

A Stereo-Atlas of Ostracod Shells

edited by R. H. Bate, J. W. Neale, Lesley M. Sheppard
and David J. Siveter

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The front cover shows a female (external & internal views) of *Cativella bensoni* Neale

ON *BREVIBOLBINA DORNBUSCHI* SCHALLREUTER

by Roger E. L. Schallreuter
(University of Hamburg, German Federal Republic)

Brevibolbina dornbuschi Schallreuter, 1964

- 1964 *Brevibolbina dornbuschi* sp. nov. R. E. L. Schallreuter, *Ber. geol. Ges. D. D. R.*, **9**, 381, 442, pl. 9, fig. 2.
1973 *Brevibolbina dornbuschi* Schallreuter; R. E. L. Schallreuter, *Palaeontographica* (A), **144** (1/3), 74, 75, tab. 5, pl. 16, figs. 1, 2, pl. 20, figs. 7, 8 (q.v. for further synonymy).
1973 *Brevibolbina dornbuschi* Schallreuter; W. Neben & H. H. Krueger, *Staringia* 2 (Bijvoegsel van Grondboor en hamer, 6), pl. 90, fig. 2 (= Schallreuter, op. cit., pl. 16, fig. 1).
1976 *Brevibolbina dornbuschi* Schallreuter; R. E. L. Schallreuter, *Palaeontographica* (A), **153** (4/6), 164.

Holotype: Department of Geological Sciences, University of Greifswald, German Democratic Republic, no. 2/2 (Os 169), ♀ LV.

Type locality: Beach at Dornbusch, Isle of Hiddensee (Baltic Sea); lat. 54° 36' N, long. 13° 7' E. Backsteinkalk erratic boulder (1B13 Type, no. 1B13), Middle Ordovician.

Explanation of Plate 6, 72

Fig. 1, ♀ LV, ext. lat. (GPIH 2207, 750 µm long); figs. 2 - 4, ♀ LV (GPIH 2208, 720 µm long): fig. 2, int. ant. obl.; fig. 3, ext. vent.; fig. 4, int. lat.
Scale A (250 µm; x 90), figs. 1, 2, 4; scale B (250 µm; x 95), fig. 3.

Figured specimens: Geologisch-Paläontologisches Institut, University of Hamburg (GPIH), nos. 2207 (♀ LV: Pl. 6, 72, fig. 1), 2208 (♀ LV: Pl. 6, 72, figs. 2 - 4), 2209 (juv. tecnomorphic LV: Pl. 6, 74, fig. 1), 2210 (juv. tecnomorphic LV: Pl. 6, 74, fig. 2) and 2211 (juv. tecnomorphic RV: Pl. 6, 74, fig. 3). All the figured specimens are from Backsteinkalk erratic boulder no. Ho - 2 (for further data see Schallreuter 1976, op. cit., 164); Middle Ordovician of Baltoscandia.

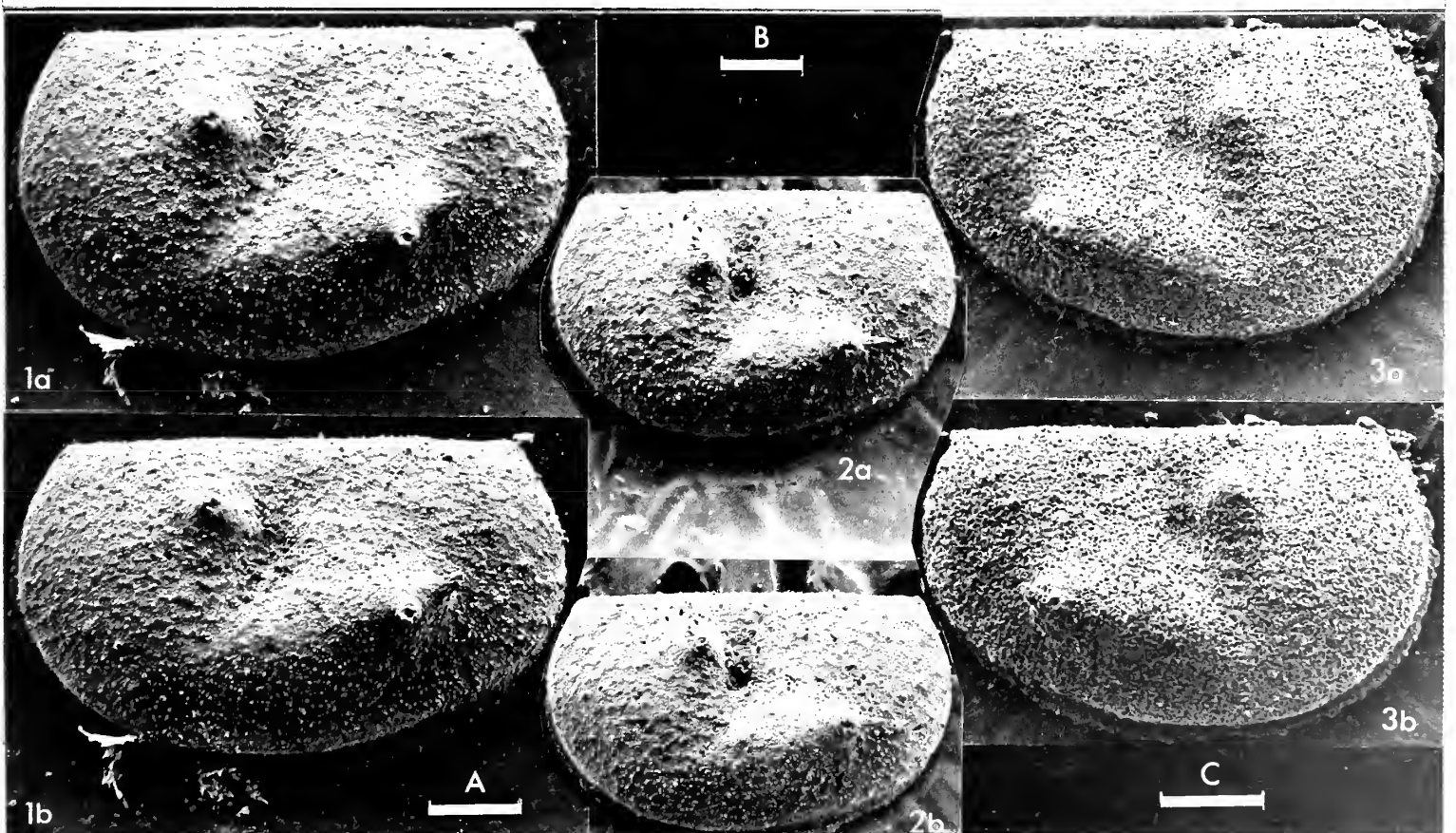
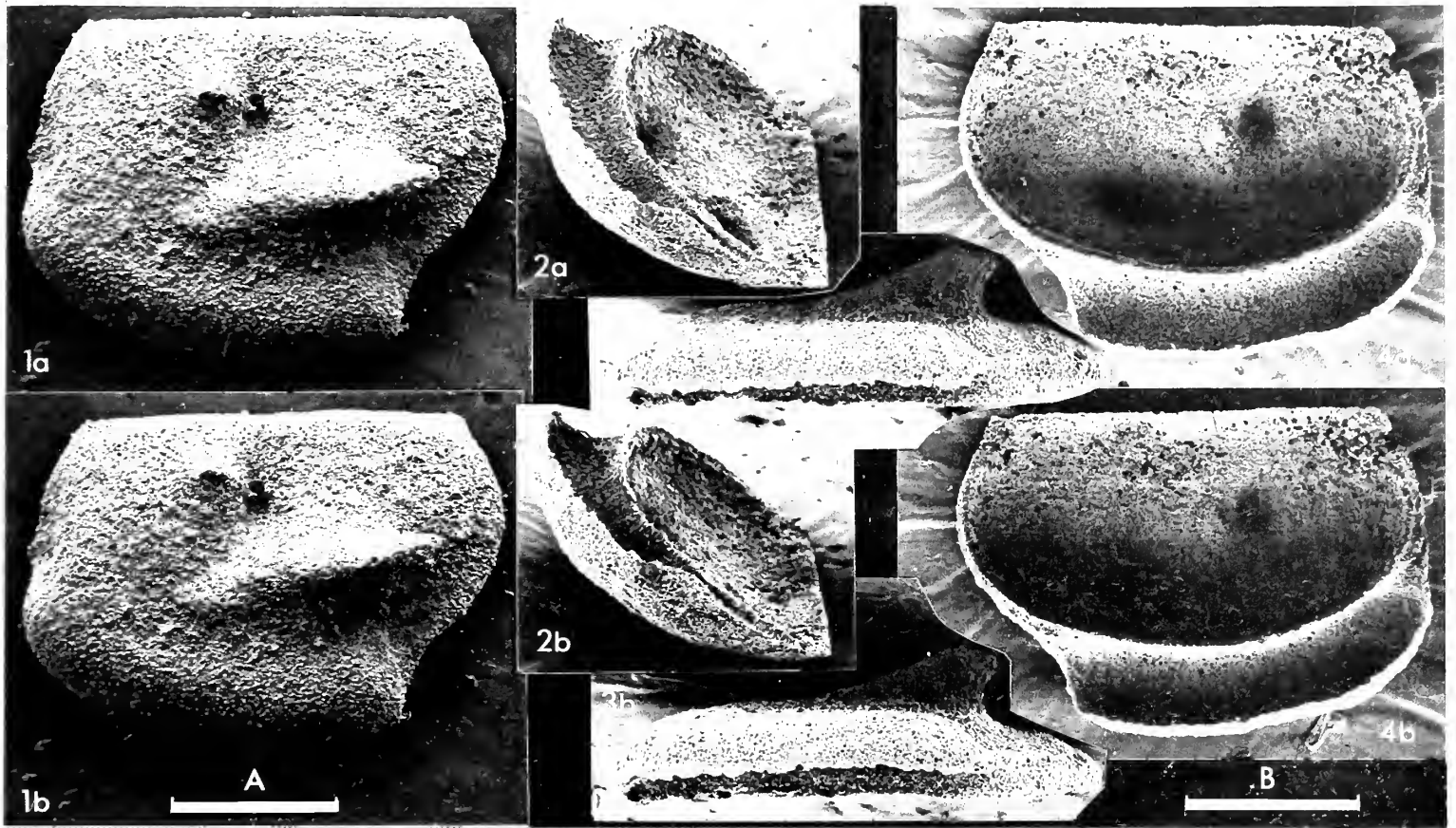
Diagnosis: Adults 0.65 - 0.80mm long. S2 distinct, sinuous, open at both ends, behind the relatively small, conical preadductorial node is more or less pit-like, below the node appears as a shallow sulcal depression. Posteroventral lobe distinct, oblong, elevated projected posteriorly as a lobal spine (Stachel) and near its termination bearing a hollow, ornamental spine (dorn). Dolon occupies the antero- and centroventral regions of females, terminating posteriorly adjacent to the base of the posteroventral lobe; between dolon and posteroventral lobe there is an open U-shaped laterovelar furrow. Surface reticulogranulose with some tubercles.

Remarks: The ornamental spine on the posteroventral lobal spine was not mentioned in the previous detailed description of the species (Schallreuter 1973).

Distribution: Lower part of the Keila Stage (D₂α), Isle of Dago (= Hiiumaa; Estonia), Baltic Sea. Backsteinkalk erratic boulders of N Germany; Sandöflint (= Baltic Backsteinkalk) of the Isle of Gotland, Baltic Sea (1B3, 1B13, 14B2 Types).

Explanation of Plate 6, 74

Fig. 1, tecnomorphic juv. LV, ext. lat. (GPIH 2209, 613 µm long); fig. 2, tecnomorphic juv. LV, ext. lat. (GPIH 2210, 515 µm long); fig. 3, tecnomorphic juv. RV, ext. lat. (GPIH 2211, 488 µm long).
Scale A (100 µm; x 125), fig. 1; scale B (100 µm; x 110), fig. 2; scale C (100 µm; x 148), fig. 3.



ON *HOMEOKIESOWIA FRIGIDA* (SARV)

by Roger E. L. Schallreuter
(University of Hamburg, German Federal Republic)

Genus *HOMEOKIESOWIA* gen. nov.

Type-species: *Kiesowia frigida* Sarv, 1959

Derivation of name: Referring to the homeomorphy with *Kiesowia* Ulrich & Bassler, 1908. Gender, feminine.

Diagnosis: A medium-sized, quadrilobate genus of Tallinnellinae. Lobes dissolved into single nodes: three nodes in front of S2 and four behind; node occupying site of ventral part of L3 (= "posteroventral lobe") strongest; posteroventral-most node (= L4 vent.) smallest, is sometimes (especially in larvae) represented only as a tubercle, and can be fused with the posterodorsal node (L4 dors.). At the dorsal border above L1 and L2 two small node- or spine-like tubercles may occur. Marginal sculpture represented as a row of spines.

Remarks: The genus differs from other genera of Tallinnellinae by having lobes dissolved into single nodes. The homeomorph *Kiesowia* Ulrich & Bassler, 1908 belongs to the Sigmoidopsinae because it develops a histium (see Schallreuter, *Stereo-Atlas of Ostracod Shells* 6 (16) 79 - 86, 1979). The only additional taxon referred to *Homeokiesowia* is *Kiesowia pernodosa* Öpik (*Ann. Naturalists Soc. Tartu Univ.* 43 (1/2), 95, 1937; *Publ. Geol. Inst. Univ. Tartu* 50, 31, 1937), a poorly known species.

Distribution: The Middle Ordovician (Viru Series) of Baltoscandia.

Explanation of Plate 6, 76

Figs. 1 - 3, ♀ RV (GPIH 2023a, 1110 µm long): fig. 1, ext. vent. obl.; fig. 2, ext. ant. obl.; fig. 3, ext. lat.
Scale A (250 µm; x 72), figs. 1, 2; scale B (250 µm; x 79), fig. 3.

Homeokiesowia frigida (Sarv, 1959)

1959 *Kiesowia frigida* sp. nov. L. I. Sarv, *Eesti NSV Tead. Akad. Geol. Inst. uurimused*, 4, 79, pl. 12, figs. 7, 8.

1976 *Kiesowia frigida* Sarv; R. E. L. Schallreuter, *Palaeontographica* (A), 153 (4/6), 164, 176 - 178, pl. 34 (1), figs. 5 - 10, tab 4 (q.v. for further synonymy).

1976 *Kiesowia frigida* (Sarv); N. Sidaravičiene, *Sov. Geol.* 1976 (8), 54, tab. 1 (49).

Holotype: Geological Museum of the Academy of Science of the Estonian SSR, Tartu, no. Os 2201, ♀ LV.

Type locality: Rakvere (=Wesenberg), Estonia; approx. lat. 59°21'N, long. 26°22'E. Laagri substage of Keila Stage (D₂α), upper Middle Ordovician.

Figured specimens: Geologisch-Paläontologisches Institut, University of Hamburg (GPIH), nos. 2023a (Schallreuter, op. cit., tab. 4, no. 3; ♀ RV: Pl. 6, 76, figs. 1 - 3; Pl. 6, 78, fig. 1) and 2023b (loc. cit. no. 5; tecomorphic RV: Pl. 6, 78, figs. 2 - 3). Both from the village of Klein-Horst, Pomerania, Poland; lat. 54°6'N, long. 15°5'E; Backsteinkalk erratic boulder no. Ho-2 (Schallreuter, op. cit., 164); Middle Ordovician; coll. by the author, 1971.

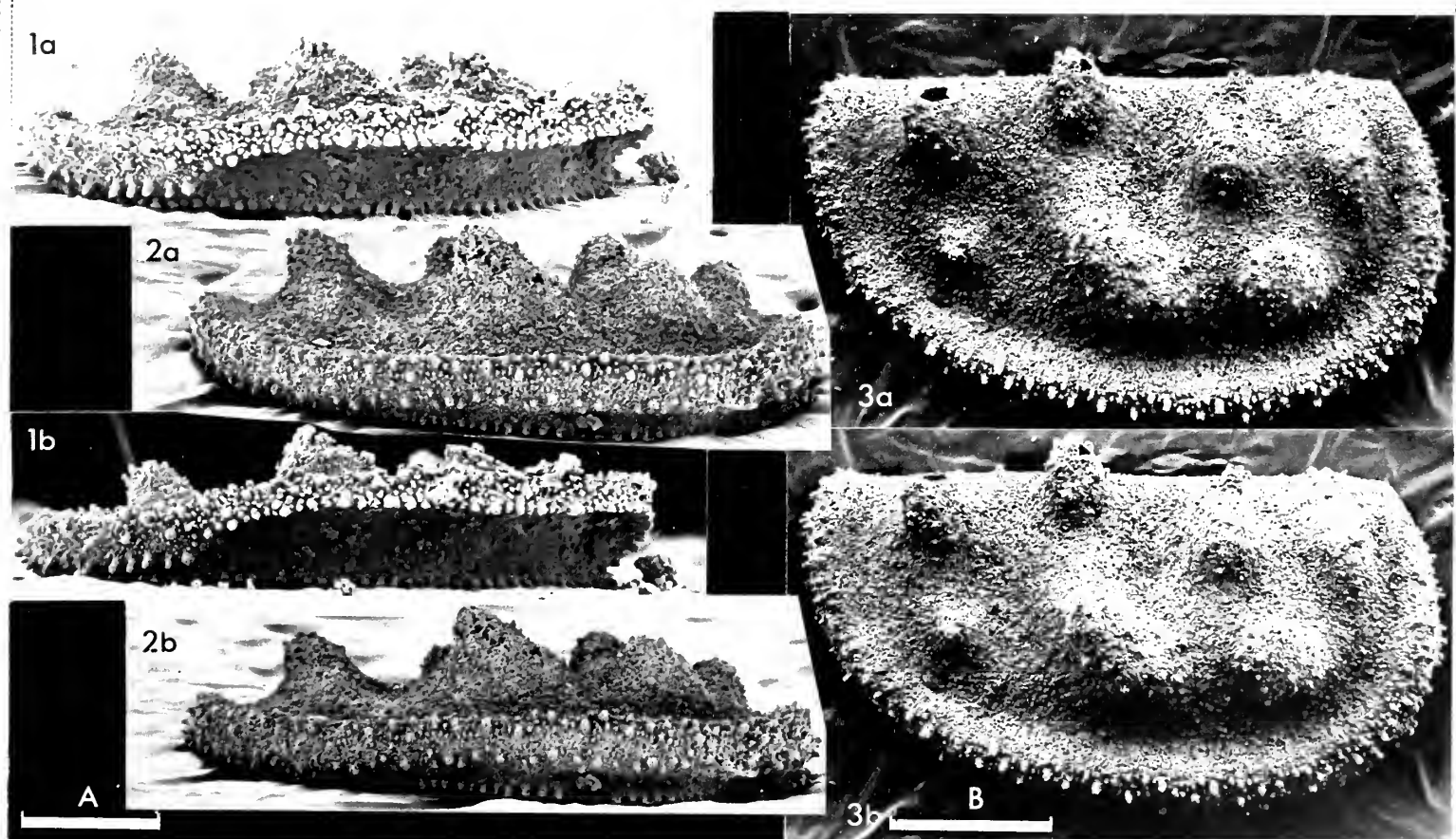
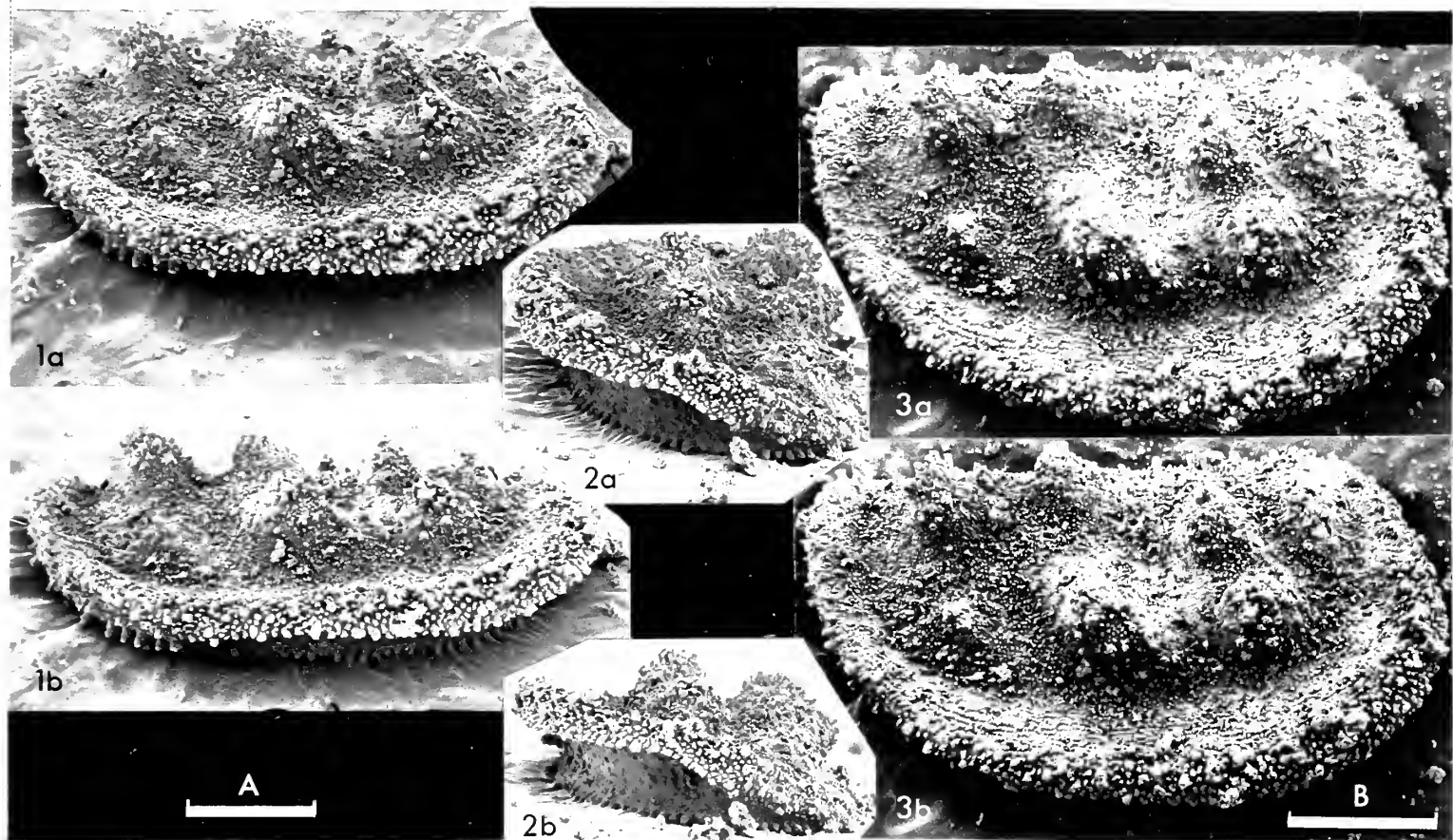
Diagnosis: Adult female valves 1.05 - 1.45mm long. L4 divided into two nodes. Dolon extends from anterocentral region to the centro-posteroventral region.

Remarks: *Homeokiesowia pernodosa* is very similar to *H. frigida* but seems to be larger and according to Öpik (op. cit.) its two posterior nodes (L4) are fused.

Distribution: Idavere (C₃) to Keilo (D₂) stages of Estonia and Lithuanian and corresponding beds of Podolia. Backsteinkalk erratic boulders of N Germany and of the Isle of Gotland, Baltic Sea (Baltic Backsteinkalk, types 14B2 and 1B13).

Explanation of Plate 6, 78

Fig. 1, ♀ RV, ext. vent. (GPIH 2023a); figs. 2, 3, tecomorphic RV (GPIH 2023b, 970 µm long); fig. 2, ext. vent.; fig. 3, ext. lat.
Scale A (250 µm; x 79), fig. 1; scale B (250 µm; x 90), figs. 2, 3.



ON *KIESOWIA* (*KIESOWIA*) *DISSECTA* (KRAUSE)

by Roger E. L. Schallreuter
(University of Hamburg, German Federal Republic)

Genus *KIESOWIA* Ulrich & Bassler, 1908

Type-species (by original designation): *Beyrichia dissecta* Krause, 1892

Diagnosis: A medium-sized to large genus of Sigmoidopsinae. Outline almost amplete – slightly preplete. Quadrilobate. S2 strongest sulcus, long and sigmoidal; S3 curved, S1 weakest sulcus, sometimes almost obsolete. Lobes relatively flat; L1 sometimes has a dorsal, posteriorly directed spine. Male velum as an entire, more or less distinct, broadly rounded elevation (“Wulst”) covered with spines or granules. Anteriorly and ventrally the female velum forms a restricted, flange-like, only weakly convex dolon. Histium ridge-like, narrow to broad, short to long, present only in females. Often no histial (supravelar) antrum. Marginal sculptures formed by row of spines.

Remarks: *Kiesowia* does not belong to the Tallinnellinae (cf. Schallreuter, *Palaeontographica* (A), 153 (4/6), 175, 1976); the occurrence of a rudimentary histium in the type-species indicates an assignment to the Sigmoidopsinae. Further, the lobation of *Kiesowia* indicates a closer relationship to the Sigmoidopsines *Carinobolbina* Henningsmoen (*Norsk geol. Tidsskr.* 31, 205, 1953) and *Pseudotallinnella* Sarv (*Eesti NSV Tead. Akad. Geol. Inst. uurimused* 4, 139, 1959) rather than to *Sigmoidopsis* Henningsmoen (204, 1953) or *Severobolbina* Schallreuter (*Geol. För. Stockh. Förh.* 96 (3 = 558), 278, 1974; = *Severella* Schallreuter, *Ber. geol. Ges. D. D. R.* 9 (3), 395, 1964). *Carinobolbina* and *Pseudotallinnella* are, therefore, here considered as subgenera of *Kiesowia*. The resemblance between *Pseudotallinnella* and *Carinobolbina* was, in

Explanation of Plate 6, 80

Figs. 1 - 4, ♀ RV (GPIH 2194, 1580 µm long): fig. 1, ext. lat.; fig. 2, ext. vent.; fig. 3, ext. ant. obl.; fig. 4, ext. post. obl.
Scale A (250 µm; x 51), figs. 1, 2; scale B (250 µm; x 49), fig. 3; scale C (250 µm; x 41), fig. 4.

fact, emphasised by Jaanusson (*Bull. geol. Instn. Univ. Upsala* 43 (6/8), 7, 1967). Sarv (op. cit., 140) considered that *Pseudotallinnella* was a probable descendant of *Carinobolbina*, and he also pointed out the similarity between *Pseudotallinnella* (*P. regalis*) and *Kiesowia*. The main difference between (*K.*) *Carinobolbina* and (*K.*) *Pseudotallinnella* is the same as that between the subgenera *Sigmoidopsis* (*S.*) and *S.* (*Sigmoidopsoides*) Schallreuter (*Ber. geol. Ges. D. D. R.* 2, 87, 1964): the histium may or may not become confluent anteriorly with the velum.

Distribution: Middle Ordovician – Silurian of Baltoscandia.

Subgenus *KIESOWIA* Ulrich & Bassler, 1908

Diagnosis: *Kiesowia* species with lobes dissolved into broad nodes. Histium and velum join anteriorly. Histium sometimes only rudimentary or is lacking.

Remarks: In both the subgenera *K.* (*Carinobolbina*) Henningsmoen, 1953 and *K.* *Pseudotallinnella* Sarv, 1959 the lobes are not dissolved into single nodes. In *K.* (*Kiesowia*) and *K.* *Pseudotallinnella* the histium is confluent with the velum, whereas in *K.* (*Carinobolbina*) it is not.

Kiesowia (*Kiesowia*) *dissecta* (Krause, 1892)

1892 *Beyrichia dissecta* n. sp. A. Krause, *Z. Deutsch. geol. Ges.* 44 (3), 391, 392, 398, 399, pl. 21, fig. 3.

1954 *Kiesowia dissecta* (Krause); G. Henningsmoen, *Norsk geol. Tidsskr.* 33 (1/2), 78, 79, 80 (*pars*), pl. 2, figs. 1 - 3; *non* 80 (*pars*), pl. 2, fig. 5 (= ? *Hithis leviconvexus* Schallreuter, *Geologie* 16 (5), 621, 1967).

1956 *Kiesowia septenaria* sp. n. K. Stumbur, *Tartu Riikliku Ülik. Toim.* 42, 188, 189, pl. 2, fig. 1 (= *K. dissecta* according to Sarv, *Eesti NSV Tead. Akad. Geol. Inst. uurimused* 9, 95, 109, 1962).

1956 *Kiesowia dissecta* (Krause); K. Stumbur, *Ibid.*, 189.

