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Illustrations of plant microfossils from the Morrison Formation

IV. Plant microfossils from the Salt Wash Member

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This report is preliminary and has not been reviewed for conformity with Geological Survey editorial standards and nomenclature.

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# Illustrations of plant microfossils from the Morrison Formation

## IV. Plant microfossils from the Salt Wash Member

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The purpose of this report is to make available photographs of the palynomorphs found in three samples from the Salt Wash Member of the Morrison Formation. This report is part of continuing efforts to provide biostratigraphical data from critical rock sequences (see Tschudy, Tschudy, Van Loenen, and Doher, 1981; Tschudy, Tschudy, and Van Loenen, 1981; and Tschudy, Tschudy, and Van Loenen, in press).

The photographs are primarily for laboratory reference. They are intended for use as a guide to the recognition and preliminary identification of pollen and spores from the Morrison Formation. The present report concerns samples from the Salt Wash Member. See figure 1 showing Morrison Formation Members.

No new genera or species are described, nor have attempts been made to bring the nomenclature up to date. This report is not intended as a formal taxonomic documentation and treatment.

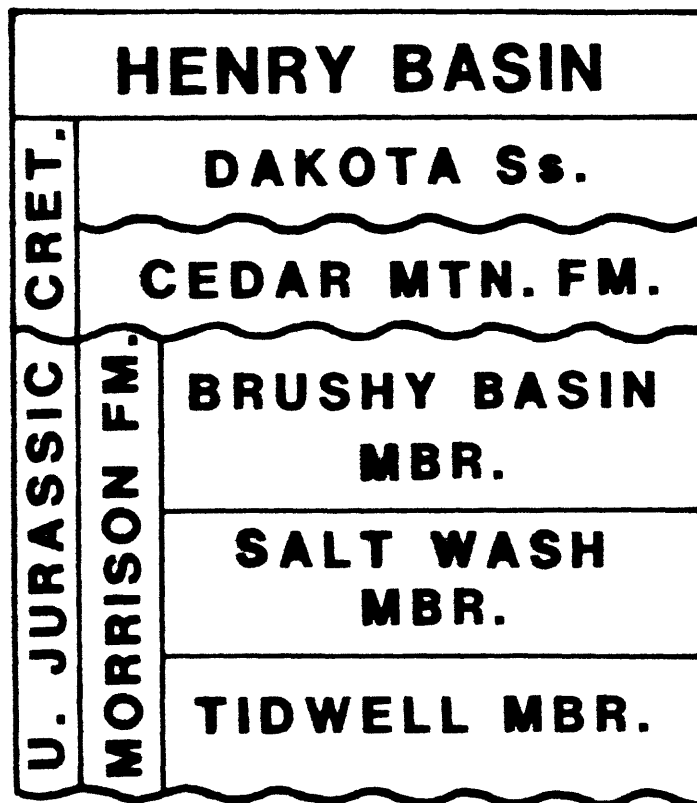


Figure 1. Chart showing nomenclature of the Morrison Formation in Henry Basin, Utah. From Peterson and Turner-Peterson, 1987.

The spores and pollen illustrated were obtained from well samples from the following localities:

USGS

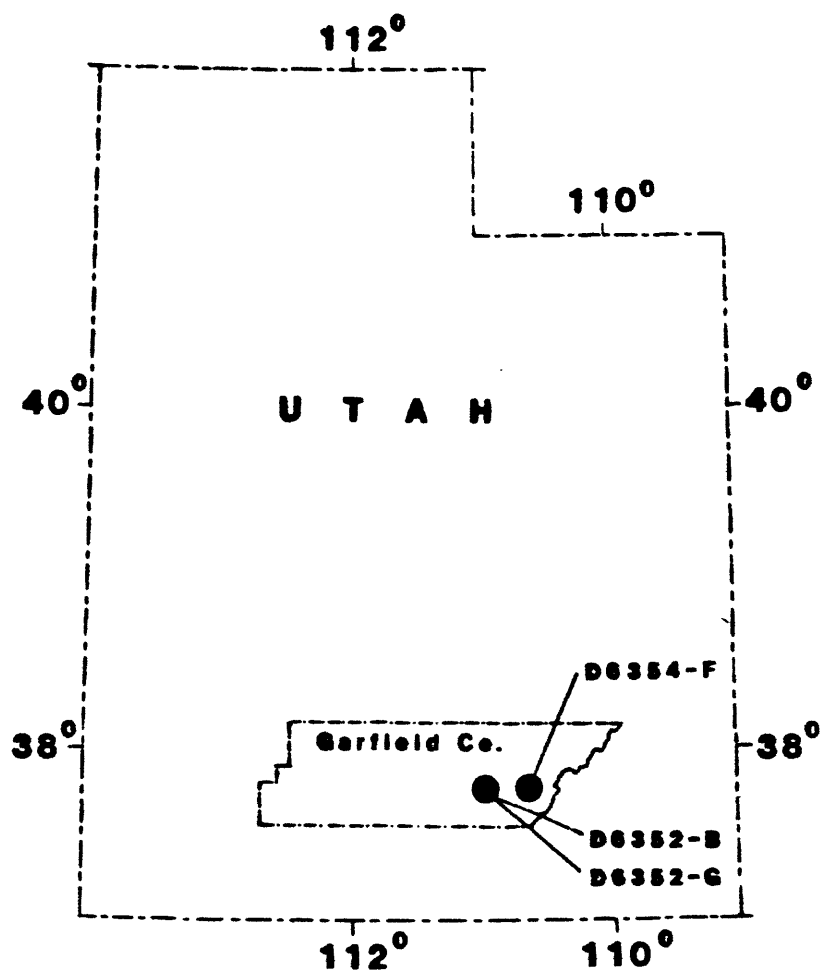
Paleobotany Locality No.

Localities

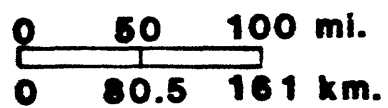
D6352-G Plates 1-6	Well WC-6, sec. 34, T. 34 S., R. 10 E.; Lat 37°50' N., Long 110°47' W., Escalante 1°x2° sheet, Garfield Co., Utah. Gray mudstone from a depth of 1,536 ft (468 m). Collected by Fred Peterson.
D6352-B Plates 7-9	Same locality. Gray mudstone from a depth of 1,580 ft (482 m). Collected by Fred Peterson.
D6354-F Plate 10	Well WC-9, sec. 36, T. 34 S., R. 11 E.; Lat 37°50' N., Long 110°39' W., Escalante 1°x2° sheet, Garfield Co., Utah. Gray mudstone from a depth of 322 ft (98 m). Collected by Fred Peterson.

The geographic positions of these localities are shown on the accompanying map, figure 2. The palynomorphs found in sample locality D6352-G are shown on plates 1-6, those from sample locality D6352-B are shown on plates 7-9, and those from sample locality D6354-F are shown on plates 10-15.

All specimens illustrated in this report are preserved on slides deposited in the paleobotanical collections of the U.S. Geological Survey, Denver, Colo. The specimens may be located on the slides by the mechanical



**Scale**



**Figure 2 - Map showing Salt Wash Member  
sample localities**

stage coordinates given in the plate explanations. In order that others may convert their mechanical stage readings to those recorded for the specimens included in this report, the coordinates for the center point of a 1 x 3-inch standard microscope slide are 108.0 x 12.3 mm. The method of accurately locating the center of a standard microscope slide has been described by R.H. Tschudy (1966, p. D78). With the slide label to the left, the vertical coordinates decrease toward the near edge of the slide, and the horizontal coordinates decrease toward the right edge of the slide.

Plate 1  
[Magnification X 1000]

- FIGURE 1. Trilete spore--undetermined. Sample D6352-G, slide 2, coordinates 114.9 x 3.2.
2. Trilete spore--undetermined. Sample D6352-G, slide 2, coordinates 100.8 x 11.5.
3. Trilete spore--undetermined. Sample D6352-G, slide 2, coordinates 95.9 x 14.7.
4. Trilete spore--undetermined. Sample D6352-G, slide 2, coordinates 100.7 x 11.5.
5. Todisporites minor Couper, 1958. Sample D6352-G, slide 2, coordinates 80.4 x 9.7.
6. Foraminisporis sp. Sample D6352-G, slide 2, coordinates 85.8 x 2.8.
7. Vitreisporites pallidus (Reissinger) Nilsson, 1958. Sample D6352-G, slide 2, coordinates 89.1 x 7.2.
8. Bisaccate pollen--undetermined. Sample D6352-G, slide 2, coordinates 97.9 x 6.2.
9. Bisaccate pollen--undetermined. Sample D6352-G, slide 2, coordinates 95.6 x 7.9.
10. Bisaccate pollen--undetermined. Sample D6352-G, slide 2, coordinates 105.4 x 21.6.
11. Bisaccate pollen--undetermined. Sample D6352-G, slide 2, coordinates 91.0 x 2.5.
12. Bisaccate pollen--undetermined. Sample D6352-G, slide 2, coordinates 85.1 x 16.8.

Plate 2  
[Magnification X 1000]

- FIGURE 1. Bisaccate pollen--undetermined. Sample D6352-G, slide 2,  
coordinates 110.6 x 3.5.
2. Bisaccate pollen--undetermined. Sample D6352-G, slide 2,  
coordinates 97.6 x 9.0.
3. Pristinuspollenites microsaccus (Couper) B. Tschudy, 1973.  
Sample D6352-G, slide 2, coordinates 105.0 x 2.0.
4. Bisaccate pollen--undetermined. Sample D6352-G, slide 2,  
coordinates 111.1 x 23.1.
5. Rugubivesiculites woodbinensis Hedlund, 1966.  
Sample D6352-G, slide 2, coordinates 99.3 x 9.1.
6. Rugubivesiculites sp. Sample D6352-G, slide 2,  
coordinates 106.4 x 4.3.

Plate 3  
[Magnification X 1000]

- FIGURE
1. Bisaccate pollen--undetermined.  
Sample D6352-G, slide 2, coordinates 83.0 x 13.4.
  2. Protopicea exilioides (Bolkhovitina) Pocock, 1970.  
Sample D6352-G, slide 2, coordinates 97.9 x 8.4.
  3. Pityosporites sp. Sample D6352-G, slide 2,  
coordinates 98.8 x 10.7.
  4. Pristinuspollenites microsaccus (Couper) B. Tschudy, 1973.  
Sample D6352-G, slide 2, coordinates 84.8 x 3.3.
  5. Podocarpidites sp. Sample D6352-G, slide 2,  
coordinates 99.4 x 9.6.
  6. Bisaccate pollen--undetermined. Sample D6352-G, slide 2,  
coordinates 92.2 x 14.9.
  7. Pristinuspollenites microreticulatus (Brenner)  
B. Tschudy, 1973. Sample D6352-G, slide 2,  
coordinates 87.9 x 14.7.
  8. Exesipollenites tumulus Balme, 1957.  
Sample D6352-G, slide 2, coordinates 106.5 x 16.3.

