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## A note on egg mass and egg of *Trachythorax illaesa* (Phasmida: Lonchodidae)

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### Abstract

Stick insects are primarily nocturnal herbivores. They display an extreme type of masquerade crypsis, showing morphological and behavioural characteristics similar to twigs, bark, lichens, mosses, and leaves. The eggs of stick insects vary in size and shape, featuring exquisite sculptures and patterns. The authors studied the egg structure and egg mass of 39 eggs of *Trachythorax illaesa*. The study provides a detailed examination of the egg mass and egg structure.

**Keywords:** Phasmida: Lonchodidae, stick insect, egg mass, egg, structure

### Introduction

Stick insects are plant-eating insects classified under the order Phasmatodea, typically located in tropical areas worldwide (Bradler and Buckley, 2018; Robertson *et al.*, 2018) <sup>[1, 5]</sup>. They are active at night and imitate living or decayed leaves, branches, bark, lichens, and mosses (Bradler and Buckley, 2018; Wang *et al.*, 2014) <sup>[1, 6]</sup>. In Phasmids, every species displays particular egg morphology, and females exhibit various egg-laying methods, such as flicking or dropping eggs onto the ground, piercing eggs into leaves, glueing eggs to the plant surface, or occasionally producing ootheca (Robertson *et al.* 2018) <sup>[5]</sup>. This study focused on the structure of *T. illaesa* egg mass and individual egg, providing insight useful for the taxonomy of stick insect eggs.

### Materials and Methods

The live female specimen of *T. illaesa* was sampled from Borbet Bk., Gaganbawada (16.5071°N, 73.8948°E), Kolhapur. The sampled female was kept in a laboratory at the Department of Zoology, Shivaji University, and Kolhapur. Photography of the egg mass and eggs was done by using a Canon D500 with a 100 mm lens and identified by using the literature of (Bresseel and Constat, 2021; Redtenbacher 1908) <sup>[2, 4]</sup>.

### Results and Discussion

The observations on the structure of the egg cluster and the egg were made. It has been found that the female that was kept in the container had deposited an egg mass on the surface of the container. The egg mass is elongated, greyish-brown and measures 26 mm long, consisting of a total of 39 eggs in the form of three rows of eggs (Figure 1A).

Out of these three rows, two rows consist of 12 eggs each, i.e., 24 eggs, while one row, which is longer in length, consists of 15 eggs. The eggs of two lateral rows are glued to the surface of the container and also to successive two eggs. While eggs of the middle row are glued to each other and also to eggs of the other two rows, they are not glued to the surface of the container.

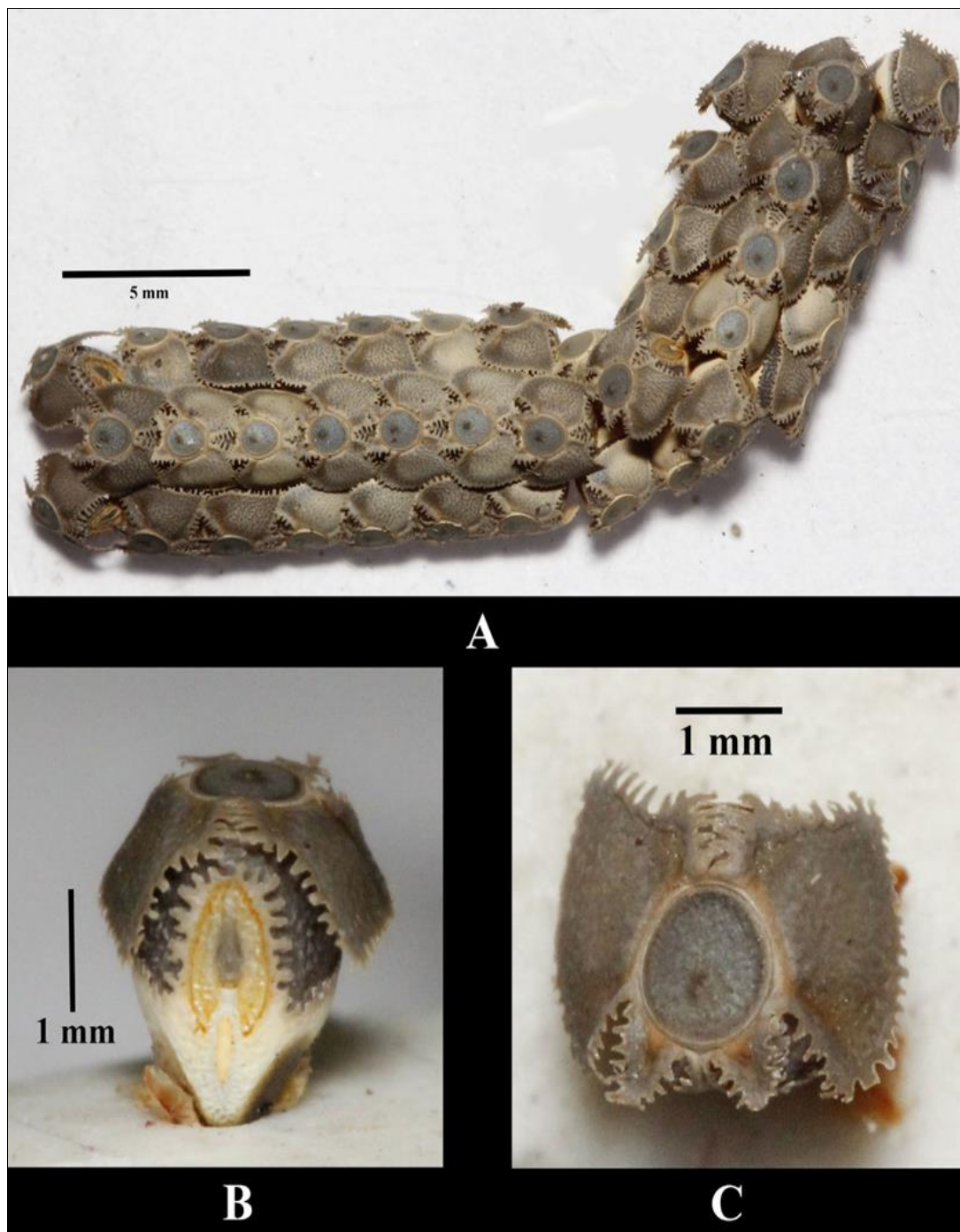
The individual egg (3 mm in height and about 1.5 mm wide) is ovoid, dark brown towards the operculum, whitish posteriorly, with an oval micropyle encircled by an incomplete pale orange micropylar plate. The outer margin of the micropylar plate is toothed and open posteriorly. The median line is elongated, spindle-shaped and pale yellowish in colour (Figure 1B). The egg capsule consists of circular, ashy-grey coloured operculum with a central dark spot two lateral trapezoidal flaps and two lateroventral flaps having toothed margins (Figure 1C). The polar area of the egg capsule is glued to the surface.

