

= Brolga =

The brolga (*Grus rubicunda*) , formerly known as the native companion , is a bird in the crane family . It has also been given the name Australian crane , a term coined in 1865 by well known ornithological artist John Gould in his *Birds of Australia* .

The brolga is a common , gregarious wetland bird species of tropical and south eastern Australia and New Guinea . It is a tall , upright bird with a small head , long beak , slender neck and long legs . The plumage is mainly grey , with black wing tips , and it has an orange red band of colour on its head . It is well known for its intricate mating dance . The nest is built of sticks on an island in marshland and usually two eggs are laid . Incubation takes 32 days and the newly hatched young are precocial . The adult diet is mostly plant matter , but invertebrates and small vertebrates are also eaten .

Although the bird is not considered endangered over the majority of its range , populations are showing some decline , especially in southern Australia , and local action plans are being undertaken in some areas . It is the official bird emblem of the state of Queensland .

= = Description = =

The brolga is a tall bird with a large beak , long slender neck and stilt like legs . The sexes are indistinguishable in appearance though the females are usually a little smaller . The adult has a grey green , skin covered crown , and the face , cheeks and throat pouch are also featherless and are coral red . Other parts of the head are olive green and clothed in dark bristles . The gular pouch , which is particularly pendulous in adult males , is covered with such dense bristles as to make it appear black . The beak is greyish green , long and slender , and the iris is yellowish orange . The ear coverts appear as a grey patch of small feathers surrounded by red naked skin and the body plumage is silvery grey . The feathers on the back and the wing coverts have pale margins . The primary wing feathers are black and the secondaries grey . The legs and feet are greyish black . Juveniles lack the red band and have fully feathered heads with dark irises . A fully grown brolga can reach a height of 0.7 to 1.3 metres (2 ft 4 in to 4 ft 3 in) and has a wingspan of 1.7 to 2.4 metres (5 ft 7 in to 7 ft 10 in) . Adult males average slightly less than 7 kilograms (15 lb) with females averaging a little under 6 kilograms (13 lb) . The weight can range from 3.7 to 8.7 kilograms (8.2 to 19.2 lb) .

The brolga can easily be confused with the sarus crane , however the latter 's red head colouring extends partly down the neck while the brolga 's is confined to the head . The brolga is more silvery grey in colour than the sarus , the legs are blackish rather than pink and the trumpeting and grating calls it makes are at a lower pitch . Additionally , in Australia the range of the sarus is limited to a few scattered localities in northern Australia , compared to the more widespread distribution of the brolga .

= = Distribution and habitat = =

Brolgas are widespread and often abundant in north and north eastern Australia , especially north eastern Queensland , and are common as far south as Victoria . They are also found in southern New Guinea and as rare vagrants in New Zealand and the northern part of Western Australia . The population in northern Australia is estimated at between 20,000 and 100,000 birds and in southern Australia , 1,000 birds . The numbers of individuals in New Guinea are unknown .

Brolgas are non migratory but move to different areas in response to seasonal rains . In northern Australia , during the dry season (June to November) , populations of brolgas are gregarious and largely occupy a strip of freshwater marshland up to 50 kilometres (31 mi) wide , lying between the coastal hills and the saline mangrove swamps that fringe the sea . They also visit freshwater lagoons in the vicinity , river and tidal pools , the edges of lakes and irrigated farmland . In December , shortly before the start of the monsoon season , they disperse to their breeding areas

. Some remain near the coast but others move up to 500 kilometres (310 mi) inland to similar habitats . Little is known of the movements and habitats of the New Guinea populations .

Further south , in Victoria and New South Wales , rainfall is spread more evenly throughout the year and the driest season lasts from December to May . At this time , southern populations congregate in inland flocking areas which include upland marshes , the edges of reservoirs and lakes , pastures and agricultural land . When rain arrives in June and July , they disperse to the coastal freshwater marshes , shallow lakes , wet meadows and other wetlands where they breed .

Queensland is the state in which the greatest numbers of brolgas are found , and sometimes flocks of over 1 @, @ 000 individuals are seen here . The bird is the official bird emblem for the state and also appears on its coat of arms .

= = Ecology and behaviour = =

Brolgas are gregarious creatures ; the basic social unit is a pair or small family group of about three or four birds , usually parents together with juvenile offspring , though some of such groups are unrelated . In the non @-@ breeding season , they gather into large flocks , which appear to be many self @-@ contained individual groups rather than a single social unit . Within the flock , families tend to remain separate and to coordinate their activities with one another rather than with the flock as a whole .

When taking off from the ground the flight is ungainly , with much flapping of wings . The bird 's black wingtips are visible while it is in the air and once it gathers speed , its flight is much more graceful and it often ascends to great heights . Here it may be barely discernible as it wheels in great circles , sometimes emitting its hoarse cry .

= = = Diet = = =

Brolgas are omnivorous and forage in wetlands and saltwater marshes . They tear up the ground with their powerful beaks in search of bulbs and edible roots . Northern populations mainly eat tubers of the bulkuru sedge (*Eleocharis dulcis*) which they extract by digging holes in the mud , but these are not available south of Brisbane . They also eat the shoots and leaves of wetland and upland plants , cereal grains , seeds , insects , mollusks , crustaceans , frogs and lizards . In saltwater marshes they may drink saline water and they have glands near their eyes through which they can excrete excess salt .

