

New findings of *Galeodes agilis* from Semi-arid region of Alirajpur, M.P., India

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Received : 25.09.2024; **Accepted** : 19.10.2024

ABSTRACT

Solifugae is an arachnid found in arid and semi-arid areas and belongs to the phylum Arthropoda, class Arachnida⁹. Solifugae is also known as a relative of spiders or scorpion. Only a few of their species are reported in Madhya Pradesh, India¹. In this series, we found another species of Galeodidae family, *i.e.* *Galeodes agilis*, which is found in Alirajpur.

Many of its names are according to their physical form and function like sun spider or wind spider and local of tribal people of Alirajpur called Kukkad Ichhu. In appearance it looks like a mixture of spiders and bichhu. Compound eyes are found in them, strong jaws called chelicerae are found on the large-sized head of Solifugae, their pedipalps are long and this is new findings in this area as well. It helped in maintaining the terrestrial ecosystem of some areas of Madhya Pradesh like Jhabua, Alirajpur, Dhar, Manawar *etc.* Properly they are not reported and their number are less according to the surveys of the areas during summer of 2023.

Kukad Ichhu are distributed throughout the tropics and subtropics, mainly in arid, semi-arid or other warm environment.

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KEY WORDS : Alirajpur, *Galeodes agilis*, Solifugae.

Introduction

As the studies showed, many species of Solifugae are found in the world. The order Solifugae is divided into 12 families, 144 Genera and 1209 species have been described to date¹². The known records of solifugae species in India is still less. The most important studies on Indian species *Galeodes agilis* were done by us and it is new findings in the state. In this paper, we represent the records of solifuges *Galeodes agilis* from the state Madhya Pradesh, Central India. Alirajpur could be defined as a barren land of gravel and sand, where solifugae manage to survive, reproduce, and colonize new habitats. Weather and climate of Alirajpur district is too hot in summer. The individuals were collected at Alirajpur (22.291687⁰ Longitude; 74.361311⁰ Latitude), in Madhya Pradesh. The highest day temperature is in between 40⁰c to 45⁰ c.

Materials and Methods

The specimens of Solifugae were collected by hand during the daytime from under the stones from Alirajpur. *Galeodes agilis* were photographed in the natural conditions at fields by using **CanonR10** Mirrorless camera. Specimens were preserved in 70% ethyl alcohol properly and used for microscopic studied. The description was made^{2,7,8,10,11} and followed the terminology.

