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Ducks, Geese, and Swans of the World: Tribe Tachyerini (Steamer Ducks)

Paul A. Johnsgard

University of Nebraska-Lincoln, pajohnsgard@gmail.com

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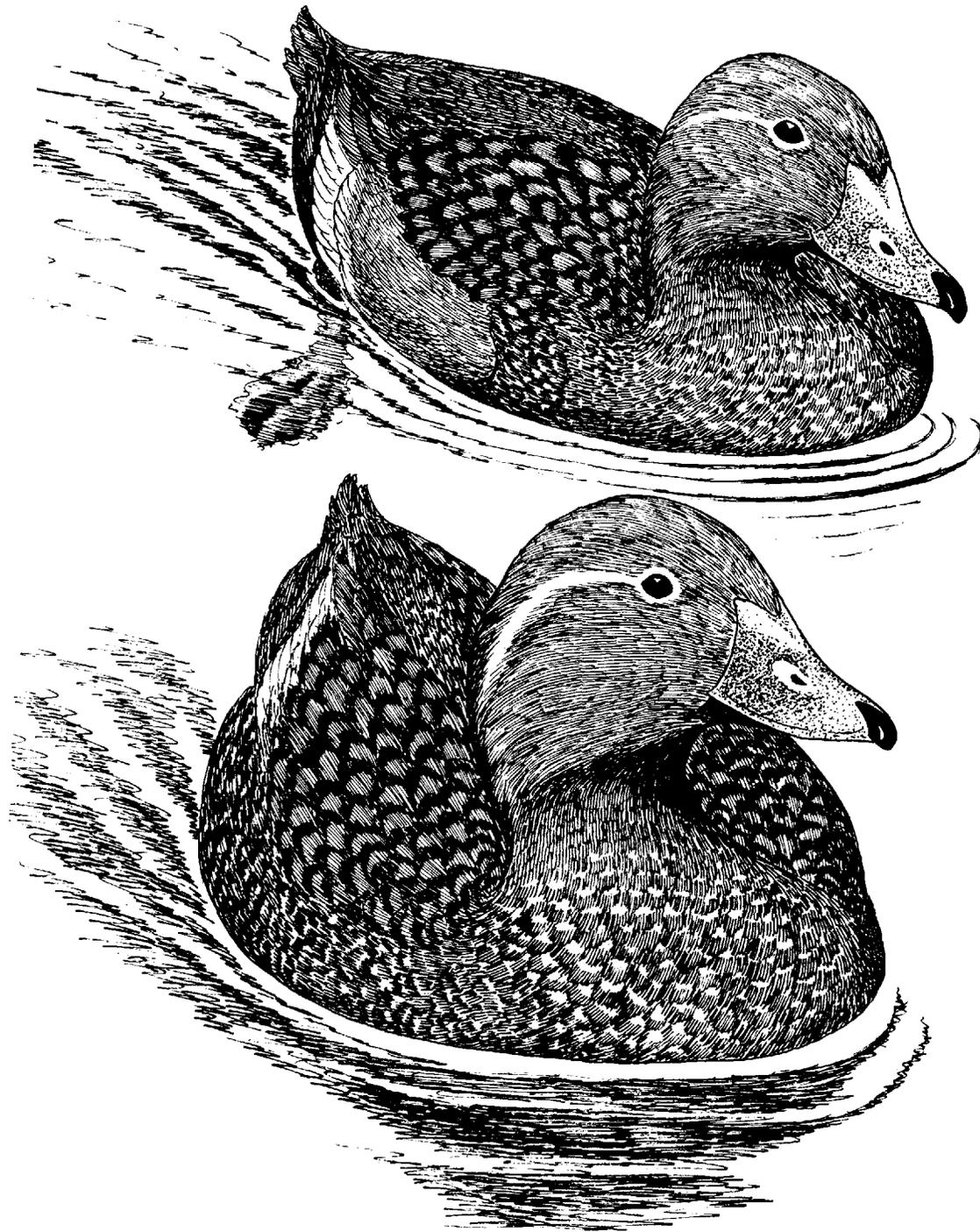
