

# Train Oil and Snotters

## Eating Antarctic Wild Foods

*To a man who is really hungry it is a very subordinate matter what he shall eat; the main thing is to have something to satisfy his hunger.*

—Kristian Prestrud, Norwegian Antarctic Expedition, 1910–12

INTREPID GOURMETS ARE no longer able to sample the wild foods of Antarctica, as the Antarctic Treaty's 1991 Protocol on Environmental Protection prohibits even "disturbing" any wildlife, except in case of life-threatening emergency. Until relatively recently, however, visitors to Antarctica and the peri-Antarctic islands regularly ate the animals and plants they found there. Penguins and seals, naturally, were the most frequently consumed species, though a variety of eggs, seabirds, shellfish, and several unusual endemic plants were also eaten. Indeed, there is a long history of living off the land in Antarctica and on the remote islands of the Southern Ocean surrounding the continent, a history we can glean from the diaries, letters, and published accounts of those who spent time there.

### Living Off the Land

Profit-hungry owners of sealing and whaling vessels expected their crews to secure a large part of their rations themselves, so sealers and whalers supplemented their often meager and monotonous diets by hunting and gathering "provision." As William Dane Phelps, an American sealer who worked on the Prince Edward Islands in 1817, explained, "We were short of 'grub' on board; while on shore we could cook and eat to our heart's content."

Finding food appears not to have been a great hardship. "Sent the boys up the hills," noted William Henry Appleman in the log of his schooner *Thomas Hunt* of Stonington, Connecticut, during an 1873 sealing voyage to the South Shetland Islands. "[They] brought home a half bushell or more of eggs which we fraid [*sic*] boiled and roasted together with variety of liver & tongues. We managed to live on the fat of the land through the day and night comfort-

ably." William Elder, principal owner of a New Zealand whaling company that sent sealing gangs to Macquarie Island in the late nineteenth century, reported that his men "came back heavier than when they went away."<sup>1</sup>

Shipwrecked seamen survived only by foraging. "When we first landed, our craving for fresh food was such that our narrow strip of shingle beach became unsafe for any living thing," wrote F.D. Ommaney after being stranded on the

Manna from heaven could not have seemed more delicious than lumps of seal or penguin meat made into a hash with a handful of oatmeal.

South Shetlands. At the 1891 court of inquiry into a wreck on Macquarie Island, Henry Mellish testified, "There is plenty of food on the island at all times if people have not too delicate stomachs."<sup>2</sup>

Even well-organized Antarctic expeditions in modern times counted on obtaining fresh meat in the field. Douglas Mawson, for example, wrote that his 1911–1914 Australasian Antarctic Expedition's one hundred tons of food were calculated "based on the supposition that unlimited quantities of seal and penguin meat can be had on the spot."<sup>3</sup>

Fresh meat was critical in avoiding scurvy, caused by a lack of Vitamin C. "Scurvy, the worst enemy of Polar expeditions, must be kept off at all costs, and to achieve this it was my intention to use fresh meat every day," wrote Roald Amundsen of his South Pole expedition. "It was easy to carry out this rule, since everyone, without exception, preferred seal meat to tinned foods." Nearly all expeditions liked fresh seal and penguin better than their preserved meats, and Norwegian-Australian explorer Carstens



Charles Green, cook on Shackleton's *Endurance* expedition, skins an emperor penguin in the ship's galley.

PHOTOGRAPH COURTESY OF SCOTT POLAR RESEARCH INSTITUTE

Borchgrevink's 1901 lament—"we grew frightfully tired of tinned food"—is oft repeated in expedition accounts.

Seal, penguin, and whale meat were eaten on the first Byrd Antarctic Expedition of 1928–1930, says Norman D. Vaughan, now ninety-seven, the expedition's last surviving member: "They all taste quite alike. It is all heavy, black meat, but as long as it's fresh, it's great."<sup>4</sup>

The healthfulness of Antarctic wild foods is proven. "We were on the island over two years," wrote Phelps:

One year without bread or any other ship-stores, wholly without vegetables, and, in fact, with nothing to eat but meat, eggs and fish, with good cold water to drink; each man averaging three full pounds of meat a day, and a considerable quantity of fish oil; yet during the whole time I do not remember a single case of a man being laid by for one day with sickness, and, with the exception of one of our fellows who got a severe bite from a seal, we had no one off duty during the absence of the vessel.

Nutritional analysis confirms that seal meat is a reasonably good source of ascorbic acid (Vitamin C), providing

two milligrams per one hundred grams of meat; seal liver provides nearly ten times that amount.<sup>5</sup>

Eating local foods was a regular part of Antarctic life as recently as the International Geophysical Year of 1957–58, when an enterprising cook at Britain's Argentine Islands base, Gerald T. Cutland, wrote a handbook on Antarctic cookery titled *Fit for a FID, or, How to Keep a Fat Explorer in Prime Condition*.<sup>6</sup> His book includes recipes using seal, penguin, and shag meat. "Before my arrival at the Argentine Islands," wrote Cutland,

I had no idea whatever that there would be any fresh foods to prepare, especially food that was alien to me, but with a little care and attention I managed to get the best out of all that is available, not only being able to cook it but able to present it in a manner that people got to like it, and also expected it at least two or three times in a week.

## Holiday Treats

Antarctic “country foods” often occupied a prominent place on the table during local holidays. The most important Antarctic celebration, Midwinter’s Day, marks the midpoint of the polar winter’s darkness and extreme cold; even today, it is celebrated with fanfare at Antarctic bases of all nations. Nearly every expedition marked the day with an elaborate feast accompanied by speeches, toasts, and hand-decorated menus. Rudmose Brown reports that the Scottish National Antarctic Expedition of 1902–04 enjoyed a Christmas dinner of *Penguin à la Scotia*, named for the expedition’s ship, while the 1912 Midwinter’s Day dinner on the Australasian Antarctic Expedition included *Noisettes de Phoque* [seal], served with a claret, and *Pinguoin à la Terre Adélie*, accompanied by an 1898 Burgundy Chauvénet. Expedition leader Mawson called the meal “a marvel of gorgeous delicacies.”<sup>7</sup>

## The Best Spice

Although a Swedish proverb holds that “hunger is the best spice,” one frequent difficulty in preparing Antarctic wild foods was insufficient seasoning, particularly when the diners were shipwrecked or marooned. “A slight variation in flavour now and again is a matter of far greater psychological importance than might at first appear,” wrote Thomas Orde-Lees in his diary from Ernest Shackleton’s Endurance expedition, in which the ship was crushed and sunk by pack ice. “So keen are explorers to obtain these little changes that when hard pressed it is quite a common thing for them to flavour their food with drugs from the medical outfit such as peppermint, ginger, citric acid, and so on.” Orde-Lees also noted with approval the flavor imparted by slicing up meat on the same boards used for cutting tobacco. While seawater was sometimes used to provide salt, several expeditions found that the magnesium it contains caused severe diarrhea.

For many, however, simply eating at all was quite enough. “Hunger is a wonderful sauce,” wrote Frank Wild, veteran of five Antarctic expeditions, including the Endurance odyssey, “and will break down most prejudices.” Mawson wrote feelingly about the unusual effects of his own starvation:

I will always remember the wonderful taste that the food had in those days. Acute hunger enhances the taste and smell of food beyond all ordinary conception. The flavour of food under such conditions is a miracle altogether unsuspected by the millions of mortals who daily eat their fill.

## By Any Other Name

A simple name change appears sometimes to have increased the palatability of Antarctic foods. On James Clark Ross’s British expedition from 1839 to 1843, penguins were “found to make excellent soup, which from its colour and flavour so much resembled hare soup, that it was always called by that name.” Of penguin meat, Borchgrevink recorded, “when served on our wooden table under the name of ‘ptarmigan’ it was considerably improved as an edible.” Two skuas and a tin of concentrated wine yielded “Coq au Vin cooked in the style of Terre Adélie” on another expedition,<sup>8</sup> and Amundsen’s men referred to the seal meat which they ate almost daily as “crocodile beef.”

Robert F. Scott wrote in the diary of his last expedition, “We had some seal rissoles to-day so extraordinarily well cooked that it was impossible to distinguish them from the best beef rissoles. I told two of the party they were beef, and they made no comment till I enlightened them after they had eaten two each.”

The following descriptions give an idea of preparation methods and taste sensations for most Antarctic wild foods. Taste is a highly individual matter, however, and reactions to the same dish varied sharply. “Many explorers will try,” wrote Frenchman Mario Marret,

to make your mouths water with stories of strange and succulent dishes such as penguin ragout or seal liver Maître d’Hôtel. But take it all with a pinch of salt. Such dishes always have a noticeable taste of fish, perfectly acceptable in fish perhaps, but not in meat.

Others’ reactions differed. “Manna from heaven could not have seemed more delicious than lumps of seal or penguin meat made into a hash with a handful of oatmeal,” wrote Ommaney, while Kevin Walton mourned in *Two Years in the Antarctic*, “The rations from home were extremely generous and, to my sorrow, we rarely had to resort to eating seal or penguin.”

## Better than Beef

The animals most often eaten were seals. “The taste,” wrote German explorer Erich von Drygalski, “is hardly similar to any of our familiar kinds of meat; it might be thought to resemble something between beef and pork, but it is really like neither, because of its fine dark colour.” Frenchman Jean-Baptiste Charcot found seal “difficult to compare with anything else” and yet “pleasant to my taste.” Scott confided in *Voyage of the Discovery*:

There are naturally prejudices to be overcome in taking to a new meat, and the seal being a very full-blooded animal, his flesh does not look pleasing before it is cooked, and afterwards it has a very dark mahogany colour, which is not attractive. It is almost impossible to describe the taste of seal; it has a distinctive flavour in a similar degree to beef and mutton, but it cannot be called 'fishy,' or like anything else that is generally known. It is a very strong meat, and in food value quite equal to the best beef.

Trying to describe the flavor, Kristian Prestrud, a member of Amundsen's expedition, wrote:

One is often asked whether seal's flesh does not taste of train oil. It seems to be a common assumption that it does so. This, however, is a mistake; the oil and the taste of it are only present in the layer of blubber, an inch thick, which covers the seal's body like a protective armour. The flesh itself contains no fat; on the other hand, it is extremely rich in blood and its taste in consequence reminds one of black-puddings. The flesh of the Weddell [seal] is very dark in colour; in the frying-pan it turns quite black.

Briton Wally Herbert found it "impossible to disguise" the dark color of seal meat, writing: "It cannot look any paler than black; but it can always be covered with bread-crumbs, or poked below the surface of a casserole so that its discovery is delayed."

Despite its unusual appearance, seal was popular fare. Reginald Skelton, chief engineer on Scott's Discovery expedition, called it "very fair eating, just like beefsteak," while William Lashly, stoker on the same expedition, called it "better than beef." Scott himself reported in *Voyage of the Discovery*:

In this matter of seal-meat there has been an extraordinary change throughout the ship. There is no getting over the fact that none of us really enjoyed the seal in the winter, and when tinned meat was stopped there were not a few downcast faces, but within a fortnight all that has been altered: everyone now eats the seal with relish; and I do not think there is a single man who would go back to tinned meat, even if he had the chance. The consumption is so great that we have all our work to keep up the supply, and appetites seem to be increasing rather than lessening.

