

Eocene ostracods of Hungary Systematical part 2 (Cytheracea 2) (MKM Project 186/96)

Miklós MONOSTORI

Department of Palaeontology, Eötvös University
H-1083 Budapest, Ludovika tér 2, Hungary

(with 17 plates)

This work is the second part of a monograph describing the ostracod fauna of the Eocene sediments of Hungary. It contains the descriptions of the following Cytheracea species: *Asperissimocythere gantensis* (MONOSTORI, 1977) and *A. perlucida* (MÉHES, 1936) in new genus *Asperissimocythere*, *Cletocythereis? angusticostata* (BOSQUET, 1852), *Cletocythereis? angusticostata darvastoense* n. ssp., *Grinioneis haidingeri pajenborchiana* (KEIJ, 1957), *Grinioneis cf. approximata minor* (DUCASSE, 1967), *Occultocythereis insolita medioventralis* Monostori, 1985, *Occultocythereis mutabilis abducta* TRIEBEL, 1961, *Occultocythereis* n. sp. 1, *Pokornyella? bicostata* n. sp., *Pokornyella inaequapunctata* DUCASSE, 1963., *?Pokornyella latorfiana* (LIENENKLAUS, 1900), *Pokornyella limbata anteglabra* n. ssp., *Pokornyella ventricosa* (BOSQUET, 1852) s. l., *Pokornyella aff. ventricosa* (BOSQUET, 1852), *Hornibrookella lamarckiana* (BOSQUET, 1852), *Hornibrookella oedtae* LIENENKLAUS, 1991 s. l., *Hornibrookella orbigniana* (BOSQUET, 1852), *Hornibrookella vahrenkampii dudarensis* n. ssp., *Reticuloquadracythere apostolescui* (DUCASSE, 1963) in *Reticuloquadracythere* n. gen., *Caudites monsmirabiliensis* APOSTOLESCU, 1955, *Cytheretta bifurcatocosta* n. sp., *Cytheretta cf. buttensis* KEEN, 1972, *Cytheretta costellata* (ROEMER, 1838) s. l., *Cytheretta decipiens* KEIJ, 1957 s.l., *Cytheretta aff. haimeana* (BOSQUET, 1852), *Cytheretta haimeanacostata* n. sp., *Cytheretta tenuipunctata laticauda* n. ssp., *Cytheretta tenuipunctata posterodepressa* n. ssp., *Cytheretta unicosata* MONOSTORI, 1985, *Loxoconcha inculta* MONOSTORI, 1985., *Paracytheridea gradata* (BOSQUET, 1982) s.l., *Paracytheridea grignonensis* (KEIJ, 1957), *Cytherura? sp.*, *Eucytherura ex gr. dentata* LIENENKLAUS, 1905, *Eucytherura* sp. 1, *Semicytherura ex gr. gracilis* (LIENENKLAUS, 1895), *Semicytherura oedelemensis* (KEIJ, 1957), *Semicytherura aff. unispinosa* PIETRZENIUK, 1969, *Cytheropteron* sp. 1, *Cytheropteron* sp. 2, *Cytheropteron* sp. 3, *Cytheropteron* sp. 4, *Monoceratina striata* DELTEL, 1961, *Monoceratina aff. tricuspidata* (JONES et HINDE, 1890), *Monoceratina* sp. and *Leguminocythereis striatopunctata tumida* nom. nov. Part 1 was published in *Annales Univ. Sci. Budapest.*, *Sectio geologica* 31, 27-74, pls 1-22.

Systematical part

Trachyleberididae SYLVESTER-BRADLEY, 1948
Trachyleberidinae SYLVESTER-BRADLEY, 1948
subfamilia
Trachyleberidini SYLVESTER-BRADLEY 1948 tribus

The genera *Cletocythereis*, *Grinioneis* and *Oertliella*, *Horrificiella*, *Agrenocythere*, *Phalcoocythere*, *Echinocythereis* in opinion of A. LIEBAU (1975) belong to Hemiccytherinae. This work follows classification of HARTMANN and PURI (1974).

Asperissimocythere n. genus

Genotype: *Hermanites acuticosta gantensis*
MONOSTORI, 1977

Derivatio nominis: after the very uneven carapace surface due to the very strong ornamentation.

Locus typicus: Gánt, Vértes Mts.

Stratum typicum: Forna Beds, Bartonian

Diagnosis: The ventral costa is keel-like, pore cones are found only at its end. The short dorsal costa strongly arched above the hinge line.

Remarks: Reticulated forms with spine-like pore cones. There is similar ornamentation on *Horrificiella* LIEBAU, 1977 except of the characters mentioned in the diagnosis of *Asperissimocythere* n. g.

Other species: *Bradleya acuticosta* PIETRZENIUK, 1965, *Bradleya acuticosta multispinosa* PIETRZENIUK, 1965.

Asperissimocythere gantensis (MONOSTORI, 1977)
Pl. 1 f. 1-6.

1977. *Hermanites acuticosta gantensis* n. ssp. -
MONOSTORI, pp. 104-107., Pl. IV., f. 3-6.

1987. „*Hermanites*” *acuticosta gantensis* MONOSTORI,
1977 - Monostori, pp. 193-154., Pl. 5., f. 6.

Remarks: There is an isolated pore cone at the antero-marginal rim near the middle-line. An arched row of five pore cones runs from the top of the posterior part of the dorsal lamellae to the anterior part of the valves, a parallel row of four cones from the subcentral tubercle to the anterior part. There are four large cones in sinuous arrangement under the mentioned one. There is no pore cone on the keel-like ventral ridge terminating in a peak, but there is a large pore cone behind it with two smaller one. The posterior spines partly are pore cones. A very thick bar runs from the protruding eye tubercle to the upper row of tubercles.

On the scanning photos it is visible, that on the Dudar specimens there is no radical declining of ornamentation, but there is a superimposed secondary reticulation in the meshes of the primary reticulation somewhat equalizing of the surface. The secondary reticulation and the homogeneous dorsal lamella are perhaps characters related to an ecological morpha.

The distinct difference in ornamentation indicates that *A. gantensis* is a distinct species, not a subspecies of *A. acuticosta*.

Dimensions: adult left valves: L = 0.54 - 0.61 mm,
H = 0.32 - 0.35 mm, L/H = 1.69 - 1.79.

Occurrence: Mátyás area: Csordakút 115 borehole
274.0 m, Mór-Tatabánya area: Gánt, Bagoly Hill
bauxite pit; Bakony area: Dudar coal mine.

Material: 330 isolated valves.

Stratigraphical range in Hungary: Middle Eocene
(Upper Lutetian-Bartonian).

Asperissimocythere perlucida (MÉHES, 1936)
Pl. 1. f. 7-10., Pl. 2. f. 1-10.

1936. *Cythereis perlucida* n. sp. - MÉHES, pp. 43-45., Pl.
IV., f. 19-22.

1985a. *Hermanites perlucida* (MÉHES, 1936) -
MONOSTORI, pp. 88-90., Pl. XI., f. 8-20.

Remarks: The main difference from *A. gantensis* is the stronger, denser reticulation. In the ornamental variation there are forms with moderate pore cones on the strong reticulation and forms with strong pore cones and a lot of little spines on the weaker reticulation. These different forms are found in a single sample together with transitional forms and they are obviously ecological morpha.

There is a large variation of dimensions and shape. The cardinal angle is variable projecting. These variations are results of local environmental

differences and must be subjects of future investigations.

Dimensions: adult carapaces: L = 0.46 - 0.60 mm,
H = 0.24 - 0.38 mm, W = 0.18 - 0.30 mm, L/H =
1.56 - 2.08.

Occurrence: Budapest area: Budakeszi 6 borehole
127.9 - 129.4 m; Solymár, Várerdő Hill. Dorog
area: Ótokod pit, samples 1-3, 5-6, 8-10; Tokod 527
borehole 206.8 - 255.8 m, Csolnok borehole 298.0 -
329.4 m, Csolnok 699/b borehole 517.2 - 534.0 m,
Esztergom 81 borehole 234.7 - 290.4 m,
Nyergesújfalu 31 borehole 228.7 - 288.9 m, Tokod-
Ebszőny outcrop. Mátyás area: Csabdi 74 borehole
262.5 - 297.6 m, Csordakút 113 borehole 294.0 -
364.0 m, Csordakút 115 borehole 306.0 - 417.0 m,
Mátyás 55 borehole 424.0 - 508.0 m, Mesterberck 46
borehole 94.2 - 94.7 m, Mesterberck 68 borehole
185.3 - 206.0 m, Mesterberck 75 borehole 278.0 -
362.0 m, Mesterberck 76 borehole 289.2 - 395.5 m,
Mesterberck 78 borehole 375.0 - 385.0 m,
Mesterberck 81 borehole 139.0 - 190.0 m,
Mesterberck 88 borehole 284.4 - 289.5 m,
Mesterberck 118 borehole 308.0 - 392.0 m,
Mesterberck 180 borehole 68.0 - 138.5 m. Mór-
Tatabánya area: Mór 16 borehole 82.6 - 92.2 m,
Oroszlány 1838 borehole 301.0 - 303.2 m,
Oroszlány 2200 borehole 583.6 - 589.0 m,
Oroszlány 2210 borehole 558.0 - 564.8 m,
Oroszlány 2260 borehole 223.0 m, Oroszlány 2274
borehole 525.2 - 553.7 m, Oroszlány 2291 borehole
471.4 m, Oroszlány 2341 borehole 406.7 - 407.7 m,
Tatabánya 1474 borehole 322.9 - 323.4 m,
Tatabánya 1481 borehole 286.8 - 295.5 m,
Várgesztes 1 borehole 95.5 - 100.7 m, Vértessomlyó
22 borehole 91.9 - 97.0 m.

Material: 2964 carapaces, 82 left valves, 106 right
valves, 131 fragments.

Stratigraphical range in Hungary: Middle and
Upper Eocene (Bartonian-Lower Priabonian).

Cletocythereis SWAIN, 1963 genus

Cletocythereis? angusticostata (BOSQUET, 1852)
Pl. 3. f. 1-10

1852. *Cythere angusticostata* n. sp. - BOSQUET, pp. 91-
92., Pl. IV., fig. 12.

1955. *Cythereis thierensiana* (BOSQUET, 1852) -
APOSTOLESCU, p. 271., Pl. VII., figs 118-119.

1957. *Quadracythere angusticostata* (BOSQUET, 1852) -
KEIJ, p. 104., Pl. XII., fig. 16., Pl. XIX., fig. 12.

1959. *Quadracythere angusticostata* (BOSQUET, 1852) -
DUCASSE, p. 66., Pl. V., fig. 3., Pl. XXIV., figs 3a-b.

1969. *Bradleya angusticostata* (BOSQUET, 1852) -
DUCASSE, p. 107., Pl. VII., fig. 166.

1971. *Bradleya angusticostata* (BOSQUET, 1852) -
BLONDEAU, pp. 39-40., Pl. IV., figs 7-8.

1977. *Quadracythere angusticostata* (BOSQUET, 1852) -
MONOSTORI, pp. 109-111., Pl. IV., figs 7-10.

1984. *Quadracythere? angusticostata* (BOSQUET, 1852) -
GUERNET, p. 127., Pl. 4., f. 6.

1985a. *Quadracythere angusticostata* (BOSQUET, 1852) - MONOSTORI, pp. 94-97., Pl. XII., f. 7-15., Pl. XIII., f. 1-3.

1985. *Quadracythere angusticostata* (BOSQUET, 1982) - DUCASSE et al., Pl. 84., f.3.

1987. *Quadracythere angusticostata* (BOSQUET, 1852) - MONOSTORI, p. 154., Pl. 5., f.8.

Remarks: on some specimens of Dudar-material an obviously u-shaped frontal scar is visible. (On the figure in KEIJ's revision of species (1957) it is figured as a single round scar far from the adductor scars. It will be necessary to make a new SEM-investigation on materials of the type locality.) There are some distinct pore conuli on the limburgina-type reticulation, mainly on the dorsal ridge and on the posterior part of valves. On the basis of all these this species is more close to *Cletocythereis* group as to „*Quadracythere*“-forms (as *Hornibrookella* or *Dameriacella*).

Dimensions: adult carapaces: L = 0.72 - 0.91 mm, H = 0.40 - 0.55 mm, W = 0.46 - 0.53 mm, L/H = 1.64 - 1.91.

Occurrence: Budapest area. Budakeszi 6 borehole 125.9 - 152.2 m. Dorog area: Ótokod pit samples A 5-6, 9-10; Bajót-Búzáshegy ravine, bed 5; Tokod 527 borehole 193.6 - 255.8 m; Csónok borehole 305.9 - 327.1 m; Csónok 699/b borehole 517.2 - 534.0 m; Esztergom 81 borehole 248.5 - 287.1 m; Nyergesújfalu 31 borehole 4.5 - 269.5 m. Mátyás area: Csordakút 113 borehole 303.0 - 346.0 m; Csordakút 115 borehole 274.0 - 306.0 m; Mátyás 55 borehole 433.0 - 474.6 m; Mesterberek 75 borehole 278.0 - 310.0 m; Mesterberek 76 borehole 330.0 - 387.0 m; Mesterberek 78 borehole 375.0 - 377.0 m; Mesterberek 81 borehole 146.0 - 186.5 m; Mesterberek 118 borehole 323.2 - 358.8 m; Mesterberek 180 borehole 79.5 - 106.0 m; Tabajd 7 borehole 144.8 - 147.0 m. Mór-Tatabánya area: Tatabánya 1481 borehole 140.3 - 158.1 m; Gánt, Bagoly hill pit, Bakony area: Dudar coal mine, Bakonyszentkirály 4 borehole, 390.0 m.

Material: 669 carapaces, 165 right valves, 188 left valves, 103 fragments.

Stratigraphical distribution without Hungary: France: Eocene.

Stratigraphical range in Hungary: Middle and Upper Eocene (Upper Lutetian - Lower Priabonian).

Cletocythereis? angusticostata darvastoenae n. ssp.
Pl. 4 f. 1-7.

Derivatio nominis: after locality name Darvastó.

Holotypus: right valve.

Locus typicus: Sümeg, Darvastó pit, Bakony Mts.

Stratum typicum: Darvastó formation, Lower Lutetian.

Diagnosis: small form with very sharp lamellar reticulation. There is a dorsal keel at the dorsal outline.

Description: the shape and ornamentation is very similar to the type. Pore cones are in similar situation. The reticulation-walls are high and sharp

(in dorsal view they are very characteristic). There is a sharp lamellar keel along the dorsal outline (posterior part of dorsal ridge and a connected anterodorsal keel). The reticulation has some extra high elements on the subcentral tubercle and along the lines connecting the posterior end of the dorsal and ventral ridges with the subcentral tubercle. The form has two isolated frontal scars.

Dimensions: adult carapaces: L = 0.49 - 0.58 mm, H = 0.28 - 0.34 mm, W = 0.30 - 0.32 mm, L/H = 1.71 - 1.87.

Comparison: The main difference from the type subspecies is the ornament and the small dimensions.

Occurrence: Bakony area: Sümeg Darvastó pit, Darvastó Formation; Ajka 181 borehole 55.0 m

Material: 100 carapaces, 26 right valves, 23 left valves.

Stratigraphical range in Hungary: Middle Eocene (Lower Lutetian).

Grinioneis LIEBAU, 1975 genus

Grinioneis haidingeri paijenborchiana (KEIJ, 1957)
Pl. 4 fig. 8-10, Pl. 5 f. 1-8.

1957. *Hermanites paijenborchiana* n. sp. - KEIJ, p. 100, Pl. XVII., f. 11-14., Pl. XXI., f. 10-11.

1959. *Hermanites paijenborchiana* KEIJ - DUCASSE, pp. 60-61., Pl. IV., f. 2., Pl. XXIII., f. 3a-b.

1961. *Hermanites paijenborchiana* KEIJ - DELTEL, pp. 168-169., Pl. 16., f. 279-280.

1962. *Hermanites paijenborchiana* KEIJ - HINTE, p. 180., Pl. I., f.5., Pl. III., f. 1-2., textfig. 8.

1966. *Hermanites paijenborchiana* KEIJ - MOUSSOU, pp. 99-100., Pl. 30., f. 126a-b.

1969. *Hermanites paijenborchiana* KEIJ - SCHEREMETA, pp. 199-200., Pl. XVIII., f. 15-16.

1969. *Hermanites paijenborchiana* KEIJ - DUCASSE, p. 115., Pl. VIII., f. 169.

1971. *Hermanites paijenborchiana* KEIJ, 1957 - BLONDEAU, pp. 55-56., Pl. V., f. 15.

1973. *Hermanites paijenborchiana* KEIJ - OLTEANU, POPESCU, Pl. II., f. 16.

1973. *Hermanites paijenborchiana* KEIJ, 1957 - SÖNMEZ-GÖKÇEN, pp. 84-85., Pl. XI., f. 10-15.

1977. *Hermanites haidingeri paijenborchiana* KEIJ, 1957 - MONOSTORI, pp. 107-109., Pl. IV., f. 1-2.

1980. *Hermanites haidingeri paijenborchiana* (KEIJ) - OLTEANU, Pl. V., f.2.

1985. *Grinioneis paijenborchiana* (KEIJ, 1957) - DUCASSE et al., Pl. 79., f. 1-2.

1985a. *Hermanites haidingeri paijenborchiana* KEIJ, 1957 - MONOSTORI, pp. 83-87., Pl. X., f. 7-16., Pl. XI., f. 1-7.

1987. *Grinioneis haidingeri paijenborchiana* KEIJ, 1957 - MONOSTORI, p. 153., Pl. 5., f.2.

Remarks: The form has a large variation both in regard of shape and in regard of ornamentation. The anterior reticulation may be disordered or nearly spider's web like. The posterodorsal ridge on the right valve may be nearly coinciding with the

dorsal outline or wing-like projecting. The anterodorsal corner of the right valve is generally stubby, but sometimes projecting.

Dimensions: adult carapaces: L = 0.54 - 0.82 mm, H = 0.31 - 0.42 mm, L/H = 1.59 - 1.94, W = 0.24 - 0.42 mm.

Occurrence: Budapest area: Budapest, Várhegy, Buda Marl Formation: Budakeszi 6 borehole 129.4 - 132.6 m. Dorog area: Tokod, Ebszöny outcrop; Ótokod open pit mine, samples A1-B6; T 527 borehole 112.0 - 115.2 m; 193.6 - 264.0 m; Csolnok borehole 296.4 - 387.0 m; Csolnok 699/b borehole 530.6 m; Esztergom 81 borehole 248.5 - 287.1 m; Nyergesújfalu 31 borehole 199.5 - 290.6 m. Mátyás area: Csabdi 74 borehole 262.5 - 264.6 m; Csordakút 113 borehole 292.0 - 344.0 m; Csordakút 115 borehole 285.0 - 306.0 m; Mátyás 55 borehole 430.0 - 435.0, 472.6 m; Mesterberek 46 borehole 94.2 - 94.6 m; Mesterberek 68 borehole 186.5 m; Mesterberek 75 borehole 278.0 - 295.0 m; Mesterberek 76 borehole 305.0 - 382.7 m; Mesterberek 78 borehole 375.0 - 377.0 m; Mesterberek 81 borehole 144.0 - 207.0 m; Mesterberek 118 borehole 308.0 - 358.8 m; Mesterberek 180 borehole 68.0 - 106.0 m; Tabajd 6 borehole 76.8 - 81.4 m; 143.0 - 146.0 m; Tabajd 7 borehole 144.8 - 147.0 m. Mór-Tatabánya area: Mór 16 borehole 82.6 - 84.6 m; Oroszlány 2210 borehole 558.0 m; Oroszlány 2361 borehole 340.0 m; Tatabánya 1481 borehole 130.7 - 158.8 m; Gánt, Bagolyhegy pit. Bakony area: Csabrendek 850 borehole 69.8 - 71.7 m; Dudar, coal mine; Sümeg, Darvastó pit, Darvastó Formation.

Material: 1472 carapaces, 85 right valves, 89 left valves, 164 fragments.

Stratigraphical distribution without Hungary: Belgium: Lower and Middle Eocene; France: Eocene-Oligocene; Austria: Eocene; Ukraine: Lower Eocene; Romania: Middle Eocene - Lower Oligocene.

Stratigraphical range in Hungary: Middle and Upper Eocene (Lutetian-Priabonian).

Grinioneis cf. approximata minor (DUCASSE, 1967)
Pl. 5 f. 9.

Remarks: Two imperfectly preserved carapaces with similarities to *Bradleya? approximata minor* DUCASSE, 1967 figured by DUCASSE et al. (1985).

Differences: the dorsal ridge is somewhat more arched on the French form.

Dimensions: adult carapaces: L = 0.72 - 0.74 mm, H = 0.35 mm, L/H = 2.06 - 2.11

Occurrence: Budapest area: Budapest (Pusztaszeri Street, samples 22., 27.).

Material: 2 carapaces.

Stratigraphical range in Hungary: Upper Eocene (Upper Priabonian).

Subfamilia et tribus incertae
Occultocythereis HOWE, 1951 genus

Occultocythereis insolita medioventralis

MONOSTORI, 1985

Pl. 5 f. 10, Pl. 6 f. 1-6.

1985a. *Occultocythereis medioventralis* n. sp. -
MONOSTORI, pp. 105-107., Pl. XIII., f. 20-21., Pl. XIV., f. 1-2.

1988. *Occultocythereis* sp. aff. *insolita* TRIEBEL, 1961 -
BARBIN et GUERNET, 1988, p. 221., Pl. 2., f. 3-4.

Remarks: On some well-preserved specimens we can see the fine intercostal secondary reticulation mentioned by TRIEBEL (1961). The connective elements between the ventral and median costae are strong, except the male right valves where the ventral costa is reduced. According to scanning photos the form is close to *insolita*, perhaps is a subspecies of it.

Dimensions: adult carapaces: L = 0.46 - 0.57 mm, H = 0.22 - 0.28 mm, W = 0.13 - 0.18 mm, L/H = 1.86 - 2.18

Occurrence: Dorog area: Tokod-527 borehole 252.2 - 255.8 m; Tokod, Ebszöny outcrop, Csolnok borehole 326.3 - 391.2 m; Nyergesújfalu-31 borehole 246.4 - 297.4 m. Mátyás area: Mesterberek 76 borehole 316.1 - 384.3 m; Mesterberek 81 borehole 152.0 m; Mesterberek 118 borehole 384.7 m; Csabdi 74 borehole 276.2 - 282.6 m; Csordakút 113 borehole 307.0 m; Mátyás 55 borehole 433.0 - 478.2 m; Tabajd 6 borehole 76.8 - 81.4 m. Mór-Tatabánya area: Oroszlány 1838 borehole 279.0 - 283.0 m; Oroszlány 2291 borehole 467.5 m; Oroszlány 2370 borehole 568.0 m; Tatabánya 1481 borehole 129.8 - 279.0 m; Oroszlány 1884 borehole 153.6 - 158.2 m; Mór 16 borehole 44.9 - 75.5 m; Tarján 8 borehole 235.2 - 257.4 m; Tarján 9 borehole 364.0 - 391.0 m. Bakony area: Somlóvásárhely 1 borehole 706.6 m; Bakonycsérnye 18 borehole 355.0 - 380.0 m; Balinka 333 borehole 525.0 - 565.0 m.

Material: 208 carapaces, 4 left valves, 1 right valve, 11 fragments.

Stratigraphical distribution without Hungary: France: Priabonian.

Stratigraphical range in Hungary: Middle Eocene (Upper Lutetian? - Bartonian).