Plate 4  
[Magnification X 1000]

- FIGURE
1. Inaperturopollenites cf. I. australis (Cookson)  
Pocock, 1970. Sample D6352-G, slide 2,  
coordinates 97.1 x 6.6
  2. Inaperturopollenites australis (Cookson) Pocock, 1970.  
Sample D6352-G, slide 2, coordinates 114.4 x 8.2.
  3. Undetermined. Sample D6352-G, slide 2, coordinates 105.1 x 6.3.
  4. Cerebropollenites mesozoicus (Couper) Nilsson, 1958.  
Sample D6352-G, slide 2, coordinates 100.8 x 15.8.
  5. Cerebropollenites macroverrucosus (Thiergart) Pocock, 1970.  
Sample D6352-G, slide 2, coordinates 96.0 x 16.3.
  6. Callialasporites sp. lateral view.  
Sample D6352-G, slide 2, coordinates 85.6 x 3.1.
  7. Callialasporites sp. lateral view.  
Sample D6352-G, slide 2, coordinates 85.6 x 3.1.

Plate 5  
[Magnification X 1000]

- FIGURE
1. Callialasporites sp. Sample D6352-G, slide 2,  
coordinates 85.9 x 5.2.
  2. Callialasporites cf. C. dampieri (Balme) Sukh Dev, 1961.  
Sample D6352-G, slide 2, coordinates 100.0 x 18.3.
  3. Crybelosporites sp. Sample D6352-G, slide 2,  
coordinates 90.8 x 9.5.
  4. Callialasporites sp. Sample D6352-G, slide 2,  
coordinates 89.0 x 17.4.
  5. Bisaccate pollen--undetermined. Sample D6352-G,  
slide 2, coordinates 114.1 x 17.9.
  6. Callialasporites trilobatus (Balme) Sukh Dev, 1961.  
Sample D6352-G, slide 2, coordinates 82.1 x 14.0.
  7. Crybelosporites sp. Sample D6352-G, slide 2,  
coordinates 91.2 x 11.4.
  8. Callialasporites cf. C. trilobatus (Balme) Sukh Dev, 1961.  
Sample D6352-G, slide 2, coordinates 91.0 x 4.6.
  9. Stereisporites sp. Sample D6352-G, slide 2,  
coordinates 89.4 x 5.9.

Plate 6  
[Magnification X 1000]

- FIGURE 1. Callialasporites sp. Sample D6352-G, slide 2,  
coordinates 82.2 x 14.1.
2. Callialasporites sp. Sample D6352-G, slide 2,  
coordinates 83.2 x 9.2.
3. Callialasporites sp. Sample D6352-G, slide 2,  
coordinates 104.8 x 17.0.
4. Callialasporites segmentatus (Balme) Sukh Dev, 1961.  
Sample D6352-G, slide 2, coordinates 80.4 x 17.3.
5. Callialasporites segmentatus (Balme) Sukh Dev, 1961.  
Sample D6352-G, slide 2, coordinates 87.2 x 16.0.
6. Corollina sp. Sample D6352-G, slide 2,  
coordinates 113.4 x 20.0.
7. Callialasporites segmentatus (Balme) Sukh Dev, 1961.  
Sample D6352-G, slide 2, coordinates 89.1 x 10.9.
8. Corollina sp. Sample D6352-G, slide 2,  
coordinates 113.4 x 4.5.
9. Corollina sp. Sample D6352-G, slide 2,  
coordinates 115.0 x 7.9.
10. Undetermined. Sample D6352-G, slide 2, coordinates 98.3 x 15.0.
11. Corollina sp. Sample D6352-G, slide 2, coordinates 93.1 x 21.1.
12. Corollina sp. Sample D6352-G, slide 2, coordinates 96.1 x 2.9.
13. Corollina cf. C. itunensis (Pocock) Cornet and Traverse,  
1975. Sample D6352-G, slide 2, coordinates 100.0 x 18.8.
14. Corollina cf. C. itunensis (Pocock) Cornet and Traverse, 1975.  
Sample D6352-G, slide 2, coordinates 97.9 x 3.5.
15. Cycadopites sp. Sample D6352-G, slide 2,  
coordinates 98.5 x 16.5.
16. Cycadopites fragilis Singh, 1964. Sample D6352-G, slide 2,  
coordinates 80.2 x 21.7.
17. Cycadopites fragilis Singh, 1964.  
Sample D6352-G, slide 2, coordinates 113.4 x 13.9.
18. Cycadopites sp.  
Sample D6352-G, slide 2, coordinates 99.2 x 8.7.

Plate 7  
[Magnification X 1000]

- FIGURE 1. Trilete spore--undetermined. Sample D6352-B, slide 1, coordinates 76.9 x 10.5.
2. Cyathidites minor Couper, 1953. Sample D6352-B, slide 1, coordinates 91.8 x 18.8.
3. Cyathidites australis Couper, 1953. Sample D6352-B, slide 1, coordinates 91.8 x 17.9.
4. Trilete spore--undetermined. Sample D6352-B, slide 1, coordinates 105.0 x 11.8.
5. Todisporites sp. Sample D6352-B, slide 1, coordinates 100.8 x 5.3.
6. Todisporites sp. Sample D6352-B, slide 1, coordinates 102.1 x 11.6.
7. Trilete spore--undetermined. Sample D6352-B, slide 1, coordinates 98.3 x 4.8.
8. Trilete spore--undetermined. Sample D6352-B, slide 1, coordinates 95.7 x 10.1.
9. Concavissimisporites sp. Sample D6352-B, slide 1, coordinates 100.1 x 4.9.
10. cf. Nevesisporites. Sample D6352-B, slide 1, coordinates 107.3 x 22.2.
11. cf. Nevesisporites. Sample D6352-B, slide 1, coordinates 107.3 x 22.2.
12. Lycopodiumsporites sp. Sample D6352-B, slide 1, coordinates 95.0 x 12.9.
13. Trilete spore--undetermined. Sample D6352-B, slide 1, coordinates 101.3 x 19.2.
14. Trilete spore--undetermined. Sample D6352-B, slide 1, coordinates 98.4 x 9.8.
15. Trilete spore--undetermined. Sample D6352-B, slide 1, coordinates 98.4 x 9.8.
16. Trilete spore--undetermined. Sample D6352-B, slide 1, coordinates 87.0 x 5.6.
17. Trilete spore--undetermined. Sample D6352-B, slide 1, coordinates 87.0 x 5.6.

Plate 7 (continued)  
[Magnification X 1000]

- FIGURE 18. Vitreisporites pallidus (Reissinger) Nilsson, 1958.  
Sample D6352-B, slide 1, coordinates 111.8 x 8.8.
19. Vitreisporites pallidus (Reissinger) Nilsson, 1958.  
Sample D6352-B, slide 1, coordinates 95.8 x 6.3.
20. Vitreisporites pallidus (Reissinger) Nilsson, 1958.  
Sample D6352-B, slide 1, coordinates 94.8 x 15.7.
21. Alisporites sp. Sample D6352-B, slide 1,  
coordinates 91.0 x 15.9.
22. Alisporites sp. Sample D6352-B, slide 1,  
coordinates 85.1 x 9.5.

Plate 8  
[Magnification X 1000]

- FIGURE 1. Alisporites sp. Sample D6352-B, slide 1,  
coordinates 110.4 x 20.9.
2. Bisaccate pollen--undetermined. Sample D6352-B, slide 1,  
coordinates 92.8 x 22.1.
3. Bisaccate pollen--undetermined. Sample D6352-B, slide 1,  
coordinates 102.7 x 15.1.
4. Alisporites sp. Sample D6352-B, slide 1,  
coordinates 100.2 x 3.9.
5. Protopicea cf. P. exilioides (Bolkhovitina) Pocock, 1970.  
Sample D6352-B, slide 1, coordinates 97.1 x 1.3.
6. Protopicea cf. P. exilioides (Bolkhovitina) Pocock, 1970.  
Sample D6352-B, slide 1, coordinates 97.1 x 1.3.
7. Alisporites sp. Sample D6352-B, slide 1,  
coordinates 98.5 x 13.5.
8. Rugubivesiculites sp. Sample D6352-B, slide 1,  
coordinates 112.4 x 21.7.
9. Protopicea cf. P. exilioides (Bolkhovitina) Pocock, 1970.  
Sample D6352-B, slide 1, coordinates 104.7 x 18.6.
10. Bisaccate pollen--undetermined. Sample D6352-B, slide 1,  
coordinates 85.0 x 6.1.

Plate 9  
[Magnification X 1000]

- FIGURE
1. Bisaccate pollen--undetermined.  
Sample D6352-B, slide 1, coordinates 102.7 x 2.7.
  2. Rugubivesiculites sp. Sample D6352-B, slide 1,  
coordinates 102.1 x 16.5.
  3. Podocarpidites langii Pocock, 1970  
Sample D6352-B, slide 1, coordinates 79.2 x 9.1.
  4. Exesipollenites tumulus Balme, 1957.  
Sample D6352-B, slide 1, coordinates 97.3 x 20.9.
  5. Exesipollenites tumulus Balme, 1957.  
Sample D6352-B, slide 1, coordinates 104.3 x 11 .3.
  6. Trilete spore--undetermined. Sample D6352-B, slide 1,  
coordinates 79.1 x 17.2.
  7. Inaperturopollenites cf. I. turbatus Balme, 1957.  
Sample D6352-B, slide 1, coordinates 92.2 x 22.0.
  8. Callialasporites sp. Sample D6352-B, slide 1,  
coordinates 111.4 x 18.2.
  9. Callialasporites sp. Sample D6352-B, slide 1,  
coordinates 111.4 x 18.2.
  10. Undetermined. Sample D6352-B, slide 1, coordinates 97.6 x 12.0.
  11. Corollina cf. C. itunensis Pocock, 1970.  
Sample D6352-B, slide 1, coordinates 85.3 x 22.9.
  12. Callialasporites trilobatus (Balme) Sukh Dev, 1961.  
Sample D6352-B, slide 1, coordinates 107.8 x 12.4.
  13. Eucommiidites troedssonii Erdtman, 1948.  
Sample D6352-B, slide 1, coordinates 98.2 x 9.4.
  14. Corollina sp. Sample D6352-B, slide 1, coordinates 88.4 x 12.0.
  15. Corollina sp. cf. C. itunensis Pocock, 1970.  
Sample D6352-B, slide 1, coordinates 109.6 x 12.8.
  16. Corollina sp. Sample D6352-B, slide 1, coordinates 108.2 x 6.9.
  17. Cycadopites? Sample D6352-B, slide 1, coordinates 80.9 x 4.5.

Plate 9 (continued)  
[Magnification X 1000]

- FIGURE 18. Cycadopites fragilis Singh, 1964.  
Sample D6352-B, slide 1, coordinates 108.0 x 16.3.
19. Corollina sp. Sample D6352-B, slide 1, coordinates 97.2 x 20.8.
20. Monosulcites sp. Sample D6352-B, slide 1,  
coordinates 109.2 x 5.1.
21. Cycadopites fragilis Singh, 1964.  
Sample D6352-B, slide 1, coordinates 108.0 x 17.3.

