

## First breeding of the Magellanic Flightless Steamer Duck in captivity

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In 1966 and again in 1967 a pair of Magellanic Flightless Steamer Duck *Tachyeres pteneres* have bred at Philadelphia Zoo, Pennsylvania, U.S.A. The male was received in July 1962 as an immature and the female in January 1964 as an adult; since then the two birds shared a large enclosure with a group of Rhea *Rhea americana*. In the centre of this paddock is a concrete pool about 10 feet in diameter and in the area adjacent to the water the weeds were allowed to grow up to provide shade and cover for the ducks. Near the pool an open-fronted wooden nesting box was placed and this the Steamers used. In 1966, five eggs were laid, the first on 18th May, the second on 20th, the third on 21st and by 25th the clutch was complete. We believe that incubation started on this date and as a single egg hatched on 24th June (the only one to do so), the incubation period is estimated at 31 days.

In 1967, four eggs were produced and three ducklings, one male and two females, hatched on 20th July. We hand-reared the young without the least difficulty on a mixture of dry meal (a high protein turkey mash), grated hard-boiled egg and chopped lettuce; however, at about five months of age they were all lost to aspergillosis. A greater catastrophe was that their father, our only male bird, attacked a Rhea and was killed in the process. At post-mortem he also was found to be suffering from aspergillosis and acute hepatitis.

Eight of the eggs measured on average  $80 \times 56$  mm. with extremes of  $78-82 \times 52-58$  mm. and four of the 1966 eggs weighed before incubation 137.25 gm. with a range of 131-140 gm. The 1966 duckling, a female (Plate IIb, facing p. 29), weighed 99 gm. at hatching, 101 gm. at two days, 116 gm. at five days and 128 gm. at eight days of age; at 35 days she was 3 lb. (1361 gm.) and still growing. The 1967 downies weighed on average

87 gm. at 36 hours old, 93 gm. at three days and 88 gm. at five days.

This breeding record is especially interesting because relatively little is known about the Steamer Ducks and none have been bred in captivity before. (Zurich Zoo bred the Falkland species *T. brachypterus* in 1967). The group contains only three species, all birds of the coast, of which the Magellanic Flightless Steamer is the largest: Murphy (1936) gives 6050 gm. as the average male weight and 4110 gm. for the female. Our 1966 female, weighed in January 1968, scaled 10 lb. (4536 gm.) and the other (the mother of the ducklings) 8 lb. (3629 gm.). Such a wide variation in the size of healthy adults may be normal in a flightless species.

Thus, using our weights, each egg constituted 3.8% of the adult female and the day-old duckling about 2.7%. These figures (see Lack (1968) for comparative table) together with an incubation period of 31 days are compatible with the view that the Steamers are related to the shelducks and sheldgeese (Tadornini) as Delacour (1954) suggested, although they alone cannot prove the connection. The eggs laid at Philadelphia are very slightly smaller than six wild-taken ones measured by Johnson (1965) who gives  $81.7 \times 55.6$  mm. (ranges  $79.9-84.1 \times 54.9-56.5$  mm.), and quite a bit smaller than 11 taken by Murphy (1936) which were  $84.7 \times 57.3$  mm. (ranges  $81-88 \times 55-61$  mm.). In the breeding grounds in southern South America, egg-laying probably starts in the spring month of October, and nests are found close to the sea-shore, under shrubbery or other concealment. Clutch size in the wild is said by both Murphy and Johnson to range from five to eight, and Murphy suggests that six is the usual figure. That our female, laying for the first time and second time in her life, should produce slightly fewer and smaller eggs than the average for these long-lived birds is, I think, not unexpected.

### References

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