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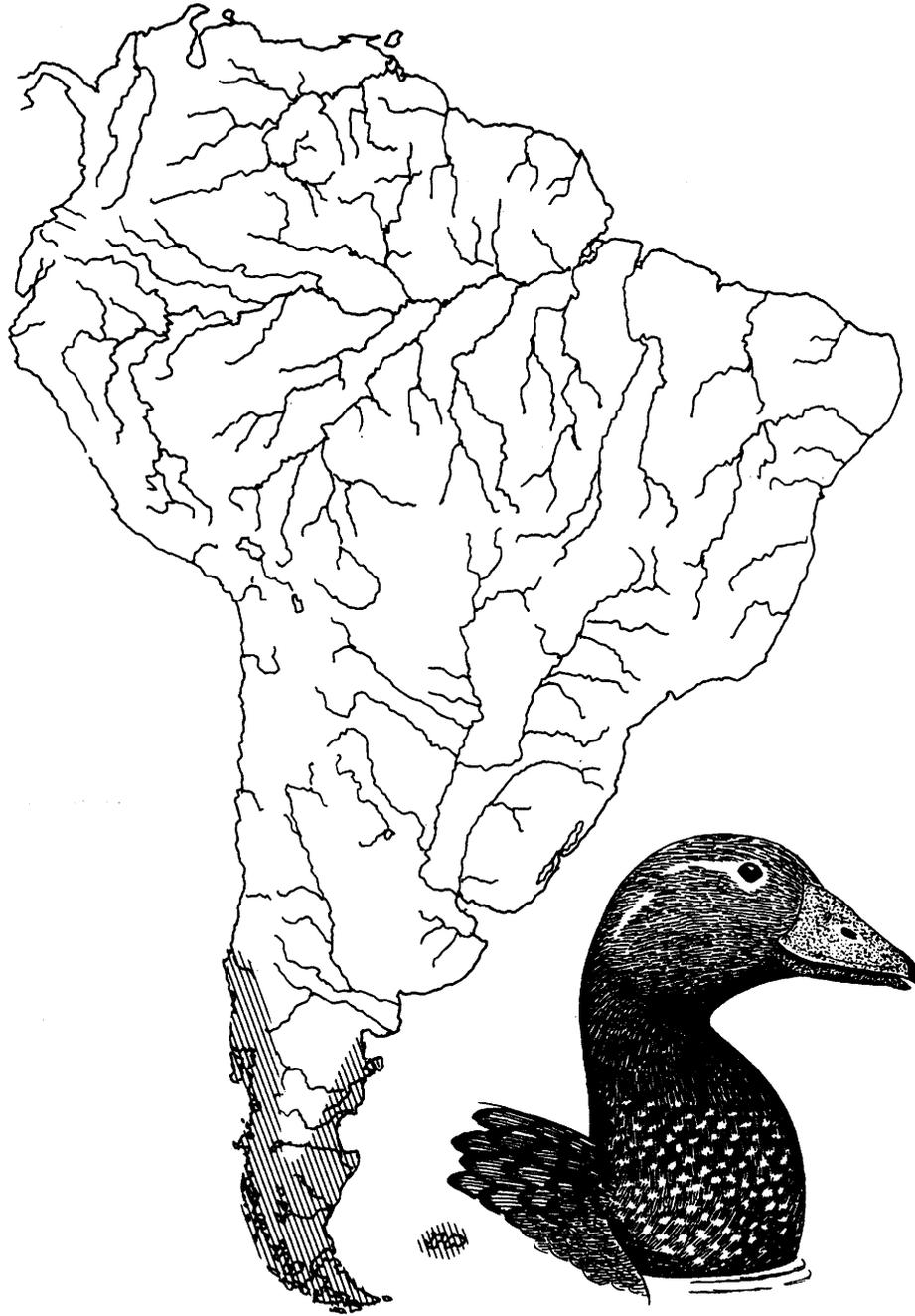
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Tribe Tachyerini (Steamer Ducks)





MAP 46. Breeding or residential distribution of the flying steamer duck.

