OBSERVATIONS ON THE EMBRYONIC DEVELOPMENT OF *NILAPARVATA LUGENS* (HOMOPTERA: DELPHACIDAE)

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It is observed that a major factor in the rapid build up of *N. lugens* population in the paddy field is its short generation time, including a short incubation period in the egg stage. Bae and Pathak (1970) reported an incubation period of 7.3 days (range 7–10.1 days) when *N. lugens* was reared under laboratory conditions of temperature 19–33°C (average 27.3°C) and relative humidity 30–100%. Daniel (1979) observed an incubation period of 9.1 ± 1.7 days in Sri Lanka population when reared under laboratory conditions of temperature 25–29.5°C and relative humidity 30–100%. The present study describes the external morphology of the embryo of *N. lugens* of Sri Lanka.

N. lugens eggs were obtained by maintaining pairs of adults in test tubes under laboratory conditions of temperature 26–32°C and relative humidity 30–100%. Eggs of known duration were fixed and stained and observations made under a light microscope.

On the second day, rudiments of antennae and labrum were visible. The 3 day old embryo measured approximately 700 μ long, and manifested segmentation and appendages. The first three segments gave rise to mandibles, maxillae and labrum. The thorax and its appendages developed from the adjoining three segments. Slight segmentation of the abdomen was also observed. Two red eye spots were visible through the chorion, but the red pigmentation disappeared during fixation.

References:

1. Bae, A. and Pathak, M. 1970. Ann. ent. Soc. Amer. 63 : 149–155.
2. Daniel, D. J. E. Personal communication