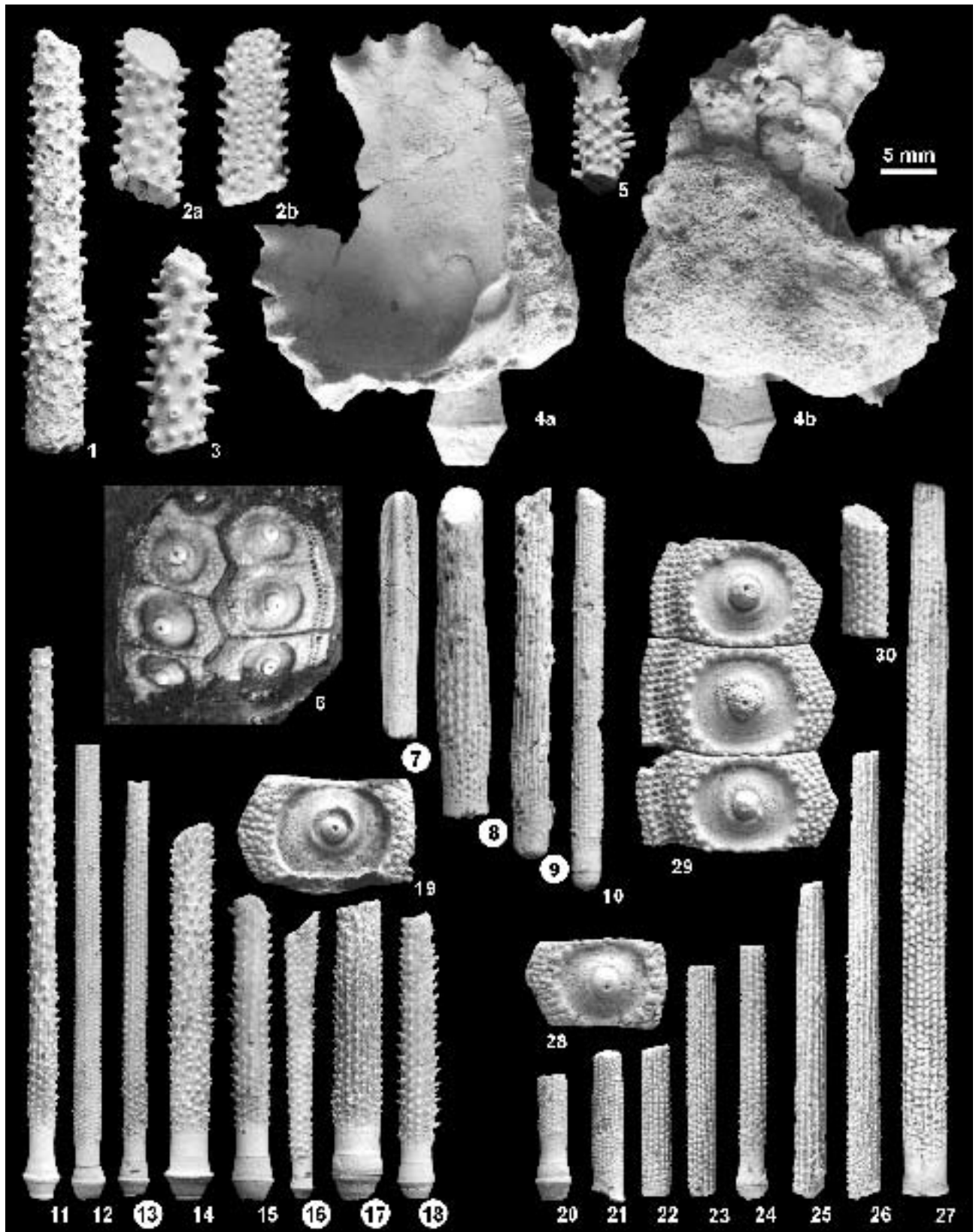
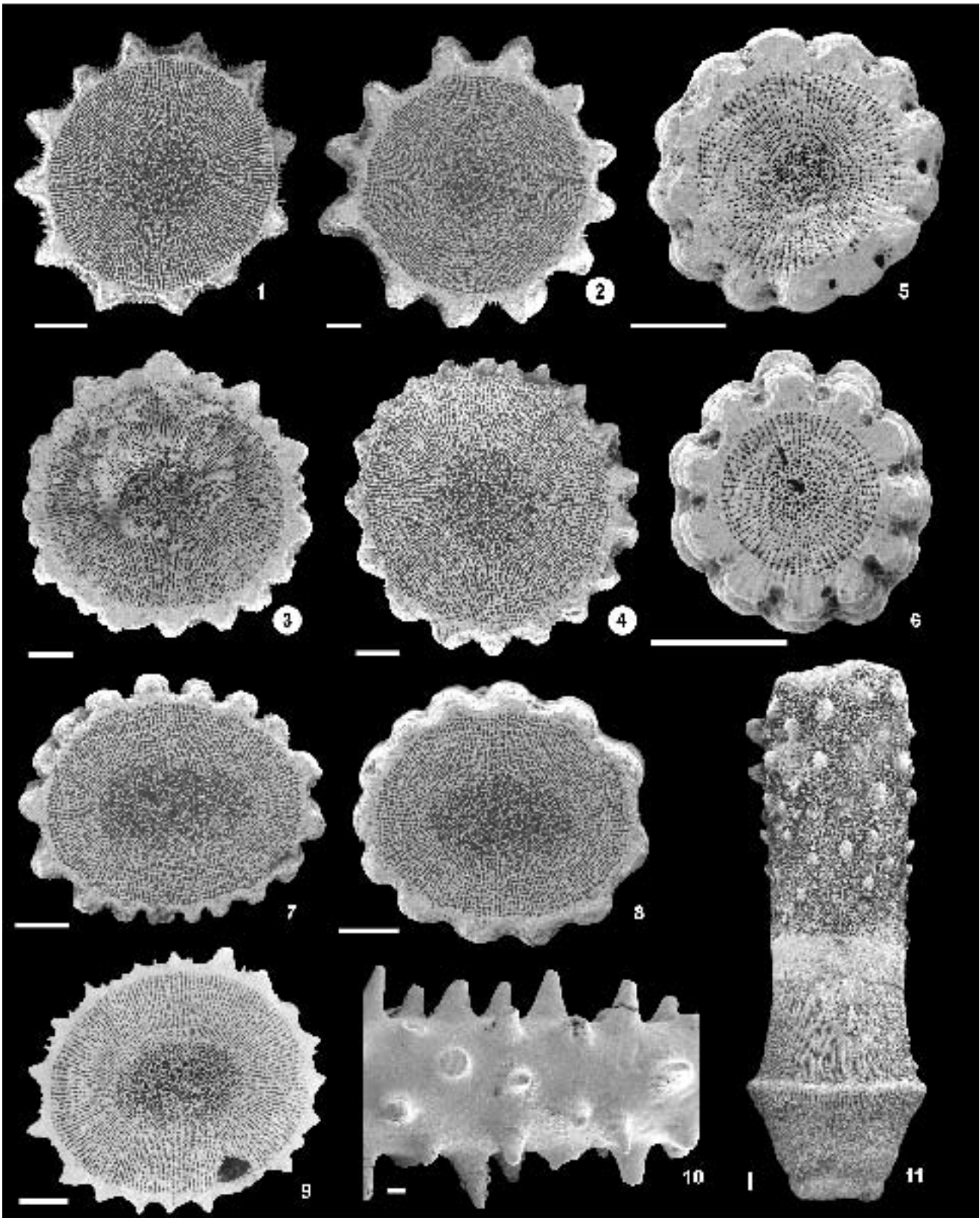


