

Potamocypris arcuata (Sars, 1903) new to Hungary
(Crustacea, Ostracoda)

By

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ABSTRACT. The re-examination of a part of the DADAY-collection revealed the presence of Potamocypris arcuata (SARS, 1903). This is the first record of the species in Hungary. The variability of some important taxonomic characters is discussed.

INTRODUCTION

In the course of the taxonomic revision of the Western European species of the genus Potamocypris, one of us (C.M.) had the opportunity to receive on loan thirteen samples of the very important DADAY-collection deposited in the Hungarian Natural History Museum (Budapest). The material consisted of spirit tubes containing Potamocypris specimens from different localities in Hungary and from one locality situated in Yugoslavia. The tubes were labelled by DADAY as P. villosa and P. ophthalmica. After careful examination, however, it became apparent that all those specimens actually belong to Potamocypris arcuata.

Because P. arcuata had been unknown from Hungary and because the carapace of this taxonomically difficult species proved to be highly variable (see GAUTHIER, 1928 and MEISCH, 1985), we believed it necessary to describe and figure the Hungarian specimens in a separate publication.

SUMMARY OF THE TAXONOMIC HISTORY OF POTAMOCYPRIS
ARCUATA

P. arcuata was first described by SARS (1903) from Central Asia. The species was barely known until GAUTHIER (1928 and 1939) gave a detailed redescription and figuration of specimens collected in North Africa (Algeria and Tunisia).

In Europe, ALM (1914 and 1915) redescribed the species from Sweden under the name P. maculata. ALM's specimens show carapaces which are distinctly more elongate than those figured by SARS and GAUTHIER. P. maculata (= P. arcuata) seems to be rather rare in Western and Northern Europe, where it has been reported from a few localities only. In Southern Europe, however, it is a relatively wide spread species.

In 1960, LÖFFLER reported the finding of P. arcuata in Austria and he suggested the synonymy of P. maculata with P. arcuata. This synonymy was confirmed by one of us after examination of the type material of both P. arcuata and P. maculata (see MEISCH, 1985).

Potamocypris arcuata in Hungary

P. arcuata had not yet been recorded from Hungary, where its finding nevertheless was to be expected. FARKAS (1958) therefore listed P. maculata (= P. arcuata) among the species whose presence in Hungary is probable, in his Fauna of Hungarian Ostracods.

At the end of the last century, when DADAY (1900) studied the thirteen samples dealt

with here, several swimming species now ranking in genus Potamocypris had been described, among them P. villosa (JURINE, 1820) and P. ophthalmica (FISCHER, 1855). Both species had unfortunately been described rather poorly and therefore identification was not certain and so one may understand that DADAY determined the specimens in his thirteen samples as P. villosa or P. ophthalmica. Eleven of those samples were labelled by DADAY as P. villosa, the remaining two as P. ophthalmica. (For a detailed list of the thirteen samples, see hereafter.)

A thorough examination of these samples, including on the whole about 150 specimens, showed that they all belong to P. arcuata.

Taxonomic features of the Hungarian specimens

The taxonomy of P. arcuata is rather difficult, because of the fact that some specific characteristics such as carapace shape, proved to be strikingly variable. This variability, which is most probably connected with the widespread geographical distribution of the species, caused a lot of confusion in the literature. So we thought it would be of interest to describe the variability of the Hungarian specimens examined.

All the specimens examined are females (males of P. arcuata have only been reported from North Africa by GAUTHIER in 1928). Carapace size ranges from 0.53 to 0.70 mm.

Surface ornamentation: the valves show the shallow round pits which characterize P. arcuata (Figs 1 and 2). Nevertheless, one sample includes specimens with smooth valves (954/1982 Vadkert, two specimens), while another sample (1186/1899 Főegyháza), includes smooth and pitted carapaces. The absence of ornamentation on these specimens is most probably due to partial decalcification of the valves in the preserving fluid.

The most common carapace shape of the specimens examined in lateral view is shown on Fig. 1. There is, however, striking variability: numerous specimens are more regularly rounded posteriorly (these carapaces being almost semicircular), while others show a distinct postero-dorsal angle.

