

Supplementary File

Pollen morphology of extant Winteraceae: a study allowing SEM based affiliation of its fossil representatives

FRÍÐGEIR GRÍMSSON, ALEXANDROS XAFIS, FRANK H. NEUMANN,
and REINHARD ZETTER

Contents: This Supplementary File contains Supplementary Plates S1 to S28

Plate S1

Tasmannia insipida R.Br. ex DC. (M: from Australia, coll. H.-J. Tillich, s.n.).

1–2. Pollen tetrads in LM, upper row at high focus, lower row in optical cross section, left tetrads in basal view, middle tetrads in lateral view, right tetrads in apical view.

3–8. Pollen tetrads in SEM.

3–4. Basal view.

5–6. Lateral view.

7–8. Apical view.

Scale bars: 10 μm .

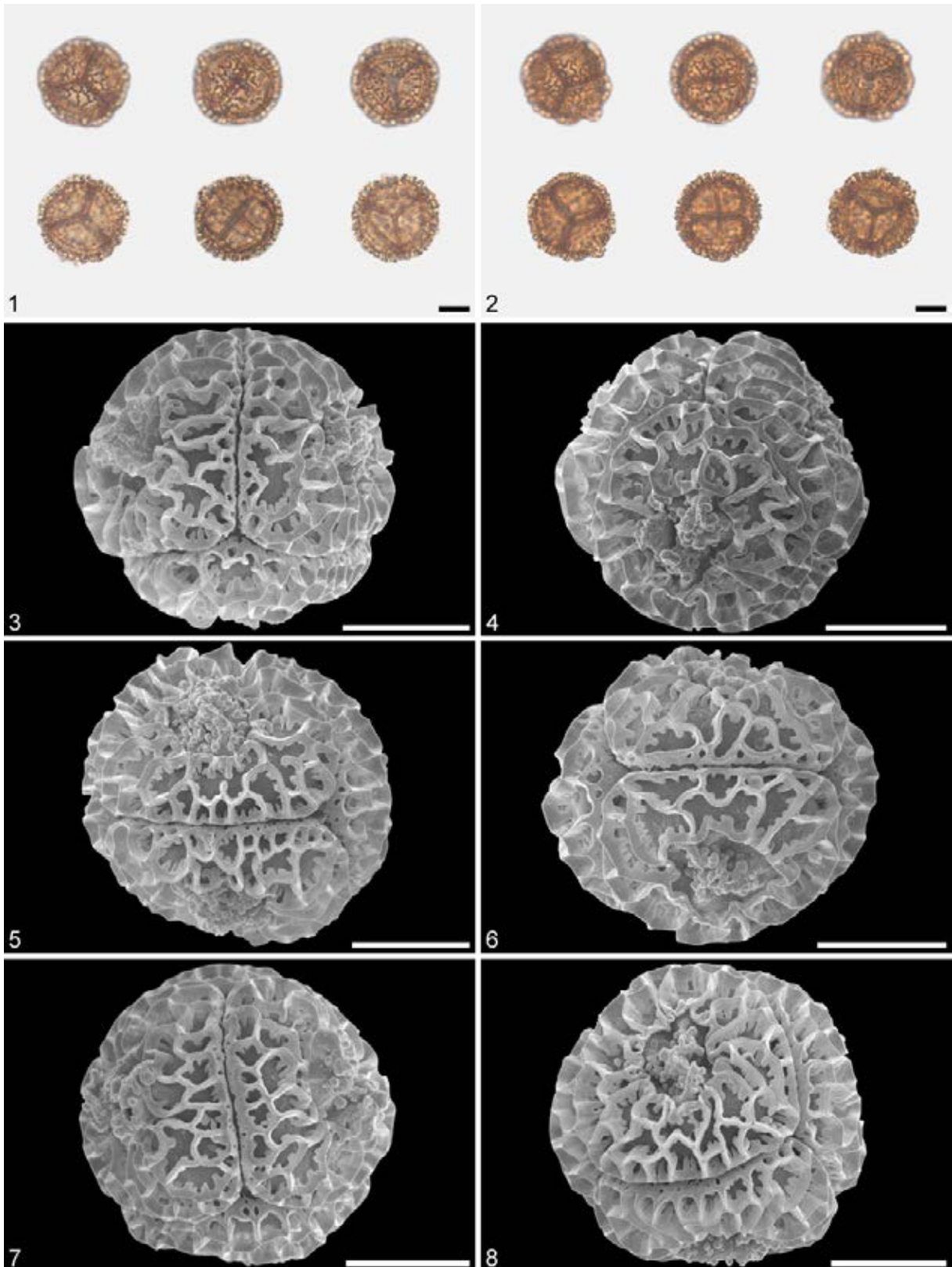


Plate S1

Plate S2

Tasmannia insipida R.Br. ex DC. (M: from Australia, coll. H.-J. Tillich, s.n.).

1–8. Close-ups of sculpture in SEM.

1–2. Distal face of pollen.

3. Pollen interface in lateral view.

4–5. Pollen interface in basal view.

6–8. Aperture.

Scale bars: 1 μm .

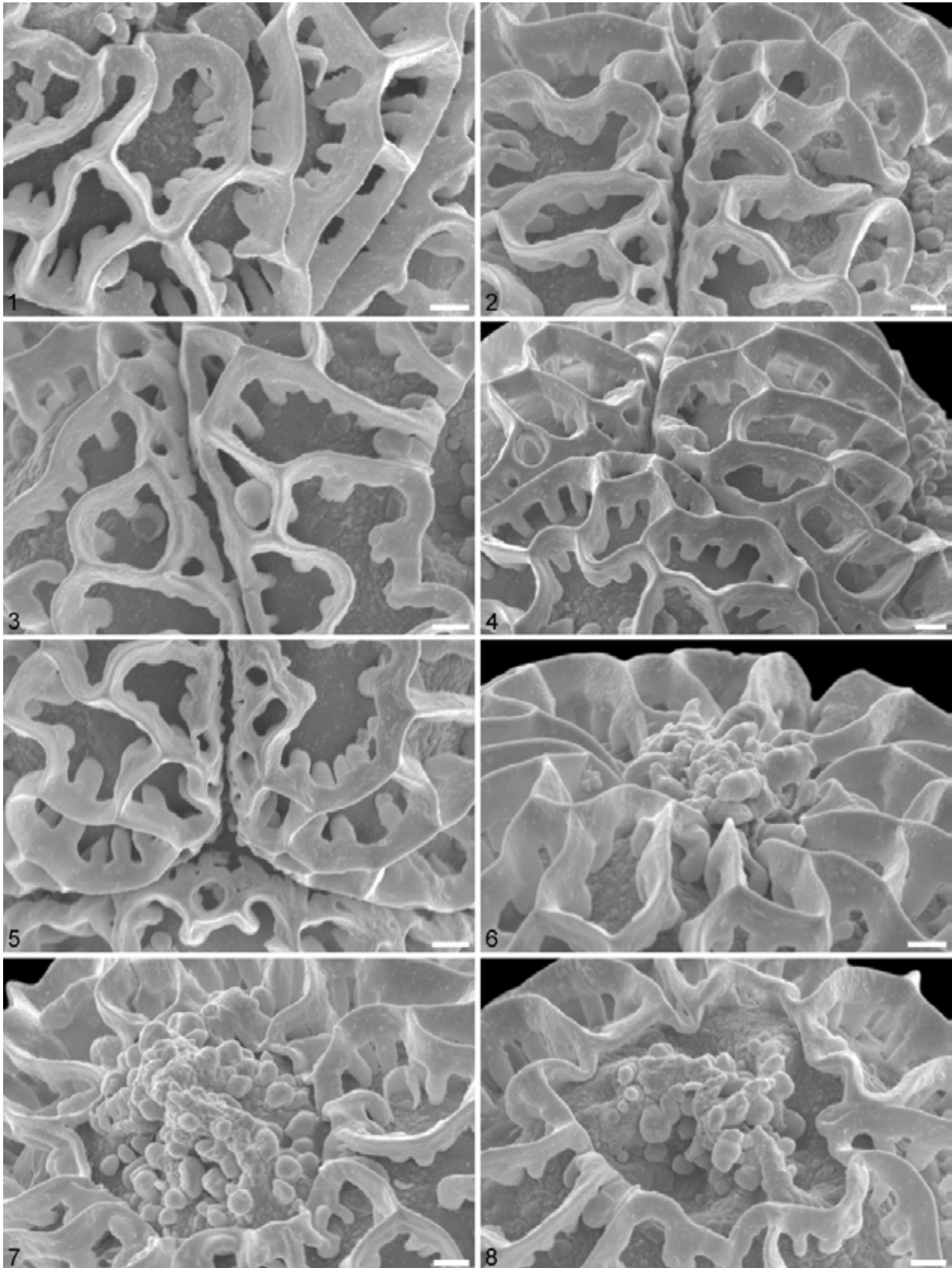


Plate S2

Plate S3

Tasmannia insipida R.Br. ex DC. (M: from Australia, coll. C.T. White, s.n.).

1–2. Pollen tetrads in LM, upper row at high focus, lower row in optical cross section, left tetrads in basal view, middle tetrads in lateral view, right tetrads in apical view.

3–8. Pollen tetrads in SEM.

3–4. Basal view.

5–6. Lateral view.

7–8. Apical view.

Scale bars: 10 μm .

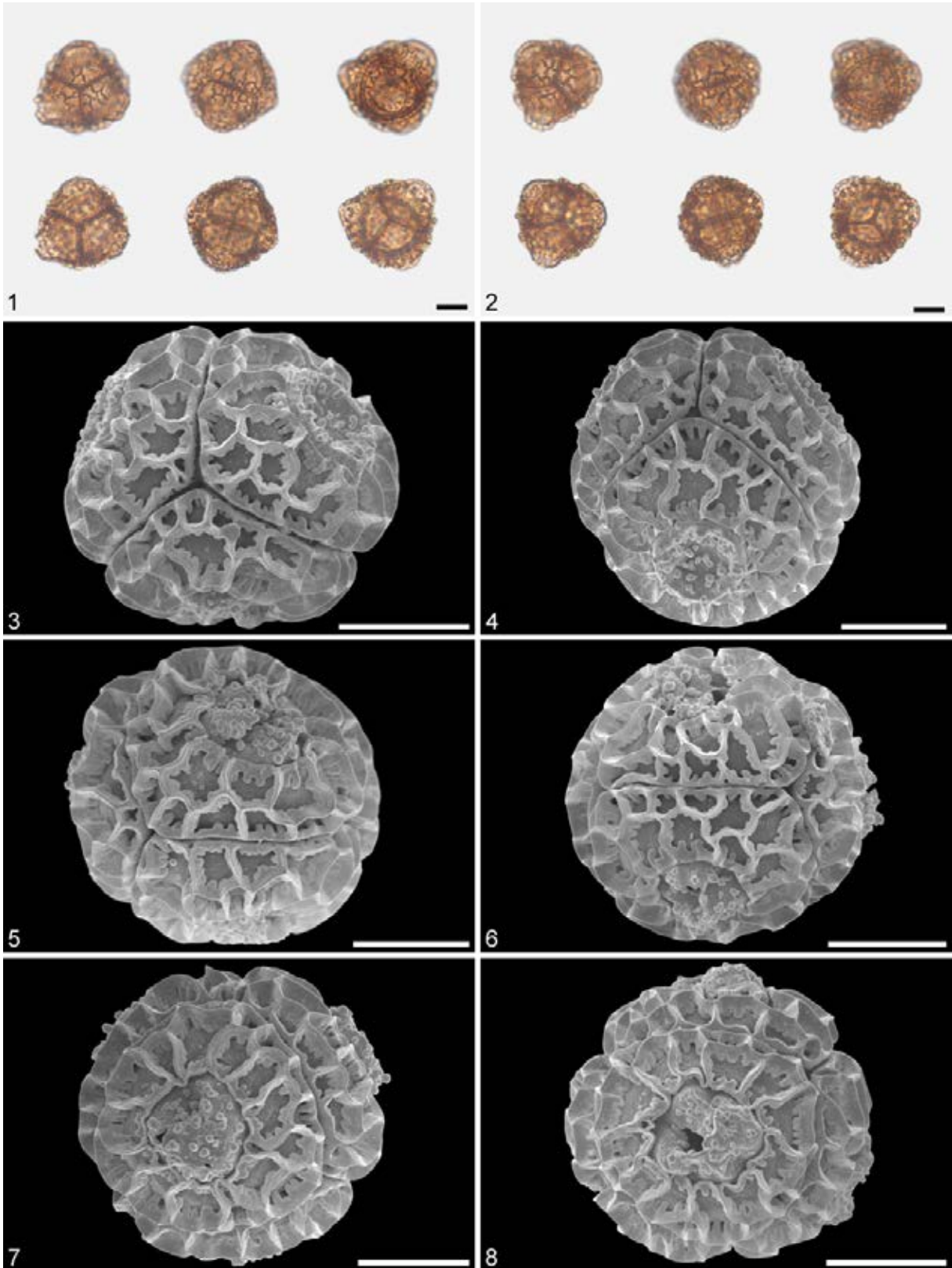


Plate S3

Plate S4

Tasmannia insipida R.Br. ex DC. (M: from Australia, coll. C.T. White, s.n.).

1–8. Close-ups of sculpture in SEM.

1–2. Distal face of pollen.

3. Pollen interface in lateral view.

4–5. Pollen interface in basal view.

6–8. Aperture.

Scale bars: 1 μm .