Drawing on preceding page: Falkland Flightless Steamer Duck (pair)

Flying Steamer Duck

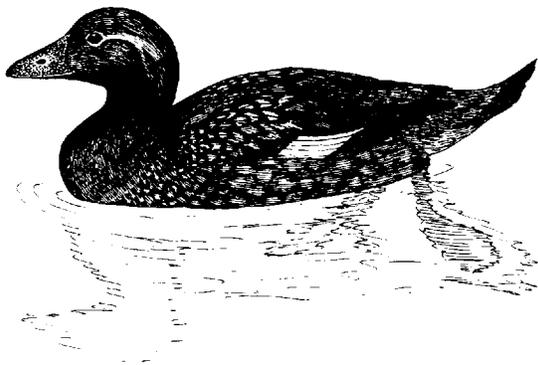
Tachyeres patachonicus (King) 1830

Other vernacular names. Canvasback (Falkland Islands); Patagonische Dampfschiffente (German); canard-vapeur volant (French); pato quetru volador (Spanish).

Subspecies and range. No subspecies recognized. Breeds on the Falkland Islands and in southern South America from Tierra del Fuego north to about 48° south latitude in Argentina and to 37° south latitude in Chile. See map 46.

Measurements and weights. Folded wing: males, 287–317 mm; females, 276–301 mm. Culmen: males, 48–57 mm; females, 50–59 mm. Weights: males, 2,892–3,175 g (av. 3,073 g); females, 2,438–2,835 g (av. 2,616 g). Eggs: av. 76 x 52 mm, ivory, 115 g.

Identification and field marks. Length 26–28" (66–71 cm). *Adult males* are grayish-lead to wine-colored above, with a pale gray head except for a reddish throat and a whitish eye-ring and eye-stripe, and with white underparts. The bill is relatively small, is orange-yellow except around the nostrils, where it is bluish, and has a relatively narrow (under 15 mm) black nail. Overall, the plumage is somewhat more brownish than that of the other two species of this tribe, especially the Magellanic flightless form. *Females* are generally more brownish, especially on the head, which is almost uniformly brown except for a whitish eye-ring and eye-stripe. The bill is yellowish on the culmen, shading to bluish on the cutting edge. *Immature* males closely resemble



females in head coloration as well as in the color of the bill. *Juveniles* are generally grayish, lacking wine-colored margins on their breast and flank feathers.

In the field, the flying ability and more slender shape of this species helps to separate it from both of the flightless forms, although it prefers to "steam" over the water with flapping wings rather than to take flight. The calls of the males range from female-like "rasping grunts" to mechanical "ticking grunts" and whistle-like "sibilant grunts." The female calls are entirely low-pitched grunting sounds, often uttered repeatedly in long series.

NATURAL HISTORY

Habitat and foods. This species, to a greater degree than the flightless forms, is often found on freshwater ponds as well as on the sea. It often frequents such ponds during the daylight hours, and may also occur on rivers or lakes some distance from the coast. So far as is known, its foods are similar to those of the flightless forms, but it consumes a lower proportion of thick-shelled mollusks and a correspondingly greater amount of crabs and crustaceans that occur in both salt- and fresh-water environments. During the winter the birds are found mainly on the coast, but during the summer they spread inland to breed over considerable distances. A favorite breeding ground on Tierra del Fuego is Mantu Lake, which is 28 miles from the coast (Murphy, 1936; Johnson, 1965).

