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# REPORT OF WEEVIL, *Myllocerus fotedari* AHMAD, 1974 (COLEOPTERA: CURCULIONIDAE) AS NEW PEST OF *ROSA CHINENSIS* JACQ IN KASHMIR VALLEY.

**DEEN MOHD. BHAT [a*]**

[a] Department of Zoology, Govt. College for Women, MA Road Srinagar, J&K-1920001, India.

**AUTHOR'S CONTRIBUTION**

The sole author designed, analyzed, interpreted and prepared the manuscript.

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## ABSTRACT

The weevil, *Myllocerus fotedari* Ahmad (Coleoptera: Curculionidae) is being reported as new pest of Chinese rose, *Rosa Chinensis* Jacq. in Kashmir, India. It was found damaging the rose plants at different locations in Kashmir (India). Since the weevil is major pest of walnut, the rose plants grown near walnut trees have been found more vulnerable to weevil infestation. The nature and extent of damage and morphological features of this weevil have also been studied. Further investigation is required for understanding the polyphagous nature of this species.

**Keywords:** *Kashmir; pest; Myllocerus fotedari; Rosa chinensis.*

## 1. INTRODUCTION

*Myllocerus* is a genus of Oriental broad-nosed weevils in the beetle family Curculionidae (Insecta: Coleoptera). There are about 336 species in the world, out of which, 89 species occur in India and adjacent countries Ghai [1]. One of the commonly occurring species of this genus is *Myllocerus fotedari* Ahmad which is widely distributed in Kashmir Valley (India) and has been reported as sporadic pest of various pome and stone fruit trees [2, 3 and 4]. The adults of genus *Myllocerus* attack *Cydonia oblonga* (Quince), *Malus domestica* (Apple), *Prunus armeniaca* (Apricot), *Prunus domestica* (Plum), *Prunus dulcis* (Almond), *Prunus persica* (Peach), *Prunus savium* (Sweet cherry), *Pyrus communis* (Pear), and *Juglans regia* (Walnut) in Kashmir [1,3,5]. The weevil attains potentially injurious dimensions in the month of June, when its incidence is higher on account of an increase in the population density due to the rise in temperature and the emergence of new generation adults [2]. However, hitherto, *Myllocerus fotedari* Ahmad was not reported on any ornamental plants in Kashmir Valley. In this commucation, it is being reported as new pest of Chinese rose, *Rosa chinensis* in Kashmir.

**Corresponding author: Email: bhatdm2014@gmail.com;*

## 2. MATERIALS AND METHODS

*Myllocerus fotedari* Ahmad (Coleoptera: Curculionidae) was accidently recorded as pest of *Rosa chinensis* in Kashmir during a random field survey of insect pests of vegetable crops conducted from the year 2014 to 2019. The adult stages of this weevil were collected from the host rose plant and were preserved in the laboratory by dry and wet mounting method. They were identified by following the taxonomic keys given by Ahamd and Dar [2] and Ramamurthy and Ghai [6]. Field observation details were recorded in field diary and presented here in Table 1.

## 3. RESULTS AND DISCUSSIONS

During the present investigation, the adult weevils were observed feeding voraciously on rose plants, *Rosa chinensis* at some of the surveyed locations in the districts of Badgam, Ganderbal, Bandipora and Srinagar (Table 1 and Figs. 1-6). However, it was observed that the rose plants were more heavily infested at those sites, which were surrounded by walnut trees (*Juglans regia*). Since *Myllocerus fotedari* Ahmad is a common pest of walnut trees in Kashmir [4,5 and 7], it may be possible that the weevil also invades and infests the nearby growing plants, particularly rose varieties. This is a first report of *M. fotedari* as pest of rose plant, *Rosa chinensis* in Kashmir valley. The necessary field data, recorded pertaining to *Myllocerus fotedari* Ahmad on rose plant at different locations in Kashmir, is appended in Table 1. The nature and extent of damage observed on host plant has also been highlighted through Fig. 3-6. As per Table 1 the maximum average number of plants infested per 20 plants at some study sites (Kangan) was found to be 14, while as the average number of weevils per plant at some sites (Serch Chowdry Bagh) was recorded to be 23.

