

Short communication

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NOTES ON THE LARVAL STAGES OF *NEGRITOMYIA ANDAMANENSIS* DAS, SHARMA & DEVROY (DIPTERA, STRATIOMYIDAE)

The present contribution embodies an account of different larval instars (about 7-8) and pupa of *Negritomyia andamanensis* Das, Sharma and Devroy (Diptera, Stratiomyidae) reared on bark of raintree in Andamans. Pupation occurs within the last larval skin and the pupal period lasts 10-15 days.

Recently, Das, Sharma & Devroy (1984) described a new fly *Negritomyia andamanensis* reared from the larvae feeding on the bark of raintree in the Andaman Islands. The communication reports some observations on different larval instars and pupa of this species.

Larval Instars : Though the larvae exhibit considerable diversity of forms, all have a peculiar thick leathery skin, with reticulate texture, impregnated with calcareous matter. The general colour of the larvae is creamy-white. The head is small, exserted and there are 11 trunk segments, none of which bear pseudopods. Peripneustic : only prothoracic and common terminal spiracles are visible in early instars ; the former is brown, conspicuous and located on the dorso-lateral margin (Fig. 2), whereas latter is seen at the middle portion of last abdominal (anal) segment. Sixth instar and onwards four abdominal spiracles are seen on II-V abdominal segments.

The body segments of all the instars bear distinct simple setae. The arrangement of these setae (Fig. 1) is constant on all segments, except the prothoracic and terminal abdominal segments in all the instars. However, as the larvae advance through successive instars the relative sizes and chitinisation of these change progressively and help to identify different instars to some extent. This species possibly passes through 7-8 instars. Differentiation of head structures become significant and prominent in the sixth instar onwards.

The field population of this species shows wide range of instars, present in all seasons. This may be due to lengthy life cycle, the variable rate of development of the larvae and overlapping generations as observed by Hitchcock (1976) in Australian species.

Pupa : Pupation occurs within the last larval skin. It is difficult to distinguish live pupae from larvae. Separation is possible only by observing the specimens closely. Prior to pupation the larvae become immobile, the colour of the larval skin changes from

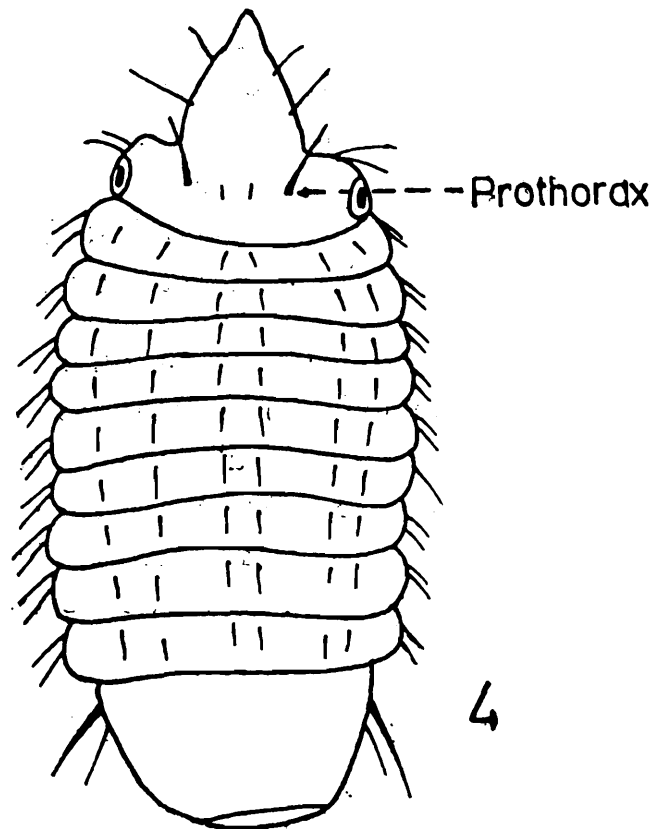
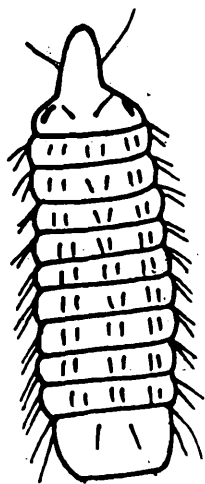
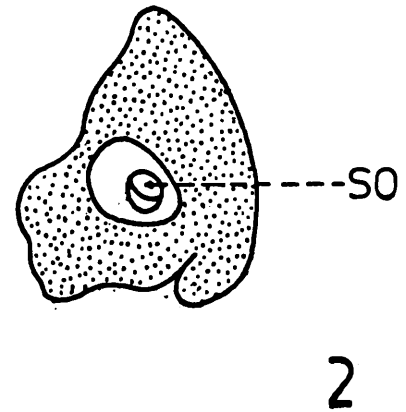
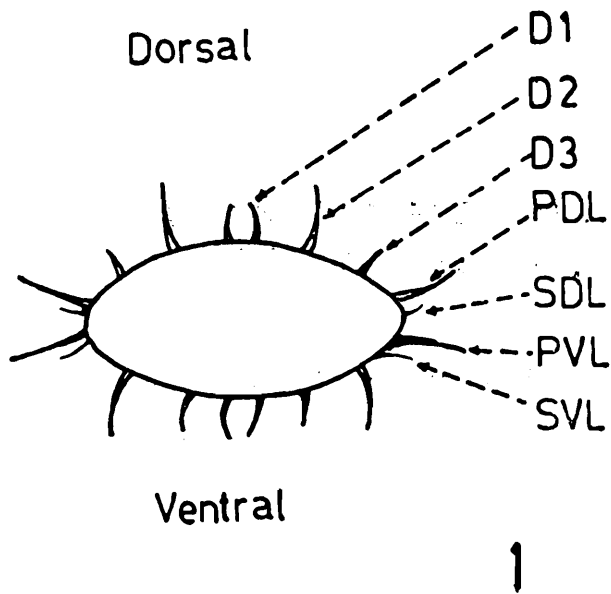