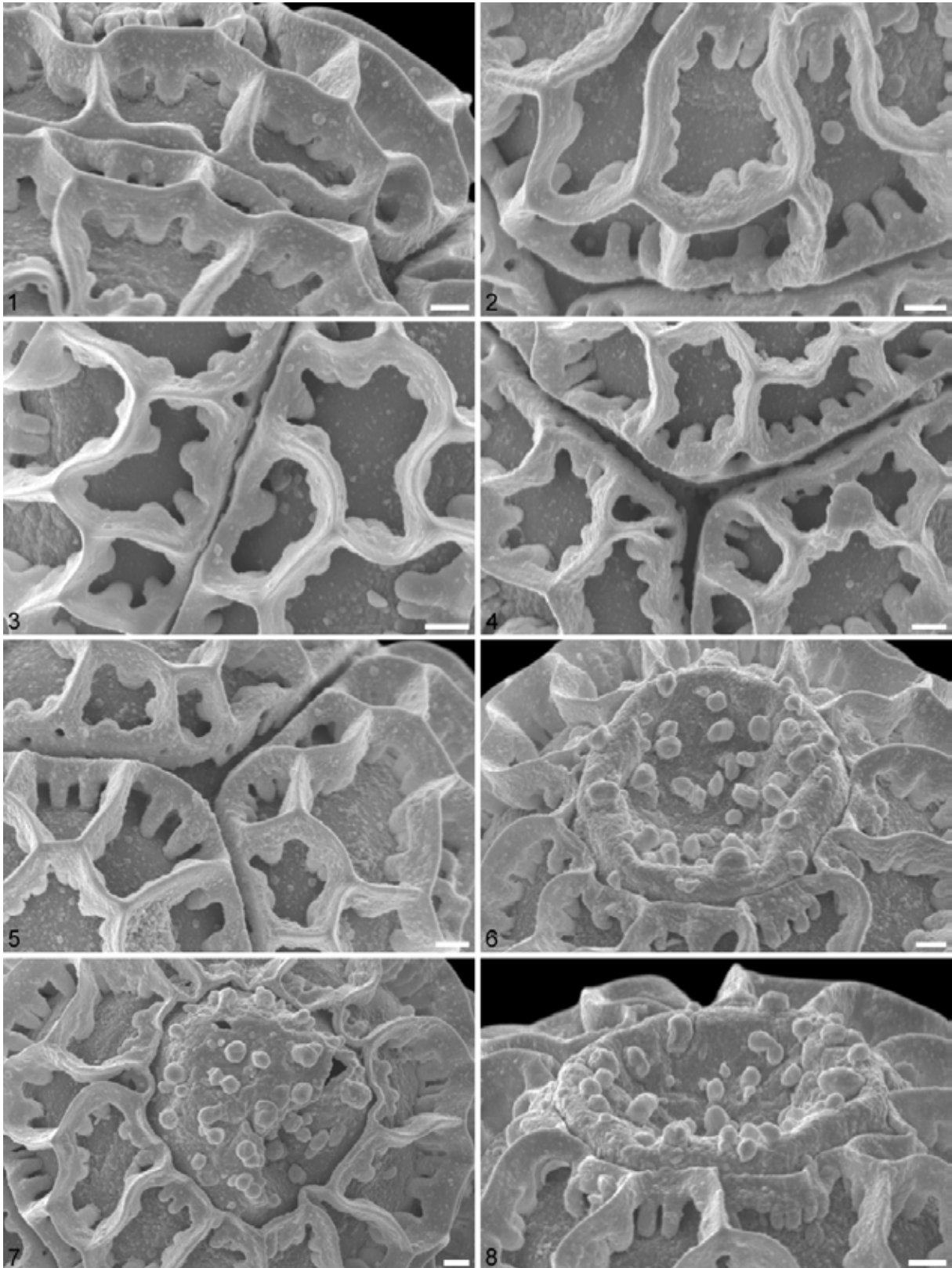


Plate S4

Plate S5

Tasmannia piperita (Hook. f.) Miers (WU: from Philippines, coll. unknown, s.n.).

1–2. Pollen tetrads in LM, upper row at high focus, lower row in optical cross section, left tetrads in basal view, middle tetrads in lateral view, right tetrads in apical view.

3–8. Pollen tetrads in SEM.

3–4. Basal view.

5–6. Lateral view.

7–8. Apical view.

Scale bars: 10 μm .

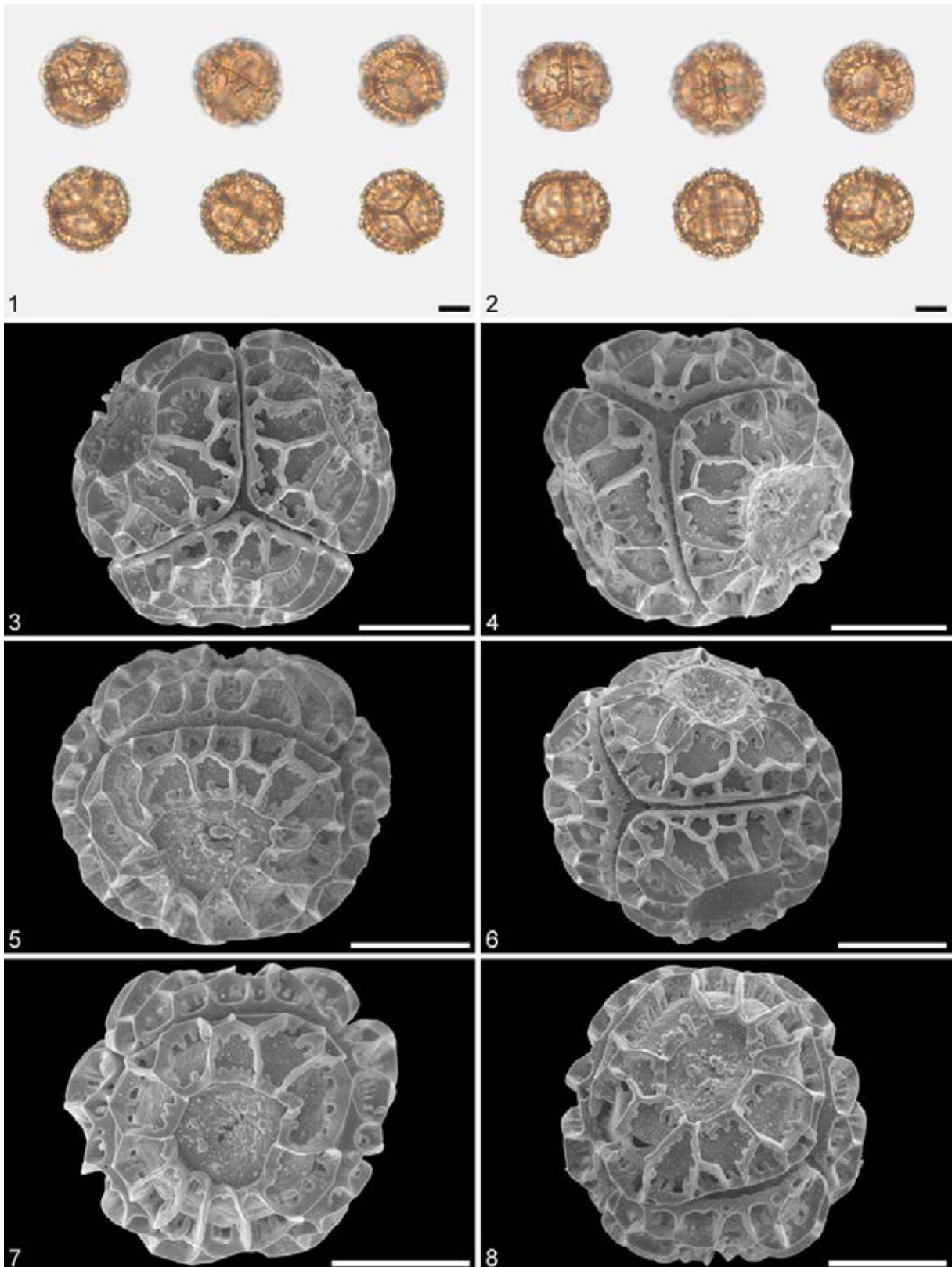


Plate S5

Plate S6

Tasmannia piperita (Hook. f.) Miers (WU: from Philippines, coll. unknown, s.n.).

1–8. Close-ups of sculpture in SEM.

1–2. Distal face of pollen.

3. Pollen interface in lateral view.

4–5. Pollen interface in basal view.

6–8. Aperture.

Scale bars: 1 μm .

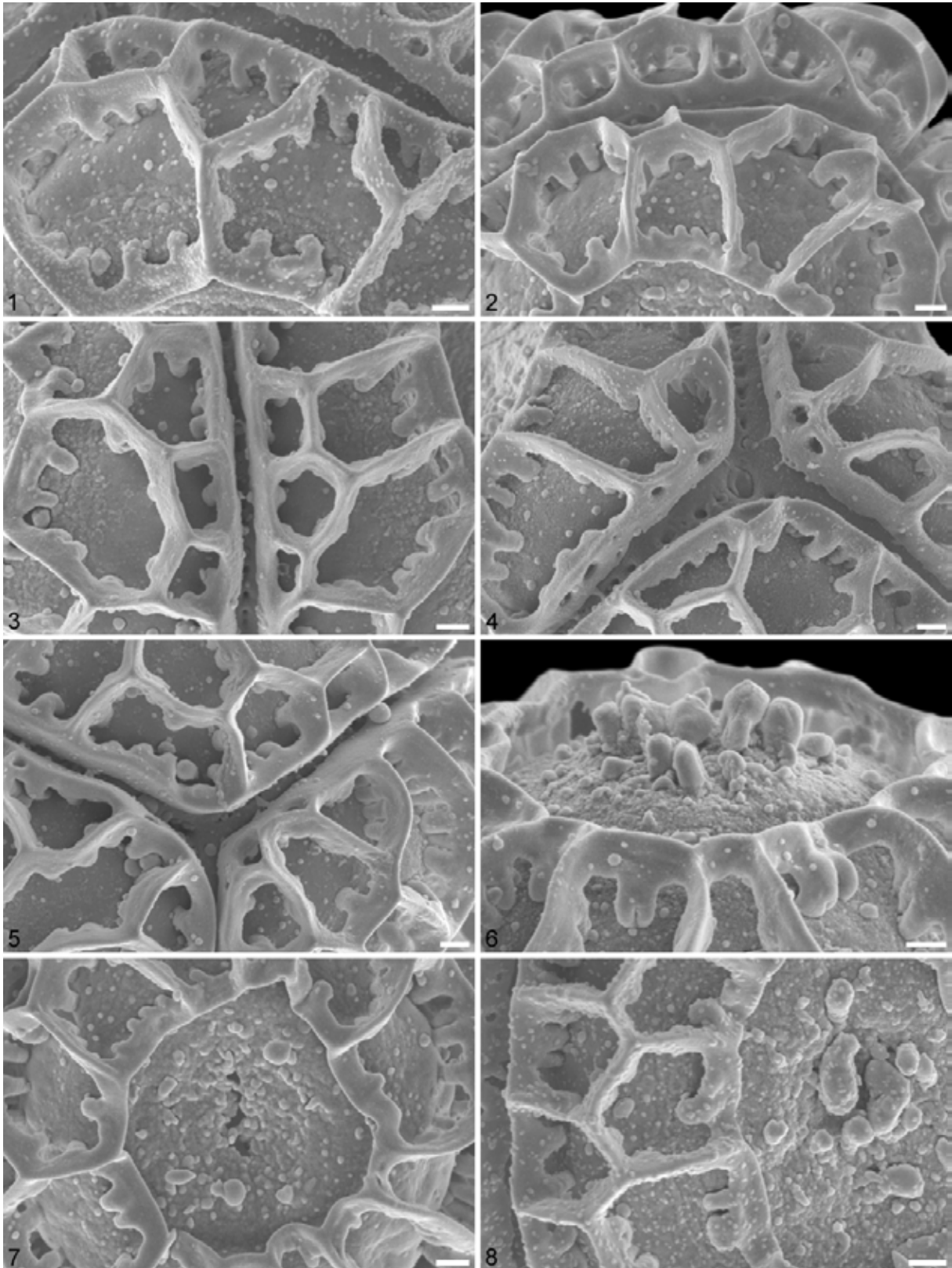


Plate S6

Plate S7

Drimys brasiliensis Miers (WU 0077153).

1–2. Pollen tetrads in LM, upper row at high focus, lower row in optical cross section, left tetrads in basal view, middle tetrads in lateral view, right tetrads in apical view.

3–8. Pollen tetrads in SEM.

3–4. Basal view.

5–6. Lateral view.

7–8. Apical view.

Scale bars: 10 μm .

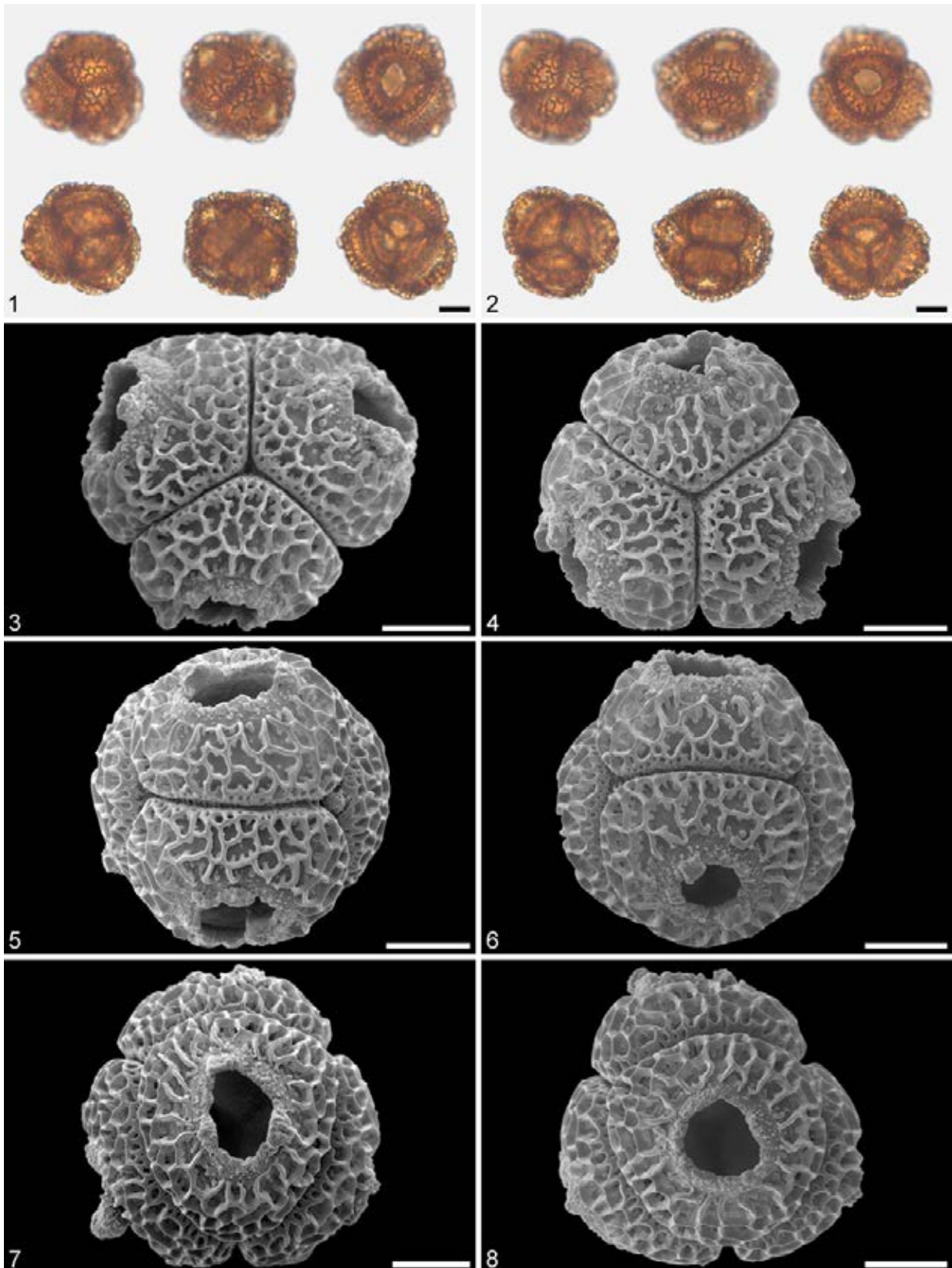


Plate S7

Plate S8

Drimys brasiliensis Miers (WU 0077153).

