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## First report of scale, *Perisopneumon ferox* new stead (Monophlebidae: Hemiptera) on Aonla (*Emblica officinalis* Gaertn.) from Gujarat, India

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### Abstract

Study was conducted on aonla (*Emblica officinalis* Gaertn.) during 2018 at College of Horticultural Farm, Jagudan, Gujarat. Infestation of *Perisopneumon ferox* new stead was recorded on aonla (*E. officinalis*). Damage is mostly caused by sap depletion, the shoots dry up and defoliation. They have black limbs and red –brown body that is coated with slight white wax. The legs and antennae are black. The present study is the first report of *P. ferox* on aonla from Gujarat, India.

**Keywords:** *Perisopneumon ferox* new stead, *Emblica officinalis* Gaertn, Gujarat

### 1. Introduction

The aonla, *Emblica officinalis* Gaertn. Belonging to family Euphorbiaceae and sub family Phyllanthoidae is an important indigenous fruit tree of arid and semi-arid regions of India. It has great medicinal and nutritional value. During recent past area under aonla increased due to fewer requirements of costly inputs, better market price and increased consumers demand at domestic level. 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>[4]</sup>.

Monophlebidae is a family of scale insects commonly known as the giant scales or monophlebidids. Giant scales occur on a wide range of host plants but most of these are trees or woody shrubs and they occur in most parts of the world but more genera are found in the tropics than elsewhere<sup>[2]</sup>.

There was no report regarding the infestation of *P. ferox* on any crop from Gujarat region in India. So, the present study was the first report of *P. ferox* infestation from this region.

### 2. Materials and Methods

The present study was conducted during 2018 at College of horticulture farm, Jagudan in Gujarat, India. Infestation was observed on aonla (*E. officinalis*). Scale insects were collected and preserved in 70% ethyl alcohol. Specimens were sent to the Division of germplasm collection and characterization, ICAR – NBAIR, Bangalore.

### 3. Results

In the present study infestation of *P. ferox* was recorded on aonla (*E. officinalis*) field in the month of May and June. Scales were observed on twigs of trees. The highest incidence observed on new shoot during the month of June.

#### 3.1 Nature of damage

It was observed that feeding of *P. ferox* on these trees causes loss of cell sap and mostly it aggregates on newly emerge twigs and also on wood portion where cutting of twig carried out. Total 28-30 scales were found on 25 cm twig of aonla in case of heavy incidence. Scales insects infest the stems, branches and leaves of their host plant.

#### 3.2 Morphological characters:

They had black limbs and red –brown body coated with slight white wax. The legs and

antennae are black. Adult scales are 1 – 1.5 cm in length. Waxy coating gradually develops after they establish on tree twig.

#### 4. Discussion

In India, it was observed earlier in Maharashtra but not recorded and no further details are available [3]. To the best of our knowledge no much reference available for this insect on any crop so it couldn't be discussed.

#### 5. Conclusion

The present investigation was the first report of *Perisopneumon ferox* newstead on aonla from Gujarat, India. Infestation of this scale insect was recorded on aonla at College of Horticulture Farm, Jagudan (District: Mehsana).

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Scale insects: *Perisopneumon ferox* newstead



Aonla branches infested with *Perisopneumon ferox* newstead

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