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HYLAEUS BIPUNCTATUS AND ITS RELATION TO RESEDA IN THE NETHERLANDS (HYM., APOIDEA)

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Introduction

As a first result of a study on the distribution and ecology of the Dutch species of the bee-genus *Hylaeus* (= *Prosopis*) the distribution of *H. bipunctatus* is presented. For this study c. 10,000 specimens of bees have been examined.

It was already a well-known fact that *H. bipunctatus* was almost restricted to areas where *Reseda* grows. After the composition of a preliminary distribution map based on specimens in museum collections, field work was carried out to complete the map. The preliminary maps of *Reseda* species, compiled by the 'Rijksherbarium' appeared to be a useful guide. *Reseda* grows along rivers and ponds, on building-sites, railway yards, along railways and roads and in the coastal dunes. These habitats were all investigated in 1980.

Results

Distribution

The distribution of *H. bipunctatus* is presented in Fig. 1. This map is based on both the insects in collections and those recorded during our own field work. In 1980 it was recorded from 53 localities in 34 squares of 10 x 10 kilometers. In 22 squares it was recorded for the first time and alltogether it is now known from 67 squares.

Ecology

During the field work 85% of the males and 88% of the females were collected on *Reseda lutea*, and 15% and 12%, respectively, on *Reseda luteola*. Two males were seen on *Daucus carota*. Eighty percent of the collected specimens were found on building sites, e.g. near brick factories, and 20% on or near river or railway dikes, usually on the southern slope.

Including the data of earlier investigations this species was found on building sites (54%), roadsides (12%), pits (6%), heaths (6%), river dikes (5%), bare grounds (4%), gardens and parks (4%) and rubble sites (2%). It is a well-known fact that *Reseda* is most abundant in disturbed habitats where human influence is considerable.

Conclusions

In order to complete the distribution map of *Hylaeus bipunctatus*, those areas where its

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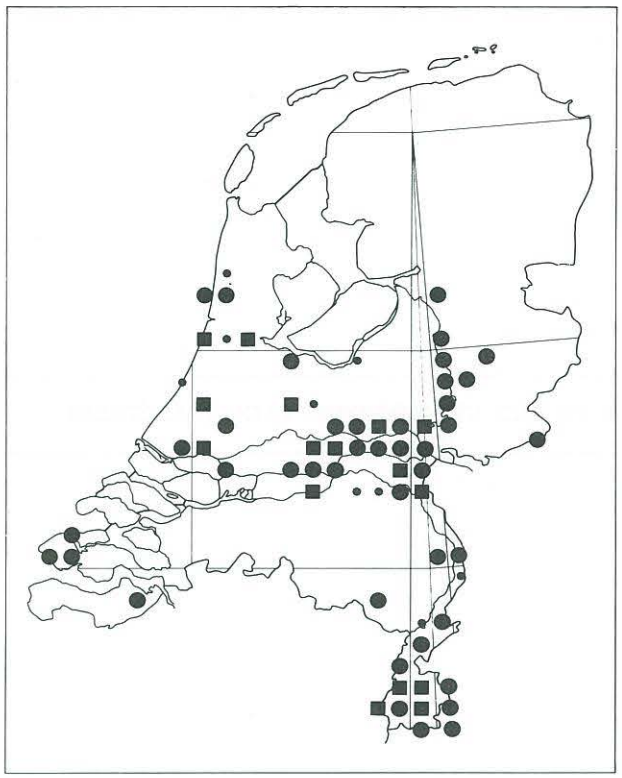

Fig. 1. *Hylaeus bipunctatus*

foodplants occur , were investigated which appeared to be an useful method. This bee species, being obligatory confined to *Reseda* for the food-supply of its brood-cells, can frequently be found on these flowers, and consequently distribution maps of the foodplants are good guides for mapping the insects. It is obvious that this method, although very useful for some species, cannot be recommended for all species, e.g. those living on a number of different plant species. ■