1–8. Close-ups of sculpture in SEM.

1. Distal face of pollen.

2. Pollen interface in lateral view.

3. Distal face of pollen.

4–5. Pollen interface in basal view.

6–8. Aperture region.

Scale bars: 1 μm .

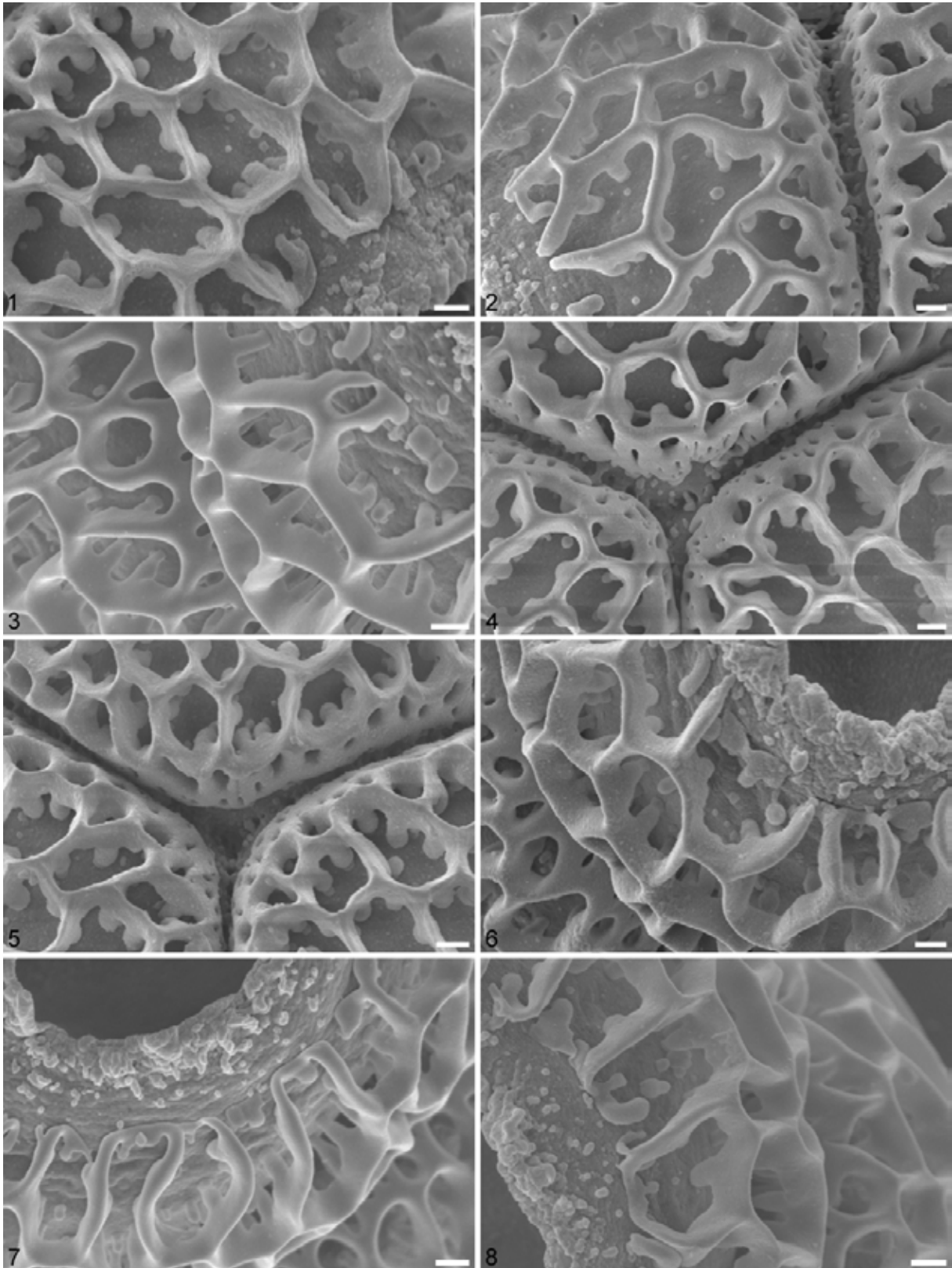


Plate S8

Plate S9

Drimys granadensis L. f. (WU: from Costa Rica, coll. Ehrendorfer, s.n.).

1–2. Pollen tetrads in LM, upper row at high focus, lower row in optical cross section, left tetrads in basal view, middle tetrads in lateral view, right tetrads in apical view.

3–8. Pollen tetrads in SEM.

3–4. Basal view.

5–6. Lateral view.

6–8. Apical view.

Scale bars: 10 μm .

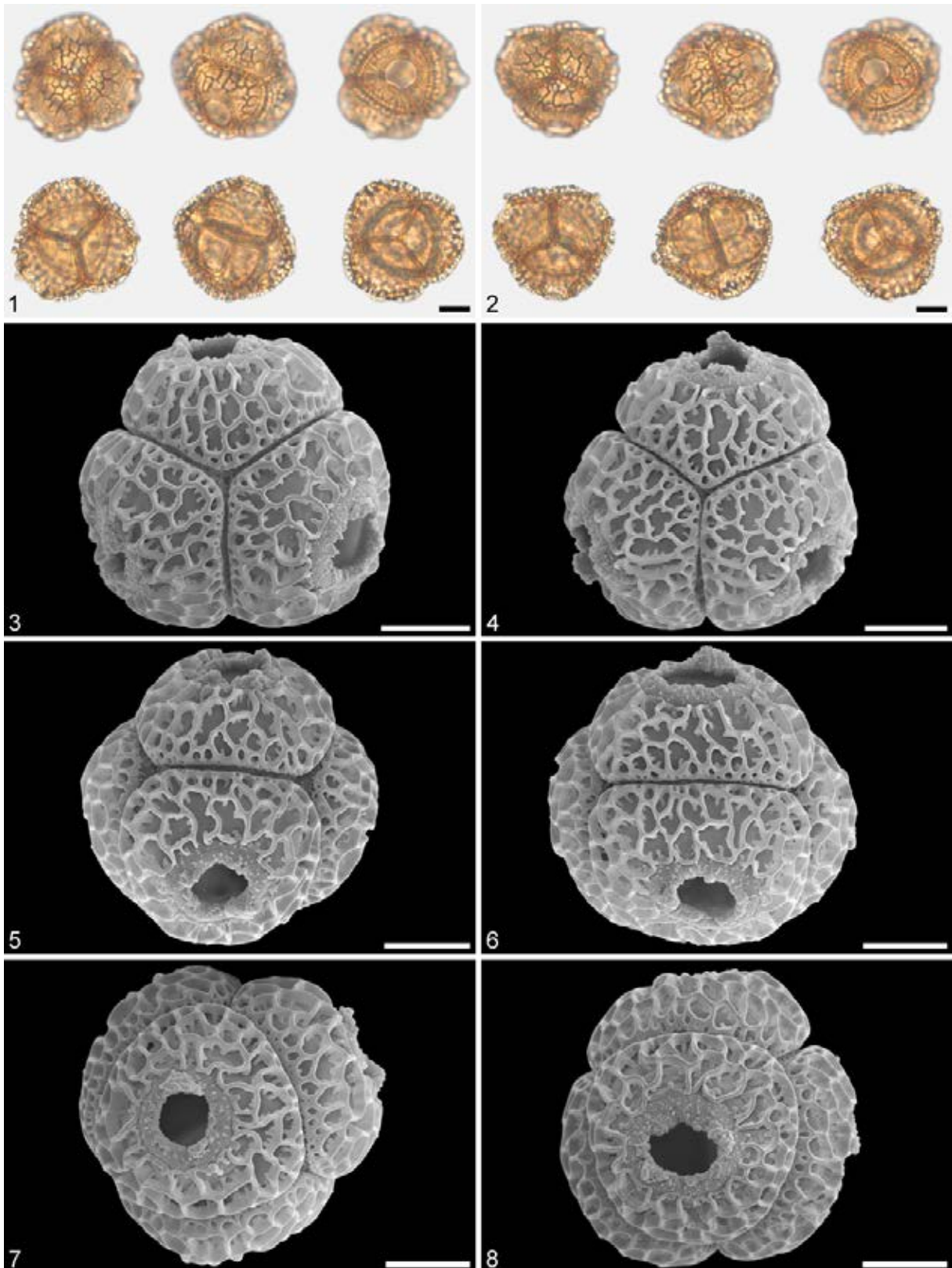


Plate S9

Plate S10

Drimys granadensis L. f. (WU: from Costa Rica, coll. Ehrendorfer, s.n.).

1–8. Close-ups of sculpture in SEM.

1. Distal face of pollen.

2. Pollen interface in lateral view.

3. Distal face of pollen.

4–5. Pollen interface in basal view.

6–8. Aperture region.

Scale bars: 1 μm .

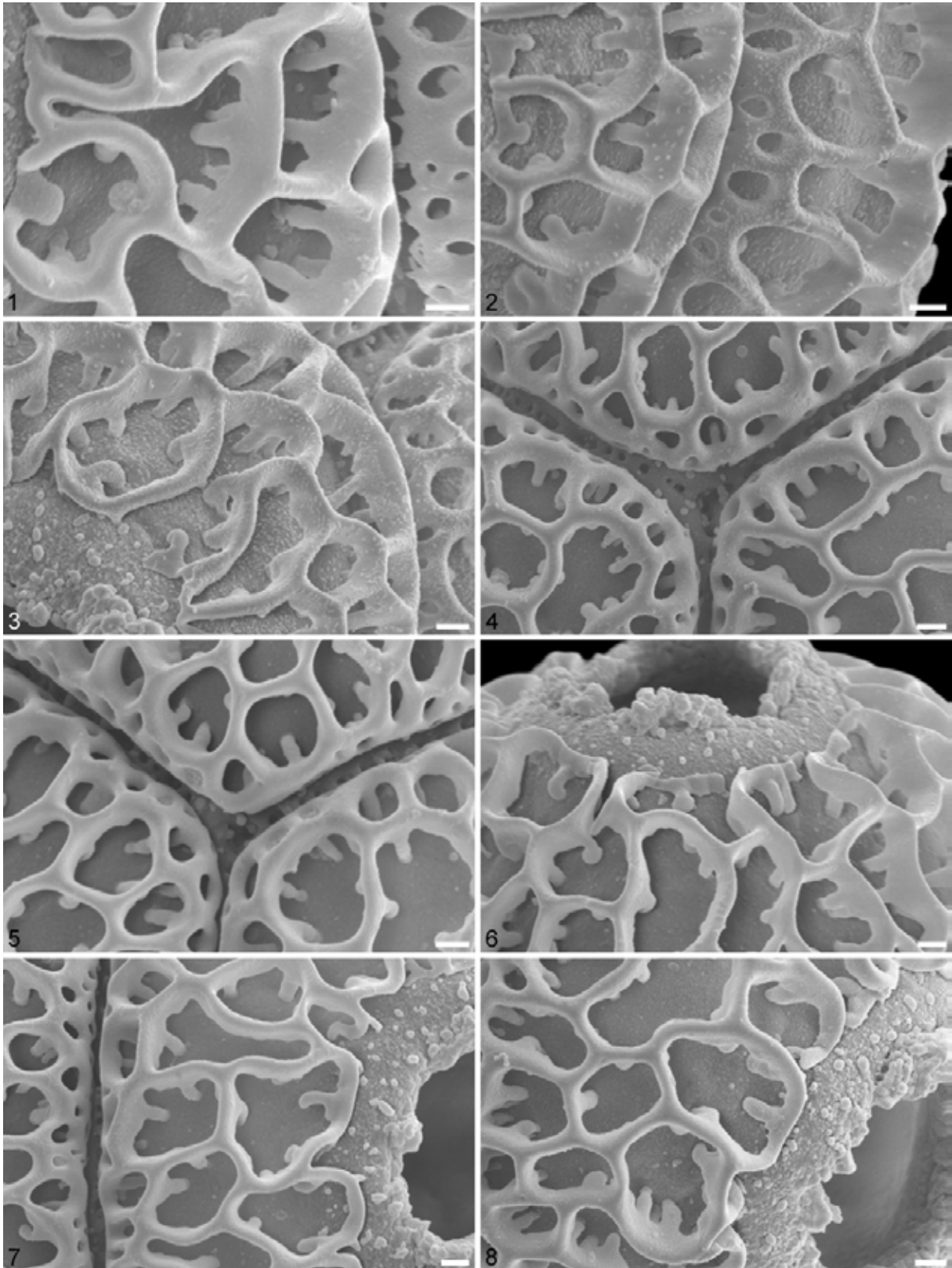


Plate S10

Plate S11

Drimys granadensis L. f. (W 1956–0020228: from Ecuador).

1–2. Pollen tetrads in LM, upper row at high focus, lower row in optical cross section, left tetrads in basal view, middle tetrads in lateral view, right tetrads in apical view.

3–8. Pollen tetrads in SEM.

3–4. Basal view.

5–6. Lateral view.

7–8. Apical view.

Scale bars: 10 μm .

