



Pacific Bird Observer

NEWSLETTER OF THE PACIFIC OCEAN BIOLOGICAL SURVEY PROGRAM, SMITHSONIAN INSTITUTION, WASHINGTON, D.C.

NOVEMBER 1965 NO 2

HOW SMITHSONIAN BANDS PACIFIC SEABIRDS

Banding seabirds is a back-breaking, tedious undertaking involving long hours of hard work. If anyone believes that banding on tropical islands involves getting paid for a tropical holiday, the following general discussion should correct any such misconception.

Birds are banded with serially-numbered aluminum leg rings. The Smithsonian puts bands on the right leg and streamers, if used, on the left, but in some areas of the Pacific other banders put streamers on the right leg.

In order to avoid handling previously banded birds in large colonies a second, third, or fourth time, a spray paint is frequently used to show either that the bird has already been banded or that a band put on at some former date has been read and recorded. This paint, in different colors for different islands, normally is sprayed around the neck, but a cross or a straight line may be used occasionally on some other part of the body. Spray painting has proved to be a time-saving device, and the paint normally wears off within a month to six weeks. By the banders' next visit the birds are in their normal unpainted plumage.

At the time of banding a record is made of the bird's species, its

age and sex (if these can be determined), whether or not it was nesting and its exact location. Every attempt is made to make this record-keeping simpler by banding birds in lots of 100, all birds having identical data.

Although various methods have been devised to facilitate banding, the first requirement is still long hours of hard work. During the usual two to three days spent on an island, the bander normally works from eighteen to twenty hours out of each twenty-four (he catches up on sleep as best he can while on



Smithsonian scientist places band on leg of Blue-faced Booby. Photo by A.B. Amerson, Jr., P.O.B.S.P.

the ship traveling to the next island). Actual banding takes five to six hours; related work takes up the remainder of the time. Each bander normally bands from 1000 to 1500 birds during this short period. Most of the banding is done at night with the bander wearing a small headlight which temporarily blinds the birds, making them easy to catch. Before he starts, band numbers are recorded and a thin coat of paint is sprayed on the bands to distinguish recently-banded birds from older ones (this is done in addition to the spray paint put on the bird later). One hundred bands come partially opened on long plastic tubes. The bander holds the end of the tube in his teeth, first making a cut part way through the plastic tube so that the bands may be slipped off without taking the tube out of his mouth. Wearing his headlight, with pliers, a notebook, and his supply of bands, he is ready to begin.

Picking up the bird with his left hand in such a fashion that its wings are secured, its bill held away from him, and its right leg stationary, the bander removes a band from the tube with his right hand and puts it on the bird's leg. Then, keeping it in place with the fingers of his left hand, he securely closes the band with the pliers. Last he releases the bird, reaching for another bird with his left hand and another band with his right. In this manner he can band up to 500 birds an hour under ideal conditions--approximately one bird every seven seconds. After several hours of such work, he will have blisters on his hands from using the pliers, his old cuts will have been opened by the birds' pecking and scratching, he will be

covered with a light coat of regurgitated fish (and other by-products), and he will wonder why he ever decided to work with birds.

For any banding program to be successful the birds must be recaptured either at the original place of banding or at some distant point. Since the recovery rate for some species is low, much of the success of the Pacific banding program depends on the many observers in the Pacific Basin who report banded birds. We consider ourselves fortunate if one Sooty Tern out of one thousand banded is recaptured away from its banding site. Even with larger birds such as the Lesser Frigatebird it is unusual to have recoveries of more than one out of a hundred. We have banded over 700,000 birds in the Pacific during the past thirty months. With this large number we hope to be able to document migration routes which are now unknown.

EXTRACT FROM THE JOURNAL
OF A BIOLOGIST IN THE PACIFIC
PROGRAM GIVING AN ACCOUNT
OF TWO DAYS' WORK ON A
PACIFIC ISLAND.

June 5 ---

I awoke at reveille and had a light breakfast while the ship tossed and pitched on a slightly choppy sea. We spent most of the morning packing and organizing gear for our landing on the island. After the ship anchored and our rubber raft was launched, we lowered our gear down on ropes until the raft was nearly full. At about 10:30 we climbed down into the raft, which was not as easy as one might think since the raft bounced and tossed

when a swell carried it against the ship. Finally we set out for the island with Tiny, a huge coxswain, controlling the ten horsepower out-board motor.

