# Fauna of Assassin Bugs (Hemiptera: Reduviidae) from Tilari Forest, Kolhapur, Maharashtra

S.V. More<sup>1</sup>, M.S. Prashant<sup>2\*</sup> and A. Singh<sup>3</sup>

<sup>1</sup>Department of Zoology, R. B. Madkholkar Mahavidyalaya, Chandgad-416509 Maharashtra, India.

<sup>2</sup> Department of Zoology, Sagar Gangotri College of Education, Ullur-577412, Sagar (Tq), Shimoga (Dt) Karnataka, India.

<sup>3</sup>Department of Zoology, Ch. Shiv Kumar Singh Smarak Mahavidyalya, Dhata, Fatehpur, U. P. India.

#### Abstract

The vegetation in the Tilari forest of Chandgad Tahsil is very rich and related to the Dajipur reserved forest of Radhanagari. However, a little information is available about biodiversity from study region, especially on the entomofauna. The assassin bugs are voracious feeders and predatory insects belonging to family Reduviidae. A total of 19 Indian species of assassin bugs under 13 genera and 7 subfamilies were recorded. The present study contains all the species of Reduviidae which were reported fist time from Tilari forest Chandgad.

Keywords: Vegetation, Tilari forest, Assassin bugs, Reduviidae, Chandgad

### **INTRODUCTION:**

The assassin bugs are the members of the suborder Heteroptera of the order Hemiptera. It is one of the largest families in the order Hemiptera and they are mostly found in tropical rain forest, but generally they occur in semiarid zone and scrub

<sup>\*</sup> Corresponding author

jungle. The members of this group are voracious feeders and predatory in nature. Naturally, all the species of this family are predators, but they are not useful for the particular insect pests and nonpredatory Reduviidae bugs are blood sucking ectoparasites, for example subfamily of Triatominae. Some species of this family are pathogenic and transmit various diseases to man and animals and they are known as kissing bugs, which feed on vertebrate blood and mostly found in Neotropical region. Members of this group are mostly found in association with the bark of trees, shrubs, herbs and trees (Readio, 1927; Miller, 1935; Louis, 1974). Reduviidae bugs are mostly predatory insects and are widely diverse in their morphology, diet specialization and microhabitat preference (Froeschner and Kormilev, 1989; Maldonado- Capriles' 1990; Schuh and Salter, 1995; Weirauch and Schuh, 2011). The family of Reduviidae consists of more subfamilies than any other hemipteran family and their composition and relationship remain unsettled (Ambrose, 1999; 2000; 2004b). This is the largest family of predaceous terrestrial Hemiptera, globally represented by more than 6878 species and subspecies under 981 genera belonging to 25 subfamilies (Henry, 2009). Of these 465species under 144 genera belong to 14 subfamilies (Ambrose, 2006). But, most of the information on Reduviidae family is available in Fauna of British India (Distant, 1902; 1910) and he described 342 species of Reduviids belonging to 106 genera, including allied families. At the present 33 species of Reduviidae belonging to 21 genera under 7subfamiles were reported from Maharashtra State (Sharma and Bano, 2012). The present study indicates that most of Reduviidae bugs were collected from mercury light, for example subfamily Harpactorinae. Cydnocoris sp is very interesting Reduviidae bugs belonging to subfamily Harpactorinae and during the study period, this species was collected from the light source. It is a new citation from the Kolhapur District.

## **MATERIALS AND METHODS:**

During the present surveys of the Tilari forest Chandgad, a total number of 19 Reduviidae bugs were collected from different localities. Most of the specimens were collected by the hand picking method and some were by insect net. The majority of the species of bugs was collected from different light sources and collected specimens were set and pinned and then all the species of bugs were deposited in the laboratory of Zoology R. B. M. Mahavidyalya, Chandgad. The identification of bugs was confirmed by available literature (Distant, 1902; 1910).

**RESULTS:** ORDER: HEMIPTERA SUBORDER: HETEROPTERA

### FAMILY: REDUVIIDAE

Subfamily: Harpactorinae Reuter, 1887
Genus Cydnocoris Stal, 1866
Cydnocoris sp
Genus Endochus Stal, 1859
Endochus sp
Genus Nagusta Stal, 1859
Nagusta sp
Genus Poldidus Stal, 1858
Polididus armatissimus Stal, 1859
Genus Sycanus Amyot & Serville, 1843
Sycanus sp
Genus Isyndus Stal, 1858
Isyndus sp

## 2. Subfamily Peiratinae Stal, 1859

Genus Ectomocoris Mayr, 1865 Ectomocoris sp Ectomocoris cordiger Stal, 1866 Genus Sirthenea Spinola, 1840 Sirthenea flavipes (Stal, 1855)

