

Australasia--Alcedinidae: split *Syma ochracea* (Ochre-bellied Kingfisher) from *S. torotoro* (Yellow-billed Kingfisher)

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AusRAG committee input from Dick Schodde, Guy Dutton, Anna Kearns, Leo Joseph, and Andrew Black

The paper below proposes to split of *Syma ochracea* (Ochre-bellied Kingfisher) from *Syma torotoro* (Yellow-billed Kingfisher):

Berryman, A.J. (2025) Species limits in *Syma* kingfishers using plumage, morphometric and bioacoustic analyses. *Zootaxa*, 5604 (2), 156–166.

<https://www.mapress.com/zt/article/view/zootaxa.5604.2.5>

Current AviList taxonomy is here:

| | |
|-------------------------------------|--------------------------|
| <i>Syma</i> | |
| <i>Syma megarhyncha</i> | Mountain Kingfisher |
| <i>Syma megarhyncha sellamontis</i> | |
| <i>Syma megarhyncha megarhyncha</i> | |
| <i>Syma torotoro</i> | Yellow-billed Kingfisher |
| <i>Syma torotoro torotoro</i> | |
| <i>Syma torotoro ochracea</i> | |
| <i>Syma torotoro flavirostris</i> | |

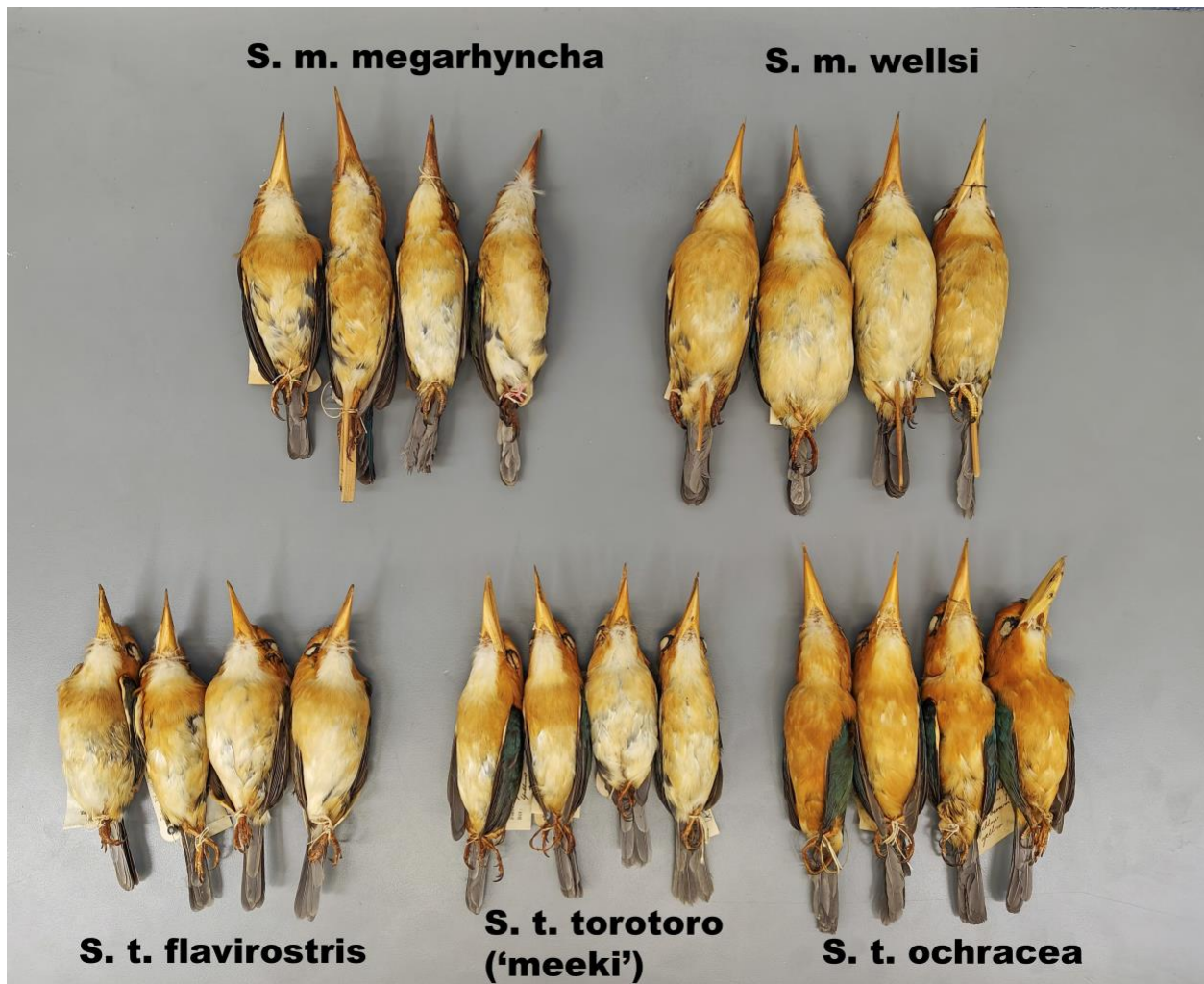
(1) Proposal Background:

The kingfisher genus *Syma* contains at present only two species, both endemic to the New Guinea region and Australia: *S. torotoro* of the tropical lowlands and foothill forests, and *S. megarhyncha* of the montane forests. On mainland New Guinea where they occur together, these two species are so similar in appearance and voice as to be difficult to separate in the field. *S. torotoro* has three subspecies: the nominate on mainland New Guinea, *flavirostris* in Australia (like the nominate but paler and showing a black mark on the culmen), and the more distinctive *ochracea* of the D'Entrecasteaux Islands immediately to the east of New Guinea.

(*S. megarhyncha* has two minor subspecies.) Recent fieldwork in the D'Entrecasteaux Is. and molecular genetic studies in the lab have revealed *ochracea* to be so different from either *totororo* or *megarhyncha* as to be eligible for species rank. The results of Berryman 2025 (morphology, vocalizations) and Link et al. (2020) are summarized below.

(2) Morphological evidence:

S. t. ochracea is larger than *S. t. totororo*, approaching *S. megarhyncha* in size. Its underparts are a more saturated ochre colour than either *totororo* or *megarhyncha*, so as to be more different from the other two than they are from each other.



Berryman 2025, Fig. 2. “Comparisons of ventral surface of *Syma totororo* and *S. megarhyncha* taxa. Note the much richer orange undersurface of *S. t. ochracea* compared to any other taxon. Specimens chosen to be representative of variation within AMNH

series. Top row: (left) *Syma megarhyncha megarhyncha* AMNH 637537, 637551 (males), AMNH 329548, 841622 (females); (right) *S. m. wellsii* AMNH 341862, 301861 (males), 301863, 302860 (females). Bottom row: (left) *S. t. flavirostris* AMNH 637514, 637510 (males), 637524, 637526 (females); (middle) *S. t. torotoro* [‘meeki’] AMNH 637480, 637482 (males), 637477, 419868 (females); (right) *S. t. ochracea* AMNH 637494, 637493 (males), 637504, 637506 (females).”

(3) Vocal evidence:

What is so striking about *ochracea* is its song, which as Berryman describes is so utterly different from congeners *totororo* and *megarhyncha* as to be unrecognizable as belong to either of those species, a fact that's especially remarkable because the songs of *totororo* and *megarhyncha* themselves are so much alike, even where their geographic ranges overlap extensively (Berryman 2025, Fig. 4).

