Probable Garganey on St Paul and Amsterdam Islands, Indian Ocean

W.R.P. BOURNE, A.C.F. DAVID and C. JOUANIN

In his review of *The Island Wildfowl* Weller (1980) remarks, 'It is interesting that no duck populations became established naturally on St. Paul and Amsterdam Islands northeast of Kerguelen . . . the fact that the Kerguelen form *Anas eatoni* has been artificially introduced . . . suggests that the habitats were adequate to support migrants but none reached them'. In fact, Jouanin and Paulian (1960) had already reported the presence of subfossil bones of a small duck similar to the Garganey *Anas querquedula* and a mummified rail on Amsterdam Island, but concluded that they must be vagrants. An examination of the literature has now revealed possible accounts of these birds which suggest that they may have belonged to local forms exterminated by seals and introduced predators.

The first person to leave an account of the islands, William de Vlaming following a search for a wreck in November and December 1696, says little about the birds but reports that one of his crew thought that he saw two four-footed animals resembling a weasel and a fox in the reeds on Amsterdam Island (Anon. 1854; Schilder 1978). Since the occurrence of small petrels in the subfossil deposits (Jouanin & Paulian 1960) indicates that it is unlikely that there were any native mammalian predators, it seems possible that he actually saw the rail and duck skulking in the undergrowth. Unfortunately this island is rather inaccessible, and by the time it was eventually explored by naturalists in December 1874 (Velain 1877) it had been visited by many sealers and whalers and there had been numerous wrecks, where in at least one case the main mast fell to form a bridge to the shore (Anon. 1854), so that it was infested with rats, and no landbirds could be found (Paulian 1960; Segonzac 1972).

St. Paul Island, 80 km to the south, has a small harbour in its crater, and has received many more visitors. On 2 February 1793 these included a British embassy to China under Lord Macartney in H.M. Ships *Lion* and *Hindostan*. The most important of several accounts of their observations is by John Barrow (1806), a distinguished explorer who subsequently became second secretary of the Navy and who has had one duck named after him. At the end of a list of the birds seen he included 'a small brown duck, not much larger than a thrush, and apparently not described by naturalists', adding that it was the favourite food of the five sealers living on the island. Unfortunately they were marooned there for a total of forty months owing to the capture of their mother-ship off Canton by H.M.S. *Lion* following the outbreak of war, and nothing further is said about the duck in the account by their leader, Péron (1824), and it has never been recorded again. It seems unlikely that passing migrants would have been numerous enough to feed five sealers, so that it seems likely to have been resident.

The duck bones collected on Amsterdam Island by Patrice Paulian in 1955-56 include part of a decalcified cranium and two tarsometatarsi with eroded ends measuring 26 mm and 27.5 mm which are compared with the same bones of the most similar species in Figure 1. They are all much smaller than comparable bones of the Kerguelen Pintail *Anas (acuta) eatoni,* which after being introduced to Amsterdam Island in 1955 had reached St. Paul spontaneously by 1970 (Segonzac 1972), and has since also been reported from Marion Island in May 1981 (Berruti & Schramm 1981). The tarsi are also much smaller than those of the Austral group of teal allied to *A. gibberifrons,* including *A. bernieri* of Madagascar, *A. castanea* of southern Australia, and *A. aucklandica* of New Zealand. They are most similar to those of the small migratory northern ducks such as the Teal *A. crecca* and Garganey, but slightly shorter and thicker. Dr. P. J. K. Burton has pointed out that