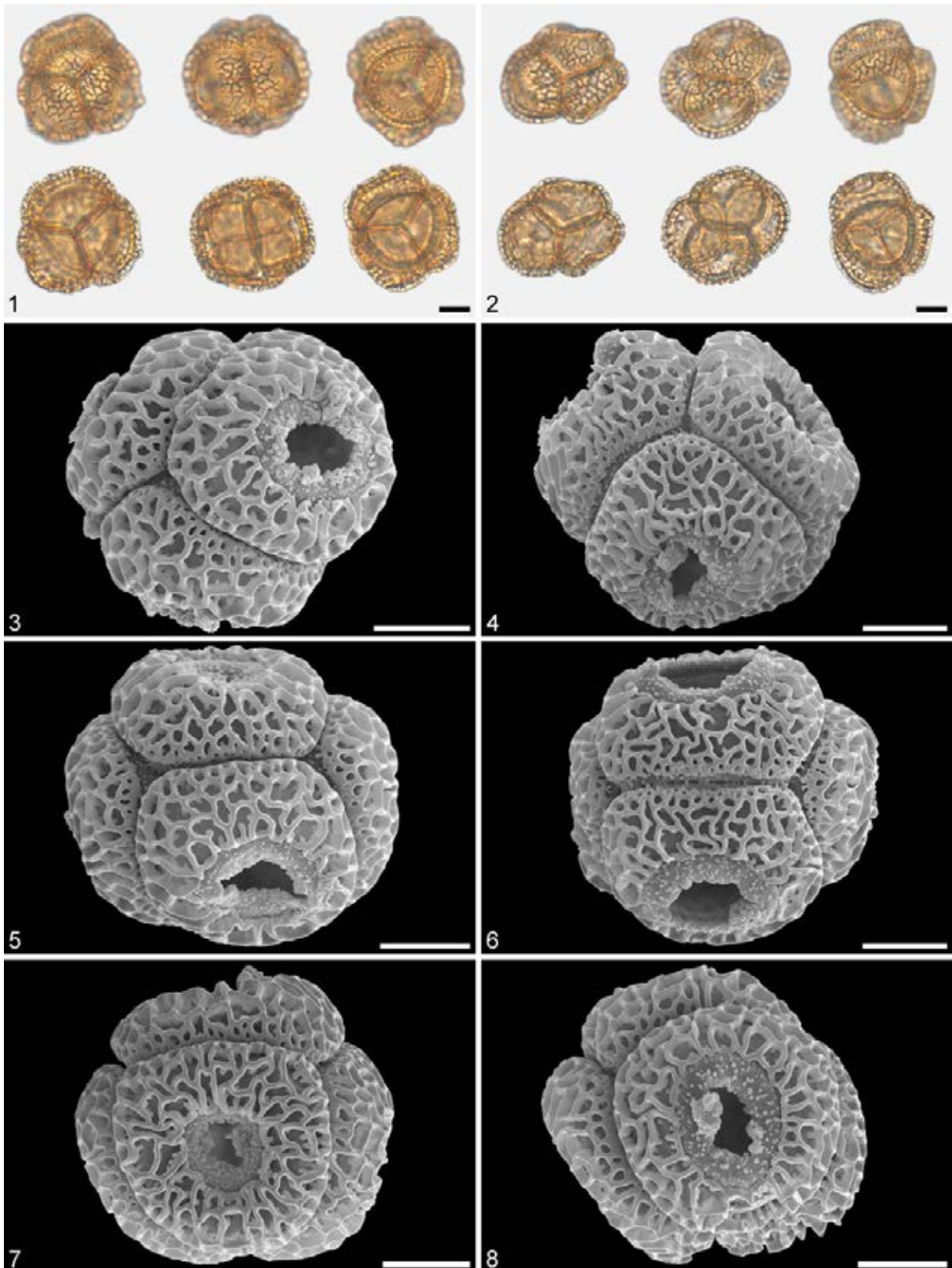


Plate S11

Plate S12

Drimys granadensis L. f. (W 1956–0020228: from Ecuador).

1–8. Close-ups of sculpture in SEM.

1–2. Distal face of pollen.

3. Pollen interface in lateral view.

4–5. Pollen interface in basal view.

6–8. Aperture.

Scale bars: 1 μm .

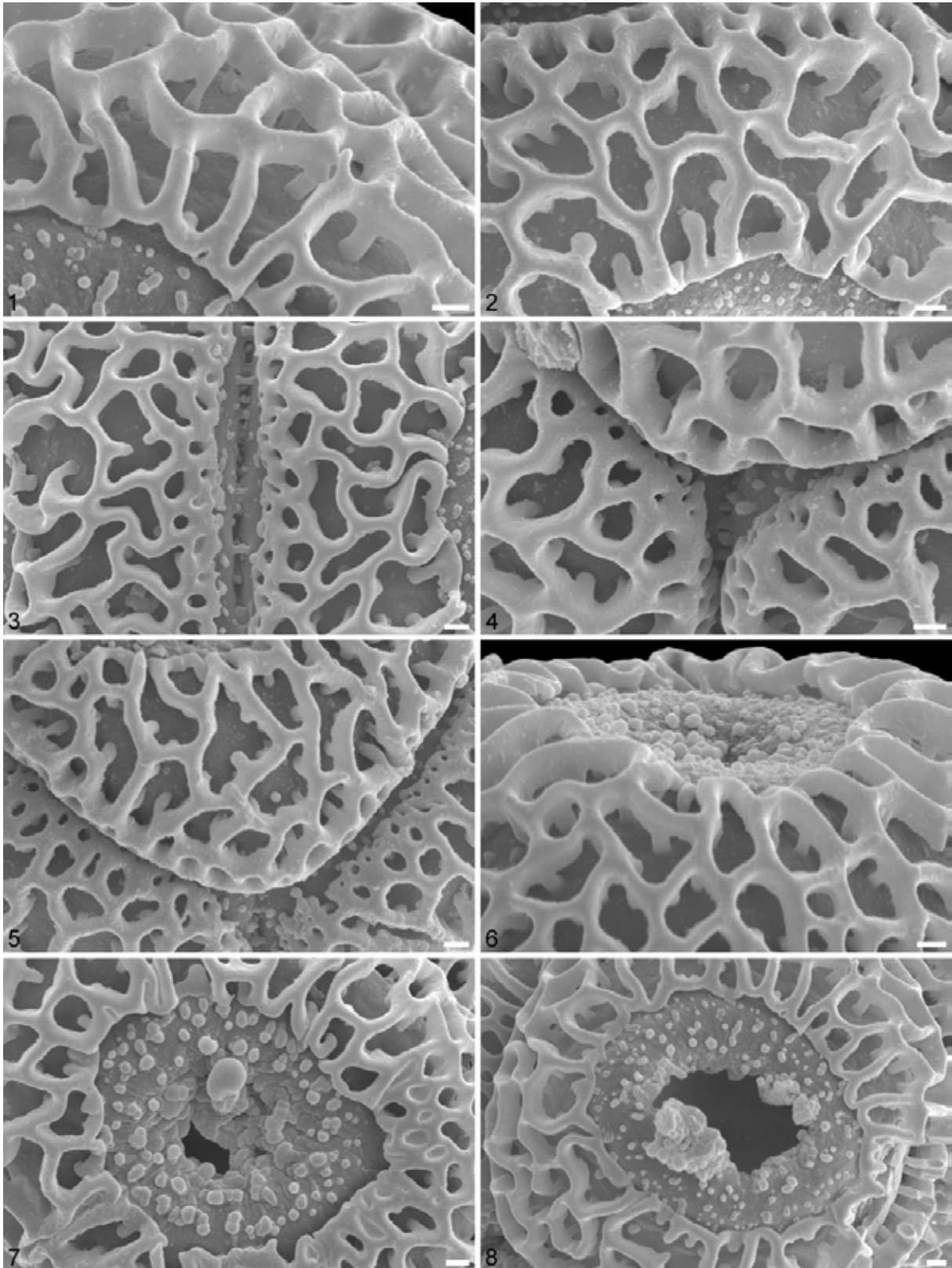


Plate S12

Plate S13

Drimys winteri J.R. Forst. & G. Forst. (W 1955–0013624: from Chile).

1–2. Pollen tetrads in LM, upper row at high focus, lower row in optical cross section, left tetrads in basal view, middle tetrads in lateral view, right tetrads in apical view.

3–8. Pollen tetrads in SEM.

3–4. Basal view.

5–6. Lateral view.

7–8. Apical view.

Scale bars: 10 μm .

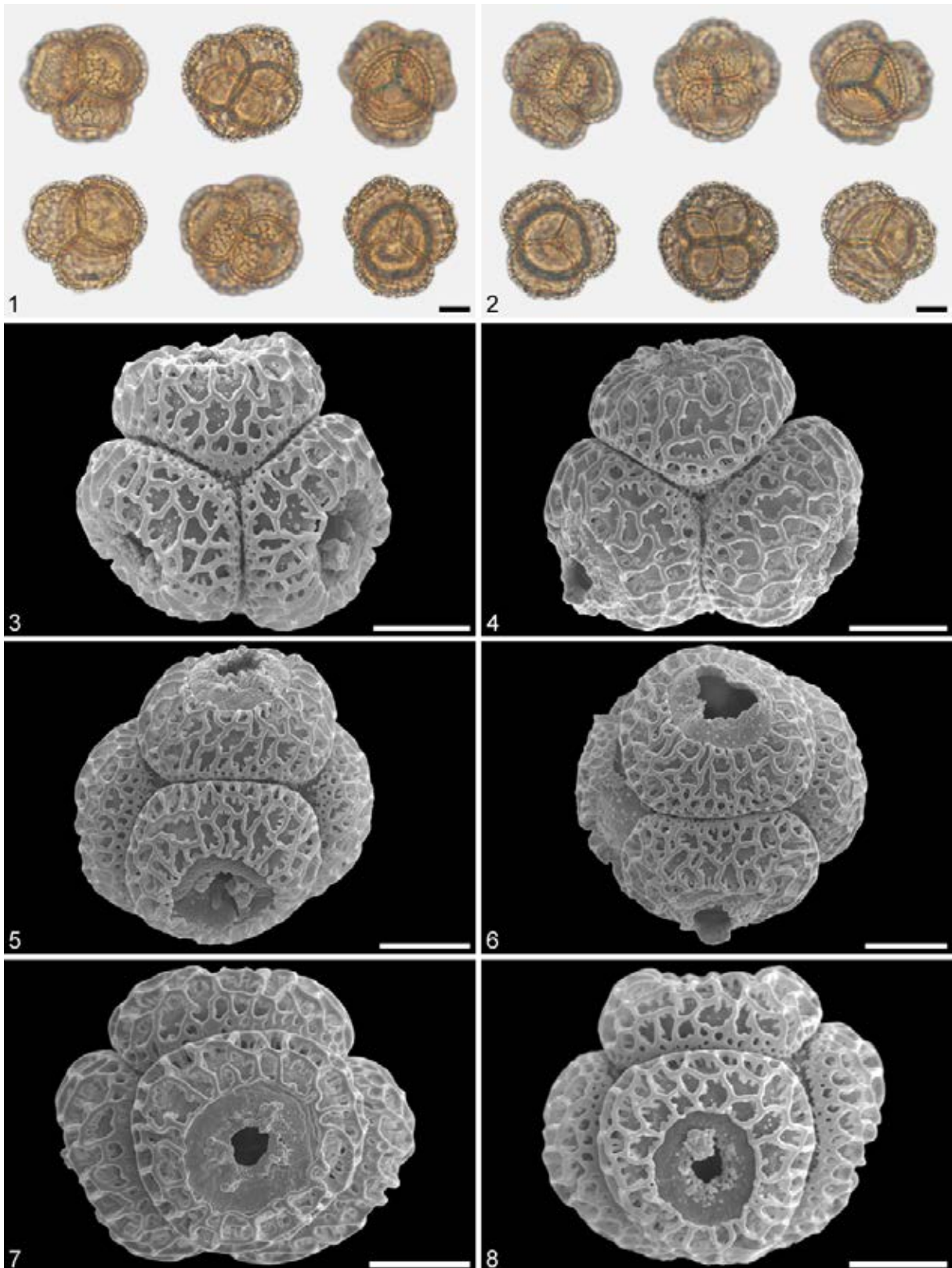


Plate S13

Plate S14

Drimys winteri J.R. Forst. & G. Forst. (W 1955–0013624: from Chile).

1–8. Close-ups of sculpture in SEM.

1–2. Distal face of pollen.

3. Pollen interface in lateral view.

4–5. Pollen interface in basal view.

6–8. Aperture.

Scale bars: 1 μm .

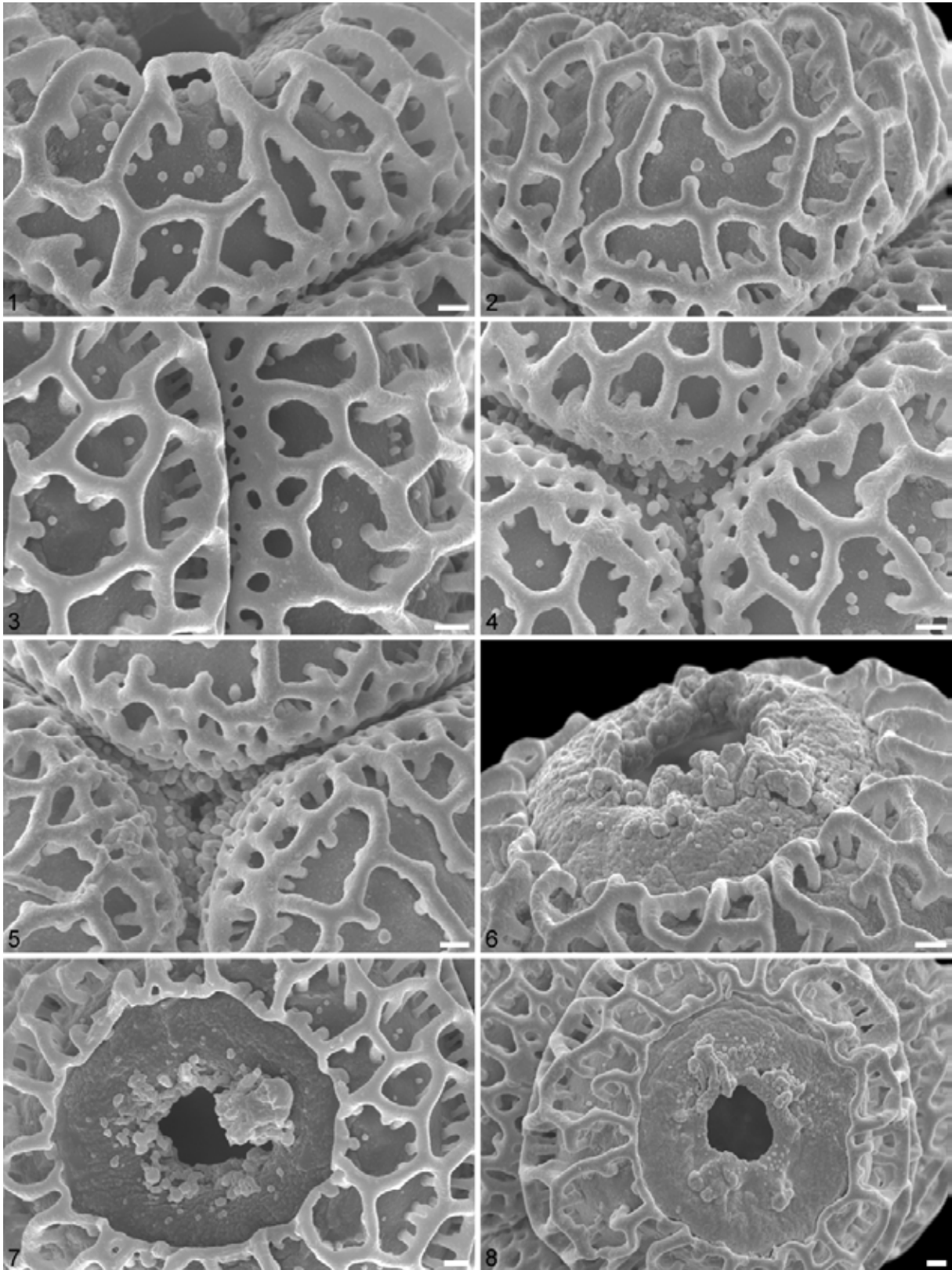


Plate S14

Plate S15

Drimys winteri J.R. Forst. & G. Forst. (WU: from Chile, coll. unknown, s.n.).