Occultocythereis mutabilis abducta TRIEBEL, 1961
Pl. 6 f. 7-9.

1961. *Occultocythereis mutabilis abducta* n. ssp. -
TRIEBEL, pp. 209-210., Pl. 2., f. 6-13.

1969. *Occultocythereis mutabilis abducta* TRIEBEL -
DUCASSE, pp. 132-133., Pl. IX., f. 191.

1969. *Occultocythereis mutabilis abducta* TRIEBEL -
PIETRZENIUK, p. 52., Pl. VII., f. 6-9., Pl. XIX., f. 12.,
Pl. XXIV., f. 17-18.

1985a. *Occultocythereis mutabilis abducta* TRIEBEL,
1961 - MONOSTORI, pp. 103-105., Pl. XIII., f. 18-19.

Remarks: Some traces of the reticulation are visible anteromarginally and under the dorsal ridge.

Dimensions: adult carapaces: L = 0.46 - 0.52 mm, H = 0.24 - 0.26 mm, L/H = 1.86 - 2.05.

Occurrence: Dorog area: Ótokod pit sample B4. Bajót-Búzáshegy ravine, sample 3; Esztergom-81 borehole 225.6 - 228.0 m, Tokod-Ebszöny outcrop.

Material: 25 carapaces.

Stratigraphical distribution without Hungary: France: Lower Eocene to Oligocene; Germany: Upper Eocene.

Stratigraphical range in Hungary: Middle Eocene (Bartonian).

Occultocythereis? n. sp. 1.

Pl. 6 f. 10.

Description: The anterior outline is asymmetrical, its upper part is broadly rounded. The anterodorsal corner is distinct with a backwardly directed spine on the left valve. The dorsal outline is straight with a slight posterior sinus caused by the dorsal costa. The posterior outline is very asymmetrical, its upper half is concave, the lower is convex. The ventral outline is concave.

There is a strong and rather broad anterior costa reaching the short, strong and abruptly terminating ventral costa. The posterior submarginal costa also is conspicuous. The dorsal costa from about 1/3 of length to about 3/4 of length is undulated, it turns downward before the end of the dorsal outline. The median costa is reduced, only a small distinct knob with a hardly visible elongated swelling are visible. The subcentral tubercle and eye tubercle are distinct. The lateral surface is densely pitted or irregularly reticulated. There are some large antero- and posteromarginal spines. The females are shorter and anteriorly higher.

Remarks: the distinct pitting of the surface is an unusual character. The preservation of the few specimens is not good enough to describe a new species.

Dimensions: adult carapaces: L = 0.58 - 0.66 mm, H = 0.30 - 0.32 mm, L/H = 1.74 - 2.07.

Occurrence: Oroszlány 2361 borehole 34.0 m; Tabajd 7 borehole 147.0 - 150.8 m; Budakeszi 6 borehole 114.5 - 116.5 m, 121.3 - 122.8 m.

Material: 6 carapaces.

Stratigraphical range in Hungary: Middle and Upper Eocene (Bartonian - Lower Priabonian).

Hemicytherinae PURI, 1953 subfamilia

Pokornyella OERTLI, 1956 genus

Pokornyella? *bicostata* n. sp.

Pl. 7 f. 1-2.

Derivatio nominis: after the distinct dorsal and ventral costae.

Holotypus: carapace.

Locus typicus: Mór, Vértes Mts.

Stratum typicum: Mór-16 borehole 82.6 - 84.6 m, Bartonian.

Diagnosis: irregularly reticulated form with long and quasiparallel dorsal and ventral costae.

Description: The anterior outline of the left valve is somewhat asymmetrical rounded, it turns at about 0.3 of the length into the slightly arched dorsal outline terminating near the end of the length in a weak hinge-ear. The posterior outline is asymmetrical, its upper part is somewhat concave and run at 120-130° angle to dorsal outline. The lower part is convex. The ventral outline is strongly and nearly symmetrically concave.

In the ornamentation the thin ventral and dorsal costae are prominent. The ventral costa run from the 0.1 of the length to 0.8 - 0.9 of the length parallel with the ventral outline, posteriorly somewhat moving away from it. The dorsal costa is beginning from the 0.3 of the length below the indistinct ocular knot. It is dorsally arched and terminate at 0.9 of the length. There is a distinct anteromarginal costa running at the valve margine from 0.5 of the ventral outline to the anterior/dorsal outline transition. It terminates in a thickening like elongated ocular knot.

There are some broadly round meshes anteriorly and a bot of irregularly spaced pits of different dimension. The subcentral and adjacent ventral area is nearly smooth.

On the right valve the anterior/dorsal outline transition is more continuous, the overlap is perceptible. The inner characters are invisible.

Remarks: the Budakeszi form has a strongly reduced ornamentation.

Dimensions: L = 0.5 - 0.53 mm, H = 0.27 - 0.30 mm, L/H = 1.67 - 1.85.

Comparison: There is no similar ornamentation among the other *Pokornyella* species, so its generic situation is uncertain.

Occurrence: Budapest area: Budakeszi 6 borehole 150.2 - 152.2 m. Mór-Tatabánya area: Mór 16 borehole 82.6 - 84.6 m.

Material: 5 valves.

Stratigraphical range in Hungary: Middle and Upper Eocene (Bartonian - Lower Priabonian).

Pokornyella inaequapunctata DUCASSE, 1963

Pl. 7 f. 3-10, Pl. 8 f. 1-4.

1961. *Pokornyella* aff. *galeata* (REUSS) - DELTEL, p. 144., Pl. 13., f. 226-229.

1963. *Pokornyella inaequapunctata* n. sp. - DUCASSE, p. 229., Pl. 1. f. 7-8.

1969. *Pokornyella* aff. *galeata* (REUSS) - DUCASSE, p. 158., Pl. 11., f. 218.

1969. *Pokornyella inaequapunctata* DUCASSE - DUCASSE, p. 159., Pl. 11., f. 219.

1969. *Pokornyella* sp.1 - DUCASSE, p. 168., Pl. 11., f. 230-232.

1981. *Pokornyella* aff. *galeata* (REUSS) - DUCASSE et COUSTILLAS, pp. 10-15., P.2., f. 9-17., Pl. 3., f. 1-3.

1985a. *Pokornyella tumescens* DUCASSE, 1967 - MONOSTORI, pp. 80-83., Pl. IX., f. 13-20., Pl. X. f. 1-6.

1985. *Pokornyyella* aff. *galeata* (REUSS, 1850) - DUCASSE et al., Pl. I., f. 12.
 1990. *Pokornyyella* aff. *galeata* (REUSS, 1850) - DUCASSE et ROUSSELLE, p. 68., Pl. 2., f. 2-4.

Description: The large variation of shape is described in MONOSTORI, 1985a, p. 80-82.

In the ornamentation there are mainly large and scattered pits on some specimens, on other there are both large and small ones in mixed and dense pattern. On the anterior, anterodorsal and posterior parts the pits are mainly small. Near the anteromarginal rim runs a depressed area with 4-6 weak or sometimes indistinct radial riblets. A weak knot is observable near the posterodorsal corner. There is an elongated knot in the eye area.

Dimensions: adult carapaces: L = 0.52 - 0.76 mm, H = 0.36 - 0.49 mm, L/H = 1.42 - 1.76. W = 0.29 - 0.42.

Remarks: In my work about the Dorog Basin material I have determined the *Pokornyyella* as *P. tumescens* DUCASSE, 1967. After the revision of the genus in France (DUCASSE et COUSTILLAS, 1981) it is obvious, that *P. tumescens*, *P. blayensis*, *P. talencensis* are „morphs” of the species *P. moyesi* DUCASSE, 1967. In this species the ornamentation is usually reduced and the concentric arrangement of the ornamental elements is common.

More similar are the forms from France, named as *P. aff. galeata* (REUSS). The name is not correct, because the species *Cypridina galeata* (REUSS, 1850) belongs to quite another genera *Senesia* and it is a rather different form (see: *Senesia galeata* REUSS, 1850 in BRESTENSKÁ et JIRICEK, 1978). The valid species name for *P. aff. galeata* is *P. inequapunctata* DUCASSE, 1963.

In the Bartonian material of Hungary we have a lot of typical and transitional forms of the morphs described by DUCASSE et COUSTILLAS (1981) as aff. *galeata*. I think they are ecologically indicated variations of a species accommodated to a changing marine environment. There is no distinct temporal dispersion in the Middle and Upper Eocene materials of Hungary.

Occurrence: Budapest area: Budakeszi 6 borehole 108.3 - 152.5 m. Dorog area: Bajót-Búzashely ravine beds 3.5 m; Csolnok borehole 305.9 - 329.4 m; Csolnok 699/b borehole 517.2 - 528.0 m; Esztergom 81 borehole 271.1 - 279.6 m; Nyergesújfalu 31 borehole 199.5 - 200.5 m. Mátyás area: Csabdi 74 borehole 260.0 - 282.6 m; Csordakút 113 borehole 299.0 - 364.0 m; Csordakút 115 borehole 274.0 - 384.0 m; Mátyás 55 borehole 433.0 - 475.8 m; Mesterberek 75 borehole 279.0 m; Mesterberek 76 borehole 273.0 - 387.0 m; Mesterberek 78 borehole 371.0 - 377.0 m; Mesterberek 81 borehole 174.0 - 210.0 m; Mesterberek 88 borehole 284.4 m; Mesterberek 118 borehole 310.0 - 384.7 m; Mesterberek 180 borehole 79.0 - 106.0 m; Tabajd 6 borehole 76.8 - 148.0 m; Tabajd 7 borehole 144.8 - 174.8 m. Bakony area: Somlóvásárhely 1 borehole 546.7 - 551.0 m.

Material: 619 carapaces, 24 right valves, 33 left valves, 33 fragments.

Stratigraphical distribution without Hungary: France: Uppermost Eocene-Oligocene. Stratigraphical range in Hungary: Middle and Upper Eocene (Upper Lutetian - Lower Priabonian).

? *Pokornyyella latorfiana* (LIENENKLAUS, 1900)
 Pl. 8 f. 5-6.

?1900. *Cythereis latorfiana* n. sp. - LIENENKLAUS, p. 513., Pl. 20., f. 1a-d.

?1968. *Pokornyyella latorfiana* (LIENENKLAUS, 1900) - Moos, pp. 16-17., Pl. 1., f. 17-21.

Remarks: The form is very similar to the type material figured in Moos' (1968) revision. The anterior outline is more asymmetric, the anterodorsal corner is more back, the posterodorsal knot is less prominent. The doubtfulness of the identification is a result of the unknown details of the ornamentation at the type material (the lack of scanning photos).

Also similar to this form are some figures of *Pokornyyella limbata* (forma, subtrapézoidale DUCASSE et COUSTILLAS, 1981; *limbata* DUCASSE et ROUSSELLE 1990; OLIVIER-PIERRE et al., 1993), but very characteristic is the ornamentation bearing not pits but reticulation consisting of equally large meshes except of the anterior row.

Dimensions: adult carapaces. L = 0.64 - 0.70 mm, H = 0.35 - 0.36 mm, L/H = 1.78 - 1.94.

Occurrence: Budapest area: Budakeszi-6 borehole 127.9 - 145.1 m.

Material: 4 carapace.

Stratigraphical distribution without Hungary: Germany: Upper Eocene.

Stratigraphical range in Hungary: Upper Eocene (Lower Priabonian).

Pokornyyella limbata anteglabra n. ssp
 Pl. 8, f. 7-10

1987. *Pokornyyella ex gr. limbata* (BOSQUET, 1852) - MONOSTORI, pp. 151-152, Pl. 5., f. 1., 3.

Derivatio nominis: after the less ornamented anterior part of valves.

Holotypus: left valve.

Locus typicus: Dudar, Bakony Mts.

Stratum typicum: mollusc sand, Upper Lutetian - Lower Bartonian.

Diagnosis: The ornamentation consists of concentrically arranged strong pits weakened on posterior and posterodorsal parts of the valves. There is a ribbed caudal process.

Description: In contrast with the description in MONOSTORI, 1987 it is obvious on scanning photos that the indistinct area of the ornamentation is observable on the anterior-antrodorsal part of valves. Very characteristic are the pointed posterodorsal corner on the left valve, the strong and pointed knot before the posterodorsal corner of

both valves, the distinct longitudinal ribbes on the caudal process.

Dimensions: adult arapaces: L = 0.64 - 0.78 mm, H = 0.36 - 0.44 mm, L/H = 1.48 - 1.90, W = 0.32 - 0.36 mm.

Comparison: The less ornamented anterior part is characteristic for the whole material collected from different localities.

Occurrence: Mór-Tatabánya area: Oroszlány 1838 borehole 301.0 - 303.2 mm; Oroszlány 2200 borehole 585.8 m; Oroszlány 2210 borehole 558 - 564.8 m; Oroszlány 2260 borehole 212.0 m; Oroszlány 2274 borehole 529.5 - 534.2 m; Oroszlány 2291 borehole 471.4 m; Oroszlány 2361 borehole 339.0 - 340.0 m; Oroszlány 2370 borehole 617.1 m; Tatabánya 1481 borehole 140.3 - 141.2 m; Mór 16 borehole 84.6 - 92.2 m. Bakony area: Dudar Coal Mine.

Material: 58 carapaces, 9 right valves, 8 left valves, 12 fragments.

Stratigraphical rage in Hungary: Middle Eocene (Upper Lutetian-Bartonian).

Pokornyella ventricosa (BOSQUET, 1852) s. l.
Pl. 9 f. 1-4.

1852. *Cythere ventricosa* n. sp. - BOSQUET, p. 80., Pl. IV., f.2.

1955. *Hemicythere ventricosa* (BOSQUET, 1852) - APOSTOLESCU, p. 267., Pl. II., f. 31-32.

1957. *Brachycythere ventricosa* (BOSQUET, 1852) - KEIJ, 1957, p. 21., Pl. IV., f. 16-17., Pl. XX., f.5-6.

1959. *Brachycythere ventricosa* (BOSQUET, 1852) - DUCASSE, pp. 31-32., Pl. II., f.3., Pl. XV., f. 1a,c.

1961. *Brachycythere ventricosa* (BOSQUET, 1852) - DELTEL, p. 47., Pl. 5., f. 73.

1963. *Pokornyella? longicosta* n. sp. - DUCASSE, pp. 230-231., Pl. II., f. 14-16.

1965. *Brachycythere ventricosa* (BOSQUET, 1852) - URVANOVA, p. 265., Pl. III., f. 1.

1969. *Pokornyella ventricosa* (BOSQUET, 1852) DUCASSE, p. 168., Pl. XI., f. 229.

1969. *Pokornyella longicosta* DUCASSE, 1963 - DUCASSE, pp. 161-162., Pl. XI., f. 221.

1969. *Brachycythere ventricosa* (BOSQUET, 1852) - SCHEREMETA, pp. 97-98., Pl. VIII., f. 10-11.

1969. *Brachycythere? longicosta* (DUCASSE, 1963) - SCHEREMETA, p. 92., Pl. VIII., f. 12.

1971. „*Pokornyella*” *longicosta* DUCASSE, 1963 - BLONDEAU, p. 38., Pl. IV., f. 2.

1971. *Pokornyella ventricosa* (BOSQUET, 1852) - BLONDEAU, p. 39., Pl. IV., f. 1.

1973. *Pokornyella ventricosa* (BOSQUET, 1852) - SÖNMEZ-GÖKÇEN, pp. 68-69., Pl. VIII., f. 37-39.

1981. *Pokornyella ventricosa* (BOSQUET, 1852) - DUCASSE et COASTILLAS, forme „antérieure”, p. 8., Pl. 1., f. 9-10.; forme „longicosta” pp. 7-8., Pl. 1., f.7-8.; forme „marginée”, p. 7., Pl. 1., f.1-3.; forme „semimarginée”, p. 7., Pl. I., f.4-6.

1985. *Pokornyella ventricosa* (BOSQUET,1852) - DUCASSE et al., Pl. 82., f.8-9.

1985. *Pokornyella cf. ventricosa* (BOSQUET,1852) - DUCASSE et al., Pl. 82., f.10.

1985. *Pokornyella longicosta* DUCASSE, 1963 - DUCASSE et al., Pl. 82., f.13.

1985. *Pokornyella ventricosa* (BOSQUET, 1852) - DUCASSE, LETE et ROUSSELLE, forme „marginée” Pl. I.,f.7.; forme „longicosta” Pl. I., f.8.

1987. *Pokornyella aff. ventricosa* (BOSQUET,1852) juv. - MONOSTORI, pp. 152-153., Pl. 4. f.10.

Remark: One of the „forms” is more frequent and similar to „marginée” and „semimarginée” of DUCASSE et COUSTILLAS (1981), but the cardinal angle is more projecting, the longitudinal elements are often strengthened like sharp costa because of the somewhat more ordered strong reticulation. The lacking of the anteroventral ornamentation is less pronounced.

The another „form” is like to „form” „longicosta” of DUCASSE et COUSTILLAS (1981). The ornamentation of two „forms” is distinctly separate in spite of variations within the forms. The form „longicosta” is rather variable also in his outline even in the same sample.

Dimensions: L = form „marginée-semimarginée”: 0.62 - 0.72 mm, form „longicosta”: 0.60 - 0.66 mm, H = form „marginée-semimarginée”: 0.32 - 0.38 mm, form „longicosta”: 0.31 - 0.34 mm, L/H = form „marginée-semimarginée”: 1.84 - 1.95, form „longicosta” 1.82 - 1.94.

Occurrence: Budapest area: Budakeszi 6 borehole 127.9 - 152.5 m. Bakony area: Dudar, coal mine; Csabrendek 850 borehole 64.5 - 66.5 m.

Material: 35 carapaces, 1 instar right valves.

Stratigraphical distribution without Hungary: France: Eocene, Belgium: Eocene, Ukraina: Eocene, Turkey: ?M, ?U. Eocene.

Stratigraphical range in Hungary: Middle and Upper Eocene (Upper Lutetian - Lower Priabonian)

Pokornyella aff. ventricosa (BOSQUET, 1852)

1987. *Pokornyella aff. ventricosa* (BOSQUET) juv. - MONOSTORI, pp. 152-153. Pl. 4., f. 10.

Occurrence: Bakony area: Dudar Coal Mine.

Material: 1 juvenile left valve.

Stratigraphical range in Hungary: Middle Eocene (Upper Lutetian - Lower Bartonian)

Thaerocytherinae HAZEL, 1967 subfamilia
Hornibrookella MOOS, 1965 genus

Hornibrookella lamarckiana (BOSQUET, 1852)
Pl. 9 f. 5-10.

1852. *Cythere lamarckiana* n. sp. - BOSQUET, p. 71, Pl. 3., f. 8 a-d.

1957. *Quadracythere lamarckiana* (BOSQUET, 1852) - KEIJ, p. 105., Pl. XIX., f. 6., Pl. XX., f. 9-10.

1977. *Quadracythere vahrenkampii* MOOS, 1965 - MONOSTORI, Pl. IV., f. 12-13.

1985a. *Quadracythere vahrenkampii* MOOS, 1965 - MONOSTORI, p. 100 (paragraph 12.).

1987. *Quadracythere vahrenkampii* MOOS, 1965 - MONOSTORI, Pl. 6., f. 8-10.

Description: On both valves the anterior outline is asymmetrical, the dorsal and ventral outlines are mostly parallel. The anterodorsal corner is very protruding at the left valve and hardly protruding at the right one. After the corner the dorsal outline is depressed up to protruding sharp rectangular end of the dorsal ridge. The dorsal and ventral margins really are converging, the parallelity of 80 % of the dorsal and ventral outlines is a result of the protruding dorsal ridge from 0.5 to 0.8 of the length of carapace. The posterior outline is very asymmetrical with a deep upper depression and a convex lower part. The ventral outline is slightly sinuous.

In dorsal view there is a large depressed anterior area, after is a part rising with angle 45° to subcentral tubercle being at the third of the valves. After it comes a depression and a new protruding part, the end of the ventral ridge at 0.7 of the valves. The posterior part of the outline of the valves are concave with a narrow nearly parallel end of the carapace.

There is a rough reticulation on the valves. The anterior meshes are rectangular and radially arranged. The walls are thick and the other meshes are therefore round. The anterior part of the valves after the submarginal row of meshes is weakly ornamented similarly to posterior narrowing part of the valves. The dorsal ridge is very prominent, it is the greatest part of the dorsal outline and terminate in a rectangular spine at 0.8 of the length. The ventral ridge is running from 0.1 to nearly 0.8 of the length and only its spine-like rectangular ends may consist of a little part of ventral outline. There is a distinct ridge connecting of the ends of the dorsal and ventral outlines.

Remarks: Part of material from Hungary was described as juvenile *Quadracythere vahrenkampii*. Our specimens are somewhat more ornamented as on figures of KEIJ (1957), but are very similar to the SEM-photo made by BLONDEAU (1971). The shape is similar with some variation. In the dorsal view of the carapace the anterior depression is more prominent and the subcentral knot is more expressed as on KEIJ's fig. 10b. Most of the Darvastó material consist of specimens with reduced anterodorsal angle and reduced overlap, with less prominent posterodorsal and posteroventral elevation of the end of dorsal and ventral ridges. This may be a problem of preservation. *Quadracythere transylvanica nontuberculata* OLTEANU 1973 is another subspecies or even species. Also similar form is *Quadracythere arcana* (LUBIMOVA, GUHA et MOHAN, 1960).

Dimensions: adult carapaces: L = 0.53 - 0.64 mm, H = 0.30 - 0.38 mm, L/H = 1.58 - 1.93, W = 0.34 - 0.38.

Occurrence: Dorog area: Ótokod pit, sample A10; Tokod 527 borehole 223.2 - 241.3 m; Csolnok borehole 306.9 - 307.0 m; Esztergom 81 borehole

273.0 - 287.1 m; Nyergesújfalu 31 borehole 246.4 - 269.5 m. Mátyás area: Csabdi 74 borehole 262.5 - 264.6 m; Csordakút 113 borehole 303.3 - 344.0 m; Mátyás 55 borehole 474.6 m; Mesterberek 76 borehole 358.6 - 387.0 m; Mesterberek 78 borehole 375.0 m; Mesterberek 81 borehole 190.0 m; Mesterberek 118 borehole 358.8 - 402.0 m; Mesterberek 180 borehole 104.8 - 107.0 m. Mór-Tatabánya area: Tatabánya 1481 borehole 140.3 - 158.8 m, Gánt, Bagoly Hill pit. Bakony area: Somlóvásárhely 1 borehole 551.0 m; Sümeg, Darvastó pit.

Material: 123 carapaces, 5 left valves, 1 right valve, 6 fragment.

Stratigraphical distribution without Hungary: France: ?Lower-Middle Eocene.

Stratigraphical range in Hungary: Middle Eocene (Lutetian-Bartonian) - ?Upper Eocene.

Hornibrookella odettae LIEBAU, 1991 s. l.
Pl. 10, f.1-10.

1969. *Quadracythere vermiculata* (BOSQUET, 1852) - DUCASSE, pp. 142-143., Pl. X., f. 203.

1977. *Quadracythere vahrenkampii* MOOS, 1965 - MONOSTORI, pp. 111-113., Pl. IV., f. 11.

1985a. *Quadracythere vahrenkampii* MOOS, 1965 - MONOSTORI, pp. 98-100., Pl. XIII., f. 4-12.

1985. *Quadracythere vermiculata* (BOSQUET, 1852) - DUCASSE et al., Pl. 85., f. 3-4.

1987. *Quadracythere vahrenkampii* MOOS, 1965 - MONOSTORI, p. 155., Pl. 6., f. 2-7.