Plates 1–82



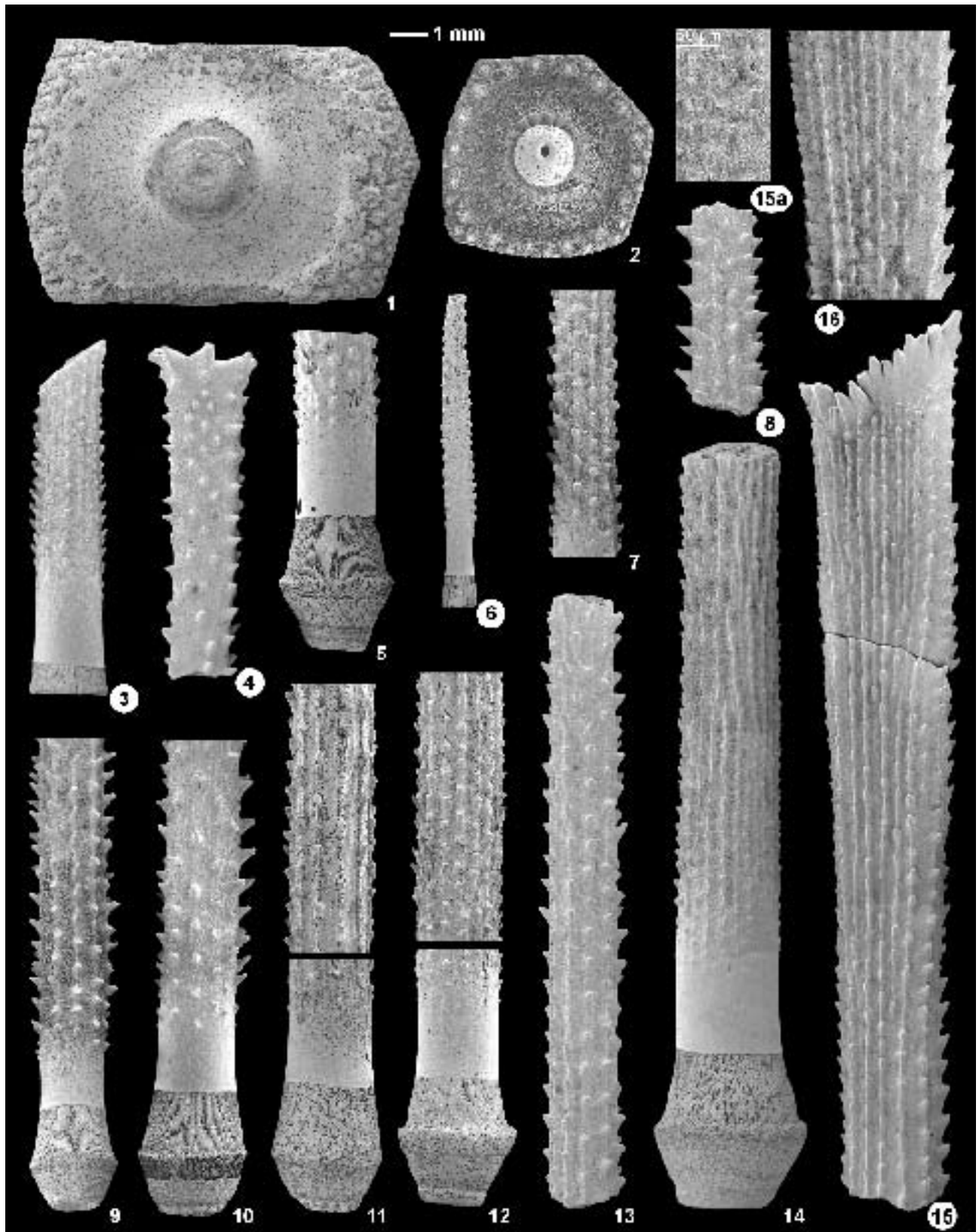
Prionocidaris sismondai (MAYER, 1864): 1: Rauchstallbrunngraben, NÖ (NHMW 1997z0178/0904); 2-5: Großhöflein, NÖ [NHMW 2004z0004/0001a-d (2: d, 3: c, 4: a, 5: b)]; *Cidarinae* sp. indet. (Ottangian type): 6: Allerding, OÖ (coll. DANNINGER); 7-9: Höch, SW Passau, Germany [NHMW 1990/1487/229a-c (7: a, 8: c, 9: b)]; 10: Mitterndorf, OÖ (NHMW 1986/102/37); *Stylocidaris ? polyacantha* (REUSS, 1860): 11: Bad Vöslau, NÖ (NHMW 2004z0001/0002a); 12, 14-15: Baden, NÖ [NHMW 1997z0178/0899a-c (12: a, 14: b, 15: c)]; 13, 16-18: Hrušovany, CZ [13, 17-18: NHMW 1981/56/3a-c (13: a, 17: b, 18: c); 16: NHMW 1997z0178/0740a]; 19: Bad Vöslau, NÖ (NHMW 2004z0001/0002b); *Stylocidaris ? schwabenauai* (LAUBE, 1869): 20-26: Winden, Bgld [20-21: NHMW 2004z0004/0002a-b (20: a, 21: b), 22-26: NHMW 1997z0178/1936a-e (22: c, 23: d, 24: a, 25: b, 26: e)]; 27: Walbersdorf, Bgld (NHMW 2004z0001/0001); 28: Großhöflein, NÖ (NHMW 2004z0004/0002); 29-30: Winden, Bgld (29: NHMW 1997z0178/1683a-c, 30: NHMW 2004z0004/0002c)