1–2. Pollen tetrads in LM, upper row at high focus, lower row in optical cross section, left tetrads in basal view, middle tetrads in lateral view, right tetrads in apical view.

3–8. Pollen tetrads in SEM.

3–4. Basal view.

5–6. Lateral view.

7–8. Apical view.

Scale bars: 10 μm .

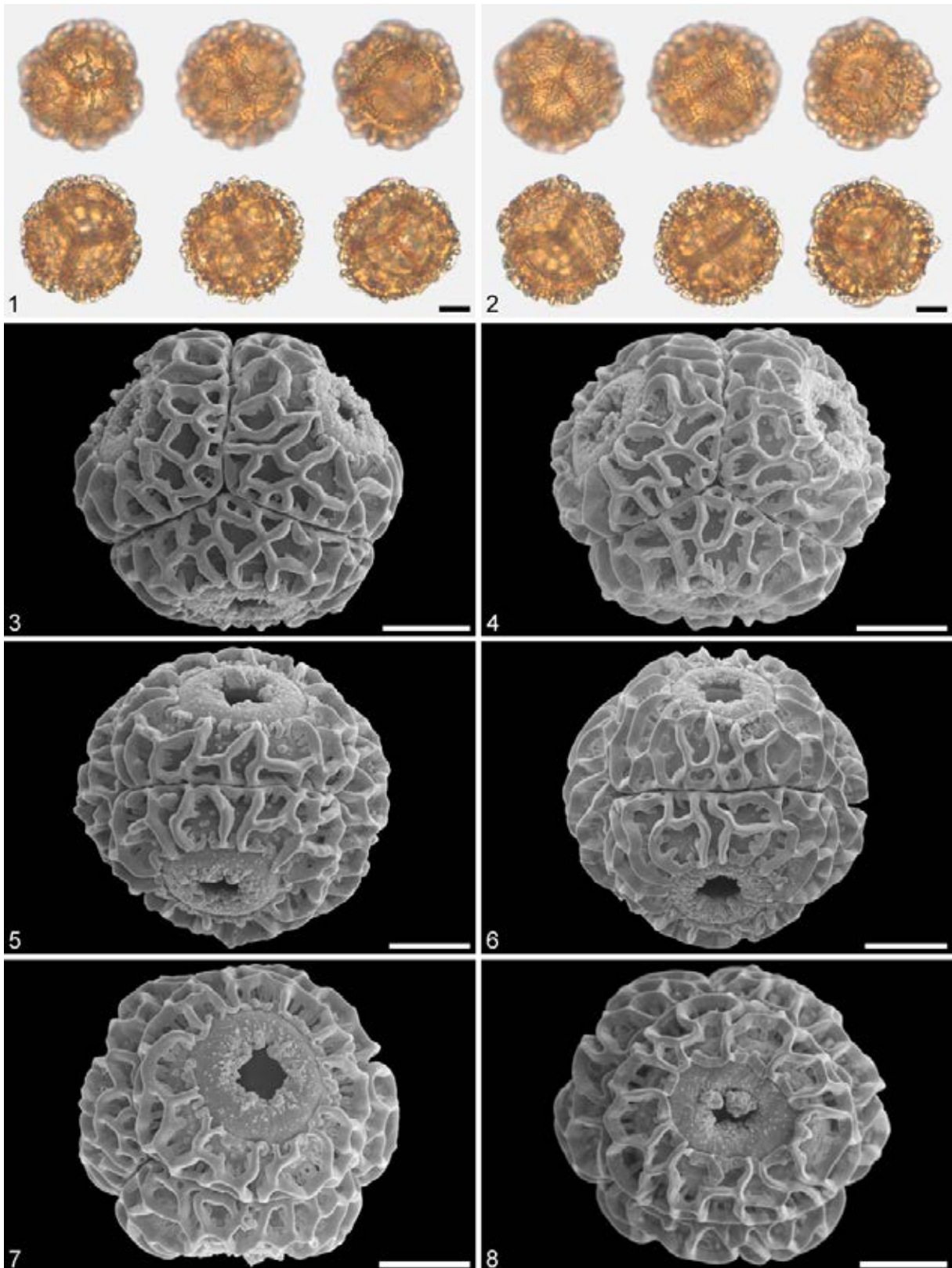


Plate S15

Plate S16

Drimys winteri J.R. Forst. & G. Forst. (WU: from Chile, coll. unknown, s.n.).

1–8. Close-ups of sculpture in SEM.

1–3. Distal face of pollen.

4–5. Pollen interface in basal view.

6–8. Aperture.

Scale bars: 1 μm .

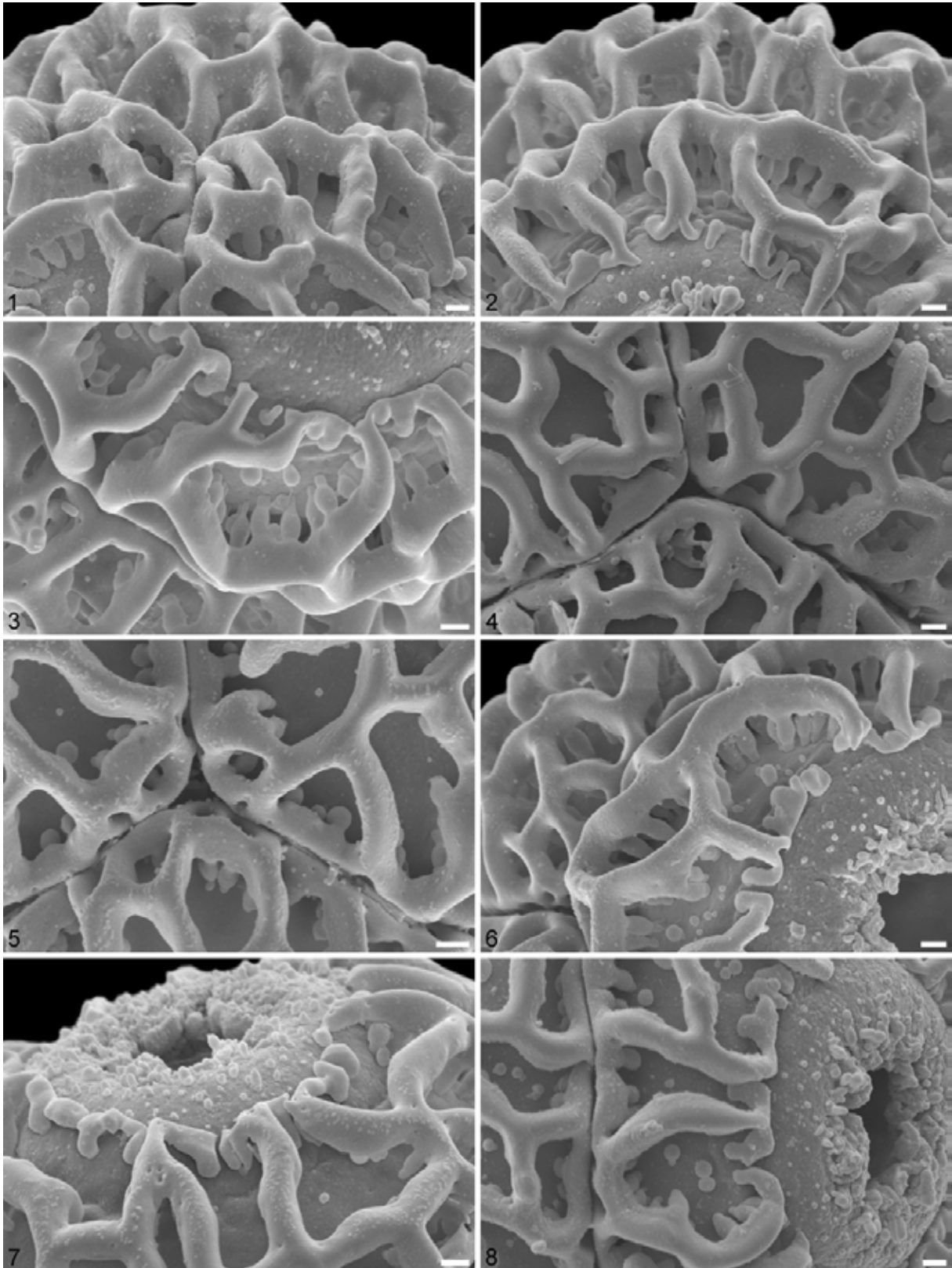


Plate S16

Plate S17

Pseudowintera axillaris (J.R. Forst. & G.Forst) Dandy (WELT SP092372: from New Zealand).

1–2. Pollen tetrads in LM, upper row at high focus, lower row in optical cross section, left tetrads in basal view, middle tetrads in lateral view, right tetrads in apical view.

3–8. Pollen tetrads in SEM.

3–4. Basal view.

5–6. Lateral view.

7–8. Apical view.

Scale bars: 10 μm .

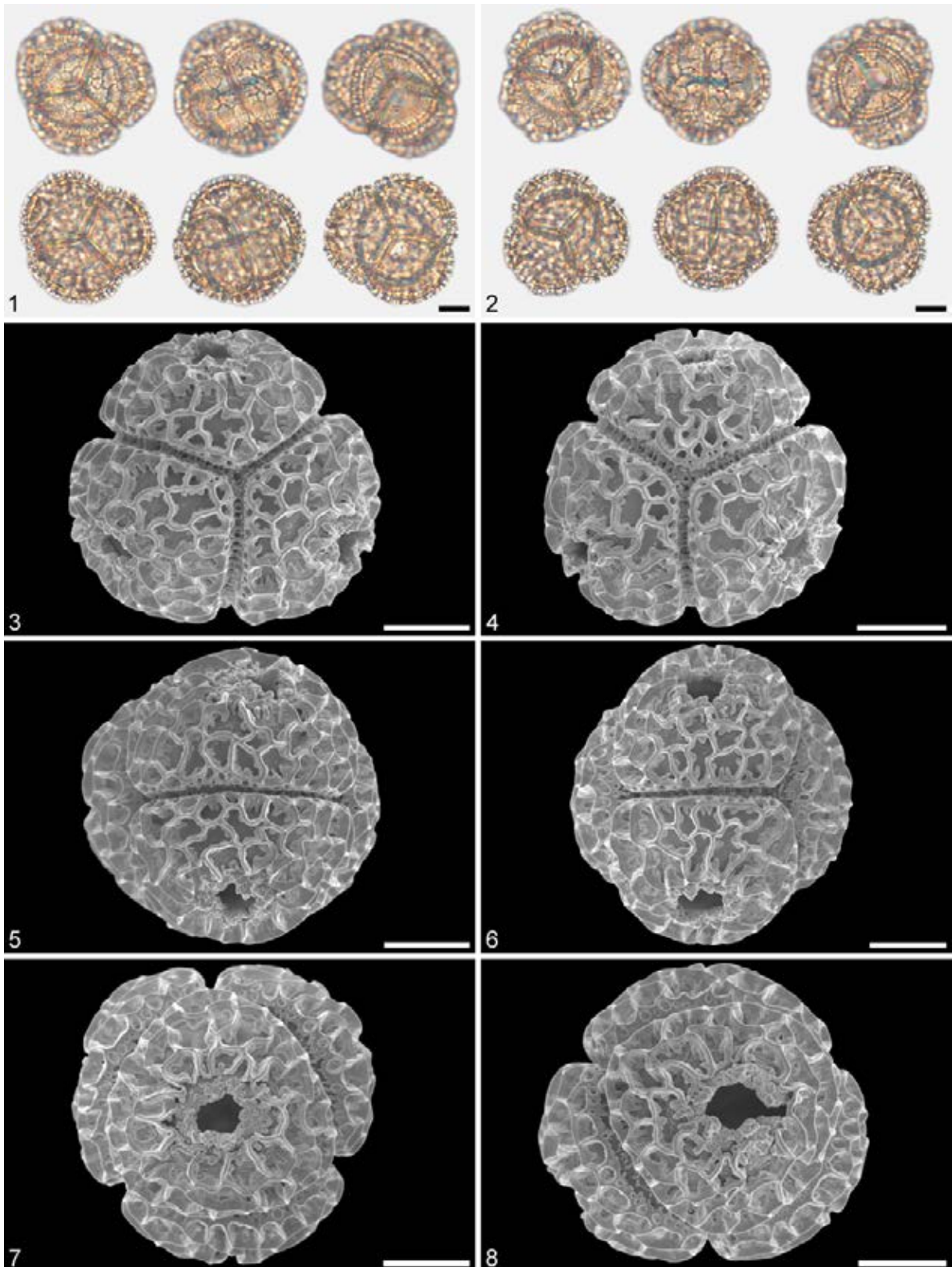


Plate S17

Plate S18

Pseudowintera axillaris (J.R. Forst. & G.Forst) Dandy (WELT SP092372: from New Zealand).

1–8. Close-ups of sculpture in SEM.

1–2. Distal face of pollen.

3–4. Pollen interface in lateral view.

5–6. Pollen interface in basal view.

7–8. Aperture.

Scale bars: 1 μm .

