

Genus *Lopholaimus* Gould

Lopholaimus Gould, *Birds Austr.*, pt. 5, 1841, pl. [7] (= 5, pl. 61 of bound volume.) Type, by monotypy, *Columba antarctica* Shaw.
(New name for *Loporhynchus* Swainson 1837, not of Vieillot 1816.)

Uncertainty has persisted concerning relationships of this monotypic genus, with alliances to *Hemiphaga* and *Ducula* often proposed. Frith (1977) points out that the bowing and other displays are quite unlike those of any other pigeon for which displays have been described, and he could detect nothing in the behaviour, morphology or habits to support the suggestion that *Lopholaimus* may represent an early offshoot of the bronzewing pigeons. The displays and many distinctive morphological characters emphasise its uniqueness, and prompted Frith to conclude that it is probably an Australian endemic with no close living relatives. Goodwin (1983) notes that, despite their great differences in colour and bill shape, *Lopholaimus* and *Hemiphaga* may be more closely related to each other than either

is to *Ducula*. Both agree in having only 12 tail-feathers and the top of the cere feathered, but the peculiar double crest and brightly coloured, laterally compressed bill in *Lopholaimus* are striking characters that may have evolved in reference to formerly existing related species that became extinct before the discovery of Australia by Europeans. Molecular analyses have revealed a close relationship between *Lopholaimus* and the *Gymnophaps* mountain pigeons, and both are more distantly allied with *Hemiphaga* (Pereira *et al.* 2007).

The sole species is a large pigeon with feathered tarsi and a long, broad tail, and is readily distinguished by its peculiar backward-curving double crest. The sexes are alike, and juveniles resemble adults. The genus is endemic to eastern Australia.