



Invertebrate Species Spotted In Telangana

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Abstract: There are about 18 lacks species so far identified worldwide, to this animal species contribute around 10 lacks, yet so many species are to be identified. India is enriched with about 81000 animal species that is 6.4% of world animal species and occupying the 6th rank in the world Biodiversity. Insects are at the top of Indian biodiversity having a no. of 57000 out of 81000 animal species. Telangana newly formed state in India is also having very much Biodiversity because of natural rivers, streams, ponds, lakes and deciduous forests with red & black soils and with semi-arid climate. There are certain insects spotted in Telangana which are not only confined to Telangana but also seen in other parts of the world. I have spotted 12 little known species which are described here in this presentation. These little-known species include, Labidura riparia, Trigonius corallines, Trombidium grandissimum, Hersilia savygni, Hersilia striata, Oxytate subvirens, Steatoda grossa, Carbula indica, Wolf spider, Scutigera coleoptrata, Scolopendra hadiwikei, and Pampillidae spider hunting wasp. Taxonomically two species belong to the order Dermoptera, five species to Araneae, two species to Scolopendromorpha, one to Hemiptera and one species belongs to the order Hymenoptera. These are found particularly in the rainy season most probably from June to September. Wolf spider bears spider lings on its back and it also mimics by exhibiting caumoflague. Hersilia species are confined to AP and Telangana, Trombidium is also known as arudra purugu which is most familiar to Nalgonda and Warangal district people.

Keywords: Scutigera, Trombidium, Labidura, Hersilia and Araneae.

Introduction: Each and every organism in our surroundings has its specialty; they depend upon each other for food or shelter, any disturbance or loss caused to an organism will definitely impact the life of other organisms. Species of an ecosystem will have the huge diversity in terms of habit, habitat, structure and gene composition. By studying the biodiversity, we put our efforts to protect the equilibrium among the species of a particular region or state or country so that socio-economic sustainability can be achieved. The state of Telangana, located in the southern part of India, is known for its rich biodiversity, including a wide variety of invertebrate species. Rivers, streams, lakes, semi-arid climate, tropical dry deciduous forests support vast biodiversity in Telangana. Most of the species are found abundantly in their native habitats in rainy season i.e. from June to September of every year. Species confined to the south India and even the species seen in some areas of other countries are found in Telangana state. Species like Scutigera has features having evolutionary significance are also spotted in Telangana state.

Topic Importance: Invertebrates play a crucial role in the ecosystem, and studying them can provide valuable insights into the functioning of the environment.

Existing Knowledge: Previous studies have identified a number of invertebrate species in Telangana, including both those with evolutionary significance and those that are considered pests.

Knowledge Gap: Despite the wealth of invertebrate species in Telangana, there is still much that is unknown about their evolutionary history and the impact they have on the environment.

Rationale: Understanding the evolutionary history and ecological role of invertebrates in Telangana is important for preserving the state's biodiversity and protecting the environment.

Research Question: What is the evolutionary history and ecological role of invertebrate species in Telangana, and how can this knowledge be used to protect the environment?

Aim/Objective: The aim of this study is to identify the fauna of Telangana state, investigate the evolutionary history and ecological role of invertebrate species in Telangana.

Hypothesis: It is hypothesized that invertebrate species in Telangana have a complex evolutionary history and play a significant role in the functioning of the environment, and that protecting these species can help to preserve the state's biodiversity and protect the environment.

Methodology: **Species** spotted are photographed and with the aid of photos their morphological anatomical characters are revealed, habit and habitats were understood. Googles search by image helped a lot in recognizing the species based on the pre-existence of species with certain accuracy (by resemblance).

Taxonomic position of the species is defined on the basis morphological and anatomical characteristics of the spotted species.

1. *Labidura riparia* (striped earwig)

Phylum-Arthropoda: Class-Insecta: Order-Dermaptera: Family-Labiduridae: Genus-Labidura: Species-*riparia*



Labidura riparia is commonly called as striped earwig, it has worldwide distribution. Its posterior cerci appear like long and strong forceps; it has leathery fore wings, long antennae and rectangular last segment. Body possesses 10 abdominal segments. These are voracious feeders, generally feed on insects and insect nymphs. Usually, they feed during crepuscular period. Its mouth parts are chewing type. This species is found its appearance in southern TELANGANA of INDIA. This male *Labidura* is identified in the residential area of Bhongir.

Area of collection; Bhongir on 01/03/2016.