Social behavior. Flocking in this species is largely limited to immature and molting birds. Small flocks of from 4 to 15 may still be commonly seen in June, while the major flightless period is probably somewhat earlier, in April. For a good part of the spring and summer the birds are in pairs on territories, and the breeding season in Chile is said to extend from November to January. However, even as early as June some females collected on the island of Chiloé had begun to show signs of gonadal growth. In the Falkland Islands the breeding season begins sooner, in October or possibly earlier. Moynihan's (1958) observations on display were made in Tierra del Fuego in November and December, or near the peak of the nesting season, and much of the hostile behavior he observed appeared to be associated with territorial defense. Most attacks he saw were by resident males on intruders, usually females, who flew immediately. Female displays included false drinking, vertical neck and head stretching, and grunting

calls. Those of the male are basically similar, but grunting occurs in a graded series of intensities that evidently reflect differing degrees of attack and escape tendencies. Displays between mated pairs were relatively few and simple, and often took the same form as the mutual triumph ceremonies of geese and swans, which is understandable, considering the strong and seemingly permanent pair-bonding arrangement. The few copulations that were seen occurred after mutual or male-only bill-dipping behavior; and after treading, the two birds assumed an alert posture and swam away from each other, orienting the back of their heads toward one another (Moynihan, 1958).

Reproductive biology. The nesting behavior of this species is much like that of the other two, and at least in Chile the nests are typically placed on small islets surrounded by water, rather than along shorelines. They are usually very well hidden by grass or other vegetation, but at times are placed in exposed sites. The clutch size may range from 5 to 9 but is typically 7 eggs. Only the female incubates; but as in the other species, the male is never found far from the nest. Although the specific incubation period has not been established, it is probably between 30 and 40 days, judging from information on the Falkland flightless species. In Tierra del Fuego many of the young have hatched by December, but the period to fledging is evidently quite prolonged. Thus, birds with barely sprouted primaries but otherwise well feathered out have been collected at Ushuaia in April (Murphy, 1936; Johnson, 1965).

Status. The flying steamer duck is probably less common than either of its two flightless relatives over their common ranges, but confusions over identities make this difficult to ascertain with certainty. Nevertheless, there is no cause for concern over its status either on the mainland of South America or on the Falkland Islands.

Relationships. This species presumably is nearest the ancestral form that produced all of the extant steamer ducks. The entire group is apparently most closely related to the shelducks and sheldgeese, but the relationship nevertheless is somewhat obscure, and tribal separation seems warranted (Moynihan, 1958; Johnson, 1965a). Woolfenden (1961) believes that the birds should be regarded as aberrant dabbling ducks on the basis of skeletal anatomy, but there is so far no supporting evidence for this.

Suggested readings. Murphy, 1936; Weller, 1976.

Magellanic Flightless Steamer Duck

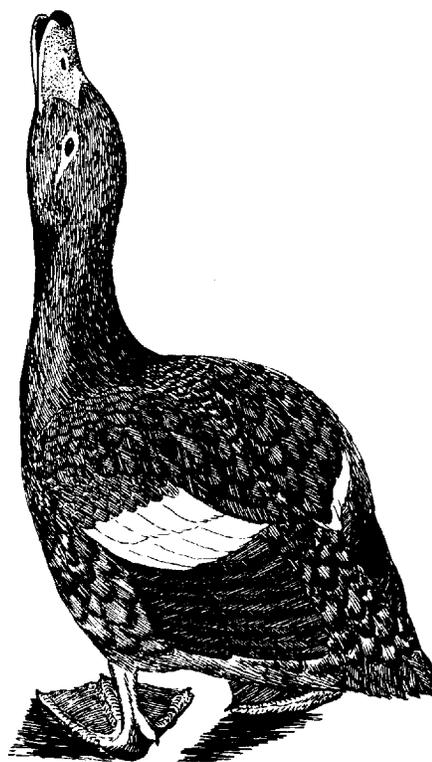
Tachyeres pteneres (Forster) 1844

Other vernacular names. Racehorse, seahorse, loggerhead; Magellan-Dampfschiffe (German); canard-vapeur de Patagonie; pato quetru no-volador, pato vapor magallanico (Spanish).

