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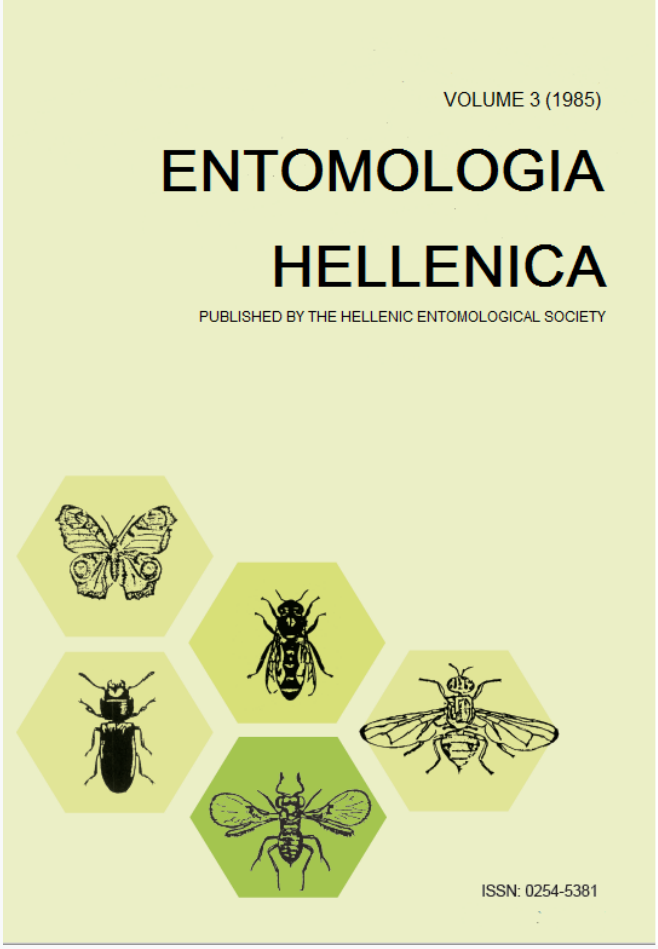

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Duration of Life-Cycle of Three Parasitic Hymenoptera on *Saissetia oleae* (Bernard) Growing on Two Different Host Plants[1]

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In this work the duration of the life-cycle of *Metaphycus helvolus* (Comp.) (parasite mainly on the third stage), *Metaphycus* affinis *stanley* (Comp.) (parasite mainly on the third stage) and *Metaphycus lounsburyi* (How.) (parasite mainly on the fourth stage) (Hymenoptera: Encyrtidae) on *S. oleae*, developed on different substrates, i.e. potato sprouts and plants of *Nerium oleander*, under laboratory conditions was determined. Among the Hymenoptera parasitizing *S. oleae* on Corfu, *M. helvolus* and *M. lounsburyi* are of particular importance (Stratopoulou and Kapatos 1984, Argyriou and Katsoyannos 1976). *M.* affinis *stanley* was introduced in Corfu in 1976 and despite the fact that the population of *S. oleae* in the release area was practically eliminated from other factors shortly after the release of the parasite, there is evidence (Macropodi unpublished) that the parasite was finally established. The above parasites can be successfully reared on *S. oleae* developed both on potato sprouts and *Nerium oleander* (DeBach 1964, Blumberg and Swirski 1977, Viggiani 1978).

The study was carried out at 23±1°C, 65-70% R.H. and 12 hours of artificial light per day. For each species, 3 potato sprouts and three plants of *Nerium oleander* in pots infested with *S.oleae* were placed in each 60×30×40 cm cage. The host insects were oviposited in by adult parasites introduced into the cages and left there for two days. The number of emerging adult parasites in each cage was recorded daily (a total number of adults emerged per cage varied from 23 to 195) and the time taken for 50% emergence was calculated from the correlation equation by plotting the cumulative percentage of adults emerged against time. The time taken for 50% of the population of each parasite to complete development (i.e. from egg to adult emergence) (TD_{50}) on *S. oleae* developed on each host plant, is given in Table 1. For *M. helvolus* the mean duration time of the life cycle was estimated to be 19.4 days on scales developed on potato sprouts and 15.1 days on scales developed on *N. oleander*. For *M.* affinis *stanley* the relevant estimates were 18.8 days and 23.4 days, respectively, while for *M. lounsburyi* the estimates were 21.3 and 18.6 days, respectively. For *M. helvolus* and *M. lounsburyi* the duration of the life cycle was shorter when the host insect developed on *Nerium* plants than on potato sprouts. For *M.* affinis *stanley* the reverse was true. These differences show the effect of the host of *S. oleae* on the time of development of the parasites, possibly reflecting the differences of the scale insect developed on different hosts as food quality for the parasites.

TABLE 1. Mean duration time (in days) of the life-cycle (i.e. from egg to emerging adult) of *M. helvolus*, *M. lounsbouryi* and *M.* affinis *stanley* on *S. oleae* developed on two different host-plants, i.e. potato sprouts and *N. oleander*.

	TD_{50}*		
Host plant	*M. helvolus*	*M.* aff. *stanley*	*M. lounsbouryi*
Sol. tuberosum	19.4±3.1	18.8±4.4	21.3± 1.3
N. oleander	15.1±5.2	23.3±9.2	19.1±10.1

* Days for 50% of parasites to complete development.

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KEY WORDS: *Saissetia oleae, Metaphycus helvolus, Metaphycus lounsburyi, Metaphycus* affinis *stanley,* Life-cycle duration

Διάρκεια του Βιολογικού Κύκλου των Παρασιτικών Υμενοπτέρων *Metaphycus helvolus* Compere, *M. lounsburyi* Howard καί *M.* affinis *stanley* Compere σε *Saissetia oleae* Bernard που Αναπτύχθηκε σε Δύο Διαφορετικά Φυτά Ξενιστές.

Μ.Β. ΜΑΚΡΟΠΟΔΗ

Ινστιτούτο Ελιάς Κέρκυρας

ΠΕΡΙΛΗΨΗ

Στην εργασία αυτή μετρήθηκε σε 23±1°C η διάρκεια του βιολογικού κύκλου τριών παρασίτων του λεκανίου της ελιάς, *Saissetia oleae* (Bernard) που εκτράφηκε σε δύο διαφορετικά υποστρώματα: φύτρα πατάτας και βλαστούς πικροδάφνης, *Nerium oleander*. Σε λεκάνιο που αναπτύχθηκε σε πατάτα, η διάρκεια του βιολογικού κύκλου των *M. helvolus, M.* affinis *stanley* και *M. lounsburyi* ήταν 19,4 ημέρες, 18,8 ημέρες και 21,3 ημέρες, αντίστοιχα. Σε λεκάνιο που αναπτύχθηκε σε *Nerium oleander* η διάρκεια ήταν 15,1 ημέρες, 23,3 ημέρες και 19,1 ημέρες, αντίστοιχα.