All specimens (except fig. 6) coated with ammonium chloride



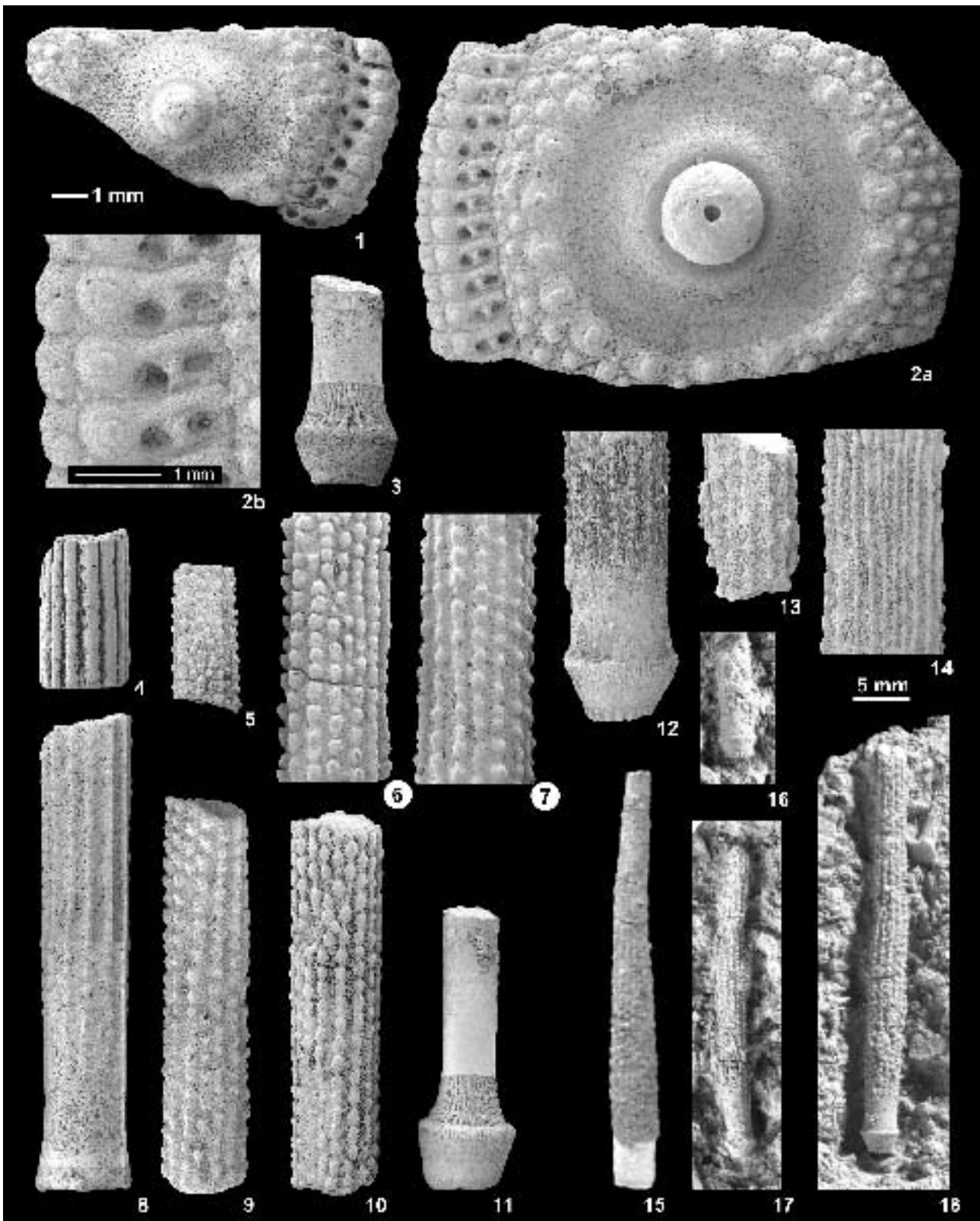
Stylocidaris? polyacantha (REUSS, 1860): 1: primary spine cross section (SEM), Baden, NÖ (NHMW 2004z0001/0063e); 2: primary spine cross section (SEM), Hrušovany (= Grusbach), CZ (NHMW 1981/56/3); *Stylocidaris? schwabenaui* (LAUBE, 1869): 3-4: primary spine cross section (SEM), Devínska Nová Ves, SK (3: NHMW 1868.VIII.27f, 4: NHMW 1868.VIII.27b); *Eucidaris zeamays* (SISMONDA, 1842): 5: primary spine cross section (SEM), Gainfarn, NÖ (NHMW 2003z0076/0012); 6: primary spine cross section (SEM), Forchtenau, Bgld (NHMW 1997z0178/1328a); *Cidarinae* sp. indet. (Ottangian type): 7-8: primary spine cross section (SEM), Rainbach, OÖ (7: NHMW 2004z0002/0002d, 8: NHMW 2004z0002/0002c); *Plegiocidaris? peroni* (COTTEAU, 1877): 9: primary spine cross section (SEM), Unternalb, near Retz, NÖ (NHMW 1999z0051/0015, AO of KROH & HARZHAUSER, 1999: pl. 7, fig. 2); *Prionocidaris sismondai* (MAYER, 1864): 10: primary spine (detail of shaft, SEM), Großhöflein, NÖ (NHMW 2004z0004/0001c); 11: primary spine (base, SEM), Großhöflein, NÖ (NHMW 2003z0081/0051)