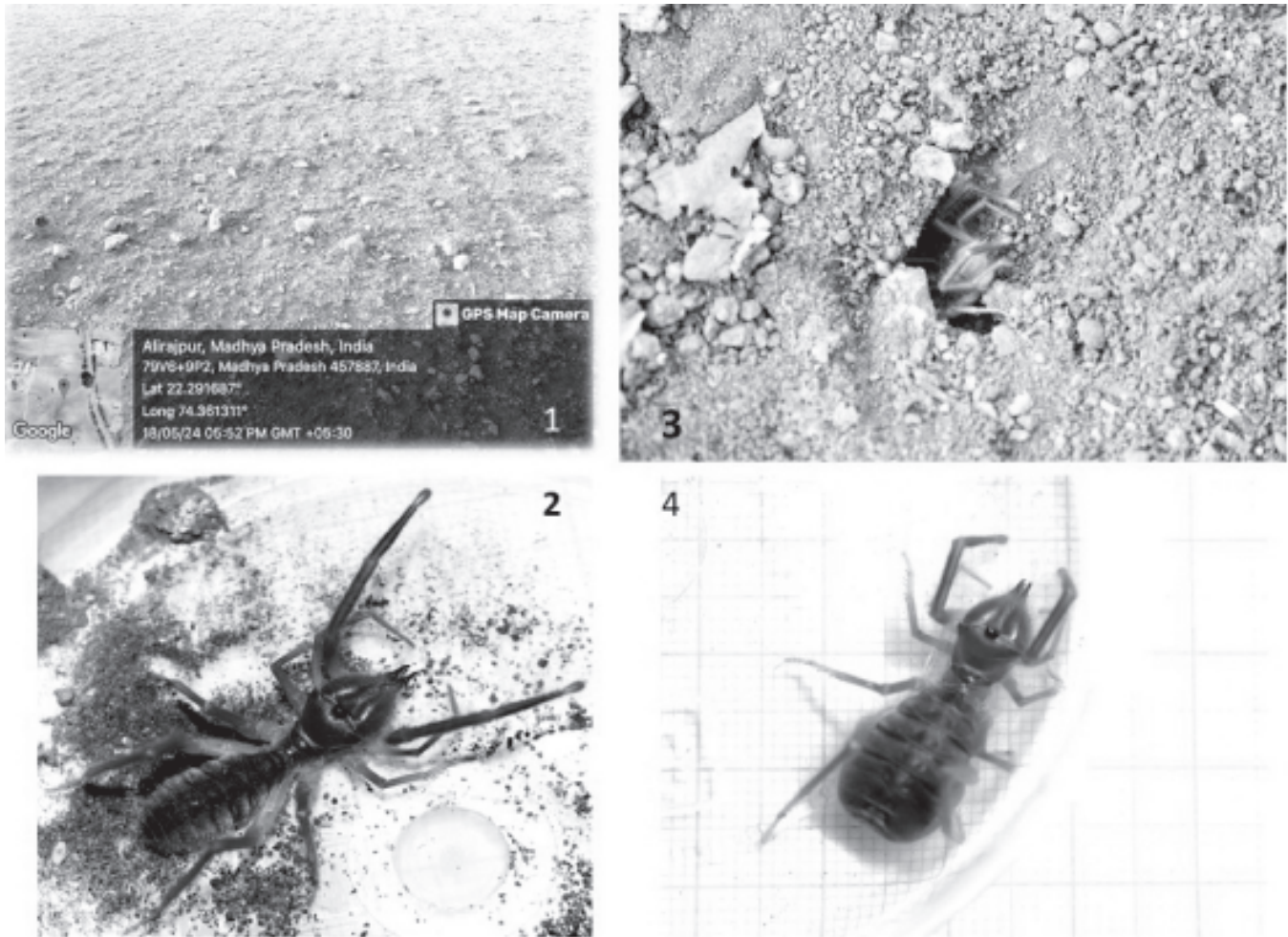
Observation and Results

Type materials: male B& (*Holotype*) (Fig. 2), female (*Allotype*) (Fig. 4)⁷.

Central India: Alirajpur, Madhya pradesh, (Fig. 1), **species *Galeodes agilis* was described.**

Description of the Holotype male (Fig. 2) :

Prosoma: head infusate anteriorly; Mandible: mandible



Figs. (1-4) : 1. Solifugae collection site of Alirajpur in Madhya Pradesh. 2. Dorsal view and features of adult *Galeodes agilis* male. 3. Solifugae hidden in crevices. 4. Dorsal views and features of adult *Galeodes agilis* female.

pale above; patella of palp deeply or slightly infuscate; Palpi: Palpi have patella twice as long as width of head, tibia longer than width of head by one third of its length; Legs: Tibia and tarsus deeply and uniformly infuscate, sometimes almost black; legs pale or with femur and patella of 4th infuscate; Male: B& nearly allied to *G. fatalis*, but much shorter. Prevailing color darker than in *G. fatalis*.

Description of the Allotype female (Fig. 4)

Prosoma: Broader head and mandibles; **Chelicerae:** mandible with the 3rd and 5th teeth of the upper jaw is large. **Pedipalp:** Patella of palp infuscate, tarsus paler than tibia. Tarsus of palp narrowed at the base and movably articulated to the tibia. **Legs:** Claws of legs with several rows of hairs upon the stalk. **Opisthosoma:**

Abdomen oval in shape and covered by very fine and hairy setae. Dorsal stripe distinctly wide and nearly covers entire dorsal surface. Somites are wider and darker than to male.

Discussion

As we know that Alirajpur is important ground for Solifugae family³⁻⁶ and here we found another species *Galeodes agilis*, which are not reported before. We studied various sites from semi-arid regions. We collected 35 specimens from the fields whereas, females are more in number as compared to the males. Our observation clearly emphasizes that *Galeodes agilis* is quite well distributed at study site and active during the summer season.

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