

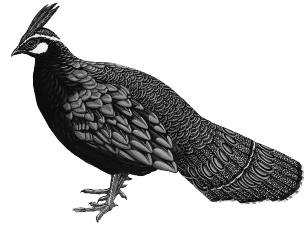
## PALAWAN PEACOCK-PHEASANT

### *Polyplectron emphanum*

Critical  —

Endangered  —

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



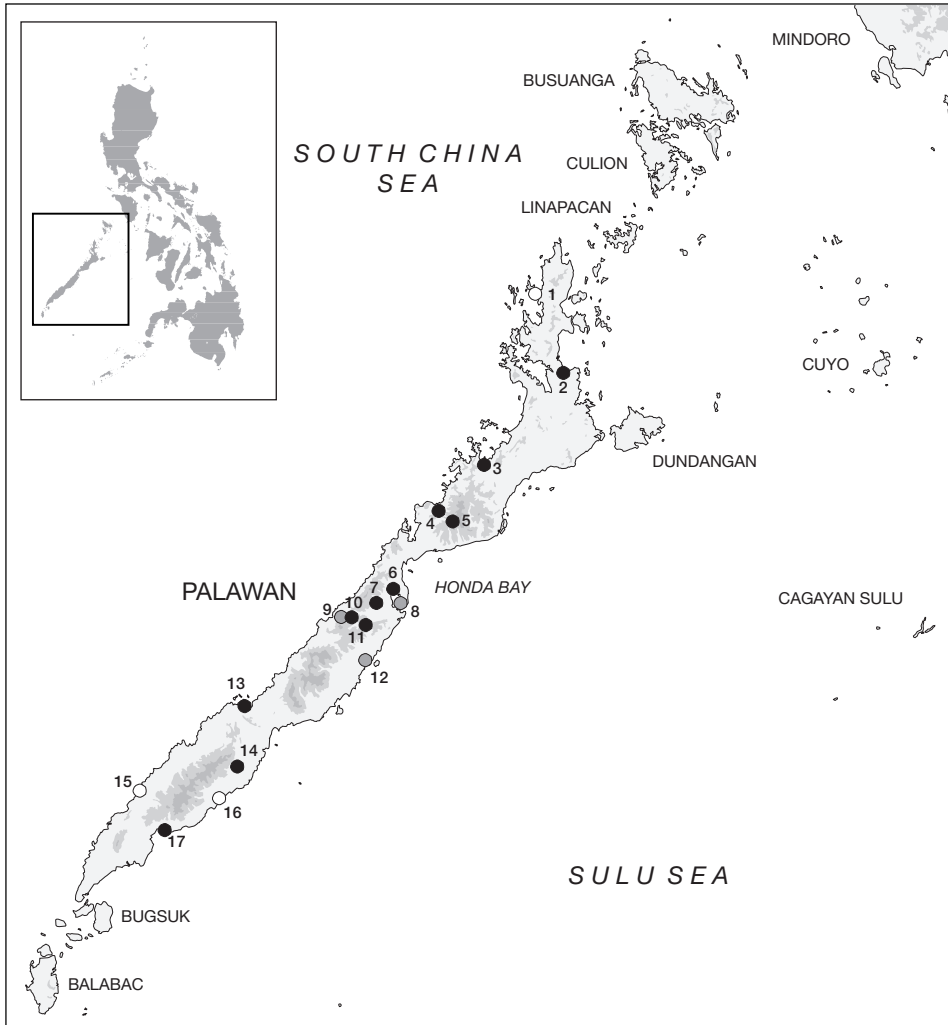
*This species qualifies as Vulnerable because it has a small, severely fragmented range and a small population which is undergoing a rapid decline as a result of habitat destruction, hunting and trade.*

**DISTRIBUTION** The Palawan Peacock-pheasant (see Remarks 1) is endemic to Palawan in the south-west Philippines (see Remarks 2). There may have been an attempt to introduce the bird to Calauit but, if so, it appears to have failed (see Measures Taken). Local reports of the species in scattered forest patches at Danlig in the north give hope that it may yet be found in the Pagdanan Range (Lambert 1993c). It was certainly reported by local people to occur throughout the island, and its presence was claimed “all along the south-eastern two-thirds of Palawan” (Grimwood 1974). Known localities are:

■ **PHILIPPINES** *Palawan* **Bacauit**, currently within the El Nido reserve, around 1949 (male in PNM); **Taytay**, presumably 1995 (Girdler 1996); **Port Barton**, 1987–1988 (McGowan *et al.* 1989); **St Paul’s Subterranean River National National Park**, repeatedly since 1986 to the present day (Caleda *et al.* 1986, McGowan *et al.* 1989, Sargeant 1989, Greensmith 1990, Jensen and Hornskov 1992, Lambert 1993c, Hornbuckle 1994); **Mt Cleopatra** and environs, 1995 (Girdler 1996); **Irawan**, 1987–1988 (McGowan *et al.* 1989); **Bagumbayan** at the 794 ha Forest Research Institute Experimental Forest, base of Mt Stavely, 1985 (Caleda *et al.* 1986), and at an unspecified site in the Mt Stavely Range, April 1967 (male in PNM); **Puerto Princesa**, January 1878, June 1883, November 1884, January 1888, January 1889, January 1898 and April 1961 (Tweeddale 1878f; also 22 specimens in AMNH, BMNH, CM, DMNH, MNHN, SUNSM, USNM, ZMB); **Iwahig Penal Colony**, January, April–September and December 1907, February and June–July 1908, April 1960, March–April 1961, December 1969, April–May and December 1970 (70 specimens in AMNH, ANSP, BMNH, DMNH, FMNH, PNM and SUNSM; also Lowe 1916), plus five further specimens (in FMNH, PNM) which specify Penal Colony, Lapulapu, and the mountain east of Lapulapu, all in March 1947, and at the Penal Colony, 1987–1988 (McGowan *et al.* 1989); **Taguliat**, 1987–1988 (McGowan *et al.* 1989); **Central Peak**, 1987–1988 (McGowan *et al.* 1989); **Mt Iraan**, Aborlan, June 1950 (male in PNM), with an unspecified locality in Aborlan, May 1962 (male in AMNH); near **Quezon**, 1985 or 1986 (McGowan *et al.* 1989); **Magtubog**, c.18 km due west of Mt Landargun in the south, where a dead snared female was found, August or September 1991 (Lambert 1993c); “Kalusian”, presumably therefore **Culasian** (see Remarks 3), 1887 (female in BMNH); **Taguso** (see Remarks 4), July 1887 (Whitehead 1890); Cabayugan (untraced) in the Marble Mountains, March 1968 (male in PNM); **Bonobono**, presumably 1995 (Girdler 1996).

This very sparse information is insufficient to judge the range of the species within Palawan, but it suggests a rather patchy distribution *at least* in the lowland forests of the island, although it is probably the case that birds may yet be found to range much more widely. However, fieldwork around Mahinit near Brooke’s Point encountered no birds, and forest clearance extended almost to the top of the slopes, 1987–1988 (McGowan *et al.* 1989). Birds were reported by local tribespeople at San Rafael, and by rattan cutters at Salacot, 1987–1988 (McGowan *et al.* 1989). The species was also reported in dwarf forest (see Ecology) at a mine 20 km north of Puerto Princesa, in 1978 (J. T. Marshall *in litt.* 1978 to W. B. King in BirdLife archives).

**POPULATION** As with many forest pheasants, the assessment of overall numbers is extremely difficult, with trappers and naturalists apparently having different encounter rates based on different methods, and of course with different views about what constitutes commonness and rarity (P. J. K. McGowan *in litt.* 1998). Thus the species has been characterised as “scarce and local” (Whitehead 1890), “extremely shy” (Bourns and Worcester 1894), “common in the forests... but seldom seen except by natives” (Lowe 1916), “not at all rare” (“n’est nullement rare”) in primary forest (Hachisuka 1931c), although by a rather contradictory local report increasingly rare and in danger of extinction (Hachisuka 1931c, 1936), and common in suitable places (Delacour and Mayr 1946). The view of its general capacity for abundance was perhaps



**The distribution of Palawan Peacock-pheasant *Polyplectron emphanum*:** (1) Bacuit; (2) Taytay; (3) Port Barton; (4) St Paul’s Subterranean River National Park; (5) Mt Cleopatra; (6) Irawan; (7) Bagumbayan; (8) Puerto Princesa; (9) Iwahig Penal Colony; (10) Taguliat; (11) Central Peak; (12) Mt Iraan; (13) Quezon; (14) Magtubog; (15) Culasian; (16) Taguso; (17) Bonobono.

