

45. OSTRACODA FROM DSDP LEG 42B

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INTRODUCTION

The Pleistocene ostracode assemblage, described in the systematic portion of this report, includes several taxa described previously from different stratigraphical levels of middle Sarmatian, Meotian, Pontian, and Dacian of the circum-Carpathian and from Aktshagylian and Apsheronian of the Ponto-Caspian regions. In addition, many species have been found in the Recent faunas of the Black Sea and the Caspian Sea.

On the basis of their known ranges, one could be tempted to assume that the ostracode assemblage contains an admixture of older reworked elements. For many reasons, however, such a conclusion cannot be supported under the present state of knowledge. The Ponto-Caspian Basin developed, after becoming isolated from the Mediterranean Sea, into a brackish and fresh-water basin, relict of the Neogene Paratethys; a brief link with the Mediterranean Sea existed only in Meotian time. Later on, in the Black Sea area, successive basins followed: the Pontic Basin with connections to the Caspian and Pannonian basins existed in early Pontian (with the so-called Egeean migration of the fauna) and probably middle Pontian time, succeeded by the Kimmeric, Kuialnik, and Gurian basins (the latter two having again connections with the Caspian Basin), each of which gradually became a fresh-water basin. They, in turn, were followed by the fresh-water Ceaudian and Palaeoeuxinic basins.

Mediterranean waters penetrated into the Black Sea waters in Uzumlar time. A new isolation followed and then the link with Mediterranean was re-established in Karangat time (Riss-Würm). During the Würm glacial epoch a break in this connection occurred and the brackish to fresh waters of Neoeuxinic Basin were prevalent. Connection with the Mediterranean Sea was re-established in Holocene time.

Upper Neozoic ostracode faunas of the Ponto-Caspian Basin were developed by repeated populatings by varying elements from nearby basins; the migrations and populations in the different periods led to the mixed assemblages. Analysis of the components of the fauna permits a separation of ostracode groups relative to their different geographic origins. They originated initially from allopatric speciation within a basin's limits and then migrated into neighboring zones. Thus the distribution in time of different species was not the same in all basins. It must be emphasized that the main part of the Pleistocene ostracode fauna from the Ponto-Caspian Basin is of Pontian origin. The early Pontian represents the maximum epoch of Pontic basin

extension, with the largest faunal migration. Early Pontian faunal elements penetrated from western Europe toward Aral Lake. However, the genera and species from the Ponto-Caspian Basin are not taxa inherited from the Meotian of the same domain but, rather, immigrated from the neighboring Pannonian and Egeean basins (Ebersin et al., 1966). This phenomenon might be explained by premature isolating and freshening of the waters from the Pannonian Basin, relative to the outer Carpathian regions. Once the connections were re-established between the Pannonian and Ponto-Caspian basins, good circulation of fauna followed. With the permanent freshening tendency of the Dacic Basin waters after Pontian time (in the Romanian stage there are only fresh-water faunas), the Pontian type of fauna persisted into the Euxinic and Caspian basins where brackish waters lasted beyond Kimmerian time into Pleistocene and beyond.

The Pannonian faunal migration toward the east explains the presence in the Pleistocene of the Ponto-Caspian Basin of such species as *Amplocypris subacuta* and *Candona (C.) balcanica*, as well as specimens of the *Candona (C.) lobata*, *Candona (C.) labiata*, *Candona (C.) flectimarginata*, *Candona (C.) nonreticulata* group.

Callistocythere diffusa (probably a primitive taxon) and *Hemicytherura* and *Cytheroma* genera are not found in fossil deposits in Ponto-Caspian regions; they are, however, abundant with numerous species in the Recent fauna of the Black Sea.

Loxoconcha ornata ornata, a prevalent species in our samples, has been described only from middle Sarmatian (Bessarabian) deposits. It survived, unchanged, in isolated ecologic niches up to Pleistocene time.

Paraconadona, relatively frequent in our samples, lives in fresh-water rivers, lakes, pools, etc. In the evolution of the Black Sea its first appearance was in early Quaternary time (Ceaudian and Palaeoeuxinic basins).

Candona species are known from Mesozoic to present time, living in a range of environments. They live mostly in fresh water, but some species live in brackish water; they do not swim but move freely in muddy bottoms.

Bacunella has been found, in several places, in fresh water and brackish deposits of the Pliocene in Europe, and lives today in the Caspian Sea.

Cypria is known from lower Tertiary into Recent deposits. Most species live in fresh-water lakes, pools, etc., but prefer an environment with abundant vegetation.

Leptocythere is typically marine but also is abundant in brackish water, it has a worldwide distribution.

Fossil species are known from Oligocene time to the present.

Loxococoncha extends from early Tertiary to Recent time. It has a worldwide distribution, inhabiting the littoral zone.

CONCLUSIONS

Two ostracode assemblages can be distinguished in DSDP Leg 42B samples; a Pleistocene association, comprising mixed ostracode faunas of different paleogeographical origins, and a pre-Recent ostracode community containing the genera *Hemicytherura* and *Cytheroma*.

At the moment, in the Pleistocene cores, it is not possible to make any stratigraphical divisions on the basis of the ostracode faunas.

SYSTEMATICS

Suborder PODOCOPA Sars, 1866

Family CYPRIDIDAE Baird, 1850

Subfamily CYPRIDINAE Baird, 1850

Genus AMPLOCYPRIS Zalanyi, 1944

Amplocypris aff. *subacuta* Zalanyi (Plate 9, Figures 3, 4)

Amplocypris subacuta Zalanyi, 1944, p. 33, pl. 3, fig. 9-12.
Amplocypris cfr. *subacuta* Zalanyi, Sokac, 1972, p. 35, pl. 11, fig. 1-4.

Dimensions: L = 0.78 mm; h = 0.36 mm.

Distribution: This species has so far been found only in the Pannonian deposits (particularly in the sediments of the south-eastern part of the Pannonian basin).

Subfamily CANDONINAE Kaufmann, 1960

Genus CANDONA Baird, 1845

Subgenus CASPIOCYPRIS Mandelstam, 1956

Candona (*Caspiocypris*) *filona* (Livental) (Plate 1, Figure 1)

Caspiocypris filona (Livental), Suzin, 1956, p. 26, pl. 13, fig. 1, 2; Mandelstam et al., 1962, p. 82, pl. 3, fig. 4, 5.

Dimensions: L = 0.56 mm; h = 0.39 mm.

Distribution: The Pontian of Kuban, Aktshaglyian, and Apsheronian deposits from Turkmenistan. Sokac (1972, p. 41) states that *Caspiocypris filona* is similar to *C. labiata* (Zalanyi). (It represents a modification of *C. labiata* due to environmental conditions.)

Candona (*Caspiocypris*) *elongata* (Schweyer) (Plate 1, Figure 5; Plate 2, Figure 4)

Bythocypris elongata Schweyer, 1948, p. 26, pl. 4, fig. 7, 8.
Candona elongata (Schweyer), Mandelstam et al., 1962, p. 138, pl. 17, fig. 2.

Dimensions: L = 1.12 mm; h = 0.54 mm.

Distribution: Upper Pliocene and lower Pleistocene of Turkmenistan.

Subgenus CASPIOLLA Mandelstam, 1960

Candona (*Caspiolla*) *balcanica* (Zalanyi) (Plate 1, Figure 6; Plate 9, Figures 1, 2)

Paracyprina balcanica Zalanyi, 1929, p. 52-55, text-fig. 19, 20, pl. 2, fig. 7.

Cantocyprina balcanica (Zalanyi), Zalanyi, 1959, p. 225, Gramann, 1969, p. 492, pl. 33, fig. 1-7.

Caspiolla balcanica (Zalanyi), Mandelstam and Schneider, 1963, p. 90, pl. 7, fig. 11, 12; Stanceva, 1964, p. 209, pl. 1, fig. 1, 2.

Candona (*Caspiolla*) *balcanica* (Zalanyi), Sokac, 1972, p. 46, pl. 18, fig. 7-14.

Candona balcanica (Zalanyi), Olteanu, 1974, pl. 1, fig. 4, pl. 2, fig. 4, 5.

Dimensions: L = 1.37 mm; h = 0.66 mm.

Distribution: This species was described from the upper Pontian of Serbia (*Congerina balatonica* Zone). It has also been found in the Meotian deposits of the Dacic basin, Pontian deposits in southern parts of USSR (Caucasus, Azerbaijan, Turkmenistan, Basarabia), in Bulgaria, Greece, Romania, and Yugoslavia.

Candona (*Caspiolla*) *confragosa* Markova (Plate 9, Figure 7)

Candona confragosa Markova, Mandelstam et al., 1962, p. 137, pl. 16, fig. 7, 8.

Dimensions: L = 1.12 mm; h = 0.67 mm.

Distribution: The upper Pliocene and lower Pleistocene of Turkmenistan.

Candona (*Caspiolla*) *livalentina* (Evlachova) (Plate 1, Figure 7, Plate 2, Figure 7)

Bythocypris livalentina (Evlachova), Svejer, 1949, p. 26, pl. 4, fig. 1.
Caspiolla livalentina (Evlachova), Mandelstam et al., 1962, p. 76, pl. 2, fig. 6.

Dimensions: L = 0.71 mm; h = 0.39 mm.

Distribution: This species was found at several places in the upper Pliocene and post-Pliocene of the USSR (western Turkmenistan, Azerbaijan).

Candona (*Caspiolla*) *gracilis* Livental (Plate 1, Figures 8, 9; Plate 2, Figures 1-3)

Candona gracilis Livental, 1929, p. 52, pl. 1, fig. 42, 43.
Caspiolla gracilis (Livental), Mandelstam et al., 1962, p. 77, pl. 2, fig. 2.

Dimensions: L = 0.81 mm; h = 0.46 (female right valve); L = 0.84 mm; h = 0.44 mm (male right valve).

Distribution: The upper Pliocene and lower Pleistocene deposits of western Turkmenistan and Azerbaijan (USSR).

Subgenus PONTONIELLA Mandelstam, 1960

Candona (*Pontoniella*) *acuminata striata* Mandelstam (Plate 3, Figures 3-7)

Pontoniella acuminata var. *striata* Mandelstam var. n., Mandelstam and Schneider, 1963, p. 86, pl. 6, fig. 4, Gramann, 1969, p. 494, pl. 32, fig. 1, 2.

Dimensions: L = 0.78 mm; h = 0.33 mm.

Distribution: This species was found in the Pontian deposits of the USSR (Crimea, Caucasus, Basarabia) and in Bulgaria, Romania, and Greece.

Remarks: *C. (P.) acuminata striata* is nearest to the species *C. (P.) hastata* Krstic (described from the upper Pontian of Yugoslavia).

Candona (*Pontoniella*) *schemachensis* Mandelstam (Plate 9, Figure 5)

Pontoniella schemachensis Mandelstam, Mandelstam et al., 1962, p. 72, pl. 1, fig. 3, 4.

Dimension: L = 0.56 mm; h = 0.19 mm.

Distribution: The Kuaialnikian of Apsheronian of Turkmenistan, cir-Caucasus, and Basarabia (USSR).

Remarks: The striation of the valve is due to certain ecological conditions.

Candona (*Pontoniella*) sp. (Plate 9, Figure 6)

Dimensions: L = 0.44 mm; h = 0.20 mm.

Remarks: This specimen is possibly a juvenile form of the *Candona* (*Pontoniella*) *schemachensis* Mandelstam.

Genus PARACANDONA Hartwig, 1899

Paracandona aff. *verrucosa* (Stanceva) (Plate 3, Figures 1, 2; Plate 8, Figure 7)

Candona verrucosa Stanceva, 1964.

Dimensions: L = 1.01 mm; h = 0.57 mm.

Distribution: The Pliocene of Bulgaria. I found this species in the lower Dacian of the Dacic basin (Romania). The genus is found in Pliocene to Recent sediments worldwide.

Genus BACUNELLA Schneider, 1958

Bacunella dorsoarcuata (Zalanyi)
(Plate 6, Figures 3, 4)

Pontocypris dorsoarcuata Zalanyi, 1929, p. 37-40, fig. 11, 12.

Bythocypris gurlana Svejser, 1949, p. 62, pl. 1, fig. 1-8.