Scale bars equal 0.5 mm



Stylocidaris? polyacantha (Reuss, 1860): 1: ambital interambulacral plate, Baden, NÖ (GBA coll.); 2: adapical interambulacral plate, note crenulation, Bad Vöslau, NÖ (NHMW 2004z0001/0012b); 3-4, 6, 8: primary and secondary (6) spines; Kinitz, CZ [NHMW 2004z0001/0017a-d (3: b, 4: a, 6: d, 8: c)]; 5: primary spine (base), Baden, NÖ (NHMW 2004z0001/0063a); 7, 9: primary spine (prox.), Hrušovany, CZ (NHMW 1981/56/3); 10: primary spine (prox.), note crenulation, Bad Vöslau, NÖ (NHMW 2004z0001/0012a); 11, 12: base + shaft of primary spines, note crenulation in fig. 11, Baden, NÖ (11: NHMW 1866.I.131, 12: NHMW 1846.37.952a); 13, 14: primary spines, distal (13) and proximal (14) part, Baden, NÖ (GBA coll.); 15-16: distal part of primary spines, 15a is a detail of the cortical hair of the specimen figured in as 15, Hrušovany, CZ (NHMW 1981/56/3)

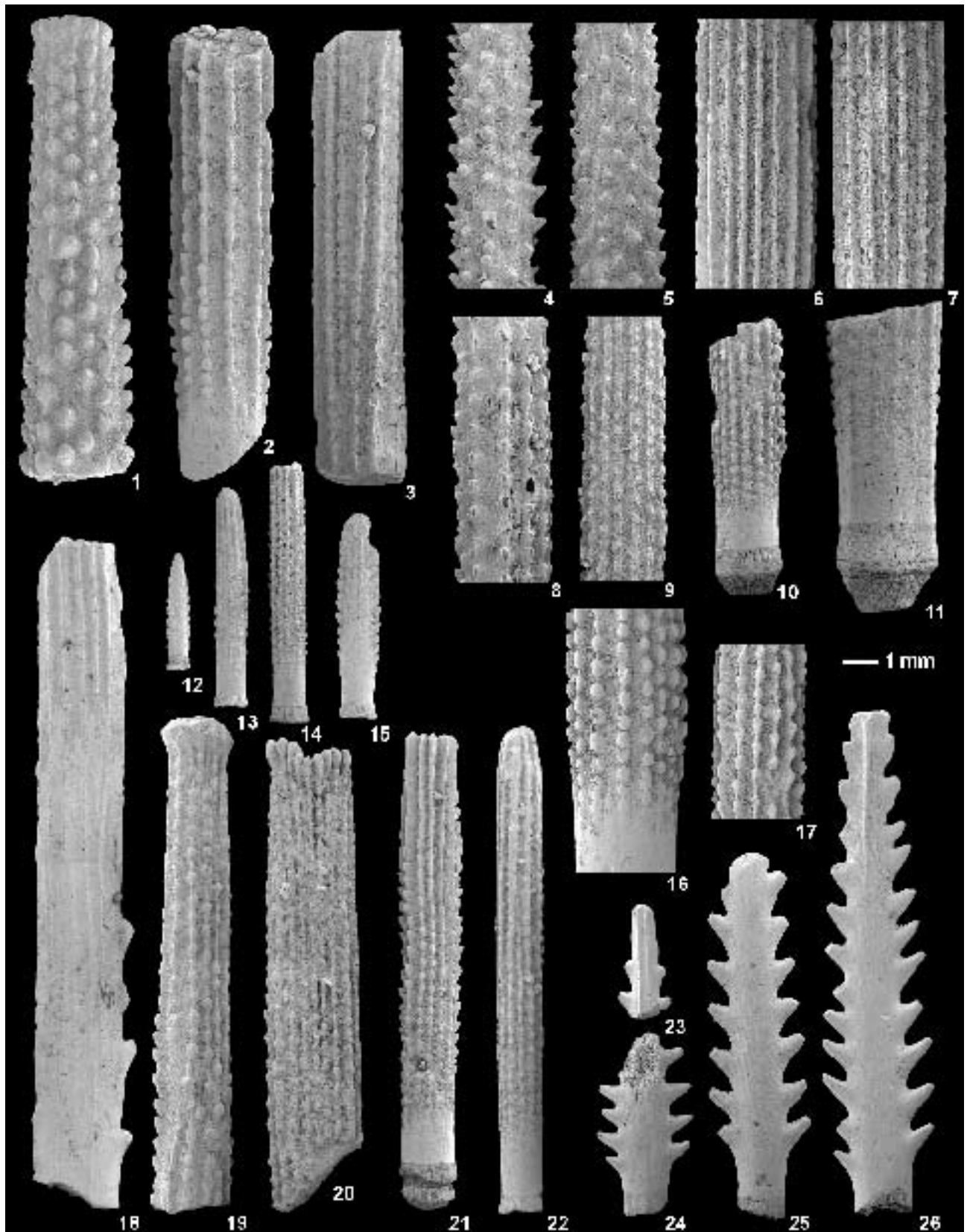
All photographs are SEM images; "1 mm" scale bar valid for all figs. except fig. 15a



