

= African river martin =

The African river martin (*Pseudochelidon eurystomina*) is a passerine bird , one of two members of the river martin subfamily of the swallow family , *Hirundinidae* . When discovered , it was not initially recognised as a swallow , but a later understanding of differences in structure , including its stout beak and robust legs and feet , led to its current placement in a separate subfamily shared only with the Asian white @-@ eyed river martin . The African river martin is a large swallow , mainly black with a blue @-@ green gloss to the head and a greener tint to the back and wings . The under @-@ wings are brownish , the underparts are purple @-@ black , and the flight feathers are black . This martin has red eyes , a broad orange @-@ red bill and a black , square tail . Young birds are similar in appearance to the adults , but have browner plumage . This species has a variety of unmusical calls , and displays both in flight and on the ground , although the purpose of the terrestrial display is unknown .

The main breeding areas are in the Democratic Republic of the Congo (DRC) along the Congo River and its tributary , the Ubangi , in habitats characterised by a mixture of tropical forest types including swampy or seasonally flooded woodland . The African river martin is migratory , wintering in coastal savanna in southern Gabon and the Republic of the Congo . Breeding also occurs in these coastal areas , but it is unknown whether the migrants are raising a second brood or if there is a separate resident population . This martin feeds in flocks throughout the year , catching a variety of insects in the air , especially flying ants . It does not use perches during the breeding season , although it will often land on the ground .

The African river martin nests in burrows in river sand banks , often alongside rosy bee @-@ eaters , but its incubation and fledging times are not known . It also digs tunnels for night @-@ time shelter when in its wintering areas . It appears to be common within its restricted range , despite being caught in large numbers by the local population for food , and large flocks are sometimes seen . However , due to a lack of detailed information about its breeding range and population numbers , this species is classed as Data Deficient by the International Union for Conservation of Nature (IUCN) .

= = Taxonomy = =

When German zoologist Gustav Hartlaub first described the African river martin in 1861 , it was not initially thought to be a member of the swallow and martin family , and he placed it with the rollers . Later authors either placed it in its own monotypic family , or with the woodswallows . A 1938 study of this martin 's anatomy by Percy Lowe revealed that the species was closest to the swallows and martins , but sufficiently distinct from them to be placed in a separate subfamily , *Pseudochelidoninae* .

The only other member of the subfamily is the white @-@ eyed river martin *Pseudochelidon sirintarae* , known only from one site in Thailand and possibly extinct . These two species possess a number of features which distinguish them from other swallows and martins , including their robust legs and feet , stout bills , large syrinxes (vocal organs) and different bronchial structure . Genetic studies confirmed that the two river martins form a distinct clade from the typical swallows in the *Hirundininae* subfamily .

The two river martins are in some ways intermediate between typical swallows and other passerine birds , and the arrangement of their leg muscles is more like that of a typical passerine than of a swallow . The extent of their differences from other swallows and the wide geographical separation of these two martins suggest that they are relict populations of a group of species that diverged from the main swallow lineage early in its evolutionary history . Like other early hirundine lineages , these martins nest in self @-@ excavated burrows , rather than adopted nest holes or mud nests . Their physical characteristics and breeding behaviour suggest that they may be the most primitive of the swallows .

The genus name *Pseudochelidon* (Hartlaub , 1861) comes from the Ancient Greek language prefix ????? / pseudo , meaning " false " , and ?????? / chelidôn , meaning " swallow " . The

species name reflects the superficial similarity to the rollers of the genus *Eurystomus* .

The African and Asian *Pseudochelidon* species differ markedly in the size of their bills and eyes , suggesting that they have different feeding ecologies , with the white @-@ eyed river martin probably able to take much larger prey . The African species has a softer , fleshier , and much less prominent gape (fleshy interior of the bill) than its Thai relative . The bill of the white @-@ eyed river martin also averages 22 @. @ 5 % wider than that of the African river martin . Following a suggestion by the Thai bird 's discoverer , Kitti Thonglongya , Richard Brooke proposed in 1972 that the white @-@ eyed river martin was sufficiently different from the African species to be placed in a separate genus *Eurochelidon* , leaving the African martin in a monotypic genus . This treatment was contested by other authorities , and most authors retain the two species in *Pseudochelidon* , BirdLife International being a notable exception .

= = Description = =

The adult African river martin is a large swallow , 14 cm (5 @. @ 5 in) long . It is mainly black , with a silky blue @-@ green gloss to the head , becoming distinctly green on the back and wing coverts . The underparts , other than the brownish under @-@ wings , are purple @-@ black , and the flight feathers are black . The black square tail is 4 @. @ 8 cm (1 @. @ 9 in) long , and the soft feather shafts project beyond the barbed section . This feature is most pronounced in the two central feathers , which in the related white @-@ eyed river martin are greatly elongated . The African river martin has brown legs with a 1 @. @ 5 cm (0 @. @ 59 in) long tarsus , red eyes , pink eye @-@ rings , and a broad orange @-@ red bill . The wing length averages 14 cm (5 @. @ 5 in) .

The sexes are similar in appearance . There are many bird species in which there is sexual dichromatism which is not apparent to the human eye , but spectroscopic analysis of this martin 's head feathers suggests that the colour differences between the sexes are small even to the birds ' perception . Juveniles are duller and have sooty brown heads . The moult to adult plumage takes place in the wintering areas and is largely complete by October .

