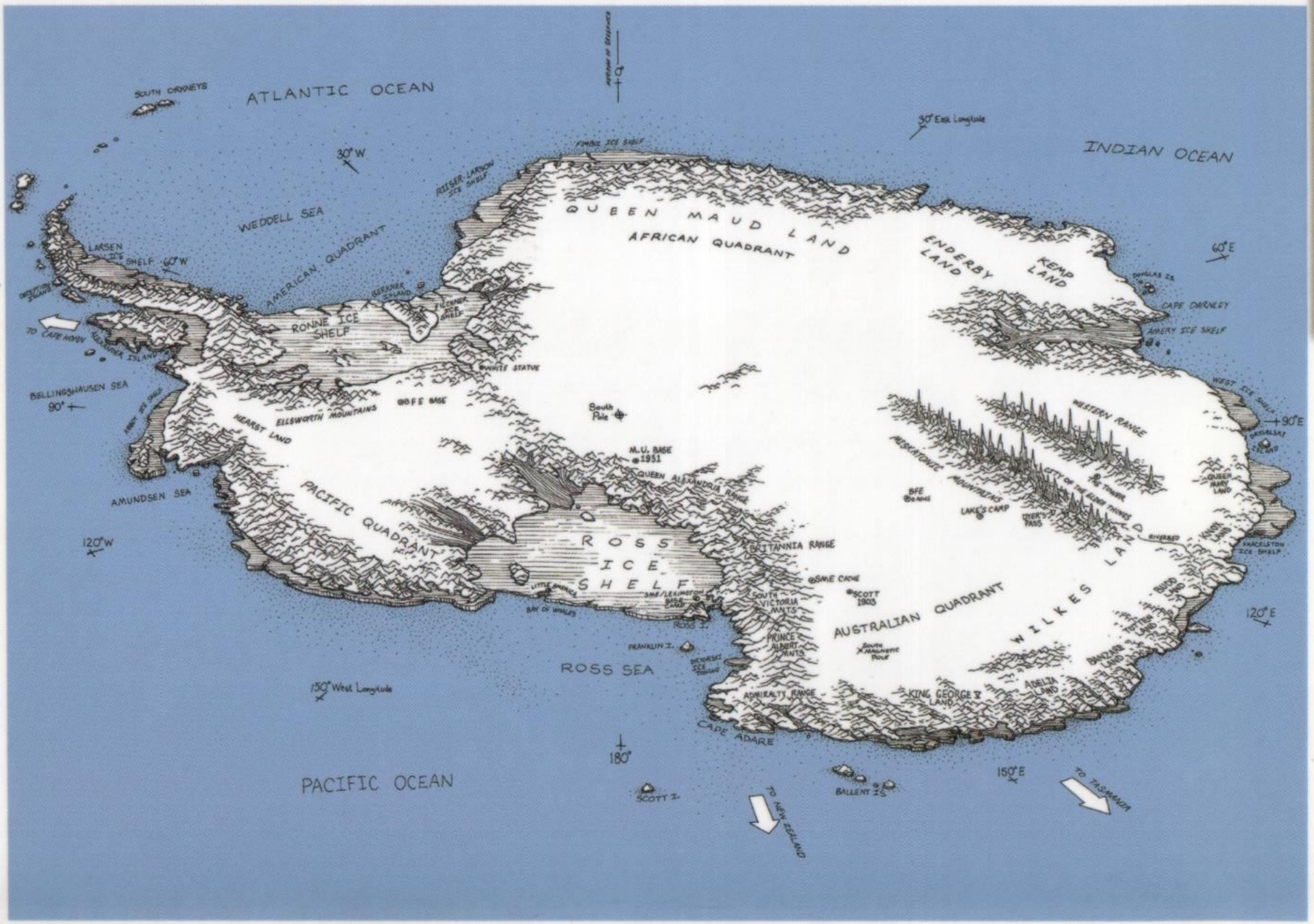
KEEPER SKETCH MAP OF ANTARCTICA



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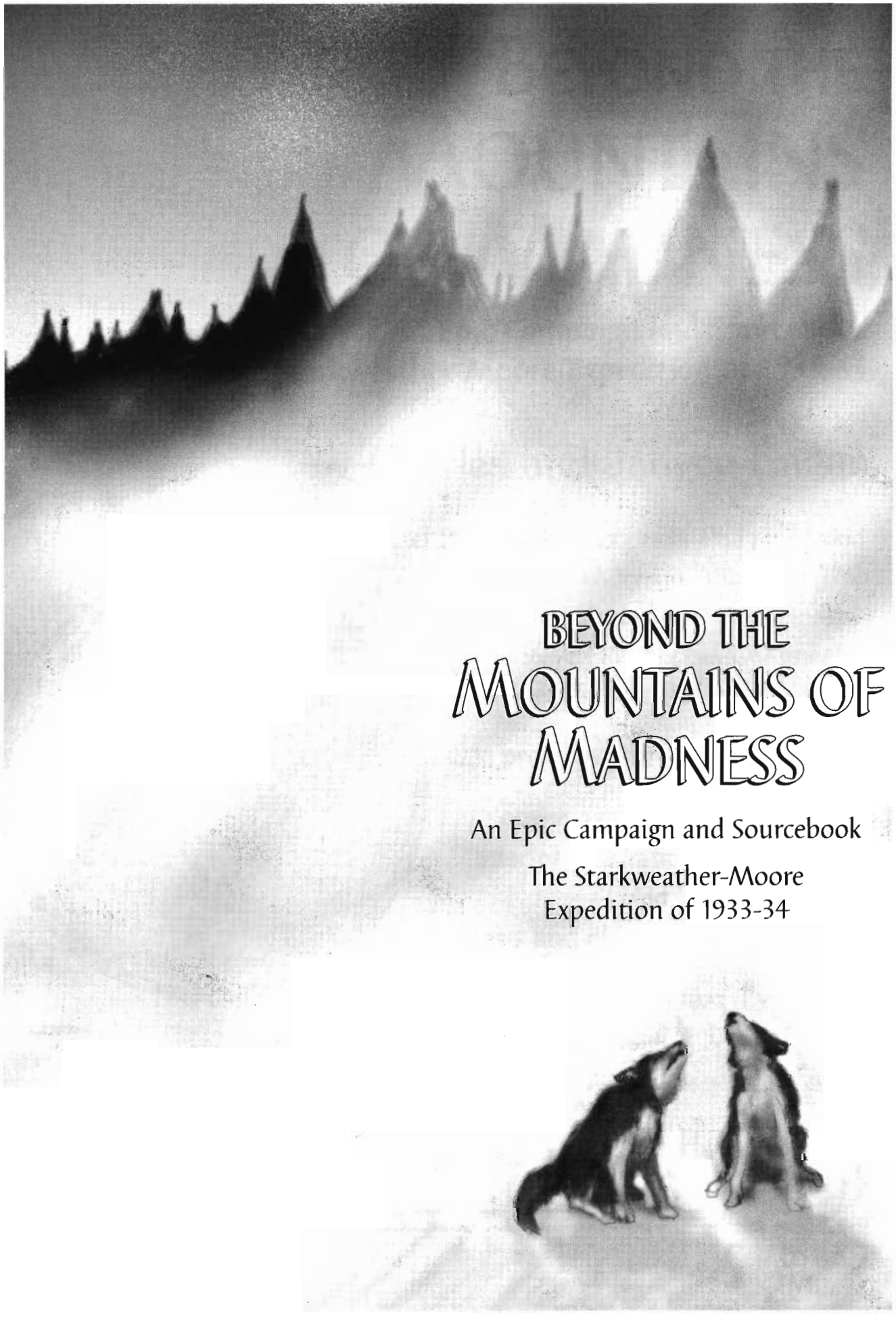

BEYOND THE MOUNTAINS OF MADNESS

An Epic Campaign and Sourcebook

The Starkweather-Moore Expedition of 1933-34

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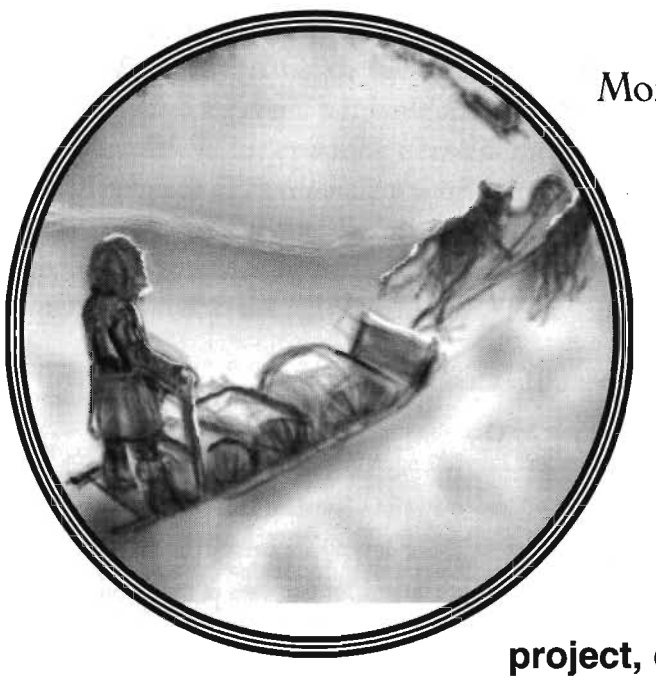
by Charles and Janyce Engan



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Beyond the Mountains of Madness was written by Charles "Chaz" Engan, except as noted below. Michael Blum contributed New York City detailing, the *Gabrielle* fire, vehicle and equipment writeups, expedition plans and logistics, the detailed design for the *Gabrielle,* scenes and architecture for the City of the Elder Things, the information for Danforth and Lexington in the City of the Elder Things, and lots of maps, charts, and plans. John Goodrich wrote the unpublished Pym text, stats and skills for the Starkweather-Moore and Lexington crews, the Lexington histories, and the Antarctic exploration history. Phil and Marion Anderson provided loads of excellent expedition preparation work, polar equipment research, the initial concept for Chapter Seven, rich views of Lake's Camp, and glimpses of Melbourne. Mike Lay provided the Starkweather, Moore, and Roerich biographies, Antarctic detailing, the Barsmeier-Falken Expedition base and related details and plotline, input for Chapter Seven, and encounters for the City of the Elder Things. Jan Engan plotted and edited the investigator interviews in the Prologue, "Get Me a Woman" in Chapter One, and the sections for New York and Port Philip. Rob Montanaro wrote the sections for Henning the Saboteur and the *Wallaroo.* Frederic Moll provided Chapter Two. Mike Hodge contributed various short articles and newsclips. Steve Hill wrote up the first looks at the animiculi and some of the scenes.in the City of the Elder Things. Sophia Caramagno and Daniel Rohrer provided short articles and Chapter Seven detailing. Lynn Willis contributed to the skills, chapter set-scenes, stats, and added various bits and pieces. Reginald Winston provided additional contributions and fire support.

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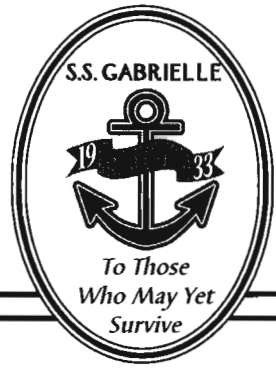

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No work of this size comes easily. We have dreamed of the Ice and suffered in the City for the past three years; we could not have done it alone. It is not possible to list everyone who lent their time and patience to the completion of this voyage, but you know who you are. We love you all, unreservedly, and you have helped to create something wonderful. Thank you.

Special thanks are due to a few, among the many, for contributions above and beyond the pale:

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—Chaz Engan, December 1998.

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Table of Approximate Conversions

inch = 2.5 cm
foot = 1/3 meter
yard = 1 meter
mile = 1.6 kilometers
pound = 1/2 kilogram

U.S. ton = 900 kilos
ounce = 29 grams
0°C = 32°F
20°C = 68°F
37°C = 100°F
100° = 212°F

Appendix 1: Timelines

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Public Timeline for the Miskatonic University Expedition of 1930-31

1930

Sept. 2 — Brig *Arkham* and barque *Miskatonic* sail from Boston Harbor.

Oct. 20 — Expedition crosses Antarctic Circle.

Oct. 26 — First sightings of Antarctica: Admiralty Range (before noon).

Nov. 7 — Pass Franklin Island.

Nov. 8 — Enter McMurdo Sound.

Nov. 9 — Landing on Ross Island effected with difficulty. Provisional camp on the shore at the foot of Mount Erebus.

Before Nov. 21 —

- Ascent of Mount Erebus.
- Borings on Ross Island.
- First field test of Pabodie apparatus.
- Establishment of a semi-permanent camp atop the ice barrier.
- Assembly of five aëroplanes at the barrier camp.

Nov. 21 — Four hour flight of four planes to Beardmore Glacier. Establishment of Beardmore Glacier base camp. (Lat 86°7', Long 174°23' E).

Dec. 13–15 — Pabodie, Gedney, and Carroll climb Mt. Nansen.

1931

Jan. 6 — Lake, Pabodie, Daniels, six students, and four mechanics fly directly over the South Pole.

Jan. 6-10 — Several recon flights to identify new features. Weather trouble, windstorms, fantastic vistas. Lake plans a new third camp to the northwest.

Jan. 11-18 — Northwest land explorations. Two dogs lost in crevasse. More fossils found in ancient rocks.

Jan. 22 — Lake Expedition leaves Beardmore in 4 planes. Dyer stays behind with Pabodie, five others, and one sled.

6 a.m. — Planes descend and take melt samples 300 miles away.

12 noon — Very excited messages— shaft sunk and blasted, remarkable fossils found.

10 p.m. — First sighting of the mountains (Lat 76°15', Long 113°10' E). "May equal Himalayas."

10:30 p.m. — Moulton's plane down on plateau in foothills, needs repair but everyone is all right. Lake scouts further into mountains in Carroll's near-empty plane.

11 p.m. — Dyer calls Douglas, asks for everything possible to be sent to him via dog sled from the ship.

Jan. 23 — Lake settles on campsite where Moulton's plane was downed, about 5 miles from the abrupt rise of higher foothills.

Morning — Dyer, Pabodie prepare to close camp. Lake will send a plane the following day for them, along with all it can carry.

4 p.m. — Gedney, Lake find a cave. Transmission to Dyer via Moulton, McTighe.

5 p.m. — More footprints in sandstone like the others. (Fowler).

10 p.m. — Orrendorf, Watson find fantastic fossils of utterly unknown life.

11 p.m. — Fourteen specimens in all. Detailed report to Dyer, who can't wait to get there; but a rising gale prevents the planes from flying.

Jan. 24 — At 10 a.m., gale winds. Radio contact lost with Lake party.

6 p.m. — Rescue operations begin. The extra plane sent to Beardmore.

7:30 p.m. — Plane lifts from McMurdo.

12 midnight — Plane arrives at Beardmore.

Jan. 25 — Rescue operations.

7 a.m. — Plane departs Beardmore, McTighe and Ropes pilot. 10 men, 7 dogs, sled, fuel, food supply, wireless.

11 a.m. — Looking for a landing.

12 noon — Rescuers arrive at Lake's Camp.

4 p.m. — Official report: hurricane winds destroy Lake party. Equipment, specimens lost or so mauled by wind as to be unsalvageable. Eleven dead, Gedney missing. Sherman, Pabodie, McTighe fly around but find no sign of Gedney.

Jan. 27 — All planes reach Beardmore in early evening after a "swift, nonstop flight."

Jan. 28 — Planes reach McMurdo camp in two laps. One plane has a failed rudder.

Feb. 02 — *Arkham* and *Miskatonic* pull clear of the field ice and head north in ominous weather.

Feb. 15 — Ships leave Antarctic waters behind forever. ❑

Campaign Timeline by Chapter

This section gathers all of the narrative chapter timelines and summarizes important events internal to the campaign. See also the "Fixed Events Timeline" on page 292, which weaves important campaign events with real-world events having to do with Antarctica.

Prologue

September 1930 — Miskatonic University Expedition departs Boston for Antarctica.

January 1931 — After two months of highly successful exploration, Percy Lake's party discovers an unbelievably rich fossil "treasure cave." Shortly after initial analysis of the find the party goes silent during a blizzard. Professor Dyer's rescue team reports that everyone is dead, their evidence scattered by winds. The expedition returns home.

December 1932 — Dyer requests indefinite leave from Miskatonic University. Starkweather and Moore decide to travel to the Ice and finish what Lake started.

March 1933 — Private recruitment of expedition personnel begins.

May 1933 — First public announcements of the Starkweather-Moore Expedition. Public recruitment begins.

July 1933 — Final interviews occur in New York City.

September 1933 — Starkweather-Moore Expedition gathers in New York before departure.

Chapter One

Sept. 1 — Play begins. Medical examinations, first fittings for arctic wear, and a photo session occur. Any final interviews take place. Departure scheduled for September 14. Characters move into the Amherst Hotel, mostly on floor 4.

Sept. 2 — The big kickoff meeting over breakfast. One of the investigators is chosen to take care of J. B. Douglas when he arrives on the 6th. Dog cages go awry.

Sept. 3 — Aircraft arrive in New Jersey. Douglas arrives at the Westbury Hotel in the evening.

Sept. 4 — Lexington's big announcement: she's going south on September 10.

Starkweather responds by moving his own departure date up to September 9 and selecting a female explorer for the expedition.

Sept. 5 — An investigator receives a crackpot letter. Scandal articles begin appearing in the yellow press.

Douglas makes his final appointments, with Starkweather, Lexington, and Brackman (Douglas' lawyer). He also meets with some old pals in the Purple Cup bar, not far from the hotel.

Evening: Douglas dies fighting with Sothcott after hours on the waterfront.

Chapter Two

Sept. 6 — News of Douglas' death hits the press in the morning. Investigators meet Lieutenant Hansen, who asks them about Douglas' hotel. If the investigators go to the Westbury Hotel they find an unfinished letter and perhaps are arrested. Danforth's warning note is delivered in the evening.

Sept. 7 — Most of the day is spent in expedition preparation and clue searches. Henry Vredenburgh is brought aboard as sailing master.

Sept. 8 — J. B. Douglas' funeral. Investigators speak to J. B.'s brother Philip.

Chapter Three

Sept. 7–8 — Afternoon. Investigators watching Acacia Lexington's home in Queens see a man abducted from her premises. Following the abductors allows the party to rescue the man—Nicholas Roerich—from Profiteer agents in a Harlem warehouse.

Chapter Four

Sept. 8 — Last cargo being loaded. The expedition moves onto the ship. Most explorers are given an evening's liberty.

Arson fire at the *Gabrielle* late in the evening. Three men die, some cargo destroyed. *Gabrielle*'s departure delayed; Lexington's *Tallahassee* departs early.

Sept. 9 — Burned cargo is replaced. Investigators are invited to visit Roerich, who asks them to watch over Acacia Lexington and be wary of the BFE. The remainder of the day can be used hunting clues.

Sept. 10 — Research.

Sept. 11 — *Gabrielle* departs New York City.

Chapter Five

Sept. 11 — *Gabrielle* departs New York City in the afternoon, heading south.

Sept. 12 — Shipboard routine begins. Moore sponsors classes on a variety of topics which last throughout the voyage. Henning begins his quiet sabotage.

Sept. 15 — *Gabrielle* rounds Cuba and enters the Caribbean Sea. Lexington's *Tallahassee* reaches Panama.

Sept. 19 — *Gabrielle* reaches Colón.

Sept. 20 — *Gabrielle* passes through Panama Canal. Supplies taken aboard in Panama City.

Sept. 21 — Into the Pacific Ocean.

Sept. 25 — *Gabrielle* crosses the equator. A Line Crossing ceremony takes place, in which many explorers are genially humiliated. Henning's sabotage causes the ship's refrigerator to break down, contaminating a lot of food.

Sept. 28 — Henning poisons several sled dogs with powdered strychnine. Once the poison is found, Starkweather and Moore assume it was meant for the explorers; a general search of the ship and the cargo begins.

Later, evidence of further sabotage—a half-made incendiary device—is found in one of the cargo holds, proving the saboteur is still aboard.

Oct. 8 — Lexington's *Tallahassee* arrives at Hobart, Tasmania.

Oct. 11 — If he has not been caught yet, Henning returns to the hold to finish his bomb.

Oct. 12 — *Gabrielle* arrives at Melbourne. Henning is thrown in jail; Starkweather meets with the press.

Campaign Timeline by Chapter (contd.)

Oct. 13-17 — Expedition crew spend time on leave, or search for replacements for the food and equipment wrecked by Henning.

Oct. 18 — *Gabrielle* leaves Melbourne headed south.

Chapter Six

Oct. 18 — *Gabrielle* departs Melbourne in clear weather.

Oct. 23 — Severe gale forces ship to turn east for several hours.

Oct. 25 — In heavy fog. First icebergs sighted.

Oct. 26 — Ship caught in heavy storm for two days. Aircraft motors break loose in the hold, causing much damage.

Oct. 30 — Gabrielle reaches the ice pack. Progress is slow for several days as the ship drifts with the ice.

Nov. 4 — Furious storm endangers the ship, but loosens the pack ice so that she can enter when the storm has passed.

Nov. 6 — Deep in the pack. The wreck of the *Wallaroo* is sighted midday.

Nov. 13 — In the Ross Sea.

Nov. 14 — Camp established near the southwest end of Ross Island. Offloading begins.

Nov. 15 — Sea ice camp established. Lexington overflies the South Pole; *Scott* makes a successful first flight, establishes location of barrier camp not far from Lexington's base.

Nov. 16–17 — *Enderby, Weddell* airlift cargo from the Ross Island camp to a safer base on the barrier.

Nov. 18 — Ice near sea camp begins to break up. Emergency airlift of all men and supplies to the barrier base. Some supplies lost when the ice overturns.

Nov. 19 — All expedition members reunited at the barrier camp. Bad weather sets in late in the day, making flight impossible.

Chapter Seven

Nov. 20 — An explosion rocks the Lexington camp at 3 a.m. Starkweather fields a rescue team to help; the blast was caused by madmen running amok. Lexington's party loses power, radio, some supplies. They think Starkweather is responsible.

Nov. 21-22 — Radio negotiations between the two parties. A tentative deal is reached, wherein the Lexington and Starkweather-Moore Expeditions join forces to explore the interior.

Nov. 23 — Thanksgiving Day. Both parties celebrate.

Nov. 24-26 — The two groups merge camps, prepare for the coming flight to the mountains.

Nov. 27 — Starkweather takes two guides and a sled team to the Polar Plateau. The foothills expedition is left in the care of Lexington and Moore. Three aircraft take off in search of Lake's Camp.

Chapter Eight

Nov. 27 — Combined expeditions fly to Lake's Camp, departing in the early afternoon and arriving in early evening. Lodgings are set up, and Moore asks the investigators to survey the site.

Nov. 28 — Moore and the investigators open a snow hummock, find an elder thing, and dissect it that afternoon. Starkweather announces he will climb Mount Nansen. Two-thirds of the Pabodie apparatus arrives by air. In the evening the investigators have a chance to overhear Lexington's final arrangement with the BFE over the radio.

Nov. 29 — The camp is completed. Another elder one is dug up and examined. The Pabodie drill is fully assembled and begins work at Lake's drill site. The investigators should uncover at least one of the Miskatonic sites of interest.

Nov. 30 — The drill crew breaks through into Lake's cave in the morning. The rest of the day is a frenzy of examining the underground locale. More men, dogs, supplies arrive at the camp. Moore tries to radio Pabodie, who will not talk to him.

Chapter Nine

Dec. 1 — The Barsmeier-Falken inland party arrives at 5 a.m. in 3 aircraft. They set up camp and sleep through the rest of the day. The American parties spend the day opening Miskatonic sites, eager to uncover as much as possible before the Germans horn in.

The BFE team wake in the evening to help with excavations of the camp. They work through the night, unearthing the most sensational sites Meyer can locate using his knowledge of the *Dyer Text*. Investigators may wish to help.

Dec. 2 — After breakfast, Lexington takes the *Belle* up to fly along the eastern face of the mountains. The flight is cut short due to bad oxygen in cylinders gotten from Starkweather. Meyer gives Moore the *Dyer Text*. Later in the day, Moore gives it to the investigators and asks them to read it through and form a plan for traveling across the mountains.

In the evening, Lexington finishes cutting her deal with the Barsmeier-Falken expedition. The BFE continues excavating the site and begins investigating the caves.

Dec. 3 — Both groups begin preparations for their flights across the mountains. Lexington delays until word arrives that her equipment has arrived at the Ross Sea base. Starkweather, informed of Moore's decision to fly, demands to be picked up as soon as possible. The *Enderby* is dispatched to retrieve him.

Dec. 4 — Starkweather arrives at midnight and begins directing preparations for departure. Tainted oxygen delays Starkweather's liftoff; Lexington's *Belle* takes to the air first, followed by Starkweather's Boeings twenty minutes later.

Chapter Ten

Dec. 4 — Starkweather's Boeings, *Enderby* and *Weddell,* traverse Dyer's Pass and circle over the City of the Elder Things. Moore chooses a landing spot in the plaza—a large circular clearing half-covered by rubble. A camp is set up and everyone explores. There is no sign of the Lexington plane or party.

Dec. 5 — A day of exploration for everyone. Elder things discover the human presence during the day.

Campaign Timeline by Chapter (contd.)

Dec. 6 — Doctor Greene is carried off by elder things in the morning. Danforth attacks the camp in the afternoon, burning out the *Enderby,* but is stopped before he can do the same to the *Weddell.* Questioned, he snaps and babbles; while this is going on, the elder things capture Starkweather and carry him away. Professor Moore orders the *Weddell* sent to Starkweather's rescue.

Chapter Eleven

Dec. 6-7 — Flying in pursuit of the elder things that have carried off James Starkweather, the investigators arrive at an immense tower at the foot of the Cold Hole's storm vortex. There they are joined by the *Belle* with its five passengers.

The two groups enter the Tower in search of Starkweather and his captors. Meyer, certain now that the Tower is the one described by Pym, takes the lead in an attempt to verify the things Pym did and saw.

The combined party explores the tower. Along the way they have an opportunity to learn something of its purpose, and of the downfall of the elder things' civilization.

Reaching the Wall of Skulls, the explorers cause the breaking of the Construct, and must effect its repair before the Unknown God breaks free. The repair requires the sacrifice of a living human being into the Construct—the explorers must perform the horrible operation themselves, and in a hurry.

Should they succeed in patching the damage they caused, the party leaves the Tower. Outside they find that Baumann and Rucker, momentarily mad from a glimpse of the Imprisoned One, have stolen the *Weddell* and fled toward Lake's Camp. In order to keep the scientists of the world from learning about the delicate and deadly Construct, the party must follow after the two men and silence them.

Chapter Twelve

Dec. 7 — Pursuit of the fleeing Rucker and Baumann takes the investigators back to the City, then to Lake's Camp. They must contend with their insane pilot, Halperin, or lose the aircraft to his delusions.

Arriving at Lake's Camp, the explorers discover that the breaking of the Construct has been felt even here. Huge earthquakes have ravaged the land and half-destroyed the camp. The party must choose whether to stay and help their comrades or continue their dash after the men who could inadvertently bring about the world's end.

Chapter Thirteen

Dec. 7 — The investigators follow Baumann and Rucker to a Barsmeier-Falken fuel cache located about 200 miles from Lake's Camp. They must decide how best to deal with the deserters there, be it by negotiation or murder.

After a few hours, bad weather descends on the cache, trapping any investigators who are still there. A rescue mission sent from the Barsmeier-Falken main encampment arrives in the meantime, further complicating things.

Chapter Fourteen

Dec. 8 — The investigators return one last time across the Mountains of Madness in order to rescue Lexington, Moore, and the other survivors in the City. There they must fight the elder things, who try to carry off as many humans as they can before the remainder can flee to safety.

Chapter Fifteen

Dec. 9 — Arrival of a Barsmeier-Falken relief flight sent to Lake's Camp signals the beginning of a general exodus from Antarctica. The next three days are spent shuttling personnel and supplies back to the Ross Sea ice shelf.

Dec. 12 — The *Gabrielle* and the *Tallahassee* finish loading and set sail into the Ross Sea.

Dec. 13 — Storms over the pack ice prevent the ships from sailing north out of the Ross Sea.

Dec. 17 — The *Gabrielle* and the *Tallahassee* sail north into the pack.

Dec. 22 — The two ships part company. *Tallahassee* heads for Hobart, Tasmania, while Captain Vredenburgh decides to turn *Gabrielle* north to Dunedin, New Zealand.

Chapter Sixteen

Dec. 23 — *Gabrielle* sails north in heavy seas. One of the crew unknowingly awakens a pair of Seeds, which escape through a hole eaten in the floor.

Dec. 24 — Christmas Eve. Engineer Brunel is badly wounded in the morning when an animiculum consumes part of his leg. The creature is captured and given to the investigators for examination; the other animiculum remains unknown and at large.

Later in the day the second animiculum consumes a sled dog, Duchess. The creature is seen as it flees and causes panic amongst the crew. It escapes captivity.

A general search of the ship follows. The creature is found in the engine room. After the crew fails to catch it, the investigators must try.

Dec. 25 — Christmas Day. The *Gabrielle* sails into Dunedin Harbor.

Aftermath

Dec. 25-31 — Members of the expedition are wined, dined, and celebrated at length. Inquiring reporters are everywhere, seeking scoops for the news agencies of the world. Any explorer who utters a word is instantly famous.

Jan. 1-20 — Travel across the Pacific Ocean to Panama. If the keeper desires, the *Wilhelmina* scenario might begin toward the end of this period.

Jan. 21-29 — Travel north from Panama to New York City. Upon arrival in New York, the explorers are greeted in ways that make Dunedin's festivities seem apathetic.

Feb. 1-?? — Follow-up scenarios, arrangements with Lexington and Roerich, etc. ❑

Fixed Events Timeline

This timeline weaves together important campaign events and real-world events having to do with Antarctica. See also the Campaign Timeline by Chapter, which summarizes datable events internal to the campaign.

August, 1933

8/22 — First sunrise at the edge of the Ross Ice Shelf.

September, 1933

9/8 — Fire aboard the SS *Gabrielle*, at dock in New York City.

9/9 — The Lexington Expedition leaves New York aboard the SS *Tallahassee*.

9/11 — Starkweather-Moore Expedition leaves New York aboard the *Gabrielle*.

9/15 — Barsmeier-Falken Expedition ship *Wilhelmina* leaves Bremerhaven.

9/25 — Byrd's ship *Bear of Oakland* leaves Boston bound for Antarctica (34 crew).

October, 1933

10/11 — Byrd's ship *Jacob Ruppert* leaves Boston bound for Antarctica (95 crew).

10/12 — The *Gabrielle* arrives at Hobart, Tasmania.

10/14 — *Wilhelmina* arrives at Deception Island; Barsmeier-Falken expedition begins setting up their base.

10/18 — *Graf Zeppelin* leaves Friedrichshafen.

10/21 — For the next four months, 24 hours of daylight in the Ross Sea region, and at Lake's Camp.

10/22 — *Graf Zeppelin* lands at Recife, Brazil; first Barsmeier-Falken flights land at Weddell Sea site.

10/25 — *Graf Zeppelin* arrives over Deception Island.

10/27 — Barsmeier-Falken expedition base camp at Weddell Sea site complete.

November, 1933

11/2 — Three BFE planes land at the South Pole.

11/3 — BFE begins shuttle flights to set up their South Pole cache; *Graf Zeppelin* begins survey flights.

11/5 — Lexington stopped by sea ice, begins 5 days ferrying by air to base on barrier.

11/7 — *Gabrielle* crosses Antarctic Circle.

11/10 — Lexington's base established.

11/12 — Heavy frost on Ross Ice Shelf areas.

11/14 — SME arrives near Ross Island, begins unloading onto sea ice, assembling aircraft, and preparing a runway on the ice; advance party travels over ice by two dog sleds to proposed base (about 10 miles from the Lexington Expedition's base).

11/15 — Acacia Lexington flies over the South Pole, and back to her base.

11/16 — SME begins moving camp by air to base on the barrier.

11/19 — Snow begins falling on Ross Ice Shelf areas; bad weather sets in; SME camp finished at the end of the day.

11/20 — Three men, with three dog sled teams, prepare to head out from the SME base to establish an emergency depot 250 miles along the air route to Lake's Camp; it will contain 120 pounds of rations, 80 pounds of other survival gear, and 165 gallons (three drums) of fuel; the disaster at the Lexington camp delays their departure for one day.

11/23 — Thanksgiving Day; BFE finishes the Polar cache.

11/25 — Three BFE planes try to reach Lake's Camp, but due to bad weather land at the 'false site,' where they leave 9 drums of fuel and a supply cache, before returning to their main base by the next day.

11/27 — Weather clears over the Ross Ice Shelf [date approximate]; emergency depot setting team returns to the SME base; the SME and Lexington expeditions begin their joint flights to set up at Lake's Camp—this will take four days.

11/28 — Already regretting her decision to work with Captain Starkweather, Acacia Lexington contacts the BFE by radio and proposes a joint flight over the Miskatonic Mountains. They advise her that their decision will have to be made at Lake's Camp.

11/29 — The ice-melting apparatus is set up at the Lake site, before all supply flights have even finished.

11/30 — The American base at Lake's Camp is finished by the end of the day.

December, 1933

12/1 — Fog and overcast settles on the Ross Ice Shelf and adjacent regions; three BFE planes reach Lake's Camp.

12/2 — Two of the BFE planes at Lake's Camp fly to their South Pole cache to bring more fuel; Lexington makes her deal with the BFE. Moore's party gets the *Dyer Text*.

12/3 — Starkweather flies up from the foggy coast to prepare for the crossing of the Miskatonic Mountains.

12/4 — Pym's "white statue" found by BFE scouts; the Lexington/BFE group fly over the range in the Delta; the SME group flies over the peaks in their two Boeing Model 247s. Both groups land and establish camps in the City of the Elder Things. The Delta is damaged.

12/5 — Danforth sets out from the Northrop Delta toward the SME camp in the City. Much exploring.

12/6 — Danforth destroys a Boeing, and rants when captured. Starkweather is carried off by two elder things, and the remaining Boeing follows to the Construct—Lexington's plane joins up on the way. The investigation of the Construct. Presumably the return to civilization begins this day also.

12/7 — The pursuit of Baumann and Rucker; weather clears over Ross Ice Shelf; whaling vessels begin entering the Ross Sea.

12/8 — Begin retrieving persons and some equipment from Lake's Camp, with only one or two planes.

Fixed Events Timeline (contd.)

12/10 — Campaign calls for all American groups to be back at the Ross Ice Shelf base.

12/11 — Remains of SME and Lexington expeditions loaded aboard their ships, begin heading out through the bergs and ice of the Ross Sea (takes all day).

12/12 — Byrd Expedition leaves Wellington, New Zealand; fog over Ross Sea and Barrier region again; if the SME expedition heads back to New Zealand, they make it to 70° S latitude, and see a major storm developing—among a lot of sea ice and bergs!

12/13–12/17 — Heavy gales encountered in the 60° latitude region between the Ross Sea and New Zealand.

12/16 — First BFE exploration of Pym's elder thing tunnels. Artifacts recovered and returned to the main base.

12/17 — Fair weather over Ross Ice Shelf; Falken party destroyed by animiculi.

12/18 — Fire and infestation at BFE main base.

12/19 — *Jacob Ruppert,* main vessel of Byrd Expedition, comes in sight of the polar ice pack (good weather now, and 24 hour sunlight).

12/20 — *Jacob Ruppert* passes the Antarctic circle (no doubt broadcasting this fact); BFE withdrawal from main (Weddell) base begins.

12/21 — Byrd Expedition, aboard the *Jacob Ruppert,* launches a plane south toward Marie Byrd Land, still 500 miles NE of Little America.

12/22–12/34 — Continuous fog in the Ross Sea and adjacent areas; one bad gale during this period.

12/26 — Good weather over Ross Ice Shelf now.

January, 1934

1/3 — *Jacob Ruppert* launches plane due south toward Marie Byrd Land, about 1000 miles east of Little America.

1/4–1/10 — More fog over Ross Ice Shelf; bad storms in the 60° latitude region.

1/8 — Berndt Balchen, of Ellsworth's expedition, skis over to the Little America base to make sure the runway is clear.

1/9 — Ellsworth's expedition, aboard the *Wyatt Earp,* begins unloading supplies and their plane along the Bay of Whales.

1/10 — *Jacob Ruppert* launches plane towards Marie Byrd Land again.

1/12 — Ellsworth expedition launches a test flight of their plane, but reports heavy seas.

1/13 (approx.) — Ellsworth expedition reports upheaval on the Ross Ice Shelf, extending up to five miles "inland," their plane is damaged and they prepare to leave.

1/17 — *Jacob Ruppert* moors in the Bay of Whales, begins three weeks of unloading supplies over the 6 mile path to Little America.

1/19 — *Bear of Oakland* of Byrd's expedition enters Ross Sea.

February, 1934

February — Norwegian whaler *Thorshaven* just off the ice barrier near Marie Byrd Land.

February — *Bear of Oakland* sails about in the Bay of Whales.

2/5 — *Jacob Ruppert* sets sail from the Bay of Whales, bound for New Zealand, to avoid any possibility of being trapped by the ice.

2/16 — First sunset on the Ross Ice Sea.

2/19 — *Bear of Oakland* sets out north to meet the *Discovery II;* ice in the Ross Sea is getting thick.

2/21 — *Bear of Oakland* meets British exploration ship *Discovery II* to take aboard a new doctor.

2/23 — *Bear of Oakland* drops off the new doctor at the Bay of Whales, and quickly departs, in a heavy gale, bound for New Zealand.

Late February — The ice breaks up in the Bay of Whales.

March, 1934

3/1 — Byrd expedition sends team of six men south to 80° 56', leaving food depots as they go.

3/3 — One of Byrd's planes crashes and is destroyed (no one seriously hurt); and a fire threatens the supply of medicine at Little America.

3/25 — Byrd arrives at the "Bolling Weather Station" for the winter.

3/28 — Byrd is left alone for the winter.

April, 1934

4/19 — Final sunset this year at the Ross Ice Barrier. ❑

Appendix 2: Antarctica Manual

Table of Contents

Victory awaits those who have everything in order—people call that luck. Defeat is certain for those who have forgotten to take necessary precautions in time—that is called bad luck.
— *Roald Amundsen,* Memoirs.

The Antarctic is arguably the place most unforgiving of errors and lack of foresight. This section discusses many things that Antarctic explorers really ought to know.

Clothing

A typical Antarctic ensemble can weigh anywhere between 10 and 20 pounds. The parka is the most widely used single style of garment, typically of reindeer skin if you can afford it.

Parkas are fur-lined coats that fit snugly about the hips and have a flap under the crotch that buttons in front. The hood is deep and can protect the face somewhat from cold air, but additional protection is required if there is more than minimal wind. The armpits are cut very large so that it is easy to draw the arms inside the coat without unbuttoning it.

Pants are also fur lined, but are generally softer and not as thick as the parka coats, since the legs are less sensitive to cold.

Byrd states that reindeer hide is the best available material for the making of cold weather clothing. His 1929 expedition brought along the skins of fifty young reindeer for the purpose of making and repairing clothing and sleeping bags.

The ice of one's breath is the greatest source of frostbite aside from stiff wind. Masks and other protective gear can be devised to keep the rime of breath from the face. One popular mask has a funnel-like tube over the mouth which is used to expel the breath. Ice which forms on the tube can be brushed away with gloved hands and stays away from the face.

The feet are the most endangered part of the body. Moisture is the greatest source of danger. A recommended boot is the *finnesko,* entirely covered with fur. Several layers of felt are padded on the bottom, and over them is laid a matting of saennegrass (or sienna-grass). This grass absorbs the perspiration and helps to keep the feet dry. When the shoe is removed the saennegrass can be lifted out, the rime brushed off, and the boot itself kept free of damp.

The problem of boots continues with sizing. Cold boots should be big enough to include three to five pairs of thick stockings, plus felt and saennegrass. Thus the boot must be taller and also have an extra-wide throat to admit the muffled foot. Byrd recommends men's boots be of U.S. size 14 at a minimum.

Arctic boots have thick rubber soles at least 0.5 inches thick and a reinforced heel. Pucker thongs at the back of the heel and up the rear can be used to adjust the boot to different thicknesses of socks.

Windproof garments (shirts, parkas, pants, mittens, socks, and sleeve protectors) are a necessary complement to the furs. Good ones can be made from aircraft silk and worn over the fur clothes to provide extra protection.

Sleeping bags are fur-lined, possibly of reindeer, and are covered with aircraft silk. They come in many styles. Reindeer again seems to be lightest and warmest, but apparently tends to shed and get up the nose. Roughly 1 in 20 people have an adverse reaction to reindeer fur, though this will rarely be more than an itchy nose and a need to sneeze when exposed to the shedding fur.

For an illustration of cold weather clothing, see Appendix 7, "Player Handouts," page 418.

Provided on the Expedition

Each member of the Starkweather-Moore Expedition is provided the following items of cold-weather clothing. Final fittings and alterations of these items, where needed, will take place in New York prior to departure or on the voyage south. Each expedition member is expected to care for his or her own clothing, including the repair and/or replacement of items damaged over the summer. Materials and tools used for repairing damaged clothing items are carried in expedition stores.

2	Parkas, fur-lined	2	Pants, fur-lined
4	Singlets, heavy cotton	4	Shirts, cotton or flannel
2	Underpants	6	Sweaters, woolen
4	Combination undersuits, flannel	3	Cardigans, woolen
6	Pr. mountaineer's stockings	18	Pr. heavy woolen socks
4	Pr. sleeping socks, felt	1	Pr. mukluks (slippers)
1	Pr. mountaineer's boots, leather	2	Pr. ski boots, leather
1	Pr. ski boots, felt	2	Pr. finnesko boots
1	Pr. crampons, for finnesko	2	Pr. boot soles, felt
2	Pr. gloves, woolen	1	Pr. gloves, kidskin
2	Pr. mittens, fur-lined leather	2	Pr. mitts, wolfskin
1	Waist belt, heavy leather	1	Harness belt, leather
1	Muffler, mohair or silk		
2	Pr. trousers, windproof silk	1	Jumper, hooded, windproof silk
1	Hood, windproof silk	1	Jumper, hoodless, windproof silk
2	Pr. mitts, windproof silk		

The clothing listed above is primarily for work outside in the deep cold. When indoors, on a ship, or in huts and aircraft, any warm clothing will suffice. Expedition members are encouraged to bring along a good supply of their own clothing for this purpose.

These garments are warmest when new. Clothing loses some of its warmth after it is washed, so wherever possible new garments should be used for extended sled journeys or outside excursions. At least one full suit should be saved for work at Lake's Camp and beyond.

Oxygen Equipment

A person breathes in 23 lbs. of oxygen per day, and exhales 21 lbs. unconsumed; the difference is the two lbs. of oxygen actually absorbed by the lungs. With a simple "breathing tube and nose clip" (such as is used by the Starkweather-Moore Expedition) all the exhaled oxygen is lost; only 9% of the four cubic feet of oxygen used each hour goes to keeping the person alive. The tube ends in what is essentially (and often literally) a pipestem, held between the teeth. A leather or rubber mask may be fitted over the tube, to prevent frostbite.

The Barsmeier-Falken Expedition is using more sophisticated oxygen masks, designed by the Drägerwerke firm. These incorporate a bag, resembling a rubber hot water bottle, under the mask—this is called an "economizer" or "rebreather." The bag is designed to be worn under the outer layer of (loose) clothing, to prevent ice crystals from forming inside it. It has a volume slightly less than the tidal volume of the human lungs, and is filled by the exhalations of the explorer. As the gas in the upper respiratory tracts is still high in oxygen content, the bag fills with relatively pure oxygen. Once it is filled, a diverter allows the final fraction of air expelled by the lungs (rich in carbon dioxide) to exit the mask. As the person takes the next breath, it empties the economizer and pulls in another portion of pure

oxygen from the tank. With this system, a person uses only one cubic foot of oxygen when resting, or two cubic feet when exertion is attempted (such as long foot marches, or heavy labor).

For resting, neither the pipestem nor the Drägerwerke system will work—both are examples of "pressure breathing" which reverses the cycle of effort in the lungs, and thus cannot be used when asleep. For rest periods, the American and German expeditions all use a primitive oxygen tent. Inside the two man tent, each person places his or her oxygen tank, with the regulator set to release one cubic foot per hour. A 25 lb. canister of caustic soda (dry sodium hydroxide, or NaOH) is opened to absorb the carbon dioxide and moisture produced in the tent; each canister has 48 man-hours of absorbing capacity. No smoking or fires (including lanterns) in or near the oxygen tent! A safety-conscious team (such as Lexington or the BFE) will plan to switch to new oxygen tanks just before entering the tent, to prevent tanks exhausting unnoticed before waking.

A standard oxygen tank, containing 80 cubic feet of oxygen, will thus last a member of the SME team about one day over the Miskatonic Range (including periods sleeping in the tent). With three tents, they will have to stagger their sleeping schedule, as only six men can sleep at any one time.

Tents and Shelters

Two types of two-man trail tents are described in Byrd's book as having been used by his 1929 expedition. These may be considered the models for the tents used both by the Miskatonic expedition and by Lexington and Starkweather-Moore. All good Antarctic tents have the following characteristics:

- Every square inch of space shall be economically employed.
- The tent shall be strong enough to withstand a high wind.
- It can be well ventilated.
- It is easy to put up and take down.
- It is sturdy enough to put up with very rough handling.
- It is light and packs well.
- It should be easily seen from afar and should absorb the sun's heat.

The first of the two designs is the *Amundsen tent*. Amundsen tents are pyramidal in shape, made of light windproof material over a framework of bamboo poles. They stand about six feet (180 cm) high and are about six feet across at the base. They weigh 25 pounds (11 kg). The Amundsen tent has a central pole and four to six others that rise from the edges to meet at the centerpole. While efficient of ventilation, thus making it a good cook tent, the Amundsen design is slightly inefficient of floor space due to the central pole. A stiff overdrape covers the door flap on the outside, sealing out the snow and wind. External anchor lines can be used to secure the flap in place.

All of the smaller tents carried by the Lake's Camp party were of the Amundsen design.

The second design, the so-called *Woods tent*, is a modification of a tent commercially available in the United States in the period. The design was refined by the men of Byrd's 1929 expedition. Approximately the same size and weight as the Amundsen model, the Woods tent more closely resembles a pup tent in appearance. The tent is wedge-shaped with a single bamboo ridgepole supported at its ends by bamboo poles from the four corners. The entrance is like the sleeve of a coat, and can be tied closed after the occupant is inside, thus making the tent effectively snow-tight. External anchor lines are used to hold its shape.

The smaller tents carried by Starkweather-Moore are all of the Woods design.

Larger Houses

Solid shelters, such as those erected by the Starkweather-Moore expedition at its base camps, are prefabricated for the purpose using designs refined by Byrd and others. The walls and roof are made of a number of identical panel sections, each one three feet wide and eight feet long. These sections are laid upon and attached to a pine frame, also pre-cut for the purpose. No nails are used anywhere in construction, and the bolts that attach the panels to the frame are never allowed to end on the outside; in this way heat transmission through the metal bolts is kept to a minimum.

The panels are four inches thick, and weigh 106 pounds apiece. Each is constructed as follows: outside is a layer of stiff building board, half an inch thick. Next are two layers of paper, a layer of building board, one and one half inches of fibrous insulation and then another layer of building board. The exterior of each panel is sealed with three coats of orange paint.

A house of this sort, measuring sixteen by twenty-four feet, requires thirty-eight panels and can be assembled in six hours in good weather. Normally the foundations of such huts are set deep into the snow, and more snow is piled tightly around the walls once the building is complete. In this way the houses are protected from all but the fiercest blizzards.

The total shipping weight of one such shelter is 4800 pounds.

Dog Sled Travel

The sled dogs carried by Starkweather-Moore are mostly Greenland huskies, or malamutes, purchased from the Danish government for the voyage. They are under the care of the two dog handlers, Fiskarson and Snåbjorn, and will be assigned as needed to sled teams as expedition members become proficient in their supervision and use.

Huskies are hard-working animals with a need for constant exercise. They are well suited to Antarctic conditions. Males mass roughly 90–120 lbs. apiece, while females are slightly smaller at 75–95 lbs. There is little difference, however, in the amount of cargo each can pull. Huskies are very affectionate toward humans, but will fight each other viciously if not skillfully handled. They eagerly attack wild animals for food—penguins, for example.

A typical sled team consists of nine dogs; the dogs can be deployed in a "line" or "fan" hitch. In rough terrain, especially when crevasses are suspected, the line hitch is safer. The dogs are hitched in pairs to a 30-foot-long central trace line, with the most experienced lead dog alone in front followed by pairs (or tethers) of dogs strung out in a line behind. For travel on smooth snow, the fan hitch is faster, with each dog having its own trace line from the sled.

Lead dogs can be either male or female, and the ideal line team consists of alternating pairs of male and female dogs in the tethers; however, female dogs must not be used at all in sled teams when in heat.

The health and safety of the dogs should be the sled driver's first concern. Each morning before setting out, the driver should

inspect his or her animals. Animals that are wounded, sick, or in poor condition should not be used for hauling. The inspection should be repeated at the end of the day, with special care being given to the pads of their feet. If these are found to be cracked or bleeding, a salve of fat or seal oil should be rubbed into the pads, and the dog rested on the following day.

Dogs should be fed at least three times each day. Dogs are normally given a one-half pound block of pemmican at each meal, supplemented by fresh seal meat and blubber when it is available. Huskies are happy to eat snow and ice, and do not need fresh water when snow is available.

At the end of each day of hauling, harnesses must be removed and inspected or repaired. Dogs should be staked out at least ten feet apart to prevent fighting. Do not allow the dogs to chew on their traces, harnesses, or collars, as they may be difficult to repair or replace on the trail. If a fight does break out between dogs (most commonly during harnessing or at the end of a day) do not attempt to separate the dogs single-handedly. Always summon help as the dogs are stronger than any single man.

Sledding commands are basic and standardized. Arctic huskies learn only four commands and their name: stop ("whoa"), go ("yake"), right ("gee"), and left ("haw"). Each handler should develop their own variations of these commands, and work whenever possible with the same team of dogs.

Sleds and Sledding

Various types of sleds have been used in Arctic exploration in recent years, with the following weights and qualities:

Flexible airplane sled	20.5 lb.	short, flexible, single-ended
Ski sled without braces	18.5 lb.	short, rigid, single-ended
Long Norwegian freight sled	51.0 lb.	long, rigid, double-ended
Norwegian Army sled	41.0 lb.	long, rigid, single-ended
Nansen freight sled	74.0 lb.	long, semiflexible, double-ended

The flexible sleds have been found to be superior for trail use in almost every aspect, though they are slightly heavier and cannot withstand quite as much torsional stress as those with rigid full-length runners or chassis. The long sleds are typically used for freight hauling or as the lead sled in a tandem haul. The short sleds are used as trailing sleds in tandem, as emergency carriers, or when man-hauling.

Sleds consist of pairs of wooden runners, shaped like skis, 3–4 inches wide and between seven and 12 feet in length, set about two feet apart. Uprights are built onto the runners; these support a framework of crossbars and slats running the length of the skis. The runners are shod with steel. No nails, screws, or bolts are used in the construction of the sled, the various parts being lashed together with cord or leather thongs.

The Starkweather-Moore Expedition carries sleds of the "Nansen" design, for long hauls and heavy loads, and the shorter "airplane sled," to be carried as emergency equipment on aircraft and used for man-hauling cargo short distances. When long travel by sled is planned, a sled meter (similar to an automotive odometer) is fitted to the frame.

Long-haul sleds are typically pulled by teams of dogs ranging from seven to thirteen in number, with nine being the most common. Sled loads can be as high as 1000 pounds; care must be taken to ensure that the load is packed well and the weight distributed evenly over the length of the sled. The shorter sleds are not capable of carrying more than 750 pounds safely.

Sleds can be hauled either by dog teams or by manpower. Harnesses are made of stitched canvas and padded with dried grass. For man-hauling, these are fitted at the waist. Dog harnesses attach at the shoulders.

Dog teams can pull up to 150 pounds per dog on smooth level ground, or 100 pounds per dog in more challenging conditions. Typical recorded travel distances for such teams are 12 miles per day over ice and névé, and 24 miles per day over sea ice, with an exceptional one-day distance record of 58 miles. Four-man hauling teams can provide half the travel distance of a nine-dog team, and can pull about 75 pounds per man on the trail. These values should be kept in mind when planning any long overland journeys. Also remember that these distances are under optimal conditions; in bad weather, or over rough ground, travel distances can drop to less than two miles per day.

On some journeys, considerable relief can be gotten from a following wind. For this reason, many sleds carry a small mast with canvas sail which can be rigged on windy days to provide an extra "push." The added weight is minimal and the advantage significant.

When embarking on a sledding journey each team should have a well-planned itinerary, with a detailed list of goals to be achieved. Weather conditions must be taken into account when provisioning the journey. It is suggested that each sled operator keep a daily log of progress throughout the journey, noting weather and temperature conditions, distance traveled, condition and number of dogs, and food consumed. This will assist in planning future trips.

A Typical Overland Journey

The following is a typical load for a three-man scientific trip of five weeks' duration.

Sleds (3)

Fittings: Instrument box, kitchen box, kerosene tray, mast attachment, mast, spar, canvas and bamboo decking, rigging, leather straps.

Camping Gear: Tent, sleeping bags (3).

Cooking Gear: Nansen stove, mugs (3), long forks (2), scales, spoons (3), matches in waterproof tin, Primus stove, Primus repair outfit, kerosene tin openers and pourers, Primus spirit.

Repair Outfit: Spare copper wire, rivets, needles, thread, small tool kit, harness repair kit, dog medicines, and foot balm.

Medical Outfit: Field dressings, cotton wool, boric wool, pleated lint, pleated bandages, roll bandages, adhesive tape, liquid collodion, opthalmic drugs for treating snow-blindness, assortment of drugs for general treatment, canvas case containing scissors,

forceps, artery forceps, scalpel, surgical needles and silk, etc.

Photographic Outfit: Camera, film, tripod (also fits theodolite), waterproof tin containing extra film.

Surveying Outfit: Theodolite, sled meter, almanac tables, logarithmic tables, notebooks (2), angle books (2), map tube, maps, pencils, dividers and eraser, protractors and set square, prismatic compass, clinometer, sun compass.

Other Instruments: Prismatic binoculars, hypsometer, ordinary thermometers (2), small thermometers (2), specimen labels.

Hunting Outfit: 22-bore rifle with cover and cleaner, ammunition, sheath knife, sharpening stone, fishing line and hooks.

Clothes: Waterproof bags (3), each containing private clothing kits.

Odd Gear: Pick, spades (2), ice axe, alpine rope, skis (1 pr), ski stick, ski boots, attachable crampons, man harnesses (3), man-hauling tow rope, flags, waterproof bag.

Beacons: Depot flag, bamboo pole, metal depot beacon, mast, flag and ropes, waterproof tins for depositing records at depots.

Fuel: Kerosene, one-gallon tins (6).

Food: Man food: 27 person-weeks' supplies, also special or luxury foods. Dog food: dried seal meat, blubber, and pemmican.

Total Weight: 1728 pounds.

Health and First Aid

Antarctic explorers face the same sorts of health problems as any other party in the wild—cuts, bruises, broken bones—though the "large nasty predator" element of exploration is absent. However, they face more insidious problems. Vitamin deficiencies brought about by too much processed and preserved food can spell disaster, as can the twin effects of the cold—hypothermia and frostbite. These and more are discussed below.

Whenever you are thousands of miles from the nearest hospital or dentist, however, even a chipped tooth or a case of appendicitis can prove disastrous. For this reason all expeditions include skilled and versatile medical staff.

Diet

There are two problems with Antarctic rations: quantity and quality. A comfortably warm person uses about half of his or her calorie intake from food just to maintain body temperature. Drinking near-freezing water, eating snow, or using body warmth to melt snow, all rob heat—which must be made up by exercise (including shivering)—which uses more food. This is the reason polar explorers eat a diet heavy in protein and fat, typically 5000 calories a day if active (32 to 34 ounces of preserved meat, fat, etc.)

It is also vitally important that explorers aim for a balanced diet—vitamin C deficiency leads to scurvy, while vitamin B deficiency leads to beri beri, among other problems. The body retains vitamin C for approximately three months, making it vitally important that explorers allow their bodies to "stock up" before leaving on long treks. This can be a problem, as most canned and preserved foods of the 1930s were notoriously poor in vitamins. The easiest solution (on the coast) is to shoot and eat penguin (a dark rich gamey meat) and seal (a strong tasting meat, akin to steak). An inventive cook is a requirement on an expedition staying in the Antarctic for a prolonged period.

Trail Rations: the Byrd expedition of 1930 budgeted for the following trail rations, per man, per day—8 oz. pemmican, 10 oz. biscuits, 4 oz. sugar, 4 oz. powdered milk, 2 oz. oatmeal, 2 oz. dried soup, 2 oz. chocolate, 0.5 oz. tea, 0.25 oz. salt. Small quantities of butter, bacon, malted milk, and cocoa were carried as treats. Perhaps surprisingly, the biggest problem was cooking the food; when the snow starts off several tens of degrees below freezing, it is a lengthy process to warm it up, and this can seriously affect how soon the expedition can get moving in the morning. The Byrd expedition solved this by placing their oatmeal and hot water into thermos flasks when they cooked their dinner; by morning, it had cooked itself. The dogs consumed 1 lb. (frozen) pemmican per dog per day.

(Pemmican is venison or other meat, sliced, dried, pounded, and made into cakes with molasses and other additives.)

Water: the extreme dryness of the Antarctic air means that explorers require more water than they would otherwise, especially when working hard or on the trail. Each explorer should consume at least two quarts (two liters) of water daily. Coffee and tea do not count toward this amount—they are diuretics and cause the body to lose water.

Meeting this requirement may not be simple. All water must be melted before it can be drunk; and that takes a lot of fuel. In camp, with insulated huts and large stoves, this is not necessarily a problem; on the trail, however, with minimal supplies, just keeping water liquid can be a major undertaking.

Diseases

Scurvy: scurvy is a nutritional disorder brought about by lack of vitamin C in the diet. The traditional remedy is to include fresh fruit, meat, or vegetables in the diet, but this becomes difficult in the Antarctic, where adventurers may spend many months living off preserved foods. Scurvy is characterized by bleeding gums, loose teeth, sore and stiff joints, subdermal bleeding, and slow wound healing. In serious cases scar tissue starts to deteriorate, so that old wounds reopen. The body retains stocks of vitamin C for up to three months, so well-fed explorers should show few signs of scurvy in this "grace" period. Treatment is a return to a diet with a high level of vitamin C. *Keeper's note: investigators contracting scurvy receive a modifier of –3 to their CON and DEX for the duration. Wounds and injuries take twice normal time to heal.*

Beri beri: beri beri is a nutritional disorder brought about by lack of vitamin B1 (thiamine) in the diet. Thiamine is common in food, but processing can destroy it. Early symptoms include loss of appetite, numbness, and weakness in limbs. The serious forms are characterized by gradual degradation of the long nerves, resulting in a loss of reflexes (dementia is not uncom-

mon in the final phase) or edema (abnormally large amounts of fluid in the tissues) resulting in poor circulation and eventually heart failure, or both. The body stores roughly a 30 day supply of thiamine and any of high carbohydrate diets, heavy alcohol intake, or i.v. glucose infusions predispose the subject to thiamine deficiency. Treatment is a return to a varied diet of fresh non-processed foods. *Keeper's note: investigators contracting beri beri receive a cumulative modifier of –1 to DEX and STR per week as long as they have the disease. Should STR reach zero the character needs successful* **CON x5 rolls** *daily, or he or she dies.*

Injuries

The following are some medical conditions that may be encountered in the Antarctic, the Arctic, or at high altitudes. Suggested ways to treat them during play are included.

Sunburn and Snow Blindness

Sunlight reflects very well off snow. Without goggles, an explorer risks damaged eyesight due to the effects of sunburn on the retina. Snow goggles are essential. Each sunny day the explorer ventures out without goggles, a successful **Luck roll** must be made to prevent temporary blindness. The condition is frightening but goes away in 1D4 days.

Hypothermia

Hypothermia is the result of a lowered core body temperature, usually resulting from lowered environmental temperatures or immersion in icy water. The condition is serious below a core body temperature of 35°C (95°F), and emergency medical treatment is mandated below 32.2°C (90°F) when the normal shivering reflex ceases. At this point pulse, respiration, and blood pressure are all very low, and the victim could be mistaken for dead. At 31°C, the victim almost certainly will be comatose. The recommended treatment is to slowly warm the victim using passive methods (blankets, etc.). Application of direct heat sources is not recommended, and warming should not exceed 0.5-1°C (1-2°F) per hour—failure to observe this limit can result in cardiovascular collapse.

Altitude Sickness

Altitude sickness is a very serious complaint affecting the chemical makeup of the blood. It is brought on by going too quickly to high altitude without acclimatizing. There are two forms. The mild form is characterized by breathlessness, nausea, and headaches. Ignoring the symptoms is risky, and may lead to complications. The severe form develops as the mild form, but the patient's condition soon worsens as either his lungs fill with fluid and he drowns, or the brain swells, leading to coma. In either case, death occurs within a few hours of onset.

The only effective treatment in either case is to descend immediately to lower altitude (a descent of a few hundred meters is sufficient to alleviate the condition, but descent to the 3500 m (12,000 ft) level is the only recommended treatment). If this is impossible, oxygen may buy the victim more time. After a severe attack, the victim should not re-ascend above 3500 m for at least 14 days, but there is no evidence that a bout of altitude sickness makes someone more susceptible to future problems.

The danger is reckoned to start at about 3500 m. Modern theory suggests that the risk is minimized by ascending no more than 350 m (1200 ft) per day over this height, and by spending at least a week at 3500 m before attempting to spend a night at 5000 m (16,500 ft). The best way of acclimatizing is to make several short trips to high altitude, returning to 3500 m the same day. It is coincidental but fortunate that the Antarctic plateau is at almost exactly the correct height.

Suggested approaches for altitude sickness in play:

- The simplest approach to the problem is to quietly ignore it, or give your players a couple of scares. One of these might be to inflict altitude sickness on one or more investigators the first time they fly over the polar plateau. Another, more sneaky, possibility is to inflict headaches, nausea, etc., on the first group of investigators to see the City. They might just draw the wrong conclusion. Let them.
- A second approach is to have every investigator's player make a **CON x5 roll** every time their characters ascend too rapidly. A failure would lead to slight headaches, a fumble would result in the mild symptoms, while a roll of 00 would result in the severe condition. Investigators who suffer the mild form should be penalized by halving all skill levels, while those suffering from the serious form are rapidly incapacitated.

Hypoxia

Hypoxia is a deadly condition arising from lack of oxygen in the bloodstream. Its effects range from the milder to the more serious:

- Increased respiration and pulse rate (INT –1).
- Headache (INT –2).
- Nausea (CON –3).
- Slight dizziness, reduced reaction time, impaired coordination (DEX –3).
- Tingling in the arms and legs.
- Purple or bluish tinge to fingers, toes, ears and lips.
- Fatigue, sleepiness and intermittent fainting (STR –3, CON –3).
- Dimming of vision (perception skills –20%).
- Confused thinking, impaired judgment and feelings of either giddiness, elation and confidence resembling intoxication, or indifference, listlessness, apathy and depression (INT –3, perception skills –30%).
- Unconsciousness (or possibly convulsions and death due to respiratory failure if a **CON x5 roll** is missed.)

Lovecraft bypassed this problem in *At the Mountains of Madness*. Aside from noting that the thin air "made exertion difficult," his protagonists pay little attention to the rarity of the atmosphere.

Suggested approaches for the keeper:

- Keepers who wish to add a little deadly realism to their tale should have the players make a **CON x5 roll** on D100 for every fifteen minutes of exposure without oxygen, at the height of the plateau or beyond, if they are inactive or resting quietly. (Investigators who exert themselves should make the roll every one minute instead of every fifteen.) Each time the roll is missed, the keeper should apply the symptoms and

modifiers from the next item on the list above. These modifiers are cumulative.

- Characters suffering from hypoxia symptoms need an **Idea roll** to think of something, even basic concepts such as "I should get some oxygen." Unfortunately, a drastic reduction in INT, along with STR, DEX, and CON (though not hit points) can make life difficult.

Communications and Navigation

Navigation and communication are both difficult in the Antarctic. The reasons for this are closely related, and stem from the proximity to the south magnetic pole.

Navigation

Throughout the world in the 1930s, gyroscopes, magnetic compasses, and astronomical observations are combined to navigate and determine position with ease. Two of these are all but useless near the South Pole, and the third may only be used with care and calculation.

Gyroscopes tend to tumble, or *precess,* much more near the Earth's axis of rotation than they do in other parts of the world, making them unreliable aides at best. The position they hold moves slowly throughout the day.

Magnetic compasses are all but worthless in Antarctica. The south magnetic pole is several hundred miles from the earth's axis; it does not stay in one place but wanders as much as a hundred miles a day within a wide oval region, making navigation by compass when one is nearby a risky thing. Also, near the Pole the lines of magnetic force are almost vertical—they pull compass needles down more than they do sideways, making compasses very weak, inaccurate, and liable to be perturbed by nearby electrical activities, such as by radios, engines, or the famous aurora australis.

Only the heavens remain accurate and stable at the bottom of the world, and these too have their drawbacks. In the Antarctic summer months, the sun never drops below the horizon, but circles endlessly in the sky. The stars are all but invisible; only the sun and the moon may be seen or used to calculate position. Without sunrise and sunset, clocks are highly important; in clear weather, the best aid to navigation is the so-called "sun compass," a combination of sundial and chronometer that may be used to determine one's position east or west, while a sextant determines the latitude. When the sun and the moon are obscured by clouds, however, even these are of little use.

Temperatures and Wind Chill

The temperatures of Antarctica in the summer rarely rise above freezing, even on the clearest days: 10° to 20°F are "pleasant" temperatures. A typical blizzard brings temperatures of –50° to –70°F. The interior is the coldest part of the world; some areas near the "pole of inaccessibility" reach midwinter temperatures of –120°F, cold enough for carbon dioxide to precipitate from the atmosphere! Of course, the ever-present Antarctic winds cause a further problem: wind chill. The heat lost from body surfaces makes a person feel colder than the actual temperature. Fortunately for polar explorers, appropriate clothing will moderate the effects of wind chill, and wind speeds over 45 miles per hour have little additional chilling effect.

	Actual temperature, °F								
	30°	*20°*	*10°*	*0°*	*–10°*	*–20°*	*–30°*	*–40°*	*–50°*
wind									
10 mph	16°	3°	–9°	–22°	–34°	–46°	–58°	–71°	–83°
20 mph	4°	–10°	–24°	–39°	–53°	–67°	–81°	–95°	–110°
30 mph	–2°	–18°	–33°	–49°	–64°	–79°	–93°	–109°	–123°
40 mph	–5°	–21°	–37°	–53°	–69°	–84°	–100°	–115°	–133°

Cross-index the thermometer temperature with the wind speed to learn the apparent temperature provoked by the wind-chill factor.

At –80°F exposed human skin will freeze in 30 seconds. The very low humidity of the air, and the low pressure of air at high altitudes, can reduce the apparent temperature by another 5°. Average wind speed at 20,000 feet is 40 mph in the open sky, 20 mph on the "protected" ground of the plateau. In the stratosphere, beginning at 36,000 feet above sea level, winds of 80 mph are common; jet stream winds in this region, if encountered, will be considerably faster than this.

Below –25°F, a face mask should be worn—the air becomes dangerous to breathe directly. At temperatures of –40°F or lower, exertion is magnified greatly; it can take hours to strike camp; and the hampering clothing needed to survive for a long walk uses up extra strength. The equipment available in this period is not really sufficient to allow work or travel (outside of vehicles) in temperatures below –60°F. To determine when frostbite sets in at below –60°F for properly dressed characters, add 90°F to the actual temperature and cross-index that with the table in the "Frostbite" sidebar on the opposite page. *Example: for a properly dressed explorer at –100°F, the apparent temperature is –100 + 90 = –10°F. Therefore, according to the frostbite table, the explorer will suffer from first degree frostbite after five hours, second degree seven hours after that, and third degree four hours after second degree; death from overall third degree frostbite would set in long before the appearance of fourth degree symptoms.*

The ambient temperature decreases approximately 1°F for every 300' of altitude; thus, at Lake's Camp (altitude 12,000 feet) the typical temperature should be 40°F lower than at the Ross Ice Shelf on a similar day. At 20,000' above sea level, the temperature will be 67°F lower. Thus, what might be a pleasant 20°F day at the Ross Ice Shelf might be an unpleasant –20°F at Lake's Camp, and a dangerous –47°F at 20,000 feet altitude—and this is all before the effects of humidity, wind, hypoxia, and actually bad weather. ❑

Frostbite

Human tissue freezes at between –5° and –6°C (23°-21°F). This includes wind chill. Wetness or restricted blood flow aids the onset of frostbite. The skin becomes hard, white, or yellow white; the depth of the problem is difficult to ascertain.

Frostbite sets in over a period of time based on the apparent temperature, ranging from minutes to hours. It can set in after only a few minutes of being exposed to –55°F air, or after 10 hours exposure at 0°F. The first sign is a reddening or yellow-gray tone to the skin, followed by blisters 12 to 24 hours after exposure at the next stage. The danger of frostbite increases if one gets wet—perspiration, melted snow, or sea water can all equally endanger an explorer. Other injuries can also lead to frostbite, both from natural processes of changed blood flow, and possible immobilization during treatment and recovery.

There is no specific product of time and apparent temperature established yet for the onset of frostbite; this chart can be used to estimate the effects on unprotected explorers, or unprotected portions thereof. For characters properly dressed in their expedition clothes, add 90°F to the apparent temperature. As mentioned above, wetness or injury can hasten the process.

Investigators exposed for the period of time indicated, according to the apparent temperature, will get frostbite. Immediate treatment, by a successful use of First Aid or similar skill, avoids this; failure moves the explorer onto the table below.

apparent temp °F	*1st degree*	*2nd degree*	*3rd degree*	*4th degree*
30°	all day	days	n/a	n/a
20°	16 hours	all day	days	n/a
10°	12 hours	all day	days	n/a
0°	10 hours	16 hours	days	n/a
–10°	5 hours	12 hours	16 hours	days
–20°	2 hour	10 hours	12 hours	days
–30°	1 hour	5 hours	10 hours	all day
–40°	30 minutes	2 hours	5 hours	16 hours
–50°	20 minutes	1 hour	2 hours	12 hours
–60°	10 minutes	30 minutes	1 hour	10 hours
–70°	6 minutes	20 minutes	30 minutes	5 hours
–80°	4 minutes	10 minutes	20 minutes	2 hours
–90°	2 minutes	6 minutes	10 minutes	1 hour
–100°	1 minute	4 minutes	6 minutes	30 minutes
–110°	seconds	2 minutes	4 minutes	20 minutes
–120°	seconds	1 minute	2 minutes	10 minutes

Tingling or coldness in an exposed part of the body is a good sign—frostbite causes numbness. Pull in that part!

Even first-degree frostbite can limit mobility for several days, if on the hands, arms, feet, or legs. Second degree frostbite, signaled by blisters, will cause severe lesions and a few weeks of painful healing. At third degree, the frostbite injury has begun to penetrate below the skin, and large, hard "eschars" or dry crusts form over the injury; typically a couple of months is required for recovery. Two to five weeks of throbbing, burning, aching pains will begin a week or two after third degree frostbite injury occurs.

