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Apoderus sissu Marshall (Coleoptera: Attelabidae) on *Dalbergia latifolia* Roxb: A new record of host plant in Jharkhand

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Abstract

Leaf rolling weevil, *Apoderus sissu* Marshall was noticed to cause severe damage by leaf scraping and leaf rolling to Black rosewood (*Dalbergia latifolia* Roxb.) plantation and such occurrence of foliage infestation by the weevil insect is reported for the first time from the Jharkhand State. This new host plant record of *Apoderus sissu* in Jharkhand is really important for the outbreak potential of weevil insect.

Keywords: *Apoderus sissu*, leaf infestation, *Dalbergia latifolia*, new record

Introduction

Apoderus sissu Marshall (Coleoptera: Curculionoidea: Attelabidae) is one of the most notorious leaf damaging insect pests of shisham (*Dalbergia sissoo* Roxb.) and it is commonly called as leaf rolling weevil causing extensive damage to shisham foliage both in the nursery as well as plantation [7, 1, 2]. Adult weevils damage tender shisham leaves by irregular scraping and feeding on them and cutting the leaf blade of medium leaves near the base for the formation of twisted leaf roll or nidus for oviposition and in order to make proper nidus, maximum number of leaves are destroyed [3]. This insect has also been reported to infest the leaves of rose by Josephraj Kumar *et al.* [4].

During the course of survey of leaf damaging insects in plantation areas of the Faculty of Forestry, Birsa Agricultural University, Ranchi (23.18°N, 85.19°E; alt 625 MSL), Jharkhand, leaf infestation by the leaf rolling weevils was noticed from the month of June to August 2018 on the foliages of *Dalbergia latifolia* Roxb., popularly known as Kala-shisham or Black rosewood which is of the same family as *Dalbergia sissoo* i.e. Fabaceae. Leaf damaging behavior and potentiality of the weevil in respect to leaf cutting and forming leaf rolls or nidus was found same as *Apoderus sissu*, the shisham leaf rolling weevil. For identification and confirmation, the weevils were collected with the help of long handled insect catching net and killed in the insect killing bottle by using ethyl acetate and the killed specimens were then pinned properly and kept in fumigated boxes containing naphthalene balls for subsequent identification. Later after thorough morphological studies the weevils were identified as *Apoderus sissu* Marshall (Fig. 1) with the help of the available literature [6, 7, 1, 2, 3, 5] and also by comparing the already identified specimen kept in Faculty of Forestry, Birsa Agricultural University, Ranchi, Jharkhand. The weevils are small, 5 - 6 mm long, golden yellow in colour and with black spots on the elytra and characterized by having glabrous rostrum, subconical prothorax, semicircular scutellum and densely pubescent meso and metasternal epimera. It can be concluded that *Apoderus sissu* Marshall is the leaf damaging weevil of both *Dalbergia sissoo* as well as *Dalbergia latifolia* and these weevils form leaf roll or nidus in both the species of genus *Dalbergia* (Figs. 2,3,4). As the occurrence of this insect pest on *Dalbergia latifolia* has not been recorded earlier, so that it is being reported for the first time from Jharkhand and this new host plant record for the weevil, *Apoderus sissu* Marshall, constitutes a significant contribution for future studies on tree and insect pest interaction.

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Fig 1: *Apoderus sissu* (Adult weevil)



Fig 2: Weevil damage by twisting and rolling of Shisham (*Dalbergia sissu*) leaves



Fig 3 & 4: Weevil damage by twisting and rolling of Black Rosewood (*Dalbergia latifolia*) leaves

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