

COMMUNITY STRUCTURE AND POPULATION DYNAMICS OF ANTS (HYMENOPTERA: FORMICIDAE) IN A HYRCANIAN FOREST

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INTRODUCTION

Ants are social insects of the family Formicidae and belong to the order Hymenoptera. Soil is an important habitat for ants. Ants play a vital role in the ecosystem of the rainforest. Hyrcanian forests are located in northern Iran near the Caspian Sea. Caspian forests are the world's ancient forests. Semeskandeh forest has a high production capacity due to mild climate and good soil moisture. Present study is based on investigation of seasonal density and diversity of Formicidae in a Hyrcanian forest (Semeskandeh forest) in northern Iran.

MATERIALS AND METHODS

For these reasons, samples from soil were assessed in 2 month intervals during 1 year sampling (2012-2013). Also used pit fall trap method for collect more ants. The samples were transported to the laboratory and ants were extracted by heat in one modified Berlese funnel. The soil samples were stayed in the modified system until the almost all ants were extracted. Additional sampling were taken from soil to have enough material for determination of mites families in Semeskandeh forest. Specimens were collected in water and separated under a dissecting microscope. The extracted specimens were preserved in 75% ethanol. The specimens were identified by taxonomic keys.

RESULTS AND DISCUSSION

Abundance of ants was highest in leaf litter in autumn (October) and the lowest in deepest layer of soil (3-6 cm) in autumn (October). Additionally, diversity of ants indicated that species diversity was highest in summer (August) in leaf litter and there was low species diversity in winter in deepest layer of soil. Overall, diversity and population dynamics of ants was higher in leaf litter than deepest layers (3-6 cm) of soil. According to this study, ants are one of the main factor in food chain in Hyrcanian forests and these result show the importance of biodiversity conservation and management of natural resources.

Keywords: Ants, population dynamics, Caspian Sea forest.

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