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## First report of metallic shield bug, *Scutellera nobilis* (Fabricius) (Scutelleridae: Hemiptera) on Aonla (*Emblia officinalis* Gaertn.) from Gujarat, India

**Naziya P Pathan, RS Jaiman, PS Patel and AU Amin**

### Abstract

Study was conducted on Aonla (*Emblia officinalis* Gaertn.) during 2018-19 at Research farm of College of Horticulture, S. D. Agricultural University, Jagudan, Gujarat on the insect pests of Aonla. Among the different pests observed, a new insect *Scutellera nobilis* (Fabricius) was found on Aonla (*E. officinalis*). Damage is caused by sucking sap and reducing quality of fruits later on development of brown colour patches on fruits. Dry mounted bug appears indigo blue with faint black marks. Head triangular, longer than broad, obliquely directed downwards. Antennae four segmented. The present study is the first report of *S. nobilis* on Aonla from Gujarat, India.

**Keywords:** *Scutellera nobilis* (Fabricius), *Emblia officinalis* Gaertn, Gujarat

### 1. Introduction

Aonla, *Emblia officinalis* Gaertn. commonly named as 'Indian gooseberry' belongs to family Euphorbiaceae. Aonla is important minor arid fruit crop which is indigenous to India sub-continent. Aonla trees thrive well throughout the tropical and subtropical parts of India. Its fruit endowed with ample of nutritional and medicinal properties. Though the fruit in raw form is not accepted in table purpose due to its high astringency but the value of its processed product has been increasing worldwide. In Gujarat, it is being cultivated in area of 8,540 ha with an annual production of about 85,350 tonnes and productivity of 9.99 MT/ha<sup>[1]</sup>. Though, it is considered to be a hardy fruit crop, not less than 30 insect and mite species have been recorded feeding on this tree from different places, mostly from India<sup>[3]</sup>.

The bugs of family Scutelleridae are commonly known as Jewel bugs. These bugs have enlarged scutellum which covers most part of abdomen and membrane tip is visible caudally in most of the cases. Most species of the subfamily Scutellerinae is characterised by attractive colourful bodies. There are about 450 species under 80 genera of Jewel bugs reported all over the world<sup>[4]</sup> and 14 species are known from India<sup>[2]</sup>. The present study was conducted to know seasonal incidence of different insect pests of Aonla.

### 2. Materials and methods

The present study was conducted during 2018-19 at Research farm of College of Horticulture, S. D. Agricultural University, Jagudan in Gujarat, India. The collection of *S. nobilis* was done with two sampling methods *viz.* sweep net and hand picking. The collected samples were killed in killing jar and pinned properly on scutellum. The morphological characters of the said specimens were studied under the microscope in the Entomology laboratory. The collected specimens were sent to National Bureau of Agricultural Insect Resources, Bangalore for the identification of the bug.

### 3. Results

During the observations, the infestation of *S. nobilis* was noticed on Aonla (*E. officinalis*) field in the month of December, 2018 to February, 2019. Metallic shield bug cause damage mainly to the fruits. The highest incidence observed on mature fruits during January, 2019.

### 3.1 Nature of damage

Eggs, nymphs and adults were observed on trunks, leaves and fruit bunches. Nymphs and adults were observed sucking sap from the fruits. These bugs caused direct damage by sucking sap and reducing quality of fruits and indirect damage by enhancing fungal attack on fruits at the points of puncture.

### 3.2 Morphological characters

In Scutelleridae family, scutellum very long covering most of the body. Coloration of body underneath, rostrum and legs reddish, underside of head, lateral side of sternum, part of rostrum as well as lateral bands on abdominal segments metallic bluish green. The pattern of large black blotches often disappears when the bug is dry mounted and the bug appears indigo blue with faint black marks. Head triangular, longer than broad, obliquely directed downwards. Antennae four segmented.



Fig 1: Metallic shield bug, *Scutellera nobilis* (Fabricius)

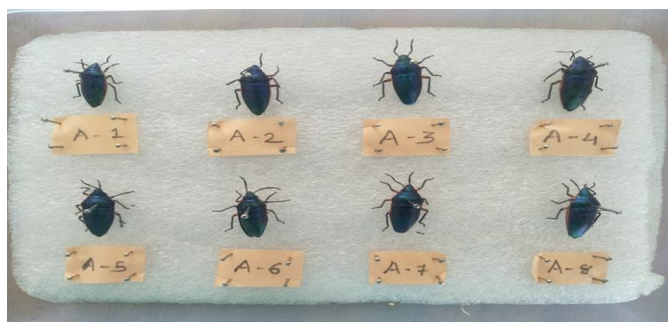


Fig 2: Dry mounted metallic shield bug appears indigo blue



Fig 3: Aonla fruits damaged by *Scutellera nobilis* (Fabricius)

### 4. Discussion

Earlier *S. nobilis* was reported for the first time on *E. officinalis* in East Forest Division, Chhindwara, Madhya Pradesh (India) causing damage to fruits [5] and it was also reported as a sucking pest of grape in Punjab [8]. *Scutellera perplexa* (Westwood) was also observed as a serious sucking pests of *Jatropha curcas* L. from Delhi [6].

*S. nobilis* also reported as pest of *Jatropha curcas* L. in Gujarat which suck the cell sap from flowers and capsules of *jatropha* that resulted in yellowing and drying up of capsules

[7]. There was no report regarding infestation of *S. nobilis* on Aonla from Gujarat. Therefore, the present study was the first report of *S. nobilis* infestation on Aonla from this region.

### 5. Conclusion

The paper deal with one species viz. *S. nobilis* of family Scutelleridae recorded from Research farm of College of Horticulture, S. D. Agricultural University, Jagudan (District: Mehsana). Therefore, new distribution record of Scutelleridae came to light.

### 6. Acknowledgement

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### 7. References

1. Anonymous Horticultural statics at glance. Horticultural Statistics division, Department of Agriculture, Ministry of Agriculture and farmers' welfare, Government of India, 2017.
2. Distant WL. The Fauna of British India, including Ceylon and Burma. Rhynchota. (Heteroptera). London: Taylor and Francis. 1902; 1:432.
3. Lakra RK. Some important pests of fruit crops of arid regions and their management. Proc. Natln. Symp. Arid Horticulture, Horticulture Society of Haryana, CCSHAU, Hisar, 1996, 144-147.
4. Lattin JD. The Scutellerinae of America north of Mexico (Hemiptera: Heteroptera: Pentatomidae). PhD Thesis. University of California, Berkeley, 1964.
5. Meshram PB, Garg VK. A report on the occurrence of *Scutellera nobilis* Fab. On *Emblica officinalis* Gaertn. Indian Forester. 1999; 125(5):536.
6. Parveen S, Khokhar S, Usmani K, Ramamurthy VV. Bionomics of *Scutellera perplexa* (Westwood) (Hemiptera: Scutelleridae), a sucking pest of *jatropha* with descriptions of immature stages. Entomological news. 2010; 212(5):401-408.
7. Patel P. Bio-ecology and management of shield backed bug, *Scutellera nobilis* (Fabricius) infesting *Jatropha*, *Jatropha curcas* L. M.Sc. Thesis submitted to the Anand Agricultural University, Anand, 2007.
8. Singh S, Kaur G. Incidence of metallic shield bug, *Scutellera perplexa* (Westwood) (= *S. nobilis* Fabricius) on grape in Punjab. Pest Management in Horticultural Ecosystem. 2015; 21(1):90-94.