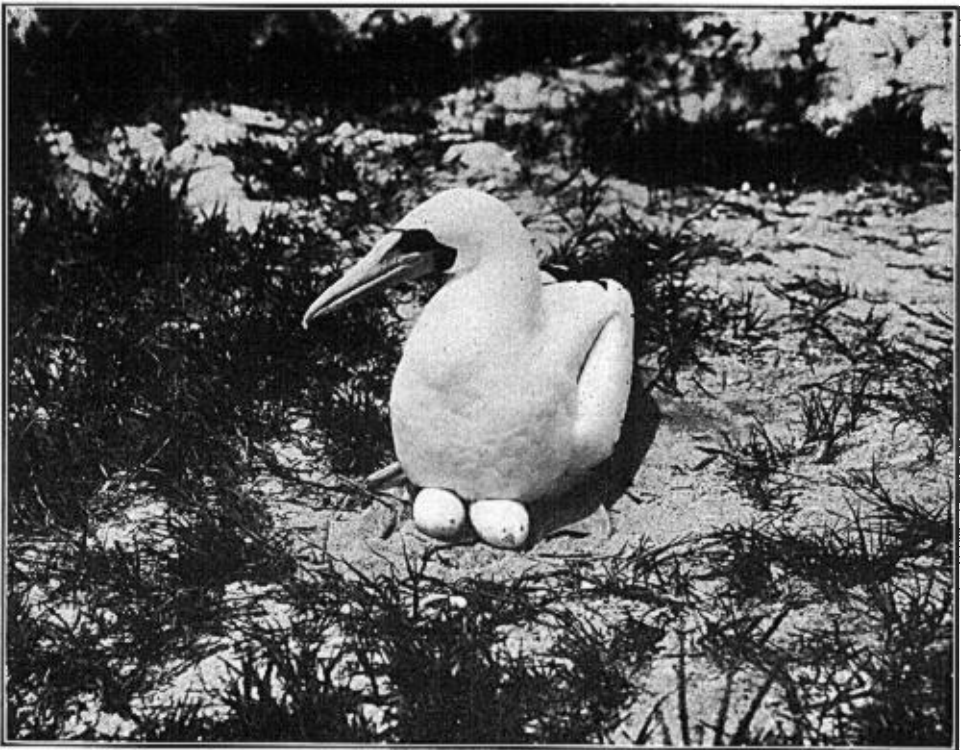


she almost flew into our tent. The next morning her strawberry patch was white with hailstones and we found her sitting humped over a stone, while her two bedraggled young were trying to keep warm under cover of the firs. By this time our little neighbors were so tame that they did not startle when Mr. Bailey shot a hummingbird, and as he said, the only danger was that if we had stayed much longer they would get so tame that some one would shoot them when we left. As we broke camp to go on up the mountains soon afterwards, however, I trust that no harm came through us to the little family that had given us so much pleasure while camped in their woods.

*Washington, D. C.*



1. BLUE-FACED BOOBY AND NEST

J. O. S.

### Three Boobies Interviewed

BY WALTER K. FISHER

ILLUSTRATED BY THE AUTHOR AND JOHN O. SNYDER

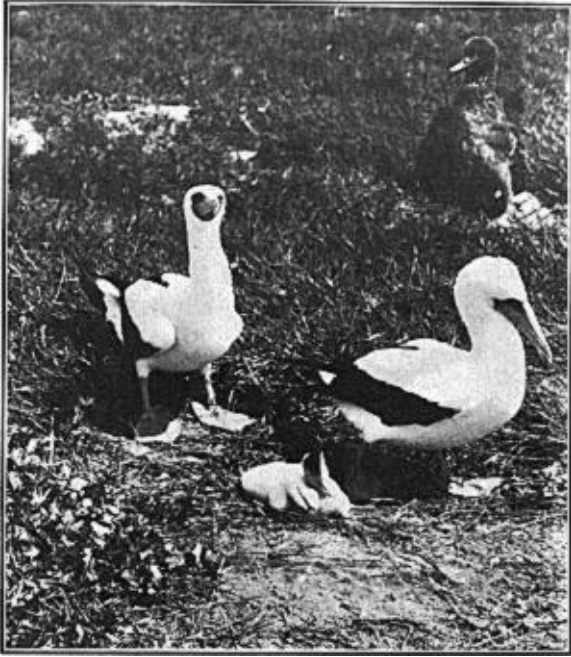
**W**E found boobies, at rest, scarcely more difficult to photograph than stuffed birds, provided we exercised elementary caution in approaching them. They made ideal subjects, consequently, for a piping hot day on a tropical islet, since we early discovered that under such conditions one is likely to be