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

based on a “fine series” being secured at the Iwahig Penal Colony, although the species was seldom seen until snared by the natives (Bourns and Worcester 1894, McGregor 1909–1910). In the early 1970s it appeared that although there had been some local extinctions it was “not a particularly rare bird” in the south-eastern two-thirds of the island (Grimwood 1974). Tentative population densities were obtained during surveys in 1985, suggesting 13.8 displaying males per km<sup>2</sup> in primary forest, and 8.5 per km<sup>2</sup> in forest logged 10 years before (Caleda *et al.* 1986), although subsequent work in 1988 found a density of 18.12 individuals per km<sup>2</sup> (Caleda 1991; see Remarks 5). A substantial population was judged to exist in an area adjacent to St Paul’s Subterranean River National Park east to Mt Cleopatra during a survey in 1995 (Girdler 1996). At present, however, the total population has been judged to be in strong decline (Collar *et al.* 1994; see Threats), and there appear to be no records at Iwahig Penal Colony since 1988. Given the extent of remaining habitat, McGowan and Garson (1995) estimated the population to be less than 10,000, and given the highly sedentary nature of the species and the fragmentation of lowland habitat, the population itself may be somewhat fragmented, although this depends on the degree to which birds use hill forest, which appears to be far more continuous and may offer corridors between known lowland sites.

**ECOLOGY Habitat** The Palawan Peacock-pheasant lives on the floor of primary and secondary forest on flat and rolling terrain, ranging up to 660 or 800 m (McGowan *et al.* 1989, Caleda 1991; see Remarks 6), although in 1995 it was found from near sea-level almost up to mossy forest on Mt Cleopatra (Girdler 1996). In the 1970s it was confirmed to enter foothills, and reports were received that it occurs “in at least parts of the higher country” (Grimwood 1974), but whether that meant anywhere higher than 800 m has not been determined; on the other hand, at two sites, 1987–1988, birds were not found below 400 m, despite available habitat (McGowan *et al.* 1989). Studies in 1985 showed higher densities of males in primary as against logged forest (see Population), but the highest density observed was in forest edge (34 males per km<sup>2</sup>), although this was perhaps a short-term consequence of adjacent habitat clearance packing birds into neighbouring territories (Caleda *et al.* 1986). An important item of previously unpublished information is that in 1978 the species was found in *Casuarina*-dominated “dwarf forest” on serpentine rock on hill slopes, habitat which appears secondary but is original yet which was not then (and presumably is not now) being commercially exploited (J. T. Marshall *in litt.* 1978 to W. B. King in BirdLife archives).

**Food** A bird shot in dense forest, July, had been eating seeds (BMNH label data), and Lowe (1916) referred to a key food being “something not unlike a small acorn”.

**Breeding** Males possess display arenas, but the species’s occurrence in pairs in the non-breeding season suggested that it might be monogamous (Whitehead 1890). There is no information on its nesting in the wild (Dickinson *et al.* 1991), but apart from Malayan Peacock-pheasant *P. malacense* birds of the genus *Polyplectron* lay two eggs in each clutch and nest on the ground (Delacour and Mayr 1946); Hachisuka (1931c) referred to a first captive breeding in which three clutches of two, two and one were laid in one spring (April–June). Two three-quarters grown birds (in AMNH) are dated September and February, while full-grown birds labelled juveniles in museums (BMNH, CM, DMNH, USNM) are mostly immatures, and date from December, January, June and July, so no seasonal pattern emerges. A calling male was observed, September (Lambert 1993c), and others heard, February (P. A. J. Morris *in litt.* 1996); the breeding season has been assumed to be December–January (Whitehead 1890), February–April (McGowan *et al.* 1989).

**Migration** This species is not expected to make any seasonal displacements, other than (possibly) to wander short distances in search of food.

**THREATS** A combination of direct exploitation and habitat destruction has evidently contributed to the decline of this galliform. What was affecting the bird in the 1920s for a

correspondent of Hachisuka (1931c) to refer to its increasing rarity is not clear, but in the mid-1960s, when it was first registered as at risk, both factors were recognised as important, greater emphasis being laid on habitat loss (Vincent 1966–1971).

