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BOOK OF ABSTRACTS

Insect Morphology in the Age of Phylogenomics

PO432

A PILOSITY ANALYSIS OF WORKERS OF THE EUROPEAN RED WOOD ANT *FORMICA PRATENSIS* (HYMENOPTERA: FORMICIDAE) IN TURKEY

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The European Red Wood ant *Formica pratensis* (Hymenoptera: Formicidae) is one of the two wood ant species living in Turkey and is distributed only in the Thrace Region of the country. In the present study, we investigated four morphological characters on workers of 87 different *F. pratensis* colonies (N=870) sampled in the region in order to determine if the Turkish population of the species is represented with the hairy N morph or the less hairy P morph described earlier. The characters used were the maximum measurable head width (HW), the number of standing hairs on one half of occipital margin frontad to eye level and seen in dorsal view (NBH), the length of longest hair on occipital margin of head seen in straight dorsal view (LBH) and the number of standing hairs on extensor profile of hind tibia (NHTI). The comparison of the pilosity data with those reported for Europe populations of the species revealed no clear discrimination of N or P ecomorphs for Turkish population. However, Principal Component Analysis based on the pilosity data revealed two distinct groups, one represented with colonies sampled in the northern woodland parts and the other represented with colonies sampled in the central steppe region. Our data showed that the NBH values of workers in Turkish population were even lower than the less hairy P morph in European populations. The higher NBH and lower LBH values measured in the steppe region group compared to the woodland region group showed that the relatively lower hair number in Turkish population was compensated with the increase in hair lengths in response to more sun exposure in the steppe area.

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Keywords: *Formica pratensis*, pilosity, ecomorph, ant ecology

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CONTRIBUTION TO THE STUDY OF THE FINE STRUCTURE OF THE EGG IN THE GENUS *PSEUDOMALLADA TSUKAGUCHI*, 1995 (NEUROPTERA CHRYSOPIDAE)

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Oviposition and egg morphology in Neuroptera have been the subject of studies which for the majority of the families have contributed significantly to the growth of knowledge on these aspects of their reproductive biology. Chrysopidae, green lacewings, is one of the richest Neuroptera families and also one of the most studied, due to the bio-ecological features of some species which have long aroused applied interest (biological control). Thus chrysopids have been the subject of much research also as regards the aspects mentioned above. The advent of the scanning electron microscope (SEM) has also allowed to considerably increase knowledge of the external morphology of the egg of green lacewings. Progressive improvements to the SEM, as well the perfecting of techniques of examining samples, now result in images of ever better quality. To date, observations are available for various genera and many dozens of green lacewing species; a relatively large number of them belong to the genus *Pseudomallada Tsukaguchi*, 1995 (Chrysopinae). In Europe this genus includes about two dozen taxa of specific or subspecific rank, some of which are difficult to discriminate and problematic as regards their systematic level: research into ootaxonomy by SEM could at least potentially help to resolve some uncertainties. The present preliminary work, based mainly on micrographs obtained using SEM, deals with the external morphology of the egg of some European species of *Pseudomallada*. The fine structure of the chorion surface, micropylar area, length of the stalk, and egg distribution during oviposition can be all useful elements for the above purpose. These observations are compared with the data already given in the literature and deserve to be extended, for this as well as other genera, to the largest possible number of taxa of species-group and also to more populations of each species from different geographic areas within the respective areal, to verify similarities or differences.

Keywords: Green lacewings, scanning electron microscope, egg structure, chorion surface, micropylar area, ootaxonomy

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THE GALVAGNI COLLECTION (ORTHOPTERA, DERMAPTERA, BLATTODEA, MANTODEA, PHASMATODEA) AT THE MUSEO CIVICO DI ROVERETO

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The Museo Civico di Rovereto was founded in 1851 and hosts several art and science collections. Concerning Zoology, the entomology is noteworthy, consisting of the collection Halbherr (Coleoptera), the collection Tamanini (Hemiptera with several types) plus the recently acquired collection Galvagni (Orthoptera, Dermaptera, Blattodea, Mantodea, Phasmatodea). Antonio Galvagni (1924-2015) has been an eminent orthopterologist, whose work served as reference and stimulus for all the orthopterologists dealing with Mediterranean and European Fauna. He described 2 genera and more than 40 spp and ssp just among Orthoptera, plus several more taxa of Dermaptera, Blattodea and Mantodea. The collection consists of about 30.000 specimens mostly of identified, sorted and unsorted, plus unidentified material, all pinned in entomological boxes. The insects are accompanied by the library of Galvagni, consisting of about 1.000 volumes and a comprehensive collection of separates covering taxonomy and faunistics of Euro-Mediterranean Orthoptera, Dermaptera, Blattodea. The first step after acquisition was to freeze all the boxes to avoid infestations of insects pest. Then started the databasing of the identified specimens. The study of the collection will progress comparing study areas surveyed by Galvagni with current surveys in the same areas. The acquisition of this collection make possible new connections between the Museum and scholars, between the Museum and other institutions, vivifying the noteworthy collection built by Galvagni. The Museum becomes a reference point for Orthoptera studies, resulting attractive also for further donations such as the Fontana Orthopteroid collection to be acquired during the current year.

Keywords: Orthoptera, Dermaptera, Blattodea, Mantodea, Museo Civico di Rovereto, Galvagni entomology collection

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Poster moved.