# 3. Subfamily Reduviinae (Acanthaspidinae Distant, 1902)

Genus Acanthaspis Amyot & Serville, 1843 Acanthaspis sp Acanthaspis sp Acanthaspis sp

## 4. Subfamily Ectrichodiinae Amyot& Serville, 1843

**Genus Scadra** Stal, 1859 Scadra sp Scadra sp

5. Subfamily Stenopodainae Amoyt & Serville, 1843

Genus Oncocephalus Klug, 1830 Oncocephalus sp Oncocephalus sp

6. Subfamily Tribelocephalinae Stal, 1866

*Genus Tribelocephala* Stal, 1853 *Tribelocephala sp* 

## 7. Subfamily Triatominae Jeannet, 1919

*Genus Triatoma* Laporte, 1833 *Triatoma rubrofasciatus* (de Geer, 1773)

## **ACKNOWLEDGMENT:**

We are indebted to Dr. Hemant Ghate, Department of Zoology, Modern College, Pune, Maharashtra, for identification and support for this work. We are also thankful to Dr. P. R. Patil, Principal, R. B. Madkholkar Mahavidyalaya, Chandgad, Maharashtra, for providing laboratory and other facilities.

## **REFERENCES:**

- Ambrose, D. P., 1999, "Assassin Bugs". Science Publishers, New Delhi Hampshire, USA and Oxford and IBH Publishing Company Private Limited, New Delhi, India, 337pp.
- Ambrose, D. P., 2000, "Assassin bugs (Reduviidae: excluding Triatominae)", pp. 695-712. In: Schaefer, C. W., and Panizzi, A. R., (Eds). *Heteroptera of Economic Importance*, CRC press, Florida, U.S.A, 828pp.

Ambrose, D. P., 2004b, "The status of Biosystematics of Indian Reduviidae

#### 274

(Hemiptera: Heteroptera)", pp. 441-459. In: Rajmohan, K., K, Sudheer., P. Girish Kumar., and S. Sntosh (Eds). *Perspectives on Biosystematics and Biodiversity*. Harvest Media Services, Calicut.

- Ambrose, D. P. 2006., "A Checklist of Indian Assassin bugs (Insecta: Hemiptera: Reduviidae) with taxonomic status, distribution and diagonostic morphological characteristics". *Zoos 'Print Journal*, 21 (9): 2388-2406.
- Distant, W. L., "The fauna of British India, including Ceylon and Burma", *Rhynchota Vol. II*, Taylor and Francis, London, 1902, 1-503.
- Distant, W. L., 1910, "The Fauna of British India", including Ceylon and Burma, *Rhynchota*, 5: 176.
- Froeschner, R. C., and Kormilev, N. A., 1989, "Phymatidae or ambush bugs of the world: A synonymic list with keys to species, except Lophoscutus and Phymata (Hemiptera). Entomography", 6: 1–76.
- Henry, T. J., 2009, "Biodiversity of Heteroptera in Insect Biodiversity Science and Society". Edt. By Robert, G. Foottit and Piter, H. Adler, Blackwell Publisher ltd., 224-263.
- Louis, D., 1974, "Biology of Reduviidae of cocoa farms in Ghana". American Midland Naturalist, 91: 68–89.
- Maldonado-Capriles, J., 1990. "Systematic Catalogue of the Reduviidae of the World (Insecta: Heteroptera)". *Special Edition of the Caribbean Journal of Science*, University of Puerto Rico, Mayaguez, Puerto Rico, 694 pp.
- Miller, N. C. E., 1953, "Notes on the biology of the Reduviidae of Southern Rhodesia". *Trans Zool Soc London*, 27: 541–672.
- Readio, P. A., 1927, "Studies on the biology of the Reduviidae of America north of Mexico". Kansas Univ Sci Bull, 17: 1–291.
- Schuh, R. T., and. Slater, J. A., 1995, "True Bugs of the World (Hemiptera: Heteroptera): Classification and Natural History". Cornell University Press, Ithaca and London. 336 pp.
- Sharma RM, Bano R. Fauna of Maharashtra, State fauna series 20 (Part-2) Zoological Survey of India, 2012; 477-478.
- Weirauch, C., and Schuh, R. T., 2011, "Systematics and evolution of Heteroptera: 25 years of progress". *Annual Review of Entomology*, 56: 487–510.

# PHOTO PLATE OF BUGS





Endochus sp

Nagusta sp



Polididus armatissimus



Sycanus sp



Isyndus sp



Ectomocoris sp



. Ectomocoris sp



Ectomocoris cordiger



Sirthenea flavipes

Acanthaspis sp

Acanthaspis sp



Acanthaspis sp

Scadra sp

Scadra sp



**Oncocephalus** sp



**Oncocephalus** sp



Tribelocephala sp



Triatoma rubrofasciatus