Caspiella dorsoarcuata (Zalanyi) Suzin, 1956, p. 21, pl. 13, fig. 15, 16.

Bacunella dorsoarcuata (Zalanyi), Mandelstam et al., 1962, p. 73, pl. 1, fig. 6, 7; Mandelstam and Schneider, 1963, p. 91, pl. 8, fig. 5, pl. 9, fig. 3, 4; Sejdaeva-Kulieva, 1966, p. 110, pl. 5, fig. 4; Gramann, 1969, p. 495, pl. 32, fig. 5; Sokac, 1972, p. 63, pl. 29, fig. 8-12.

Dimensions: L = 0.56 mm; h = 0.35 mm.

Distribution: This species was described from the Pontian deposits of Serbia, and afterwards was found in the Pontian from Hungary, Bulgaria, Greece, and Romania. It is also known from the Pliocene and post-Pliocene of the southern parts of the USSR (Caucasus, Crimea, Turkmenistan), as well as from the Recent fauna of the Caspian Sea.

Family CYTHERIDAE Baird, 1850

Subfamily LEPTOCYTHERINAE Hanai, 1957

Genus LEPTOCYTHERE Sars, 1925

Leptocythere striatocostata (Svejer)
(Plate 4, Figure 7)

Cythere striatocostata Svejer, 1949, p. 27, pl. 9, fig. 8; Schornikov, 1969, p. 187, pl. 14, fig. 2.

Dimensions: L = 0.52 mm; h = 0.31 mm.

Distribution: The species is known from the Black Sea and Caspian Sea. It is also found in the Pliocene and post-Pliocene deposits from southern USSR.

Remarks: The species of the subfamily Leptocytherinae, described here, are assigned to the genus *Leptocythere* sensu larger.

Leptocythere bacuana (Livaltal)
(Plate 5, Figure 1; Plate 9, Figure 8)

Leptocythere bacuana (Livaltal), Mandelstam et al., 1962, p. 227, pl. 37, fig. 3; Schornikov, 1969, pl. 15, fig. 3.

Dimensions: L = 0.58 mm; h = 0.30 mm.

Distribution: Fossil specimens are known from the Pliocene and lower Pleistocene (Apsheonian) deposits of Turkmenistan and Azerbaijan. It has also been found in Recent fauna of the Black Sea.

Leptocythere bosqueti (Livaltal)
(Plate 4, Figure 2; Plate 6, Figures 2, 6;
Plate 7, Figure 11)

Cythere bosqueti Livaltal, 1929, p. 24, fig. 27.

Leptocythere bosqueti (Livaltal), Suzin, 1956, p. 81, pl. 2, fig. 8; Stanceva, 1965, p. 25, pl. 2, fig. 7; Mandelstam et al., 1962, p. 225, pl. 36; Sejdaeva-Kulieva, 1972, p. 68, pl. 31, fig. 14.

Dimensions: L = 0.53 mm; h = 0.26 mm.

Distribution: This species is known from the Pliocene and post-Pliocene of the southern parts of the USSR (north Caucasus, Turkmenistan), in the Pontian of Bulgaria and Serbia. It is also found in the Recent fauna of the Caspian Sea.

Leptocythere andrusovi (Livaltal)
(Plate 7, Figure 5)

Cythere andrusovi Livaltal, 1929, p. 16, pl. 1, fig. 6, 7.

Leptocythere andrusovi (Livaltal), Suzin, 1956, p. 91, 92, pl. 3, fig. 2; Mandelstam et al., 1962, p. 195-196, pl. 30, fig. 13, 14; Sokac, 1972, p. 69, pl. 32, fig. 1, 2.

Dimensions: L = 0.66 mm; h = 0.34 mm.

Distribution: The Pontian, Aktshaglyian, and Apsheonian of the Azerbaijan, Caucasus, and Turkmenistan. It is also known from the Pontian of Bulgaria and Serbia.

Leptocythere multituberculata (Livaltal)
(Plate 7, Figure 4)

Cythere multituberculata Livaltal, 1929, p. 14, pl. 1, fig. 36-38; Svejer, 1949, p. 26, pl. 9, fig. 1-3; Suzin, 1956, p. 81, pl. 2, fig. 1; Mandelstam et al., 1962, p. 229, pl. 37, fig. 6; Stanceva, 1972, p. 24-25, pl. 1, fig. 3; Sejdaeva-Kulieva, 1966, p. 90, pl. 3, fig. 10; Gramann, 1969, p. 468, pl. 34, fig. 12; Sokac, 1972, p. 71, pl. 32, fig. 14, 15.

Dimensions: L = 0.44 mm; h = 0.26 mm.

Distribution: Fossil specimens are known from the Pontian and Apsheonian of Azerbaijan, Turkmenistan, and north Caucasus. It has also been found in the Pontian of Bulgaria, Yugoslavia, and Greece and in the Recent fauna from the Caspian Sea.

Leptocythere cymbula (Livaltal)
(Plate 4, Figure 9; Plate 7, Figure 3)

Cythere cymbula Livaltal, 1929, p. 21, pl. 1, fig. 25.

Cythere propinqua Livaltal, 1929, p. 21, pl. 1, fig. 21, 22.

Leptocythere aff. *propinqua* Livaltal, Suzin, 1956, p. 119, pl. 5, fig. 21.

Leptocythere propinqua (Livaltal), Mandelstam et al., 1962, p. 201, pl. 31, fig. 18; Sejdaeva-Kulieva, 1966, p. 92-93, pl. 3, fig. 14.

Leptocythere (*Leptocythere*) *cymbula* (Livaltal), Schornikov, 1969, p. 35, 36, fig. 3.

Leptocythere cymbula (Livaltal), Sokac, 1972, p. 69, pl. 32, fig. 7-9.

Dimensions: L = 0.49 mm; h = 0.24 mm.

Distribution: This species has been found by Schornikov (1966) in Recent faunas from the Black Sea and the Caspian Sea. He compared these forms with the fossil species from Pliocene and post-Pliocene of Turkmenistan, western Caucasus and concluded that the species *Leptocythere propinqua* (Livaltal), *L. accurata* Schneider, *L. aediculata* Stepanajtis represent synonyms of the species *L. cymbula* (Livaltal).

Leptocythere nostrata (Livaltal)
(Plate 4, Figure 3)

Leptocythere nostrata (Livaltal), Mandelstam et al., 1962, p. 200, pl. 31, fig. 16, 17.

Dimensions: L = 0.49 mm; h = 0.20 mm.

Distribution: The Aktshaglyian and Apsheonian of Turkmenistan and cir-Caucasus.

Leptocythere ergeniensis (Schweyer)
(Plate 4, Figure 1; Plate 7, Figure 9)

Cythere ergeniensis Schweyer, 1949, p. 34, pl. 8, fig. 4-6.

Leptocythere ergeniensis (Schweyer), Mandelstam et al., 1962, p. 223, pl. 36, fig. 4.

Dimensions: L = 0.56 mm; h = 0.29 mm.

Distribution: The upper Pliocene and lower Pleistocene of Turkmenistan and western Caucasus.

Leptocythere aff. caspia (Livaltal)
(Plate 4, Figure 4)

Leptocythere caspia (Livaltal), Mandelstam et al., 1962, p. 232, pl. 37, fig. 10.

Dimensions: L = 0.43 mm; h = 0.29 mm.

Distribution: The Aktshaglyian and Apsheonian of Turkmenistan and Azerbaijan.

TOCYTHERE Ruggieri, 1953

Callistocythere cf. diffusa (G.W. Müller)
(Plate 5, Figure 4; Plate 7, Figure 10)

Cythere diffusa G.W. Müller, 1894, p. 354, pl. 28, fig. 16.

Callistocythere diffusa (G.W. Müller), Caraion, 1967, p. 74, text-fig. 19.

Dimensions: L = 0.54 mm; h = 0.31 mm.

Distribution: Mediterranean Sea, Black Sea, and Atlantic Ocean.

Subfamily HEMICYTHERINAE Puri, 1953

Genus HETEROCYTHEREIS Eloffson, 1941

Heterocythereis sp.
(Plate 6, Figure 5)

Dimensions: L = 0.51 mm; h = 0.34 mm.

Subfamily CYTHERIDEINAE Sars, 1925

Genus CYTHERISSA Sars, 1928

Cytherissa bogatschovi (Livental)
(Plate 6, Figure 1)*Cytherissa bogatschovi* (Livental), Svejer, 1949, p. 37, pl. 8, fig. 2, Mandelstam et al., 1962, p. 190, pl. 30, fig. 1, 2.**Dimensions:** L = 0.35 mm; h = 0.24 mm (juvenile form).**Distribution:** The middle and upper Pliocene of Turkmenistan and Azerbaijan. I found this species in the upper Pontian and Dacian deposits of the Dacic basin (Romania).**Cytherissa bogatschovi plana Klein**
(Plate 5, Figure 5; Plate 6, Figure 1)*Cytherissa bogatschovi plana* Klein, Mandelstam et al., 1962, p. 190, pl. 30, fig. 3.**Dimensions:** L = 0.65 mm; h = 0.37 mm.**Distribution:** The lower Pleistocene (Apsheonian) of Turkmenistan and Azerbaijan.

Subfamily CYTHERURINAE G.W. Müller, 1894

Genus HEMICYTHERURA Elofson, 1941

Hemicytherura sp.
(Plate 7, Figure 7)**Dimensions:** L = 0.31 mm; h = 0.27 mm (juvenile form).

Subfamily LOXOCONCHINAE Sars, 1925

Genus LOXOCONCHA Sars, 1866

Loxoconcha eichwaldi Livental
(Plate 5, Figures 6, 7; Plate 7, Figure 2)*Loxoconcha eichwaldi* Livental, 1929, p. 34, pl. 1, fig. 42, 43; Suzin, 1956, p. 72, pl. 6, fig. 10, 11; Mandelstam et al., 1962, p. 155, pl. 22, fig. 2-5.**Dimensions:** L = 0.70 mm; h = 0.42 mm.**Distribution:** The Aktshaglyian and Apsheonian of Turkmenistan and western cir-Caucasus.**Loxoconcha petasa (Livental)**
(Plate 5, Figure 8; Plate 7, Figure 1)*Loxoconcha petasus* Livental, 1929, p. 33, pl. 1, fig. 39-41. *Loxoconcha petasa* Livental, Suzin, 1956, p. 67, pl. 6, fig. 4, 5; Mandelstam et al., 1962, p. 164, pl. 25, fig. 4-6.**Dimensions:** L = 0.68 mm; h = 0.34 mm.**Distribution:** This species has been found in the Pontian of Yugoslavia, in the Pliocene of Azerbaijan, Turkmenistan, and north Caucasus, in the post-Pliocene of west Turkmenistan, as well as in the Recent fauna of the Caspian Sea.**Loxoconcha schweyeri (Suzin)**
(Plate 8, Figure 6)*Loxoconcha schweyeri* Suzin, 1956, p. 70-71, p. 6, fig. 7; Sokac, 1972, p. 86, pl. 45, fig. 8-12.**Dimensions:** L = 0.67 mm; h = 0.34 mm.**Distributions:** This species was first described from Pontian sediments of northern Caucasus, and then it has been found in the Pontian of Bulgaria and Yugoslavia.**Loxoconcha ornata ornata Schneider**
(Plate 7, Figure 8; Plate 8, Figures 1-5)*Loxoconcha ornata* Schneider, 1949, p. 140, pl. 8, fig. 1. *Loxoconcha ornata ornata* Schneider, Stanceva, 1972, p. 106, pl. 37, fig. 11.**Dimensions:** L = 0.44 mm; h = 0.25 mm (Plate 7, Figures 3-5); L = 0.54 mm; h = 0.32 mm (Plate 7, Figures 1, 2).**Distribution:** The middle Sarmatian (sensu Barbot de Marny 1966), and the Besarabian of Bulgaria and southern USSR.

