

foot at least 10 times in succession. This washing, "combing," and bill-wiping was done while floating on the water, so it happened that the fluffy-feathered bird was spinning round like a wind-blown, circling cork when bill-wiping.

In order to oil its feathers the bird evidently needed a solid stand, so it swam to a basalt boulder and stood there oiling its plumage. Its bill was tucked into the uropygial region and was rubbed strongly along the feathers there. I did not see a stiff pressing of the oil gland, however, as in common terns. When oiling, its feathers were puffed out and spread out, which gave an "untidy" impression. Especially the stiff quills were oiled, but the feathers of the underparts and the flanks were not forgotten either. This oiling lasted for many minutes.

After having oiled its plumage, there followed a vibrating ruffle of the feathers and then the bird started to swim again. When meeting the rope of an eel-trap, it first looked at it and then flew up, only to alight again on the water very soon, meanwhile uttering a rather sharp "tsit, tsit."

Now the above observations certainly may have little value in themselves; it is the comparison with the same kind of movements in other species that perhaps makes them worthwhile. I tried to find comparable facts in Mrs. Nice's behavior-study of the song sparrow (1943).

The description of the *stretching movements* (Nice, 1943: 44) does not exactly fit into the phalarope's case. The *scratching of the head*, described on pages 44 and 45 seems partly to correspond to "my" wiping of the bill. This wiping was also done with a leg brought up over the wing, but the wing was not dropped down and the head was not scratched. Moreover, the bill-wiping seen by me was not at all awkward.

The "vibrating ruffle" after the oiling of the plumage seems identical with the shaking mentioned (Nice, 1943: 45). No doubt the shaking was performed in this phalarope's case to get his feathers in order.

Of the bathing reactions that I saw, only Motion 2 (the dipping of the head; Nice, page 47) seems to be of the same type. In this connection I may cite Nice (1943: 48), ". . . we need accurate observations on the bathing technique of even our commonest birds."

The crouching and immobility of the phalarope when seeing the black-headed gull partly corresponds with the second stage of "fear" in the song sparrow, mentioned by Nice on page 253. This immobility, together with the silence of the bird, certainly has biological significance—non-moving objects are mostly ignored by many animals.

Just as "enlargement" may be an element of all "impressive behavior," it may as well be that "diminution" is an important element of most cryptic and concealing behavior, at least insofar as this behavior results from the appearance of a superior predator (Nice, 1943: 154).—A. L. J. VAN IJZENDOORN, *Korenmarkt 1, Hoorn, Holland.*

The white-throated pigeon nesting on the ground on New Caledonia.—

Among the scattered notes on the nesting habits of the white-throated pigeon (*Columba vitiensis*) I have found only a single, vague reference to a possible terrestrial nest. According to Mayr (Birds of the Southwest Pacific, p. 65, 1945) this species builds a nest of sticks ten to 20 feet above the ground in fairly heavy timber. T. L. Macmillan (field notes, Amer. Mus. Nat. Hist.) made the same observation regarding the nest of the race *hyponochroa* Gould on the Loyalty Islands of Uvea, Lifu and Mare. The only account suggesting that the New Caledonia population of this race nests on the ground was published by E. L. and E. L. C. Layard (Notes on the Avifauna of New Caledonia. Ibis, 1882: 528) who were informed by a local inhabitant that this was the case.

The only nest of this pigeon which came to my attention was shown to me on December 7, 1944, by Mr. Vigneron who lived on the lower slopes of Mt. Mou at an altitude of about 400 feet. He found the nest under construction about November 25. The nest was on the ground three feet uphill from the old, long-abandoned Noumea-Paita trail. It was about 100 yards in from the edge of a semi-open forest of tall trees. The undergrowth along the trail consisted primarily of scattered bunches of coarse grass and a few clumps of *Lantana camara* and other shrubs about four feet in height. A lush growth of bracken fern (*Pteridium*) three or four feet high nearly covered the forest floor to the edge of the old trail.

As we approached the nest, I caught sight of one of the parents on the ground beneath a dense growth of bracken. The bird walked a few feet; then, on loudly flapping wings, it flew swiftly out of sight, keeping within ten feet of the ground in its twisting uphill flight.

The well-hidden nest was a slightly cupped structure of small, black twigs, all apparently from the same species of tree and all about the same diameter (3 to 5 mm.) but varying greatly in length. The nest was ten inches in diameter and four inches deep at its thickest part. Leading up the slope from the nest for a distance of six feet was a slightly curved, well beaten path six inches wide. Although the surrounding forest floor was littered with leaves and twigs, this path was absolutely bare of everything but bits of caked mud. It was by way of this path that the incubating bird had left the nest.

One white egg, measuring 40.1 by 30.0 millimeters, was in the nest. It was in an early stage of incubation, Although I remained in the vicinity of the nest for several hours that day, neither parent returned. However, the loud, hooting call, 'CooodOOO-OOOO,' of this species continued to be heard throughout the middle of the day from the woods several hundred yards above the nest. The call, surprisingly reminiscent of the hoot of the barred owl, was given at about two-minute intervals. Apparently the pair never returned to this nest because on a later visit the egg was cold and a few leaves lay on the nest and path.—Dwain W. Warner, *Minnesota Museum of Natural History, University of Minnesota, Minneapolis.*

Identity of Trinidad barn owls.—The two barn owls from Trinidad that were listed as *Tyto alba tuidara* (Gray) by Roberts (*Trop. Agric.*, XI (4): 92-93, 1934) are obviously referable to the recently described *hellmayri* Griscom and Greenway (*Bull. Mus. Comp. Zool.*, 81: 421, 1937) hitherto known from the Guianas south to the Amazon Valley. Both specimens are adult males and have wing lengths of 315 and 316 millimeters respectively.

The identity of Tobago barn owls has not been determined, but they are probably *hellmayri* or an undescribed form closely allied to this large, light colored race, since the affinities of almost all of the birds of Tobago lie with Trinidad and continental South America, the Antillean element in both of these islands being negligible. *Tyto insularis* found on nearby Grenada, the southernmost of the Lesser Antilles, is a very small and dark bird. Less is known of Tobago ornithologically than of any island of comparable size in the Caribbean Sea, and we have little information concerning its night birds.—James Bond, *Academy of Natural Sciences, Philadelphia, Pennsylvania.*

Sexual selection in woodpeckers.—G. K. Noble (*Auk*, 53: 269-282, 1936) wrote "That the courtship of the Flicker differs from that of other local Woodpeckers in that two or more females may gather about a single male and apparently compete with one another for his attention." I have not only seen a flicker (*Colaptes auratus*)