

The status and current distribution of the Crested Argus *Rheinardia ocellata nigrescens* in Peninsular Malaysia

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Summary

The Crested Argus *Rheinardia ocellata nigrescens* is endemic to Peninsular Malaysia and is threatened with extinction. It is known from elevations above 600 m and is limited to a few mountain ranges in Peninsular Malaysia. First described in 1902, this subspecies was only known from Gunung Tahan and Gunung Rabung for many years. Recent surveys have added several new sites: Gunung Mandi Angin and Gunung Gagau, Gunung Penumpu and Camp Kor. All known sites are in Taman Negara National Park.

Introduction

There are two subspecies of the Crested Argus *Rheinardia ocellata*: the nominate *ocellata* is found in Vietnam and Laos and subspecies *nigrescens* is endemic in Peninsular Malaysia. *R.o. ocellata* occurs in primary, logged and secondary evergreen forests at 100–700 m (Robson *et al.* 1993) and recently was found at 1,700–1,900 m on the Da Lat Plateau (Robson *et al.* 1994). The range within Laos is poorly known, with only two historical records near the Vietnam border. In 1994, it was found in southern Laos and may be restricted to wetter parts of the Annamitic Mountains (Cambridge Survey Team in McGowan and Garson 1995).

Subspecies *nigrescens* is only known in Peninsular Malaysia from altitudes of 600 to 1200 m and is limited to Tahan Mountain Ranges in Taman Negara (Formerly King George V) National Park (Figure 1). It is considered to be threatened with extinction (McGowan and Garson 1995). This paper reviews the knowledge about the localities from which it is historically recorded and describes surveys undertaken to clarify its current distribution. Information on former distribution was obtained from Rothschild (1902), Robinson (1908), Wells (1975) and Davison (1978, 1979 and 1981).

Localities known before 1980

The Crested Argus was discovered in Peninsular Malaysia by John Waterstradt and his collectors who sent two males and a female to the Zoological Museum at Tring, U.K. These were described as a new species (later accepted as a subspecies, *R.o. nigrescens*) by Rothschild (1902) who gave the locality as Ulu Pahang, a vague term that does not allow the exact collection site to be identified. Later the

