Rück's Blue-flycatcher *Cyornis ruckii*: the evidence revisited

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Summary: Photographs and measurements of all four known specimens of *Cyornis ruckii* are provided. One of the two adult males has the underparts entirely blue, the other has the lower belly and vent greyish-white; a widely available illustration shows far too much white on the underparts. Contrary to speculation, the specimens are not aberrant Pale Blue Flycatchers *C. unicolor*. Review of early texts reveals that no locality was ever given for the first two specimens and that the second two, from near Medan, Sumatra, were almost certainly taken in primary forest, not exploited forest as currently stated. Searches should target primary lowland forest in northern Sumatra.

Ringkasan: Keempat spesimen yang pernah dikoleksi dari Sikatan Aceh *Cyornis ruckii* telah difoto dan didiskusikan. Salah satu dari dua jantan dewasa memiliki bagian bawah seluruhnya berwarna biru, yang lain perut bagian bawah dan tungging putih keabu-abuan; gambar yang tersedia secara luas menunjukkan terlalu banyak warna putih pada bagian bawah. Bertentangan dengan spekulasi, spesimen tersebut bukanlah Sikatan Biru Pucat *C. unicolor* yang menyimpang. Tinjauan naskah-naskah awal menunjukkan bahwa tidak pernah diberikan keterangan mengenai lokasi untuk dua spesimen pertama dan dua spesimen berikutnya berasal dari dekat Medan, Sumatera, hampir pasti diambil dari hutan primer, bukan hutan yang sudah tereksploitasi sebagaimana yang dinyatakan saat ini. Upaya pencarian harus menargetkan hutan dataran rendah primer di Sumatera bagian utara.

Introduction

Rück's Blue-flycatcher *Cyornis ruckii* is known from just four museum specimens. The first two were sent in 1880 by a Monsieur Rück from the trading port of Malacca (now Melaka), Malaysia, to the Muséum National d'Histoire Naturelle (MNHN), Paris, France, where Oustalet (1881) determined them to be a new species and named them for the sender. No locality or date of collection came with these birds which, given their structural similarity but individual distinctiveness, were presumed to be a male and female of the same species (Plate 1a-c). The second two specimens, now in the American Museum of Natural History (AMNH), New York, USA (Plate 1d-e), were collected by Dr A. F. C. A. van Heyst in 1917 and 1918 at two localities near Medan, North Sumatra, Indonesia; these were also described as a new species, *Cyornis vanheysti*, by Robinson & Kloss (1919), who however acknowledged that they might 'possibly be referable' to Oustalet's *C. ruckii*, which they noted was 'from Kessang, Malacca'. Five years later the same authors (Robinson & Kloss 1924) published illustrations of their two specimens, again speculating that they might represent *C. ruckii* but now querying whether Kessang might be an erroneous locality. After another four years Robinson & Kinnear (1928) were finally able to compare Rück's two specimens directly with van Heyst's, concluding that the male types were 'identical' and that therefore *vanheysti* was indeed a synonym of *ruckii*. This arrangement has found widespread acceptance in world and regional avifaunal lists.

The lack of further records of *C. ruckii* has led to its being listed as threatened with extinction (fullest account in Collar *et al*. 2001). Consequently on visits to MNHN (26 April

2016) and AMNH (20 November 2013) I took the opportunity to examine, measure and photograph the specimens in question, in order to clarify the record of the species and to provide a profile that might stimulate new interest in it.

Mistakes and misrepresentations in the literature

Robinson & Kinnear (1928) were mistaken over the male types being identical. The primary diagnostic character that Oustalet (1881) noted in Rück's male was its complete blueness, with no greyish or white on the belly (Plate 1a), whereas Robinson & Kloss (1919) noted for van Heyst's adult male: 'abdomen and tail coverts whitish grey, flanks bluish grey' (Plate 1d). The discrepancy, although slight, needs explanation: possibly Rück's male is missing some abdominal feathering (there is in fact a *trace* of greyish on the disrupted feathers around the legs of the male in Plate 1a); possibly two subspecifically distinct taxa are in play (note the slightly larger bills of van Heyst's specimens in Table 1); or possibly it is just individual variation. However, the small amount of whitish-grey on the belly of van Heyst's adult male is seriously misrepresented in the illustration of the species in Clement (2006), Eaton *et al*. (2016), del Hoyo & Collar (2016) and del Hoyo (2020), where strong white is shown from mid-belly to undertail-coverts.

Table 1. Measurements (in mm) of the four specimens of *Cyornis ruckii*, taken by NJC with digital calipers, bill-tip to skull, wing curved, tail from point of insertion to tip. Tarsi of the MNHN sample are tucked into the body and are unmeasurable. Bill-tip of AMNH 450702 is missing (about 1 mm). It is a matter of some mystery how Robinson & Kloss (1919) arrived at equivalent measurements for 450702 of 22.5, 78, 18, 67 and for 450701 of 21.5, 79, 18.5, 64 (but presumably wings were measured flat). Oustalet (1881) gave equivalent figures (again somewhat divergent from those below, notably in tail) for 1880.1678 of 13 ('culmen'—presumably exposed), 83, 18, 75 and for 1880.1679 12, 80, —, 65.

	museum	catalogue	age & sex	bill	wing	tarsus	tail
C. ruckii	MNHN	1880.1678	ad. male	16.5	81.1	—	64.1
	MNHN	1880.1679	ad. female	16.3	75.4	—	57.7
C. vanheysti	AMNH	450702	ad. male	17.3	75.5	18.4	60.1
	AMNH	450701	imm. male	17.0	76.6	18.6	57.8