Stylocidaris ? schwabenaui (LAUBE, 1869): 1: adoral test fragment, Winden, Bgld (NHMW 2003z0082/35); 2a-b: ambital test fragment (see also pl. 1, fig. 29), Winden, Bgld (NHMW 1997z0178/01638a); 3: primary spine base, Winden, Bgld (NHMW 2003z0082/32); 4: primary spine fragment, Perchtoldsdorf, NÖ (NHMW 1981/56/9a); 5: primary spine fragment, Winden, Bgld (NHMW 2003z0082/31); 6-7: primary spine (shaft), Devínska Nová Ves, SK (NHMW 1868.VIII.27g-h); 8-11: primary spines, Winden, NÖ (8: NHMW 2003z0082/0038; 9: ../0036; 10: ../0037; 11: ../0039)

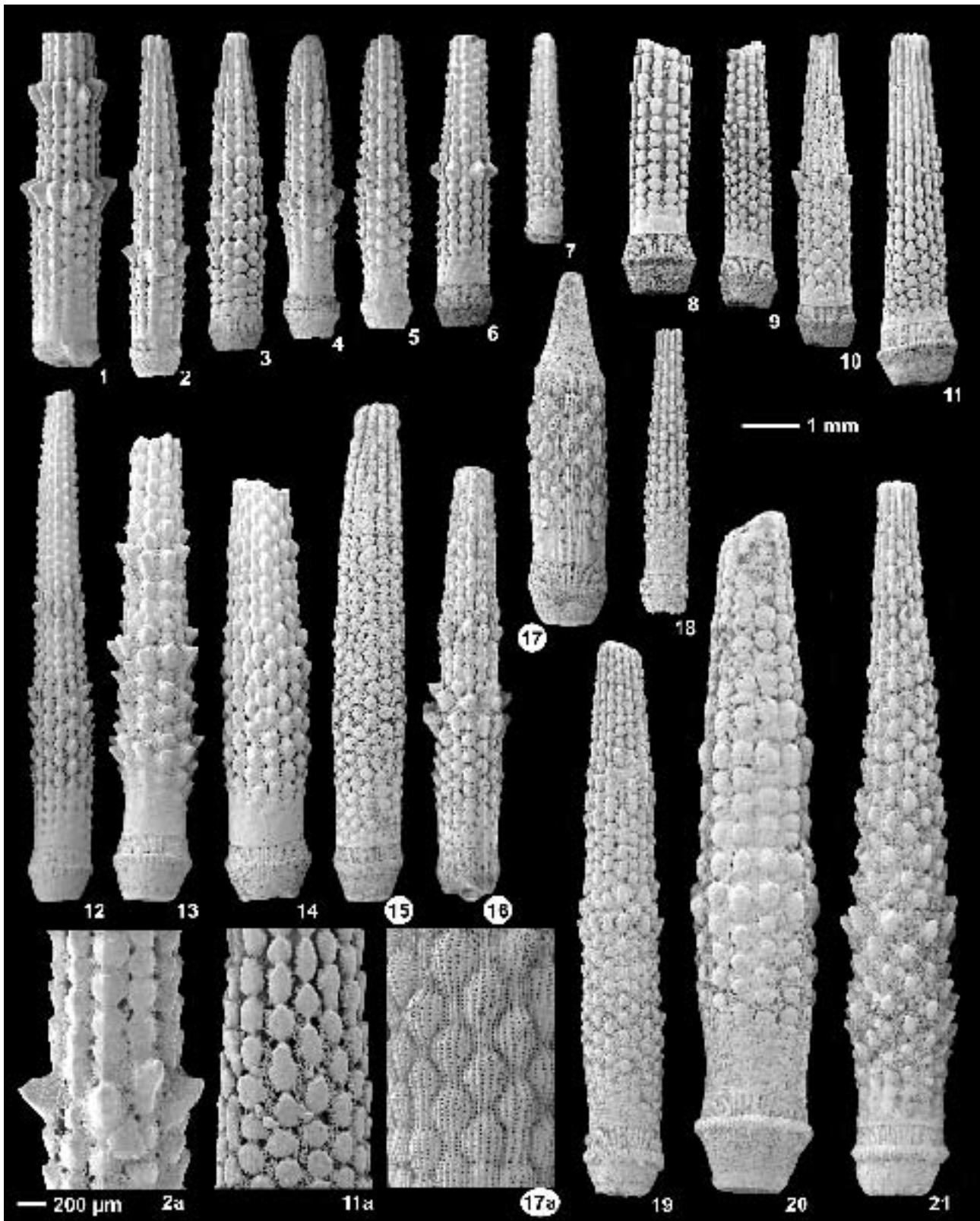
Plegiocidaris ? peroni (COTTEAU, 1877): 12: primary spine base; Sonndorf, NÖ (NHMW 2003z0076/0001a); 13-14: primary spine fragments, Grübern, NÖ (NHMW 2003z0075/12a+b); 15: primary spine, Unternalb, near Retz, NÖ (NHMW 1999z0051/0015, AO of KROH & HARZHAUSER, 1999: pl. 7, fig. 4); 16-18: primary spines; Sonndorf, NÖ (NHMW 2003z0076/0001a-c)

"1 mm" scale bar valid for figs. 1-14 (SEM images), except fig. 2b; "5 mm" scale bar valid for figs. 15-18 (coated with ammonium chloride)