INCERTAE FORMS

Candona (Casiolla) ex gr. lobata (Zalanyi)
(Plate 1, Figure 4)*Paracypris lobata* Zalanyi, 1929, p. 55-57, text-fig. 21, 22, pl. 2, fig. 8.*Casiolla lobata* (Zalanyi), Mandelstam and Schneider, 1963, p. 89, 90, p. 8, fig. 10.**Dimensions:** L = 0.77 mm; h = 0.35 mm.**Distribution:** This species was first found in the upper Pontian of Serbia (*Congerina balatanica* Zone). It has also been found at numerous places in the Pontian deposits of Azerbaijan, Turkmenistan, Crimea, Caucasus, Besarabia (USSR), and in Bulgaria.**Candona (Casiocypris) ex gr. labiata (Zalanyi)**
(Plate 1, Figure 4)*Paracypris labiata* Zalanyi, 1929, p. 48-51, text-fig. 17, 18, p. 12, fig. 9.*Casiocypris labiata* (Zalanyi), Mandelstam and Schneider, 1963, p. 98, pl. 10, fig. 6, 7.*Candona (Casiocypris) labiata* (Zalanyi), Sokac, 1972, p. 40, pl. 15, fig. 8-13.**Dimensions:** L = 0.74 mm; h = 0.33 mm.**Distribution:** The species was described from the upper Pontian of Serbia. It has also been found in the Pontian of the Caucasus and Besarabia (USSR).**Candona (Casiolla) ex gr. flectimarginata Sokac**
(Plate 2, Figure 6; Plate 6, Figure 2)*Candona (Casiolla) flectimarginata* Sokac, Sokac, 1972, p. 47, pl. 20, fig. 1-6.**Dimensions:** L = 0.81 mm; h = 0.36 mm.**Distribution:** This species was described from the upper Pontian of Yugoslavia. It is also characteristic of these deposits in the south part of the Pannonian basin.**Candona (Lineocypris) ex gr. nonreticulata Sokac**
(Plate 1, Figure 2)*Candona (Lineocypris) nonreticulata* Sokac, 1972, p. 54, pl. 24, fig. 1-7.**Dimensions:** L = 0.79 mm; h = 0.41 mm (juvenile form).**Distribution:** This species was described from the upper Pannonian.**Cytheroma (?) sp.**
(Plate 7, Figure 6)**Dimensions:** L = 0.46 mm; h = 0.21 mm.

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APPENDIX
Occurrences of Ostracode Species in Leg 42B Cores

Sample (Interval in cm)	Species	Number of Forms	Adult/Juvenile
Hole 379A			
8-5, 64-66	<i>Heterocythereis</i> sp ₁	1	Juvenile
	<i>Cytherissa bogatschovi</i> var. <i>plana</i>	1	Juvenile
9-1, 120-122	<i>Leptocythere bacuana</i>	1	Juvenile
	<i>Leptocythere cymbula</i>	1	Juvenile
	<i>Leptocythere caspia</i>	1	Juvenile
	<i>Callistocythere aff diffusa</i>	1	Adult
11-5, 15-17	<i>Leptocythere bacuana</i>	1	Juvenile
	<i>Loxoconcha eichwaldi</i>	1	Juvenile
	<i>Candona (Caspionella) gracilis</i>	2	Juvenile
11-5, 26-27	<i>Candona (C.) gracilis</i>	2	Adult
	<i>Leptocythere multituberculata</i>	1+1	Adult, juvenile
	<i>Leptocythere caspia</i>	1	Adult
	<i>Leptocythere bacuana</i>	1	Juvenile
	<i>Candona (Caspionella) filona</i>	1	Adult
	<i>Cytheroma</i> sp ₁	1	Adult
	<i>Cytherissa bogatschovi</i>	1	Juvenile
15-2, 48-50	Unidentified fragments of <i>Candona</i> genus		
20-3, 104-106	<i>Candona (C.) aff gracilis</i>	Fragments	
21-2, 98-100	<i>Candona (C.) aff gracilis</i>	Fragments	
36, CC	<i>Loxoconcha ornata ornata</i>	2	Juvenile
	<i>Leptocythere caspia</i>	1	Adult
	<i>Leptocythere bacuana</i>	1	Adult
37, CC	<i>Bacunella dorsoarcuata</i>	2	Juvenile
38, CC	<i>Loxoconcha aff eichwaldi</i>	1 (fragm.)	Adult
	<i>Leptocythere bacuana</i>	1	Juvenile
42-1, 102-104	<i>Candona</i> sp ₃ ex gr. <i>nonreticulata</i>	1	Adult
	<i>Candona (C.) liventalina</i>	3	Juvenile
	<i>Candona</i> sp ₂ ex gr. <i>labiata</i>	1	Adult (?)
45, CC	<i>Leptocythere bacuana</i>	1	Adult
	<i>Candona (C.) liventalina</i>	1	Adult
46, CC	<i>Loxoconcha eichwaldi</i>	1	Adult
	<i>Paracandona aff verrucosa</i>	1	Adult
48-4, 66-68	<i>Candona (C.) liventalina</i>	1 (fragm.)	Adult
49-1, 56-58	<i>Loxoconcha aff eichwaldi</i>	1 (fragm.)	Adult
	<i>Candona (C.) liventalina</i>	1 (fragm.)	Adult
51, CC	<i>Leptocythere bacuana</i>	1	Juvenile
	<i>Loxoconcha aff eichwaldi</i>	1 (fragm.)	Adult
52, CC	<i>Loxoconcha ornata ornata</i>	2	Juvenile
	<i>Paracandona aff verrucosa</i>	1 (fragm.)	Adult
	<i>Leptocythere bacuana</i>	1	Juvenile
	<i>Loxoconcha aff eichwaldi</i>	1 (fragm.)	Adult
53-1, 92-94	<i>Bacunella dorsoarcuata</i>	2	Adult
	<i>Leptocythere cymbula</i>	1	Juvenile
	<i>Candona (C.) liventalina</i>	2	Adult
54, CC	<i>Loxoconcha aff petasa</i>	3 (fragm.)	Adult, juvenile
	<i>Candona (C.) liventalini</i>	2 (+numerous fragm.)	Adult

APPENDIX – Continued

Sample (Interval in cm)	Species	Number of Forms	Adult/Juvenile	
Hole 379A – Continued				
59-1, 105-107	<i>Candona (C.) liventalina</i>	1	Adult	
	<i>Candona</i> sp ₁ ex gr. <i>lobata</i>	1	Adult	
59-3, 83-85	<i>Loxoconcha eichwaldi</i>	2	Juvenile	
	<i>Bacunella dorsoarcuata</i>	2	Juvenile	
	<i>Candona (C.) gracilis</i>	1	Adult	
	<i>Candona</i> sp ₃ cfr <i>flectimarginata</i>	2	Juvenile	
59, CC	<i>Candona (C.) gracilis</i>	2	Juvenile	
	<i>Leptocythere bacuana</i>	1	Juvenile	
60-4, 36-38	<i>Leptocythere ergeniensis</i>	2	Adult	
	<i>Leptocythere caspia</i>	1	Juvenile	
	<i>Loxoconcha ornata ornata</i>	3	Juvenile	
	<i>Loxoconcha eichwaldi</i>	1	Juvenile	
	<i>Heterocythereis</i> sp ₁	1	Juvenile	
	<i>Candona (C.) gracilis</i>	2	Adult	
	<i>Bacunella dorsoarcuata</i>	1	Adult	
	<i>Leptocythere bacuana</i>	1	Adult	
65-4, 84-86	<i>Candona (C.) liventalina</i>	2	Adult	
	<i>Bacunella dorsoarcuata</i>	2 (+3 fragm.)	Adult	
	<i>Loxoconcha ornata ornata</i>	1	Juvenile	
Hole 379B				
4, CC	<i>Leptocythere</i> aff <i>cymbu</i>	1	Juvenile	
6, CC	<i>Candona (C.) gracilis</i>	3	Juvenile	
	<i>Cyprideis</i> sp ₁	1	Juvenile	
	<i>Loxoconcha petasa</i>	1	Adult	
	<i>Candona (C.) gracilis</i>	1	Juvenile	
Hole 380				
1, CC	<i>Heterocythereis</i> sp ₁	11	Adult (2), juvenile	
	<i>Leptocythere ergeniensis</i>	2	Adult	
4-2, 92-94	<i>Leptocythere bosqueti</i>	2	Adult	
	<i>Heterocythereis</i> sp ₁	1	Adult	
4-3, 52-54	<i>Heterocythereis</i> sp ₁	3	Juvenile	
4-4, 41-43	<i>Heterocythereis</i> sp ₁	1	Juvenile	
5-1, 103-105	<i>Leptocythere andrusovi</i>	1	Adult	
	<i>Leptocythere bosqueti</i>	1	Adult	
	<i>Loxoconcha eichwaldi</i>	2	Adult	
	<i>Heterocythereis</i> sp ₁	1	Juvenile	
	<i>Leptocythere cymbula</i>	2	Juvenile	
	<i>Leptocythere caspia</i>	1	Adult	
	<i>Leptocythere nostrata</i>	1	Adult	
	<i>Bacunella dorsoarcuata</i>	2	Juvenile	
	<i>Candona (C.) gracilis</i>	4	Adult (1), juvenile	
	6-1, 133-135	<i>Candona elongata</i>	2	Adult
		<i>Loxoconcha petasa</i>	2	Adult + juvenile
		<i>Loxoconcha eichwaldi</i>	2	Juvenile
8-1, 87-89	<i>Loxoconcha eichwaldi</i>	2	Juvenile	
	<i>Hemicytherura</i> sp ₁	1	Juvenile	
	<i>Leptocythere multituberculata</i>	1	Adult	
35-4, 58-60	<i>Leptocythere cymbula</i>	3	Juvenile	
	<i>Loxoconcha eichwaldi</i>	2	Juvenile	
36-3, 82-84	<i>Loxoconcha schweyeri</i>	4	Adult (1), juvenile	
37-2, 46-48	numerous fragments of <i>Candona</i> genus			
40, CC	<i>Bacunella dorsoarcuata</i>	2	Adult	
	<i>Loxoconcha eichwaldi</i>	3	Adult (2), juvenile	
Hole 380A				
3, CC	<i>Loxoconcha ornata ornata</i>	3	Juvenile	
	<i>Leptocythere cymbula</i>	1	Juvenile	
6-3, 88-90	<i>Loxoconcha eichwaldi</i>	2	Juvenile	
	<i>Loxoconcha ornata ornata</i>	2	Juvenile	
9, CC	<i>Loxoconcha ornata ornata</i>	2	Juvenile	
	<i>Cytherissa bogatschovi plana</i>	1	Adult	