THE RED-FOOTED BOOBY ON NEST, LAYSAN ISLAND

Photographed from Nature by Walter K. Fisher

less patient than in a cool forest of a northern zone. We were fortunate enough to make the acquaintance of three species of *Sula* among the islets to the westward of the main Hawaiian Group; namely, *Sula cyanops*, *Sula piscator*, and *Sula sula*. All the accompanying photographs (which are accredited by our respective initials)



2. A BLUE-FACED BOOBY FAMILY

J. O. S.

were secured, however, on Laysan Island, a small atoll about eight hundred miles northwest-by-west from Honolulu. A general description of this wonderful bird metropolis was published under the account of the man-o'-war bird, in the last issue of this magazine (p. 57).

In their actions boobies are less interesting than most tropical sea birds, being at best rather stolid creatures, much given to gazing at their own long faces. They are the phlegmatic, unsentimental, burgomasters of the community, as different in all their actions from the nervous terns or playful albatrosses, as persons of a similar temperament would be. On Laysan, the masked or blue-faced booby (*S. cyanops*) lives only on the

sedgy slope facing the ocean, exposed to spray-laden winds and close to the booming surf. On the inner slopes of the island, facing the lagoon, the species is entirely absent, being replaced by its somewhat smaller congener, *S. piscator*. The homes of the masked gannets are not crowded, colony-fashion, but

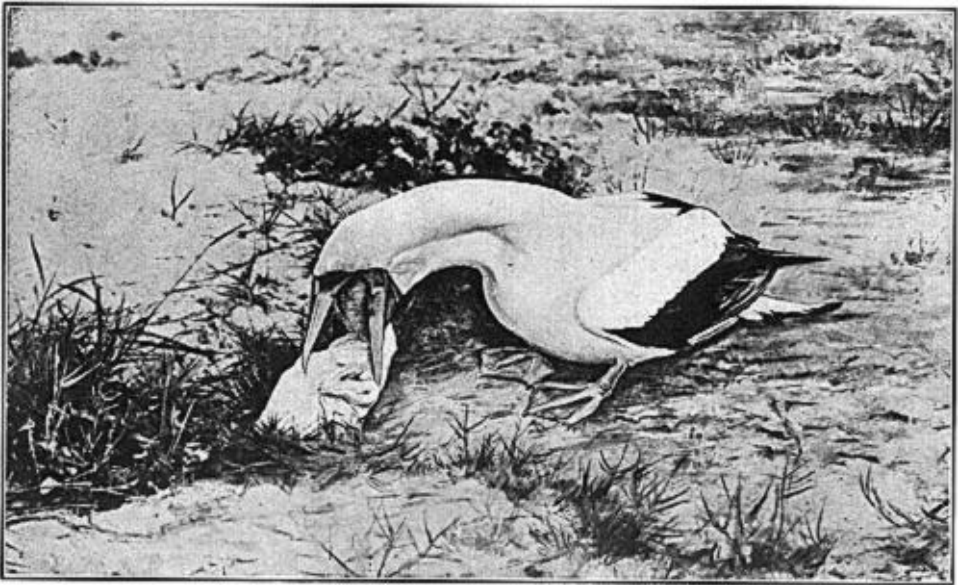


3. *SULA CYANOPS* FEEDING YOUNG

W. K. F.

are scattered here and there over the greensward, and one can see them from afar, because there is usually a circular patch of bare sand about each nest—provided the latter is among grass—in the center of which stands the omnipresent sentinel bird. There is really no *nest* at all, the two eggs being deposited on