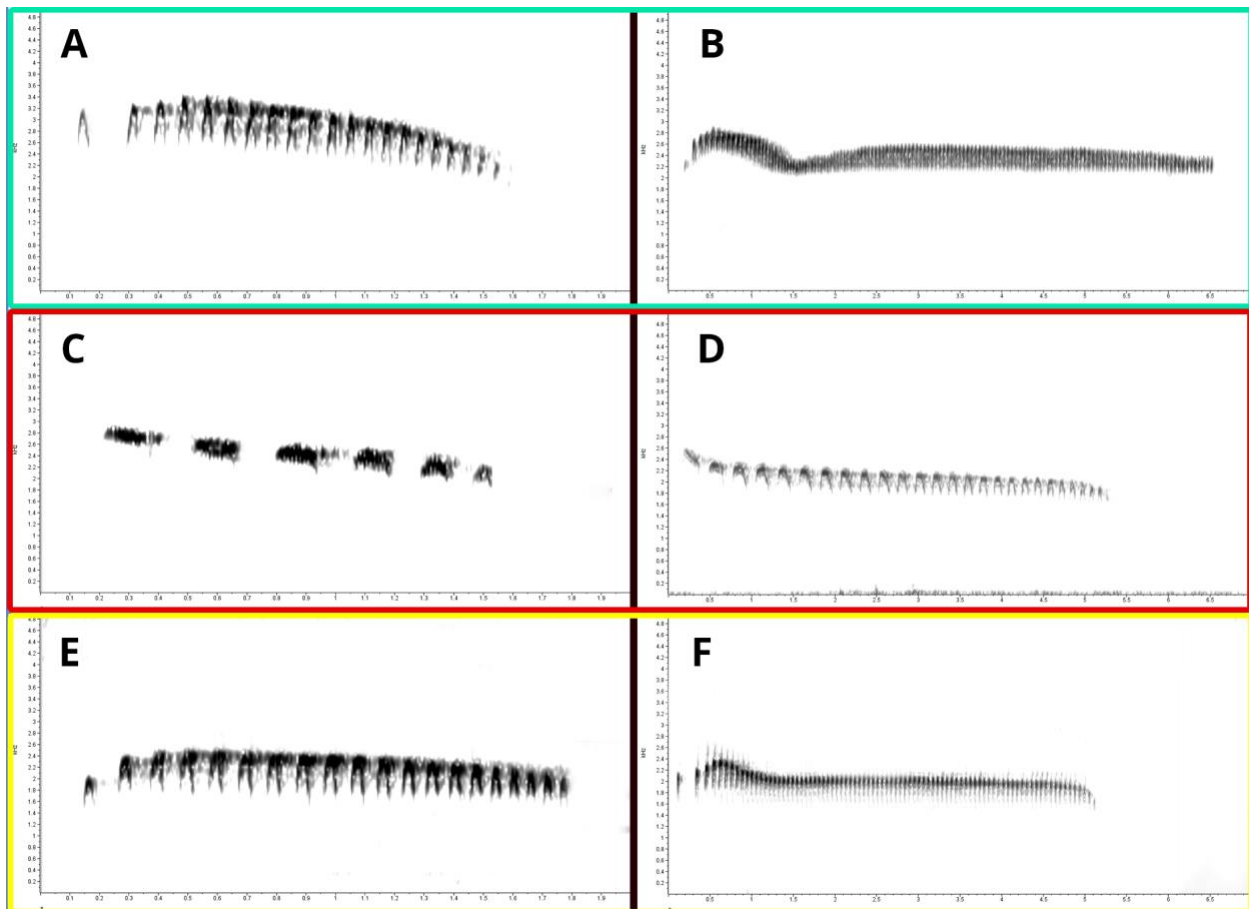


FIGURE 4. Spectrograms of short songs (left) and long songs (right) of *Syma* taxa: A–B *S. torotoro* (mainland New Guinea); C–D *S. t. ochracea*; E–F *S. megarhyncha*.

(4) Genetic evidence:

Link et al. 2020:1674 explained their limited genetic results regarding *ochracea*: “Furthermore, we note that our ND2 gene tree indicates an unexpected sister relationship between *S. megarhyncha* and the phenotypically distinctive Yellow-billed kingfisher subspecies *S. (t.) ochracea*, suggesting the latter may best be classified as a distinct biological species (Figure 1b). Though this relationship is consistent with multiple divergence histories—and reflects only the history of a single, nonrecombining locus—it presents a possible (if unparsimonious) scenario of allopatric speciation on an oceanic island followed by a subsequent reinvasion of the mainland and range.”

(5) The Australasian RAG has reviewed the proposal with a quorum of 6 members supporting it and none opposing. The only additional comment was: “It contributes to the growing awareness of the levels of endemism of Louisiade Archipelago birds.” This refers to the growing number of former subspecies from islands of Milne Bay that have recently been raised to species rank based on genetic evidence, and in some notable cases rather deep divergence. Overall, *ochracea*, an insular taxon, meets the “yardstick” requirements for species status regarding morphology, voice, and genetics when compared with its two closely related, continental congeners.

(6) Recommendations, nomenclature:

Elevate the taxon to species, *Syma ochracea*.

(7) Recommendation, common name:

Berryman proposed “Ochre-bellied Kingfisher”, an apt name.

(8) Recommendations, placement:

Because the actual phylogenetic position of *ochracea* isn’t entirely clear, we recommend placing it between *megarhyncha* and *totoro* in the AviList sequence.

Recommended AviList taxonomy is here:

| | |
|-------------------------------------|--------------------------|
| <i>Syma</i> | |
| <i>Syma megarhyncha</i> | Mountain Kingfisher |
| <i>Syma megarhyncha megarhyncha</i> | |
| <i>Syma megarhyncha sellamontis</i> | |
| <i>Syma ochracea</i> | Oche-bellied Kingfisher |
| <i>Syma torotoro</i> | Yellow-billed Kingfisher |
| <i>Syma torotoro torotoro</i> | |

| | |
|-----------------------------------|--|
| <i>Syma torotoro flavirostris</i> | |
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(9) References:

Berryman, A.J. (2025) Species limits in *Syma* kingfishers using plumage, morphometric and bioacoustic analyses. *Zootaxa*, 5604 (2), 156–166.

<https://www.mapress.com/zt/article/view/zootaxa.5604.2.5>

Linck, E., B. G. Freeman, and J. P. Dumbacher. 2020. Speciation and gene flow across an elevational gradient in New Guinea kingfishers. *Journal of Evolutionary Biology* 33:1643-1652. <https://doi.org/10.1111/jeb.13698>