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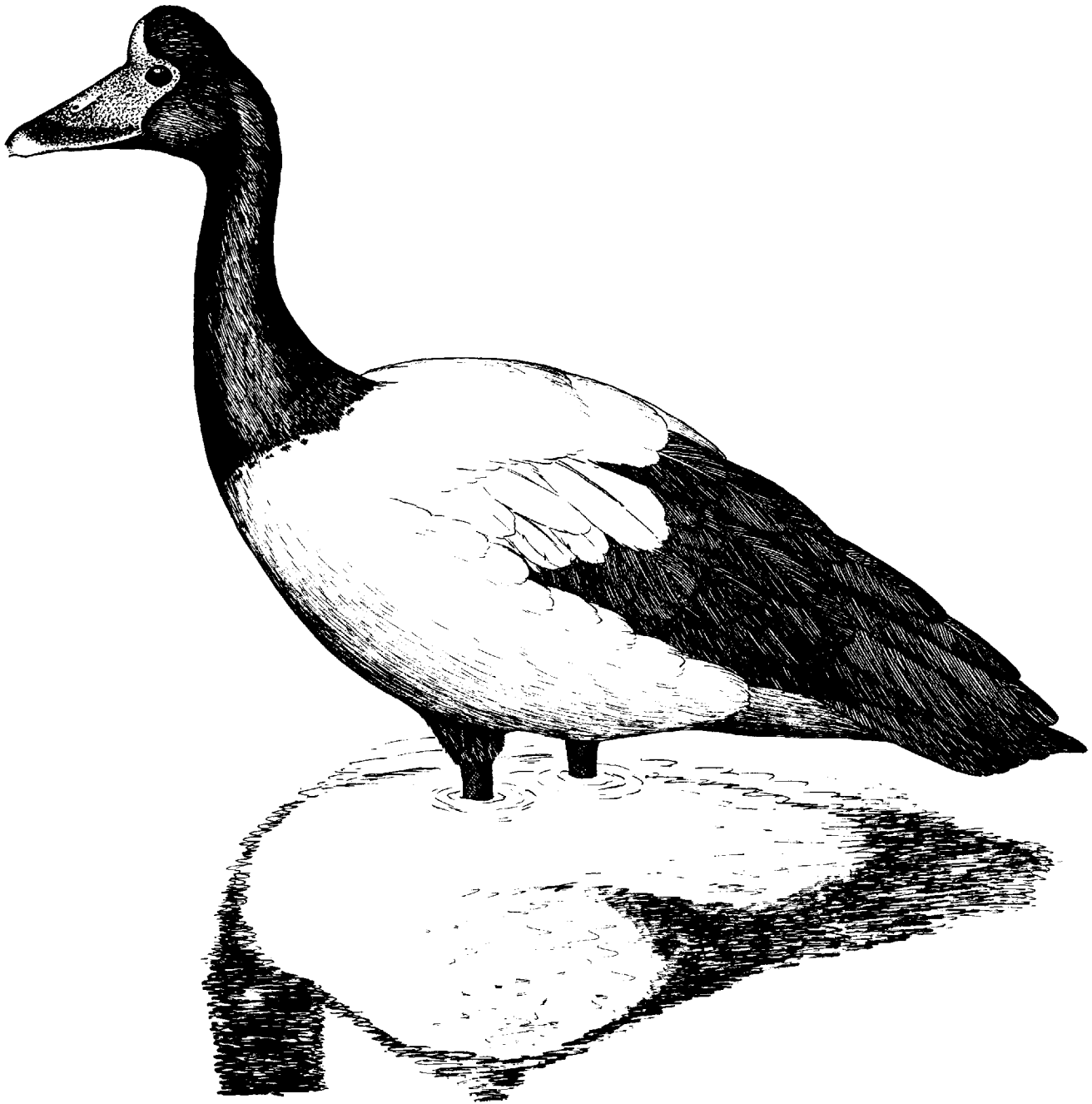
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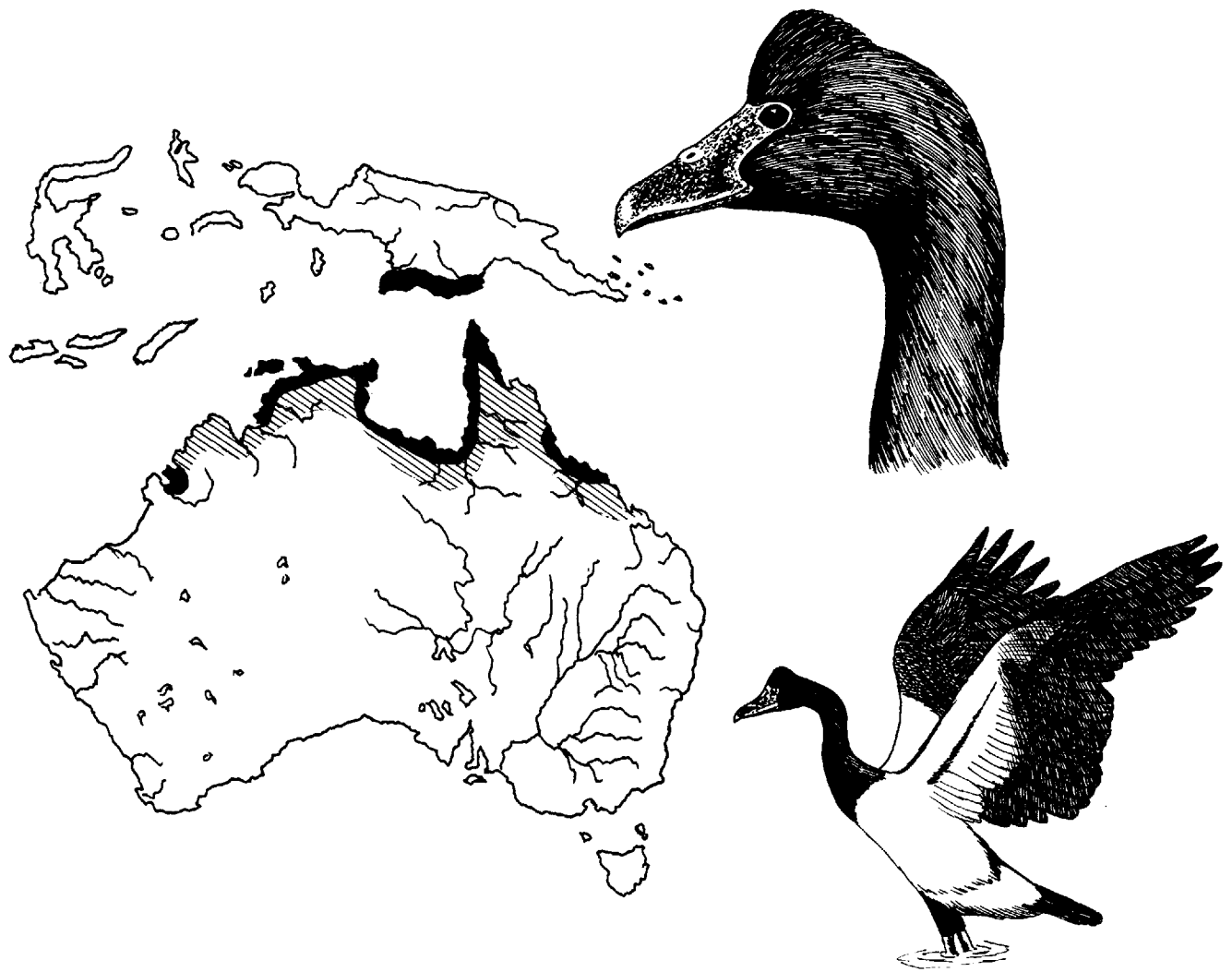
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Tribe Anseranatini (Magpie Goose)