APPENDIX – Continued

Sample (Interval in cm)	Species	Number of Forms	Adult/Juvenile
Hole 380A – Continued			
11-2, 38-40	<i>Leptocythere caspia</i>	2	Adult
	<i>Loxoconcha ornata ornata</i>	6	Adult (4), juvenile
	<i>Candona (C.) liventalini</i>	3	Adult
13, CC	Unidentified fragments of <i>Candona</i> genus		
14-2, 99-101	<i>Candona (C.) gracilis</i>	2	Juvenile
	<i>Candona</i> sp ex gr. <i>labiata</i>	1	Adult
14-6, 85-87	<i>Candona (C.) gracilis</i>	2	Juvenile
14, CC	<i>Candona (C.) gracilis</i>	3	Juvenile
19, CC	<i>Candona (C.) gracilis</i>	2	Juvenile
15, CC	<i>Candona (C.) aff labiata</i>	2	Juvenile
23-3	Unidentified fragments		
23-4, 66-68	<i>Candona (C.)</i> sp. ex gr. <i>lobata</i>	6	Adult (+numerous fragm.)
	<i>Candona (C.) balcanica</i>	2	Adult
23, CC	Unidentified fragments		
26, CC	Unidentified fragments		
28, CC	<i>Candona (C.) balcanica</i>	4	Adult
	<i>Candona (C.)</i> sp. ex gr. <i>lobata</i>	3	Adult
32, CC	<i>Candona (C.)</i> sp. ex gr. <i>labiata</i>	1	Adult
	<i>Loxoconcha ornata ornata</i>	2	Juvenile
31, CC	Unidentified fragments		
60, CC	Unidentified fragments		
Site 381			
1-1, 62-64	<i>Loxoconcha schweyeri</i>	1	Adult
	<i>Loxoconcha eichwaldi</i>	1	Juvenile
2-1, 72-74	<i>Heterocythereis</i> sp	2	Juvenile
	<i>Candona (c.) balcanica</i>	1	Juvenile
	<i>Candona (C.) gracilis</i>	3	Juvenile
2, CC	<i>Leptocythere cymbula</i>	2	Juvenile
	<i>Candona (C.) gracilis</i>	4	Juvenile
	<i>Candona elongata</i>	2	Juvenile
3, CC	<i>Candona (C.) balcanica</i>	2	Adult
	<i>Candona (C.) gracilis</i>	4	Juvenile
	<i>Candona elongata</i>	1	Juvenile
	<i>Leptocythere cymbula</i>	1	Adult
4-2, 82-84	<i>Leptocythere ergeniensis</i>	1	Adult
4, CC	<i>Candona (C.) gracilis</i>	3	Adult
	<i>Candona elongata</i>	4	Adult (1), juvenile
	<i>Cytherissa bogatschovi</i>	1	Juvenile
	<i>Leptocythere cymbula</i>	2	Adult
5-2, 82-84	<i>Candona (C.) gracilis</i>	3	Juvenile
5-4, 72-74	<i>Candona (C.) liventalini</i>	3	Adult
	<i>Candona (C.) balcanica</i>	3	Juvenile
	<i>Candona (Pontoniella)</i> cfr <i>schemachensis</i>	1	Adult
	<i>Candona (C.) gracilis</i>	2	Adult
5, CC	<i>Leptocythere multituberculata</i>	1	Juvenile
	<i>Candona (C.) gracilis</i>	2	Juvenile
6-2, 72-74	<i>Bacunella dorsoarcuata</i>	3	Juvenile
	<i>Loxoconcha ornata ornata</i>	1	Juvenile
	<i>Candona (C.) liventalina</i>	1	Adult
6, CC	<i>Loxoconcha eichwaldi</i>	1	Juvenile
	<i>Candona (C.) gracilis</i>	3	Adult (1), juvenile
	<i>Loxoconcha ornata ornata</i>	2	Juvenile
	<i>Candona (C.) liventalina</i>	1	Adult
	<i>Candona (C.) balcanica</i>	1	Adult
	<i>Bacunella dorsoarcuata</i>	1	Juvenile
7-3, 72-74	<i>Leptocythere multituberculata</i>	1	Juvenile
	<i>Leptocythere ergeniensis</i>	1	Juvenile
	<i>Candona (C.) gracilis</i>	2	Juvenile
	<i>Candona (Caspioocypris) filona</i>	1	Adult
	<i>Bacunella dorsoarcuata</i>	1	Adult
8-1, 72-74	<i>Paracandona aff verrucosa</i>	1	Adult
	<i>Candona (C.) liventalina</i>	4	Adult (2), juvenile
	<i>Candona (Caspioocypris) filona</i>	2	Juvenile

APPENDIX – Continued

Sample (Interval in cm)	Species	Number of Forms	Adult/Juvenile
Site 381 – Continued			
	<i>Candona (Pontoniella) sp₁</i>	1	Juvenile
	<i>Bacunella dorsoarcuata</i>	4	Adult (1), juvenile
	<i>Loxoconcha ornata ornata</i>	3	Juvenile
	<i>Leptocythere striatocostata</i>	1	Adult
8-3, 72-74	<i>Candona (C.) liventalina</i>	3	Adult
	<i>Bacunella dorsoarcuata</i>	3	Adult
8-5, 82-84	<i>Candona (C.) liventalina</i>	4	Adult
	<i>Candona (C.) gracilis</i>	3	Juvenile
	<i>Candona (Caspiocypris) filona</i>	2	Juvenile
	<i>Amplocypris subacuta</i>	2	Adult (?)
	<i>Candona confragosa</i>	1	Adult
9-1, 94-96	<i>Candona (C.) liventalina</i>	4	Adult
	<i>Candona (C.) balcanica</i>	2	Adult
	<i>Candona (Pontoniella) sp₁</i>	2	Adult
	<i>Leptocythere ergeniensis</i>	3	Adult
	<i>Leptocythere andrusovi</i>	2	Adult
	<i>Leptocythere striatocostata</i>	2	Adult
	<i>Leptocythere bacuana</i>	1	Juvenile
	<i>Leptocythere caspia</i>	1	Adult
	<i>Bacunella dorsoarcuata</i>	2	Juvenile
	<i>Heterocythereis sp₁</i>	2	Juvenile
	<i>Loxoconcha eichwaldi</i>	4	Juvenile
	<i>Loxoconcha petasa</i>	1	Adult
9-5, 77-79	<i>Candona (C.) liventalina</i>	4	Adult
	<i>Candona (C.) gracilis</i>	1	Juvenile
	<i>Leptocythere bacuana</i>	1	Juvenile
	<i>Loxoconcha ornata ornata</i>	2	Juvenile
10, CC	<i>Loxoconcha ornata ornata</i>	1	Juvenile
13, CC	<i>Candona (C.) liventalina</i>	5	Adult
	<i>Candona (C.) gracilis</i>	8	Juvenile
	<i>Bacunella dorsoarcuata</i>	3	Juvenile
	<i>Candona sp. ex gr. flectimarginata</i>	1	Adult
14, CC	<i>Candona (C.) gracilis</i>	1	Juvenile
	<i>Candona (C.) liventalina</i>	3	Juvenile
15-6, 92-94	<i>Candona (C.) liventalini</i>	1	Juvenile
	<i>Candona sp₁ cf. lobata</i>	1	Adult (?)
15, CC	<i>Candona sp₃</i>	1	Adult
	<i>Candona (C.) liventalina</i>	3	Adult
	<i>Candona (C.) gracilis</i>	7	Juvenile
	<i>Candona (P.) acuminata striata</i>	2	Adult
	<i>Candona (C.) balcanica</i>	2	Adult
	<i>Paracandona aff verrucosa</i>	1	Adult
	<i>Bacunella dorsoarcuata</i>	7	Juvenile
16-4, 72-74	<i>Candona (C.) liventalina</i>	3	Juvenile
	<i>Candona (C.) gracilis</i>	3	Juvenile
	<i>Bacunella dorsoarcuata</i>	3	Juvenile
16-5, 74-76	<i>Candona (C.) liventalina</i>	2	Adult
	<i>Loxoconcha ornata ornata</i>	1	Juvenile
17-3, 72-74	<i>Candona (P.) schemachensis</i>	1	Adult
	<i>Candona (P.) acuminata striata</i>	4	Adult
	<i>Candona sp₂ cf. labiata</i>	1	Adult
	<i>Leptocythere bosqueti</i>	3	Adult
	<i>Loxoconcha petasa</i>	1	Adult
	<i>Loxoconcha eichwaldi</i>	2	Adult
17, CC	<i>Candona (P.) acuminata striata</i>	2	Adult
	<i>Loxoconcha ornata ornata</i>	1	Adult
	<i>Loxoconcha petasa</i>	3	Adult (2), juvenile
	<i>Bacunella dorsoarcuata</i>	2	Adult
	<i>Heterocythereis sp₁</i>	1	Juvenile
18-2, 52-54	<i>Candona (C.) balcanica</i>	2	Adult
18-5, 72-74	<i>Candona sp₂ cf. labiata</i>	1	Adult
18, CC	<i>Candona sp₂ cf. labiata</i>	3	Adult
	<i>Candona (C.) liventalina</i>	1	Juvenile
19-1, 72-74	<i>Candona (C.) liventalina</i>	1	Adult
	<i>Bacunella dorsoarcuata</i>	1	Adult
39, CC	Unidentified fragments		

PLATE 1

- Figure 1 *Candona (Caspiocypris) filona* Livalent—exterior lateral view of right valve.
- Figure 2 *Candona* sp₃ ex gr. *nonreticulata* Sokac—exterior lateral view of left juvenile valve.
- Figure 3 *Candona* sp₂ ex gr. *labiata* (Zalanyi)—exterior lateral view of right valve.
- Figure 4 *Candona* sp₃ ex gr. *lobata* (Zalanyi)—exterior lateral view of right valve.
- Figure 5 *Candona (Caspiocypris) elongata* (Svejer)—exterior lateral view of left valve.
- Figure 6 *Candona (Camptocypris) balcanica* (Zalanyi)—exterior lateral view of left juvenile valve.
- Figure 7 *Candona (Caspiolla) liventalina* (Evlachova)—exterior lateral view of left valve.
- Figure 8 *Candona (Caspiolla) gracilis* (Livalent)—exterior lateral view of female right valve.
- Figure 9 *Candona (Caspiolla) gracilis* (Livalent)—exterior lateral view of male right valve.

(see p. 1026)

PLATE 2

- Figure 1 *Candona (Caspiolla) gracilis* (Livalent)—interior lateral view of female right valve.
- Figure 2 *Candona (C.) gracilis* (Livalent)—interior lateral view of juvenile right valve (larval stage 6).
- Figure 3 Idem—larval stage 5.
- Figure 4 *Candona (Caspiocypris) elongata* (Svejer)—interior lateral view of left valve.
- Figure 5 *Hemicytherura* sp₁—interior lateral view of right valve.
- Figure 6 *Candona (Caspiolla) ex gr. flectimarginata* Sokac—interior lateral view of right valve.
- Figure 7 *Candona (Caspiolla) liventalina* (Evlachova)—interior lateral view of left valve.
- Figure 8 *Candona* sp₃ ex gr. *nonreticulata* Sokac—interior lateral view of left valve.

(see p. 1027)

