Eclogae geologicae Helvetiae,
Vol. 56/1 (1963)

CORRELATION CHART HABANA AREA

P. BRÖNNIMANN and D. RIGASSI: Contribution to the Geology and Paleontology of the Area of the City of La Habana, Cuba, and its Surroundings. PLATE I

Era	Epoch and Stage	Biostratigraphic Zones: Planktonic Foraminifera	Biostratigraphic Zones: Discoasterids	Biostratigraphic Zones: Larger Foraminifera	Groups of Formations	Punta Brava	Jaimanitas Autopista del Mediodía Canc	Tejar Andrade Cantera Pogolotti	Cantera Husillo Tejar Consuelo	Almendares Vedado Nuevo Vedado	Capdevila Vento	Alta Habana	Arroyo Naranjo Alkazar Apolo	Plaza de la República Ave. de los Presidentes Habana Vieja	Casa Blanca Cojimar Alamar	Continuation Vía Monumental from Vía Blanca to Carretera Central	San Francisco de Paula	Santa María del Rosario Cotorro
CENOZOIC	RECENT	Globorotalia menardii		Archaias angulatus	MARIANAO GROUP CARBONATE FACIES		RECENT DEPOSITS			RECENT DEPOSITS	RECENT DEPOSITS			RECENT DEPOSITS	RECENT DEPOSITS			
	PLEISTOCENE						Santa Fe Fm.								Casa Blanca Fm.			
	PLIOCENE						Jaimanitas Fm.											
	OLIGO - MIOCENE	Globorotalia mayeri		Operculinoides			? Cangrejeras Fm.			? Vedado Fm.	? Güines Fm.		Rosario Fm. ?		? Morro Fm.	? Güines Fm. ?	Rosario Fm.	Rosario Fm.
		Globorotalia fohsi					Cojimar Fm.	Cojimar Fm.	Cojimar Fm.	Cojimar Fm. ?					Cojimar Fm.			
		Globigerinatella insueta	Discoaster deflandrei	Miogypsina				Husillo Fm.	Husillo Fm.	Husillo Fm.					Husillo Fm.			
		Catapsydrax dissimilis		Lepidocyclina (Lep.) – Miogypsina														Husillo Fm.
		Globorotalia kugleri				Husillo Fm. (?)					Husillo Fm.							
		Gl. ciperoensis – Glr. opima	Discoaster woodringi	Lepidocyclina (Lep.) – Lepidocyclina (Eulep)		Consuelo Fm.			Consuelo Fm.	Consuelo Fm.								
		Globigerina ampliapertura																
	EOCENE UPPER	Globorotalia cerroazulensis	Discoaster barbadiensis	Lepidocyclina s. l. – Discocyclina		Punta Brava Fm.												
		Globigerapsis semiinvoluta																
	EOCENE MIDDLE	Hantk. dumblei – Globigerinatheka barri	Discoaster lodoensis												Urría beds			Universidad Fm.
		Hantk. mexicana – Glc. aragonensis																
	EOCENE LOWER	Glc. bullbrooki – Glr. aragonensis	Discoaster lodoensis	Eoconuloides wellsi – Boreloides cubensis			E W Universidad Fm.	Universidad Fm.	Universidad Fm.	Universidad Fm.				Universidad Fm.	Universidad Fm.			
		Globorotalia palmerae																
		Glr. brodermanni – Glr. pseudoscitula	Marthasterites tribrachiatus		HABANA GROUP FLYSCH FACIES	?	Capdevila Fm.		Capdevila Fm.	Capdevila Fm.	Capdevila Fm.	Capdevila Fm.	Capdevila Fm.	Capdevila Fm.				
		Glc. rex – Glc. formosa																
		Glc. velascoensis – Glr. pseudomenardii gr.	D. multiradiatus – M. bramlettei M. contortus	"Operculina" catenula		Capdevila Fm.						Alkázar Fm.	Alkázar Fm.	Alkázar Fm.	Alkázar Fm.	Alkázar Fm.	Alkázar Fm.	Alkázar Fm.
		Glc. angulata										Apolo Fm.	Apolo Fm.	Apolo Fm.	Apolo Fm. Probably present	Apolo Fm.	Apolo Fm.	Apolo Fm.
	? Danian	Gl. daubjergensis – Glr. compressa																
MESOZOIC AND OLDER	CRETACEOUS Maastrichtian	Rugotruncana mayaroensis	Coccoliths Assemblages	Omphalocyclus macroporus									Peñalver Fm.	Peñalver Fm.	Peñalver Fm.	Peñalver Fm.	Peñalver Fm.	Peñalver Fm.
		Rugotruncana gansseri		Vaughanina cubensis									Vía Blanca Fm.	Vía Blanca Fm.	Vía Blanca Fm.	Vía Blanca Fm.	Vía Blanca Fm.	Vía Blanca Fm.
	Campanian	Globotruncana * linneiana		Pseudorbitoides israelskyi – Rhabdorbitoides hedbergi											Pre-Vía Blanca beds ?	Pre-Vía Blanca beds ?		
	Santonian to Coniacian	Glt. fornicata *																
		Glt. concavata																
		Glt. coronata																
	Turonian	Helvetoglt. helvetica																
		Rot. turonica																
	Cenomanian	Rot. appenninica																
		Thalm. multiloculata																
	Albian to Aptian	Hedbergella trocoidea		Nannoconus truitti														
	Barremian to Neocomian			Nannoconus steinmanni														Nannoconus limestones
	Upper Jurassic and older														Serpentinites ?	Serpentinites ?		Serpentinites ?

* Zonation not definitely established

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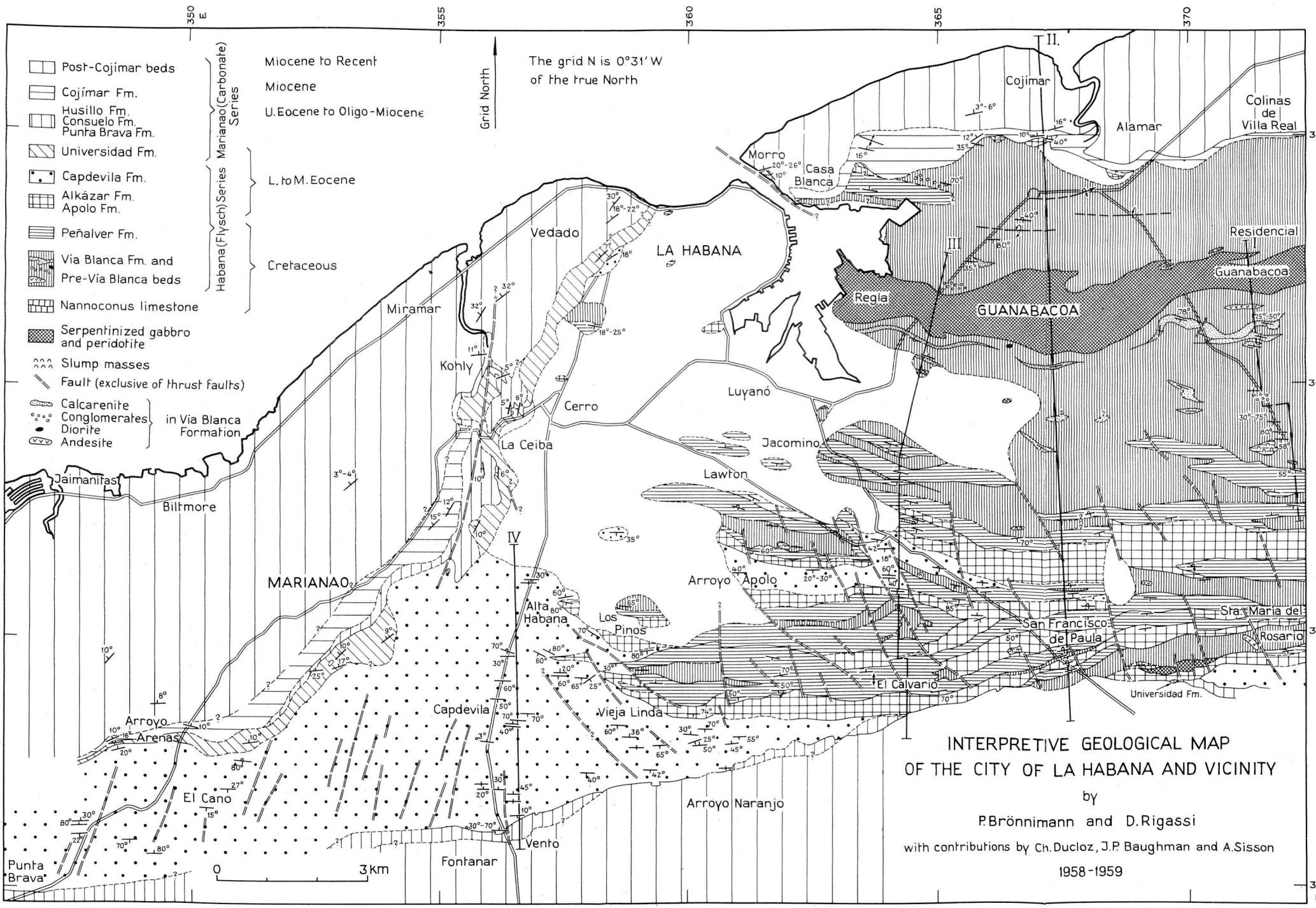

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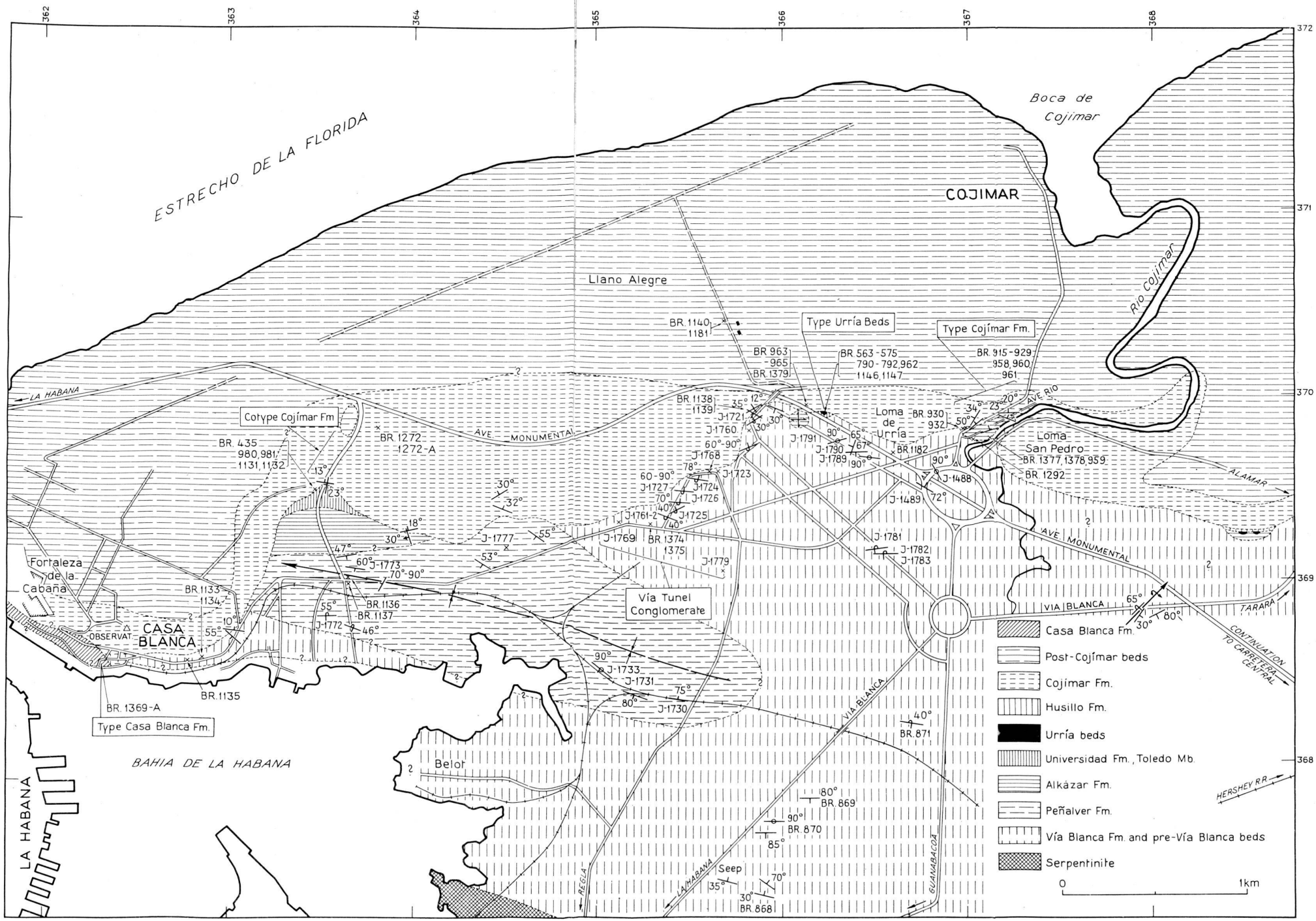