1991. *Hornibrookella odettae* n. sp. - LIEBAU, pp. 105-106., Pl. 3., f. 5-6., Pl. 4., f. 4., Abb. 34., 96.

1991. *Hornibrookella* sp. LA 52 - LIEBAU, p. 104., Pl. 18., f. 1-3. Abb. 35.

Remarks: After the investigation of the new scanning photos the material determined earlier as *Quadracythere vahrenkampii* proved to be *Hornibrookella odettae* on the basis of the details of the ornamentation. In the Lutetian-Lower Priabonian beds of Hungary there are a lot of form from the typical LA 52 to the *H. odettae*. There is not a distinct temporal separation in the material I think the LA 52 is an eco-variation of the species *odettae*. Some differences in the investigated material are the often projecting upwards dorsal ridge and more asymmetrical anterior outline.

Dimensions: adult carapaces: L = 0.61 - 0.80 mm, H = 0.35 - 0.47 mm, L/H = 1.56 - 1.97.

Occurrence: Budapest area: Vár-hill; Budakeszi 6 borehole 108.3 - 152.2 m. Cserhát area: Kósd 20 borehole 123.9 - 124.4 m. Dorog area: Ótokod pit beds A1-A4, A6-A10; Tokod 527 borehole 213.8 - 255.8 m; Tokod, Ebszöny outcrop; Csolnok borehole 301.0 - 329.4 m; Csolnok 699/b borehole 522.6 - 532.0 m; Esztergom 81 borehole 248.5 - 290.4 m; Nyergesújfalu 31 borehole 199.5 - 297.4 m. Mátyás area: Csabdi 74 borehole 260.0 - 264.6 m; Csordakút 113 borehole 295.0 - 332.0 m; Csordakút 115 borehole 306.0 m; Mátyás 55 borehole 434.0 m; Mesterberek 76 borehole 307.5 - 338.0 m;

Mesterberek 81 borehole 146.0 - 174.0 m; Mesterberek 180 borehole 79.5 - 86.9 m; Tabajd 6 borehole 76.8 - 148.0 m; Tabajd 7 borehole 144.8 - 150.8 m. Mór-Tatabánya area: Mór 16 borehole 84.6 - 92.2 m; Gánt, Bagoly Hill pit; Oroszlány 1838 borehole 301 - 303.2 m; Oroszlány 2210 borehole 558 m; Oroszlány 2274 borehole 525.2 m; Oroszlány 2291 borehole 471.4 m; Oroszlány 2361 borehole 340.0 m; Oroszlány 2370 borehole 618.6 m; Tatabánya 1481 borehole 285.8 - 286.8 m; Várgesztes 1 borehole 98.8 - 100.7 m. Bakony area: Dudar coal mine; Bakonyszentkirály 4 borehole 392 - 437 m.

Material: 510 carapaces, 9 right valves, 13 left valves, 87 fragments.

Stratigraphical distribution without Hungary: France: Middle and Upper Eocene.

Stratigraphical range in Hungary: Middle and Upper Eocene (Upper Lutetian-Priabonian).

Hornibrookella orbigniana (BOSQUET, 1852)

Pl. 11, f. 1-3.

1852. *Cythere orbigniana* n. sp. - BOSQUET, p. 86., Pl. 4, f. 8a-d.

1957. *Quadracythere orbigniana* (BOSQUET, 1852) - KEIJ, p. 107., Pl. XII, f. 14-15., Pl. XV, f. 10.

1959. *Quadracythere orbigniana* (BOSQUET, 1852) - DUCASSE, p. 67., Pl. XXV., f. 3a-b.

1969. *Quadracythere orbigniana* (BOSQUET, 1852) - DUCASSE, pp. 141-142., Pl. X., f. 201.

1971. *Quadracythere orbigniana* (BOSQUET, 1852) - BLONDEAU, pp. 34-35., Pl. III., f. 6.

1984. *Quadracythere ? orbigniana* (BOSQUET, 1852) - GUERNET, p. 127., Pl. 4., f. 11-12.

1985. *Quadracythere orbigniana* (BOSQUET, 1852) - DUCASSE et al., Pl. 84., f. 13-14.

Description: The anterior outline of the right valves in nearly symmetrical. The dorsal outline is very sinuous, the cardinal angle and the arcuated dorsal ridge are projecting. The posterior outline is asymmetrical, its upper (larger) part is concave, the lower part is convex. On the ventral outline is an asymmetrical embayment. The anterior outline is closely denticulated, the lower part of posterior outline has some strong denticles. Eye tubercle is prominent. The species has a characteristic ornamentation: behind the eye knot there is a depressed and unornamented dorsal area. The indistinct character of the ornamentation continues up to the lower part of the subcentral tubercle. Between the anteromarginal rim and subcentral tubercle there is concentrically arranged reticulation. The dorsal ridge beginning above the moderately developed subcentral knot is highly arcuated and has a rectangular end. The distinct ventral ridge runs from 0.2 - to 0.7 of the length parallel with the ventral outline. There is a connecting ridge between the dorsal and ventral ridges. The reticulation is rough behind the subcentral knot and between the subcentral knot and the ventral ridge. Under the dorsal ridge there is

some longitudinal costa-like strengthened reticulation row. The ornamentation is weakened on the posterior part. On the left valve the anterior outline is more asymmetrical, the cardinal angle is more projecting, the posterior outline is less acute.

Remarks: The shape and ornamentation is very similar to those of figured and described by KEIJ (1957) in the type revision.

Dimensions: adult carapaces: L = 0.68 - 0.73 mm, H = 0.38 - 0.41 mm, L/H = 1.68 - 1.87.

Occurrence: Mány area: Mesterberek 76 borehole 358.0 - 358.6 m; Mesterberek 78 borehole 375.0 m; Mesterberek 118 borehole 358.8 m. Mór-Tatabánya area: Mór 16 borehole 90.8 - 92.2 m; Oroszlány 2361 borehole 339.0 m. Bakony area: Dudar, coal mine, Somlóvásárhely 1 borehole 551.0 m.

Material: 14 carapaces, 1 right valve.

Stratigraphical distribution without Hungary: France: Eocene.

Stratigraphical range in Hungary: Middle and Upper Eocene.

Hornibrookella vahrenkampii dudarensis n. ssp.

Pl. 11, f. 4-5.

1987. *Quadracythere* ex gr. *vermiculata* (BOSQUET, 1852) - MONOSTORI, Pl. 5., f. 9-10., Pl. 6., f. 1.

Derivatio nominis: after locality name.

Holotypus: left valve.

Locus typicus: Dudar, Bakony Mts.

Stratum typicum: Upper Lutetian - Lower Bartonian mollusc marl.

Diagnosis: The row of meshes of the reticulation under the eye knot consist of very elongated ones.

Dimensions: adult left valves: L = 0.64 - 0.76 mm, H = 0.37 - 0.41 mm, L/H = 1.61 - 2.07.

Comparison: The outline and ornamentation is very close to forms figured by LIEBAU (1991, Pl. 9., f. 1-2.). The walls of meshes are more thin but zigzagged similarly to mentioned forms. The eye knot is enlarged. On the forms of LIEBAU there are second and third concentric rows of small meshes in the anterior half of valves. On the new subspecies there is a row of irregularly arranged elongated meshes instead of the mentioned two rows.

Occurrence: Bakony area: Dudar, mollusc marl.

Material: 5 carapaces, 4 right valves, 5 left valves, 4 fragments.

Stratigraphical range in Hungary: Middle Eocene (Upper Lutetian - Lower Bartonian).

Reticuloquadracythere n. genus

Genotype: *Quadracythere apostolescui* DUCASSE, 1963.

Derivatio nominis: after the uniform reticulation of the carapace's surface.

Locus typicus: Plassac, LeChay CA. 4788, France.

Stratum typicum: Upper Eocene.

Diagnose: The macrofossae of macroreticulation are nearly equivalent to each other on the whole lateral surface.

Remarks: Very inflated form with nearly equal to each other macrofossae, which are bordered by very high and narrow costulae. The long dorsal ridge is posteriorly bifurcate from the 2/3 of length, the upper branch goes above the eye-tubercle, the lower one turns down below the eye tubercle. The ventral ridge is also bifurcate after 0.3 of length. The ornamentation is somewhat stronger (higher) at the subcentral area.

Other species: *Quadracythere persica* TAMBAREAU, 1972, *Quadracythere hulusii* SÖNMEZ-GÖKÇEN, 1973.

Reticuloquadracythere apostolescui DUCASSE, 1963
Pl. 11, f. 6-10, Pl. 12, f. 1.

1963. *Quadracythere apostolescui* n. sp. - DUCASSE, pp. 240 - 241., Pl. III., f. 32-33.
1969. *Quadracythere apostolescui* DUCASSE - DUCASSE, p. 136., Pl. 9., f. 195.
1969. *Bradleya validornata* n. sp. - PIETRZENIUK, p. 65., Pl. XXI., f. 15., Pl. XXVI., f. 3-4.
1971. *Quadracythere apostolescui* DUCASSE-BLONDEAU, p. 33., Pl. III., f. 3.
1977. *Bradleya validornata hungarica* n. sp. - MONOSTORI, pp. 100-102., Pl. III., f. 5-8.
1985a. *Bradleya validornata hungarica* MONOSTORI - MONOSTORI, pp. 90-94., Pl. XI., f. 21-22., Pl. XII., f. 1-6.
1985. *Quadracythere apostolescui* DUCASSE - DUCASSE et al., Pl. 84., f. 4-5.
1985. *Quadracythere cassidea* (REUSS, 1869) (forme „apostolescui” et „casquée”) - Ducasse et al., p. 164., Pl. III., f. 5-10.
1987. *Bradleya? validornata hungarica* MONOSTORI - MONOSTORI, p. 154., Pl. 5., f. 4-5., 7.
1988. *Quadracythere? sp. gr. cassidea* (REUSS, 1869) - BABIN et GUERNET, p. 221., Pl. 3., f. 4-5.
1991. *Quadracythere apostolescui* DUCASSE, 1964 - GUERNET et al., Pl. 2., f. 2.

Remarks: DUCASSE et al. (1985) drew together species *apostolescui* DUCASSE, 1963 and *cassidea* (REUSS, 1869). We don't have any true revised descriptions or illustrations of „cassidea”, the original figure refers to another species. Probably another form is figured in DELTEL, 1961 (p. 15., Pl. 14., f. 242-244.) as *Q. cassidea?* (REUSS 1869), in MOUSSOU, 1966 (pp. 102-103., Pl. 31., f. 129a-b., 130.) as *Q. cassidea* (REUSS), in DUCASSE, 1969 (pp. 136-137., Pl. X., f. 196) as *Q. cassidea?* (REUSS), in CARBONNEL, 1975 (p. 49., Pl. 1., f. 28.) as *Q. apostolescui* DUCASSE, 1963, in DUCASSE et al. (1985) (pl. 85., f. 1-2.) as *Quadracythere cassidea?* (REUSS, 1869 in DELTEL, 1961).

On the basis of the new scanning photos of the *apostolescui* the „*Bradleya*” *validornata* and its subspecies *hungarica* obviously fit into the species *apostolescui*.

Dimensions: adult carapaces: L = 0.86 - 1.06 mm, H = 0.50 - 0.62 mm, L/H = 1.61 - 1.81, W = 0.59 - 0.64 mm.

Occurrence: Budapest area: Budakeszi 6 borehole, 130.2 - 132.6m; 150.2 - 152.2 m. Dorog area: Ótokod-pit, samples A2, A3, A5; Tokod 527 borehole 210.2 - 241.3 m; Csolnok borehole 312.8 - 329.4 m; Csolnok 699/b borehole 517.2 m; Esztergom 81 borehole 248.5 - 276.7 m; Nyergesújfalu 31 borehole 199.5 - 271.1 m. Mátyás area: Csabdi borehole 262.5 - 264.6 m; Csordakút 113 borehole 304.0 m; Mesterberek 75 borehole 278.0 m; Mesterberek 76 borehole 338.6 m, 349.7 m, 352.2 m, 358.6 m, 384.3 m; Mesterberek 78 borehole 375.0 m, 377.0 m; Mesterberek 81 borehole 146.0 m; Mesterberek 118 borehole 358.8 m; Mesterberek 180 borehole 80.6 m, 82.8 m 106.0 m. Mór-Tatabánya area: Ta 1481 borehole 155.3 - 157.1 m; Gánt, Bagoly Hill pit. Bakony area: Dudar, coal.mine; Somlóvásárhely 1 borehole 551.0 m.

Material: 171 carapaces, 24 left valves, 23 right valves, 24 fragments.

Stratigraphical distribution without Hungary: France: Upper Eocene - Lower Oligocene, Germany: Upper Eocene.

Stratigraphical range in Hungary: Middle and Upper Eocene (Bartonian - Lower Priabonian).

Orionininae PURI, 1973 subfamilia
Caudites CORYELL et FIELDS, 1937 genus

Caudites monsmirabiliensis APOSTOLESCU, 1955
Pl. 12, f. 2-7.

1955. *Caudites monsmirabiliensis* n. sp. - APOSTOLESCU, p. 251., Pl. II., figs. 33-34.
1957. *Caudites monsmirabiliensis* APOSTOLESCU - KEIL, p. 117.
1959. *Caudites monsmirabiliensis* APOSTOLESCU - DUCASSE, p. 57., Pl. Xxi., fig. 4.
1969. *Caudites monsmirabiliensis* APOSTOLESCU - DUCASSE, pp. 151 - 152., Pl. X., fig. 211.
1971. *Caudites monsmirabiliensis* APOSTOLESCU - BLONDEAU, pp. 43-44., Pl. IV., fig. 12.
1977. *Caudites monsmirabiliensis* APOSTOLESCU - MONOSTORI, pp. 93-95., Pl. II., fig. 10.
1985a. *Caudites monsmirabiliensis* APOSTOLESCU - MONOSTORI, pp. 101-103., Pl. XIII., f. 13-17.
1987. *Caudites monsmirabiliensis* APOSTOLESCU - MONOSTORI, pp. 155-156., Pl. 7., f. 1-3.
1985. *Caudites monsmirabiliensis* APOSTOLESCU - DUCASSE et al., Pl. 86., f. 2.

Remarks: The reticulation of the surface is variable, the anterior and anterodorsal parts sometimes have some large pits, sometimes they are nearly smooth. Between the anterior ridge and margin there are a row of elongated spaces (large or narrow ones).

Dimensions: adult left valve: L = 0.52 mm, H = 0.27 mm, L/H = 1.91; adult carapaces: L = 0.46 - 0.55 mm, H = 0.24 - 0.28 mm, L/H = 1.82 - 2.20, W = 0.16 - 0.18 mm, L/W = 2.16 - 2.69.

Occurrence: Budapest area: Budakeszi 6 borehole 127.9 - 129.4 m. Dorog area: Ótokod pit samples N° A8 - A10; Tokod 527 borehole 223.2 - 226.2 m,

238.8 - 241.3 m; Nyergesújfalu 31 borehole 252.5 - 253.5 m, 261.6 - 254.0 m, 268.0 - 269.5 m. Mány area: Csordakút 113 borehole 304.0 m; Csabdi 74 borehole 262.5 - 264.6 m; Mesterberek 78 borehole 377.0 m; Mesterberek 81 borehole 190.0 m; Mesterberek 180 borehole 80.6 m, 104.8 - 107.0 m; Tabajd 6 borehole 76.8 - 81.4 m. Mór-Tatabánya area: Gánt Bagoly Hill pit; Tatabánya 1481 borehole 141.2 - 142.3 m, 157.1 - 158.8 m. Bakony area: Dudar, coal mine.

Material: 5 left valves, 96 carapaces, 9 fragments.

Stratigraphical distribution without Hungary:

France: Lower Eocene - Upper Eocene.

Stratigraphical range in Hungary: Upper Lutetian? - Bartonian - Lower Priabonian?

Cytherettidae TRIEBEL, 1972 genus
Cytheretta G.W. MÜLLER 1894 genus

Cytheretta bifurcatocosta n. sp.
 Pl. 12, f. 8-10.

Derivatio nominis: after its branching costae.

Holotypus: carapace.

Locus typicus: Somlóvásárhely, Bakony Mts.

Stratum typicum: Somlóvásárhely-1 borehole, 546,7 m, Lower Priabonian.

Diagnosis: the form is only somewhat lower posteriorly as anteriorly, the sharp longitudinal costae are partly bifurcated, the transversal elements are reduced.

Description: the anterior outline of the left valve is very asymmetrical, its lower part has small radius, the upper part a large one, the anterior/dorsal angle is very large (without hinge ear), the posterior hinge ear is very weak, the dorsal outline is moderately convex, the posterior outline is asymmetrical, its upper part is nearly straight perpendicularly to longitudinal axis, the lower part is convex and gradually pass to the slightly sinuous ventral outline. There are sharp longitudinal costae on the surface, some of these are bifurcating in posterior direction near the maximal height and there are two shorter intermedier costae in the posterior half of valve. The posterior 1/4 of the valve is irregularly reticulated, anteriorly run two concentric costae, the inner is undulating.

The right valve is lower, the anterior/posterior transition is gradual, the posterior hinge ear absent, an anteriorly directed bifurcation is observable. The posterior outline of both valves is crenulated.

Dimensions: adult carapaces: L = 0.68 - 0.70 mm, H = 0.32 - 0.36 mm, W = 0.34 mm, L/H = 1.94 - 2.12.

Comparison: The form is similar to *C. minipustulosa* KEEN, 1972, but the later has more distinct anterior hinge ear, is more rectangular, in the dorsal view its sides are parallel and different are the details of the ornamentation.

Occurrence: Bakony area: Somlóvásárhely 1 borehole 546,7 - 551.0 m.

Material: 8 carapaces 3 right valves, 1 left valve, 5 fragments.

Stratigraphical range in Hungary: Upper Eocene (Lower Priabonian).

Cytheretta cf. *buttensis* KEEN, 1972
 Pl. 13, f. 1.

Remarks: form and ornamentation is similar to Morphotype B (KEEN, 1972, Pl. 15., f. 7.).

Dimensions: adult carapace: L = 0.63 mm, H = 0.33 mm, L/H = 1.91.

Occurrence: Mány area: Tabajd 6 borehole 143.0 - 48.0 m.

Material: 2 carapaces.

Stratigraphical range in Hungary: Middle? or Upper? Eocene.

Cytheretta costellata (ROEMER, 1838) s.l.
 Pl. 13, f. 2-3.

1968. *Cytheretta costellata* (ROEMER, 1838) - HASKINS, pp. 165-166., Pl. 2., f. 1-8.

1972. *Cytheretta costellata* (ROEMER, 1838) - KEEN, 1972, pp. 285-289., Pl. 2., f. 1-10.

1978. *Cytheretta costellata* (ROEMER, 1838) - KEEN, Pl. 7., f. 11.

Remarks: The shape and ornamentation is typical for this species.

Dimensions: adult carapaces: L = 0.66 - 0.73 mm, H = 0.39 - 0.41 mm, L/H = 1.76 - 1.87.

Occurrence: Bakony area: Somlóvásárhely 1 borehole 834.7 - 835.0 m.

Material: 4 carapaces, 1 right valve, 15 fragments.

Stratigraphical distribution without Hungary:

France: Middle Eocene, Belgium: Middle Eocene, England: Lutetian.

Stratigraphical range in Hungary: Middle Eocene (Lutetian).

Cytheretta decipiens KEIJ, 1957 s.l.
 Pl. 13, f. 4-10., Pl. 14, f. 1-8.

1957. *Cytheretta decipiens* n. sp. - KEIJ, p. 133., Pl. VI., f. 8., Pl. X. f. 15-16.

?1970. *Cytheretta decipiens* KEIJ, 1957 - GÖKÇEN, p. 72., Pl. I., f. 8-9.

1972. *Cytheretta decipiens* KEIJ, 1957 - KEEN, p. 294., Pl. 6., f. 8-10.

1972. *Cytheretta* aff. *decipiens* KEIJ, 1957 - KEEN, p. 294., Pl. 6. f. 8-10.

?1973. *Cytheretta concinna* TRIEBEL, 1952 - SÖNMEZ-GÖKÇEN, p. 44., Pl. V., f. 18-19.

1975. *Cytheretta decipiens* KEIJ, 1957 - WILLEMS, p. 514., Pl. 2., f. 6.

1977. *Cytheretta decipiens* KEIJ, 1957 - WILLEMS, p. 198., Pl. 1., f. 5.

1977. *Cytheretta tricostata* n. sp. - OLTEANU, pp. 121-122., Pl. I., f. 4., Pl. II., f. 1.

1985a. *Cytheretta decipiens* KEIJ, 1957, forma A - MONOSTORI, pp. 107 - 111., Pl. XIV., f. 3-19.

1993. *Cytheretta tricostata* OLTEANU, 1977 - RUSU et al., Pl. II., f. 15.

Remarks: The ornamentation present in some variations especially in sharpness of the three costa-groups. It is a tendency of sharpening of costa in the Upper Eocene but the main ornamentation pattern is constant.

There is a form occurring both in Bartonian and Priabonian with less undulating dorsal and ventral outlines and reduced transversal elements (intercostal reticulation). The three costa-groups are very similar to those of the frequent form. That is also a variation of *decipiens*.

Another frequent variation of this species is the „forma B” in Monostori, 1985a. This form is frequent in Middle Eocene of Transdanubian Central Range and its surroundings. There is a gradual transition from the typical *decipiens* form („forma A” in Monostori, 1985a) to extreme form of forma B with three short longitudinal swellings of fused costae and weak reticulation between, before and behind those.

Cytheretta tricostata OLTEANU, 1977 is equivalent of the forms from Upper Eocene of Hungary with his sharpened costae.

Dimensions: adult carapaces: typical („forma „ in Monostori, 1985): L = 0.73 - 0.85 mm, H = 0.37 - 0.46 mm, W = 0.34 - 0.39 mm, L/H = 1.79 - 2.03. „forma B” (in Monostori, 1985): L = 0.68 - .73 mm, H = 0.39 - 0.42 mm, W = 0.33 - 0.35 mm, L/H = 1.58 - 1.85.

Occurrence: Budapest area: Budakeszi 6 borehole 132.6 - 152.2 m. Cserhát area: Kósd-20 borehole 136.5 - 140.5 m. Dorog area: Tokod-Ebszöny outcrop; Ótokod open pit mine A2-B4 samples; Tokod 527 borehole 199.8 - 255.8 m; Csolnok borehole 306.9 - 329.4 m; Csolnok 699/b borehole 520.0 - 528.0 m; Esztergom 81 borehole 234.7 - 252.6 m; Nyergesújfalu 31 borehole 186.9 - 286.8 m. Mátyás area: Csabdi 74 borehole 262.5 - 264.6 m; Csordakút 113 borehole 297.0 - 321.0 m; Csordakút 115 borehole 249.0 - 404.0 m; Mátyás 55 borehole 445.0 m; Mesterberek 75 borehole 289.0 - 292.5 m; Mesterberek 76 borehole 295.5 - 337.6 m; Mesterberek 81 borehole 158.0 - 190.0 m; Mesterberek 118 borehole 299.0 - 324.0 m; Mesterberek 180 borehole 79.5 - 107.0 m. Mór-Tatabánya area: Tatabánya 1481 borehole 126.0 - 155.3 m.

Material: 773 carapaces, 66 right valves, 55 left valves, 32 fragments.

Stratigraphical distribution without Hungary: France and Belgium: Cuisian to Ledian; Romania: Upper Eocene.

Stratigraphical range in Hungary: Middle and Upper Eocene (Bartonian - Lower Priabonian).

