

Kingfishers of Australia & New Guinea – Jewels of the Air

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The *Handbook of the Birds of the World* (volume 6) lists 92 kingfishers worldwide; birds Dr David Holland calls “Jewels of the Air”. The oldest ancestral forms of the family are generally considered to be found in the rainforests of Malesia – Indochina, Indonesia, Malaysia and New Guinea. Their nearest relatives are regarded as todies, motmots and bee-eaters, although there are a lot of questions still to be addressed. The number of species has increased as research begins to look at the number of subspecies that inhabit the islands from Indonesia through to the Pacific Ocean. For example, the Variable Dwarf Kingfisher was split into 16 species with most of them endemic to specific islands. Collared Kingfisher had about 50 subspecies spread widely through this area and was split into 6 species, with Torresian Kingfisher being the species in the Australasian region. Some, or many of these, could be seen as monotypic due to their isolation and geographic differences. The Sacred Kingfisher has only five subspecies, but they are widely separated and new species could easily come from their ranks. The IOC now recognises 114 species of kingfishers.

The smallest kingfisher is the African Dwarf, weighing between 9 and 12 grams. The largest is the female Laughing Kookaburra at 490 grams. Other giants in the family are the Blue-winged Kookaburra (Australia and New Guinea) which has females reaching 442grams, and the African Giant has males tipping the scales at 426 grams. The majority of the species weigh in the region of 30 – 100 grams.

The ten species of the spectacular Paradise Kingfishers all occur in this region and all have long central tail streamers in the adults. As most of these are very sedentary there is a marked differentiation of isolated species, especially those on islands, as we shall soon see.

HOOK-BILLED KINGFISHER *Melidora macrorrhina*

Found throughout New Guinea, except for the mountainous spines. Lives in lowland primary and secondary forest, scrub and partially cleared areas. Regarded as monotypic, but shows similarities with at least three other species. Often observed with mud on its bill, suggesting it may dig in the mud for prey. Mainly nocturnal or crepuscular but forages actively in daytime when feeding chicks. Digs nest in active termite mounds. Sedentary – a banded bird was recaptured 5.5 years later at the same site. Three subspecies recognised.

COMMON PARADISE KINGFISHER *Tanysiptera galatea*

Found almost all round the coast of Papua New Guinea, with the exception of the eastern bird’s head area. Absent from the central mountainous spine. Also on many of the islands west of Papua New Guinea. There are 15 subspecies. Many of these are island endemics and could be split into separate species.

Forages on the ground in the wet season, digging up earthworms. During the rest of the year feeds by sitting in dark forest understorey and swooping on prey. Sedentary, scarcely moving more than 100 metres.

KOFIAU PARADISE KINGFISHER *Tanysiptera ellioti*

Formerly conspecific with Common, but morphological differences combined with geographical isolation on Kofiau Island in the West Papuan Islands support treatment as a separate species. The head and upperparts of both male and female are dark blue and the rump, tail and underparts are white. The central tail feathers are long and tapering.

BIAK PARADISE KINGFISHER *Tanysiptera riedelii*

Formerly conspecific with Common, but morphological differences combined with geographical isolation on Biak Island and nearby support treatment as a separate species. Has a bright blue head and nape, more white in tail and a stouter bill. Also called Riedel's Racquet-tail.

NUMFOR PARADISE KINGFISHER *Tanysiptera carolinae*

Formerly conspecific with Common, but morphological differences combined with geographical isolation on Numfor Island in Geelvink Bay in northwest New Guinea support treatment as a separate species. Both sexes have purple-blue upperparts and underparts, except for white lower back, rump, tail and vent. Found in lowland forest, open woodlands, farmland and beach vegetation. Reported to nest in termitaria. The call is reported to be similar to the Common Cuckoo. Also called Cobalt Paradise Kingfisher.

LITTLE PARADISE KINGFISHER *Tanysiptera hydrocharis*

Also known as Aru Paradise Kingfisher. Another bird formerly considered conspecific with the Common, but it probably became differentiated on the Aru Islands. It then invaded the Trans-Fly region of the southern coast of New Guinea where it is now sympatric with the Common, but doesn't hybridise with it. It is a much darker blue and also has blue on the belly. The tail has white margins. Regarded as sedentary in spite of its earlier movement.

