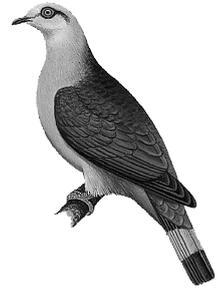


MINDORO IMPERIAL-PIGEON

Ducula mindorensis



Critical —

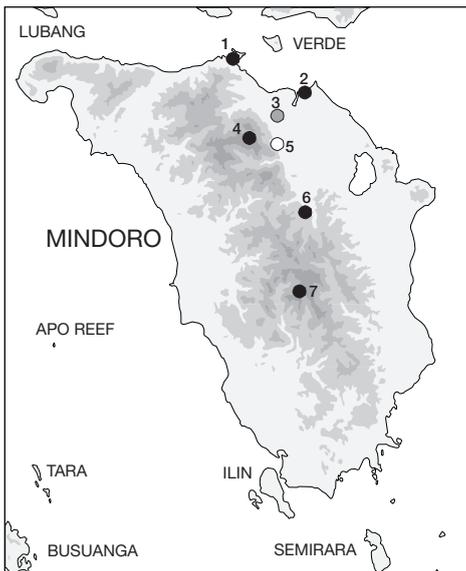
Endangered —

Vulnerable ■ A1c,d; A2c,d; B1+2b,c,d,e; C1; C2a

This pigeon qualifies as Vulnerable on account of its small range and population, both of which are declining as a result of the continuing rapid reduction in the extent and quality of its forest habitat. It is currently only known from a few localities and is close to qualifying as Endangered. However, it may be under-recorded and prove to be more widespread.

DISTRIBUTION The Mindoro Imperial-pigeon (see Remarks 1) is endemic to Mindoro in the Philippines, where McGregor (1920) thought it likely to be present throughout the highlands. The relatively few precise locality records are as follows:

■ **PHILIPPINES** **Mindoro** **Puerto Galera**, at Mt Talipanan, 1991 (R. Sison *per* J. C. T. Gonzalez *in litt.* 1996) and by local report at Mt Malasimbo, June 1997 (J. C. T. Gonzalez *in litt.* 1997); **San Vicente**, before 1920 (McGregor 1920) and, at 700–750 m, Mt Ilong September 1991 (Dutson *et al.* 1992); **Barawanan Peak** at 1,460 m in April 1954 (Ripley and Rabor 1958); **Mt Halcon** at “Tarugin”, “Nawhan” (Naujan), at 1,500 m, March 1972 (female in DMNH), at “Ar-angin”, Calapan, 900 m, April 1966 (male in DMNH), and at “Haangin”, Naujan, 900 m, August 1964 (male in AMNH; see Remarks 2) and, mostly at 800–950 m, Mt Ilong, September 1991 (Dutson *et al.* 1992); **Mt Dulangan** at 1,220–1,830 m, January 1896 (Ogilvie Grant 1896b, Whitehead 1899d; male in AMNH); **MUFRC Experimental Forest**, 1980 (Catibog-Sinha 1982); **Mt Iglit-Baco National Park**, 700 m, May 1995 (J. C. T. Gonzalez verbally 1997). The record above from Puerto Galera is the lowland report in Collar and Andrew (1988), which was treated with some hesitation by Dutson *et al.* (1992), who pointed



The distribution of Mindoro Imperial-pigeon

Ducula mindorensis: (1) Puerto Galera; (2) San Vicente; (3) Barawanan Peak; (4) Mt Halcon; (5) Mt Dulangan; (6) MUFRC Experimental Forest; (7) Mt Iglit-Baco National Park.

○ Historical (pre-1950) ● Fairly recent (1950–1979)
● Recent (1980–present)

out that there have been no records from lowland areas and no forest appears to exist in that part of the island. However, it is now apparent that this record and the subsequent report came from hills in Puerto Galera, and presumably refer to wandering birds in only partly modified hill forest habitat.

POPULATION This species has seemingly always been considered rare and local (Hachisuka 1930, 1931–1935, Dickinson *et al.* 1991) or at least uncommon (Gonzales and Rees 1988). It was described as common on Mt Halcon in 1983 (Collar and Andrew 1988), but this was apparently based on one bird seen over four days (see Dutson *et al.* 1992). Moreover, although it proved not uncommon at the Mt Ilong (Halcon) survey site, where 22 birds were seen or heard in six days in 1991, it is and has for a century been a low-density species (Dutson *et al.* 1992, Evans *et al.* 1993a): thus Ripley and Rabor (1958) saw and heard the bird several times but failed to secure any specimens, while in the 1890s the birds were usually seen singly or in pairs, occasionally up to four together, but were most difficult to obtain, with only five specimens secured in nearly four months (Ogilvie Grant 1896b, Whitehead 1899d; see Remarks 3).