Cytheretta aff. *haimeana* (BOSQUET, 1852)

Pl. 14, f. 9.

1987. *Cytheretta* cf. *bambruggensis* KEIL, 1955 - MONOSTORI, pp. 156-157., Pl. 7., f. 5-6.

Remarks: The ornamentation corresponds to that of the specimens from Beauchamp (the longitudinal

costae are more prominent than the transversal reticulation-elements). The shape is rather different, the dorsal and ventral outlines run nearly parallel and they are only slightly undulate. This is perhaps a transitional form from *haimeana* to *haimeanacostata* n. sp.

Dimensions: adult carapaces: L = 0.80 - 0.95 mm, H = 0.42 - 0.46 mm, L/H = 1.90 - 2.07.

Occurrence: Mór-Tatabánya area: Tatabánya 1481 borehole 140.0 - 140.3 m. Bakony area: Dudar coal mine.

Material: 3 carapaces.

Stratigraphical range in Hungary: Middle Eocene (Upper Lutetian-Bartonian).

Cytheretta haimeanacostata n. sp.

Pl. 14, f. 10., Pl. 15, f. 1-3.

Derivatio nominis: the ornamentation is similar to *C. haimeana* (BOSQUET, 1852).

Holotypus: carapace.

Locus typicus: Budakeszi, near Budapest.

Stratum typicum: Budakeszi 6 borehole, 150.0 - 152.2 m, Lower Priabonian.

Diagnosis: the dorsal and ventral outlines run nearly parallel, the longitudinal costae are distinct, mostly sharp, the transversal elements are reduced. The pattern of costae is equivalent to that of the *haimeana*.

Description: The anterior outline of the left valves is slightly asymmetrical, the dorsal outline is nearly straight, fairly undulating, the posterior outline is broadly and asymmetrically rounded, its shorter upper part is straight. The ventral outline is nearly straight. In the anterior 0.1 of the valves there is a reticulation with distinct transversal element. From 0.1 to 0.8 - 0.9 of length run parallel, sharp costae. Their pattern corresponds to that of the *haimeana* visible on scanning photos KEEN (1972, 1978) apart from the more distinct transversal elements on the material of KEEN, which are hardly or not visible on the materials investigated from Hungary. The posterior-posteroventral part is nearly smooth with faint reticulation and some small knot-like spines. The posteroventral outline have 5-6 small spines. The right valve is similar with ventral-posteroventral overlap of left valve on right.

In dorsal view of carapace the anterior part runs up at angle 30-35° to 1/4 of length than at angle 5-10° to 0.8 of length. Posteriorly it slopes at angle 45-50° to the short parallel part of carapace-end. There is a similar short parallel carapace-part anteriorly.

The inner features are not visible. In material of Kósd there are specimens with weakening of all ornamentation.

Dimensions: adult carapaces: L = 0.80 - 0.90 mm, H = 0.42 - 0.46 mm, W = 0.39 mm, L/H = 1.89 - 2.00.

Comparison: The form is similar to *C. haimeana* (BOSQUET, 1852), but its shape is different and the transversal elements of intercostal ornamentation are very faint.

Occurrence: Budapest area: Budakeszi 6 borehole 180.3 - 152.2 m. Mány area: Tabajd 6 borehole 76.8 - 81.2 m.

Material: 32 carapaces, 3 right valves, 2 fragments.
Stratigraphical range in Hungary: Upper Eocene.

Cytheretta tenuipunctata laticauda n.ssp.

Pl. 15, f. 4-5.

Derivatio nominis: after its broadly rounded posterior outline.

Holotypus: carapace.

Locus typicus: Budakeszi, near Budapest.

Stratum typicum: Budakeszi-6 borehole, 114.5 - 116.5 m, Lower Priabonian.

Diagnosis: the posterior outline is nearly symmetrical without distinct concave upper part of posterior outline of right valve.

Description: the form and outline are similar to those of *C. tenuipunctata* in DUCASSE et al., 1985, except of details mentioned above in the diagnosis of new subspecies. The later is more elongate, so the ventral and dorsal outlines are more parallel. The ornamentation is also very similar, the anteromarginal and parallel with it costae are more prominent and longer on the new subspecies.

A part of the material has distinct ornamentation with sharp costae, another has in different degree indistinct ornamentation.

Dimensions: adult carapaces: L = 0.72 - 0.81 mm, H = 0.34 - 0.37 mm, L/H = 2.05 - 2.221.

Comparison: see in description.

Occurrence: Budapest area: Budakeszi 6 borehole 108.3 - 150.2 m. Mór-Tatabánya area: Oroszlány 2361 borehole 307.0 m. Bakony area: Somlóvásárhely 1 borehole 551.0 m; Padragkút outcrop, sample N° 13.

Material: 20 carapaces, 2 right valves.

Stratigraphical range in Hungary: Middle and Upper Eocene (Bartonian - Lower Priabonian).

Cytheretta tenuipunctata posterodepressa n. sp.

Pl. 15, f. 6-7.

Derivatio nominis: after wide posterior depressed area.

Holotypus: carapace.

Locus typicus: Budakeszi, near Budapest.

Stratum typicum Budakeszi 6 borehole 150.0 - 152.2 m, Lower Priabonian.

Diagnosis: elongated quadrangular form with densely ribbed central part, fairly ornamented anterior and smooth, depressed posterior-posteroventral part.

Description: the anterior outline of the left valve is asymmetrically rounded, the dorsal outline from 1/4 of length in nearly straight, the posterior outline is asymmetrically rounded, its lower part has larger radius, the ventral outline is nearly straight. The shape is nearly rectangle. On the anterior-anteroventral surface there is some traces of concentric rib(s) and reticulation, on the central part run 10-12 parallel costae converging

posteriorly and there is a dorsal one running nearly parallel the valve outline and moving off from it posteriorly and ventrally and attaching before the mid-length to another costa near the ventral outline. The depressed area posteriorly and posteroventrally from this costa is smooth.

There is a variation with reduced costae.

Dimensions: adult carapaces: L = 0.88 - 0.89 mm, H = 0.41 - 0.42 mm, L/H = 2.10 - 2.17.

Comparison: the species is similar to *C. tenuipunctata*, the new subspecies is more elongated, the depressed posterior-posteroventral area is prominent and smooth. The ornamentation is similar to that of the *laticauda*, the anterior and posterior reticulations are less developed. There are some transitional forms in the material, so the subspecies or ecomorph level is indistinct.

Occurrence: Budapest area: Budakeszi 6 borehole 130.4 - 152.2 m.

Material: 9 carapaces.

Stratigraphical range in Hungary: Upper Eocene (Lower Priabonian).

Cytheretta unicostata MONOSTORI, 1985

Pl. 15, f. 8-10.

1985a. *Cytheretta unicostata* n. sp. - MONOSTORI, pp. 114-115, Pl. XV., f. 8-10.

Remarks: variable form. In material of Dudar there are specimens with weak longitudinal and somewhat irregular costae with a more strong corresponding to distinct costa of *unicostata*. Sharp costa run parallel with anterior outline. There are different degree of ornamentation in the whole material from Hungary.

Dimensions: adult carapaces: L = 0.61 - 0.78 mm, H = 0.29 - 0.41 mm, L/H = 1.69 - 2.08.

Occurrence: Dorog area: Bajót-Búzáshegy ravine, sample N° 11; Csolnok 699/b borehole 517.2 - 518.2 m; Esztergom 81 borehole 287.8 - 290.4 m. Mány area: Csordakút 113 borehole 315.0 m. Mór-Tatabánya area: Oroszlány 2361 borehole 313.0 m. Bakony area: Dudar coal mine.

Material: 8 carapaces, 1 right valve, 1 left valve.

Stratigraphical range in Hungary: Middle Eocene (Upper Lutetian-Bartonian).

Cytheretta sp. div.

Remarks: Some indeterminable specimens of different species were found in the samples.

Occurrence: Budapest area: Budakeszi 6 borehole 108.3 - 130.4 m. Mány area: Mesterberek 76 borehole 317.0 m. Bakony area: Somlóvásárhely 1 borehole 546.7m; Ajka 181 borehole 55.0 m.

Material: 9 carapaces.

Loxoconchidae Sars, 1925 familia

Loxoconcha Sars, 1866 genus

Loxoconcha inculta MONOSTORI, 1985
Pl. 16, f. 1-6.

1985a. *Loxoconcha inculta* n. sp. - MONOSTORI, pp. 116-117., Pl. XV., f. 11-23.

Remarks: There is a very fine posteroventral arched keel far from the ventral and posterior margins and a little posteroventral knot behind it. There are some specimens having larger pits even in the same samples together with the finely pitted forms.

Dimensions: adult carapaces L = 0.34 - 0.44 mm, H = 0.21 - 0.25 mm, W = 0.18 - 0.20 mm, L/H = 1.60 - 1.85.

Occurrence: Cserhát area: Kósd 20 borehole 124.4 - 130.2 m. Dorog area: Tokod, Ebszöny outcrop; Ótokod, open pit mine samples A2 - B12; Tokod 527 borehole 198.4 - 254.7 m; Csolnok borehole 327.1 - 329.4 m; Csolnok 699/b borehole 589.8 - 593.0 m; Esztergom 81 borehole 248.5 - 279.6 m; Nyergesújfalu 31 borehole 205.2 - 209.6 m. Mány area: Csabdi 74 borehole 262.5 - 296.5 m; Csordakút 113 borehole 296.0 - 369.0 m; Csordakút 115 borehole 292.0 - 410.0 m; Mány 55 borehole 424.0 - 509.0 m; Mesterberek 75 borehole 272.5 - 368.0 m; Mesterberek 76 borehole 288.2 - 389.5 m; Mesterberek 78 borehole 383.0 - 385.0 m; Mesterberek 81 borehole 140.0 - 152.0 m; Mesterberek 118 borehole 287.1 - 396.0 m; Mesterberek 180 borehole 68.0 - 138.5 m; Tabajd 6 borehole 76.8 - 81.4 m. Mór-Tatabánya area: Tarján 8 borehole 247.6 - 256.3 m; Tarján 9 borehole 364.0 - 368.8 m; Tatabánya 1481 borehole 127.0 - 129.8 m.

Material: 821 carapace, 1 right valve.

Stratigraphical range in Hungary: Middle and Upper Eocene (Bartonian - Lower Priabonian).

Paracytherideidae PURI, 1957 familia
Paracytheridea G. W. MÜLLER 1894 genus

Paracytheridea gradata (BOSQUET, 1852) s.l.
Pl. 16, f. 7-8.

1852. *Cythere gradata* n. sp. - BOSQUET, p. 127., Pl. VI., f. 11.

1957. *Paracytheridea* (*Paracytheridea*) *gradata* (BOSQUET, 1852) - KEIJ, p. 159., Pl. XXII., f. 2-4.

1961. *Paracytheridea gradata* (BOSQUET, 1852) - DELTEL, p. 126., Pl. 9., f. 138.

1966. *Paracytheridea gradata* (BOSQUET, 1852) - MOUSSOU, pp. 72-73., Pl. 20., f. 82a-c.

1969. *Paracytheridea gradata* (BOSQUET, 1852) - DUCASSE, p. 88., Pl. VI., f. 124.

1970. *Paracytheridea* (*Paracytheridea*) *gradata* (BOSQUET, 1852) - HASKINS, p. 18., Pl. 2., f. 4-9.

1975. *Paracytheridea* aff. *gradata* (BOSQUET, 1852) - DOEBL et SONNE, p. 144., Pl. 2., f. 15.

1977. *Paracytheridea gradata* (BOSQUET, 1852) n. ssp. - MONOSTORI, pp. 91-93., Pl. II., f. 12.

1978. *Paracytheridea* cf. *gradata* (BOSQUET, 1852) - KEEN, 1978., Pl. 9., f. 19.

1980. *Paracytheridea gradata* (BOSQUET, 1852) - OLTEANU, pl. VI., f. 6.

1985a. *Paracytheridea* cf. *gradata* (BOSQUET, 1852) - MONOSTORI, p. 118., Pl. XV., f. 24-25.

1985. *Paracytheridea gradata* (BOSQUET, 1852) - DUCASSE et al., Pl. 87., f. 11.

1987. *Paracytheridea* cf. *gradata* (BOSQUET, 1852) - MONOSTORI, p. 157.

1988. *Paracytheridea* aff. *gradata* (BOSQUET, 1852) - FAURE et GUERNET, Pl. 1., f. 12.

Remarks: There are some variations in the material from the Hungarian Eocene (considering the shape and details of the ornamentation).

Dimensions: adult carapaces: L = 0.42 - 0.53 mm, H = 0.18 - 0.25 mm, W = 0.29 - 0.33 mm, L/H = 2.00 - 2.45.

Occurrence: Dorog area: Bajót-Búzáshegy ravine samples 3-5; Lábatlan-Nyergesújfalu river wall sample III/3; Nyergesújfalu 31 borehole 238.0 - 266.0 m. Mány area: Csabdi 74 borehole 292.8 - 295.5 m; Csordakút 113 borehole 297.0 - 361.0 m; Mány 55 borehole 431.0 - 434.0 m. Mór-Tatabánya area: Gánt, Bagoly Hill pit.

Material: 6 carapaces, 1 right valve, 1 left valve.

Stratigraphical distribution without Hungary: France: Middle Eocene - ?Lower Miocene; Belgium, The Netherlands: Eocene; England: Eocene; Roumania: Lower Oligocene.

Stratigraphical range in Hungary: Middle and Upper Eocene.

Paracytheridea grignonensis (KEIJ, 1957)
Pl. 16, f. 9.

1957. *Paracytheridea* (*Paracytheridea*) *grignonensis* n. sp. - KEIJ, p. 161., Pl. XIX., f. 11., Pl. XXII., f. 1.

1959. *Paracytheridea* (*Paracytheridea*) *grignonensis* KEIJ, 1957 - DUCASSE, pp. 29-30., Pl. XIV., f. 3.

1961. *Paracytheridea grignonensis* KEIJ, 1957 - DELTEL, pp. 126 - 127., Pl. 9., f. 137.

1969. *Paracytheridea grignonensis* KEIJ, 1957 - DUCASSE, p. 89., Pl. VI., f. 125.

1970. *Paracytheridea* (*Paracytheridea*) *grignonensis* KEIJ, 1957 - HASKINS, 1970., p. 18., Pl. 2., f. 1-3.

1971. *Paracytheridea grignonensis* KEIJ, 1957 - BLONDEAU, p. 91., Pl. IX., f. 20.

1985a. *Paracytheridea* cf. *grignonensis* KEIJ, 1957 - MONOSTORI, p. 118., Pl. XV., f. 26.

1985. *Paracytheridea grignonensis* KEIJ, 1957 - DUCASSE et al., Pl. 87., f. 7-8.

Dimensions: adult carapace: L = 0.58, H = 0.32, L/H = 1.81.

Occurrence: Dorog area: Lábatlan-Nyergesújfalu river wall sample II/1. Bakony area: Somlónásárhely-1 borehole 546.7 m.

Material: 2 left valves.

Stratigraphical distribution without Hungary: France: Middle and Upper Eocene.

Stratigraphical range in Hungary: Upper Eocene (Lower Priabonian).

Cytheruridae G. W. MÜLLER familia
 Cytherurinae G. W. MÜLLER, 1894 subfamilia
Cytherura SARS, 1866 genus

Cytherura? Sp.

Remarks: There is a single very poorly preserved left valve with a ventrolateral extension finished in a stubby point and with the remains of the coarse and irregular ornamentation.

Occurrence: Budapest area: Budapest, Pusztaszeri Street outcrop.

Stratigraphical range in Hungary: Upper Eocene (Uppermost Priabonian).

Eucytherura G. W. MÜLLER, 1894 genus

Eucytherura ex gr. *dentata* LIENENKLAUS, 1905
 Pl. 16, f. 10.

1985b. *Eucytherura dentata* LIENENKLAUS, 1905 - MONOSTORI, pp. 208-209., Pl. 7., f. 7.

Remarks: The all investigable characters of the poorly preserved specimens relate to this species.

Dimensions: adult carapace: L = 0.41 mm, H = 0.22 mm, L/H = 1.84.

Occurrence: Budapest area: Kiscell-1 borehole 103.5 m. Bükk area: Noszvaj, Sikfőkút outcrop, sample N° 15.

Material: 1 right valve, 1 carapace.

Stratigraphical distribution without Hungary: Germany: L. Oligocene; Belgium: U. Eocene - L. Oligocene; Ukraine: U. Eocene - L. Oligocene; Czechoslovak: Oligocene.

Stratigraphical range in Hungary: topmost Eocene.

Eucytherura sp. 1.
 Pl. 17, f. 1.

Remarks: The specimens are similare to *E. dentata* LIENENKLAUS, 1905 and *E. keiji* PIETRZENIUK, 1969 species, but the details are not clear because of the bad preservation.

Dimensions: adult carapaces: L = 0.27 - 0.30 mm, H = 0.14 - 0.16 mm, L/H = 1.86-1.88.

Occurrence: Mátya area: Mesterberek 76 borehole 307.0 m; Bakony area: Dudar coal mine.

Material: 2 carapaces, 1 left valve.

Stratigraphical range in Hungary: Middle Eocene (Upper Lutetian-Bartonian).

Semicytherura WAGNER, 1957 genus

Semicytherura ex gr. *gracilis* (LIENENKLAUS, 1895)
 Pl. 17, f. 2-3.

1985b. *Semicytherura* ex gr. *gracilis* (LIENENKLAUS, 1895) - MONOSTORI, pp. 209-210., Pl. 7., f. 8-9.

Remarks: The specimens are close to *S. aff. gracilis* in BARBIN et GUERNET (1988).

Dimensions: adult carapaces: L = 0.40 - 0.41 mm, H = 0.20 - 0.22 mm, W = 0.19 mm, L/H = 1.82 - 2.05.

Occurrence: Budapest area: Budapest, Pusztaszeri str. outcrop, samples N° 2, 21, 22, 24, 26.

Material: 14 carapaces.

Stratigraphical range in Hungary: Upper Eocene (Upper Priabonian).

Semicytherura oedelemensis (KEIJ, 1957)
 Pl. 17, f. 4.

1957. *Cytherura oedelemensis* n. sp. - KEIJ, p. 147., Pl. XXIII., f. 11-13.

1969. *Cytherura oedelemensis* KEIJ, 1957 - PIETRZENIUK, p. 97. Pl. VI., f. 12-13., Pl. XVII., f. 13.

1985a. *Semicytherura oedelemensis* (KEIJ, 1957) n. ssp - MONOSTORI, pp. 119-120., Pl. XV., f. 27-29.

Remarks: On the basis of the SEM photos the ornamentation corresponds to that of the *oedelemensis* in the works of KEIJ and PIETRZENIUK.

Dimensions: adult carapaces: L = 0.31 - 0.37 mm, H = 0.15 - 0.17 mm, L/H = 2.00 - 2.21.

Occurrence: Dorog area: Tokod 527 borehole 238.2 - 241.3 m. Mátya area: Csabdi 74 borehole 294.7 - 295.6 m.

Material: 12 carapaces.

Stratigraphical distribution without Hungary: Belgium, The Netherlands, Germany: Middle and Upper Eocene.

Stratigraphical range in Hungary: Middle Eocene (Bartonian).

Semicytherura aff. *unispinosa* PIETRZENIUK, 1969
 Pl. 17, f. 5.

1985a. *Semicytherura* n. sp. aff. *S. unispinosa* PIETRZENIUK, 1969 - MONOSTORI, pp. 120-121., Pl. XV., f. 30-32.

Remarks: On the SEM photo there is a fine reticulation. The form is obviously different from the *unispinosa*, but the material is not enough to describe a new species.

Dimensions: adult carapace: L = 0.35 mm, H = 0.19 mm, L/H = 1.87.

Occurrence: Dorog area: Ótokod open pit mine, samples A1 - A9; Tokod 527 borehole 210.2 - 213.8 m.

Material: 3 carapaces.

Stratigraphical range in Hungary: Middle Eocene (Bartonian).

Cytheropterinae HANAI, 1957 subfamilia
Cytheropteron SARS, 1866 genus

Cytheropteron sp. 1

Remarks: Poorly preserved carapace with similarity to *C. brevalata* PIETRZENIUK, 1969.

Dimensions: adult carapace: L = 0.40 mm, H = 0.23 mm, L/H = 1.74, W = 0.29 mm.

Occurrence: Somlóvásárhely 1 borehole 679.5 m.
Material: 1 carapace.
Stratigraphical range in Hungary: Middle Eocene (Upper Bartonian).

Cytheropteron sp. 2
Pl. 17, f. 6.

Remarks: Poorly preserved carapace. The caudal prolongation is at the 3/4 of the height, the dorsal outline is weakly arched, the weak wing runs near the ventral outline, the anterior outline is somewhat assymmetrically rounded, its upper part is nearly straight and it runs at about 120° angle to the dorsal outline.

Dimensions: adult carapace: L = 0.40 mm, H = 0.24 mm, L/H = 1.67.

Occurrence: Tatabánya 1481 borehole 234.2 - 236.2 m.

Material: 1 carapace.

Stratigraphical range in Hungary: Middle Eocene (Bartonian).

Cytheropteron sp. 3
Pl. 17, f. 7.

Remarks: The anterior outline is nearly symmetrically rounded, the dorsal outline is straight, the caudal process is upward directed and placed near the dorsal line, the posterior half of the ventral outline is nearly parallel with the dorsal one. There is a strong reticulation on the valve except of the anterodorsal and posterior-posterodorsal parts and a fine punctuation both in the meshes of the reticulation and on the unreticulated parts.

The ventral sharp alar prolongation is long, and parallel with the dorsal outline. There is a sharp keel on its edge and some parallel another ribs on its ventral side.

There is an unexpected knot near the anterior hinge area.

Dimensions: adult left valve: L = 0.41, H = 0.21, L/H = 1.95

Occurrence: Bakony area: Dudar.

Material: 1 left valve.

Stratigraphical range in Hungary: Middle Eocene (Upper Lutetian - Lower Bartonian).

Cytheropteron sp. 4
P. 17, f. 8.

Remarks: The anterior outline is nearly symmetrically rounded, the dorsal outline is slightly and asymmetrically arched, the caudal process is near the 3/4 of the height. The ventral outline is nearly straight. The alar prolongation is obtuse and rather short. There is a prominent polygonal reticulation on the surface with fine punctuation in the meshes.

Dimensions: adult left valve: L = 0.33, H = 0.20, L/H = 1.65.

Occurrence: Dudar.

Material: 1 left valve.

Stratigraphical range in Hungary: Middle Eocene (Upper Lutetian - Lower Bartonian).

Bythocytheridae SARS 1866 familia
Monoceratina ROTH 1928 genus

Monoceratina striata DELTEL, 1961
Pl. 17, f. 9.

1961. *Monoceratina? striata* n. sp. - DELTEL, pp. 50-52., Pl. 6., f. 77-79.

1964. *Monoceratina? striata* DELTEL - DELTEL, Pl. II. f. 35-37.

1985a. *Monoceratina* n. sp. aff. *M. striata* DELTEL - MONOSTORI, pp. 126-127., Pl. XVI., f. 6-7.

Remarks: The differences noticed in MONOSTORI, 1985a are not sufficient to establish a new taxon.

Dimensions: adult carapaces: L = 0.50 - 0.53 mm, H = 0.24 - 0.27 mm, L/H = 1.87 - 2.14, W = 0.35 - 0.42 mm.

Occurrence: Dorog area: Tokod Ebszöny outcrop; Csolnok 699/b borehole 588.4 - 589.8 m; Csolnok borehole 387.0 - 391.2 m.

