

# **Volume II**

## Plates 1-103

The photographic illustrations of taxa recorded in the study are compiled as assemblage plates which are presented in stratigraphic order. This volume contains those from the Tremadoc (Ordovician) to Ludlow (late Silurian) interval and Volume III contains those from the Pridoli (latest Silurian) to the Strunian (latest Devonian).

Each plate is headed with an indication of the group(s) of taxa illustrated and the formation and the biostratigraphic and/or chronostratigraphic interval from which the specimens were recovered. It should be bourn in mind that some of the taxa illustrated in these assemblages of specified ages have been interpreted as having been reworked into that assemblage from older sediments. These reworked taxa are labelled '(R)' at the end of the figure caption of the taxon in question. The evidence for reworking of these palynomorphs is discussed in the stratigraphic palynology chapter in Volume I.

The reference for each figure on a plate is in three parts. The first part (egs. DW 310; OD 3675.75) indicates the sample number, the second part (egs. 1-1; FS-1) refers to the slide number and the third part (eg. L34\4) refers to the England Finder Reference for the specimen on the slide. Some photographs are taken under interference contrast which is indicated by the abbreviation IC.

The magnification of the acritarch and spore figures are all at X920 and the magnification of all the chitinozoan figures are at X550, unless otherwise stated in the figure caption.

**Plate 1.**

Acritarchs from the Fezouata Formation, Tremadoc-earliest Arenig in age.

1. *Acanthodiacrodium amplium* Rasul 1979. DW 105, 2-2, L40\1.
2. *Acanthodiacrodium amplium* Rasul 1979. DW 115, 2-1, M40\4.
3. *Acanthodiacrodium angustizonale* Burmann 1968. DW115, 2-1, G26\3.
4. *Acanthodiacrodium angustizonale* Burmann 1968. DW115, 2-1, P18\2.
5. *Acanthodiacrodium constrictum* (Deunff) Downie & Sarjeant 1965. DW 105, 2-1, P37\3.
6. *Acanthodiacrodium constrictum* (Deunff) Downie & Sarjeant 1965. DW 115, 2-1, D40\4.
7. *Acanthodiacrodium raia* (Deunff) Eisenack Cramer & Diez 1979. DW 305, 2-2, P16\3.
8. *Acanthodiacrodium raia* (Deunff) Eisenack Cramer & Diez 1979. DW 305, 2-2, D16\4.
9. *Acanthodiacrodium costatum* Burmann 1968. GAO 65, 2-1, E25\2.
10. *Acanthodiacrodium costatum* Burmann 1968. GAO 65, 2-1, L34\2.
11. *Acanthodiacrodium costatum* Burmann 1968. GAO 65, 2-1, L34\1.

PLATE 1

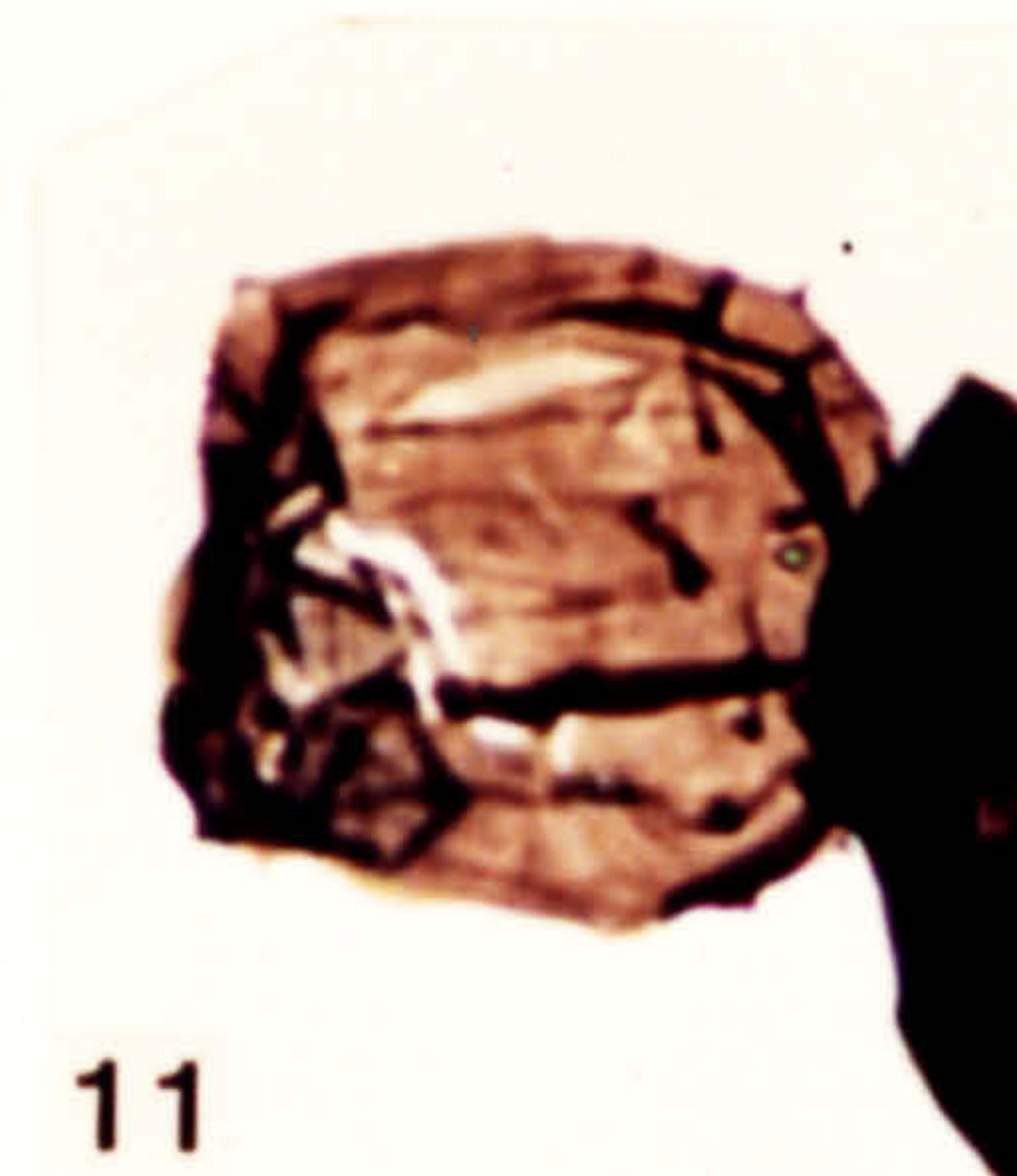
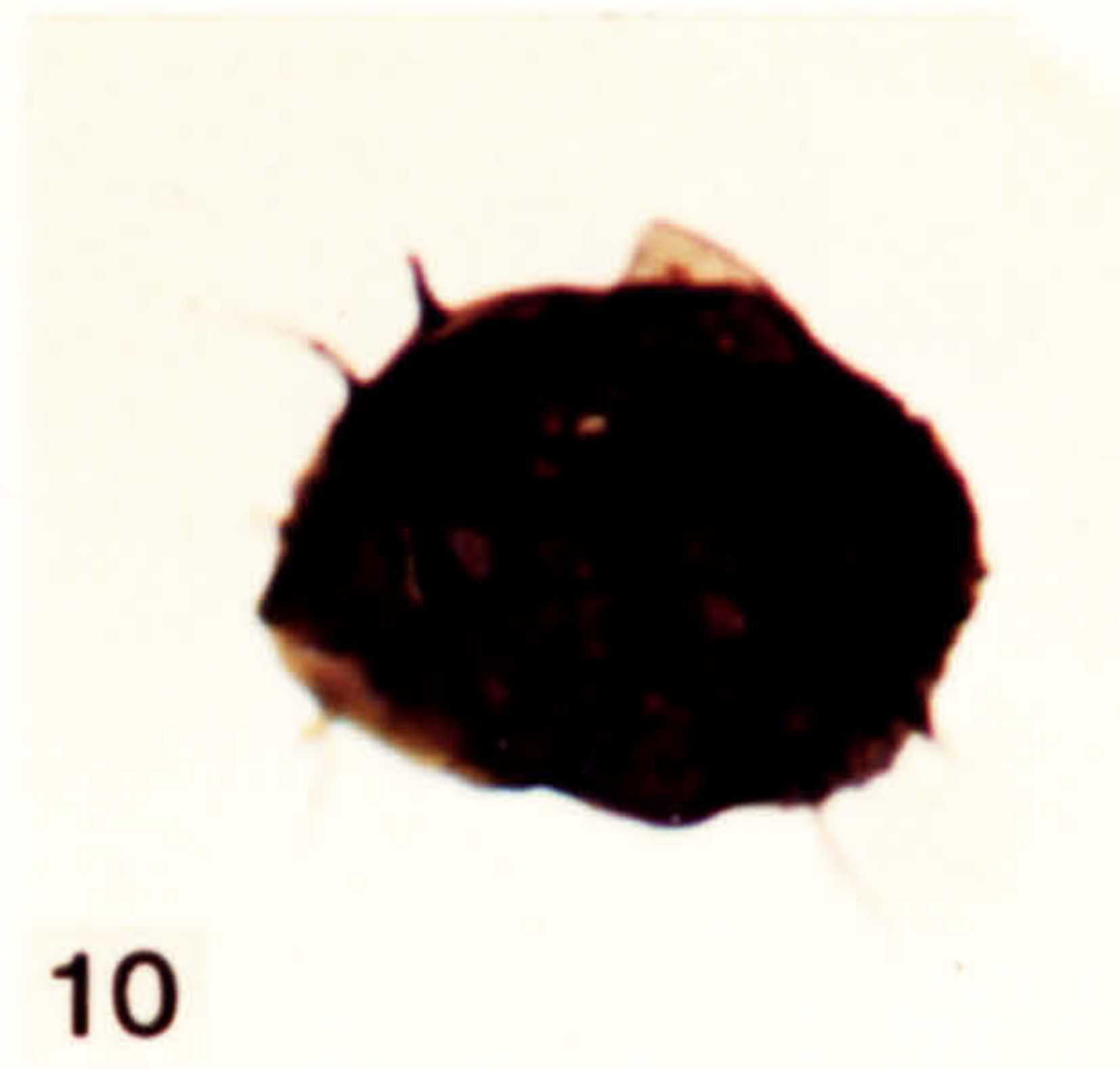
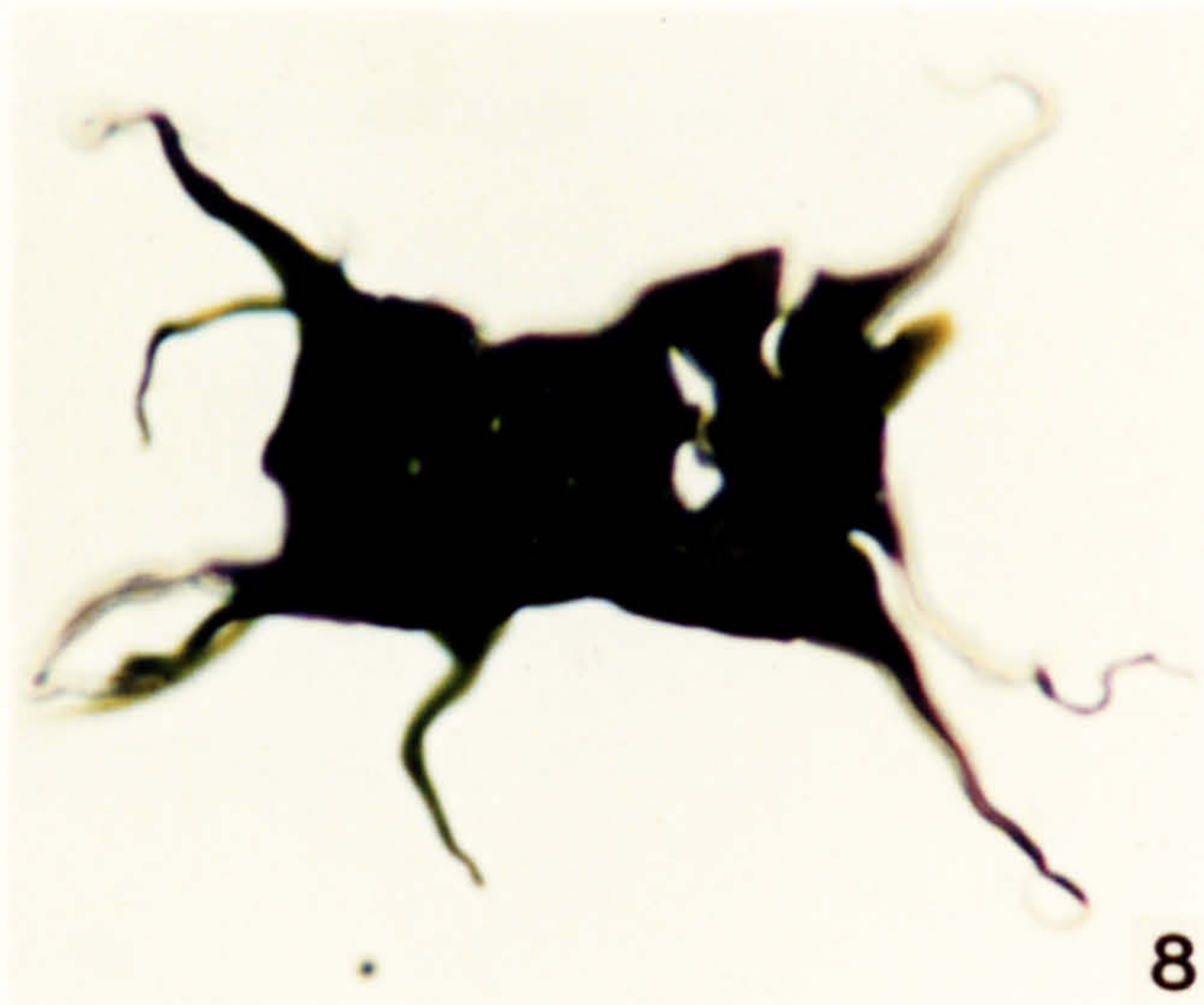
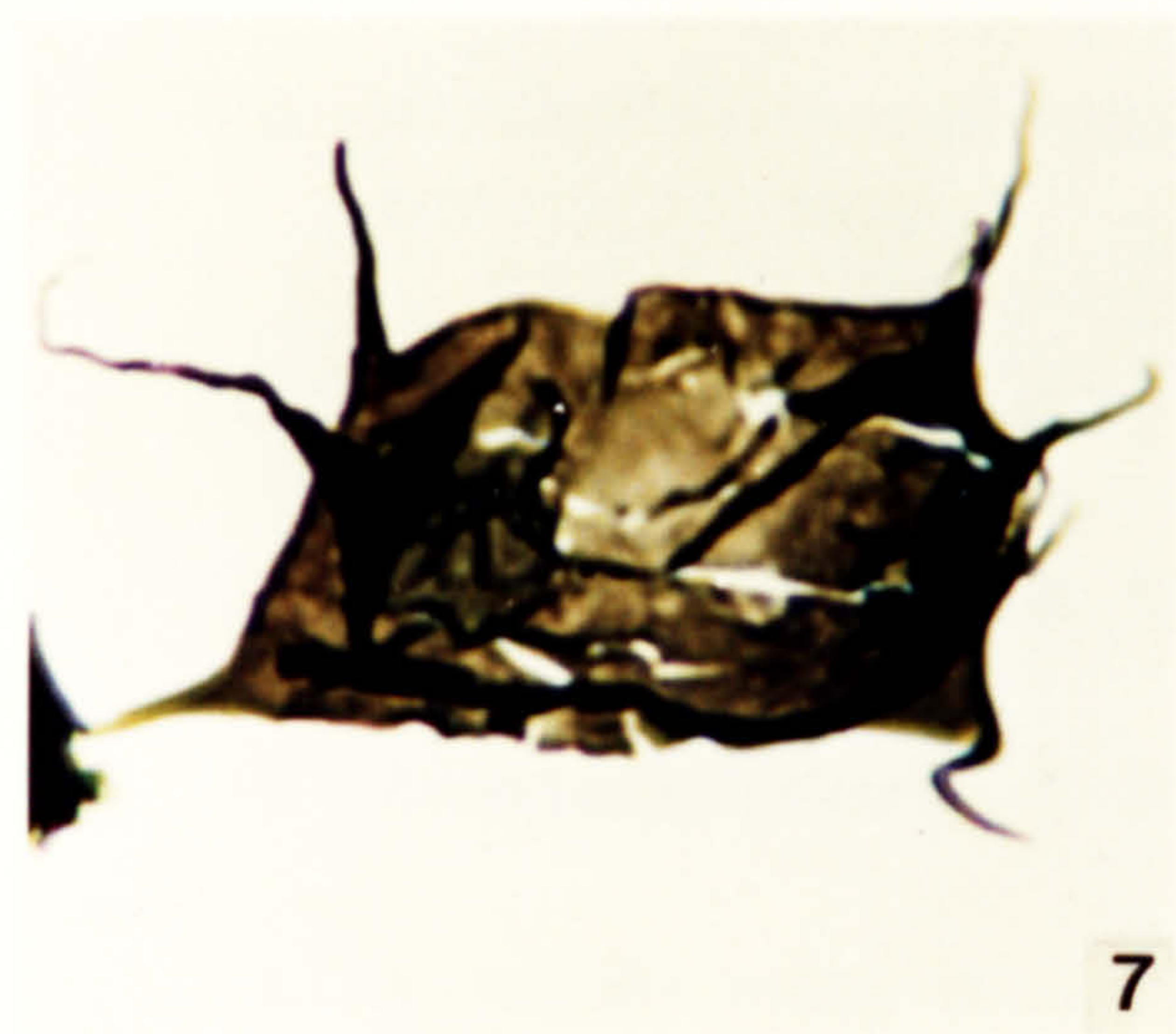
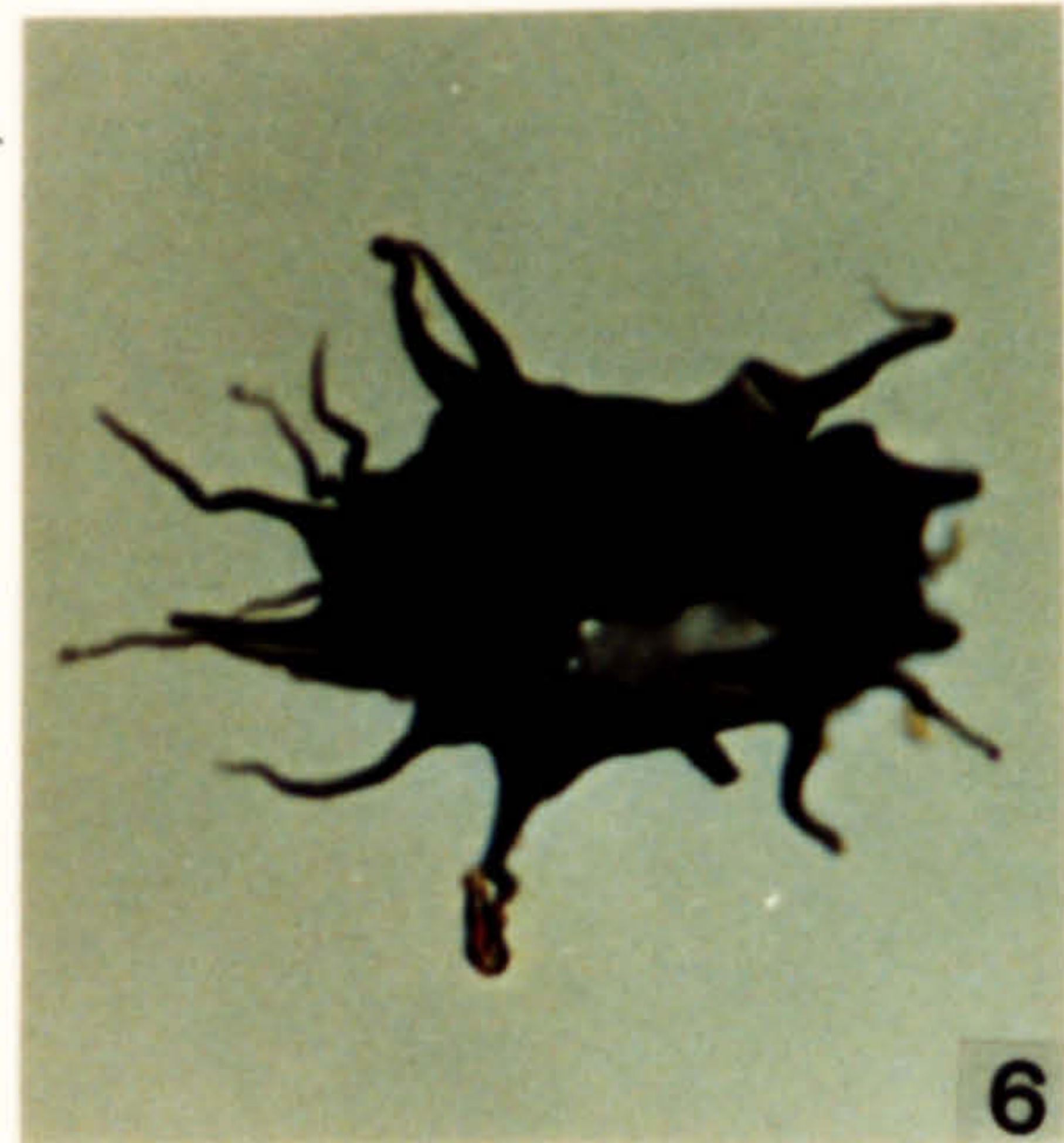
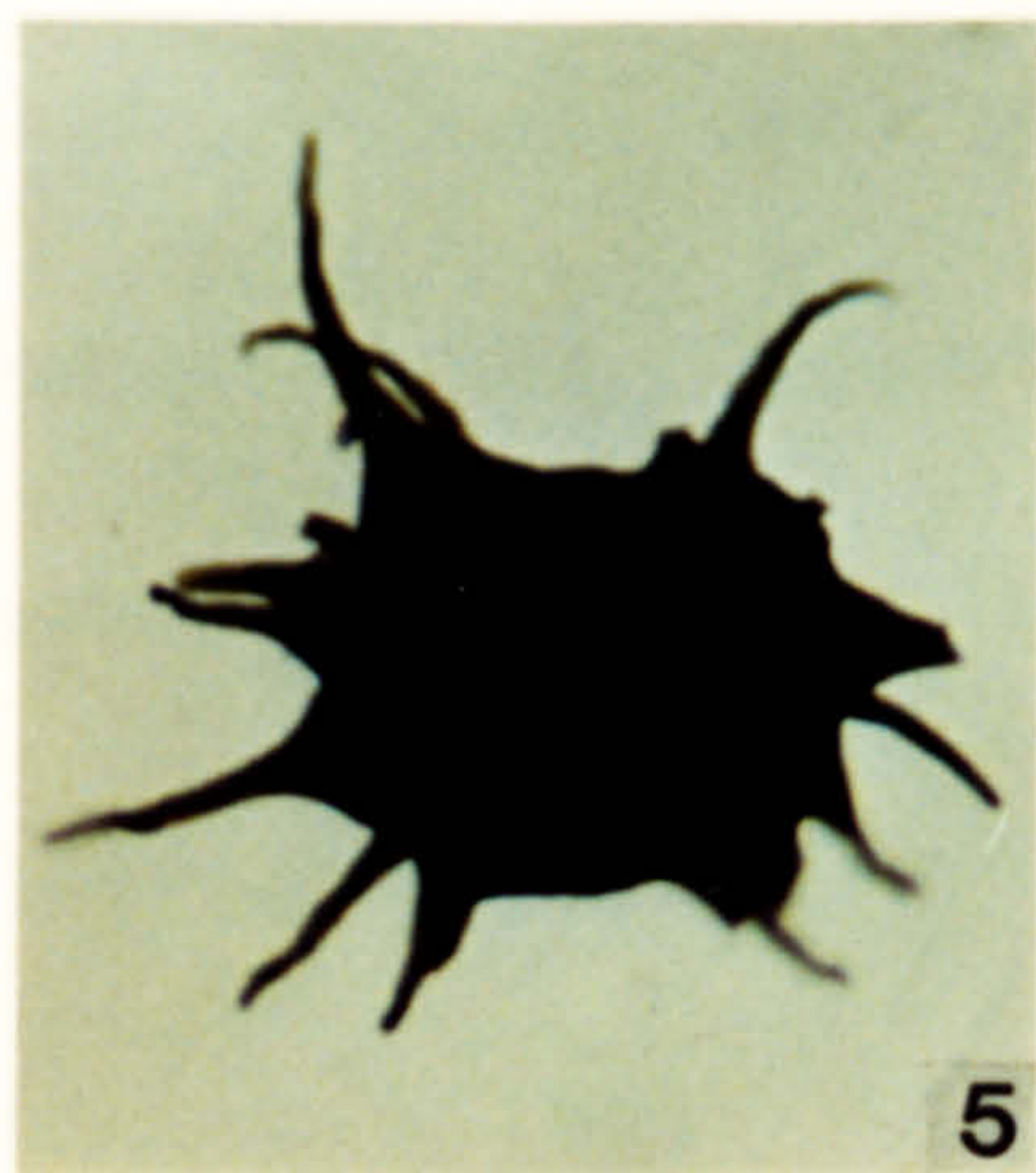
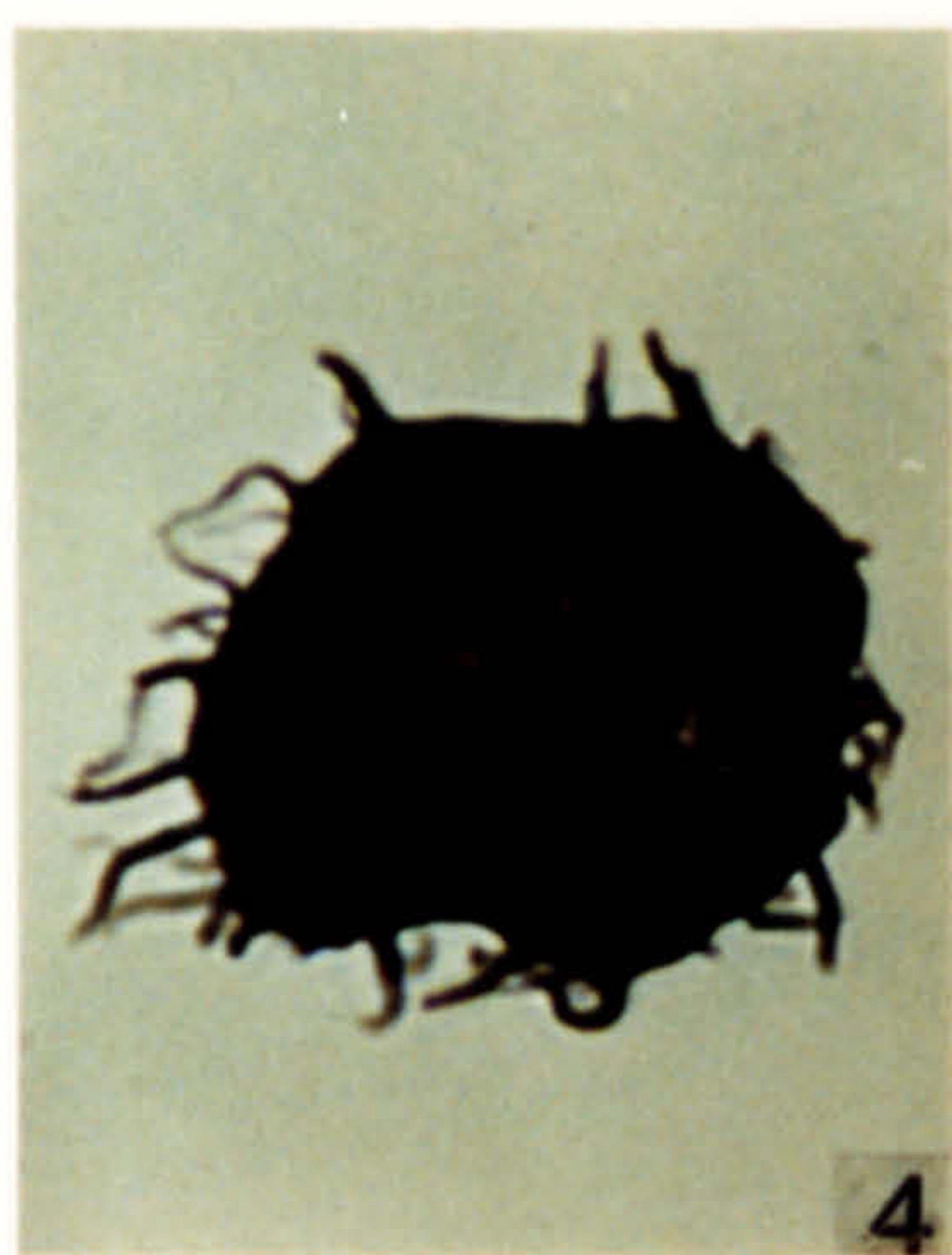
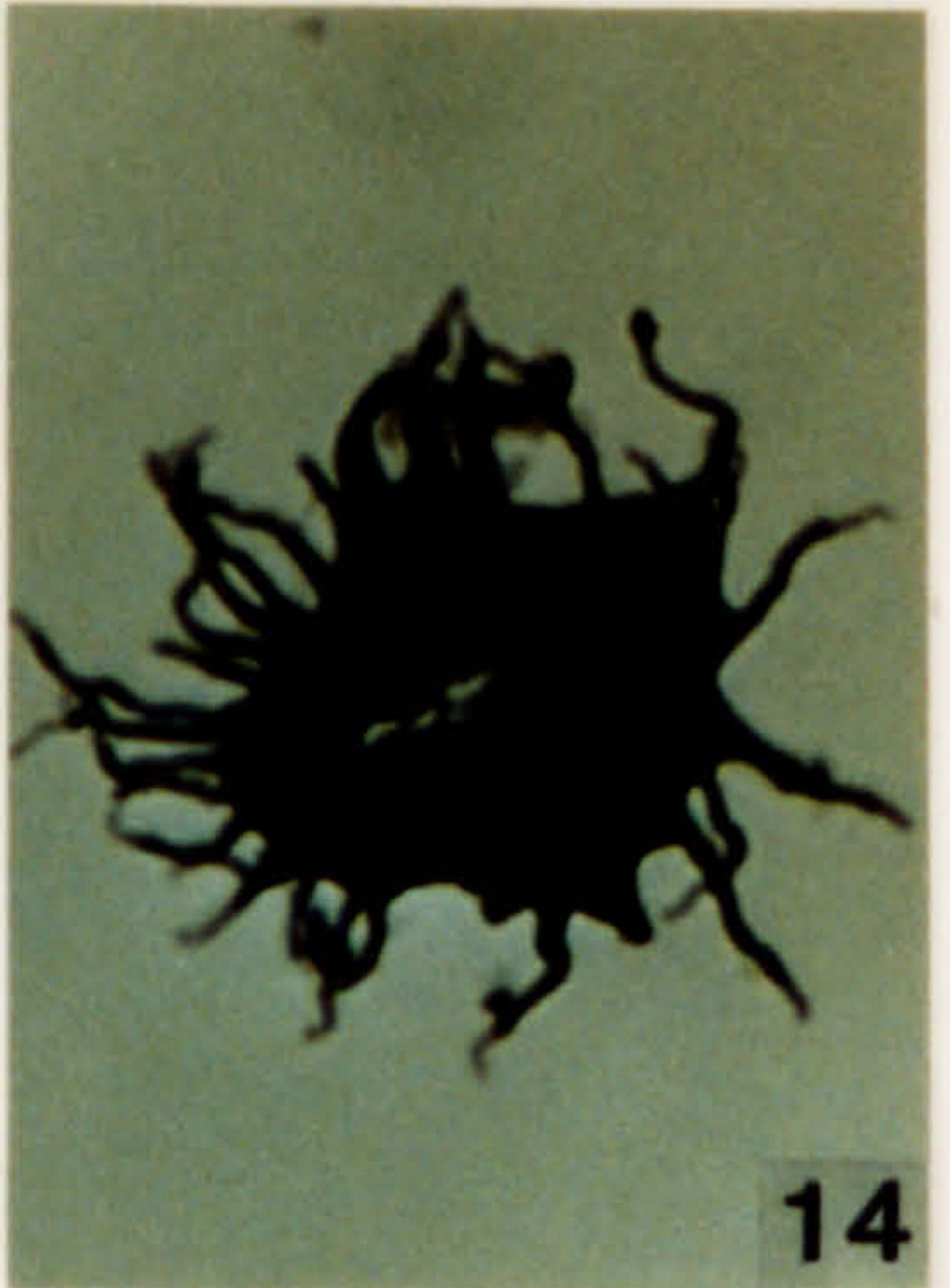
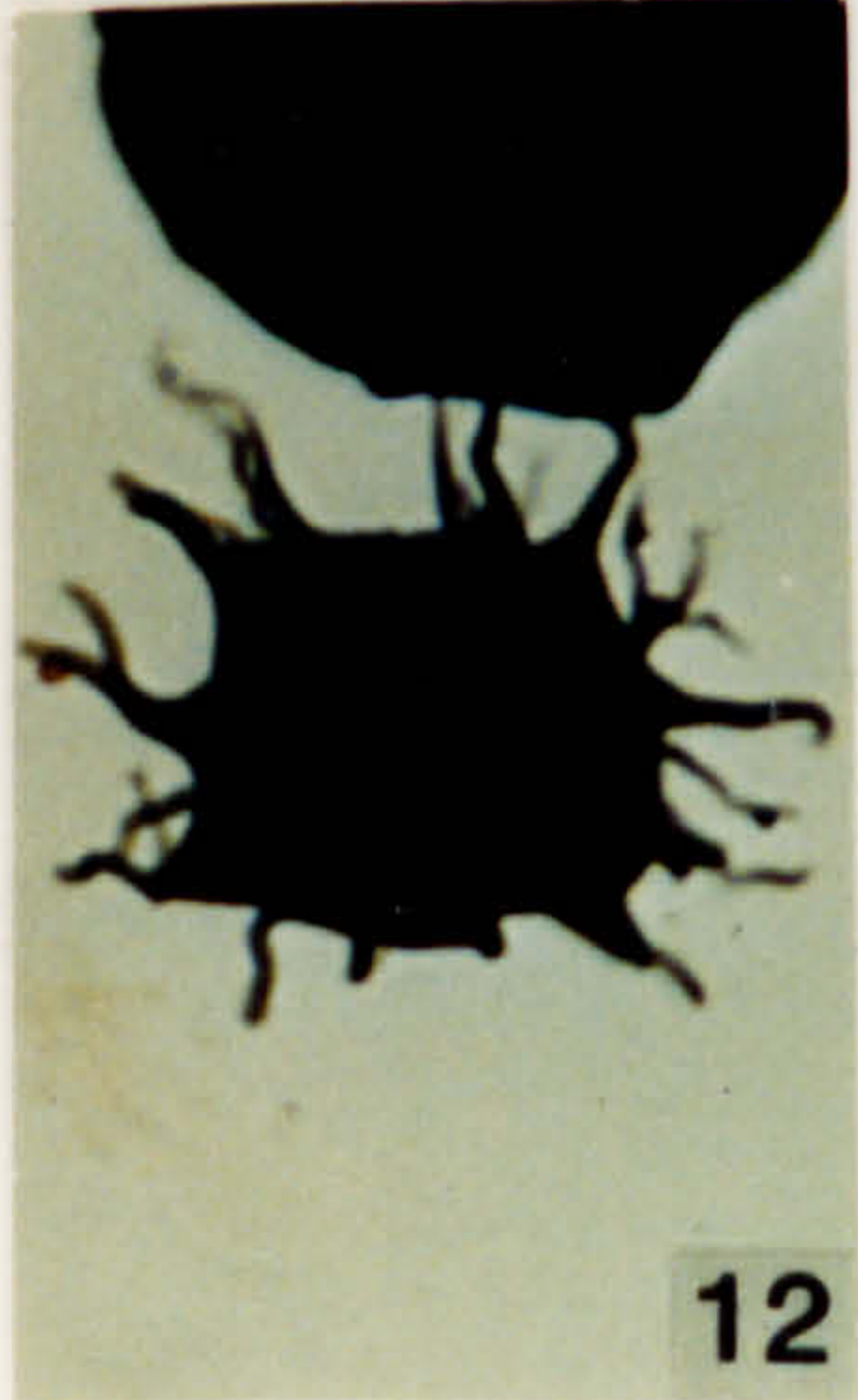
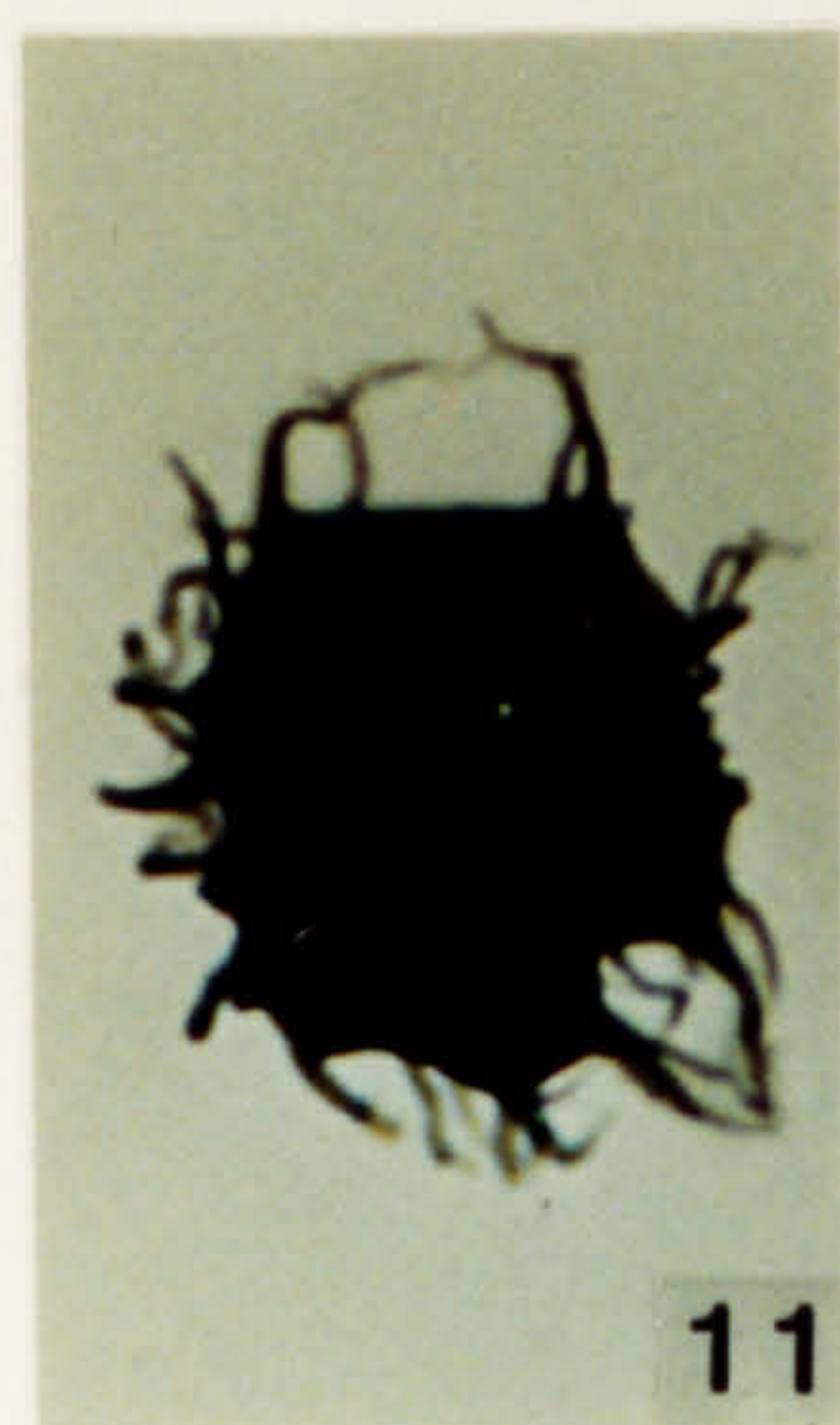
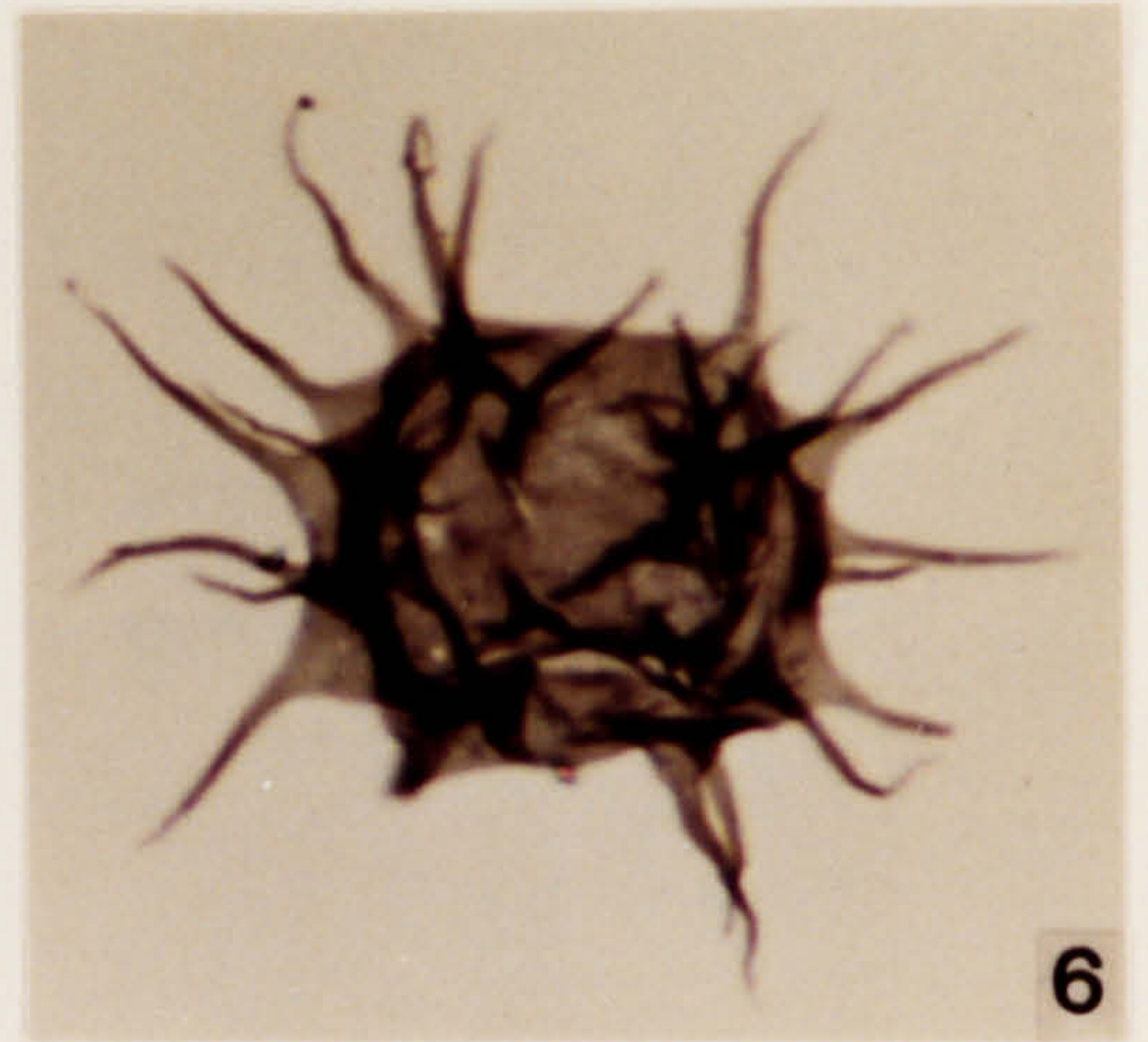
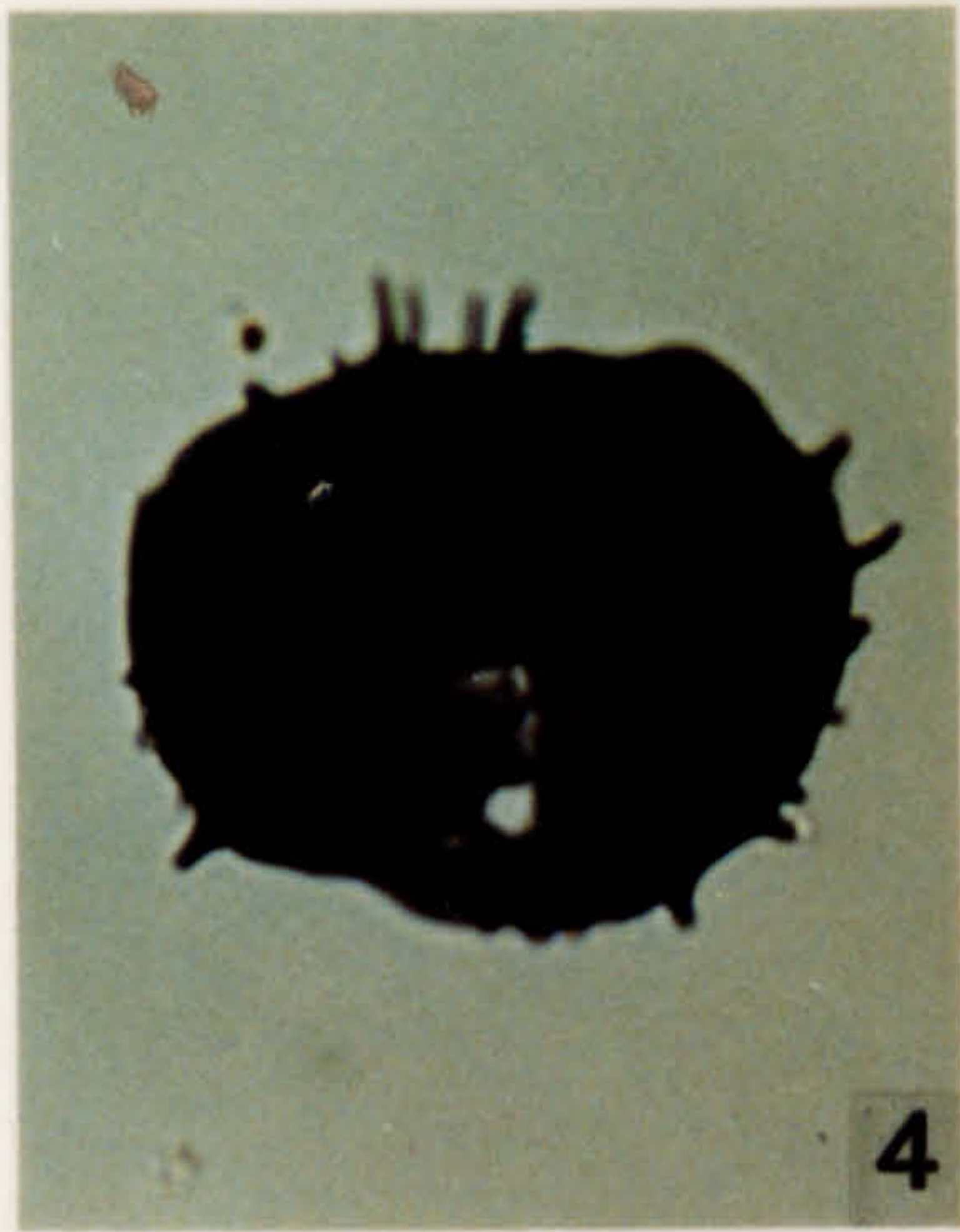
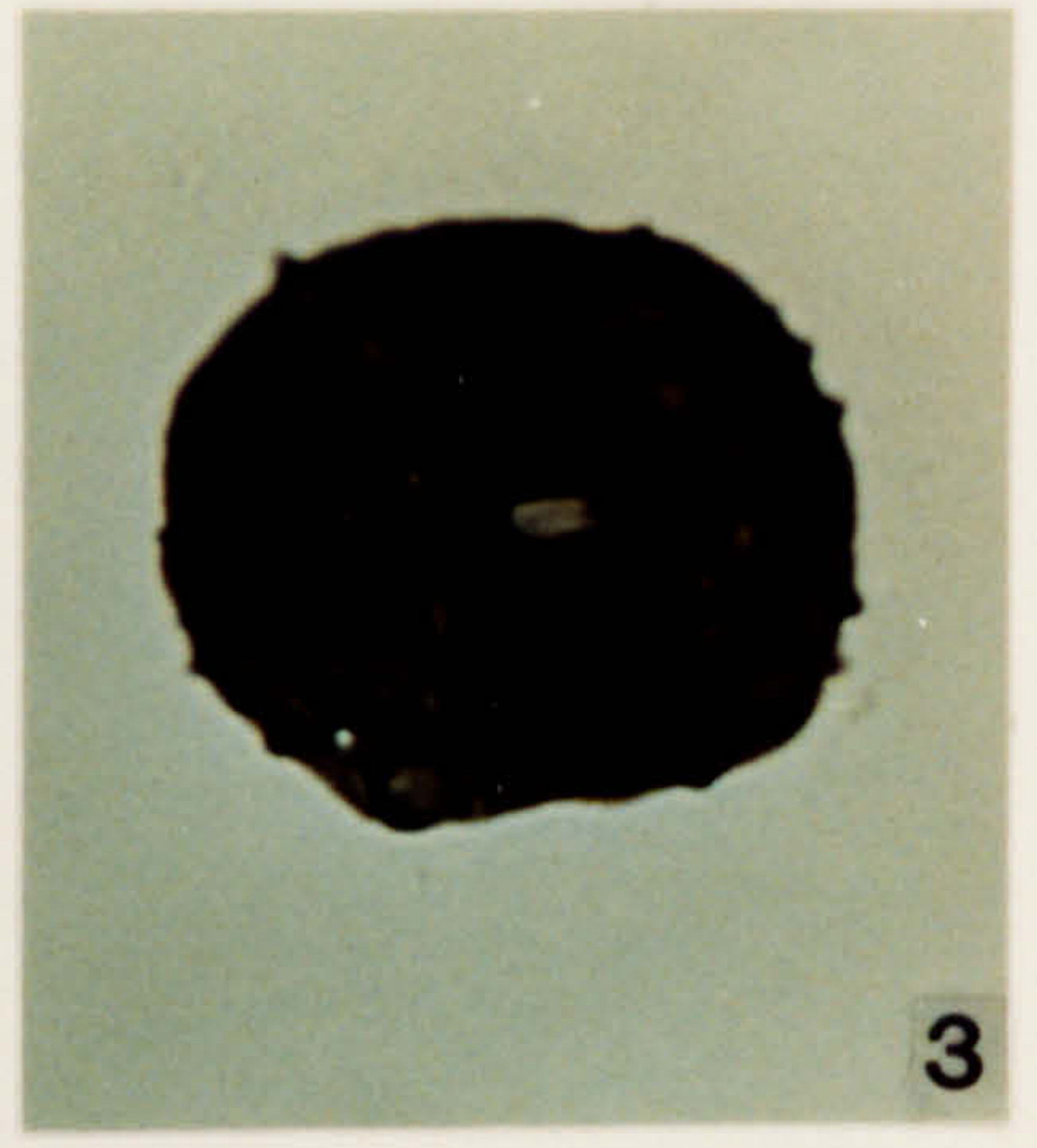
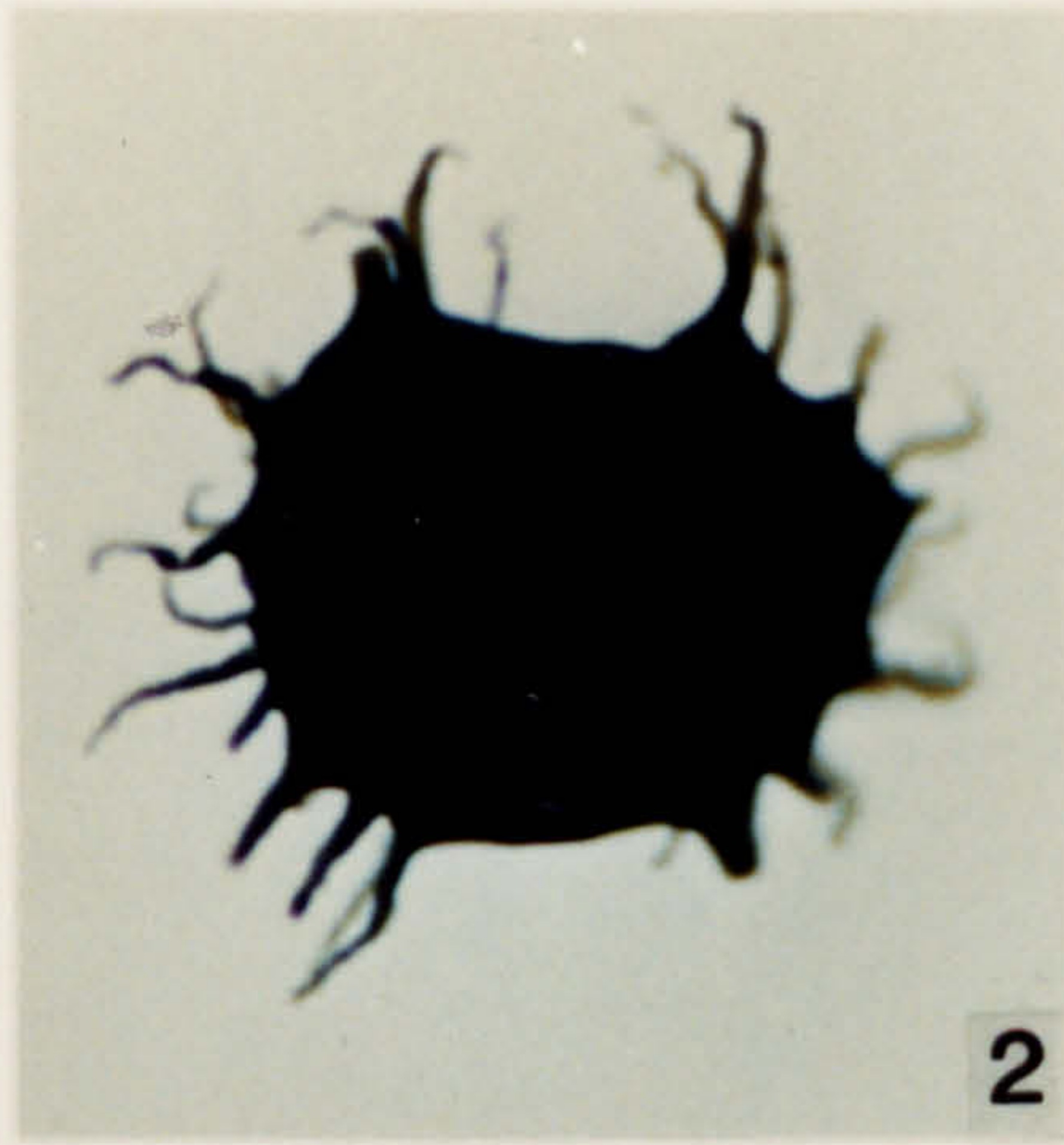


Plate 2.

Acritarchs from the Fezouata Formation, Tremadoc-earliest Arenig in age.

1. *Acanthodiacrodium selectum* Timofeev 1959. DW 304, R-A, Q39\4.
2. *Acanthodiacrodium selectum* Timofeev 1959. DW 304, 2-1, C20\1.
3. *Acanthodiacrodium uniforme* Timofeev 1959. DW 115, 2-1, J21\1.
4. *Acanthodiacrodium uniforme* Timofeev 1959. DW 115, 2-1, F29\4.
5. *Acanthodiacrodium uniforme* Timofeev 1959. DW 115, 2-1, W31\4.
6. *Acanthodiacrodium varvrdovae* Cramer & Diez 1977. DW 105, 2-1, L24\-..
7. *Acanthodiacrodium* sp. 1. DW 115, 2-1, W36\4.
8. *Acanthodiacrodium* sp. 1. DW 105, 2-1, G40\4.
9. *Acanthodiacrodium* sp. 1. DW 115, 2-1, L31\1.
10. *Acanthodiacrodium* cf. *vulgare* Timofeev 1959 ex Downie & Sarjeant 1965.  
DW 115, 2-1, P36\2.
11. *Acanthodiacrodium* sp. 2. DW 305, 2-1, W17\2.
12. *Acanthodiacrodium* sp. 2. DW 305, 2-1, P13\2.
13. *Acanthodiacrodium* sp. 2. DW 305, 2-1, G19\1.
14. *Acanthodiacrodium* sp. 2. DW 305, 2-1, N15\4.

PLATE 2

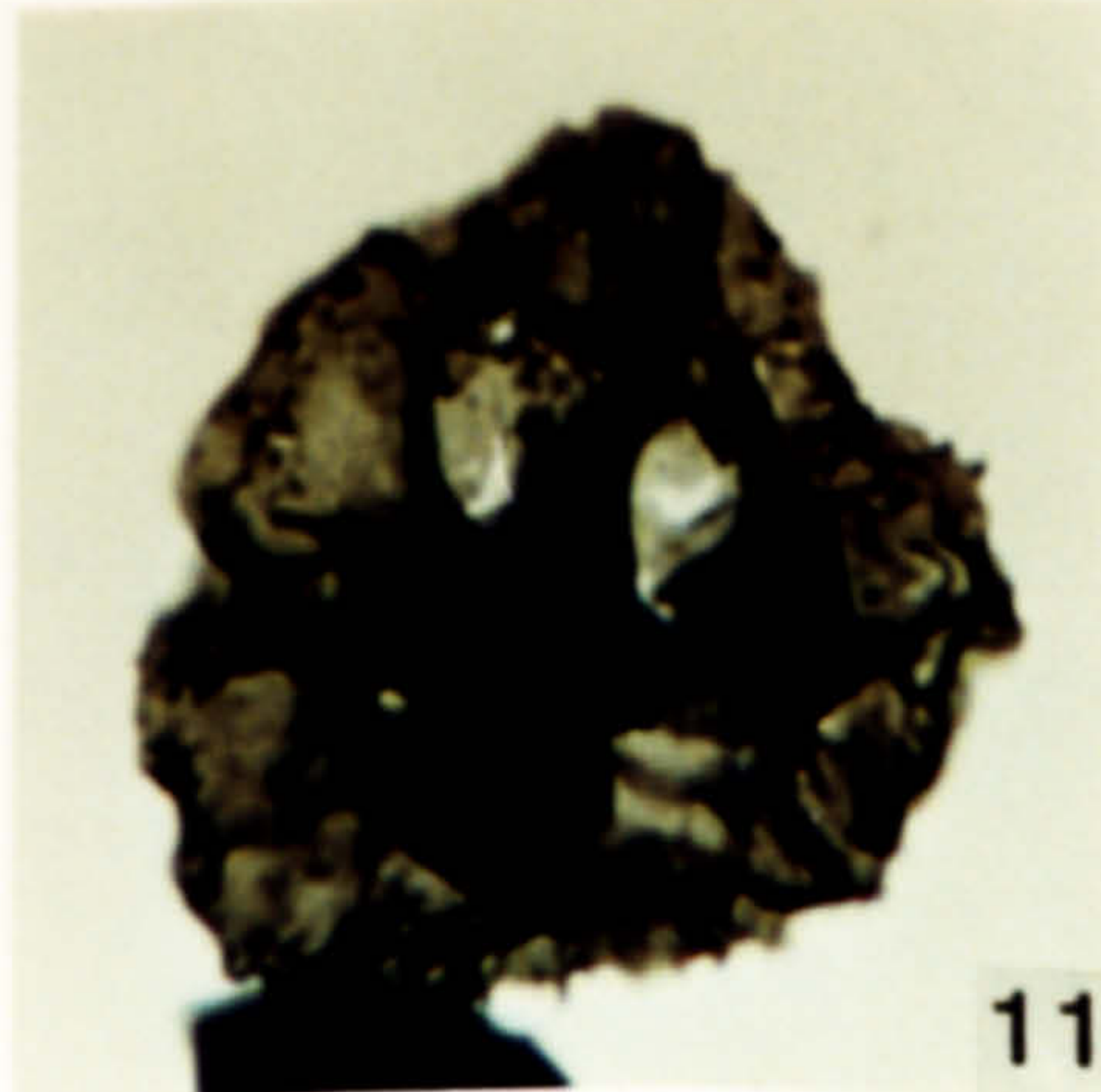
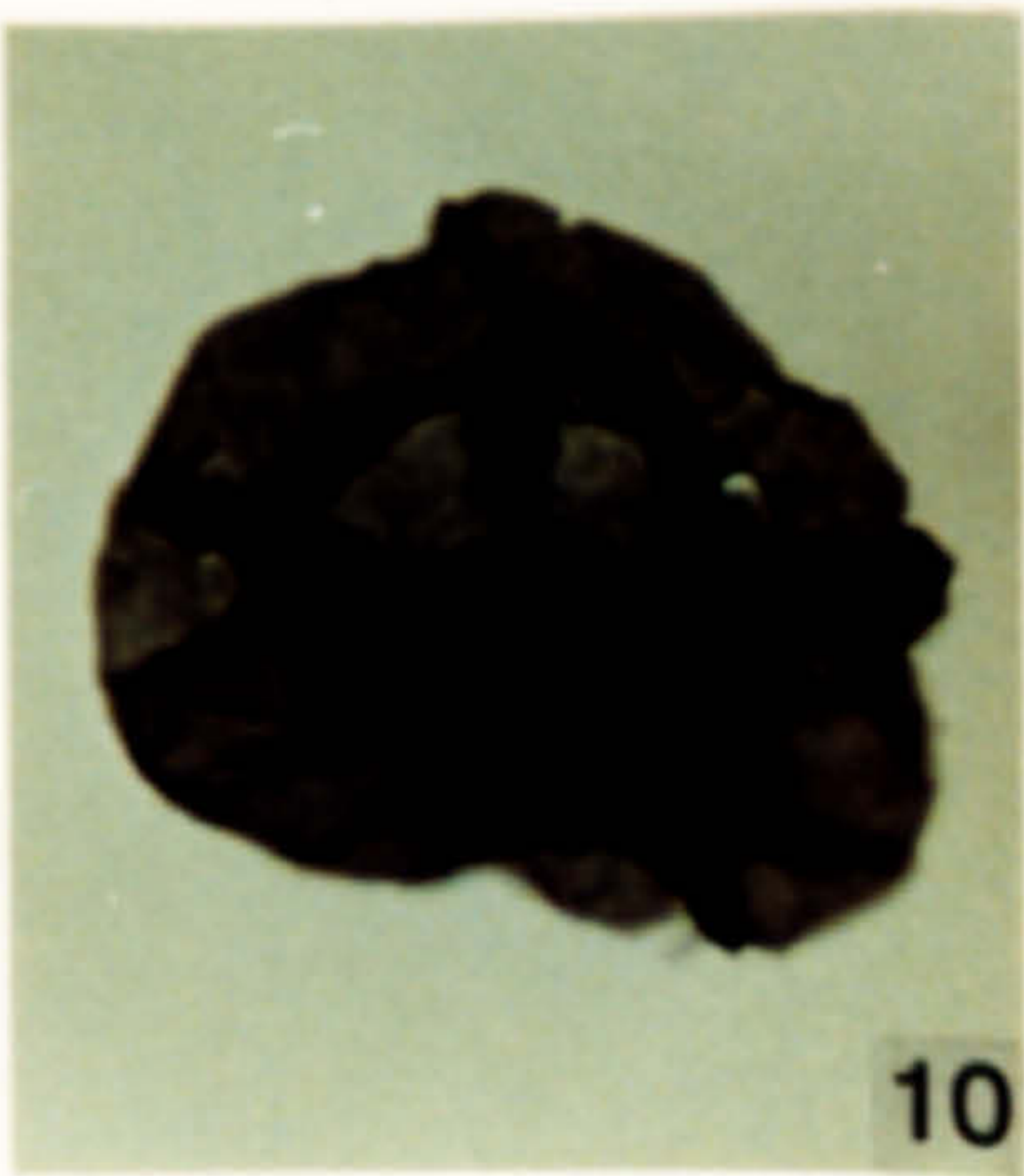
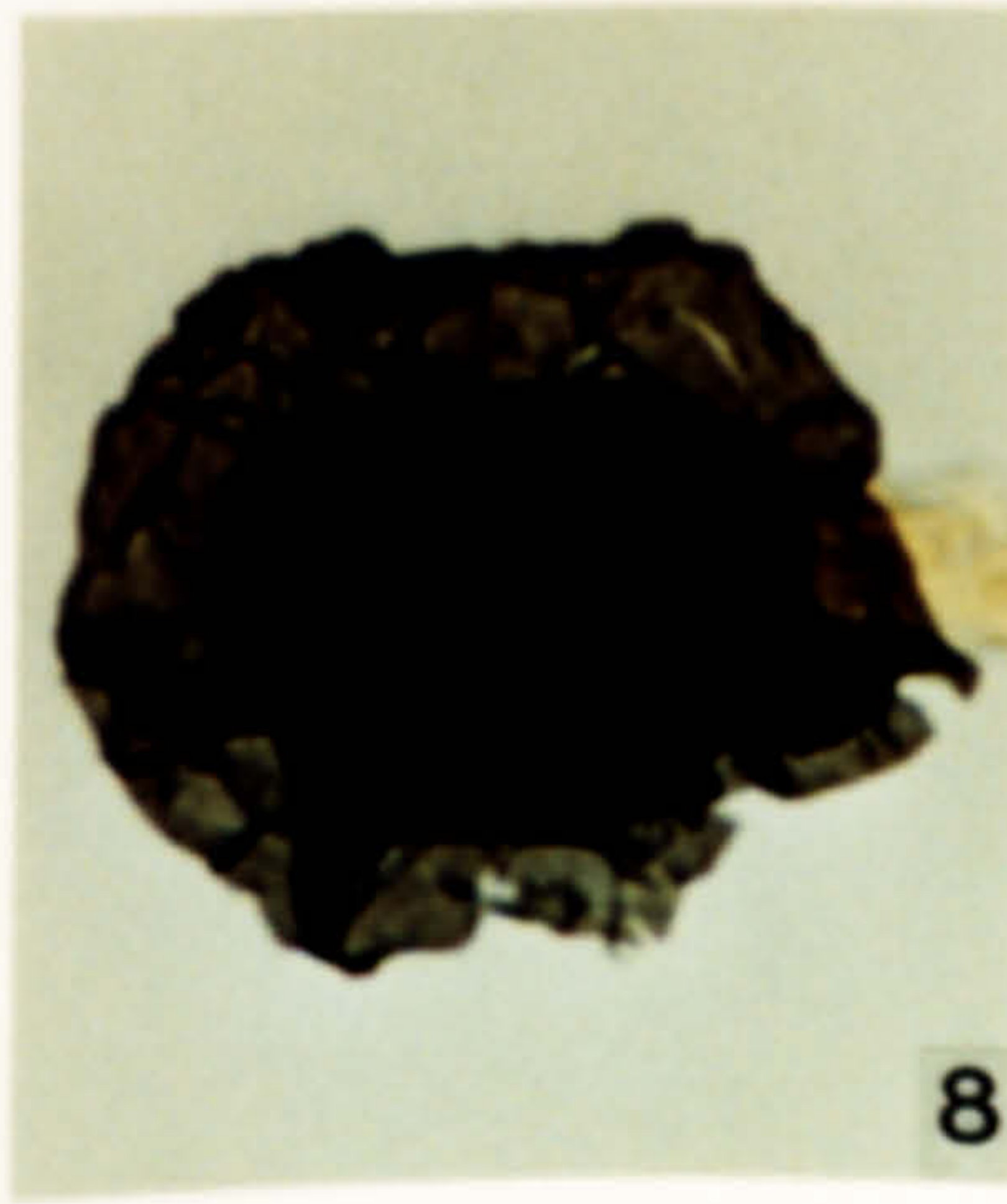
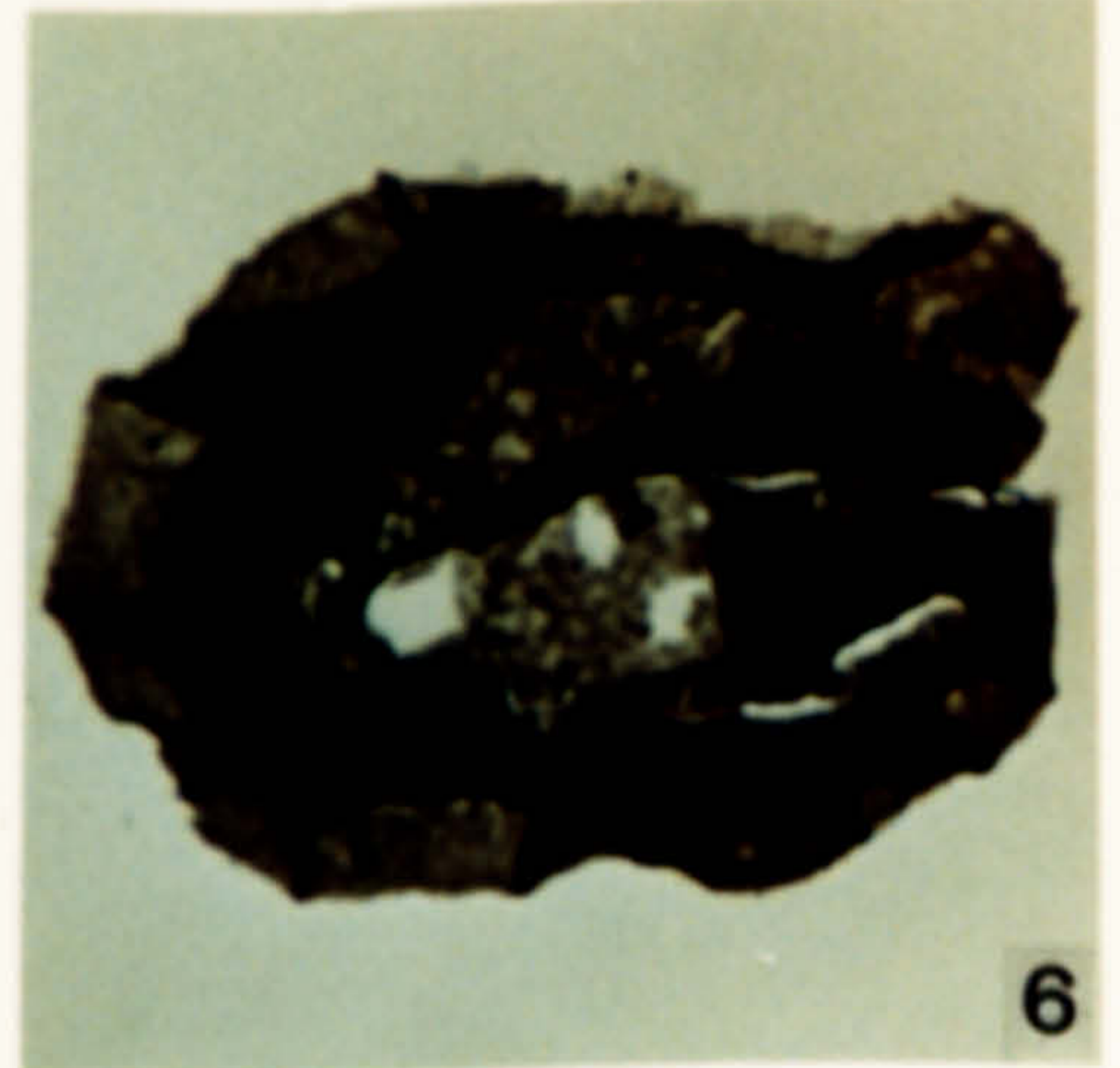
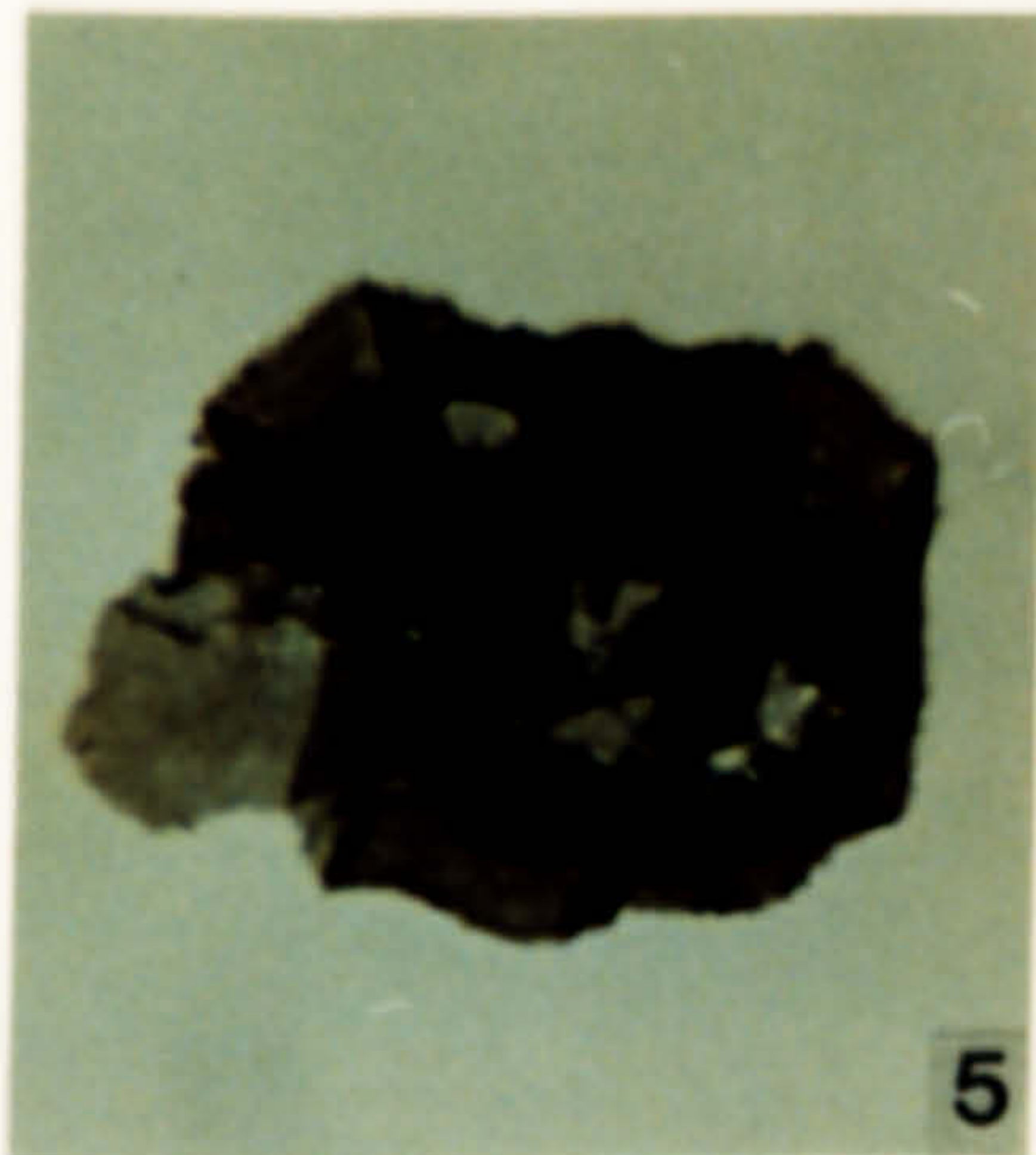
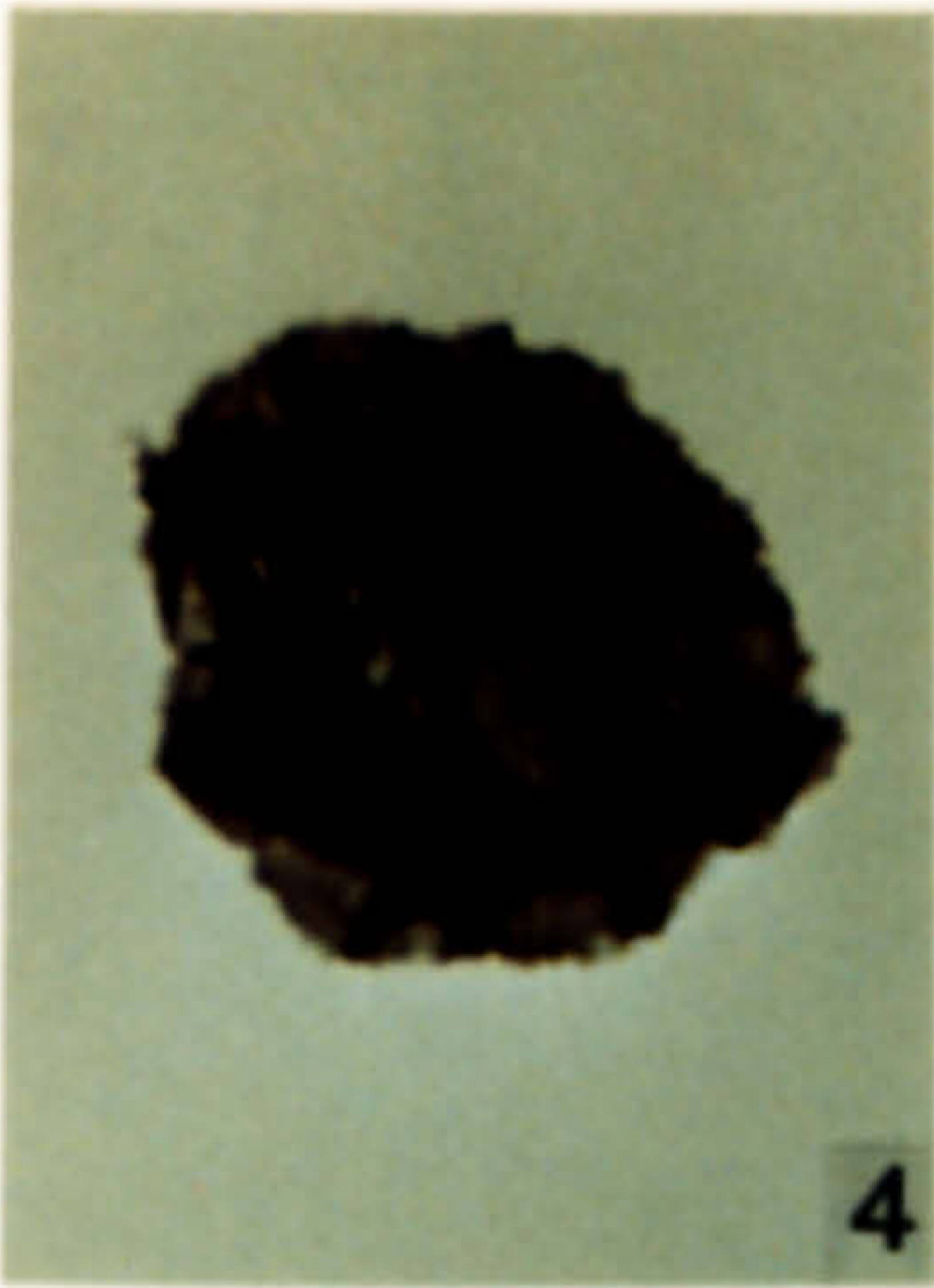
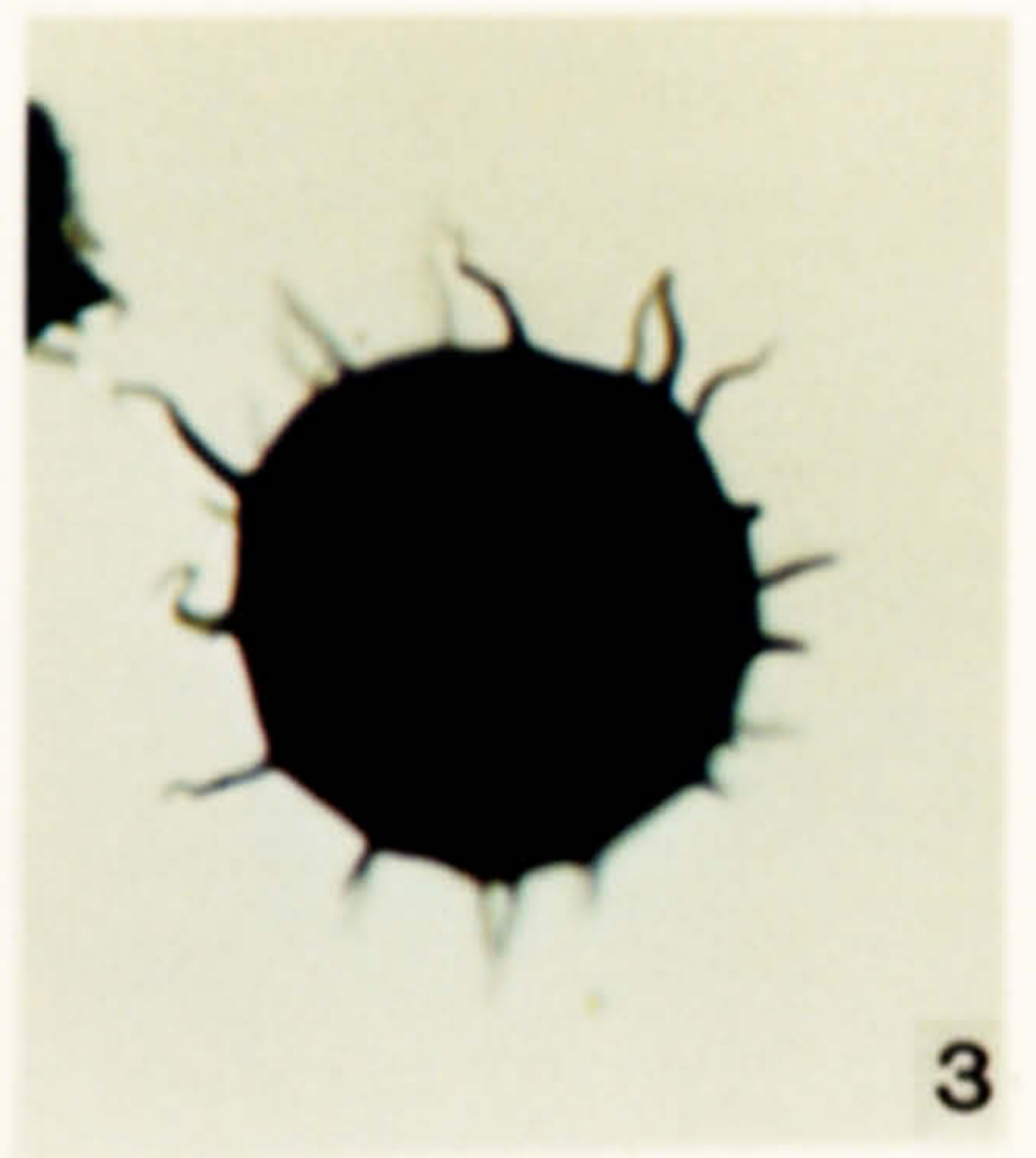
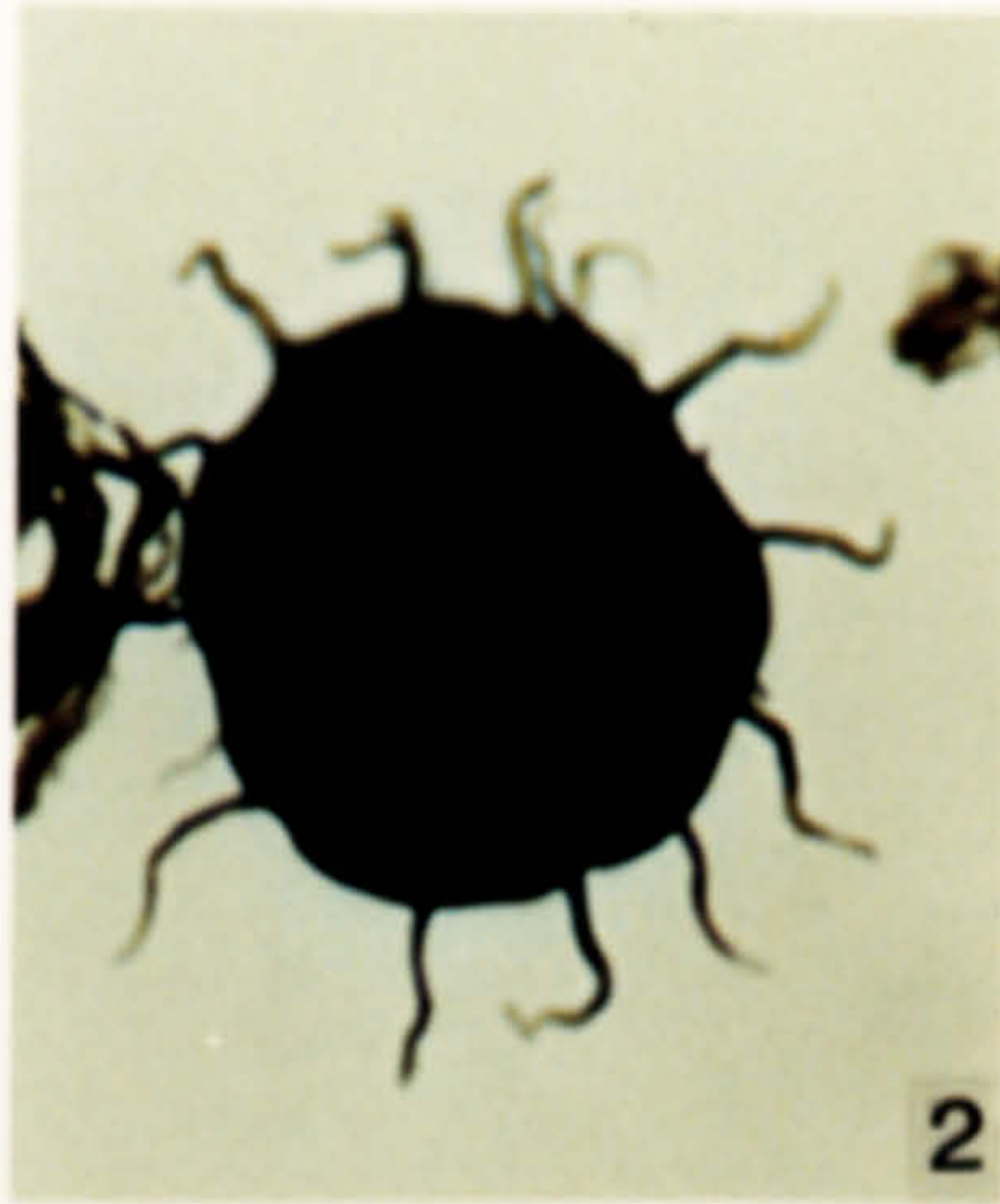
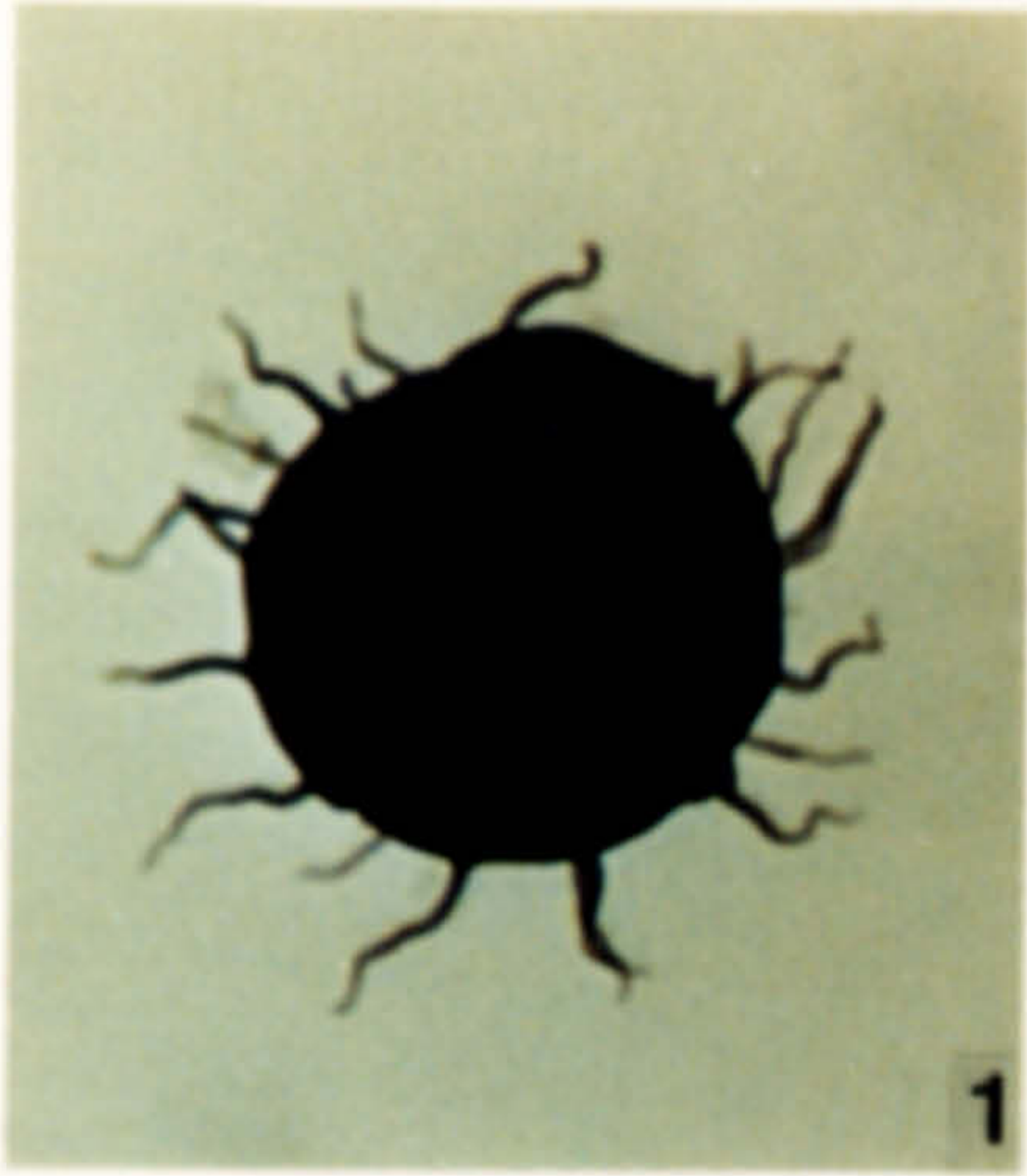


**Plate 3.**

Acritarchs from the Fezouata Formation, Tremadoc-earliest Arenig in age.

1. *Baltisphaeridium hirsutoides* (Eisenack) Eisenack 1959. DW 304, 2-1, B14\4.
2. *Baltisphaeridium hirsutoides* (Eisenack) Eisenack 1959. DW 304, 2-1, V27\2.
3. *Baltisphaeridium hirsutoides* (Eisenack) Eisenack 1959. DW 304, 2-1, L29\3.
4. *Crystallinium ovillense* (Cramer & Diez) Fensome *et al.* 1990. DW 115, 2-1, H39\4.
5. *Crystallinium ovillense* (Cramer & Diez) Fensome *et al.* 1990. DW 105, 2-1, K41\2.
6. *Crystallinium ovillense* (Cramer & Diez) Fensome *et al.* 1990. DW 105, 2-1, T41\2.
7. *Cymatiogalae deunffii* Jardine *et al.* 1974. DW 304, 2-1, P17\4.
8. *Cymatiogalae deunffii* Jardine *et al.* 1974. DW 304, 2-1, O11\4.
9. *Cymatiogalae deunffii* Jardine *et al.* 1974. DW 304, R-B, H47\3.
10. *Cymatiogalae deunffii* Jardine *et al.* 1974. DW 304, 2-1, V27\2.
11. *Cymatiogalae cf. deunffii* Jardine *et al.* 1974. DW 304, 2-1, C14\1.
12. *Caldariola glabra* (Martin) Molyneux 1988. GAO 65, 2-1, T33\4.

