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BIOECOLOGY OF THE OLIVE MOTH, *PRAYS OLEAE* (BERN.), IN TRAS-OS-MONTES REGION (NORTHEAST OF PORTUGAL)

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The olive moth, *Prays oleae* (Bern.) (Lepidoptera: Yponomeutidae) is one of the most serious pests of the olive trees in the Mediterranean basin, attacking, during each of its three generations, successively the flowers, the fruits and the leaves. If sound control strategies against the pest are to be developed, a comprehensive study of its bioecology should be considered. The scope of this work was to gain insight on the life cycle and the natural mortality factors of the insect in Trás-os-Montes region (northeast of Portugal). The experimental work was carried out in an ecological olive grove situated near Mirandela, during the period of 1993 to 2002, on trees of the **Cobrancosa**, Verdeal Transmontana and Madural oil producing varieties, about 30 years old, non-irrigated and not sprayed. The flight phenology of the insect was studied by means of pheromone delta traps, whiles that of the immature stages, and also the rates of predation and the mortality due to intraspecific competition, were studied by collecting samples of leaves, flower clusters and fruits. To evaluate the mortality due to premature fall of fruits, samples of fallen fruits were collected, while the rates of parasitism and the species of parasitoids responsibles for its occurrence were determined by rearing larvae and pupae of each of the three generations of the insect. Male adult captures were recorded from April to May, for the first flight period, from May to July for the second, and from September to December, for the third. The cumulative number of captures per trap was between 440 and 1400, for the first flight, 980 and 1790, for the second, and 260 and 750 for the third. The predation rates of eggs varied from 14.0% to 25.0 %, in the leaf generation, 3.2% to 10.7% in the flower generation and 9.7% to 34.0% in the fruit generation, while parasitism rates were from 7.4% to 46.7% in the leaf generation, from 25.4% to 56.5% in the flower generation, and from 21.3% to 61.9% in the fruit generation. Eight species of Hymenoptera parasitoids were identified. The mortality due to the intraspecific competition varied between 18.4% and 24.5% of the total population, while that due to the premature fall off of fruits ranged from 57.9% to 89.5%.

Key words: integrated pest management, *Prays oleae* (Bern.), natural control.

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