Material: 3 carapaces.

Stratigraphical distribution without Hungary: France: Lutetian - Ludian.

Stratigraphical range in Hungary: Middle Eocene (Upper Lutetian - Lower Bartonian).

Monoceratina aff. *tricuspidata* (JONES et HINDE, 1890)
Pl. 17, f. 10.

1985b. *Monoceratina? cf. striata* DELTEL, 1961 - MONOSTORI, pp. 214-215.

Remarks: Fragmented specimen remembering on *M. tricuspidata* JONES et HINDE, 1890 sensu DELTEL, 1961 and DUCASSE et al., 1985 (on the scanning photo the three members of the wing-like lateral extension are visible).

Dimensions: adult carapace: L = 0.57 mm, H = 0.29 mm, L/H = 2

Occurrence: Budapest area: Budapest, Pusztaszeri str. outcrop, bed N° 27.

Material: 1 carapace.

Stratigraphical range in Hungary: Upper Eocene (Uppermost Priabonian).

Monoceratina sp.

1977. *Monoceratina* sp. - MONOSTORI, p. 83., Pl. II., f. 3.

Remarks: There is a weak posterior reticulation.

Dimensions (fragmental specimen): L = 0.52 mm, H = 0.28 mm.

Occurrence: Mór-Tatabánya area: Gánt, Bagolyhegy outcrop.

Material: 1 fragmental left valve.

Stratigraphical range in Hungary: Middle Eocene (Bartonian).

Appendix

Leguminocythereis striatopunctata angulata n. ssp. in MONOSTORI, 1996, p. 58., Pl. 22., f. 78. is a preoccupied name by *L. angulata* POAG, 1972. The

new name is *Leguminocythereis striatopunctata tumida* nom. nov.

References

- APOSTOLESKU, V. (1955): Description de quelques ostracodes du Lutétien du Bassin de Paris - Cahiers Géologie, 28-29., pp. 241-279., Pl. 1-8.
- BARBIN, V. ET GUERNET, C. (1988): Contribution a l'étude de Priabonien de la Région-type (Italie du Nord): les Ostracodes - Revue de Micropaléontologie, 30., 4., pp. 209-231., Pl. 1-4.
- BLONDEAU, M. A. (1971): Contribution a l'étude des ostracodes Eocenes des Bassins de Campbon et de Saffre (Loire-Atlantique) - These de l'Univ. Nantes, pp. 1-157., Pl. 1-17.
- BOSQUET, J. (1852): Description des Entomostacés fossiles des terrains tertiaires de la France et de la Belgique - Memoires Sav. étrang. Academie Roy. Sci. Belgique, 24., pp. 1-142., Pl. 1-6.
- BRESTENSKÁ, E. ET JIRICEK, R. (1978): Ostrakoden des Badenien der Zentralen Paratethys - Chronostratigraphie und Neostatotypen, VI, M₄ Badenien, VEDA, Bratislava, pp. 405-421., Pl. 1-9.
- CARBONNEL, G. (1975): Les ostracodes de l'Ilerdien (Eocène inférieur) du bassin de Tremp (Espagne): stratotype et coupes avoisiantes - Revista española micropaleontologia, VII., 1., pp. 37-50., Pl. 1-3.
- DELTEL, B. (1961): Les Ostracodes du Paléogène moyen et supérieur d'Aquitaine méridionale - These Troisième Cycle, Université de Bordeaux, N° 95., pp. 1-215., Pl. 1-19.
- DELTEL, B. (1964): Nouveaux Ostracodes de l'Eocène et l'Oligocène de l'Aquitaine méridionale - Actes Soc. Linnéenne Bordeaux, 100., pp. 127-221., Pl. 1-6.
- DOEBL, F. ET SONNE, V. (1975): Mikrofauna und -flora des Unteren Meeressandes (Rupel). I. Sandgrube am Steigerberg bei Wendelsheim (Mainzer Becken) - Mainzer geowiss. Mitteilungen, 4., pp. 139-157., Pl. 1-3.
- DUCASSE, O. (1959): Les Ostracodes de l'Eocène du sous-sol bordelais: répartition intérêt stratigraphique et paléogéographique - Thèse Troisième Cycle, Univ. Bordeaux, N° 40., pp. 1-132., Pl. 1-28.
- DUCASSE, O. (1963): Quelques espèces nouvelles d'Ostracodes de l'Eocène terminal girondin - Actes Soc. Linnéenne Bordeaux, 100., pp. 223-248., Pl. 1-3.
- DUCASSE, O. (1967): Nouveaux Ostracodes de l'Eocène Nordaquitain - Proc. Verb. Soc. Sc. Phys. Natur Bordeaux, (7/2/1967), pp. 1-89., Pl. 1-5.
- DUCASSE, O. (1969): Etude micropaléontologique (Ostracodes) de l'Eocène Nord-Aquitain - These Univ. Bordeaux, pp. 1-381., Pl. 1-20.
- DUCASSE, O. ET COUSTILLAS, F. (1981): Les ostracodes du genre *Pokornyyella* dans le Paleogène aquitain. Part I. - Bulletin Inst. géol. bassin d'Aquitaine, 29., pp. 5-3., Pl. 1-4.
- DUCASSE, O., GUERNET, CL. ET TAMBAREAU, Y. (1985): Paléogène - In Oertli, H.J. (ed.) Atlas des Ostracodes de France. Bulletines Centre Rech, Explor-Prod. Elf-Aquitain, Mem. 9., pp. 257-311., Pl. 71-89.
- DUCASSE, O.; LETE, C. ET ROUSSELLE, L. (1985): Contribution a l'étude paleontologique d'une crise Paleogène: populations d'ostracodes a la limite Eocène-Oligocène dans le Medoc (Gironde) - Bulletin Inst. géol. Bassin d'Aquitaine, 38., pp. 141-175., Pl. 1-4.
- DUCASSE, O. ET ROUSSELLE, L. (1990): Les *Pokornyyella* (ostracodes) a la limite oligo-miocène en Aquitaine: populations intraspecifics, utilisation biostratigraphique régionale - Bulletin Inst. géol. Bassin d'Aquitaine, 49., pp. 65-91., Pl. 1-6.
- FAURE, P. ET GUERNET, C. (1988): Ludien marin de Chateau-Thierry, Ostracodes et corrélation stratigraphique entre Bassin de Paris (France) et Bassin de Hampshire (Grande-Bretagne) - Geobios, 21., 4., pp. 507-513., Pl. 1.
- GÖKÇEN, N. (1970): Les Ostracodes de l'Yprésien de l'Ouest du Bassin de Londres - Bulletin Min. Res. Expl. Inst. Turkey, 75., pp. 69-86., Pl. 1-3.
- GUERNET, CL. (1984): Ostracodes de l'Auvervien du Bassin de Paris: description et signification - Revue de Micropaléontologie, 27., 2., pp. 118-137., Pl. 1-4.
- GUERNET, CL.; BOURDILLON DE GRISSAC, CH. ET ROGER, J. (1991): Ostracodes Paléogènes du Dhofar (Oman). Intérêt stratigraphique et paléogéographique - Revue de Micropaléontologie, 34., 4., pp. 297-311., Pl. 1-4.
- GUERNET, CL. ET MOULLADE, M. (1994): Ostracodes en milieu océanique profond (Atlantique Central) au passage Miocène - Pliocène. - Revue de Micropaléontologie, 37., 4., pp. 257-274., Pl. 1-3.
- HARTMANN, G. ET PURI, H.S. (1974): Summary of neontological and paleontological classification of Ostracoda - Mitteilungen Hamburg. zool. Mus. Inst., 70., pp. 7-73.
- HASKINS, C. W. (1968-1971): Tertiary Ostracoda from the Isle of Wight and Barton, Hampshire, England. I-VII - Revue de Micropaléontologie 10., 4., pp. 250-260., Pl. 1-2; 11., 1., pp. 3-12., Pl. 1-2; 11., 3., pp. 161-175., Pl. 1-3; 12., 3., pp. 149-170., Pl. 1-4; 13., 1., pp. 13-29., Pl. 1-3; 13., 4., pp. 207-221., Pl. 1-3; 14., 3., pp. 147-156., Pl. 1-2.
- HINTE, J.E. (1962): Ostracoden aus dem Alttertiär des Sonnerberges, Kärnten, Österreich - Proceedings Kon. Nederl. Akad. Wetensch., B. 65., pp. 166-188., Pl. 1-3.
- KEEN, M. C. (1972): Mid-Tertiary Cytherettinae of North-West Europe - Bulletin of British Museum (Nat. Hist.), Geology, 21., 6., pp. 263-349., Pl. 1-23.

- KEEN, M. (1978): The Tertiary-Paleogene. - In R. Bate and E. Robinson (eds) A stratigraphical index of British Ostracoda, Seel House Press, Liverpool, pp. 385-450., Pl. 1-12.
- KEIL, A.J. (1957): Eocene and Oligocene Ostracoda of Belgium - Institute Roy. Sci. Nat. Belgique, Mém. 136., pp. 1-210., Pl. 1-26.
- LIEBAU, A. (1975): Comment on suprageneric taxa of the Trachyleberididae s.n. (Ostracoda, Cytheracea) - Neues Jahrbuch Geol. Paläont. Abh., 148., 3., pp. 353-379.
- LIEBAU, A. (1977): Homologous sculpture patterns in Trachyleberididae and related Ostracods - Smithsonian Inst., Nolit, Belgrade, 1977., pp. 1-93.
- LIEBAU, A. (1991): Sculptur-Evolution bei Ostracoden am Beispiel europäischer „Quadracytheren“ - Geologie und Paläontologie in Westfalen, 13., pp. 1-395., Pl. 1-95., Münster.
- LIENENKLAUS, E. (1900): Die Tertiär-Ostracoden des mittleren Nord-Deutschland - Zeitschrift Deutsch. Geol. Gesellschaft, 52., pp. 497-550., Pl. 1-4.
- LIENENKLAUS, E. (1905): Die Ostrakoden des Mainzer Tertiärbeckens - Abhandlungen Senckenberg. Naturforsch. Ges. für 1905., pp. 1-67., Pl. 1-4.
- LUBIMOVA, P. L.; GUHA, D.K. et MOHAN, H. (1960): Ostracoda of Jurassic and Tertiary deposits from Kutch and Rajasthan (Jaisalmer), India - Bulletin Geol. Mining, Metallurg. Soc. India, 22., pp. 1-61., Pl. 1-4.
- MÉHES, GY. (1936): Die eozänen Ostracoden der Umgebung von Budapest - Geologica Hungarica, ser. Palaeontologica, 12., pp. 1-64., Pl. 1-IV.
- MONOSTORI, M. (1977): Ostracode fauna from the Eocene of Gánt (Transdanubian Central Mountains, Hungary) - Annales Univ. Sci. Budapestinensis, Sect. Geol., XIX., pp. 75-129., Pl. I-IV.
- MONOSTORI, M. (1985a): Eocene ostracods from the Dorog Basin (Northern Transdanubia, Hungary) - Akadémiai Kiadó, Budapest, pp. 1-213., Pl. I-XVII.
- MONOSTORI, M. (1985b): Ostracods of Eocene/Oligocene boundary profiles - Annales Univ. Sci. Budapestinensis, Sect. Geol., XXV., pp. 161-243., Pl. 1-8.
- MONOSTORI, M. (1987): Ostracod fauna and palaeoecology of the Lutetian (Eocene) mollusc sand at Dudar, Hungary - Annales Univ. Sci. Budapestinensis, Sect. Geol., XXVII., pp. 135-183., Pl. 1-7.
- MONOSTORI, M. (1996): Eocene ostracods of Hungary - Systematical part 1. (Cytheracea 1.) - Annales Univ. Sci. Budapestinensis, Sect. Geol., XXXI., pp. 27-74., 123-144., Pl. 1-22.
- MOOS, B. (1968): Zur Ostracoden-Fauna (Crust.) des Unteroligozäns von Lattorf. - Geologisches Jahrbuch, 87., pp. 1-40., Pl. 1-4.
- MOUSSOU, A. (1966): Contribution a l'étude des Ostracodes de l'Oligocene girondin - These Troisième Cycle, Univ. Bordeaux, N° 374., pp. 1-218., Pl. 1-33.
- OLLIVIER-PIERRE, M. F.; MAUPIN, C.; ESTEOULE-CHOUX et SITTNER, C. S. (1993): Transgression et paleoenvironnement a l'Oligocene en Bretagne (France): Sedimentologie, micropaleontologie, palynologie et palynofacies du Rupelien du Bassin de Rennes - Palaeogeography, Palaeoclimatology, Palaeoecology, 103., 3-4., pp. 223-250.
- OLTEANU, R. et POPESCU, B. (1973): Paleontological and sedimentological considerations concerning the ostracod evolution in the Eocene deposits west of Cluj - Studii cerc. geol., geophys. geogr., Ser. geol. 18., 1., pp. 245-260., Pl. 1-4.
- OLTEANU, R. (1977): New Eocene Ostracods from the Transylvanian Basin - Revue rouman. géol. géophys. et géogr., Ser. géol. 21., pp. 117-123., Pl. 1-4.
- OLTEANU, R. (1980): Évolution de la communauté d'ostracodes dans l'Oligocène du NW de la Transylvanie - Revue roum. géol. géophys. et géogr., Ser. géol., 24., pp. 177-198., Pl. I-VI.
- PIETRZENKUK, E. (1965): Zwei neue Bradleya-Arten (Ostracoda) aus dem deutschen Obereozän - Geologie, 14., 7., pp. 879-891.
- PIETRZENIUK, E. (1969): Taxonomische und biostratigraphische Untersuchungen an Ostracoden des Eozän 5 im Norden der Deutschen Demokratischen Republik - Paläontologische Abhandlungen, A., IV., 1., pp. 1-162., Pl. I-XXVIII.
- POAG, C. W. (1972): New ostracode species from the Chickasawhay Formation (Oligocene) of Alabama and Mississippi - Revista Espanola de Micropaleontologia, 4., 1., pp. 65-96., Pl. 1-6.
- REUSS, A. E. (1850): Die fossilen Entomostraceen des österreichischen Tertiärbeckens - Haidingers Naturwiss. Abhandl., 3., 1., pp. 1-92., Pl. 8-11.
- REUSS, A. E. (1869): Zur fossilen Fauna der Oligocän-schichten von Gaas. - Sitzungsberichte Akad. Wiss. pp. 446-486., Pl. 1-6.
- ROEMER, F. A. (1838) Die Cytherinen des Molasse-Gebirges - Neues Jahrbuch Min. Geogr. Geol. Petref.-Kunde, pp. 514-519., Pl. 1-6.
- RUSU, A.; BROTEA, D.; IONESCU, A.; NAGYMAROSY, A. et WANEK, F. (1993): Biostratigraphic study of the Eocene-Oligocene boundary in the type section of the Brebi Marls (Transylvania, Romania) - Romanian Journal of Stratigraphy, 75., pp. 71-82., Pl. I-VI.
- SCHEREMETA, V. G. (1969): Ostracody paleogena Ukrainy - Lvovskij Universitet, Lvov, pp. 1-273., Pl. 1-21.
- SÖNMEZ-GÖKÇEN, N. (1973): Etude paleontologique (Ostracodes) et stratigraphique de niveaux du Pleogene du Sud-Est de la Thrace - Publ. Inst. Rech. Min. Turquie (MTA), 147., pp. 1-118., Pl. 1-12.
- TAMBAREAU, Y. (1972): Thanétien supérieur et Ilerdien inférieur des Petites Pyrénées, du Plantaurel et des Chainons audois - Thèse, Toulouse, pp. 1-377., Pl. 1-20.
- TRIEBEL, E. (1961): Geschlechts-Dimorphismus und Asymmetric der Klappen bei der Ostracodengattung *Oculitocythereis* - Senckenbergiana lethaea, 42., 3/4., pp. 205-225., Pl. 1-5.
- URVANOVA, V. N. (1965): Ostracody iz otlozhenij bahchisarajskovo jarusa nhiznhevo eocena jugo-zapadnovo Kryma - Trudy Vses. n.-i. geologorazved. nef. instituta, 44., pp. 258-275., Pl. 1-3.
- WILLEMS, W. (1975): Ostracoda from the Ieper formation of the Kallo well (Belgium) - Bulletin

Soc. belge géol. paléontol. et hydrol., 82., 3-4., pp. 511-522., Pl. 1-2.

WILLEMS, W. (1977): Ostracods of the Ypres Formation (Lower Eocene) in the Tielt boring. Biostratigraphical and paleoecological interpretation and comparison with the Ypres Formation in the Kallo boring (Belgium) - *Natuurwet. Tijdschr.*, 59., pp. 184-205., Pl. 1.



Plate 1

Figs 1-6. *Asperissimocythere gantensis* MONOSTORI, 1977.

Figs 1-4. Gánt, Bagoly pit, Middle Eocene (Bartonian).

Fig. 1. Right valve. 129x.

Fig. 2. Inside of the right valve. 121x.

Fig. 3. Inside of the left valve. 110x.

Fig. 4. Left valve. 113x.

Figs 5-6. Dudar, Mollusc sand, Middle Eocene (Upper Lutetian - Bartonian).

Fig. 5. Left valve. 102x112x.

Figs 7-10. *Asperissimocythere perlucida*. (MÉHES, 1936) Middle Eocene (Bartonian).

Fig. 6. Right valve.

Figs 7-8. Ótokod pit, sample A9.

Fig. 7. Carapace from the right valve. 110x.

Fig. 8. Carapace from the dorsal side. 121x.

Fig. 9. Carapace from the left valve. Ótokod pit, sample A1. 105x.

Fig. 10. Carapace from the left valve. Mesterberek 180 borehole 137.3 - 138.5 m. 102x.

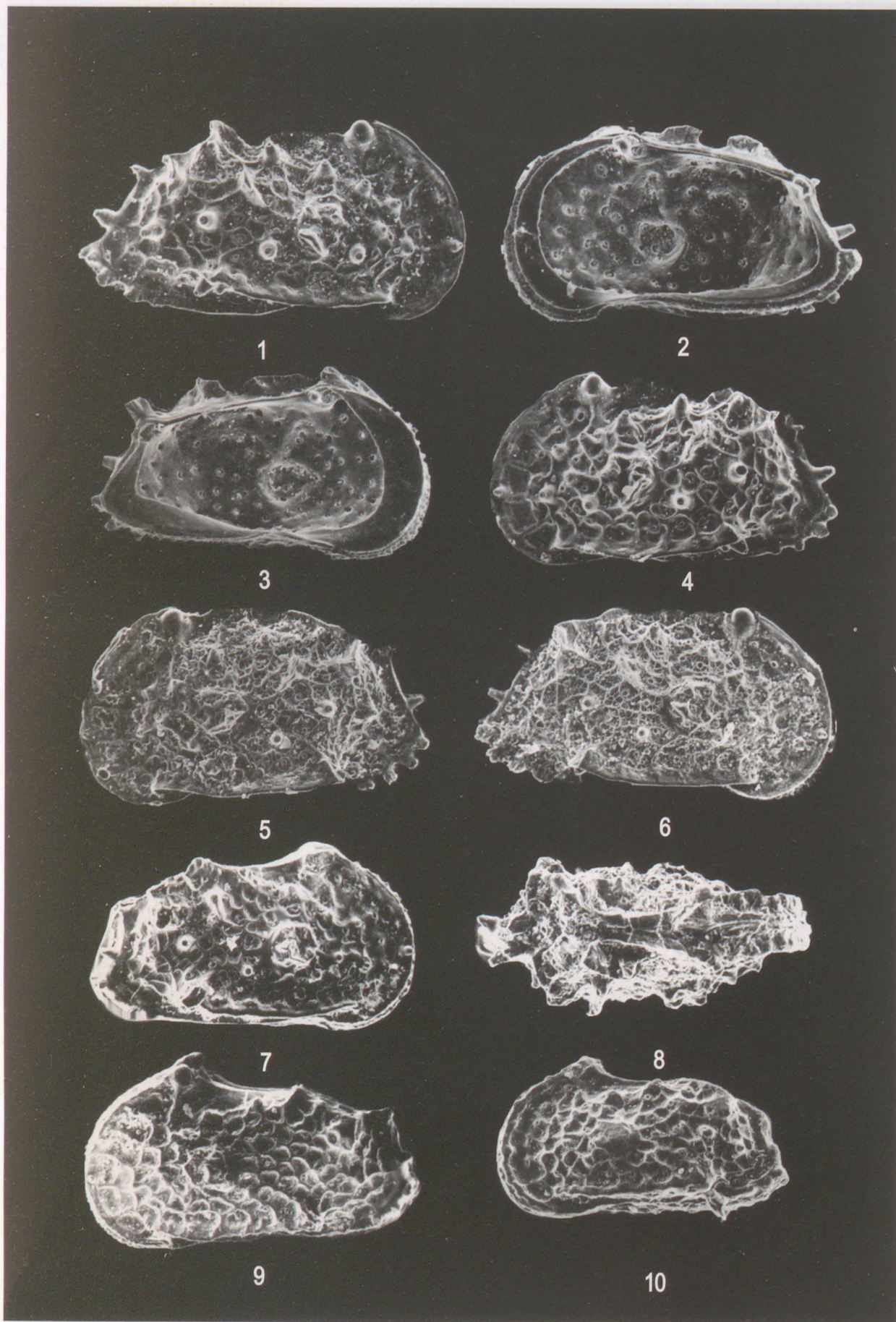


Plate 2

Figs 1-10. *Asperissimocythere perlucida* (MÉHES, 1936) Middle Eocene (Bartonian).

Fig. 1. Carapace from the left valve. Mesterberek 76 borehole 385.3 m. 99x.

Fig. 2. Carapace from the left valve. Csordakút 113 borehole 305.0 m. 99x.

Fig. 3. Carapace from the right valve. Mesterberek 180 borehole 131,2 - 137,3 m. 94x.

Fig. 4. Carapace from the dorsal side. Mesterberek 180 borehole 106.0 m. 110x.

Fig. 5. Inside of the left valve. Mesterberek 118 borehole 339.2 m. 110x.

Fig. 6. Inside of the left valve. Várgesztes 1 borehole 95.5 - 97.0 m. 113x.

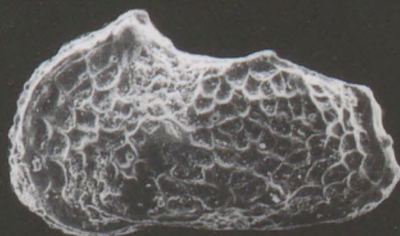
Figs. 7-8. Carapace from the left valve. Mór 16 borehole 82.6 - 84.6 m. 99x, 96x.

Fig. 9. Carapace from the dorsal side. Mór 16 borehole 82.6 - 84.6 m. 102x.

Fig. 10. Carapace from the right valve. Várgesztes 1 borehole 95.5 - 97.0 m. 107x.