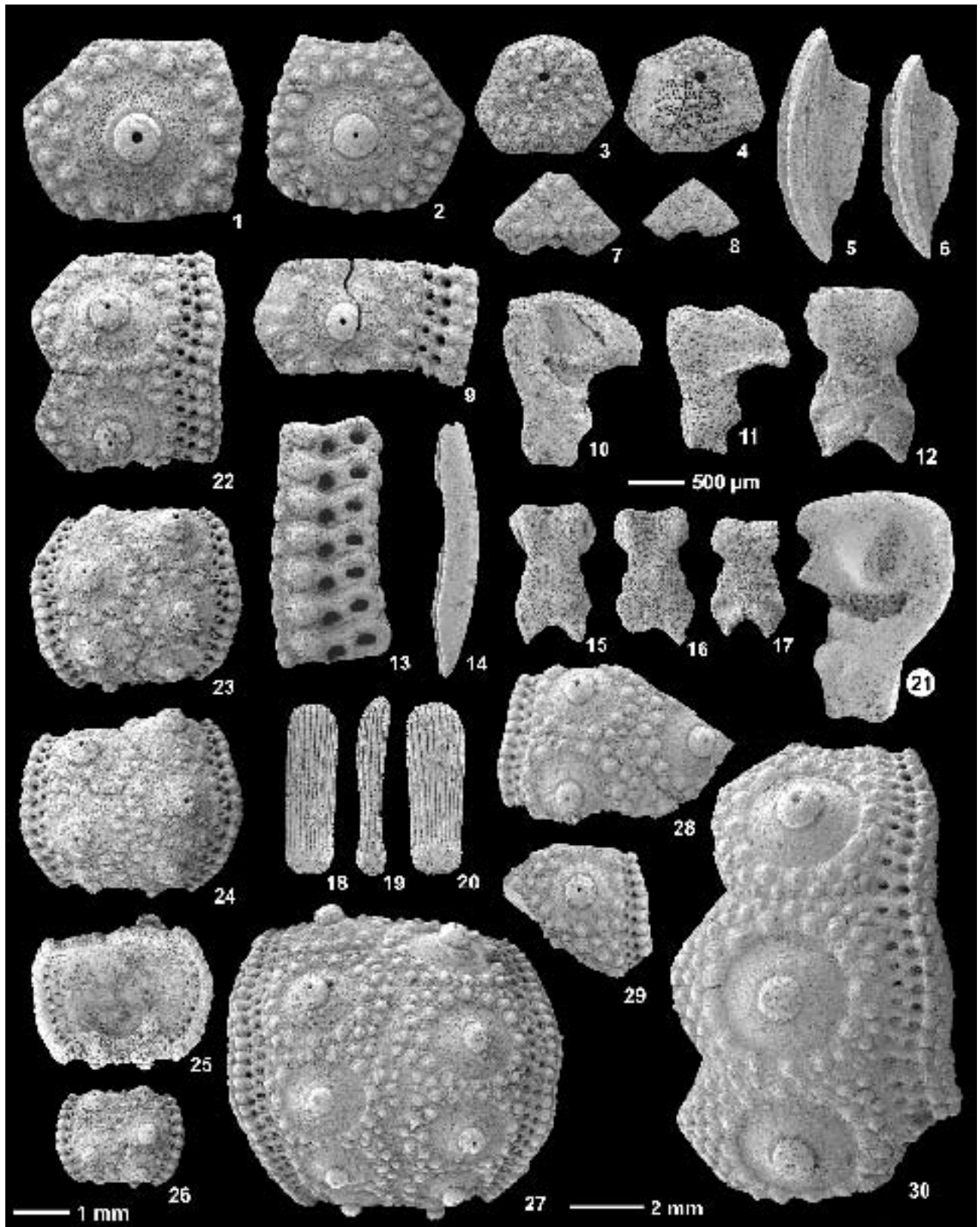
Cidarinae sp. indet. (Ottangian type): 1-3: Mitterndorf, OÖ (primary spines; 1: NHMW 1989/58/24b, 2: NHMW 1986/102/37d, 3: NHMW 1986/102/37e); 4-7: Plesching, OÖ (primary spine ornamentation; NHMW 2004z0002/0001c-f); 8-15: Höbmansbach, OÖ [primary spine ornamentation (8-9), bases (10-11), and secondary spines (12-15)]; 8: NHMW 1978/1966/12j, 9: ../12k, 10: ../12s, 11: ../12l, 12: ../12y, 13: ../12w, 14: ../12u, 15: ../12x]; 16-17: Rainbach, OÖ (primary spine ornamentation; NHMW 2004z0002/0003a-b); 18-20, 22: Höbmansbach, OÖ [18: large oral primary spine, NHMW 1978/1966/12f; 19-20: primary spine tips, 19: NHMW 2004z0002/0005, 20: 1978/1966/12m; 22: small (adapical ?) primary spine, NHMW 1978/1966/12n]; 21: Plesching, OÖ [small (adapical ?) primary spine, NHMW 2004z0002/0001g]; 23-26: Höbmansbach, OÖ (oral primary spines, NHMW 1978/1966/12o-r)