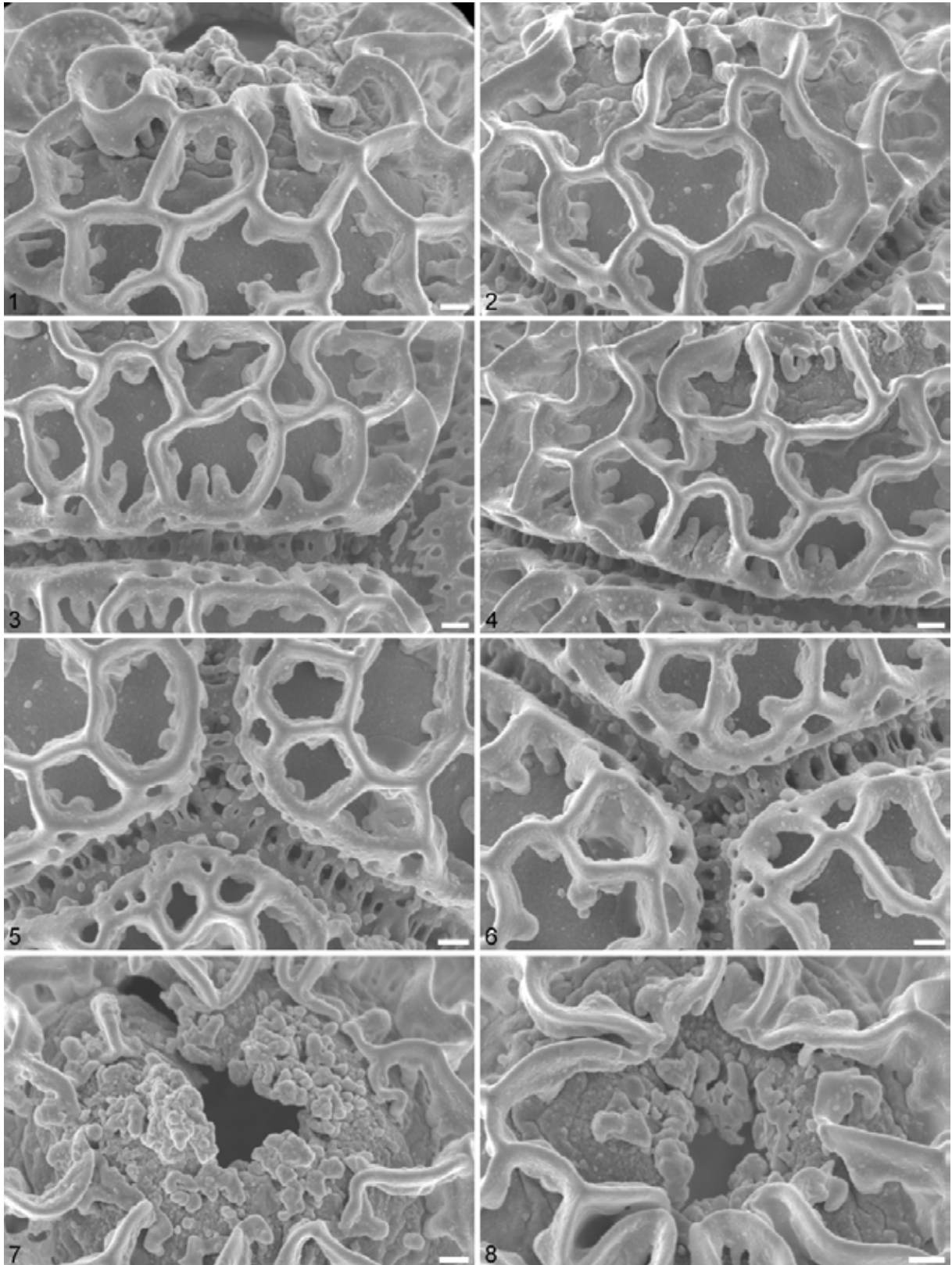


Plate S18

Plate S19

Pseudowintera axillaris (J.R. Forst. & G.Forst) Dandy (WELT SP092375: from New Zealand).

1–2. Pollen tetrads in LM, upper row at high focus, lower row in optical cross section, left tetrads in basal view, middle tetrads in lateral view, right tetrads in apical view.

3–8. Pollen tetrads in SEM.

3–4. Basal view.

5–6. Lateral view.

7–8. Apical view.

Scale bars: 10 μm .

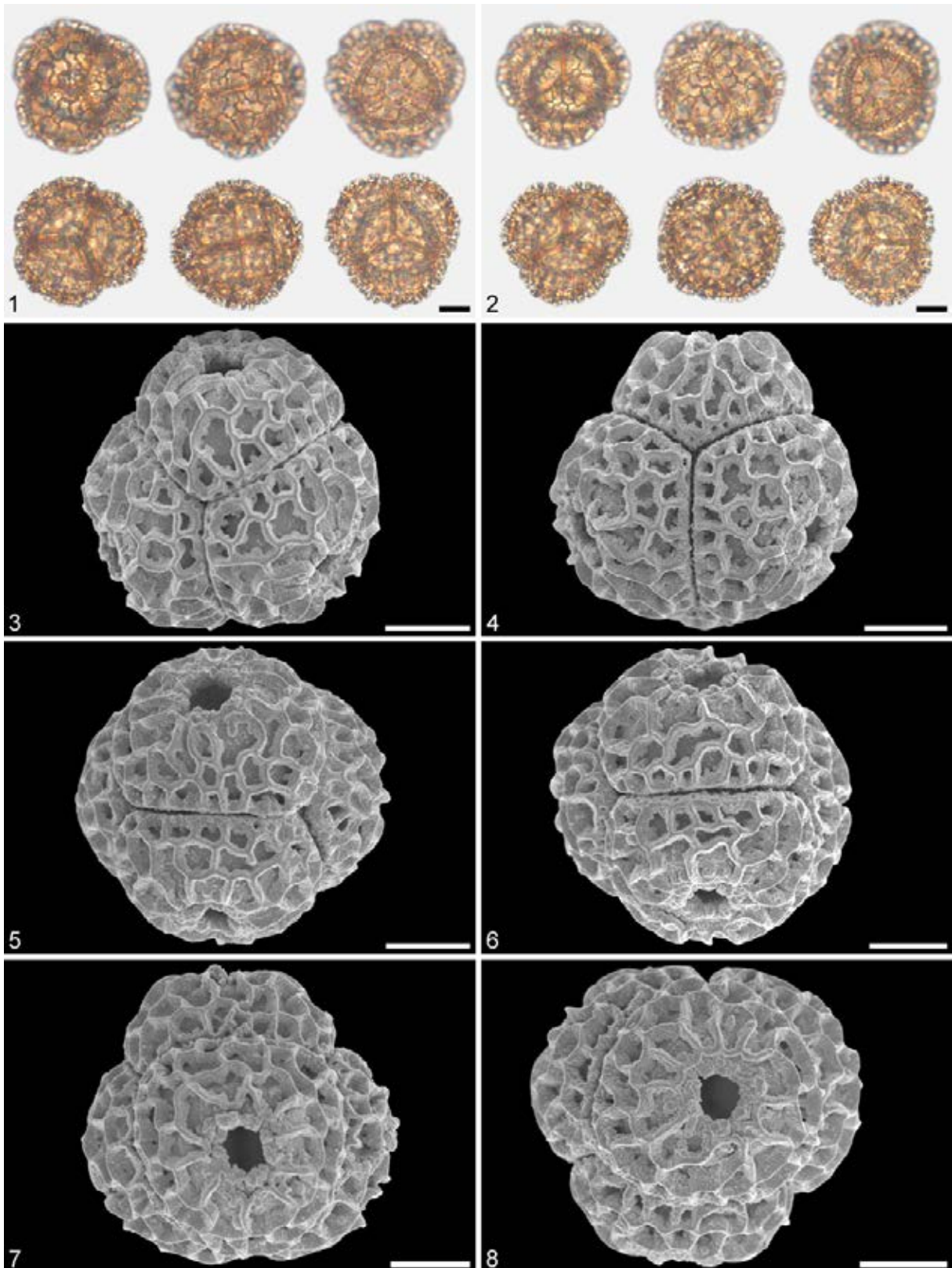


Plate S19

Plate S20

Pseudowintera axillaris (J.R. Forst. & G.Forst) Dandy (WELT SP092375: from New Zealand).

1–8. Close-ups of sculpture in SEM.

1–3. Distal face of pollen.

4. Pollen interface in lateral view.

5–6. Pollen interface in basal view.

7–8. Aperture.

Scale bars: 1 μm .

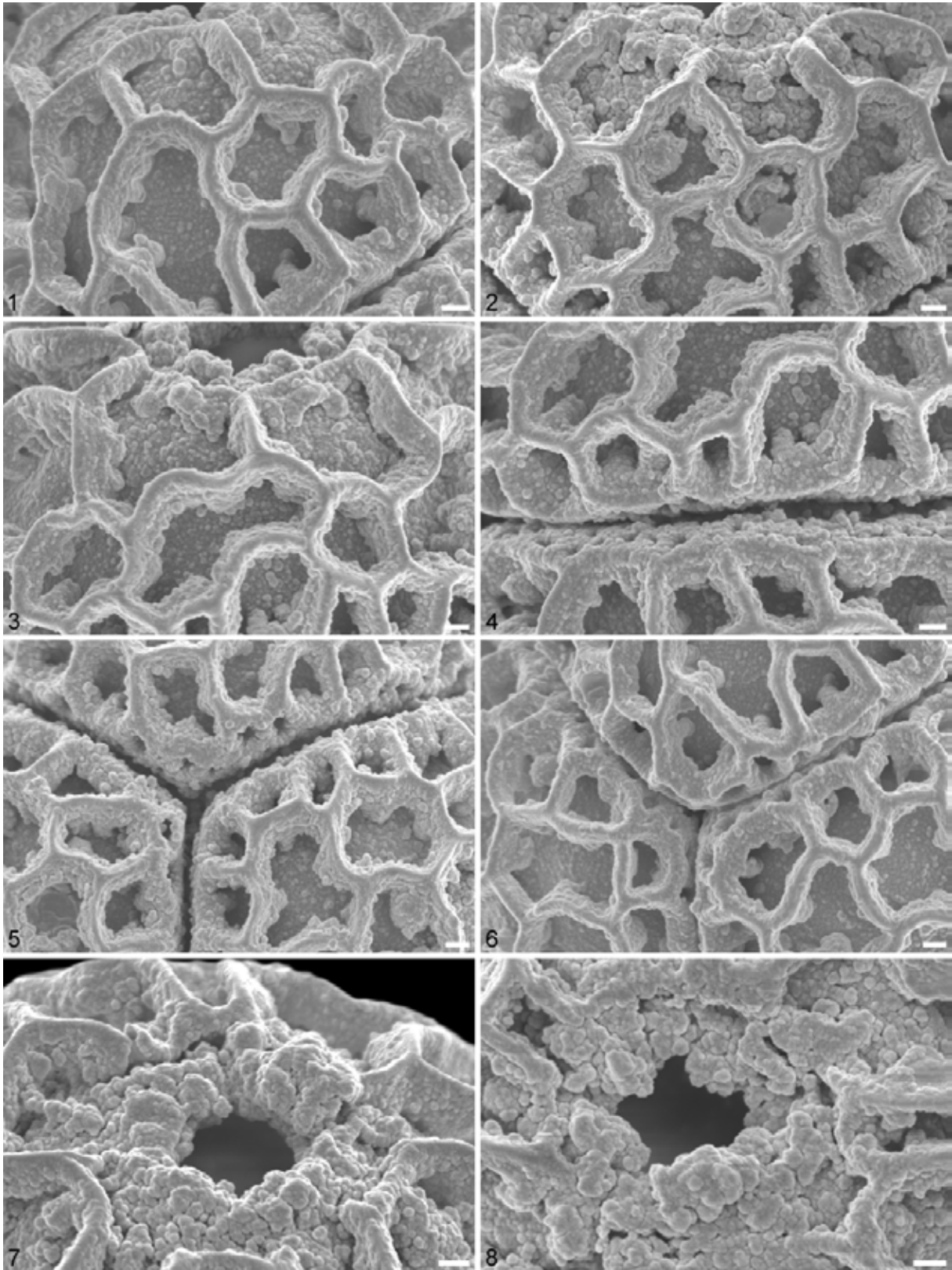


Plate S20

Plate S21

Pseudowintera colorata (Raoul) Dandy (WELT SP092383: from New Zealand).

1–2. Pollen tetrads in LM, upper row at high focus, lower row in optical cross section, left tetrads in basal view, middle tetrads in lateral view, right tetrads in apical view.

3–8. Pollen tetrads in SEM.

3–4. Basal view.

5–6. Lateral view.

7–8. Apical view.

Scale bars: 10 μm .

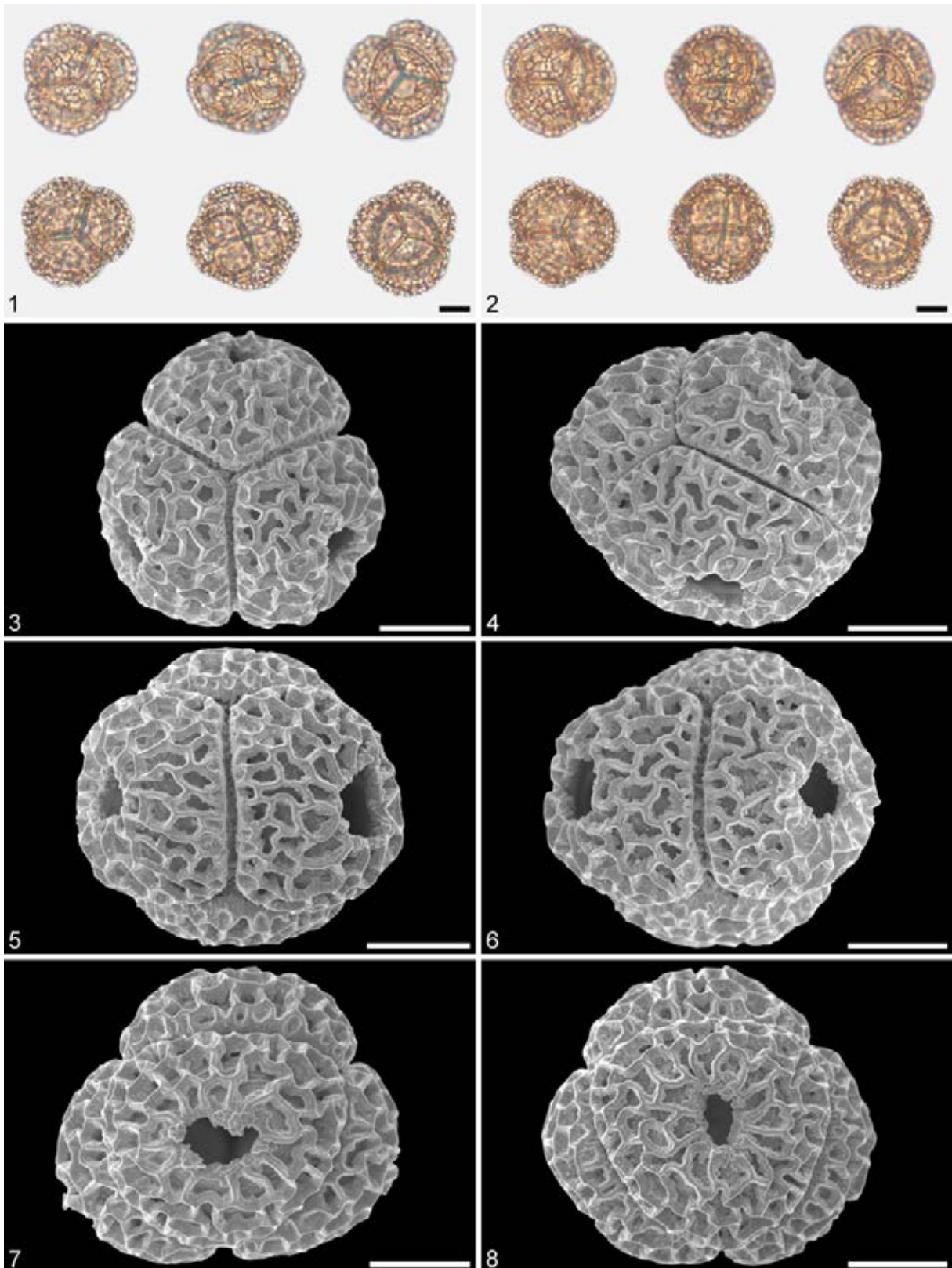


Plate S21

Plate S22

Pseudowintera colorata (Raoul) Dandy (WELT SP092383: from New Zealand).