As we chugged along at about 5 knots towards the island, we passed over a reef of multi-colored coral in very beautiful aquamarine water. We had to be constantly alert for nearly-emergent coral heads lest they tear the raft to shreds or smash the motor. We have been lucky in our previous landings but I continue to fear for the safety of those who cannot swim well, although we always wear lifejackets.

We landed a little before noon after searching for the channel to the docking area near an abandoned military installation. Unloading our equipment, we stored it in a dilapidated tin-roofed shack and put our personal gear in the tents which we had erected. After a short and not particularly delectable snack of C-rations Tiny and I went back to the ship for Pete and more supplies. This trip we had some trouble in clearing the reef since the tide was almost out. We finally got back to the ship just before a rain squall hit. They had saved some chow for us so I ate a second lunch aboard ship, knowing full well that my diet for the next few days would consist primarily of C-rations.

While the ship's crew fished, we loaded the raft and set out for the island once more. It was still raining, but the cool fresh water was welcome after the torrid heat of the past few days. As we landed, Fred and Larry returned from their reconnaissance of the island. Soon Fred and Doug left camp to collect insects while Bob collected plant specimens. The rest of us

straightened up the camp and had a brief respite in which we were able to catch up on our journals.

Around 8 PM the others returned, and the five of us set off together to band shorebirds. Pete and I had little luck and returned to camp to pick up booby banding equipment, pliers, bands, and a can of spray paint. In the next few hours he and I banded approximately 100 Red-footed Boobies. We pulled each one off its roost--often twenty feet up in a tree--using a long stick with a wire loop on the end. When we got the bird in our hands, we shoved its head between our legs, affixed a band to its leg, sprayed a ring of paint around its neck and then released it. The bird was painted for two reasons; it made it easier to avoid recapturing already banded birds, and it made these birds conspicuous if they turned up on an island where we were using a different marking system and paint color.

After trudging what felt like twenty miles, we returned to camp hoping to sack out but instead were sent out to band more birds. Finally, sometime after midnight, we once again returned to camp, eased our tired bodies onto our cots, and immediately fell asleep.

June 6 ---

I was rudely awakened by 7:00 AM when Fred tossed a sleeping bag at me. After a hasty breakfast the others left in the raft for another island a short distance away while Bob and I remained behind to collect fish and plant specimens. While we were engaged in this work Fairy Terns flew low about our heads, and while we were collecting fish, small Black-tipped sharks

nuzzled about our ankles like curious puppies.

In the afternoon we concentrated primarily on collecting plant specimens and taking notes on the vegetation. The three dominant elements of the fauna were coconut palms, Messerschmidia trees, and a long non-pinnated bird nest fern. The surface of the ground was mostly pulverized coral, littered with coconuts and palm fronds. Hermit crabs and large land crabs were abundant. Once, when we peered into a hollow log, we saw an immense coconut crab, more than a foot across with very large and formidable pincers which I readily believed could open a coconut.

It was very hot, and every so often we would stop to sip some water from our canteens. Bob stopped occasionally to take photographs of the various habitats and vegetation associations. In all, I think we walked at least eight miles. Exhausted, we returned to camp about 5:00 PM. Grit and sand had gotten into our tennis shoes, and this, together with our blis-

ters, had made the last part of our excursion quite uncomfortable.

Our supper, as usual, was C-rations but we attempted to make a stew by boiling several cans of different foods in one pot. It wasn't really very tasty, but it couldn't have been too bad because the complaints about the food settled down to occasional grunts.

That evening we banded birds as we had the night before and got more birds than the night before, too--but as a result were more heavily covered with guano and regurgitated food than before. These Red-footed Boobies seem to have an unfortunate tendency to go from both ends when caught, and they are capable of inflicting a painful gash with their sharp-edged beaks. Completely tired, we returned to camp and attempted to clean our cuts and scratches to avoid infection before we went to sleep.

