

ODONATA OF ANNAMALAI UNIVERSITY, ANNAMALAINAGAR, TAMIL NADU, INDIA

M. Asaithambi and S. Manickavasagam

Department of Entomology, Faculty of Agriculture, Annamalai University, Annamalainagar, Tamil Nadu 608002, India.

Abstract

Odonata population of Annamalainagar, Tamil Nadu was surveyed and 23 species under four families and 21 genera were collected and identified. Suborder Zygoptera is represented by the family Coenagrionidae and Anisoptera by the families Libellulidae, Aeshnidae and Gomphidae. Various genera and species collected are reported with their distribution in India.

Keywords

Odonata, Annamalai University campus, checklist, distribution.

Introduction

Odonata, the dragonflies and damselflies, constitutes a small, well-known, widely distributed, beautiful and fascinating order of insects. Their large size makes them valuable for quickly assessing water quality and for the study of insect behaviour.

Prasad and Varshney (1995) gave a check list of Indian odonates, listing three sub orders, 17 families, 139 genera and 499 species and subspecies. However Tyagi (1997) reported 500 species and subspecies after revising Fraser's works (1933, 1934, 1936) and, Prasad and Varshney (1995), but has mentioned that following Indian Independence, due to changes in the political boundaries, the number of odonate species and subspecies occurring in India reduced by 75. Sixteen species of odonata from rice fields of Coimbatore region, were reported by Gunathilagaraj *et al.* (1999). Palot and Soniya (2000) reported 14 species of odonata from Courtallam region of Tamil nadu. Earlier surveys showed that no study has been carried out so far from this region of Tamil Nadu, hence an attempt was made to study the odonata fauna of Annamalai University area.

Study area

Annamalai University is located in Chidambaram, Cuddalore District, a well known tourist place (11°24' N and 79°44' E). It lies at an altitude of about 5m. The area receives water from River Kollidam. Temperature varies from 26°C to 35°C. The average annual rainfall is 1200mm mostly from the Northeast monsoon during September to November.

Observation

Systematic Account

Order: Odonata

Suborder: Zygoptera

Super family: Coenagrionoidea

Family: Coenagrionidae

Subfamily: Pseudagrioninae

Ceriagrion coromandelianum (Fabr.)

Material examined: Two females and two males, 14.v.2000; one female and three males, 10.vi.2000.

Distribution: Found extensively throughout India.

Remarks: Very common along the grassy weeds and paddy fields

Subfamily: Ischnurinae

Ischnura delicata (Hagen)

Material examined: Two females and two males, 13.xii.1999; one female and three males, 10.v.2000.

Distribution: Uttar Pradesh, Punjab, Himachal Pradesh and Tamil Nadu.

Remarks: Very common in the grassy lands and paddy field.

Ischnura senegalensis Rambur

Material examined: One female and two males, 7.ii.2000; two females and three males, 23.ii.2001.

Distribution: Throughout India

Remarks: Common near water channels and paddy fields.

Subfamily: Agriocnemidinae

Argiocnemis rubescens Selys

Material examined: Two females and one male, 13.vi.2000; two females and three males, 28.iii.2001.

Distribution: Bengal, Meghalaya and Assam.

Remarks: Common in paddy fields.

Argiocnemis pygmaea (Rambur)

Material examined: Three females and six males, 12.vii.2000.

Distribution: Throughout India

Remarks: Very common in paddy fields.

Suborder: Anisoptera
Superfamily: Libelluloidea
Subfamily: Sympetrinae

Bradinopyga geminata (Rambur)

Material examined: Two females and three males, 12.vi.2000.

Distribution: Throughout India.

Remarks: Collected from cement and tank wall.

Brachythemis contaminata (Fabricius)

Material examined: One female and two males, 17.iii.2001; two females and three males, 25.iv.2000.

Remarks: Common near water canals.

Distribution: Throughout India.

Crocothemis servilia servilia (Drury)

Material examined: Two females and three males, 23.iii.2000; four females and two males, 4.iv.2001.

Distribution: Throughout India

Remarks: Common near water canals and Kollidum River. Thermoregulatory behaviour was also observed during the present study.

Diplacodes trivialis (Rambur)

Material examined: Four females and three males, 4.x.1999; two females and five males, 23.ii.2000; seven females and five males, 25.xii.2000; four females and three males, 14.iii.2001

Distribution: Throughout India.

Remarks: Common throughout during summer and winter.

Found both in grassy lands and paddy fields.

Rhodothemis rufa (Rambur)

Material examined: One male 25.xi.2000

Distribution: Throughout India, Nilgiris, Coorg and Bombay.

Remarks: Near weedy tank

Subfamily: Libellulinae

Orthetrum sabina sabina (Drury)

Material examined: 15 Females and 12 males, 15.ix.2000, six females and five males, 24.xi.2000.

