

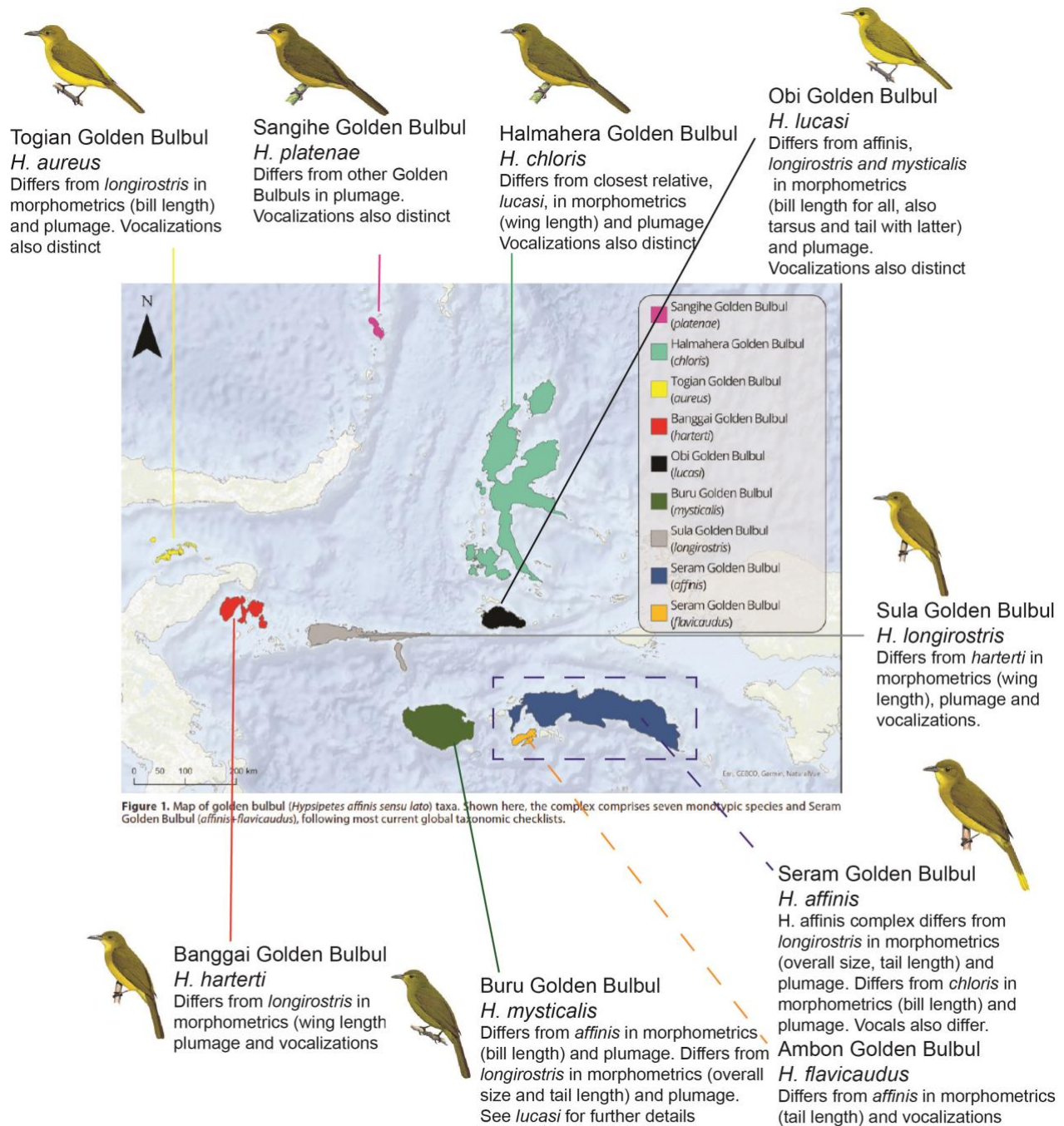
Pycnonotidae: split *Hypsipetes flavicaudus* (Ambon Golden Bulbul) from *Hypsipetes affinis* (Seram Golden Bulbul)

Taxonomic revisions on the basis of data presented in [Berryman et al. 2025](#)

This proposal seeks to elevate the current subspecies, *Hypsipetes affinis flavicaudus*, to species based on novel vocalization data presented in Berryman et al. (2025), including field playback experiments that were not previously available in earlier taxonomic assessments of this taxon.

