MICROPALAEONTOLOGY NOTEBOOK

First occurrence of the genus *Sclerocypris* Sars, 1924 (Ostracoda) in the ?Pleistocene of Western Europe (Portugal)

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The Recent distribution of the freshwater ostracod genus *Sclerocypris* Sars, 1924 (type species *Sclerocypris clavularis* Sars, 1924; synonyms *Bharatocypris* Battish, 1978 and *Candonopsis* Sars, 1894 *pro parte*), subfamily Megalocypridinae Rome, 1965, is restricted to Africa and India (Martens, 1986; Martens & Coomans, 1990).

Recovery of fossils of *Sclerocypris* are not frequent and are restricted to Plio-Quaternary deposits of Kenya, with *Sclerocypris clavularis* Sars, 1924 from Lakes Turkana and Bogoria (Carbonel & Peypouquet, 1979; Carbonel *et al.*, 1983, 1987; Cohen *et al.*, 1983) and *Sclerocypris jenkiniae* Klie, 1933 from Lakes Elmenteita and Naivasha (Lindroth, 1953; Cohen & Nielsen, 1986) and the Pliocene basal member of the Omo Series, Lake Turkana (Peypouquet *et al.*, 1979). *Sclerocypris bicornis* (G. W. Müller, 1900) has been recorded (identified as *Chlamydotheca* sp.) in the Pleistocene of Egypt (Boukhari & Guernet, 1985).

Recent field work in Algarve, southern Portugal (Cabral *et al.*, 2003, 2004, 2005), recorded the presence of *Sclerocypris*. It

was represented by numerous juvenile specimens of a species related closely to the Recent species *Sclerocypris bicornis* in a probable Pleistocene lacustrine ostracod assemblage at Bolqueime associated with other Cyprididae, Candonidae, Darwinulidae, Limnocytheridae and Cypridopsidae. The instars are characterized by the presence of long spines on the margins, as is common in many species of this genus (Martens, 1986, 1991), such as *Sclerocypris tuberculata* (Methuen, 1910), *Sclerocypris venusta* (Vavra, 1897) [illustrated in Martens, 1986] and *Sclerocypris clavularis* Sars, 1924 (Pl. 1, fig. 2). They also possess three large conical tubercles not present on adults, an important dimorphic feature between larvae and adults which has misled several authors. To the authors' knowledge, juveniles of *Sclerocypris* have been illustrated very seldom. According to Martens & Coomans (1990), *Candonopsis dentatus* Victor & Michael, 1975, which presents clear marginal spinations, is probably a juvenile of an Indian *Sclerocypris* species. The same applies to *Eucypris serratomarginata* Kiss, 1960, considered as a juvenile (A-1) of *Sclerocypris multififormis* (Kiss, 1960).

Explanation of Plate 1.

figs 1, 3, 4. *Sclerocypris* cf. *bicornis* (G. W. Müller, 1900), Pleistocene of Bolqueime, Portugal: **1**, juvenile, right valve; **3**, juvenile, left valve; **4**, juvenile, right valve, internal view. **fig. 2.** *Sclerocypris clavularis* Sars, 1924, Holocene of Lake Bogoria, Kenya: juvenile, left valve (length of all specimens is 0.86 mm).

The recognition of *Sclerocypris* cf. *bicornis* (Pl. 1, figs 1, 3, 4) in southern Portugal is the first documented occurrence of this genus in Europe; its presence in Portugal, associated with *Zonocypris* cf. *costata* (Vávra, 1897) suggests a warm sub-tropical climate.

ACKNOWLEDGEMENTS

The authors wish to thank Drs K. Martens (Brussels) and D. Horne (London) for their advice and literature help.

Manuscript received 3 December 2004

Manuscript accepted 15 March 2005

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