Fauna of Protected Area - 31

# OBSERVATIONS ON ODONATES IN SIMILIPAL BIOSPHERE RESERVE, MAYURBHANJ, NORTH ORISSA

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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 ($\alpha$) 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 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 Libelluiidae (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,

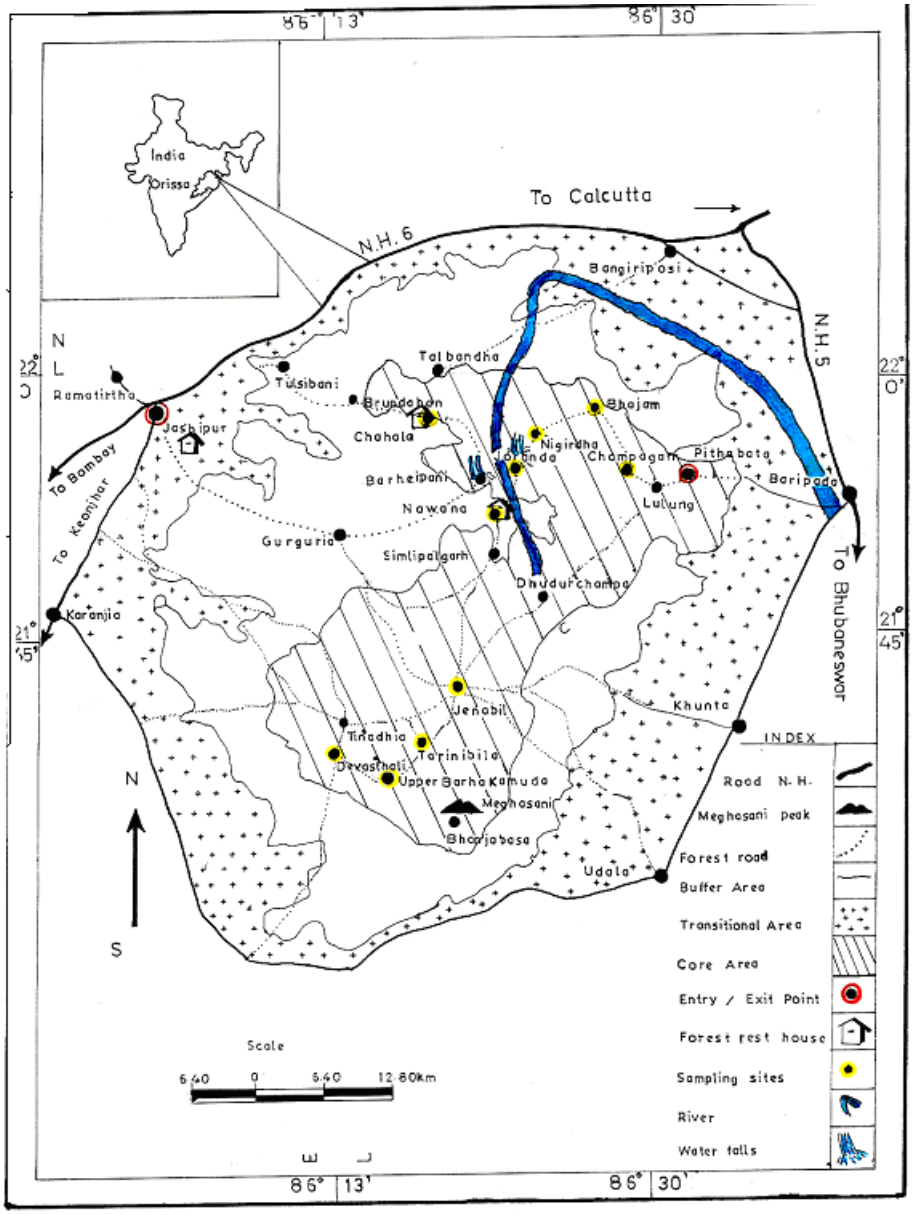


***Figure.1. Topographic map of Similipal Biosphere Reserve, Mayurbhanj, Orissa showing sampling sites and others (After Forest Dept., Govt. of Orissa)***

*Manuscript 1601; © ZOO; Date of publication 21 October 2007*
*Received 24 July 2006; Revised received 16 August 2007;*
*Finally accepted 09 October 2007*

***Table 1. List of Odonates of Similipal Biosphere Reserve***

**Family: Libellulidae**
**Bradinopyga geminata* (Ramber)
*Branchythemis* sp
**Potamarcha obscura* (Rambur, 1842)
*Potamarcha congener* (Rambur)
*Pantala flavescens* (Fabricius, 1798)
**Trithemis festiva* (Schneider1936)

**Family: Coenagrionidae**
**Aciagrion hisopo hisopa*
**Ceriagrion olivaceum* Laidlaw
**Cercion malayanum* Selys
**Cercion calamorum dyeri Fraser*
**Onychargia atrocyana* Selys

**Family: Lestidae**
*Lestis nodalis* Selys
**Lestes viridulus* Ramber

**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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## Acknowledgements

The authors express their gratitude to Dr. J.R.B. Alfred, Sci. H and Director ZSI, Kolkata and Dr. Ramakrishna, Jt. Director, for the opportunity and facilities; to the P.C.C.F /Chief Wildlife Warden, Forest Department, Bhubaneswar and in particular to the Conservator of Forest and Field Director and to Dr. L.A.K. Singh, Sr. Research Officer, Similipal Biosphere Reserve, Bhanjpur, Baripada for facilities and encouragement, all through the course of this project.

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