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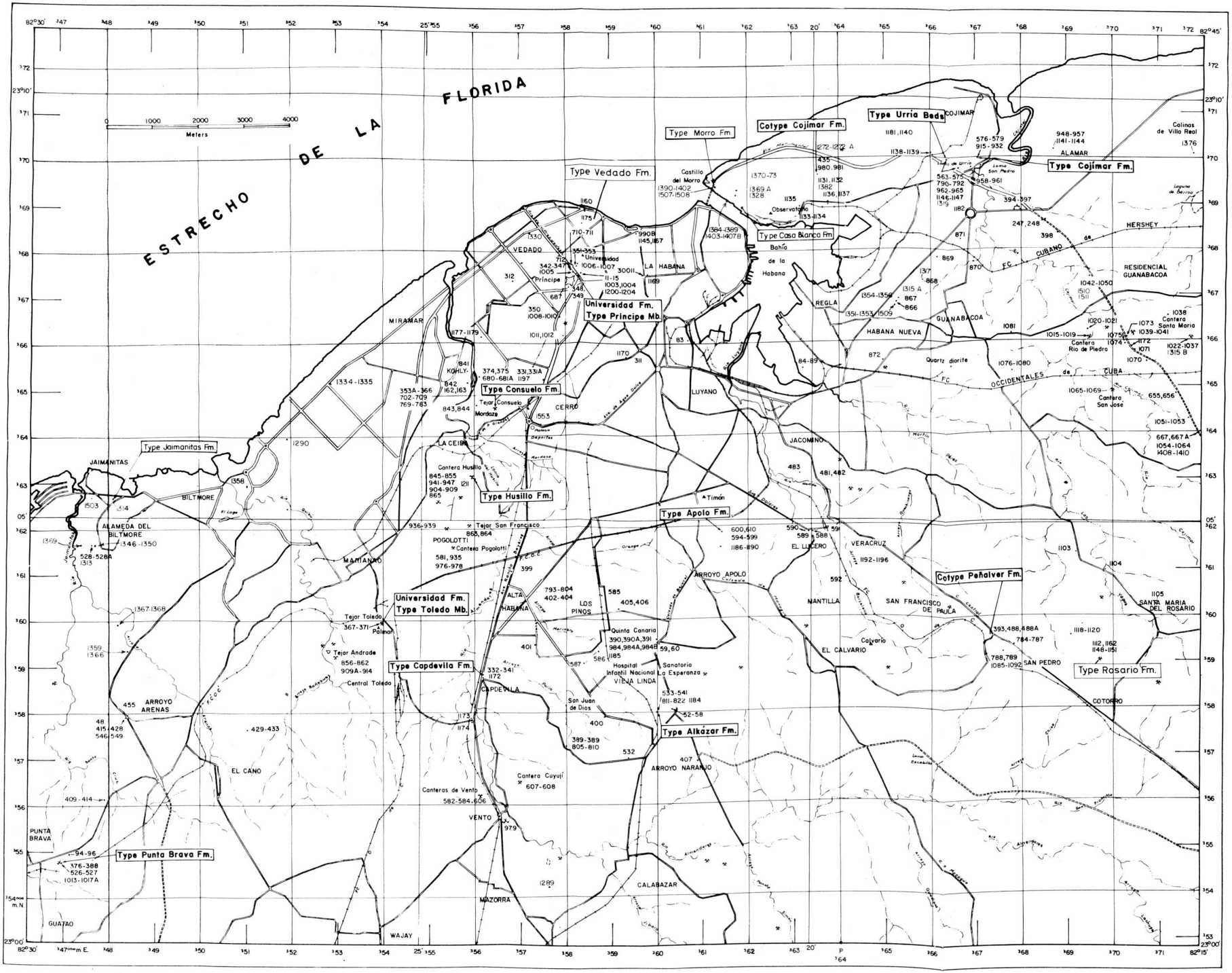

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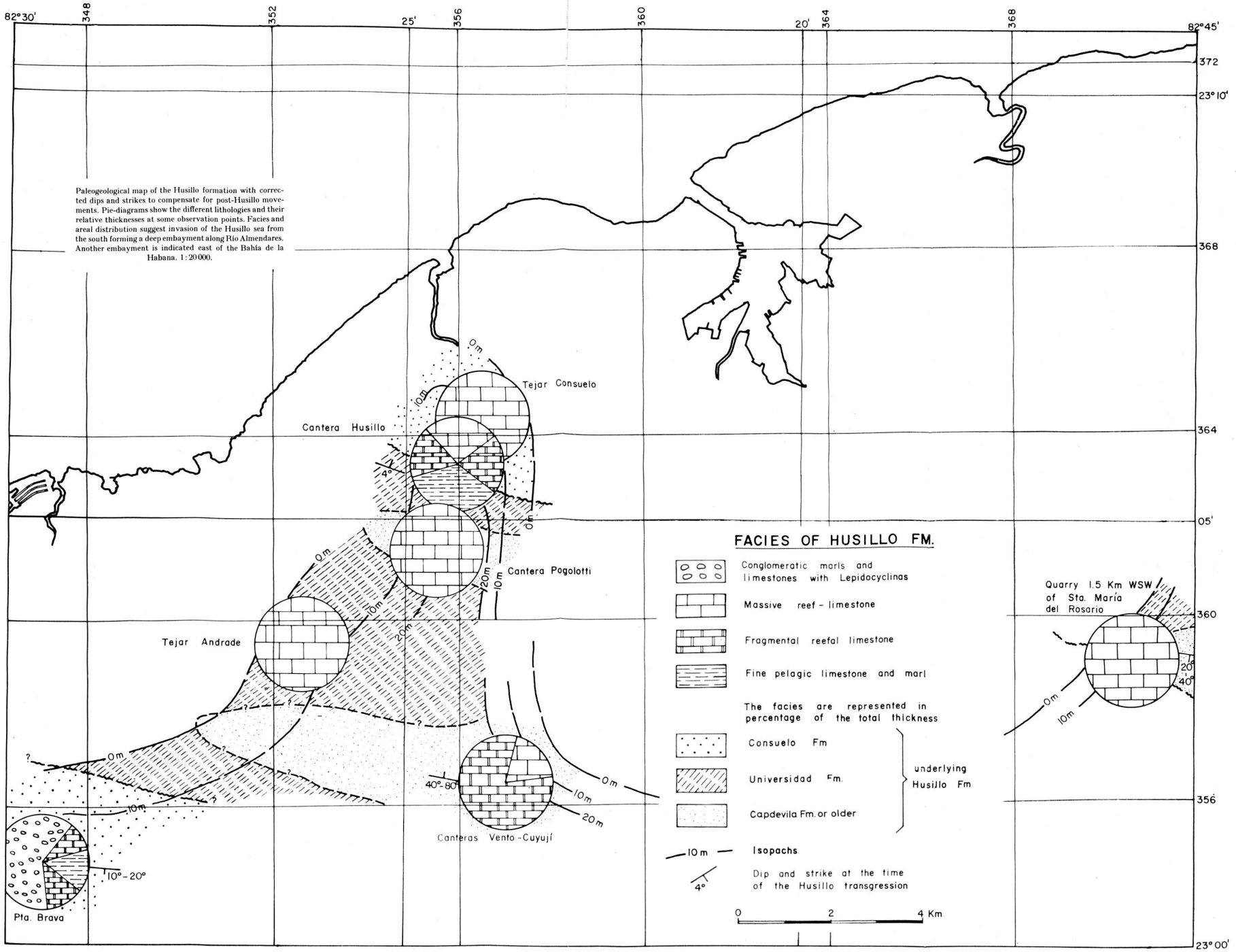

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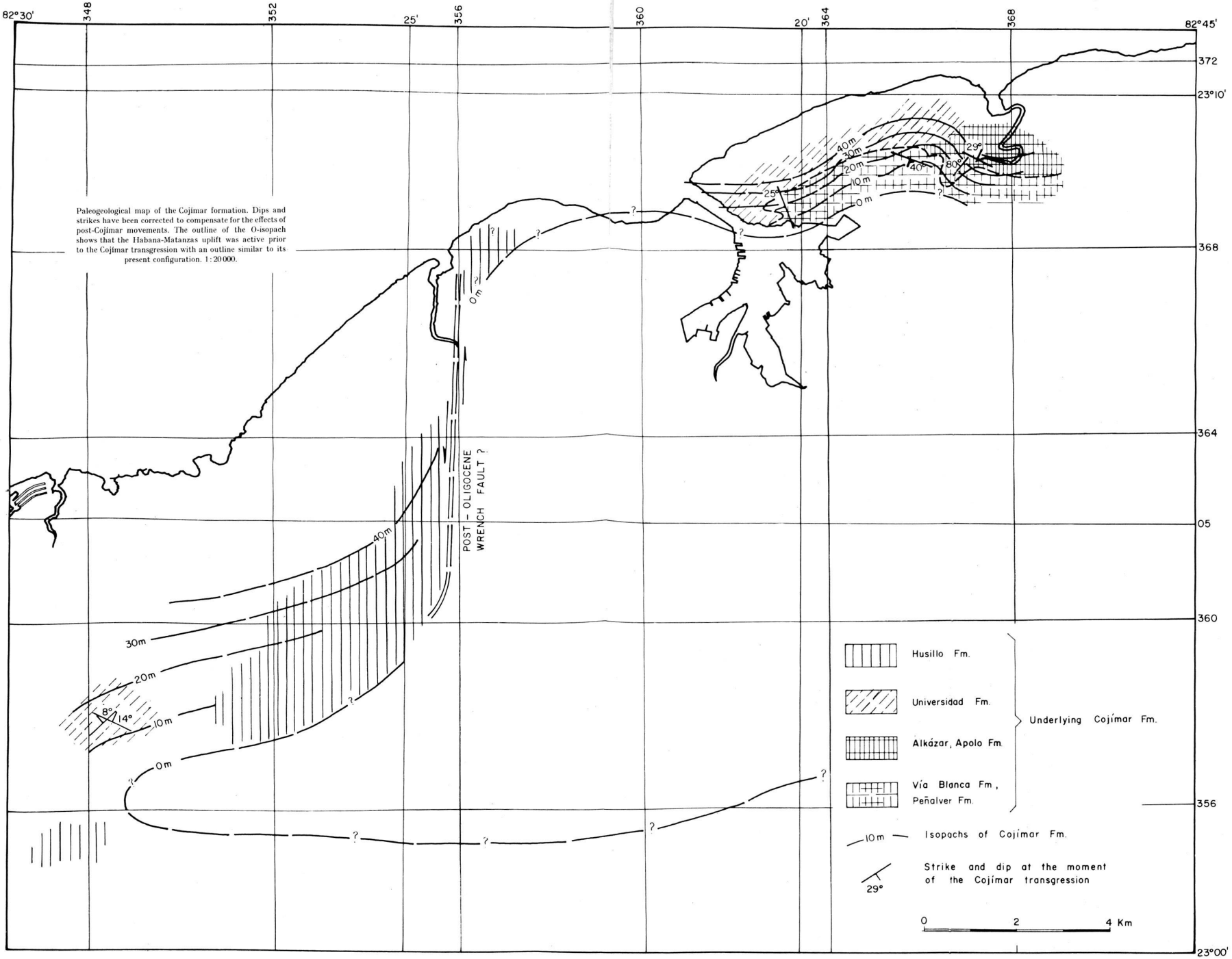

Paleogeological map of the Cojímar formation. Dips and strikes have been corrected to compensate for the effects of post-Cojímar movements. The outline of the O-isopach shows that the Habana-Matanzas uplift was active prior to the Cojímar transgression with an outline similar to its present configuration. 1:20000.

1

2

3

4

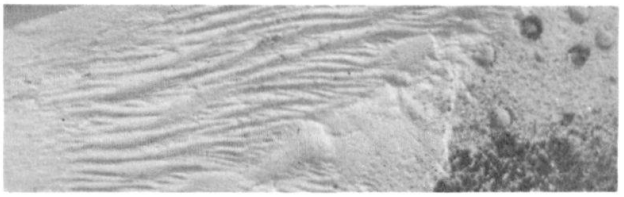

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Plate VIII

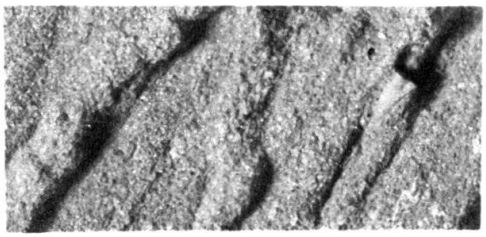
Figs. 1–3. "Hieroglyphic" markings formed by sandy material filling animal borings on mud surface.