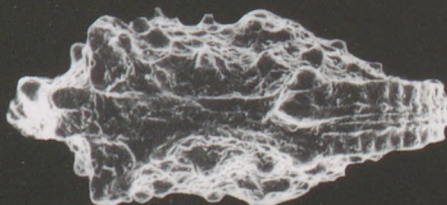
1



2



3



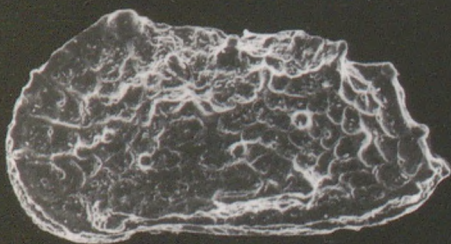
4



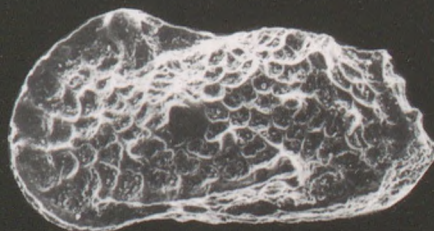
5



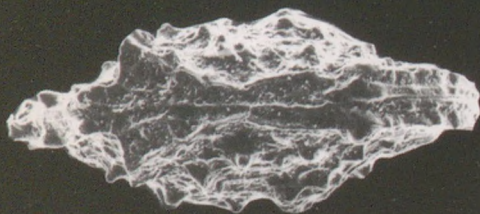
6



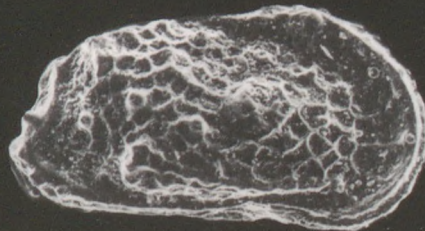
7



8



9



10

Plate 3

Figs 1-10. *Cletocythereis? angusticostata* (BOSQUET, 1852)

Fig. 1. Left valve. Dudar, mollusc sand. 82x.

Fig. 2. Inside of the right valve. Gánt, Bagolyhegy pit. 82x.

Fig. 3. Left valve. Gánt, Bagolyhegy pit. 82x.

Fig. 4. Right valve. Gánt, Bagolyhegy pit. 82x.

Fig. 5. Right valve. Tokod 527 borehole 232.8 - 238.8 m. 78x.

Fig. 6. Carapace from the dorsal side. Mesterberek 180 borehole 82.6 m. 77x.

Fig. 7. Carapace from the left valve. Mesterberek 78 borehole 375.0 m. 79x.

Fig. 8. Carapace from the right valve. Mány 55 borehole 437.0 m. 74x.

Fig. 9. Juvenile right valve. Gánt, Bagolyhegy pit. 110x.

Figs 1-9. Middle Eocene (Upper Lutetian - Bartonian).

Fig. 10. Carapace from the left valve. Budakeszi 6 borehole 130.2 - 132.6 m. 72x. Upper Eocene (Lower Priabonian).

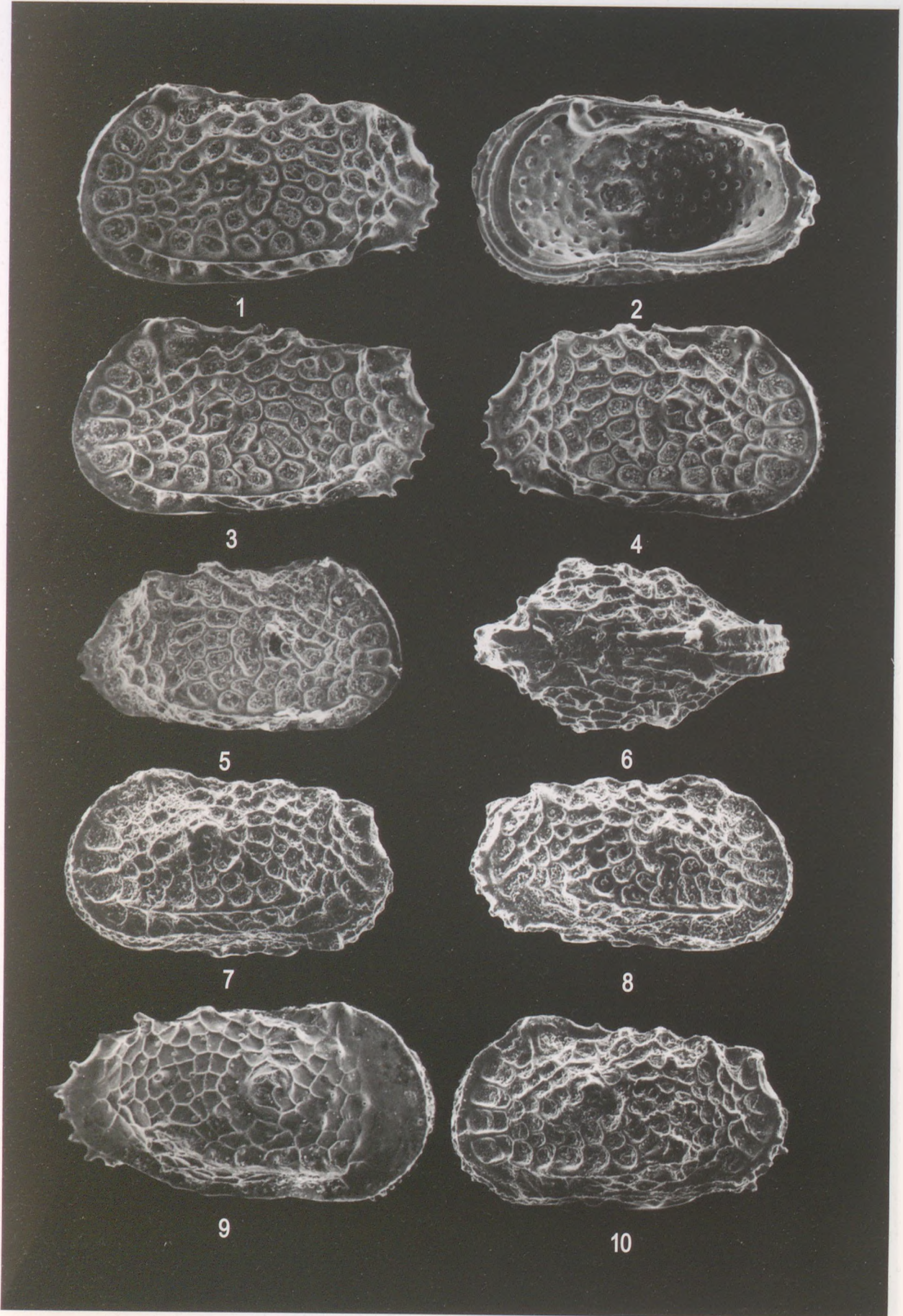


Plate 4

Figs 1-7. *Cletocythereis? angusticostata darvastoense* n. ssp. Sümeg, Darvastó pit. Middle Eocene (Lower Lutetian).

Fig. 1. Inside of the left valve. 102x.

Fig. 2. Left valve. 105x.

Fig. 3. Carapace from the dorsal side. 113x.

Fig. 4. Right valve. 105x.

Fig. 5. Carapace from the right valve. 108x.

Fig. 6. Left valve. 105x.

Fig. 7. Right valve. 105x.

Figs 8-10. *Grinoneis haidingeri paijenborchiana* (KEIJ, 1957) Middle Eocene (Upper Lutetian - Bartonian).

Fig. 8. Right valve. Dudar, mollusc sand. 88x.

Fig. 9. Left valve. Dudar, mollusc sand. 88x.

Fig. 10. Left valve. Gánt, Bagoly pit. 88x.

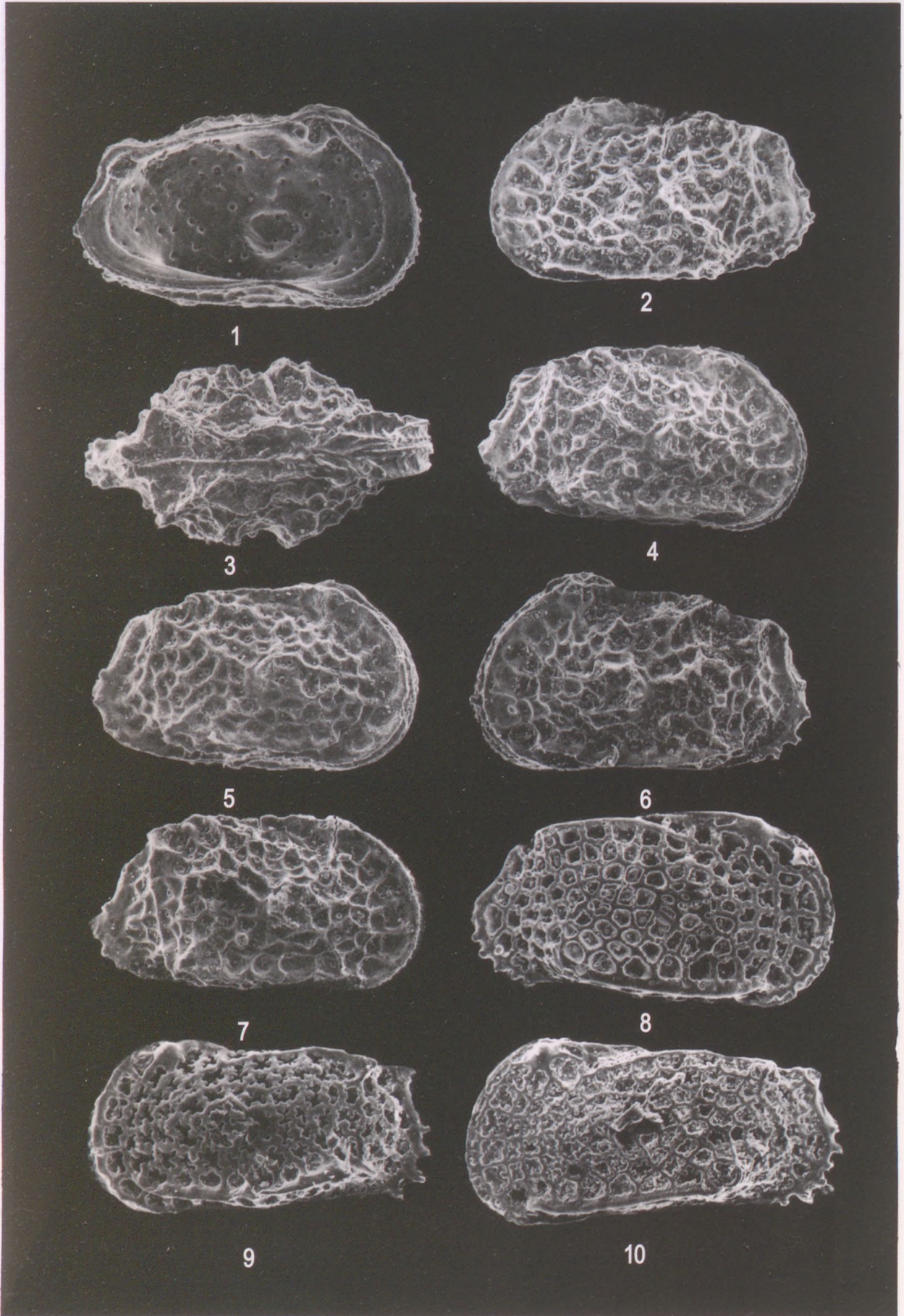


Plate 5

Figs 1-8. *Grinioneis haidingeri pajenborchiana* (KEIJ, 1957) Middle Eocene (Bartonian)

Fig. 1. Carapace from the dorsal side. Mesterberck 76 borehole 358.6 m. 85x.

Fig. 2. Right valve. Ótokod pit, sample A1. 94x.

Fig. 3. Carapace from the right valve. Csordakút 115 borehole 294.0 m. 104x.

Fig. 4. Carapace from the left valve. Csordakút 115 borehole 294.0 m. 99x.

Fig. 5. Left valve. Tatabánya 1481 borehole 130.3 - 133.1 m. 93x.

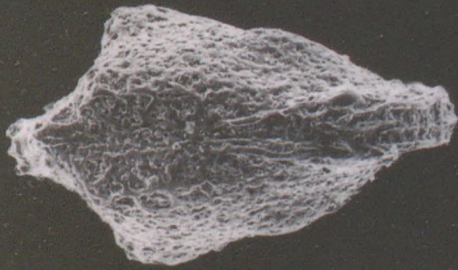
Fig. 6. Left valve. Mány 55 borehole 431.0 m. 89x.

Fig. 7. Carapace from the right valve. Mesterberck 76 borehole 305.1 m. 99x.

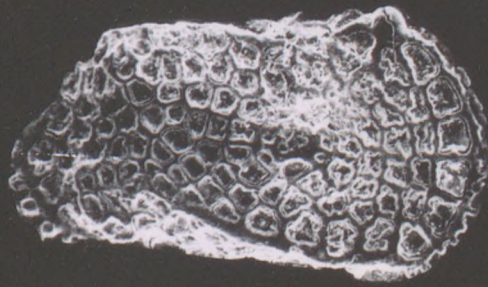
Fig. 8. Carapace from the dorsal side. Tokod, Ebszöny outcrop. 88x.

Fig. 9. *Grinioneis cf. approximata minor* (DUCASSE, 1967). Carapace from the right valve. Upper Eocene (Upper Priabonian). Budapest, Pusztaszeri street, sample 27. 88x.

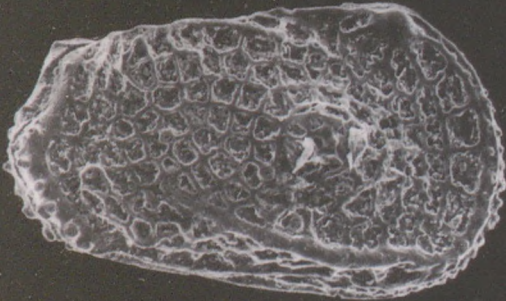
Fig. 10. *Occultocythereis insolita medioventralis* (MONOSTORI, 1985). Middle Eocene (Bartonian). Carapace from the right valve. Nyergesújfalu 31 borehole 294.5 - 294.7 m. 126x.



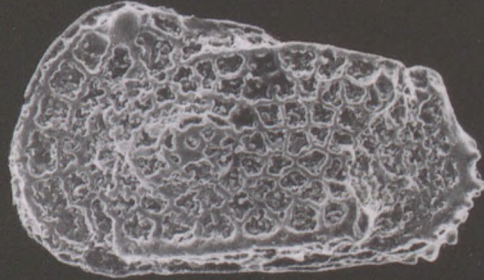
1



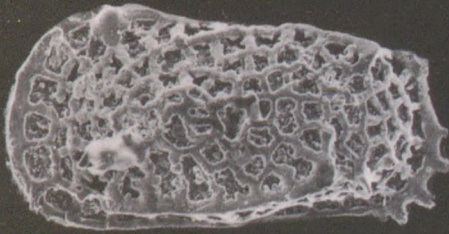
2



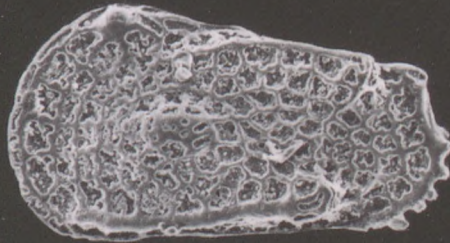
3



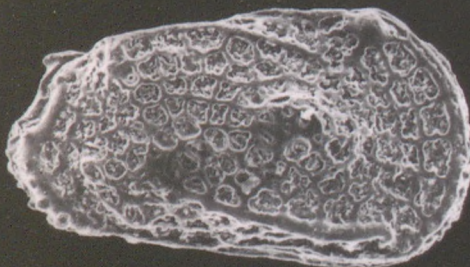
4



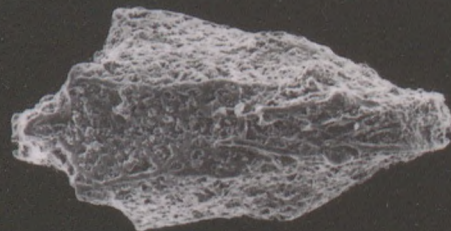
5



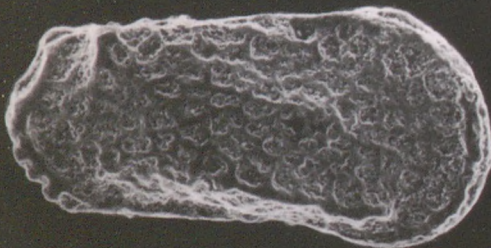
6



7



8



9



10

Plate 6

Figs 1-6. *Occultocythereis insolita medioventralis* (MONOSTORI, 1985). Middle Eocene (Bartonian).

- Fig. 1. Carapace from the left valve. Mesterberek 76 borehole 338.0 m. 126x.
- Fig. 2. Carapace from the left valve. Mesterberek 76 borehole 384.3 m. 121x.
- Fig. 3. Carapace from the left valve. Bakonycsérnye 18 borehole 355.0 m. 124x.
- Fig. 4. Carapace from the left valve. Csabdi 74 borehole 281.8 - 282.6 m. 121x.
- Fig. 5. Carapace from the left valve. Tabajd 6 borehole 76.8 - 81.4 m. 121x.
- Fig. 6. Carapace from the dorsal side. Tabajd 6 borehole 76.8 - 81.4 m. 121x.

Figs 7-9. *Occultocythereis mutabilis abducata* TRIEBEL, 1961. Middle Eocene (Bartonian) Tokod, Ebszöny outcrop.

- Fig. 7. Carapace from the dorsal side. 121x.
- Fig. 8. Carapace from the right valve. 132x.
- Fig. 9. Carapace from the right valve. 126x.

Fig. 10. *Occultocythereis?* n. sp. 1. Middle Eocene (Bartonian). Carapace from the left valve. Oroszlány 2631 borehole 340.0 m. 99x.

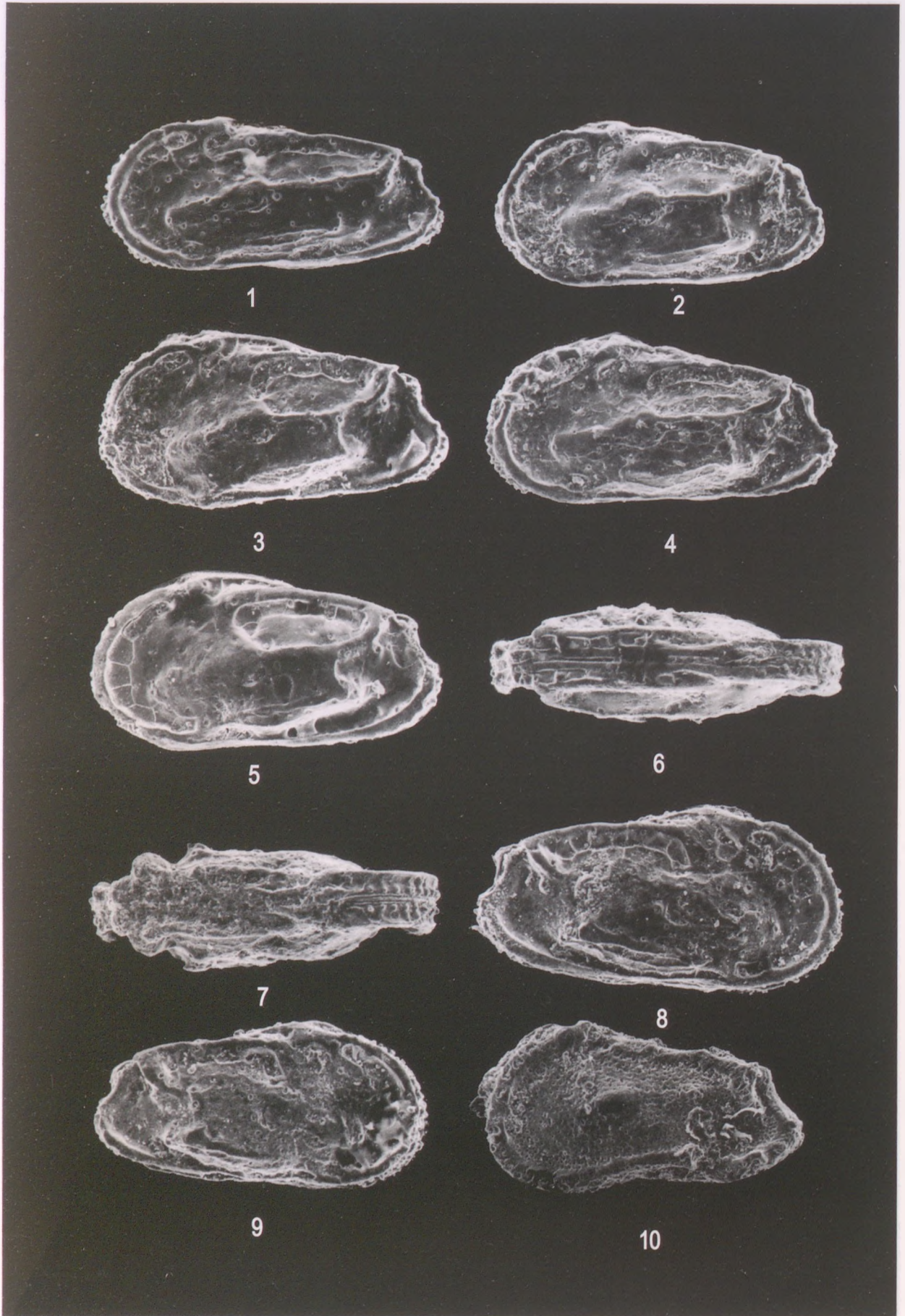


Plate 7

Figs 1-2. *Pokornyella? bicostata* n. sp. Middle Eocene (Bartonian) Mór 16 borehole 82.6 - 84.6 m

Fig. 1. Carapace from the left valve. 121x.

Fig. 2. Carapace from the right valve. 113x.

Figs 3-10. *Pokornyella inaequapunctata* DUCASSE, 1963.

Fig. 3. Carapace from the left valve. Mesterberek 76 borehole 358.6 m. 86x.

Fig. 4. Carapace from the left valve. Mány 55 borehole 434.0 m. 88x.

Fig. 5. Carapace from the right valve. Mesterberek 76 borehole 358.0 m. 88x.

Fig. 6. Carapace from the dorsal side. Mesterberek 118 borehole 358.8 m. 88x.

Fig. 7. Right valve. Csabdi 74 borehole 281.8 - 282.6 m. 85x.

Fig. 8. Carapace from the right valve. Csordakút 113 borehole 384.0 m. 75x.

Figs 3-8. Middle Eocene (Bartonian)

Fig. 9. Carapace from the left valve. Budakeszi 6 borehole 132.6 - 136.6 m. 79x.

Fig. 10. Carapace from the left valve. Budakeszi 6 borehole 150.0 - 152.5 m. 77x.