The eggs of the stick and leaf insects are considered for the confirmation of the identification, as every phasmid species has a unique pattern of egg. Earlier workers have studied eggs of several species.

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According to Clark-Sellick (1997) <sup>[3]</sup>, eggs of *Trachythorax* are deposited in clusters and are adhesive. Bresseel and Constat (2021) <sup>[2]</sup> described the egg structure of *T. illaesa* in brief and mentioned that eggs are laid in groups. However, the

present describes the egg mass and individual egg structure in detail. The observations of the present study are consistent with the findings of eggs of *T. illaesa* by Clark-Sellick (1997) <sup>[3]</sup> and Bresseel and Constant (2021) <sup>[5]</sup>.



**Fig 1:** A. Egg mass of *Trachythorax illaesa*, B. Egg (Dorsal view), C. Egg (Anterior view)

### Conclusion

The findings of the present study will add scientific information on the Phasmida group and are useful in the taxonomy of stick insects.

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### References

1. Bradler S, Buckley TR. Biodiversity of Phasmatodea. In: Insect Biodiversity: Science and Society. 2<sup>nd</sup> Ed. Hoboken: Wiley-Blackwell; 2018, p. 281-313. <https://doi.org/10.1002/9781118945582.ch11>.
2. Bresseel J, Constant J. Review of the Oriental stick insect genus *Trachythorax* Rendtenbacher, 1908 with two new species from Vietnam and comments on egg parasitism and morphological counter adaptations (Phasmida: Lonchodidae: Necrosiinae). Belgian Journal of

- Entomology. 2021;120:1-56.
3. Sellick CJT. Descriptive terminology of the phasmid egg capsule, with an extended key to the phasmid genera based on egg structure. *Systematic Entomology*. 1997;22(2):97-122. <https://doi.org/10.1046/j.1365-3113.1997.d01-30.x>.
  4. Redtenbacher J. Die Insektenfamilie der Phasmiden. III. *Phasmidae Anareolatae* (Phibalosomini, Acrophyllini, Necrosciini). Leipzig: Wilhelm Engelmann; 1908, p. 564.
  5. Robertson JA, Bradler S, Whiting MF. Evolution of oviposition techniques in stick and leaf insects (Phasmatodea). *Frontiers in Ecology and Evolution*. 2018;6:216. <https://doi.org/10.3389/fevo.2018.00216>.
  6. Wang M, Bethoux O, Bradler S, Jacques FMB, Cui Y, Ren D. Under cover at pre-angiosperm times: a cloaked phasmatodean insect from the Early Cretaceous Jehol Biota. *PLOS ONE*. 2014;9(3):e91290. <https://doi.org/10.1371/journal.pone.0091290>.