

Fig. 51. Camera-lucida drawings of *Semiometra impressa* (Carpenter, 1881) (A-C) and *Loriolometra retzii* (Lundgren, 1875) (D-L) from the Benzenrade Member (Vaals Formation, Late Campanian) (Arpot Colln, ex Prins Colln, unregistered) of the Benzenrade area. Scale bar equals 1 mm (del. F. Wesselingh).

Plate 1

Figs. 1-2. *Austinocrinus bicornatus* (von Hagenow, 1840); NHMM GK 573 (W.M. Felder Colln); articulum of internodal and lateral view of pluricolumnal; Nieuwe Weg, Zeven Wegen (Vijlenerbosch); Gulpen Formation, topmost Beutenaken Member or basal Vijlen Member, Late Campanian or Early Maastrichtian.

Figs. 3-4. *Praeissellicrinus? limburgicus* (Rasmussen, 1961); NHMM GK 1178 (W.M. Felder Colln, holotype); articulum of internodal and lateral view of pluricolumnal; Nieuwe Weg, Zeven Wegen (Vijlenerbosch); Gulpen Formation, topmost Beutenaken Member or basal Vijlen Member, Late Campanian or Early Maastrichtian.

Figs. 5-10. *Issellicrinus buchii* (Roemer, 1840)

5-6: NHMM GK 1110 (W.M. Felder Colln); articulum of internodal and lateral view of pluricolumnal; Nieuwe Weg, Zeven Wegen (Vijlenerbosch); Gulpen Formation, base Vijlen Member.

7-8: NHMM MB 1239a; articulum of internodal and lateral view of pluricolumnal; Mamelis-Selzerbeek; Gulpen Formation, lower Vijlen Member.

9-10: NHMM MB 522; articulum of internodal and lateral view of pluricolumnal; Altembroeck ('s Gravenvoeren); Gulpen Formation, Vijlen Member.

Scale bars equal 5 mm, except in figs. 5-6 and 9-10, where they represent 1 mm.



Plate 2

Figs. 1-3, 5-10. *Nielsenicrinus agassizii* (von Hagenow, 1840)

1-3: NHMM 1997027 (Vijlen Group Colln); lateral view of pluricolumnal and articula of internodal and nodal, respectively; Altembroeck ('s Gravenvoeren); Gulpen Formation, Vijlen Member.

5-6: RGM 396 207 (ex Jagt Colln, no. 5411); articulum of internodal and lateral view of pluricolumnal; Ernst-Moritz-Arndt Sicht, Jasmund (Rügen, northeast Germany); late Early Maastrichtian.

7: NHMM MB 1239b; symplectial articulum of internodal of the '*Pentacrinites kloedeni*' type; Mamelis-Selzerbeek; Gulpen Formation, lower Vijlen Member.

8: NHMM 1997028 (Vijlen Group Colln); cryptosymplectial articulum of nodal; Altembroeck ('s Gravenvoeren); Gulpen Formation, Vijlen Member.

9-10: RGM 396 208 (ex Jagt Colln, no. Vij I/a); symplectial articulum of internodal; temporary exposure Hans-Böckler-Allee, Aachen; Gulpen Formation, Vijlen Member.

Fig. 4. '*Isocrinus lanceolatus* (Roemer, 1840)?; NHMM GK 1815 (W.M. Felder Colln); symplectial articulum of infranodal; temporary exposure (outcrop no. 62G-31) south of Vaalserstraße, Aachen (Germany); Gulpen Formation, Vijlen Member.

Scale bars equal 1 mm.

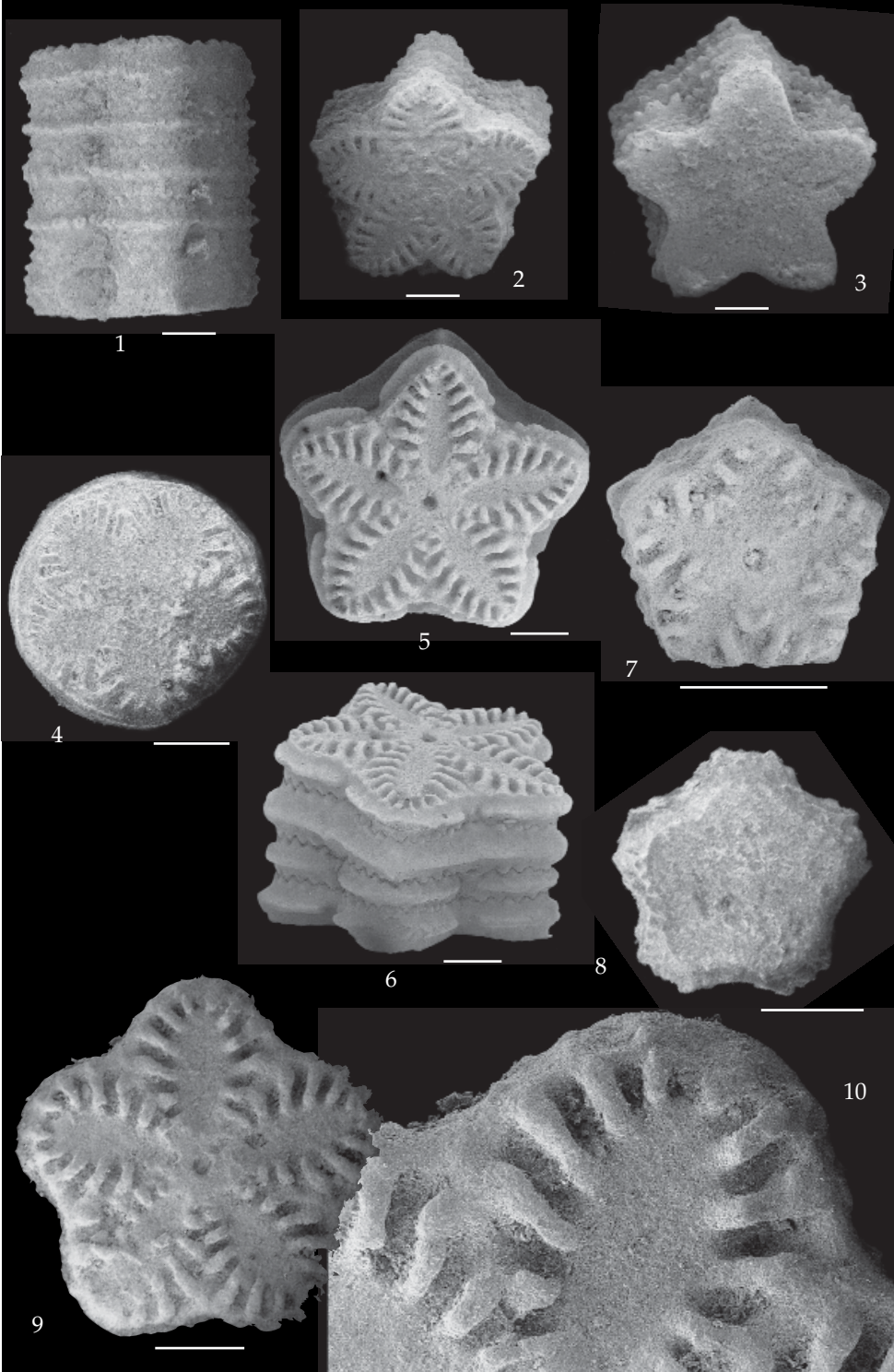


Plate 3

Figs. 1-2. *Isselicrinus buchii* (Roemer, 1840); NHMM MB 1239c; cryptosymplectial articulum and oblique lateral view of nodal; Mamelis-Selzerbeek; Gulpen Formation, lower Vijlen Member.

Figs. 3-6. *Nielsenicrinus agassizii* (von Hagenow, 1840)

3-4: NHMM MB 1239d; cryptosyzygial proximal articular facet and lateral view of IBr2; Mamelis-Selzerbeek; Gulpen Formation, lower Vijlen Member.

5: NHMM MB 1239e; cryptosyzygial articular facet of secundibrachial; same locality and stratigraphy.

6: NHMM MB 1239f; cryptosyzygial articular facet of secundibrachial; same locality and stratigraphy.

Figs. 7-10. '*Isocrinus*' sp.

7: NHMM MB 506-17a; lateral view of pluricolumnal; RW 76 motorway outcrop, Benzenrade; Maas-tricht Formation, Kunrade Limestone facies.

8-9: NHMM MB 601-3a; lateral views of pluricolumnal; Ankerpoort-Nekami quarry, Bemelen; Maas-tricht Formation, base Meerssen Member.

10: NHMM MB 322a; lateral view of pluricolumnal; RW 76 motorway outcrop, Benzenrade; Maas-tricht Formation, Kunrade Limestone facies.

Scale bars equal 1 mm.

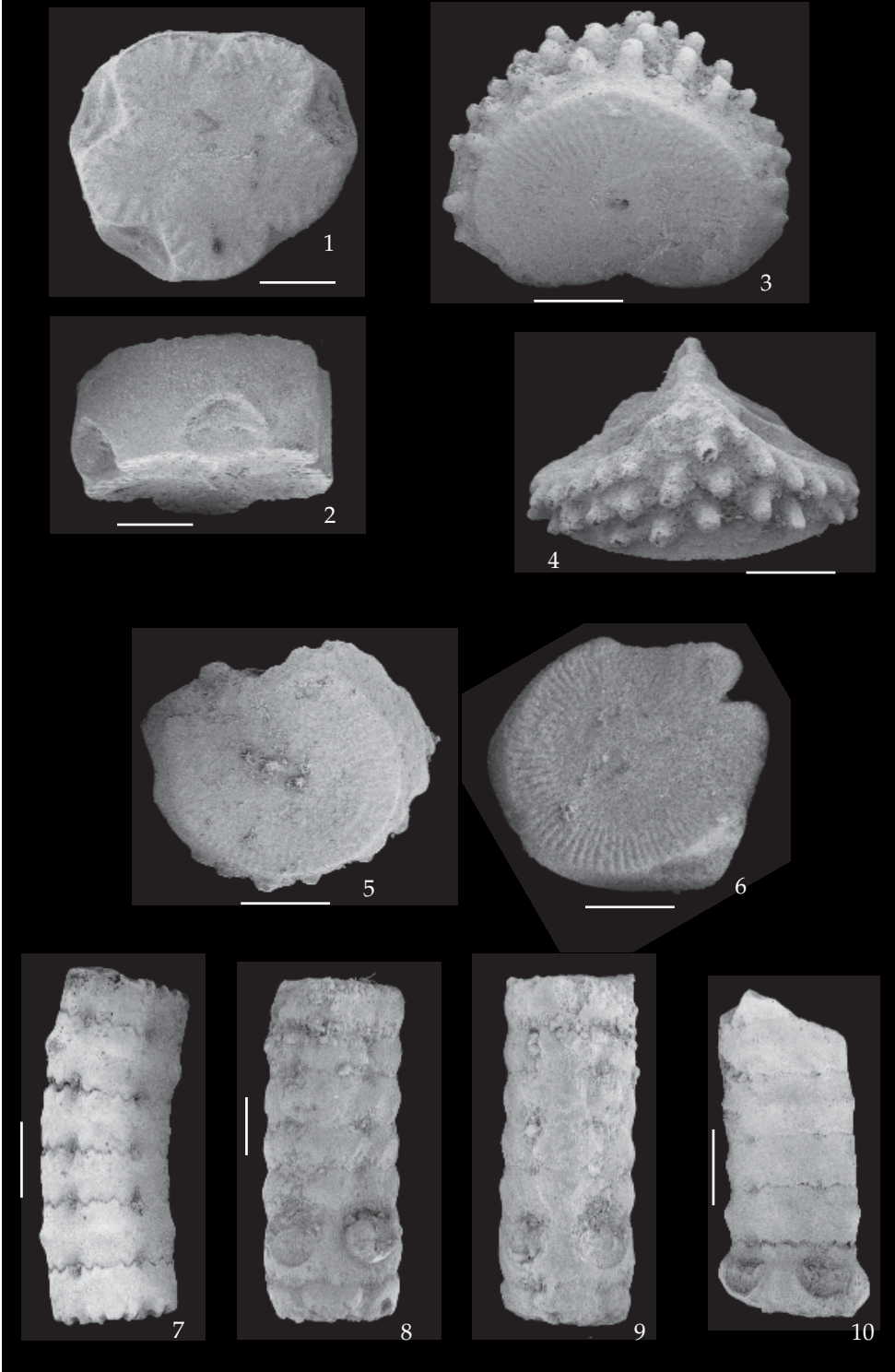


Plate 4

Figs. 1-11. *Nielsenicrinus ewaldi* sp. nov.

1-2: NHMM MB 601-3b; symplectial articulum and lateral view of nodal (**paratype**); Ankerpoort-Nekami quarry, Bemelen; Maastricht Formation, base Meerssen Member.

3-6: NHMM 1997029 (ex Reijnaers Colln, no. 100, **holotype**); lateral views and (crypto)symplectial articula of pluricolumnal, respectively; ENCI-Maastricht BV quarry, Maastricht; Maastricht Formation, top Nekum Member.

7-8: NHMM MB 655-5a; symplectial articulum of nodal and lateral view of pluricolumnal; outcrop southwest of Schunck quarry, Kunrade; Maastricht Formation, Kunrade Limestone facies.

9: NHMM BL 0138; symplectial articulum of internodal; Blom quarry, Berg en Terblijt; Maastricht Formation, Meerssen Member (IVf-4).

10: NHMM MB 601-3c; symplectial articulum of internodal (**paratype**); Ankerpoort-Nekami quarry, Bemelen; Maastricht Formation, base Meerssen Member.

11: NHMM MB 322b; symplectial articulum of tetramerous internodal; RW 76 motorway outcrop, Benzenrade; Maastricht Formation, Kunrade Limestone facies.

Scale bars equal 1 mm.

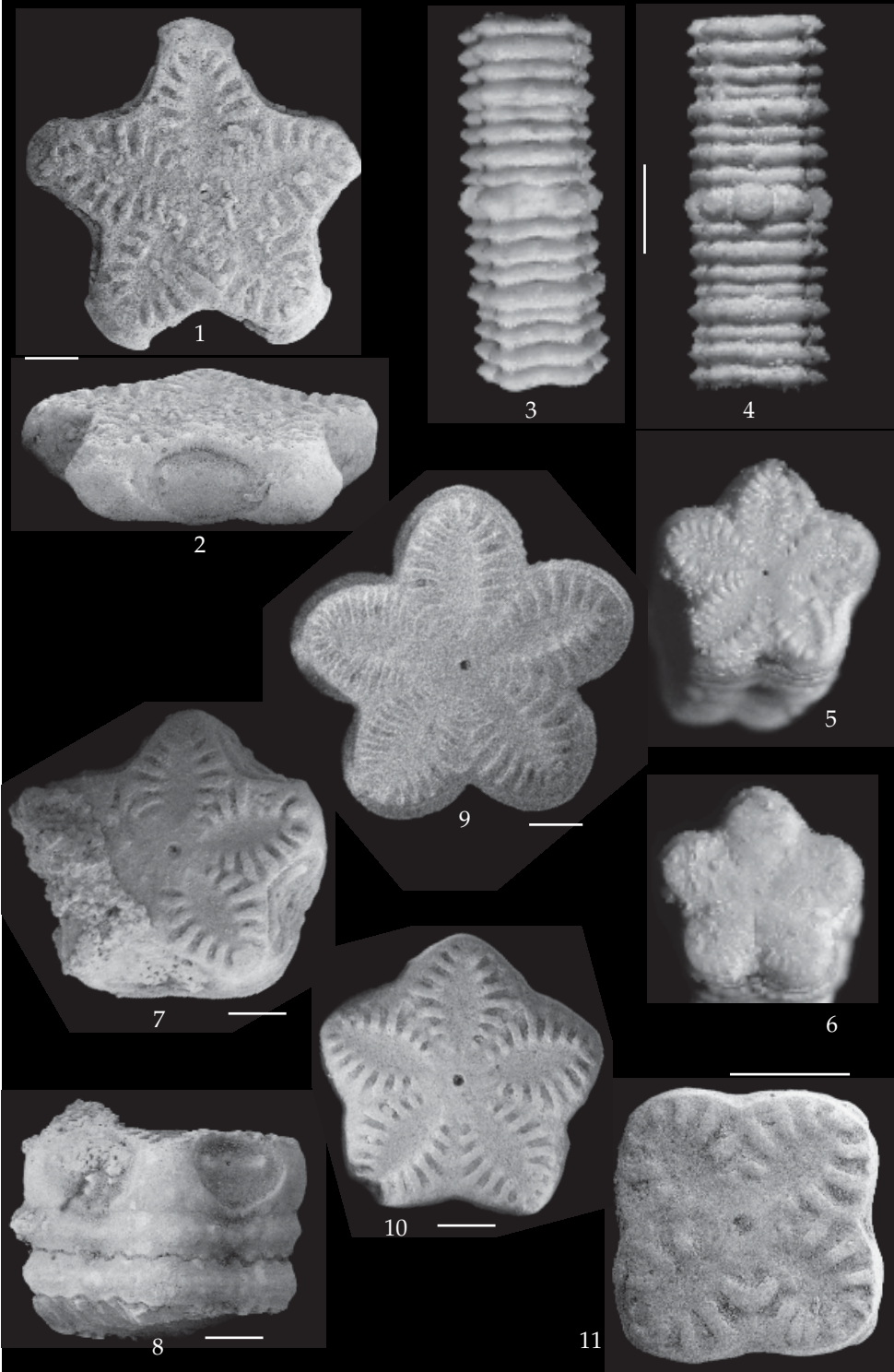


Plate 5

Figs. 1-3, 8. *Nielsenicrinus ewaldi* sp. nov.

1-3: NHMM MB 754a; axillary primibrachial (IBr2), distal, aboral and proximal views, respectively; temporary outcrop Benzenrade area; Maastricht Formation, Kunrade Limestone facies.

8: NHMM MB 652a; cryptosyzygial articular facet of secundibrachial; RW 76 motorway outcrop, Benzenrade; Maastricht Formation, Kunrade limestone facies.

Figs. 4-7, 9-10. *Nielsenicrinus carinatus* (Roemer, 1840) sensu Rasmussen, 1961

4: RGM 396 209 (ex Jagt Colln, no. 9486a); lateral view of juvenile pluricolumnal; CPL SA quarry, Haccourt (Liège); Gulpen Formation, Zeven Wegen Member, base sponge level + 1.5-2 m.

5-6: NHMM MB 808-12a; lateral views of juvenile pluricolumnal, with nodal preserving a single proximal cirral; CPL SA quarry, Haccourt (Liège); Gulpen Formation, Zeven Wegen Member, base + 6/7 m.

7: NHMM MB 808-12b; lateral view of juvenile pluricolumnal; same locality and stratigraphy.

9: RGM 396 210 (ex Jagt Colln, no. 5930a; see also Pl. 7, fig. 3); lateral view of pluricolumnal; CBR-Lixhe quarry (Liège); Gulpen Formation, Zeven Wegen Member, top - 6/7 m.

10: NHMM MB 808-12c; oblique lateral view of nodal; locality and stratigraphy as figs. 5-7.

Scale bars equal 1 mm, except in figs. 5-7, where they represent 100 μ m.

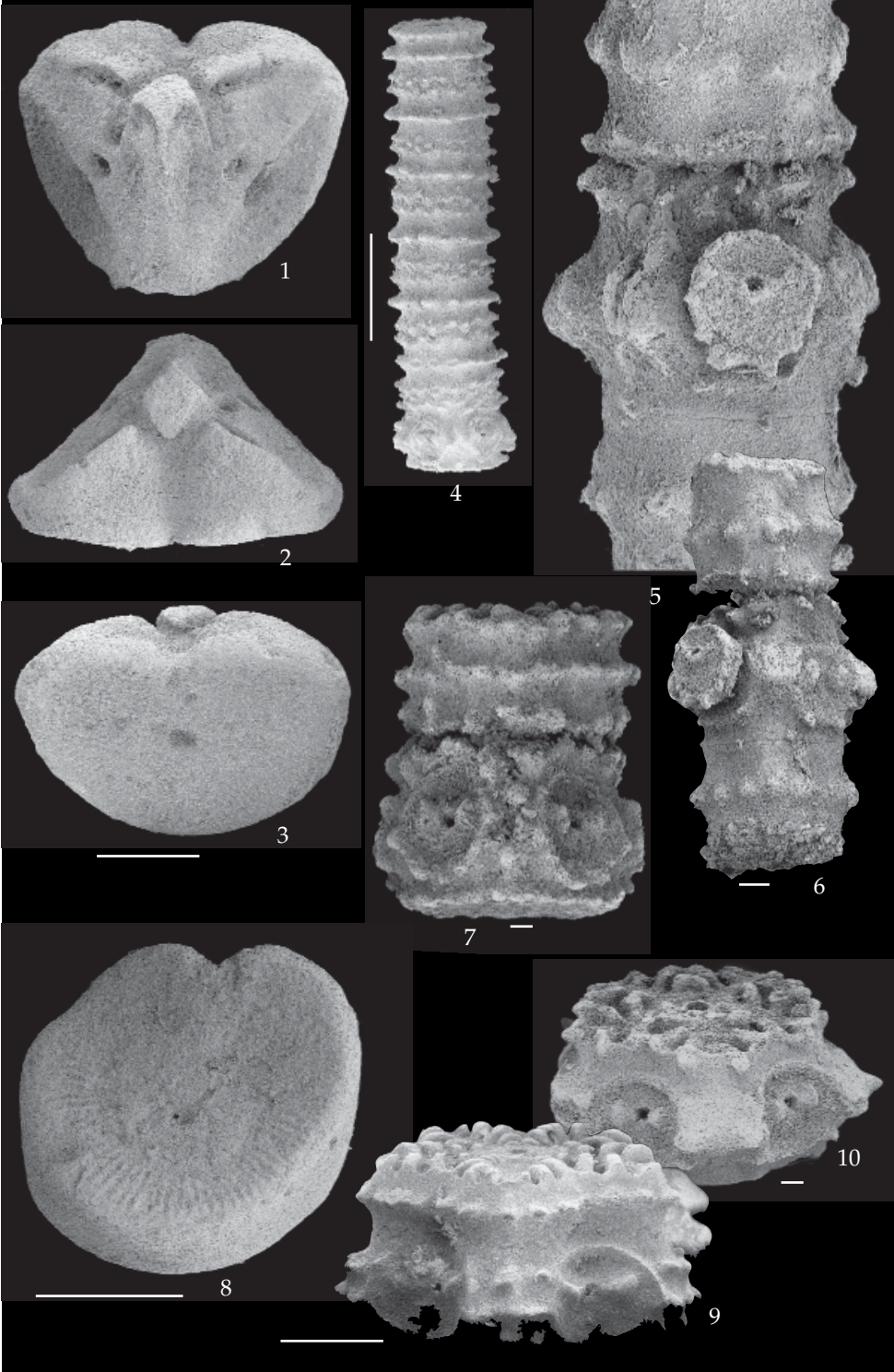


Plate 6

Figs. 1-10. *Nielsenicrinus carinatus* (Roemer, 1840) sensu Rasmussen, 1961

- 1: NHMM MB 1044a; symplectial articulum of nodal; CPL SA quarry, Haccourt (Liège); Gulpen Formation, base Zeven Wegen Member.
- 2: NHMM MB 1044b; symplectial articulum of internodal; same locality and stratigraphy.
- 3: NHMM MB 1044c; symplectial articulum of internodal; same locality and stratigraphy.
- 4: NHMM MB 1044d; symplectial articulum of internodal; same locality and stratigraphy.
- 5: NHMM MB 808-12d; symplectial articulum of internodal; CPL SA quarry, Haccourt (Liège); Gulpen Formation, Zeven Wegen Member, base + 6/7 m.
- 6: NHMM MB 808-12e; symplectial articulum of internodal; same locality and stratigraphy.
- 7: NHMM MB 1044e; symplectial articulum of internodal; locality and stratigraphy as figs. 1-4.
- 8: NHMM MB 808-12f; symplectial articulum of nodal; locality and stratigraphy as figs. 5-6.
- 9: NHMM MB 1044f; symplectial articulum of proximal nodal; locality and stratigraphy as figs. 1-4 and 7.
- 10: RGM 396 211 (ex Jagt Colln, no. 9486b); symplectial articulum of nodal; CPL SA quarry, Haccourt (Liège); Gulpen Formation, Zeven Wegen Member, base sponge level + 1.5-2 m.

Scale bars equal 1 mm, except in figs. 6-8 and 10, where they represent 100 μ m.

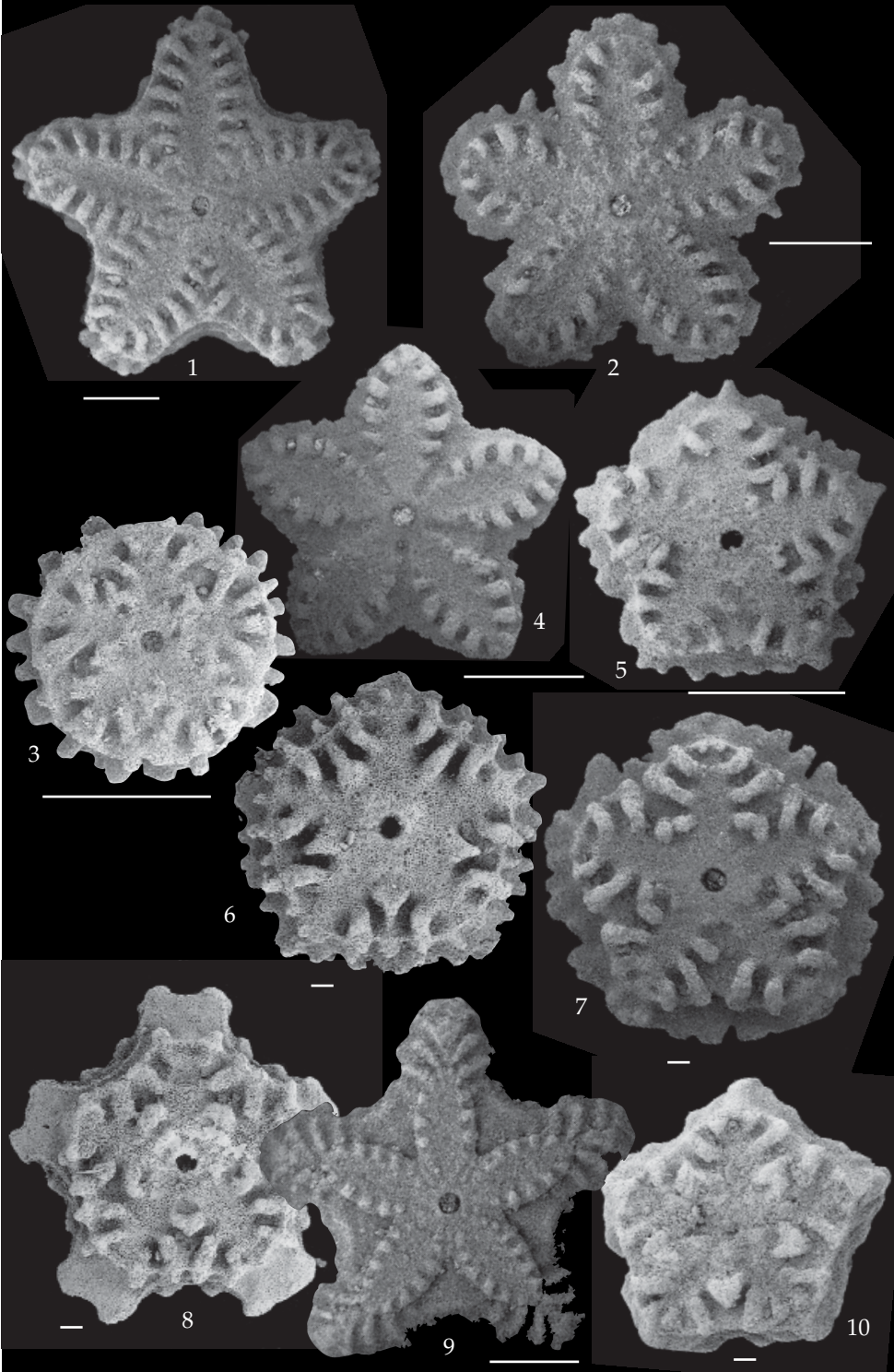


Plate 7

Figs. 1-10. *Nielsenicrinus carinatus* (Roemer, 1840) sensu Rasmussen, 1961

1-2: NHMM MB 1044g; cryptosymplectial articulum and oblique lateral view of nodal; CPL SA quarry, Haccourt (Liège); Gulpen Formation, base Zeven Wegen Member.

