



**CONVENTION ON
MIGRATORY
SPECIES**

UNEP/CMS/COP13/Doc. 27.1.5

25 September 2019

Original: English

13th MEETING OF THE CONFERENCE OF THE PARTIES
Gandhinagar, India, 17 - 22 February 2020
Agenda Item 27.1

**PROPOSAL FOR THE INCLUSION OF
THE BENGAL FLORICAN (*Houbaropsis bengalensis bengalensis*)
IN APPENDIX I OF THE CONVENTION**

Summary:

The Government of the Republic of India has submitted the attached proposal for the inclusion of the Bengal Florican (*Houbaropsis bengalensis bengalensis*) in Appendix I of CMS.

PROPOSAL FOR INCLUSION IN CMS APPENDICES

A. PROPOSAL

To include the Bengal Florican *Houbaropsis bengalensis bengalensis* in the Appendix I of the Convention on Migratory Species

B. PROPONENT

India (Ministry of Environment, Forest and Climate Change)

C. SUPPORTING STATEMENT

The Bengal Florican *Houbaropsis bengalensis bengalensis*, an iconic, critically endangered species of topmost conservation priority, exhibits transboundary movements, and its migration exposes it to threats such as land use changes, collision with power transmission line at boundary area of India-Nepal and probable power-line collisions. Inclusion of the species in Appendix I of CMS will aid in transboundary conservation efforts facilitated by International conservation bodies and existing international laws and agreement.

1. Taxonomy

1.1 Class - *Aves*

1.2 Order - *Otidiformes*

1.3 Family - *Otididae*

1.4 Genus, species or subspecies, including author and year -Bengal Florican *Houbaropsis bengalensis*(J.F. Gmelin, 1789)

1.5 Scientific synonyms -*Eupodotis bengalensis*

1.6 Common name(s), in all applicable languages used by the Convention Charas, Charg (Urdu, Hindi), Ulu Moira (Assamese) and Dao Triling (Bodo).

2. Overview

The Bengal Florican is a Critically Endangered bird, with the South Asian subspecies *H.b.bengalensis* restricted to the terai and duars grassland regions of the Indo-Gangetic and Brahmaputra floodplains. This is the highest of IUCN's categories of endangerment, and is only applied to species closest to extinction. Populations of this species have declined mainly as a result of habitat loss, habitat degradation and hunting. In the Indian subcontinent, the species no longer breeds outside PAs except few pockets in Brahmaputra flood plains (BirdLife International 2001).

3 Migrations

3.1 Kinds of movement, distance, the cyclical and predicable nature of the migration

Recent telemetry studies in India and Nepal indicate that birds disperse from grassland reserves annually during the flooding, probably because the grass grows too tall and

dense. All three fatalities among 11 satellite-tagged birds occurred between mid-August and mid-September when birds left protected breeding areas for adjacent degraded grassland and farmland near human settlements (DNPWC 2016, Jha et al. 2018), suggesting that they were victims of hunting or predation, and that threat levels in non-breeding habitats are high and probably the critical/limiting factor for the species' survival.

3.2 Proportion of the population migrating, and why that is a significant proportion

Based on telemetry studies, birds from Nepal and parts of Uttar Pradesh share non breeding areas in floodplains of rivers Sharda, Koshi, Narayani and Rapti. Satellite-tracking studies in India and Nepal have revealed that birds (both males and females) occupy non-breeding areas located 5-80km from breeding sites outside Protected Areas and near large rivers in floodplain-agriscapes with a mosaic of groundcover types including grassland (under Reserved/Protected Forest categories), scrub and traditional low intensity crop-fields.

4. Biological data (other than migration)

The Bengal Florican is omnivorous and known to feed on various seeds, grain, tender shoots of grass and insects like grasshoppers, ants, beetles and even frogs. The breeding season of Bengal Florican begins from February-March onward and lasts until the end of June. During the breeding season, male birds establish individual territories in open areas of short grasslands. The adult males show a characteristic flight display within the territory to attract females for mating in an exploded lek breeding system. However, the male strongly defends its territories from other intruder males. Apart from mating, the male takes no further part in raising the next generation. The female does not construct a proper nest, rather they just lay eggs after scraping the bare ground. In one clutch a Bengal Florican lays one to two eggs. Incubation period, chick survival, post-fledging dispersal are not known.

