Threatened Birds of Asia:
The BirdLife International Red Data Book

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PALAWAN HORNBILL
_Anthracoceros marchei_

Critical □ —
Endangered □ —
Vulnerable ■ A1c,d; A2c,d; C1

This hornbill has a small population which is declining rapidly as a result of the loss of lowland forest, compounded by hunting, and therefore qualifies as Vulnerable.

**DISTRIBUTION** This hornbill is confined to Palawan and its satellite islands in the westernmost Philippines. Records (see Remarks 1) are from:

■ **PHILIPPINES** Calauit unspecified (Agaloos and Nepomuceno 1977), and in December 1990 (Diesmos 1992);
   Busuanga Dimaniang (untraced), March 1947 (female in FMNH); Salvacion at Lubao, February 1975 (two females in PNM); Coron at Banga, January 1963 (two females in PNM);
   Culion San Pedro, November and December 1976 (two specimens in PNM), with an untraced site, Suik, in April 1947 (male in PNM);
   Linapacan Dicabaitot, March 1973 (two males in PNM);
   Palawan El Nido, April 1997 (J. C. T. Gonzalez verbally 1997); Miniloc island, up to 200 m, October 1996 (Gonzalez et al. 1997); Pangulasian island, October 1996 (Gonzalez et al. 1997);
   Lagen island, May 1997 (Gonzalez et al. 1997); Taytay bay, August 1913 (two specimens in MCZ); Pagdanan at the PTPI (Pagdanan Timber Products, Inc.) concession, two in August 1984 (Quinnell undated); Languyan, Roxas, November 1983 (male in PNM);
   St Paul’s Subterranean River National Park, April 1987 (Jensen and Hornskov 1992), January 1988 (Sargeant 1989), March–April 1990, when up to six were seen (Greensmith 1990), March 1992 (R. J. Timmins _in litt._ 1997), up to nine, February 1994 (Hornbuckle 1994), 12 at a pre-roost gathering in March 1994 and considered fairly common (Davidson ms), with 10–15 seen there in August 1994 (J. C. T. Gonzalez _in litt._ 1996), 10–15 there in January–February 1995 (W. Simpson _in litt._ 1997), and birds seen over four days, March 1997 (P. A. J. Morris _in litt._ 1997); Malabosog, Tinitian, Roxas, 0–75 m, April–May 1962 (three specimens in UPLB, USNM, YPM); Badian, Babuyan, February 1968 (two specimens in AMNH); Iwahig Penal Colony at Balsahan, May 1978 (female in UPLB), April 1983 (Clarke 1983), February 1984, when 10 birds were seen (Gibbs 1984), with two at the colony in July–August 1984 (Quinnell undated), 20 in January 1988 (Sargeant 1989), February 1994 (Hornbuckle 1994) and March 1997 (P. A. J. Morris _in litt._ 1997); Puerto Princesa, October and November 1887 and July 1888 (four females in AMNH, DMNH), October 1925 (Baud 1978), including at Canigaran, April 1987 (male in FMNH), Tarabanay, May 1962 (five specimens in UPLB, YPM) and Napsan, April 1987 (male in USNM); Inagauan, in the last century (de Elera 1895); Kabigaan (or Cabigaan), Aborlan, January 1963 (male in PNM), with two males simply marked “Aborlan”, May 1955 (in PNM); Quezon, March 1983 (male in NCSM), and at Ganaugan, May 1963 (female in PNM); Mt Gorang Bato, April 1971 and January 1993 (two specimens in PNM, collected between 600 and 900 m: P. C. Gonzales verbally 1998); north of Pulot, Brooke’s Point, 60 m, March 1971 (two specimens in DMNH); Taguso, July and August 1887 (Whitehead 1890; three specimens in AMNH); Brooke’s Point, March–April 1916 (Zimmer 1918a); near Marasi bay, c.1883 (Dickinson _et al._ 1991);
   Bugsuk unspecified locality, March and April 1973 (three specimens in DMNH); a few, August–September 1991 (F. R. Lambert verbally 1997);
Balabac unspecified locality, March 1884 (specimen in AMNH), December 1893 (Everett 1895), January 1963 (female in PNM).

**POPULATION** The true status of this species is difficult to assess from reports. Already at the end of the late nineteenth century it was considered hard to find on the main island of Palawan on account of shooting, although “by no means rare” (Whitehead 1890) and “both common and tame” on the Calamianes (F. S. Bourns and D. C. Worcester in McGregor

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The distribution of Palawan Hornbill *Anthracoceros marchei*: (1) Caluit; (2) Salvacion; (3) Coron; (4) San Pedro; (5) Dicabaitot; (6) El Nido; (7) Miniloc; (8) Pangulasian; (9) Lagen; (10) Taytay bay; (11) Pagdanan; (12) Languyan; (13) St Paul’s Subterranean River National Park; (14) Malabosog; (15) Binduyan; (16) Iwahig Penal Colony; (17) Puerto Princesa; (18) Inagauan; (19) Kabigaan; (20) Quezon; (21) Mt Gorang Bato; (22) Pulot; (23) Taguso; (24) Brooke’s Point; (25) Marasi bay; (26) Bugsuk; (27) Balabac.