BUFF-BREASTED PARADISE KINGFISHER *Tanysiptera sylvia*

Two subspecies. The nominate subspecies *sylvia* breeds in north-east Australia and migrates to south and north New Guinea. Nests in terrestrial termitaria, occasionally arboreal, but sometimes in a tree hollow or even in a bank, or on the ground. Lives in the mid-section or lower canopy where it tends to roost in dense foliage, silent and almost motionless. Breeding population of *salvadoriana* in New Guinea probably resident.

BLACK-CAPPED PARADISE KINGFISHER *Tanysiptera nigriceps*

Formerly part of the Buff-breasted Paradise Kingfisher complex, the two subspecies in the Bismarck Archipelago are now regarded as a separate species. Very little information is available.

RED-BREASTED PARADISE KINGFISHER *Tanysiptera nympha*

Lives in two disjunct populations: one in the Vogelkop Peninsula and the other in the northeast, from the Adelbert mountains to the Huon Peninsula. Found in lowland forest and ravines in forested hills, mainly below 500 metres but occasionally up to 1500 metres;

also riverine and mangrove forests. Not threatened but restricted habitat and clearance could change that.

BROWN-HEADED PARADISE KINGFISHER *Tanysiptera danae*

Forms a super family with Red-breasted. Found only on the tail of New Guinea. Little is known of its breeding habits, but it calls intensively from May to October. Situated mainly in dense primary forests and most common between 500 – 1000 metres. Regularly found in Varirata National Park. Nothing known of its population or possible threats to its continuing existence.

SHOVEL-BILLED KOOKABURRA *Clytoceyx rex*

Related to the other kookaburras and possibly the Hook-billed Kingfisher. One of its other names is Shovel-billed Kingfisher. It is a large bird with the females weighing up to 325 grams. Has a relatively short, but massively heavy bill. Located mainly along the spine of New Guinea, but only reaches the coast in a few areas. Found predominantly on hills and lower mountains in wet forest up to 2,400 metres. Widely distributed but apparently uncommon. When feeding digs up an area of 20 x 30 cm and 8 cm deep by thrusting its bill into the ground at a slight angle and pushing forward. Not much known about breeding, but some evidence that it may be between October and January.

LAUGHING KOOKABURRA *Dacelo novaeguineae*

Found only in Australia even though its specific name is *novaeguineae*. We used the name *gigas* but the stranger name had the prior claim – in spite of the fact it appears to be based on a false premise. One of Australia's most loved and iconic species. Originally found only along the east coast but introduced to Tasmania and Western Australia. A sub species *minor* found in Cape York is smaller than the nominate subspecies. The largest of the kookaburras, it may be an offshoot of the Blue-winged. Also introduced to Flinders Island, Kangaroo Island and New Zealand.

BLUE-WINGED KOOKABURRA *Dacelo leachii*

Found across northern Australia from Broome to Brisbane, and rarely to Byron Bay. There are four subspecies with three occurring in Australia. The subspecies *occidentalis* occupies the Pilbara and Hamersley Ranges. The subspecies *cervina* is restricted to Melville Island. Found along the south central coast of New Guinea and the south-eastern tail. It is a large kookaburra, large-headed with a heavy bill. Call quite unlike the Laughing Kookaburra, but probably more interesting and manic, according to your individual taste. In Australia it frequents savanna woodlands, eucalypt, riverine and littoral mangroves. Avoids dense understorey. It is a southern bird in New Guinea from ground level to 600 metres. Takes a huge range of prey.

SPANGLED KOOKABURRA *Dacelo tyro*

Only slightly larger than Rufous-bellied but found in a much smaller area, from the Aru Islands and on the southern belly of New Guinea. Has a call similar to the Blue-winged and has been reported calling in unison with that species. Found in well wooded dry savanna, swamp margins, melaleuca savanna but also in dense monsoon and riverine forest. Nests in arboreal termitaria with some reports of tree hollow usage. Mainly eat beetles, insects

including ants and flying ants. Limited range could be a problem in the future. Two subspecies with the nominate race *tyro* restricted to the Aru Islands.