Fourth degree frostbite kills tissue down to the bone; dry gangrene will set in. The tissues involved become black, dry, and mummylike over about twenty days; however, competent medical care will probably result in amputation of the affected area just about then. An old Russian proverb goes, "the only way to treat frostbite is to wait for everything to drop off that is going to drop off and then see what you can do with what is left."

Dealing with frostbite involves restoring body temperature as swiftly as possible. For minor cases of frostbite, gentle rubbing suffices. For more serious cases, placing the affected limb in a bath of warm water is recommended. Note that an applied temperature of greater than 46°C (115°F) can cause further damage. Other folk remedies, such as rubbing, packing with snow, application of salve, or high temperatures do nothing or cause further harm. In the 1930s, unfortunately, such remedies are still recommended by many medical authorities. It is up to the keeper to decide if an investigator's or non-player character's First Aid or Medicine skill incorporates advanced thinking on the treatment of injuries due to cold.

The prognosis for recovery is good if the frozen state is only temporary and is followed by rapid thawing. In this instance, blisters develop early, are pink and large, and extend to the end of the affected hand or foot. The prognosis is poor if thawing is delayed or is by excessive heat, or if a cycle of repeated thawing and re-freezing is entered. Amputation is often required in this case as the flesh starts to decay. Early symptoms of this are dark or hemorrhagic blisters which do not extend to the tip of the affected limb. Even if serious frostbite does not result in amputation, it can still lead to other effects such as sensory loss, persistent deep pain, limited joint motion, joint deformity, and increased sensitivity to cold. ❑

Communication

The chief difficulty with radio communication in the Antarctic is the presence of the aurora australis—the "southern lights." This great magnetic storm is present year round, though it is largely invisible in the summer. It centers around the south geomagnetic pole, and disrupts radios and compasses with its constant activity.

Elsewhere in the world, long-range radio exchanges are becoming commonplace in the 1930s, using shorter and shorter wavelengths to bend signals through the Earth's ionosphere. These so-called "skip bands" can carry low-powered signals anywhere on the globe—but in Antarctica the ionospheric layers are constantly disrupted by the aurora, making skip band communication a fragile and transient thing. Reliable radio traffic can only be achieved by using lower frequencies, the so called "ground waves" used by AM radio stations among others. These require much larger antennas and more powerful transmitters, making reliable long-range traffic a thing restricted to ships and well-made base stations.

The transmitters on aircraft, such as the *Belle* or the Boeings, will not normally reach more than two or three hundred miles in Antarctica, though this limit is much higher when the aurora is quiet, or if the craft in question is attached to a larger ground aerial.

Antarctic Geography

Antarctica may be roughly divided into eastern and western sections by the Transantarctic Mountains. These mighty peaks, comprising the world's longest mountain range, extend from the northwest corner of the Ross Sea to the southwest corner of the Weddell Sea. In order to proceed inland, the adventurers must first fly over these impressive mountains, which regularly peak at two and a half miles above sea level. Antarctica is the tallest continent on earth, at an average ground height of one and a half miles above sea level, due to a series of massive plateaus. However, there are also areas that cut deep into the continent, and large areas lie more than half a mile below sea level.

West Antarctica is the smaller of the two sections, and includes the Antarctic Peninsula, which used to be attached to South America. West Antarctica also includes a few active volcanoes, and the Vinson Massif, the highest actual point known in Antarctica, close to the Ronne Ice Shelf.

Of East Antarctica, where the Starkweather-Moore Expedition is headed, significantly less is known. Because of the broad area to be covered and the difficult conditions under which observations are made, even today there are areas which are insufficiently explored. Mountains and small ranges dot the white landscape, with the occasional black rock poking out of the ice where it is too vertical for snow to accumulate.

Crevasses

Crevasses are cracks in the ice, and are often very deep. They frequently have shelves and plateaus on the way down, which may save the unfortunate discoverer of the crevasse. They can be obvious, or they can be covered in a thin crust of snow, and be very difficult to spot until the ice breaks through underfoot. People on foot are more vulnerable to falling into such crevasses, as skis and snow shoes help to spread the weight. Explorers in unknown territory should make use of bamboo poles to probe the ground ahead, and rope themselves together.

Whenever a party is crossing unknown ice, the keeper should decide whether a crevasse field is present. If so, roll on the following table for the result. If the party is on foot, rather than on snowshoes or skis, add 10% to the dice roll; if the explorers are probing the ground ahead with poles, subtract 10%:

D100	*result*
01-50	Field crossed; no difficulty encountered.
51-80	Crevasse discovered; the party must backtrack or go around.
81-95	Crevasse discovered by accident; someone falls D10 feet and gets stuck or falls on a ledge. A successful **Climb roll** is needed to get out (-20% penalty if not helped from above). Falling damage may apply.
96-99	Crevasse catches a sled and team. Dogs, sled and driver all fall D20 feet before the fall is stopped. A successful **Climb roll** is required for the driver to get out (-20% penalty if not helped from above.) Sled and dogs are not retrievable without help from the surface. Falling damage may apply to dogs and driver.
00	Large deep crevasse catches a sled and team. Dogs, sled, and driver all fall 3D20 feet and must be rescued from above. Falling damage applies.

Antarctic Weather

Any description of Antarctic weather can be broken down into two time periods, winter and summer, and three regions—the surrounding ocean (including the pack ice), the Antarctic coastal lowlands (including the permanent ice), and the polar plateau.

Winter, All Regions

During the winter months of April to August all areas are essentially unnavigable, and exact details of the conditions become irrelevant. Temperatures average –30°C (–22°F) with a recorded low of about –60°C (–105°F). Wind speed averages 30-40 mph with gusts as strong as 140 mph. Any human without fuel, food, and shelter will be dead long before spring, and any exposed structures (*e.g.*, airplanes) are liable to damage or destruction. The Byrd expedition of 1930 used a series of half-buried huts with connecting snow tunnels, and completely entombed their aircraft in the snow. Even the dogs were housed underground. The pack ice reaches thicknesses of several feet, and is unnavigable to any ships of the day. In the coastal areas, the sun does not rise above the horizon from mid-April to mid-August, making any activity that much more difficult.

Summer, at Sea

During the summer months, cyclonic storms circle the continent, always moving west to east. The effects of heat exchange and moist air interacting with cold polar air means that the oceans surrounding the continent are extremely stormy—leading to the common appelations of "the roaring forties" and "the furious fifties."

Winds blow continuously off the Antarctic mainland, and veer west (due to the Earth's rotation) to become fierce southeasterly winds in the latitudes 60° to 80° south. These cold katabatic winds are some of the strongest surface winds anywhere in the world, with the possible exception of those in well-developed tropical cyclones.

Wind speeds of 200 miles per hour have been reported along the mountainous shores, and winds of 70 to 100 miles per hour are likely in any bad weather. The ocean region surrounding Antarctica is the stormiest in the world.

Ships braving these waters can expect an extremely rough ride. The pack ice starts to break up and become navigable in November or early December, and starts to freeze over in early March.

At sea, in clear weather, the ice conditions over the horizon can sometimes be guessed by observing the color of the sky or clouds just above the horizon: a "white" sky is the reflection of ice, and a slate-colored "water" sky is a reflection of the open sea.

Summer, Coastal Regions

Summer weather on the coastal fringe is relatively balmy. In midsummer, the temperatures on the northern peninsulas can reach + 15°C (59°F), with a mean temperature of about freezing. The rest of the lowlands average about –10°C (14°F). For the interior, the mean temperature is generally in the range –20°C (–4°F) to –30°C (–22°F).

Wind is still a problem: the summer average is 15 mph, and a slight increase in wind speed can make the air flow turbulent. This leads to blizzard conditions on the ground, even with a cloudless sky, as snow is picked up and moved about. Storms like these can blow up with little warning, and reduce visibility to two or three yards. The winds in the interior are lighter (averaging about 10 mph), though storms are still common.

Wind chill is an important factor of Antarctic life. At Antarctic temperatures, the effective temperature is reduced by approximately 8°C (15°F) for every 10 mph wind speed. Anyone moving about in an effective temperature of –35°C (–30°F) will be extremely uncomfortable, and risks rapid frostbite even presuming that they are wearing full Antarctic gear. Temperatures below –50°C (–60°F) make life outside one's tent all but impossible.

Aside from the obvious danger of storms, fog is a common and hazardous feature of coastal Antarctic weather. The two common types of fog are "advection fog" (thick and dense, lasting for days at a time) and "frost smoke" (also known as 'sea smoke,' as it rises from the surface in tendrils, obscuring the horizon but leaving the sky clear).

Rapid ice formation is a hazard whenever moisture is present. Most often this is at or near the sea. Salt spray freezing onto a vessel causes deck ice, which can accumulate rapidly, especially in storms. This will increase the topside weight of the vessel, and seriously reduce its stability (again, especially in storms). Deck ice is removed with scrapers, brooms, shovels, etc. wielded by the crew—dangerous work on deck in a storm.

Sea ice just over one inch (about 2.6 cm) thick will support a persons on skis or snowshoes—but they should stay seven yards apart. A person on foot can safely cross two-inch-thick sea ice, as can lightly loaded dog sleds, with seven yards separation between persons or sleds. A heavily loaded dog sled should not attempt ice less than six inches thick. A snowmobile or tractor, not over four tons weight, needs ice eight inches thick, and should stay 15–20 yards from other vehicles. Aircraft of this period should not land on ice under 20 inches thick.

Summer, Inland Regions

Blizzards, lasting several days, and blowing snow are the usual effects of storms inland. In a blizzard, or any strong wind, surprising amounts of very fine snow will drift into unheated confined spaces—such as parked aircraft, tents, etc. One unexpected bad effect of "good" weather can be snow melt, which makes land travel very difficult.

Due to the ice crystals blowing about the sky, any number of interesting and colorful fogbows, halos of various sizes, parhelic circles, sun dogs, sun pillars, sun crosses, coronas, crepuscular rays, glories, mirages, and *fata morgana* can be seen.

A danger to both surface and aerial travelers is polar "whiteout," when snow hides surface features and the sky is covered by uniform clouds (so that there are no shadows). The horizon disappears. Distance becomes impossible to estimate, and navigation difficult—indeed, severe disorientation can set in.

Another problem is snow blindness, a temporary effect caused by snow-reflected ultraviolet light. An affected person's vision will turn pink, then red, and finally vanish over a few hours, and might take two or five days to return. By the 1930s, explorers have known for some time to wear dark glasses.

Rapid Weather Change

Storms can blow up out of clear skies, and conditions can deteriorate from fine to whiteout in less than an hour. Explorers on the ground should take survival gear sufficient for several days, even if they anticipate traveling only for a few hours.

Flying Weather

Flying during the winter is essentially impossible in the 1930s. What windows of opportunity do exist are interspersed among blizzards of sufficient power to destroy an unprotected aircraft, making keeping an aëroplane in a state of readiness very difficult. As noted above, the Byrd expedition of 1930 buried their planes during the winter, having lost one in an autumnal gale.

Flying in coastal regions during the summer months is risky, and should not be undertaken unless the 24 hour weather forecast is favorable. Conditions can change rapidly (a temperature drop of 36°C/65°F in 20 hours has been recorded), and landing in a blizzard is impossible with available technology. Approximately 50% of days are suitable for flying, while a further 25% of days are suitable for sledding or skiing. Approximately one in four days are unsuitable for prolonged outdoor activity, and can be assumed to be whiteout or blizzard conditions.

Weather in the upland interior is similar to that of the coastal zones. There are fewer ground blizzards, however, and less precipitation; the key limiting factors are powerful winds and unpredictable cloud cover. Roughly three out of four days in the interior may be considered suitable for flight.

No "random weather" tables are provided in this scenario. Antarctic weather during the course of play is spelled out where needed; the keeper may, if desired, use the descriptions above (or an investigator's **Luck rolls**) to determine the weather elsewhere.

Magnetic Storms

This close to the magnetic pole, electric and magnetic storms are common and pronounced. Such storms can blank out communications for days, and transient magnetic and electric variations can lead to a compass being out. The common error is by up to three degrees, but a deviation of almost five degrees has been recorded. An error of three degrees would mean a spatial error of five miles on a trip of 100 miles.

Keepers should feel perfectly justified in cutting all communications from portable transmitters (such as in aëroplanes) for one day in every five to ten.

Odd Phenomena and Weird Skies

The following are some bizarre and interesting conditions which the explorers may encounter. All are natural, but may be interpreted otherwise by the adventurers.

- ***Explosions:*** in the extreme cold, when a glacial field is covered by shadow after a period in the sun, it contracts explosively. Explosions can be single, or can occur in clusters, sounding like heavy gunfire.
- ***Glory:*** roughly the same as a halo, but a radiant nimbus seen around either a light or a dark center, or any central motif.
- ***Green Sky:*** this well-known effect happens when the sun is close to the horizon, the sky is cloudless, and there is snow on the ground: a section of the sky turns beautiful grass-green. Sometimes the band is very large.
- ***Halo:*** rings of light around the sun or the moon, these are caused by thin layers of ice crystals refracting the light of the body in question. If multiple cloud layers exist, multiple halos may also.
- ***Mirages:*** just like in the desert. Distant scenes reflected over the horizon. Often upside down, sometimes moving at alarming speeds through the sky.
- ***Rainbow Breath:*** ice crystals freeze in the breath when exhaled, catching the light at the correct angle to be seen (by someone else) as a rainbow shimmer.
- ***Sun Crosses:*** this is another phenomenon caused by ice in the upper atmosphere—bars of light radiate outward from the sun like a cross. When a sun cross occurs at the same time as a halo, the result is spectacular.
- ***Snowbow:*** sometimes called a "white rainbow," these are essentially halos that are occluded by the ground.
- ***St. Elmo's Fire:*** blue auras and sparks that linger around antennas, people, tents, etc. Caused by static electricity in the extreme dry cold.
- ***Spatial Disorientation:*** the very clear air in the Antarctic makes judging distance tricky. Many explorers have seen large mountains far off, and then found them to be small humps in the snow a couple of miles on. A fumbled **Spot Hidden roll** or **Navigate roll** might well trigger this problem.

Altitude

The pack ice and the coastal lowlands are, of course, at or near sea level. Explorers traveling inland, however, must take into account the effects of altitude, especially if they wish to cross the Miskatonic Mountains onto the high plateau beyond.

Antarctica's Polar Plateau rises to a height of roughly 10,000 feet (3000 m) above sea level. The thin air makes exertion more difficult, causes headaches, shortness of breath, impaired night vision, pounding hearts, difficulty sleeping, and low blood pressure. Explorers spending time at this altitude find that they become acclimatized after a few days. The symptoms decrease gradually, though they never entirely disappear. See the "Altitude Sickness" entry on page 299. Notably, smoking lowers the body's tolerance for altitude for several hours, after even one cigarette.

At Lake's Camp, the altitude is about 12,000 feet (3500 m) above sea level. The effects are similar to those at 10,000 feet. Water boils at 190°F (87°C) at this height.

Persons ascending above these heights must be acclimatized. In addition, climbers above this altitude should carry oxygen supplies with them—the available oxygen in the air is insufficient for normal activity without damage to the body and the brain. (See the "Hypoxia" entry on page 299.)

At just above 20,000 feet, the altitude of the plateau beyond the Miskatonic Mountains, the air pressure has declined to 13" of mercury (6.3 psi), or 43% of sea level standard (29.9" Hg, or 14.7 psi). Water boils at about 175°F (79°C). The reduced pressure itself is only an annoyance at this altitude; however, the low partial pressure of oxygen is a threat to human health. The oxygen content remains constant at 21% of the total atmospheric pressure, thus 2.7" of mercury (1.3 psi). Unfortunately, the partial pressure of water vapor in the lungs remains constant at 1.85" Hg (0.9 psi), and carbon dioxide partial pressure in the lungs at this altitude is 1.4" Hg (0.7 psi); the oxygen being breathed from the free air is only 20% of the remaining pressure.

Human beings, at least, cannot whistle at this altitude due to the low air density.

A person exposed to the thin air of the plateau without additional oxygen quickly (within CON minutes) exhibits the symptoms of hypoxia.

Antarctic Flora and Fauna

By far the majority of Antarctica's plants and animals live in the sea off her coasts. Although the southernmost continent has some of the world's worst weather, the surrounding waters teem with life.

Inland, no natural animals will be seen, other than what the expedition takes with them. There are occasional wingless midges and mites that live on the ice, but characters will have to make an intensive effort to find them.

Students of Antarctic plant life will be very quickly disappointed. There is little plant life on the Antarctic continent, with the exception of mosses and lichens. As far south as the Starkweather-Moore party is landing, they will likely encounter only lichens, small scraps of plant-life clinging desperately to the sea coast rocks. Unlike most places, however, the Antarctic lichens can be red, orange, or even yellow on sea-battered rocks. Inland, there will be no sightings of plant life on the ice, unless the explorers bring some themselves.

Penguins

Most famous of all Antarctica's sea life are the penguins. Unique to the Southern Hemisphere, these flightless birds are found in several different species all along the coasts and islands of Antarctica, as well as at points in Australia, New Zealand, South America, Africa, and associated islands. Penguin species on Antarctica range from the small (28 inch tall) Adelie to the larger (39 inch) emperor penguin.

As a rule, penguins are uncomfortable and awkward on land, but they are consummate swimmers, swooping through the freezing ocean waters like agile sparrows, and attaining speeds of six to nine miles per hour. Penguins are actually able to hurtle themselves out of the water onto ice floes, a feat which enables them to escape their primary predator, the leopard seal.

While on the coast of the Ross Sea, the Starkweather-Moore Expedition is most likely to find emperor and gentoo penguins.

Emperors are the largest of the penguins, averaging three inches over three feet, weighing in at 66 pounds. They have a black cap and blue-gray back and neck, and a lemon-yellow belly, with dots of brilliant orange marking the ears. The gentoo penguin is a smaller bird, only two and a half feet tall, and weighs approximately 13 pounds.

The gentoo is the classic penguin, with a black back and white belly, and large flippers that nearly touch the ground as it walks. Natural penguins are only seen on the Antarctic coast, and on surrounding islands. Once the player characters are inland, they probably see no natural animals at all.

Seals

Preying on the penguins of the Ross Sea are fair numbers of Ross and leopard seals. Seals are pinnipeds, and to the uninitiated, look somewhat like dogs as they swim along the surface. Investigators are likely to see leopard and Ross seals sunning themselves during the relatively warmer summer months, lying on stones or waiting for an opportune fish, but most seals will be seen in the water. Seals on land are generally lazy and inoffensive unless attacked. Seals in the water are lively and alert to their surroundings.

The Ross seal is a hefty 7.5 feet in length, and weighs over 440 pounds. This is not something that a single hunter can easily drag back to base camp. Ross seals are dark uniform gray along the back and flanks, with a silvery belly. They have small heads with large brown eyes and mouths full of needle-sharp teeth.

The leopard seal, larger than the Ross, attains a full 10 feet at maturity, and weighs in at over 770 pounds. Leopard seals come in varying shades of gray, with numerous dark spots from which the species draws its name, with long, sinuous bodies that are larger than those of the Ross seals. Young and yearling seals of either sort are very seldom seen, and neither seal is especially prized for its pelt.

A single seal has four to five inches of protective blubber insulating its internal organs. About one half of a seal's mass is in edible meat; much of the rest is blubber. Blubber is highly nutritious, and useful for a wide variety of things, but while many expedition members have come to enjoy eating the dark and suspicious-looking seal meat, few have ever developed a taste for blubber.

Whales

Aside from fish, the other animals Antarctic adventurers are likely to see are whales. Due to recent whaling efforts, the tremendous blue whale is seldom seen in the Antarctic anymore, although the smaller fin, sei, minke, southern bottlenose, and killer whales may be sighted from ship decks. The most likely sighting will be that of a pack of orcas—killer whales—prowling for seals, penguins, or larger prey. A pod of these black and white sea wolves is a fearsome sight indeed. Killers are well known in the 1930s for their fierce and predatory habits. (*Free Willy* will not be produced for nearly sixty years!) Many accounts tell of pods of killers chasing ships and even overturning small boats in calm waters. Investigators may be comforted, however, by the fact that there is not a single record of a human actually being attacked by a killer whale.

Antarctic Advice and Relevant Facts

Here are some polar do's and don'ts. If James Starkweather had followed these, he might have encountered a different fate.

- When leaving camp, by any means, make sure you bring your survival gear (clothing, sleeping bag, 3–10 days of rations, etc.).
- Never travel alone: have at least two persons in a party, and in crevasse country rope at least three together. The use of bamboo poles or other objects to probe the snow ahead should be considered mandatory.
- A competent, experienced navigator is a must.
- Perspiration is dangerous: keep clothes dry, and change socks twice daily.
- Do not touch cold metal with bare hands. If you should stick a hand to cold metal, urinate on the metal to warm it and save your skin. If you stick both hands, you'd better have a friend along.
- Depots should be liberally flagged. It is recommended that all depots and other sites should be bracketed by flags for at least a quarter of a mile on either side.
- Be careful handling liquids other than water—such as gasoline, kerosene, or alcohol. Contact at low temperatures can induce immediate frostbite.
- Whether or not you eat regularly, be sure to drink at least two quarts of water per day, and not more than one third of this as coffee or tea.
- Sea and shelf ice can break up in minutes, and glacial fronts frequently drop large pieces of ice. Avoid these features. *Never* camp on sea ice.
- Falls into polar seas are hazardous—only 15 minutes of immersion in freezing temperature water causes death. A person in freezing water can swim 100 to 200 yards; clothing should be kept on while swimming. Once out of the water, if help or shelter is unavailable, keep on your feet and keep moving.
- On the trail, split up items of essential equipment between vehicles, sleds, and individual packs, so that loss of one vehicle or man will not endanger the party. For small parties with only one radio or other survival essential, place those treasures on the last vehicle, sled, or man.
- Fire in camps is highly dangerous, as almost no water is available, and wood can dry rapidly in the low polar humidity.

Temperature Effects

As the temperature drops, various weird and wonderful things start to happen!

- –25°F (–32°C): photographic film becomes brittle.
- –50°F (–45°C): electric torches cease to function as the chemical batteries fail. (Batteries last a long time in the intense cold, but are often unusable until warmed.)
- –55°F (–48°C): kerosene freezes; electric cable insulation becomes brittle.
- –60°F (–51°C): breath freezes; non-freezing ink freezes.

- –70°F (–57°C): even well designed machinery starts to fail (see below). Inventive keepers might have the clocks stop when this happens, just to unnerve the players.

Machinery Malfunctions

Machinery can malfunction in one of two ways. Firstly, lubricants or water vapor can freeze inside a mechanism, locking it shut. This is a particular problem when an item is taken from a relatively warm room (a tent, or the underground areas of the City) out into the cold. The traditional way around this is to leave such mechanisms next to the stove for several hours before taking them outside. This does imply that equipment that is required to work in the cold must stay there. Charging outside with that pistol is a sure fire way to ensure it does not work when required. Any items abused in this way should be assumed not to work in the cold.

Secondly, different materials expand or contract differently as the temperature changes. Something which works smoothly at room temperature can jam or break in the freezing cold. The only solution for this is to get things specially made, and to use equipment that is as simple as possible. For game purposes, presume that most expedition equipment is designed for the cold. Increase the malfunction chances of simple firearms (revolvers, bolt action rifles, and pump shotguns) by 5%, and other firearms by 10%. A **DEX x5 roll** for trying to reload while wearing very thick gloves would also be reasonable.

The following additional tips should also be kept in mind.

- Explorers should remove oil from equipment such as cameras, and if a camera lens is breathed on, the camera has to be warmed up thoroughly before being useful again.
- Photographic developing, which uses water, is very time-consuming. Bathing is impossible without major resources and shelter.
- Any firearm will need to be warmed up inside clothing (or a tent or a heated airplane cabin) for 15–20 minutes, or it will likely jam; usually only pistols can be carried under clothing, of course. After being exposed to cold air for a period of time which would cause first degree frostbite, the weapon must be warmed up again.
- Aircraft engines which have cooled down need 45 minutes to an hour of warming with a hooded fire source (or lots of blowtorches) before they will start at temperatures below 25°F.
- Ice formation in oxygen breathing apparatus is a real danger—economizers, if not used carefully, can pack up with frozen moisture from the exhaled breath.

Aircraft Maintenance

Operating aircraft in the unusual conditions of the Antarctic is risky, but the risks can be minimized with diligence and proper precautions. A proper pre-flight check and basic maintenance should be performed before each flight to ensure that all systems are working correctly.

The two important features of Antarctic weather which most affect flyers are the extreme cold and the continual presence of fine dry snow. The cold does more than cause everything to freeze; engines and other parts expand and contract a great deal due to the extreme changes in temperature, and this can cause fatigue in metal and other rigid parts. The snow gets into everything, even airplane interiors, and can build up unexpectedly or damage delicate devices. Aircraft engineers should carry plenty of spare parts, and replace components whenever there is a hint of trouble.

In this adventure, the extreme altitude of many flights presents an additional strain on aircraft engines and control systems. The thin dry air greatly increases the need for regular lubrication, and requires the motors to work harder with less of a cooling airflow. Any flight requiring oxygen for the crew (*i.e.*, above 18,000 feet) should also be considered an additional risk to the aircraft systems. Fuel efficiency drops greatly as well on such flights; even if no mishaps occur, aircraft flying long distances at extreme heights receive, at best, 75% of their rated fuel range.

Check Before You Fly

Preflight checks and maintenance can be performed by anyone with Pilot or Mechanical Repair skill of 25% or better. At a minimum, a normal preflight check in the Antarctic should take 30 to 45 minutes and include the following steps:

- Heat the fuel lines and engines so that fuel flows freely.
- Check free motion and proper tension of all control cables to the wings and tail.
- Ensure no unwanted buildup of snow and ice on the hull, wings, tail, or inside the fuselage.
- Check to make sure all flaps move correctly.
- Lubricate the engines and important moving parts.

Other components, such as interior systems, may be checked as desired.

Aëroplane Starting

Starting a motor in the Antarctic is a non-trivial exercise. Any engine must be drained of all oil when not in use (lest it freeze). With proper precautions, an engine will stay warm for perhaps two hours before this becomes a problem. Starting an engine consists of warming the motor for approximately an hour with a kerosene blowtorch blowing hot air into a canvas hood completely covering the engine. When the engine is sufficiently warm, pre-warmed oil is poured into the engine, and the engine can be started. The hazards inherent in this process are obvious.

Chances of Failure

Base chance of failure on any flight	5%
Added chance, each time preflight maintenance is not performed	+ 5%
Added chance, each extended flight above 18,000 feet	+ 5%
Added chance, due to condition of aircraft or unusual situations	varies

Failures in flight can occur in any system. There are also failures that have nothing to do with aircraft systems but are due to the special conditions of the Antarctic. The keeper may roll randomly or select items from the list below as desired to fit the scene.

Aircraft Systems Malfunctions

D10	*result*
1:	***Engines:*** ignition failures, cracked engine blocks, frozen drive shafts, lack of lubrication, etc.
2-3:	***Control wires:*** too loose, too tight, missing, broken, frozen in place, etc.
4-5:	***Fuel Systems:*** clogged or broken fuel lines, leaky tanks, broken pumps, etc.
6:	***Landing Gear or Skids:*** missing, loose or broken wheel, loose or missing skis, missing tail skid or wheel, fractured undercarriage, loose or broken guy wires, etc.
7:	***Fuselage:*** warped or broken frame, snow in interior areas, windows popping out or losing seal, doors that won't close or won't open, etc.
8-9:	***Wings/Tail:*** jammed rudder or ailerons (in any position), broken or missing same, icy buildup on surface, etc.
0:	***Interior Systems:*** heaters, oxygen, internal electrical, pilot instruments, radio, etc.

Climbing the Miskatonics

Whether from an aircraft accident or because of unquenchable curiosity, the investigators may find themselves on foot in the Miskatonic Mountains (or the Western Range). The first part of this information discussing the general terrain of such mountains; a few more paragraphs discuss the difficulties of climbs, the usefulness of rope, and the consequences of falls.

For climbers, such ranges have three regions—the foothills, the upper slopes, and the high spires.

The Foothills

The foothills of the Miskatonics describe a band of mountains a hundred miles wide on the eastern side of the range. Peaks here rise as high as 16,000 feet above sea level. The Miskatonic foothills are true mountains in their own right, being composed for the most part of the same Pre-Cambrian slate and other sedimentary strata as the parent range.

These mountains are very old and worn by time and weather. Unless the explorers are determined to climb the highest peaks, steepness of the slopes should not be a problem for them. There are few climbs through the foothills more strenuous than a Class 2 (see further below for classes). Glaciation, however, is extensive in the lower regions. In addition, many apparently navigable slopes are made up of loose talus and broken rock crumbled from higher mountainsides, covered by snow and ice. Such surfaces are extremely dangerous, and may collapse into deadly landslides at any time from the disturbance of the investigators' passage.

At one time, geologic ages ago, the elder things built broad smooth avenues through the foothills, providing easy travel from the high passes down to the polar plateau. Some of these remain. Thought buried now under ice and fallen rock, they are still evident from the air and easier to traverse that the surrounding terrain.

The Upper Slopes

The upper slopes of the Miskatonics rise, like the Himalayas, in a colossal arc across the continent. Peaks are arrayed as high as 25,000 feet. Most of the upper slopes are steeply angled bare rock. Snow and ice build up only in protected pockets; strong gusting winds upwards of 100 miles per hour are not uncommon.

The greatest dangers for climbers here are crumbling footing, falling rock, and unexpected winds. Climbers should remain roped together at all times; see the rules for slopes and ropes below. Daily climbs across the upper slopes should be considered Class 2 to Class 4. Above 18,000 feet, oxygen is required for safe travel. If oxygen tanks and masks are not available, refer to the article on hypoxia on page 162 for the effects of deprivation.

Here and there in the high slopes, explorers may find ancient remnants of the constructions of the elder things. Almost all of these are above 20,000 feet, and are examples of the cave mouths and "cuboid excrescences" described by Lake and Dyer.

The High Spires

The high spires make up the central spine of the range, thrusting from 22,000 feet to more than 30,000 feet above the sea. These impossible peaks are all but impassibly steep on their near-vertical surfaces—however, they are riddled with eons-old tunnels, caves, and passages. The Miskatonic's high spires are not really natural mountains at all, but artificial constructions, built up by the elder things atop the true mountains over millions of years, to house their alien temples and the mechanisms which they used to enrich the thin air of the high plateau.

Exploration of the internal caves and tunnels of the high spires should be treated in much the same way as the City proper. No useful machinery of any sort remains. The bands of murals should be quite illuminating. Most of the construction in the high spires comes from the Archaic period; popular themes are the construction of the God Trap, the catastrophe that resulted from the capture of the Unknown God, and the subsequent struggle to keep the high plateau habitable as it slowly pushed up into the stratosphere.

The greatest dangers to explorers on the outside of the high spires, including in Dyer's Pass, are the lack of oxygen, the near-vertical slopes, the deadly drag of the hurricane winds, and the terrible mind-shattering *noise* made by the ancient gales as they flute and shrill through the endless tunnels and caves. All external climbs on the spires should be considered Class 3 or higher.

For those traveling inside the spires themselves, the steepness of the slopes are not an issue, as ramps and shafts are frequent; however, the wind is much more dangerous, and the howling whine of its passage is, at times, strong enough to deafen or even kill.

Slopes and Ropes

Climbers in the mountains should always remember to travel in pairs at least. Ropes, while recommended for all climbs, are not without danger in the Antarctic. The best available climbing ropes in 1933 are made of hemp, are both stiff and heavy, and freeze into near-uselessness at subzero temperatures. It is impractical for a climber to carry more than about 100 feet of man-supporting rope in this period.

Ice axes and crampons are in use for Antarctic explorers, and pitons are available but do not see wide service.

Class Ratings of Climbs

The rating of a climb is based on a number of factors—the steepness and irregularity of the slope, the friability of the stone, the presence of overhangs, high winds, and other considerations.

The route up the Matterhorn is (we believe) a Class 3 climb. Most of the roads to the peak of Mount Everest are between Class 4 and Class 5.

The keeper should require inexperienced climbers to make two **Climb rolls** per day, multiplied by the Class rating of the slope. A typical Class 1 foothill climb, therefore, requires two successful rolls for safe passage each day, while a Class 3 climb requires six.

A character with Climb 60% or higher is considered an experienced technical climber; he or she needs only one **Climb roll** per day, multiplied by the Class rating of the slope.

Falling

Explorers with failing **Climb rolls** have slipped and possibly fallen. Climbers who are roped together each receive a bonus 10 percentile Climb skill increase. If an explorer's player rolls over his/her resident skill, but under the modified chance, the explorer has been caught short of a fall by his/her mountainside companions. Explorers who fail the modified roll have fallen.

Falling explorers tumble down the mountainside 1D20 feet per Class level of the climb. Bruising damage applies when falling: falling characters take (1D6-2) points of damage per 10 feet of fall. If the falling character is roped to another, the maximum distance of the fall is the length of the rope between them; however, the second individual must also receive a successful **Climb roll** or be pulled along.

If the **Climb roll** is fumbled, the climber suffers a spectacular misfortune, most likely plummeting to his or her death in some tragic and colorful way. Pitons snap or dislodge, ropes break, ledges crumble.

History of Antarctic Exploration

Antarctica is the only continent without any sort of indigenous human population. Because of this, and because Antarctica has never offered any historically lucrative trade, its exploration has remained the domain of pure science rather than that of better-funded commercial explorers. Most of the expeditions in the Age of Exploration involved a search for a faster way to India, bringing wealth to the company that discovered such a route. They were not interested in dangerous and inhospitable terrain.

This, combined with the deadly bulwark of pack ice that infests the water surrounding the continent, has made exploration of the southernmost continent very slow indeed. A single iceberg sank the mighty, steel-hulled *Titanic;* how much more frightening must it be to see dozens of icebergs from the deck of a one hundred and sixty ton ship made entirely of wood?

Nevertheless, there have been legends of a great southern continent somewhere south of the Horn, sometimes described as a lush tropical Eden, since the fifteenth century.

Exploring the Southern Seas

The earliest of these tales of the far south were essentially cartographer's fancies. The first known purposeful penetration into the southern seas in search of the mythic land was made by Yves Joseph Kerguelen-Tremarec of France, in 1771. He found what he believed to be a part of a continent, but his discovery was in fact an island more than a thousand miles north of Antarctica proper. Kerguelen-Tremarec never even reached the Antarctic Circle (66.5 degrees south).

In January of 1773, British explorer James Cook penetrated the Circle in two ships, the *Resolution* and the *Adventure*. Cook quickly encountered ice, and could not continue further south, but was able to demonstrate that there was no land connection between New Zealand and Tierra del Fuego as had been previously supposed. His discovery of the South Georgia islands soon brought sealers from both England and America. N. B. Palmer, an American sealer, discovered the mountainous Palmer Archipelago. Later, George Powell, a British sealer also based on South Georgia, surveyed the South Orkney Islands.

In 1819, Russian Emperor Alexander I sent an expedition commanded by Fabian von Bellinghausen to the South. Bellinghausen discovered the first land within the Antarctic Circle, Peter I Island and Alexander Island. Like Cook, Bellinghausen circumnavigated the Antarctic, but he was able to do so at a more southerly latitude. Though he did not know it, Bellinghausen was probably the first to look upon the Antarctic continent.

Following Bellinghausen's voyage, several attempts were made by the British to find suitable whaling or sealing territories. These were funded by the famous Enderby and Sons of London. In 1823 James Weddell, in the brig *Jane* and the cutter *Beaufoy*, sailed into the Weddell Sea and achieved the most southerly position of any human to that point: 74 degrees south. In 1830 John Briscoe, also funded by Enderby, spent four weeks south of the Antarctic Circle. He saw, but was unable to reach, Enderby Land, a section of the Antarctic coast on the Indian Ocean.

In 1835, spurred by the importance of obtaining magnetic observations in the far south, France, England, and the United States began plans for separate expeditions to the Antarctic. The French equipped the *Astrolabe* and the *Zelee* under James Dumont d'Urville, while in 1836, the United States authorized Lieutenant Charles Wilkes to follow Weddell's route to the south. With a grand fleet of five ships, Wilkes encountered terrible weather and frequent fogs. Although land was sighted, none of the crews were able to set foot ashore. Wilkes' Land is now the name of a large section of Antarctica, also bordering the Indian Ocean.

The Ross Expedition

The most famous of the Antarctic expeditions in the 1830's was England's Ross expedition, mounted in 1839. It consisted of two ships, the *Erebus* and the *Terror,* which were designed specifically for Antarctic exploration. (For the strange fate of these two vessels while they served the lost Franklin Expedition, see Pagan Publishing's scenario *Walker in the Wastes.*) With strengthened hulls to withstand the ice, Ross intended to sail all the way to the magnetic pole. He encountered pack ice and slowly forced his way through it for five days when he reached open water. Sailing farther south, he sighted a great chain of mountains along what is now known as Victoria Land.

Ross landed on Possession Island and patriotically claimed the mainland (on which he could not land) in the name of Queen Victoria. Continuing southward, he saw and named Mt. Melbourne for the prime minister, and two volcanoes, Mt. Erebus and Mt. Terror. Ross also discovered the great ice shelf that now bears his name, a tremendous wall of ice rising from the water to a height of over 200 feet. Ross followed this spectacular natural formation for over two hundred and fifty miles, and never saw a gap or break through which he could sail.

Although Ross searched for a winter port, as he desired to spend the winter in Antarctica, the coastline of Queen Victoria Land was ice-locked and inaccessible. Ross' voyage is considered one of the most significant and remarkable voyages in all of Antarctic exploration.

The Victorian Age

Despite Ross' phenomenal discoveries, only one brief attempt was made to penetrate Antarctic waters in the thirty years that followed. However, in 1874, a steamship—H.M.S. *Challenger*—broke through the Antarctic Circle and took sea bed dredgings which demonstrated a shoaling of the ocean towards the ice, indicating proximity to a continent.

The next ships to penetrate into the Antarctic were mostly whalers, beginning with Captain Larsen's *Jason* in 1892, nearly twenty years after the *Challenger.* These ships were primarily on missions to find new whaling grounds; in 1894 the famous whaler Sven Foyn sent his ship the *Antarctic* to test the whaling off the coast of Victoria Land. On Jan 23, 1894, a small party landed on the mainland of Antarctica for the first time, near Cape Adare.

In 1895, Sir Clements Markham, president of the British Royal Geographical Society and of the International Geographic Congress, championed the cause of Antarctic exploration. At his urging many European nations began once again to show an interest in the southernmost continent. Responding to the call, Captain Adrien de Gerlache organized and led an expedition from Belgium. Gerlache's *Belgica* had the misfortune to get frozen into the ice, and drifted for more than a year. Although one crew member died, the scientific data that came from the *Belgica* expedition was unique. *Belgica* was one of the first Antarctic expeditions to have its results published formally.

The first expedition to winter over in Antarctica was that of Borchgrevink, who left England in 1898, and remained south for all of 1899. Although the party lost its biologist and was unable to make sled journeys to the south, Borchgrevink did prove that it was possible to withstand the intense southern winter, and noted that the Ross Barrier ended significantly further south than it had when Ross first discovered it in 1842.

Sir Clements Markham himself organized a British voyage in 1901. The *Discovery* was built especially for Antarctic exploration. Commander Scott led this mission, accompanied by Lieutenant Shackleton. The *Discovery* party was to spend a winter on the ice, and was the first such exploratory team to work from a settled base. Despite many hardships, including scurvy, the death of their sled dogs, and breakdown by Shackleton who had to be sent home on a relief ship, much was discovered about Antarctic conditions and the art of surviving in them. One member of the party, named Armitage, pioneered a route to an 8,000 foot plateau west of the camp headquarters. When it became obvious that the *Discovery* would not be able to get clear of the ice, the group remained for a second long Antarctic winter. During this second winter, Scott, without any dogs, explored 300 miles west of the ship, 250 miles overland.

After the second winter, the Admiralty ordered Scott to return. Despite fears that he would have to abandon his ship, Scott and his men managed to free *Discovery* from the ice and sail her home.

A German expedition aboard the *Gauss,* under Prof. Erich von Dryglaski, was active in the south at the same time as Scott, and also spent a winter in the ice. Unlike Scott, the crew of the *Gauss* did not venture far from their ship, instead taking measurements and readings from their own decks.

Two private expeditions were also mounted in 1901. Dr. Otto Nordenskjold of Sweden led a mission aboard the *Antarctic,* penetrating far into the Weddell Sea. Like the *Gauss* and the *Discovery,* the *Antarctic* was allowed to become ice bound, and stayed the long Antarctic winter. Nordenskjold spent a second winter at a base camp on Snow Hill Island. When their ship was lost, the Argentine gunship *Uruguay,* under Captain Irizar, rescued the expedition. If the keeper wishes to mention an example of international cooperation in the Antarctic, this rescue is an admirable one.

Dr. W. S. Bruce aboard the *Scotia* took oceanographic observations in the Weddell Sea in 1903 and 1904. *Scotia* made many valuable oceanographic discoveries, and a thorough exploration of the eastern side of the sea, solving several disputed points.

The Modern Age

In 1908, Shackleton planned a fresh expedition to the south aboard the small whaler *Nimrod.* A hut was built on Ross Island, 20 miles north of Scott's 1904 winter headquarters, and the *Nimrod* sailed north for the winter. Before winter set in, the party scaled Mt. Erebus, and the next summer Shackleton made a journey to the south magnetic pole, at an altitude of over 7,000 feet. Shackleton also made a drive southward, ascending the Antarctic plateau by means of the Beardmore Glacier. In what is considered one of the greatest sled journeys ever made without supporting parties or depots, Shackleton pioneered the way to the Pole, and nearly reached it. The party's return to the base camp was made more difficult by the death of the ponies Shackleton used instead of dogs, and the trail blazing party very nearly did not return at all, but the *Nimrod* arrived in time and there were no casualties.

Scott left England for Antarctica again in 1910 in the *Terra Nova* with a carefully selected crew and a large scientific staff. Upon arriving in the Ross Sea, Scott's crew was amazed to find an Arctic exploration team aboard the *Fram,* commanded by Captain Roald Amundsen. This expedition, formed to explore the northern ice cap, had changed its plans after setting sail. Instead of heading north it steamed from Madeira to the Ross Sea without making radio contact at a single port.

Amundsen's primary goal was to reach the South Pole overland. He made his way up the polar plateau by way of the Axel Heiberg glacier, and reached the South Pole on December 14, 1911. The return journey took 38 days, and they returned to their base with 12 dogs, and an ample supply of food. Amundsen made no pretense of serious scientific work thereafter.

Scott, meanwhile, launched no less than four parties toward the Pole—one utilizing motor-sleds, another ponies, a third and fourth using dogs to pull heavy loads. Three failed to achieve their goals but, despite some narrow escapes, returned to safety. The fourth, led by Scott himself, reached the Pole only to discover a tent the Amundsen party had left there. Bitterly disappointed that he was not the first, Scott turned back. His return journey was made difficult by terrible weather, and disaster heaped upon disaster. One by one Scott's companions succumbed to the harsh environment. The fuel oil at the last depot proved insufficient, and after a truly heroic push of ten miles, Scott, Wilson, and Bowers froze to death in their tent. Their bodies were not discovered until Nov. 12, 1912.

Dr. Douglas Mawson landed an Australian party from the *Aurora,* in December 1911, and established a radio antenna on the Adelie Coast directly south of Australia. A splinter group, under Frank Wild, made some of the best meteorological and climatic observations to date. Mawson himself led one of several

explorations of the coastline of Queen Mary Land, ranging more than 300 miles from his base camp. On the return trip, Mawson lost B. Ninnis and X. Mertz, leaving Mawson alone 100 miles from his base with only his own back on which to carry supplies. In a feat of inhuman endurance, Mawson made it to his headquarters, discovering a rescue party waiting for him.

Shackleton, not a man to be kept from exploration for long, led the Imperial Trans-Antarctic Expedition of 1914, intending to cross the continent from the Weddell Sea to the Ross Sea, by way of the Pole. He was not fortunate in this venture. His vessel the *Endurance* found no place to land and was trapped in the ice pack for several months. The crew had to abandon ship when *Endurance* was crushed by ice on October 27, 1915. The 28 men of the expedition camped on an ice-floe until April, 1916, when it broke up, then took their three small boats and reached Elephant Island. Shackleton, with five men, departed the island, and succeeded in reaching South Georgia, 750 miles distant, in a 22-foot boat. He was able to retrieve his entire expedition crew with the help of the Chilean trawler *Yelcho* the following August. A second section of the party, sent to the Ross Sea side of the continent aboard the *Aurora* to lay in supply depots, drifted with the ice for 315 days, losing Captain Macintosh and two others.

Shackleton returned to the Antarctic in 1921, but died on South Georgia on Jan 5, 1922, of a heart attack. Frank Wild was able to complete the majority of Shackleton's mission objectives, and made important soundings in the little-known Enderby quadrant of the coast.

In the summer of 1928, two expeditions with airplanes came to the ice. Commander Richard Byrd planned to build a base due south of New Zealand. His goals were to discover the extent of the great mountain ranges which border the Ross sea, and to reach the South Pole. Byrd set out from his base, Little America, in his Ford tri-motor plane, making a round trip to the South Pole and back in just under 19 hours. In the same season Sir Hubert Wilkins brought his airplane to the Antarctic continent. He flew 3,000 miles to the east over parts of the continent previously unseen.

Byrd's second expedition, from 1933-35, extends his explorations over Marie Byrd Land, east of the Ross Sea. He arrives in his two ships shortly after the departure of the Starkweather-

Appendix 3: Deep Background

Table of Contents

The Elder Things and the Elder Pharos

This appendix takes a look at the history of the City of the Elder Things, from the creation of the Elder Pharos and the God Trap, through the capture of the Unknown God, down to the last desperate efforts to repair the now-failing Construct and keep the god from getting free.

The Elder Things

The elder things are not native to this planet, but have lived here continuously for at least a billion years. They are said to have created all life on Earth during their earliest residency. The race has changed form only a little in all that time, with the present-day things somewhat smaller and less sophisticated than their ancient ancestors.

The elder things are fully described in Dyer's manuscript. Additional information and a sketch can be found in the *Call Of Cthulhu* rule book. A typical thing weighs between three hundred and five hundred pounds and stands nearly eight feet in height when on the ground.

Elder things are much stronger than human beings, and are capable of carrying a full-grown man aloft for great distances. Although the creatures are no longer capable of traveling unaided through space, they can fly in all but the thinnest air at speeds of up to sixty miles per hour, and swim through the ocean depths at twenty knots or more. They are at ease in a wider range of temperatures than humans, but extreme cold is uncomfortable and potentially deadly. The things cannot live unprotected for long in subzero weather, and swimming in water at or near freezing is as impossible for them as it is for us.

Elder thing speech is a rhythmic liquid whistling, high and discordant, with several notes shrilled at once in complex alien discords. It cannot be learned by humans, as much of the content is voiced in the ultrasonic range above normal hearing. A primitive debased form of the things' speech is used by their onetime slaves, the shoggoths.

Elder things are very long-lived, and tend to take the long view whenever possible. Their society and art are quite static, evolving substantially only over geologic ages. Their understanding of the laws of nature and the universe is extremely advanced, but they rarely build complex machines, preferring to use simple tools and living "devices" where possible.

ELDER THINGS, Primordial City Builders

STR	4D6 + 24
CON	3D6 + 12
SIZ	8D6
INT	1D6 + 12
POW	3D6
DEX	3D6 + 6
Move	8/9 swimming/10 flying
HP	25-26

Damage Bonus: Averages + 3D6.

Weapons: Tentacle 40%, damage 1/2 DB in constriction

Armor: 7 point skin.

Spells: Each has **INT x3** chance to know 1D4 appropriate spells.

Sanity Loss: 0/1D6.

Elder Thing Writing

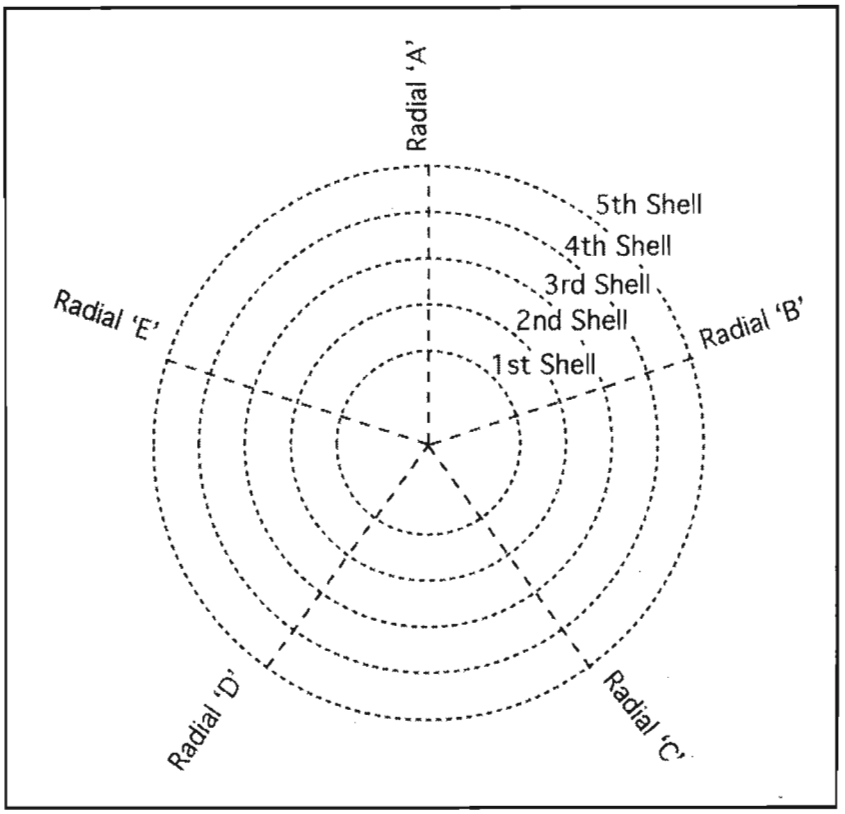
The writing of the elder things is a masterpiece of simplicity and clarity, and is intimately connected to their speech. Each symbol is a pattern of from one to five dots arranged in distorted pentacles about an empty center, and represents a particular whistling chord as it might be produced by the things' five breathing orifices. The presence or absence of each of the five dots, and their relative distance from the center point, determine precisely which chord is represented. There are more than sixty thousand symbols in the things' "alphabet."

This simplicity of the form is bought at the cost of machine-like precision. In their writing, as in their speech, elder things are extremely accurate. Each of the five tones used in their speech is assigned a range that is different from the other four; the permissible combinations of sound clash, rather than harmonize, to minimize the possibility of confusion.

Combinations of one or two symbols exist for all the concepts in the things' language, and still a great many remain unused. There are more than four billion possible "words" that can be produced using two-symbol combinations alone. While longer "words" exist in the language, they are used solely as art or in religious mathematics, or to reproduce specific sounds, and will rarely be encountered preserved in stone.

Fortunately for human scholars, most of the two-symbol concepts are directly derived from a simpler form represented by a single glyph. A human who recognized a few of the basic glyph

Figure A3.1: Elder Cipher Template



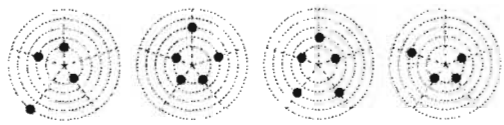
forms could make a learned guess from context at what a more complex concept might conceivably be; for instance, the words for most spherical objects might contain the glyph for "sphere."

Human explorers studying the frequent wall murals in the Antarctic City may learn to associate certain of the basal glyphs with the nearby illustrations, and this is a useful tool. Some skill in Elder Cipher, described elsewhere in this book, may be acquired in this way. The keeper should note, however, that misinterpretations are likely; explorers who learned their glyphs from murals showing bowls of oranges might think that the "sphere" glyph actually meant "fruit," resulting in possible confusion elsewhere.

Creating Dot Glyphs

Elder thing dot glyphs have from one to five dots. These are arrayed in a pentagonal matrix, with each of the five dots having five possible positions arrayed outward from the center. See Figure A3.1 on page 311 for an illustration of the matrix.

Figure A3.2: Sample Elder Cipher Text



Translation: "This is a classroom."
- **location/present**
- **used space/dedicated to sole purpose**
- **impartation/growth of knowledge**
- **gathering to share**

The most basic symbols are those which use only the innermost five positions. The elder things' written word for "cosmos," for example, is a simple pentacle with all five dots in the innermost places. A single dot alone represents an individual elder thing; it may be used to signify the race, or more commonly to represent the self.

When more complex glyphs are formed, containing points in the outer positions, the only rule is that at least two of the dots must be present in the inner shell, to indicate scale. The outer layers being relatively quite far from the center, considerable variation in the shape of the glyphs is possible.

Elder thing glyphs each have five possible meanings, depending upon the angle from which they are viewed. Ordinarily the text is written in horizontal bands, providing a known orientation to the viewer, and read from right to left. Occasionally, however, explorers might discover an alternate arrangement inscribed on a floor or ceiling. In this form, which may be thought of as a type of poetry, glyphs are arranged in five-sided arrays which can be read from any side. By changing the angle of the observer, the meaning of each glyph changes, and so does the meaning of the group. The pentagon thus contains five different meaningful phrases, which taken together as a whole, are meaningful as well.

Figures A3.2 and A3.3 are examples of the elder things' linear text; Figure A3.4 on page 315 shows a pentagonal haiku form.

The City of the Elder Things

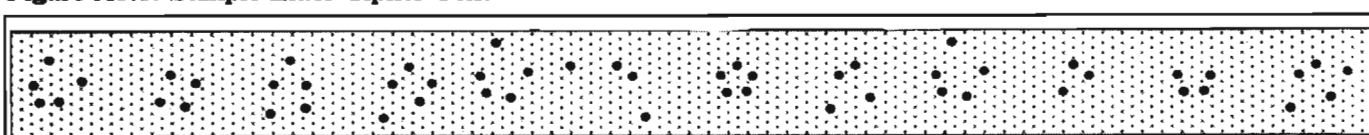
The City discovered by the Miskatonic Expedition of 1930 is more than a hundred million years old. It lies between the Miskatonic Mountains and an even taller Western Range, but is nowhere near the South Pole. It was built by the elder things, and at one time was the largest city in their terrestrial domains.

About 150 million years ago, according to the *Call of Cthulhu* rule book, "The largest elder thing city in the Antarctic was destroyed by the same earthquake that gave rise to the Mountains of Madness. After the cataclysm the elder things laid the foundations of a new city, the last surface structures they built." This earthquake was not an accident; it was caused by the arrival of an outside being, perhaps an unknown Outer God. The existing City was largely wrecked, and the new construction is more fortresslike and industrial: a redoubt, not a place of life and culture.

Following the cataclysm that began the raising of the high plateau, the elder things realized that the ancient tableland would soon become uninhabitable by the local plants and animals because of the altitude. To preserve it, they continued their massive efforts of construction, artificially building up the highest peaks around the high plateau basin and erecting gigantic "pumping stations" there. These stations pumped air into the basin, artificially enriching and thickening the atmosphere there so the plants and wildlife could continue to thrive far above the tree line. Professor Dyer, reading elder thing murals, refers to these stations as "temples," but he is only partially correct. The pumping stations were the final works abandoned when the Sunken Sea was colonized.

The members of the Miskatonic Expedition awakened a handful of elder things at Lake's Camp in 1931. These have returned to the City, and for three years have been quite busy. Traces of their activity are everywhere for the investigators to find. The true challenge will be to decipher and interpret these traces correctly, so as to help save the world, rather than bring it to an end.

Figure A3.3: Sample Elder Cipher Text



Translation: "Warning: This unit anchors the Great Lure singularity. It contains lethal energies."
- **warning of potential for danger**
- **object/present**
- **to bind/hold captive/motionless**
- **great spirit/volatile/energy + attraction/dominance/command**
- **entire universe + simplify/reduce/minimize**
- **great spirit/volatile/energy + overwhelming danger/force**
- **dissolution/permanent damage**
- **proceeding inevitably from a cause**
- **inappropriate contact/behavior**

The Elder Pharos and the God Trap

The elder things living on Earth ages ago were wielders of mighty and unknown forces. Though they were largely a peaceful people, they were not allowed to remain at peace; their history as drawn on the walls of the City is a tale of countless wars against successive waves of invaders. They had a need for great weapons, and great sources of power, because their foes were mighty ones.

The City in Antarctica was the birthplace of one such device.

The elder things were knowledgeable about the strange paths and dimensions outside of our world. They knew, from long experience, of the things that lurked beyond the veil. Drawing upon a billion years' experience with strange and unknown energies, they devised a way to channel those earthly forces that are most in tune with those outside. They twisted and formed those primordial vital essences of our world, shaping them into the Great Lure. When those outside came forth in response to the Lure's siren call they were trapped by the elder things.

The Great Lure caught those beings in a mechanism that is vastly beyond anything we know. Like a black hole, the God Trap hangs in a place where every semblance of dimension or change has been leached away. The core of the singularity has an effective temperature far below zero degrees Kelvin. No motion is possible; within the event horizon of the Cold Hole, all material processes simply cease. Time itself is slowed to a crawl.

Danforth had some glimpse of this, in his brief maddening vision while fleeing from the City. The Elder Pharos, he called it; the Great Beacon of the ancient ones. It was a lure and a snare; it called the creatures of power out of the strangely angled darkness between the universes, and it caught them in an unbreakable cage so that their struggles for freedom could be used.

The Elder Pharos was built on high barren land in the oldest part of Antarctica, two hundred miles from where the City ruins now stand. For unknown ages the Pharos called out into the dark, luring those outside close and snaring them in the Trap's inescapable grip. There is no record of the number of times the Lure was used, nor of the power of the beings that were caged for use by the elder things.

Finally, though, a being was called into the trap that was too powerful for it to fully hold.

We do not know the true nature of that great prisoner. Perhaps it is an unknown Outer God; perhaps it is another of the Great Old Ones. Whatever it is, it is trapped on the verge of entering fully into our world—and should it ever succeed we are all inescapably doomed.

The *Call Of Cthulhu* rule book states that it is only possible to destroy the *forms* of the Lovecraftian gods when they appear on Earth, and not the gods themselves, because what actually is manifested and destroyed is merely an extrusion, a shadow of the whole and not the god entire. What if one such being were to enter wholly into our universe? It would be a risky venture, since the manifestation in normal space would compress and limit the being in ways we cannot truly comprehend. Such a one, though, fully inside and active, would be a creature of unmatched power; indisputably it would be able to dispense with any other force or being which chose to challenge it. Such a thing would not be destructible by any means known to man or nature in the 1930s or today. It would indeed be absolute ruler of the earth, alone and supreme.

None of the Device's builders expected a creature of such power to be ensnared by the Lure's call.

The being was far more mighty than anything anticipated by the elder things. The battle to contain it shook the continent, tore the fabric of the City, and threatened to destroy the Pharos and the Trap before at last the being was contained. Every last resource was strained to the limit, but the Device held.

The being was not destroyed. It was trapped on the edge of entry, held in a stasis more complete than that of Great Cthulhu, who can still dream. The being in the Cold Hole has never been able to communicate with humanity or any of the terrestrial races, and therefore does not appear in the Mythos pantheon. Even now, it can scarcely be said to exist. Its only motivation, if it has one, is to *get out*. Or at least to get *warm*.

For the elder things, the being's arrival was both a victory and a disaster. Their greatest work had contained the invader, but the Pharos could not be used again. So long as the Unknown One remained within the Cold Hole the threat of its release remained. They could not set it free. They could not allow the machinery ever to shut down. The slightest weakness in the Trap would allow the being to work free in time; and its reign would be immediate and absolute.

The elder things did what they could, of course, to ensure that the Trap would stay shut. They built and rebuilt the Device, with living components that would grow and heal, feed themselves and stay in eternal repair. But the presence of the Cold Hole changed things, including the climate; eventually the elder things were forced to move and abandoned the City forever.

The God Trap in Later Ages

The Device is enormous, but most of it is unseen. The Construct at its center, where the Trap operates still, is more than thirty miles across and descends over a mile into the ground. The great thermal conduits that were built to pump away the energies of the singularity span the length of the Antarctic continent and end deep in the ocean waters beyond.

The rebuilding of the Construct was one of the last great engineering feats of the things' Mature period. Originally wrought in stone and crystal, the Device was woven through and buttressed after the capture by a complex web of living components—a jungle which grew in, and for miles around, the Tower—which were intended to support and maintain the Trap long after the original mechanisms were ground to dust by time.

As for the things themselves, they too were affected by the prisoner's ominous presence. The region around the Trap was shunned in the ages after the capture, a place not to be visited or spoken of. Eventually it was all but forgotten, a place of nightmares and tall tales from which monsters still sprang.

The Pharos continued to operate; it too could not be shut down. Entities from beyond the world continued to be lured to the ancient highlands beyond the City, but these could no longer be caught within the Trap. Most often the invaders simply left without damage; other times they stayed, and had to be destroyed or sent away by those nearby.

Millions of years passed. The continents moved, the climate changed, and once-verdant Antarctica slid into the South Polar cold. The decadent things of that latter day moved away from the plateau, into undersea cities warmed by the outflow of the Construct's thermal vents, or deep underground in the sunless sea beneath the City's plateau. They gave no thought to the Pharos or the God Trap, secure perhaps in the knowledge that both were eternal.

They were wrong.

As the weather worsened and the annual snows grew deeper the mighty Construct jungle began to die. Soon all that remained of the Construct was within its original tower; and the organic

components there were not enough to keep the whole in order if the mineral parts were destroyed.

In time an earthquake shook the plateau and broke the tower open, letting the cold within and damaging the Construct further. The God Trap began to break down, its mighty prisoner stirring and flexing for the first time in tens of millions of years.

The elder things that remained became aware of the threat but were unable to rebuild the crystalline matrix of the Construct's control core. They no longer had the knowledge or the tools for such repairs; all they could do was to patch the system with makeshift supplements made from the brains and nervous systems of complex living things, woven into the web to take the place of damaged crystal shards.

For untold tens of millennia the decadent elder things in their sea-bottom cities continued to travel to the Tower and shore up the failing machine. The task of maintaining the Trap became first routine, then later ritual, as the individuals assigned to the duty acquired priestly status. Unwilling to use their own kind where it was not necessary, they built their components from the most complex alternative, the living bodies of apes and human beings.

These repairs were not complete; the strength of the now-fragile Construct waxed and waned, allowing the Imprisoned One to stretch ever so slightly now and then—not much, but enough to bleed tiny fragments of itself through the walls of the Trap and into the world outside. The things who came to repair the device now had to see to these as well, finding them and flinging them back into the Cold Hole's vortex before they could be of use to the prisoner within.

The Present Day

This state of affairs continued into the nineteenth century. The elder things repairing the God Trap lived in a community deep beneath the surface of the Weddell Sea, in the warm waters created by the Cold Hole's remaining outflow vent. They preyed upon aboriginal humans in the region for their supply of working parts, travelling every few months through the thermal tunnels to the Construct Tower on the high plateau.

In 1829 a group of humans killed the team of things and broke the thermal conduit while escaping. Without the Cold Hole's heat the sea quickly froze over; within a decade or two it was indistinguishable from the remainder of the Antarctic ice. The growing cold of the water in the Weddell Sea made long voyages increasingly deadly for the inhabitants of the remaining underwater city. By the end of the century the elder things on the ocean bottom ventured out rarely if at all, preferring to huddle near their last few remaining sources of warmth. They no longer have any notion of what passes in the world above the ice.

Without periodic visits from the city dwellers, the God Trap began slowly to break down for the last time for want of repairs.

In 1930, three years ago, the Miskatonic Expedition fortuitously awoke a group of elder things. The survivors of the group returned to the City and, when they learned the state of things, began at once doing what they could to keep the ailing Construct alive.

The awakened elder things have had to make do with seals and penguins. The thick ice and freezing water of the Weddell Sea has prevented them from getting help from their underwater brethren. A few enigmatic half-filled shafts, already dug through the ice near the great white statue when the Falken party arrives at the site, are the only evidence of the things' unsuccessful attempts to contact their remaining kin.

The return of human beings to the plateau represents for the things a last great hope. Only with a sufficient number of human components can they expect to keep the Construct running long enough for them to have a chance at more robust repairs.

Side Effects

The operation of the device has a large effect on local weather. The Miskatonic expedition was able to easily go to the City and return in part because the Construct was malfunctioning, very close to shutting off. Efforts of the elder things to repair it since then have brought it much closer to proper function; and this has had the effect as well of establishing a more or less permanent low-pressure vortex over the City and the Construct Valley. Weather is constantly bad near the site, though in the City itself it is rather like being in the eye of a hurricane. Constant storm winds blow up and over all passes into the Valley. Taking aircraft into the City will be a difficult piloting task; not impossible, but tougher than the reports implied. Flying back out, in the lowered pressure and against headwinds at great heights, is very dangerous indeed.

The other significant effect of the God Trap is a sort of insidious stasis. The barest vestiges of the forces used to bind the Imprisoned One have, by this time, gently woven their way throughout the upper plateau. This has had the effect of helping to maintain the ruin and slow its breakdown. The web of stasis is broken, however, with the breaking of the Construct; afterwards, regardless of how well the elder things are able to repair the machine, that delicate balance has been lost and the City, the mountains, and all but the Construct itself will once again begin to decay. The Mountains of Madness will not disappear overnight; but within a few decades they will visibly slump, falling inward and succumbing to the effects of wind and weather until, hundreds or thousands of years hence, they are no more than another line of windswept crags high in the icy wastes of the Antarctic plateau.

The third effect of the God Trap's operation, the timeslip effect, is not really significant at all, but is quite noticeable to the investigators. Timeslips are fragmentary "ghosts" of images from previous moments played back without rhyme or reason. Timeslips are strongest near to the Cold Hole, and are most frequent when the device is in worst repair. The fabulous mirage witnessed by Dyer while flying to the mountains was a colossal timeslip. Most are no more than barely perceptible flickers, hints of change that are hardly even seen.

The Elder Things and the Tsalalians

Up until historically recent times, the outflow conduits from the Cold Hole warmed the deep waters off the Antarctic coast. The last of these conduits had its terminus in the Weddell Sea, beneath what is now the Filchner Ice Shelf. Heat from the conduit warmed the ocean, creating a small tropical realm far south of any natural temperate zone. Animals thrived there that grew nowhere else. So did primitive men—the Tsalalians mentioned by Pym, and others—and so did the elder things.

One undersea city, at least, survived into the modern day close by the outflow. This was the home of those decadent latter-day elder things who maintained and repaired the Construct throughout prehistory, and into recent times, ending in the 1830s. These repairs involved the periodic collection and conversion to use of a number of the local native humans—a practice which provides the reason for the peculiar cult practices and reactions alluded to in the published parts of the Pym tale.

Once the tunnel was closed this repair work stopped; the Construct continued to degenerate slowly until the cysts (Seeds) began to break free. The Prisoner's cysts have only become numerous in the last 100 years.

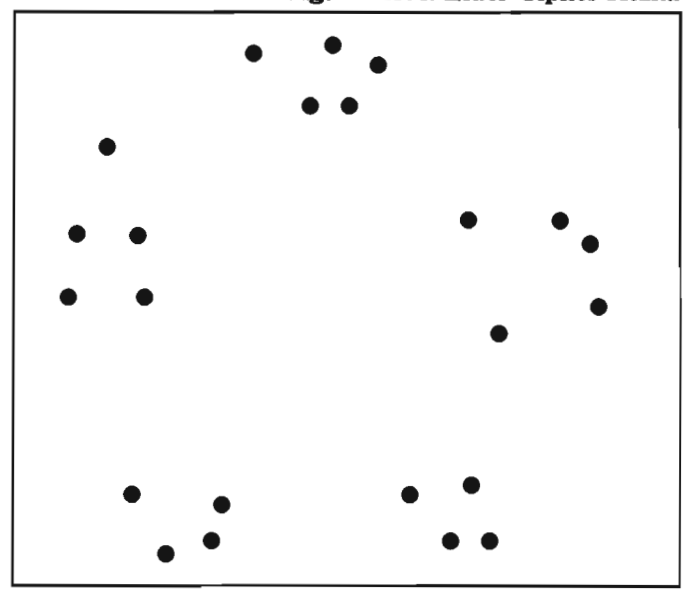
At the same time, the water ceased to be warmed by the conduit. The seas cooled, the plants and animals (and men) died away, and within a decade or two nothing but ice remained. The city of the elder things may be there still, deep in the cool dark waters at the bottom of the sea—but its inhabitants no longer roam the surface world. Their ultimate fate is left for the keeper to determine.

When the eight elder things were awakened by Lake's explorers and found their way back into their City, they found already in place evidence of previous crude repairs that were within their scope to do themselves immediately. After reading the murals on the walls of the Construct Tower, the wakened things attempted to seek out the dwellers in their undersea city, but were unable to reach them due to the closing of the thermal tunnels and the thick cold ice sheet atop the Weddell Sea.

There should be a very well-defined track or trail between the nerve extraction chamber (read shoggoth-in-a-drum) and the upper entrance to the deep tunnel (tunnel mouth "A" on the Construct Valley Keeper's Map). Any attempt to go that way will result in an encounter with the many shoggoths/animiculi that now reside in the heated caverns below. These are only kept in check by their simple tropic nature: they will not leave warmth for cold unless lured by greater heat.

See "Seeds of the Unknown God" on page 316 for more about the Seeds and the animiculi. ■

Figure A3.4: Elder Cipher Haiku



Translation of Figure A3.4

Figure A3.4 depicts a quatrain from the *Rubaiyat of Omar Khayyam*, more or less:

> "The moving
> finger writes,
> and having writ,
> Moves on. Not
> all thy piety, nor
> wit,
> Shall lure it back
> to cancel half a
> line,
> Nor all thy tears
> wash out a word
> of it."

Five sets:

1) "Time, potential, and entropy merge in reality."

- time
- potential value
- entropy/physical law
- results of combining terms
- perceived reality

2) "All that might have been yields inevitably into what is."

- summation of terms derived (from)
- invalid/unacceptable paths
- inexorably/inescapably change
- simplification/yielding
- true results

3) "The moment of collapse moves inexorably forward."

- isolated instant
- action of collapse/change
- eternal ceaseless motion + containment function
- uncertainty/future

4) "No logic or faith can force fate's unwinding."

- logic/action
- faith/action
- negation of capability
- to summon/invoke
- reversal of process

5) "No sorrow, no regret will change truth into lies."

- sorrow/state
- regret/state
- negation of facthood
- proposition of transformation
- unacceptable action

Seeds of the Unknown God

The encysted Seeds of the Prisoner inside the Cold Hole are flakes of that entity. Over 120 million years or more, the Prisoner has managed to move a little, seeping out a bit through the event horizon of the singularity. This process is so slow, however, that it is only in the past few million years that any of the being has been able to win free.

The parts that do get out are abraded away as tiny cysts, or Seeds. These appear much like small matte-black opals which feel abnormally cold to the touch; they are, however, still in contact with the being, and they transmit heat back into its main mass. The more of them that break free, the larger the Seeds become, the more heat the Prisoner receives; and the sooner it wins its eventual freedom.