"At first the characteristic strong smell tends to put people off," wrote Cutland:

This can be, and must be destroyed if it is to be palatable... Cut your joints and wash thoroughly—sea water is as good as any for this job—ensuring that you wash away as much blood as possible. Hang for a

couple of days and the meat is then ready to cook. If the seal is an old one I would suggest that you blanch it prior to cooking. This is done by placing the joint in a pan of cold water and bring to the boil. Immediately the water boils remove the joint and wash off any scum. This method destroys most of the strong smell. If the seal is a young one then you need not bother to blanch as the little smell that there is is destroyed by the cooking.

Cutland prepared seal in many ways, reporting that the following recipes "proved very popular": Roast Seal, Roulades of Seal, Braised Seal, Casserole of Seal, Tournados of Seal, Tournados of Seal Portugaise, and Seal Meat Hamburgers.

"Seal meat is generally fat-free and therefore dry, like venison," reports British researcher Bernard Stonehouse, who has been visiting Antarctica almost continuously since 1947:

The meat is improved by marinating. We had our steaks rolled lightly in seasoned flour, fried quickly to brown, then stewed, braised or pot-roasted for several hours with mixed vegetables, or, alternatively, minced and served as Vienna steaks. Steak from a very young seal could be cut thin, hammered, then fried or grilled as cutlets.<sup>9</sup>

A single bull seal killed by a two-man expedition in the 1930s provided 318 pounds of meat and 231 pounds of skin and blubber.<sup>10</sup> Another party of four found that one seal yielded them ten meals, while its blubber could cook about thirty meals.<sup>11</sup> Under severe hardship, of course, the meat could be stretched much further.

In the view of Wild, who ought to have known, "Practically the whole of the meat of the seal can be used for eating...the choicest pieces of flesh...are the undercuts from the inside of the ribs."

Praise for seal meat could be effusive. "To-night we had galantine of seal," wrote Scott. "It was *excellent*."<sup>12</sup> Amundsen exulted over "Seal-beef and fresh whortleberries—*delicioso!*" After a dinner of Weddell seal livers, hearts, sweetbreads, kidneys, and undercuts, Albert Armitage, second-in-command on Scott's Discovery expedition, wrote, "Not a diner in London, Paris, or New York enjoyed his meal that night as we did ours."

Seal soup was another palate-pleaser. Scott wrote in his diary in May 1912: "We are living extraordinarily well. At dinner last night we had some excellent thick seal soup, very much like thick hare soup." He later called it "by common consent the best decoction that our cook produces."

## Tender Young Things

Although adult seal meat was enjoyed, the seal version of veal was even more appreciated. “Normally the meat of a full-grown seal,” wrote Australian Robert Dovers,

is black and tough, and though we were well accustomed to it, frequently asserting that it was indistinguishable from a good steak, there was never any doubt that we were eating seal...However, this meat of the month-old seal pup was a bright, healthy red. It was so tender as to melt in the mouth and indistinguishable from a selected fillet of beef.

“With young seal,” wrote Cutland, “you would hardly know the difference in the flavour of meat from the faithful cow, apart from it being very slightly darker. A few guests have even asked where we acquired the beef.”

## Everything but the Bark

“I am sure seals have never been so thoroughly eaten as ours were,” wrote Victor A. Campbell, leader of Scott’s Northern Party, which was marooned for eight and a half months on Inexpressible Island. “There was absolutely no waste...The bones, after we had picked all the meat off them, we put on one side, so that if the worst came to the worst we could pound them up for soup.” Shackleton’s castaways enjoyed seal vertebrae, which expedition photographer Frank Hurley called “delicious and exquisitely tender,” while seal’s head “tasted like pig’s cheek” and was “improved in flavour by the maturing influence of two months hanging!”

Cooking seal, however, is not simple. “To my knowledge no other polar expedition has consumed so much seal meat,” wrote Wilhelm Filchner, leader of the Second German Antarctic Expedition of 1911–12. “It almost seems to me that the reason for the antipathy to this food source on other expeditions lay partly in the fact that nobody on board was as knowledgeable in cooking seal meat appetizingly as our cook.”

The cooking method plays a large role in seal’s palatability. Armitage wrote:

By itself, without seasoning or sauces, etc., [seal] is somewhat flavourless—something like poor horse-flesh, which I have had the pleasure of eating in the North Polar regions. For about nine months our cook did not appear able to tackle the problem of serving it with any variety; we had fried seal-steak day after day until many of us loathed the sight of it. Subsequently, with a change in the method of cooking it, we all voted Weddell seal real good eating, though I cannot say that I ever went so far as to declare it equal with fresh beef or mutton, as some of our company did.

Later in the expedition, Armitage wrote, seal “was cooked in a different way each day of the week, which made a wonderful difference in the amount eaten. Seal olives, seal pie, seal pudding, ragout of seal, seal with onions, and curried seal, all made their appearance, and, flavoured with various sauces, were eaten with relish.”<sup>13</sup>

## An Acquired Taste

The main difficulty in cooking seal is blubber, the seal’s sheath of insulating fat, which “has a very strong rancid taste and a most penetrating smell,” as Scott wrote in *Voyage of the Discovery*. “Blubber was to us an abomination both in taste and smell, and the smallest scrap that had inadvertently been cooked with the meat was sufficient to put us off our dinner.”

“I have tasted a variety of meats from Antarctic species—seals, penguins, skuas,” says ninety-year-old Phillip G. Law, leader of the Australian National Antarctic Research Expeditions from 1949 to 1966. “There is one basic rule of greatest importance when preparing them: get rid of every last remnant of blubber, otherwise the food will have an abominable fishy taste.”<sup>14</sup> As Scott’s photographer Herbert Ponting put it, blubber “is a taste that takes a good deal of acquiring.”

But in dire circumstances, that taste can be acquired. “At the beginning we swallowed the bits of blubber without daring to taste them,” wrote Swedish explorer Otto Nordenskjöld, “but at last one actually enjoyed masticating the fat, especially when it was quite fresh.” “We find the raw seal’s blubber very acceptable,” wrote Orde-Lees, “and are now quite unconscious of its rank taste, indeed, cut into thin slices we fancy that it forms quite a passable substitute for butter and our only regret is that we cannot afford to have a second helping of it.”

Raymond Priestley, a member of Scott’s castaway Northern Party, also liked blubber:

I shall not soon forget my first taste of blubber and the relief I felt when it was plain that the new food was not going to be distasteful...we tried some thin pieces of [a young crabeater seal’s] fat raw and found them quite palatable, while Abbott and Dickason even declared that the fat tasted strongly of melon. That opinion I was never able to endorse with sincerity...It was hard at first to conquer the physical distaste when one bit on a juicy piece of the fat and the oil spirted in all directions into one’s mouth, but after the first few days I think that none of us save Campbell found the blubber of either seals or penguins distasteful...

Thomas Bagshawe, only nineteen years old when he and a fellow student wintered in the Antarctic in 1921–22,

singled out as a special treat fried blubber eaten straight out of the frying pan: “How delicious those little cubes of blubber were with their agreeable nutty flavour, especially when they were eaten still spluttering with fat!”

## The Antarctic Luxury

Seal variety meats, or organs, were eaten as often as the flesh. Given seals’ size, their organs provided large meals: Bagshawe found that the heart of one seal weighed two pounds, and the liver fourteen.

Law reports that seal’s liver, kidneys, and brains are “practically indistinguishable from the offal from cattle and sheep.”<sup>15</sup> On the other hand, L. Harrison Matthews, a British naturalist who sailed on whaling and sealing voyages, states in *Sea Elephant* that he found seal kidneys “tough and rubbery as a motor tyre.”

“Seal’s heart stuffed with sage and onions was a great delicacy,” wrote Scotsman R.N. Rudmose Brown, and Cutland prepared Braised Seal Hearts, Roast Seal Heart, and Savoury Seal Heart.

Seal liver was widely hailed as a special treat. “Everyone partakes of this excellent dish and wishes heartily that the seal was possessed of more than one liver,” wrote Scott in *Voyage of the Discovery*. “There was a strong temptation to kill them for their livers only, and I think it is a creditable fact that we refrained from obtaining this luxury at a rate so expensive to life.” He later noted in his diary, “We never tire of our dish and exclamations of satisfaction can be heard every night.”

Seal brain was even more highly prized. “Fried seal’s brain,” wrote Wild, “is a dish that can hardly be excelled anywhere in the world.” Matthews added in *Sea Elephant*, “When dished up frizzling hot on slices of fried bread, it is the delicacy of the antarctic.”

Scott’s Northern Party appears to have been the first to sample seal’s brain, and Priestley describes the first taste:

[T]he principal luxury we obtained from [the seal] still remains to be named: seal’s brain. In those two words you have the greatest success of the winter...Curiously enough Antarctic expeditions had never used the seal’s brain as an article of diet before; at any rate, they have never recorded it as being used...The result was a revelation to us, and if I ever go South again I think seal’s brain will become a regular item in the menu. The soup it made was really the best we had yet tasted, and the pieces of brain themselves did not taste at all like meat, but, as Levick said, were much more like soaked bread. It might be urged against the use of the brains in future that our sense of taste was abnormal just now. So it certainly was, but we tried the brain a few months

later, when we had been back amongst plenty for a month, and we found it equally palatable. For the rest of the winter, therefore, we had another luxury added to our store. Each brain was enough to flavor one hoosh, and as we had ten or twelve seals this meant brain hoosh at least once a fortnight.<sup>16</sup>

Campbell says simply, “The brain was our greatest luxury,” and Bagshawe records, “One night we had a hitherto untried luxury—a seal’s brain; this was repulsive to extract, but when cooked was delicious and resembled soft fish roe without the fishy taste.”

Cutland, who prepared Fried Seal Brains, Seal Brains au Gratin, Brain Fritters, Seal Brain Omelette, and Savoury Seal Brains on Toast, concurred: “This part of the seal I would consider one of the delicacies and luxuries of the Antarctic, and was extremely enjoyed by most members of the base at which I was Chef.”

Herbert, however, provides an alternative view: “Take ‘seal brains au gratin’...Like most local dishes, it is eaten with relish by strangers until they find out what they have consumed; then they complain of indigestion or nausea, and spend the rest of their lives sickening their friends by telling them how much they enjoyed it!”

Even seal blood was used as a nourishing supplement in cases of extreme hardship. Scott’s Northern Party made it into a gravy in which it was possible to stand a spoon upright, and Priestley described it as “our one great discovery in the eatable line.”

## Species Matters

Not all seals are equally savory: crabeater seals (*Lobodon carcinophagus*) were considered tastier than Weddell seals (*Leptonychotes weddellii*). “Young crabeater was generally judged superior,” Stonehouse says. “Weddell and leopard seals taste slightly fishy.”<sup>17</sup> Prestrud explained that “The flesh of the crab-eater is of about the same colour as beef, and to us, at any rate, its taste was equally good. We therefore always tried to get crab-eater when providing food for ourselves.”

Alexander H. Macklin, a surgeon on Shackleton’s ill-fated Endurance expedition, described another possible cause for crabeaters’ popularity: “One has to beware of parasites...Weddell seals and sea-leopards especially seem to be infested...The crab-eater seals, which live largely on small crustaceae, are much more healthy animals.”

