



Distribution and diversity of hemiptera fauna of Katepurna Wildlife Sanctuary, Akola district, Maharashtra, India

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Abstract

Diversity of bug at different parts of Katepurna region was studied from 1 February 2021 to 1 December 2021. Katepurna Sanctuary is situated in the district of Akola, which comes under the Vidarbha region. (Maharashtra). The study yielded the identification of 8 species belonging to 5 families of the order Hemiptera and all these species are reported first time from this sanctuary.

Keywords: Katepurna Wildlife Sanctuary, hemiptera

Introduction

Akola town of the Vidarbha State of Maharashtra. Situated at latitude 20.7° North and longitudinal 77.07° East. It is an altitude of 925ft (287m) to 1036.745ft (316m) above sea level. Akola has tropical savanna climate. Annual temperature range from a high of 47.6°C to a low 2.2°C. Annual rain fall averages 800mm. Katepurna Sanctuary is situated in the district of Akola, which comes under the Vidarbha region. The sanctuary occupies a large part of catchment area of the Katepurna reservoir. Due to the presence of large amount of water, birds get attracted towards the place. The period between October to June is the ideal time for visiting the place. Flora- The place is very rich in vegetation cover and mainly comprises of southern tropical deciduous forests. There are more than 115 species of plants & trees like Bahada, Aola, Tendu, Dhawada, Salai, Moha, Teude and many more. Fauna- The sanctuary is a home to a wide array of animals like Black buck, Hyena, Wolf, Nilgai, Leopard, Jungle cat, Hare, Wild boar, Monkey etc. The chief attraction of the sanctuary is the Barking deer and the Four-horned Antelope. One can also see various species of birds like Peafowl, eagles, woodpecker etc. Katepurna Wildlife Sanctuary is spread over 73.69 sq. km. It covers a great part of the catchment area of the Katepurna reservoir. It is well known for four-horned antelope and barking deer.

Hemipteran insects that are usually called as 'true bugs' are of great economic importance as most of them are pests of various commercial crops. The members of the group show hemimetabolous type of metamorphosis as the nymphal stages having great resemblance in structure with that of adult (Ghosh and Biswas 1995). A detailed account of Hemiptera fauna of central India had been done by Distant (1904a and b). Later on brief account of this order were described by Ghosh and Biswas, 1995, Ramakrishna *et al.* 2006, Chandra 2008 and 2009 respectively.

Material and Methods

The major freshwater source is Katepurna River situated at Mahan, near Barshi Takali. The region has a large area under crop cultivation. Bugs were collected from various localities of Katepurna region by hand picking, net trap and light tarp methods. The specimens were sorted out and bugs were pinned and dried and identified with the help of literature and manuals as well as different websites from the internet.

Result

Table 1: A total of 8 bug individuals were recorded belonging to 8 species Within 8 genera falling under 5 families.

Sr. No.	Name of the species	Family	Genus
1.	<i>Chrysocoris patricius</i> (Green jewel bug)	Scutelleridae	<i>Chrysocoris</i>
2.	<i>Palomena prasina</i> (Green shield bug)	Pentatomidae	<i>Palomena</i>
3.	<i>Euschistus servus</i> (Pink shield bug)	Pentatomidae	<i>Euschistus</i>
4.	<i>Dysdercus cingulatus</i> (Red cotton bug)	Pyrrhocoridae	<i>Dysdercus</i>
5.	<i>Lygus lineolaris</i>	Miridae	<i>Lygus</i>
6.	<i>Diabrotica undecimpunctata</i> (Ladybug)	Coccinellidae	<i>Diabrotica</i>
7.	<i>Harmonia axyridis</i> (lady bug)	Latreille	<i>Harmonia</i>
8.	<i>Nezara viridula</i> (green vegetable bug)	Pentatomidae	<i>Nezara</i>