All photographs are SEM images



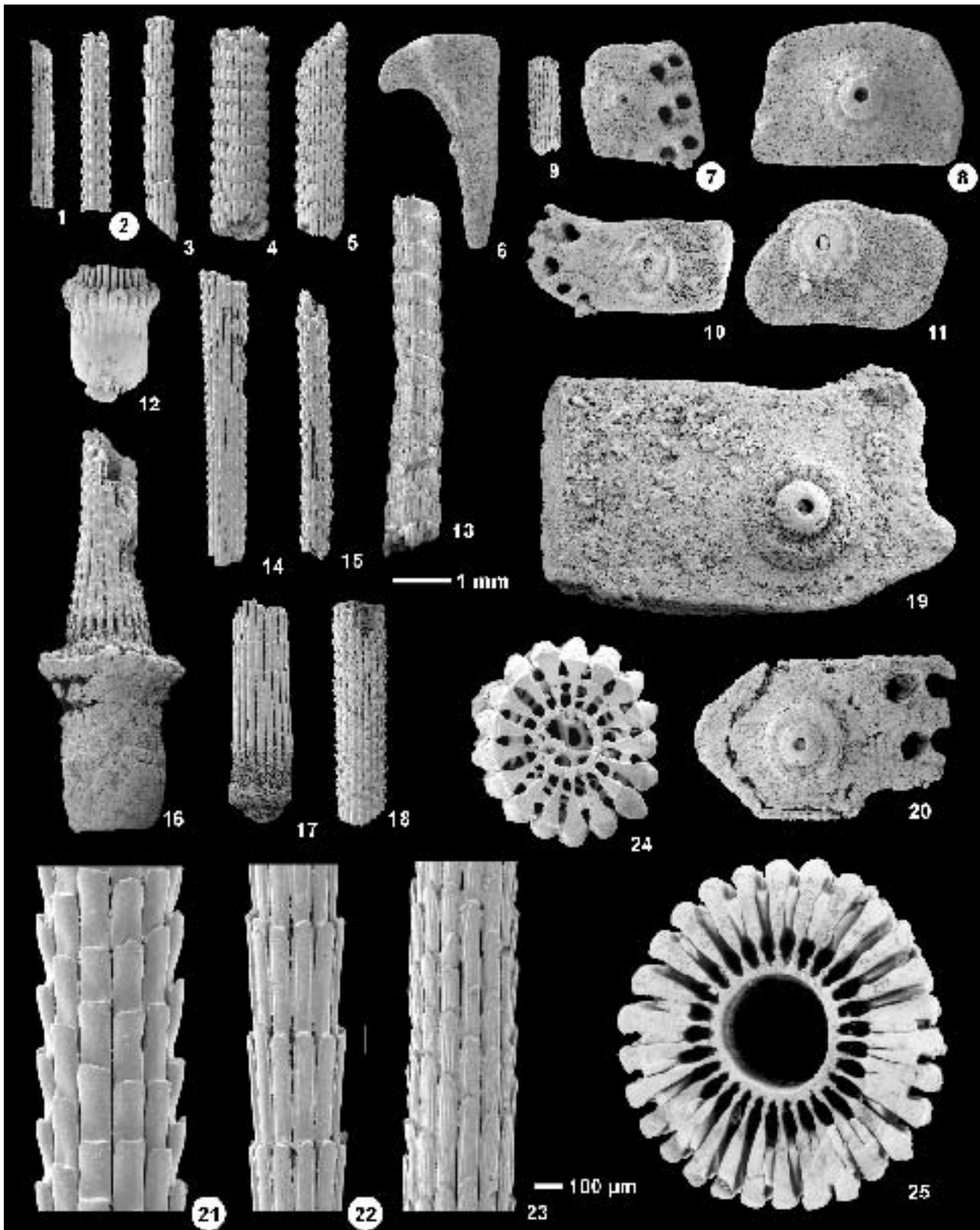
Eucidaris zeamays (SISMONDA, 1842) (primary spines): 1-7: Niederleis, NÖ [NHMW 2002z0087/0040-45, 47 (1: ../0043, 2: ../0044, 3: ../0040, 4: ../0042, 5: ../0041, 6: ../0047, 7: ../0045), AO of KROH, 2003: pl. 1, figs.1-6, 8]; 2a: ornamentation of spine with thorny surface, Niederleis, NÖ (NHMW 2002z0087/0044); 8-11: Badener Tegel, ? Bad Vöslau, NÖ [NHMW 1997z0178/1328a-d (8: a, 9: b, 10: c, 11: d)]; 11a: ornamentation of spine with relatively smooth surface (note preserved cortical hair between the granulae), Baden Tegel, ? Bad Vöslau, NÖ (NHMW 1997z0178/1328d); 12-14: Forchtenau, Bgld (NHMW 2004z0001/0015a); 15-17, 17a: Lăpugiu des Sus, Romania [NHMW 1859.XLV.617B.a; specimen in figure 17 is a growing spine (17a shows spine surface showing lamellae without covering cortex layer)]; 18-21: Stotzing, Bgld (18: NHMW 2004z0050/0030, 19: ../0029, 20: ../0027, 21: ../0028)

"1 mm" scale bar valid for of all photographs (except 2a, 11a and 17); all photographs are SEM images



