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Invertebrate Conservation & Information Network of South Asia (ICINSA)

Newsletter of the

Roosting Behaviour of Greynite Ghost Dragonfly



IUCN Red List:

Global —
Least Concern (LC)

National
India — LC

Figure 1: Nocturnal Roosting Behaviour of *Bradinopyga geminata*.

Dragonfly and damselfly encompass order Odonata of Arthropoda phylum. 474 species of odonates are found in India, amongst 5,952 species of odonates of the planet (Subramanian 2014). *Bradinopyga geminata* is one of 20 species of odonates of central Rajasthan, which feeds mainly on houseflies, mosquitoes, ants, aphids, butterflies and beetles.

Insecta
[Class of Insects]

Odonata
[Order of carnivorous insects]

Libellulidae
[Family of Skimmers or Perchers]

Bradinopyga geminata
[Granite Ghost]

Species described by
Rambur in 1842

The species bears chromatic camouflage with black, white and grey colour (Andrew et al. 2008). An adult *B. geminata* has 26-29 mm wide abdomen, 33-36 mm long hind wings with grey thorax and brown eyes. The species prefers to roost on dark coloured compound walls, rock pools, boulders and other nearby places of small water collections. This species is commonly found in urban areas and breed in tanks and garden ponds. *B. geminata* prefers summer period for their roostings (Palot & Soniya 2000).

The assemblage of more than two individuals at one spot, known as roosting behaviour, is wontedly seen in animals (Wynne-Edwards 1962; DeVries et al. 1987; Miller 1989; Vulinec 1990; Bijleveld 2010), which may be nocturnal or diurnal (Mallet 1986; De Vries et al. 1987). Roosting is generally recognised

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in Coleopterans, Hemipterans, Hymenopterans, Lepidopterans (Finkbeiner 2014), some Odonates (Rau & Rau 1916; Corbet 1962; Copp & Copp 1983; Brönmark et al. 1984; DeVries et al. 1987; Joseph & Lahiri 1989; Miller 1989) and Aves (Lammertink 2011).

General aggregation of *Bradinopyga geminata* (Fraser 1936) and night roosting of Rubyspot damselfly (Switzer & Grether 2000a & 2000b) has been observed by previous researchers.

We documented the nocturnal roosting of *Bradinopyga geminata* from foothills of central Aravalli mountain ranges at Rajasthan province. The area is politically known as Ajmer, geographically located at 26.45° N Longitude and 74.64° E Latitude. The area is an ecotone zone between arid and dry deciduous zones of western India. The behaviour was observed on February 21-23, 2016 during routine night surveys. All individuals were photosensitive but motionless in the absence of light (Figure 1). They were observed for three days. Seven individuals were seen at the observational site on first day. Five and seven individuals were observed at same site on second and third days respectively.

Simultaneously we recorded all possible environmental parameters such as average temperature 18°C-23°C, average relative humidity 35%-78%, average rainfall 0 (zero) mm, wind speed 8-10 kmph, wind direction 340° from north and cloud cover 2 octa as environment parameters. The behaviour was observed on metamorphic rock surface, which is surrounded by *Prosopis juliflora* dominated undulate land (Figure 2). The possible purpose of Communal Roosting is may be to reduce predator pressure by concerned species, to find travel companions and potential mates. Selection of roosting sites depends on the spatial and temporal learning



Figure 2: Habitat of *Bradinopyga geminata*

Global Distribution

India, Sri Lanka, and Thailand

South Asia —
India and Sri Lanka

Southeast Asia —
Thailand

Greynite Ghost Dragonfly feeds mainly on houseflies, mosquitoes, ants, aphids, butterflies and beetles



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behaviour (Eason & Switzer 2006), which outlines 1 metre to 200 metres from breeding site (Corbet 1980). During roosting, all individuals sit in tight & immobile phase (Benson & Emmel 1973; DeVries et al. 1987; Miller 1989; Neubauer & Rehfeldt 1995). During current scenario, species requires special attention for monitoring the current prominence and planning new conservation strategies.

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