BIRD STUDY AT SEA

In mid-October a Lesser Frigatebird was banded in the Phoenix Islands. Eight months later it was in the Philippine Islands. In early March, a Black-footed Albatross was banded in the Leeward Islands. Fifteen and one-half months later it was found near Tiajuana, Mexico.

Besides the movement of breeding birds to distant lands, species such as South America gadfly petrels, Alaskan storm petrels, North American gulls, Australian shearwaters, Russian shorebirds, and many others make long overwater movements to get to the Central Pacific.

What routes do they follow? How long do they take?

(continued on next page)

The Pacific Bird Observer is a bi-monthly newsletter distributed to collaborators of the Pacific Ocean Biological Survey Program of the Smithsonian Institution in order to promote the understanding of birds and their relation to man in the Pacific.

These questions are being partially answered through a program of intensive at-sea observation by the Pacific Ocean Biological Survey Program. Each month many hundreds of pelagic miles are being covered in the search for birds. Shipboard watches are maintained from sunrise to sunset by relays of one or two men keeping an accurate log of all birds, including their numbers, direction of flight, association with other species, and their possession of color markings or bands. Many birds are collected in an attempt to recover bands or

other markings.

Since the inception of this program in August 1963, over 150 banded or marked birds have been observed or collected, while previously unknown migratory pathways and non-breeding areas for at least 10 different species have been discovered.

Continued pelagic observations in conjunction with intensive banding and marking programs should result in a heretofore unparalleled expansion of our knowledge of the movements and distribution of oceanic birds.



Smithsonian scientist stands watch on ship during program of sea bird study. Photo by P.J. Gould, Pacific Project.

VOLUNTEERS FROM NORTHEAST PACIFIC PUBLICIZE PACIFIC PROGRAM

In our first issue we published a list of the many volunteers from the northwest quadrant of the Pacific together with their services. By distributing notices, broadcasting information, and passing on copies of the Pacific Bird Observer, they and many like them are greatly assisting the banding program. Listed below are those from the northeast quadrant who have helped to publicize our program. Names of others in the remaining two quadrants will be listed in future issues of the Pacific Bird Observer.

PUBLICITY VOLUNTEERS AND THEIR CONTRIBUTIONS

ALASKA:

Mrs. Rachel S. Simmet, Arctic Health Research Center: distributed notices to interested persons and organizations.

Mr. George Y. Harry, Jr. Bureau of Commercial Fisheries: distributed notices to fisheries and oceanographic programs.

CENTRAL AMERICA:

Dr. Carlos A. Lorre H., Inspeccion Regional de Pesca: distributed notices to Costa Rican fishing fleet.

OREGON:

Mr. Leon A. Verhoeven, Editor, P.M.F.C. Newsletter: published notice in newsletter, suggested other cooperators.

Mr. Paul T. Quick, Bureau of Sports Fisheries and Wildlife: arranged for publication of notice in newspapers, on radio, and T.V.

WASHINGTON:

Mr. Gerald A Sanger, University of Washington: posted notices on U.W. research vessels, sent notes on bird observations made off the coast.

Mr. Samuel J. Hutchinson, Bureau of Commercial Fisheries: published notice in Market News Service, suggested other cooperators.

CANADA:

Mr. Don Newton, Vancouver Natural History Society: published notice in the Society's Bulletin.

Mr. M. D. F. Udvardy, University of British Columbia: posted notice in graduate department, distributed others to interested persons.

Mr. J. L. Kask, Director of Investigations, Inter-American Tropical Tuna Commission: distributed notices to the American Tunaboat Association.

Mr. Gerald V. Howard, Bureau of Commercial Fisheries: arranged for publication of notice to 500 fishermen, and suggested other cooperators.