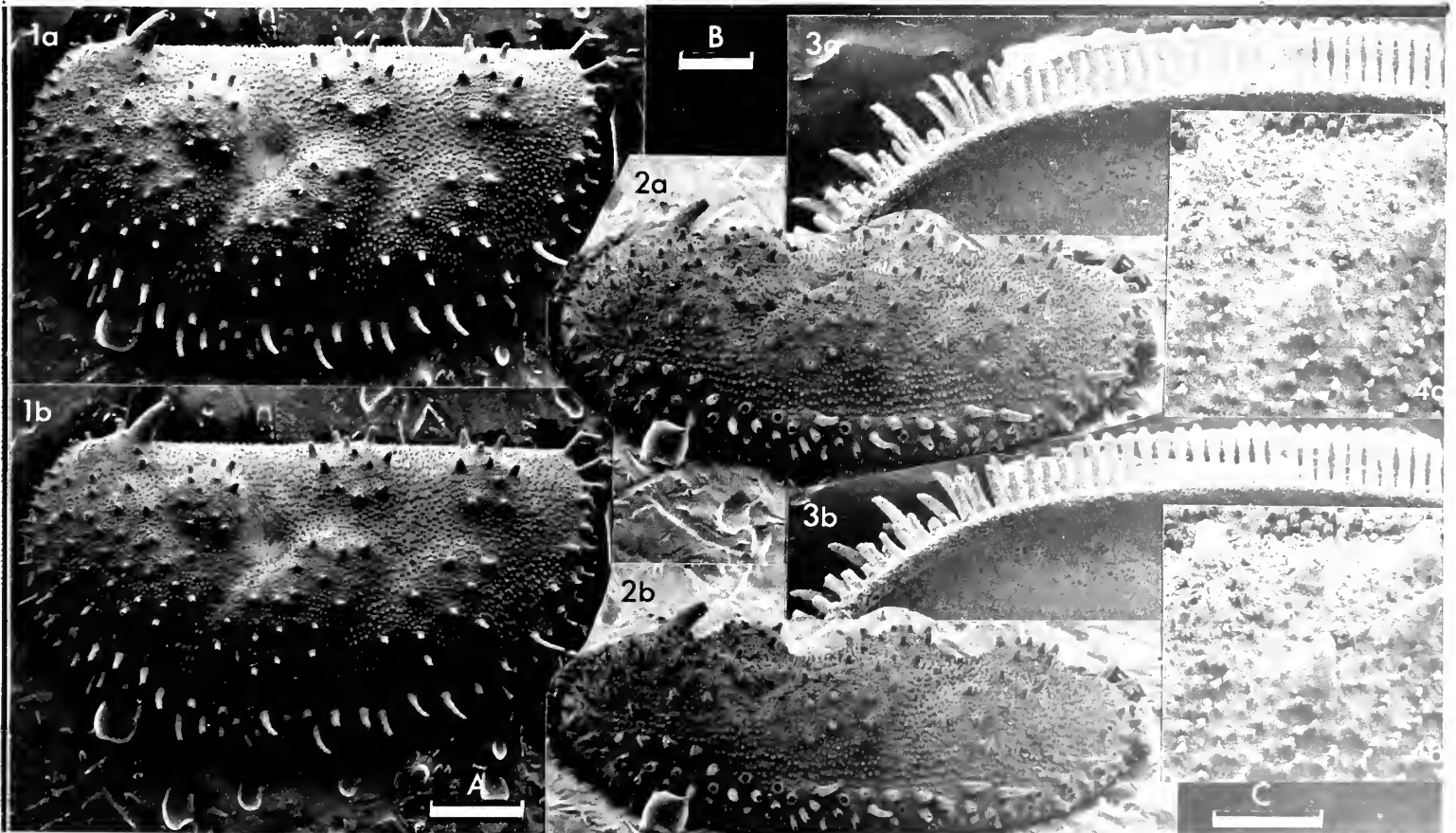
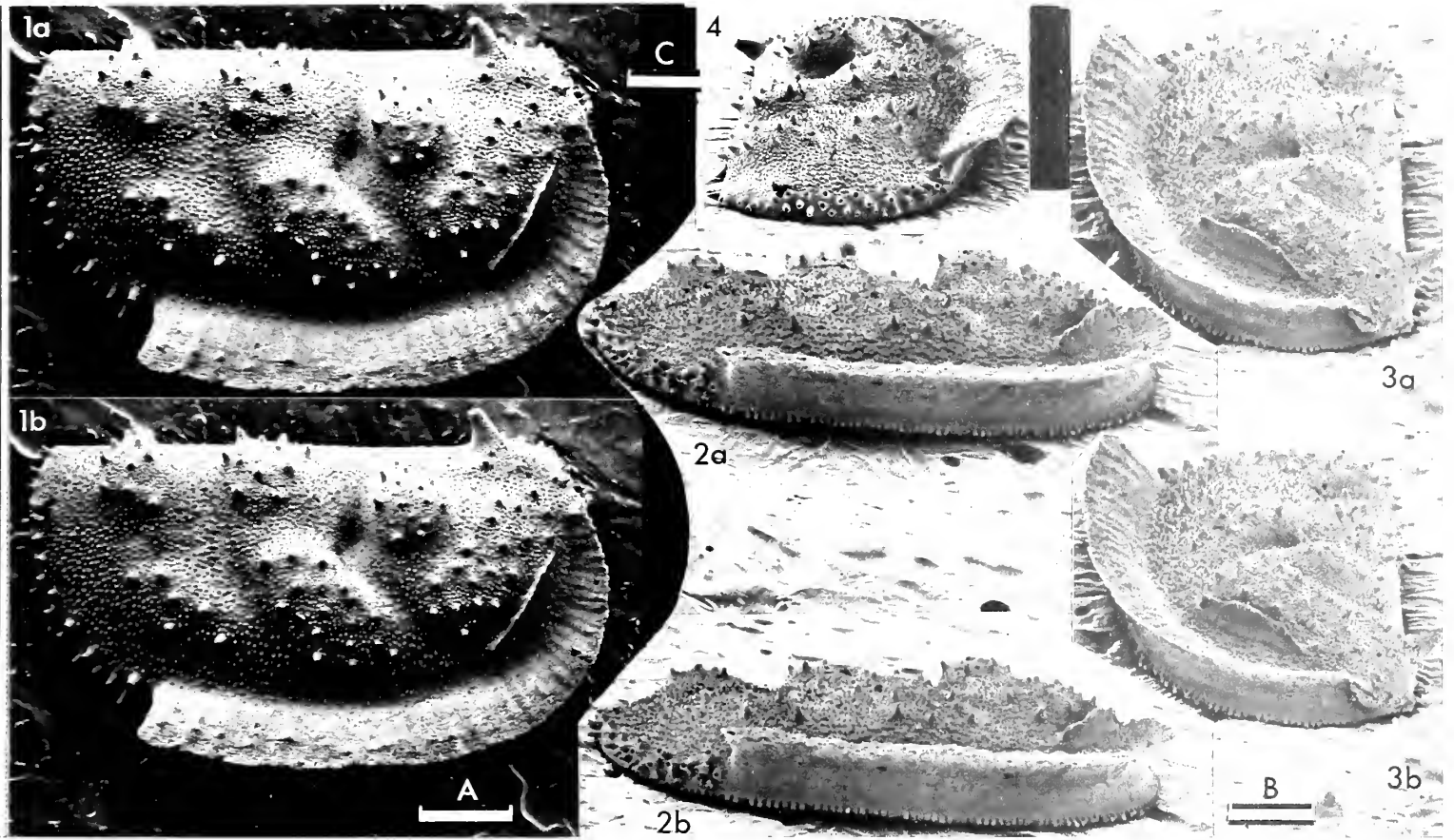
1960 *Kiesowia septenaria* Stum; V. S. Krandijevskij, *Eesti NSV Tead. Akad. Geol. Inst. uurimused* 5, 175.

1962 *Kiesowia dissecta* (Krause); L. I. Sarv, *Eesti NSV Tead. Akad. Geol. Inst. uurimused* 9, 95, 97, 98, 109, 110, pl. 4, fig. 9.

Explanation of Plate 6, 82

Figs. 1, 2, ♂ LV (GPIH 2195, 1490 µm long): fig. 1, ext. lat.; fig. 2, ext. vent. obl.; fig. 3, fragmentary ♀ RV, int. lat., marginal sculpture in centroventral region (GPIH 2196); fig. 4, incomplete ♀ RV, ext. posterovent. obl., detail showing surface ornamentation (GPIH 2197).

Scale A (250 µm; x 53), figs. 1, 2; scale B (100 µm; x 105), fig. 3; scale C (100 µm; x 155), fig. 4.



Lectotype: (designated by Henningsmoen 1954, 79). Unnumbered specimen, Paläontologisches Museum, Museum für Naturkunde, Humboldt University, Berlin; a presumed ♂ RV (Krause, op. cit., pl. 21, fig. 3).

Type locality: Upper Ordovician erratic boulder from Müggelheim, Berlin.

Figured specimens: Geologisch-Paläontologisches Institut, University of Hamburg (GPIH), nos. 2194 (♀ RV: Pl. 6, 80, figs. 1 - 4), 2195 (♂ LV: Pl. 6, 82, figs. 1, 2), 2196 (fragmentary ♀ RV: Pl. 6, 82, fig. 3), 2197 (incomplete ♀ RV: Pl. 6, 82, fig. 4; Pl. 6, 86, fig. 6), 2198 (juv. LV: Pl. 6, 84, fig. 1), 2199 (♂ LV: Pl. 6, 84, figs. 2, 3), 2200, (♀ RV: Pl. 6, 84, fig. 4; Pl. 6, 86, figs. 1 - 4) and 2201 (♀ RV: Pl. 6, 84, fig. 5; Pl. 6, 86, fig. 5). Specimens 2196, 2197 and 2199 are from Öjlemyrflint (Upper Ordovician) erratic boulders nos. Sy 2, Sy 35 and Sy 1 respectively, of the Kaolinsand (Pliocene – Pleistocene), near Braderup, Isle of Sylt N Frisian Is., N Sea); lat. 54°56'N, long. 8°21'E; coll. by Ulrich von Hacht, 1976. The other specimens are from Öjlemyrflint (Upper Ordovician) erratic boulder no. G30 from the Isle of Gotland (Baltic Sea), beach opposite the Isle of Lilla Karlsö, lat. 57° 18' N, long. 18° 8' E; coll. by the author, 1976.

Diagnosis: Females 1.43 - 2.30 mm long. Histium rudimentary: a short, anteroventral ridge, not connected with velum, sometimes absent.

Remarks: *Pseudotallinnella regalis* sensu Sarv (*Eesti NSV Tead. Akad. Geol. Inst. uurimused* 4, pl. 21, fig. 17, 1959) belongs to *K. (Kiesowia)* and is possibly a new species. Its lobes are dissolved into nodes, a small velar flange seems to be present anteriorly and ventrally and above the flange there is a histial ridge which is longer than in *Kiesowia dissecta* and which seems to be connected with the velum somewhat below the anterior cardinal corner.

Explanation of Plate 6, 84

Fig. 1, juv. LV, ext. lat. (GPIH 2198, 1300 µm long); figs. 2, 3, ♂ LV (GPIH 2199, 1460 µm long): fig. 2, ext. lat.; fig. 3, ext. vent. obl.; fig. 4, ♀ RV, ext. post. (GPIH 2200); fig. 5, ♀ RV, ext. ant. obl. (GPIH 2201).

Scale A (250 µm; x 61), fig. 1; scale B (250 µm; x 45), figs. 2, 3; scale C (250 µm; x 56), figs. 4, 5.

Remarks: The adult valves of *K. dissecta* from Norway (Henningsmoen 1954) are about 1.90mm long, Sarv (1962) (*contd*) mentions an adult length of 2.15mm for Estonian material and the lectotype is 2.20 or 2.30mm long (Krause 1892; Helmdach 1977). The specimens figured herein possibly represent a new, smaller subspecies.

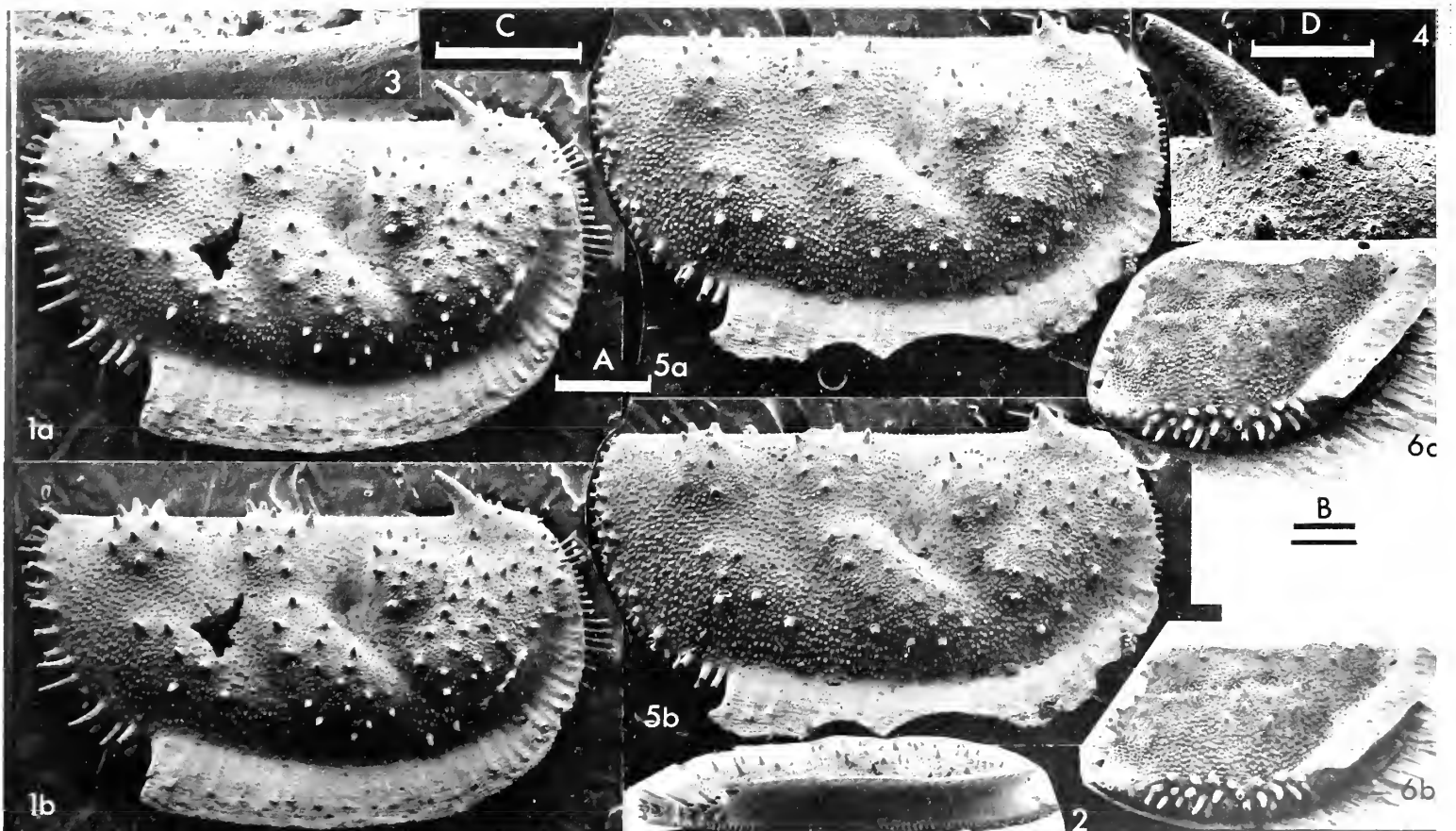
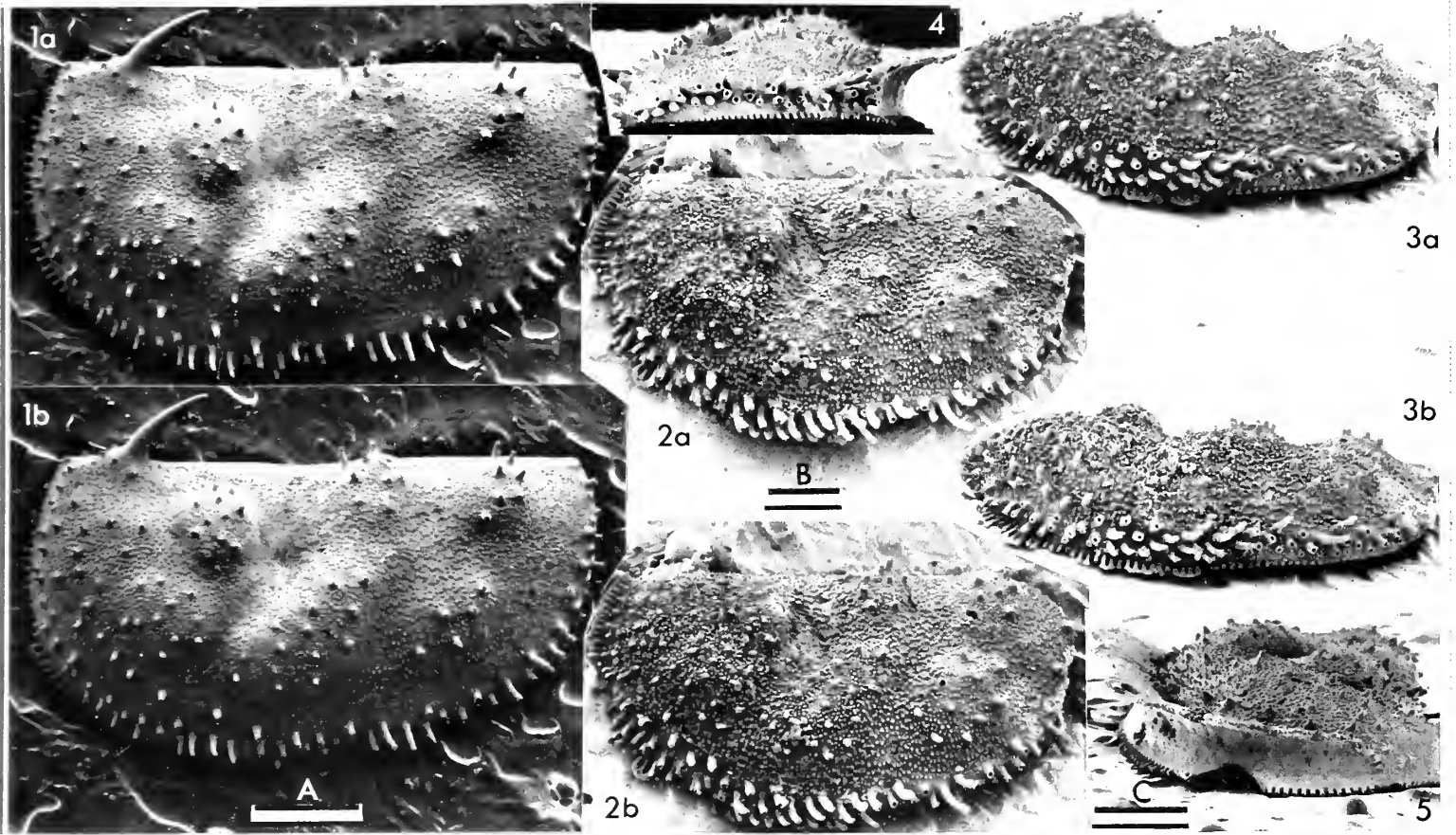
Kiesowia dissecta is similar to, and can occur together with *Hithis leviconvexus* Schallreuter, 1967. *H. leviconvexus* is smaller, it lacks a histium in females (also lacking in some females of *K. dissecta*; Pl. 6, 86, fig. 5) and its dolon terminates posteriorly below L3 whereas in *K. dissecta* it reaches below L4. The inner antral fence (marginal sculpture) in *H. leviconvexus* is formed by a broad flange and in *K. dissecta* by a row of spines. The nodes in *H. leviconvexus* are more typically node-like (smaller, higher and more rounded) but in *K. dissecta* they are more lobe-like (broad and flattened). The nodes in front of the preadductorial node of *K. dissecta* are mostly more or less fused, not distinct as in *H. leviconvexus*. According to Henningsmoen (1954, 80) *Beyrichia mamillosa* Krause, 1892 agrees rather well with larval forms of *K. dissecta* and may be synonymous. His figured juvenile of *K. dissecta* (Henningsmoen, pl. 2, fig. 5) is, in my opinion, possibly conspecific with *Hithis leviconvexus* (see above), which resembles the holotype of *B. mamillosa* Krause, 1892 (*op. cit.*, pl. 22, fig. 14) more than *K. dissecta*. *B. mamillosa* is more probably a senior synonym of *H. leviconvexus*.

Distribution: Porkuni Stage (F₂), Ordovician and Tamsalu Stage (G₂), Silurian of Estonia. Stages 5a, 5b, Oslo region, Norway. Erratic boulders of Germany; Öjlemyrflint (Upper Ordovician) erratic boulders of the Isle of Gotland (Baltic Sea) and of the Kaolinsand (Pliocene – Pleistocene) of the Isle of Sylt (N Frisian Is., N Sea).

Explanation of Plate 6, 86

Figs. 1 - 4, ♀ RV (GPIH 2200, 1430 µm long): fig. 1, ext. lat.; fig. 2, ext. vent.; fig. 3, ext. vent., detail of velum; fig. 4, ext. lat., anterodorsal spine; fig. 5, ♀ RV without histium, ext. lat. (GPIH 2201, 1460 µm long); fig. 6, incomplete ♀ RV, ext. post. obl. (GPIH 2197, 1060 µm broad).

Scale A (250 µm; x 54), figs. 1, 5; scale B (250 µm; x 38), figs. 2, 6; scale C (100 µm; x 200), fig. 3; scale D (100 µm; x 170), fig. 4.



ONPYXION POSTEROBICARINATUM SCHALLREUTER sp. nov.

by Roger E. L. Schallreuter
(University of Hamburg, German Federal Republic)

Pyxion posterobicarinatum sp. nov.

Holotype: Geologisch-Paläontologisches Institut, University of Hamburg, no. 2202, RV.

Type locality: Middle Ordovician Hornstein erratic boulder no. Sy 52 of the Kaolinsand (Pliocene – Pleistocene), near Braderup, Isle of Sylt (N Frisian Is, N Sea), Germany; lat. 54° 56' N, long. 8° 21' E.

Derivation of name: With reference to the two carinae in the posterior part of the valve.

Figured specimens: Geologisch-Paläontologisches Institut, University of Hamburg (GPIH), no. 2202 (holotype, RV: Pl. 6, 88, figs. 1 - 4), 2203 (LV: Pl. 6, 90, figs. 1, 2), 2204 (juv. RV: Pl. 6, 88, fig. 5; Pl. 6, 90, fig. 3), 2205 (RV: Pl. 6, 90, fig. 4) and 2206 (LV: pl. 6, 90, fig. 5). All the figured specimens are from Hornstein erratic boulder no. Sy 52 (see type locality for details); coll. by Ulrich von Hacht, 1978.

Explanation of Plate 6. 88

Figs. 1 - 4, RV (holotype, GPIH 2202, 560 μ m long); fig. 1, ext. lat.; fig. 2, ext. vent. obl.; fig. 3, ext. dors. obl.; fig. 4, ext. vent.; fig. 5, juv. RV, ext. vent. (GPIH 2204, 482 μ m long).

Scale A (100 μ m; x 125), figs. 1 - 3; scale B (100 μ m; x 115), figs. 4, 5.

Diagnosis: Length of valves up to 0.59mm. Length/height ratio without the sculptures dorsal of hinge-line is high (1.45 to 1.51); with dorsal sculptures, is very high (<1.45). Outline postplete but with forward swing because anterior cardinal corner considerably larger than posterior cardinal corner; dorsum epicline. Short, faint sulcal depression dorsal, slightly in front of mid length; two faint more or less confluent nodes anteroventrally in front of the depression. Anteriorly the indistinct, broadly elevated, ventral carina gradually merges into the lateral surface, posteroventrally it is more ridge-like, converging with the free margin in dorsal direction and lacking in the posterodorsal region. Marginal surface confluent with ventral elevation is convex and in lateral view overhangs the free border; marginal surface confluent with posteroventral ridge is concave and does not protrude over the free margin. A second, rounded carinal ridge occurs posterodorsally. Surface appears to be smooth.

Remarks: The contact conditions of the carapace of *Pyxion* are here described for the first time (cf. Jaanusson, *Bull. geol. Instn. Univ. Upsala* 37 (3/4) 427, 1957). Internal views of *P. posterobicarinatum* (Pl. 6, 90, figs. 4, 5) show that the left valve overlaps the right valve at the contact margin: the left valve bears an outer list and an entire, uninterrupted, inner semi-groove; conditions are reversed in the right valve.

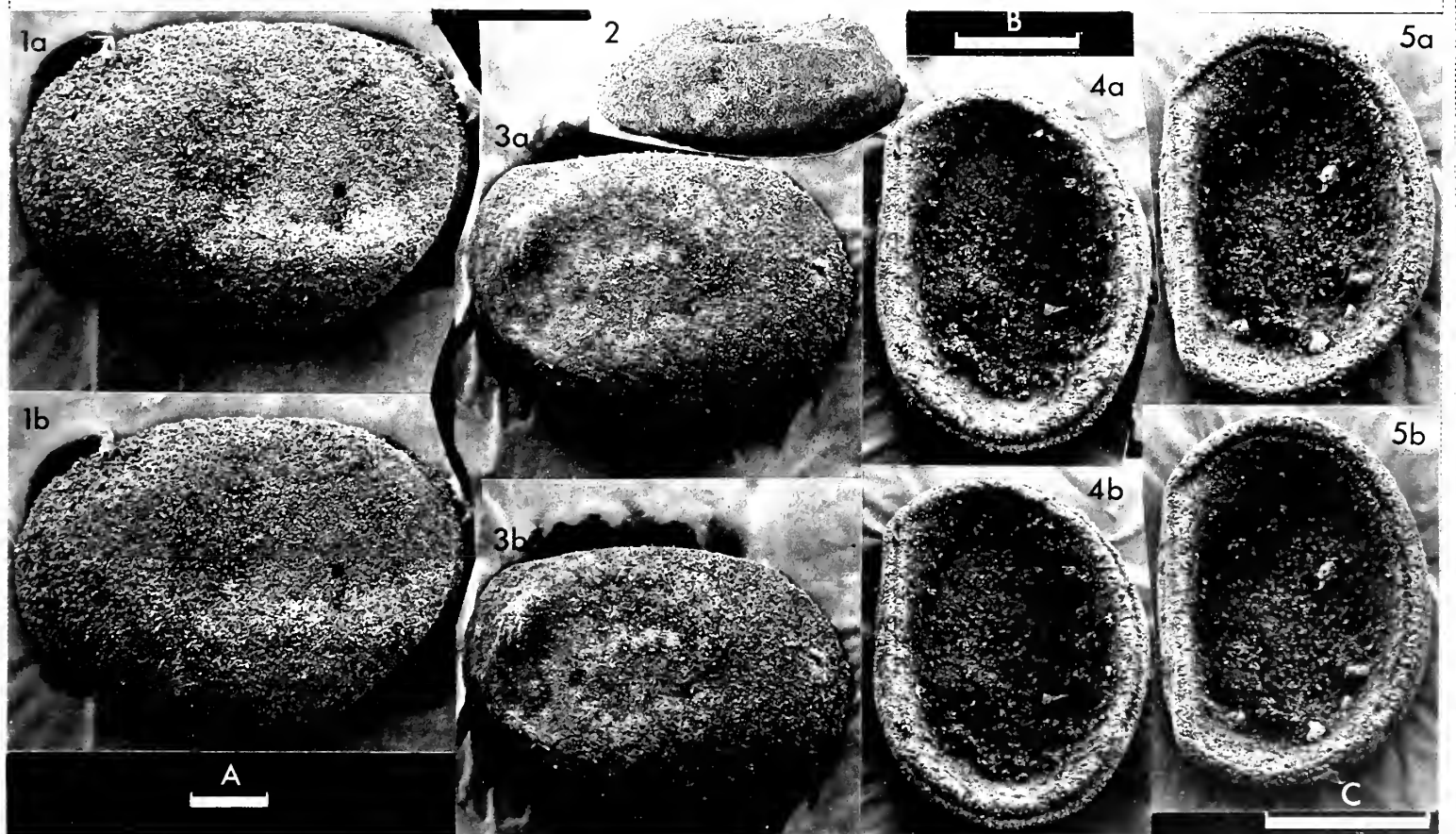
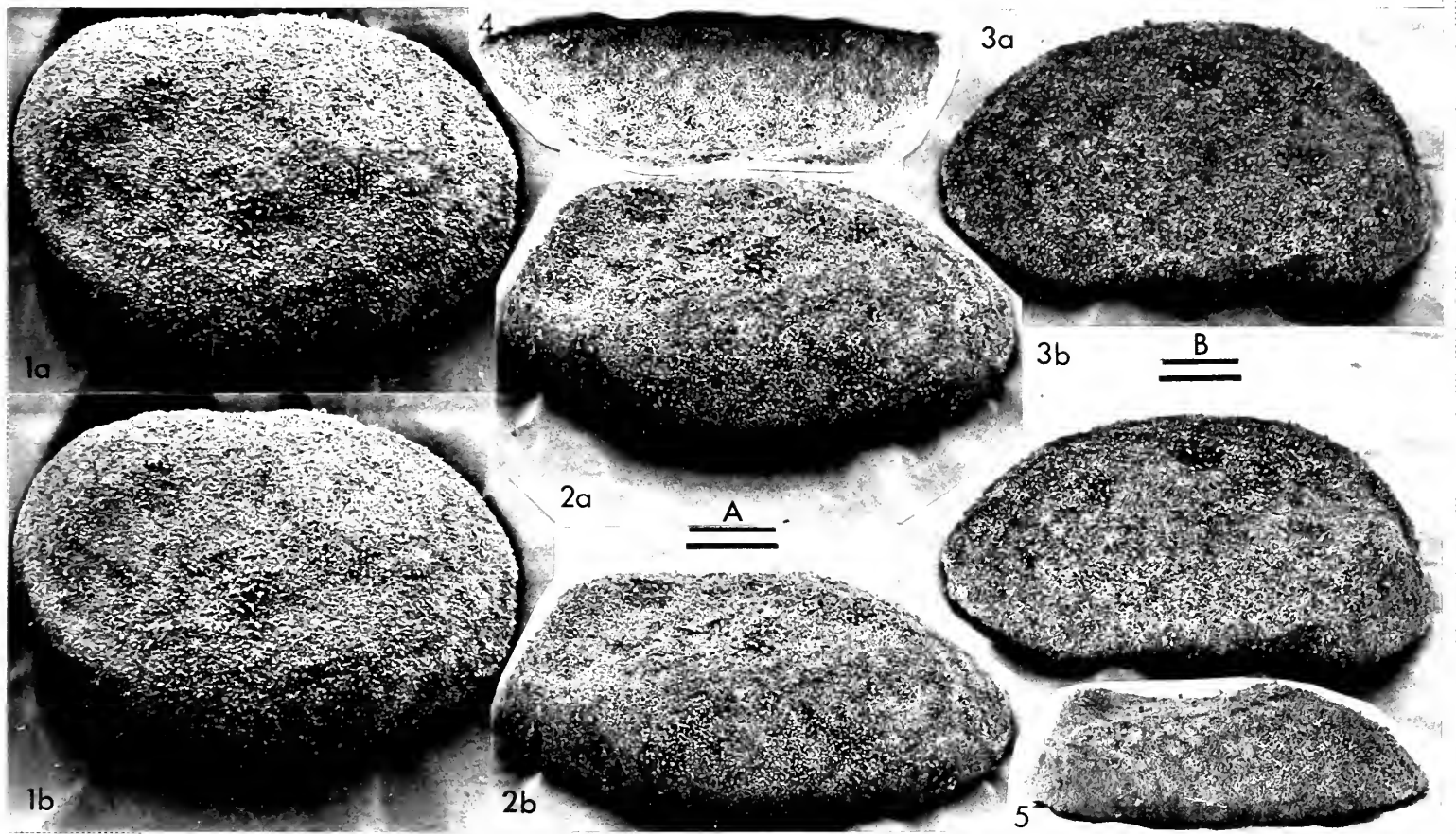
The type-species of *Pyxion*, *P. carinatum* (Hadding, 1913), possesses an anterodorsal oblong knob, its crest forming the highest point of the valve. Behind the adductor scar it has a broad, low inflation extending posteriorly almost to the carinal ridge (Jaanusson, op. cit., 428).