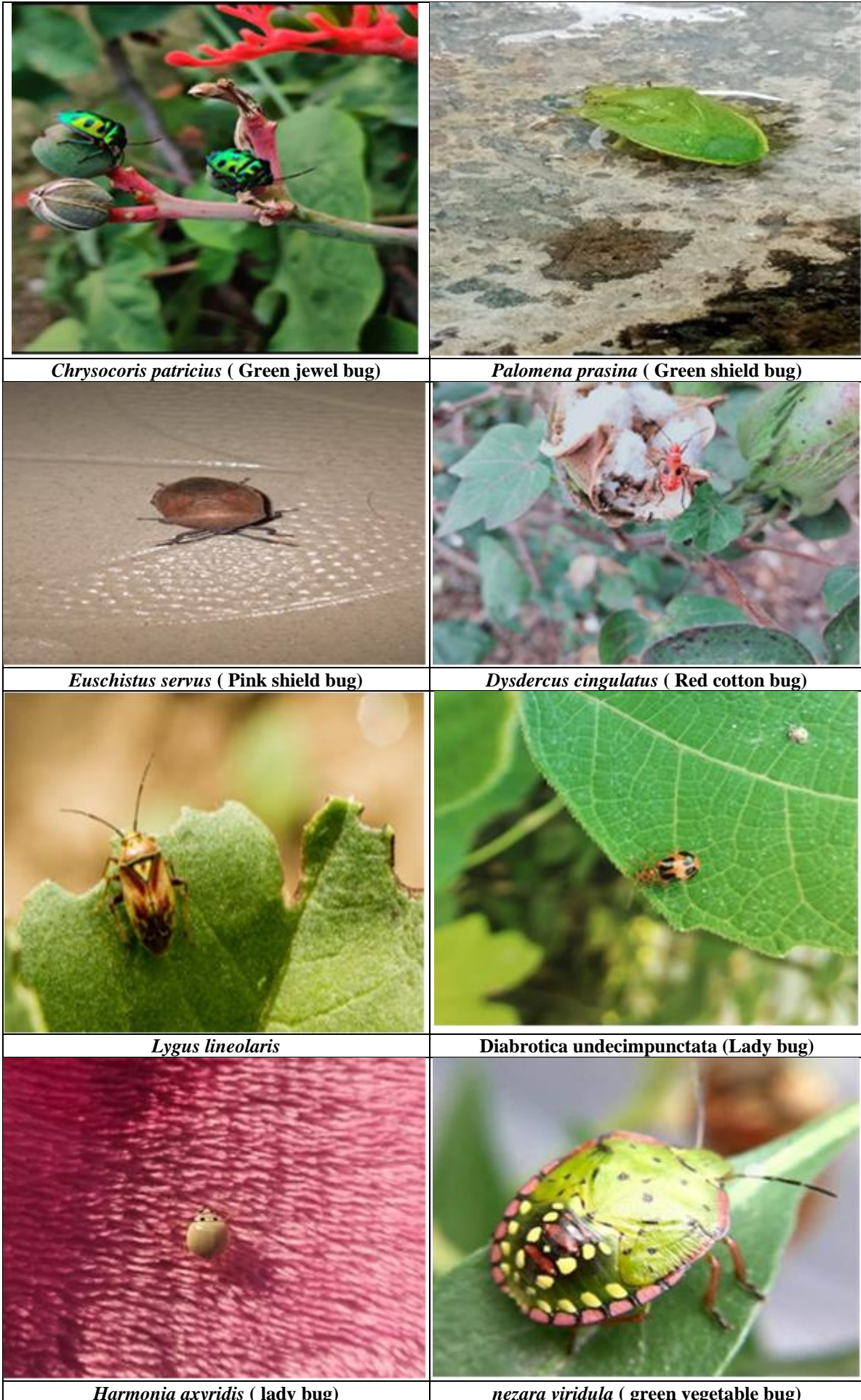


Fig 1: Images of some Bug of protected areas of Katepurna wildlife Sanctuary of Akola (M.S.)

Discussion

Bugs mainly occur as a pest on various plants. A total of 8 bug individuals were recorded belonging to 8 species Within 8 genera falling under 5 families falling under order Hemiptera. All of them are reported first time from records Katepurna wild life Sanctuary. Family Pentatomidae and Pyrrhocoridae respectively show the maximum diversity among all the families. *Chrysocoris patricius* (Green jewel bug) belong to family Scutelleridae recorded near their host plant namely *Mangifera indica* (Mango). Pentatomidae family represents three species of bug *Palomena prasina* (Green shield bug), *Euschistus servus* (Pink shield bug) and *Nezara viridula* (green vegetable bug) These bugs feed on fruit and stems of a wide variety of plants. Hosts include native species, weeds, garden flowers, vegetables, maize, fruit crops and macadamia nuts. Pyrrhocoridae family represents bug *Dysdercus cingulatus* (Red cotton bug) Found on cotton (*Gossypium*), *D. cingulatus* feeds on a number of other crop plants including okra (*Abelmoschus esculentus*), muskmallow (*Abelmoschus moschatus*), hibiscus, white jute (*Corchorus capsularis*), citrus and maize (*Zea mays*). It also attacks trees including silk cotton tree (*Bombax ceiba*), kapok (*Ceiba pentandra*), teak (*Tectona grandis*) and the portia tree (*Thespesia populnea*).

The species *Lygus lineolaris*, *Diabrotica undecimpunctata* (Lady bug) and *Harmonia axyridis* (lady bug) represented the family Miridae, Coccinellidae and Latreille respectively. These three families appeared to be scarce representing single species.

Lygus lineolaris grown crop plants, but favors cotton. While Garlic flowers attract pollinators and beneficial insects like ladybugs. Besides this garlic repels pests and insects like flies and mosquitoes.

Conclusion

Insects like Bug provide useful services to mankind and the environment in a number of ways. They keep pest insects in check, pollinate crops we rely on as food, and act as sanitation experts, cleaning up waste so that the world doesn't become overrun with dung. Professional entomologists contribute to the betterment of humankind by detecting the role of insects like Bug in the spread of disease and discovering ways of protecting food and fiber crops, and livestock from being damaged. They study the way beneficial insects contribute to the well being of humans, animals, and plants.

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