AviList Australasian Regional Advisory Group

Issues of Distribution and Species-Limits Taxonomy Associated with the Black-winged Monarch *Monarcha frater* Part 1.

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AusRAG committee input from Andrew Black, Guy Dutson, Anna Kearns and Thane Pratt

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Preamble

This case concerns what has long been considered the Black-winged Monarch *Monarcha frater*.

The full case has four elements and is the subject of ***Species limits and distribution in the Black-winged Monarch Monarcha frater complex · Issue #31 · aviantaxonomy/RAG-assessments***

Presented here is Part 1 comprising the first two of those elements. The entirety of the case for all four elements has already been argued and published in:

Joseph, L., Teh, J., Sweet, P. and Gregory, P. 2023. The Black-winged Monarch *Monarcha frater*: geographic variation, taxonomy, a "new" population, and an enduring mystery in migration. *Avian Research*. 14: 100122. https://doi.org/10.1016/j.avrs.2023.100122.

The two elements concerned here are:

1. Need to add a newly described area of distribution of *M. f. frater sensu stricto* in New Guinea east of the Bird's Head Peninsula and need for concomitant removal of that same area from the range of *M. f. periophthalmicus* and *M. f. kunupi* as traditionally recognized.

2. Recommendation that *M. f. kunupi* is undiagnosable and that it be placed into synonymy of what is currently known as *M. f. periophthalmicus*.

References cited here are all in that paper except one published since then as follows:

Beehler, B.M., and Prawiradilaga, D.M. 2010. New taxa and new records of birds from the north coastal ranges of New Guinea. *Bulletin of the British Ornithologist's Club* 130(4): 277–285.

Carter, E.D. and Engilis, A., Jr. 2025. Birds collected in the North Coastal Range (Bewani and Torricelli Mountains) of New Guinea, 1972–1986 in the Bernice P. Bishop Museum, Honolulu, Hawai'i, USA. *Bishop Museum Occasional Papers* 171: 1–66.

Flannery, T.F., Koungoulos, L.G. and Eldridge, M.D.B. 2026. Towards an understanding of marsupial interchange between Australia and New Guinea. *Records of the Australian Museum* 78: 77-86.

INTRODUCTION

Figure 1 illustrates the range and subspecies-level taxonomy of the Black-winged Monarch *Monarcha frater* as it has stood in the literature for decades. The four consistently and currently recognized subspecies and their distributions as so understood (see Fig. 1 for distributions and key localities; Appendix Table S1 in Joseph et al. (2023) also includes geocoded localities) provide a framework for reading this case.

(1) *M. f. frater* Sclater, 1873. Restricted to the Bird's Head Peninsula at the western end of New Guinea (Beehler and Pratt, 2016).

(2) *M. f. periophthalmicus* Sharpe, 1882 (first named at species rank) and *M. f. kunupi* Hartert and Paludan, 1934 (first named at subspecies rank). Both were treated without reasons as subspecies of M. frater by Hartert and Paludan (1934) and Mayr (1941). These names have been assigned to populations across the rest of New Guinea east of the Bird's Head Peninsula; they have never been well differentiated from each other and so their putative ranges are similarly ill-defined (Sharpe, 1882; Hartert and Paludan, 1934; Rand and Gilliard, 1967; Beehler and Pratt, 2016; Gregory, 2017). *M. f. periophthalmicus* is generally assigned to populations from all of Papua New Guinea (PNG) and central and mid-western Indonesian West Papua. *M. f. kunupi* is usually restricted to populations from the Weyland Mountains in far western sectors of New Guinea excluding the Bird's Head Peninsula.

(3) *M. f. canescens* Salvadori, 1876 (first named at species rank). Assigned to migratory populations breeding in Australia (Schodde and Mason, 1999; Higgins et al., 2006). *M. f. canescens* was confused with and sometimes treated as conspecific with the Black-faced Monarch (*M. melanopsis*); only since the 1970s has it been consistently placed within *M. frater* (cf. Keast, 1958; Storr, 1973, 1984; Mees, 1982; Schodde and Tidemann, 1986; Schodde and Mason, 1999).

(4) The only other species-group names applied to the *M. frater* complex are *M. kurandi* Mathews, 1915 and *M. canescens claudia* Mathews, 1917. They were poorly diagnosed relative to *M. f. canescens* (see Mathews, 1915, 1917) and both have long been unremarkably regarded as synonyms of that form (LeCroy, 2008).

