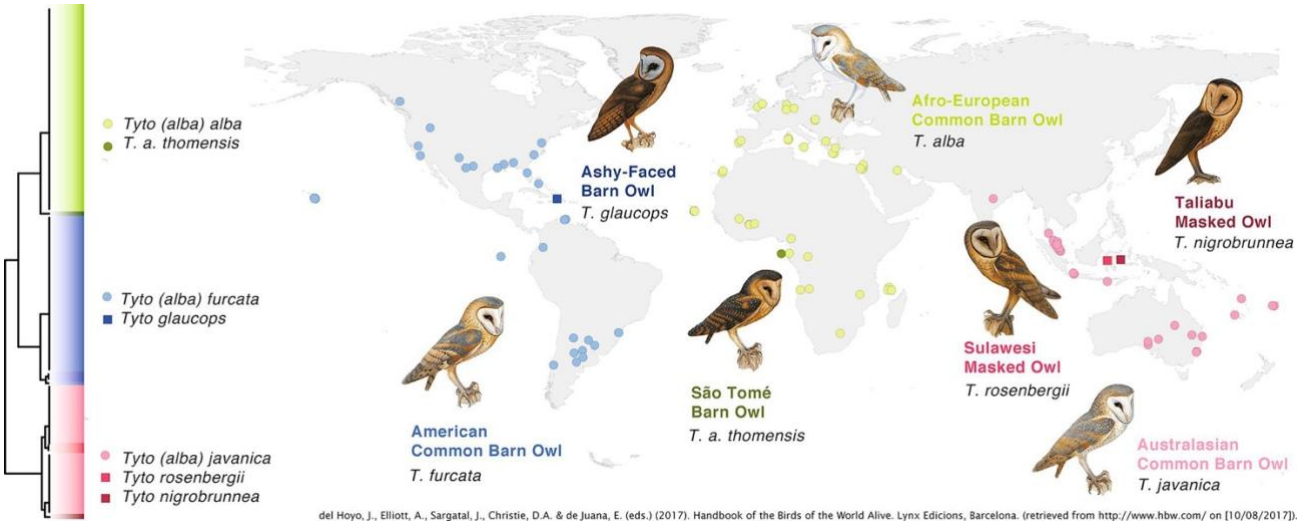
Tytonidae: lump *Tyto nigrobrunnea* (Taliabu Masked-Owl) and *Tyto rosenbergii* (Sulawesi Masked-Owl) with *Tyto javanica* (Eastern Barn Owl)

Barn Owl *Tyto alba* was long considered a cosmopolitan species, spanning much of the old and new world, comprising some 28 taxa. This remained the status quo for decades, until Rasmussen and Anderton (2012) took the first step in re-evaluating the species limits of the *alba* complex from a South Asian perspective, with the recognition of Andaman Masked-Owl (*Tyto deroepstorffi*) based on its striking plumage.

AviList v2025 continued to recognise Andaman Masked Owl [#388], and in addition split 'Barn Owl' into three species based on the genetic data presented in Uva et al. 2018: American, Western and Eastern Barn Owls (*Tyto furcata*, *T. alba* and *T. javanica* respectively) [#389].

Uva et al (2018) also made additional recommendations, which were beyond the scope of AviList v1, including to subsume *Tyto nigrobrunnea* (Taliabu Masked-Owl) and *Tyto rosenbergii* (Sulawesi Masked-Owl) with *Tyto javanica* (Eastern Barn Owl). Here, we detail these recommendations.



Birds of the World, matching AviList taxonomy:
Taliabu Masked-Owl *Tyto nigrobrunnea* - monotypic
https://birdsoftheworld.org/bow/species/talowl1/cur/introduction

Sulawesi Masked-Owl *Tyto rosenbergii* – two subspecies, *rosenbergii* and *pelegensis*
https://birdsoftheworld.org/bow/species/sulowl1/cur/introduction

Eastern Barn Owl *Tyto javanica* – seven subspecies, *javanica*, *stertens*, *sumbaensis*, *meeki*, *delicatula*, *crassirostris*, *interposita*
https://birdsoftheworld.org/bow/species/eabowl1/cur/introduction

Following Uva et al (2018).
Reasons for taxonomic revision:

1) Genetics

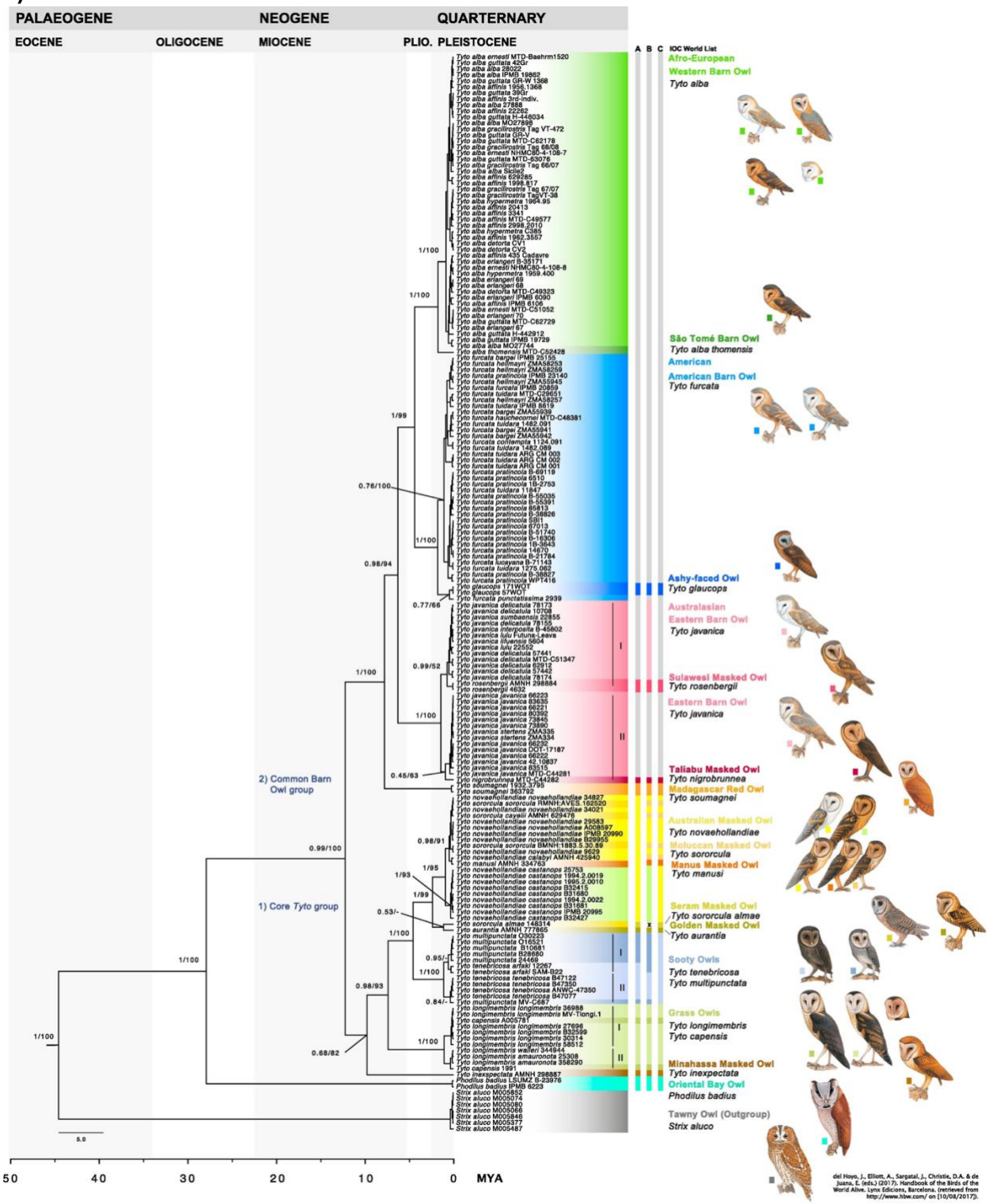


Figure 1: Bayesian Inference (BI) and Maximum Likelihood (ML) molecular phylogeny of the Tytonidae, with divergence time estimations, following the classifications found in Gill and Donsker (2018), based on the BEAST analysis of five mitochondrial and two nuclear markers. Numbers near

the nodes refer to BI posterior probabilities (PP)/ML bootstrap support values (BS). Clades not supported by the ML approach are illustrated with a dash. Figure from Uva et al. 2018.

Based on the genetic data in Figure 1, *T. javanica* is not monophyletic if *T. rosenbergi* and *T. nigrobrunnea* are recognised as species. Furthermore, the mtDNA p-distance between *T. nigrobrunnea*/*T. rosenbergi* and *T. javanica* is below 0.5%, well below the commonly applied threshold for species-level divergence (typically ~2%). This level of divergence is instead consistent with subspecific differentiation, comparable to the case of *T. manusi* being subsumed within *T. novaehollandiae*, where p-distances ranged from 0.46–0.95% (Jonsson et al., 2013) - see table below.

TABLE 2. Uncorrected pairwise distances in % in the mitochondrial cytochrome-*b* (877 base pairs) between Australasian Masked-Owls.