RUFOUS-BELLIED KOOKABURRA *Dacelo gaudichaud*

Has been called the Giant Rufous-bellied Kookaburra but it is in fact the smallest, only just, of the kookaburras. Absent only along the spine of New Guinea, generally lives in monsoon and riverine forests below 500 metres, occasionally up to 1,500 metres. Requires arboreal termitaria for breeding. Takes a large range of prey, including crabs. Often mobbed by other birds so it probably robs nests. Sometimes digs for prey. The male defends territory vigorously, especially against conspecifics. Has a clutch size of two eggs and both parents feed the young.

BLUE-BLACK KINGFISHER *Todiramphus nigrocyaneus*

A stunning blue, black and white kingfisher found in three subspecies that are so different it has been suggested that they could easily be seen as distinct species. However where they overlap they produce intermediates indicating that they are probably conspecific. The nominate race *nigrocyaneus* has easily separated males and females; *quadricolor* has a chestnut belly and *stictolaemus* is entirely blue-black with black mottling on a white throat. Their ecology and vocalisations are very similar, another indication they are conspecific. Found from the Vogelkop east along both the north and south coasts, reaching the tail (North) and halfway down the tail (South). Habitat – lowland to hill forests along streams, swamps and ponds up to 600 metres. Little is known about their feeding habits and only very little about their breeding.

FOREST KINGFISHER *Todiramphus macleayii*

Smallish kingfisher with blue and white plumage and a distinctive white loreal spot. Found mainly at the east end of New Guinea but also the south-west islands. In Australia found in the top end and Cape York to New South Wales in the east. Live in forests bordering swamps, monsoon forest, wet melaleuca forests, mangroves and open eucalypt forests. They eat a wide range of prey sally-pouncing. Take prey from vegetation and foliage by sally strikes, i.e. taking prey from the air. Some variation in breeding periods, but generally from August to February. Double breed in many places but single broods in the Northern Territory.

TORRESIAN KINGFISHER *Todiramphus sordidus*

A medium sized with a variable plumage pattern. Formerly conspecific with Collared Kingfisher *Halcyon chloris*. There are three Australian subspecies. *sordidus* is an unfortunate name for an attractive bird, *pilbara* occurs in that region, and *colcloughi* occurs from Townsville south to NE NSW. A tree kingfisher that hunts over low-tide mud and puddles rather than deep diving. Used to be called the Mangrove Kingfisher in Australia, but this was changed because there is already a bird by that name in East Africa.

BEACH KINGFISHER *Todiramphus saurophaga*

Large kingfisher with three subspecies; showing differences in plumage and other markings. Found in New Guinea coasts and many of the islands adjacent. Habitat is on beaches with driftwood and a few perches, rocky shores, coral cliffs and pools, headlands

and mangrove swamps. Feed on crabs, fish and their larvae, lizards. Some movement from offshore islands to northern New Guinea.

SACRED KINGFISHER *Todiramphus sanctus*

Probably the best known Australian kingfisher apart from the Laughing Kookaburra. Widespread from New Zealand, islands of Indonesia and Western Samoa. The Australian bird is the nominate race *sanctus*. The northern birds are sedentary. The southern birds migrate north, although a few remain behind, especially on the coast. They migrate to New Guinea and Indonesia, moving west to Sumatra, north to Borneo and east to the Solomon Islands, leaving nocturnally from Australia on a broad front. There is evidence they return to the same breeding and non-breeding sites. Feed on a wide variety of invertebrates, centipedes, crustaceans, fish, lizards, frogs, small birds and mice. Have a good success rate when breeding. In some places 77 to 85% hatching – with fledging success 68%.

