

# Threatened Birds of Asia:

## The BirdLife International Red Data Book

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## ORANGE-NECKED PARTRIDGE

### *Arborophila davidi*

Critical  —

Endangered  B1+2b,c,d,e; C1; C2a

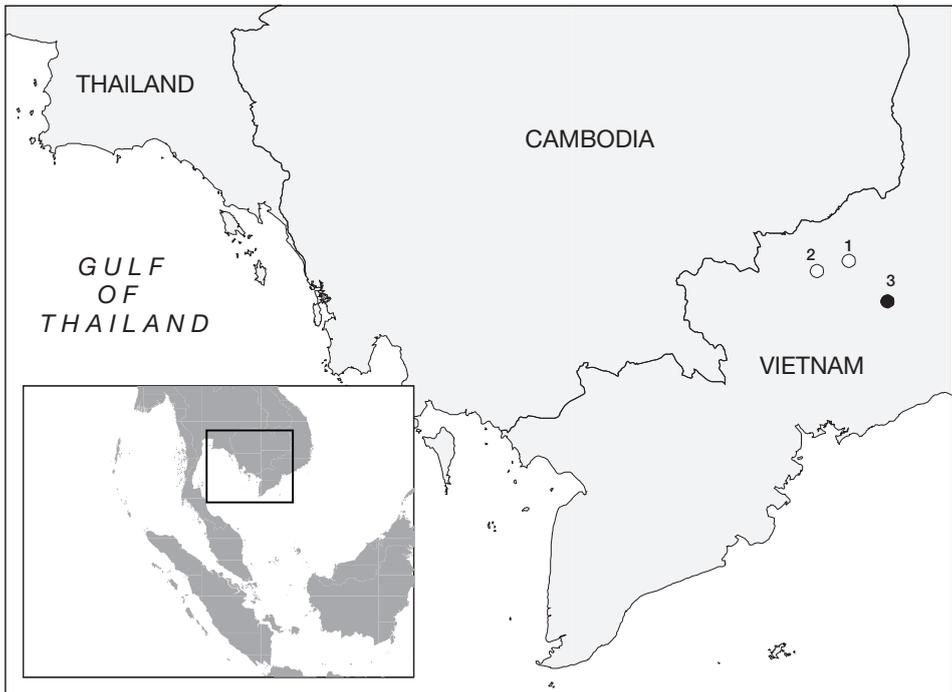
Vulnerable  A1c,d; D1; D2



*This partridge qualifies as Endangered because it has a very small population and a very small range, both of which are declining and undergoing severe fragmentation owing to habitat loss. High levels of hunting are an additional pressure.*

**DISTRIBUTION** The Orange-necked Partridge (see Remarks 1) is endemic to southern Vietnam, occurring principally in the provinces of Dong Nai and Lam Dong in lower hill ranges north of Ho Chi Minh City. Details of the few records are as follows:

■ **VIETNAM Bu Kroai**, Binh Phuoc province, May 1927 (specimen in MNHM, Delacour and Jabouille 1931); c.64 km east of **Phu Rieng**, Binh Phuoc province, c.250 m, February 1927 (specimen in BMNH, Delacour *et al.* 1928; see Remarks 2); **Cat Tien National Park**, Dong Nai, Lam Dong and Binh Phuoc provinces, three on a small isolated hill at c.150–200 m near Dak Lua substation, 37 km south-east of Bu Kroai, June 1991 (Eames *et al.* 1992, McGowan 1992, Robson *et al.* 1993, Nguyen Cu *in litt.* 1997), with several subsequent sightings at the same location (*Oriental Bird Club Bull.* 18 [1993]: 67–70, *Oriental Bird Club*



**The distribution of Orange-necked Partridge *Arborophila davidi*:** (1) Bu Kroai; (2) Phu Rieng; (3) Cat Tien National Park.

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

*Bull.* 24 [1996]: 59–65, Nguyen Tran Vy *in litt.* 1997), groups of 2–5 recorded during fieldwork in February–April 1997 (Atkins and Tentij 1998b), up to 27 recorded in the Cat Loc sector, February–April 1997 (J. C. Eames *in litt.* 1997, Atkins and Tentij 1998b), up to three pairs on nearby Elephant mountain, April 1997 (Nguyen Tran Vy *in litt.* 1997), and subsequently recorded by many observers (e.g. B. Wright *in litt.* 1999).