4.1 Distribution (current and historical)

Globally it is distributed in two isolated and disjunct populations recognized as distinct subspecies- one in South East Asia in Cambodia (*H.b.blandini*) and the other in South Asia in India and Nepal (*H.b.bengalensis*). The global population of Bengal Florican is estimated at <1000 mature individuals (BirdLife International 2016). It is already locally extinct from Bangladesh and perhaps from Vietnam as well. The Bengal Florican inhabits patches of alluvial grasslands (terai) from Uttar Pradesh to the foothills and plains of Assam and Arunachal Pradesh in India.

4.2 Population (estimates and trends)

Range maps in BirdLife International (2001) indicate that the species lost about 75% of its South Asia range during the previous 150 years. Particularly indigenous people began ploughing and planting up in the grasslands (Rahmaniet al.2017;Donaldet al. 2013). Even the few reserves where terai vegetation persists hold only small areas of

suitable Bengal Florican habitat, and bird numbers are small and mostly declining—in Nepal’s three major grassland parks, Shuklaphanta, Bardia and Chitwan, male numbers fell from 29–41 in 1982 to 14–15 in 2007 (Donald et al. 2013). In Dudhwa National Park and Kishanpur Wildlife Sanctuary, Rahmani (2001) found 24 adult territorial males, while in 2014, only eight territorial males were seen in Dudhwa NP, and none in Kishanpur WLS. Similar declining trends were seen in Manas NP in Assam, while in Kaziranga NP the species appear to be holding on (Rahmaniet al. 2017). A good population of nearly 30 adult territorial males was found in D’Ering WLS in 2015-2016 (Rahmani et al. 2016). In South Asia overall, surveys in various areas suggest a significant decline, with estimated population of 225-249 in 2017 (Collar et al 2017).

4.3 Habitat (short description and trends)

Bengal Florican inhabits lowland dry, or seasonally inundated, natural and semi-natural grasslands, often interspersed with scattered scrub or patchy open forest (Inskipp and Inskipp 1983, Narayan and Rosalind 1990a, Lahkar 2008), usually in lowlands below 300 m asl (Baralet al. 1996, Choudhury 1996). It occurs in undisturbed grassland patches of *terai* and Brahmaputra valley that extend along the southern edge of the Himalayas in India and Nepal (Rahmaniet al. 2017). The region is composed of early successional riverine plant communities on alluvium deposited by changing water courses. The Bengal Florican occupies subtly different habitats during the breeding and non-breeding seasons. During the breeding season it inhabits floodplain alluvial grasslands (Collar et al. 2018). In protected areas in India and Nepal these are dominated by grasses such as *Imperata cylindrica*, *Saccharum spontaneum*, *Eriarthus munja*, *Vetiveria zizanioides*, *Narengaporphyrocoma*, *Cymbopogon martini* and *Sclerostachya fusca* (in no particular order) (Jha et al. 2018). Suitable breeding habitat in India and Nepal is now largely confined to protected areas (with the notable exception of birds that breed on the Brahmaputra River *chaporis*), however even here inappropriate management regimes, succession and hydrological processes have led to loss of habitat (Collar et al. 2017).

4.4 Biological characteristics

The Bengal Florican is a medium-sized ground-dwelling bird, about 60 cm tall while standing. It shows distinct sexual dimorphism. The adult males have black head, neck and body with white wings which is distinctly visible when in flight. However, when standing the white wings are seen as a thin patch on either side of the body. The back is mottled with buff-brown. During the breeding season males have a thick cluster of feathers hanging under the breast. On the other hand, the female and immature male is dull brown and mottled on the back. The females are slightly larger in size than the male, unlike that in other bustards except for the Lesser Florican *Sypheotides indicus*. Females are hard to locate and are cryptically coloured. Consequently, females are less frequently seen than the conspicuous territorial males during the breeding season. The Bengal Florican is omnivorous and known to feed on various seeds, grain, tender shoots of grass and insects like grasshoppers, ants, beetles and even frogs.

4.5 Role of the taxon in its ecosystem

The alluvial grassland of Assam is a unique habitat of Bengal Florican and supports many globally threatened species like Indian Rhinoceros (*Rhinoceros unicornis*) and Pygmy Hog (*Porcupus salwa*). The survival of these threatened species' is ensured by the presence of grassland and the protected areas of the Himalayan foothills in the north bank of the river Brahmaputra in Assam has always been the stronghold for the species in India.