PLATE 3



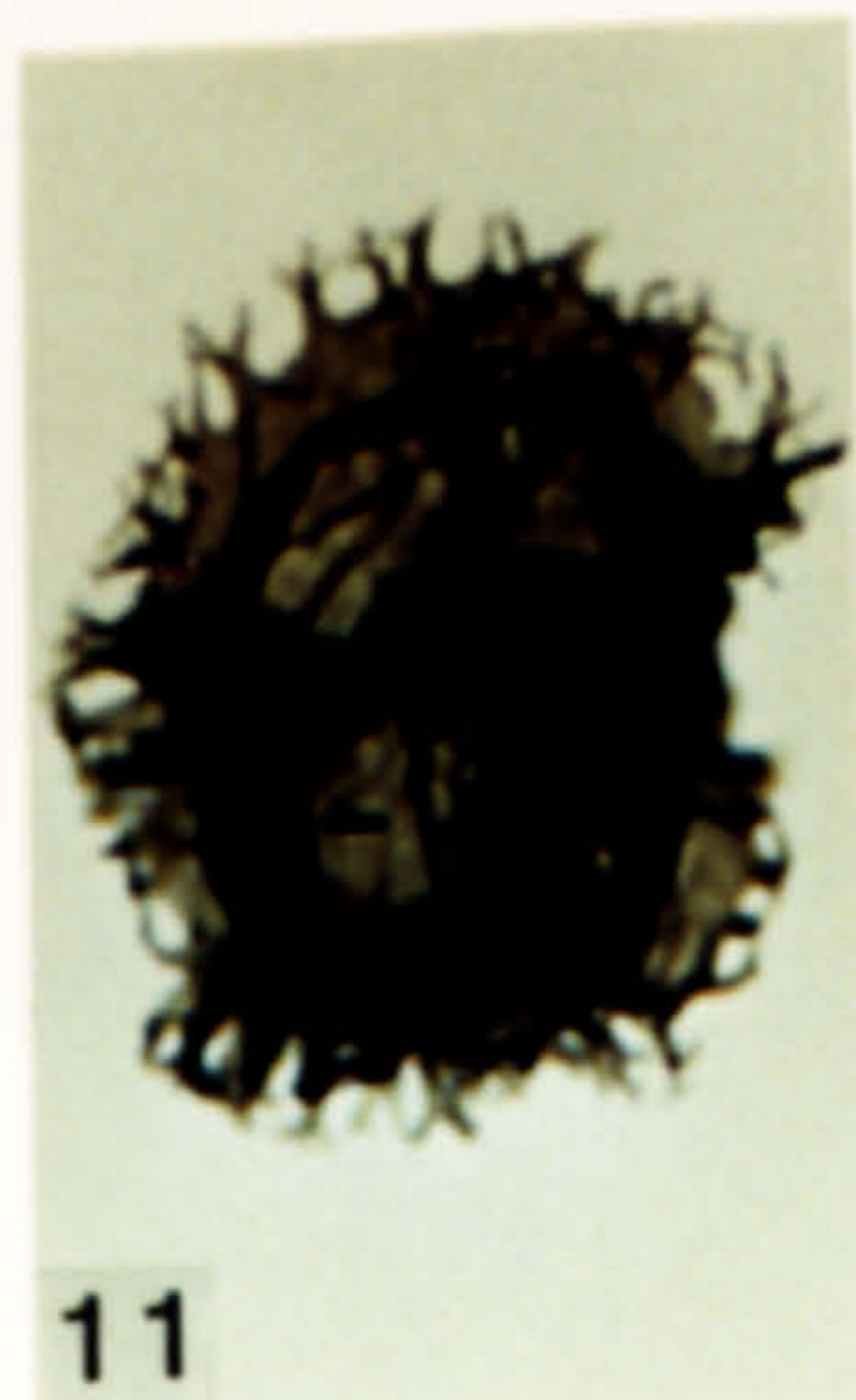
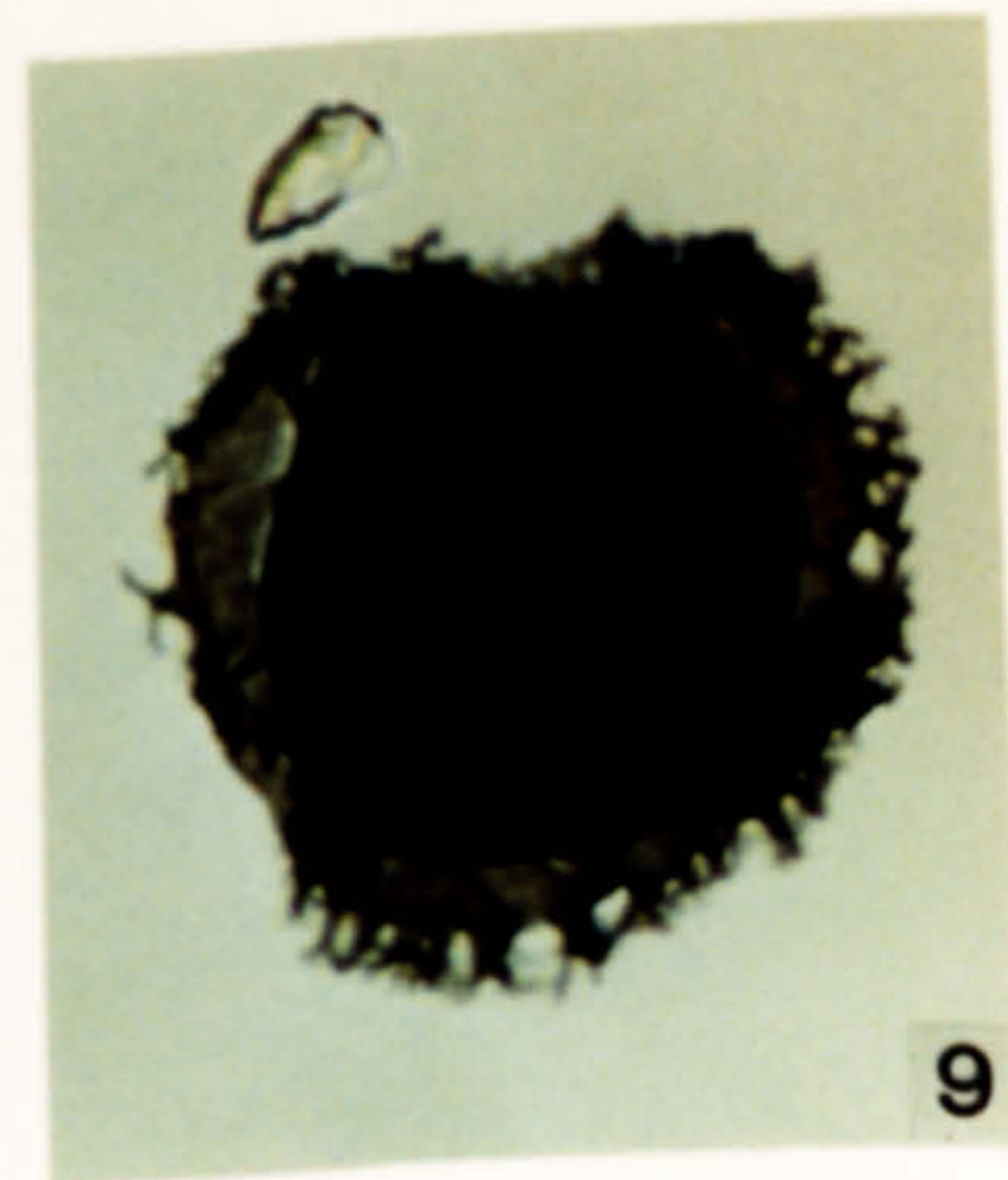
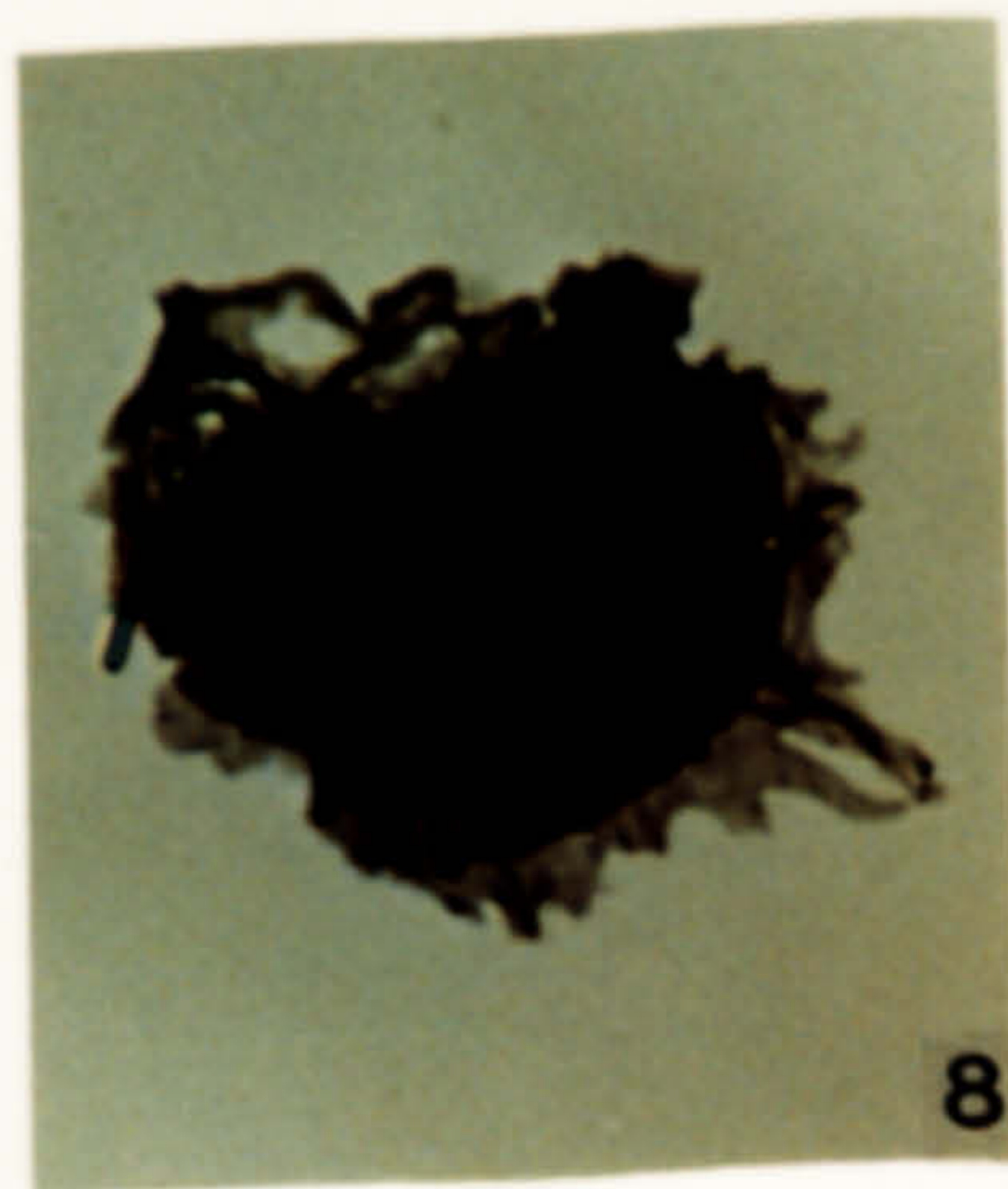
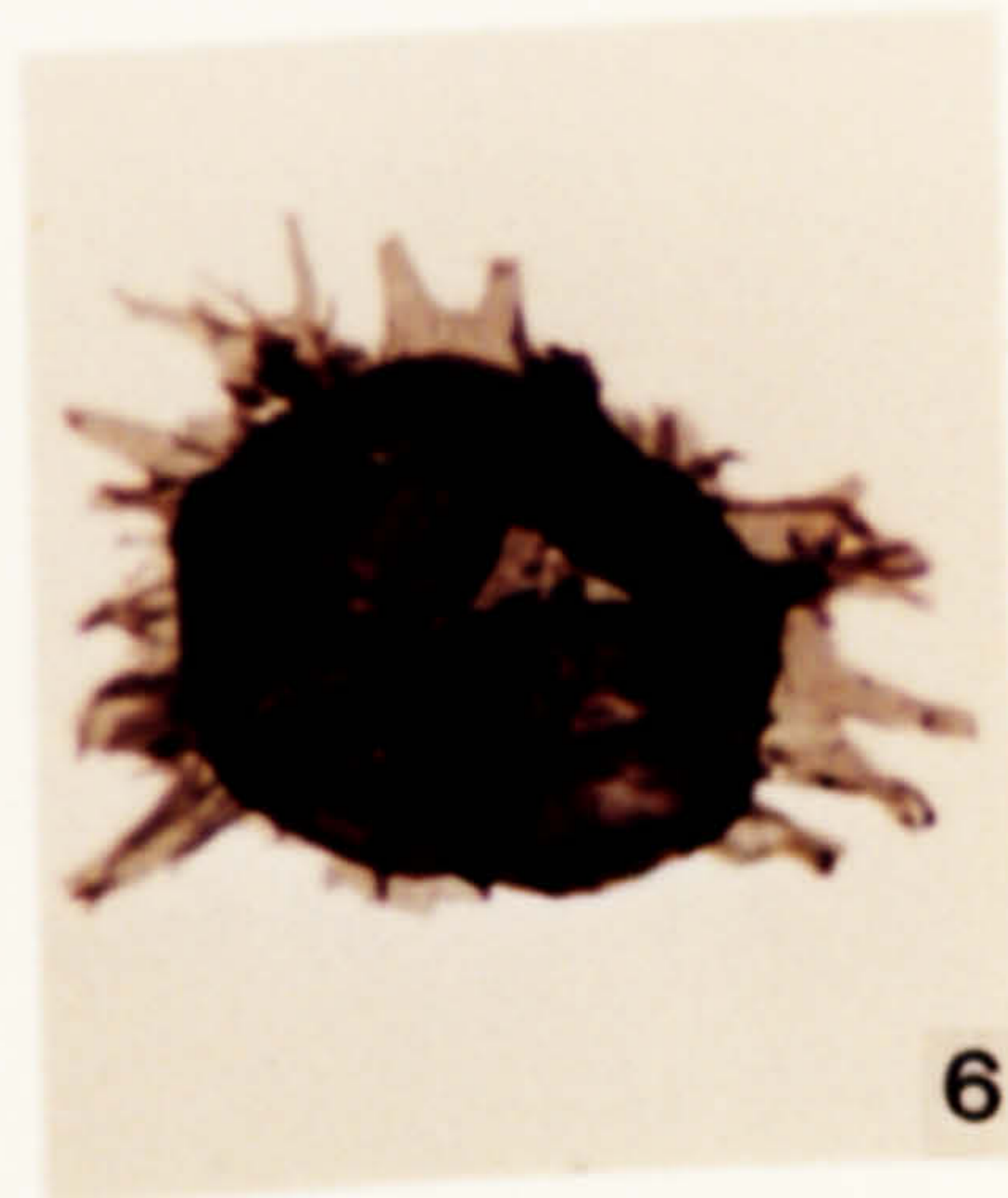
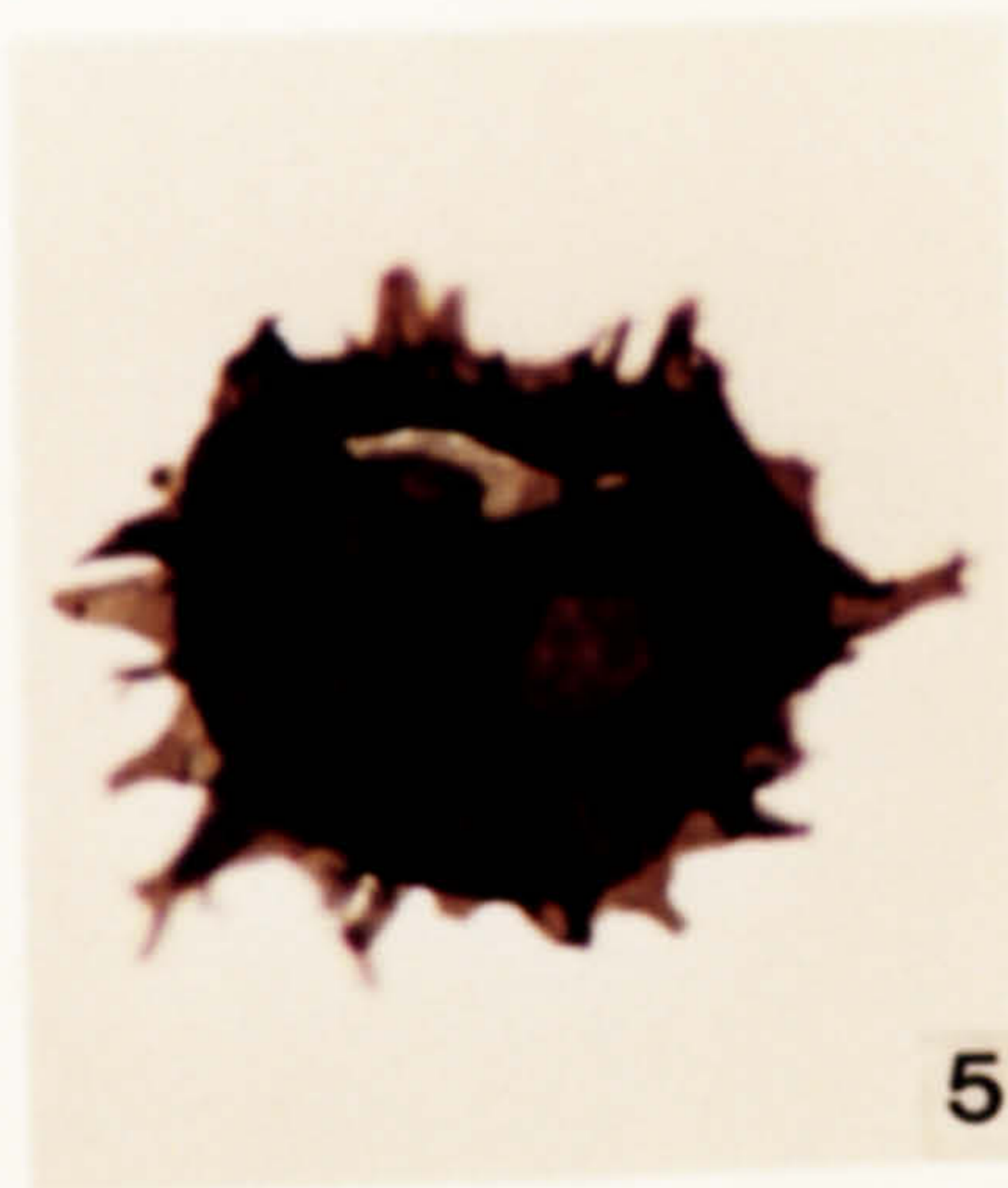
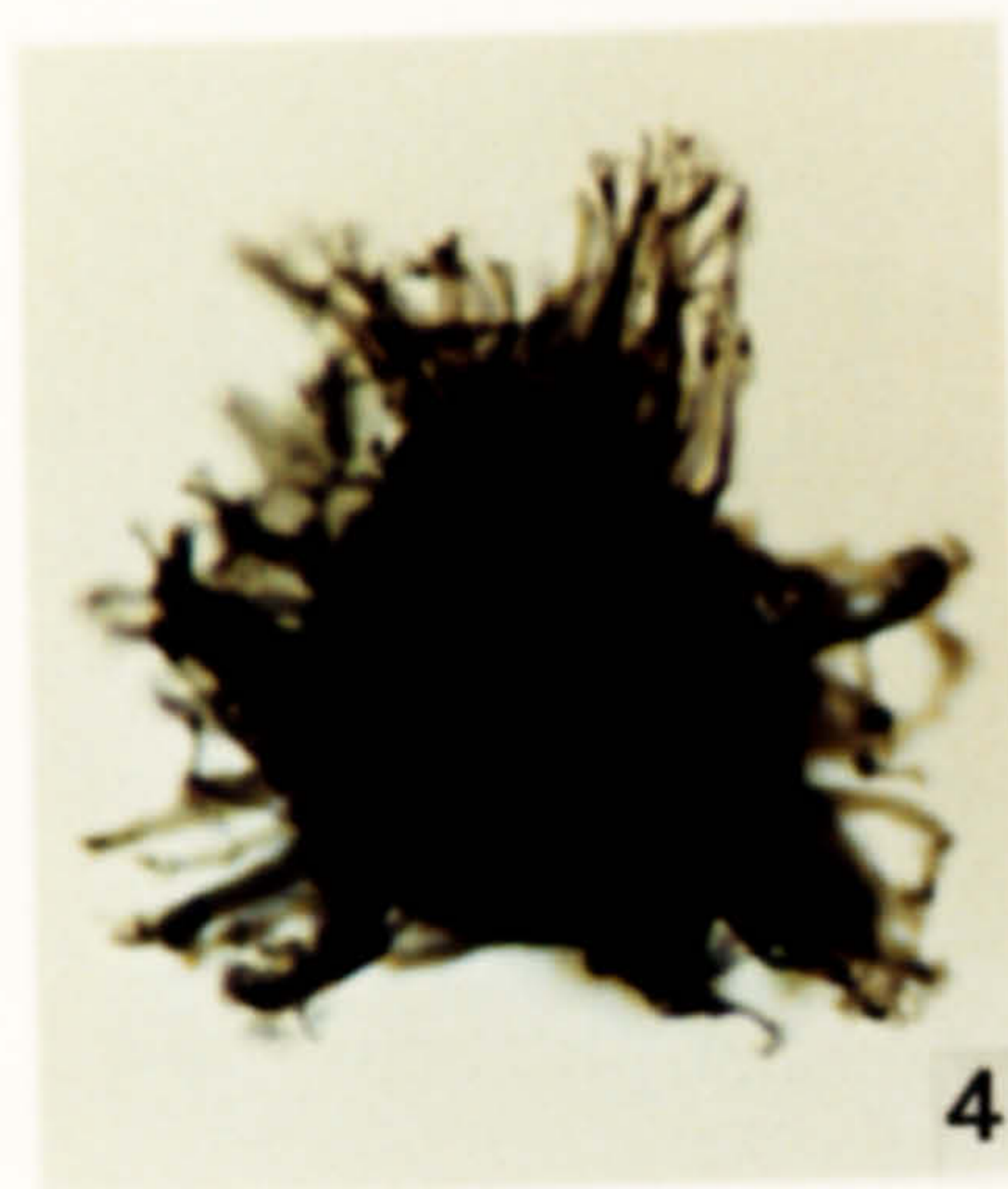
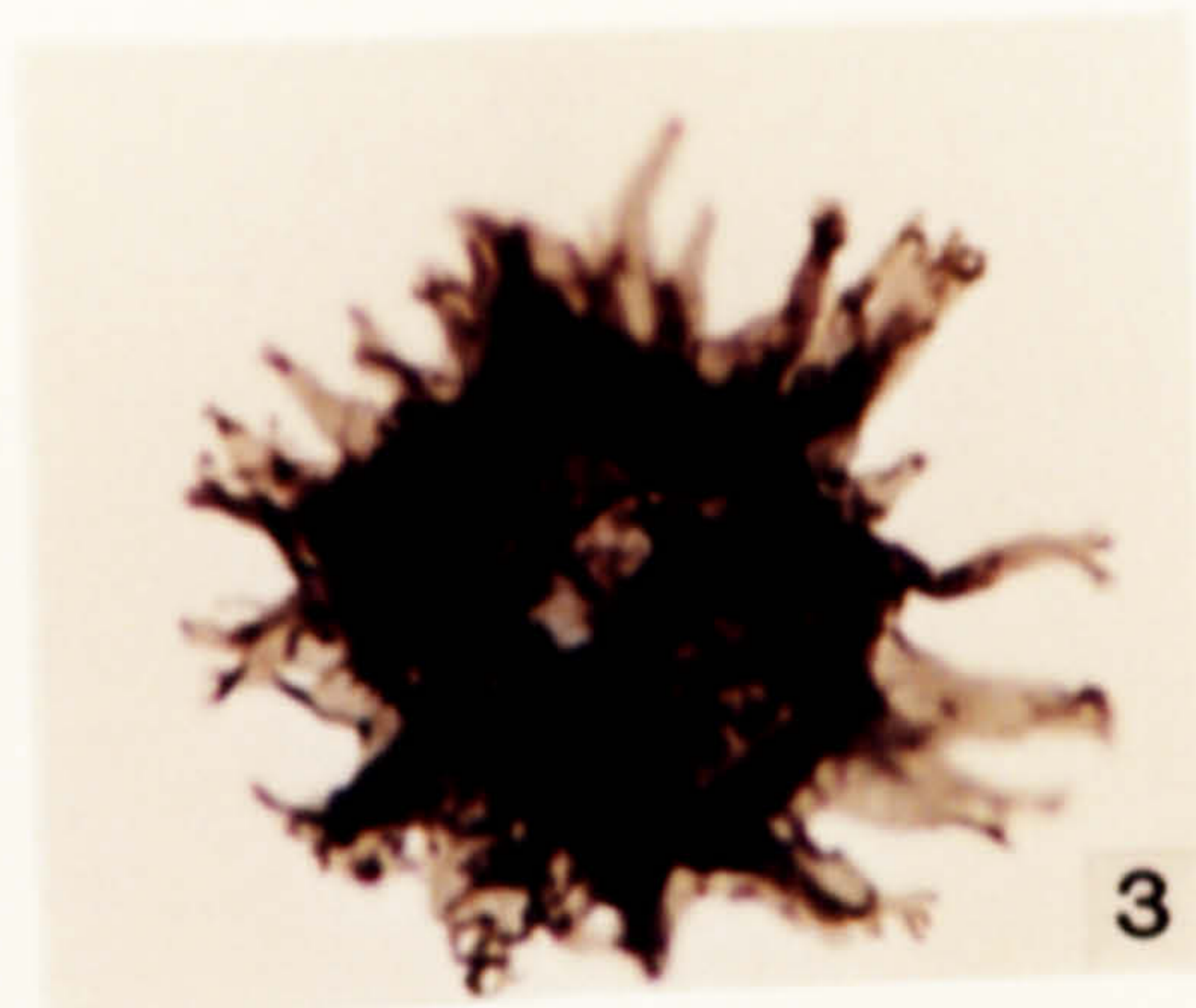
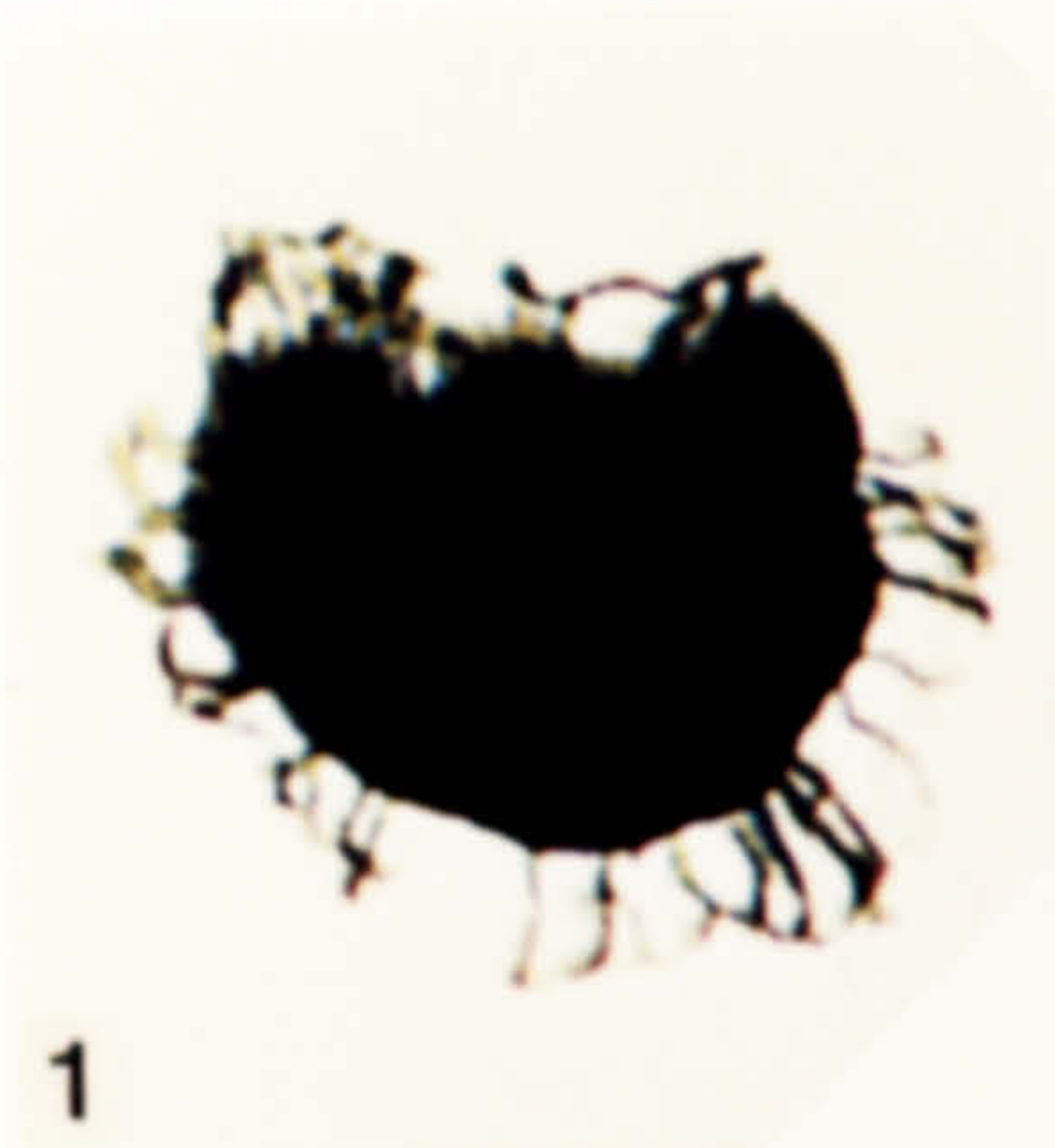


**Plate 4.**

**Acritarchs from the Fezouata Formation, Tremadoc-earliest Arenig in age.**

1. *Cymatiogalae cf. margaritata* Deunff 1961. DW 304, R-B, M48\1.
2. *Cymatiogalae cf. margaritata* Deunff 1961. DW 304, R-B, M48\1.
3. *Cymatiogalae messaoudii* var A. GAO 65, 2-1, P36\4.
4. *Cymatiogalae messaoudii* var A. GAO 65, 2-1, H20\4.
5. *Cymatiogalae messaoudii* var B. GAO 65, 2-1, P15\2.
6. *Cymatiogalae messaoudii* var B. GAO 65, 2-1, D26\2.
7. *Cymatiogalae messaoudii* var B. GAO 65, 2-1, M30\2.
8. *Cymatiogalae messaoudii* var B. GAO 65, 2-1, G39\4.
9. *Cymatiogalae* sp. 1. DW 304, 2-1, X23\2.
10. *Cymatiogalae* sp. 1. DW 304, 2-1, O20\2.
11. *Cymatiogalae* sp. 1. DW 304, 2-1, N26\3.
12. *Cymatiogalae* sp. 1. DW 304, 2-1, V27,2.
13. *Cymatiogalae* sp. 1. DW 304, 2-1, X22\1.

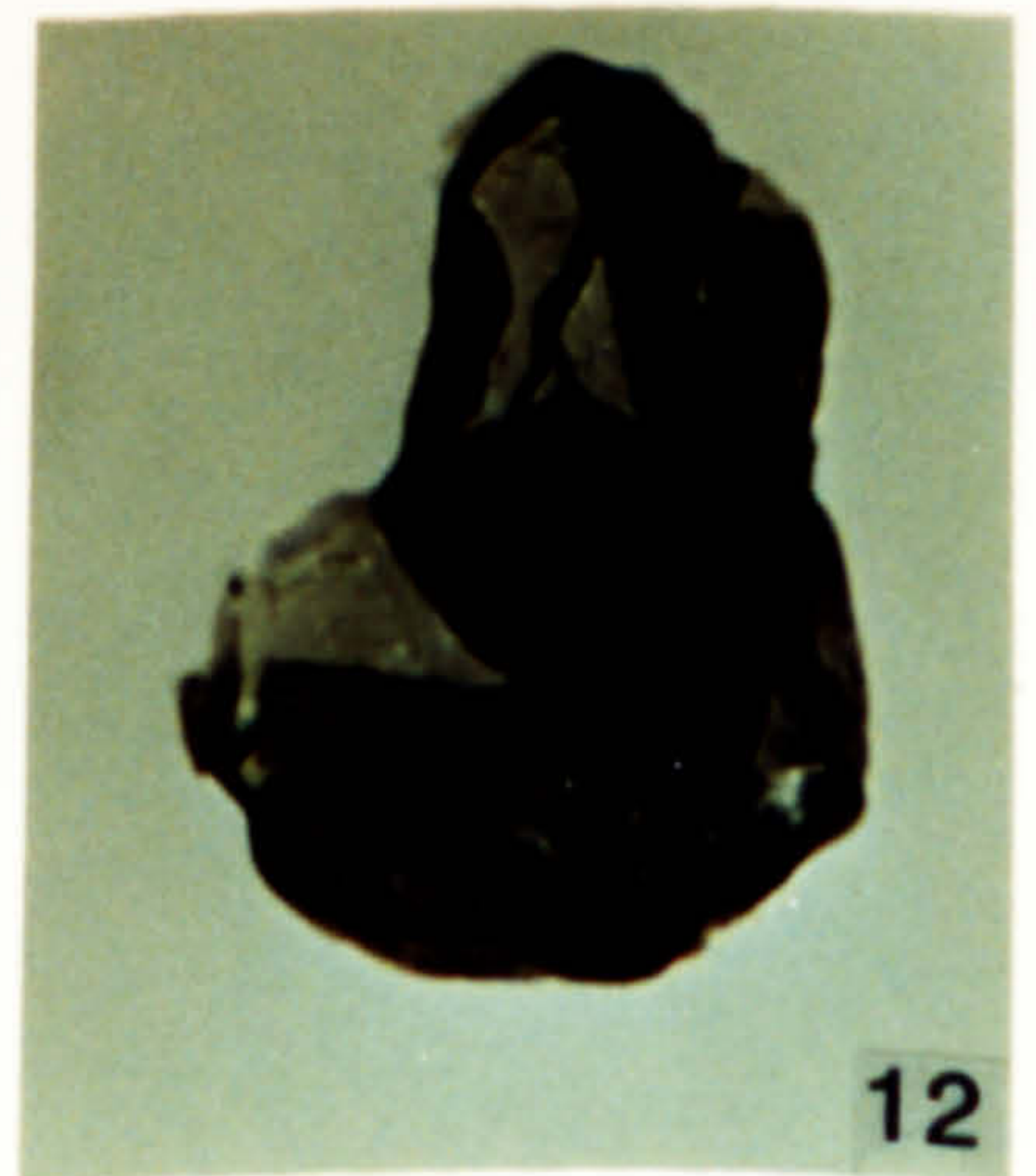
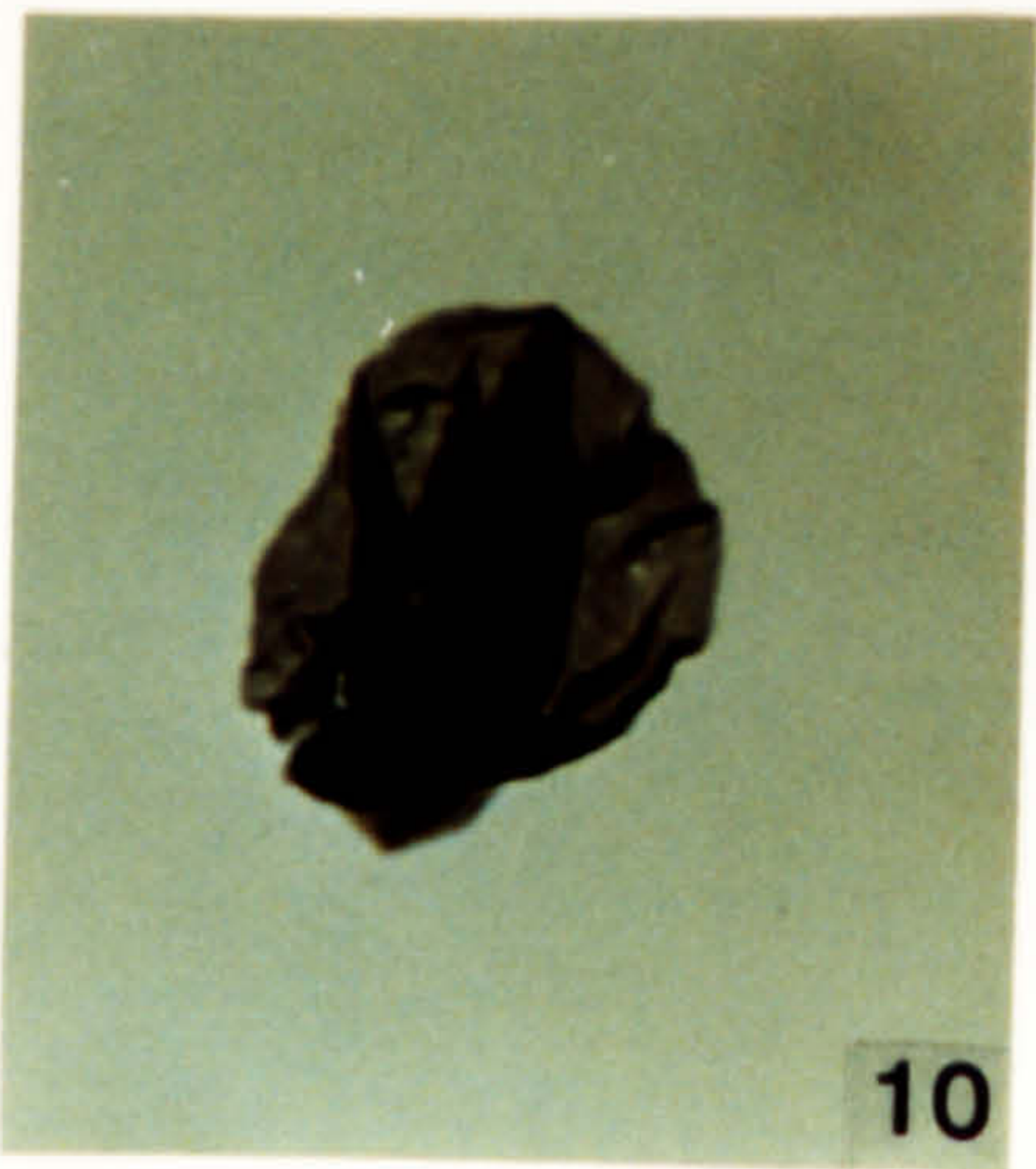
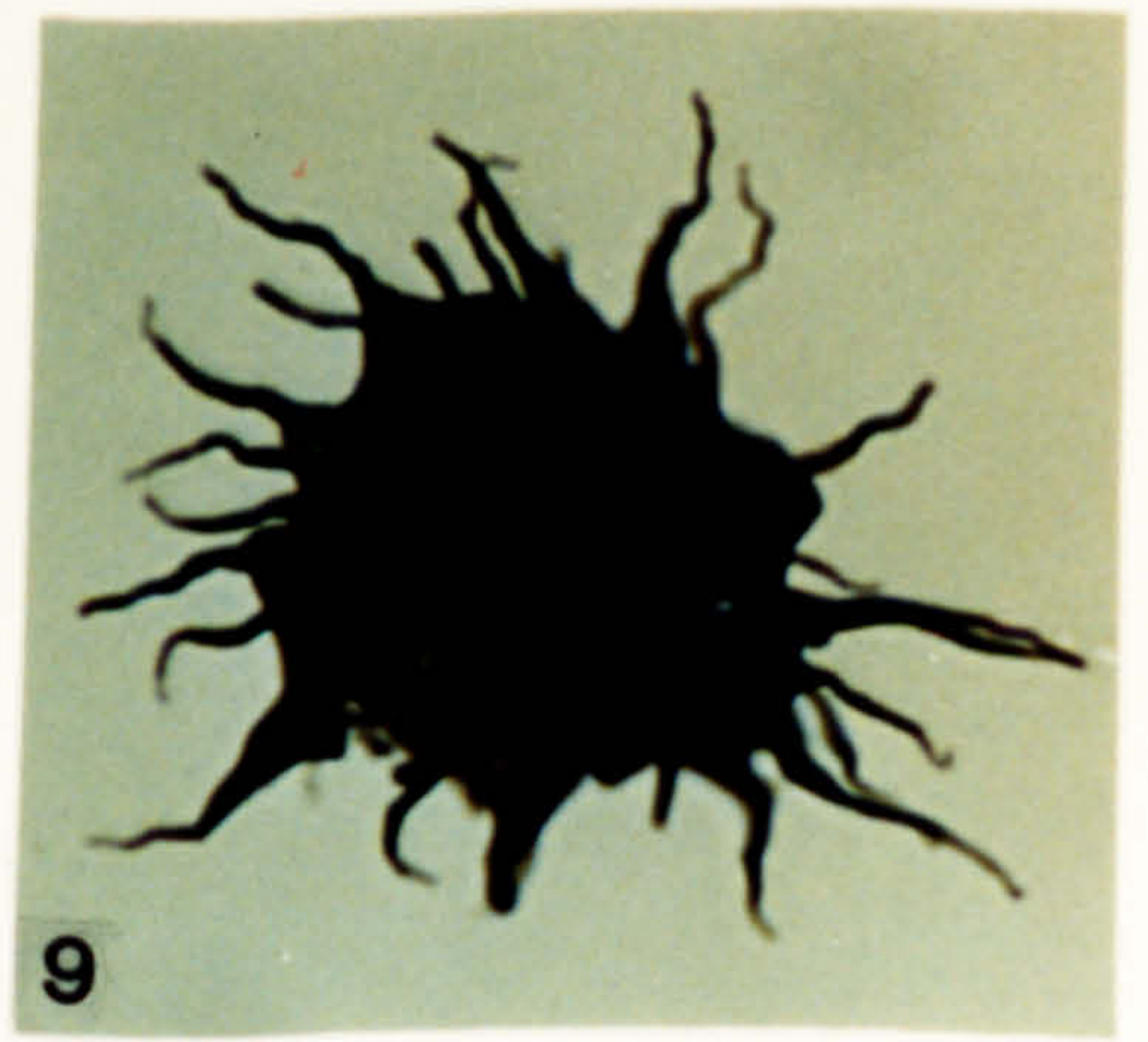
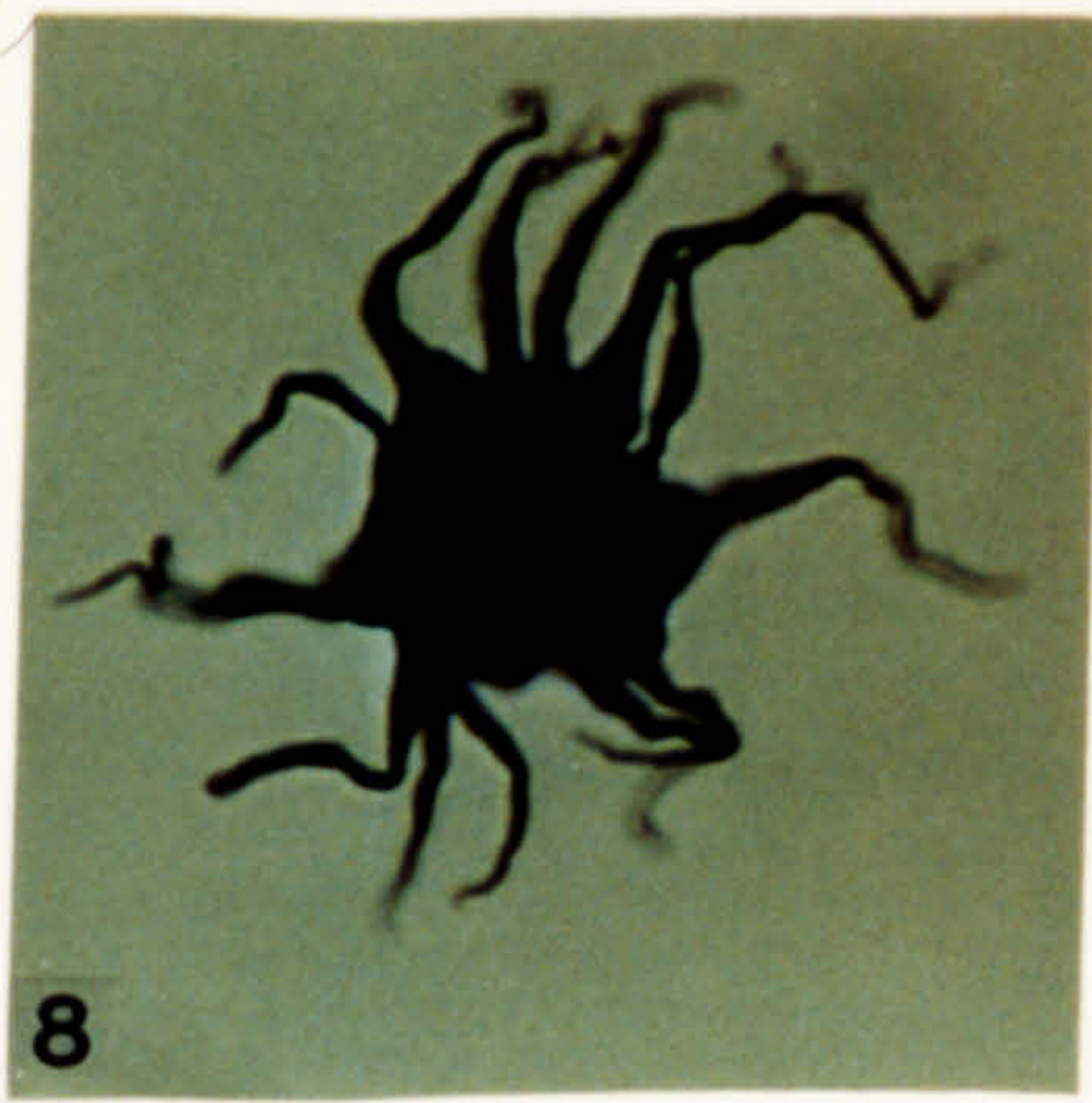
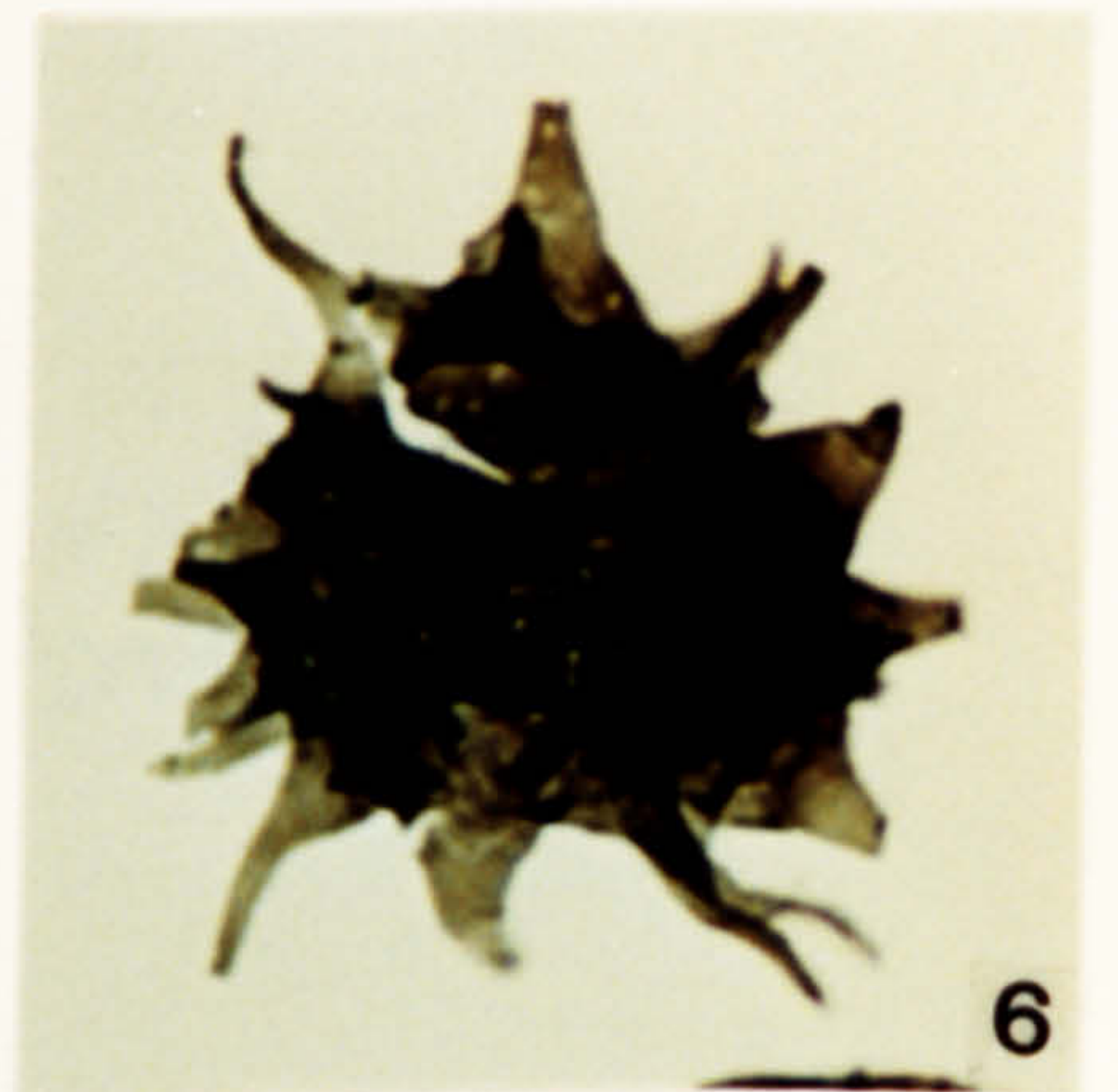
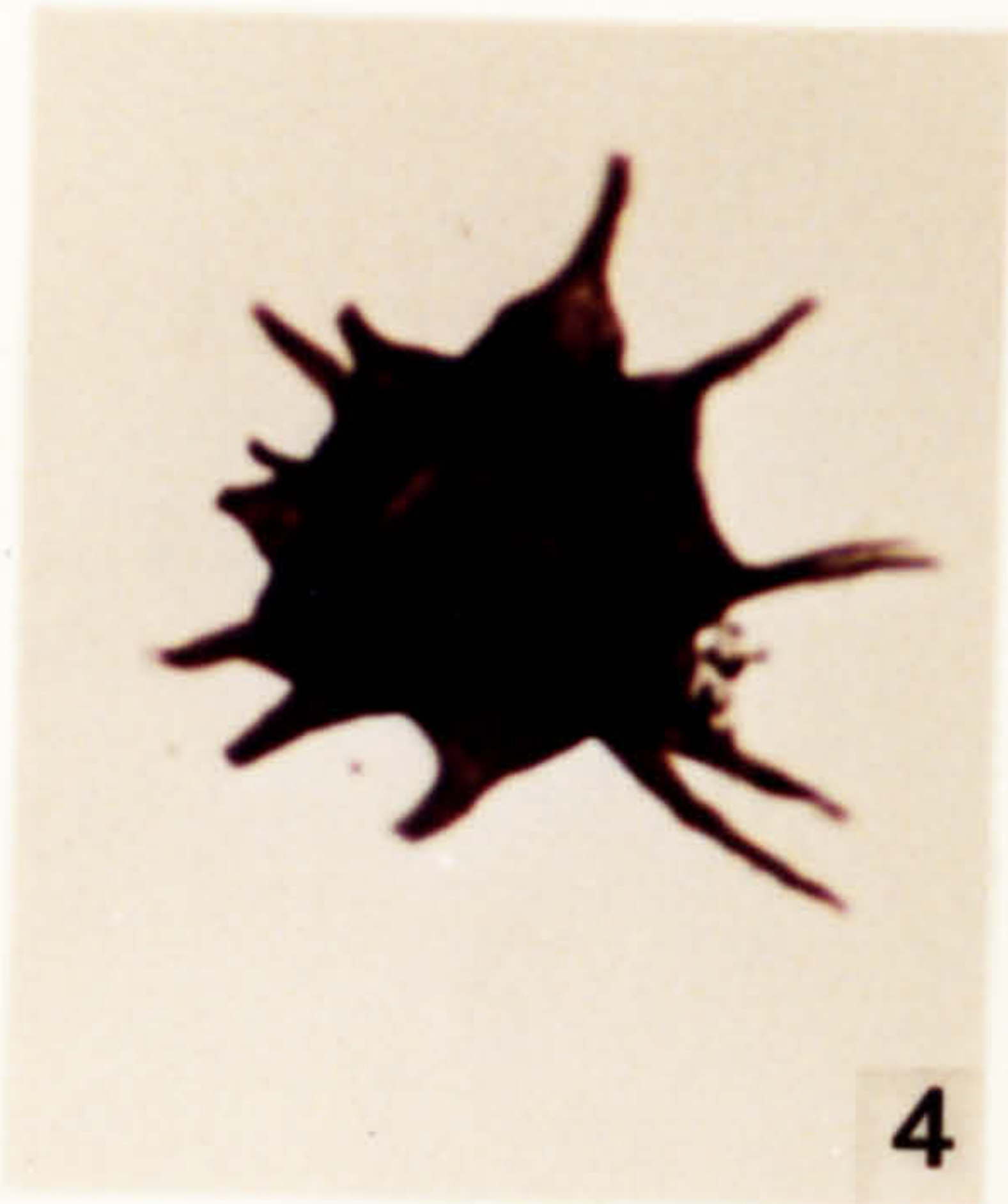
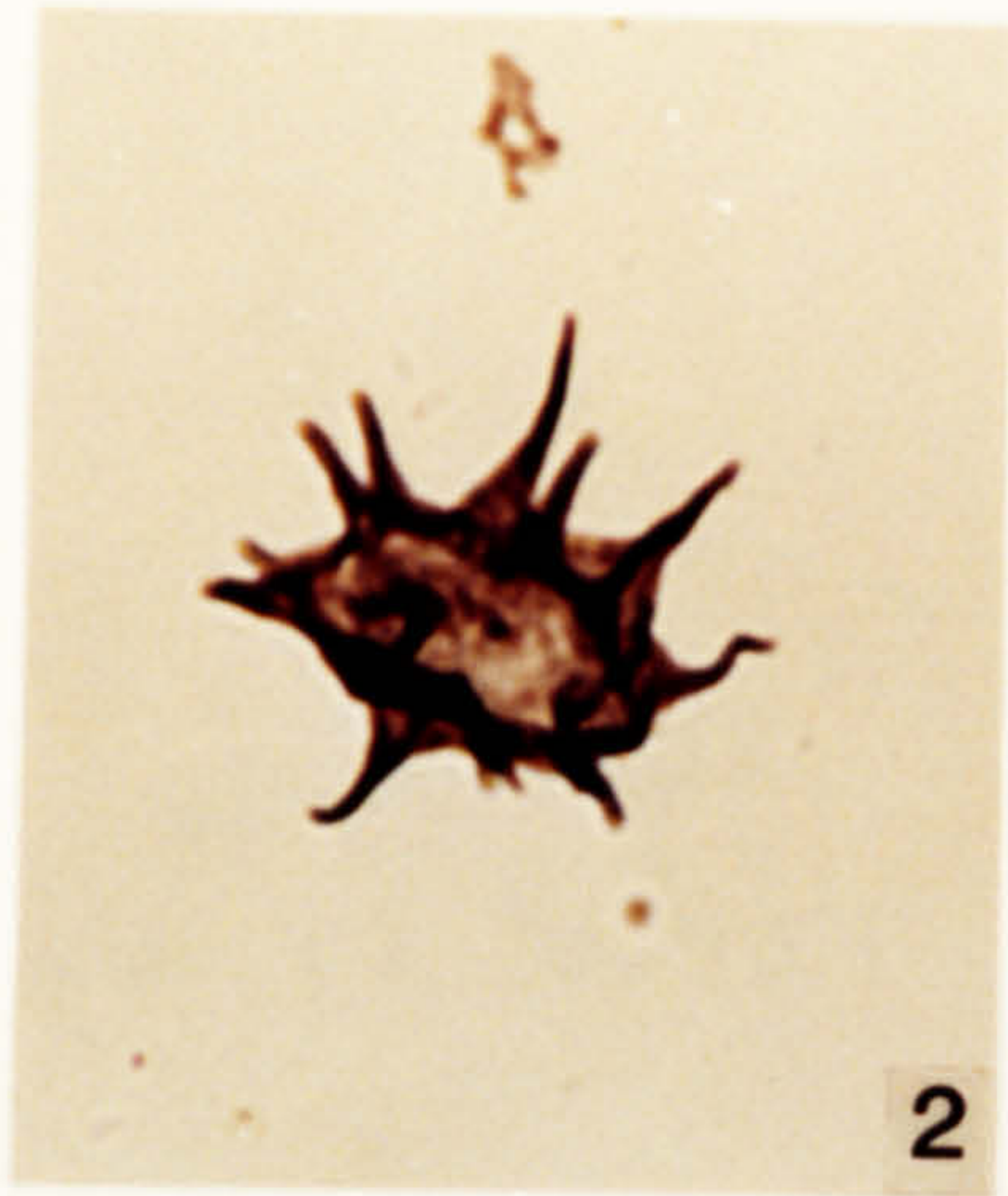
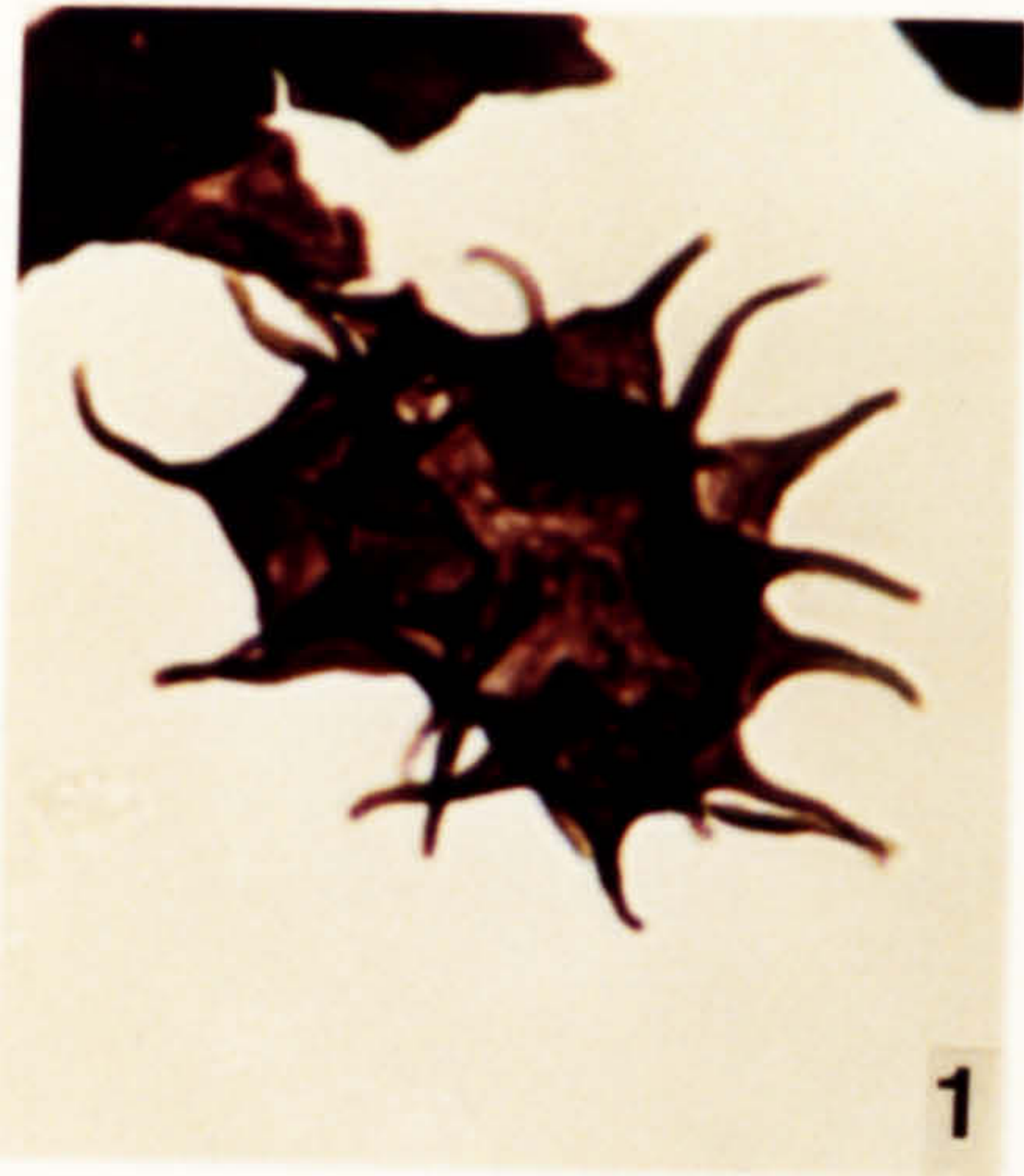
PLATE 4



**Plate 5.**

Acritarchs from the Fezouata Formation, Tremadoc-earliest Arenig in age.

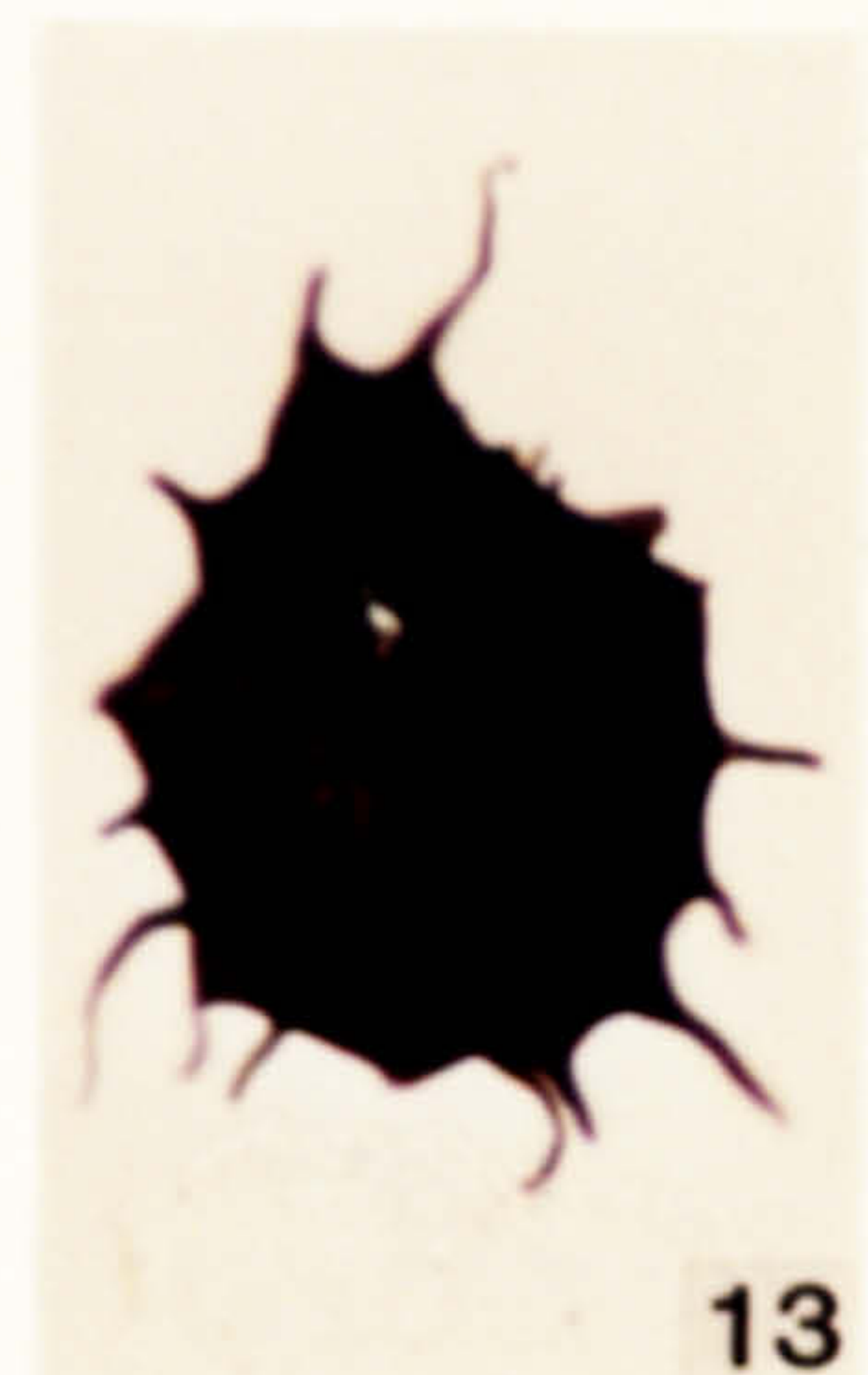
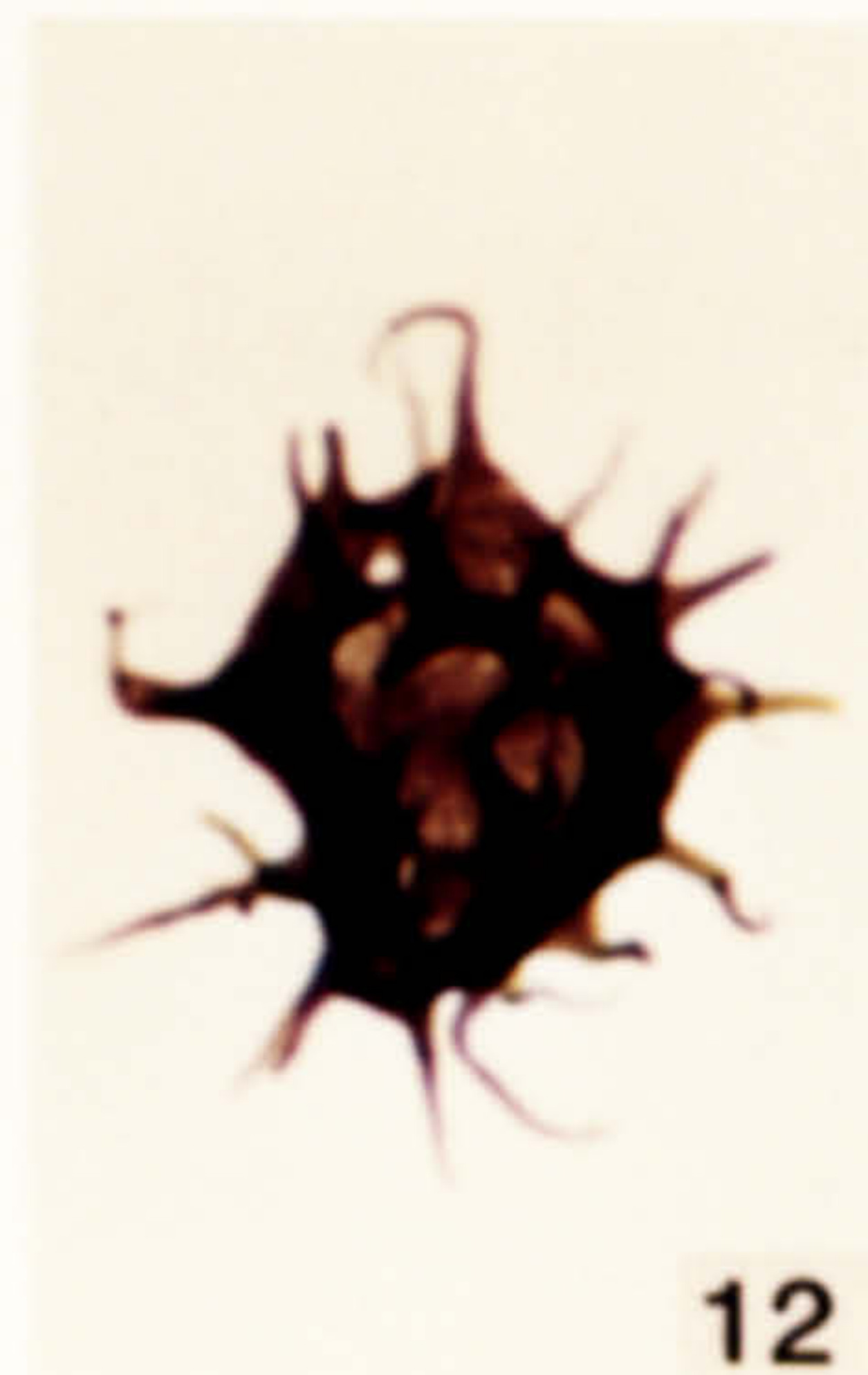
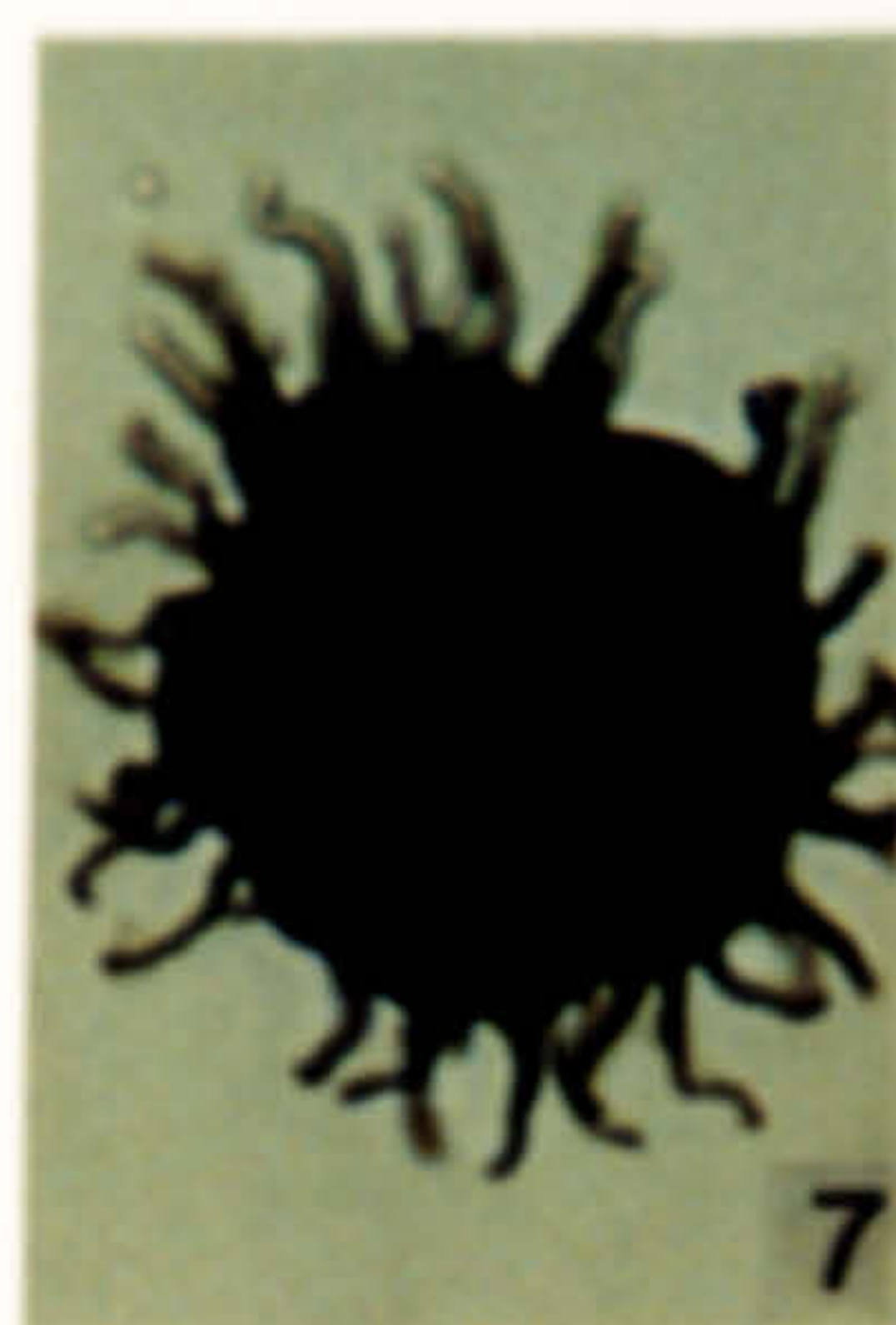
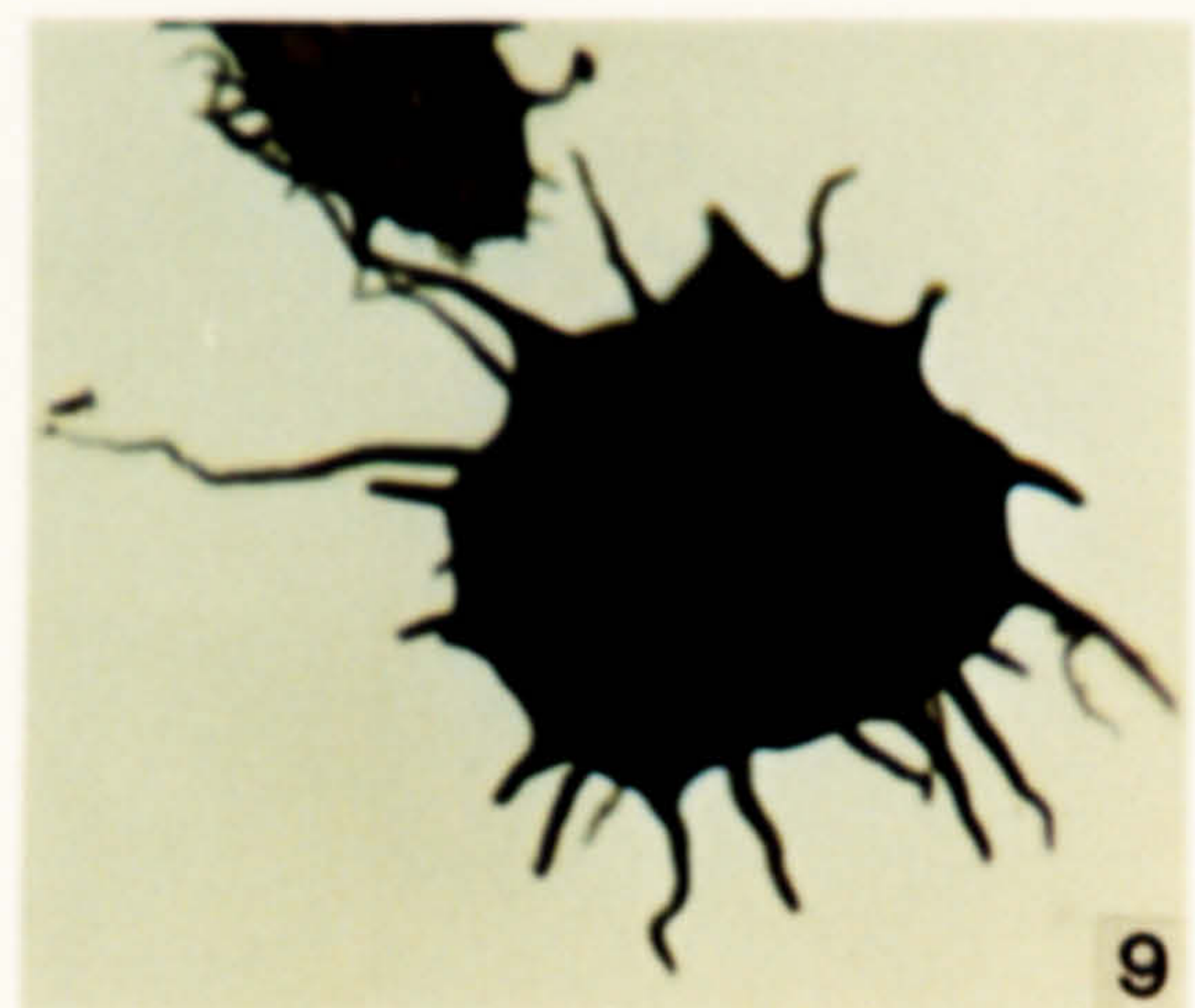
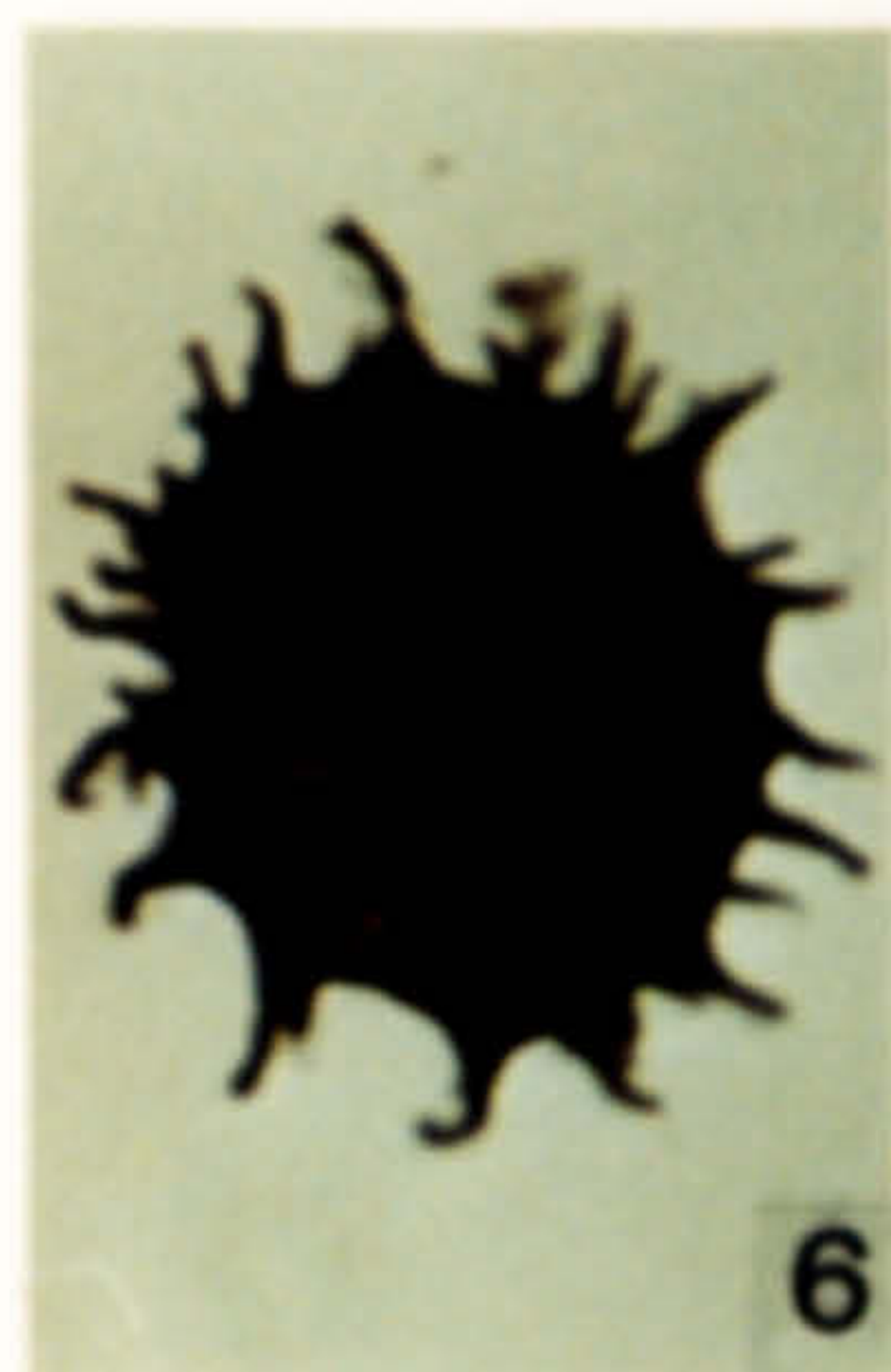
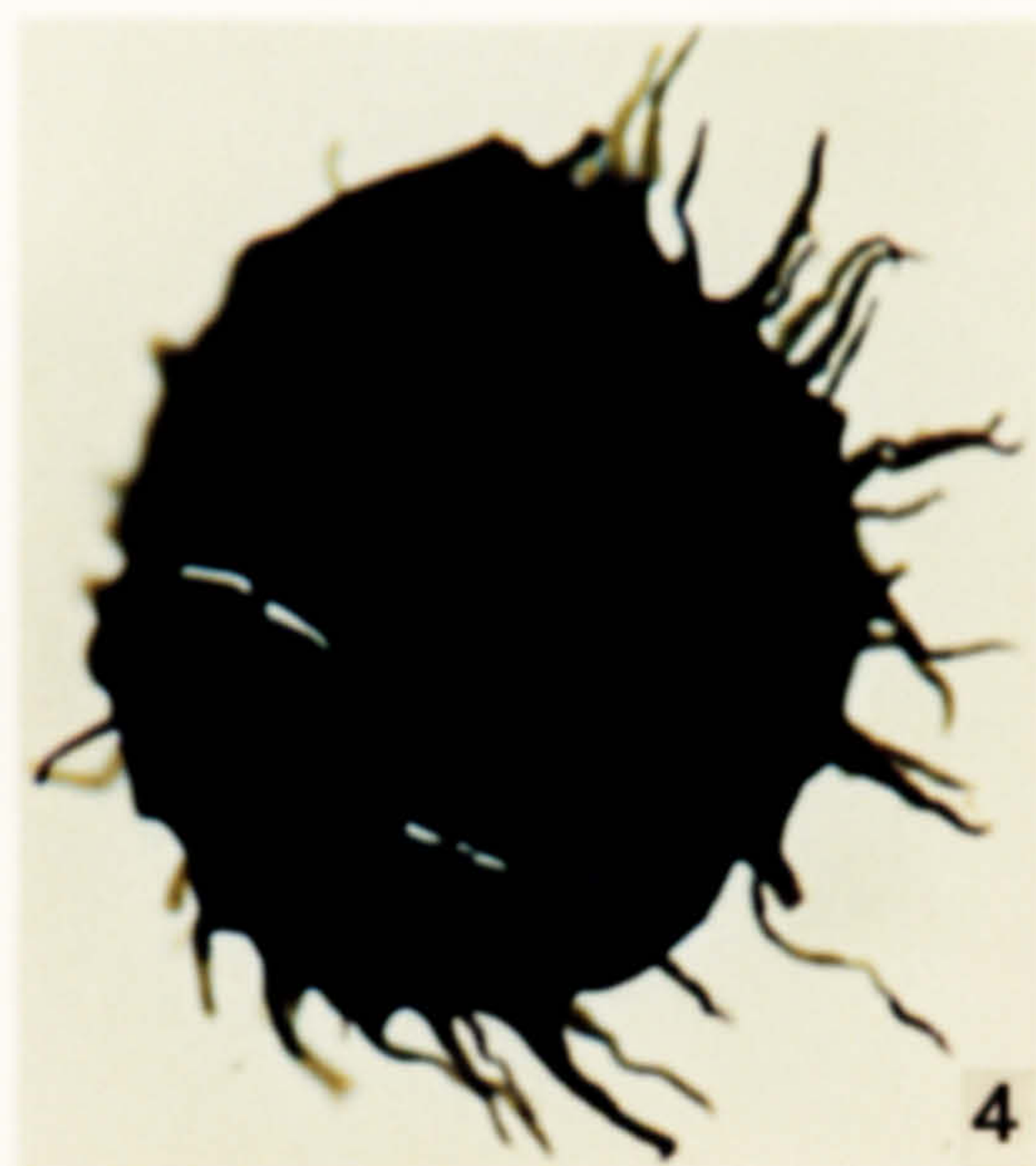
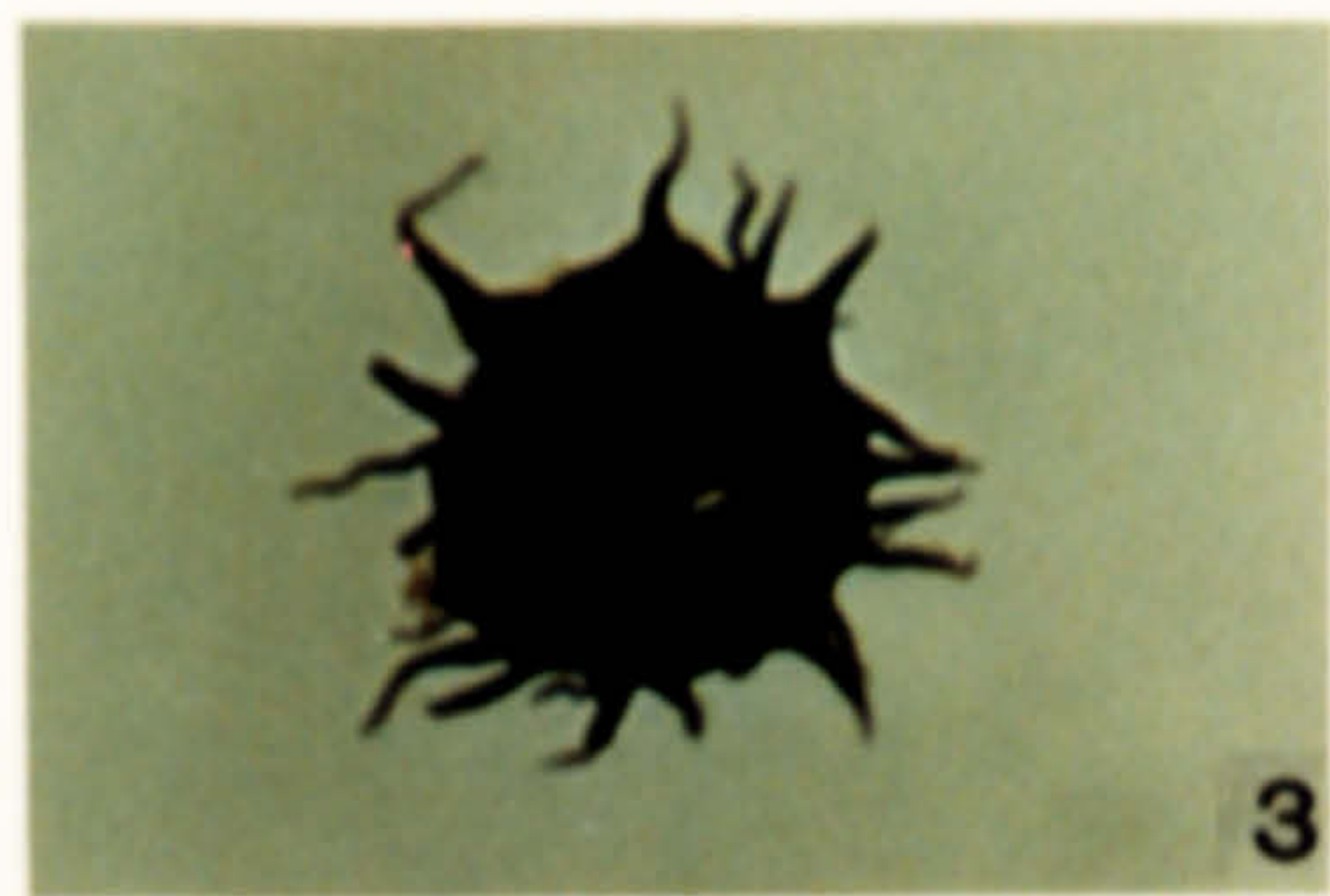
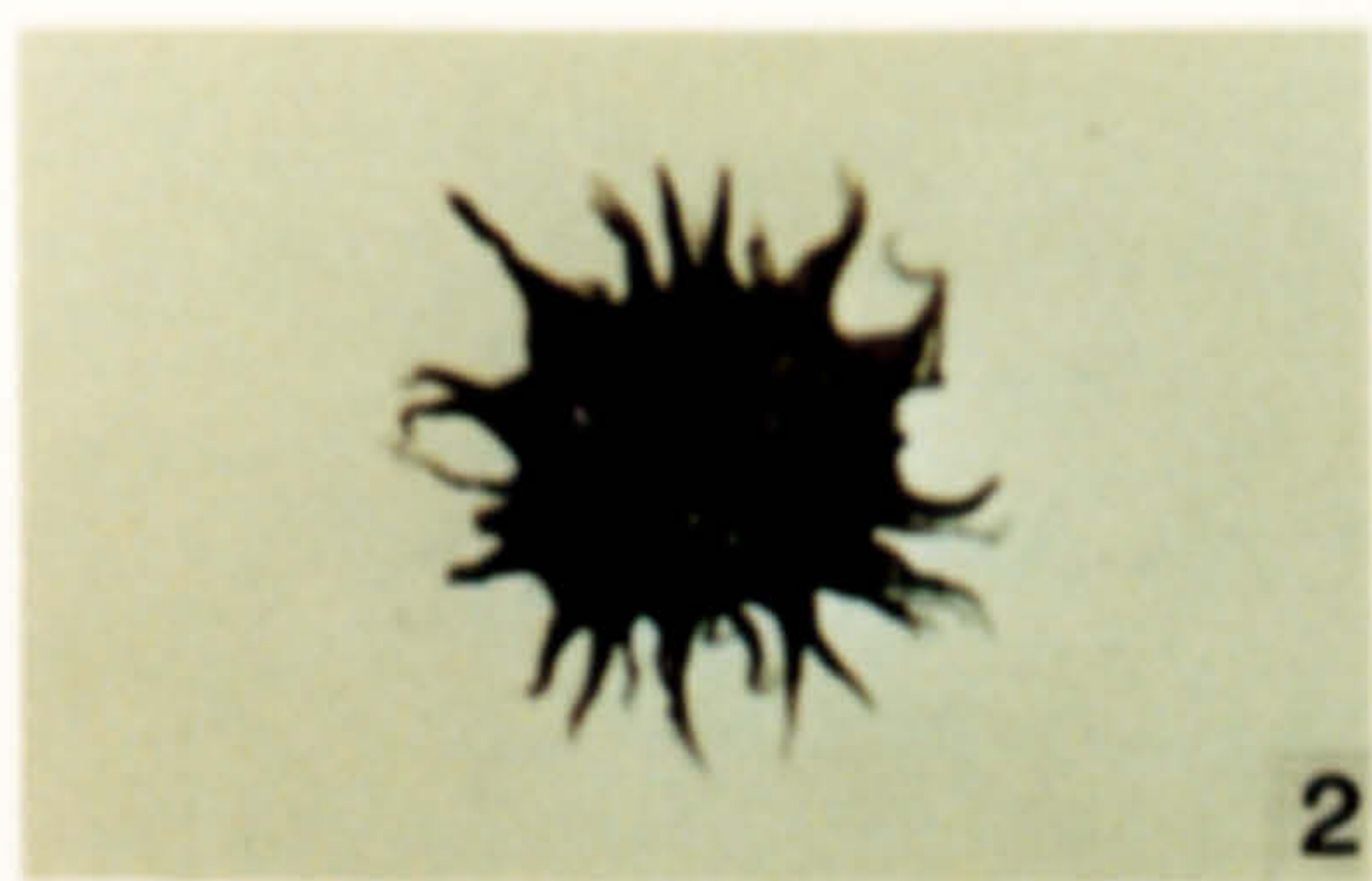
1. *Goniosphaeridium* cf. *connectum* Kjellstrom 1971. GAO 65, 2-1, O12\2.
2. *Goniosphaeridium* cf. *connectum* Kjellstrom 1971. GAO 65, 2-1, M29\2.
3. *Goniosphaeridium* cf. *connectum* Kjellstrom 1971. GAO 65, 2-1, M29\2.
4. *Goniosphaeridium* sp. 1. DW 105, 2-1, D26\4.
5. *Goniosphaeridium* sp. 2. GAO 65, 2-1, D38\3.
6. *Goniosphaeridium* sp. 3. DW 115, 2-1, K39\1.
7. *Impluviculus?* sp. DW 105, 2-2, R43\4.
8. *Goniosphaeridium polygonale* subsp. *pellucidum* (Timofeev ex Tynni) Fensome *et al.* 1990. DW 305, 2-1, D26\1.
9. *Goniosphaeridium polygonale* var. A. DW 305, 2-1, P35\2.
10. *Leiosphaeridia* sp. DW 105, 2-1, O36\-..
11. *Leiosphaeridia* sp. DW 105, 2-1, O33\2.
12. *Leiosphaeridia* sp. DW 115, 2-1, M12\3.



**Plate 6.**

Acritarchs from the Fezouata Formation, Tremadoc-earliest Arenig in age.

1. *Leiofusa* cf. *pittauae* ex Pittau 1985, Fensome *et al.* 1990.
2. *Micrhystridium aremorecanium* (Paris & Deunff) Fensome *et al.* 1990.
3. *Micrhystridium aremorecanium* (Paris & Deunff) Fensome *et al.* 1990.
4. *Polygonium* sp. 1. DW 305, 2-1, F18\3.
5. *Polygonium* sp. 1. DW 305, 2-1, N23\-.
6. *Polygonium?* sp. 2. DW 305, 2-1, J16\4.
7. *Polygonium?* sp. 2. DW 304, 2-1, P11\3.
8. *Polygonium gracile* Vavrdova 1966. DW 105, 2-1, H41\2.
9. *Polygonium gracile* Vavrdova 1966. DW 105, 2-1, D32\1.
10. *Polygonium gracile* Vavrdova 1966. DW 105, 2-1, C34\4.
11. *Polygonium gracile* Vavrdova 1966. DW 105, 2-1, H40\1.
12. *Polygonium gracile* Vavrdova 1966. GAO 65, 2-1, Q19\-.
13. *Polygonium gracile* Vavrdova 1966. GAO 65, 2-1, N36\3.

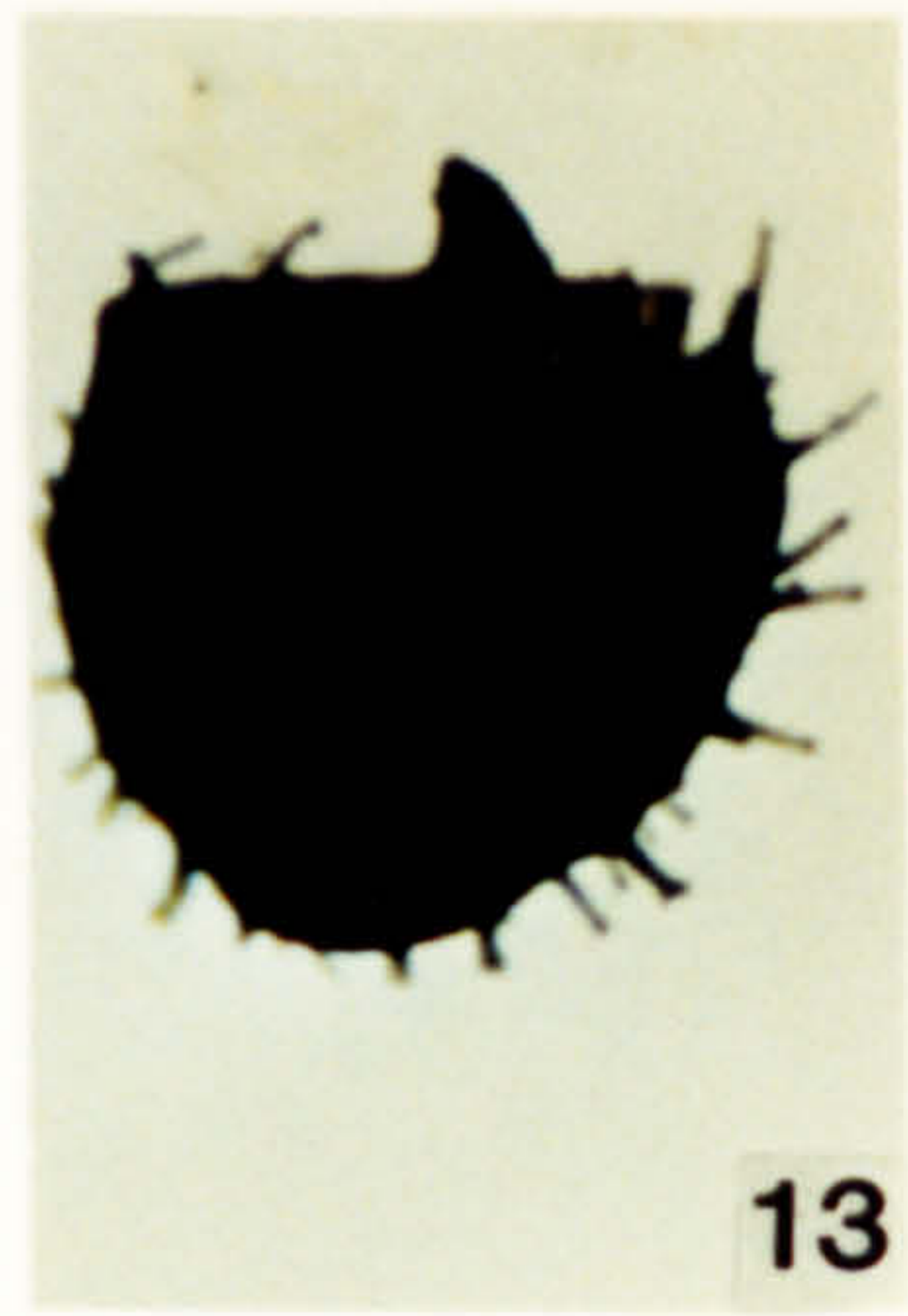
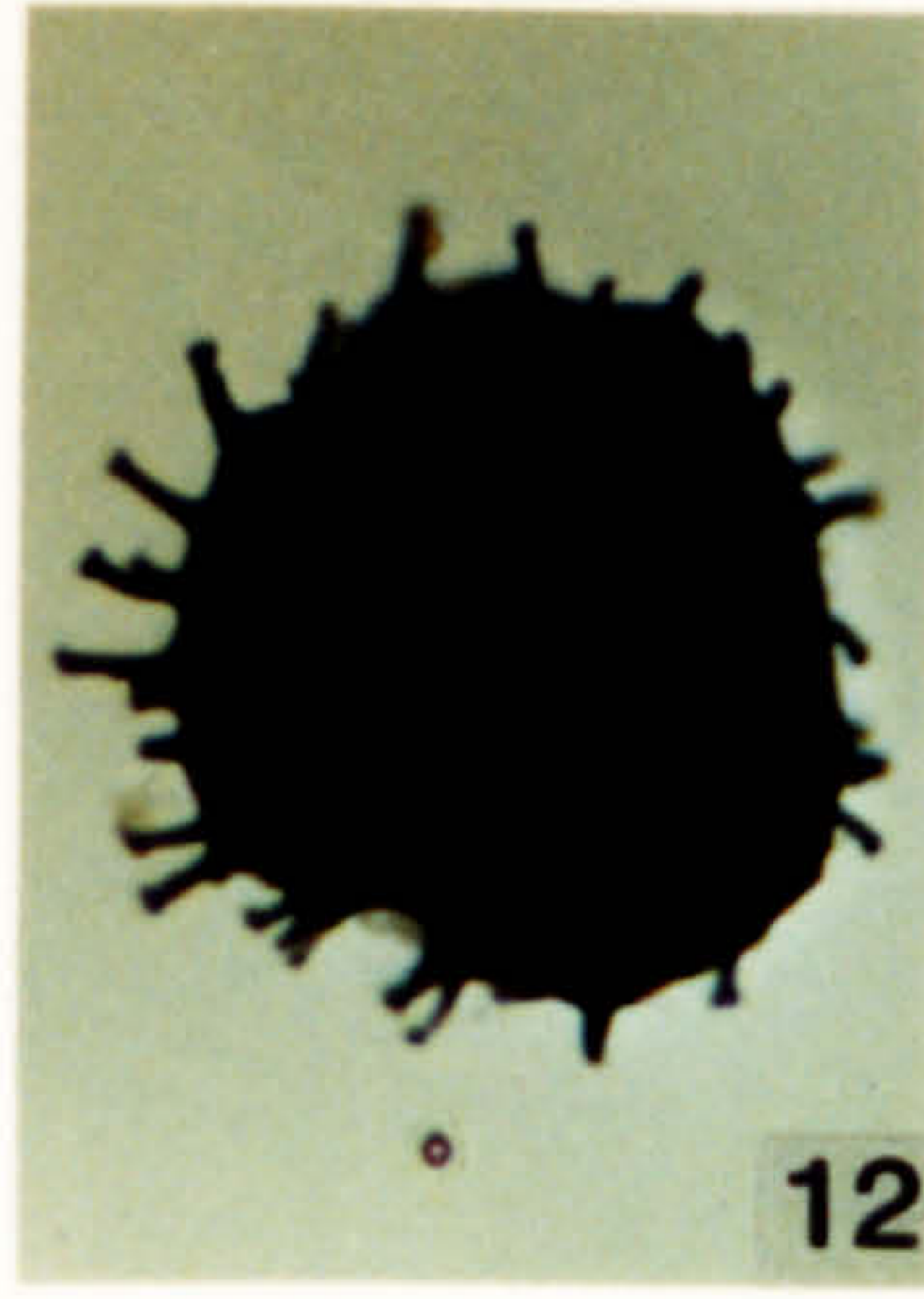
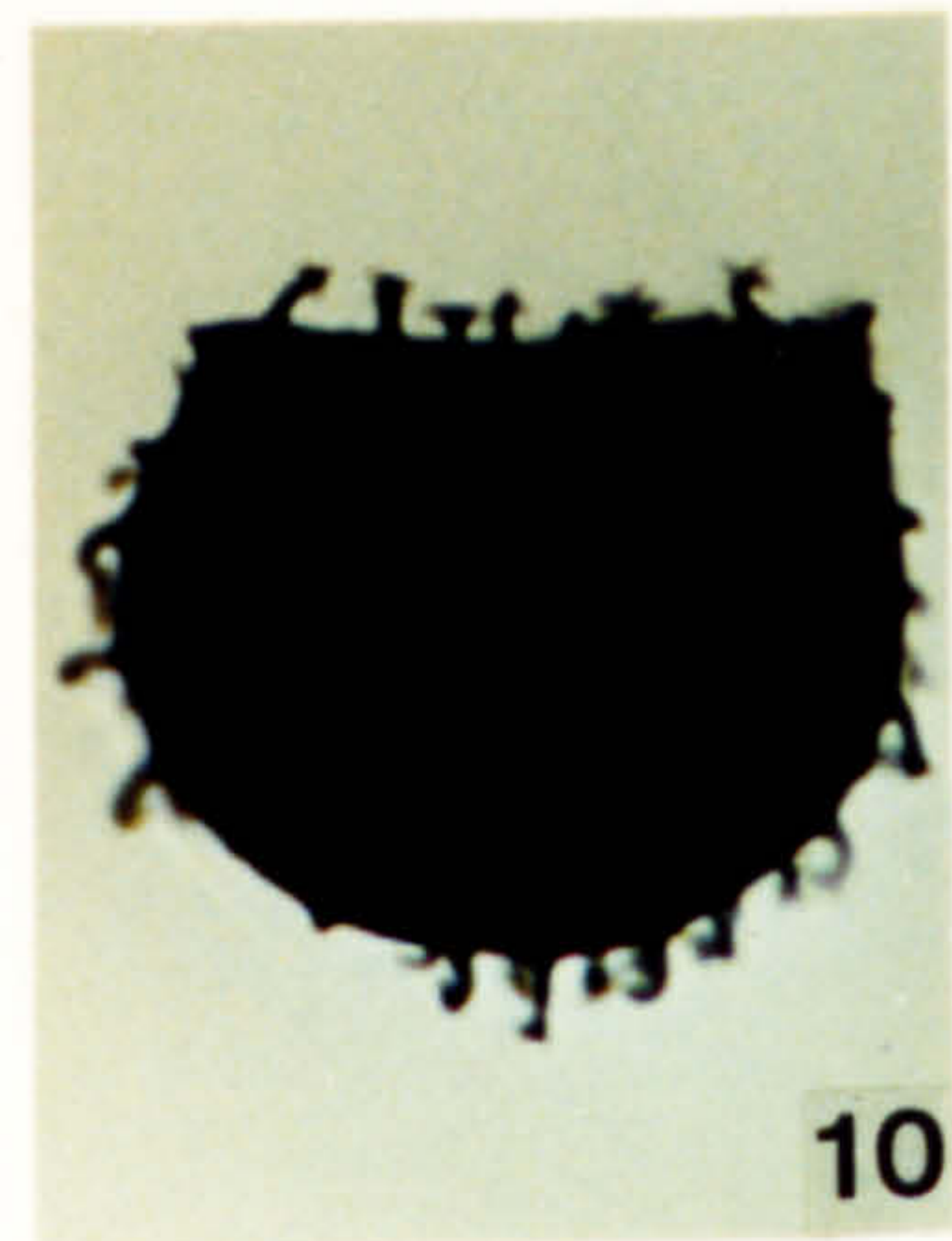
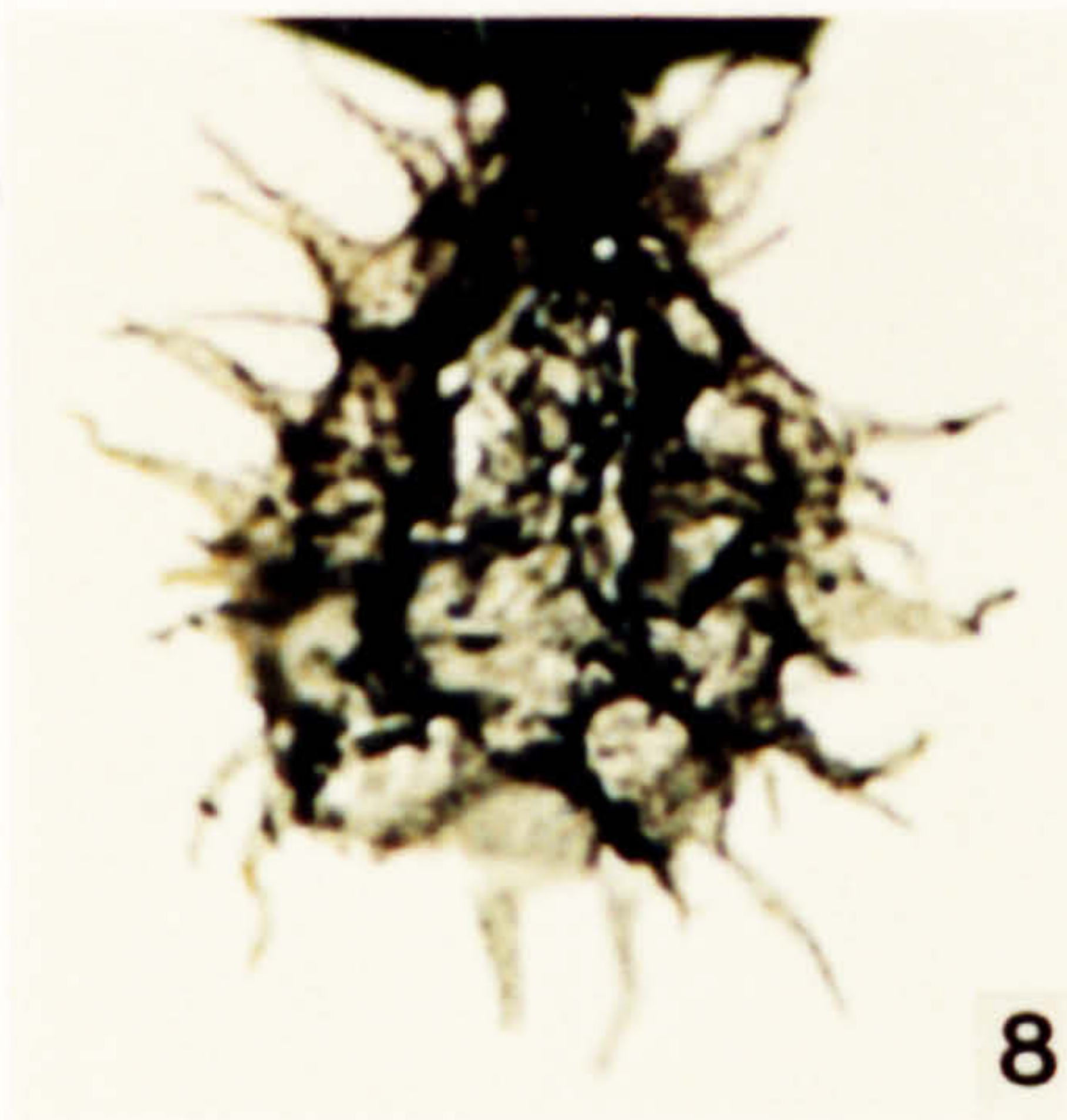
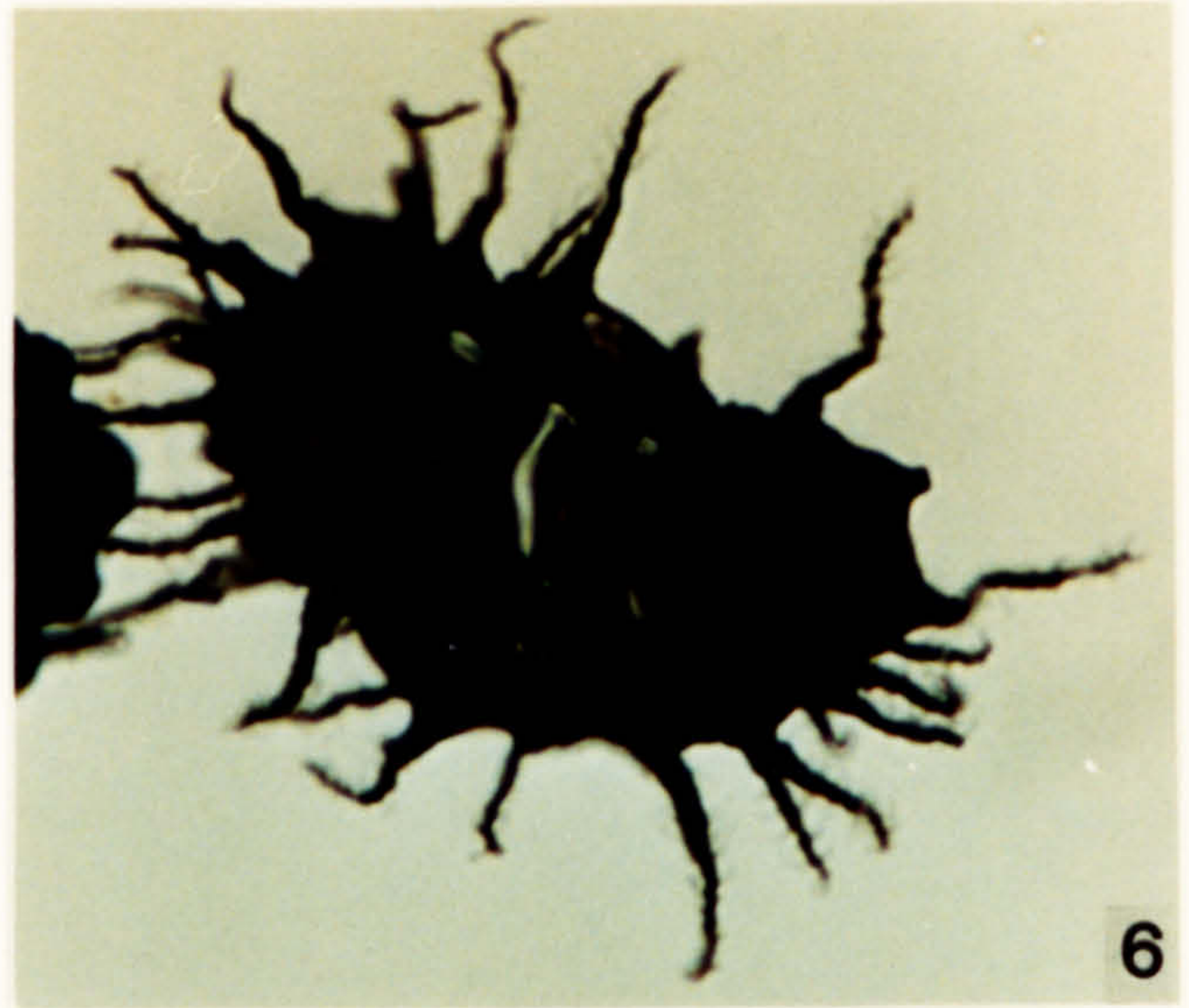
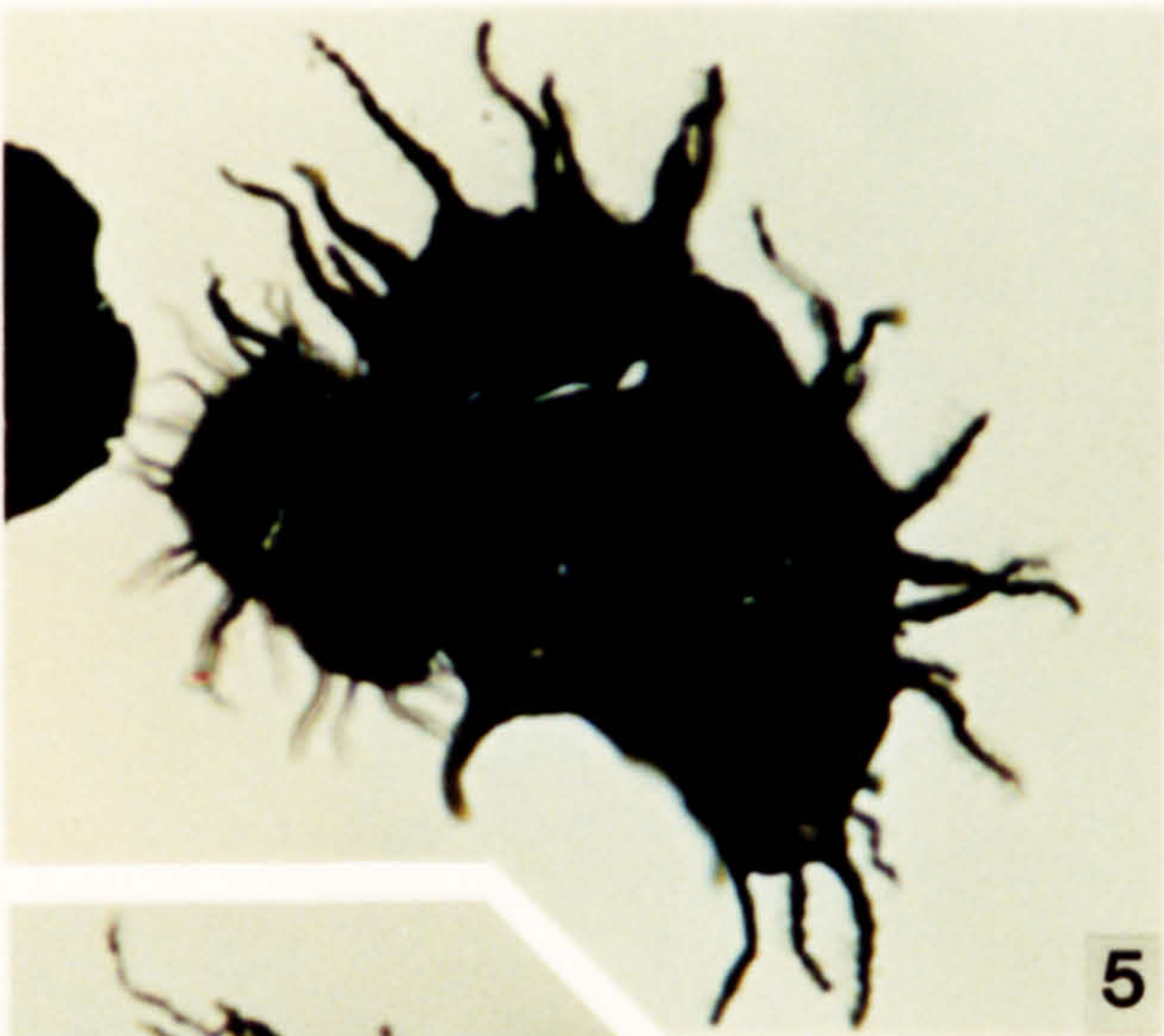
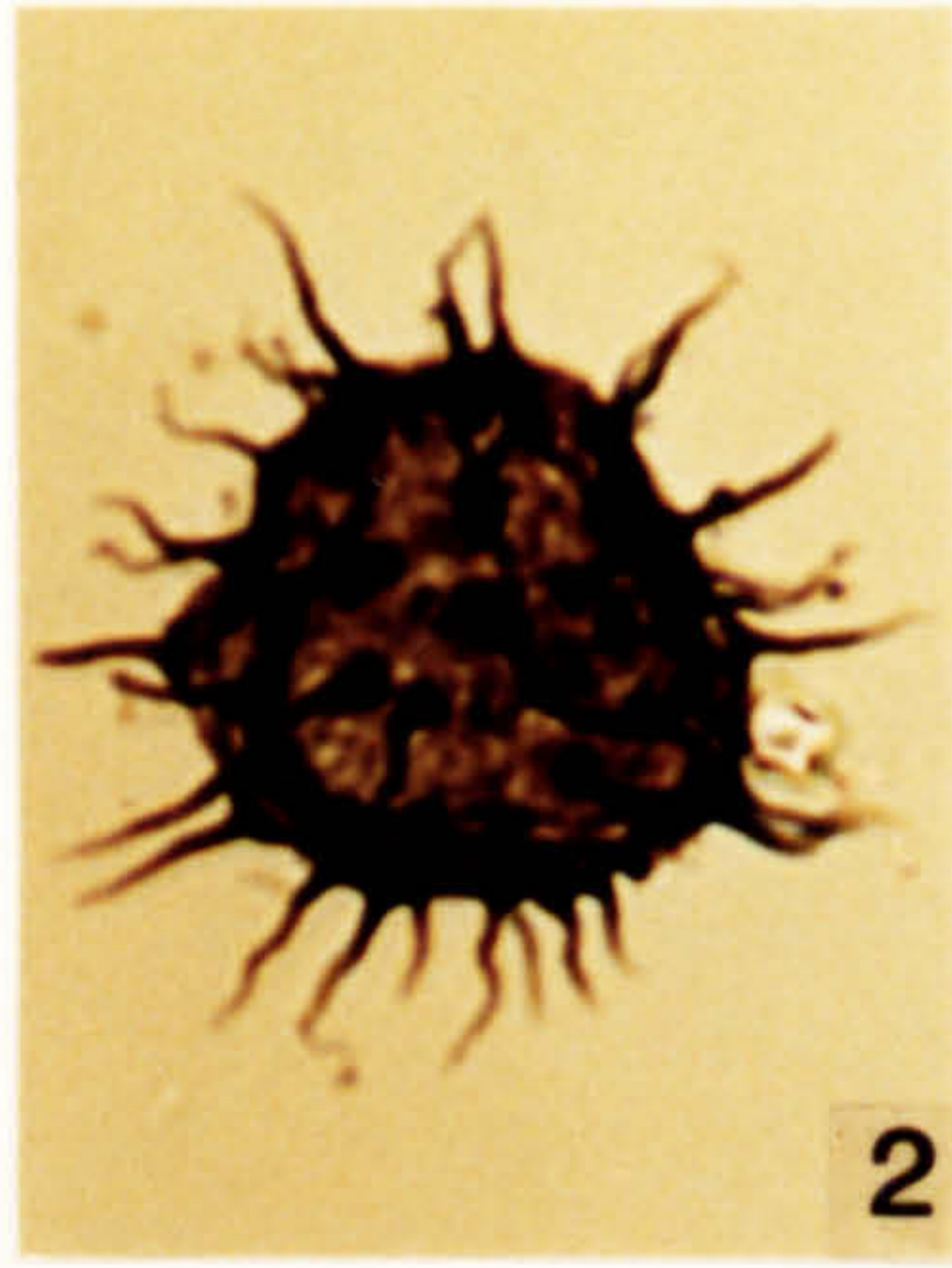


**Plate 7.**

Acritarchs from the Fezouata Formation, Tremadoc-earliest Arenig in age.