the sand, with a few dried grasses scratched around them, as if the old bird in her own mind satisfied her sense of possession by thus staking a claim. Very often even the formality of a few grasses is omitted. The eggs are outwardly limy white, the under shell of light blue being often revealed by scratches made while the outer layer was soft. It is apparently characteristic of this species to lay two eggs, and raise but one young. The right of the oldest child of the house of *Cyanops* seems all fixed by law, but in the enforcement of this canon, Nature proves once more that she is not always a kind mother. In other words, it is distinctly rough on the bird which is hatched last. There is evidently a period of several days between the laying of the first and second egg. The chick first hatched is considerably grown before the second appears, and from the peculiar manner of feeding, is able to devour all available food. It is probably true, also, that the old bird is not at all concerned for its second chick, for we found two newly hatched young, one of which had already been trampled to death, as if purposely.



4. BLUE-FACED BOOBY FEEDING YOUNG

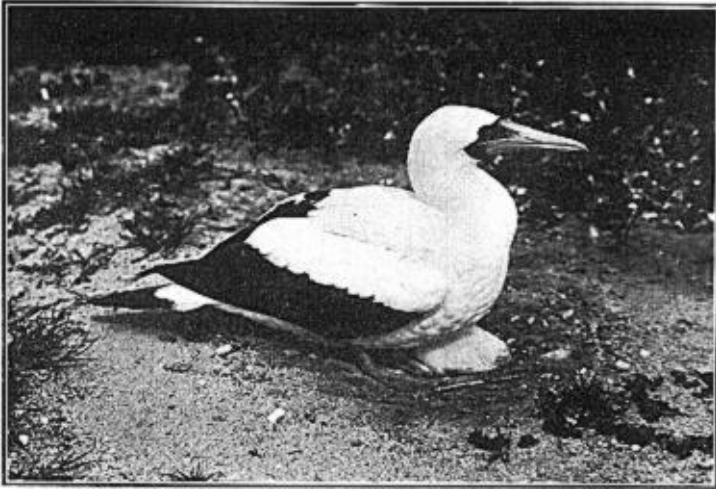
W. K. F.

We found young and eggs in about equal numbers, and most of the eggs were far advanced in incubation. The young varied from about a week old down to newly hatched individuals. Often all signs of the second egg were removed, as if the nestling had hatched, and had been devoured by a parent, or some marauding *Fregata*. But more frequently there would be one nestling and one egg. Sometimes this egg was spoiled, sometimes contained an embryo. The habit of disposing of one of its offspring is not confined to the birds inhabiting the Hawaiian Group, but has been noted also on Clipperton and the Galapagos Islands by Mr. R. H. Beck, who tells me he has observed the old bird strike one of the nestlings, as if attempting to make away with it.

The first afternoon at Laysan we spent on the outer slopes of the islet among the boobies. While stalking some bristle-thighed curlews (*Numenius tahitiensis*) which were ridiculously tame and kept flying a little way ahead, uttering flutelike

notes as they foraged among the wiry salt-grass, we espied an old booby feeding its young, in a highly gruesome manner. The process was promptly photographed at close range, and as sometimes happens, the better of the two exposures (Fig. 4)

was badly light-struck, the beam almost obscuring the body of the bird. An enlargement was made from this negative, the body touched up, and the result re-photographed. The head, neck, and young bird were not light struck. These two pictures show better than any description the exact manner of feeding. The head of the young is thrust fairly into