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1909–1910). It was still common in St Paul’s Subterranean River National Park in the mid-1980s (Kemp 1995) and then characterised generally as “quite common to uncommon” (Gonzales and Rees 1988). The fact that birds can be found in degraded forest (see Ecology) is fairly typical of hornbills but, as with parrots, the need for large trees in which to nest remains important and seems likely to act as a constraint on numbers with the extensive logging and clearance of land over the course of the twentieth century. Moreover, the pressure from hunting, already evident a century ago, seems likely to have had a further depressive effect on numbers over the years. On Calauit the species was seen in flocks of 8–12 in December 1990, and was then reported by local people to be quite common in forest edge by the sea (Diesmos 1992); but it was not recorded on the island in April–May 1993 (NADM) or April–May 1994 (A. C. Diesmos verbally 1997), suggesting (a) a sudden and rapid decrease, (b) partial or total seasonal emigration, (c) lower detectability owing (e.g.) to breeding activity, and/or (d) chance failure to make contact.

ECOLOGY

Habitat This is basically a forest bird (Dickinson et al. 1991, Kemp 1995), but it is recorded from “mangrove swamps, cultivated land, bushland, secondary growth and mountain forest”, ranging from the canopy to the undergrowth in multi-storeyed forests and descending to the ground to pick up food (Gonzales and Rees 1988). A question of major importance is its altitudinal limitation: specific records from higher levels, other than Mt Gorang Bato with an upper limit of 900 m, appear to be lacking.

Food Birds have been seen feeding in fruit trees within a few feet of the ground (F. S. Bourns and D. C. Worcester in McGregor 1909–1910). A certain common large-seeded fruit was found to be preferred (Zimmer 1918b). Apart from fruit, other plant material and animals such as insects and lizards are consumed (Gonzales and Rees 1988).

Breeding The male from Napsan, April, had testes much enlarged (USNM label data). The species breeds in the same trees as the Philippine Cockatoo Cacatua haematopus (F. R. Lambert verbally 1997).

Migration There are no data on movements, but only very local wandering (if any) would be expected, in response to seasonal changes in food supply.

THREATS The fact that the species was very wild and difficult to shoot on Palawan (no specimens obtained) but very common and tame on Calamianes (F. S. Bourns and D. C. Worcester in McGregor 1909–1910) suggests considerable historical hunting pressure on the former island. Whitehead (1890) also found it difficult to shoot in 1887, as did Zimmer (1918b) in 1915–1916 (“wary... watchful and alert”), only procuring a single specimen in a month of fieldwork. The extent to which hunting remained a pressure through the twentieth century appears not to have been documented, but it is likely to have been less intense than for Palawan Peacock-pheasant Polyplectron emphanum and certain parrots (NADM). Nonetheless, Rivera (1993) listed both hunting (for food and sport) and habitat destruction as modern threats. Although the nest trees may be spared felling because they are often in the same cavities or trees as those left standing to permit harvesting of young Philippine Cockatoos, it may well be that hornbill nests in such trees are also raided for young birds, which appear to have commercial potential (F. R. Lambert verbally 1997).

Nearly all of Palawan’s forests are leased to logging operations, and the commercial logging at Pagdanan, whose forests, as elsewhere, ought to be on a rotation of a minimum 45 years between cuts, was expected to be complete within 8–15 years of 1984 (Quinnell and Balmford 1986). A report that the islands of Busuanga, Culion and Balabac are now largely deforested (see Kemp 1995) is not entirely accurate: while Culion is severely and probably irreparably damaged, with a constant influx of settlers (Orig 1997), Busuanga has suffered fairly badly but may retain 40% forest cover (NADM), and Balabac retains only a small amount of forest (see Population under Philippine Cockatoo). The small populations on the
tiny islands of Pangulasian, Miniloc and Lagen appear relatively secure (J. C. T. Gonzalez in litt. 1997). There are plans to commence granite mining at Iwahig, a key area for the species (McGowan and Garson 1995).

MEASURES TAKEN Populations of the Palawan Hornbill are legally protected within El Nido (a NIPAP site; see Appendix) and St Paul’s Subterranean River National Park which is managed by the local government of Palawan. The Iwahig Penal Colony is managed by the Bureau of Prisons and provides further protection (BRT), but see Threats. While these areas are clearly valuable in terms of the conservation of the species, they are by no means sufficient in themselves; for additional relevant information see under equivalent section for Palawan Peacock-pheasant.

The species is listed on Appendix II of CITES.

MEASURES PROPOSED Apart from the areas targeted for conservation above, the Palawan Hornbill occurs in three “key sites” (Victoria/Anapalan ranges, Mt Mantalingahan and San Vicente/Taytay/Roxas forests; see Appendix) and these deserve formal designation and protection under the NIPAS process. A survey of Palawan and its satellite islands is urgently required to determine additional key sites for the conservation of this hornbill. Ideally, these sites should encompass populations of other threatened Palawan endemics (see Remarks 2) and species such as the Philippine Cockatoo. Furthermore, a detailed ecological study of this hornbill is needed to assess its year-round needs in terms of food supply and nesting. A more detailed discussion of relevant conservation proposals is in the equivalent section under Palawan Peacock-pheasant.

REMARKS (1) Kemp (1995) misinterpreted Dickinson et al. (1991) concerning their supposed non-acceptance of records from Calauit and Culion, and was mistaken in citing either Whitehead (1890) or McGregor (1909–1910) as specifying Culion. The listing of Cuyo (midway to Panay) by de Elera (1895) has not been confirmed. (2) Forests on Palawan are important for several other threatened endemic or near-endemic birds (Palawan Peacock-pheasant *Polyplectron emphanum*, Blue-headed Racquet-tail *Prioniturus platenae*, Falcated Wren-babbler *Ptilocichla falcata* and Palawan Flycatcher *Ficedula platenae*) and a conservation strategy for the island should consider the requirements of all these species, prioritising sites in which the largest number are present.