### 3.1 General Characters and Diagnosis of *Myllocerus fotedari* Ahmad: (Fig.1-2)

The species has been described by Ahmad and Dar [2]. The body colour of the adult is piceous, the legs being a shade lighter. There is greyish-white scaling over the body. The antennae and thorax are piceous black in colour. Head is transverse with dorsally visible scrobes. Antennae is measuring about 3.3 mm. in length and possessing dark clubs. The mandibles are obtuse and pincer-like. Mentum is small and almost circular in shape, submentum without any peduncle. Scape elongated, curved and extending beyond the anterior margin of prothorax. Funicle seven jointed with two basal segments longer than the rest. Elytra sub-oblong in shape and measuring about 4.2 mm in length, much broader than the prothorax at shoulders and measuring about 1.5 mm. in width at the base. Outer margins of elytra sub-parallel and ten distinct striae present on each elytra. The tarsi bearing a stout seta on each leg, the tarsal seta on hind legs being very sharp Tarsal pulvinus measuring about 35, 13 and 14 microns in the first, second and third pairs of legs respectively. Hind legs devoid of claws, the femora serrated at both sides while the tibia serrated on one edge only. The three pairs of legs are measuring 4.0 mm, 2.1 mm and 4.4 mm in length respectively.

**Table 1. Details of *M. fotedari* infesting rose plant, *Rosa chinensis* in Kashmir (through random sampling)**

| Location | District | Coordinates | Date of Collection | Avg. No. of plants infested/ 20 plants | Avg. No. of weevils per plant | Nature and extent of damage |
|---|---|---|---|---|---|---|
| Serch Chowdry bagh | Ganderbal | 33.9606° N, 74.6979° E | 21-06-2019 | 12/20 | 23 | Adults feed on leaves and shoots of the plant and cause complete defoliation in server infestation |
| Kangan | Ganderbal | 34.2946° N, 75.2169° E | 25-06-2019 | 14/20 | 17 | |
| Hajin | Bandipora | 34.2950° N, 74.6313° E | 28-06-2019 | 9/20 | 11 | |
| Harwan | Srinagar | 34.3976° N, 74.3982° E | 3-07-2019 | 10/20 | 14 | |
| Bugam | Budgam | 33.6911° N, 75.0231° E | 4-07-2019 | 12/20 | 10 | |