Distribution: Lower Upper Viruan Hornstein erratic boulders of the Kaolinsand (Pliocene – Pleistocene) near Braderup, Isle of Sylt (N Frisian Is, N Sea), Germany.

Explanation of Plate 6, 90

Figs. 1, 2, LV (GPIH 2203, 585 μ m long): fig. 1, ext. lat.; fig. 2, ext. vent. obl.; fig. 3, juv. RV, ext. lat. (GPIH 2204); fig. 4, RV, int. lat. (GPIH 2204); fig. 4, RV, int. lat. (GPIH 2205, 564 μ m long); fig. 5, LV, int. lat. (GPIH 2206, 572 μ m long).

Scale A (100 μ m; x 110), figs. 1, 3; scale B (250 μ m; x 70), fig. 2; scale C (250 μ m; x 90), figs. 4, 5.



ON *ARGENTICYTHERETTA* (*ARGENTICYTHERETTA*) *PUNCTATA*

ROSE sp. nov.

by John F. Rose

(BP Research Centre, Sunbury-on-Thames, England)

Argenticytheretta (*Argenticytheretta*) *punctata* sp. nov.

Holotype: University of Hull coll. no. **HU.220.T.20**, ♂ RV.

Type locality: Laguna Blanca No. 1 well between 1527 and 1528.5m, N of Peninsula Brunswick, Magallanes Province, Chile; approx. lat. 52° 16' S, long 71° 07' W. Grey siltstone, with an abundant, largely foraminiferal fauna, suggesting a cool water, inner sub-littoral environment; Loreto Formation, uppermost Oligocene, Miradorian Stage.

Derivation of name: A reference to the punctate ornamentation.

Explanation of Plate 6, 92

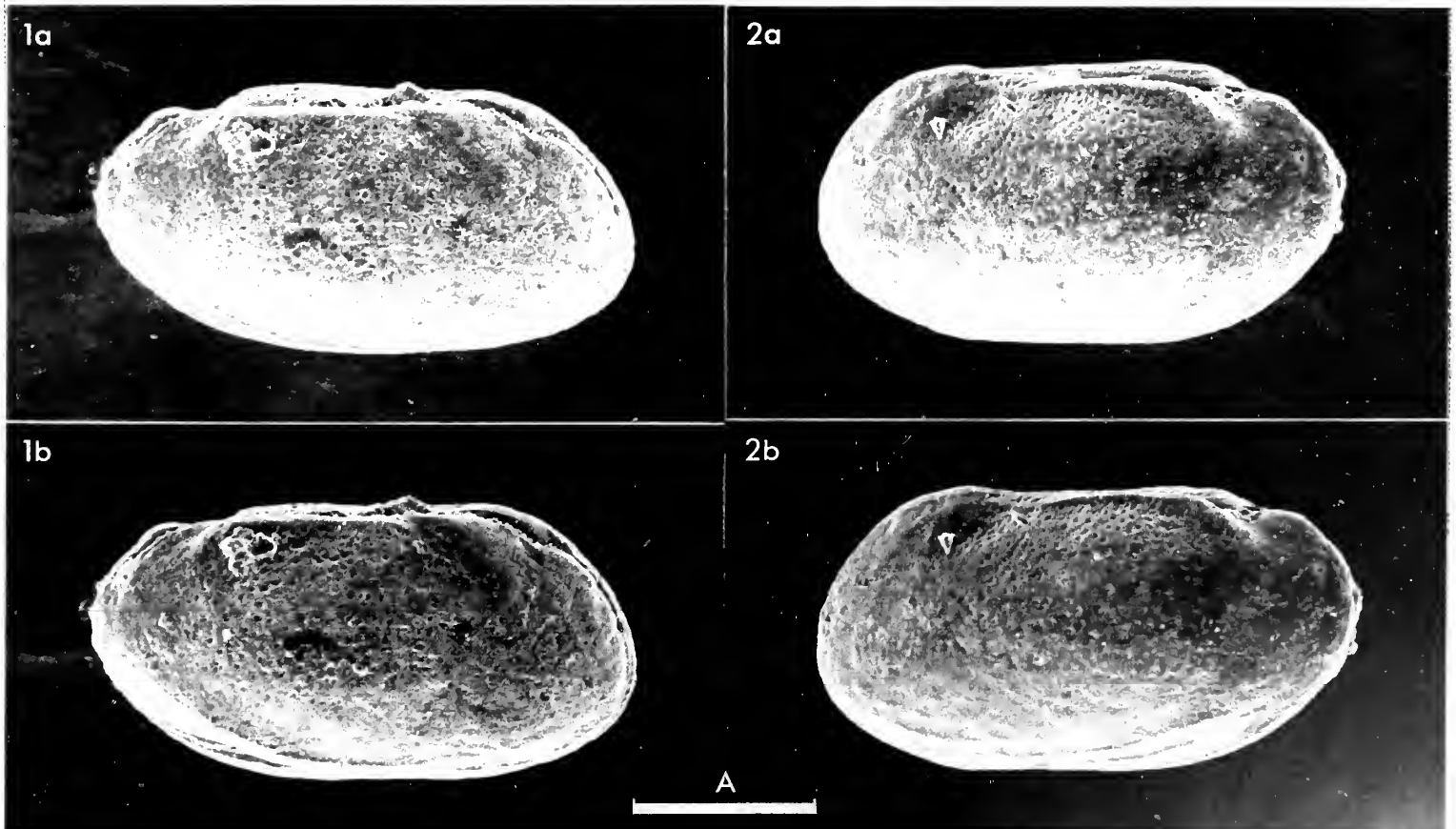
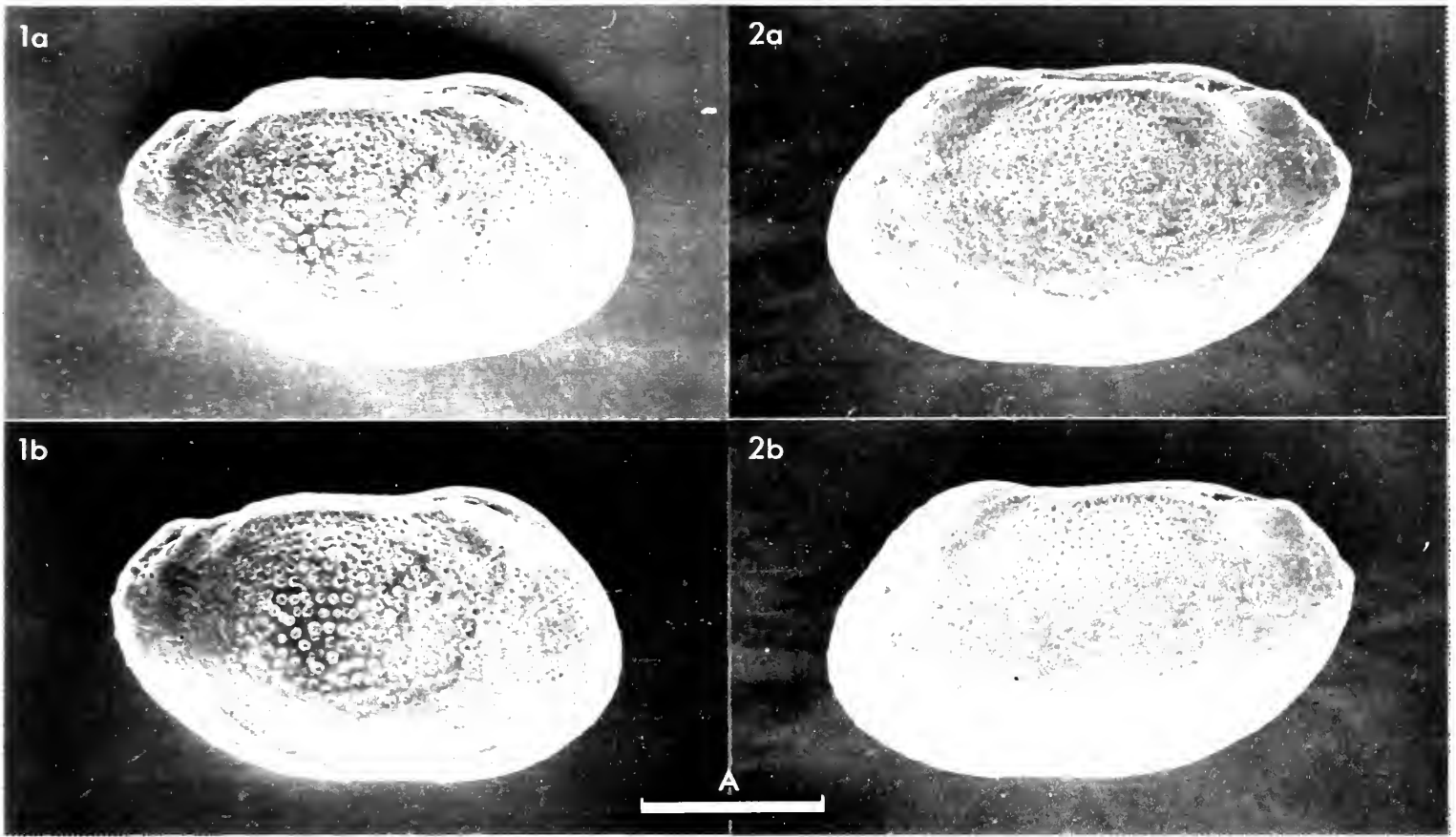
Fig. 1, ♀ car., ext. rt. lat. (paratype, 700 μm long); fig. 2, ♀ car., ext. lt. lat. (**HU.220.T.21.1**, 730 μm long).
Scale A (250 μm; x 100), figs. 1, 2.

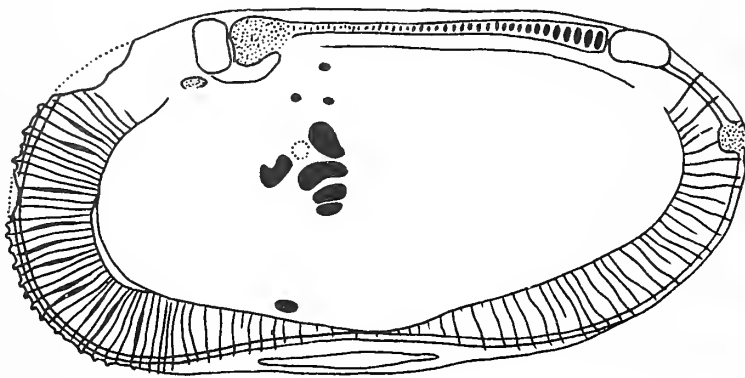
Figured specimens: University of Hull coll. nos. **HU.220.T.21.1** (♀ car., Pl. 6, 92, fig. 2), **HU.217.T.10** (♂ car., Pl. 6, 94, fig. 1), **HU.220.T.21.2** (♂ car., Pl. 6, 94, fig. 2), **HU.217.T.11** (♀ car., Pl. 6, 96, fig. 1), **HU.220.20** (♂ RV, pl. 6, 98, figs. 1 - 3), Paratype, to be lodged with Empresa Nacional del Petroleo at Punta Arenas, Chile (♀ car. Pl. 6, 92, fig. 1 and Pl. 6, 96, fig. 2). The figured specimens were obtained from three samples. **HU.220.T.21.1.**, **HU.220.T.21.2** and **HU.217.T.11** are from Ciaike No. 1 well (approx. lat. 52° 9' S, long. 70° 3' W) between 1648 and 1651m, Late Oligocene, Miradorian stage. **HU.217.T.10** is from Ciaike No. 1 well between 1666 and 1669m, Late Oligocene, Miradorian stage. **HU.220.T.20** and the paratype are from the type locality and level.

Diagnosis: A species with a punctate ornamentation, in which the punctation becomes strongest in the central and centrodorsal portions of the valves. Fine longitudinal ribs are developed dorsally in both valves and ventrolaterally in the right valve.

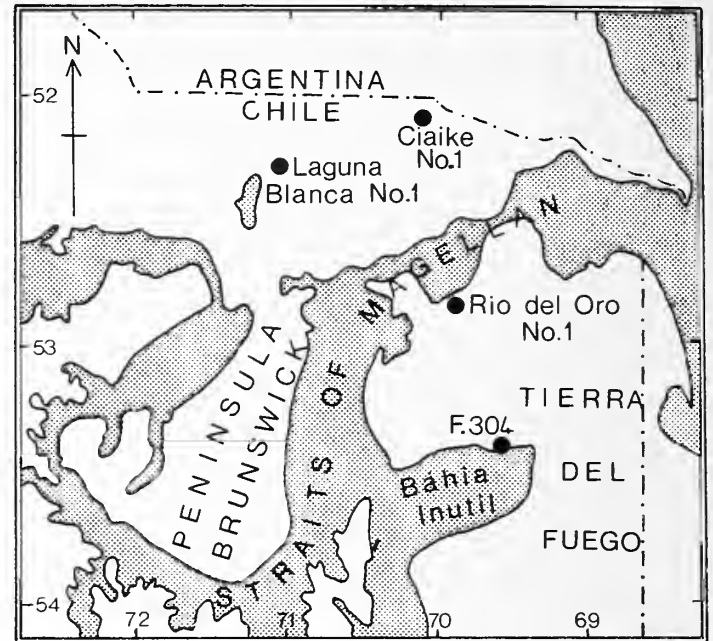
Explanation of Plate 6, 94

Fig. 1, ♂ car., ext. rt. lat. (**HU.217.T.10**, 750 μm long); fig. 2, ♂ car., ext. lt. lat. (**HU.220.T.21.2**, 750 μm long).
Scale A (250 μm; x 100), figs. 1, 2.





Text-fig. 1. Internal view of holotype, HU.220.T.20., x 130 (approx.) showing marginal pore canals.



Text-fig. 2

Explanation of Plate 6, 96

Fig. 1, ♀ car., ext. dors. (HU.217.T.11, 700 μm long); fig. 2, ♀ car., ant. dors. obl. (paratype, 700 μm long). Scale A (250 μm; x 100), figs. 1, 2.

Remarks: *A. (A.) punctata* resembles the type species, *A. (A.) miocenica* Rossi de Garcia, 1969 and Morphotype A of *A. (A.) fuegoensis* Rose, 1975 (*Stereo-Atlas of Ostracod Shells* 2, 199 - 202, 1975) but is smaller in size, ♂♂ being only 0.75mm long compared with ♂♂ of *A. (A.) fuegoensis* which are 0.87mm. *A. (A.) fuegoensis* and *A. (A.) miocenica* also lack any longitudinal ribs.

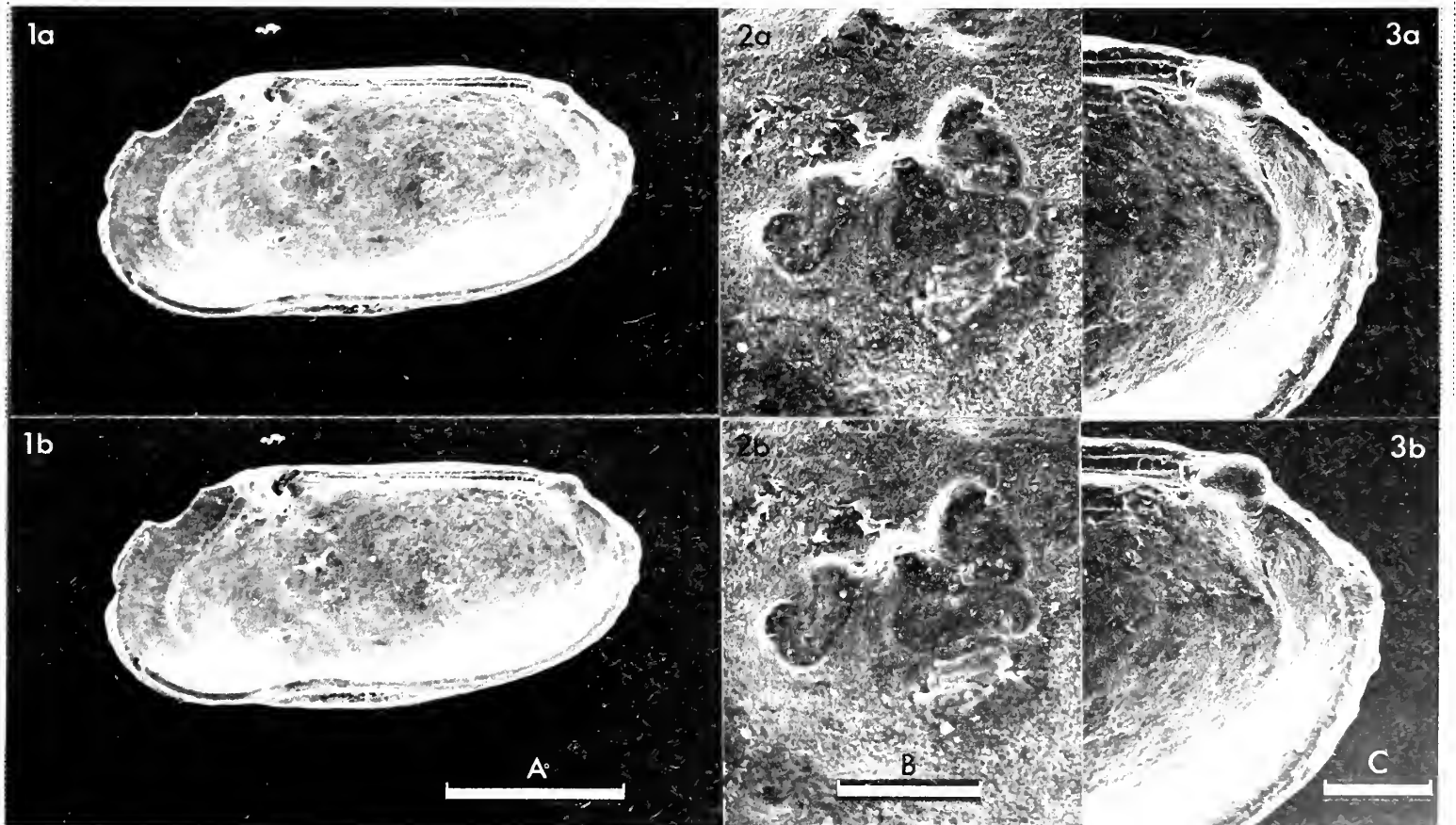
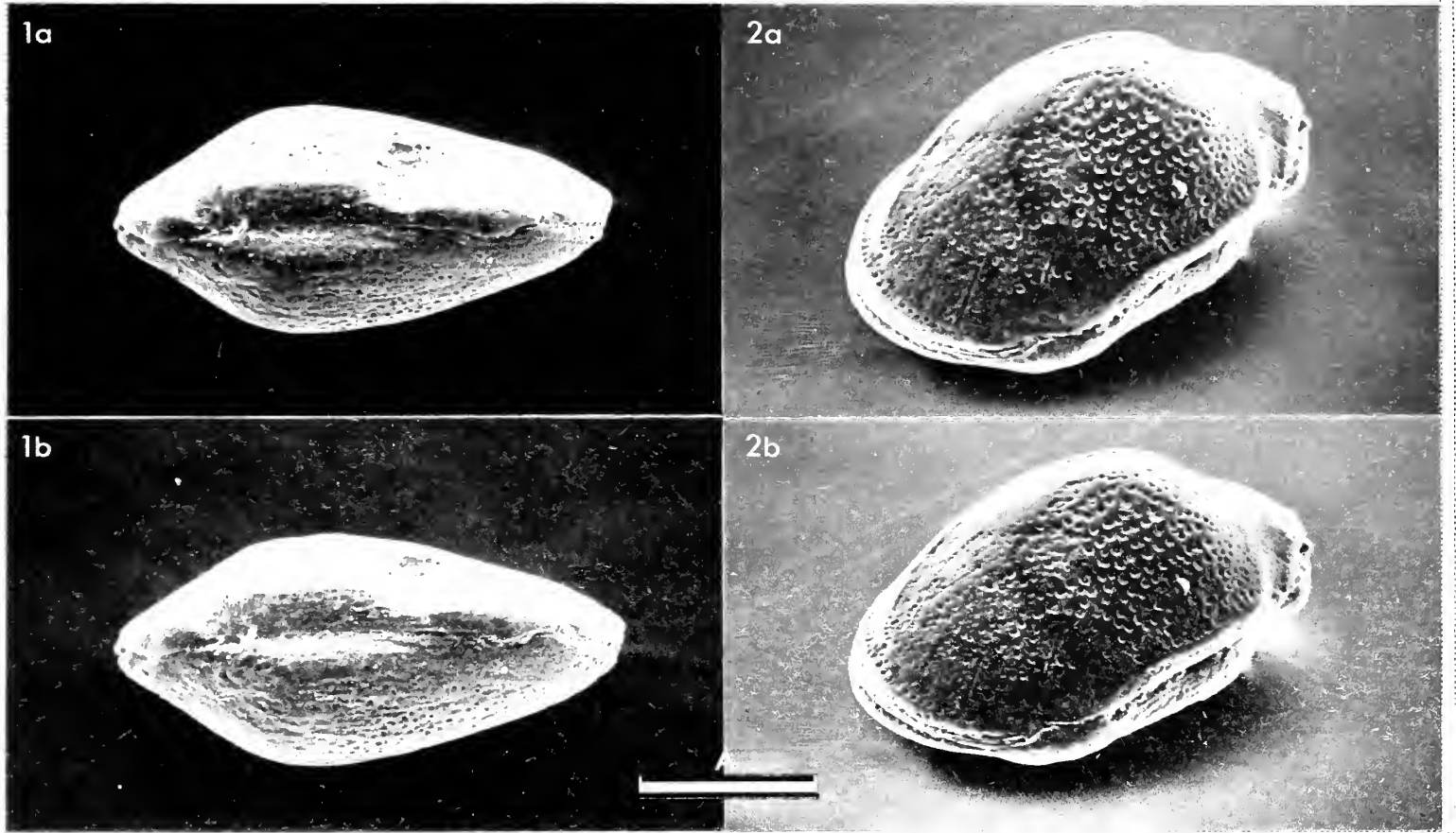
Like some other species of *Argenticytheretta* from Southern Chile, [*A. (A.) patagoniensis* Rose, 1975, *A. (A.) gonzalezi* Rose, 1975 and *A. (A.) riescoensis* Rose, 1975 (*Stereo-Atlas of Ostracod Shells* 2, 195 - 198, 1975)] *A. (A.) punctata* has a posterior snap-knob (Pl. 6, 98, fig. 3). There is also a possibility that this species possesses a ventral snap-knob in the form of a multi-dentate bar below the selvage, as is the case with many other yet undescribed members of the genus, but on the only single valve found of this species, this structure is obscured by adherent sediment.

Distribution: The thirteen specimens found come from four localities (text-fig. 2), Laguna Blanca No. 1 well in two samples between 1518 and 1528.5m, Ciaike No. 1 well in six samples between 1531 and 1669m, Rio del Oro No. 1 well in one sample from 978 to 981m, and a surface sample, F.304 from the north coast of Bahia Inutil (approx. lat. 53° 25' S, long. 69° 35' W). All are of Late Oligocene age (Miradorian Stage) and are from deposits with a probable inner sub-littoral origin.

The genus is very widespread in the southern half of South America and makes up a significant part of the Tertiary ostracod fauna.

Explanation of Plate 6, 98

Figs. 1 - 3, (holotype, HU.220.T.20, 750 μm long): fig. 1, ♂ int. rt. lat.; fig. 2, int. musc. sc.; fig. 3, post. snap-knob. Scale A (250 μm; x 100), fig. 1; scale B (50 μm; x 400), fig. 2; scale C (50 μm; x 300), fig. 3.



ON *GHARDAGLAIA AMBIGUA* NEALE sp. nov.

by John W. Neale
(University of Hull, England)

Ghardaglaia ambigua sp. nov.*Holotype*: University of Hull coll. nos. **HU.261.R.3a, b**, ♂ car. (a = valves, b = soft parts).*Type locality*: Gonalabba, Yala National Park, Sri Lanka, lat. 6° 20' 58" N, long. 81° 30' 0" E. Recent, in very saline conditions on a sand bottom.*Derivation of name*: Latin, meaning ambiguous, referring to the mixture of characters of both *Ghardaglaia* and *Aglaiella*.*Figured specimens*: University of Hull coll. nos. **HU.261.R.3a** (♂ car; RV: Pl. 6, 100, fig. 1; LV: Pl. 6, 102, fig. 1), **HU.261.R.3b** (♂ car; Zenker's organ: Pl. 6, 106, fig. 1; Hemipene: Pl. 6, 106, fig. 3), **HU.261.R.2a** (♀ car; RV: Pl. 6, 100, fig. 2; LV: Pl. 6, 102, fig. 2), **HU.261.R.1a** (♀ car; RV: Pl. 6, 104, fig. 1; LV: Pl. 6, 104, fig. 2, Pl. 6, 106, fig. 2), **HU.261.R.1b** (♀ furcal attachment: text-fig. 1), **HU.261.R.4b** (♀ limb 5: text-fig. 1), **HU.261.R.4a** (♀ car.; RV: text-fig. 1).

Explanation of Plate 6, 100

Fig. 1, ♂ RV, ext. lat. (holotype, **HU.261.R.3a**, 712 μm long); fig. 2, ♀ RV, ext. lat. (paratype, **HU.261.R.2a**, 712 μm long).
Scale A (100 μm; x 132), figs. 1, 2.

