

Bird Note

Listing Australia's birds

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The most recent taxonomic list of Australian birds published in book form was 'The systematics and taxonomy of Australian birds' by Christidis and Boles (2008). It appeared during a period of rapid advances in knowledge of the inter-relationships of the world's birds, driven largely by increasingly sophisticated DNA analyses. As anticipated by the authors, further changes have continued and their taxonomy was soon superseded.

What was needed to keep Australia's taxonomy up to date? Black (2010) considered the potential role of a national taxonomic review committee. We do not have one.

Within a few years the need for a revised list was recognised both nationally within BirdLife Australia (BLA) and in this State (South Australian Museum and Department of the Environment, Water and Natural Resources). There are several authoritative international taxonomies that could provide guidance, some published as books and the majority posted on line. The latter have the potential for continuous revision by incorporating recently published evidence.

The International Ornithological Congress (IOC) World Bird List (Gill and Donsker 2013, 2016) is frequently updated and is both flexible and reliable, in making only those changes that are soundly supported by the published data. The South Australian list (Horton, Blaylock and Black

2013, currently being extensively updated) is based on the IOC taxonomy.

The choice of BLA was to align with BirdLife International (BLI), whose world-wide commitment to avian diversity and conservation had prompted development of a simplified taxonomic approach suitable for regions with limited scientific resources. Termed 'quantitative criteria for species delimitation', the method is the work of Tobias *et al.* (2010) and assigns point scores to phenotypic variables of plumage, morphometrics and voice. Any pair of birds that achieve a threshold score of seven or above will be split and accorded separate species status. BLI have begun to apply the method not just to birds of developing regions but to the world avifauna. The Tobias method does have inherent problems however, for example in not dealing adequately with hybrid zones. Thus the method has split Masked Lapwing (*Vanellus miles*) from "Black-shouldered Lapwing" (formerly Spur-winged Plover) (*V. novaehollandiae*) because of their obvious differences in plumage and morphometrics, despite their complete reproductive compatibility and extensive zone of intergradation through much of northern South Australia.

A particularly serious deficiency in the Tobias method is its deliberate exclusion of genetic data, largely because of the "patchiness of genetic data and the extent of disagreement about how they should be applied to species limits". It might here be observed that patchiness and disagreement are not unique to genetic datasets. Tobias *et al.* (2010) noted however that in future their method might be modified to incorporate genetic evidence, but only after suitable thresholds of divergence are agreed.

Taxonomy aims to place organisms in an evolutionary context, showing their inherited relationships, each with all others. It follows that the application of DNA sequencing data, by providing direct rather than inferred evidence of inheritance, has prompted most recent taxonomic revision. This is especially the case in Australia, which might suggest that the Tobias method is peculiarly unsuited to our situation.

The Working List of Australian Birds (WLAB)

WLAB is the outcome of considerable effort by a group within BLA to list all recognised Australian ultrataxa (species and subspecies), using the BLI system. It is posted on line, subject to amendment, and currently shown in its second version (<http://www.birdlife.org.au/conservation.science/taxonomy>, accessed 5 December 2016). While it incorporates taxonomic decisions based on genetic evidence for higher level classifications (genera, families and above), its adherence to the Tobias method for species and subspecies has led to a number of species delimitations that deviate from many current lists. Shown below are some species changes, accepted by IOC on the basis of recently published evidence (largely but not exclusively genetic), that are missing from WLAB V. 2.

- Australasian Swamphen, *Porphyrio melanotus* (formerly Purple Swamphen, *P. porphyrio melanotus*);
- Western Ground Parrot, *Pezoporus flaviventris* (formerly Ground Parrot, *P. wallicus flaviventris*);
- Naretha Bluebonnet, *Northiella narethae* (formerly Bluebonnet, *N. haematogaster narethae*);
- Western Quailthrush, *Cinlosoma marginatum* (formerly Chestnut-breasted Quailthrush, *C. castaneothorax marginatum*);
- Copperback Quailthrush, *Cinlosoma clarum* (formerly Chestnut/Chestnut-backed Quailthrush, *C. castanotum clarum*);
- Nullarbor Quailthrush, *Cinlosoma alisteri* (formerly Cinnamon Quailthrush, *C. cinnamomeum alisteri*);
- Western Whistler, *Pachycephala occidentalis*

(formerly Australian Golden Whistler, *P. pectoralis occidentalis*, but not recognised even as a subspecies in WLAB);

- Paperbark Flycatcher, *Myiagra nana* (formerly Restless Flycatcher, *M. inquieta nana*);
- Scarlet Robin, *Petroica boodang* (formerly *P. multicolor boodang*);
- Australian Pipit, *Anthus australis* (formerly Australasian Pipit, *A. novaeseelandiae australis*).

It should be noted that BLI's most recent checklist (2015) has applied the Tobias method only to non-passerines, the results having been published in the Illustrated Checklist of del Hoyo and Collar (2014). BLI has since done the same for passerines and will publish the results in the second volume of the Illustrated Checklist, due to be released in December 2016, with the full BLI checklist to be updated in due course. The lack of recognition of the passerine species listed above is therefore not necessarily due to the direct application by BLA of the Tobias method, but it has followed the Tobias approach by discounting genetic evidence.

The shortcomings of WLAB have become a matter of concern for many Australians who have traditionally followed the lead of BirdLife Australia in the questions of taxonomy and nomenclature. A particularly critical commentary from a Western Australian perspective was the extensively researched newsletter article of Cake (2016).

We are encouraged that WLAB has not slavishly followed the BLI checklist, for example in maintaining the two forms of Masked Lapwing as subspecies, and in recognising the Thick-billed and Western Grasswrens as separate species, which presumably will continue to be combined by BLI if the Tobias method fails to separate them because of their cryptic plumages. Nevertheless, we are concerned at the potential for the official Australian list to drift from a scientifically based progressive taxonomy until BLA accepts internationally acknowledged, peer-reviewed revision based on analyses that include genetic

data, some of it published in *Emu*, the national ornithological journal. We hope that BLA will accept genetic evidence for species as it has for higher-level taxonomy, and will continue to exert, and indeed increase, its independence from BLI's taxonomic system.

English names for all subspecies

A separate and unusual aspect of WLAB is its inclusion of English names for every recognised subspecies. Mostly this has been achieved by adding a geographic descriptor to the species' name. Thus:

- *Calamanthus pyrrhopygius parkeri* is the Mount Lofty Ranges Chestnut-rumped Heathwren;
- *Acanthorhynchus tenuirostris halmaturinus* is the South Australian Eastern Spinebill.

This can lead to misleading names such as Nullarbor Rufous Fieldwren for the subspecies that also occurs on Eyre and Yorke Peninsulas, the mid-North and lower North-East, and formerly occurred on the Adelaide Plains, its type locality; or the Murray Mallee Grey Currawong for the subspecies that also occurs in the Mount Lofty Ranges.

Even more unusual is the substitution of artificially created names for older, well established ones:

- Eastern Splendid Fairywren for Black-backed Fairywren;
- Inland Variegated Fairywren for Purple-backed Fairywren;
- South-western Yellow-throated Miner for Dusky Miner;
- Gulf St Vincent Slender-billed Thornbill for Samphire Thornbill;
- Murray Mallee Grey Currawong for Black-winged Currawong.

However BLA does explain on its website that these subspecies names are preliminary and some may need to be revised; they also encourage feedback and suggestions from the ornithological community. We note that the Cloncurry Parrot, *Barnardius*

zonarius macgillivrayi, of north-western Queensland has already been changed from Channel Country Ringneck in an earlier version of WLAB to Cloncurry Ringneck in the current version.

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