Other species were also taken. When the Endurance crew killed a rarely-seen Ross seal (*Ommatophoca rossii*), Orde-Lees noted that “the slight difference in the flavour



of the meat has been a pleasant change in our menu.” In *Sea Elephant* Matthews calls leopard seal (*Hydrurga leptonyx*) “rather dry and very dark,” but Joseph J. Fuller, a nineteenth-century Connecticut sealer who visited Kerguelen twelve times over a fifty-year period, wrote that leopard seal

is very good eating and wholesome. It is considered a dainty on the island. The flesh it has the appearance of beef and tastes much like it only a bit stronger... There are different ways of preparing the flesh for eating. Made into balls, it is delicious and also goes very well fried or made into stew... Large ships coming to these parts consider the leopard seal quite a delicacy. Every particle of the flesh is kept and cooked into different dishes.

*Male elephant seal (Mirounga leonina), the source of “snotters.”*

PHOTOGRAPH BY JEFF RUBIN © 2003

Antarctic and sub-Antarctic fur seals (*Arctocephalus gazella* and *A. tropicalis*) were nearly completely exterminated for their luxurious pelts, but, rather oddly, their flesh appears to have been eaten much less frequently than that of Weddells or crabeaters.<sup>18</sup> John Nunn, stranded at Kerguelen for more than two years beginning in 1825, thought fur seal “very palatable and not unlike mutton in flavour.” Charles Goodridge, shipwrecked on Iles Crozet for two years beginning in 1821, thought fur seal “very rank,” but added, “The young ones are usually denominated Pompeys, by South-seamen, and are very excellent for food.”

## Organs and Snotters

Because adult southern elephant seals (*Mirounga leonina*) can weigh more than 7,500 pounds—and because they were slaughtered in great numbers for their oil-yielding blubber—it’s a pity that their meat was not more widely enjoyed.<sup>19</sup> “The flesh of the animal is very indigestible and produces great nausea,” wrote Nathaniel Taylor, a physician who took part in an American sealing voyage to Kerguelen in 1851–53. Other sealing parties found that eating elephant seal meat “produced constipation in a virulent form.”<sup>20</sup>

Many diners, however, appreciated both the quantity and quality of meat provided by elephant seals, or sea elephants, as they were known to sealers. For Goodridge, shipwrecked on Iles Crozet, they were of singular importance. “Our principal dependence,” he wrote,

was on the Sea Elephants, which, from their great tameness, became an easy prey; and they served us for meat, washing, lodging, firing, lamp-light, shoe-leather, sewing thread, grates, washing-tubs, and tobacco pipes. The parts we made use of for food, were the heart, tongue, and sweetbread, the skins of the old ones, the snotters, (a sort of fleshy skin which hangs over the nose,) and the flippers, (a sort of fin which assists the animal in swimming.) The flesh [of the flippers] resembled very coarse beef, to the eye, but was very hard, and by no means palatable. These after boiling a considerable time, formed a kind of jelly, and with the addition of some eggs, adding a few pigeons, or a couple of sea hens, made very good soup... The fleshy protuberance at the snout of these animals, more particularly the males, has the appearance of a proboscis [*sic*], from which, and their great size, they doubtless derive their name of *Sea Elephants*. Our Cookery consisted principally of soup, comprised of the different parts of the Sea Elephant enumerated, with the addition of eggs, instead of vegetables or bread. To this we frequently added the brain of the animal, which was almost as sweet as sugar, and was frequently eaten by us in its raw state.

“The elephant flesh is darker in colour than cow beef, guaranteed free from tuberculosis, and not at all fishy flavoured,” wrote J. Inches Thomson, a Macquarie Island sealer. “When we were in want of provisions,” Nunn wrote,

we generally availed ourselves of any opportunity of securing a sea-elephant upon the beach, for each of these would yield us a supply sufficient for seven or eight days. Upon killing it we removed the tongue, heart, skirt, and kidneys, which we cooked in various ways. We also removed the nose and flippers (feet): of these we prepared a very palatable and excellent kind of soup, which we named ‘flipper-soup.’

This “flipper soup,” Nunn attests, was eaten “with a zest which is scarcely known to a City of London alderman.”

Young “ellies” were highly praised. According to Alan Gilchrist, an Australian who wintered on Heard Island in 1948, “the chops taken from an eight week old sea elephant pup were as delicious as anything I have ever tasted.” Phelps considered young elephant seal “equal to lamb.”

Elephant seal organs also found favor. Robert Fildes wrote in the log of *Cora’s* South Shetlands sealing voyage in 1820, “Sea elephants tongues are excellent when sound and dry; their hearts when stuffd and roasted are not inferior to a Bullocks: and their flippers make a mess of soup not unlike mock turtle which it was humerously stiled.” Gurdon Allyn, a Connecticut sealer who visited Iles Crozet in 1843, ate fried elephant seal liver “with better relish than many have for better viands.”

The elephant seal’s massive tongue, which can weigh ten pounds, “is as good, or to my fancy, better than ox, and three times as large,” wrote a Macquarie Island sealer in 1878. “It can be cooked in slices fried in fresh blubber, or, if the party had any foresight, save the tongues of all they kill and put them in empty beef or pork pickle casks.”<sup>21</sup> Nathaniel Taylor noted that pickled tongues were “often brought home as a luxury.”

Phelps’s sealing gangs on the Prince Edward Islands prepared a dish they called “fried cocked hats”—pastries filled with corned elephant seal tongues, chopped up fine, along with molasses, vinegar, salt, and pieces of bread. Macquarie Island sealers boiled rather than fried the pastries they filled with chopped elephant seal tongues and hearts; the results were known as “sinkers.”<sup>22</sup>

Pickled elephant seal foreflippers, wrote Taylor, “make a most excellent substitute for souse,” but Professor A. Hamilton, who visited Macquarie Island in the 1890s, doubted the dish’s deliciousness: “They are said to be very good, but we were not there long enough to come down as far as that.”

Probably the most unusual item in the Antarctic larder was the nose (or trunk) of the male elephant seal. “The old sealers used to eat the trunks as a tit-bit, calling them ‘snotters,’” noted nineteenth-century British naturalist H.N. Moseley. In his book *Sea Elephant*, Matthews vividly describes a re-creation of the dish:

‘Christ Almighty!’ said the cook when I dumped them flabby and bloody in the galley. ‘What the hell you got there?’

It took a little persuasion to get him to agree to cook them but he gave in for a tot of rum...He scalded the skin and hair off the trunks, and then simmered them in salt and spices for many hours, dishing them up the next day. We were all a trifle suspicious of the steaming kit with the blanched and swollen trunks quivering in it; but they smelt good.

'Well,' said the skipper to me, 'it's your idea, you take first cut.'

I sliced off a chunk on to my plate and took a mouthful, the others closely watching my face.

'All right,' I said. 'Very good, like pig's trotters and tripe. Here, I'll have some more,' and I loaded up with another thick slice....

Then they all tried it and came back for more—it was really excellent and had swollen up soft like calf's head. The only thing against it was the indecent-looking nostrils gaping in every slice.

'Next time we'll try stuffing them,' I said. 'Sage and onions in one hole, thyme and lemon in the other, then you'll get a bit of both in each slice. Hansen says the old timers used to call them snotters.'

'Well snotters is good,' said Nils.

One snotter was enough for the six of us, and the cook pickled the other two in vinegar and served them up cold the next day. If the Wine and Food Society want a new thrill they should try pickled sea-elephant snotters.<sup>23</sup>

## Meaty Breasts

Naturally, the bird most identified with Antarctica did not escape uneaten. "If they became too impertinent," Thorvald Nilsen, one of Amundsen's men, wrote of the little Adélie penguins (*Pygoscelis adeliae*), "we did not hesitate to take them, for their flesh, especially the liver, was excellent." Similarly, Armitage wrote: "Numbers of Adélie penguins visited us, and not a few of them found their way into our cooking pots, for they were exceedingly good eating."

Thomson went even further: "Our very good friends, the penguins, deserve a chapter to themselves, as we were very much indebted to them for sustenance and health, for thousands of eggs and many a savoury stew..."

"Because of the powerful pectoral muscles developed for swimming, the meatiest part of a penguin is its breast," says Law. "The dense muscle meat resembles ox heart. My favorite recipe is to thinly slice the breast and fry it with a coating of egg and bread crumbs in the fashion of a wiener schnitzel."<sup>24</sup>

"Some of us regarded penguin as a delicacy," wrote American polar explorer Richard Byrd. "It is a very dark, rich and gamey meat and tastes like nothing that we have in civilization." Penguin meat was "not too delicate of odor and had a 'gamey' taste," wrote Paul Siple in *A Boy Scout with Byrd*.

"Cut in thin slices and fried in butter," wrote A.L. McLean, a member of one of Mawson's expeditions, "it challenges comparison with chicken or turkey." Added Priestley: "Penguin breast cooked as Dickason or Browning could cook it was a delicacy worth travelling some way to taste."

"We also frequently ate penguin, though as time went on not so enthusiastically as seal," wrote Drygalski. "These birds have a similar dark, almost black flesh and a somewhat

pungent taste, but much can be done with the right kind of preparation, more even than our cook knew how."

Fabian von Bellingshausen, who completed the second-ever circumnavigation of Antarctica in 1821, liked the penguins his crew caught in the pack ice. "The penguins were cooked for the officers' mess," he wrote,

and we proved that they are good for food, especially if kept for several days in vinegar as is done with certain kinds of game. Penguin meat is generally regarded as very good and slightly preferable to seal. That it receives only grudging appreciation here is due rather to the natural conservatism of the seaman than to any unusual taste in the meat... We had it stewed together with salt beef and gruel and seasoned with vinegar; the crew liked it, seeing that the officers' mess too pronounced favourably upon it.

Frederick A. Cook, surgeon on the *Belgica* expedition, is often quoted for his memorable description of the taste of penguin in *Through the First Antarctic Night* (1900):

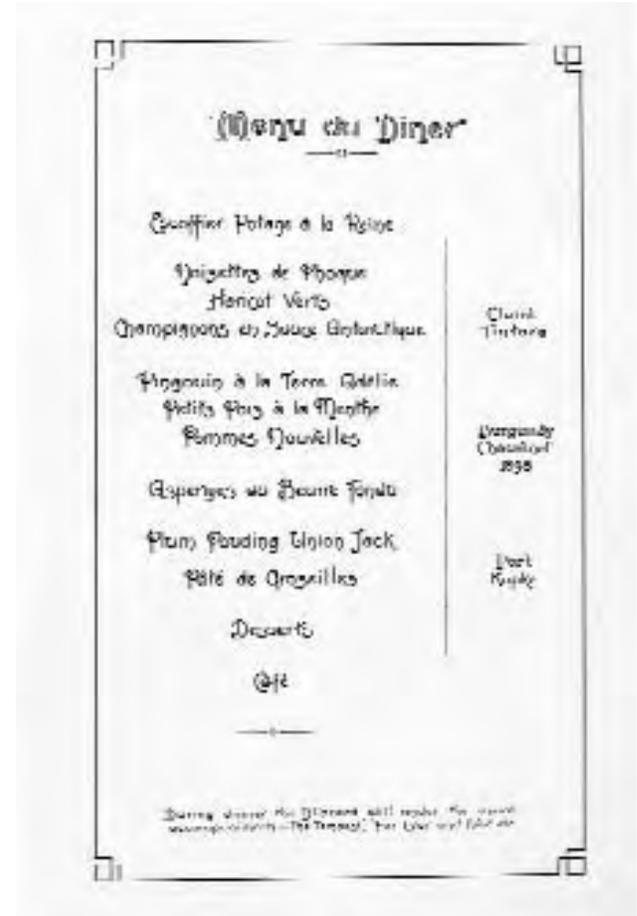
It is rather difficult to describe its taste and appearance; we have absolutely no meat with which to compare it. The penguin, as an animal, seems to be made up of an equal proportion of mammal, fish, and fowl. If it is possible to imagine a piece of beef, an odoriferous codfish, and a canvas-back duck, roasted in a pot, with blood and cod-liver oil for sauce, the illustration will be complete.