**Habitat loss** Deforestation in the level lowlands of Palawan has been widespread (Quinnell and Balmford 1988, Lambert 1993c, 1994b), and although coastal forest in the south remains relatively extensive, illegal logging continues (McGowan and Garson 1995). Despite the recent suspension of commercial logging on Palawan, nearly all the island's forests have been leased to logging operations (Lambert 1994b). As a consequence, the species is becoming increasingly restricted to higher ground on the island (McGowan *et al.* 1989), which may well be suboptimal. There are plans to commence granite mining at Iwahig, a key area for the species until at least 1988 (McGowan and Garson 1995).

**Persecution** By the late 1960s exploitation was of increased concern, the species being “eaten by people... [and] listed as a game bird, hence... hunted by anybody”, which was the cause for no protective measures being taken on its behalf; moreover it was being “trapped in large numbers by natives for sale to zoos... [and] it makes beautiful pets since it thrives and breeds well in captivity” (Gonzales and Alcalá 1969, Gonzales and Rees 1988). In 1974 birds were being exported for aviculture at the rate of 70–100 birds per year, these supposedly being the 20% of birds that survived capture (King 1978–1979). The species is widely hunted or trapped for food and for the bird trade, without regard to or enforcement of laws that prohibit all forms of capture (Grimwood 1974, Dickinson *et al.* 1991, Collar *et al.* 1994), with six birds seen at markets in Puerto Princesa and Cartimar during March and December 1987 (McGowan *et al.* 1989) and recent evidence of heavy depredations by resin collectors in an area adjacent to St Paul's Subterranean River National Park (R. Girdler *per* P. J. Garson *in litt.* 1997). A snared female was eaten by “a wild cat” and it was suspected that this latter species—presumably feral on the island—“destroys numbers of this beautiful bird” (Whitehead 1890). Numbers exported from Palawan appeared to fall off considerably in the late 1980s (McGowan *et al.* 1989).

**MEASURES TAKEN** The El Nido reserve is a NIPAP site (see Appendix). A population of the species also exists in St Paul's Subterranean River National Park, which is managed by the local government of Palawan, and perhaps still in the Iwahig Penal Colony, which is managed by the Bureau of Prisons (BRT), but see Threats. Recently, commercial logging activities in the island were suspended by presidential decree (Lambert 1994b), but see Threats.

Since 1983, Palawan has been a “Game Reserve” (Presidential Proclamation 219), in which it has been illegal to catch any wild animals; DENR is responsible for enforcing this (clearly unenforceable) law. In addition, the Haribon Foundation has been involved in a campaign against the wildlife trade, and is now gathering information on this practice in Palawan and Manila (Lambert 1994b); the species has been listed on Appendix I of CITES since 1 July 1975. It is also legally “protected” in the Philippines (McGowan and Garson 1995). In the mid-1990s the species was featured on an environmental awareness poster 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).

A captive breeding centre near Puerto Princesa has been abandoned, while other in-country breeding initiatives appear to be unsuccessful (McGowan and Garson 1995). About 1,000 birds (perhaps 10% of the size of the wild population) are thought to be in captivity worldwide (McGowan and Garson 1995).

The island of Calauit off the north-west coast of Busuanga was developed in the 1970s as a reserve for African wildlife (the island has the status of wildlife reserve), and has been reported as holding a population of the peacock-pheasant that is “doing well” (Hicks 1998). This, however, is incorrect, as the birds taken to the island have now (in April 1998) apparently dwindled to a single captive bird (N. Hicks *in litt.* 1998); it is not clear if any were ever

released on the island or merely held in cages there. Endeavours may continue to introduce wild Palawan birds to the island, but details have not been traced; however, some 30% of the island is well wooded and is ostensibly suitable for the species (NADM).

**MEASURES PROPOSED** *Protected areas* Apart from the areas targeted for conservation above, the species has been recorded at sites in or near three “key sites” (San Vicente/Taytay/Roxas forests, Victoria/Analapan ranges, Mt Mantalingahan; see Appendix) and these deserve further survey plus designation and protection, at least in part, under the NIPAS process. There are plans to increase the size of St Paul’s Subterranean River National Park by 32,500 ha to include the whole of the Babuyan River catchment, i.e. Mt Cleopatra (Lambert 1994b, McGowan and Garson 1995), and the current border was to be delimited during 1997 (NADM): this should be supported. Proposals to mine granite in Iwahig Penal Colony should be investigated urgently, and formal protection measures recommended for forests in this area (McGowan and Garson 1995, Girdler 1996). Phase II of the Palawan Integrated Area Development Project, of which a key part is the demarcation of new boundaries for a variety of classes of reserve forest, should be initiated as soon as possible (McGowan and Garson 1995).