**POPULATION** Before its rediscovery, the global population of this species was estimated at below 1,000 (McGowan *et al.* 1994). Despite intensive searching, only small numbers were initially observed in Cat Tien National Park and the species was presumed scarce at this site (Eames *et al.* 1992, Nguyen Cu *in litt.* 1997). However, it has more recently been described as occurring “everywhere on hills” in the park and “common” in its Cat Loc sector, with 27 sightings in four days (Atkins and Tentij 1998b).

It potentially occurs widely throughout hill forest in southern Lam Dong, Dong Nai, Binh Duong and Binh Phuoc provinces, and is likely to be commoner than current records suggest owing to its inconspicuous nature (J. C. Eames and Nguyen Cu *in litt.* 1997). The ease with which numbers can be underestimated is illustrated by the fact that, while it was not located in two months of searching at Cat Tien National Park in February–March 1997 (when birds were silent), seven were later encountered in three weeks when the site was resurveyed with the aid of recordings of its voice (Atkins and Tentij 1998b). This suggests that improvements in fieldwork technique will lead to a more optimistic evaluation of the status of this species. As such it is now considered a “fairly common to common resident” of the area (Robson 2000). Nevertheless, its populations, however numerically strong, must be considered in significant decline (see Threats).

**ECOLOGY Habitat** The type specimen was collected at c.250 m in densely wooded country with rolling hills (Delacour *et al.* 1928, Delacour and Jabouille 1931). More recently the species has been observed within Cat Tien National Park at 200 m in “non-thorny bamboo forest”, sometimes very dense, reaching a height of c.6–10 m (Eames *et al.* 1992) and with a light understorey including various gingers Zingiberaceae (Robson *et al.* 1993). In the Cat Loc sector of Cat Tien National Park it seems to thrive in a variety of secondary habitats including tall scrub (c.4 m high), bamboo, acacia, logged evergreen and semi-evergreen forest plantation, and thus appears to tolerate considerable habitat disturbance (J. C. Eames and Nguyen Cu *in litt.* 1997, Atkins and Tentij 1998b). It perhaps favours slopes covered with bamboo and a thick layer of leaf-litter; much of Cat Tien National Park is composed of level lowlands but the Cat Loc area is hillier, although rising to only 400 m, and the species occurs on even the steepest slopes (Atkins and Tentij 1998b).

**Food** There is no information, although diet and foraging behaviour are presumably similar to related *Arborophila* partridges.

**Breeding** There is no information. None is kept in captivity.

**THREATS** The Orange-necked Partridge is one of two threatened bird species that are entirely restricted to the “South Vietnamese Lowlands Endemic Bird Area”, threats and conservation measures in which are profiled by Stattersfield *et al.* (1998).

The forests of Vietnam suffered rapid clearance during the twentieth century (see Threats under Crested Argus *Rheinardia ocellata*), and they continue to face a variety of threats including commercial logging, fuelwood collection, charcoal production and conversion to cultivation (Nguyen Cu and Eames 1993). These threats are all relevant to the small range of the Orange-necked Partridge, but the following examples are drawn specifically from Cat Tien National Park and its environs, the most important site for the conservation of the species. Large-scale clearance of forest in the Cat Loc sector of the park was recently described as rapid, particularly on hill-tops and in any flat areas (J. C. Eames *in litt.* 1997, Atkins and

Tentij 1998b). Before Cat Loc was incorporated into Cat Tien National Park there were few conservation management measures in place and extensive areas were cleared and converted to commercial cashew nut plantations as part of an official policy (Atkins and Tentij 1998b). Herbicide spraying during the Vietnamese war degraded several areas of forest within Cat Tien National Park but these have mostly regenerated well (Robson *et al.* 1993, Nguyen Cu *in litt.* 1997), or are dominated by bamboo and rattans (G. Polet *in litt.* 2000), habitat perfectly suitable for this species. In subsequent years military units based around the original Cat Tien National Park boundaries (which excluded the Cat Loc and Tay Cat Tien sectors) cleared further areas of forest (Robson *et al.* 1993). No military units were based in the Cat Loc sector of the park, but parts of it were official settlement zones for immigrants from the Red River Delta area (G. Polet *in litt.* 2000). Logging operations used to occur in the Nam Cat Tien sector, causing some damage, but these ceased in 1978 when the national park was established (Robson *et al.* 1993). A few areas within the park are now farmed, either by park personnel who were until recently given small areas of land after retirement, or people resettled by government programmes (G. Polet *in litt.* 2000). Currently over 100,000 people live in the buffer zone of Cat Tien National Park, and some have settled in the western sector of the park, putting high pressure on forest resources; moreover, a large town separates the Cat Loc sector from the other two sectors of the national park (A. W. Tordoff *in litt.* 2000).

