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separation. anxiety

Untangling the pipit family tree

Pipits. The mere mention of these quintessential LBJs is enough to induce feelings of trepidation and inadequacy in all but the most competent birders. The difficulty of identifying pipits in the field has contributed to their taxonomy remaining contentious, with the number of recognised species forming the basis for long-standing and often heated debate. A prime case in point concerns the Kimberley Pipit *Anthus pseudosimilis* and the Long-tailed Pipit *A. longicaudatus*. These two species were described in the late 1990s and early 2000s but their validity has subsequently been called into question (see *African Birdlife* 2(1): 61–66).

As part of a Fitztitute-funded PhD on the Yellow-breasted Pipit *A. chloris*, Darren Pietersen recently reassessed the phylogeny of African pipits and longclaws. The analysis was based on blood samples

Long-billed Pipits in southern Africa are sufficiently distinct from those in East Africa to be considered a separate species.

from live birds, toe pads from museum specimens and GenBank sequence data. The final dataset comprised 56 currently recognised species, including 28 of the 32 species occurring in Africa. The results of this study, which involved researchers from the University of Pretoria, the National Zoological Gardens, Tshwane University of Technology and the Endangered Wildlife Trust, were recently published in the British ornithological journal *Ibis*.

The Pietersen et al. analysis differs in several respects from earlier molecular assessments of relationships among the pipits, the most important of which was published by Gary Voelker in 1999. One difference is that whereas Voelker's (1999) phylogeny was based on 45 specimens representing 31 species, the new phylogeny is based on 277 samples representing 56 species, not including the GenBank sequences. In addition to more extensive sampling, the Pietersen et al. study involved analyses of three gene

regions, one nuclear and two mitochondrial, whereas Voelker's was based on a single mitochondrial region.

The new phylogeny provides some surprises, but also confirms recent arguments about the questionable validity of the two species described from Kimberley. Specifically, the analysis of the multiple gene regions supports the view of Greg Davies, Faansie Peacock and others that Kimberley Pipits are in fact African Pipits *A. cinnamomeus* and Long-tailed Pipits are actually Buffy Pipits *A. vaalensis*.

Birders mourning the likely demise of two species on their lists may, however, take some consolation from the study's findings concerning Long-billed Pipit *A. similis*. It turns out that the geographically separated populations of this species in East and southern Africa are sufficiently distinct to warrant considering the southern African population a separate species, Nicholson's Pipit *A. nicholsoni*. In addition, the new data confirm that Wood Pipit *A. nyassae* is a distinct species and not conspecific with Long-billed, as has sometimes been argued in the past.

Another key finding of the Pietersen et al. study concerns Yellow-breasted Pipit and the taxonomically enigmatic Golden Pipit *Tmetothylacus tenellus*. Debate surrounding the affinities of the latter species goes back more than a century, with it originally being described as a longclaw, but then subsequently being transferred to *Anthus*, with Austin Roberts arguing in 1922 that the species represents a link between pipits and longclaws. The new genetic data, however, reveal that both these 'yellow pipits' are longclaws in the genus *Macronyx*.

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References

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