It is well-established that *M. f. canescens* is migratory and largely vacates its Australian range, the southern extent of which is ill-defined (see Higgins et al., 2006 and Discussion below), between approximately April and October (Draffan et al., 1983; Storr, 1984; Schodde and Mason, 1999; Higgins et al., 2006; Menkhorst et al., 2017; Joseph et al., 2019a). Remarkably, and apart from the few non-breeding birds remaining in Australia, details of the non-breeding range of *M. f. canescens* remain completely unknown (Schodde and Mason, 1999; Joseph et al., 2019a). Although the non-breeding range of *M. f. canescens* is reasonably assumed to be in New Guinea, no records of the species in New Guinea have ever been attributed to *M. f. canescens* (e.g., Rand and Gilliard, 1967; Coates, 1990; Higgins et al., 2006; Beehler and Pratt, 2016; Gregory, 2017).

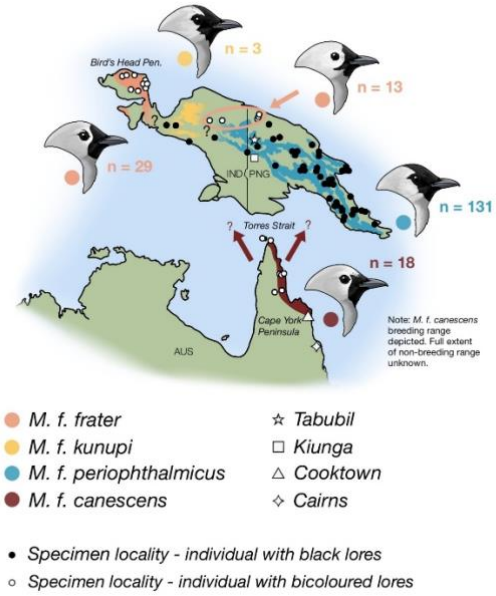

Figure 1. Map of New Guinea and northern Australia highlighting Cape York Peninsula and showing the broad distribution of the Black-winged Monarch (*Monarcha frater*; modified from Birds of the World (https://birdsoftheworld.org/bow/species/blwmon1/cur/introduction; accessed 20 October 2022) and subspecies taxonomy at commencement of the Joseph et al. (2023) study; the circled area shows the localities of specimens newly reported in that paper here and identified as *M. f. frater*. Question marks indicate presumptive but essentially unsampled parts of the range. Maroon arrows and question marks indicate possible directions of migration of *M. f. canescens* to its unknown non-breeding range. White and black dots indicate bicoloured and wholly black lores, respectively, as well as specimen localities; for full details of specimen localities and numbers see Appendix Table S1 in Joseph et al. (2023). Illustrations are based on specimens as follow: *M. f. frater:* AMNH 654264; *M. f. kunupi*: AMNH 302156; i: AMNH 420522; *M. f. canescens*: AMNH 654177. Key localities mentioned in the text are shown. AUS: Australia; IND: Indonesia; PNG: Papua New Guinea.

ELEMENT 1. That a newly described area of distribution of *M. f. frater sensu stricto* in New Guinea east of the Bird's Head Peninsula, North Coastal Range, should be added to the range of *M. f. frater* and that this should concomitantly be excluded from the range of *M. f. periophthalmicus* and *M. f. kunupi* as traditionally recognized

Resident New Guinean populations of *M. frater* comprise two main groups (Figure 2).

First are those of the nominotypical subspecies *M. f. frater* traditionally considered endemic to the Bird's Head Peninsula. In this form, facial and coronal black is restricted to the forecrown and part of the lores closest to the bill. This results in distinctive bicoloured lores – black proximally towards the bill and white distally back to the front of the eye, a trait also seen in the Black-faced Monarch *M. melanopsis*. The centre of the crown and the hind crown are grey and there is no black periophthalmic ring of feathers.

Second are the populations nominally comprising *M. f. periophthalmicus* and *M. f. kunupi* occupying the rest of the range in New Guinea east of the Bird's Head Peninsula. These populations have full

black facial masks in which the lores are all black and a conspicuous black feathered periocular ring extends distally behind the eye. These populations have a distinctive “masked appearance”.