Once a Seed reaches a certain temperature, roughly that of the human body, it dissolves into a kind of molecular solvent that seeps slowly into glass or stone but that can be contained by metal. Solid or fluid, the material cannot be destroyed by physical means. Acids and caustics are absorbed; heat, POW, or electricity are actually preferred, as the excess is channeled back into the Prisoner. Only cold can stop it. Temperatures near or below freezing cause the fluid to solidify; the resultant substance looks a lot like frozen tar. Organic material that comes into contact with the fluid Seed dissolves into more of the same, though it is safe to handle the stiffened form.

Animiculi

When the mass of the solvent is great enough (that is, larger than a grapefruit), the nature of the mass changes; it pulls itself into an animiculum, capable of action. The pattern for the animiculum is pulled from the physical structures of whatever creature comprise most of the mass. The initial process takes about an hour, though later absorptions are much quicker. The animiculum, through its continued contact with the Prisoner, is "cold-blooded" and always has a body temperature at least 10°C colder than its environment.

An animiculum is unintelligent, capable only of fleeing pain or seeking warmth and hosts. Animiculi which are dog-sized or larger can display a certain level of cunning—for example, ambushing a potential host. An animiculum is susceptible to damage just like the models upon which it is patterned; when destroyed, it dissolves into the solvent form, and immediately begins the change to animiculum again. Pieces separated from the main body dissolve into the solvent form.

The danger presented by the Seeds is that if any of them should ever be planted in fertile soil in a tropical environment, they will literally grow into the ground, getting larger, stronger, and deeper by the hour. Such an animiculum would be nearly impossible to remove. In the space of a few years, it would grow to the point that the heat to the Prisoner would become a torrent of energy—perhaps so that more of the Prisoner would be outside the Trap than in it. Through the medium of the Seeds, the being would release itself.

Seeds or animiculi never become truly intelligent, regardless of size. They have no magical spells of their own, but resist magical attacks as would the Parent, with impossibly high POW.

Effects of the Animiculum

The larger an animiculum gets, the more the conduit between it and the Imprisoned God opens. This allows more energy to reach the god; it also allows more of the god's malign radiance to make itself felt through the animiculum. This alien aura inspires an instant and thorough revulsion in most earthly beings. It also inspires horrible dreams (if within a few feet, match the sleeper's **POW** against the animiculum's **SIZ** on the Resistance Table), and Sanity loss (see below).

In extreme cases it may induce a helpless fascination in victims that may even make it easier for the animiculum to catch more living things and grow. Persons whose POW is at least 10 points lower than the animiculum's SIZ must **roll POW x5** or less for each round they are within the creature's SIZ in feet. Failure means that the individual becomes *stupefied* by the animiculum, and will not move away or otherwise do anything but watch it with fascination and loathing.

The animiculum's only attack is to consume. The base rate of consumption damage is the same regardless of SIZ, 1D2 hit points per round. As an animiculum grows larger and more mobile, however, it becomes more capable of attaching itself to a victim and burrowing in, thus greatly increasing the efficiency of the conversion.

In game terms, the animiculum's important stats are determined by its SIZ (see the table below). An animiculum's SIZ increases by +1 for every 2 points of SIZ of living creatures or inanimate matter consumed.

At the beginning of the scenario, all pieces of the being that are on the surface are in cyst (Seed) form. Antarctica is too cold. The elder things know what the Seeds are, know that they can't be destroyed, and collect them with the intention of dropping them back into the Cold Hole before they finish the repairs to the Construct. The Seeds will not become fluid unless they are brought to near body temperature. This can

Animiculum Statistics by SIZ

SIZ	1	2-3	4-6	7-15	16-30	each additional + 10
Attach Skill	20%	40%	60%	80%	90%	90%
Consume Damage	1D2	2D3	2D4	4D4	6D4	+ 2D4
Sanity Loss	0/1D3	1/1D4	1/1D6	1D3/1D8	1D4/2D6	+ 1/+2 SAN
Hit Points	8 + 2 x SIZ	8 + 2 x SIZ	8 + 2 x SIZ	8 + 2 x SIZ	8 + 2 x SIZ	8 + 2 x SIZ
Move	2	4	8	10	10	10
STR	2	6	12	16	20	+4
DEX	4	8	12	16	20	20

only happen if a person carries one around inside his or her clothing for a couple of hours (no one will carry one next to the skin—they are too cold to the touch); or if they are brought to an equatorial climate (ambient temperature 30°C/83°F or hotter).

The interior of the Construct's thermal tunnels is, however, an excellent environment for the animiculi since Pym and Peters broke the conduit. There are many animiculi in the dark expanses under the earth, slowly feeding vital heat to their Parent and helping it grow strong. ■

Chronostratigraphy of the Mountains of Madness

Geologic Time	*Years B.P.*	*Known History*	*Secret History*
Cenozoic			
- Quaternary			
- Holocene	11,000	modern man	Tsalalians installed in the Construct
	500,000	ice cap at "modern" extent	last elder thing activity in City (date used in *Dyer Text*)
	1,000,000	river stops flowing	
	1,500,000	the great Ice Age begins	
- Pleistocene	2,500,000	early man vulcanism near Ross Sea	"Decadent" elder thing culture
- Tertiary	4,000,000		meteor hits Bellinghausen Sea; end of Tierra del Fuego city
- Pliocene	10,000,000	large carnivores	ice cap begins forming
- Miocene	27,000,000	primates, whales	elder things use primates
- Oligocene	38,000,000	large land mammals	elder things in the cave enter stasis
- Eocene	55,000,000	modern plants	subtropic City is at 60° S
- Paleocene	70,000,000	true mammals appear	extensive vulcanism
Mesozoic			
- Cretaceous	140,000,000	end of the dinosaurs Gondwanaland breakup completed	the current City is founded
- Comanchean	150,000,000	flying reptiles, early birds	sedimentary layers laid down
- Jurassic	160,000,000	primitive mammals	the mi-go invasion
- Triassic	225,000,000	dinosaurs, palms, hardwoods Gondwanaland breakup starts	
Paleozoic			
- Permian	250,000,000	end of the trilobites	shoggoths become nuisance
- Carboniferous	315,000,000	amphibians, primitive forests	the City region is at 45° S
- Devonian	405,000,000	early land animals	
- Silurian	440,000,000	insects and plants on land	
- Ordovician	505,000,000	cephalopods and early fish	the cave is established
- Cambrian	570,000,000	rise of the trilobites	
Pre-Cambrian			
- Proterozoic	1,200,000,000	marine worms, early seaweed	early elder thing footprints
- Archaean	all older	no fossils from this period	

N.B. the studies by John M. Clarke, New York state geologist, are widely respected by paleobotanists, and can be summarized as follows: terrestrial life, both animal and plant, came out of the sea. The plant life which first emerged from the sea to the land, "the flora of transmigration," made its trek in days before the Cambrian period. These plants were algae of a higher order in respect to perfection of reproduction organs than any modern algae now living.

The molecular disintegration of the minerals uranium and thorium produces lead which, derived from these sources, has a specific gravity different from that of ordinary lead.

If then a mineral deposit known to be of Devonian age contains a uranium mineral accompanied by lead which has been derived from it, the length of time from the formation of that mineral-bearing Devonian bed to the present is at least as long as the time required for the change from the uranium molecules into lead.

This rate of change has been measured and it is known that in one year a gram of uranium would generate 1.25×10^{-10} grams of lead, and at this rate one gram of lead would be produced in 8,000 million years.

On the basis of such evidence, the length of time represented by the entire body of the unchanged rocks of the earth is 667 million years. If this is added to the time necessary for the accumulation of the rocks of the Pre-Cambrian age, some of which are sedimentary and some of which are igneous, the figure rises to at least 1,500,000 years. ■

Barsmeier-Falken Expedition (BFE)—History on Ice

This section looks at the Barsmeier-Falken Expedition, its discoveries and its ultimate demise, and also describes the Weddell Sea base camp and the ancient tunnels they found. It is intended for keeper use in case the investigators find themselves at the BFE's main base, either during the expedition's final days or at some later date.

The expedition was assembled and financed by a consortium of private industrial interests, most notably DELAG (The German Airship Company) and the Junkers Company, with the approval and support of the German government. Some of its goals were well known to the public, while others were of a more private nature. The exploration of Lake's Camp and the region beyond the Miskatonic Mountains is only one of these.

Expedition Goals and Summary

The primary public purpose of the expedition was to survey and map the Antarctic for the purpose of evaluating its natural resources. The bulk of Antarctica was unexplored and unknown in 1933, and there is much profit to be made from the discovery of new sources of mineral wealth. The Antarctic Treaty, which bans such exploitation, was not signed until 1959.

Much of the mapping was to be performed from the air, using cameras to record the terrain below, but for reasons of safety and fuel considerations, most of the mapping and surveying proved to be accomplishable with dogs and teams on the ground. The expedition included a large number of dogs, and some of the most experienced dog handlers and survival experts in the world.

The expedition's foremost private goal had little to do with charting terrain or prospecting for mineral finds. That goal was to find and examine the tunnel complex described in the suppressed final chapters of *The Narrative of Arthur Gordon Pym*. The backers of the expedition believed that the *Narrative* was a factual account, rather than one of fiction. If that was the case, and if the tunnel site could be found, the leaders of the expedition were instructed to excavate and explore the site in search of artifacts and examples of the technology of that lost civilization.

The expedition consisted of over one hundred men, led by Barsmeier and Falken. They arrived on the ice in October with the principal aims of general exploration, and specifically location of Lake's camp and location of the sites mentioned in the Pym document. This document purported to describe a semi-tropical region of Antarctica that existed about one century previous.

In Search of Ancient Artifacts

The Barsmeier-Falken Expedition established their base of exploration by air in October, 1933, inland from the Weddell Sea by several hundred miles. The general exploration consisted of a mix of aerial mapping and two sled expeditions which left camp in mid-November. This phase of the BFE operations appears to have passed without much incident. Locating the Pym sites caused more difficulty. Careful study of the Pym text led analysts to conclude that, if the white statue and the associated tunnel complex did indeed exist a century ago, they were most likely located in that region. But there bewildering changes from Pym's narrative had taken place.

Pym's account described evidence of a civilization and technology not known to the modern world. It was thought that, if examples of these could be found by the explorers, the mission might be extremely profitable. However, initial aerial surveys failed to reveal any of the features recorded in the final chapters of the *Narrative*. No lush jungles or half naked savages were sighted, and in place of the tropical climate was an unending wilderness of snow and ice.

Fearing that the document had been some sort of hoax, Barsmeier and Falken abandoned the search, directing their pilots to aid in the general mapping and exploration effort. When news of the finds at Lake's Camp reached them, the leaders revised their opinions, and assigned two planes to resume searching the edges of the Filchner ice shelf for anything of interest. Two days later, one of the pilots discovered the head of the white statue mentioned in the Pym document, far inland from the sea.

This was simultaneously a great step forward and a great blow to Barsmeier's hopes of finding the tunnel. The expedition now knew the rough location of the tunnel but also knew that the buildings were buried under thirty feet or more of featureless snow and ice. However, the search resumed, both by air and on the ground.

For an agonizing week nothing was found. Adverse weather conditions were aggravated when some of the photographic film was found to be fogged and unusable. The photographers blamed poor film stock, the pilots blamed the photographers, and Barsmeier blamed everybody. Finally, Herr Pommerenke, the occultist, realized that there was a pattern to the fogging of the film in that all the flights and sled expeditions that had returned damaged film had crossed over roughly the same point. A brief

expedition to this point proved him right, and also demonstrated the presence of two other anomalies: the local magnetic field showed unusual fluctuations, and that radio traffic from the location was particularly poor. Pommerenke pronounced that these affects were "obviously" a side effect of the technology that lurked under the ice.

Dr. Falken immediately took an excavation team to the area and began sinking experimental pilot holes. After several false starts, he located a site that seemed promising, and after four days of excavation, on December 15th, probes encountered what was obviously worked stone. After a closer inspection of the uncovered surface confirmed that this was indeed an artificial stone construct, Falken convinced Barsmeier to commit a large number of people to the dig. These would be housed in tents and makeshift ice burrows until more permanent structures could be established.

Continued excavation uncovered the entrance into the building on December 16th. Falken led a small, heavily armed party into the interior. To his relief, the party did not encounter anything like the creatures described in the Pym document. They did, however, succeed in recovering several artifacts, including two of the lamp-like constructs, and, from near the entrance, a handful of cold black opal-like crystals. These were immediately dispatched back to the main base for further study.

Into the Tunnels: Disaster

Further exploration on the afternoon of Dec. 16 took Falken deeper underground, where he confirmed what he had suspected earlier: the tunnels got warmer the further in the expedition went. They successfully located the "monorail terminus" but were disappointed to learn that it was no longer functioning. Various members of the expedition reported hearing scuttling sounds just out of range of their electric torches, but Falken dismissed their fears—he had seen nothing and refused to abandon the find of the century just because some of his men had the jitters.

That evening Falken announced that he would be leaving half the expedition on the surface, under the command of Herr Pommerenke, to perform a detailed excavation of the locale. Falken would take the other half of the expedition on an extended exploration of the deeper tunnels. He expected to be gone for about three days, which should allow Pommerenke's people to fully map the tunnel entrance building.

Falken's expedition moved into the tunnels on the morning of December 17th and made good time into the interior. However, after they made camp that evening, in a side chamber off of the transport tunnel about ten miles inland, they were set upon by a pack of animiculi and massacred. Very little of the expedition remains to find (the metal equipment is about the only thing that survives) even if the investigators are sufficiently foolhardy to try to find them.

Pommerenke, oblivious to Falken's fate, set his people to exploring and mapping the nearer parts of the tunnel complex. As evening of December 18th drew in, a blizzard blew up, trapping the bulk of the expedition in the tunnels; however, Pommerenke had foreseen this possibility and had several days of supplies stored in the tunnels, where it was warm. The blizzard lasted for almost two days, and when it cleared, Pommerenke's expedition had vanished utterly.

Only four men from Pommerenke's party survived. These had been trapped on the surface when the blizzard blew up, and simply waited out the storm in their shelters. Unfortunately for them, their plane was wrecked and they were in a communications black spot; communication was not re-established until the arrival of the rescue flight on Dec. 23.

The Experiments Begin

Unaware of the disasters occurring at the tunnel site, Barsmeier and his colleagues immediately set to work on Dec. 18, cataloguing and analyzing the finds that Falken had sent. The primitive artifacts seemed to confirm the Pym document's claims, especially inasmuch as they were mostly of mahogany—a tropical hardwood—and seemed to represent the work of an unknown culture.

One of the lamp-like constructs could not be made to function, and it was observed that it bore a curious chemical-like scoring on the surface. Dr. Hammel, the base physicist, postulated that the lamp was damaged in some way sufficient to allow the "lamp plasma" to escape. This was a deep disappointment to Barsmeier. Fortunately, despite similar scoring to the surface, the other lamp seemed to operate as expected. Whenever it was touched, a luminous green effect formed in the center of the lamp and lasted for several minutes. Fearing that the damage to the lamp might make it weak, Hammel put this to one side and began a preliminary examination of the "black opals."

The black stones proved to be similarly exotic. Hammel soon learned that they had remarkable thermal properties. Cold to the touch, they melted at about 70°F but refroze only at about 40°F. They also displayed remarkable turbulent convection properties as the black liquid seethed over the Bunsen burner. Occasionally it even seemed to form pseudopodia that groped blindly at the rim of the crucible, but Hammel dismissed this effect as a mere fluke of random motion, and turned the Bunsen burner down.

An accident with the crucible, which resulted in a spill on the work bench, also displayed that the liquid opals had a very strong caustic effect, especially on organic materials. Hammel was able to determine that the black opals could dissolve many forms of organic matter ranging from wood to frozen seal. Metal seemed resistant to the corrosive action, and glass was only slightly etched. Hammel, pondering this strange stuff, decided to get a bite to eat and headed for the kitchen.

Keeper's note: for more information on the behavior and properties of the Seeds and the animiculi, see "Seeds of the Unknown God" on page 316 and the section of Chapter Fifteen called "Examining the Creature."

The Animiculi Are Freed

When he returned, Hammel realized that he had left the Bunsen burner on, and the black liquid was boiling furiously. He reached past the crucible to turn the Bunsen off, and as he did so, the animiculum leapt from the crucible and onto his face. Hammel stumbled backwards, screaming and clawing at the creature. As he did so, he backed into the workbench upon which he had placed the working elder thing lamp. The lamp teetered briefly and toppled to the floor where it cracked along its length. With a dull thud the lamp exploded, and ignited most of the wooden lab. The kerosene container that fueled the Bunsen burners also exploded, adding to the conflagration.

By the time the other base inhabitants could get to the lab, the place was an inferno. Thinking that the fire would be swiftly contained when the fire burned through the wood to the snow, Barsmeier left a couple of men to watch the fire and instructed the others to return to their duties. What he did not know was that the explosion and subsequent fire had animated all the animiculi in the lab. As the lab cooled, the animiculi attacked and

devoured the two guards, and then continued to search blindly for other sources of heat. The kerosene lamps in the corridors soon led them to more populated areas.

Although the animiculi were exceptionally dangerous, they were not directed by intelligence—they merely headed for the next nearest heat source. They were observed to ignore a well insulated human in favor of a galley stove (which was promptly welded shut and covered with snow). This allowed the survivors of the initial assault to contain and deal with the creatures, using flares and fires as lures. Two of the animiculi made their way into the dog tunnels and froze once they had consumed the dogs. Another was lured out onto the surface with a chain of flares and there froze solid; two more were lured into the steel safe with a kerosene lamp as bait and the safe was welded shut. The latter animiculum had been found in the photography lab, contentedly absorbing the more recent negatives and prints.

Shocked and concerned that the "black demons" might return to life at any moment, Barsmeier ordered the immediate evacuation of the base. The ten survivors included two of the pilots. The base was evacuated in short order. Over the next ten days the two sled expeditions were recovered, as were the four survivors of Falken's expedition. Unwilling to lose any more men to the tunnels, Barsmeier nevertheless mounted a picket near the tunnel entrance well into January until several days of blizzards began to fill in the shaft down to the tunnels.

Resigned at last to the loss of Falken and his expedition, Barsmeier returned to Germany. He was not well received. The expedition had been costly to mount, had returned little of scientific interest, and had suffered an incredible casualty rate. Few of the artifacts recovered from the tunnels had survived the explosion of the physics lab and most of the photographs had been lost. Survey by later overflights failed to find the statue, buried by subsequent blizzards. Barsmeier had no intention of telling his backers the real truth—that his expedition had been destroyed by the animiculi—and the survivors of the massacre had no real interest in being consigned to lunatic asylums. The German authorities briefly contemplated charging Barsmeier with manslaughter, but the evidence was lacking.

The Barsmeier-Falken Expedition was consigned to a footnote in Antarctic exploration and quietly forgotten. Financially ruined, scientifically discredited, and feeling responsible for over fifty deaths, Barsmeier placed his affairs in order, and on December 18th, 1934, shot himself. It was the anniversary of the massacre at the BFE camp.

Timeline

Dec. 4 — Statue found, mostly buried in snow.

Dec. 10 — Pommerenke locates tunnel site.

Dec. 11 — Excavation begins.

Dec. 15 — Tunnel entrance found.

Dec. 16 — Initial exploration. Artifacts recovered and returned to the main base.

Dec. 17 — Falken explores deeper into the tunnels. His expedition is destroyed.

Dec. 18 — Lab accident releases the animiculi in the main base.

Dec. 18-19 — Blizzard at dig site. When it lifts only four men still live.

Dec. 20 — BFE main base abandoned.

Late December — Sled expeditions recovered by air.

Mid-January — Falken's expedition declared "missing, presumed dead." Barsmeier begins preparations to return to Germany. ❑

BFE Weddell Base Camp

Before the Animiculum Assault

It is possible that the investigators decide to visit the Barsmeier-Falken Expedition. If they do so then it is probably worth juggling the time table by a couple of days to allow them to participate in the destruction of the base.

The plane circles the airfield, the pilot noting the presence of three impressive radio masts, and that a gusty cross wind is developing. "Storm soon," he remarks. Leveling the plane out, the pilot makes a nearly perfect landing and taxis to what is obviously some sort of hangar. As the party approaches, they can make out a flurry of activity as mechanics work to batten the base down in the face of the oncoming storm.

When they get out of their plane, they are greeted by Barsmeier, his face familiar to the investigators from the newspapers with a successful **Know roll,** even if they have not met him in person. Pleasantries are exchanged, and Barsmeier invites the party into the base; they can have some coffee and a bite to eat before getting down to the question of why they have come. Barsmeier conducts the investigators from the hangar past the administration building to the galley, where he asks the cook to see to their needs and then bring them round to the officers' quarters when they are ready. *Keeper's note: this means that the investigators will do almost the full tour of the square tunnel, and will see most of the rooms and buildings—allow the players to ask questions and give them a copy of the site map, which is posted in several of the buildings.*

From this point on, allow the players to participate in the research on the artifacts and the "strange black opals." Use the history above as a guideline for the events. Barsmeier will obviously not cede command of the base, but he will cooperate with them, especially if they seem to be making sense.

Where Have All the People Gone?

Investigators arriving at the BFE camp may be expecting to find the place heaving with activity; after all, the expedition boasts nearly 100 participants. In fact, BFE base camp is manned by a skeleton crew of 24 persons. Where are all the others? In addition to the party that was sent to Lake's camp under the command of Dr. Meyer, the Barsmeier-Falken expedition has committed personnel to the following.

- Two dog sled expeditions are currently out in the Antarctic wastes, mapping and surveying. Each expedition consists of three dog handlers, survival experts, one radio operator, one cartographer, one mechanic, and one medical assistant. Of course, each man is competent at several other tasks; most of

the survival experts can draw maps, and the non-dog handlers can still drive sleds. Due to the Antarctic conditions, contact with these expeditions is sporadic, and they will not become concerned until the BFE main base is off the air for five consecutive days. Even then, it will take them between two and three weeks to return. They have been gone for three weeks and are not expected back for at least another four weeks. Because of this, no further details are required. In theory, they could be collected by plane, but that would imply abandoning all their gear, including the sled dogs.

- A large contingent of the BFE expedition is at the newly discovered tunnel site; when the opening was found, Barsmeier and Falken agreed that it warranted their attention. Manpower committed to that tunnel dig consists of Dr. Klaus Falken, Thomas Pommerenke, Konrad Felgener, four mechanics to man the ice drills and other equipment, ten laborers, one photographer, one occult-oriented scientist to assist Pommerenke, one surveyor, one doctor, one archaeologist, and four pilots. This expedition is expected to be overwhelmed by the animiculi in the tunnel, but its operations are discussed in a separate section at the end of this appendix.

The net result of this is that the BFE base camp is being operated by a skeleton crew consisting of Josef Barsmeier, Dr. Heinrich Panning, Harold Schmitt, six pilots, four dog handlers, one medical assistant, one meteorologist, four radio operators, one photographer, one physicist, one biochemist, one archaeologist, and one occult-oriented scientist, for a total of 24 people in the base, plus the investigators.

Base Layout Prior to Destruction

The design of the base arises from considerations about heat and fire. Conservation of heat suggests that all accommodations should be closely packed. However, in the event of a fire, the whole lot might go up, and there could be only one fate for a group of explorers trapped on the ice with no shelter. Thus the buildings are separated from each other while important facilities and stores are split and duplicated.

All buildings intended for human habitation are prefabricated, with walls up to four inches thick, made of layers of wood and insulation. No bolts or other metal objects extend through the walls as this would quickly sap interior heat. These structures are built deep into the snow and are now completely covered by recent blizzards. This provides additional insulation and protection from the ravages of the elements. Note that although these rooms are insulated, they are nowhere near a shirt sleeve environment, and with a couple of exceptions are below freezing.

Storerooms and the like are not so well constructed or insulated. They are generally holes in the snow, lined with boxes or other scrap timber and covered with a tarpaulin. After a couple of weeks, shifting snow obscures these tarpaulins, providing unpleasant traps for the unwary.

In order to avoid the worst of the weather, the groups of buildings are linked by a system of tunnels—two-yard-deep trenches covered with tarpaulins and lined with (mostly) empty supply boxes. These tunnels are not very wide and two men can only just pass in them. In places the roof sags under the weight of the snow on top. It is also possible to move over ground between the buildings. The routes are marked with flagged poles as are hazards such as the underground buildings and tunnels. The tunnels are illuminated by the occasional kerosene lamp.

Very few of the rooms have electric lights. Most of the generator output is reserved for radio use. The radio masts have electric lights at the tops to act as a warning to the aircraft. Other than that, only the accommodation and galley buildings have electric bulbs. All other illumination is by kerosene lamp, electric torch, or candle.

The keeper should recall always that this is an Antarctic base. Most of the base is well below freezing. The exceptions are the areas around the oven and the photographic shack. This makes normally simple activities that much more difficult. Want a drink? Better hope there is a thawed bucket of water on the stove!

Since the expedition is German, most written items are in that language. Any character with German 30% or better is automatically able to read these documents, although some extra knowledge (such as Chemistry) might be required to understand the content of a particular document.

Individual Buildings

This section describes the individual buildings in the BFE complex; the keeper should refer to the BFE Base Camp schematic, reproduced nearby. A copy has been posted in every accommodation block. There are no detailed "deck plans" or the like here, though; if required, the keeper must improvise.

- ***A (Mess Hall):*** A large open room with three long wooden tables and associated benches running almost the entire length. At the west end is a large coal-fired stove, together with cupboards for cutlery and crockery, and a couple of smaller tables for food preparation. In general, the expedition eats in two sittings of approximately fifty men at each. The only electric lights are over the oven and the food preparation areas. All other areas of the room are lit by kerosene lamps placed on the tables. The oven is allowed to burn out overnight and is relit by the night watchman before breakfast.

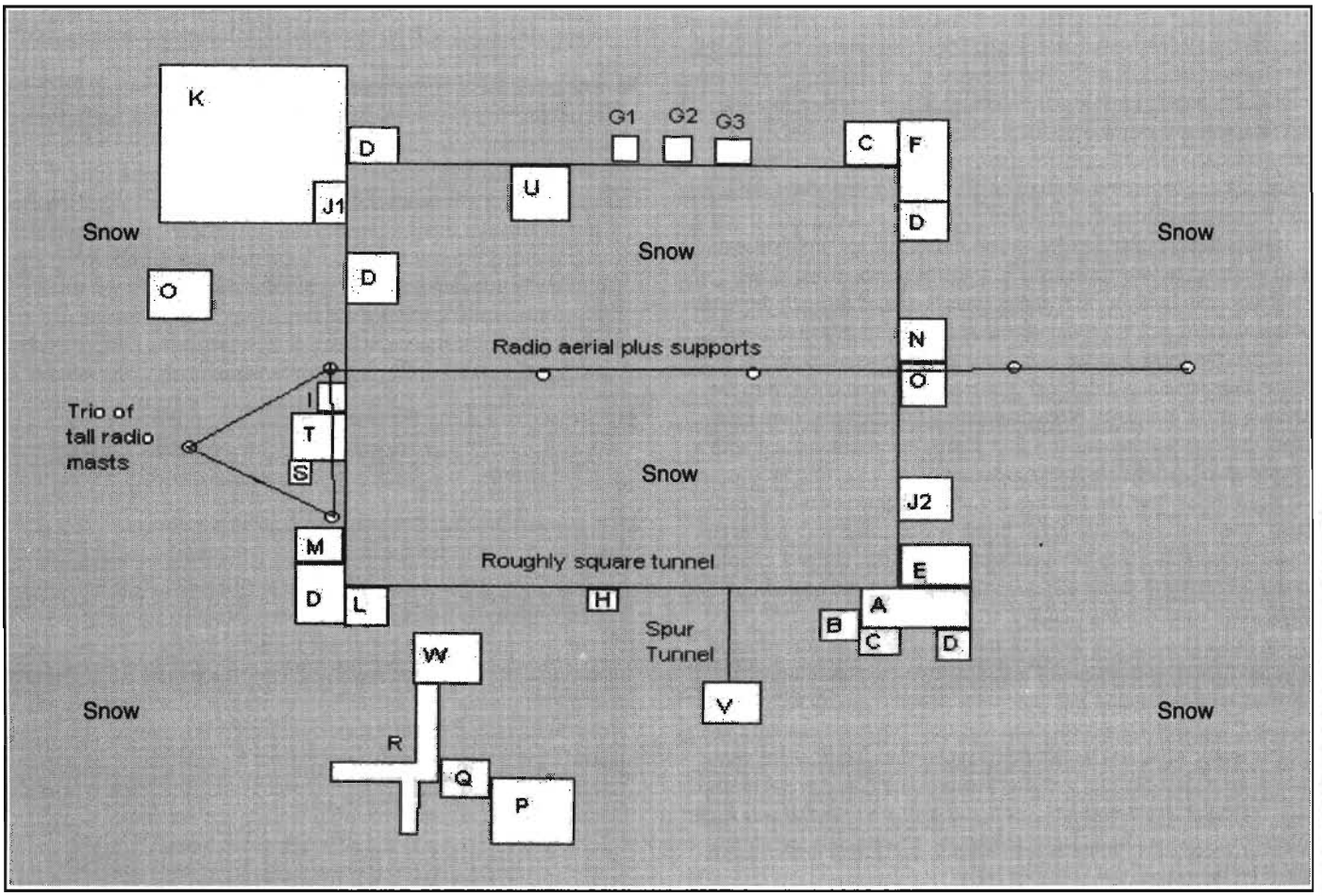
- ***B (Photographic Shack):*** A light-proof room set aside for the development of film taken by the expedition (ranging from snapshots by the archaeologists to long heavy rolls of film made by the aerial reconnaissance). In addition to stores of developing chemicals and their components (since the liquids freeze, they are made as needed and stored in thermos jars overnight), the room has two 50-gallon water drums with Bunsen burners underneath. When the shack is in operation, the vats contain hot water, although they take several hours to get up to temperature. This means that the upper portion of the shack exceeds 70°F, and the floor is at freezing temperature.

- ***C (Coal Store):*** As the name implies, this building houses several tons of coal bagged in hundred pound sacks. Present stores are sufficient to last the expedition for a year.

- ***D (Supply Room):*** Supplies are split evenly between the various store rooms. Although the expedition is not expected to winter over in the Antarctic, there is sufficient food here and in the supply of butchered and frozen seals to last the entire expedition until spring if needed. The supply rooms also house stores not specifically required elsewhere; for instance, somewhere in all the boxes are several spare reindeer skins (for making and repairing outdoor clothing), and several thousand spare staples. If anything would be reasonable for the expedition to have, then it is in one of the store rooms. The supply boxes are individually labeled, and the location of all supplies is tracked by the administrative team.

- ***E (Accommodations):*** Each man has a bunk, cabinet, and sea chest for his personal belongings. These are locked or unlocked at the owner's whim (most are unlocked—there's nowhere for a thief to go). The accommodation blocks are poorly heated; the occupants rely on extremely thick sleeping bags for warmth. Each room does have a single coal stove which struggles against the pervasive chill.
- ***F (Administration Building and Accommodations):*** This building houses the administration office, the library, and ten members of the expedition. The administration office is awash with paper detailing what supplies are currently available and where they are kept, as well as estimates on fuel consumption, anticipated fuel usage, and the location and contents of all the BFE supply dumps. The library consists of some thousand volumes covering relevant sciences (physics, chemistry, geology, and meteorology), specific textbooks (such as the manuals for all heavy machinery), occult and philosophical subjects (no Mythos tomes are in evidence), general reference (including *Who's Who,* the *Encyclopedia Britannica,* a comprehensive German dictionary, and several German-to-other-language dictionaries), and an intelligent collection of German-language fiction and poetry. The library was carefully compiled, and is quite complete. Provided the investigators ask questions that the library should be able to answer, they can use their **Library Use** skill as usual, if they can read German.
- ***G1 (Meteorological Station):*** This is actually above ground, and houses things such as thermometers (the air temperature is written to paper using non-freezing ink, giving a continuous record of the temperature), barometers, and anemometers. The expedition meteorologists will often be found here, muttering coldly to themselves. Weather forecasting in the Antarctic is a tricky business, and accuracy is vital for safe flying.
- ***G2 (Meteorological Supplies):*** Spare paper and ink for the above, together with extra kites and balloons. During clear weather the meteorologists release balloons into the air to measure the wind patterns at different altitudes. The kites can be used to carry thermometers and other devices aloft.
- ***G3 (Kite and Balloon Repair):*** This room, below ground, holds the tools and materials necessary to repair meteorological instruments as well as the balloons and kites.
- ***H (Non-Magnetic House):*** This is the base physicist's pride and joy. The room is entirely constructed from wood (including wooden pins to hold it together). Here expedition physicists can measure the ambient magnetic and electrical fields without interference.
- ***I (Radio Shack):*** A small, but vital room. It contains all the apparatus needed to send and receive radio messages, as well as a full log of all messages sent and received. Some of the messages are in a code to which only Barsmeier and Falken have the key. The uncoded messages are regular message traffic concerning the progress of the expedition, weather reports,

Barsmeier-Falken Base Camp Map



and the like. The coded messages are to and from the expedition backers with more detailed information on the expedition. The code should be exceptionally difficult to break, but the keeper can use the coded messages to plant whatever plot hooks are desired.

- ***J-1 and J-2 (Workshops and Machine Rooms):*** Contain a wide selection of tools required to keep the base functioning smoothly. If the investigators can make a case for a particular tool being present, then it is.

- ***K (Hangar Space):*** The hangar is a large building, half sunk into the snow, half constructed from snow blocks. It is large enough to house any one of the expedition's planes, and allows the mechanics to perform large scale overhauls and refits in relative comfort out of the wind.

- ***L (Biology Lab):*** Contains a pair of work benches and several cabinets of chemicals and equipment. This is a well provided biological lab capable of performing investigations, dissections, and, if the situation requires, post mortems.

- ***M (Medical Facilities):*** A small room used by the expedition's doctor. A locked desk contains medical files for the entire expedition, and locked cabinets contain various drugs (including morphine and chloroform) and an assortment of medical instruments and tools such as an autoclave. The facilities are capable of supporting operations up to the level of an appendectomy or amputation; these operations would be performed in the biology lab, where there is room for assistants.

- ***N (Generator):*** This is the primary source of electricity for the base; most of the output is reserved for the radio. A secondary generator is stored in the hangar. It runs on gasoline and must be refueled twice daily.

- ***O (Gasoline Supplies):*** There are several of these dumps scattered around the camp; each one contains a portion of the total supply in 50 gallon drums.

- ***P (Seal Cache):*** Contains the carcasses of approximately three hundred seals, butchered and frozen for later use.

- ***Q (Chopping Room):*** The room used to prepare the harvested seal carcasses for storage. However, anyone coming in this room without foreknowledge may fear the worst; it contains a large wooden table, with an adjacent rack from which hang various cutting and slashing instruments. The walls and floor are spattered red—the blood immediately froze.

- ***R (Dog Tunnels):*** The expedition dogs are housed down here; the surface weather gets too extreme even for huskies on occasion. The dogs are staked out along the corridors with sufficient room to move around, but such that they cannot quite reach or attack their neighbors. A system of chains and leather collars is used for this. In the dark, this is an unnerving environment, and the howls that come from the tunnels at dusk and feeding time can shake the soul of even the sturdiest individual.

- ***S (Safe):*** A metal box, constructed *in situ* from steel plate, measuring ten feet in all dimensions. The structure is securely welded together and could only be moved by disassembling it with a blow torch. Access to the safe is through a locked, reinforced door from the officers' accommodation. This room was intended to house valuable samples and artifacts discovered during the expedition. It also contains the expedition supplies of cigarettes and alcohol.

- ***T (Officers' Accommodation):*** Conveniently situated close to the radio shack, this is the accommodation for the leaders of the expedition. It is no more luxurious than the other accommodation, but Barsmeier feels it appropriate to keep a little distance from "the men." Copies of the complete Pym narrative, the *Dyer Text,* and the missing Douglas journals can be found here among Falken's personal effects, before the evacuation of the base.

- ***U (Physics and Geology Lab):*** Holds all the equipment needed to perform geological investigations, including analysis of core ice samples. It also contains some specialized equipment designed to handle, date, and examine the items mentioned in the Pym document—several heavy pressure vessels and a remote handling box have been provided. (A remote handling box has toughened glass sides, one of which has a pair of apertures with heavy rubber gloves attached.) Anybody familiar with polar expeditions will be extremely puzzled as to reasons for the presence of such gear.

- ***V (Tractor Garage):*** The expedition snow tractors are stored here, together with the tools for their repair and a small cache of fuel.

- ***W (Ski/Sled/Harness Repair and Store):*** Contains about ten spare sets of skis, the expedition's supply of dog sleds, and the harness for the dog teams, together with the equipment and supplies needed to repair or construct new ones.

After the Animiculi

If the investigators come to the BFE camp long after the events described above, then they find a desolate and snow-covered camp. The camp has been evacuated. The buildings are little more than bumps in the snow field, and the only real landmarks are the radio masts. Landing is nerve-wracking; there are no clues as to where the landing strip once was. A fumbled **Pilot roll** results in a crashed plane (base facilities are sufficiently intact that repairs could be effected if the team contains a competent mechanic).

The base in this state is an eerie place, deathly quiet except for the wind moaning through the radio masts. The buildings are half covered in snow drifts, but all the doors open inward. The place is deathly cold. There is no real threat facing the investigators unless they do something particularly stupid, but that should not discourage the keeper from making the exploration a slow and nerve-wracking experience. For a cinematic example refer to the early part of the film *Aliens* as the marines explore the deserted mining complex.

Most of the personal diaries and journals were taken when the survivors evacuated the camp; however, a search of the base administration building and the radio shack will turn up notes and minutes from meetings sufficient to compile a summary of the expedition's activities. This takes two days with a successful **Library Use roll,** three days otherwise. The researcher must be able to read German. Maps are available that detail all the sites mentioned. However, the statue has once again vanished under the snow and will be exceptionally difficult to locate.

Searching the library turns up a copy of the Pym document, with a successful **Luck roll,** and anything else the keeper wishes to add.

The investigators find scant trace of the members of the expedition. To the description of the base in the previous section above, add the following new evidence.

- ***A (Mess Hall):*** The area is tidy, but the oven is completely welded shut. A small animiculum sleeps inside.
- ***B (Photographic Shack):*** The photographic shack shows signs of animiculum activity (etched glass, warped kerosene lamps) and most of the film stocks have been destroyed.
- ***D (Supply Room):*** Chemicals and other stores are mostly intact. They were too cold to attract any interest from the animiculi.
- ***E, F (Accommodations):*** The accommodation blocks show signs of hasty packing. All the personal items are gone, returned to their owners or the next of kin, but most of the heavy weather gear remains.
- ***N (Generator):*** An animiculum is "asleep" on top of the generator. It is not immediately obvious to the casual observer. Once defrosted, the creature only ventures away from the generator room if the generator cuts out. Of course, if the lights go out, the investigators may well send someone to see why, at which point the animiculum would register them as an alternative source of heat.
- ***P (Seal Cache):*** Here is the home of a large, vaguely dog-shaped animiculum. It is completely inert, though it may give the investigators quite a shock as it looms by the door. Several of the nearby seal carcasses show signs of erosion.
- ***R (Dog Tunnels):*** Dark and eerily quiet. Investigators soon discover that, although the chains are still embedded into the walls, there is no sign of the dogs except for a few splatters of blood and frozen excrement. In several places the walls are scored with claw marks as if something were trying to tunnel its way out. A second dog-shaped animiculum lies at the end of the west tunnel.
- ***S (Safe):*** When the investigators discover this, they see that the door has been welded shut. Whoever performed the welding was thorough and also filled the key hole with slag. The welding gear lies abandoned nearby. The reason for this does not become apparent unless the investigators melt their way in; members of the expedition managed to lure a pair of animiculi into the safe, using a kerosene lamp as bait, then welded the box shut. As the box cooled, the animiculi went quiescent. Of course, the heat of cutting the door open is enough to reawaken them. Smart investigators might think to drill through the safe door for a look first. The safe could be disassembled with a hacksaw, but it would be slow work.
- ***U (Physics and Geology Lab):*** Completely gutted by fire. Even the metal instruments are warped and distorted, and certainly no notes or wooden artifacts remain. Knowledgeable investigators might well be surprised at the apparent heat of the blaze.

At Falken's Tunnel Dig

Pym's tunnel is now under some thirty feet of snow and ice.

In order to support his dig, Falken established a temporary base consisting of some dozen tents; most are used solely for sleeping and shelter, while one bigger tent has cooking facilities. In the center of the circle of tents is a thirty-foot-deep hole. Set up over the hole is a block and tackle arrangement which can be used to winch up to four men at a time up and down the hole. It takes two strong men to operate this winch.

To one side of the tent circle sit two Junkers Ju-52 transport planes.

Down the hole is a very impressive archway, ten feet wide by fifteen high, into a large stone building. The edifice is built of blocks of unmortared stone fitted together with impressive accuracy. The exterior, what little of it has been uncovered, is obviously ancient, made of a dark metamorphic stone similar to granite. The weathered, pitted surface gives no clue as to its age. In contrast, the interior, once the snow drifts are navigated, is smooth, almost polished. Little light filters down from above and explorers will need their own sources of illumination. A corridor with an obvious, worn track leads downward into the stygian gloom.

Exploring near the entrance way reveals a number of alcoves containing some interesting finds.

The first is a pair of pentagonal prisms with metallic rings at one end resembling the lamps described by Pym. Both are strangely etched, as if by acid, and only one functions. Touching the surface (rather than the carrying ring) causes the holder to lose a magic point, in exchange for which the lamp glows with an eerie green luminescence. However, this lamp is damaged and the glow fades within five or ten minutes. At the keeper's discretion, the sensation of losing a magic point is worth 0/1 SAN, as is seeing the lamp burst into life for the first time. If the functioning lamp breaks, the keeper must decide what happens; nothing happens if the other one breaks (see "The Narrative of Arthur Gordon Pym: The Missing Chapters," page 327, for more information).

Another alcove holds a number of native artifacts left by the Tsalalians, including a feathered headdress, spears, and a couple of leather bags containing unidentifiable vegetable matter. Scattered throughout this area are a dozen or so of the strange black opals.

Following the tunnel downward, explorers soon notice that the air becomes warmer and much more humid. After about half a mile, the corridor opens out into a sort of wharf with no water. A tunnel, with a slot in the far wall, runs off into the blackness. Compasses do not function reliably here, but dead reckoning suggests that the tunnel heads towards the elder thing City at the Miskatonic Mountains. The wharf has a pair of storage areas, one of which has a supply of strange metallic poles. Each pole is about five feet long, pentagonal in cross section, with a rounded spike at one end. The spike is at right angles to the rest of the pole. The metal has a strange green sheen and is oily to the touch. Also present are a pair of extremely heavy five-foot-wide pentagonal stone platforms; a combined STR of 30 or greater is required to move either of them.

Keeper's note: this area is the start of the elder thing monorail. Inserting two of the metal poles into the slot in the wall, and laying one of the stone platforms correctly across them, once provided a method of getting to the City of the Elder Things. Sadly, the monorail no longer functions.

Exploring the monorail tunnel is a fruitless task; the rock fall that Pym caused is some fifty miles along the tunnel and is impassable without heavy mining equipment. Animiculi infest the area, making exploration extremely dangerous.

If the investigators come to this place as part of the Barsmeier-Falken exploration team, it is suggested that they take the lead in the initial investigation. Play on their nerves with strange scuttling sounds, but try and dissuade them from joining Falken's deeper exploration. Falken may well decide that this is his expedition;

perhaps he fears that the investigators will try to claim the academic rewards from his efforts. Use a steady stream of animiculi to drive them from the tunnels, and remember that a blizzard is due. Although the animiculi cannot function for long near the snow, they are still dangerous and tend to retreat back into the tunnels when they start to get cold. They cannot climb out of the hole, and only reach the surface if the investigators facilitate this.

If the investigators come to this place after the destruction of the Barsmeier-Falken expedition, then they find a desolate deserted camp, half covered in snow. All the personal effects have gone, but a large quantity of supplies remains. Two days work is needed to remove the ice from the winch and then to dig the snow out of the hole.

Most of the finds near the doorway were returned to the BFE main base. However, they have been replaced with a strange variety of metal objects. Here and there are the scattered remains of Pommerenke's half of the expedition: belt buckles, brass buttons, spectacles with glass lenses strangely etched by the animiculi. The metal remains of a rifle lie halfway down the tunnel, but the stock has vanished. Several pistols can also be found, but none of them have hand grips. These weapons will function if cleaned, but only at half normal skill.

The animiculi remain, but have retreated into the warmer areas. They do not notice the investigators until the humans start to explore. Remember that the animiculi are not intelligent and do not coordinate their attacks.

In either case, there are effectively an infinite number of animiculi in the tunnels; generate them as needed. Some, having participated in the destruction of the expedition, are quite large and have acquired some alarmingly human characteristics of form. ■

Deception Island

The BFE left supplies here, one of the points where the Graf Zeppelin *touches down on its way to the BFE main base. Investigators who must chase down the Seeds of the Prisoner may find things much as described—or find great threats here.*

Part of the South Shetlands archipelago, Deception Island was discovered in 1820 by the British explorer Edward Bransfield, commanding the brig *Williams*. It is the horseshoe-shaped remnant of a volcanic caldera, 9 miles across the outside, surrounding a bay about 5 miles in diameter. The entrance channel, a chasm shattered through the caldera wall, is only a half mile wide.

The outer slopes of the island are usually ice-free in summer, with some large patches of moss and orange lichens. Black ash covers much of the island; fumaroles and hot springs give evidence of the continuing geothermal activity within. The interior bay is usually warm enough to swim in, and the water temperature has at times gotten high enough to blister the paint on ships. Every few decades, an eruption of ash and smoke will change the island's appearance. In December, the temperature hovers around 0°F.

Large rookeries of chinstrap penguins inhabit the island, numbering in the hundreds of thousands of birds; mated pairs are taking turns incubating their eggs during the entire month. Some petrels and crabeater seals can also be found on the island.

Within the bay are the ruins of Port Foster, a whaling station. It was abandoned in 1931 after many profitable decades of operation. Dozens of large rusting tanks, and a small town of processing sheds, barracks, boilers, flensing platforms, docks, a chapel, and warehouses still stands along the black, steaming shore. The buildings are built mostly from wood and corrugated iron, and contain odds and ends of the personal possessions of English and Norwegian whalemen. Jumbles of gray whalebones litter the area, and a large dump contains rusting cans, defunct equipment, broken liquor bottles, and other debris. Half a dozen large whaleboats, in good condition, lie upside down on the ash.

The runway built for Sir Hubert Wilkins in 1928 runs half a mile from the whaling station toward the ocean, across rough lava on an undulating course. ❑

The Narrative of Arthur Gordon Pym: A Short History

The Narrative of Arthur Gordon Pym by Edgar Allan Poe was first published in 1837, by Thomas A. White of Richmond, Virginia, and was a notable departure from the majority of Poe's works in both its style and subject matter.

In actuality, the *Narrative* was written by Arthur Pym himself, a young man who sailed out of New England in 1827, at the age of eighteen, and suffered many hardships and adventures in the South Pacific and regions beyond. He brought it to Poe for finishing, since his skills as a writer were limited, and allowed Poe to put his name upon the completed work. (For a summary, see the sidebar "A Synopsis of Pym's Narrative" on page 179.)

The published portion of the *Narrative* covers Pym's travels through nearly two years, until March of 1829. The published form of the manuscript, however, is incomplete; White notes in an afterword that Pym withdrew several final pages for editing and was killed in a spectacular accident before they were resubmitted.

The original manuscript of the *Narrative* was destroyed in the same ferryboat explosion that killed Arthur Pym. At least one scopy of the work did survive, however—uncorrected galley proofs or page proofs that were pulled by White's printers before Pym withdrew the conclusion of the manuscript. These sheets or octavo pages were in Edgar Allan Poe's possession at the time of the disaster, but disappeared when a thief broke into his lodgings a few days later.

An octavo signature in 16 pages reappeared in 1875, in Chicago. Records of a court sale of the estate of one Mary Peters Hartley in March of that year notes that an "Old printer's copy of monstrous fiction by Edgar Allan Poe and Arthur Pym"

brought $60 in the auction, and was sold to "Lionel White, of Milwaukee."

Lionel White was a collector of antiques. He soon became aware of the uniqueness of his find and kept it in his prized collection of rare books until business reverses in June of 1897 forced him to sell his treasures. The collection was sold in July, in many lots, to a variety of collectors around the country. The Pym manuscript was purchased by Stanley Edgar Fuchs, a Philadelphia antiquarian of some note, for $400.

Fuchs, after careful examination, concluded on stylistic grounds that the work was not actually written by Edgar Allan Poe, and lost interest in the manuscript. He offered it for sale in literary journals, searching for someone who would allow him to recoup the money he had paid.

The advertisement was seen by Nathaniel Vredenburgh, a wealthy ship owner in London. Vredenburgh wrote at once to Fuchs offering $500 for the work, but by the time the letter arrived Fuchs had already sold the signature to Percival Lexington.

Lexington was reportedly delighted with his find. Despite letters from Vredenburgh and other collectors, offering to buy the work, Lexington refused to sell. The Pym tale's conclusion became one of a number of prized collectibles guarded carefully in Lexington's private library.

It was not until 1921, when a number of bad speculations and dubious business practices came to light, that Lexington decided to sell. He offered the octavo for auction along with many other private treasures.

The day of the auction dawned, but Percival Lexington never arrived. Vredenburgh and the other interested parties were informed in due course that Percival Lexington had passed away in his study the previous evening. Some thought suicide; others, including his daughter, cried murder.

The auction was delayed for several weeks, eventually to be presided over by Percival's daughter Acacia. The Pym signature could not be found to sell, and has not been seen since.

In actuality, an agent of one of the interested parties, Albrecht Loemmler, visited Lexington on the night of his death in order to try to buy the document before the auction. He arrived quietly, after hours as arranged, but found Lexington dead when he arrived. Always the opportunist, he took the document and left as quietly as he had come.

The octavo signature thus found its way into the hands of a German industrialist, Albrecht Loemmler, where, in 1933, it remains. ■

March 22. The darkness had materially increased, relieved only by the glare of the water thrown back from the white curtain before us. Many gigantic and pallidly white birds flew continuously now from beyond the veil, and their scream was the eternal Tekeli-li! as they had retreated from our vision. Hereupon Nu-Nu stirred in the bottom of the boat; but upon touching him, we found his spirit had departed. And now we rushed into the embraces of the cataract, where a chasm threw itself open to receive us. But there arose in our pathway a shrouded human figure, very far larger in its proportions than any dweller among men. And the hue of the skin of the figure was of the perfect whiteness of the snow.

CHAPTER XXVI

Shocked from our passive trance, Peters and I took the oars from the bottom of the canoe and stroked powerfully, trying to make headway towards the great figure. We could not say precisely what it was, but without a doubt, whatever lay near the statue was a better fate than the crushing and drowning death that the cataract promised. The now-apparent roar of falling water approached at a tremendous pace, but we clung grimly to our only salvation, throwing ourselves mightily into the task. We could see it only on occasion, for great amounts of mist and the ash-like powder often obscured the figure. Still we struggled on, grasping at last at what might have been our one chance for life. Both Dirk Peters and myself cursed for having lapsed into the strange, dreamy apathy of the previous days, only to be awakened to the fatality of our situation by the awful proximity of the onrushing cataract.

Owing to the great velocity with which the water rushed ahead, we were indeed fortunate to achieve the great figure. It had not moved, and as Peters touched it, virtually in the grasp of the waterfall, we saw that it was an immense statue of some sort, carved entirely out of some brilliant marble-white stone. By the time we had reached it, the haze and ash were so thick that we could seldom see even each other. Peters clung to one leg of the shrouded form with his mighty arms, and screamed over the thunder of the falling water that I was to climb to the front of the boat with him. Moving next to him, I saw through the blinding white storm that the great statue had been constructed on the very edge of an island, on the very lip of the monstrous cataract. We had not seen this land before due to the haze that surrounded it, added to the fact that the island itself was almost entirely white in its appearance, no doubt due to the density of the powdery ash and steam. Peters clung to the leg of the thing while I stepped onto the great foot, and then I held the boat while Peters leapt nimbly onto the other leg. The spray was extremely painful, for the water was so hot that even small droplets were enough to raise blisters. As soon as he was out of the boat, the current tore it from my hands. Our meager supplies, along with Nu-Nu's body, were swept into the roaring chasm, to who knew what chambers on the sea's dead floor.

From the legs of the statue, it was only a slight jump to the pale and sandy island. Whatever the ash in the air was, it was indistinguishable from the bone-white sand that made up the shore of the island, and was nearly the same color as the pale and strangely fleshy vegetation that covered the land. The air was constantly roaring with the cataract, and it is a wonder that we could make ourselves heard by shouting. Having lost our supplies, our first order of business was to find some sort of food. Peters suggested we try to eat the oddly liquescent flesh of the white, trembling plants that grew no more than two feet out of the white sand, seeing as the many white birds of the island seemed to use it for their own sustenance, and we did so. Although it jerked and quivered when cut and oozed a pale liquid at the rent edges, it was not an entirely repulsive meal. In fact it proved to be our sustenance for many days, containing as it did both food and a sustaining amount of relatively fresh water, although the flavor was sharp, as if it had been pickled.

March 23. The true disadvantage to the fleshy plants was that they were the only thing that grew on the island. While their fortifying powers were quite in evidence in the renewed constitutions of both Peters and myself, they would in no way serve in the creation of a boat

or raft. Unless we could find something to help us get off the island, a stand of trees or perhaps some flotsam that washed on the shore, we were doomed to remain there for the rest of our days. And so we set out to explore the island, keeping close to the beach and each other, because the swirling mist and ash were exceedingly thick, thicker even than the Nantucket fogs I had known as a boy, and we did not want to lose sight of each other. We searched for many hours, only to find the beach scoured clean, as if by the white hands of the tremendous statue that stood sentinel on the end of the island.

March 24. I awoke to Peters shaking me, and pointing to figures which were approaching the island in distressingly familiar canoes, black shapes easily seen through the eddying whiteness. Alarmed, we hid ourselves among the knee-high white plants. Although they squashed oozily under us, we paid them no mind as we peered across the beach at the canoes of the savages as they approached the island. There were six canoes, which had neither the enormous length nor breadth that we had seen displayed in the canoes used by the other Tsalalians. These were perhaps twenty feet in length, and contained only three figures, two of whom paddled, and one who stood at the bow. The creatures standing in the boats seemed to be some sort of chantey-man or witch doctor, as a nearly continual wailing ululation came from these figures, very different from the short, harsh tones that we had heard on the island of Tsalal, but punctuated with the familiar Tekeli-li. And each time one of the witch-doctors uttered that dread phrase, all the savages in the canoes would give a shudder, almost all at once. They were obviously terrified of the island and its great expanse of whiteness; possibly this island was the source of the superstitious fear itself. Peters and I had watched the canoes approach for some time when one of them turned, and we saw that, in the bottom, there was a bound human form. I pointed this out to Peters, who quickly began looking at the rest of the boats to see if there were any other prisoners. By the time the savages had landed, we were certain that there were captives in each of the canoes.

As they were dragging canoes out of the water onto the white beach, Peters and I were shocked to see that the prisoners were white—Europeans such as we had not seen since our own crew had been killed. It was a sight to almost make one weep—to have friends and compatriots so close, and yet captured by the foul savages. We immediately determined to rescue them, but immediately upon our resolution, the savages each picked up a lance or a club from their canoes, and we quailed, being unarmed ourselves. Peters and I discreetly resolved to remain hidden after that, for only when the filthy creatures had hefted their weapons did they reach into the canoe and bring out the Europeans. They had been trussed up like deer—bound hand and foot to a pole, and carried through the deliquescent undergrowth. It was almost too much to bear, and I heard Peters swear under his breath that we would recover the captives, come brimstone and darkness. There was a light in his eyes that I had not seen before, and I recoiled slightly as I saw it. I thought that there perhaps was a glint of madness in his gaze, and I was afraid.

As opposed to their unusually noisy approach, the disgusting Tsalalians were absolutely silent as they paced across the island. We followed, thankful that the slippery oozing plants did not betray us with noise as a wholesome forest would have done, but rather we squashed quietly on a course parallel to that of the loathsome Tsalalians. After some length, the procession came to a halt at a large stone edifice. It was obvious that the Tsalalians had not built this monument, whatever it was, for while they lived in rude huts, this was a structure composed of blocks of unmortared stone. It seemed very ancient; pitted and worn, as Roman ruins seemed in pictures I had seen on the walls in the academy. They appeared to be gray, although it was difficult to tell under the layers of white ash that drifted from the sky, but our view was too obstructed for us to discern its overall form. The Tsalalians marched directly through a wide archway, easily large enough to admit a team of horses, and disappeared from view. Peters and I waited for a time, unsure as to our next action. If we followed too closely, we would probably be massacred by armed warriors. But we simply could not stand by while the evil creatures sacrificed fellow humans to some obscene paynim god. We were creeping closer to the open archway, when we suddenly heard a great shriek of Tekeli-li, repeated a dozen times, echoing from what must have been a substantial distance inside the edifice. We

heard the sound of running feet rapidly approaching, and had just enough time to hide in the sickly plants before the Tsalalians came thundering back through the archway at a dead run. Of the captives there was no sign, but the warriors, obviously more used to running than the witch doctors, led the mad stampede of black shapes out of the archway running blindly for their canoes.

Peters and I lay dumbfounded, and then stood up. "Did you count them?" Dirk asked. "No," I replied. "Only thirteen came out," he said matter-of-factly. He grinned in a grotesque fashion. There were only two of the savages left in the structure, and he was anxious to find them. He rubbed his coarse hands together in anticipation, and preceded me into the archway. I had the feeling that he had in mind revenge for the souls of the Jane Guy's crew who had been killed in that terrible ambush. As we entered, I noted that despite the rough, weathered look of the exterior of the building, the interior was smooth, as though it had been carefully polished. The blocks of stone that comprised the structure fit so exactly that I was not even able to insert a fingernail between them. I thought of stories of the great monuments of antiquity, and a feeling of ancientness settled like dust upon us. There was a worn area in the floor—presumably from the feet of the Tsalalians, for we had seen no other evidence of animal or human on the isle. The structure sloped downward at a fair angle, not quite enough to set us tumbling but enough off level to be noticeable. Down we went, into what appeared to be a hallway. Unfortunately, the light that issued from the archway did not penetrate far into the structure, and neither Peters nor I had any means to make a light, let alone any sort of combustible material with which to sustain it. We proceeded forward with caution, allowing our eyes to use even the tiny amounts of light available to us. We were soon below sea-level, for the air was as damp as could be imagined. The walls sweated in such a fashion that I thought of Jonah in the belly of the whale, so great was the wetness of the air. As the light grew dimmer and dimmer, we were forced to navigate by the touch of the smooth, slimy walls, for we still heard nothing from the captive party ahead of us.

Then suddenly, there was a mad shrieking, as of a group of men in mortal danger. The volume was excruciating, and yet on top of it there was a hideous screeching that seared the eardrums like nothing I had ever encountered before. Dirk Peters was suddenly no longer at my side, but whether he had run ahead or fled behind I could not tell. I moved determinedly towards the terrible cacophony, but I tripped and fell sprawling in the thick darkness below the earth.

CHAPTER XXVII

When I regained my senses, the terrible shrieks had quieted, and a thick, glutinous red light had sprung up from the tunnel ahead of me, and I was able to see. Peters was crouching at a corner of the tunnel, peering down into the unnatural red light. At this time I noticed the noise of activity, such as men loading crates into the hold of a ship. Under cover of these sounds, I crept up to Peters, who was raptly watching the activity beyond the corner. I was about ask him what was going on, when without even looking back, he clapped his hand over my mouth. The other noises quickly subsided, and the silence was suddenly total, and then there was a metallic clank and a curious hissing sound, which receded quickly. As the hissing decreased in volume, so too did the light, and we were soon enveloped in darkness again.

"We have to get them," Peters said in a low, terrible voice that made my skin crawl. He turned and went a little way down the corridor, towards something I could not see. He blundered in the darkness, and I heard him cursing and the sounds of objects being moved. I could see nothing until there flared a pale, sickly green light. Peters was standing on a block of stone, holding the strangest-looking lantern I had ever seen. There was no metal on it, simply an eight inch tall glass pentagon, which narrowed to a point at the bottom, and was capped by a flat stone which was topped in turn by a stone ring that Peters held. Inside the glass was a roiling liquid that seemed to be in some way boiling, and it was this that gave out

the very strange illumination. I looked away from the queer thing, grateful enough for the light.

Although the tunnel continued, it was very different. This seemed some sort of wharf without water, and certainly it was one of the strangest places I had ever yet been in. Before I had the opportunity to properly look about me, Peters directed me towards a jumble of metallic poles and instructed me to pick out four. I looked at these strange objects, about five feet long, pentagonal, and equipped with a rounded spike about a handspan in length, which jutted off sharply from the very end, razor sharp on the bottom edge. The entire effect was something like a metal scythe, only shorter in every way and set in straight, rigid lines. They were of no metal I had ever seen before—green as verdigrised bronze and yet slightly oily to the touch, although this may have been the action of the damp air in the tunnel. After I had picked four—no difficult task, for they were all virtually identical—Peters hurriedly told me to bring them to him by the wall. There, in a depression set below the rest of the floor, was a slot in the wall, which ran down the dark tunnel, into which I assumed the prisoners had been taken. He thrust two of the poles into holes which had grooves running down to the main slot, with the spikes pointing up.

After that, we lifted one of the stone platforms that was lying on the floor. It was extraordinarily heavy, as it was about five feet wide and rather thick, and we had to rest several times before we were able to place it on the two poles, on which it fit snugly. The platform itself was made of the same stone as the walls, but perfectly pentagonal, with five holes drilled into the center, in a circle. Other than this, the surface was slightly rough, as if unfinished. Before we continued our journey, I suggested that we ought to get some food, since we had no idea how long we would be in that dreadful tunnel. Peters agreed, and sent me up to gather as many of the white plants from the island as I could. As I was returning to the tunnel below, I heard a great hammering sound. Alarmed, I proceeded more slowly, until I came upon Peters, beating the floor with one of the metal poles. While the floor showed considerable damage from the abuse, the pole did not seem to have suffered in the slightest. When he caught sight of me, he shook the pole at me, saying that it was fit for use. "On what?" I asked him. "Them!" he screamed, pointing down the tunnel, and proceeded to have a fit of violent paroxysms, raging around the little room and screaming strange things to himself. I dared not disturb him, lest his anger turn on me.

I deposited my slimy armload of native vegetation onto the stone platform, and Peters and I climbed on board. We each brought three of the odd lamps, in case the fuel for the one providing the current illumination should fail. Peters also brought several more of the metal rods, apparently to use against the kidnappers. I quickly discovered that these would fit into holes in the front and back of the platform, and we hung our lamps on these. When all was in readiness, Peters took hold of one of the bars supporting the platform and turned the long spike at the end. The stone raft dropped and lurched, and we were quite suddenly moving at a fair rate of speed. The only sound to our conveyance was the strange hissing that came from the wall we were passing so near to, like some indefatigable snake. The walls were smooth, so I did not initially notice our great velocity, but upon looking back, I could no longer see the end of the passage.

Presently, I noticed that there were disks occasionally set into the walls just above the slit along which we were traveling. Owing to the rapidity of our motion, I was unable to determine what they were. We traveled through the tunnel for hours, neither one of us saying anything to the other, with only the slight hissing of our transport to break the silence. At no other time did I come so close to sheer and utter hopelessness as I did in those first hours descending in that horrible, endless tunnel. The walls were monotonous and the green light made me feel ill. We carefully rationed our vinegary leaves, so eating was infrequent. And so we had nothing but each other to destroy the monotony of the stygian way, and yet I was afraid to say anything to Peters. He seemed very affected by the events previous to our

attaining transport. What was going through his mind, I could in no way guess, but he was full of evil looks and violent temper, so I returned to my tedious observation of the walls.

The tunnel was hewn out of the living rock that connected the island to the sea floor. That it had been made by the repugnant Tsalalians was impossible, since there were no seams in the rock, and the walls and floor appeared very smooth. Although there were no clues to the making of the tunnel, there were occasional jogs and lifts along the way. While the majority of the ride was as smooth as oil on water, sometimes there would be a little sway, or a rise that would make the raft shudder a little, and lose some of its velocity, only to resume it some seconds later.

Of other life there was no sign. I never saw anything of the red light I had seen earlier, only the septic green of our own light. Whoever had taken away the prisoners had completely vanished from our sight. But Peters was determined to catch them; to a much greater extent than I was. But we had no idea if there was any way to excite our mode of transport to an even greater velocity. Indeed, I was completely in the dark as to the action that made our platform move so rapidly—it was Peters who had known how to engage whatever mechanism propelled us. The mechanism of the platform required no effort on our part, and the walls rushed by too fast for examination. Blackness surrounded us, cut only by the wan, spectral light of our lamp. Peters squatted, a dark and frightening shape at the other end of the platform. Weariness overcame me, and I lay down, head pillowed by the slick vegetation that served as our feeble store of food. Lulled by the monotonous hiss of the cavern, I was soon overcome by sleep.

I awoke to perfect and utter darkness. I could hear nothing but the faint hissing of our transport and, after a panicked minute, Peters' slow, labored breathing. He was not dead, then. I felt around the platform, hoping to be able to re-ignite our odd light source, for although the light was nauseous, it was better than the crushing darkness that currently surrounded us. By feel alone, I was able to make my way to the fore of the platform, and found the pole upon which the lamp hung. I felt my way up the oily pole, careful not to encounter the sharp edge of the spike, and onto the rough surface of the lamp.

Immediately, there was a sharp tearing sensation along my hand, and the lamp immediately sprang to life, almost literally. I had not before been able to observe the action of the lamp, but now I had a particularly horrible opportunity. A faint glow began in the depths of the glass, radiating from a small, lumpy form at the top of the glass container. After a second, it rapidly grew, both in size and luminosity. Very quickly the mass had expanded enough to press firmly against the sides of the lamp, roiling as I had seen it earlier. I looked at my hand, expecting the palm to be bloody, but there was no mark upon it at all. It was an unpleasant feeling, and I hoped that I would forever after be spared repeating the experience. Our progress continued unabated, the walls rushing past us at great velocity.

Words cannot describe the tedium of the journey—to be confined to a space no more than twenty-five square feet, alone save an insensate companion, rushing through the darkness towards some unknown goal. I spent as much time as possible sleeping, and remain unsure how long the terrible journey lasted—three days at the least.

At last, there came a slowing of our strange method of transportation, along with a distinct cooling of the air. All through the tunnel the air had been warm and humid, but now it turned chill, and water ran off the walls in streams, pooling into ice-scummed puddles on the floor. This was especially worrisome as Peters and I had no clothing against the cold, and no means of procuring any. We turned a corner, the first in the whole hellish journey, and came to another of the peculiar wharves. But it was obvious that our odd method of conveyance was not going to stop, although it had slowed considerably. The platform was at the height of our raft, so it was a natural thing to simply step off, leaving the raft to continue its journey into the darkness alone.

We were in a maze of tunnels that led in several directions, and from one there was the faintest glimmering of clean, wholesome light. Despairing from our inability to find any signs of passage on the cold stone floor, we jumped in alarm at a loud, confused chattering that came down from the lit corridor. Up this barely-lit cavern, something was moving—a shifting, flapping sound echoed around us, accompanied by strange squawking and hooting noises. Peters took one of the oily rods in one hand and the pale green-glowing lantern in another. I took another bar, and followed closely behind him.

There were a number of white penguins—larger than any bird I had ever seen before—milling about, the mouth of the cavern. From our vantage, the light behind them was almost intolerably bright, already surpassing the loathsome light that emanated from our lantern. But with the increase of light also came an increase in the chill. A freezing wind gusted down the cave, and Peters, shivering with the cold, hefted his pole and in a trice, broke the neck of one of the birds. "You get one, too," he said, his breath already steaming as he began to skin the wretched thing with the razor-edge of his pike, "we can wear their pelts against the cold." This seemed reasonable to me, and it was the work of but a moment before I had killed another of the things. Oddly, they did not flee, despite seeing two of their company struck dead in their midst, but continued to mill about as confusedly as before. But when I was engaged in the grisly task of cutting it open, I noted that the eyes were a milky white, all but useless. Like Peters, I skinned the creature, and then turned the whole skin inside-out so that the minute feathers would keep my skin warm. We guessed that the cold outside the tunnel would be even more intense than inside and, even though I rapidly followed his example, I was shaking violently by the time I was done. The polar cold was unimaginably fierce. Even through the penguin hide, I could feel the chill working into my bones. By this time, Peters was feasting on the raw meat from his penguin—the first food other than the vinegary plants we had had in some time. We did not bother to bring any supplies with us—we had no hope of building a fire, and anything we carried with us would probably freeze before we got any significant distance away from the tunnel. Even so, just before we left the site of our butchery, Peters, after some careful maneuvering, pulled an organ from each of the piles. One he thrust at me as he chewed on the other. I ate the raw, bloody liver—and it sent the blood singing in my veins. Thus fortified, we proceeded towards the end of the tunnel and the clean light of day.

A scene of unutterable horror greeted us at the mouth of the cavern. The temperature plummeted as we approached the entrance, and we stepped out into the light. It was excruciatingly bright, reflected not only from the murky skies but from the thousand drifts and embankments of snow that surrounded us. To the ordinary eye, the light was diffuse and dim, but to those such as we who had been immured in the very depths of the earth's bowels, darker than any night, even this wan light was nearly unbearable. The nauseous light of the lamp had in no way prepared our eyes for the wholesome light of the sun, despite the overcast sky and the sun's low angle. There was nowhere to look to rest our eyes; everywhere there was the blinding whiteness of sky or snow, piercing our eyes like silver-white daggers. We stood and blinked—covering and uncovering our eyes to shield us from the reflected glare—and beheld yet another terrible revelation. As our eyes adjusted, we began to make out the outlines of the rock formations that the snow had drifted against, squat and black in contrast to the unyielding brilliance of the snow. The more we could see, the more we saw that the outlines were too regular for anything of nature's construction. Whatever it was and whoever had built it, the blocks of stone and suggestively regular corridors between them could be only one thing. It was a ruined city—unutterably ancient—built and then abandoned on this freezing Antarctic waste.

Great and ancient it was—with open arches and tumbled causeways, many of the great works thrown down by some unimaginable cataclysm. Everything had an unsettling queerness to it—the incalculable age of the city itself, the gaping holes choked with snow, and an indefinable but decidedly repugnant otherness of the entire place. The only sounds were those of the wind as it thrilled and roared through the ruined streets. There were paved courtyards swept clean of snow, with five avenues leading from them, hemmed in by five blank stone

walls. There were no signs of inhabitation, only the terrible desolation and loneliness of ages; the march of time slowly grinding this strange metropolis into oblivion. I stood, dumbfounded by this incredible and monstrous landscape, but Peters shook me from my passivity and pointed to the undisturbed snow at the cavern's mouth.

Whatever we were tracking, it had not been this way. The snow was deep and fresh, white as an unwritten page waiting for the first defacing scratch of a pen. Snarling in anger, Peters stalked back into the darkness of the cavern, and we again set a raft of stone into the wall, and after loading our meager stock of food and other equipment, continued down the passage. But our time in the darkness was much less this time. After no more than three or four hours, our ride ended, and we drifted into another of those dry wharves. This time, however, there was only one tunnel, and it lead directly to the surface.