3: RGM 396 212 (ex Jagt Colln, no. 5930a); symplectial articulum of internodal (see also Pl. 5, fig. 9); CBR-Lixhe quarry (Liège); Gulpen Formation, Zeven Wegen Member, top - 6/7 m.

4: RGM 396 213 (ex Jagt Colln, no. 9486c); symplectial articulum of internodal; CPL SA quarry, Haccourt (Liège); Gulpen Formation, Zeven Wegen Member, base sponge level + 1.5-2 m.

5: NHMM MB 1044h; cryptosymplectial articulum of nodal; CPL SA quarry, Haccourt (Liège); Gulpen Formation, base Zeven Wegen Member.

6: NHMM MB 1044i; symplectial articulum of tetramerous nodal; same locality and stratigraphy.

7-8: NHMM MB 1044j; oblique lateral view of proximal pluricolumnal and symplectial articula of internodals; same locality and stratigraphy.

9: NHMM MB 808-12g; symplectial articulum of internodal; CPL SA quarry, Haccourt (Liège); Gulpen Formation, Zeven Wegen Member, base + 6/7 m.

10: RGM 396 214 (ex Jagt Colln, no. 3531); cryptosymplectial articulum of nodal; CPL SA quarry, Haccourt (Liège); Gulpen Formation, Zeven Wegen Member, top - 0/8 m.

Scale bars equal 1 mm, except in figs. 4 and 9 where they represent 100 μ m.

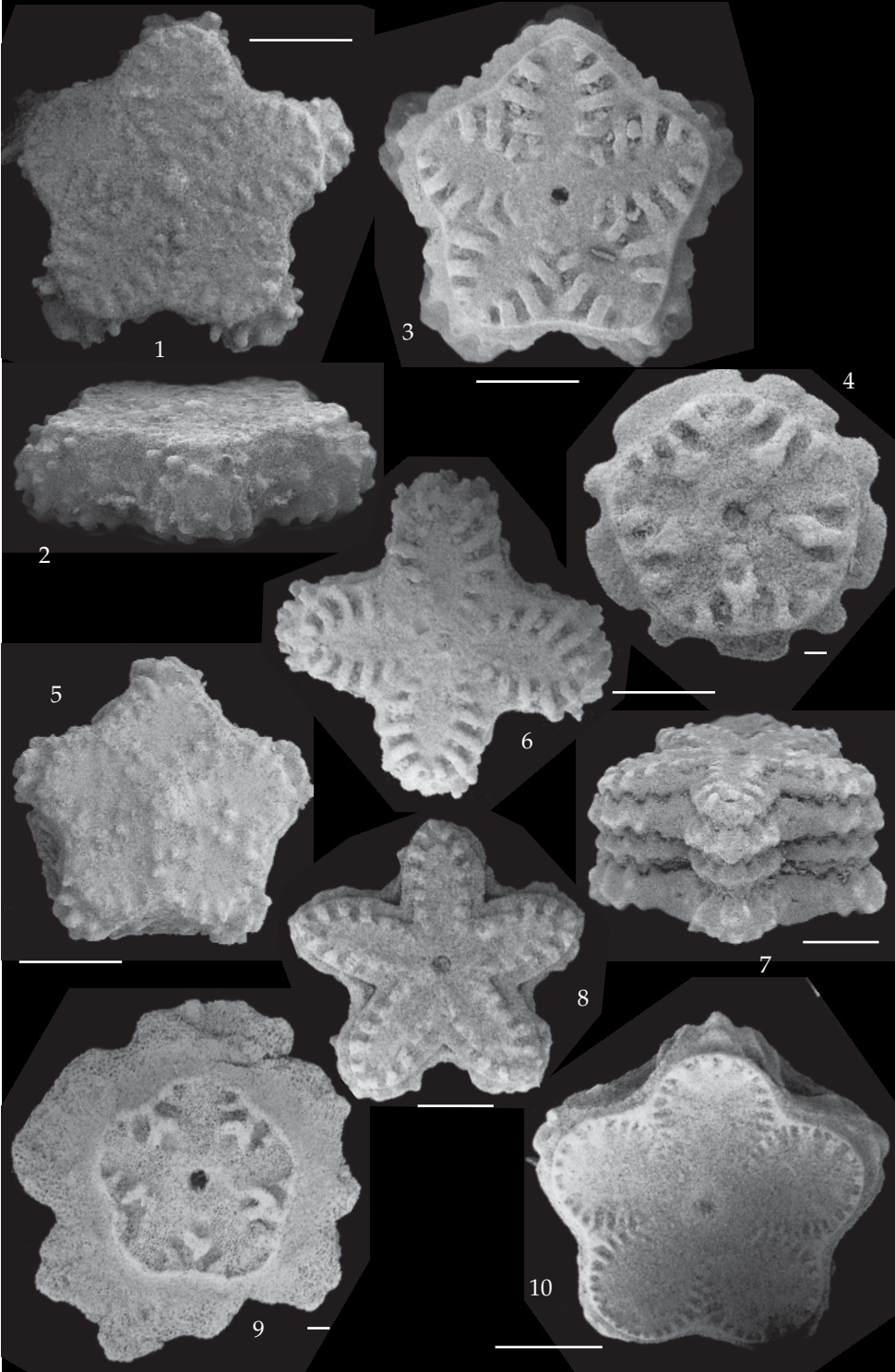


Plate 8

Figs. 1-9, 11. *Nielsenicrinus carinatus* (Roemer, 1840) sensu Rasmussen, 1961

1-3, 7-8: RGM 396 215 (ex Jagt Colln, no. 4836); lateral views of pathological pluricolumnal and symplectial articulum of and lateral view of nodal, respectively; CPL SA quarry, Haccourt (Liège); Gulpen Formation, Zeven Wegen Member, base + 9-10 m.

4, 6: RGM 396 217 (ex Jagt Colln, no. 7280); oblique proximal and distal views of pluricolumnal (both cryptosymplexes), respectively, with nodal preserving two proximal cirrals; same locality and stratigraphy.

5: RGM 396 216 (ex Jagt Colln, no. 5930b); lateral view of pluricolumnal, with nodal preserving three proximal cirrals; CBR-Lixhe quarry (Liège); Gulpen Formation, Zeven Wegen Member, top - 6/7 m.

9: NHMM MB 619-17a; symplectial articulum of internodal; Benzenrade ('kapelletje'), Vaals Formation, Benzenrade Member.

11: RGM 396 218 (ex Jagt Colln, no. 8164); oblique lateral view of pluricolumnal preserving cirri; CPL SA quarry, Haccourt (Liège); Gulpen Formation, Zeven Wegen Member.

Fig. 10. Indeterminate isocrinid (possibly? *Nielsenicrinus carinatus*); NHMM GK 1179 (W.M. Felder Colln); lateral view of pluricolumnal; Zeven Wegen (Vijlenerbosch); Gulpen Formation, Zeven Wegen Member.

Scale bars equal 1 mm.

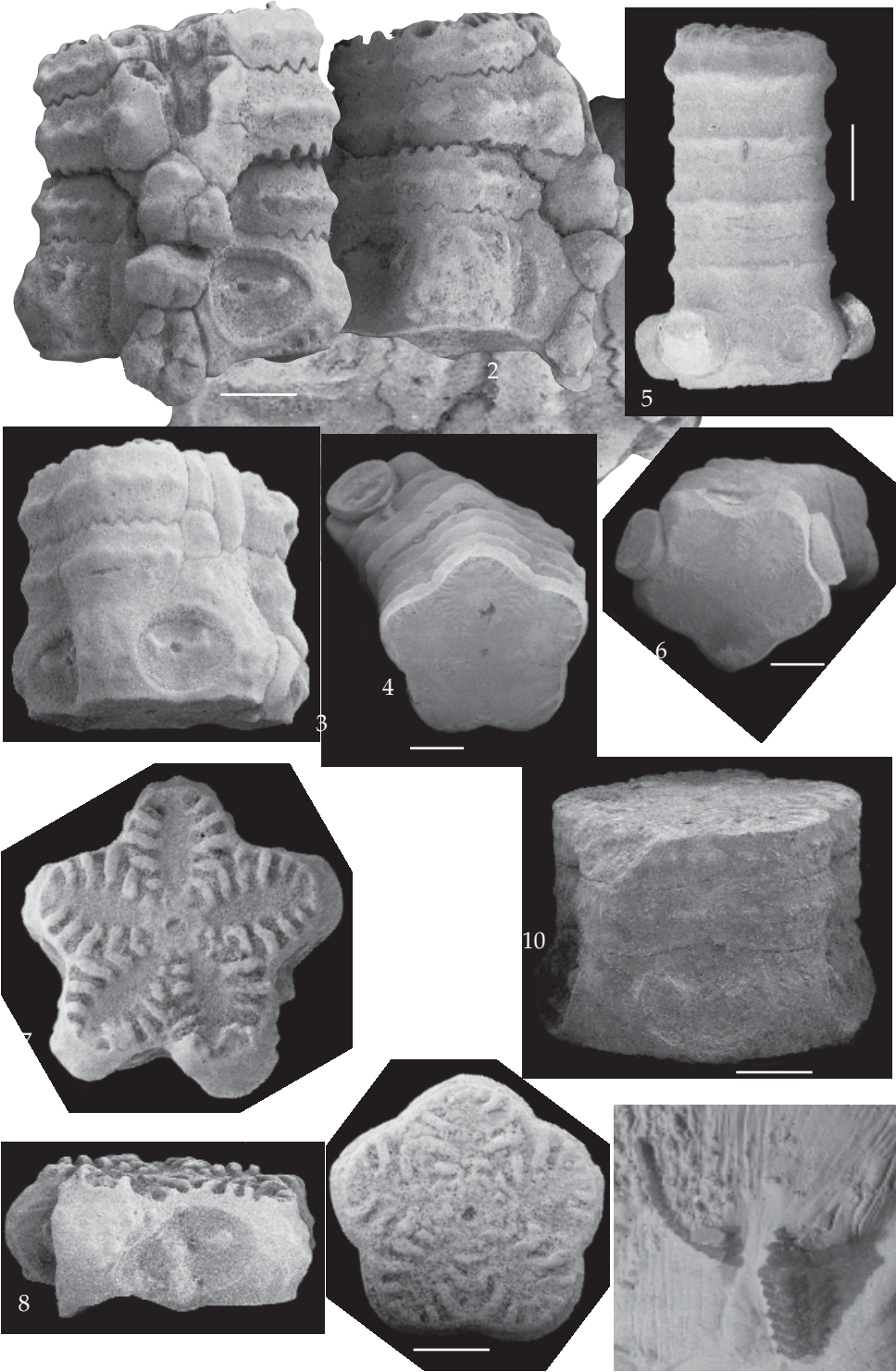


Plate 9

Figs. 1-11. *Nielsenicrinus carinatus* (Roemer, 1840) sensu Rasmussen, 1961; all specimens from Gulpen Formation, Zeven Wegen Member. Scale bars equal 1 mm.

1-3: NHMM MB 808-11a; oblique lateral, oblique lateral-proximal and distal view of dorsal cup; CPL SA quarry, Haccourt (Liège); base Zeven Wegen Member + 6/7 m.

4: NHMM MB 1044k; proximal articular facet of basal; CPL SA quarry, Haccourt (Liège), base Zeven Wegen Member.

5-6: NHMM MB 1044l; lateral and distal views of basal; same locality and stratigraphy.

7: NHMM MB 1044m; proximal articular facet of IBr1; same locality and stratigraphy.

8: NHMM MB 1044n; articular facet of radial; same locality and stratigraphy.

9-10: NHMM MB 1044o; distal and oblique lateral views of radial; same locality and stratigraphy.

11: NHMM MB 1044p; proximal cryptosyzygial articulum of IBr2; same locality and stratigraphy.

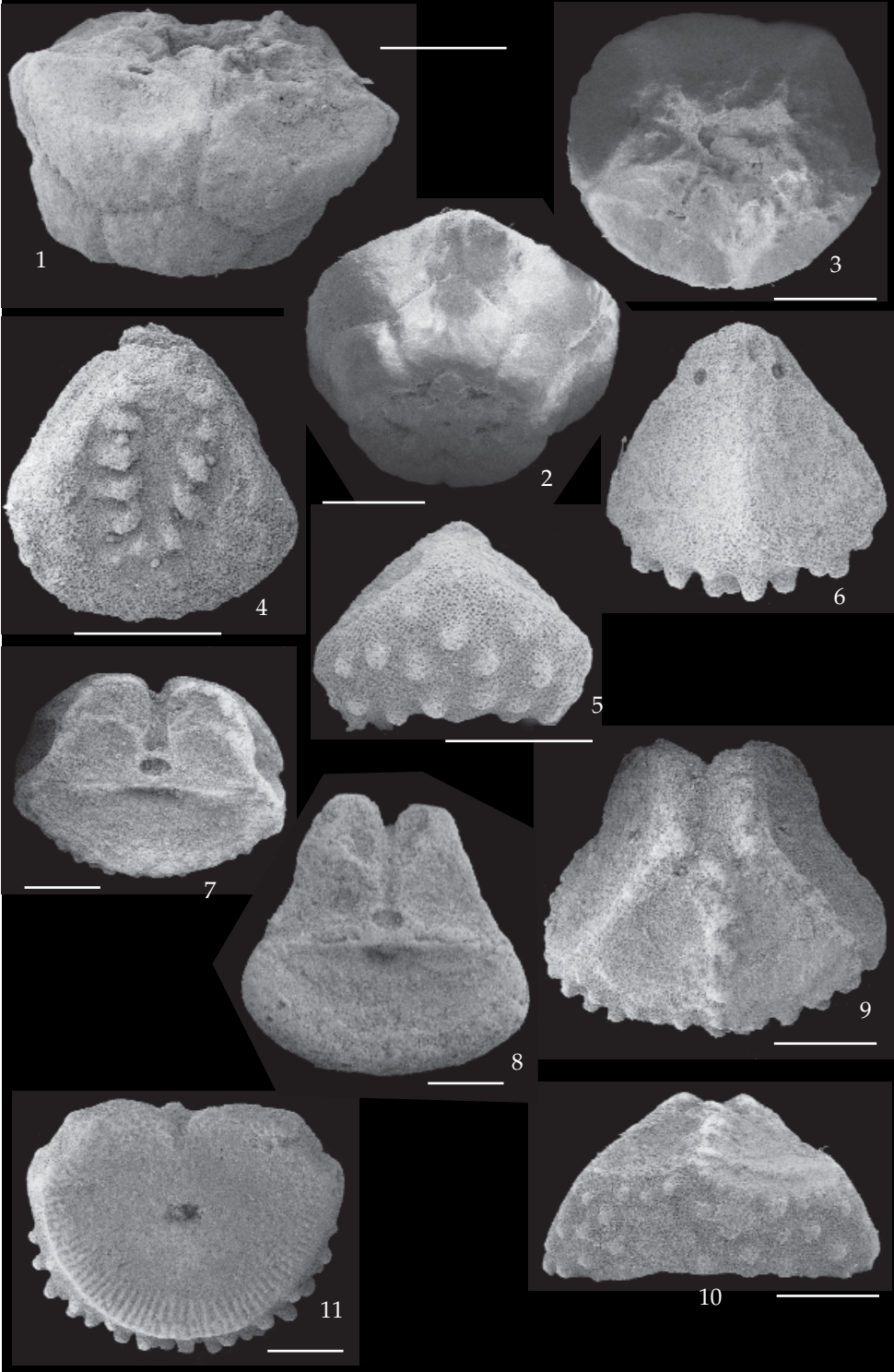


Plate 10

Figs. 1-11. *Nielsenicrinus carinatus* (Roemer, 1840) sensu Rasmussen, 1961; all specimens from Gulpen Formation (Zeven Wegen Member). Scale bars equal 1 mm, except in figs. 6 and 11, where they represent 100 μ m.

1-2: NHMM MB 1044q; proximal articular facet and lateral view of IBr2; CPL SA quarry, Haccourt (Liège); base Zeven Wegen Member.

3-4: NHMM MB 808-12h; distal synarthrial and lateral views of IIBr1; CPL SA quarry, Haccourt (Liège), Zeven Wegen Member, base + 6/7 m.

5: NHMM MB 1044r; distal synarthrial articular facet of IIBr1; locality and stratigraphy as figs. 1-2.

6: NHMM MB 1044s; distal articular facet of proximal cirral; same locality and stratigraphy.

7: NHMM MB 1044t; distal articular facet of axillary secundibrachial; same locality and stratigraphy.

8-9: NHMM MB 1044u; oblique lateral view of proximal muscular articular facet and lateral view of axillary secundibrachial; same locality and stratigraphy.

10: NHMM MB 1044v; distal articular facet of IIBr1; same locality and stratigraphy.

11: NHMM MB 1044w; proximal articular facet of proximal cirral; same locality and stratigraphy.

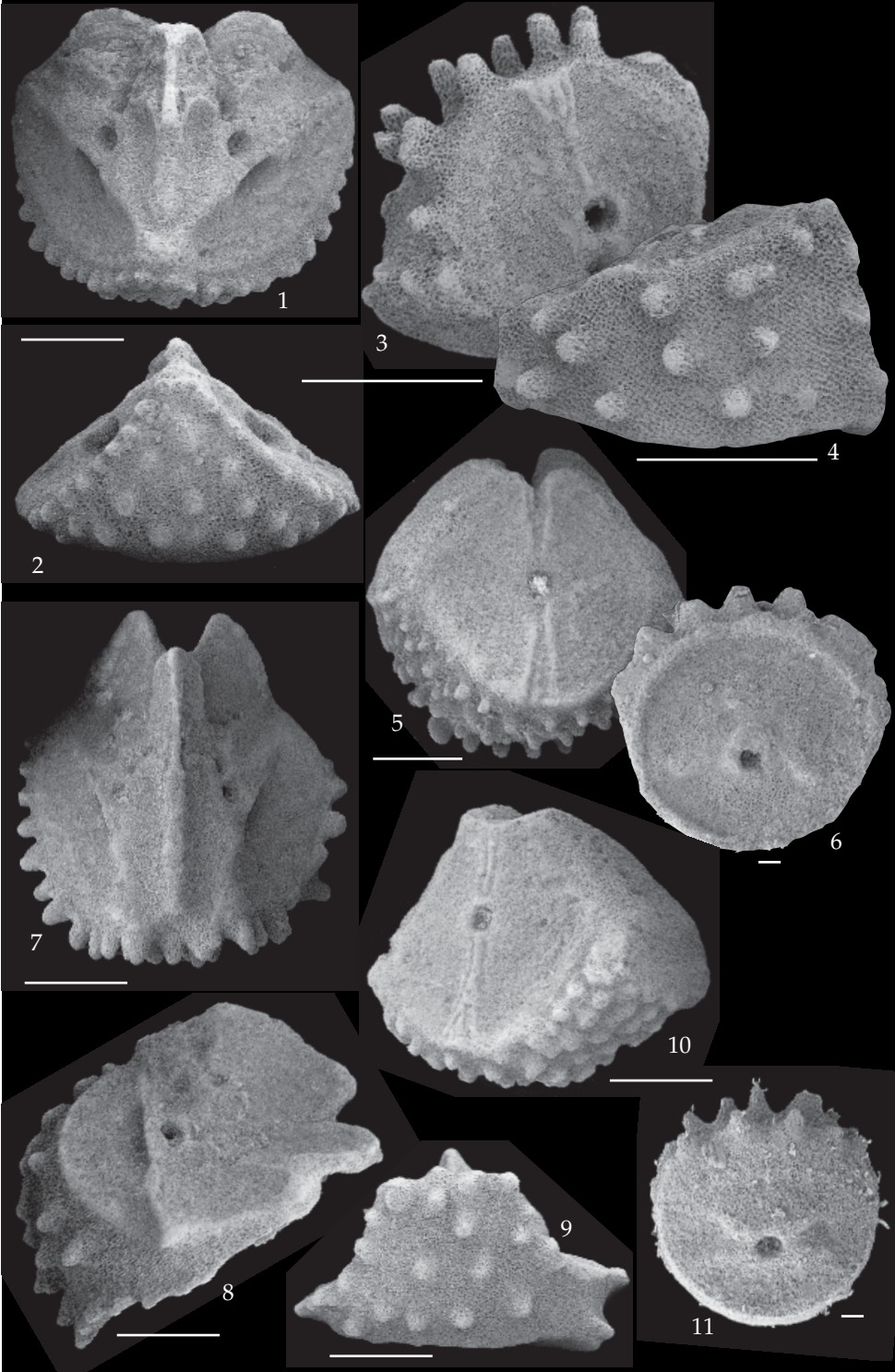


Plate 11

Figs. 1-10. *Nielsenicrinus carinatus* (Roemer, 1840) sensu Rasmussen, 1961; all specimens from Gulpen Formation (Zeven Wegen Member), CPL SA quarry, Haccourt (Liège), Late Campanian. Scale bars equal 100 μm , except in figs. 2 and 8-10, where they represent 1 mm.

1: NHMM MB 808-12i; proximal articular facet of proximal cirral.

2: NHMM MB 1044x; lateral view of articulated median cirrals.

3: RGM 396 219 (ex Jagt Colln, no. 3548a); lateral view of articulated median cirrals.

4-5: RGM 396 220 (ex Jagt Colln, no. 3548b); proximal and distal views of proximal cirrals.

6-7: RGM 396 221 and 396 338 (ex Jagt Colln, no. 7280a, b); distalmost claw-like cirrals.

8-10: NHMM MB 1044y-1044z; distal muscular and proximal cryptosyzygial articular facets of IIBr1.

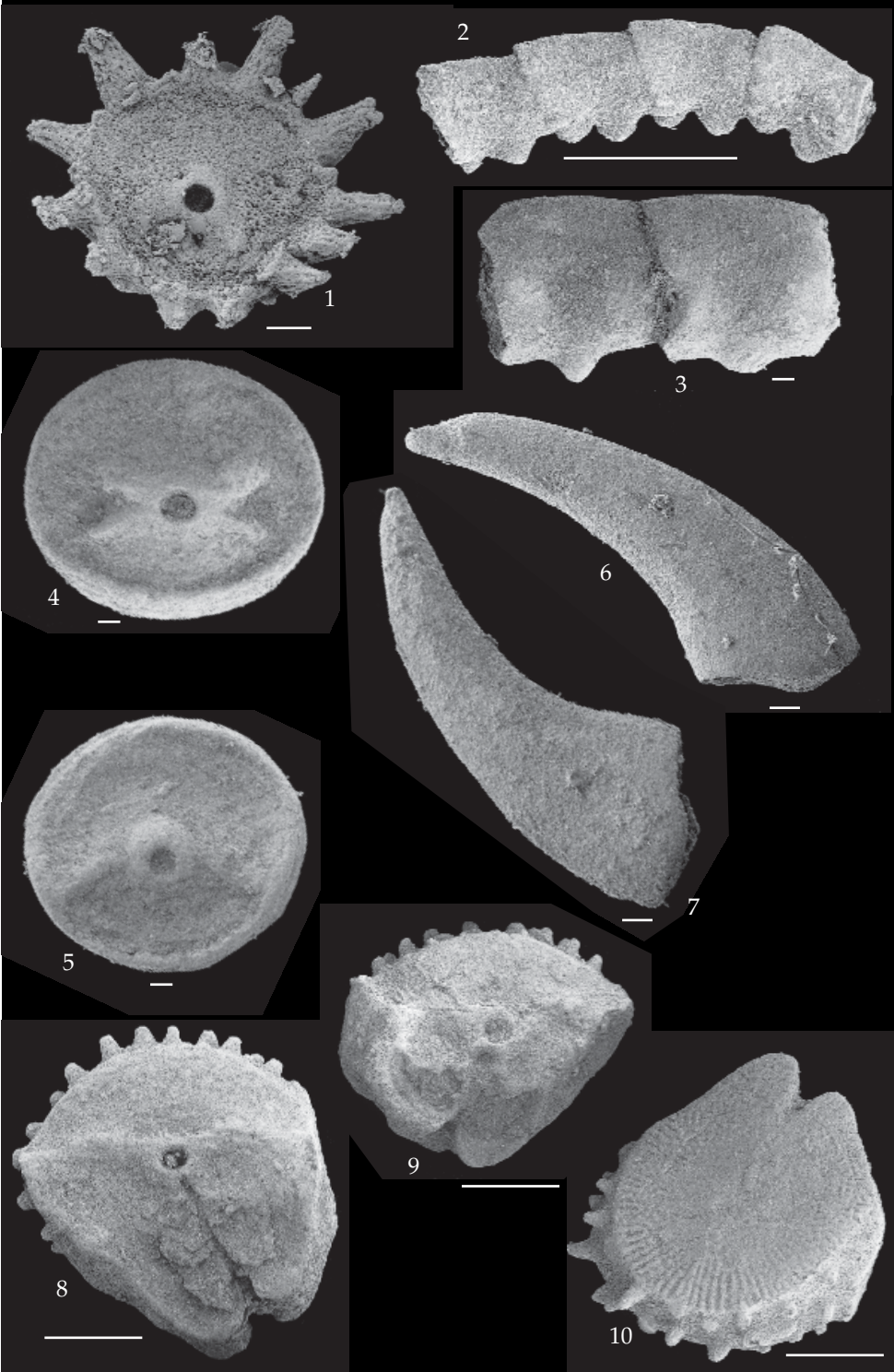


Plate 12

Figs. 1-6, 8. *Nielsenicrinus carinatus* (Roemer, 1840) sensu Rasmussen, 1961

1: NHMM MB 1044aa; proximal cryptosyzygial articular facet of IIBr1; CPL SA quarry, Haccourt (Liège); Gulpen Formation, base Zeven Wegen Member.

2-3: NHMM MB 1044bb; distal muscular articular facets of IIBr2 and IIBr1, respectively; same locality and stratigraphy.

4: NHMM MB 808-12j; cryptosyzygial articular facet of secundi- or tertibrachial, possibly belonging to the present species; CPL SA quarry, Haccourt (Liège); Gulpen Formation, Zeven Wegen Member, base + 6/7 m.

5: NHMM MB 1044cc; distal muscular articular facet of secundibrachial; locality and stratigraphy as figs. 1-3.

6: NHMM MB 1044dd; oblique lateral view of IBr1; same locality and stratigraphy.

8: NHMM MB 1044ee; oblique proximal articular facet of IBr1; same locality and stratigraphy.

