pattern was consistent throughout all replicates. As would be expected, the reaction varied in consistency with the drop in attractiveness. For instance in logs in which *Sirex* had recently oviposited two insertions of the ovipositor were recorded in the first test and one in the replicates. The slight attractiveness of wood infested with *Amylostereum chaillettii* might have been due to the presence of a small amount of larval frass, though this was not noticed. It could also have been due to the presence of secretions from siricid larvae, undetected by the visual checks made before the wood specimens were exposed to the parasite. Cultures of the fungus in wood not attacked by *Sirex* could clear up this point.

The significance of adequate food for parasites such as *Rhyssa* is obvious. There is therefore a sound biological reason for the apparently poor performance of this ichneumonid in some pine plantations in New Zealand. There seems little doubt that plentiful sources of nectar within or near the pine stands would result in higher degrees of parasitism, though such may be of local significance only. The inability of the parasite to find a large proportion of available hosts is innate to the insect and therefore unlikely to be something that can be manipulated. Likewise the emergence of *Rhyssa* before the peak emergence of *Sirex* could in itself indicate that the parasite would be less efficient in the control of its host because it could not parasitise more than a small fraction of the potential host larvae in its first attack, since the flight period of the parasite is completed before peak emergence of its host. One might expect a better performance from a parasite that is active after the period of peak emergence of its host because it could have larger numbers of its host to parasitise, thereby giving perhaps an improved chance of parasitism. Perhaps there are species of *Rhyssa* that emerge in the autumn. If so, these should be found and introduced to assist in the control of *S. noctilio*. It is unlikely that *R. persuasoria* could be manipulated so that its emergences would occur naturally 4–5 months later than at present. This could probably be done in warm rooms to speed development, or cold rooms to retard it, but it is probable that once released in the field, it would revert to the former emergence period. It would thus be a case of continuous propagation and annual release which is probably much more expensive in the long term than finding and establishing a species which emerges in the autumn, should such exist.

In this study of the effect of *R. persuasoria* on a population of *S. noctilio* there appears to be evidence that, while the parasite is extremely active, it exerts an insignificant degree of control on the numbers of its host. Though some environmental factors, such as increased food availability, might improve the rate of parasitism, innate characteristics including a life cycle out of phase with that of its host and a lack of ability in the finding of its host, generally tend to reduce the significance of the ichneumonid in the natural control of its host.

It was thought for some years that *R. persuasoria* was not a parasite of *S. noctilio* in Europe but F. Wilson at Silwood Park, England (personal communication) has definitely determined that it is a parasite of *noctilio* in Europe.

Finally, it would appear that aggregations of larvae of *sirex* in the wood may well have significance for the survival of the woodwasp. In these studies *Rhyssa* often left a site where successful parasitism had occurred, despite the fact that several more hosts were available there. It is possible that, once having " worked " a site successfully, *Rhyssa* may make that site unattractive both to itself and to other female parasites which come along later. This could be one way in which hyperparasitism by *Rhyssa* is prevented. Certainly we have not recorded such hyperparasitism and we have noted that female *Rhyssa* do not use the bores made by other females when inserting their ovipositors.