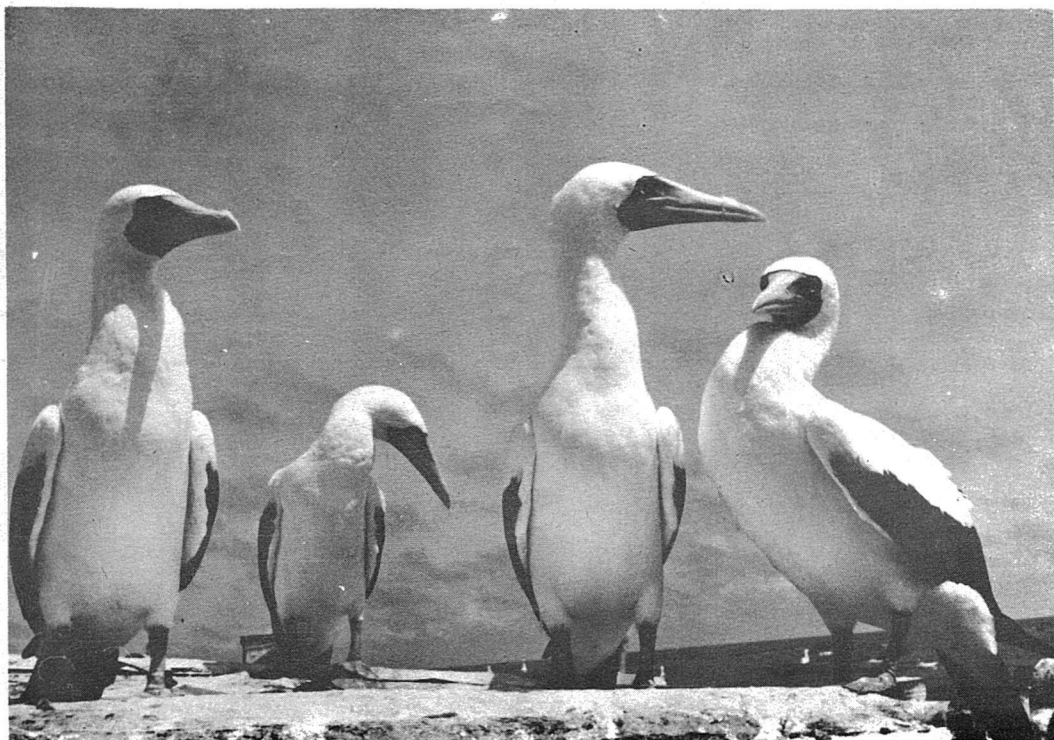
Mr. John H. Prescott, Marineland of the Pacific: promised cooperation of their staff and collectors, distributed notices to other interested persons.

Mrs. Harold P. Henningsen, Western Bird Banding Association: distributed notices at several meetings of the association.

Mr. L. Richard Mewaldt, Director, Point Reyes Bird Observatory; offered the cooperation of the observatory, and suggested other cooperators.

Mr. Joel W. Hedgepath, Director, Pacific Marine Station: distributed notices in the local resort area, suggested other cooperators.

Mr. P. G. Trapani, Marine Superintendent, Scripps Institution of Oceanography: distributed notices to each of the Institution's ships.



Blue-faced Boobies on a South Pacific island. Photo by R.B. Clapp, Pacific Project.

HAWAII:

Mr. Philip Helfrich, Hawaii Marine Laboratory: distributed notices in French Polynesia, to M. Jacques Drollet, Ecole de Lepacrué, Papeete and M. Jean Lapu, Institut de Recherches Medicales de la Polynesie Francaise, Papeete, who arranged for Papeete radio to broadcast in French and Tahitian, and distributed notices in the Marquesas.

Miss Brenda Bishop, Bishop Museum: published in the Information Bulletin of the Pacific Science Association, distributed notices to interested Hawaiians.

Mr. W. M. Ord, President, Hawaii Audubon Society: published in The Elepaio, and distributed notices to other interested organizations.

Mr. Robert W. Hiatt, Vice President for Academic Affairs, U. of Hawaii: posted notice at the Eniwetok Marine Biological Laboratory, and distributed notices to military check points on the island.

Mr. John J. Magnuson, Acting area Director, U.S. Fish and Wildlife Service: distributed notices to the fleet office, research vessels, and Sea Life Park.

Mr. R. J. McKenzie, Matson Navigation Company: distributed notices to masters of all Matson oceanic vessels.

Mr. Michio Takata, Director, Hawaii Fish and Game: distributed notices throughout Hawaii, suggested other cooperators in the South Pacific.

Mr. Herbert D. Hart, General Manager, Hawaiian Tuna Packers: distributed notices to 20 skipjack fishing boats and some long-line vessels.