Fig. 1. Baughman station 1743. 2.2 ×.
Figs. 2, 3 Baughman station 1944. 2.2 ×.

SEILACHER (1959, p. 1070, text-fig. 29, Tabelle II) explains the forms illustrated by fig. 1 as "Langgestreckte Gangfüllung mit wenigen geweihartigen Verzweigungen. Ursprünglich mit Tonpillen austapeziert, daher stets scharf von der umgehenden Schichtfläche abgesetzt" (cf. *Granularia* POMEL). Our fig. 3 may be identical with SEILACHER's problematic form illustrated by his text-fig. 35, Tabelle II (*Terebellina* ULRICH).

Fig. 4. Ripple mark on top of sandy bed. Baughman station 2037. 1.5 ×.

1



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3

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Plate IX

Figs. 1–6. Chondrites of different types from the calcilutite in the upper part of the Vía Blanca formation, continuation of the Avenida Monumental. BR stations 667 and 667 A. Fig. 1 1.7 ×.

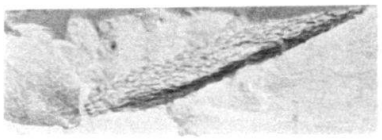
Fig. 2. Detail of surface structure. 2.2 ×.

Figs. 3, 4 1.8 ×.

Figs. 5, 6 2.2 ×.

SEILACHER (1959, p. 1072, Tabelle III, text-fig. 50) refers the form illustrated by our fig. 1 to *Chondrites* ("Fressbau"). Figs. 3 and 4 are identical with SEILACHER's fig. 49, Tabelle 3, referred to *Chondrites intricatus* BROGNIART. Figs. 5 and 6 appear to be intermediate forms of *Chondrites* and fig. 2 shows the filling of the "Fressbau" with ellipsoidal coprolites.

1



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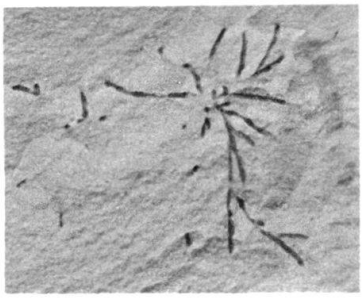

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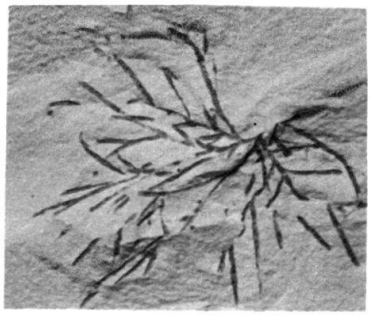

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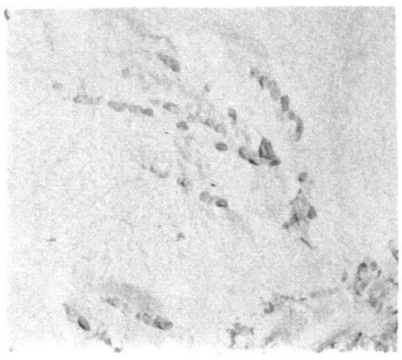

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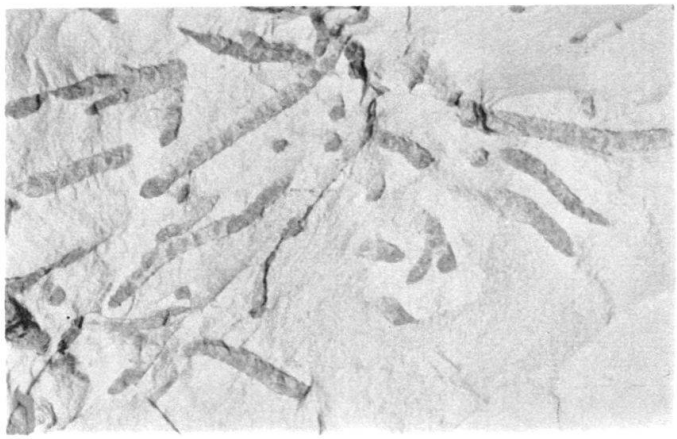

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Plate X

Fig. 1. *Discoaster multiradiatus* BRAMLETTE and RIEDEL
a) Facies superior
b) Facies inferior

Fig. 2. *Discoaster bebalaini* (TAN SIN HOK) nov. comb.
a) Facies superior
b) Facies inferior

Fig. 3. *Discoaster aecus* BRÖNNIMANN and STRADNER
a) Facies superior
b) Facies inferior

Fig. 4. *Discoaster geometricus* BRÖNNIMANN and STRADNER
a) Facies superior
b) Facies inferior

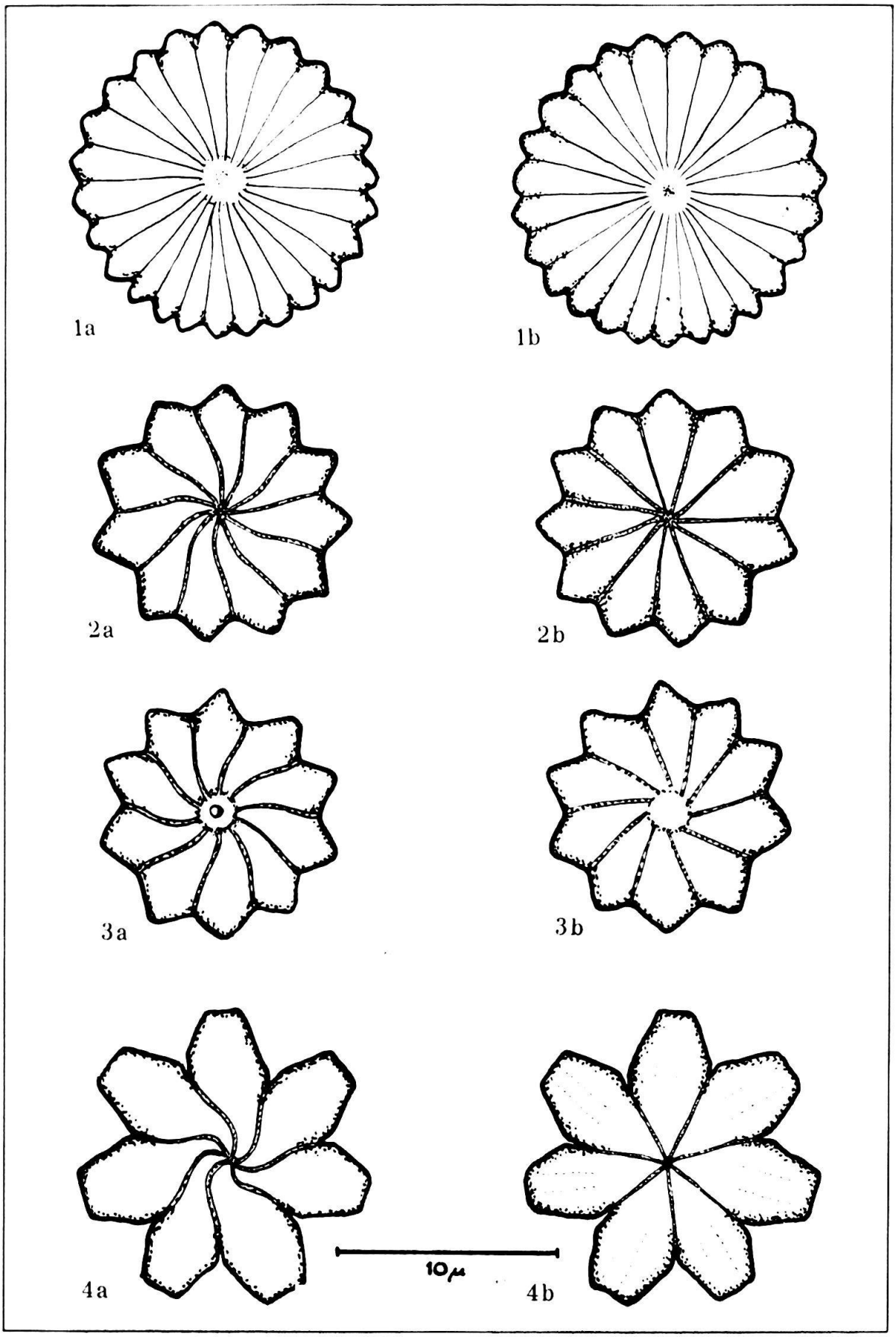

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Plate XI

Fig. 1. *Discoaster uncinatus* BRÖNNIMANN and STRADNER
a) Facies superior
b) Facies inferior

Fig. 2. *Discoaster lodoensis* BRAMLETTE and RIEDEL
a) Facies superior
b) Facies inferior

Fig. 3. *Discoaster hilli* TAN SIN HOK
a) Facies superior
b) Facies inferior

Fig. 4. *Discoaster mirus* DEFLANDRE
a) Facies superior
b) Facies inferior

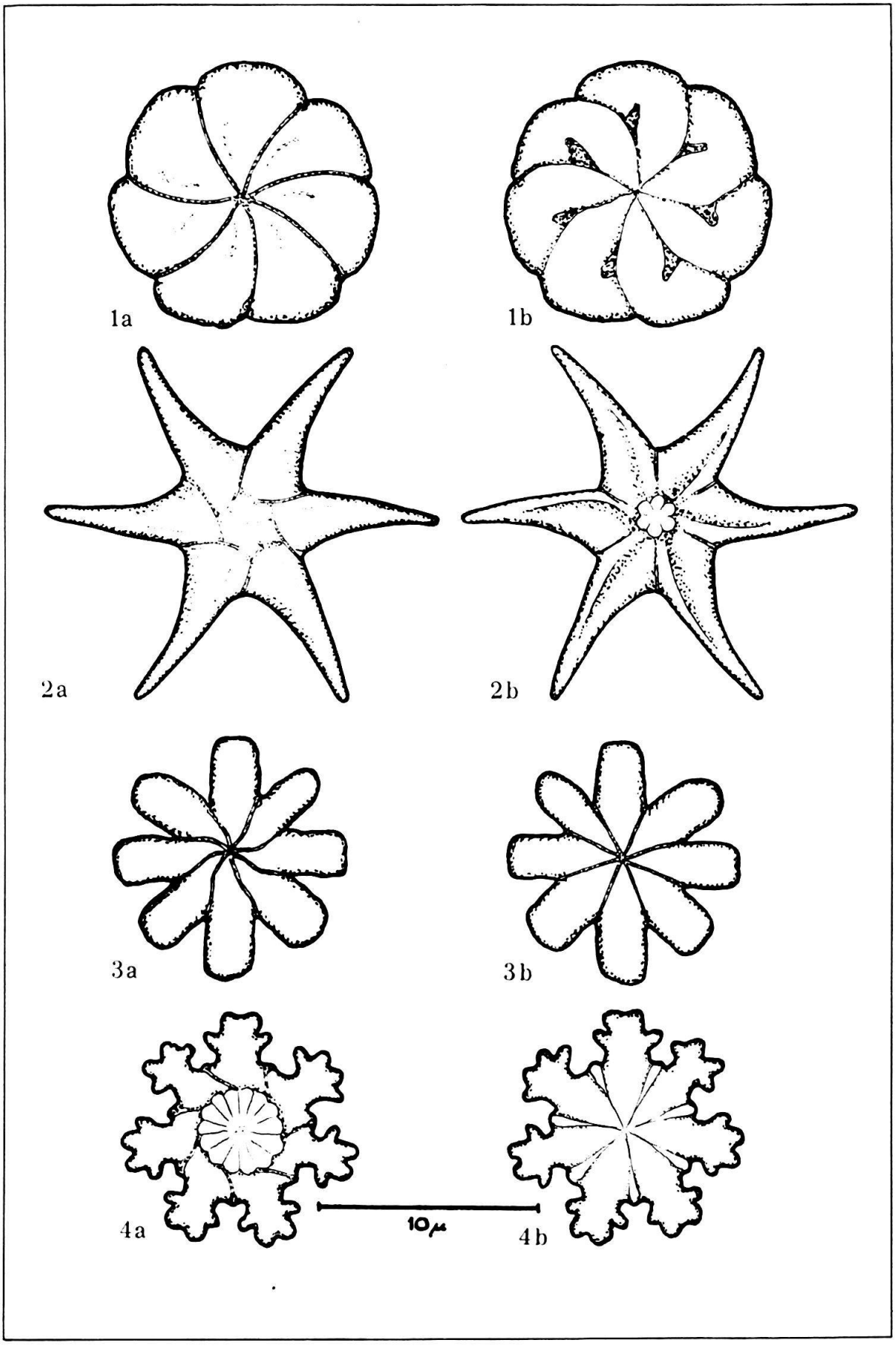

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Plate XII

Fig. 1. *Discoaster binodosus* MARTINI
a) Facies superior
b) Facies inferior

Fig. 2. *Discoaster corniger* SHAMRAY and LAZAREVA
a) Facies superior
b) Facies inferior

