# An observation of Madagascar Teal *Anas bernieri* in northwestern Madagascar

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During one week of a survey for the endangered Madagascar Fish Eagle conducted along the coast between Mahajanga and Soalala of western Madagascar in June 1995, all mangroves that were accessible by boat were searched. In addition to one pair of Fish Eagles, a pair and a large flock of 81 Madagascar Teal were observed on a tidal mudflat in the Betsiboka River delta and another pair was sighted 15 km south flying by a Fish Eagle nest located in the mangroves of this estuary.

Keywords: Madagascar Teal, Madagascar Fish Eagle, Mangrove, Mahajanga, Madagascar

The Madagascar Teal Anas bernieri (see colour plate 4) and the Madagascar Fish Eagle Haliaeetus vociferoides are endemic and endangered species of Madagascar with small known world populations (Collar & Stuart 1985; Meyburg 1986; Dee 1986; Langrand & Meyburg 1989; Green 1992; Safford 1993). The distribution and status of the Madagascar Teal has been well documented in the Antsalova region at Lakes Bemamba and Antsamaka (Scott & Lubbock 1974; Young et al. 1993) and south to Morondava (Safford 1993: Green et al. 1994). The Teal's preferred habitat is shallow water in open, nutrient-rich mud found in fresh and saline water of inland lakes and coastal mudflats (Safford 1993; Green et al. 1994). Lakes Bemamba and Antsamaka are shallow lakes that have had high counts of 35 individuals at each site during 1993 and 11 birds were sighted farther south at the Tsiribihina delta and in the small pools of the Beroboka-nord (Safford 1993). We observed 85 Madagascar Teal at least 400 km away from recently published records in the Betsiboka River delta and mangrove habitat in a  $2^{1/2}$  h period on 17 June 1995. The information presented here adds to the distribution and status of this little known species and probably doubles the size of the known population.

## **Methods**

Coastal mangroves were surveyed between Mahajanga and Soalala from 17 June to 26 June 1995 (**Figure 1**). Mangroves were visited from the ocean side by a 6 m fiberglass power boat. Observations were made with 10x binoculars. Low tides limited our access to some mangroves, mudflats, estuaries and rivers during several survey days. Survey work was conducted by an observer and the boat operator. Locations of rare birds and Fish Eagles were recorded with an on board Geographical Position System (Ensign; Trimble Navigation Inc.).

## Results

On 17 June 1995 (13:45 h), a pair of Madagascar Teal was observed on a mudflat in the Betsiboka River delta at Bombetoka Bay. The two Teal were foraging together as a pair on the mudflat

approximately 15 m from the tidal water. Farther to the southwest, approximately 300 m from the Teal pair, a large group of Lesser Flamingos Phoeniconaias minor (totalling about 200 birds) and Sacred Ibises Threskiornis aethiopicus (numbering 50 birds) were resting with several Glossy Ibises Plegadis falcinellus. Dimorphic Egrets Egretta dimorpha, and Grey Herons Ardea cinerea. We travelled down to this large wading bird flock and counted 81 Madagascar Teal (14:00 h), feeding and resting on the tidal mudflat between the wading bird flock and the tide water (15°55.162'S, 46°17.815'E). The Teal were 50 m from the water's edge. After observing the large flock of teal we continued up the river delta, heading south into the mangrove habitat.



A Madagascar Fish Eagle pair was located on the north tip of one of the many mangrove islands in this estuary (16:00 h). We observed the Fish Eagle pair constructing a nest. While observing the Fish Eagles, a pair of Madagascar Teal flew directly by us and the boat which was anchored in the river channel. This site was 15 km south of the pair and the large flock of Madagascar Teal we observed earlier. We believe that the Teal pair near the Fish Eagle nest was not from the large flock to the north because of the large distance and short time between observations. We observed 85 Teal in a  $2^{1/2}$  h period in the Betsiboka River delta. We searched other mangroves, estuaries, and mudflats and did not observe any other Madagascar Teal.