ECOLOGY Habitat This species has been stated to occur in forests usually above 1,000 m (Hachisuka 1931–1935, Gonzales and Alcala 1969, Dickinson *et al.* 1991); McGregor (1909–1910) stated 1,200–1,800 m, Gonzales and Rees (1988) 1,400 m (lower in dry season in search of water). However, in 1991 birds were found at 700–750 m in tall mid-mountain forest on steep terrain at San Vicente, and most records were from the lowest-altitude forest remaining between 800 and 950 m (on Mt Halcon); there was only one record from the relatively large area of primary forest above 1,050 m, and one more in closed forest beyond Ilong Ridge at 1,500 m, although mountaineers reported encountering it at 2,000 m (Dutson *et al.* 1992, Evans *et al.* 1993a). At MUFRC the habitat is second-growth dipterocarp forest at 200–1,200 m (Catibog-Sinha 1982) but doubtless the record(s) in question was (were) from the upper reaches of this site. In 1991 the species was usually encountered in understory trees, but perhaps only because of its unobtrusiveness when in the canopy; a bird was seen at roost, in the company of up to 14 individuals of at least two other species, on the top of a tall tree in a clearing on the lower edge of closed forest (Dutson *et al.* 1992, Evans *et al.* 1993a).

Food An early report refers to birds “feeding on some large purple-coloured fruits as big as a pigeon’s egg” (Whitehead 1899d). Two birds were observed to feed, about 50 m apart from each other, on the small fruits of two unidentified trees (Dutson *et al.* 1992, Evans *et al.* 1993a).

Breeding The ovaries of the female from Tarugin, March, were inactive, but the testes of the male from Arangin, April, were enlarged (DMNH label data), while the male from Haangin, August, was immature (AMNH label data). There are no other data (see Remarks 1).

Migration It is not known if this species undertakes any seasonal or nomadic movements in response to food supply, but occasional shortages of fruit could force such behaviour and would be very serious for a species with no fallback resources (Dutson *et al.* 1992, Evans *et al.* 1993a).

THREATS Forest destruction and intensive hunting are likely to be significant problems. Although this pigeon occurs in habitat generally above the deforestation zone on Mindoro, it is not necessarily secure if, as seems possible, there are times when it depends on fruiting events at lower elevations (see above, Migration) and if, as seems very likely, it is sought after for food: logging and slash-and-burn cultivation continue to reduce lower areas of suitable habitat at Halcon and San Vicente, and imperial-pigeons are common targets of subsistence hunters throughout the Philippines (Dutson *et al.* 1992, Evans *et al.* 1993a).

MEASURES TAKEN In August 1964 the species was removed from the list of game birds, and it was then or soon after “afforded complete legal protection”; however, “declaring these measures is one matter, enforcing them is quite another”, game wardens on Mindoro being “as scarce as, if not scarcer than, the birds” (Gonzales and Alcala 1969). Other than these legal niceties and various DENR sustainable-use and improved-yield projects at one site on Halcon and at San Vicente (Dutson *et al.* 1992), plus the possibility that the species is present in the few montane forest patches left inside the predominantly grassland Mt Iglit-Baco National Park (a NIPAP site; see Appendix), nothing is known to have been done that might favourably affect this bird, but in the mid-1990s it was featured on an environmental awareness poster focusing on pigeons as part of the “Only in the Philippines” series, funded by British Airways Assisting Conservation and FFI, with text in English and Tagalog (W. L. R. Oliver verbally 1998). The species is listed on Appendix I of CITES.

MEASURES PROPOSED Apart from the national park above, the Mindoro Imperial-pigeon is known from two “key sites” (Mt Halcon and possibly Lake Naujan; see Appendix) and these deserve further survey and, at least in part, formal designation under the NIPAS process (see equivalent section under Mindoro Bleeding-heart *Gallicolumba platenae* for comments on conservation proposals). The status and ecology of the species merits careful evaluation through surveys using voice as an index of presence and possibly numbers, at the most appropriate season, coupled with observations on food sources, tree phenology and habitat occupancy throughout the year. The entire forested upland area should be targeted for this survey work, with ecological studies focused in the most important sites for this and other species reliant on the forests of Mindoro (see equivalent sections under Black-hooded Coucal *Centropus steerii*). A detailed map of forest habitats on the island, with a status-weighted inventory of the key species each contains, is urgently needed as the basis for a plan of long-term forest conservation. A study of hunting on Mindoro, and specifically of its past and present effects on pigeons and hornbills, is needed together with practical measures to reduce and preferably eliminate such pressure.

REMARKS (1) This species belongs in the *poliocephala* species-group of *Ducula* pigeons, and is closest to *D. radiata*, from which it differs mainly in size (Goodwin 1960; also Hachisuka 1931d, 1931–1935); this latter has been found nesting in niches in cliffs inside mountain woodlands (see Goodwin 1960). (2) Tarugin, Arangin and Haangin are probably the same place. (3) Dutson *et al.* (1992) suggested that the difficulty Whitehead experienced in obtaining five specimens in three months was evidence of the species’s scarcity a century ago; but Whitehead (1899d) himself laid the blame for this (given that “we followed up the birds in all directions whenever they ‘boomed’ at us”) on the combination of difficult terrain and appalling weather (recounted elsewhere as “seventy days out of a hundred...very wet, twenty dull and drizzling, while only ten were comparatively bright and fine”: Ogilvie Grant 1896b).