Fig. 1 : Transverse section through a body segment of *Negritomyia* larva showing the arrangement of the setae. (D1, dorsal seta ; D2-D3, medio dorsal setae ; PDL, primary dorso-lateral seta ; PVL, primary ventro-lateral seta ; SDL, secondary dorso-lateral seta ; SVL, secondary ventro-lateral seta).
 Fig. 2 : Prothoracic spiracle, (SO, Spiracular openings) Fig. 3 : Instar I. whole larva (dorsal view)
 Fig. 4 : Instar III. whole larva (dorsal view).

creamy white to light or dark brown. The head and anterior segments become straight, while posterior segments may remain deflected dorsad or ventrad. Pupal period lasted

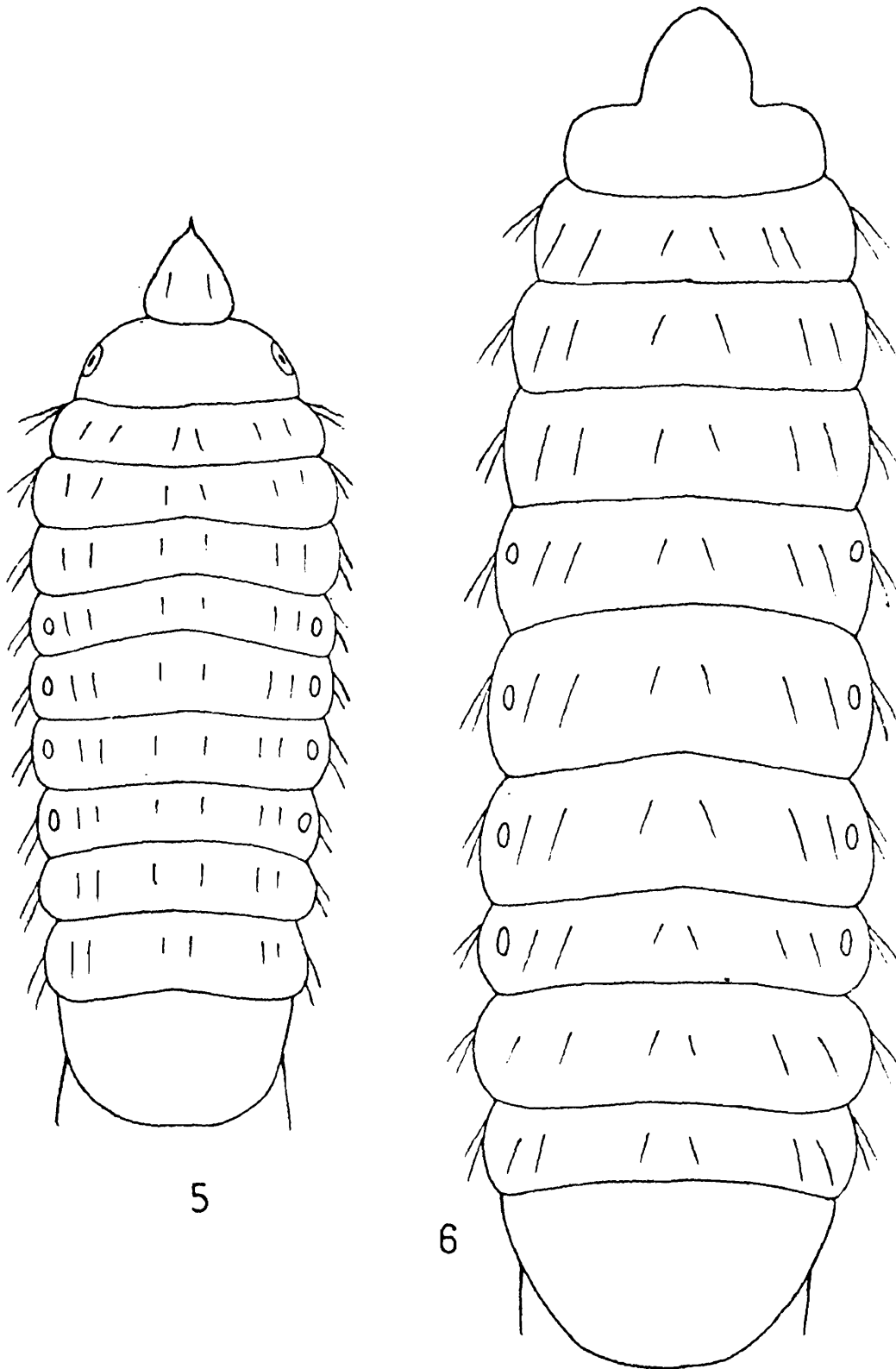


Fig. 5 : Instar VII, whole larva (dorsal view)

Fig. 6 : Puparium (dorsal view).

10-15 days depending on temperature. Adults emerge out by breaking larval skin at mesothoracic region.

Laboratory emergence of adults occurred from October to the middle of February with the main emergence in January. Generally females emerged from smaller pupae and males from larger ones. Emergence of adults usually took place between 14·00 to 16·00 hrs and rarely in the morning between 9·00 to 10·00 hrs.

Observations on sex-ratio at the time of emergence revealed that females outnumber the males. An experiment conducted on longevity of the adults in laboratory conditions showed that the adults remain alive for 14 days when fed on 10% sucrose solution while 5 days without any food.

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