Fig. 3. *Discoaster* cf. *molengraaffi* TAN SIN HOK
a) Facies superior
b) Facies inferior

Fig. 4. *Discoaster* cf. *woodringi* BRAMLETTE and RIEDEL
a) Facies superior
b) Facies inferior

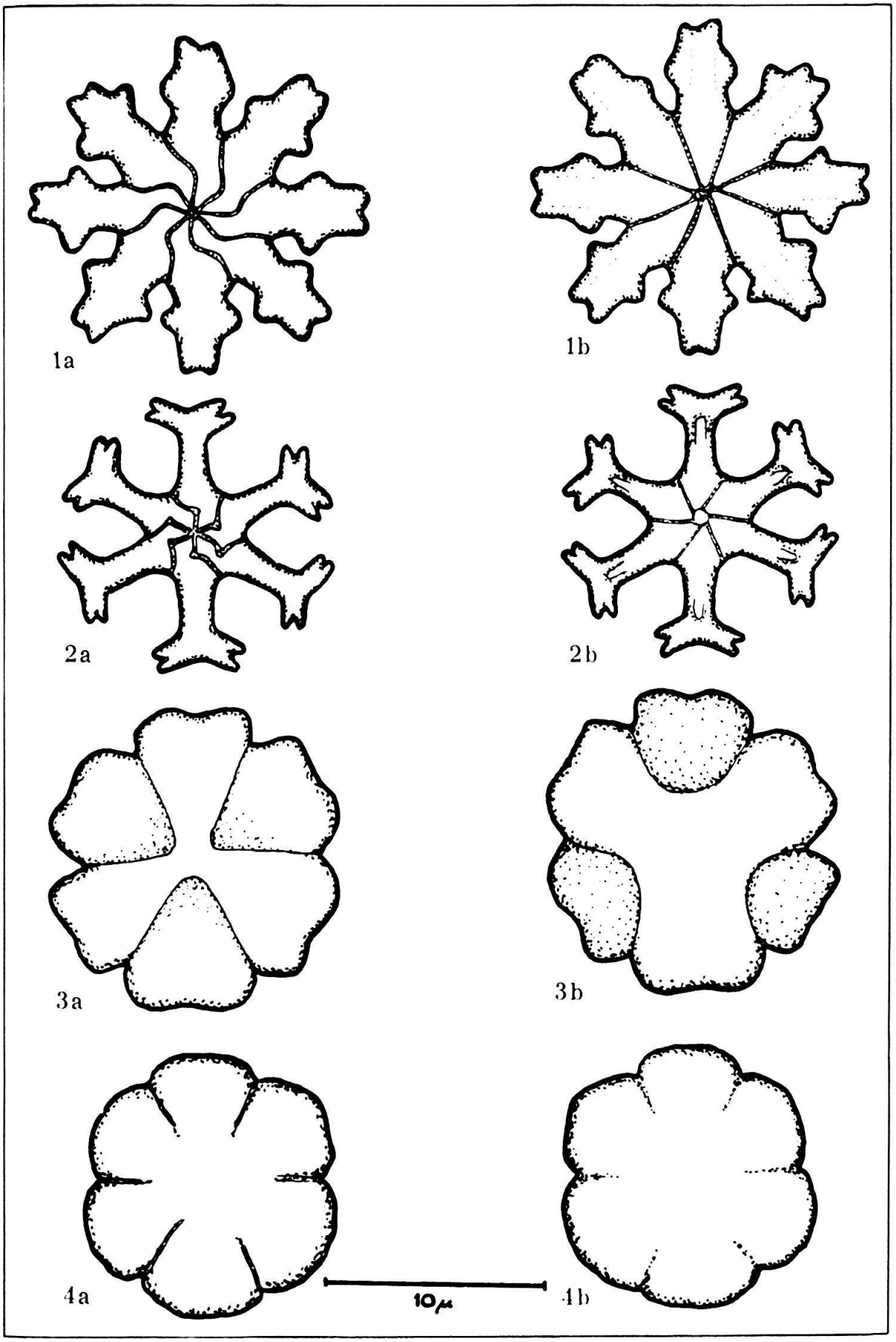

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Plate XIII

Fig. 1. *Marthasterites contortus* (STRADNER) DEFLANDRE
a) Facies superior
b) Facies inferior

Fig. 2. *Marthasterites bramlettei* BRÖNNIMANN and STRADNER
a) Facies superior
b) Facies inferior

Fig. 3. *Marthasterites riedeli* BRÖNNIMANN and STRADNER
a) Facies superior
b) Facies inferior

Fig. 4. *Marthasterites tribrachiatus* (BRAMLETTE and RIEDEL) DEFLANDRE
a) Facies superior
b) Facies inferior

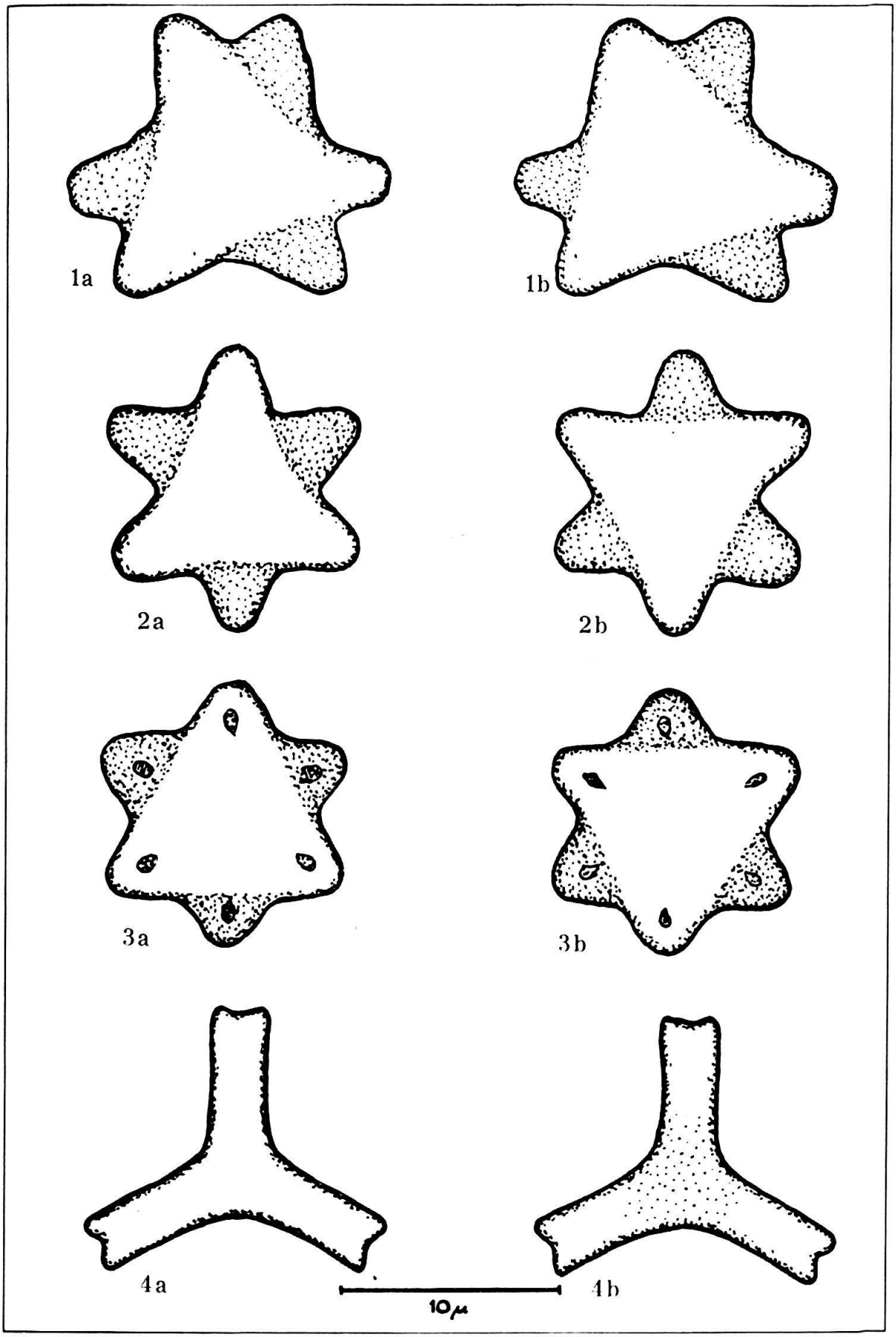

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Plate XIV

Fig. 1. *Nannotetraster swasticoides* (MARTINI) MARTINI and STRADNER
a) Facies superior
b) Facies inferior

Fig. 2. *Braarudosphaera bigelowi* (GRAN and BRAARUD) DEFLANDRE
a) Facies distalis
b) Facies proximalis

Fig. 3. *Braarudosphaera discula* BRAMLETTE and RIEDEL
a) Facies distalis
b) Facies proximalis

Fig. 4. *Braarudosphaera undata* STRADNER
a) Facies distalis
b) Facies proximalis

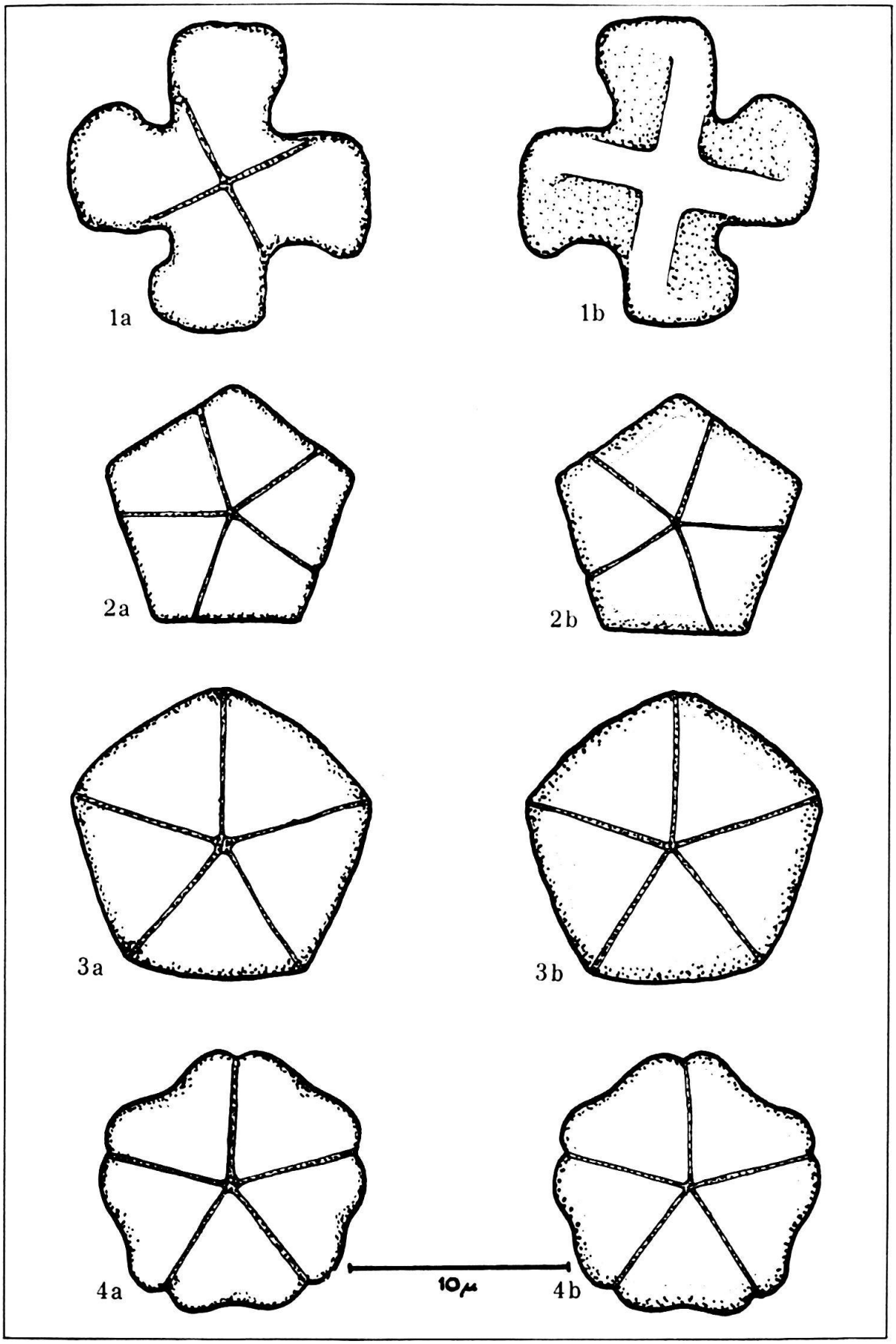

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Plate XV

Fig. 1. *Micrantholithus vesper* DEFLANDRE
- a) Facies distalis
- b) Facies proximalis

