

**REPLY TO COMMENTS RAISED BY KULKARNI (2015) ON “A NEW SPECIES OF GENUS THOMISUS WALCKENAER, 1805 (ARANEAE: THOMISIDAE) FROM TELANGANA, INDIA AND A DETAILED DESCRIPTION OF THOMISUS PROJECTUS TIKADER, 1960” BY PRAVALIKHA & SRINIVASULU, 2015**

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Responding to Pravalikha & Srinivasulu (2015), Kulkarni (2015) has raised certain issues regarding the description of the new species and identification of *Thomisus projectus* Tikader, 1960, reported therein. The concerns raised by Kulkarni (2015) echo the perpetual challenges that arachnologists face due to varied intraspecific phenotypic plasticity present among spiders.

On comments raised on *Thomisus telanganaensis*, our response is: Both the specimens of *Thomisus telanganaensis* (holotype & paratype), collected from the same plant, do show variation with regards to their size - the paratype being larger than the holotype. Owing to this, the largeness was also reflected not only on the total body length, clypeal size and increased size of the eyes, but also in the length and width of carapace, maxilla, labium, sternum, abdomen, and the lengths of chelicera and legs (Table 1 of Pravalikha & Srinivasulu 2015). The eye diameter of the paratype was greater than that of the holotype (AME 0.07 vs. 0.06 mm and

ALE 0.10 vs. 0.14 mm). There is no difference in the positioning of eyes. Both the lateral eyes are separated by conical tubercles which is a characteristic feature of the genus *Thomisus*. The confusion regarding eye position (Image 2C and 3C of Pravalikha & Srinivasulu 2015) is primarily due to the angle in which the photographs were taken and distortion of aspect ratio while setting the final images. The major feature rendered in the identification of a species of spider is the morphology of genitalia of the adult specimens. The gross epigynal structure (both external and internal) of the holotype and paratype are same, and the variations observed could be a preservation artefact or due to the minor time difference in NaOH treatment. The basic structure, deflated balloon-like spermathecae, beak-like protuberances and the coiled intromittent canal are similar. Recently, a pair of *T. telanganaensis* (female & male) were collected from the type locality on the same plant (Pravalikha & Srinivasulu in review). The new female specimen collected show intermediary morphological characters of holotype and paratype (single black spot on the shoulder tubercles of abdomen, ocular area white; four prolateral spines as holotype & chelicerae, maxillae, labium and sternum without mottling; four pairs of sigillae present ventrally as paratype). The epigyne (both external and internal) is similar to the types.

On comments raised on *Thomisus projectus*, our response is: The original description by Tikader (1960) is a ‘classical description’, which ends in explaining the structure of the epigyne as ‘epigyne as in Fig. 59’ on page 42 (see Tikader 1980). Owing to this, there remains a lot of confusion with regards to the detailed epigynal structure as one has to depend on the attached drawings provided in the description. The detailed



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morphological description (excepting the spination and detailed leg measurements) provided therein forms a robust basis for identification of the species in question. The type specimen of *T. projectus* is badly preserved and could not be compared with, as are those of many small spiders described by B.K. Tikader. Owing to this, we relied on the published morphological description to diagnose the fresh specimen and as per the requirement of the taxonomic studies provided a detailed description with photographs of the specimen and the external and internal epigynum. We take the suggestion of collecting a fresh topotype and proceeding further in scientific spirit. We are of the opinion that owing to the lack of recent detailed studies, inavailability of properly written description and preserved types, the challenge of spider taxonomy increases manifold. Arachnologists are aware of the 'rarity' of certain species which has been the reason for poor representation of specimens in collections and also how difficult it is sometimes to collect an additional specimen. When the diagnostic characters are robust enough, species descriptions based on single type should not be a problem. We totally disagree with the statement that "the diagnosis section states that the species 'differs with respect to the pattern on the abdomen and epigyne structure' to its closely related species. The details of this difference are not understandable for the reader." The diagnosis, read completely, clearly defines the shared and distinct characters of *T. projectus* with *T. dhakuriensis* Tikader, 1960, *T. memae* Sen & Basu, 1963 and *T. rishus* Tikader, 1970. We are of the opinion that the genus *Thomisus* needs revision, but that is not the reflection of confidence level of diagnosis as being assumed by Kulkarni (2015).

Furthermore, we do not understand the concern raised by Kulkarni (2015) pertaining to distribution of *Thomisus projectus*. We have listed the references (irrespective of them being standard or dubious) that

have included the nomen *T. projectus* in their works. None of these works provide a description of *Thomisus projectus* Tikader, 1960 and in the discussion, we point this out clearly. As for the endemic status of the species, basing on the best of knowledge available within the scientific community, this species is currently known only from localities in India. It could be occurring elsewhere, and until such reports become available, its endemic status will not change. The claim by Kulkarni (2015) "Given the current records, it is impossible to comment on endemic nature of this species. The fact is that the only known records of *T. projectus* are from India." is contradicting.

To conclude, we would like to point out that the new species recently described is an example of a species that has a high level of morphological intraspecific variation. With the discovery of the male of the species which does not match any of the male of the *Thomisus* species described so far from India and *T. labefactus* from southeast Asia (with which the female shows affinity in having a balloon-like spermathcae), the specific status of the *T. telanganaensis* is valid.

## References

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