1–6. Close-ups of sculpture in SEM.

1–2. Distal face of pollen.

3–4. Pollen interface in lateral view.

5. Pollen interface in basal view.

6. Aperture.

Scale bars: 1 μm .

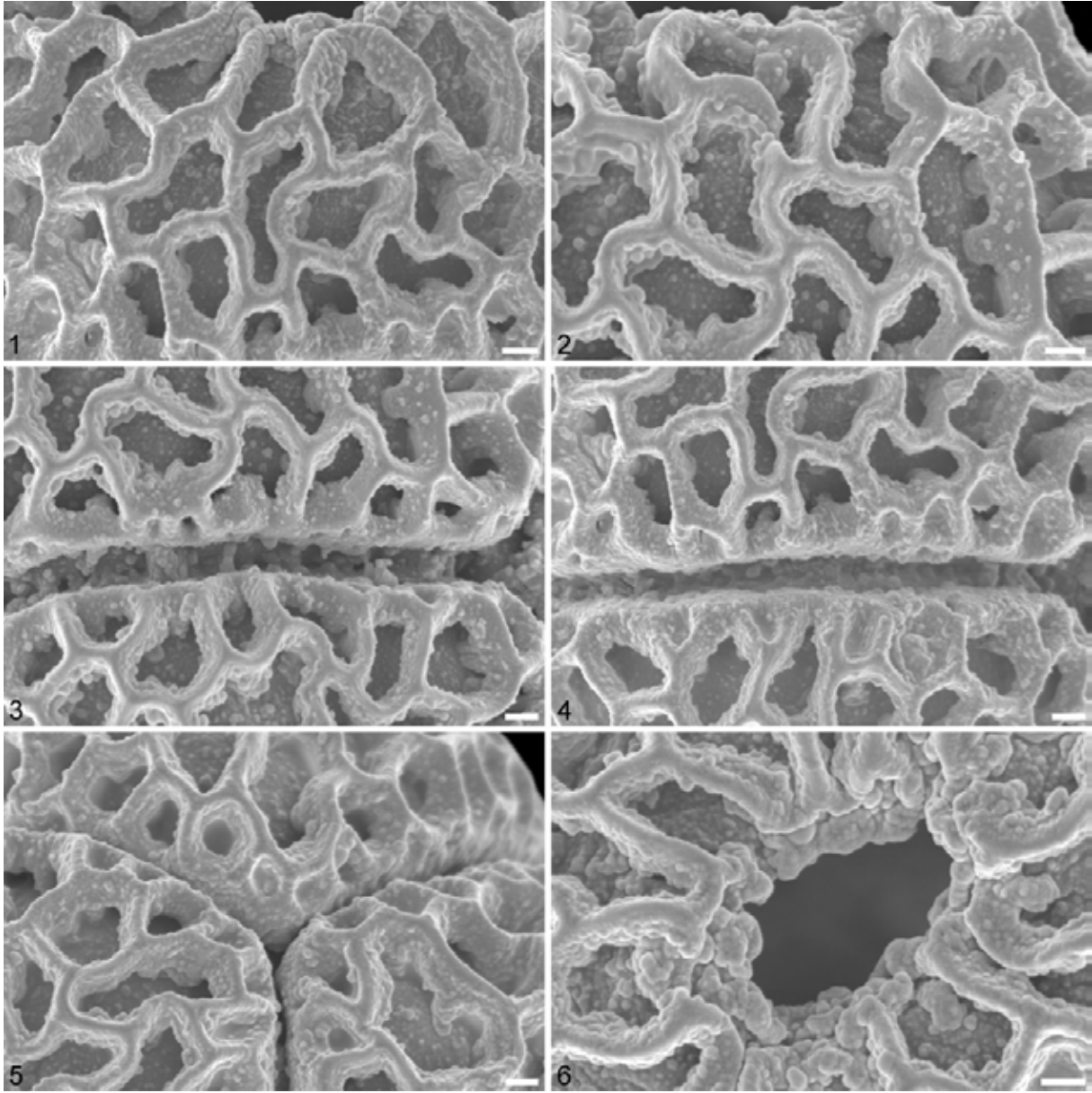


Plate S22

Plate S23

Pseudowintera colorata (Raoul) Dandy (WELT SP092400/A: from New Zealand).

1–2. Pollen tetrads in LM, upper row at high focus, lower row in optical cross section, left tetrads in basal view, middle tetrads in lateral view, right tetrads in apical view.

3–8. Pollen tetrads in SEM.

3–4. Basal view.

5–6. Lateral view.

7–8. Apical view.

Scale bars: 10 μm .

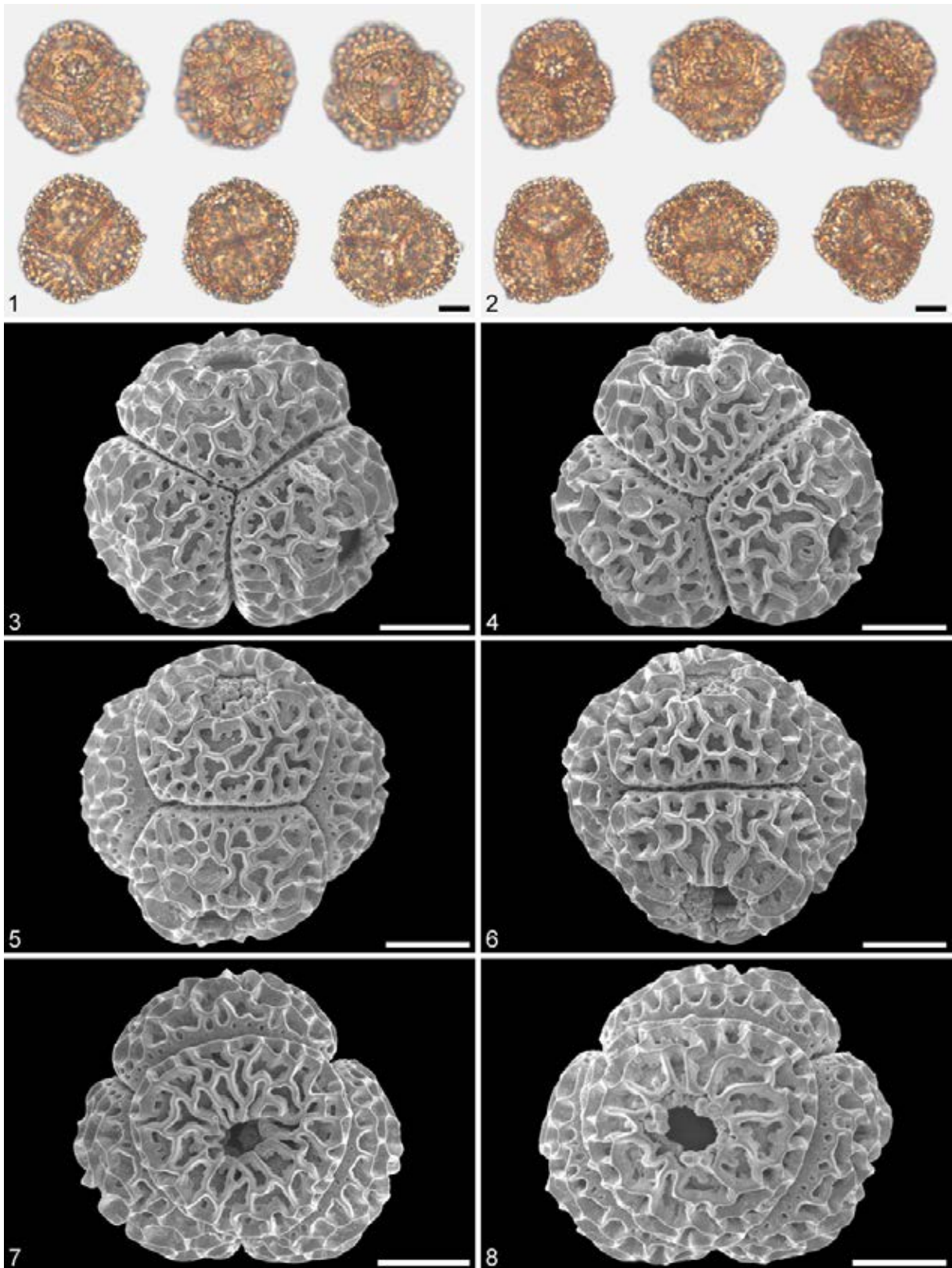


Plate S23

Plate S24

Pseudowintera colorata (Raoul) Dandy (WELT SP092400/A: from New Zealand).

1–8. Close-ups of sculpture in SEM.

1–2. Distal face of pollen.

3–4. Pollen interface in lateral view.

5. Pollen interface in basal view.

6–8. Aperture.

Scale bars: 1 μm .

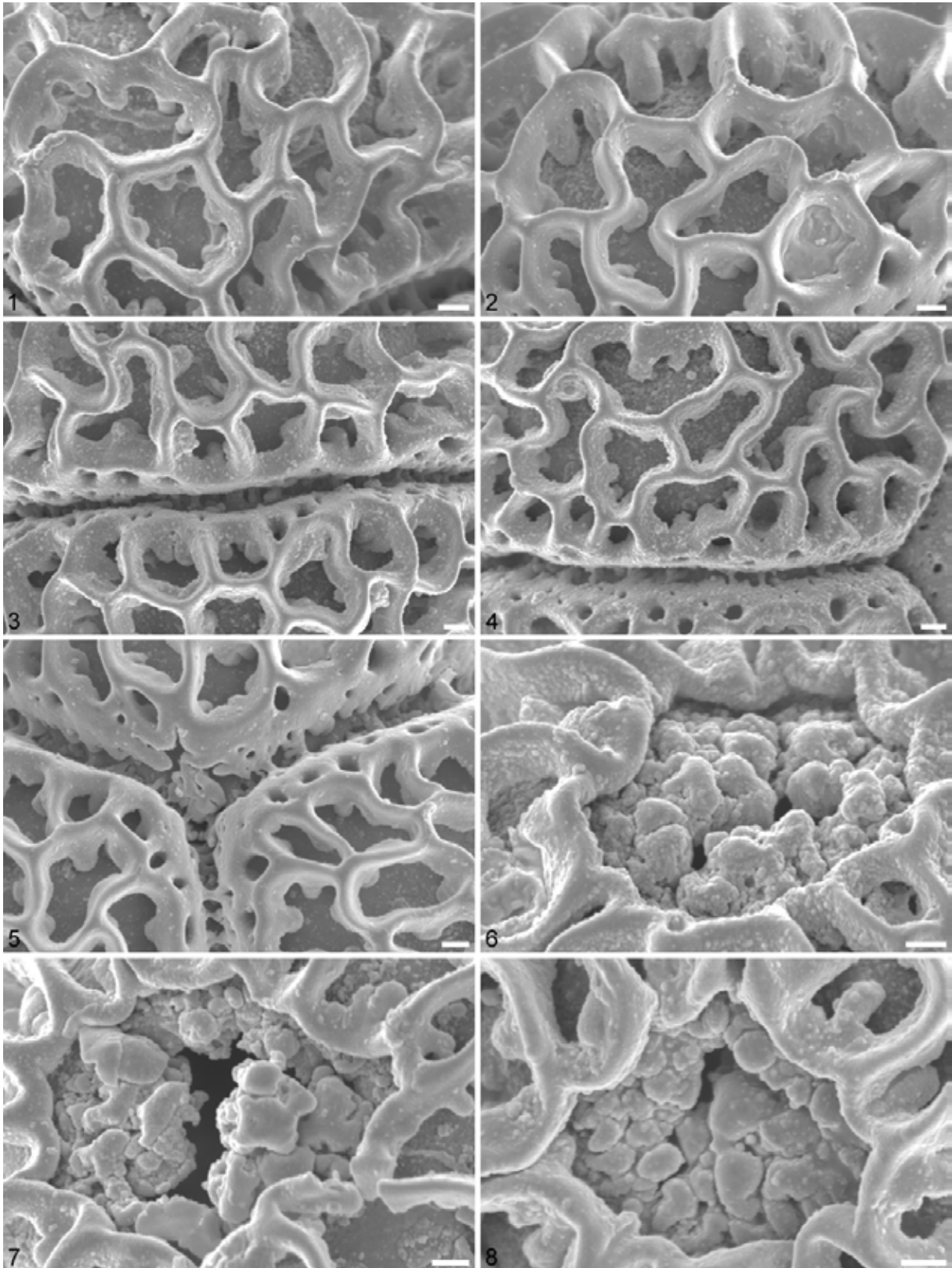


Plate S24

Plate S25

Pseudowintera traversii (Buchan.) Dandy (CHR 229918: from New Zealand).

1–2. Pollen tetrads in LM, upper row at high focus, lower row in optical cross section, left tetrads in basal view, middle tetrads in lateral view, right tetrads in apical view.

3–8. Pollen tetrads in SEM.

3–4. Basal view.

5–6. Lateral view.

7–8. Apical view.

Scale bars: 10 μm .

