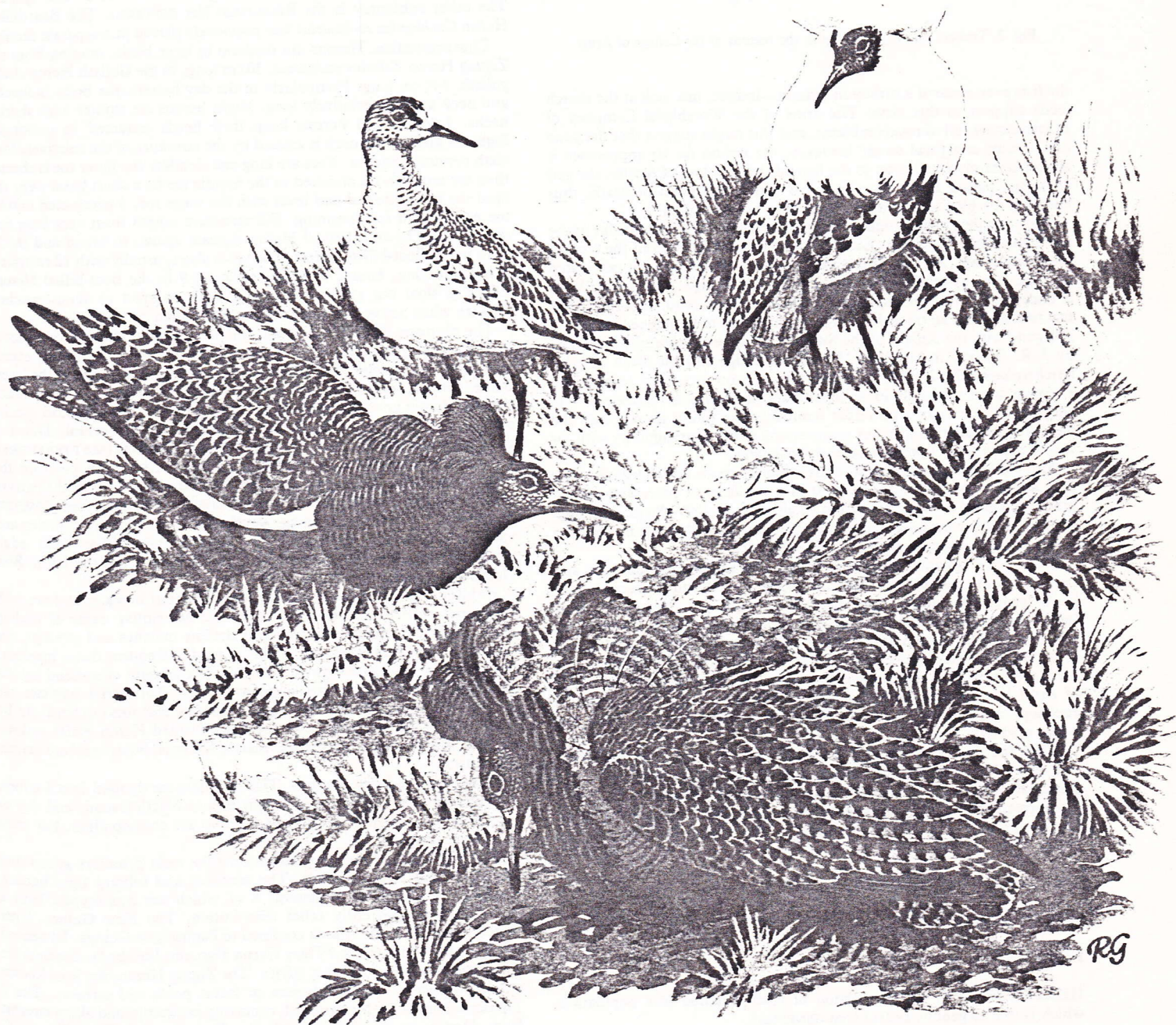


A Dictionary of BIRDS



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1985. *British Ornithological Union.*

HERMIT THRUSH: *Catharus guttatus*, a North American THRUSH, noted for its outstandingly beautiful song.