CALIFORNIA:

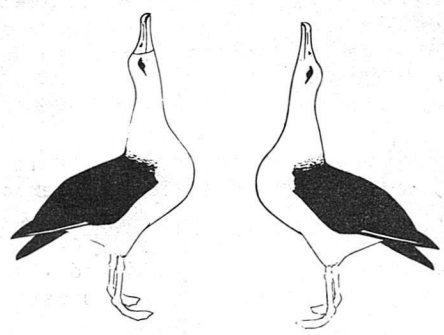
Mr. Donald P. Abbott, Hopkins Marine Station: posted notice at the station and sent a copy on research vessel in the Pacific; distributed notices to local Audubon Society and the Monterey Peninsula which published news of the program.

Mr. Richard C. Banks, Natural History Museum, Balboa Park: distributed notices to two newspapers and three radio-television stations, the museum, and the San Diego Society of Natural History.

Mr. K. L. Chamberlain, Assistant to the President, P+O Orient Lines: distributed notices on all ships.

Mr. J. Cummings, Manager South Pacific Department, General Steamship Corporation: distributed notices to Pacific ships.

Mr. W. L. Hancock, Jr., Captain, U.S. Coast Guard, Deputy Commander Western area; included notices in Weekly Notices to Mariners (sent to Coast Guard Cutters in the Pacific), and suggested additional cooperators.



Courtship dance of the Laysan Albatross.

BANKO RETURNS TO FISH AND WILDLIFE

Mr. Winston Banko, who worked for two years on the Pacific Ocean Biological Survey Program, recently has resumed work with the Fish and Wildlife Service of the U.S. Department of the Interior.

While with the Pacific Program Mr. Banko was instrumental in devising and completing the Central Pacific Reference File which contains reproductions of almost all articles dealing with the biology of the Central Pacific Area. He was also of immense help in producing the first issue of the Pacific Bird Observer.

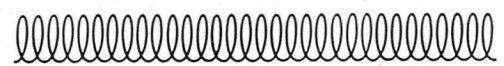
Mr. Banko is now in the Hawaiian Islands working on the Department of the Interior's newly conceived program of study and preservation of rare and endangered species of birds and mammals. Well known to conservationists for his highly-praised work on the once-endangered Trumpeter Swan, he will undoubtedly be of great value to the program.