= = = Mating and breeding = = =

Brolgas are monogamous and usually bond for life , though new pairings may follow a fatality of one individual . A feature of a bonded couple is the synchronous calling which the female usually initiates . She stands with her wings folded and beak pointed to the sky and emits a series of trumpeting calls . The male stands alongside in a similar posture but with his wings flared and primaries drooping . He emits one longer call for every two emitted by the female .

Brolgas are well known for their ritualised , intricate mating dances . The performance begins with a bird picking up some grass and tossing it into the air before catching it in its bill . The bird then jumps a metre (yard) into the air with outstretched wings and continues by stretching its neck , bowing , strutting around , calling and bobbing its head up and down . Sometimes just one brolga dances for its mate ; often they dance in pairs ; and sometimes a whole group of about a dozen dance together , lining up roughly opposite each other before they start .

The brolga breeds throughout its range in Australia and New Guinea . The start of the breeding season is largely determined by rainfall rather than the time of year ; thus the season is February to May after the rainy season in the monsoonal areas , and September to December in southern Australia . The flocks split up and pairs establish nesting territories in wetlands . In food @-@ rich habitats , nests can be quite close together , and are often found in the same area as those of the sarus crane . The nest , which is built by both sexes , is a raised mound of sticks , uprooted grass ,

and other plant material sited on a small island in shallow water , or occasionally floating . If no grasses are available , mud or roots unearthed from marsh beds are employed . Sometimes the birds make hardly any nest , take over a disused swan nest , or simply lay on bare ground .

There is a single brood produced per year . The clutch size is usually two , but occasionally one or three eggs are laid about two days apart . The dull white eggs are sparsely spotted or blotched with reddish brown , with the markings being denser at the larger end of the egg . They measure 95 by 61 millimetres (3 @. @ 7 by 2 @. @ 4 in) . Both sexes incubate the eggs with the female sitting on the nest at night . Hatching is not synchronised , and occurs after about thirty @-@ two days of incubation . The newly hatched chicks are covered with grey down and weigh about 100 grams (3 @. @ 5 oz) . They are precocial and are able to leave the nest within a day or two . Both parents feed and guard the young . The chicks fledge within four or five weeks , are fully feathered within three months and are able to fly about two weeks later . When threatened , they hide and stay quiet while the parents perform a broken @-@ wing display to distract the predator . The adults continue to protect the young for up to eleven months , or for nearly two years if they do not breed again in the interim .

= = Conservation status = =

The IUCN Red List of Threatened Species lists the brolga as being of " least concern " . This is because it has a large range and a population of more than 10 @,@ 000 individuals . Although the population may be declining slowly , this is not at a rate that would warrant the brolga being included in a more vulnerable category . Brolga are not listed as threatened on the Australian Environment Protection and Biodiversity Conservation Act 1999 . However , their conservation status varies from state to state within Australia . For example , the brolga is listed as threatened under the Victorian Flora and Fauna Guarantee Act (1988) . Under this Act , an Action Statement for the recovery and future management of this species has been prepared . It is also included in the 2007 advisory list of threatened vertebrate fauna in Victoria where it is listed as vulnerable .

The chief threats faced by the brolga , particularly in the southern part of its range , are habitat destruction , the drainage of wetlands , collision with powerlines , and predation by the introduced red fox . It is more secure in its northern habitat as the land is mostly unsuitable for farming and much of it is in national parks or private ownership , but changes in vegetation cover , encouraged by the rooting activities of feral pigs , may reduce the abundance of bulkuru sedge and may make the brolga more vulnerable by providing cover for predators .

Conservation measures being undertaken include international cooperation , legal protection , research , monitoring , habitat management , education and the maintenance of captive flocks for propagation and reintroduction . Although the bird breeds well in the wild , it has proved much more problematic to get it to breed while in captivity . The International Crane Foundation , a conservation organisation located in Baraboo , Wisconsin , began a captive breeding programme with three pairs of wild brolga captured in Australia in 1972 . In 1984 they imported twelve fertile eggs for further breeding .

= = Taxonomy = =

When first described by the naturalist George Perry in 1810 , the brolga was misclassified as a species of *Ardea* , the genus that includes the herons and egrets . It is in fact a member of the Gruiformes ? the order that includes the crakes , rails , and cranes , and a member of the genus *Grus* . The ornithologist John Gould used the name *Grus australasianus* when he wrote about it and noted it to be widespread in the north and east of Australia . He also recorded that it was easy to tame , and that James Macarthur had kept a pair at his home in Camden . Calling it the Australian Crane , he mentioned that its early colonial name had been Native Companion . The Royal Australasian Ornithologists Union made brolga , a popular name derived from Gamilaraay *burrulga* , the official name for the bird in 1926 .

In 1976 , it was suggested that the brolga , sarus crane (*Grus antigone*) and white @-@ naped

crane (*Grus vipio*) formed a natural group on the basis of similarities in their calls . This was further confirmed by molecular studies of their DNA . These also showed that the brolga is more closely related to the white @-@ naped crane than it is to the morphologically more similar sarus crane .

There have traditionally been considered to be two subspecies ; *G.r. argentea* is the northern Australian crane and is found in Western Australia , the Northern Territory and western Queensland ; *G.r. rubicunda* , the southern Australian crane , occurs in New Guinea , Queensland , New South Wales , Victoria and South Australia . The two subspecies intergrade where their ranges coincide . Some authorities now consider that there are no subspecies , merely two separate populations of the bird adapted to breed at different periods of the year .