*Management initiatives* Increased protection should be accorded to the most appropriate localities identified by fieldwork, with due allowance being made for other lowland specialist endemic birds (see equivalent section under Palawan Hornbill *Anthracoceros marchei*) and other elements of Palawan’s biodiversity. Efforts should be made to address the chronic understaffing of protected areas so that poaching can be controlled more effectively, but the government should ensure that the human communities likely to be affected will not be unfairly displaced or disadvantaged. As legislation covering the intended Palawan “Game Reserve” is largely ignored, resources must be allocated towards more effective control of hunting and the bird trade. Educational initiatives, in collaboration with local government, could include painted motorised trishaws in Puerto Princesa, Quezon and Brooke’s Point (McGowan and Garson 1995).

*Research* The most up-to-date images of forest cover would help identify appropriate areas in which fieldwork should be targeted to ascertain the presence (and status) of this and other key Palawan endemics (see under Palawan Hornbill). Such priority areas probably include the mountains south of Brooke’s Point, the western slopes of Mt Victoria, the area behind the Tapon Caves in Quezon, and remaining forest in the north of the island; surveys of southern Palawan are expected to reveal new populations of the species (McGowan 1994). The report of the species in stands of dwarf forest on serpentine rocks requires confirmation, and, if it proves true, the extent of such habitat, along with its other biological values and its degree of security, should be determined. An assessment is needed of the suitability of selectively logged and secondary forest for the pheasant (McGowan and Garson 1995). It is by no means clear that the key areas of this faunal subregion are properly known, and it is important not to assume that currently known sites for threatened species are the only, best or most appropriate to work with.

*Captive breeding and translocation* The species can breed well in captivity (see, e.g., Taynton 1984 and references therein), but there seems to be no compelling conservation relevance in *ex situ* programmes. It is not clear that translocation efforts to Calauit (a) are happening, or (b) would be worthwhile; if they continue, the undertaking should be framed in the light of strict principles associated with translocations, and this includes ensuring that no damage is caused to the population from which the birds are taken (the involvement of the Pheasant Specialist Group in any such work is recommended).

**REMARKS** (1) This is the only pheasant in the Philippines and has endured a somewhat chequered taxonomic history, based on apparent polymorphism expressed by the presence,

part-presence or absence of a white superciliary stripe (see Lowe 1925), although this may simply be individual variation (P. J. K. McGowan *in litt.* 1997). (2) Everett (1895) found its absence from Balabac to be the one avifaunal difference between that island and Palawan, although de Elera (1895) included Balabac in the bird's range. Neither Balabac nor Dumaran is believed to hold the species, based on surveys in 1987 (Girdler 1996). (3) "Kalusian", a J. Whitehead collecting locality, was considered by D. S. Rabor to be "Calasian", but in any case it remained untraced (Dickinson *et al.* 1991). However, there is a Culasian at 8°51'N 117°29'E (see Gazetteer). The date on the label of the BMNH specimen is merely 1887, while the only other Whitehead specimen of the species is from July 1887 at "Taguso", which is the other side of Brooke's Point at the same latitude (see Remarks 4), so it is highly plausible that Culasian is Whitehead's locality. (4) It is suggested that "Taguso" should correctly be Tagusao (Dickinson *et al.* 1991), while on NBS (1985) there is a Tagusab at or close to the coordinates Dickinson *et al.* (1991) give for Tagusao, and in these circumstances the original Whitehead spelling is retained. (5) Caleda (1991) reported work on another *Polyplectron* as showing a sex ratio of 1:3, but in assuming such a ratio for *P. emphanum* he indicated "6 male and 12 female" birds per km<sup>2</sup> when the numbers should have been 4.5 males and 13.5 females. Caleda (1991) did not discuss the considerable disparity between this value for males and that reported in Caleda *et al.* (1986). (6) Caleda (1991) suggested that, because he found high tree species diversity and richness within the small area he sampled for peacock-pheasants, it may well be that the species depends on such diversity and richness ("this suggests that *P. emphanum* occupy areas with diverse vegetation which provide different types of cover or shelter, and food sources throughout the year"). This may indeed be the case but, as there was no test of less diverse or species-poorer areas, it remains no more than a hypothesis.