HERN; HERNSHAW: obsolete or dialect names, in Britain, for the Heron *Ardea cinerea*—the latter variously spelt, including 'handsaw' in Shakespeare.

HERODIONES: see CICONIIFORMES.

HERON: substantive name for most species of the Ardeinae (typical herons), one of 2 subfamilies of Ardeidae (Ciconiiformes); in Britain commonly used without qualification for the sole native species, the Grey Heron *Ardea cinerea*; in the plural, a general term for the Ardeinae and the Ardeidae. The substantive name 'egret' is used for several species. The other subfamily is the Botaurinae (see BITTERN). The Boat-billed Heron *Cochlearius cochlearius* was previously placed in a separate family.

Characteristics. Herons are medium to large birds, ranging from the Zigzag Heron *Zebritus undulatus*, 30 cm long, to the Goliath Heron *Ardea goliath*, 140 cm long. Particularly in the day herons, the body is slender and neck and legs relatively long. Night herons are stouter with shorter necks. Long-necked herons keep their heads retracted in prolonged flight. A kink in the neck is caused by the structure of the relatively long sixth cervical vertebra. Toes are long and slender; the inner toe is shorter than the outer and is attached to the middle toe by a short basal web; the hind toe is lengthened and level with the inner toe; a pectinated middle toe nail is used for grooming. Bill structure ranges from very long and thin in the Chestnut-bellied Heron *Agamia agami*, to broad and thickened in the Boat-billed Heron. The tail is short, usually with 12 rectrices. Wings are long, broad, with 10 primaries, 9 in the Boat-billed Heron. Flight is slow but strong. Herons assume an erect or semi-crouched posture when active and retract their neck when resting.

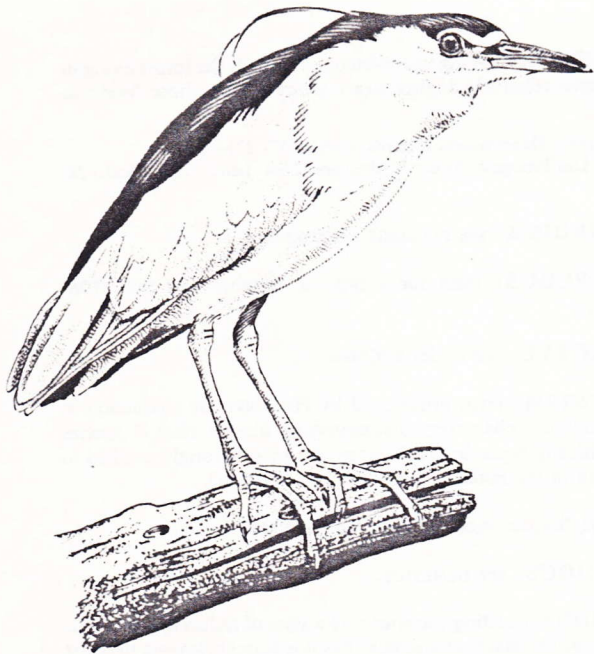
The plumage of herons is loose, the basic colours emphasizing black, brown, blue, grey, and white. Colour patterns may be complex, especially in cryptic species. The head is completely feathered except the lores. Some species, especially day herons, have lanceolate or filamentous display plumes on their head, neck, breast, or back. Sexes of most species are alike in plumage, but polymorphism occurs in several. Down is confined to apteria; feather tracts are extremely narrow (see PTERYLOSIS). Powder-down patches, characteristic of herons, occur in pairs on the breast and rump. Additional pairs are located on the back and thighs of some species. Powder down is used during preening (see COMFORT BEHAVIOUR). Molt and plumage development patterns are complex and variable, seasonally and with age. Juvenile may differ from adult plumage, the night herons being cryptically barred and the Little Blue Heron *Egretta caerulea* white.

