

SEXING LIVE ADULTS OF THE 'POLLU' BEETLE *LONGITARSUS NIGRIPENNIS* MOTS. (CHRYSOMELIDAE: COLEOPTERA)

P. S. P. V. VIDYASAGAR*,
S. DEVASAHAYAM and
K. M. ABDULLA KOYA

National Research Centre for Spices, Marikunnu,
Calicut 673 012, India.

* Present address: Central Plantation Crops Research
Institute, Kasaragod 670 124, India.

THE flea beetle or 'pollu' beetle, *Longitarsus nigrispennis* Mots. (Chrysomelidae: Coleoptera) is a major pest of black pepper (*Piper nigrum* L.) in India, causing considerable damage to berries as well as to leaves¹. It becomes imperative to determine the sex of live adults in order to conduct studies on its biology, population dynamics and other such investigations. Most of the earlier workers depended on the slightly larger size of female beetles for sexing live adults. Some coleopteran species have been sexed on the basis of morphological characters such as tarsal claws, clypeal tubercles, post-tibial mucro spine, etc²⁻⁴. However, these characters were not useful in the present case. Hence, the external characters of the beetles were studied in order to arrive at a probable method for differentiating the sexes.

An important character found only in the female beetles is the elongated, sclerotized spine attached to the mid-ventral wall of the genital chamber. This is clearly visible through the pale sternal plates of the last three abdominal segments (figure 1). This spine, identified under a stereomicroscope, measures about 0.7 mm in length and extends from the third abdominal segment to almost the tip of the abdomen. It is broadest in the region of the last abdominal segment and tapers towards the tip. To

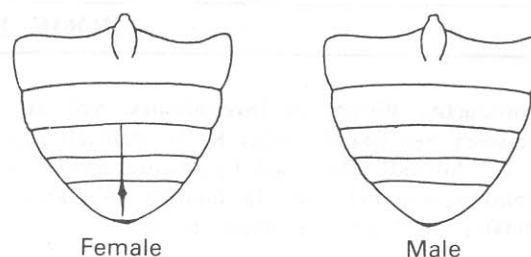


Figure 1. Ventral view of abdomen of female and male 'pollu' beetle.

confirm the presence of the spine only in females, 50 specimens were examined. All specimens with the ventral spine turned out to be females; the males lacked the spine.

Thus, the presence of the ventral spine in females and the absence of the same in males can be used as a distinctive characteristic for sexing live 'pollu' beetles rapidly.

The authors thank Dr M. K. Nair, Director, CPCRI, Kasaragod, for encouragement and providing facilities and Sri G. B. Pillai, Head of the division of Entomology, CPCRI Regional Station, Kayangulam, for a critical perusal of the manuscript.

2 March 1988; Revised 11 April 1988

1. Pillai, G. B., In: *Proceedings of the National Seminar on Pepper*, (eds) M. K. Nair and M. Haridasan, Central Plantation Crops Research Institute, Kasaragod, 1978, p. 15.
2. Evertt, T. R. and Newsom, L. D., *Ann. Entomol. Soc. Am.*, 1964, **57**, 514.
3. Shires, S. W. and McCarthy, S., *J. Stored Prod. Res.*, 1976, **12**, 273.
4. Kovarik, P. and Burke, H. R., *Entomol. News*, 1983, **94**, 37.