## Discussion

Historically, the Madagascar Teal has been a very elusive and rare species in Madagascar and was first described in 1860 (Young 1995). It was rarely observed by European travellers and almost no specimens were collected until the Franco-Anglo-American expedition of 1929-32 (Rand 1936; Young 1995). In the 1970s, in the lakes north of Ambereny of western Madagascar, 60 Teal were found at Lake Masama (Salvan 1970) and Scott & Lubbock (1974) estimated the population to be 120 Teal in Lake Bemamba.

Presently, Teal are best known from Lakes Bemamba and Antsamaka (a lake 30 km south of Ambereny) to Tsiribihina River basins (Safford 1993; Young et al. 1993; Appert 1996). R. Lewis (pers. comm.) sighted a flock of 67 Madagascar Teal 400 km from our sighting near Lake Bemamba during July 1995. In the Antsalova to Morondava region, the population size is estimated at 100-500 birds (Safford 1993) and a world population size estimate of 500-1,000 (H.G. Young in press). Counting the Teal we saw, plus the birds at Lake Bemamba and the birds seen by R. Lewis adds up to more than 150 individuals.

In the Betsiboka region Teal are known from the reservoir Lake Amboramalandry 90 km south of Mahajanga (Young 1995) and several sightings in the Betsiboka River delta and mangrove habitat by RR and F. Hawkins of 11 Madagascar Teal in October 1993 (Safford 1993), and 20 individuals by RR during 1994 suggests that this area should be intensely surveyed. We believe our sighting of 85 Madagascar Teal this year in the same area is the largest reported flock observed in Madagascar.

Safford (1993) states that flamingos have feeding requirements similar to Madagascar Teal on inland freshwater lakes but this correlation has not been observed in marine habitats. The pair and large flock of 81 Madagascar Teal we saw were on a tidal mudflat between the flamingos and tide water Our sighting suggests that the ecological similar association or requirements between flamingos and Teal may exist in tidal mudflats and estuaries, and may not break down as reported by Safford (1993). Estuaries and tidal mudflats may be an alternative or seasonal habitat for the Madagascar Teal during the nonbreeding period.

In addition to the above, we observed a large concentration of flamingos (numbering more than 1000 birds) and Sacred Ibises (about 500 birds) on 22 June 1995 (14:30 h) along the mudflats near the mouth of Ankalasina River (FTM map Namakia J39). We could not approach within binocular viewing distance to this large flock of wading birds to identify any ducks because of the extreme low tide at the time. We were unable to verify that any Madagascar Teal were associated with this large wading bird flock. We

recommend that this stretch of estuarine mudflats should be surveyed during favourable water conditions to determine whether Madagascar Teal are associated with this area.

We recommend that further survey work should be the highest priority to determine the distribution and population status of this species, as stated by Young et al. (1993) and Safford (1993). We suggest that the Betsiboka estuary should be surveyed extensively due to the recent sightings in the last three years and the area from Mahajanga to Lake Bemamba should be a high priority for surveying (Young et al. 1993). We believe there are some potentially suitable inland lakes and estuarine mudflats for Madagascar Teal along this coastal stretch. Surveys should also be made of the coastal estuaries and mangroves north of Mahajanga which may contain suitable habitat for the Teal. RR observed one pair of Madagascar Teal at Mahajamba Bay (15°27.065'S, 45°05.693'E) during high tide while searching for Fish Eagles in September 1994.

Protecting suitable habitat wherever it occurs should be the highest priority for conservation of the Madagascar Teal and other ecologically similar species. Surveys and studies understanding the distribution, abundance, and ecological needs of this species are needed urgently before sound conservation decisions can be made.

We would like to thank R. Watson for encouragement, support, and assistance in making this survey possible. We thank the Direction des Eaux et Forêts (DEF), ANGAP and Tripartite Commission for their collaboration with The Peregrine Fund's Project in Madagascar. A special thanks to Robert Comstock and the Tivolie Company for the generous donation of the boat and Environment Now for providing funding for this survey.

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