Plate 10  
[Magnification X 1000]

- FIGURE 1. Undetermined. Sample D6354-F, slide 1, coordinates 107.1 x 6.5.
2. Trilete spore--undetermined. Sample D6354-F, slide 1,  
coordinates 103.3 x 6.1.
3. Cyathidites minor Couper, 1953. Sample D6354-F, slide 2,  
coordinates 77.4 x 16.2.
4. Cyathidites australis Couper, 1953. Sample D6354-F, slide 1,  
coordinates 94.4 x 22.9.
5. Cyathidites australis Couper, 1953. Sample D6354-F, slide 1,  
coordinates 86.5 x 5.6.
6. Trilete spore--undetermined. Sample D6354-F, slide 1,  
coordinates 97.8 x 18.7.
7. Crybelosporites vectensis Kemp, 1970. Sample D6354-F, slide 2,  
coordinates 87.3 x 12.7.
8. Interulobites sp. Sample D6354-F, slide 1,  
coordinates 109.2 x 3.9.
9. Lycopodiumsporites circolumenus Cookson and Dettmann, 1958.  
Sample D6354-F, slide 2, coordinates 98.7 x 10.8.
10. Klukisporites sp. Sample D6354-F, slide 1,  
coordinates 110.8 x 16.2.
11. Cerebropollenites mesozoicus (Couper) Nilsson, 1958.  
Sample D6354-F, slide 2, coordinates 85.4 x 11.9.
12. Nevesisporites radiatus (Chlonova) Srivastava, 1972.  
Sample D6354-F, slide 1, coordinates 96.0 x 15.9.
13. Undetermined. Sample D6354-F, slide 2,  
coordinates 112.4 x 22.9.

Plate 11  
[Magnification X 1000]

- FIGURE 1. Vitreisporites sp. Sample D6354-F, slide 1,  
coordinates 82.6 x 8.1.
2. Vitreisporites pallidus (Reissinger) Nilsson, 1958.  
Sample D6354-F, slide 1, coordinates 83.0 x 3.0.
3. Bisaccate pollen--undetermined. Sample D6354-F, slide 1,  
coordinates 100.2 x 2.3.
4. Alisporites sp. Sample D6354-F, slide 1,  
coordinates 103.1 x 19.1.
5. Alisporites sp. Sample D6354-F, slide 1,  
coordinates 109.4 x 4.4.
6. Bisaccate pollen--undetermined. Sample D6354-F, slide 1,  
coordinates 108.9 x 7.7.
7. Alisporites sp. Sample D6354-F, slide 1,  
coordinates 103.9 x 3.0.
8. Bisaccate pollen--undetermined. Sample D6354-F, slide 1,  
coordinates 84.4 x 18.6.
9. Bisaccate pollen--undetermined. Sample D6354-F, slide 1,  
coordinates 107.3 x 1.5.

Plate 12  
[Magnification X 1000]

- FIGURE 1. Pityosporites divulgatus (Bolkhovtina) Pocock, 1970.  
Sample D6354-F, slide 1, coordinates 109.2 x 9.6.
2. Bisaccate pollen--undetermined.  
Sample D6354-F, slide 1, coordinates 90.9 x 4.5.
3. Bisaccate pollen--undetermined.  
Sample D6354-F, slide 1, coordinates 107.9 x 7.1.
4. Podocarpidites sp.  
Sample D6354-F, slide 2, coordinates 89.5 x 12.9.
5. Bisaccate pollen--undetermined.  
Sample D6354-F, slide 1, coordinates 95.6 x 19.2.
6. Podocarpidites sp.  
Sample D6354-F, slide 1, coordinates 103.2 x 8.9.
7. Cedripites cf. C. cretaceus Pocock, 1970.  
Sample D6354-F, slide 1, coordinates 109.3 x 1.8.
8. Rugubivesiculites sp.  
Sample D6354-F, slide 1, coordinates 97.8 x 14.8.
9. Pityosporites sp.  
Sample D6354-F, slide 1, coordinates 99.9 x 5.1.

Plate 13  
[Magnification X 1000]

- FIGURE 1. Rugubivesiculites sp. Sample D6354-F, slide 1,  
coordinates 107.1 x 20.1.
2. Rugubivesiculites sp. Sample D6354-F, slide 2,  
coordinates 75.8 x 19.0.
3. Bisaccate pollen--undetermined.  
Sample D6354-F, slide 1, coordinates 108.2 x 3.3.
4. Podocarpidites sp. Sample D6354-F, slide 2,  
coordinates 75.3 x 6.2.
5. Paleoconiferus asaccatus Bolkhovitina, 1956.  
Sample D6354-F, slide 1, coordinates 105.4 x 4.2.
6. Araucariacites australis Cookson, 1947.  
Sample D6354-F, slide 2, coordinates 79.7 x 4.6.
7. Pseudowalchia ovalis Pocock, 1970.  
Sample D6354-F, slide 1, coordinates 99.9 x 19.3.
8. Monosaccate--undetermined.  
Sample D6354-F, slide 1, coordinates 92.9 x 14.0.

Plate 14  
[Magnification X 1000]

- FIGURE 1. Exesipollenites tumulus Balme, 1957.  
Sample D6354-F, slide 2, coordinates 75.7 x 16.0.
2. Exesipollenites tumulus Balme, 1957.  
Sample D6354-F, slide 1, coordinates 103.3 x 2.6.
3. Araucariacites australis Cookson, 1947.  
Sample D6354-F, slide 1, coordinates 84.9 x 8.6.
4. Cerebropollenites mesozoicus (Couper) Nilsson, 1958.  
Sample D6354-F, slide 2, coordinates 112.0 x 18.0.
5. Cerebropollenites mesozoicus (Couper) Nilsson, 1958.  
Sample D6354-F, slide 2, coordinates 80.2 x 15.2.
6. Undetermined inaperturate? spore.  
Sample D6354-F, slide 2, coordinates 100.6 x 4.0.
7. Callialasporites sp. Sample D6354-F, slide 2,  
coordinates 85.6 x 18.4.
8. Concentrisporites sp. Sample D6354-F, slide 1,  
coordinates 97.4 x 11 .5.
9. Inaperturopollenites cf. I. turbatus Balme, 1957.  
Sample D6354-F, slide 1, coordinates 88.1 x 21.1.

Plate 15  
[Magnification X 1000]

- FIGURE
1. Callialasporites trilobatus (Balme) Sukh Dev, 1961.  
Sample D6354-F, slide 1, coordinates 91.0 x 7.0.
  2. Callialasporites dampieri (Balme) Sukh Dev, 1961.  
Sample D6354-F, slide 1, coordinates 97.6 x 6.2.
  3. Callialasporites dampieri (Balme) Sukh Dev, 1961.  
Sample D6354-F, slide 1, coordinates 91.0 x 3.3.
  4. Callialasporites dampieri (Balme) Sukh Dev, 1961.  
Sample D6354-F, slide 1, coordinates 91.4 x 10.6.
  5. Corollina sp. Sample D6354-F, slide 1, coordinates 108.1 x 6.7.
  6. Corollina sp. Sample D6354-F, slide 1, coordinates 109.7 x 6.0.
  7. Corollina sp. Sample D6354-F, slide 2, coordinates 75.2 x 18.1.
  8. Corollina sp. Sample D6354-F, slide 1, coordinates 75.9 x 6.0.
  9. Corollina sp. Sample D6354-F, slide 1, coordinates 88.5 x 13.0.
  10. Corollina sp. Sample D6354-F, slide 1, coordinates 93.2 x 16.3.
  11. Corollina sp. Sample D6354-F, slide 1, coordinates 79.0 x 13.6.
  12. Cycadopites nitidus (Balme) Pocock, 1970.  
Sample D6354-F, slide 1, coordinates 99.9 x 22.8.
  13. Cycadopites cf. C. fragilis Singh, 1964.  
Sample D6354-F, slide 1, coordinates 92.1 x 11.6.
  14. Undetermined. Sample D6354-F, slide 1, coordinates 95.8 x 13.7.