Figs. 7, 10. Indeterminate axillary secundibrachials.

7: NHMM 1997030 (Vijlen Group Colln); lateral view of axillary secundibrachial of an isocrinid or bourgueticrinid; Altembroeck ('s Gravenvoeren); Gulpen Formation, Vijlen Member.

10: NHMM MB 838-6a; distal articular facet of axillary secundibrachial of an isocrinid or bourgueticrinid; outcrop near Pesaken; Gulpen Formation, Beutenaken Member.

Fig. 9. *Nielsenicrinus agassizii* (von Hagenow, 1840); NHMM MB 93-8a; cryptosyzygial proximal articular facet of IBr1; temporary outcrop Neuenhoferweg, Aachen-Vaalsquarter; Gulpen Formation, Vijlen Member.

Scale bars equal 1 mm, except in fig. 4 where it represents 100 μ m.

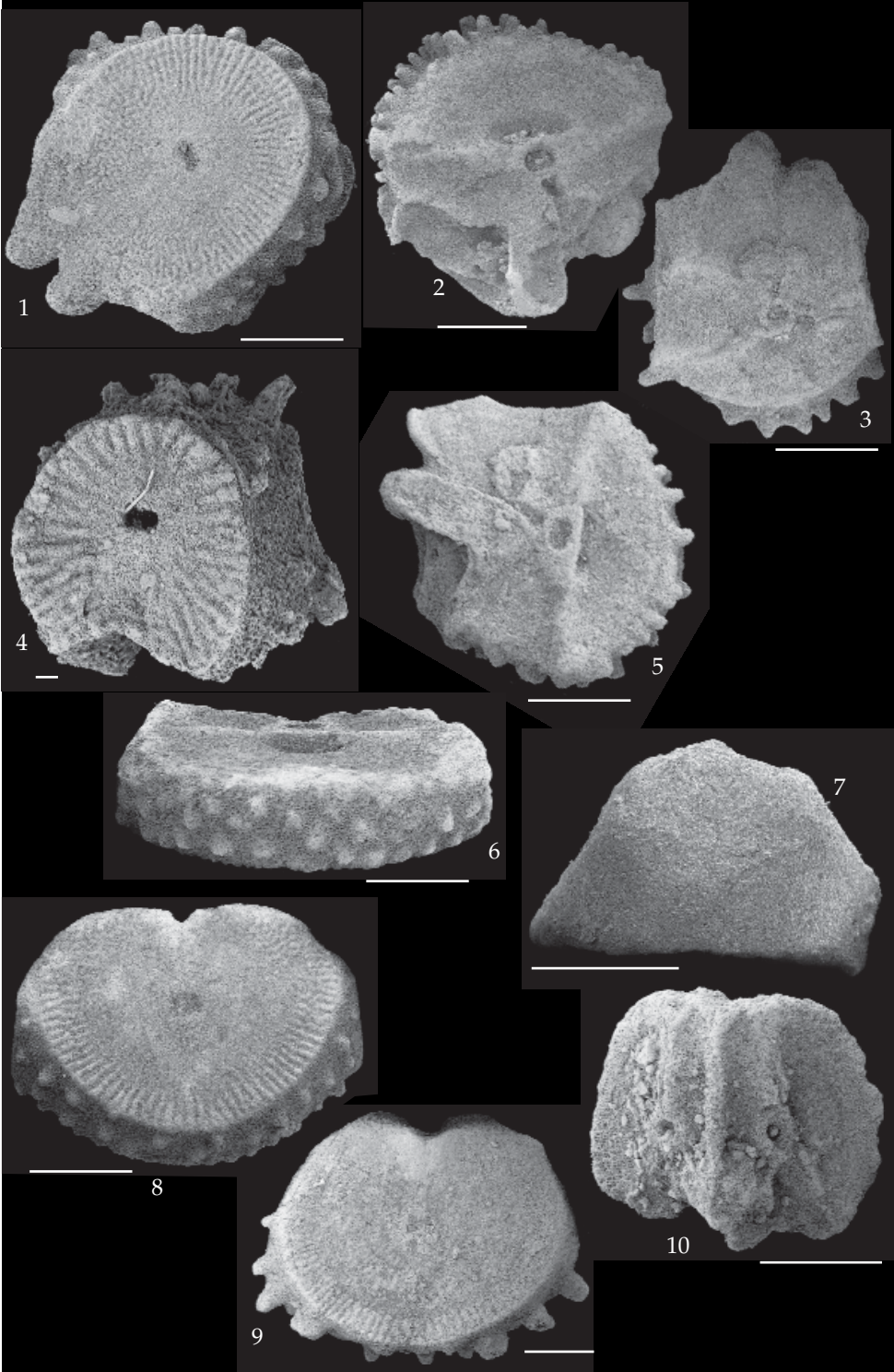


Plate 13

Figs. 1-5. *Amphorometra* gr. *conoidea* (Goldfuss, 1839)

1-2: NHMM MB 1239g; oblique lateral and ventral views of centrodorsal; Mamelis-Selzerbeek; Gulpen Formation, Vijlen Member.

3-5: RGM 396 222-396 223 (ex Jagt Colln, no. 9481a, b); ventral and oblique lateral views of centrodorsals; CPL SA quarry, Haccourt (Liège); Gulpen Formation, Zeven Wegen Member, base sponge level + 1.5-2 m.

Figs. 6-8. *Comatulidina* gen. et sp. indet.; RGM 396 224 (ex Jagt Colln, no. 7691); oblique ventrodorsal and ventral views of centrodorsal and detail of cirral facet to show ornament; CBR-Lixhe quarry, Lixhe (Liège); Gulpen Formation, Zeven Wegen Member, base crinoid level.

Scale bar equals 1 mm, except in fig. 8 where it represents 100 μ m.

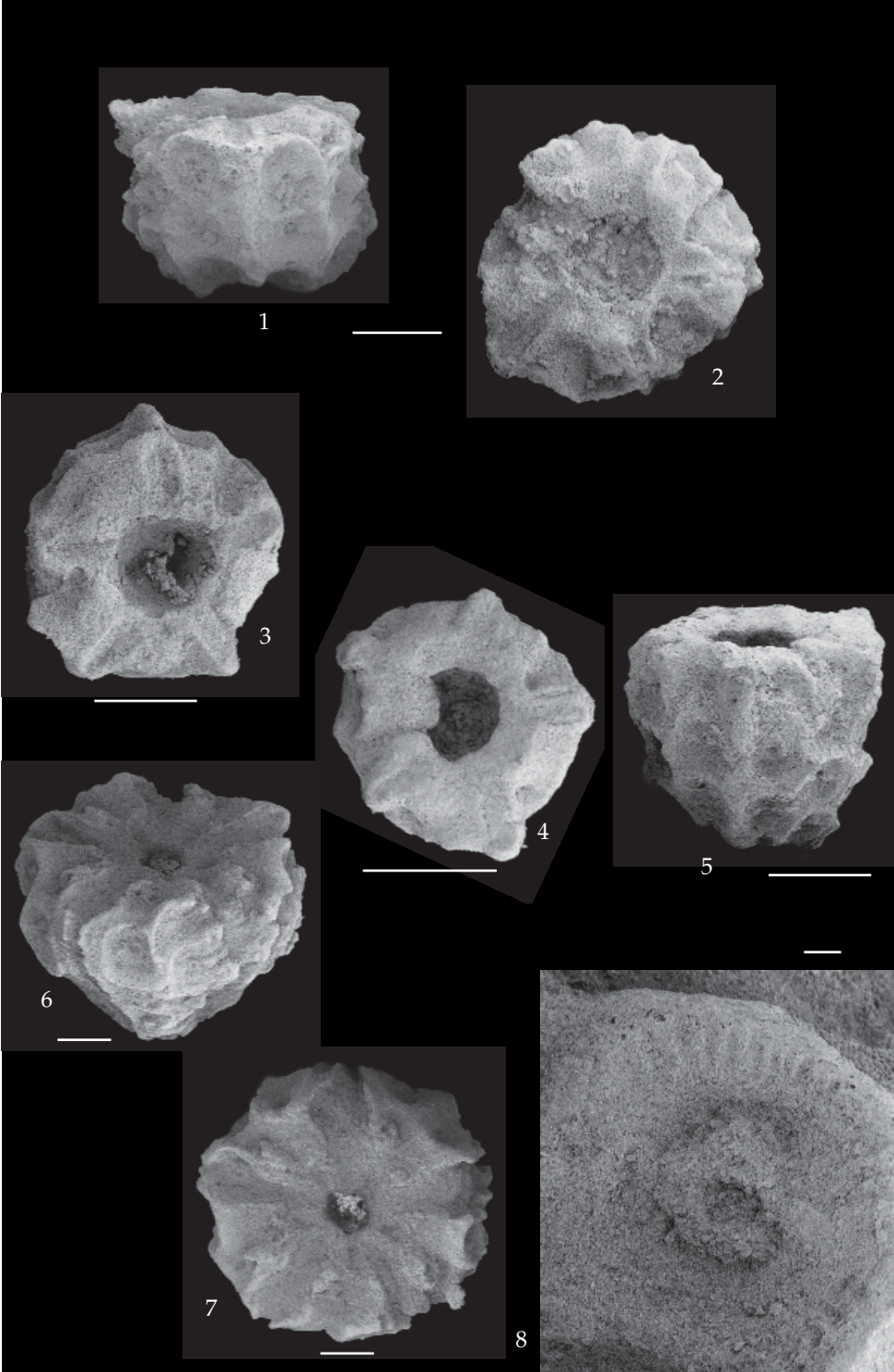


Plate 14

Figs. 1-13. *Placometra* gr. *laticirra* (Carpenter, 1880)

1: NHMM MB 865-22a; ventral view of centrodorsal; de Wingerd quarry; Vaals Formation, Benzenrade Member.

2: NHMM MB 865-22b; ventral view of centrodorsal; same locality and stratigraphy.

3: NHMM MB 865-22c; dorsal view of centrodorsal; same locality and stratigraphy.

4, 8: NHMM MB 649-1a; lateral views of complete cup; CBR-Romontbos quarry, Eben Emael (Liège); Maastricht Formation, base Emael Member.

5-7: NHMM MB 865-22d/f; dorsal views of centrodorsals (figs. 5-6) and proximal view of radial ring showing basals (fig. 7); locality and stratigraphy as figs. 1-3.

9-10: NHMM MB 649-1b; radial ring preserving basals; locality and stratigraphy as figs. 4 and 8.

11-13: Kutscher Colln, no. 1568; late Early Maastrichtian, Jasmund/Rügen (NE Germany); oblique lateral and ventral views of centrodorsal preserving basals; note cirral facet ornament.

Scale bars equal 1 mm, except in figs. 1-3, where they represent 100 μ m.

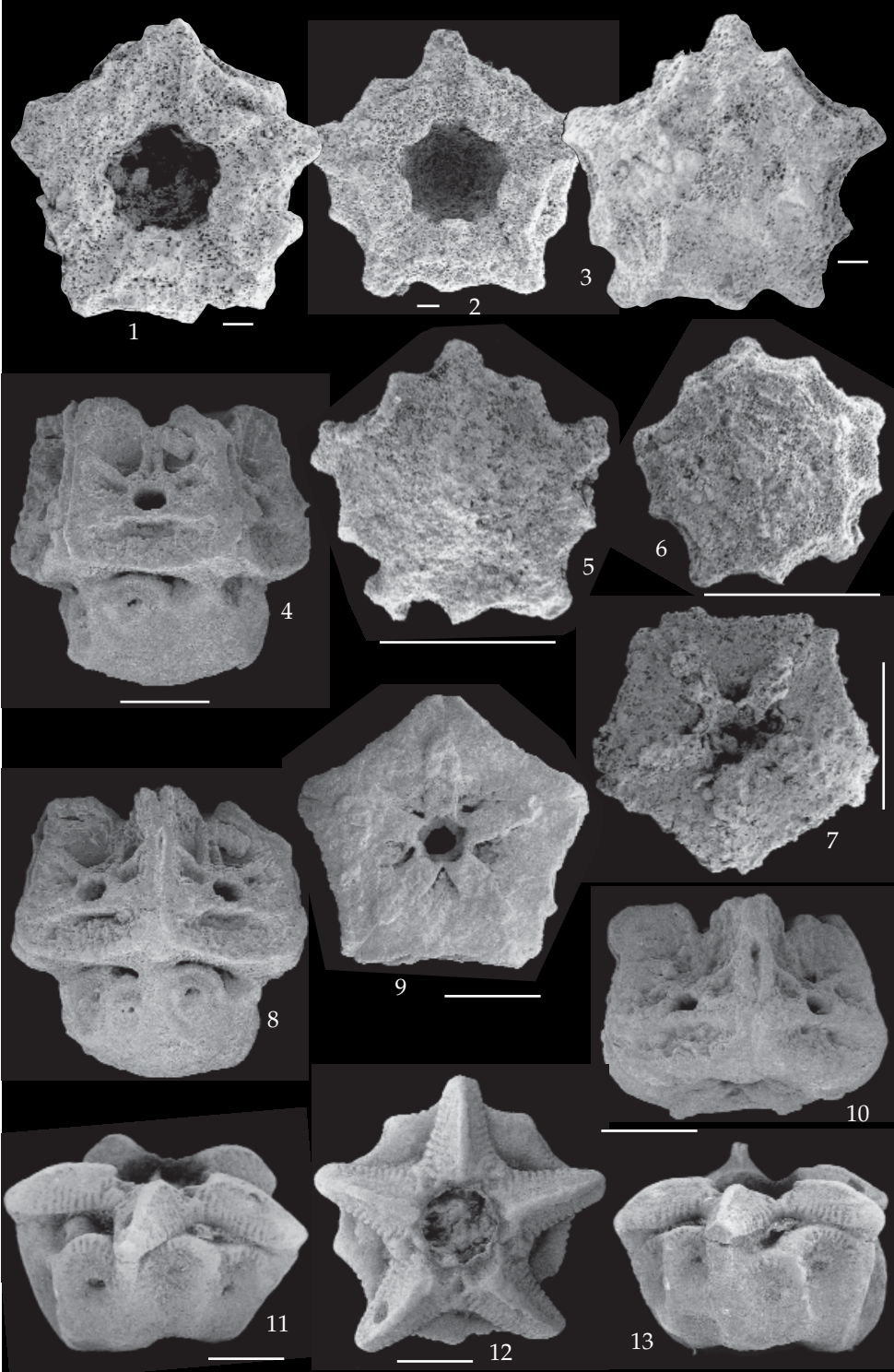


Plate 15

Figs. 1-2. *Jaekelometra? defectiva* sp. nov.; NHMM 1997031 (ex Jagt Colln); lateral and oblique dorsolateral view of centrodorsal (**holotype**); ENCI-Maastricht BV quarry, Maastricht; Maastricht Formation, base Emael Member.

Figs. 3-12. *Jaekelometra* gr. *belgica* (Jaekel, 1902)

3-6: RGM 396 225 (ex Jagt Colln, no. 3695); oblique lateral view of basals, ventral view of centrodorsal, dorsal view of basals and lateral view of centrodorsal, respectively; ENCI-Maastricht BV quarry, Maastricht; Maastricht Formation, top Nekum Member.

7-8: NHMM RD 15; ventral view of radial ring and lateral view of complete cup, respectively; Ankerpoort-Nekami quarry, Bemelen; Maastricht Formation, base Meerssen Member.

9-10: RGM 396 226 (ex Jagt Colln, no. 2787); oblique lateral and dorsal views of centrodorsal; CBR-Romontbos quarry, Eben Emael (Liège); Maastricht Formation, Nekum Member.

11-12: NHMM BL 0130; ventral view of radial ring and lateral view of complete cup, respectively; Blom quarry, Berg en Terblijt; Maastricht Formation, Meerssen Member (IVf-4).

Scale bars equal 1 mm.

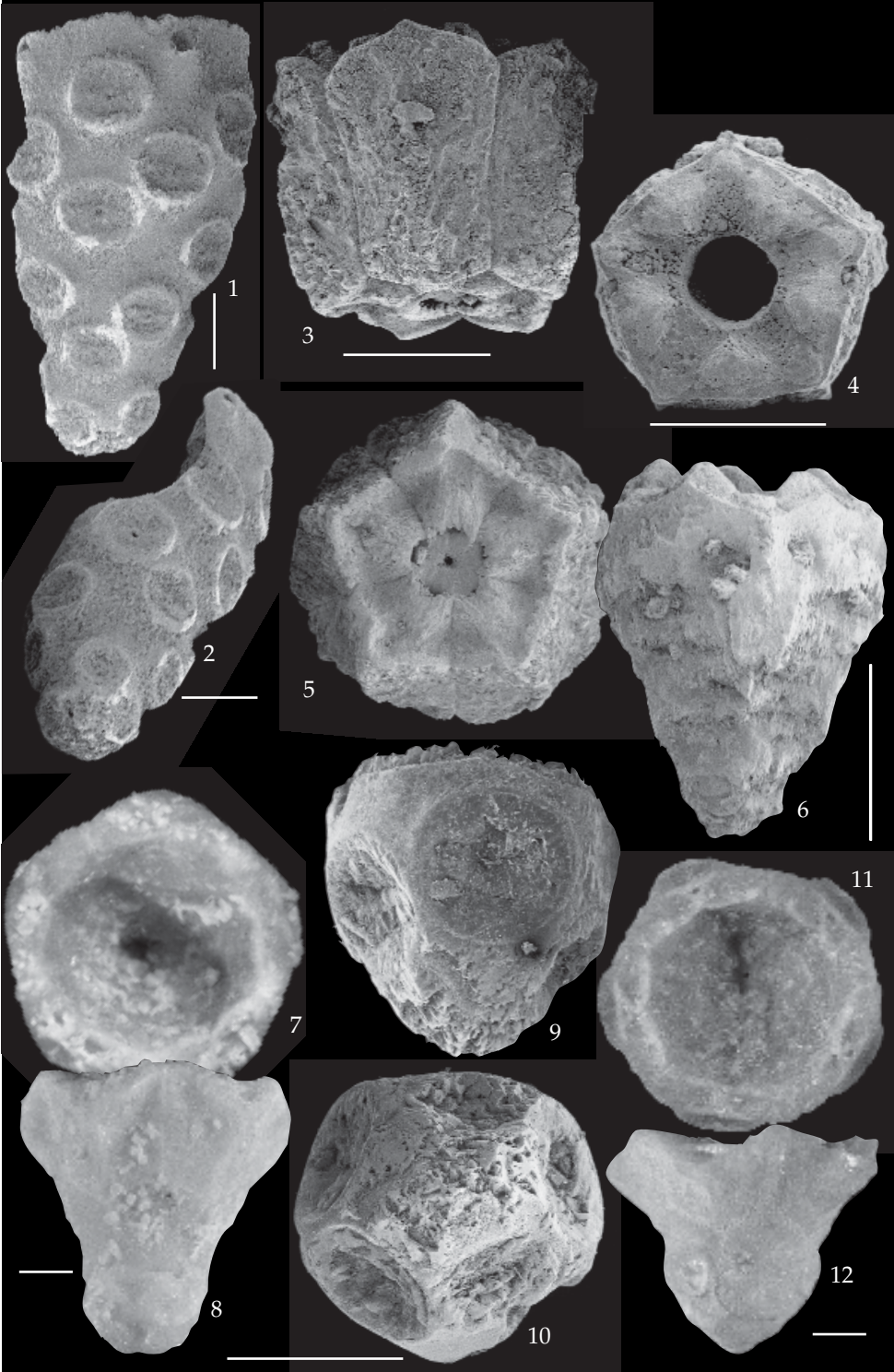


Plate 16

Figs. 1-7, 9, 12. *Jaekelometra concava* (Schlüter, 1878)

1-2: RGM 396 227 (ex Jagt Colln, no. 10405a); ventral and lateral views of centrodorsal; ENCI-Maastricht BV quarry, Maastricht; Maastricht Formation, Meerssen Member (IVf-5/6).

3, 6: NHMM 1997033 (ex W.M. Felder Colln); ventral and lateral views of centrodorsal; Blom quarry, Berg en Terblijt; Maastricht Formation, Meerssen Member.

4: RGM 396 228 (ex Jagt Colln, no. 5135a); lateral view of centrodorsal; locality and stratigraphy as figs. 1-2.

5, 7: RGM 396 229 (ex Jagt Colln, no. 5135b); oblique lateroventral and lateral views of centrodorsal; same locality and stratigraphy.

9, 12: RGM 396 230 (ex Jagt Colln, no. 5135c); lateral and distal views of centrodorsal; same locality and stratigraphy.

Figs. 8, 10-11. Radials of *Jaekelometra* spp.; RGM 396 221 (ex Jagt Colln, nos. 5136a, b); oblique inner and outer view and articular facet, respectively; same locality and stratigraphy.

Scale bars equal 1 mm.

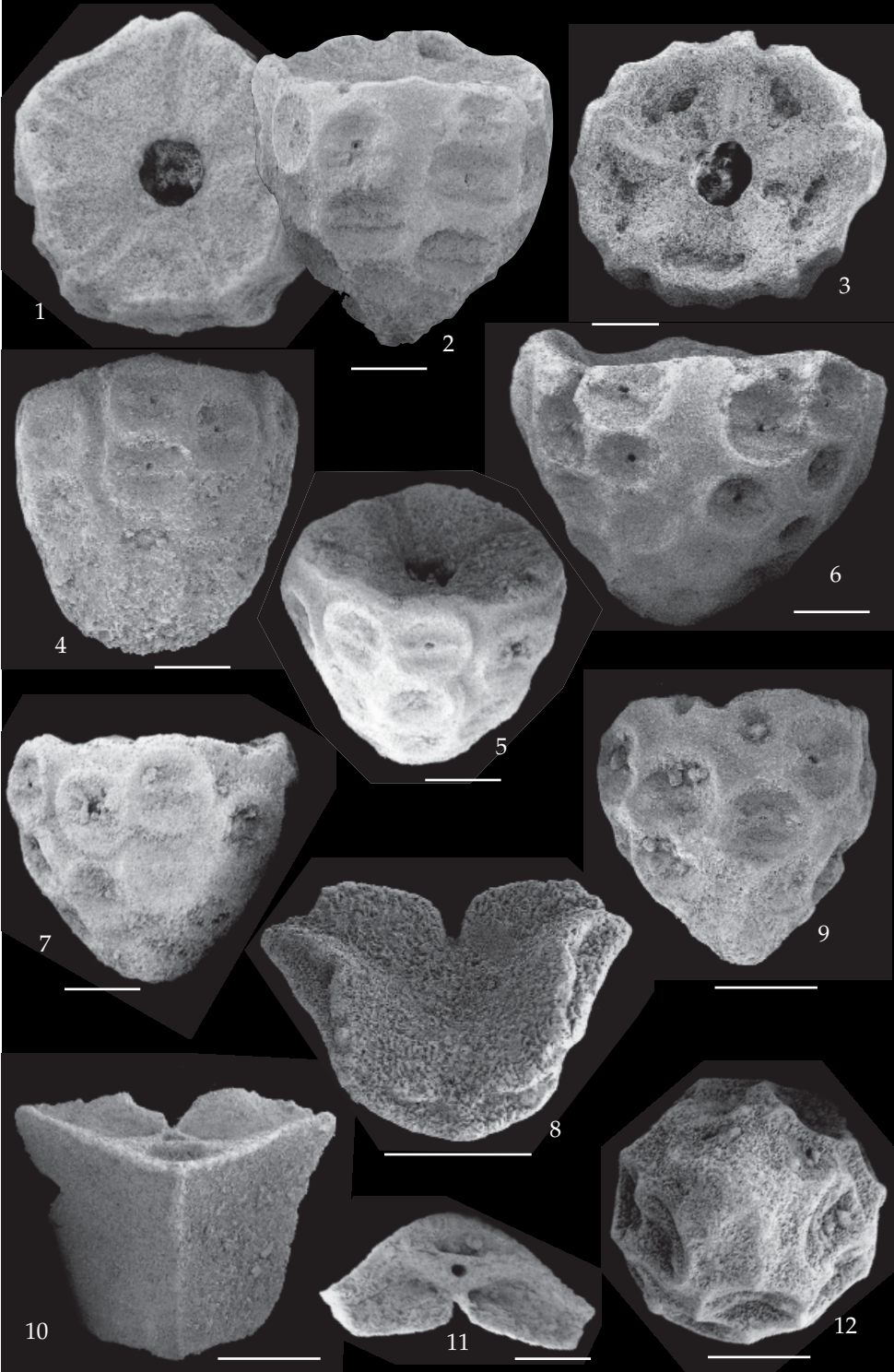


Plate 17

Figs. 1-10. Basal and brachials of *Jaekelometra* spp. Scale bars equal 1 mm.

1-3: RGM 396 232-396 233 (ex Jagt Colln, no. 2495); lateral, distal and oblique proximal views of IBr2; temporary Albertkanaal sections, Vroenhoven-Riemst; Maastricht Formation, top Meerssen Member.

4, 6, 8: RGM 396 234 (ex Jagt Colln, no. 5137a); oblique proximal, lateral and distal views of IIBr2 (?); ENCI-Maastricht BV quarry, Maastricht; Maastricht Formation, Meerssen Member (IVf-5/6).

5, 7: RGM 396 235 (ex Jagt Colln, no. 5137b); proximal and lateral views of IBr1; same locality and stratigraphy.

9: RGM 396 236 (ex Jagt Colln, no. 10508); oblique proximal-lateral view of basal; locality and stratigraphy as figs. 4, 6, 8-9.

10: NHMM MB 108-15a; inner view of IBr1 (?); Blom quarry, Berg en Terblijt; Maastricht Formation, Meerssen Member (IVf-6).