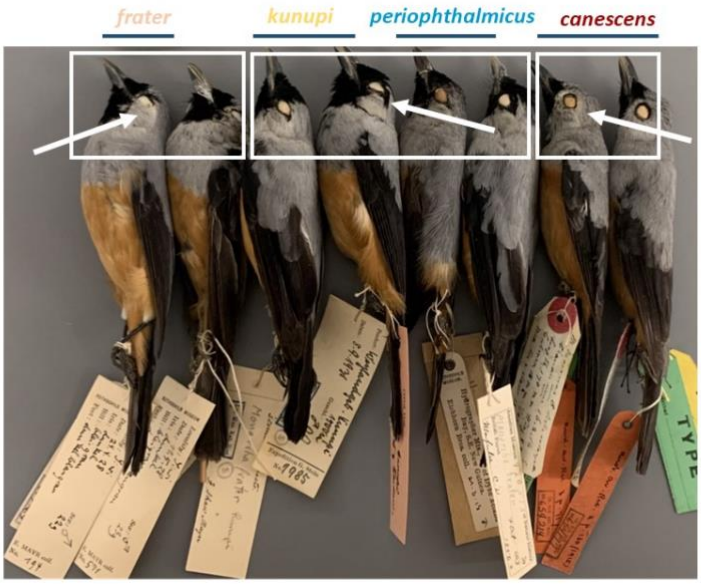

Figure 2. Lateral views of representative specimens of the four nominal taxa within *M. frater* at the commencement of the study. Arrows highlight the extent of black on frons and crown, loral colour, and post-ocular white streaks in *frater* (pronounced) and *canescens* (reduced, absent). Specimens shown and whether assigned in the text to Group 1 or 2 based on these patterns are *M. f. frater* (Group 1): AMNH 293999, AMNH 654264; *M. f. kunupi* (Group 2): AMNH 302898, AMNH 302156; *M. f. periophthalmicus* (Group 2): AMNH 654284, AMNH 420515; *M. f. canescens* (Group 1): AMNH 654214, AMNH 654177.

Data from 194 New Guinean and Australian specimens and a literature review **revealed 13 specimens of an essentially overlooked population of the *M. f. frater* phenotype** (bicoloured lores, black on the head confined to the forecrown) east of the Bird’s Head Peninsula in north-western New Guinea where this phenotype has never been recorded (Fig. 3). All are easily recognizable and distinguishable by their bicoloured lores and black limited to the frons and forecrown. They are from two widely disjunct areas within what has been presumed to be the nominal geographical range of *M. f. periophthalmicus* (e.g., Rand and Gilliard 1967; Gregory 2017). They were tentatively assigned to *M. f. periophthalmicus* by Beehler and Pratt (2016) but they are clearly not that form (Fig. 3). Nine of the specimens (BBM 109825, 109912; AMNH 829531–7) are from three localities in far north-western PNG (Mt Nibo and Mt Menawa in the Torricelli and Bewani Mountains, respectively; Agpo Creek ¼ 13 km E Utai). Notably, AMNH 829531-7 have all been labelled as *Monarcha f. frater* so an unknown previous worker in that unpublished format has recognized their identity with *M. f. frater*. The other four (AMNH 341159–61; YPM 75920) are from two localities in Indonesian West Papua ~500 km to the southwest (Bernhard Camp and valley of Doendre River; Fig. 3). All 13 share with *M. f. frater* its slightly more extensive black forecrown relative to the more restricted black frons of *M. f. canescens* (examples in Fig. 5). Phenotypically, Joseph *et al*. (2023) found them essentially indistinguishable from *M. f. frater* nor did they find literature reference to the specifics of the plumage of any of these specimens; this includes two admittedly preliminary reports on the avifauna of known localities such

as the Torricelli and Bewani Mountains (Diamond, 1967, 1968) or feasible localities (Diamond, 1972; Beehler et al., 2012).