Picturesque, no doubt, but Cook and his men actually *liked* penguin. "We have begun to eat penguin meat," he wrote in the passage immediately preceding the above:

The doubtful recommendation it has received from other explorers has caused us to shun it; but now, for variety, we would gladly take to anything... We have tried the meat several times, and it seems to improve upon acquaintance. It was amusing to watch the first trials: little pieces were taken and tasted, and allowed to settle into the stomach slowly. With a few some time elapsed before a second trial was attempted. Some never ventured farther, and others passed their plates for a second and third helping. No one seemed to eat the penguin steaks with any kind of relish, but somehow we stored away quite a little stack of it.

Cook later described how his men used a cornet to exploit penguins' well-documented fondness for music: "when they hear it they make directly for the ship, and remain as long as the music lasts... In this manner we have only to wait and seize our visitors to obtain penguin steaks, which are, just at present, the prize of the *menu*."

Cook's description is infamous enough that at least one other explorer even referred to it in his own work. Rudmose Brown writes:



Penguin was a staple article of meat diet. At first the crew showed some objection to it, but in the course of the winter they learned to like it as well as we did, and asked for nothing better. Some Antarctic expeditions have found penguin utterly unpalatable...I must really protest against [Dr. Cook of the *Belgica's*] caricature; and while I admit its dark red-black appearance is unusual, and that it cannot be compared in taste to anything I know, I yet must bear testimony to its excellence as a food. When we no longer could get it we sorely missed it, and drew comparisons between it and mutton far from favourable to the latter. I think it would be well worth while to establish penguin rookeries on many of the barren rocks off the western isles of Scotland, and so introduce a new and delicious food to the inhabitants of this country. The *Belgica's* cook cannot have understood the art of cooking penguin, which Florence certainly did. Only the breasts were used, and were cut into thin pieces, first browned in the frying-pan and then stewed, and finally served with fried onions. The cook also used it frequently for soup, with great success, while it made most excellent curry.

### Penguins Are Not Birds of a Feather

"There is a difference in the flesh of the various species of penguins," wrote Rudmose Brown. "We found by experience that the black-throated [Adélie] penguin was most satisfactory. The gentoo (*Pygoscelis papua*) flesh is some-

*Midwinter Dinner Menu. Winter Quarters, Commonwealth Bay, Adélie Land, June 21, 1912. Expedition leader Sir Douglas Mawson called this feast "a marvel of gorgeous delicacies."*

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what tougher and more stringy, and that of the emperor (*Aptenodytes forsteri*), while very eatable, is rather dry."

King penguins (*Aptenodytes patagonicus*), wrote Fuller at Kerguelen, "are very palatable when young and even the old ones are splendid eating. In fact they are the best and most wholesome bird for eating purposes that there is on the island." His men sometimes ate the meat raw or soaked in vinegar as a cure for scurvy.

The largest penguins, the emperors, which weigh up to eighty-five pounds each, were also used as food. Armitage found their flesh "good eating, though rather strong, and we rarely indulged in it." "On my first expedition," says Charles Swithinbank, who first went to Antarctica with the Norwegian-British-Swedish Antarctic Expedition of 1949–1952 and has returned many times since,

our cook often served breast of emperor penguin. It is a very dry and lean meat, because the bird concentrates all its insulating fat near the skin. So what he did was the same treatment—brief boiling—as whale.

Then he cut round holes in the penguin steak and inserted rolled pieces of fried bacon to add a bit of fat. Delicious!<sup>25</sup>

Harold Fletcher, a member of Mawson's British, Australian and New Zealand Antarctic Research Expedition (BANZARE) of 1929–1931, wrote of a “great success” at dinner: “Our main course—baked emperor penguin breast—approached rather timidly by the fastidious, was generally voted as equal to any game bird. Doc said it was very reminiscent of grouse.” The Australian expeditioner Tom Maggs wrote in 1977: “We fried the [emperor] penguin steaks with cayenne pepper and some reconstituted 1958 dried onions which we had discovered in cans buried in a snow drift near the hut. Then we said a grace for the birds, and tucked in: it was delicious.”

### Not Everyone's Favorite

Ross found penguin flesh “very dark, and of a rank fishy flavour,” while a nineteenth-century Macquarie Island sealer wrote, “I need scarcely say that the penguins themselves are not eatable.”<sup>26</sup> Goodridge succinctly opined on the king penguin: “Their flesh is not good for food.” Despite being shipwrecked at Iles Crozet in 1875, Charles F. Wordsworth also disliked penguin meat, writing, “These young ones were tender eating, but, except when very young, of rather a rank flavour.”

Nunn, another shipwreck victim, agreed:

Had we felt inclined we could have secured any number of the birds; but as food we did not find them very good... The young of this species [rockhopper penguin] we also found useful as food; but the old birds were tough and strong in flavour... the full-grown birds we used to eat only during extreme cases of deficiency, and we found the best method of cooking them was to make them into a kind of broth or stew.

Thomas W. Smith, an English orphan who made four sealing voyages to the peri-Antarctic islands between 1815 and 1821, surviving several shipwrecks in that time, wrote of “the disagreeable necessity of subsisting on Penguin flesh for several days”:

Our provision being exhausted in the course of 6 days, we were under the necessity of sustaining nature on Penguin's hearts and livers, and occasionally on the carcass itself... This food although it satisfied the cravings of nature, was inadequate to maintain the healthy standard of the human constitution, consequently our flesh wasted away to an incredible extent.

Macklin further noted that “penguins also require careful examination” for internal parasites.

For years, penguin meat was the subject of a running joke among British personnel in Antarctica: “I prefer my fish with scales, not feathers.”<sup>27</sup> Cutland disliked penguin, noting that it is “very strong in smell and flavour,” adding, however, “It would not be my choice for a meal but several people lapped it up so I tried to make it as tasty as possible, and judging by some of the comments I was to a degree successful.”

Penguin recipes in Cutland's cookbook include *Roast Penguin Breast*, *Tournados of Penguin Portugaise*, *Braised Penguin Breasts*, *Casserole of Penguin Breasts*, *Escallops of Penguin Breasts*, *Roulades of Penguin Breasts*, *Savoury Penguin Breast*, *Sauté of Penguin Breasts*, and *Fried Penguin Breasts*.

An Adélie penguin breast provides about two and one-half to three pounds of meat, and Rudmose Brown reported that two birds were enough to feed “twelve to fifteen hungry men.” The much larger emperor yields a great deal more. “Half the [emperor] breast and the liver was a substantial meal for 16 men with nothing else but some pease, cocoa and biscuit,” wrote Edward Wilson in his *Diary of the Terra Nova Expedition to the Antarctic, 1910–1912*. “We fried it in butter and it was excellent.”

“Penguins were usually tough but well-flavoured,” recalls Stonehouse. “[We ate them] on the trail, stewed with dried onions, and at base marinated for three days in herbs and apple-ring wine (made from dried apples and raisins, which made acceptable home brew). We braised or pot-roasted them and served them with onion sauce or gravy.”<sup>28</sup>

On occasion, the cooking techniques employed could sound almost homely. “As the winter came on,” wrote Nordenskjöld, “we began to think of new ways of preparing our penguin-meat. Penguin-beef fried in the fat found beneath the skin and in the entrails of the birds, proved an excellent dish, and Duse made an admirable discovery—grilled penguin—the meat being rolled in the fine crumbs obtained from ship's-biscuits.”

### Pleasing Penguin Parts

“The legs too are excellent eating,” Orde-Lees noted, “the heart, liver and kidneys are especially delicious but there is nothing on the wings or rather the flippers.” Hurley remarked on “a welcome diversion at dinner”—fried penguin legs: “These were delicious and flavorful and a vast improvement over boiling, which successfully extracts all juices, leaving a leathery synthetic rubber like meat, firmly attached by stringy sinews to the bone.”

The penguin organ most prized was the liver. “We had a dish of fried penguins’ liver with seal kidneys,” wrote Scott in *Voyage of the Discovery*. “Eaten straight out of the frying-pan this was simply delicious. I have come to the conclusion that life in the Antarctic Regions can be very pleasant.”

Priestley gushed, “Petronius never had so much pleasure from a Roman feast as we had from our hooshes, flavoured as they were with the carefully saved livers and hearts of Adélie penguins.”

### Odd-Looking but Delicious

For a brief period in the Antarctic springtime, another wild food was readily available in certain areas. “The [Adélie] penguins were now laying,” wrote Shackleton in *The Heart of the Antarctic* (1909),

and the men found that the eggs were very good to eat. The egg of the penguin is about the same size as that of a duck, and it has a transparent, jelly-like white and a small yolk. It takes about eight minutes’ boiling to cook the egg nicely, and ten minutes if it is required to set hard to the centre.

“I can assure you that penguins’ eggs are the finest I ever ate—better than ducks’,” wrote a Macquarie Island sealer,<sup>29</sup> while Priestley averred: “They are always a distinct addition to our diet and taste very like the egg of the domestic fowl.”

Fuller, who called them “splendid eating,” also noted one of their unfamiliar properties: “When you cook the eggs, the albumen in them does not turn white like that of a fowl, but it has a translucent appearance.”

“They were indeed a luxury to all on board in whatever form they were partaken of,” wrote Rudmose Brown,

boiled or fried, scrambled or in omelettes, cooked or raw. No one could be satisfied for many days, and, in some shape or other, eggs were the principal constituent of every meal, and of various irregular meals interpolated when hunger prompted. For the first fortnight that eggs were obtainable the average daily consumption of all hands was fifteen a-head, not counting various raw ones that did not pass through the cook’s hands.

Even after half an hour of boiling, however, the “white” of a penguin egg never sets, wrote Bagshawe, and “the slimy, transparent albumen does not look appetizing.” Despite this, he wrote, “Never had food given me such a thrill of pleasure before. It was such a marvellous taste after our other food, and we knew that these eggs would do us a world of good; in fact I almost felt in better health immediately.”

Matthews remarked in *Penguins, Whalers and Sealers* that gentoo penguin eggs “are delicious eating in spite of their peculiar appearance; the yolks are deep red, almost like blood,” and Herbert added

It is about as difficult to disguise a penguin egg as it is to disguise an Englishman...the ‘white’ of a penguin egg when cooked looks like a semi-transparent jelly and the yoke [*sic*], which is a bright orange, can be seen in a green firmament like a setting sun. A couple of fried penguin eggs on a white dinner plate look like two bloodshot eyes.

Emperor eggs weigh a little less than one pound each, and a single egg scrambled “makes an excellent meal for three hungry men,” Stonehouse reports, while the contents of three king penguin eggs, Nunn wrote, “would nearly fill a quart mug!”