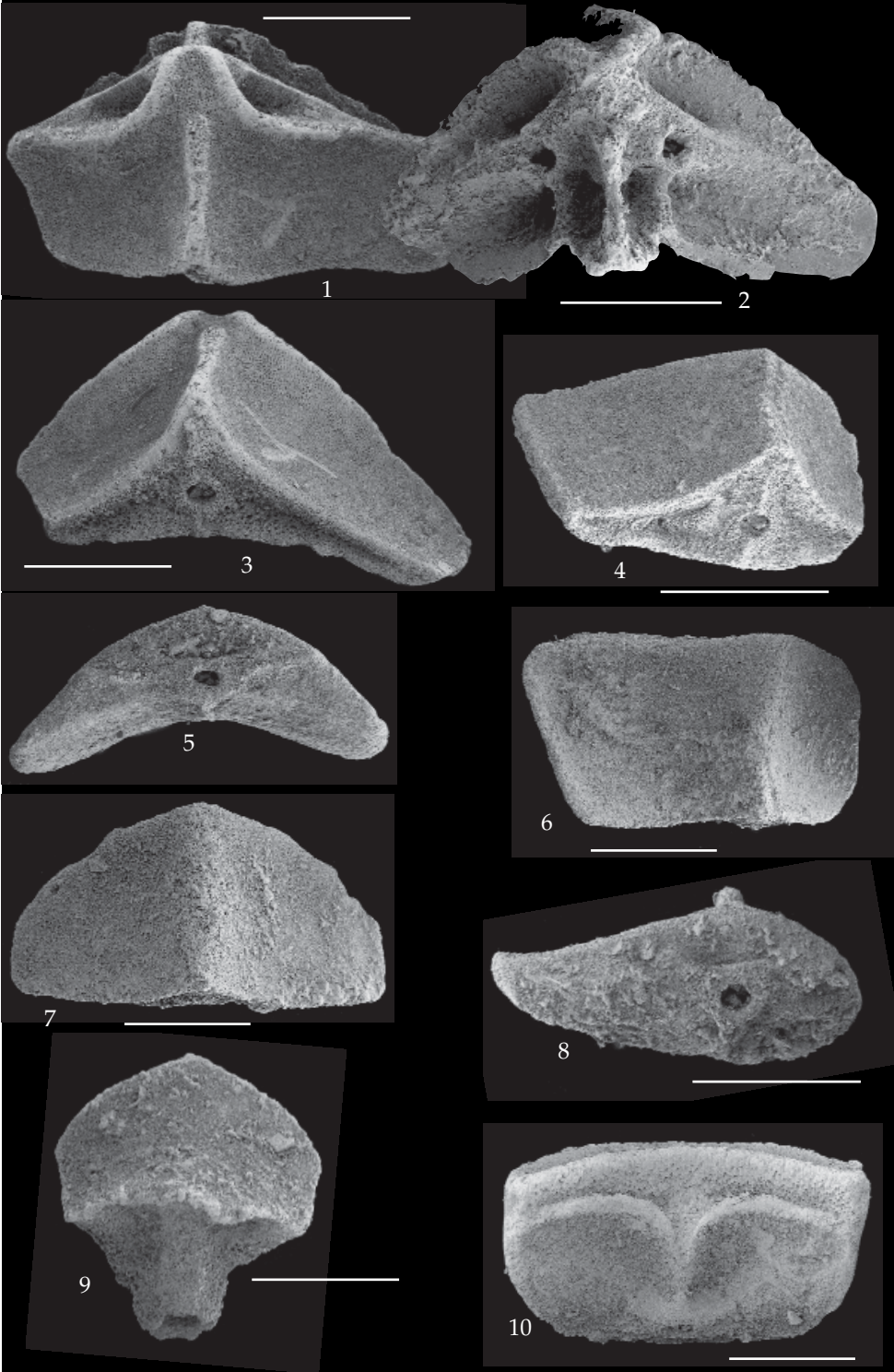


Plate 18

Figs. 1-8. Secundibrachials of *Jaekelometra* spp.; ENCI-Maastricht BV quarry, Maastricht; Maastricht Formation, Meerssen Member (IVf-5/6).

- 1: RGM 396 237 (ex Jagt Colln, no. 5139a); proximal synostosal/cryptosyzygial articulum.
- 2: RGM 396 238 (ex Jagt Colln, no. 5139b); distal muscular articulum.
- 3: RGM 396 239 (ex Jagt Colln, no. 5139c); proximal synostosal/cryptosyzygial articulum.
- 4: RGM 396 240 (ex Jagt Colln, no. 5139d); distal muscular articulum.
- 5: RGM 396 241 (ex Jagt Colln, no. 5139e); distal muscular articulum.
- 6: RGM 396 242 (ex Jagt Colln, no. 5139f); distal muscular articulum.
- 7: RGM 396 243 (ex Jagt Colln, no. 5139g); proximal synostosal/cryptosyzygial articulum.
- 8: RGM 396 244 (ex Jagt Colln, no. 5139h); proximal synostosal/cryptosyzygial articulum.

Figs. 9-12. *Amphorometra* gr. *conoidea* (Goldfuss, 1837)

9-10: NHMM 1997034 (ex Jagt Colln, no. 10405b); ventral and oblique ventrolateral views of a centro-dorsal representing 'Type 2'; same locality and stratigraphy.

11-12: RGM 396 245 (ex Jagt Colln, no. 3200); dorsal and lateral views of a centro-dorsal representing 'Type 1'; Blom quarry, Berg en Terblijt; Maastricht Formation (IVf-2/3).

Scale bars equal 1 mm, except in figs. 6-7, where they represent 100 μ m.

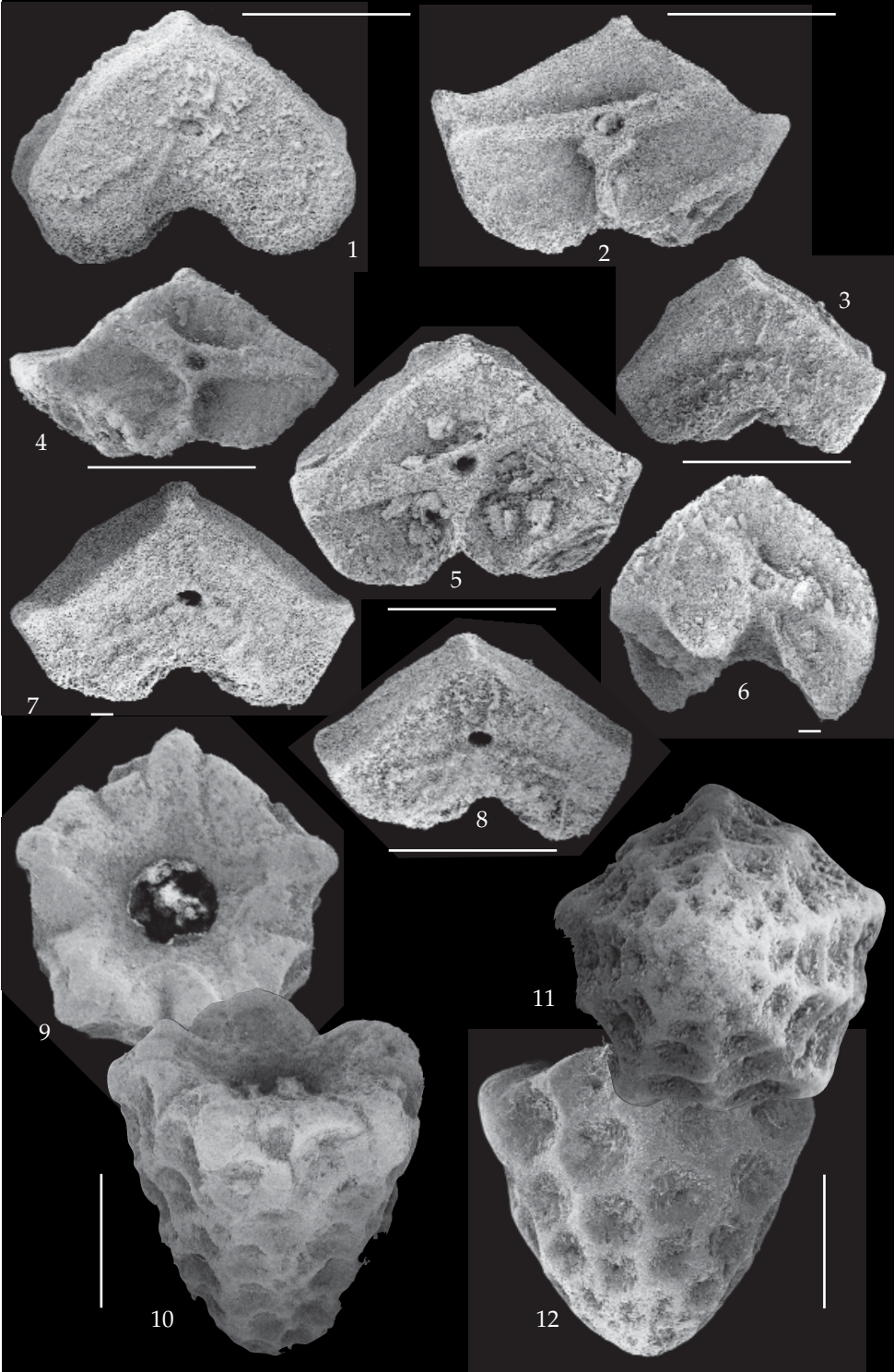


Plate 19

Figs. 1-2. *Amphorometra* gr. *conoidea* (Goldfuss, 1837); NHMM MB 808-21; lateral and ventral views of complete cup; CPL SA quarry, Haccourt (Liège); Gulpen Formation, Zeven Wegen Member, base + 6/7 m.

Figs. 3-7. *Atuatucametra annae* gen. et sp. nov.

3, 5: NHMM MB 432.PPa; dorsal and oblique lateral views of centrodorsal (**paratype**); temporary Albertkanaal sections; Vroenhoven-Riemst; Houthem Formation, Geulhem Member.

4, 7: NHMM MB 432.PPb; dorsal and oblique lateral views of centrodorsal (**paratype**); same locality and stratigraphy.

6: NHMM MB 432.PPc; ventral view of centrodorsal (**paratype**); same locality and stratigraphy.

Scale bars equal 1 mm, except in fig. 4, where it represents 100 μ m.

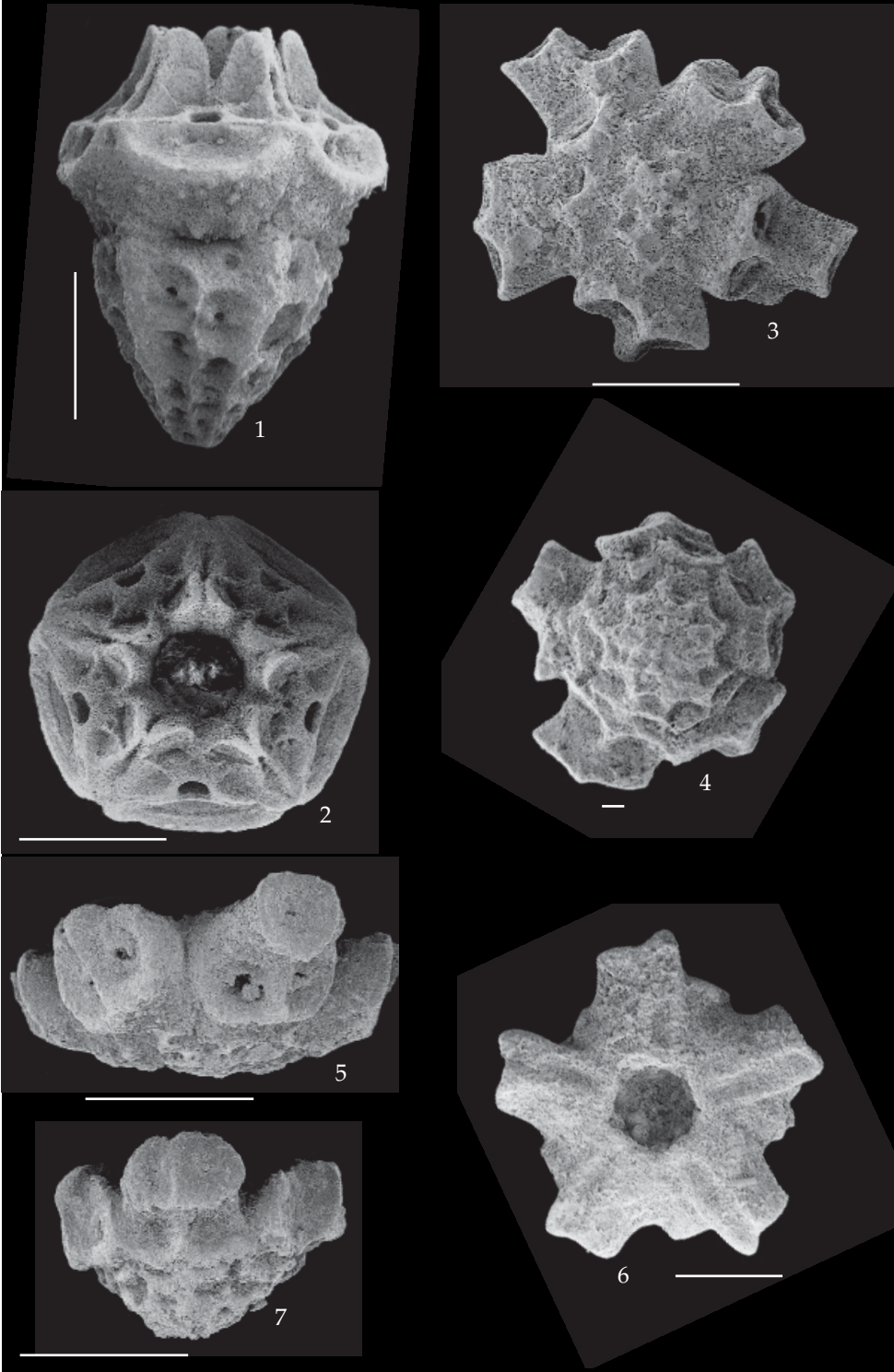


Plate 20

Figs. 1-7, 9. *Hertha* gr. *plana* (Brünnich Nielsen, 1913)

1, 3: RGM 396 246 (ex Jagt Colln, no. 9471a); ventral and oblique lateral views of complete cup; temporary outcrop Hans-Böckler-Allee (Aachen); Gulpen Formation, Vijlen Member.

2, 5: RGM 396 247 (ex Jagt, Vij/I); distal and oblique lateral views of centrodorsal; same locality and stratigraphy.

4, 6: RGM 396 248 (ex Jagt Colln, no. 9466); oblique lateral and ventral views of complete cup; same locality and stratigraphy.

7: RGM 396 249 (ex Jagt Colln, no. 9471b); dorsal view of centrodorsal; same locality and stratigraphy.

9: RGM 396 250 (ex Jagt, Vij/I); ventral view of centrodorsal; same locality and stratigraphy.

Fig. 8. *Hertha* (?) sp.; NHMM MB 284-8a; dorsal view of fragmentary centrodorsal; CPL SA quarry, Haccourt (Liège); Gulpen Formation, upper Vijlen Member.

Scale bars equal 1 mm.

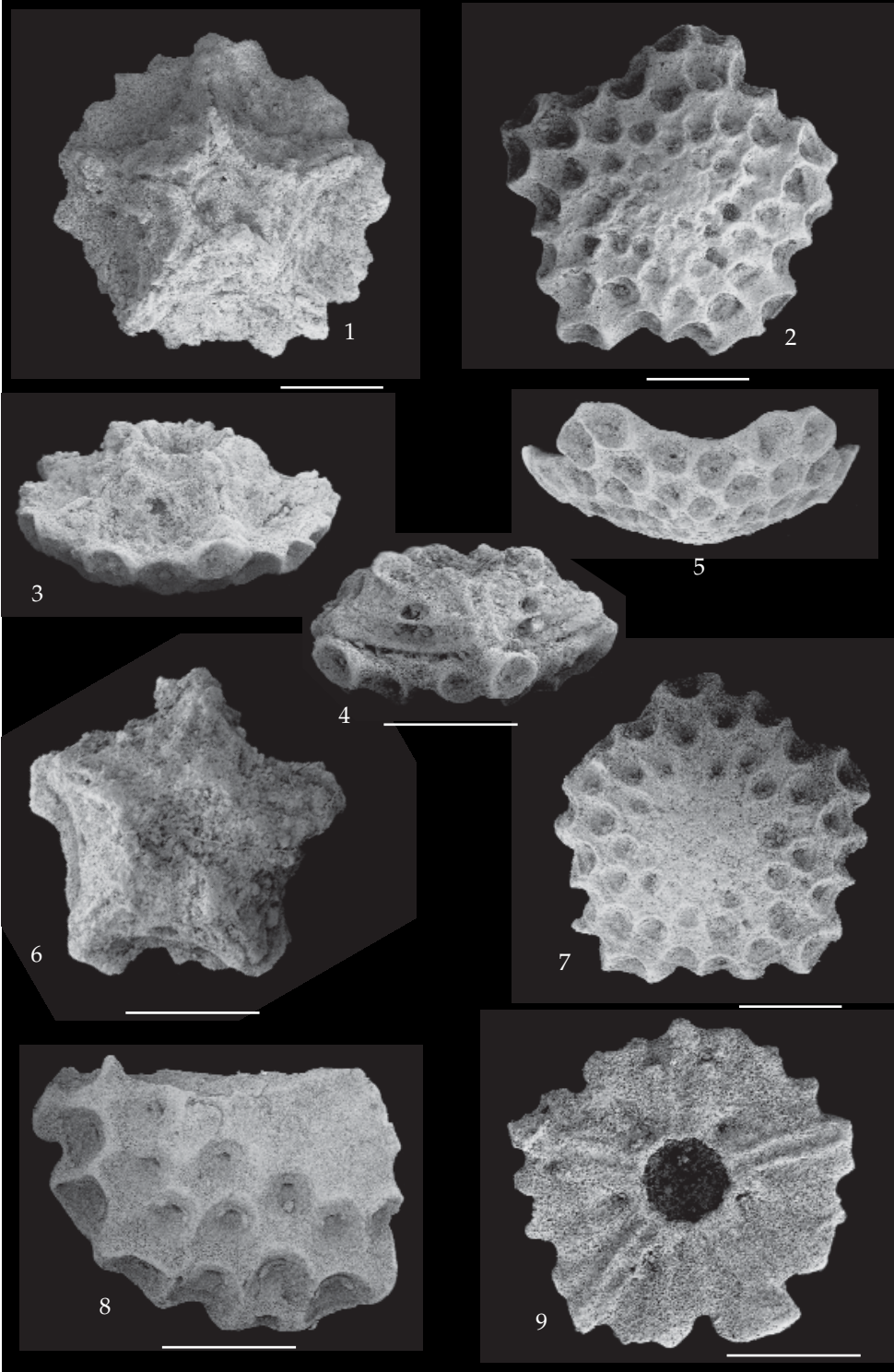


Plate 21

Figs. 1-3. *Hertha* gr. *pygmea* Gislén, 1924; Kutscher Colln, no. 1573; lateral view of complete cup, and ventral and dorsal views of a centrodorsal, respectively; late Early Maastrichtian, Jasmund/Rügen (NE Germany).

Fig. 4. Secundibrachials of *Semiometra* spp.; NHMM MB 377-36a/c; brachials preserving pinnules; Blom quarry, Berg en Terblijt; Maastricht Formation, Meerssen Member.

Figs. 5-11. *Semiometra saskiae* sp. nov.

5, 8: NHMM K1018a (**paratype**); ventral and lateral views of complete cup preserving IBr1 and IBr2; Blom quarry, Berg en Terblijt; Maastricht Formation, Meerssen Member (base IVf-3).

6-7, 9: NHMM MB 377-4a; ventral, dorsal and lateral views of complete cup (**holotype**); Blom quarry, Berg en Terblijt; Maastricht Formation, Meerssen Member.

10-11: RGM 396 251-396 252 (ex Jagt Colln, nos. 2784a, b); dorsal views of centrodorsals (**paratypes**); CBR-Romontbos quarry, Eben Emael (Liège); Maastricht Formation, Nekum Member.

Scale bars equal 1 mm, except in fig. 3, where it represents 100 µm.

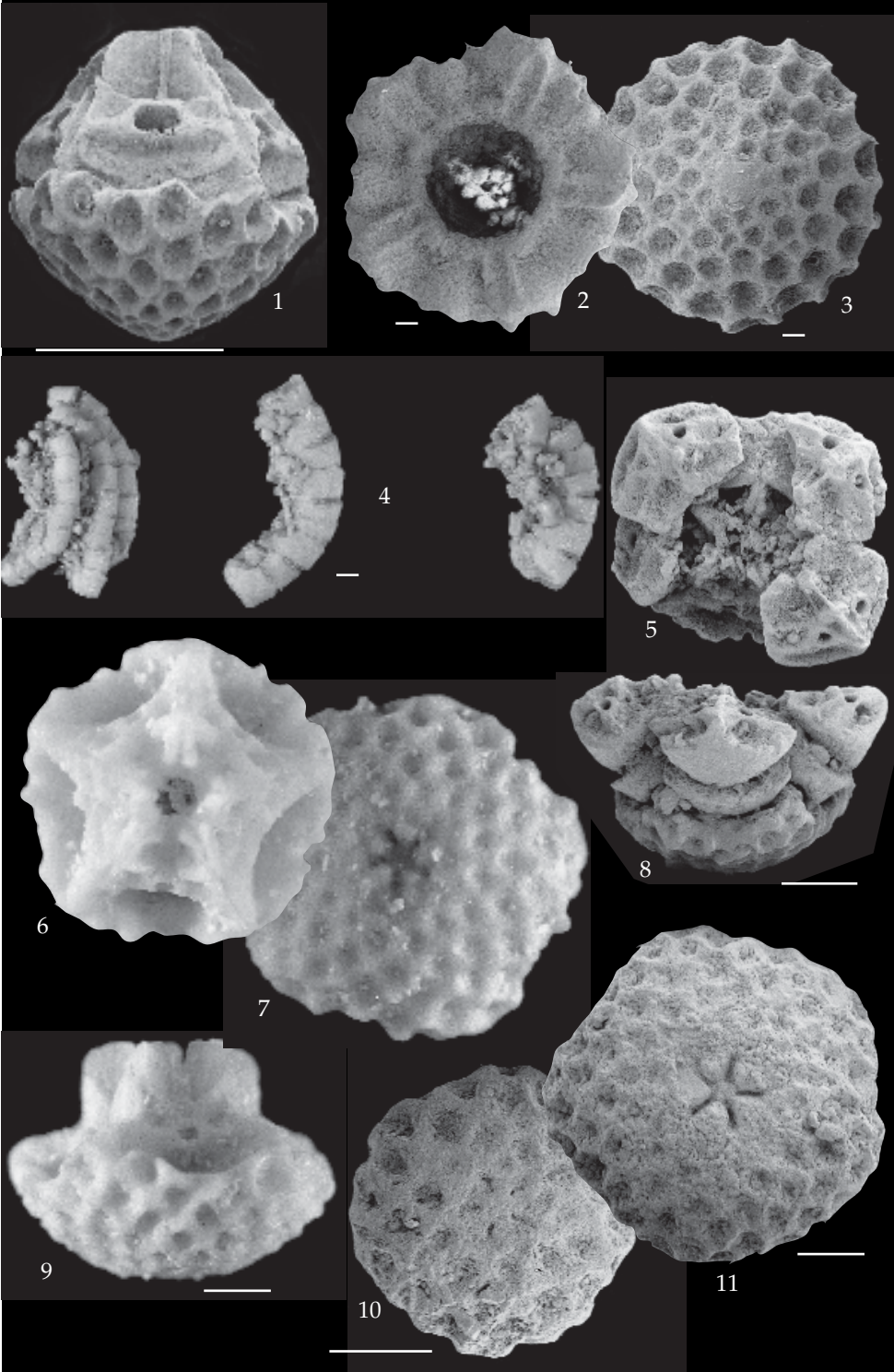


Plate 22

Figs. 1-8. *Semiometra saskiae* sp. nov.; all specimens from Maastricht Formation (Nekum Member), CBR-Romontbos quarry, Eben Emael (Liège). Scale bars equal 1 mm.

1, 4: RGM 396 253-396 254 (ex Jagt Colln, no. 2788a); outer and inner views of radial.

2-3, 5: RGM 396 255-396 256 (ex Jagt Colln, no. 2788b); proximal, distal and lateral views of IBr1.

6-8: RGM 396 257-396 258 (ex Jagt Colln, no. 2788c); distal, lateral and proximal views of IBr2.

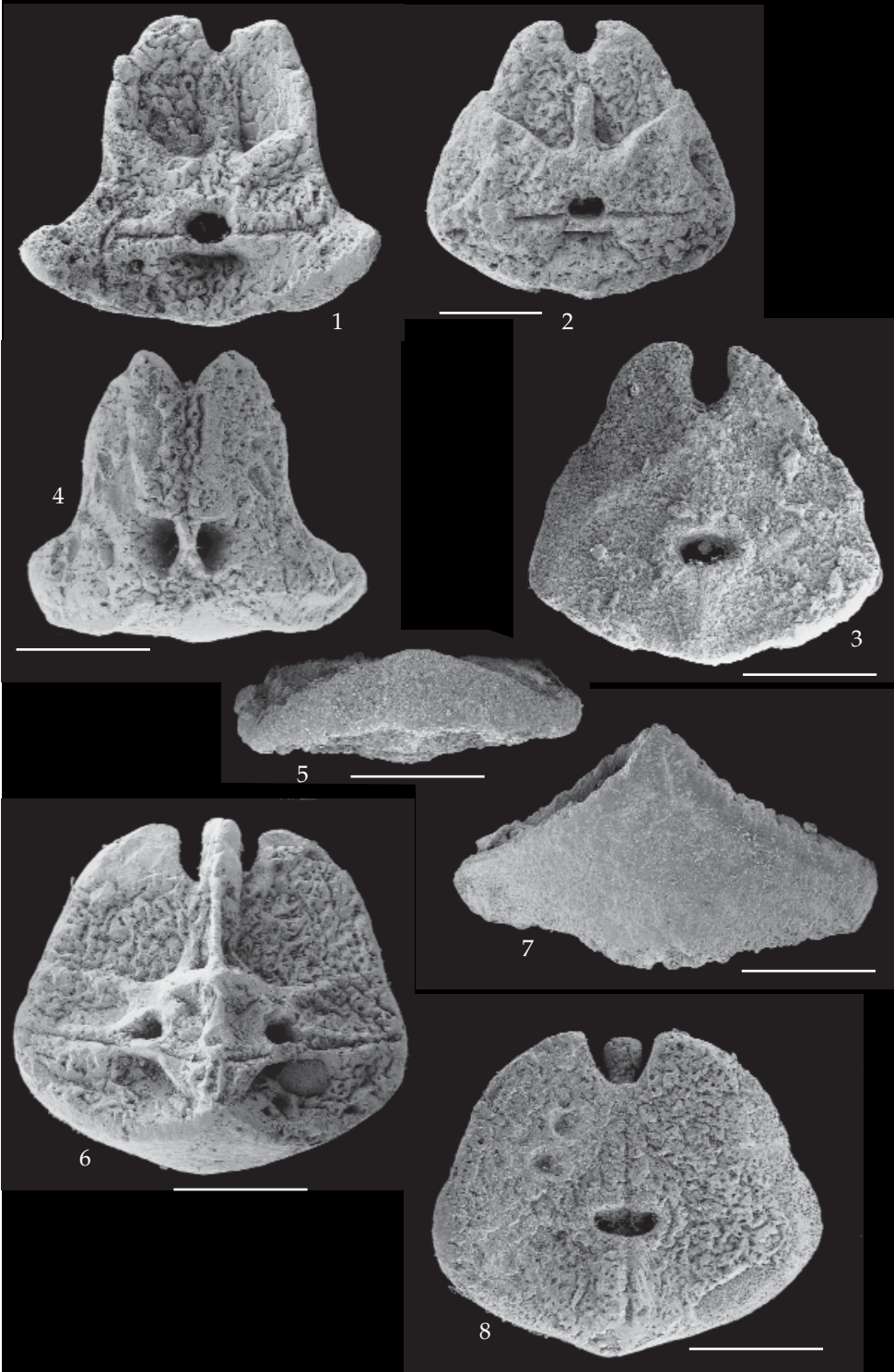


Plate 23

Figs. 1-10. *Semiometra lenticularis* (Schlüter, 1878). Scale bars equal 1 mm.

1-2: RGM 396 259 (ex Jagt Colln, no. 2923); dorsal and oblique lateral views of centrodorsal; temporary Albertkanaal sections, Vroenhoven-Riemst; Maastricht Formation, top Meerssen Member.

3-4: NHMM MK 1186 (W.M. Felder Colln); ventral and dorsal views of centrodorsal; same locality and stratigraphy.

5: NHMM MB 377-3a; ventral view of complete cup preserving IBrr1; Blom quarry, Berg en Terblijt; Maastricht Formation, Meerssen Member.

6-8: NHMM MB 108-12a; dorsal view of centrodorsal and ventral and lateral views of complete cup, respectively; Blom quarry, Berg en Terblijt; Maastricht Formation, Meerssen Member.

