

a white solitaire (*Ornithoptera solitaria*) from Reunion. The descriptions were based on contemporary reports and figures and were strongly biased by the "linkage" mentioned earlier. Discounting the possibility of rafting between Reunion and Mauritius (95 miles) or Rodrigues (over 450 miles), one must assume that the large white bird or birds of Reunion were no more closely related to the Dodo or the Solitaire than each was to each other. I predict that if and when remains of such birds are found on Reunion, they will prove to be unrelated either to the Dodo or the Solitaire, and I would not be surprised if they proved to be derived from rails or some group other than pigeons. (Descent of the Dodo and Solitaire from rails has already been proposed by Lüttschwager (Zool. Anzeiger, 162: 127, 1959).)

The line of reasoning followed leads to these conclusions: The Dodo of Mauritius and the Solitaire of Rodrigues must be placed in separate monotypic families, the Raphidae and the Pezophapidae, respectively; the large flightless bird (or birds) reported from Reunion must be considered of uncertain taxonomic position until actual remains of it (or them) are found; and anyone investigating the systematic relationships of the Dodo and the Solitaire should consider them independently as separate phyletic lines.

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Canada Goose killed by Arctic Loon and subsequent pairing of its mate.—

On 10 June 1967 at 10:35, while studying small Canada Geese (*Branta canadensis*) at the McConnell River, N.W.T., we witnessed a fatal encounter between a gander and an Arctic Loon (*Gavia arctica*). The gander and his mate arrived on the breeding ground on 4 June. The female immediately began to build a nest 30 meters from an observation tower. Both birds wore coded neck bands (male, ZH; female, ZD).

The gander regularly threatened other geese, Herring Gulls (*Larus argentatus*), and Parasitic Jaegers (*Stercorarius parasiticus*) if they approached the nest island. When an Arctic Loon swam to within 15 meters of the nest island, the gander moved towards it in an offensive posture with wings outstretched. The loon turned towards the gander and for 30 seconds violent splashing and flapping of wings ensued. With difficulty the gander flopped 10 meters toward the nest island, fell in the water near the female, and did not move again.

Dissection revealed a 1 × 0.5 cm hole through the 3 cm thick pectoralis muscle that continued between the first rib and coracoid, through the pulmonary vein, and into the lung for a total distance of 6 cm. As the bill of the Arctic Loon ranges from 49 to 55 mm in length (Palmer, Handbook of North American birds, vol. 1, New Haven, Connecticut, Yale Univ. Press, 1962), this loon's bill must have penetrated for its full length into the gander's body.

Meinertzhagen (Ibis, 5, 14th Ser.: 105, 1941) reports seeing the Common Loon (*Gavia immer*) catching and eating young Eider Ducks (*Somateria mollissima*), but we can find no record of the Arctic Loon killing other birds as food or in defense. Arctic Loons occasionally do nest near nesting Canada Geese. B. C. Lieff (pers. comm.) found a loon and a goose nesting 6 meters apart on the same island in the McConnell River in 1965. We made a similar observation during the summer of 1967.

The mate (ZD) of the dead gander stayed near the nest site all day. At 15:00 she was harassed by a pair of geese that had just arrived in the area (male unbanded,

female neck banded: 93). The pair chased ZD for several hours and at 22:00 the three birds left the area. At 24:00 ZD was back at the nest site with an unbanded male. On 11 June ZD and the unbanded male copulated twice. Also on this date ZD laid her fifth egg and began incubation. The female 93 was not seen again until 12 June; as she was alone, possibly the male that joined ZD the evening of 10 June was the same male that had been associated with 93 earlier that day.

Sherwood (Canada Geese of the Seney Wildlife Refuge, unpublished rept., Wildl. Mgmt. Studies, nos. 1 and 2, Seney National Wildlife Refuge, Michigan, 1965) reports one case of pair formation within a few hours. Both birds had arrived on the breeding grounds unpaired, having lost their mates sometime through the winter. Klopman (Living Bird, 1962, see p. 128) states that pair formation in Canada Geese usually spreads over several months, but "that the process may be accelerated when pairs lose their mates early in the hunting season." Kossack (Amer. Midl. Naturalist, 43: 627, 1950) working with a captive flock of Canada Geese found 18 days to be the shortest period for new pair formation after an established pair separated. The incident we describe shows that pair formation can be greatly accelerated and may take place after egg laying has started.

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Spread-wing postures in Pelecaniformes and Ciconiiformes.—In commenting on the spread-wing postures in several groups of birds, Clark (1969) summarizes three hypotheses on the functional significances of spread-wing behavior: wing-drying, balancing, and thermoregulation. Heath (1962) suggested the latter theory for the spread-wing in the Turkey Vulture (*Cathartes aura*). Independently from Heath I suggested the same hypotheses in 1962, based on observations of cormorants.

From the Congo I have evidence that completely dry Long-tailed Cormorants (*Phalacrocorax africanus*) spread their wings for considerable periods (Curry-Lindah, 1960). Early one morning before sunrise at Lake Tanganyika I watched a small number of Long-tailed Cormorants roosting together. When it became lighter the birds flew down from the trees and perched on some rocks near the shore. As soon as they had alighted the birds spread out their wings and rested in this position for more than 35 minutes. There had been no rain during the night; it had been very warm, but not especially humid. Apparently, the behavior of the cormorants on this particular occasion had nothing to do with the drying of wings.

Two years later, when checking the Swedish translation of Austin's "Birds of the world" (1961), I wrote Austin about his passage on the cormorants' habit of "spreading their wings to dry" asking him whether we could insert the thermoregulation theory. With his agreement the Swedish edition (Austin, 1962) mentions the possibility that thermoregulation may be an explanation of the spread-wing posture in cormorants.

As regards Ciconiiformes, Clark refers to Lippens' (1938) observations in the Congo (Lake Edward) of spread-wing posture in the Wood-ibis (*Ibis ibis*). I have several similar observations not only of *I. ibis* but also of the Marabou (*Leptoptilos crumeniferus*) from the shores of Lake Edward, where both species are common. Also in this case the behavior does not seem to have anything to do with the drying of wings. The Marabou, for example, may assume this posture far from the nearest water and independent of previous wetting.