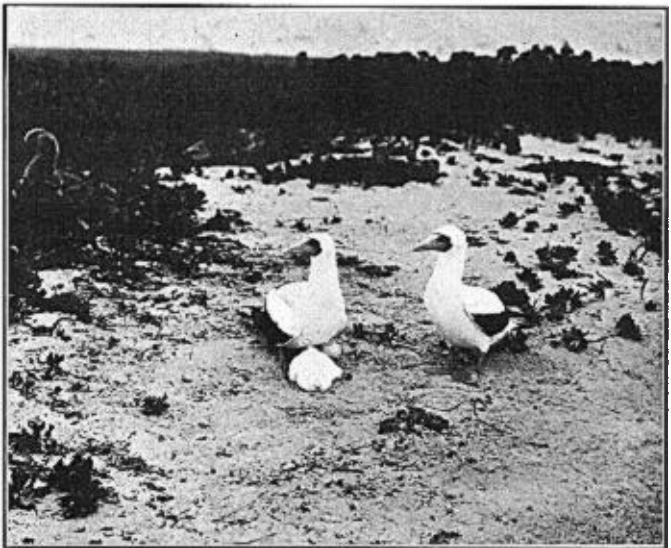
5. BLUE-FACED BOOBY AND YOUNG

W. K. F.

the throat of the parent, who disgorges the fish contained in its very spacious stomach. In the few stomachs we examined the flying fish, their favorite food, had been swallowed whole. Whether the mother waits till this is partially digest-

ed, or allows the bird to nibble at the end I am unable to say. The latter view seems a bit absurd, but the young kept its head in the throat an inordinately long time, and for several courses in succession. Note the rigidity of the neck muscles, and, in fact, of the whole pose of the old bird. We were on Laysan a week, but did not again witness the feeding.

The young bird nearly always keeps its head under the parent, as shown in



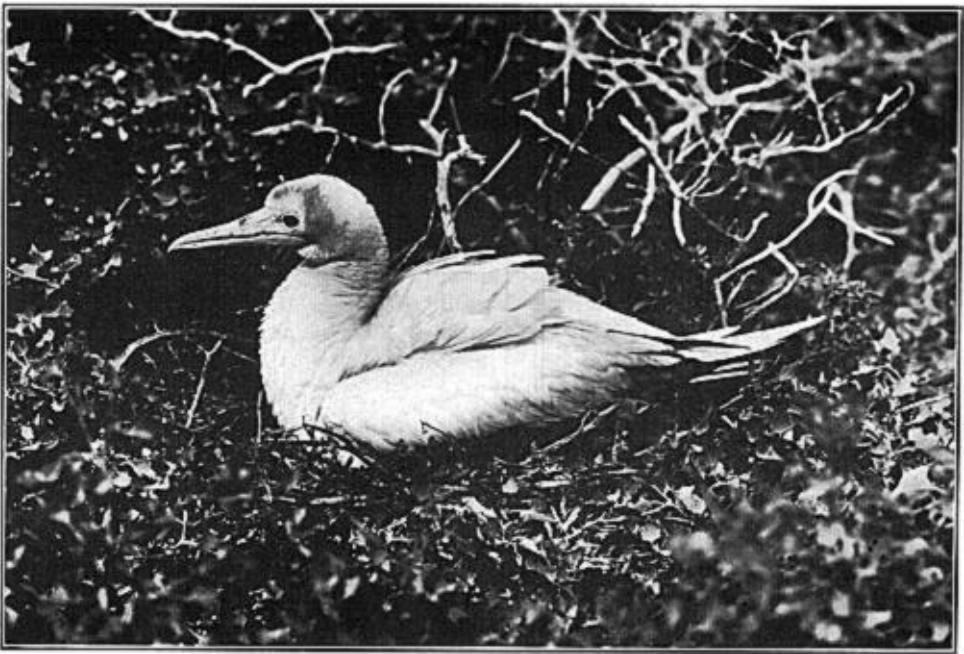
6. BLUE-FACED BOOBIES, YOUNG, AND EGG

W. K. F.

figures 5 and 6, altho the greater part of its body may be exposed to the sun. Both birds take turns in brooding the eggs or watching the nestling. Occasionally both will be seen standing guard together, in an absurd statuesque pose, or gazing sea-

ward or at the sky, as if on the lookout for winged marauders. Frequently they utter a hoarse, strident cry. When the old birds exchange places, which is happening in figures 2 and 6, one slips off the nestling and the other immediately takes its place. The young birds when bereft of protection for a moment, assume very outlandish postures, as shown in Fig. 2. The bird to the right is strutting off with the characteristic ambling swagger. He bit the finger off the photographer's glove a moment later—amiable fellow! In this photograph the tolipalmate feet show admirably. Note also the absence of nostrils.