2. *Trigoniulus corallinus*

Phylum-Arthropoda: Order-Diplopoda: Family-Trigoniulidae: Genus-Trigoniulus: Species-*corallinus*



Trigoniulus corallinus is commonly called as rusty or scarlet millipede, it is native to Thailand and Myanmar, but also abundantly distributed in the Deccan plateau like Telangana of Indian peninsula. Body is cylindrical and divisible into many segments; each trunk segment bears two pairs of legs. Head is provided with one pair of mandibles and maxillae. Its red coral like body color is

distinctive. Heaps of these millipedes are found particularly during rainy season creeping on the moist soil near rotten woods and leaves.

This species is observed in KARIMNAGAR of Telangana on 28/06/2016.

Area of collection; Govt. Degree College Peddapalli Dist. Karimnagar.

3. *Trombidium grandissimum*

Phylum-Arthropoda: Subphylum-Chelicerata: Class-Arachnida: Order-Trombidiformis: Suborder-Prostigmata: Family-Trombididae: Genus-Trombidium: Species-grandissimum



Trombidium grandissimum is commonly called as Arudra purugu in Telugu states due to their particular distribution in arudra karthi (particular period in rainy season of India). It is a red velvet mite abundantly located in Nalgonda and Warangal districts of Telangana. People believe in its aphrodisiac medicinal values and it is also having some medicinal value in treating paralysis. Oil is extracted from the body of these insects by

keeping them in hot boiling water. Much is to be done in proving scientifically its medical use.

Area of collection: Mulugu of Warangal Dist. Armur of Nizamzbad Dist. In Telangana of INDIA.

4. *Hersilia savignyi*

Phylum-Arthropoda: Subphylum-Chelicerata: Class-Arachnida: Order-Araneae:

Family-Hersillidae: Genus-Hersilia: Species-savignyi



Hersilia savignyi is a spider commonly called as two tailed spider. Its distribution is noticed in India. It is found stucked on to the walls near gardens. Its two spinnerets are long and appear like tails. Males are 1.0 to 1.3 cm in length with light brown color. Third pair of walking legs is small compare to second and first pairs. Long stalked eyes are seen in this spider. This spider is widely distributed in Karimnagar Dist.

Area of collection: Govt. Degree College Peddapalli Dist. Karimnagar of Telangana 2016.

5. *Hersillia striata*

Phylum-Arthropoda: Subphylum-Chelicerata: Class-Arachnida: Order-Araneae:

Family-Hersillidae: Genus-Hersilia: Species-striata



It is distributed throughout India. It is also found in Telangana of India. Its body is dorsoventrally compressed with circular abdomen. It has two long posterior spinnerets which appear like tails. Hence it is commonly called as two tailed spider. It is generally found on the walls. It seems to build no web; it is a diurnal spider. Body is in ash colour, third pair of legs is small. Legs, chelicerae and spinnerets are with alternate light and dark color bands. Eight eyes present in 4 rows. Body gradually widens from anterior to posterior and looks like a leaf. Cerci are straight with no curvature.

Area of Collection: Govt. Degree College Peddapalli Dist. Karimnagar July 2016.

6. *Steatoda grossa*

Phylum-Arthropoda: Subphylum-Chelicerata: Class-Arachnida: Order-Araneae:

Family-Theridiidae: Genus-Steatoda: Species-grossa



Steatoda grossa is commonly called as house spider/cupboard spider. The male spider is small measures 4.0 mm in length with long legs. It is worldwide distributed and also found southern Telangana. They can survive several months without food. They are in brown color and have a bulbous abdomen. It constructs an irregular web with thin silky fibers. It detects the enemy with only vibrations.

Collected in the residential area of Bhongir in Nalgonda District of Telangana

7. *Carbula indica* (Shield bug)

Phylum-Arthropoda: Class-Insecta: Order-Hemiptera; Family-Pentatomidae;

Subfamily-Pentatominae; Genus-*Carbula*; Species-*indica*



This stink bug humeral angles are somewhat pointed. Scutellum possesses whitish rectangular dots; two prominent eyes like whitish yellow oval dots are seen on the back. Its dorsal side appears as human face.

Area of Collection: Bhongir of Telangana State in India.

8. Wolf Spider (with spiderlings on its back) *Crocidilosa leucostigma*

Phylum-Arthropoda: Class-Arachnida: Order-Araneae: Family-Lycosida.



This genus is commonly called as wolf spider. The female spider carries its babies on its back. It jumps from one place to other along with spiderlings on the back. Its body color tally with surroundings so that it is not easy to find and identify in the soil. Body size is not more than 1.0cm. It is a voracious feeder feeds on small insects and is a good hunter. It lives on the ground and in burrows, moves quickly due to its characteristic eyes.

