

WORKSHOP 3**QUATERNARY PALEOECOLOGY USING FOSSIL ORIBATID MITES
INTRODUCTION TO ORIBATID MITES AND THEIR APPLICATIONS TO
QUATERNARY PALEOCLIMATIC INTERPRETATION**

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ABSTRACT

This short course is designed to introduce to anyone interested in one of the newest paleoecological tools, the study of fossil soil mites. These ubiquitous organisms are numerous as fossils in bog and lake sediments. Although they have been occasionally identified from postglacial deposits, there has been little effort made to determine paleoenvironmental conditions based on oribatid occurrences. That situation is now changing.

The course will be led by three active workers in this field; two are internationally acknowledged experts in oribatid biology, and the third, a paleobiologist, has developed techniques for study of fossil mites - particularly as paleoenvironmental indices. It will provide a rare opportunity for students interested in challenging, cutting-edge, research ideas leading to paleoclimatology and Quaternary paleoecology projects to learn what the field is about.

Paleoacarology is still in its infancy, but the subject it embraces should be of wide application to paleoclimatic investigations, particularly those in which sample sizes are limited.

TOPICS

Introduction

Oribatid biology and examples of ecological specificity

Fossil record of the Oribatida

Oribatid mites - classification within the Arthropoda and Arachnida.

Gross morphology of macropylina and brachypilina oribatids

Morphologic elements and superfamilial separation among Brachypilina

Fossil preservation and utility for paleoclimatic interpretation

Collection techniques for living and fossil material

Separation and storage techniques for fossil material