9-10: NHMM MB 108-12b; ventral and dorsal views of centrodorsal; same locality and stratigraphy.

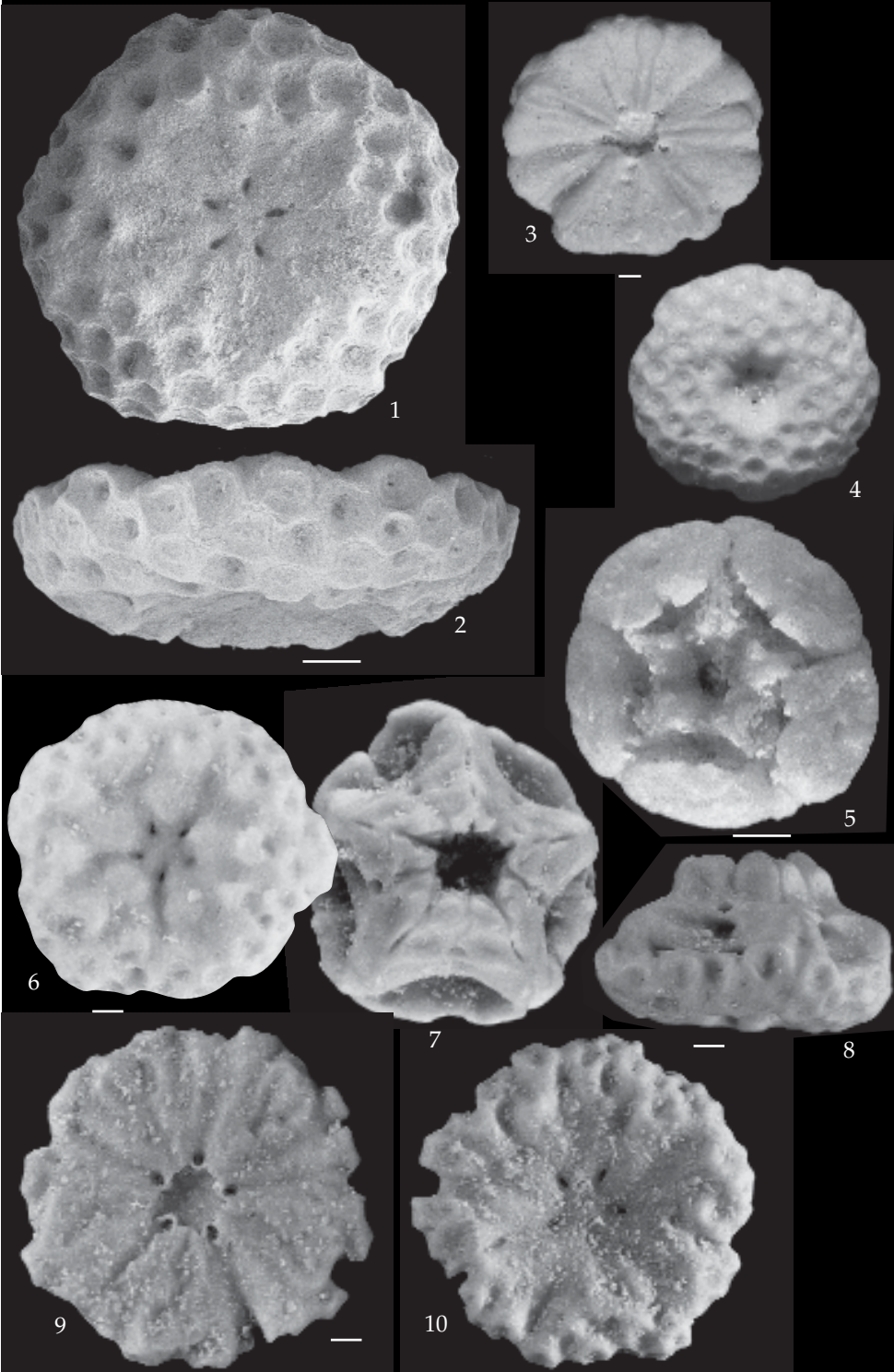


Plate 24

Figs. 1-2. Indeterminate axillary primibrachial (IBr2) with syzygial proximal articular facet; RGM 396 260 (ex Jagt Colln, sample CPL 2); inner and oblique proximal views; CPL SA quarry, Haccourt (Liège); Gulpen Formation, lower Zeven Wegen Member.

Figs. 3-4. Indeterminate comatulid axillary primibrachials (IBr2), possibly belonging to *Amphorometra* gr. *conoidea* (Goldfuss, 1839)

3: RGM 396 261 (ex Jagt Colln, no. 9483); oblique distal view; locality as figs. 1 and 2; Gulpen Formation, Zeven Wegen Member, base sponge level + 1.5-2 m.

4: RGM 396 262 (ex Jagt Colln, no. 3573); oblique distal view; same locality; Gulpen Formation, Vijlen Member, base + 4/6 m.

Fig. 5. *Placometra* gr. *laticirra* (Carpenter, 1881); NHMM MB 865-22g; inner view of radial; de Wingerd quarry; Vaals Formation, Benzenrade Member.

Figs. 6-9. *Dunnirinus aequalis* (d'Orbigny, 1841); RGM 396 263-396 264 (ex Jagt Colln, nos. 9380-36); articular facets and lateral views of pinnulars; ENCI-Maastricht BV quarry, Maastricht; Maastricht Formation, base Gronsveld Member.

Scale bars equal 100 μ m, except in fig. 3, where it represents 1 mm.

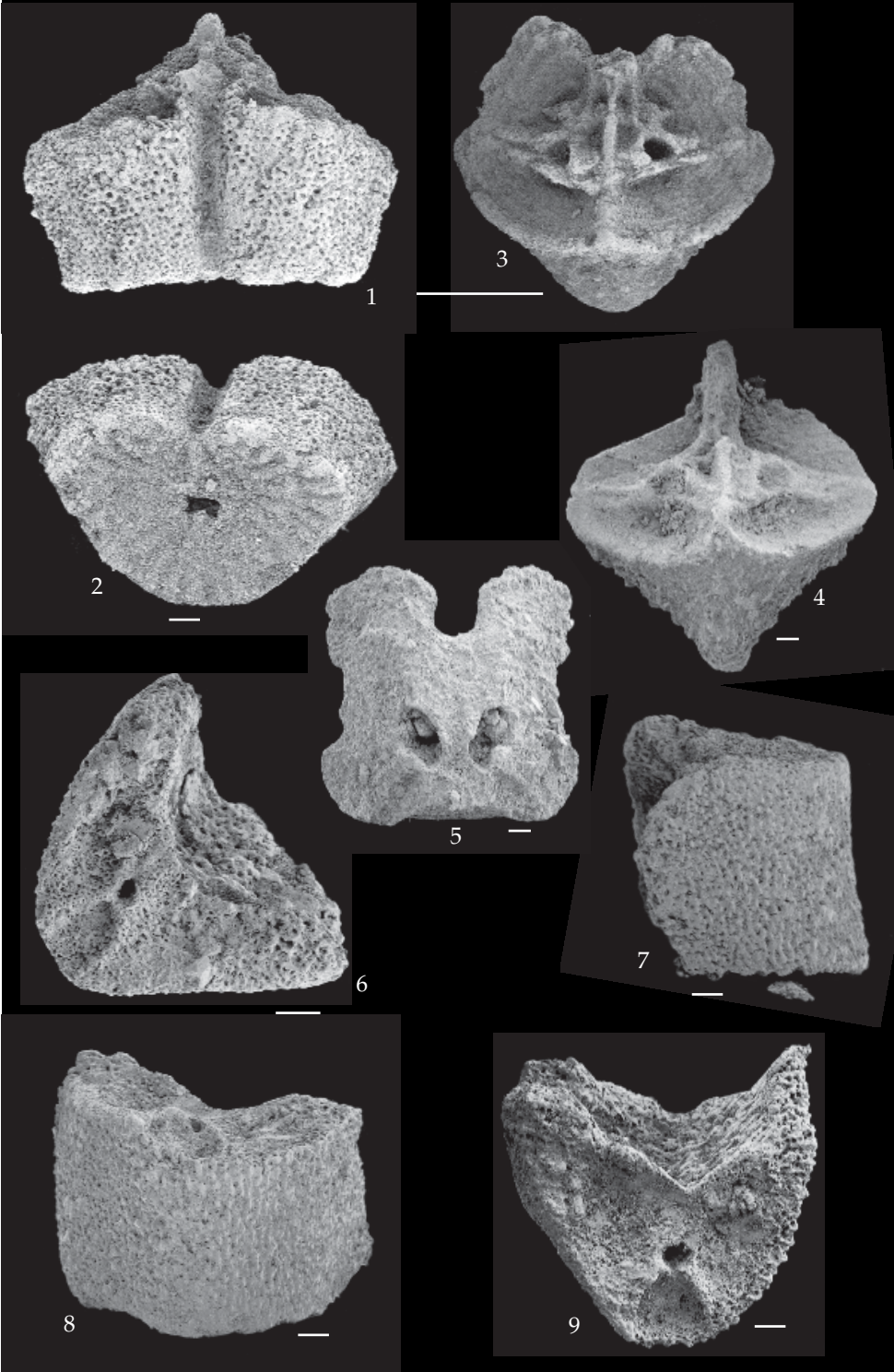


Plate 25

Figs. 1-2. *Semiometra impressa* (Carpenter, 1881); RGM 396 265-396 266 (ex Jagt Colln, no. 9480a, b); dorsal and ventral views of centrodorsals; CPL SA quarry, Haccourt (Liège); Gulpen Formation, Zeven Wegen Member.

Fig. 3. *Loriolometra retzii* (Lundgren, 1875). NHMM MB 619-15a; ventral view of centrodorsal; Benzenrade ('kapelletje'); Vaals Formation, Benzenrade Member.

Figs. 4-11. Indeterminate comatulid cirrals.

4-5: RGM 396 267 and 396 337 (ex Jagt Colln, no. 2491); lateral and oblique proximal views; temporary Albertkanaal sections, Vroenhoven-Riemst; Maastricht Formation, top Meerssen Member.

6-7, 10-11: RGM 396 270-396 271 (ex Jagt Colln, no. 3584a, b); lateral and proximal views; CPL SA quarry, Haccourt (Liège); Gulpen Formation, Zeven Wegen Member, top - 0/8 m.

8: RGM 396 268 (ex Jagt Colln, no. 7280c); lateral view; CPL SA quarry, Haccourt (Liège); Gulpen Formation, Zeven Wegen Member, base + 9.7-11.5 m.

9: RGM 396 269 (ex Jagt Colln, no. 2786a); lateral view; possibly belonging to *Semiometra saskiae* sp. nov.; CBR-Romontbos quarry, Eben Emael (Liège); Maastricht Formation, Nekum Member.

Scale bars equal 100 μm , except in figs. 1-3 and 6-7, where they represent 1 mm.

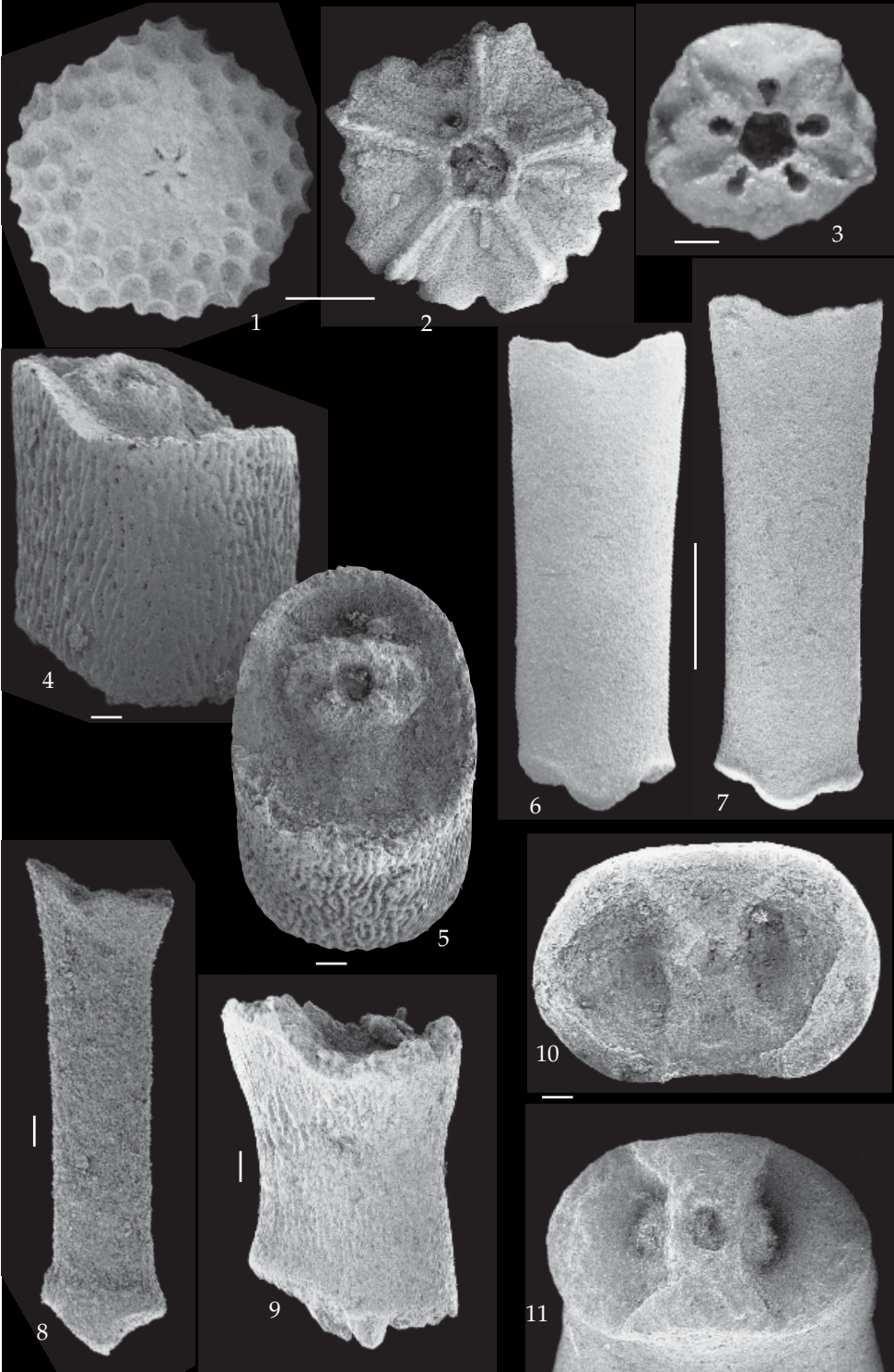


Plate 26

Figs. 1-12. Indeterminate isocrinid (?) and comatulid (crypto)syzygial secundibrachials. Scale bars equal 1 mm, except in figs. 3 and 11, where they represent 100 μm .

1: RGM 396 272 (ex Jagt Colln, no. 2786); comatulid; CBR-Romontbos quarry, Eben Emael (Liège); Maastricht Formation, Nekum Member.

2: RGM 396 273 (ex Jagt Colln, no. 3551); isocrinid (?); CPL SA quarry, Haccourt (Liège); Gulpen Formation, Zeven Wegen Member, top - 0/8 m.

3: NHMM MB 865-22h; possibly belonging to *Placometra* gr. *laticirra* (Carpenter, 1880); de Wingerd quarry; Vaals Formation, Benzenrade Member.

4: RGM 396 274 (ex Jagt Colln, no. 3762a); comatulid; ENCI-Maastricht BV quarry, Maastricht; Maastricht Formation, Nekum Member.

5: RGM 396 276 (ex Jagt Colln, no. 2492); comatulid; temporary Albertkanaal sections, Vroenhoven-Riemst; Maastricht Formation, top Meerssen Member.

6: RGM 396 275 (ex Jagt Colln, no. 3696); comatulid; ENCI-Maastricht BV quarry, Maastricht; Maastricht Formation, top Nekum Member.

7, 10: RGM 396 277 (ex Jagt Colln, no. 3762b); comatulid; same locality and stratigraphy.

8-9: RGM 396 280, 396 281 (ex Jagt Colln, no. 3547a, b); comatulid; CPL SA quarry, Haccourt (Liège); Gulpen Formation, Zeven Wegen Member, top - 0/8 m.

11: RGM 396 278 (ex Jagt Colln, no. 3554); comatulid; same locality and stratigraphy.

12: RGM 396 279 (ex Jagt Colln, no. 3551); isocrinid (?); same locality and stratigraphy.

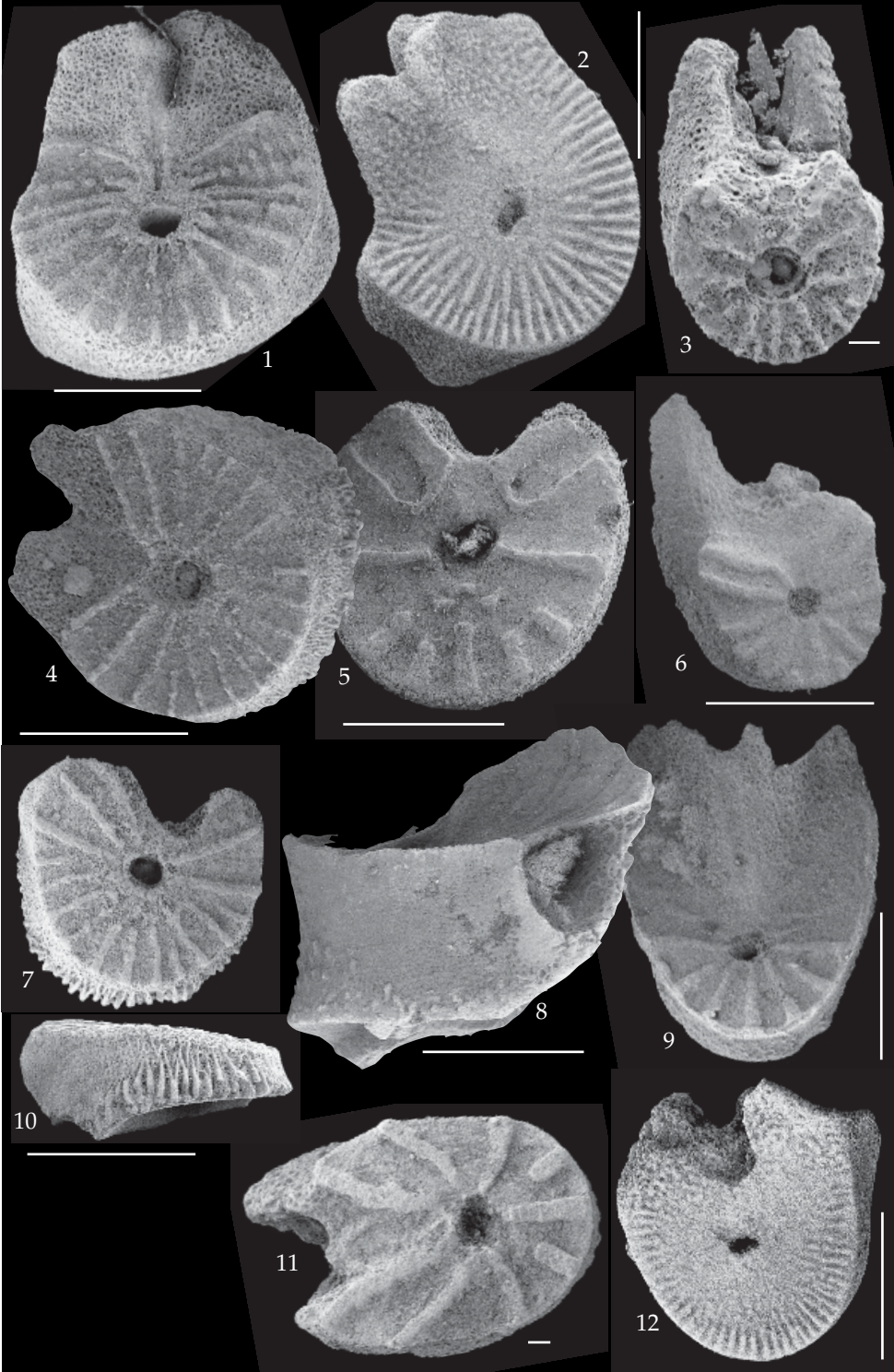


Plate 27

Figs. 1, 5. *Semiometra saskiae* sp. nov.

1: RGM 396 282 (ex Jagt Colln, no. 3768a); IIBr1; ENCI-Maastricht BV quarry; Maastricht Formation, Nekum Member.

5: RGM 396 283 (ex Jagt Colln, no. 3768b); IIBr2; same locality and stratigraphy.

Figs. 2-4, 6-10. Indeterminate comatulid synarthrial and muscular primi- and secundibrachials.

2: RGM 396 284 (ex Jagt Colln, no. 10520); IBr1; ENCI-Maastricht BV quarry, Maastricht; Maastricht Formation, Meerssen Member (IVf-5/6).

3: RGM 396 285 (ex Jagt Colln, no. 3685); CPL SA quarry, Haccourt (Liège); Gulpen Formation, Vijlen Member, base + 0-2 m (possibly belonging to *Amphorometra* gr. *conoidea*).

4: NHMM MB 865-22i; de Wingerd quarry; Vaals Formation, Benzenrade Member (possibly belonging to *Loriolometra retzii*).

6: RGM 396 286 (ex Jagt Colln, no. 3696a); ENCI-Maastricht BV quarry, Maastricht; Maastricht Formation, Nekum Member.

7: RGM 396 288 (ex Jagt Colln, no. 3696b); *latus*; same locality and stratigraphy.

8: NHMM MB 865-22j; locality and stratigraphy as fig. 4.

9: RGM 396 287 (ex Jagt Colln, no. 3696c); locality and stratigraphy as figs. 6-7.

10: RGM 396 289 (ex Jagt Colln, no. 3696d); same locality and stratigraphy.

Scale bars equal 100 μ m, except in figs. 2, 4, 7, 9-10, where they represent 1 mm.

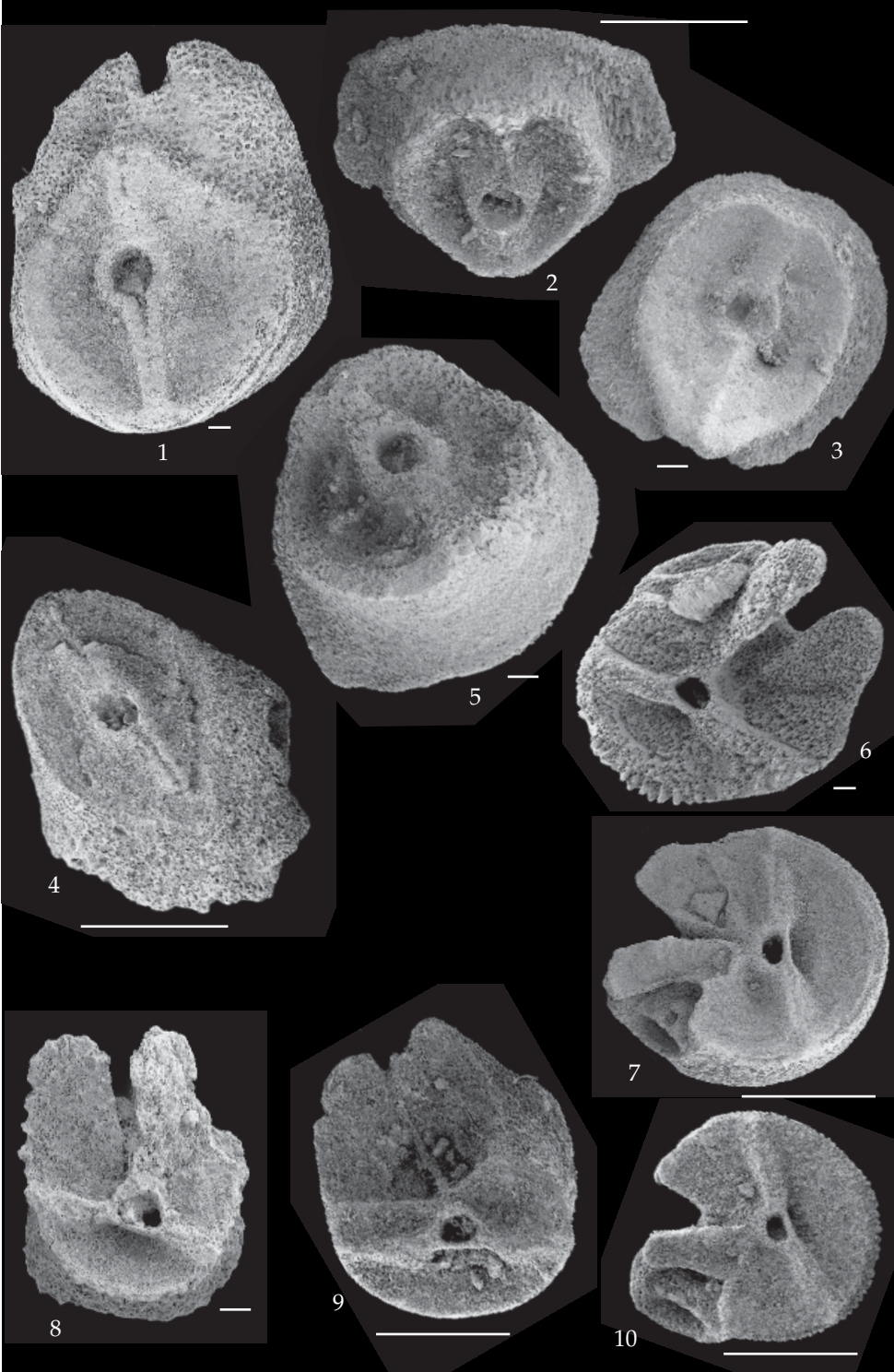


Plate 28

Fig. 1. *Bourgueticrinus danicus* Brünnich Nielsen, 1913; NHMM MB 734-15a; temporary Albertkanaal sections, Vroenhoven-Riemst; Houthem Formation, Geulhem Member.

Figs. 2, 5-6. *Democrinus? maximus* (Brünnich Nielsen, 1915)

2: NHMM MB 734-14a; temporary Albertkanaal sections, Vroenhoven-Riemst; Houthem Formation, Geulhem Member.

5: NHMM MB 734-14b; preserving proximal columnal and IBrr1; same locality and stratigraphy.

6: NHMM MB 734-14c; same locality and stratigraphy.

Figs. 3-4, 7. *Bourgueticrinus bruennichinielseni* Ødum, in Jessen & Ødum, 1923

3: NHMM MB 734-14d; same locality and stratigraphy.

4: NHMM MB 734-14e; same locality and stratigraphy.

7: NHMM MB 734-14f; same locality and stratigraphy.

Figs. 8-9. Indeterminate bourgueticrinid/bathycrinid columnals; NHMM MB 734-16a, b; same locality and stratigraphy.

Scale bars equal 1 mm.



Plate 29

Figs. 1-10. *Bourgueticrinus hureae* (Valette, 1917); all specimens from Gulpen Formation (Zeven Wegen Member), CPL SA quarry, Haccourt (Liège), except fig. 8, which is from CBR-Lixhe quarry; all Late Campanian. Scale bars equal 1 mm.

1, 5: NHMM MB 770a.

2, 7: NHMM MB 770b.

3, 6: NHMM MB 770c.

4: NHMM MB 770d.

