

On the distribution and biology of *Edwardsiana iranicola* Zachvatkin in Krasnodar Territory (Homoptera: Cicadellidae, Typhlocybinae)

E.S. Kotenev, V.M. Gnezdilov & V.B. Golub

Kotenev, E.S., Gnezdilov, V.M. & Golub, V.B. 2007. On the distribution and biology of *Edwardsiana iranicola* Zachvatkin in Krasnodar Territory (Homoptera: Cicadellidae, Typhlocybinae). *Zoosystematica Rossica*, **15**(2), 2006: 299-300.

The species status and distribution of *Edwardsiana iranicola* Zachvatkin and *E. tshinari* Zachvatkin are discussed. Terms of development, number of generations and seasonal population dynamics of *E. iranicola* in Krasnodar Territory are described.

E.S. Kotenev, Slavyansk-na-Kubani State Pedagogical Institute, Slavyansk-na-Kubani, Russia.

V.M. Gnezdilov, Zoological Institute, Russian Academy of Sciences, Universitetskaya nab. 1, 199034, St.Petersburg, Russia. E-mail: hemipt@zin.ru

V.B. Golub, Voronezh State University, Voronezh, Russia.

Taxonomic notes and distribution

Zachvatkin (1947, figs 18-21) described *Edwardsiana iranicola* from NW Iran. In the same paper, he described *E. tshinari* from Uzbekistan (Tashkent) and noted that these two species are closely related, but differ from each other in the dimensions, details of coloration and structure of penis (*E. tshinari* is distinguished by the aedeagal shaft not swollen basally and apical aedeagal processes distinctly curved in lateral view). Zachvatkin (1947) mentioned that *E. tshinari* was abundant on *Platanus orientalis* in Tashkent. All following records of both species were also from *Platanus*.

Dworakowska (1982) recorded and illustrated *E. tshinari* from the Caucasus (without concrete locality); she referred also to other papers with records of the species from Israel, Turkey, and Cyprus. In the same paper, Dworakowska recorded and illustrated *E. iranicola* from Israel.

In Krasnodar Territory, *E. iranicola* was recorded for the first time from Adler (Gnezdilov, 2001). The species was also collected in Slavyansk-na-Kubani in 2004 and in Abinsk, Anastasievskaya and Chernomorsky villages in 2006.

The specimens collected in Adler coincide with figures by Zachvatkin for *E. iranicola*: aedeagal shaft swollen basally, apical aedeagal processes straight. General coloration of the specimens is white yellowish, pronotum basally and medially and forewing ochre yellow, scutellum white.

Body length about 3.00 mm. The structure of the penis in specimens from Slavyansk-na-Kubani is closer to that in specimens of *E. iranicola* from Israel figured by Dworakowska (1982, fig. 198), and the costal margin of the forewings is orange in one male (feature of *E. tshinari*, according to Zachvatkin).

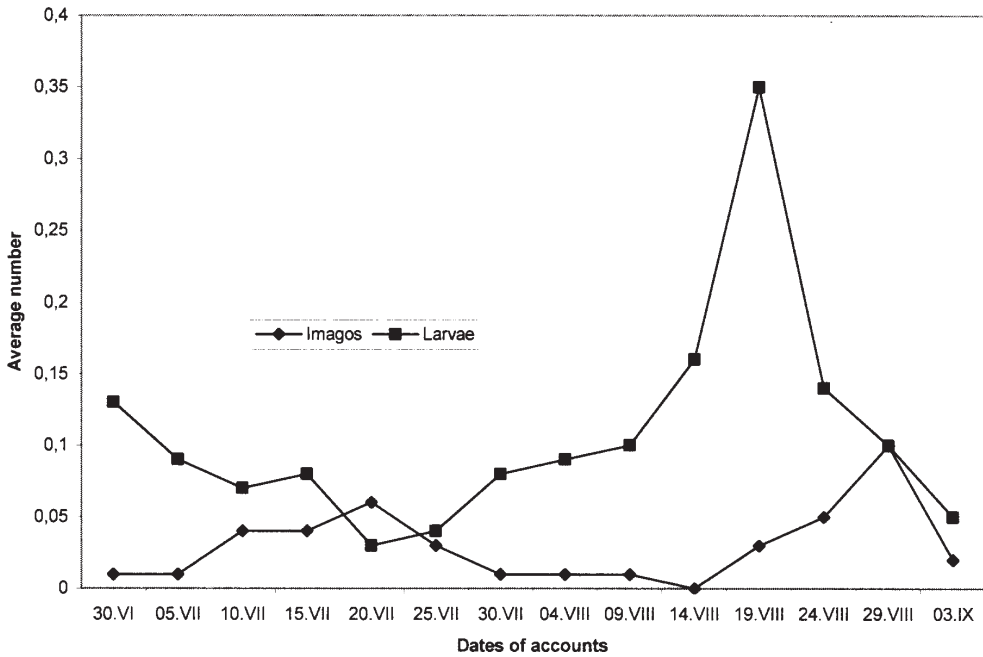
Unfortunately, Zachvatkin did not illustrate the male genitalia of *E. tshinari*, and we have at present only subsequent interpretations of this species based on the material from other geographical regions. The differential characters indicated for *E. iranicola*, *E. tshinari* and *E. platanicola* (Vidano, 1961) from Italy are subtle; it is not improbable that they represent a single widely distributed species associated with *Platanus* and characterized by morphological and colour variability.

Biology and population dynamics

Terms of development, number of generations and seasonal population dynamics of *E. iranicola* are investigated in Slavyansk-na-Kubani.

In Krasnodar Territory, *E. iranicola* occurs only on leaves of *Platanus acerifolia* and *P. orientalis*. Our study does not confirm the data by Movsesyan (1980) from Armenia about development of first instar larvae on leaves of *Ulmus*. Elm is absent in all surveyed localities.

Eggs hibernate. In Slavyansk-na-Kubani, larvae hatch in the last ten days of May. In differ-



Population dynamics of *E. iranicola*, number of individuals per leaf.

ent years, the first imagos were observed on leaves of plane trees from mid-June to late June. Larvae and imagos were recorded up to mid-September. The population dynamics of imagines (see Figure) has two peaks: in late June and (the higher one) in late August (data of monitoring in 2006). Hence, the species develops in Krasnodar Territory in two overlapping generations.

E. iranicola, when abundant, causes by its feeding significant harm to plane tree (see also Movsesyan, 1980). The damages of leaves are similar to those of the introduced American bug *Corythucha ciliata* Say, but distributed on the whole leaf surface in regular intervals (in *C. ciliata*, the leaf is damaged more intensively near its main vein).

Acknowledgements

The authors were financially supported by grants from the Russian Foundation for Basic Research (nos. 06-04-48427 and 05-04-49089).

References

- Gnezdilov, V.M. 2001. New and little known leafhoppers and planthoppers from Caucasus (Homoptera, Cicadina). *Zoosyst. Ross.*, **9**(2), 2000: 359-364.
- Dworakowska, I. 1982. Typhlocybini (Homoptera, Auchenorrhyncha, Cicadellidae) of Asia. *Entomol. Abh.*, **45**(6), 1981: 99-181.
- Movsesyan, L.I. 1980. Pests and diseases of plane tree. *Zashchita Rasteniy*, **1980**(1): 39-40. (In Russian).
- Zachvatkin, A.A. 1947. Homoptera-Cicadina from north-western Persia. I. *Entomol. Obozr.*, **28**(3-4), 1945: 106-115. (In Russian, with English summary).

Received 8 December 2006