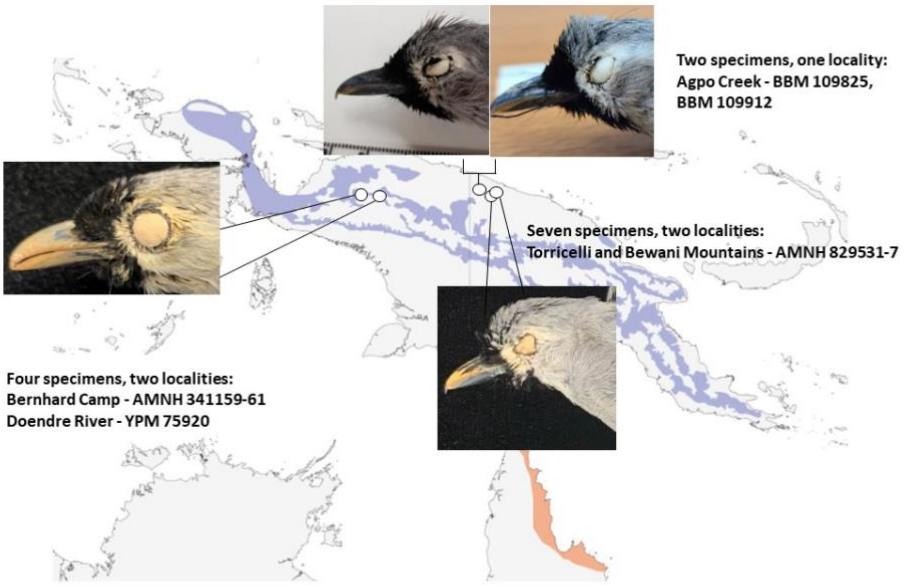

Figure 3. Locations and representative examples of the hitherto almost totally unremarked Group 1 specimens (bicoloured lores) from east of the Bird's Head Peninsula (see Beehler and Pratt, 2016). Registration numbers and the locations of the relevant collections are given: AMNH, American Museum of Natural History, New York; BBM, Bernice P. Bishop Museum, Honolulu; YPM, Yale Peabody Museum, New Haven.

Relevant Literature Since Joseph et al. (2023)

Carter and Engilis (2025) have reviewed the Bishop Museum specimens cited above and reached the same conclusion concerning the distribution of what has long been considered *M. f. frater*, i.e., that the range of *M. f. frater* includes the Agpo Creek specimens. It is worth citing their relevant text in full:

"This species was reviewed recently by Joseph *et al*. (2023) who discussed these specimens (and ones collected by Diamond from the North Coastal Range), and referred them to *frater*, of Vogelkop, instead of the geographically closer subspecies. These specimens show the characters of *frater*: the entire orbital region gray, separating the eye from the black lores. However, we consider it best, at least for the present, to treat these forms as this subspecies since the difference is not especially great. The species limits proposed by Mees (1982) are here tentatively followed, pending further investigation.

Note that a similar biogeographical pattern is found in *Peneothello cryptoleuca cryptoleuca*, which occurs disjunctly in the Arfak and Tamrau Mountains, and then again in the Foja Mountains, these localities being separated by other subspecies in the Fakfak Kumawa ranges and in the Weyland Mountains (Beehler & Prawiradilaga 2010)."

Concerning species with similar distributions, the Australasian RAG also noted that *Ptlinopus viridis* is a further bird species with a similar distribution.

Flannery *et al*. (2026) identified a hitherto unrecognized biogeographical pattern relevant to this case. They concluded from marsupial distribution patterns that in the early Pleistocene a contiguous mountain range, named by them the Northern Cordillera, extended from Bird's Head Peninsula to the Torricelli mountains. The distribution of *M. f. frater* seems also to be typical of this pattern. The lack of phenotypic differentiation between the Bird's Head and the Torricelli Mountains area seems especially consistent with this.

Recommendation for Element 1:

In light of these findings, AviList should:

(1) Extend the distribution of *M. f. frater* to include that part of northwestern New Guinea itself east of the Bird's Head Peninsula between Bernhard Camp, valley of Doendre River in Indonesian New Guinea (Papua) and the Torricelli and Bewani Mountains in far north-western Papua New Guinea, and
(2) Adjust the range of *M. f. periophthalmicus* to exclude these areas.

Five AusRAG committee members reviewed this proposal and support this recommendation.

ELEMENT 2. Recommendation that *M. f. kunupi* Hartert and Paludan, 1934 be placed into synonymy of what is currently known as *M. f. periophthalmicus* Sharpe, 1882 because it was based on a partially melanic specimen *of M. f. periophthalmicus* and is undiagnosable.