8: NHMM MB 811.

9-10: RGM 396 290 (ex Jagt Colln, no. 4844).

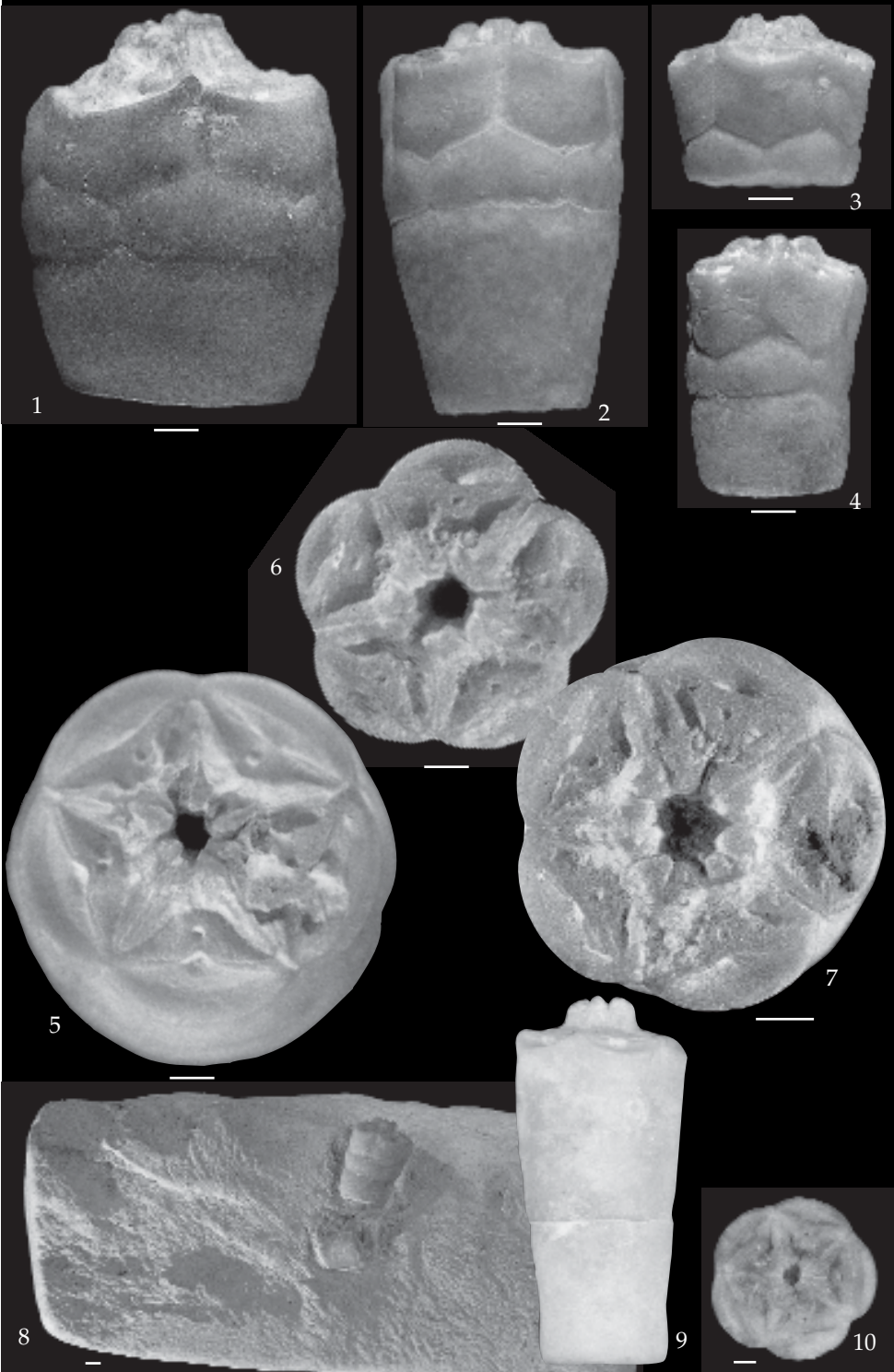


Plate 30

Figs. 1-3. Bourgueticrinidae sp. juv.

1: NHMM MB 761-40a; Heure-le-Romain (Liège); Gulpen Formation, Zeven Wegen Member, top - 8 m.

2-3: NHMM MB 808-11b; CPL SA quarry, Haccourt (Liège); Gulpen Formation, Zeven Wegen Member, base + 6/7 m.

Figs. 4-13. '*Monachocrinus gallicus* Rasmussen, 1961'

4: NHMM MB 761-40b; Heure-le-Romain (Liège); Gulpen Formation, Zeven Wegen Member, top - 8 m.

5: NHMM MB 761-39a; same locality and stratigraphy.

6: NHMM MB 761-40c; same locality and stratigraphy.

7: NHMM MB 417-3; same locality and stratigraphy.

8: NHMM MB 761-40d; same locality and stratigraphy.

9: NHMM MB 761-39b; same locality and stratigraphy.

10, 13: RGM 396 291 (ex Jagt Colln, no. 6578); CBR-Lixhe quarry (Liège); Gulpen Formation, Zeven Wegen Member, top - 6/9 m.

11-12. NHMM MB 761-39c; same locality and stratigraphy.

Scale bars equal 1 mm, except in figs. 4, 7, 10-13, where they represent 100 μm .

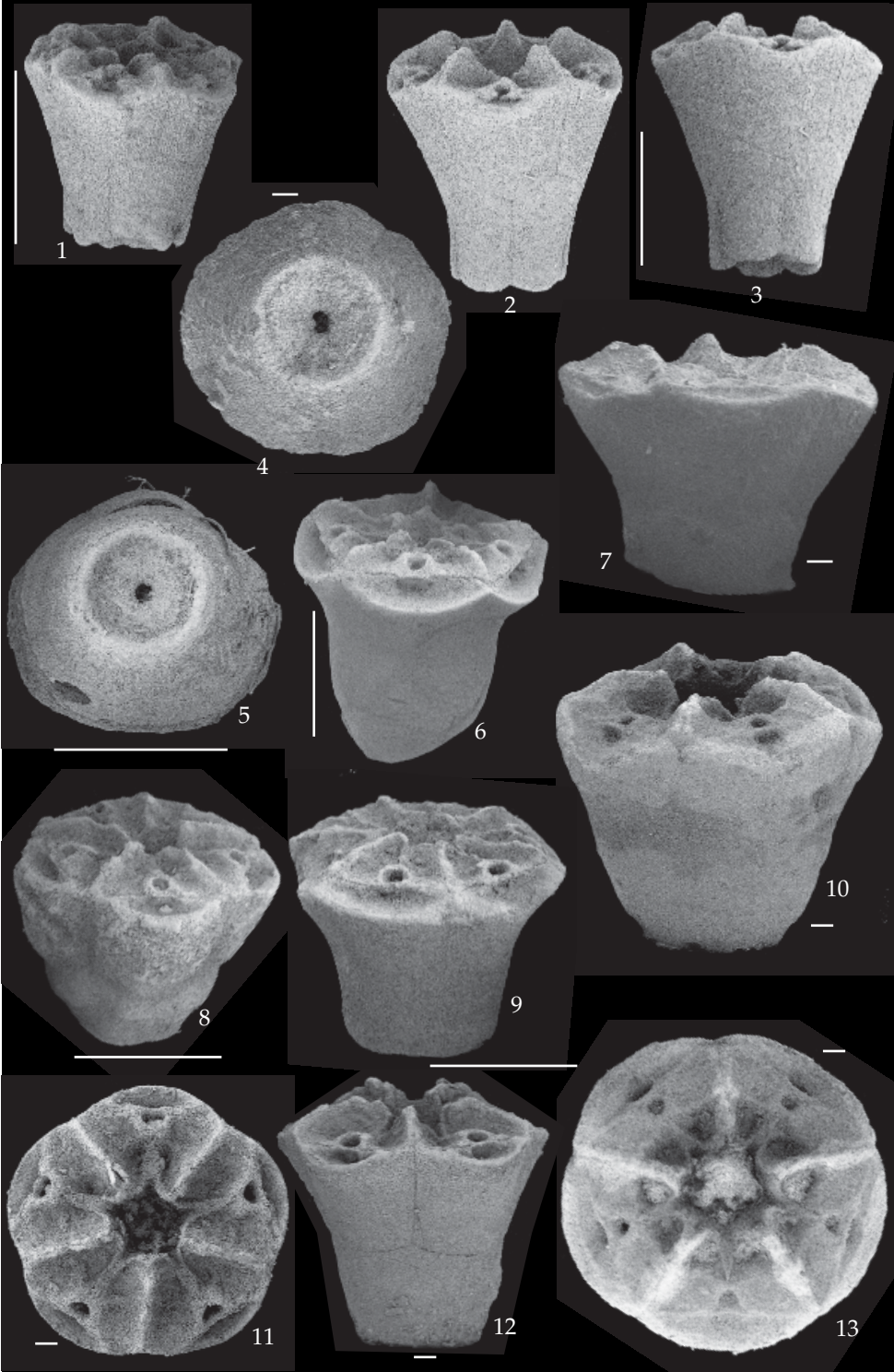


Plate 31

Fig. 1. *Bourgueticrinus* sp. 1 (?) (aff. *baculatus* Klikushin, 1982c); RGM 396 292 (ex Jagt Colln, no. 4854); preserving IBrr1; CPL SA quarry, Haccourt (Liège); Gulpen Formation, Zeven Wegen Member, top - 0/4 m.

Figs. 2-3, 5, 9, 11. *Bourgueticrinus?* *suedicus* (Carpenter, 1881)

2-3: RGM 396 293 (ex Jagt Colln, no. 8631); CBR-Lixhe quarry; Gulpen Formation, Zeven Wegen Member, belemnite level - 4 m.

5: RGM 396 294 (ex Jagt Colln, no. 10607); same locality and stratigraphy.

9: RGM 396 295 (ex Jagt Colln, no. 7884); CBR-Lixhe quarry (Liège); Gulpen Formation, Zeven Wegen Member, top crinoid level.

11: RGM 396 296 (ex Jagt Colln, no. 4894); CBR-Lixhe quarry (Liège); Gulpen Formation, Zeven Wegen Member, top - 0/6 m.

Figs. 4, 8, 10. *Bourgueticrinus* sp. 1 (aff. *baculatus* Klikushin, 1982c)

4: NHMM MB 761-39d; Heure-le-Romain (Liège); Gulpen Formation, Zeven Wegen Member, top - 8 m.

8: NHMM MB 808-17a; CPL SA quarry, Haccourt (Liège); Gulpen Formation, Zeven Wegen Member, base + 6/7 m.

10: NHMM MB 808-17b; same locality and stratigraphy (see also Pl. 32, fig. 10).

Figs. 6-7. *Bourgueticrinus* sp. 2.

6: NHMM MB 1044-8a; CPL SA quarry, Haccourt (Liège); Gulpen Formation, base Zeven Wegen Member.

7: NHMM MB 838-6b; Pesaken; Gulpen Formation, Beutenaken Member.

Scale bars equal 1 mm.

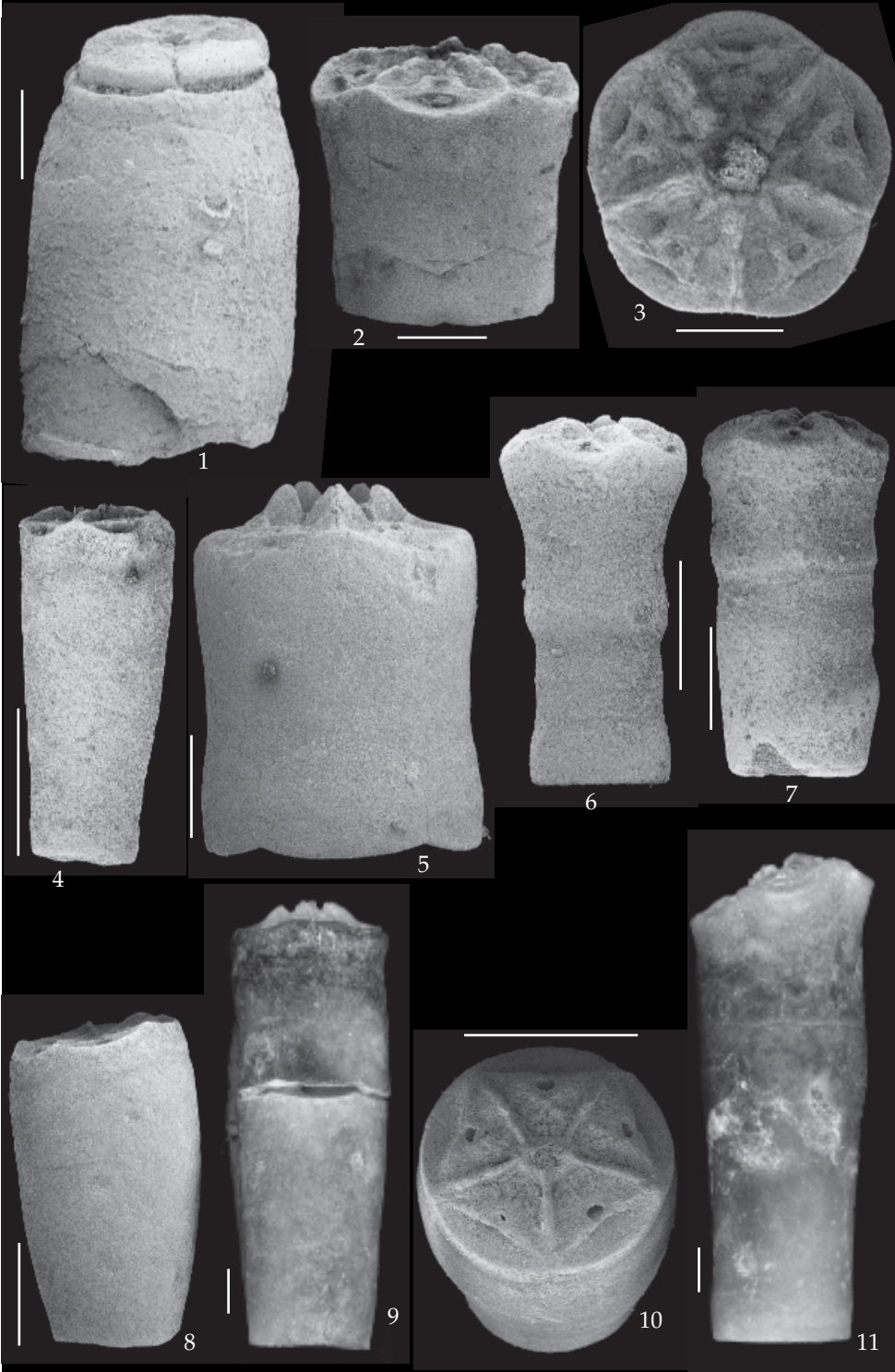


Plate 32

Figs. 1-4. *Bourgueticrinus* aff. *brydonei* Rasmussen, 1961

1-3: NHMM MD 2736; proximale; CPL SA quarry, Haccourt (Liège); Gulpen Formation, Lixhe 1 Member.

4: RGM 396 297 (ex Jagt Colln, no. 6983); proximale; CPL SA quarry, Haccourt (Liège); Gulpen Formation, Vijlen Member, base + 1.6 m.

Figs. 5-9, 11. *Bourgueticrinus constrictus* (von Hagenow, in Quenstedt, 1876)

5: NHMM MB 1239h; Mamelis-Selzerbeek; Gulpen Formation, lower Vijlen Member.

6: NHMM MB 1239i; same locality and stratigraphy.

7-8: NHMM MB 1239j; same locality and stratigraphy.

9: RGM 396 299 (ex Jagt Colln, no. 5951) (see also Pl. 36, fig. 7); CPL SA quarry, Haccourt (Liège); Gulpen Formation, Vijlen Member, base + 5/7 m.

11: RGM 396 298 (ex Jagt Colln, no. 6811); CPL SA quarry, Haccourt (Liège); Gulpen Formation, Vijlen Member + 1.5 m.

Fig. 10. *Bourgueticrinus* sp. 1 (aff. *baculatus* Klikushin, 1982c); NHMM MB 808-17b; CPL SA quarry, Haccourt (Liège); Gulpen Formation, Zeven Wegen Member, base + 6/7 m (see also Pl. 31, fig. 10).

Scale bars equal 1 mm.



Plate 33

Figs. 1-10. Indeterminate bourgueticrinid columnals of 'rhizocrinid' type. Scale bars equal 1 mm, except in fig. 5, where it represents 100 μm .

- 1: NHMM MB 284-8b; CPL SA quarry, Haccourt (Liège); Gulpen Formation, upper Vijlen Member.
- 2: NHMM MB 1044-8b; CPL SA quarry, Haccourt (Liège); Gulpen Formation, base Zeven Wegen Member.
- 3: NHMM MB 867-9a; CPL SA quarry, Haccourt (Liège); Gulpen Formation, Vijlen Member, top - c. 4 m.
- 4: RGM 396 302 (ex Jagt Colln, no. 3912); CPL SA quarry, Haccourt (Liège); Gulpen Formation, lower Lanaye Member.
- 5: RGM 396 300 (ex Jagt Colln, no. 4979b); CPL SA quarry, Haccourt (Liège); Gulpen Formation, Zeven Wegen Member, base + 9/10 m.
- 6: RGM 396 301 (ex Jagt Colln, no. 4979a); same locality and stratigraphy.
- 7: NHMM MB 1239k; Mamelis-Selzerbeek; Gulpen Formation, lower Vijlen Member.
- 8-9: NHMM MB 1239m; same locality and stratigraphy.
- 10: NHMM MB 1239l; radix on belemnite guard; same locality and stratigraphy.

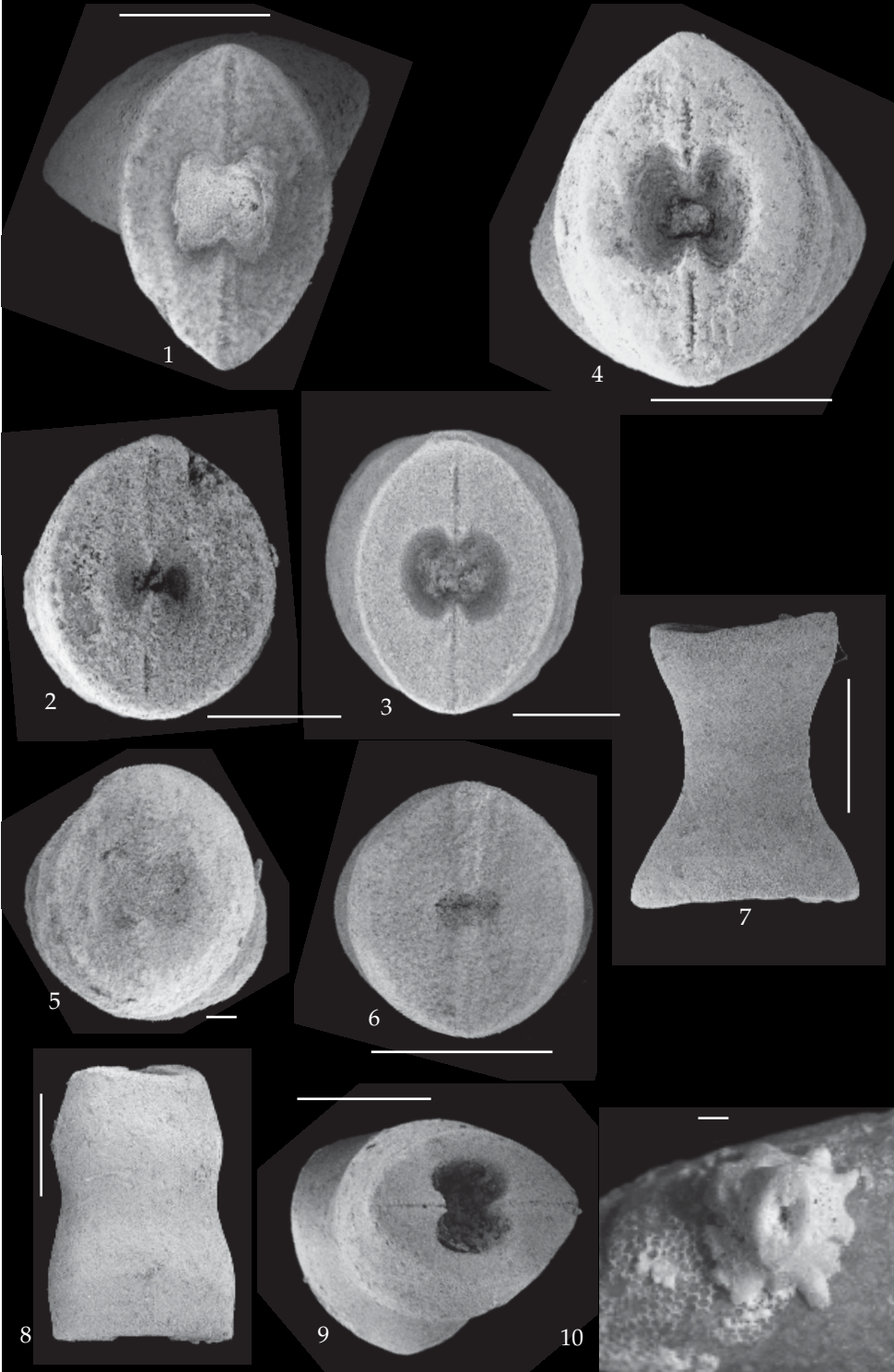


Plate 34

Figs. 1-2, 4-5, 7-9. Indeterminate bourgueticrinid columnals of 'bourgueticrinid' type.

1: RGM 396 303 (ex Jagt Colln, no. 3104); CPL SA quarry, Haccourt (Liège); Gulpen Formation, Vijlen Member, base + 2/3 m.

2: RGM 396 304 (ex Jagt Colln, no. 3388); CPL SA quarry, Haccourt (Liège); Gulpen Formation, Vijlen Member, base + 0-4 m.

4: RGM 396 311 (ex Jagt Colln, no. 2270a); CPL SA quarry, Haccourt (Liège); Gulpen Formation, Zeven Wegen Member, top - 0/5 m.

5: RGM 396 305 (ex Jagt Colln, no. 2270b); same locality and stratigraphy.

7: RGM 396 306 (ex Jagt Colln, no. 4898); CBR-Lixhe quarry (Liège); Gulpen Formation, Zeven Wegen Member, top - 0/6 m.

8: RGM 396 308 (ex Jagt Colln, no. 3533); CPL SA quarry, Haccourt (Liège); Gulpen Formation, Zeven Wegen Member, top - 0/8 m.

9: RGM 396 309 (ex Jagt Colln, no. 6365); Heure-le-Romain quarry (Liège); Gulpen Formation, Zeven Wegen Member, crinoid level.

Figs. 3, 6. Columnals of *Dunnicrinus aequalis* (d'Orbigny, 1841)

3: RGM 396 310 (ex Jagt Colln, no. 1019a); CBR-Romontbos quarry, Eben Emael (Liège); Gulpen Formation, Lanaye Member (12/13).

6: RGM 396 307 (ex Jagt Colln, no. 1019b); same locality and stratigraphy.

Scale bars equal 1 mm.

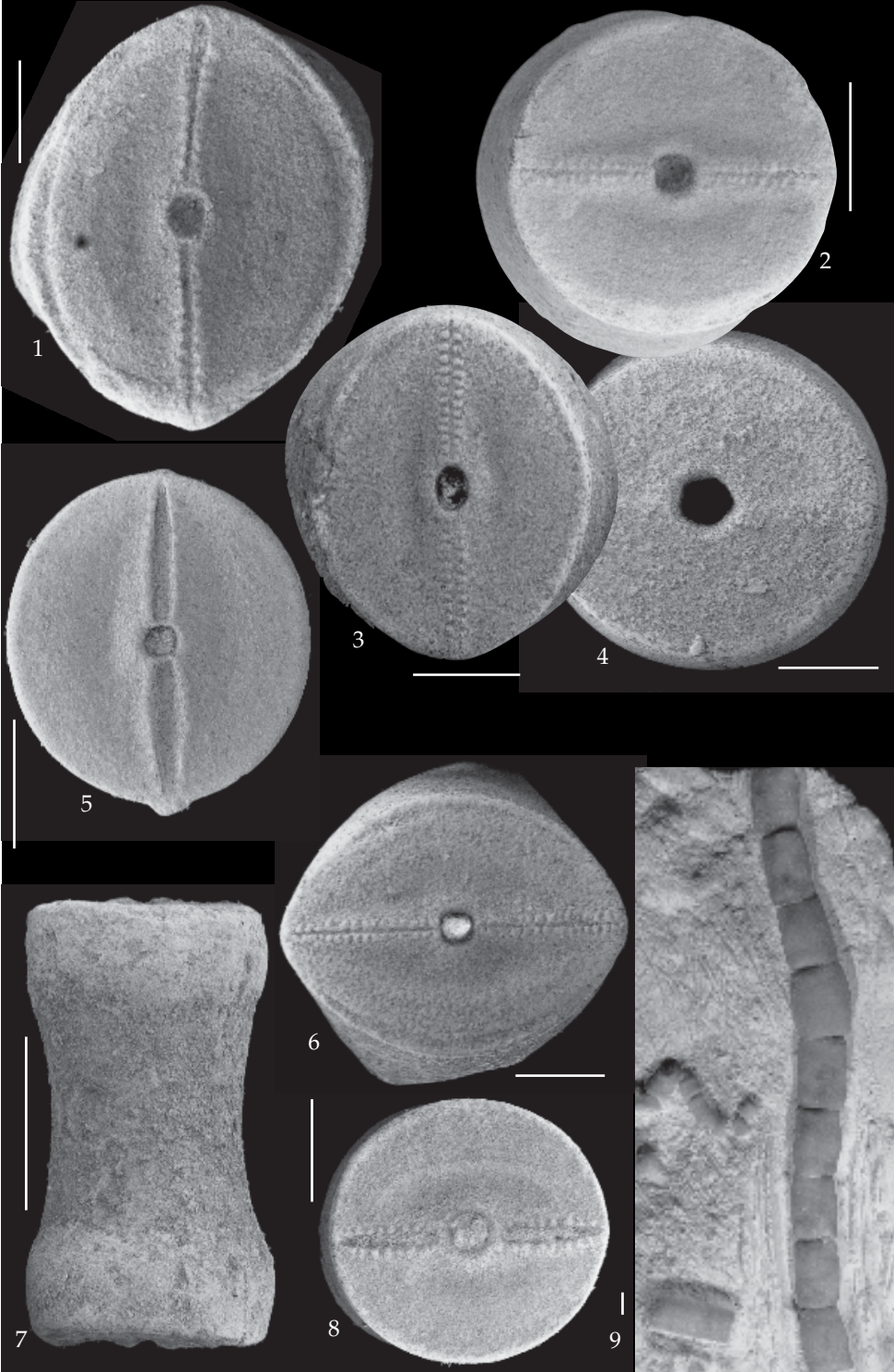


Plate 35

Figs. 1, 4. Indeterminate bourgueticrinid.

1: NHMM MB 918-2a; CPL SA quarry, Haccourt (Liège); Vaals Formation, upper part.

4: NHMM MB 918-2b; radicular cirrus; same locality and stratigraphy.

Figs. 2-3, 5-11. *Dunnocrinus aequalis* (d'Orbigny, 1841)

2: NHMM JJ 9138 (Jagt Colln); ENCI-Maastricht BV quarry, Maastricht; Maastricht Formation, base Gronsvelt Member.