Fig. 2. *Nannoturbella moriformis* BRÖNNIMANN and STRADNER
- a) Basal view
- b) Side view
- c) In polarized light

Fig. 3. *Heliorthus fallax* BRÖNNIMANN and STRADNER
- a) Facies distalis
- b) Facies proximalis
- c) In polarized light (different scale)
- d) Side view
- e) Facies proximalis of a paratype with more rugged outline
- f) Facies distalis of a paratype with slender cross and rim

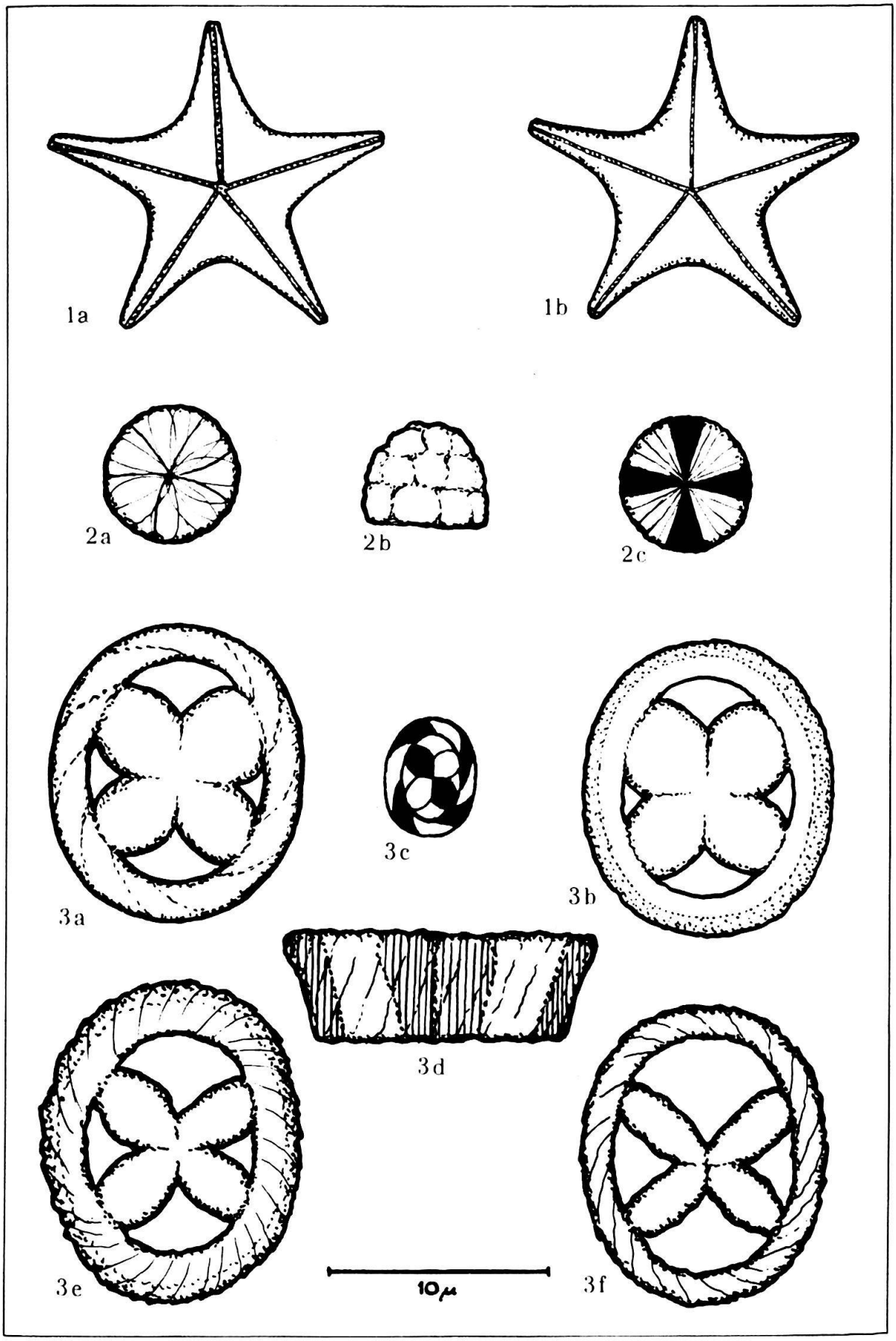

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Plate XVI

Fig. 1. *Rugotruncana gansseri* (BOLLI)
Baughman station 1802, Maastrichtian
95×

Fig. 2. *Globotruncana contusa* (CUSHMAN)
Baughman station 1805, Maastrichtian
60×

Fig. 3. *Trinitella scotti* BRÖNNIMANN
Sisson station 156, Maastrichtian
95×

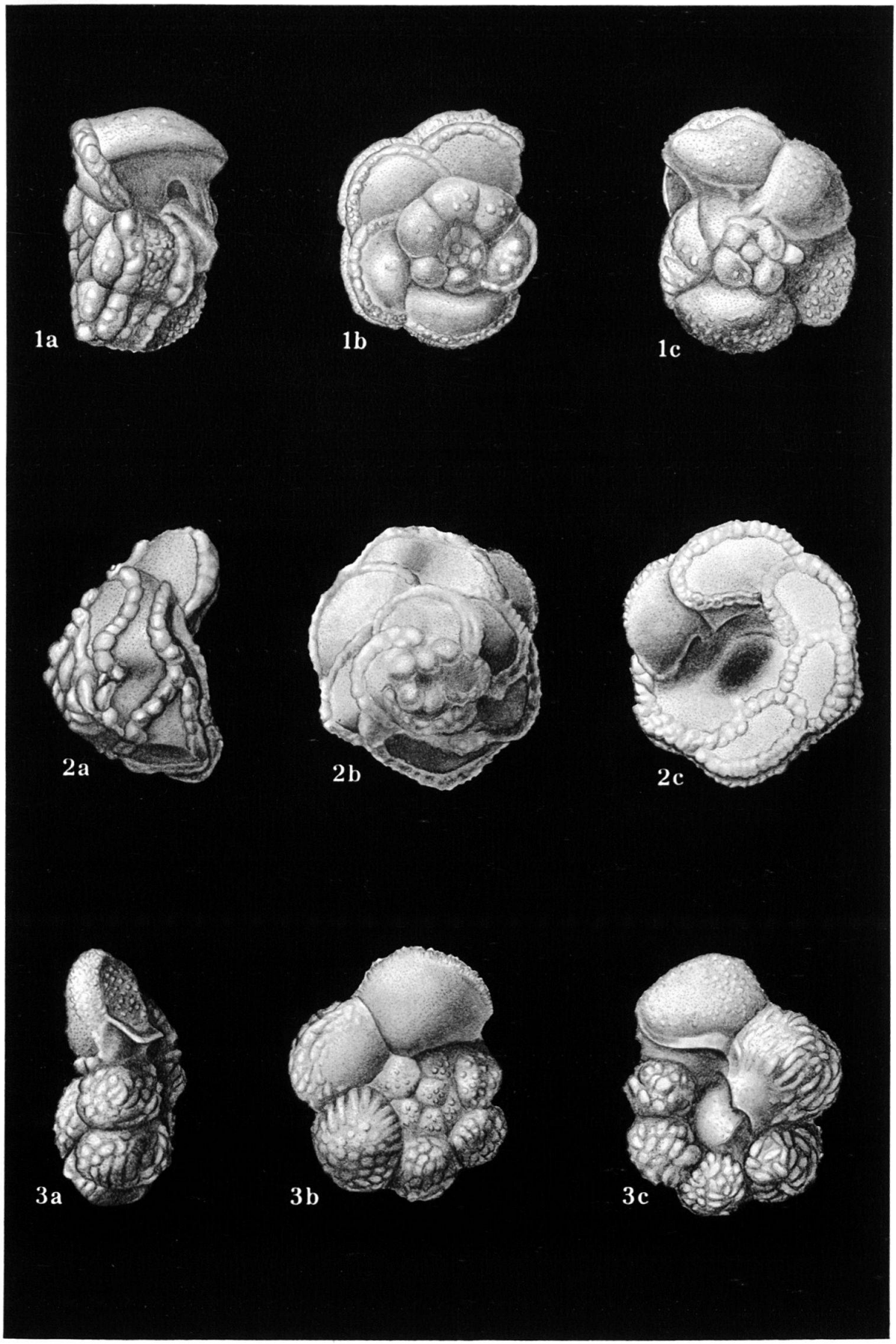

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Plate XVII

Fig. 1. *Rugotruncana calcarata* (CUSHMAN)
Baughman station 1839 B, Campanian
62×

Fig. 2. *Globotruncanella havanensis* (VOORWIJK)
Baughman station 1839 B, Campanian
62×

Fig. 3. *Globotruncana fornicata* PLUMMER
Baughman station 1839 B, Campanian
62×

Fig. 4. *Gublerina ornatissima* (CUSHMAN and CHURCH)
Sisson station 156, Maastrichtian
62×

Fig. 5. *Globotruncana linneiana* (D'ORBIGNY)
Baughman station 1839 B, Campanian
62×

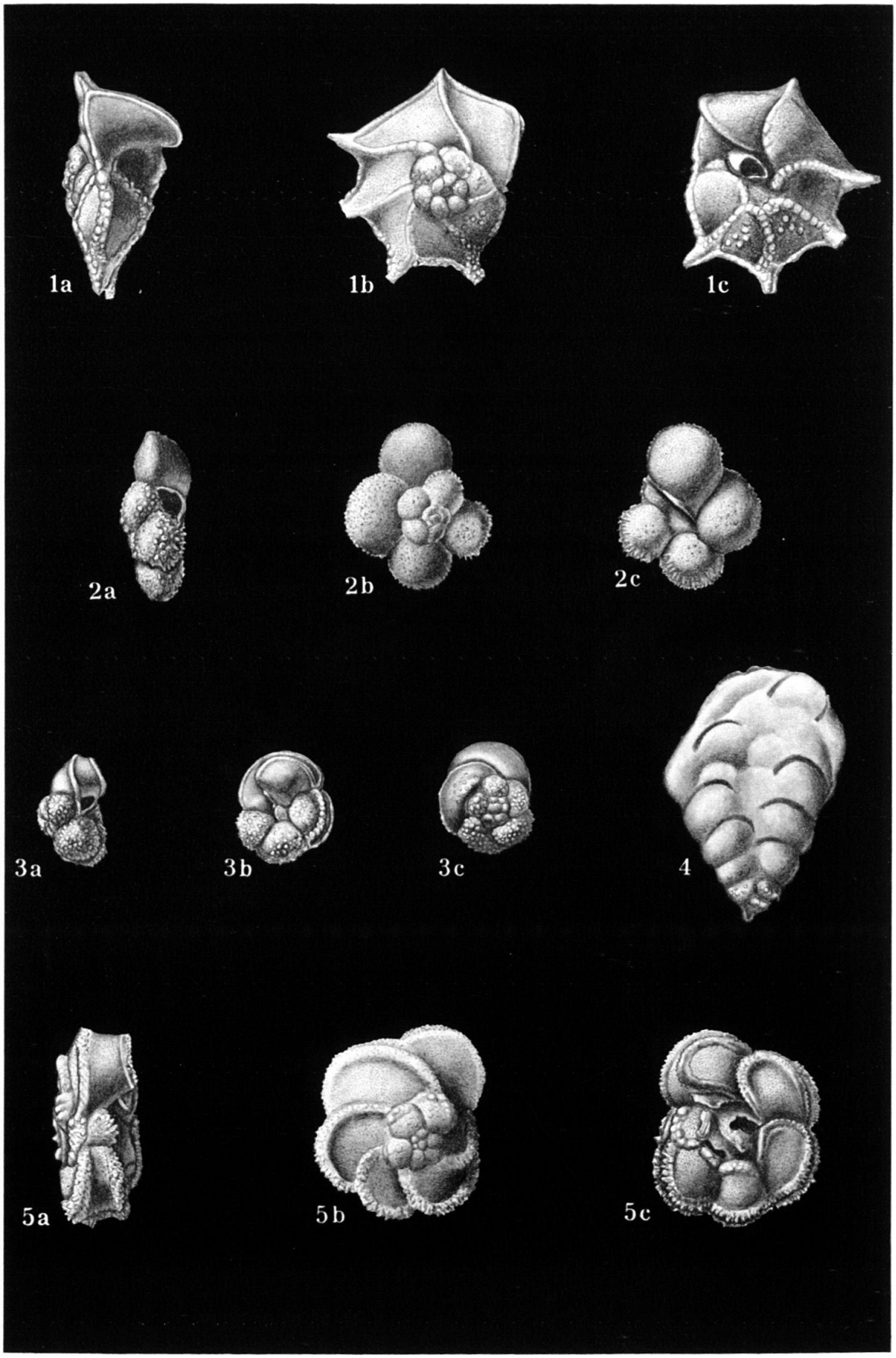

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Plate XVIII

Fig. 1. *Rugoglobigerina rugosa rugosa* (PLUMMER)
Sisson station 156, Maastrichtian
92×