5. Conservation status and threats

5.1 IUCN Red List Assessment (if available)

Bengal Florican is Critically Endangered (BirdLife International, 2018). Populations have declined as a result of habitat loss, hunting and the species no longer breeds outside Protected Areas in the Indian subcontinent, except in a few areas of Assam(Rahmaniet al. 2017)).

5.2 Equivalent information relevant to conservation status assessment

The species has been listed under Schedule I of the Indian Wild Life (Protection) Act 1972 and protected since Independence. It is listed under CITES Appendix I, of which India is a signatory. Studies have shown that their conservation is compatible with low-intensity traditional human use of the landscape (Gray *et al.* 2007). Hence, the species has been identified for recovery programme under the Integrated Development of Wildlife Habitats (Centrally Sponsored Scheme) of the Ministry of Environment and Forests, Government of India, 2009 (Duttaet al.2013).

5.3 Threats to the population (factors, intensity)

Exploitation by human, especially in the breeding season, was the major cause of species' decline throughout its range. Rampant sports hunting during the British rule (Pollok 1879) initiated the decline by 1920 (Inglis *et al.* 1920). Birds were easily shot and were "among the best of table-birds" (Baker 1922- 1930). Even in the 1980s hunting persisted in many areas (Narayan and Rosalind 1990a) and several instances of birds being shot, snared or killed were reported from Assam and Arunachal Pradesh (Choudhury 1996, 1997, 2000). The Sahabad- Sayedabad tea estates in Darjeeling (West Bengal) supported a small population which went extinct in the hands of local people who openly admitted killing birds and robbing their nests (Narayan and Rosalind 1990b). Historically, terai grasslands were maintained by flooding and changing river courses and grazing by large wild herbivores. Alteration of rivers led to the emergence of new areas that were colonized by grass and shrubs, whilst older grasslands and forests were eroded or submerged. Recently, terai rivers have been tamed by hydro-electric and irrigation projects, while wild herbivore populations have been dramatically reduced as human impact has increased radically. Newly emerging areas are being rapidly converted to agriculture preventing colonization by grasses, and existing fertile alluvial grasslands are also being cultivated. These recent developments

have disrupted the historical ecological processes that were critical for maintaining the species' habitat viability. Further, recent studies show that threats in non-breeding habitats are high and perhaps the critical/limiting factor for the species' persistence. But further research is required to prioritize these threats.

5.4 Threats connected especially with migrations

Mortality associated with migration to non-breeding habitats has been demonstrated for the Indo-Nepal population (Jha et al. 2018). Although there is a dearth of evidence on power-line mortality for the Indo-Nepal population, this is a demonstrated threat for the Cambodian population (Mahood et al. 2016). Hence, powerline mortality during movement/migration can be a threat for the Indo-Nepal population too. In many areas nest destruction through trampling by livestock greatly increased during the 1990's (Choudhury 1996; Narayan 1992). While birds might adapt to breed in certain crop-fields, the chances of nest destruction during the weeding and harvesting periods is very high (Ali *et al.* 1986). Accidental nest destruction also occurs due to human activities in the periphery of PAs, for example collection of ripe *Grewiasapida* fruits in Uttar Pradesh (Rahmani, 2001).

5.5 National and international utilization

Hunting for food, game and occasional collection of eggs

6. Protection status and species management

6.1 National protection status

The species is listed as Schedule I in Wild Life (Protection) Act, 1972 – the highest level of protection in India.

6.2 International protection status

The species is enlisted in CITES Appendix I.

6.3 Management measures

Threats such as land-use changes, stray dogs, and power lines are increasing in Bengal Florican habitats. However, reductions in hunting have been achieved, and that practitioners have a good understanding of how to manage threats relating to habitat conversion. Although some sites (e.g. Kaziranga, Manas) have achieved notable reductions in threats, much more remains to be done.

6.4 Habitat conservation

Grassland Ecology: Long-term study on the impact of annual grass burning through controlled and experimental grass plots to study the habitat utilization of Bengal Florican. Bengal Florican conservation should be formally included as an integral part of habitat management activities of Dudhwa, Pilibhit, Manas, Kaziranga, Orang, D'Ering and other reserves. Temporal and spatial movement of this bird through satellite tracking of at least 10 birds each at Dudhwa, Kaziranga, Manas and D'Ering reserves.