1. *Solisphaeridium* sp. 1. DW 304, 2-1, K19\3.
2. *Solisphaeridium* sp. 1. DW 304, 2-1, J17\1.
3. *Solisphaeridium* sp. 2. DW 305, 2-1, F11\4.
4. *Solisphaeridium* sp. 2. DW 305, 2-1, J28\2.
5. *Stellechinitum* sp. 1. DW 305, 2-1, W26\4.
6. *Stellechinitum* sp. 1. DW 305, 2-1, J12\1.
7. *Stellechinatum* sp. 2. DW 305, 2-1, E22\1.
8. *Stellechinatum* sp. 2. DW 305, 2-1, S13\-.
9. *Stellechinatum* sp. 3. DW 304, R-A, W50\4.
10. *Stelliferidium trifidum* (Rasul) Fensome *et al.* 1990. DW 304, 2-1, K26\1.
11. *Stelliferidium trifidum* (Rasul) Fensome *et al.* 1990. DW 304, 2-1, P23\3.
12. *Stelliferidium trifidum* (Rasul) Fensome *et al.* 1990. DW 105, 2-1, J19\2.
13. *Stelliferidium trifidum* (Rasul) Fensome *et al.* 1990. DW 105, 2-1, K29\2.

PLATE 7

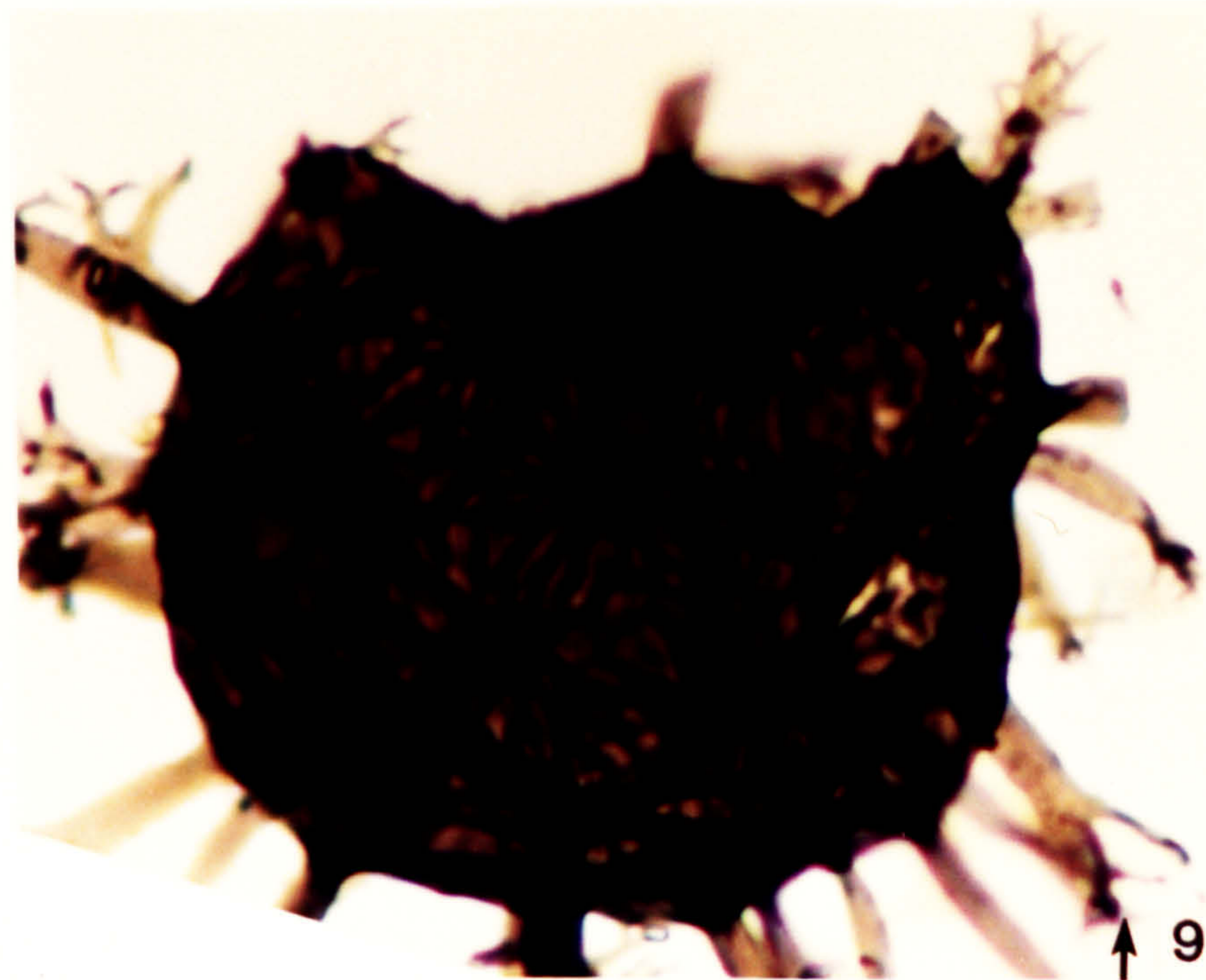
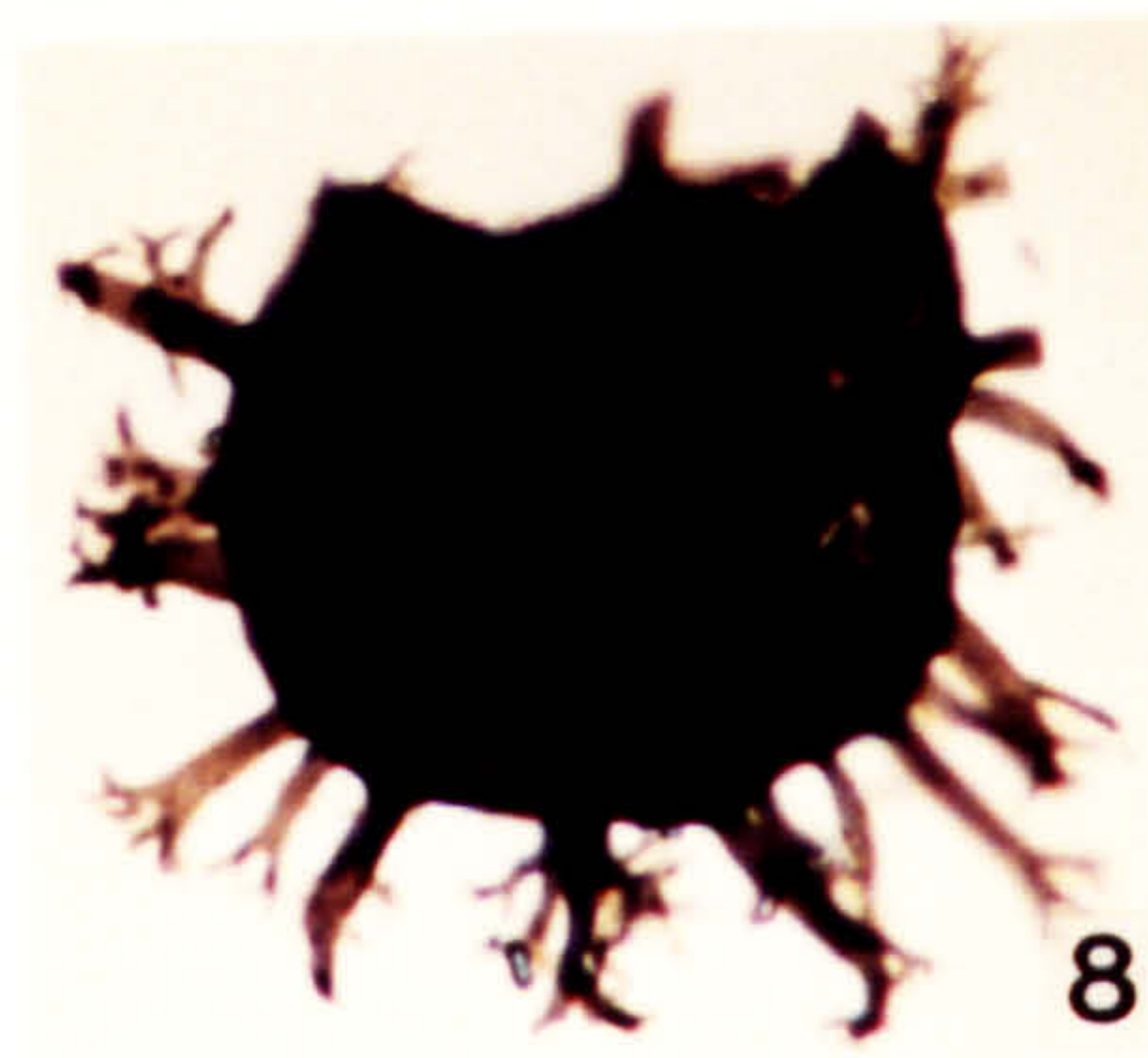
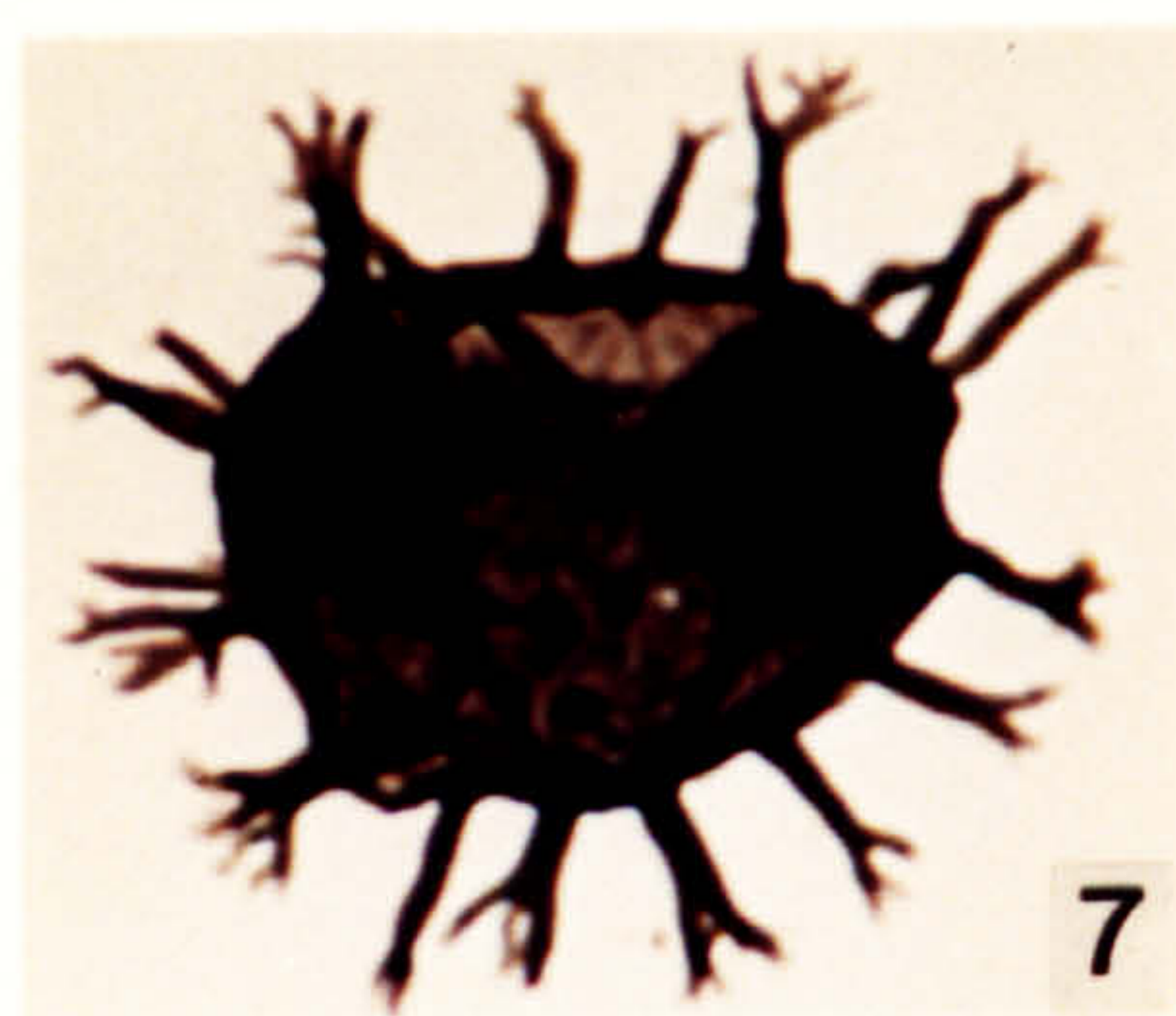
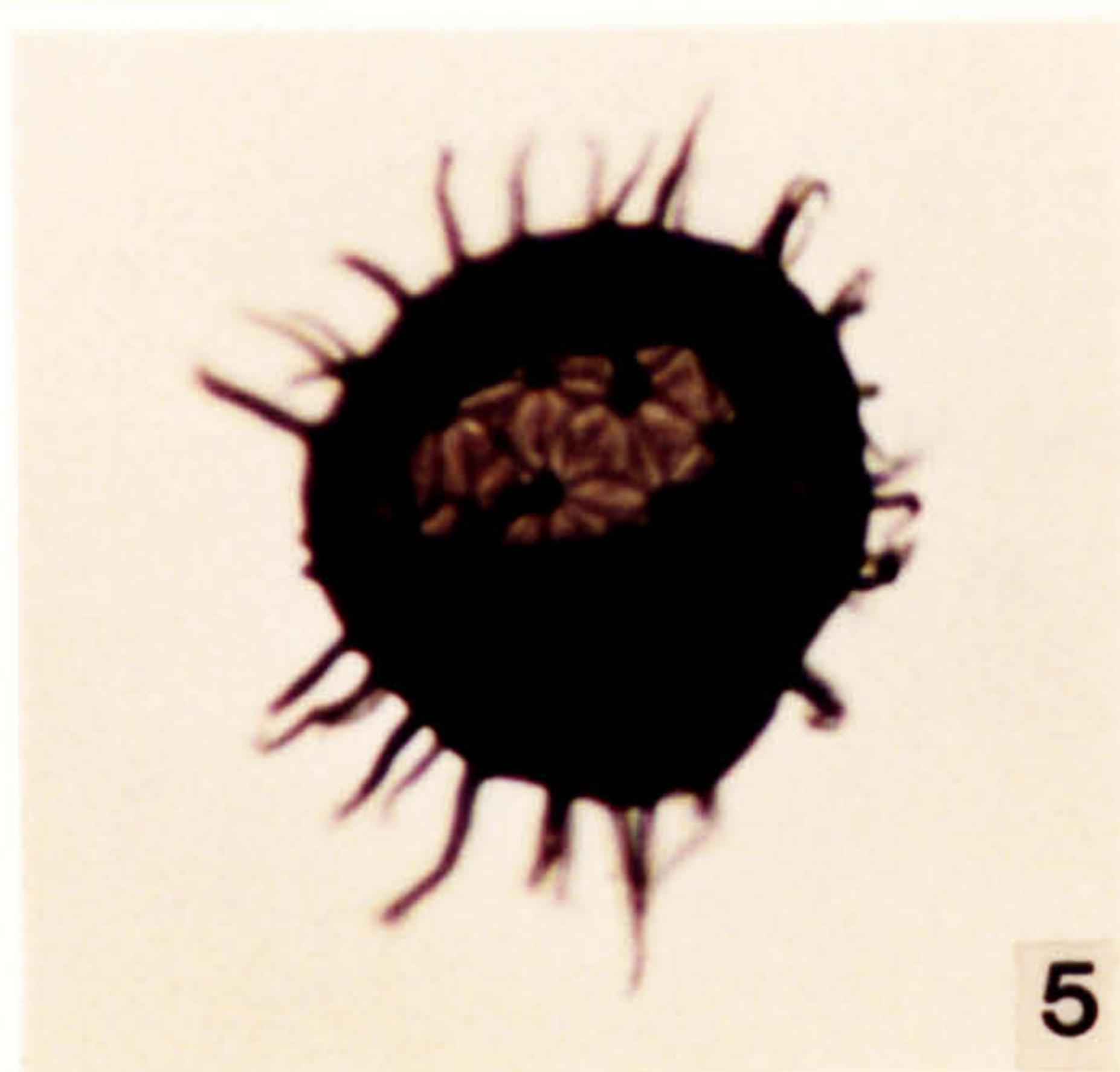
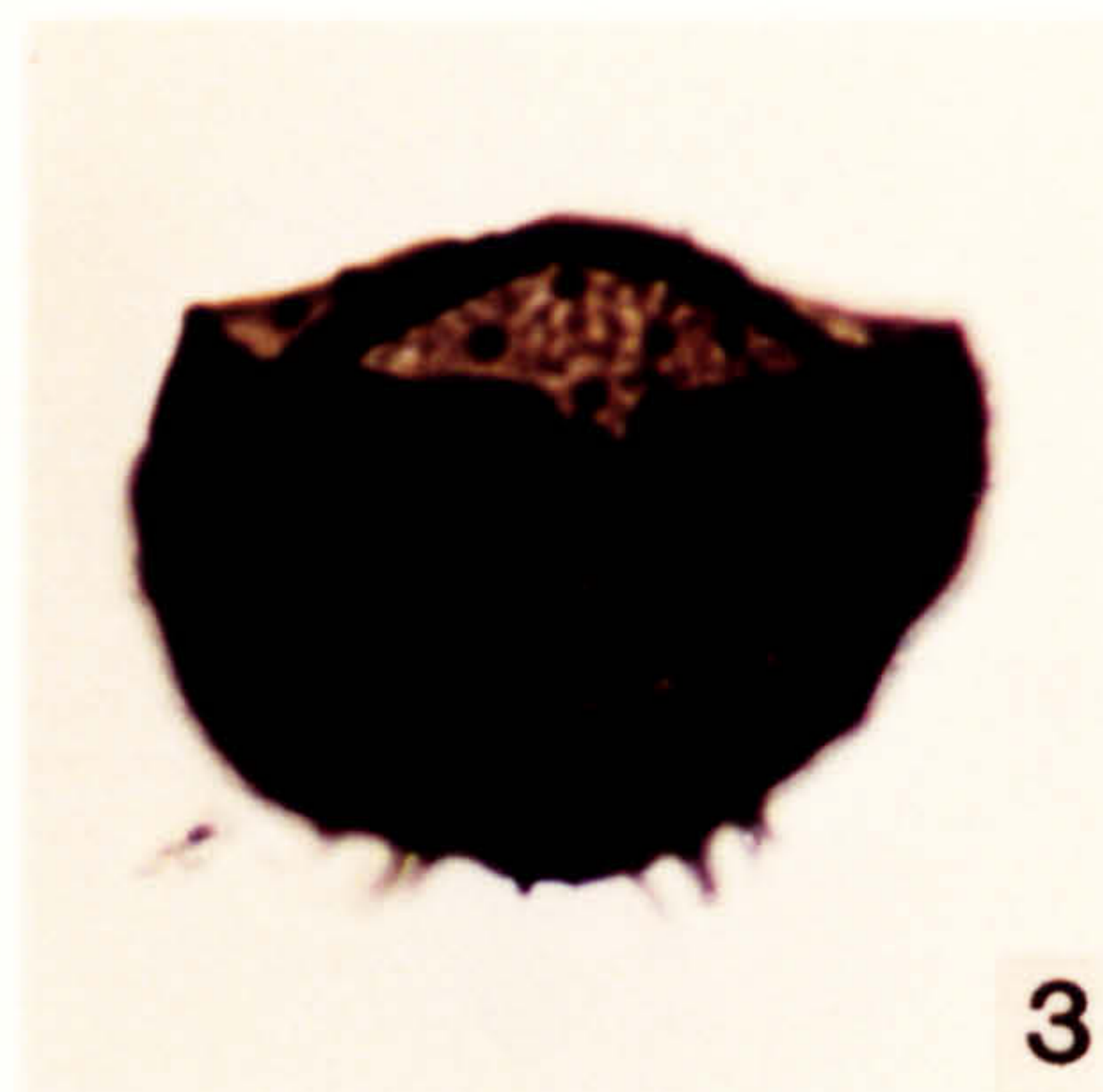
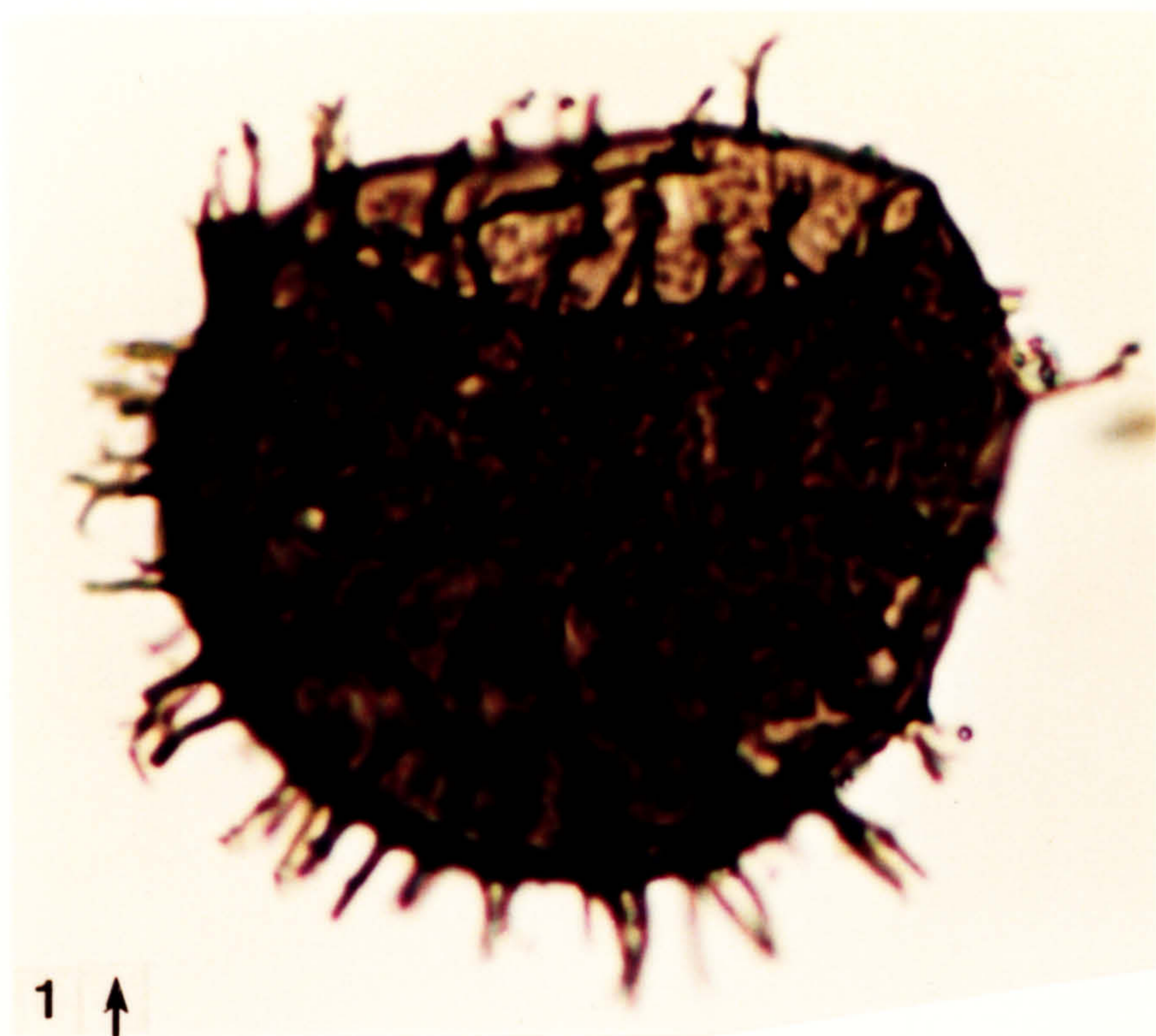




**Plate 8.**

**Acritarchs from the Fezouata Formation, Tremadoc-earliest Arenig in age.**

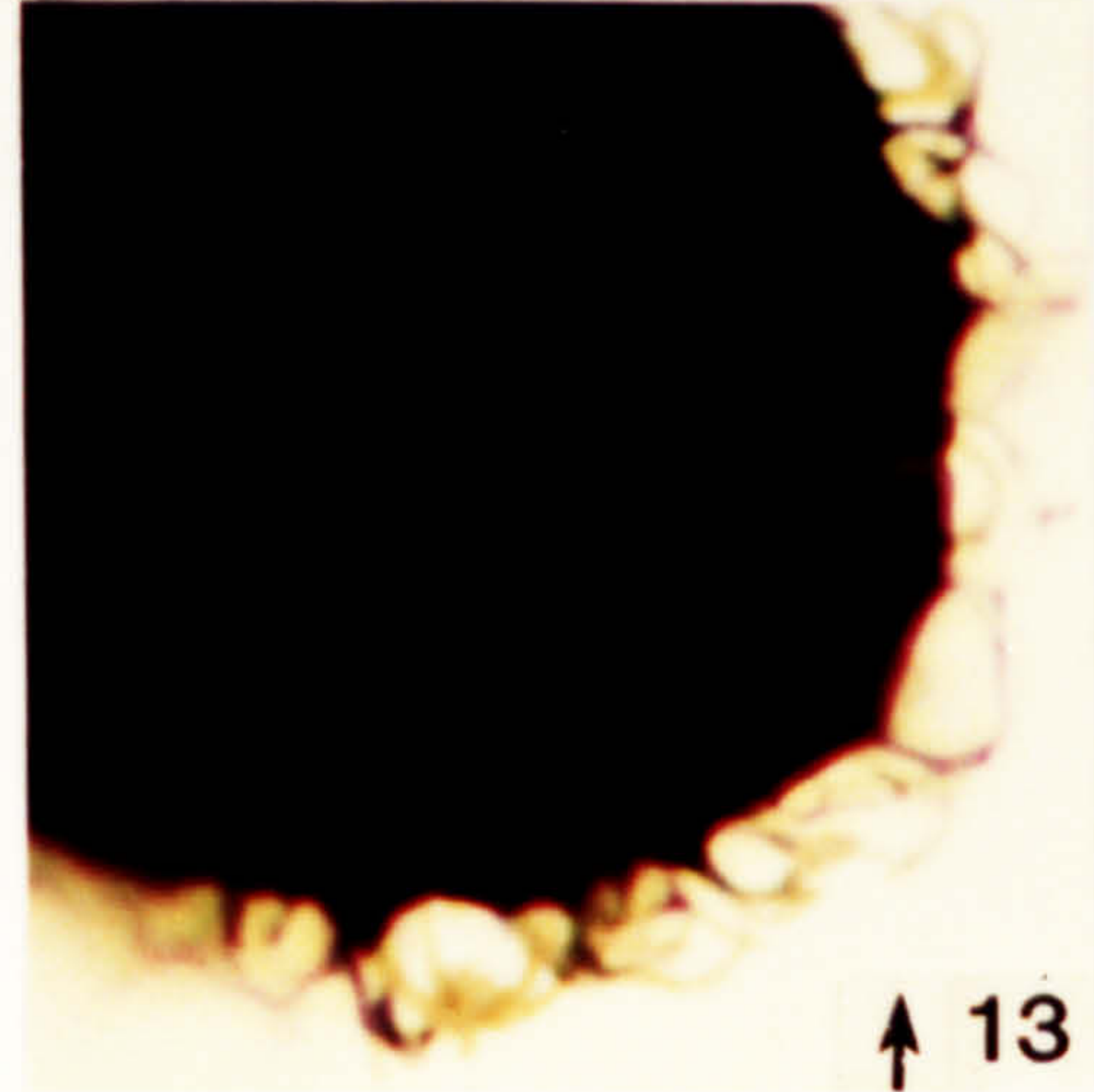
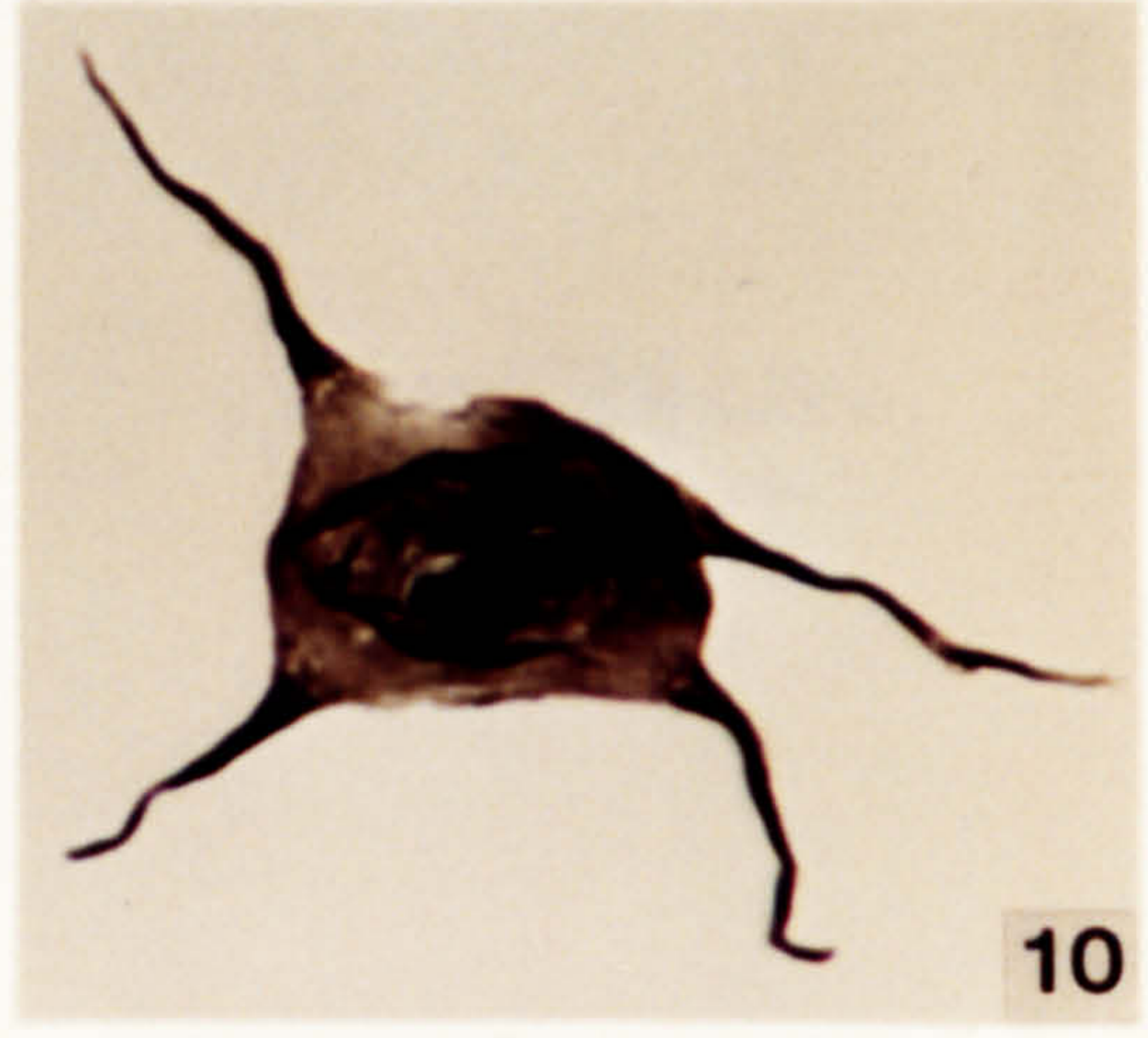
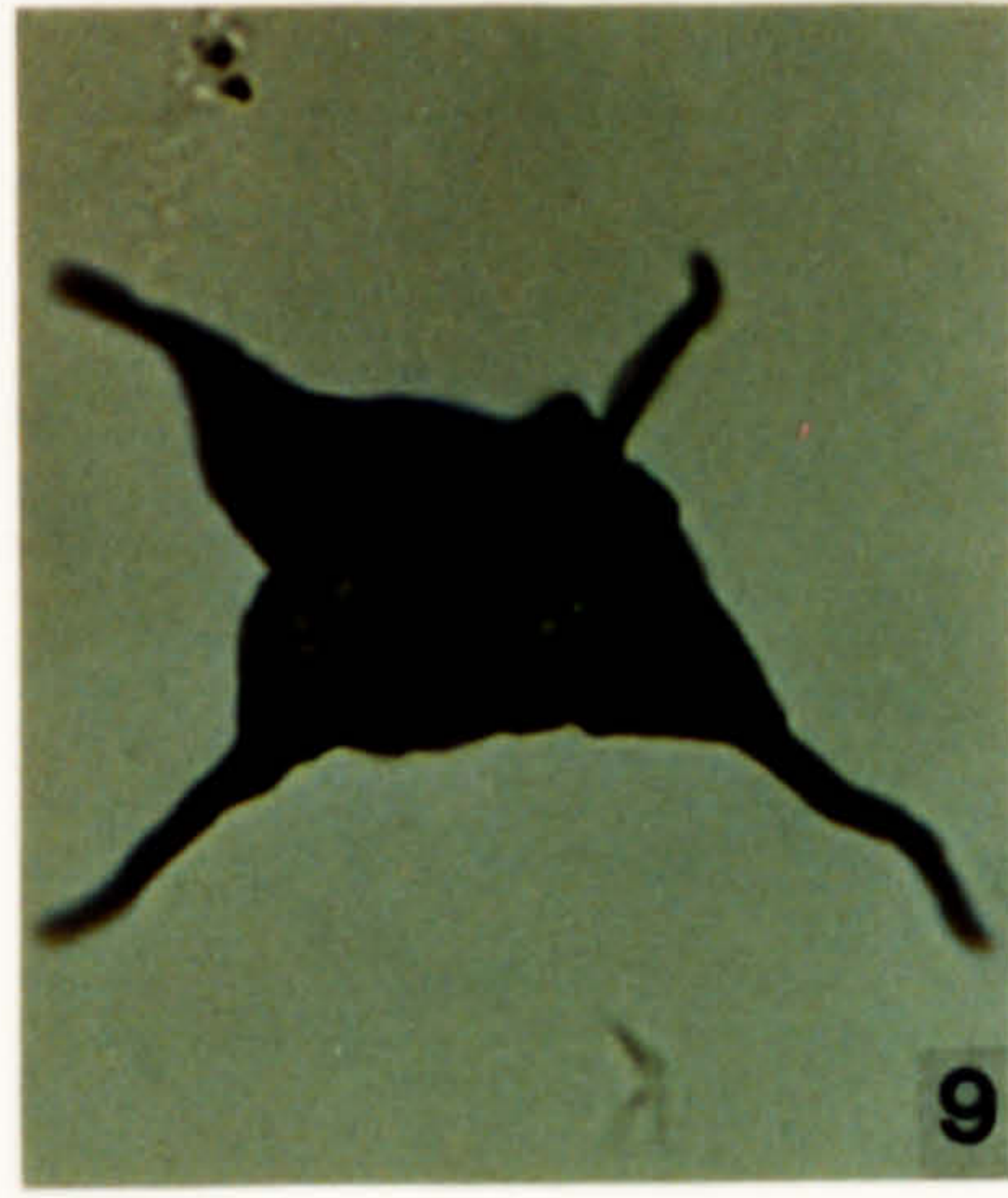
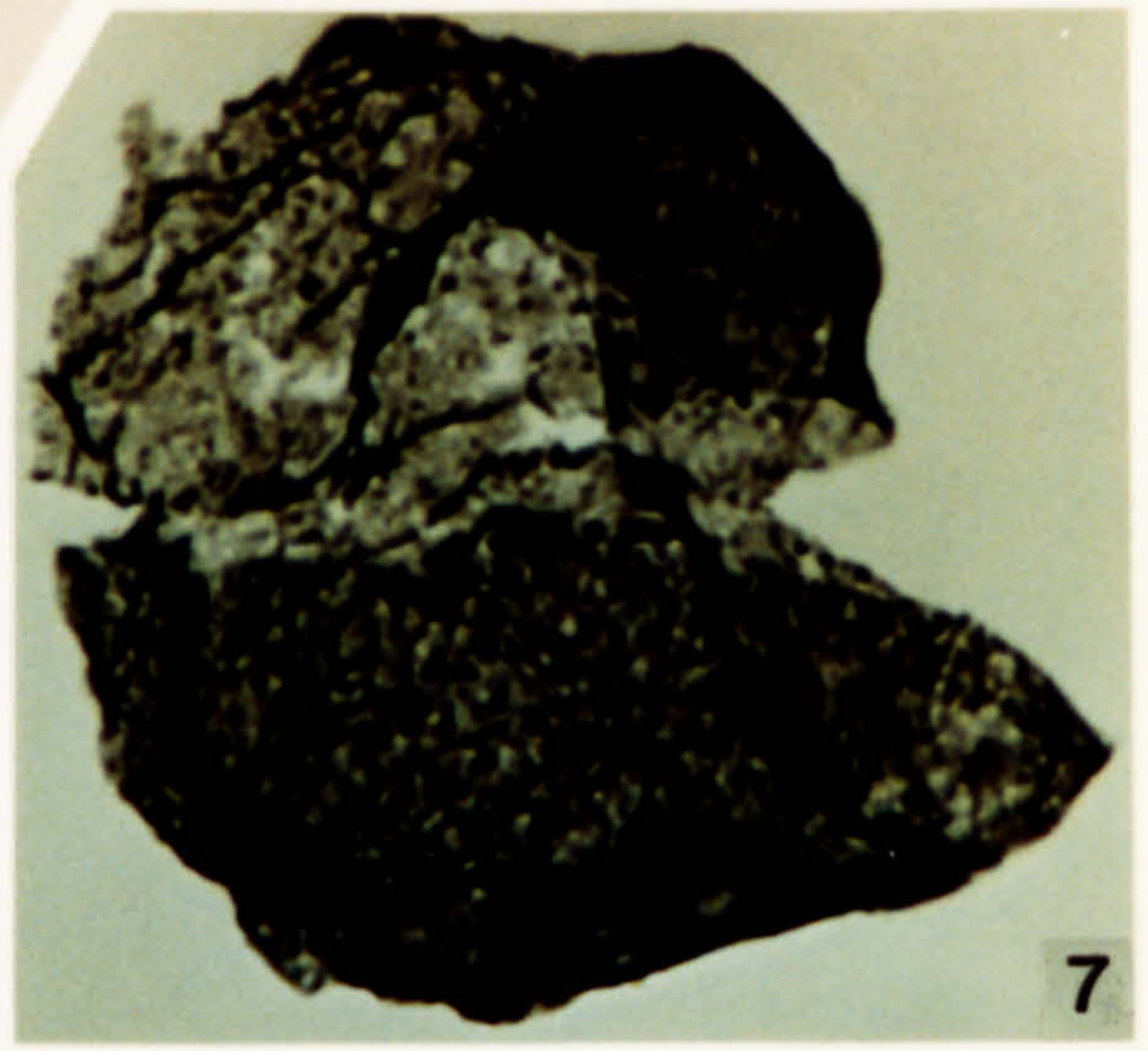
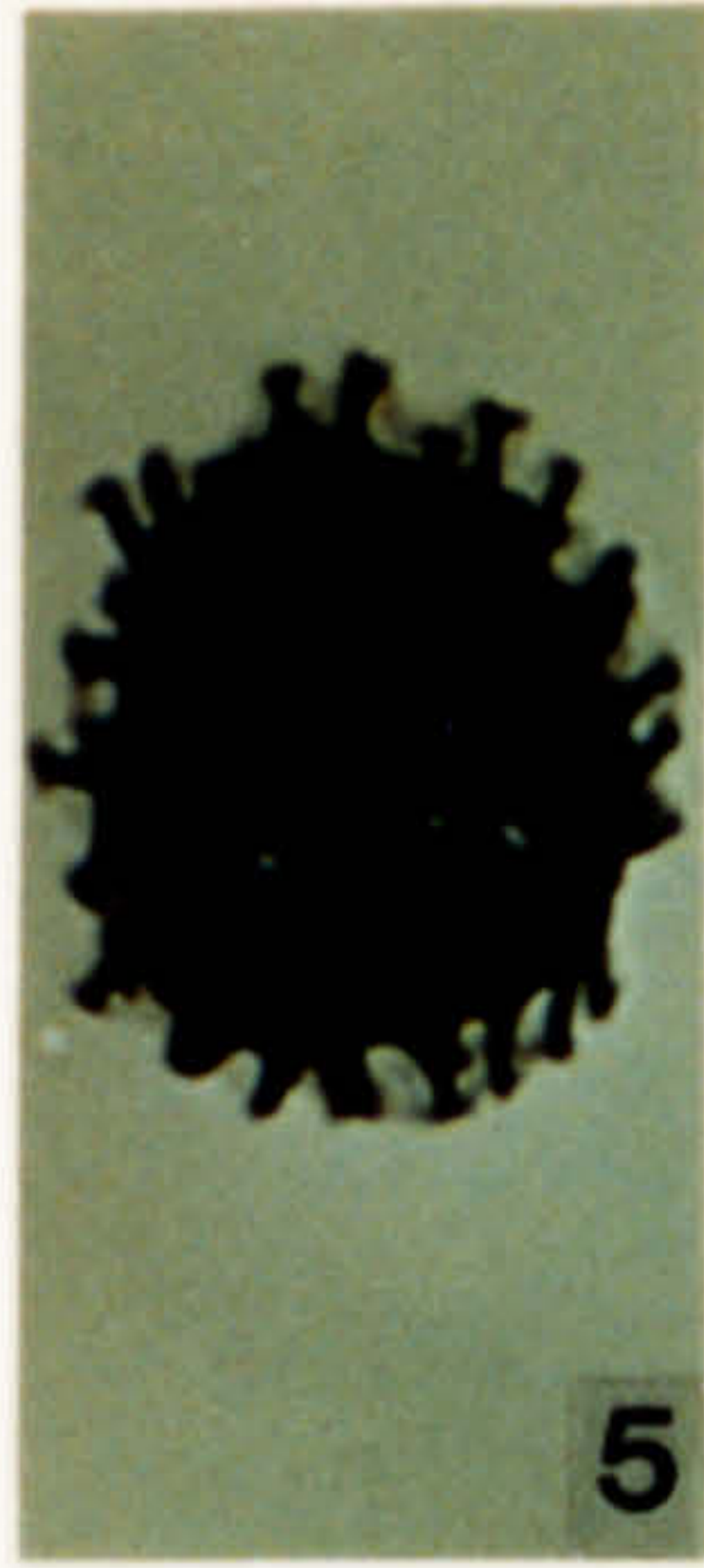
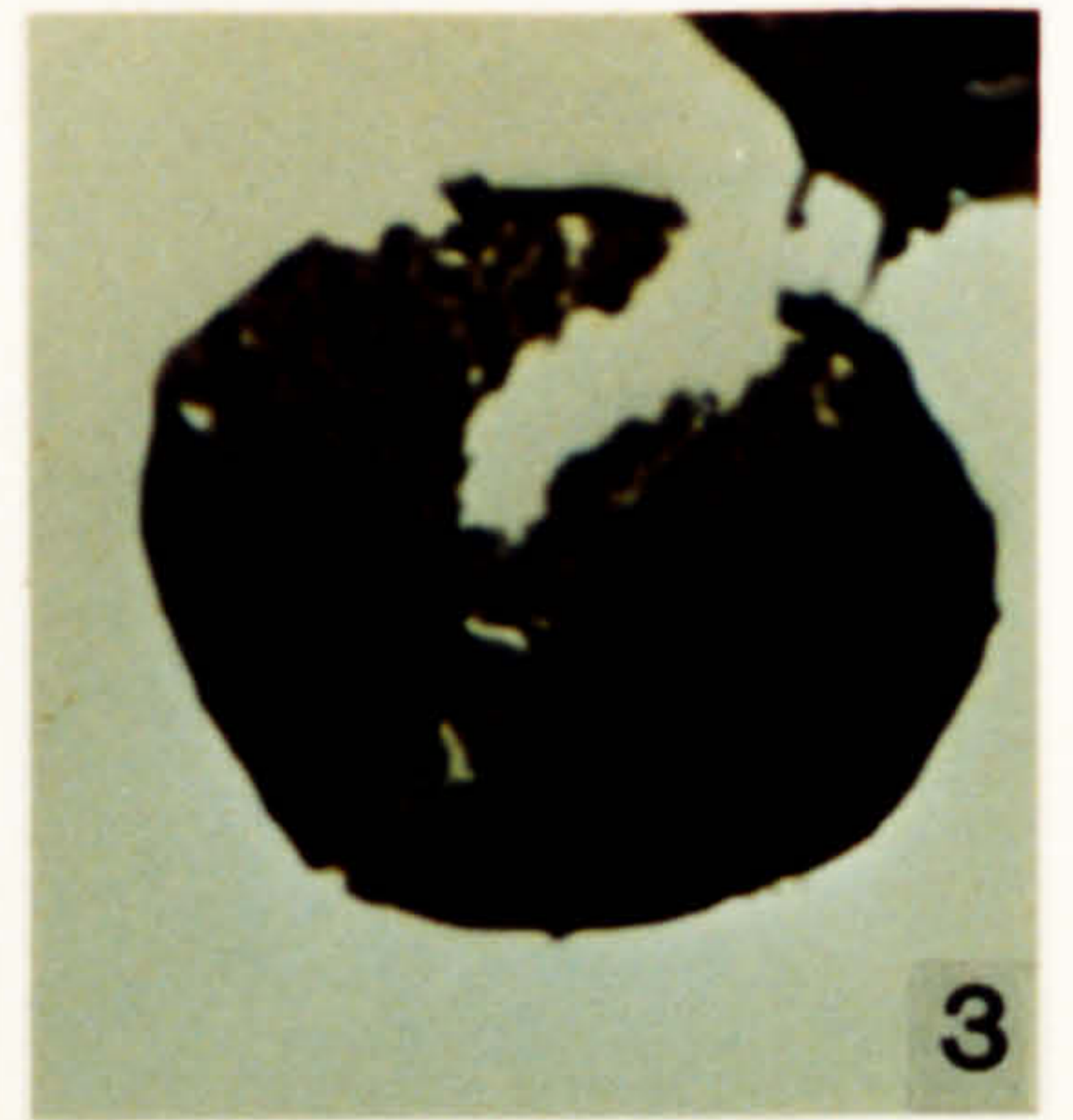
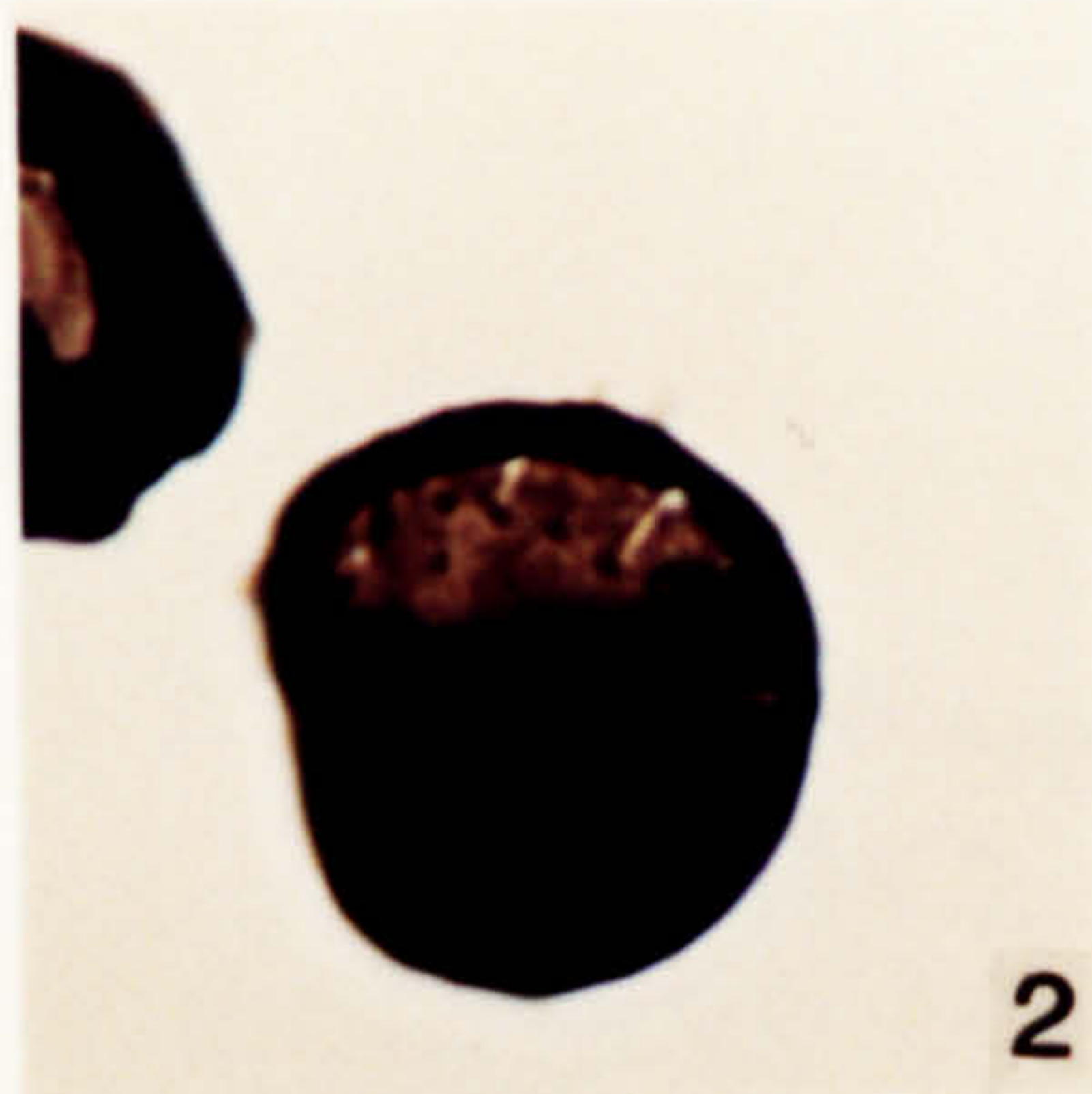
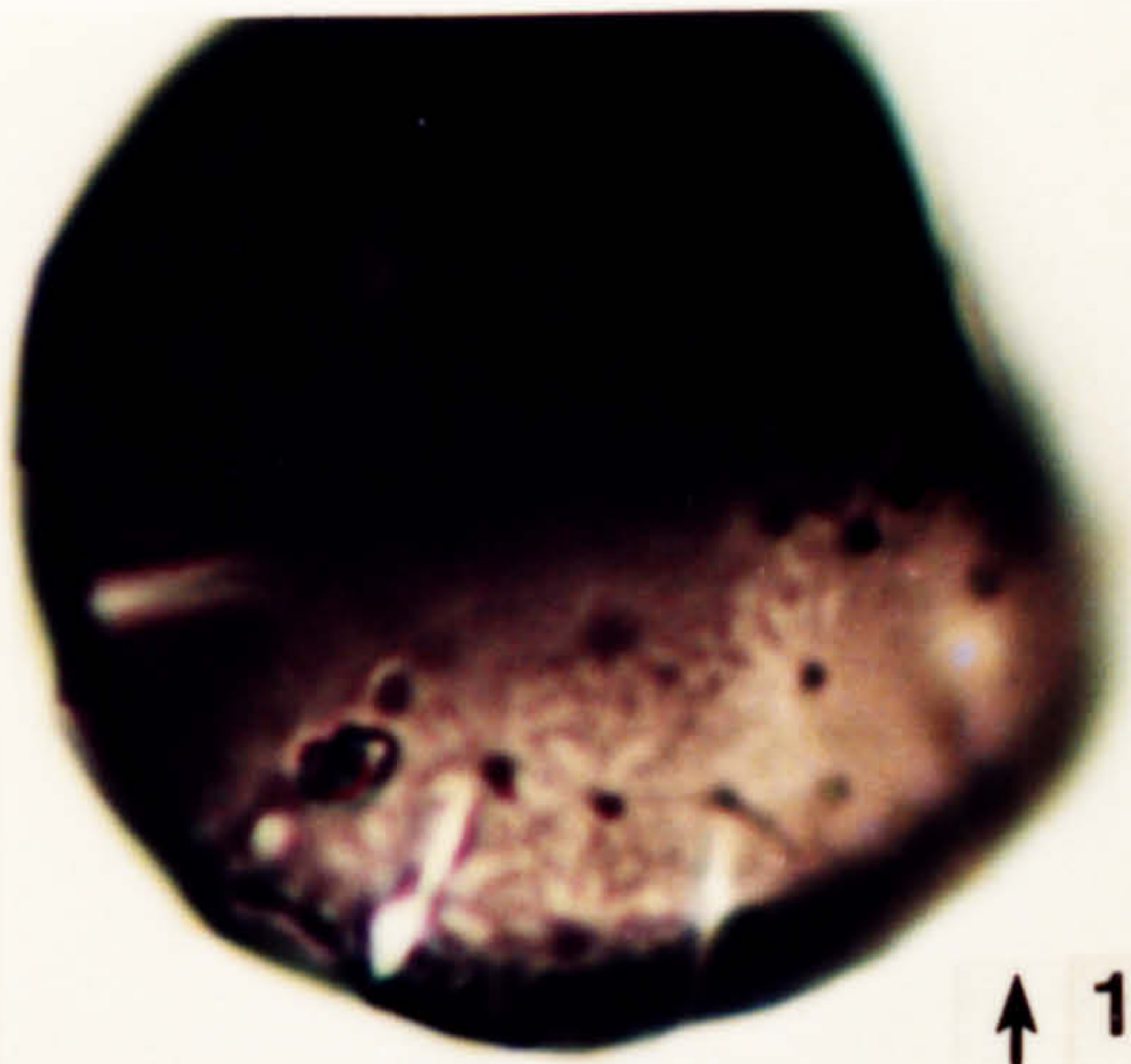
1. *Stelliferidium striatulum* (Vavrdova) Deunff, Gorka & Raucher 1974. DW 105, 2-2, K26\3, X2300.
2. *Stelliferidium striatulum* (Vavrdova) Deunff, Gorka & Raucher 1974. DW 105, 2-2, K26\3.
3. *Stelliferidium simplex* (Deunff) Deunff, Gorka & Rauscher 1974. DW 105, 2-1, Q35\3.
4. *Stelliferidium cortinulum* (Deunff) Deunff, Gorka & Rauscher 1974. DW 105, 2-1, R23\4.
5. *Stelliferidium cf. simplex* (Deunff) Deunff, Gorka & Rauscher 1974. DW 105, 2-2, K23\2.
6. *Stelliferidium simplex* (Deunff) Deunff, Gorka & Rauscher 1974. DW 105, 2-1, F27\4.
7. *Stelliferidium cortinulum* (Deunff) Deunff, Gorka & Rauscher 1974. DW 105, 2-2, S37\-..
8. *Stelliferidium cortinulum* (Deunff) Deunff, Gorka & Rauscher 1974. DW 115, 2-1, G15\1.
9. *Stelliferidium cortinulum* (Deunff) Deunff, Gorka & Rauscher 1974. DW 115, 2-1, G15\1, X2300.



**Plate 9.**

Acritarchs from the Fezouata Formation, Tremadoc-earliest Arenig in age.

1. *Stelliferidium pseudoornatum* Pittau 1985. DW 105, 2-1, J26\1, X2300.
2. *Stelliferidium pseudoornatum* Pittau 1985. DW 105, 2-1, J26\1.
3. *Stelliferidium pseudoornatum* Pittau 1985. DW 105, 2-1, O20\-.
4. *Trichosphaeridium annolovaense* var. A. DW 115, 2-1, Q42\4.
5. *Tunisphaeridium?* sp. DW 304, 2-1, B15\2.
6. *Tunisphaeridium?* sp. DW 305, 2-1, N18\3.
7. *Trichosphaeridium annolovaense* var. B. DW 105, 2-1, V24\1.
8. *Trichosphaeridium annolovaense* var. A. DW 115, 2-1, C34\3.
9. *Veryhachium lairdii* Deflandre 1946 ex Loeblich 1970. DW 305, 2-1, S13\-.
10. *Veryhachium* sp. 8. GAO 65, 2-1, J12\3.
11. *Trichosphaeridium annolovaense* var. A. DW 115, 2-1, T19\1.
12. *Tongzia meitana* Li Jun 1987. DW 304, 2-1, Y23\-.
13. *Tongzia meitana* Li Jun 1987. DW 304, 2-1, Y23\-, X2300.

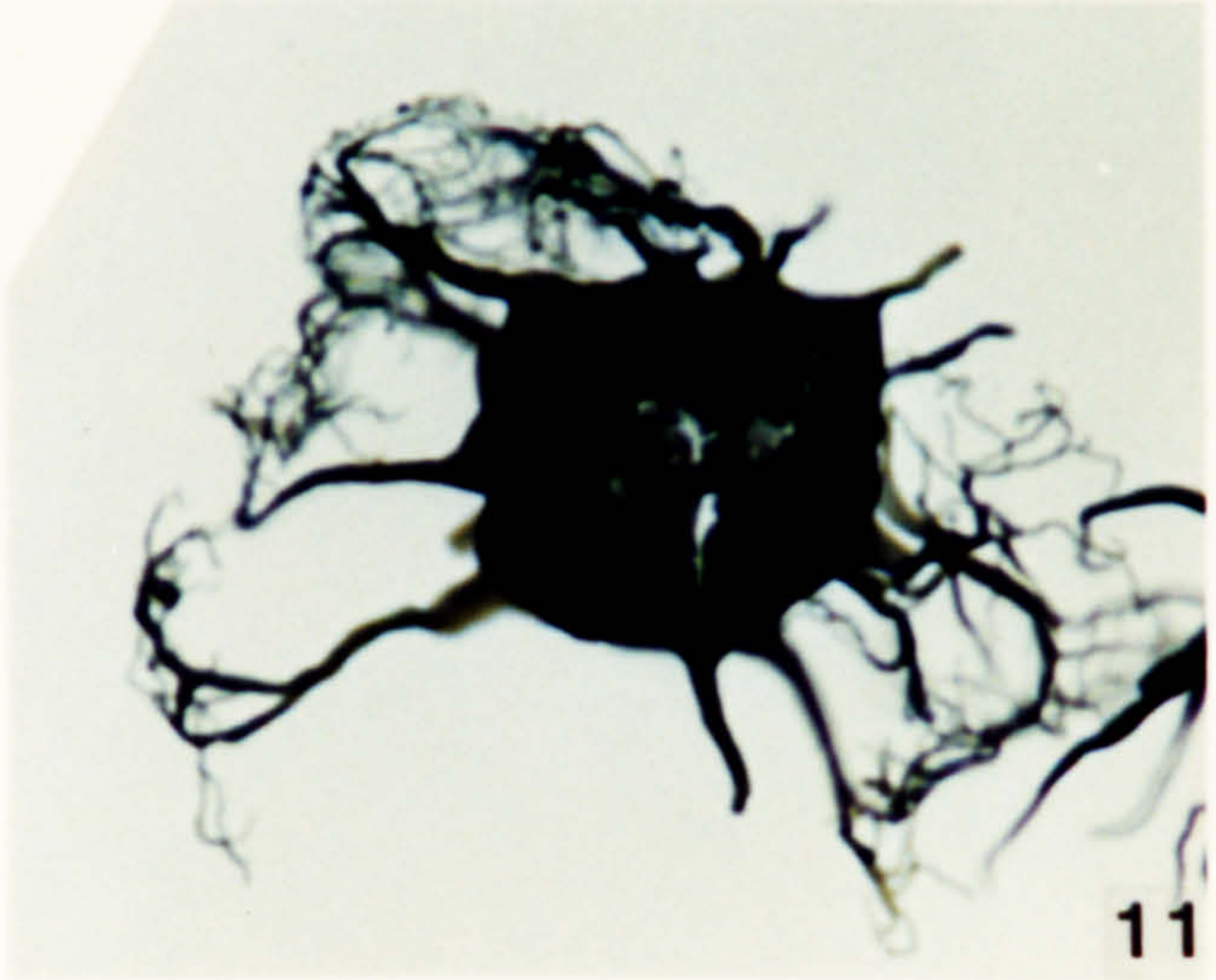
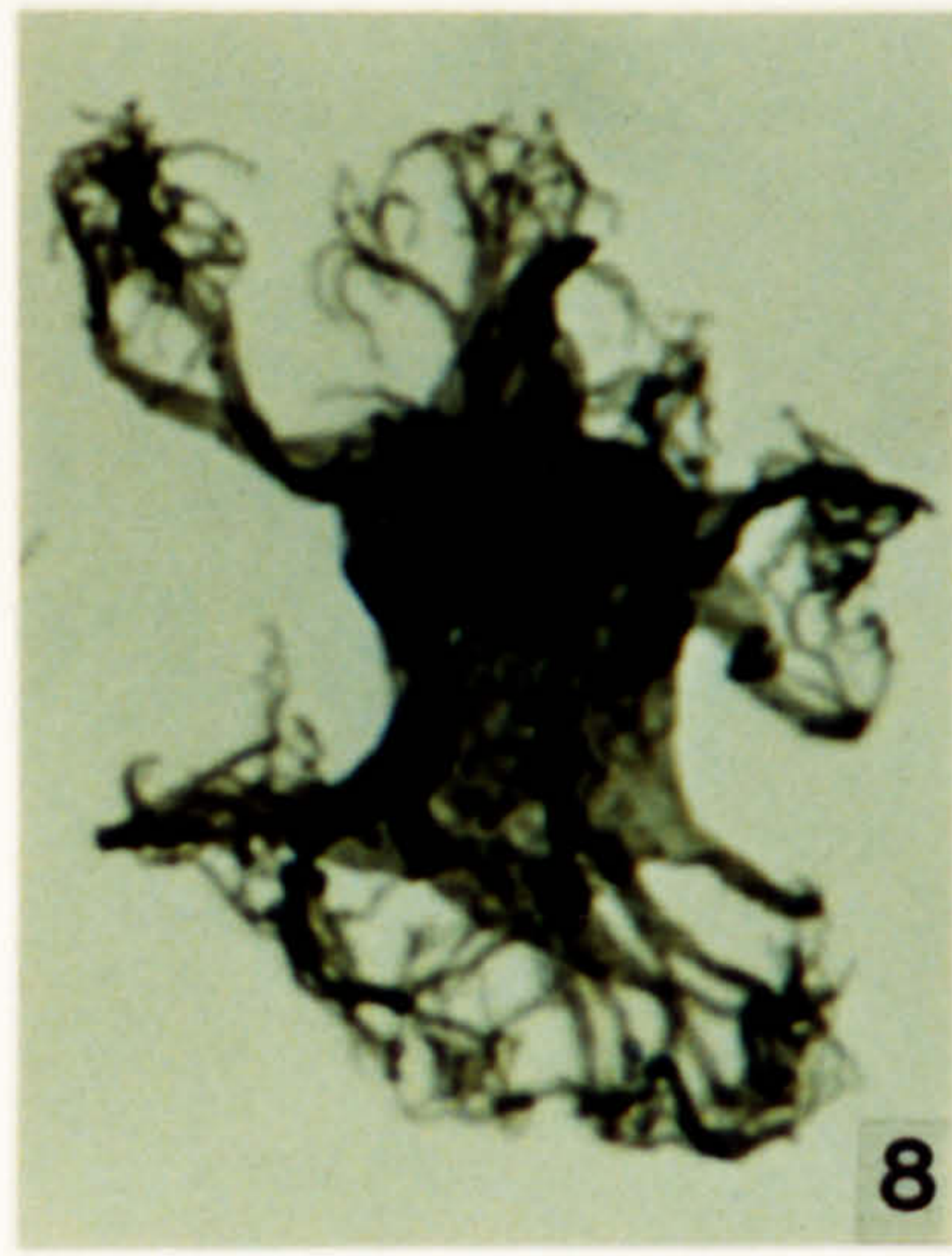
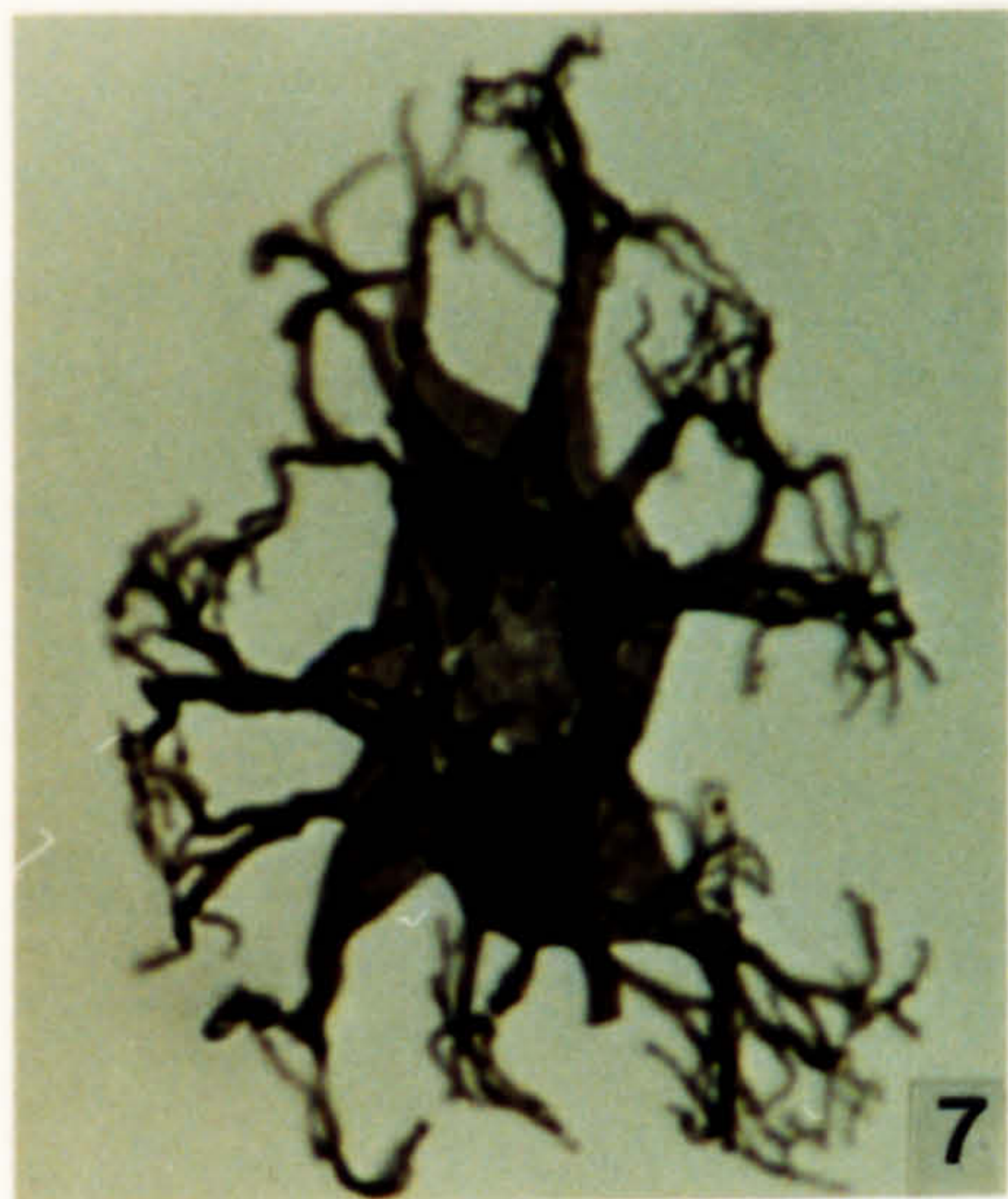
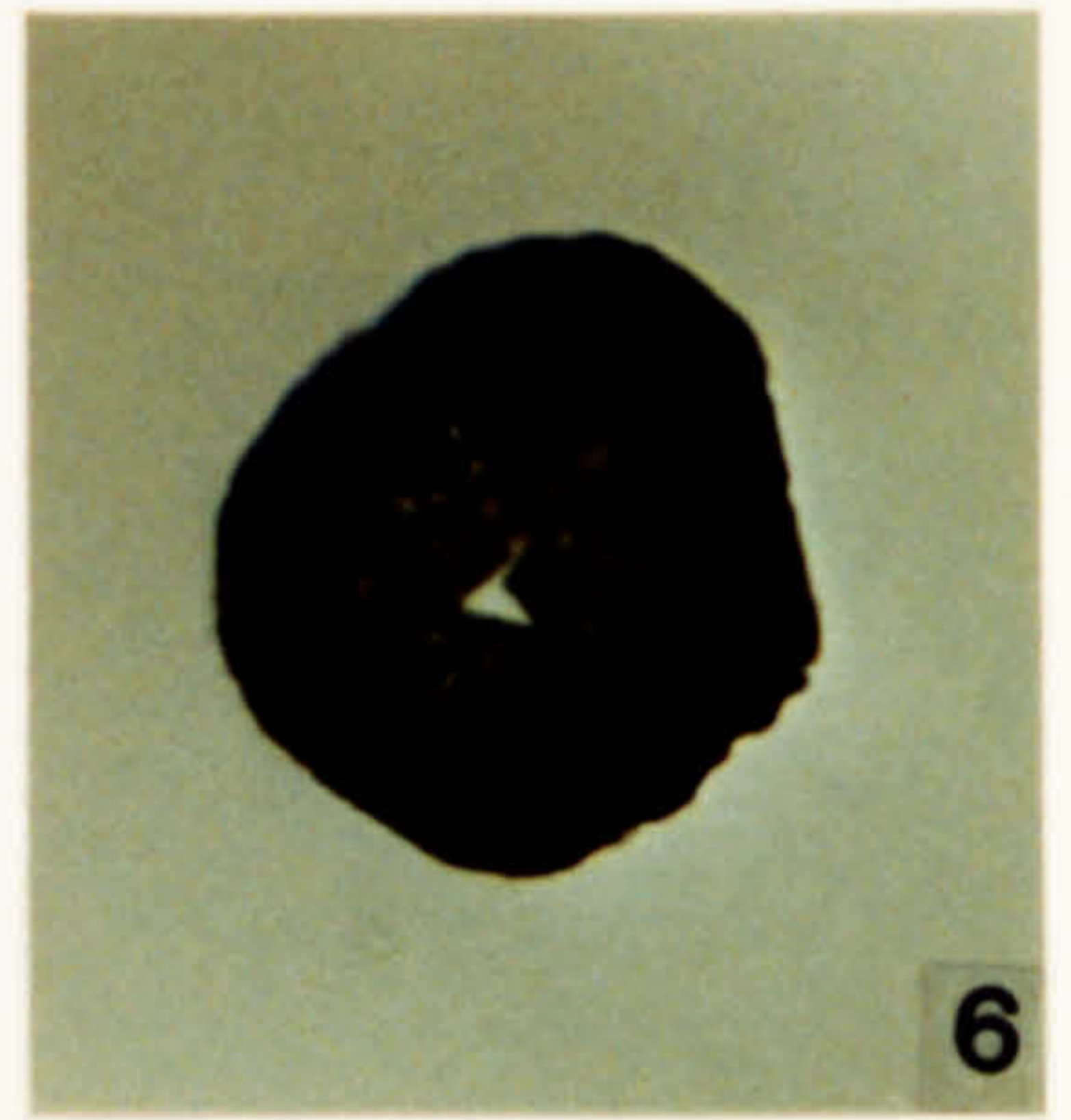
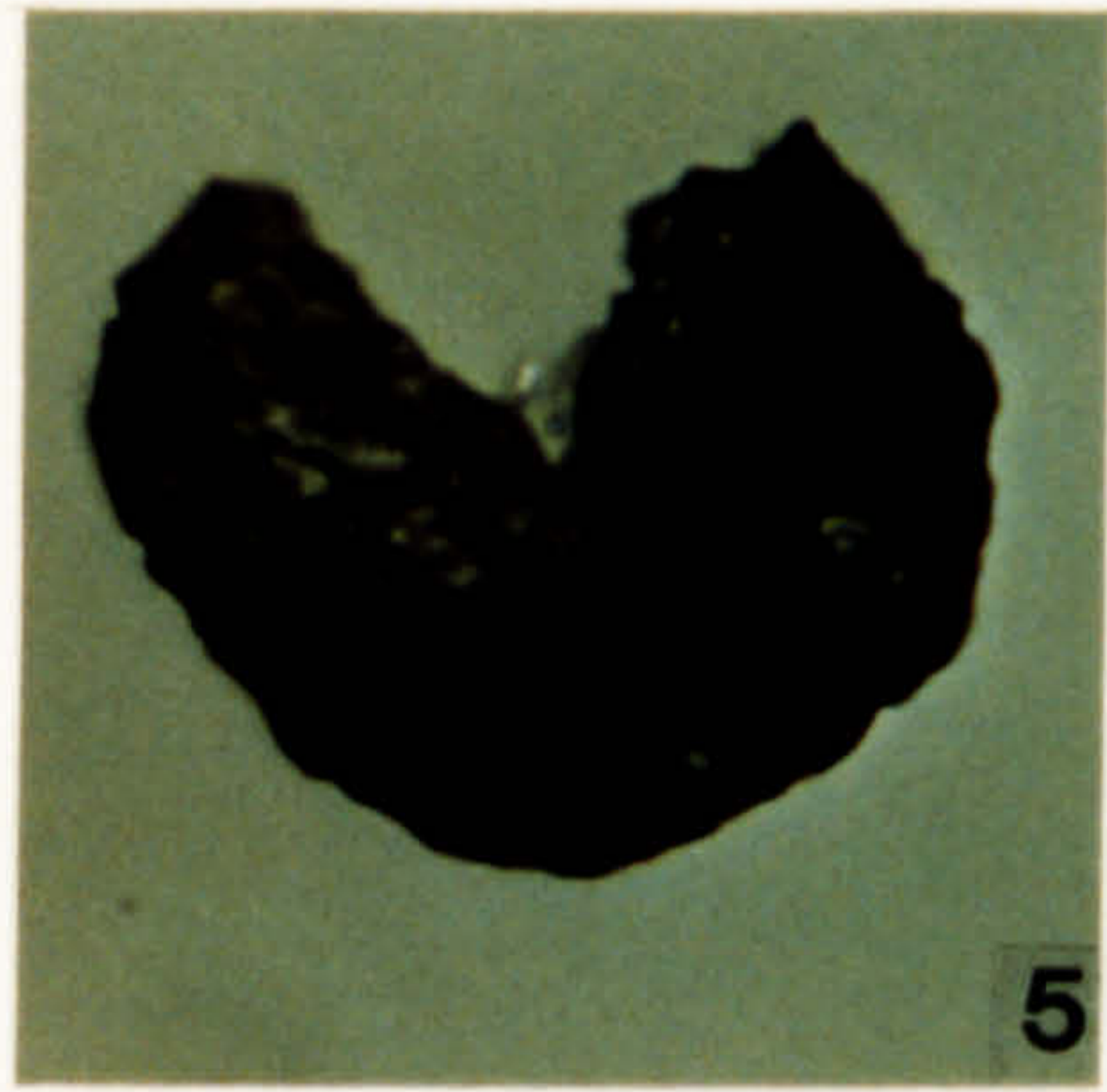
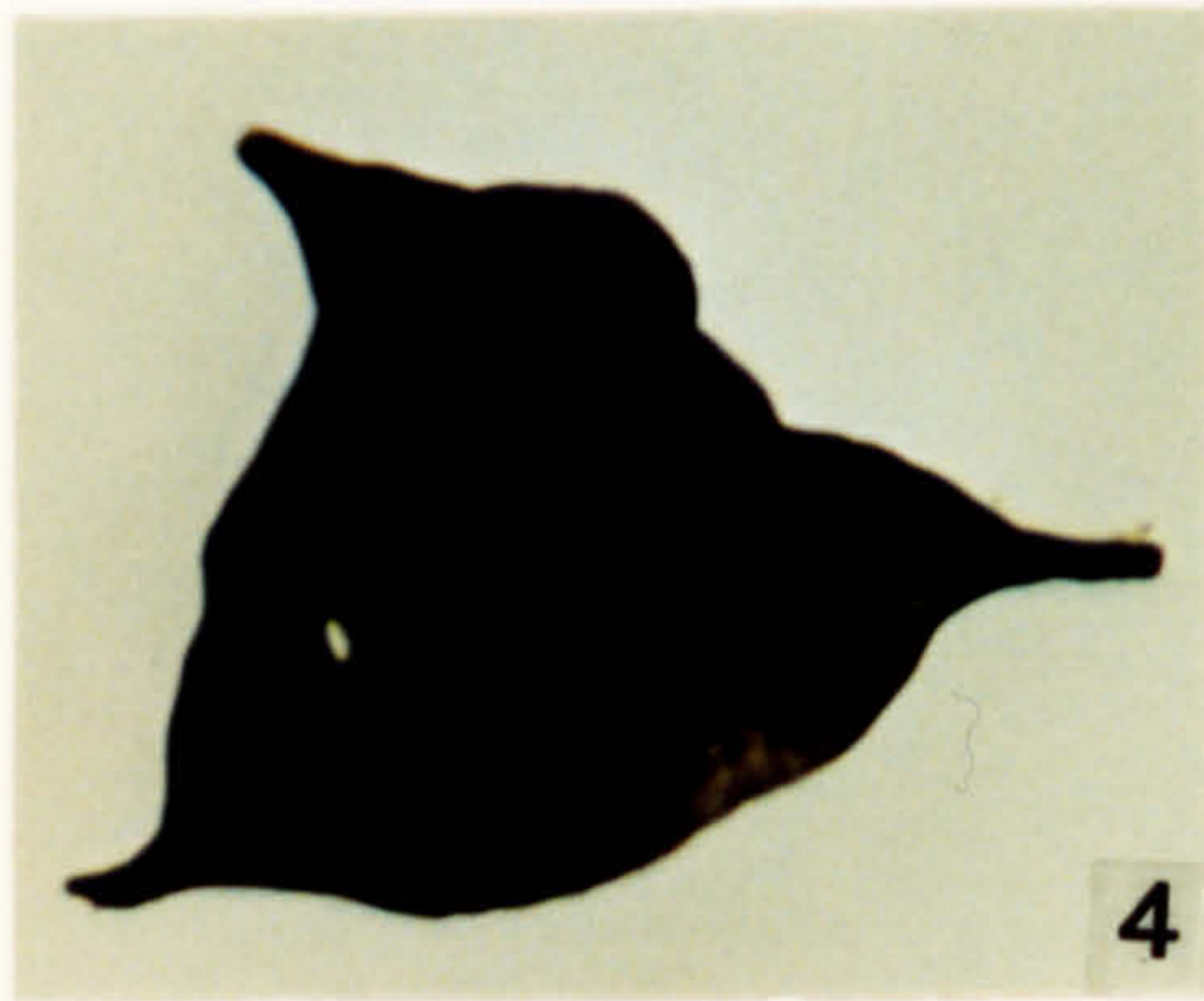
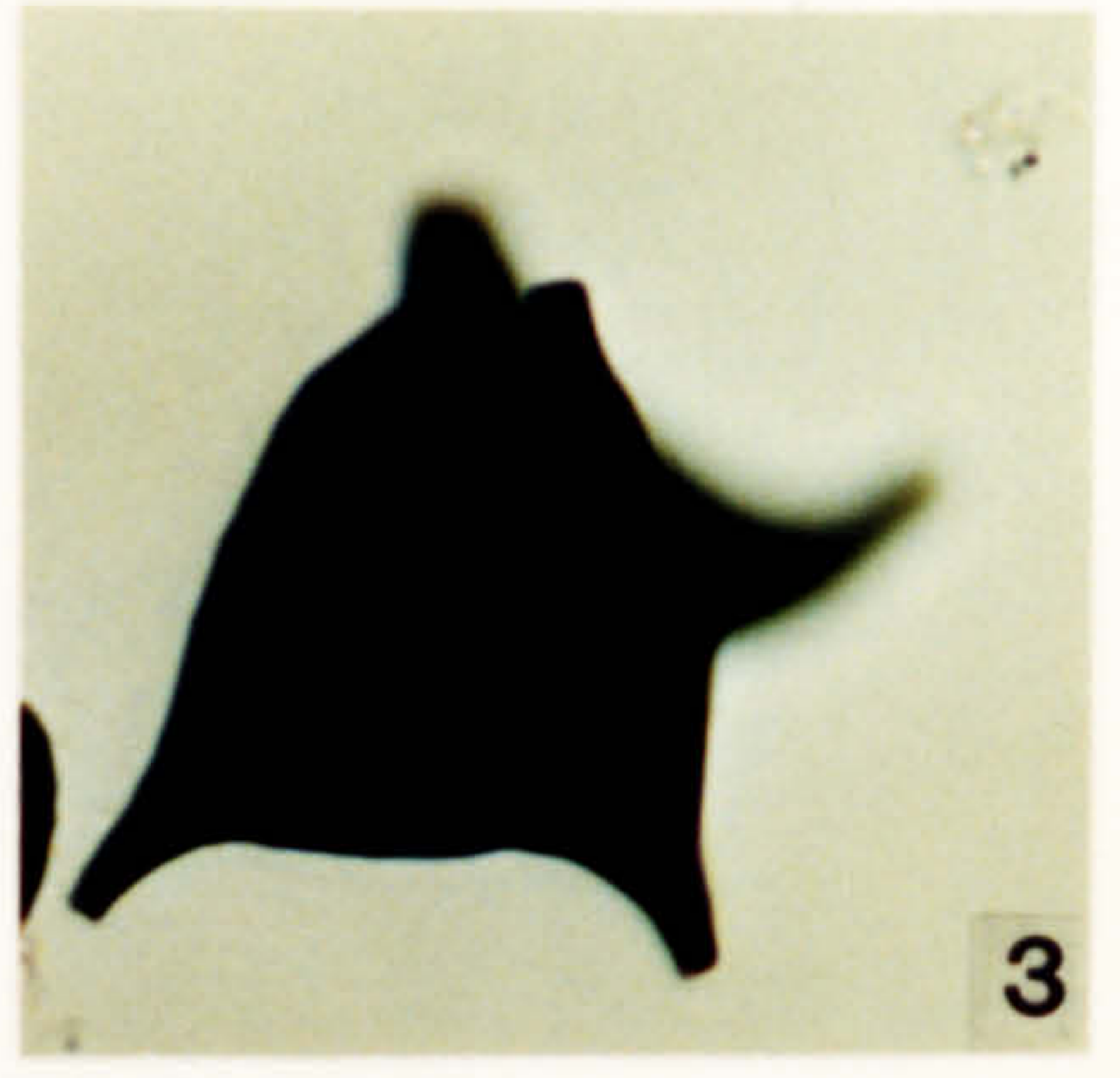
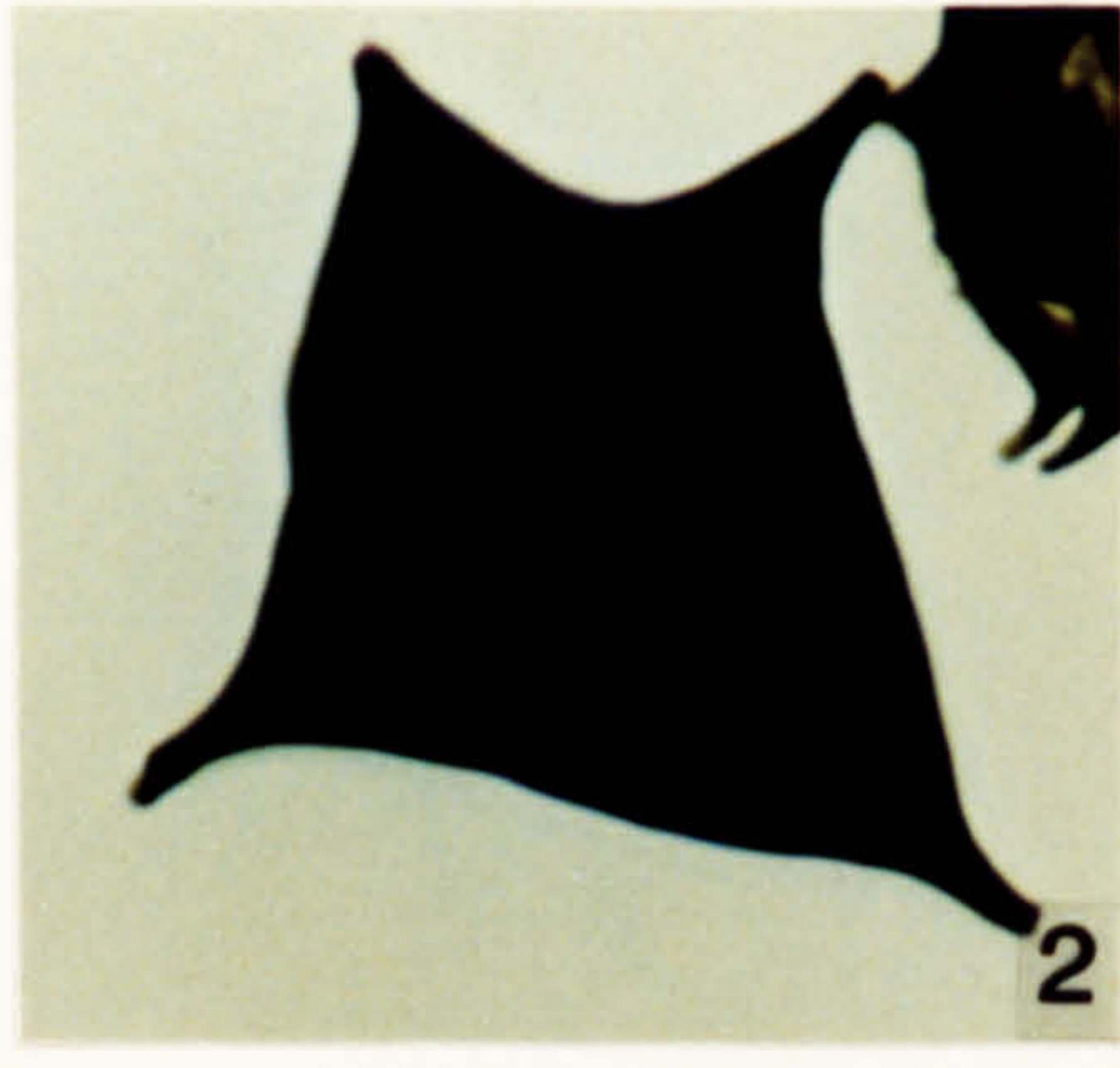
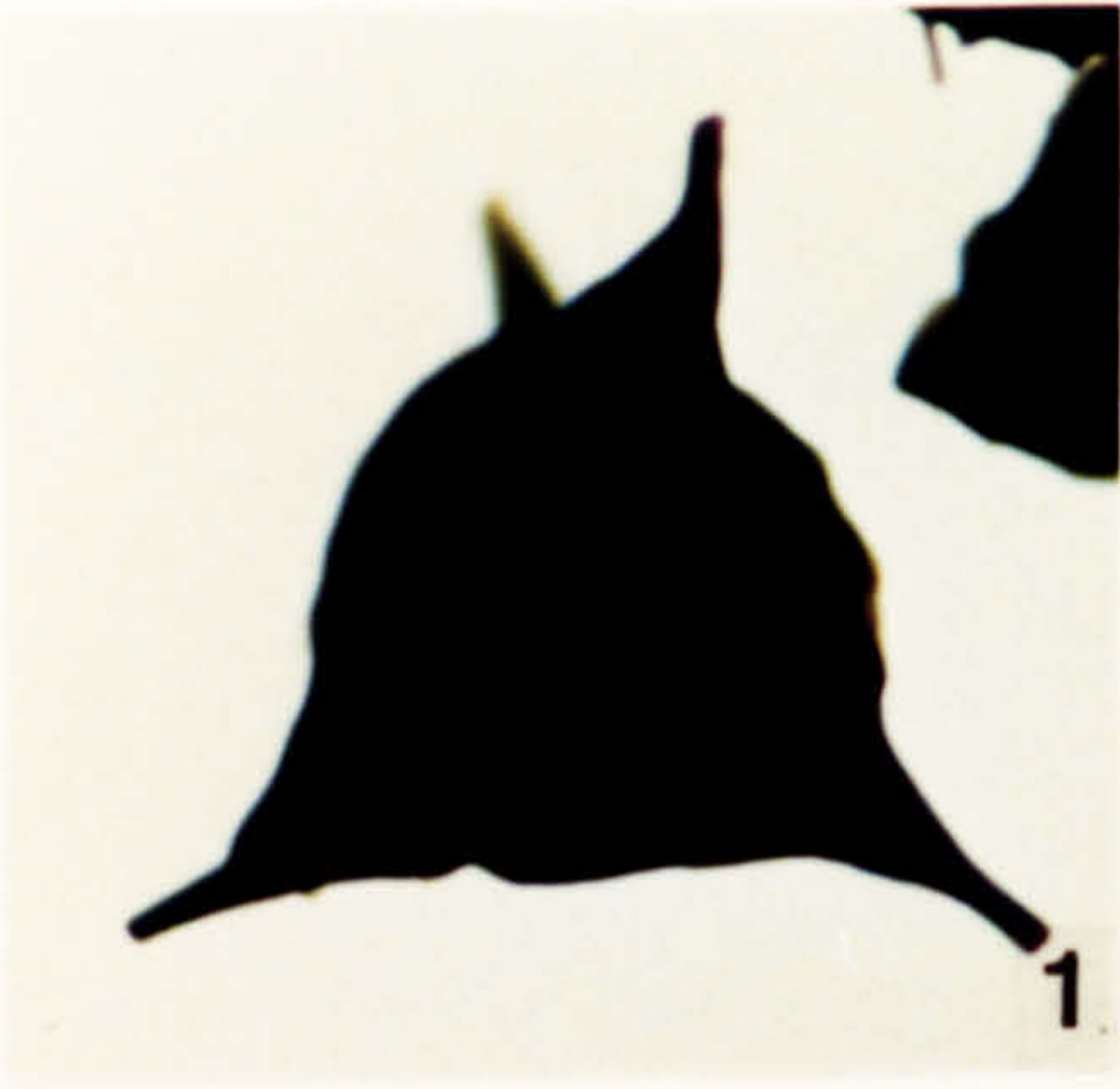


**Plate 10.**

**Acritarchs from the Fezouata Formation, Tremadoc-earliest Arenig in age.**

1. *Veryhachium* sp. 7. DW 115, 2-1, H23/4.
2. *Veryhachium* sp. 7. DW 115, 2-1, P18\2.
3. *Veryhachium* sp. 7. DW 115, 2-1, W34\1.
4. *Veryhachium* sp. 7. DW 115, 2-1, P13\3.
5. *Virgatasporites rudii* Combaz 1967. DW 304, 2-1, V27\2.
6. *Virgatasporites rudii* Combaz 1967. DW 115, 2-1, L21\2.
7. *Vogtlandia* sp. 1. DW 305, 2-1, E12\1.
8. *Vogtlandia* sp. 1. DW 304, 2-1, L29\3.
9. *Vogtlandia* sp. 1. DW 305, 2-1, T11\3.
10. *Vogtlandia* sp. 1. DW 304, 2-1, V19\1.
11. *Vogtlandia* sp. 1. DW 305, 2-1, T15\3.

