BIOLOGY

War on Midway's Clowns

One of the biggest morale builders on Midway Island may have to go. The big, clownish gooney-birds disrupt air traffic, and wildlife experts waged war on them two years ago.

By HENRY W. PIERCE

➤ THE MOST STUBBORN, brash, contrary, noisy, unpredictable morale builder that the Army, Navy, Marines or Air Force can point to is the gooney-bird.

If anyone questions this, he has only to ask the 700-odd Naval personnel on Midway Island in the Pacific about it. Confined to an island only two miles square, the seamen and their families look to the big birds for what may be the liveliest entertainment in the feathered world.

The gooney-birds, actually albatrosses, have a courtship dance as formal and stately as anything found in a royal ballroom. Dubbed the "Midway Mambo," the dance has been compared to a minuet.

The birds bow, spread their wings, stretch their necks, rattle their bills and utter a calf-like "ahhhh." They go through this routine both before and after mating, and long after the young have been hatched. They do not confine their antics to daylight hours.

Midway nights are darker than most. From somewhere in the mysterious depths around come outlandish cries accompanied by the staccato clicking of bills being knocked together. The gooney-birds keep up their courting and bickering long after the human inhabitants of the island have retired.

War Declared on Birds

Airplane pilots say there are more birds per acre on Midway than on any other Pacific Island regularly used for landing. Because of this, some of the amusing goonies had to be driven from the haunts of man. Many more may have to go.

Two years ago the Military Air Transport Service declared war on the birds. There were good reasons for the move. Sand Island, one of the two islands comprising Midway Atoll, is home to 22,600 Laysan albatrosses and 7,700 black-footed albatrosses. These are the gooney-birds. There are also some 50,000 Bonin Island petrels and 10,000 terns and shorebirds. Spring and summer find an additional 100,000 sooty terns and 40,000 wedgetailed shearwaters. This means that, at some seasons, every unsurfaced acre of Sand Island averages 330 birds.

Picture a Military Air Transport Service pilot, tired after a 12-hour flight from Japan, coming in for a landing on Sand Island. He points the plane toward the airfield. Suddenly he notices below him that birds

with seven-foot wingspread are sailing leisurely across the runways.

Gooney-birds caused ten accidents during the first six months of 1954. Fortunately, there were no injuries to personnel, but damaged propellers and wings cost the military thousands of dollars. A seven-pound bird smacking into a moving plane can cause a big dent.

An additional problem has been created with the introduction of jet aircraft because the birds are apt to be sucked into the jet scoops.

In desperation the Military Air Transport Service asked for help from the U. S. Fish and Wildlife Service.

Two biologists, Philip A. DuMont and Johnson Neff, were dispatched to Midway to lay plans for the offensive. The scientists expected, of course, that everyone who had ever flown to Midway would encourage prompt extermination of the birds.

Quite the contrary. The nearer the biologists got to Midway, the more pro-gooney sentiment they encounterd. In Hawaii,

Capt. Ralph Pray, an experienced combat veteran, then with the Military Air Transport Service headquarters, asked whether it would "really be necessary" to kill the gooney-birds.

Sentiment was running high by the time the wildlife experts got to Midway. Everywhere they went people asked the same question: "Are you really going to kill our goonies?"

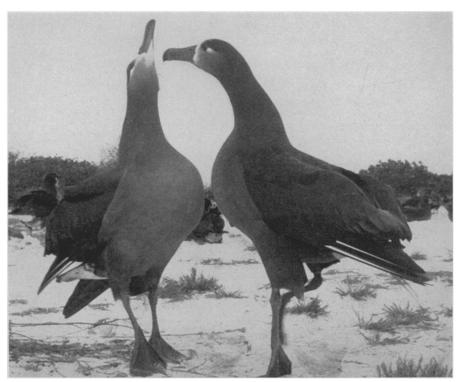
The birds had become old friends to many Midway-based servicemen and their families. A gooney returns to the same nesting place season after season, and this nesting place may be next to someone's

house or in someone's yard.

Diversionary Tactics Tried

The biologists decided the best way to deal with the birds would be to divert them from Sand Island to uninhabited Eastern Island. If, the wildlife authorities reasoned, birds' lives could be made sufficiently intolerable on Sand Island, the goonies would set up nest-keeping elsewhere.

