

ORNITHOLOGY

Antarctic Penguin Hunting

These flightless birds are easily caught but keeping them alive poses problem. Washington has the largest group of emperor penguins assembled in any zoo.

By DR. FRANK THONE

See Front Cover

► FOR portly dignity, a trifle on the pompous side, visitors to Washington should not ascend Capitol Hill. They should go out to the National Zoological Park.

There they will find not mere senators, but a conclave of emperors. Solemn emperor penguins, all in impeccable full dress, and all with an air of having just arrived at a momentous, world-changing decision which they aren't going to tell common mortals.

Sometimes they march in decorous procession, the full length of their glassed-in, specially air-conditioned enclosure, then turn around and as decorously parade back again. It is all very impressive—and it doesn't mean a thing. Except, perhaps, "When do we get our fish?"

When the fish do arrive, they are very likely to be distributed by the penguins' oldest human acquaintance, the man who journeyed to Antarctica to collect and bring to Washington the largest group of emperor penguins ever assembled in any zoo, and then nursed them through heart-breaking days of oppressive heat as his ship steamed up through the tropics. He is Malcolm Davis, who runs the birdhouse at the Washington Zoo, and is the world's Number One penguinier. Mr. Davis is shown with three emperors on this week's cover of the SCIENCE NEWS LETTER.

Five-Month Expedition

The big birds now in Washington, each more than half as high as a tall man, were collected during a five-months' expedition along the coasts of Antarctica carried out by two Navy ice-breakers, the *Edisto* and the *Burton Island*. As the two stout ships probed their way along more than half of Antarctica's icy coastline through the perpetual daylight of the South Polar summer, Mr. Davis kept himself on a fireman's schedule. At the lookout's shout

of "Penguins!" he would drop whatever else he was doing, or roll out of his bunk if he was taking a nap, and prepare to land.

Tactics for capture varied. If the birds were more than a quarter-mile from the edge of the ice, an ordinary boat landing sufficed; for while an emperor penguin can make pretty good speed in his first efforts to escape, he tires in about a quarter-mile and can thus be overhauled. But if they were near the edge of the ice, or in the water, one of the expedition's helicopters was called into action. This was, incidentally, the first time helicopters were ever used in hunting penguins. The pilot would fly his whirlygig aircraft close to the penguins, and the big birds, alarmed at the disturbance, would head inland. When they had been herded more than the requisite quarter-mile from the water, the pilot would make a landing on the ice and Mr. Davis would pile out and begin the pursuit.

Chasing Penguins

When a penguin tries to get away he turns into a temporary quadruped; does a "bellywopper" and propels himself over the ice or crusted snow with both feet and flippers. He can make pretty good speed this way, but can't keep it up long. Once overtaken, football tactics are in order. You dive at him and try to get a good hold on a flipper. The penguin struggles violently, and since an emperor penguin weighs 50 pounds it is likely to be quite a tussle. Fortunately, says Mr. Davis, the big birds do not offer to use their formidable beaks, merely buck and squirm and try to break away. Fortunately also there was always plenty of voluntary help from members of the crew. Most U. S. Navy men have had at least a little football experience, and penguin catching offered a chance for some rough-and-tumble fun.

After the big bird was subdued, he would be stuffed headfirst into a sea-bag and the mouth quickly secured. The big canvas bag used by sailors for stowing their gear is just the right size

for an emperor penguin, and plenty strong enough to keep him from breaking out. Then a short haul to helicopter or boat, and presently the penguin would be aboard the *Edisto*, making acquaintance with his fellows already in the penguin pen.

In addition to the big emperors, Mr. Davis also captured a number of the little Adelie penguins, of which only four survived the discomforts of the voyage through the tropics. Catching Adelies is much easier, he states. Although they weigh only about seven pounds, as against the emperors' 50, they are as pugnacious as the big birds are pacifist. Adelies come waddling up, wagging their flippers, and in general asking in sign language, "Wanna fight?" So you just swing a long-handled crab-net—and there you have your Adelie.