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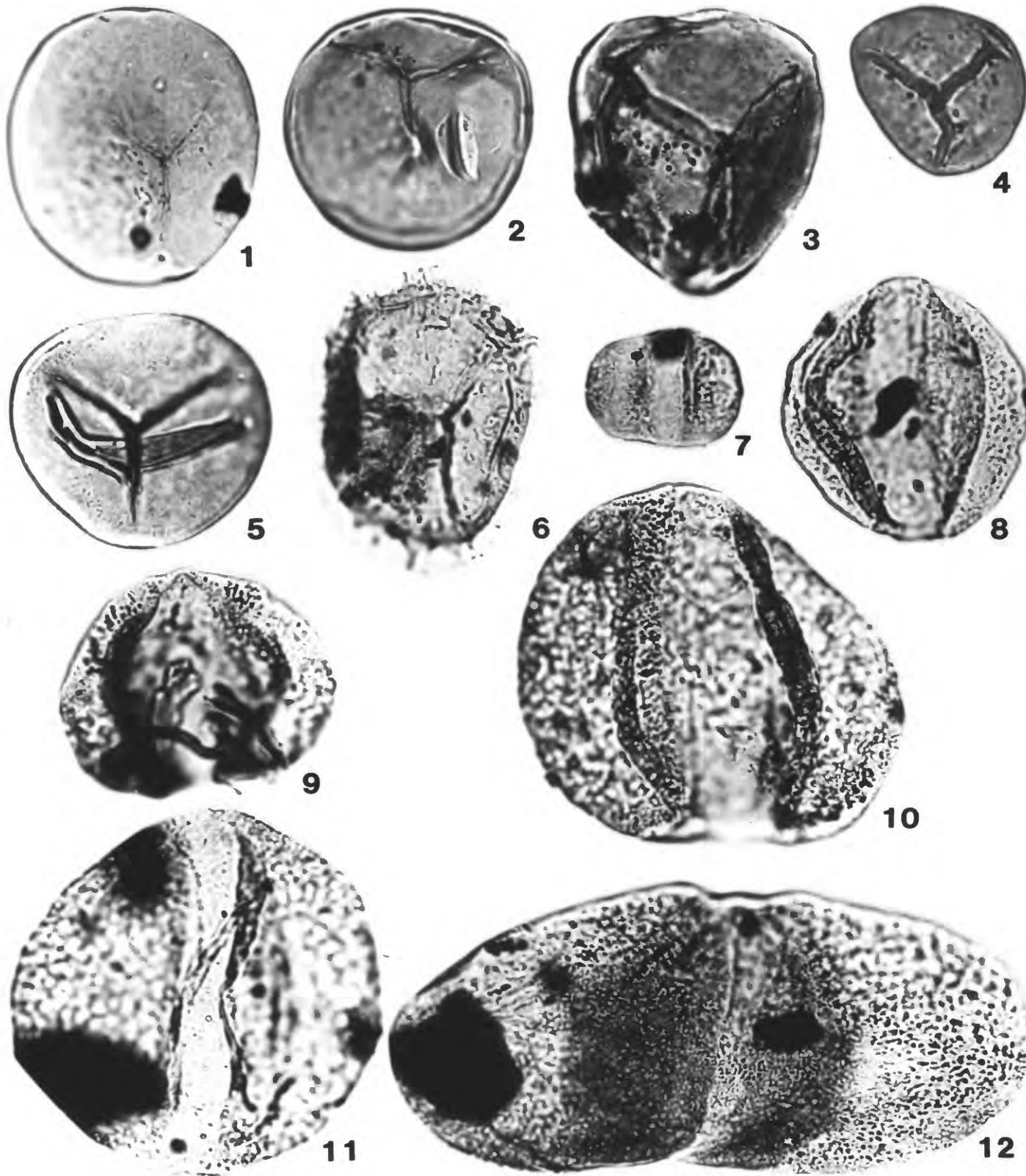
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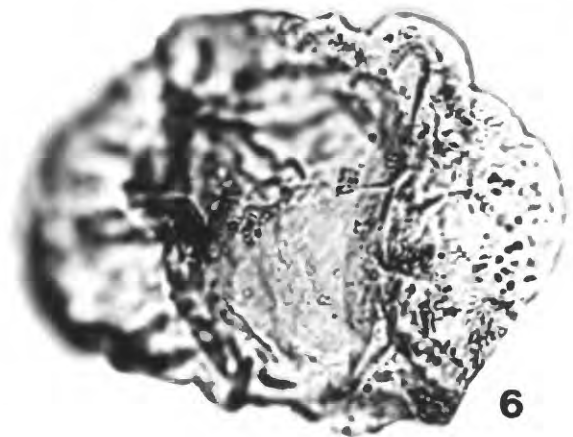
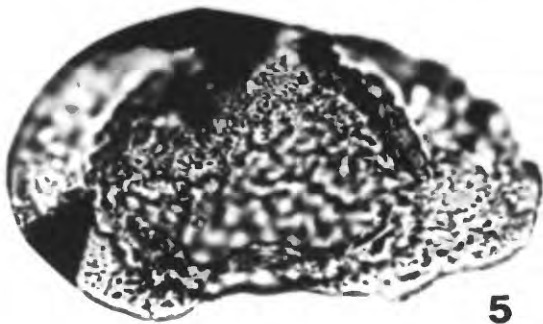
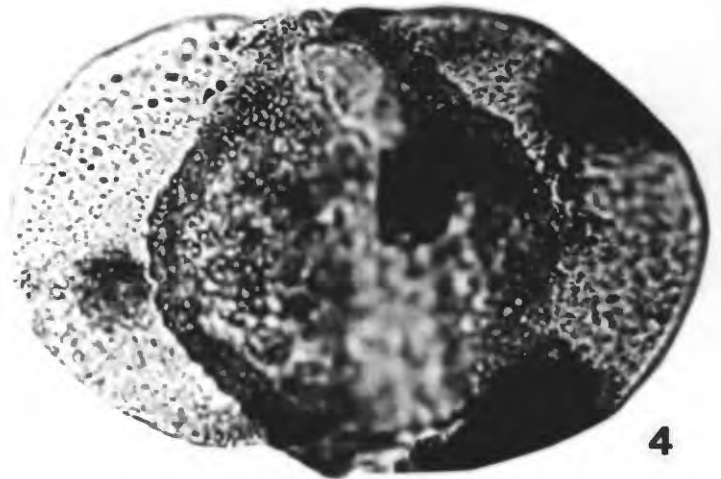
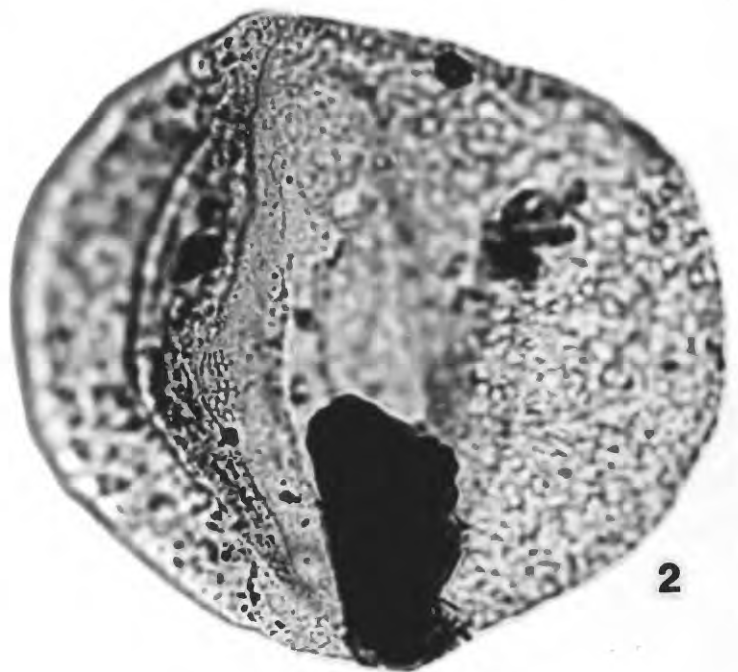
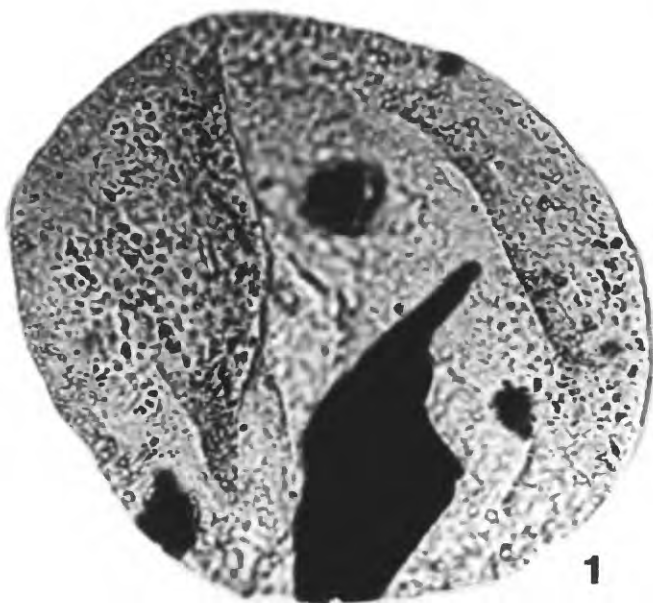
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Salt Wash Member

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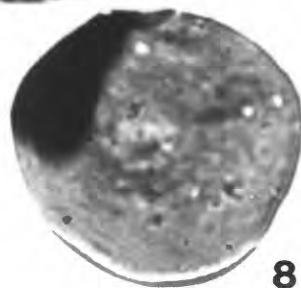
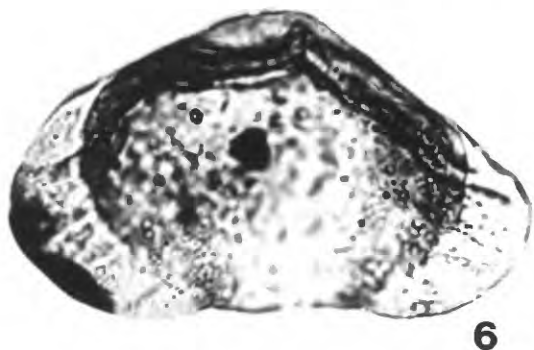
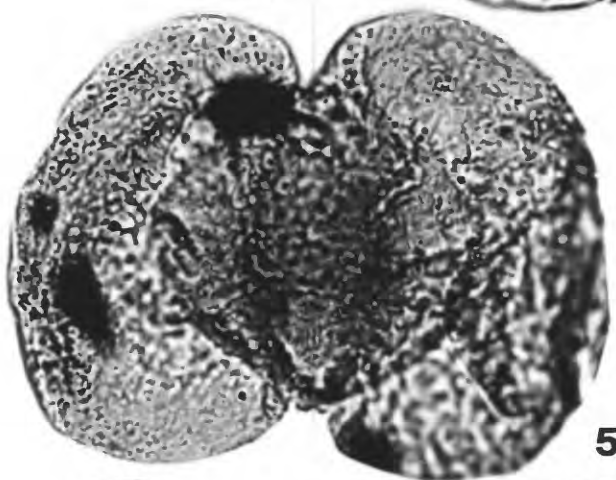
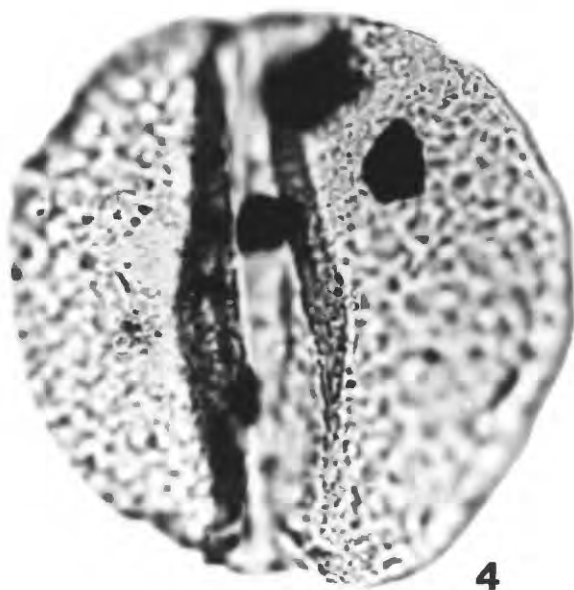
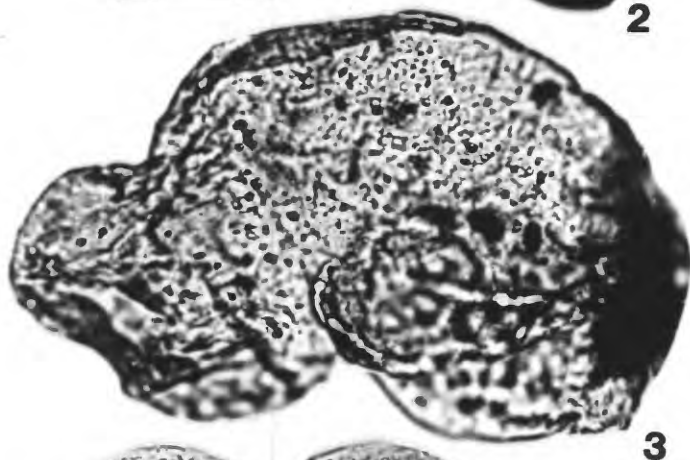
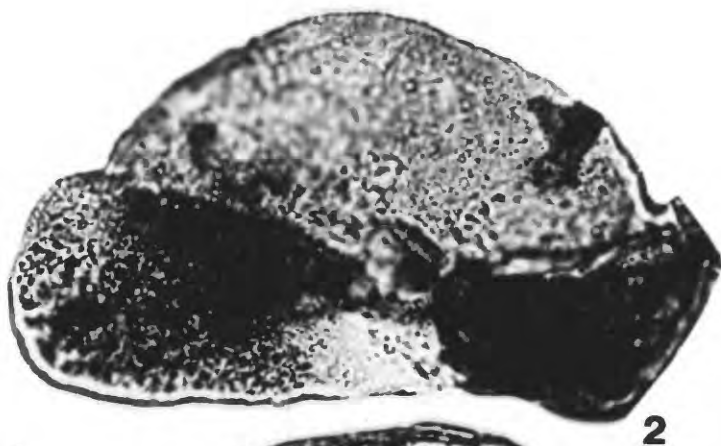
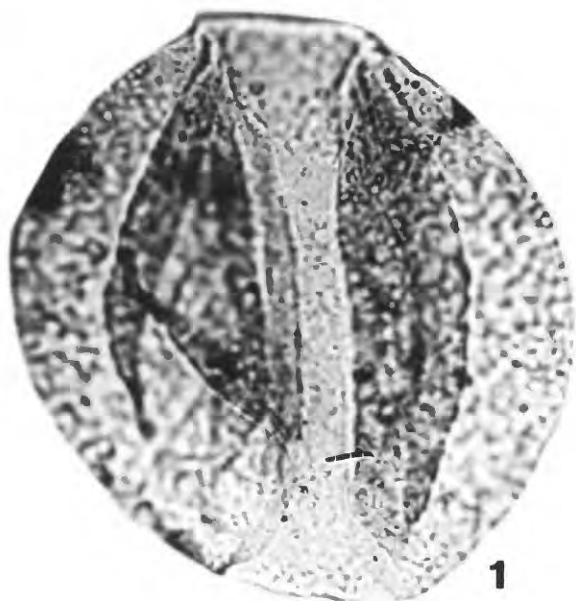
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Salt Wash Member