PLATE 1

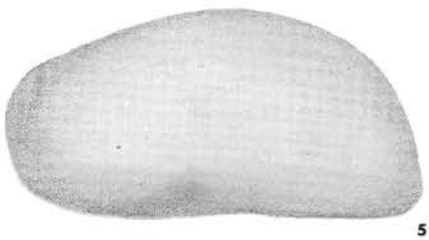
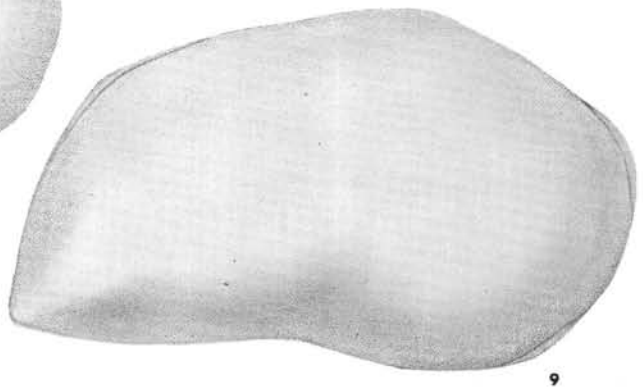
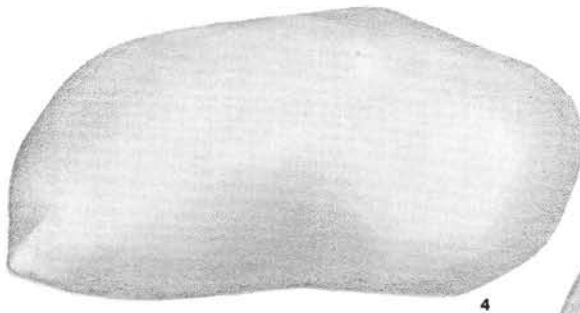
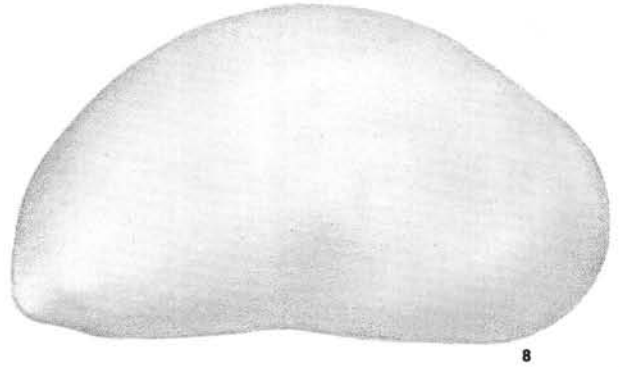
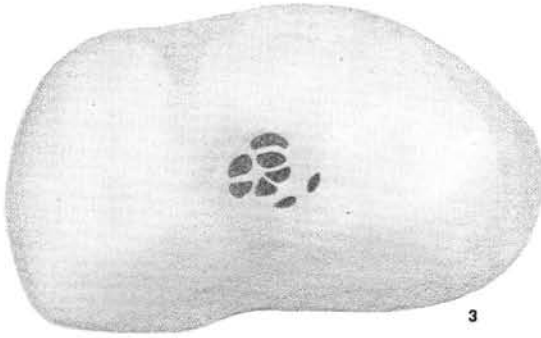
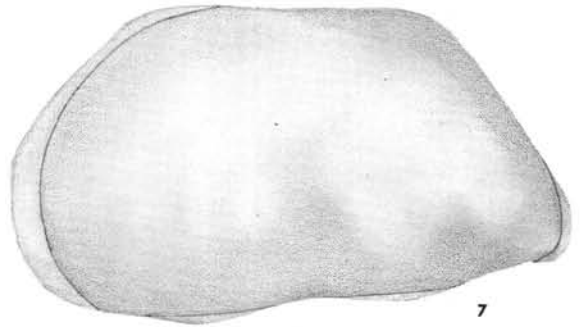
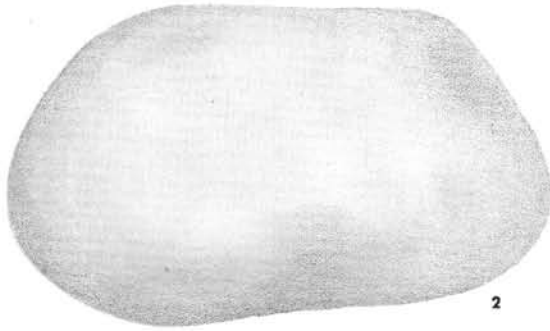
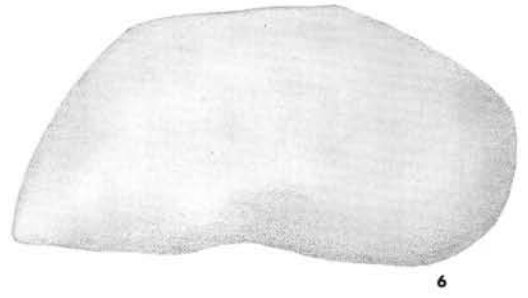
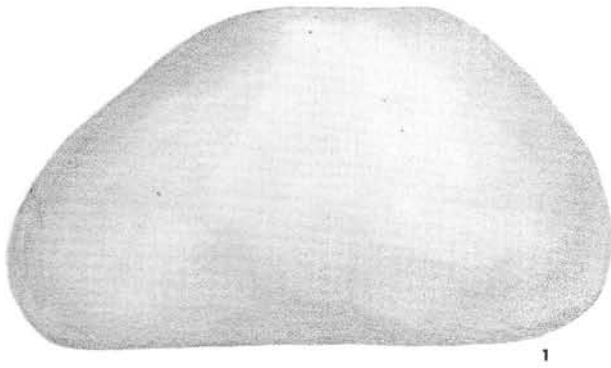


PLATE 2

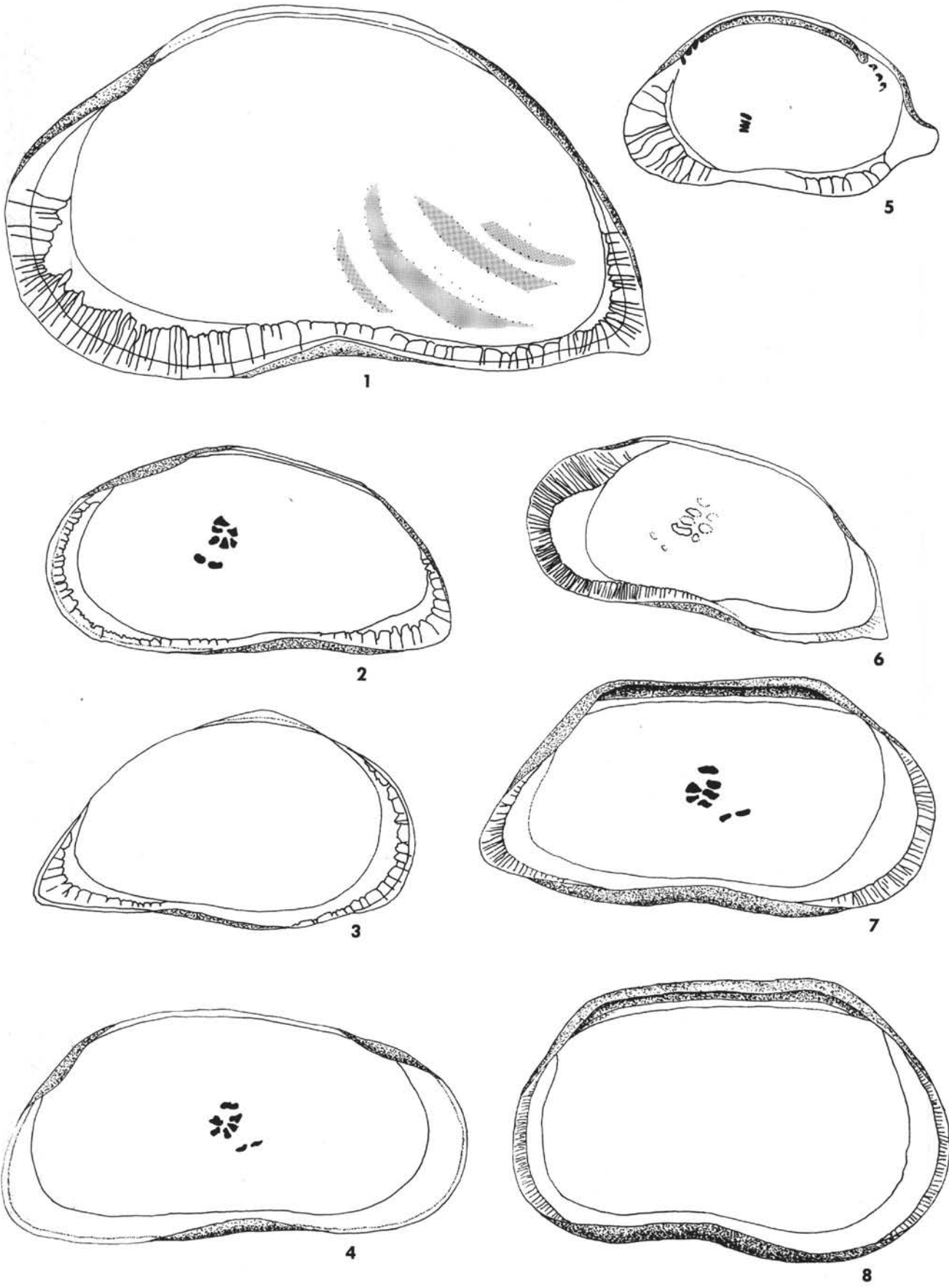


PLATE 3

- Figure 1 *Paracandona* aff. *verrucosa* (Stanceva)—interior lateral view of right valve.
- Figure 2 *Paracandona* aff. *verrucosa* (Stanceva)—dorsal view.
- Figures 3, 4, 6 *Candona (Pontoniella) acuminata striata* Mandelstam—exterior lateral view of different morphotype.
- Figures 5, 7 *Candona (Pontoniella) acuminata striata* Mandelstam—interior lateral view of different morphotype.

PLATE 4

- Figure 1 *Leptocythere ergeniensis* (Svejer)—exterior lateral view of left valve.
- Figure 2 *Leptocythere bosqueti* (Livental)—exterior lateral view of left valve.
- Figure 3 *Leptocythere* aff. *nostrata* (Livental)—exterior lateral view of left valve.
- Figure 4 *Leptocythere* aff. *caspia* (Livental)—exterior lateral view of left valve.
- Figure 5 *Leptocythere adrusovi* (Livental)—interior lateral view of right valve.
- Figure 6 *Leptocythere bosqueti* (Livental)—interior lateral view of left valve.
- Figure 7 *Leptocythere striatocostata* (Svejer)—exterior lateral view of right valve.
- Figure 8 *Leptocythere* aff. *cymbula* (Livental)—exterior lateral view of right valve.

(see p. 1030)

PLATE 3

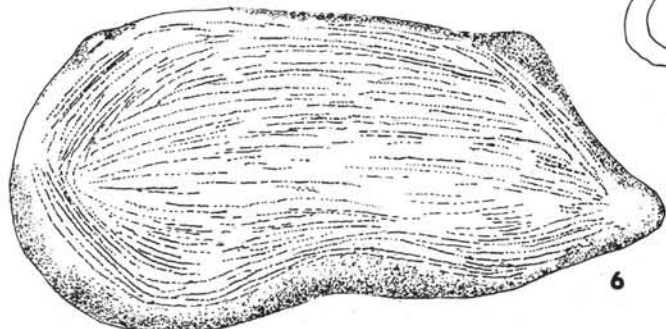
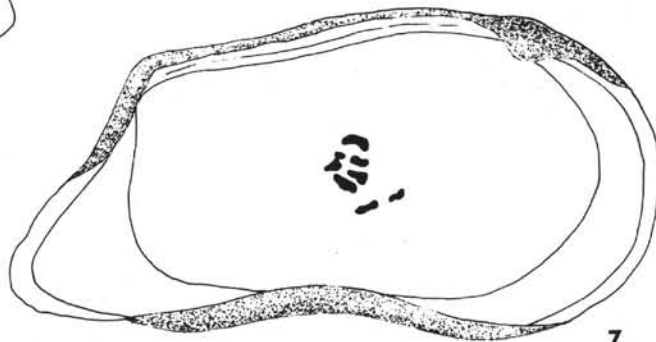
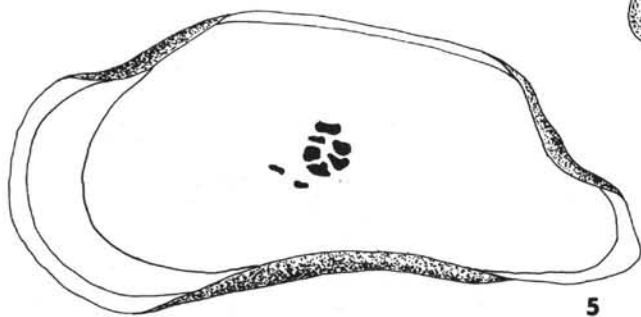
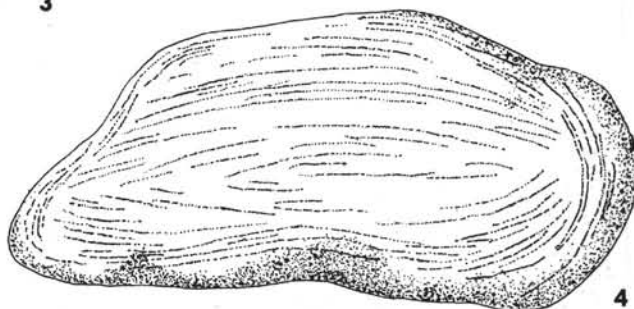
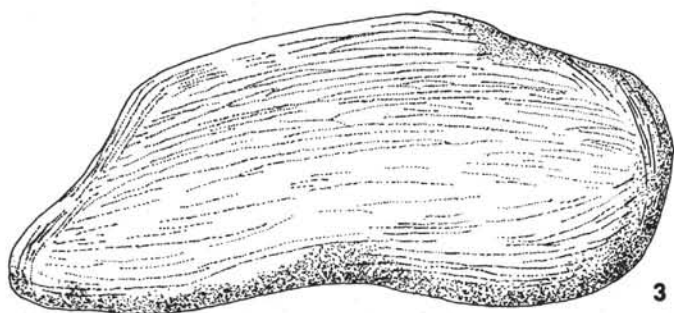
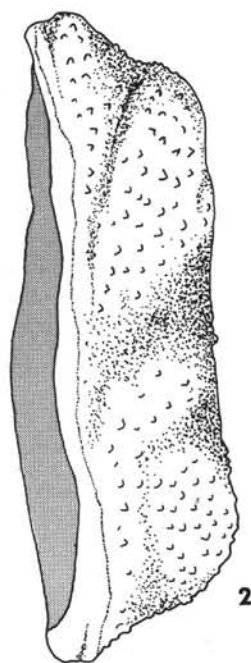
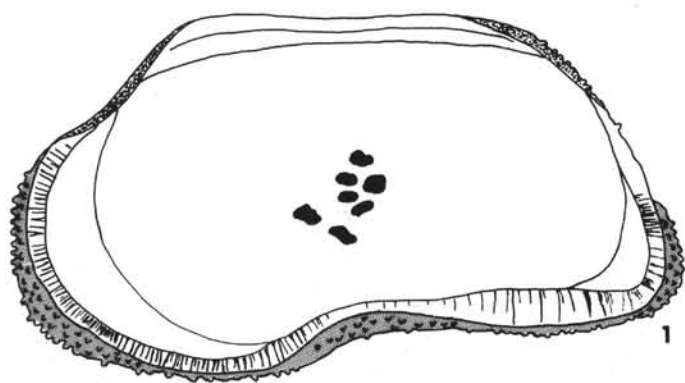
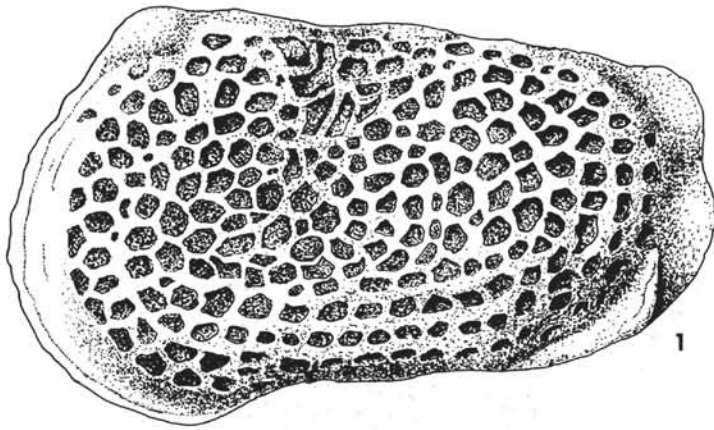
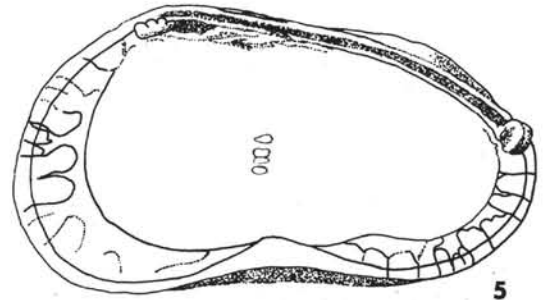