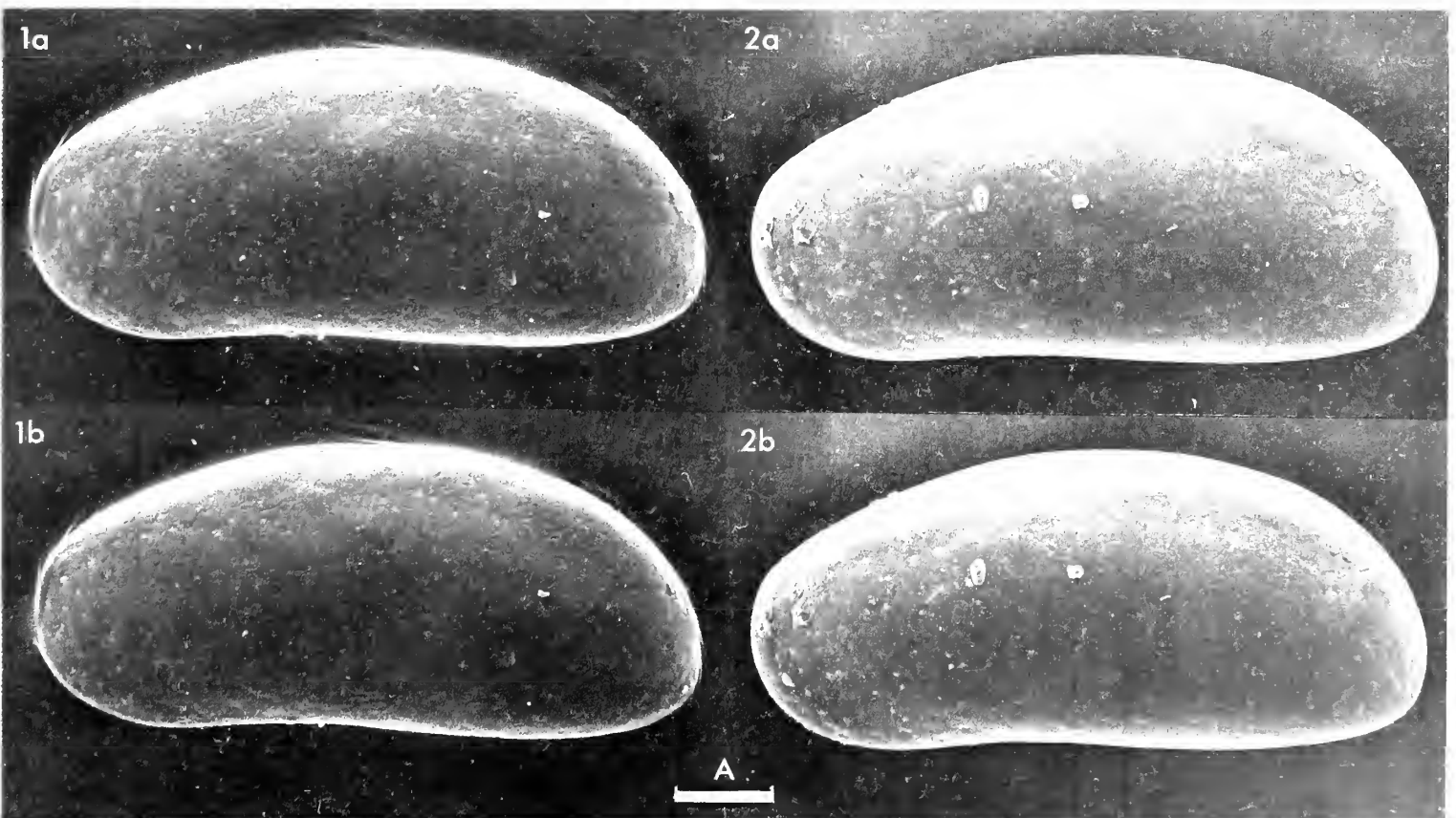
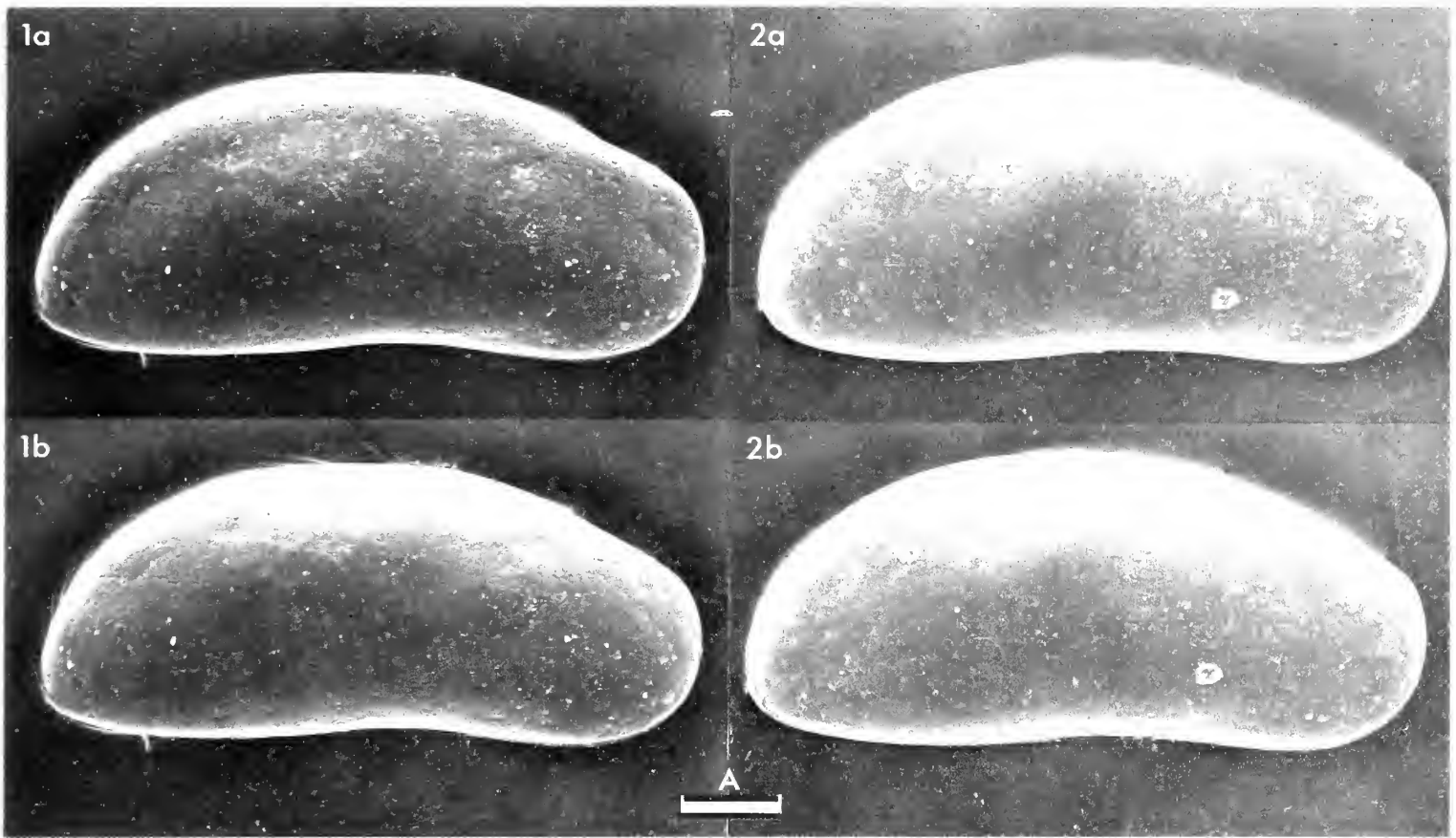
Diagnosis: Smooth, elongate, sub-reniform valves; large vestibules with branched marginal pore canals anteriorly, less so posteriorly. Small, simple pore canals. Fresh material with diffuse sepia-coloured pattern, black eye and Zenker's Organ with 7 rosettes.*Remarks*: This is referred to Hartmann's genus *Ghardaglaia* (hitherto known only from the Red Sea) because of the characteristic setal 'brush' developed at the tip of Limb 7. The antennule, however, has 6 segments (characteristic of *Aglaiella*) not 5 (*Ghardaglaia*) but the proportions are more in accordance with a division of segment 2 of the *Ghardaglaia* type species (Hartmann, *Kieler Meeresforschungen* 20, 1964) than the proportions seen in the type of *Aglaiella* as figured by Daday 1910 (*Sber. öst. Akad. Wiss.*, 119).*Distribution*: *G. ambigua* is known from four collections made in the Yala National Park, Sri Lanka on the S E coast of the island viz. Gonalabba, Yala 1, Yala 2 and Mahasilawa (text-fig. 3). The first three yielded only this species. The collection at Mahasilawa yielded also *Indiacypris luxata* (Brady 1886), *Strandesia elongata* Hartmann 1964 and ? *Cytheridea pusilla* Brady 1886 which suggests a fauna of mixed salinity tolerances. Salinity at Gonalabba was high (44 - 72‰) with pH 7.5. At Yala 1 salinity was 15 - 30‰ with pH 7.5 - 8.5; in both cases the bottom was sandy.

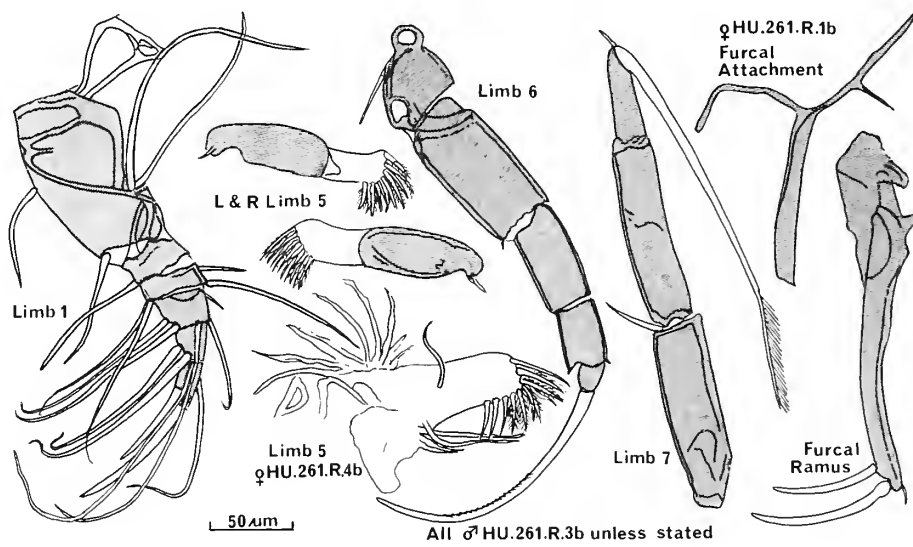
N.B. Gonalabba is also occasionally spelled Gonalabbe and Mahasilawa - Mahaseelawa.

I am grateful to John Benzie and the Aberdeen University Expedition of 1978 who kindly provided the material on which this paper is based.

Explanation of Plate 6, 102

Fig. 1, ♂ LV, ext. lat. (holotype, **HU.261.R.3a**, 712 μm long); fig. 2, ♀ LV, ext. lat. (paratype, **HU.261.R.2a**, 720 μm long).
Scale A (100 μm; x 132), figs. 1, 2.

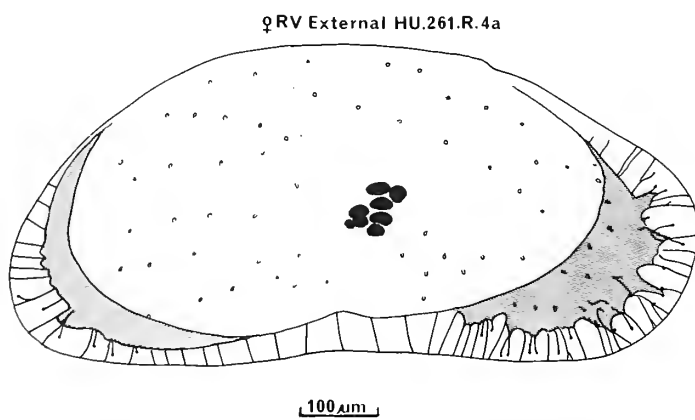




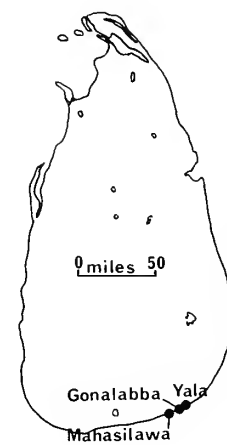
Text-fig. 1.

Explanation of Plate 6, 104

Fig. 1, ♀ RV, int. lat. (paratype, HU.261.R.1a, 744 μm long); fig. 2, ♀ LV, int. lat. (paratype, HU.261.R.1a, 752 μm long). Scale A (100 μm; x 136), fig. 1; scale B (100 μm; x 126), fig. 2.



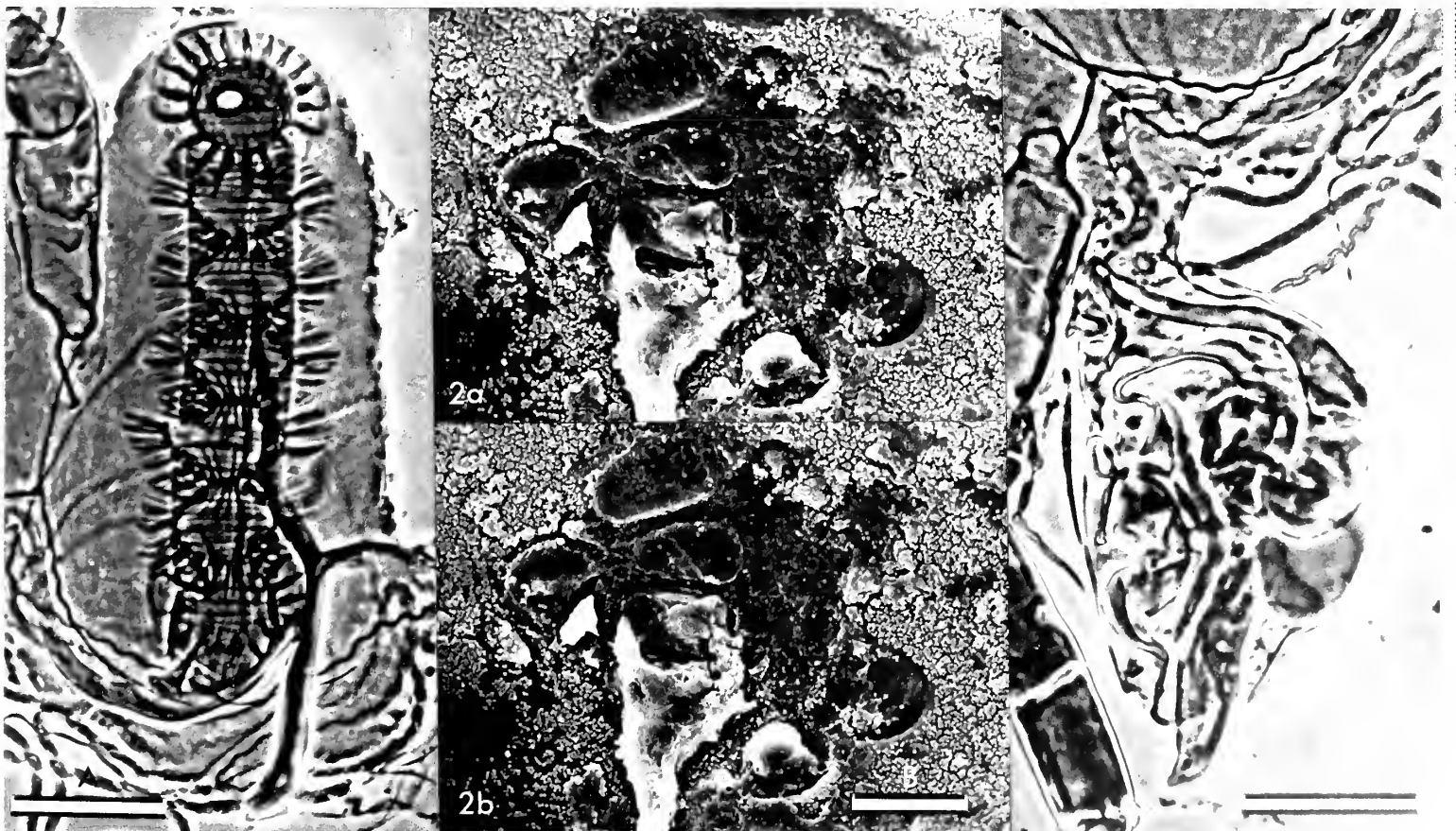
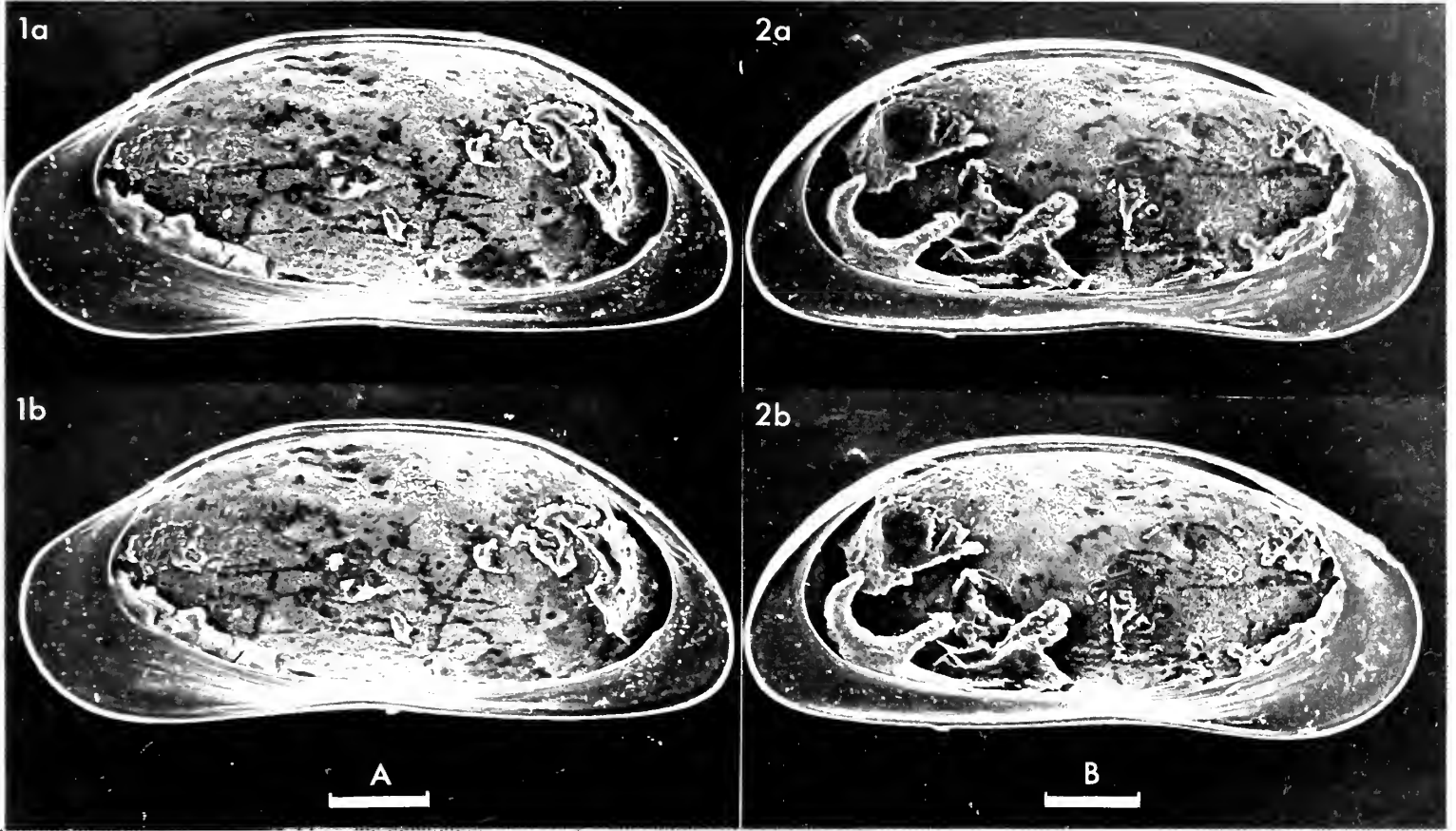
Text-fig. 2.



Text-fig. 3.

Explanation of Plate 6, 106

Fig. 1, ♂ Zenker's Organ (holotype, HU.261.R.3b); fig. 2, ♀ LV, int. musc. sc. (paratype, HU.261.R.1a); fig. 3, ♂ hemipene (holotype, HU.261.R.3b). Scale A (50 μm; x 424), fig. 1; scale B (25 μm; x 625), fig. 2; scale C (50 μm; x 487), fig. 3.



PAIJENBORCHELLINA VENOSA GURNEY sp. nov.

by Ann R. Gurney
(British Museum [Natural History], London)

Paijenborchellina venosa sp. nov.

- 1971 *Paijenborchellina* sp. R. H. Bate, *Bull. Cent. Rech. Pau*, 5, 245, 248, 250, 252 - 253, pl. 1, fig. a.
1978 *Paijenborchellina* sp. S. P. Jain, *Bull. Ind. Geol. Assoc.*, 11 (2), 128, pl. 5, figs. F1 - 3.

Holotype: Brit. Mus. (Nat. Hist.) no. 1979.199, ♀ car.
[Paratypes: 1979.200 - 208].

Type locality: Nearshore, shelf, sample 62222, between Abu Dhabi and Sadiyat Islands, Arabian Gulf; lat. 24° 32' N, long. 54° 27' E (text-fig. 2).

Derivation of name: Referring to vein like ridges on the reticulate carapace.

Explanation of Plate 6, 108

Fig. 1, ♂ car., ext. rt. lat. (paratype, 1979.202, 603 μm long); fig. 2, ♂ car., ext. lt. lat. (paratype, 1979.200, 595 μm long); fig. 3, ♀ car., ext. lt. lat. (holotype, 1979.199, 629 μm long); fig. 4, ♀ car., ext. rt. lat. (holotype, 1979.199, 629 μm long); fig. 5, ♀ LV, int. lat. hinge (paratype, 1979.205, 518 μm long); fig. 6, ♀ LV, int. lat. (paratype, 1979.205, 518 μm long); fig. 7, ♂ car., ext. lt. lat. (paratype, 1979.201, 510 μm long); fig. 8, ♀ car., tubercle (paratype, 1979.207, 518 μm long).
Scale A (150 μm; x 67), figs. 1, 2, 3, 4; scale B (75 μm; x 123), fig. 5; scale C (150 μm; x 81), fig. 6; scale D (130 μm; x 88), fig. 7; scale E (20 μm; x 373), fig. 8.

Figured specimens: Brit. Mus. (Nat. Hist.) nos. 1979.199 (holotype, ♀ car.; LV: Pl. 6, 108, fig. 3; RV: Pl. 6, 108, fig. 4), 1979.200 (♂ car.; LV: Pl. 6, 108, fig. 2), 1979.201 (♂ car.; LV: Pl. 6, 108, fig. 7), 1979.202 (♂ car.; RV: Pl. 6, 108, fig. 1), 1979.203 (♀ car.; dorsal: Pl. 6, 110, fig. 1), 1979.204 (♀ car.; vent: Pl. 6, 110 fig. 2), 1979.205 (♀ car.; RV internal: Pl. 6, 110, fig. 3), 1979.206 (♀ car.; LV internal: Pl. 6, 108, fig. 6; hinge: Pl. 6, 108, fig. 5), 1979.207 (♀ car.; tubercle: Pl. 6, 108, fig. 8), 1979.208 (♂ car.; marginal pore canals: text-fig. 1). 1979.199 - 201, 203 - 208 are from the nearshore shelf and 1979.202 from the lagoonal channel, Abu Dhabi Lagoon, Arabian Gulf. All specimens described here were obtained from samples collected by Dr. G. Evans, Imperial College of Science, London.

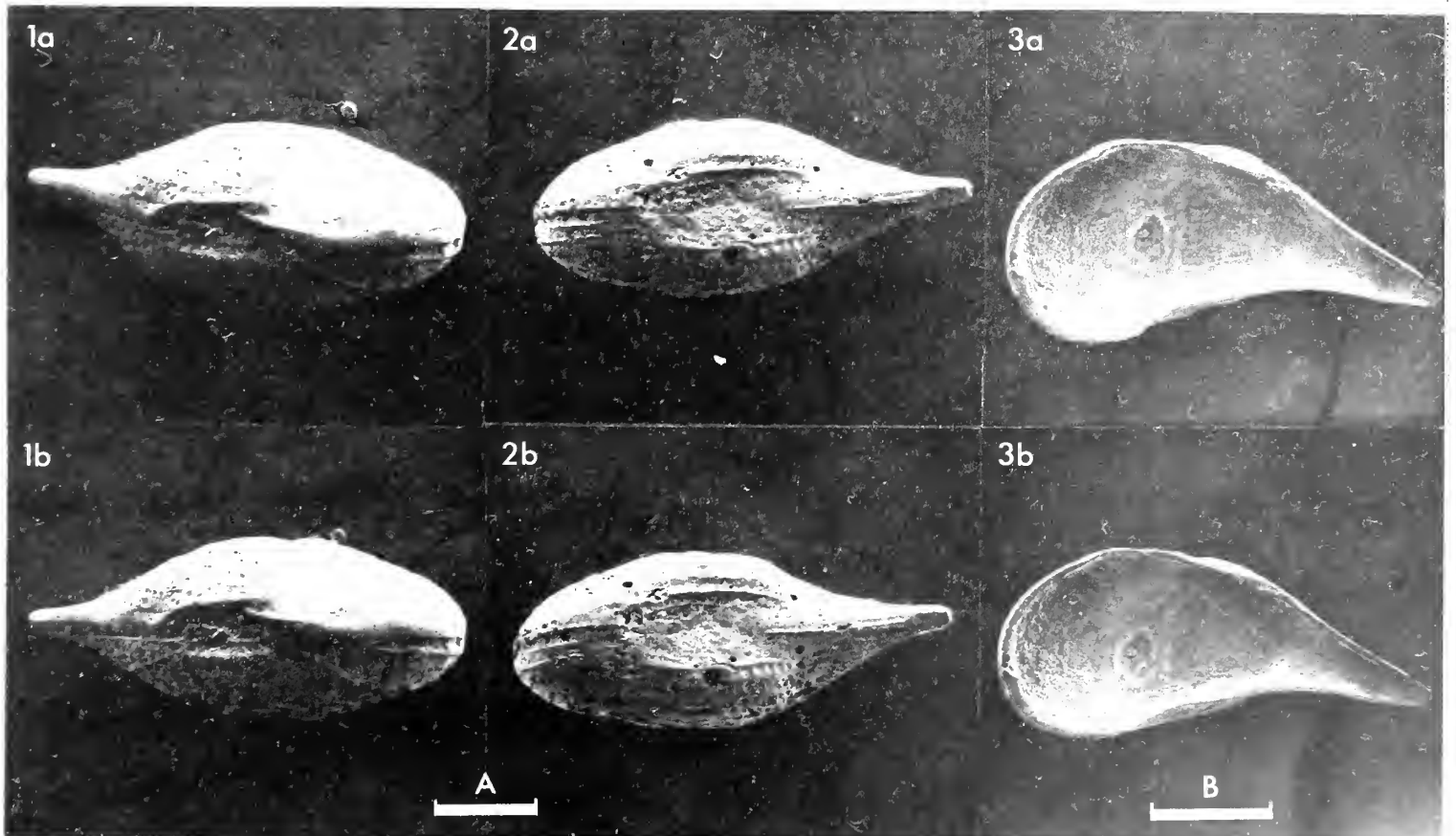
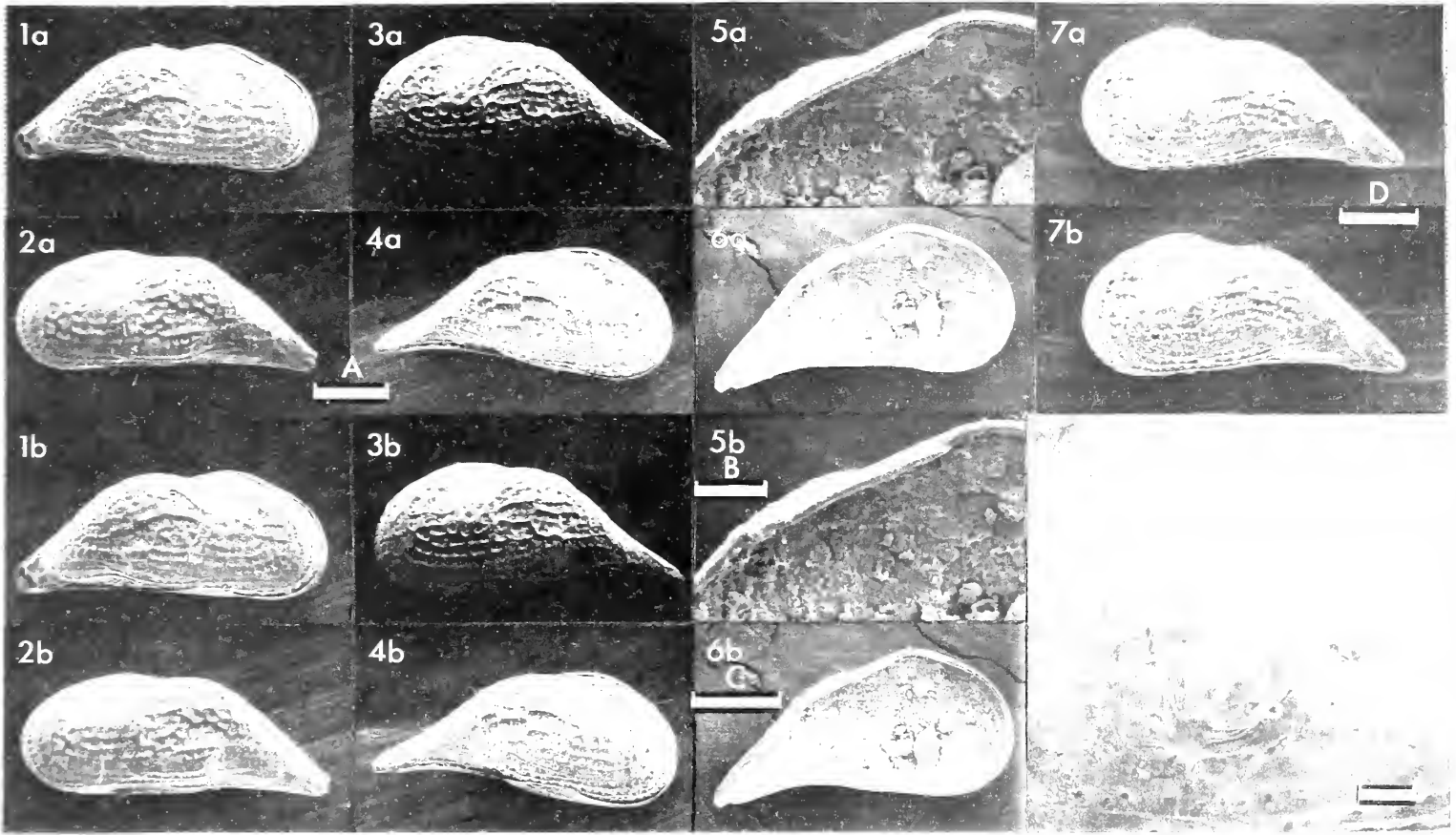
Diagnosis: *Paijenborchellina* having reticulate ornament with pitting within the reticulae and superimposed vein-like ridges. Dorsal margin with saddle shaped depression anterodorsally. External muscle scar swelling sometimes tuberculate (Pl. 6, 108, fig. 8). Two tubercles may be present in posterior half.

Remarks: As for other species of *Paijenborchellina* the male dimorph is more elongate than the female. Internally *P. venosa* has 13 long straight anterior marginal pore canals (text-fig. 1) similar to *P. alata* Gurney, 1979, where 12 have been recorded. *P. ijuensis* Reyment, 1959, from Lower Eocene, Nigeria (*Stockh. Contr. Geol.* 3 (7): 139 - 143) and *P. sp.* Reyment, 1963, from beach sand, Gabon (*Ann. Mag. nat. Hist.*, ser. 13, 6, 271 - 272) are figured showing less than 10 canals.

Distribution: In addition to Abu Dhabi lagoon *P. venosa* is also known to occur in beach sediments, Mandi, Kutch, Arabian Sea (Jain 1978).

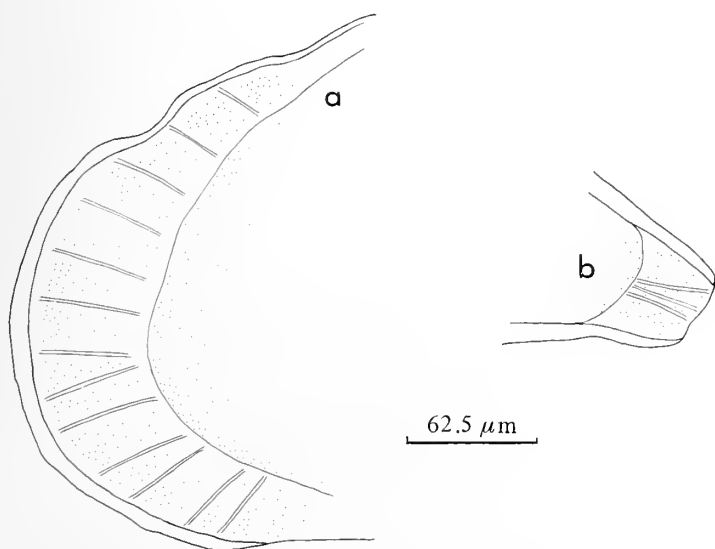
Explanation of Plate 6, 110

Fig. 1, ♀ car., ext. vent. (paratype, 1979.203 [specimen broken]); fig. 2, ♀ car., ext. dors. (paratype, 1979.204, 612 μm long); fig. 3, ♀ RV, int. lat. (paratype, 1979.205, 518 μm long).
Scale A (150 μm; x 98), figs. 1, 2; scale B (150 μm; x 115), fig. 3.

