J. Aphidol.	10: 77-79, 1996	The Aphidological Society, India	Gorakhpur	ISSN 0970-3810

NEW RECORD

NEW HOST RECORD OF *APHIS NERII* B. D. FONSC. (HOMOPTERA: APHIDIDAE) FROM WEST BENGAL, INDIA

Sangita Mitra & L.K. Ghosh

Zoological Survey of India, Calcutta – 700 053, W.B., India

Abstract: Two plant species *viz., Gymnema sylvestre* (Retz.) Schult and *Dregea volubilis* (L.f) Benth. (N. O.:Asclepiadaceae) have been recorded as new hosts for *Aphis nerii* Boyer de Fonscolombe from Calcutta, West Bengal. The aphid species infests 18 plant species belonging to 7 families. Of these, family Asclepiadaceae is most common. An up-to-date list of host plants for this aphid is appended. Ecological observations on new host plants are made. Medicinal importance of these plants is also mentioned.

Key words: Aphis nerii, new host record, aphid.

The yellow oleander aphid, *Aphis nerii* Boyer de Fonscolombe infests about 16 species of plants belonging to 10 genera under 7 plant families in India (Behura, 1963, 1965; Behura & Dash, 1971; Raychaudhuri, 1983). It occurs in the plains as well as in hills. The species is widely distributed and enjoys holocyclic life-cycle in India.

A. nerii was found to infest heavily on two plant species viz. *Gymnema sylvestre* (Retz.) Schult (Asclepiadaceae) and *Dregea volubilis* (L.f.) Benth. (Asclepiadaceae) which are hitherto recorded as new host plants for this aphid in India.

Aphid colonies consisting of apterous and alate viviparous female and nymphs were collected on plants of *G. sylvestre* and *D. volubilis* in Calcutta at various seasons. The specimens preserved in 70% alcohol were boiled with 10% KOH for 5-10 min, and then washed in water and boiled with saturated solution of chloral phenol for about 10 minutes and mounted in Berlese's

medium. The prepared slides were then examined under compound microscope.

Ecological notes : *G. sylvestre* is a latex yielding creeper whereas *D. volubilis* is a woody climber without latex production. In both the plants, leaves are simple but the surface is thicker in *Gymnema* than *Dregea*.. Flowers are actinomorphic and pentamerous like any Asclepiadaceae but small and white in *G. sylvestre* whereas light green coloured flowers in umbelliform inflorescence is typical of *D. volubilis*. Hairy seeds are arranged in compact rows inside the boatshaped fruit which ruptures at the time of seed dispersal. The aphids were collected from the branches and leaf surfaces at the time of heavy infestation on these two plants. Within a few days of heavy infestation, leaves show signs of distortions due to sucking of plant sap by the aphids. Main regions of the plants from where the aphids could be collected are tip of young br nches, stems, along the veins and mid ribs of mature leaves.

The plants grow in warm, moist plain areas. They can thrive easily on well drained clay loam soil. Leaf fall in winter renders the plants withered or dry. Occurrence of *A. nerii* on these two plants is more or less throughout the year except during extreme heat of summer. The availability of the aphids is directly related with moisture content of atmosphere. They spread rapidly in humid weather and can be seen within a temperature ranging between 17°C – 32°C and 50-55 individuals can easily be obtained from a surface area of 625 mm^2.

Analysis of the available data reveals that out of all recorded host plants for *A. nerii* (Table), the most favoured hosts (55.55%) belong to family Asclepiadaceae. The aphid reproduces parthenogenetically almost throughout the year on the recorded hosts both in the plains and altitudes under Indian conditions. So far, there is no record of occurrence of sexual morphs of this aphid species from India although sexuals of most of the species of *Aphis* Linn. are on record. However, extensive and intensive surveys on alternate hosts may reveal interesting result.

Remarks: Apart from the proved host plants of *A. nerii*, *G. sylvestre* and *D. volubilis* are important medicinal plants because of the fact that the leaves of *Gymnema* are chewed by the local people of Maharashtra for the treatment of glycosuria and that of *Dregea* are applied on boils and abscesses but in West Bengal, flowers of *Dregea* are also taken.

Acknowlegement: Grateful thanks are due to Dr. J.R.B. Alfred, Director, Zoological Survey of India, Calcutta for necessary laboratory facilities and encouragement.

Table : List of host plants of *A. nerii*.

Plant species	Family
Asclepias curassavica	Asclepiadaceae
Asclepias sp.	Asclepiadaceae
Bryophyllum pinnatum	Crassulaceae
Calotropis gigantea	Asclepiadaceae
Calotropis procera	Asclepiadaceae
Calotropis sp.	Asclepiadaceae
Cryptostegia grandiflora	Periplocaceae
Cucurbita moschata	Cucurbitaceae
Daemia extensa	Asclepiadaceae
Daemia sp.	Asclepiadaceae
**Dregea volubilis*	Asclepiadaceae
Duranta plumieri	Verbenaceae
Duranta repens	Verbenaceae
**Gymnema sylvestre*	Asclepiadaceae
Lyonia ovalifolia	Ericaceae
Nerium odorum	Apocynaceae
Nerium sp.	Apocynaceae
Tylophora asthmatica	Asclepiadaceae
* New record from India	

REFERENCES

Behura, B.K. (1963). Aphids of India, a survey of published information. *Proc. Ist Summer School. Zool.(Simla, 1961)*, Government of India, pp. 25-78.

Behura, B.K. (1965). Supplement to aphids of India, a survey of published information. I.J. *Utkal Univ.* (Sci.) Bhubaneswar, 3(1-2) (1963), pp. 42-65.

Behura, B.K. & Dash, M.M. (1971). Studies on the Aphididae of India – VI. Notes on the external morphology of *Aphis nerii* Fons. collected on *Bryophyllum pinnatum* from Bihar. *Prakruti Utkal University Journal Science* **8**, 53-64.

Raychaudhuri, D.N. (1983). *Food-Plant Catalogue of Indian Aphididae* (Ed.), The Aphidological Society, India: 14.