Special attention to tag female Bengal Floricans with satellite transmitters to acquire knowledge about nesting ecology and survival of chicks. Strict control on poaching and trapping of Bengal Florican throughout its range, particularly when they are outside PAs. General publicity amongst local communities about the importance of Bengal Florican as an indicator species of tall wet grasslands of the terai and Brahmaputra floodplains. Development of popular and technical literature on Bengal Florican in Hindi, Assamese, Bengali and English. Drafting and implementation of state-specific Bengal Florican Species Recovery Plans.

6.5 Population monitoring

Complete population censuses are used for population estimation in Cambodia (Gray et al. 2009; Packman et al. 2013). Six sites that together support c.90% of the total population have been monitored almost annually since 2012 since 2005 (Mahood et al. In press). Customized protocol and consistent monitoring methods have been maintained across sites and years. Development of systematic and robust monitoring protocol is necessary that needs to be implemented at the sub-species' range scale periodically (2-3 years) and preferably in collaboration/coordination with Nepal.

7. Effects of the proposed amendment

7.1 Anticipated benefits of the amendment

The proposed amendment will help in better understanding about transboundary movement of the birds and protection of the species against hunting and other human induced mortality risks.

7.2 Potential risks of the amendment

There is no potential risk of the amendment

7.3 Intention of the proponent concerning development of an Agreement or Concerted Action

An Agreement between two range countries to protect the bird from hunting, power-line collision and habitat loss agents will aide in the species' recovery as these factors are unsustainable and require concerted transboundary actions.

8. Range States

India and Nepal

9. Consultations

Bird Conservation Nepal is a BirdLife Partner and work closely with BNHS, which is also BirdLife International Partner in India. Further transboundary consultation is yet to be undertaken. A similar proposal has been developed for the South-east Asian population by WCS-Cambodia that will further aide in the species conservation.

10. Additional remarks

11. References

Ali, S., J. C. Daniel and A.R. Rahmani (1986). The Floricans: Annual Report 1, 1984–85 [of project entitled “Study of the ecology of certain endangered species of wildlife and their habitats”]. Bombay: Bombay Natural History Society.

Baker, E.C.S. (1922-1930): The fauna of British India, including Ceylon and Burma, 2 edn. Taylor and Francis, London.

Baral, H. S., C. Inskipp, T. P. Inskipp, and U. R. Regmi (1996). Threatened Birds of Nepal. BCN & DNPWC, Kathmandu, Nepal.

BirdLife International (2001). Threatened birds of Asia: the Birdlife International Red Data Book. BirdLife International, Cambridge.

BirdLife International (2018). *Houbaropsis bengalensis*. The IUCN Red List of Threatened Species 2018: e.T22692015A130184896. <http://dx.doi.org/10.2305/IUCN.UK.2018-2.RLTS.T22692015A130184896.en>. Downloaded on 16 April 2019.

Choudhury, A. (1996). Survey of the White-winged Duck and the Bengal Florican in Tinsukia District and adjacent areas of Assam and Arunachal Pradesh. Guwahati: The Rhino Foundation for Nature in North-East India.

Choudhury, A., (1997). The status of birds of Dibru-Saikhowa Sanctuary, Assam, India. Oriental Bird Club Bulletin 25, 27-31.

Choudhury, A., (2000). The birds of Assam. Gibbon Books and World Wide Fund for Nature - India, Gauhati.

DNPWC (2016). Annual Report (July 2015-June 2016). Nepal: Department of National Parks and Wildlife Conservation.

Donald, P. F., N. J. Collar, S. J. Marsden and D. J. Pain (2013). Facing extinction: the world’s rarest birds and the race to save them. 2nd edn. Helm, London.

Dutta, S., Rahmani, A., Gautam, P., Kasambe, R., Narwade, S., Narayan, G., and Jhala. Y. (2013). Guidelines for State Action Plan for Resident Bustards' Recovery Programme. The Ministry of Environment and Forests, Government of India. New Delhi

Gray, T. N. E., H. Chamnan, R. Borey, N. J. Collar and P. M. Dolman (2007). Habitat preferences of a globally threatened bustard provide support for community-based conservation in Cambodia. Biological Conservation 138: 341- 350.