The red-footed booby, *Sula piscator*, unlike the foregoing species, always builds in bushes, so far as my experience goes, never on the ground. At Laysan it is found in colonies of scattered individuals on the inner slopes of the island. The nest is very simple, scarcely more than a slightly hollowed platform composed



W. K. F.

7. RED-FOOTED BOOBY. *SULA PISCATOR*. ON NEST

of twigs and sticks, placed on the top of bushes, which cover large areas on the island. The birds place a few fresh leaves about the newly laid eggs. The old birds take turns in brooding, and occasionally one is seen perched on the side of the nest while the other is sitting. Whenever we approached a nest to take a photograph, the occupant would ruffle its feathers as shown in the frontispiece, and if we came too near would take a chance poke at us with its beak, which much resembles an animated marlin spike. The old birds are very handsome, despite their vicious yellow eyes, as the white plumage is set off by bright blue skin about the bill, and by coral-red feet.

Most of the nests contained a single white egg, and we saw only a few downy white young, recently hatched.

We did not observe this species feeding its young, but one old bird, which was

gently poked with a tripod, gladly disgorged squids for our inspection. The red-footed booby also feeds on fish.

The common booby, *Sula sula*, for some reason best known to itself, does not live on Laysan, but we encountered it on Necker, a high, rocky islet, a few hundred miles to the eastward, where also the two foregoing species were met with. In its habits the common booby much resembles *Sula cyanops*, depositing two eggs on a shelf of rock, and rearing only one young. On account of lack of time and proper apparatus we were unable to secure satisfactory photographs.

*Stanford University, California.*

### California Jays and Cats

BY JOSEPH MAILLIARD

WE always have several cats around our home at San Geronimo for the purpose of keeping the house free from rats and mice, which they do most effectively. These cats are daily fed in the back yard and some California jays have discovered that they can get good free lunches there also. Throughout most of the year several are in the habit of coming around at frequent intervals through the day to feed on what remnants may be left.

At nesting time they usually scatter among the brushy hillsides and are not often in evidence, but this season apparently one pair has remained at the house, and these two birds have become highly educated. Not being content with remnants alone they dodge around among the cats for better picking, and even resort to strategy to obtain particular bits of food that the animals are intent upon. However, the cats themselves have also grown wise in their own generation and it is seldom that a jay can make a cat leave its own particular tid-bit. Each has the measure of the other, and while a cat is watching, it is rarely that a jay approaches within reach of its business end, though it will do all it can to make the cat jump at it, or at least turn away. Grimalkin has learned to keep her tail well curled up when feeding, as a favorite trick of the jay is to give a vigorous peck at any extended tail and, when the cat turns to retaliate, to jump for the prize and make off with shrieks of exultation. These birds are not afraid of any of us within reasonable distance, though keeping a weather eye open for too close an approach. None of these actions are remarkable when one considers that it is the result of a course of education that has been going for some time that has produced them, but what does seem peculiar is that this particular pair of jays delight in wantonly teasing the cats in a most persistent manner. To find a cat napping, with its tail partially extended is absolute joy to one of these birds, which will approach cautiously from the rear, cock its head on one side and eye that tail until it can no longer resist the temptation, and, finally after hopping about a few times most carefully and noiselessly, Mr. (or Mrs.) Jay will give the poor tail a vicious peck and then fly, screeching with joy, to the nearest bush.

Watching one of these demonstrations one evening made me think of writing these notes. A large black cat was asleep on the edge of the roadway back of the house and as I was sitting on the porch about twenty yards away, one of the jays hopped down from a bush and approached the animal, whose tail was drawn in