Comparing gentoo and Adélie eggs, Rudmose Brown wrote, “The eggs of the two species are hardly distinguishable externally from one another, but the yolk of the gentoo egg is often of a richer colour,—though there is little distinction when once the cooking-pot is passed.” Phelps found the eggs of the macaroni penguin “decidedly ‘fishy’” and did not use them.

“In preparing our eggs,” wrote Nunn, “we frequently boiled them with their shells on in plain water, to different degrees of hardness, according to our taste: and we often prepared them in another way, which was as follows—We broke the shells and put the contents of several together, beat and mixed them well, and then fried them in fresh seal oil: in this way we used to eat them as a substitute for bread.”

“Oh, how we revel!” wrote C.J. Skottsberg, a member of Nordenskjöld’s shipwrecked expedition, which gathered six thousand penguin eggs. “Fried eggs, boiled eggs, raw eggs, eggs in soup, in coffee, in tea: I am a temperate man and never ate more than a score in one day, but I know of a sailor who ate three dozen in the same time.”

Penguin eggs almost certainly saved the lives of Wordsworth, his mother, and the other forty-seven survivors (out of eighty-nine people aboard) of the 1875 wreck of *Strathmore* at Iles Crozet:

Even my mother has eaten seven at a meal, fried, roasted, or raw, beaten up with a little fresh water, which made a most refreshing drink. The eggs did every one a great deal of good, and we all felt satisfied and had not the longing desire for other food. Those who had been haggard and miserable got quite plump and fresh—some of them ate about thirty at a meal.

Goodridge’s shipwrecked group also made a drink from penguin eggs: “...what we named Mocoa, as a substitute for tea, and this consisted of raw eggs beat up in hot water.”

Penguin eggs remain fresh for an extremely long time in the Antarctic cold. Collected by the thousands, then packed in oil, dry moss, or salt, or buried in sand or snow, the eggs could be kept even until the next laying season. Wrote Cutland: "I have used [penguin] eggs when twelve months old with excellent results."

## Winged Veal

Albatross (*Diomedea* spp and *Phoebetria* spp) was a favorite dish from the time of Captain Cook's voyage in HMS *Endeavour* in 1768. Naturalist Joseph Banks, who accompanied Cook, wrote that the albatrosses

were so good that every body commended and Eat heartily of them tho there was fresh pork upon the table...The way of dressing them is thus. Skin them over night and soak their carcasses in salt water till morn then parboil them and throw away the water, then stew them well with very little water and when sufficiently tender serve them up with a savory sauce.

An albatross chick, wrote Nathaniel Taylor, "is not feathered out till seven or eight months after it is hatched, but is covered with a long and most beautiful down ten inches in length. During this period of growth they are procured from the nest for the table and are really very fine eating, resembling veal in tenderness and flavor." Young albatross, agreed Fuller, "makes splendid eating and has a taste liken to veal."

"The flesh of these [year-old albatrosses]," wrote British sealer James Weddell, "is sweet, but not sufficiently firm to be compared with that of any domestic fowl." Goodridge likewise praised albatross chicks: "they were...excellent for the table, and provided us with a very good dish for a long period, as they did not fly off until December."

Young albatross was the first food eaten by the crew of Shackleton's small boat, *James Caird*, after their epic, sixteen-day ocean crossing from Elephant Island to South Georgia. Frank Worsley, the skipper and navigator on that journey, described the young birds as

a beautiful white ball of down, like a huge powder puff. These chicks give twelve or fourteen pounds of delicious food...When the dish was cooked, we reveled in unwonted gluttony—the delicious, white, well-flavoured and rich flesh was rendered even more piquant by the addition of hoosh and a little salt, which we had been able to save in a hermetically sealed tin. How we stuffed! For once there was no stint. We even ate the bones, as they were soft and juicy...[we] discussed making enough money to start another expedition by taking some hundreds of baby albatross and selling them to the epicures, gourmets, gourmands, gluttons and whatnots of Europe and New York at £50 a piece...

Frank Wild, leader of the group left behind on Elephant Island, later recalled: "Often had we listened to Worsley's telling of the story, this much of which never varied: 'Baby albatross just off the nest—we ate them! By jove, they were good, damn good!'"

Albatross eggs "are inferior to those of geese, but they have less yolk, and more white in proportion to their size, and weigh generally one pound and three-quarters," wrote Weddell. "When new laid, they are a great source of refreshment." They are also large eggs, the shell holding as much as a pint. "A fried molly [albatross] egg fills a tin dinner plate and the edge hangs over the rim," Matthews wrote in *Penguins, Whalers and Sealers*, "and molly eggs do not look so odd as gentoo eggs but have golden yolks and nicely-set whites." The thick-walled eggshells were used by sealers and shipwrecked sailors as oil lamps and conveyances for "message-in-a-bottle" pleas for rescue.<sup>30</sup>

## Other Birds

A wide variety of other birds was also consumed.

In general, wrote Macklin, "seabirds have a rather strong taste of oil and fishiness, which can largely be removed by soaking them in dilute vinegar for twenty-four hours."

Shags (*Phalacrocorax* spp), declared Fuller at Kerguelen, "are the only bird that inhabits these parts that is not fit to eat, their flesh having a very strong and rancid flavor, liken to that of old stale fish." William S. Bruce, leader of the Scottish expedition, found that six shags easily fed fifteen people: "Opinions differed; most, however, saying that it was even better than penguin." Bagshawe found boiled shag breast and liver "excellent," and Cutland also liked them very much:

To those people who have Shags (or Cormorants) in their vicinity and have not included this bird in their diet I would say they are missing one of the luxuries of the Antarctic and my advice is that if you see any around, take a .22 rifle and knock a few off. It is a very meaty bird and one is enough for about 6 people. Once tried I am convinced that you would have them at least once a week, although it is bound to be that one or two of the community will not indulge, not because of the flavour but rather that they would be prejudiced although, I must admit, they are of a rather rich and strong flavour but anyone who is used to any game bird will appreciate the value and the delightful change in diet that this bird makes. If the bird is eaten too fresh the flavour is very strong, so the best thing to do is to hang it for about two weeks. Outside is the best place where the air can get at it freely.

Cutland prepared Roast Shag, Shag Maryland, Spanish Paella with Shag, Casserole of Shag, Fricassee of Shag, Jugged Shag, Fried or Grilled Shag, and Savoury Hot Pot with Shag.

Giant petrels (*Macronectes* spp), despite being scavengers, “make capital eating when curried,” wrote Fildes; but Weddell disagreed: “From this appetite for oily food, their flesh is uneatable, nor are their eggs so good as those of the other birds I have mentioned.”

Cape petrels (*Daption capense*), Wild found, “when properly cooked make quite good eating.” Fried Cape petrel, Bruce wrote, was “excellent.”

The beautiful white snow petrel (*Pagodroma nivea*) was “served up as dainties to two or three members enterprising enough to take the trouble to catch them, which can generally be accomplished with a long stick,” wrote Orde-Lees. “All are pretty well agreed,” Bruce wrote, “that for delicate tit-bits Cape pigeons and snowy petrels excel everything.” Snow petrel eggs, nearly as large as hen’s eggs, “are excellent eating when fresh,” Wild wrote. “Many of ours had been under the birds rather too long, but although they don’t look so nice, there is really very little difference in the taste.”<sup>31</sup>

Burrowing petrels were the only wild food about which Wordsworth wrote with pleasure:

Another great and *real* delicacy came in about this time—viz., the “mutton-birds.”...their nests were under the ground, and to find them we had to stamp about till we discovered a hollow place, our feet very often going right through the surface into their nests, when we had only to put in our hand and pull out our treasure. They had a delightful flavour, and were covered with beautiful fat.

Skuas (*Catharacta* spp) are “not unlike duck,” according to Alan Gilchrist, who wintered on Heard Island in 1948, and Bagshawe called fried skua breasts “quite good eating.” James Marr, a member of Shackleton’s last expedition, found skuas “excellent eating, being less fishy and oily than penguins and the like.”

“Skua stew for dinner,” wrote Matthews in *Sea Elephant*, “was our staple, and it was not at all bad.” Wrote Priestley: “Skua gull even when well roasted is a little tough and high, but it is no tougher than many joints I have tasted in civilization, and certainly in the latter respect it cannot vie with many kinds of English game.”

André Migot, who lived on Kerguelen for a year, wrote, “Although they look so unattractive and live by scavenging, they are the most eatable of the polar birds.”

Law gives this recipe for skua: “Pluck feathers, strip off all blubber, wipe off blubber oil with an alcohol-soaked rag, then roast. The product is like roast wild duck.”<sup>32</sup>

Skua eggs are the size of a small hen’s egg and brown in color, with black, tawny, and buff flecks on them, wrote Griffith Taylor, a member of Scott’s Last Expedition: “They have not so much taste as those of the common fowl and the albumen is translucent and bluish. They were very good and I could have managed six, though the Polar record of sixteen was I felt sure beyond my attainment.” Armitage called scrambled skua eggs “a most delicious meal.”

Sheathbills (*Chionis* spp), nicknamed by sealers “paddies” or, descriptively, “sore-eyed pigeons,” were “very good eating...we often made a hearty meal on them,” wrote Matthews in *Sea Elephant*. Wild deemed them “very dainty fare,” and Orde-Lees wrote: “Notwithstanding that they are carrion feeders we consider that they taste delicious, but then I think we should say the same of owls or rats if we had them here in our present straitened circumstances.” William Anderson, who sailed with Captain Cook, wrote: “Some of our people put it in competition with the Duck as food.”

### “Cabbages,” Tussock, and Seaweed

Because their voyages often lasted for years, sealers and sailors were anxious to secure fresh vegetables at their landfalls, both for nutritional reasons and as a change in diet. Two similar plants found on sub-Antarctic islands—Macquarie Island cabbage (*Stilbocarpa polaris*) and especially, as its taxonomic name implies, Kerguelen cabbage (*Pringlea antiscorbutica*)—are excellent sources of vitamin C.<sup>33</sup>

“The so-called ‘wild cabbage,’ undoubtedly an effective [scurvy] remedy, grows abundantly over the whole island,” wrote Bellingshausen upon visiting Macquarie in 1820.

It is distinguished from the other vegetation by the darkness of its foliage. It has broad leaves growing horizontally with slight indentations at the edges, dark on top and light underneath. The stalk is about a foot high and, like the leaves, is hairy. The flower on the central stalk is white like a cauliflower. The greater part of the root, which is about two inches in thickness, lies on the surface of the ground and its thin suckers grow into the earth. The roots resemble cabbage in flavour. The sealers scrape the stalks and roots, cut them up very fine and make soup of them. We took a lot of these cabbages with us and preserved them for the use of the crew, the roots being pickled for the officers’ mess. From the preserved cabbage we made a very tasty shtshi [Russian cabbage soup], and we were sorry that we had not prepared more.

Right: *Pringlea antiscorbutica*—“an inestimable blessing.”

FROM CHARLES MEDYETT GOODRIDGE’S NARRATIVE OF A VOYAGE TO THE SOUTH SEAS (1843).



KERGUELEN CABBAGE, PRINGLEA ANTISCORBUTICA.

“*Stilbocarpa polaris* is the Macquarie Island cabbage used by the sealers of the nineteenth century as an anti-scorbutic,” wrote B.W. Taylor in his study of the island’s vegetation. “The petioles taste like celery when cooked; pickled rhizomes like turnips; and leaves when cooked like wet blotting paper.”