Figs 9-10. Upper Eocene (Lower Priabonian)

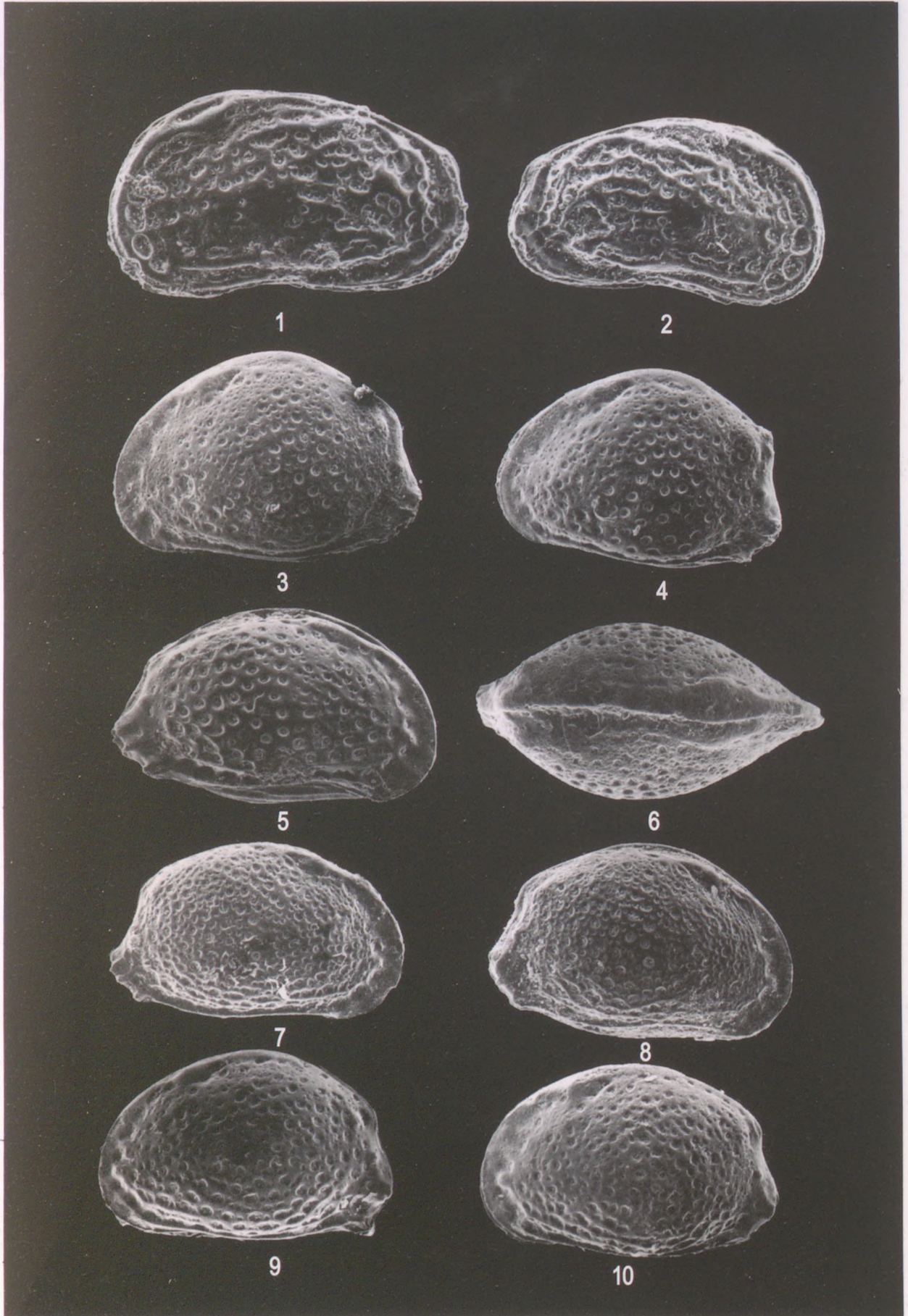


Plate 8

Figs 1-4. *Pokornyella inaequapunctata* DUCASSE, 1963. Upper Eocene (Lower Priabonian).

Fig. 1. Carapace from the left valve. Budakeszi 6 borehole 114.5 - 116.5 m. 77x.

Fig. 2. Carapace from the dorsal side. Budakeszi 6 borehole 132.6 - 136.0 m. 82x.

Figs 3-4. Carapace from the right valve. Budakeszi 6 borehole 132.6 - 136.0 m. 86x, 71x.

Figs 5-6. ?*Pokornyella lattorfiana* (LIENENKLAUS, 1900) Upper Eocene (Lower Priabonian)

Fig. 5. Carapace from the left valve. Budakeszi 6 borehole 142.0 - 145.1 m. 80x.

Fig. 6. Carapace from the left valve. Budakeszi 6 borehole 130.2 - 132.6 m. 80x.

Figs 7-10. *Pokornyella limbata anteglabra* n. ssp. Middle Eocene (Upper Lutetian - Bartonian).

Fig. 7. Left valve. Dudar, mollusc sand. 90x. Holotypus.

Fig. 8. Left valve. Dudar, mollusc sand. 88x.

Fig. 9. Right valve. Oroszlány 2210 borehole 564.4 m. 82x.

Fig. 10. Inside of the left valve. Oroszlány 2210 borehole, 564.4 m. 77x.



Plate 9

Figs 1-4. *Pokornyella ventricosa* (BOSQUET, 1852). Upper Eocene (Lower Priabonian).

Fig. 1. Carapace from the left valve. Budakeszi 6 borehole 127.9 - 129.4 m. 91x.

Fig. 2. Carapace from the right valve. Budakeszi 6 borehole 127.9 - 129.4 m. 99x.

Fig. 3. Carapace from the left valve. Budakeszi 6 borehole 150.2 - 152.2 m. 90x.

Fig. 4. Carapace from the right valve. Budakeszi 6 borehole 129.4 - 130.4 m. 86x.

Figs 5-10. *Hornibrookella lamarckiana* (BOSQUET, 1852). Middle Eocene (Lutetian - Bartonian).

Fig. 5. Left valve. Dudar, mollusc sand. 102x.

Fig. 6. Carapace from the dorsal side. Nyergesújfalu 31 borehole 246.4 - 248.7 m. 100x.

Fig. 7. Carapace from the right valve. Mesterberek 180 borehole 106.0 m. 90x.

Fig. 8. Carapace from the left valve. Csordakút 113 borehole 304.0 m. 91x.

Fig. 9. Carapace from the left valve. Sümeg, Darvastó pit. 104x.

Fig. 10. Carapace from the right valve. Sümeg, Darvastó pit. 90x.

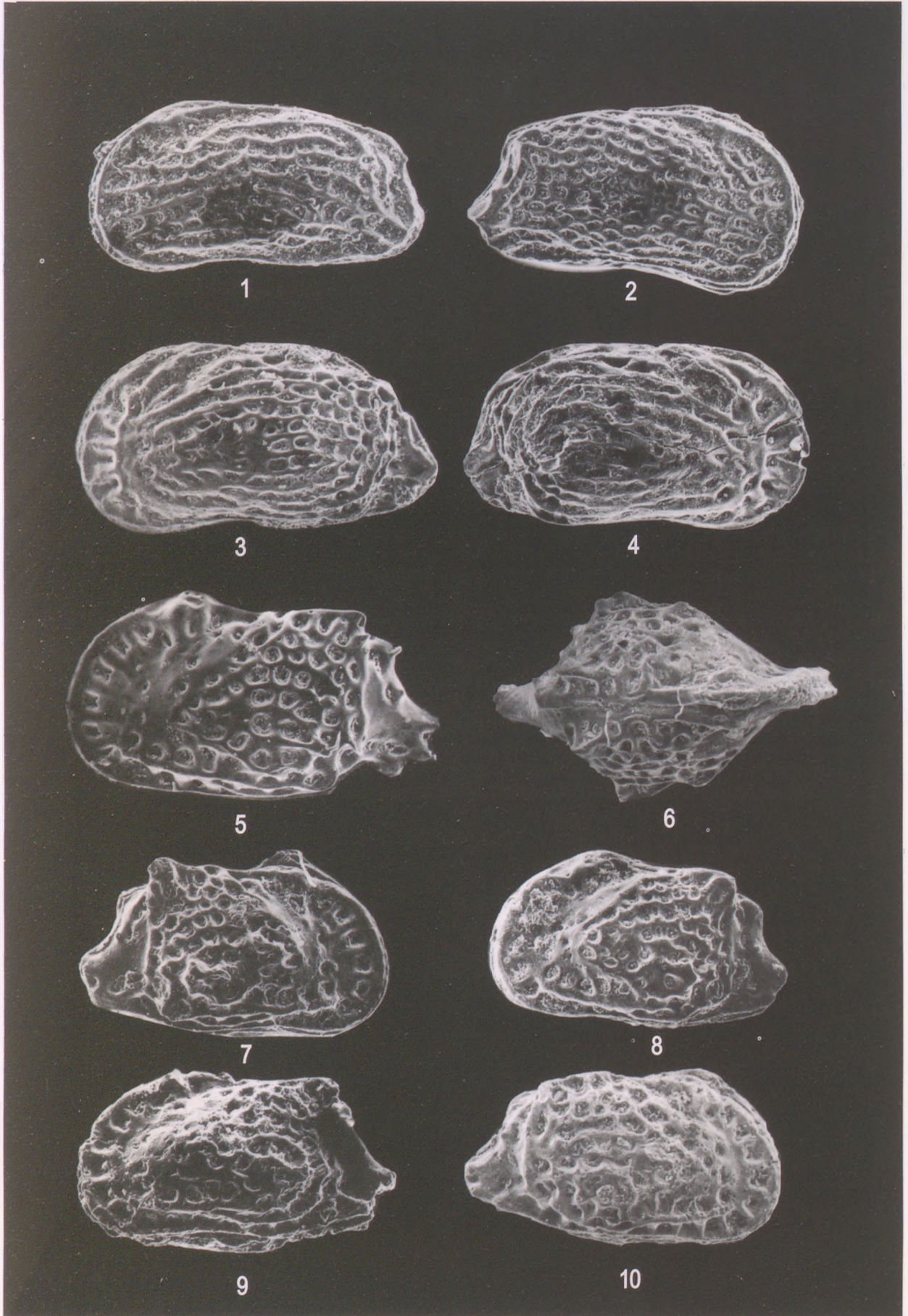


Plate 10

Figs 1-10. *Hornibrookella odettae* LIEBAU, 1991.

Figs 1-9. Middle Eocene (Upper Lutetian-Bartonian)

Fig. 1. Inside of the left valve. Dudar, mollusc sand. 80x.

Fig. 2. Left valve. Dudar, mollusc sand. 93x.

Fig. 3. Right valve. Dudar, mollusc sand. 82x.

Fig. 4. Carapace from the right valve. Tokod 527 borehole 223.2 - 226.2 m. 93x.

Fig. 5. Carapace from the right valve. Csordakút 113 borehole 298.0 m. 82x.

Fig. 6. Carapace from the left valve. Mesterberek 180 borehole 86.9 m. 88x.

Fig. 7. Carapace from the dorsal side. Mány 55 borehole 434.0 m. 85x.

Fig. 8. Carapace from the left valve. Csabdi 74 borehole 262.5 - 264.6 m. 77x.

Fig. 9. Carapace from the dorsal side. Csabdi 74 borehole 262.5 - 264.6 m. 82x.

Fig. 10. Upper Eocene (Lower Priabonian) Carapace from the left valve.
Budakeszi 6 borehole 129.4 - 130.4 m. 93x.

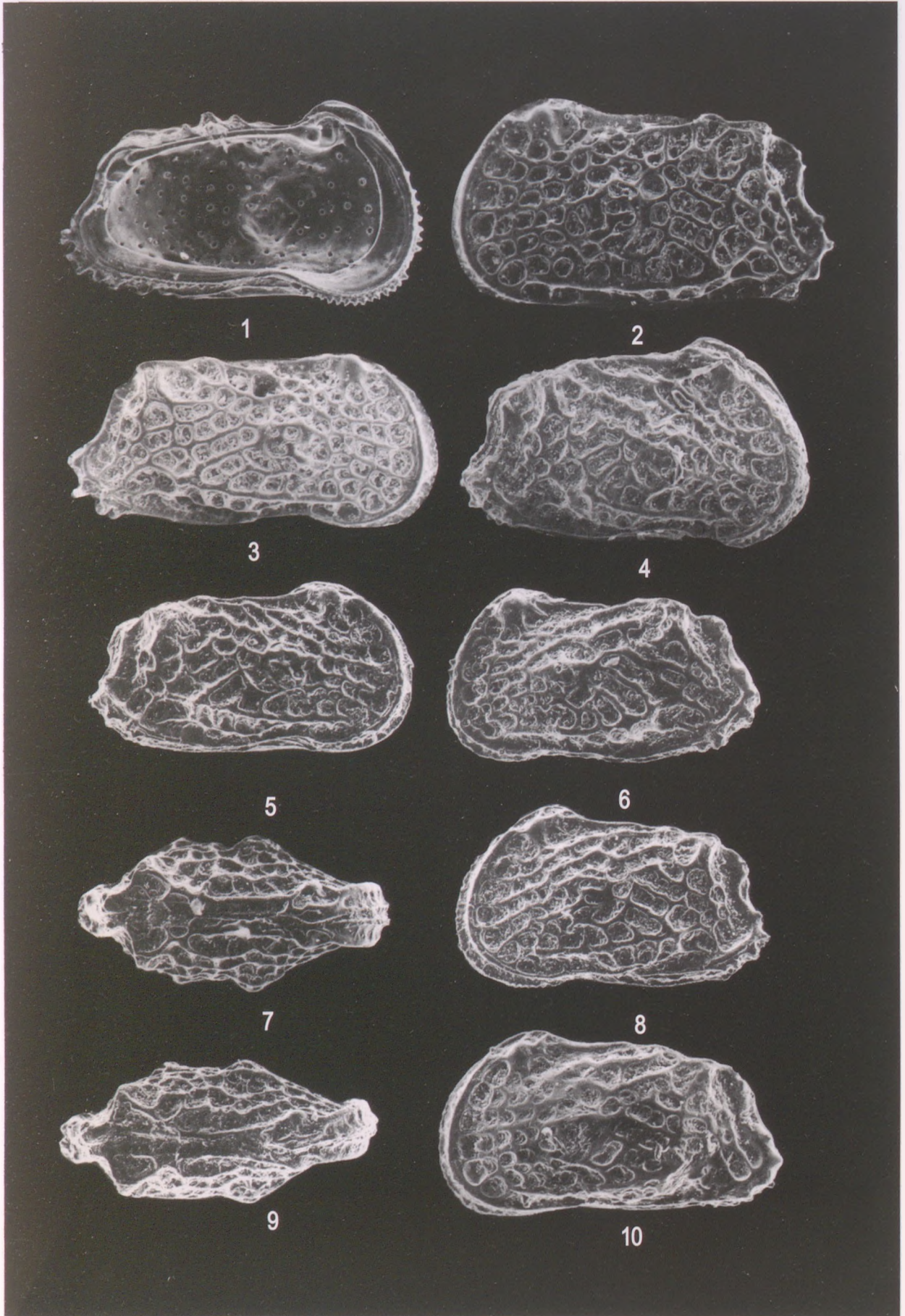


Plate 11

Figs 1-3. *Hornibrookella orbigniana* (BOSQUET, 1852)

Figs 1-2. Middle Eocene (Upper Lutetian-Bartonian)

Fig. 1. Right valve. Dudar, mollusc sand. 88x.

Fig. 2. Carapace from the left valve. Mesterberek 76 borehole 358.0 m. 77x.

Fig. 3. Upper Eocene (Lower Priabonian) Carapace from the right valve.

Somlóvásárhely 1 borehole 551.0 m. 85x.

Figs 4-5. *Hornibrookella vahrenkampii dudarensis* n. ssp. Middle Eocene (Upper Lutetian-Bartonian) Dudar, mollusc sand.

Fig. 4. Left valve. 88x. Holotypus.

Fig. 5. Right valve. 94x.

Figs 6-10. *Reticuloquadracythere apostolescui* (DUCASSE, 1963) Middle Eocene (Upper Lutetian-Bartonian)

Fig. 6. Left valve. Gánt, Bagoly Hill pit. 77x.

Fig. 7. Inside of the right valve. Gánt, Bagolyhegy pit. 75x.

Fig. 8. Right valve. Dudar, mollusc sand. 64x.

Fig. 9. Carapace from the dorsal side. Mesterberek 78 borehole 375.0 m. 68x.

Fig. 10 Carapace from the left valve. Mesterberek 180 borehole 104.8 - 107.0 m. 68x.

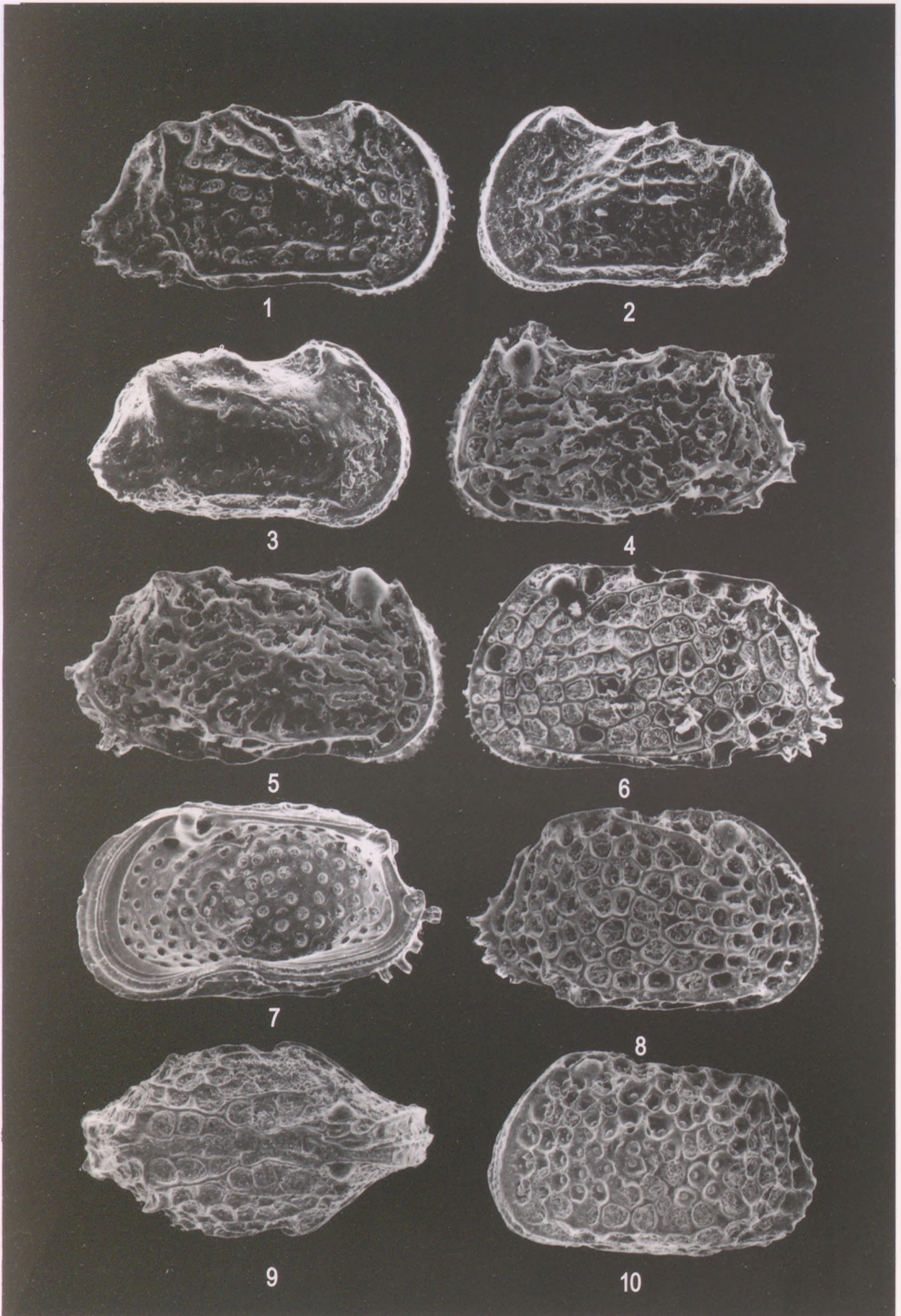


Plate 12

Fig. 1. *Reticuloquadracythere apostolescui* (DUCASSE, 1963) Upper Eocene (Lower Priabonian). Left valve. Somlóvásárhely 1 borehole 551.0 m. 66x.

Figs 2-7. *Caudites monsmirabiliensis* APOSTOLESCU, 1955. Middle Eocene (Upper Lutetian-Bartonian).

Fig. 2. Carapace from the right valve. Ótokod pit, sample A10. 121x.

Fig. 3. Carapace from the dorsal side. Ótokod pit, sample A9. 132x.

Fig. 4. Carapace from the left valve. Csabdi 74 borehole 262.5 - 264.6 m. 122x.

Fig. 5. Carapace from the left valve. Mesterberek 180 borehole 80.6 m. 128x.

Fig. 6. Carapace from the right valve. Mesterberek 78 borehole 377.0 m. 121x.

Fig. 7. Left valve. Dudar, mollusc sand. 129x.

Figs 8-10. *Cytheretta bifurcatosta* n. sp.. Upper Eocene (Lower Priabonian)

Fig. 8. Carapace from the dorsal side. Somlóvásárhely 1 borehole 546.7 m. 88x.

Fig. 9. Carapace from the left valve. Somlóvásárhely 1 borehole 546.7 m. 88x.

Fig. 10. Carapace from the right valve. Somlóvásárhely 1 borehole 551.0 m. 99x. Holotypus.

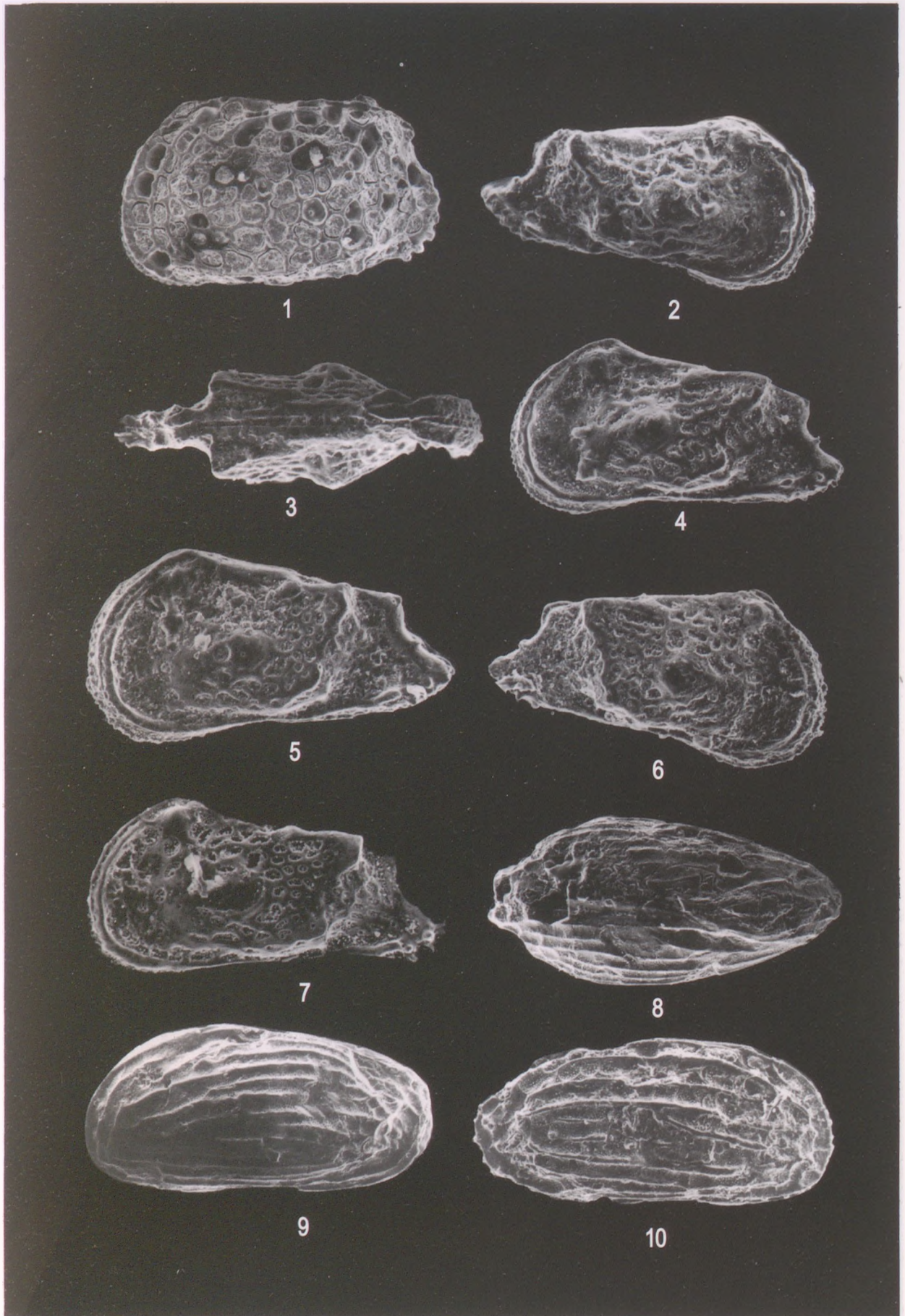


Plate 13

Fig. 1. *Cytheretta cf. buttensis* KEEN, 1972. Middle? Eocene. Carapace from the left valve. Tabajd 6 borehole 143.0 - 148.0 m. 104x.