As harrowing as the sight at the previous tunnel had been, our view from this one was even more terrible. No more than a mile away through blasts of snow and wind, yet clearly visible, was the image of a titan tower—a lair of giants, dragons, or some other fabulous and abhorrent creature, for it was far too great to have been erected by mere human hands. It soared above us, hidden behind a swirling, freezing veil of ice and snow, taller than any medieval tower or citadel. And then we saw the brilliant blue light which hovered about its cap, like Saint Elmo's fire about a mast, and I knew, I knew to my soul that this was nothing else but a primordial lighthouse—I can think of no other thing it might have been as the light, dazzlingly bright in the polar gloom, lanced from its top—guiding ships from God knew where to this most desolate of ports. It was a sight that I can never erase from my mind; grand as a square-rigger's mast, terrible as lightning on the sea. There clung to this unholy edifice a hideous feeling of monstrousness, as if this were not something native to this earth, but an enormous, blasphemical tower of Babel erected to mock God and all of His good works. I tried to run, but I could not—I was captivated, involuntarily fascinated by that elder tower of eons long past—as if it were calling to me, urging me to come towards it. I stood frozen, freezing; when Peters nudged me, and I was able to look away from that titan horror. I immediately had the urge to run, but successfully fought it down. To panic and run in this wilderness of snow was to die.

My only hope that we could get away from this awful place of elder madness was crushed by Peters' excited pointing to a trail on the ground. Although it was not fresh—even now there was a light fall of snow and ice—it was definite evidence of recent passage. Utterly crushed, not even daring to believe we should come through the venture alive, I followed as Peters pursued the trail of the captives directly towards the antediluvian ruins.

CHAPTER XXVIII

For an interminable time of freezing cold that we followed that track; I have no conception of how long that dreadful mile took us, for we were unable to even lift our eyes, the cold was so utterly numbing to mind and body. Snow and sleet blew all around us, and it was all we could do to watch our ice-laden feet follow each other down the trail in the inches-deep snow. Ice formed on our lashes, and our breath froze ere it left our bodies, forming a second, frozen beard on our lips. We toiled on and the snow got worse, the wind driving against us mercilessly. Our previous agonies were nothing compared to what we now endured—our erstwhile coats freezing to our bodies, the wind a sledgehammer that drove us from the path, which we knew was leading us to some horrible ending of gruesome death. Twice I fell, only to be picked out of the freezing snow and urged on by Peters. A third time I stumbled, and absolutely could not go on. I lay in the snow, waiting for the merciful oblivion of death, the dark closing in, when Peters kicked me sharply. I threw up an arm to ward off his abuse, unable to cry out, for my lips were frozen shut. "Get up!" he cried. "Up, you miserable wretch!" And with that, he hauled me bodily out of the snow and shook me as if I were nothing but a child. This had the effect of bringing me back to my senses and sending the

blood feebly back to my limbs. I gathered myself—more afraid of Peters than I was of the spire of death—and trudged on. Soon, we were walking in the shadow of the dreadful pharos itself.

We continued to stumble, half blind, wholly insensate, until my foot struck something in the trail and I again fell headlong. Peters aimed a fierce kick at me, then suddenly stopped, his face contorting with rage and terror. I followed his gaze, and saw that I had tripped on a human body. Whoever he had been, he was unrecognizable now; his head had been caved in by a powerful blow and his blood had frozen to ice in his long, blonde hair. Although the sight was ghastly, it was in some horrible manner comforting, for we at least knew the mysterious captors and their prisoners had come this way, even if not all of the captives remained alive.

Only a few yards from the pitiful remains, the trail entered the base of the appalling tower. Immediately, we found ourselves on a circular ramp that descended into the depths of the earth below the tremendous lighthouse, and a small amount of packed snow and ice to show us that our quarry had descended within. As we followed this trail, we noted that around this ramp, the walls of the building were covered in carvings—bas reliefs that were too frightening to contemplate for long. We hurried down into the darkness, afraid that we might see too much, Peters in the lead. It is fortunate that Peters had remembered to keep hold of his lamp, for darkness was almost immediate, as within the tower there was no hint of the awful blue light that beckoned. Although there was no snow to hold a trail, he detected a slight trail of ice that continued into the lower depths of the structure.

If the tower above was dead, then below the surface it was alive. We passed dozens of darkened hallways, and from many of these there came sounds of work or activity, the hiss of steam or the clank of metal being worked. Each of these was in perfect rhythm, even more perfect than the best sea-chantey. At times, we looked into entrances or archways, but at no time did we see any living soul, only great disks and plates of metal and stone and other, less identifiable substances that blasted foul air and turned and twisted to no recognizable purpose. Fearful of that which we did not understand, we exited from these rooms in haste. We did not explore the silent passages. As we descended, we noted that the air was becoming warm and damp again. Soon we were all but sweating in our penguin-skin overcoats, but we did not take them off. Our icy beards melted off painfully, and we stopped once to restore life to our limbs, shaking off the effects of the cold as quickly as possible; we did not know what would be required of us for any rescue attempt.

Eventually, we came to a place where we heard the rasp of human breath, and saw the thick red glow we had seen at the beginning of the terrible tunnel so long ago. Ever cautious, Peters retreated and left our lamp some distance away from the archway, crept up to the entranceway, then signaled me to silently join him. Once there, I saw the four captives, hands still trussed in the primitive ropes made by the Tsalalians, in addition to two of the filthy savages. All lay on a block of stone which rose off the floor of the chamber, apparently dazed in some way. There were carvings on the block, but I could not make them out. Although I could not see the entire chamber, I could see that it was vast and contained several large crystalline structures of some unknowable purpose. The air wafting out of the room was tropical—damp and hot, almost to the point of steaming. I signaled to Peters that we should make an immediate rescue, but he shook his head minutely, his stony features imprecating dire results if I made any attempt. We continued to study the chamber, when there came a queer shuffling sound, and there stepped into my view, a Thing.

There are many things that Man does not yet know about the Earth, and this was one of the most horrible. For it is a conceit of mankind that there are no other intelligences on this Earth than himself, and that the Lord gave him dominion over all the beasts and fishes. This is not the case, for there are other, stranger Things that live amid the polar wastes, Things shaped like whalers' barrels, only taller and more slender, with thick, ropy tentacles below and a curious starfish-shaped head crowning the whole. Its color was a dirty greenish gray, mottled in some areas, and it walked. Great God! I cannot swear whether it was animal or

plant, but the Thing walked; clumsily, as if uncomfortable with ambulation, but walk it did, shuffling along on the five powerful tentacles that sprang from its base like the roots from a great tree. I here swear to God in Heaven that this thing was not simply alive, but also intelligent, possessed of a malicious mind at least as great as the brains of men, but evil, as foul as any demon or devil. Without a doubt, these were the creatures that had raised that horrible, hell-spawned beacon that rose above us like the arrogance of Lucifer himself, for only minds of such malice could have created something so grossly malevolent.

The dreadful Thing moved toward one of the defenseless captives and picked him up easily, with only one limb. As soon as the victim was lifted off the carven stone upon which he had rested, he began to thrash and scream horribly, but he was held fast by the Thing's tentacle. Peters and I were paralyzed with horror, knowing that there was nothing we could do as the poor wretch was carried some several yards to a pit in the floor. With incredible strength, the hellish thing carelessly flung its screaming burden headfirst into the cavity. His screams stopped immediately, replaced by a curious churning sound, as if he had fallen into mud, but we held no hope for him in this awful place. I averted my eyes and covered my ears in a futile attempt to shut out the sounds of the dying man. The Thing merely stood by, impassive as the rocky walls while the muddy slopping slowly tapered off. With sudden action, it reached into the hole in the floor, and, with a care it had not previously shown to the man, raised up what was left of our poor fellow. All that had been a man was gone, and there was only left the pinkish-white net of his sinews, attached to the thick cord of his spine and the pudding-like lump that was his brain!

Paralyzed with fear, sickened with revulsion, we could do nothing but watch as the Thing draped the pitiful sinews of our fellow man over its tentacle and folded it into a neat package, much as a mother tenderly folds the dress of her small child. It then shuffled out of the room by some exit which I was not able to see. Soon after it was out of sight, I leapt down to free the captives. No sooner had I sprinted across the floor and come to the side of the captives then I was struck immobile. Nearly out of my mind with terror, lest the cursed Thing should return and treat me as it had our other compatriot, I attempted to command my limbs to action, but to no avail. I was utterly frozen in place, unable to even move so much as my eyes. There was a weird radiance around certain of the carvings on the stone, and it seemed that it was these symbols that had clamped onto my brain, immobilizing me.

Again, Dirk Peters saved me. Noting my sudden and idiotic stillness, he knocked me sprawling with a powerful blow to my back. As soon as I fell, I was again able to move. Guessing that this was some foul action of the unholy altar upon which the captives were placed, Peters and I carefully removed the three white men from their imprisonment on the stone block. As soon as they were clear of the stone, they began to thrash and struggle. We quieted them, quickly explained that we had the means to escape, and, using the sharp edge of the providential rod, cut them free. Within a few minutes, our work was done, and we remaining five retreated from that terrible room.

We left the Tsalalians to their gods.

Outside in the corridor, we began to run, intending to run all the way to the tunnel, leaving this accursed lighthouse far behind us. Peters led, showing his marvelous dexterity by snatching the still-lit lamp from the floor without slowing his pace. As we fled up the corridor towards the surface, one of our new companions glanced back and let out a despairing cry of horror. The Thing had returned, and was pursuing us! For all its clumsy ambulation, it was horrendously swift when aroused. We ran still faster, but we were tired, hungry, and cold. The Thing steadily gained upon us, issuing an odd, almost musical piping that did nothing but increase our terror. We were hopeless now, knowing that even five of us had no hope of overpowering even one such creature. Finally, in desperation, Peters threw our sickly-green lamp at the creature, more as a gesture of defiance than in hope of doing it harm. To our surprise, there was no explosion. The glass shattered, and the seething liquid within expanded

hungrily. Although Peters had thrown short of the mark, the Thing was unable to stop or turn swiftly enough to avoid its peril. At its first touch, the light turned from the familiar ulcerous green to the thick, vile red we had seen in the tunnel. The liquid, growing madly and increasing in brilliance just as rapidly, swiftly covered the tentacled Thing, which, overbalanced, crashed to the floor like a felled tree. Completely enveloped, the Thing flopped for few seconds, then stopped, and the red light burned and shimmered like a roaring bonfire. The edges of the entrapped Thing began to soften horribly as the glowing, bubbling mass corroded or melted the Thing in some way. And then, of its own volition, the liquid mass moved, seeming to have sucked its victim dry, and seeking more sustenance, reached with bright, fiery red feelers in our direction.

Terrified by what we had released, we fled like madmen. Soon we were out of the accursed lighthouse, and the deathly cold of the polar weather oppressed us with its might. Words cannot describe the piteous suffering we went through on our return, for our new companions were but lightly clothed and obviously on the verge of collapse. We continued at a loping jog, praying that the exertion would warm us enough to allow us to reach the tunnel. Half-way there one of the strangers collapsed, and Peters was obliged to carry the unfortunate soul. Although the wind had slackened, the snow fell even more thickly, so that there we could not feel the call of that titanic, hellish beacon. By the time we reached the safety of the tunnel, our lope had degenerated into the desperate shuffle of the bone-weary. Peters still carried one of the men, so I supported the other two, for tired as I was, my privations were surely as nothing compared to those of these three.

After finally reaching the tunnel, we quickly moved our new comrades into the warmer interior. Presently, after being fed some of the sharp, fleshy leaves that remained on our raft, our companions began to revive. Peters and I then removed our ghastly attire, for it would quickly grow too warm for the wearing of it, and, as it thawed, it would certainly begin to stink and rot. We were quite relieved to see that nothing had been disturbed in our absence; there had been no monstrous penguins to eat the pale, squishy leaves. All five of the remaining lamps were there, much to our dismay—especially in light of the greedy nature it had displayed on the Polar Thing. We handled these very carefully, afraid of releasing the luminous substance within. When we were all restored somewhat, we clambered aboard the movable platform. Peters, obviously understanding the mechanism much better than I, fumbled with the metal rods for a few minutes before they settled with a crunch, and we began to move, this time away from the horrible city of the Pole.

CHAPTER XXIX

When we were sure that we were not immediately pursued, Peters touched one of the lamps. It sprang to eerie, greenish life, and in this shifting light we took our first good look at our fellow survivors. They were sturdy men, for despite all they had been through, they were pale and weak but with their spirits unbowed. We continued for some time, neither of us speaking, haunted by the fear of pursuit. But eventually one of their company broke the silence, and we learned that they were crewmen of a bark named the Discovery, out of Oslo, named Vredenburgh, DeLance and Marburg. They told us that their hope was that their ship might still be at the shore where they had left it, laid up for repairs. Originally they had been a hunting party of eight, until they had run afoul of the repulsive Tsalalians. Three of their party had been killed in a terrible ambush, and the five survivors taken as hostages. The man whose head was split open by the Polar Things was named Gunnarsson, a mighty man who had waited until the freezing cold was almost intolerable before attempting to free his fellow-hostages. One of the Things had killed him with a single swift, enormously powerful blow, splitting his head open like a pumpkin. Their other companion who had died so horribly in that awful city had been named Johansen, but they could not bear to talk of him for long. They wept for their comrades, and Peters and I gave them such scraps of comfort as we could.

Hours and days passed, and for a time there was nothing but the monotonous hiss of the platform and the vast miles falling behind us. It had been a long time, far beyond any counting, when Vredenburgh saw a movement just beyond our range of light. Peters touched another lamp, and the nauseous light brightened. Following us, and gaining at a rapid pace, were no less than three of the terrible Polar Things, riding their own platform and encouraging it in some way to overtake ours. Vredenburgh and Marburg screamed and clutched at themselves, paralyzed by approaching doom. Peters swore, and seeing nothing else with which to defend ourselves, threw one of our remaining lamps at it. The lantern shattered on the floor of the tunnel, leaving only a glowing spot that was swiftly left behind us, doing no damage to our pursuers. We all gasped in utter horror, but then DeLance shouted that we should throw two or three of the remaining lanterns together, in the hopes that we would have a better chance of hitting the creatures. This we quickly agreed on. Peters and I activated the lamps, for I felt that the frightful draining sensation would certainly be nothing compared to the horrors that awaited us if we were captured and returned to the polar city. At DeLance's count, we hurled the lamps, glowing greenishly, down the tunnel at our pursuers. We were fortunate; two of the three lamps broke on the Polar Things' platform. As before, the liquid sought out the living creatures, the putrid green glow turning a no-more wholesome red as it touched the Things. The Things frantically swatted at the liquid, attempting to remove it from themselves, but only succeeded in spreading the noxious stuff around, bringing about their dissolution all the faster. As the hungry stuff overwhelmed their platform, one Thing attempted to get off the platform despite the high rate of speed at which it was moving. But the virulent stuff, radiating the swirling red light of a burning house, actually reached out and pulled the Thing back onto the platform, and devoured it. There was no denying now that the substance was alive, and then panic struck us, for the other platform still gained on ours. It was clear that in a matter of minutes, the two would touch, and we would be food for the blazing red horror. We wept, cursing DeLance for his thoughtless action, and Marburg began to pray.

But hope and salvation sprang from nowhere. Even as we stared, horrified, at the seething, red liquesence that surged towards us, it stopped and, turning, smashed through a weak part of the wall, and was wholly gone in a matter of seconds. We were at a loss, unable to believe our escape. Our platform rushed onwards, leaving the new horror we had created behind us. But abruptly, our movement stopped. We were thrown forward headlong and sprawled severally, like dice thrown by a clumsy gambler. The impact was tremendous, as our rate of speed had been very great, but I did not suffer any broken bones. As I picked myself up, I felt a rumbling in the stone of the tunnel. I tried to gather my companions, hoping to collect them together in preparation for a collapse of some section of the tunnel, when, from behind us, there exploded the blazing monstrosity, its size incalculably magnified, its light shining brighter than the sun. We felt, rather than saw, it rush up the tunnel like a juggernaut, so powerful and swift that we were unable to do anything but cringe in fear that it would crush us utterly. But it slowed quickly after the initial rush, and stopped less than ten feet from the edge of our platform.

It was not enough to shield our eyes from the brilliant mass, we had to actually turn away from it and keep our eyes closed to make the light tolerable at all. Blinded, we gathered each other and what little equipment we could lay our hands on, and retreated away from the brilliantly-lit monstrosity as fast as we were able. We all had sustained some bruises and aches from our rough treatment, but Peters was the one who was most badly injured. As soon as the light was merely bright, DeLance examined him and found his arm to be broken, although he did not complain of the pain. DeLance bound the arm tightly, to prevent the bones from grinding together, while the rest of us took stock of our situation. We had one remaining lantern, which we treated with great care; by some stroke of good fortune, it had not been thrown from its spike or otherwise damaged during our sudden stop, or else we surely would have shared the terrible fate of our pursuers. We also had two of the metal poles, and only two handfuls of our slowly decaying fleshy leaves. Rationing the food, we plodded along, our pace torturously slow, and I felt myself getting weaker and weaker. Vredenburgh led the way, the

tunnel growing slowly dimmer and dimmer as the we moved away from the horrible source of our luminescence. We walked for a day, and yet still we did not need to light our last lantern before we came to the end of the tunnel, on the island near the boiling sea. With glad hearts we attained the surface of the island, to find it much changed. Whatever the plume had been, it was gone, and also the roar of the cataract to which we had grown so accustomed. Marburg and Vredenburgh ran down to the sea, and found it still extraordinarily hot, but the powerful current which had dragged us to the island was gone, presumably linked inextricably with the strangely missing cataract.

While Vredenburgh, Marburg, and DeLance whooped and cheered on the sandy white beach, eating the pale leaves that had sustained Peters and I for so long, we two sat down, our limbs weak from exhaustion. My head rang as if a cannon had been fired nearby. As the other crew ran on the beach, I watched Peters stumble and fall to the ground. Trance like, I started to walk over to him, but found that I had abused my body too fiercely. My joints cramped, and like Peters, I collapsed onto the sand.

I can only report that I experienced nightmares the like of which I never have before, and that I spent several weeks delirious and raving, from what cause I cannot guess. I know I would have died had not our three companions taken it upon themselves to care for us. For we awoke some time later, to see the sturdy beams of a ship above us, and felt the rolling of the sea under a great ship.

It was some time later that Vredenburgh came down to see us. He explained that we were on the explorer's ship Nancy, and that Peters and I had been ill for some weeks. When I asked him how we had come to be here, he briefly recounted how we had arrived on the Nancy. Without the current, it had been an easy thing to take the Tsalalian canoe from the shores of the island and paddle out into the sea while Peters and I lay groaning and helpless in the bottom of the canoe. The further away from the island they moved, the colder it had become. After a few days, we had landed on a drifting ice-floe. They had set to work butchering several seals and wrapping us in the skins, each day keeping we two invalids warm and fed, and never leaving us alone, for fear the Tsalalians might find us. I cannot find the words to express my gratitude to those three brave souls who kept us alive as we awaited rescue. And rescue did come: after two weeks on the ice floe, a passing ship, the exploration brig Nancy, found us and took us aboard. After telling his story, Vredenburgh impressed upon me that I should tell no one about our adventures, or anything about the city on the Pole, for, as explorers, the Nancy's crew would certainly wish to investigate that terrible place on the ice. I agreed to this, and the following day was well enough to join the crew.

But there was always a distance between us and the rest of the crew of the Nancy. While they believed our story about being shipwrecked, they could not but notice that there was some oddness to us, and that what little gear we carried was of unusual manufacture. Peters and Vredenburgh were especially close-mouthed, fearing the curiosity of the crew. Their resistance to questioning was so adamant that they nearly started a few fights with those who asked too much. We were fortunate that the Nancy had completed her primary mission, and that she was returning to her home port of Liverpool, for our notoriety had quickly risen among her crew.

We arrived in Liverpool, where I worked as a barman for some years in order to accumulate enough money to finance my return to America. Of the minor mishaps we suffered as we sailed north, I shall not tell, for they are trivial compared to the terrors and trials that preceded them. Once a man has seen certain things, the mundane world seems ordinary and adventures that once thrilled the blood do not seem worth telling. This is the end of my journal, for I am not the boy who started it. I have starved, frozen, been subject to pirates and Things beyond description. I am no longer as I was. When we return to America, I shall not seek out my father and his home in Nantucket, for I am too changed and the memory of my boyish innocence will do nothing but haunt me. I am no longer the child that my friends

knew, if indeed any of them recognize me as the boy who ran away from home to sail the sea. I know now that there are things of which men ought not know, and places they ought not go. I will make my living away from the sea, away from the great waters that see so much. I shall go inland, and never wish to see the world again.

END

September 4, 1933

Johann,

Here is the rest of the text; read it carefully. I do not need to remind you that, if true, this writing holds the key to the greatest discovery in human history. Though I am not enough of an adventurer to join you on the expedition, I wish you good fortune in our hunt.

Poe had his hands on this, there may be some misunderstandings; I am sure you will be able to sift the truth from the fiction.

Loemmler

Appendix 4: Game Logistics

Table of Contents

Starkweather-Moore Expedition
Equipment Manifest

page 01

no.	description	stored in	lbs. ea.	total
2	Ford snow tractors, cap. 750# cargo, tow 3000#	#1 tween	1,450	2,900
3	300 watt generators, gasoline powered, on skids	#1 tween	80	240
1	heavy crate w.derrick, bracing struct for drill	#1 tween	1,000	1,000
1	heavy crate w. generator, meters & drill-head	#1 tween	1,000	1,000
1	frame cont. w. jointed drill-pipe, 12' lengths	#1 tween	1,000	1,000
1	heavy crate w. electrical ice-melting equipment	#1 tween	1,000	1,000
2	crated windmill generator, cplt w. 12' triped	#1 tween	300	600
80	tanks of oxygen	#1 lower	20	1,600
20	one gal. cans kerosene for stoves & blowtorches	#2 tween	8	160
400	55 gallon drums gasoline (22,000 gallons total)	#2 lower	330	132000
10	50 gallon drums lub. oil (500 gallons total)	#2 lower	350	3,500
1	55 gallon drum industrial alcohol for photolab	#2 lower	330	330
2	kerosene stoves for base camp	#3 tween	25	50
2	chalkboard, 4' x 4' on stand	#3 tween	35	70
6	blowtorch	#3 tween	5	30
4	kerosene lanterns	#3 tween	2	8
3	boxed set cooking gear for camp (pots and pans)	#3 tween	20	60
2	camp radio with antenna	#3 tween	200	400
4	trail radio with antenna	#3 tween	100	400
20	trail radio battery	#3 tween	20	400
6	field telephone w. telegraph key	#3 tween	20	120
32	telephone battery	#3 tween	1	32
1	spool 8,000' telephone wire	#3 tween	8	8
5	bag, set aircraft tools	#3 tween	50	250
1	crate tools (vise, sm lathe, files, drill, &c.)	#3 tween	300	300
1	chest carpentry tools:base (saws hammers etc.)	#3 tween	50	50
1	box, w. various nails & carpentry supplies	#3 tween	50	50
2	sled, 900 board feet lumber for base	#3 tween	4,000	8,000
1	pallet, w. 6 rolls tarpaper	#3 tween	380	380
1	box, set film developing equipment & chemicals	#3 tween	35	35
10	Nansen cookers & primus stoves	#3 tween	25	250
2	crate 1 doz. settings plates, mugs, utensils	#3 tween	15	30
12	buckets (to melt water in)	#3 tween	2	24
12	4 person bellows-entrance tents, w. poles, etc.	#3 tween	50	600
20	5-pole sledging tents	#3 tween	10	200
40	canvas and goosedown sleeping bags	#3 tween	16	640
8	box, w. 6 cnt. of 60 'lifeboat' style matches	#3 tween	5	40
6	flags (2 U.S., 2 Brit., 2 M.U.) on short poles	#3 tween	5	30
40	pair snowshoes	#3 tween	6	240
10	pair skis, bindings, and poles	#3 tween	12	120
12	shovels	#3 tween	3	36
6	axes	#3 tween	5	30
4	bow saws	#3 tween	4	16
6	600' coils, alpine rope	#3 tween	40	240
12	bagged sets pitons, slings, other climbing gear	#3 tween	7	84
12	ice axes	#3 tween	5	60
8	Nansen sleds, 12' long, 2' wide, 1000lb. cap.	#3 tween	100	800
8	sled meters	#3 tween	3	24
4	box with 1" flare pistol and 10 flares	#3 tween	4	16
3	metal box, 10 calcium flares (burn for 10 min.)	#3 tween	20	60

(continued next page)

Starkweather-Moore Expedition
Equipment Manifest

(continued from previous page)

no.	description	stored in	lbs. ea.	total
6	cerise marker panels to signal aircraft	#3 tween	n/a	n/a
6	electric signal lamp (needs power source)	#3 tween	3	18
3	oxygen snow tents	#3 tween	50	150
1	heavy cargo ramp for unloading ship	#3 lower	1,500	1,500
36	malamute sled dogs - usually 9-11 per sled	#5 tween	90	3,240
--	bunks, benches, etc. for base camp	#5 lower		800
150	8' bamboo poles	#5 lower	2	300
20	12' x 12' timbers, 18' long for base shelters	#5 lower	1,300	26000
10	24' telephone poles for base masts and bridging	#5 lower	500	5,000
5	Brace and Clamp Sets for panel huts	#5 lower	172	860
190	Insulated panel, for 5 panel huts	#5 lower	106	20140
	subtotal			217,521

In addition there are a dozen more pallets, for a subtotal of about 197,581#. This extra weight includes all the items listed below.

no.	description	stored in	lbs. ea.	total
	- supplies aboard ship for ice operations:			
1	spare rudder and rudder assembly	on deck aft	2,100	2,100
1	spare ship's propeller	on deck aft	2,700	2,700
1	raft built atop oil drums (for help unloading)	on deck aft	1,100	1,100
40	bags, quick setting cement	#4 tween	40	1,600
2	case of 48 sticks ammonia-gelatin dynamite	#4 tween	60	120
2	set, welding equipment	bosun stores	220	440
8	mallet	bosun stores	8	64
8	large hammer	bosun stores	2	16
1	wooden box, 100 no.6 non-electric blasting caps	bosun stores	10	10
6	coil (50') of time blasting fuse	bosun stores	10	60
8	large crowbar	bosun stores	4	32
12	ice scrapers	bosun stores	3	36
12	snow shovels	bosun stores	3	36
12	stiff brooms for sweeping ice off ship	bosun stores	2	24
4	ice anchors (really big hooks)	bosun stores	180	720
	subtotal			9,058

In addition, the ship's stores include a larger than usual amount of canvas, oakum, rope, chain, timbers and planks, carpentry supplies, iron plates, beams and angles for repair work, etc. Six heavy mooring lines, each 720' long, are carried aboard.

Starkweather-Moore Expedition
Equipment Manifest

no.	description	stored in	lbs. ea.	total
	- clothing supplies			
40	set of parkas, hooded anoraks, and pants			
40	camel hair balaclavas			
40	set windproof linen oversuits			
40	pair of gloves and mittens, with lanyards sewn on			
200	set of silk, linen and wool underclothes			
80	wool jersey sweaters			
40	flannel shirts			
40	heavy trousers or overalls			
240	pair wool socks			
40	pair sea boots			
40	pair lauger-kock boots (canvas, leather, & sheepskin)			
40	pair finneskoe (Norwegian fur boots)			
40	set, sled pulling harness			
40	mountaineering goggles with canvas side shields			
40	sheath knives			
	-- all are issued individually to members			
	subtotal			1,640

Note: 12 lbs clothing is typical for 'good' weather, 22 lbs for 'bad.'

Starkweather-Moore Expedition
Equipment Manifest

no.	description	stored in	lbs. ea.	total
	-food for operations away from ship:			
30	crate, w. 30 1/2# cans sardines	#3 tween	20	600
4	box, w. 8 cans 4 oz. pepper	#3 tween	2	8
2	box, w. 8 jars 6 oz. mustard	#3 tween	3	6
2	box, w. 8 jars 2 oz. tabasco sauce	#3 tween	1	2
4	crate, w. 40 jars 8 oz. marmalade	#3 tween	25	100
1	box, w. 8 bottles 3 oz. worcestershire sauce	#3 tween	2	2
4	box, w. 80 boxes 4 oz. raisins	#3 tween	22	88
3	crate, w. 150 jars 8 oz. orange syrup	#3 tween	75	225
3	crate, w. 150 jars 8 oz. grape syrup	#3 tween	75	225
16	box, w. 9 boxes, ea. w. 4 slabs 1# chocolate	#3 tween	40	640
48	crate, w. 12 box, ea. 6 12 oz wheat&oat biscuit	#3 tween	60	2,880
4	box, w. 20 boxes of 1/2# cubed sugar	#3 tween	12	48
4	box, w. 27 boxes of 4 oz. w. bouillon cubes	#3 tween	8	32
10	sack, 10# sugar	#3 tween	10	100
8	bag, 12# all-purpose flour	#3 tween	12	96
4	can, 2# baking powder	#3 tween	2	8
4	box, 1# baking soda	#3 tween	1	4
1	box, w. 12 drums 2# salt	#3 tween	25	25
5	crate, w. 12 boxes of 4# oatmeal	#3 tween	50	250
30	crate, w. 2 boxes, w. 24 cans 1# butter	#3 tween	52	1,560
25	crate, w. 32 cans 20 oz. powdered milk	#3 tween	43	1,075
1	chest, w. 4 boxes tea, 16 tins 12 oz. each	#3 tween	55	55
2	crate, w. 6 boxes of 2# dried apricots	#3 tween	12	24
8	crate, w. 4 boxes each w. 24 cans 12 oz. prunes	#3 tween	75	600
20	cases, w. 24 cans 2# baked beans	#3 tween	55	1,100
6	jar, 1 gallon sour cream	reefer space	10	60
8	crate, each w. 22 boxes of a dozen eggs	reefer space	60	480
4	tub, 20# of lard	reefer space	22	88
192	crate, w. 90 blocks 1/2# pemmican (men & dogs)	reefer space	50	9,600
5	sides of bacon	reefer space	50	250
	subtotal			20,231

The food is loaded on 16 standard 48" square pallets. There are 8 pallets of pemmican crates, 2 pallets of biscuit crates, 1 pallet each of butter and milk, and 4 mixed pallets; the loaded pallets weigh between 1,000# and 1,600# each. An empty pallet weighs 80#, so the actual amount going over the side equals 21,511#.

3	Boeing Model 247	#4, #2 tween	11,000	33000
1	Fairchild FC-2 moneplane	#2 lower	2,050	2,050
2	spare Pratt and Whitney 'Wasp' S1H1 engines	#2 tween	800	1,600
	subtotal			36,650

Starkweather-Moore Expedition
Equipment Manifest

no.	description	stored in	lbs. ea.	total
4	canvas plane covers, 38' on a side	on planes	150	600
6	heating hoods for engines	on planes	10	60
2	case, with movie camera, tripods and film	deckhouse	130	260
2	guitar	deckhouse	n/a	n/a
2	harmonica	deckhouse	n/a	n/a
3	still camera set - camera, lenses, triped, film, 50 flashbulbs, IR filters	deckhouse	25	75
1	case biology, zoology, and botany instruments - microscopes, slides	deckhouse	25	25
1	straitjacket	doc's cabin	5	5
3	pairs handcuffs	doc's cabin	n/a	n/a
1	case of 24 bottles various "medicinal" liquor	doc's cabin	30	30
1	medicine chest with surgical and drug supplies	doc's cabin	28	28
1	doctor's medical bag, for use on trail - includes injectable morphine	doc's cabin	12	12
1	box, tobacco and cigarettes	SME office	8	8
1	case, with typewriter, paper and carbon paper	SME office	35	35
1	crate var. navigational instruments and charts	SME office	50	50
12	binoculars, 7x50mm	SME office	2	24
1	case astronomy instruments and notebook - Geiger-Muller counter for cosmic ray studies - quartz spectrographs to study sun and sky spectra	SME office	26	26
4	case meteorology instruments and texts	SME office	13	52
2	chest paleontology equipment - reference works, wire brushes, small 'dental' tools, charting equipment	SME office	10	20
6	chest, geology-cartography tools - stakes, survey theodolite on aluminum triped, rock hammers, sample bags, drafting tools	SME office	40	240
2	chest, geophysics set - precision compass and magnetometer	SME office	12	24
2	chest, chemistry sampling and test equipment - test tubes, beakers & other glassware, bunsen burners, test chemicals, tongs, steppers, thermometers, reference works	SME office	10	20
4	crate, 6 caustic soda canisters	bosun stores	25	100
	subtotal			1,694

items from pages 01-02	217,521	
ship's stores from page 02	197,581	
clothing from page 03	1,640	
food from page 04	21,511	
aircraft and spares from page 04	36,650	
items from page 05	1,694	
grand total	281,431	(141 tons)

Starkweather-Moore Cargo Operations

Flying supplies from edge of sea ice to base on Ross Ice Shelf (about 30 miles), any plane: 1/4 hour flight time + one hour load + 1/2 hour unload + 1/4 hour misc. = two hours. If ten hours operation (in 24 hours) could be planned for, then in five flights each day:

Supplies delivered per day to base, by two Model 247s = 37,200 lbs., uses 275 gallons fuel (from ship); 3,720 lbs. capacity.

Flying supplies to Lake's Camp from the Ross Ice Shelf landing strip (about 1000 miles):

- By Delta: 10-1/2 hours flight time + 1/2 hour at site + one hour at base (fuel and load) = 12 hours.
- By Model 247: 11-3/4 hours flight + 1/2 hour at site + one hour at base (fuel and load) = 13-1/4 hours.

If the Starkweather-Moore/Lexington group plans to set up 37 people at Lake's Camp (13 from Lexington's group, and 24 from the SME group), with three months of supplies, the following has to be hauled from the Ross Ice Shelf:

Weight in Lbs.	What's Carried
6,400	people
5,390	emergency supplies and overland travel gear
1,000	Lexington's generator and radio equipment
700	scientific instruments, cameras, etc.
1,840	two nine-dog sled teams, with sleds
6,660	food for people (two pounds a day)
2,430	dog pemmican (1.5 lbs. a day working, 1 lb. a day resting)
5,940	aircraft, drill and stove fuel (990 gallons, or 18 drums)
640	32 oxygen tanks, 80 cubic feet capacity each
3,000	the Pabodie drill, in three loads
34,000	total at Lake's Camp

If each plane flies three flights in 48 hours (leaving four to six hours a day for maintenance, weather, etc.), then it takes about four days to complete setting up the expedition at the Lake site (seven round trip flights per plane) . . .

And will use a total amount of fuel—

Weight in Lbs.	What's Carried
13,860	by the Delta (2,310 gallons, or 42 drums)
53,150	by both Model 247s (8,860 gallons, or 161 drums)
67,010	11,170 gallons, or 203 drums

All this fuel, and camp supplies, and (say) an eight person base must be set up on the ice shelf.

2,660	eight people and their emergency gear
1,440	food for base crew (two pounds a day)
4,270	two nine-dog sled teams, with sleds, and 90+ days dog pemmican
2,000	huts, wind shelters, plane work shed, repair tools
13,530	aircraft and stove fuel (2255 gallons, or 41 drums)
23,900	total at base

Then the grand total delivered to the ice shelf base (from the ships) is:

23,900	ice shelf base supplies and staff
67,010	fuel to be used by planes flying to Lake's Camp
34,000	Lake's Camp supplies and staff flown into base
124,910	(about 125,000 pounds as actually composed)

Thus: about three days, eight hours to move all supplies from sea ice to base, if only two Model 247s are available at that time. Total number of fuel drums over the side from the SS *Gabrielle* is 279, minus whatever the Lexington Expedition can contribute. ■

BFE Transpolar Operations and Fuel Usage

(1) From Deception Island to Weddell Sea base: 1200 miles (eight hours at cruise speed), uses six barrels.

(2) From Weddell Sea base to South Pole: 830 miles (5.5 hours at cruise speed), uses six barrels.

(3) From South Pole to Lake's Camp: 950 miles (6.25 hours at cruise speed), uses seven barrels.

First assumption: six Ju-52 cargo aircraft, one unserviceable He-70G-2 survey plane.

(A) The expedition arrives.

Graf Zeppelin finishes last trip from South America to Germany: October 15.

three days to make modifications, load supplies.

Depart from Friedrichshafen on Oct. 18.

Reach Recife, Brazil on Oct. 22, land and resupply.

Depart for Antarctica Oct. 23, a flight of 3,000 miles to the Antarctic Peninsula (40 hours).

Arrive at Deception Island on Oct. 25, proceed to the Weddell Sea ice shelf and locate new landing site, drop off 7,000 lbs. of fuel (21 drums); 1,200 mile flight, one way.

Return to Deception Island, meet the expedition Oct. 27, load 75 drums Oct. 28, transport to the ice shelf once every 36 hours, for six days: 321 total drums delivered to the ice shelf.

Graf Zeppelin finishes fuel carrying flights November 3, begins surveys.

(B) Supplies to the South Pole.

Ship arrives at Deception Island (Oct. 27), set up camp, assemble planes and mast: seven days.

The high-altitude He-70G-2 is damaged during unloading, and cannot be flown.

Three planes land at South Pole (Nov. 2), place markers, supplies (8 hours at the Pole): 18 hours round trip, + six hour delay for decisions, rest, preparation = one day (plus the three other planes flying the same arrangement from Deception Island to the ice shelf).

Begin shuttle flights: planes in pairs, each plane makes one round trip per 40 hours on the average: ergo, 42 plane loads of cargo delivered over two weeks plus a week of delays, bad weather, other work for the BFE 21 days.

At the Pole: 3,500 lbs. emergency supplies, 118,800 lbs. fuel (19,800 gallons, or 360 drums). Completed Nov. 23.

(C) First attempt at Lake's camp.

Three planes fly up from Weddell Sea (Nov. 25), fuel at Pole (remove 18 drums), fly to "false site," where they land, spend 17 hours unloading nine drums of fuel, resting and looking around.

Planes return to South Pole, load up with fuel (remove 42 drums of fuel), take off and fly back to the Weddell Sea.

Total time from departure from Weddell Sea: 48 hours. Nov. 26th date of return from cache.

Now 24 days after flying begins and announcement of South Pole landing, 32 days after BFE arrived at the Weddell Sea coast.

Remaining Pole cache fuel: 60 drums removed, so 300 drums remain.

(D) Visiting the Americans at Lake's Camp.

Three planes take off from Weddell base camp, fly to pole, remove 18 drums of fuel, fly on to Lake's Camp, arriving 13 hours after departing base (Dec. 1).

Unload passengers, cargo, and 9 drums of fuel, rest for 13 hours.

Two planes fly back to the pole, refuel and load 18 drums of fuel as cargo (remove 32 drums) and return directly to Lake's Camp, where they unload the drums of fuel (Dec. 2).

One of the German planes is fueled up now, leaving 11 full drums at Lake's Camp. 250 drums remain at the South Pole. Lexington finalizes her 'deal' with the BFE.

Assume the *Graf Zeppelin* heads for Argentina.

(E) What's All the Hurry?—Dec. 3.

The Germans are examining Lexington's Northrop; the secret (Lexington + BFE) is out. They offer the SME fuel equal to what's aboard Lexington's plane (four drums). The two partially fueled BFE planes leave for the Weddell camp.

After refueling at the South Pole, 236 barrels of fuel remain there.

The BFE and Lexington mechanics rig the oxygen tank packs (with Dräger masks). They use German air tanks, because 1) U.S. oxygen is often bad, 2) metric vs. English fittings.

(D) Over the Mountains—Dec. 4.

Information stops here, and this really seems to be enough. Beyond this, the investigators may well determine who goes where, and whose fuel is drawn down. ■

Appendix 5: Game Stats and Rosters

Table of Contents

The Fate of the M.U. Expedition Members

— Professors —

Atwood Physicist and meteorologist, also knew sextant and compass navigation. At Lake's Camp. *Dead.*

Dyer Geologist, also knows sextant and compass navigation. Can pilot, but not well. Led the rescue at Lake's Camp.

Lake Biologist, leader of the Lake's Camp group. *Dead.*

Pabodie The engineer who made the drill. Knows sextant and compass navigation, and was in on the Lake's Camp rescue.

— Graduate Students —

Brennan Physicist. *Dead.*

Carroll Geologist and pilot. Ascended Mt. Nansen with Pabodie and Gedney. He flew Lake to the mountains. *Dead.*

Danforth Biologist and pilot. Knows navigation with sextant. "Brilliant young man" rescued at Lake's Camp.

Daniels Biologist and pilot. *Dead.*

Gedney Engineer. Ascended Mt. Nansen with Pabodie and Carroll. At Lake's Camp he operated the Pabodie Device. *Missing and presumed dead.*

Moulton Geologist, paleontologist, radio operator, fair pilot (crashed plane). At Lake's Camp. *Dead.*

Ropes Physicist and pilot. With the Lake's Camp rescue attempt.

— Mechanics —

Boudreau At Lake's Camp. *Dead.*

Fowler At Lake's Camp. *Dead.*

McTighe Base operator/radio operator, Dyer's Camp; pilot, Lake's Camp rescue. Knows shorthand. He is the one who has taken most of the important transcripts.

Mills At Lake's Camp. *Dead.*

Orrendorf At Lake's Camp. *Dead.*

Sherman Cache operator, McMurdo Sound; pilot, Lake's Camp rescue.

Watkins At Lake's Camp. *Dead.*

Williamson With the Lake's Camp rescue attempt.

Wylie With the Lake's Camp rescue attempt.

— Sailors —

Gunnarson At Dyer's Camp (from McMurdo Sound); with the Lake's Camp rescue attempt.

Larsen At Dyer's Camp (from McMurdo Sound); with the Lake's Camp rescue attempt. ■

Starkweather-Moore Expedition Personnel Roster

Responsibility	Name	Nation	Expertise
Team Leaders (2)	James Starkweather	UK	Explorer, guide, lecturer
	William Moore	USA	Geologist and organizer
Guides (3)	Peter Sykes	CAN	Arctic guide
	Nils Sorensen	NOR	Arctic guide, mountaineer
	Gunnar Sorensen	NOR	Arctic guide, mountaineer
Science Crew (9)	Willard Griffith	USA	Geologist, Cornell University
	Charlie Porter	USA	Assistant to Griffith
	Morehouse Bryce	USA	Paleontologist, Univ. of California
	Timothy Cartier	USA	Assistant to Bryce
	Charles Myers	USA	Archaeologist, Univ. of Chicago
	Avery Giles	USA	Assistant to Myers
	Pierce Albemarle	USA	Meteorologist, Oberlin College
	Douglas Orgelfinger	USA	Assistant to Albemarle
	Samuel Winslow	USA	General aide, studying glaciology
Camp Crew (5)	Tomás Lopez	USA	Worker
	Hidalgo Cruz	ARG	Worker
	Maurice Cole	CAN	Worker
	David Packard	USA	Team boss, camp security
	Richard Greene	USA	Physician
Technicians (3)	Louis Laroche	CAN	Radio tech/operator/electrician
	Albert Gilmore	USA	Drill tech
	Michael O'Doul	USA	Drill tech
Sled Teams (3)	Gregor Pulasky	POL	Sled team chief
	Enke Fiskarson	NOR	Dog wrangler
	Olav Snåbjorn	NOR	Dog wrangler
Pilots/Mechanics (5)	Douglas Halperin	USA	Pilot
	Ralph DeWitt	USA	Pilot
	Lawrence Longfellow	USA	Engineer/mechanic
	Alan "Colt" Huston	USA	Engineer/mechanic
	Patrick Miles	USA	Technician/mechanic

The expedition is traveling south on a 7,500 ton oil-burning steamer, the *Gabrielle,* Scottish-built in 1913. *Gabrielle* has a mixed crew of Americans and Europeans numbering 47, captained by Henry Vredenburgh.

The expedition carries three large aircraft, all Boeing 247s. These very modern aircraft are brand new, have a service range of 750 miles, and can carry a crew of two plus ten passengers, or a large amount of cargo. A fourth smaller aëroplane, built by Fokker, remains at the Ross Sea camp. It possesses neither the range nor the service ceiling to travel to Lake's Camp or beyond.

The expedition is also carrying two Pabodie improved ice melting drill sets, and 34 sled dogs normally placed into three separate sled teams. ■

Starkweather-Moore Expedition Bios and Stats

JAMES STARKWEATHER, age 43, Expedition Leader, Lecturer, Guide

STR 13	CON 15	SIZ 14	INT 13	POW 15
DEX 16	APP 14	EDU 15	SAN 71	HP 15

Damage Bonus: + 1D4.

Weapons: Elephant Gun 82%, damage 3D6 + 4
.455 Webley Revolver 72%, damage 1D10 + 2
Fist/Punch 72%, damage 1D3 + 1D4
Ice Ax 40%, damage 1D6 + 1 + 1D4

Skills: Art (Writing) 74%, Astronomy 30%, Bluster 88%, Climb 63%, Credit Rating 45%, Dodge 65%, Dodge Question 70%, Explosives 35%, Fast Talk 77%, First Aid 35%, Flatter Reporters 75%, Hide 65%, Ignore Details 88%, Jump 40%, Listen 55%, Natural History 66%, Navigate 34%, Persuade 48%, Polar Survival 25%, Raconteur 55%, Radio Operator 30%, Sneak 55%, Spot Hidden 70%, Swim 45%, Track 40%.

Languages: English 80%, French 20%, Kikuyu 05%, Swahili 25%.

Starkweather is possessed of classic "tall, dark, and handsome army officer" looks. Well-spoken, immaculately behaved towards his peers, and unfailingly condescending toward women, Starkweather nonetheless gets on well with anyone who treats him with the respect he believes he deserves. He can regale an appreciative audience with tales of his exploits for hours. Starkweather does not like to have his authority or experience questioned, or to see anyone else's opinion asked.

He was born January 15th, 1890, the younger son of a respectable but no longer rich family, and was educated at Eton (where he narrowly escaped expulsion due to an incident involving a local girl) and Christ Church, Oxford (1908-1912). He received a "Blue" for playing rugby against Cambridge, but was academically undistinguished—he achieved a 4th in greats. His elder brother had done much better, a source of particular irritation for James.

(A Blue is awarded in certain sports to someone who plays in the Oxford/Cambridge Varsity match, and is the most highly sought university sporting accolade. A 4th is a now obsolete degree which was the lowest possible honors degree. Greats is a mixture of classics, philosophy, and ancient history, and was one of the traditional routes into academia.)

His 4th effectively closed the door to any sort of academic career—not that he particularly wanted one, but he liked to feel superior to others and disliked this sort of demonstration that he wasn't. His uncle worked in the civil service in Rhodesia and offered him a job as an assistant, which he accepted. His line is "of course they asked me to stay in Oxford but I declined—wanted to get out there and do something useful."

After the outbreak of the war in 1914 he joined up in 1915—before he could be conscripted—and spent the war in Rhodesia. He was commissioned as a lieutenant and was commended several times for valiant action in putting down native uprisings. After one of these he was promoted to captain. His operations were characterized by tactical flair and personal bravery, but also by high casualty rates among his men.

At the end of the war, Starkweather was decommissioned and set himself up as a safari guide to the wealthy in Kenya. He also guided a university-backed expedition looking for the ruined Congo basin city first discovered by Sir Wade Jermyn in the 18th century (see Lovecraft's short story "Arthur Jermyn" for details). Although unsuccessful in finding the city itself, the expedition brought back a large number of important and intriguing artifacts. Though fortunate in its good weather, the group returned to the railhead with only two days of supplies left.

In 1920, Starkweather was recommended to Acacia Lexington's father by a mutual friend as the ideal person to guide Lexington's daughter on an African safari. (See her biography in this section for a version of this trip very different than that which follows here.) Lexington was much taken with the dashing Englishman (he still occasionally calls himself captain although he is no longer in the army). Starkweather encouraged her interest with stories of his time in uniform and previous safaris, with the unfortunate bits removed. She was spellbound by his tales of heroic adventures.

(If desired the keeper may suggest that a romantic connection existed between Lexington and Starkweather. Both vehemently deny the suggestion.)

Despite a few minor mishaps, the trip went smoothly. They were fortunate that Starkweather had experienced bearers. When the time came to return to Nairobi, Lexington had seen everything she had hoped to, with the exception of a giraffe. She demanded to see a giraffe before returning home. Starkweather knew "just the place," and it would add only two days to their trip (she had four days before her ship departed from Zanzibar home). The expedition set off on a detour which involved crossing one of the Congo tributaries. Acacia became fearful at the sight of rain clouds passing overhead, and wanted to turn back. Starkweather assured her that the rain would be falling only on the higher ground a few miles distant. The location lived up to expectations and after a day spent photographing more giraffes than she had hoped for, they returned to the ford to find that the quiet stream had risen and was now a roaring torrent, carrying the previous day's rainfall down from the hills. Starkweather wanted to cross, but the head bearer said the river was completely impassable and his men refused. He said it would take several days for the level to drop again. That would mean that Lexington would miss her ship. In order to prevent the bearers from abandoning the party, Starkweather set them to chopping down trees with the intention of building rafts.

She argued against the plan, but Starkweather was able to make her see reason. Secretly he instructed the head bearer to go to the nearest village to acquire men and canoes in order to be ferried across. The plan succeeded, and the river was crossed easily. Lexington spent the remainder of the trip in an angry silence, hurt that Starkweather had not confided in her.

The return to Nairobi was uneventful, and she caught her ship at Mombassa.

The tale of the river rescue was far too exciting to keep from the public (see *Beyond Papers 4.1*, "Daring Rescue of Heiress!"). With such favorable publicity, Starkweather's safari business flourished. It became fashionable among the upper class to engage him to guide parties into unknown and dangerous territory. These

have not been universally successful, though it must be noted that few expeditions of the time are. Starkweather has been able to shed his fair share of the blame for poor decisions in both private safaris and larger expeditions. Indeed, he has been able to branch out and head expeditions into several territories very different from the African jungles with which he is familiar.

In 1922, Starkweather was commissioned by the Chandler Foundation, in conjunction with the University of California, to lead a five month expedition to cross some 1,200 miles of Australian desert, from the Great Sandy Desert to the Great Victoria Desert. While the expedition began well, the group did not find hoped-for wells or springs in the Great Victoria Desert south of Limejuice Camp. By the time Madura was reached, in Southern Australia, all of the camels had been killed, and the party had been without water for two full days. Starkweather claimed that it was his leadership and self-sacrifice that allowed the party to survive, but a little-noticed monograph by another team member ("Across the Great Southern Deserts," by then-undergraduate Mark Peabody) tells a different story. Peabody's version of the expedition is generally ignored in favor of Starkweather's.

After this adventure, Starkweather kept to his African safari ventures, making a good deal of money from his good name and well attended lecture tours. His safari services became more exclusive, and more expensive.

In the summer of 1925, he agreed to lead a group of Miskatonic University geologists in a daring survey of the western Himalayan plateau, despite a general unfamiliarity with mountaineering and an ostensibly closed border. Notwithstanding losing three weeks' worth of supplies, a local guide, a number of local bearers, and several yaks to an avalanche, the survey managed to carry out enough data to claim success. This expedition marked the first meeting of Starkweather and Moore. Although the two did not get along at first, they soon learned to respect each others' abilities, and became friends.

The Himalayan expedition also marked the first of Starkweather's books. Titled *Survival at the World's Roof,* published in 1926, Starkweather aggrandizes himself and his role in the amount of data collected. Other accounts of this and subsequent expeditions suggest that significantly less glory is deserved by Starkweather. All of Starkweather's later expeditions are documented with grandiose claims.

Starkweather again returned to his safari business, and found that his absence from Africa had made him in even greater demand than before. Starkweather tours now commanded the highest prices, and he accepted only the wealthiest of clients. He spent another two years amassing a fair fortune before trying his hand at exploration again.

Unfortunately, James Starkweather had the misfortune to choose the ill-fated *Italia* expedition, an attempt in 1928 to fly over the North Pole. Despite the confused and indifferent organizing of the expedition, the airship *Italia* achieved the North Pole, but crashed on the return journey. Although rescue attempts were made by various countries, they were also poorly organized and were failures. In the end nearly a third of the crew died. Some spent more than two months stranded on the polar ice cap. Starkweather managed to get himself rescued early, and reportedly swore off expeditions involving ice. He returned, quite contentedly, to his safari tours.

As with the rest of the world, Starkweather's fortunes turned downward in the stock market crash of 1929. A man always prone to risk, he lost virtually everything. The safari business also collapsed, reflecting the financial situation of the time. Starkweather went into semi-retirement, writing more memoirs, and a book on his more exciting safari experiences (*Death in Africa,* 1930). He soon became bored.

As a favor to his friend Doctor Moore, Starkweather accompanied a minor Miskatonic University expedition to Costa Rica in 1930. Starkweather's job was to capture small animals alive for study. If asked, he would describe the experience as "running around Central American jungles with a butterfly net." This was, however, a break from the tedium of chronic unemployment. Moore also casually mentioned the floundering university expedition to the Antarctic.

Starkweather was at first very reluctant to entertain the notion of an Antarctic expedition. He had bad experiences in lands of ice and snow, and had sworn off them after the *Italia* disaster. But he also realized that he hadn't lead a publicly successful expedition in nearly ten years. The fact that he had passed his fortieth birthday also weighed heavily in his decision. No longer a young man, Starkweather feared his star was waning. Other names, such as Byrd, were rising.

The dramatic failure of the Miskatonic University Expedition became a gauntlet thrown before Starkweather. The challenge nagged at him. Where the University had failed, he as an individual would succeed. After a discussion with Moore in late 1932, a new Antarctic expedition became an obsession of sorts. Moore was able to provide seed money and Starkweather began to lay plans accordingly. The famous explorer immediately went on the lecture circuit, returning to the public eye in order to gather donations to fund his expedition.

The venture is now assembling. He is determined to make this his greatest expedition ever.

Starkweather's Personality

Starkweather is charismatic and overbearing at the same time. He has an expansive charm that warms conviction in his listeners. Starkweather uses this talent to great advantage when dealing with the press. Though daily exposure to him soon exposes his faults, Starkweather can be likable, even to those who know him well. He is energetic, though given to theatrical gestures and overblown expressions. He impresses many by his knack for remembering names. Once introduced, Starkweather will remember a person by name for the rest of his life. A man's man, women find him casually chauvinistic and condescending, even if they prove themselves competent and useful.

James Starkweather's charisma and confidence often leave him oblivious to errors in judgment, especially since he believes that leadership hinges on making swift decisions. He has a lot invested in the new Antarctic venture, and will go to great lengths to see it come off well. However, as things go more and more wrong, Starkweather's solution will be to insist that everyone work that much harder, rather than to look for causes.

The relationship between Starkweather and Moore is complex and lengthy. Their friendship is not at all apparent to the casual observer. While Starkweather does not have the foresight Moore would like, he does have the charisma and drive to carry out the decisions he makes. Starkweather never confers with Moore in front of other people, but despite appearances, Starkweather takes Moore's suggestions very seriously. Starkweather will appear to dominate Moore in public discussions, making a decision and standing firmly by it while Moore caves in slowly. However, in the truly important decisions, Moore stands up to Starkweather

and does not give an inch. These cases are few and far between, and usually only arise when the safety of the expedition members is at risk. Moore is aware of Starkweather's pride, and will allow him his way if it does not endanger the expedition or its members.

However at odds these two may seem, they are fast friends, and either would risk his life for the other. Together, they share the spirit of the challenge, admire the other's strengths, and endeavor to make up for the other's weaknesses. Together, they are a highly effective team. Simply assembling such a large expedition is a major accomplishment in the early 1930's.

WILLIAM MOORE, age 38, Expedition Co-leader, Geologist, Paleontologist, Investigator

STR 10	CON 12	SIZ 11	INT 17	POW 15
DEX 14	APP 11	EDU 24	SAN 70	HP 12

Damage Bonus: + 0.

Weapons: Epee 80%, damage 1D6 + 1
.45 Automatic Pistol 45%, damage 1D10 + 2
.30-06 Rifle 35%, damage 2D6 + 4

Skills: Accounting 30%, Anthropology 20%, Archaeology 30%, Bargain 70%, Biology 30%, Chemistry 30%, Credit Rating 60%, Cthulhu Mythos 02%, Dodge 50%, Drive Auto 30%, Elder Thing Cipher 20%, Explosives 18%, Fast Talk 20%, Geology 90%, History 30%, Library Use 90%, Navigate 50%, Paleobiology 20%, Paleontology 90%, Persuade 51%, Photography 40%, Physics 30%, Polar Survival 20%, Psychology 45%, Radio Operator 10%, Spot Hidden 75%.

Languages: Afrikaans 10%, English 99%, French 55%, German 60%, Inuit 20%, Spanish 30%.

Little is known about the early life of Professor William Hannibal Moore, other than that it was spent in the small town of Butler, Missouri. In 1911, at the tender age of sixteen, Moore scored almost perfectly on his entrance exams for Miskatonic University, and received a full scholarship from that institution. Thus began a distinguished academic career. Curiously, Moore has never returned to his hometown nor visited his relatives there.

At Miskatonic, Moore quickly made his mark. He excelled in every class he took, but settled on geology as his life's calling, to the dismay of virtually every other department. With department head William Dyer as his mentor, Moore was soon inducted into the Silver Key Honor Society, as well as Miskatonic's elite academic fraternity the Scabbard and Blade. His graduate thesis, "A Reassessment of the Age of the Earth," was considered a bold, well argued, but essentially incorrect statement from a fine young mind not yet willing to accept contemporary geological theory. This experience marked Moore, and his subsequent work always exhibited more conservative conclusions. Nevertheless, in 1914, at age 20, Moore graduated Summa Cum Laude.

From Miskatonic, Moore went to Yale for his graduate work, specializing in stratigraphy, the study of the layers and age of rock formations. Although his studies at Yale were more rigorous than those at Miskatonic, Moore did a great deal of work outside of his academics. He won several trophies in intercollegiate fencing competitions, and participated in an amateur astronomical organization.

In 1917, Moore heard his country's call, and enlisted in the Army. Second Lieutenant Moore arrived in Europe in time to take part in the second battle of the Marne, where he was wounded severely, and Moore was sent home to America. He never talks about his war experiences. Even Starkweather is unaware of them. Perceptive investigators notice that there is a stiffness in the movement of his left arm. Only if his shirt is removed and the puckered bullet-scars on his back are revealed will Moore admit that he was in the Great War. In order to keep this little secret, Moore is even more prudish than most people of the era, preferring to dress unobserved. Unlike most of the wounded, Moore did not return to his home town to recover from his wounds. Instead, he went to New Haven, Connecticut, and Yale University.

Moore soon resumed his studies, but he was necessarily less physically active than before. He did not rejoin the fencing team. His outlook became markedly more serious, and it was during this period that he first became involved with the Society for the Prevention of Cruelty to Children. Just prior to his graduation, he was inducted into the Secret and Fraternal Order of Free and Accepted Masons (the Freemasons). His doctoral thesis, "The Theoretical Compositional Dynamics of Asteroids, Drawn from an Analysis of the Composition and Organization of Elements in Meteorites," was well received by those competent enough to understand it. In 1922, Moore earned his doctorate at Yale and was quickly hired by his old mentor, Doctor William Dyer of Miskatonic.

While giving his first set of lectures at Miskatonic University, Moore became interested in the relatively recent technique of radioactive dating, originally proposed by Bertram Boltwood in 1905. Realizing that this concept could be applied to topics of special interest to him, Moore organized a small expedition into the Arctic, where he and his team spent the summer of 1923 drilling ice cores. Dating the deposited volcanic dust led to some very interesting results and some interesting climatological speculations, based on the depth at which various samples were found. Although the expedition was a success, some felt that Moore could have achieved greater things if he had not withdrawn the expedition at the first sign of bad weather—in fact the autumnal storms did not arrive for another three weeks.

In the summer of 1925, Moore was involved with a Miskatonic University expedition to survey the Himalayan plateau. Scientifically, the expedition was a great success, though it was marred by the unfortunate deaths of a number of local bearers, a local guide, and several yaks. Moore himself spent much of the summer collecting paleontological samples and specimens of the surrounding rock for subsequent dating. A feature of the expedition was the collection of painstakingly dated fossil samples which hinted strongly and seemingly inexplicably at the remarkable history of the Himalayas (to be established nearly three generations later). This expedition also marked the beginning of the strange friendship between Moore and the English explorer, James Starkweather.

The summers of 1927 and 1928 saw expeditions to South Africa and Minnesota, respectively; the surface rocks of both areas are particularly old, and Moore hoped to find and date rocks of sufficient age to validate certain predictions made in his own post-graduate work. In this he partly succeeded, though his scientific peers noted that his estimates were on the conservative side—this repeated evaluation of his peers is telling, since geology in that era was already among the most staid and conservative of scientific disciplines. The 1927 expedition was also notable for another, albeit brief, encounter with Starkweather. Although the great adventurer could not lead the expedition personally, he was able to offer copious advice to his "protégé," who quietly added a doubled margin of error to all estimates. Both expeditions went smoothly.

Although these expeditions were perhaps the high point of Moore's early career, he was also active in the department of geology, supervising students, giving lectures, and analyzing the finds from other expeditions. In 1929, in recognition of his achievements in the Himalayas, Moore was appointed to the newly created Smythe Chair of Paleontology. The professorial post, funded by a most generous benefaction, gave Moore academic and financial freedom from the university. This he used to organize a trip to Costa Rica, prevailing on his old friend James Starkweather to help. The Costa Rican expedition, designed to compare current species with the limited fossil record of the area, was yet another feather in Moore's cap.

On his return, Moore shared in the preparations for the 1930 Miskatonic University expedition to Antarctica. His arctic experience proved to be useful in the planning, but a bout of pneumonia kept him from accompanying Professor Dyer south into the icy wastes.

Returning from the ill-fated expedition, Dyer refused to discuss his findings, despite the catalogued paleontological wonders. After several months of delay, a rift between Dyer and his former student developed and widened, until the two refused all social contact. Dyer's willful silence concerning an expedition that Moore had helped organize left the Smythe Professor of Paleontology feeling professionally and personally slighted.

Spurred on by the remarkable Precambrian finds, Moore began to organize his own expedition to Antarctica. The implications of the finds already being classified were revolutionary; more systematic work could make Moore the preeminent paleontologist of his generation. Dyer initially made no objection, but when Captain James Smythe, benefactor of the Smythe chair, stepped in with a large donation, Dyer roused himself and attempted to block the venture. The Miskatonic University board of trustees listened to both sides of the argument, the most dramatic academic confrontation at the university since the triumph of the biology department Huxleyites in 1870. After long internal discussion, the trustees supported Moore, with one stipulation. Given the large cost in life and materiel of the previous expedition, they stipulated that Moore's be led by an experienced explorer, rather than an academic. After some negotiation, Moore persuaded his old friend Starkweather to lead the expedition. Indeed, Moore even managed to persuade his friend to contribute to the cost.

William Dyer, unwilling even then to reveal his close-held secrets, took a leave of absence from the university and dropped out of sight.

Moore's friendship with Starkweather is curious, but long standing. Moore is well aware of Starkweather's impulsive nature and need to lead; he regards Starkweather as a useful chap, but one who must be watched over. To an observer, Moore defers to Starkweather except on the most important of decisions, where, if he believes he is right, Moore will fight his corner of the argument until he wins.

Guides

PETER SYKES, age 34, Polar Guide

STR 14	CON 17	SIZ 14	INT 12	POW 13
DEX 11	APP 09	EDU 12	SAN 65	HP 16

Damage Bonus: + 1D4.

Weapons: .30-06 Bolt Action Rifle 77%, damage 2D6 + 4
Ice Ax 67%, damage 1D6 + 1 +1D4
Hunting Knife 38%, damage 1D6 + 1D4

Skills: Art (Singing) 34%, Climb 72%, Craft (Harness-making) 55%, Drive Auto 75%, Drive Dog sled 65%, Explosives 25%, First Aid 35%, Mechanical Repair 30%, Natural History 55%, Navigate 56%, Polar Survival 81%, Psychology 55%, Radio Operator 25%, Spot Hidden 78%, Swim 65%, Throw 84%, Track 62%.

Languages: English 60%, French 35%, Inuit 30%.

This Canadian is a rugged adventurer of average height, with long limbs and a narrow, wide-mouthed face and black hair. Aggressive and optimistic, he loves challenges and risks, and is often ready with a wisecrack or a joke.

GUNNAR SORENSEN, age 36, Polar Guide and Mountaineer

STR 16	CON 18	SIZ 15	INT 15	POW 14
DEX 10	APP 08	EDU 12	SAN 70	HP 17

Damage Bonus: + 1D4.

Weapons: Hunting Knife 75%, damage 1D6 + 1D4
.30-06 Bolt Action Rifle 70%, damage 2D6 + 4
Ice Ax 60%, damage 1D6 + 1 + 1D4
Fist/Punch 55%, damage 1D3 + 1D4

Skills: Climb 85%, Drive Dog sled 75%, Listen 70%, Natural History 72%, Navigate 70%, Persuade 55%, Polar Survival 85%, Psychology 45%, Spot Hidden 56%, Throw 77%, Track 43%, Weather Eye 30%.

Languages: English 36%, Norwegian 60%.

As with his older brother Nils, long stretches of arctic winter appear to have leached all color from Gunnar Sorensen. Still, the brothers' personalities could not be more opposite. Gunnar is happy and companionable, contrasting with Nils' coldness. Happy to meet people, and willing to pitch in energetically whenever asked, Gunnar quickly becomes one of the most popular people on the expedition. Unlike Nils, Gunnar is willing to explain the deadly serious nature of his advice.

NILS SORENSEN, age 38, Polar Guide and Mountaineer

STR 17	CON 17	SIZ 15	INT 15	POW 16
DEX 12	APP 08	EDU 12	SAN 75	HP 16

Damage Bonus: + 1D4.

Weapons: Ice Ax 72%, damage 1D6 + 1 + 1D4
.30-06 Bolt Action Rifle 67%, damage 2D6 + 4
Fist/Punch 65%, damage 1D3 + 1D4
Hunting Knife 60%, damage 1D6 + 1D4

Skills: Climb 80%, Drive Dog sled 64%, Listen 87%, Natural History 70%, Navigate 83%, Polar Survival 93%, Psychology 03%, Spot Hidden 65%, Throw 56%, Track 51%, Weather Eye 50%.

Languages: English 41%, Norwegian 65%.

The older Sorensen brother is tall and nearly colorless, with pale Norwegian skin and fine, virtually white hair that grows down past his shoulders. The pale blue eyes resemble ice water, and they study sky or horizon more comfortably than a nearby person. Sorensen's lips are thin and bloodless, usually set with an air of cold determination. He is admirable for his extraordinary economy of words, seldom stringing more than two sentences together, and he never repeats himself. Even Starkweather's bluster makes no dint in Nils' icy exterior, although Gunnar will

often act as intermediary to soften his brother's uncompromising attitude. Nils is a thorough fatalist; only raw strength and swift understanding of the environment will allow humans to survive the Antarctic. If the Ice is not understood, people will die.

Science Crew

WILLARD GRIFFITH, age 34, Geologist (Cornell University)

STR 11	CON 14	SIZ 13	INT 16	POW 14
DEX 09	APP 12	EDU 20	SAN 70	HP 14

Damage Bonus: + 0.

Weapons: Fist/Punch 35%, damage 1D3.

Skills: Astronomy 12%, Bargain 40%, Credit Rating 45%, Dodge 35%, Explosives 19%, Geology 82%, Library Use 89%, Listen 45%, Martial Arts 15%, Persuade 70%, Photography 55%, Ride Horse 45%, Spot Hidden 45%.

Languages: English 99%, Esperanto 34%.

Professor Griffith is a rising young geologist, adept at linking and explaining other people's ideas. Griffith is not excited about this trip to Antarctica, but this long, unpleasant trip will advance his career considerably. He has researched Starkweather's expeditions, and feels uneasy about his leadership. Consequently, Griffith will always try to get Moore involved with any Starkweather decision that he does not agree with. He often grumbles about Starkweather into his large mustache, in Esperanto. His graduate assistant, Charlie Porter, has begun learning Esperanto from him as an easy "secret language" that allows them private discussions anywhere.

CHARLIE PORTER, age 40, Graduate Assistant to Willard Griffith

STR 15	CON 15	SIZ 12	INT 17	POW 15
DEX 16	APP 09	EDU 22	SAN 75	HP 14

Damage Bonus: + 1D4.

Weapons: Fist/Punch 67%, damage 1D3 + 1D4
Dynamite Stick 65%, damage 5D6/2 y, match fuse or electric cap
16-Gauge Shotgun 65%, damage 2D6 + 2/1D6 + 1/1D4

Skills: Chemistry 35%, Climb 45%, Electrical Repair 20%, Explosives 35%, Geology 70%, History 32%, Library Use 61%, Listen 55%, Mechanical Repair 45%, Operate Heavy Machine 40%, Psychology 30%, Throw 75%, Tunneling (Scratch) 85%.

Languages: English 99%, Esperanto 10%.

Charlie Porter is almost unique in this era, a graduate student of middle age who is able to pay cash while studying full time. Porter jumped at the chance to do research in the Antarctic. Although quiet and erudite, Porter was once a miner and pit foreman in California, and is significantly more knowledgeable about practical geology than Griffith. He never brings this up. Though now a man of some means, Porter's thick hands betray the fact that he has not always been prosperous, nor an academic. An energetic man, he is often to be found helping the Pabodie drill team once the expedition reaches Lake's Camp.

MOREHOUSE BRYCE, age 29, Paleontologist (U.C. Berkeley)

STR 10	CON 10	SIZ 12	INT 17	POW 17
DEX 09	APP 14	EDU 19	SAN 85	HP 11

Damage Bonus: + 0.

Weapons: None.

Skills: Biology 70%, Climb 58%, Geology 65%, History 37%, Library Use 63%, Natural History 68%, Occult 33%, Paleobiology 55%, Paleontology 76%, Persuade 66%, Spot Hidden 65%.

Languages: English 95%, French 35%, German 60%, Hebrew 54%.

Morehouse Bryce is a newly-minted associate professor of Paleontology at the University of California at Berkeley. As a life-long resident of San Francisco, Bryce is somewhat prepared for the numbing temperatures of Antarctica, but poor Bryce, much like Sam McGee, can never quite get warm, or even very comfortable on the polar continent. Despite his constant unhappiness, Bryce is a dogged worker and tries to encourage anyone who appears to be more miserable than he. Bryce has a head of curly black hair, brown eyes, and appears to be about 25 years old. His graduate assistant is Tim Cartier. Starkweather refers to the Bryce-Cartier team as "the boys."

TIMOTHY CARTIER, age 29, Graduate Assistant to Morehouse Bryce

STR 13	CON 12	SIZ 13	INT 17	POW 16
DEX 10	APP 15	EDU 18	SAN 80	HP 13

Damage Bonus: + 1D4.

Weapons: Ice Ax 30%, damage 1D6 + 1 + 1D4
.30-06 Bolt Action Rifle 45%, damage 2D6 + 4

Skills: Biology 61%, Climb 65%, Geology 70%, History 28%, Library Use 48%, Natural History 74%, Paleobiology 52%, Paleontology 60%, Persuade 54%, Spot Hidden 58%, Swim 56%.

Languages: English 90%.