Gray TNE, Collar NJ, Davidson PJ, Dolman PM, Evans TD, Fox HN, Chamnan H, Borey R, Hout SK, Van Zalinge RN. (2009). Distribution, status and conservation of the Bengal Florican *Houbaropsis bengalensis* in Cambodia. *Bird Conservation International* 19:1-14.

Inglis, C. M., W. L. Travers, H. V. O'Donel and E. O. Shebbeare (1920). A tentative list of the vertebrates of Jalpaiguri district, Bengal. *Birds. Journal of Bombay Natural History Society* 26: 988-999; 27: 151-158.

Inskipp, C. and T. Inskipp (1983). Results of a preliminary survey of Bengal Florican *Houbaropsis bengalensis* in Nepal and India, 1982. Cambridge, U. K. International Council of Bird Preservation (Study Report 2).

Jha, R.R.S., J. J. Thakuri, A. R. Rahmani, M. Dhakal, N. Khongsai, N. M. B. Pradhan, N. Shinde, B. K. Chauhan, R. K. Talegaonkar, I. P. Barber, G. M. Buchanan, T. H. Galligan and P. F. Donald. (2018). Distribution, movements, and survival of the critically endangered Bengal Florican *Houbaropsis bengalensis* in India and Nepal. *Journal of Ornithology* 159 (3):851-866. <https://doi.org/10.1007/s10336-018-1552-1>

Lahkar, P. B. (2008). Ecology and Management of Grassland with special reference to Grass and Birds communities in Manas National Park. PhD Thesis. Gauhati University, 22-23pp.

Mahood SP, Silva JP, Dolman PM, Burnside RJ. (2016). Proposed power transmission lines in Cambodia constitute a significant new threat to the largest population of the Critically Endangered Bengal florican *Houbaropsis bengalensis*. *Oryx* 52:147-155.

Mahood SP, Hong C, Son V, T. GS. (In press). Catastrophic ongoing decline in Cambodia's Bengal Florican *Houbaropsis bengalensis* population. *Bird Conservation International*.

Narayan, G. (1992): Ecology, distribution and conservation of the Bengal Florican *Houbaropsis bengalensis* (Gmelin) in India. University of Bombay.

Narayan, G. and L. Rosalind (1990). An introduction to the Bengal Florican. Pp. 9-16 in Status and ecology of the Lesser and Bengal Floricans, with reports on Jerdon's Courser and Mountain Quail: final report. Bombay: Bombay Natural History Society.

Packman CE, Showler DA, Collar NJ, Virak S, Mahood SP, Handschuh M, Evans TD, Chamnan H, Dolman PM. (2013). Rapid decline of the largest remaining population of Bengal Florican *Houbaropsis bengalensis* and recommendations for its conservation. *Bird Conservation International* 24:429-437.

Pollok, F. W. T. (1879). Sport in British Burmah, Assam, and the Cassyah and Jyntiah hills. Chapman and Hall, London

Rahmani, A.R., Narayan, G., Rosalind, L., Sankaran, R., and Ganguli-Lachungpa, U. (1990). Status of the Bengal Florican in India. *Journal of the Bombay Natural History Society*, 88: 349–375.

Rahmani, A. R. (2001) Status of the Bengal Florican *Houbaropsis bengalensis* in Uttar Pradesh, India. Bombay: Bombay Natural History Society.

Rahmani, A.R., Rahman, A., Imran, M., Sagwan, T., and Khongsai, N. (2016). D'Ering Memorial Wildlife Sanctuary: Report of Summer Survey in 2016. Bombay Natural History Society, Mumbai. Pp 46.

Rahmani, A.R., Jha, R.R.S., Khongsai, N., Shinde, N., Talegaonkar, R. and Kalra, M. (2017): Studying movement pattern and dispersal of the Bengal Florican (*Houbaropsis bengalensis*): a Satellite Telemetry Pilot Project. Final Report 2013-2016. Bombay Natural History Society, Mumbai. Pp. 157.

Sibley, C. G. and J. E. Ahlquist (1990). Phylogeny and classification of birds. Yale Univ. Press, New Haven, Connecticut.