MAP 1. Distribution of the magpie goose, showing breeding (inked) and nomadic (hatched) ranges.

Magpie Goose

Anseranas semipalmata (Latham) 1798

Other vernacular names. Semipalmated goose, pied goose, black-and-white goose; Spaltfussgans (German); oie pie (French); gans overo o pintado (Spanish).

Subspecies and range. No subspecies recognized. The current breeding range includes much of northern Australia and southern New Guinea. See map 1.

Measurements and weights. (From Delacour, 1954-64, and Frith, 1967.) Folded wing: males, 368-450 mm; females, 356-418 mm. Culmen: males, 72-92 mm; females, 63-82 mm. Weights: males, 1,838-3,195 g (av. 2,766); females, 1,405-2,770 g (av. 2,071). Eggs: av. 80 x 54 mm, glossy white, 128 g.

Identification and field marks. Length 30-34" (75-85 cm). Plate 2. This is the only species of true waterfowl with only partially webbed feet. *Adults* of both sexes are black on the head, neck, wings, rump, and tail, and white elsewhere. The bill is long and straight, with a well-developed nail at the tip; as in swans, the head is featherless back to the eyes. *Females* resemble males but are somewhat smaller, lack an enlarged bony crown, and have a higher-pitched voice. Adult males have an elongated trachea that loops downward between the breast muscles and skin and can be felt through the skin; adult females and immature birds lack this



feature. *Immature* birds also have more mottled and grayish plumages than do adults. There are no seasonal variations in plumage.

In the field, this goose-sized bird can be readily recognized by its distinctive black and white plumage, its long legs, and its honking, gooselike call. In flight, the slow wing beat and rounded wing outline produce a somewhat vulturine appearance; in the wild the birds usually occur in family-sized groups or larger flocks.

