

8/10/190

190 B.N.

[Reprinted from SCIENCE AND CULTURE  
 Vol., 39 pp. 311-312 July 1973.]

**Largescale Rearing Technique of *Brachymeria tachardiae* Cam. (Chalcidoidea :  
 Hyenoptera), a Pupal parasite of *Holcocera Pulverea* Meyr.  
 (Blastobasidae) and *Eublemma-amabilis* Moore. (Noctuidae),  
 the predators of lac insect *Kerria lacca* Kerr.**

*Brachymeria tachardiae* Cam. is a pupal parasite of *Holcocera pulverea* Meyr. and *Eublemma amabilis* Moore, the two major predators of lac insect *Kerria lacca* Kerr. which are responsible for the loss of thirty to forty percent of lac crop.<sup>1</sup> Technique of large scale rearing of their parasite on alternative hosts have not been given adequate attention except for those of *Apanteles tachardiae* Cam. and *Perisierola pulveriae* Kurian, (Bethylid) larval endo and ectoparasite of *H. pulverea*<sup>2</sup> respectively. This aspect attains great significance since neither the immature stages of lac predators are easily accessible nor any method of their artificial rearing have so far been evolved. Studies were, therefore, undertaken to rear this parasite on a large scale using *Corcyra cephalonica* Staint. as an alternative host in the laboratory.

Parasites were collected from the mature lac caged in parasite cages and their average size recorded. Newly formed pupae of *C. cephalonica* were exposed to them in rearing glass jars (10x10 cm.) covered with muslin cloth, held by rubber bands. Moistened raisins were provided as food for the parasites. Similar cages using the pupa of *H. pulverea* and *E. amabilis* were simultaneously maintained which served as control.

The data with regard to developmental period, longevity, percentage of female and size are given in the table. It may be seen that there is no appreciable difference between the parasites reared on *C. cephalonica* as compared to the natural host in so far as developmental period, longevity and percentage of females are

TABLE 1

Developmental period, longevity, percentage of female and size of *B. tachardiae* reared on different hosts.

Host	Length of the host pupa used Avg./R. (mm.)	Total number of parasites reared	Length of the parasites reared. Avg./R. (mm.)	Developmental period. Avg./R. (Days)		Percentage of females emerged.	Longevity of adult Avg./R. (Days)	
				Male	Female		Male	Female
<i>C. cephalonica</i>	9.8	227	3.9	16.5	21.1	50.2	22.0	27.5
	8.0-11.2		2.9-4.5	12-37	12-41		9-22	9-84
<i>E. amabilis</i>	7.5	125	3.4	15.3	20.5	52.4	17.8	25.9
	6.7-9.7		2.5-4.7	11-41	13-43		7-37	10-49
<i>H. pulverea</i>	5.6	137	2.9	15.0	20.0	56.4	12.7	24.0
	4.5-6.1		2.5-3.5	10-36	10-38		5-29	12-66

Avg. = Average.  
 R. = Range.

concerned, variation being 20.0 to 21.0 days, 24.0 to 27.5 days, and 50.2 to 56.4 percents respectively. In so far as size is concerned, those reared on the alternative hosts *C. cephalonica* were apparently larger measuring on an average 3.9 mm. as compared to 3.4 mm and 2.9 mm. those of the natural hosts *E. amabilis* and *H. pulverea* respectively.

It is, therefore, surmised that the technique developed has proved successful.

The author is grateful to Shri C. P.

Malhotra, Scientific Officer for his useful suggestions.

M. K. CHOWDHURY

Entomology Division,  
Indian Lac Research Institute,  
Namkum, Ranchi-10.

Received : 17 May, 1971

- <sup>1</sup> P. M. GLOVER, *Lac Cultivation in India*, p.1147, (Ind. Lac. Res. Instt, Ranchi), 1937.
- <sup>2</sup> E. S. NARAYANAN, *A Monography on Lac*, 1962 p. 378. (Ind. Lac. Res. Instt., Ranchi).

The data with regard to developmental period, longevity, percentage of females and size are given in the table. It may be seen that there is no appreciable difference between the females reared on *C. cephalonica* compared to the natural host in so far as developmental period, longevity and percentage of females are

concerned. The data with regard to developmental period, longevity, percentage of females and size are given in the table. It may be seen that there is no appreciable difference between the females reared on *C. cephalonica* compared to the natural host in so far as developmental period, longevity and percentage of females are

TABLE I

Developmental period, longevity, percentage of females and size of *B. argentifurcata* reared on different hosts

Host	Length of pupal case (mm)	Length of pupae (mm)	Developmental period (Days)	Percentage of females	Longevity (Days)
<i>C. cephalonica</i>	3.9	3.4	21.0	50.2	27.5
<i>E. amabilis</i>	3.4	2.9	20.0	24.0	21.0
<i>H. pulverea</i>	2.9	2.4	19.0	18.0	15.0