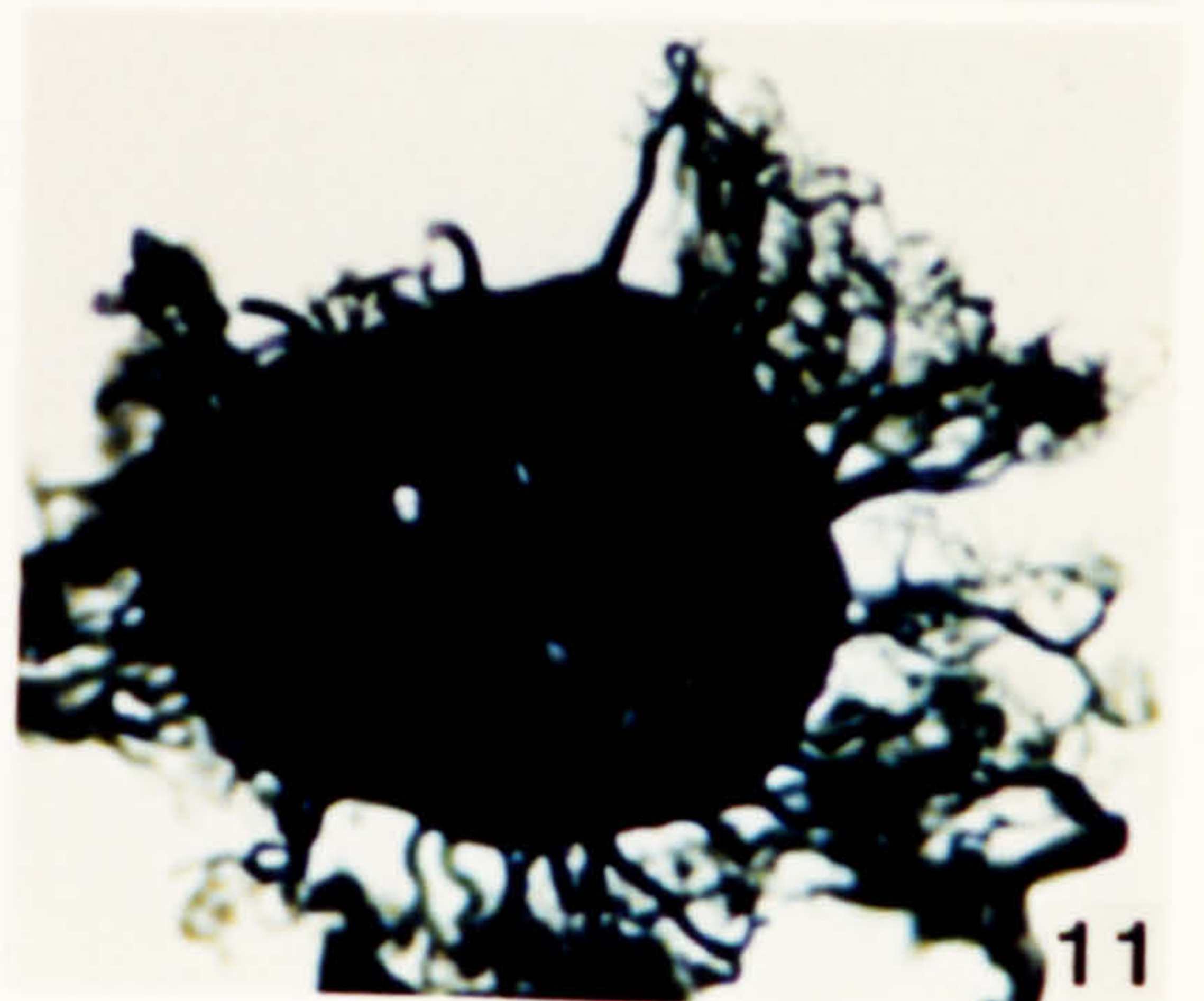
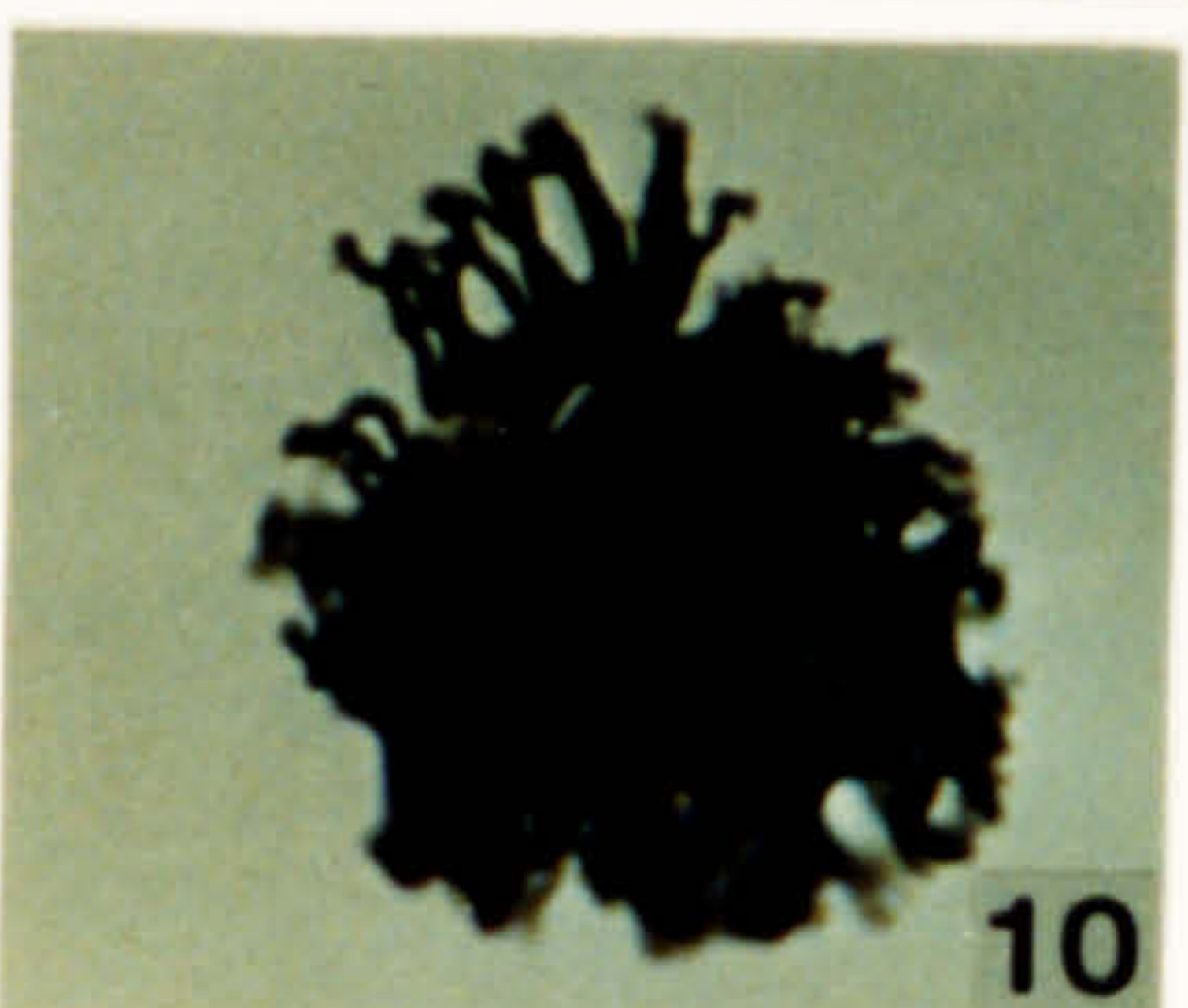
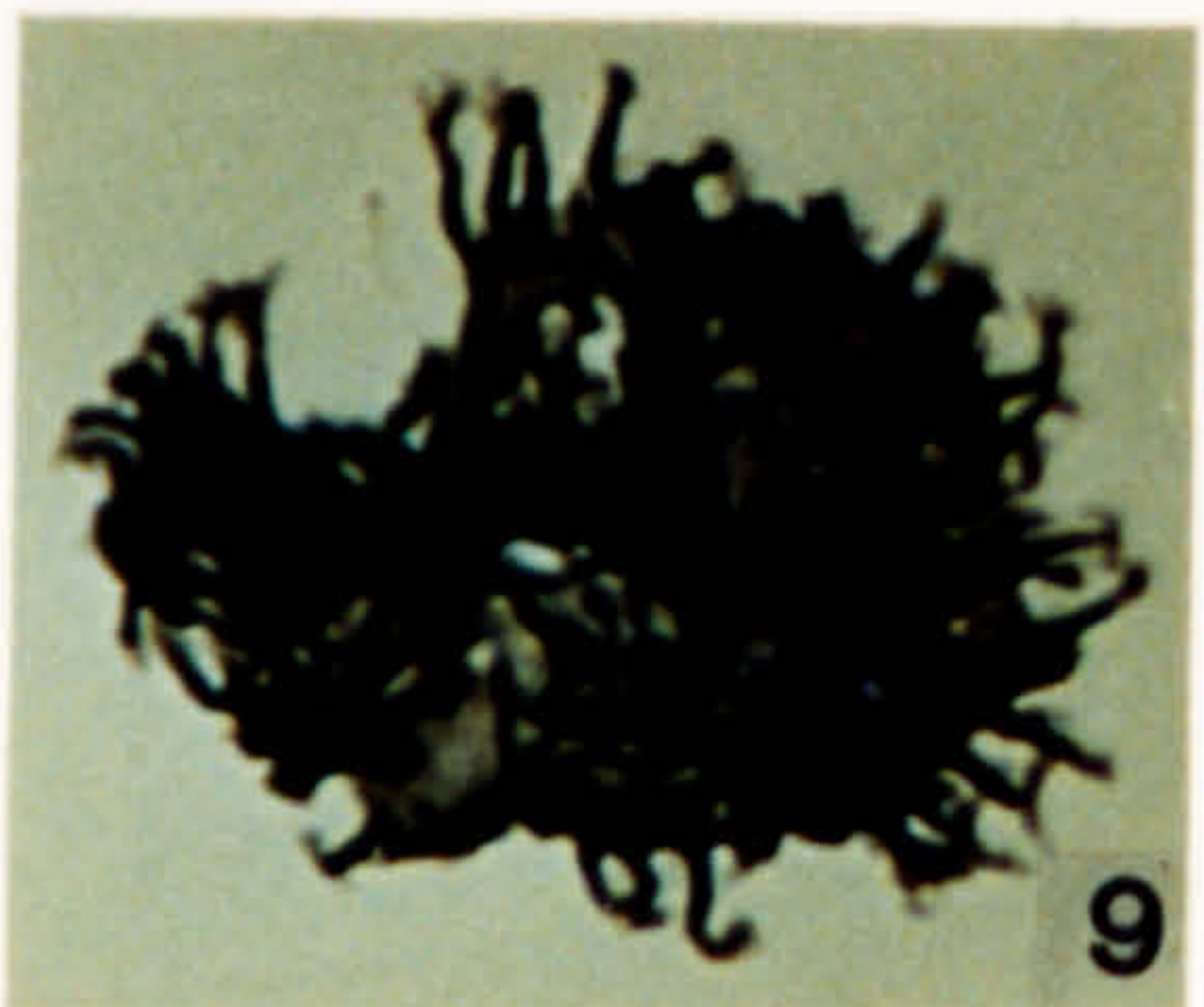
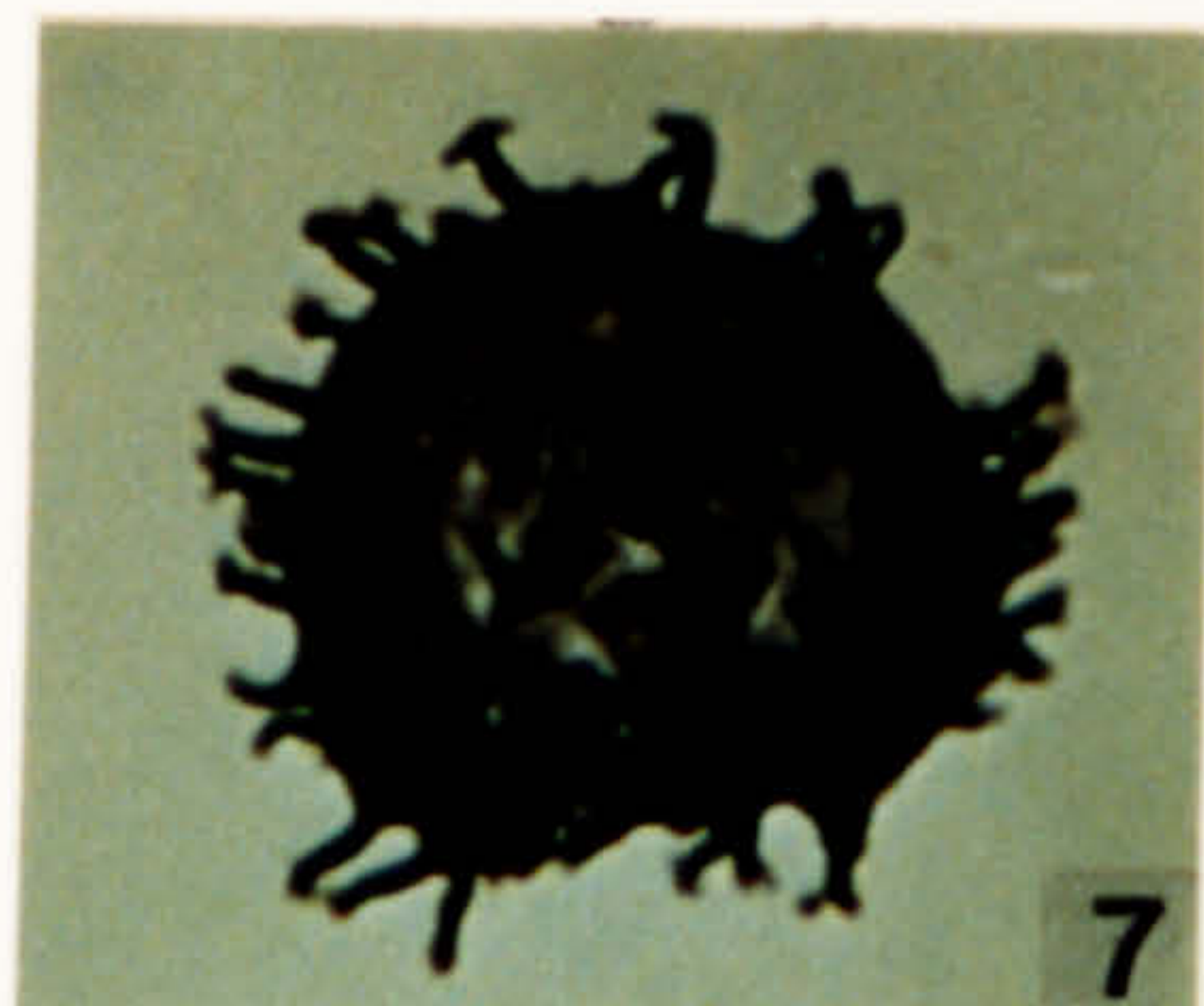
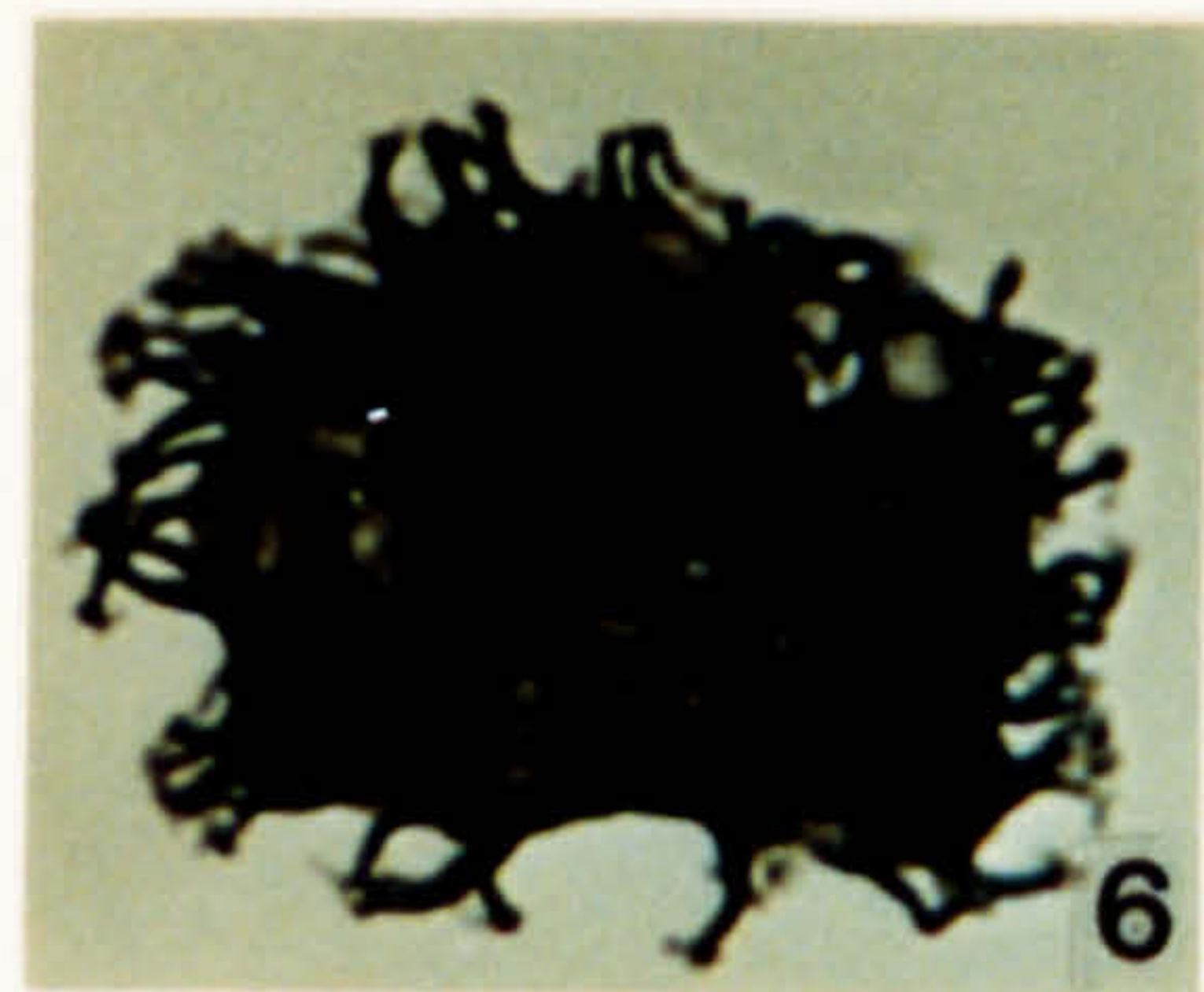
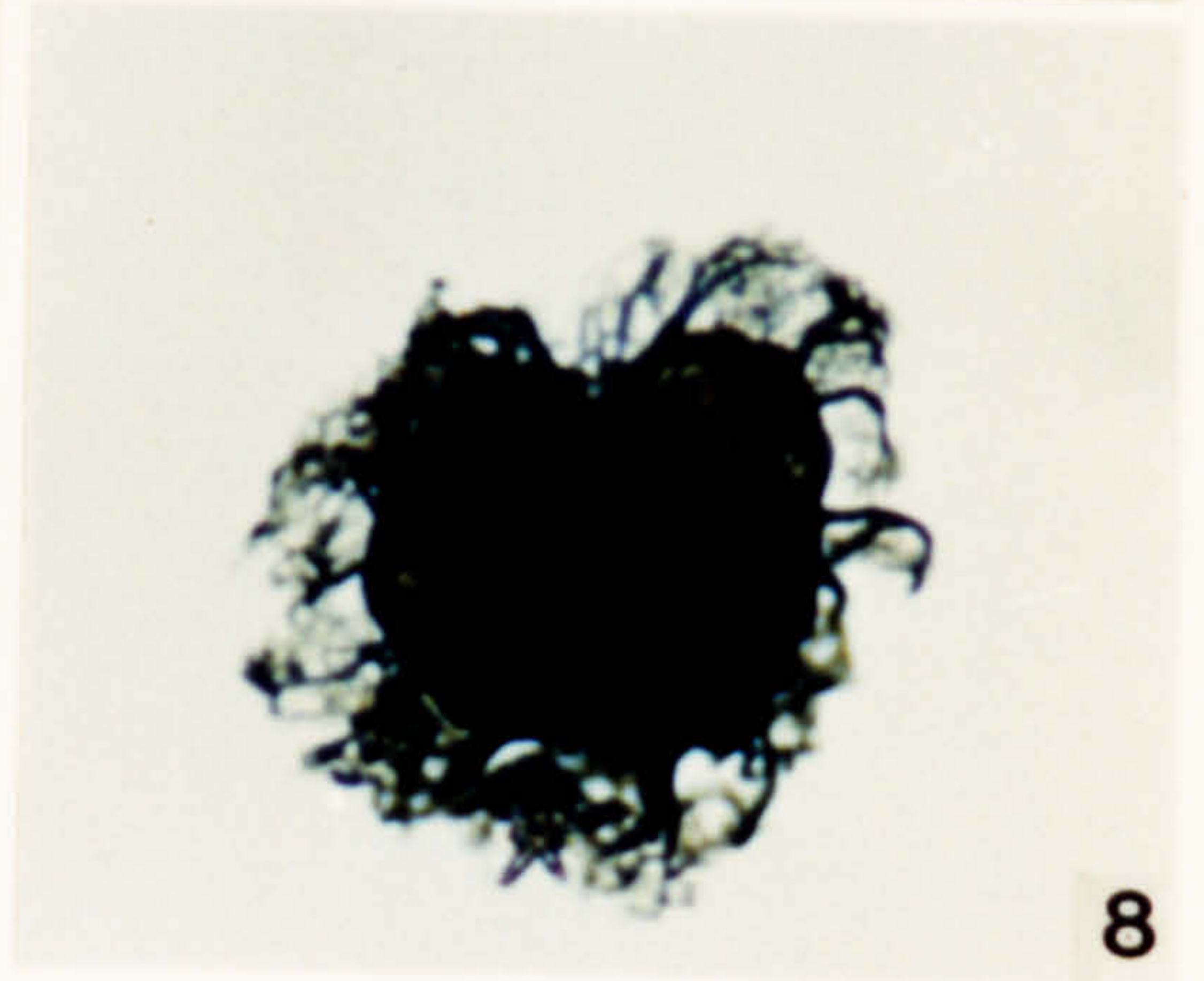
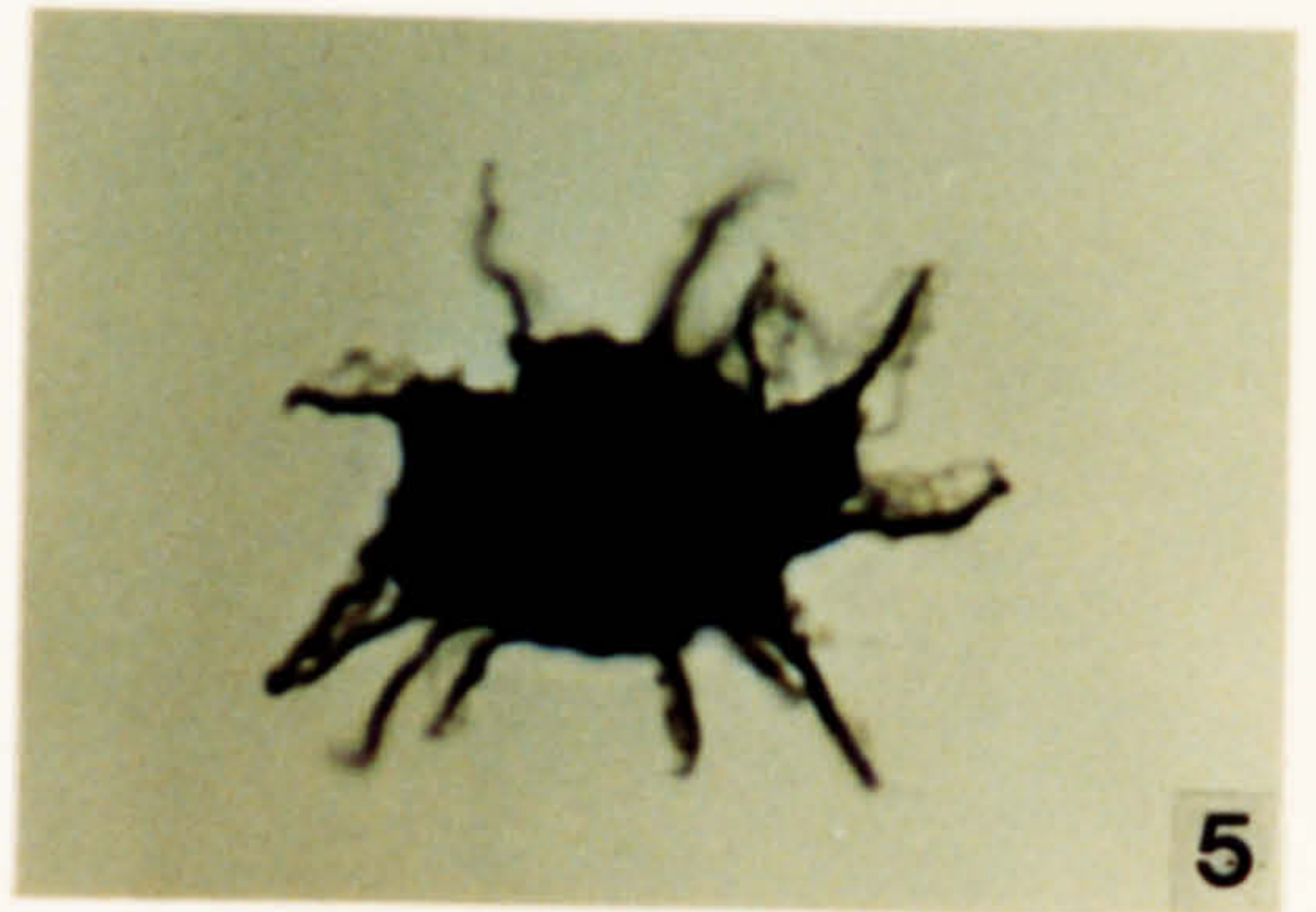
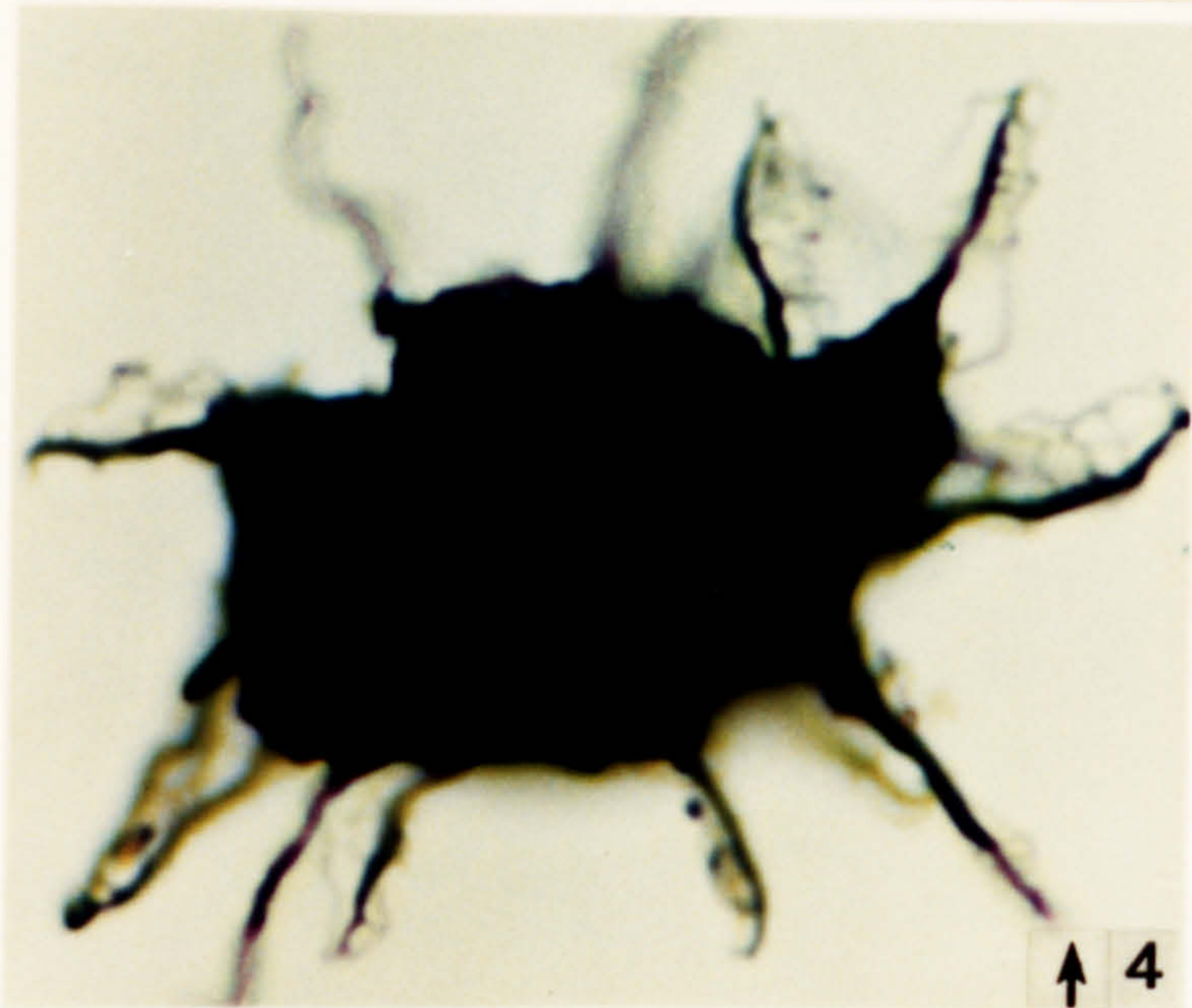
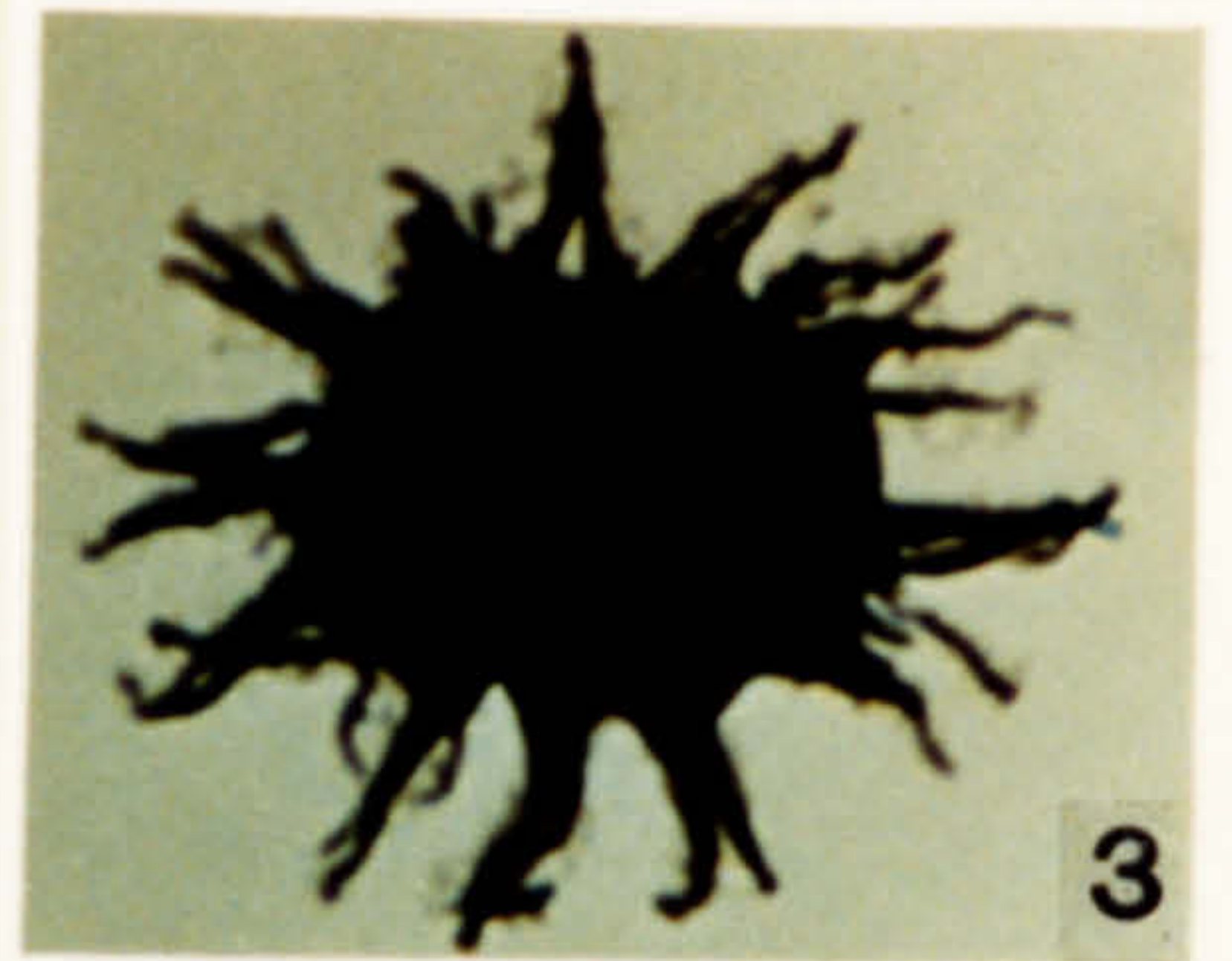
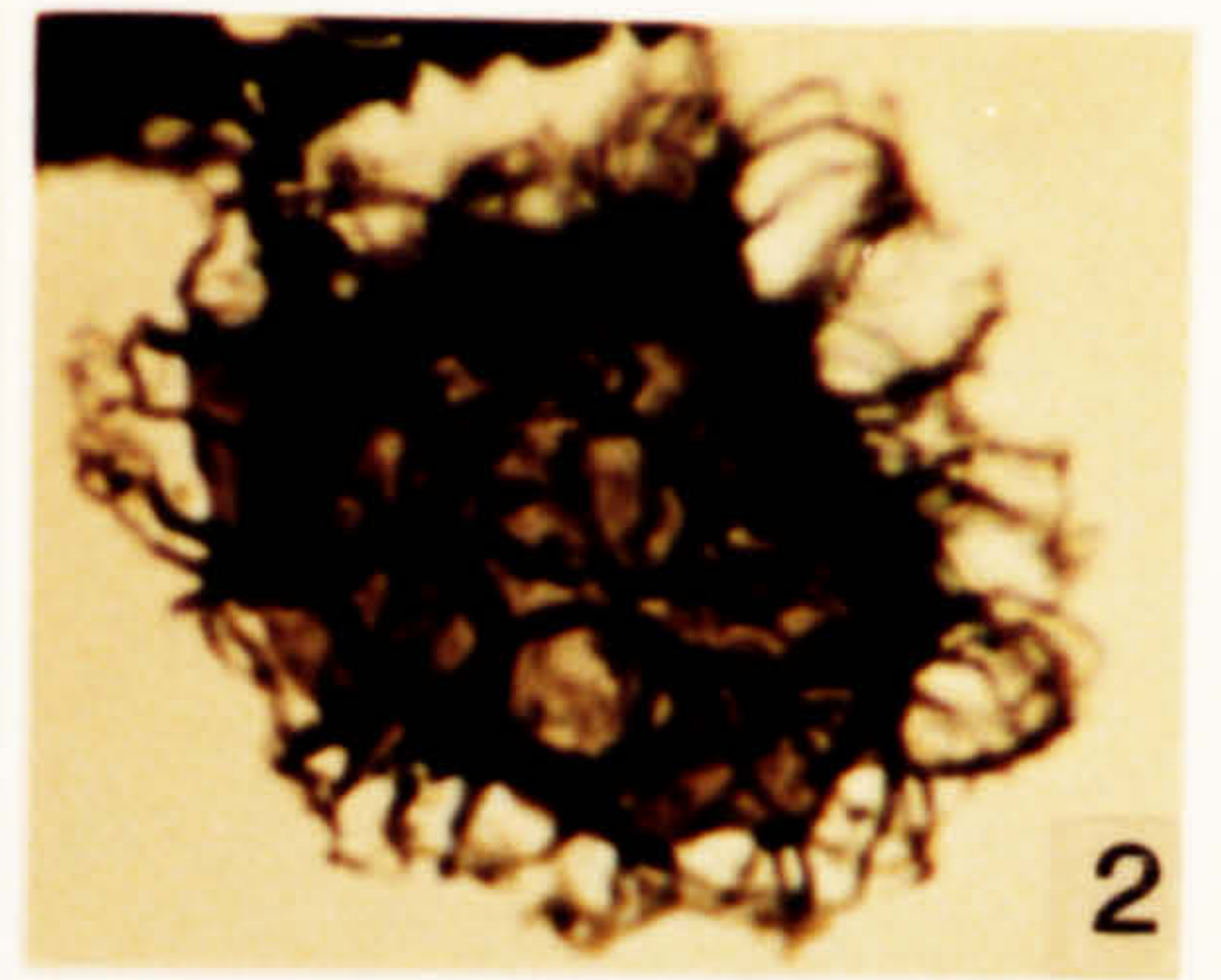
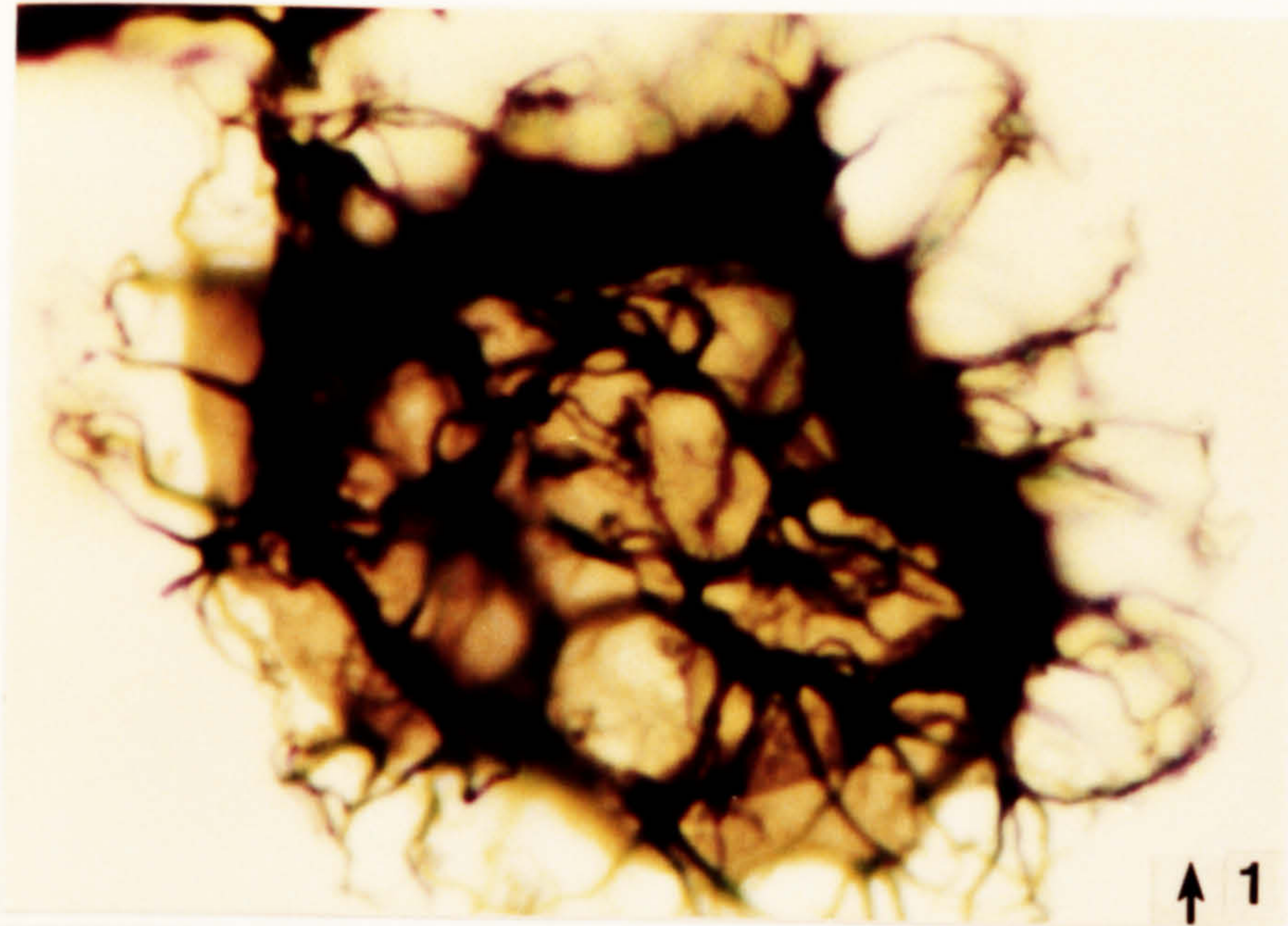
PLATE 10



**Plate 11.**

**Acritarchs from the Fezouata Formation, Tremadoc-earliest Arenig in age.**

- 1. *Vulcanisphaera nebulosa* Deunff 1961. DW 304, 2-1, O14\3, X2300.**
- 2. *Vulcanisphaera nebulosa* Deunff 1961. DW 304, 2-1, O14\3.**
- 3. Acritarch Form B. DW 304, 2-1, F17\3.**
- 4. Acritarch Form B. DW 305, 2-1, H16\4, X2300.**
- 5. Acritarch Form B. DW 305, 2-1, H16\4.**
- 6. Acritarch Form A. DW 305, 2-1, E8\2.**
- 7. Acritarch Form A. DW 305, 2-1, U19\4.**
- 8. Acritarch Form M. DW 305, 2-1, U33\2.**
- 9. Acritarch Form A. DW 305, 2-1, J7\2.**
- 10. Acritarch Form A. DW 305, 2-1, S27\2.**
- 11. Acritarch Form M. DW 305, 2-1, Q22\1.**





**Plate 12.**

Chitinozoa from the Fezouata Formation, Tremadoc-earliest Arenig in age.

1. *Conochitina brevis* Taugourdeau & Jekhowsky 1960. DW 304, R-A, J22\3.
2. *Conochitina brevis* Taugourdeau & Jekhowsky 1960. DW 304, R-A, O17\2.
3. *Conochitina brevis* Taugourdeau & Jekhowsky 1960. DW 304, R-A, J22\3, X230.
4. *Conochitina brevis* Taugourdeau & Jekhowsky 1960. DW 304, R-A, O17\2, X230.
5. *Conochitina brevis* Taugourdeau & Jekhowsky 1960. DW 304, 2-1, M25\1, X230.
6. *Hoegisphaera?* sp. DW 304, R-A, L44\-, X230.
7. *Conochitina brevis* Taugourdeau & Jekhowsky 1960. DW 304, 2-1, M14\3, X230.
8. *Conochitina brevis* Taugourdeau & Jekhowsky 1960. DW 304, 2-1, V25\1, X230.



1



2



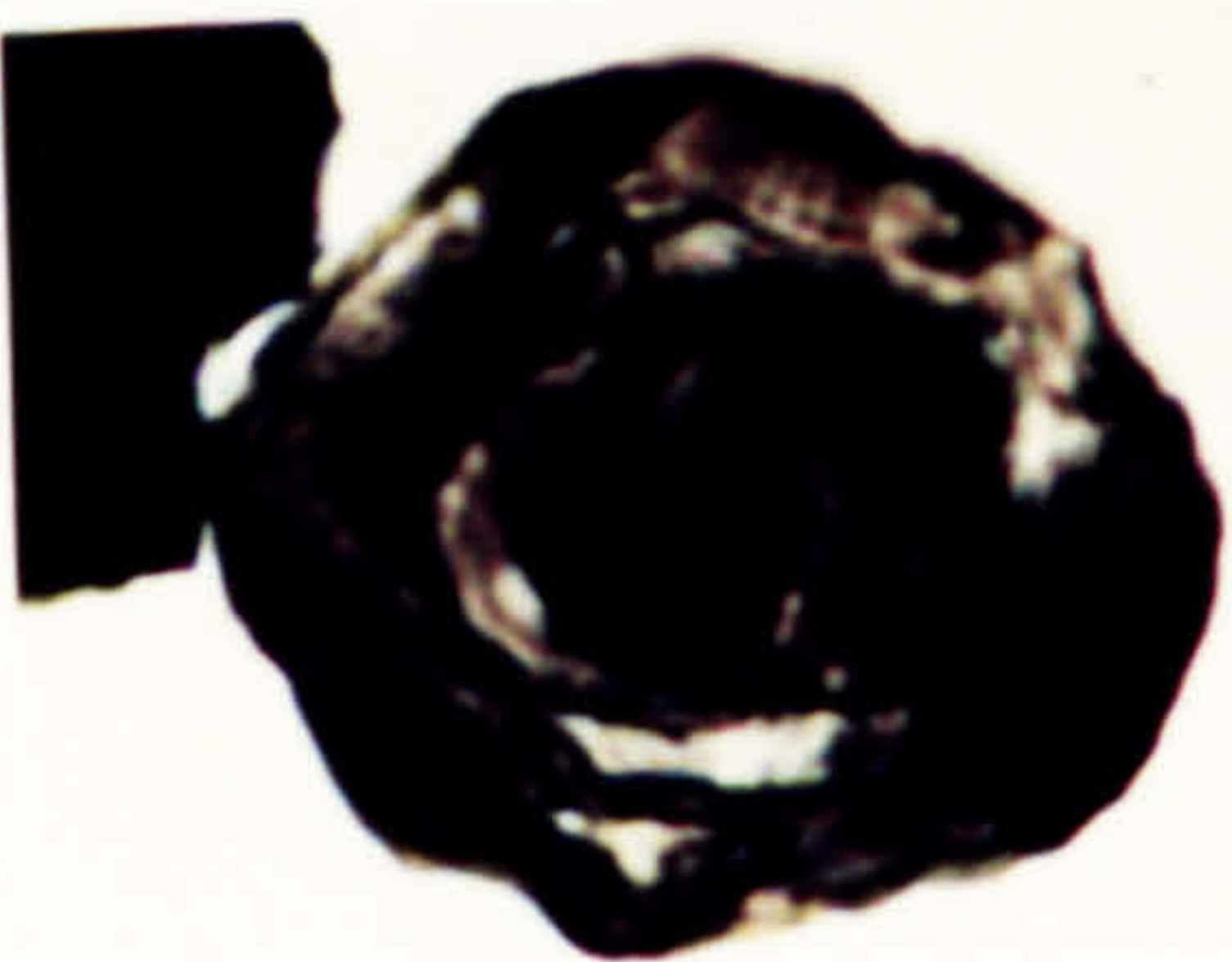
3 ↓



↓ 4



↓ 5



6



↓ 7

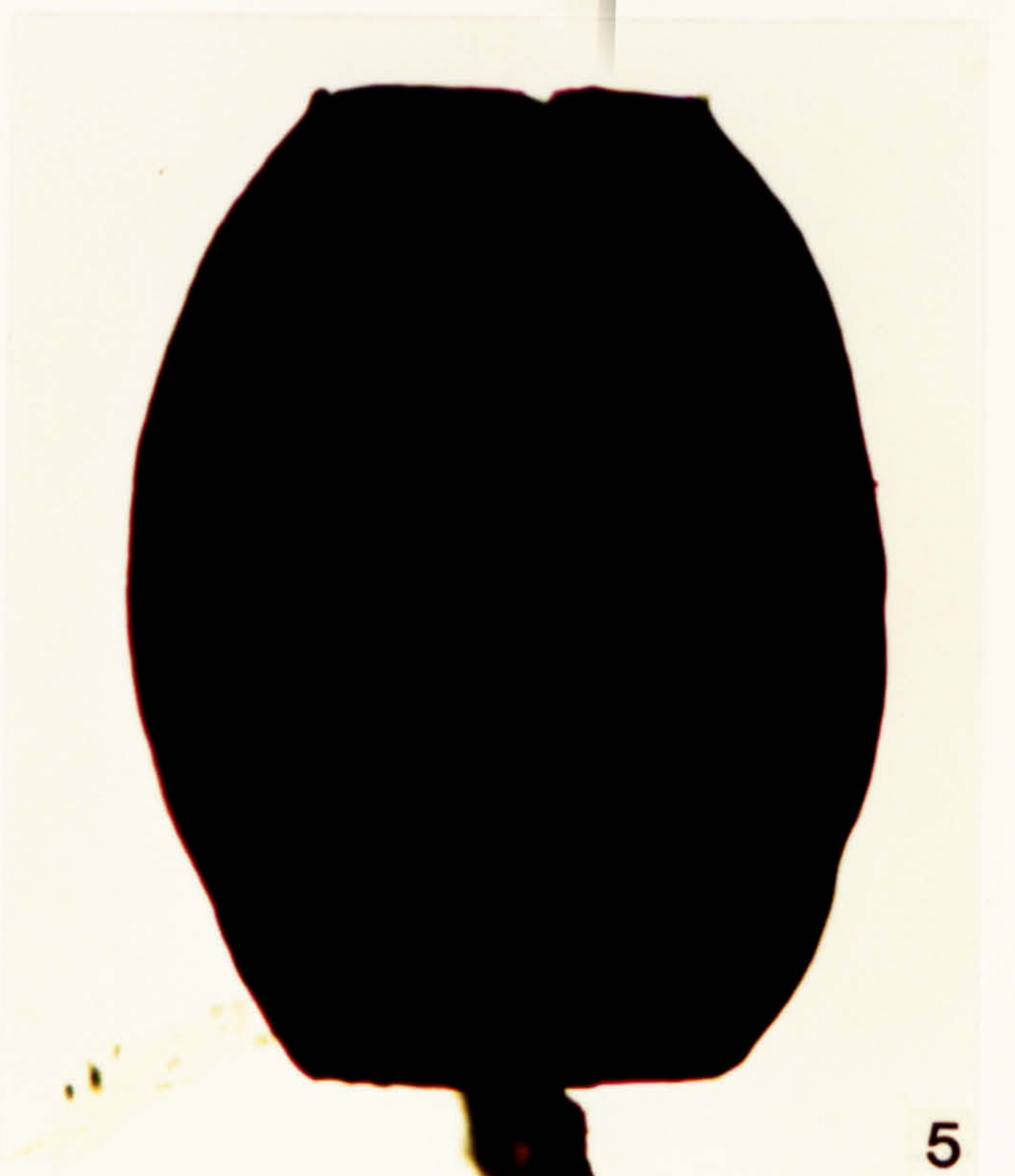
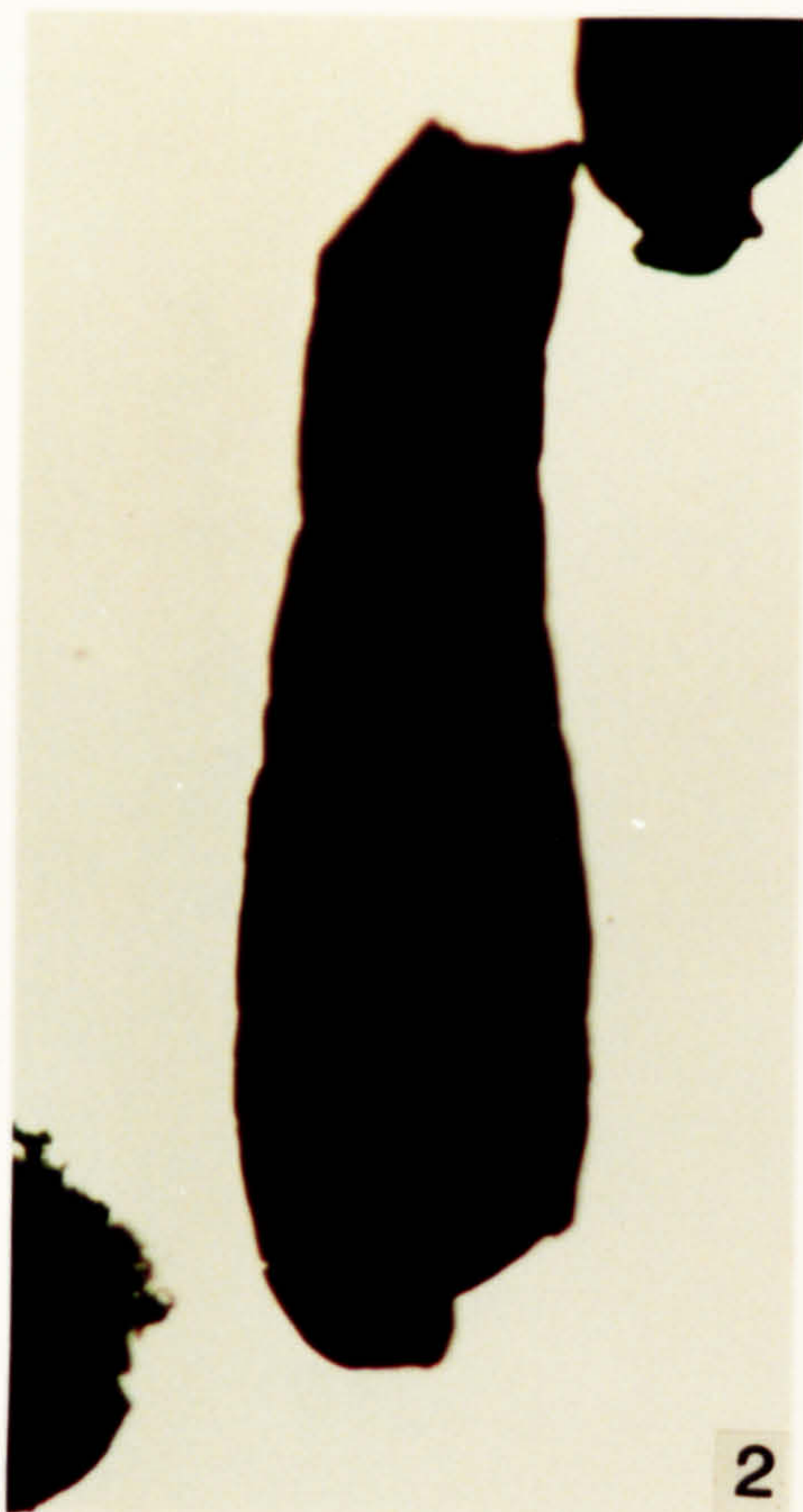


↓ 8

**Plate 13.**

Chitinozoa from the Fezouata Formation, Tremadoc-earliest Arenig in age.

1. *Lagenochitina? destombesi* Elaouad-Debbaj 1988. DW 304, R-A, A20\2.
2. *Lagenochitina? destombesi* Elaouad-Debbaj 1988. DW 304, R-A, H16\3, X230.
3. *Lagenochitina ventriosa* (Achab) Elaouad-Debbaj 1988. DW 304, 2-1, Q20\1, X230.
4. *Desmochitina minor?* Eisenack 1931. DW 304, R-A, J22\3.
5. *Desmochitina* sp. DW 304, 2-1, F21\3.

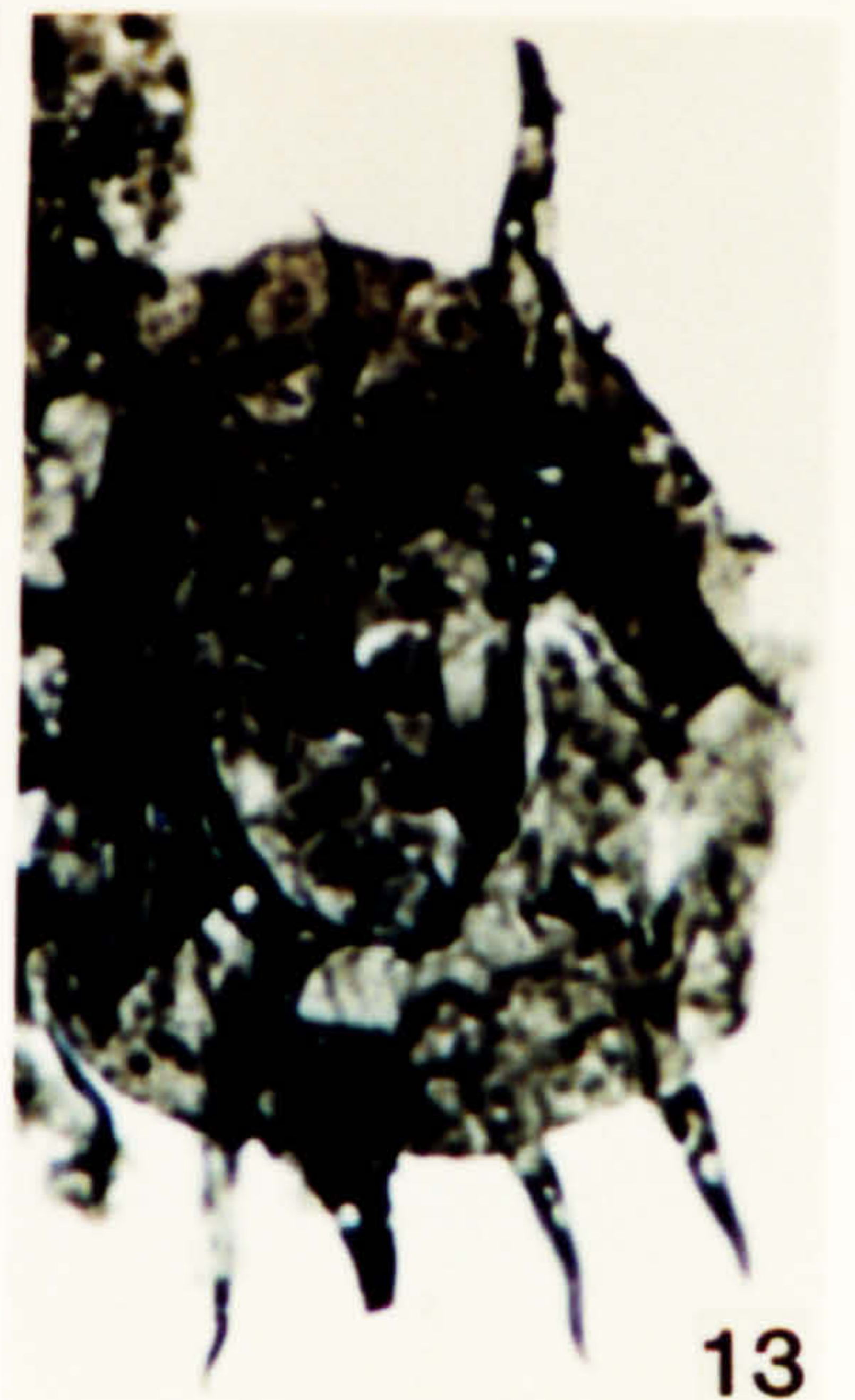
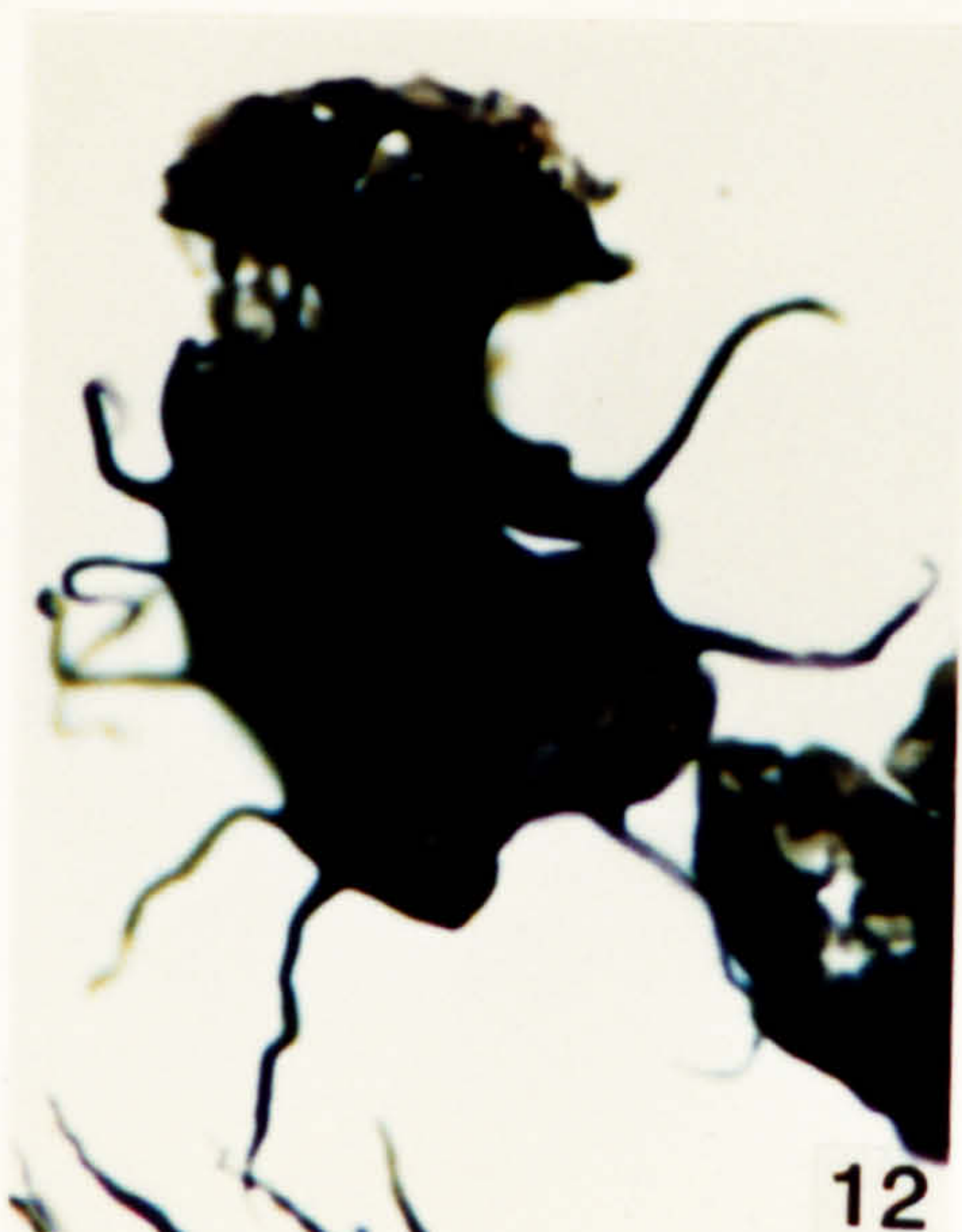
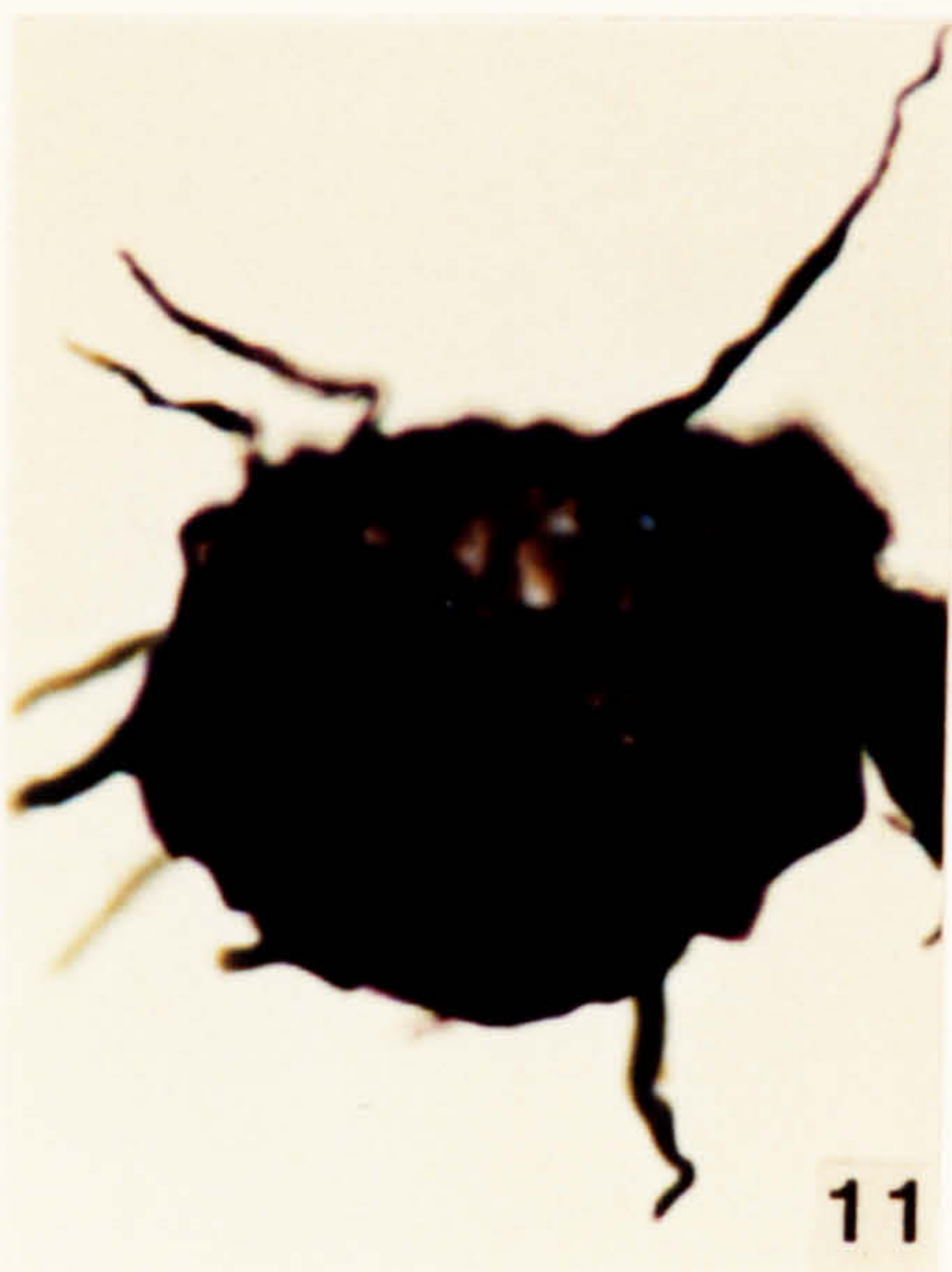
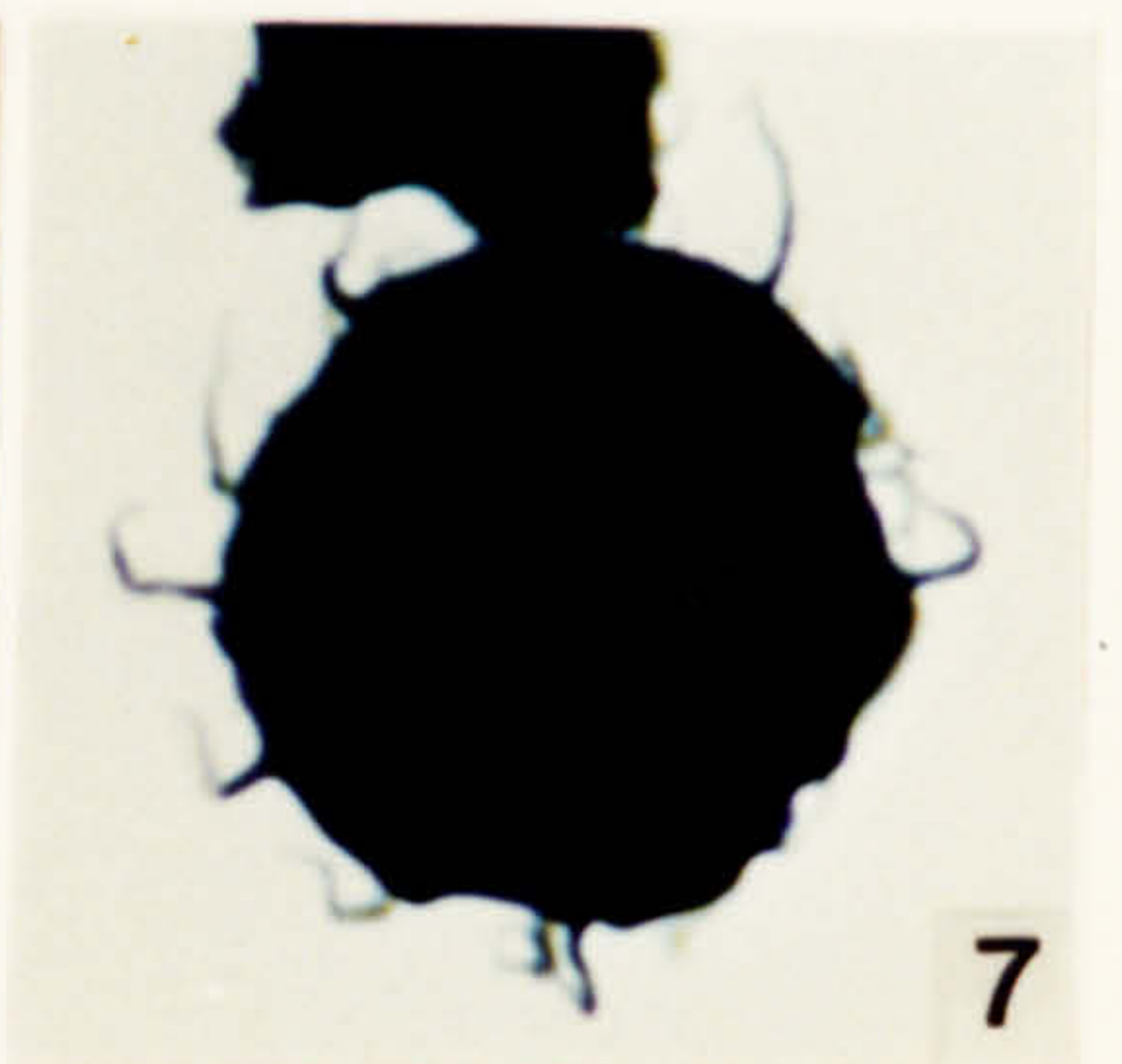
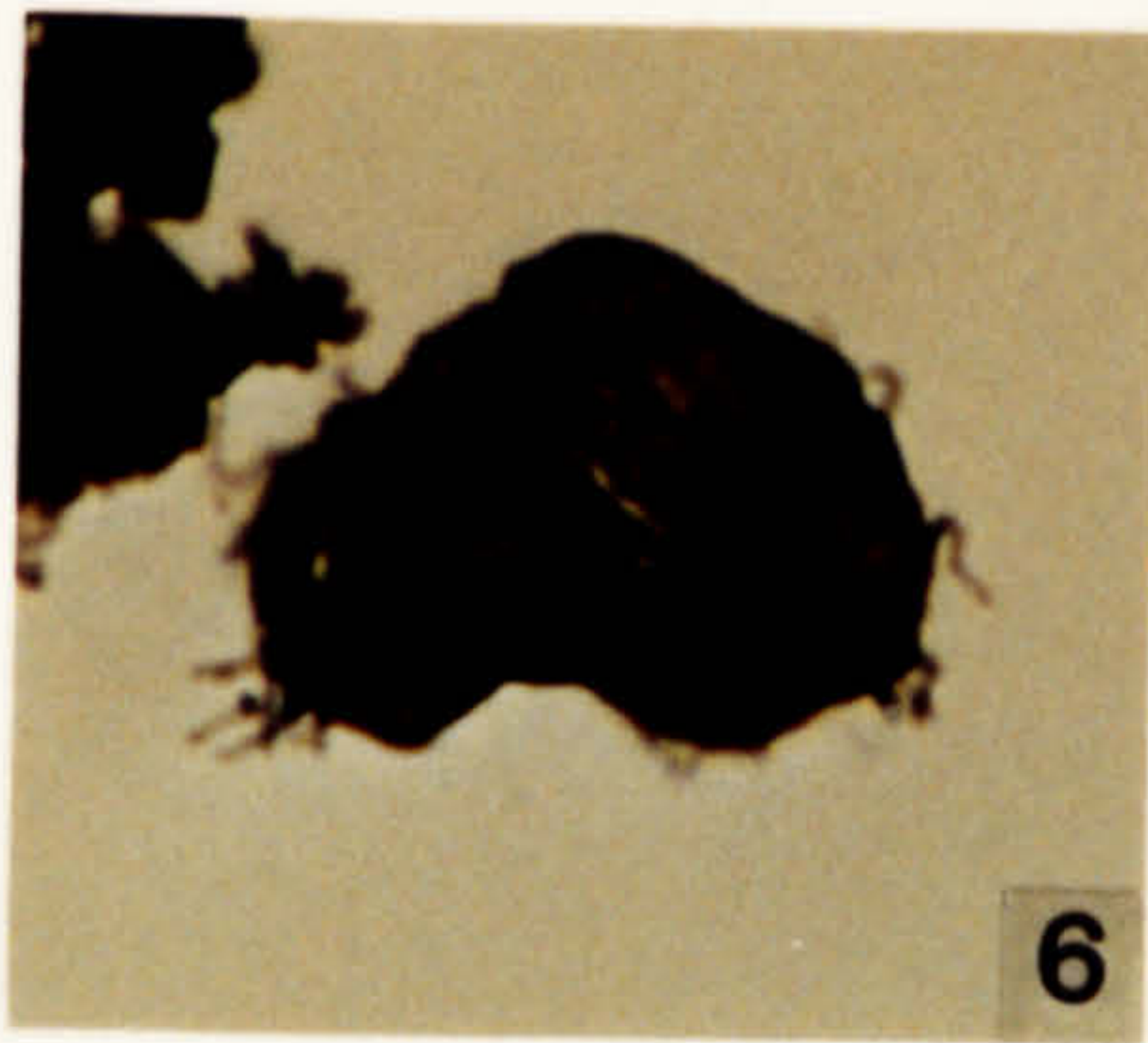
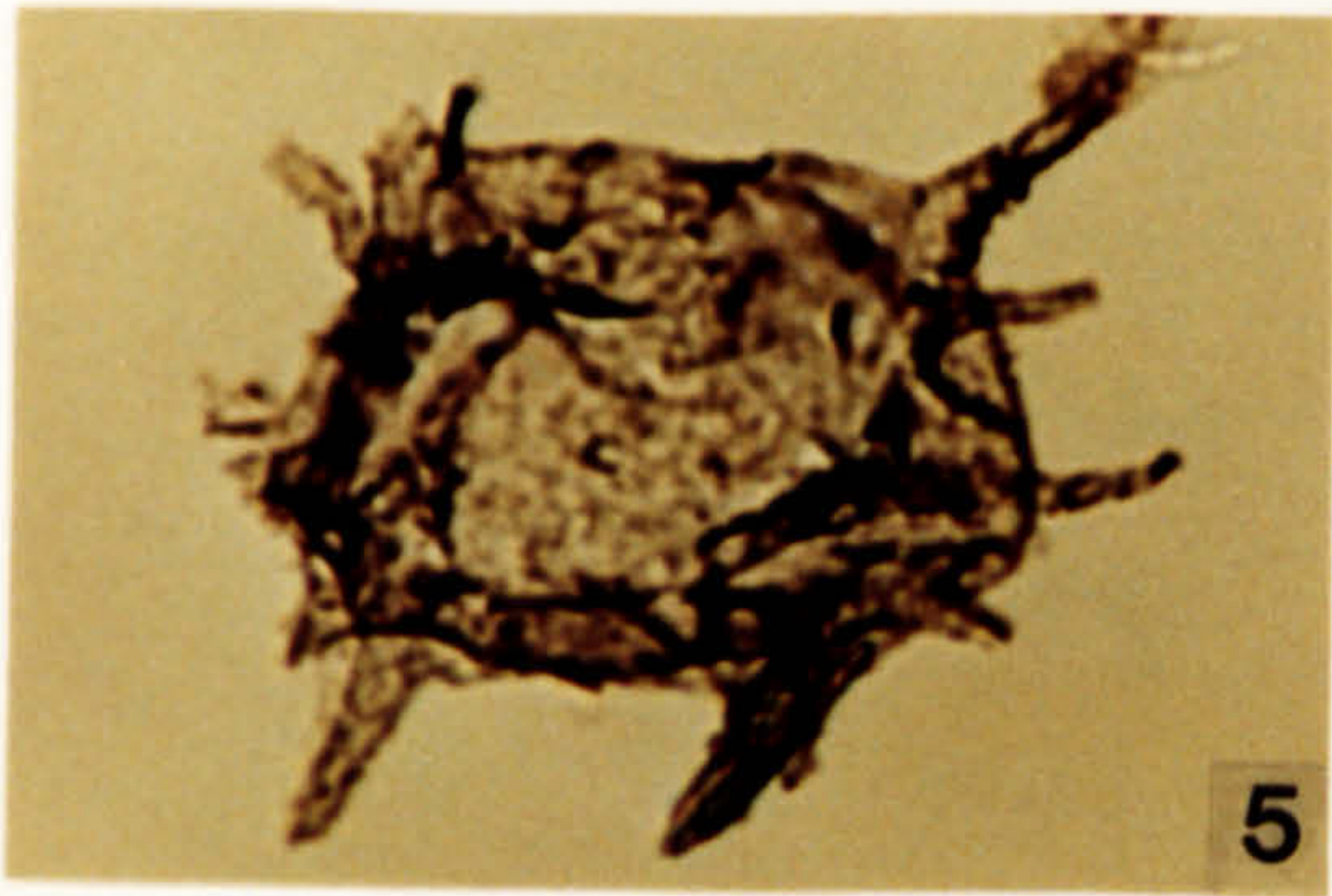
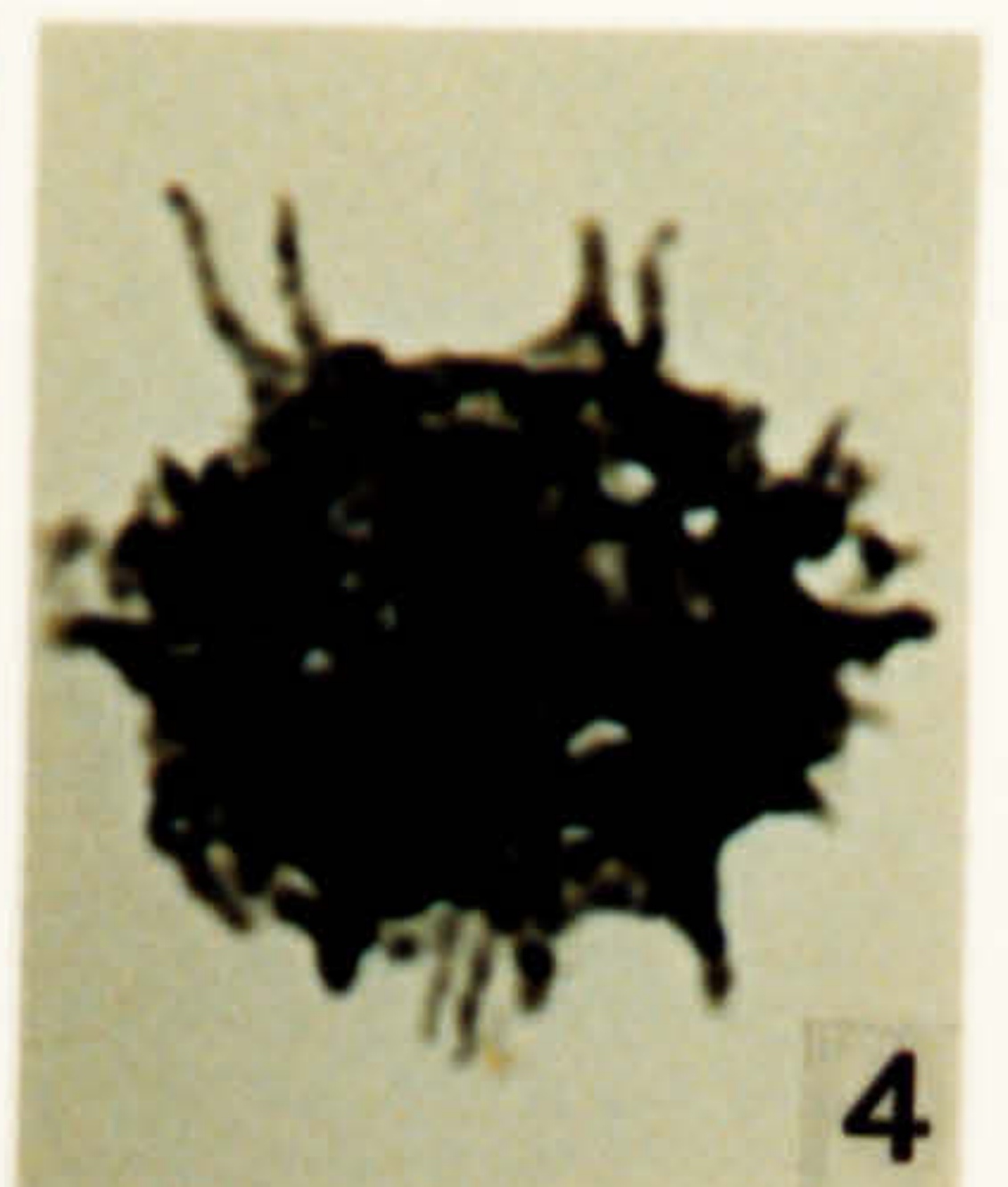
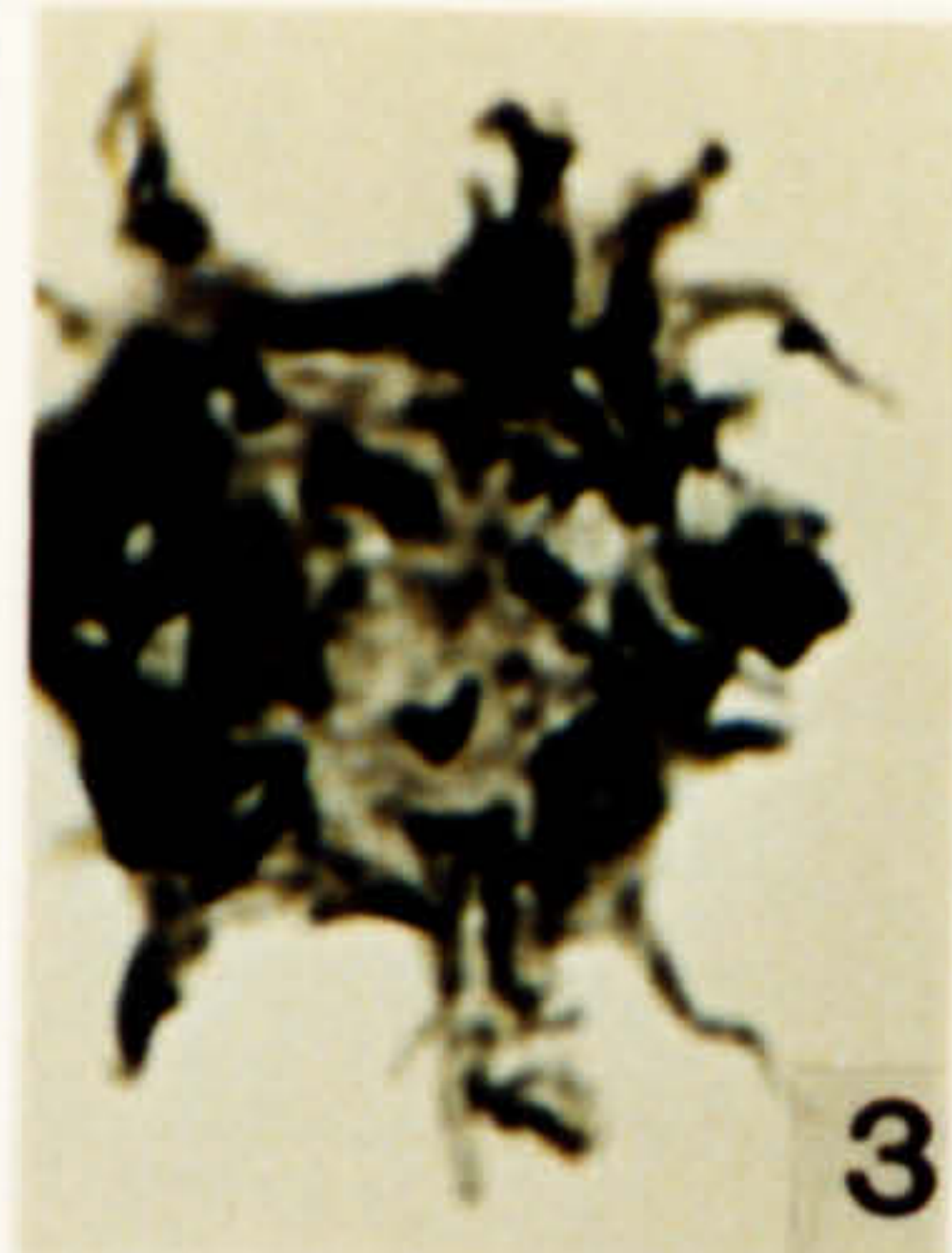
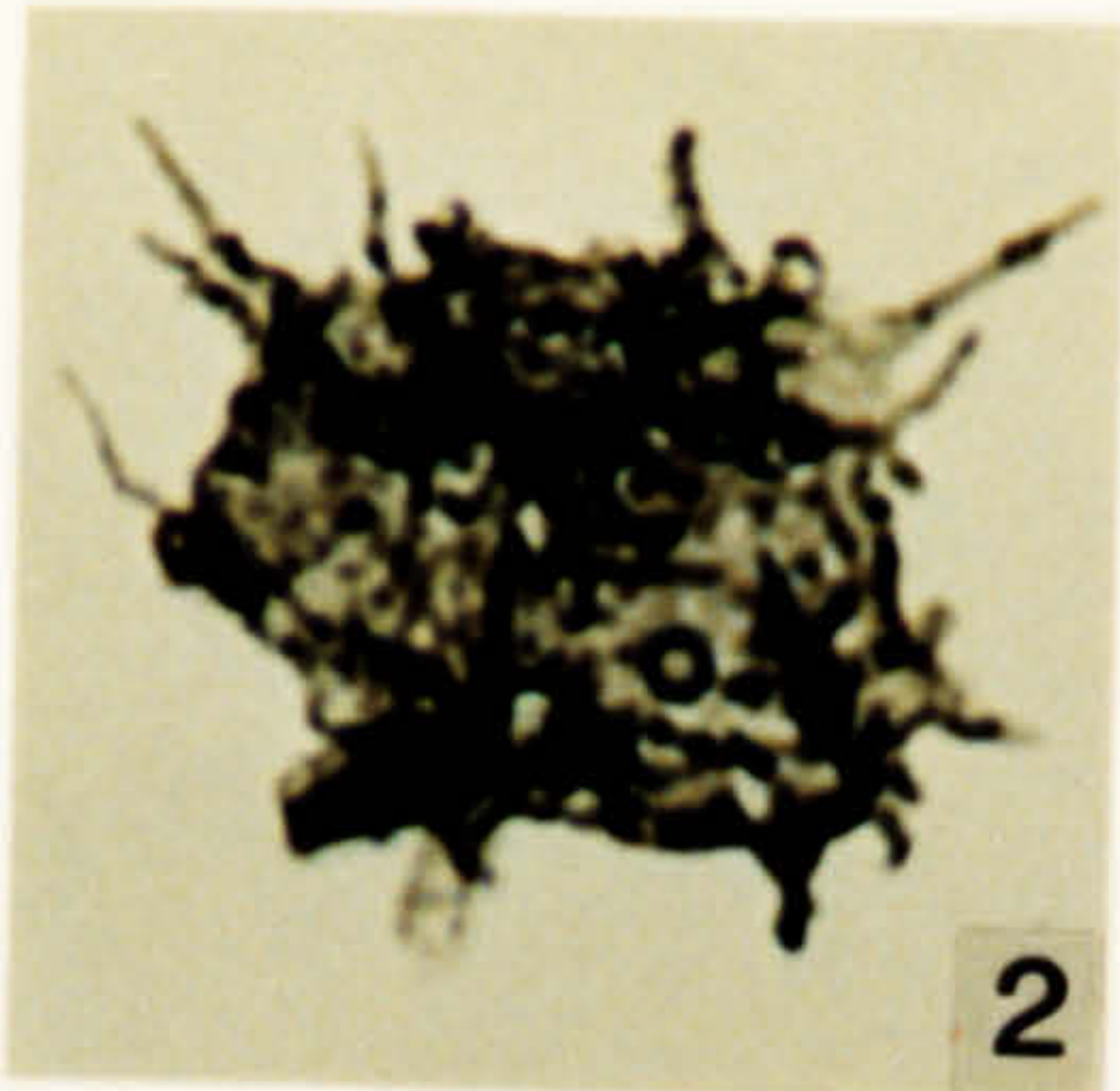
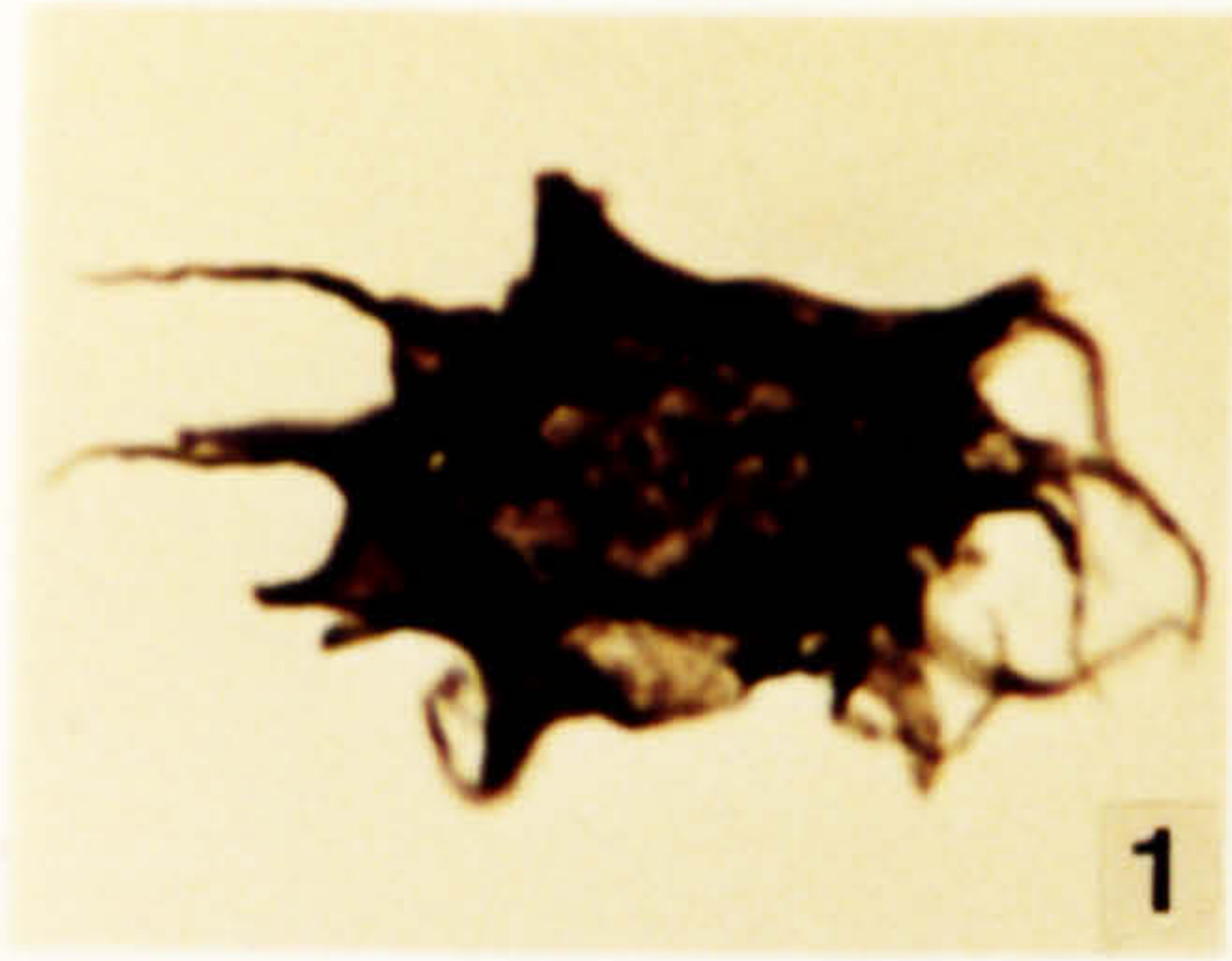


**Plate 14.**

**Acritarchs from the Fezouata Formation, Arenig in age.**

1. *Acanthodiacrodium constrictum* (Deunff) Downie & Sarjeant 1965. DW 303, 2-1, F21\1.
2. *Actinodissus rectinerve* (Burmann) comb. nov. DJ 107, 2-1, K13\1.
3. *Actinodissus rectinerve* (Burmann) comb. nov. DJ 107, 2-1, P33\4.
4. *Actinodissus rectinerve* (Burmann) comb. nov. DJ 107, 2-1, N32\2.
5. *Actinodissus* sp. 2. JW 5, FS-1, D8\2.
6. *Actinodissus* sp. DW 294, 2-1, G30\1.
7. *Baltisphaeridium hirsutoides* (Eisenack) Eisenack 1959. DW 303, 2-1, X24\1.
8. *Arbusculidinium filamentosum* (Vavrdova) Vavrdova 1972. JW 5, 2-1, H35\4.
9. *Arbusculidinium filamentosum* (Vavrdova) Vavrdova 1972. DJ 107, 2-2, V16\3.
10. *Arbusculidinium filamentosum* (Vavrdova) Vavrdova 1972. DJ 107, 2-1, M27\4.
11. *Baltisphaeridium longispinosum* subsp. *delicatum* Turner 1984. DW 294, 2-1, R30\4.
12. *Baltisphaeridium longispinosum* subsp. *delicatum* Turner 1984. DW 294, 2-1, F29\1.
13. *Baltisphaeridium* sp. DW 303, 2-1, H13\3.