Golden bulbul taxonomic history

The golden bulbul complex was originally considered a single species, until [Rheindt and Hutchinson \(2007\)](#) recognised it as three species based on observed differences between northern and southern taxa. However, their conclusions were drawn from limited sampling (two of three taxa), based on their field experience on Buru, Seram, and Halmahera. Following this, after field visits to the ranges of the other taxa, [Collar et al. \(2013\)](#) split the complex into seven species (this taxonomy has been followed in AviList v1). Since then, a further split occurred, which was also included in AviList v1 (Banggai Golden Bulbul *Hypsipetes harterti*) based on pronounced differences in vocalisations despite just minor morphometric differences (Eaton et al 2016). However, Collar et al. (2013) did not have any sound recordings of *flavicaudus* to include in the analysis. Now that this is available, it is clear the vocalisations are as different as between any of the other taxa, as shown in the analyses presented in Berryman et al. 2025.



AviList v2025 taxonomy:

English name	Scientific name and authority	Range
Seram Golden Bulbul	<i>Hypsipetes affinis</i>	
	<i>Hypsipetes affinis affinis</i> (Hombron & Jacquinot, 1841)	Seram (central Moluccas)
	<i>Hypsipetes affinis flavicaudus</i> (Bonaparte, 1850)	Ambon (central Moluccas)

Birds of the World, matching AviList

taxonomy: <https://birdsoftheworld.org/bow/species/golbul3/cur/introduction>

Proposed taxonomic revision for AviList v2026

English name	Scientific name and authority	Range
Seram Golden Bulbul	<i>Hypsipetes affinis</i>	
	<i>Hypsipetes affinis</i> (Hombron & Jacquinot, 1841)	Seram (central Moluccas)
Ambon Golden Bulbul	<i>Hypsipetes flavicaudus</i>	
	<i>Hypsipetes flavicaudus</i> (Bonaparte, 1850)	Ambon (central Moluccas)

Published manuscript, [Berryman et al 2025](#):

Reasons for taxonomic revision:

1. Vocalisations

Seram and Ambon Golden Bulbul vocalisations differ in three of six parameters measured (Table 1; Figure 1). Importantly, both populations are able to reciprocally discriminate sympatric and allopatric song (Table 2). Birds on Seram (*affinis*) always responded aggressively to playback of their own song (n = 12) but never did so at all to playback of Ambon (*flavicaudus*) song (n = 8). Similarly, birds on Ambon (*flavicaudus*) never responded to playback of Seram (*affinis*) song (n = 7) but usually did so when played sympatric song.