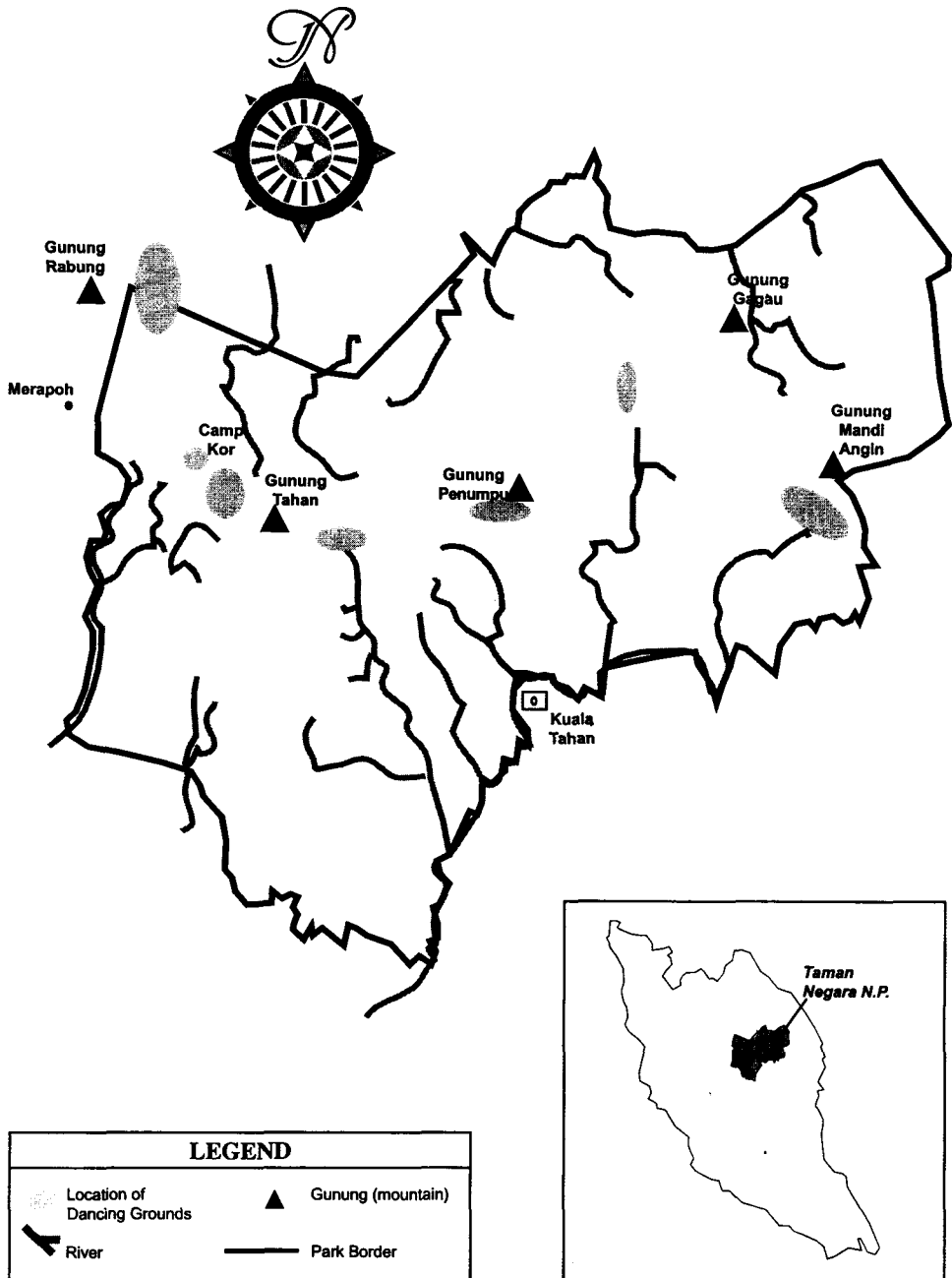


Figure 1: Areas where Crested Argus *Rheinardia ocellata nigrescens* were found in Taman Negara National Park, Peninsular Malaysia.

same year Hartert (1902) described all of Waterstradt's collection and indicated that it was primarily made on Gunung Tahan, although other specimens described were collected in Pahang State: indeed Waterstradt claimed to be the first European to ascend the mountain. Subsequently, Robinson (1908) reported that two specimens were collected on Gunung Tahan in 1905 and claimed to have heard the bird in Kuala Lipis, and in Batang Padang in the Main Range.

Davison (1980) reviewed the circumstances surrounding the description of the subspecies and the subsequent assumption by Robinson that Gunung Benom was the type locality. This mountain lies to the south-west of Gunung Tahan and Taman Negara from where all other reliable records have been made. He rejected Gunung Benom, Kuala Lipis and Batang Padang as localities and considered that the type was probably collected on Gunung Tahan.

In 1972, the species's distinctive calls were heard and feathers were found on two dancing grounds at Gunung Rabung, Taman Negara, Kelantan (Wells 1975). In May 1976, a field study was conducted in the area. Two different calls of males were heard every day around Gunung Rabung and the number of calling males was estimated to be 15 (Davison 1978). At the same site in March 1977 calling males were heard, primaries of a male were collected at 790 m and a female was sighted at 1,080 m. Dancing grounds were found to be limited to a narrow altitude belt at 820 m to 1080 m (Davison 1978). In 1980, eight calling males were heard near Wray's Camp on the middle slope of Gunung Tahan (Davison 1981).

Localities discovered since 1980

The Department of Wildlife and National Parks has undertaken a series of surveys since 1984 to determine the exact range of this subspecies in Peninsular Malaysia. Although two of the sites (Gunung Gagau and Gunung Mandi Angin) were mentioned by McGowan and Garson (1995), they were omitted from an assessment of the status of partridges and pheasants in South-East Asia (McGowan and Gillman 1997; see also McGowan *et al.* 1998) because the records were not fully documented (P. McGowan verbally 1997). The opportunity is taken here, therefore, to provide full details of these records.

Methods

Areas chosen for the surveys were thought to be potential sites for the subspecies and are mainly in Taman Negara National Park. During the surveys undertaken between 1984 and 1992, records of Crested Argus were made from calls, sightings of birds, feathers and dancing grounds. Dancing grounds were measured. Work undertaken in 1992 and subsequently also included other methods of detecting birds, including call playback and carefully controlled trapping.

Results

The Crested Argus has been found on three new mountains since 1984, namely Gunung Gagau, Gunung Mandi Angin and Gunung Penumpu (Table 1). It has also been recorded at an additional site on Gunung Tahan, namely at Camp Koh

Table 1. Records of the Crested Argus in Peninsular Malaysia since 1984.

Place	Year	Observer ¹	Type of Record	Altitude
Gunung Gagau, Taman Negara	1984	Mohd. Khan	Tail feather, dancing ground	—
Sungai Luis	April 1988	Jasmi Abdul	Tail feather	1,200 m
Gunung Rabung, Kelantan	September 1988	DWNP	Sighting (four adult males, one young male and one female)	680 to 1,070 m
Wray's Camp, Taman Negara	1989	Zainuddin Baatu	Call	890 m
Wray's Camp, Taman Negara	September 1989	Jamalun Nasir	Sighting (one male)	800 m
Gunung Rabung, Kelantan	September 1989	DWNP	Sighting (two males) Five dancing grounds	815 and 820 m 710, 760, 800, 810 and 1,134 m
Gunung Mandi Angin, Taman Negara	May 1991	Mohd. Noor Ariri, Mohd. Noor	Tail feather Two dancing grounds	880 m 880 and 900 m
Sungai Sepia to Camp Gajah, Gunung Mandi Angin, Taman Negara	February 1992	Ismail Mamat Ibrahim Istar	Four dancing grounds, tail feather Sighting (one male)	940 m, 1,150 m, 1,000 m, 940 m 890 m
Gunung Rabung, Kelantan	May 1992	Mohd. Noor Ariri	Two dancing grounds Sighting (male and female) Response to playback Trapped	890 m 957 m 930 m 877 m
Camp Kor, Gunung Tahan, Taman Negara	August 1996	Abd. Rahman	Sighting (one male) Dancing ground	840 m 840 m
Camp Kor, Gunung Tahan, Taman Negara	July 1997	Ismail Mamat	Trapped, breast feather, dancing ground	All at 840 m
Gunung Penumpu, Taman Negara	July 1997	Maarof Hasan	Sighting (female) Two dancing grounds	880 m 890 m

¹ DWNP, Bird Unit of the Department of Wildlife and National Parks of Peninsular Malaysia. All named individuals are members of the Department.

on the northern ascent ridge from Merapoh on the western edge of Taman Negara. All of these records were made in tall forest where trees reached as high as 30 m with a sparse understorey.