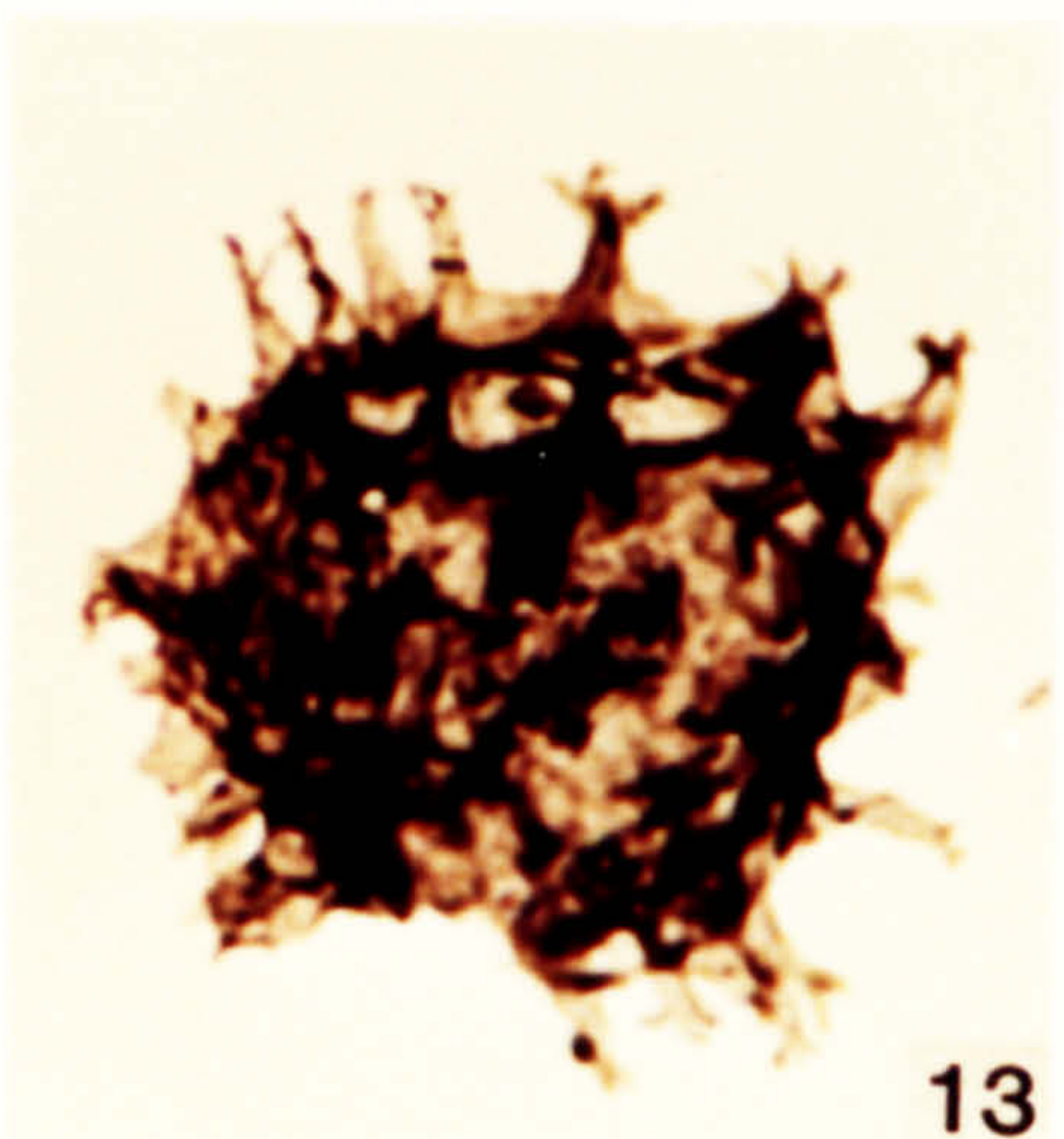
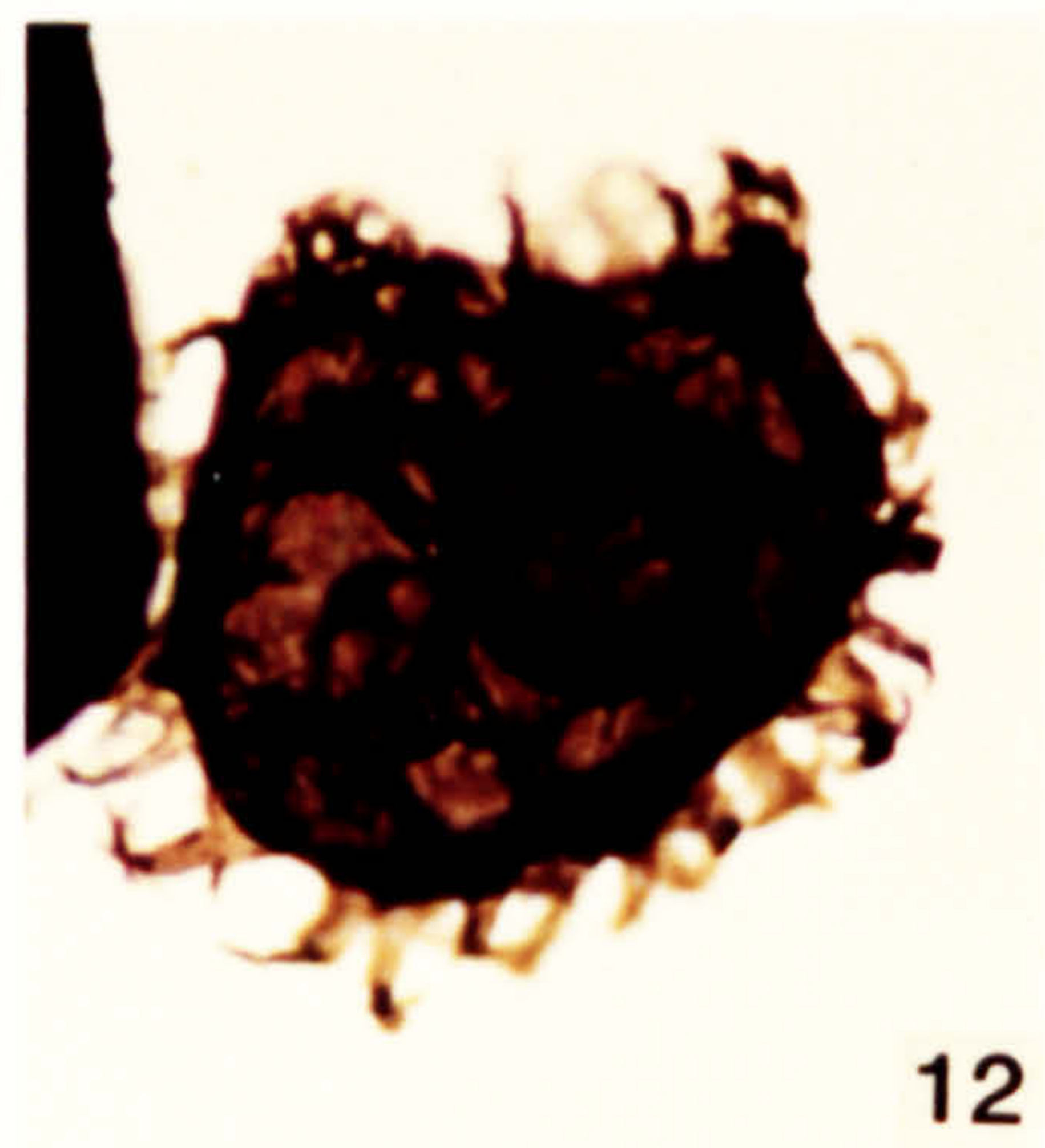
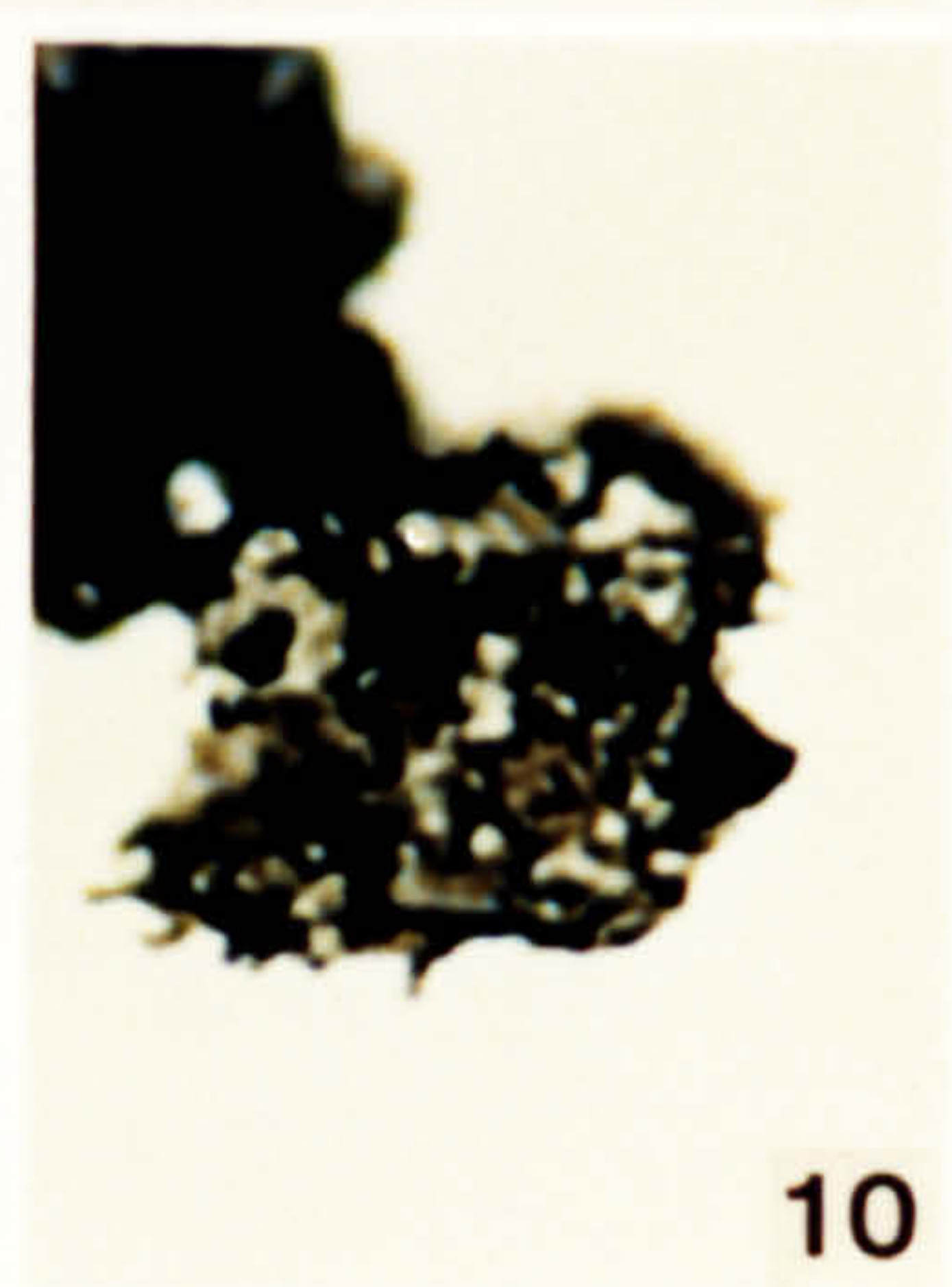
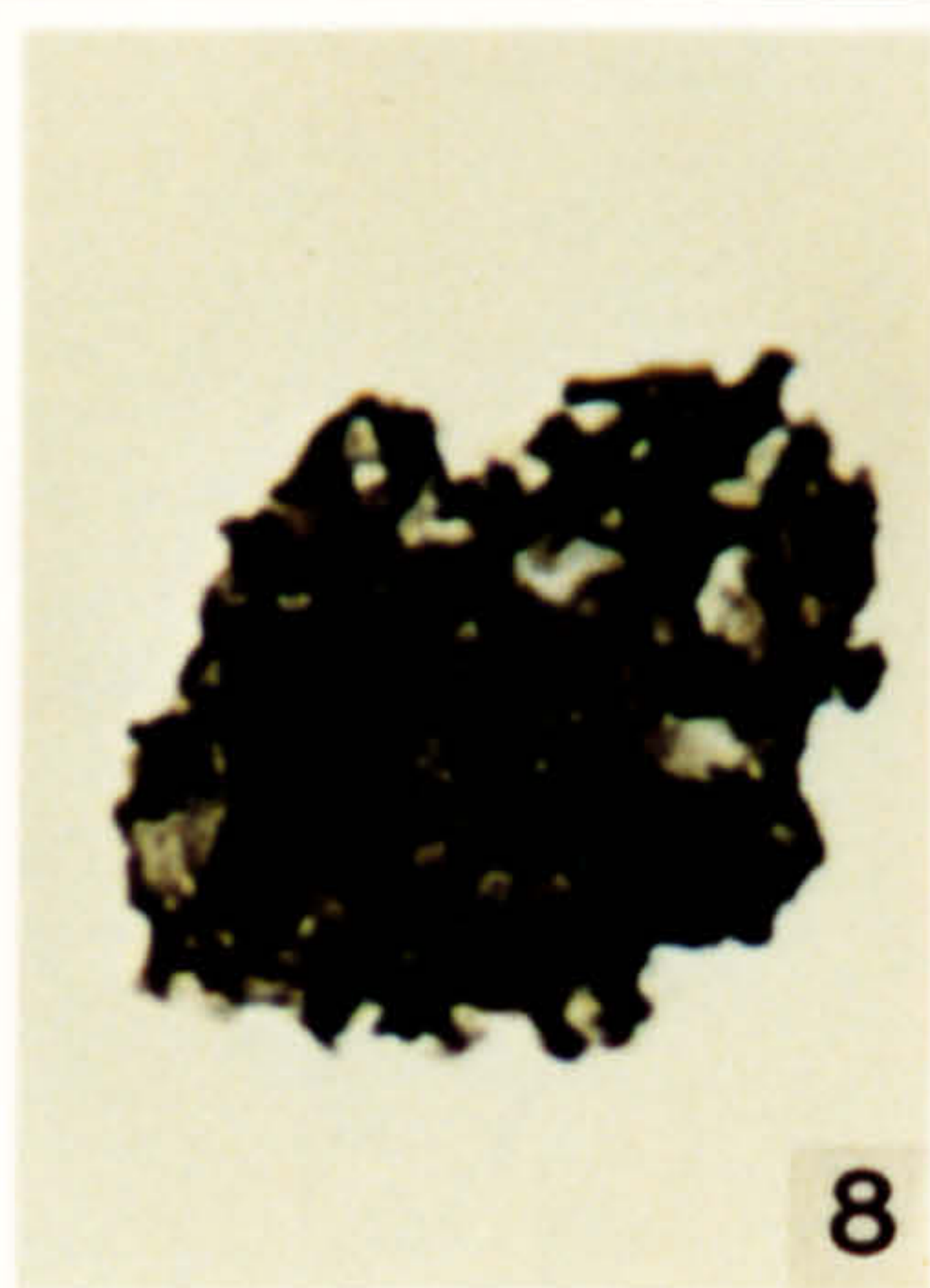
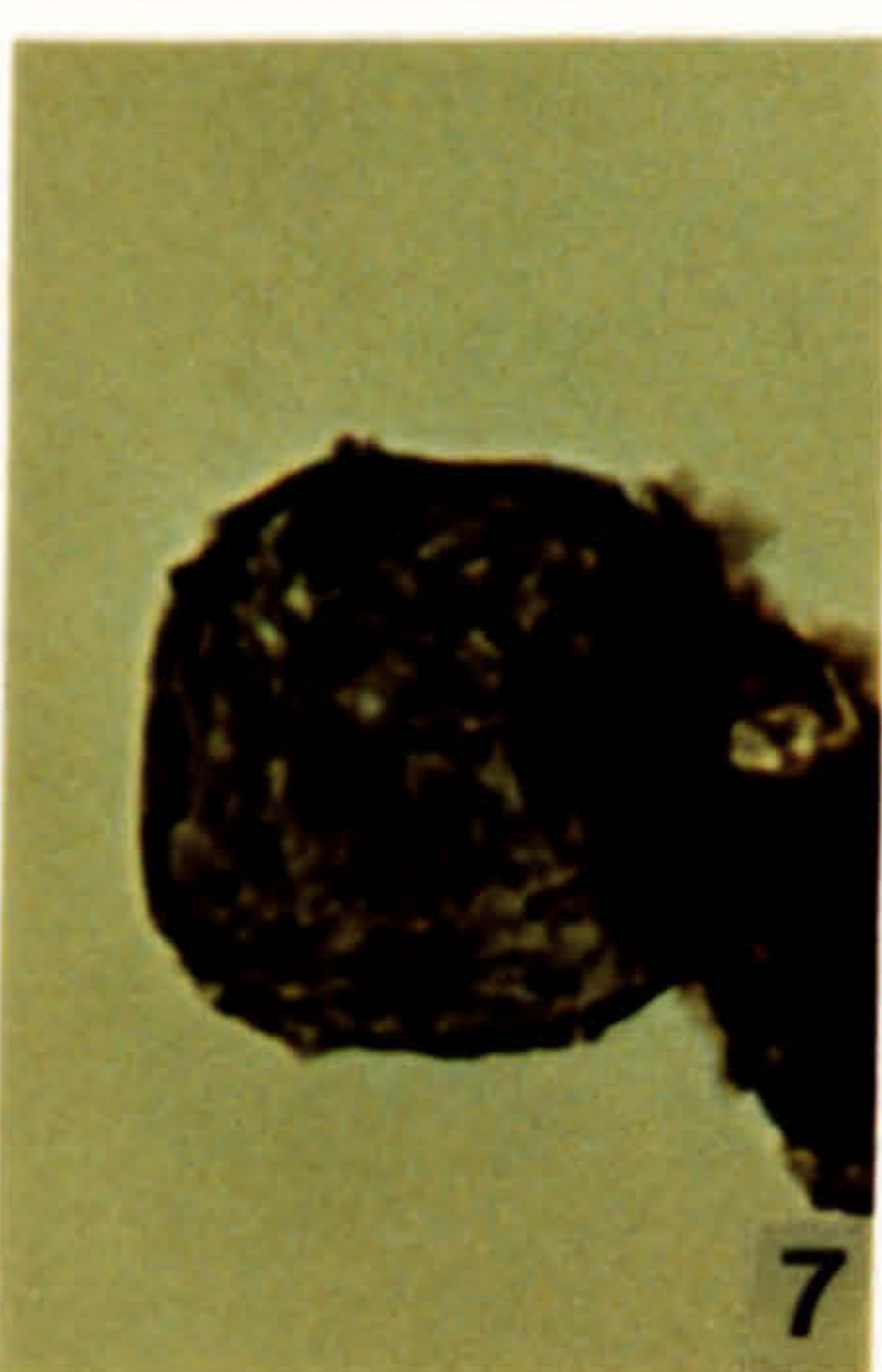
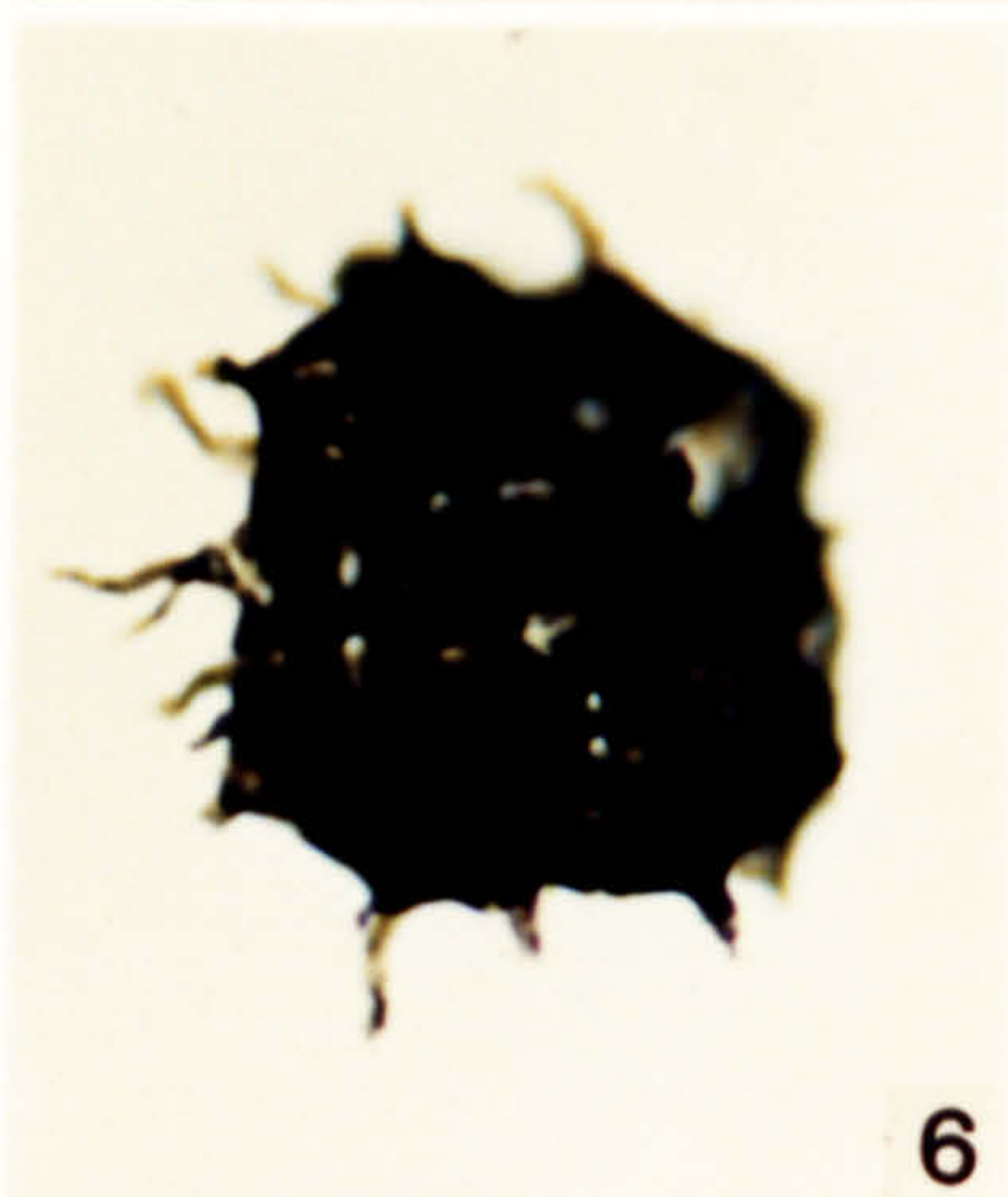
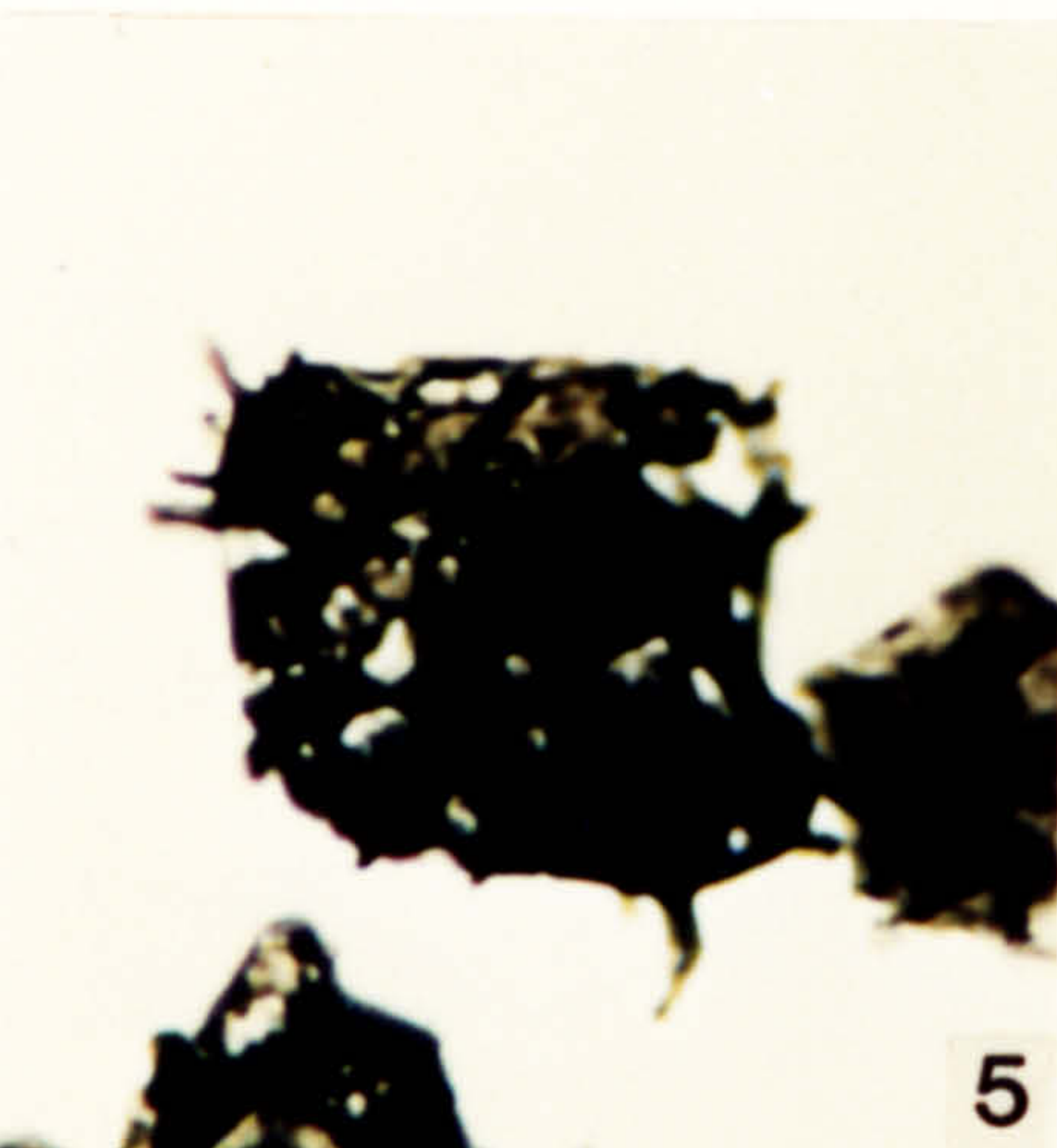
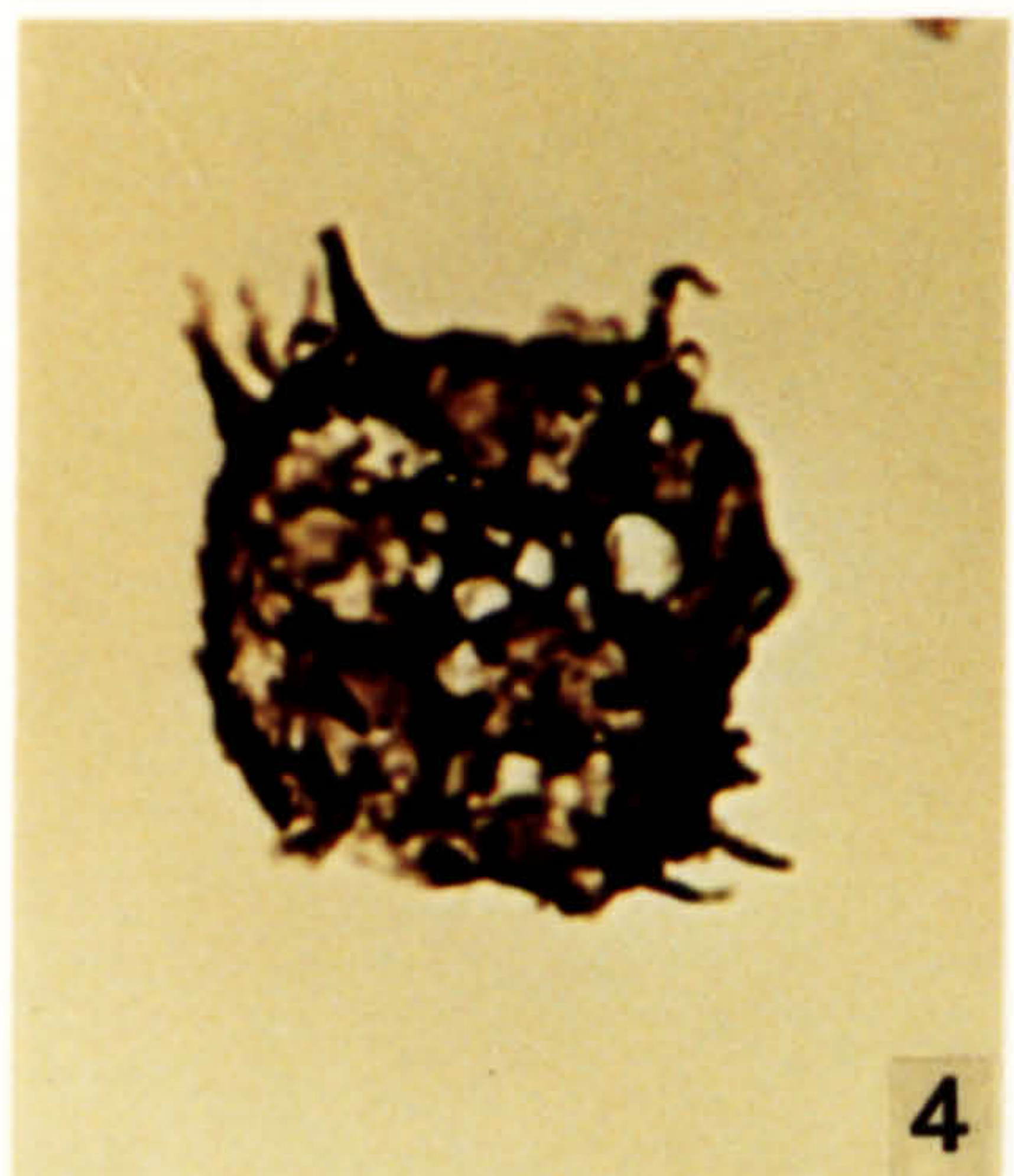
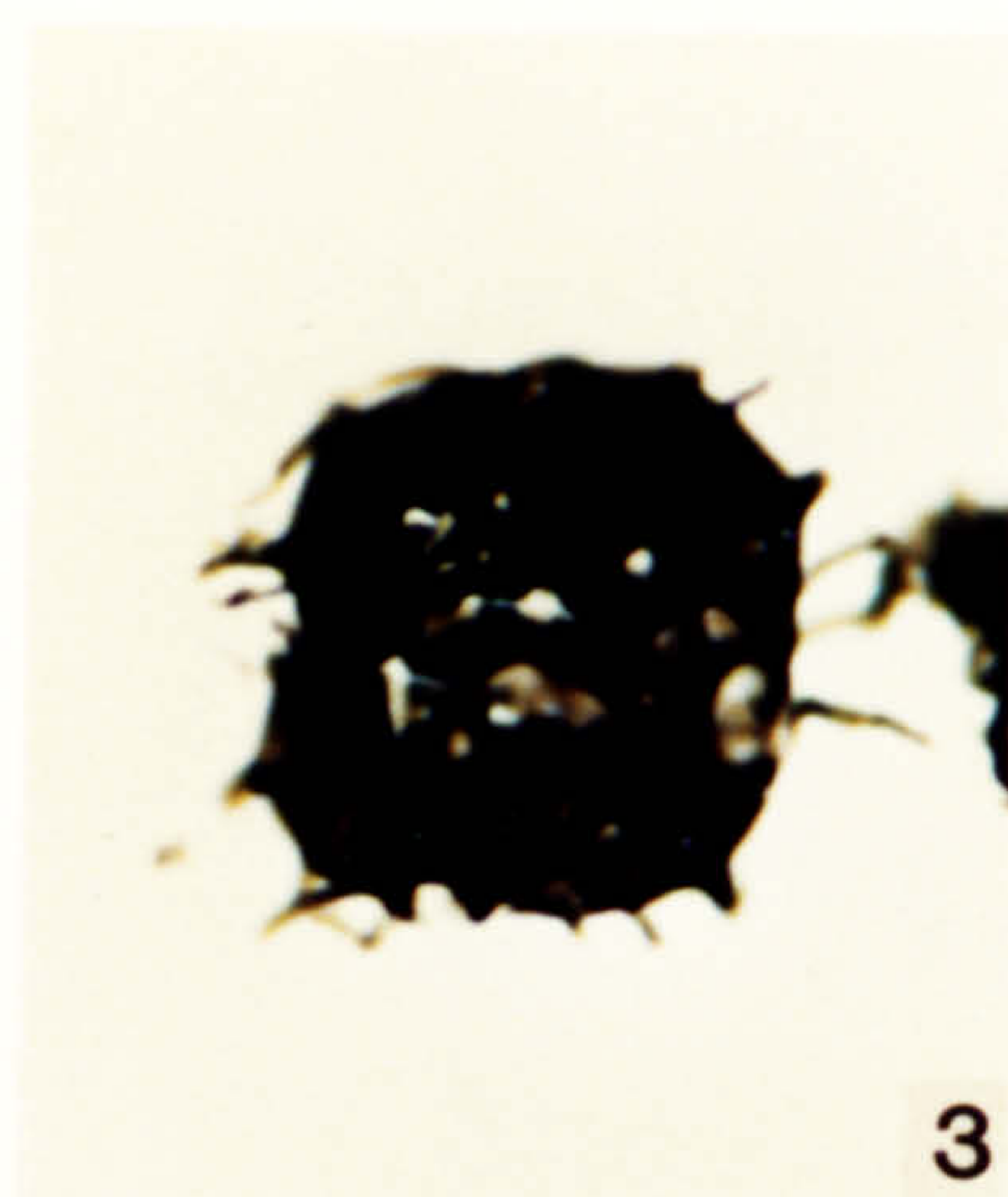
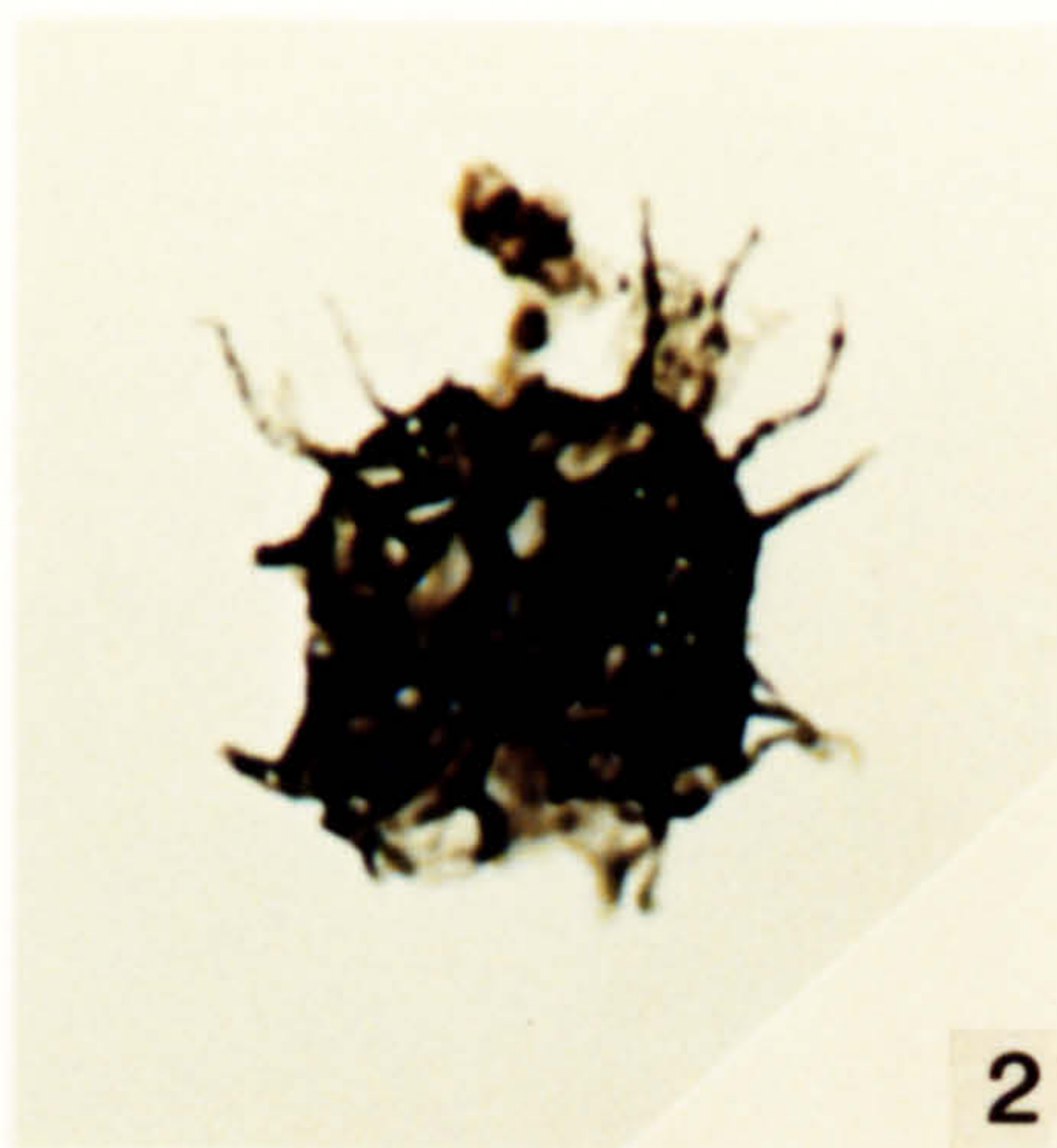
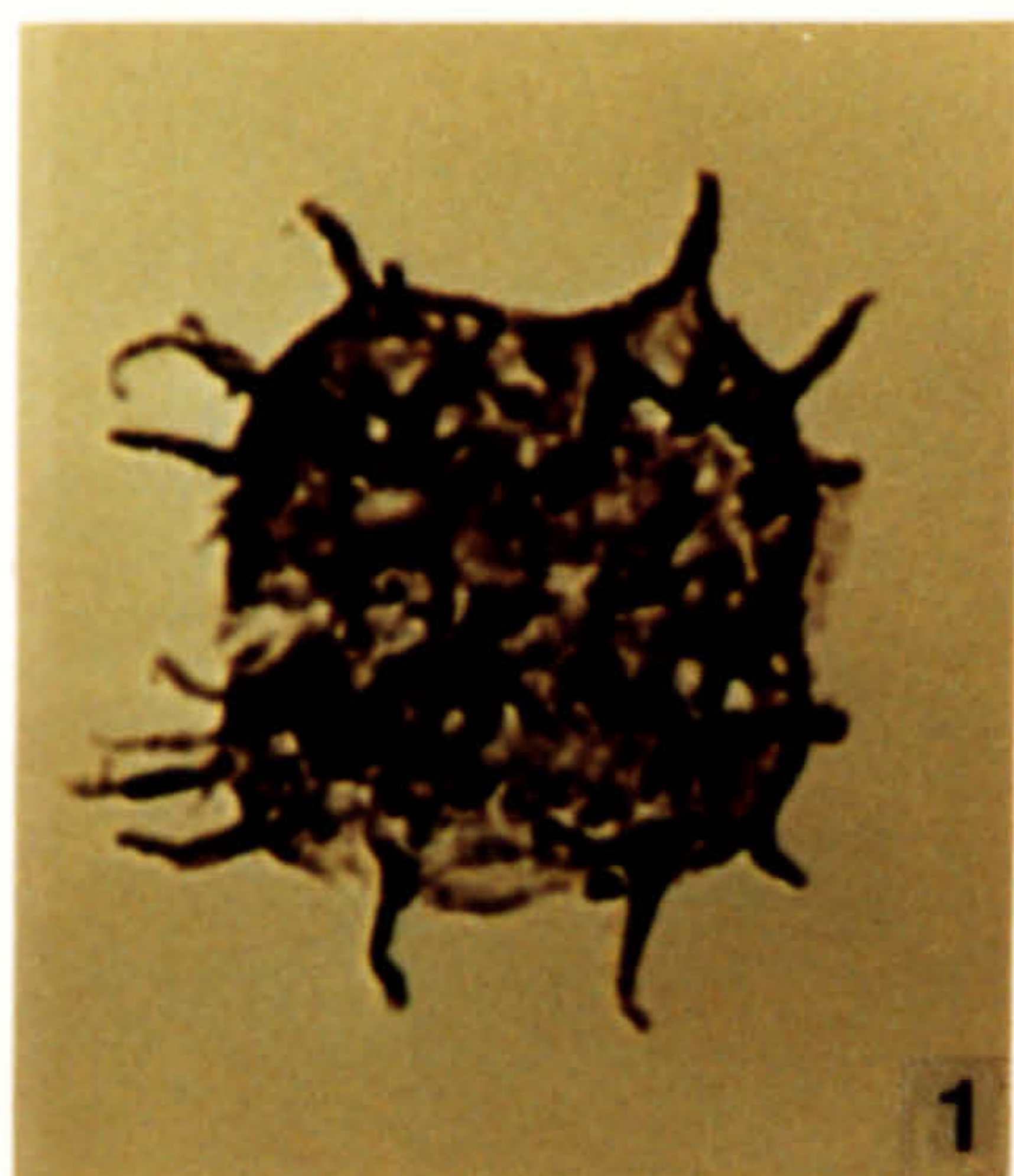
PLATE 14



## **Plate 15.**

**Acritarchs from the Fezouata Formation, Arenig in age.**

- 1. *Coryphidium cf. tadlum* Cramer & Diez 1976. JW 5, FS-1, L13\3.**
- 2. *Coryphidium cf. tadlum* Cramer & Diez 1976. DW 291, FS-1, K10\3.**
- 3. *Coryphidium cf. tadlum* Cramer & Diez 1976. DW 307, FS-1, C14\3.**
- 4. *Coryphidium cf. tadlum* Cramer & Diez 1976. JW 5, FS-1, O20\2.**
- 5. *Coryphidium cf. tadlum* Cramer & Diez 1976. DJ 107, 2-2, H23\2.**
- 6. *Coryphidium cf. tadlum* Cramer & Diez 1976. DW 307, FS-1, D33\1.**
- 7. *Coryphidium almohadillum?* Cramer & Diez 1976. JW 5, FS-1, O31\1.**
- 8. *Coryphidium ramiferum?* Cramer & Diez 1976. DW 262, 1-1, W29\4.**
- 9. *Coryphidium sp.* DW 294, 2-1, E27\-.**
- 10. *Coryphidium sp.* DJ 107, 2-2, G29\2.**
- 11. *Comasphaeridium denseprocessum* Cramer & Diez 1977. DW 303, 2-1, P17\2.**
- 12. *Cymatogalae messaoudii* var A. DW 303, 2-1, H15\4.**
- 13. *Cymatogalae messaoudii* var A. DW 303, 2-1, G30\2.**



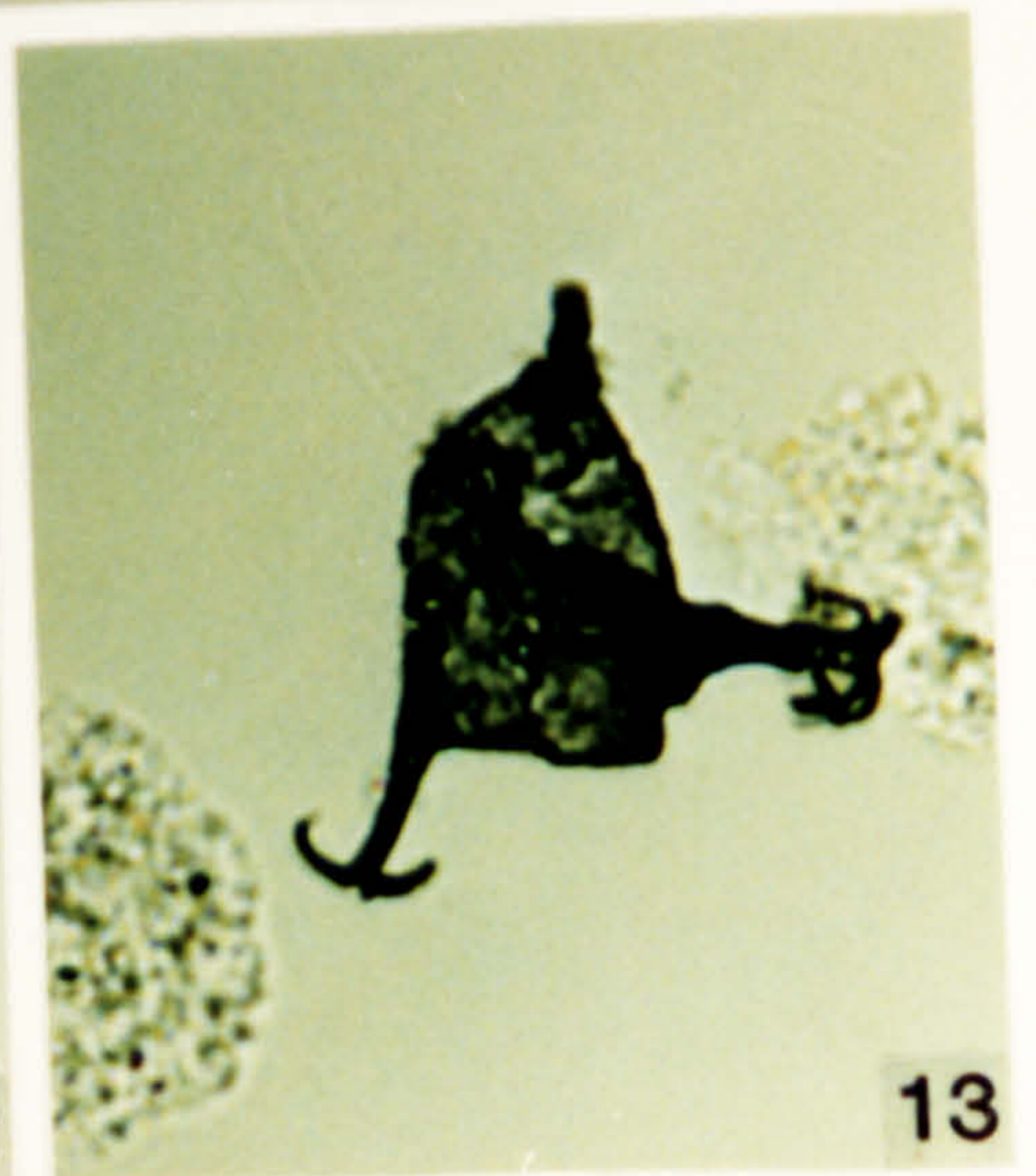
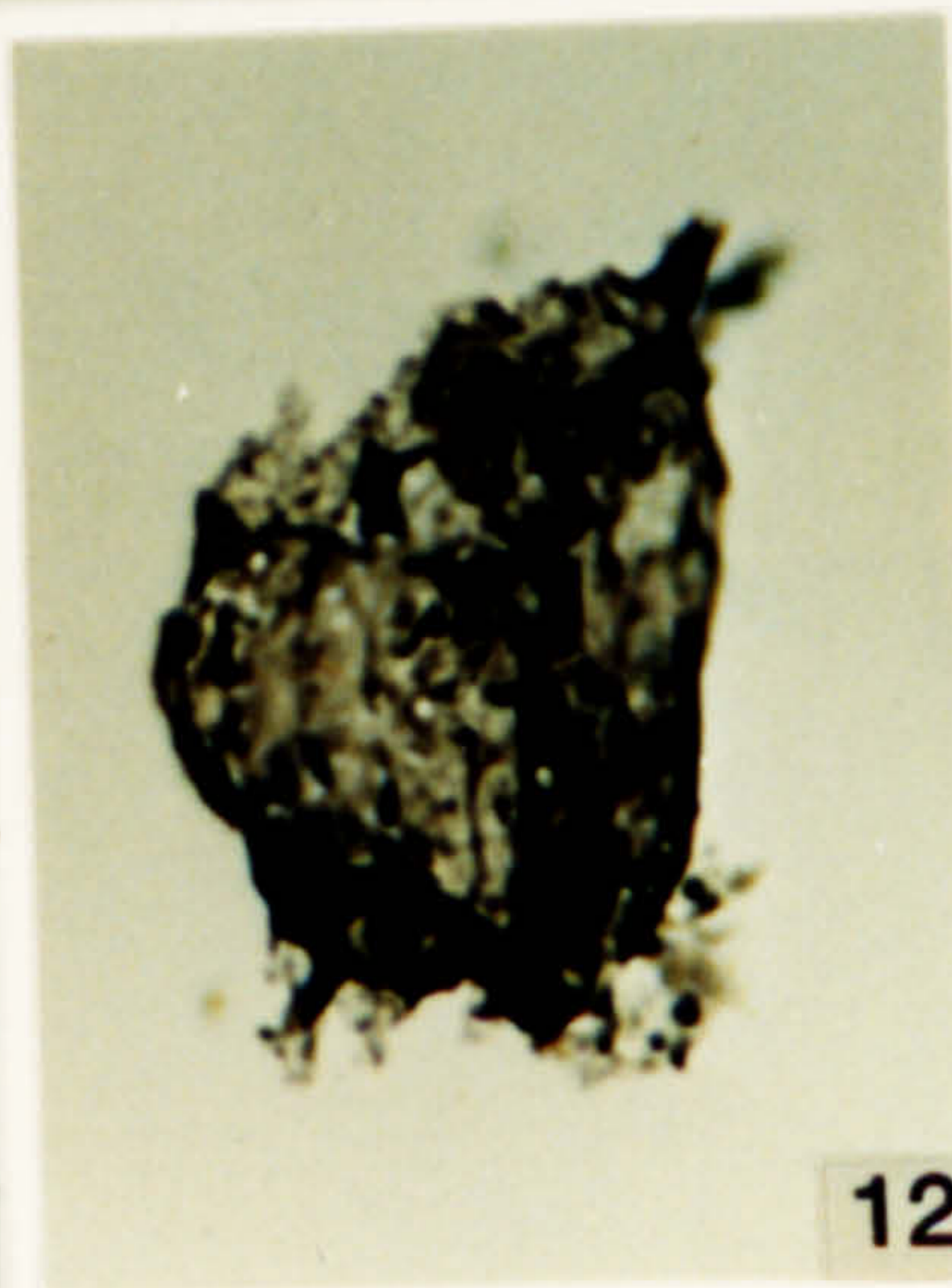
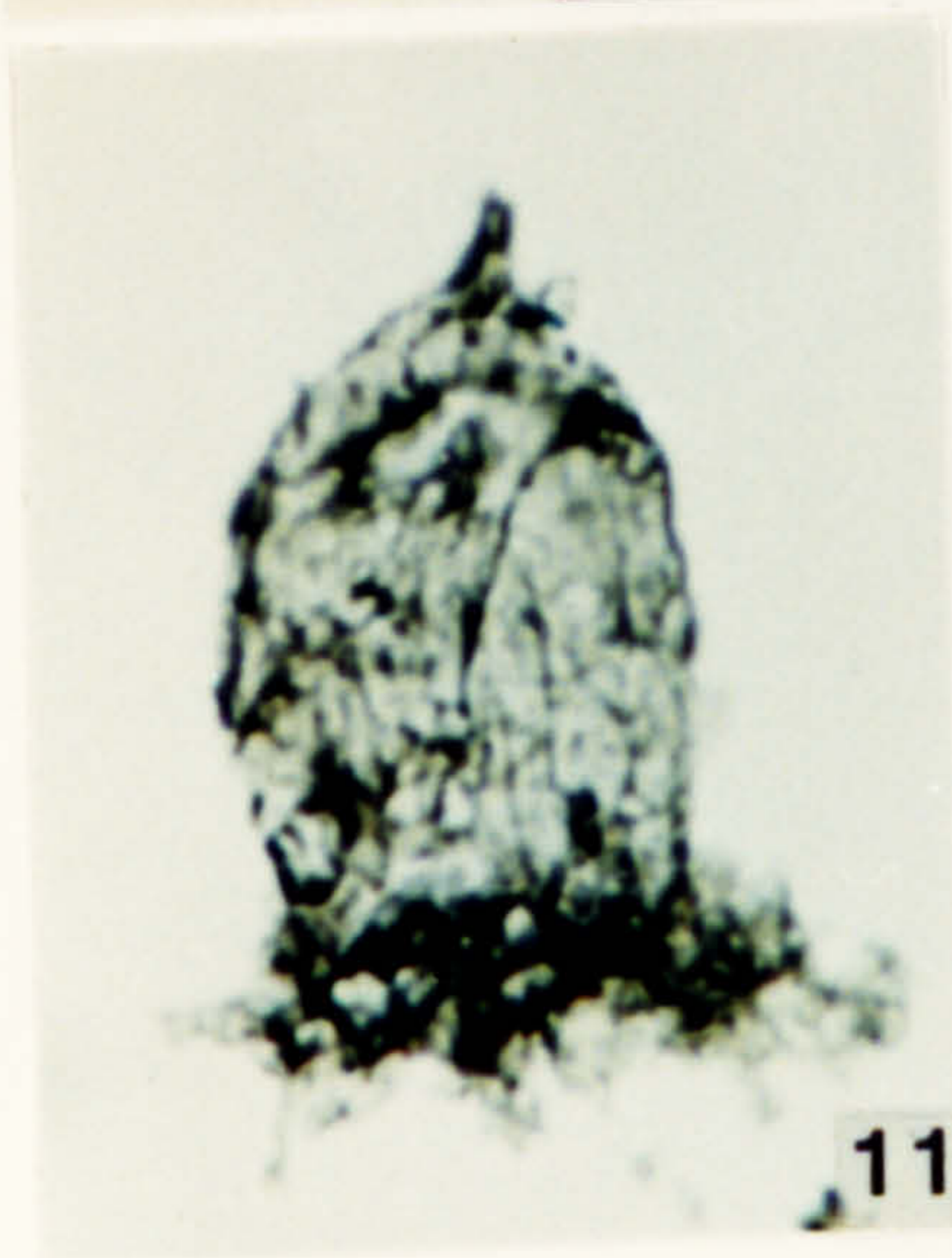
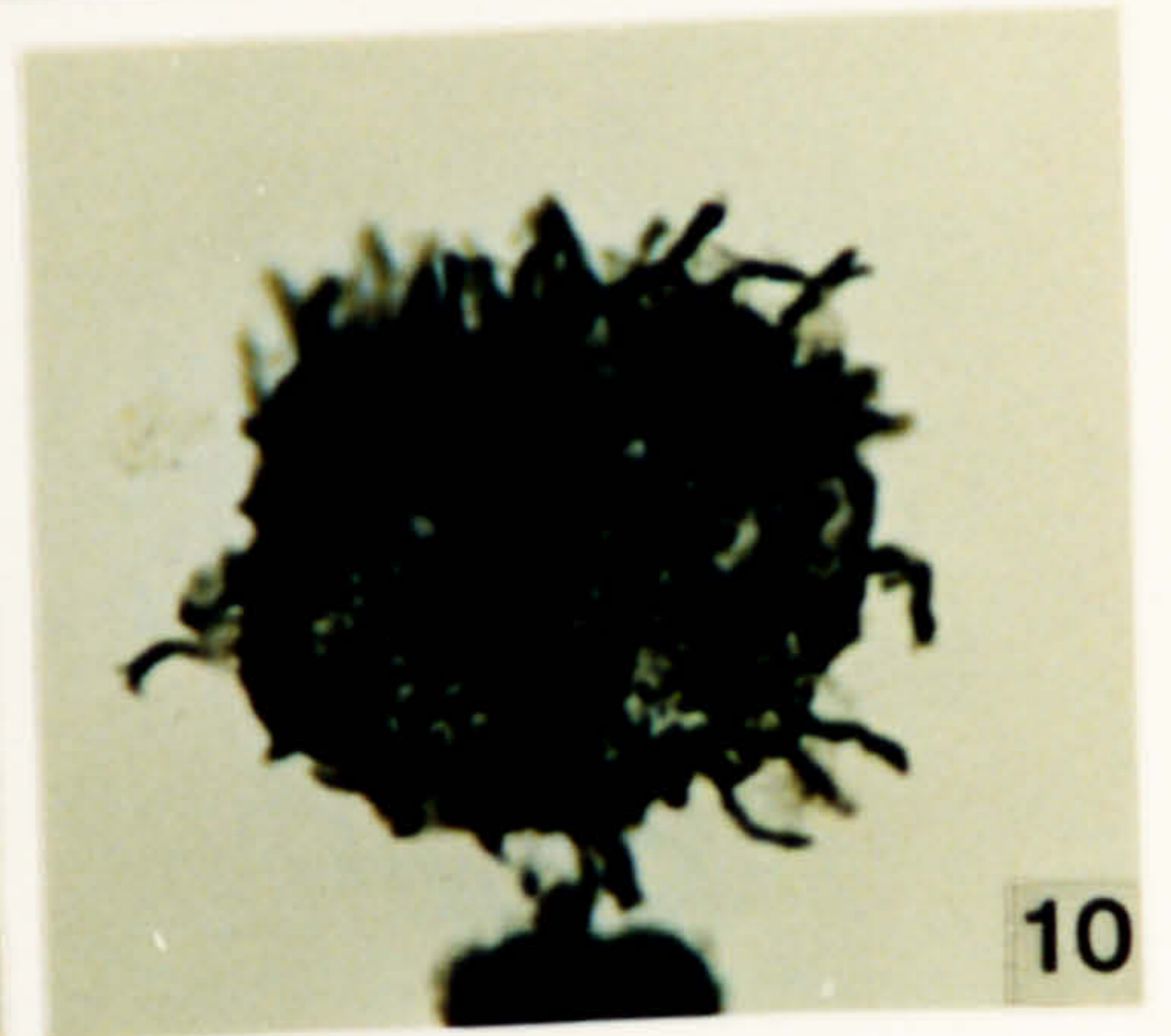
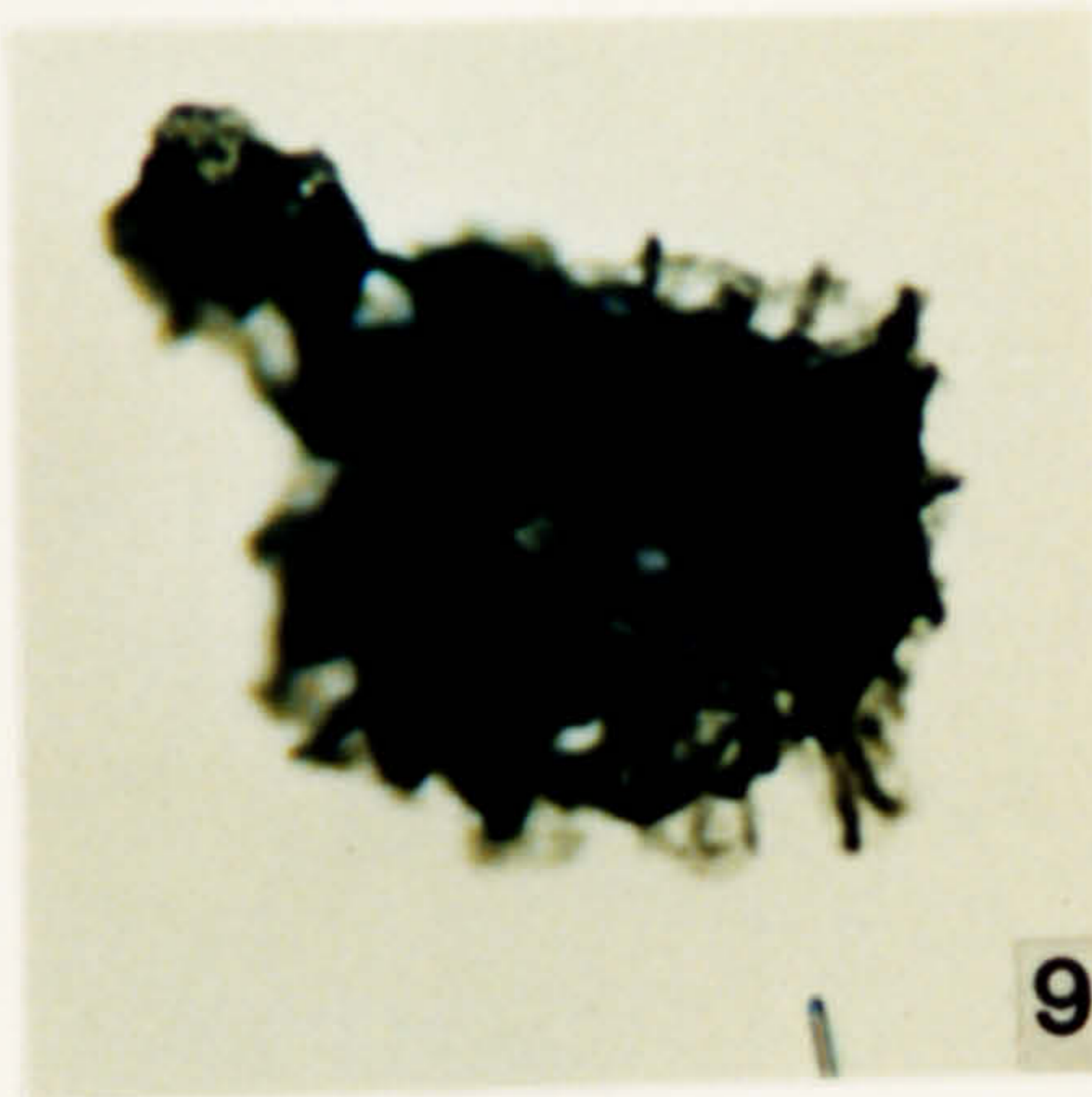
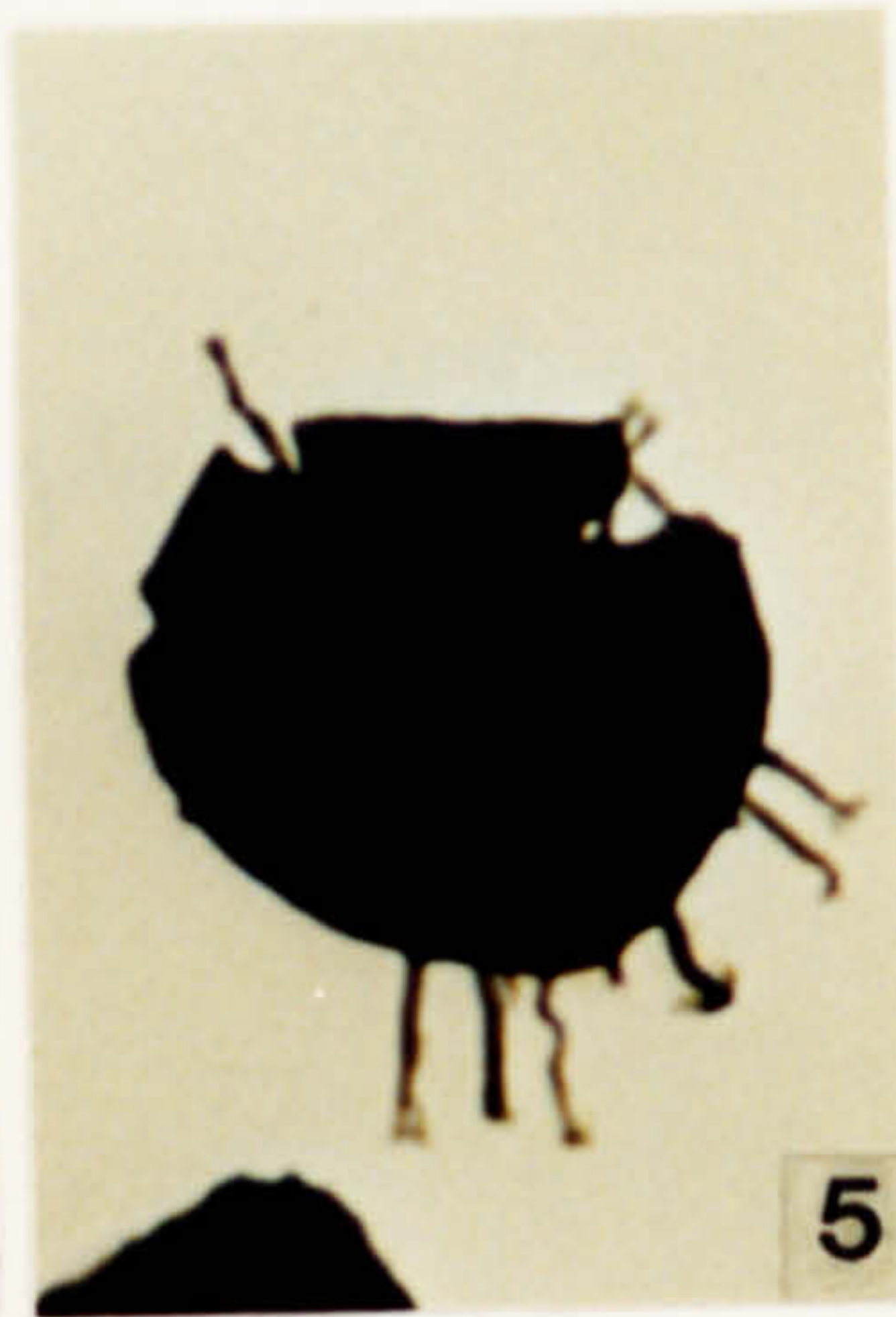
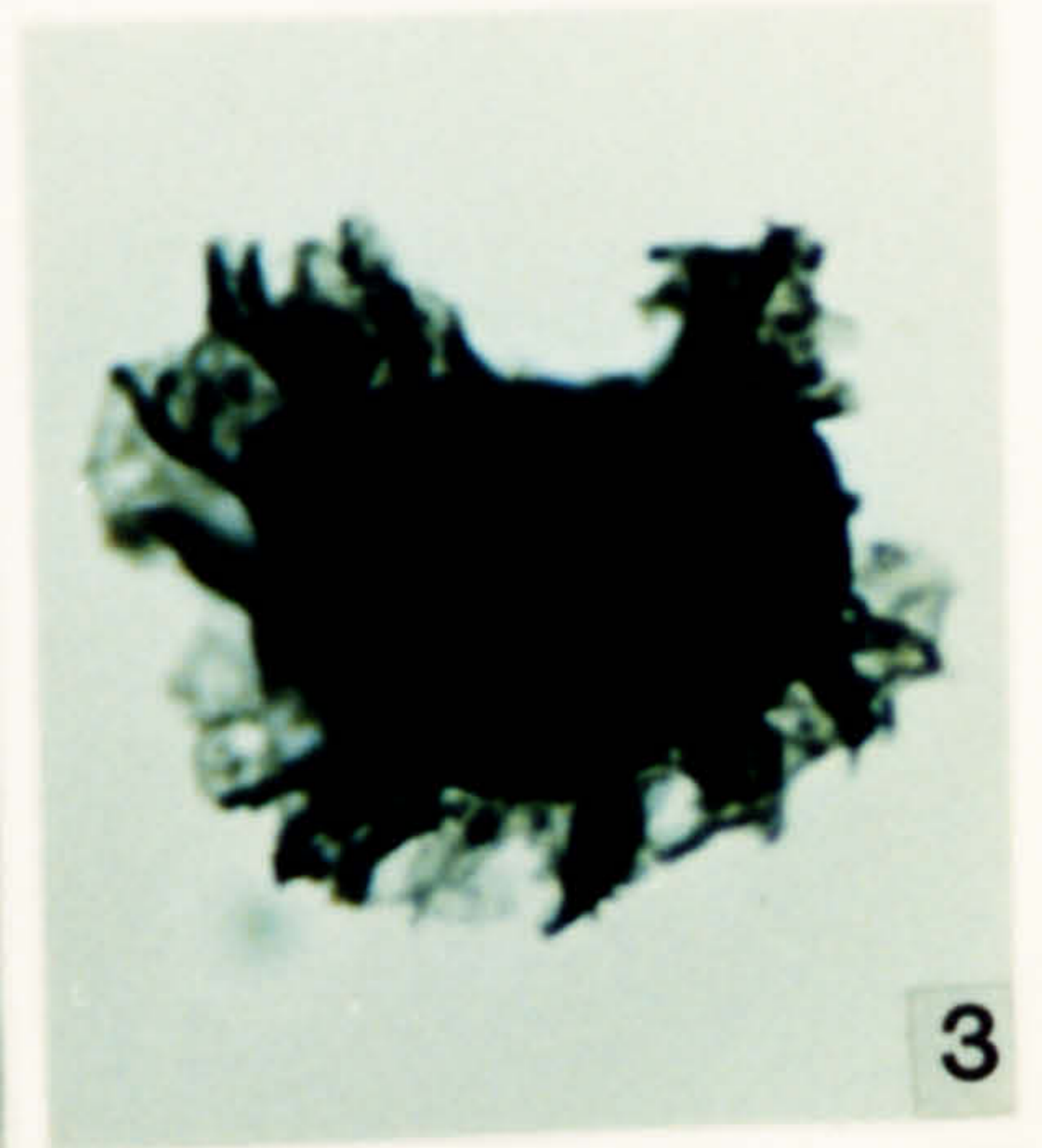
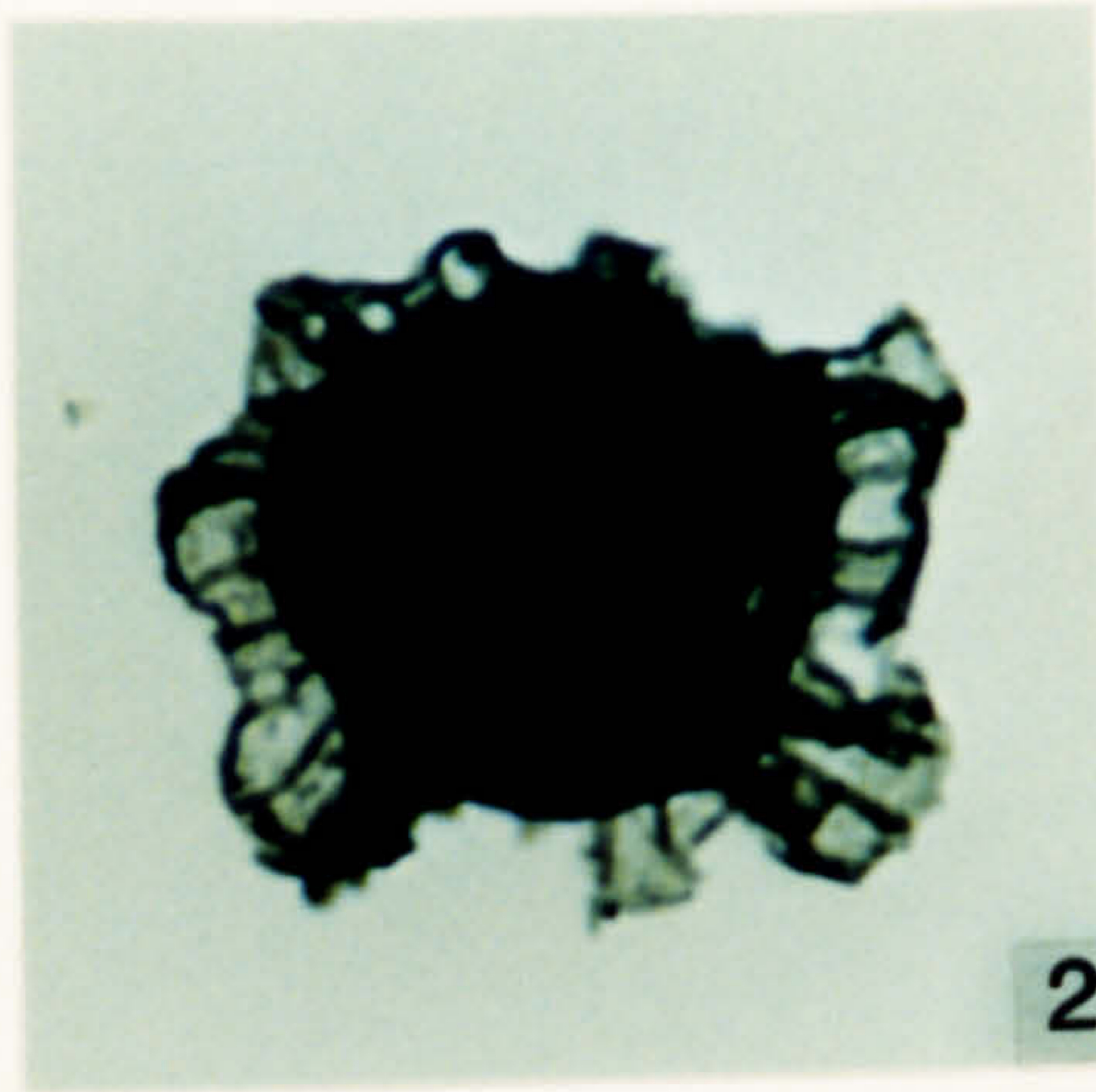
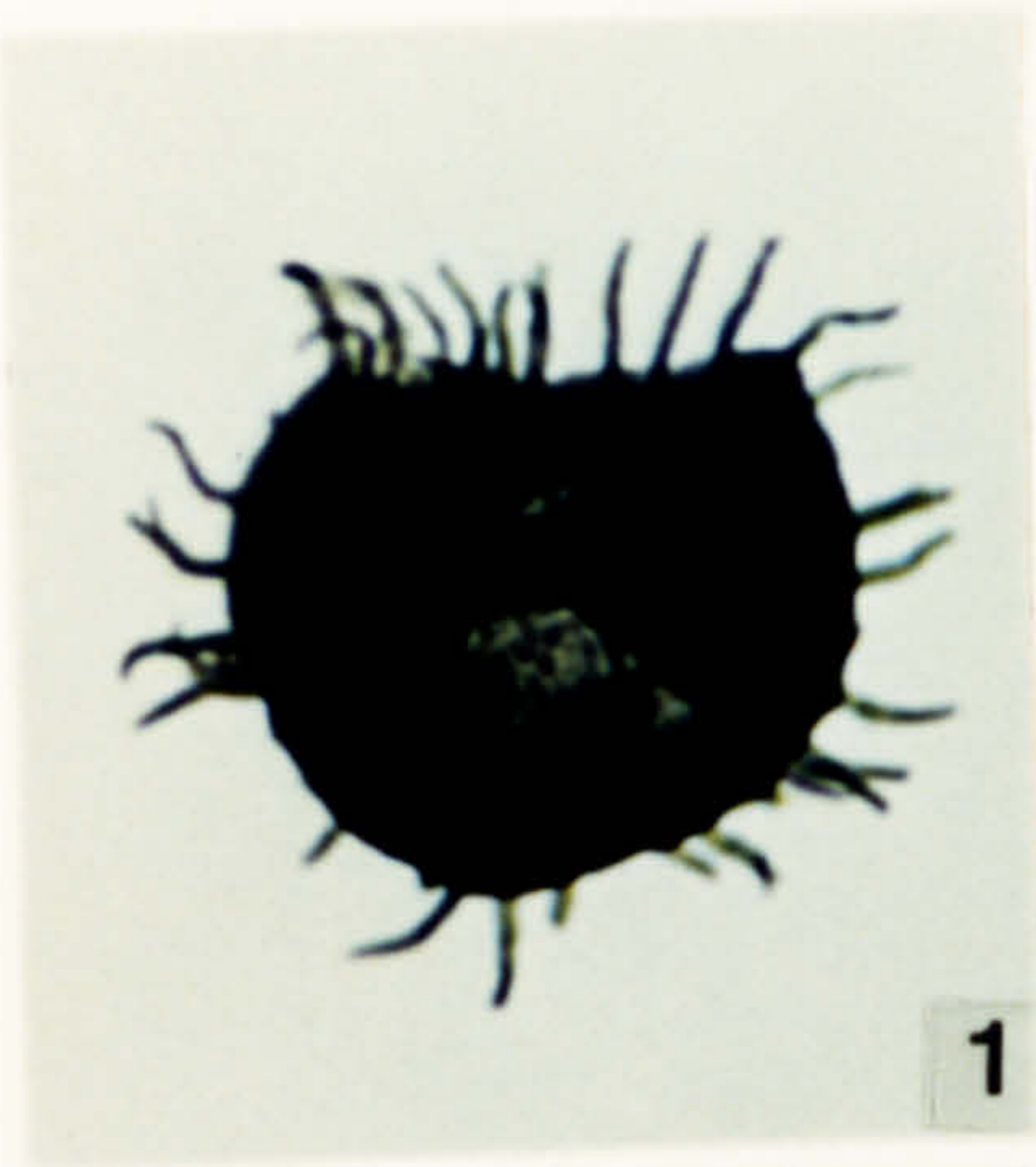


**Plate 16.**

**Acritarchs from the Fezouata Formation, Arenig in age.**

1. *Cymatiogalae multarea* (Deunff) Eisenack, Cramer & Diez. DW 303, 2-1, F10\3.
2. *Cymatiogalae velifera* (Downie) Martin 1969. DW 303, 2-1, W25\3.
3. *Cymatiogalae velifera* (Downie) Martin 1969. DW 303, 2-1, F20\4.
4. *Cymatiogalae deunffi?* Jardine *et al.* 1974. DJ 107, 2-1, R11\4.
5. *Cymatiogalae?* sp. DW 294, 2-2, G38\1.
6. *Cymatiogalae?* sp. DW 294, 2-1, Y12\1.
7. *Cymatiogalae?* sp. DW 294, 2-1, L16\2.
8. *Cymatiogalae?* sp. DW 294, 2-2, R29\3.
9. *Cymatiogalae* sp. DW 332, 2-1, L19\3.
10. *Cymatiogalae* sp. DW 332, 2-1, H16\4.
11. *Dicrodiacrodium ancoriforme* var. *minutum* Burmann 1968. JD 29, 2-1, G17\3.
12. *Dicrodiacrodium ancoriforme* var. *minutum* Burmann 1968. DW 307, FS-1, E5\1.
13. *Frankea sartbernardensis* (Martin) Colbath 1986. DW 262, 1-1, P35\2.

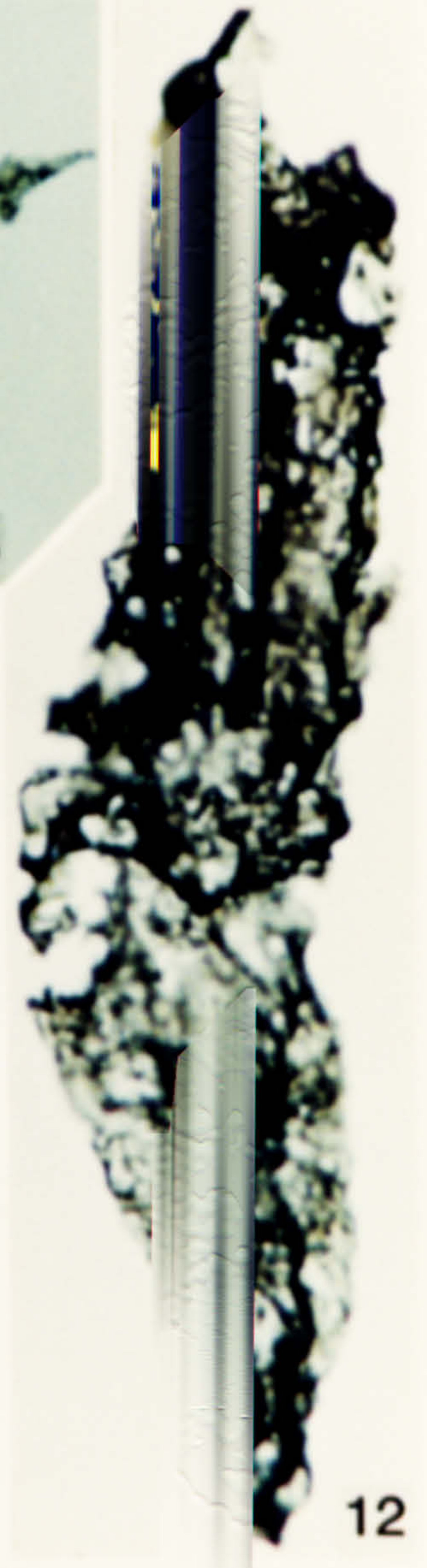
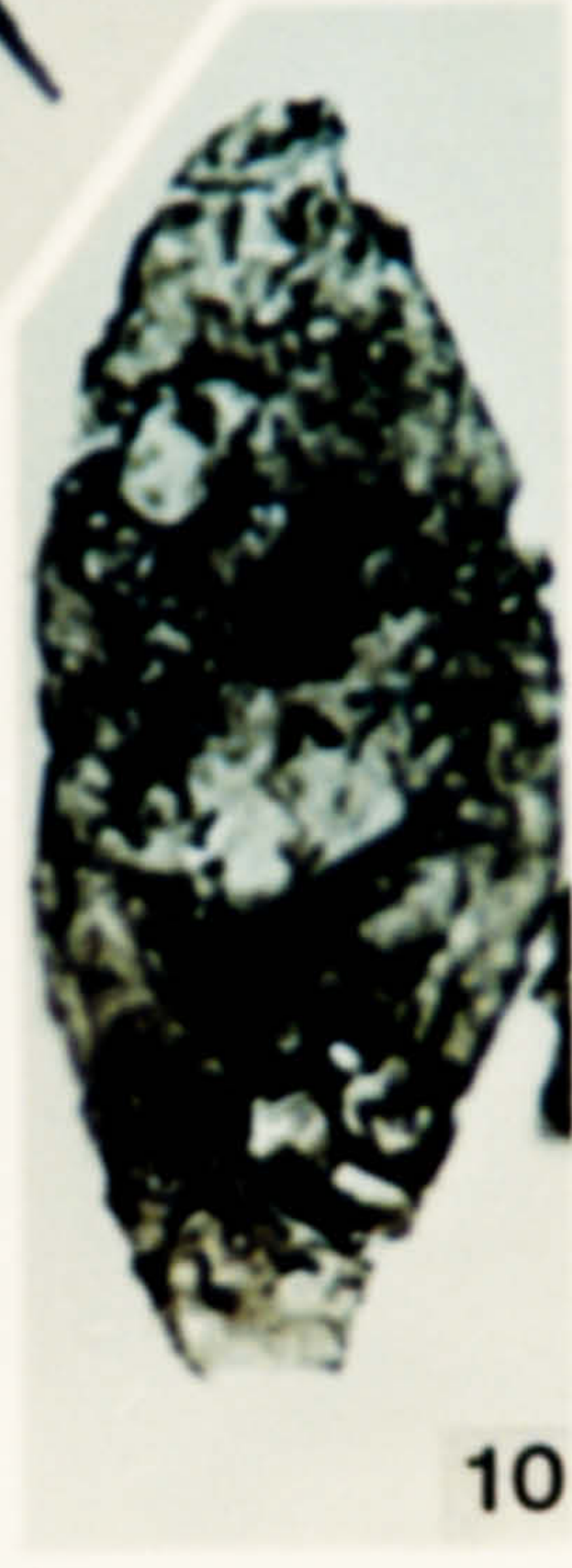
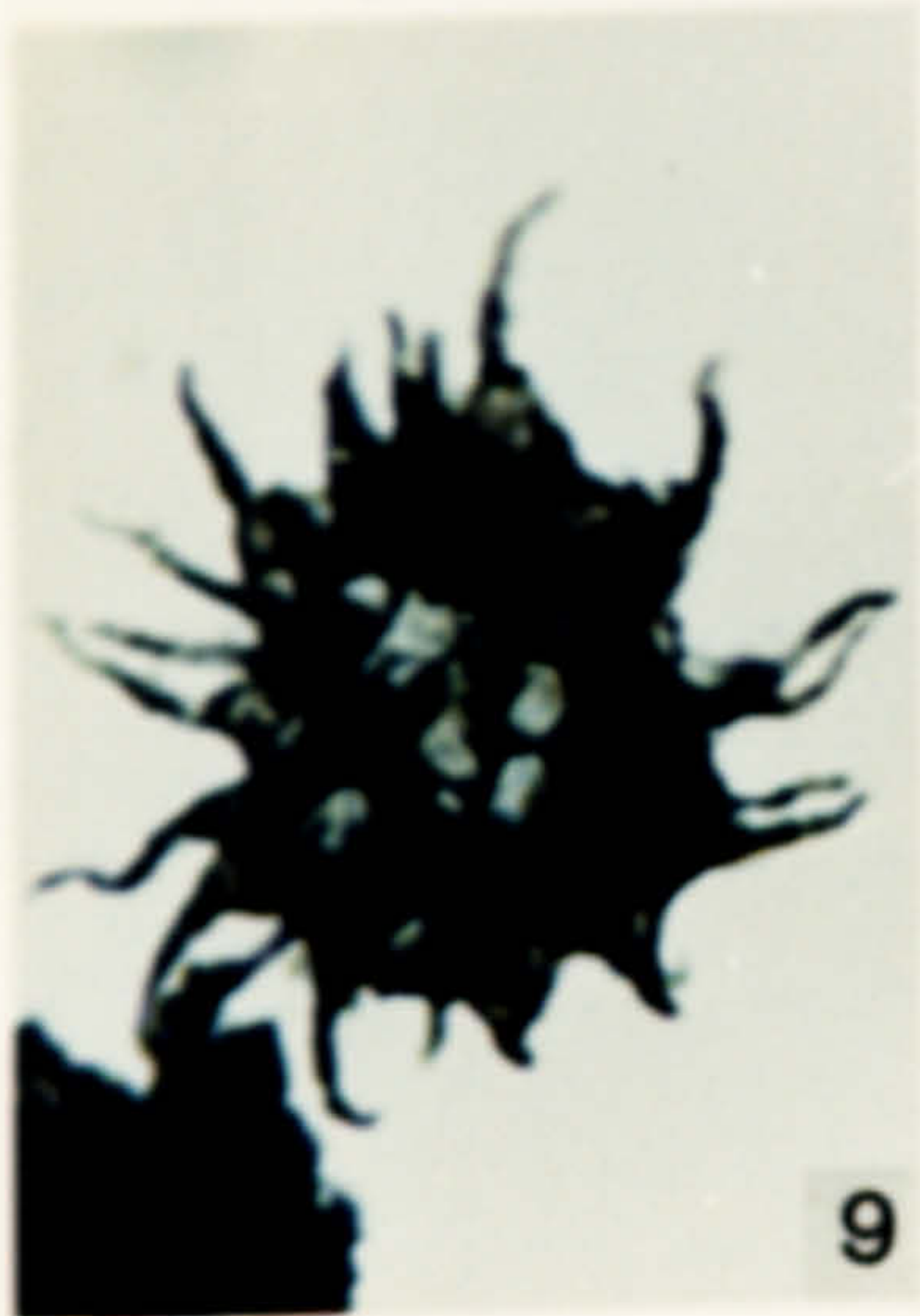
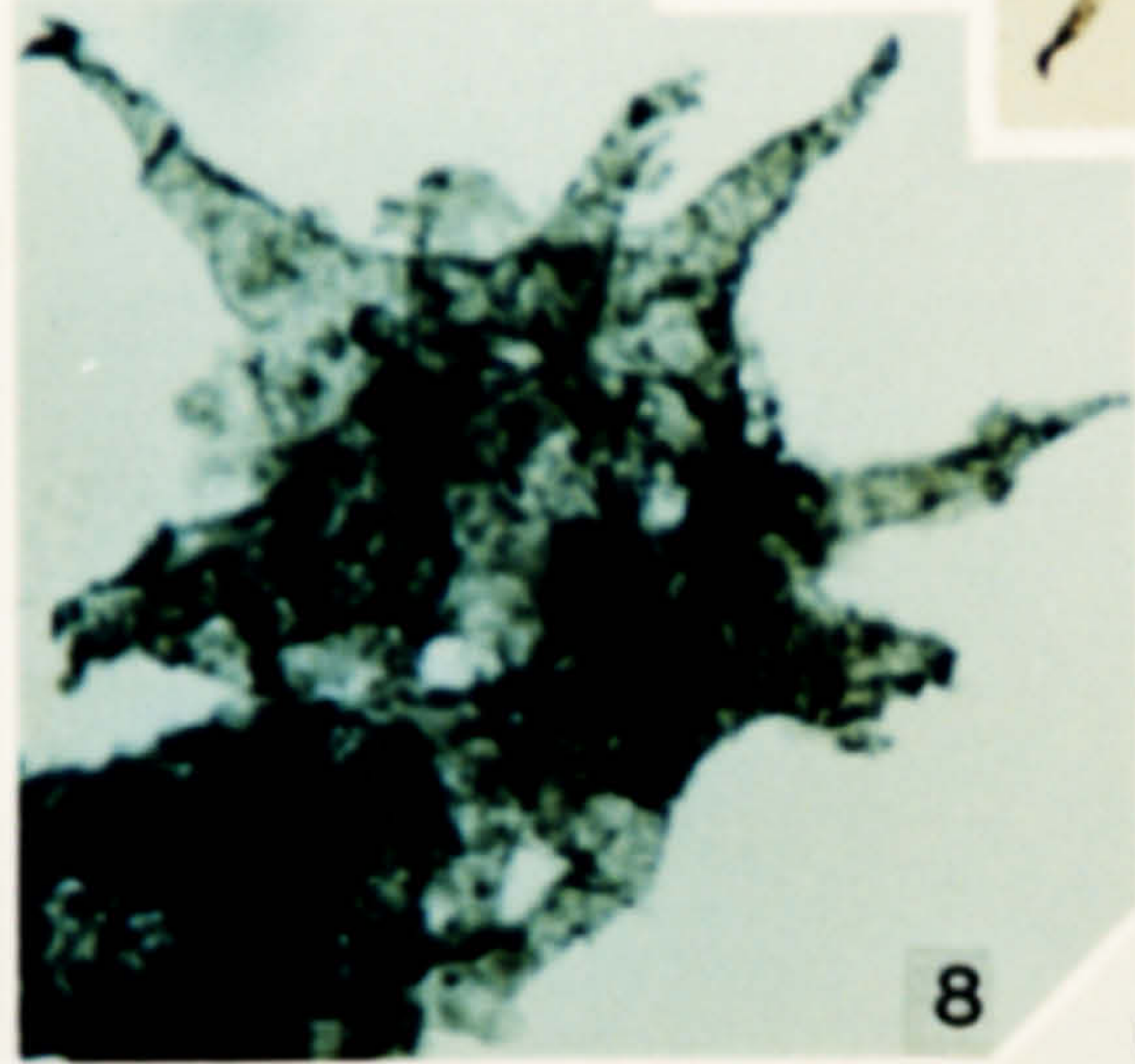
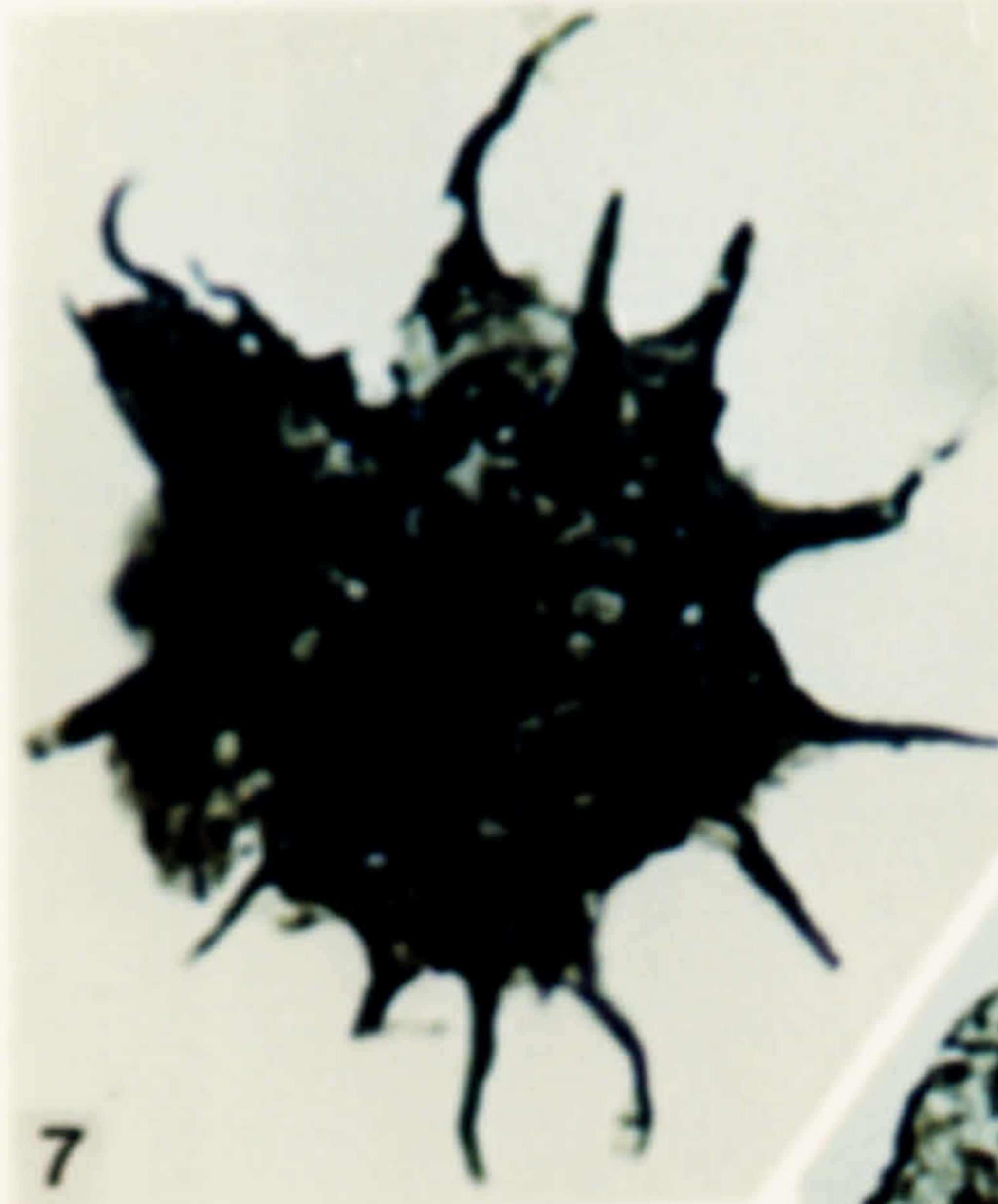
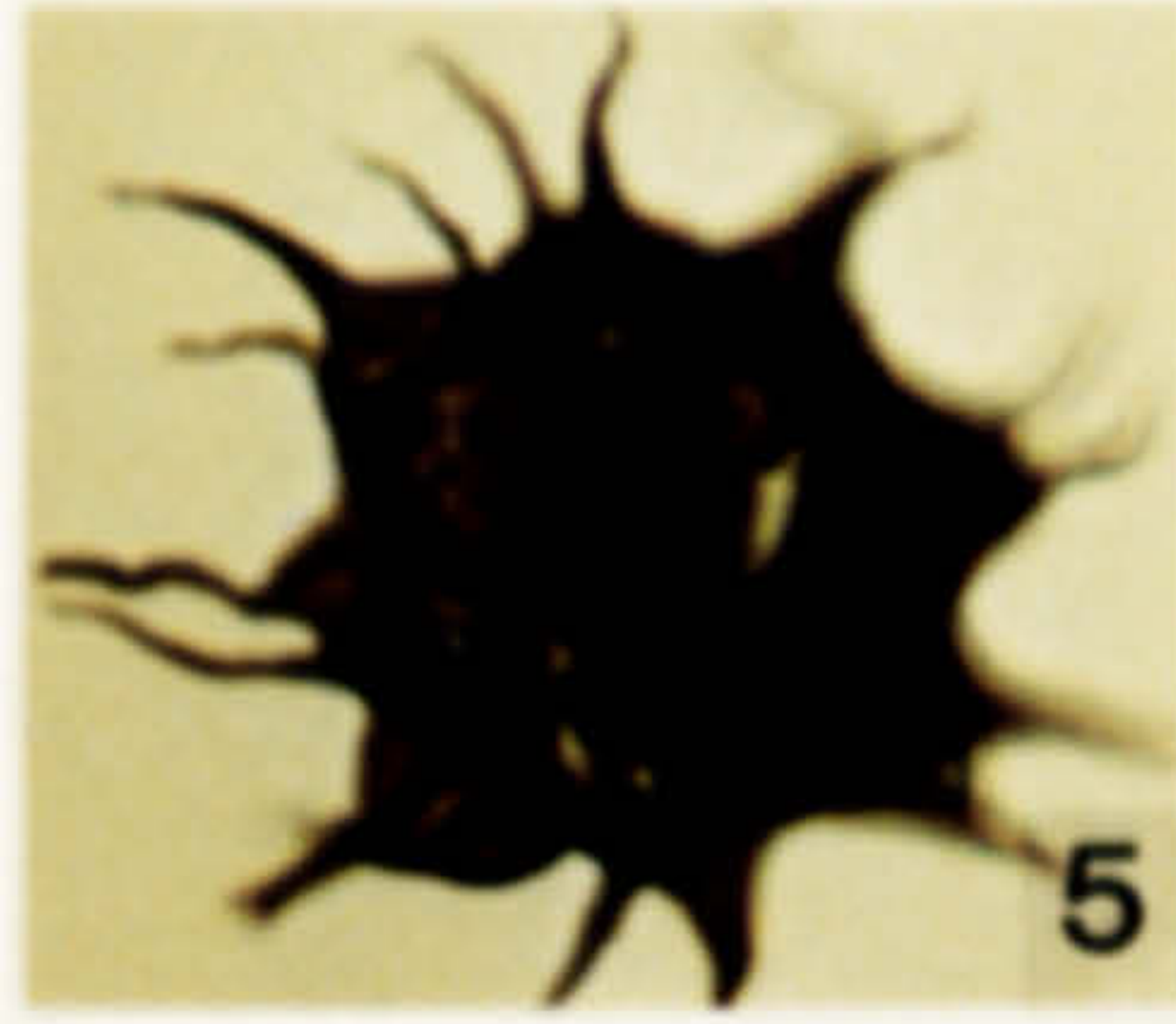
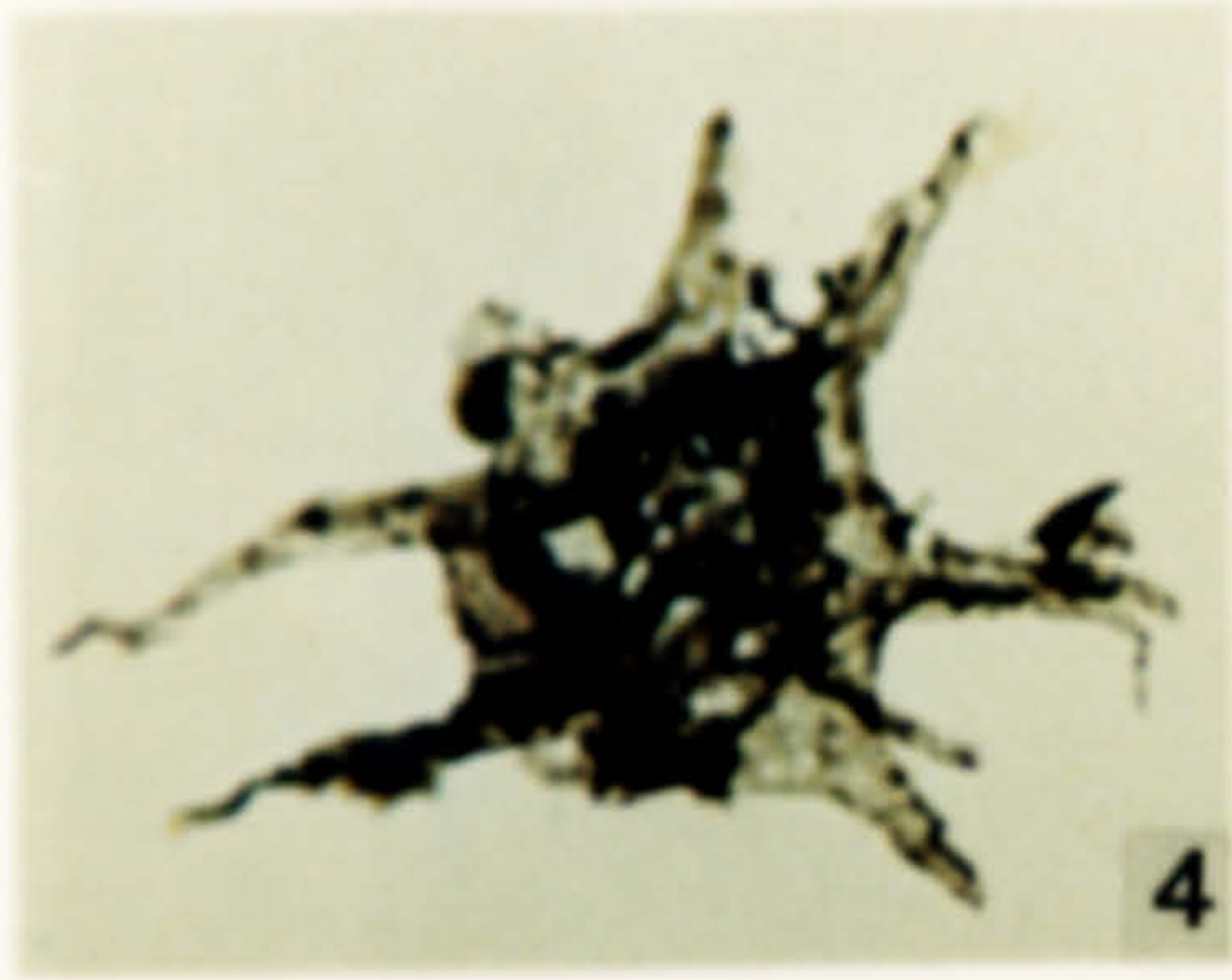
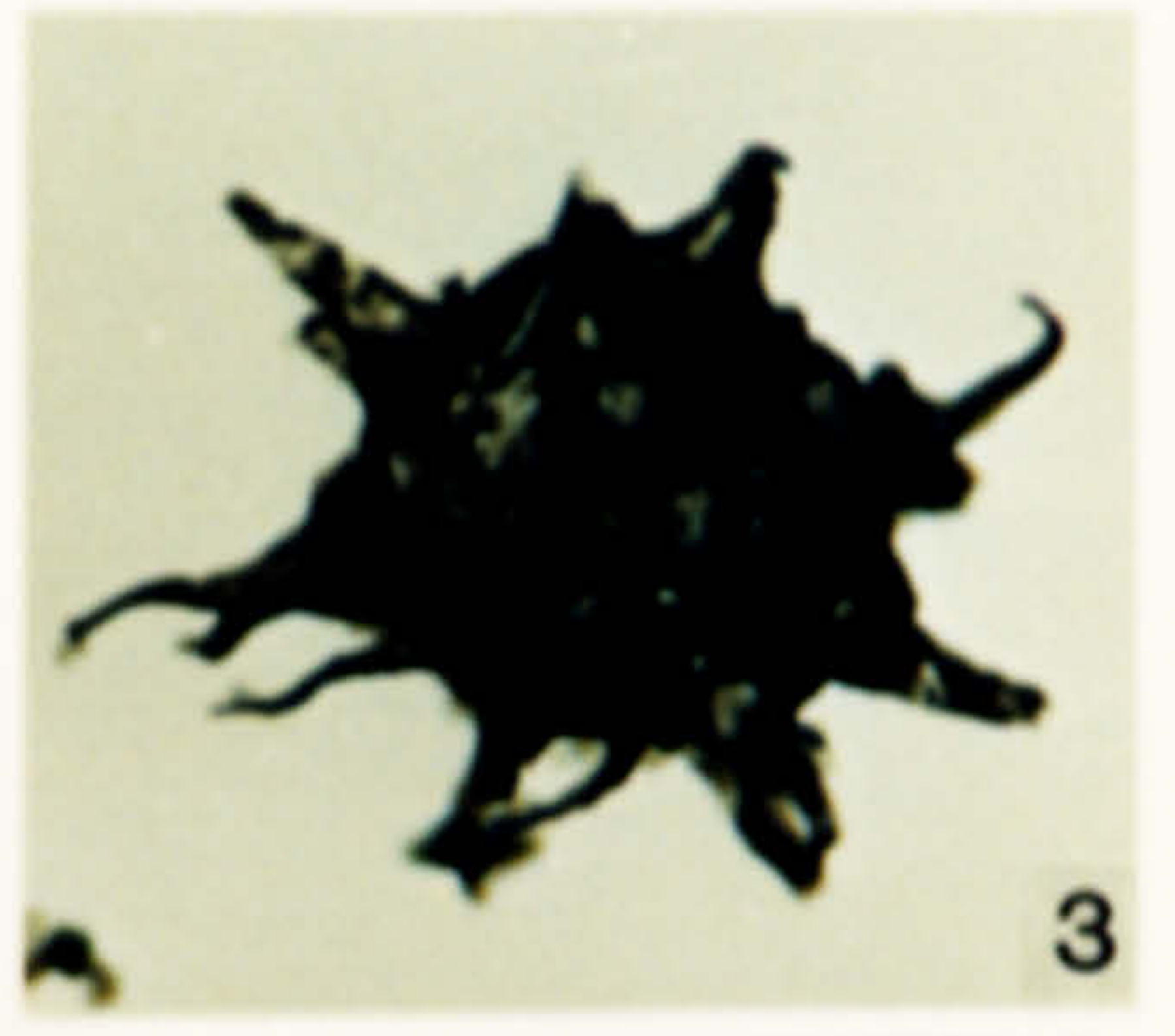
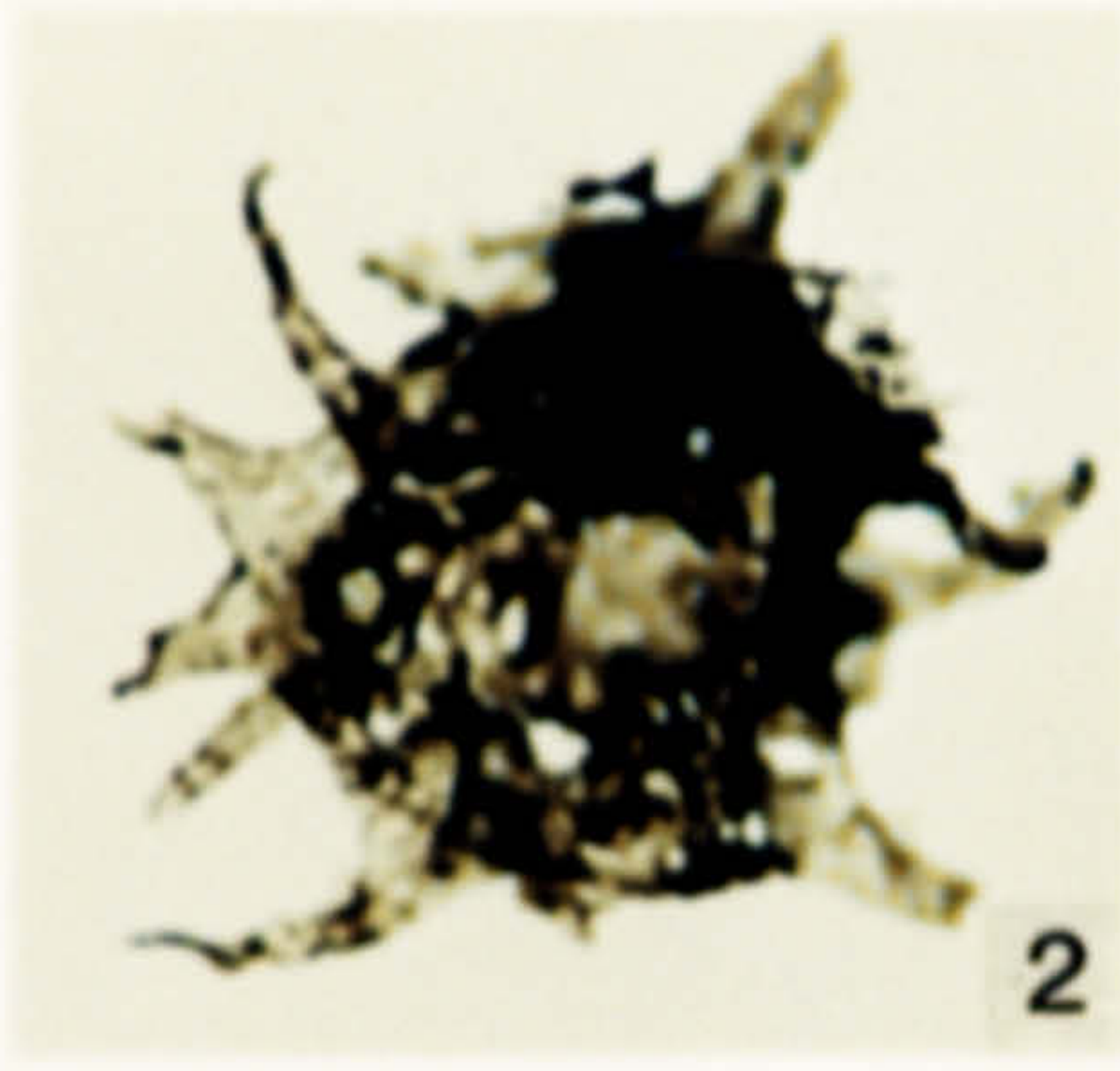
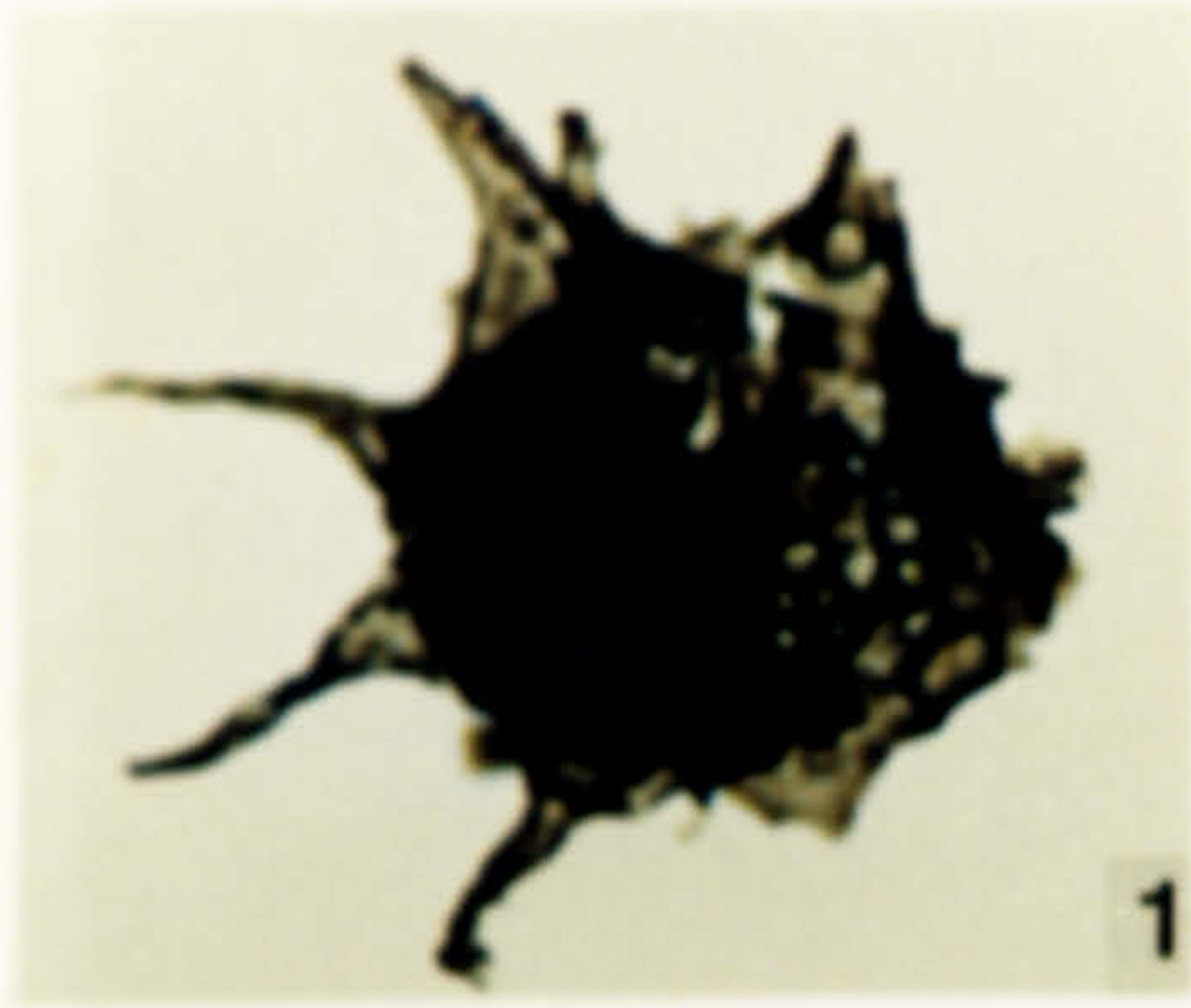
PLATE 16



**Plate 17.**

**Acritarchs from the Fezouata Formation, Arenig in age.**

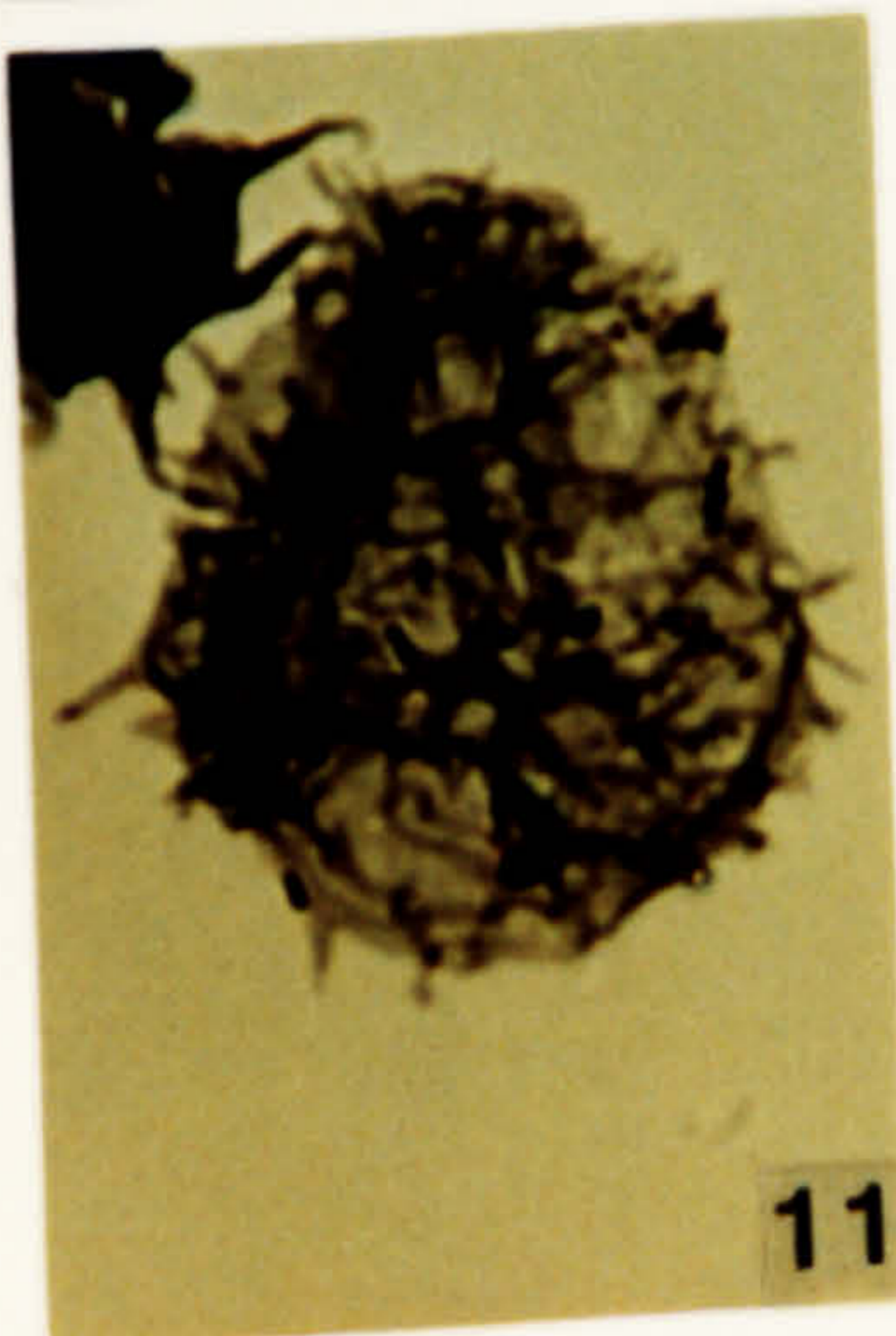
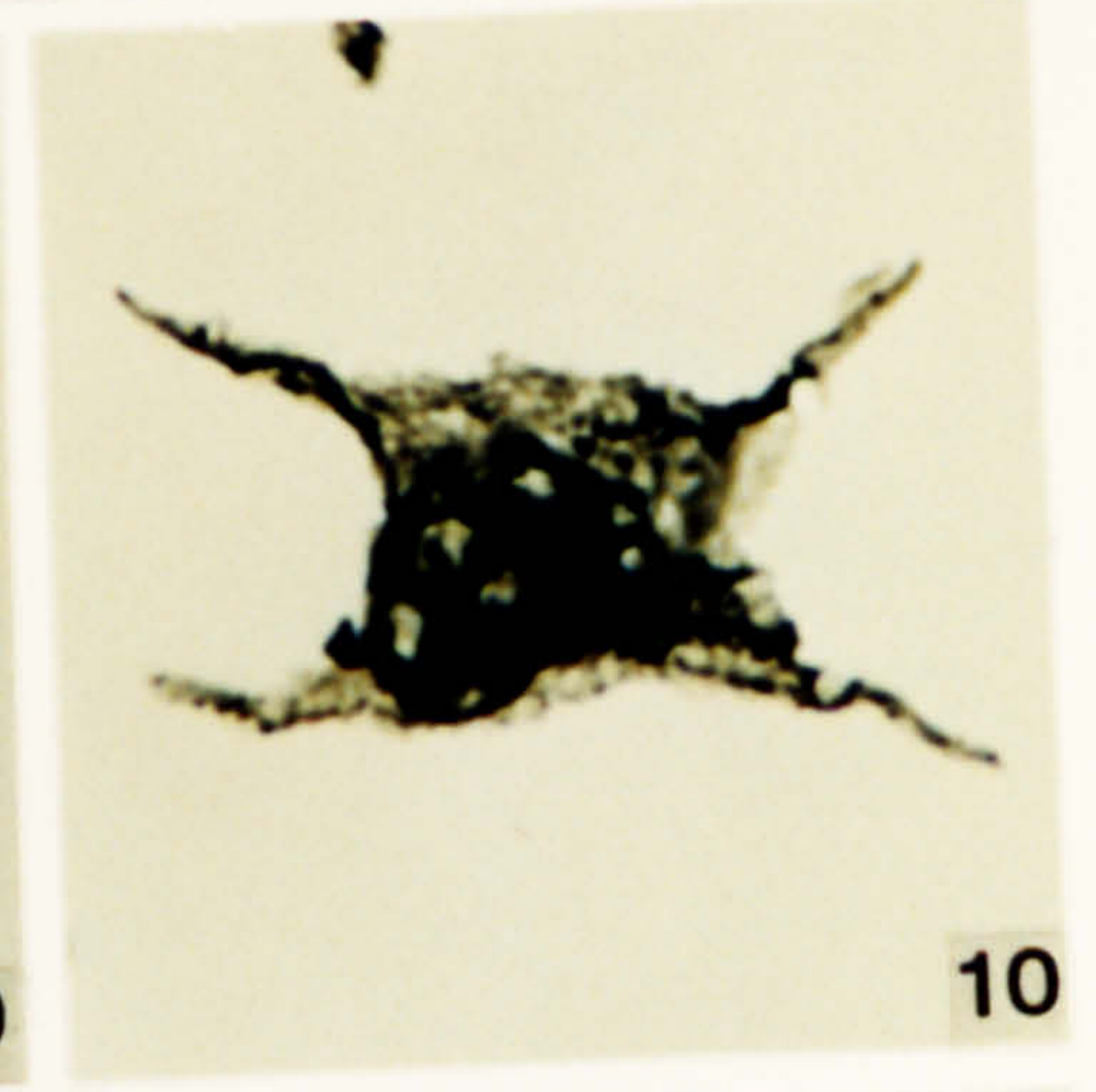
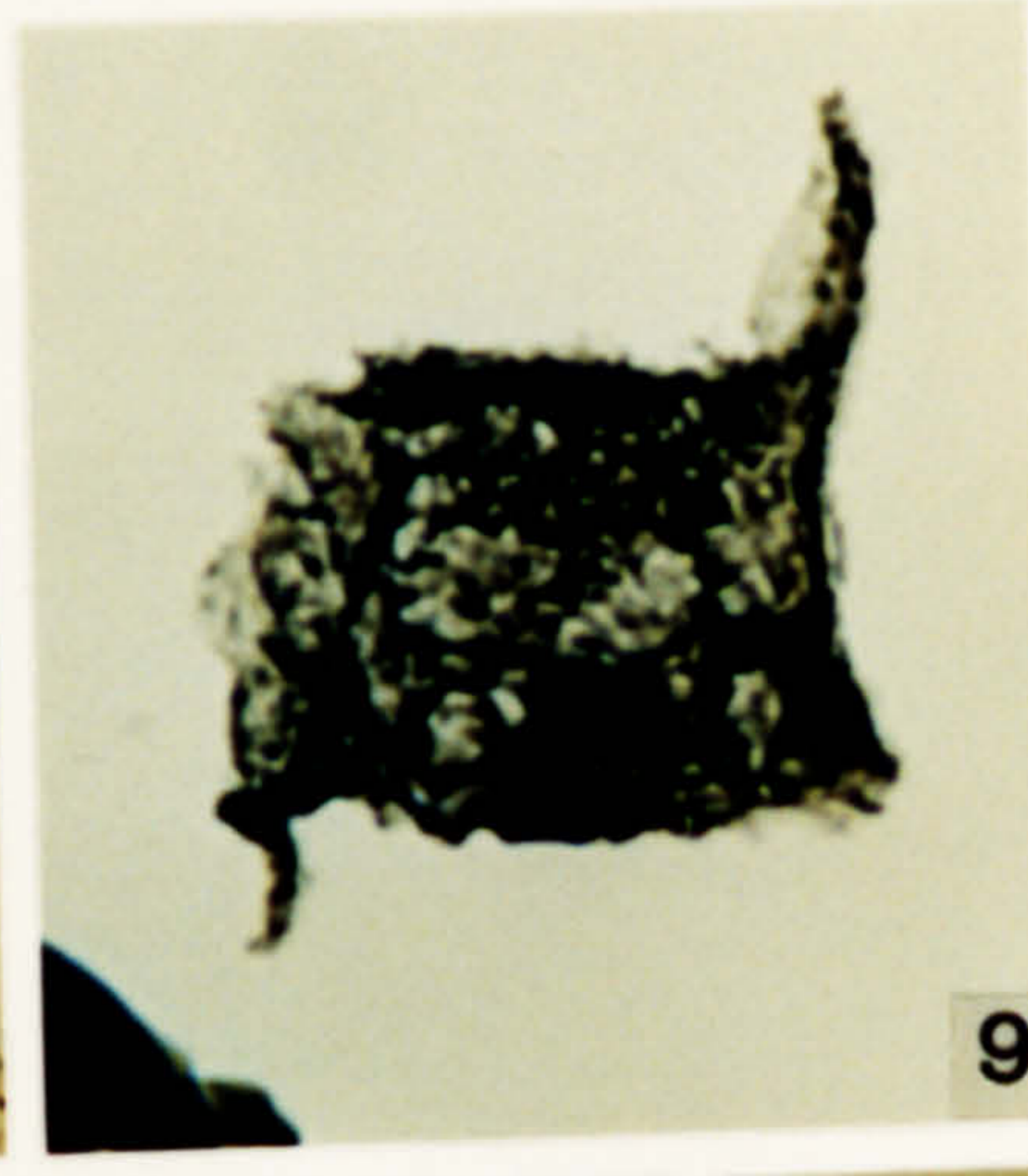
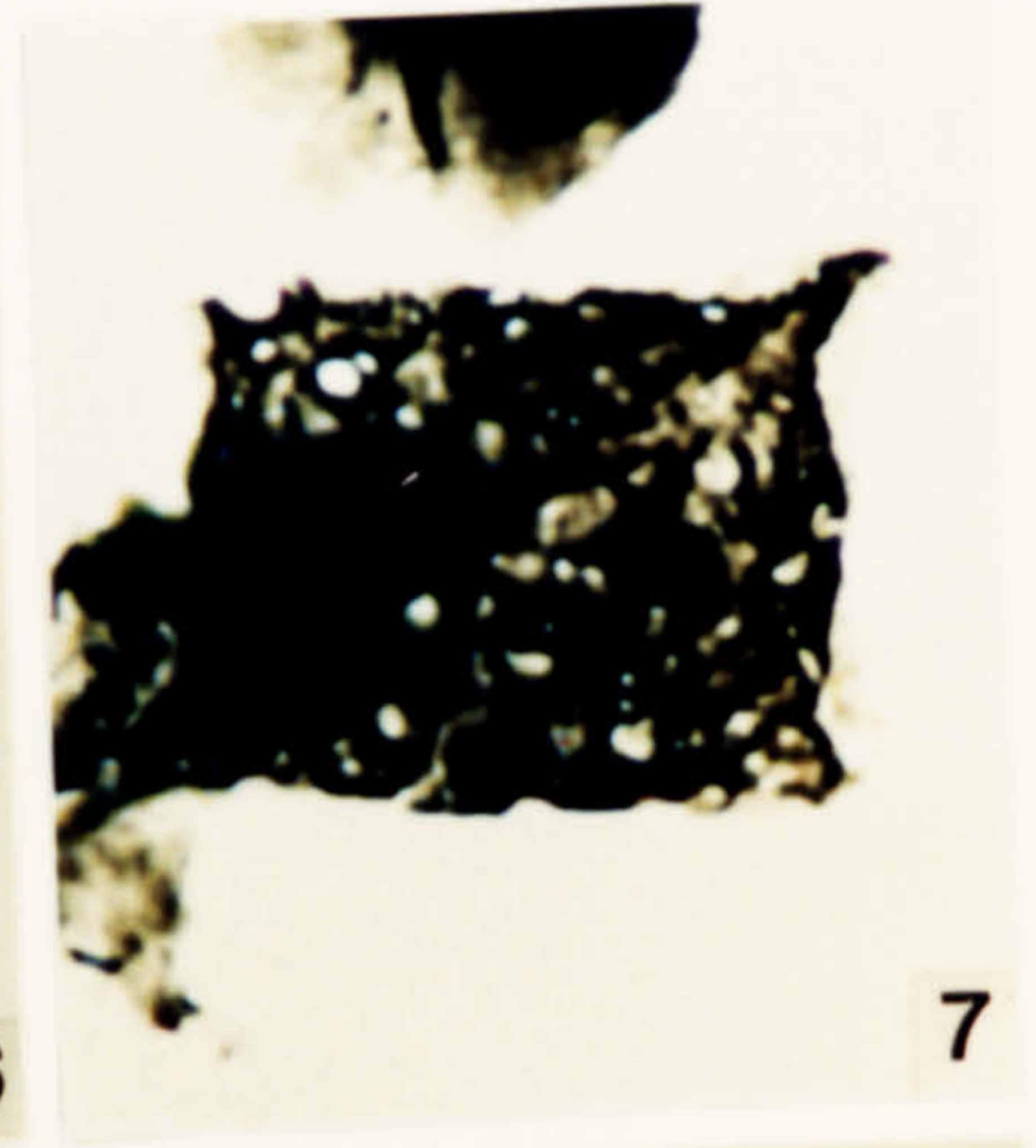
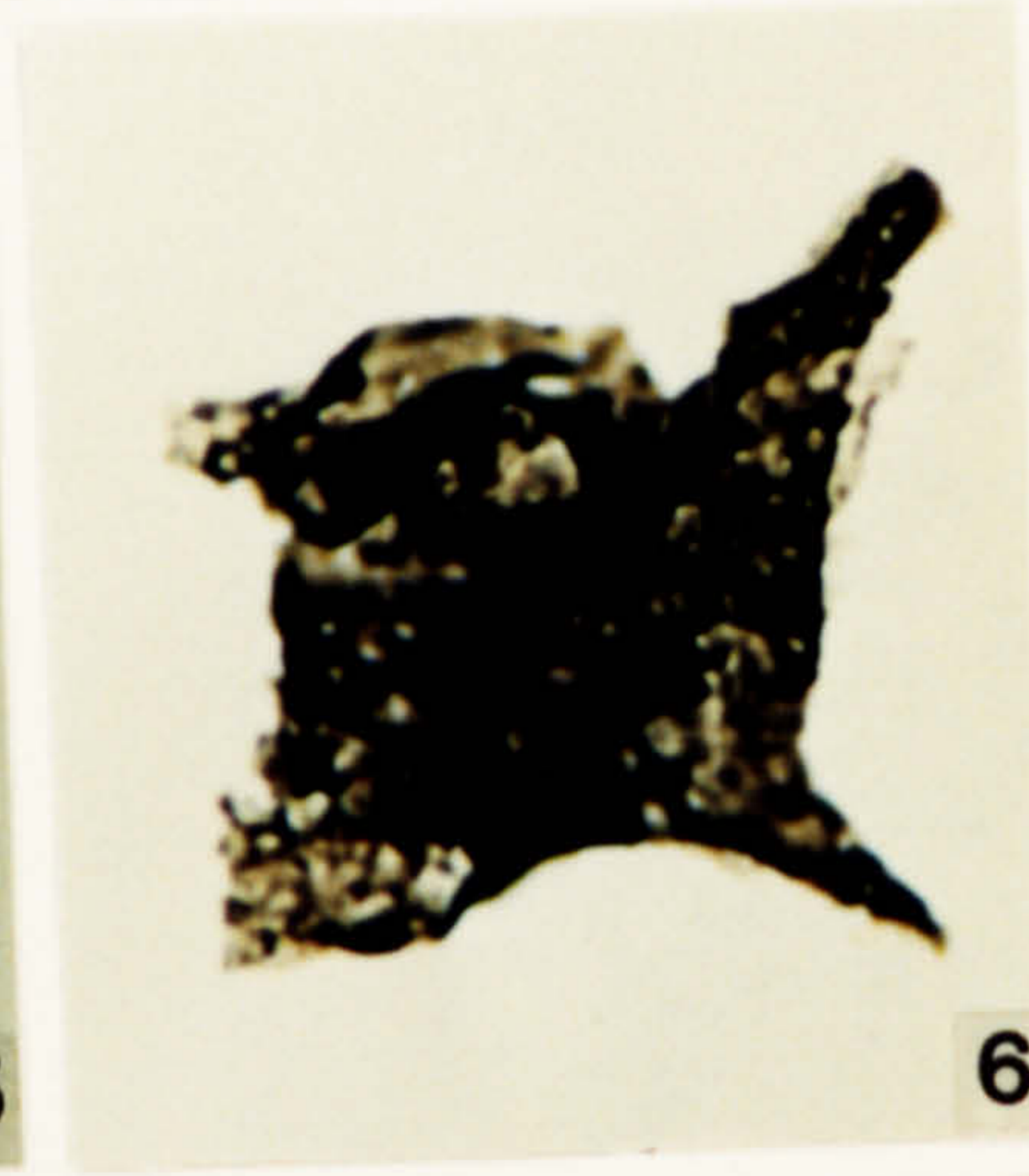
- 1. *Goniosphaeridium polygonale* subsp. *polygonale* (Eisenack) Fensome *et al.* 1990. DW 262, 1-1, Q14\1.**
- 2. *Goniosphaeridium polygonale* subsp. *polygonale* (Eisenack) Fensome *et al.* 1990. DW 291, FS-1, K10\3.**
- 3. *Goniosphaeridium polygonale* subsp. *polygonale* (Eisenack) Fensome *et al.* 1990. DJ 107, 2-1, B6\4.**
- 4. *Goniosphaeridium polygonale* subsp. *polygonale* (Eisenack) Fensome *et al.* 1990. DW 291, FS-1, M28\3.**
- 5. *Goniosphaeridium* sp. DW 294, 2-1, G15\4.**
- 6. *Goniosphaeridium polygonale* var. A. DW 291, FS-1, Z24\4.**
- 7. *Goniosphaeridium polygonale* var. A. DW 303, 2-1, F35\2.**
- 8. *Goniosphaeridium polygonale* (Eisenack ex Eisenack) Eisenack 1969. JD 29, 2-2, R25\1.**
- 9. *Goniosphaeridium polygonale* var. A. DW 303, 2-1, F20\2.**
- 10. *Leiofusa* sp. JD 29, 2-1, J41\4.**
- 11. *Leiofusa* sp. JD 29, 2-2, C39\-.**
- 12. *Leiofusa* sp. DW 303, 2-1, M26\4.**



**Plate 18.**

Acritarchs from the Fezouata Formation, Arenig in age.