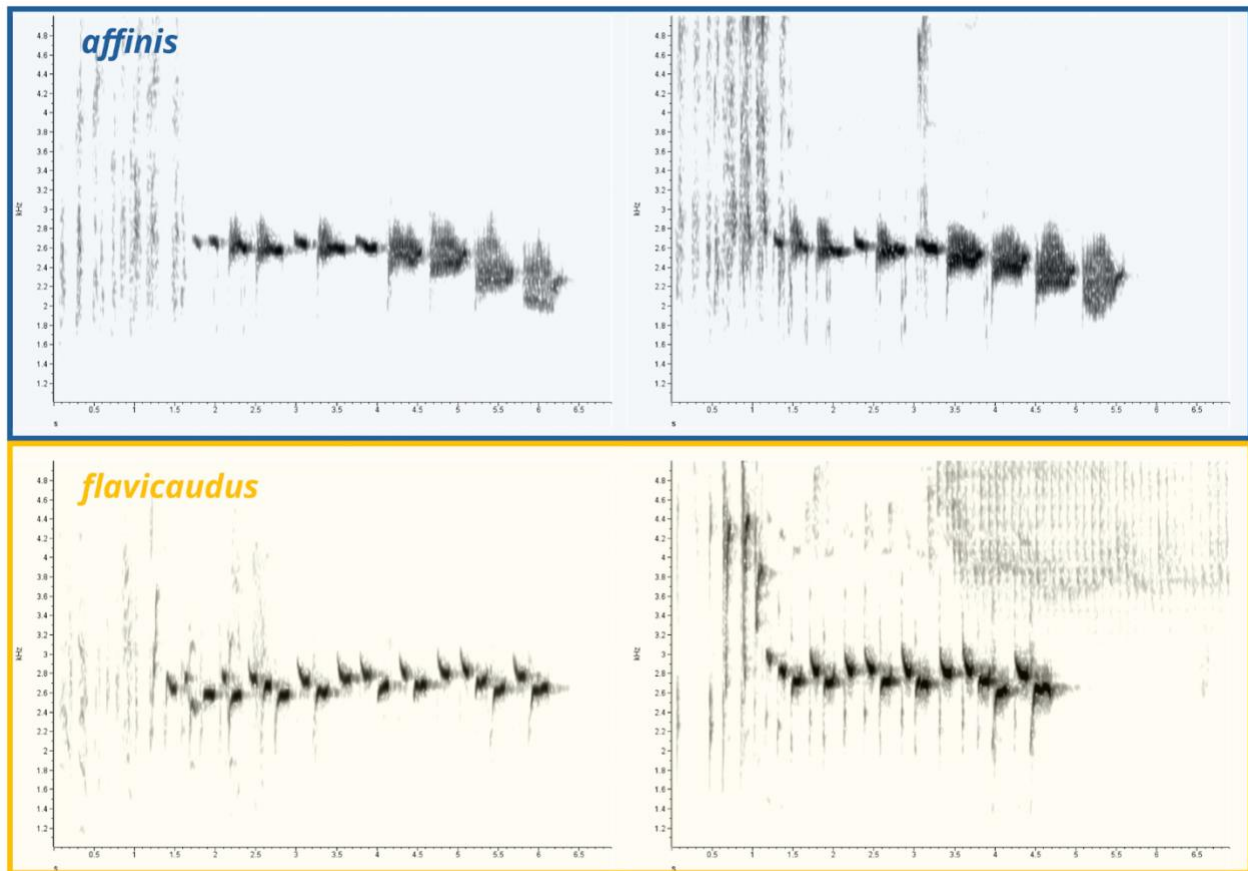


Figure 1. Example spectrograms of *Hypsipetes affinis* songs from two individuals each of *affinis* (Top, Seram; [ML613381162](#) and [ML613412386](#)) and *flavicaudus* (Bottom, Ambon; [ML613311184](#) and [ML613484616](#)).

Playback experiment methods From Berryman et al. (2025):

To test the ability of populations to discriminate sympatric from allopatric song, and thereby the likely reproductive significance of any vocal differences between populations, AJB and JAE undertook playback experiments opportunistically during recent recreational visits to Seram and Ambon (AJB: December 2024–January 2025 [n = 29, 17 sympatric, 12 allopatric]; JAE: April 2025 [n = 5; 2 sympatric, 3 allopatric]). Each experiment comprised a nearby bird being played a recording either sympatric song (a recording of a bird from the same island) or allopatric song (from another island) for up to two minutes. Responses were recorded as follows:

- ‘no response’ (bird behaved indifferently to recording)
- ‘moderate response’ (e.g. bird called back but did not approach)
- ‘strong response’ (e.g. bird approached the speaker and vocalised)

In scenarios where birds were already vocalising before the playback experiment commenced, a positive response was only noted if the bird’s behaviour obviously changed. Because golden bulbuls are frequently found in pairs, in response to playback often two birds would approach the speaker; in such instances, this was counted as only a single response.

Table 1. Mean, standard deviation and range (in parentheses) of each vocal parameter of Seram (*affinis*) and Ambon (*flavicaudus*) populations of Seram Golden Bulbul *Hypsipetes affinis*. The p-values represent the statistical probability of differences in the mean between the two populations using Welch’s unpaired t-tests.

The magnitude of differences (effect size) was measured using Cohen's *d* coefficient. The diagnosability of parameters was analysed using the Isler criterion (Isler et al. 1998), where YES = diagnosable.

Taxon	Temporal parameters				Frequency parameters			
	Length of strophe (s)	Number of notes in each strophe	Average length of first three notes (s)	Average length of last three notes (s)	Minimum frequency entire strophe (kHz)	Maximum frequency entire strophe (kHz)	Average centre frequency of first three notes (kHz)	Average centre frequency of last three notes (kHz)
<i>affinis</i> (Seram) (n = 8)	3.3 ± 0.5 (2.5–4.1)	7.7 ± 1.1 (7–10)	0.26 ± 0.05 (0.20–0.33)	0.59 ± 0.03 (0.53–0.64)	2.0 ± 0.16 (1.9–2.2)	2.8 ± 0.14 (1.9–2.2)	2.6 ± 0.05 (2.5–2.7)	2.4 ± 0.86 (2.2–2.5)
<i>flavicaudus</i> (Ambon) (n = 13)	3.5 ± 0.4 (2.9–4.3)	15.7 ± 2.2 (13–22)	0.16 ± 0.03 (0.13–0.22)	0.23 ± 0.03 (0.19–0.32)	2.5 ± 0.05 (2.4–2.6)	2.9 ± 0.06 (2.8–3.0)	2.7 ± 0.09 (2.6–2.8)	2.7 ± 0.04 (2.6–2.8)
Statistics	p = 0.165 d = -0.35 Isler: NO	p < 0.001 d = 4.27 Isler: YES	p < 0.001 d = 2.59 Isler: NO	p < 0.001 d = 12.00 Isler: YES	p < 0.001 d = 4.29 Isler: NO	p = 0.180 d = 1.05 Isler: YES	p = 0.003 d = 1.15 Isler: NO	p < 0.001 d = 5.40 Isler: NO

Table 2. Results of playback experiments (n = 34) on both taxa of *Hypsipetes affinis*. Values in bold represent scores, calculated as the proportion of birds that responded to playback of each song type. SR = strong response, MR = moderate response, NR = no response.