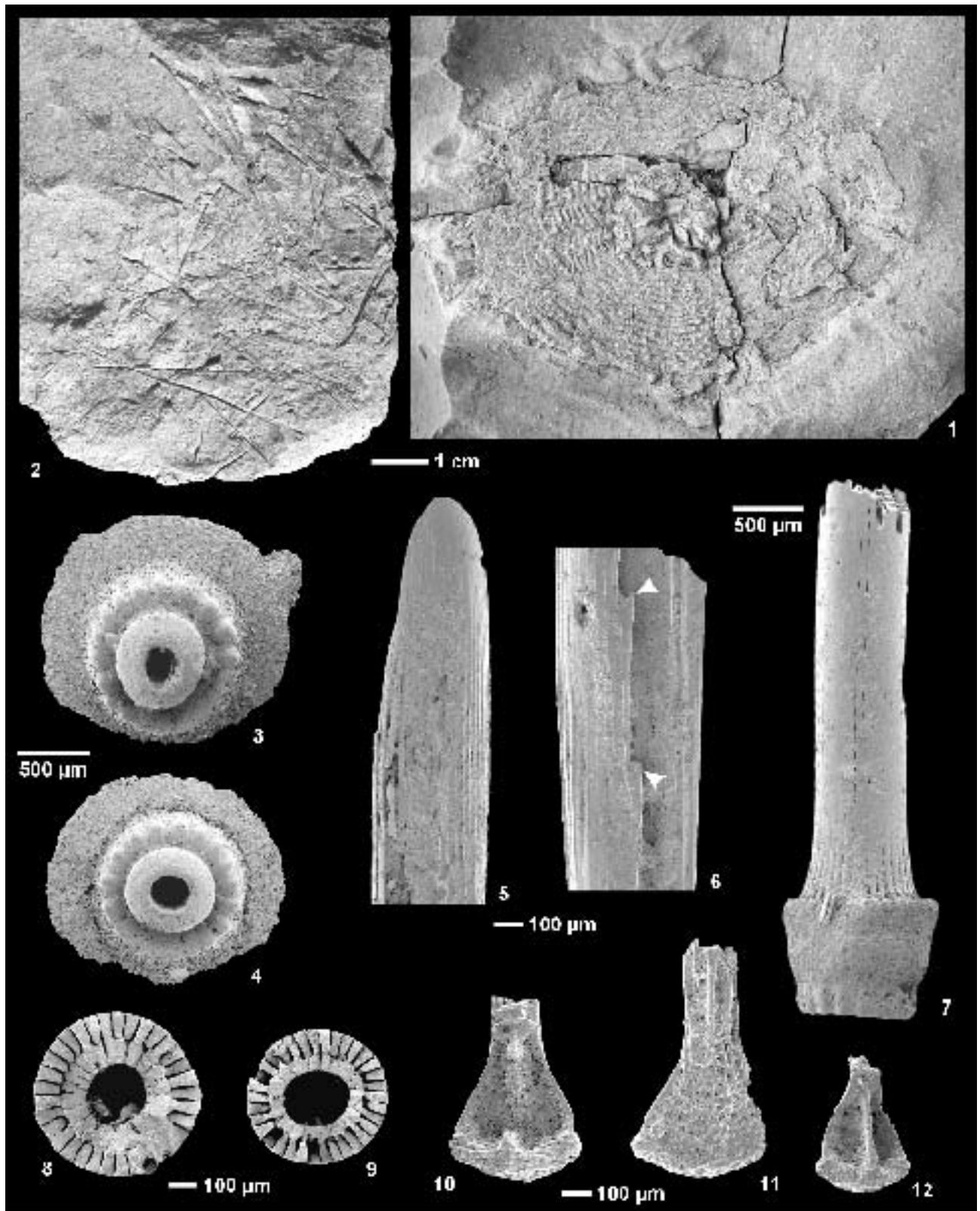
Eucidaris zeamays (SISMONDA, 1842): 1-20: Rauchstallbrunngraben, near Baden, NÖ [1-2: adapical interambulacral plates (1: NHMW 2004z0121/0002, 2: ../0001), 3: genital plate (NHMW 2004z0121/0005), 4: madreporite (genital plate 2, NHMW 2004z0121/0006), 5-6: demipyramids (NHMW 2004z0121/0018-19), 7-8: ocular plates (NHMW 2004z0121/0007-08), 9: ambital interambulacral plate with attached ambulacral plates (NHMW 2004z0121/0010), 10-11: epiphyses (NHMW 2004z0121/0020-21), 12, 15-17: rotulae (12: NHMW 2004z0121/0024, 15: ../0023, 16: ../0022, 17: ../0025), 13: ambulacral plates (NHMW 2004z0121/0009), 14: tooth (NHMW 2004z0121/0026), 18-20: scrobicular spines (18: NHMW 2004z0121/0028, 19: ../0029, 20: ../0027)]; 21: epiphysis, Coștei, Romania (NHMW 2004z0084/0002); 22-26: test segments, Großhöflein, Bgld (NHMW 2003z0081/0046-50); 27-30: test fragments, Stotzing, Bgld (27: NHMW 2004z0050/0024, 28: ../0021, 29: ../0020, 30: ../0025)

"1 mm" scale bar valid for figs. 1-9, 22-26, "500 μ m" scale bar for figs. 10-21, "2 mm" scale bar for figs. 27-31; all are SEM images



Diademmatidae indet.: 1, 23: Höbmansbach, near Schäring, OÖ (Ottngian, NHMW 1978/1966/12z); 2, 21-22: Lăpușiu des Sus, Romania (Early Badenian, NHMW 1859.XLV.617B.b); 3-6: Großhöflein, near Eisenstadt, Bgld (Badenian, 3: NHMW 2004z0081/0025, 4: ../0024, 5: ../0023, 6: ../0038); 7-8: Nový Rybík, Czech Republic (Badenian; 7: ambulacral plate, 8: interambulacral plate; NHMW 1858.XLVIII.78b); 9-12, 25: Untermalb, near Retz, NÖ (Late Eggenburgian; 9: spine fragment, NHMW 1999z0051/0022; 10: ambulacral plate, NHMW ../0021; 11: interambulacral plate, ../0019; 12: spine base, ../0022; 25: spine cross section, ../0022); 13: Eggenburg, NÖ (Eggenburgian; NHMW 2004z00110/0007); 14-20: Gainfarn, NÖ [Badenian; 14-18: spine fragments (14: NHMW 2004z0076/0025, 15: ../0026, 16: ../0023, 17: ../0024, 18: NHMW ../0029); 19: interambulacral plate (NHMW 2004z0076/0021); 20: ambulacral plate (NHMW 2004z0076/0022)]; 24: Bad Vöslau, NÖ (Badenian; spine cross section, NHMW 1997z0178/1327)

"1 mm" scale bar valid for figs. 1-20, "100 μm" scale bars for figs. 21-25



Retzneiosoma jaseneki KROH, nov. gen. nov. sp.: 1-12: Lafarge quarry, Retznei, Styria [1: NHMW 2003z0071/0002; 2: holotype, coated with ammonium chloride, NHMW 2003z0071/0001; 3-12: SEM images of tubercles (3-4), spines (5-9), and pedicellariae (10-12) from specimen NHMW 2003z0071/0002 (1)]

"1 cm" scale bar valid for figs. 1-2, "500 μm" scale bars for figs. 3-4, 7, "100 μm" scale bars for figs. 5-6, 8-12

Retzneiosoma jaseneki KROH, nov. gen. nov. sp.: 1-8: Lafarge quarry, Retznei, Styria [1-6: holotype, coated with ammonium chloride, NHMW 2003z0071/0001 (1: lantern, 2-3: aboral surface, half ambulacrum and adjacent interambulacral column in different lighting, 4: interambulacrum apex to ambitus, 5: adapical ambulacrum, 6: inside of oral surface); 7-8: NHMW 2003z0071/0002] all coated with ammonium chloride, scale bars equal 5 mm