Thomson thought Macquarie cabbage tasted like “a combination of parsnip and cabbage, and not particularly palatable.” Mawson’s men, who knew the plant as “Maori cabbage,” found it “somewhat stringy and insipid.”<sup>34</sup>

At Kerguelen, the endemic cabbage was also important to the rare visitor. “There is indeed one Plant,” wrote Anderson in 1772,

which grows in considerable quantities on the boggy declivities near the height of two feet, somewhat like a small Cabbage when it has shot into seeds. The leaves about the root are numerous, large and rounded with a small point: those on the stalks (which all proceed from the root) are much smaller, oblong and pointed. The stalks, which are often three or four and separate, run into cylindrical heads compos’d of small flowers. It has not only the Habit but the watery acrid taste and other qualities of the Antiscorbutic plants, and yet differs essentially from the whole tribe so that we all look’d on it as a production entirely peculiar to the place. I have eaten it frequently raw and found it to be almost like the Scurvy grass of New Zealand, only tenderer, but it seem’d to acquire a rank flavour when boild which however some of our people could not perceive and esteem’d it good. If it could be introduc’d into our Gardens it would in all probability afford an excellent Pot herb by cultivation.

The eminent British botanist Joseph Dalton Hooker, who launched his career by sailing as the assistant surgeon on one of Ross’s ships during his Antarctic voyages from 1839 to 1843, called the cabbage “perhaps the most interesting plant procured during the whole voyage in the Antarctic.”<sup>35</sup> Of its utility he wrote:

To a crew long confined on salt provisions, or indeed to human beings under any circumstances, this is a most important vegetable, for it possesses all the essentially good qualities of its English namesake, whilst from its containing a great abundance of essential oil, it never produces heartburn or any of those disagreeable sensations which our pot-herbs are apt to do...The root tastes like horse-radish, and the young leaves or hearts resemble in flavor coarse mustard and cress. For one hundred and thirty days our crews required no fresh vegetable but this, which was for nine weeks regularly served out with the salt beef or pork, during which time there was no sickness on board.<sup>36</sup>

He concluded: “Growing spontaneously and in so great abundance where it does, it is likely to prove for ages

to come an inestimable blessing to ships touching at this distant isle.”<sup>37</sup>

Nunn found the plant’s roots “not very unlike dark sticks of horse-radish, and equally acrid in flavour: the leaves which form dense solid heads also contain a pungent essential oil, but were very useful to us in our culinary operations when cut in slices and boiled.”

For Nathaniel Taylor, the cabbage’s roots possessed “the pungent flavor of common horseradish,” while the plant’s dense white heart of inner leaves

resembles in taste and smell the mustard and water-cress. It abounds with an essential oil, which accounts for its peculiar flavor and gives it a fine relish. It is more wholesome than common cabbage and does not produce heartburn or other sensation when eaten. To us it was a most invaluable and constant companion to our meals, whether cut up in its raw state or boiled with beef and pork.

Fuller, who knew the plant as “Desolation cabbage” (after the sealers’ name for Kerguelen), struggled to describe its unique tang:

I do not know of anything that I could possibly compare it with as regards flavor. It has got a slight bitter taste, which I am sure could be removed by a little cultivation. I myself, and I have heard other persons express their opinion on it, prefer it to the best cultivated cabbage. Its interior leaves are the same as those of the cultivated sort, while in color they are very tender and more savorious than the exterior leaves. It is sought for by all persons coming to these parts and is considered a staple article. It makes delicious cole slaw and I have no doubt but what sauerkraut could be made out of it. In all, I am certain that it can be turned to all the purposes that our cultivated kind is. Suffice to say that it is quite a boon to whalemens and others coming to these parts. Even—I will add—the Transit of Venus party seemed to consume an enormous lot of it and I can assure you that they relished it, as I have seen them especially send their steam launch off to gather it and they raised havoc among that year’s crop.

Kerguelen cabbage also grows at Heard Island, and Tasmanian sealer James W. Robinson, who visited from 1858 to 1860, wrote: “In this large and barren country there is very little to be had for feeding the crews of vessels, except the Kerguelen cabbage, which if not very palatable, is a good food and we used it considerably.”<sup>38</sup> Arthur Scholes, after fifteen months at Heard, described the flavor as “almost a cross between Brussels sprouts and spinach.”

Delight in the plant was expressed by C.R.V. Gibbs, who took part in a secret British naval operation aboard HMS *Neptune*, which visited Kerguelen in 1940. “A party

went ashore and brought back supplies of the Kerguelen Cabbage, famous among the sealers for its antiscorbutic qualities and full of iron," he wrote later. "It was cooked, eaten and found to have a taste compared with which spinach is positively insipid!"<sup>39</sup>

Drygalski's party, however, found it "bitter and unpleasant, though this may have been due to the way in which it was prepared. Perhaps the bitter taste might have been reduced by cooking in more water."

That very remedy was suggested by Frenchman Raymond Rallier du Baty, who lived at Kerguelen from 1907 to 1910 and again from 1912 to 1914:

We gathered a good deal of this plant and made use of it in our cooking, because we had a great need of vegetable food to keep our blood pure. But the Kerguelen cabbage is not an ideal green-stuff. We had to boil it twice before we could eat it, for it has a most rank and bitter taste, very much like the most powerful horse-radish. In the first boiling the water becomes of a dark yellow colour, but in the second boiling it is fairly clear and the cabbage then becomes eatable. We made sauces with it, and chopped it up with our tinned meats for the stew-pot.

Shipwrecked on Iles Crozet, Goodridge had a similar experience:

I have before mentioned that we had found on the island a plant resembling a cabbage in appearance, but so bitter that we could not make use of it; our companions, on the other island, either using more sagacity, or more patience, had found in it a very useful vegetable; for by boiling it for three or four hours, it became quite sweet. By this information another addition was made to our bill of fare—and one too which, to us, so long deprived of vegetable diet, was indeed a rich delicacy, and made to our soup a considerable improvement.

Says Stonehouse: "The young leaves are astringent when fresh and best as a salad ingredient in small amounts. They are bland and dull when lightly boiled."<sup>40</sup>

Tussock grass was also tried as a vegetable. "The bases of the culms [stems] are nearly as broad as the thumb," wrote Ross, "and, when pulled out young, they yield an inch or two of soft, white, and sweet substance, of the flavour of a nut, and so nutritious that two American sealers, who deserted a vessel in an unfrequented part of the Falklands, subsisted on little else for fourteen months." Matthews states in *Penguins, Whalers and Sealers* that the grass stems were "crisp and...rather nutty," while Stonehouse boiled them lightly and ate them with butter "like asparagus."<sup>41</sup>

Seaweed was tasted by several groups of castaways, but even in their desperate straits, they did not like it. Hurley

noted that by boiling seaweed for "about six hours," it turned to a jelly-like consistency, and "if sugared tastes much like arrowroot," but Orde-Lees added in his own diary that "unfortunately we have not enough sugar to denaturize the acrid inklike flavour of the jelly." Priestley's marooned party, starving as even their native foods began to dwindle, attempted to dine on "old dried seaweed from the beach, the same material which we were using to sleep on...it had lain, probably for a century or so, on the beach well above high-water mark":

it tasted like essence of must and mildew, and reminded me of what I should expect a concentrated solution of Old Masters to taste like. If one were to strip the walls of the National Gallery, throw the canvases into a huge caldron and boil them for seven weeks, I fancy the resulting soup would have tasted very like our Evans' Coves seaweed.

## Other Foods

A variety of other foods—including fish, shellfish, whale milk, elephant seal milk and, most famously, dog meat—was also eaten.

Fish, caught either in traps or on lines, provided a welcome change of menu for many expeditions. "At breakfast each of us had two of our nutty little *Notothenia* fish," Scott recorded in his diary in May 1911. "These little fish have an extraordinarily sweet taste." Bruce found the fish caught by his party, when fried with breadcrumbs, "somewhat like very good whiting, only with a slightly sweet and, if anything, a more delicate flavour."

Storms provided the occasional windfall, Nunn wrote: "We used occasionally to find skate or rays thrown upon the shore which had apparently been involved in the kelp, and were perfectly fresh and in good condition for cooking, having been dead but a few hours."

On several occasions, castaways benefited from the skills of Antarctica's best anglers: seals and seabirds. "In the stomach of the leopard [seal], were found some 50 pre-digested fish, in excellent condition," wrote Hurley. "The fish are reserved for to-morrow's breakfast. Hunger brings us all to the level of other species." Priestley's stranded party also killed a seal with thirty-six fish in its stomach

which were not too far digested to be still eatable, and we had three each fried for dinner that night and three each for breakfast the next morning. Two of the fish were in the throat of the seal and were not yet dead when taken out. It was a red-letter day for us, and the discovery threw a glow of cheerfulness over the party. I should not like to have to eat that meal to-day, but at the time the fish seemed to us a dish fit for a king, and never have I enjoyed a meal more.

“I remember once killing an albatross,” Wordsworth wrote in 1876, “and, as is often the case just before dying, it vomited up the contents of its bag, and amongst the mess was an eel quite perfect, having the appearance of being cooked. I took it and ate it, and it tasted quite like stewed eel.”

Shellfish provided additional protein. Fuller found mussels in abundance on Kerguelen, “delicious when served up either stewed, fried, on shell or raw with vinegar, salt and pepper.” The Elephant Island group ate all the limpets they could find. “Difference of opinion is rife,” noted Orde-Lees

as to whether to cook the limpets at all and if so how. The balance of opinion at present is in favour of boiling them in blubber oil, but some think that this makes them even tougher than they already are and, as we cannot possibly spare salt to cook them with, they are in favour of boiling them in seawater. Others again are advocates of the live diet.

Whale meat was eaten when it could be obtained. It was supplied to the first Byrd Antarctic Expedition by whalers who had contracted to tow the expedition ship *The City of New York* through the pack ice. “When fried,” noted Siple, “this meat tasted very much like poor beefsteak but was much more tender despite its coarse appearance.” Ommaney also liked whale’s tenderness: “Whale meat is excellent food and, if well hung and properly cooked, it is like tender beef steak.” Swithinbank ate whale meat aboard the factory ship on which he sailed in 1949: “The secret, they told me, was to briefly boil it up three times, each time throwing away the water with its fishy tang, then to use fried onions to disguise the last trace of krill.”<sup>42</sup>

L. Harrison Matthews appears to have been an adventurous eater. Not only did he revive the tradition of “snotters,” but he also collected whale milk streaming from the teats of a freshly-killed eighty-two-foot-long blue whale that had been suckling a calf. The chalky-white milk, up to forty percent fat—compared with the standard three percent for cow’s milk—is thick and sticky like condensed milk. In *Penguins, Whalers and Sealers* he writes that “We tried it in tea and in coffee, but it was not good, for it had a fishy taste like cod-liver oil emulsion.” Matthews also tried elephant seal milk, even richer with more than fifty percent fat, finding, as he reports in *Sea Elephant*, that it “had none of the usual taste of milk but a sickly fishy flavour—not only did it look like cod-liver oil emulsion, it tasted like it.”