Fig. 2. *Rugoglobigerina macrocephala macrocephala* BRÖNNIMANN
Sisson station 156, Maastrichtian
92×

Fig. 3. *Ticinella roberti* (GANDOLFI)
Sisson station 148, Cenomanian
92×

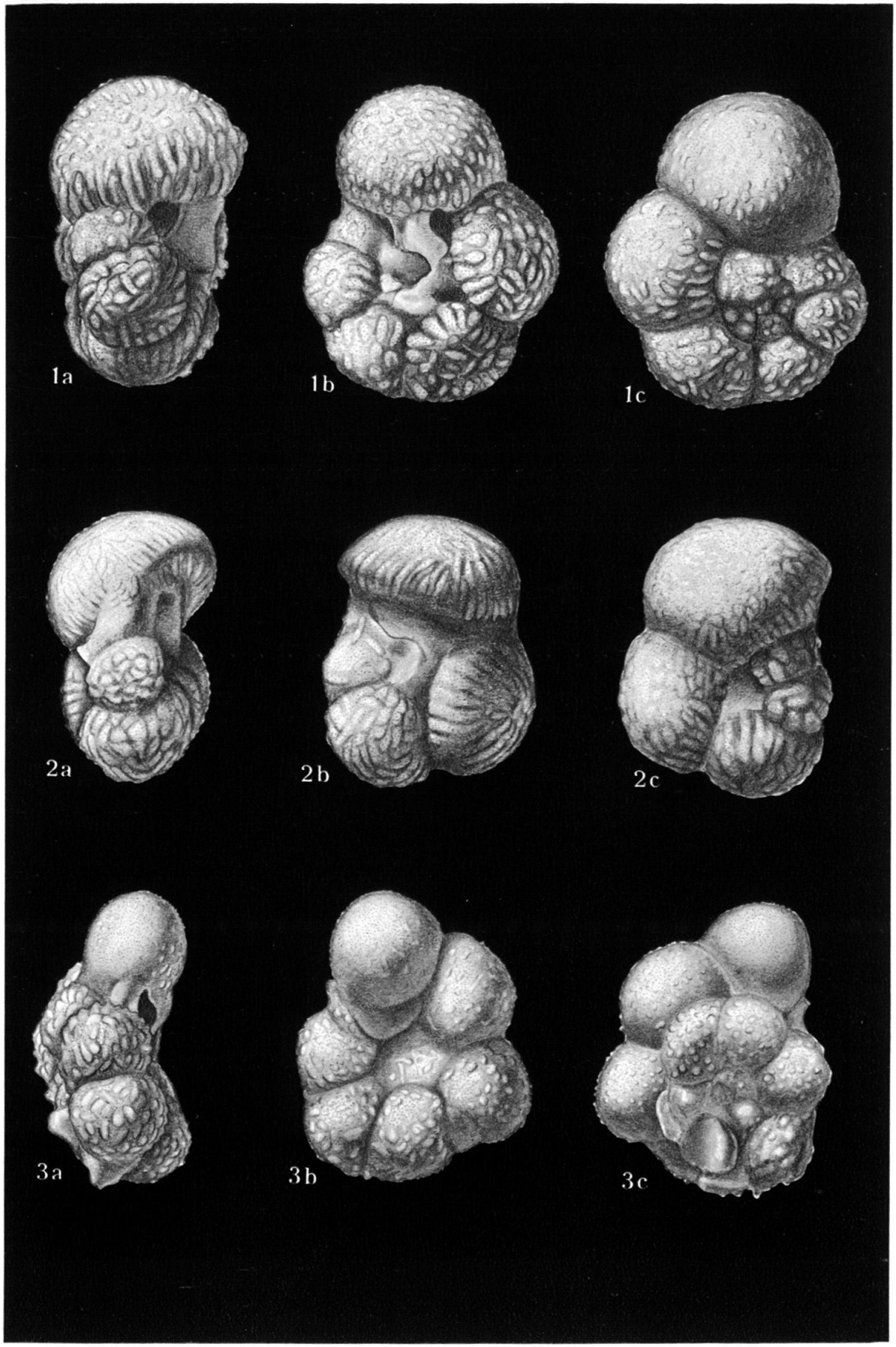

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Plate XIX

Fig. 1. *Hedbergella trocoidea* (GANDOLFI)
Sisson station 148, Cenomanian
96×

Fig. 2. *Planomalina buxtorfi* (GANDOLFI)
Sisson station 148, Cenomanian
60×

Fig. 3. *Globigerina daubjergensis* BRÖNNIMANN
BR station 1221, Danian
96×

Fig. 4. *Globorotalia compressa* PLUMMER
BR station 1221, Danian
96×

Fig. 5. *Globorotalia pseudobulloides* PLUMMER
BR station 1221, Danian
96×

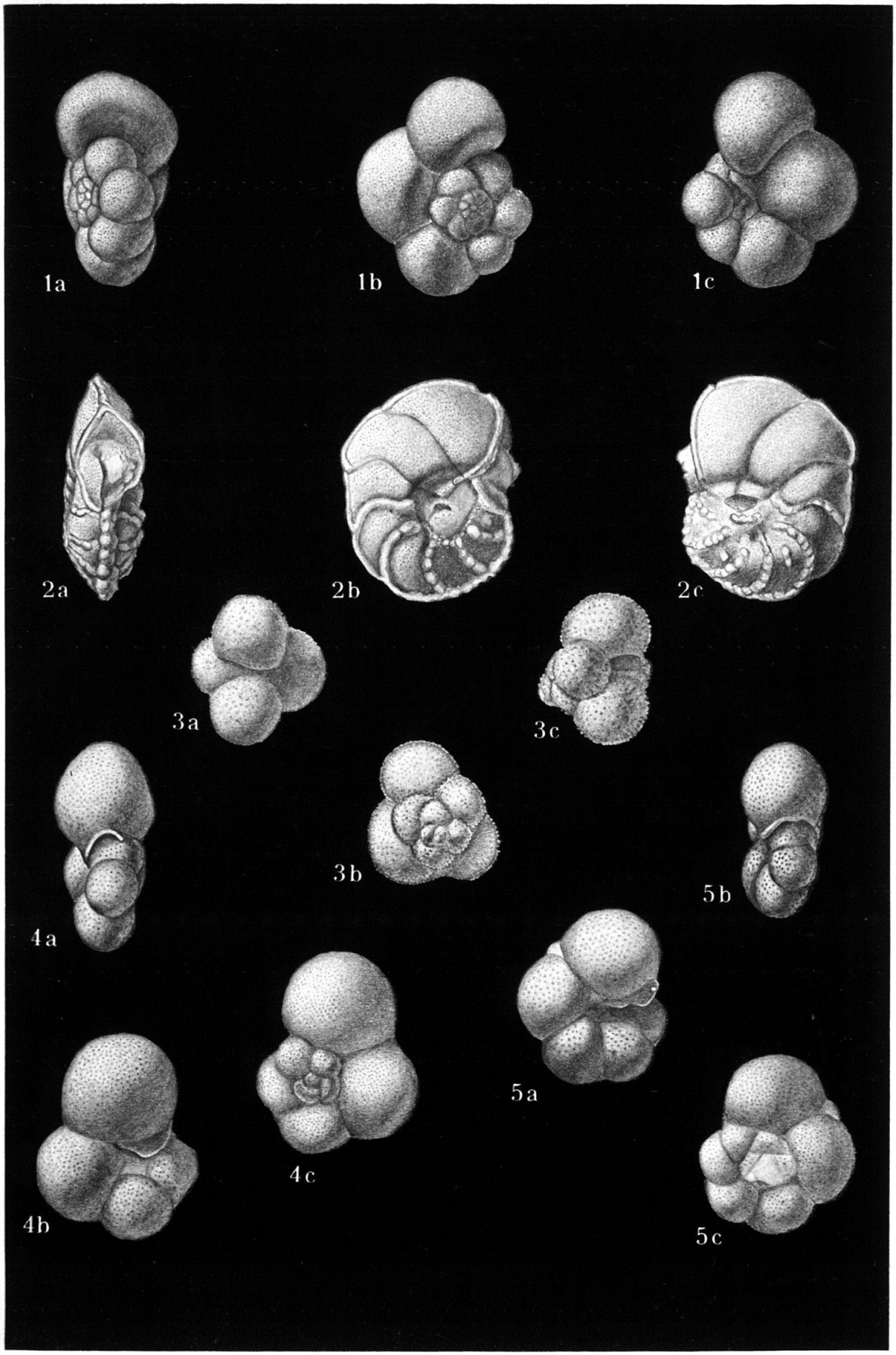

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Plate XX

Fig. 1. *Globigerina ciperoensis angustiumbilicata* BOLLI
BR station 383, Oligocene
97×

Fig. 2. *Globigerina ciperoensis ciperoensis* BOLLI
BR station 383, Oligocene
97×

Fig. 3. *Globigerina ciperoensis angulisuturalis* BOLLI
BR station 376, Oligocene
97×