Hartert and Paludan (1934) based *M. f. kunupi* on two specimens from the Weyland (Kobowre) Mountains in western Indonesian New Guinea (Figs. 1, 2, 4 and 5). They diagnosed it relative to *M. f. frater* and *M. f. periophthalmicus*, the latter being represented by an unspecified number of specimens of *M. f. periophthalmicus* from Sattelberg in the Huon Peninsula region ~1000 km eastwards in present-day PNG; we have located eight specimens from Sattelberg (Appendix Table S1 in Joseph et al. 2023). On this scant basis, they diagnosed *M. f. kunupi* as having completely black inner secondaries not broadly lined with grey, more extensive black on the crown, darker grey on the dorsal surface and black, instead of grey, longest upper tail coverts (no measurements given). Rand and Gilliard (1967) and Beehler and Pratt (2016) essentially repeated some of these purported differences (extent of black on crown, secondaries, and on the longer upper tail coverts in *M. f. kunupi*) but indicated no specific examination of specimens. LJ examined the holotype (Figs 4, 5) and noted it as partially melanic (e.g., scattered black feathers in the grey chest). Note that melanism is a feature of *Monarcha* whereby some species have melanic forms. Further, variation in whether the inner secondaries are black or grey is not sex-related and not geographically structured although Joseph et al. (2023) could not rule out an age-related component, and thus far more likely individually based. For example, AMNH 302157 is nominally *M. f. kunupi* based on its Weyland Ranges locality but it has grey inner secondaries (Fig. 2). The ANWC series of males (n = 6) and females (n = 3), all from within the range of *M. f. periophthalmicus* in PNG, shows inner secondaries varying from grey to black in both sexes. YPM 89252 (male) and YPM 89253 (unsexed) from the Baiyer River also show the two extremes. Two series of specimens in NHMUK from PNG (n = 9) and the Utakwa River in

West Papua (n ¼ 4) closer to the nominal geographical range of *M. f. kunupi* also show the full range of variation between the two extremes. Similarly for the other three characters listed by Hartert and Paludan (1934: tone of dorsal grey; grey or black longest upper tail-coverts; extent of black on the crown), the same series of specimens as just cited shows variation in these traits to be unstructured geographically and almost certainly individually based and susceptible to loss during specimen preparation.

Joseph *et al.* (2023) find that each character on which *M. f. kunupi* was based is more likely to be individually variable across its nominal geographical range (Weyland Mountains) and that of *M. f. periophthalmicus*. Again, they could not rule out an age-related component to variation in each of these traits; Finsch and Meyer (1886) stated baldly that in younger birds, the back of the head and neck is spotted with black. Joseph *et al*. (2023) reject this based on three clearly immature birds (brownish primaries, reduced facial black): AMNH 293998, 654287, 654288.

Figure 4. Ventral view of the holotype of *M. frater kunupi*. Note the irregularly scattered black feathers of the chest typical of a partially melanic bird.

Figure 5. Dorsal view of the holotype of *M. frater kunupi*. Note the irregularly scattered black feathers of the hind-crown and nape typical of a partially melanic bird.

In sum, Joseph *et al.* (2023) found no consistent differences supporting the separation of *M. f. kunupi* from *M. f. periophthalmicus* and they recommended their synonymy under *M. f. periophthalmicus* Sharpe, 1882. Continuing to recognize the epithet *kunupi* exemplifies what Prates et al. (2022) described as deference to the opinions of previous workers about population distinctiveness based on subspecies proposed decades ago and that are difficult to falsify and discard owing to typically vague morphological definitions based, in this case at least, on a handful of specimens. That the holotype of *M. f. kunupi* was partially melanic in a genus known for melanism (Uy et al., 2019) reinforces this view.

Recommendation for Element 2:

In light of these findings, AviList should:

(1) Place *M. f. kunupi* Hartert and Paludan 1934 in the synonymy of *M. f. periophthalmicus* Sharpe, 1882

Five AusRAG committee members reviewed this proposal and support this recommendation.

Concluding Remarks

Presented above are cases for two simple changes to *Monarcha frater* agreed universally by the Australasian RAG: (1) extension of the geographical range of *M. f. frater* to include the Northern Cordillera region defined by Flannery *et al.* (2026) and placing *M. f. kunupi* Hartert and Paludan 1934 in the synonymy of *M. f. periophthalmicus* Sharpe, 1882.

Pending the acquisition of genomic data, a subsequent case will address the other two elements of https://github.com/aviantaxonomy/RAG-assessments/issues/31.