Host plants of adult beetles of *Leucopholis lepidophora* Blanchard and *L. burmeisteri* Brenske (Coleoptera: Scarabaeidae)

S. K Adarsha*, C. M Kalleshwara swamy, N. L Naveen
H. B Sharanabasappa Pavithra and B. B Kumar.  
*Department of Agricultural Entomology, University of Agricultural and Horticultural Sciences, Shivamogga, Karnataka, India*

E-mail: adarsha.801@gmail.com

Areca nut (*Areca catechu* L.) is one of the important commercial crops in India, belonging to family Palmae. Areca nut is infested by many pests and diseases. Among them, the root grubs cause severe damage to the crop, particularly in malnad and costal belt of Karnataka and Kerala. The magnitude of the problem has been widespread over the past years. In this region of India, the root grubs have attained the status of a serious pest in plantation crops due to several factors like cropping pattern, agricultural practices, and lack of suitable plant protection measures, etc. There are three important species of root grubs, which infest areca nut and coconut are *Leucopholis lepidophora* Blanchard, *Leucopholis coneophora* Burmeister and *Leucopholis burmeistri* Brenske (Veeresh *et al*., 1982). *Leucopholis lepidophora* is distributed in the hilly and high rain fall regions, whereas, *L. burmeistri* were restricted to coastal regions of Karnataka. These grubs cause damage to roots by feeding, resulting in yellowing of leaves, stem tapering, nut fall, reduced vigour and yield. In Shivamogga district, higher per cent of damage was noticed in Sagara (36.97 %) followed by Shivamogga (33.00 %), and Thirthahalli (27.63 %) taluks. However, least incidence was noticed in Soraba (19.00%). The species *L. burmeisteri*, was restricted to coastal region in Udupi taluk (28.80%) (Kalleshwaraswamy *et al*., 2015 unpublished). Different integrated management practices for white grubs are hoeing or forking to expose grubs for bird predation, application of insecticides and adult collection (Prakash *et al*.,
Adult collection was one of the major management practice included in the IPM programme for white grub control. However, adults emerge during late evening hours, fly at higher heights and are difficult to collect (Kumar, 1999). Unlike Holotrichia, there is no report on the host plants of Leucopholis spp which can be used for adult collection. Hence, studies were carried out in farmer’s fields at Aladka (Udupi taluk) (N13°43; E074°75), Harakere (Shivamogga taluk) (N13°53; E075°33) and Gulukoppa (Hosanagara taluk) (N13°522; E075°12) during evening hours between June and September of 2013 and 2014 to understand the host plants of two species of Leucopholis.

It was observed that the adult beetles emerge from the soil between 18.30h to 21.30h with a buzzing sound and immediately alight on the plants nearby including areca nut. During surveillance it was observed that adult beetles of L. lepidophora fed on Napier grass Pennisetum purpureum, Mangifera indica L. and Anacardium occidentale (Linn.) (Plate A) and L. burmeistri were fed on Dipterocarpus turbinatus (Gaertn) and Anacardium occidentale (Linn.) (Plate B and C), which belongs to plants of family Anacardiaceae and Dipterocarpacea, respectively. Earlier reports say that the L. coneophora and L. lepidophora fed on Anacardiaceae, Eleagnaceae, Fabaceae, Moraceae, Myrtaceae and Tiliaceae (Kumar, 1999). However, there are no published reports on host plants of L. burmeistri. Both the species are not found feeding on areca nut leaves.

For further confirmation, freshly emerged adults were collected in the field and allowed for feeding on leaves of different plants placed in separate cages. Three adults per cage were released and observed for about two days and confirmed that the adults of L. burmeistri fed on leaves of D. turbinatus and A. occidentale. This published report on the host plants of the
Leucophilis adults may help in the design/incorporating the host plants for adult collection in IPM.

Plate A. L. lepidophora feeding on leaves of Napier grass *Pennisetum purpureum*

Plate B. L. burmeistri feeding on leaves of *Dipterocarpus turbinatus*

Plate C. L. burmeistri feeding on leaves of *Anacardium occidentale*

References