Fig. 4. *Globorotalia mayeri* CUSHMAN and ELLISOR
BR station 959, Miocene
97×

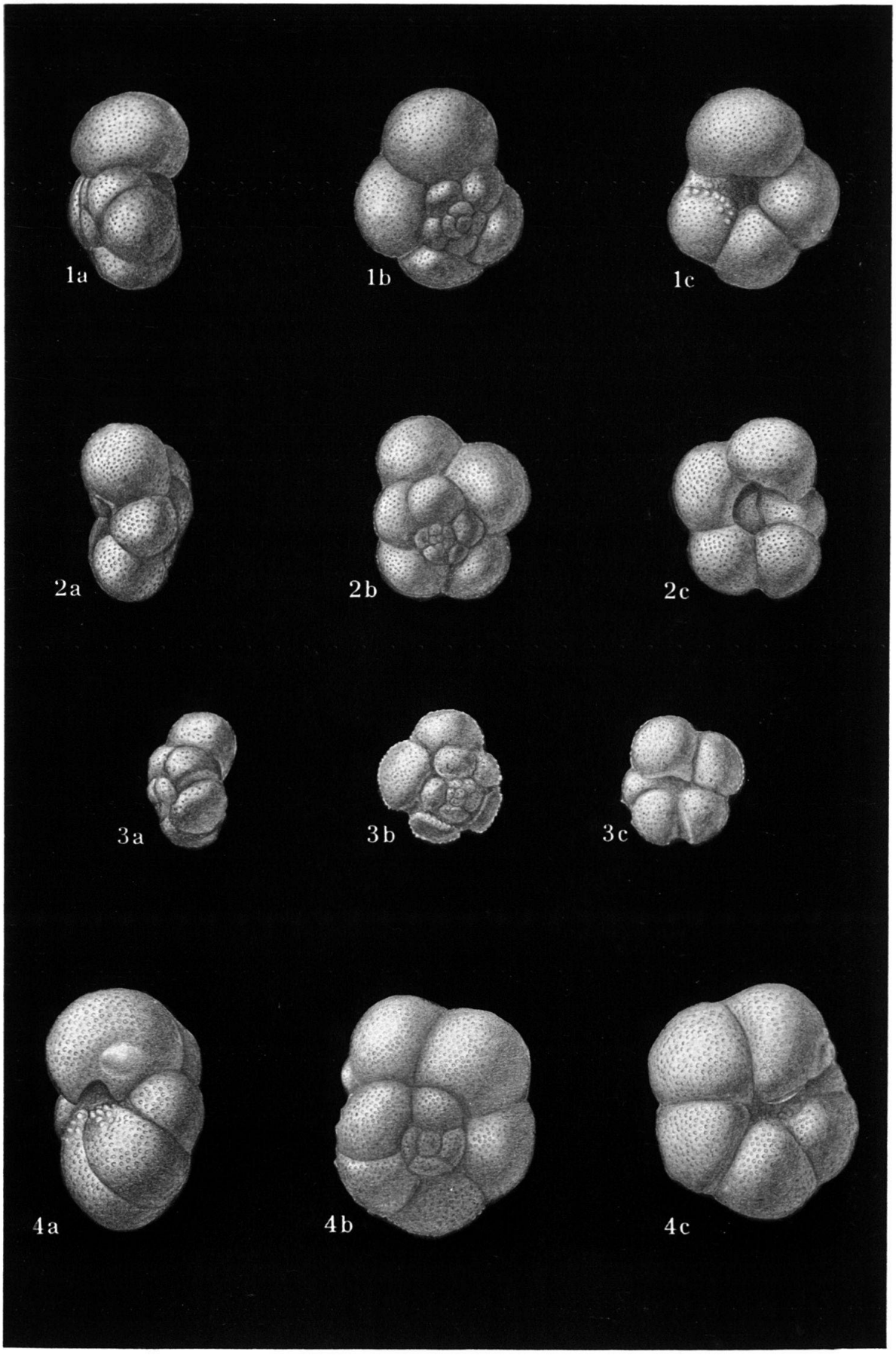

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Plate XXI

Fig. 1. *Globigerina ampliapertura* BOLLI
BR station 366, Oligocene
93×

Fig. 2. *Globigerina euapertura* JENKINS
BR station 383, Oligocene
93×

Fig. 3. *Globorotalia opima nana* BOLLI
BR station 383, Oligocene
93×

Fig. 4. *Globorotalia opima opima* BOLLI
BR station 376, Oligocene
93×

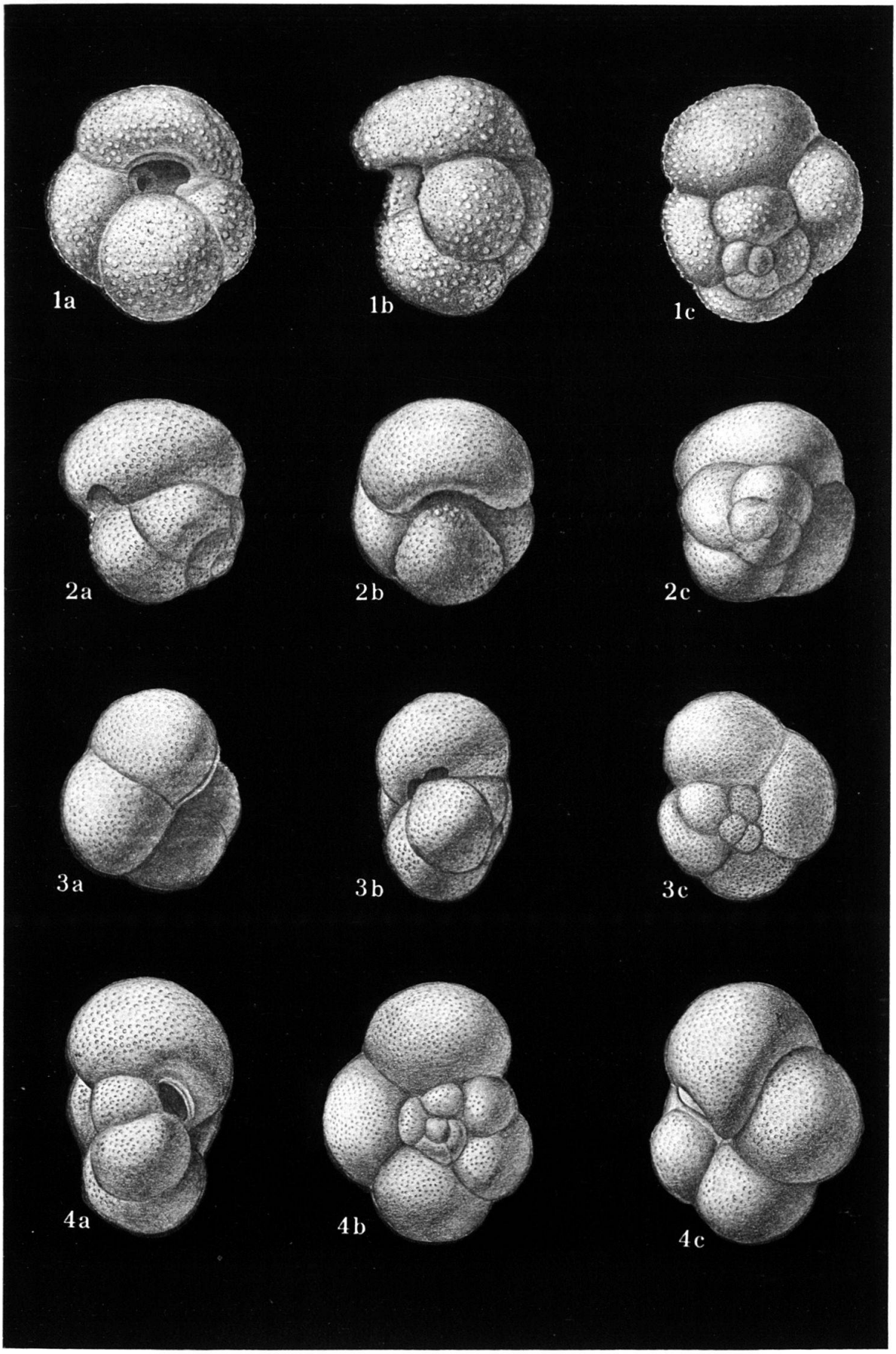

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Plate XXII

Fig. 1. *Globigerina triloculinoides* PLUMMER
BR station 1221, Danian
98×

Fig. 2. *Globigerina* cf. *triloculinoides* PLUMMER
BR station 1221, Danian
98×

Fig. 3. *Porticulasphaera transitoria* BLOW
BR station 933, Miocene
62×

Fig. 4. *Globigerinoides bisphericus* TODD
BR station 933, Miocene
62×

Fig. 5. *Globigerinoides subquadratus* BRÖNNIMANN
BR station 933, Miocene
62×

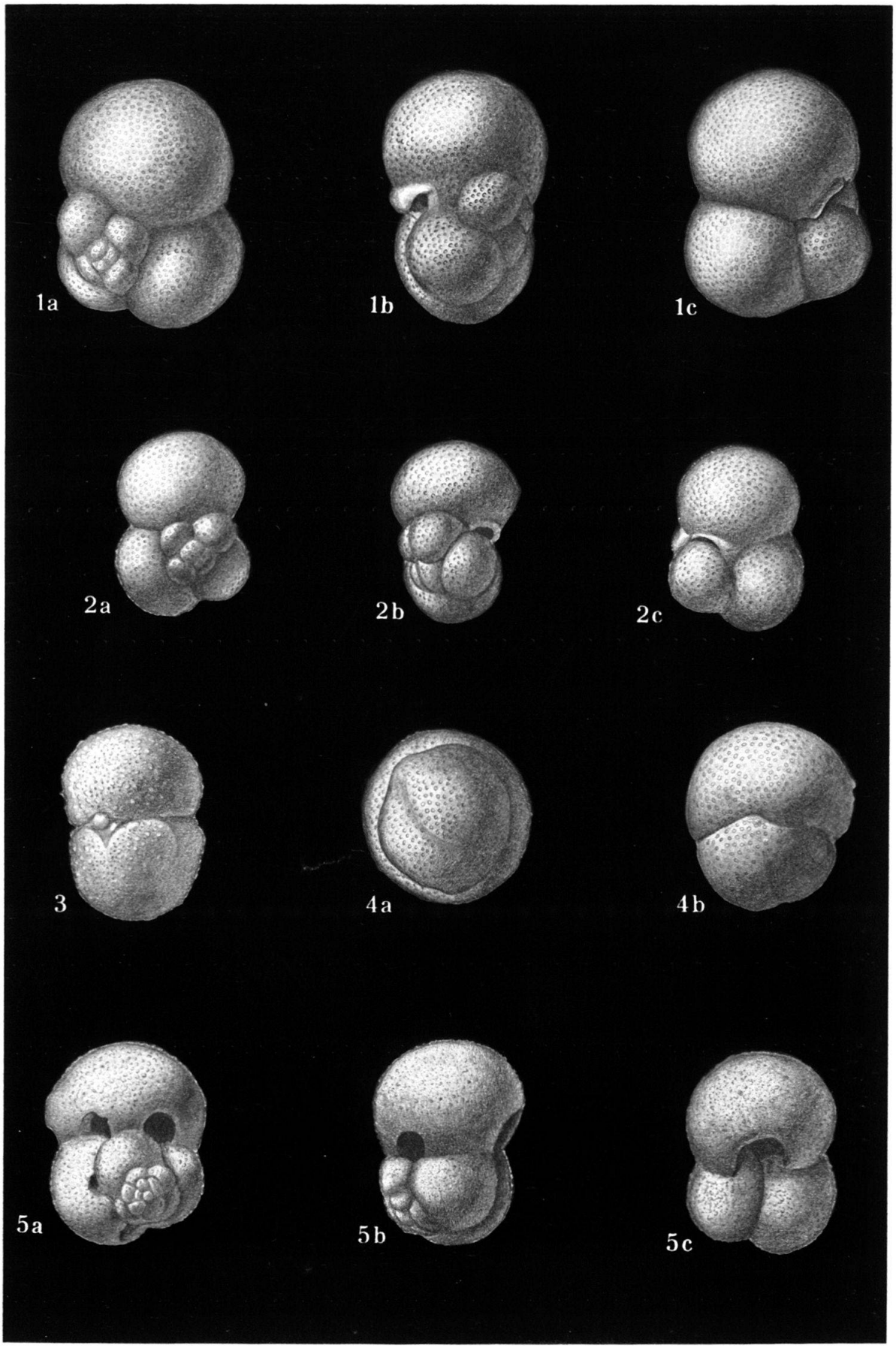

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Plate XXIII

Fig. 1. *Globigerina rohri* BOLLI
Finca Adelina, Oligocene
99×

Fig. 2. *Globoquadrina altispira globosa* BOLLI
Finca Adelina, Oligocene
43×

Fig. 3. *Globoquadrina altispira altispira* (CUSHMAN and JARVIS)
Finca Adelina, Oligocene
43×

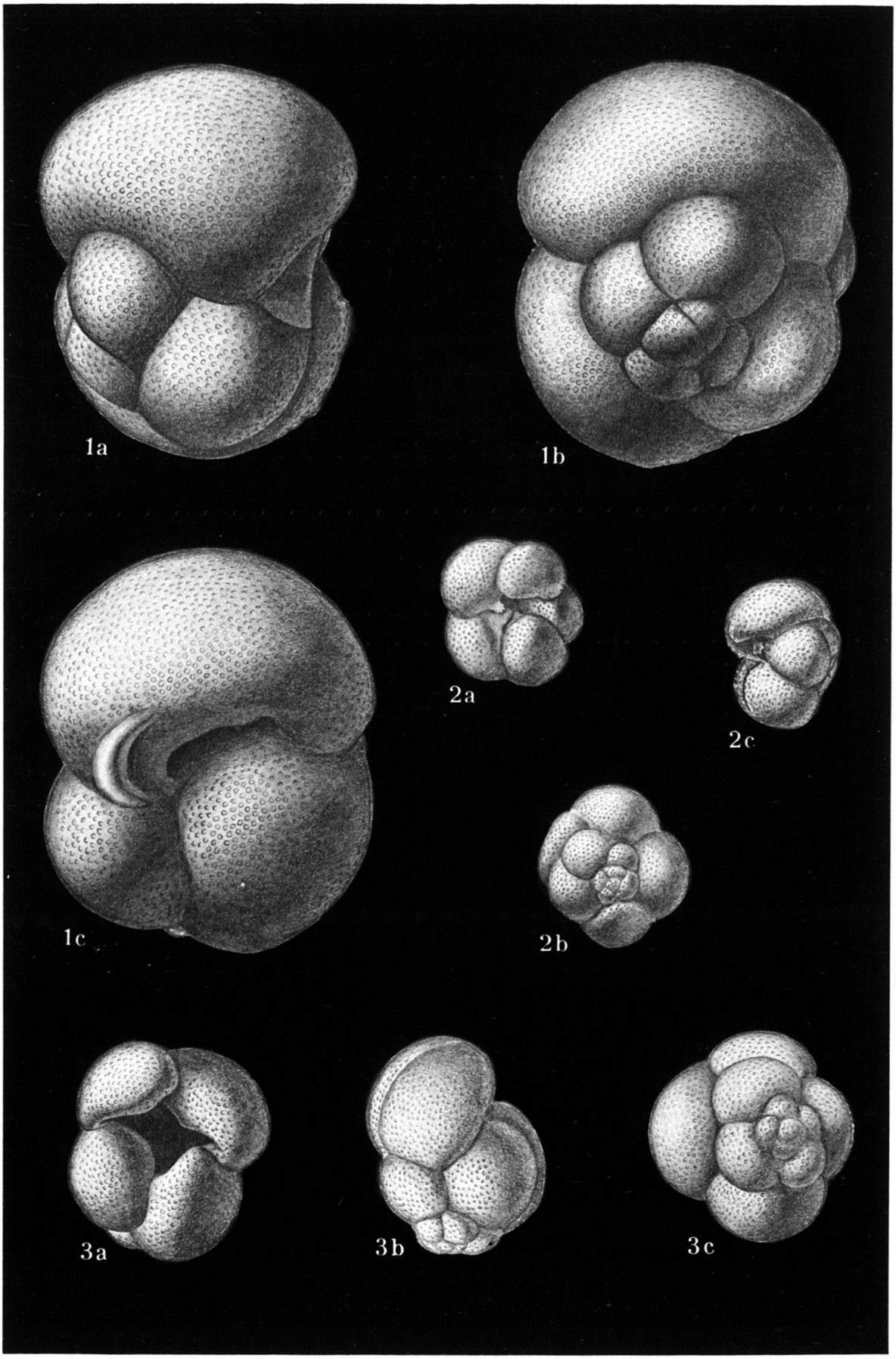

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Plate XXIV

Fig. 1. *Globoquadrina venezuelana* (HEDBERG)
Finca Adelina, Oligocene
92×

Fig. 2. *Globorotalia praemenardii* CUSHMAN and STAINFORTH
BR station 923, Miocene
92×