Plate 2

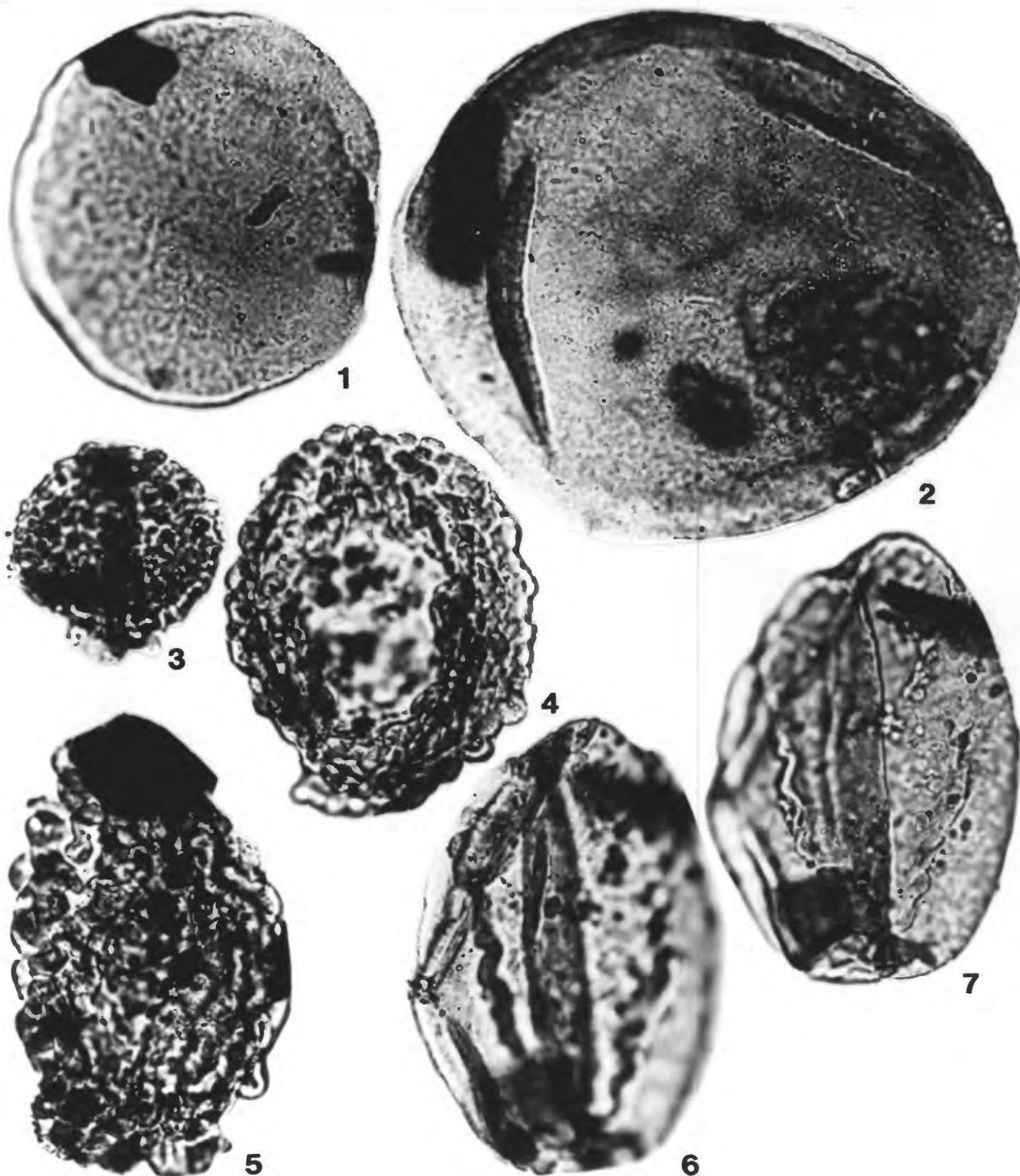
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**Salt Wash Member**

**Plate 3**

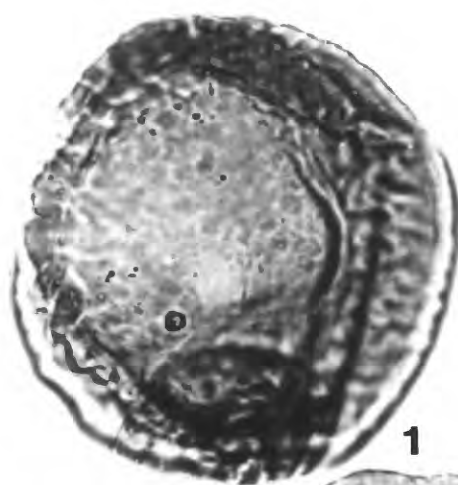
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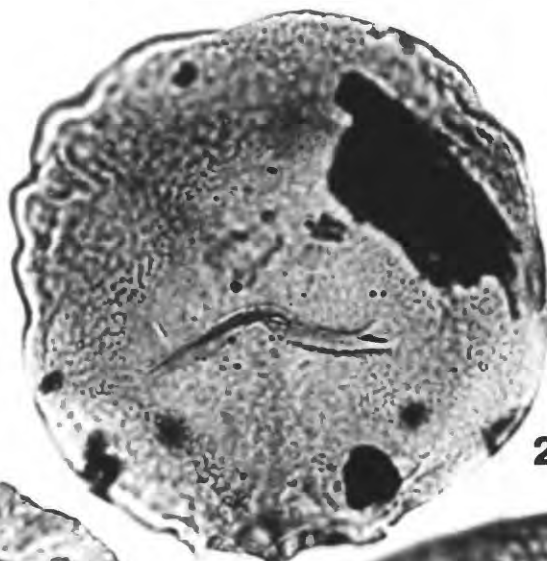
**Salt Wash Member**