Population tested	Song played	
	Seram	Ambon
Seram	1.0	0.0
	12 SR n = 12	8 NR n = 8
Ambon	0.0	0.9
	7 NR n = 7	4SR, 2MR, 1NR n = 7

2. Morphometrics

There are minor morphometric differences between Ambon and Seram Golden Bulbul (including longer tail, a trait that was not previously documented in literature, but is quite noticeable in the field). Minor morphometric differences have not previously hindered the splitting of other Golden Bulbul taxa, for example the separation of Banggai and Sula Golden Bulbul (Collar et al. 2013; Figure 3; Appendix).

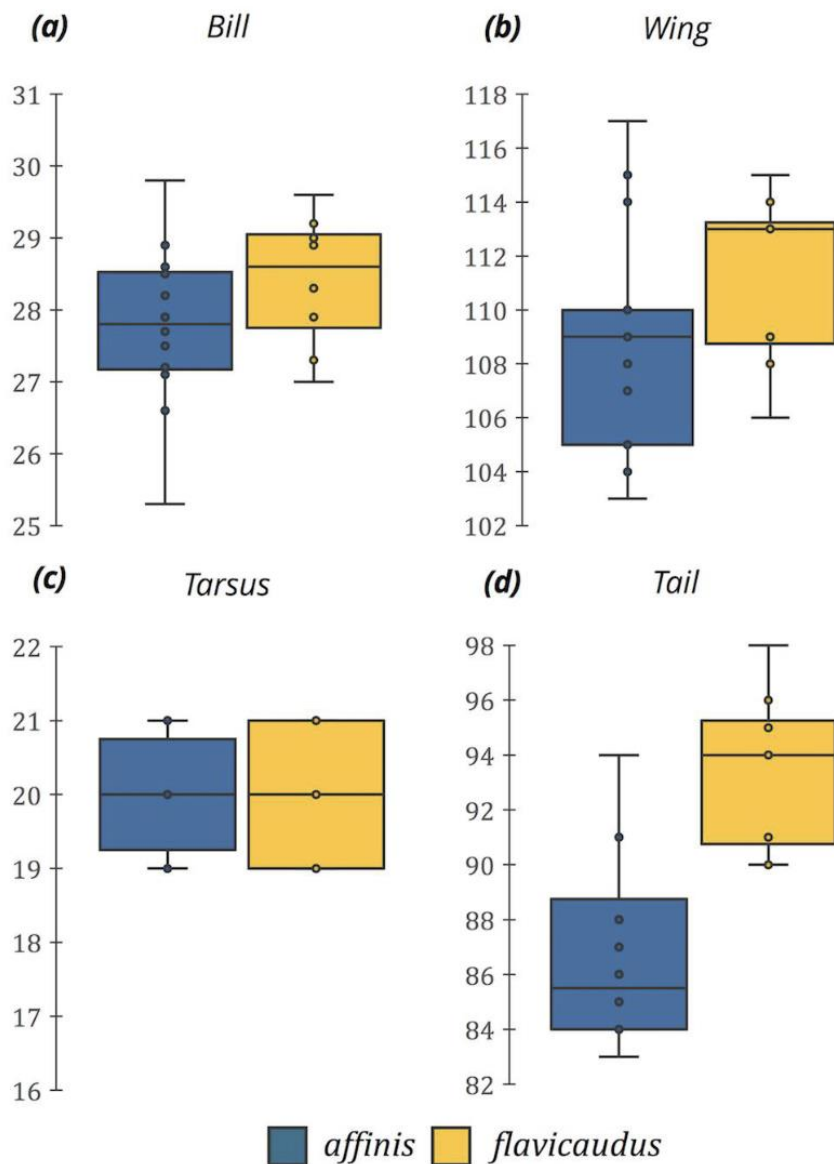


Figure 3. Comparison of four morphological traits of Seram (*affinis*; n = 12) and Ambon (*flavicaudus*; n = 8) populations of Seram Golden Bulbul *Hypsipetes affinis*; data from Collar et al. (2013). Note variation of y-axes, in mm, because of different scales of measurements.

