

Fauna of Protected Area - 31 OBSERVATIONS ON ODONATES IN SIMILIPAL BIOSPHERE RESERVE, MAYURBHANJ, NORTH ORISSA

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handle simple insect net (30cm diameter) was used for netting odonates, for reference as voucher specimen for identification and classification. Fraser (1933-36, 1957) and Mitra (2002) were referred for identification and classification of specimens.

Discussion: In all, 58 odonate species are known to inhabit Orissa, (Srivastava & Das, 1987). This study records distribution of 16 species of odonates in the Simiipal Biosphere Reserve, under 14 genera and six families, in which *Potamarcha congener* (Rambur) and *Pantala flavescens* (Fabricius) were reported earlier (ZSI, 1995). Of these odonates, family Libellulidae (6 species) is well represented followed by Coenagrionidae (5 species), Lestidae (2 species), Protoneuridae (1 species), Aeshnidae (1 species) and Calopterygidae (1 species). The odonates were observed around the meandering streams and rivers (Khairi, Sono, east & west Deo, Palpala,

The unique Similipal Biosphere Reserve (SBR), Mayurbhanj, Orissa, (Patro, 1985; Das & Das, 1997) is dominated by Sal (*Shorea robusta*). The sprawling biosphere (2750km² area) has 845.70km² as core area while the rest (1904.30km²) forms the buffer zone. The Biosphere (Fig. 1), in reality, is a compact block of hilly terrain with thick, dense semievergreen, moist to dry deciduous forests and grasslands. The availability of perennial water bodies-swamps, lakes, ponds, water holes and streams, besides varied associated vegetation and ideal undisturbed natural habitat, provide a good habitat for odonates in the reserve.

Previous notable works on odonates fauna in the state of Orissa was under taken by Laidlaw (1915), Fraser & Drover (1922), Srivastava & Das (1987) and Mitra (2000). The Zoological Survey of India Kolkata (ZSI, 1995), as part of the comprehensive faunal studies on conservation areas, reported only two species of odonates. Interestingly enough, despite its rich faunistic diversity, no systematic studies on odonates were initiated to-date, in this vast and biotically varied reserve. The present communication, an offshoot of two year field studies aimed at profiling alpha (α) or regional faunal diversity, records 16 species of odonates from the protected area.

Material and Methods: In all, five exploratory faunal surveys (January 2003 - April 2004) were undertaken to cover three major seasons (winters, summers and south-west monsoons) in 39 randomly selected sampling sites in the core / buffer areas of SBR. A long