Wildfowl 34 (1983): 127–129

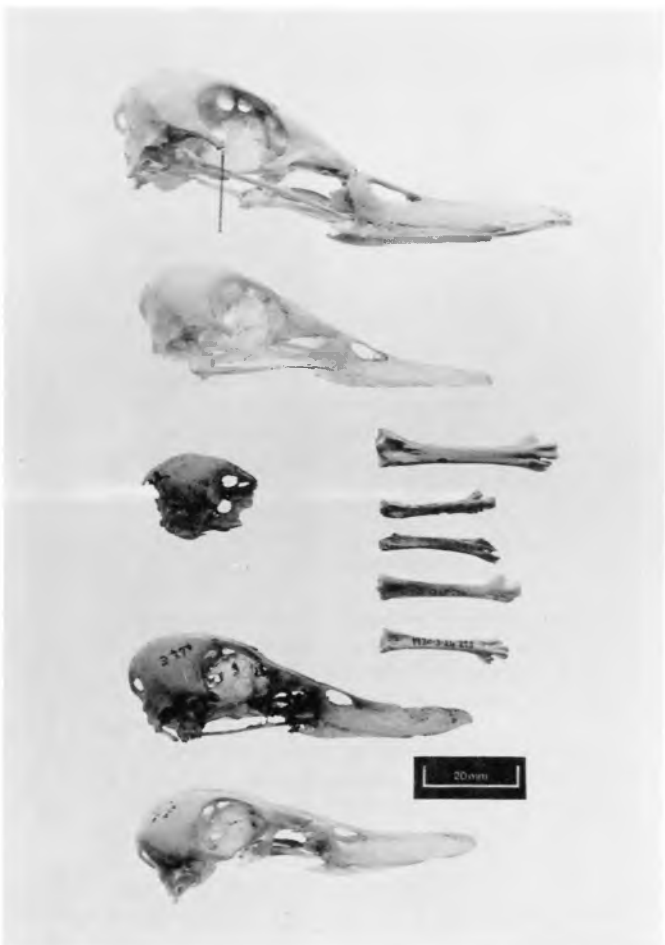

Figure 1. Skulls from above to below: male *Anas acuta*, male *A. eatoni*, Amsterdam Island, male *A. querquedula*, female *A. crecca*. **Tarsometatarsi:** male *Anas acuta*, two from Amsterdam Island, male *A. querquedula*, female *A. crecca*. Base to postorbital process indicated in first skull.

the cranium has a short base to the post-orbital process probably reflecting modifications of the jaw musculature which agrees with the last species.

It initially seems surprising to find a population of Garganey breeding on a subantarctic island. It is, however, less surprising than to find a form of Pintail breeding even further south on Kerguelen. Garganey are known to have reached Madagascar and the Mascarene Islands, and a small duck with a white edge to the wing seen within 600 km of St. Paul and Amsterdam Islands at 36°52'S 69°43'E on 14th August 1975 (Stapleton 1976) seems most likely to have been this species. At the time of Barrow's visit in February northern winter visitors should already heave been in breeding plumage so that he would probably have recognised them. It seems likely, therefore, that he encountered a small endemic form which either normally occurred in dark plumage comparable to that of several other small insular duck populations (Weller 1980), or was in eclipse at the time.

Acknowledgements

We are indebted to the Museum National

d'Histoire Naturelle, Paris, the British Museum (Natural History) and the Wildfowl Trust for the loan of the specimens, photographed by A. Lucas, and to Drs. P. J. K. Burton, C. J. O. Harrison, J. Kear, S. Olson and M. Weller for advice.

Summary

It seems likely that old accounts from St. Paul and Amsterdam Islands, and bones from the first, indicate the presence of a small, dark endemic form of Garganey which was exterminated by sealers and introduced predators between one and two centuries ago.

References

Anon. 1854. Loss of the Meridian. *Nautical Mag.* 23: 75-81, 262-5.
Barrow, J. 1806. *Voyage to Cochin China in the years 1792 and 1793.* London.
Berruti, A. & Schramm, M. 1981. More nonmarine vagrant birds at the Prince Edward Islands. *Cormorant* 9: 133-5.
Jouanin, C. & Paulian, P. 1960. Recherches sur des ossements d'oiseaux provenant de l'île Amsterdam (océan Indien). *Proc. Int. Orn. Congr.* 12: 368-72.
Péron, F. 1824. *Mémoires du Capitaine Péron sur ses voyages.* 2 vols., Paris.
Segonzac, J. 1972. Données recentes sur la faune des îles Saint-Paul et Nouvelle Amsterdam. *Oiseau* 42: special no. 3-68.
Schilder, G. G. 1976. *De ontdekkingsreis van Willem Hesselsz. de Vlamingh in de jaren 1696-1697.* 2 vols., The Hague: Martinus Nijhoff.
Stapleton, N. B. J. 1976. Doubts or certainties. *Sea Swallow* 25: 47.
Vélain, C. 1877. Passage de Venus sur le soleil (9 Decembre 1874). Expedition Francais aux Iles Saint Paul et Amsterdam. Zoologie. *Arch. Zool. Exp. Gen.* 6: 1-97.
Weller, M. W. 1980. *The Island Wildfowl.* Ames: Iowa State University Press.

W. R. P. Bourne, Department of Zoology, Aberdeen University, Tillydrone Avenue, Aberdeen, AB9 2TN, Scotland.
A. C. F. David, Oak End, West Monkton, Taunton, Somerset, TA2 8QZ, U.K.
C. Jouanin, Zoologie, Mammifères et Oiseaux, Museum National d'Histoire Naturelle, 55 Rue de Buffon, 75-Paris (V), France.