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A new record of *Nezara viridula* (Linnaeus) on shisham (*Dalbergia sissoo* Roxb.) in Jharkhand, India

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Abstract
The occurrence of *Nezara viridula* (Linnaeus) on *Dalbergia sissoo* is reported for the first time from Jharkhand and these sap sucking pentatomid insect pests were noticed to damage apical tender shoots and leaves of *Dalbergia sissoo* in both nursery as well as young plantations.

Keywords: *Nezara viridula*, new record, *Dalbergia sissoo*, Jharkhand

Introduction
Nezara viridula (Linnaeus) is a polyphagous, cosmopolitan hemipteran insect pest belonging to the family Pentatomidae of suborder Heteroptera and is having a wide array of host plants of both agricultural as well as tree crops throughout the tropical and subtropical areas of the world because of its efficient dispersal ability [19, 15, 11]. Among the tree species, infestation of these sap sucking bugs was recorded on apple (*Malus domestica*) plantation in Jammu and Kashmir [9]. Other reported tree food plants of *Nezara viridula* are Murraya *koenigii* [17]; mango (*Mangifera indica*) [18]; *Ziziphus jujuba* [6]; *Ligustrum lucidium* [15]. Kalia and Lal [10] included *Nezara viridula* in the list of insect pests of *Dalbergia sissoo* from Jabalpur, Madhya Pradesh. Amongst the recorded 145 host species of 32 plant families, leguminous plants are preferable food plants of *N. viridula* [20, 14]. Smaniotto and Panizzi [16] recorded 21 plant species of family Fabaceae as the reproductive hosts of *N. viridula* and stated that complete development of this bug species occurred on those fabaceous plant species. In the present finding, an endeavour has been made to record *Nezara viridula* (Linnaeus) as a sap sucking insect pest on Shisham (*Dalbergia sissoo)*, from Jharkhand, India.

Material and Methods
Regular investigations were carried out to find out the insect pests of shisham (*Dalbergia sissoo)* in the nursery and young plantation of Faculty of Forestry, Birsa Agricultural University, Ranchi (23.18 º N, 65.19º E; alt. 625 MSL), Jharkhand and during the course of survey, infestations of large number of sap sucking pentatomid bugs were observed during November to February for last two years. These bugs were collected by net sweeping from the shisham foliages and killed in the insect killing bottle by using ethyl acetate. After proper pinning these insects were kept in the fumigated insect box for further identification. Later the insects were identified as *Nezara viridula* (Linnaeus) with the help of available literature [1, 7, 8, 13, 17, 18]. The bugs are 11 to 14 mm long; green in colour and with three tiny white dot like spots on the pronotum and characterized by extended rostrum beyond the middle of the scutellum, abdomen with small dots along the sides, obtuse abdominal spine and frena extending beyond the middle of the scutellum.

Results and Discussion
Quite a good number of adults of sap sucking bug species, *Nezara viridula* were found on nursery seedlings and saplings as well as young plantations of shisham (*Dalbergia sissoo)* plant feeding tender apical shoots and leaves during last week of November to February in the previous two years. In few nursery seedlings, dried appearance of apical parts of tender shoots and leaves was noticed due to severity of infestation of the sucking bugs. They were noticed to be very active fliers during the day time and also found in copula on the new shisham foliages (Fig. 3).

So far as existing literature goes, no information is available of *Nezara viridula*, the hemipteran insect pest on *Dalbergia sissoo* in Jharkhand [2, 3, 4, 5, 12] and so this sap sucking bug species is the first record as the insect pest of shisham in Jharkhand state of India.

Fig 1: *Nezara viridula* (Dorsal view)

Fig 2: *Nezara viridula* (Ventral view)

Fig 3: *Nezara viridula* (In copula)

Conclusion

Nezara viridula is a widespread insect pest having a large number of host plants. But its record of occurrence of feeding on shisham is an important finding and this information can be used for further study to know the degree of infestation and insect -host plant interaction of such insect pest species.

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