

Contribution to the knowledge of the Cynipidae (Hymenoptera) of Jordan

By José Luis Nieves-Aldrey and Bruno Massa

Abstract. A first account of the cynipid fauna of Jordan is given. Most samples were collected in the Jordan highlands on *Quercus calliprinos* Webb., *Q. ithaburensis* (Decne.) Boiss., and *Q. boissieri* Reut. 17 species of Cynipidae are listed, all recorded for the first time in this country. The gall of *Hedickiana levantina* (Hedicke) is illustrated and taxonomic comments are provided on this poorly known species. Taxonomic and biological comments are also given on other interesting species on the list, particularly on "*Andricus miriami*" Sternlicht, 1968, a species of uncertain status recorded from Israel.

Kurzfassung. Es wird eine erste Übersicht über die Gallwespenfauna Jordaniens gegeben. Das meiste Material wurde im jordanischen Hochland auf den Eichen *Quercus calliprinos* Webb., *Q. ithaburensis* (Decne.) Boiss. und *Q. boissieri* Reut. gesammelt. Es werden 17 Arten von Cynipiden aufgeführt, die alle neu für das Land sind. Die Galle der wenig bekannten *Hedickiana levantina* (Hedicke) wird abgebildet und taxonomisch bewertet. Taxonomische und biologische Anmerkungen werden auch zu anderen interessanten Arten gemacht, besonders zu "*Andricus miriami*" Sternlicht, 1968, einer Art, die aus Israel bekannt ist und deren Status noch der Klärung bedarf.

Key words. Faunistics, gall wasps, inquilines, *Hedickiana*, *Andricus miriami*, *Quercus*.

Introduction

The Cynipidae is one of the largest families of the Cynipoidea (Hymenoptera). About 1400 species are known worldwide (RONQUIST 1999), with less than 300 valid species recorded from Europe (NIEVES-ALDREY 2001). Historically, the fauna of Cynipidae from the Eastern Mediterranean and Near East region has been poorly studied, despite its high species richness, and there are very few records of Cynipidae from the countries of that area in the reference works by DALLA TORRE & KIEFFER (1910) and WELD (1952). Some later exceptions are the articles on the regional fauna of Israel (STERNLICHT 1968a, b) and Iran (CHODJAI 1980). Recently, some further works have been published dealing with the cynipid fauna of Greece (PUJADE-VILLAR et al. 2002) and Turkey and Iran (MELIKA & STONE 2001, MELIKA et al. 2004). However, the Near East cynipid fauna as a whole remains comparatively poorly known and requires much more attention. Here we present the results of a survey of the Cynipidae of Jordan, a country not previously investigated for its cynipid fauna. During 1999-2000 one of us (B.M.) visited Jordan three times and collected galls induced by cynipid wasps. The present paper lists all the species recorded, and is the first comprehensive study of this geographic area; all the listed species are first records for Jordan.

Jordan has great biogeographical interest. It lies in the Middle Eastern transition area, among three different biota, the Mediterranean, the Irano-Turanian and the Saharo-Arabian. This zone is characterised by the Dead Sea depression, which is part of the Pliocene