**Plate 4**

88-235



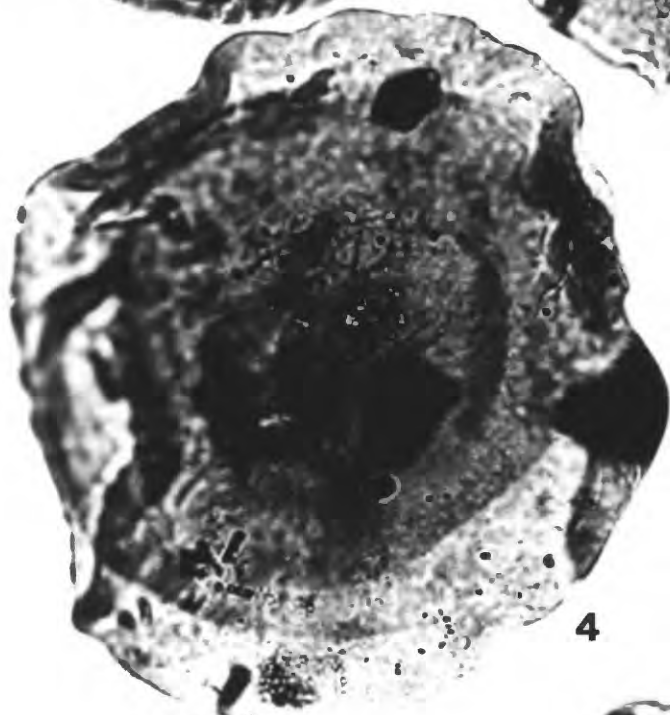
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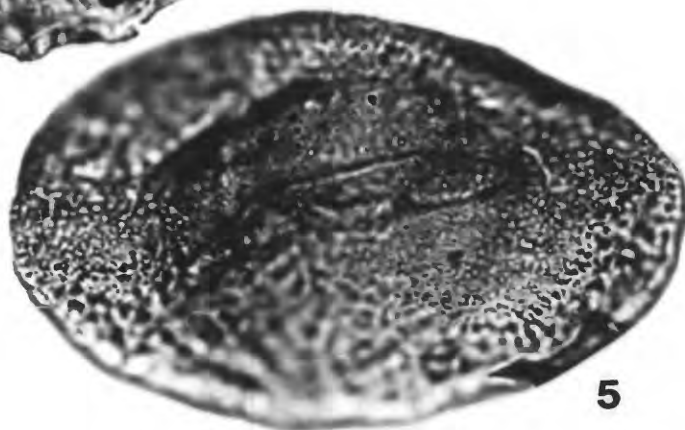
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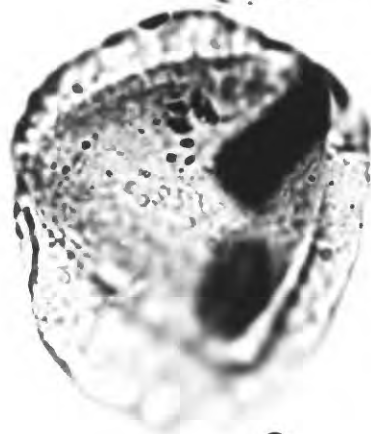
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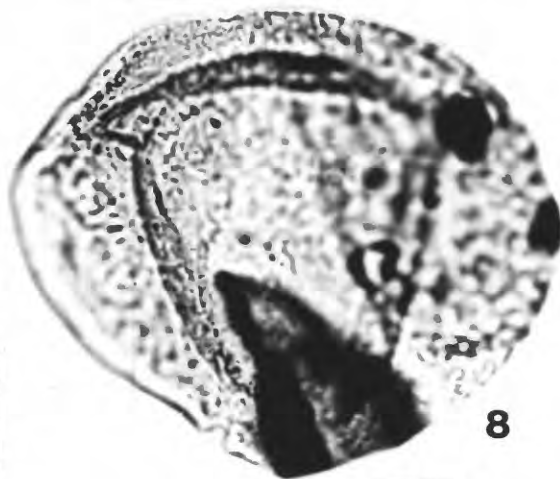
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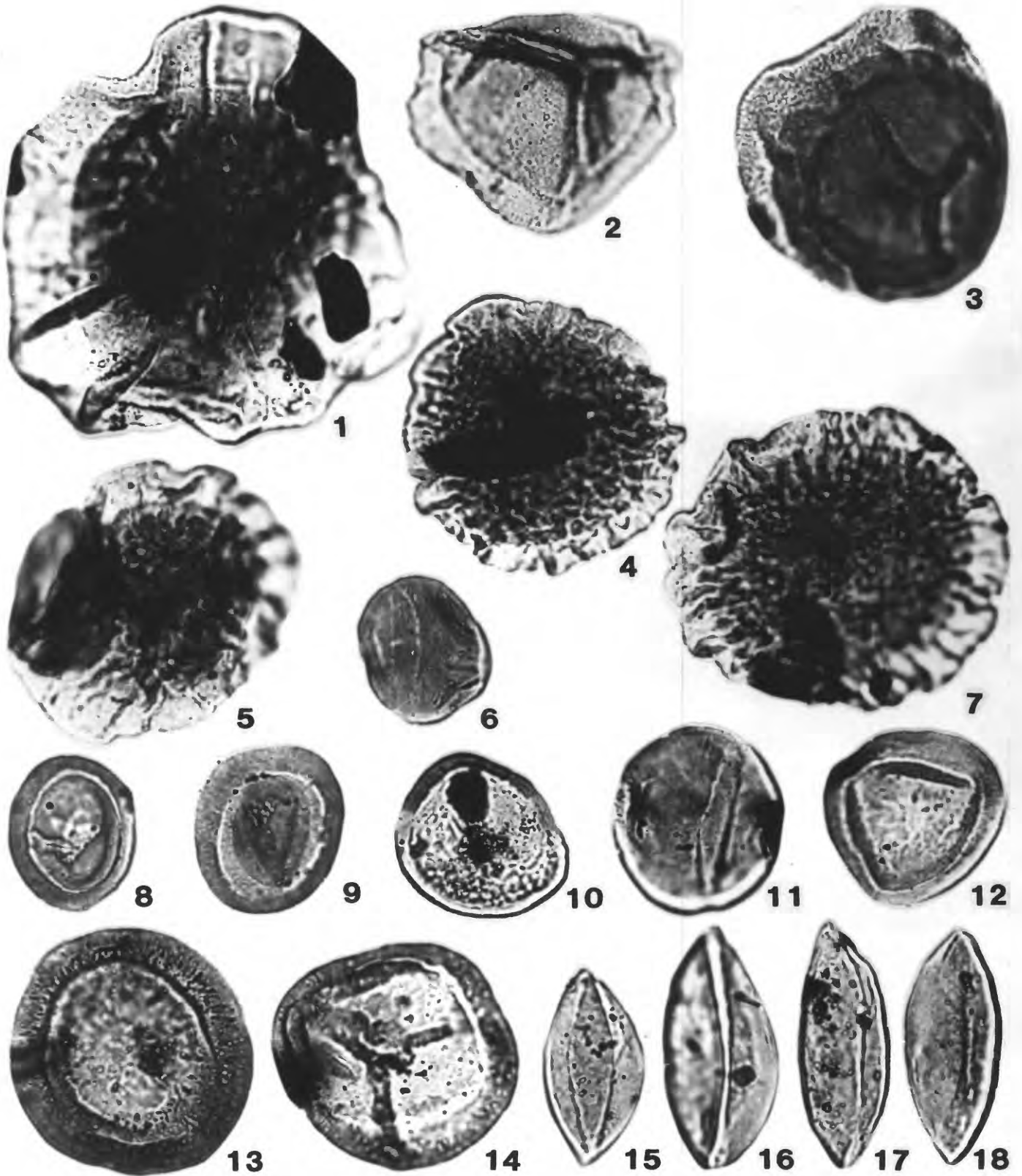


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Salt Wash Member

Plate 5

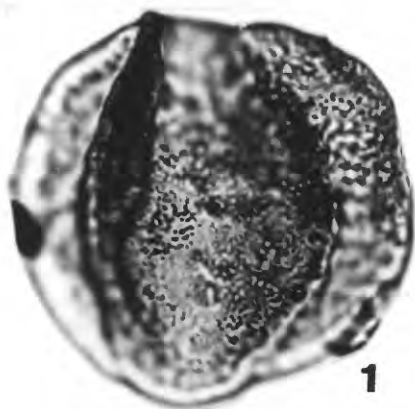
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Salt Wash Member

Plate 6

88-255



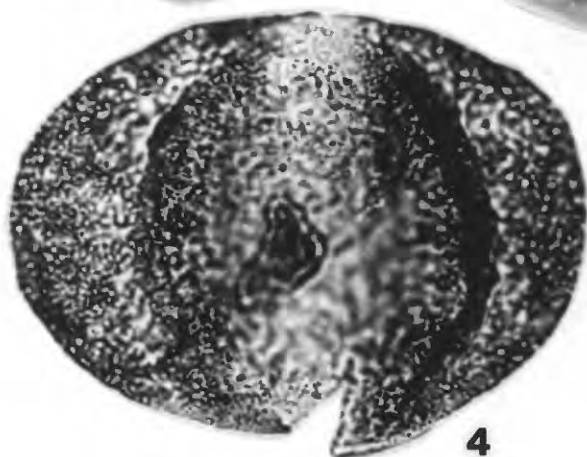
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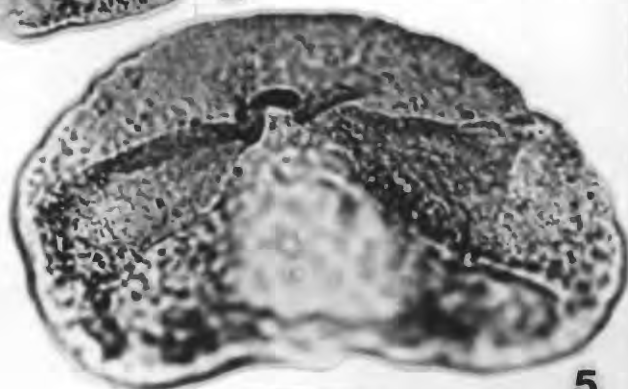
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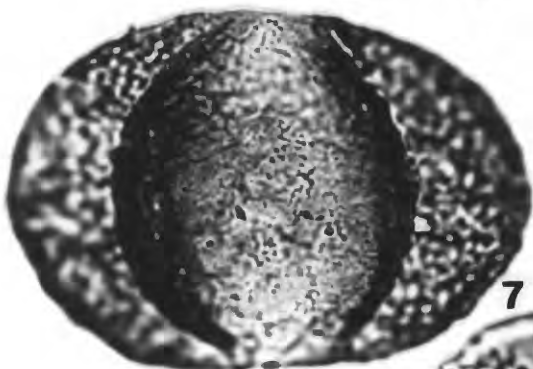
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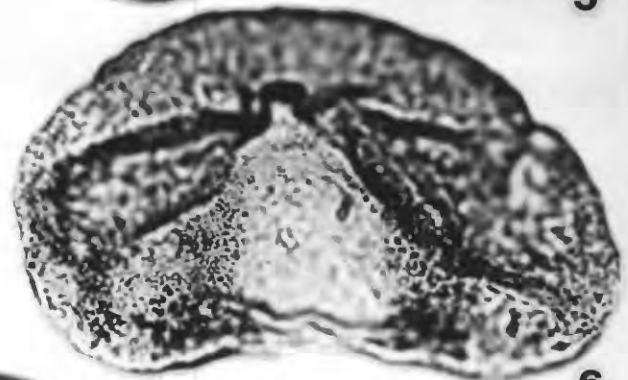
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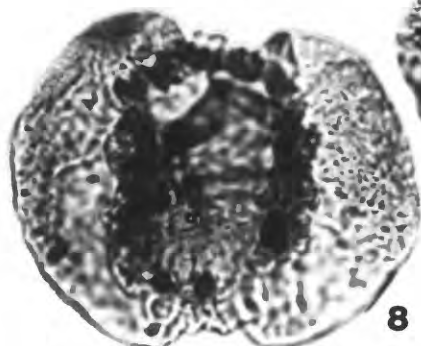
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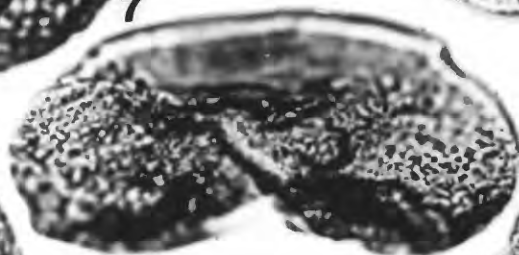
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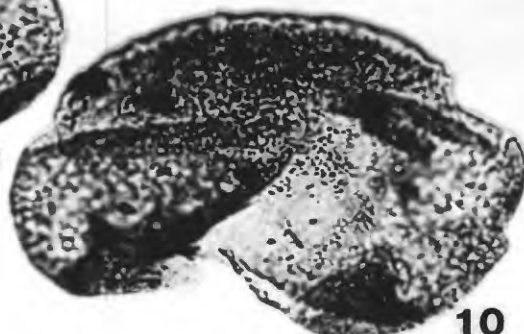
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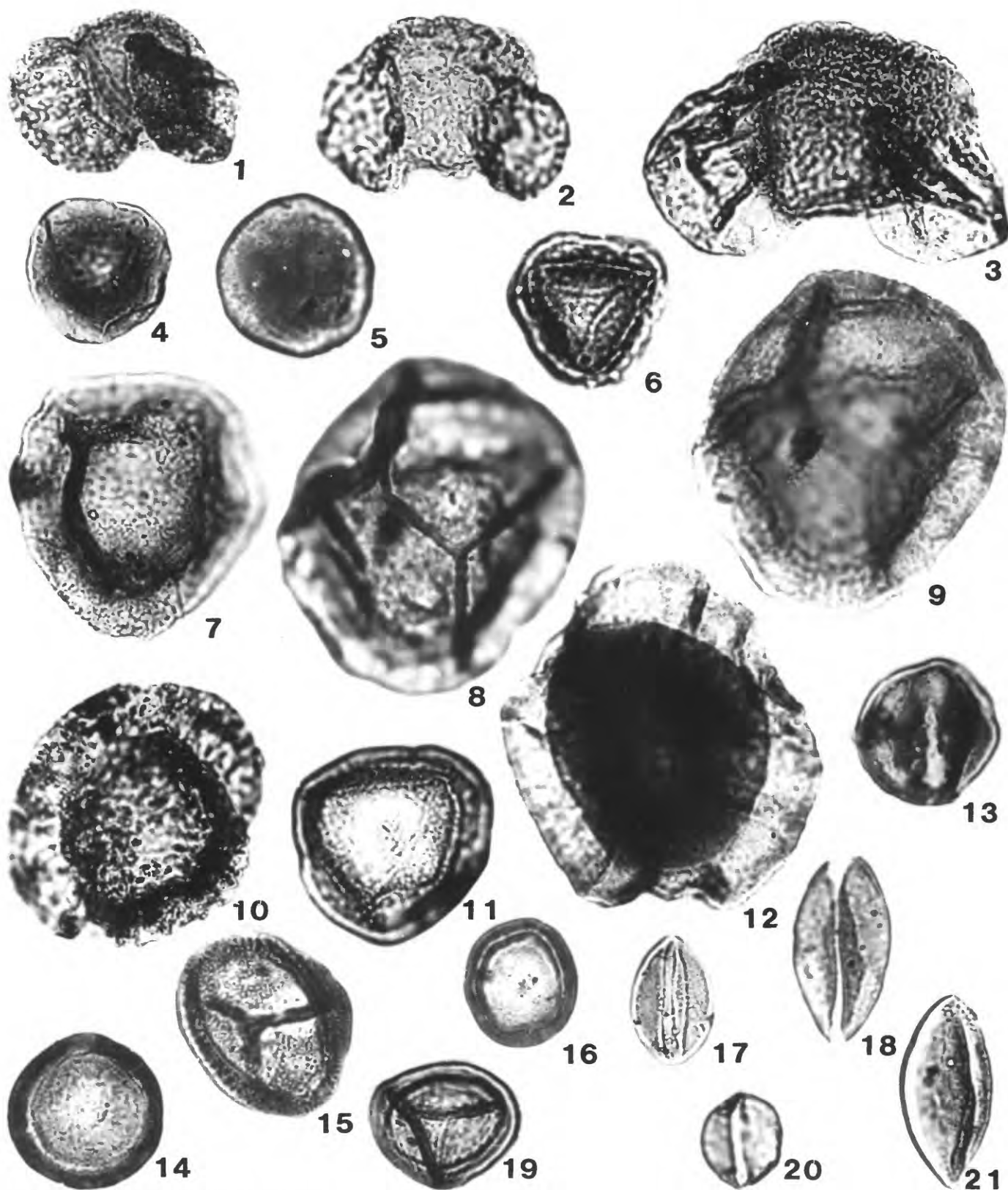