1. *Leiosphaeridia* sp. DW 332, FS-1, N14\1.
2. *Lophosphaeridium* sp. DW 291, FS-2, Q29\1.
3. *Marrocanium simplex* Cramer *et al.* 1974. DJ 107, 2-1, K30\-..
4. *Marrocanium simplex* Cramer *et al.* 1974. JW5, FS-1, Q24\2.
5. *Marrocanium simplex* Cramer *et al.* 1974. DJ 107, 2-1, J19\1.
6. *Marrocanium simplex* Cramer *et al.* 1974. DW 307, FS-1, J13\2.
7. *Marrocanium simplex* Cramer *et al.* 1974. DJ 107, 2-1, H25\3.
8. *Marrocanium simplex* Cramer *et al.* 1974. JW5, FS-1, O20\2.
9. *Marrocanium* sp. DJ 107, 2-2, H10\1.
10. *Marrocanium* sp. DJ 107, 2-2, L13\2.
11. *Micrhystridium inaffectilumium?* Loeblich 1970. DW 294, 2-1, N14\3.
12. *Micrhystridium inaffectilumium?* Loeblich 1970. DW 294, 2-1, G6\3.
13. *Micrhystridium henryii* Paris & Deunff 1970. JW5, FS-1, D26\1.
14. *Micrhystridium henryii* Paris & Deunff 1970. DW 303, 2-1, K36\1.

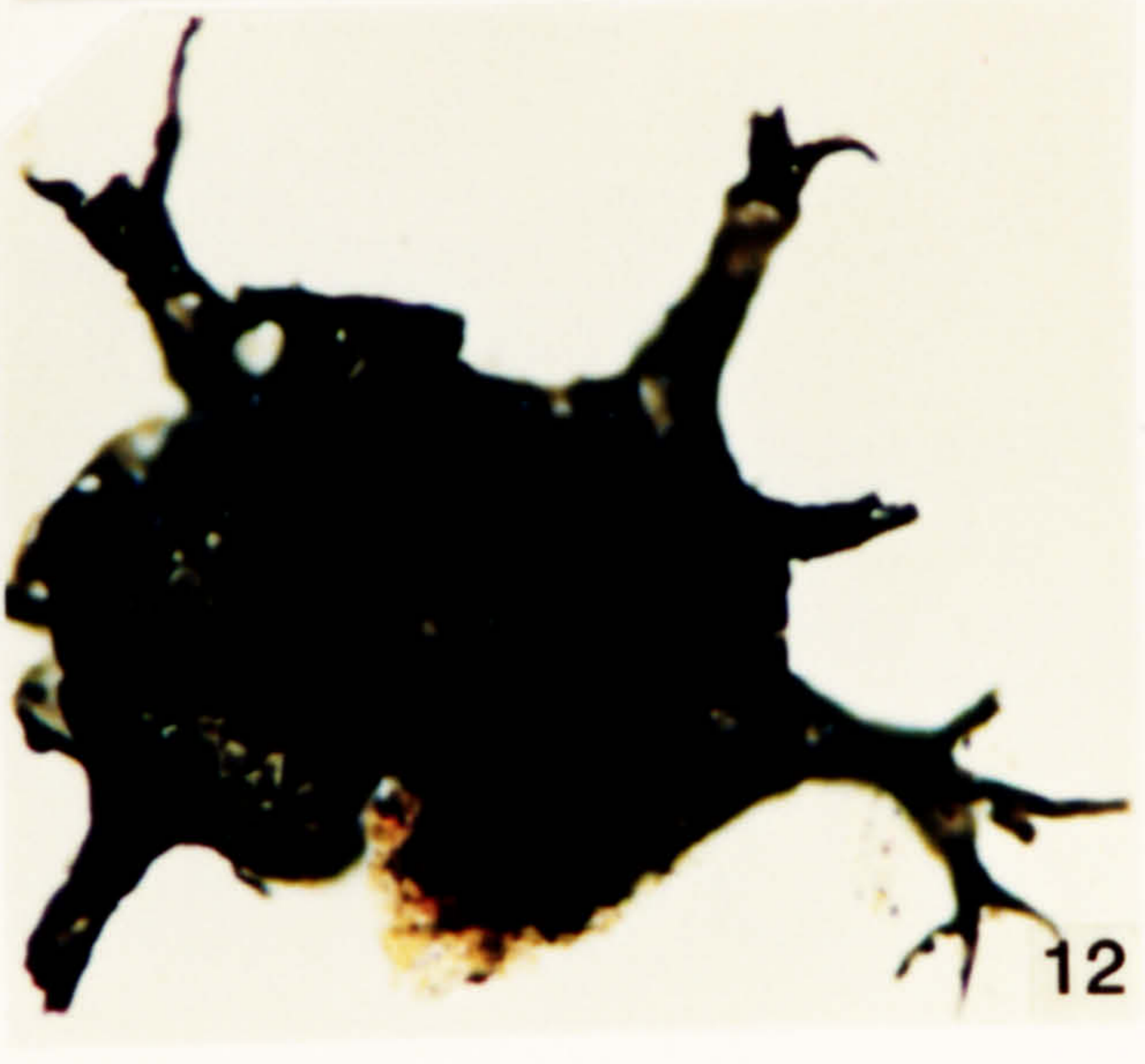
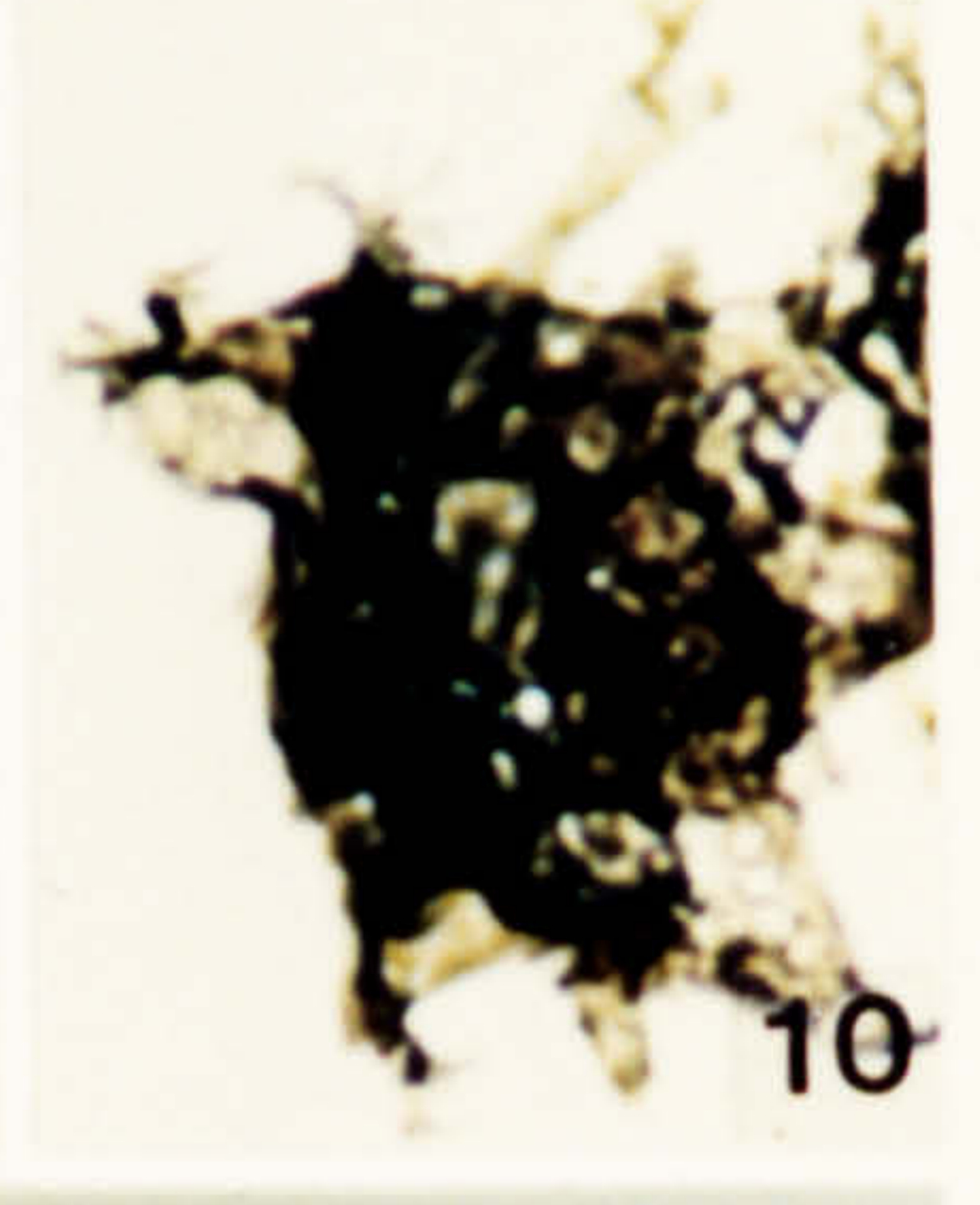
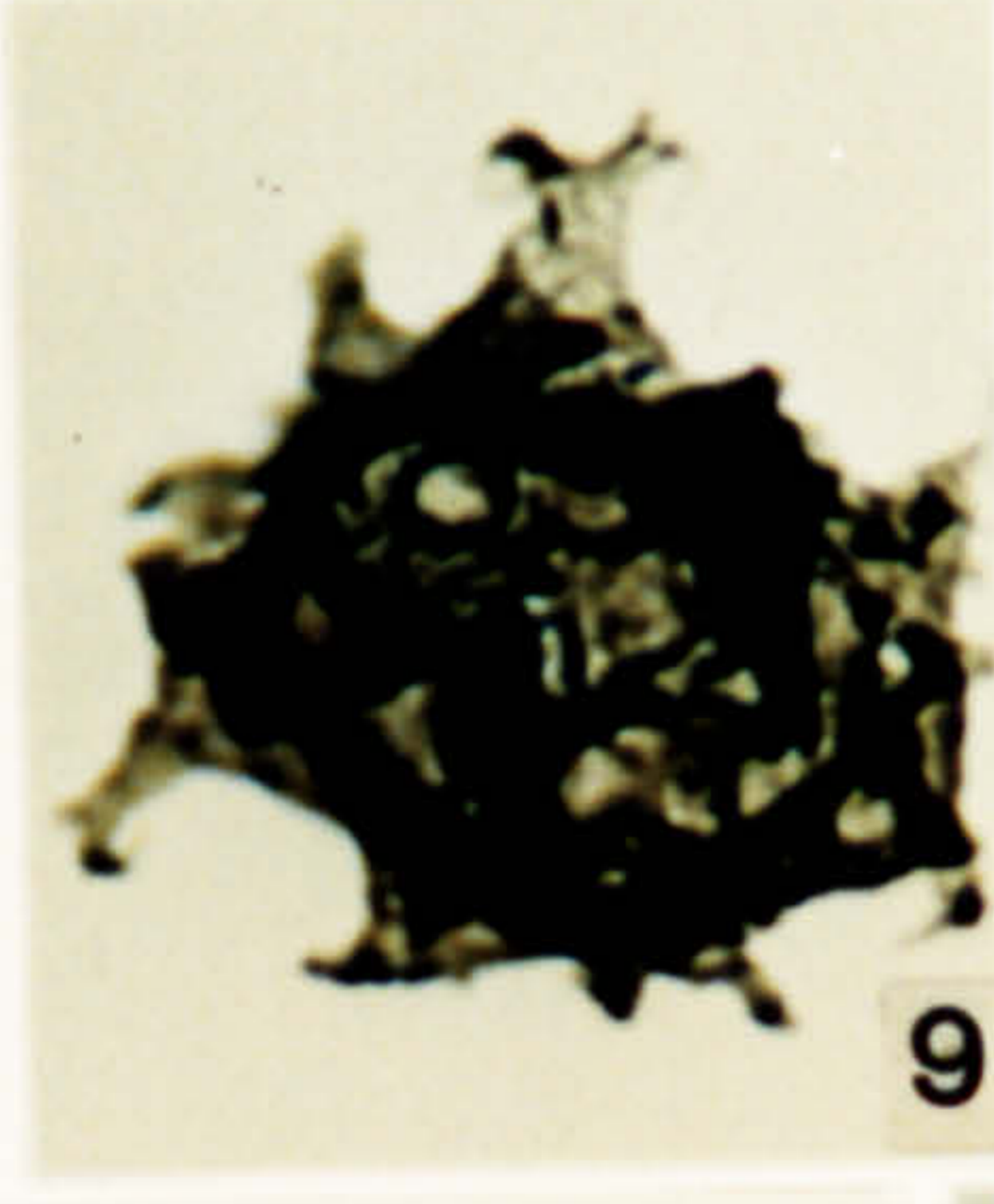
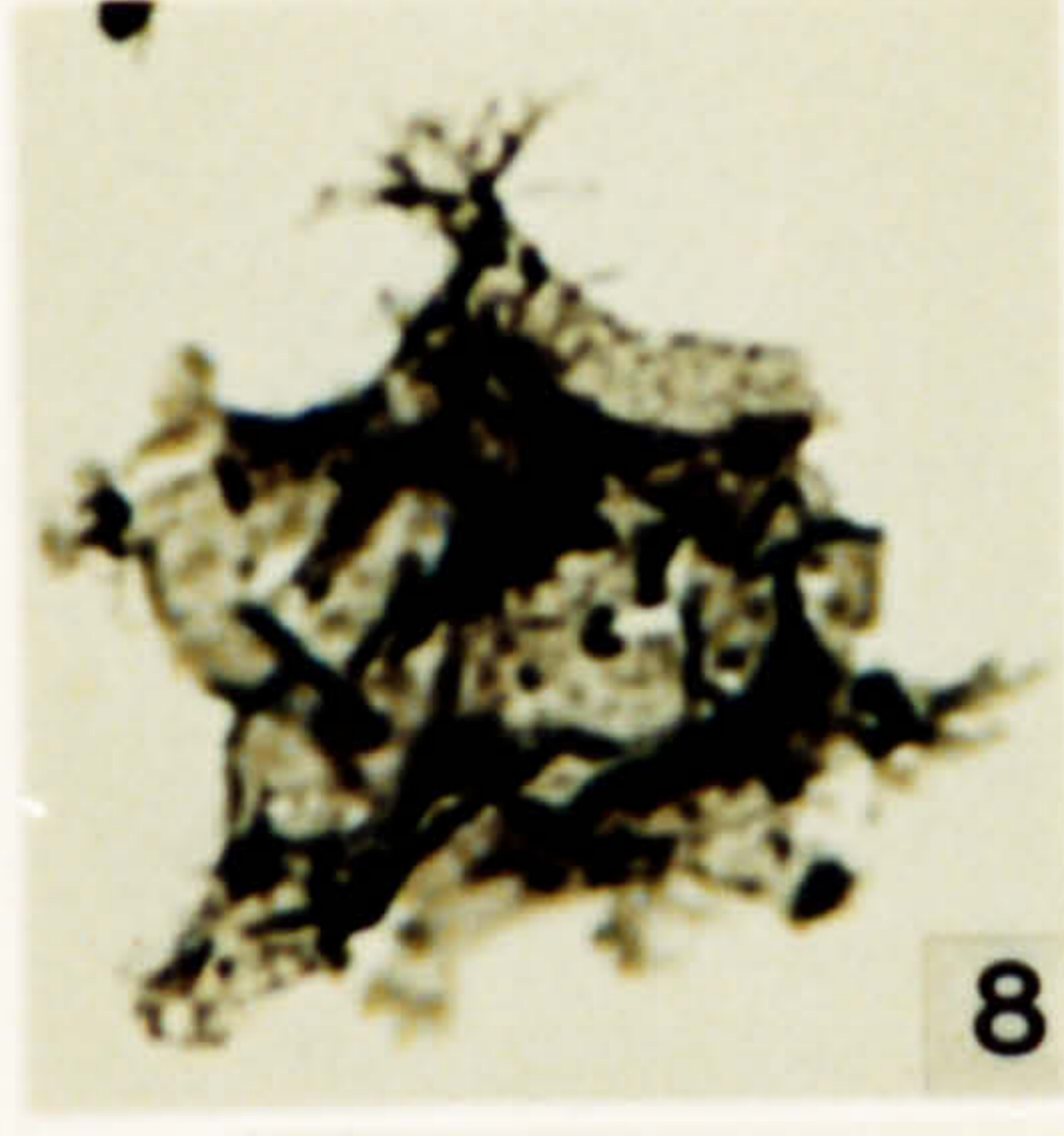
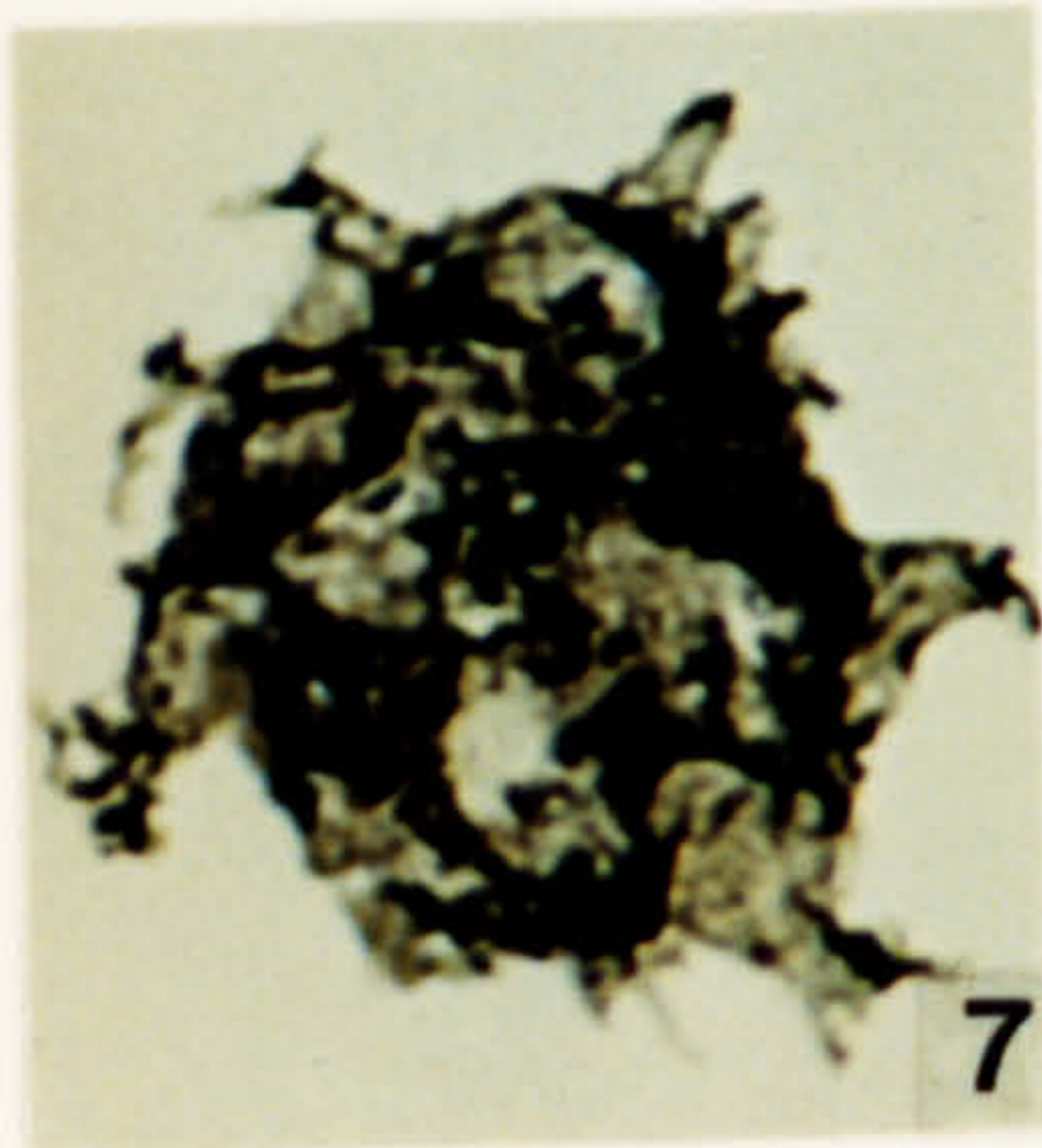
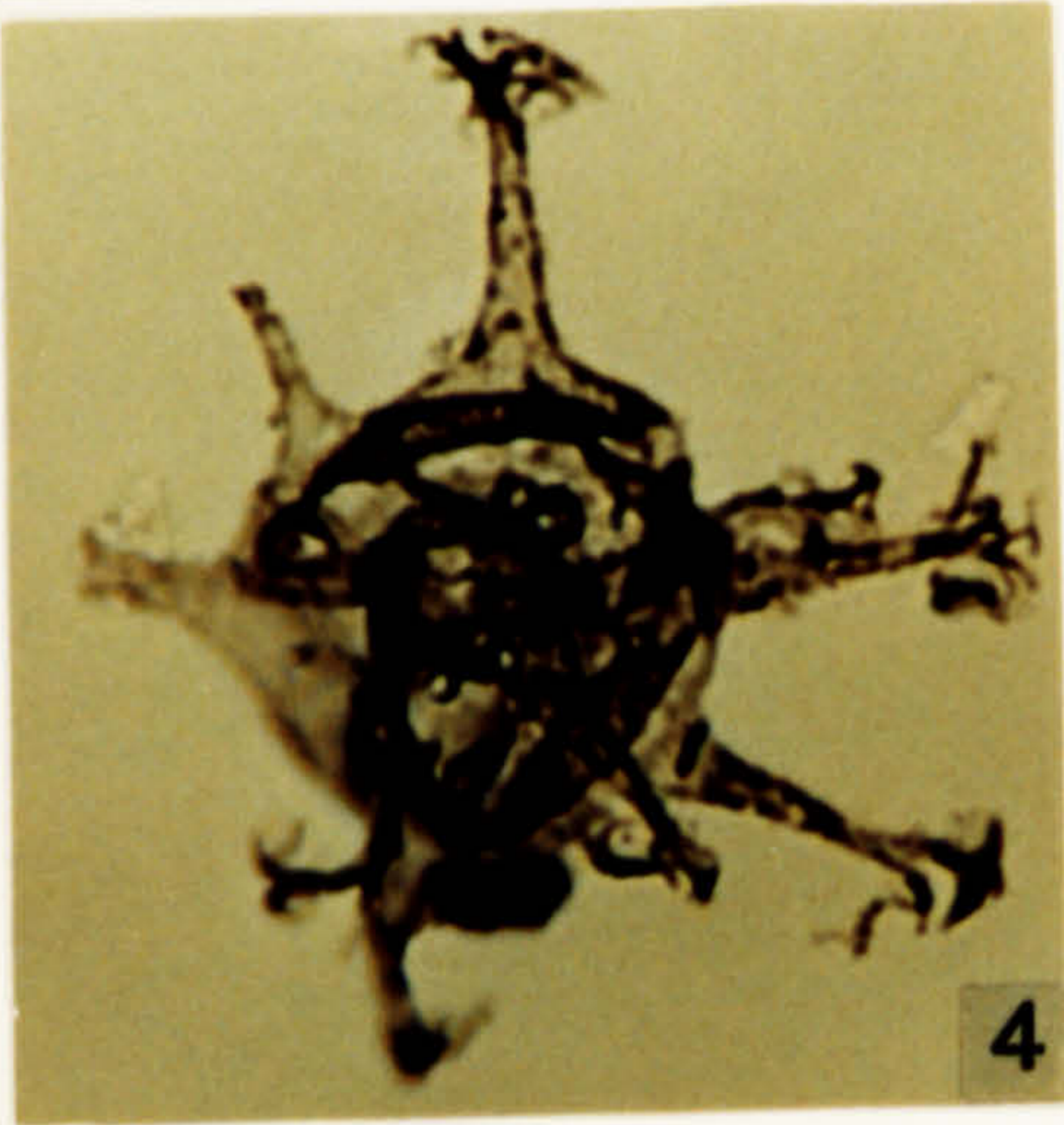
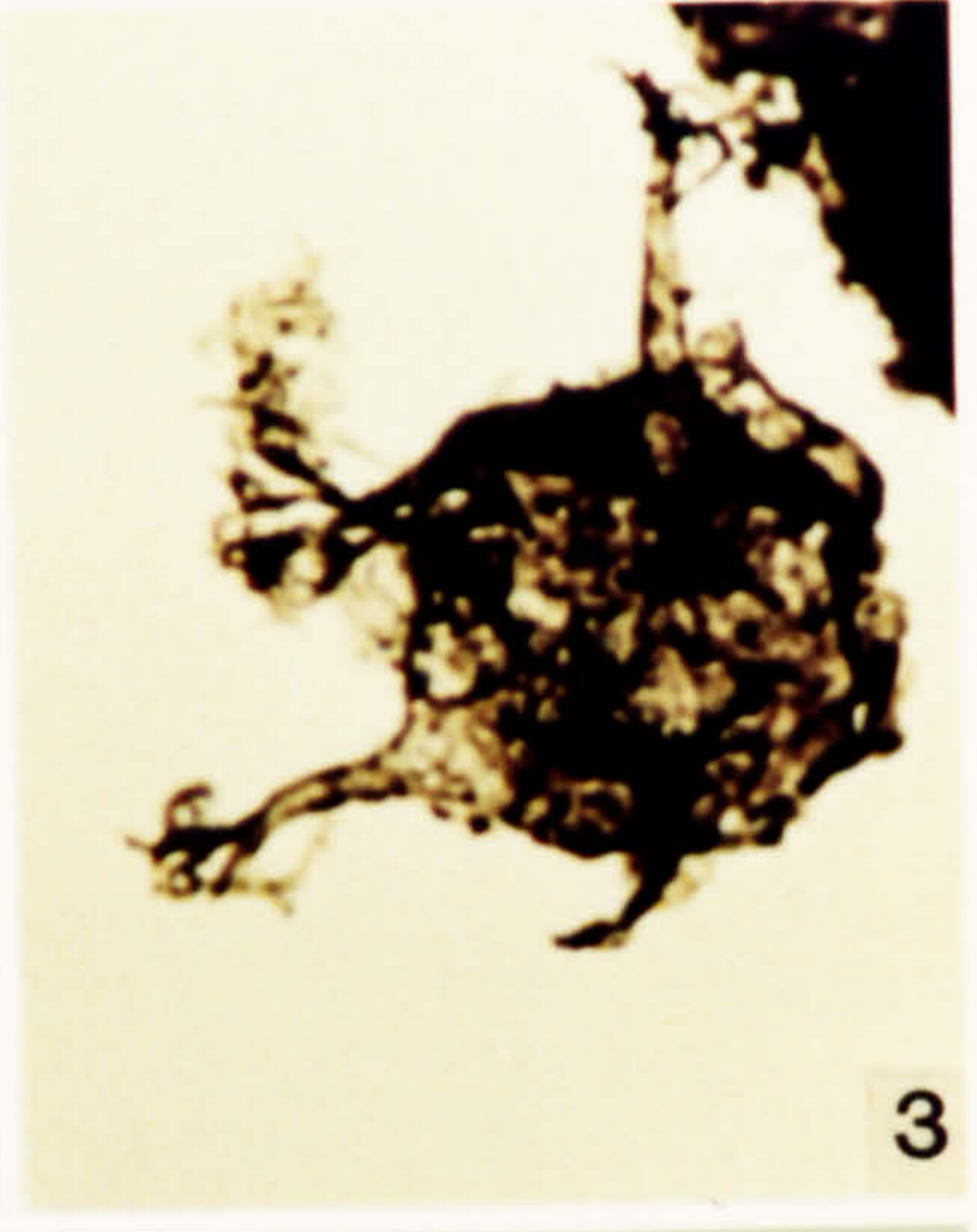
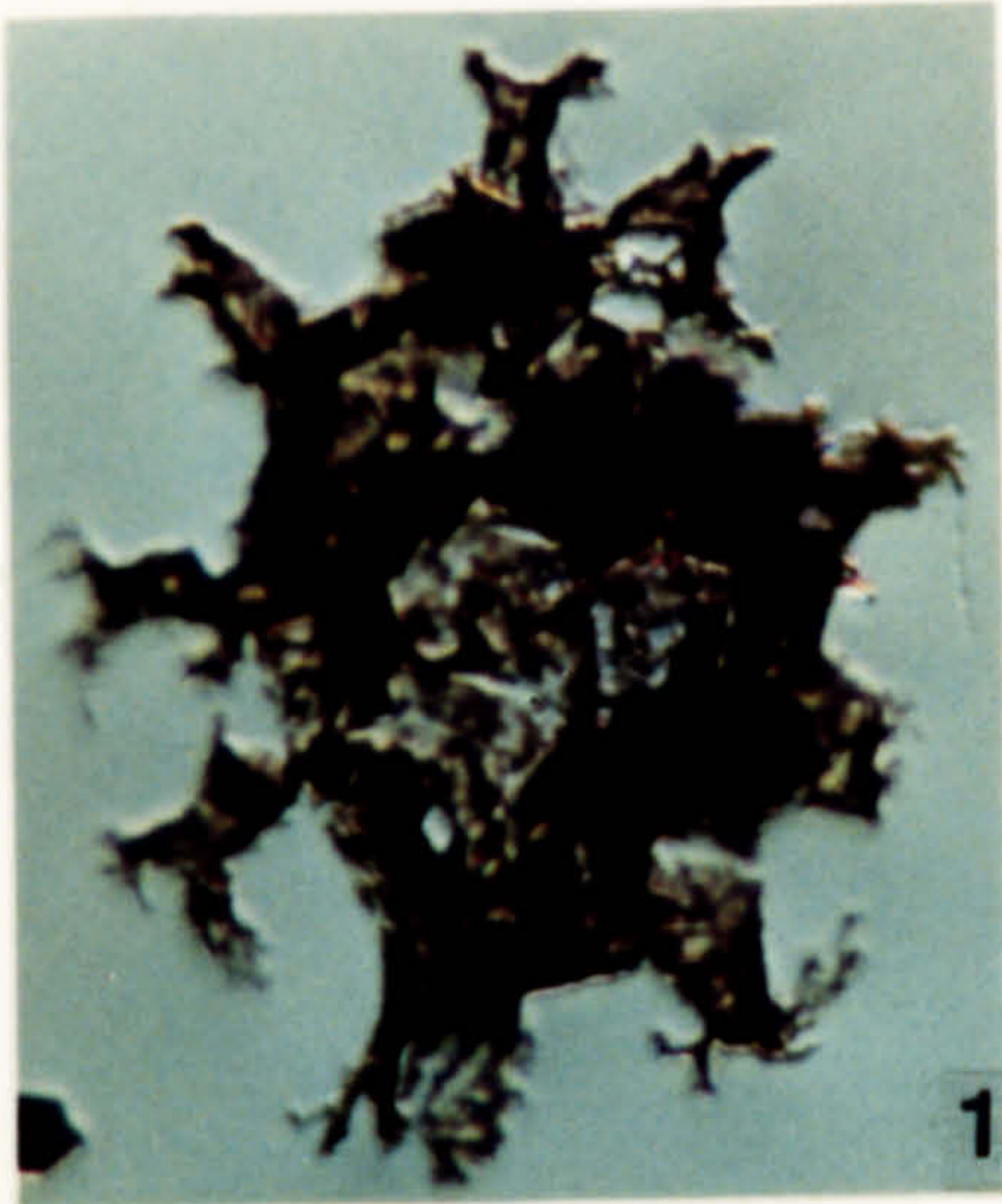


**Plate 19.**

**Acritarchs from the Fezouata Formation, Arenig in age.**

1. *Multiplicisphaeridium consolator* Cramer & Diez 1977. JW 5, FS-1, R22\4, IC.
2. *Multiplicisphaeridium consolator* Cramer & Diez 1977. JW 5, FS-1, T11\1, IC.
3. *Multiplicisphaeridium crispum* (Vavrdova) comb. nov. JW 5, 2-3, J20\-.
4. *Multiplicisphaeridium crispum* (Vavrdova) comb. nov. JW 5, FS-1, C25\3.
5. *Multiplicisphaeridium crispum* (Vavrdova) comb. nov. JW 5, FS-1, O27\1.
6. *Multiplicisphaeridium crispum* (Vavrdova) comb. nov. DJ 107, 2-1, W32\4.
7. *Multiplicisphaeridium firmum* (Burmann) Fensome *et al.* 1990. DW 291, FS-2, L4\2.
8. *Multiplicisphaeridium firmum* (Burmann) Fensome *et al.* 1990. DW 291, FS-2, K27\2.
9. *Multiplicisphaeridium firmum* (Burmann) Fensome *et al.* 1990. DJ 107, 2-2, M31\1.
10. *Multiplicisphaeridium firmum* (Burmann) Fensome *et al.* 1990. DW 307, FS-1, F26\4.
11. *Multiplicisphaeridium firmum* (Burmann) Fensome *et al.* 1990. DJ 107, 2-1, W25\3.
12. *Multiplicisphaeridium cf. inconstans* Cramer & Diez 1977. JD 29, 2-2, J22\1.
13. *Multiplicisphaeridium inconstans* Cramer & Diez 1977. DW 262, 1-1, O36\3.

PLATE 19

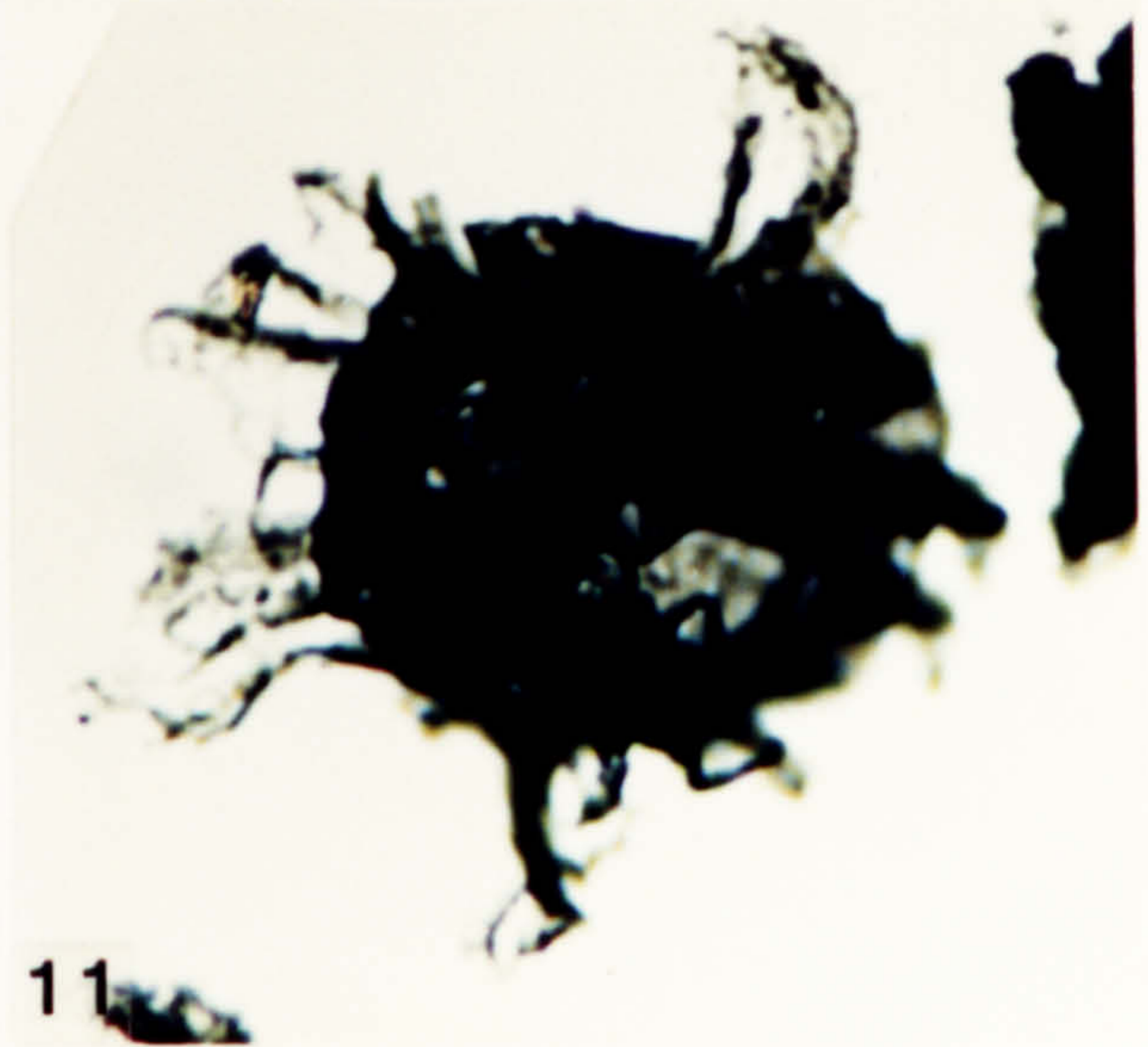
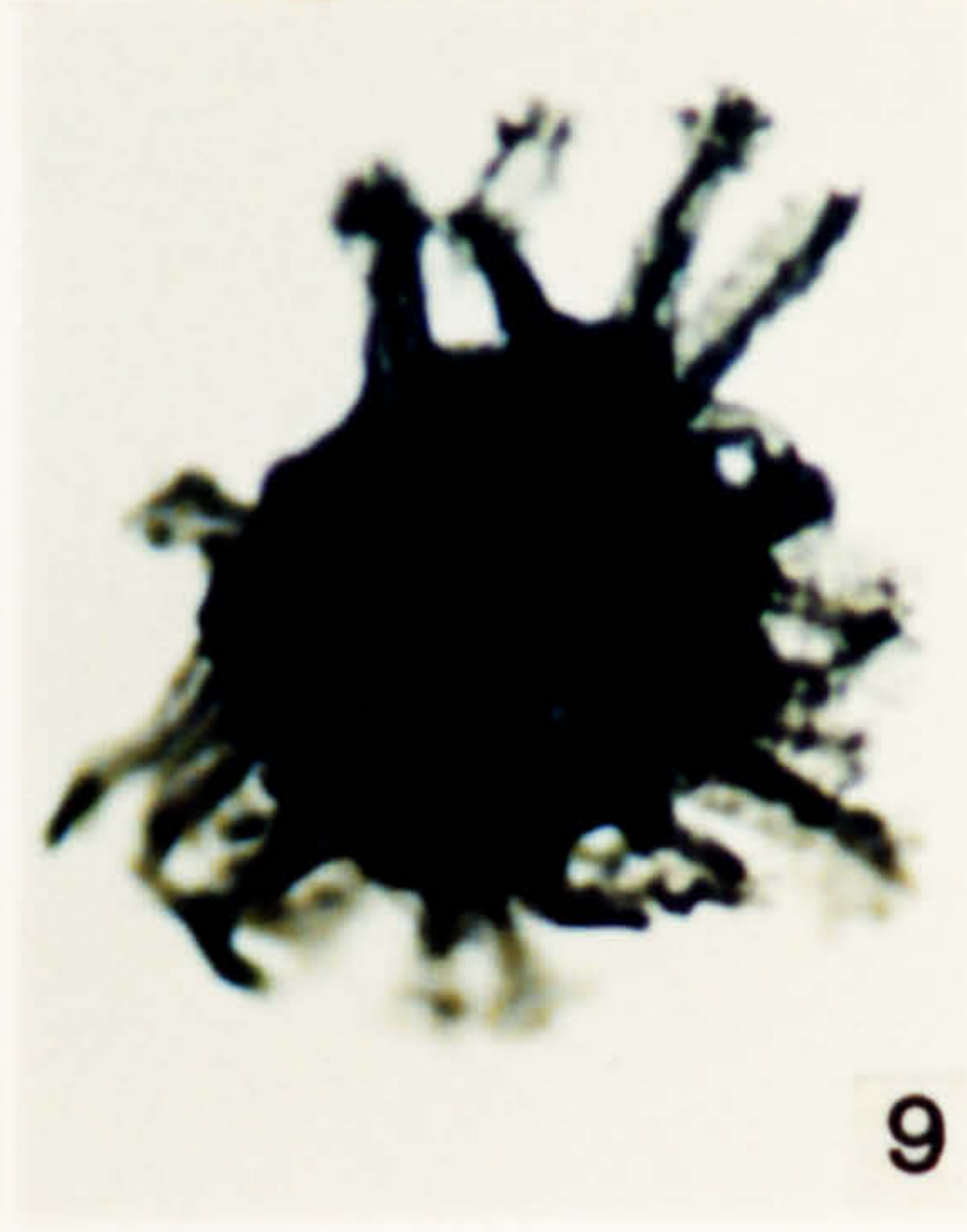
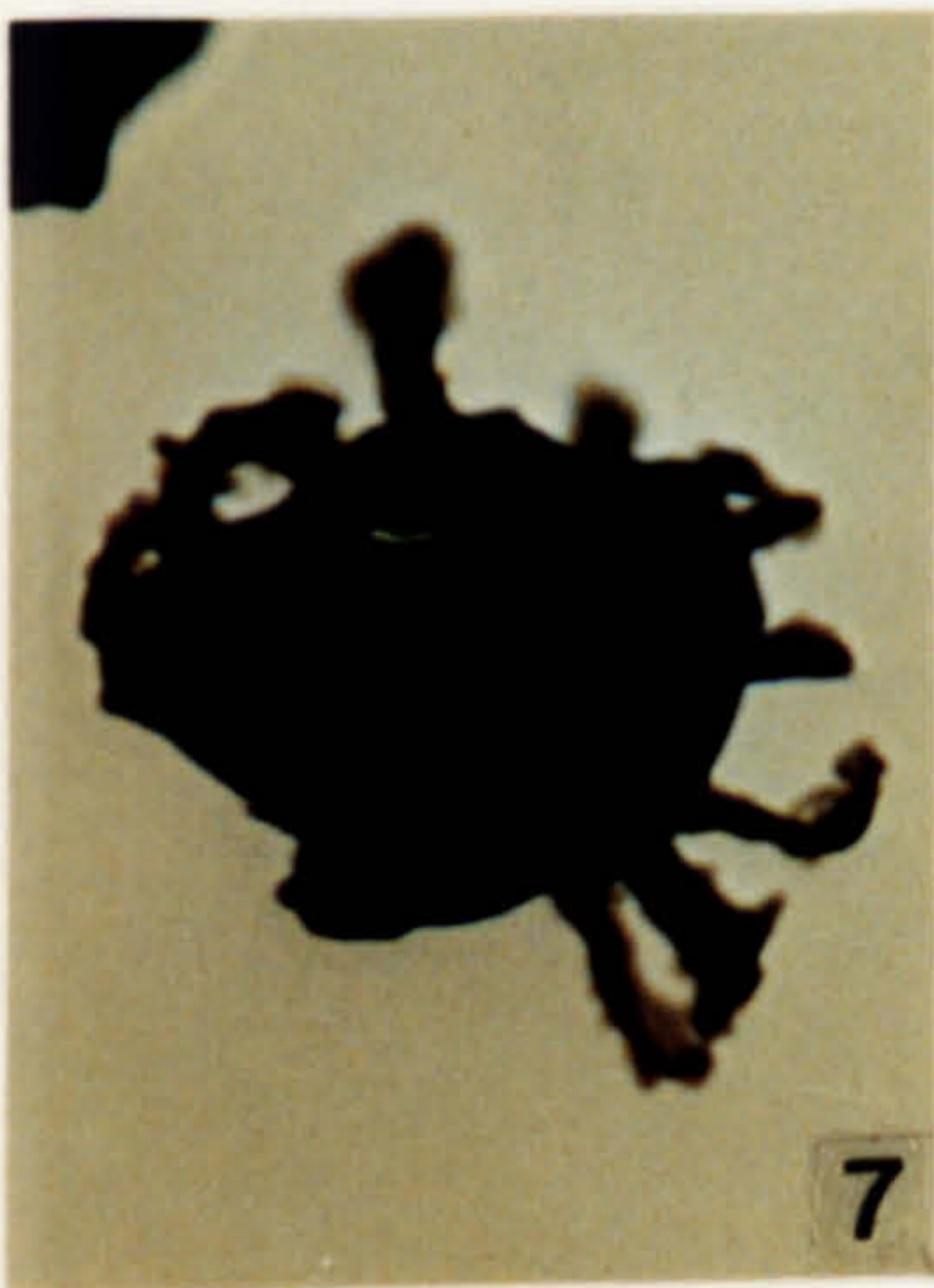
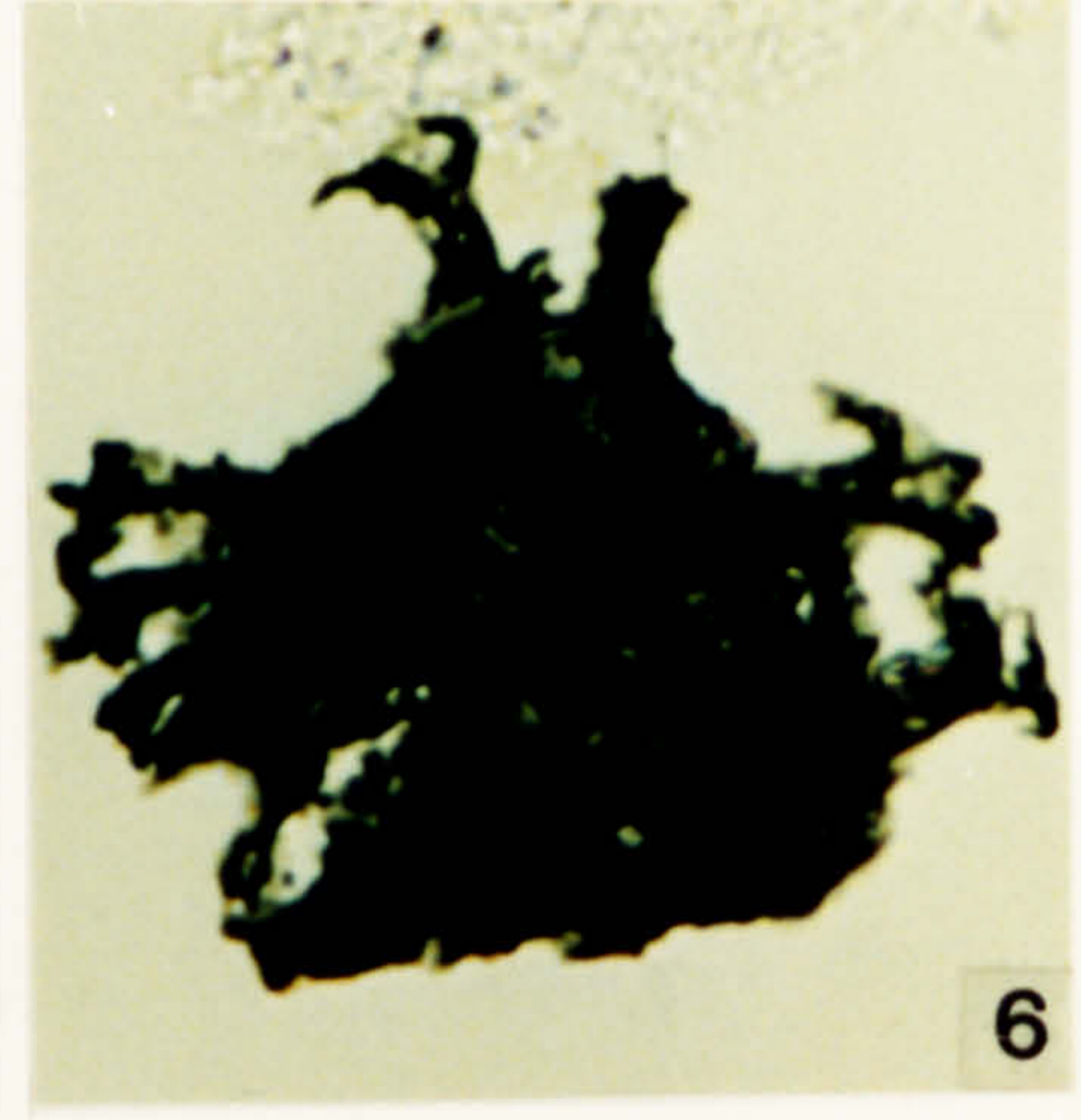
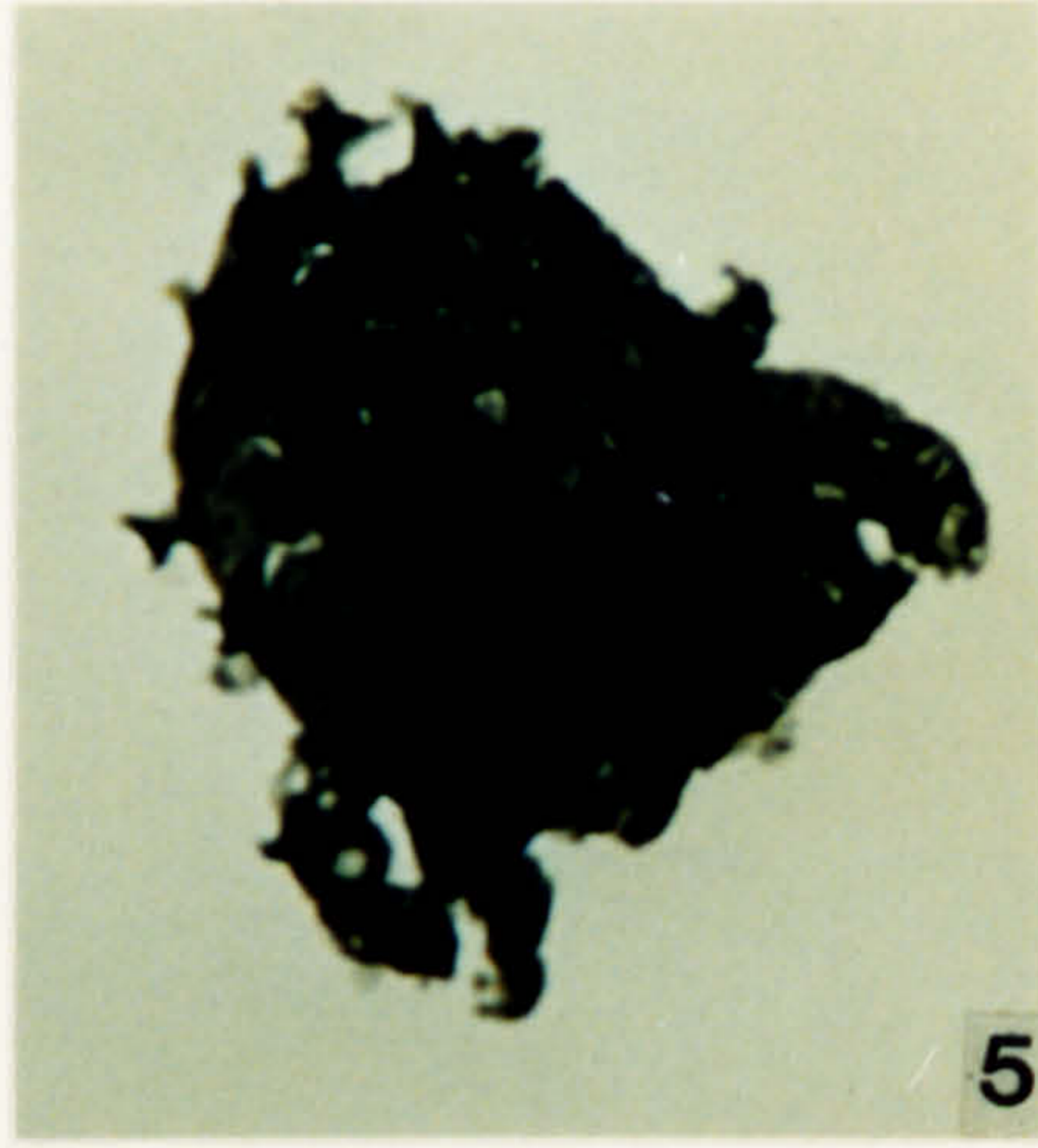
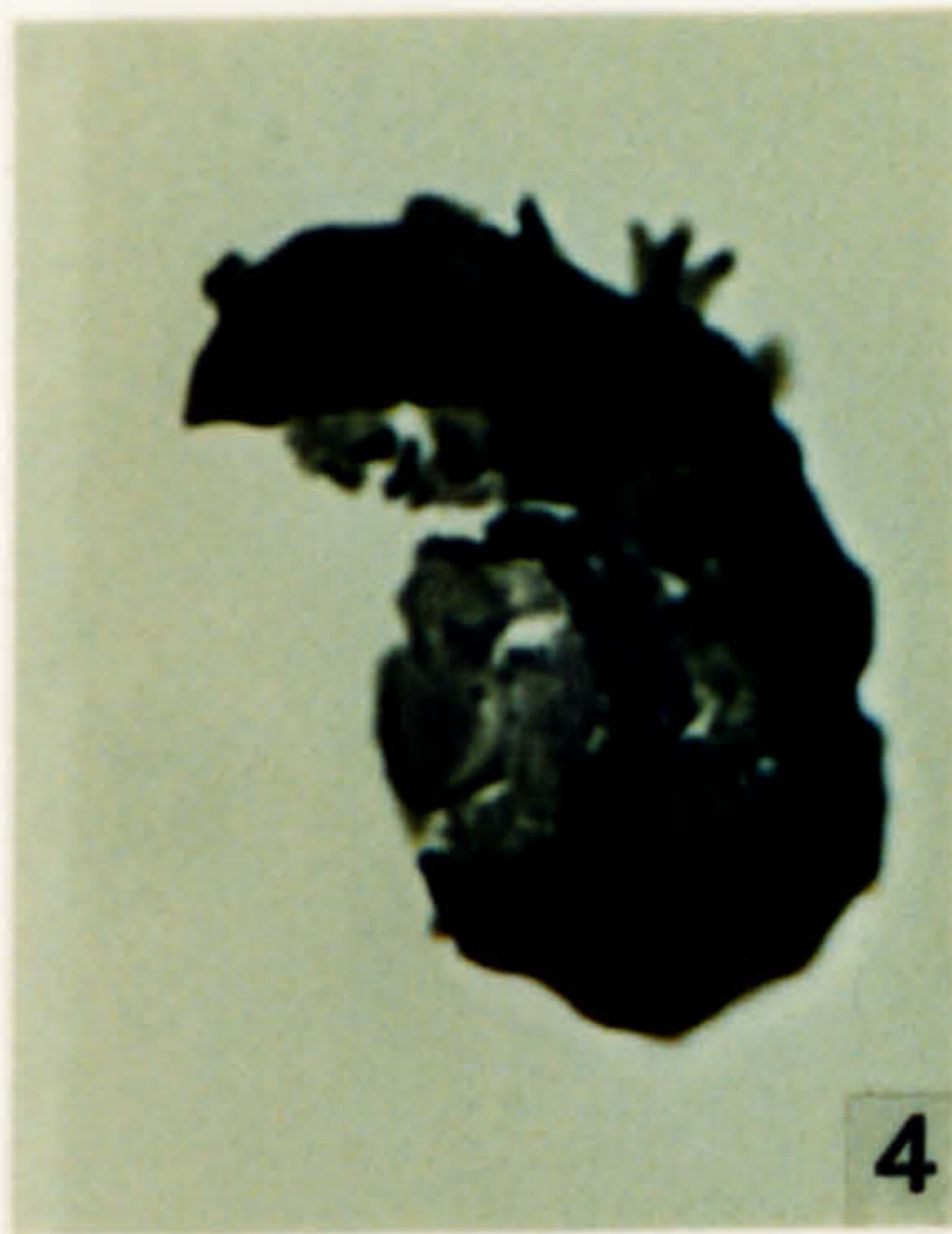
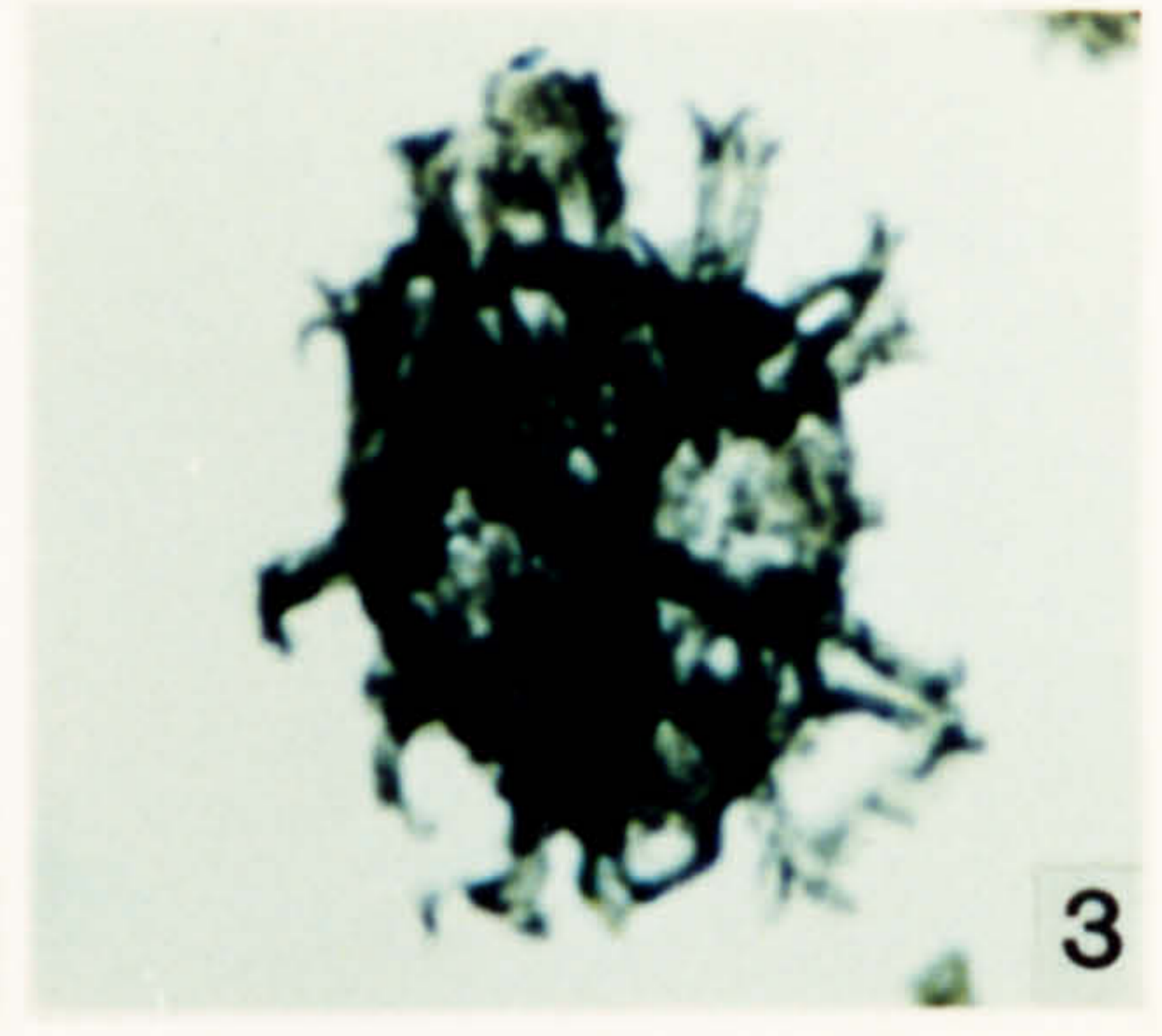
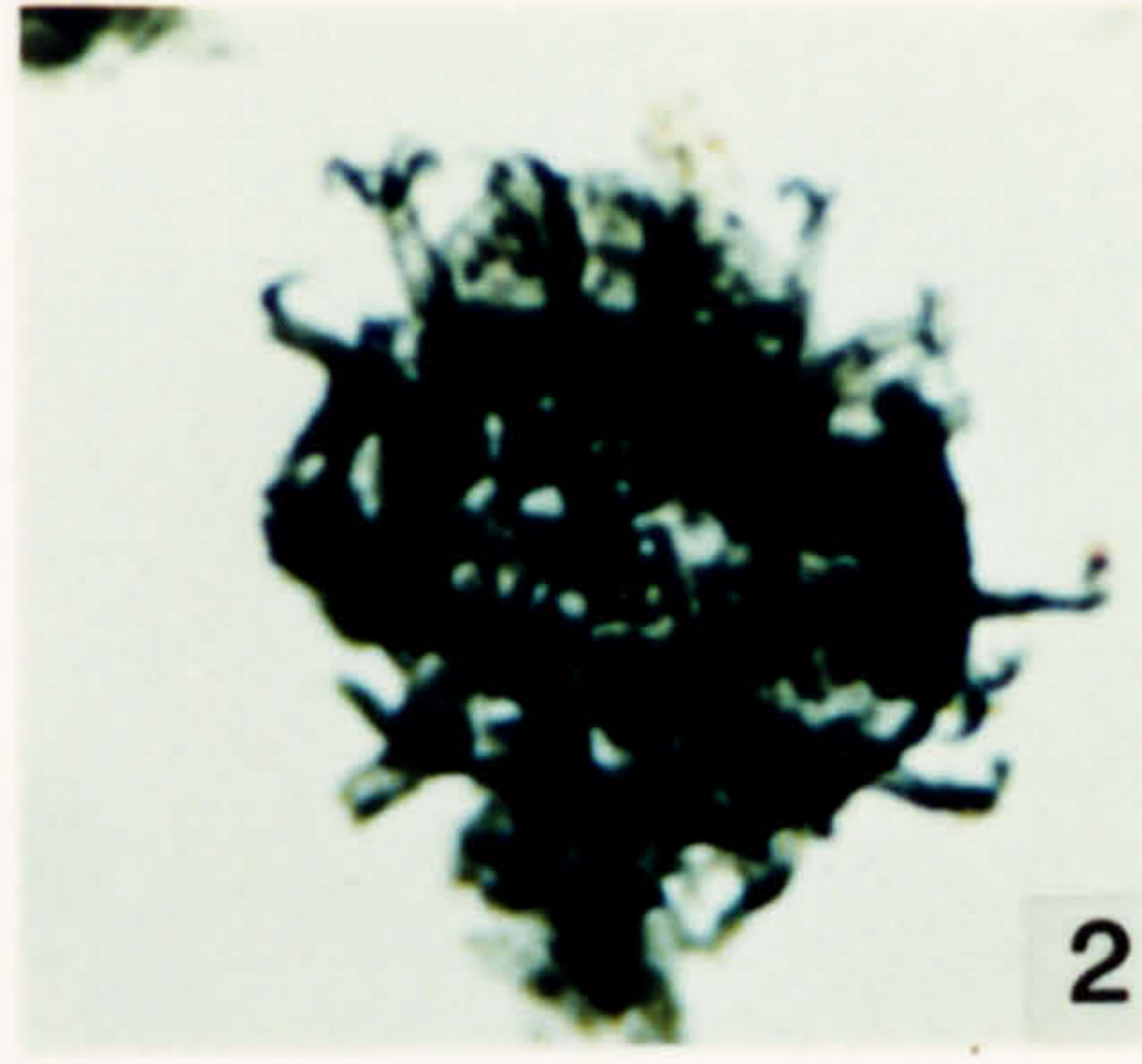
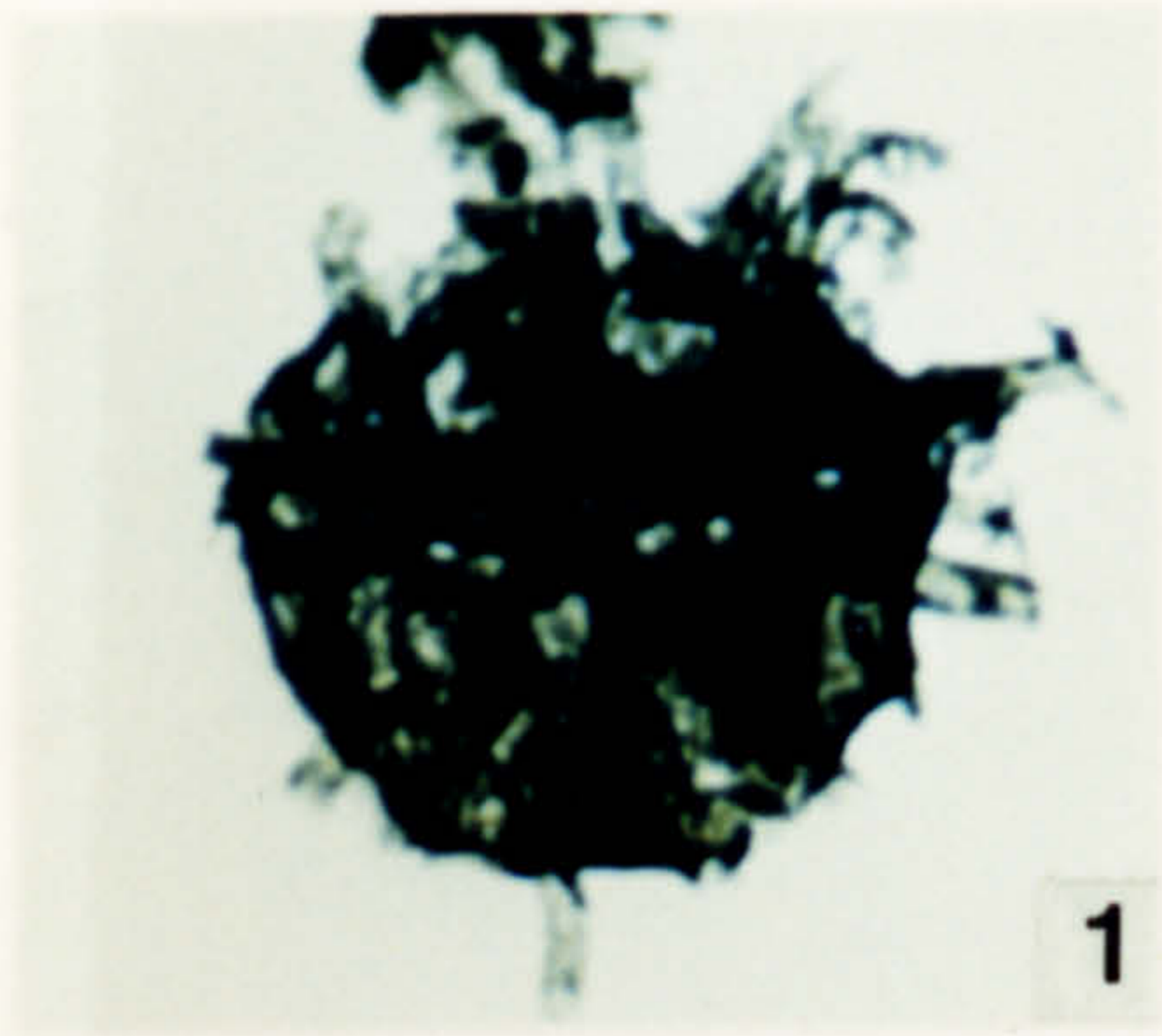




**Plate 20.**

**Acritarchs from the Fezouata Formation, Arenig in age.**

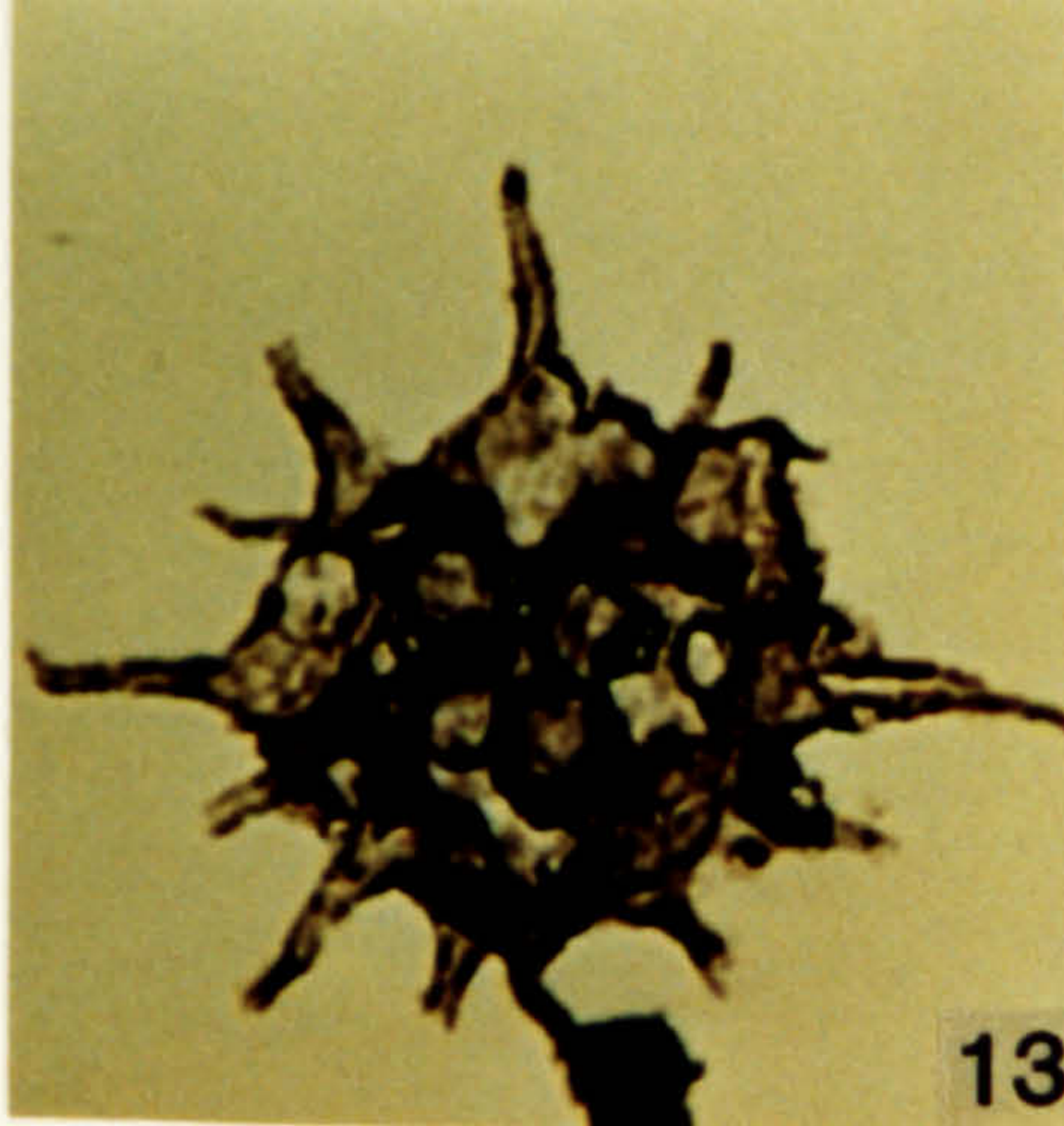
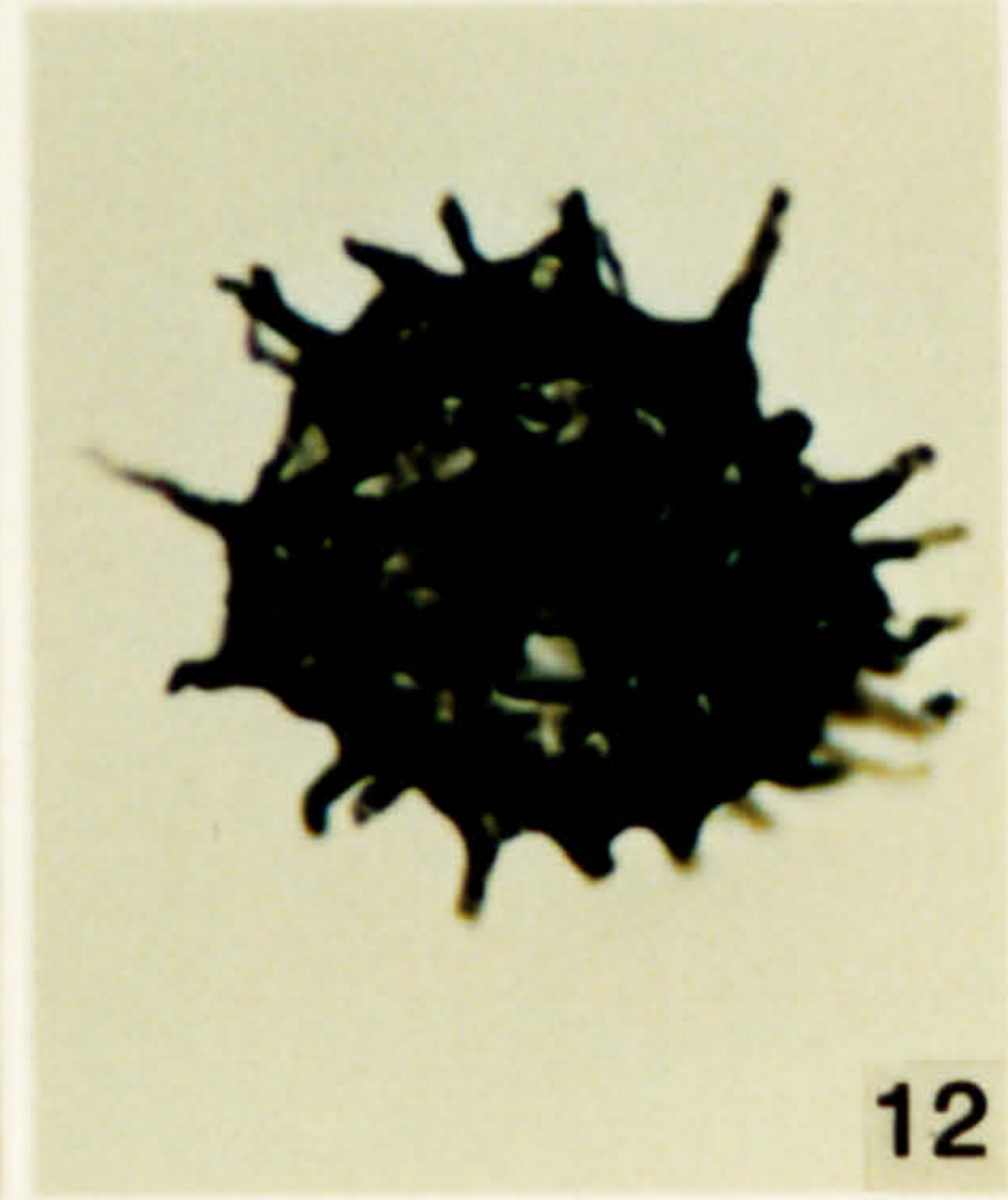
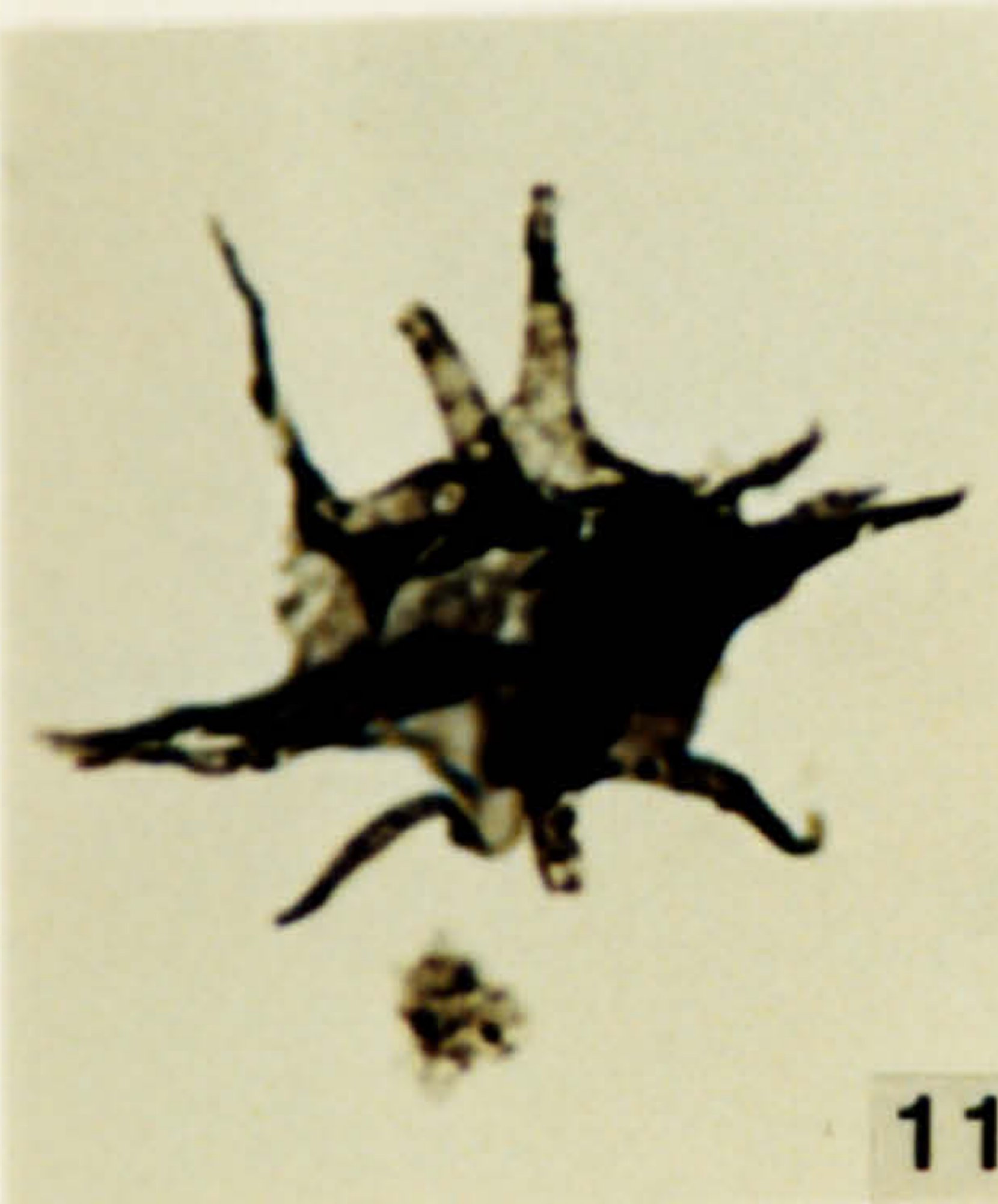
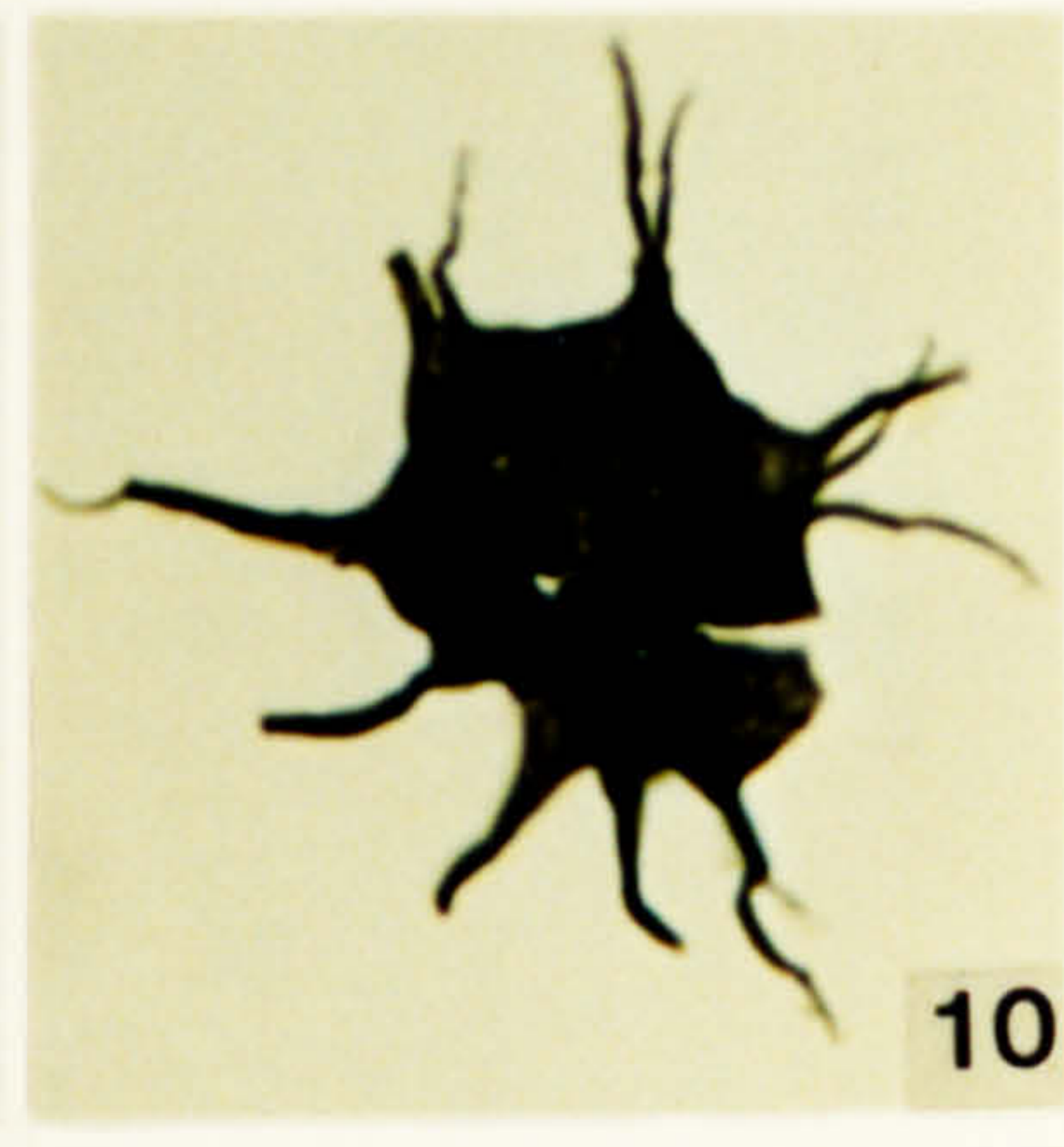
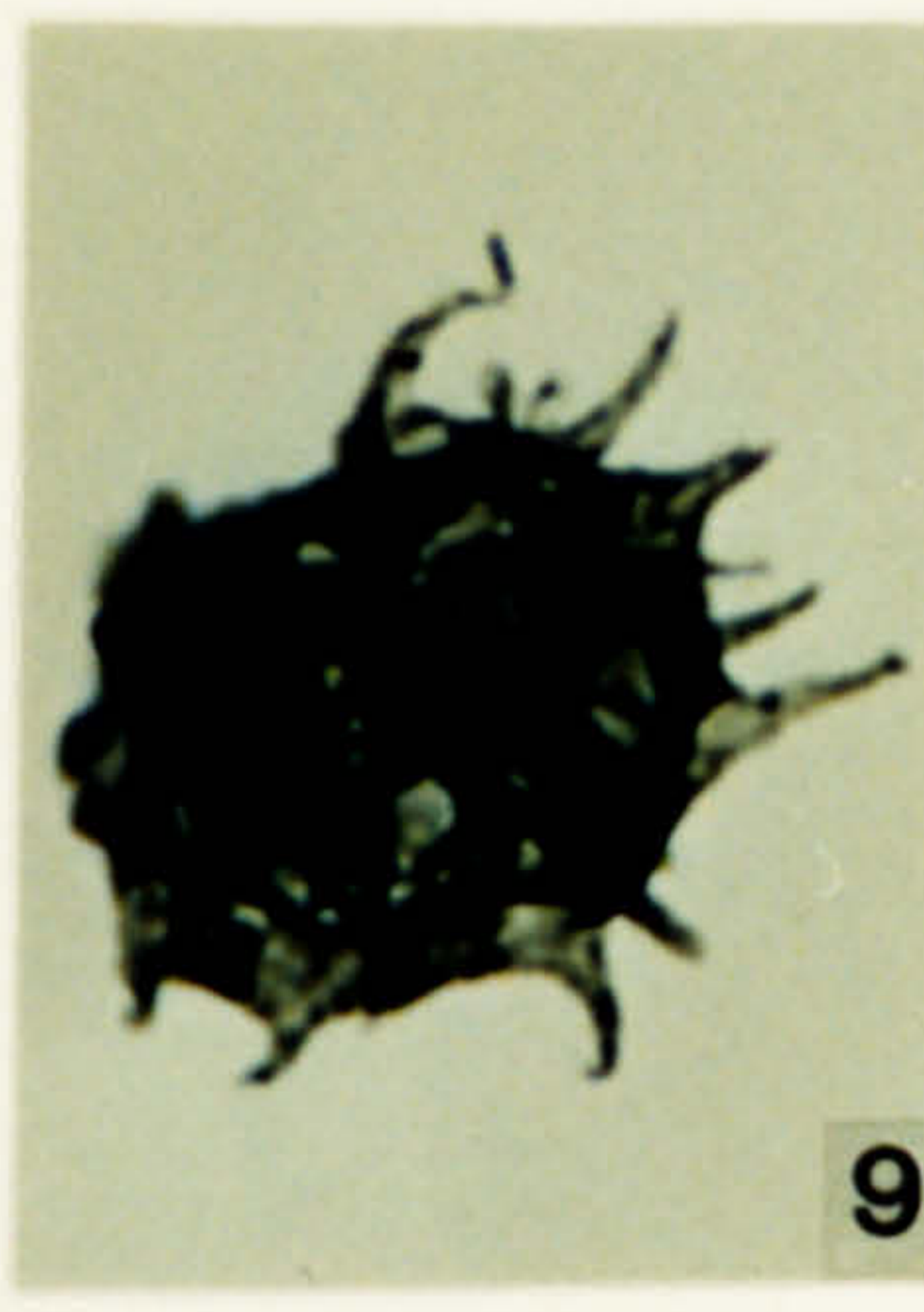
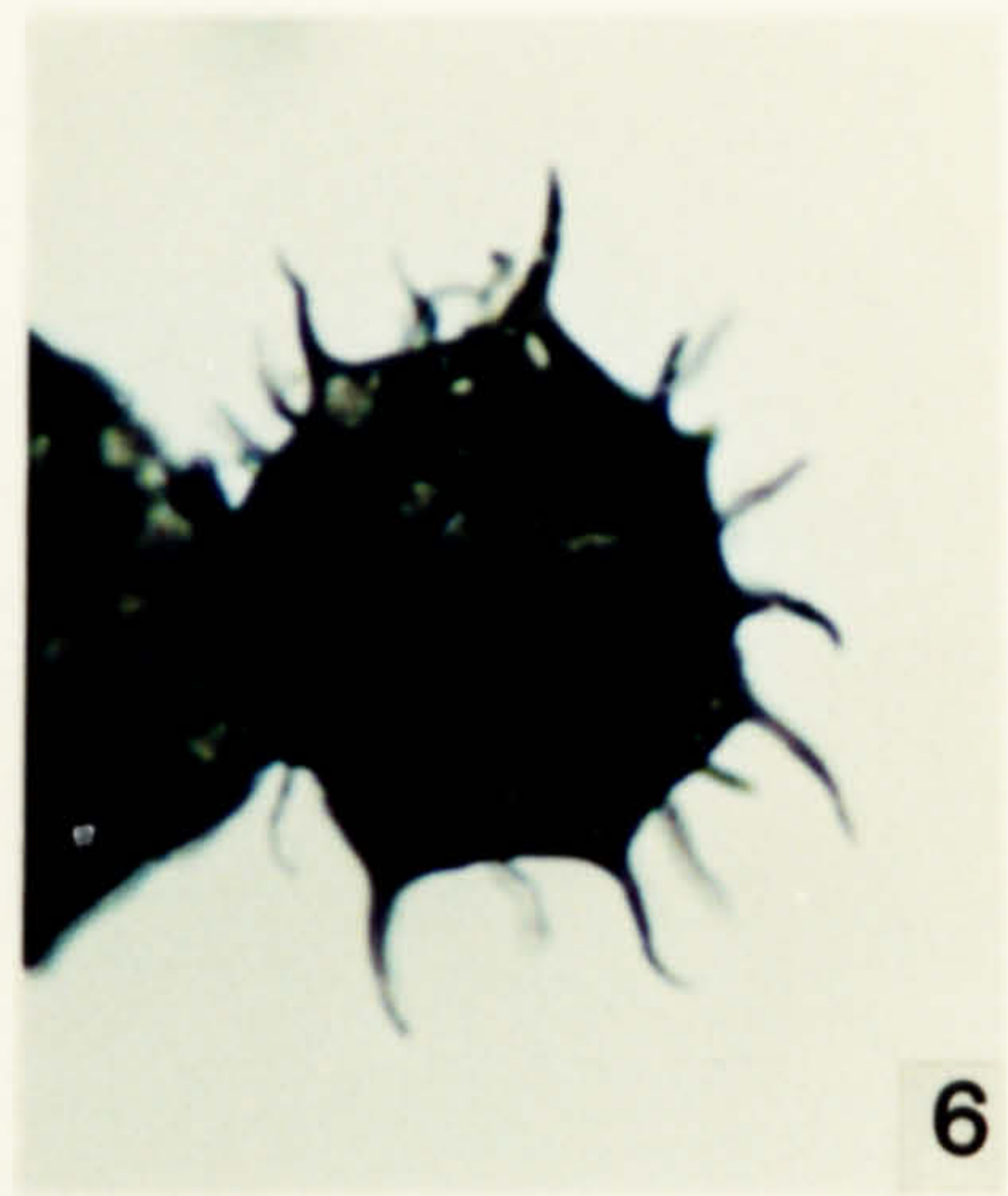
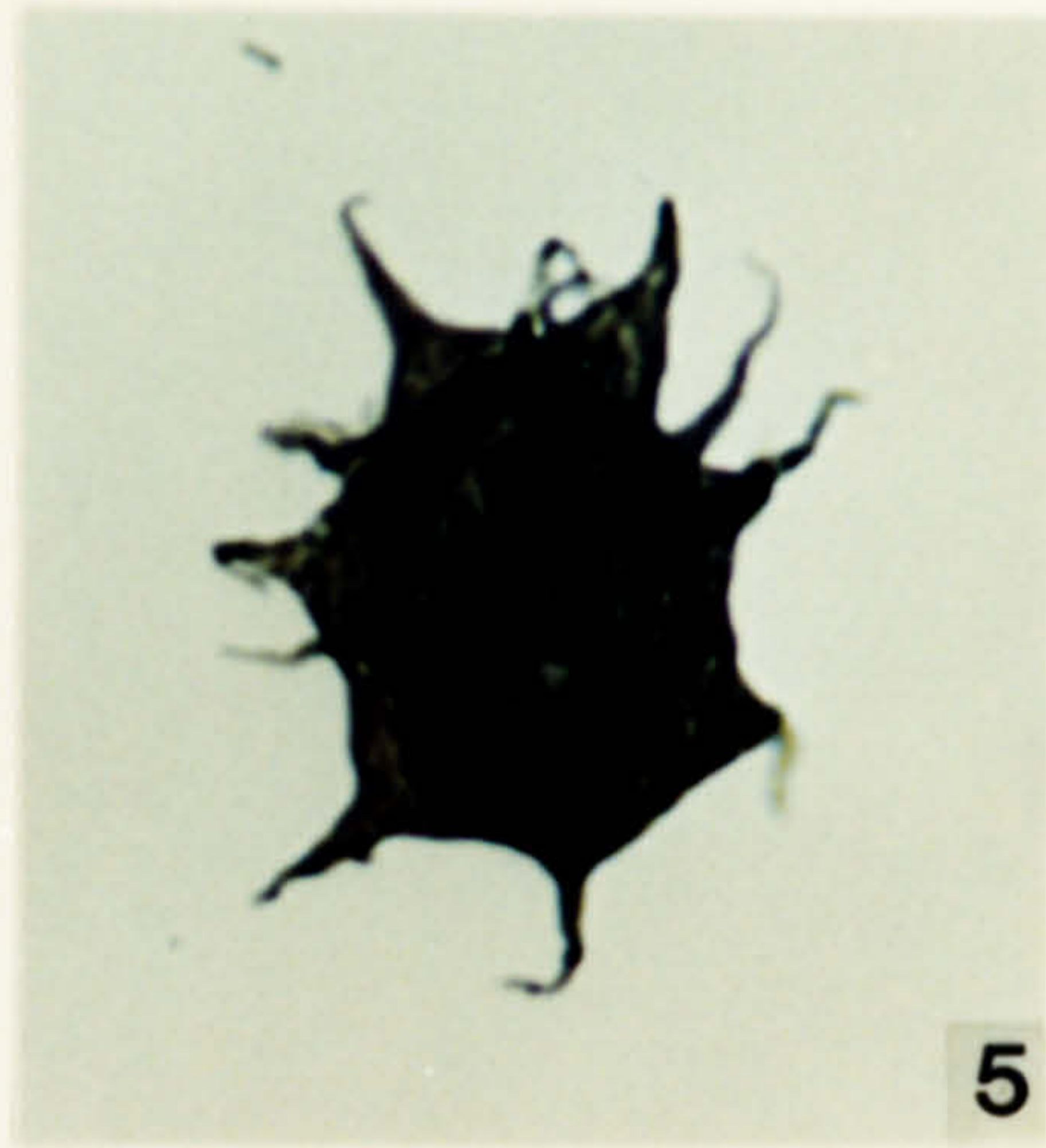
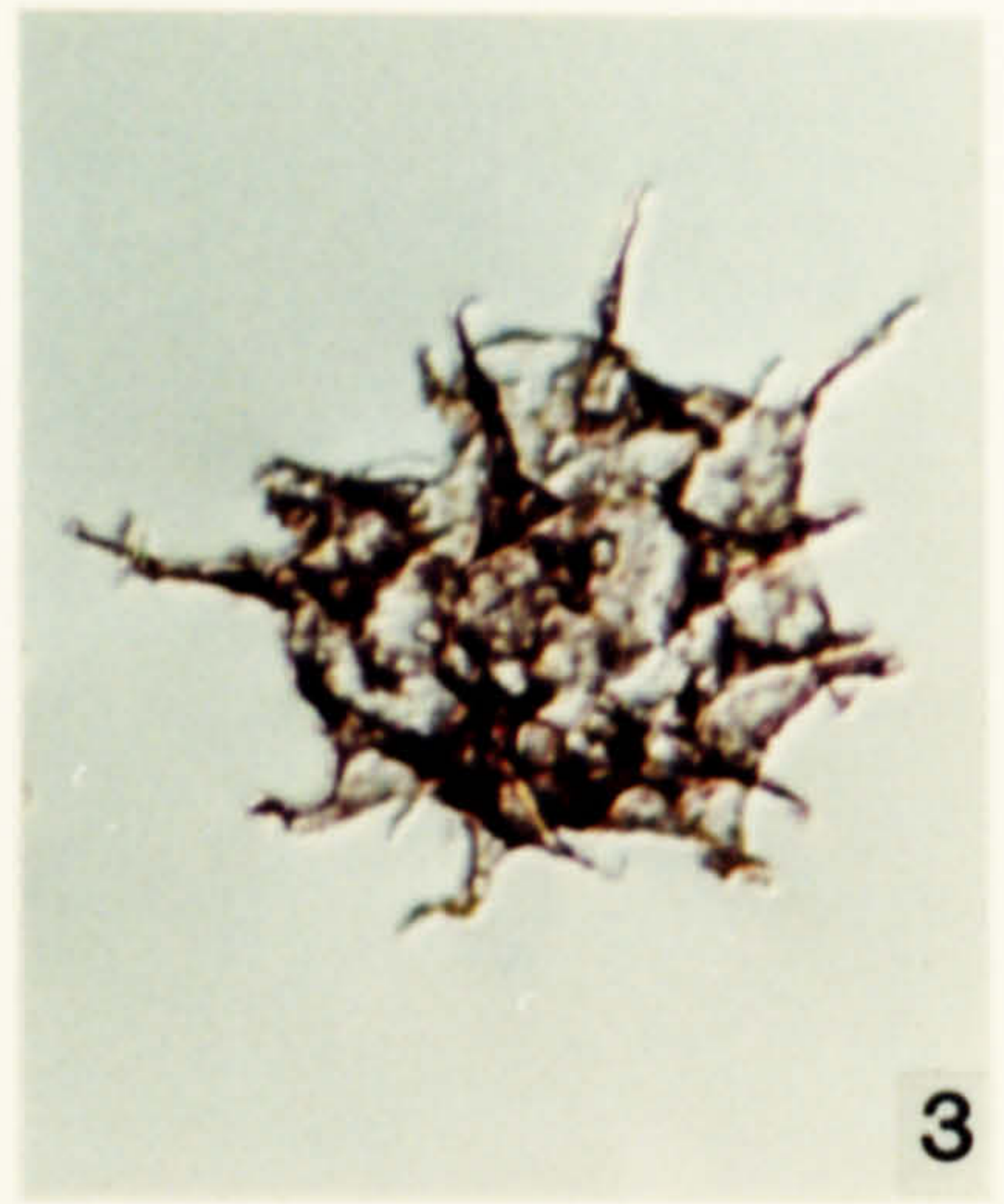
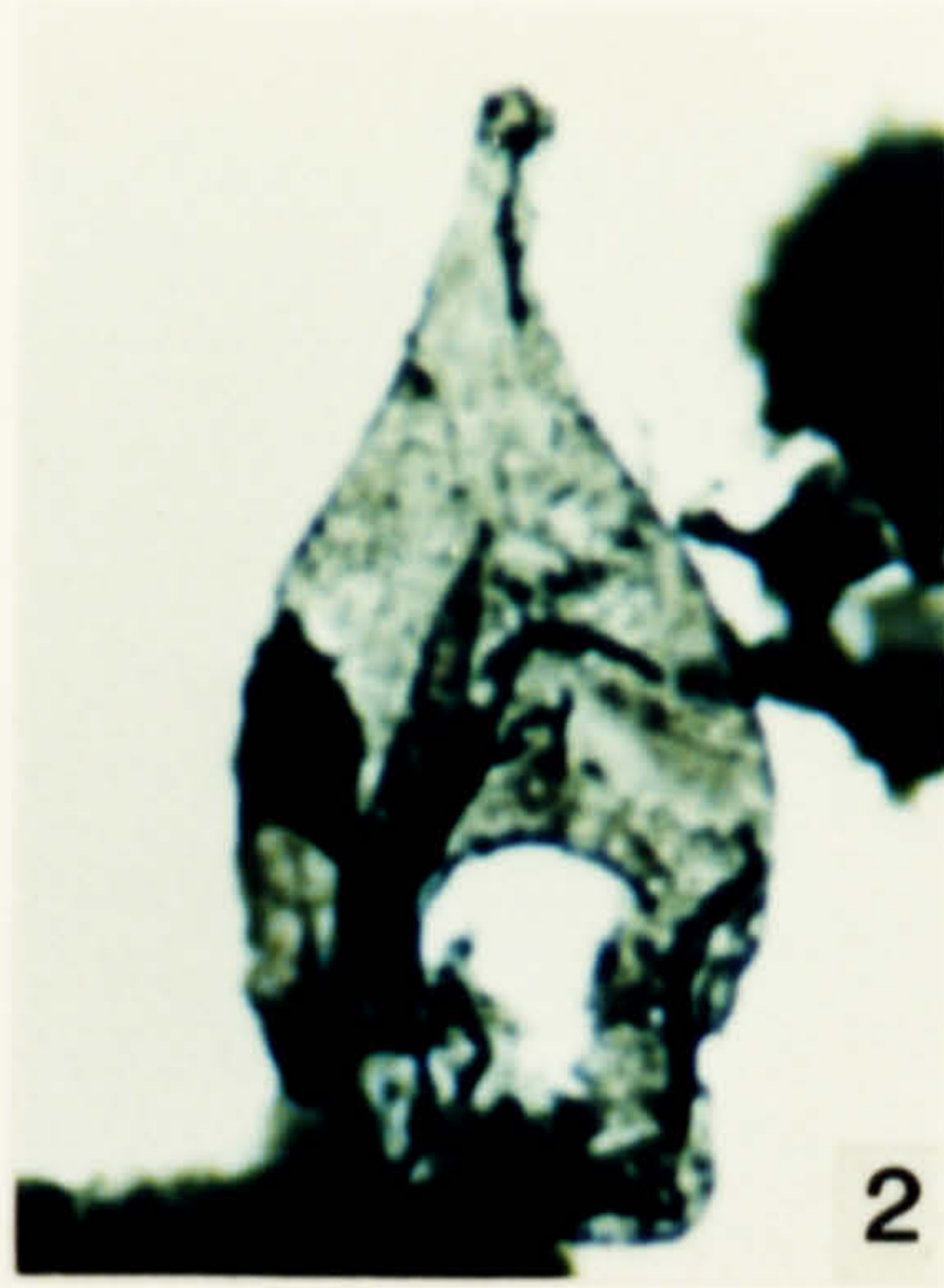
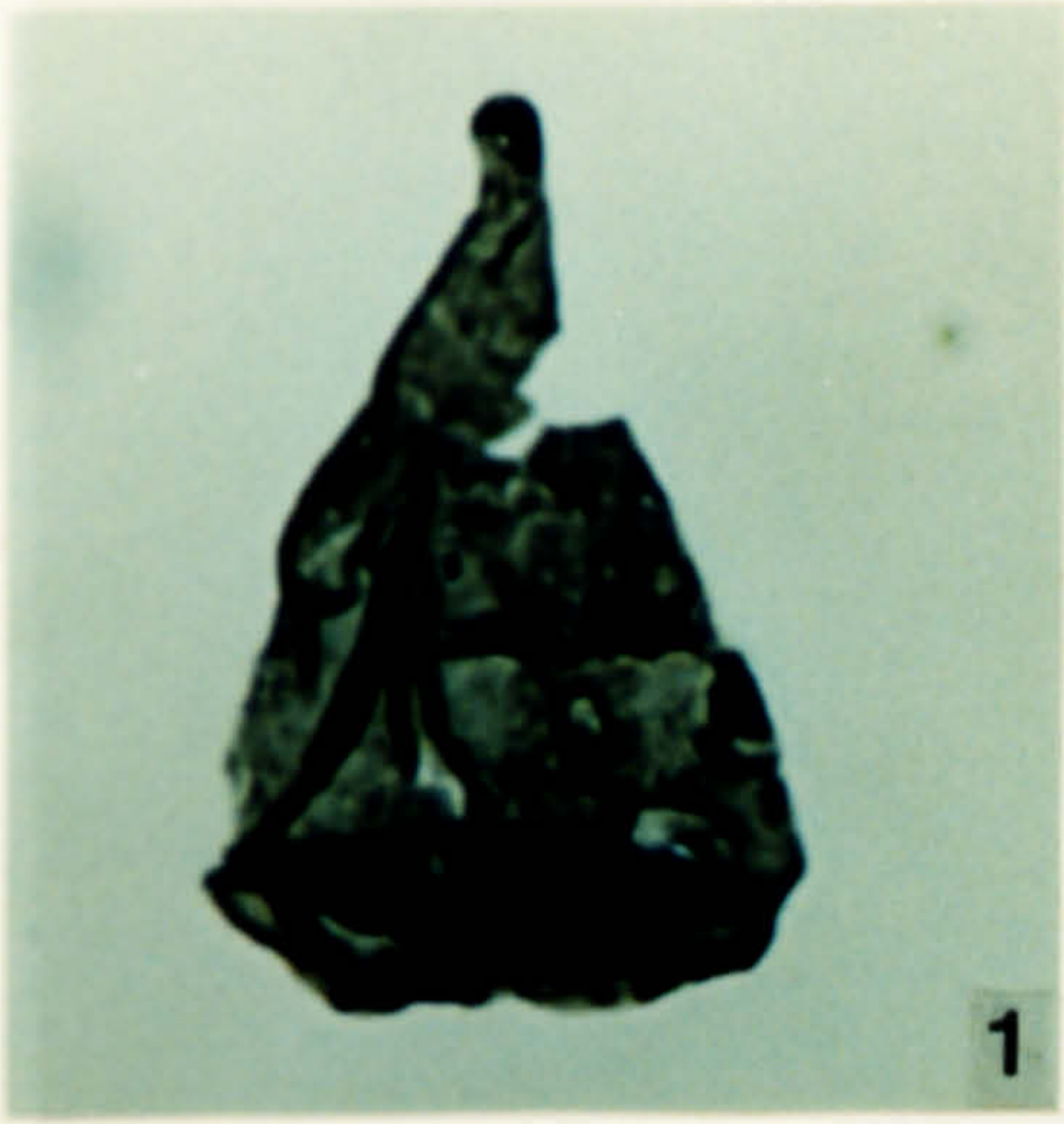
1. *Ordovicidium cf. heteromorphicum* (Kjellstrom) Loeblich & Tappan 1978. JD 29, 2-1, E42\3.
2. *Ordovicidium cf. heteromorphicum* (Kjellstrom) Loeblich & Tappan 1978. JD 29, 2-1, Q28\4.
3. *Ordovicidium cf. heteromorphicum* (Kjellstrom) Loeblich & Tappan 1978. JD 29, 2-1, W32\1.
4. *Peteinosphaeridium cruzianum* Vavrdova 1990. DW 294, 2-1, B33\4.
5. *Peteinosphaeridium cruzianum* Vavrdova 1990. DW 294, 2-1, C28\4.
6. *Peteinosphaeridium* sp. DW 262, 1-2, Q39\4.
7. *Peteinosphaeridium* sp. DW 294, 2-1, V34\3.
8. *Peteinosphaeridium* sp. DW 294, 2-2, J40\3.
9. *Peteinosphaeridium* sp. DW 303, 2-1, K7\3.
10. *Peteinosphaeridium* sp. DW 303, 2-1, G19\3.
11. *Peteinosphaeridium* sp. DW 303, 2-1, F17\.