The most infamous meals in Antarctic history were not made from Antarctic wild foods, however. They occurred when desperate explorers killed and ate their sledge dogs (*Canis familiaris*). Mawson and a companion ate their starving dogs when they lost most of their food (and another

companion) down a crevasse while three hundred miles from their base. Mawson later recalled:

At that first repast on starved-dog we got little satisfaction for, prepared in this way, the meat proved so stringy as to tax our powers of mastication to the utmost...All the dogs were thin and miserable when they reached the stage of extreme exhaustion. Their meat was tough, stringy and without a vestige of fat. For a change we sometimes chopped it up finely, mixed it with a little pemmican, and brought it all to the boil in a large pot of water. We were exceedingly hungry, and the ration went but a short way to satisfy our cravings...By long boiling the sinews and gristle were reduced to the consistency of jelly. The paws took longest to cook, but, treated to a lengthy stewing, even they became quite digestible.

Perhaps Amundsen, who slaughtered his dogs on his single-minded quest for the Pole, should have the last word: “If we had entertained the slightest doubt of the quality of the meat,” he wrote of his healthy animals in *The South Pole*,

this vanished instantly on the first trial. The meat was excellent, quite excellent, and one cutlet after another disappeared with lightning-like rapidity. I must admit that they would have lost nothing by being a little more tender, but one must not expect too much of a dog.

Those who visited the Antarctic regions often showed remarkable adaptability in the face of exigency, particularly when it came to diet. As Macklin wrote, “There is very little in the way of animal flesh that one cannot eat if put to it, and a few precautions in cooking can make almost anything palatable.”<sup>43</sup>

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## Escallops of Penguin Breasts

### INGREDIENTS

Penguin Breasts as required  
Reconstituted onion  
Some fairly thick batter  
Flour  
Salt and pepper to taste

Cut the breasts into thin slices and soak in milk for about 2 hours. Dry, season and flour them well on both sides. Have ready some deep frying fat. When just smoking hot dip the pieces in the batter with the onion mixed into it and fry each piece to a nice golden brown. For a sauce turn the contents of a tin of mushroom soup into a saucepan and heat but do not boil. When hot pour over the meat and serve with fried potatoes and peas.

From Gerald T. Cutland's *Fit for a FID, or, How to Keep a Fat Explorer in Prime Condition* (© British Antarctic Survey)

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### NOTES

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Due to space limitations, most of the citations in the text are not referenced as endnotes here. However, all of the sources used are listed alphabetically by author at the end of this essay, with the page numbers referenced in the order in which they appear in the text. If any readers should need more explicit information, they may contact the author at rubinwiles@worldnet.att.net.

1. Quoted in J.S. Cumpston, *Macquarie Island* [ANARE Publication no. 93] (Canberra: Australian Government Printing Office, 1968), 118.
2. *Ibid.*, 159.
3. Douglas Mawson, Appendix VII, "Equipment," in *The Home of the Blizzard*, vol. ii (Philadelphia: J.P. Lippincott, 1915), 317.
4. Author interview with Col. N.D. Vaughan, 27 February 2002.
5. Arne Høygaard and Harald Waage Rasmussen, "Vitamin C Sources in Eskimo Food," *Nature* 3631 (3 June 1939): 943.
6. FID was the former name for a member of British Antarctic expeditions from 1945 to 1961, derived from the acronym for Falkland Islands Dependencies, the British territorial claim in the South American sector of Antarctica.
7. Lot #221, *The Sale of the Polar Collection of Andreas Züst*, May 9, 2002 (King Street, St. James's, London: Christies, 2002), 159.
8. Robert Dovers, *Huskies* (London: G. Bell & Sons, 1957), 196.
9. E-mails to the author from Dr. B. Stonehouse, 10 and 11 June 2002.
10. Thomas W. Bagshawe, *Two Men in the Antarctic* (Cambridge: Cambridge University Press, 1939), 46.
11. Griffith Taylor, "The Western Journeys," in Scott, *Scott's Last Expedition*, vol. ii, 245.
12. Scott, *Scott's Last Expedition*, vol. i, 266. A galantine, according to the *Oxford English Dictionary*, is "a dish of veal, chickens, or other white meat, freed from bones, tied up, boiled, and served cold with the jelly."

13. Armitage, *Two Years in the Atlantic*, 87–88. An olive, according to the *Oxford English Dictionary*, is "a dish composed of thickish slices of beef or veal, rolled up with onions and herbs, and stewed in brown sauce."

14. Letter to the author from Dr. P.G. Law, 27 February 2002.

15. *Ibid.*

16. Priestley, *Antarctic Adventure*, 285–6. Hoosh is "a hot, soupy stew eaten during sledging expeditions or field trips," according to Bernadette Hince, *The Antarctic Dictionary: A Complete Guide to Antarctic English* (Collingwood, Australia: CSIRO Publishing/Museum of Victoria, 2000), 169. Antarctica is the only place where the word has been recorded; its first use was in Scott's *Voyage of the Discovery*, 1905.

17. E-mails to the author from Dr. B. Stonehouse, 10 and 11 June 2002.

18. By contrast, Alaskan natives used endemic fur seals extensively as food. See Victor B. Scheffer, "Use of Fur Seal Carcasses by Natives of the Pribilof Islands, Alaska," in *Pacific Northwest Quarterly* 39 (1948): 131–32.

19. In 1970, an Australian researcher investigating the commercial potential of the meat of elephant seals, then being slaughtered for their oil, concluded, "No data of this type are available at present...[but] there is a need for critical assessments of the relative value of the meat of different classes of seals and of the quality of meat obtained from different parts of the carcass." Michael M. Bryden, "Utilisation of the meat of elephant seals," in *Proceedings of the Australian Society of Animal Production* 8 (1970), 106–8.

20. Cumpston, *Macquarie Island*, 258.

21. "E.R." [Edward Risk?], letter to the Dunedin [New Zealand] *Evening Star*, 12 December 1890, quoted in Cumpston, *Macquarie Island*, 119.

22. D. Livingstone, letter of November 1959, quoted in *ibid.*, 233.

23. Matthews, *Sea Elephant*, 140–141. Interestingly, elephant seal "snorter" has an Arctic conjugate: moose nose. "Moose nose was Slim's favorite delicacy—he boiled it—and the fact that wolves had beaten him to it disgusted him." Jim Reardon, "A Lifetime in the Wilderness," *Alaska Magazine* 68 (6), Aug. 2002: 48–52.

24. Letter to the author from Dr. P.G. Law, 27 February 2002.

25. E-mail to the author from Dr. C. Swithinbank, 25 May 2002.

26. "E.R.," quoted in Cumpston, *Macquarie Island*, 119.

27. E-mail to the author from Robert K. Headland, 13 May 2002.

28. E-mails to the author from Dr. B. Stonehouse, 10 and 11 June 2002.

29. "E.R.," quoted in Cumpston, *Macquarie Island*, 119.

30. "We emptied them of their contents, dried them well, and then introduced into each a notice written upon paper in the gall of the albatross, describing the nature of our residence upon the island. We then stopped the opening with a small piece of cloth covered with mineral pitch, and afterwards pitched the outside well over to keep out the water, and to render the surface as strong and durable as we could; after which we turned them adrift upon the sea, with many a hearty wish for the success of the project, and that they might be seen and caught up by the crew of some vessel and lead to our discovery." Nunn, *Narrative of the Wreck of the Favorite*, 158.

31. Frank Wild, December 8, 1912, quoted in Douglas Mawson, *Geographical Narrative and Cartography, Australasian Antarctic Expedition 1911–1914*, Scientific Reports series A, vol. 1 (Sydney: Australian Government Printer), 255. Quoted in Hince, *The Antarctic Dictionary*, 306.

32. Letter to the author from Dr. P.G. Law, 27 February 2002.

33. A nutritional analysis done by Australia's Commonwealth Scientific and Industrial Research Organization found that the heart leaves of the Kerguelen cabbage were the most vitamin-packed, averaging one hundred fifty-five milligrams per one-hundred gram sample of raw leaves. The middle leaves ranged from one hundred to one hundred forty-three milligrams and the outer leaves, from sixty-three to one hundred twelve milligrams per one-hundred gram sample. H.H. Hatt, "Vitamin C Content of an Old Antiscorbutic: The Kerguelen Cabbage," *Nature* 164 (4182) [December 24, 1949]: 1081–2.

Another Australian government study, done in 1998, also found that Vitamin C was at appreciable levels in Kerguelen cabbage (one hundred ninety-seven milligrams per one-hundred gram edible portion). When boiled for five minutes, the levels dropped by only about twenty percent (to one hundred fifty-four milligrams

per one-hundred gram portion). After boiling Macquarie Cabbage for twenty minutes (the longer time was required to make it palatable), however, vitamin C was not detected. Iain Dawson, *New Salad & Vegetable Crops from Australia's Sub-Antarctic Islands* [Publication no 98/145] (Barton, Australia: Rural Industries Research and Development Corporation, 1998).

34. C.R.V. Gibbs, "Remote Islands of the Southern Indian Ocean," *Scottish Geographical Magazine* 61 (1) [1945]: 13.

35. Joseph D. Hooker, *Flora Antarctica*, vol. ii (London: Reeve Brothers, (1844–60), 239, quoted in Hatt, "Vitamin C Content of an Old Antiscorbutic."

36. Joseph D. Hooker, in James Clark Ross, *A Voyage of Discovery and Research in the Southern and Antarctic Regions during the Years 1839–43*, vol. 1 (New York: Augustus M. Kelley, 1969 [facsimile of 1847 original]), 86–87.

37. Hooker, quoted in Hatt, "Vitamin C Content of an Old Antiscorbutic."

38. W.E.L.H. Crowther, ed., "Captain J.W. Robinson's Narrative of a Sealing Voyage to Heard Island, 1858–60," *Polar Record* 15 (96) [1970]: 311.