The scientists and military personnel went into a huddle. The stratagem they evolved was simple and, they thought, effective. They would smoke the goonies out!



GOONEY-BIRDS DANCING—These seven-pound birds are doing a courtship dance that occupies most of their time even after the young are hatched. The stately dance never fails to draw an audience from among servicemen and their families on Midway Island.

Ten distress flares sent orange, sulfurous smoke drifting over 130 black-footed gooney-birds concentrated at the end of one runway. The goonies refused to budge.

A burning truck tire was placed among five incubating birds, all within six feet of flame and smoke. The goonies were profoundly unimpressed. Not one moved.

Noises were equally ineffective. Gooneybirds nested on the rifle range. They held their positions between the firing platform and the targets during practice. The noise did not disturb them, the bullets did not frighten them.

Unimpressed by Mortar Fire

Mortar fire did not impress the birds, either. Goonies sleeping within 200 feet of one of the weapons did not wake up when it was fired. Goonies sitting between gun and target stubbornly held their ground.

Ultrasonic vibrations were tried. A Navy communications team set up a signal generator, amplifier and speaker that had a range of from 20 cycles to 20,000 cycles. The noise was directed at a sheltered group of 85 black-footed gooney-birds, then at 32 Laysan gooney-birds, then at 10 nesting black-footed gooney-birds. No effect.

The amplifier was put a few inches from a single nesting bird. No effect. The birds seemed aware of the noise between 1,000 and 900 cycles, but they still held fast to their territory.

Goonies nesting on landing strips seldom got up for planes. Amazingly, the worst that happened to most of them were occasional upsets from propeller wind. Birds' wings were sometimes broken in these upsets, but this did not seem to bother their comrades in the least.

Since neither noise, smoke, fire, bullets nor airplanes would make the goonies surrender Sand Island, the wildlife men hatched a new scheme. They called it "egg snatching."

A gooney-bird, the wildlife authorities decided, would not sit on its nest if there were no eggs to be hatched.

Two preliminary egg-snatching experi-

ments showed that a gooney-bird will sit on a nest an average of only four days after the eggs have been removed. Ordinarily, males and females take turns sitting on the eggs, each for more than a week at a time, until the eggs are hatched three months later.

In succeeding experiments, 130 birds were sprayed with yellow enamel so they could be identified and 137 eggs were destroyed. Within three weeks, only 53 marked birds remained in the area.

Encouraged, the commander of Midway's naval base directed that an egg destruction program be carried out along the edges of the runways. In three days a total of 3,178 gooney-bird eggs were destroyed.

Wildlife officials are not certain what effect "operation egg smash" will have on this year's gooney-bird population. A gooney-bird lives a long time. Many that were banded 14 to 16 years ago are still around. There is a theory, not yet proved, that young albatrosses remain away from their home grounds several years before returning to breed. This could mean a fresh flock of gooney-birds will arrive.

If the operation proves unsuccessful, why not simply kill the adult birds?

Biologist DuMont has one answer.

"The American people would not stand for it," he says. "If we ever started any such mass slaughter, the public would soon hear about it and protest."

Meanwhile, the Military Air Transport Service has decided on temporary peaceful co-existence with its feathered adversaries. Wildlife officials have suggested that, since few gooney-birds fly at night, all planes land after dark. The wildlife authorities have also suggested that planes on Sand Island continue using a "short field take-off." The short run and rapid climb quickly take a plane above the 200-foot danger zone.

Follow-up studies should show how effective operation egg smash actually was. Until then, no one will know how long the obstinate, dancing gooney-birds will continue to harass tired pilots and entertain earth-bound servicemen.

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Curtain-type paper electrophoresis is finding widespread application in the fractionation of proteins, amino acids, polypeptides, and other materials of biological interest, as well as dyes, dye-intermediates, pharmaceuticals, and like materials.

The new Spinco Model CP instrument is designed to provide controllable conditions for accurately reproducible production of high-purity fractions in quantities as high as 10 ml per hour.

Each fraction travels a unique path under the influence of the lateral electrical field and evaluations can be made both by analysis of the collection tubes below or by visual inspection of dyed patterns on the curtain.