Subspecies and range. No subspecies recognized. Resident in western South America from Chiloé Island south to Cape Horn and Staten Island. See map 47.

Measurements and weights. Folded wing: males, 260–88 mm; females, 255–71 mm. Culmen: males, 55–66 mm; females, 54–61 mm. Weights: males, 5,897–6,180 g (av. 6,039 g); females, 3,629–4,763 g (av. 4,111 g). Eggs: av. 82 x 56 mm, ivory, 167 g.

Identification and field marks. Length 29–33" (74–84 cm). Plate 28. This is the largest of the steamer ducks. *Adult males* have a bluish gray to whitish head, with reddish brown lower cheeks and throat, a body pattern of bluish gray scales with darker slate edges, and



white underparts. The wing pattern, with a large white speculum formed by the secondaries and their greater coverts, is like that of the other species. The massive bill is bright orange, with a large and wide (over 15 mm) black nail, and the legs and feet are mostly yellow, with some black on the underside of the feet. *Females* are considerably smaller than males, more wine-colored on the back, with a more brownish head and more yellowish bill. *Juveniles* are entirely gray and lack wine-colored margins on the breast and flank feathers.

In the field, its very large size and nearly flightless condition help separate this species from the flying steamer duck. It also has a substantially heavier bill and nail than that of the flying steamer duck; and the white speculum of the flightless species is limited to the outer six or seven secondaries, while in the flying

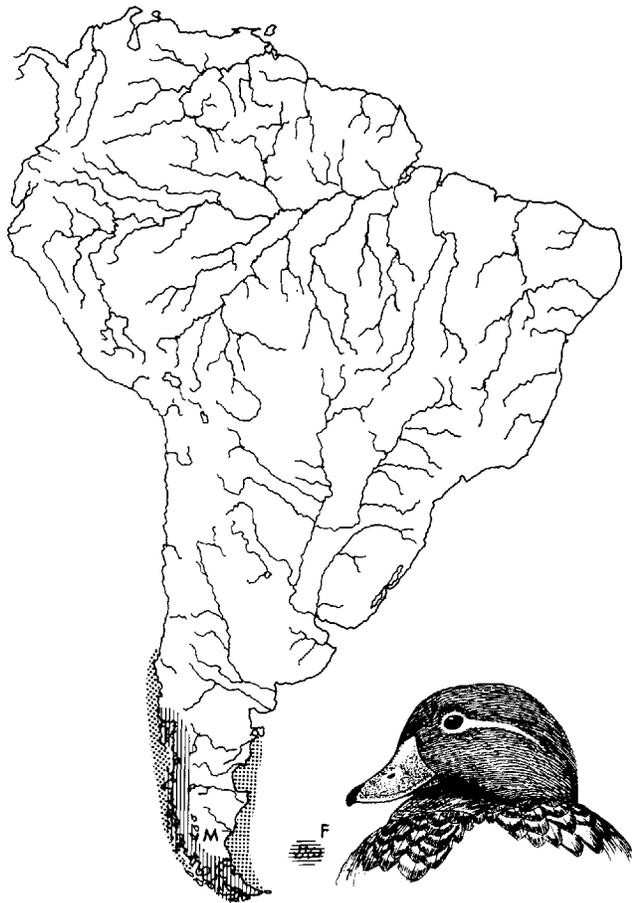
steamer duck it extends to the tenth or twelfth secondary (Murphy, 1936). The calls of this species include a shrill, repeated *qu-ie-u-ll* and a quick *kek* note, while the female produces croaking sounds.

NATURAL HISTORY

Habitat and foods. These birds are found along rocky shorelines and offshore kelp beds, where they forage on a variety of invertebrate forms. Johnson (1965) found mytilid mussels in some, and states that mollusks, crustaceans, and small fish are their major items of diet. They forage at or near high tide periods, and as the tide goes out they resort to preening or sleeping on rocks. Chitons, limpets, snails, and crustaceans have all been reported in the stomachs of this species, and probably most of the foods are obtained by diving in the relatively shallow kelp beds. The birds probably rarely move far inland except during nesting, but apparently in some areas make daily trips to fresh-water springs for drinking, as has been suggested by various observers (Murphy, 1936).

