

## MELLER'S DUCK

Scientific name – *Anas melleri*



### Background

Although to some people it may look like a rather boring brown bird, Meller's duck is one of the world's rarest and least known species of wildfowl. It is one of 3 duck species that only occur naturally in Madagascar. A recent survey revealed this shy and retiring duck to have a small and rapidly declining population, because of hunting and encroachment on their habitat by humans.

John Hartley, Gerald Durrell's right hand man, brought a pair of Meller's ducks to Jersey from Mauritius in 1977 to start a captive breeding programme. Since then around 150 young have been reared at Durrell's headquarters and sent to other institutions. In 1993 further birds were imported from Madagascar and these replaced the ex-

Mauritian birds as the founders of a managed captive breeding programme. This captive population forms an effective safeguard for the survival of the species, should the worst happen in the wild. Also crucial to the conservation of this species is extensive research on its behaviour in captivity and in its natural habitat, as well as the support and education of local people in Madagascar.

### Species classification

Wildfowl (ducks, geese and swans) belong to the 'order' of birds known as the *Anseriformes* and the family *Anatidae*, which is comprised of 48 smaller groups or 'genera'. The 100 or so species of duck make up 30 of these groups, the largest of which is known as *Anas*, and contains 46 species. Meller's duck is a mallard and is distantly related to the American black duck *Anas rubripes* and northern mallard *Anas platyrhynchos* and closely related to the African yellow-billed duck *Anas undulata*. It is thought to be the second most endangered of Madagascar's 3 endemic duck species (found nowhere else in the world). The most endangered is the Madagascar teal, which is also cared for in Jersey.

### Description

Meller's ducks are relatively large, stoutly built ducks, with a relatively long neck, a long, dark grey bill and a dark green speculum, the part of the secondary feathers in the wing, which is visible as a small band when the wings are folded). They measure about 60cm (23½in) in length and weigh up to 1kg (2.2lbs). Adult males are slightly larger than females, as is common in ducks, but both sexes have the same plumage, which is dark brown with pale brown streaks and flecks, like that of a female northern mallard.

### Distribution and habitat

Once widely distributed in the eastern parts of Madagascar, Meller's duck is now increasingly rare and mostly confined to the east coast. A population was also found to exist in Mauritius, where people introduced the species probably as a game bird around 1850. Mauritian law

protects the duck, as until recently, it was the only kind of wildfowl that bred in the wild on the island. However, in the 1970s a census reported the Mauritius population to consist of just 30 birds, and it is now thought to be extinct there because of widespread habitat destruction and hunting.

The ducks live in wetlands, principally in the many rivers and associated marshy areas, mainly in the remaining forests and woodlands and are found up to an altitude of 1,830m (6,000ft). Meller's ducks may also collect at lakes, particularly outside of the breeding season. Habitat use varies according to seasonal changes in weather conditions. In Madagascar, Lac Alaotra, the island's largest lake, is thought to be of major importance for non-breeding Meller's ducks and to also hold several nesting territories. It is an important area for native wildlife – the reed beds that surround the lake are the only place where the Alaotran gentle lemur, also cared for in Jersey, lives in the wild. Meller's duck is still found in areas of the Central Plateau, unlike the Madagascar teal. This area of the island has long been degraded by humans, but used to hold extensive shallow lakes. The capital of Madagascar, Antananarivo, was built in this flat area.

### Feeding habits

In the wild, Meller's ducks feed on a variety of vegetation, as well as insects, snails, earthworms, small fish and freshwater shrimps..

### Breeding

Meller's ducks do not live in flocks, as such, but, outside of the breeding season, a number of

birds will congregate in suitable areas of habitat. Monogamous pairs are formed in the breeding season and courtship takes place between March and April in Jersey. In Madagascar they typically breed November-March and nesting is probably triggered by the onset of the rainy season, which usually lasts from September to April. Successful pair bonds may last for more than one season. Males do not assist with nest building or incubation, but maintain their established nesting territory by warding off intruders. They also stay close to the nest and may protect their mate and offspring from potential predators. Females, as in most ducks, build a nest alone, of vegetation and feathers on the ground in thick vegetation near to water, and lay 1 egg each day to form a clutch of 8-10. They begin sitting when the penultimate egg has been laid, and leave only for short periods to find food and water for themselves during the 27-28 days that the eggs take to hatch.

Ducklings look very similar to northern mallard ducklings, with yellow and brown downy feathers and a dark stripe on the head. They are 'precocial' - they hatch well developed, and within a couple of days are able to run around and forage for themselves. They become 'imprinted' on their mother soon after hatching and follow her closely when she moves from the nest site. The ducklings gain adult plumage and are able to fly at about 11 weeks after hatching, and are able to breed themselves the following season. The usual lifespan of Meller's ducks in captivity is 10-15 years.

### **Conservation status**

The World Conservation Union currently classifies Meller's duck as Endangered on the Red Data List (IUCN, 2000). This means that it faces a very high risk of extinction in the wild in the near future. A recent estimate of numbers puts the population at between 2,000 and 5,000, and still decreasing rapidly. In Madagascar there are some laws controlling hunting of the duck, but although these exist on paper, the laws are generally not enforced and large numbers of ducks are still killed for food. However, the spectacular and uncontrolled degradation of Madagascar's wetland habitats has undoubtedly been the main factor responsible for the decline of the species. This has been caused by a number of human activities, including land drainage for agriculture and construction, redistribution of water for irrigation and other use and the silting up of water bodies with eroded soil because of deforestation.

Although it is thought that the natural drying of Madagascan wetlands has been slowly causing

a decrease in wildfowl numbers for centuries, human activities have vastly accelerated this decline, in many cases to the extent of almost total eradication. However, in the case of the Meller's duck, deforestation is the form of habitat degradation that has been mostly responsible for the massive declines. Since the 1970s, more and more people have moved into the duck's habitat and used much of the land for rice cultivation. While some water birds adapt to living with human disturbance, the Meller's ducks are very shy and sensitive, and so when people arrive they usually leave.

### **The future**

The information collected on the birds cared for in Jersey has dramatically improved the knowledge of this species, and will be invaluable in formulating an effective conservation plan for the wild population. However, more research into the habits of both the wild and captive ducks is still essential to secure the future of the species. In Madagascar the development of community education projects is one of the most important ways in which the protection areas of suitable habitat can be encouraged. Such measures will improve the situation for Meller's duck and preserve the island's natural heritage.

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