Habitat. Herons are adapted for walking about in water and are with ibises and storks often referred to by the descriptive name of wading birds. They characteristically inhabit shallow marshes and swamps, the shores of rivers and lakes. Small herons tend to frequent dense marshes; larger species tend to forage in the open. The amount of wetland habitat available directly influences population size. Terrestrial habitats are frequented by many typically aquatic species and used extensively by Cattle Egrets *Bubulcus ibis* and the Black-headed Heron *Ardea melanoccephala*. Many species use shallow marine habitats, but several are marine specialists.

Taxonomy and distribution. The Ardeinae are divided into 3 tribes, the tiger herons Tigriornithini, night herons Nycticoracini, and day or typical herons Ardeini. Herons as a group are cosmopolitan, but most species are tropical.

The Tigriornithini are considered to be the most primitive group (but see Payne and Risley (1976)). The secretive and solitary tiger herons, including 6 species in 4 genera, 3 of which are monotypic, have a discontinuous apparently relict distribution. The New Guinea Tiger Heron *Zonerodius heliosylus* is confined to Papua-New Guinea. Its nearest relative, the White-crested Tiger Heron *Tigriornis leucolophus* inhabits the equatorial rain forest of West Africa. The Zigzag Heron, the least known ardeid, occurs in South America in forest pools and streams. The 3 *Tigrisoma* herons are Neotropical, occurring in swamps and along streams from Mexico to Argentina, with the Bare-throated Tiger Heron *T. mexicanum* confined to Central America.

The Nycticoracini are medium-sized herons that typically, but not universally, feed at night. In general they are stockier, shorter-legged, and heavier-billed than day herons. The 8 species in 3 genera have



Black-crowned Night Heron *Nycticorax nycticorax*. (R.G.).

distinctive skeletal differences from the day herons. The 4 oriental night herons *Gorsachius* are Palaeotropical. The Black-crowned Night Heron *Nycticorax nycticorax* is found on all continents but Australia and on many islands. It is replaced in Australia by the closely related Nankeen Night Heron *N. caledonicus*.

The Neotropical Boat-billed Heron is distinguished by its peculiarly widened bill, 7.5 cm long by 5 cm wide, and by its exceptionally large eyes. It has diverged from other herons in its display repertoire and has 3 rather than 4 powder-down patches. It resembles night herons in plumage and frequently feeds at night. Some believe that the unusual bill primarily serves a display function. It seems more likely to be a feeding adaptation.

The Ardeini include the well known, typically day-feeding herons and egrets. Many species nest colonially and forage in aggregations. The day heron group of 35 species is cosmopolitan.

The little known Capped Heron *Ptilherodius pileatus* has a distribution centred in the Amazon basin of South America. Considered in the past to be a night heron, taxonomic and field studies indicate it to be a typical heron, characteristic of forested stream edges. The Whistling Heron *Syrigma sibilatrix* has a disjunct distribution in northern and southern South America. Its whistling calls, duck-like flight, and complex social behaviour are distinctive. It is a bird of the tropical savannas.

The pond herons *Ardeola* include 6 diminutive, short-legged Old World herons of shallow, reedy marshes. In several species breeding and non-breeding plumage differ markedly. The Cattle Egret is primarily a terrestrial heron that forages in commensal association with African buffalo, domestic cattle, other large animals, and even agricultural equipment. In Africa this mostly white bird favours seasonally-flooded plains. Both Indian and African races have expanded their ranges markedly within historic times, probably taking advantage of changing agricultural practices. The Cattle Egret had become established in South America by the late 1800s, in Australia by the early 1900s, and in North America and Europe by the early 1950s.

The Green Heron *Butorides striatus* includes 3 small, dark herons previously considered to be separate species. The most distinctive population, on the Galapagos, includes individuals that are almost entirely dark grey. Green Herons are secretive, often foraging under the cover of trees along the shores of rivers and lagoons. The Galapagos form typically feeds on rocky shores.