3: NHMM MD 2248; 6-rayed specimen; same locality and stratigraphy.

5: NHMM MB 369a; sutures in proximale; disused Dalmen quarry, Eben Emael (Liège); Gulpen Formation, Lanaye Member.

6: NHMM MD 0965.4; showing predation traces; locality and stratigraphy as figs. 2-3.

7: NHMM MD 2245; tetramerous specimen; same locality and stratigraphy.

8-9: NHMM JJ 9335a (Jagt Colln); juvenile crown; same locality and stratigraphy.

10: NHMM MD 0965.7; showing predation traces, and preserving Br1; same locality and stratigraphy.

11: RGM 396 312 (ex Jagt Colln, no. 7756); showing predation traces; same locality and stratigraphy.

Scale bars equal 1 mm, except in fig. 1, where it represents 100 μm .

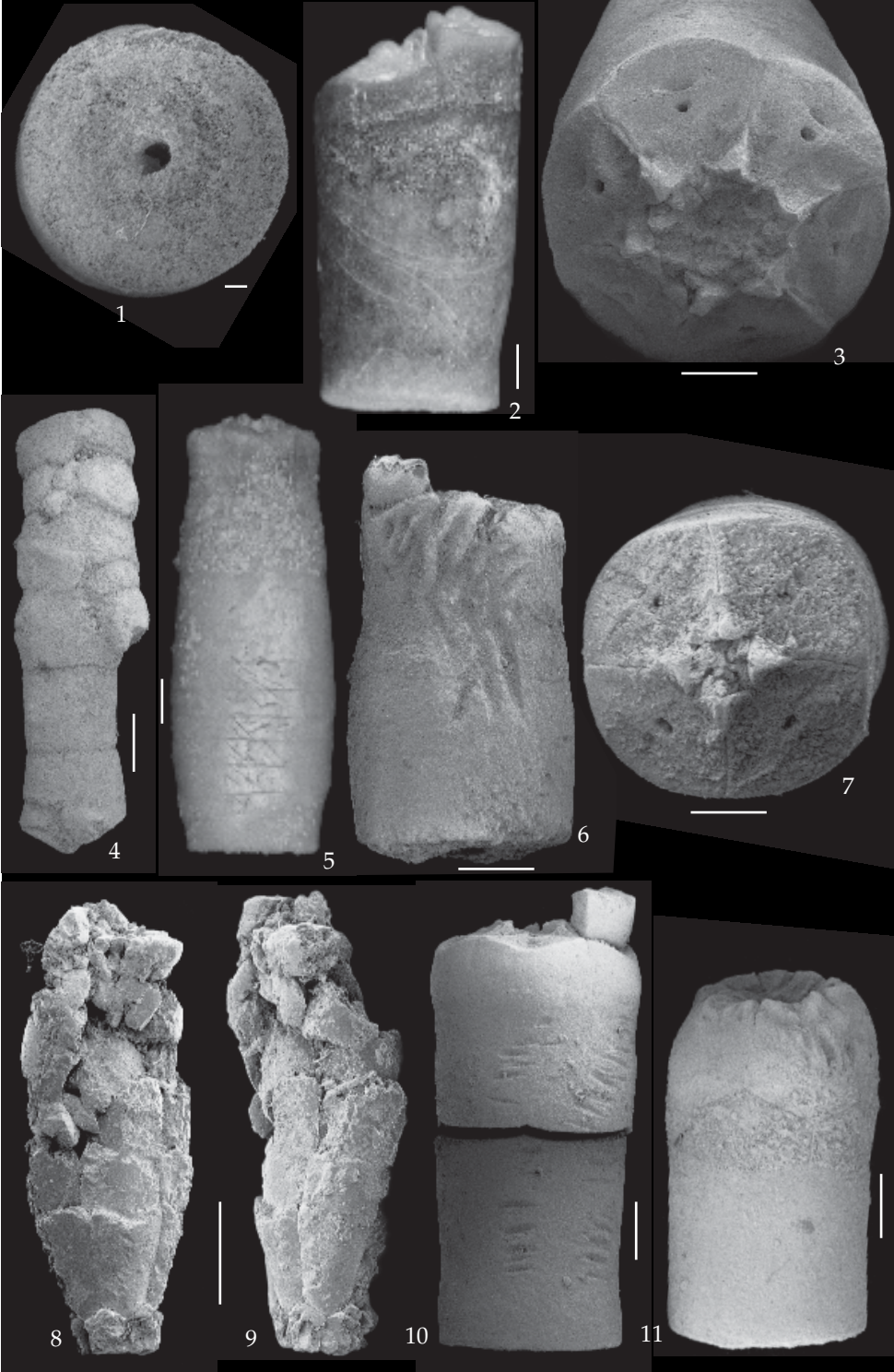


Plate 36

Figs. 1, 3, 9. *Dunnicrinus aequalis* (d'Orbigny, 1841)

1: NHMM 1997039 (ex Deckers Colln); arms and pinnules; ENCI-Maastricht BV quarry, Maastricht; Maastricht Formation, base Gronsveld Member.

3: NHMM 1997040 (ex Deckers Colln); arms and pinnules; same locality and stratigraphy.

9: NHMM 1997041 (ex Deckers Colln); arms and pinnules; same locality and stratigraphy.

Figs. 2, 4-8, 10-11. Indeterminate bourgueticrinid brachials.

2, 4: NHMM MB 867-9b; arms and pinnules; CPL SA quarry, Haccourt (Liège); Gulpen Formation, Vijlen Member, top - c. 4 m).

5: RGM 396 313 (ex Jagt Colln, no. 6371); Heure-le-Romain quarry (Liège); Gulpen Formation, Zeven Wegen Member, crinoid level.

6: NHMM MB 761-25a; arms and pinnules; Heure-le-Romain quarry (Liège); Gulpen Formation, Zeven Wegen Member, top - 8 m.

7: RGM 396 299 (ex Jagt Colln, no. 5951) (see also Pl. 32, fig. 9); CPL SA quarry, Haccourt (Liège); Gulpen Formation, Vijlen Member.

8: NHMM MB 284-6a; CPL SA quarry, Haccourt (Liège); Gulpen Formation, upper Vijlen Member.

10: NHMM MB 867-9c; locality and stratigraphy as figs. 2 and 4.

11: RGM 396 314 (ex Jagt Colln, no. 6914a); CPL SA quarry, Haccourt (Liège); Gulpen Formation, Zeven Wegen Member, crinoid level.

Scale bars equal 1 mm.

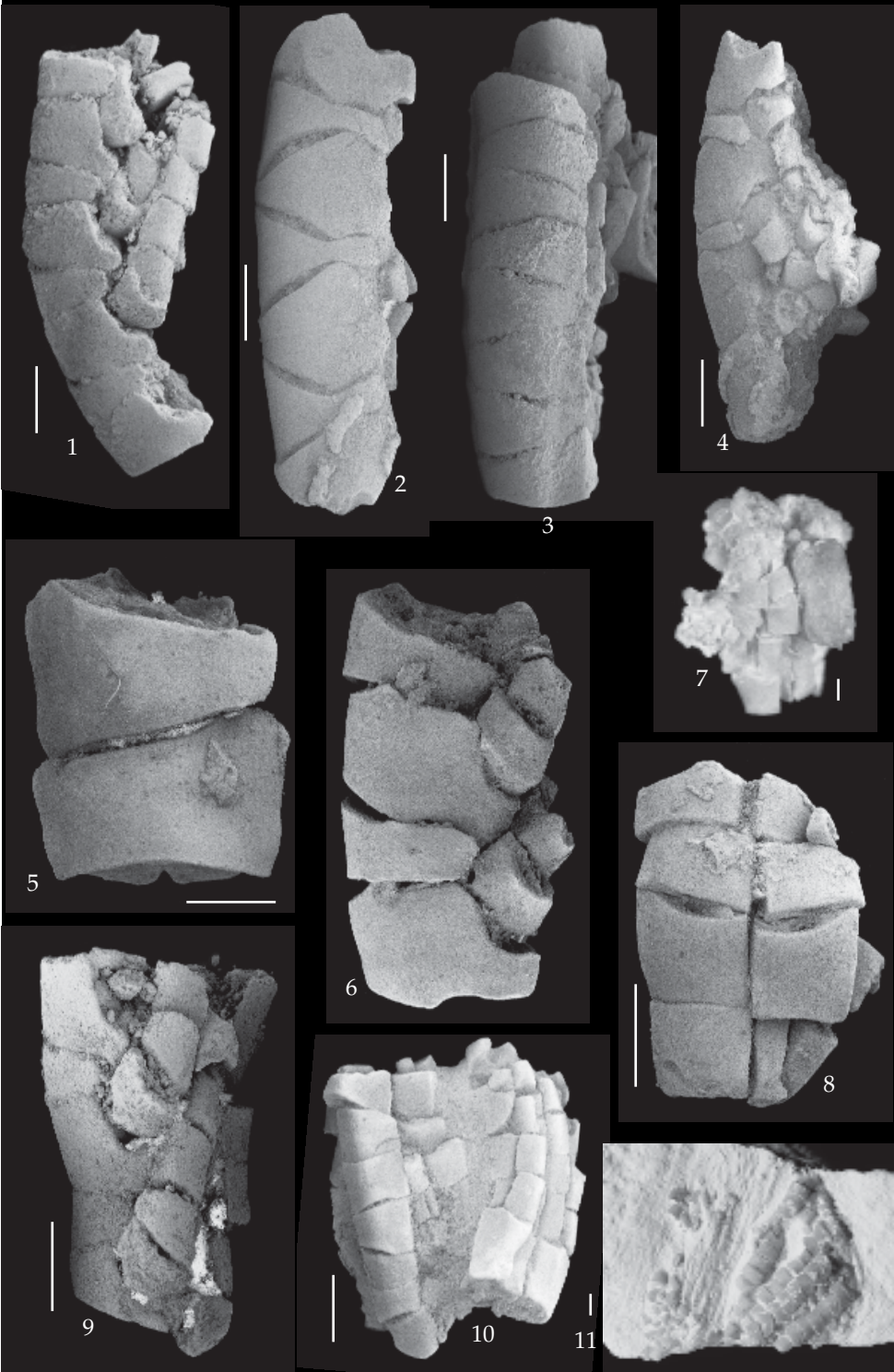


Plate 37

Figs. 1-3. *Dunnocrinus aequalis* (d'Orbigny, 1841); NHMM MD 2928; inner, oblique proximal and lateral views of radial, respectively; ENCI-Maastricht BV quarry, Maastricht; Maastricht Formation, base Gronsvelt Member.

Figs. 4-9. Indeterminate proximal bourgueticrinid brachials.

4: RGM 396 315 (ex Jagt Colln, no. 6032a); CPL SA quarry, Haccourt (Liège); Gulpen Formation, Lixhe 2 Member.

5: NHMM MB 867-9d; oblique lateral view of axillary primibrachial (IBr2); CPL SA quarry, Haccourt (Liège); Gulpen Formation, Vijlen Member, top - c. 4 m.

6: RGM 396 318 (ex Jagt Colln, no. 6032b); secundibrachial (?); locality and stratigraphy as fig. 4.

7, 10: RGM 396 316 (ex Jagt Colln, no. 6032c); IBr2; same locality and stratigraphy.

8: RGM 396 317 (ex Jagt Colln, no. 6032d); Br2 (?); same locality and stratigraphy.

9: NHMM MB 1239n; lateral view of IBr2; Mamelis-Selzerbeek; Gulpen Formation, lower Vijlen Member.

Scale bars equal 1 mm, except in figs. 6 and 10, where it represents 100 μm .

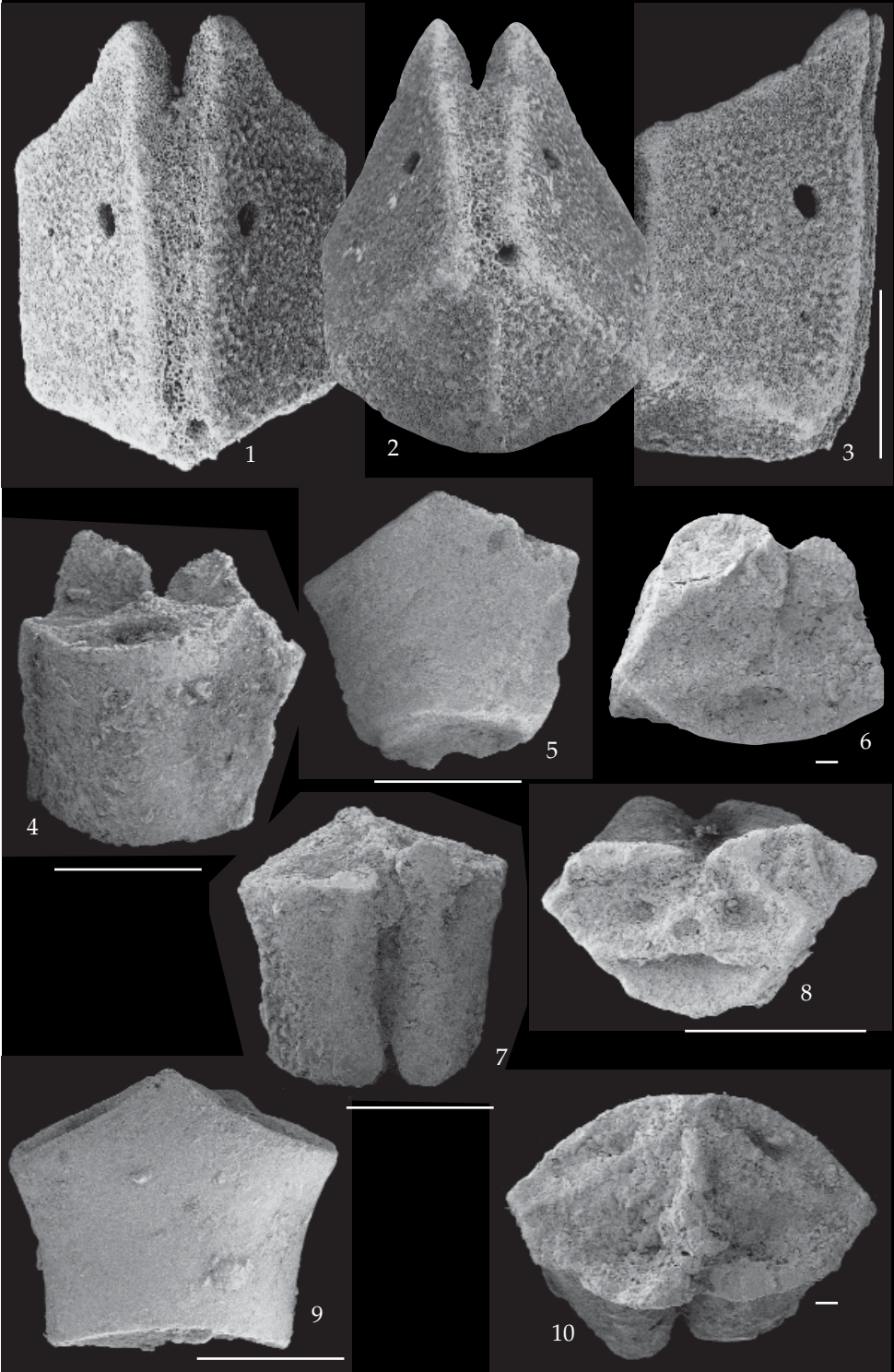


Plate 38

Figs. 1-4. *Dunnocrinus aequalis* (d'Orbigny, 1841)

- 1: RGM 396 319 (ex Jagt Colln, no. 9380a); inner view of Br3/4 (?); ENCI-Maastricht BV quarry, Maastricht; Maastricht Formation, base Gronsvelt Member.
- 2: RGM 396 322 (ex Jagt Colln, no. 9380b); cryptosyzygial proximal articular facet of proximal brachial; same locality and stratigraphy.
- 3: RGM 396 320 (ex Jagt Colln, no. 9380c); oblique distal view of muscular proximal brachial; same locality and stratigraphy.
- 4: RGM 396 321 (ex Jagt Colln, no. 9380d); distal view of muscular median brachial; same locality and stratigraphy.

Figs. 5-9. Bourgueticrinidae indet.

- 5: RGM 396 323 (ex Jagt Colln, no. 3579a); Br2 (with pinnular facet); CPL SA quarry, Haccourt (Liège); Gulpen Formation, Zeven Wegen Member, top - 0/8 m.
- 6: NHMM MB 1044-8c; cryptosyzygial articular facet of (? secundi)brachial; CPL SA quarry, Haccourt (Liège); Gulpen Formation, base Zeven Wegen Member.
- 7: NHMM MB 1044-8d; muscular (? secundi)brachial with pinnular facet; same locality and stratigraphy.
- 8: RGM 396 324 (ex Jagt Colln, no. 8168a); proximal synarthrial articular facet of Br1; CPL SA quarry, Haccourt (Liège); Gulpen Formation, Zeven Wegen Member, top - 0/5 m.
- 9: RGM 396 325 (ex Jagt Colln, no. 3579b); oblique proximal articulum of Br1; locality and stratigraphy as fig. 5.

Scale bars equal 1 mm, except in fig. 4, where it represents 100 μ m.

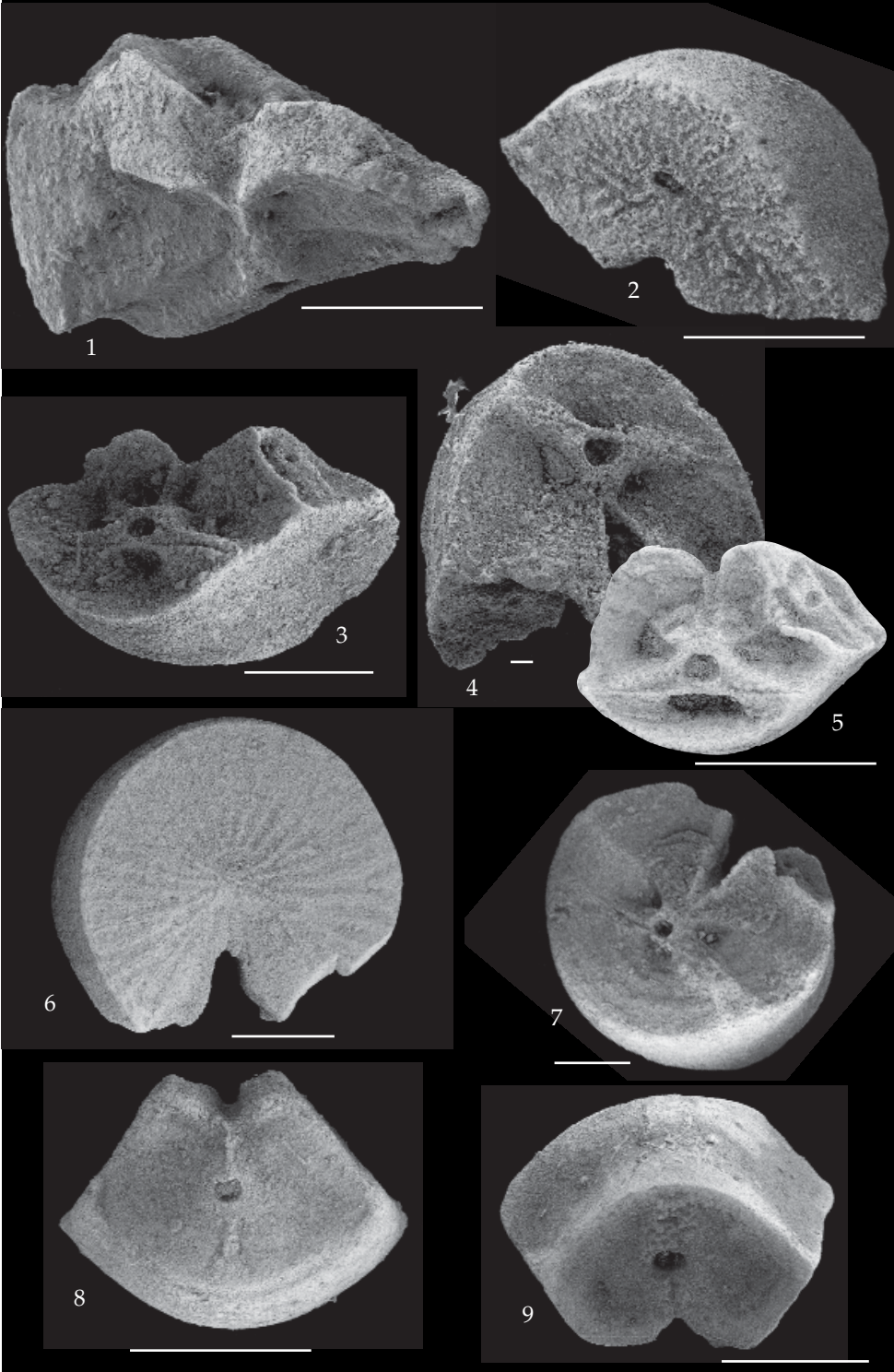


Plate 39

Figs. 1-11. *Applinocrinus cretaceus* (Bather, 1924). Scale bars equal 100 μm .

1-2, 4-5. NHMM JJ 10600/1-2; ventral and (oblique) lateral views; CBR-Romontbos quarry, Eben Emael (Liège); Gulpen Formation, Lanaye Member (20/21).

3, 6. NHMM MB 619-32; ventral and oblique lateral views; Benzenrade ('kapelletje'); Vaals Formation, Benzenrade Member.

7-8, 11. NHMM MB 1175a-c; Snouwenberg (Voer); Gulpen Formation, Vijlen Member.

9. NHMM JJ 10849 (leg. M. Kutscher); late Early Maastrichtian of Jasmund/Rügen (NE Germany).

10. NHMM JJ 10851 (leg. M. Kutscher); central spike; late Early Campanian of Ivö Klack (southern Sweden).

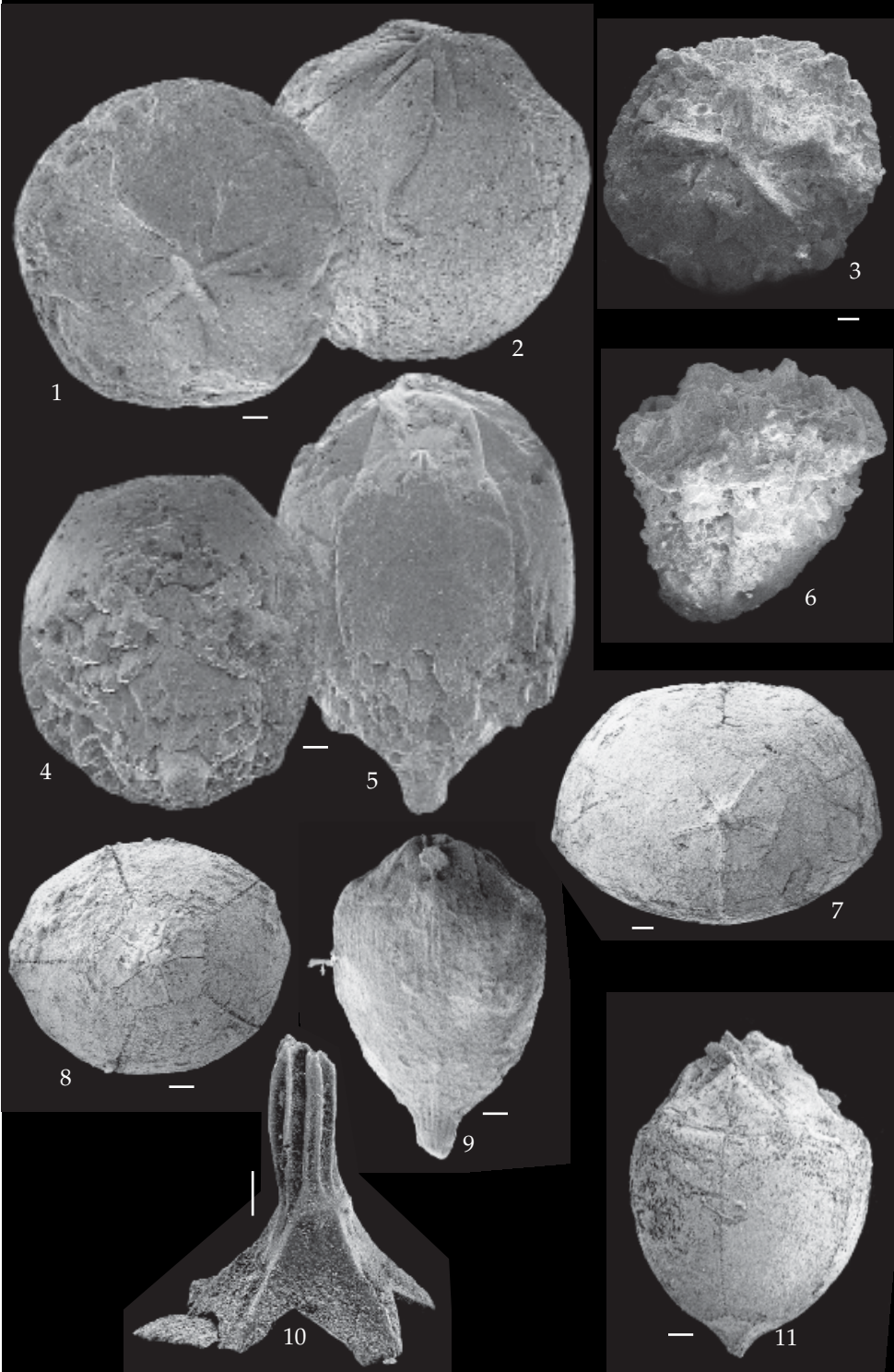


Plate 40

Figs. 1-4, 7-8. *Applinocrinus cretaceus* (Bather, 1924); RGM 396 326-396 331 (ex Jagt Colln, leg. M. Kutschner); late Early Maastrichtian of Jasmund/Rügen (NE Germany).

Figs. 5-6, 9. Indeterminate roveacrinid brachials; RGM 396 332-396 334 (ex Jagt Colln, no. 7280d-f); CPL SA quarry, Haccourt (Liège); Gulpen Formation, Zeven Wegen Member, top - 9.7/11.5 m.

Fig. 10. ? *Veugeliersia diana* gen. et sp. nov.; NHMM JJ 10848e (sample CPL 2), isolated radial; CPL SA quarry, Haccourt (Liège); Gulpen Formation, lower Zeven Wegen Member.

Scale bars equal 100 μm .

