

# *Peribaea tibialis* Rob.-Desv. (Diptera: Tachinidae), new to Krasnodar Territory, parasitizes the introduced moth *Tarachidia candefacta* Hübner (Lepidoptera: Noctuidae)

V.A. Richter & O.S. Shevchenko

Richter, V.A. & Shevchenko, O.S. 2005. *Peribaea tibialis* Rob.-Desv. (Diptera: Tachinidae), new to Krasnodar Territory, parasitizes the introduced moth *Tarachidia candefacta* Hübner (Lepidoptera: Noctuidae). *Zoosystematica Rossica*, **13**(2), 2004: 246.

A Palaearctic fly species, *Peribaea tibialis* Rob.-Desv. (Diptera: Tachinidae), was found to parasitize larvae of the introduced moth *Tarachidia candefacta* Hübner (Lepidoptera: Noctuidae). *P. tibialis* is recorded from Krasnodar Terr. for the first time.

V.A. Richter, Zoological Institute, Russian Academy of Sciences, Universitetskaya nab. 1, St.Petersburg 199034, Russia.

O.S. Shevchenko, All-Russian Institute of Biological Control, Krasnodar 350039, Russia.

The noctuid *Tarachidia candefacta* Hübner was introduced to the USSR (Krasnodar Territory) from Canada by O.V. Kovalev in 1967 for biological control of hogbrake, *Ambrosia artemisiifolia* L., an adventive weed native to North America. It was the first species introduced to Europe for the control of hogbrake. The choice was made owing to its host specificity, so as to reach safe introduction without damaging other plants (Kovalev & Runeva, 1970). It was shown that normal development of this noctuid species occurs only when feeding on hogbrake. In Krasnodar Territory, the duration of the larval and pupal stages is from 26 to 34 days, resulting in 3 or 4 generations per year (Kovalev & Runeva, 1970). *T. candefacta* overwinters as pupa in soil, in cocoon made of soil particles and silk threads. Though it has been shown that the noctuid can overwinter in Krasnodar Territory, the general conclusion is that it cannot be regarded as a promising controlling agent for hogbrake (Kovalev, 1989).

There was no information on the noctuid in ensuing years, but in 1995-1998 it was found that *T. candefacta* should be considered an established species, as it occurs in various localities of Krasnodar Territory, namely, in the Kuban area and at the Black Sea shore, spreading along river valleys to mountains up to 600-800 m above the sea level (Shchurov, 1998).

In 2004, *T. candefacta* was found to be common in the vicinity of Krasnodar (the territory of All-Russian Institute of Biological Control), on *Ambrosia artemisiifolia*. A newly emerged female of the tachinid fly *Peribaea tibialis* Rob.-Desv. was found on 5.IX.2004 in a cage with larvae and pupae of *T. candefacta* of the third generation (the specimen is deposited in the Zoological Institute, St.Petersburg).

*P. tibialis* is recorded from Krasnodar Territory for the first time. This tachinid was found to parasitize *T. candefacta* for the first time. *P. tibialis* is widely distributed in the Palaearctic from Europe to Transcaucasia, Uzbekistan, Mongolia, Far East of Russia, China, Japan and Burma. Larvae of this polyphagous species parasitize larvae of different genera of Noctuidae, more rarely larvae of other Macrolepidoptera (Tschorsnig & Herting, 1994; Andersen, 1996).

In Japan, *P. tibialis* was reared from *Furcula furcula* Clerck (Notodontidae) (Tachi & Shima, 2002).

## Acknowledgements

The work of V.A. Richter was supported by the Russian Foundation for Basic Research (grant 02-04-4858), the Ministry of Industry, Science and Technology of the Russian Federation (grant NSH-1667.2003.4) and by the programme of the Presidium of Russian Academy of Sciences "Scientific fundamentals of conservation of biodiversity in Russia".

## References

- Andersen, S. 1996. The Siphonini (Diptera: Tachinidae) of Europe. *Fauna entomol. Scand.*, **33**: 1-148.
- Kovalev, O.V. 1989. The results of introduction of foreign phytophages in the USSR and outlook for international exchange of useful phytophages. In: Scarlato, O.A. (Ed.). *Introduktsiya i primeneniye poleznykh chlenistonogikh v zashchite rasteniy* [Introduction and application of useful arthropods in plant protection]: 162-168. Leningrad: Zool. Inst. Akad. Nauk SSSR. (In Russian).
- Kovalev, O.V. & Runeva, T.D. 1970. *Tarachidia candefacta* Hübner (Lepidoptera, Noctuidae), an efficient phytophagous insect in biological control of weeds of the genus *Ambrosia* L. *Entomol. Obozr.*, **49**(1): 23-36. (In Russian).
- Shchurov, V.I. 1998. Acclimatization of the American hogbrake noctuid. *Zashchita i Karantin Rasteniy*, **12**: 31-32. (In Russian).
- Tachi, T. & Shima, H. 2002. Systematic study of the genus *Peribaea* Robineau-Desvoidy of East Asia (Diptera: Tachinidae). *Tijdschr. Entomol.*, **145**: 115-144.
- Tschorsnig, H.-P. & Herting, B. 1994. Die Raupenfliegen (Diptera: Tachinidae) Mitteleuropas: Bestimmungstabellen und Angaben zur Verbreitung und Ökologie der einzelnen Arten. *Stuttg. Beitr. Naturk., Ser. A*, **506**: 1-170.

Received 27 December 2004