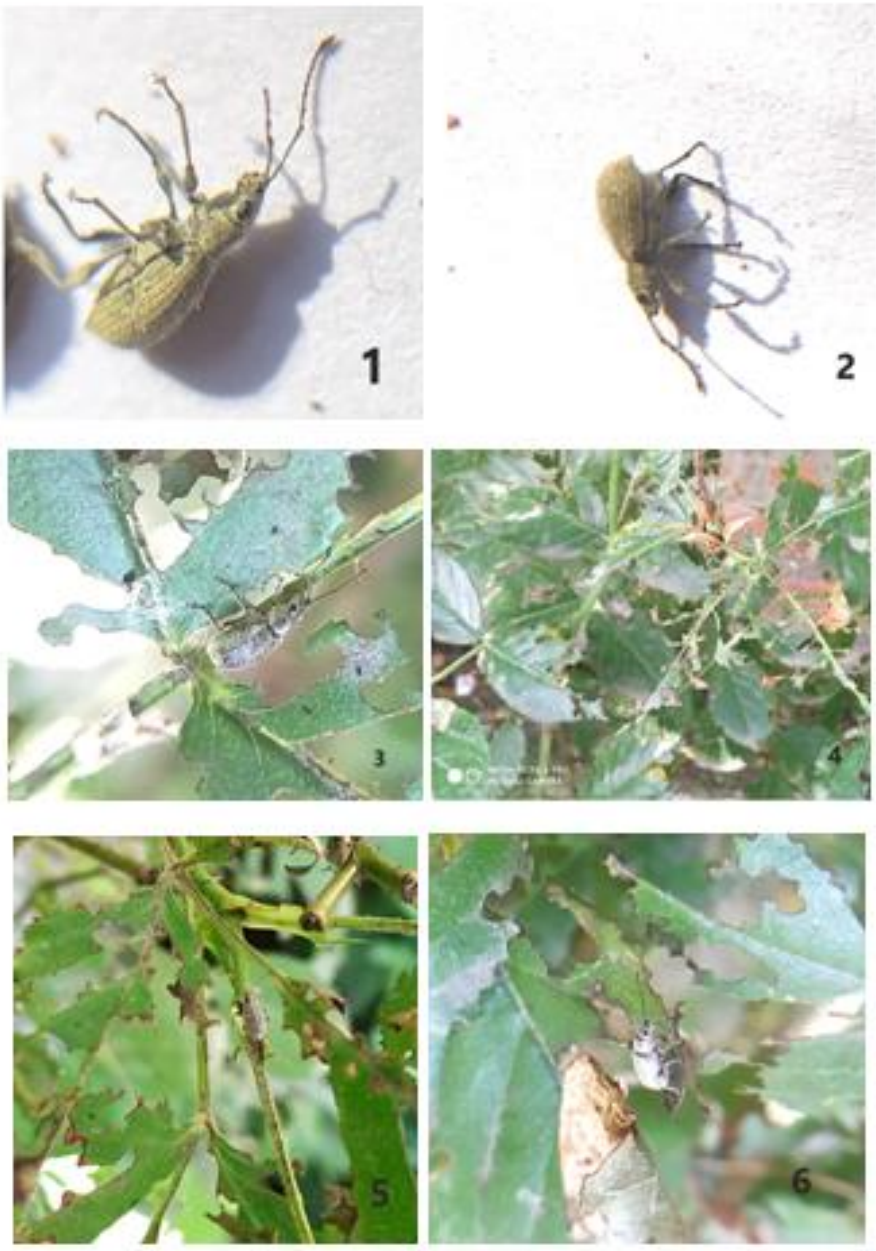


**Fig. 1-2. Adult weevil, *Myllocerus fotedari* Ahmad; Fig. 3-6: Infestation and damage of *M. fotedari* on rose plant, *Rosa chinensis* in Kashmir**

## 4. CONCLUSION

The weevil, *Myllocerus* has got established as sporadic pest of many pome and stone fruits in Kashmir Valley in Kashmir Valley. The present investigation provides us some clue that the weevil shows tendency to attack ornamental plants like rose as well, as has been recorded at some study sites (Kangan, Harwan, Hajin, Serch Chowdrybagh) in different districts of Kashmir Valley. However, further research is needed in order to study the polyphagous nature of this insect and to assess its damage particularly on economically important plants, in this part of the world, so that, control measure of this insect can be suggested accordingly.

## ETHICAL APPROVAL

As per international standard or university standard ethical approval has been collected and preserved by the authors.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

## REFERENCES


1. Khan AA, Dar SM, Shah MA, Mohi-udDin S, Majid S. Insect pests of walnut and their management In: Pandey, A.K& Mall, Pramod (ed), Chap.17. Insect Pest Management of Fruit Crops. Biotech Books, New Delhi; 2016.
2. Ahmad D, Dar HU. A New Species of Weevil (Curculionidae: Coleoptera) from Kashmir Valley. Journal of Science. 1974;2:91-94.
3. Bhagat RC. Coleopteran-fauna (Insecta) infesting fruit plantations in Jammu & Kashmir state (India): An annotated checklist and biodiversity. International Journal of Current Research in Bioscience and Plant Biology. 2017; 4(2): 60-66. DOI: http://dx.doi.org/10.205 46/ijcrbp.2017.402.008
4. Gull S, Ahmad T, Rasool A. Studies on diversity indices and insect pest damage of walnuts in Kashmir, India Acta Agriculturae Slovenica. 2019;113(1):121 - 135.
5. Gull S, Khanday LA, Ahmad T, Buhroo AA. A Survey of Some Insect Pests associated with *Juglans regia* L. (Juglandaceae) from Kashmir, India. Journal of Zoological Research. 2019a; 3(2):2637-5575.
6. Rammamurthy VV, Ghai S. (A study of Genus *Myllocerus* (Coleoptera: Curculionidae). Oriental Insects. 1988;22:377-500.
7. Mir GM, Wani MA, Severity of infestation and damage to walnut plantations by important insect pests in Kashmir. Indian Journal of Plant Protection. 2005;33(2):188- 193.