The African river martin has a strong , fast flight interspersed with glides . It is a vocal species with a variety of sounds . It has a jingling song given in the aerial breeding display , and a number of contact calls , kee @-@ r @-@ r , chee @-@ chee and similar short , unmusical sounds . Flocks call together , cheer @-@ cheer @-@ cheer , as they take to the air , and this martin is very vocal during migration , giving harsh gull @-@ like calls .

= = Distribution and habitat = =

The African river martin breeds along the Congo River and its tributary , the Ubangi in the Democratic Republic of the Congo (DRC) , an area estimated at 47 @, @ 000 km² (18 @, @ 150 mi²) . This part of Africa is poorly known , and this martin may also breed on other tributaries , such as the Kasai , or on other suitable rivers . It also breeds in southern Gabon and the Republic of the Congo . The DRC breeding population is migratory , wintering in coastal savanna in Gabon , but it is not known if the birds nesting at the coast are a separate population , or if the migrants are breeding again in the wintering area . Westwards migration from the DRC is from June to early September , with birds arriving at the coast from mid @-@ August to mid @-@ September . Return migration is mainly from December to March . Three or four birds were seen passing through the southern Central African Republic in 1994 .

This martin 's breeding requirement is forested rivers with islands that have sandy banks for nest burrows , and its habitat in the DRC is tropical forest with over 200 cm (78 @. @ 5 in) of rain a year . This area is a patchwork of dry , seasonally flooded and permanently wet woodland , and seasonally flooded savanna , all of which are subject to inundation by the Congo River and its tributaries . The swamp forests contain trees such as *Symphonia globulifera* , raffia palms and *Mitragyna* species , and the riverbanks are often lined with arrowroot . This specialised habitat is shared with two other restricted @-@ range birds , the Congo sunbird and the Congo martin . The main coastal breeding area in Gabon , around Gamba , has a similar mosaic of habitats , with

mangroves , swamp forests , wet evergreen woodlands and seasonally wet savanna . There are also two large lagoons , and drier areas of grassland and forest . All the breeding areas form part of a belt of forest that stretches from southern Cameroon through Gabon to the northern parts of the Republic of Congo , and extends through most of the DRC up to its eastern mountains . Outside of the breeding season , this martin roosts in reed @-@ beds or riverine vegetation .

= = Behaviour = =

The African river martin has flight displays in which pairs or small groups chase each other while making jingling calls . It also displays on the ground , with the wings drooped and slightly open , and the head raised but held horizontally ; the function of these terrestrial displays is uncertain . This species nests in colonies in sandbanks along forested rivers from December to April when the river is low . The colonies , sometimes shared with rosy bee @-@ eaters in Gabon , may contain up to 800 birds , each pair excavating a 1 ? 2 m (39 ? 79 in) long tunnel in the sandbar . Two to four unspotted white eggs are laid onto a few twigs and leaves in the pocket at the end of the tunnel . The eggs measure 21 @.@ 9 mm ? 26 @.@ 0 mm × 16 @.@ 4 mm ? 18 @.@ 2 mm (0 @.@ 86 in ? 1 @.@ 02 in × 0 @.@ 65 in ? 0 @.@ 72 in) . The incubation and fledging times are unknown , although it is believed that both parents care for the nestlings .

In the breeding areas , this martin rarely uses perches other than the ground , and once it has landed , it may walk around or cleanse itself with the sand . It feeds in flocks often far from the colony . Wintering birds use elevated perches much more readily , landing on treetops , wires and roofs , and feed in flight over rivers and forests , often far from water . The flocks feed on insects including flies , small beetles and bugs , but mainly on winged ants . Wintering birds dig tunnels in the sand in which to roost overnight .

= = Status = =

The total population size of the African river martin is unknown . In the late 1980s , it appeared to be common , if local , and large numbers were seen on migration in Gabon . However , it is particularly poorly studied in the Democratic Republic of the Congo (DRC) , and it is not known if there is any relationship between the birds breeding in the DRC and those breeding in coastal areas of Gabon and Congo . Several hundred birds were seen at Conkouati @-@ Douli National Park in Congo in 1996 and a flock of 15 @,@ 000 birds was seen in Gabon in 1997 . Investigations in Gabon in September 2003 extended the known range of this martin . More than 300 birds were found with hundreds of rosy bee @-@ eaters in the Omboué area and the newly established Iguéla National Park , and a mixed flock with rosy bee @-@ eaters at Loango National Park in Gabon was estimated at 100 @,@ 000 birds in total . In January 2010 , 250 martins were seen at a new location in Bakoumba , and single birds were observed in hirundine flocks near Moanda , at Mounana , and at Lekoni . Despite sightings of large flocks and a population which may exceed 100 @,@ 000 , the species is classed by the IUCN as Data Deficient due to the lack of detailed information on its range and numbers .

This species is protected under national laws in the DRC (Loi portant réglementation de la chasses , 1985) . and Gabon (Loi d 'orientation en matière des eaux et forêts , 1982 and Loi relative à la protection et à l 'amélioration de l 'environnement , 1993) , and by regional legislation in Nigeria , which does not have national wildlife laws . The Nigerian laws are based directly on older colonial era laws which includes a number of species , such as this martin , which are not native to the country . The African river martin is not a protected species in the Republic of Congo .

In the 1950s , this martin was caught and eaten in large quantities in the DRC by the local population , and this practice could be increasing . The African river martins and the bee @-@ eaters with which they share their colonies are dug out of the breeding burrows for food . Breeding colonies in river sandbars are liable to flooding , but thousands of birds were breeding on the grasslands east of Gamba as recently as 2005 .