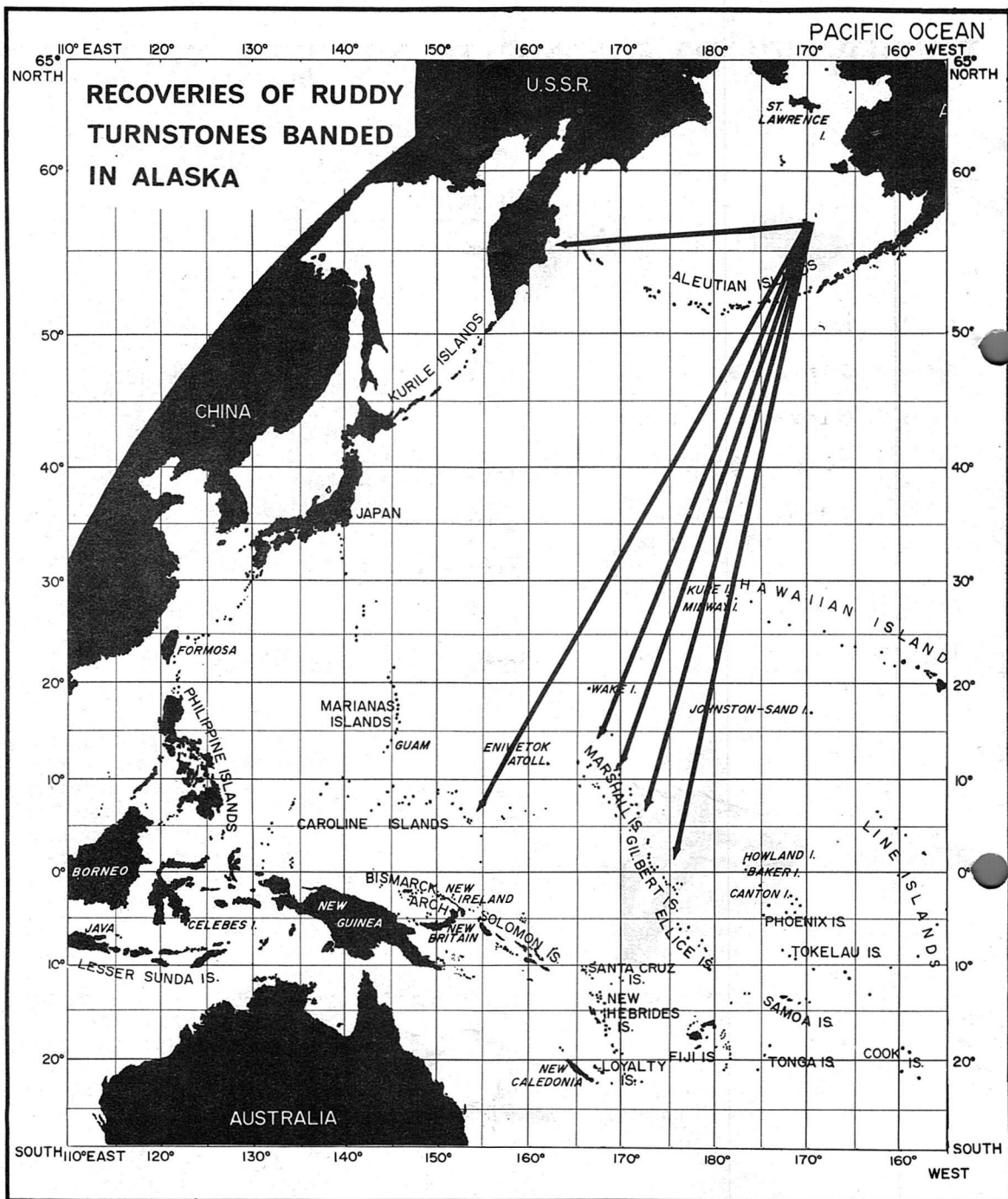
RUDDY TURNSTONE

The Ruddy Turnstone, a species of circumpolar distribution during the breeding season, scatters widely over the Pacific in migration. This small stout shorebird, about nine inches long, is easily identified in breeding plumage by its patchwork pattern, rich chestnut and black upperparts, black chest, and bright orange legs. It is most frequently seen in the Pacific in winter when the upperparts become a duller brown, but the combination of orange legs and flashing white wing stripe makes the bird easy to identify.

In the islands of the Pacific the turnstone feeds mostly on small crustacea, molluscs, and various invertebrates picked from the shores of beach and lagoon. Other items in its diet prove it hardly a dainty feeder. On the seal-killing grounds in the Commander Islands, large flocks feed on the maggots from the putrid carcasses of fur seals. In the Leeward Islands of the Hawaiian group it is not unusual to find turnstone feeding among the excrement of the Hawaiian Monk Seal.

The name "Turnstone" is derived from this bird's conspicuous habit of turning over small stones, shells, and other objects in its search for small organisms. So vigorous is its "turnstoning" activity that the stones and shells may be tossed seven or eight inches in the air.