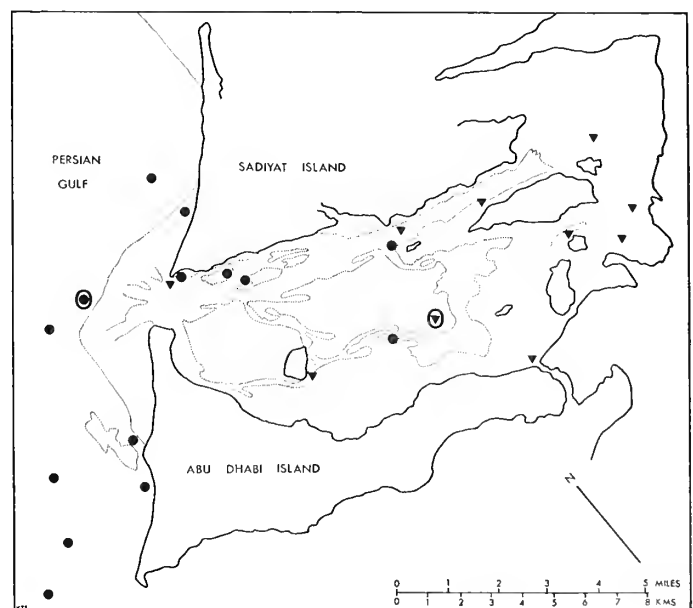


Ecology: The reticulate *P. venosa* inhabits the more turbulent waters of the lagoonal channel and nearshore shelf, while the smooth, alate *P. alata* Gurney, 1979 inhabits the calmer back waters (text-fig. 2). A specimen of *P. alata*, found at the exit of the lagoon channel is considered to have been brought out of the lagoon and deposited there by tidal currents. The reticulate *P. venosa* is better adapted to a life in the more turbulent waters of the Gulf and lagoon channel than the smooth shelled *P. alata*. The two species do not overlap in their ecological distribution and both appear to be ideally adapted to life in the conditions where they are now found. Unfortunately no living specimens have been obtained but both species are considered to have lived in the areas where they occur with the exception of the single specimen of *P. alata* found outside the lagoon.

Corrigendum: While the present paper was in press Dr. A. J. Keij drew my attention to a paper by Gründel (*Z. Geol. Wiss.*, 9, 1295, 1976) in which he erected *Gibboborchella* for those non sulcate species previously placed in *Paijenborchellina* Kuznetsova, 1961. Unfortunately it was not possible to amend the genus designation of this paper and a corrigendum has had to be inserted. *P. venosa* sp. nov. (present paper) and *P. alata* Gurney (*Stereo Atlas of Ostracod Shells*, 6, 27 - 30, 1979) should now be assigned to *Gibboborchella* together with those already assigned to the genus by Gründel.



Text-fig. 1. Anterior (a) and posterior (b) radial pore canals of RV (paratype, 1979.208).



Text-fig. 2. Distribution of *P. venosa* (●) and *P. alata* (▼). Holotype locations ringed.



ON *MONOCERATINA SCROBICULATA* TRIEBEL & BARTENSTEIN

by Lesley M. Sheppard

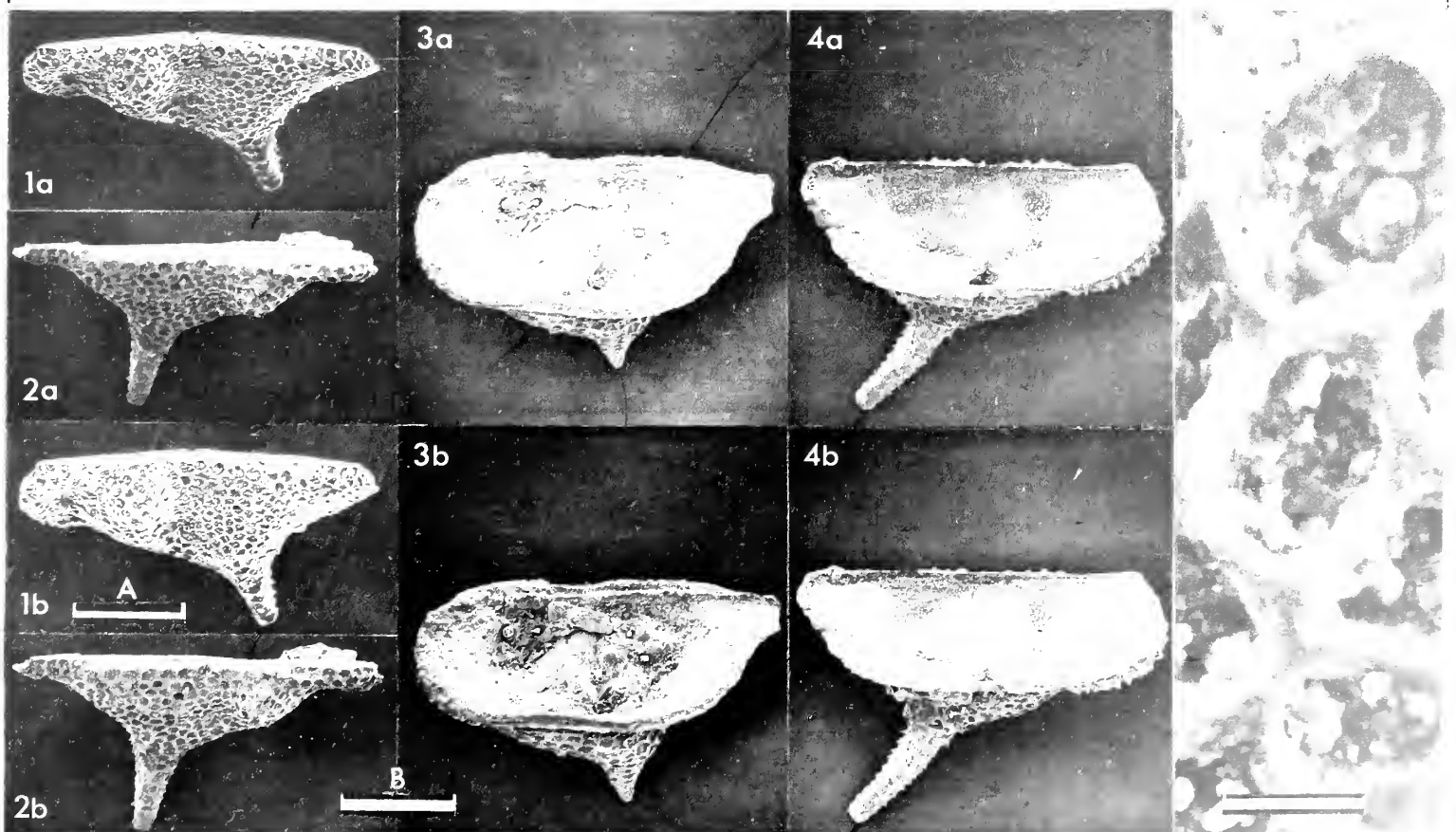
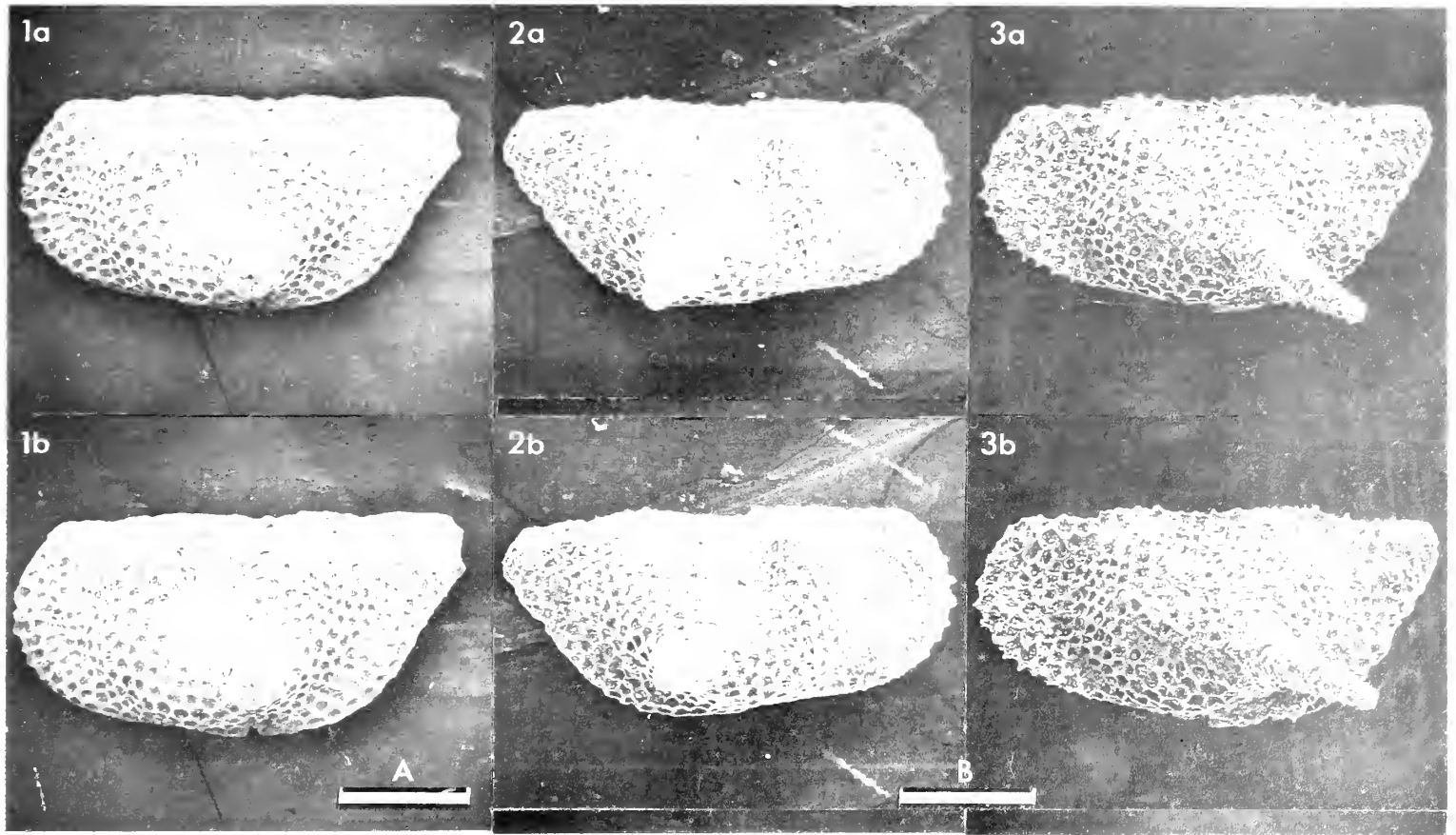
*(British Museum [Natural History], London)**Monoceratina scrobiculata* Triebel & Bartenstein, 19381938 *Monoceratina scrobiculata* n. sp. E. Triebel & Bartenstein, *Senckenbergiana*, 20 (6), 508, pl. 1 figs. 4a, b, pl. 2 fig. 6.1959 *Monoceratina scrobiculata* Triebel & Bartenstein; H. J. Oertli, *Denkschriften der Schweiz. Naturf. Gesellschaft*, 83, 26, pl. 4 figs. 92 - 95.1960 *Monoceratina* cf. *scrobiculata* Triebel & Bartenstein; G. F. Lutze, *Geol. Jb.*, 77, 433, pl. 37 fig. 7.non 1969 *Monoceratina* cf. *scrobiculata* Triebel & Bartenstein; F. Depeche, *Bull. Centre Rech. Pau - SNPA*, 3 (2), pl. 2 fig. 9.1970 *Monoceratina scrobiculata* Triebel & Bartenstein; R. C. Whatley, *Bull. Br. Mus. nat. Hist. (Geol.)*, 19 no. 6, 318, pl. 3, figs. 1 - 7, 9, 10 (q.v. for full synonymy).*Holotype*: Senckenberg Museum coll. no. SMF Xe 133a, RV.*Type locality*: Kremmeldord, near Bamberg, Baden, S Germany. Dogger alpha, *opalinus* zone, L. Aalenian, M. Jurassic.*Figured specimens*: Senckenberg Museum coll. nos. SMF Xe 133b (LV: Pl. 6, 114, fig. 1), SMF Xe 113c (LV: Pl. 6, 116, fig. 3). Brit. Mus. (Nat. Hist.) nos. OS 11705 (RV: Pl. 6, 114, fig. 2; Pl. 6, 116, fig. 2), OS 11706 (LV: Pl. 6, 114, fig. 3; Pl. 6, 116, figs. 4, 5), OS 11707 (LV: Pl. 6, 116, fig. 1). SMF Xe 113b is from the type locality and level, SMF Xe 113c is from the type level at Peulendorf, near Bamberg, Baden, S Germany, and

Explanation of Plate 6, 114

Fig. 1, LV, ext. lat. (paratype, SMF Xe 113b, 654 μ m long); fig. 2, RV, ext. lat. (OS 11705, 646 μ m long); fig. 3, LV, ext. lat. (OS 11706, 646 μ m long).Scale A (200 μ m; x 92), fig. 1; scale B (200 μ m; x 94), figs. 2, 3.*Figured specimens*: OS 11705 - OS 11708 are from Port-en-Bessin, Normandy, France; Lower Fuller's Earth, Bathonian, (*contd.*) Middle Jurassic. The paratypes were kindly lent by Dr H. Malz of the Senckenberg Museum, Frankfurt.*Diagnosis*: Spined species of *Monoceratina* characterised by strong reticulation over entire valve surfaces.*Remarks*: This is a very striking ostracod with the surface reticulation comprising large, essentially hexagonal pits. The medial area is greatly swollen with a deep sulcus forming a distinctive crescentic lobe, the postero-ventral part bearing the spine which in well preserved specimens is as long as $\frac{1}{2}$ valve length and usually directed posteroventrally. The paratype figured here shows a more even ornament around the valve edges than the French material but this is considered merely a function of preservation. The hinge is lophodont with a long median ridge in the left valve fitting into a groove in the right valve; terminal elements weak.*Distribution*: *M. scrobiculata* ranges from Lower to Upper Jurassic in NW Europe. It has been recorded in the Lower Bathonian of Normandy (listed previously by Depeche, *Revue Micropaléont.*, 15, 4, 214, 1973 from the Port-en-Bessin section, and by Bizon, *Revue Inst. fr., Pétrole*, 13, 1, 23, 1958 from Villers-sur-mer); from the Middle Callovian (*coronatum* Zone) to the base of the Upper Oxfordian (*plicatilis* Zone) at various localities in England and Scotland (*see* Whatley, *op. cit.*); and from the Upper Callovian to Lower Oxfordian of N France (J. Guyader, *Le Jurassique supérieur de la baie de la Seine - Etude stratigraphique et micropaléontologique*, unpub. PhD thesis, University of Paris, p. 197, 1968). In NW Germany it has been recorded from the Upper Bathonian (*aspidoides* Zone) to Lower Oxfordian (*miriae* Zone) and in S Germany from the Upper Lias and Lower Aalenian; also from the Upper Oxfordian of Switzerland (Oertli, *op. cit.*).

Explanation of Plate 6, 116

Fig. 1, LV dors. (OS 11707, 663 μ m long); fig. 2, RV dors. (OS 11705, 646 μ m long); fig. 3, RV, int. lat. (paratype, SMF Xe 113c, 646 μ m long); fig. 4, LV, int. lat. (OS 11706, 646 μ m long); fig. 5, ornament (OS 11706).Scale A (200 μ m; x 76), fig. 1; scale B (200 μ m; x 78) figs. 2, 3, 4; scale C (50 μ m; x 400), fig. 5.



ON *HETEROCYTHEREIS ALBOMACULATA* (BAIRD)

by John Athersuch & John E. Whittaker

(B.P. Research Centre, Sunbury, and British Museum [Natural History], London)

Genus *Heterocythereis* Elofson, 1941

Type-species (by original designation): *Cythere albomaculata* Baird, 1838.

Diagnosis: Valves weakly ornamented; sexual dimorphism pronounced. Hinge amphidont with very strong anterior tooth; posterior tooth crenulate, median elements smooth. Muscle scars with three frontal scars; only second from top adductor muscle-scar subdivided; fulcral point present.

Heterocythereis albomaculata (Baird, 1838).

- ?1835 *Cythere alba* sp. nov. W. Baird, *Hist. Berwicksh. Nat. Club*, 1, 98, pl. 3, fig. 6. (? juv.) (*nomen dubium*).
 1838 *Cythere albo-maculata* sp. nov. W. Baird, *Mag. Zool. Bot.*, 2, 142, pl. 5, fig. 23.
 1941 *Cythereis* (*Heterocythereis* (*albomaculata* (Baird))); O. Elofson, *Zool. Bidr. Upps.*, 19, 292.
 1957 *Eucythereis albomaculata* (Baird); A.P.C. de Vos, *Arch. Zool. exp. gen.*, 45, 28, pl. 11, figs. 3a - c; pl. 12, figs. 2a - g.
 1957 *Heterocythereis albomaculata* (Baird); C. W. Wagner, *Sur les Ostracodes du Quaternaire recent des Pays-Bas et leur utilization dans l'etude geologique de depots holocènes*, Mouton & Co., The Hague, 57, pl. 24, figs. 1 - 7.
 non 1975 *Heterocythereis albomaculata* (Baird); G. Bonaduce, G. Ciampo & M. Masoli, *Pubbl. Staz. zool. Napoli*, 40, 46, pls. 21, figs. 8 - 11. (= *H. voraginosa* Athersuch, 1979).

Explanation of Plate 6, 118

Fig. 1, ♀ car., ext. lt. lat. (Neotype, 1979.210, 850 μm long); fig. 2, ♀ RV, ext. lat. (1979.211, 860 μm long); fig. 3, ♂ car., ext. lt. lat. (1979.212, 980 μm long).

Scale A (250 μm; x 64), figs. 1 - 3.

Neotype: (here designated). Brit. Mus. (Nat. Hist.) no. 1979.210; ♀ car.

Type locality: Berwick-on-Tweed, N E England, approx. lat. 55° 46' N, long. 02° 00' W; Recent.

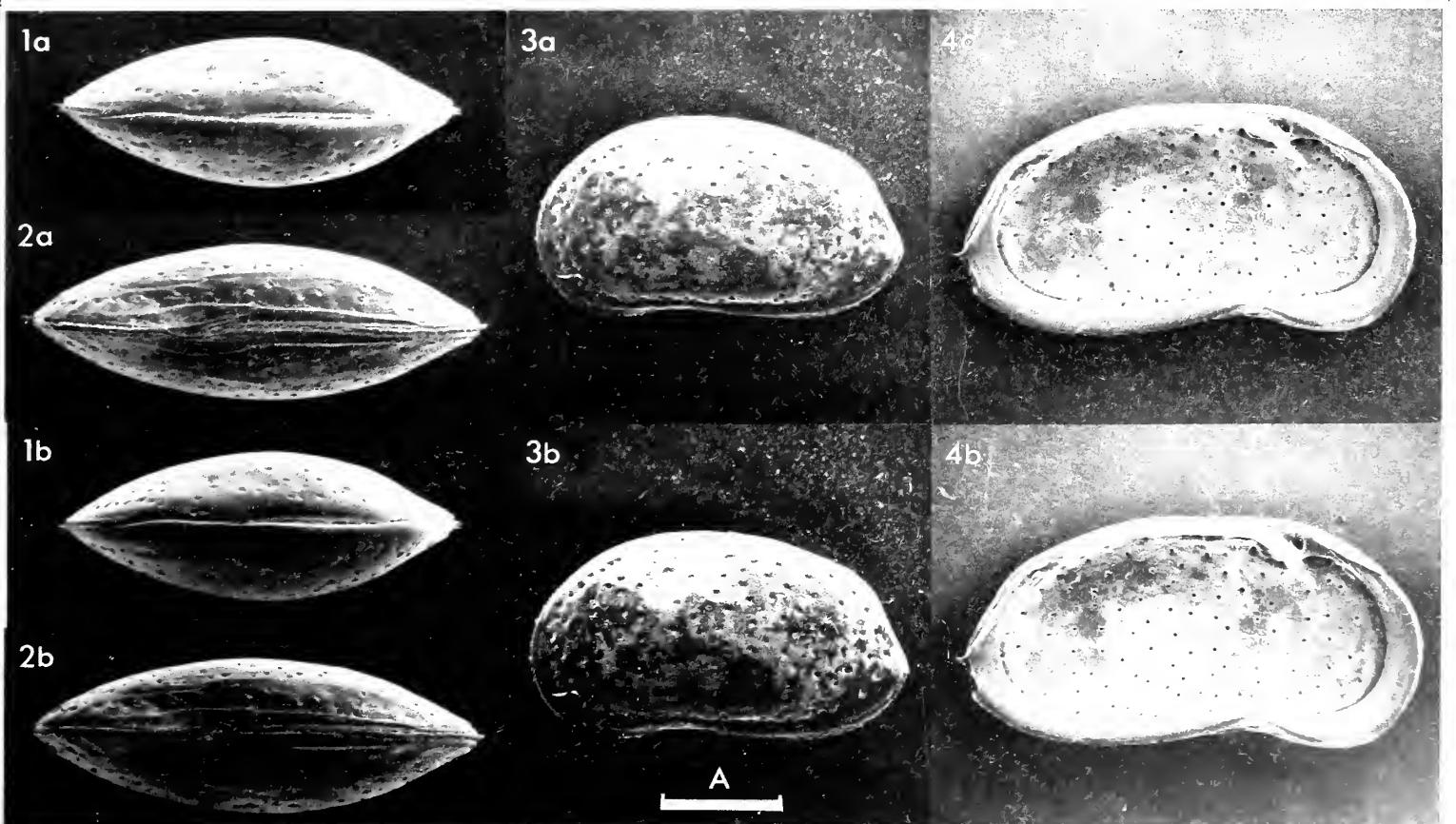
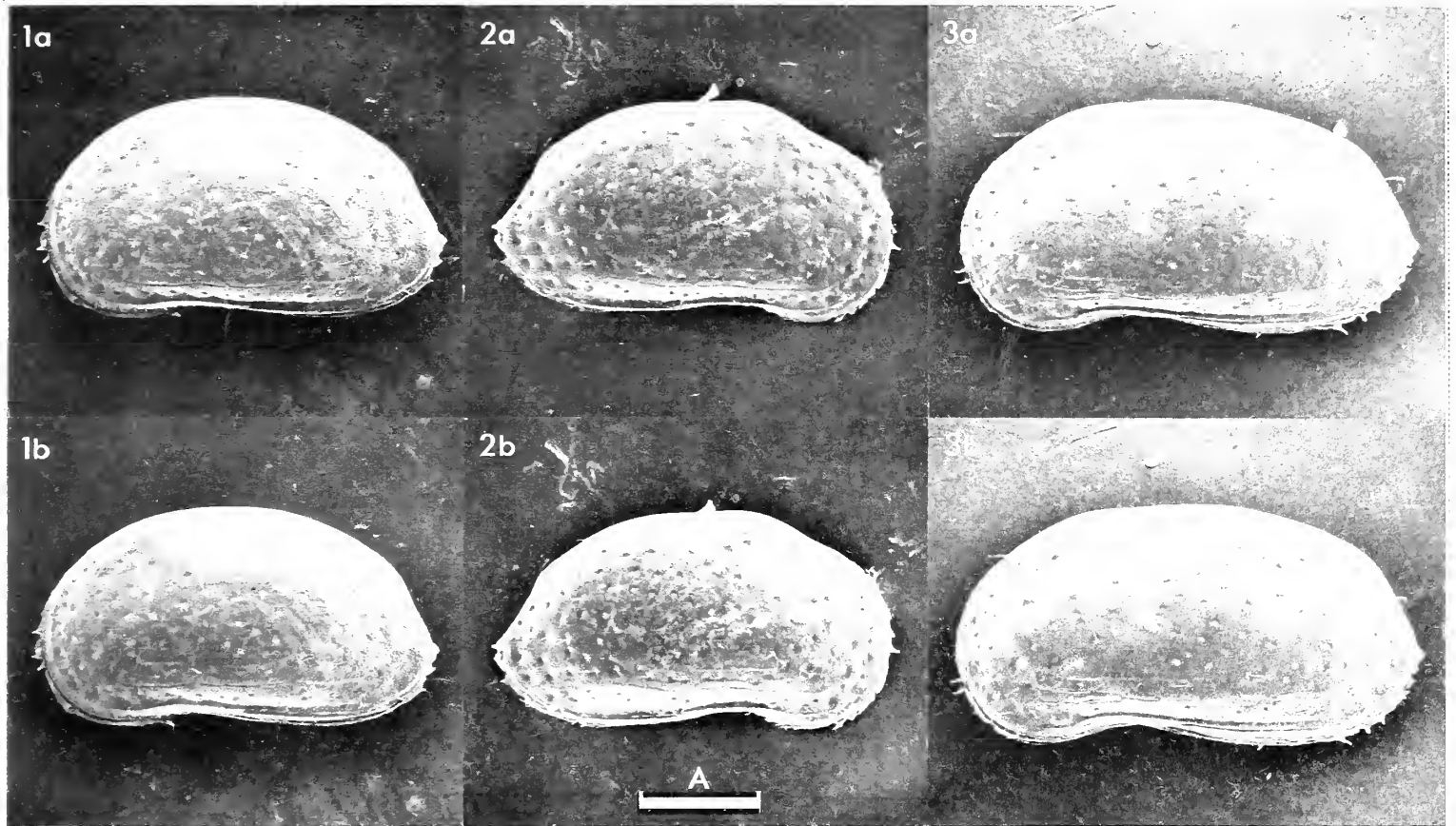
Diagnosis: Carapace surface finely punctate with conspicuous normal pores; lineate and often faintly reticulate ventrally; gently convex in dorsal view, greatest width in middle. Shape of opaque areas and copulatory appendages diagnostic.

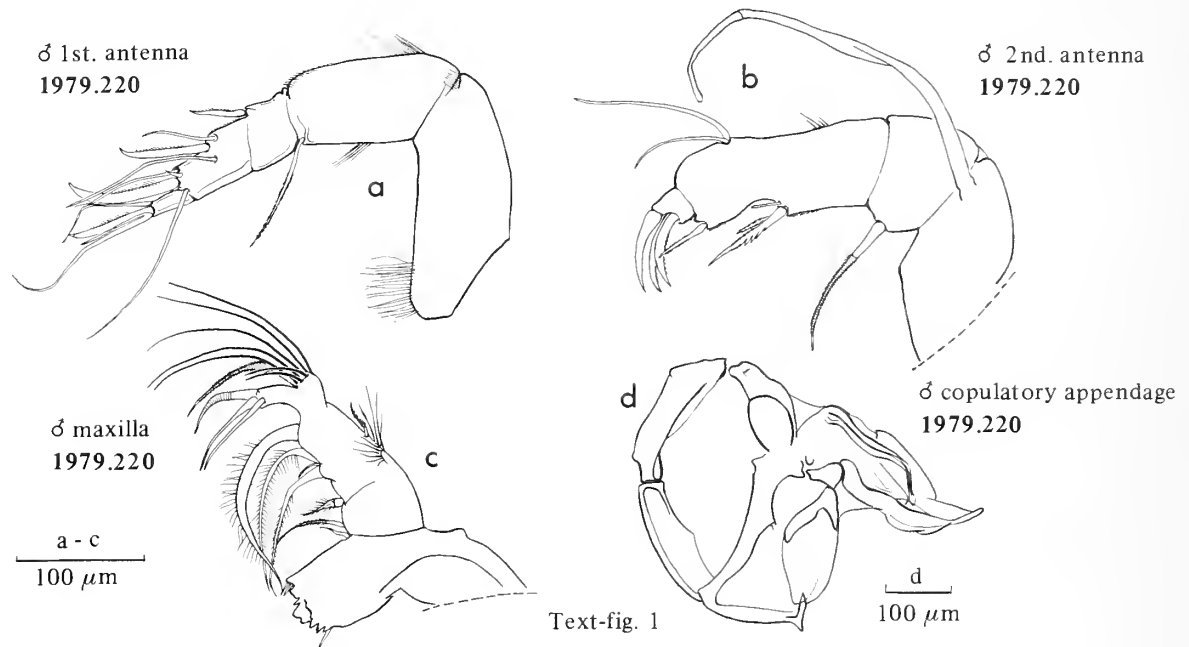
Figured specimens: Brit. Mus. (Nat. Hist.) nos. 1979.210 neotype (♀ car.: Pl. 6, 118, fig. 1), 1979.211 (♀ RV: Pl. 6, 118, fig. 2), 1979.212 (♂ car.: Pl. 6, 118, fig. 3; Pl. 6, 122, fig. 2), 1979.213 (♀ car.: Pl. 6, 120, fig. 1), 1979.214 (♂ car.: Pl. 6, 120, fig. 2), 1979.215 (♀ car.: Pl. 6, 120, fig. 3), 1979.216 (♂ LV: Pl. 6, 120, fig. 4; Pl. 6, 124, figs. 1, 3, 4), 1979.217 (juv. -4: Pl. 6, 122, fig. 1), 1979.218 (♀ car.: Pl. 6, 122, fig. 3), 1979.219 (♂ LV: Pl. 6, 122, fig. 4; Pl. 6, 124, figs. 2, 5), 1979.220 (♂ soft-parts: Text-fig. 1a - d), 1979.275 (♀ RV: Text-fig. 2). 1979.210 from algae in an intertidal rock pool at the type locality, collected by J. Athersuch and J. E. Whittaker during March 1979. 1979.211 - 214, 216, 218, 219, 275, collected by K. Trier and J. Athersuch from intertidal rock pools at Abereiddy, S W Wales (approx. lat. 51° 56' N, long. 05° 13' W), during September 1977. 1979.217 from Osmington Mills, Weymouth Bay, S England (approx. lat. 50° 38' N, long. 02° 23' W), collected from green algae in an intertidal rock pool during August 1969 by J. E. Whittaker. 1979.220 from Shell Bay, Poole, S England (approx. lat. 50° 17' N, long. 02° 05' W), collected August 1975 by C. P. Palmer, from beach sand. 1979.215 from Rimini, N E Italy (approx. lat. 44° 03' N, long. 12° 34' E), collected by G. Ruggieri, from beach sand. All specimens were collected from normal marine salinities. All had soft-parts intact.

Explanation of Plate 6, 120

Fig. 1, ♀ car., ext. dors. (1979.213, 860 μm long); fig. 2, ♂ car., ext. vent. (1979.214, 980 μm long); fig. 3, ♀ car., ext. lt. lat. (1979.215, 780 μm long); fig. 4, ♂ LV, int. lat. (1979.216, 1000 μm long).

