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The Great Indian Bustard in semi-arid and grassland habitats



Indicator species:

The bustard is an indicator flagship species of undisturbed grasslands.

Habitat:

Arid and semi-arid flat or gently undulating terrain, grasslands having varying height of grass, low dunes; scattered low bushes and short scrub; areas with low intensity cultivation and low grazing pressure.

Habit:

Diurnal. Singly, in pairs or small parties with droves as large as 30 birds recorded in the past.

Distribution:

Indian Subcontinent. In India, it is presently in Rajasthan, Maharashtra, Karnataka and Gujarat. A small population exists in Pakistan.

Status:

Resident. Shows seasonal nomadic migration, now understood by satellite telemetry.



A male Great Indian Bustard in semi-desert habitat in Rajasthan. Bustards are well adapted to survive in draught prone regions.



GIB, WLS at Nannaj, is in the biogeographic zone of the 'Southern Tropical Thorn Forest,' where the bustards forage, display, nest and roost till date.

Food:

Omnivorous. Grain; shoots of crop like sorghum, mustard, barley; fruits and drupes; insects (locusts, grasshoppers, beetles); reptiles (lizards and snakes); amphibians in monsoon; small birds and eggs; scorpions, centipedes, etc. are consumed.



Bustards forage in open grasslands



Bustards drink water either squatting in a plantigrade manner or by bending over



Flight:



Breast band of the male is prominent; Female has a conspicuous white eye brow



Side view of the head and beak



Front view of the head shows binocular vision



The hind toe is absent; sole pads are thick



Due to its heavy weight the bustard often takes a few steps before taking off



Outer aspect of the wing of a female



Female in typical neck extension posture; Note vermiculation on the neck

Key Features:

- Male larger, black crown with crest, gorget across breast.
- Female smaller, usually lacks breast band; has a prominent eye brow.
- Sandy buff brown above.
- Neck and under-parts of male white; female vermiculated with black.
- Whitish patches near tips of broad wings
- Typically neck stretched in flight
- Short tail
- Iris: yellow, hazel
- Legs: yellowish cream to greenish.
- Hind toe absent.
- **Chick:** Patterned with mottled ginger, whitish and dark down; whitish below; grey legs.
- **Young :** Buff above with dark marks on head and back; buff-white below.



Behavior:



A bustard is comfortable amidst grazing cattle. Dung beetles constitute bustards diet



A flock with one male and a harem of three females



Male taking sand bath

Etymology:

Ardea (L.) and *otis* (Greek), a heron-bustard; *niger* (L.) black and *caput* (L.) head, black head. (Pande, Satish (2009).



Australian Bustard *Ardeotis australis*

Related species: Macqueen's Bustard

Chlamydotis macqueenii.

Vulnerable; winter visitor to few parts of India

Cultural aspects:

Features on the Indian postal stamp. A temple of the bustard is built in Rajasthan.



Human interference and conversion of grasslands to cropland reduce the already depleted bustard habitats. Wind farms near bustard habitat can pose threat of collision

THREATS:

This species has undergone a rapid decline (more than 82% in less than 50 years) and is on the brink of extinction. Threats include habitat loss and degradation, encroachment, plantation projects in grasslands, change in land use pattern by converting semi-arid habitats to cropland by providing irrigation, hunting, road development, wind turbines, mining, changing crop pattern and electrocution. Predation of eggs or chicks by crow, cat, dog or wolf.



Hunting, which was once rampant, took a toll on bustard populations



Great Indian Bustard *Ardeotis nigriceps* (Vigors, 1831).

Type locality: Himalayas – Foothills of NW India.

Maldhok (Marathi); **Gadad** (Kutch); **Ghorar** (Gujarati); **Heri hikki** (Kannada); **Bat meka** (Telugu); **Kanal myle** (Tamil); **Sohan, Hookna** (Hindi); **Garumba** (Sind).

- **Size:** 122 cm (M); 92 cm (F).
- **Weight:** 8-14.5kg(M); 3.5-6.75 kg(F).
- **Wing:** Male 614 – 762 mm. Female 460 – 540 mm.
- **Tarsus:** Male 190 – 208 mm.
- **Breeding season:** March – September.
- **Clutch:** 1 – 2 eggs. One clutch per year.
- **Eggs:** Oval; pale olive-brown; faint brown blotches.
- **Egg Size:** 79.4 x 59.6 mm (Baker).
- **Incubation:** By female alone.
- **Nuptial displays:** Running, posturing, mutual feeding and calling.
- **Call:** Booms, hooks, bellows, moans, barks, and alarm calls.

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Great Indian Bustard

- **Order:** Gruiformes • **Family:** Otidae.
- **Status:** Critically Endangered.

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Phenology:



Displaying male with cocked tail



A pair foraging in grassland



A pair near the nest



Egg is laid on the ground



Egg gets stained with time



Female incubating



Female with chick



Female with sub-adult



Data from **Satellite Transmitter** fixed on a male bustard in 2015 by the Forest Department (Wildlife), Pune for the first time in India, shows the bird moving between Nannaj, Maharashtra & Karnataka border



Research and Conservation:

Protected under Wild Life (Protection) Act, 1972 and included in CITES App. I. 'Project GIB' is launched by the Government of India. Community awareness programs in rural areas around GIB Protected Areas are proving useful. Task Force to monitor conservation action plans like strict habitat management, breeding monitoring, agro-environmental farming, ex-situ breeding, in-situ conservation, and telemetric studies.

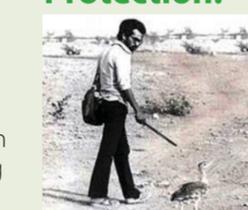


A desert patrol in Rajasthan



Observation hut- GIB WLS, Nannaj

Protection:



Ramu the orphan bustard



Ramu at Rollapadu

Nest:

The nest is on open ground, with 25 to 100 cm tall grass, in undisturbed grassland. One egg is laid per year, rarely two.

Amazing Facts:

An account from the 'Oriental Sporting Magazine' states that a hunter shot 961 bustards between 1809 and 1829. A pure albino glistening white Great Indian Bustard was reported in 1926 from Kutch (JBNHS 31:526). Male is polygynous. During display, the male, through an opening below the tongue, inflates the gular pouch enormously, to the extent that it reaches the ground. The booming call of the male reaches up to half a km.

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