The genus *Egretta* includes 13 species, the medium sized white Little Egret *E. garzetta* of Europe, Africa, and Australia being typical. The Little Egret has a mainly inland distribution and breeds in mixed-species colonies. The Snowy Egret *E. thula* of North and South America is similar but has different breeding plumes. Two polymorphic reef herons *E. gularis* and *E. sacra* tend to replace the Little Egret along the coast in

Africa and in Asia to Australia, respectively. But see a recent discussion in *The Herons Handbook* (p. 132). Another similar heron, Swinhoe's Egret *E. eulophotes*, is now confined to China and Korea. Three New World forms are similar in habitats to the Old World reef herons. The Pied Heron *E. picata* has a patchy distribution in Australia to New Guinea. Two more occur in Africa, and the Intermediate Egret *E. intermedia*, larger than the Little Egret, has a discontinuous distribution from Africa and Asia to Australia. The Great White Egret *E. alba* is cosmopolitan, occurring in many habitats on all continents.

The genus *Ardea* includes 11 species of medium to very large dark-plumaged herons. The Grey Heron and Purple Heron *A. purpurea* are widely distributed in Eurasia and Africa. The Grey Heron forms a natural, mutually allopatric, group with the North American Great Blue Heron *A. herodias* and the South American Cooi Heron *A. cocoi*. The White-necked Heron *A. pacifica* replaces these species in Australia. The White-faced Heron *A. novaehollandiae* is a medium-sized species of Australia, which has been introduced and has spread in New Zealand. The African Black-headed Heron is characteristically terrestrial, feeding in cultivated areas and open grassland. Finally, there are 4 very large herons of allopatric distribution: the Malagasy Heron *A. humbloti* of the Malagasy Republic, the Goliath Heron of Africa and Asia, the Imperial Heron *A. imperialis* of South Asia, and the Sumatran Heron *A. sumatrana* from Malaya to Australia.

The Agami or Chestnut-bellied Heron is a peculiarly attractive neotropical species of uncertain affinity. It has a long neck and bill and brilliant dark green, chestnut, and pale blue plumage. It occurs along stream banks in deep forests.

Populations. Over their known history many populations have been reduced by hunting and by habitat loss. Extensive surveys in North America have assembled information on nesting colonies in recent years. The Grey Heron is the best known species, colonies in the United Kingdom being tallied as early as 1872 and the nesting population of England and Wales being censused annually since 1928. The population decreases markedly after hard winters.

Movements. Herons demonstrate several types of population movements. In temperate latitudes, regular seasonal migrations are undertaken by many species. Herons of the eastern Palearctic move toward Malaysia and Indonesia; western Palearctic herons migrate on a broad front to central Africa and also to India; Nearctic herons move to southern North America with eastern birds moving through Florida and western birds moving through Central America; southern African herons and southern South American herons undoubtedly migrate northward but their routes require additional study; Australasian herons appear to migrate as far north as New Guinea. Nearly all herons show post-breeding dispersals of juveniles, and of adults after nesting failure. Such dispersing birds may be moving from areas where food is scarce. Dispersals before migration bring many birds as late summer visitors to localities well away from their breeding range. Intra-regional movements, nomadic responses to seasonally variable food resources, have also been documented for various species.

Food. Herons are almost entirely carnivorous, depending heavily on aquatic prey. Diets are broad and variable in time and place and reflect seasonal flushes of prey. Exploiting seasonal prey abundances is of critical importance to many populations, affecting nesting success, movements, migration, and food choice.

The foraging behaviour of herons can be as simple as standing motionless in the shallows or at the water's edge until a potential prey approaches, as is typical of the largest and smallest species. Food is commonly sought by walking stealthily in the water or on dry ground, or by more active behaviours. A bird may combine walking with running or hopping in a repetitive sequence, as is characteristic of Reddish Egrets *E. rufescens*. Use of the feet is common, particularly in species with distinctively coloured toes. Aerial feeding methods are used by several species. Special wing actions characterize actively foraging species. The Black Heron *E. ardesiaca*, stands with its wings extended completely over its head forming a canopy that appears to attract prey and may increase their visibility.

