

these *Xyleborus* species, nor about the competition between the ambrosia fungi with each other and with other organisms with which the wood becomes infected at the moment the borers penetrate the tissues. It is to be regretted therefore, that there was no opportunity at the time to investigate the supposed interaction of the *Xyleborus* species in any further detail.

At the time the observations were made, several *Xyleborus* species were found for the first time and the identifications were received much later (see the introduction in KALSHOVEN 1958 and 1959). Moreover there was a large variety of species in both cases — some 14 in the *Cinnamomum* log and some 20 in the *Eupatorium* stems — including, besides the *Xyleborus* species, some Cryphalini, *Thamnurgides* species and Platypodidae, which made the whole picture rather complex. This, added to the fact that the original samples were rather small and that today the specimens are no more completely at my disposal, renders it impossible for me to state with certainty what species were involved in the assumed relationship.

It seems likely however, that the small, later coming species was *X. justus* Schedl, which is 1.5—1.9 mm in size, and that the pioneer species associated with it were *X. difficilis* Egg. (1.8—2.0 mm), *X. cancellatus* Egg. (2.9—3.2 mm) and *X. javanus* Egg. (2.3—2.8 mm). There are also indications in my notes that another small species, *X. quadrispinosulus* Egg., 1.55—1.75 mm in size, may have a similar tendency to commensalistic habits.

For further details on the plant hosts and habitat of these species the reader may be referred to my recent paper on the habits of Indonesian ambrosia-feeding Scolytids (KALSHOVEN 1959).

It is to be hoped that the whole matter, which still is for the present rather hypothetical, may be checked and investigated by other field entomologists.

Summary

Observations are mentioned which have led the author to the opinion that particular species of *Xyleborus* are inclined to make their entrance holes quite near to those of other species of the same genus, with the result that they bore right into tissues already occupied by the ambrosia fungus of the pioneering borer, which makes the food immediately available for the later coming species. Herein a tendency to commensalism is seen.

References

- KALSHOVEN, L. G. E., 1958, *Tijds. Entom.* 101 : 157.
KALSHOVEN, L. G. E., 1959, *Tijds. Entom.* 102 : 135.
SCHWERDTFEGGER, F., 1957, *Zeits. ang. Entom.* 40 : 495.

Het aanvreten van bloemen door wespen. Op de „Hoge Veluwe” werd waargenomen, dat wespen (*Vespa* spec.) op grote schaal in een tuin de bloembladen van pronkbomen aanvrazen. Dit gebeurde op verschillende plaatsen bij de bloemen, ook aan de rand, het was dus niet een weg banen naar het centrum. Ik schreef hierover naar Pater BENNO. Deze kende het verschijnsel niet, althans niet in deze vorm.

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