

# Feather Fascination!

with local Birdwatcher,

Jim Butler

## New Fairy-wren Species

THE Variegated Fairy-wren complex covered mainland Australia. The four subspecies in the complex had strong, geographically structured variations in plumage and their distributions were essentially disjoint. It was suspected that the four subspecies represented the early stages of speciation. This suspicion has now been realised.

The International Ornithological Union announced on 25 January 2018 that Australia has a new species of chestnut-shouldered fairy-wren: Purple-backed Fairy-wren (*Malurus assimilis*). The new species has been split from the Variegated Fairy-wren complex *Malurus lamberti* of which it previously was a subspecies *Malurus lamberti assimilis*. The split follows a 2017 report from ornithologists at two Brisbane universities. How does this naming of a new species occur? It comes down to the definition of a "species" as a population that shares a gene pool stabilised by barriers to external gene inflow. In this case the barrier is the Great Dividing Range, which has been shown to prohibit the Variegated Fairy-wrens east of the Range interbreeding with the Purple-backed (previously Variegated) Fairy-wrens west of the Range.

The Variegated Fairy-wren in Brisbane is the subspecies *lamberti*



which is found along the coast, east of the Great Dividing Range. The other relevant subspecies *assimilis* has a vast geographical range from the western foothills of the Range to the Western Australian coastline! Genetic studies of these two populations show that their geographical separation by the Great Dividing Range since they shared an ancestor approximately 148,000 years ago has led to full speciation of those west of the Range. Over that vast arid area members of the population actually or potentially interbreed and therefore all share a common gene pool, separate from the east coast birds. The chestnut-shouldered fairy-wrens west of the Great Dividing Range are now named the Purple-backed Fairy-wrens *M.assimilis*; the chestnut-shouldered fairy-wrens in Brisbane remain the Variegated Fairy-wren subspecies *M.lamberti lamberti* until further genetic studies!

~ Jim

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Digital Bird Guide: <http://www.moggillcreek.org/> by David Niland