Timothy Cartier and Morehouse Bryce entered the University of California the same year, and became fast friends in their freshmen year. Bryce has proved more adept at navigating the obstacles of academia, and has subsequently become an assistant professor while Bryce is still a graduate student. The two remain inseparable friends, and they work much more as a team rather than a standard mentor-student relationship. Cartier appears very young, like Bryce, but with light brown hair and piercing green eyes.

CHARLES MYERS, age 34, Archaeologist (University of Chicago)

STR 15	CON 17	SIZ 15	INT 16	POW 14
DEX 14	APP 13	EDU 20	SAN 68	HP 16

Damage Bonus: + 1D4.

Weapons: Fist/Punch 80%, damage 1D3 + 1D4

Skills: Anthropology 34%, Archaeology 78%, Climb 70%, Cthulhu Mythos 01%, Dodge 68%, Fast Talk 65%, Geology 62%, History 75%, Library Use 61%, Martial Arts 35%, Navigate 43%, Persuade 45%, Spot Hidden 45%.

Languages: English 99%, Greek 56%, Latin 78%.

Myers is a tall, strong man in athletic trim. Throughout the expedition, he is excited about the archaeological possibilities of Antarctica, and will gently but consistently press investigators for whatever tidbits they may know about the previous expedition. He is fascinated with the possibility of a pre-human Antarctic civilization, and has read some of the more speculative books on the sub-

ject. Myers was the boxing champ of his graduating class. Avery Giles is his graduate assistant.

AVERY GILES, age 21, Graduate Assistant to Charles Myers

STR 08	CON 14	SIZ 11	INT 16	POW 16
DEX 12	APP 14	EDU 18	SAN 80	HP 13

Damage Bonus: + 0.

Weapons: None.

Skills: Anthropology 23%, Archaeology 64%, Art (Actor) 35%, Bargain 55%, Conceal 45%, Disguise 45%, Fast Talk 65%, Geology 35%, History 64%, Library Use 67%, Occult 43%, Psychology 43%, Spot Hidden 88%.

Languages: English 90%, Greek 35%, Latin 47%.

A born deal-maker, Giles immediately sets about discovering the interests and specialties of everyone in the expedition. It is he who discovers Albemarle's small cache of chocolate on board the *Gabrielle*, and is aware of Charlie Porter's working-class history. If the investigators need something, their best bet is to go to Avery Giles, who is the ace dog-robber with the expedition. Although his work always gets done on time, one rarely sees Giles working. He is usually talking to someone who is both working and negotiating with Giles. As an undergraduate, he was also clever as an actor, and is still fond of declaiming long passages from famous plays and poems.

PIERCE ALBEMARLE, age 33, Meteorologist (Oberlin College)

STR 11	CON 17	SIZ 15	INT 17	POW 12
DEX 08	APP 14	EDU 19	SAN 60	HP 16

Damage Bonus: + 1D4.

Weapons: .30-06 Bolt Action Rifle 67%, damage 2D6 + 4

Skills: Academic Social Functions 90%, Astronomy 45%, Credit Rating 75%, Geology 44%, Library Use 62%, Meteorology 79%, Natural History 53%, Persuade 46%, Physics 48%, Spot Hidden 68%, Write Letter of Reference 88%.

Languages: English 95%, French 47%, German 39%.

Pierce Albemarle, scion of the Bridgeport Albemarles, is a slightly portly young man with a fashionable mustache and a monocle on his right eye for reading. He is a friendly sort, and although unused to heavy work, contributes readily to any group effort requiring assistance. Albemarle is used to the finer things in life, and even in Antarctica the investigators will find his tent redolent with the fragrance of some fine oolong tea. Given the small comfort of good tea, Pierce ably faces any disaster with little more than a brief frown. His graduate assistant is Douglas Orgelfinger.

DOUGLAS ORGELFINGER, age 26, Graduate Assistant to Pierce Albemarle

STR 15	CON 16	SIZ 13	INT 14	POW 11
DEX 13	APP 15	EDU 17	SAN 55	HP 15

Damage Bonus: + 1D4.

Weapons: None.

Skills: Art (Writing) 54%, Astronomy 53%, Geology 14%, Library Use 52%, Meteorology 54%, Natural History 32%, Persuade 75%, Photography 35%, Physics 33%, Spot Hidden 54%.

Languages: English 85%, German 31%.

Douglas Orgelfinger is the ideal graduate student: doggedly loyal, intelligent without being creative, and able to go long periods without rest or food. Orgelfinger is willing to push himself to the utmost if necessary for the expedition, but he has done so too many times already, and repeated feats of endurance without significant rest wear him down. Orgelfinger will usually be found in Albemarle's shadow, running errands for his patrician mentor.

SAMUEL WINSLOW, age 26, Graduate Student (Glaciology)

STR 11	CON 11	SIZ 13	INT 19	POW 16
DEX 09	APP 09	EDU 19	SAN 73	HP 12

Damage Bonus: + 1D4.

Weapons: Ice Ax 55%, damage 1D6 + 1 + 1D4

Skills: Art (Singing) 64%, Bargain 45%, Climb 63%, Dodge 55%, Geology 56%, Glaciology 72%, History 56%, Library Use 83%, Mathematics 67%, Meteorology 62%, Natural History 32%, Photography 19%, Physics 54%, Polar Survival 45%, Psychology 47%, Radio Operator 20%, Spot Hidden 68%.

Languages: English 95%, French 67%, German 45%, Norwegian 40%.

More than anyone else on the expedition, Winslow is a certifiable genius. Although he is ostensibly studying glaciology, he knows a great deal about the majority of the disciplines represented on the expedition. Unfortunately, his mind works so quickly that many people are unable to keep up with the whipsaw rapidity of his ideas. Winslow appears to be terribly disorganized—papers with scribbles and doodles lie in the snow of his tent or bunk, and must be shoveled aside in order to move around in the small space. This impression of disorganization is misleading—Winslow makes notes only to jog his memory; his ideas remain clear in his mind. He is hard-working and cheerful, although people tend to find his humor a little strange. He also plays poker with ghoulish verve.

Camp Crew

TOMÁS LOPEZ, age 24, Camp Crew Worker

STR 16	CON 14	SIZ 15	INT 08	POW 09
DEX 11	APP 10	EDU 08	SAN 45	HP 15

Damage Bonus: + 1D4.

Weapons: None.

Skills: Astronomy 15%, Biology (Botany) 33%, Boathandling 55%, Craft (Transplants) 89%, Natural History 34%, Navigate 15%, Spot Hidden 34%.

Languages: English 30%, Portuguese 60%, Spanish 45%.

A strong, likable gardener recruited at Miskatonic University, Lopez is as hard and uncomplaining a worker as the expedition could wish for. Off-shift, he is shy and deferential, and indeed quite surprised that he was chosen for this trip. Initially, Lopez feels more at home with Colt or the Sorensens than among the university-educated, but that hesitancy passes once he works shoulder-to-shoulder on the frozen continent. Once the Barrier camp is established, he and Whitston (if she makes the trip) may make week-long excursions to look for living lichens and mosses.

HIDALGO CRUZ, age 38, Camp Crew Worker

STR 17	CON 18	SIZ 17	INT 11	POW 11
DEX 13	APP 09	EDU 10	SAN 55	HP 18

Damage Bonus: + 1D6.

Weapons: Fist/Punch 60%, damage 1D3 + 1D6
Heavy Club 59%, damage 1D8 + 1D6

Skills: Climb 62%, Dodge 55%, Listen 65%, Occult 43%, Operate Heavy Machine 44%, Sneak 45%, Spot Hidden 31%.

Languages: Spanish 25%, English 25%, Quechua 60%.

He is a burly man with an extraordinarily barrel-like chest. As wide as the proverbial barn door, Cruz is not the brightest member of the expedition, but he interprets instructions well, solves problems ingeniously and with humor, and is seemingly untiring. Raised on the bleak Alto Plano in Bolivia, Cruz suffers little from the hypoxia that afflicts the expedition on the Plateau. He has been on several of Starkweather's expeditions, but is less pleased to be in on this one. He was married less than a year and a half ago, and left his wife and twin baby girls in Argentina. However, he knows that the money he makes on the expedition can help feed his family for years. Cruz has a deep yearning for justice, and honors whoever sides with the weak.

MAURICE COLE, age 19, Camp Crew Worker

STR 14	CON 16	SIZ 11	INT 12	POW 08
DEX 16	APP 08	EDU 12	SAN 40	HP 14

Damage Bonus: + 1D4

Weapons: Fist/Punch 76%, damage 1D3 + 1D4
Heavy Club 63%, damage 1D8 + 1D4

Skills: Bargain 43%, Conceal 47%, Dodge 86%, Fast Talk 24%, First Aid 53%, Physics 35%.

Languages: English 60%.

Maurice Cole is a compact mass of muscle and leverage with short, brown hair and surprisingly pretty green eyes set into his boyish face. Although younger and smaller than Cruz and Lopez, and lacking the brute force the other two workers offer, Cole compensates with an excellent knowledge of applied leverage. He can be distressingly scrappy when not otherwise occupied, although the gentle temperament of the other workers stifles serious encounters during the voyage south. Once on Antarctica, there is too much to do for him to get worked up.

DAVID PACKARD, age 28, Team Boss and Sergeant at Arms

STR 16	CON 14	SIZ 14	INT 11	POW 11
DEX 14	APP 11	EDU 11	SAN 55	HP 14

Damage Bonus: + 1D4.

Weapons: Fist/Punch 77%, damage 1D3 + 1D4
Kick 60%, damage 1D6 + 1D4
.30-06 Bolt Action Rifle 52%, damage 2D6 + 4
.45 Revolver 45%, damage 1D10 + 2
Head Butt 45%, damage 1D4 + 1D4

Skills: Accounting 45%, Art (Origami) 67%, Explosives 20%, First Aid 63%, Hide 65%, Jump 45%, Law (Criminal) 72%, Listen 50%, Persuade 48%, Psychology 64%, Spot Hidden 55%.

Languages: English 55%.

Outwardly a rough-and-tumble sort, team leader David Packard was expecting significantly less work when he signed onto the Starkweather-Moore expedition. He hides a sensitive, artistic side that only comes out when he is in the company of trusted friends. Competent and a good judge of character, Packard quickly sees that Moore is the real power behind the expedition, despite Starkweather's bluster. Packard will try to reason quietly with Moore rather than win arguments with Starkweather. Packard begins the expedition with optimism, but he has a bleaker feeling by the time the *Gabrielle* reaches Antarctica. If he returns from the expedition, he swears off adventure and passes his bar exams.

Doctor RICHARD GREENE, age 27, Physician

STR 13	CON 15	SIZ 11	INT 18	POW 17
DEX 16	APP 13	EDU 22	SAN 85	HP 13

Damage Bonus: + 0.

Weapons: .30-06 Bolt Action Rifle 32%, damage 2D6 + 4

Skills: Art (Ballroom Dance) 78%, Chemistry 34%, Credit Rating 55%, First Aid 82%, Geology 34%, History 54%, Law 33%, Library Use 73%, Medicine 80%, Natural History 44%, Occult 21%, Persuade 73%, Pharmacy 68%, Physics 45%, Psychology 43%, Psychoanalysis 45%.

Languages: English 99%, French 75%.

At the peak of his physical condition, and intense, Doctor Greene has conquered medicine and is looking for a new challenge. He is up for virtually anything that could be proposed, from climbing extraneous mountains to naked hundred yard dashes in the snow, so long as he has someone else to egg him on and tackle the challenge with him. He will not take truly foolish or medically hazardous risks. Subtle challenges will be more likely to catch his interest. Wise investigators herd him far away from Starkweather. Physically, Greene is lean, youthful, and has the natural grace of a dancer.

Technicians

LOUIS LAROCHE, age 34, Radio Technician/ Operator and Electrician

STR 16	CON 15	SIZ 14	INT 14	POW 09
DEX 13	APP 12	EDU 14	SAN 45	HP 15

Damage Bonus: + 1D4.

Weapons: 12-Gauge Shotgun 43%, damage 4D6/2D6/1D6
Small Club 43%, damage 1D6 + 1D4

Skills: Art (Sing) 34%, Chemistry 33%, Electrical Repair 73%, Listen 68%, Mechanical Repair 80%, Physics 32%, Persuade 76%, Radio Operator 84%.

Languages: English 48%, French 70%.

A Canadian, Laroche is a stocky man with a voice that is a pleasure to hear over the radio. He knocks down his cigarette habit to two per day while aboard the *Gabrielle,* and kicks them completely when the expedition lands on the ice. Nicotine withdrawal leaves him a sour, snappish person and, by the time Antarctica has been reached, his attitude has simply become a habit.

ALBERT GILMORE, age 37, Drill Technician

STR 11	CON 14	SIZ 12	INT 13	POW 09
DEX 13	APP 06	EDU 12	SAN 35	HP 13

Damage Bonus: + 0.

Weapons: .30-06 Bolt Action Rifle 66%, damage 2D6 + 4
Thompson Submachine Gun 47%, damage 1D10 + 2
.38 Special Revolver 32%, damage 1D10

Skills: Electrical Repair 67%, Geology 54%, Mechanical Repair 84%, Operate Heavy Machine 73%, Physics 35%, Spot Hidden 43%.

Languages: English 60%, French 35%.

People's first impression of Albert Gilmore is his scarred, discolored face; Gilmore was one of the last people to face German flame throwers in the Great War. As a result, he has no hair on his head, nor any external earlobes. Despite his disconcerting appearance, he is an excellent mechanic, and he looks forward to a long stint in the cold. Optimistic to a fault, Gilmore is hardworking and will remain upbeat about the expedition despite many disasters. More than anyone else in the expedition, Gilmore will fall in love with the raw, pristine beauty of Antarctica.

MICHAEL O'DOUL, age 29, Drill Technician

STR 09	CON 11	SIZ 10	INT 14	POW 12
DEX 12	APP 12	EDU 13	SAN 60	HP 11

Damage Bonus: + 0.

Weapons: None.

Skills: Archaeology 14%, Bible 57%, Electrical Repair 44%, Mechanical Repair 58%, Natural History 52%, Operate Heavy Machine 73%, Photography 26%, Polar Survival 15%.

Languages: English 65%.

A small fussy man, O'Doul is one big knot of worry. He constantly fidgets with the machinery, hoping to get it to operate a fraction of a percentile more efficiently. He is never far from the drill, and admonishes all those transporting the pieces to be careful. Nothing irritates him more than Gilmore's ability to fix a major problem in ten seconds by tightening a bolt. A devout man, O'Doul always offers a brief prayer of thanks before eating, and rigidly abstains from alcohol and swearing.

Sled Teams

GREGOR PULASKI, age 35, Sled Team Chief

STR 13	CON 15	SIZ 15	INT 11	POW 13
DEX 12	APP 9	EDU 9	SAN 65	HP 15

Damage Bonus: + 1D4.

Weapons: .30-06 Bolt Action Rifle 88%, damage 2D6 + 4
Small Club 76%, damage 1D6 + 1D4

Skills: Art (Sing) 56%, Climb 65%, Drive Dog sled 84%, First Aid 57%, Natural History 65%, Navigate 78%, Polar Survival 75%.

Languages: English 20%, Polish 55%, Russian 30%.

Pulaski is a big, happy Pole who loves all his dogs and knows them by name and personality. His round face always has a bright smile and a wave for anyone he meets. On the trail, to comfort his dogs, Pulaski often will sing Polish folk songs loud enough for the lead dog to hear. His first concern is for his dogs, not the expedition, and he absolutely refuses to push his dogs beyond their limits. He knows he is going to lose dogs on the expedition, everyone does. Anyone intentionally hurting the dogs will be confronted by a furious Pulaski, who has no compunctions about using his truncheon on humans. He will not easily forgive such trespasses. Pulaski spends a good deal of time hanging out with Sorensen and Lopez.

ENKE FISKARSON, age 24, Dog Wrangler

STR 14	CON 17	SIZ 16	INT 13	POW 17
DEX 14	APP 08	EDU 08	SAN 85	HP 17

Damage Bonus: + 1D4.

Weapons: Ice Ax 60%, damage 1D6 +1 + 1D4
.45 Revolver 40%, damage 1D10 + 2

Skills: Astronomy 35%, Climb 61%, Drive Dog sled 91%, Natural History 53%, Navigate 88%, Polar Survival 78%.

Languages: English 20%, Norwegian 45%.

Dogs know an alpha when they meet one, and they always agree to obey Fiskarson. He is a burly bear of a man, standing well over six feet, with white-blond hair and enormous hands. He is one of the gentlest people in the expedition. He has found his life's love in his dogs; he cares more for them than he does for any person. Originally, Fiskarson was going to lead the sled teams, but Starkweather switched two names on a roster, so Pulaski is now the team leader.

OLAV SNÅBJORN, age 36, Dog Wrangler

STR 14	CON 18	SIZ 10	INT 10	POW 12
DEX 11	APP 13	EDU 07	SAN 60	HP 14

Damage Bonus: + 0.

Weapons: Fist/Punch 87%, damage 1D3
Grapple 77%, damage special

Skills: Astronomy 33%, Drive Dog sled 82%, First Aid 67%, Natural History 79%, Navigate 67%, Polar Survival 72%, Ride Dog 54%.

Languages: English 30%, Norwegian 50%.

Olav is significantly shorter than the other two dog-wranglers, which makes him doubly close to the dogs. While Fiskarson and Pulaski love their dogs, Snåbjorn takes the opportunity to play with them every day. He can often be found wrestling with the dogs in the snow, or holding pemmican over his head to get the dogs to jump for it. "Dem dogs, dey smarter den you here, hey?" Snåbjorn is simple and devoted in his affection for his animal friends; they don't lie, stab you in the back, or cheat on you.

Pilots/Mechanics

DOUGLAS HALPERIN, age 30, Pilot

STR 13	CON 12	SIZ 13	INT 14	POW 12
DEX 16	APP 13	EDU 13	SAN 60 (44)	HP 13

Damage Bonus: + 1D4.

Weapons: .45 Revolver 38%, damage 1D10 + 2

Skills: Aircraft Maintenance 50%, Astronomy 35%, Climb 62%, Craft (Machine Parts) 35%, Electrical Repair 38%, Mechanical Repair 43%, Meteorology 20%, Navigate 87%, Pilot Aircraft 76%, Psychology 43%, Radio Operator 30%.

Languages: English 65%, Hebrew 10%, Yiddish 20%.

Halperin is quietly good-natured, always willing to take what comes and go along for the ride. He has thin, sandy hair and small, round glasses that give him a perpetually bookish air. He is taciturn, very competent, and does not get along at all with the daredevil DeWitt. In the trip to the Construct, Halperin goes mad after experiencing timeslips and the Unknown God, but within limits he is still able to function. Note his parenthetical Sanity statistic.

RALPH DEWITT, age 35, Pilot

STR 14	CON 15	SIZ 12	INT 13	POW 11
DEX 17	APP 10	EDU 11	SAN 41	HP 14

Damage Bonus: + 1D4.

Weapons: .30 Aerial Machine Gun 66%, damage 2D6 + 3, burst only (Note: DeWitt knows how to use this weapon, but does not have it with him.)
.45 Revolver 35%, damage 1D10 + 2

Skills: Aircraft Maintenance 35%, Dodge 67%, First Aid 81%, Hide 43%, Jump 62%, Mechanical Repair 65%, Meteorology 15%, Navigate 73%, Occult 47%, Physics 12%, Pilot Aircraft 89%, Radio Operator 15%.

Languages: English 55%, French 10%.

Like many fliers after the Great War, Ralph DeWitt has drifted through life, at a loss for what to do with himself. He has been a barnstormer, a stunt flier, and a test pilot, but none of these occupations has given him the thrill that flying in the Great War did. DeWitt looks forward to the challenge of flying a heavily-loaded plane into treacherous Antarctic winds. Despite this, DeWitt knows his limits, and is aware that other lives hang on his skill as a pilot; he will not take off into utterly impossible conditions. DeWitt is a blocky, hairy man, with black hair and dark brown eyes, who seems somewhat withdrawn or sullen on the ground. Only when he is fighting against the savage Antarctic winds, or telling a story about it, will his face split in a wide grin.

LAWRENCE LONGFELLOW, age 40, Engineer/ Mechanic

STR 11	CON 15	SIZ 15	INT 13	POW 11
DEX 15	APP 11	EDU 14	SAN 55	HP 15

Damage Bonus: + 1D4.

Weapons: None.

Skills: Aircraft Maintenance 76%, Astronomy 37%, Conceal 76%, Electrical Repair 56%, Hide 55%, Mechanical Repair 87%, Operate Heavy Machine 83%, Radio Operator 10%.

Languages: English 70%.

Longfellow is a shy, pudgy man with thinning brown hair, unremarkable brown eyes, and a hint of a stutter. Whenever possible, he retreats behind engines and machinery, leaving the talking to Huston. Unlike his garrulous coworker, Longfellow prefers to take his orders and quickly do the repairs. They make an excellent team, as Huston attracts all the attention, leaving Longfellow to do his work in peace. Away from the machines, he is quiet, and effort must be made out get him out of his shell. Those who get close to him are his friends for life; Longfellow is extremely loyal, especially to his fellow mechanics Huston and Miles.

ALAN "COLT" HUSTON, age 31, Engineer/Mechanic

STR 13	CON 14	SIZ 11	INT 12	POW 08
DEX 15	APP 15	EDU 13	SAN 40	HP 13

Damage Bonus: + 0.

Weapons: Fist/Punch 71%, damage 1D3
Thrown Knife 68%, damage 1D4 + 2
.30-06 Bolt Action Rifle 66%, damage 2D6 + 4
.45 Revolver 35%, damage 1D10 + 2
Fighting Knife 42%, damage 1D4 + 2

Skills: Aircraft Maintenance 80%, Bargain 43%, Dodge 60%, Electrical Repair 62%, Mechanical Repair 74%, Operate Heavy Machine 73%, Radio Operator 10%, Tell Tall Tale 73%, Throw 68%, Weather Eye 25%.

Languages: English 65%, Norwegian 10%.

A handsome, wiry, Midwestern ladies' man, Colt Huston has survived many North Dakotan winters. He has dozens of "this is nothing" stories about repairing tractors and other farm equipment in hundred mile-an-hour Arctic gales with sleet *and* lightning. Astoundingly, he is able to spin these tales as he makes expert repairs. He is a congenial sort, although he has a compulsion to top just about any story he hears. He gets along well with fellow mechanics Longfellow and Miles.

PATRICK MILES, age 33, Aircraft Technician and Mechanic

STR 16	CON 11	SIZ 14	INT 14	POW 11
DEX 13	APP 09	EDU 10	SAN 55	HP 13

Damage Bonus: + 1D4.

Weapons: Fist/Punch 55%
.30-06 Bolt Action Rifle 60%, damage 2D6 + 4

Skills: Aircraft Maintenance 84%, Climb 55%, Dodge 60%, Electrical Repair 78%, History (Irish) 54%, Locksmith 67%, Mechanical Repair 77%, Navigate 20%, Pilot Aircraft 06%, Occult 32%, Operate Heavy Machine 45%, Radio Operator 10%.

Languages: English 50%, Irish 33%.

Miles is a well-built man with curly, reddish hair and a pale complexion that hints at his Irish heritage. Strong, capable, and devoted, Miles' only flaw is that he is a complainer. His dark humor and morose personality make it seem that he is always dissatisfied, worried about possible disasters, and forever uncertain of the future. He gets along well with fellow mechanics Huston and Longfellow.

CHARLENE WHITSTON, age 32, Intellectual with an Itch for Fame

STR 12	CON 15	SIZ 11	INT 14	POW 12
DEX 11	APP 12	EDU 20	SAN 60	HP 13

Damage Bonus: + 0.

Weapons: 16-Gauge Shotgun 75%, damage 2D6 + 2/1D6 + 1/1D4
.32 Revolver 40%, damage 1D10

Skills: Accounting 30%, Biology (Biometeorology) 61%, Botany (Phytomorphology) 80%, Climb 60%, Credit Rating 70%, Dodge 35%, Drive Auto 50%, Fast Talk 55%, First Aid 45%, Jump 45%, Library Use 50%, Natural History 25%, Navigate 25%, Persuade 45%, Photography 22%, Pilot Aircraft 25%, Psychology 59%, Radio Operator 20%, Ride 55%, Spot Hidden 65%.

Languages: Dutch 57%, English 85%, French 65%, German 65%.

Of privileged family, Whitston is an intelligent, experienced botanist and a skilled traveler. While she may strike some as superficial, no woman publishes scientific articles in order to host excellent parties. She has been a valuable contributor to scientific expeditions in Africa and Mongolia, and has excellent survival and organizational skills in addition to her formidable knowledge of plant biology. The investigators, however, are unlikely to discover any of this while she is in the company of their expedition leader. As long as the blustering Starkweather is around, she will dutifully "keep her place," following his orders without question, and allow him to condescend to her. Out of his shadow she takes on a life of her own, and proves an able hand. She likes to get her hands dirty, and takes and gives orders with equal readiness. She has no experience with the Antarctic. While she participates in classes aboard ship and reads several books on polar survival on the way to the ice, that is no substitute for having been there before. ■

Starkweather-Moore Expedition Album

JAMES STARKWEATHER,
EXPEDITION LEADER

WILLIAM MOORE,
EXPEDITION CO-LEADER

PETER SYKES,
POLAR GUIDE

GUNNAR SORENSEN,
POLAR GUIDE

NILS SORENSEN,
POLAR GUIDE

WILLARD GRIFFITH,
GEOLOGIST

CHARLIE PORTER,
GRIFFITH'S ASSISTANT

MOREHOUSE BRYCE,
PALEONTOLOGIST

TIMOTHY CARTIER,
BRYCE'S ASSISTANT

CHARLES MYERS,
ARCHAEOLOGIST

AVERY GILES,
MYERS'S ASSISTANT

PIERCE ALBEMARLE,
METEOROLOGIST

Starkweather-Moore Expedition Album (contd.)

DOUGLAS ORGELFINGER,
ALBEMARLE'S ASSISTANT

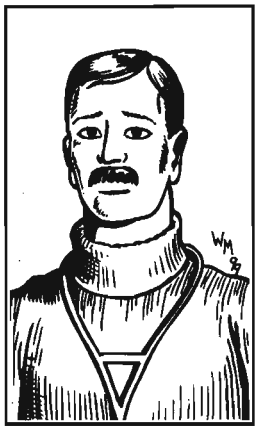
SAMUEL WINSLOW,
GRADUATE STUDENT

TOMÁS LOPEZ,
CAMP CREW WORKER

HIDALGO CRUZ,
CAMP CREW WORKER

MAURICE COLE,
CAMP CREW WORKER

DAVID PACKARD,
TEAM BOSS



DOCTOR RICHARD
GREENE, PHYSICIAN

LOUIS LAROCHE,
RADIO TECHNICIAN

ALBERT GILMORE,
DRILL TECHNICIAN

MICHAEL O'DOUL,
DRILL TECHNICIAN

GREGOR PULASKI,
SLED TEAM CHIEF

ENKE FISKARSON,
DOG WRANGLER

Starkweather-Moore Expedition Album (contd.)

OLAV SNÅBJORN,
DOG WRANGLER

DOUGLAS HALPERIN,
PILOT

RALPH DEWITT,
PILOT

LAWRENCE LONGFELLOW,
ENGINEER/MECHANIC

ALAN "COLT" HUSTON,
ENGINEER/MECHANIC

PATRICK MILES,
AIRCRAFT TECHNICIAN

CHARLENE WHITSTON,
INTELLECTUAL

SS Gabrielle Crew Roster

Responsibility	Name
Captain	Henry Vredenburgh
First Officer	Paul Turlow
Second Officer	Arthur Ballard
Third Officer	Lamont Quigley
Fourth Officer	John "Jack" Driscoll
Ship's Physician	Ray Lansing
Chief Engineer	Charles Drummond
Engineer's Mate	Bert Pacquare
Engineers (3)	William Wheeler Mark Folsom Clyde Abernathy
Engine Crew (15)	Tom Humphries Bartholomew White Sidney Beakins Philippe Brunel Samuele Girolamo Michael Fitzpatrick Albert Webb Richard Hartz Carford Montaigne Edgar Cawley Sanley Rupert Gregory Stanislaw Lucius Morelli Wylie Loden Hugh O'Toole
Radioman	Robert MacIlvaine
Carpenter	Lysander Bertolli
Boatswain	Roger Blunt
Storekeeper	Thomas Price
Quartermasters (3)	Michael Oates Darren Horst Gregory Houlihan
Able Seamen (9)	Peter Stokeley Abelard Almondale Truman Cotter Gordon Cooke Nicolas Pellerin Alexander Moseley David Waters Jude Pierce Chipper Green
Chief Steward	Judas Whitney
Stewards (5)	Niles Abraham (cook) Adam Henning (messboy) Philip Coates (messboy) David Lyle (laundry) August Wylie (laundry)

SS Gabrielle Crew Bios and Stats

Typical Complement of the SS *Gabrielle:* 47 officers and men:

- master and 4 deck officers
- chief engineer and 4 engineer officers
- radio operator, carpenter, boatswain, storekeeper
- 3 quartermasters, 9 seamen
- 15 engine room crew (oilers, firemen, wipers, water tenders)
- 1 chief steward, 5 other stewards (cooks, messboys, laundrymen, etc.)

Aboard during the campaign:

- Captain Vredenburgh, First Mate Turlow, and 3 other deck officers
- chief engineer, Engineer's Mate Pacquare, and 3 other engineering officers
- Lansing the ship's doctor
- MacIlvaine the radio operator, a carpenter, a boatswain, Price the storekeeper
- 3 quartermasters, 9 seamen
- Beakins, Brunel, Carlsson, Giraloma, Harz, Humphries, O'Toole, Webb, White, and 6 other engine room crew (oilers, firemen, wipers, water tenders)
- Whitney the chief steward, Abraham the cook, mess boys Coates and Henning, and 2 other stewards (cook's helper, laundryman)

HENRY VREDENBURGH, age 55, Captain of the SS *Gabrielle*

STR 09	CON 15	SIZ 09	INT 12	POW 16
DEX 17	APP 12	EDU 12	SAN 90	HP 12

Damage Bonus: + 0.

Weapons: .45 Revolver 35%, damage 1D10 + 2
.30-06 Bolt Action Rifle 45%, damage 2D6 + 4

Skills: Accounting 45%, Bargain 67%, Credit Rating 35%, Electrical Repair 20%, Fast Talk 35%, First Aid 65%, Law (Maritime) 40%, Listen 30%, Mechanical Repair 30%, Medicine 20%, Navigate 45%, Operate Heavy Machine 40%, Persuade 50%, Pilot Ship 70%, Psychology 60%, Raconteur 70%, Spot Hidden 55%, Swim 40%, Weather Eye 80%.

Languages: English 60%, Spanish 25%, Tagalog 35%.

Captain Vredenburgh is a short, erect man of 55 years, clean-shaven, with a mane of graying black hair and a no-nonsense disposition. As a sea captain must, Vredenburgh runs his ship by the book and gives no quarter in public. He comes down hard on whoever threatens the peace or safety of the ship, no matter who he might be. Consequently, the crew admire him for his fairness. They willingly bring conflicts to him to resolve, and gladly accept his judgments. Though rather blocky in shape, Vredenburgh is surprisingly agile and precise in his movements.

PAUL TURLOW, age 33, First Officer of the SS *Gabrielle*

STR 14	CON 15	SIZ 12	INT 12	POW 10
DEX 11	APP 11	EDU 11	SAN 50	HP 14

Damage Bonus: + 1D4.

Weapons: Fist/Punch 50%, damage 1D3 + 1D4
.30-06 Bolt Action Rifle 40%, damage 2D6 + 4
.45 Revolver 30%, damage 1D10 + 2

Skills: Accounting 10%, Bargain 40%, Boat Handling 35%, Dodge 40%, Electrical Repair 25%, First Aid 40%, Listen 50%, Mechanical Repair 35%, Natural History 35%, Navigate 40%, Psychology 25%, Ship Handling 55%, Spot Hidden 60%, Swim 55%, Weather Eye 45%.

Languages: English 55%, Spanish 30%.

Turlow is a tough, competent first officer, but he is relatively new to his position, and is still not at ease in it. He has sailed with Captain Vredenburgh before, and they are comfortable with each other. This is only his second voyage as second in command, and while he is at ease with his duties, he has not found the perspective called for by the position. Though a better man as a friend could not be found, on rare occasions Turlow can be impatient and prone to snap judgments. Vredenburgh sees in him the stuff of good leadership and, fortunately for the ship, is able to defend Turlow from himself. Soon Turlow's instincts will be tempered and sound, but not quite yet. Turlow is a strong, rangy man from Colorado. He has dreamed of the sea since he was a child. There is a streak of fatalism and deathly metaphor in him that is not attractive. Once the Seeds come aboard, his dreams are disturbed and he rises tired.

ARTHUR BALLARD, age 32, Second Officer of the SS *Gabrielle*

STR 12	CON 13	SIZ 10	INT 15	POW 14
DEX 14	APP 13	EDU 13	SAN 70	HP 12

Damage Bonus: + 0.

Weapons: Fist/Punch 50%, damage 1D3
.30-06 Bolt Action Rifle 35%, damage 2D6 + 4
.45 Revolver 30%, damage 1D10 + 2

Skills: Accounting 30%, Astronomy 25%, Bargain 30%, Boat Handling 30%, Electrical Repair 38%, Fast Talk 20%, First Aid 30%, Listen 55%, Make Conversation 70%, Mechanical Repair 30%, Natural History 52%, Navigate 35%, Persuade 38%, Photography 20%, Psychology 35%, Ship Handling 45%, Spot Hidden 65%, Swim 45%, Tell Tall Tale 65%, Weather Eye 50%.

Languages: English 70%, German 37%, Spanish 43%.

Ballard is an observant, outgoing New Yorker who is still learning the ropes of his job. He lacks Turlow's and Vredenburgh's experience, but he compensates with dedication, a cool head, and the ability to learn quickly. As his experience increases, so does his confidence; Vredenburgh recognizes that Ballard, like Turlow, will make a good captain one day. In his spare time, Ballard likes to engage people in long discussions about anything and everything. He chose a maritime career for the adventure and the chance to see the world. In spite of, or perhaps because of, their vastly different personalities, Ballard and Quigley are good friends.

LAMONT QUIGLEY, age 35, Third Officer of the SS *Gabrielle*

STR 17	CON 16	SIZ 16	INT 10	POW 10
DEX 11	APP 08	EDU 10	SAN 50	HP 16

Damage Bonus: + 1D6.

Weapons: Fist/Punch 65%, damage 1D3 + 1D6
Kick 40%, damage 1D6 + 1D6
Blackjack 45%, damage 1D8 + 1D6
.30-06 Bolt Action Rifle 50%, damage 2D6 + 4
.45 Revolver 40%, damage 1D10 + 2

Skills: Accounting 10%, Astronomy 11%, Bargain 33%, Climb 40%, Boat Handling 41%, Dodge 45%, Electrical Repair 20%, First Aid 45%, Hold Liquor 85%, Jump 35%, Listen 45%, Mechanical Repair 42%, Navigate 40%, Psychology 15%, Read Popular Novels 70%, Spot Hidden 53%, Ship Handling 50%, Swim 60%, Throw 25%, Weather Eye 40%.

Languages: English 55%, French 25%.

Quigley is a big, burly man, more of a doer and a fighter than a thinker or a fast talker. He is a competent officer, but not spectacularly so. Originally from Virigina, he served in the United States Navy during the Great War; he found life at sea to be to his liking, and chose a maritime career. He speaks little, but carries out his orders faithfully and does whatever it takes to get the job done. His main problem is his limited leadership ability; because of it, he will probably never advance any farther in his job, but he doesn't mind.

JOHN "JACK" DRISCOLL, age 31, Fourth Officer of the SS *Gabrielle*

STR 13	CON 14	SIZ 12	INT 11	POW 11
DEX 11	APP 15	EDU 11	SAN 55	HP 13

Damage Bonus: + 1D4.

Weapons: Fist/Punch 55%, damage 1D3
.30-06 Bolt Action Rifle 45%, damage 2D6 + 4
.45 Revolver 35%, damage 1D10 + 2

Skills: Accounting 10%, Bargain 40%, Boat Handling 33%, Climb 37%, Dodge 30%, Electrical Repair 20%, First Aid 35%,

Listen 40%, Mechanical Repair 30%, Navigate 35%, Psychology 21%, Ship Handling 50%, Sneak 26%, Spot Hidden 50%, Swim 55%, Weather Eye 40%.

Languages: English 58%, Portuguese 37%, Spanish 27%.

Driscoll is the youngest and least experienced of the ship's officers, and he takes himself and his job very seriously because of it. He is always very businesslike, perhaps too much so, and is the source of occasional jokes among the sailors. Nonetheless, he is a competent officer and he does the best he can; as a result, even if no one really loves him, no one hates him, either.

TEN ABOVE-AVERAGE CREWMEN, in order of dexterity

	STR	*CON*	*SIZ*	*POW*	*DEX*	*SAN*	*HP*
1	13	13	13	10	11	50	13
2	14	11	12	11	12	55	12
3	10	11	15	12	14	60	13
4	11	10	16	10	10	50	13
5	14	11	12	09	11	45	12
6	13	09	13	11	10	55	11
7	15	11	15	12	14	60	13
8	11	11	14	11	15	55	13
9	16	15	10	10	13	50	13
10	12	12	13	13	12	65	13

Damage Bonus: + 1D4.

Weapons: Fist/Punch 55%, damage 1D3 + 1D4
.30-06 Bolt Action Rifle 40%, damage 2D6 + 4

Skills: Astronomy 19%, Climb 50%, Dodge 40%, Electrical Repair 30%, Fast Talk 35%, Hide 20%, Jump 35%, Listen 45%, Mechanical Repair 40%, Natural History 20%, Operate Heavy Machine 45%, Psychology 20%, Sneak 40%, Spot Hidden 50%, Swim 30%, Throw 25%, Weather Eye 20%. ■

Lexington Expedition Personnel Roster

Responsibility	Name	Nation	Expertise
Team Leader	Acacia Lexington	USA	Expedition backer
Guides (2)	Haakon Tuvinnen	FIN	Arctic guide
	Henk Beentje	DEN	Explorer, crew boss
Film Crew (3)	Albert Priestley	USA	Chief cameraman
	Chip Hooper	USA	2nd cameraman, film tech
	Kelly Donovan	USA	Tech, grip boy
Camp Crew (3)	Anthony Johnson	USA	Worker
	Charles Wright	USA	Mechanic
	Curtis Anthony	UK	Medic
Technicians (3)	Carl Schmidt	USA	Radio tech/operator
	Tony Hopewell	USA	Radio tech/operator
	Kurt Jenner	GER	Electrician
Pilots/Mechanics (3)	Kyle Williams	USA	Pilot
	Charles Sachs	USA	Engineer
	Robert Marklin	USA	Technician & mechanic

The expedition is traveling south on a single 5000-ton oil-burning steamer, the *Tallahassee,* Norwegian-built in 1921. She has a mixed crew of 29 men, led by Captain Joseph Burr.

The expedition carries a pair of aircraft: a Northrop Delta, modified slightly for the conditions in the Antarctic, which can carry up to eight passengers in addition to the pilot, and has a commercial range of 1500 miles; and a Cierva C-30 autogyro which can carry two men and equipment in addition to the pilot and has a range of about 400 miles.

The expedition is also carrying two large powerful radios, gasoline generators, and in general has excellent, expensive gear. ■

Lexington Expedition Bios and Stats

ACACIA ("THE SHARK") LEXINGTON, age 31, Expedition Leader

STR 11	CON 14	SIZ 12	INT 16	POW 17
DEX 14	APP 14	EDU 16	SAN 85	HP 13

Damage Bonus: + 0.

Weapons: Fist/Punch 40%, damage 1D3
Fencing Foil 37%, damage 1D6 + 1
.38 Revolver 66%, damage 1D10
20-Gauge Shotgun 75%, damage 2D6/1D6/1D3
.30 Bolt Action Rifle (5x hinged scope) 55%, damage 2D6 + 1 (handcrafted carbine with high velocity custom loads; 7-round clip, base range 140 yards)

Skills: Accounting 48%, Bargain 87%, Climb 67%, Credit Rating 94%, Dodge 55%, Drive Auto 15%, History 43%, Library Use 65%, Listen 51%, Locksmith 21%, Mechanical Repair 34%, Navigate 45%, Persuade 43%, Photography 13%, Pilot Aircraft 46%, Polar Survival 13%, Psychology 77%, Purchase Lasting Art 60%, Radio Operator 15%, Ride 54%, Spot Hidden 68%.

Languages: English 90%, French 45%, German 41%, Italian 36%, Latin 31%, Swahili 23%.

Acacia Lexington is blonde and gray-eyed with classic patrician features. Her face is striking for its character, without being beautiful. Fiercely independent and strong-willed, she is constantly at odds with the era's perception of the feminine. She is straightforward and efficient in her words and mannerisms, refusing to waste valuable time on empty social gestures. Her habit of looking directly into the eyes of whomever she speaks to tends to be unnerving to men of the period.

She has little patience for those she perceives as spineless. She expects honesty, truthfulness, and energetic self-confidence from those with whom she deals. Failure to meet these expectations causes her to classify that person as an underling rather than an equal, and she treats him or her accordingly.

Acacia is the only child of Colleen Hampton Lexington and Percival Woodrow Lexington, a couple married relatively late in life, Percival at age 35 and Colleen at age 30; Colleen was considered a spinster when the wedding took place in 1901.

In the early years of the century P. W. Lexington distinguished himself as a brilliant self-made lawyer. A lack of higher education was no obstacle to his ambitions once he passed the bar, and P. W. quickly overcame all barriers by sheer charisma. Colleen Lexington's connections through her family—the Hamptons of New York—opened circles to P. W. that otherwise would have been closed to him. Her high social standing and the sizable fortune that accompanied her into the marriage were the basis for the eventual Lexington family wealth.

Born April 19, 1902, to parents who never expected to be blessed with a family, Acacia was a spoiled and pampered child for whom nothing was good enough. From her earliest age, life in the Lexington household revolved around Acacia's desires. Lavish Christmases and birthdays became the rule—a live pony brought with it a stable, a riding instructor, a groom, and all the accessories. A steady stream of nannies came and went as Acacia quickly turned into a household tyrant.

Her schooling was by private tutor. Only in the classroom did she become a willing and tractable child. Dates, numbers, and languages fascinated her; mastering them was a wonderful challenge. She proved to be a bright student with a quick intellect and the same driving ambition as her father. Quickly absorbing subject matter beyond her years, she gloried in quoting passages in flawless Latin or French to adult visitors.

In 1913, Colleen Lexington was a victim of meningitis. Her mother's death, when Acacia was 11, had a profound influence on the girl. Acacia's secret adoration of her lovely but distant mother was brought into sharp focus by grief. In the months following the funeral, her temper tantrums, outrageous demands, and spoiled behavior diminished.

At the same time, P. W. took new interest in his daughter. From 1913 through 1915, she accompanied him everywhere. Tutors and maids in tow, the two went on a grand tour of Europe. Along with the sights, P. W. introduced her to his business and social connections among European society. Discovering Acacia's observations of prospective clients to be not only accurate but cruelly truthful, he began including her in his business meetings.

During these two years, Acacia Lexington was exposed to skills not usually taught to a young woman. Along with advanced riding skills, she picked up a working knowledge of fencing, and became an excellent skeet shooter. She developed a fascination for mechanical devices which continues. Her first-hand knowledge of sheeplike parliaments and a Europe blindly at war left her dismayed at the ineptitude of politicians, and may have prompted her later interest in alternative political movements.

The Lexingtons returned to the United States at the end of 1915. It took a chance comment from a friend to point out to P. W. that his daughter had quietly traded her boyish grin for the soft smile of a young woman. Travel and tutors had placed Acacia's academic knowledge far in advance of most of her peers, but her

The Origin of the Feud

In early 1920, Acacia Lexington was given an elaborate Kenyan safari as a birthday gift from her father. As recommended by business acquaintances, P. W. hired Captain Starkweather to guide the party.

In Kenya, Lexington quickly became aware of the safari's poor organization. Photography supplies were missing or faulty, foodstuffs were incomplete, and many boxes of ammunition were for weapons which the party had not brought. There was no set plan for setting up or striking camp—sometimes it was well after dark before her tent was raised. More than once sightseeing had to be delayed to locate fresh water. Sheer luck and the chance employment of skilled bearers kept the party from utter disaster.

Lexington brought these problems to Starkweather's notice. She challenged his authority and questioned his skills. Vicious arguments erupted between them. The tension in the camp was high. In self-defense, she began to look on Starkweather as a buffoon rather than a competent guide. This change in attitude made the rest of the trip go much more smoothly for all concerned.

A passing comment about giraffes gave Starkweather a chance to prove his skills as a guide. With only a two day delay, he could take her to "just the place." They set off across barren country, leaving behind the well marked trails and familiar landmarks, navigating by Acacia's compass, the only compass in the party.

At a small stream, threatening weather gave Acacia pause. She pointed out the dark rain clouds to Starkweather, who assured her that they were in no danger of getting wet. Overheard snatches of conversation between the bearers confirmed to her that Starkweather's plan was sheer stupidity. She attempted to get him to turn back. Starkweather was firm that she should see her giraffes. Her concerns were nothing but "quite normal womanly jitters at being in the unknown."

The location was indeed wonderful, and the giraffes everything promised. A chance encounter with a hidden baby led the bearers to nickname Lexington "The Woman Whom the Giraffes Love."

Retracing their path, they found the stream now swollen and unfordable. Despite Starkweather's harangues and threats, the bearers refused to attempt a crossing. Several days might pass before the waters could be safely forded. Lexington would surely miss her ship for Europe and her connection home.

Starkweather set the bearers to cutting trees for rafts, intending to float the party across. With no suitable tools at hand the idea was patently absurd. Lexington attempted to point out the flaws, but Starkweather would hear of no other plan save his.

She took matters into her own hands. She found out from the head bearer that a village was only a few miles away. He was reluctant to take an unguarded woman away from the safety of the party, but Acacia's sheer force of personality convinced him to lead her there. Once there, she exchanged her gold jewelry for men and canoes to ferry them across the water.

Starkweather commended the bearer on his quick thinking, and on his ability to keep Acacia safe during their visit to the village. Acacia retreated into an icy fury, refusing to speak further with her erstwhile guide or to acknowledge his existence all the way back to Nairobi.

Six hours before reaching Nairobi she found they had no supplies left at all. Even without the two day delay, supplies would have been short. The detour was not only irresponsible, but could have cost lives. Her assessment of Starkweather changed from that of a mere buffoon to a menace to himself and others. ■

father began to realize that she had almost no preparation for the graces and sensitivities her station in life would demand.

Just after her 14th birthday, she was sent to Cadmere Academy, an exclusive finishing school in Boston. Taken away from everything familiar and secure, Acacia found Cadmere to be a living nightmare. Her lack of formal etiquette kept her in academic classes that she had long since mastered. Pouring tea properly became a prerequisite for higher geometry. She quickly came to hate the social rituals she was forced to learn. Penning a proper invitation, or knowing the correct glove length to wear, were empty, useless skills compared to the elegance of mathematics, or the best ways to disguise irregularities in a profit and loss statement. She became the target for snubs and gossip by the other girls. Acacia wrote repeatedly to her father, begging to come home. For the first time P. W. refused his daughter's requests.

In 1918 she refused to attend non-academic classes, and aggressively voiced her opinion on the short-sighted education the other students were receiving. Conferences with the headmistress and removal of privileges did not alter her stance. Stubborn, she became a never-ending source of aggravation to her teachers. Eventually Cadmere requested that her father remove her from the school.

Despite her rebellion, Lexington was aware of the restrictions that society placed on a woman, and she was not insensitive to her father's desires for her future. After weeks of argument and simple, tearful manipulation, she and her father reached an agreement. She would allow herself to be trotted out as a debutante, and perform all her social tricks flawlessly and without complaint. In return P. W. would educate her in the business of managing the family fortune.

Her entry into the New York social scene of 1919 was perfect. The social columns named her the year's loveliest and most eligible debutante. She was described frequently as the "fragile, golden fairy child." Pictures from that period do her only partial justice. They show a beautiful young girl with delicate features, often surrounded by admiring men. The smiles and laughter she seems to bestow on them do not reach to her eyes. In another photograph she is caught in profile, among a group at a charity ball. There is no mistaking the condescension in her expression.

Despite being the most sought-after debutante of the season, Acacia quickly discovered that the men of her own age and station were shallow and self-absorbed. Their talk of being seen at all the "right" places, of tailors, gambling, and weekend parties bored her to tears. Their treatment of her as a fragile decorative object made her seethe with anger. She learned to turn empty flattery aside with a few polite, well chosen words. While never lacking for an escort or dance partner, no young man inspired a spark of romance in her. In 1920, as the new season opened, new debutantes began to take up column space. Miss Lexington vanished from the society page. The "fairy child" was forgotten.

In early 1920, her father arranged a trip to Africa as a birthday gift to her. Captain Starkweather was hired on high recommendation from business associates. *See the sidebar "The Origin of the Feud" on page 368 for the full story of the trip.* Despite his dashing reputation and charisma, the young Lexington easily saw through Starkweather's bravado. His grand gestures and extravagant tales were at first an annoyance, then an aggravation, since he also insisted on treating her like a helpless woman. When he replaced her own rifle with one of lighter caliber, her dislike of him became intense.

She was furious when she returned to New York, to find the papers full of the story of her "rescue." Her first thought was to spill the true tale to the newspapers. After a long and heated discussion with her father, she reluctantly agreed not to contradict Starkweather's account. The only thing truly hurt was her pride, and the newspapers would eagerly seize on the information, and turn the matter into a circus. The publicity would of course damage Starkweather, but it would also expose the Lexington family to gossip. It was not easy to keep silent, but she did. Her grudge against Starkweather remains.

On August 8, 1921, a member of the house staff discovered Percival Woodrow Lexington dead in his study. The official ruling was death by a self-inflicted gunshot wound. The papers were full of wild speculations about P. W.'s business dealings.

In the midst of her grief, a tearful Acacia stated that her father had been murdered. A rare book had been stolen from the house, and she was convinced that he had been killed for that reason. The item, a one-of-a-kind manuscript by Edgar Allan Poe called *The Narrative of Arthur Gordon Pym,* was an unbound copy of the twenty-nine chapters of the complete work.

After the funeral, Acacia wrote an open letter to the managing editors of New York's newspapers, retracting her assertion of murder and agreeing with the coroner's findings. Of the missing manuscript she said, "I believe it is still in the library. You will understand that under the circumstances, I haven't made a search for it." After that she did not mention the Pym document.

The death of her father placed the family fortune in Acacia Lexington's hands. All pretense of fitting into high society vanished. With what P. W. had taught her as a base, she set herself to learning the finer skills of the business world. Prohibited by her sex from joining the influential "old boy" circles, she found her own way. In some financial circles she became quietly known as "The Shark."

Her accurate understanding of the world's stock markets allowed her to escape the worst effects of the 1929 crash and the long depression that has followed. She retains most of her wealth, and is able to make cautious acquisitions at bargain prices. She continues to be enviably prosperous. In the 1940s her long range planning will pay off enormously.

Over the last two years she has dabbled in various social and political groups. She has been spotted at meetings of socialists, communists, fascists, social credit agitators, and other fringe groups. She is known to have donated money to each of these groups.

Guides

HAAKON TUVINNEN, age 35, Polar Guide

STR 14	CON 16	SIZ 12	INT 14	POW 13
DEX 09	APP 10	EDU 14	SAN 65	HP 14

Damage Bonus: + 1D4.

Weapons: Ice Ax 81%, damage 1D6 +1 + 1D4
.30-06 Bolt Action Rifle 68%, damage 2D6 + 4
Hunting Knife 78%, damage 1D6 + 1D4

Skills: Astronomy 65%, Climb 62%, Drive Dog sled 84%, First Aid 50%, Hide 67%, Jump 55%, Natural History 56%, Navigate 88%, Polar Survival 89%, Radio Operator 10%, Spot Hidden 72%, Track 56%, Weather Eye 30%.

Languages: English 35%, Finnish 70%.

A citizen of Finland, he is one of the best cold-weather expedition guides in the world. Tuvinnen patiently educates those he leads in polar survival. He watches out for the expedition as he would his large brood of children—firmly, but with a care that borders on loving. He has phenomenal presence of mind and an excellent record of returning his charges from dangerous cold; it is a pity that both virtues will be ruined by this expedition.

HENK BEENTJE, age 43, Crew Boss, Explorer

STR 17	CON 17	SIZ 14	INT 12	POW 13
DEX 13	APP 08	EDU 11	SAN 65	HP 16

Damage Bonus: + 1D4.

Weapons: Iron Club 79%, damage 1D6 + 1 + 1D4
.30-06 Bolt Action Rifle 45%, damage 2D6 + 4

Skills: Accounting 44%, Bargain 55%, Climb 40%, Credit Rating 35%, Drive Tracked Vehicle 65%, Drive Dog sled 45%, Fast Talk 75%, First Aid 40%, Listen 46%, Logistics 80%, Operate Heavy Machine 33%, Persuade 35%, Polar Survival 55%, Psychology 67%, Spot Hidden 65%.

Languages: Danish 60%, English 36%.

Henk Beentje is a stern, hard-bitten Dane who has seen his share of foolish explorers, but he realizes that this group is not foolish. He has a loud, harsh voice that carries far across the icy wastes, and he gleefully uses it to call out orders or warnings. Henk always carries an iron rod which he uses as a prybar, a pointer, and, when necessary, a tool for personal defense.

Film Crew

ALBERT PRIESTLEY, age 30, Chief Cameraman

STR 14	CON 13	SIZ 12	INT 13	POW 17
DEX 14	APP 15	EDU 12	SAN 85	HP 13

Damage Bonus: + 1D4.

Weapons: None.

Skills: Bargain 45%, Craft (16mm Camera) 79%, Chemistry 31%, Dodge 51%, Fast Talk 56%, Flatter 55%, Geology 13%, Mechanical Repair 62%, Persuade 67%, Photography 77%, Psychology 45%, Spot Hidden 66%.

Languages: English 60%.

When Raymond Priestley returned from his exploration of the South Pole on the 1907-1909 Shackleton expedition, he brought back many strange and wonderful stories of the haunting yet overawing beauty of the Antarctic continent. Over the course of several years, he shared these stories in letters with his American "nephew" (actually a first cousin once removed), Albert. Young Albert was absolutely enraptured by the accounts, and swore that one day, he would himself go to Antarctica. When Lexington decided to go south, Albert Priestley was the first to join the expedition. Priestley has a steadfast, unquenchable good nature, which stems from a deep foundation of faith in God and himself. Until the very last of his strength, Priestley is hopeful, and will struggle toward whatever possibility of rescue there may be, sharing an encouraging word with anyone who needs one. Keepers should resist the urge to make Priestley stupid or needlessly annoying: he is a bastion of strength and encouragement for the entire Lexington Expedition, and a good person to have around when disaster strikes. Aside from that single, dominant trait, Priestley is also a skilled newsreel photographer, and an amateur chemist. Unlike some people in other expeditions, Priestley realizes that he is only a photographer, and lets those with more experience at polar survival make the important decisions.

CHIP HOOPER, age 23, Second Cameraman, Film Technician

STR 14	CON 14	SIZ 13	INT 11	POW 10
DEX 12	APP 13	EDU 16	SAN 50	HP 14

Damage Bonus: + 1D4.

Weapons: Fist/Punch 40%, damage 1D3 + 1D4
.30-06 Bolt Action Rifle 40%, damage 2D6 + 4

Skills: Bargain 35%, Chemistry 17%, Craft (16mm Camera) 50%, Craft (Edit Film) 45%, Craft (Still Photo) 70%, Craft (Sound Recording) 75%, Electrical Repair 70%, Listen 69%, Mechanical Repair 55%, Photography 80%, Spot Hidden 44%, Swear Eruditely 73%.

Languages: English 80%, French 09%.

A Princeton graduate from upstate New York, Hooper fell in love with the movies in his junior year—to the dismay of his parents. He completed college quickly, but then headed to Hollywood, just when the Depression had flooded the streets with jobless hopefuls. Hooper's buoyant optimism got him a job now and then, until the fast-changing technology of talking pictures exposed his talents for recording, and his reputation suddenly soared.

KELLY DONOVAN, age 22, Technician and Grip Boy

STR 15	CON 12	SIZ 12	INT 11	POW 09
DEX 14	APP 14	EDU 08	SAN 45	HP 12

Damage Bonus: + 1D4.

Weapons: Fist/Punch 59%, damage 1D3 + 1D4

Skills: Climb 45%, Craft (Lighting) 68%, Drive Auto 70%, Electrical Repair 65%, Fast Talk 55%, First Aid 40%, Jump 55%, Listen 50%, Occult 15%, Operate Heavy Machine 30%, Photography 25%, Religious Faith 60%, Spot Hidden 45%, Swim 55%.

Languages: English 40%.

Donovan has worked with Priestley for four years, following him everywhere. Donovan has lost family members to the damp, chill winters of Boston, and fears the snow and cold. On the Ice, Donovan is as cautious as possible, because the possibility of freezing to death is so real to him. His loyalty to Priestley makes him grit his teeth and pitch in, but the vast isolation of the Antarctic continent is beyond his imagining, and frightens him to his core. When anyone suggests leaving the continent for home, he or she hears a heartfelt second from Donovan Kelly.

Camp Crew

ANTHONY JOHNSON, age 28, Camp Worker

STR 17	CON 16	SIZ 14	INT 09	POW 13
DEX 13	APP 08	EDU 11	SAN 65	HP 15

Damage Bonus: + 1D4.

Weapons: Grapple 88%, damage special
Large Club 73%, damage 1D8 + 1D4
Fist/Punch 65%, damage 1D3 + 1D4

Skills: Bargain 55%, Camp Superstitions 43%, Climb 50%, Electrical Repair 24%, First Aid 58%, Jump 67%, Mechanical Repair 43%, Operate Heavy Machine 33%, Psychology 45%, Secure Rope 80%, Sneak 63%.

Languages: English 55%, Romany 24%.

A former circus roustabout, Anthony may not be the brightest in camp, but he reacts quickly and appropriately to emergencies. He is wary of strangers, a holdover from his carnival and circus days. Johnson loves to travel. He was attracted to the expedition by realizing that he would be traveling further than anyone he knew. Johnson is a hard worker. He is protective of Miss Lexington, whom he reveres as the older sister he never had.

CHARLES WRIGHT, age 26, Mechanic

STR 13	CON 11	SIZ 14	INT 15	POW 09
DEX 16	APP 13	EDU 14	SAN 45	HP 13

Damage Bonus: + 1D4.

Weapons: None.

Skills: Craft (Ice Sculpture) 76%, Listen 41%, Mechanical Repair 88%, Operate Heavy Machine 37%, Pilot: Aircraft 35%, Spot Hidden 55%.

Languages: English 70%.

Lured away from a profitable aircraft repair business in Boston, Charles Wright is the perfect mechanic for the expedition. He is fiercely loyal to Acacia Lexington, and secretly fantasizes an unspoken romance between them. When not otherwise engaged, Wright creates impressive and beautiful sculptures from the ice. The subjects of these creations change significantly over the weeks on the Ice, however, and their mood darkens if Wright gets significantly closer to the Unknown God.

Doctor CURTIS ANTHONY, age 42, Expedition Physician

STR 11	CON 14	SIZ 14	INT 16	POW 14
DEX 12	APP 10	EDU 20	SAN 70	HP 14

Damage Bonus: + 1D4.

Weapons: None.

Skills: Accounting 45%, Anthropology 38%, Biology (Human Anatomy) 65%, Chemistry 63%, Credit Rating 40%, First Aid 86%, Library Use 40%, Medicine 83%, Natural History 67%, Persuade 30%, Pharmacy 50%, Swim 65%, Psychoanalysis 56%, Psychology 67%, Spot Hidden 44%.

Languages: English 99%, French 73%, Latin 18%.

Those who meet Doctor Anthony quickly are charmed by the utter confidence and self-assurance that radiates from the man. His cultivated English accent soothes and comforts. Alas, Doctor Anthony knows much less about men's minds than he would like to think. He is going through what will later be known as a mid-life crisis, and is attempting to do something great before he is no longer able. He has an excellent mind, and those who present him with well-reasoned discussions will find him a receptive listener. Poorly thought-out arguments are mercilessly torn to shreds. When they meet, Doctors Anthony and Greene develop an instant mutual dislike for each other.

Technicians

CARL SCHMIDT, age 35, Radio Technician and Operator

STR 10	CON 10	SIZ 12	INT 13	POW 11
DEX 13	APP 09	EDU 11	SAN 55	HP 11

Damage Bonus: + 0.

Weapons: .30-06 Bolt Action Rifle 30%, damage 2D6 + 4

Skills: Bargain 45%, Chainsmoke Hand-Rolled Cigarettes 88%, Chess Problems 35%, Craft (Glass-Blowing) 65%, Electrical Repair 75%, Radio Operator 80%, Read Popular Novels 74%, Sneak 30%, Jump 44%, Spot Hidden 55%.

Languages: English 55%, German 21%, Spanish 44%.

A Texas native, Schmidt's plains drawl is tinged by the faintest suggestion of thick northern German. He is a tall, thin man, always at the mercy of the cold, but enthusiastic about this trip to the end of the world. He has brought along his own camera gear. When off watch, he is glad to offer a helping hand, but usually can be found snapping photos around camp.

TONY HOPEWELL, age 31, Radio Technician and Operator

STR 11	CON 17	SIZ 13	INT 14	POW 12
DEX 15	APP 10	EDU 13	SAN 60	HP 15

Damage Bonus: + 0.

Weapons: .30-06 Bolt Action Rifle 44%, damage 2D6 + 4
Small Club 44%, damage 1D6

Skills: Bargain 46%, Climb 62%, Electrical Repair 78%, History 34%, Listen 67%, Mechanical Repair 52%, Radio Operator 81%, Read Popular Novels 75%, Persuade 55%.

Languages: English 65%.

Normally competent and friendly, Tony Hopewell has become grim and nervous since his arrival on the Ice. He is aware as few others are how tenuous their lifeline is and how fragile human life is against the primordial snow and ice. He also has night-marish dreams of horrifying dangers to come. Combined with the numbing hostility of Antarctica, he is spooked. Investigators need great patience to open him up, but he will be greatly relieved to share his fears with anyone who understands.

KURT JENNER, age 27, Electrician

STR 10	CON 13	SIZ 11	INT 16	POW 14
DEX 14	APP 12	EDU 12	SAN 60	HP 12

Damage Bonus: + 0.

Weapons: None.

Skills: Astronomy 35%, Bargain 51%, Chemistry 35%, Conceal 78%, Dodge 40%, Electrical Repair 89%, Hide 65%, Mechanical Repair 22%, Navigate 20%, Operate Electrical Generator 80%, Operate Heavy Machine 15%, Radio Operator 25%, Sneak 35%.

Languages: English 43%, German 60%.

A man with a past he does not want revealed, Jenner is hoping to remain in America after the Lexington Expedition is over. Trapped in poverty, he has been using his skills in a smuggling operation. The ring has been cracked, and Jenner believes that German authorities are looking for him. The Lexington Expedition was a godsend. Antarctica is the best hiding place in the world. Jenner distrusts anyone who is not of the Lexington expedition, and will resist every effort to contact the Barismeier-Falken Expedition. Not a hardened criminal, Jenner was simply doing what he had to do in order to eat.

Pilots/Mechanics

KYLE WILLIAMS (PAUL DANFORTH), age 27, Pilot

STR 11	CON 13	SIZ 12	INT 14	POW 15
DEX 15	APP 11	EDU 19	SAN 12	HP 13

Damage Bonus: + 0.

Weapons: P08 Luger Automatic Pistol 40%, damage 1D10
.30-06 Bolt Action Rifle 40%, damage 2D6 + 4
Fist/Punch 30%, damage 1D3

Spells: Nightmares, Elder Sign, and one or two others of the keeper's choice. All are learned from baleful books, but only the two named should be related to this campaign.

Skills: Aircraft Maintenance 55%, Biology 48%, Climb 40%, Cthulhu Mythos 05%, Drive Dog sled 22%, Elder Cipher 13%, Electrical Repair 42%, First Aid 28%, Library Use 55%, Mechanical Repair 44%, Navigate 44%, Occult 45%, Pilot Aircraft 61%, Radio Operator 25%, Polar Survival 35%, Spot Hidden 46%.

Languages: English 95%, German 38%, Latin 20%.

"Kyle Williams" is an alias of Paul Danforth, the graduate student in biology who was on the Miskatonic University expedition in 1930. He accompanied Professor Dyer on the only previous flight across the Mountains of Madness. Danforth was nearly driven mad by his experiences in the City of the Elder Things. He fears for the safety of the world should knowledge of the City and its builders ever become widely known.

CHARLES SACHS, age 24, Engineer

STR 17	CON 15	SIZ 16	INT 12	POW 16
DEX 14	APP 11	EDU 12	SAN 80	HP 16

Damage Bonus: + 1D6.

Weapons: Fist/Punch 87%, damage 1D3 + 1D6
Grapple 68%, damage special
Thrown Rock 79%, damage 1D4 + 1D6

Skills: Aircraft Maintenance 75%, Climb 74%, Craft (Watchmaker) 42%, Electrical Repair 75%, First Aid 55%, Locksmith 45%, Machine Tools 75%, Mechanical Repair 82%, Natural History 72%, Operate Heavy Machine 87%, Polar Survival 23%, Spot Hidden 37%, Throw 79%.

Language: English 60%.

A tremendous and startlingly shaggy man from northern New Hampshire, Sachs looks like a windblown yeti. Despite his thick, farm-boy hands, he can make the finest tunings with his fingers. Sachs is almost entirely self-taught, and has a number of unique names for machine parts (anyone assisting him takes five percentages off his or her Mechanical Repair roll result, due to puzzlement about Charlie's lingo). Sachs has ferocious powers of concentration: he ignores snow, cold, dogs, and other people while working on an important repair. The same applies whether he is playing cards, shoveling snow, or deep in conversation. Having that attention directed directly at one is a very disconcerting experience.

ROBERT MARKLIN, age 32, Technician and Mechanic

STR 14	CON 14	SIZ 10	INT 11	POW 12
DEX 13	APP 10	EDU 10	SAN 60	HP 12

Damage Bonus: + 0.

Weapons: .30-06 Bolt Action Rifle 58%, damage 2D6 + 4
.45 Revolver 65%, damage 1D10 + 2
Fist/Punch 48%, damage 1D3

Skills: Aircraft Maintenance 70%, Climb 61%, Dodge 60%, Drive Dog sled 25%, Electrical Repair 80%, First Aid 30%, Listen 45%, Mechanical Repair 80%, Natural History 20%, Navigate 16%, Operate Heavy Machine 58%, Pilot Aircraft 12%, Polar Survival 17%, Radio Operator 15%, Spot Hidden 37%, Track 25%.

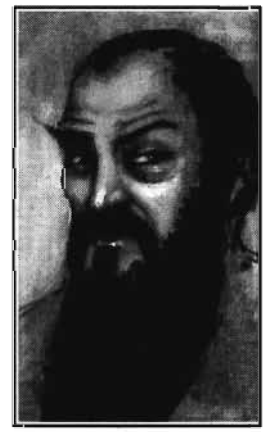
Language: Cherokee 35%, English 50%.

A quiet, thoughtful man from Oklahoma, Marklin was chosen for his previous polar experience as well as his range of useful technical skills. In the field, everyone praises him for his stamina, good sense, and the ability to get the job done. He served on the Ice with the previous Byrd expedition and joined one of the teams trying to rescue the *Italia.* ■

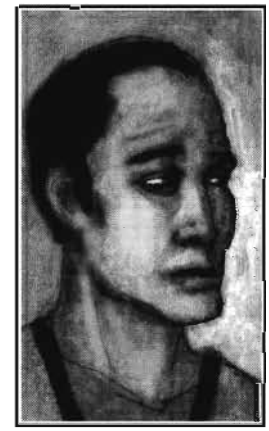
Lexington Expedition Album

ACACIA LEXINGTON,
EXPEDITION LEADER

HAAKON TUVINNEN,
POLAR GUIDE

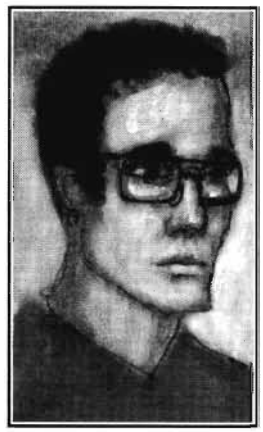


HENK BEENTJE,
CREW BOSS



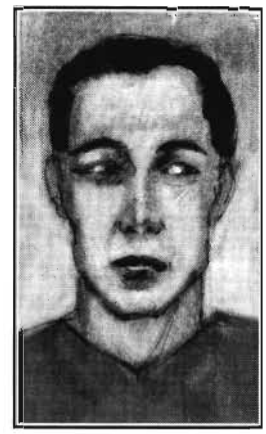
ALBERT PRIESTLEY,
CHIEF CAMERAMAN

Lexington Expedition Album (contd.)

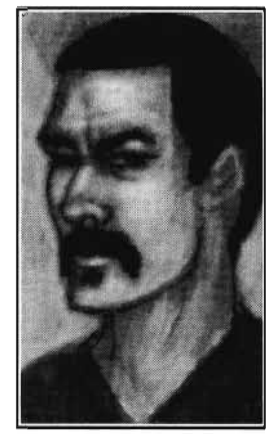


CHIP HOOPER,
SECOND CAMERAMAN

KELLY DONOVAN,
TECHNICIAN



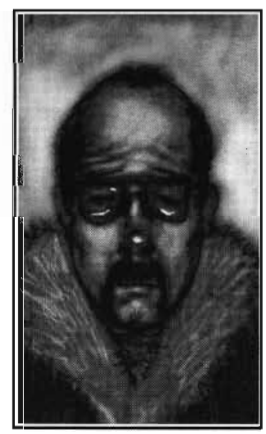
ANTHONY JOHNSON,
CAMP WORKER



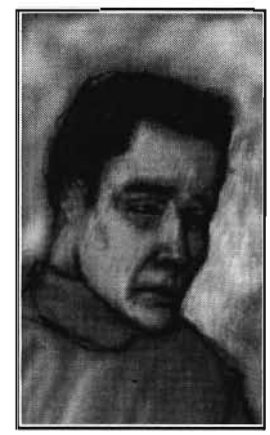
CHARLES WRIGHT,
MECHANIC

DOCTOR CURTIS
ANTHONY, PHYSICIAN

CARL SCHMIDT, RADIO
TECHNICIAN

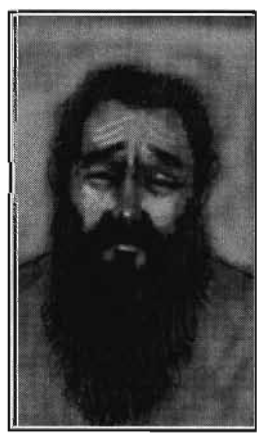


TONY HOPEWELL,
RADIO TECHNICIAN



KURT JENNER,
ELECTRICIAN

KYLE WILLIAMS, PILOT



CHARLES SACHS,
ENGINEER

ROBERT MARKLIN,
TECHNICIAN

Barsmeier-Falken Expedition Personnel Roster

(Die Barsmeier-Falken Antarktisexpedition)

Persons indicated as "surviving" or "deceased" are based upon the unaltered chain of events described in the "BFE Weddell Base Camp" section of Appendix 3. The presence of the investigators in this endgame scenario may have a very large effect upon the fate of base personnel.