In May 1992, four males responded to playback of male calls on Gunung Rabung (on the Kelantan side above Mentara Estate) at 930 m. In the same month, a total 65 traps were set and an adult male was trapped at 877 m and released once body measurements were made. In July 1997, an adult male was trapped at 840 m at Camp Kor and later released once measurements were made.

Discussion

Distribution

Little is known about the ecology of the Crested Argus in Peninsular Malaysia. The surveys described here extend the range of the subspecies beyond the western third of Taman Negara National Park. However, all of these recent records are within or very close to the park's boundaries. It seems likely that the entire distribution of this subspecies is, in fact, restricted to Taman Negara, the only minor exceptions being the outer flanks of mountains whose peaks form the park boundary. There is no reason to believe that the subspecies occurs in areas beyond these mountains, indicating that this park is crucial to its survival. Therefore, a full survey of the main areas of mountain in the park should be conducted to fully understand its distribution. Regular checks of known areas would make sure that it is still surviving and counts of males could be conducted every two or three years to assess numbers and distribution.

Habitat Use

The Crested Argus was previously known from a narrow altitude range in the transition between hill dipterocarp forest and the lower montane forest (Davison 1978). This picture is still broadly true. One feather was found in stunted forest on Gunung Rabung where the tallest tree reached 12 m, with an understorey of bamboo up to 1 m high ferns with *Dipteris conjugata* and *Matonia pectinata*. All the other records were in tall forest (Davison 1978). However the records reported in this paper were also made in tall forest.

Current Threats

Taman Negara with an area of 4343 km² is protected under The Taman Negara Enactments of 1937/38. However, habitat destruction of areas bordering Taman Negara on the Kelantan State side near Gunung Rabung, remain the biggest threat to the Crested Argus within its limited distribution. This has opened up more areas around the known distribution and when the forest areas are opened up for logging and agriculture the forest is more accessible to poachers. Although these poachers may be looking for other wildlife species, it is likely that they will also trap large ground-dwelling species such as pheasants. Further south, human activities in the Gunung Tahan area are increasing at a very rapid rate as access is possible via both Kuala Tahan and Merapoh: over 1000 trekkers a year scale

Gunung Tahan through these entry points. It is possible that the increased number of people will result in birds avoiding areas close to the main trail. Furthermore, if it is thought that additional paths are required to meet increased demand, more habitat will become disturbed.

Acknowledgments

Geoffrey Davison and Will Duckworth kindly made helpful comments on the manuscript. F. E. Warr at The Natural History Museum, Tring, U.K. kindly helped with obtaining older references. Phil McGowan made many helpful comments on the manuscript. Lori Markiton assisted with the figure.

References

- Davison, G. W. H. (1978) Studies of the Crested Argus II. Gunung Rabung, 1976. *J. World Pheasant Assoc.* 3: 46–53.
- Davison, G. W. H. (1979) Studies of the Crested Argus III. Gunung Rabung, 1977. *J. World Pheasant Assoc.* 3: 46–53.
- Davison, G. W. H. (1981) The type locality of *Rheinardia ocellata nigrescens*. *Bull. B.O.C.* 199 (2) 141–143.
- Hartert, E. (1902) On birds from Pahang, eastern Malay Peninsula. *Nov. Zool.* 9: 537–580.
- McGowan, P. and Gillman, M. (1997) Assessment of the conservation status of partridges and pheasants in South-East Asia. *Biodivers. and Conserv.* 6: 1321–1337.
- McGowan, P., Gillman, M. and Dodd, M. (1998) Assessing the status of poorly known species: lessons from partridges and pheasants of Southeast Asia. *Biol. Cons.* 83: 1–7.
- Robinson, H. C. (1908) Report on the Gunung Tahan Expedition. *J. Fed. Malay St. Mus.* 3: 1–90
- Robson, C. R., Eames, J. C., Nguyen Cu and Truong Van La (1993) Further records of birds of Vietnam. *Forktail* 8: 25–52.
- Robson, C. R., Eames, J. C., Nguyen Cu and Truong Van La (1994) Birds recorded during the third BirdLife/Forest Birds Working Group expedition in Vietnam. *Forktail* 9: 89–119.
- Rothschild, W. (1902) Untitled remarks in *Bull B.O.C.* 12: 55–56.
- Wells, D. R. (1975) Bird report, 1972 and 1973. *Malay. Nat. J.* 28: 186–213.

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