Scale A (250 μm; x 64), figs. 1 - 4.





Explanation of Plate 6, 122

Fig. 1, juv. -4 car., ext. lt. lat. (1979.217, 310 μm long); fig. 2, ♂ car., pores in oral region (1978.212); fig. 3, ♀ car., pores in posterodorsal region (1978.218); fig. 4, ♂ LV, int. lat., detail of post.vent. region of RV showing clusters of marginal setae. (1978.219).

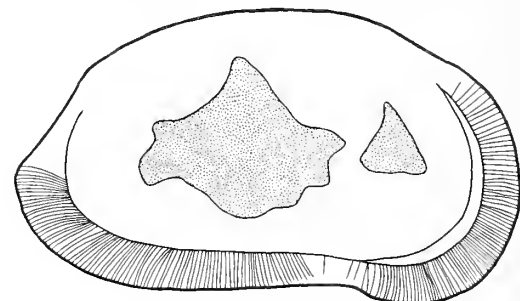
Scale A (250 μm; x 64), fig. 1; scale B (10 μm; x 750), fig. 2; scale C (10 μm; x 1,000), fig. 3; scale D (25 μm; x 500), fig. 4.

Remarks: The types of both *Cythere alba* and *C. albomaculata* could not be found in the remaining part of the W. Baird collection in the Brit. Mus. (Nat. Hist.). Brady (*Trans. Linn. Soc. Lond.* 26, 403, 1868) suggested that Baird had applied the name *C. alba* to a juvenile of *C. albomaculata*. If *C. alba* and *C. albomaculata* could be shown to be conspecific, the former name would have priority. However, since small instars of many species of the Hemicytheridae look very similar, and because the name *C. alba* does not appear to have been used since 1850 (Baird, *The Natural History of the British Entomostraca*, Ray Soc., London, 170) we prefer to regard the name as a *nomen dubium*. A small instar of *Heterocythereis albomaculata* is shown in Pl. 6, 122, fig. 1 for comparison with Baird's 1838 illustration of *C. alba* (pl. 3, fig. 6).

Distribution: Recent; a widely distributed phytal species in the littoral and sublittoral waters of N W Europe as far north as N Norway (Brit. Mus. [Nat. Hist.] coll.); also occurs in the Mediterranean. Quaternary; Holland (Wagner 1957, *op. cit.*).

250 μm

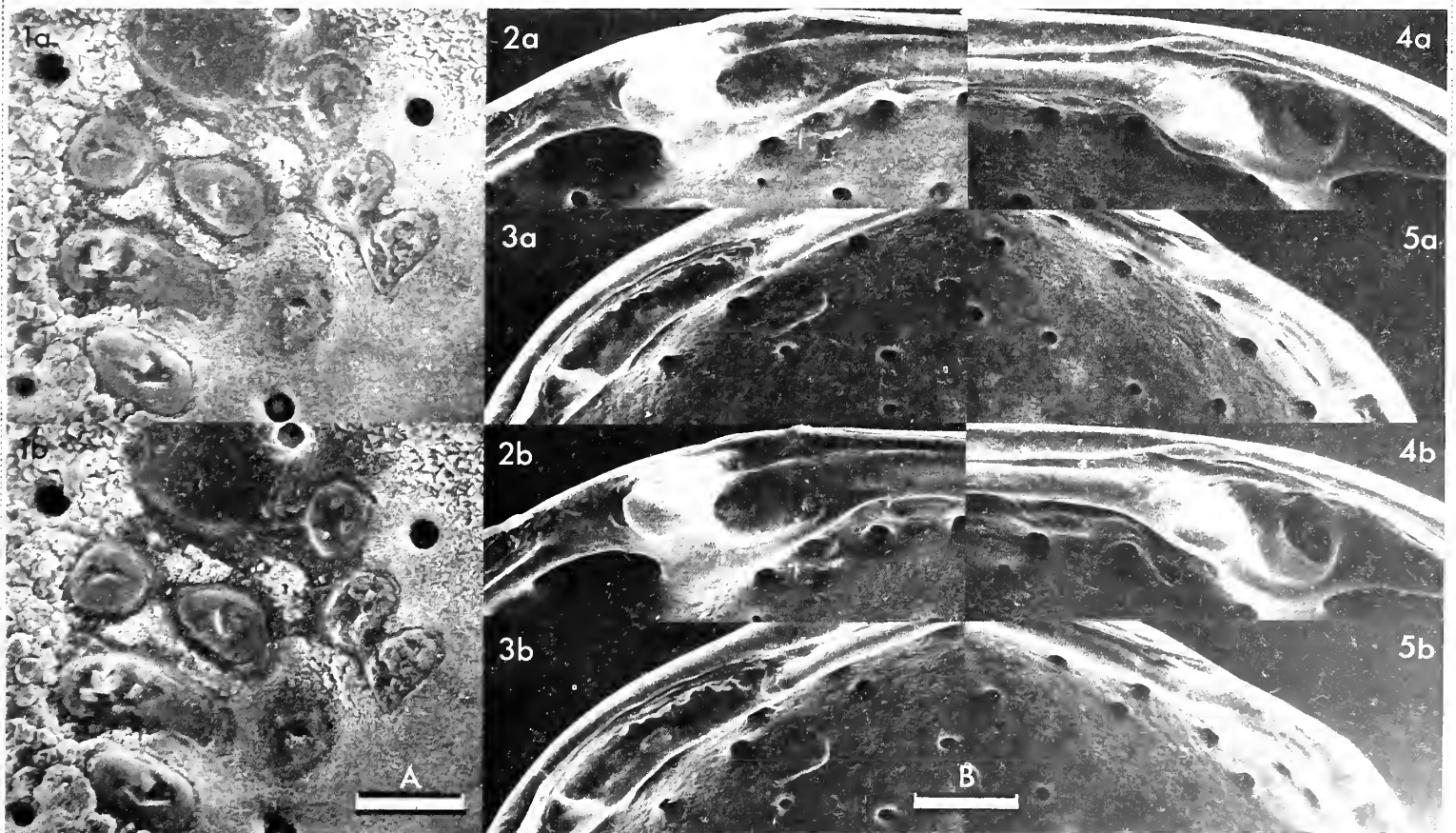
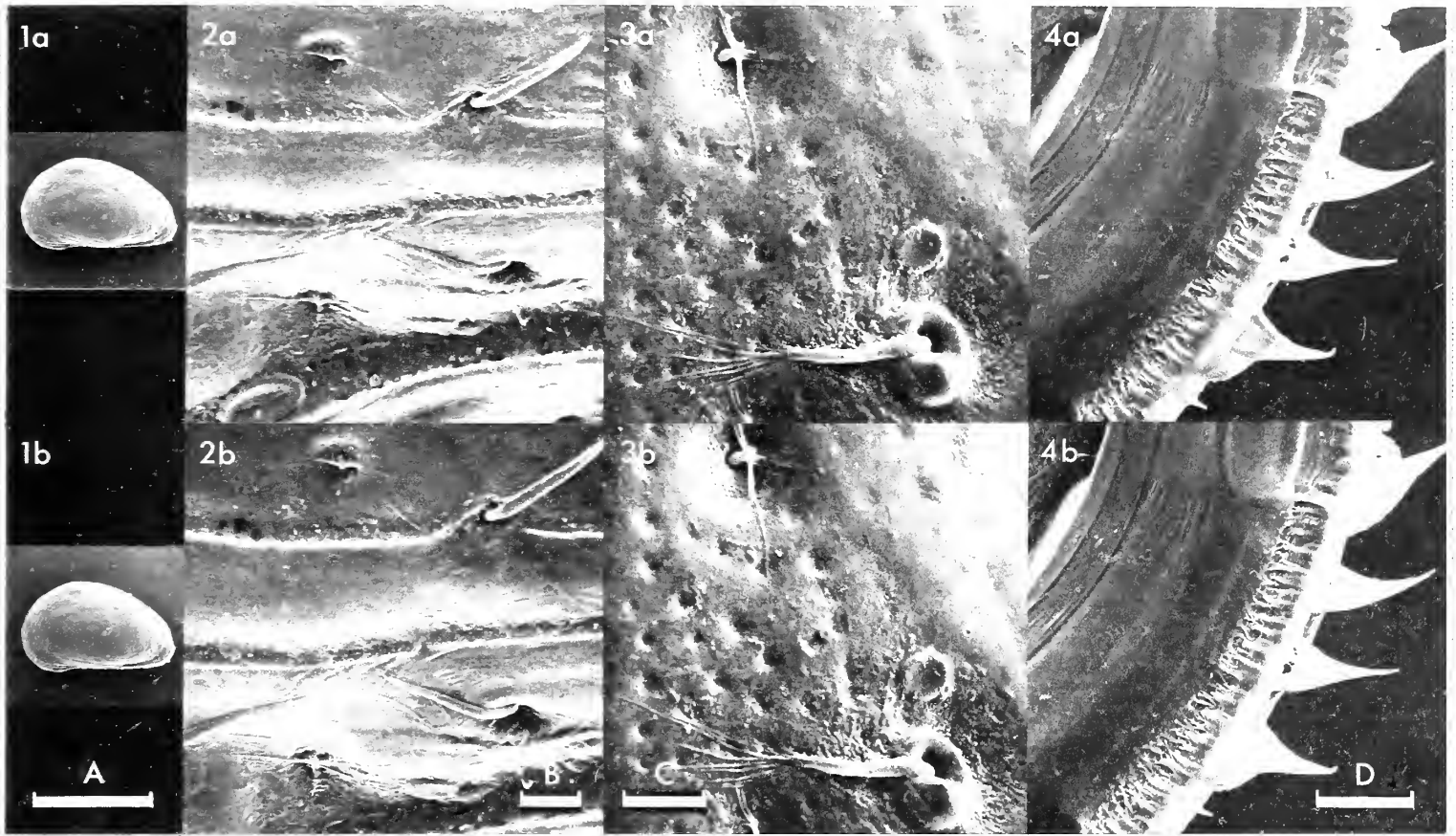
Text-fig. 2. ♀ RV, transmitted light to show opaque areas and radial pore canals (scale = 250 μm; x 1979.275).



Explanation of Plate 6, 124

Fig. 1, ♂ LV, int. lat. musc. sc. (1979.216); figs. 2, 5, ♂ RV, ant. and post. hinge (1979.219); figs. 3, 4, ♂ LV, post. and ant. hinge (1979.216).

Scale A (25 μm; x 570), fig. 1; scale B (50 μm; x 260), figs. 2 - 5.



ON *HETEROCYTHEREIS VORAGINOSA* ATHERSUCH sp. nov.

by John Athersuch

(B.P. Research Centre, Sunbury-on-Thames, England)

Heterocythereis voraginosa sp. nov.

1975 *Heterocythereis albomaculata* (Baird); G. Bonaduce, G. Ciampo & M. Masoli, *Pubbl. Staz. zool. Napoli*, **40**, 46, pl. 21, figs. 8 - 11. (*non Cythere albomaculata* Baird 1838).

Holotype: Brit. Mus. (Nat. Hist.) no. **1979.224**, ♀ car.

[Paratypes: nos. **1976.943**; **1979.221 - 223**, **225 - 229**].

Type locality: Dhavlos Bay, Cyprus, approx. lat. 35° 25' N, long. 33° 55' E; beach sand; Recent.

Derivation of name: *voraginosus*, -a, -um, Latin; covered with pits — alluding to the many obvious sunken sieve-pores.

Diagnosis: Carapace surface with faint reticulum; soli foveolate and perforated by large, sunken sieve-pores; angular ventrolaterally; truncate anteriorly and posteriorly.

Explanation of Plate 6, 126

Fig. 1, ♀ LV, ext. lat. (**1979.221**, 750 μm long); fig. 2, ♂ LV, ext. lat. (**1979.222**, 860 μm long); fig. 3, ♂ RV, ext. lat. (**1979.223**, 850 μm long).

Scale A (250 μm; x 70), figs. 1 - 3.

Figured specimens: Brit. Mus. (Nat. Hist.) nos. **1979.221** (♀ LV: Pl. 6, 126, fig. 1); **1979.222** (♂ LV: Pl. 6, 126, fig. 2; Pl. 6, 130, fig. 1); **1979.223** (♂ RV: Pl. 6, 126, fig. 3); **1979.224** Holotype (♀ car.: Pl. 6, 128, fig. 1); **1979.225** (♂ car.: Pl. 6, 128, fig. 2); **1976.943** (♂ car.: Pl. 6, 128, fig. 3); **1979.226** (♂ RV: Pl. 6, 130, fig. 2; Pl. 6, 132, figs. 2, 5); **1979.227** (♂ LV: Pl. 6, 130, fig. 3; Pl. 6, 132, figs. 1, 3, 4); **1979.228** (♂ copulatory appendage: Text-fig. 1); **1979.229** (♂ RV: Text-fig. 2). **1976.943** from Yialousa, Cyprus, approx. lat. 35° 31' N, long. 34° 12' E, collected by J. Athersuch during November, 1973; depth 11m, water temp. 21°C, salinity 39‰, pH 8.1, living in sand and algal debris. **1979.221 - 229** from beach sand at the type locality, collected by P.C. Sylvester-Bradley during Summer, 1972; soft-parts intact.

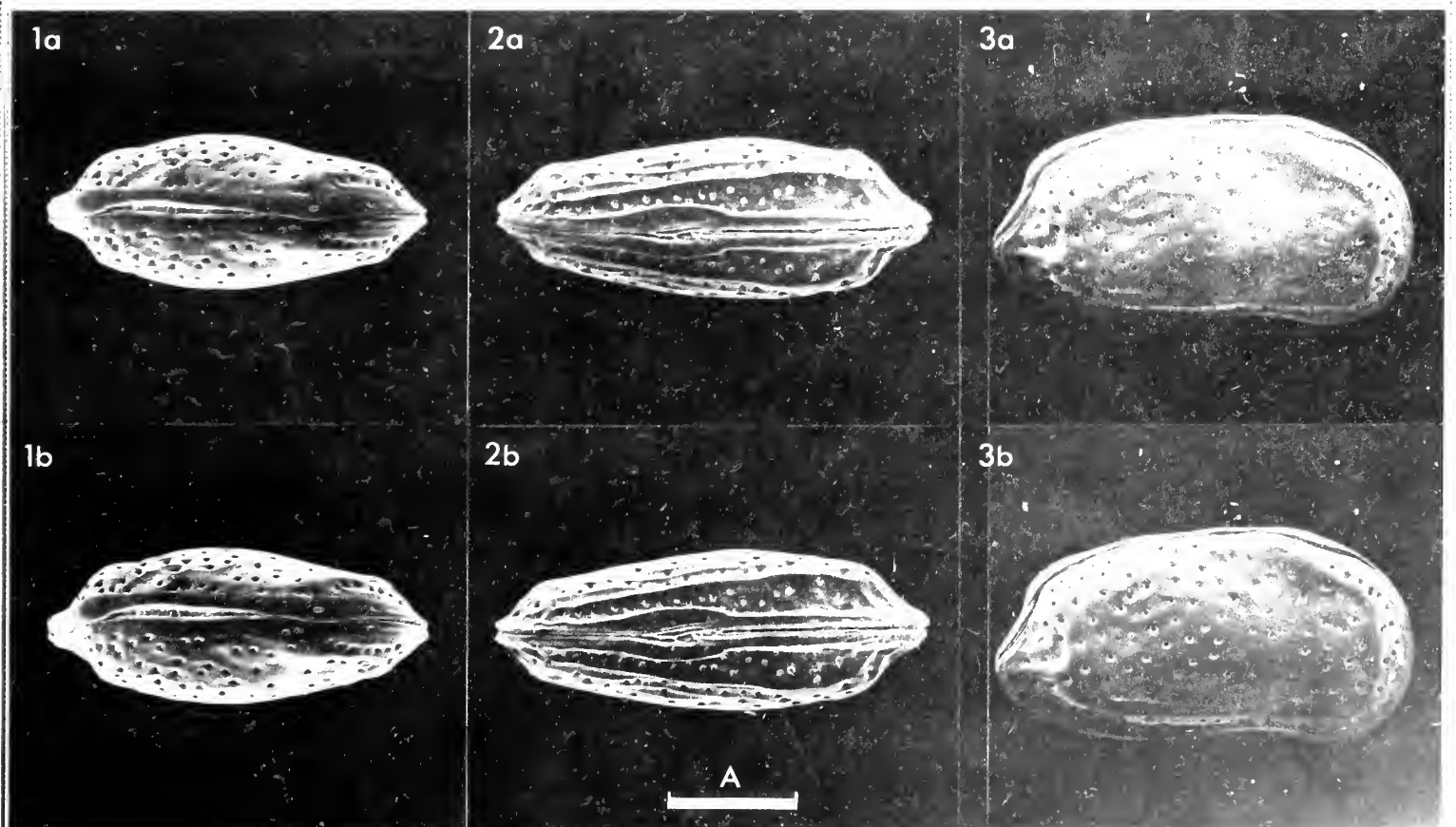
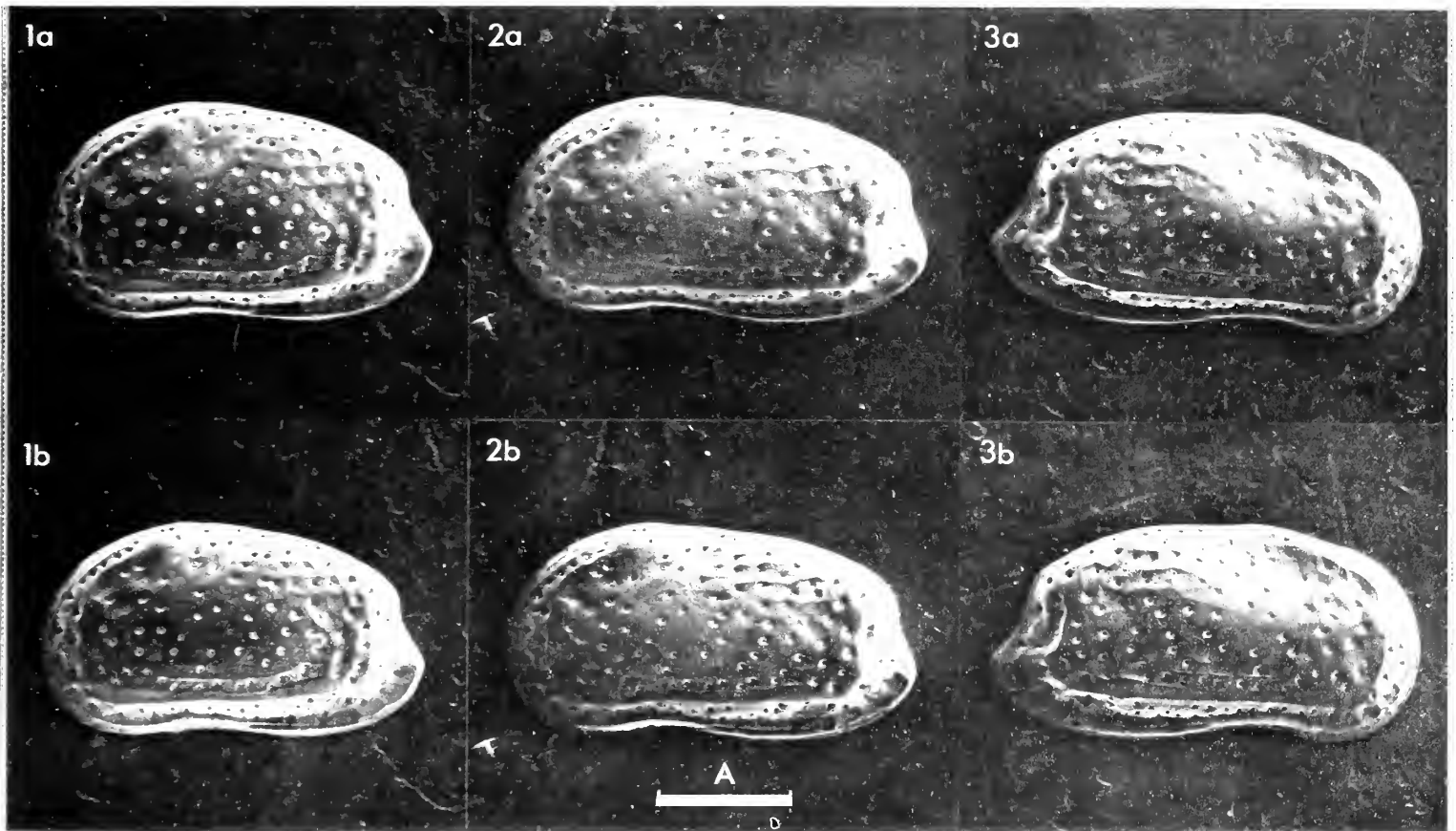
Remarks: Differs from *H. albomaculata* (Baird) (see *StereAtlas of Ostracod Shells* 6, 117 - 124, 1979) in having larger sieve-pores and in being finely reticulate and generally more angular in outline. Opaque area and male copulatory appendages distinctive.

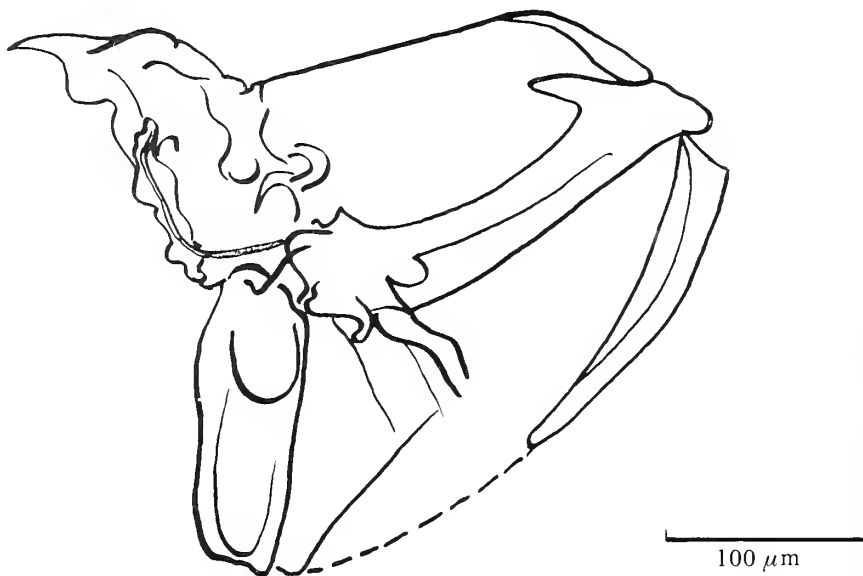
Distribution: The only previous record is from the N Adriatic Sea (Bonaduce *et al.*, 1975 *op. cit.*).

Explanation of Plate 6, 128

Fig. 1, ♀ car., ext. dors. (holotype, **1979.224**, 760 μm long); fig. 2, ♂ car., ext. vent. (**1979.225**, 860 μm long); fig. 3, ♂ car., ext. rt. lat. (**1976.943**, 840 μm long).

Scale A (250 μm; x 70), figs 1 - 3.



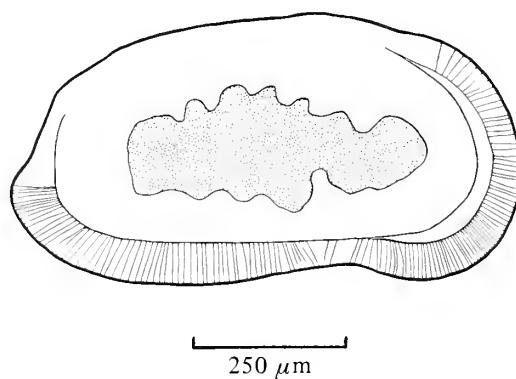


Text-fig. 1. ♂ copulatory appendage
(scale = 100 μm; 1979.228).

Explanation of Plate 6, 130

Fig. 1, ♂ LV, detail of post. vent. region (1979.222); fig. 2, ♂ RV, int. lat. (1979.226, 840 μm long); fig. 3, ♂ LV, int. lat. (1979.227, 840 μm long).

Scale A (25 μm; x 665), fig. 1, scale B (250 μm; x 70), figs. 2, 3.

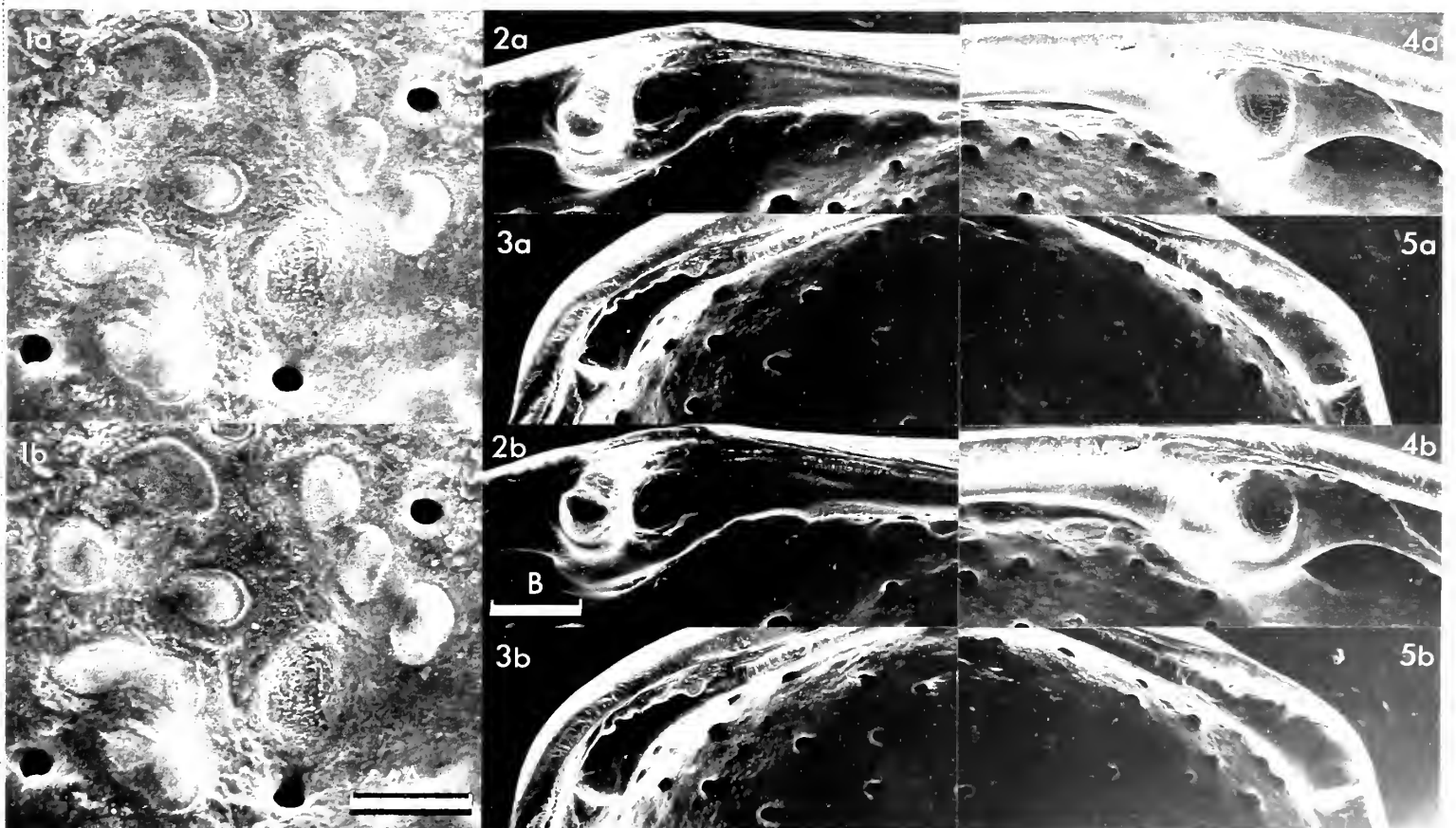
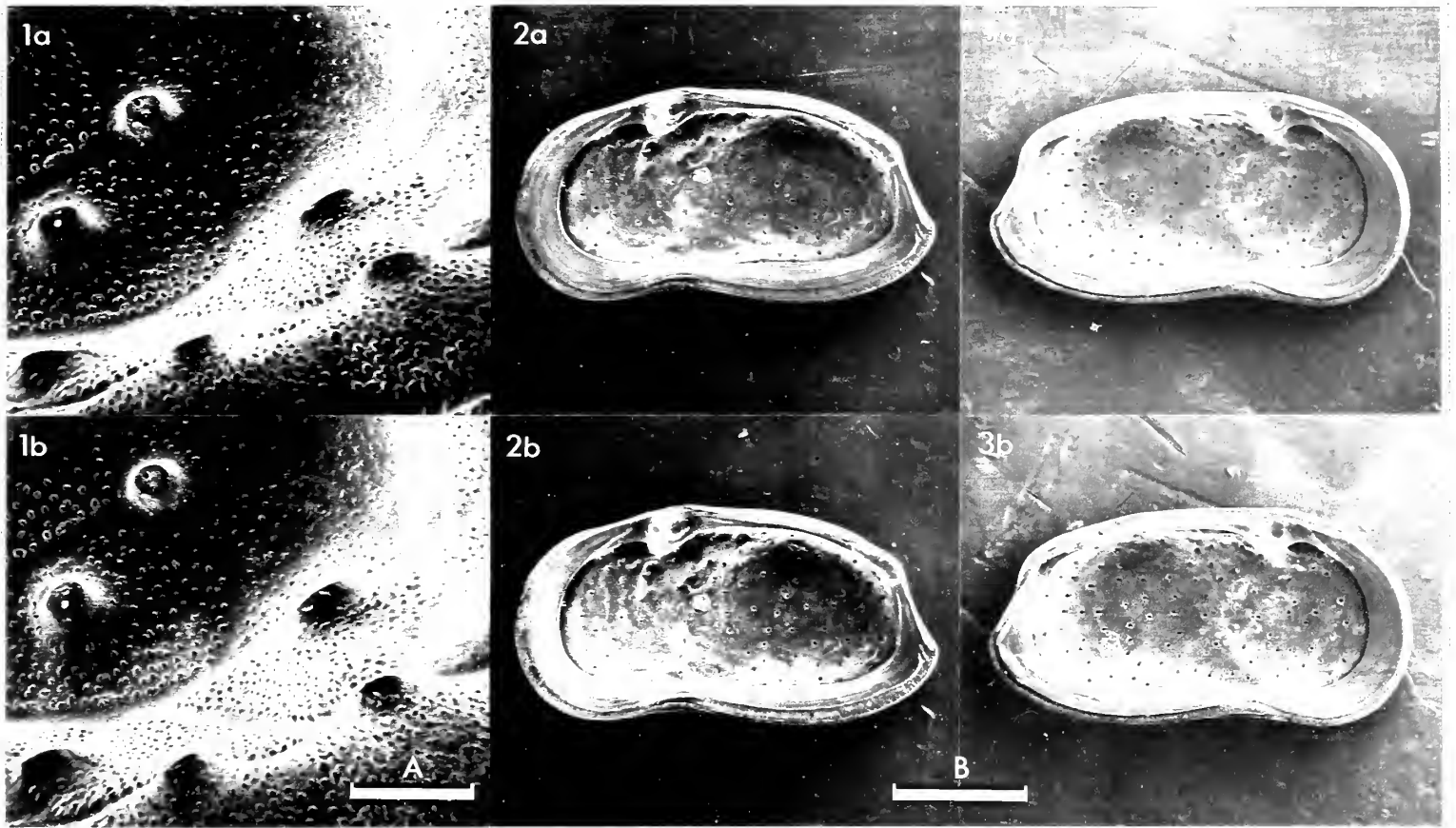


Text-fig. 2. ♂ RV, transmitted light to show opaque area and radial pore canals (scale = 250 μm; 1979.229).