**Plate 21.**

**Acritarchs from the Fezouata Formation, Arenig in age.**

1. *Pirca colliformis* (Burmann) Eisenack, Cramer & Diez 1976. DW 303, 2-1, O10\4.
2. *Pirca colliformis* (Burmann) Eisenack, Cramer & Diez 1976. DW 303, 2-1, O15\4.
3. *Polygonium gracile* Vavrdova 1966. JW 5, FS-1, O26\4.
4. *Polygonium gracile* Vavrdova 1966. DW 303, 2-1, S22\1.
5. *Polygonium gracile* Vavrdova 1966. DW 303, 2-1, M15\-.
6. *Polygonium gracile* Vavrdova 1966. DW 303, 2-1, U39\1.
7. *Polygonium gracile* Vavrdova 1966. DW 291, FS-1, T18\3.
8. *Polygonium gracile* Vavrdova 1966. DW 291, FS-1, K8\-.
9. *Polygonium gracile* Vavrdova 1966. DW 332, 2-1, J42\1.
10. *Polygonium gracile* Vavrdova 1966. DW 294, 1-1, K9\2.
11. *Polygonium gracile* Vavrdova 1966. DW 307, FS-1, C26\4.
12. *Polygonium gracile* Vavrdova 1966. DW 107, 2-1, L31\4.
13. *Polygonium gracile* Vavrdova 1966. JW 5, FS-1, C36\2.

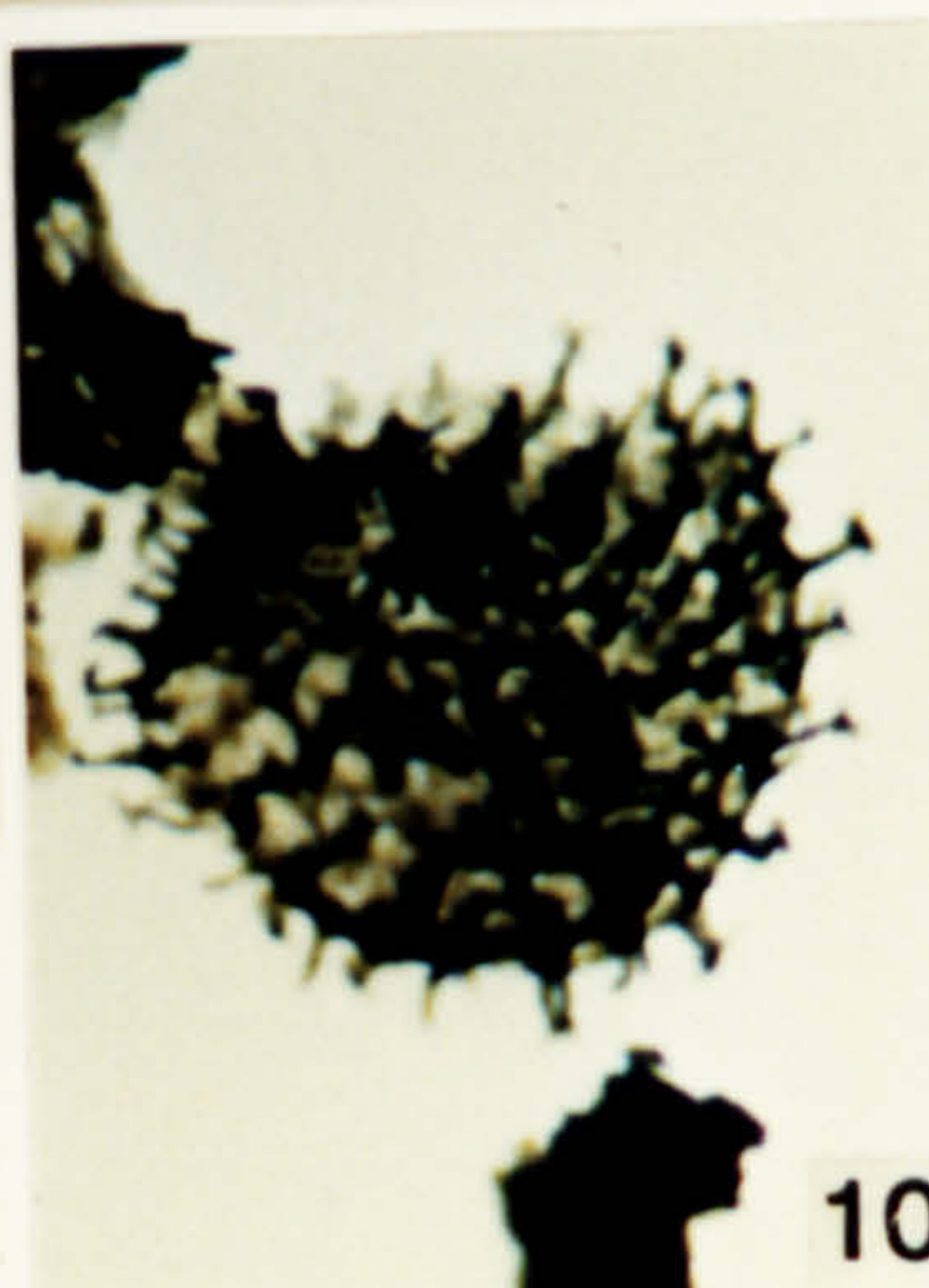
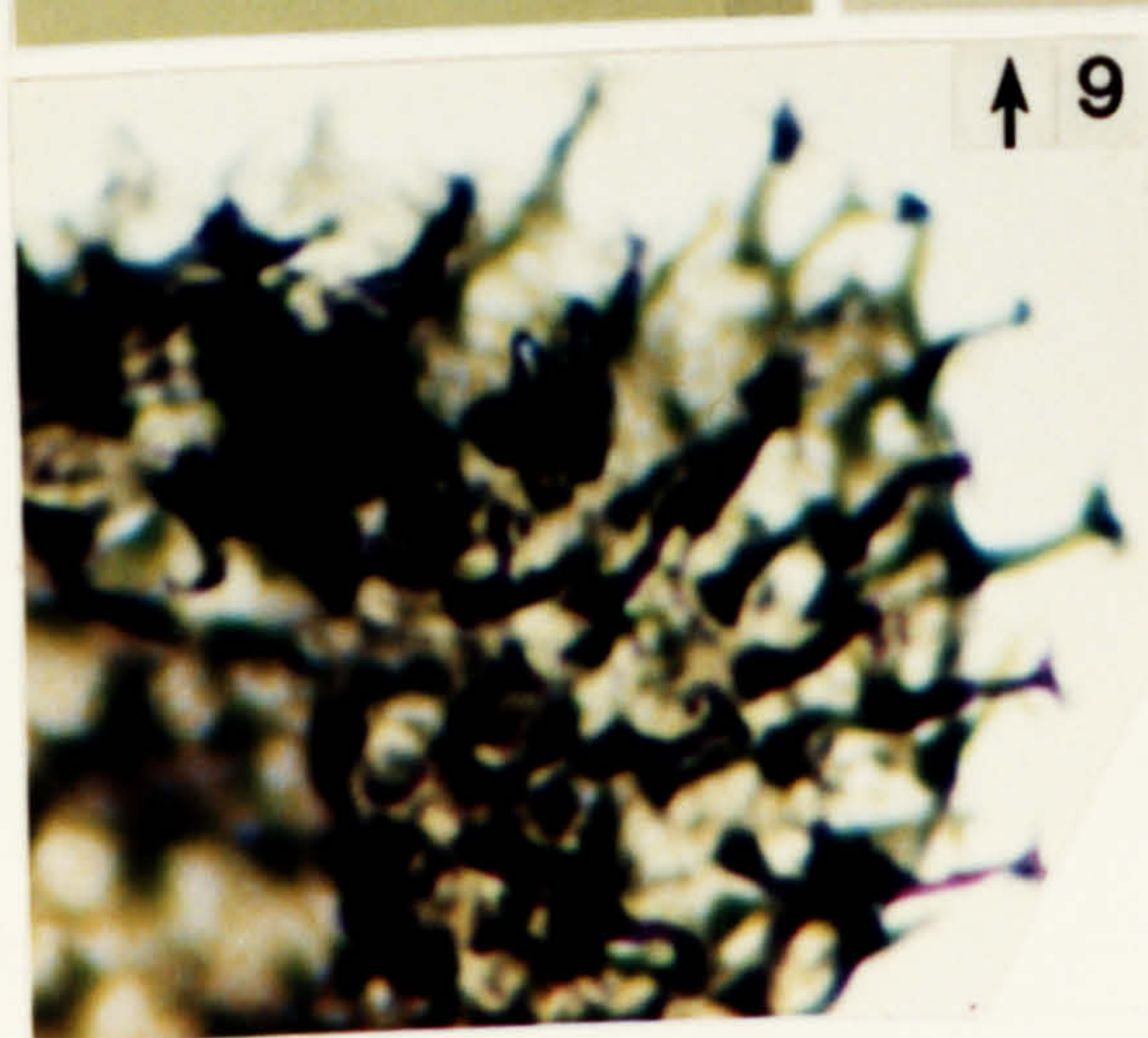
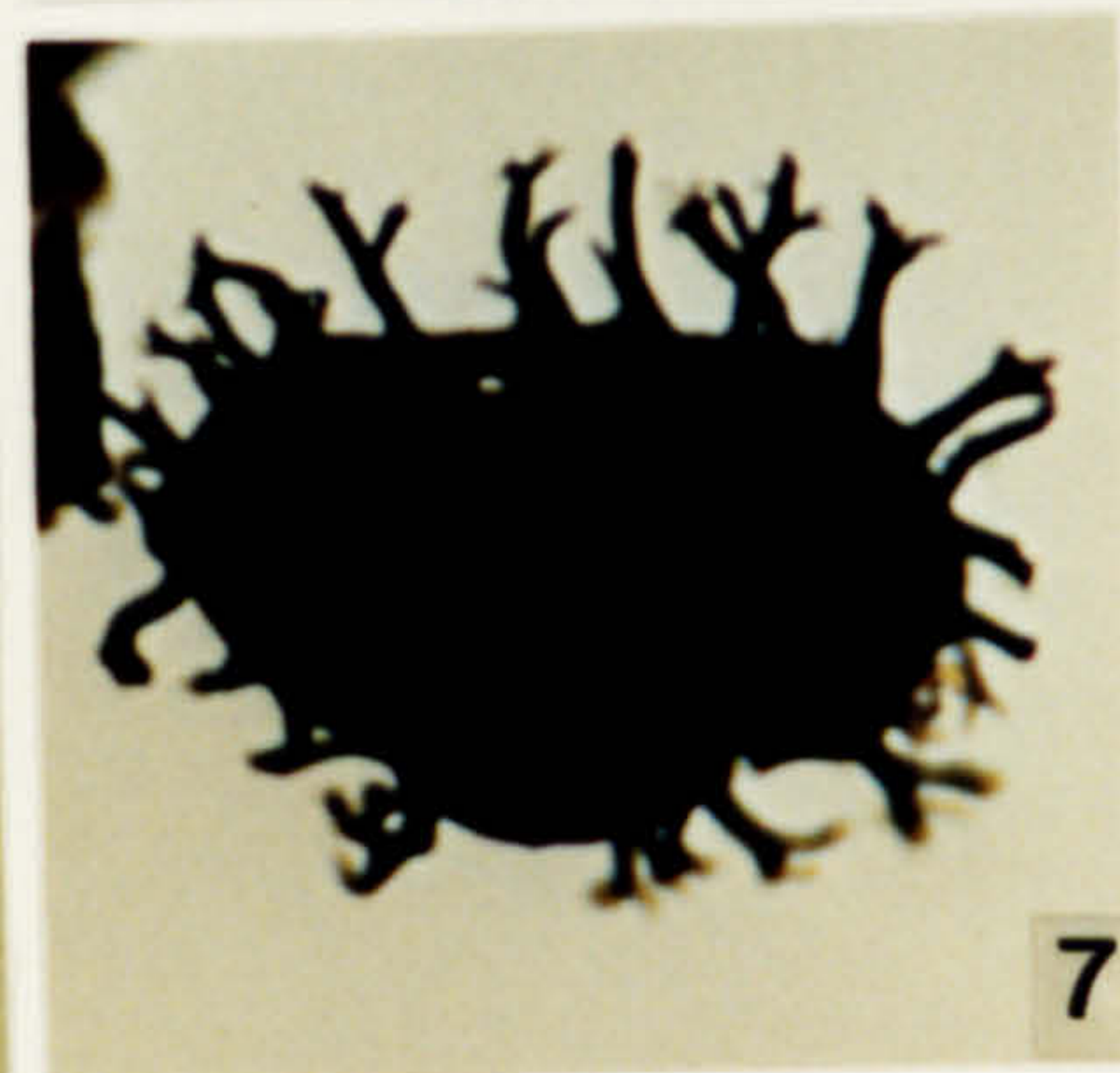
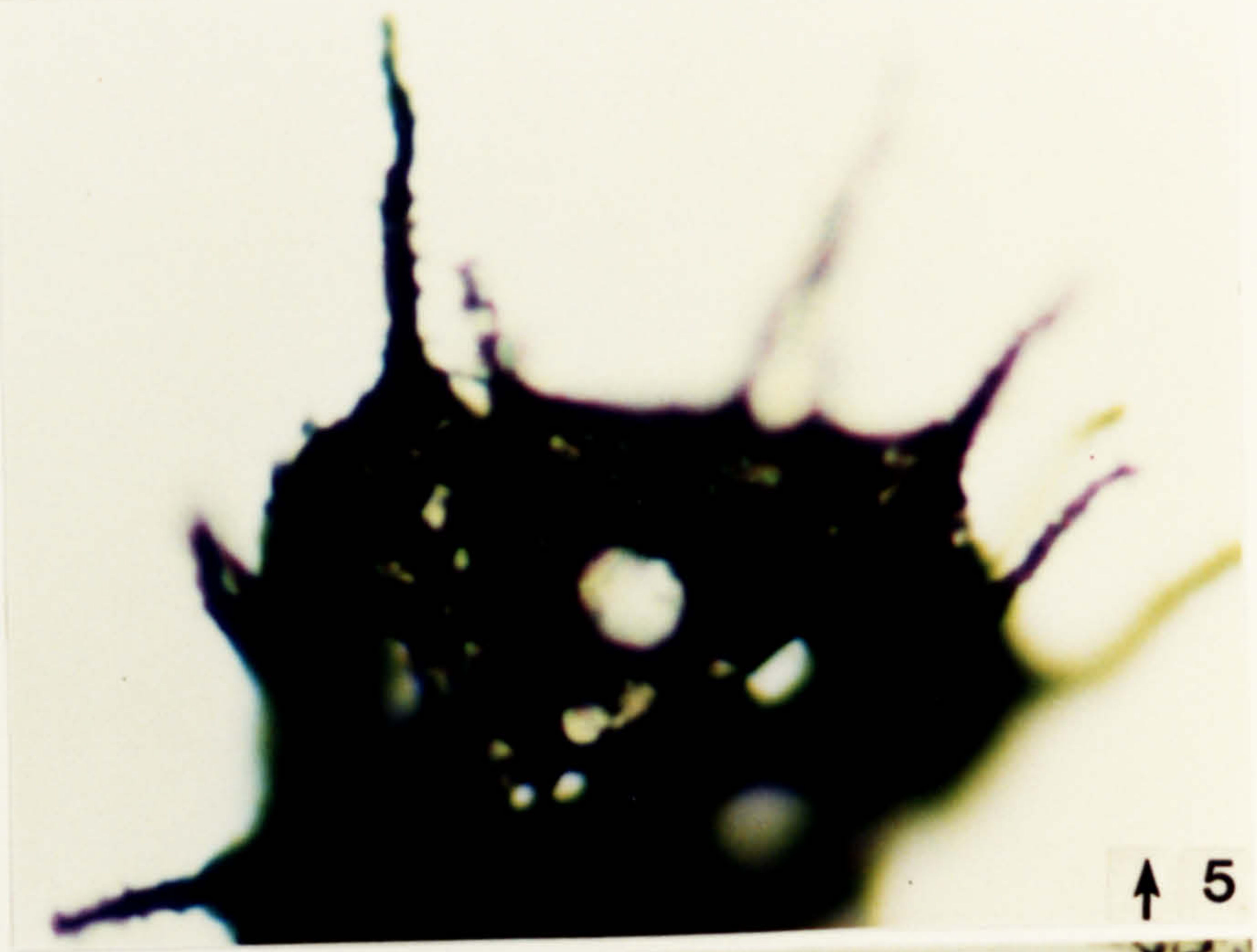
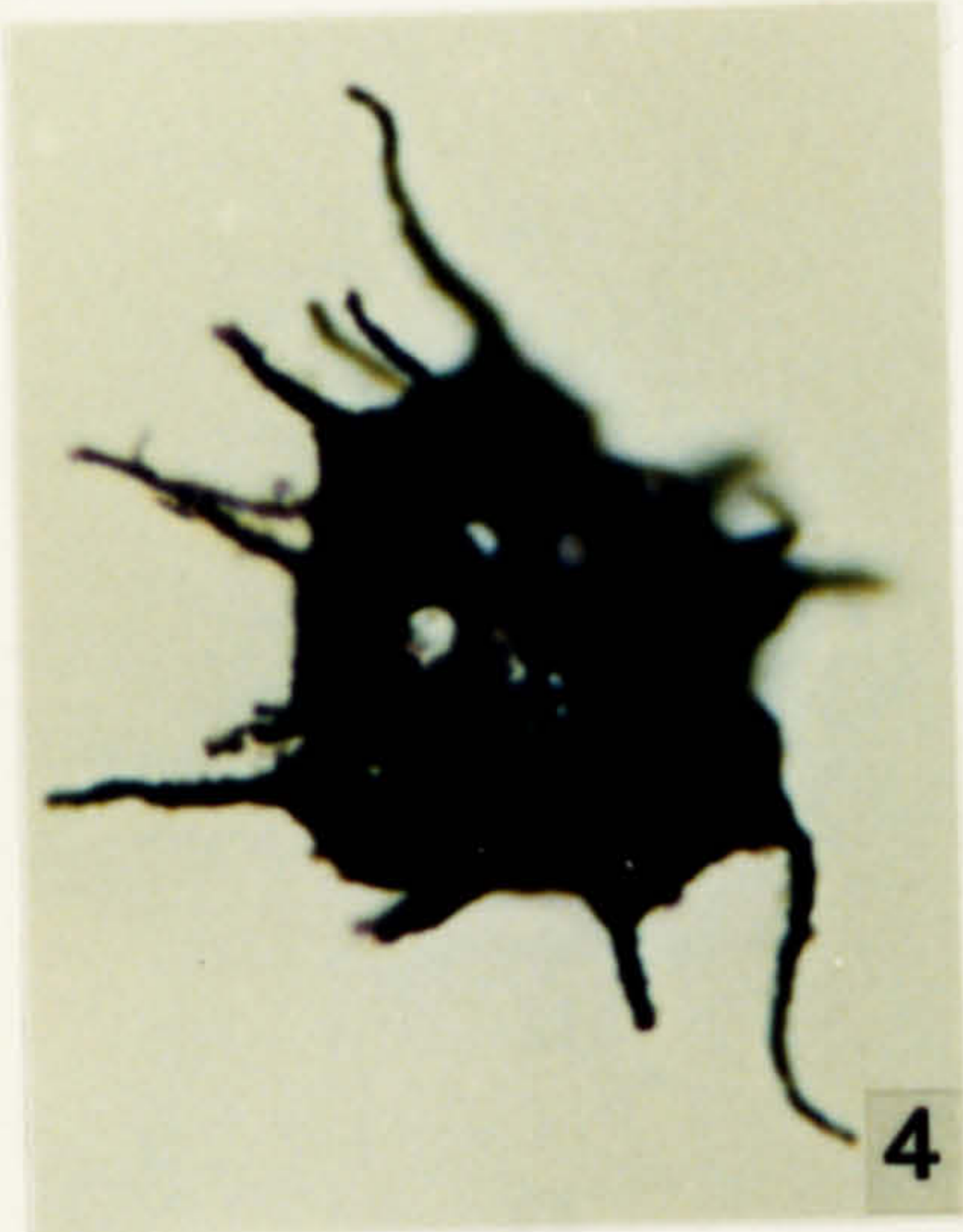
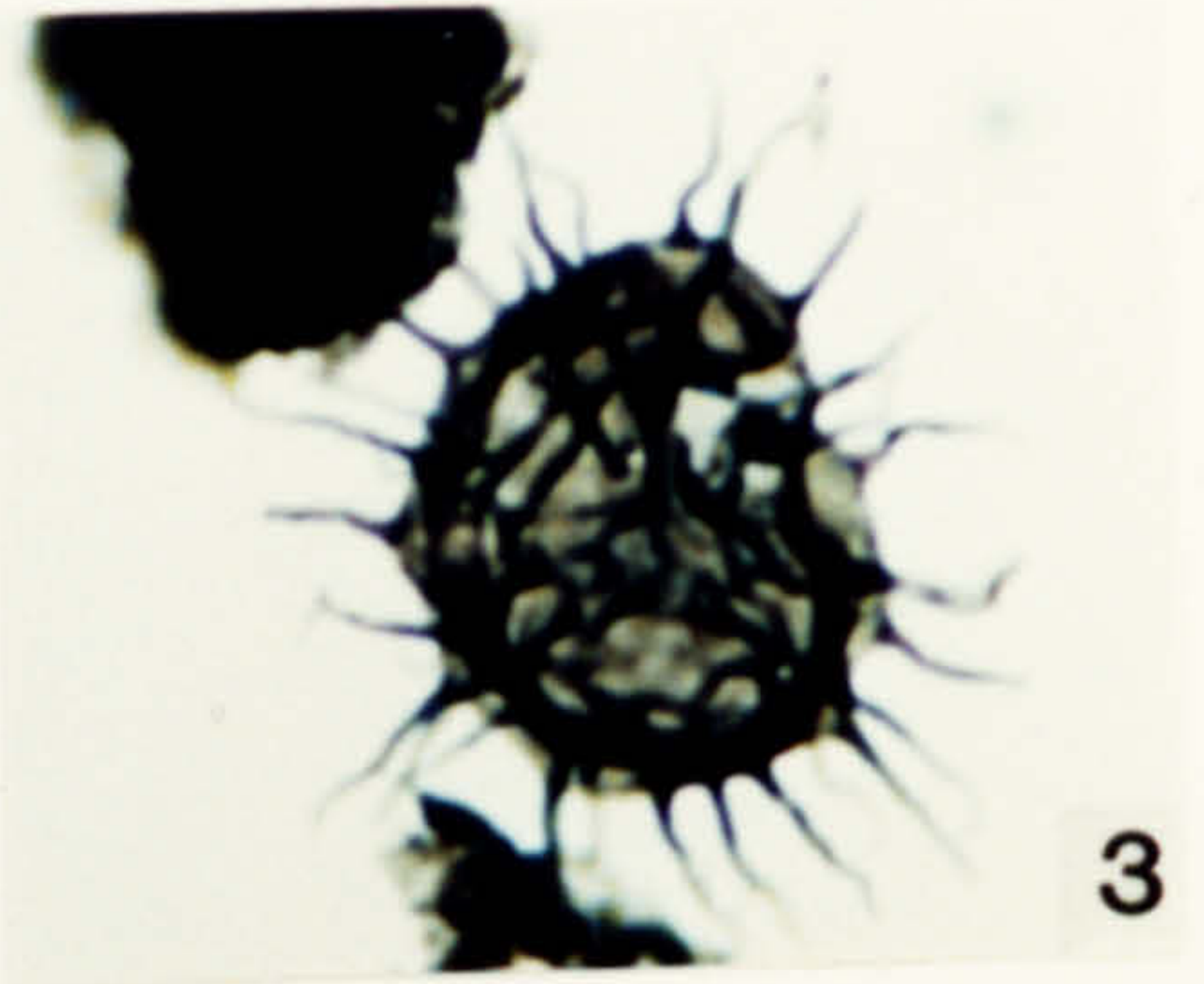
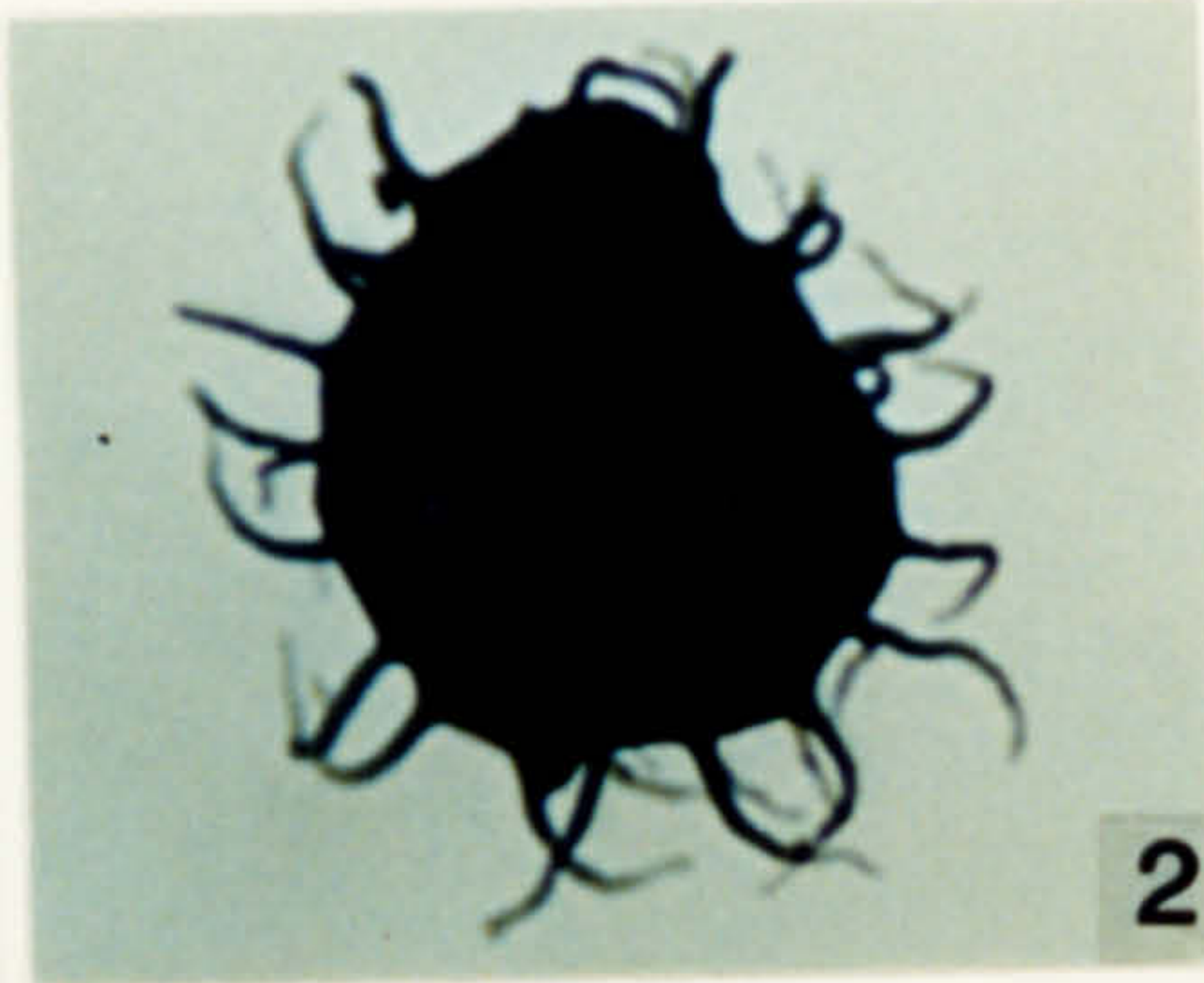
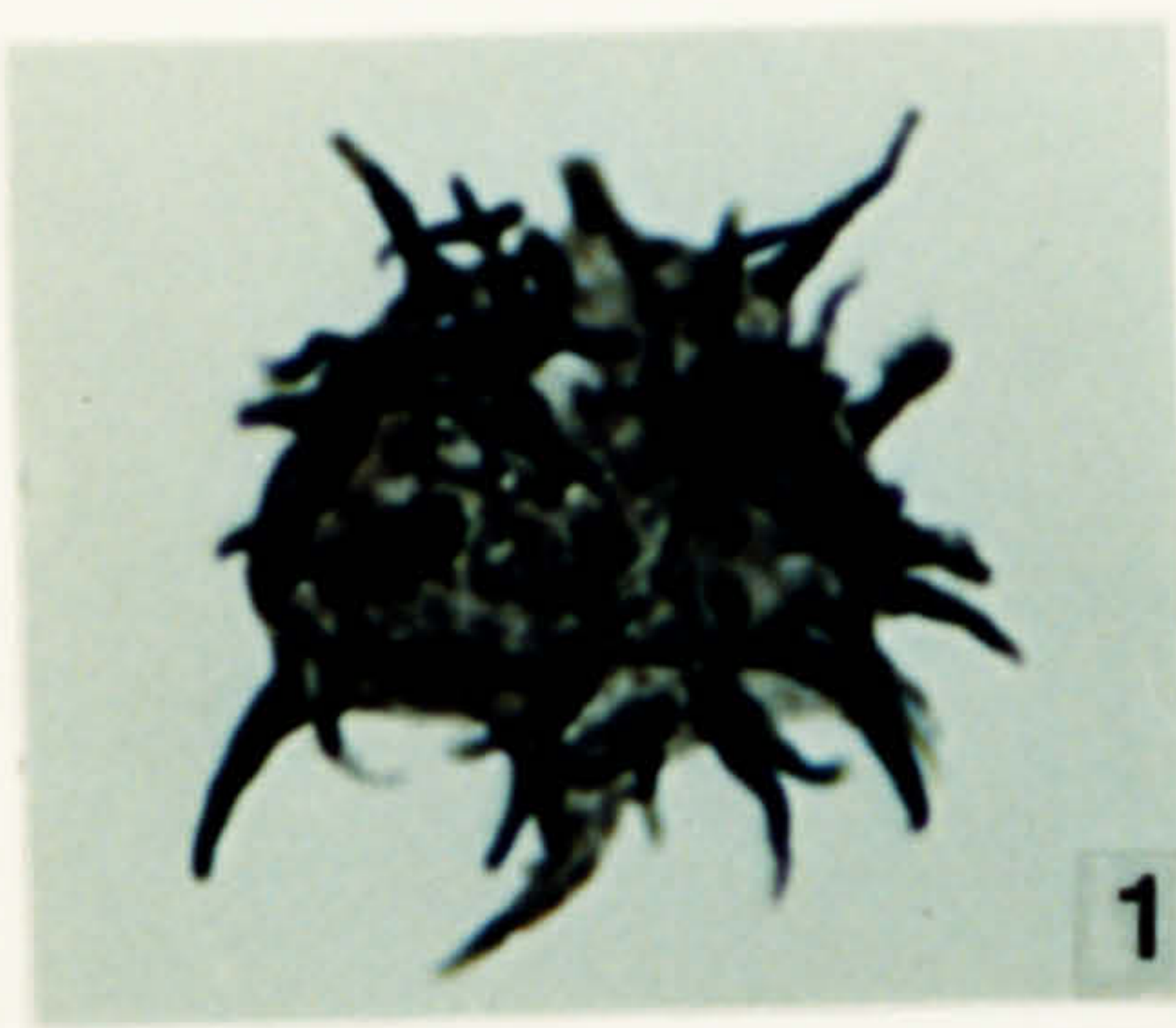


**Plate 22.**

Acritarchs from the Fezouata Formation, Arenig in age.

1. *Solisphaeridium solidispinosum* Cramer & Diez 1977. DW 303, 2-1, G21\3.
2. *Solisphaeridium* sp. 1. DW 303, 2-1, P42\4.
3. *Solisphaeridium* sp. 1. DW 303, 2-1, P42\4.
4. *Stellechinitum helosum* Turner 1984. DW 307, FS-1, F11\4.
5. *Stellechinitum helosum* Turner 1984. DW 307, FS-1, F11\4, X2300.
6. *Stellechinitum helosum* Turner 1984. JW 5, FS-1, E30\1.
7. *Stelliferidium cortinulum* (Deunff) Deunff, Gorka & Rauscher 1974. DW 294, 2-1, T27\4.
8. *Stelliferidium striatulum* (Vavrdova) Deunff, Gorka & Raucher 1974. DW 307, FS-1, E10\4.
9. *Stelliferidium trifidum* (Rasul) Fensome *et al.* 1990. DW 307, FS-1, H10\4, X2300.
10. *Stelliferidium trifidum* (Rasul) Fensome *et al.* 1990. DW 307, FS-1, H10\4.
11. *Stelliferidium trifidum?* (Rasul) Fensome *et al.* 1990. DW 307, FS-1, H23\1.

PLATE 22



**Plate 23.**

Acritarchs from the Fezouata Formation, Arenig in age.

1. *Striatotheca principalis* Burmann 1970. JW 5, FS-1, P31\2.
2. *Striatotheca principalis* Burmann 1970. DW 291, FS-2, E29\2, X2300.
3. *Striatotheca principalis* Burmann 1970. DJ 107, 2-1, O17\1.
4. *Tongzia meitana* Li Jun 1987. DW 303, 2-1, G20\1.
5. *Striatotheca* sp. DJ 107, 2-1, X24\4.
6. *Striatotheca* sp. DJ 307, FS-1, F20\1.
7. *Striatotheca* sp. DJ 107, 2-1, G10\2.
8. *Tongzia meitana* Li Jun 1987. DW 303, 2-1, G35\2.
9. *Tongzia meitana* Li Jun 1987. DW 307, FS-1, O33\4.
10. *Tongzia meitana* Li Jun 1987. DW 307, FS-1, E11\3.
11. *Uncinisphaera?* sp. 1. JW 5, FS-1, M12\3, IC.
12. *Uncinisphaera?* sp. 1. JW 5, FS-1, G20\2, IC.
13. *Uncinisphaera?* sp. 1. DW 307, FS-1, G20\2.

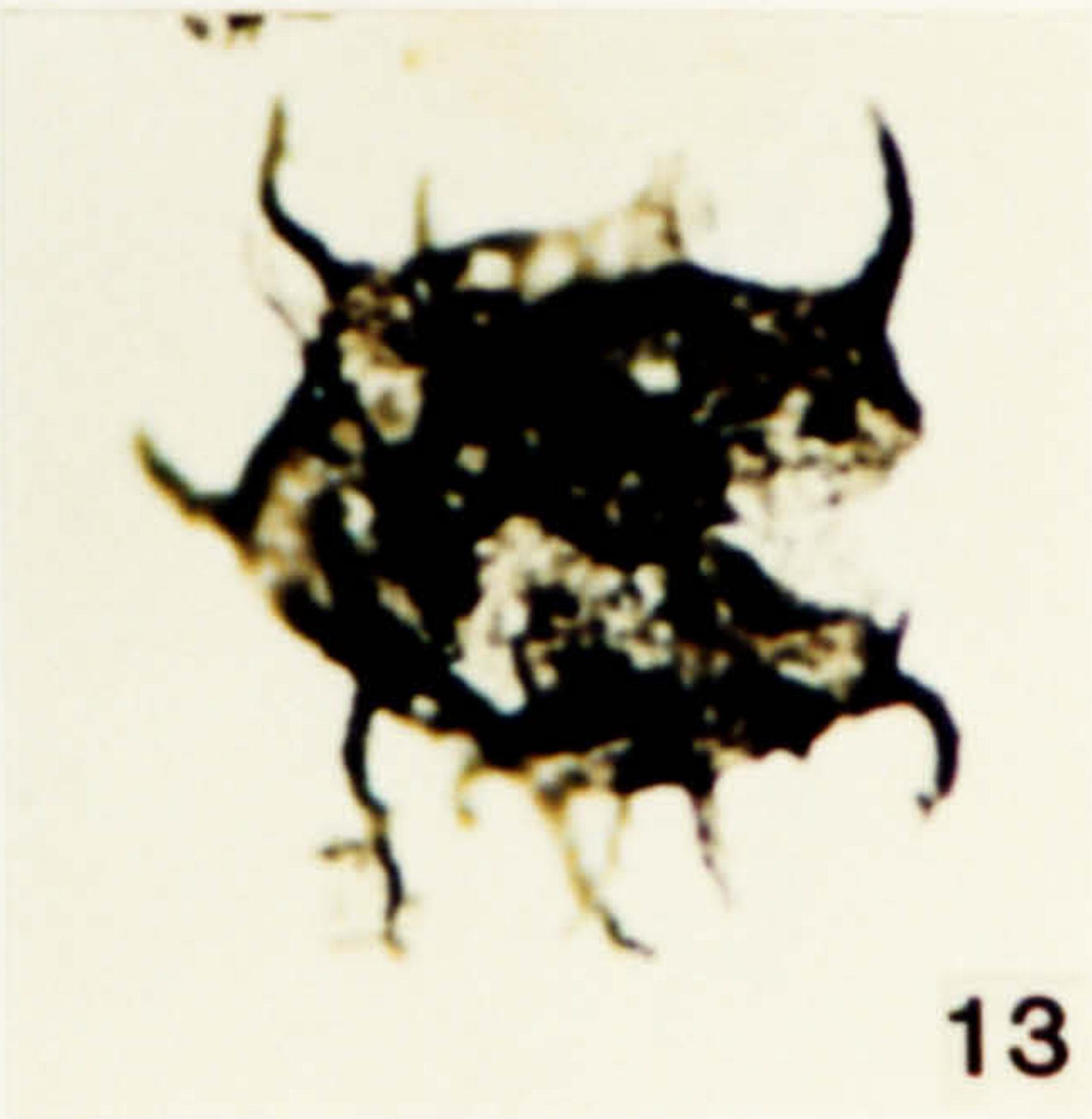
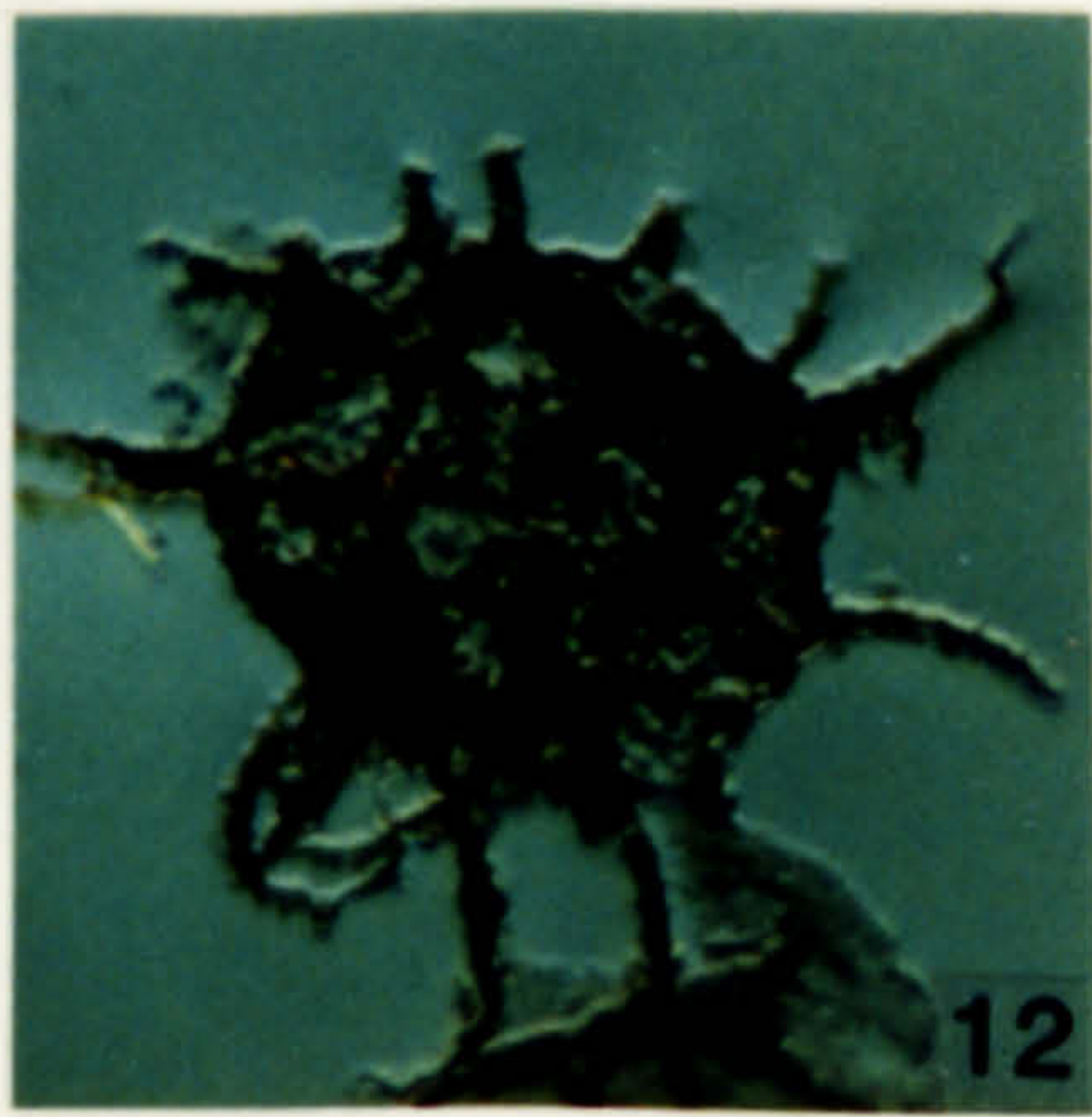
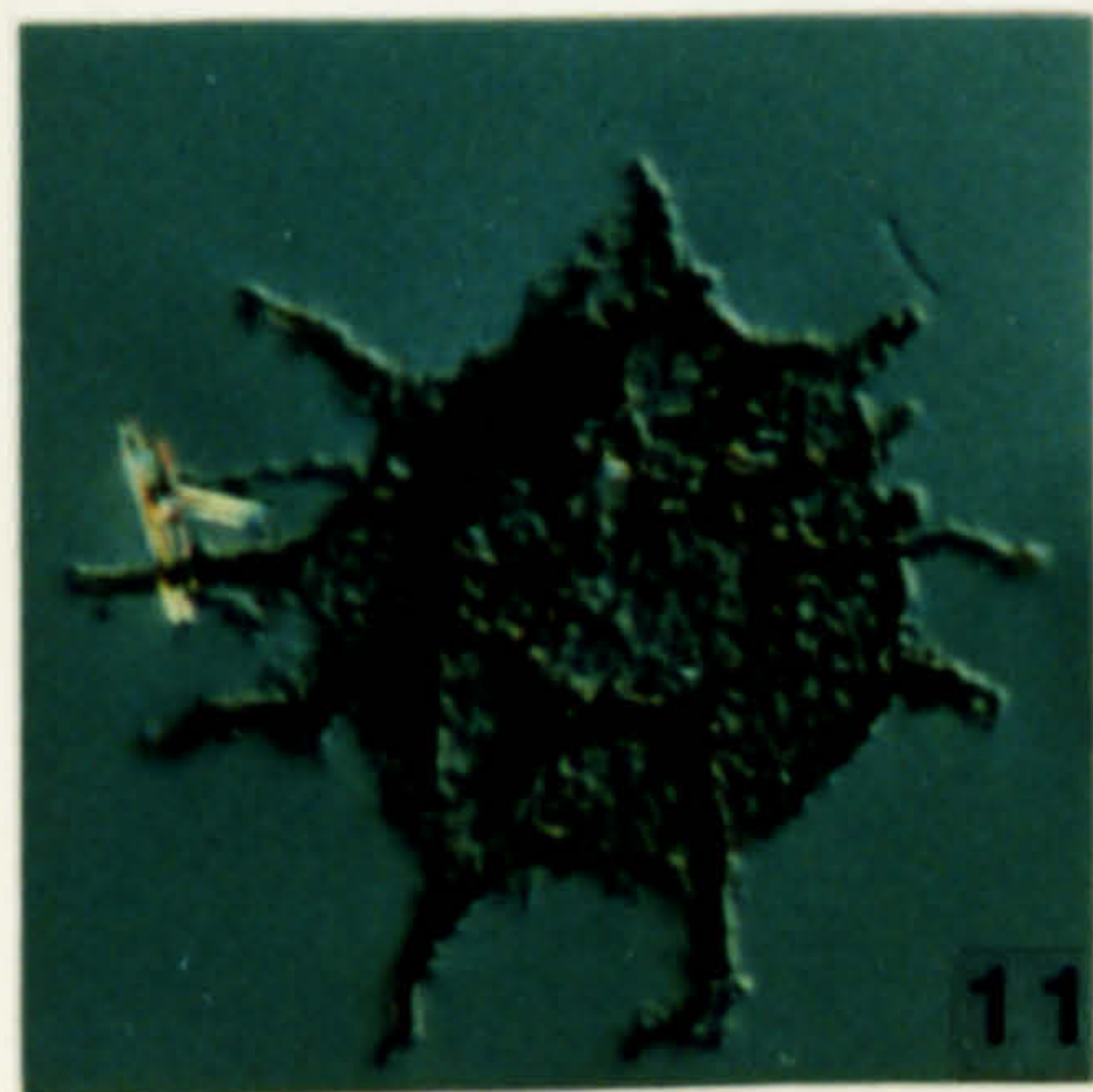
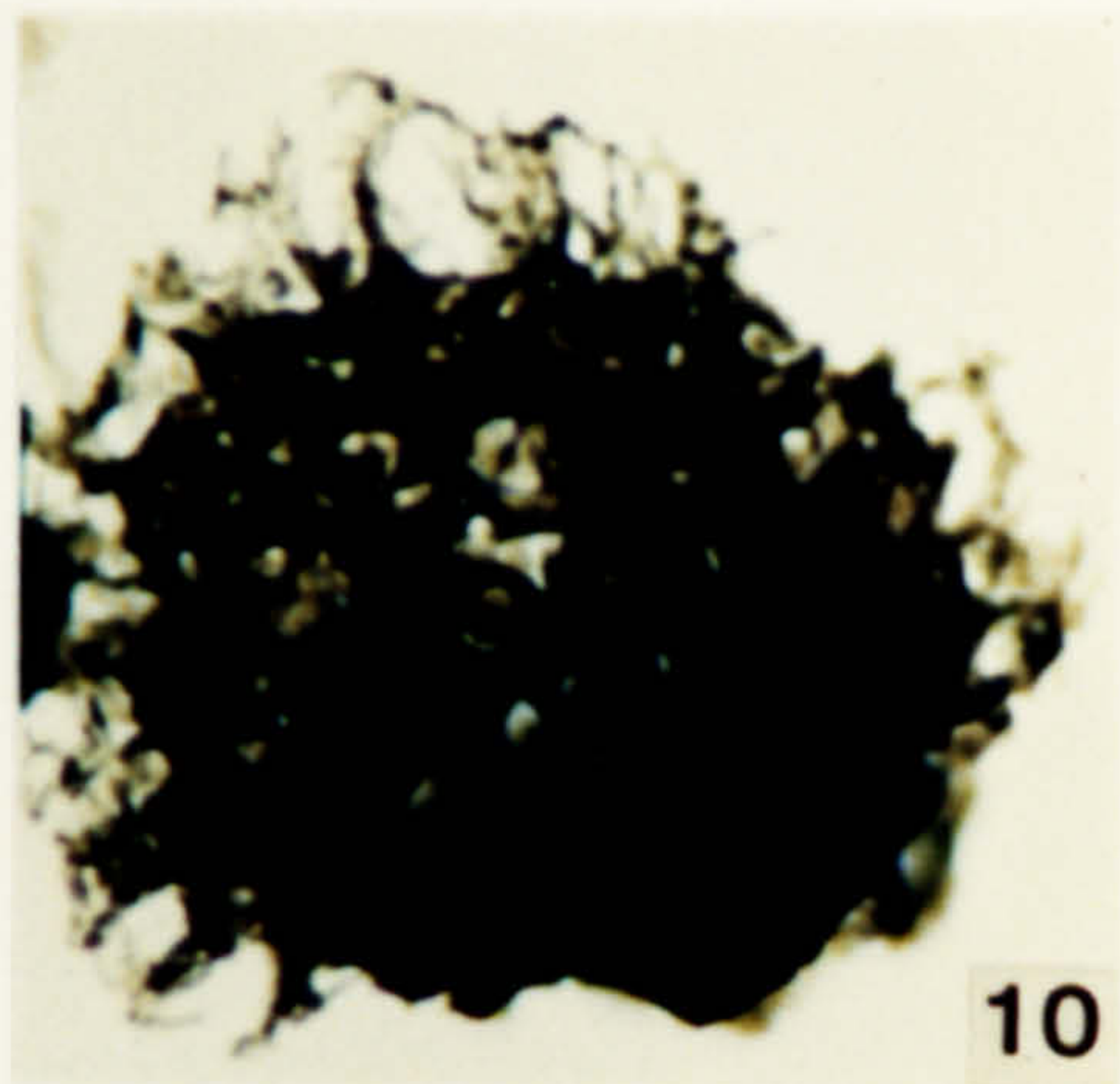
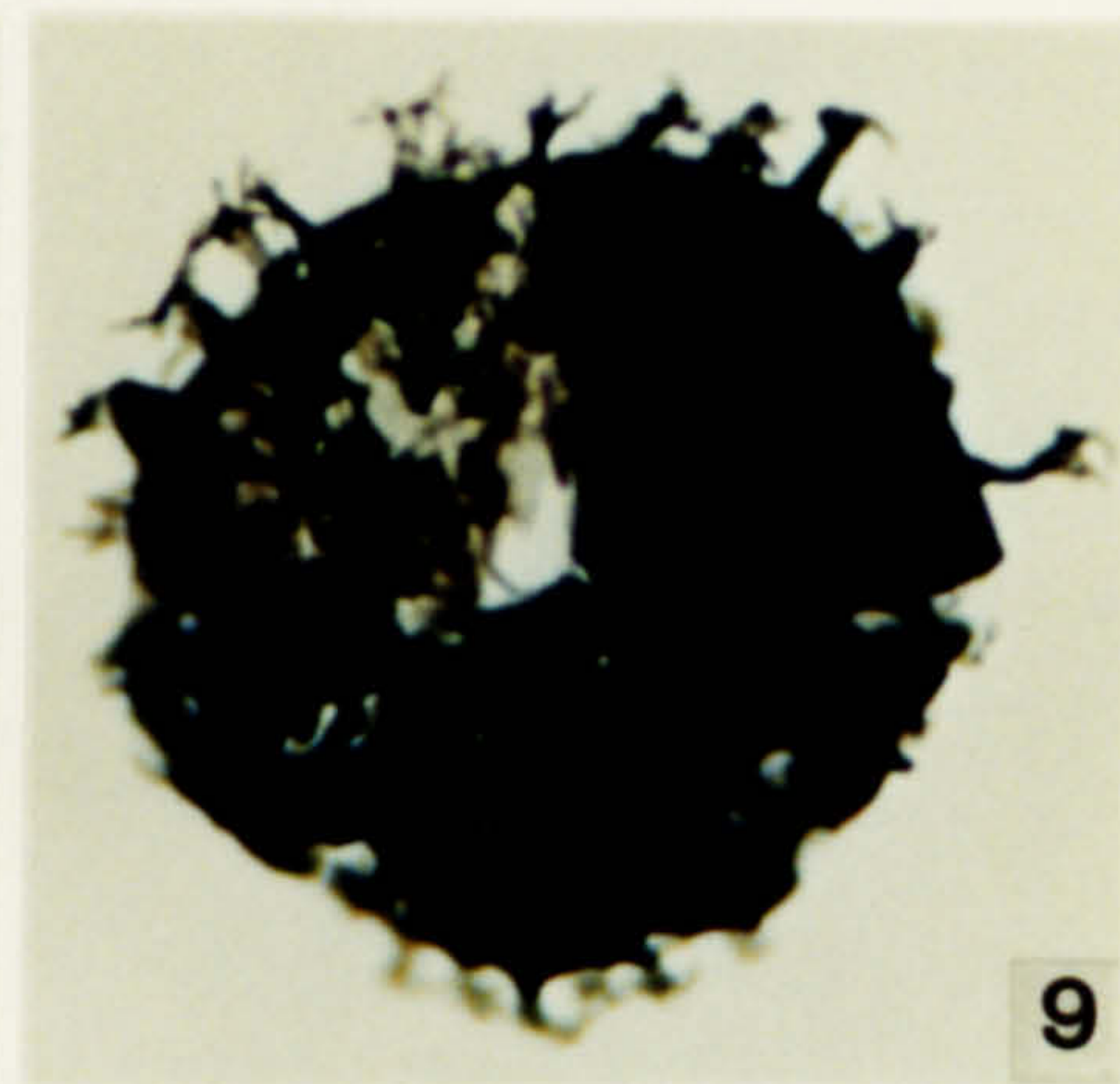
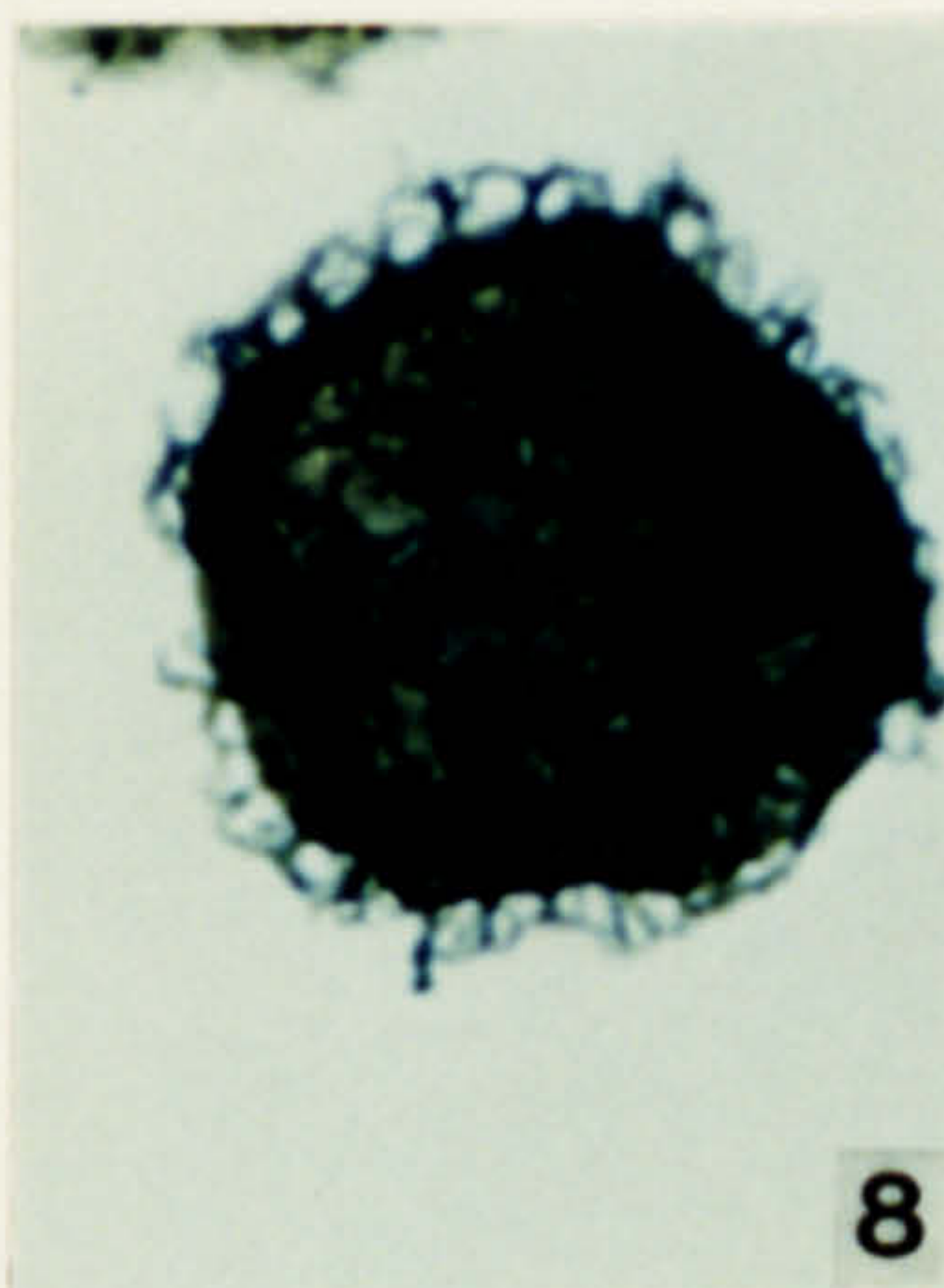
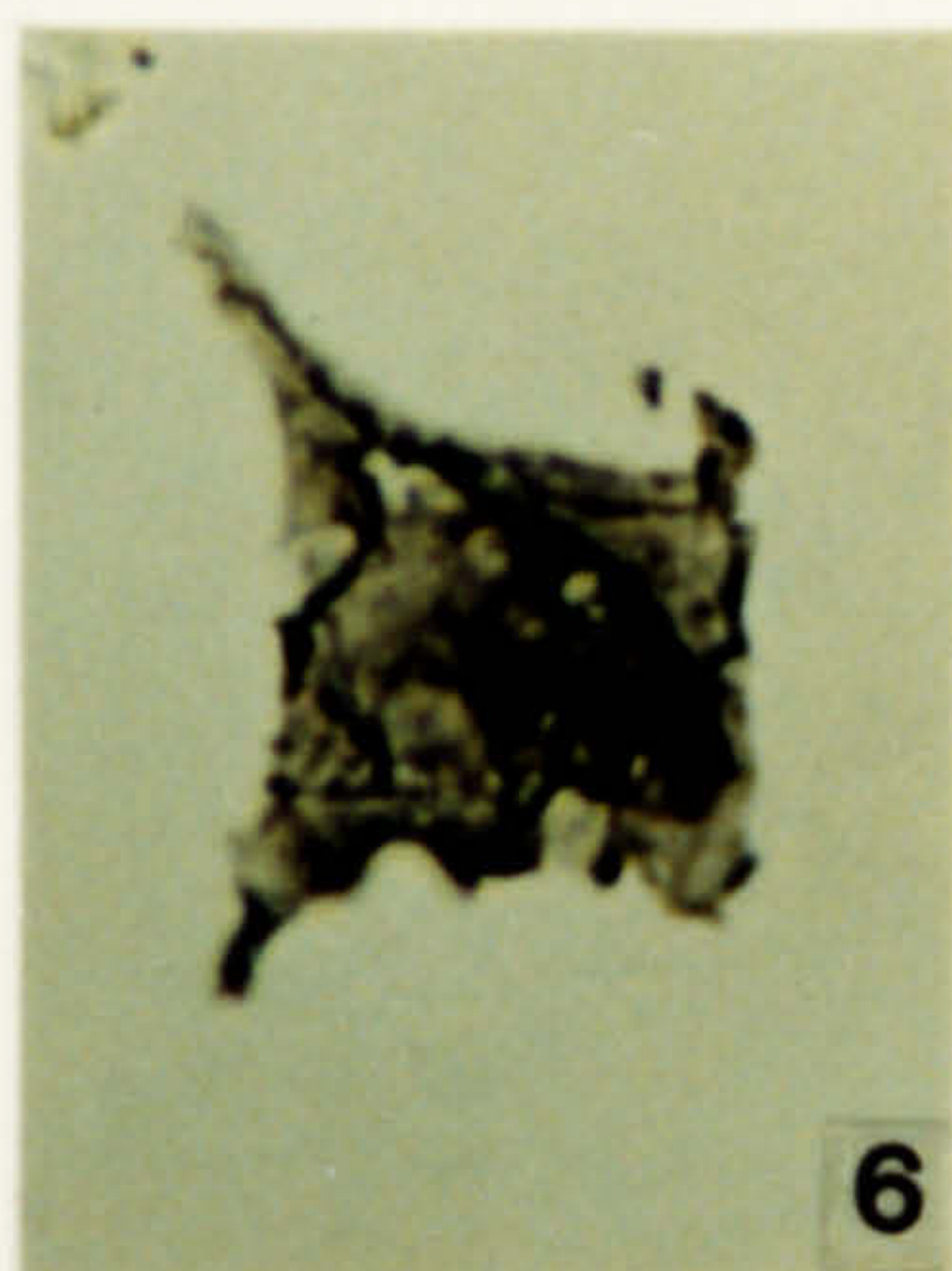
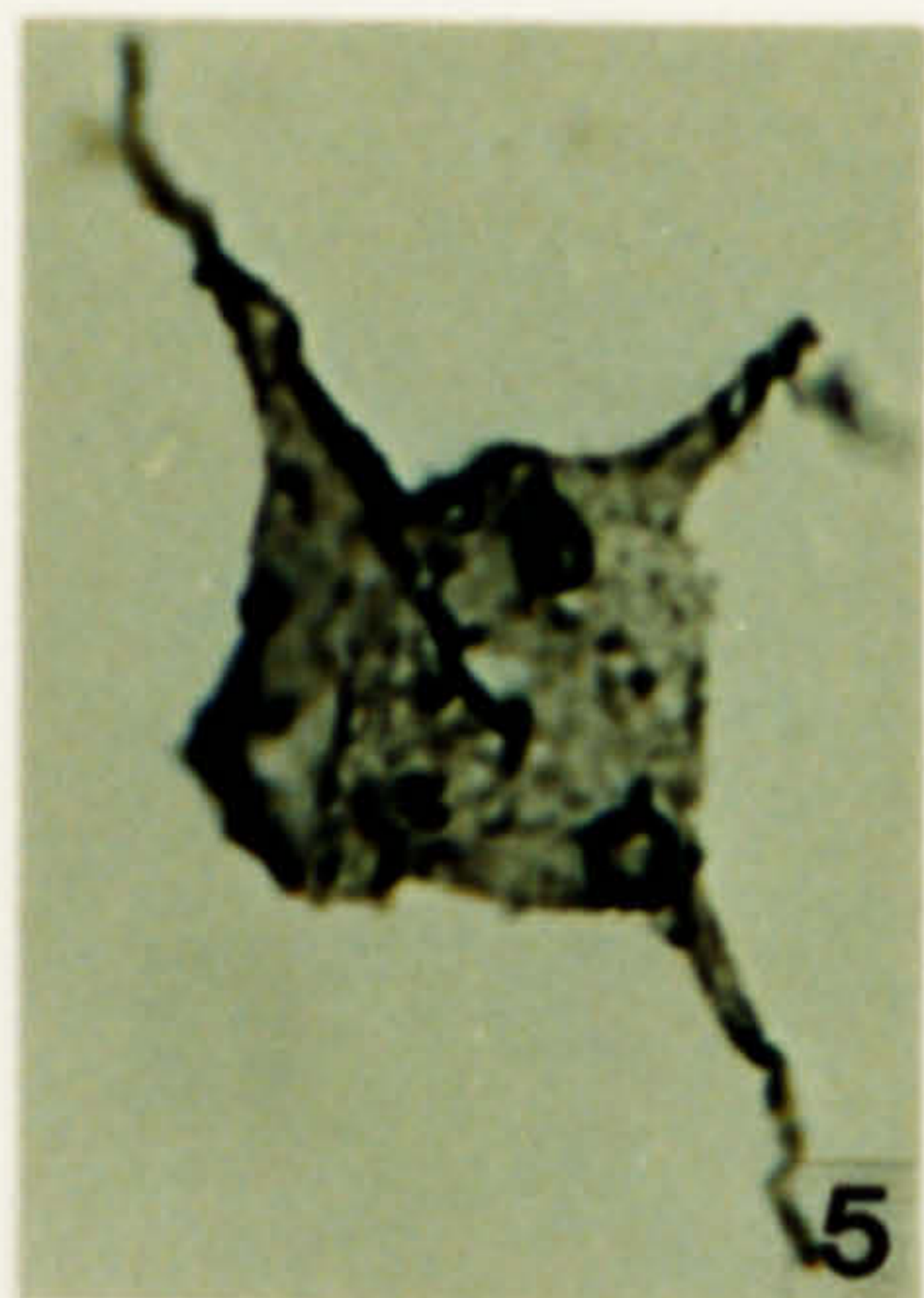
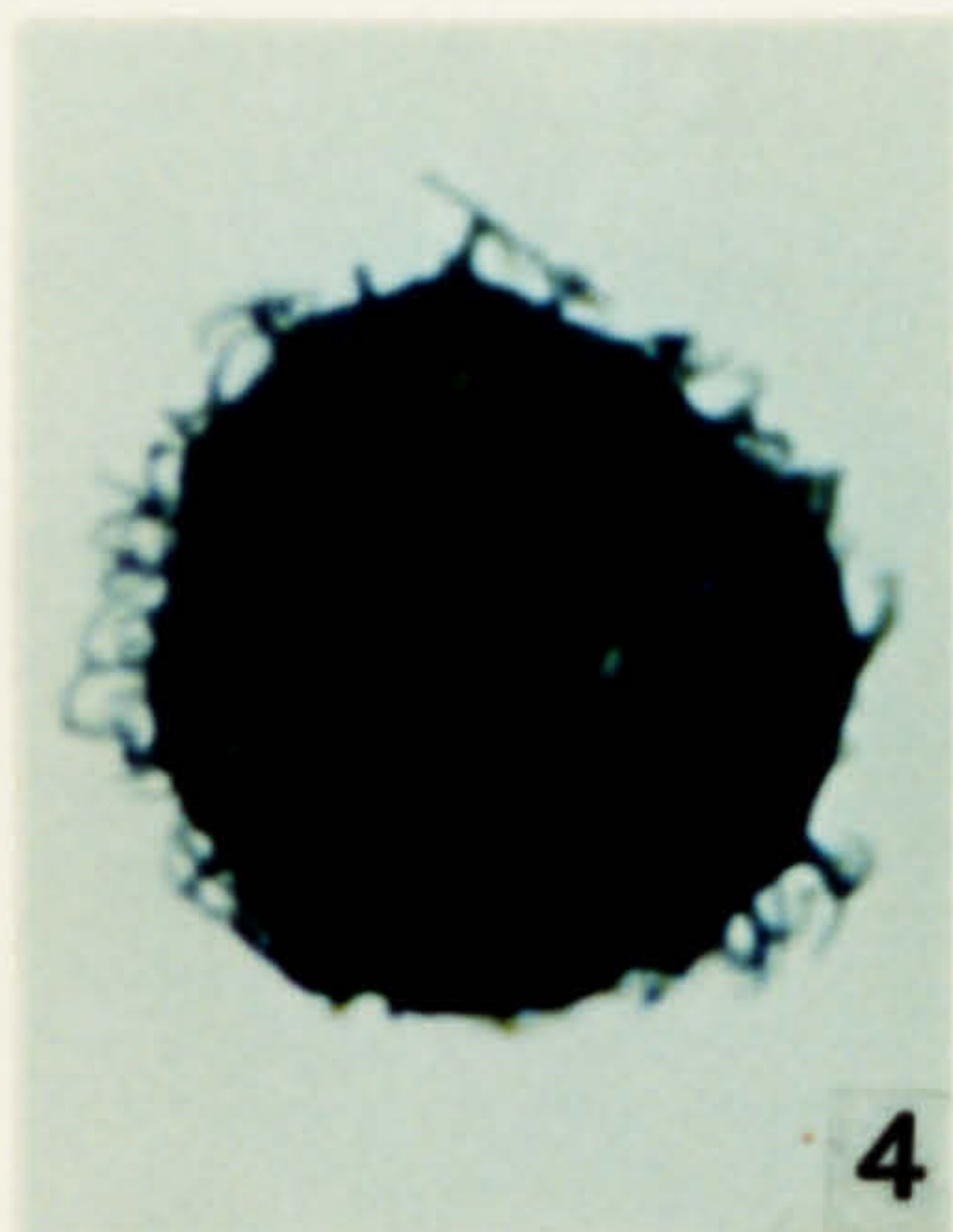
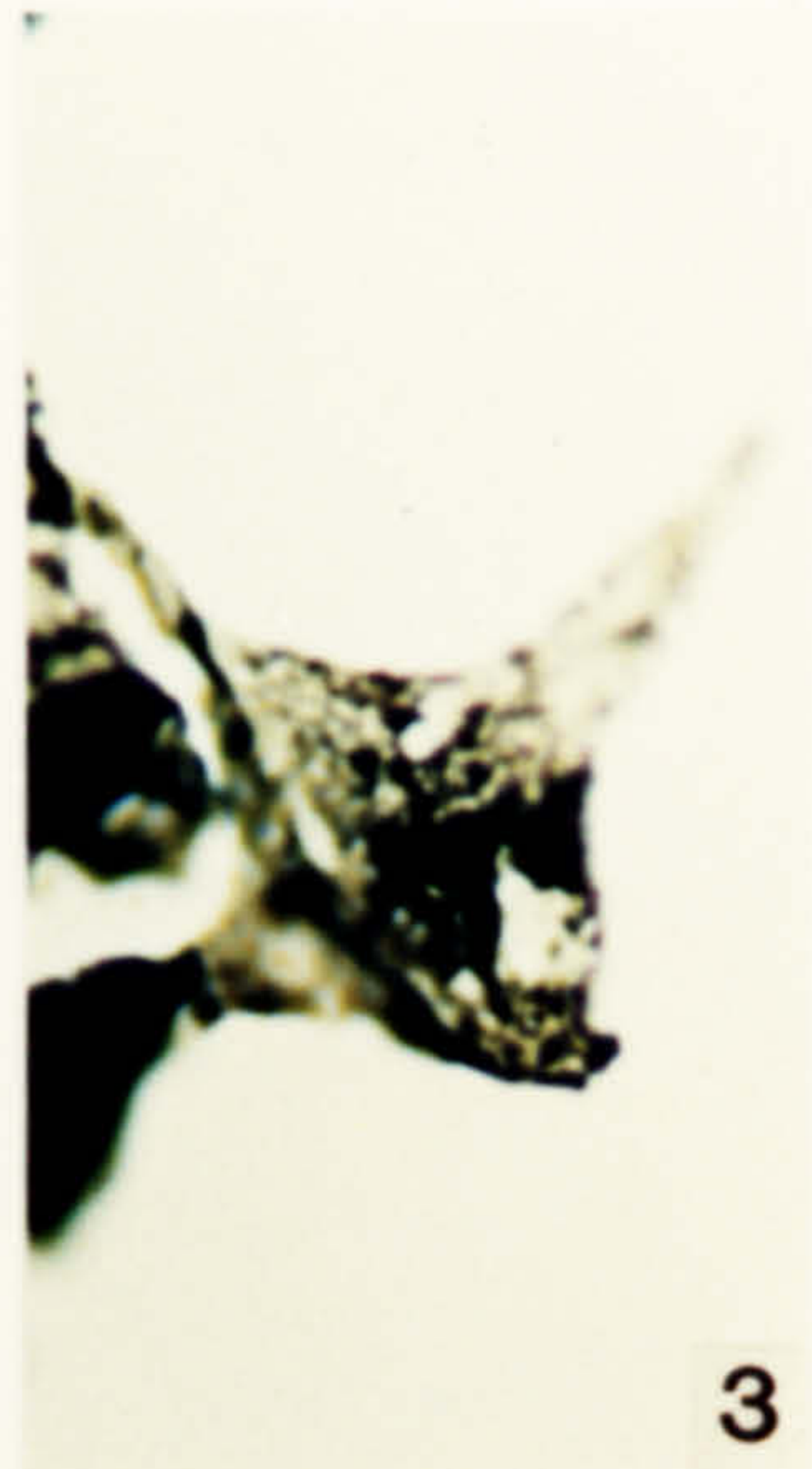
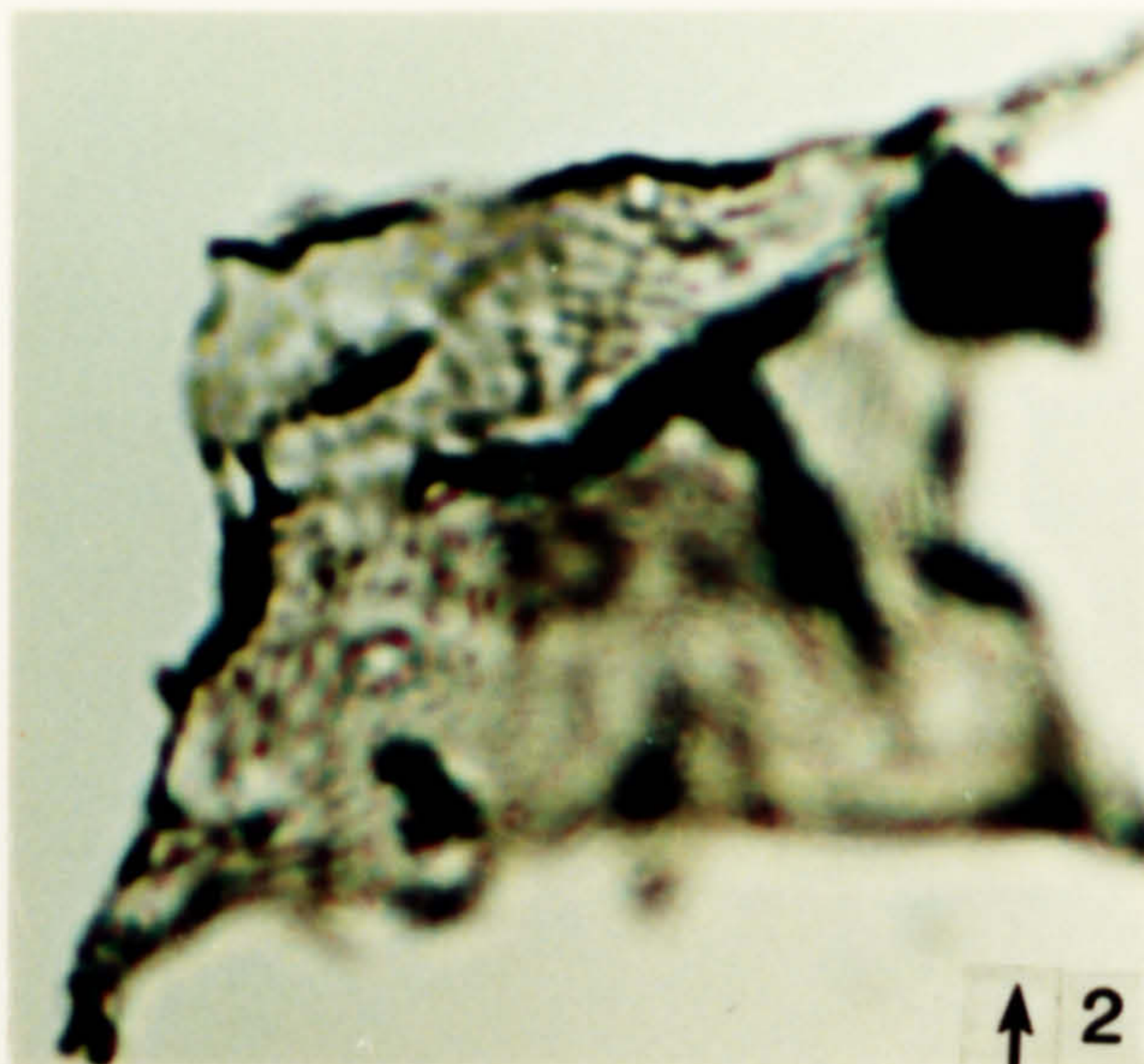
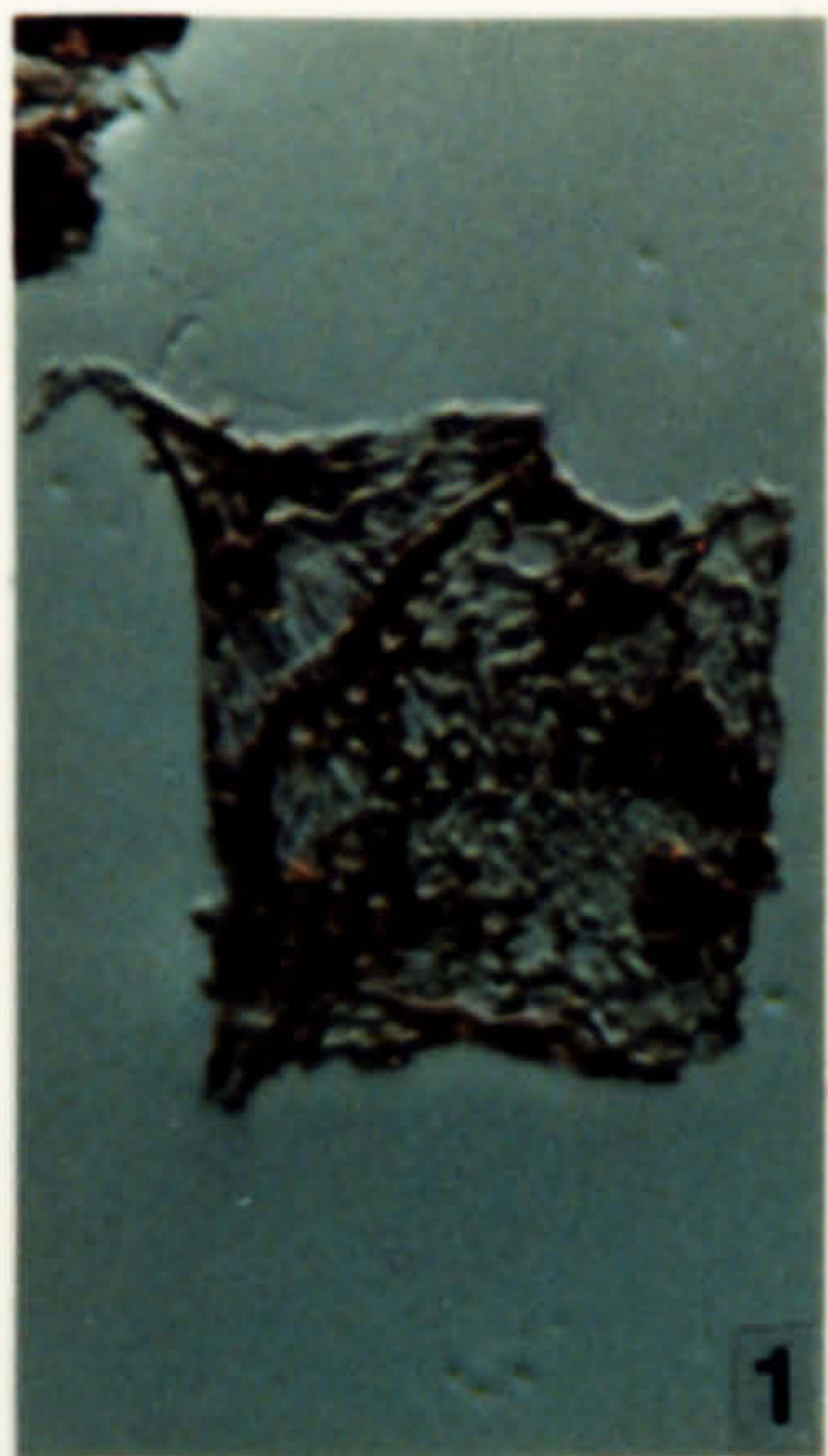


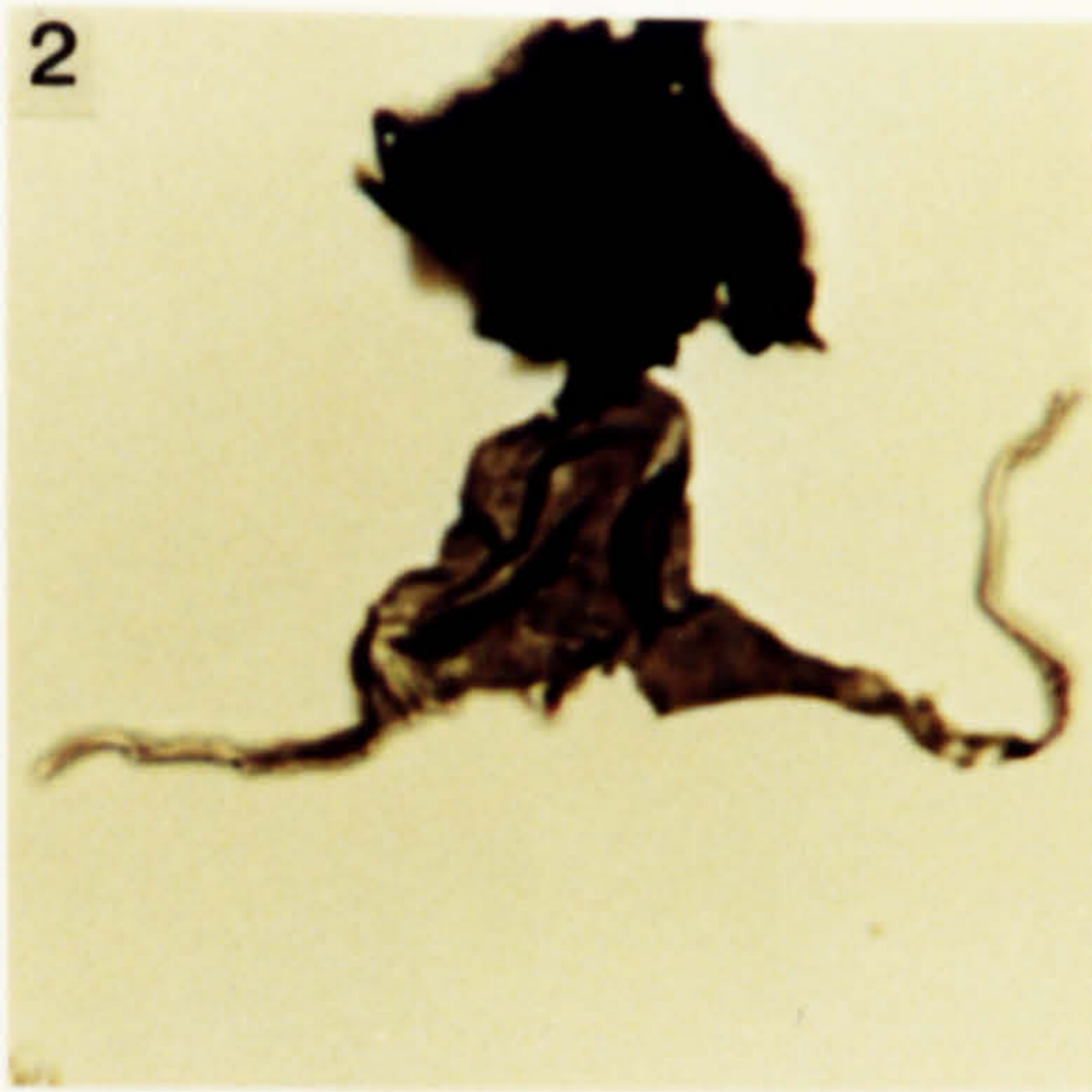
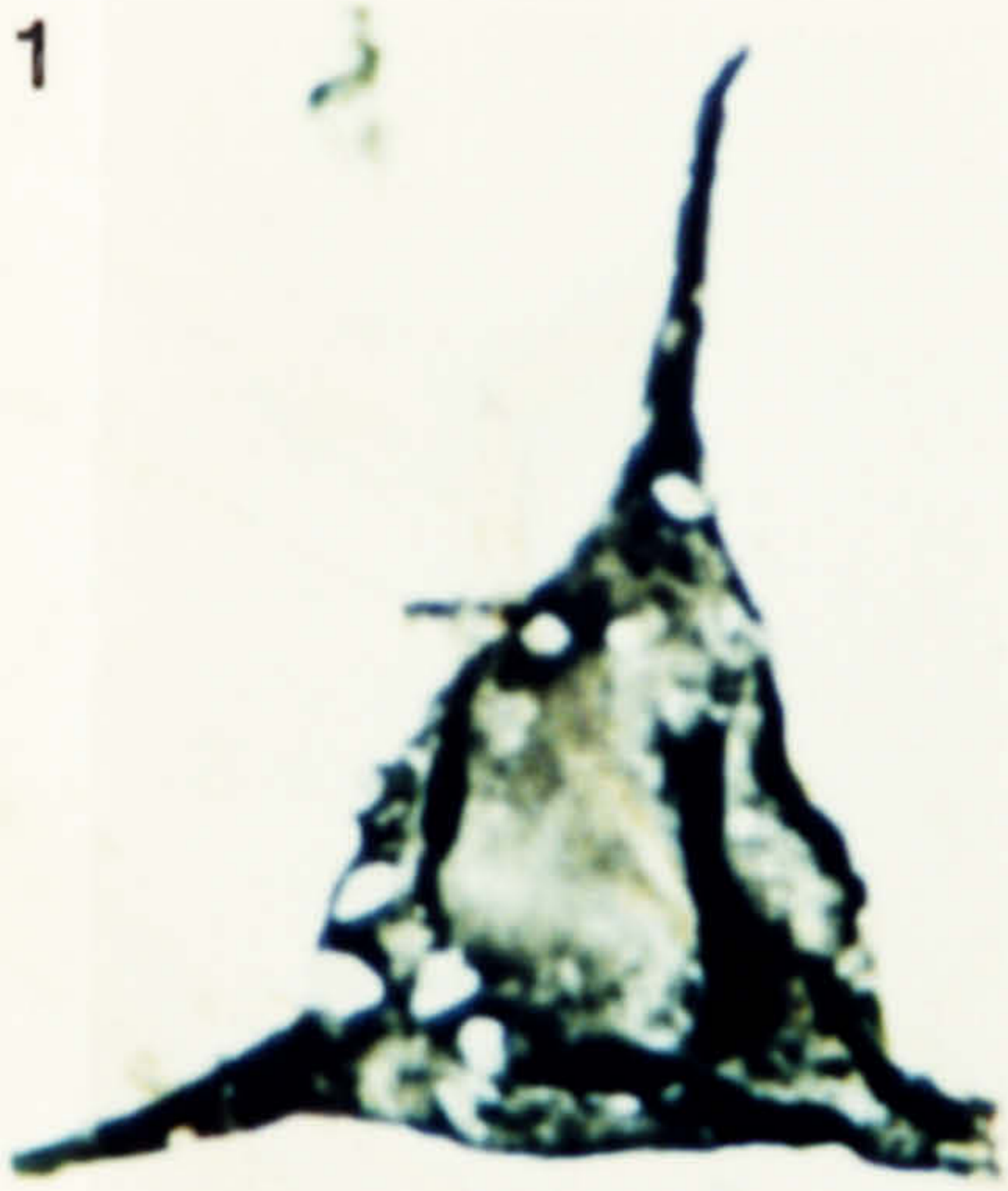


Plate 24.

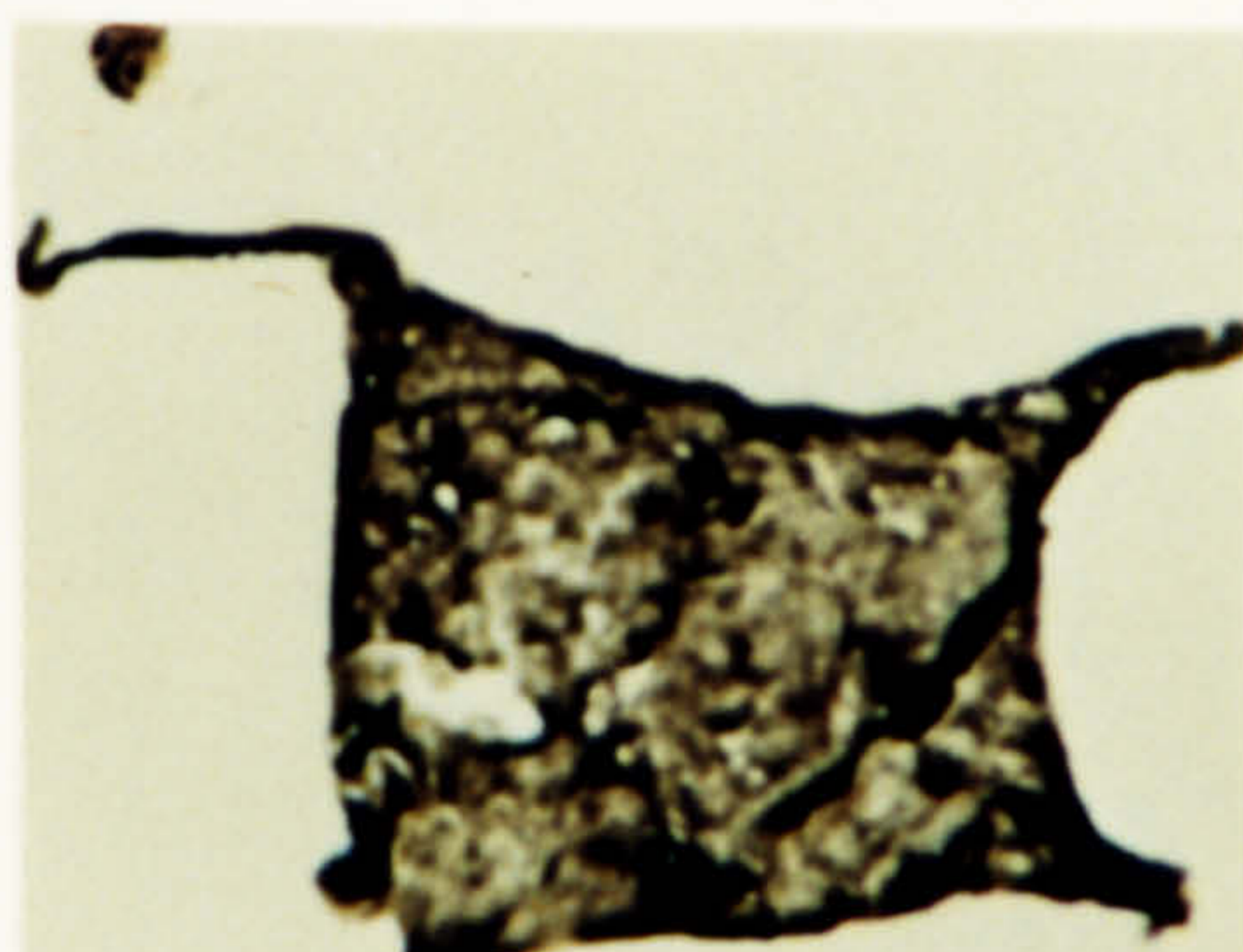
Acritarchs from the Fezouata Formation, Arenig in age.