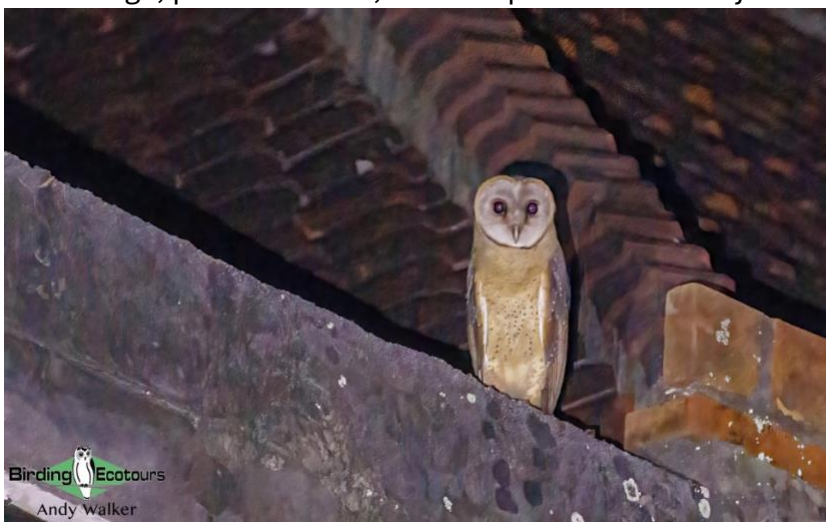
	Tyto almae **sp. nov.**	*Tyto aurantia*	*Tyto manusi*	*Tyto n. calabyi*	*Tyto n. castanops*	*Tyto n. novaehollandiae*	*Tyto s. cayelii*
Tyto aurantia	3.28						
Tyto manusi	3.08	2.82					
Tyto novaehollandiae calabyi	3.08	2.83	0.46				
Tyto novaehollandiae castanops	3.07	2.96	0.95	0.95			
Tyto n. novaehollandiae	3.07	2.66	0.47	0.47	0.95		
Tyto sororcula cayelii	3.53	2.98	0.68	0.68	1.41	0.94	
Tyto sororcula sororcula	2.85	2.69	0.23	0.23	0.71	0.24	0.68

2) Bioacoustics
Extensive playback experiments in the field showing that *nigrobrunnea* readily responds to *javanica* and *rosenbergii* (JAE pers obs), and *rosenbergii* to *javanica*.

3) Morphology
Significant variation in plumage of Sulawesi Masked-Owl, for example:

https://macaulaylibrary.org/asset/463956301

rosenbergii, pale individual, which is paler than some *javanica* Eastern Barn Owls (below).



https://macaulaylibrary.org/asset/356036751
javanica Eastern Barn Owl (Bali)

https://macaulaylibrary.org/asset/608972296
javanica Eastern Barn Owl

https://macaulaylibrary.org/asset/608972295
same *javanica* individual

https://macaulaylibrary.org/asset/639446439

Variation within *rosenbergii* pairs, showing how similar they are to *javanica*

https://macaulaylibrary.org/asset/609100480

Intermediate plumage *rosenbergii* individual

Intermediate plumage *rosenbergii* https://macaulaylibrary.org/asset/205221951

Intermediate plumage *rosenbergii* https://macaulaylibrary.org/asset/204852941
Both of which overlap with the supposedly darker *T. r. pelengensis* (from Banggai islands)

https://macaulaylibrary.org/asset/477108951

rosenbergii (above), dark individual, can appear even darker than some *T. nigrobrunnea* (below)

https://macaulaylibrary.org/asset/624677028

A light plumaged *T. nigrobrunnea*

https://macaulaylibrary.org/asset/628800511

Although *nigrobrunnea* is generally darker than the darkest *rosenbergii*, as seen here, there is a wide plumage variation across these taxa.

4) Habits and habitat

T. r. rosgenbergi, *T. r. pelengensis* and *T. nigrobrunnea* all occupy similar habitats to *T. javanica* taxa (and the greater 'barn owl' taxa), forest edge, forest clearings, plantations, countryside and even urban areas (JAE pers obs). None of these taxa occupy a different habitat and their habits are shared.

5) Yardstick

Eastern, Western and American Barn Owls were split based on Uva et al (2018). The same manuscript recommended that *T. rosenbergii* and *T. nigrobrunnea* be recognized as subspecies of *T. javanica*. See #389. Also note Per Alstrom's comment that if Barn Owl is to be split into three, then the taxa concerned here has to be subsumed under Eastern Barn Owl.

Uva et al (2018) was also the basis for subsuming both 'Lesser Masked Owl' taxa (*sororcula* and *cayelii*) and 'Seram Masked Owl' *T. almae* taxa into Australasian Masked Owl *Tyto novaehollandiae*, based on molecular data, as in issue #451 and issue #450.

Conclusion

Tropical Asian RAG agrees with the AviList v2025 decisions regarding the Australasian Masked Owl complex, and to split Barn Owls into three species. In order to be consistent with these decisions, and given that (1) *nigrobrunnea* and *rosenbergi* are nested within *T. javanica* (based on genetic data from five mitochondrial and two nuclear markers), (2) there exists extensive plumage variations across these three taxa, (3) all three taxa occupy similar habitats and (4) vocalizations across these taxa are variable, overlapping, and they respond to playback from each other (specifically *nigrobrunnea* responds to *javanica* and *rosenbergii*, and *rosenbergii* to *javanica*), we recommend lumping Taliabu Masked-Owl and Sulawesi Masked-Owl taxa with Eastern Barn Owl. Specifically, we advocate that Taliabu Masked-Owl and Sulawesi Masked-Owl taxa be recognized on a subspecies level instead, as *Tyto javanica nigrobrunnea, Tyto javanica rosenbergii* and *Tyto javanica pelengensis* respectively.

References

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