39. C.R.V. Gibbs, "Remote Islands of the Southern Indian Ocean," 13.

40. E-mails to the author from Dr. B. Stonehouse, 10 and 11 June 2002.

41. Ibid.

42. E-mail to the author from Dr. C. Swithinbank, 25 May 2002.

#### SOURCES

Ainsworth, G.F. "Life on Macquarie Island." In Douglas Mawson. *The Home of the Blizzard*, vol. ii. Philadelphia: J.P. Lippincott, 1915. (181)

Allyn, Gurdon L. *The Old Sailor's Story*. Norwich, Connecticut: Gordon Wilcox, 1879. (58, 50)

Amundsen, Roald. *The South Pole*. Translated by A.G. Chater. London: C. Hurst & Co., 1976 [reprint of 1912 edition]. (vol. i, 51; vol. ii, 301, 301, 67)

Anderson, William. Appendix 1, "A Journal of a Voyage Made in His Majesty's Sloop Resolution." In James Cook. *The Journals of Captain James Cook on His Voyages of Discovery: The Voyage of the Resolution and Discovery 1776–1780*. Edited by J.C. Beaglehole. Cambridge: Published for the Hakluyt Society at the University Press, 1967. (part two, 775, 771–772)

Appleman, William Henry. Journal entry for 24 January 1875. Nicolson Whaling Collection. Providence Public Library, schooner *Thomas Hunt*, 1873–75 (roll 42). Quoted in Briton Cooper Busch. *The War Against the Seals*. Kingston and Montreal: McGill-Queen's University Press, 1985. (209)

Armitage, Albert B. *Two Years in the Antarctic*. London: Edward Arnold, 1905. (189, 87–88, 139, 275, 92, 268)

Bagshawe, Thomas W. *Two Men in the Antarctic*. Cambridge: Cambridge University Press, 1939. (46, 43, 46, 55, 7, 152–153, 69, 46)

Banks, Joseph. In W.L.N. Tickell, *Albatrosses*. East Sussex: Pica Press, 2000. (358)

Bellingshausen, Fabian von. *The voyage of Captain Bellingshausen to the Antarctic Seas, 1819–1821*. Edited by Frank Debenham. London: Printed for the Hakluyt society, 1945. (111–12, 368–369)

Borchgrevink, Carstens. *First on the Antarctic Continent*. Montreal: McGill-Queen's University Press, 1980 [reprint of 1901 edition]. (153)

Brown, R.N. Rudmose, R.C. Mossman, and J.H. Harvey Pirie. *The Voyage of the 'Scotia'*. Edinburgh: William Blackwood and Sons, 1906. (225, 102, 101–102, 101–102, 102, 135, 136)

Bruce, William Speirs. *The Log of the Scotia Expedition, 1902–4*. Edinburgh: Edinburgh University Press, 1992. (154, 84, 154, 126)

Byrd, Richard. *Little America*. New York: G.P. Putnam's Sons, 1930. (101)

Campbell, Victor A. "Narrative of the Northern Party." In Robert F. Scott. *Scott's Last Expedition*. London: Smith, Elder, 1913. (vol. ii, 137, 137)

Charcot, Jean-Baptiste. *The Voyage of the 'Why Not?' in the Antarctic*. Translated by Philip Walsh. London: Hodder and Stoughton; Toronto: Musson, n.d. (ca. 1911). (217)

Cook, Frederick A. *Through the First Antarctic Night*. Montreal: McGill-Queen's University Press, 1980 [facsimile of 1900 edition]. (234, 233–234, 382)

Cutland, Gerald T. *Fit for a FID, or, How to Keep a Fat Explorer in Prime Condition*. British Antarctic Survey, n.d. (ca. 1957). (2, 14, 14, 18, 25, 12, 21)

Drygalski, Erich von. *The Southern Ice-Continent: The German South Polar Expedition Aboard the Gauss, 1901–03*. Translated by M.M. Raraty. Bluntisham: Bluntisham Books, 1989. (216, 216, 103)

du Baty, Raymond Rallier. *Fifteen Thousand Miles in a Ketch*. London: Thomas Nelson and Sons Ltd., n.d. (ca. 1914). (189–90)

Filchner, Wilhelm. *To the Sixth Continent: The Second German South Polar Expedition*. Translated by William Barr. Bluntisham: Bluntisham Books, 1994. (190)

Fildes, Robert. In Stephen Martin, *A History of Antarctica*. Sydney: State Library of New South Wales Press, 1996. (68, 68)

Fletcher, Harold. *Antarctic Days with Mawson*. Sydney: Angus & Robertson, 1984. (134)

Fuller, Joseph J. *Master of Desolation*. Edited by Briton Cooper Busch. Mystic: Mystic Seaport Museum, 1980. (64, 305, 52, 24, 313, 315, 295, 65)

Gilchrist, Alan. In Tim Bowden, *The Silence Calling: Australians in Antarctica, 1947–97* (Sydney: Allen & Unwin, 1997). (56, 56)

Goodridge, Charles Medyett. *Narrative of a voyage to the South Seas, and the shipwreck of the Princess of Wales Cutter*, 5th ed. Exeter: W.C. Featherstone, 1843. (51–52, 52–54, 41, 55, 63, 63, 77)

Hamilton, Professor A. "Notes on a visit to Macquarie Island." *Transactions of the New Zealand Institute*, Vol. xxvii, 1894. Quoted in J.S. Cumpston. *Macquarie Island* (ANARE Publication No. 93). Canberra: Australian Government Printing Office, 1968. (174)

Herbert, Wally. *A World of Men*. New York: G.P. Putnam's and Sons, 1969. (56, 55–56)

Hurley, Frank. *Endurance Diary, 1914–1917*. Mitchell Library, State Library of New South Wales, Australia. (27 August 1916; 13 July 1916; 13 August 1916; 30 March 1916)

Lashly, William. *Under Scott's Command: Lashly's Antarctic Diaries*. Edited by A. R. Ellis. London: Victor Gollancz, 1959. 4. In T. H. Baughman. *Before the Heroes Came: Antarctica in the 1890s*. Lincoln: University of Nebraska Press, 1994. (96)

Livingstone, D. Letter of November 1959. Quoted in Cumpston, *Macquarie Island*. (233)

Macklin, Dr. Alexander H. In Frank Wild. *Shackleton's Last Voyage: The Story of the Quest*. London: Cassell and Co., 1923. (363, 363, 363, 363)

Maggs, Tom. "Fold Island: Black and White; May 1977." In *Huskies in Harness*. Edited by Shelagh Robinson. Kenthurst, New South Wales, Australia: Kangaroo Press, 1995. (92)

Marr, James. *Into the Frozen South*. New York: Funk and Wagnalls, n.d. (ca. 1923). (115)

Marret, Mario. *Seven Men Among the Penguins*. Translated by Edward Fitzgerald. New York: Harcourt, Brace & Co., 1955. (70)

Matthews, L. Harrison. *Penguins, Whalers and Sealers*. New York: Universe Books, 1977. (72, 67, 83, 142–143)

Matthews, L. Harrison. *Sea Elephant*. London: MacGibbon & Kee, 1952. (46, 46, 166, 140–141, 149, 62, 60)

Mawson, Douglas. *The Home of the Blizzard*. New York: St. Martins, 1998. (111, 180, 167–74)

McLean, A.L. "With Mawson on Macquarie Island." *The Bulletin*, 1919. Quoted in Cumpston, *Macquarie Island*. (240)

Migot, André. *The Lonely South*. Translated by Richard Graves. London: Rupert Hart-Davis, 1956. (157)

Moseley, H.N. *Notes by a Naturalist: An Account of Observations Made During the Voyage of H.M.S. 'Challenger' Round the World in the Years 1872–1876*. London: John Murray, 1892. (176)

- Nilsen, Thorvald. "The Voyage of the *Fram*." In Amundsen. *The South Pole*. (vol. ii, 286)
- Nordenskjöld, Otto. *Antarctica, or Two Years amongst the Ice of the South Pole*. Translated by Edward Adams-Ray. St. Lucia: University of Queensland Press, 1977 [facsimile of 1905 edition]. (550, 458)
- Nunn, John. *Narrative of the Wreck of the Favorite on the Island of Desolation*. London: William Edward Painter, 1850. (111, 130, 71, 198–199, 157, 157–158, 202–203, 131)
- Ommaney, F.D. *Below the Roaring Forties*. London: Longmans, Green and Co., 1938. (274, 275, 39)
- Orde-Lees, Thomas. *Diary of the Endurance Expedition, 1914–1916*. The Alexander Turnbull Library, National Library of New Zealand. (Introduction; 22 April 1916; 27 January 1916; 19 February 1916, 19 February 1916; 15 July 1916; 3 May 1916; 14 August 1916, 14 August 1916)
- Phelps, William Dane. *Fore and Aft; or, Leaves from the Life of an Old Sailor*. Boston: Nichols & Hall, 1871. (48, 91, 83, 77, 69)
- Ponting, Herbert G. *The Great White South*. London: Duckworth & Co., 1923. (75)
- Prestrud, Kristian. "The Eastern Sledge Journey." In Amundsen. *The South Pole*. (vol. ii, 231, 276, 276)
- Priestley, Raymond E. *Antarctic Adventure: Scott's Northern Party*. New York: E.P. Dutton & Co., 1915. (361–2, 227, 252–253, 73, 309, 181, 74, 286–287, 242–243)
- Ross, James Clark. *A Voyage of Discovery and Research in the Southern and Antarctic Regions during the Years 1839–43*. New York: Augustus M. Kelley, 1969 [facsimile of 1847 original]. (vol. i, 90, 234; vol. ii, 273)
- Scholes, Arthur. *Fourteen Men: the story of the Antarctic Expedition to Heard Island*. New York: E.P. Dutton & Co., 1952. (126)
- Scott, Robert F. *Scott's Last Expedition*. Arranged by Leonard Huxley. London: Smith, Elder, 1913. (vol. i, 134, 287–288, 325, 220–221, 288)
- Scott, Robert F. *Voyage of the Discovery*. New York: Charles Scribners, 1905. (vol. i, 130–1, 547, 131, 294; vol. ii, 320)
- Shackleton, Ernest. *The Heart of the Antarctic*. London: William Heinemann, 1909. (389)
- Siple, Paul. *A Boy Scout with Byrd*. New York: G.P. Putnam's Sons, 1931. (79, 27)
- Skelton, Reginald. In David E. Yelverton. *Antarctica Unveiled*. Boulder: University Press of Colorado, 2000. (103)
- Skottsberg, C. J. "Hail! Hail! Thou Northern Land!" In Nordenskjöld, *Antarctica*. (580)
- Smith, Thomas W. *A Narrative of the Life, Travels and Sufferings of Thomas W. Smith*. Boston: Wm. C. Hill, 1844. (143, 153)
- Stonehouse, Bernard. *Penguins: The World of Animals*. London: Arthur Barker/New York: Golden Press, 1968, 40. In Hince. *The Antarctic Dictionary: A Complete Guide to Antarctic English*. Collingwood, Australia: CSIRO Publishing/Museum of Victoria, 2000. (115)
- Taylor, B.W. *The Flora, Vegetation and Soils of Macquarie Island* [ANARE reports series B, vol. II, Botany]. Melbourne: Antarctic Division, 1955). 131. In Bernadette Hince, "Words from the ice." In David McGonigal and Lynn Woodworth. *Antarctica: The Complete Story*. Noble Park, Victoria: Five Mile Press, 2001. (581)
- Taylor, Griffith. "The Western Journeys." In Scott. *Scott's Last Expedition*. (vol. ii, 245, 253–254)
- Taylor, Nathaniel W. *Life on a Whaler* [Occasional Publications Volume II]. New London, Connecticut: The London County Historical Society, 1929. (145, 145, 91, 145, 92, 84)
- Thomson, J. Inches. *Voyages and Wanderings in Far Off Seas and Lands*. London: Headley Brothers, n.d. (ca. 1912). (176, 185, 175)
- Walton, E.W. Kevin. *Two Years in the Antarctic*. New York: Philosophical Library, 1955. (35)
- Weddell, James. *A Voyage Towards the South Pole performed in the years 1822–24*. 2nd ed. Newton Abbot, England: David & Charles Reprints, 1970 [reprint of 1827 edition]. (51, 59, 59)
- Wild, Frank. *Shackleton's Last Voyage: The Story of the Quest*. London: Cassell and Co., 1923. (105, 108, 104, 189, 190, 163)
- Wilson, Edward. *Diary of the Terra Nova Expedition to the Antarctic, 1910–1912*. London: Blandford Press, 1972. (119)
- Wordsworth, Charles F. "The Strathmore: Mr. Wordsworth's Narrative." *Blackwood's Edinburgh Magazine* 731 (120) [Sept. 1876]. (334, 337, 331–332, 338)
- Worsley, Frank. *Shackleton's Boat Journey*. New York: W. W. Norton & Co., 1977. (175–76)