Responsibility	Name	Number	Disposition	Survived?
Team Leaders	Josef Barsmeier	1	Base	1
	Klaus Falken	1	Tunnels	0
Doctor	Heinrich Panning	1	Base	0
Occultist	Thomas Pommerenke	1	Tunnels	0
Chief Tech	Harold Schmitt	1	Base	1
Arctic Guide	Konrad Felgener	1	Tunnels	0
Pilots		10	4 Tunnels, 6 Base	3
Mechanics		11	4 Tunnels, 5 Base, 2 Survey	2
Dogmen and Guides		10	2 Base, 8 Survey	8
Workers		15	10 Tunnels, 5 Base	1
Doctor		1	1 Tunnel	0
Medic Aides		3	1 Base, 2 Survey	2
Metorologist		1	1 Base	1
Radio Men		6	4 Base, 2 Survey	2
Surveyors		3	1 Tunnels, 2 on Survey	3
Photographers		2	1 Tunnels, 1 Base	1
Physicist		1	1 Base	0
Biochemist		1	1 Base	0
Archaeologists		2	1 Tunnels, 1 Base	0
Occultists		2	1 Tunnels, 1 Base	1
Lake's Camp Team		12	12 Lake's Camp	?
Wilhelmina Crew		41	41 *Wilhelmina*	41
Graf Zeppelin Crew		44	44 *Graf Zeppelin*	44
	Total	171		
		-44	*Graf Zeppelin* Crew (counted elsewhere)	
		-41	*Wilhelmina* Crew (not needed in the scenario)	
		-12	Lake's Camp Team (counted elsewhere)	
	Subtotal	74	Associated with the Weddell base camp	
		-16	Two Eight-man Survey Sled Teams (all survive)	
		-13	Falken Tunnel Team (all dead)	
		-13	Pommerenke Team (4 survive)	
	Subtotal	32	Actually working in residence at Weddell base camp	

Barsmeier-Falken Expedition Team Rosters

(Die Barsmeier-Falken Antarktisexpedition)

The Lake's Camp Team

Doctor Johann Meyer, leader
Doctor Professor Frank Uhr, famous scientist
Herr Maxwell Rucker, geologist
Herr Johann Benecke, engineer
Herr Martin Kleiser, meteorologist
Herr Herman Baumann, chief pilot
Herr Karol Breyer, pilot
Herr Gregor Schimmel, chief radioman
Herr Josef Stoltz, assistant radioman
Herr Gunter Thimm, dog handler
Doctor Otto Schick, physician
Herr Hugo Grosswirth, mechanic
12 in all.

The Falken Tunnel Team

Doctor Klaus Falken, leader
Konrad Felgener, guide
2 Mechanics
7 Workers
1 Archaeologist
1 Photographer
13 in all. *Thirteen killed or missing.*

The Pommerenke Tunnel Team

Thomas Pommerenke, leader
4 Pilots (D-BFEB, D-BFEC); 1 survives
2 Mechanics; 1 survives
3 Workers; 1 survives
1 Occultist
1 Surveyor; 1 survives
1 Doctor
13 in all. Four survive and are rescued. *Nine dead.*

Sled Survey Team 1

3 Dog Handlers
1 Guide
1 Radioman
1 Cartographer
1 Mechanic
1 Medic aide
8 in all. All survive and are rescued.

Sled Survey Team 2

3 Dog Handlers
1 Guide
1 Radioman
1 Cartographer
1 Mechanic
1 Medic aide
8 in all. All survive and are rescued.

The Base Camp Team

Barsmeier (leader); survives
Panning (doctor)
Schmitt (chief tech); survives
6 Pilots; 2 survive
5 Mechanics; 1 survives
2 Dog Men
5 Workers; 1 survives
1 Medic aide; survives
1 Metorologist; survives
4 Radio Men
1 Photographer; survives
1 Physicist
1 Biochemist
1 Archaeologist
1 Occultist; survives
32 in all. 10 survive. *Twenty-two dead.* ■

Weddell Base Camp Roster

(Die Barsmeier-Falken Antarktisexpedition)

The following personnel are present at Weddell base camp after Falken's group and the survey teams depart.

Responsibility	Name	Survived?
Leader	Josef Barsmeier	yes
Doctor	Heinrich Panning	no
Chief Technician	Harold Schmitt	yes
Pilots (6)	Edward Köllnitz (D-BFEC)	no
	Friedrich Schonberg (D-BFEC)	no
	Hermann Mahr (D-BFED)	no
	Gustav Rave (D-BFED)	yes
	Joachim Kausch (D-BFEE)	yes
	Hans Wallenberg (D-BFEE)	no
Mechanics (5)	Theodore Eckert (D-BFEC)	no
	Gunther Treue (D-BFED)	no
	Hanz Garten (D-BFEE)	no
	Albert Wehrlein (Motor Pool & Drills)	yes
	Eric Kessell (Drills)	no
Dog Men (2)	Trygve Sammelsen	no
	Snorri Braggen	no
Workers (5)	Emilio Lasciari	no
	Arthur Schnabel	yes
	Pavel Vorster	no
	Peter Demetz	no
	Georg Spender	no
Medic Aide	Peter Lang	yes
Metorologist	Franz Klipsch	yes
Radio Men (4)	Kurt Cooper	no
	Wilhelm Brust	no
	Mackie Kronen	no
	Max Sterner	no
Photographer	Martin Brubacher	yes
Physicist	Alan Hammel	no
Biochemist	Egon Auden	no
Archaeologist	Robert Wiene	no
Occultist	Ernst Hoffmann	yes

Skills and statistics for these men may be generated by the keeper as needed. Only the occultists have a chance of possessing Cthulhu Mythos knowledge or skill. ■

Barsmeier-Falken Expedition Bios and Stats

(Die Barsmeier-Falken Antarktisexpedition)

Doctor JOHANN MEYER, age 43, Head of the BFE Team at Lake's Camp

STR 12	CON 10	SIZ 13	INT 15	POW 11
DEX 14	APP 10	EDU 19	SAN 55	HP 12

Damage Bonus: + 1D4.

Weapons: Kar 98 Rifle 43%, damage 2D6 + 4
P08 Luger Pistol 35%, damage 1D10

Skills: Archaeology 67%, Bargain 66%, Cartography 60%, Credit Rating 50%, Cthulhu Mythos 01%, Fast Talk 65%, History 50%, Library Use 45%, Navigate 25%, Persuade 60%, Occult 42%, Psychology 30%.

Languages: Arabic 74%, Aramaic 38%, Catalan 64%, Coptic 69%, English 55%, French 65%, Frisian 51%, German 85%, Gothic 48%, Hebrew 60%, Hindi 81%, Hungarian 59%, Italian 70%, Latin 48%, Pahlavi 44%, Romansch 70%, Romany 58%, Sanskrit 64%, Serbo-Croatian 44%, Spanish 67%, Turkish 78%, Urdu 47%.

Johann Meyer is the head occultist of the expedition, as well as an archaeologist. He is fluent in many languages. His archaeological studies have mostly focused on ancient European and Middle Eastern civilizations. He also was a junior officer in the German Army in the Great War, serving on the staff of General Otto Liman von Sanders in Turkey. He saw no combat, although for the

last six months of the war he was posted to General von Sanders' forward headquarters in Nazareth. His service with von Sanders was almost entirely as a translator and liaison with the Turks.

His demeanor is diplomatic. He has a broad, almost intuitive grasp of languages. His wife and two young sons are at home in Berlin.

Doctor Meyer is comfortable with the commercial bent behind the Barsmeier-Falken Expedition; while he deplores any loss of possible knowledge, he is practical enough to realize there could never be such an effort spent on Antarctic research without the backing of government or industry. He is easily able to manipulate Doctor Falken, due to that scientist's obsession with "Science!" Meyer has seen the strange documents which the BFE possesses.

Meyer is tall and thin, with a neatly trimmed white beard and intense blue eyes. Farsighted, he wears glasses for reading.

Doctor Professor FRANZ UHR, age 57, Anthropologist and Cryptographer

STR 12	CON 16	SIZ 14	INT 16	POW 15
DEX 13	APP 13	EDU 20	SAN 56	HP 15

Damage Bonus: + 1D4.

Weapons: None.

Skills: Anthropology 76%, Cartography 60%, Cryptography 86%, Cthulhu Mythos 01%, History 30%, Library Use 77%, Mathematics (Number Theory) 81%, Persuade 60%, Occult 30%, Psychology 60%, Ride 35%, Spot Hidden 45%.

Languages: English 63%, French 44%, German 90%, Greek 30%, Italian 53%, Latin 20%.

Doctor Professor Uhr of the University of Dresden is a leading anthropologist and cryptographer, although he has been included in the expedition supposedly for his cartographic skills. An intensely curious man, he uses his jovial mannerisms and shrewd intuition to pry information from people. His reputation in anthropology is known to any character with a successful **Anthropology roll.** Uhr is best known for his writings about "tribal peoples" in Europe—the Romany, Cossacks, Lapps, etc.

His skill at cryptography is known only if an investigator gets a successful **Know roll** in addition to the **Anthropology roll.** Then the investigator has read a short biography of him, a commentary in a professional journal, or a military report mentioning his service as a civilian counter-intelligence specialist with the Imperial German Navy in the Great War.

Uhr is unmarried. He is not proud of his service as a spy-catcher during the war, and avoids the subject of wartime experience. Like Doctor Meyer, Uhr is easily able to manipulate Doctor Falken. He dislikes Josef Barsmeier (a fact he disguises well, even from Barsmeier) as a narrow-minded Prussian.

He was invited to participate on the expedition by Doctor Meyer, who was aware of his wartime contributions. He is aware of the strange information that has contributed to the formation of the expedition.

Doctor Professor Uhr needs the money this expedition can provide, and rather enjoys small adventures. He is easily intimidated by credible physical threats, though with his good Psychology skill he can usually identify bluffs for what they are.

He is short and balding, perhaps 30 pounds overweight, with a constant smile gathering crow's feet around his merry blue eyes. He has a white spade beard and thin white hair.

Doctor MAXWELL RUCKER, age 36, Geologist at Lake's Camp

STR 10	CON 10	SIZ 10	INT 12	POW 10
DEX 09	APP 08	EDU 15	SAN 45	HP 10

Damage Bonus: + 0.

Weapons: P08 Luger Pistol 30%, damage 1D10

Skills: Bargain 25%, Chemistry 20%, Climb 45%, Dodge 20%, Geology 55%, Mechanical Repair 30%, Operate Heavy Machine 30%, Physics 35%, Photography 30%.

Languages: English 40%, French 60%, German 70%, Italian 60%.

Maxwell Rucker is the geologist accompanying the German group to Lake's Camp. He has no interest in history, soft sciences such as anthropology, or even the elder things (after an initial raised eyebrow). Logic is his deity, and in Antarctica Doctor Klaus Falken is his priest. Rucker will insist that any deviation from profitable goals be reported to Falken for approval; fortunately for Doctor Meyer and Doctor Professor Uhr, Rucker is also a slave to hierarchy. Despite his meek appearance, Rucker is a ruthless man.

Rucker is a pinkish, fat-faced individual with searching brown eyes that look everywhere in the eyes of the person he is talking to, giving him an appearance of perpetual guilt. His voice is usually soft and toneless.

JOHANN BENECKE, age 29, Engineer and Ace Scrounger

STR 16	CON 10	SIZ 14	INT 14	POW 07
DEX 13	APP 08	EDU 16	SAN 35	HP 12

Damage Bonus: + 1D4.

Weapons: Wrench 47%, damage 1D6 + 1D4
Kar 98 rifle 50%, damage 2D6 + 4

Skills: Bargain 50%, Brew Brandy 40%, Chemistry 10%, Conceal 30%, Craft (Machine Tools) 75%, Dodge 35%, Electrical Repair 30%, Engineering (Mechanical) 45%, Locksmith 55%, Mechanical Repair 70%, Operate Heavy Machine 60%, Sneak 45%, Spot Hidden 65%.

Languages: English 40%, French 20%, German 70%.

Benecke is the engineer sent with the German team to Lake's Camp. He designed and operates their snow and ice removal machinery, repairs aircraft, and generally mends broken equipment. He is very friendly, and seems to have a nearly inexhaustible supply of cheap brandy, which he is glad to share. He enjoys playing cards—especially skat. He claims to be a poor poker player; this is true, at first, but Benecke learns fast.

Benecke is a venal, visionless man, cunning but not violent. High wages brought him here. The opportunities to swipe, er, scrounge materiel from other expeditions are many; and the temptation to bring back his own samples of valuable Antarctic finds will be strong. Doctor Meyer and Professor Uhr became aware of his proclivities during the voyage from Germany, and at the BFE's Weddell base used him to improve their team's equipment at the expense of other teams within the expedition.

With an almost ape-like physique, Benecke is also valuable for his strong back.

MARTIN KLEISER, age 33, Meteorologist at Lake's Camp

STR 11	CON 10	SIZ 12	INT 12	POW 13
DEX 10	APP 09	EDU 15	SAN 65	HP 11

Damage Bonus: + 0.

Weapons: None.

Skills: Astronomy 25%, Boating 30%, Climb 65%, Meteorology 80%, Natural History 20%, Navigate 40%, Photography 45%, Spot Hidden 50%.

Languages: English 30%, French 40%, German 75%.

Kleiser is a weatherman, and the archetypal absent-minded scientist. Unmarried, he lives in Bremerhaven. He enjoys fishing and strange weather—an unexpected snowstorm brings out a cry of "Isn't zis vonderful?"

He is a squinty-eyed individual with a sparse blond beard and spectacles that are in constant need of de-fogging. Most of his time is spent looking at the sky, which often causes him to trip over unnoticed obstacles.

HERMAN BAUMANN, age 28, Pilot at Lake's Camp

STR 13	CON 16	SIZ 14	INT 11	POW 15
DEX 15	APP 15	EDU 14	SAN 55	HP 15

Damage Bonus: + 1D4.

Weapons: Mauser M1932 Machine Pistol 40%, damage 1D10 (fires 1 or burst)

Skills: Climb 65%, Credit Rating 65%, Drive Auto 75%, Electrical Repair 20%, Geology 20%, Jump 35%, Mechanical Repair 75%, Natural History 15%, Operate Heavy Machine 20%, Polar Survival 35%, Pilot Aircraft 90%, Radio Operator 35%, Ride 40%, Ski 40%, Spot Hidden 40%.

Languages: English 80%, Finnish 40%, French 50%, German 71%, Swedish 30%.

Herman Baumann, chief pilot of the Barsmeier-Falken expedition, is a dashing man in the image of heroic pilots from the movies. Concerned more with image than safety, he is nonetheless a capable aviator. He was chosen for the expedition because of his connections in upper-class society and for his cold-weather flight experience in Sweden and Finland. If not closely supervised, he will do hair-raising stunts, such as the low-level flyby upon his arrival at Lake's Camp. He is skilled enough to pull such things off—so far. He is an excellent aircraft mechanic, since there are rarely machine shops handy in the Arctic. He is an experienced alpinist, and also a member of the *Schwäbische Höhlenverein* (a spelunking society). He has extensively explored a number of European cave systems.

Class is more important to him than nationality, though he is relatively unbigoted for his time. He is certainly aware of his attractiveness to women and the media, and tries not to look too eager for the attentions of either—but welcomes both.

Baumann resembles Errol Flynn, tall and athletic, with a thin mustache, long silk scarf, and leather helmet. His English is perfect, with a faint British upper-class accent.

KAROL BREYER, age 34, Copilot at Lake's Camp

STR 10	CON 10	SIZ 11	INT 14	POW 13
DEX 12	APP 10	EDU 15	SAN 40	HP 11

Damage Bonus: + 0.

Weapons: None.

Skills: Electrical Repair 25%, Mechanical Repair 40%, Meteorology 20%, Navigate 60%, Pilot Aircraft 55%.

Languages: English 10%, French 30%, German 75%, Polish 20%.

A veteran of the Great War, Karol Breyer has since worked for Lufthansa as a mechanic and pilot. A mild-mannered man, he has a good reputation as a careful navigator. He makes a good match with Herman Baumann, except that he is unlikely to object strongly enough to stifle Baumann's stunts.

Breyer is not talkative, but willingly pitches in to help with chores and unpleasant work. He loses a lot of skin starting airplane engines while Herman Baumann leans out of the cockpit, shouting encouragement. He has a quiet wife and a young daughter at home in Potsdam.

Breyer is unexceptional in appearance; he walks with a slight limp.

GREGOR SCHIMMEL, age 32, Team Chief Radio Operator at Lake's Camp

STR 10	CON 12	SIZ 10	INT 15	POW 10
DEX 8	APP 12	EDU 14	SAN 41	HP 11

Damage Bonus: + 0.

Weapons: Kar 98 Rifle 30%, damage 2D6 + 4
P08 Luger Pistol 72%, damage 1D10

Skills: Cryptography 20%, Electrical Repair 60%, Listen 68%, Radio Operator 70%, Spot Hidden 42%.

Languages: English 23%, German 75%, Swedish 30%.

Gregor Schimmel is the senior radio operator assigned to the team at Lake's Camp. He is in charge of maintaining contact with the main body of the Barsmeier-Falken Expedition on the Ice inland from the Weddell Sea.

He is an unpleasant, bigoted man, chosen for his secretive personality and skill with radio equipment. He knows some of the truth about the sources of Barsmeier's and Falken's information about Antarctica, since he encrypts and decrypts important messages for the expedition. Mildly paranoid, he pretends that he speaks only German, and liberally uses the rankest obscenities in his native tongue.

Schimmel is thin and balding, with a perpetual frown beneath a dark brown beard. He already has been treated for second degree frostbite in his hands when he arrives at Lake's Camp, and will no doubt experience more trouble with the cold. His usual problem is to avoid touching cold metal with his bare hands, resulting in first degree frostbite.

JOSEF STOLTZ, age 24, Alternate Radio Operator at Lake's Camp

STR 10	CON 10	SIZ 12	INT 13	POW 13
DEX 12	APP 11	EDU 12	SAN 75	HP 11

Damage Bonus: + 0.

Weapons: None.

Skills: Bible 45%, Craft (Carve Ivory) 47%, Electrical Repair 40%, Radio Operator 40%, Physics 20%.

Languages: English 35%, Danish 30%, German 79%.

A quiet, religious man, Josef Stoltz is the alternate watch radioman for the BFE team at Lake's Camp. He often apologizes quietly to persons who have been insulted by Schimmel, his boss. He is far more careful than his boss about touching cold surfaces without gloves; as a result, he works slower, but has fewer injuries. He is unmarried, and comes from Munich.

Stoltz's hair is red, and he wears glasses. He will spend some of his off-duty time reading the Bible.

GUNTER THIMM, age 27, German Dog Handler at Lake's Camp

STR 14	CON 16	SIZ 12	INT 13	POW 13
DEX 13	APP 12	EDU 14	SAN 69	HP 14

Damage Bonus: + 1D4.

Weapons: Kar 98 Rifle 50%, damage 2D6 + 4
Fist/Punch 75%, damage 1D3 + 1D4

Skills: Climb 60%, Drive Dog sled 85%, First Aid 40%, Listen 55%, Natural History 55%, Polar Survival 55%, Spot Hidden 50%, Track 40%.

Languages: English 20%, Danish 35%, German 65%, Inuit 35%.

Gunter Thimm is the head dog handler for the German team. He is an effete man with an aristocratic air about him that reminds one of a strutting ballerina. Because of his demeanor, he is pointedly ignored by most of the team members. However, Thimm can urge his dogs to efforts achievable by no one else. This has earned him respect from the other dog handlers (at the Weddell base camp). He is also skilled at boxing, which he has had to demonstrate several times since the arrival of the expedition in Antarctica.

Doctor OTTO SCHICK, age 46, Team Physician at Lake's Camp

STR 10	CON 09	SIZ 14	INT 13	POW 11
DEX 11	APP 12	EDU 16	SAN 29	HP 12

Damage Bonus: + 0.

Weapons: None.

Skills: Biology (Anatomy) 60%, Chemistry 25%, Fast Talk 45%, First Aid 30%, Library Use 40%, Medicine 60%, Occult 10%, Pharmacy 45%, Photography 30%, Psychology 35%.

Languages: English 20%, French 40%, German 75%, Greek 10%, Hebrew 20%, Latin 10%, Yiddish 30%.

Doctor Otto Schick is a burned-out man, whose excellent medical skills and reputation mask a dangerous decline into alcoholism and depression. Family tragedies, financial disasters, embarrassing romantic episodes, ill health, and the awareness of his nation's plunge into fascism have left him bitter and cynical. He is not fond of the Ice; Doctor Falken hired him as one of the expedition's doctors as a personal favor (Schick would be bankrupt otherwise). He is divorced, and has lived most recently in Vienna, Austria.

Schick is overweight, and frostbite has turned his nose permanently red—a point of shame for him. His treatment for frostbite (in accord with the standards of the time) calls for rubbing the affected parts with snow; this actually can cause more damage, and has no therapeutic value.

HUGO GROSSWIRTH, age 25, Aircraft Mechanic at Lake's Camp

STR 14	CON 12	SIZ 13	INT 13	POW 14
DEX 11	APP 12	EDU 12	SAN 85	HP 13

Damage Bonus: + 1D4.

Weapons: Kar 98 rifle 40%, damage 2D6 + 4

Skills: Drive Auto 55%, Electrical Repair 20%, Mechanical Repair 70%, Natural History 25%, Operate Heavy Machine 50%, Pilot Aircraft 20%, Polar Survival 15%, Radio Operator 15%.

Languages: Czech 35%, English 20%, German 70%.

Hugo Grosswirth is a strong, skilled and helpful man—and very loyal to Barsmeier and Falken. He enjoys polar exploring, likes to be helpful, and seems to get by without sleep. His specialty is aircraft: engines, airframe, and controls. His skills are essential to the success of the German team at Lake's Camp. He has a girlfriend in Chemnitz.

He is a tall, blond fellow, and in the last month has grown a scrappy beard.

Doctor HUGO ECKENER, age 68, Captain of the *Graf Zeppelin*

STR 12	CON 18	SIZ 15	INT 17	POW 18
DEX 14	APP 10	EDU 16	SAN 89	HP 17

Damage Bonus: + 1D4.

Weapons: none.

Skills: Accounting 65%, Astronomy 35%, Cartography 20%, Credit Rating 70%, Electrical Repair 25%, Mechanical Repair 65%, Meteorology 90%, Natural History 20%, Navigate 95%, Persuade 60%, Physics 40%, Pilot Airship 99%, Psychology 40%, Spot Hidden 50% (90% if it involves something aboard the *Graf Zeppelin*).

Languages: English 40%, French 45%, German 90%, Russian 25%.

Doctor Eckener was a political economist and journalist when hired by Count Ferdinand von Zeppelin as flight director for DELAG in 1909. He quickly learned the engineering and scientific skills needed to design and pilot dirigibles, and is the finest airship handler alive. Of course, the *Graf Zeppelin* is currently one of only three dirigibles in existence.

Eckener is capable of astounding feats of stamina, remaining alert for days on end during zeppelin flights. He demands caution, intelligence, and a profound knowledge of airship physics and meteorology from his crews; his demands for discipline and formality are taxing; and his patience for fools is non-existent. Despite (or because of) all of this, his crews are devoted to him, and he instills confidence in his passengers.

A married man, he lives in Friedrichshafen. His son Knut is aboard the *Graf Zeppelin* as the chief engineer. Doctor Eckener, as managing director of both the Zeppelin Company and DELAG since 1922, only pilots the *Graf Zeppelin* on unusual missions—such as this one to Antarctica. He is an outspoken anti-Nazi.

Heavy set and long faced, with a gray mustache and bags under his eyes, Doctor Eckener is intensely formal, even in the worst situations. ■

Graf Zeppelin Passengers and Crew

(Die Barsmeier-Falken Antarktisexpedition)

Responsibility	Name
CREW:	
Master	Hugo Eckener
Watch Officers (3)	Albert Wollheim
	Gustav Speier
	Mark Müller
Navigators (3)	Sigurd Nadel
	Otho Perlmann
	Karl Himmler
Helmsmen (6)	Peter Vogel
	Adam Aschenkeller
	Heinrich Aselbein
	Rudolf Holger
	Franz Zeigner
	Kurt Berber
Chief Engineer	Knud Eckener
Assistant Engineers (2)	Wolfgang Schirmer
	Hermann Volpe
Riggers (2)	Friedrich Grosz
	Fritz Albers
Radiomen (3)	Wolff Wedekind
	Owen Yoffe
	Martin Ebert
Machinists (15)	Johann Epp
	Emil Fiche
	Otto Lüdendorff
	Erich Kausch
	Karl Barth
	Walther Rundstedt
	Richard Scheller
	Werner Blomstein
	Axel Kempinski
	Gustav Bracht
	Adolf Hellmann
	Johannes Hilferding
	Johann Wiegandt
	Erwin Kapp
	Leo Huelsenbeck
PASSENGERS:	
Cook	Wilfrid Adler
Scientists (3)	Julius Klemmer (Geologist)
	Franz Ihering (Meteorologist)
	Ignatz Poehle (Physicist)
Journalists (2)	Bernard Stecker (*Deutsche Allgemeine Zeitung*)
	Friedrich Hals (*Völkischer Beobachter*)
Cameraman	Theodor Sitz

Individual Bios and Stats, Alphabetically Arranged

Appendix 6: Vehicles

Table of Contents

Keeper's note: the SS Gabrielle *is not included in this appendix. For her plans and description, see all of Chapter Four-B.*

SS Tallahassee

The Lexington Expedition's ship was built in 1921 in Norway, and launched as the *Evanger.* It has an ice-breaking bow, for use in the Baltic Sea. The captain is Joseph Burr.

Dimensions

length . . . . . 307 feet
beam. . . . . 32 feet
depth, keel to main deck. . . . . 27 feet
draft, light ship . . . . . 9 feet
draft, loaded ship . . . . . 17 feet

register tons 5,000

Displacements

light ship . . . . . 1,500 tons
loaded ship . . . . . 4,500 tons
deadweight . . . . . 3,000 tons
- crew & stores . . . . . 20 tons
- fuel oil . . . . . 580 tons
- fresh water. . . . . 55 tons
- cargo. . . . . 2,345 tons

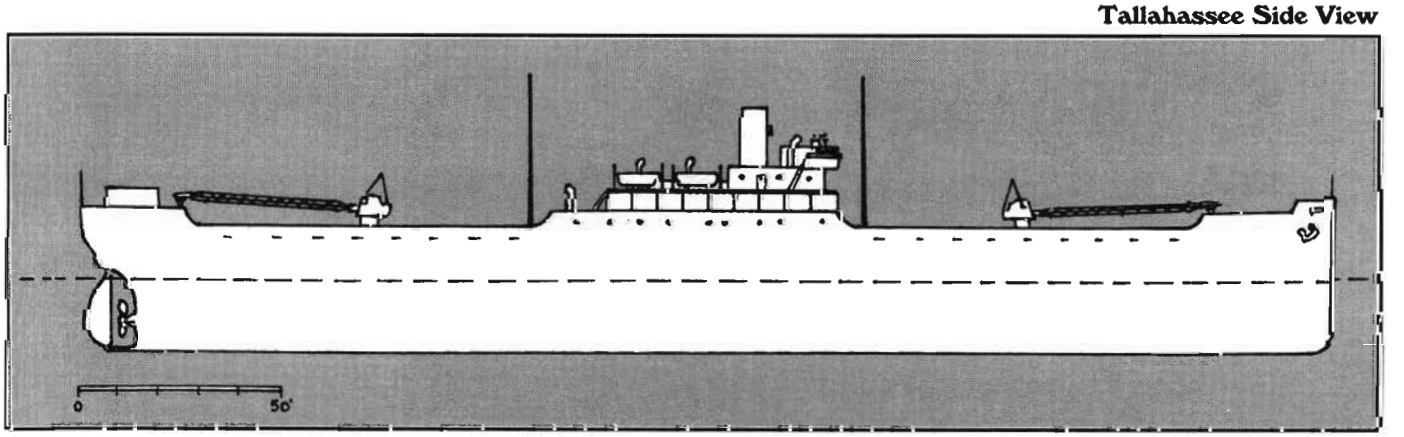
Cargo Space

no. of holds. 4
hatches . . . . . 4 (each 24 feet long x 18 feet wide)
cargo booms . . . . . - 2 x 1 ton capacity
- 2 x 5 ton capacity
- 2 x 5 ton capacity cranes (one between forward, one aft)
loading speed . . . . . 20 tons per gang hour (18 man gang; one gang per hatch usually)

Machinery

- reciprocating oil-burning steam engine, top speed 13 knots
- uses 0.05 tons of fuel per nautical mile at 11 knots
- maximum cruising range about 11,500 miles

Tallahassee Side View



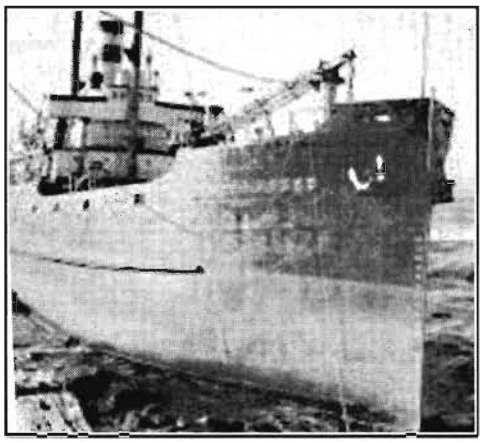
Crew (29 total)

- master and 3 deck officers
- chief engineer and 2 engineer officers
- radio operator, carpenter, boatswain, storekeeper
- 3 quartermasters, 6 seamen
- 5 engine room crew (oilers, firemen, wipers, watertenders)
- 1 chief steward, 1 cook, 2 other stewards (messboys, laundrymen, etc.)

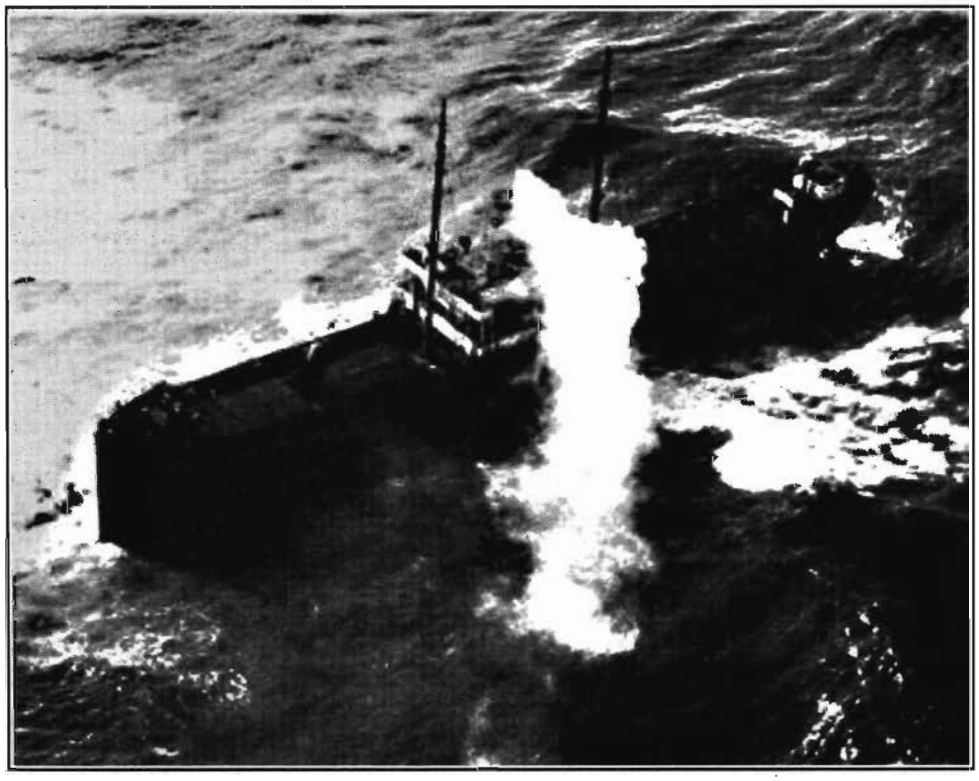
Incidental Equipment

- line gun, 18 life rings with water lights, flares and rockets, 4 life rafts
- 2 lifeboats, 25 person capacity each; these are motorboats with a 6 knot top speed ■

The Tallahassee



The Tallahassee in Rough Waters



SS Wilhelmina

This vessel has been modified by the Barsmeier-Falken Expedition: a 100-foot-tall mooring mast for the zeppelin has been added aft, and the number 3 and 4 cargo hatches have been joined to allow Ju-52 fuselages to be loaded without disassembly.

Dimensions

length . . . . . 383 feet
beam. . . . . 40 feet
depth, keel to main deck . . . . . 36 feet
draft, light ship . . . . . 12 feet
draft, loaded ship . . . . . 21 feet

register tons 5,000

Displacements

light ship. . . . . 2,500 tons
loaded ship . . . . . 8,500 tons
deadweight . . . . . 5,500 tons
- crew & stores . . . . . 30 tons
- fuel oil . . . . . 1,100 tons
- fresh water. . . . . 80 tons
- cargo . . . . . 4,290 tons

Cargo Space

no. of holds. . . . . 4 (but number 3 and 4 are joined to make a single hold)
hatches . . . . . 4 (each 33 feet long, 24 feet wide (aft now 81 feet long, 24 feet wide))
cargo booms . . . . . - 4 x 5 ton capacity forward
- 2 x 10 ton capacity cranes aft
loading speed . . . . . 24 tons per gang hour (18-man 'gang'; 1 gang per hatch usually)

Machinery

- reciprocating oil-burning steam engine, top speed 15 knots
- uses 0.1 tons of fuel per nautical mile at 12 knots
- maximum cruising range about 11,000 miles

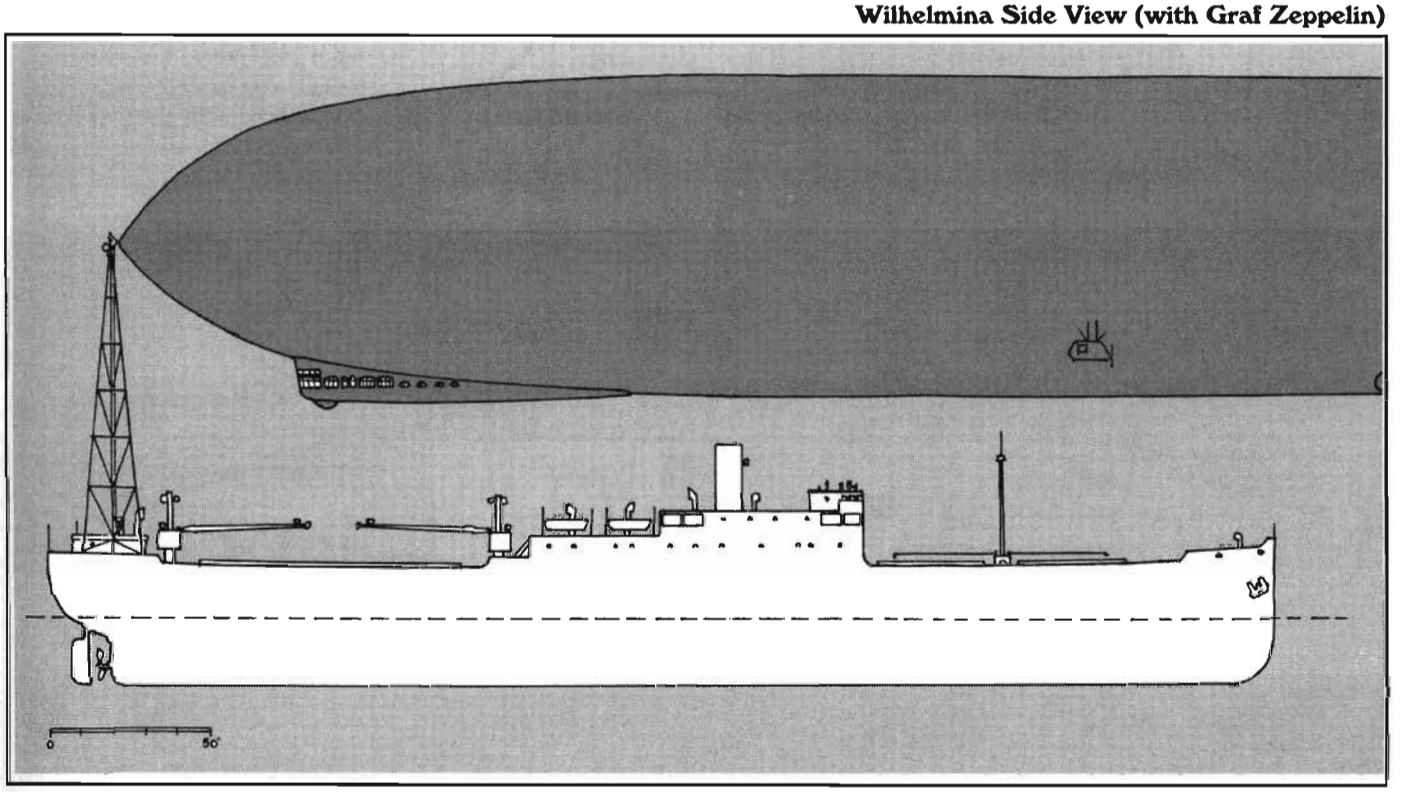
Crew (41 total)

- master and 4 deck officers
- chief engineer and 3 engineer officers
- radio operator, carpenter, boatswain, storekeeper
- 3 quartermasters, 8 seamen
- 12 engine room crew (oilers, firemen, wipers, watertenders)
- 1 chief steward, 1 cook, 3 other stewards (messboys, laundrymen, etc.)

Incidental Equipment

- line gun, 30 life rings with water lights, flares and rockets, 2 life rafts
- 4 lifeboats, 25 person capacity each; these are all motorboats with a 6 knot top speed ■

Wilhelmina Side View (with Graf Zeppelin)



Boeing 247

This very advanced all-metal monoplane, designed as a 12 passenger airliner, has all the most modern features: air conditioning and cabin heating, sound proofing, radio, a de-icing system for the wings and tail, variable pitch three-bladed propellers, engine superchargers, flaps, and retractable landing gear. The first flight by a Model 247 was on February 8, 1933. The hinged nose allows access to a luggage compartment.

Some modifications have been made to the aircraft of the Starkweather-Moore Expedition, as follows: retractable ski landing gear, oxygen breathing apparatus, extra radio equipment, gyrocompass, radio direction finder, artificial horizon, an eight-gallon fresh water tank, extra fuel tanks, lightweight folding seats, wider doors (to fit cargo and fuel drums), motion picture camera rack and optically flat window, and electric engine heaters.

The engines are two Pratt & Whitney "Wasp" S1H1-G nine cylinder air-cooled radials, 550 HP each. Features include inertia (hand cranked) and electric (battery) starters, engine fire extinguishers, and a 12-gallon oil tank fitted in each engine nacelle. Each engine uses 25 gallons of gasoline per hour at 'cruise' setting, 35 gallons per hour at full power. Total fuel capacity is 770 gallons: 220 gallons in the wing tanks, and 550 gallons in auxiliary tanks built into the fuselage. Engine overhauls are needed after 300 hours of operation. The Model 247 can climb with one engine shut down, up to 6,000 feet altitude, depending on load.

Weights

Starkweather-Moore configuration:

empty weight	11,000 lbs. (no fuel, oil, cargo or passengers; includes seats, radios, etc.)
maximum gross weight	17,000 lbs.
emergency overload	19,500 lbs. (cannot take off at high altitudes at this weight)
each crew/passenger	200 lbs. including clothing, worn equipment, etc., for planning purposes
emergency supplies	100 lbs. per person aboard
each passenger seat	10 lbs. (12 aboard; could be tossed out in emergency)
gasoline, per gallon	six lbs.; 4620 lbs. when all tanks filled
lube oil, per gallon	7.5 lbs.; 180 lbs. fully loaded
radio set	150 lbs.(could be tossed out in emergency)
husky sled dog	90 lbs.
dog sled	100 lbs.
oxygen tank	20 lbs.; 80 cubic feet of oxygen, good for 16 man-hours of work

On a typical cargo flight to Lake's Camp:

empty plane	11,000 lbs.
two pilots	400 lbs.
emergency supplies	200 lbs.
lube oil	180 lbs.
fuel, 605 gallons	3630 lbs.; 2060 miles range (to Lake's Camp and back, plus reserve)
cargo or passengers	1590 lbs.; five passengers with SM emergency supplies plus hand sled, or 260 gallons fuel, or nine dogs + sled + 680 lbs. supplies

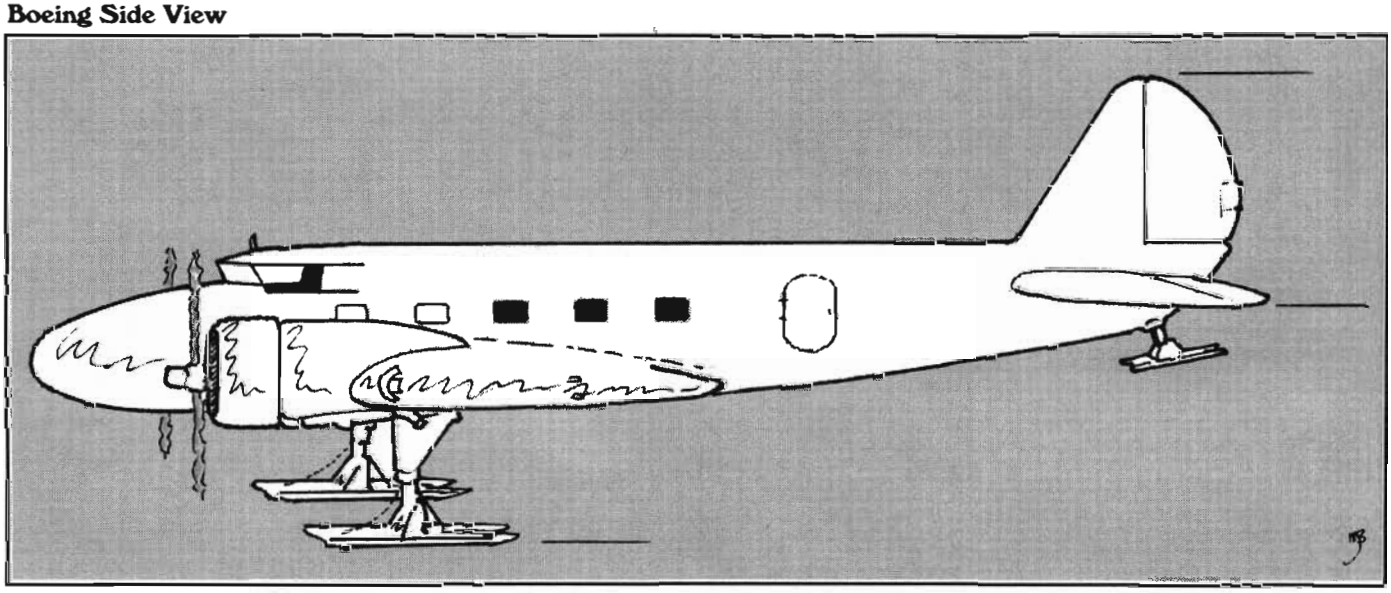
Dimensions

wingspan	74' (12.3" in scale)
length	51' 7" (8.6" in scale)
height	12' 2" standing on landing gear

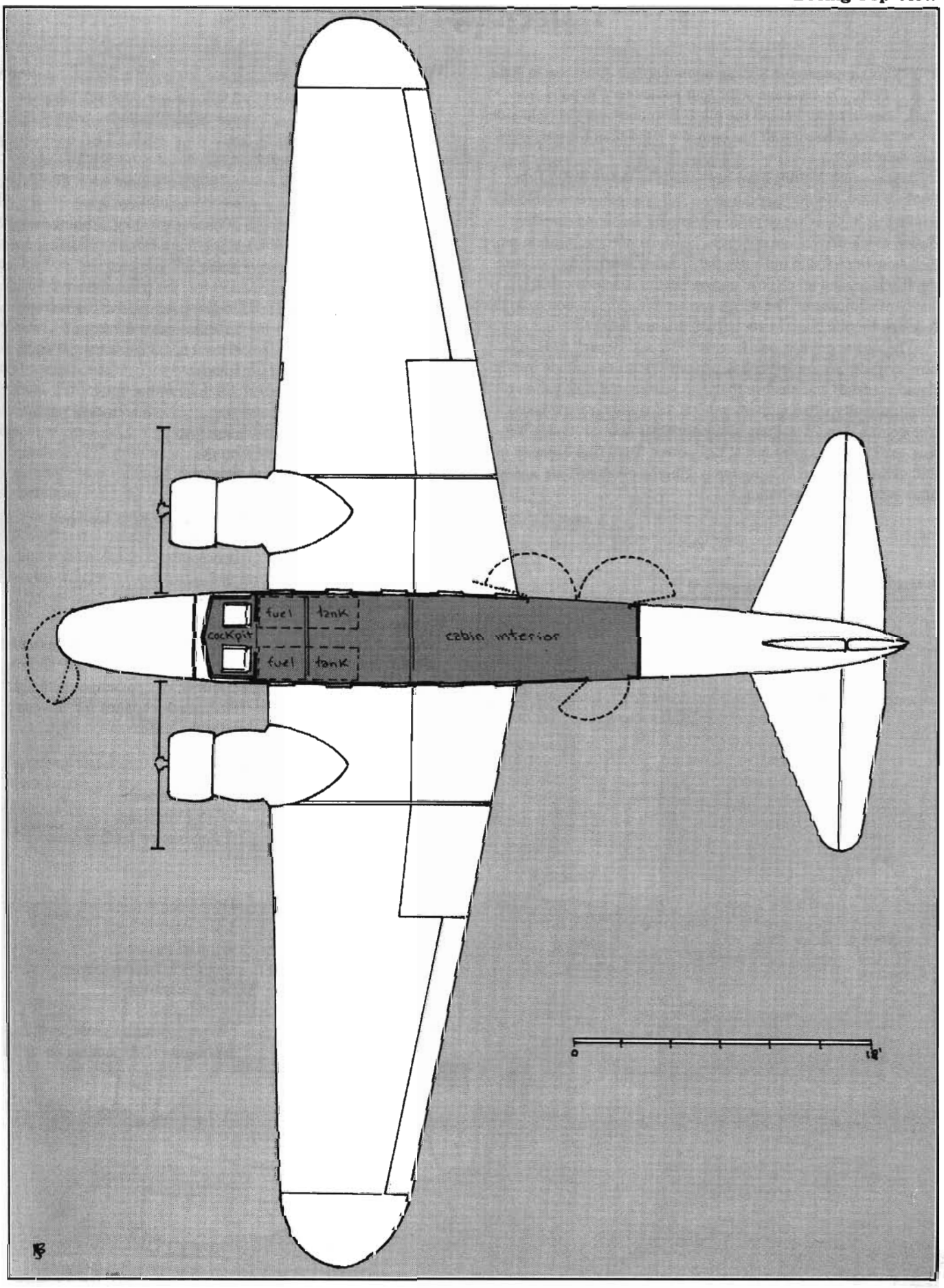
Performance

cruise speed	170 miles per hour
max speed	200 miles per hour
stall speed	60 miles per hour, flaps down
ceiling	25,400', assuming not above max total weight limit
range	up to 2600 miles, depending on fuel amount carried
takeoff/landing	900' at maximum gross; as little as 600' light; 1200' landing on skis ■

Boeing Side View



Boeing Top View



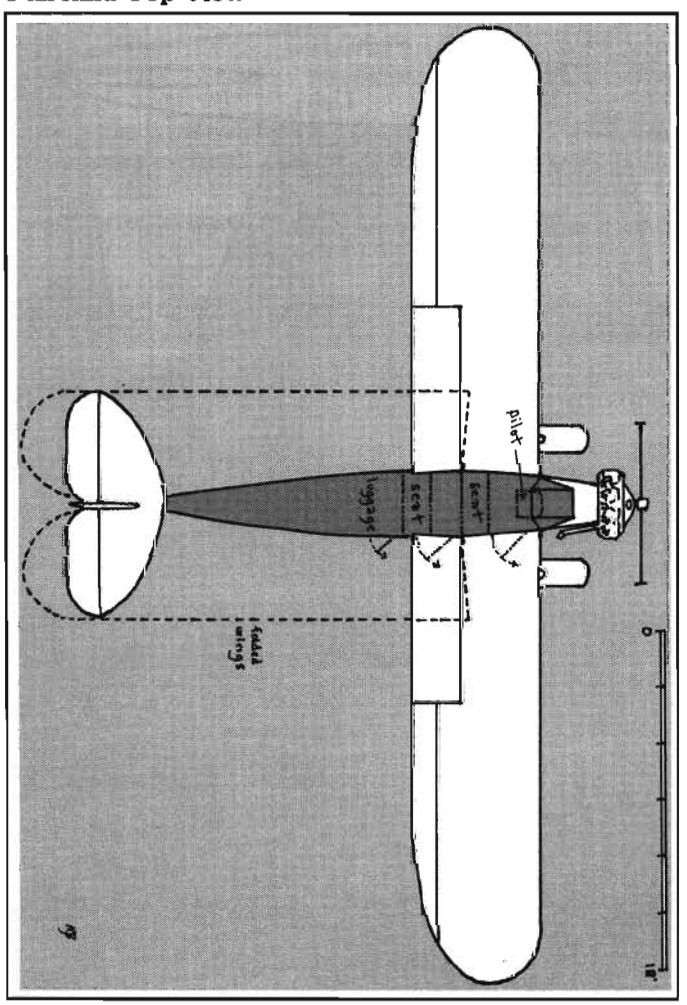
Fairchild FC-2W

This single-engine high-wing monoplane first flew in June, 1926. The fuselage seats four passengers, in pairs (on bench seats) behind the pilot. Two doors on the right side allow access. The aircraft has earned a reputation for toughness and reliability.

Some modifications have been made to the aircraft of the Starkweather-Moore Expedition, as follows: non-retractable ski landing gear, short range radio equipment including direction finder, clock-driven sun compass, artificial horizon, motion picture camera rack and optically flat window, a hoisting eye atop the fuselage, and an electric engine heater. A heated cabin is standard equipment. The wings can be folded back alongside the fuselage by two men, in about two minutes time.

The power plant is one Pratt & Whitney "Wasp" S1H1-G nine cylinder air-cooled radial, 550 HP. Features include inertia (hand cranked) and electric (battery) starter, and a 12 gallon oil tank (normally filled with 10 gallons, to allow for expansion). The engine uses 25 gallons of gasoline per hour at 'cruise' setting, or 35 gallons per hour at full power. Total fuel capacity is 220 gallons, carried in wing tanks. Engine overhauls are needed after 300 hours of operation.

Fairchild Top View



Weights

empty weight	2,050 lbs. (no fuel, oil, cargo or passengers; includes seats, radios, etc.)
maximum gross weight	4,600 lbs.
emergency overload	5,000 lbs. (cannot take off at high altitudes at this weight)
each crew/passenger	200 lbs. including clothing, worn equipment, etc., for planning purposes
emergency supplies	230 lbs. per person aboard
each passenger bench	15 lbs. (two aboard; can be removed to make space for cargo)
gasoline, per gallon	6 lbs. (1,320 lbs. when all tanks filled)
lube oil, per gallon	7.5 lbs. (75 lbs. full)
radio set	50 lbs. (could be tossed out in emergency)
husky sled dog	90 lbs.
dog sled	100 lbs.

On a typical 'excursion' flight around the Ross Ice Shelf region:

empty plane	2,050 lbs.
pilot	200 lbs.
passenger	200 lbs.
emergency supplies	460 lbs.
lube oil	75 lbs.
fuel, 220 gallons	1,320 lbs.; 910 miles range (including 10% reserve)
cargo or passengers	295 lbs.; one passenger with light emergency supplies for all aboard (100 lbs. each)

Dimensions

wingspan	50' (8.3" in scale)
length	31' (5.2" in scale)
height	9' standing on landing gear

Performance

cruise speed	115 miles per hour
max speed	130 miles per hour
stall speed	45 miles per hour
ceiling	15,500', assuming not above max total weight limit
range	1,000 miles
takeoff/landing	600' at maximum gross; as little as 500' light; 1200' landing on skis ■

Northrop Delta

This modern all-metal monoplane first flew in May, 1933. It is an enlarged version of the "Gamma," which was designed for exploration work. The pilot sits under a canopy atop the fuselage; up to eight passengers can be carried.

Some modifications have been made to the aircraft for the Lexington Expedition, as follows: non-retractable ski landing gear, oxygen breathing apparatus, extra radio equipment including direction finder, gyrocompass, clock-driven sun compass, artificial horizon, extra fuel tanks, lightweight folding seats, motion picture camera rack and optically flat window, electric engine heaters, and a three-bladed propeller.

The power plant is one Wright SR-1820F "Cyclone" 9 cylinder air-cooled supercharged radial engine, producing 750 HP. Features include inertia (hand cranked) and electric (battery) starters, engine fire extinguisher, and an 18 gallon oil tank (normally filled only with 15 gallons to allow for expansion). The engine uses 30 gallons of gasoline per hour at 'cruise' setting, or 40 gallons per hour at full power. Total fuel capacity is 385 gallons: 275 gallons in the main tanks, and 110 gallons in an auxiliary tank. Engine overhauls are needed after 300 hours of operation.

Weights

Lexington Expedition configuration:

- empty weight . . . . . 3,500 lbs. (no fuel, oil, cargo or passengers; includes seats, radios, etc.)
- maximum gross weight . . 7,500 lbs.
- emergency overload . . . . 8,500 lbs. (cannot take off at high altitudes at this weight)
- each crew/passenger . . . . 200 lbs. including clothing, worn equipment, etc., for planning purposes
- emergency supplies . . . . . 230 lbs. per person aboard
- each passenger seat . . . . . 10 lbs. (eight aboard; could be tossed out in emergency)
- gasoline, per gallon . . . . . 6 lbs. (2,310 lbs. when all tanks filled)
- lube oil, per gallon . . . . . 7.5 lbs. (115 lbs. fully loaded)
- radio set . . . . . 150 lbs. (could be tossed out in emergency)
- husky sled dog . . . . . 90 lbs.
- dog sled . . . . . 100 lbs.
- oxygen tank . . . . . 20 lbs. (good for 16 man-hours of activity above 18,000')

On a typical cargo flight to Lake's Camp:

- empty plane . . . . . 3,500 lbs.
- pilot . . . . . 200 lbs.
- emergency supplies . . . . . 230 lbs.
- lube oil . . . . . 115 lbs.
- fuel, 330 gallons . . . . . 1,980 lbs.; 2,100 miles range (to Lake's camp and back, plus reserve)
- cargo or passengers . . . . . 1,475 lbs.; three passengers with emergency supplies, or 245 gallons fuel, or nine dogs, one sled and 565 lbs. supplies

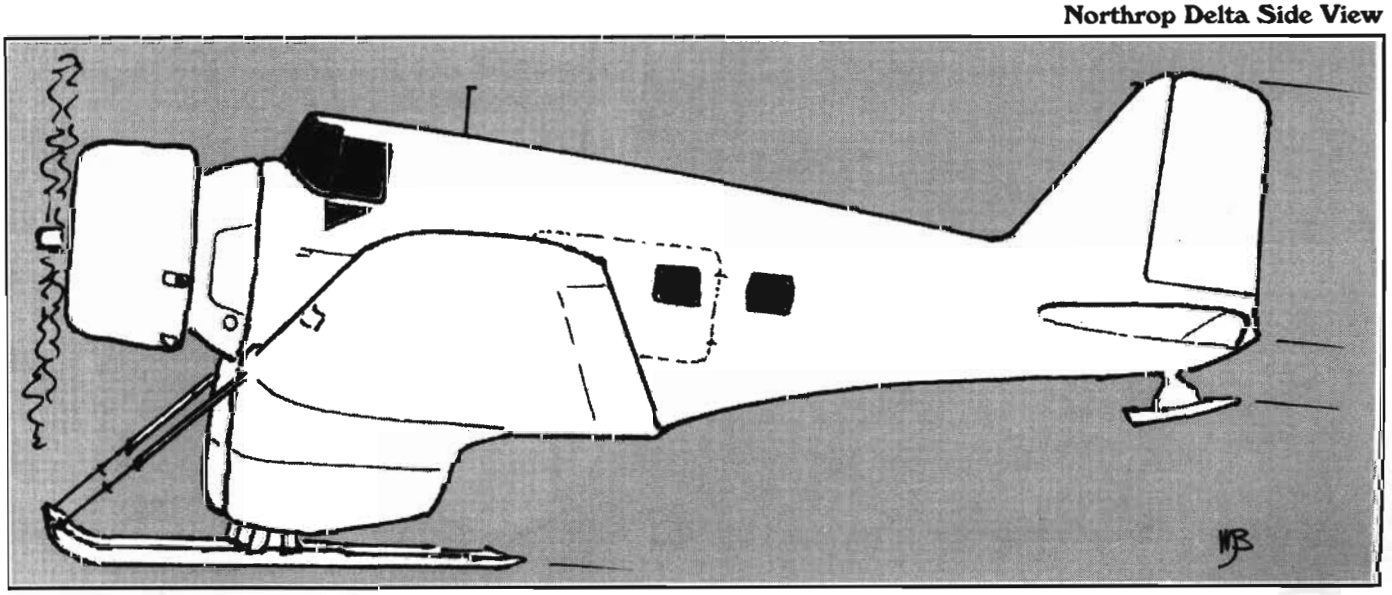
Dimensions

- wingspan . . . . . 48' (8" in scale)
- length . . . . . 34' 3" (5.7" in scale)
- height . . . . . 9' 8" standing on landing gear

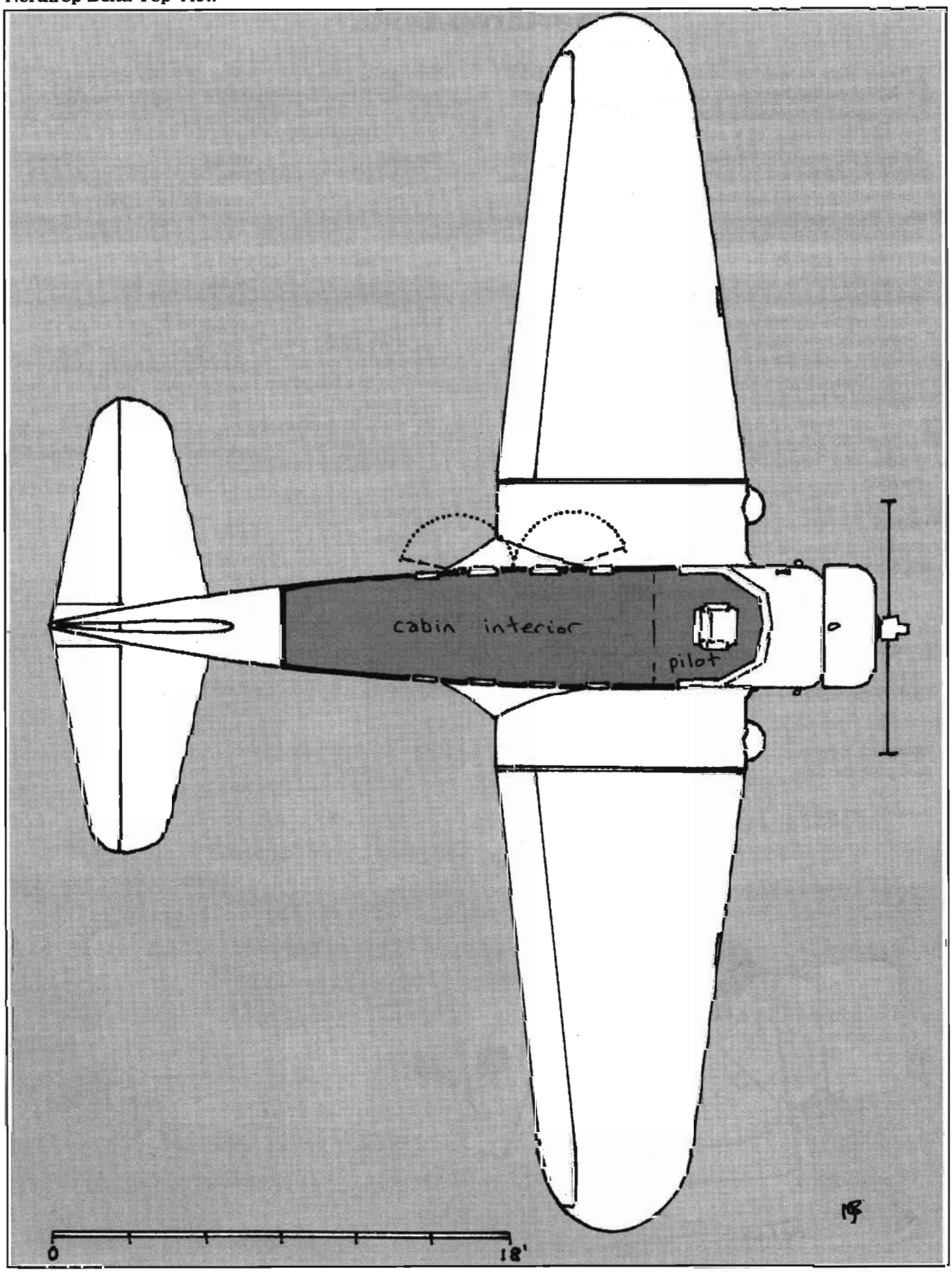
Performance

- cruise speed . . . . . 190 miles per hour
- max speed . . . . . 200 miles per hour
- stall speed . . . . . 65 miles per hour
- ceiling . . . . . 22,000', assuming not above max total weight limit
- range . . . . . over 2,400 miles
- takeoff/landing . . . . . 750' at maximum gross; as little as 600' light; 1300' landing on skis ■

Northrop Delta Side View



Northrop Delta Top View



Cierva C-30 Autogyro

An interesting airplane, which obtains its lift from a three bladed rotor mounted on a set of struts above the pilot. The fuselage is constructed of fabric over steel tubing, and the rotor is steel covered with plywood. The pilot and a single passenger are carried in separate open cockpits; most controls are duplicated in each cockpit. This model of autogyro first flew in April 1933, built in Great Britain by A.V. Roe and Co.

The autogyro purchased by the Lexington Expedition is fitted with ski landing gear, and a short range radio. A rotor drive system is clutched in by the pilot to start the rotor turning on the ground before takeoff—then, after declutching the rotor driveshaft, a sudden increase of blade pitch causes the aircraft to make a vertical jump of 30 or 40 feet, lasting just long enough to begin normal forward flight. The autogyro cannot hover, but it can fly as slowly as 25 miles per hour—and since this is air speed, there are frequently wind conditions where it can remain motionless above a point on the ground. Landings are made with virtually no forward speed.

The power plant is an Armstrong Siddely Genet Major seven cylinder radial engine, of 140 HP, with a hand-cranked inertia starter. The oil tank has an eight gallon capacity (normally filled with just under seven gallons to allow for expansion). The engine uses 10 gallons of gasoline per hour at 'cruise' setting, or 13 gallons per hour at full power. Total fuel capacity is 30 gallons. Engine overhauls are needed after 200 hours of operation.

Weights

empty weight	1,300 lbs. (no fuel, oil, cargo or passengers; includes seats, radio, etc.)
maximum gross weight	1,900 lbs.
emergency overload	2,100 lbs. (cannot take off at high altitudes at this weight)
each crew/passenger	200 lbs. including clothing, worn equipment, etc., for planning purposes
emergency supplies	25 lbs. per person aboard—reduced from the usual allowance
gasoline, per gallon	six lbs. (2310 lbs. when all tanks filled)
lube oil, per gallon	7.5 lbs. (115 lbs. fully loaded)
radio set	20 lbs. (could be tossed out in emergency)

On a typical excursion flight:

empty plane	1,220 lbs.
one pilot, one passenger	400 lbs.
emergency supplies	50 lbs. as the crew sees fit
lube oil	50 lbs.
fuel, 30 gallons	180 lbs.
cargo	0 lbs. (Yes, the emergency supplies are the cargo.)

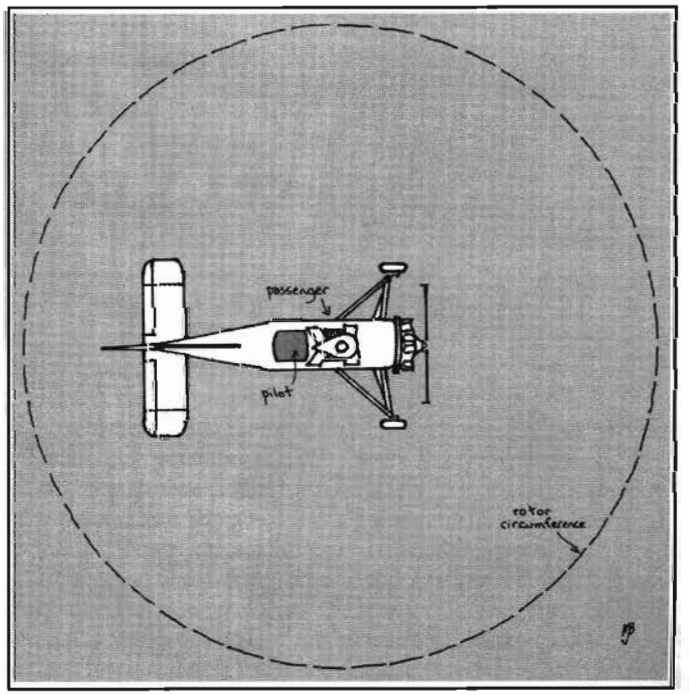
Dimensions

width across skis	11'
rotor diameter	37'
length	19' 9"
height	11' 10" standing on landing gear, to top of rotor hub

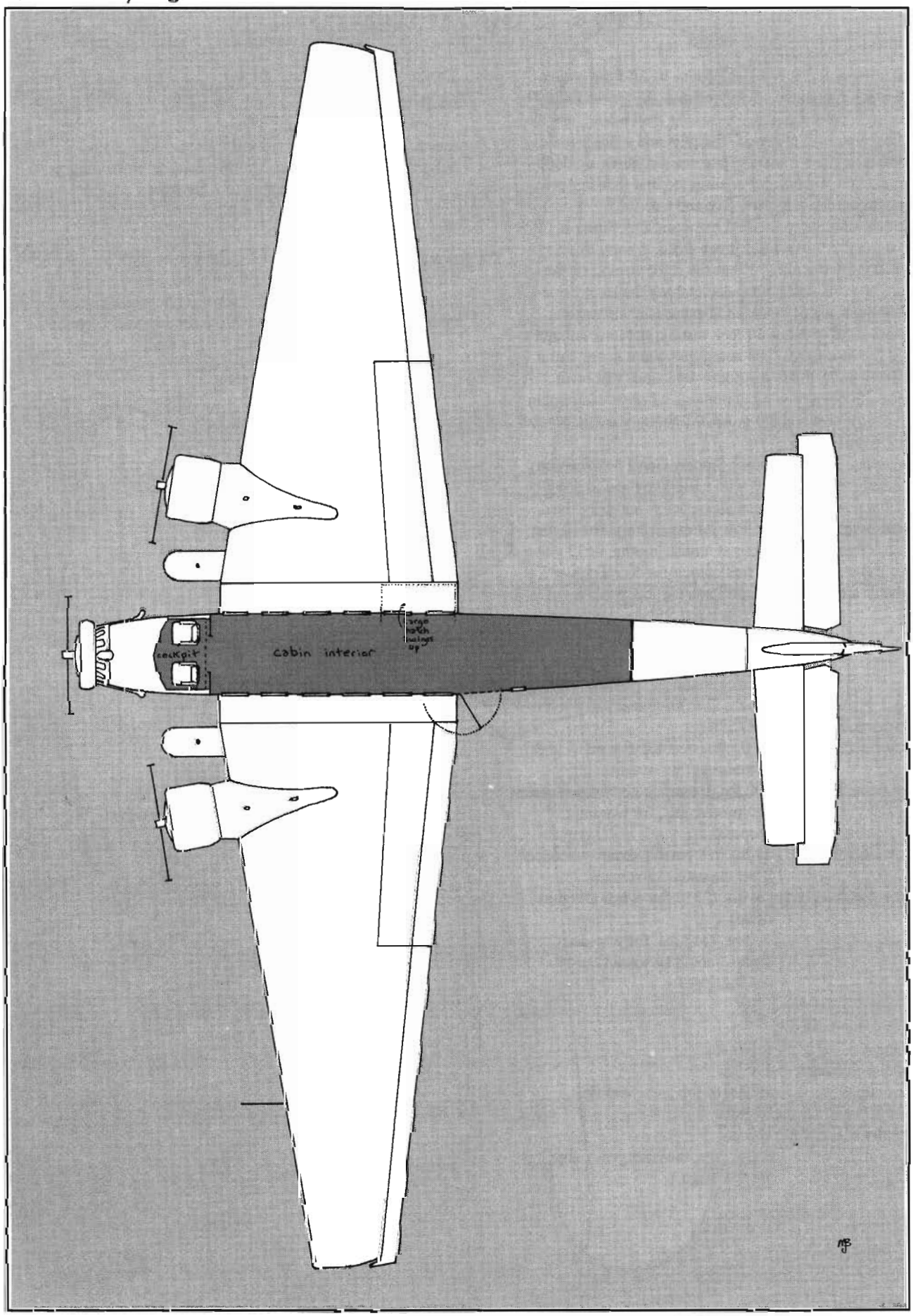
Performance

cruise speed	80 miles per hour
max speed	100 miles per hour
minimum speed	25 miles per hour
ceiling	8,000', assuming not above max total weight limit
maximum range	250 miles
takeoff or landing run	neg. ■

Cierva C-30 Autogyro Top View



Junkers Ju-52/3m ge



Junkers Ju-52/3m ge

A low-wing trimotor monoplane, with corrugated metal skin. Designed to carry two pilots and up to 18 passengers, or 590 cubic feet of cargo, it was first flown in April 1931, and has already begun service with Lufthansa and other airlines. It has a reputation for reliability, all-weather capability, and ease of maintenance. It is fitted with large flaps and sturdy fixed landing gear, for rough field work.

BFE modifications for the German aircraft are: ski landing gear, oxygen generating apparatus for the pilots, extra radio equipment, gyrocompass, sun compass, engine exhaust de-icing system, large radio direction finder loop antenna, artificial horizon, extra fuel tanks, and electric engine heaters.

It is powered by three BMW 132 nine cylinder air-cooled radial engines, 525 HP each (license built copies of the American Pratt & Whitney "Hornet"). Features include inertia (hand cranked) and electric (battery) starters and a ten gallon oil tank (filled with nine gallons of oil) fitted in each engine nacelle. Each engine uses 20 gallons of gasoline per hour at 'cruise' setting, or 28 gallons per hour at full power. Total fuel capacity is 880 gallons: 330 gallons in the nacelle tanks, and 550 gallons in auxiliary tanks built into the fuselage. Fuel in the auxiliary tanks must be manually pumped into the nacelle tanks before it can be used. The fuel gauges for the port and starboard nacelle tanks are mounted outside, on the top of the wings! Engine overhauls are needed after 300 hours of operation; the engines must be greased every ten hours.