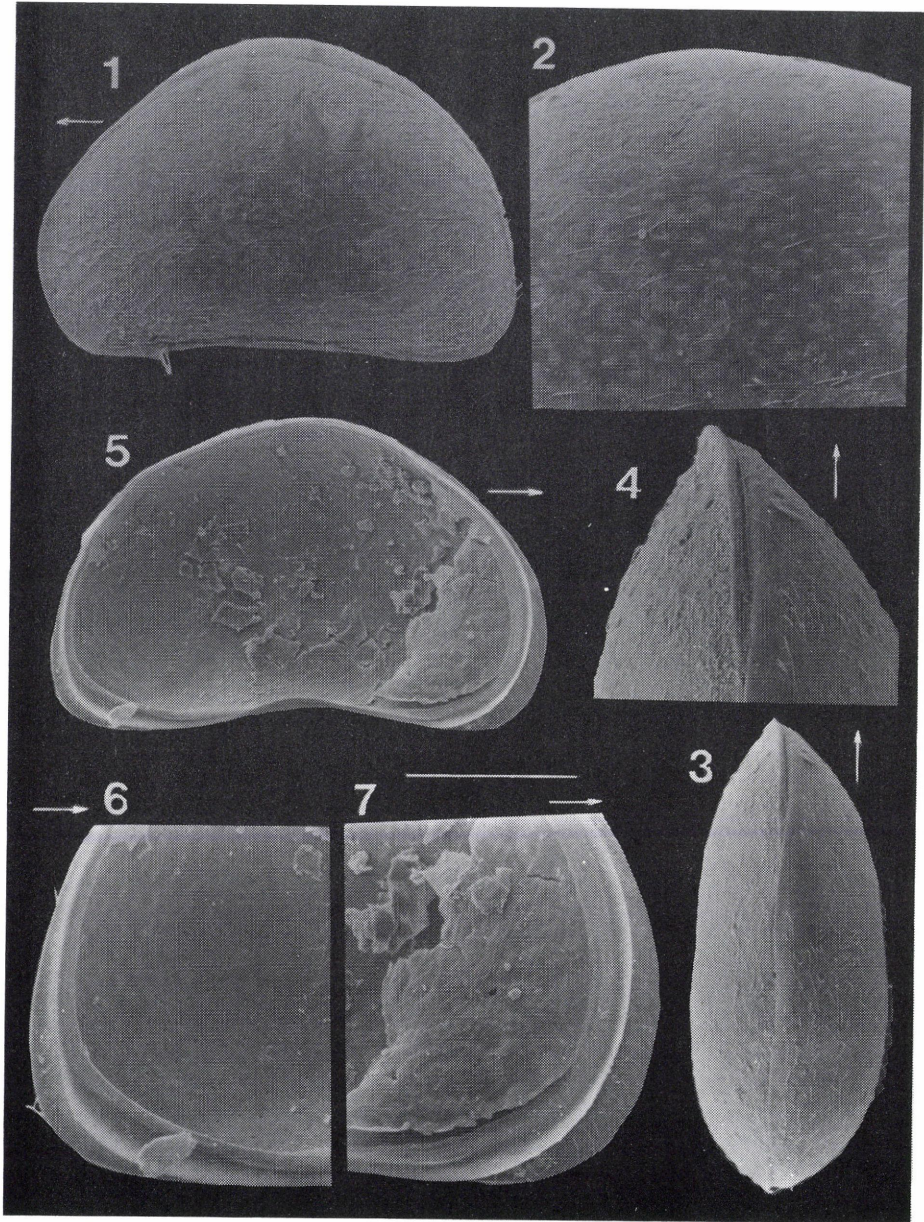
Carapace in dorsal view: the left valve extends beyond the right valve both anteriorly and posteriorly. In most specimens, the anterior end of the carapace is slightly drawn towards the left (Figs 3 and 4). This character is not found in any of the remaining swimming Potamocypris-species occurring in Europe. In dorsal view the carapace is also highly variable: most commonly it is slender, rather sharp-pointed in front and more rounded behind. Some specimens, however, mainly the larger ones, have a carapace which is distinctly broader and less sharp-pointed in front (such a broad carapace is shown on Figs 3 and 4).

The structure of the marginal zones of the left valve deserves special remark: contrary to the carapace shape, this structure proved to be constant and characteristic for each Potamocypris-species and can be considered as one of the most reliable diagnostic features on species level. The marginal zones of the left valve of the Hungarian specimens are shown on Figs 5-7. It should be noted that they are remarkably similar to those of the type specimens of the species and also to those of the P. arcuata specimens recently collected in Belgium (compare with figures 20-a, b, c and 21-c, d, e given by MEISCH, 1985).

From the soft parts, only the relative length of the swimming setae on the second antennae will be described: in the four specimens which were dissected, the swimming setae overlap the tips of the distal claws by 45-52% of their total length. (These values are most commonly found in P. arcuata). It is to be noted that all the features of the soft parts of the

Figs 1-7. Potamocypris arcuata (SARS, 1903).

1= lateral view of the carapace; 2= surface ornamentation (detail); 3= carapace in dorsal view; 4= anterior end of the carapace in dorsal view (note the relative position of both valves); 5= internal view of the left valve; 6= posterior marginal zone of the left valve; 7= anterior marginal zone of the left valve. White bar = 0.20 mm for 1, 3 and 5; = 0.10 mm for 2, 4, 6 and 7. (The 3 specimens figured here are from the localities Nánás (no 970/1893) and Akasztó (no 970/1893).



Hungarian specimens are in perfect agreement with the diagnosis and the description of the type specimens of P. arcuata (see MEISCH, 1985).

Remarks: The samples examined clearly do not belong to P. villosa. In this species, the valves are totally smooth and have longer and stiffer setae. Furthermore, the swimming setae only extend beyond the tips of the claws by 20-36 % of their total length. As far as P. ophthalmica (Fischer, 1855) is concerned, it is not impossible that this species must be considered a nomen oblitum, but this question will remain unsolved as long as it is not exactly known what species was meant by FISCHER's original description.

MATERIAL EXAMINED

Thirteen spirit tubes of the DADAY-collection deposited in the Hungarian Natural History Museum (Budapest) have been examined. These tubes contain on the whole about 150 specimens. They are registered as:

954/1892 Akasztó (16 specimens, 1 diss.); 954/1982 Kalocsa (3 specimens); 954/1892 Kisújszállás (9 specimens); 954/1892 Szabadka, YU (2 specimens); 954/1892 Tázlár (2 specimens); 954/1892 Vadkert (2 specimens); 970/1893 Fülöpszállás (4 valves); 970/1893 Nánás (32 specimens, 1 diss.); 1186/1899 Félégyháza (71 specimens, 1 diss.); 1187/1899 Parád (1 specimen); 1192/1899 Peszér (4 specimens); 954/1892 Hódmezővásárhely (8 specimens); 1194/1899 Felső-Örs (11 specimens, 1 diss.).

Remarks: 1. diss. = number of dissections.

2. The first eleven samples were labelled by DADAY as P. villosa, the remaining two samples as P. ophthalmica.

3. The locality Szabadka is situated in Yugoslavia; all other samples come from Hungary.

4. The tube 970/1893 from Fülöpszállás includes 4 separate valves; the tube 954/1892 from Tázlár includes two badly preserved specimens. The determination of these valves and specimens is difficult and remains uncertain.

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