Explanation of Plate 6, 132

Fig. 1, ♂ LV, int. lat. musc. sc. (1979.227); figs. 2, 5, ♂ RV, ant. and post. hinge (1979.226); figs. 3, 4, ♂ LV, post. and ant. hinge (1979.227).

Scale A (25 μm; x 630), fig. 1; scale B (50 μm; x 230), figs. 2 - 5.



ON *ACANTHOCYHEREIS HYSTRIX* (REUSS)

by John Athersuch

(B. P. Research Centre, Sunbury-on-Thames, England)

Acanthocythereis hystrix (Reuss, 1849)

- 1795 *Mytuli scabri vel asperi*; A. Soldani (*pars*), *Testaceographiae ac Zoophytographiae parvae et microscopicae*, 1 (3), 218, pl. 148, fig. Z.
- 1849 *Cypridina hystrix* sp. nov. A. E. Reuss, *Naturw. Abh. Vienna*, 3 (1), 74, pl. 10, figs. 6a - c.
- 1850 *Cythereis senticosa* sp. nov. W. Baird, *Proc. zool. Soc. Lond.*, (18), 256, pl. 18, figs. 16 - 18.
- 1941 *Cythereis? hystrix* (Reuss); E. Triebel, *Senckenbergiana*, 23, pl. 12, fig. 146.
- 1950 *Trachyleberis hystrix* (Reuss); G. Ruggieri, *Giorn. Geol. ser. 2a*, 21, 14 (new combination).
- 1953 *Cythereis hystrix* (Reuss); G. Ruggieri, *Giorn. Geol. ser. 2*, 23, 65, pl. 1, fig. 2.
- 1962 *Trachyleberis (Trachyleberis) hystrix* (Reuss); G. Ruggieri, *Palaeontogr. ital.*, 56, 18, pl. 11, fig. 21.
- 1972 *Acanthocythereis hystrix* (Reuss); W. Sissingh, *Utrecht micropaleont. Bull.*, 6, 92 (new combination).
- 1975 *Acanthocythereis hystrix* (Reuss); E. Bremen, *The Distribution of Ostracodes in bottom sediments of the Adriatic Sea*, Dissertation, University of Amsterdam, 56, pl. 7, fig. 102.
- Lectotype*: (here designated). In the Reuss collection, Natural History Museum, Vienna no. 1848.XXXVIII.23 ? ♂ RV.

Explanation of Plate 6, 134

Fig. 1, ♂ LV, ext. lat. (1979.150, 1000 μ m long); fig. 2, ♂ RV, ext. lat. (1979.151, 951 μ m long); fig. 3, ♀ LV, ext. lat. (1979.152, 890 μ m long).

Scale A (250 μ m; x 63), figs. 1 - 3.

Type locality: Rudelsdorf (Rudoltice), N W Czechoslovakia, approx. lat. 49° 54' N, long. 16° 35' E; Middle Miocene (Badenian).

Figured specimens: Natural History Museum, Vienna no. 1848.38.23 (lectotype, ♂ RV: Pl. 6, 136, fig. 1), Brit. Mus. (Nat. Hist.) nos. 1979.150 (♂ LV: Pl. 6, 134, fig. 1; Pl. 6, 138, fig. 2), 1979.151 (♂ RV: Pl. 6, 134, fig. 2; Pl. 6, 138, fig. 1), 1979.152 (♀ LV: Pl. 6, 134, fig. 3, Pl. 6, 138, fig. 3), 1979.153 (♀ LV: Pl. 6, 136, fig. 2), 1979.154 (♀ LV: Pl. 6, 136, fig. 3), 1979.155 (♀ RV: Pl. 6, 136, fig. 4), 1979.156 (♂ car.; RV: Pl. 6, 140, figs. 1, 2, 4; LV: Pl. 6, 140, figs. 3, 5; text-fig. 1a - d).

Lectotype from the type locality. All other specimens from grab samples collected during 1972 summer cruise of R. R. S. 'Shackleton' off the N coast of Cyprus. Samples kindly supplied by Dept. of Oceanography, University of Liverpool and Dept. of Earth Sciences, University of Leeds. 1979.150 - 155 from approx. lat. 35° 12' N, long. 32° 38' E; water depth 69m. 1979.156 from approx. lat. 34° 42' N, long. 33° 25' E; water depth 75m.

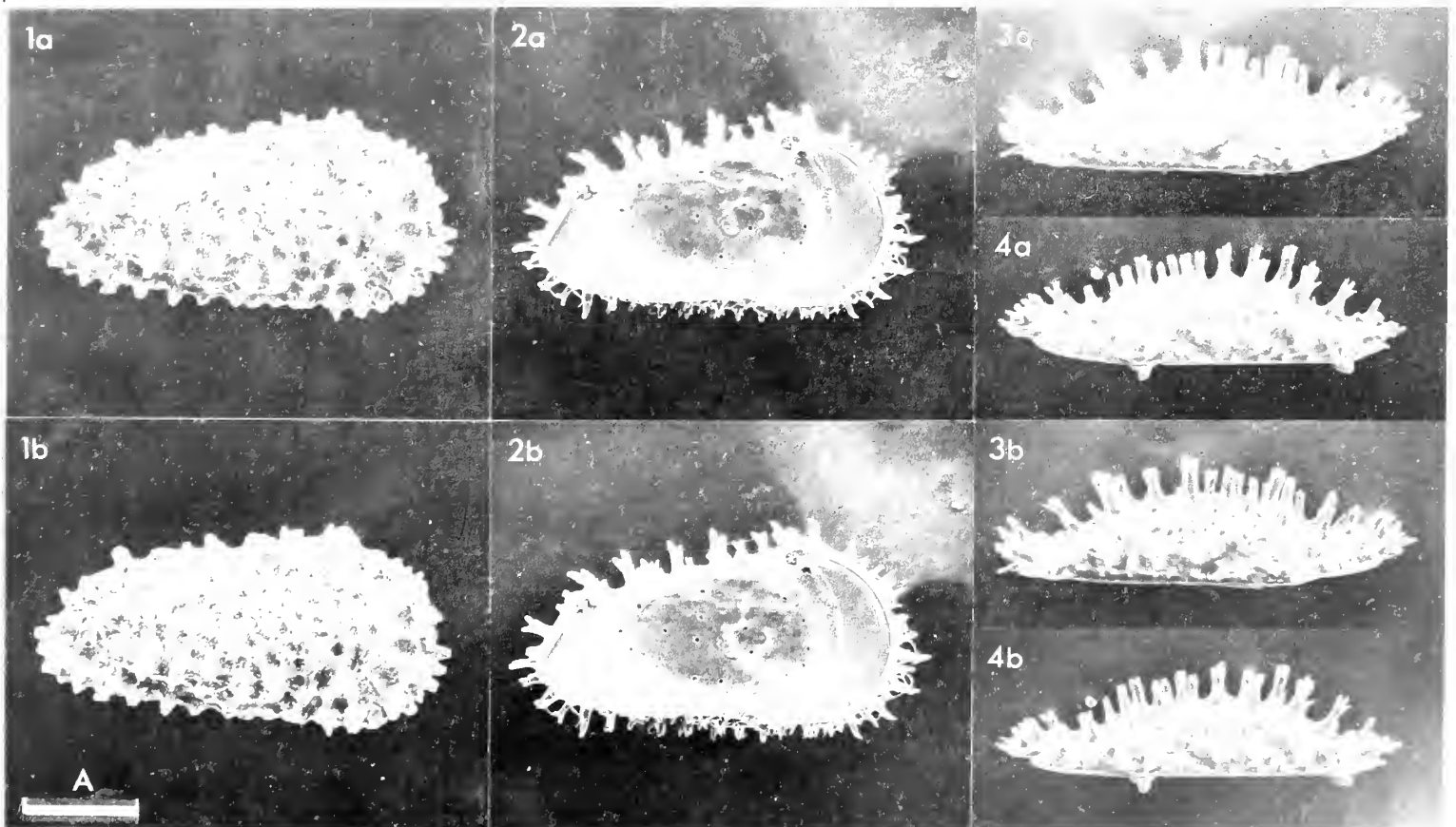
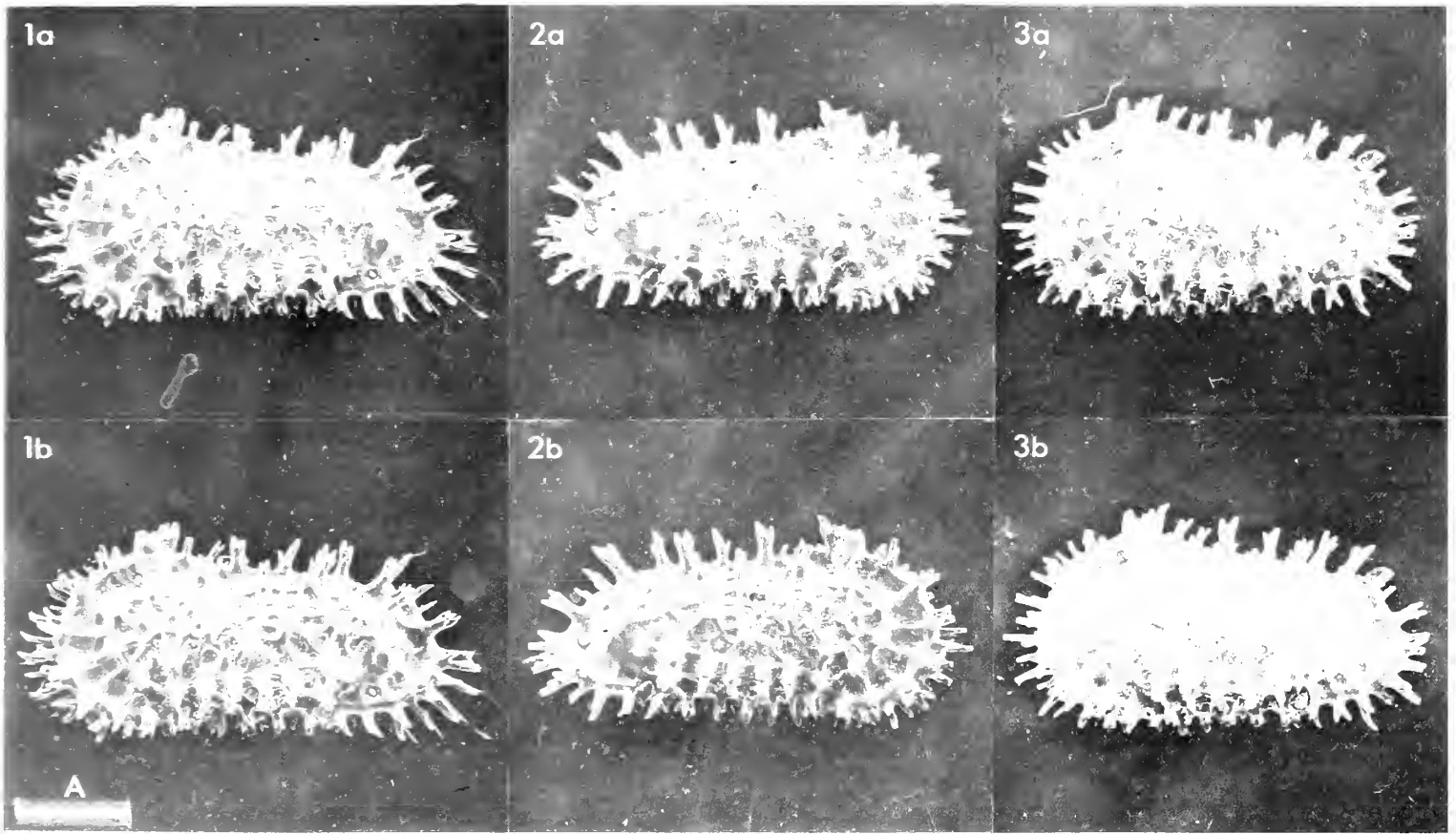
Diagnosis: Long multifurcate spines borne in consistent pattern conjunctively on surface reticulum and marginally.

Remarks: The list of species in the main part of Reuss's ostracod collection has been lost for more than fifty years (pers. comm. Dr. F. Rögl, Natural History Museum, Vienna), and it is not possible, without a thorough search of the whole collection, to determine if any specimens of *Cypridina hystrix* are present. However, a subsidiary collection, received by the Natural History Museum, Vienna from Reuss in 1848, contained a single complete, but abraded RV of this species. Since this specimen is topotypic and was known to Reuss at the time of publication of his 1849 paper, it has been selected as the lectotype.

Explanation of Plate 6, 136

Fig. 1, ?♂ RV, ext. lat. (lectotype, 933 μ m long); fig. 2, ♀ LV, int. lat. (1979.153, 902 μ m long); fig. 3, ♀ LV, ext. dors. (1979.154, 902 μ m long); fig. 4, ♀ RV, ext. dors. (1979.155, 902 μ m long).

Scale A (250 μ m; x 63), figs. 1 - 4.



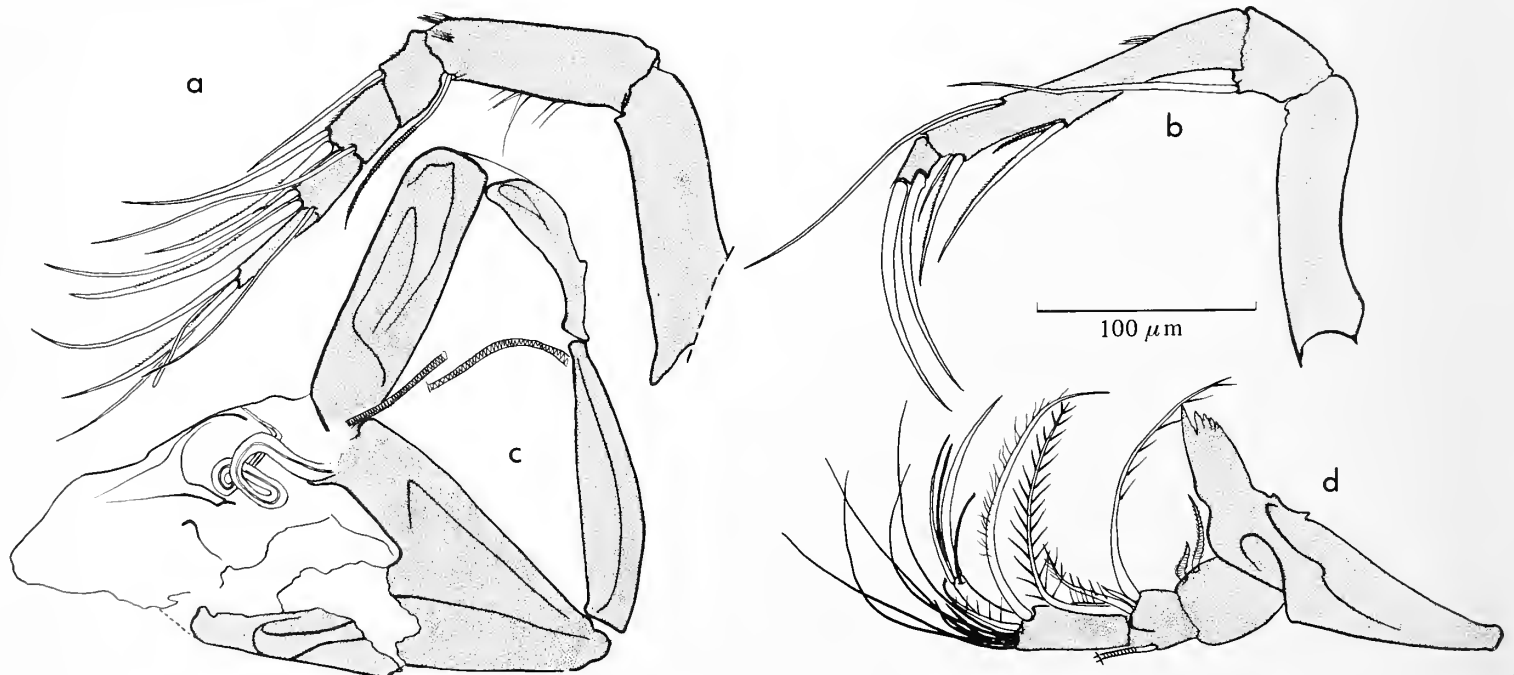
Remarks: The present species resembles the type species of *Acanthocythereis* Howe, 1963 (*A. araneosa* Howe, 1963) (*contd.*) in having a reticulum bearing conjunctive spines and in having strongly developed eye tubercles and marginal spines. The double row of ventrolateral spines might indicate affinities to *Actinocythereis* Puri 1953 which is characterised by lineation of the lateral spines. However, the type species (*A. exanthemata* [Ulrich & Bassler, 1904]) lacks a reticulum and has poorly developed marginal spines and small eye tubercles. Moreover, the spines of *Actinocythereis* tend to be nodose laterally and denticulate antermarginally, unlike those of *A. araneosa* or *A. hystrix*. In addition, males of *Actinocythereis* spp. typically have distinct asymmetry of the valves (see J. E. Hazel, *Prof. Pap. U. S. geol. Surv.*, No. 564, 1967). On balance, therefore, I prefer to regard the present species as belonging to the genus *Acanthocythereis*.

Distribution: Recent and sub-Recent: Aegean (Baird (1850); Adriatic (Bremen, *op. cit.*, Bonaduce coll.); Italy (Ruggieri and Bonaduce colls.); Cyprus (herein); N W. africa (Rosenfeld & Bein, *Meteor Forsch Ergebn. (C)*, 17:17, pl. 1, fig. 4, 1978). Miocene, Pliocene and Pleistocene of Italy (Ruggieri 1950, 1962, *op. cit.*, Reuss, *op. cit.*) and the Aegean Islands (Sissingh, *op. cit.*). Miocene of Czechoslovakia (herein) and Austria (Triebel, *op. cit.*).

Explanation of Plate 6, 138

Fig. 1, ♂ RV, eye tubercle (1979.151); fig. 2, ♂ LV, tip of spine (1979.152); fig. 3, ♀ LV, ext. lat., sieve pore and seta (1979.150).

Scale A (25 μm; x 435, fig. 1; scale B (25 μm; x 755), fig. 2; scale C (5 μm; x 2100), fig. 3.

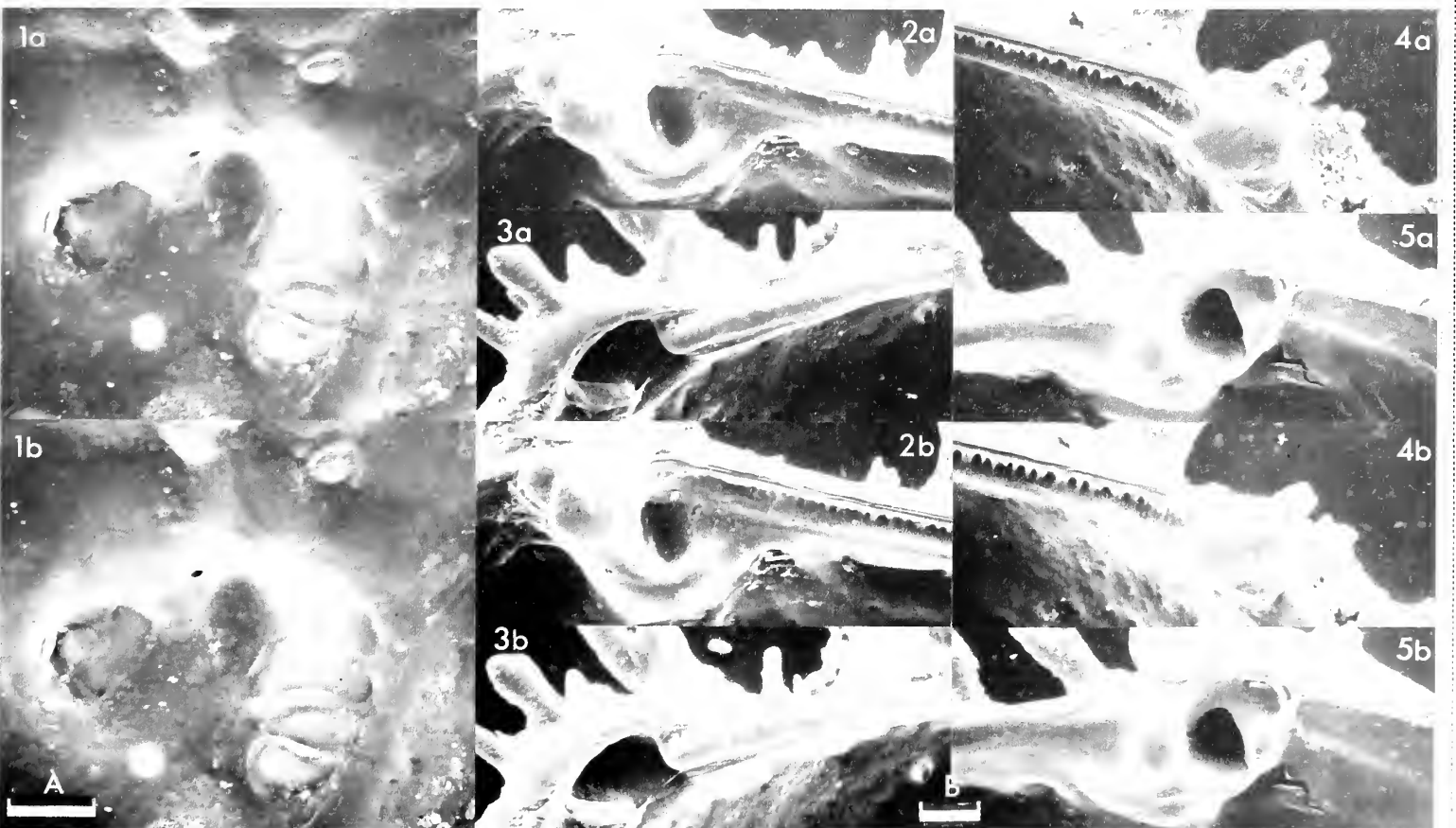
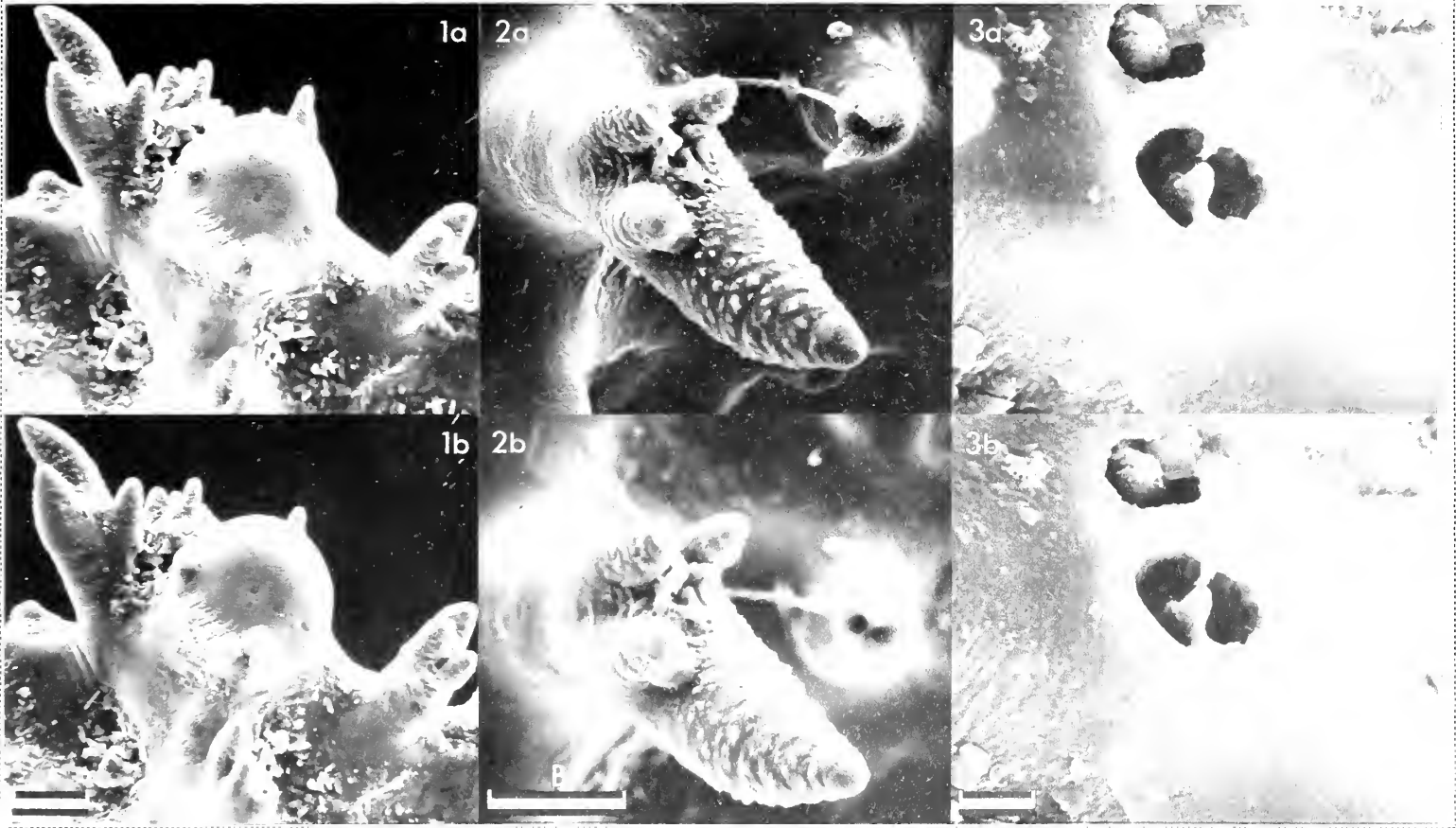


Text-fig. 1. Appendages of male (1979.156). a: 1st antenna; b: 2nd antenna; c: copulatory appendage; d: mandible (all x290).

Explanation of Plate 6, 140

Fig. 1, ♂ RV, int. lat. musc. sc. (1979.156, 950 μm long); figs. 2, 4, ♂ RV, term. hinge elements (1979.156); figs. 3, 5, ♂ LV, term. hinge elements (1979.156).

Scale A (25 μm; x 500), fig. 1; scale B (25 μm; x 325), figs. 2 - 5.



ON *LOXOCONCHA OVULATA* (COSTA)

by John Athersuch

(B. P. Research Centre, Sunbury-on-Thames, England)

Loxoconcha ovulata (Costa, '1863')

- '1863' *Cytherina ovulata* sp. nov. O. G. Costa, *Paleontologia del Regno di Napoli*, pt. 3, 181, pl. 16, fig. 7.
 1864 *Cytherina ovulata* Costa; O. G. Costa, *Atti Accad. Pontan.*, 8, 177, pl. 16, fig. 7.
 1869 *Loxoconcha tumida* sp. nov. G. S. Brady, *Ann. Mag. nat. Hist.*, ser. 4, 2, 48, pl. 8, figs. 11, 12. (*non L. tumida* Chapman, 1902).
 1965 *Loxoconcha ovulata* (Costa); P. Ascoli, *Arch. Oceanogr. Limnol.*, 14 (1), 99.
 1968 *Loxoconcha tumida* Brady; M. Masoli, *Mem. Mus. Trident. Sci. Nat.*, 17 (1), 55, pl. 3, fig. 34; pl. 12, figs. 191 - 193.
 1971 *Loxoconcha ovulata* (Costa); P. J. Barbeito-Gonzalez, *Mitt. hamb. Zool. Mus.*, 67, 307, pl. 32, figs. 1b, 2b, 3b, 4b.
 1972 *Loxoconcha ovulata* (Costa); H. Uffenorde, *Göttinger Arb. Geol. Paläont.*, 13, 85, pl. 9, fig. 4.
 1975 *Loxoconcha tumida* Brady; E. Bremen, *The Distribution of Ostracodes in the Bottom Sediments of the Adriatic Sea*, Dissertation, University of Amsterdam, 66, pl. 9, fig. 130.
 1975 *Loxoconcha tumida* Brady; G. Bonaduce, G. Ciampo & M. Masoli, *Pubbl. Staz. zool. Napoli*, 40 (1), 110, pl. 60, figs. 1 - 7.

Explanation of Plate 6, 142

Fig. 1, ♀ LV, ext. lat. (Hancock Museum specimen, 720 μ m long); fig. 2, ♀ RV, ext. lat. (Hancock Museum specimen, 720 μ m long); fig. 3, ♂ LV, ext. lat. (1976.1084, 780 μ m long).

Scale A (250 μ m; x 80), figs. 1 - 3.

Lectotype: (not figured herein) In the Costa collection, Institute of Palaeontology, University of Naples; ♀ LV.

Type locality: La Starza, Pozzuoli, Italy, approx. lat. 40° 49' N, long. 14° 07' E; Quaternary.