Social behavior. Except for young and nonbreeding birds, flocking in this species is nonexistent. Flocks of nearly one hundred birds have been reported in mid-January in extreme southern Chile, at the time that broods are out. Even when molting, however, the birds are usually to be found in pairs or only small flocks. During the winter months they sometimes associate with flying steamer ducks. The courtship period in Chiloé has been estimated to begin in August or September, and nearly all of the broods are hatched by December in that area (Murphy, 1936). Although it is almost certain that the hostile and sexual displays of this species are very much like those of the flying steamer duck, no actual detailed observations on this point are yet available. I (1965a) have observed a very few examples of display in captive individuals of this species, and the posturing and calling of both sexes appear to be nearly the same as Moynihan's (1958) account of these patterns in the flying steamer duck. Apparent inciting behavior by the female, called stretching, and a variety of male calls that are progressively more sibilant and variably associated with tail cocking and head lifting are the most common displays. Both sexes also perform false drinking frequently.

Reproductive biology. Nesting is probably largely confined to the period September through December, but few actual egg dates are available. Nests are often



MAP 47. Residential range of the Falkland flightless steamer duck ("F"), and breeding ("M") and wintering (stippling) distributions of the Magellanic flightless steamer duck.

placed quite close to water, rarely more than 300 yards from it according to Murphy (1936). He states that they are usually under shrubbery or otherwise well concealed. Johnson (1965) noted that on the Guaitecas Islands off the coast of Chile the nests were placed well inside the nearly impenetrable forest, and so well hidden that they could not be found without the aid of a dog. When sitting, the female can often be caught and lifted off the nest bodily. The usual clutch is from 5 to 8 eggs, but the incubation period has not yet been established. Very probably it is between 30 and 40 days, as in the Falkland Island species. Foxes and caracaras are reportedly serious predators of the eggs, and large gulls and skuas almost certainly destroy significant numbers of young birds. Families with downy young have been seen in coastal caves on the small islands off Chiloé, where fresh water trickles down through the rocks (Murphy, 1936).

Status. This species is still quite common in southern Chile and Argentina, and neither its habitat nor use by humans places it in any foreseeable danger.

Relationships. Presumably this flightless form evolved from an ancestral type relatively similar to the present-day flying steamer duck.

Suggested readings. Murphy, 1936; Weller, 1976.

Falkland Flightless Steamer Duck

Tachyeres brachypterus (Latham) 1790

Other vernacular names. Logger, loggerhead; Falkland-Dampfschiffente (German); canard-vapeur des Iles Falkland (French); pato vapor malvinero (Spanish).

Subspecies and range. No subspecies recognized. Resident on the Falkland Islands. See map 47.

Measurements and weights. Folded wing: males, 272–82 mm; females, 251–72 mm. Culmen: males, 53–61 mm; females, 52–58 mm. Weights: males, 4,303–4,420 g; females av. 3,400 g. Eggs: av. 82 x 57 mm, buff, 147 g.

Identification and field marks. Length, females 24" (61 cm), males 29" (74 cm). *Adult males* have a head that is predominantly gray and white (nearly pure white in old males) and a body that is mostly a scaled pattern of slate-gray feathers edged with blackish and reddish brown, especially on the breast, scapulars, and flanks. The cheeks and throat of males are reddish brown, and the bill is bright orange, with a black nail. The tail and wings are gray, the latter with a large white patch formed by the secondaries and their greater coverts. *Females* are smaller than males and have a yellow-green bill and a dark brown head with a white eye-ring and eye-streak. *Juveniles* and first-year birds resemble females but usually lack the white streak behind the eyes, and second-year males gradually acquire a grayish head and orange bill.

