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Record of *Cryptophlebia ombrodelta* (Lower) (Tortricidae: Lepitoptera) on Bael (*Aegle marmelos*) and tamarind (*Tamarindus indica*) in eastern India

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Cryptophlebia ombrodelta (Lower) (Tortricidae: Lepitoptera) is reported from India, Sri Lanka, Nepal, Indonesia, China, Taiwan, Vietnam, Thailand, western Malaysia, New Guinea, the Philippines, Japan, Guam, Australia and Hawaii. It is considered a pest of legumes. However, it has been reported to be an important pest of macadamia, litchi, and longan fruit (Jones, 1995) in Asia, Australia and Hawaii. Larvae are moderately polyphagous and have been recorded feeding on plants in several families. Recorded food plants are Citrus, coconut, *Parkinsonia aculeata*, *Cassia fistula*, *Cassia occidentalis*, *Senna occidentalis*, *Cassia alata*, *Cassia sophera*, *Cassia bicapsularis*, *Nephelium litchi*, *Acacia* sp, *Aegle marmelos*, *Sesbania aculeata*, *Sesbania grandiflora*, *Tamarindus indica*, *Feronia*, *Adenanthera pavonia*, *Filicium decipiens*, *Bauhinia hirsuta*, *Bauhinia purpurea*, *Bauhinia malabarica*, *Parkia*, *Prosopis juliflora*, *Cocoloba uvifera*, *Phaseolus lunatus*, *Poinciana pulcherrima* and *Pithecellobium dulce*.

The damage of this pest was recorded in bael and tamarind at the Central Horticultural Experiment Station, IIHR located at Bhubaneswar in the coastal regions of Odisha state (eastern India) . The damage of borer started at the green fruit stage and went up almost till the maturity stage in bael and tamarind. The damage to fruits was recorded for two consecutive years in both the fruit crops. The early stage larvae were collected and reared on respective hosts and some preliminary observations were recorded. Though egg laying behaviour was not recorded, it appears that females lay eggs on the fruits surface and larvae bore into the fruit. Inside the fruit, the larvae feeds on the pulp and seed and remained inside until adult emergence. Pupation occurred in the fruit near the rind and the adult emerged through an already made borehole leaving behind the puparium attached to exit hole on the fruit surface. Adults are brown to reddish brown with a dark-brown pretornal spot that was more pronounced in females. Late instar larvae were approximately 13-20 mm long. The abdomen was yellowish white, turning reddish in the final instar. The head and prothoracic shield were black or dark brown in the early instars, turning pale or yellowish brown in the final instar. Though three species of this pest have been reported viz. *C. illepida*, *C.*

ombrodelta and *C. peltastica* (Bradley, 1953), the species emerged in present study was identified as *C. ombrodelta*.

The damage of the borer to fruits is presented in Table -1. It indicates a damage level to the tune of 80 and 25 percent in 2013 and 2014, respectively with an average of 45.51 and 9.91 per cent in respective years in bael which led to premature fruit fall. The damage of the pest was recorded to be 10 per cent in 2013 and 3.50 percent in 2014 in tamarind crop. Review of literature reveals no mention of this pest on bael and tamarind from this region and therefore it may be first record of this pest on these crops from the eastern region of India.

Table-1: Incidence level of *C. ombrodelta* in bael varieties/accession

Bael Varieties/accession	**Affected fruit (%) (Center)**	
	2013	2014
CISHB 1	49.25	25.00
CISHB 2	15.25	0.00
Pant Shivani	38.42	20.00
Pant Urbarshi	23.14	7.14
Pant Sujata	26.35	0.00
Pant Aparna	78.21	7.14
CHBAEL -6	80.26	6.00
CHBAEL 7	53.24	14.00
Average	45.51	9.91

Tamarind pod with puparium partially in bore hole

Adult moth

Bael fruit with puparium partially in bore hole

References:

Bradley, J. D. 1953. Some important species of the genus *Cryptophlebia* Walsingham, 1899, with descriptions of three new species (Lepidoptera: Olethreutidae). *Bulletin of Entomological Research*. **43**: 679-689.

Jones, V. P. 1995. Sampling plans for *Cryptophlebia s*pp. (Lepidoptera: Tortricidae) attacking macadamia and litchi in Hawaii. *Journal of Economic Entomology*. **88**: 1337-1342.

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