The authors are grateful to Dr S. P. Ghosh, Director, Central Tuber Crops Research Institute, Trivandrum and to Prof. C. A. Ninan, Head of the Department of Botany, for facilities and encouragement.

31 December 1984, Revised 28 March 1985


**STUDIES ON THE HOST AGE SELECTION BY DIADEGMA TRICHOPTILUS (CAMERON), A LARVAL PARASITOID OF EXELASTIS ATOMOSA (WALSINGHAM)**

T. V. SATHE and P. K. NIKAM*

Department of Zoology, Shivaji University, Kolhapur 416004, India.

*Department of Zoology, Marathwada University, Aurangabad 431004, India.

ENTOMOPHAGUS parasitoids are stimulated by various factors of hosts such as shape, texture, size, movement, colour and odour to find out their hosts¹. The host selection criteria is divided into host habitat location, host location, host acceptance, host suit-
ability and host regulation. Investigations on size or age of the hosts and their acceptance by the parasitoids have already been studied.

This study was conducted at 24 ± 1°C and 55 to 60% RH. To determine the effect of host age on parasitism, 30 larvae of *E. atomosa* of known age ranging between less than 1 day and 9 days old were exposed to a single-mated female of *D. trichopilus* in an oviposition unit for 24 hr. Following the exposure, the larvae were removed into separate containers and the daily emergence of parasitoid from different lots were recorded. Each experiment was replicated five times and fresh pigeonpea pods and 20% honey were provided as food to the host and parasitoid respectively. The relationship between the age of the host larvae and % parasitism were examined by regression analysis.

Results are recorded in table 1. Emergence was not seen from 9–10 day old hosts. Maximum parasitism, 21.3%, was recorded on 2–3 day old host larvae. There exists a significant (P < 0.05) correlation between the host age and the percentage of parasitism (r = -0.6245).

Lingren *et al.* studied the host age preference by *Campoteles chloridae* Uchida towards four lepidopterous host species viz *Pseudoleta unipuncta* (Hawarth), *Trichoplusia ni* (Hubner), *Prodenia ridinia* (Cramer) and *P. praefica* Grote. Larvae (1–8 day old) of all hosts were susceptible for parasitism, 2–6 day old being the most acceptable. In the present findings 1–8 day old larvae of *E. atomosa* were susceptible, 2–4 day old were readily accepted and 2–3 day old being most suitable for parasitism. Cardona and Oatman recorded 48% parasitism on 2–3 day old *Kieferia lycopersicella* (Walsingham) larvae by *Apanetes digmus* Muesebeck and 8–9 day old larvae remained unparasitized. *Phthorimaea operculilla* (Zeller) larvae 3–4 day old were more suitable for maximum adult emergence of *Orgilus lepidus* Turner* and *Temelucha sp.* In *Cotesia flavipes* (Cameron) maximum parasitism 42% was recorded on 7–8 day old host larvae. In the present study 21.3% parasitism was seen with 2–3 day old *E. atomosa* larvae.

Table 1 Maximum effective age of *E. atomosa* larvae for parasitism by *D. trichopilus*.

<table>
<thead>
<tr>
<th>Host age in days</th>
<th>Total number of parasitoids emerged</th>
<th>Mean number of parasitoids emerged per replicate</th>
<th>Percentage of parasitism</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–1</td>
<td>Male 8 Female 4</td>
<td>2.40</td>
<td>8.0</td>
</tr>
<tr>
<td>1–2</td>
<td>Male 10 Female 5</td>
<td>3.00</td>
<td>10.00</td>
</tr>
<tr>
<td>2–3</td>
<td>Male 20 Female 12</td>
<td>6.40</td>
<td>21.33</td>
</tr>
<tr>
<td>3–4</td>
<td>Male 18 Female 8</td>
<td>5.20</td>
<td>17.33</td>
</tr>
<tr>
<td>4–5</td>
<td>Male 13 Female 7</td>
<td>4.00</td>
<td>13.33</td>
</tr>
<tr>
<td>5–6</td>
<td>Male 8 Female 3</td>
<td>2.20</td>
<td>7.33</td>
</tr>
<tr>
<td>6–7</td>
<td>Male 5 Female 3</td>
<td>1.60</td>
<td>5.33</td>
</tr>
<tr>
<td>7–8</td>
<td>Male 3 Female 2</td>
<td>1.00</td>
<td>3.33</td>
</tr>
<tr>
<td>8–9</td>
<td>Male 1 Female 0</td>
<td>0.20</td>
<td>0.67</td>
</tr>
<tr>
<td>9–10</td>
<td>Male 0 Female 0</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Each host age groups was replicated five times, each replicate consisted of 30 larvae of *E. atomosa*.

20 November 1984; Revised 8 April 1985


**MYCETO CYTES IN AEGYOPOECUS PERSPICUUS (PHTHIRAPTERA)**

A. K. SAXENA and G. P. AGARWAL*
Department of Zoology, L. M. Govt. Post-Graduate College, Rishikesh, Dehradun, (India)
*Department of Zoology, Banaras Hindu University, Varanasi 221005, India.

Some Mallophaga, especially the nonhaematophagous species show an interesting symbiotic association with bacteria. The symbionts occur in special cells called mycocytes. The best studied species in this respect is *Columbicola columbae columbae* (infesting pigeon, *Columba livia*). In this study, another ischnoceran species *Aegypoecus perspicuus* (infesting white scavenger vulture, *Neophron percnopterus*) was found containing 45–80 mycocytes packed with symbionts. These cells are found among the fat bodies. Individual mycocytes...