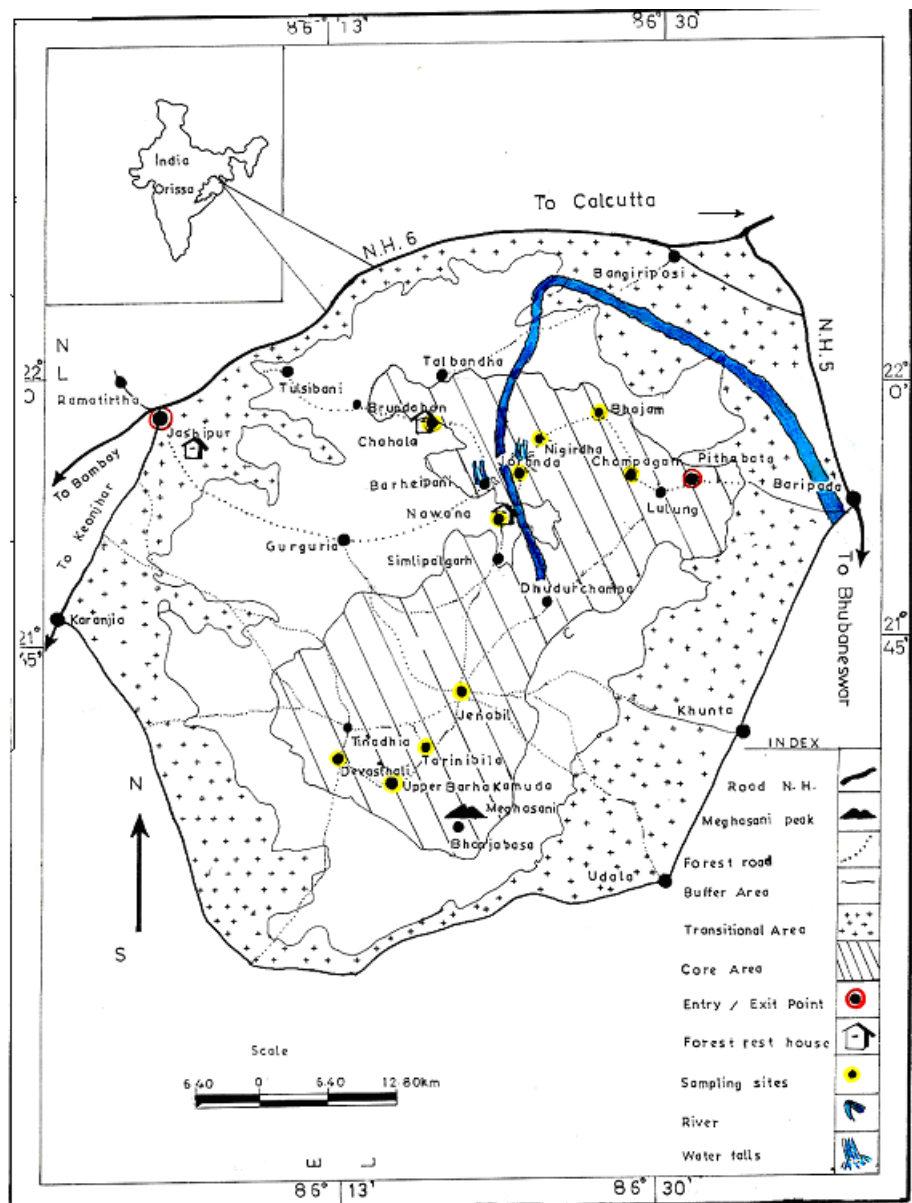


Figure.1. Topographic map of Similipal Biosphere Reserve, Mayurbhanj, Orissa showing sampling sites and others (After Forest Dept., Govt. of Orissa)

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Table 1. List of Odonates of Similipal Biosphere Reserve**Family: Libellulidae**

- **Bradinopyga geminata* (Rambur)
Branchythemis sp
 **Potamarcha obscura* (Rambur, 1842)
Potamarcha congener (Rambur)
Pantala flavescens (Fabricius, 1798)
 **Trithemis festiva* (Schneider 1936)

Family: Coenagrionidae

- **Aciaagrion hisopo hisopo*
 **Ceriagrion olivaceum* Laidlaw
 **Cercion malayanum* Selys
 **Cercion calamorum dyeri* Fraser
 **Onychargia atrocyanus* Selys

Family: Lestidae

- Lestis nodalis* Selys
 **Lestes viridulus* Rambur

Family: Protoneuridae

- **Disparoneura* sp.

Family: Aeshnidae

- **Anax imperator* Leach

Family: Calopterygidae

- Neurobasis chinensis chinensis* (Linnaeus)

* - first time reported from the Similipal Biosphere Reserve.

Budhabalanga and Salandi) near Pithabata, Lulung, Namtidar, Chahala, Gurguria, Nawana, Jenabill, Patbill, Mandadhar, Kabatghai and Upper Baraha Kamuda in protected area. Gurguria and Pithabata sampling sites (buffer area) exhibit higher odonata diversity (equitability or evenness in distribution), perhaps due to lush open forests, agricultural strips of lands, and streams and river around. A detailed systematic list of the odonates are presented in Table 1.

A more systematic faunal survey and collection from the sprawling biosphere is bound to yield higher species diversity of odonates in the reserve, especially in undisturbed habitats falling in the core areas of SBR.

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