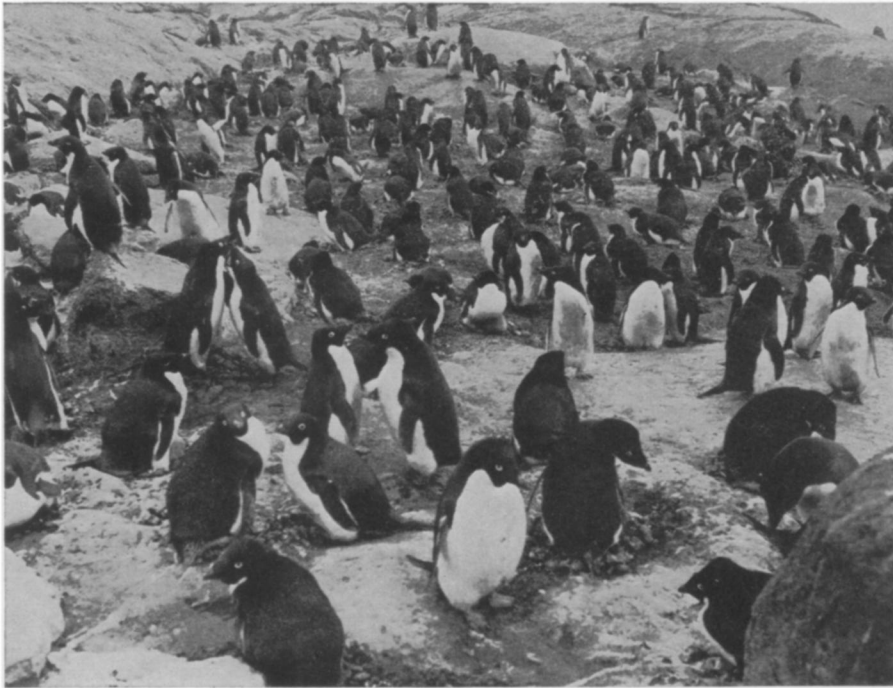
They Can't Stand Heat

While capturing penguins requires far voyaging and strenuous work, it isn't too difficult. Getting the birds back alive is the really heartbreaking job. With the sole exception of the peculiarly adapted Galapagos penguin, no species of this group can stand heat. So while he started on the long northward voyage with 21 emperor penguins, Mr. Davis had to be satisfied to get eight of them to their destination alive.

At that, he fared better this time than he did on his first penguin-bringing expedition, when he sailed to Little America with the U. S. Antarctic Service Expedition of 1939-40. He started back with a contingent of birds but when his ship had made about half the long distance up the west coast of South America they all died. Mr. Davis promptly went back to Antarctica for some more penguins—and got enough of them through alive to justify his trip.

He feels rather acutely on this matter of shipping penguins through the tropics without benefit of refrigeration, for he hates to see penguins die. He is convinced that if he could get accommodations for his birds on a properly air-conditioned ship, or better yet, air-lift all the way from Antarctica to the Washington Airport, he could cut his losses practically to zero.

Mr. Davis not only brought back birds from Antarctica; he took some there. He had with him two pairs of carrier pig-



LITTLE ADELIE PENGUINS—Whole armies of these small flightless birds occupy long stretches of Antarctica's rocky coast.

eons, to test the practicability of using these birds as message bearers under frigid-zone conditions. They were the first pigeons to be flown over Antarctica.

On the trial flights the birds proved two things: that the pigeons actually could find their way back to their home roosts on shipboard, and that they could escape their winged enemies. There are no hawks in Antarctica, but a flesh-eating bird of the gull family, called the skua, takes their place. Once three of the pigeons left the ship on a flight, and were chased out of sight by five hungry skuas. After a couple of hours they returned, with the skuas nowhere

in sight. They had outraced the predator birds so completely that the skuas didn't even figure as also-rans.

So much attention has been paid to penguins that one may get the impression that they are the only birds to be found in Antarctica. This is not at all the case, Mr. Davis states: in addition to the skuas already mentioned there are three species of petrel, cormorant, sheath-bill, kelp gull and Antarctic tern. These are all summer residents only; having wings, they are able to fly north when winter comes. The flightless penguins have to get through the fury of the Antarctic winter as best they can.

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ASTRONOMY

U. S. To See Nine Eclipses

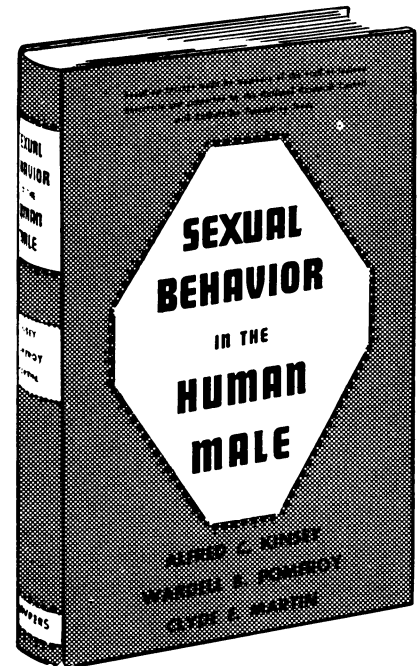
➤ NINE total eclipses of the sun will be visible somewhere in the continental United States during the next hundred years.

The next total eclipse scheduled for observation in this country is that of June 30, 1954. At that time the sun will rise eclipsed for some people in Nebraska. The path of totality will then pass through South Dakota, Minnesota and Wisconsin, cross Lake Superior and continue on into Canada.

The dates of other eclipses to be visible from the United States are as fol-

lows: Oct. 2, 1959; July 20, 1963; March 7, 1970; Feb. 26, 1979; Aug. 21, 2017; April 8, 2024; Aug. 23, 2044; and Aug. 12, 2045. As the paths of totality of some of these eclipses cross within this country, in a few regions the sun may be seen totally eclipsed twice within the next century.

From 1900 to 2050, totality for 15 eclipses falls somewhere within the United States. Thus within this 150-year period, a total eclipse is seen somewhere in this country about once every ten years, calculates Dr. C. H. Clemin-



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