RED-BACKED KINGFISHER *Todiramphus pyrrhopygius*

Smallish kingfisher endemic to Australia with a distinctive streaked crown. The rufous lower back and rump can be invisible if the bird is sitting quietly. Only largely arid region kingfisher in Australia. Not common near coast, absent in the south-east, Tasmania, coastal Victoria and Cape York. Found throughout the drier regions, semi-arid woodlands, mulga and Mallee regions, spinifex and almost treeless country, often far from water. Some found the whole year in the north, but others move south in summer to breed before returning north. In many areas movements are nomadic, probably related to erratic rainfall patterns.

YELLOW-BILLED KINGFISHER *Syma torotoro*

Small, brightly coloured, can be difficult to see as it sits among coloured foliage in lowland rainforest. Forms a superspecies with the Mountain Kingfisher in New Guinea, with which it may hybridise where their territories overlap. In Australia it is only found from the tip of Cape York to Iron Range. There are four subspecies recognised – *torotoro* and *meeki* in the lowlands of New Guinea, *flavirostris* on Cape York and *ochracea* in the D'Entrecasteaux Archipelago. Found in mature and secondary rainforest, mangroves, and teak and rubber plantations. Can be seen along roads and often perch about 6 metres from the ground. Lays eggs November – January in Australia; August – March in New Guinea. Both sexes excavate in active arboreal termitaria.

MOUNTAIN KINGFISHER *Syma megarhyncha*

Similar size and call to Yellow-billed, perhaps marginally larger and has a larger black spot in front of eye. Dark in culmen. Lives in primary and secondary forest mainly between 1200 – 2200 metres, occasionally as low as 750 metres. Feeds on insects, larvae and small lizards. Perches for long periods in middle and upper canopy before diving for prey on foliage or on the ground. Probably sedentary, but little known species which requires more research.

COMMON KINGFISHER *Alcedo atthis*

Probably the most widespread of all kingfishers, being found in much of Europe, Russia, China, India, south-east Asia and the islands north of Australia. Seven subspecies recognised. In much of its range the only small blue kingfisher. Utilises still or gently

flowing water with plentiful small fish and with reeds, rushes or shrubs on the banks to act as perches. Nest sites can up to 250 metres from foraging spots. Obviously because of the differences in their environments there are extremes in their migrations, or in some cases the lack of them. Widely distributed and common in many areas but sensitive to river pollution and management.

PAPUAN DWARF KINGFISHER *Ceyx solitarius*

Formerly part of the Variable Dwarf Kingfisher complex. There are also species from this complex on Manus Island (*dispar*), New Ireland (*mulcatus*) and New Britain (*sacerdotis*). Little information is available about the differences in the complex. The complex represents a small bird with 16 species and a significant range of colours, although blue and rufous predominate. Distribution ranges from the Philippines and the islands south, then east through New Guinea and continuing east through the chain of islands there. Habitat is as usual primary and secondary rainforest etc., often in thick vegetation along creeks, although not dependent on water. Occupy areas from coast to 1300 metres. Preys on insects, tadpoles, frogs and spiders. Nests in earth or streamside banks.

AZURE KINGFISHER *Ceyx azureus*

Six subspecies currently recognised (there were two others that have been subsumed into others), three of them in Australia. The nominate race *azureus* is found in south-east Australia from Cooktown to Victoria. *ruficollaris* occurs across northern Australia to the Lesser Sundas. *diemenensis* is restricted to Tasmania. It can easily be overlooked when it sits still in spite of its colouring, but it is a joy to behold when it darts across water to vanish in the vegetation. Mainly sedentary but juveniles disperse varying distances and some adults wander widely when not breeding. Widely dispersed and in no danger.

LITTLE KINGFISHER *Ceyx pusillus*

The smallest kingfisher found in Australia, and one of the smallest in the world. Along with the Azure, they are Australia's only representatives of the *Ceyx* kingfishers – specialists at exclusively deep diving into water for their prey. Another feature is only having three toes. Australia has three of the recognised nine subspecies. Shy and wary birds often only seen as they dart away into the gloom of mangroves or rainforest. From its perch it dives to take small fish, crustaceans and water beetles. Ranges from locally common to uncommon.

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