Figs. 2-3. *Cytheretta costellata* (ROEMER, 1838). Middle Eocene (Lutetian)

Fig. 2. Right valve. Somlóvásárhely 1 borehole 834.7 m. 88x.

Fig. 3. Carapace from the left valve. Somlóvásárhely 1 borehole 835.0 m. 79x.

Figs 4-10. *Cytheretta decipiens* KEIJ, 1957 (forma A sensu Monostori, 1985)

Figs 4-9. Middle Eocene (Bartonian)

Fig. 4. Carapace from the left valve. Mesterberek 76 borehole 330.0 m. 80x.

Fig. 5. Carapace from the left valve. Csordakút 113 borehole 303.0 m. 77x.

Fig. 6. Carapace from the left valve. Tatabánya 1481 borehole 153.3 - 155.3 m. 88x.

Fig. 7. Carapace from the right valve. Ótokod pit, sample A12. 88x.

Fig. 8. Carapace from the left valve. Tokod 527 borehole 241.8 - 244.8 m. 68x.

Fig. 9. Carapace from the dorsal side. Tokod 527 borehole 241.8 - 244.8 m. 90x.

Fig. 10. Upper Eocene (Lower Priabonian). Carapace from the left valve. Budakeszi 6 borehole 132.6 - 136.0 m. 77x.

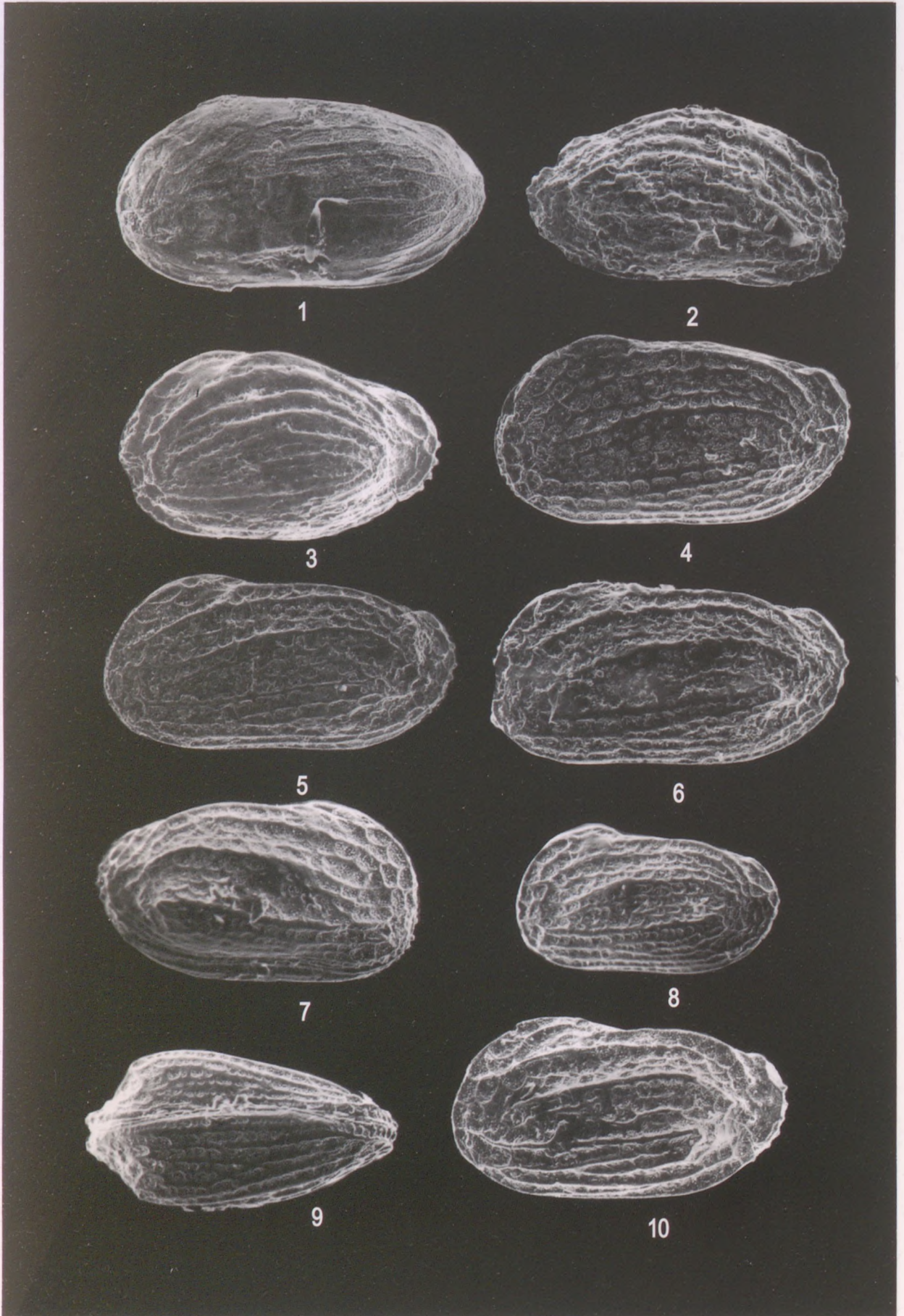


Plate 14

Figs 1-2. *Cytheretta decipiens* KEIJ, 1957 (forma A sensu MONOSTORI, 1985). Upper Eocene (Lower Priabonian)

Fig. 1. Carapace from the dorsal side. Budakeszi 6 borehole 132.6 - 136.0 m. 85x.

Fig. 2. Carapace from the right valve. Budakeszi 6 borehole 150.0 - 152.2 m. 77x.

Figs 3-8. *Cytheretta decipiens* KEIJ, 1957 (forma B sensu MONOSTORI, 1985). Middle Eocene (Bartonian)

Fig. 3. Carapace from the left valve. Mesterberek 76 borehole 324.0 m. 80x.

Fig. 4. Carapace from the right valve. Mesterberek 76 borehole 320.8 m. 88x.

Fig. 5. Carapace from the left valve. Tatabánya 1481 borehole 127.0 - 129.8 m. 86x.

Fig. 6. Carapace from the left valve. Mesterberek 76 borehole 320.8 m. 83x.

Fig. 7. Carapace from the left valve. Nyergesújfalu 31 borehole 246.4 - 248.7 m. 77x.

Fig. 8. Carapace from the dorsal side. Nyergesújfalu 31 borehole 248.7 - 250.5 m. 77x.

Fig. 9. *Cytheretta* aff. *haimeana* (BOSQUET, 1852). Middle Eocene (Upper Lutetian-Bartonian). Left valve. Dudar, mollusc sand. 85x.

Fig. 10. *Cytheretta haimeanacostata* n. sp. Upper Eocene (Lower Priabonian). Carapace from the right valve. Budakeszi 6 borehole 150.0 - 152.2 m. 66x.

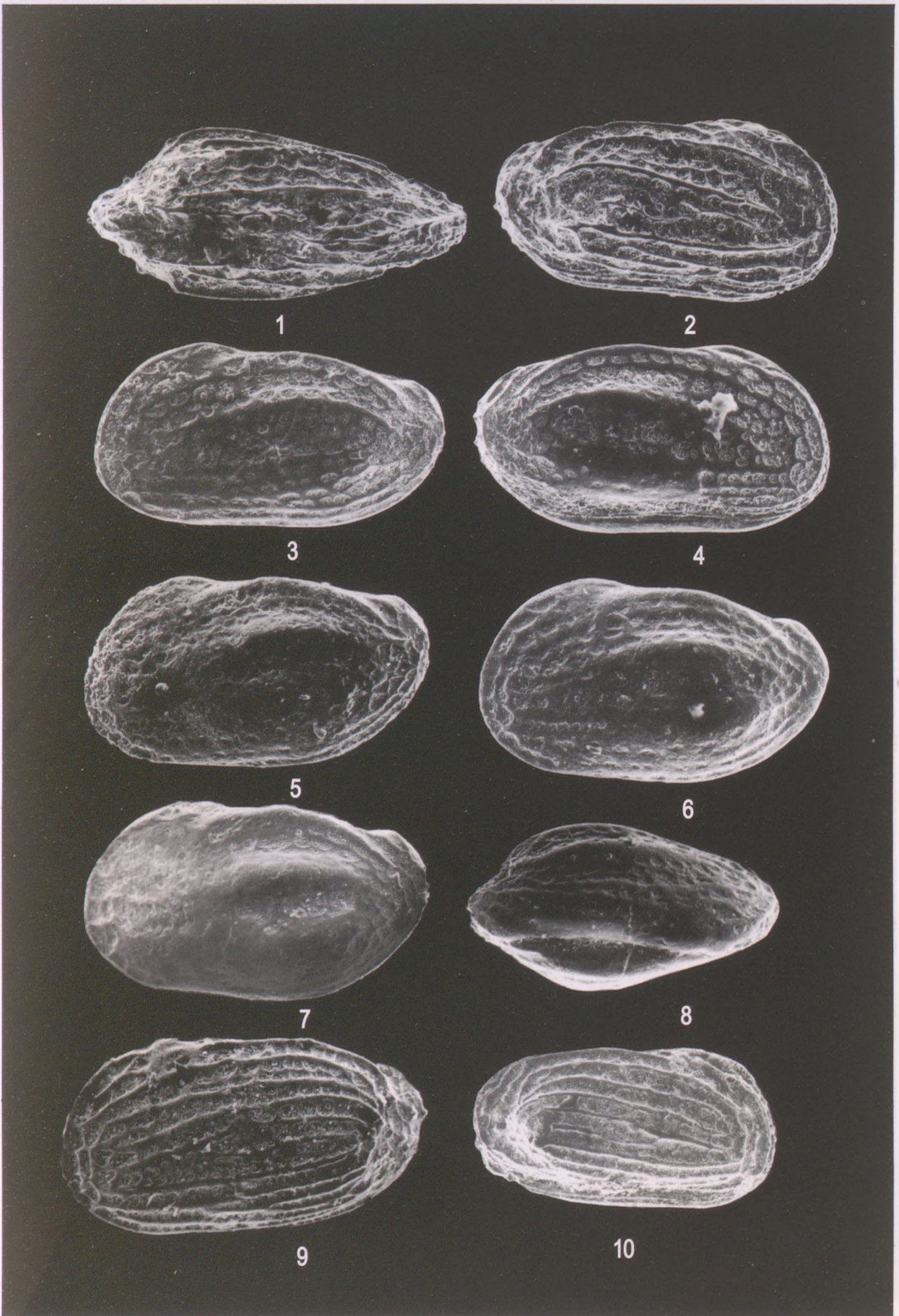


Plate 15

Figs 1-3. *Cytheretta haimeanacostata* n. sp. Upper Eocene (Lower Priabonian)

Fig. 1. Carapace from the dorsal side. Budakeszi 6 borehole 129.4 - 130.4 m. 68x.

Fig. 2. Carapace from the left valve. Budakeszi 6 borehole 114.5 - 126.5 m. 75x. Holotypus.

Fig. 3. Carapace from the right valve. Budakeszi 6 borehole 150.0 - 152.2 m. 77x.

Figs 4-5. *Cytheretta tenuipunctata laticauda* n. ssp. Middle? - Upper Eocene.

Fig. 4. Carapace from the right valve. Budakeszi 6 borehole 114.5 - 116.5 m. 90x. Holotypus

Fig. 5. Carapace from the right valve. Padragkút ravine, sample 13. 86x.

Figs 6-7. *Cytheretta tenuipunctata posterodepressa* n. ssp. Upper Eocene (Lower Priabonian)

Fig. 6. Carapace from the left valve. Budakeszi 6 borehole 150.0 - 152.2 m. 71x. Holotypus.

Fig. 7. Carapace from the left valve. Budakeszi 6 borehole 130.4 - 132.6 m. 71x.

Figs 8-10. *Cytheretta unicastata* MONOSTORI, 1985. Middle Eocene (Upper Lutetian-Bartonian).

Fig. 8. Carapace from the left valve. Csolnok 699/b borehole 517.2 - 518.8 m. 77x.

Fig. 9. Carapace from the left valve. Oroszlány 2361 borehole 313.0 m. 90x.

Fig. 10. Left valve. Dudar, mollusc sand. 79x.

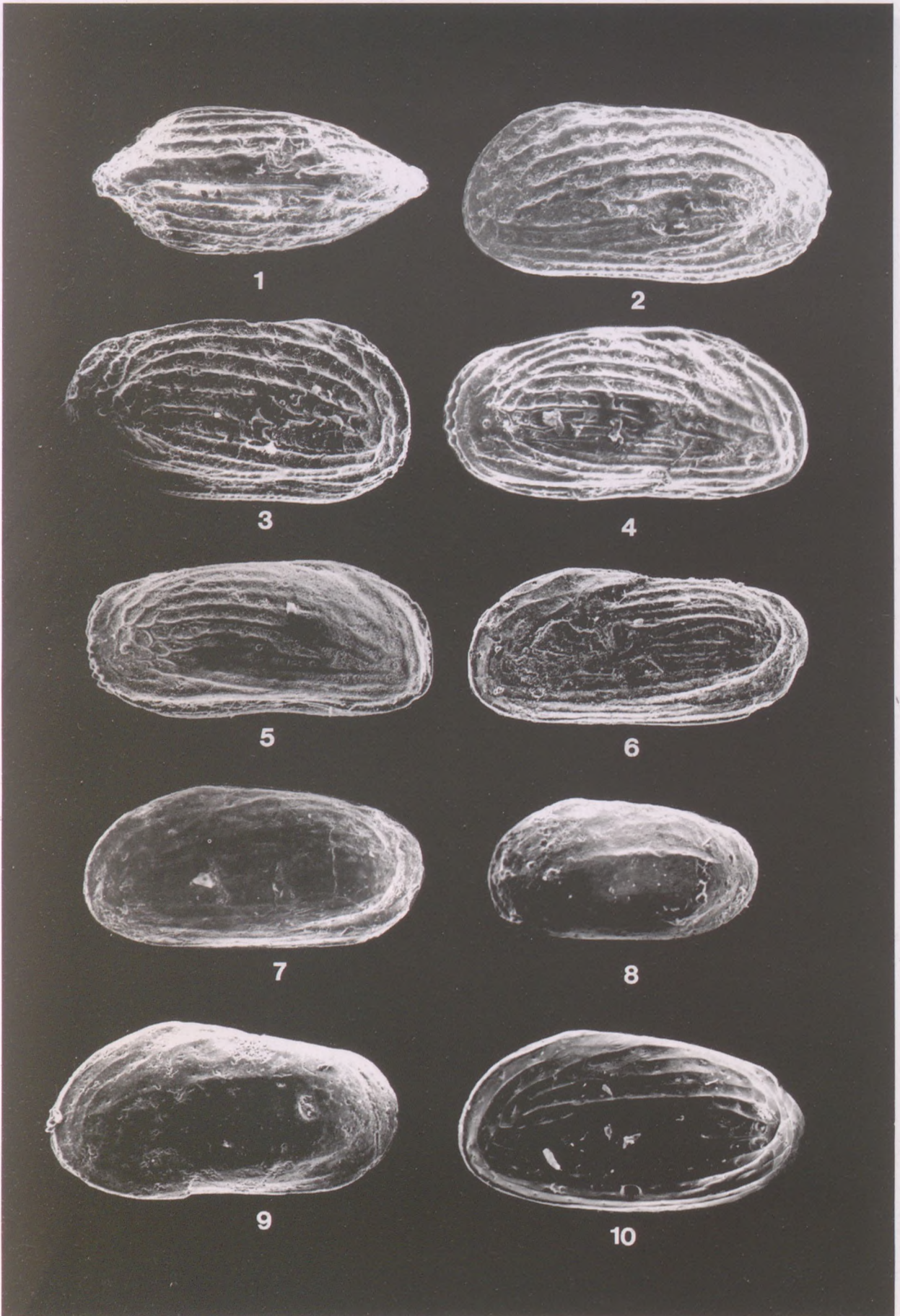




Plate 16

Figs 1-6. *Loxoconcha inculta* MONOSTORI, 1985. Middle Eocene (Bartonian)

Fig. 1. Carapace from the dorsal side. Csabdi 74 borehole 295.6 - 296.4 m. 168x.

Fig. 2. Carapace from the left valve. Csabdi 74 borehole 295.6 - 296.4 m. 158x.

Fig. 3. Right valve. Mesterberek 81 borehole 146.0 m. 143x.

Fig. 4. Carapace from the right valve. Mesterberek 75 borehole 280.0 m. 143x.

Fig. 5. Carapace from the right valve. Mesterberek 75 borehole 280.0 m. 162x.

Fig. 6. Carapace from the right valve. Mesterberek 118 borehole 309.0 m. 156x.

Figs 7-8. *Paracytheridea gradata* (BOSQUET, 1852). Middle Eocene (Bartonian)

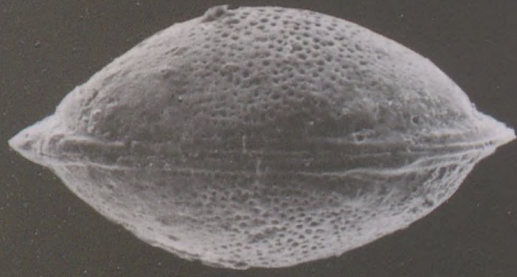
Fig. 7. Left valve. Gánt, Bagoly Hill pit. 156x.

Fig. 8. Carapace from the right valve. Csabdi 74 borehole 292.8 - 293.5 m. 126x.

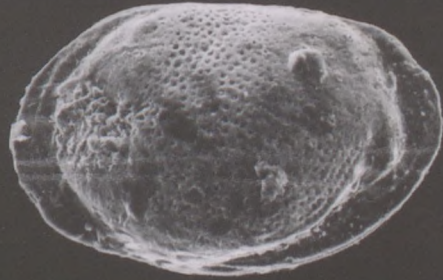
Fig. 9. *Paracytheridea grignonensis* (KEIJ, 1957). Upper Eocene (Lower Priabonian). Left valve.

Somlóvásárhely 1 borehole 546.7 m. 111x.

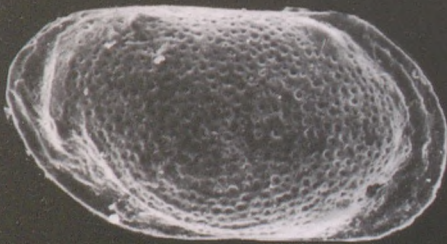
Fig. 10. *Eucytherura* ex gr. *dentata* LIENENKLAUS, 1905. Upper Eocene (Uppermost Priabonian). Carapace from the right valve. Kiscell 1 borehole 103.3 m. 139x.



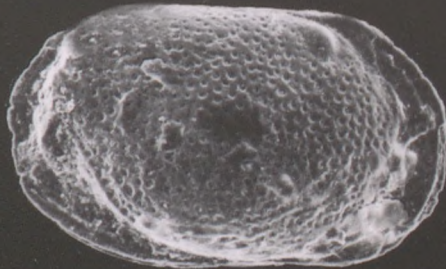
1



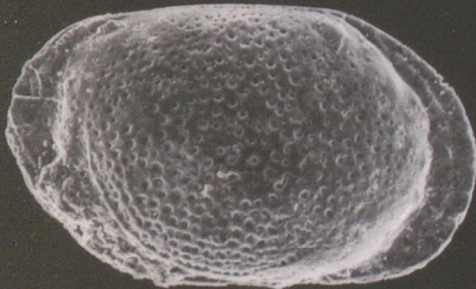
2



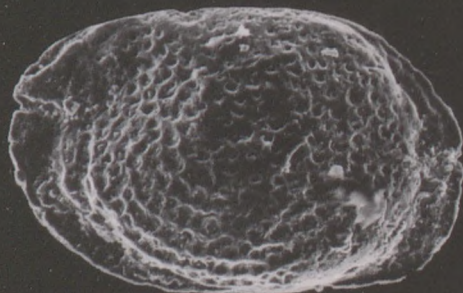
3



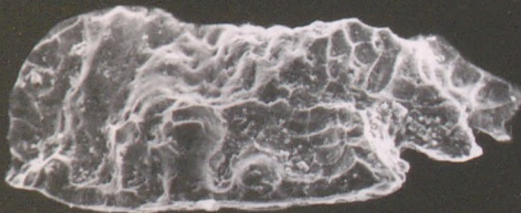
4



5



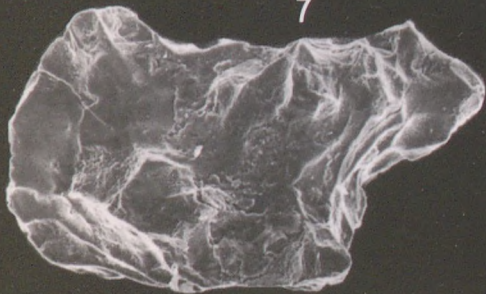
6



7



8



9



10

Plate 17

- Fig. 1. *Eucytherura* sp. 1. Middle Eocene (Bartonian). Carapace from the left valve. Mesterberek 76 borehole 307.0 m. 200x.
- Figs 2-3. *Semicytherura* ex gr. *gracilis* (LIENENKLAUS, 1895). Upper Eocene (Upper Priabonian).
Fig. 2. Carapace from the dorsal side. Budapest, Pusztaszeri str., sample 24. 170x.
Fig. 3. Carapace from the left valve. Budapest, Pusztaszeri str., sample 21. 165x.
- Fig. 4. *Semicytherura oedelemensis* (KEIJ, 1957). Middle Eocene (Bartonian). Carapace from the right valve. Tokod 527 borehole 238.0 - 241.3 m. 192x.
- Fig. 5. *Semicytherura* aff. *unispinata* PIETRZENIUK, 1969. Middle Eocene (Bartonian). Carapace from the left valve. Ótokod pit, sample A9. 159x.
- Fig. 6. *Cytheropteron* sp. 2. Middle Eocene (Bartonian). Carapace from the left valve. Tatabánya 1481 borehole 234.2 - 236.2 m. 139x.
- Fig. 7. *Cytheropteron* sp. 3. Middle Eocene (Upper Lutetian-Bartonian) Left valve. Dudar, mollusc sand. 154x.
- Fig. 8. *Cytheropteron* sp. 4. Middle Eocene (Upper Lutetian-Bartonian). Left valve. Dudar, mollusc sand. 198x.
- Fig. 9. *Monoceratina striata* DELTEL, 1961. Middle Eocene (Bartonian). Carapace from the left valve. Csolnok borehole 387.0 - 391.2 m. 110x.
- Fig. 10. *Monoceratina* aff. *tricuspidata* (JONES ET HINDE, 1890). Upper Eocene (Upper Priabonian). Carapace from the right valve. Budapest, Pusztaszeri str. sample 27. 115x.