Weights

empty weight	12,700 lbs. (no fuel, oil, cargo or passengers; includes seats, radios, etc.)
maximum gross weight	22,000 lbs.
emergency overload	25,000 lbs. (cannot take off at high altitudes at this weight)
each crew/passenger	200 lbs. including clothing, worn equipment, etc., for planning purposes
emergency supplies	230 lbs. per person aboard
each passenger seat	ten lbs. 17 aboard that could be tossed out in emergency; one in cockpit
gasoline, per gallon	six lbs. (4620 lbs. when all tanks filled)
lube oil, per gallon	7.5 lbs. (180 lbs. fully loaded)
radio set	150 lbs. (could be tossed out in emergency)
husky sled dog	90 lbs.
dog sled	100 lbs.

On a typical cargo flight to Lake's Camp:

empty plane	12,700 lbs.
two pilots	400 lbs.
emergency supplies	460 lbs.
lube oil	200 lbs.
fuel, 880 gallons	5280 lbs.; 2200 mile range (to Lake's Camp and back, plus reserve)
cargo or passengers	2960 lbs.; six passengers with emergency supplies, or 495 gallons fuel, or two passengers, 18 dogs, two sleds and 740 lbs. supplies

Dimensions

wingspan	96' (16" in scale)
length	62' (10.3" in scale)
height	20' standing on landing gear

Performance

cruise speed	152 miles per hour
max speed	180 miles per hour
stall speed	50 miles per hour, flaps down
ceiling	18,000', assuming not above max total weight limit
maximum range	2200 miles
takeoff/landing	500' at maximum gross; as little as 400' light; 850' landing on skis ■

Graf Zeppelin D-LZ 127

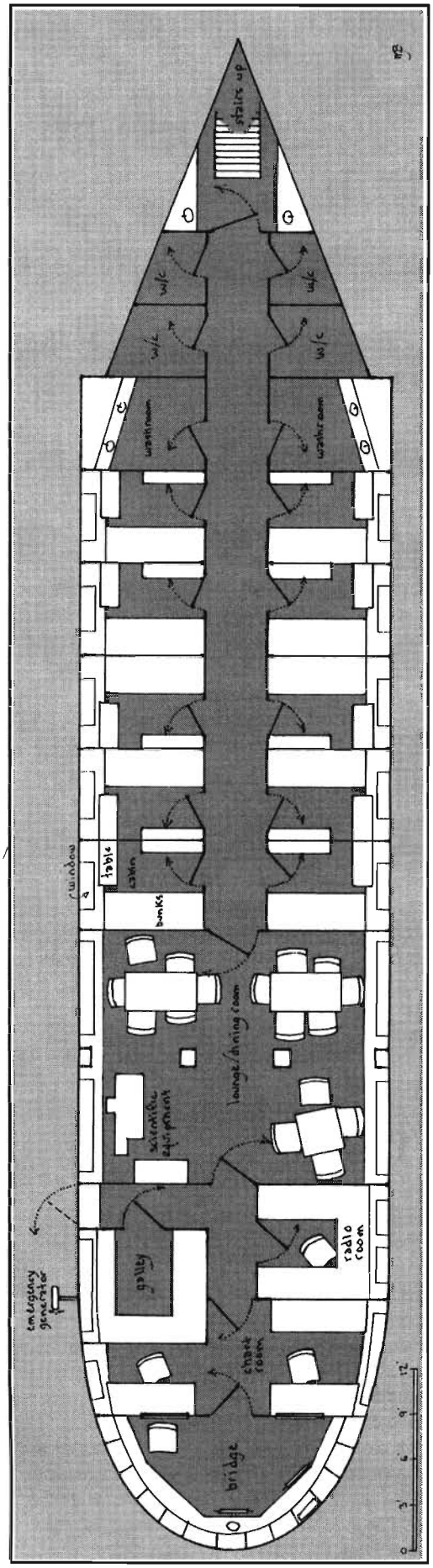
Launched in 1928, this is currently Germany's only dirigible; the *Hindenburg* is under construction, but will not be finished until 1936. Owned by DELAG (Deutsche Luftschiffahrts-Aktien-Gesellschaft, or "German Airship Transportation Company"), she has just finished her summer schedule of nine round trips from Germany to Brazil. Commanded for this special voyage by Doctor Hugo Eckener, the *Graf Zeppelin* will be used primarily to move supplies onto the Weddell Sea ice shelf; some coastal surveying will be done after the base is established.

Built at a cost of $1,000,000, the *Graf Zeppelin* is normally used as a passenger vessel; her ten cabins can accommodate twenty passengers. Her motors operate on "blau gas," resembling propane, which is carried in 12 gas cells. The advantage of blau gas is that, with the same density as air, its consumption does not lighten the ship.

A gondola, 100' long and 20' wide, holds the passenger quarters, lounge, toilets, radio room, chart room, galley, and control room. A central gangway along the lower keel (within the hull) leads to the crew's quarters, water ballast tanks, and cargo holds. Five engine gondolas are supported below the hull. An echo-sounding altitude finding device is fitted for use in clouds at low altitude; it uses shotgun shells to produce a sonic 'pulse.'

For this trip, the airship carries all sorts of special surveying and survival gear—for example, six months worth of food supplies for the crew in case of emergency. The stewards and other 'comfort' crew have been left off; three scientists unconnected with the Barsmeier-Falken Expedition, two journalists, and a

Graf Zeppelin Gondola



cameraman have been embarked. Three watch officers, three navigators, six helmsmen, three radio operators, fifteen machinists, a chief engineer (Knut Eckener), two assistant engineers, three riggers, and a cook make up the crew, in addition to Dr. Eckener.

The power plants, five Maybach VLII engines of 550 HP each, have compressed-air starters and use 15.5 pounds of blau gas per hour at "cruise" speed setting, or 20 pounds per hour at full power. Engine overhauls are needed after 500 hours of operation; a spare engine and propeller are carried as cargo.

Note that the airship's top speed is only 80 mph, and its effective ceiling is 13,000'. With the surface of the Polar Plateau as much as 10,000' above sea level, and the continual possibility of Antarctic gales sporting winds of over 100 miles per hour, the ship's captain will never allow the *Graf Zeppelin* to approach closer than several hundred feet above the ice while over the Antarctic mainland. Passengers descending to the surface do so via parachute; those coming aboard are winched in on a long cable attached to a belt and shoulder harness. Ascending 250 feet in this fashion takes about a minute per trip.

Keeper's note: for a side view of the Graf Zeppelin, *see the description of the* Wilhelmina *on page 385. The gondola is depicted on this page.*

Weights

empty weight	148,000 lbs.
maximum gross weight	225,000 lbs.
emergency overload	250,000 lbs.
each crew/passenger	200 lbs.
emergency supplies	230 lbs. per person aboard
On a typical survey flight over the ice shelf:	
empty dirigible	148,000 lbs.
38 crew, 6 passengers	8,800 lbs.
emergency supplies	10,120 lbs.
fuel	9,180 lbs. blau gas
water ballast	24,000 lbs.
cargo capacity	25,000 lbs. w/ above weights (= 75 drums of gasoline)

Dimensions

diameter	100'
length	774'

Performance

cruise speed	72 miles per hour
max speed	80 miles per hour
ceiling	13,000' (Doctor Eckener usually will stay below 8000')
range	118 hours at cruise speed (over 8,000 miles usually) ■

Snow Tractor

This is a tracked vehicle with a boxy cab. The heated cab seats five passengers, in pairs (on bench seats), beside the driver. Two doors on each side allow access. The engine and fuel tank are mounted in the back.

The engine is a 200 cubic inch Ford four cylinder gasoline engine, producing 40 HP at 2200 RPM. Features include an inertia (hand cranked) starter, and a one gallon oil tank. The engine uses one gallon of gasoline per hour; total fuel capacity is 18 gallons. Overhauls and track lubrication are needed after 100 hours of operation. The tractor can tow 3000 pounds of sleds over the snow. The driver directs the tractor with two steering brakes, controlling a "Cletrac" geared differential; basic operation is possible for anyone, but careful steering and operation on soft surfaces requires some experience.

Weights

empty weight	1,450 lbs. (no fuel, oil, cargo or passengers; includes seats, etc.)
maximum gross weight	2,500 lbs.
emergency overload	3,000 lbs. increased chance of damage to running gear
each crew/passenger	200 lbs. including clothing, worn equipment, etc.
emergency supplies	100 lbs. per person aboard
each passenger bench	30 lbs. (two aboard; can be removed to make space for cargo)
gasoline, per gallon	six lbs.; 108 lbs. when all tanks filled.
lube oil, per gallon	7.5 lbs.; 7 lbs. full.

On a typical cargo trip, around the Ross Ice Shelf region:

empty tractor	1,450 lbs.
driver	200 lbs.
passenger	200 lbs.
emergency supplies	200 lbs.
lube oil	seven lbs.
fuel, 18 gallons	108 lbs. 910 miles range (including 10% reserve)
cargo or passengers	335 lbs. one passenger with emergency supplies

Dimensions

length	14' (2.25" in scale)
width	7.5' (1.25" in scale)
height	9' to top of cab roof

Performance

cruise speed	ten miles per hour (8 mph with three loaded sleds)
max speed	14 miles per hour on smooth going (12 mph with three loaded sleds)
range	180 miles (140 miles with three loaded sleds) ■

Appendix 7: Handouts

Table of Contents

Appendix 7: Handouts

Table of Contents (contd.)

The handouts in this appendix should be photocopied by the keeper and given to players at the appropriate times over the course of the adventure. Most of them are reprinted from earlier parts of the book; those without reference page numbers are printed exclusively in this appendix.

Newspaper Clippings

Beyond Papers P.2

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MAY 26, 1933

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"ANTARCTICA OR BUST!"

Renowned Adventurer Sets His Sights on the Bottom of the World

New York (AP)—World famous explorer James Starkweather announced today that he would lead a party of scientists and explorers into uncharted parts of the Antarctic continent this fall.

Starkweather, accompanied by geologist William Moore of Miskatonic University in Arkham, Massachusetts, intends to continue along the trail first blazed by the ill-fated Miskatonic University Expedition of 1930–31.

The Starkweather-Moore Expedition will set sail in September from New York City. Like their predecessors, they intend to use long-range aircraft to explore further into the South Polar wilderness than has ever been done before.

"This is not about the South Pole," Starkweather explained this morning, in a prepared speech in his hotel in New York. "Many people have been to the Pole. We're going to go places where no one has ever been, see and do things that no one alive has seen."

The expedition intends to spend only three months in Antarctica. Extensive use of aëroplanes for surveying and transport, according to Starkweather, will allow the party to chart and cover territory in hours that would have taken weeks to cross on the ground.

One goal of the expedition is to find the campsite and last resting place of the twelve men, led by Professor Charles Lake, who first discovered the Miskatonic Range, and who were killed there by an unexpected storm. The mapping and climbing of the mountains in that range and an aërial survey of the lands on the far side are also important goals.

"The peaks are tremendous," Starkweather explained. "The tallest mountains in the world! It's my job to conquer those heights, and bring home their secrets for all mankind.

"We have the finest equipment money can buy. We cannot help but succeed."

Starkweather, 43, is a veteran of the Great War. He has led expeditions into the wilderness on four continents, and was present on the trans-polar flight of the airship *Italia*, whose crash near the end of its voyage on the North Polar ice cap received worldwide attention.

Moore, 39, a full Professor of Geology, is also the holder of the Smythe Chair of Paleontology at Miskatonic University. He has extensive field experience in harsh climates and has taken part in expeditions to both the Arctic and the Himalayan Plateau.

Beyond Papers P.3

The Arkham Advertiser, May 30, 1933

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Intrepid Explorers Ready Expedition
(cont. from p.1)

"We're going back," Starkweather said. "The job's not done. We're going back, and we're going to finish what was started and bring the whole lot out to the world. It will be a grand adventure and a glorious page in scientific history!"

Professor Moore, sitting quietly to one side, was less passionate but just as determined.

"A lot has changed in the past three years," he insisted. "We have technology now that did not exist three years ago. The aëroplanes are better, brand new Boeing craft, sturdier and safer than before. Professor Pabodie's drills have been improved. And we have Lake's own broadcasts to draw upon. We can plan ahead, with better materials and a knowledge of the region that none of them had when they prepared for their voyage. Yes, I am optimistic. Quite optimistic. We will succeed in our goals."

When asked what those goals were, the two men looked briefly at one another before Starkweather answered, leaning forward intently.

"Leapfrog, gentlemen!" he smiled. "We shall leapfrog across the continent. A base on the Ross Ice Shelf; another at the South Pole. One at Lake's old campsite, if we can find it; and, gentlemen, we plan to cross over those fantastic mountains described by Dyer and Lake, and plant our instruments and our flag right on top of the high plateau! Imagine it! Like a landing strip atop Everest!

"We'll have the finest equipment, and skilled men. Geologists—paleontologists—we've got Professor Albemarle from Oberlin, he wants to study weather. Glaciologists, perhaps another biologist or two; the team's not all made up yet, of course. We're not leaving for another five months!"

"It is important," added Moore, "to try to find Professor Lake's camp and bring home whatever we can from the caverns he discovered. The prospect of a wholly new kind of life, a different taxonomy, is extremely exciting. It would be a shame if, having found it once, we were unable to do so again."

The two explorers plan to land thirty men on the southern continent, half again more than the Miskatonic Expedition. The expedition is privately funded and owes no allegiance to any school or institution.

Beyond Papers 1.1

ste

Morning Edition
3¢

SEPTEMBER 3, 1933

COMMANDER DOUGLAS TO JOIN EXPEDITION

Famed Sea-Captain Returns to Antarctic Waters

New York (UPI)—Commander J. B. Douglas, famed sea captain and former master of the brig *Arkham*, will return to Antarctic waters later this year.

James Starkweather, world explorer and leader of the forthcoming Starkweather-Moore Expedition to Antarctica, announced today that Douglas has agreed to come out of retirement and captain the expedition's ship on their voyage of discovery.

"Commander Douglas will be an invaluable addition to our expedition," Starkweather said. "Not only does he have a personal knowledge of the many of the dangers and hazards of the South Pole, but he is an accomplished explorer and adventurer. The expedition will benefit greatly from his experience of the harsher climes and his keen inquiring mind. I look forward to providing this country's most noteworthy scientists with a means to enrich our understanding of the natural world."

Douglas, a twenty-five year veteran of the Merchant Marines, was sailing master of the *Arkham* on its 1930 voyage to the Antarctic with the now-famous Miskatonic Expedition. He retired from the sea in 1932.

Commander Douglas could not be reached for comments. Starkweather has promised interviews with the Commander beginning on September 7, by appointment.

Beyond Papers 1.2

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Morning Edition
3¢

SEPTEMBER 4, 1933

LEXINGTON SETS SIGHTS SOUTH

Blonde Beauty to Fly to Pole

New York (INS)–In a startling announcement from her home in Queens today, millionaire industrialist Acacia Lexington told reporters that she intends to set aside her ledger books in favor of seal furs and snow goggles, in an attempt to be the first woman to stand at the bottom of the world.

Lexington, only child of the late P. W. Lexington of this city, has for years impressed friends and adversaries alike with her skilled maneuverings in troubled financial waters. Now she intends to venture into a new realm.

Accompanied by a hand-picked team of journalists, photographers, and wilderness experts, the lovely Acacia will cross the Antarctic wastelands in a specially modified Northrop Delta aëroplane and a Cierva C-50 autogyro.

"It's about time a woman did this," she told our reporters. "Today's women are capable of anything that men can do. If I am the first, it only means that others will find it easier to follow."

When asked if her planned expedition was in any way affected by the presence of no less than four other parties on the Antarctic ice this summer, Miss Lexington declined to comment.

Beyond Papers 1.3

GLOBE

TEMBER 4, 1933 TWO CENTS

Woman of Education Adds Poise to Starkweather Expedition

New York (AP)—Captain James Starkweather, leader of the Starkweather-Moore Antarctic Expedition, divulged the latest addition to his excursion to the South Pole today. Miss Charlene Whitston, botanist and cum laude graduate of Bowdoin College, is the newest member of the team.

Captain Starkweather expressed his concern that intelligent and talented women not be excluded from scientific ventures as his upcoming journey of exploration, and announced that he wished to do his part in advancing the enlightenment of the age.

"I was only too happy to honor Miss Whitston's request with an invitation to the Antarctic expedition," he told reporters today in his suite at the Amherst Hotel. "Her credentials as an educated member of the scientific community are excellent and I am sure she will be a valuable member of the team we have assembled for this voyage."

Professor William Moore, the expedition's other head, could not be reached for comment.

Beyond Papers 2.1

ste

Morning Edition
3¢

SEPTEMBER 6, 1933

FAMED SEA CAPTAIN MURDERED!

Watery Death for Commander Douglas

New York (AP)—J. B. Douglas, fifty years old, was discovered last night in the water off Battery Wharf. Two fishermen brought the unconscious mariner ashore after an assault by person or persons unknown.

Commander Douglas died on the way to the hospital.

A respected officer of the Merchant Marine for many years, Douglas will be remembered as the captain of the SS *Arkham*, one of the vessels which carried the Miskatonic University Expedition to the Antarctic in 1930.

Douglas was reportedly in New York City to speak with the leaders of the Starkweather-Moore Expedition, which will leave in a few days. The expedition expects to retrace the route of Douglas' ship three years ago.

Thomas Gregor and Phil Jones, sailors resident in New York City, were returning to their fishing boat *Bristol* when they heard muffled cries and ran to see what was happening. They spotted a man running away and some agitation in the water.

While Jones ran after the fleeing man, Gregor dove into the cold waters of the harbor and found a motionless figure there. He heroically pulled the unconscious man out of the water and onto the dock. He attempted to revive the drowned man. Meanwhile Jones, who had lost his quarry, went for help.

Police later announced that Commander Douglas had been bludgeoned about the head, and began a search for his murderers.

Anyone with information about this terrible crime, or about Mr. Douglas' whereabouts on the night of the murder, should contact Detective Hansen at the Battery Precinct Station.

Beyond Papers 2.2

DEATH ANNOUNCEMENTS

Commander J. B. Douglas

Jeremiah Barnes Douglas, Commander in the United States Merchant Marine (ret.), aged fifty years, died September 5th in New York City.

Douglas served as an officer in the Merchant Marine during the Great War. He retired from the Service as a Commander in 1926 after twenty five years. He then captained his own vessel, the *Arkham*, notably on an expedition to Antarctica in 1930–31. He retired from active life in 1932 to his home in New Hampshire.

Known as "J. B." to his family and friends, Douglas is remembered as quiet, forthright, and a stout friend to all. He is survived by his brother Philip.

A graveside Memorial Service will be held September 8th, 11 a.m., at Saint Brigit's Cemetery in Brooklyn.

Beyond Papers 4.1

illar-Riposte

Bulldog Edition
3¢

OCTOBER 20, 1920

DARING RESCUE OF HEIRESS

Nairobi (INS)—The dark continent where the wonders of nature can turn on man and prove deadly has shown once again that wherever European man goes, so goes chivalry. Wireless reports out of the Belgian colonies in Africa tell of the daring rescue of our own socialite scamp Acacia Lexington by that gallant Englishman, Captain James Starkweather.

Lovely Lexington has been touring the regions of darkest Africa dominated by the mighty Lake Tanganyika. Savages fight daily with alligators longer than a Deusenberg to ensure the passage of commerce in this wild region. Against the advice of her elders, Lady Lexington insisted upon seeing the fabled giraffe mating grounds of Eyasi. Under the expert leadership of Captain Starkweather the band braved the wilderness and arrived at the plains of tall swaying grasses the giraffes find so compelling for their very survival.

The wild beasts, gentled by our own lovely Lady Lexington, came within a few feet of the party without making threatening gestures. Lady Lexington's presence was so compelling that when she came upon a baby giraffe in the grasses, she immediately tamed it and was able to even embrace it briefly before it returned to its herd, earning her the nickname among the savages as "'The Woman Whom the Giraffes Love."

On the return trip to Nairobi, sudden rains caught the party crossing a branch of the mighty Nakuru river. The party was nearly lost as savages panicked under the onslaught of the rain and river. Brave Captain Starkweather rallied the natives and had them chop trees and fashion rafts to carry the supplies to safety. A personal trip by Captain Starkweather to a nearby village procured enough canoes to carry the party across the river. The crossing was treacherous but under the skilled hand of Captain Starkweather the entire party made it to port in time for Lady Lexington's return trip to America.

We'll all be thanking Captain Starkweather for the safe return of one of the brightest lights of our social season. Hurrah for him and hurrah for chivalry!

Beyond Papers 4.2

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Evening Edition
3¢

JULY 23, 1921

LEXINGTON TRAGEDY

New York (AP)—A shocking scene greeted police at the P. W. Lexington mansion on Fifth Avenue today. They came to investigate what appears to be the death of one of New York City's greatest industrialists at his own hand.

Percival Woodrow Lexington was discovered in his study dead from a gunshot wound to the head. Police initially suspected foul play from the disheveled nature of the study.

"But there are obvious powder burns on his head and right hand," said Police Detective Ronald O'Meira. "That coupled with the position of the body and gun lead us more toward a self-inflicted wound than foul play."

But his daughter Acacia does not agree. "Daddy wouldn't kill himself. These buffoons are looking for an easy answer to keep from doing any real work," the distraught young woman said. "I vow I'll find my father's killers and make them pay."

Meanwhile an anonymous Wall Street source has hinted that the Lexington fortunes were severely over-extended.

The sky in New York society has grown dimmer this evening and the murky surroundings of this death surely spur further inquiry.

Beyond Papers 4.3

GLOBE

JULY 24, 1921 TWO CENTS

RARE MANUSCRIPT LINKED TO LEXINGTON DEATH

(Special)—A notice from the estate of Percival Lexington warns rare book dealers to watch out for a missing manuscript that could be linked to foul play in Lexington's recent death.

An extremely valuable and rare galley proof of the Edgar Allen Poe book *The Narrative of Arthur Gordon Pym* has been reported missing from Lexington's study where his body was found yesterday.

"Robbery would be a motive for murder," said police detective Ronald O'Meira. "But the physical evidence points to a different conclusion. The book may show up in a few days. It's very difficult for most families to accept the loss of a loved one in this way."

Issuing the notice was daughter Acacia Lexington who previously raised suspicions of foul play and a lax attitude by police in investigating this case.

"This manuscript is unique. I believe it is involved in my father's death," she said. "This manuscript differs greatly from the published version. I fear some collector has killed for it."

The manuscript was to have been sold in public auction today, along with other rare andvaluable items from Percival Lexington's collection..

A coroner's report is expected tomorrow. A public service and private family funeral will be held Friday. The public service will be held at St. John the Divine Cathedral at 11 a.m.

Beyond Papers 4.4

illar-Riposte

Evening Edition
3¢

JULY 26, 1921

HEIRESS DENIES OWN TALE OF MURDER

New York (AP)—A startling retraction came today from the daughter of the late industrialist Percival Lexington. Just days after she claimed foul play and police mishandling of the case, Acacia Lexington delivered a very different story after her father's funeral.

"With the coroner's report and the physical evidence I have no choice but to face the facts about my father's death," Miss Lexington said.

Earlier this week Lexington claimed that her father's death was linked to the disappearance of a rare manuscript he kept in the study where his body was found.

"I believe that book is still in my father's library," Miss Lexington said when asked about her earlier claim. "I haven't finished cataloging the contents of the house to see if anything is missing. When it is done I'm sure we'll find the book."

"We know this is a hard time for Miss Lexington," said police detective Ronald O'Meira who investigated the Lexington suicide. "Any suggestions she made earlier were obviously the result of the strain of the situation," O'Meira said.

Percival Lexington was eulogized by several business leaders including fellow industrialist John D. Rockefeller and esteemed banker John Pierpont Morgan. He was laid to rest in a private ceremony at the family's estate in Suffolk County.

Lexington's last will and testament will be read at his attorney's next Wednesday. It is expected that his daughter Acacia will be his sole beneficiary. Questions still remain as to who will run the Lexington enterprises for this young woman.

Notes and Messages

In addition to the material presented in this section, the keeper is encouraged to photocopy the final chapter of *The Narrative of Arthur Gordon Pym* in Appendix 3, "Deep Background," pages 327-341. If the keeper decides to roleplay the Line Crossing Ceremony in Chapter Five, he or she should also photocopy "Beyond Papers 5.1: Davy Jones's Summons" on page 83 and "Beyond Papers 5.2:

Beyond Papers 2.4: The Second Warning

Dear .....,

You must listen to this warning. There will be no others. After this, only action remains. I do not expect any of you to understand my reasons, but all that is necessary is that you act. Consider this a threat if you like. A most earnest threat.

The expedition must not sail south. Captain Douglas was only the first to die. If you persist in your brave blind hopes you will all perish. Only those who turn back are safe. I hope that you will be among them.

Let the dead lie peacefully with their secrets. They are the only ones who are beyond pain. Nothing awaits upon the ice but suffering and a bitter ending that I will do anything to help you avoid. Yes, help: even death is a blessing compared to what lies in wait.

I suppose you will blame me for everything. I don't mind, even though it's not true. There are forces at work here that you do not understand, and I have to be content with that. The deadliest sin, sometimes, is in the understanding; and the most damned are those who explain.

Please. I urge you. Turn away. Tell the others. For your own sake, for all of us, turn back while you can. There is nothing more that I dare say.

Most Sincerely,

A better friend than you will ever know.

Beyond Papers 2.3: Douglas' Unfinished Letter to Philip

September 5th, 1933
New York City

Dear Philip,

I have arrived, as you see, in New York, and will be with you in a few days. It will not be as soon as I had hoped, however. I am shipping you some personal things by rail which ought to get there before I do. Take care and keep them safe for me. I have some rather sorry business here in the city that I must attend to before I can come.

There is a man here named Starkweather who is hiring crew for an Antarctic voyage. He has been hounding me for months, by letter and by wire. I have no interest in his voyage, as you well know. I swore I would not ever return to that hellish place and I will not, so help me God! But the man wants me to captain his ship, and he will not take "no" for an answer. I told him I would meet with him when I arrived in New York. Perhaps he will understand my refusal when I shout it to his face.

You may imagine my annoyance when I got here and discovered that the imbecile has been telling the press that I was already signed on! We are to meet tomorrow. I intend to be quite firm with him.

Adding insult to injury, a lunatic German here at the hotel has been after me ever since he learned my name. Again and again I encounter him "by chance;" the man is obsessed with fairy tales. Each time we meet he asks if I know anything of South Seas folklore, of great statues in the pack ice or of lost island nations. I have told him no: I know nothing of Tsalal, or black-toothed savages, or a man named Pym, or of anything south of the Antarctic Circle but ice, whales, and misery. If he approaches me again, so help me, Philip, I shall knock him senseless!

It is not bad enough that Starkweather has been misusing my name in the newspapers. He has been using it to attract his crews as well. He has even managed to sign some of the boys from the Arkham and the Lady Margaret on the strength of it.

How he got any of the Arkham crew I shall never know. None of us who were on that voyage are ever likely to forget the things that were said about those murdered men, or the howls of that poor mad boy Danforth. The things he whispered to me, toward the end when he knew where he was, still haunt me. God only knows what he told the others.

I am going to do what I can to convince

Beyond Papers 4.5: Fuchs' Letter

September 4th, 1921
Philadelphia, Penn.

Dear Mister Boseley,

I write to you in regard to your letter of August 28th.

It is always unpleasant to hear of an untimely passing, especially of one with whom I have had dealings in the past. My business with Percival Lexington having taken place more than twenty years ago, however, I find it difficult to imagine what benefit you may receive from my recollections at this late date.

I am as you know a collector of antiquities. It was in that capacity that I first purchased the erstwhile Poe manuscript from a fellow collector, a man named Lionel White. The book arrived in good order and proved exactly as promised. I recall that it was unbound, in loose form, and that a number of the pages were showing signs of wear. Mister White had also included a letter summarizing his own researches into the origin of the work. It was clear that he considered it genuine. I found, after some inspection, that I had to disagree.

You will be aware, sir, that the Narrative of Arthur Gordon Pym differs in several aspects of style from the rest of Mister Poe's body of work. The manuscript I had acquired was substantially the same as the published work in its first twenty-five chapters, including those same uncharacteristic usages and turns of phrase. The additional five chapters, however, were quite different even from the remainder of the manuscript, in both style and content, and clearly had been written by a different hand.

Once this was clear to me, I had no further interest in the work. However clever the fiction, it was evidently not Poe's tale but an homage or attempted forgery, and thus I sought to recover my purchase price by any means possible. Mister Lexington bought it eagerly and I was able to secure a small profit for my trouble.

I concealed nothing from Mister Lexington when he came to examine the manuscript. That is my way of doing business. He drew his own conclusions and was delighted at his purchase, for which I wished him well. As I recall, he was excited by the possibility that the "Narrative" represented an undocumented collaboration rather than an original work. I did not seek to dissuade him.

Several other collectors inquired about the work. I referred them all to Lexington. There is very little else I can say about the purchase.

As to your other question regarding the content of the additional chapters I fear I can be of little use. I recall that they were unpleasantly speculative, more than usually macabre, and dealt with a tribe of inhuman horrors that dwelt in the Antarctic and practiced human sacrifice. More than that I cannot now say.

Wishing you the best of luck in your continuing research, I am
Sincerely yours,

Stanley Edgar Fuchs

Beyond Papers 1.4: The First Warning

Dear Man of Science.

Soon You will go down far away to the cold and the white ice and the old old things that wait and move and work and plan. Do not! Blessed Mary hears me beg You to stay! Do not wake the Sleeping One there. Do not pass the prison walls of black and white cold ice and time. The cage must not open! Let the dead and the dying hold closed the doors.

I have listened to His dreams. I have seen Its form within His mind. for He has seen It and He knows It must be free and He will stop You if You go.

Turn back or we all die.

A friend.

Beyond Papers 6.1: Captain's Log, Final Entry

March 12th. It is over. My hand is wholly useless now, lost to the gangrene, and the red lines of infection have spread past the tourniquet and up my arm. There is nothing to be done. My own stench disgusts me.

Bowers passed on in the night.

I am no Shackleton, no Mawson, to face the odds and overcome them. I am merely an old tired soul who has lost the gamble and will die alone upon the ice. The horrible endless ice. It is beautiful, but heartless. In these past few days I have come to hate its cruelty. It cries, and whispers, and moans to me in the still air, grinding hopes and prayers away in mindless hostile fury. I pray the others got away. There is nothing for anyone here. Even the whales are long gone.

Should anyone ever find this log, let me praise once again the excellence and skill of my officers and crew. Their loyalty and stout hearts are without peer. I wish them well and pray that they are now safely homeward bound.

I give my love to Nancy and the boys. May they find happiness in years to come. I only regret I cannot hold them to me one last time.

God forgive me for what I am about to do.

Stephen Willard, Captain

SS Wallaroo

General Information

In addition to the material presented in this section, the keeper may wish to photocopy part or all of Chapter Four-B, "SS *Gabrielle*,"pages 68-74. Permission is granted to copy Chapter Four-B for personal use only. ■

The *Dyer Text* Summary

Dyer's story of the Miskatonic University Expedition is fully reproduced in H. P. Lovecraft's excellent novelette, *At the Mountains of Madness*. Every keeper should own and read a copy before playing this scenario. He or she may now give the novelette to the players to read. For keepers who do not wish to break their session for a reading of the novel, here is a synopsis of the *Text*.

Dyer's tale and historical accounts agree substantially, up to the point where the rescue party lands at Lake's Camp. In this account, however, the party finds the Camp in great disarray—much as it was found by Moore's group, but with the cruelly murdered bodies of dogs and men still scattered about the camp or arrayed in Hangar H2 in hideous display. That the party was murdered was never in any doubt; the identity of the murderer was uncertain, most likely being Gedney the missing student.

Dyer and Danforth flew several flights over the area in search of Gedney but found nothing. They then lightened a single plane and flew over the mountains through the nearest pass.

On the far side of the range they found, not a barren plateau, but the incredibly ancient remains of an immense city, uninhabitable for geologic epochs. They landed and walked through the city's near edge, sketching and taking many photographs. The city is barren now but contains untold murals, frescoes and other non-portable artifacts which reveal its age and the extreme civilization of its now-vanished builders.

Dyer maintains that the city was built, not by men, but by creatures similar in appearance to Professor Lake's "old ones" or "elder ones"—and that the murders were done not by Gedney but by the eight "perfect specimens" removed from the cave by Lake's party. These, it seems, were not dead but somehow hibernating; awakened, they slew their rescuers and fled over the mountains to their city home.

The city is built atop the plateau, but deep underneath the plateau is a great sunless sea which may be reached by long tunnels slanting down from the surface. There, according to Dyer, the city's builders took their final refuge. Their descendants may still remain there; however, in a foray into one such tunnel the two men were set upon by a huge and monstrous predator—a shoggoth—descended of the ancient slaves of the city builders, now apparently free to roam at will. The men escaped through good luck, but the shock of the meeting was one of the things that caused Danforth's breakdown.

Dyer and Danforth found the bodies of four of the returned "elder ones" in the downward sloping tunnel, apparently slain by the shoggoths. He concludes that the rest most likely perished as well while seeking others of their kind. He found Gedney's body too, preserved and carried as if for later examination.

After examining the city for several hours and being chased by the shoggoth, Danforth and Dyer conclude that existence of the elder ones and their city is something that should be kept from the world lest they loose horrors that cannot be controlled. They pledge to keep the secret, and persuade the others in the rescue party to stay silent about what they know as well. Only the advent of the Starkweather-Moore Expedition, with its avowed intent of exploring the high plateau, has forced him to break his silence in the hopes of warning them away.

Although Dyer speaks of a great many photos and samples which originally accompanied the work, they are not provided with the manuscript.

The book can be read end to end in about three hours by a fast reader; a slower reading, with more attention to detail, requires as much as a day or two.

The *Dyer Text* (published in 1936 as *At the Mountains of Madness*), in English, typed on bond paper, 110 ms. pages. By Professor William Dyer. Tells the story of the Miskatonic University Antarctic Expedition of 1930–31 and their encounters with the elder things. ❑

Investigator Name _____
Occupation _____
Colleges, Degrees _____
Birthplace _____
Mental Disorders _____
Sex _____ **Age** _____

Characteristics & Rolls

STR ____	**DEX** ____	**INT** ____	**Idea** ____
CON ____	**APP** ____	**POW** ____	**Luck** ____
SIZ ____	**SAN** ____	**EDU** ____	**Know** ____
99-Cthulhu Mythos ____		Damage Bonus ____	

1930s Antarctic Explorer

Player's Name _____

CALL OF CTHULHU
Horror Role-Playing

Sanity Points

Insane	**0**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65
66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82
83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99

Magic Points

Unconscious	**0**	1	2	3				
4	5	6	7	8	9	10	11	
12	13	14	15	16	17	18	19	
20	21	22	23	24	25	26	27	
28	29	30	31	32	33	34	35	
36	37	38	39	40	41	42	43	

Hit Points

Dead	**-2**	**-1**	**0**	**1**	**2**	3	
4	5	6	7	8	9	10	11
12	13	14	15	16	17	18	19
20	21	22	23	24	25	26	27
28	29	30	31	32	33	34	35
36	37	38	39	40	41	42	43

Investigator Skills

- ❑ Accounting (10%) ____
- ❑ Aircraft Maint. (05%) ____
- ❑ Anthropology (01%) ____
- ❑ Archaeology (01%) ____
- Art (05%):
- ❑ _____ ____
- ❑ Astronomy (01%) ____
- ❑ Bargain (05%) ____
- ❑ Biology (01%) ____
- ❑ Block (DEX x2%) ____
- ❑ Chemistry (01%) ____
- ❑ Climb (40%) ____
- ❑ Conceal (15%) ____
- Craft (05%):
- ❑ _____ ____
- ❑ Credit Rating (15%) ____
- Cthulhu Mythos (00) ____
- ❑ Disguise (01%) ____
- ❑ Dodge (DEX x2) ____
- ❑ Drive Auto (20%) ____
- ❑ Drive Dog sled (20%) ____
- ❑ Electr. Repair (10%) ____
- ❑ Explosives (01%) ____
- ❑ Fast Talk (05%) ____
- ❑ First Aid (30%) ____
- ❑ Geology (01%) ____
- ❑ Hide (10%) ____
- ❑ History (20%) ____
- ❑ Jump (25%) ____
- ❑ Law (05%) ____
- ❑ Library Use (25%) ____
- ❑ Listen (25%) ____
- ❑ Locksmith (01%) ____
- ❑ Martial Arts (01%) ____
- ❑ Mech. Repair (20%) ____
- ❑ Medicine (05%) ____
- ❑ Meteorology (05%) ____
- ❑ Natural History (10%) ____
- ❑ Navigate (10%) ____
- ❑ Occult (05%) ____
- ❑ Opr. Hvy. Mch. (01%) ____
- **Other Language** (01%):
- ❑ E.Thing Cipher (01%) ____
- ❑ _____ ____
- ❑ _____ ____
- **Own Language** (EDUx5%):
- ❑ _____ ____
- ❑ Persuade (15%) ____
- ❑ Pharmacy (01%) ____
- ❑ Photography (10%) ____
- ❑ Physics (01%) ____
- Pilot (01%):
- ❑ _____ ____
- ❑ _____ ____
- ❑ Polar Survival (01%) ____
- ❑ Psychoanalysis (01%) ____
- ❑ Psychology (05%) ____
- ❑ Radio Operator (01%) ____
- ❑ Ride (05%) ____
- ❑ Sneak (10%) ____
- ❑ Spot Hidden (25%) ____
- ❑ Swim (25%) ____
- ❑ Throw (25%) ____
- ❑ Track (10%) ____
- ❑ _____ ____
- **Firearms**
- ❑ Handgun (20%) ____
- ❑ Machine Gun (15%) ____
- ❑ Rifle (25%) ____
- ❑ Shotgun (30%) ____
- ❑ SMG (15%) ____

Weapons

melee	*%*	*damage*	*hnd*	*rng*	*#att*	*hp*
❑ Fist (50%)	____	1D3+db	1	touch	1	n/a
❑ Grapple (25%)	____	special	2	touch	1	n/a
❑ Head (10%)	____	1D4+db	0	touch	1	n/a
❑ Kick (25%)	____	1D6+db	0	touch	1	n/a
❑ _____	____	_____	____	____	____	____
❑ _____	____	_____	____	____	____	____

firearm	*%*	*damage*	*malf*	*rng*	*#att*	*shots*	*hp*
❑ _____	____	_____	____	____	____	____	____
❑ _____	____	_____	____	____	____	____	____
❑ _____	____	_____	____	____	____	____	____
❑ _____	____	_____	____	____	____	____	____
❑ _____	____	_____	____	____	____	____	____
❑ _____	____	_____	____	____	____	____	____

A Synopsis of Pym's Narrative

The Narrative of Arthur Gordon Pym was written by Pym in the spring of 1837. It expands and continues some narratives published as short fiction in January and February of that year in the *Southern Literary Messenger,* a magazine printed in Richmond, Virginia. (For more information, see Appendix 3, "Deep Background.")

At that time, according to the tale, Pym had returned "to the United States a few months ago, after the extraordinary series of adventures in the South Seas and elsewhere. . . . "

The tale begins in June of 1827. At this time, from evidence in the text, Pym is about 18 years of age. He stows away aboard the bark *Grampus* with the help of Augustus Barnard, son of the vessel's captain. The ship is bound for the South Seas on a whaling voyage. *Grampus* is never heard of again.

Mutineers kill the captain and most of the crew, and the ship is turned far from her destination, before she is wrecked in a heavy storm. Pym, and one crewman, Dirk Peters, are the only ones who survive, barely, to be picked up by the schooner *Jane Guy* (out of Liverpool, bound for the south Pacific) on August 7th. They accompany the vessel on its voyage, passing Prince Edward Island on October 13th, arriving at Kerguelen Land on the 18th. No landings are reported before then, and it is unclear whether any news of Pym or the *Grampus* ever got home.

The captain of the *Jane Guy* behaves mysteriously at Kerguelen, leaving sealed notes in bottles inland on one of the islands without explanation.

After a couple weeks' stay, they travel on in November to the Tristan da Cunha islands, sending mail and so on. From there they set out into the deep ocean for more exploring. They search at sea for many weeks, attempting to chart islands, going further and further south and west, pushing into then-unexplored areas.

Jane Guy crosses the Antarctic Circle in mid-December, heading south. They encounter a lot of ice floes in the following days, as well as some pack ice, but they force their way through this pack and into clearer water.

Early January 1829—Past the thick pack floes, the ice begins to free up and there is a large expanse of free water.

A sailor, Peter Vredenburgh of New York, is lost overboard on Jan 10th. *Keeper's note: the* Grampus *was owned by the firm of Lloyd and Vredenburgh, but no connection between the names is revealed.* More thick ice follows, which they pass through. Beyond this point, both water and air seem to get steadily warmer as the ship sails south. They encounter odd animals—a giant polar bear and an unidentified creature with red teeth and claws, and white fur.

1/19—The ship drops anchor at an inhabited island. Estimated 83°20'S, 43°5'W. Bizarre and savage natives here, but seemingly friendly. Lots of descriptions of people and island follow, some of it extremely weird and unlikely, even in a *Call of Cthulhu* universe.

2/1—The natives savagely murder the crew and assault and dismantle the *Jane Guy*. Pym and Peters are the only survivors, but they are trapped on a barren part of the island and it is some time before they can escape to steal a native boat. Much description of carven canyons and channels inland here, some of it may be writing; mention of a few remnants of very tumbled/weathered ruins as well, but no details—Pym wasn't interested.

2/20—Pym and Peters finally manage to steal a large canoe and flee the island. One native hostage, a young man named Nu-Nu, is taken along and provides a few scraps of info about the locals but little of substance. Nu-Nu and all the locals are absolutely terrified of anything white. They won't touch or go near such things, screaming "Tekeli-li!" and going into convusions or sick fits when forced.

3/1—Pym, Peters, Nu-Nu in the canoe, in a southerly current. The water gets steadily warmer, and a distant band of haze is visible on the horizon.

3/5—Wind entirely gone, just the current. The water is turning milky (bubbles?) and the vaporous region is near them. Feelings of numbness and lethargy in mind and body. The water is quite hot.

3/6—Occasional explosions under the water, suggest gas ventings or other turbulence. Powdery stuff, ash-like, drops on them from time to time.

3/8—Another one of those dead white animals floats by. Nu-Nu goes catatonic just from seeing it. The water is too hot to put one's hand in.

3/10—They're fully in the vapor range now. (Pym's description is reminiscent of the way fog pours over the San Francisco hills into the bay sometimes. . . .) The rain of ashy stuff (which dissolves in water) is continual and heavy.

3/11—Absolutely dim above—but the water exhibits a luminous glare. Gusty winds, much turbulence in the water, but little sound.

3/12—Gigantic white birds fly through the mists again and again screaming "Tekeli-li!" Nu-Nu just up and dies. The canoe is caught in the grip of a furious current.

". . . Now we rushed into the embraces of the cataract, where a chasm threw itself open to receive us. But there arose in our pathway a shrouded human figure, very far larger in its proportions than any dweller among men. And the hue of the skin of the figure was of the perfect whiteness of the snow."

The published account ends here. The editor says that there were "only two or three" concluding chapters, and that Pym retained them "for the purpose of revision" when he died in some unspecified but well-published fashion. "It is feared that . . ." the pages of those final chapters "have been irrevocably lost through the accident by which he perished himself."

Peters, we are told, survived. He is, in 1837, a resident of Illinois, but "cannot be met with at present."

Poe, who helped publish the first couple of chapters, was available for comment but "...has declined the task—this, for satisfactory reasons connected with the general inaccuracy of the details afforded him, and his disbelief in the entire truth of the latter portions of the narration."

In the unpublished chapters, Pym and Peters ground their boat at the base of the white figure, which they learn is a colossal statue. They observe a group of natives carrying prisoners of evident European origin. Following, they enter a cave, where the natives flee in fear from something horrible Pym does not see. The two men pursue the captives and their new captors through long tunnels and make use of a sort of subway which takes them on a very long ride. Eventually it ends, leaving them in a very cold place. Beyond the cold and snow, following some weird tracks, they come to an immense black tower. They enter.

Inside the tower are more remarkable sights, including the captive Europeans and their monstrous captors. Pym and Peters help the others to flee, but not before they observe one of the monsters kill a man, remove his head, and carry it away in a dish.

Pym and the others are pursued by the monsters. They return to the tunnel and flee using the subway. The monsters almost catch them, but Pym and Peters throw a lantern in the others' tram. There is an explosion and the fugitives get away. Eventually they and the other men, crew of the brig *Nancy,* win their way home again. ❑

New and Augmented Skills

Coordinate this section with the shipboard learning episodes in Chapter Five. Most of the skills below are taught aboard ship during that time. The "Benefits of Education" table early in that chapter discusses what students of such classes gain.

Aircraft Maintenance (05%)

Preparing aircraft and aircraft engines for flight, and securing the machines after flight. This includes general check-lists for flight, warming engines with blow-torches, and replacing the oil. It also provides the knowledge and techniques for maintaining aëroplanes in extreme temperatures and climates.

Percentiles of learning can be taken for this skill or as skill points for Operate Heavy Machine.

Block (DEX x2%)

Allows a character to defend against a physical attack by interposing an object held out between the hands. A barstool, an empty shotgun, a length of pipe, a tree branch—anything that can reasonably be held up with the hands to intercept a blow may be used in conjunction with the skill. A successful Block roll means that the object intercepted the blow.

If the damage done by the attacker exceeds the object's hit points, the blocking object is broken or knocked loose from the defender's hands. The defender is hit with what's left, and loses hit points equal to the amount.

Like the Dodge skill, Block increases with successful use. It does not replace the capability to parry built into weapons designed for hand-to-hand combat, such as swords.

Climb (40%) (augmented)

Climbing freehand requires a Climb roll every 10 to 30 vertical feet, depending on availability and firmness of handholds, wind, visibility, slipperiness, etc.

To climb quietly, match a D100 roll against the investigator's Climb and Sneak on the Resistance Table. If succeeding in Climb but failing in Sneak, he or she climbed noisily. If the Climb failed but the Sneak succeeded, the character fell quietly.

An investigator with Climb 60% or more knows free-hand rock climbing and has mastered the principles and gear needed for technical climbs. A high percentage in Climb is thus equivalent to mountaineering: rare in the 1890s and the 1920s, that sport is widely taught in the 1990s.

Drive Dog Sled (20%)

Teaches the lore and practice of dog sledding and the behavior and expectations of sled dogs. The character learns how to care for, train, and control sled teams; how to repair traces and sleds; how to load and maneuver various sleds; and how to choose terrain most suitable to travel by sled.

A character with Dog Sled 60% or higher automatically has peaceable, efficient teams of dogs who enthusiastically follow commands. The skill-holder is still subject to all the difficulties and dangers of polar travel and survival.

Elder Thing Cipher (01%)

Without murals present, the starting skill is 00%. Characters who have the opportunity to compare at leisure elder thing murals with associated dot-ciphers will begin to notice repetitions of certain patterns or cartouches in combination with the graphical concepts portrayed. Examples might be "disaster," "war," "hope," "shoggoths," etc. Over time, such matches between graphics and dot-cipher become more numerous. But it is no exaggeration to say that a human's percentage in Elder Thing Cipher approximates little more than that many words in English: if 50%, then 50 words. Elder thing murals are much more informative to humans.

Explosives (01%)

Storage, transport, and use of common commercial explosives such as black powder, dynamite (ordinary or low-temperature), nitroglycerin, trinitrotoluene, ammonium picrate, detonating cords, etc., along with cord fuse, electrical blasting caps, delay systems, rotational firing, and weather and safety considerations. For small-scale blasting projects (breaking up rocks, opening a well, lengthening a mine shaft, chasing off a chthonian) a skill of 60% or higher grants an automatic success except on 00 or when personally making explosives.

For demolishing a large building, long tunnel, massive dam, steel girder bridge, or similar formidable structure, the initial chance for success is either the average of the blaster's Explosives and Engineering skills, or half the blaster's Explosives skill if the character has no Engineering skill. (Inexperienced blasters usually fail their first attempt at a complex demolition.) Round up fractions. For the second and later attempts to demolish a particular structure, the chance equals the blaster's Explosives skill or the blaster's Explosives and Engineering skills combined. Those taught Demolition during military service may use that skill.

Meteorology (05%)

Informed about the warmth or chill of the air, the amount of sunshine, prevailing and upper winds, and precipitation, the skill-holder can predict local or regional weather conditions for tomorrow until perhaps next week. In the present day, satellite observations and computer modelling also have become important.

Based on season and a little experience in an area, those with less than 20% Meteorology can often predict local conditions and such variables as when fog appears. Those with more than 20% Meteorology and proper equipment can accurately predict local or regional conditions 90% of the time, as well as temperatures, winds, etc., for minor localities. Estimates of rainfall amounts and wind strength and duration are rarely wrong. Those with 60% or better Meteorology and good observations are able to make accurate predictions except on a 00 result.

Navigate (10%)

Allows the user to find his or her way in storms or clear weather, in day or night. Those of 20% skill or higher are familiar with and can use astronomical principles for the sun and stars, understand magnetic deviation and radio interference, navigational tables, charts, compasses and gyroscopes, autopilots, radio direction devices, and gear such as sextants or GPS as they exist in the era of play.

A skill of 60% or better means automatic success at Navigate under ordinary conditions, except on a result of 00. It also promotes surveying and map-making; given sufficient time, areas of hundreds of square miles can be accurately mapped with this skill.

Anyone of INT 8 or better can sketch a good plan of a room, area, or smallish building.

Polar Survival (01%)

Characters with this skill know the fundamentals of surviving in the icy and desolate climes near either pole, or at high altitudes. Includes dress, shelter, sleeping, safety techniques, hunting, food preparation, and oxygen deprivation, frostbite, and other special medical problems. Do not roll for this skill unless factors important to survival are missing. This skill also teaches the behavior of materials at sub-zero temperatures, including water and ice at various altitudes and temperatures, chemicals such as lubrication oil, gasoline and kerosene, various metals and metal alloys, thermometers and other scientific equipment, cartridges and explosives, rifles and other machined weapons, batteries and electrical generators, heaters, etc.

A skill-holder of 60% or more does not need to check his or her Polar Survival except in the most extreme and dangerous situations, such as being lost in a blizzard.

Radio Operator (01%)

In the 1920s, it includes short-wave band transmission and reception, radio construction and repair, and practical understanding of the procedures customary in short-wave two-way radio. This skill also includes the ability to understand and transmit Morse code at a varying rate per minute. At percentages lower than twenty, the percentage indicates the actual per-minute Morse code rate of the skill user; above 20%, the operator codes and decodes as needed. At 20% or better, the user may apply for a ham license and own and operate a private short-wave set.

At 60% or better, the character can operate a commercial radio station or be a licensed engineer for one, upgrade or create new equipment, design and create his or her own vacuum tubes, and so on.

Throw (25%) (augmented)

To hit a target with a thrown object, to hit a target with the right part of a thrown object (such as the point of a knife blade), or to encompass a target with a loop of thrown rope, use Throw. A palm-sized object of reasonable balance, such as a water-smoothed stone, can be hurled three yards or more for each STR point exceeding the object's SIZ. An object designed to be thrown, such as a baseball, can be hurled up to seven yards for each STR point in excess of the object's SIZ, and bounce on for more. Keepers must choose a suitable multiplier for a hand grenade, javelin, etc.

A loop of rope can be thrown to ensnare if the entire rope is long enough, or for the character's Throw skill divided by five in yards, whichever length is reached first. (In other words, a character with Throw 65% can throw a loop of rope 65 / 5 = 13 yards, provided the rope is long enough.) As a practical matter, the maximum for lassoing something moving is about ten yards—closer to five yards if from horseback.

If the Throw roll fails, then the object misses, landing at some random distance from the target. If where the object falls is important, the keeper should compare the closeness of the die roll result to the highest number which would have indicated a successful roll, and choose a comparable distance in yards between the thrown object and the target. ■

What the World Knows about the M. U. Expedition to Antarctica, 1930–31

Most of the following came to the world via the *Arkham Advertiser's* powerful radio installation at Kingsport Head, Massachusetts.

The expedition landed at Ross Island in the Ross Sea. After several tests of the drilling gear and trips to Mt. Erebus and other local sights, the land party, consisting of 20 men and 55 dogs plus gear, assembled a semi-permanent camp on the barrier not far away and readied their five big Dornier aircraft for flight.

Using four of the aircraft, the fifth being held in reserve at the barrier camp, the party established a second base camp on the Polar Plateau beyond the top of the Beardmore Glacier (Lat 86d7m Long E174d23m) and did a lot more drilling and blasting in that vicinity. During December 13–15, 1930, Pabodie, Gedney, and Carroll climbed Mt. Nansen. Many fascinating fossil finds were made using the drill rig.

On January 6, 1931, Lake, Dyer, Pabodie, Daniels, and ten others flew directly over the South Pole in two aircraft, being forced down once for several hours by high winds. Several other observation flights were made to points of less noteworthiness during the week before and after.

The published plan for the expedition at this point was to move the entire operation eastward another 500 miles in mid-January, for the purpose of establishing once and for all whether Antarctica was one continent or two. The public also received word during this period that Lake, the biologist, campaigned strongly for an expedition to the northwest before moving the base camp. Therefore, instead of flying west on the 10th of January as planned, the party remained where it was while Lake, Pabodie, and five others set out via sled to probe overland into unknown lands. This expedition lasted from January 11th through the 18th, and was scientifically successful and marred only by the loss of two dogs in an accident while crossing a pressure ridge. During this same period, many supplies and barrels of fuel were airlifted by the others up to the Beardmore camp.

The expedition's published agenda was changed once again when it was decided to send a very large party northeastward under Lake's command. The party left Beardmore by aircraft on January 22nd, and radioed frequent reports directly to the *Arkham* for rebroadcast to the world. The party consisted of 4 planes, 12 men, 36 dogs, and all of the drilling and blasting equipment. Later that same day the expedition landed about 300 miles east and drilled and blasted up a new set of samples, containing some very exciting Cambrian fossils.

Late on the same day, about 10 p.m., Lake's party announced the sighting of a new mountain range far higher than any heretofore seen in the Antarctic. Its estimated position was at Lat 76d15m, Long E113d10m. It was described as a very broad range with suspicions of volcanism present. One of the planes was forced down in the foothills and was damaged in the landing. Two other craft landed there as well and set up camp, while Lake and Carroll, in the fourth plane, flew along the new range for a short while up close. Very strange angular formations, columns, and spiracles were reported in the highest peaks. Lake estimated the range peaks may top 35,000 feet. Dyer called back to the ships and ordered the crew there to ready large amounts of supplies for shipment to a new base which would have to be set up in the foothills of the new range.

January 23rd—Lake commented on the likelihood of vicious gales in the region, and announced that they were beginning a drilling probe near the new camp. It was agreed that one plane would fly back to the Beardmore camp to pick up the remaining men and all the fuel it could carry. Dyer told Lake that he and his men would be ready in another 24 hours.

The rest of that same day was filled with fantastic exciting news that rocked the scientific world. A borehole had drilled through into a cave, and blasting had opened up the hole wide enough to enter. The interior of the limestone cave was a treasure trove of wonderful fossil finds in unprecedented quantity. After this discovery, the messages no longer came directly from Lake but were dictated from notes that Lake wrote while at the digsite and sent to the transmitter by runner.

Into the afternoon the reports poured in. Amazing amounts of material were found in the hole, some as old as the Silurian and Ordovician ages, some as recent as the Oligocene period. Nothing was found more recent than 30 million years ago. Fowler discovered triangular stippleprints in a Comanchian fossil stratum that were obvious close cousins to ones discovered by Lake himself in Archaean slate elsewhere on the continent. They concluded that the makers of those tracks were members of a species of radiant that continued significantly unchanged for over six hundred million years—and was in fact evolved and specialized at a time "not less than a thousand million years ago when the planet was young and recently uninhabitable for any life forms of normal protoplasmic structure. The question arises when, where, and how that development took place."

Later that evening—Orrendorf and Watkins discovered a huge barrel-shaped fossil of wholly unknown nature. Mineral salts apparently preserved the specimen with minimal calcification for an unknown period of time. Unusual flexibility remained in the tissues, though they were extremely tough. The creature was over six

feet in length and seems to have possessed membraneous fins or wings. (More detail given, too much for this synopsis.) Given the unique nature of the find, all hands were searching the caves looking for more signs of this new organism type.

Close to midnight—Lake broadcast to the world that the new barrel-bodied animals were the same creatures that left the weird triangular prints in fossil strata from the Archaean to the Comanchian eras. Mills, Boudreau and Fowler found a cluster of thirteen more of the specimens about forty feet from the entrance, in association with a number of small oddly shaped soapstone carvings. Several of the new specimens were more intact than the first, including intact head and feet samples that convinced Lake that the creatures were his track-makers (an extremely detailed anatomical description followed at this point). Lake intended to dissect one at this point, then get some rest and see Dyer and the others in a day or two.

January 24th, 3 a.m.—Lake reported that the fourteen specimens had been brought by sled from the dig site to the main camp and laid out in the snow. The creatures were extremely heavy and also very tough. Lake began his attempt at dissection on one of the more perfect specimens, but found that he could not cut it open without risking great damage to delicate structures, so he exchanged it for one of the more damaged samples. This also gave him easier access to the creature's interior. (More details—vocal systems—very advanced nervous system—exceedingly foul smell—weird and complex sensory organs.) He jokingly named the creatures the "elder ones."

Last report, about 4 a.m.—Strong winds rising, all hands at Lake's Camp were set to building hurried snow barricades for the dogs and the vehicles. As a probable storm was on the way, air flight was out of the question for the moment. Lake went to bed exhausted.

No further word was received from Lake's Camp. Huge storms that morning threatened to bury even Dyer's camp. At first it was assumed that Lake's radios were out, but continued silence from all four transmitter sets was worrisome. Dyer called up the spare plane from McMurdo to join him at Beardmore once the storm had subsided.

January 25th—Dyer's rescue expedition left Beardmore with 10 men, 7 dogs, a sled, and a lot of hope, piloted by McTighe. They took off at 7:15 a.m. and were at Lake's Camp by noon. Several upper-air gales made the journey difficult. Landing was reported by McTighe at Lake's camp at noon; the rescue party was on the ground safely.

4 p.m., same day—A radio announcement was sent to the world that Lake's entire party had been killed, and the camp all but obliterated by incredibly fierce winds the night before. Gedney's body was missing, presumed carried off by wind; the remainder of the team were dead and so grievously torn and mangled that transporting the remains was out of the question. Lake's dogs were also dead; Dyer's own dogs were extremely uneasy around the camp and the few remains of Lake's specimens. As for the new animals—the elder ones—described by Lake, the only specimens found by Dyer were damaged, but were still whole enough to ascertain that Lake's descriptions were probably wholly and impressively accurate. It was decided that an expedition in a lightened plane would fly into the higher peaks of the range before everyone returned home.

January 26th—Early morning report by Dyer talked about his trip with Danforth into the mountains. He described the incredible difficulty in gaining the altitude necessary to reach even the lowest of the passes at 24,000 feet; he confirmed Lake's opinion that the higher peaks were of very primal strata unchanged since at least Comanchian times. He discussed the large cuboid formations on the mountainsides, and mentioned that approaches to these passes seemed quite navigable by ground parties but that the rarefied air makes breathing at those heights a very real problem. Dyer described the land beyond the mountain pass as a "lofty and immense super-plateau as ancient and unchanging as the mountains themselves—twenty thousand feet in elevation, with grotesque rock formations protruding through a thin glacial layer and with low gradual foothills between the general plateau surface and the sheer precipices of the highest peaks." The Dyer group spent the day burying the bodies and collecting books, notes, etc., for the trip home.

January 27th—Dyer's party returned to Beardmore in a single air hop using three planes, the one they came in and the two least damaged of Lake's four craft.

January 28th—The planes were back at McMurdo Sound. The expedition packed and left soon after that. ❑

Beyond Papers 9.1

Starkweather-Moore across the Mountains

WEDDELL

No.	Description	Weight, Lbs.
1	empty Boeing Model 247 plane	11,000
6	crew and passengers	1,200
24	gallons of engine lube oil, in engine	180
556	gallons of aviation gasoline (1890 miles range)	3,336
1	canvas bag with airplane repair tools and minor parts	50
1	drum 23 gallons engine lube oil	172
1	set navigational equipment (clock, charts, sextant, sun compass, tables, etc.)	6
1	blowtorch	5
2	canvas tarpaulins with grommets and six poles (engine starting covers)	20
24	person-days worth of food	48
2	canvas and goosedown sleeping bags	32
6	sets of snowshoes	36
1	Nansen sledding cooker and primus stove	25
1	1 gallon fuel can of kerosene (40 person-days for the stove)	10
1	trail radio (100 W, nominal range 50 miles)	100
1	radio battery	20
1	1-inch flare pistol, holster, and box of 10 flares	4
1	electric 'Mars' signal lamp	3
1	still camera set (camera, lenses, tripod, film, 10 flashbulbs, IR filters, case)	25
1	reel, 300' climbing rope	20
2	bags of climbing equipment (2 hammers, pitons, carabiners)	25
1	set of meteorology instruments, in wooden case	13
1	set of cartography/geology instruments, in wooden case with carry straps	40
1	set of chemistry sampling and test equipment, in canvas bag	10
1	medical bag, with instruments, drugs and supplies	20
1	sled with hauling harness	100
1	oxygen snow tent, 2 man, with poles, stakes, and lashings	50
2	sodium hydroxide canisters, 48 man-hours of capacity each	50
20	oxygen tanks, 80 cubic feet capacity each	400
	TOTAL	17,000

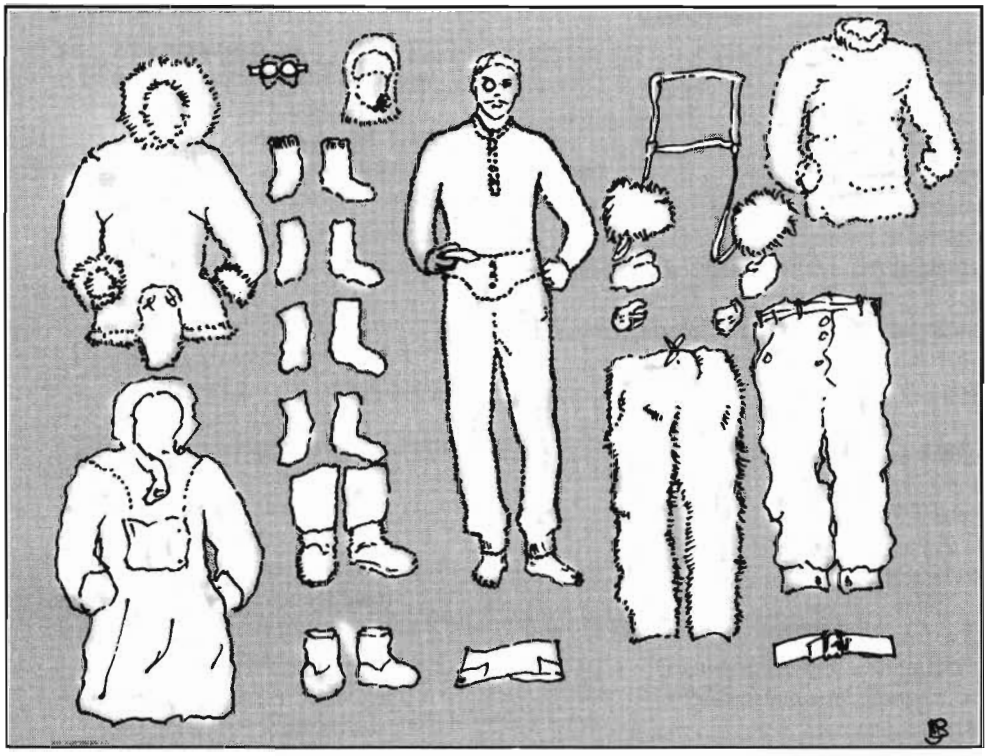
Starkweather-Moore across the Mountains (contd.)