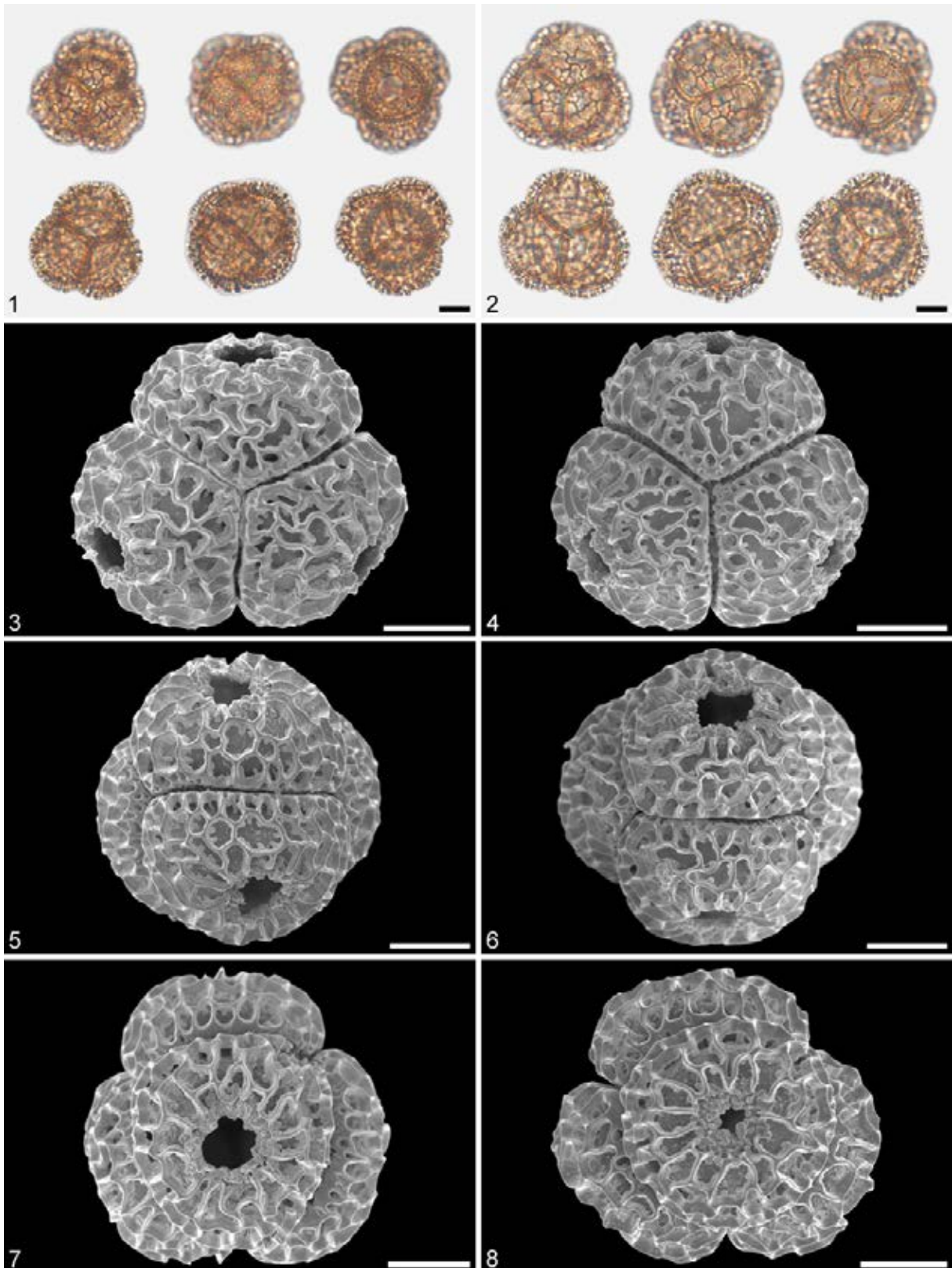


Plate S25

Plate S26

Pseudowintera traversii (Buchan.) Dandy (CHR 229918: from New Zealand).

1–8. Close-ups of sculpture in SEM.

1–2. Distal face of pollen.

3. Pollen interface in lateral view.

4–5. Pollen interface in basal view.

6–8. Aperture region.

Scale bars: 1 μm .

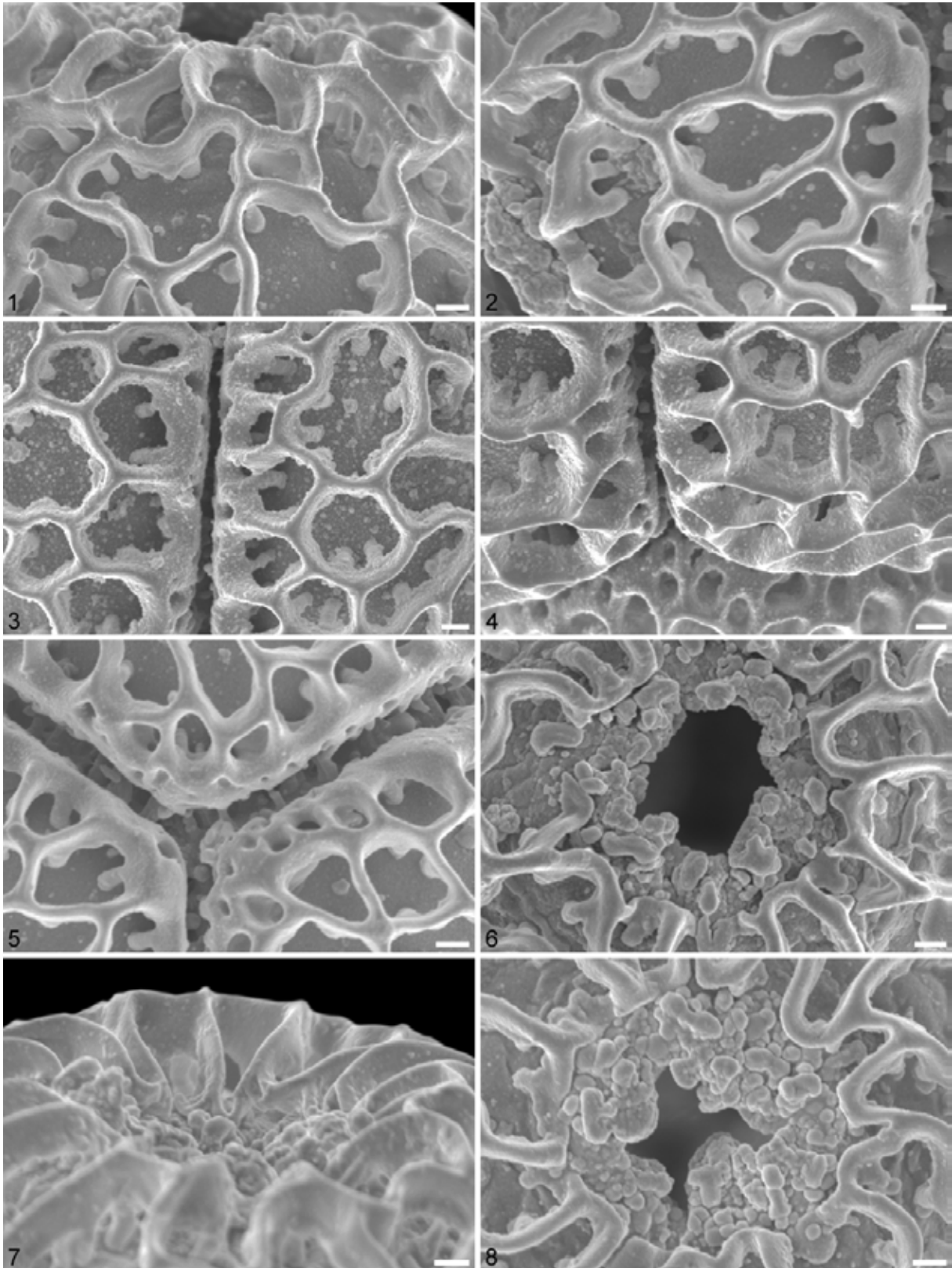


Plate S26

Plate S27

Pseudowintera traversii (Buchan.) Dandy (CHR 325595: from New Zealand).

1–2. Pollen tetrads in LM, upper row at high focus, lower row in optical cross section, left tetrads in basal view, middle tetrads in lateral view, right tetrads in apical view.

3–8. Pollen tetrads in SEM.

3–4. Basal view.

5–6. Lateral view.

7–8. Apical view.

Scale bars: 10 μm .

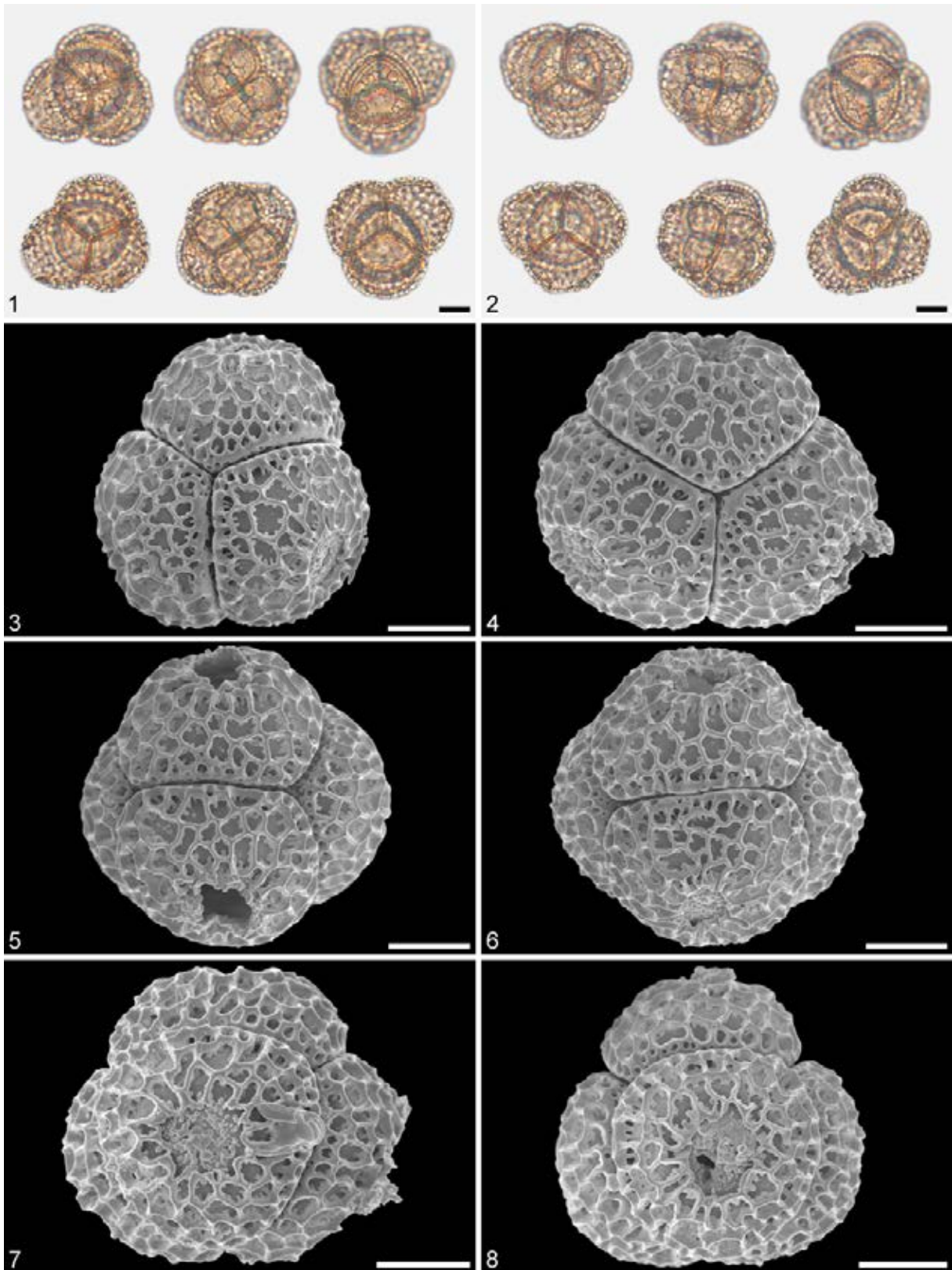


Plate S27

Plate S28

Pseudowintera traversii (Buchan.) Dandy (CHR 325595: from New Zealand).

1–8. Close-ups of sculpture in SEM.

1–2. Distal face of pollen.

3–4. Pollen interface in lateral view.

5–6. Pollen interface in basal view.

7–8. Aperture region.

Scale bars: 1 μm .

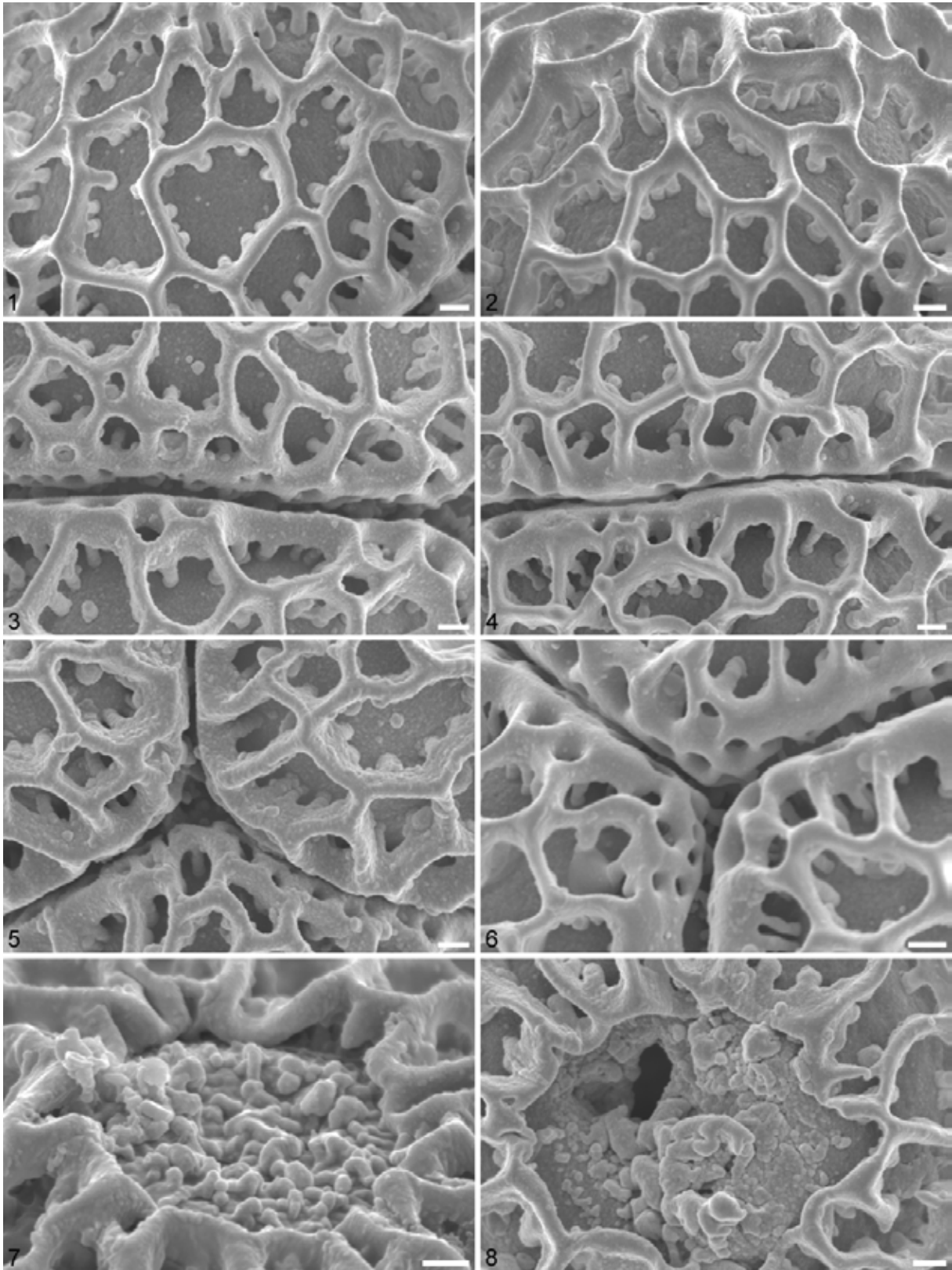


Plate S28