NATURAL HISTORY

Habitat and foods. In Australia, magpie geese are particularly associated with the flood plains of tropical rivers within 50 miles of the coast, where several kinds of habitats occur. In permanent lagoons where the water is usually four feet deep or deeper, and where the dominant vegetation consists of lotus (*Nelumbo*), spike rush (*Eleocharis*), and water lilies (*Nymphaea*), the birds occur in great flocks, especially in the dry season, when they use these areas as refuges. In areas where the water is three to four feet deep and dries to damp soil in the dry season, tea trees (*Melaleuca*) grow and provide roosting sites. If a spike rush understory is present, the birds may also breed there. Low black-soil swamps dominated by spike rush and wild rice (*Orzya*) are primary breeding habitats, and the rice is also used for food. Higher soils that are rarely if ever flooded are covered by a variety of grasses and sedges, and are used as foraging areas by the geese when the plants are seeding (Frith, 1967).

The birds forage by bending down tall grasses with their feet to reach the seeds with the bill, by grazing, and by filtering beakfuls of mud. They also dig in the soil with their beaks to reach the bulblike roots of spike rush. Studies by Frith and Davies (1961) in the Northern Territory of Australia indicate that the birds are almost entirely vegetarians, with 70 percent of the food samples consisting of grass blades, the bulbs of spike rush, and the seeds of wild rice, wild millet (*Echinochloa*), *Paspalum*, and couch (*Cynodon*). Goslings consume the seeds of these same swamp grasses and water plantain (*Sesbania*), as well as some arthropods. The adults may bend down grasses for the young to reach the seed heads, and they may also bring up underwater food with the bill, if it is too deep for the young to reach. In captivity, adults often bring up submerged grain in this man-

ner, after which they allow the young to feed on it as they release it from the bill (Johnsgard, 1961c).

Social behavior. Magpie geese are highly gregarious, and flocks may contain up to several thousand birds. Nesting is performed in colonies that vary greatly by locality and year but in one reported case averaged 135 nests per 100 acres in one year. The size of the nesting colony may vary from a few acres to several square miles. Although magpie geese mate for life and are always found in family groups, it is common for males to mate with two females. This has been reported to occur both in the wild (Frith, 1967) and in captivity (Johnsgard, 1961c). Kear (1973) suggests that this unique pair bonding arrangement carries the advantage of having more than two parents caring for the brood and is due to the need for rapid growth and early fledging in impermanent breeding habitats. After fledging, some flock movements occur, but Frith (1967) believes that these are usually only local ones. In some years, however, there are fairly extensive flock movements, especially in dry seasons as the geese leave their drying coastal swamps and move to inland lagoons. When extremely dry conditions occur, some geese may move as far south as southern Australia, and rarely they even reach Tasmania.

Reproductive biology. The nesting season begins with the first heavy rains of the wet season in northern Australia, which usually occur in October or November. The nest building occurs after the water depth in the swamp has become adequate. The nests consist of a large accumulation of vegetation that is gathered and trampled down by the geese. The nest has a deep cup at the top, but is not lined with down. It has been observed that in captivity nests are built off the ground by full-winged birds, sometimes in the tops of hedges or shrubs. All of the adults, usually a male and two females, help in building the nest, and several dummy nests may be built in advance of the one to be used. Usually one female begins to lay shortly in advance of the other, and each produces eggs at approximately 36-hour intervals. Wild clutches laid by a single female average 8.6 eggs, while those laid by two females averaged 9.4 eggs (Frith, 1967). A usual clutch size of 9 has been reported for captive birds (Kear, 1973). Incubation requires 28 days, and is shared by both sexes, with the male most often incubating at night (Johnsgard, 1961c). The young birds are actively fed by their parents, especially during the

first week, but occasionally feeding can be observed in goslings up to six weeks old. Fledging is said to require eleven weeks among wild birds; hand-reared birds have been reported to fledge in seven or eight weeks.

Status. Frith (1967) reports that although the number of magpie geese in the southern portions of Australia has greatly declined since early days, the species is still very numerous in the tropical areas. It can legally be hunted in the Northern Territory, but it is fully protected elsewhere from sport hunting. It has caused crop damage to rice in areas where it is most numerous, and perhaps the greatest danger to the species lies in the development of these tropical areas for grazing and agricultural purposes, which would destroy the specialized swamp vegetation on which the species depends for breeding.

Relationships. I have earlier (1961c) reviewed the numerous anatomical and behavioral characteristics of the magpie goose that distinguish it from other members of the Anatidae and suggest affiliations with the screamers (Anhimidae) and, more remotely, between the Anseriformes and the Galliformes. It is clear that subfamilial separation of the magpie goose is warranted, and that no other single species of the Anatidae provides such unique taxonomic and evolutionary interest. A recent study by Brush (1976) on the electrophoretic characteristics of feather proteins supports the position that the magpie goose is not closely related to any other waterfowl tribe and shows greater similarity to the crested screamer (*Chauna torquata*) than to other Anatidae.

Suggested readings. Frith, 1967; Johnsgard, 1961c.