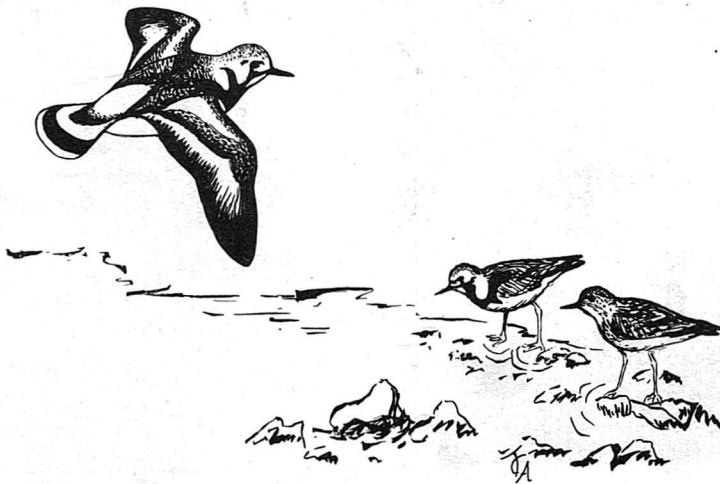
RUDDY TURNSTONE BAND REPORTERS

OF BIRDS ORIGINALLY BANDED IN THE PRIBILOF ISLANDS, ALASKA

NAME OF REPORTER AND LOCATION WHERE

THE BIRD WAS FOUND ARE GIVEN BELOW

A. Vinokurov.....Kamchatka, U.S.S.R.
 Peter T. Coleman.....Ailinglapalap Atoll, Marshall Islands
 Peter T. Coleman.....Majuro Island, Marshall Islands
 Peter T. Coleman.....Mejit Island, Marshall Islands
 Peter A. Bien.....Majuro Island, Marshall Islands
 Liki Lapi.....Ejit Island, Marshall Islands
 Akimichi Kimura.....Moen Island, E. Caroline Islands
 Lotan A. Jock.....Ailinglapalap Atoll, Marshall Islands



WHAT TO DO IF YOU FIND A BAND

What do you do if you find a live banded bird?

Do not remove the band, but read the number on the band, write it down, and release the bird carefully. Hopefully, the banded bird will be caught again elsewhere. Remember, don't take the band off: you might injure the bird. Please send in the following information:

1. Your name and address (plainly printed)
2. All letters and numbers on the band.
3. The date you found the bird.
4. The place where you found the bird.
5. How you obtained the bird.

PLACE THIS INFORMATION IN AN ENVELOPE AND SEND IT TO THE ADDRESS ON THE BAND.

If you find a band on a dead bird, straighten the band out and tape it securely to a piece of heavy paper. Send the following information with the band:

1. Your name and address (plainly printed)
2. All letters and numbers on the band.
3. The date you found the band.
4. The place where you found the band.
5. Tell how you obtained the band (on a bird found dead -- shot, trapped, etc.)

PLACE THIS INFORMATION AND THE

BAND IN AN ENVELOPE AND SEND IT TO THE ADDRESS ON THE BAND.

If the band you found was that of the U.S. Fish and Wildlife Service you will receive a letter from the Bird Banding Laboratory telling where the bird was banded, what kind it was, and who banded it. The Smithsonian's Pacific program, or whoever banded it, will also learn that you found the band.

Please do not send bands or band numbers to the Smithsonian Institution. This may cause confusion with other banding programs operating in the Pacific.

READERS URGED TO CONTRIBUTE NEWS

Readers of the Pacific Bird Observer are urged to send their personal observations of Pacific birds directly to the Pacific Ocean Biological Survey Program, Smithsonian Institution, Washington, DC., 20560. Information on the numbers of birds and the local breeding and migration schedules of various species is especially needed. Also useful are interesting photographs and information about people with birds. Appropriate items may be published in future issues. We welcome requests to be put on our free mailing list for future issues.

Letters to us concerning our program in the Pacific and requests to be put on our free mailing list for the Pacific Bird Observer should be addressed to Pacific Ocean Biological Survey Program, Smithsonian Institution, Washington, DC., 20560.

SMITHSONIAN INSTITUTION

WASHINGTON 25, D. C.

OFFICIAL BUSINESS

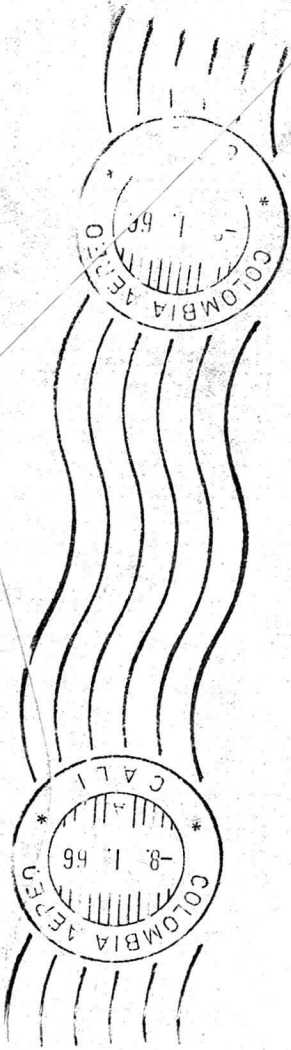
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