Prey are grasped or, less frequently, impaled by a quick thrust. Dead or slow-moving prey are grabbed or picked up. When bill thrusts are directed into the water, herons must compensate for refraction. Herons may tilt or cock their heads to improve visibility. Captured prey are mandibulated by bites or stabbing if they are large or possess counter-adaptations such as spines, hard bodies, or violent post-capture be-

haviour. Pellets of undigested material are disgorged. Smaller herons take longer to handle large prey, which may affect their choices. The New World Yellow-crowned Night Heron *Nycticorax violaceus* specializes in feeding on crustaceans. Most herons feed diurnally, but some species, e.g. the night herons, characteristically feed nocturnally or crepuscularly, while others, e.g. Great Blue Heron, may do so at times.

Behaviour. Some herons, such as the tiger herons, are typically solitary; others forage in isolation but nest colonially. Some species, such as the Cattle Egret, feed in flocks and nest in large colonies. Others are socially flexible, and individuals may alternately feed alone or in an aggregation. Social foraging provides opportunities for complex interactions, including aggression, commensalism, competition, and prey robbing. Territorial behaviour on the feeding grounds is common, and individual territories may be occupied over long periods. Individual distances are always maintained.

Many herons form mixed-species communal roosts in protected sites, often after assembling at staging locations. Nesting in groups on isolated sites confers some degree of protection. Herons may also use colony associates to obtain information on the direction of available food resources.

Pair formation behaviours are varied and elaborate, including aerial and non-aerial elements. Pair-bonding begins at the colony, with intensive displays by males. Three types of pair formation are distinguishable. A succession of females may visit a displaying male at his future nest site (Grey Herons). Several females may visit a male on one or more temporary display sites (Cattle Egrets). Both males and females may move as a group around the colony (Little Egrets). A male typically initiates courtship by advertising calls, defends his site, and attracts a female with various displays.

In many species lores, irides, bill, legs, or feet change colour during courtship. Often the colour remains for only a few days. Coloration may vary among populations, such as in the Great White Egret. The irides and feet of the Green Heron turn from yellow to orange; bills of the European Great White Egret turn yellow; and bills of the Squacco Heron *Ardeola ralloides* turn blue. Colour changes appear to be partly a result of the deposition of pigments (see COLOUR) and partly of increased vascularization.

Voice. Herons have a limited repertoire of guttural honks, franks, coos, and growls. Tiger herons and oriental night herons have booming bittern-like calls. The Whistling Heron has high-pitched calls. Calls are most frequent during agonistic encounters and early in pair formation. Bill-snapping also produces sounds. Acoustic signals are emphasized by species such as the Boat-billed Heron which occur in dense vegetation.

Breeding. Nesting generally occurs during the local spring and summer or when the rainfall cycle produces optimal foraging conditions. Some tropical herons nest year-round. Nests typically are stick platforms in trees, reeds, or on the ground. They are built by the female from sticks brought by the male. The 3–7 eggs are usually unmarked white, buff, or pale blue. Both the parents incubate the eggs for 16–30 days. The altricial, nidicolous young are fed regurgitated food. Young may leave the nest in as little as a week, returning to be fed. At this time both parents forage simultaneously. Young become progressively more independent and are seldom fed away from the nest site.

See PHOTOS CREST; DISPLAY; FEEDING HABITS; RITUALIZATION; SUNNING.
J.A.K.

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HERPETOTHERINAE: see FALCON.

HESPERORNITHIFORMES: an order erected to include such fossil forms as *Hesperornis*, *Hargeria*, *Enaliornis* (provisional placing) and *Baptornis* (see FOSSIL BIRDS).