Prosopis juliflora is an invasive alien/exotic plant species of Fabaceae family. In the present study, Prosopis juliflora has been found to harbor very large population of Myllocerus spp. in Rajasthan. Prosopis juliflora is reported to host a wide spectrum of insects world over. The genus Myllocerus Schoenherr, 1823 is distributed world over. So far no species of Myllocerus have been reported to host on or cause damage to Prosopis juliflora. This is the first record of Myllocerus species diversity found associated with Prosopis juliflora.

MATERIAL AND METHODS

Adults of Myllocerus spp. were collected from Prosopis juliflora in different districts of Rajasthan during 2010-2015. Adults were collected from the Prosopis juliflora trees by spreading a white sheet below it and then shaking/tapping the branches. They were also collected directly from the leaves, stem and thorns of the tree by hand picking and also by using light trap with mercury bulb of 160 W at night in thick plantation areas of Prosopis juliflora thickets. The specimens were killed using ethyl acetate as killing agent and preserved dry in butter paper envelops in storage boxes with dichlorobenzene. The specimens were also directly killed and preserved in 70% alcohol. The specimens were pinned for identification. The species was taxonomically determined and confirmed by the experts.

RESULTS AND DISCUSSION

Adults of Myllocerus spp. were observed feeding on leaves of Prosopis juliflora in different districts of Rajasthan during 2010-2015. Myllocerus spp. are mainly foliage feeders. Adults mainly feed on leaves and sometimes cause severe defoliation. The short snouted curculionid Myllocerus spp. are widely distributed and recorded from various trees, horticulture and agro-forestry plants and many are also reported as pests of plant species. Although in case of Prosopis juliflora no mortality was recorded in the field either at plants sapling or tree stage but population density was very high on an individual tree. The present paper reports for the first time Prosopis juliflora sustaining/supporting diversity of ten Myllocerus spp. of class Insecta under order Coleoptera and family Curculionidae.

These beetles are normally polyphagous in nature but have a selected host range. The adults are small 2.5 mm to 6.2 mm long, some are with various blackish spots or lines on thorax and elytra. The colour varies from yellowish-green, light to dark green, grey to brown which helps them camouflage with the colour of the leaves, stem and thorns and thus escape notice of their presence. The adults were found singly on the under-surface of leaves, on the upright shoot tips, the base of the stem near ground level and clinging at the base of the thorns. In general the eggs are laid in the soil. Larvae feed on roots and rootlets of various seedlings and young plants. Adults emerge from the soil and feeds on foliage. The adults were active throughout the year with maximum activity by the end of July to last week of September. The species are diurnal but also attracted to light. The adults feign death for a short period of 30 to 50 sec. Many species of insectivorous birds and lizard Calotes versicolor (Daudin, 1902) feed on Myllocerus adults which serves as natural food for these biological control agents thus keep their population in check. It was also recorded that the agriculture fields having Prosopis juliflora as fencing were not infested by Myllocerus spp. The systematic account of the species and host range is discussed below.
DIVERSITY OF MYLLOCERUS SPECIES

SYSTEMATIC ACCOUNT

Order: Coleoptera
Family: Curculionidae
Subfamily: Otiorrhynchinae
Genus: Myllocerus Schoenherr, 1823

1. Myllocerus dalbergiae Ramamurthy and Ghai, 1988

Reported Host range: Azadirachta indica, Dalbergia sisoo, Moringa oleifera, Tecomella undulata. **New Host:** Prosopis juliflora.

Remarks: Also collected from Acacia nilotica, Azadirachta indica, Dalbergia sisoo, Moringa oleifera, Prosopis cineraria, Tectona grandis.

2. Myllocerus discourl Boheman, 1834


3. Myllocerus dorsatus (Fabricius, 1798)

Reported Host range: Azadirachta indica, Cedrela toona, Dalbergia sisoo, Leucaena leucocephala, Morus alba, Prosopis cineraria, Santalum album, Tectona grandis, Toona ciliata, Cajanus cajan, Canavalia, Citrus spp., Gossypium spp., Solanum tuberosum, Vicia faba, Vigna unguiculata. **New Host:** Prosopis juliflora.

Remarks: Also observed and collected from Prosopis cineraria.


5. Myllocerus nepalensis Ramamurthy and Ghai, 1988

Reported Host range: Dalbergia sisoo, Cassia siamea. **New Host:** Prosopis juliflora.

6. Myllocerus subfuscatus (Gruérin-Méneville, 1843)


Remarks: Also collected from Acacia nilotica, Azadirachta indica, Dalbergia sisoo, Prosopis cineraria, Tectona grandis.

7. Myllocerus tenuicornis Faust, 1891

Reported Host range: Acacia nilotica, Azadirachta indica, Dalbergia sisoo, Acalypha spp., Psidium spp. (Litchi). **New Host:** Prosopis juliflora.

Remarks: Also observed and collected from Acacia nilotica, Acacia senegal, Acacia tortilis and Azadirachta indica.

8. Myllocerus tenuicornis Faust, 1891

Reported Host range: Acacia nilotica, Azadirachta indica, Dalbergia sisoo, Acalypha spp., Psidium spp. (Litchi). **New Host:** Prosopis juliflora.

Remarks: Also collected from Acacia nilotica, Acacia senegal, Acacia tortilis and Azadirachta indica.


Reported Host range: Shorea robusta and cultivated crops. **New Host:** Prosopis juliflora.


Reported Host range: This includes Acacia nilotica, Acacia senegal, Albizia lebbeck, Acacia tortilis, Azadirachta indica, Casuarina equisetifolia, Cassia siamea, Dalbergia sisoo, Leucaena leucocephala, Mangifera indica, Moringa oleifera, Pongamia pinnata, Litchi chinensis, Prunus spp., Psidium spp., Punica granatum, Pyrus spp., Zizyphus jujuba, Zizyphus mauritiana, Abelmoschus esculentus, Cajanus cajan.

New Host: Prosopis juliflora.

Remarks: Also recorded from Acacia nilotica, Acacia tortilis, Acacia senegal, Dalbergia sissoo, Prosopis cineraria, Tectona grandis and Tecomelia undulata.

REFERENCES