SCIENTIFIC NOTES

NEW REPORT OF *XYLOTRUPES GIDEON* (LINNAEUS) (COL.: SCARABAEIDAE) ON SOM, *PERSEA BOMBYCINA* KOST, A FOOD PLANT OF MUGA SILKWORM, *ANTHERAEA ASSAMENSIS* (HELFER) (LEP.: SATURNIIDAE) IN ASSAM, INDIA

S. G. Eswarareddy* and R. K. Rajan

* Central Muga Eri Research & Training Institute, Central Silk Board, Ministry of Textiles, Govt. of India, Lahdoigarh, Jorhat-785 700, Assam, INDIA. E-mail: ereddy2001@yahoo.com

Som, *Persea bombycina* Kost is the primary food plant for rearing of muga silkworm, *Antheraea assamensis* (Helfer) (Lepidoptera: Saturniidae) in out door conditions (Som plantations) for the production of golden yellow silk in Assam (India). This perennial tree is attacked by the number of insect pests (caterpillars, borers, beetles, gall insects, sucking pests) and diseases their by affecting the quality of the leaves, reduction in the leaf yield which indirectly influences the production of muga silk. During frequent visits to the institute farms, the new beetles were observed feeding by boring on the stem of som tree, the collected beetles got identified by International taxonomist as *Xylotrupes gideon* (Linnaeus). This beetle is reported first time in som plantations of Farm No.1 & 3 at Lahdoigarh, Jorhat, Assam during May-October 2010.

These beetles are reddish brown to black and have long horn projecting dorsally from the head in male and in female, the horn is short. Adult beetle responsible for causing damage to som plants and seen at the base of the stem and tree trunks. These beetles mainly bore at the base of the stem and also on tree trunks and feed internal tissues/contents by making big hole from outside without entering inside the stem. During boring, fibrous woody material was comes out from the bored hole. Repeated attack of beetle reduces the growth of the plant. Gummy exudation was observed from bored holes of the stem, which in turn attracts flies.

This beetle is also reported on coconut (in Malaysia, Solomon Islands), oil palm (in Malaysia), Poinciana, *Delonex regia* (in Indonesia, British Solomons, New Herbides), Caco tree (in New Britain) etc. The biology of *X. gideon* is yet to be studied on som in Assam conditions. As per the earlier reports on coconut and other host plants in different countries, female lay eggs in manure/compost pits, dead and decaying organic matter, undisturbed heaps. After hatching, the grubs which feed on the decaying matter and adults bore on stem. Average duration of the developmental stages of eggs (21 days), total larval period (188 days), pre pupa (14 days), pupa (2 days), adult female (102 days) and female (90 days) (Bedford, 1975).

Management: Collection and destruction of beetles present in the stem, trapping of beetles with attractive breeding material mixed with insecticide, installation of sex pheromone traps to attract female beetles, application of neem

based granules (Avana @ 1.5 kg/Ac.) or Carbaryl 75 WP (2g/l) to the soil to control the grubs breeding in the soil to be followed to reduce the incidence of beetle in the plantations.

ACKNOWLEDGEMENTS

LITERATURE CITED

Bedford, G. O. 1975. Observations on the biology of *Xylotrupes gideon* (Coleoptera: Scarabaeidae) in Melanesia. Journal of Australian Entomological Society, 14: 213-216.

Male   Female

Figure 1. Adult beetles of *Xylotrupes gideon*.

Figure 2. Adult *X. gideon* feeding and boring on the stem of Som, *Persea bombycina*.

Figure 3. Bored hole on stem due to feeding by *X. Gideon* and gummy substance coming out from the bored hole.