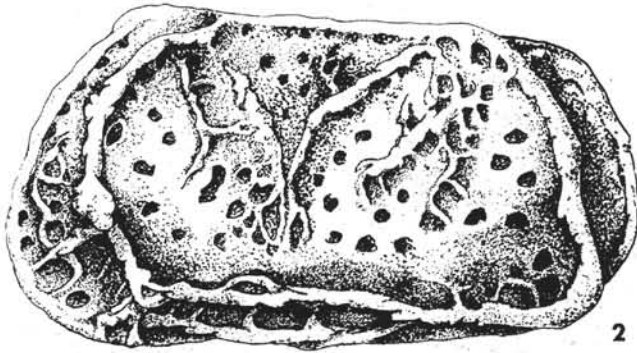
PLATE 4



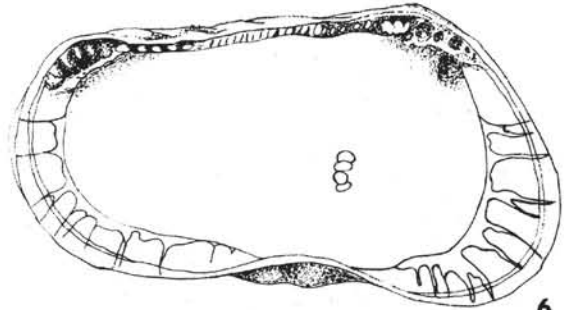
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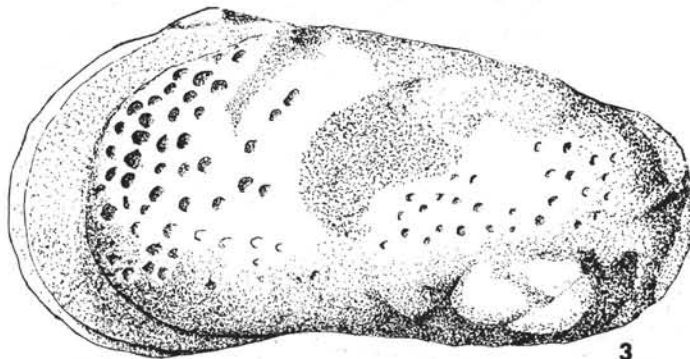
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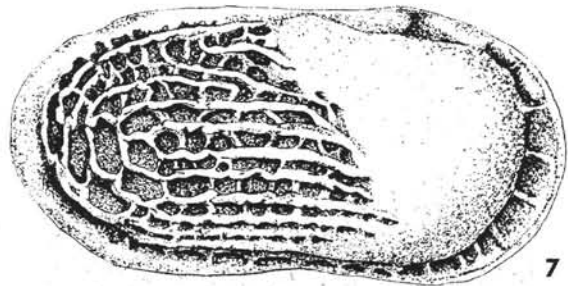
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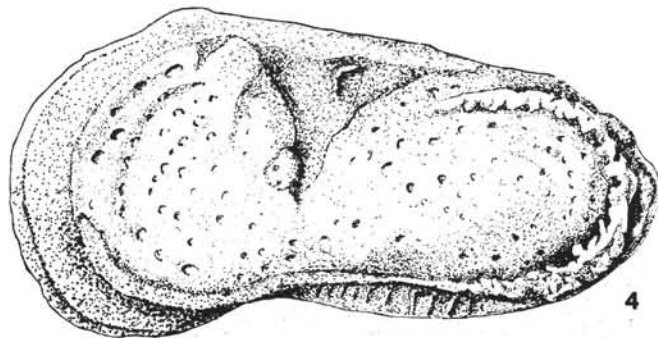
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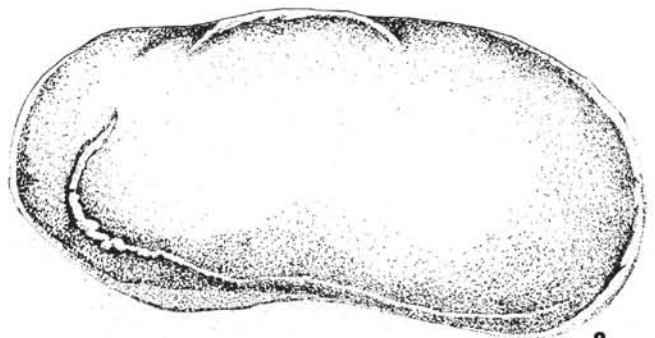
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PLATE 5

- Figure 1 *Leptocythere bacuana* (Livental)—exterior lateral view of juvenile left valve.
- Figure 2 *Leptocythere* aff. *cymbula* (Livental)—interior lateral view of right valve.
- Figure 3 *Leptocythere ergeniensis* (Svejer)—interior lateral view of right valve.
- Figure 4 *Callistocythere* cf. *diffusa* (G.W. Müller)—interior lateral view of left valve.
- Figure 5 *Cytherissa bogatschovi plana* Klein—interior lateral view of right valve.
- Figure 6 *Loxoconcha eichwaldi* Livental—interior lateral view of right valve.
- Figure 7 *Idem*—interior lateral view of juvenile right valve.
- Figure 8 *Loxoconcha petasa* Livental — interior lateral view of left valve.

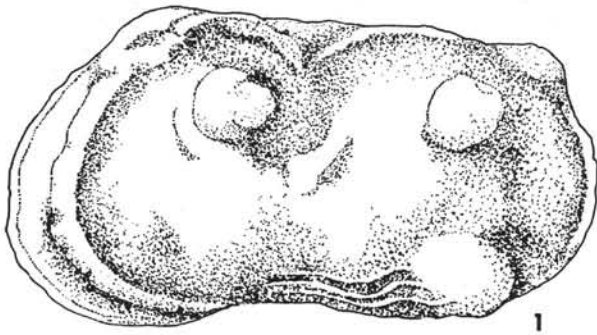
(see p. 1032)

PLATE 6

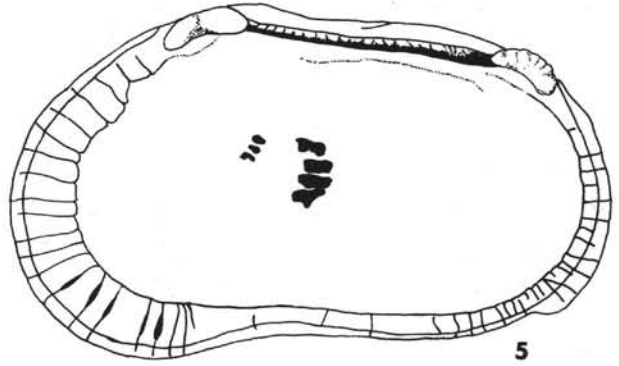
- Figure 1 *Cytherissa bogatschovi plana* Klein—exterior lateral view of right valve.
- Figure 2 *Candona (Caspiolla) ex gr. flectimarginata* Sokac—exterior lateral view of right valve.
- Figure 3 *Bacunella dorsoarcuata* (Zalanyi)—exterior lateral view of left valve.
- Figure 4 *Bacunella dorsoarcuata* (Zalanyi)—dorsal view.
- Figure 5 *Heterocythereis* sp₁—exterior lateral view of juvenile left valve.
- Figure 6 *Leptocythere bosqueti* (Livental)—exterior lateral view of juvenile (?) left valve.
- Figure 7 *Cytherissa bogatschovi*.

(see p. 1033)

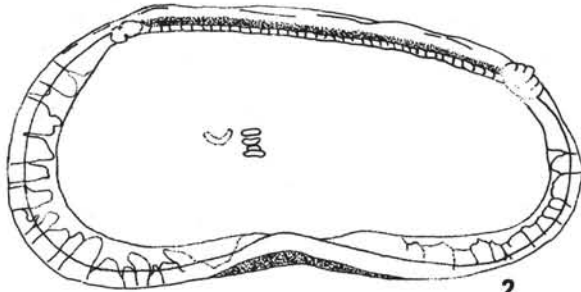
PLATE 5



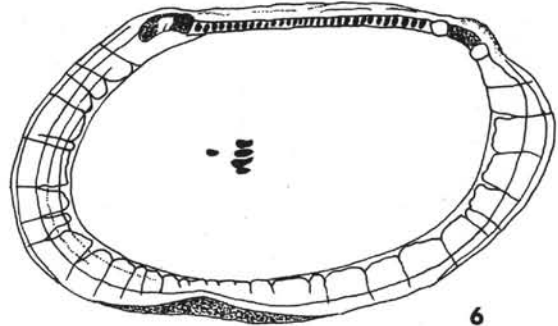
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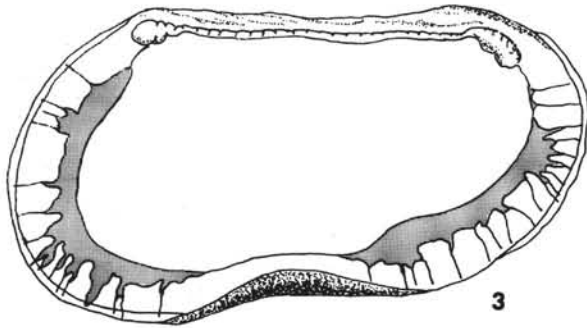
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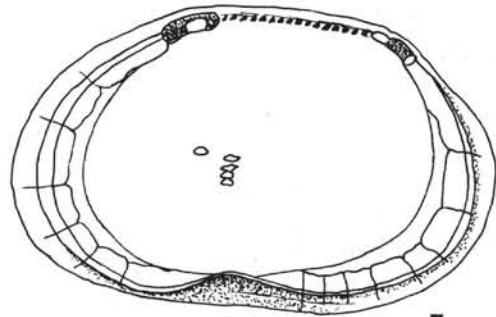
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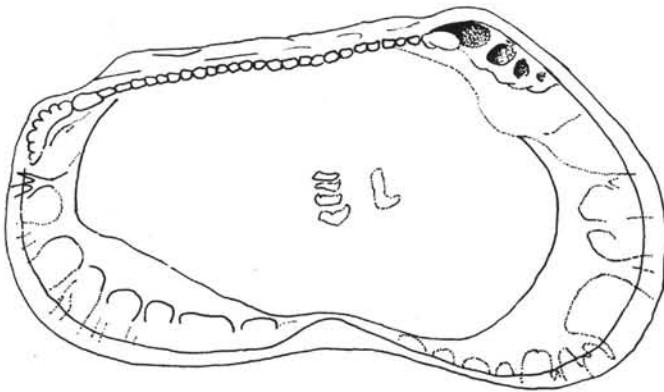
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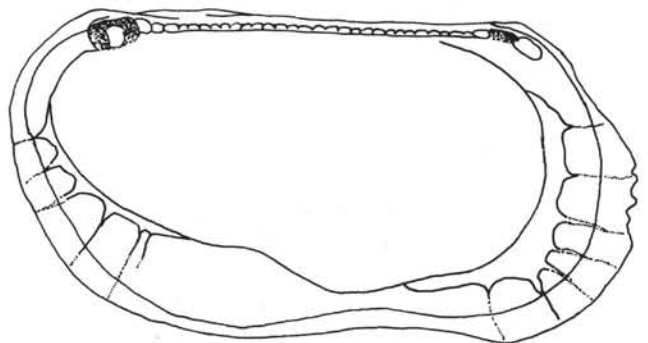
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PLATE 6