Area of collection: Govt. Degree College Peddapalli Dist. Karimnagar Telangana in the year 2016.

9. *Scutigera coleoptrata* (The Home centipede)



Scutigera coleoptrata, a home centipede found in Karimnagar District is with a pair of compound eyes have the phylogenetic value in the evolutionary line. This centipede is with 15 body segments and a pair of long antennae. Each body segment with a pair of long jointed legs.

Scutigera species is widely distributed in U.S.A, but also has its occurrence in India. Though it seems confined to Himalayan foot hills it can also be expected in the plains of north Telangana like Karimnagar District. It inhabits in the black soils and red sandy loams with hot moist semi-arid climate, in the temperate deciduous forests of north Telangana.

This fast-moving home centipedes found under the stones and leaves in the agricultural fields with their nocturnal habit. It is an oviparous animal. It is collected in the Namsanipalli village of Odela Mandal in Karimnagar dist. Telangana

Area of collection: Pegadapalli village of odela Mandal in Karimnagar of Telangana State.

10. *Scolopendra hardiwiki* (Indian Tiger Centipede)

Phylum-Arthropoda; Subphylum-Myriapoda: Class-Chilopoda: Order-Scolopendromorpha: Family-Scolopendridae: Genus-Scolopendra: Species-hardiwiki



Scolopendra hardiwicki is a poisonous centipede generally distributed in Indian peninsula, Sumatra and Nicobar. Its occurrence is also noticed in the Deccan plateau particularly in the Telangana state. It is collected in the college premises of govt degree college Mulugu in Warangal district. This species has beautifully colored dark orange and black segments alternately. Each segment is provided with a pair of legs which are also in orange color. It feeds on small invertebrates and small vertebrates too. Seventh segment is large. It bears 4 ocelli on each side at the cephalic.

Place of Collection: At Govt Degree College Mulugu in Warangal District of Telangana.

11. Spider Hunting Wasp, Pompilidae

Phylum-Arthropoda: Class-Insecta: Order-Hymenoptera: Family-Pompilidae



Spider hunting wasp attacks orb web spider, kills and carries with their legs to their nests. Body is provided with attractive metallic blue colour wings and light orange to yellow colour legs with characteristic spines. Abdomen is with black transverse white bands.

Area of Collection: Sultanabad of Karimnagar Dist. In Telangana

12. Oxytate subvirens (Green Crab Spider)

Phylum- Arthropoda: Class-Arachnida: Order-Araneae: Family-Thomisidae

Genus-Oxytate: Species-subvirens



Oxytate, the crab spider is in green colour with small eyes shield by white orbits. Legs has spines, abdomen is oval, cephalothorax is broad and round and in green in colour. Whereas abdomen is in light green colour. This genus is widely distributed in Sri Lanka, India and Malesia. It inhabits in green grass and on leaves. Green crab spiders are very helpful to honeybee and plants to interact. Oxytate has an ability to reflect UV lights which makes flowers more attractive to honeybees. And by attracting honeybees, it is captured in a trap of crab spiders.

INVERTEBRATE SPECIES OF TELANGANA (Animals) Spotted and described by S. Srinath Patel, Asst. Prof. of Zoology BJR Govt. Degree College(A), Narayanaguda-Hyd.

Sl.NO.	NAME OF THE ANIMAL	ORDER	CHORDATA/NON-CHORDATA
01	Hersilia savygni	Araneae	NON-CHORDATA
02	Hersilia striata	Araneae	NON-CHORDATA
03	Steatoda grossa	Araneae	NON-CHORDATA
04	Wolf spider with spiderlings	Araneae	NON-CHORDATA
05	Oxytate subvirens	Araneae	NON-CHORDATA
06	Labidura riparia	Dermaptera	NON-CHORDATA
07	Trigoniulus corallinus	Diplopoda	NON-CHORDATA
08	Carbula indica	Hemiptera	NON-CHORDATA
09	Pampillidae spider hunting wasp	Hymenoptera	NON-CHORDATA
10	Scolopendra hardiwiki	Scolopendromorpha	NON-CHORDATA
11	Scutigera coleoptrata	Scolopendromorpha	NON-CHORDATA
12	Trombidium grandissimum	Trombidiformis	NON-CHORDATA

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Acknowledgements: My sincere gratitude to the Google Wikipedia, google search by photo image and the authors mentioned in the references for the help obtained in his regard.

