

**A NEW RECORD OF *XYLOTRUPES GIDEON* (LINNAEUS)
(COLEOPTERA: SCARABAEIDAE) ON *PERSIA BOMBYCINA*,
KOST. FROM INDIA**

Rajesh Kumar*, G. Rajkhowa, N. J. Dhar and R. K. Rajan

* Central Muga Eri Research & Training Institute, Central Silk Board, Ministry of Textiles (Govt. of India), Central Silk Board, Lahdoigarh 785700, Assam, INDIA. E-mail: rajesh.ento@gmail.com

[Kumar, R., Rajkhowa, G., Dhar, N. J. & Rajan, R. K. 2011. A new record of *Xylotrupes gideon* (Linnaeus) (Coleoptera: Scarabaeidae) on *Persia bombycina*, Kost. from India. *Munis Entomology & Zoology*, 6 (1): 173-175]

ABSTRACT: *Xylotrupes gideon* (Linnaeus) is belongs to the family Scarabaeidae in order Coleoptera was noticed feeding on Som plant, *Persia bombycina* Kost. (Lauraceae) during May to September, 2010 and analysis of literature indicates that this is the first record of *X. gideon* Linnaeus on Som plantation crop at Farm No. 3 and Farm No. 2, Central Muga Eri Research and Training Institute, Central Silk Board, Ministry of Textiles, Govt. of India, Lahdoigarh, Assam. In the manuscript the host range of *X. gideon* (L.) and some morphological characters is discussed.

KEY WORDS: *Xylotrupes gideon* (L.), new record, som, Assam, India.

Som, *Persia bombycina* Kost (Family: Lauraceae) is primary host plant for Muga Silkworm, *Antheraea assamensis*, Helfer (Lepidoptera: Saturniidae) in whole Assam and other North Eastern Region of India where the muga silkworm rearing occurs. This tree usually attacked by many pests like, shoot borer, trunk borer, leaf miners, leaf galls, mealy bugs etc. Recently, *Xylotrupes gideon* (Linnaeus) (Coleoptera: Scarabaeidae: Dynastinae) was noticed feeding on the trunk of the Som plant during the August and September, 2010. North eastern region of India is abode to endemic insect biodiversity. Som plantation is available in North Eastern India and muga silkworm (*A. assamensis*, Helfer) is endemic to this region in the world, because of climatic conditions. The purpose of this paper is to highlight important observations and conclusions made by previous host plants and new host plant record along with color polymorphism of this beetle.

MATERIALS AND METHODS

All the specimens were collected and preserved in well fumigated wooden boxes. Prior to collection, the beetles were photographed in the field condition from May to September, 2010 at Farm No. 3 and Farm No. 2, Central Muga Eri Research and Training Institute, Central Silk Board, Ministry of Textiles, Govt. of India, Lahdoigarh, Assam. For field observations specimens and damage symptoms were photographed by Sony DSC R1 10.3 mega pixel. The photographs were edited using software ACDSee 9.0 Photo Manager and prepared plate in 600 dpi using software Adobe Photoshop 7.0.

RESULTS AND DISCUSSION

This plantation crop for rearing of Muga Silkworm was reared at Farm No. 3 and Farm No. 2, Central Muga Eri Research and Training Institute (CMER&TI),

Lahdoigarh, Jorhat, Assam (India). The detail information of observation was collected from two farms of the institute (Farm No. 2 and 3).

The damage symptoms were observed in the field and shows that beetle made hole to the main trunk of the plant (Figs. 1, 2, 3). During rainy season May – September, 2010, It was observed that the beetles come out from the soil and sit on plant trunk in group (Figs. 4, 5). The beetles were found in group of 4-6 full grown adults feeding on the trunk of the plant. The male were larger than the female and infatuated cephalic and prothoracic horn, but females never infatuate with horn. The color polymorphism was also observed and was found that the color of male and female of *X. gideon* (L.) were varied. *X. gideon* (L.) was found in three colors i.e. black, blackish brown, reddish brown (Fig. 4-7). The observation for *X. gideon* (L.) shows that males were dimorphic for horn length, but horn size varies within morphs (Figs. 4-7). Males of *X. gideon* were generally larger than females, but sometimes observed that few males were smaller than the females (Figs. 4, 5).

X. gideon is well known as occasional pest of coconut (Dangar et al., 1994) and it has also been reported on crops like plum (Kumar et al., 2007), okra (Nair et al., 2001), Oil palms, Sugarcane, Rubber, Banana, Bamboo, Poinciana, Cassia, Litchi and Potato (CABI, 1985). *X. gideon* is world wide in distribution. Hence, an analysis of literature indicates that this first record of infestation on Som plantation crop by *X. gideon* (Linnaeus).

ACKNOWLEDGEMENTS

The authors are thankful to Dr. V. V. Ramamurthy, Principal Scientist / In-charge, Identification Service, Division of Entomology, Indian Agricultural Research Institute, New Delhi 110012 for identification of the beetles.