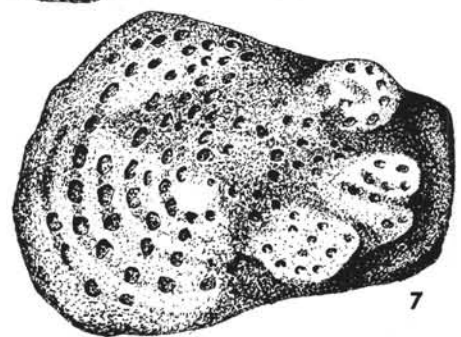
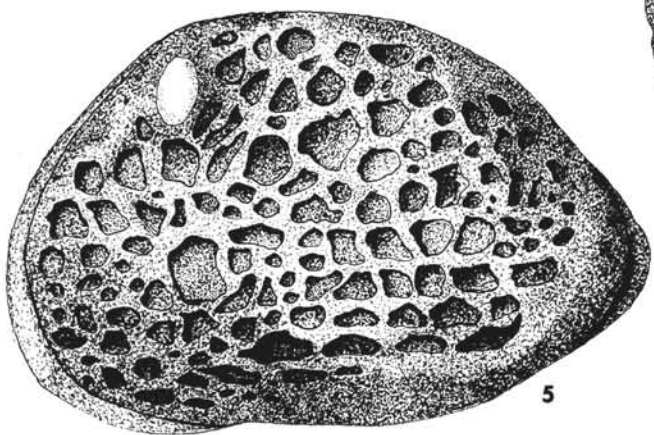
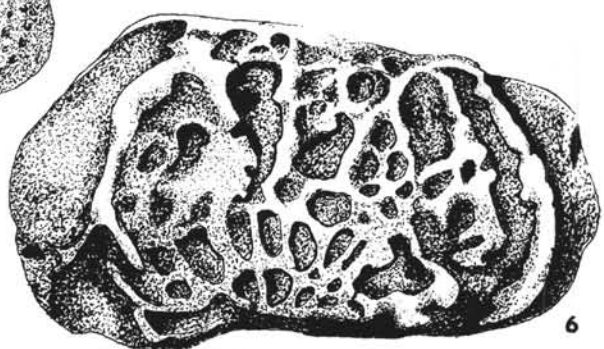
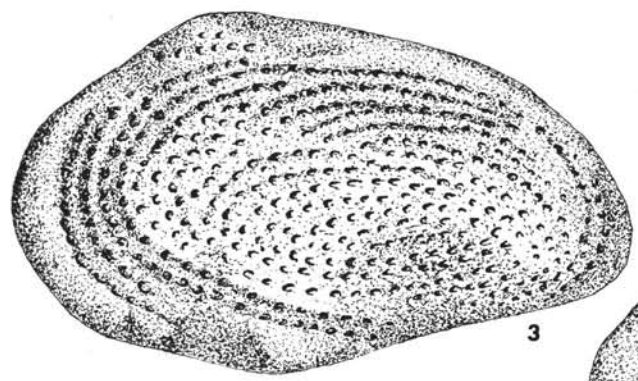
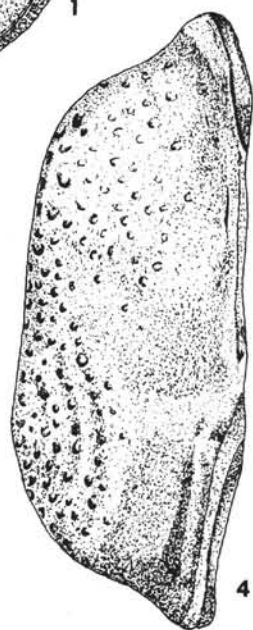
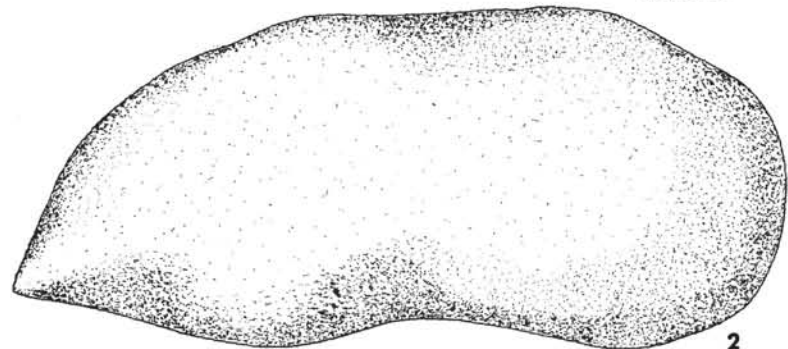
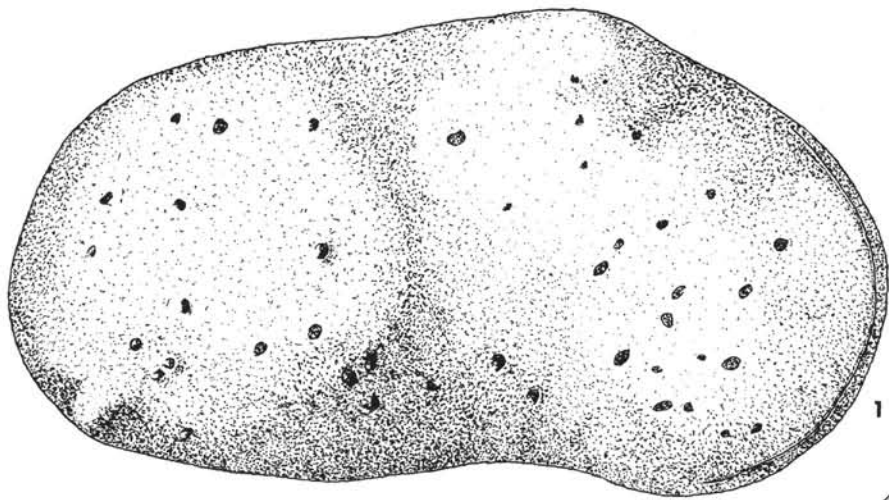


PLATE 7

- Figure 1 *Loxoconcha petasa* Livaltal—exterior lateral view of left valve.
- Figure 2 *Loxoconcha eichwaldi* Livaltal—exterior lateral view of right valve.
- Figure 3 *Leptocythere* aff. *cymbula* (Livaltal)—exterior lateral view of right valve.
- Figure 4 *Leptocythere multituberculata* (Livaltal)—exterior lateral view of left valve.
- Figure 5 *Leptocythere andrusovi* (Livaltal)—exterior lateral view of right valve.
- Figure 6 *Cytheroma* (?) sp₁—exterior lateral view of left valve.
- Figure 7 *Hemicytherura* sp₁—exterior lateral view of right valve.
- Figure 8 *Loxoconcha ornata ornata* Schneider—exterior lateral view of juvenile right valve.
- Figure 9 *Leptocythere* aff. *ergeniensis* (Svejer)—exterior lateral view of juvenile right valve.
- Figure 10 *Callistocythere* cf. *diffusa* (G.W. Müller)—exterior lateral view of right valve.
- Figure 11 *Leptocythere bosqueti* (Livaltal)—exterior lateral view of left valve.

PLATE 8

- Figure 1 *Loxoconcha ornata ornata* Schneider—exterior lateral view of right valve.
- Figure 2 Idem—ventral view.
- Figure 3 Idem—exterior lateral view of juvenile right valve.
- Figure 4 Idem—dorsal view.
- Figure 5 Idem—interior lateral view of juvenile right valve.
- Figure 6 *Loxoconcha schweyeri* Suzin—exterior lateral view of left valve.
- Figure 7 *Paracandona* aff. *verrucosa* (Stanceva)—exterior lateral view of right valve.

(see p. 1036)

