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REPRODUCTIVE POTENTIAL OF *APANTELES CREATONOTI* VIERECK (HYMENOPTERA) IN RELATION TO AGE OF *THIOCIDAS POSTICA* WLK. CATERPILLARS (LEPIDOPTERA)

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Reproductive potential in relation to host age was studied providing 1 to 10 day old *Thiocides postica* Wlk. larvae to *Apanteles creatonoti* Viereck. Age groups 2-9 day old were susceptible, 4 day old shows maximum 41.33% parasitism while 1 and 10 day old remained unparasitized. The study was conducted at laboratory conditions (24 ± 1°C, 55 to 60% R. H.).

Apanteles creatonoti Viereck is an internal, larval, solitary parasitoid of *Thiocidas postica* Wlk., pest of ber Zyzypus sp. Selection criteria is divided into host habitat location, host location, host acceptance, host suitability and host regulation. Host age plays an important role individually or in combinations in introduction, colonization and mass production of parasitoids for biological control strategies. Investigations on size and age of the hosts and their acceptance by the parasitoids, have been carried out by Oatman *et al.* (1969), Cardona & Oatman (1971), Nikam & Sathe (1983), Sathe (1984) and Sathe & Nikam (1985).

This study was conducted at 24 ± 1°C and 55 to 60% R. H. to determine the influence of host age on parasitism, 30 larvae of *T. postica* of age ranging from 1 to 10 day old were exposed to a single mated female of *A. creatonoti* in an oviposition chamber for 24 hrs. Following the exposure, the larvae were removed into separate containers and the daily emergence of parasitoids from different lots were recorded. Each experiment was replicated five times.

Fresh ber leaves and 50% honey were provided as food to the hosts and parasitoids respectively.

Results are recorded in Table I. Maximum 41.3% parasitism was recorded on 4 day old host larvae. Emergence was not seen at the host age 1 to 10 day old. Cardona & Oatman (1971) recorded 48% parasitism on 2 to 3 day

Table I. Maximum effective age of *T. postica* larvae for parasitism by *A. creatonoti* (Total number of hosts in each case 150)

Host age (in days)	Total No. of hosts tried	Total number of parasitoids emerged			Mean No. of parasitoids emerged/ replicate	% of parasitization
		Male	Female	Total		
1	150	0	0	0	0	0
2	150	7	5	12	2.4	8
3	150	14	11	25	5.0	16.6
4	150	35	27	62	12.4	41.33
5	150	26	21	57	11.4	38.0
6	150	14	9	23	4.6	15 33
7	150	9	5	14	2.8	9 3
8	150	4	2	6	1.2	4.0
9	150	1	0	1	0.20	0.66
10	150	0	0	0	0	0

(Each host age groups were replicated five times, each replicate consisted of 30 larvae of *T. postica*)

old *Kieferia lycopersicella* (Walsingham) larvae by *Apanteles dignus* Muesebeck and 8–9 day old larvae remained unparasitized. 3 to 4 day old *Phthorimaea operculella* (Zeller) caterpillars were more suitable for maximum adult emergence of *Orgilus lepidus* Turner (Oatman *et al.*, 1969). Nikam & Sathe (1983) recorded maximum 42% parasitism on 7–8 day old *Chilo partellus* (Swin.) larvae by *Cotesia flavipes* (Cameron) In *Cotesia diurnii* R. & N. and *Diadegma trichoptilus* (Cameron) maximum 20% and 21.3% parasitism were recorded on 4 day and 2 to 3 day old *Exelastis atomosa* larvae (Sathe, 1984; Sathe & Nikam, 1985). In the present study maximum 41.33% parasitism was seen with 4 to 5 day old

larvae; 2 to 8 day old larvae were susceptible, 3 to 6 day old readily accepted and 1 to 10 day old remain unparasitized.

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