Figured specimens: Hancock Museum specimen (♀ car.; LV: Pl. 6, 142, fig. 1; RV: Pl. 6, 142, fig. 2); Brit. Mus. (Nat. Hist.) nos. 1976.1084 (♂ car.; LV: Pl. 6, 142, fig. 3; RV: Pl. 6, 144, fig. 3; Pl. 6, 150, fig. 1); 1976.1085 (♂ LV: Pl. 6, 144, fig. 1); 1976.1086 (♀ car.; RV: Pl. 6, 144, fig. 2; Pl. 6, 150, figs. 2, 4); 1976.1087 (♀ LV: Pl. 6, 148, fig. 1); 1976.1088 (♀ LV: Pl. 6, 148, fig. 3); 1976.1089 (♂ LV: Pl. 6, 148, fig. 4); 1976.1090 (♂ LV: Pl. 6, 150, figs. 3, 5); OS 11421 (♂ RV: Pl. 6, 148, fig. 2). The specimen from G. S. Brady's collection in the Hancock Museum is from Piraeus, Greece. 1976.1084, 1086 were living at the time of collection. 1976.1084 collected by J. Athersuch during November 1973 off Famagusta, Cyprus, approx. lat. 35° 08' N, long. 33° 57' E; water depth 27m., salinity 39‰ in coarse sand.

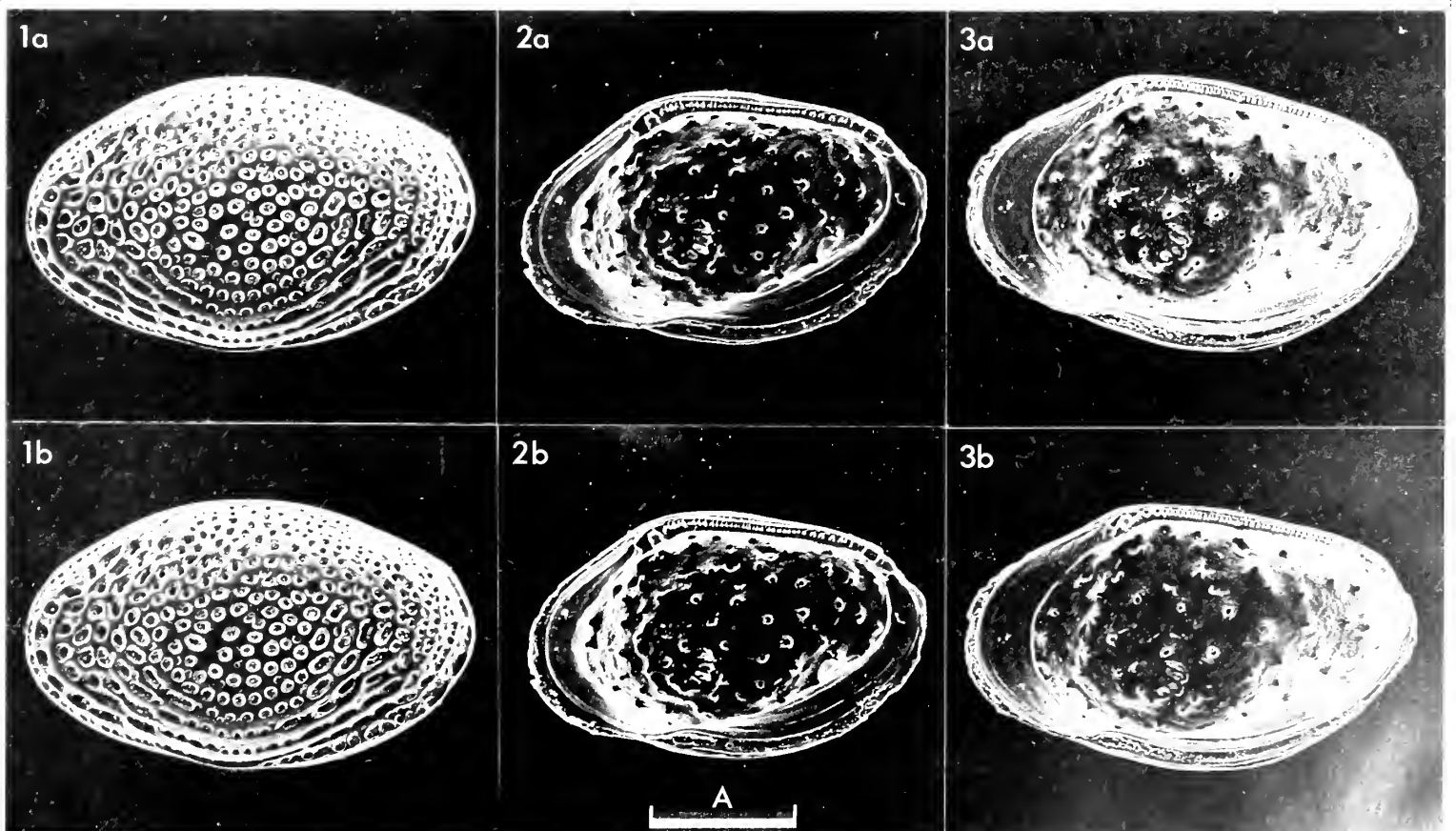
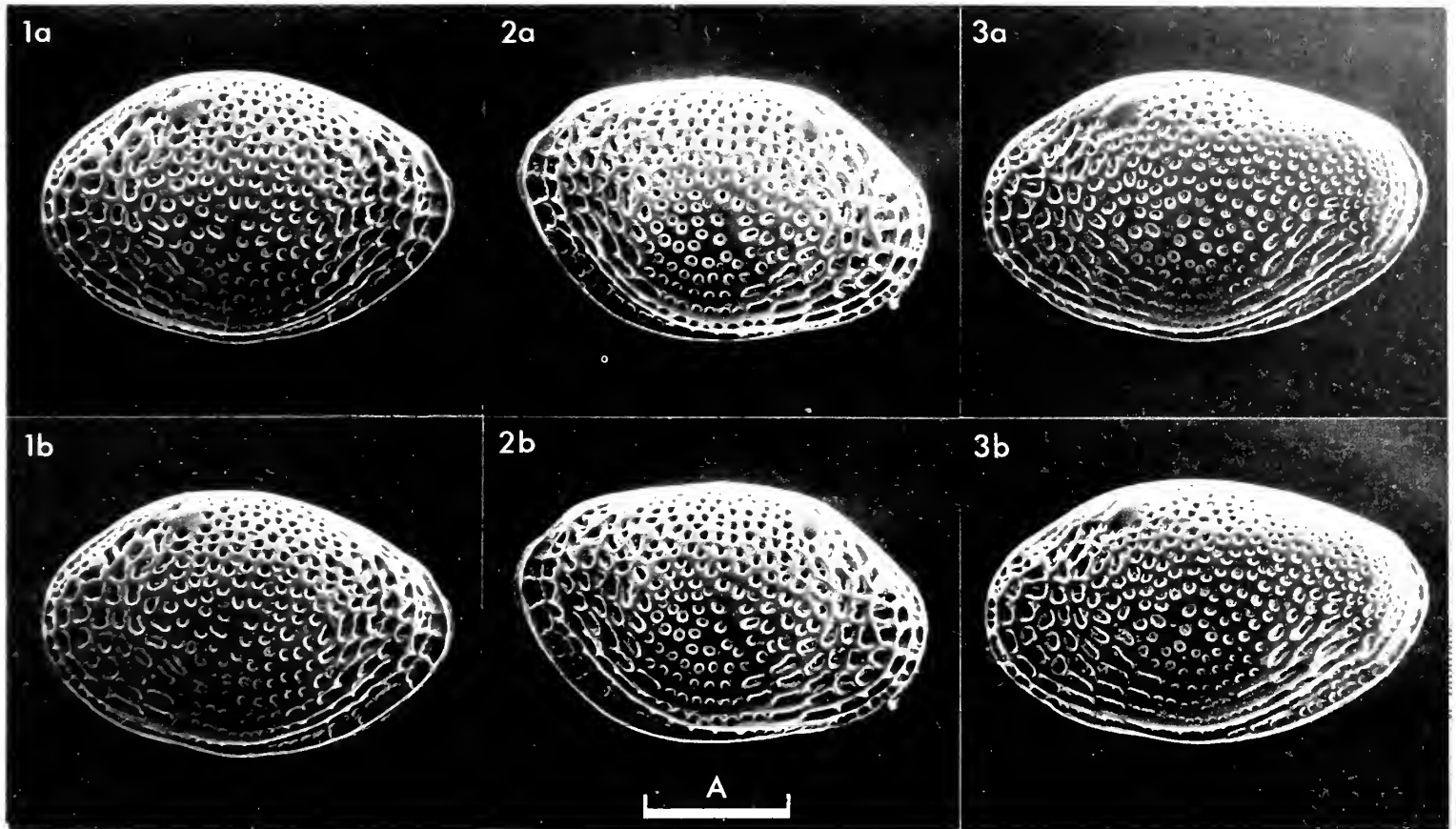
Dr. G. Bonaduce collected 1976.1085 - 7, 1089 from the Bay of Naples, Italy and OS 11421 from Costa's type locality at Pozzuoli, Italy. 1976.1088, 1090 are from silt in Morphou Bay, Cyprus, collected by members of the Fisheries Dept. of the Ministry of Agriculture and Natural Resources, Nicosia, Cyprus.

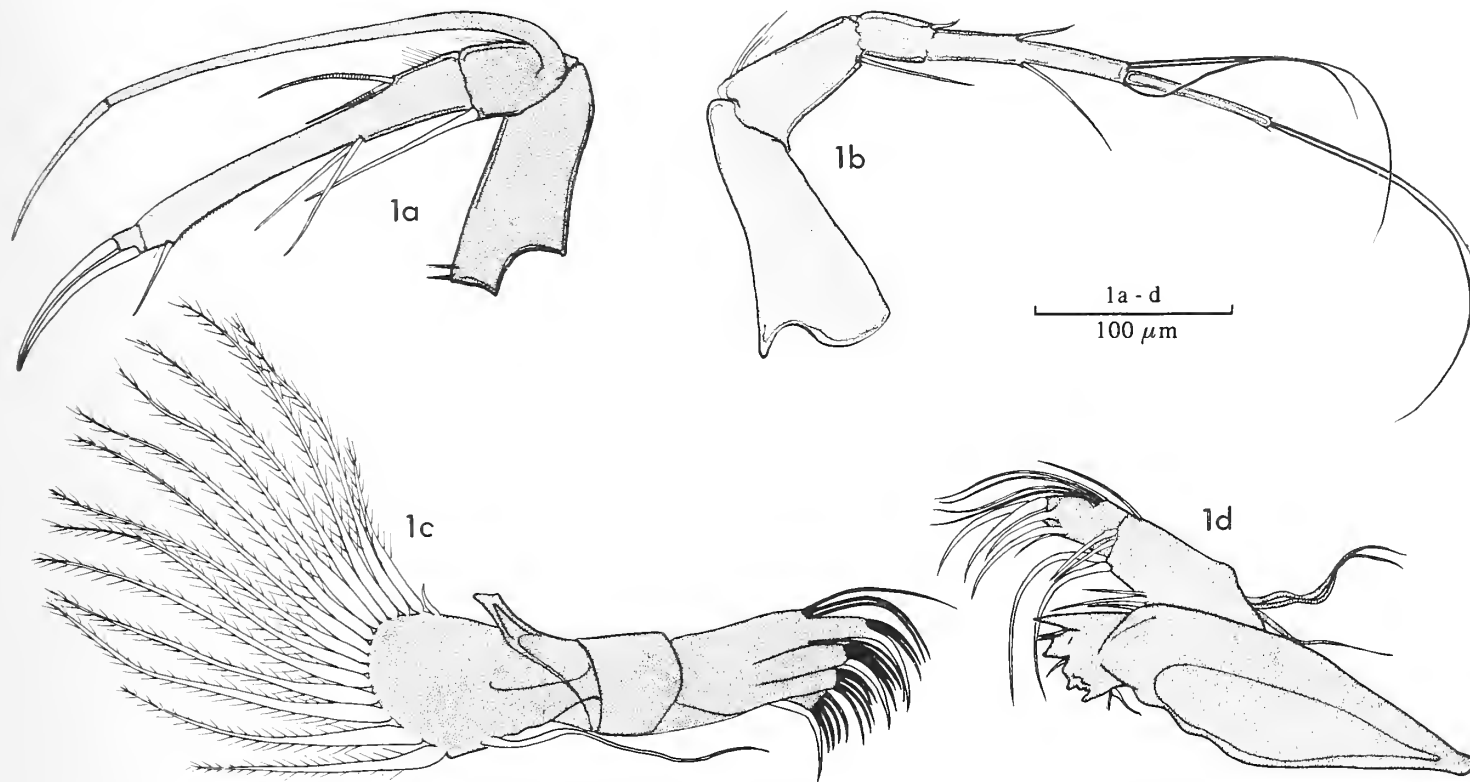
Diagnosis: Tumid. Margins, particularly those of the ♀, smoothly rounded and lack a flange anteriorly. ♂ copulatory appendages of *L. rhomboidea* (Fischer) type, but with long curved, pointed, distal 'lappet'.

Explanation of Plate 6, 144

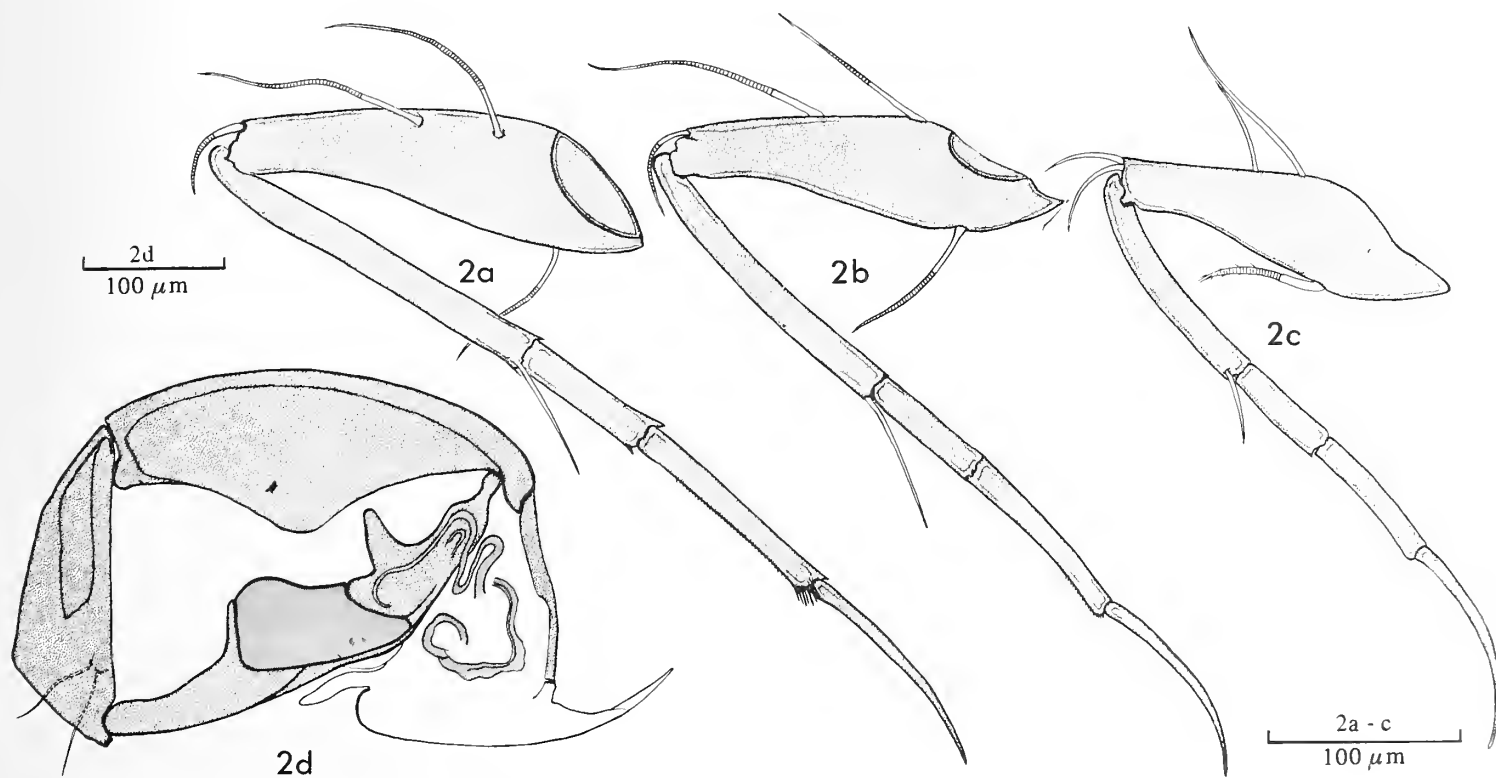
Fig. 1, ♂ LV, ext. lat. (1976.1085, 768 μ m long); fig. 2, ♀ RV, int. lat. (1976.1086, 683 μ m long); fig. 3, ♂ RV, int. lat. (1976.1084, 780 μ m long).

Scale A (250 μ m; x 80), figs. 1 - 3.





Text-fig. 1. Appendages. a: 2nd. lt. antenna; b: 1st. rt. antenna; c: maxilla; d: mandible.



Text-fig. 2. Appendages. a - c: lt. legs, 3 - 1; d: rt. copulatory appendage.

Date of publication: Costa's *Paleontologia del Regno di Napoli* was published both as a book (in three parts) and in the volumes of the *Atti Accad. Pontan.* The two issues are essentially identical, except for minor details such as page numbering, and it is obvious that the text and plates were pulled from one setting of type. The most important difference concerns the dates of publication; 1864 for the *Atti*, but 1857 - 1863 for the separate issue. On p.144 of the latter is a footnote reference to the compte rendue of the Paris Academy of Sciences of 29.4.1861. It is certain, therefore, that p.181, where *C. ovulata* appears, must have been published later than this date, probably in 1863, according to the title page. It seems likely that the whole of pp.144 - 202, entitled 'Capitolo IV, Malacostraci', is of that date. The date of *C. ovulata* is, therefore, given as '1863'.

Explanation of Plate 6, 148

Fig. 1, ♀ LV, ext. lat. (1976.1087, 732 μ m long); fig. 2, ♂ RV, ext. lat. (OS 11421, 760 μ m long); fig. 3, ♀ LV, ext. dors. (1976.1088, 720 μ m long); fig. 4, ♂ LV, ext. dors. (1976.1089, 850 μ m long).
Scale A (250 μ m; x 80), figs. 1 - 4.

Remarks: Ascoli (1965, *op. cit.*) was the first to consider, after examination of Costa's type collection, in the University of Naples, that *Cytherina ovulata* Costa from the Quaternary of Naples (Costa '1863', *op. cit.*) was conspecific with *Loxoconcha tumida* Brady. He used *L. ovulata* (Costa) as the valid name, although, under I.C.Z.N. Article 23b as it then stood, he should have considered the name a *nomen oblitum* and referred the case to the Commission.

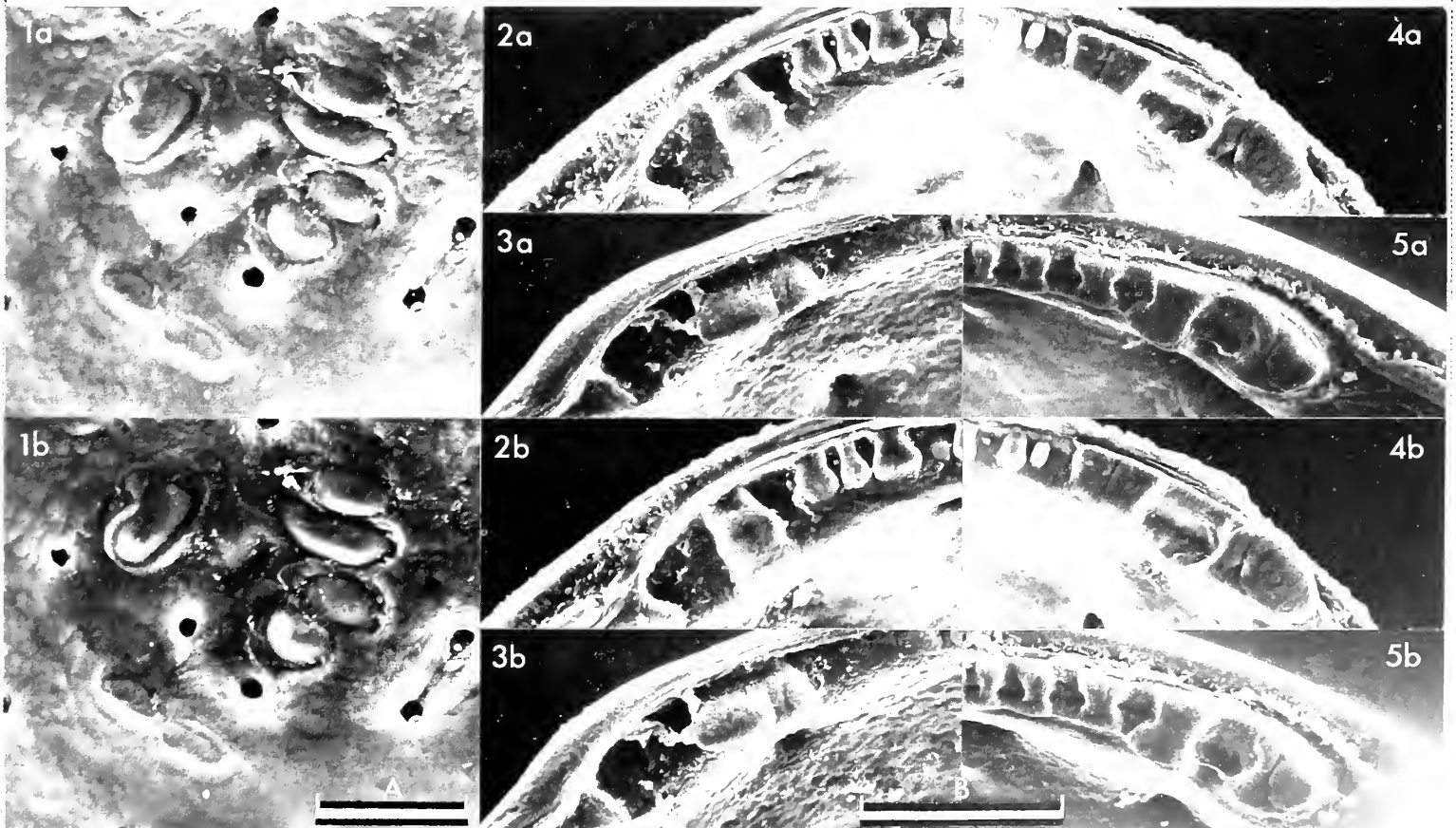
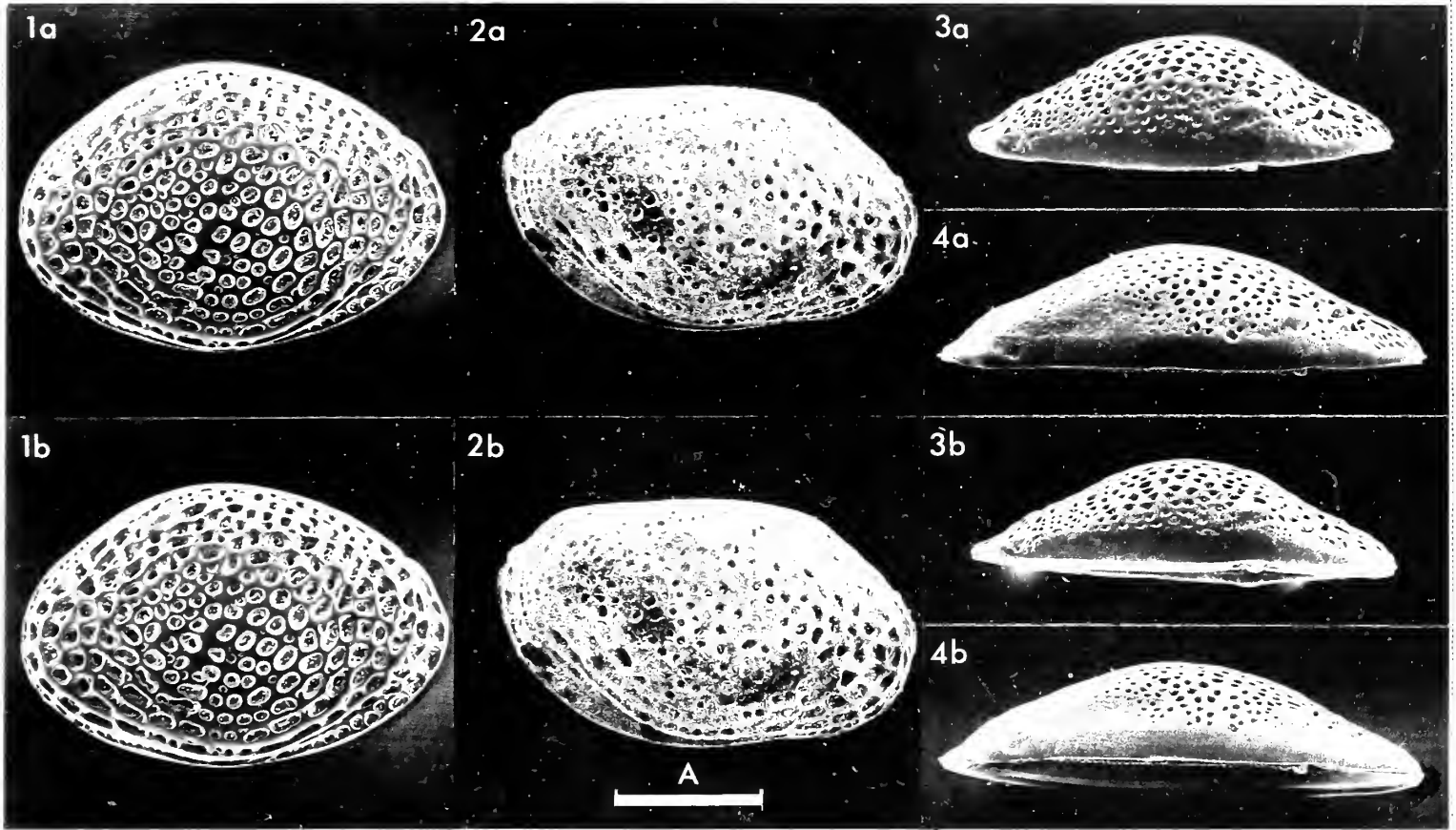
Ruggieri (*Atti Soc. Ital. Sci. nat.*, 106 (2), 106, 1967) criticised Ascoli's revival of Costa's name, but he, too, did not refer the matter to the I.C.Z.N. Since then usage has been divided. By adopting the senior synonym herein the Law of Priority is strictly applied. Wouters (*The Ostracodologist*, 21, 8, 1974) considered *L. aequalis* Terquem, 1878 and *Cythere dispar* Terquem 1878 as junior synonyms of *L. tumida* Brady 1869, and therefore of *L. ovulata*.

Little is yet known about the ecology of this species. All records are from shallow marine environments. It is interesting to note that Müller (*Fauna Flora Golf. Neapel*, 21, 1894) did not record this species from the Bay of Naples, although recent collections have shown that it occurs there quite commonly. Males more elongate than females.

Distribution: Recent: N Adriatic, (Uffenorde, *op. cit.*), Naxos, Greece (Barbeito-Gonzalez, *op. cit.*). As *L. tumida*: Beskika Bay, Turkey and Piraeus, Greece (Brady, *op. cit.*), Monaco (British Museum (Nat. Hist.) collection), Italy and Cyprus (herein), Adriatic, (Masoli, *op. cit.*). ?Sub-Recent: Italy (herein), Cyprus (author's collection), Adriatic (Bremen, *op. cit.*). Quaternary: Pozzuoli, Italy (Costa '1863', *op. cit.*, herein).

Explanation of Plate 6, 150

Fig. 1, ♂ RV, int. musc. sc. (1976.1084); figs. 2, 4, ♀ RV, terminal hinge elements (1976.1086); figs. 3, 5, ♂ LV, terminal hinge elements (1976.1090, 805 μ m long).
Scale A (50 μ m; x 418), fig. 1; scale B (50 μ m; x 564), figs. 2 - 5.



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| (113.313) | Upper Ordovician:
<i>Caprabolbina capra</i> ; 63 - 66
<i>Kiesowia</i> (<i>K.</i>) <i>dissecta</i> ; 79 - 86
<i>Platybolbina</i> (<i>R.</i>) <i>spongiosoreticulata</i> ; 67 - 70
<i>Pyxion posterobicarinatum</i> ; 87 - 90 | (116.312) | Aptian:
<i>Schuleridea hammi</i> ; 1 - 4 |
| (116.21) | Lower Jurassic:
<i>Monoceratina scrobiculata</i> ; 113 - 116 | (118.15) | Oligocene:
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| (116.231) | Oxfordian:
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| (262) | Mediterranean Sea:
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<i>Loxoconcha ovulata</i> ; 141 - 150 | (420) | England:
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- | | |
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|--|--|

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595.337.14 (119.4 + 119.9) (4) : 551.351

Pterygocythereis jonesii (1 of 1)

Addendum to

ON *PTERYGOCYHEREIS JONESII* (BAIRD)

by John Athersuch
(B.P. Research Centre, Sunbury, England)

Editorial comment: Owing to a shortage of space in *A Stereo-Atlas of Ostracod Shells* 5, 9 - 16, 1978, the generic diagnosis was omitted. It is, therefore, presented here in order to complete the aforementioned paper.

Genus *PTERYGOCYHEREIS* Blake, 1933

1933 *Cythereis (Pterygocythereis)* Blake; in: *Biological Survey of the Mount Desert Region*, Wistar Institute of Anatomy and Biology, Philadelphia, p. 239.

Type-species (by original designation): *Cythereis jonesii* Baird, 1850.

Diagnosis: Carapace quadrate with prominent, spinose, ventro-lateral alae terminating in a strong spine. Anterior and posterior margins spinose, carinate or both. Eye tubercles conspicuous. Muscle scar pattern and hinge typical for Trachyleberidinae.

A Stereo-Atlas of Ostracod Shells

edited by R.H. Bate, J. W. Neale, Lesley M. Sheppard
and David J. Siveter

Volume 6, 1979

Part 1 (pp. 1 - 70); 29th June, 1979

Part 2 (pp. 77 - 154); 29th November, 1979

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