

SCIENTIFIC NOTES

**NEW REPORT OF APHIDS ON MUGA FOOD PLANTS
IN UPPER ASSAM (INDIA)****S. G. Eswara Reddy***

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Muga silkworm, *Antheraea assamensis* Helfer (Lepidoptera: Saturniidae), yields golden yellow silk and is unique to Brahmaputra river valley of Assam. It is polyphagous insect, multivoltine. It producing 117 million tonnes of raw silk, accounting to 0.65% of raw silk produced in the country, while rest of the production contributed by other North-Eastern states. The silkworm has 5-6 generations in a year viz., *Jethua* (April-May), *Aherua* (June-July), *Bhodia* (Aug-Sept.), *Kotia* (Oct.-Nov.), *Jarua* (Dec.-Jan.) and *Chatua* (March-April). The *Jethua* and *Kotia* rearings are considered as commercial crops, *Chotua* and *Bhodia* as seed and *Jarua* and *Aherua* are pre-seed crops. Muga silkworm is reared on two primary host plants, Som, *Persea bombycina* Kost and Soalu, *Litsaea monopetala* Roxb under outdoor conditions; there fore quality and nutritional value of food plants play a significant role in larval growth and silk productivity. These perennial trees are attacked by the number of insect pests and diseases their by affecting the quality and reduction in the leaf yield which indirectly influences the production of muga silk. During visits to the institute farms, the new species of aphid, *Schizoneuraphis himalayensis* (Ghosh & Raychaudhuri) on Som and *Toxoptera aurantii* (Boyer de Fonscolombe) (Hemiptera:Aphididae) on Soalu is reported first time at Farm No.2, Lahdoigarh, Jorhat (Assam) during May-October 2010. The nature of damage caused by these aphids and its management is discussed below.

***Schizoneuraphis himalayensis* (Ghosh & Raychaudhuri, 1973)
(Hemiptera: Aphididae)**

This aphid (Fig. 1) is reported on som plants, it is greenish; infest the som plants after pruning particularly during new flush. Both nymphs and adults found in the colonies on tender buds, shoots, lower surface of leaves and suck the sap which results in curling and reduction in the size of the leaves. In severe incidence, aphids secrete honeydew on tender parts of the plant and develop black sooty mold which reduces the photosynthesis activity and vigour of the plant. Sooty mould affected leaves are unfit for rearing of muga silkworm. Presence of honeydew and ants on the plants indicate the incidence of aphids.

***Toxoptera aurantii* (Boyer de Fonscolombe, 1841)
(Hemiptera: Aphididae)**

This **black citrus aphid** (Fig. 2) is reported on soalu plants, it is dark brown to black and infest tender parts of the soalu plants. Both nymphs and adults found in the colonies on tender buds, leaves, shoots and suck the sap their by reducing the vigour of the leaves.

Management: Collection and destruction of affected parts of plants as soon as noticed both in som and soalu, encouraging predatory coccinellids viz., *Coleophora bowringi* Crotch, *Coleophora saucia* Mulsant, *Harmonia dimidiata* (Fabricius), *Phrynocaria unicolor* (Fabricius) reported on som to reduce the infestation and spraying of any commercial Neem based formulations containing Azadirachtin 50000 ppm (1ml/L)/ Azadirachtin 10000 ppm (3ml/L) or any systemic insecticides like Imidacloprid (0.2 ml/L) on both som and soalu plants at 25-30 days before brushing of worms is recommended to control the aphids.

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Figure 1. *Schizoneuraphis himalayensis* sucking sap on som leaf.



Figure 2. *Toxoptera aurantii* sucking sap on soalu leaf.