

COMPARATIVE STUDY OF ANT ASSEMBLAGES IN DIFFERENTIATED HABITATS RESULTING FROM MEDITERRANEAN FOREST FIRES ON MT. PARNITHA

Nikoletta Stylianidi ¹, Chris Georgiadis ¹ & Anastasios Legakis ²

¹ Section of Zoology-Marine Biology, Dept. of Biology, University of Athens, Panepistimioupoli, GR-157 84 Athens, Greece. Email: cgeorgia@biol.uoa.gr

² Zoological Museum, University of Athens, Panepistimioupoli, GR-157 84 Athens, Greece. Email: alegakis@biol.uoa.gr

Although during the recent decades fires in the southern Mediterranean region are usually thought to be man-induced, for eons they were part of the natural processes taking place in typical forest and shrub ecosystems. The indigenous flora and fauna have developed ways of coping with this type of catastrophe and in many cases there have been documented process of obligatory evolution as part of their natural biological cycles. Ants have been known to overcome wild fires as they are typical hypogaecic animals, although the composition of their assemblages may change according to the effects the fire has on the available hypergaecic resources. In this experiment we tried to identify these changes in three different types of ecosystems by the use of pitfall trapping (monthly changes). They were located at Mt. Parnitha, a great part of which was burned in 2007. The ecosystems were: (1) unburned *Abies* forest, (2) burned *Abies* forest and (3) an unburned patch surrounded by burned forest. We pursued taxonomic identification to the species level. The specimens collected belong to 2 subfamilies and in overall 13 genera and approximately 40 species. We concluded that the patch assemblage combined elements from the burned and the unburned forest. The genus *Formica* dominated in the patch (34.06%) as well as in the unburned forest (54.17%), while the genus *Crematogaster* was abundant in the patch (20.56%) and in the burned forest (23.38%). The genus *Cataglyphis* presented the higher proportion with 28.47% in the burned area. The only genus abundant in all three ecosystems was *Tetramorium* (10.59% in the patch, 16.16% in the unburned and 28.19% in the burned forest). In all three areas, several other genera appear having minor populations and being represented by different species in each ecosystem, as well as rare genera with only 1 or 2 representatives. Our conclusions coincide with the concept that the genus *Formica* dominates undisturbed ecosystems, while the genus *Cataglyphis* proved that it is the most successful genus for colonizing open areas.