In the field, this species can be separated from the flying steamer duck by its shorter wings and heavier bill, and by a golden-yellowish collar at the base of the neck. Males utter a loud alarm note, *cheroo*, and similar but softer conversational notes, and females produce low, creaking notes while throwing the head vertically upward.

NATURAL HISTORY

Habitat and foods. Like other steamer ducks, this species concentrates on mollusks for its food; there is one record of a single bird with over 450 mussel shells in its crop and stomach. Other bivalves, limpets, chitons, and gastropod mollusks are likewise consumed, as are crabs and shrimps. Foraging is done by either upending in shallow water or diving in deeper waters, with each dive about 30 seconds in length. The birds are thus essentially coastline birds, and are especially numerous in sheltered harbors and along creeks and where there are large beds of kelp near the shore. They are seen as far as three miles from shore, and at night sometimes move to ponds (Woods, 1975; Murphy, 1936). Ducklings begin to dive for food within a few days of hatching, gradually increase their diving times, and feed on amphipods, isopods, and snails. Adults have been observed feeding in water probably over 9 meters deep, but also dabble and probe for their food in shallow waters (Weller, 1972).

Social behavior. Adult paired birds remain relatively segregated and may stay on or near their territories throughout the year, in conjunction with a very pro-

tracted breeding season. However, newly fledged young and older but still sexually immature birds gather in flocks that sometimes number in the hundreds, foraging in the coastal waters and sometimes resting together on beaches. The birds also at times use ponds close to the tide line. The length of time to sexual maturity is not yet certain, but must be at least two years, judging from the number of nonbreeding birds and the extended period required for the male's assumption of adult plumage and bill coloration. Although this is the least shy of all the steamer ducks, the birds seem to show fear of sea lions, and gulls and skuas are serious predators of their ducklings (Woods, 1975; Murphy, 1936). Pair-forming behavior is not well known in this species, but Pettingill (1965) states that the aggressive patterns are apparently identical to those of the flying steamer duck. The male's threat consists of rising in the water, throwing the head back and lifting the tail, and uttering a series of wheezy sounds and clicking notes. Fighting during the period of territorial defense is common, prolonged, and often bloody. The death of one of the males by drowning is probably rare but has been observed.

Reproductive biology. The territories of these birds are stretches of shoreline, and areas defended include both the offshore water and the shoreline up to the edge of vegetation. Pettingill (1965) reported that territories were spaced about 300 yards apart on Kidney Island. Eggs have been found in every month of the year, but most nesting occurs between mid-September and December. The nests are placed in grass, dry kelp, "diddle-dee" (*Empetrum*), tussock grass (*Poa*), or even at times in an old penguin burrow. Nests are usually within 200 yards of a beach, but

have been found as far as a quarter mile away. The nest is well lined with down, and the usual clutch is from 5 to 8 eggs, occasionally as many as 10 or more. Observations of a captive pair at the Zurich Zoo (Schmidt, 1969) suggest that the eggs are laid at approximately two-day intervals. In this study, eggs hatched over a variety of incubation periods that ranged from 28 to 40 days (estimated average 34 days), under various forms of incubation. The male closely guards the nest during the period of incubation, often patrolling offshore and calling to the female at the first sign of danger. After hatching, he joins the family, and upon disturbance will remain behind to ward off intruders as the female leads her brood to safety (Murphy, 1936). The fledging period is about 12 weeks (Weller, 1972).

Status. This species, which is still very widespread and common in the Falklands, seems to be in no danger.

Relationships. As Murphy (1936) has suggested, it seems apparent that the flying steamer duck is nearest the ancestral type which has given rise to near-flightless birds both on the Falkland Islands and on mainland South America. The steamer ducks are clearly related to the shelduck group, but Moynihan (1958) has suggested tribal separation, with which I (1965a) have agreed. Brush (1976), on the basis of his studies of feather proteins, judged, however, that the steamer ducks might be included in the shelduck tribe rather than being recognized as a distinct group of their own.

Suggested readings. Pettingill, 1965; Woods, 1975; Weller, 1976.