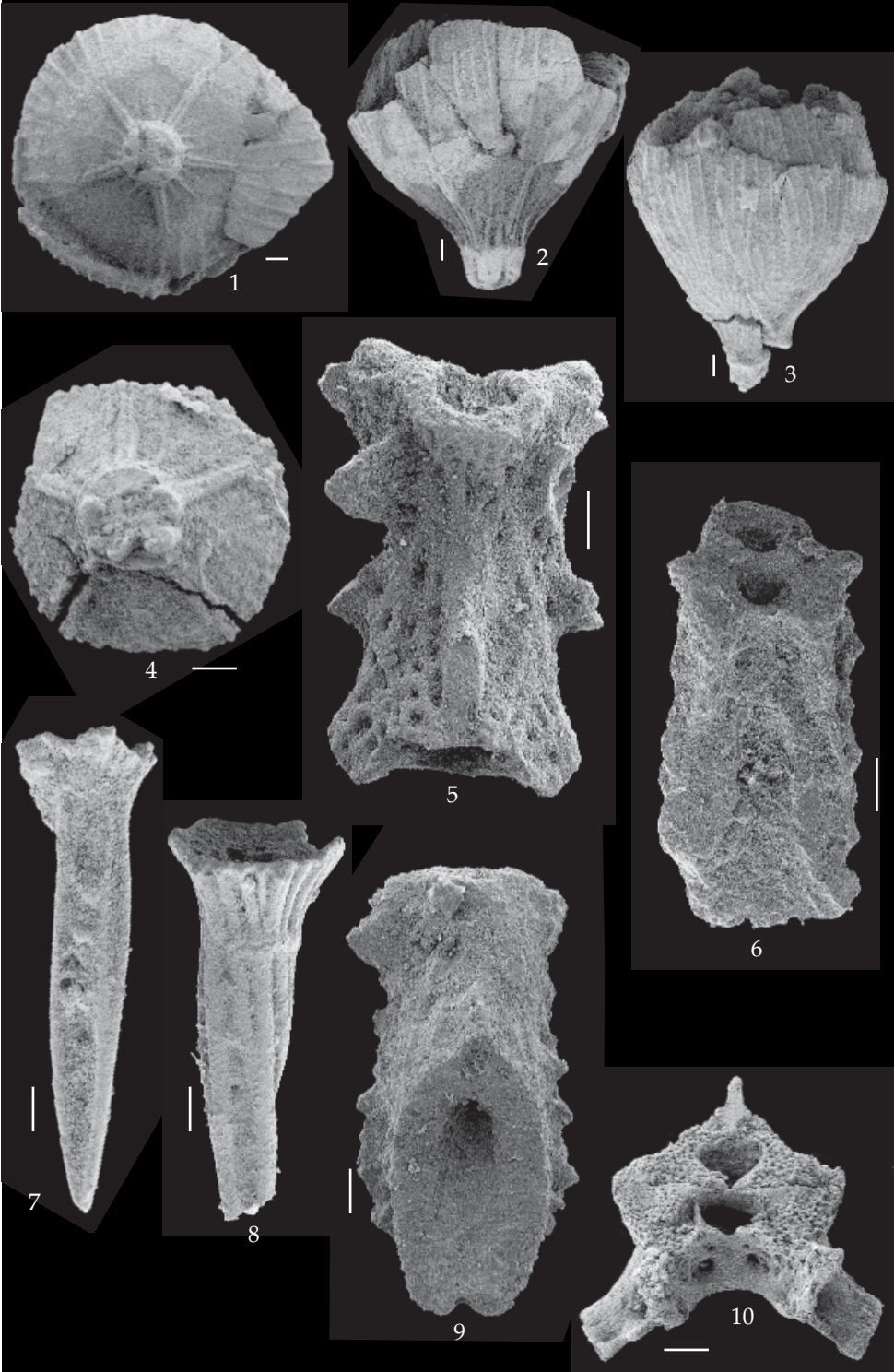


Plate 41

Figs. 1-10. Indeterminate roveacrinid proximal brachials. Scale bars equal 100 μm .

- 1: NHMM MB 619-31c; Benzenrade ('kapelletje'); Vaals Formation, Benzenrade Member.
- 2: NHMM MB 619-31f; IBr2; same locality and stratigraphy.
- 3: NHMM MB 619-31e; IBr2; same locality and stratigraphy.
- 4: NHMM MB 619-31d; same locality and stratigraphy.
- 5: NHMM MB 619-31b; same locality and stratigraphy.
- 6: NITG-TNO (Heerlen; Vergoossen Colln, no. 11430); IBr2; same locality and stratigraphy.
- 7: NHMM JJ 10848b (sample CPL 2); IBr2; CPL SA quarry, Haccourt (Liège); Gulpen Formation, lower Zeven Wegen Member.
- 8: NHMM JJ 10848a; IBr2; same locality and stratigraphy.
- 9: NHMM JJ 10848c; same locality and stratigraphy.
- 10: NHMM JJ 10848d; same locality and stratigraphy.

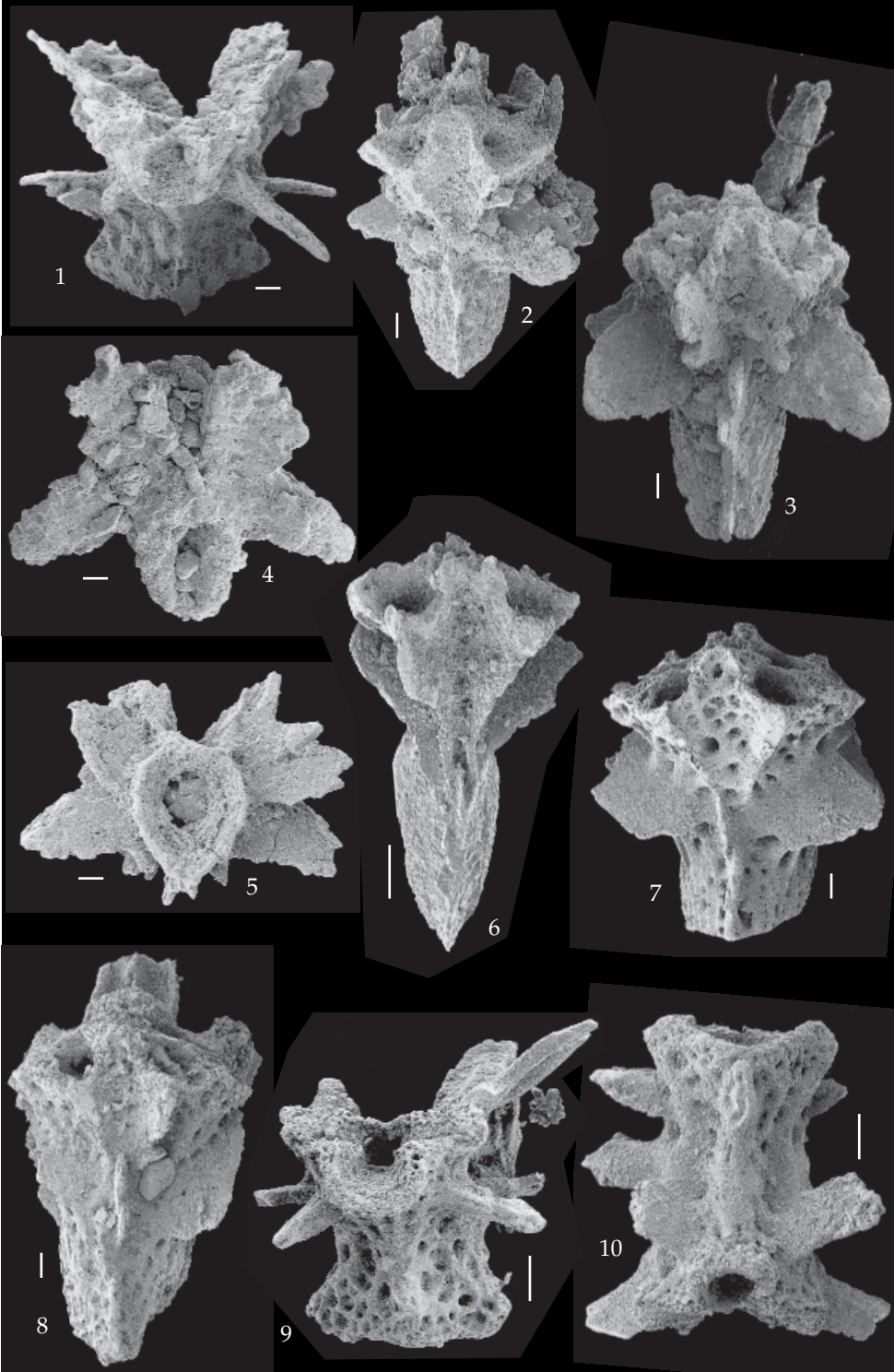


Plate 42

Figs. 1-2, 4. Indeterminate roveacrinid brachials.

1: NHMM MB 619-31a; Benzenrade ('kapelletje'); Vaals Formation, Benzenrade Member.

2: RGM 396 335 (ex Jagt Colln, no. 10850); CPL SA quarry, Haccourt (Liège); Vaals Formation, upper part.

4: NHMM JJ 4110a; IBr1, IBr2, IIBr1-4 in association; CPL SA quarry, Haccourt (Liège); Gulpen Formation, Zeven Wegen Member, top - 0/4 m.

Figs. 3, 5-10. *Birgelenocrinus degraafi* gen. et sp. nov.

3: NHMM MB 506-15a; RW 76 motorway outcrops; Maastricht Formation, Kunrade Limestone facies.

5, 7: NHMM MB 506-15c; same locality and stratigraphy.

6: NHMM MB 506-15b; same locality and stratigraphy.

8: NHMM MB 506-15d; same locality and stratigraphy.

9: NHMM MB 506-15e; same locality and stratigraphy.

10: NHMM MB 506-15f (inadvertently destroyed); same locality and stratigraphy.

Scale bars equal 100 μ m.

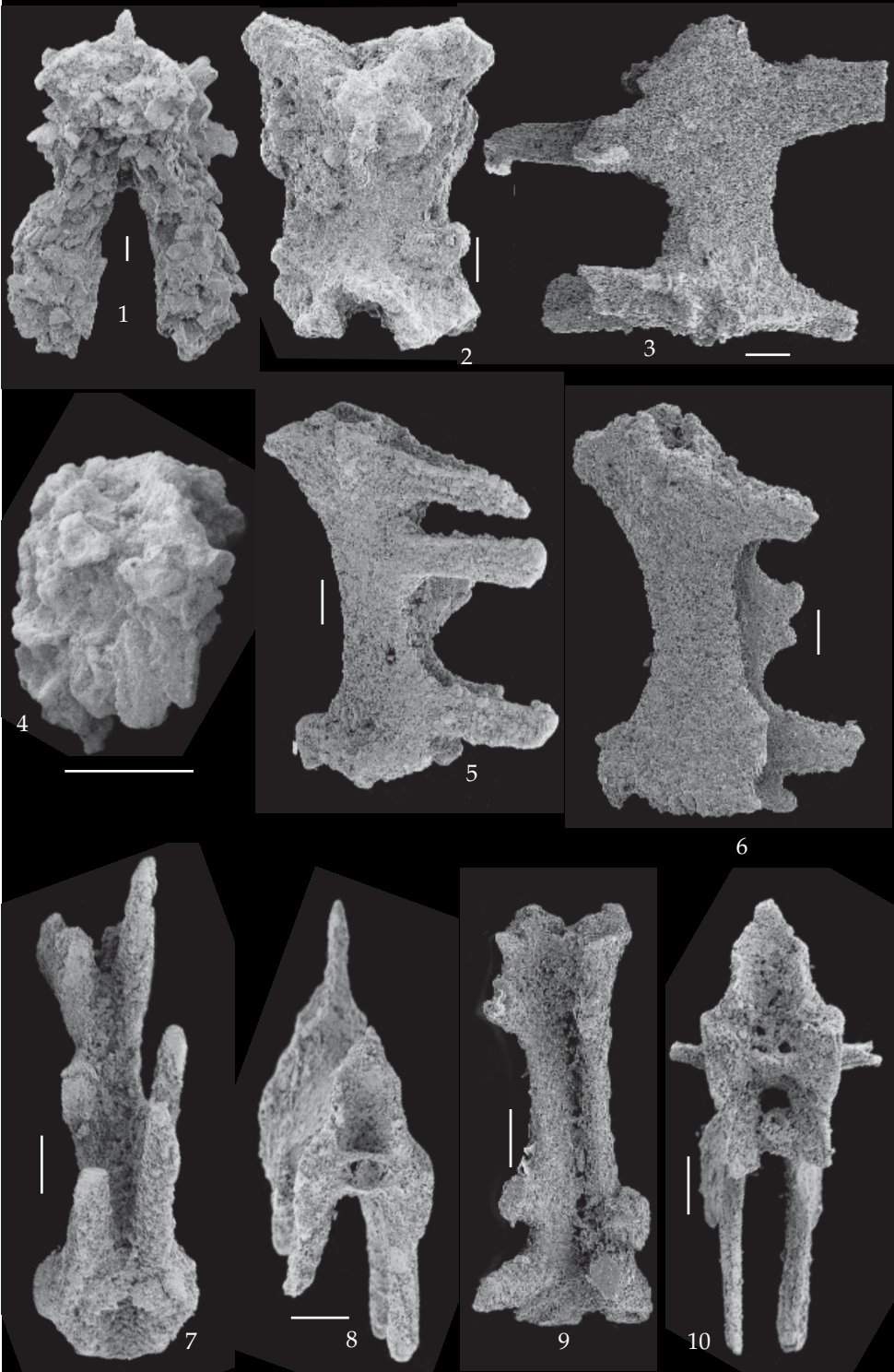


Plate 43

Figs. 1-9. *Birgelenocrinus degraafi* gen. et sp. nov. Scale bars equal 100 μ m.

1: NHMM MB 506-15j (**paratype**); RW 76 motorway outcrops, Kunrade; Maastricht Formation, Kunrade Limestone facies.

2, 5: NHMM MB 506-15i (**holotype**); same locality and stratigraphy.

3: RGM 396 336 (ex Jagt Colln, no. 9335b) (**paratype**); ENCI-Maastricht BV quarry, Maastricht; Maastricht Formation, base Gronsveld Member.

4: NHMM JJ 9543a (**paratype**); ENCI-Maastricht BV quarry; Maastricht Formation, base Emael Member.

6: NHMM JJ 9543b (**paratype**); same locality and stratigraphy.

7: NHMM MB 506-15g (**paratype**); locality and stratigraphy as figs. 1-2 and 5.

8: NHMM MB 506-15h (**paratype**); same locality and stratigraphy.

9: NHMM JJ 9543c (**paratype**); locality and stratigraphy as figs. 4 and 6.

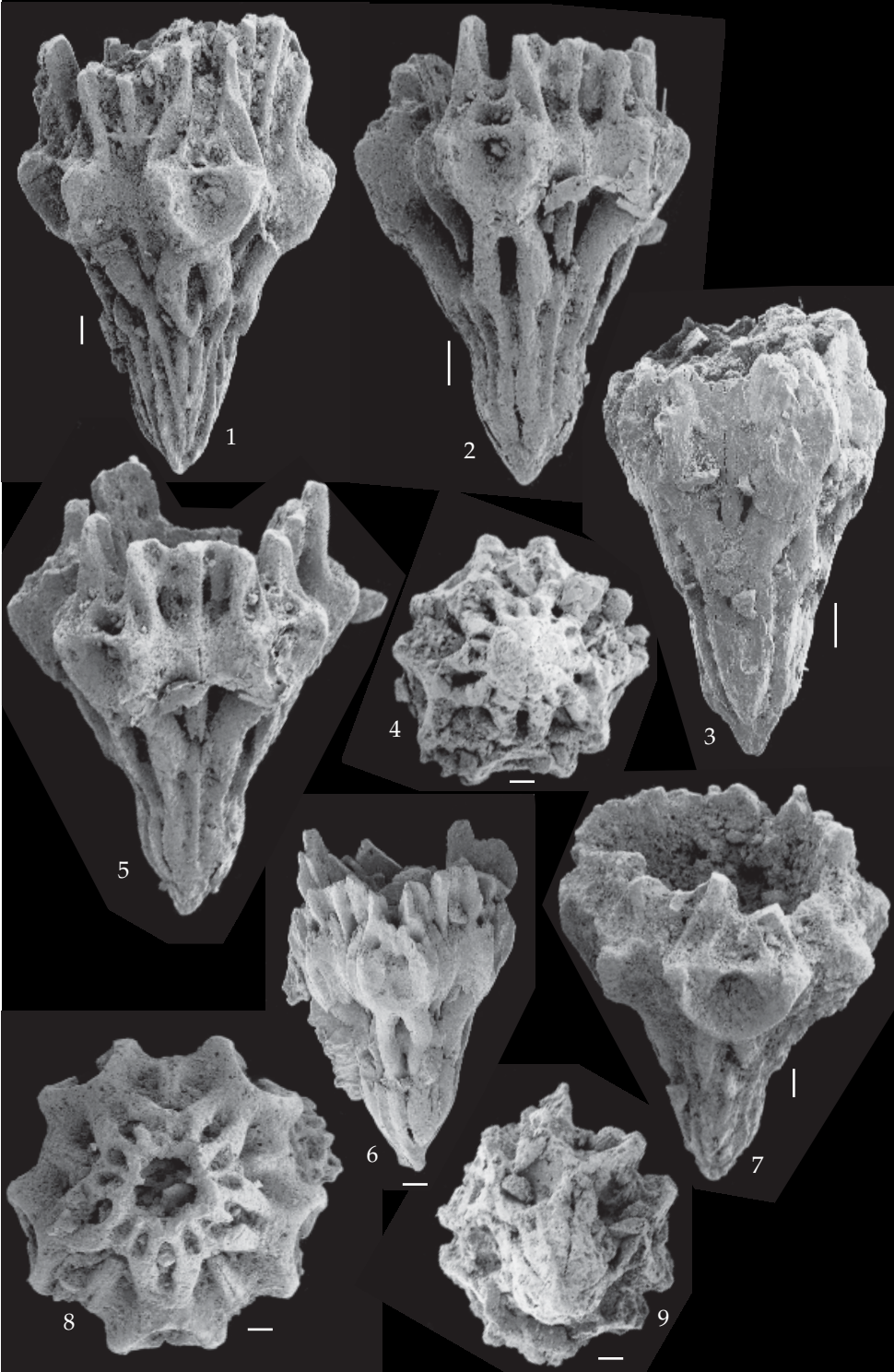


Plate 44

Figs. 1-7. *Birgelenocrinus degraafi* gen. et sp. nov. Scale bars equal 100 μ m.

- 1: NHMM MB 506-15k (**paratype**); RW 76 motorway outcrops, Kunrade; Maastricht Formation, Kunrade Limestone facies.
- 2: NHMM JJ 5125b (**paratype**); ENCI-Maastricht BV quarry, Maastricht; Maastricht Formation, Meerssen Member (IVf-5/6).
- 3: NHMM JJ 5152a (**paratype**); same locality and stratigraphy.
- 4: NHMM JJ 9543d (**paratype**); ENCI-Maastricht BV quarry, Maastricht; Maastricht Formation, base Emael Member.
- 5: NHMM MB 506-15j; detail of Pl. 43, fig. 1.
- 6: NHMM JJ 9543 (**paratype**); locality and stratigraphy as fig. 4.
- 7: NHMM MB 506-15i; detail of Pl. 43, figs. 2 and 5.

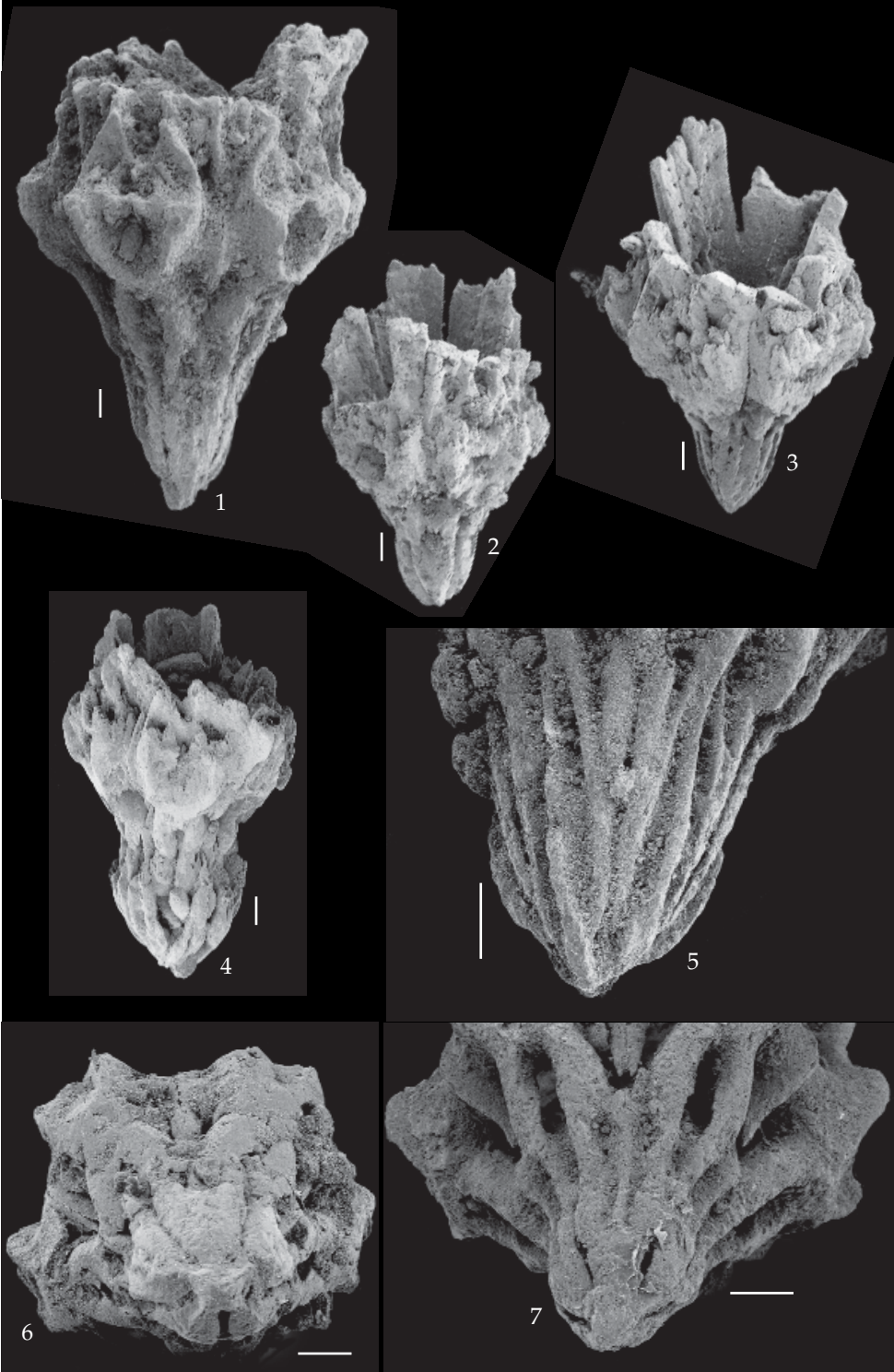


Plate 45

Figs. 1-8. *Veugeliersia diana* gen. et sp. nov. Scale bars equal 100 μm , except in figs. 5-6, where they represent 1 mm.

1-2: NHMM MB 517-1a (**holotype**); Ankerpoort-Nekami quarry, Bemelen; Maastricht Formation, base Emael Member.

3: NHMM MB 517-1b (**paratype**); same locality and stratigraphy.

4, 6: NHMM MB 619-9a (**paratype**); Benzenrade ('kapelletje'); Vaals Formation, Benzenrade Member.

5: NHMM MB 619-9b (**paratype**); same locality and stratigraphy.

7: NHMM MB 865-17c (**paratype**) (see also Pl. 46, fig. 5); de Wingerd quarry; Vaals Formation, Benzenrade Member.

8: NHMM MB 865-25a (**paratype**); same locality and stratigraphy.

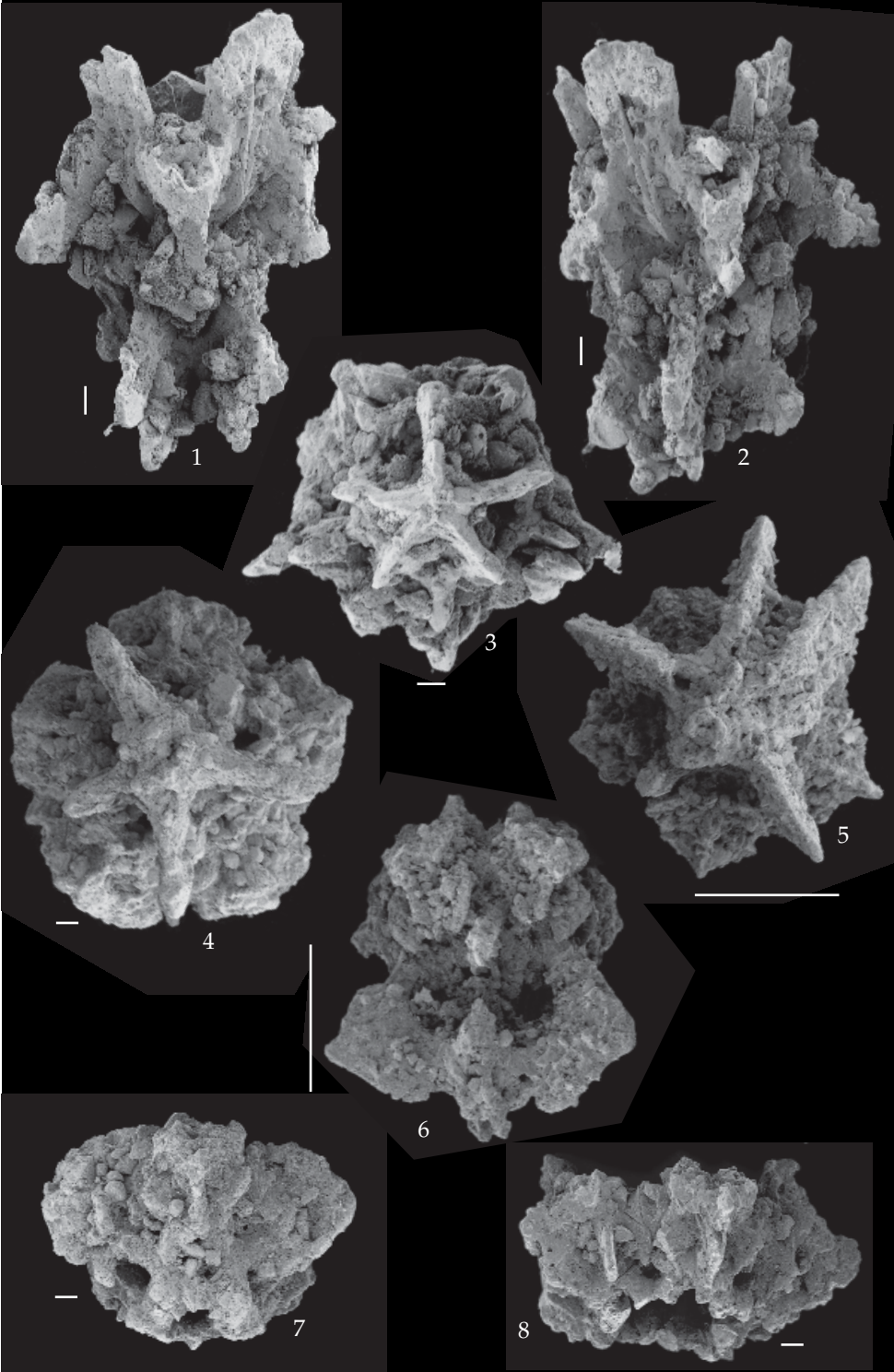


Plate 46

Figs. 1-5. *Veugelersia diana* gen. et sp. nov. Scale bars equal 100 μm .

- 1: NHMM MB 865-17a (**paratype**); de Wingerd quarry; Vaals Formation, Benzenrade Member.
- 2: NHMM MB 865-17b (**paratype**); same locality and stratigraphy.
- 3: NHMM MB 865-25b (**paratype**); same locality and stratigraphy.
- 4: NHMM MB 865-25c (**paratype**); same locality and stratigraphy.
- 5: NHMM MB 865-17c (**paratype**) (see also Pl. 45, fig. 7); same locality and stratigraphy.