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Salt Wash Member

Plate 8

88-235



Salt Wash Member

Plate 9

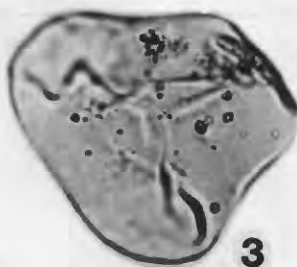
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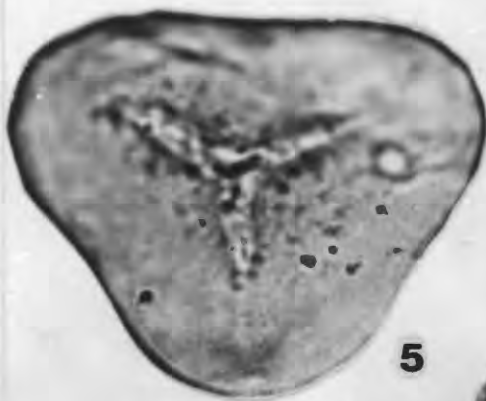
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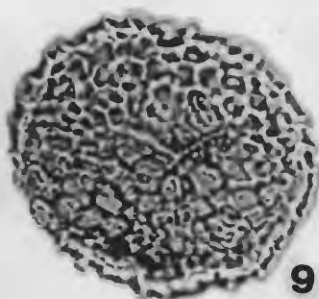
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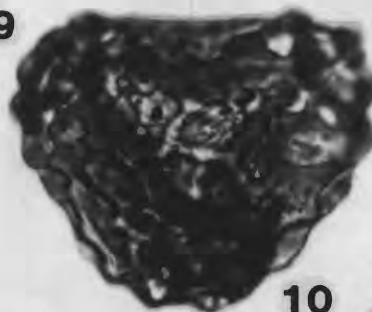
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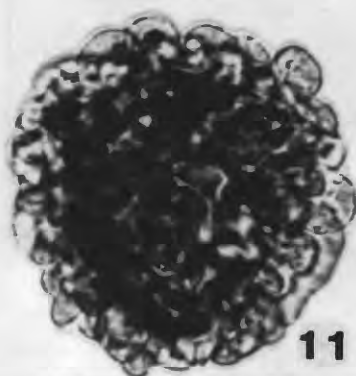
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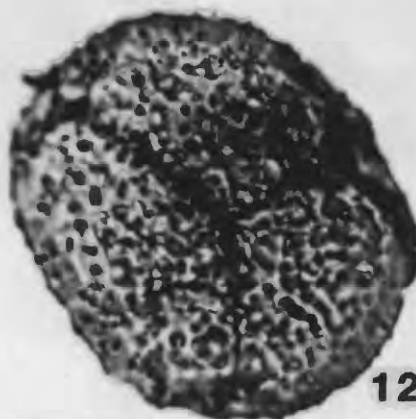
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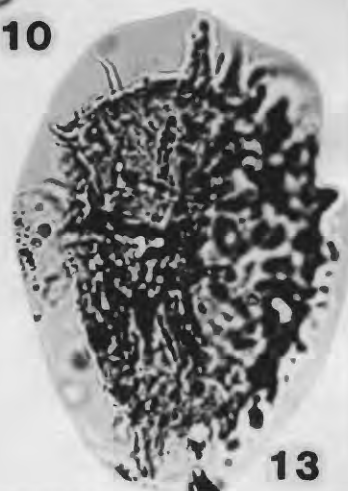
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Salt Wash Member

Plate 10

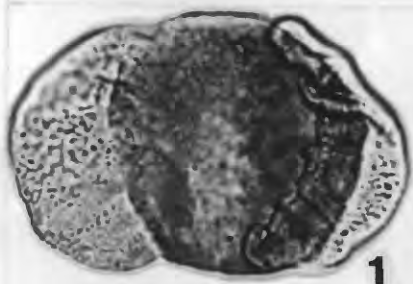
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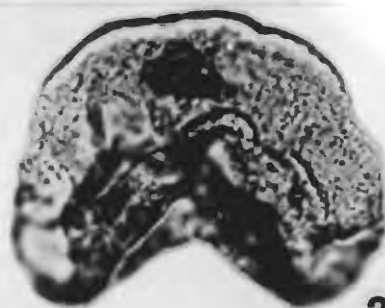
Salt Wash Member

Plate 11

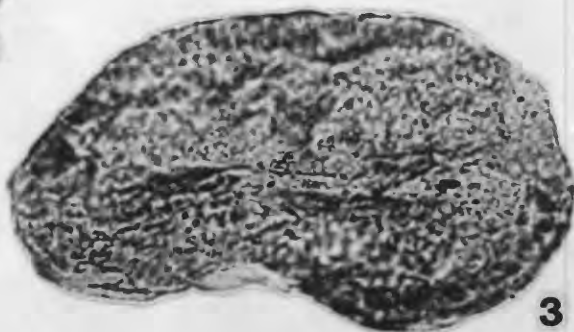
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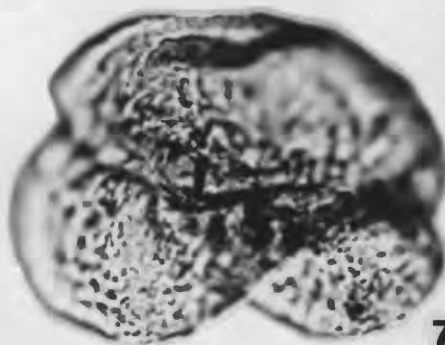
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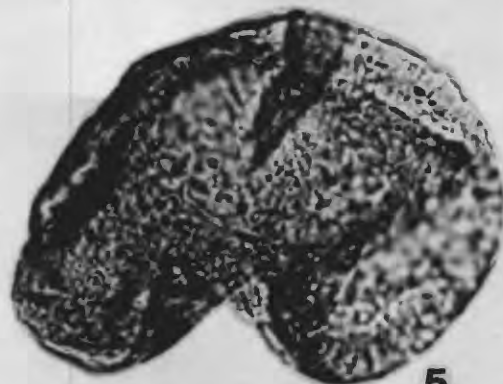
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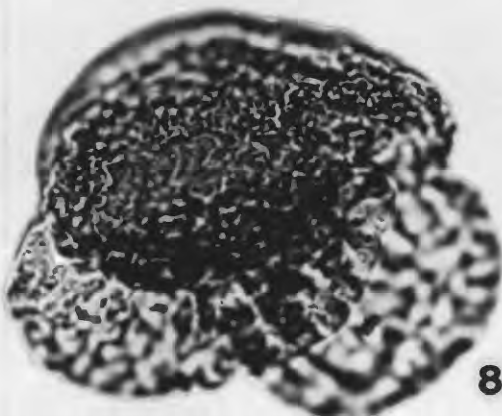
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Salt Wash Member