ENDERBY

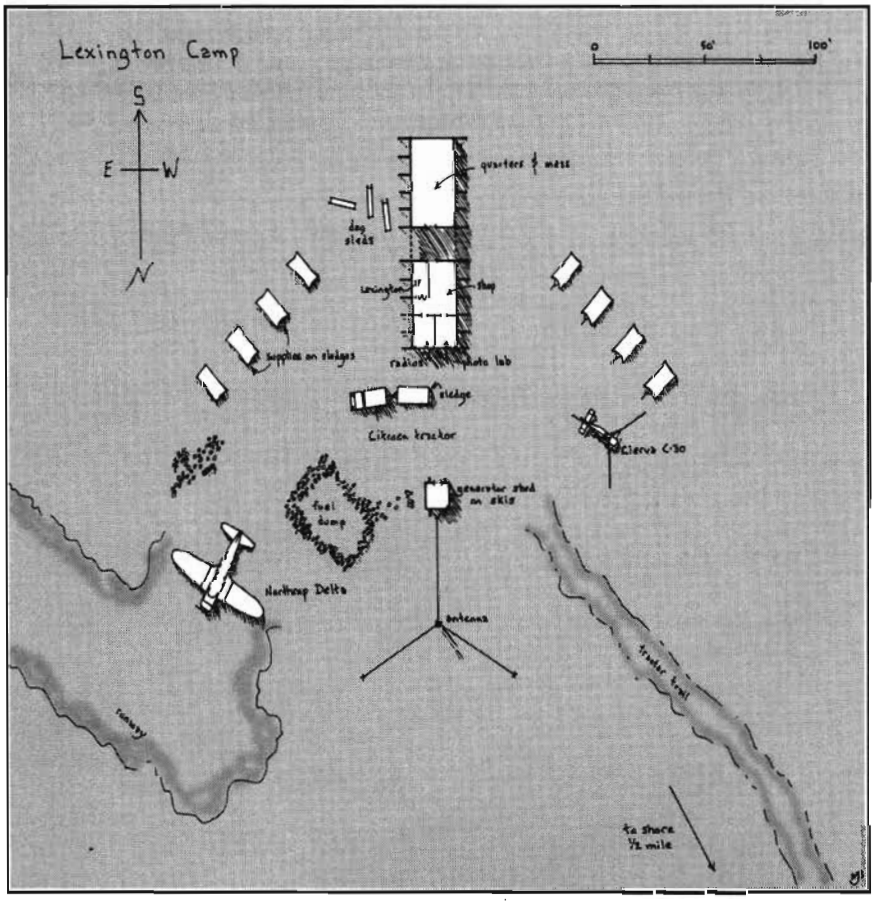
No.	Description	Weight, Lbs.
1	empty Boeing Model 247 plane	11,000
6	crew and passengers	1,200
24	gallons of engine lube oil, in engine	180
556	gallons of aviation gasoline (1890 miles range)	3,336
1	canvas bag with airplane repair tools and minor parts	50
1	drum 23 gallons engine lube oil	172
1	set navigational equipment (clock, charts, sextant, sun compass, tables, etc.)	6
1	blowtorch	5
2	canvas tarpaulins with grommets and six poles (engine starting covers)	20
24	person-days worth of food	48
4	canvas and goosedown sleeping bags	64
6	sets of snowshoes	36
1	Nansen sledding cooker and primus stove	25
1	1 gallon fuel can of kerosene (40 person-days for the stove)	10
1	trail radio (100 W, nominal range 50 miles)	100
1	radio battery	20
1	1-inch flare pistol, holster, and box of 10 flares	4
1	electric 'Mars' signal lamp	3
1	reel, 300' climbing rope	20
2	bags of climbing equipment (2 hammers, pitons, carabiners)	25
1	Geiger-Müller counter and spectrograph, in wooden case	26
1	hand sled with hauling harness	100
2	oxygen snow tents, 2 men each, with poles, stakes, and lashings	100
2	sodium hydroxide canisters, 48 man-hours of capacity each	50
20	oxygen tanks, 80 cubic feet capacity each	400
	TOTAL	17,000

Maps and Pictures

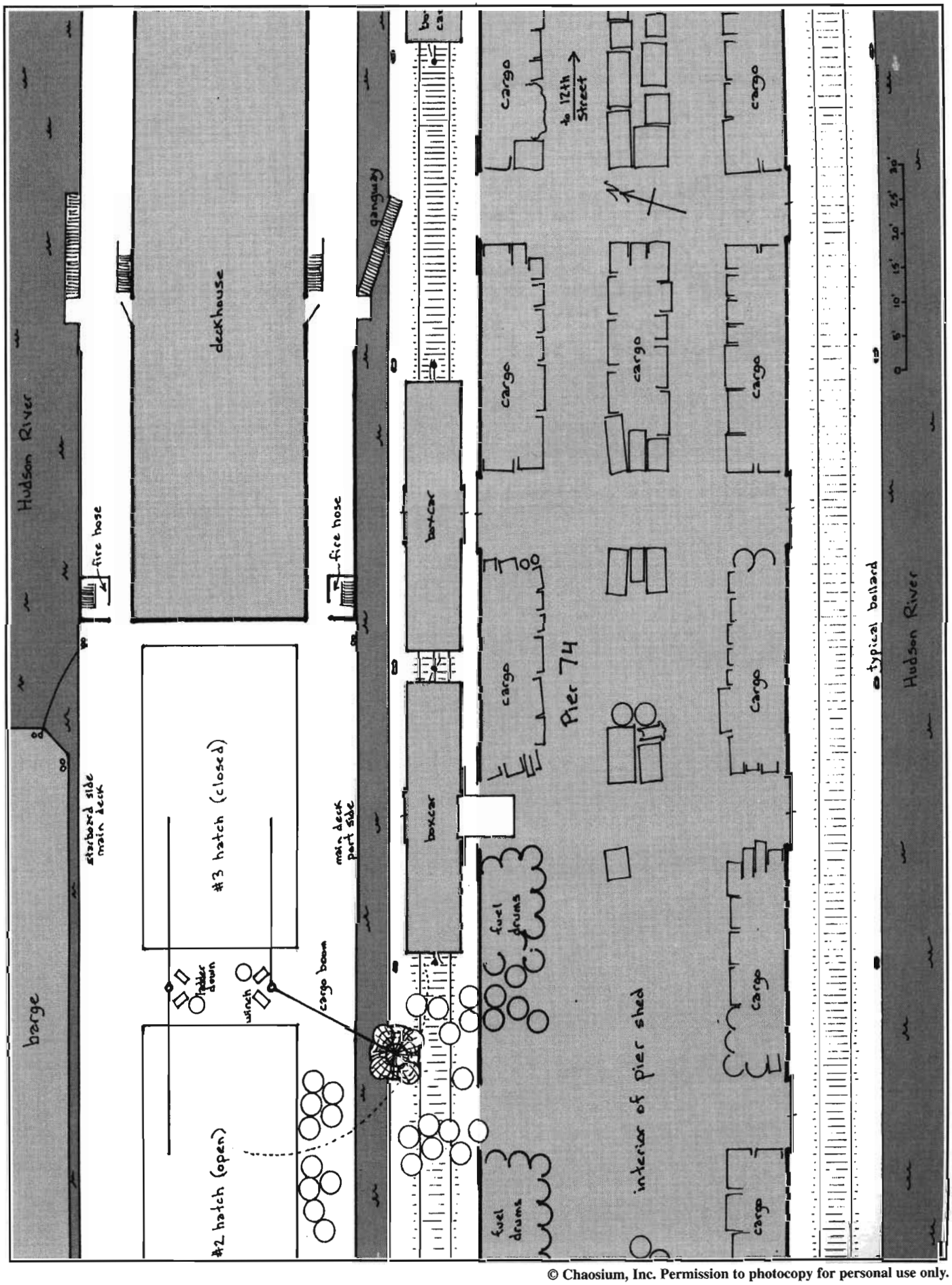
Antarctic Clothing



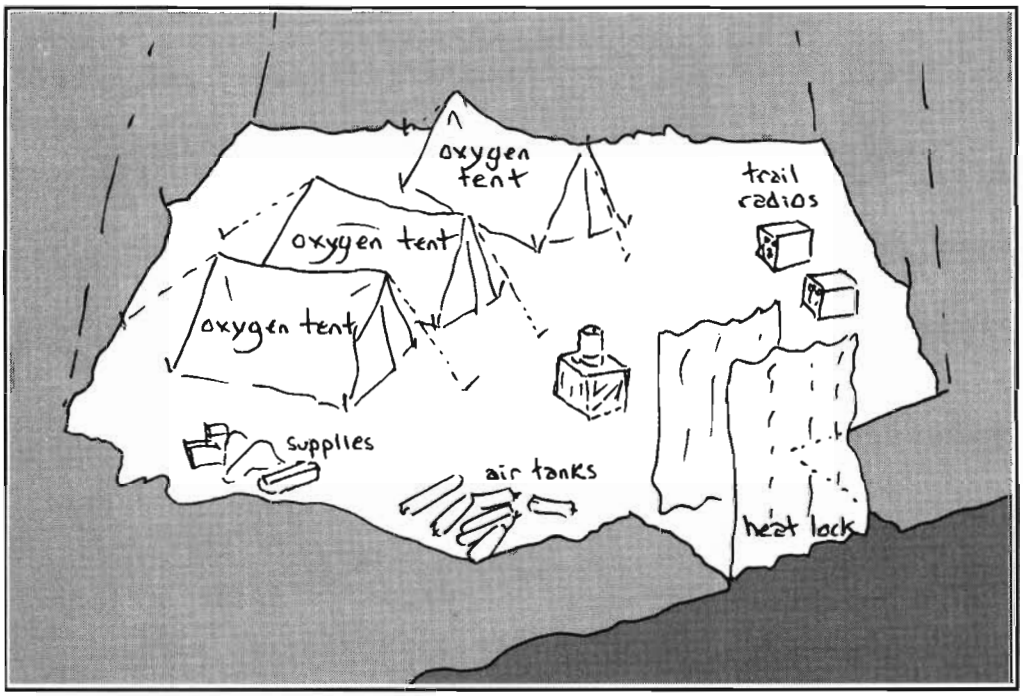
Lexington Expedition Barrier Camp Layout



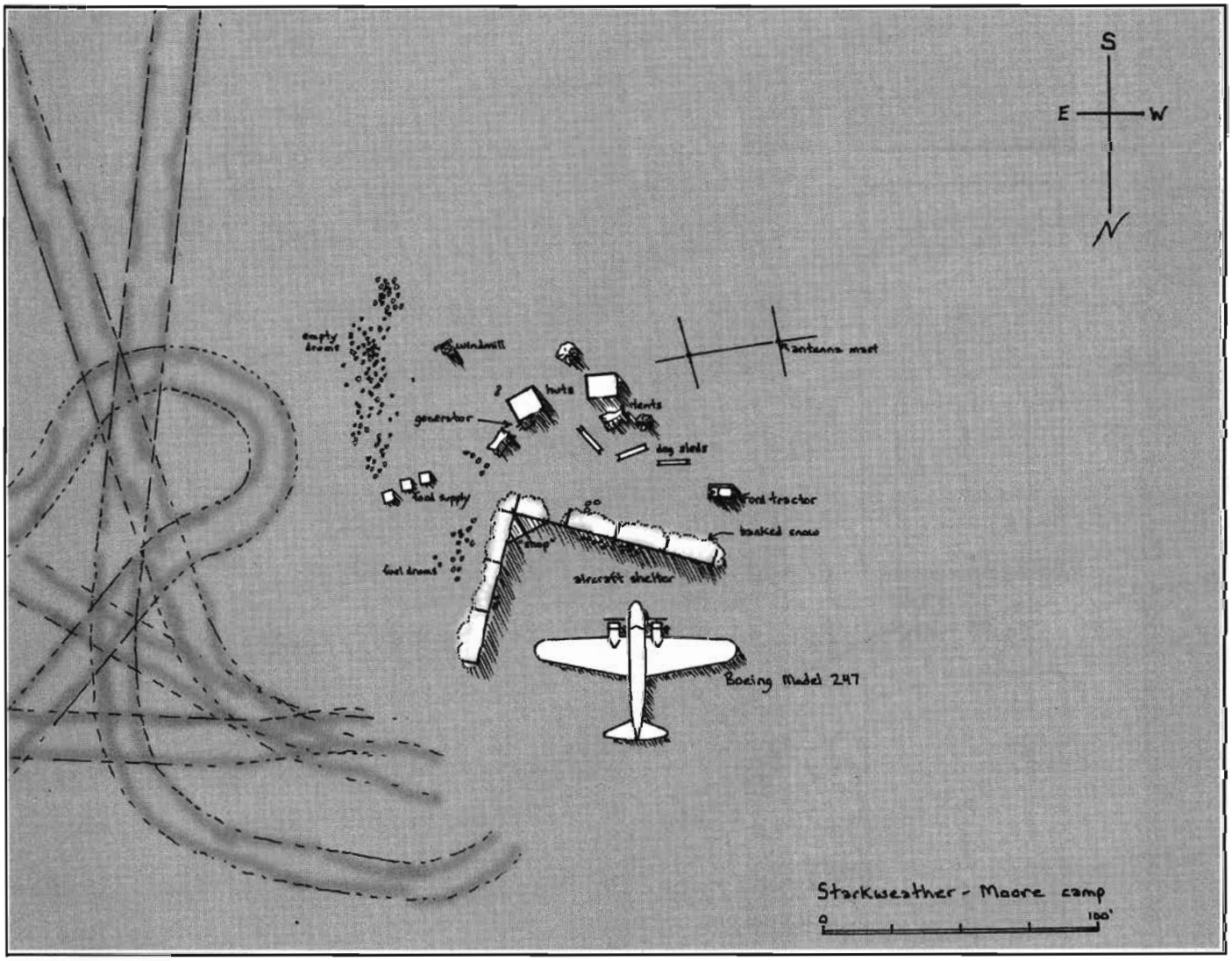
The Gabrielle's Deck and Nearby Pier



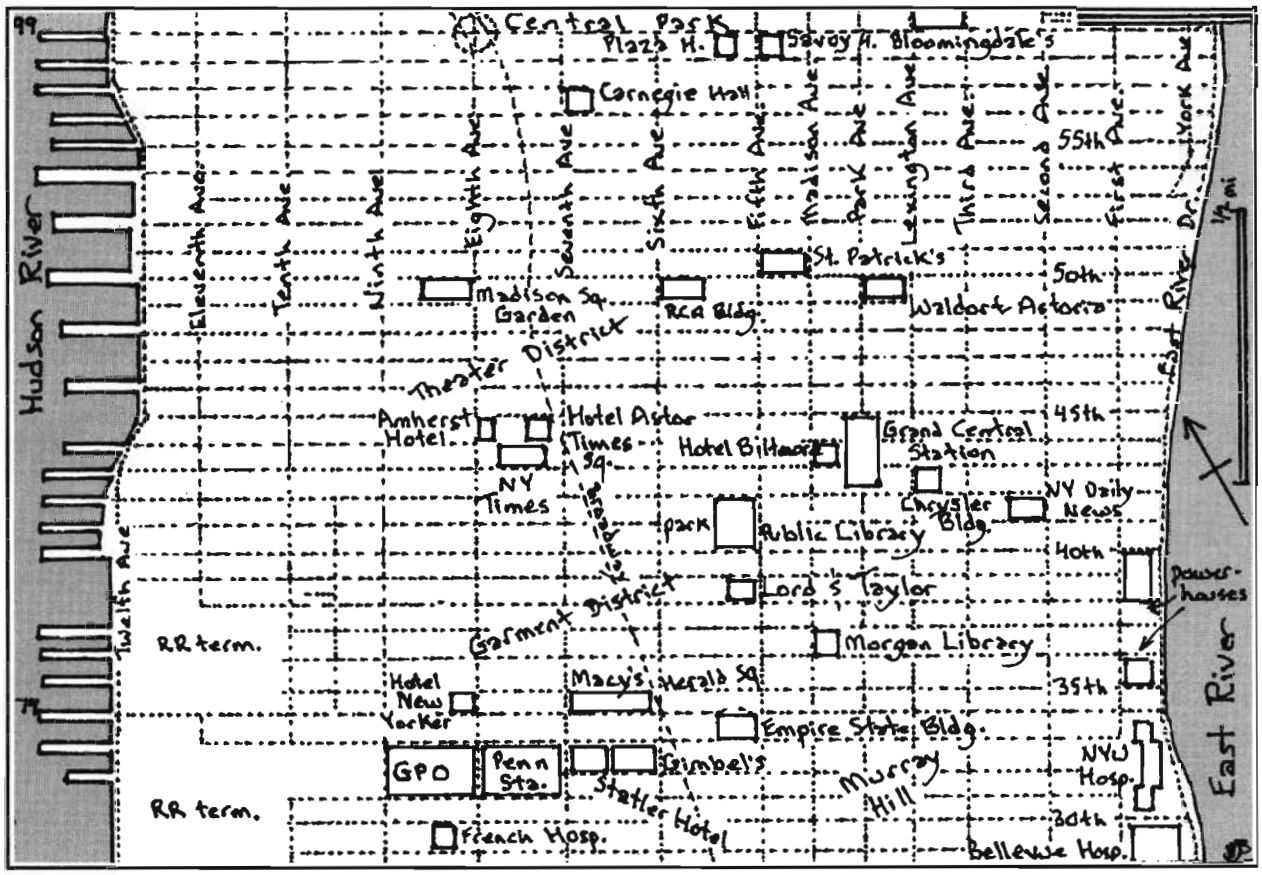
The Plaza Campsite



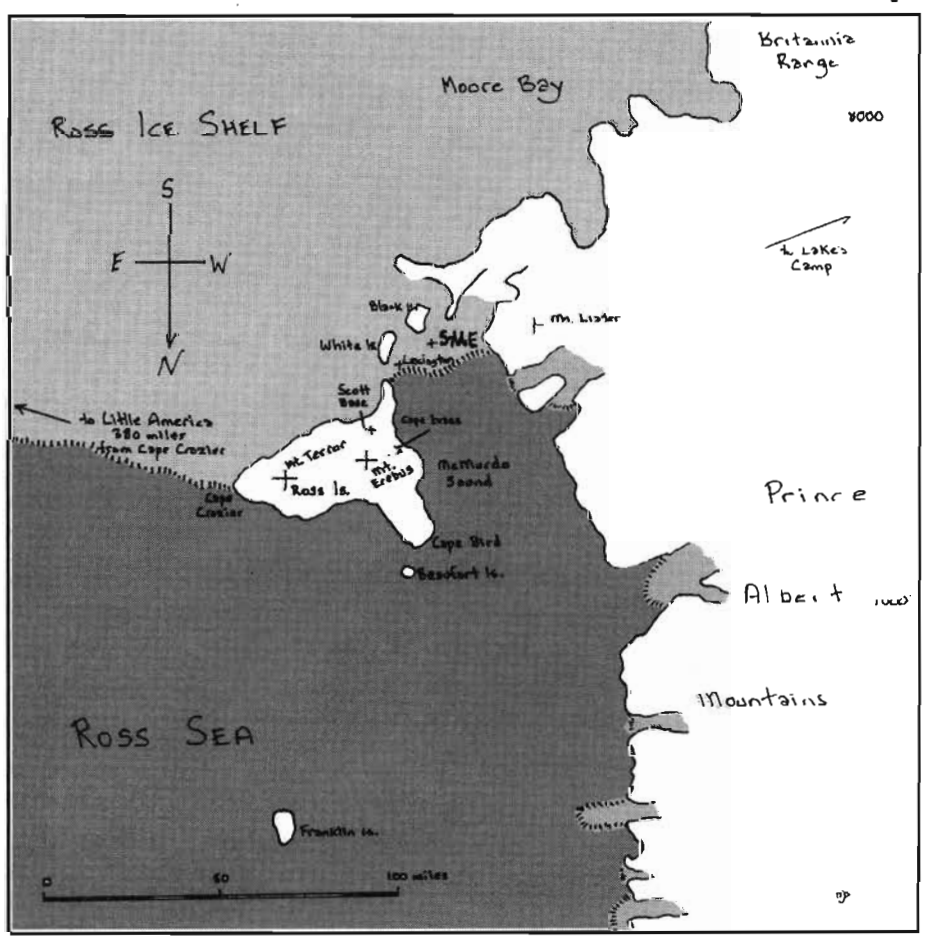
Starkweather-Moore Expedition Barrier Camp Layout



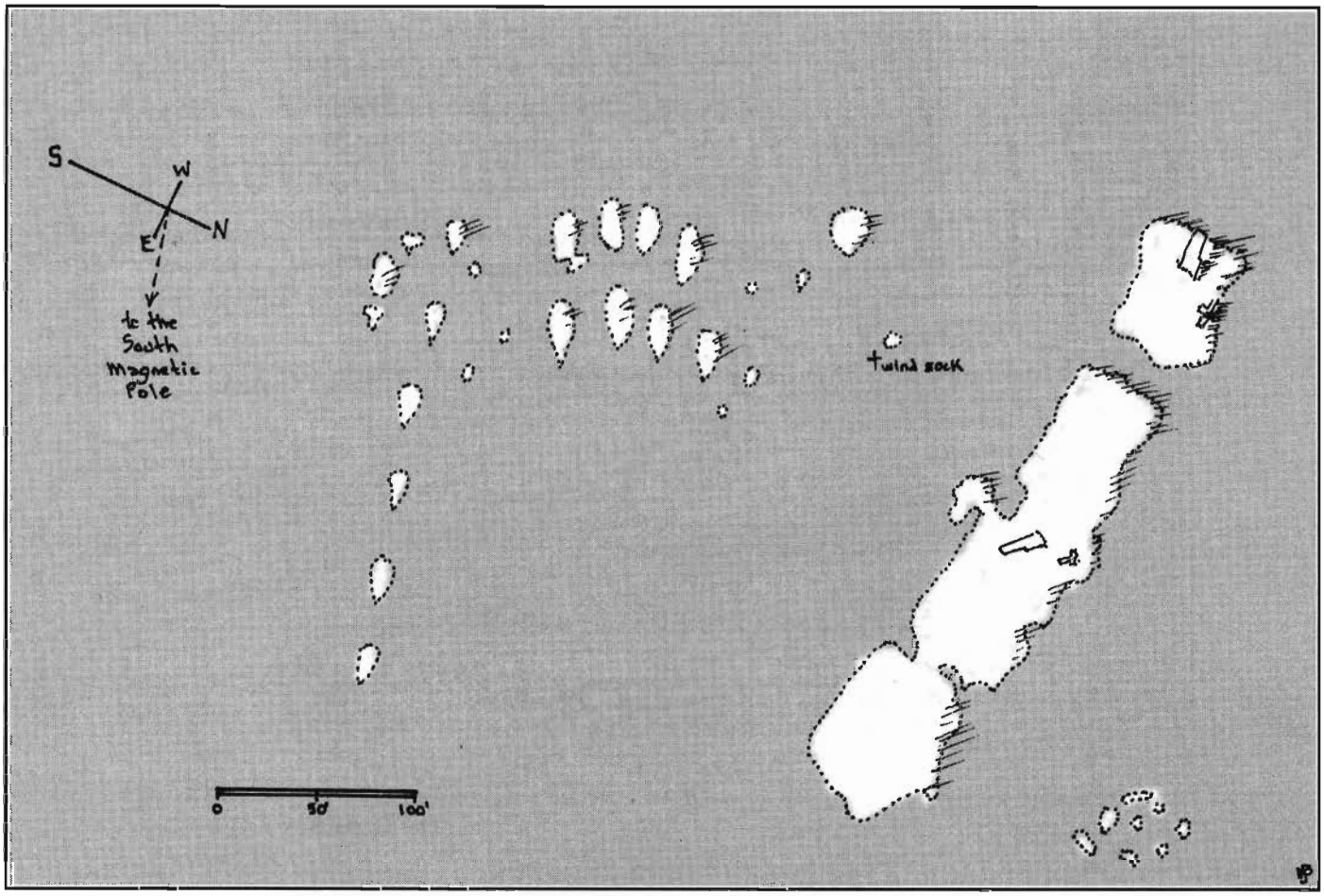
Downtown New York Players' Map

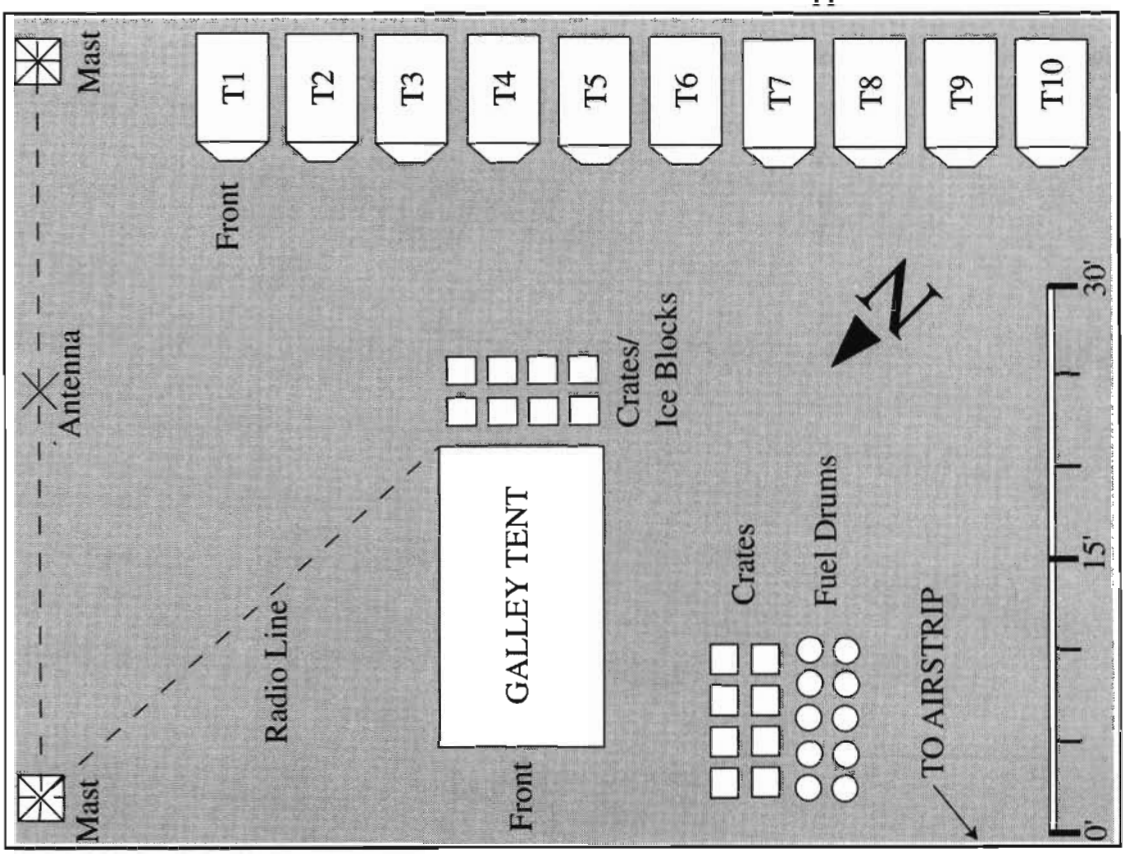


The Ross Sea and the Barrier Camps



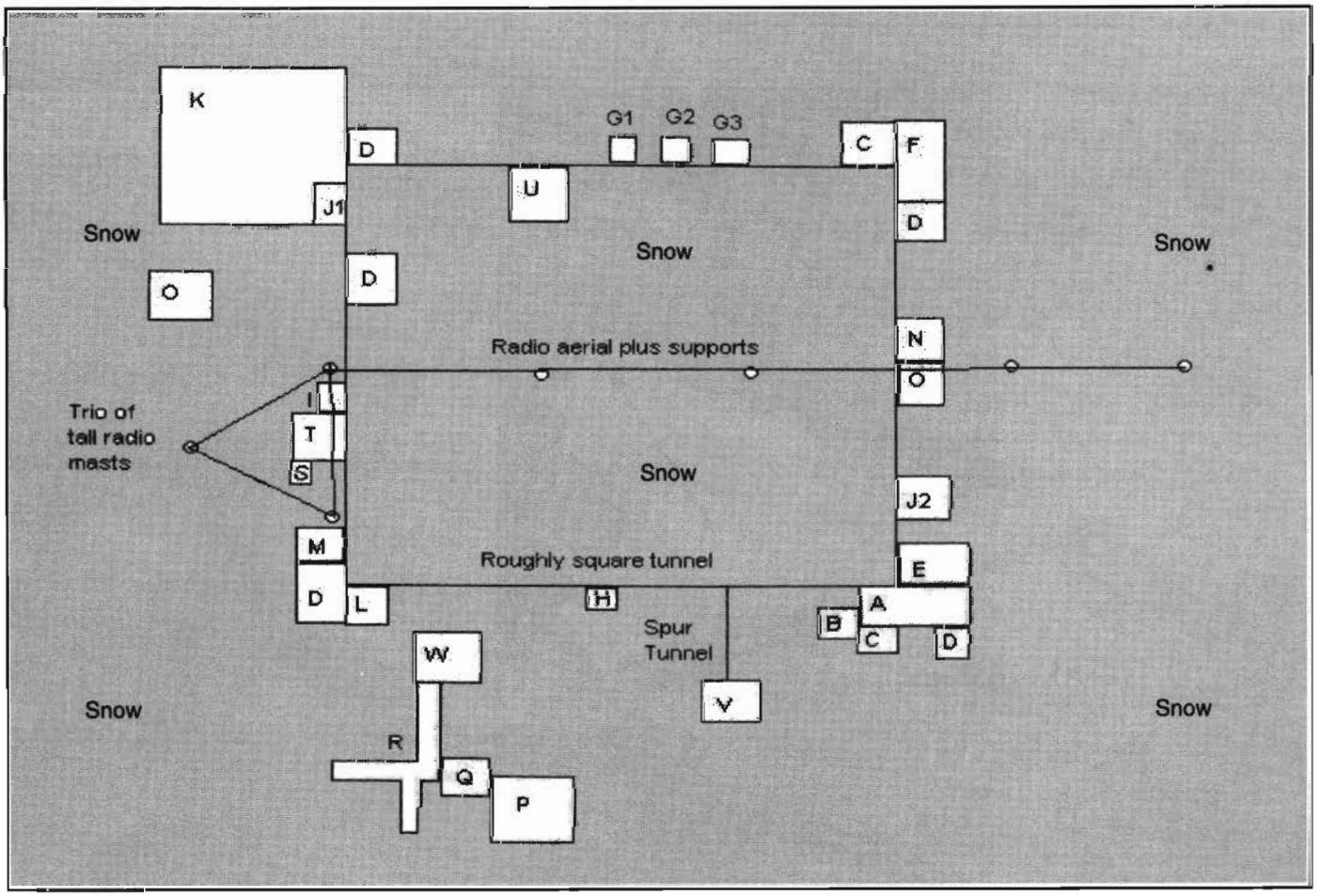
Lake's Camp Players' Map



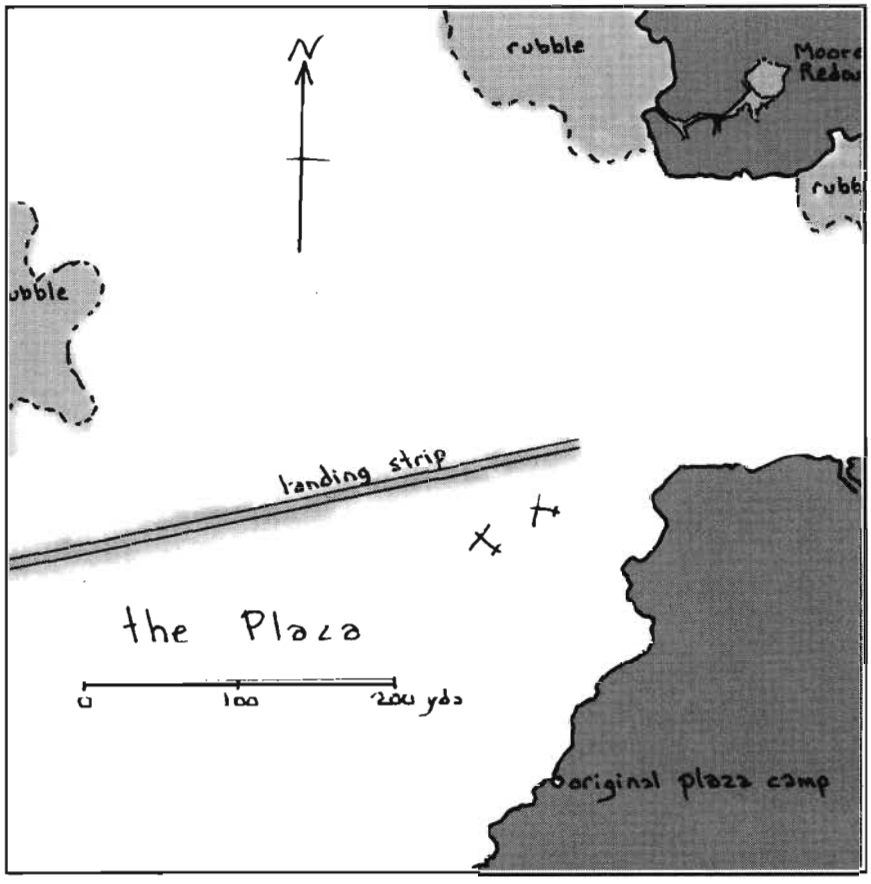


Barsmeier-Falken Camp

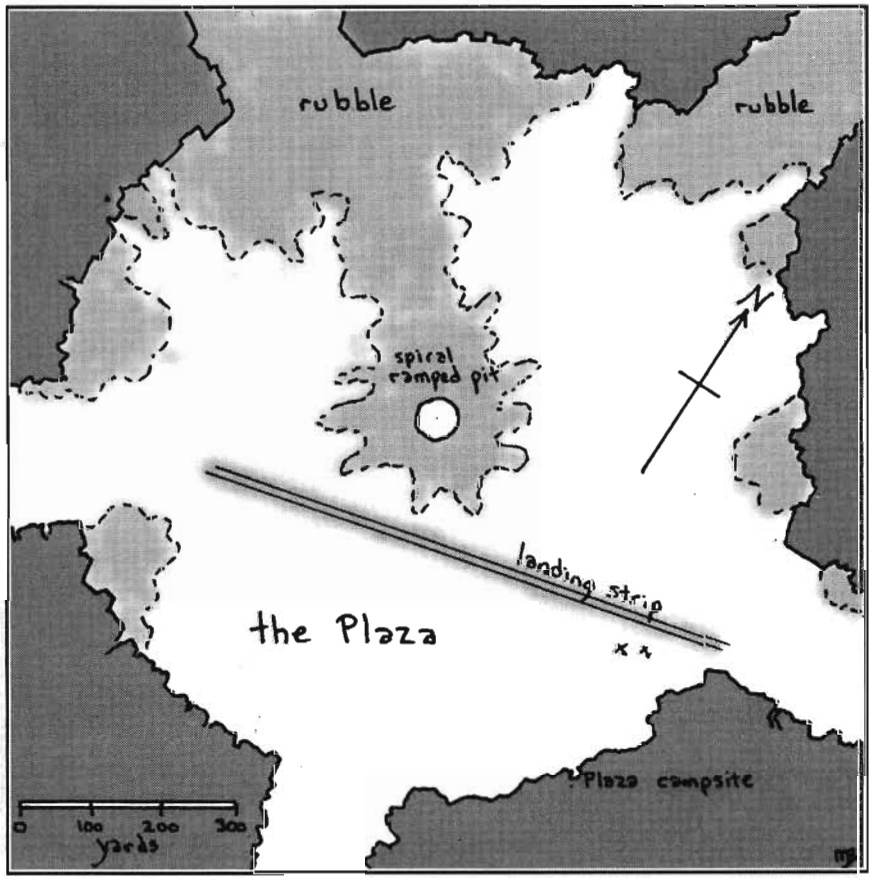
Barsmeier-Falken Weddell Base Camp Map



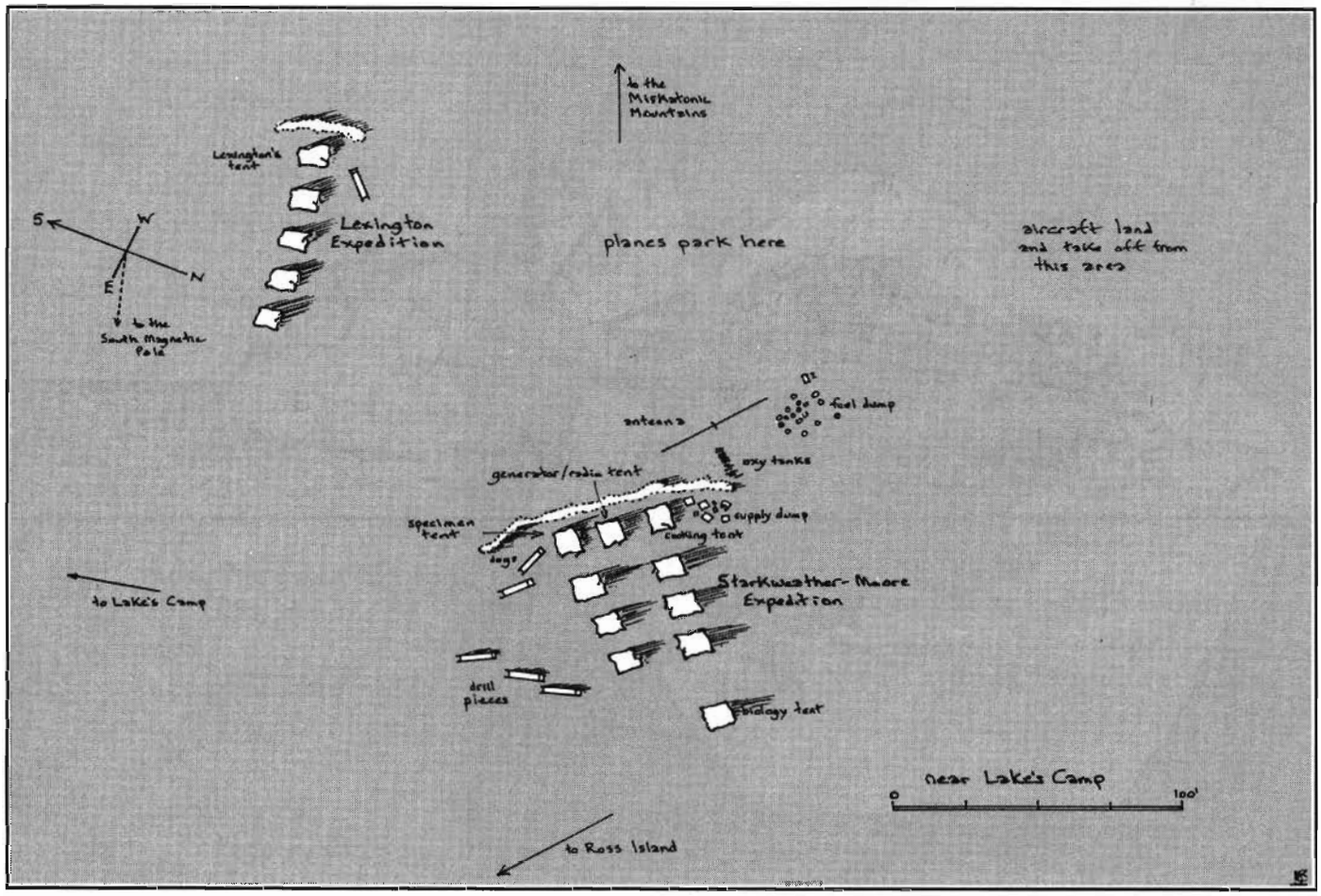
Redoubt Tower and Vicinity



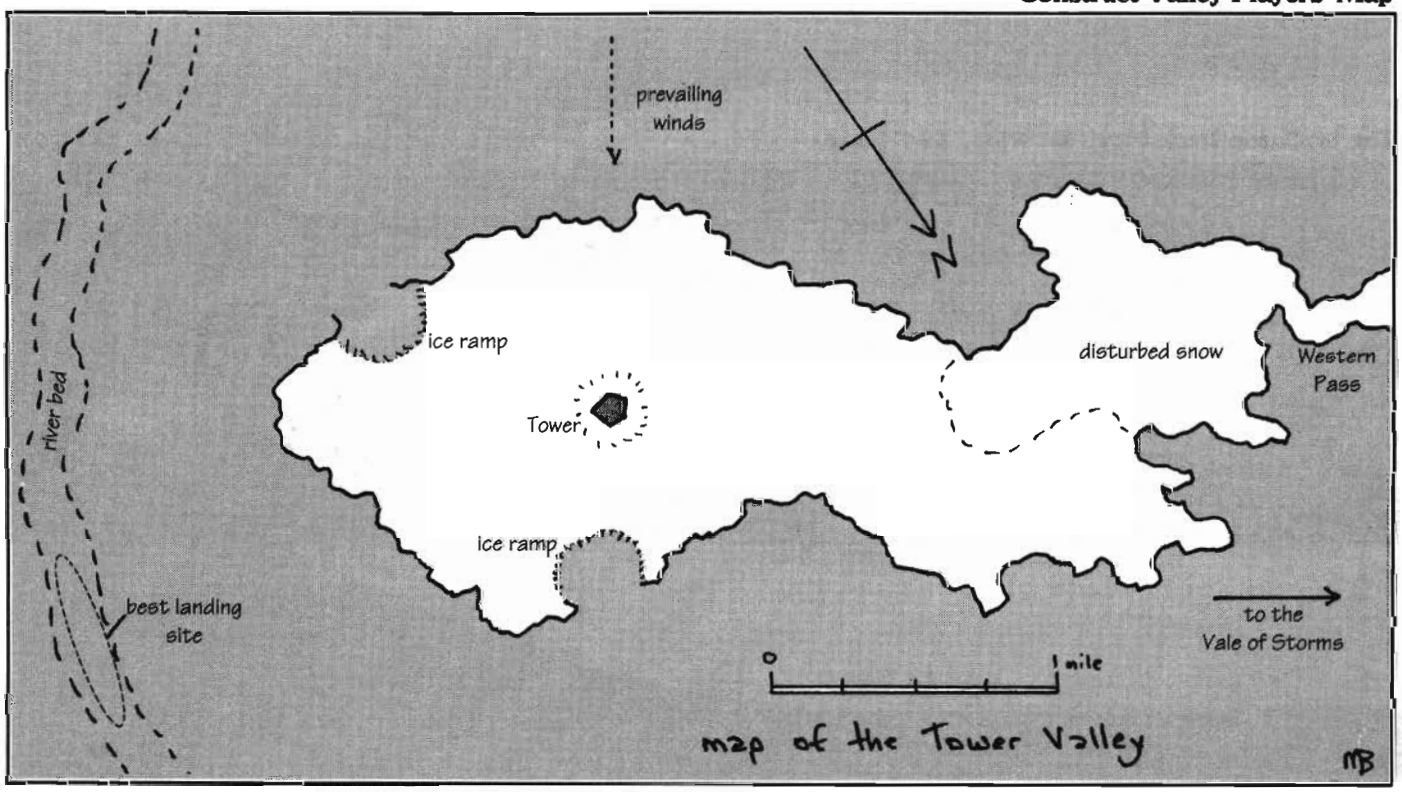
The Plaza



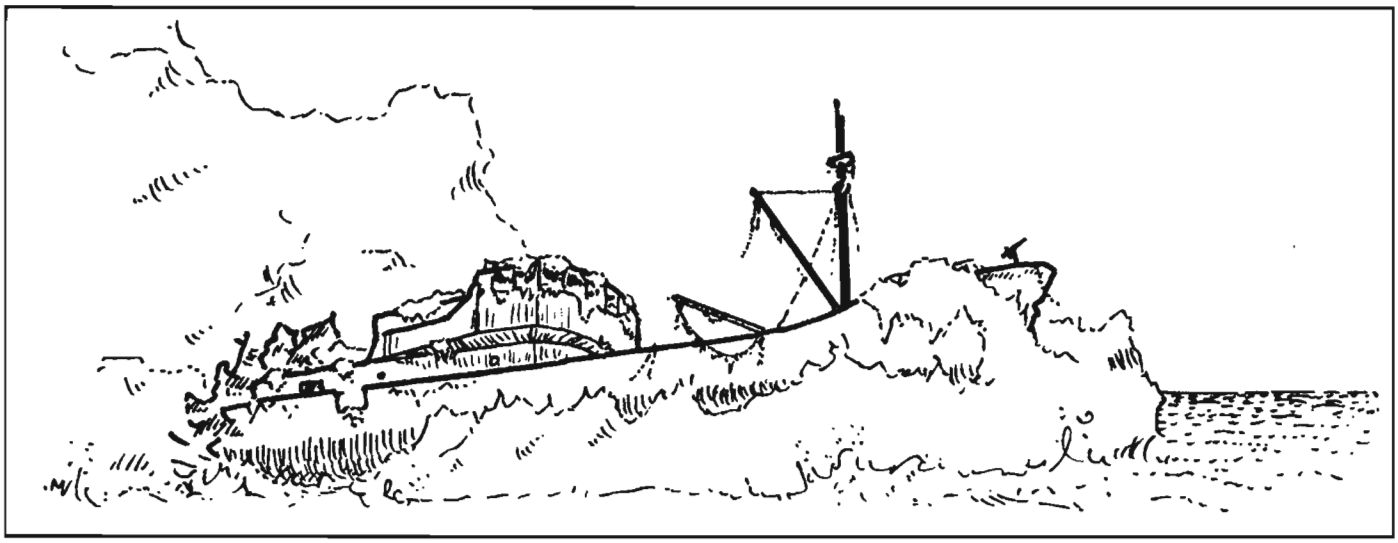
Starkweather-Moore and Lexington Camps



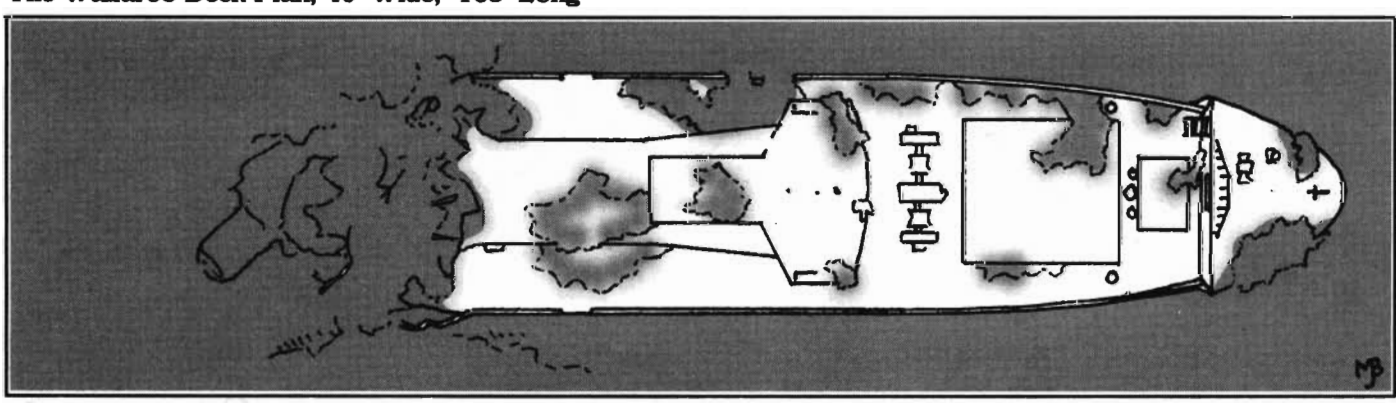
Construct Valley Players' Map



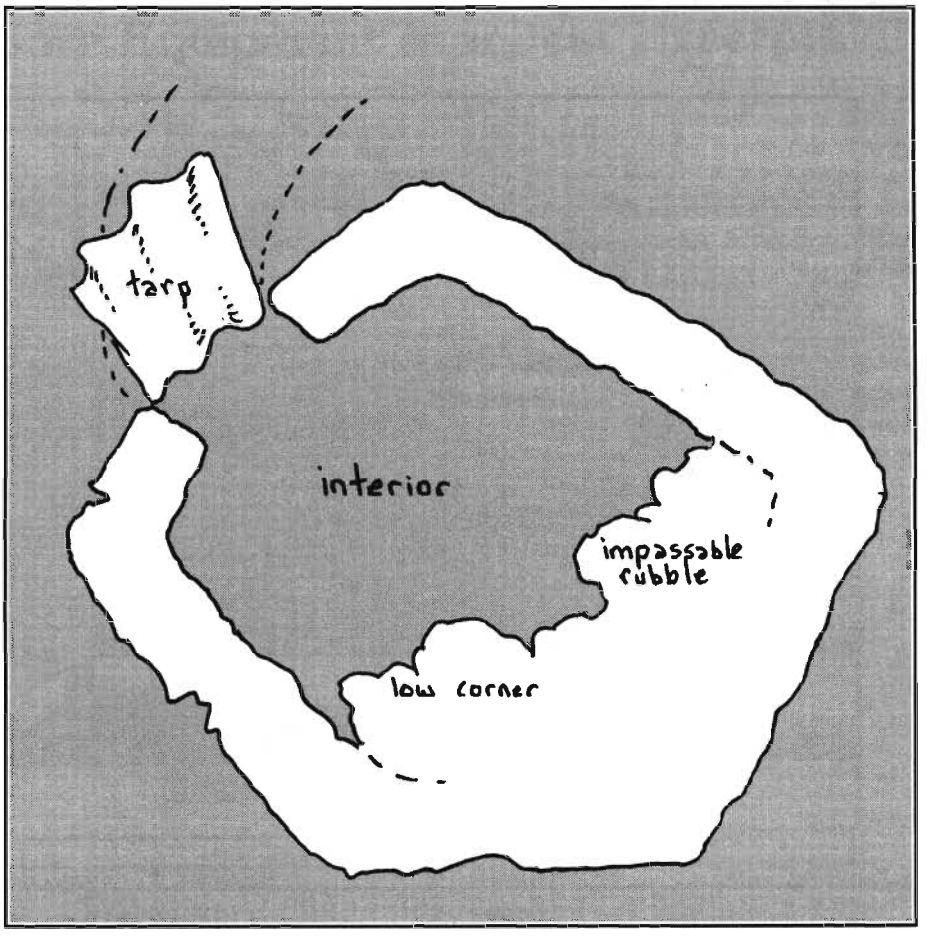
The Wallaroo in the Ice



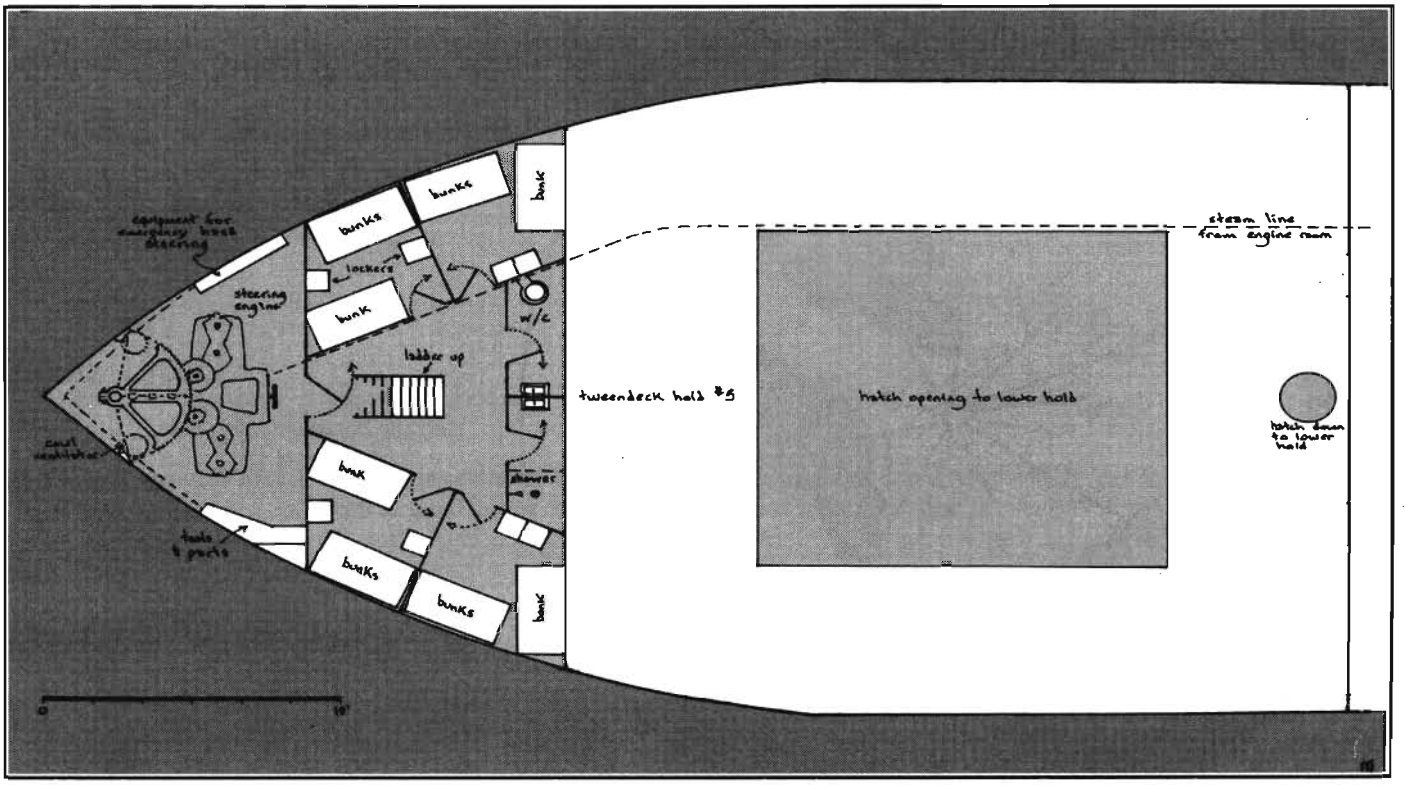
The Wallaroo Deck Plan, 40' Wide, 165' Long



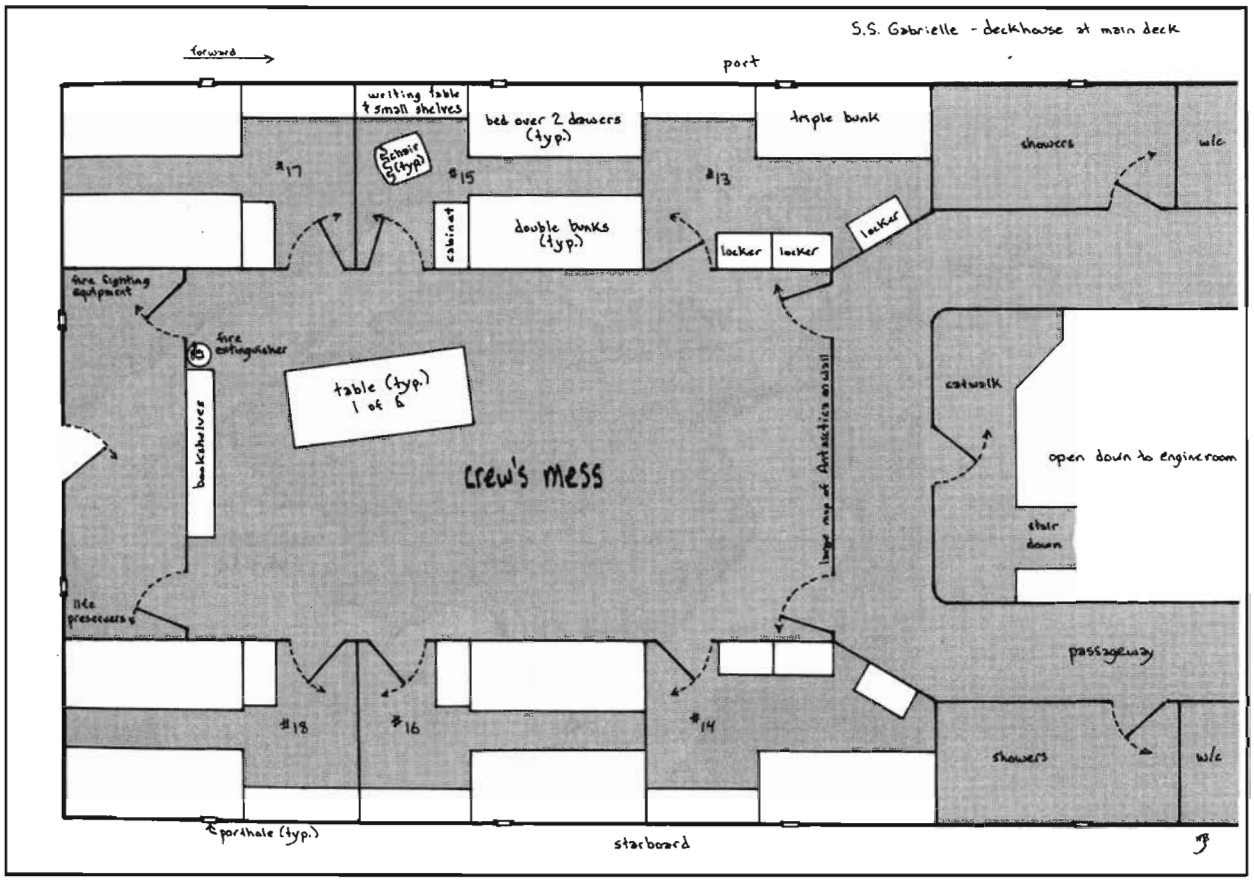
Redoubt Tower Interior



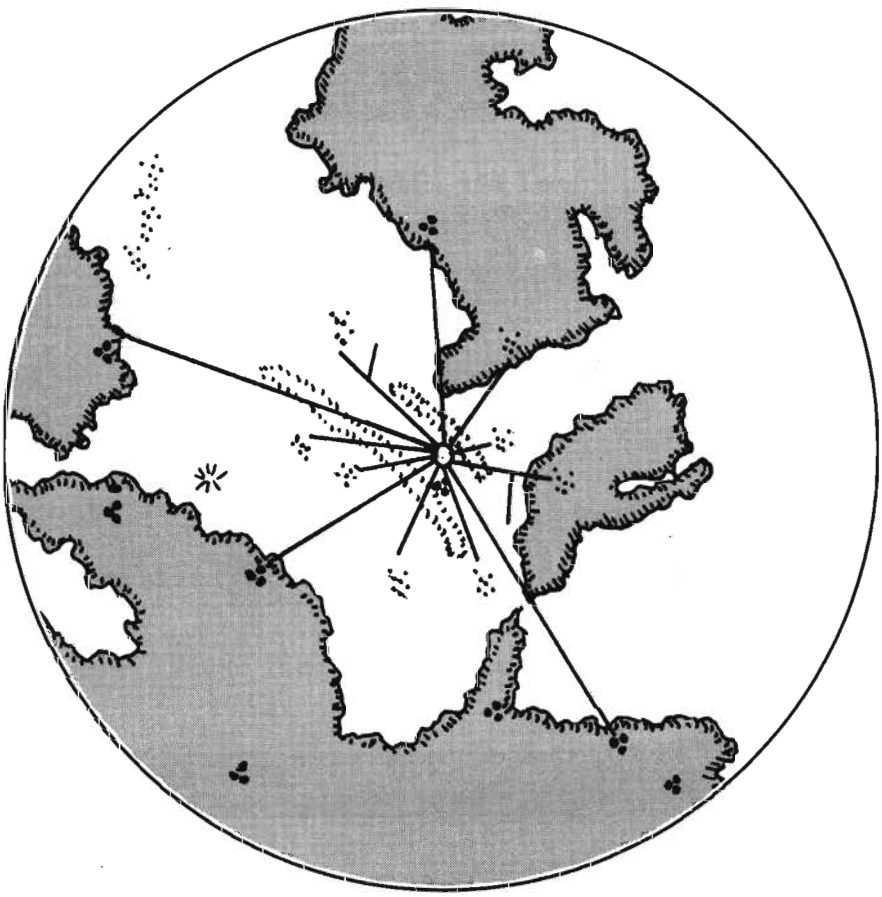
The Tween-Decks Aftercastle and the Steering Engine Chamber



The Aftercastle Common Area



Panel Five Antarctic Map



Starkweather-Moore Equipment Manifest Excerpts

Photocopy pages 429 through 435 in this appendix. They are excerpts from the Starkweather-Moore Expedition's equipment manifests. At the top of each page are the items that need checking, their quantity, where the items should be when aboard the *Gabrielle,* and how much they weigh. At the bottom of each page, information intended only for the keeper tells what is wrong with that list.

The keeper should photocopy each page, *then divide the page and give the player only the manifest portion.* When convenient for the keeper, he or she can tell the player of a solution concerning something on the list. Very detailed descriptions are at the keeper's option, of course, but the idea here is to recognize the sorts of things that can go wrong, the effort that is needed to correct them, and to foreshadow other more dangerous searches in the months to come.

Try to characterize each as a project requiring hours or days to complete. Inspect the cargo hold descriptions for the *Gabrielle* in Chapter Four-B, and be sure to acquaint the character with the bad lighting and limited access of the holds. This foreshadowing will be helpful later, when the team tries to corner the saboteur on the voyage south, as well as during the much greater dangers on the terrifiying voyage north.

Since there probably are more manifest sections than players, a single player-character may have a chance to investigate several such lists. Use them as punishments (since no skill rolls or great recognition will come from such work), to fill up hours otherwise unaccounted for, or to divert the players while the keeper prepares some emergency patch.

Nothing in these minor searches warrants a skill check or a skill increase unless otherwise stated. ■

CUT HERE

Starkweather-Moore Expedition
Equipment Manifest Excerpts

no.	description	stored in	lbs. ea.	total
30	crate, w. 2 boxes, w. 24 cans 1# butter	#3 tween	52	1,560
25	crate, w. 32 cans 20 oz. powdered milk	#3 tween	43	1,075
1	chest, w. 4 boxes tea, 16 tins 12 oz. each	#3 tween	55	55
2	crate, w. 6 boxes of 2# dried apricots	#3 tween	12	24
8	crate, w. 4 boxes each w. 24 cans 12 oz. prunes	#3 tween	75	600
20	cases, w. 24 cans 2# baked beans	#3 tween	55	1,100
6	jar, 1 gallon sour cream	reefer space	10	60
8	crate, each w. 22 boxes of a dozen eggs	reefer space	60	480
4	tub, 20# of lard	reefer space	22	88
192	crate, w. 90 blocks 1/2# pemmican (men & dogs)	reefer space	50	9,600
5	sides of bacon	reefer space	50	250

CUT HERE

Keeper's Notes

The following things are wrong on this list:

■ The six gallon jars of sour cream were accidentally included on a pallet with the canned butter and the powdered milk—destined for the hold—rather than the pallets destined for the refrigerator. If not found and refrigerated, the cream will go very bad by the time anyone decides to use it.

Starkweather-Moore Expedition
Equipment Manifest Excerpts

no.	description	stored in	lbs. ea.	total
2	Ford snow tractors, cap. 750# cargo, tow 3000#	#1 tween	1,450	2,900
3	300 watt generators, gasoline powered, on skids	#1 tween	80	240
1	heavy crate w.derrick, bracing struct for drill	#1 tween	1,000	1,000
1	heavy crate w. generator, meters & drill-head	#1 tween	1,000	1,000
1	frame cont. w. jointed drill-pipe, 12' lengths	#1 tween	1,000	1,000
1	heavy crate w. electrical ice-melting equipment	#1 tween	1,000	1,000
2	crated windmill generator, cplt w. 12' triped	#1 tween	300	600
2	kerosene stoves for base camp	#3 tween	25	50
2	chalkboard, 4' x 4' on stand	#3 tween	35	70
6	blowtorch	#3 tween	5	30
4	kerosene lanterns	#3 tween	2	8
3	boxed set cooking gear for camp (pots and pans)	#3 tween	20	60
2	camp radio with antenna	#3 tween	200	400
4	trail radio with antenna	#3 tween	100	400
20	trail radio battery	#3 tween	20	400
6	field telephone w. telegraph key	#3 tween	20	120
32	telephone battery	#3 tween	1	32
1	spool 8,000' telephone wire	#3 tween	8	8

CUT HERE

Keeper's Notes

The following things are wrong on this list:

- The two crated windmill generators and tripods are not present. These were ordered from Willard and Ball Agricultural Supply Company of Chicago, Illinois. If the investigators contact the company they discover that the generators have not been shipped because payment for $370 was never received. Once the check is in their hands the equipment arrives within 48 hours.
- Of the three cook sets listed in the manifest, only one can be found in the dockside warehouse; the other two were shipped to the dock but cannot now be found. Investigators will not find these items unless they think to look aboard the ship; the other two sets have been unpacked and placed in the crew galley as part of the regular assortment of kitchen gear. Identifiying the pans will be difficult, if not impossible—most likely they must simply be replaced. A cook set costs about $50.
- The four trail radios appear complete on brief inspection; however, they are not functional. Each is missing its power amplifier tube—these must be ordered separately and no such order has been placed. The tubes can be obtained only from the manufacturer—in this case the DeForrest Company in New York—and it would be a good idea to order several spares. The missing tubes cost $10 apiece.

Starkweather-Moore Expedition
Equipment Manifest Excerpts

no.	description	stored in	lbs. ea.	total
5	bag, set aircraft tools	#3 tween	50	250
1	crate tools (vise, sm lathe, files, drill, &c.)	#3 tween	300	300
1	chest carpentry tools:base (saws hammers etc.)	#3 tween	50	50
1	box, w. various nails & carpentry supplies	#3 tween	50	50
2	sled, 900 board feet lumber for base	#3 tween	4,000	8,000
1	pallet, w. 6 rolls tar paper	#3 tween	380	380
1	box, set film developing equipment & chemicals	#3 tween	35	35
10	Nansen cookers & primus stoves	#3 tween	25	250
2	crate 1 doz. settings plates, mugs, utensils	#3 tween	15	30
12	buckets (to melt water in)	#3 tween	2	24
12	4 person bellows-entrance tents, w. poles, etc.	#3 tween	50	600
20	5-pole sledding tents	#3 tween	10	200
40	canvas and geesedown sleeping bags	#3 tween	16	640
8	box, w. 6 cnt. of 60 'lifeboat' style matches	#3 tween	5	40
6	flags (2 U.S., 2 Brit., 2 M.U.) on short poles	#3 tween	5	30
40	pair snowshoes	#3 tween	6	240
10	pair skis, bindings, and poles	#3 tween	12	120
12	shovels	#3 tween	3	36
6	axes	#3 tween	5	30
4	bow saws	#3 tween	4	16

CUT HERE

Keeper's Notes

The following things are wrong on this list:

- These five 50-pound sets of tools are well-made, in perfect condition, and brand new; they are simply not the right tools. These are heavy tool sets for marine engines, and only the smaller items are of any use whatsoever in maintaining the aircraft, while a number of pliers and fine wrenches needed for the Boeings are simply not present. Investigation into this discrepancy reveals that the tools are exactly what was ordered by Starkweather; it is the order itself that is incorrect. The tool sets must be returned to their manufacturer, Bertram Ironworks of Baltimore, and new tool kits acquired from the Boeing Company. These take three days to arrive.
- Two long sleds, each containing 900 board-feet—two tons—of lumber for construction of the base camp are missing. They have never been ordered. Fortunately, these materials can be acquired from any large lumber yard. Suitable heavy wood costs between three and five cents per foot, depending upon the cut and the quality; the entire lot probably costs about $100, including shipping to the *Gabrielle*.
- One large box, listed on the manifest as containing film development equipment and supplies, is missing. If the entire warehouse is searched (with a successful **Luck roll**) it will be found stacked beneath a number of other boxes the same size and shape labelled "chocolate."
- Four bow saws, used for working wood, are absent. In their place is a small parcel containing four replacement blades for the same sort of saw. The invoice numbers match; it appears to be a clerical error.

Starkweather-Moore Expedition
Equipment Manifest Excerpts

no.	description	stored in	lbs. ea.	total
6	600' coils, alpine rope	#3 tween	40	240
12	bagged sets pitons, slings, other climbing gear	#3 tween	7	84
12	ice axes	#3 tween	5	60
8	Nansen sleds, 12' long, 2' wide, 1000# cap.	#3 tween	100	800
8	sled meters	#3 tween	3	24
4	box with 1" flare pistol and 10 flares	#3 tween	4	16
3	metal box, 10 calcium flares (burn for 10 min.)	#3 tween	20	60
6	cerise marker panels to signal aircraft	#3 tween	n/a	n/a
6	electric signal lamp (needs power source)	#3 tween	3	18
3	oxygen snow tents	#3 tween	50	150
1	heavy cargo ramp for unloading ship	#3 lower	1,500	1,500
36	malamute sled dogs - usually 9-11 per sled	#5 tween	90	3,240
--	bunks, benches, etc. for base camp	#5 lower	--	800
150	8' bamboo poles	#5 lower	2	300
20	12' x 12' timbers, 18' long for base shelters	#5 lower	1,300	26,000
10	24' telephone poles for base masts and bridging	#5 lower	500	5,000

CUT HERE

Keeper's Notes

The following things are wrong on this list:

- The twelve bagged sets of pitons and associated climbing gear are nowhere in evidence. They cannot be found anywhere in the warehouse or on the ship; contacting the provider (Dalrymple's of Boston) reveals that the carton was shipped to the Amherst Hotel, not to the dockside warehouse; the items can be found there in the luggage room along with Starkweather's other personal mountaineering equipment.
- The six cerise marker panels, used for signalling aircraft, are missing. The manufacturer, Crawford Manufacturing of Brooklyn, shows the order paid in full and delivered to the warehouse on schedule, but there is no sign of it now. These items must be replaced at a cost of about $20.
- The six electric signal lamps are the wrong type. In place of the small models listed in the invoice, the warehouse contains a pair of very large crates with big heavy shuttered carbon-arc lamps used for theatrical lighting. These weigh about 40 pounds apiece and require a pipe mount and a lot of power; they are eminently unsuitable for the Antarctic. They may be returned to the supplier (Abercrombie Stage and Studio, in Manhattan) for a refund, and the proper lamps purchased from any shipboard supply house.
- The twenty heavy foot-thick timbers, destined as the main beams of the shelters at the base, are nowhere to be found. They have never been ordered. Fortunately, these can be acquired from any large lumber yard. Each such beam costs $30-$40 depending upon the cut and the quality; the entire lot probably costs about $850 including shipping to the *Gabrielle*.

Starkweather-Moore Expedition
Equipment Manifest Excerpts

no.	description	stored in	lbs. ea.	total
1	spare rudder and rudder assembly	on deck aft	2,100	2,100
1	spare ship's propeller	on deck aft	2,700	2,700
1	raft built atop oil drums (for help unloading)	on deck aft	1,100	1,100
40	bags, quick setting cement	#4 tween	40	1,600
2	case of 48 sticks ammonia-gelatin dynamite	#4 tween	60	120
2	set, welding equipment	bosun stores	220	440
8	mallet	bosun stores	8	64
8	large hammer	bosun stores	2	16
1	wooden box, 100 no.6 non-electric blasting caps	bosun stores	10	10
6	coil (50') of time blasting fuse	bosun stores	10	60
8	large crowbar	bosun stores	4	32
12	ice scrapers	bosun stores	3	36
12	snow shovels	bosun stores	3	36
12	stiff brooms for sweeping ice off ship	bosun stores	2	24
4	ice anchors (really big hooks)	bosun stores	180	720

CUT HERE

Keeper's Notes

The following things are wrong on this list:

- The forty bags of quick-setting cement are missing. They have never been ordered, but a full search of the warehouse is required to confirm this. The invoice number given on Moore's list is in fact for the ship's spare rudder assembly. Bags of cement can be purchased from any construction supply firm for about $0.50 each.
- The several cases of ammonia-gelatin dynamite have not arrived. They were ordered and paid for from Giordano's construction supply firm in Newark. If the investigators look into this they find that the explosives have not been delivered because of a New Jersey law that requires all purchasers of large quantities of explosives to be licensed. Giordano's has sent several letters to Starkweather advising him of this, but he has not responded (and is not aware of the problem.) Resolving the issue requires a visit to Newark, a session or two with the New Jersey state police, and a five dollar licensing fee.
- The box of blasting caps, also ordered from Giordano's, has also been held up, and for the same reason. Examination of the caps when they do arrive shows them to be a different sort from those on Moore's list. These are electrically-fired caps, not non-electric ones. They should be replaced by no. 6 fused caps, at a cost of about $20.
- It should come as no surprise by now that the coils of time blasting fuse are not present in the warehouse. These, however, were shipped by Giordano's long ago to the expedition's dock and were duly signed for by the guard there. Now they are gone, vanished without a trace. Replacing the coils costs about $30. The whereabouts of the originals remains a mystery. (Actually the fuses have been stolen by Henning, Danforth's paid saboteur, who has hidden them aboard the ship.)
- The crate of 12 shovels listed on Moore's manifest is present in the warehouse. A successful **Idea roll,** however, causes the investigator to notice that it is much larger than it probably ought to be. Inspection reveals that the crate contains 72 snow shovels, not 12, probably due to someone's imprecise handwriting. These have all been bought and paid for.

Starkweather-Moore Expedition
Equipment Manifest Excerpts

no.	description	stored in	lbs. ea.	total
30	crate, w. 30 1/2# cans sardines	#3 tween	20	600
4	box, w. 8 cans 4 oz. pepper	#3 tween	2	8
2	box, w. 8 jars 6 oz. mustard	#3 tween	3	6
2	box, w. 8 jars 2 oz. tabasco sauce	#3 tween	1	2
4	crate, w. 40 jars 8 oz. marmalade	#3 tween	25	100
1	box, w. 8 bottles 3 oz. worcestershire sauce	#3 tween	2	2
4	box, w. 80 boxes 4 oz. raisins	#3 tween	22	88
3	crate, w. 150 jars 8 oz. orange syrup	#3 tween	75	225
3	crate, w. 150 jars 8 oz. grape syrup	#3 tween	75	225
16	box, w. 9 boxes, ea. w. 4 slabs 1# chocolate	#3 tween	40	640
48	crate, w. 12 box, ea. 6 12 oz wheat&oat biscuit	#3 tween	60	2,880
4	box, w. 20 boxes of 1/2# cubed sugar	#3 tween	12	48
4	box, w. 27 boxes of 4 oz. w. bouillon cubes	#3 tween	8	32
10	sack, 10# sugar	#3 tween	10	100
8	bag, 12# all-purpose flour	#3 tween	12	96
4	can, 2# baking powder	#3 tween	2	8
4	box, 1# baking soda	#3 tween	1	4
1	box, w. 12 drums 2# salt	#3 tween	25	25
5	crate, w. 12 boxes of 4# oatmeal	#3 tween	50	250

CUT HERE

Keeper's Notes

Several items on this list were mis-ordered, and must be purchased anew if they are to be brought along:

- Thirty small crates of sardines listed on the manifest each contain several large cans of sardine *oil.*
- Four boxes of pepper are actually four two-pound boxes of dried red peppers.
- Four crates supposedly containing jars of marmalade are actually four crates of small canning jars, with wax and sealable lids, ready to use but without anything in them.

Other missing items have never been ordered:

- Eight twelve-pound bags of flour.
- Four eight-pound boxes of bouillon cubes.

The following items were ordered but have gone astray and must be hunted down:

- One box containing eight 3-oz. jars of worcestershire sauce. (These have actually been brought aboard the *Gabrielle* for the crew's use, but the investigators will probably never know.)
- Four boxes of sugar cubes. These were delivered from a local grocery but cannot now be found. (These were accidentally taken aboard another ship and are now far out to sea.)

Starkweather-Moore Expedition
Equipment Manifest Excerpts

no.	description	stored in	lbs. ea.	total
4	canvas plane covers, 38' on a side	on planes	150	600
6	heating hoods for engines	on planes	10	60
2	case, with movie camera, tripods and film	deckhouse	130	260
2	guitar	deckhouse	n/a	n/a
2	harmonica	deckhouse	n/a	n/a
3	still camera set - camera, lenses, triped, film, 50 flashbulbs, IR filters	deckhouse	25	75
1	case biology, zoology, and botany instruments - microscopes, slides	deckhouse	25	25
1	straitjacket	doc's cabin	5	5
3	pairs handcuffs	doc's cabin	n/a	n/a
1	case of 24 bottles various "medicinal" liquor	doc's cabin	30	30
1	medicine chest with surgical and drug supplies	doc's cabin	28	28
1	doctor's medical bag, for use on trail - includes injectable morphine	doc's cabin	12	12
1	box, tobacco and cigarettes	SME office	8	8
1	case, with typewriter, paper and carbon paper	SME office	35	35
1	crate var. navigational instruments and charts	SME office	50	50
12	binoculars, 7x50mm	SME office	2	24
1	case astronomy instruments and notebook - Geiger-Muller counter for cosmic ray studies - quartz spectrographs to study sun and sky spectra	SME office	26	26
4	case meteorology instruments and texts	SME office	13	52
2	chest paleontology equipment - reference works, wire brushes, small 'dental' tools, charting equipment	SME office	10	20
6	chest, geology-cartography tools - stakes, survey theodolite on aluminum triped, rock hammers, sample bags, drafting tools	SME office	40	240
2	chest, geophysics set - precision compass and magnetometer	SME office	12	24
2	chest, chemistry sampling and test equipment - test tubes, beakers & other glassware, bunsen burners, test chemicals, tongs, stoppers, thermometers, reference works	SME office	10	20
4	crate, 6 caustic soda canisters	besun stores	25	100

CUT HERE

KEEPER'S NOTES

The following things are wrong on this list:

- The box for the harmonicas has been broken into and both instruments are gone. This is obvious vandalism. If desired, the harmonicas must be replaced, at a cost of about $8.
- The case containing astronomy instruments and Geiger counters is missing. This case is actually in the luggage room at the Amherst Hotel; investigators will not know this unless they check with Moore, who is aware of its location.
- The crate containing the caustic soda was delivered to the warehouse but is now missing. No trace of it can be found; if caustic soda is desired it must be purchased from a laboratory supply house for about $9. (The original crate was stolen by the saboteur, Henning, and hidden aboard ship.)

Index

By no means is this index a complete list of references in this book. However, it is a listing of all the important references for the items included, with the most vital pages highlighted in bold. When looking up Characters, also see the "Individual Bios and Stats" listing on pages 381-382.

Artifacts

Characters

Creatures

Locations

Spells

DOCK PASS
PIER 74-B
Gabrielle
SS

WATCH OUT!
for
Switch engines
Trucks
Flammables
Dollies
Cargo booms
Cargo nets
Electrical cables
Taxicabs
Piles of cargo

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PIER 74-B
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STARKWEATHER-MOORE
ANTARCTIC EXPEDITION 1933

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