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Catalogue of parasitoids and inquilines in galls of Aylacini, Diplolepidini and Pediaspidini (Hym., Cynipidae) in the West Palaearctic

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Table of contents

Abstract	4
Introduction	5
Material & methods	5
Catalogue	7
Aylacini	7
Pediaspidini	25
Diplolepidini	26
West Palaearctic gall wasps for which there is no data on parasitoids	35
Aylacini	35
Pediaspidini	36
Diplolepidini	36
Checklist of parasitoid and inquiline species and their host galls	36
Hymenoptera, Ichneumonoidea	36
Ichneumonidae	36
Pimplinae	36
Phygadeuontinae	36
Orthopelmatinae	37
Hymenoptera, Cynipoidea	37
Cynipidae	37
Cynipinae	37
Synergini	37
Figitidae	37

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ZOOTAXA



Parnipinae	37
Hymenoptera, Chalcidoidea	38
Eurytomidae	38
Torymidae	40
Toryminae	40
Ormyridae	42
Pteromalidae	43
Eupelmidae	45
Eulophidae	47
Eulophinae	47
Tetrastichinae	47
Discussion	
Acknowledgements	50
References	

Abstract

A quantitative catalogue of the regular members of the parasitoid and inquiline communities inhabiting cynipid galls of the tribes Aylacini, Diplolepidini and Pediaspidini in the western Palaearctic is presented. Quantitative and national data are included. There follows a checklist of the parasitoid (almost entirely Chalcidoidea) and inquiline species, with their cynipid hosts. The communities in galls of the three tribes are compared with those associated with Cynipini. Inquiline Cynipidae are well represented in Diplolepidini and Cynipini gall communities, but absent from galls of the other two tribes, although an inquiline eulophid (Dichatomus) develops in galls of Pediaspidini. The great majority of the parasitoids encountered belong to six families of Chalcidoidea that are all represented in Aylacini, Diplolepidini and Cynipini communities, except Ormyridae which have not been found in Pediaspidini galls. Representation of the chalcidoid families varies in the parasitoid faunas of different cynipid tribes, with species of Eurytomidae most abundant in Aylacini galls, Torymidae in Diplolepidini galls, Eupelmidae in Pediaspidini galls and Eulophidae in Cynipini galls. Pteromalidae are evenly represented in galls of all tribes. With the exception of Eupelmidae, which are mostly very polyphagous, few parasitoid species are regularly associated with more than a single tribe of Cynipidae. However, examples of parasitoid species attacking gall wasps in the 'wrong' tribes are not rare. While species diversities of the parasitoid communities of Cynipini are high, those of Aylacini are relatively low. The varied nature of galls of Cynipini, all on Quercus, creates a multiplicity of niches for the parasitoids, and these are mostly polyphagous attacking hosts in a range of galls. In contrast, galls of Aylacini present much less structural diversity, but they occur on several genera and families of host plant, and their parasitoids are, in general, less polyphagous and restricted to hosts on a more or less taxonomically limited host plant range.

Key words: Chalcidoidea, Cynipidae, galls, parasitoids, inquilines, catalogue, west palaearctic