Distribution: Throughout India.

Remarks: Specimens mostly collected from paddy field and also near water canals. Perched also on dry grasses and thorns. More abundant in this region.

Lathrecista asiatica asiatica (Fabricius)

Material examined: One male 7.x.2000.

Distribution: Throughout India

Remarks: Rare

Sub family: Trameinae

Pantala flavescens (Fabricius)

Material examined: Five females and seven males, 8.x.2000, seven females and nine males, 23.xi.2000.

Distribution: Cosmopolitan.

Remarks: Very common in paddy fields during monsoon. Many newly emerged adults were also collected from paddy fields. After sunrise, it swarms over the paddy fields.

Rhyothemis variegata variegata (Linnaeus)

Material examined: Six females and three males, 12.v.2000, four females and two males, 5.iv.2001

Distribution: Throughout India.

Remarks: Collected near weedy tanks, observed during summer.

Tramea limbata (Desjardins)

Material examined: One male, 7.v.2000.

Distribution: Throughout India

Remarks: Collected near water canals, rare.

Subfamily: Trithemistinae*Tholmyis tillarga* (Fabricius)**Material examined:** Five females and four males, 21.x.2000.**Distribution:** Throughout India**Remarks:** Most of the specimens were collected near light source during night and also from paddy fields. The brown fascia and opalescent white spot on hindwing serve to identify this species easily.*Trithemis pallidinervis* (Kirby)**Material examined:** Four females and three males, 25.iv.2000; one female and two males, 13.v.2000.**Distribution:** Throughout India**Remarks:** Collected near water canals and paddy fields. More common in summer*Potamarcha congener* (Rambur)**Material examined:** Five females and four males, 25.v.2000.**Distribution:** Throughout India**Remarks:** Commonly found near weedy ponds and marshes.

Super family: Aeshnoidea

Family: Aeshnidae

Sub family: Aeshniinae*Anax guttatus* (Burmeister)**Material examined:** Five females and five males, 14.x.2000.**Distribution:** Throughout India.**Remarks:** All specimens were collected near light source during October and November monsoon period.*Anax parthenipe* (Selys)**Material examined:** One male, 17.x.2000.**Distribution:** Throughout Deccan, Coimbatore, Coorg and West coast region of India.**Remarks:** Collected near the light sources.*Hemianax ephippiger* (Burmeister)**Material examined:** One male 25.x.2000, Annamalaiagar Hostel**Distribution:** Throughout India**Remarks:** Collected from light sources during October and November monsoon*Gyancantha hyalina* (Selys)**Material examined:** Two males, 19.x.2000**Distribution:** Cosmopolitan.**Remarks:** Collected from light source during October and November monsoon.

Superfamily: Aeshnoidea

Family: Gomphidae

Subfamily: Lindeniinae*Ictinogomphus rapax* (Rambur)**Material examined:** Two females and three males, 29.x.2000.**Distribution:** Throughout India**Remarks:** Collected near light sources.**Discussion**

A total of 23 species of Odonata under four families and 21 genera were collected and identified during the survey. Sub order Zygoptera (damselflies) is represented by the family Coenagrionidae with five species, whereas Anisoptera (dragonflies) by Libellulidae, Aeshnidae and Gomphidae representing 13, four and one species respectively.

Among the collected Libellulids, *Pantala flavescens* (Fabricius) and *Orthetrum sabina sabina* (Drury) were more abundant during monsoon season. All Aeshnids were collected near light during night, among which *Anax guttatus* (Burmeister) was more.

Gomphidae is represented by only one species *Ictinogomphus rapax* (Rambur), again collected near light at night. Among *Zygopterans ceriagrion coromandelianum* (Fabricius) was more abundant followed by *Ischnura delicata* (Hagen) and *I. senegalensis* (Rambur). *Argiocnemis pygmaea* (Rambur) and *Argiocnemis rubescens* Selys are also represented from this area.

References

- Fraser, F.C. (1933-36). *Fauna of British India including Ceylon and Burma, Odonata*, Vol. 1-3. Taylor and Francis Ltd., London.
- Gunathilagaraj, K., R.P. Soundararajan, N. Chitra and M. Swamiappan (1999). Odonata in the rice fields of Coimbatore. *Zoos' Print Journal* 14(6): 43-44.
- Palot, M.J. and V.P. Soniya (2000). Odonata from Courtallam, Tamil Nadu, southern India. *Zoos' Print Journal* 15(7): 301-303.
- Prasad, M. and R.K. Varshney (1995). A check list of the Odonata of India including data on larval studies. *Oriental Insects* 29: 385-428.
- Tyagi, B.K. (1997). Dragonfly wealth of India - extant species. A preliminary systematic list. *Zoos' Print* 12(10): 3-10.