

SHORT COMMUNICATION

Yurshenko G.I. & Turova G.I. ON BIOLOGY OF THE TACHINID-FLY *CARCELIA MATSUKAREHAE* SHIMA (DIPTERA, TACHINIDAE) IN PRIMORYE TERRITORY - Far Eastern Entomologist. 1998. N 52: 7-8.

Г.И. Юрченко, Г.И. Турова. О биологии тахины *Carcelia matsukarehae* Shima (Diptera, Tachinidae)) в Приморском крае // Дальневосточный энтомолог. 1998. N 52: 7-8.

A tachinid-fly *Carcelia matsukarehae* Shima is known as a parasite of *Dendrolimus spectabilis* Butler in Japan [1] and Siberian moth (*Dendrolimus superans sibiricus* Tschetv.) in the Russian Far East [2, 3]. But its biology in the local conditions still remains unstudied.

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This report is based on material, obtained in 1977-1997 during *Dendrolimus superans sibiricus* population observations in several permanent investigation areas in Dal'nerechenskii, Chuguyevskii, Arseniyevskii, and Yakovlevskii districts of Primorskii krai. The investigations were conducted mainly in cedar-broadleaved stands of 250-500 m a.s.l. The stands have the next composition: 2-6 units of *Pinus koraiensis*, to 4 units of *Abies nephrolepis* and *Picea ajanensis*, besides that oak, linden, maples and other deciduous trees are presented.

Siberian moth larvae were collected and calculated mainly by method of shake off the second storey trees 10-18 cm d.b.h. on the fabric. Larvae were reared on branches in nature or in laboratory on the cutted branches.

According to our data *Carcelia matsukarehae* is widely distributed throughout several southern and central districts of the Primorye territory and inhabits cedar-broadleaved stands of various types located on the slopes and river vallies. It is important to note its populations are more abundant in stands that were cutted partly for a long time. Now they have moderate density and the coniferous share consists no more than one half of deciduous in the first storey composition (no more than 6 units among 10). The northern limit of *C. matsukarehae* is not clear because there were no comprehensive studies of Siberian moth northwardly from the named districts during the last years.

In southern Primorye *C. matsukarehae* produces two generations. The first generation larvae overwinter in the Siberian moth larvae of 2nd-5th instars (mostly of 3rd-4th instars) and leave them from early May to mid-June. Adult tachinid-flies emerge in June and July. From mid-June they infest Siberian moth larvae of 5th and 6th instar, but adult larvae emerge from Siberian moth pupae in the second decade of August. Adult tachinid-flies of the second generation emerge 7-10 days later, occuring in August-September and infest the new larvae of Siberian moth.

C. matsukarehae not found in pupae, that were obtained from the larvae collected in May and early June. Only 3% of pupae were infested in the larvae sample of June 17-21; we assume that they were infested by second generation of *C. matsukarehae*. Usually one tachinid larva grows in one host larva, but it was not so rare to find two specimens of parasite in one big 5th instar host larvae. In one pupa there were 1-25 specimens of *C. matsukarehae* (8 specimens in average). Tachinid-flies grew in puparia about 20 days in May but only 7-10 days in June and July under hot weather.

Some part of new hatching tachinid-flies of both sexes were carried into the glass box-enclosures covered with meshy material. Water, sweet top-dressing, cutted shoots of fir and oak, some larvae of Siberian moth and *Lymantria dispar* were placed inside too.

Periodic dissection of females being in the boxes, revealed a great number of the mature eggs after 8-10 days; it reached 180 eggs. In three females had been living in the box more than 14 days, there were 40-70 larvae besides the eggs.

1. Shima, H. 1969. A new species of the genus *Carceliopsis* Townsend (Diptera, Tachinidae), reared from *Dendrolimus spectabilis* Butler (Lepidoptera: Lasiocampidae) – *Kontyu* 37(2): 233-236.

2. Kolomieyts, N.G. & Artamonov, S.D. 1994. *Dvukrylye nasekomye - entomofagi lesnykh shelkopryadov*. Nauka Publ., Novosibirsk: 151 pp. (In Russian).

3. Yurchenko, G.I. & Orlov, Yu.M. 1978. [Siberian moth and its control in cedar-broadleaved forests of Far East]. – In: *Zashchita khvoinykh nasazhdenii ot vreditelei i boleznei*. Kaunas: 127-130. (In Russian).

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