Robinson & Kinnear (1928) noted that Rück's two skins 'are stated to have come from Kessang on the coast of Malacca, from which locality the same dealer forwarded specimens of Pale Blue Flycatcher *Cyornis unicolor harterti*' (= *C. u. infuscata*). Chasen (1939) in turn pointed out that van Heyst had also collected *C. unicolor* when he obtained his two specimens, so he raised but, given its large bill and distinctive female, simultaneously rejected the notion that *ruckii* might be 'an aberration of *C. unicolor*'. Somewhat perplexingly, however, Gibson-Hill (1949) duly repeated Chasen's observation but without explanation reversed the latter's conclusion, deciding it was 'possible' that *ruckii* represented 'aberrant individuals of the commoner bird'. This idea was given wider currency by being mentioned (although also doubted) by van Marle & Voous (1988). Clearly Chasen and Gibson-Hill were disadvantaged by never seeing the *ruckii* material, but in my side-by-side comparisons in the museums *unicolor* has a smaller bill, a longer tail, a much paler blue male and a much drabber female, so it can be stated categorically that *ruckii* is not an aberrant of that species.

A further error deriving from these early accounts relates to the assumption that Rück's birds were collected in rather than simply shipped from 'Kessang' (now Kesang, some 25 km south-east of Melaka). Oustalet (1881) only mentioned one locality, Malacca, Rück's base, in his original description. 'Kessang' was introduced as the origin of Rück's specimens by Robinson & Kloss (1919, 1924), evidently because, as Robinson & Kinnear (1928) later explained, the two skins 'are stated to have come from Kessang on the coast of Malacca, from

which locality the same dealer forwarded specimens of *Cyornis unicolor harterti*' (= *C. u. infuscata*—see above). This clearly suggests that at an early stage Robinson & Kloss misinterpreted a shipping port as a collecting locality, an error which Wells (2007: 584) compounded by mistakenly reporting that Rück's specimens 'are *labelled* [my italic] as coming from "Kessang"'.

Likely provenance and habitat

The provenance of Rück's specimens thus remains uncertain. Robinson & Kinnear (1928) judged that the male specimen 'has the appearance of a Malacca trade skin, though the female has not'. The difference, which curatorial eyes a century ago would be better equipped to judge than at present, resides according to Chasen (1939) in the 'distinctive cylindrical appearance' of Malacca skins, but this is not obvious now. It is possible that over the past 140 years the male specimen has lost some of its early shape, but regardless of this the implication behind Robinson & Kinnear's suggestion—that the two birds came into Rück's possession by entirely different processes—now seems highly improbable. Moreover, their common level of dishevelment (Plate 1a–c) and the fact that both specimens have their tarsi tucked so firmly into the abdominal area that I considered the risk of damage too high to attempt to measure them (Table 1)—although Oustalet (1881) managed the male—is evidence of a common preparator. In any case, the perception that one was a trade skin was enough for later commentators to suggest that both were. Perhaps reinforced by the failure to find anything resembling *ruckii* in Malaysia 'though very carefully searched for' (Robinson & Kinnear 1928), Gibson-Hill (1949) speculated that the specimens were probably imported from Sumatra, a view repeated by G. E. Watson in Mayr & Cottrell (1986) and by Clement (2006), who added that they 'may have been obtained from captivity'. Certainly Sumatra has been widely assumed to be the only place where the species is likely ever to be found again (e.g. Collar *et al*. 2001).

A further important consideration is that the habitat of *Cyornis ruckii* may have been misrepresented in the literature. In speculating that the species might or indeed must have 'a restricted or peculiar habitat, such as dense mangroves', Robinson & Kinnear (1928) were overlooking the evidence of Robinson & Kloss (1919), to whom van Heyst had given brief outlines of his collecting localities. The Deli Toewa (Delitua) estate, where the immature male was secured on 4 April 1917, was described as 'on hilly country ranging up to about 200 metres', but 'most of the birds were collected in primaeval forest at the south side of the estate'. The Toentoengan (Tuntungan) estate, where the adult male was taken on 10 February 1918, was 'like Deli Toewa, ranging up to about 150 metres'. The strong inference here is that van Heyst was targeting primary lowland forest when collecting at the two sites. Nevertheless, van Marle & Voous (1988), perhaps referring to the intended status or purpose of the estates rather than the actual condition of the habitat at the time, asserted that the specimens were taken in 'exploited forests', and this was repeated by Eaton *et al*. (2016) and elaborated by Clement (2006) as 'exploited or logged' forest, which he interpreted as indicating that 'the species may be able to tolerate some habitat degradation and disturbance'.

Conclusion

This brief review is offered as a clarification of the taxonomic status, appearance, origin and habitat of Rück's Blue-flycatcher, so that field ornithologists are better aware of the features of the species and, in the event of an encounter with an unfamiliar *Cyornis*, they can more confidently evaluate the evidence. Given the single known locality in the northern part of Sumatra and the likelihood that Rück's two specimens originated on the island, it seems appropriate to regard the species, as all recent authors have done, as very probably a Sumatran

endemic. Possibly the most useful, if simultaneously most discouraging, information to emerge here is that the habitat of the species was almost certainly primary lowland forest, which is evidently now almost impossible to find in Sumatra. The extent to which northern Sumatra has been assessed for surviving tracts of such habitat, or to which such habitat has been explored for its ornithological content, is unknown. If a window of opportunity to investigate the situation remains open, it seems likely to be closing very fast.

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Plate 1. (a) Ventral, (b) dorsal and (c) lateral views of *Cyornis ruckii* (upper MNHN 1880.1679, female; lower MNHN 1880.1678, male), plus (d) ventral and (e) dorsal views of *C. vanheysti* (upper AMNH 450701, immature male; lower AMNH 450702, adult male). Photographs: N. J. Collar, courtesy Collections de Mammifères et Oiseaux du Muséum National d'Histoire Naturelle de Paris, and American Museum of Natural History.