Loss of habitat is compounded by high levels of hunting by local ethnic groups such as the Chau Ma and S'Tieng and by immigrants from northern Vietnam (Nguyen Cu *in litt.* 1997). As pheasants and partridges are commonly snared by people working in the forest in Vietnam (Eames *et al.* 1989a,b,c, 1992), it is likely that hunting poses a significant threat to surviving populations of this species, at least outside Cat Tien National Park.

Many conservation problems at Cat Tien National Park were exacerbated in the past by a shortage of staff and funds, and this led to poor control of illegal activities such as hunting and logging within the park's boundaries (Robson *et al.* 1991, Eames *et al.* 1992), but happily this situation improved in the late 1990s (G. Polet *in litt.* 2000). Survey work in the area has, until recently, been hampered by provincial reluctance to permit foreigners to work in the ethnic minority areas of Lam Dong province (J. C. Eames *in litt.* 1997). Furthermore, the difficult terrain and high rainfall ensure that forest protection is a very demanding task, and personnel require more support than they currently receive (G. Polet *in litt.* 2000).

**MEASURES TAKEN** The species occurs in Cat Tien National Park, a site considered irreplaceable to the long-term conservation of East Asian galliforms (McGowan *et al.* 1999). The park originally covered 383 km<sup>2</sup> but, with recent extensions to include the Tay Cat Tien and Cat Loc sectors, now covers 738 km<sup>2</sup> (Atkins and Tentij 1998b, G. Polet *in litt.* 2000). As a result, protection of the Cat Loc sector is much improved, with 30 forest guards now stationed there, an increase from seven in 1998 (G. Polet *in litt.* 1999). In 1998, 110 park guards were stationed in the Nam Cat Tien sector of the park (which excludes the Cat Loc and Tay Cat Tien sectors); not only has the number of guards increased in the last few years, but the level of protection is much higher, a circumstance leading to a marked decline in poaching incidents (G. Polet *in litt.* 2000). The road from Dak Lua to Talai, the only one to cut through part of the Orange-necked Partridge's range in the national park, was closed to public traffic in 1998 (G. Polet *in litt.* 1999). WWF and Care are currently implementing an Integrated Conservation and Development Project (ICDP) at Cat Tien National Park (A. W. Tordoff *in litt.* 2000). A printed birdlist for Cat Tien National Park, with an illustration of Orange-necked Partridge on the cover, was produced in 1999 and the species was due to appear on a Vietnamese postage stamp in 2000 (G. Polet *in litt.* 1999).

**MEASURES PROPOSED** Long-term protection and improved management of Cat Tien National Park (including the Cat Loc sector) is the most important conservation measure

for this species (McGowan *et al.* 1994; see Remarks 3), a requirement currently being addressed by the ongoing WWF/Care project (G. Polet *in litt.* 1999; see Measures taken). As a result, it is to be hoped that commercial planting of cashew nut trees in the protected area will cease and current plantations be phased out, since this not only threatens the integrity of the protected area but violates legislation (Atkins and Tentij 1998b). In addition, further illegal encroachment (for fishponds and orchards), as has recently occurred adjacent to a locality for Orange-necked Partridge in the park (Atkins and Tentij 1998b), should be stopped. There are plans to re-locate villages in the Cat Loc sector of the park which are within the range of Javan rhinoceros *Rhinoceros sondaicus*, which overlaps with that of Orange-necked Partridge (G. Polet *in litt.* 1999).

Fieldwork should be targeted towards identifying new populations of the species. Remaining habitat in Lam Dong, Dong Nai, Binh Duong and Binh Phuoc provinces should receive immediate attention. For example, the species might occur at Bu Gia Map Nature Reserve and a survey of this protected area should be undertaken at the earliest opportunity (Nguyen Cu *in litt.* 1997, Atkins and Tentij 1998b). The species responds strongly to playback of taped vocalisations (Atkins and Tentij 1998b) and this method should be used judiciously in surveys for the species.

**REMARKS** (1) Despite initial claims that this species was taxonomically allied to the Red-billed Partridge *Arborophila rubrirostris* of Sumatra (Delacour *et al.* 1928), it seems closer to Bar-backed Partridge *A. brunneopectus*, a species that it appears to replace at low elevations in southern Vietnam (Eames *et al.* 1992, J. C. Eames *in litt.* 1997). (2) The type locality (Phu Rieng) was erroneously given as “38 miles east of Saigon” by Delacour (1927). (3) The species is also listed for three proposed protected areas by Wege *et al.* (1999), but this information has no basis as yet and should be discounted.