

**A FAUNISTIC REVIEW OF THE MODERN AND FOSSIL MOLLUSCAN FAUNA  
FROM LAKE PAMVOTIS, IOANNINA, AN ANCIENT LAKE IN NW GREECE:  
IMPLICATIONS FOR ENDEMISM IN THE BALKANS***Michael R. FROGLEY*

Centre for Environmental Research, University of Sussex, UK

*Richard C. PREECE*

Department of Zoology, University of Cambridge, UK

The Balkans are justifiably famous for their unusually rich biodiversity. Isolated ancient lakes such as Ohrid and Prespa have developed remarkable endemic faunas, attesting to the complex biogeographical evolution of the region. Despite the detailed biological investigation of such sites, however, many key localities in the Balkans remain poorly known, particularly with regard to their fossil histories. Here we present an account of the aquatic molluscan fauna from Lake Pamvotis, an ancient lake located within the Ioannina Basin of NW Greece, that has a fossil record stretching back to the Plio-Pleistocene. Unlike the faunas from Ohrid and Prespa, however, the modern molluscan fauna of Lake Pamvotis does not exhibit spectacular endemism, as only four of the thirty-seven species that now occur in the lake and its surrounding marshland and springs appear to be endemic. Eight of these extant species have been found in Holocene sediments and four have records extending back beyond 200 kyr, but these are borehole records, so the faunas are certain to have been more diverse in the past. It is significant that older, magnetically reversed sediments from Ioannina have yielded additional taxa, including forms of *Viviparus* that appear to show differences in shell ornamentation with time. By comparing the Ioannina record with other extant and fossil lake sequences from the region, we consider what implications this might have in terms of the evolution of both Lake Pamvotis and other Balkan sites.

**Key words:** Quarternary, Molluscs, Lake Pamvotis, Greece, palaeoecology**FOSSIL OSTRACODS AND FAUNISTICS: WHAT THEY TELL US ABOUT THE EVOLUTION  
OF REGIONAL BIODIVERSITY***Huw I. GRIFFITHS*

Department of Geography, University of Hull, UK

*Michael R. FROGLEY*

Centre for Environmental Research, University of Sussex, UK

Although still under-researched, the ostracod fauna of the Balkans is well-known for its large numbers of endemic species, many of which occupy localised distributions in the karst or in biodiversity 'sump' areas such as Lake Ohrid. Moreover, very diverse PlioPleistocene faunas have been described - particularly by workers from the former FSR Yugoslavia. We review these two datasets, and incorporate further information derived from recent fine-scale studies of extended (> one climatic cycle) lake sediment records from Pamvotis (W. Greece) and Kopais (E. Greece). These analyses provide additional insights into the temporal structuring of aquatic biodiversity and the timing of colonisation events. Contrasts are also made with faunistic and palaeoecological datasets from adjacent regions - notably western Anatolia.

**Key words:** Ostracoda, Quarternary, recent, palaeobiogeography, southern Balkans