Plate 12

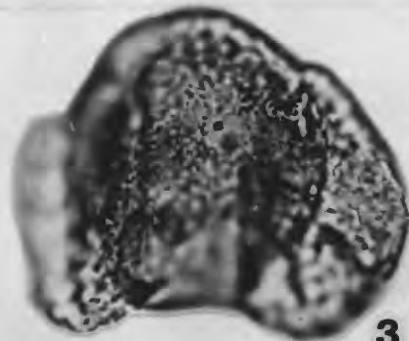
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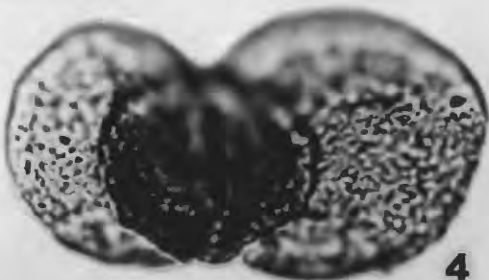
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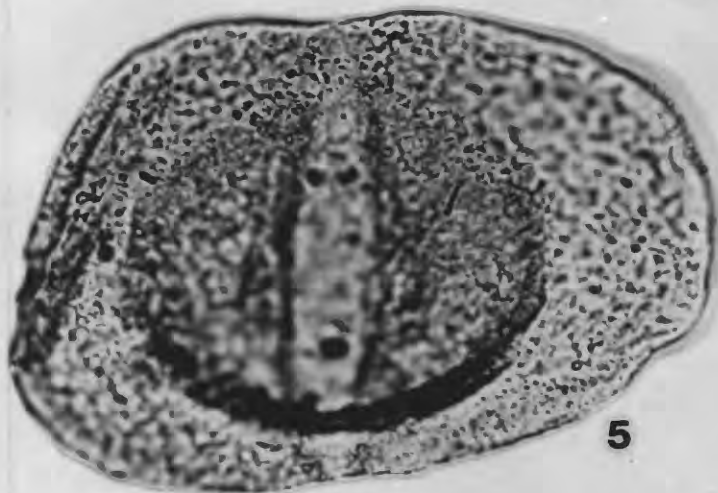
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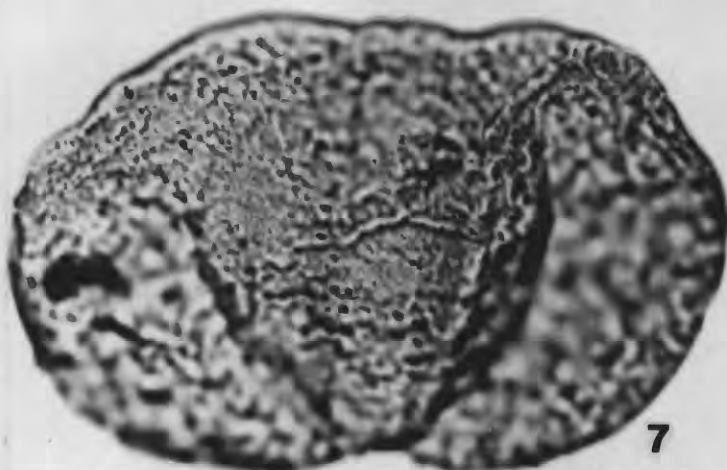
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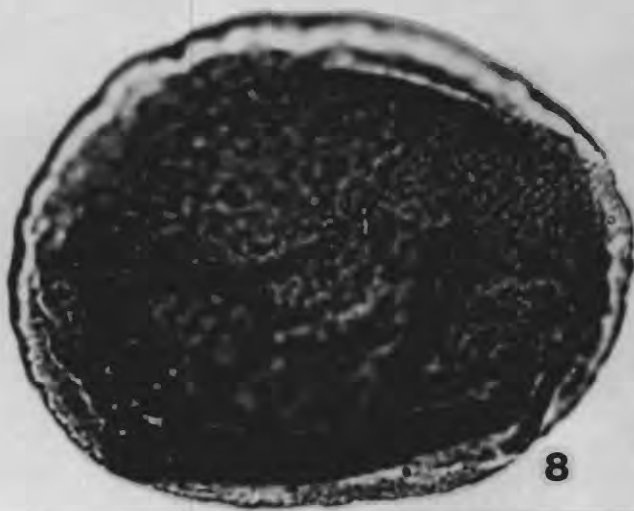
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Salt Wash Member

Plate 13

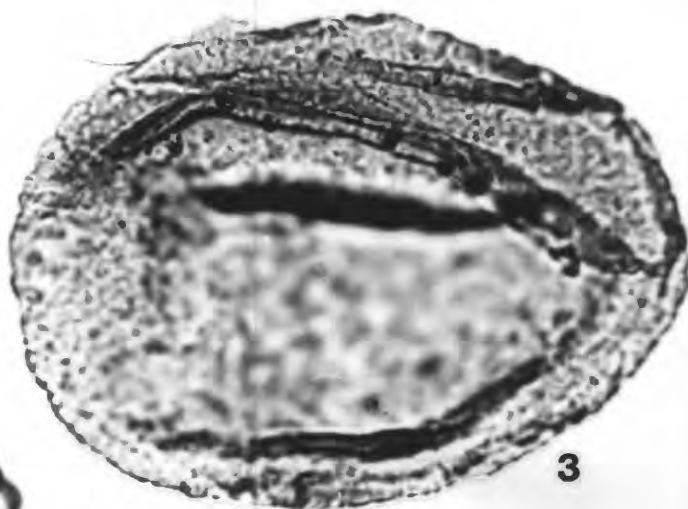
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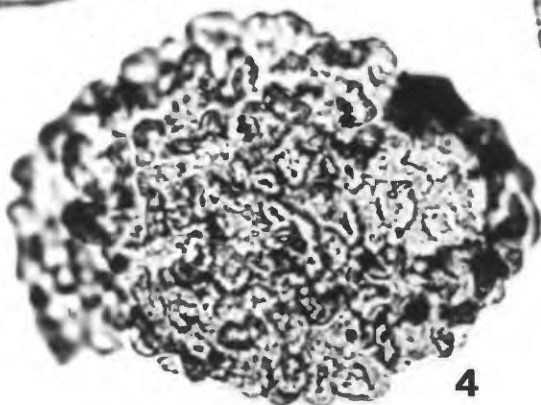
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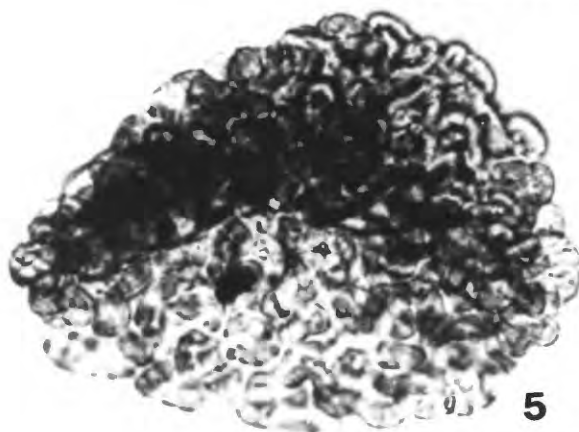
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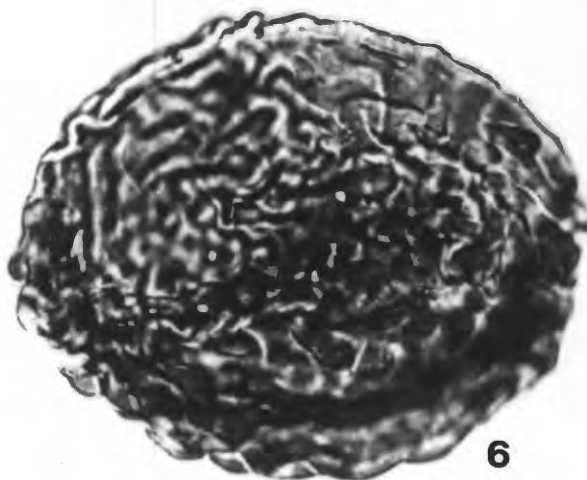
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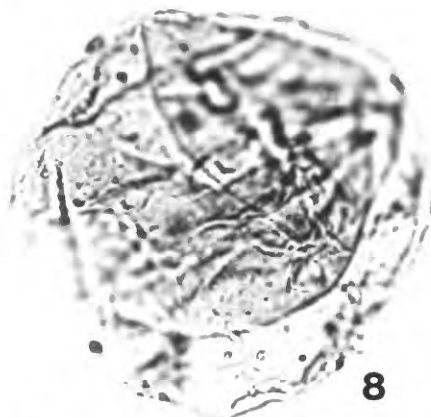
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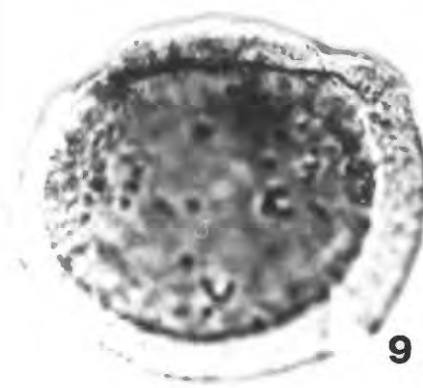
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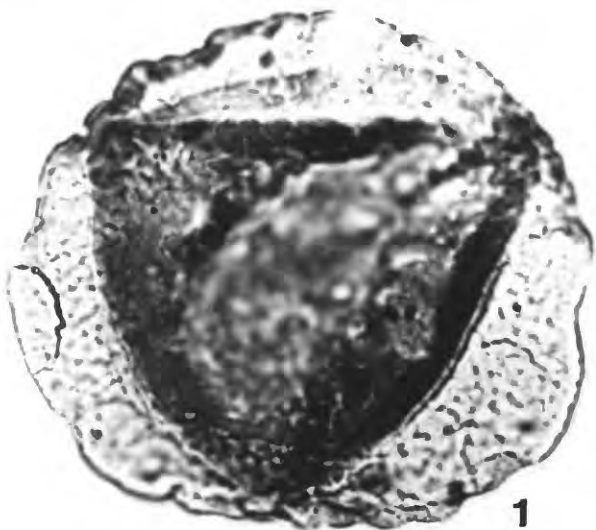


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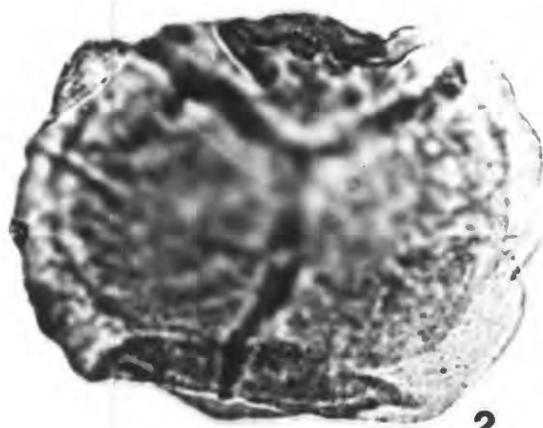
Salt Wash Member

Plate 14

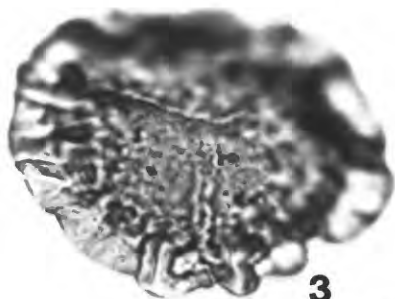
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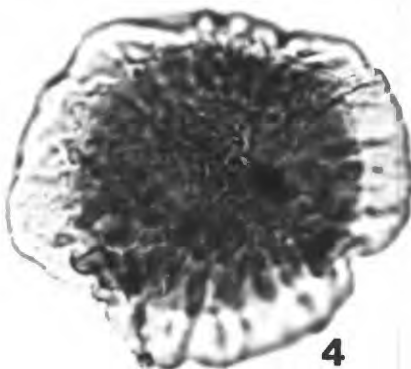
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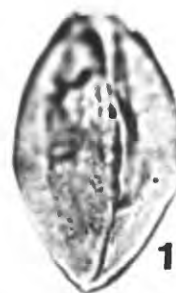
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Salt Wash Member

Plate 15

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