3. Genomics

No genomic work has been done

4. Distribution

Both taxon are on separate islands of Ambon (*flavicaudus*) and Seram (*affinis*)

Yardsticks

1. Buff-vented vs Charlotte's Bulbul - split based on mtDNA and very minor vocal differences (but plumage is more-or-less identical), following [Manawatthana et al. 2017](#). This was discussed and

accepted by TaxCom, [#752](#). We would argue this split is based on mtDNA, which is a disputed method for species status, and the biacoustic evidence is not as strong as the Ambon Golden Bulbul case (along with morphometrics).

2. Cream-eyed vs Cream-vented Bulbul, visually only separating field character is song, and possibly iris colour (Shakya et al 2019), though the latter feature, the basis of the English name, is potentially disputed based on recent field observations as despite the species being recently described, there is much confusion regarding the true species boundaries and distinctiveness (Eaton et al 2024). This accepted diagnosis was also without supplementing biacoustic data.
3. The previously discussed internal taxonomy of the Golden Bulbul complex that has been followed by AviList already (Collar et al 2013, Eaton et al 2016).
4. [Collar et al \(2013\)](#) split the Golden Bulbul complex into seven species. Since then, a further split occurred, which was also included in AviList v1 (Banggai Golden Bulbul *Hypsipetes harterti*) based on pronounced differences in vocalisations despite just minor morphometric differences (Eaton et al 2016). However, an important distinction between the current taxonomy and this proposal is that Collar et al (2013) did not have any sound recordings of *flavicaudus* to include in the analysis. Now that this is available, it is clear the vocalisations are as different as between any of the other taxa, as shown in the analysis of Berryman et al 2025.

Conclusion

The results from Berryman et al. (2025), using bioacoustic and playback data clearly show the consistent and striking differences between *Hypsipetes affinis affinis* and *Hypsipetes affinis flavicaudus*, and we hereby propose the elevation of *Hypsipetes affinis flavicaudus* to species status, Ambon Golden Bulbul *Hypsipetes flavicaudus*.

References

[Berry, A & Eaton, J. E. 2025. The final piece of the golden puzzle: Seram Golden Bulbul *Hypsipetes affinis* should be considered two species. *Journal of Asian Ornithology*, 41:44–50](#)

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Appendix

Morphometric measurements of Golden Bulbul taxa reported in Collar et al. 2013

Table 1. Means and standard deviation (in brackets) of four morphometric variables in all specimens of the *Thapsinillas* complex. Notes: ^a = sample size reduced by 1; ^b = sample size reduced by 2; ^c = sample size reduced by 6. These reductions were caused by damage to the parts being measured or (in the case of tarsi) their inaccessibility (being tucked tightly against the body).

Taxon	n	Bill	Wing	Tarsus	Tail
<i>chloris</i>	39	22.3 (1.06) ^a	98 (3.44) ^a	18.6 (0.6)	82.9 (2.36) ^a
<i>lucasi</i>	13	23.4 (0.53) ^a	104.8 (3.11)	18.6 (0.69) ^b	86.3 (2.06)
<i>affinis</i>	12	27.8 (1.17)	109.2 (4.35)	20 (0.78) ^a	86.8 (3.49)
<i>flavicaudus</i>	8	28.4 (0.94)	111.4 (3.25)	20 (0.95)	93.5 (2.93)
<i>mysticalis</i>	21	25.7 (0.88)	104.4 (4.48)	19.6 (0.82) ^a	92.4 (3.37)
<i>longirostris</i>	23	29.8 (1.31) ^a	115.6 (4.62)	21.2 (0.56) ^c	106.9 (4.56)
<i>harterti</i>	13	28.9 (1.24) ^a	120.7 (5.11)	21.2 (0.72) ^a	108.7 (3.61) ^b
<i>aurea</i>	2	27.1 ^a	117	20.5	108
<i>platenae</i>	3	27.7	121	20	109.3

Table 2. Means of four morphometric variables in male specimens of the *Thapsinillas* complex. Note: ^a = sample size reduced by 1.

Taxon	n	Bill	Wing	Tarsus	Tail
<i>chloris</i>	11	22.7 ^a	99.8	18.6	82.8
<i>lucasi</i>	7	23.6 ^a	106	18.7	86.3
<i>affinis</i>	4	28.4	109.5	20 ^a	87.3
<i>flavicaudus</i>	6	28.1	110.5	19.8	92.7
<i>mysticalis</i>	4	25.8	109.3	19.8	92.8
<i>longirostris</i>	2	28.7	112.5	21.5	105.5
<i>harterti</i>	1	29.5	123	22	113
<i>aurea</i>	1	27.1	124	21	111
<i>platenae</i>	3	27.7	121	20	109.3