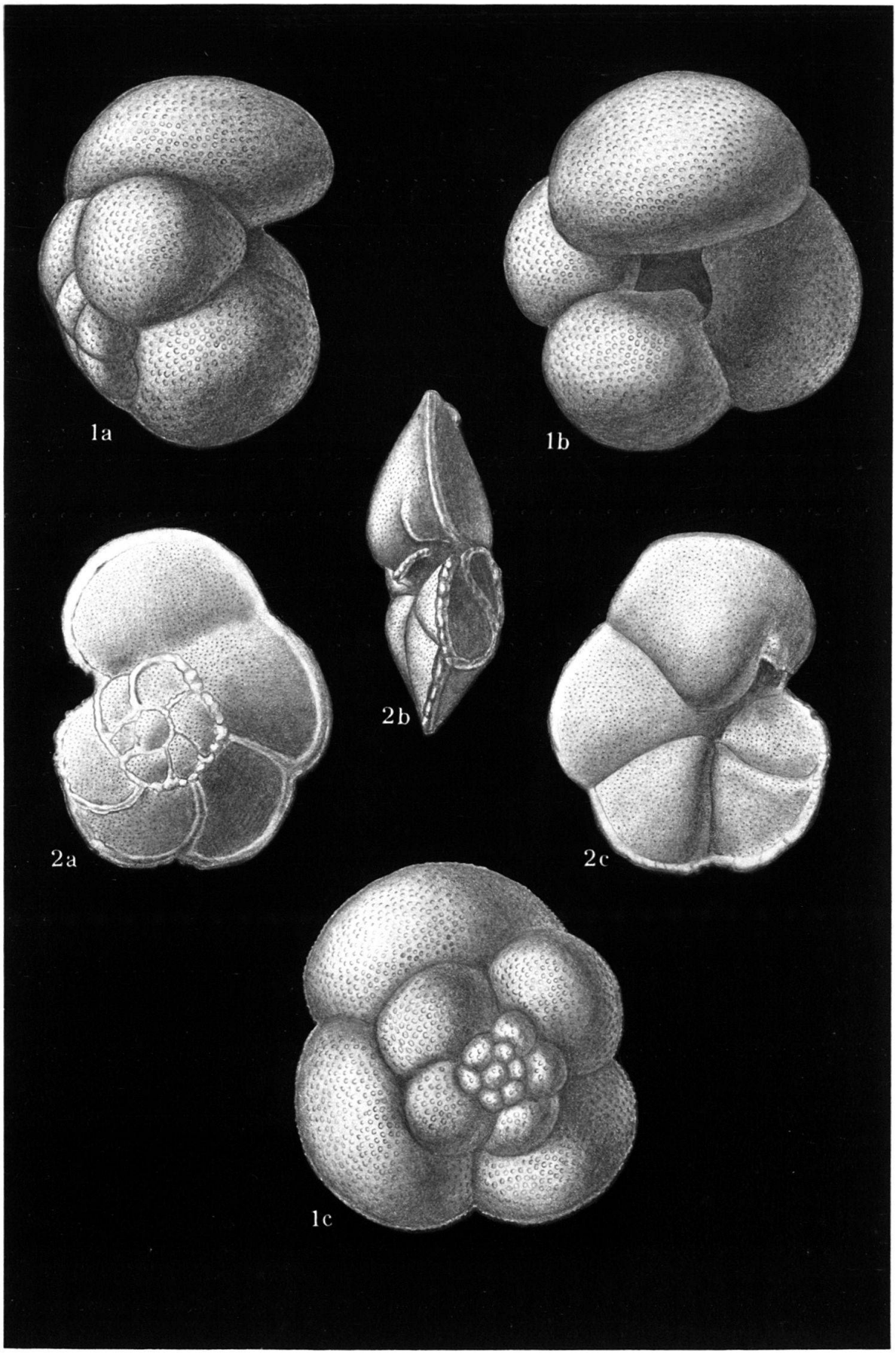

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Plate XXV

Fig. 1. *Globorotalia fohsi lobata* BERMÚDEZ
BR station 908, Miocene
97×

Fig. 2. *Globorotalia fohsi fohsi* CUSHMAN and ELLISOR
BR station 924, Miocene
97×

Fig. 3. *Globorotalia fohsi barisanensis* LEROY
BR station 925, Miocene
97×

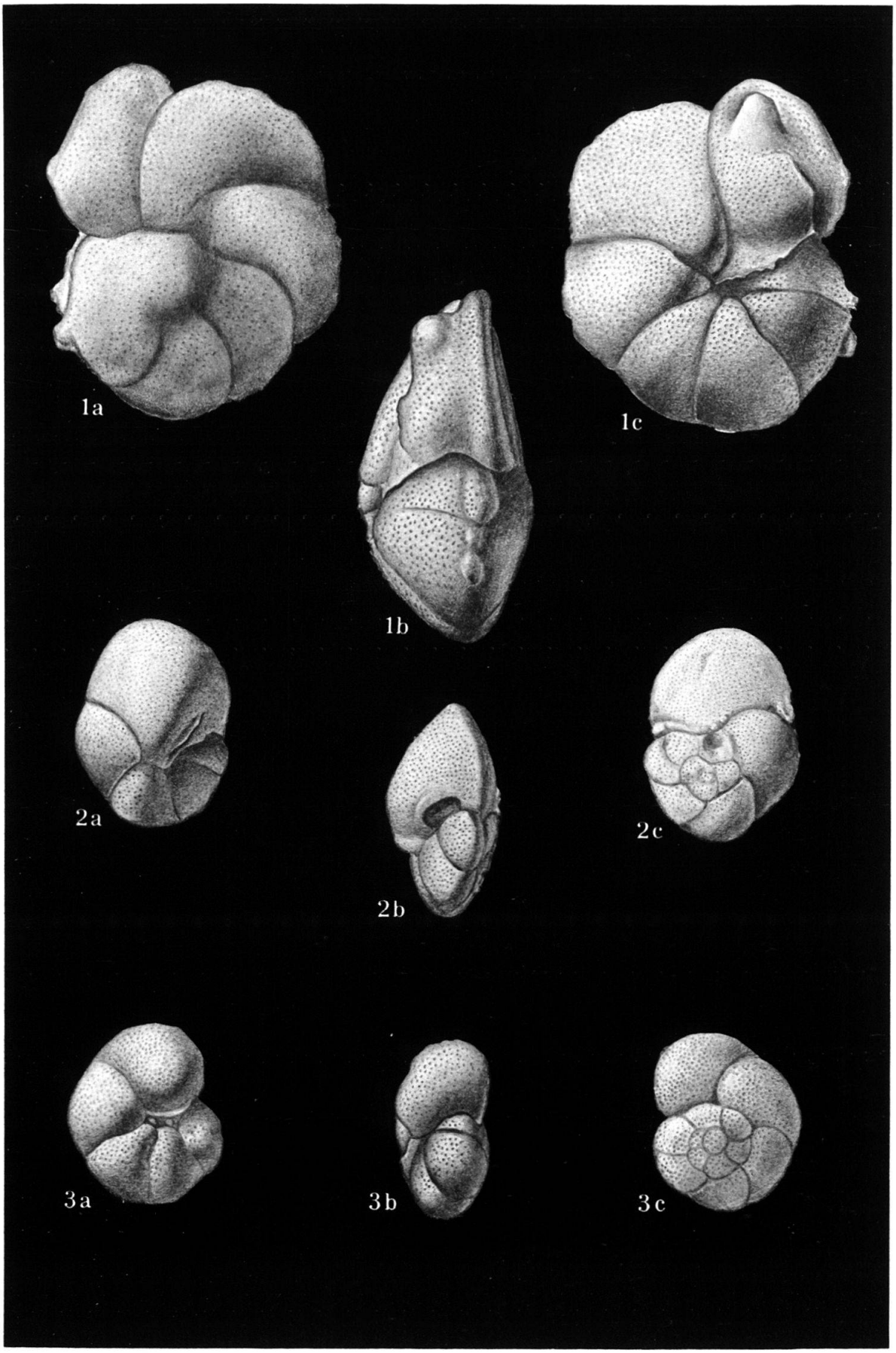

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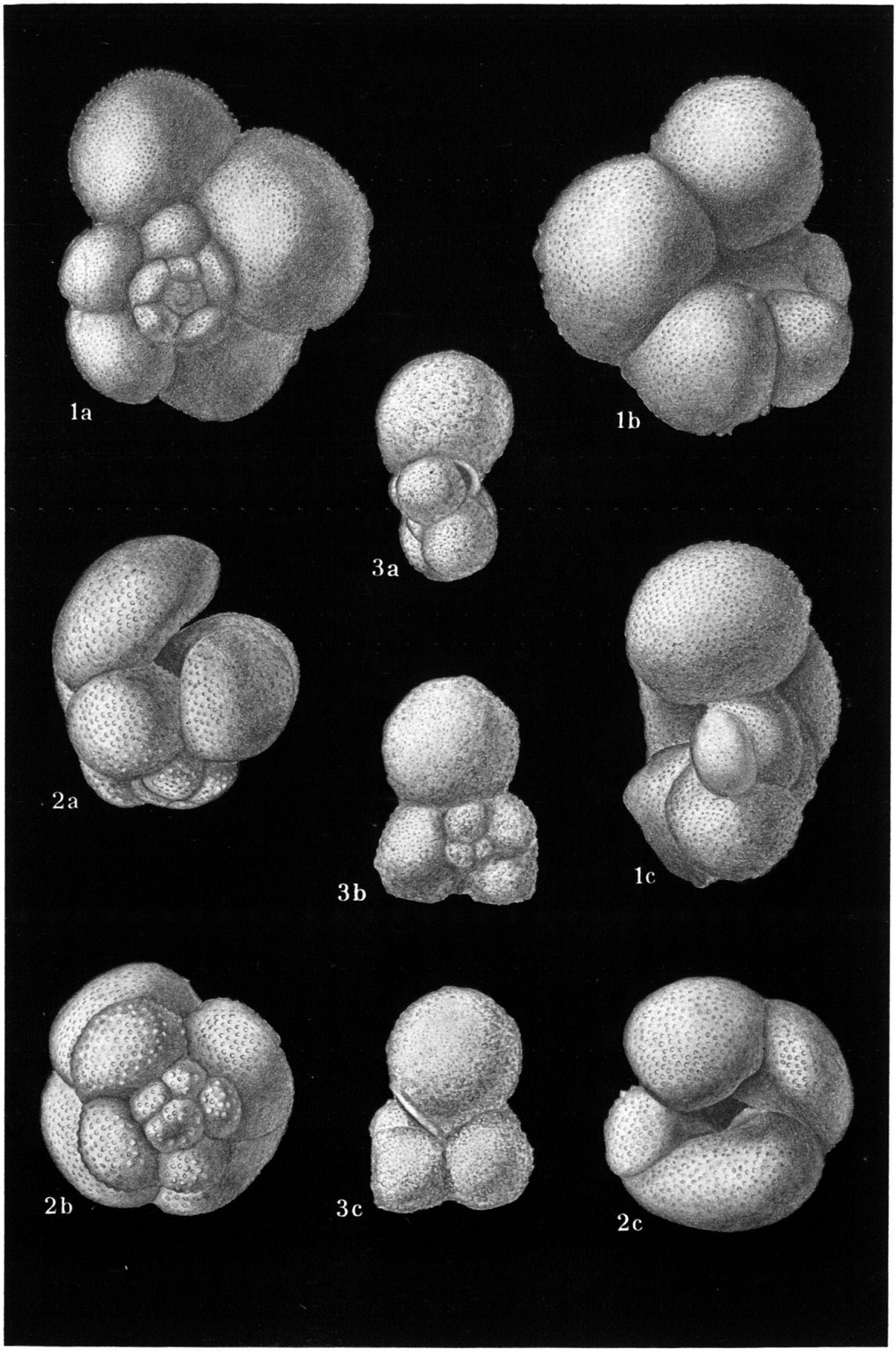
Plate XXVI

Fig. 1. *Globorotalia obesa* BOLLI
BR station 922, Miocene
97×

Fig. 2. *Globoquadrina altispira altispira* (CUSHMAN and JARVIS)
Finca Adelina, Oligocene
97×

Fig. 3. *Globigerina foliata* BOLLI
BR station 922, Miocene
97×



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