PLATE 7

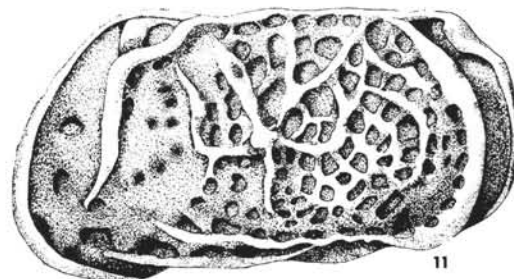
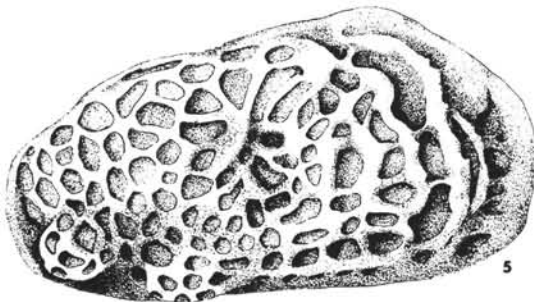
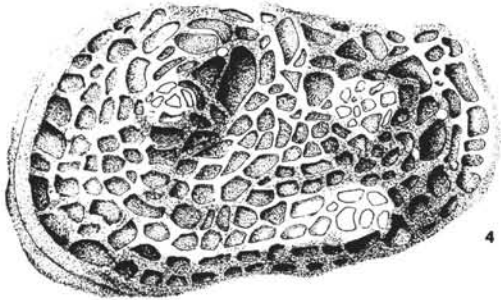
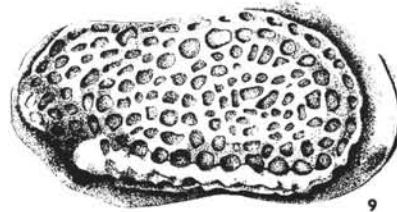
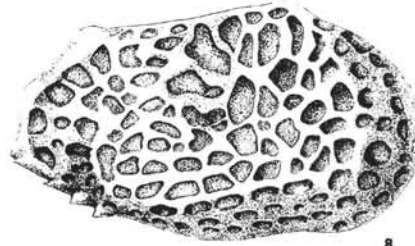
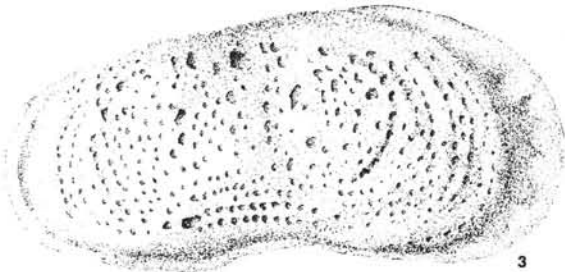
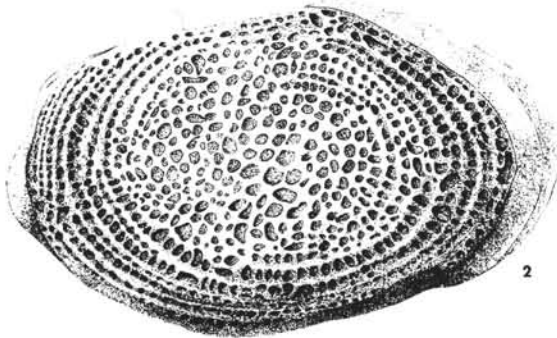
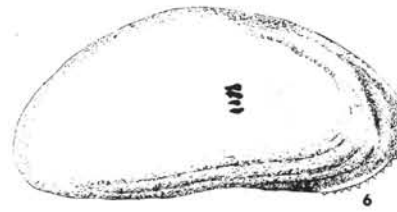
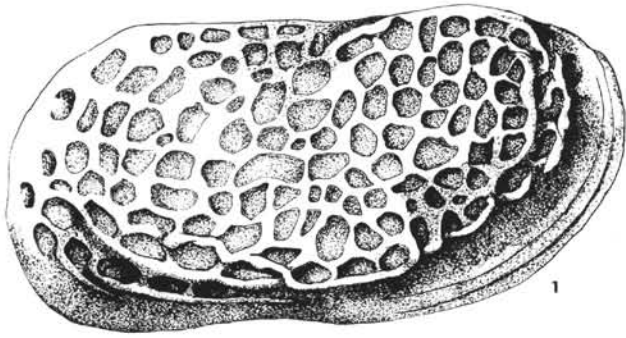
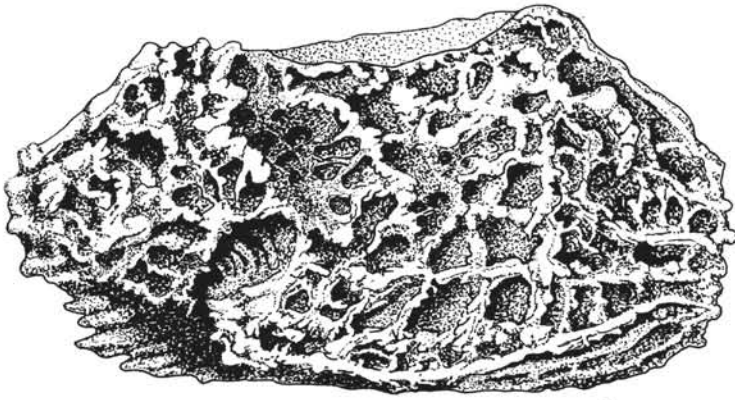
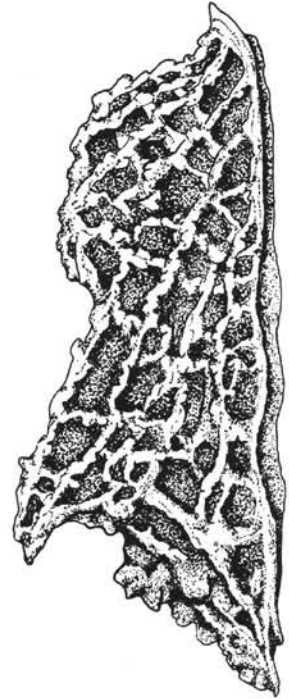


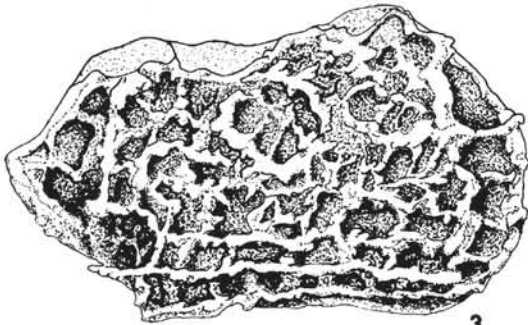
PLATE 8



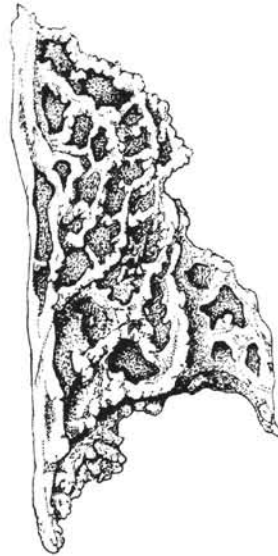
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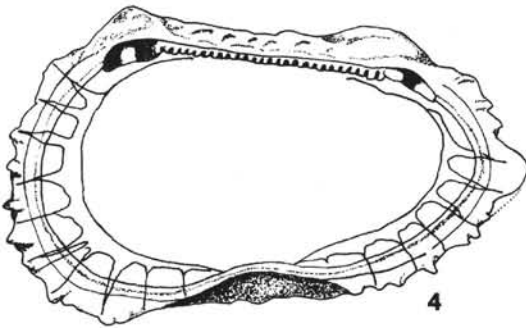
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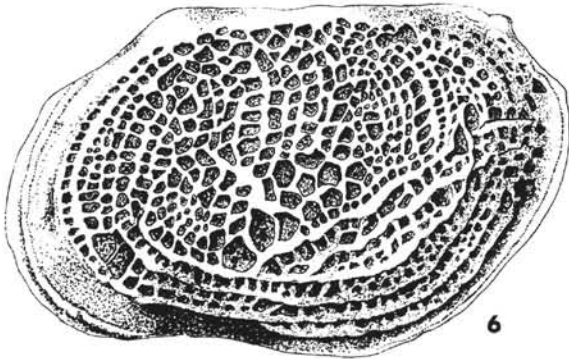
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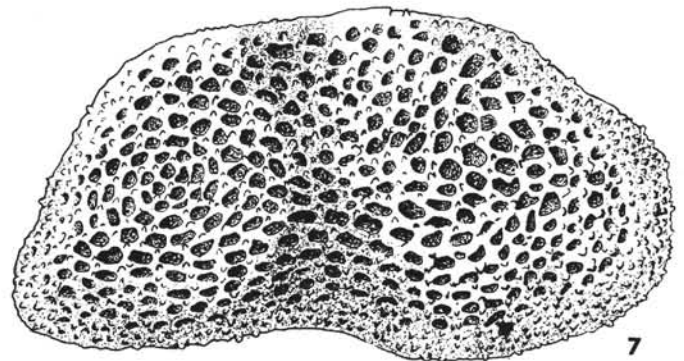
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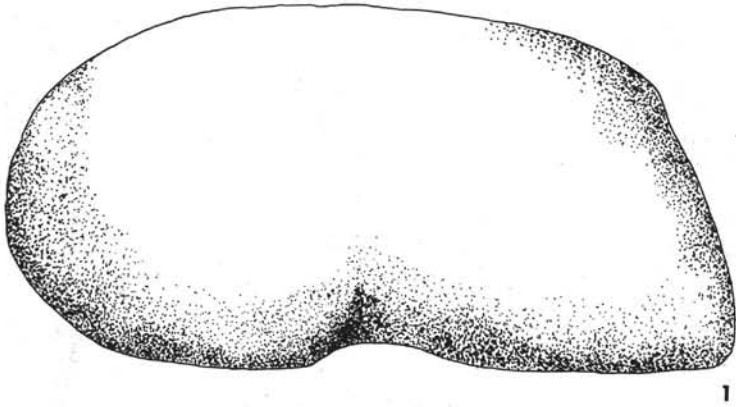
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PLATE 9

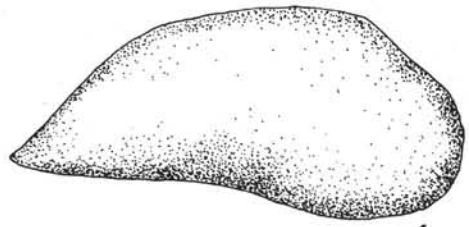
- Figure 1 *Candona (Caspiolla) balcanica* (Zalanyi)—exterior lateral view of left valve.
- Figure 2 Idem—interior lateral view of left valve.
- Figure 3 *Amplocypris* aff. *subacuta* Zalanyi—exterior lateral view of left valve.
- Figure 4 Idem—interior lateral view of left valve.
- Figure 5 *Candona (Pontoniella) schemachensis* Mandelstam—exterior lateral view of left valve.
- Figure 6 *Candona (Pontoniella)* sp₁—exterior lateral view of right valve.
- Figure 7 *Candona (Caspiolla) confragosa* Markova—exterior lateral view of left valve.
- Figure 8 *Leptocythere bacuana* (Livental)—exterior lateral view of left valve.

(see p. 1038)

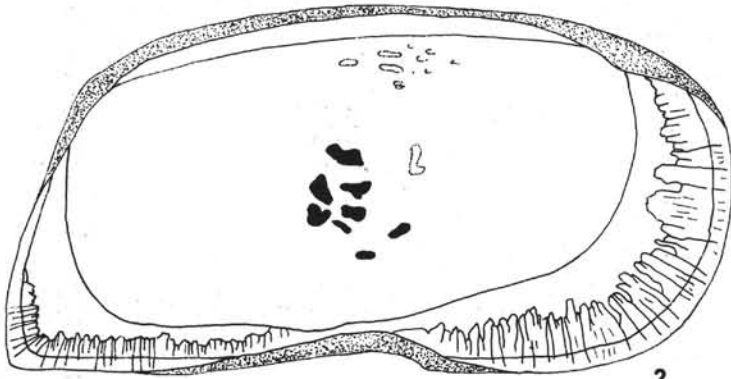
PLATE 9



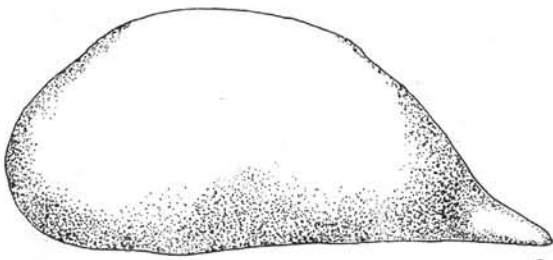
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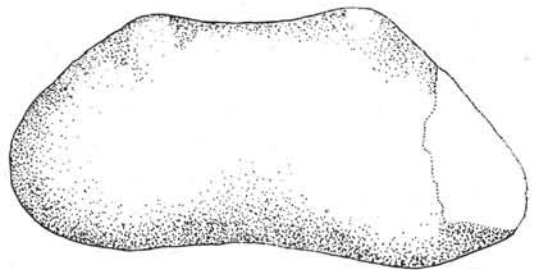
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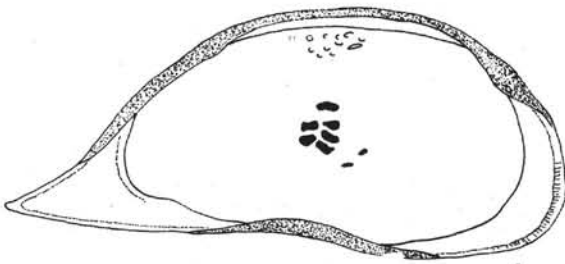
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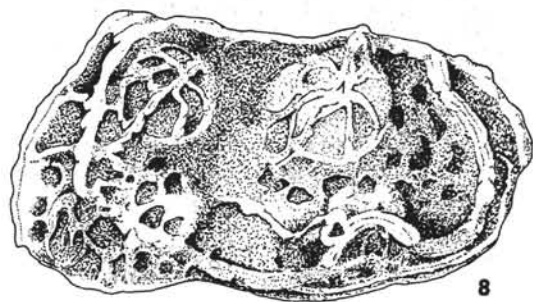
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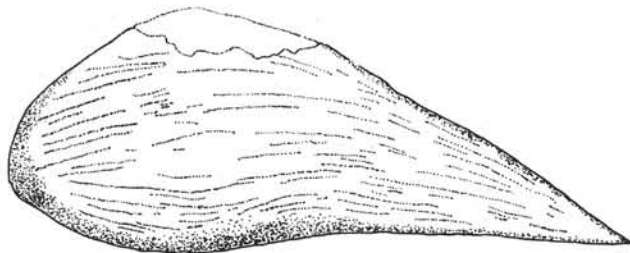
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