

Egg Structure and Embryonic Development of the Leaf-rolling Cricket *Nippancistroger testaceus* (Matsumura *et* Shiraki, 1908) (Insecta: Orthoptera, Gryllacrididae)*

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The order Orthoptera is the most diversified order in Polyneoptera, including about 20,000 species, and is one of the most important groups in understanding Polyneoptera of which groundplan and evolution have been variously argued (Klass, 2009; Beutel *et al.*, 2014). We have started a comparative embryological study of Orthoptera for reconstruction of the groundplan and phylogeny of Orthoptera. As a first step, we have tackled the embryological study of the Gryllacrididae which have been considered as one of the most phylogenetically problematic families in the ensiferan superorder Gryllacridoidea, using *Nippancistroger testaceus* as materials. In this report, we made a brief description on its eggs and embryogenesis (Jost and Shaw, 2006).

Eggs of *Nippancistroger testaceus* are cylindrical in shape, about 5 mm in length and 0.7 mm in thickness, and yellowish white in color. An operculum-like structure is present at the anterior pole. Three or four micropyles are found on the ventral side of the egg. The embryo is formed on the ventral

side near the posterior pole of the egg, and performs the embryogenesis of short germ band type. The embryo keeps its position on the egg surface throughout the embryogenesis. Katatrepsis occurs in combination of the reversion of anteroposterior axis and 180-degree-rotation of the embryo. Details of embryogenesis of *N. testaceus* will be given in the next article.

References

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