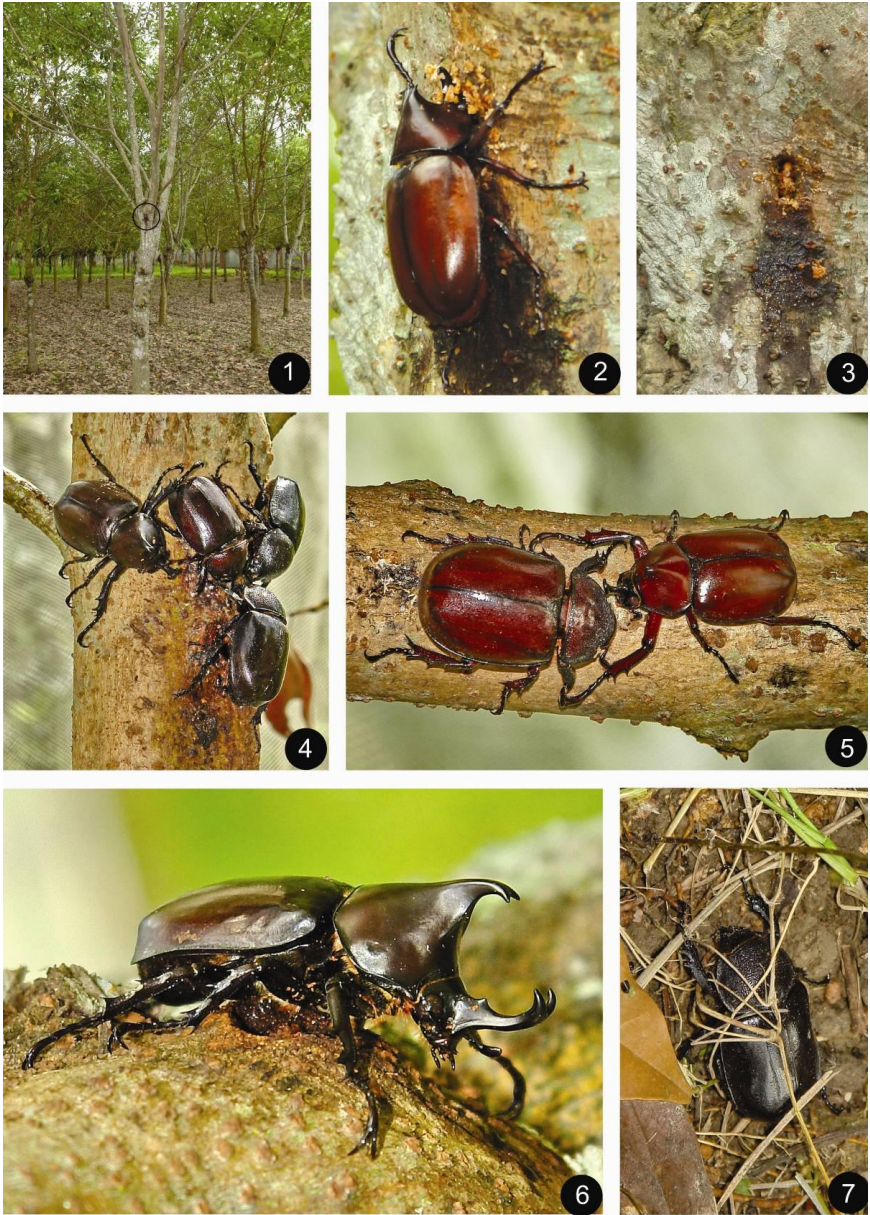
LITERATURE CITED

CABI, 1985. *Xylotrupes gideon*, Distribution Maps of Plant Pests. Map No. 474.

Dangar, T. K., Solomon, J. J. & Pillai, G. B. 1994. Infection of the coconut palm beetle, *Xylotrupes gideon* (Coleoptera: Scarabaeidae), by a nonoccluded baculovirus. Zeitschrift für Pflanzenkrankheiten und Pflanzenschutz, 101 (6): 561-566.

Nair, S., Prameela, P., Suma, A., Cherian, K. A. & Babu, K. V. 2001. A new record of *Xylotrupes gideon* (L.) on okra (*Abelmoschus esculentus* [L.]). Insect Environment, 7 (2): 71.

Kumar, J., Sharma, S. D. & Ramesh, Lal. 2007. Host plants of scarabaeid beetles in the lower Kullu valley of Himachal Pradesh. Pest Management and Economic Zoology. 15 (2): 213-216.



Figures 1-7, *Xylotrupes gideon* (Linnaeus): 1. Som plantation, *Persea bombycina* Kost shows highlighting beetle feeding, 2. Beetle feeding on trunk, 3. Damage symptoms, 4. Group sitting on trunk during morning time after rain (one male and three female), 5. One male and one female, 6. Male lateral view, 7. Female hiding in litter.