1. *Veryhachium reductum* (Deunff) Downie & Sarjeant 1965. JD 29, 2-1, L22\4.
2. *Veryhachium trisulcum* var. *trisulcum* (Deunff) Fensome *et al.* 1990. DW 294, 2-1, F19\4.
3. *Veryhachium trisulcum* var. *trisulcum* (Deunff) Fensome *et al.* 1990. DW 294, 2-1, H27\3.
4. *Veryhachium longispinosum?* Jardine *et al.* 1974. DW 294, FS-1, E26\3.
5. *Veryhachium longispinosum?* Jardine *et al.* 1974. DW 307, FS-1, T21\2.
6. *Vulcanisphaera simplex* Jardine *et al.* 1974. DW 303, 2-1, F38\2.
7. *Veryhachium longispinosum?* Jardine *et al.* 1974. DJ 107, 2-1, G28\2.
8. *Veryhachium longispinosum?* Jardine *et al.* 1974. JW 5, FS-1, J10\1.
9. *Villosacapsula fakirum?* (Martin) comb. nov. JD 29, 2-1, J37\1.
10. *Veryhachium minutum* var. B. DJ 107, 2-1, N29\3.
11. *Veryhachium minutum* var. A. DJ 107, 2-1, F12\1.
12. *Vogtlandia?* sp. DW 294, 2-2, G30\1.
13. *Vogtlandia?* sp. DW 294, 2-1, R14\1.

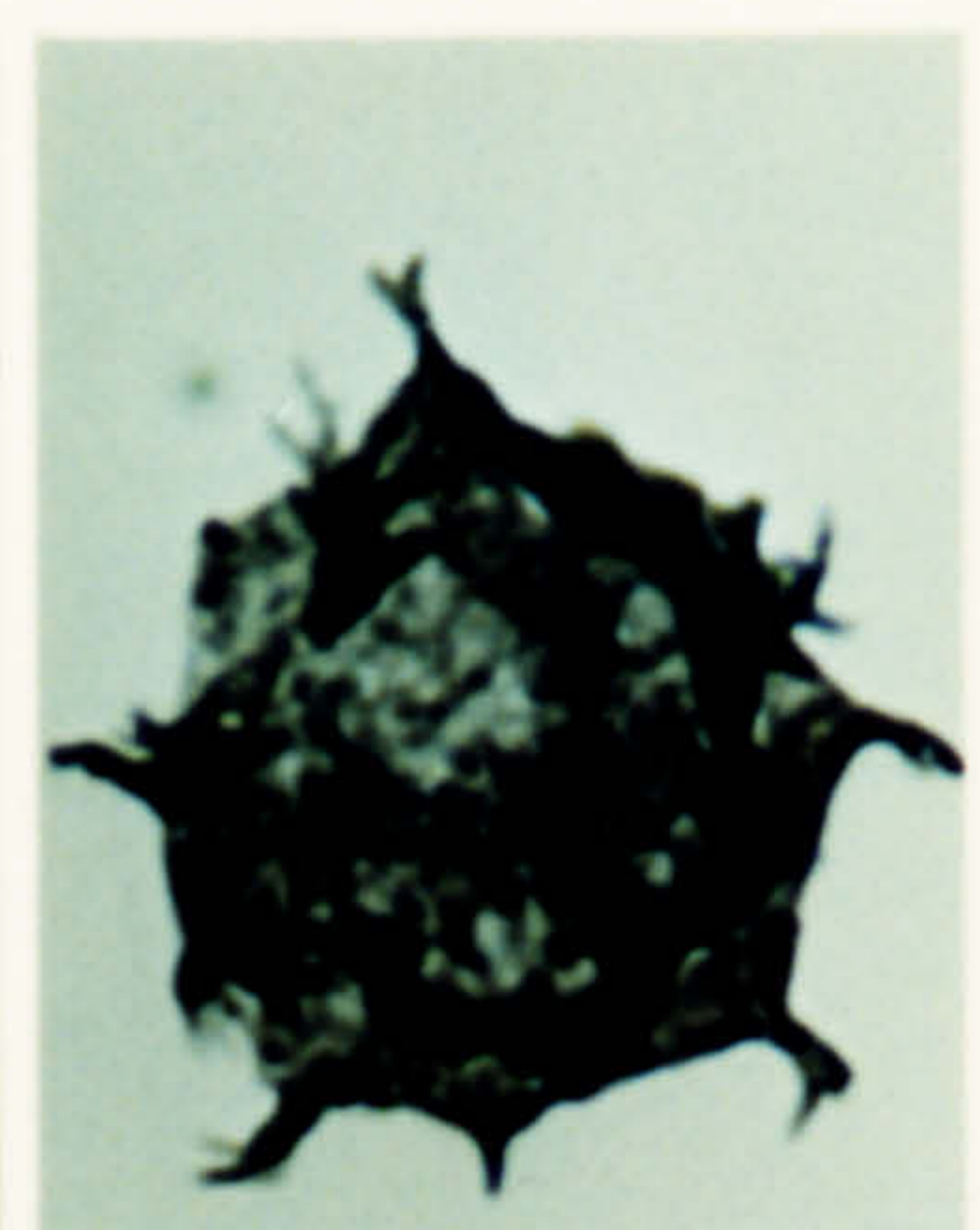
PLATE 24



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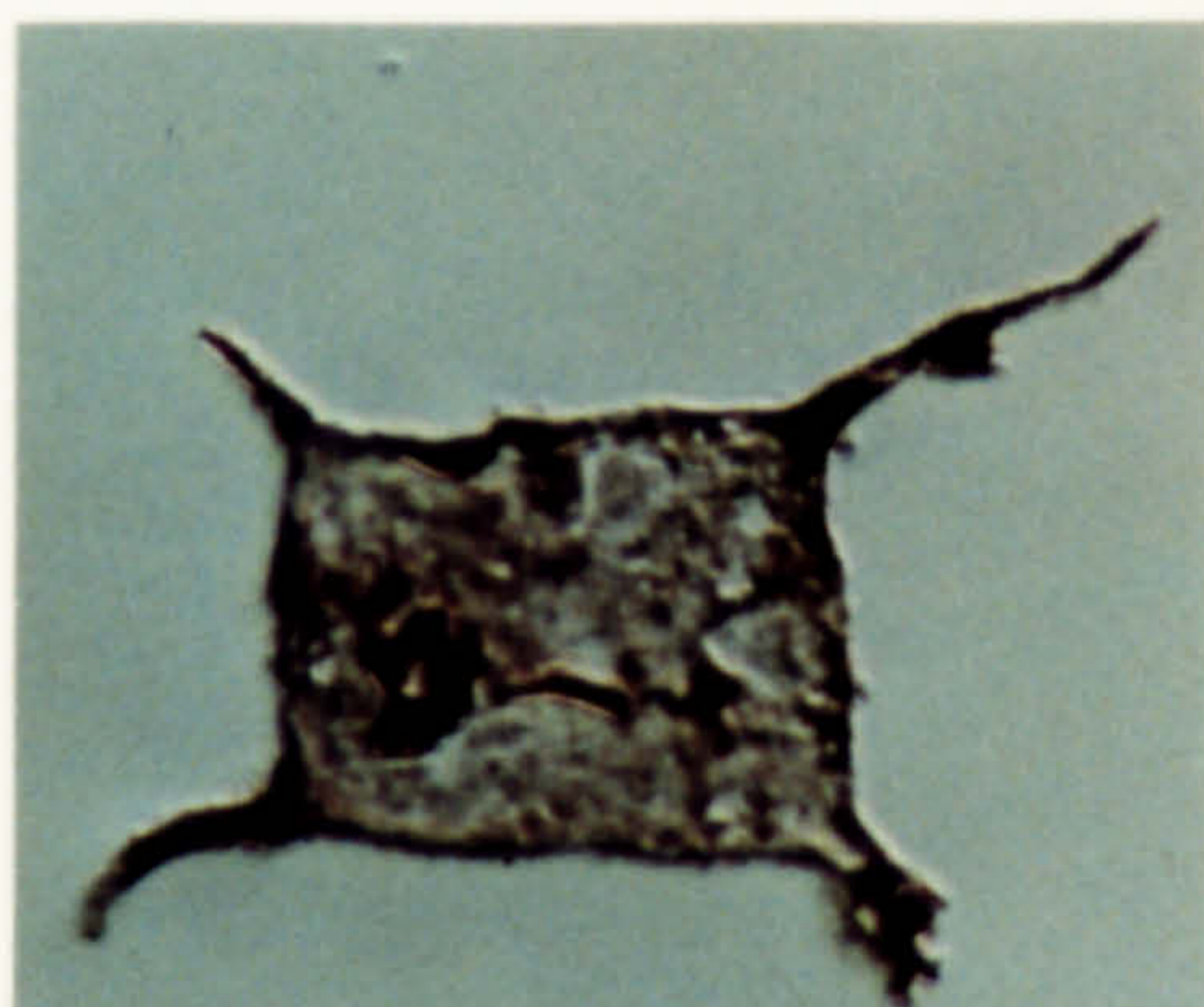
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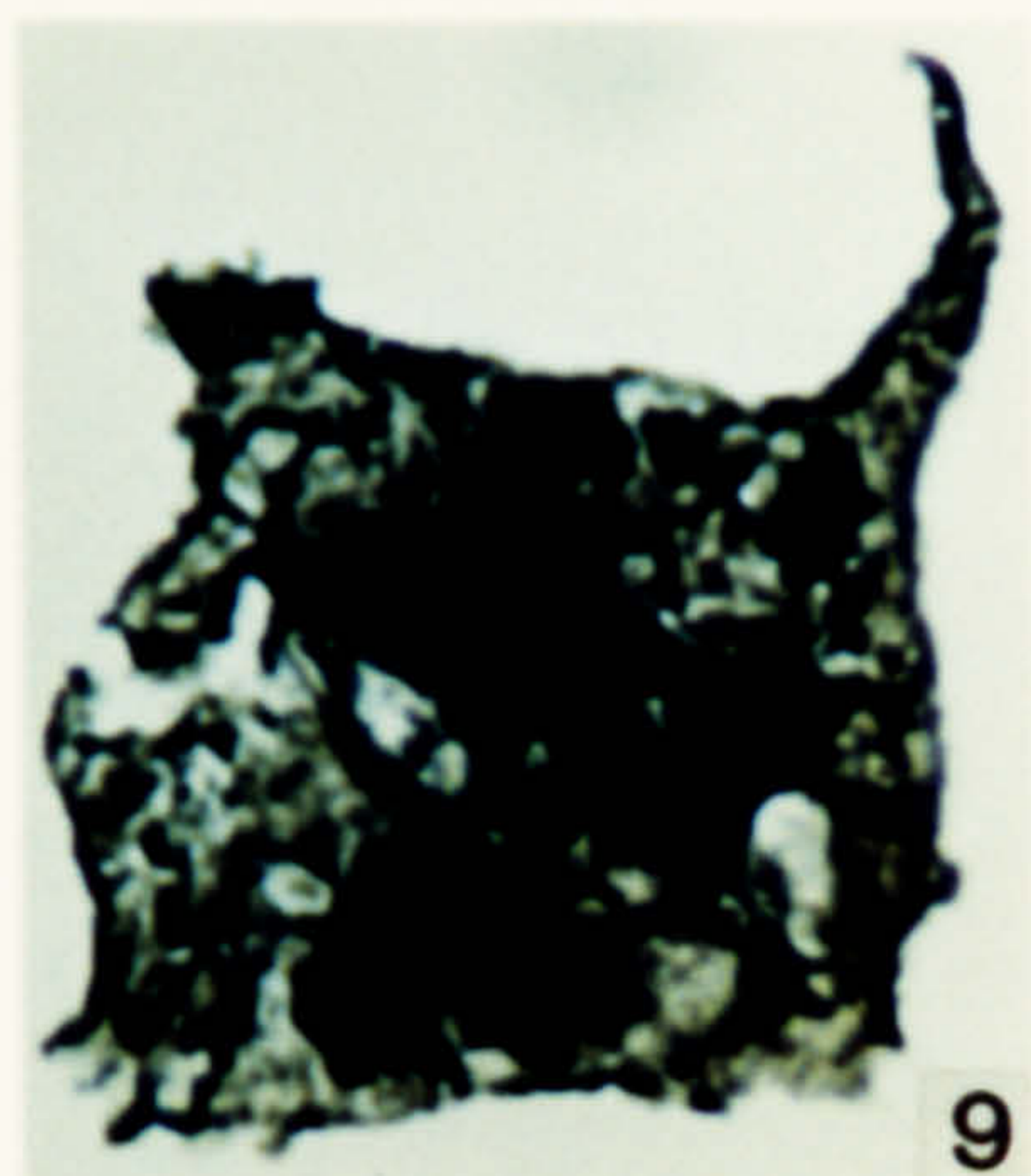
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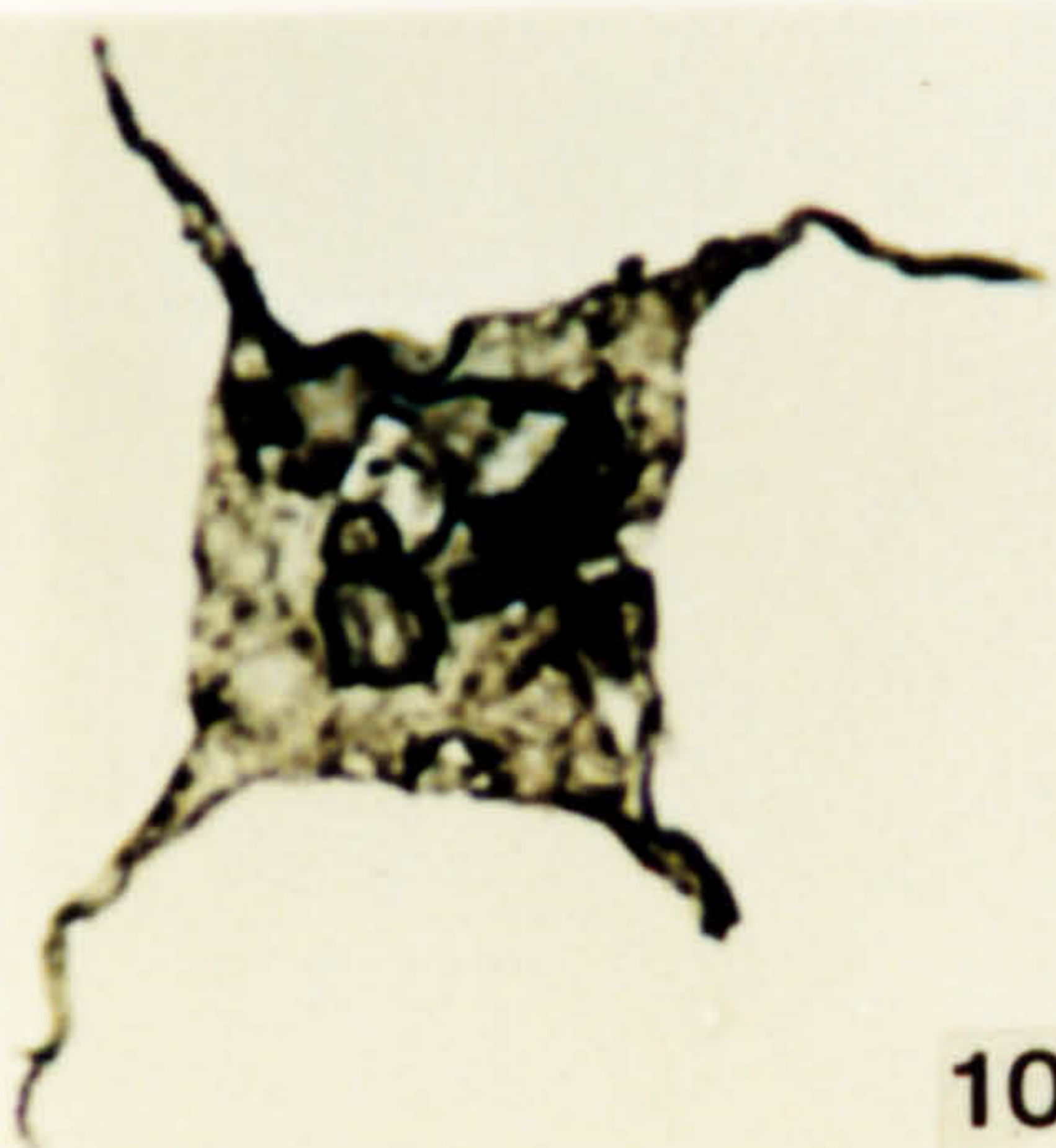
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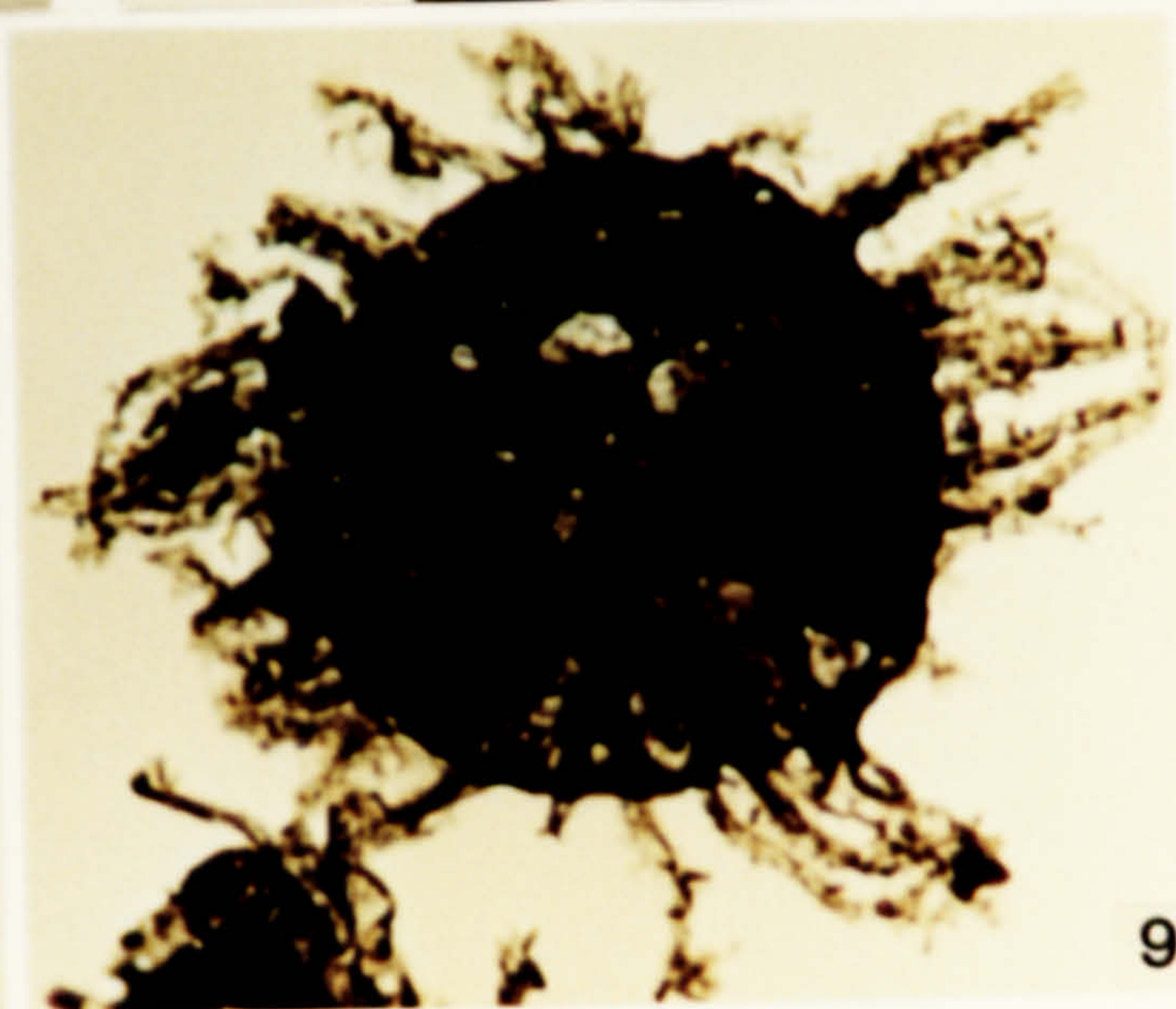
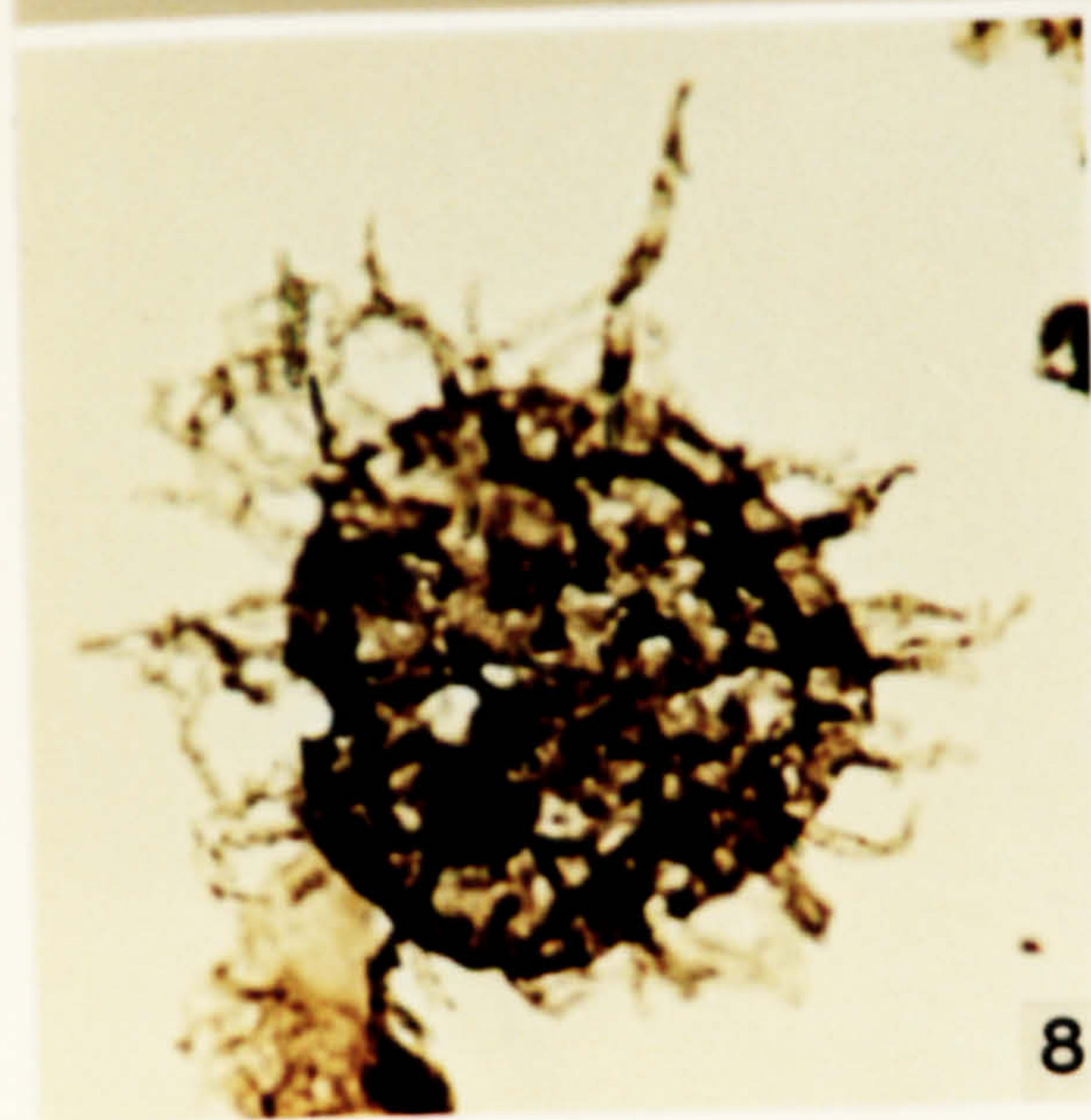
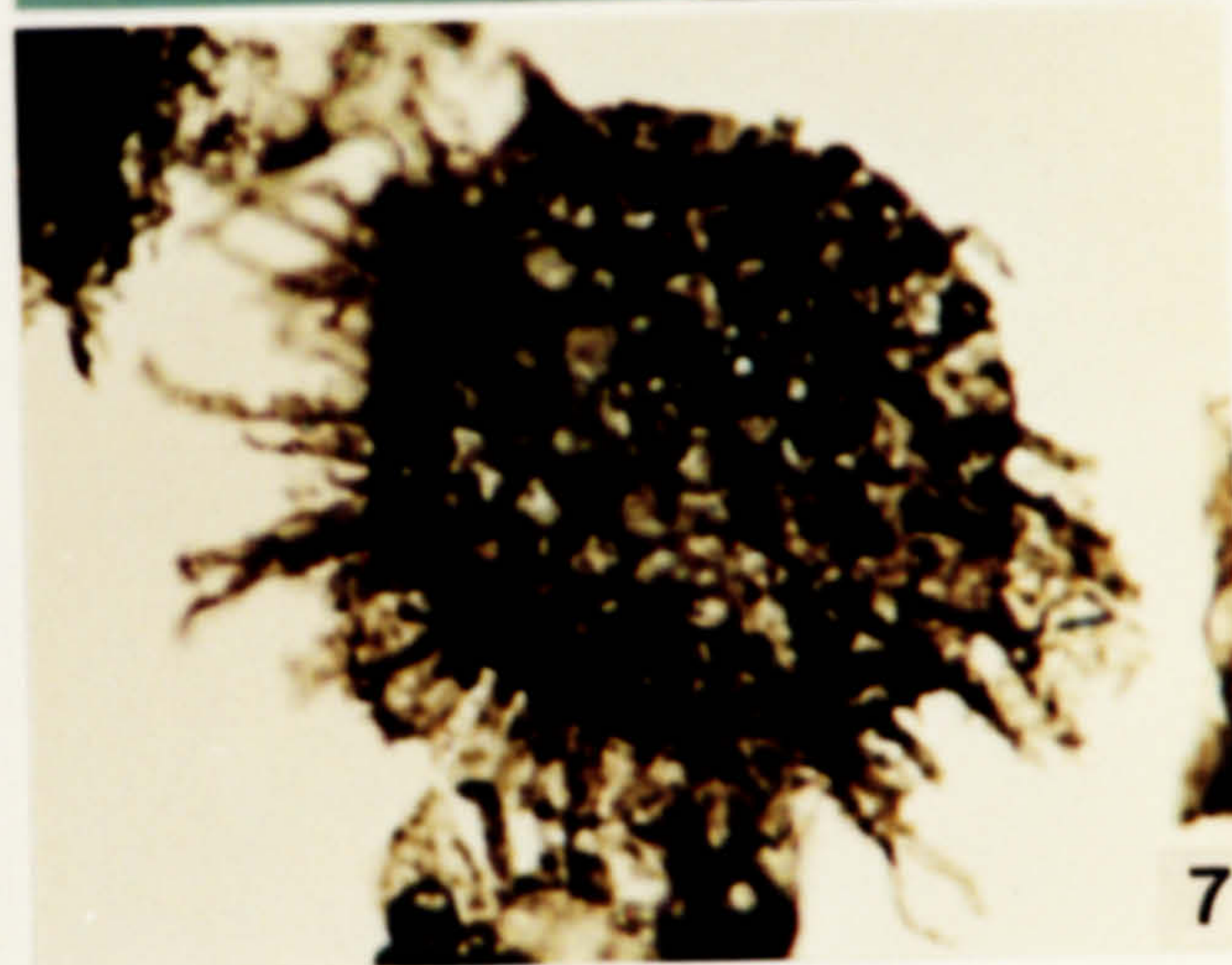
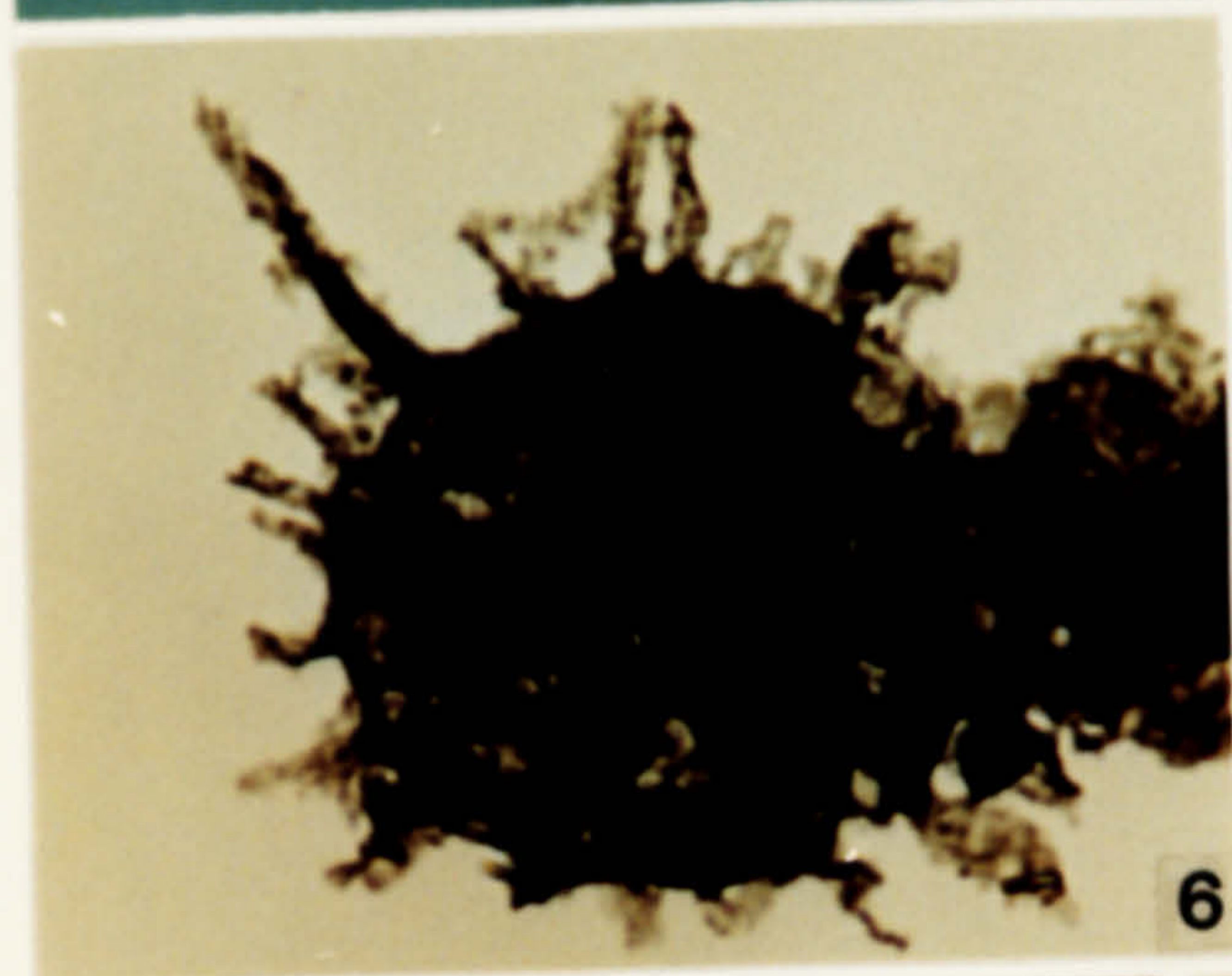
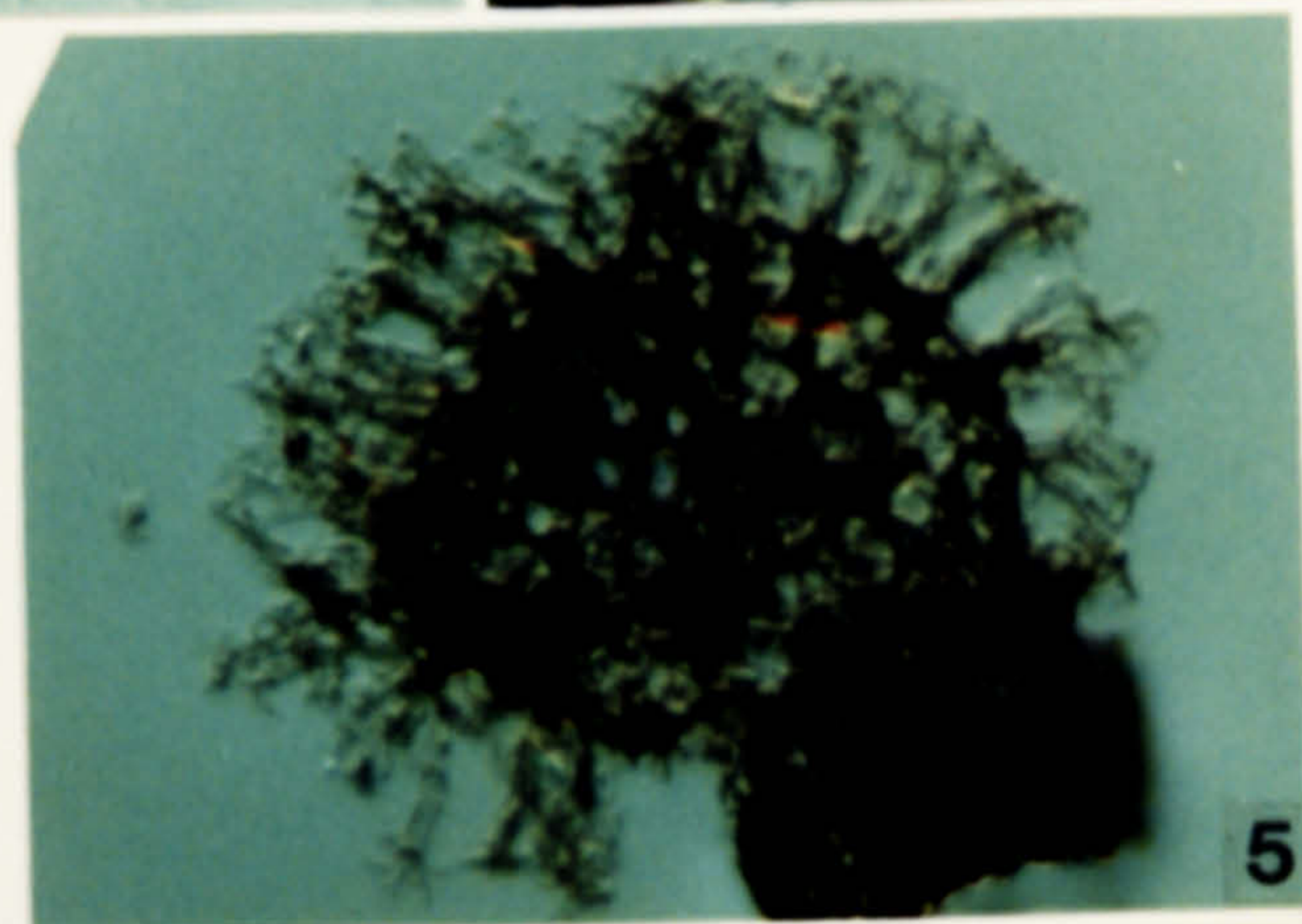
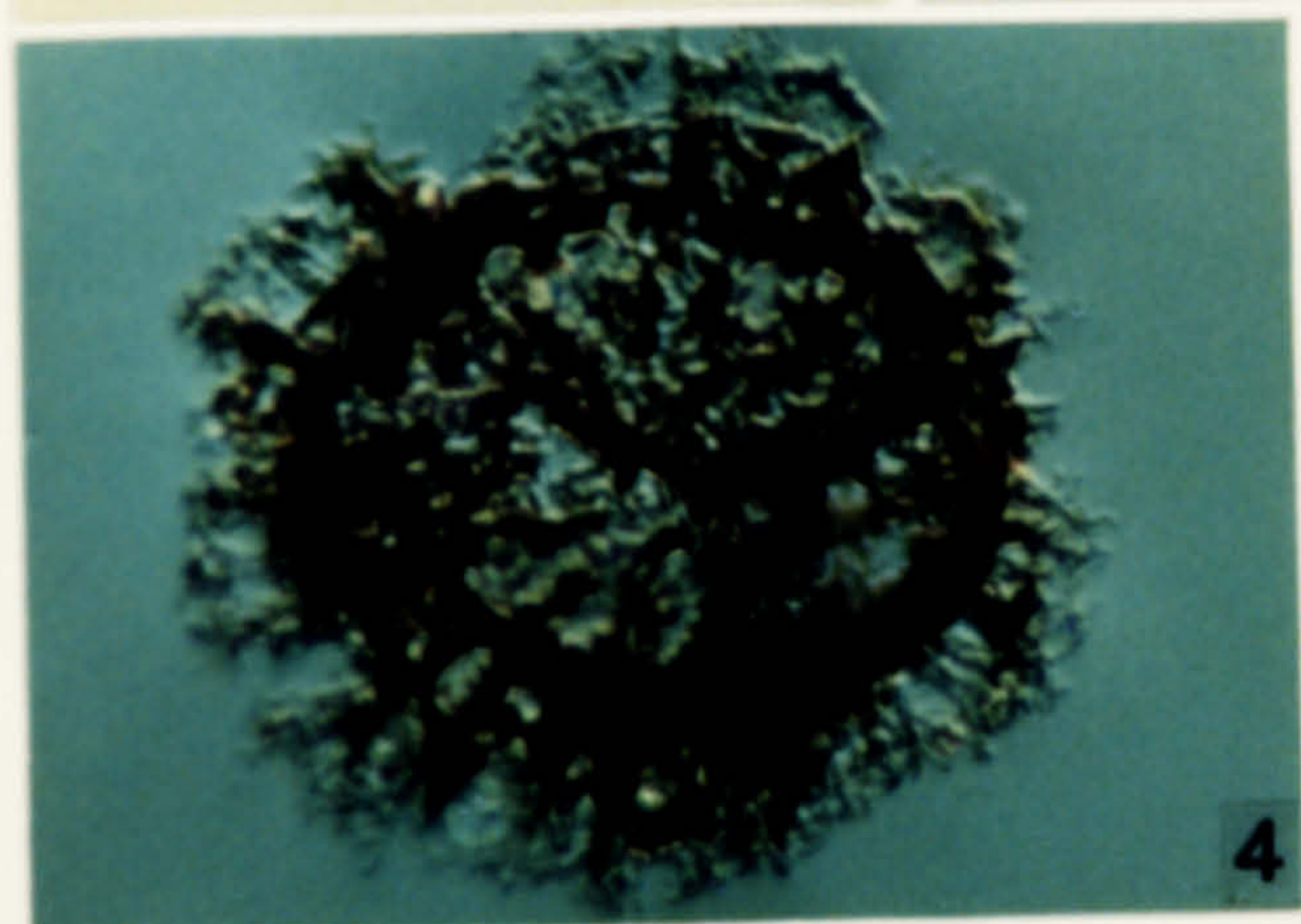
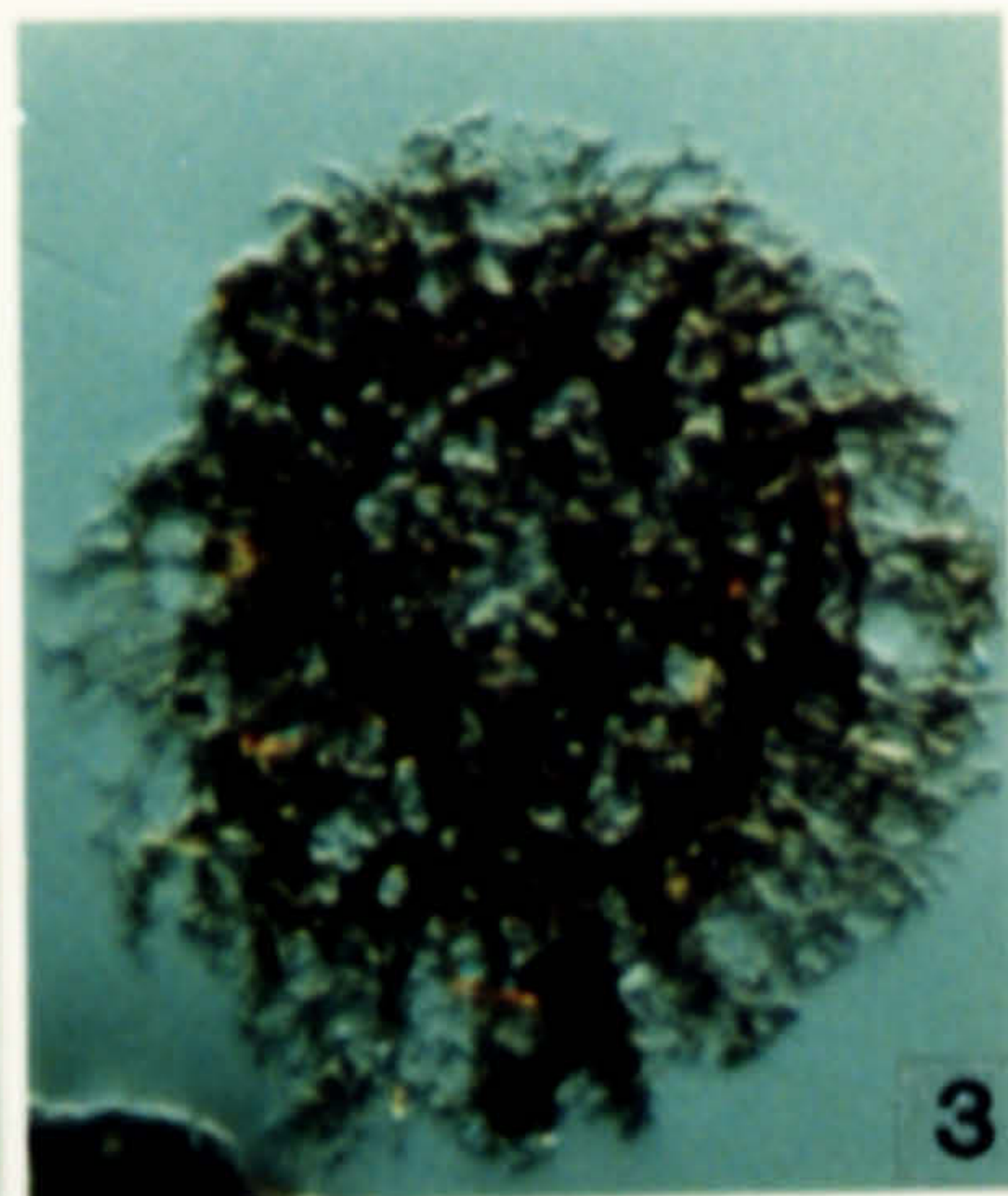
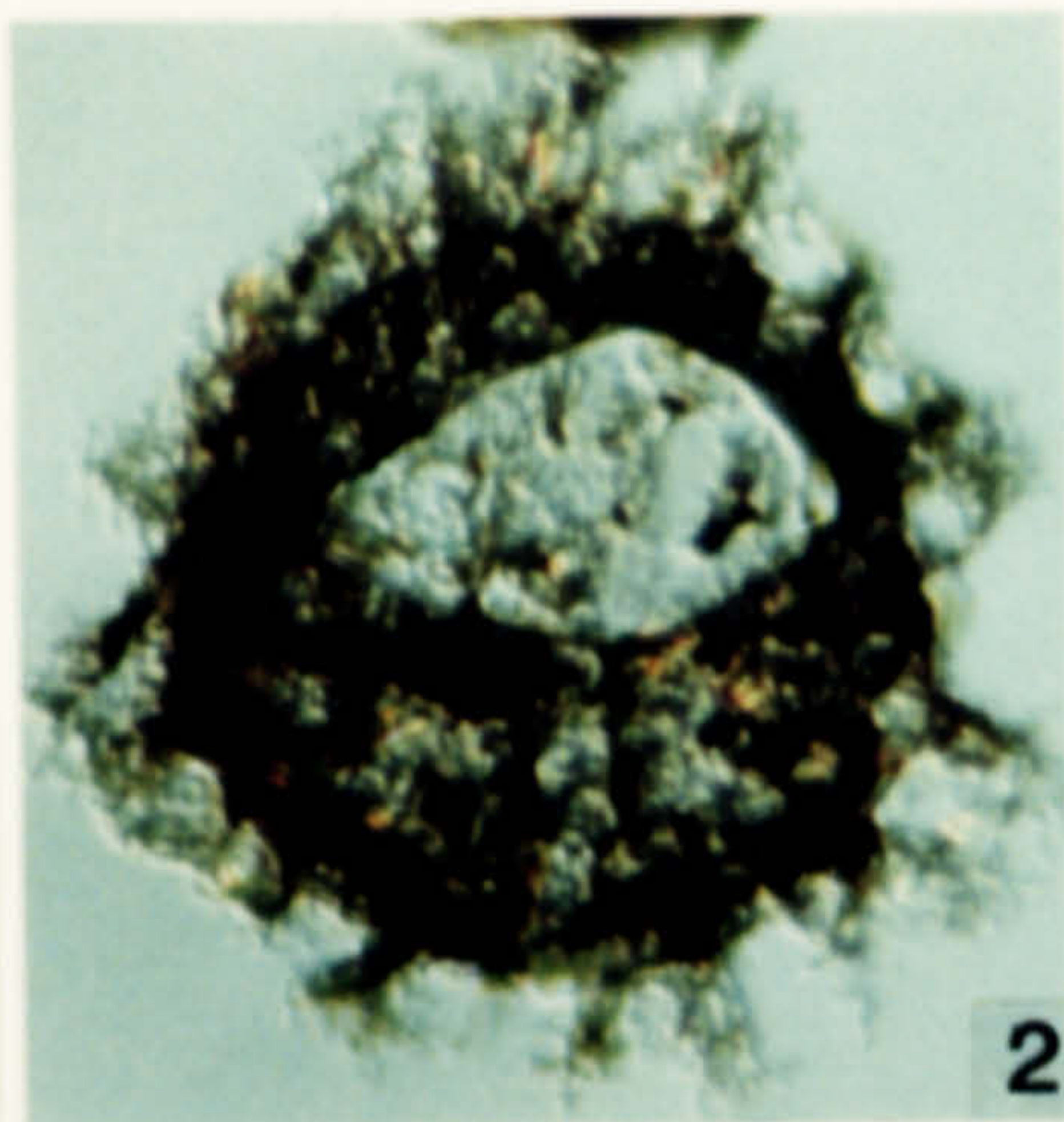
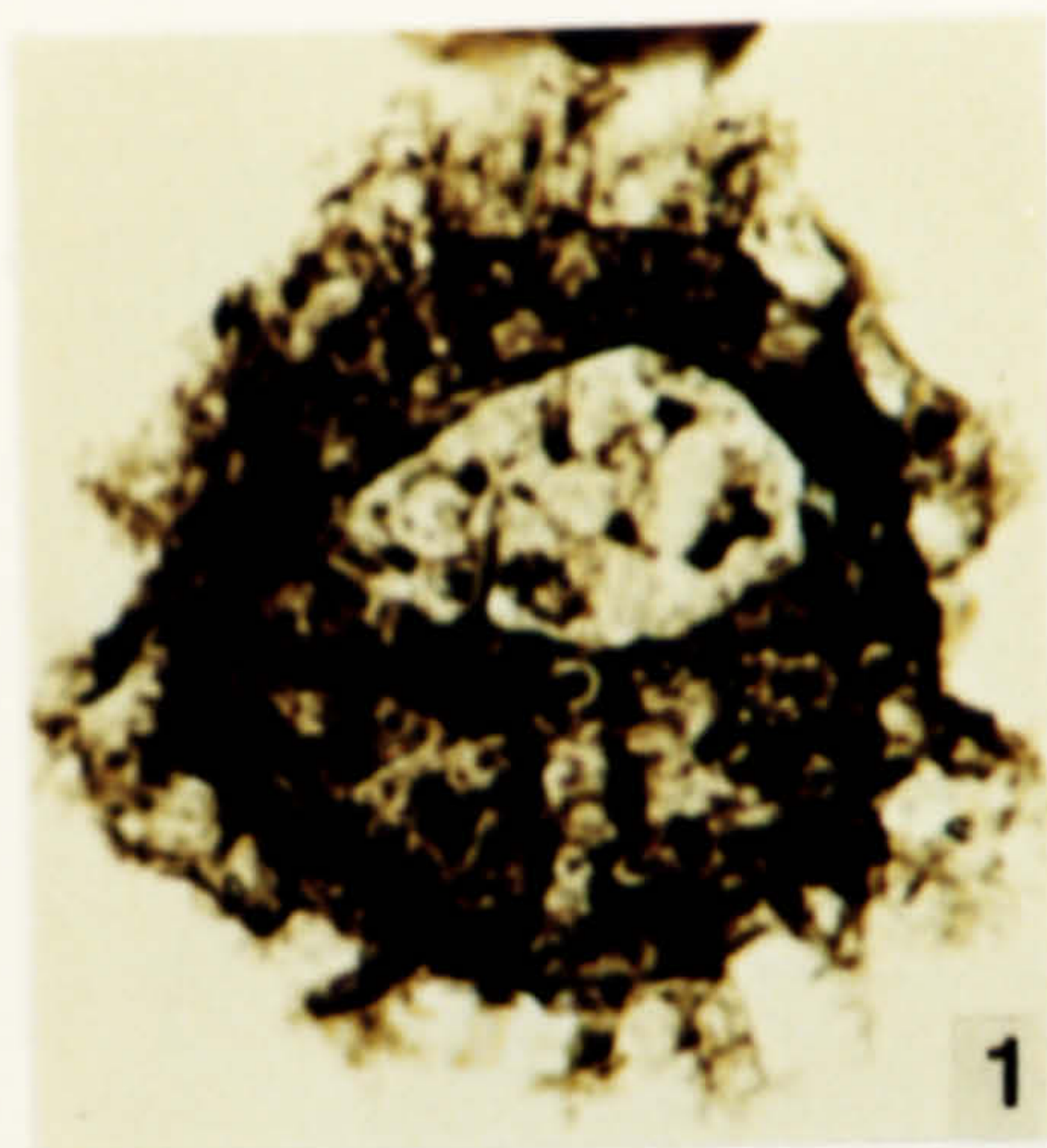


13

**Plate 25.**

Acritarchs from the Fezouata Formation, Arenig in age.

1. Acritarch Form D. JW 5, FS-2, P25\3.
2. Acritarch Form D. JW 5, FS-2, P25\3, IC.
3. Acritarch Form D. JW 5, FS-1, W11\2, IC.
4. Acritarch Form D. JW 5, FS-1, O8\2, IC.
5. Acritarch Form D. JW 5, FS-1, E12\2, IC.
6. Acritarch Form N. JW 5, FS-1, L6\2.
7. Acritarch Form N. JW 5, FS-1, J17\4.
8. Acritarch Form N. JW 5, FS-1, O20\2.
9. Acritarch Form N. JW 5, FS-1, G8\1.



**Plate 26.**

Chitinozoa from the Fezouata Formation, Arenig in age.

1. *Belonechitina micracantha* subsp. *robusta* (Eisenack 1959). DW 262, 1-1, T33\2.
2. *Belonechitina micracantha* subsp. *microcantha* (Eisenack 1959). DW 262, 1-1, H7\3.
3. *Belonechitina micracantha* subsp. *microcantha* (Eisenack 1959). JD 29, 2-2, P17\1.
4. *Conochitina brevis* Taugourdeau & Jekhowsky 1960. JW 5, FS-1, G11\1.
5. *Conochitina brevis* Taugourdeau & Jekhowsky 1960. JW 5, FS-1, E25\2.
6. *Conochitina brevis* Taugourdeau & Jekhowsky 1960. JW 5, 2-3, T23\2.
7. *Desmochitina minor* forma *cocca* Eisenack 1931. DW 262, 1-1, U31\1.
8. *Desmochitina minor* Eisenack 1931. JD 29, 2-1, F32\3.
9. *Conochitina* cf. *lepida* Jenkins 1967. JD 29, 2-1, F16\4.



1



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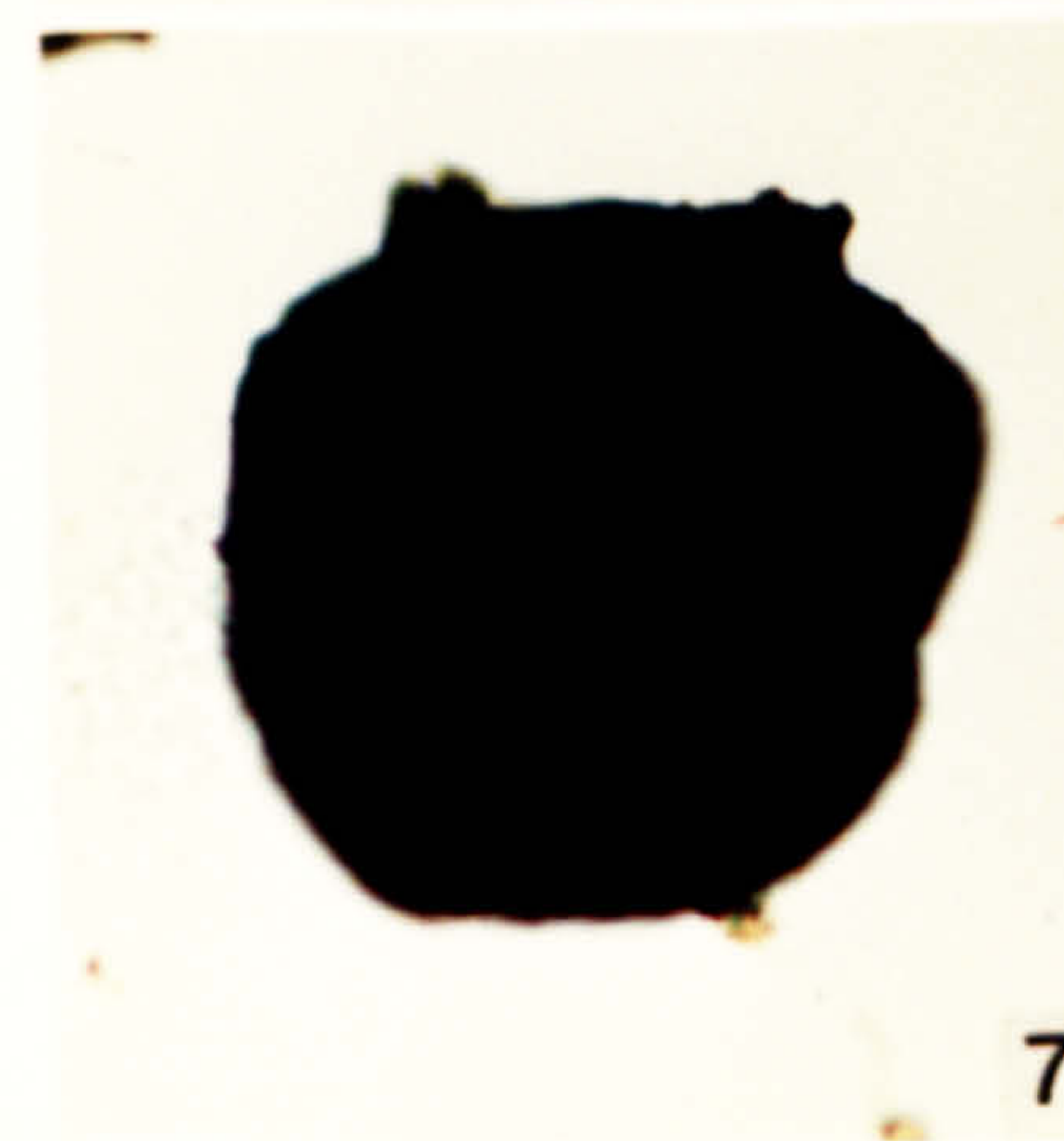
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**Plate 27.**

**Chitinozoa from the Fezouata Formation, Arenig in age.**

- 1. *Cyathochitina campanulaeformis* (Eisenack) Eisenack 1955. JD 29, 2-2, W19\3.**
- 2. *Cyathochitina cf. fistulosa* Taugourdeau & Jekhowsky 1960. DW 332, FS-1, J29\4.**
- 3. *Eremochitina brevis* (Benoit & Taugourdeau) Paris 1990. JW 5, 2-4, R38\3.**
- 4. *Eremochitina brevis* (Benoit & Taugourdeau) Paris 1990. JW 5, 2-3, E39\2.**
- 5. *Eremochitina brevis* (Benoit & Taugourdeau) Paris 1990. JW 5, 2-1, G23\1.**





**Plate 28.**

**Chilinozoa from the Fezouata Formation, Arenig in age.**

- 1. *Eremochitina* cf. *baculata* Taugourdeau & Jekhowsky 1960. JW 5, 2-4, J2111.**
- 2. *Eremochitina* cf. *baculata* Taugourdeau & Jekhowsky 1960. JW 5, FS-1, C2111.**
- 3. *Eremochitina* sp. JW 5, 2-3, R4113.**
- 4. *Eremochitina* sp. JW 5, FS-1, F3311.**
- 5. *Eremochitina brevis* (Benoit & Taugourdeau) Paris 1990. DW 307, FS-1, F2513.**
- 6. *Eremochitina brevis* (Benoit & Taugourdeau) Paris 1990. DW 307, FS-1, K2512.**
- 7. *Eremochitina* sp. JW 5, 2-4, S2513.**



**Plate 29.**

**Chitinozoa from the Fezouata Formation, Arenig in age.**

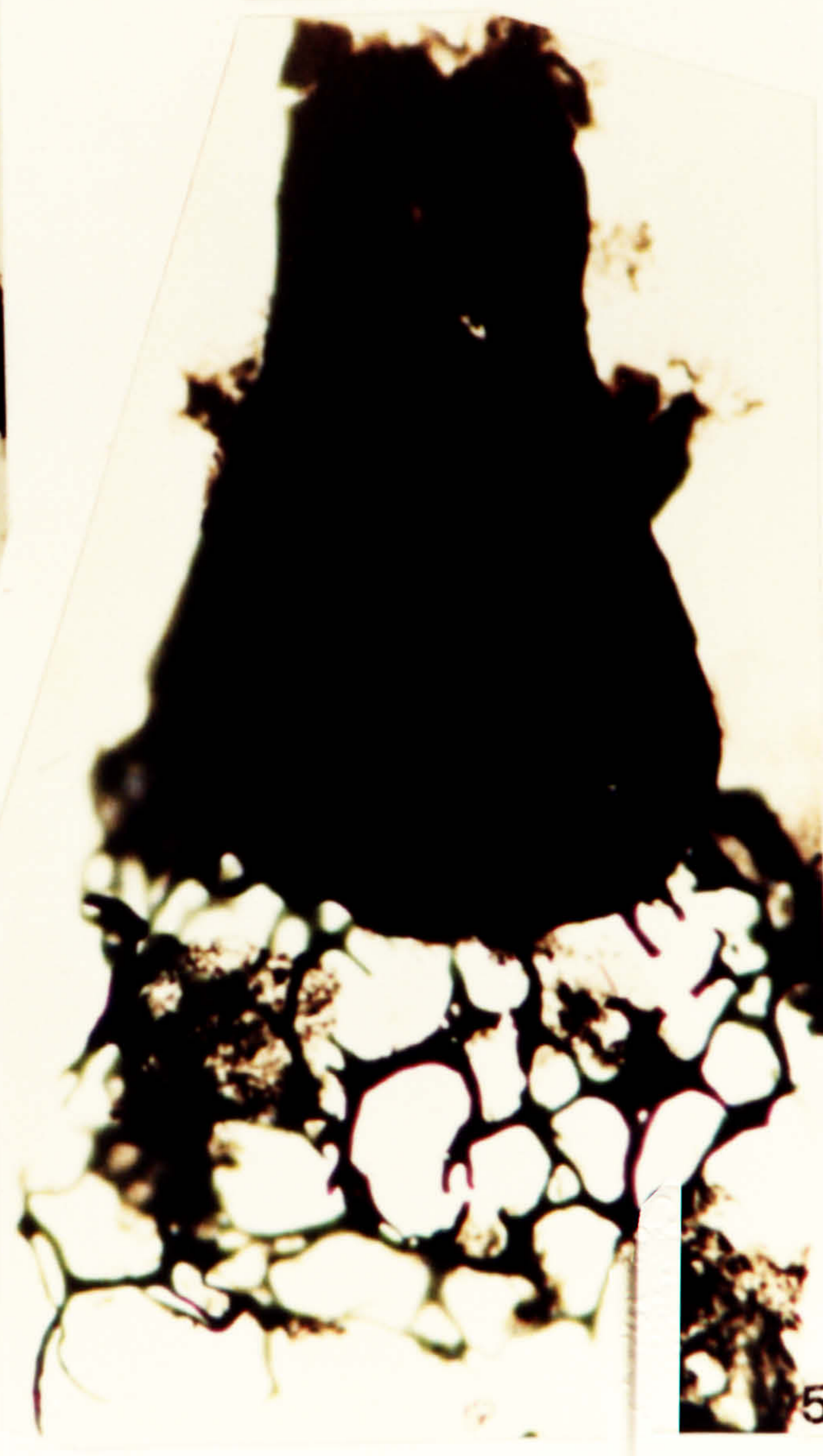
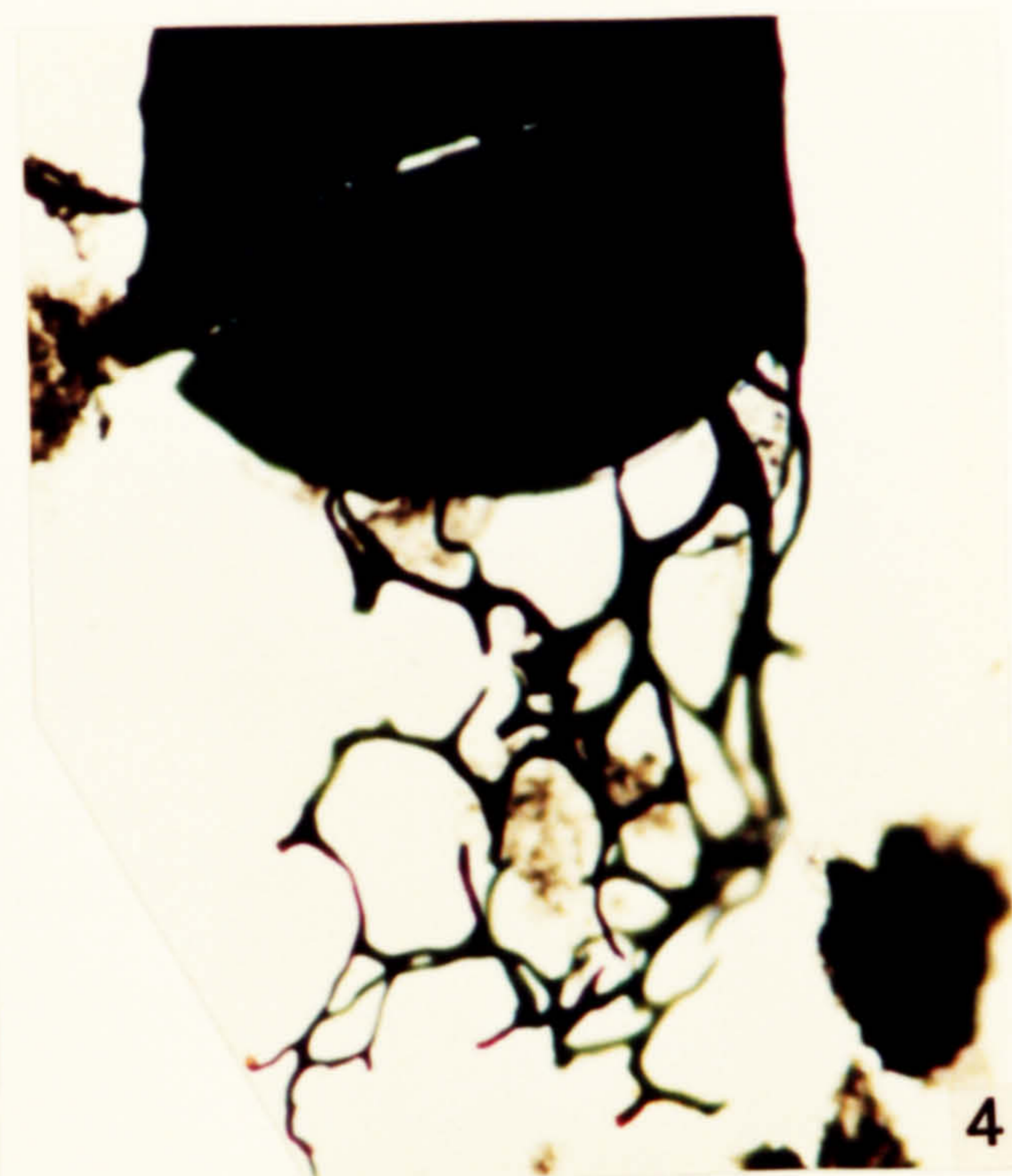
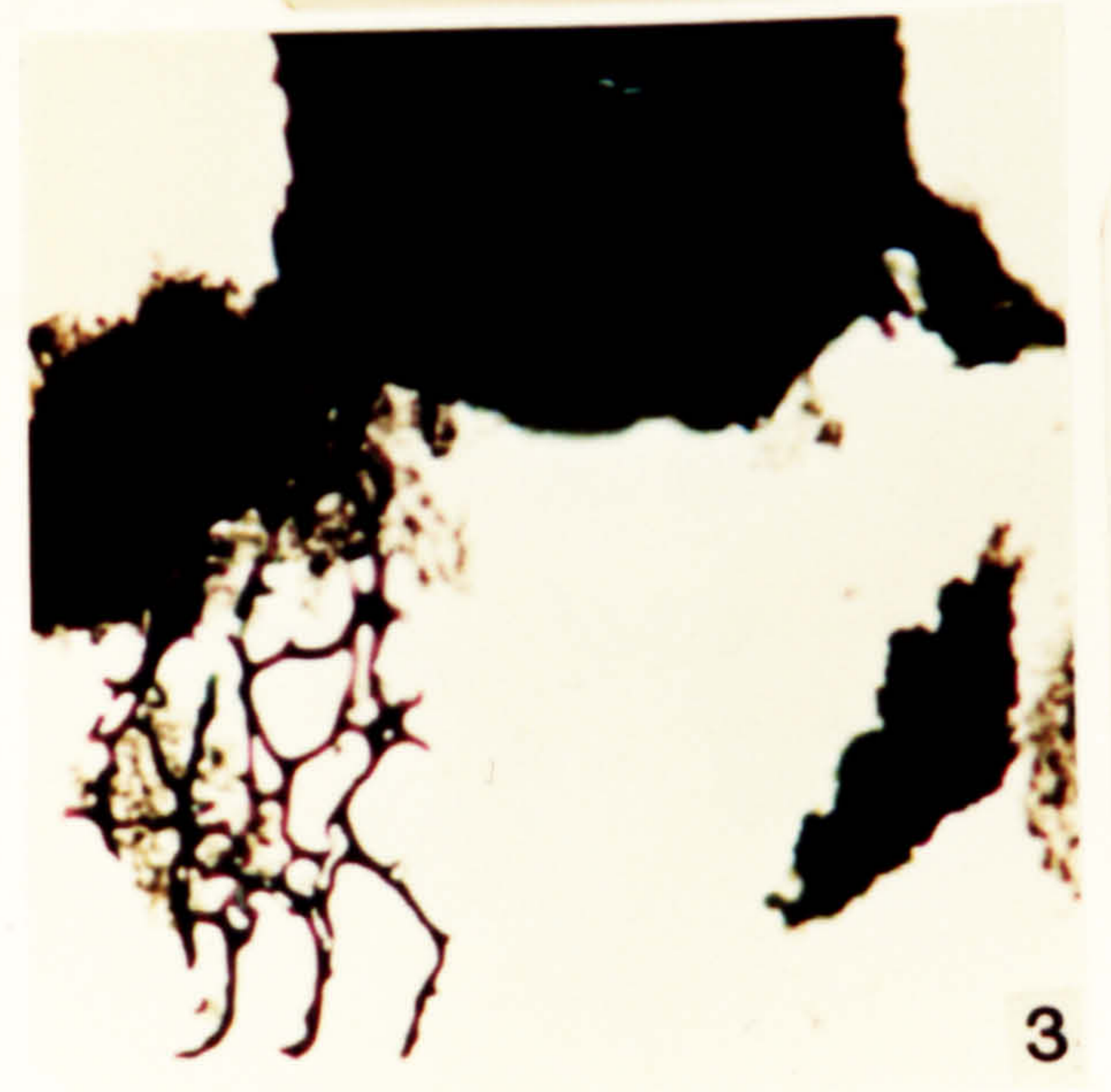
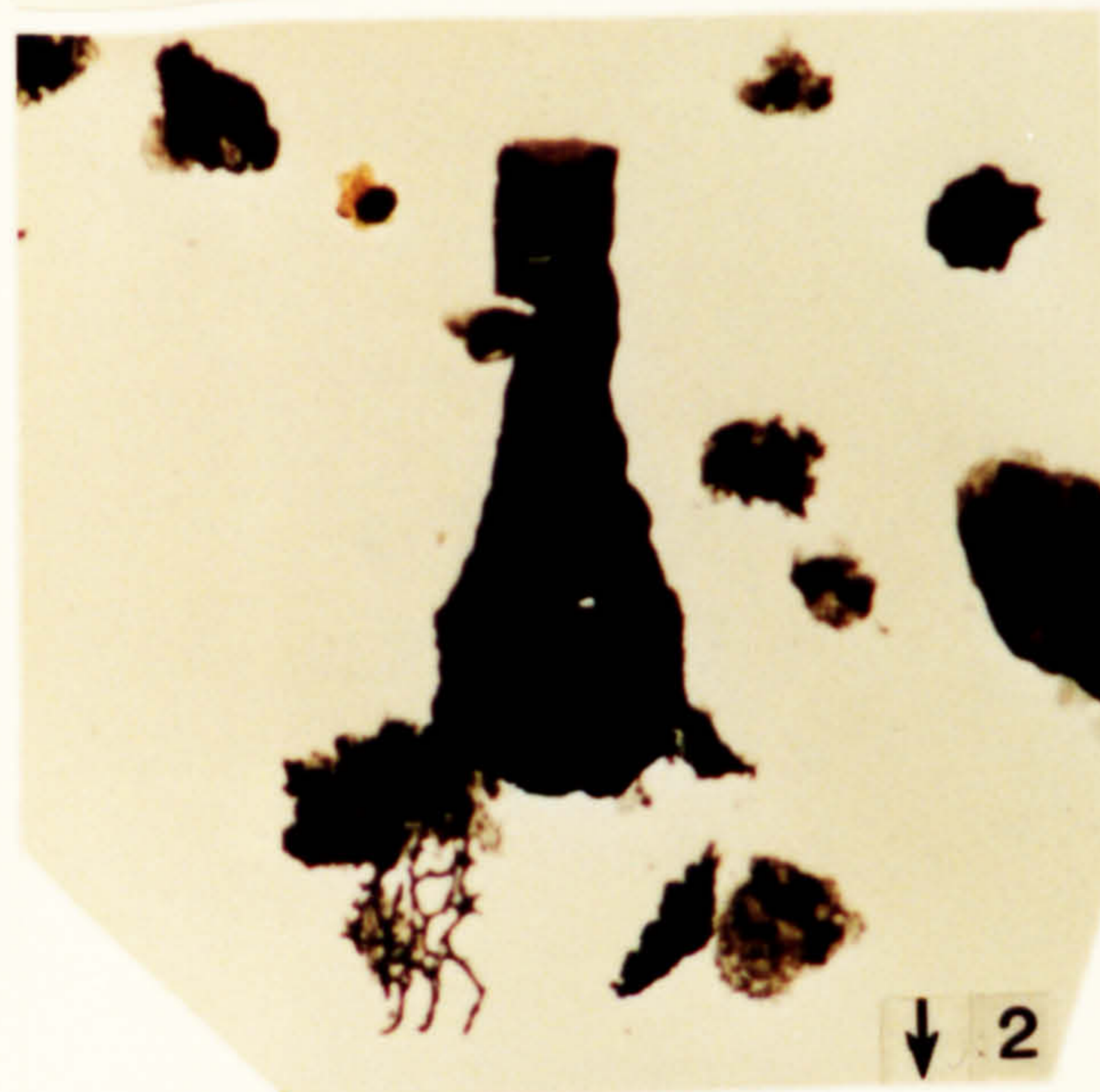
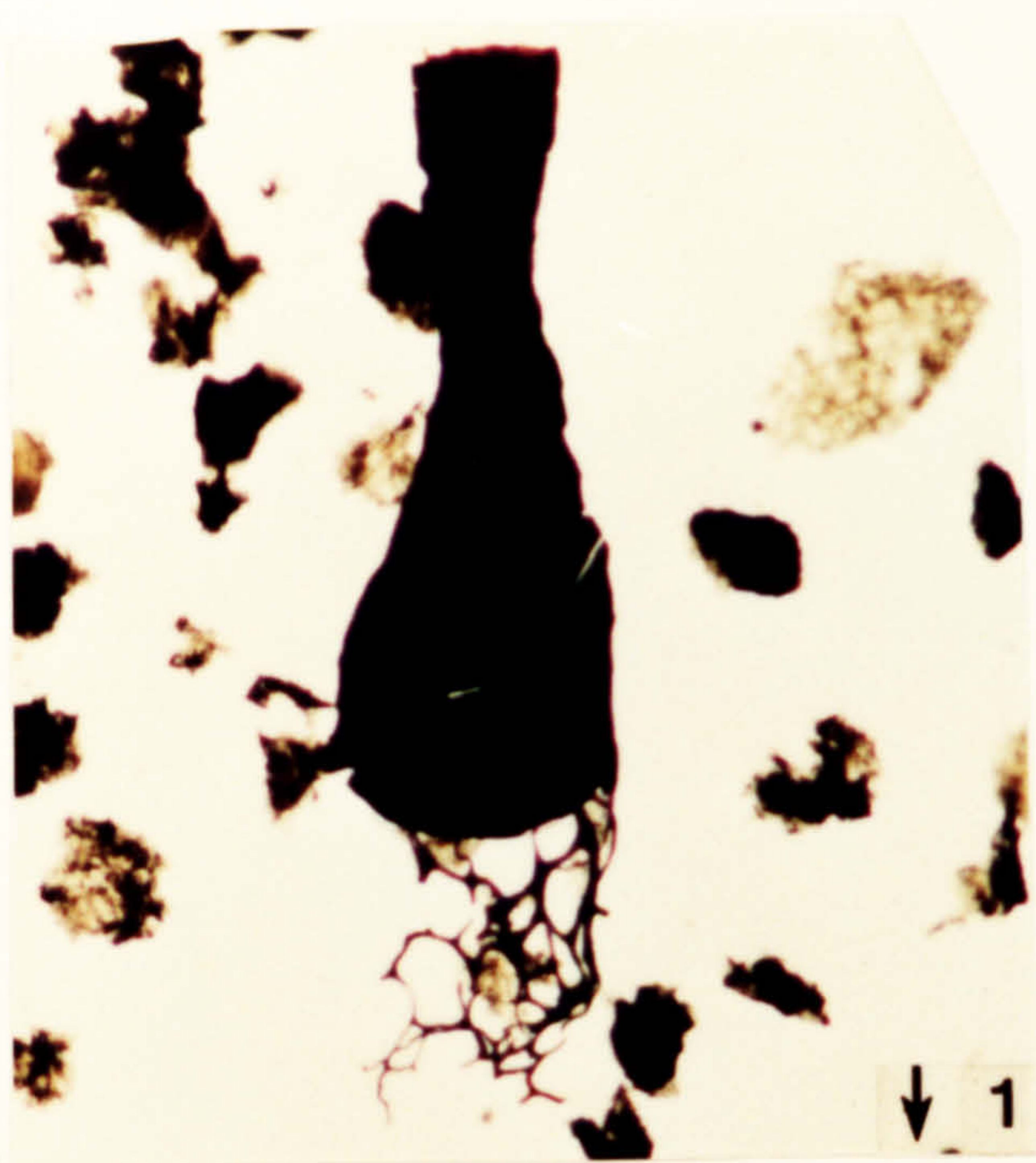
- 1. *Lagenochitina baltica* Eisenack 1931. JD 29, 2-1, Q40\4.**
- 2. *Lagenochitina baltica* Eisenack 1931. DW 303, 2-1, J19\-.**
- 3. *Rhabdochitina magna* Complex. DW 332, 2-1, O25\1, X230.**
- 4. *Velatachitina nebulosa* Poumot 1968. JD 29, 2-1, V44\2.**
- 5. *Velatachitina?* sp. DW 303, 2-1, K27\1, X230.**
- 6. *Velatachitina?* sp. DW 303, 2-1, G11\1, X230.**
- 7. *Rhabdochitina magna* Complex . DW 332, FS-1, E8\4, X230.**



**Plate 30.**

**Chitinozoa from the Fezouata Formation, Arenig in age.**

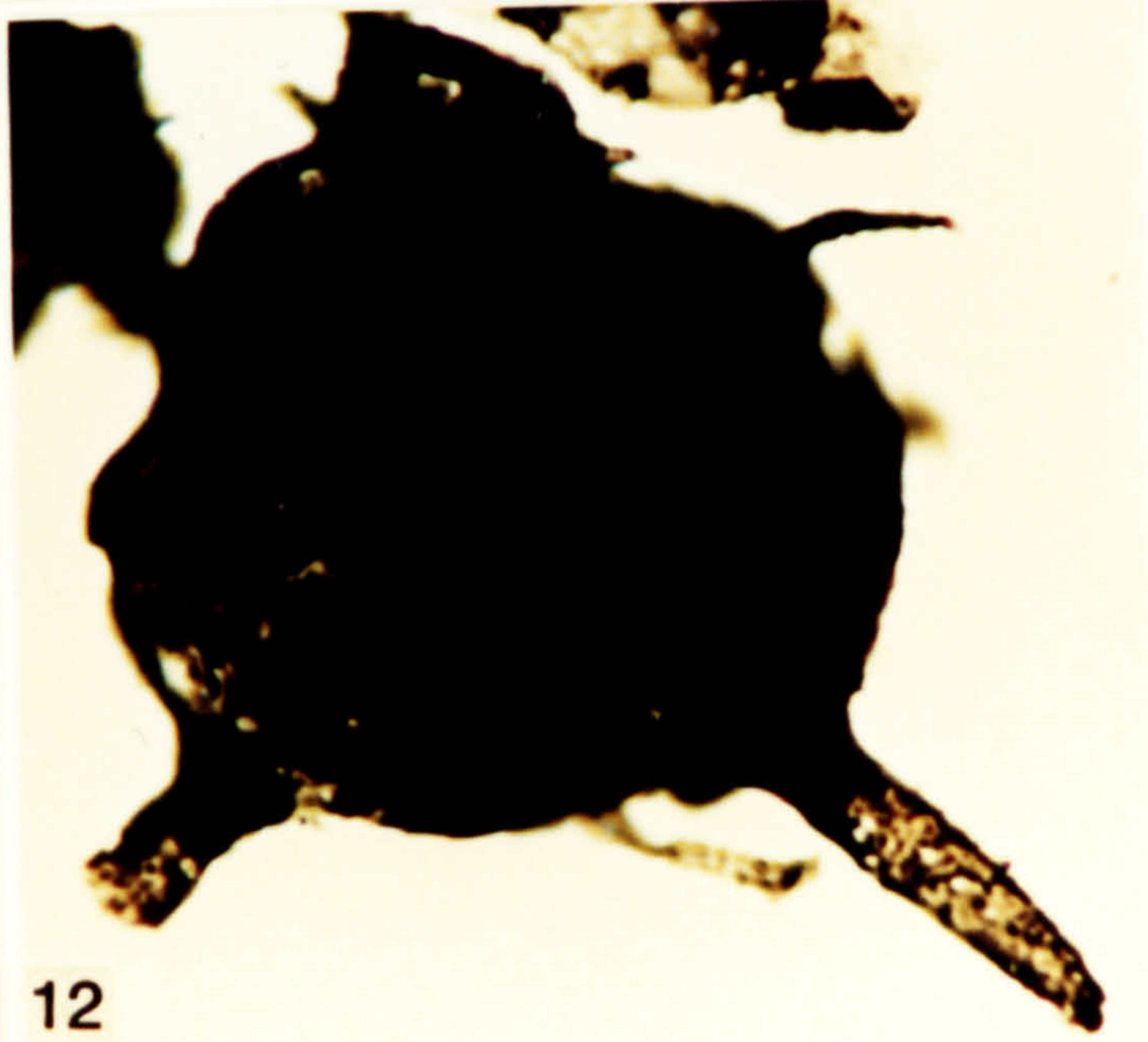
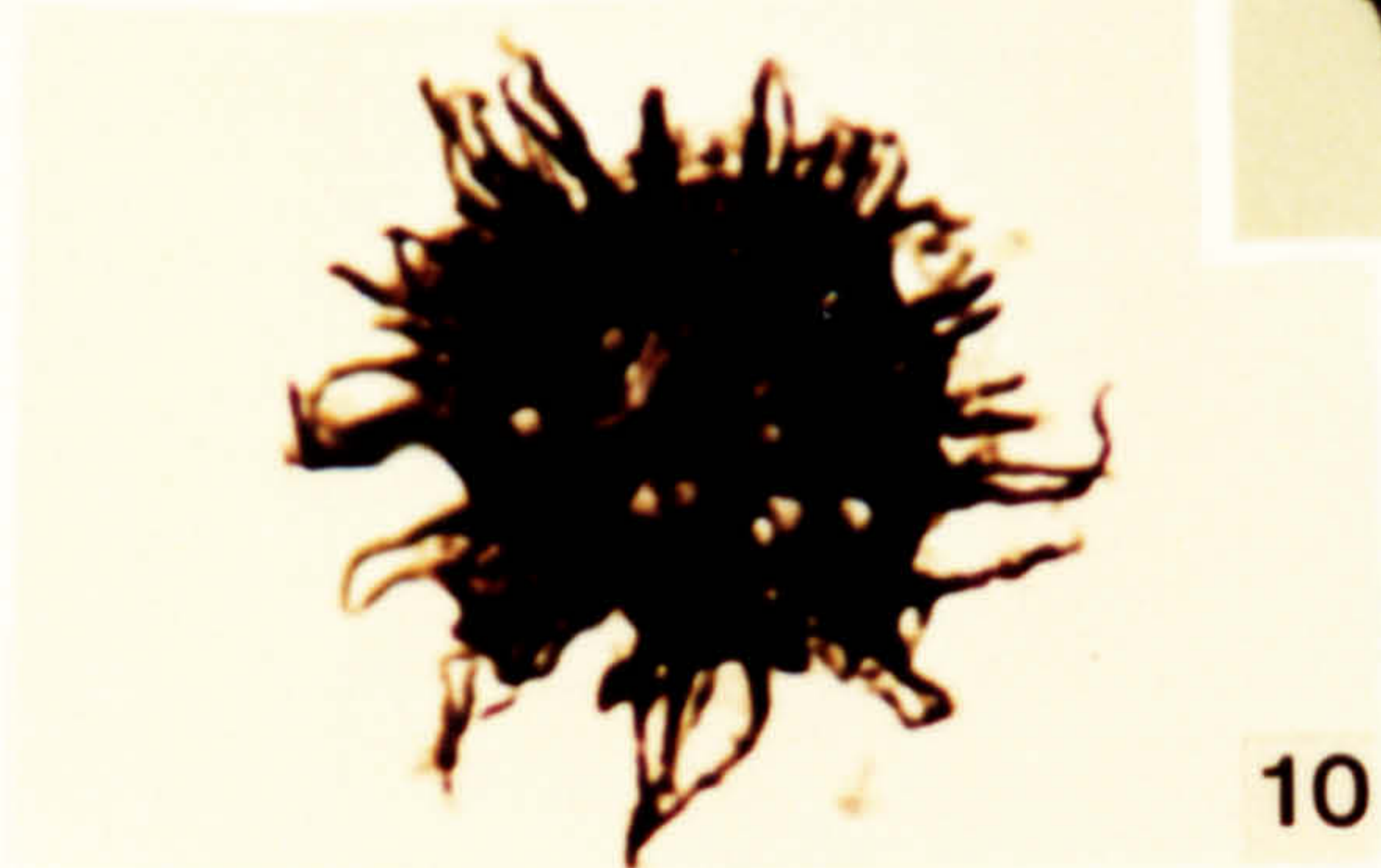
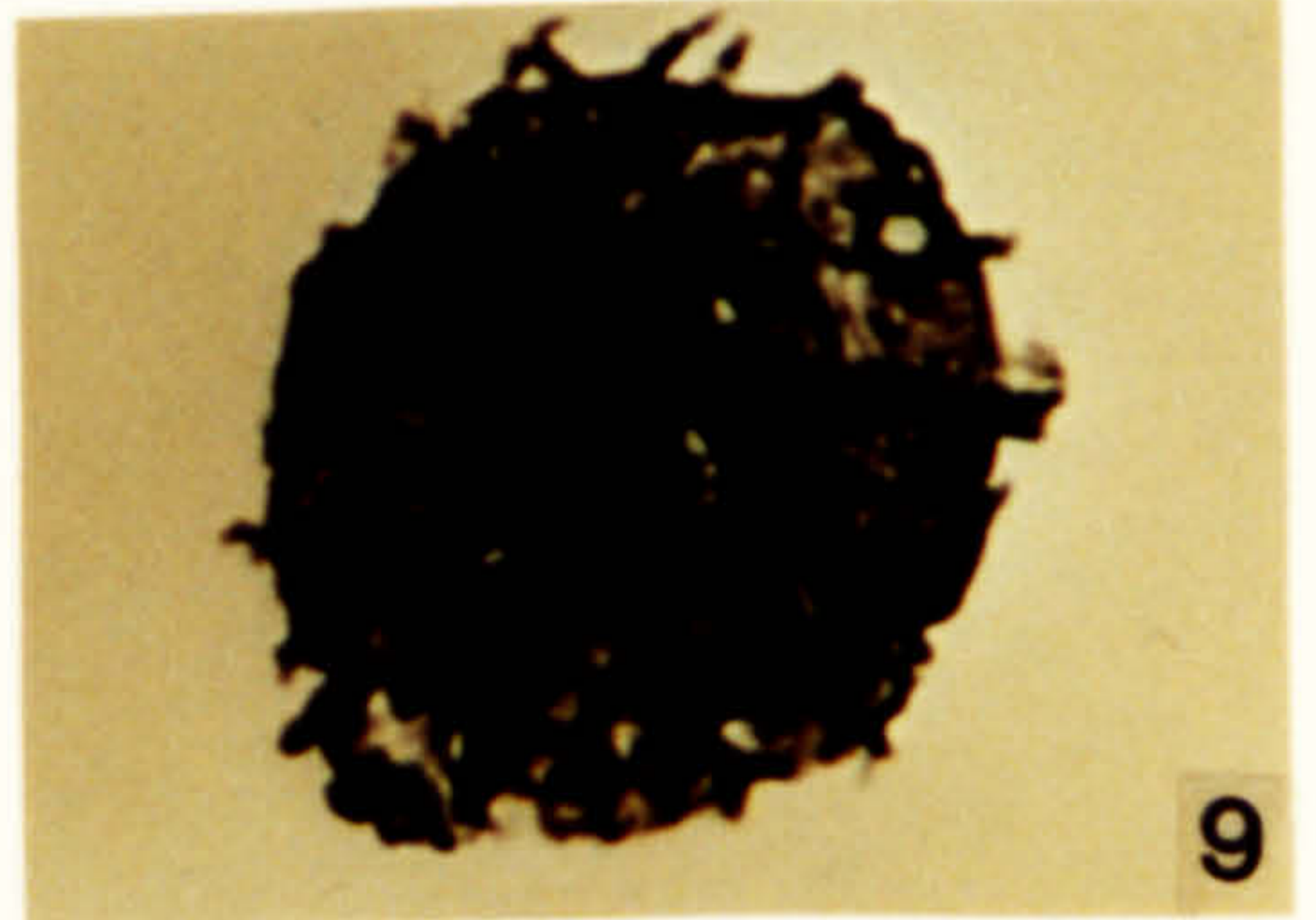
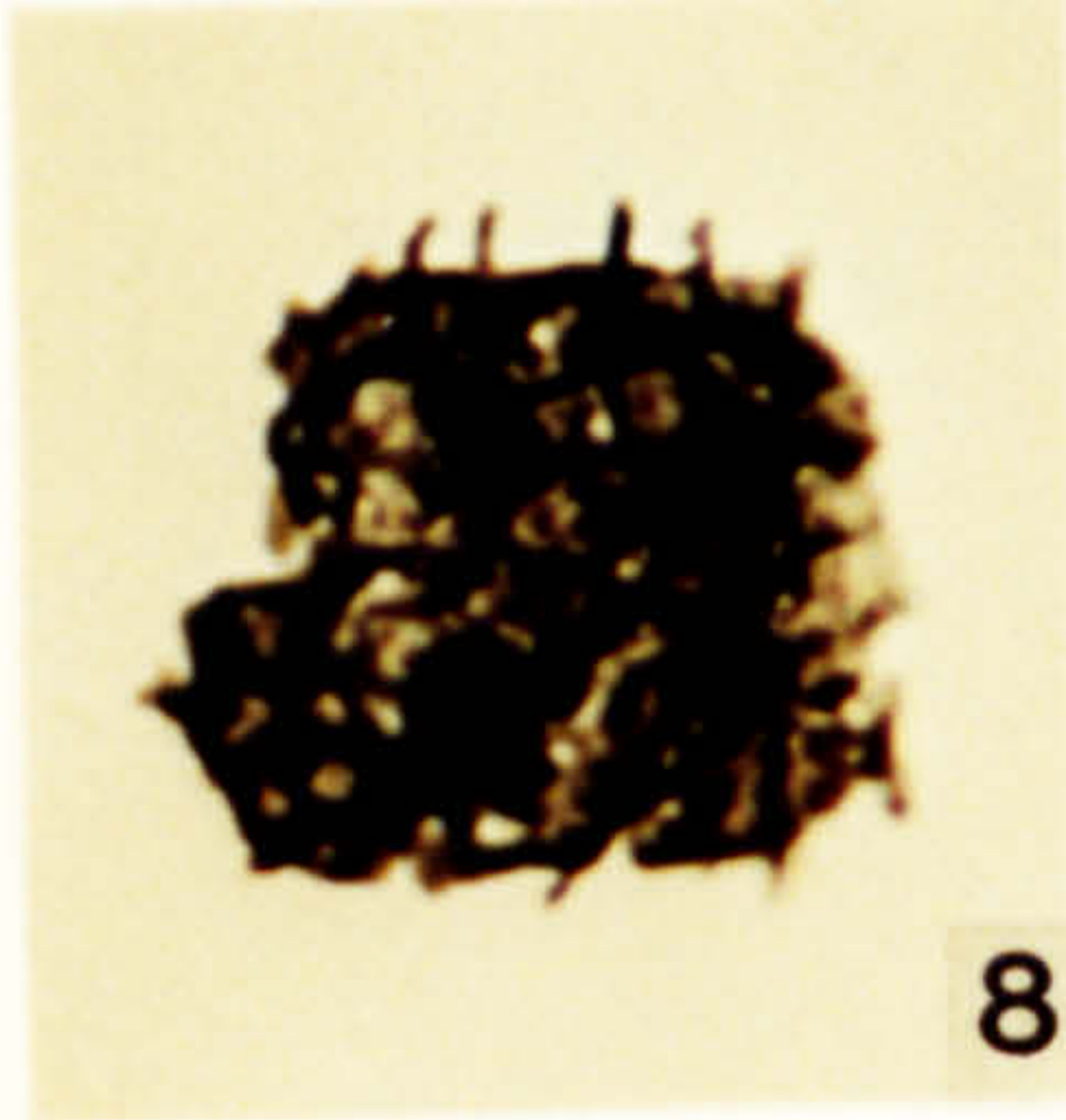
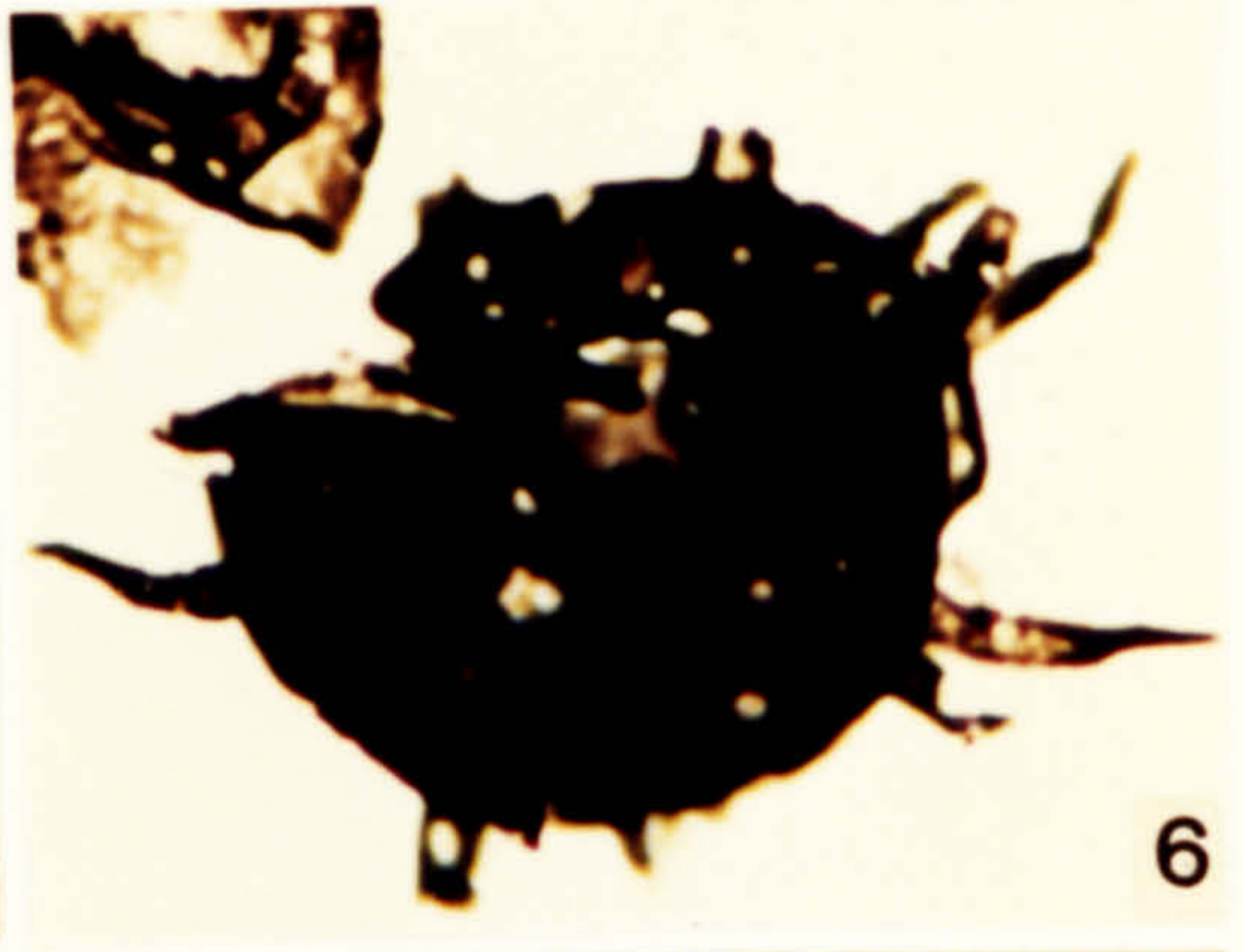
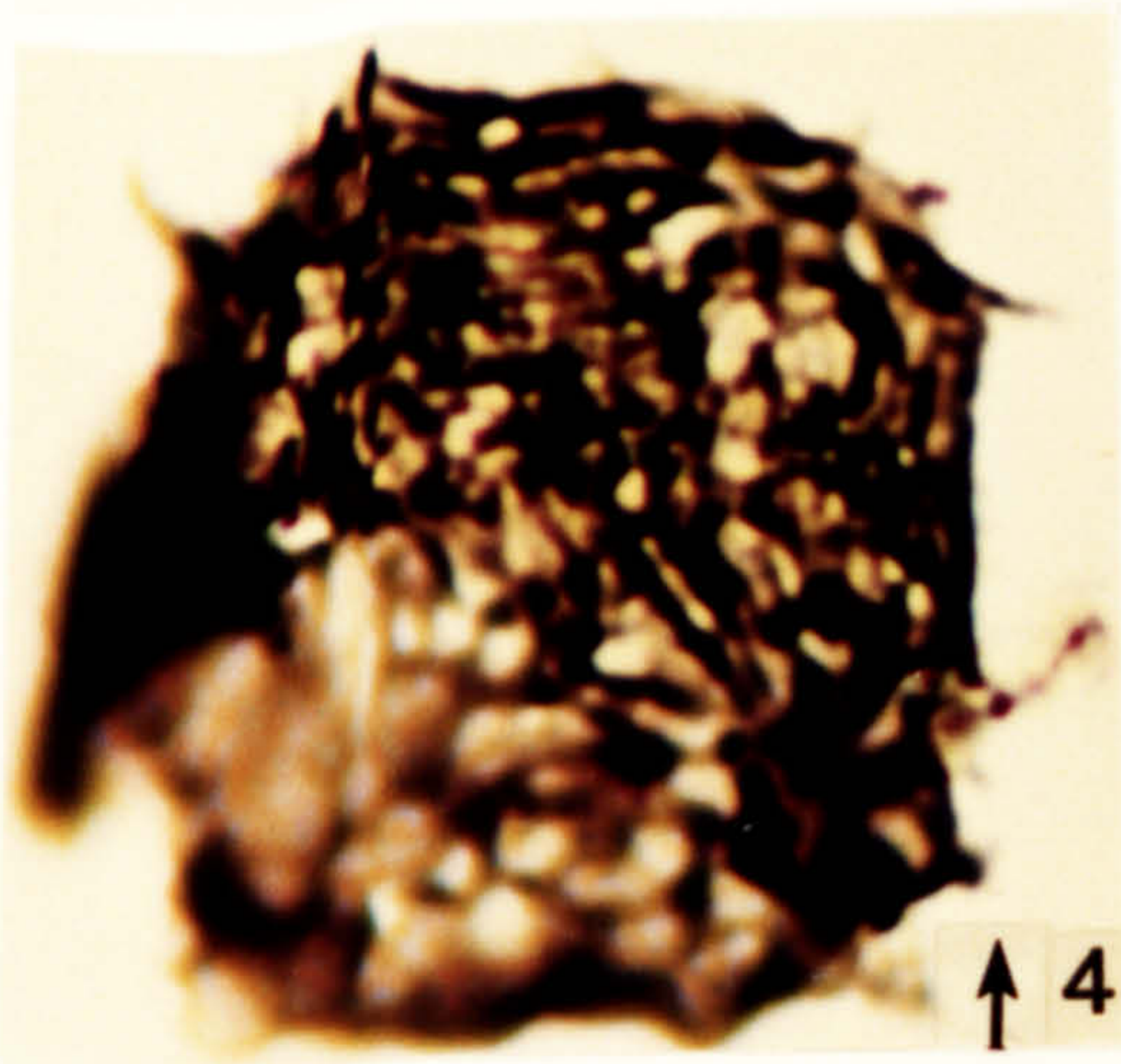
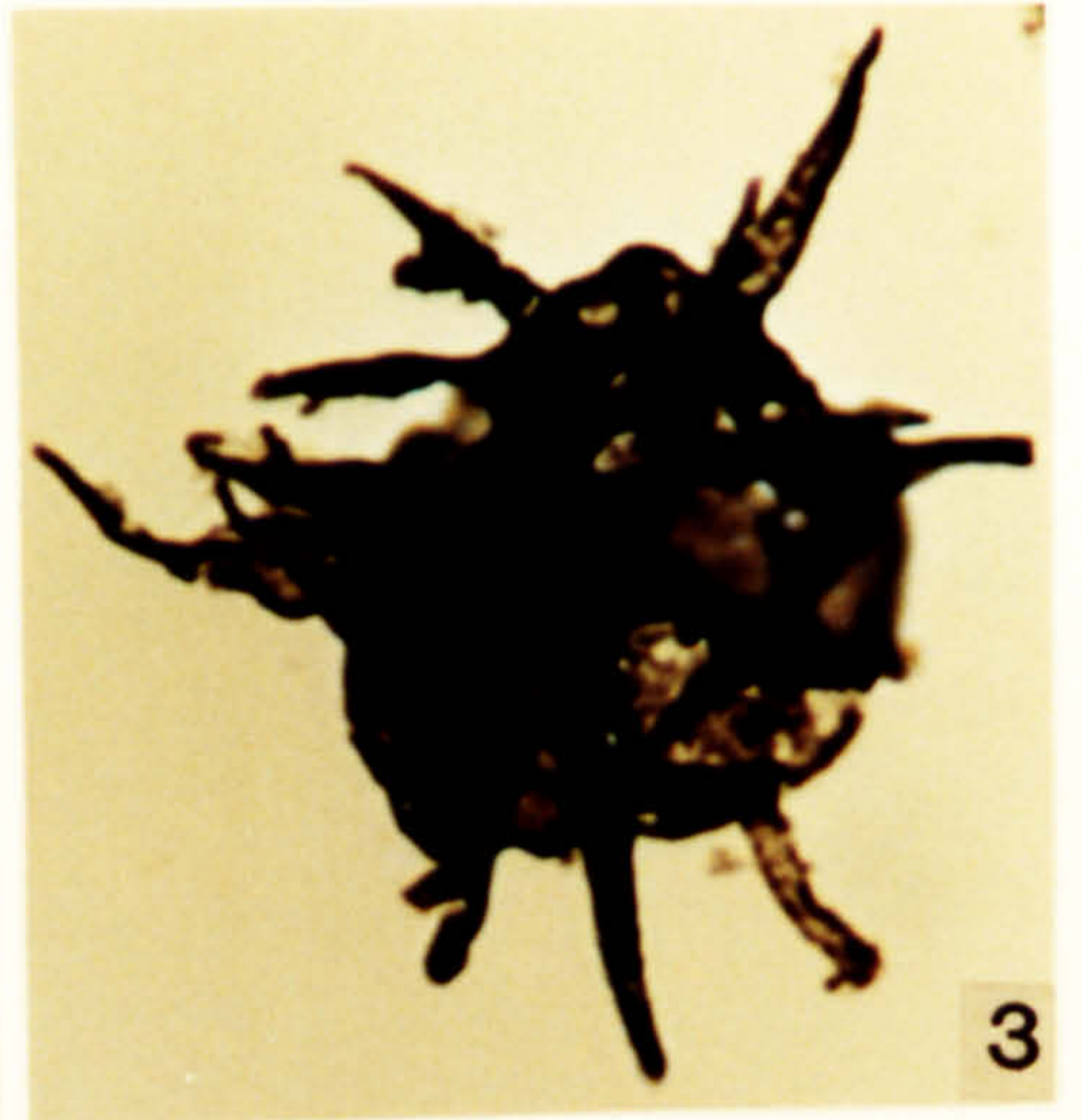
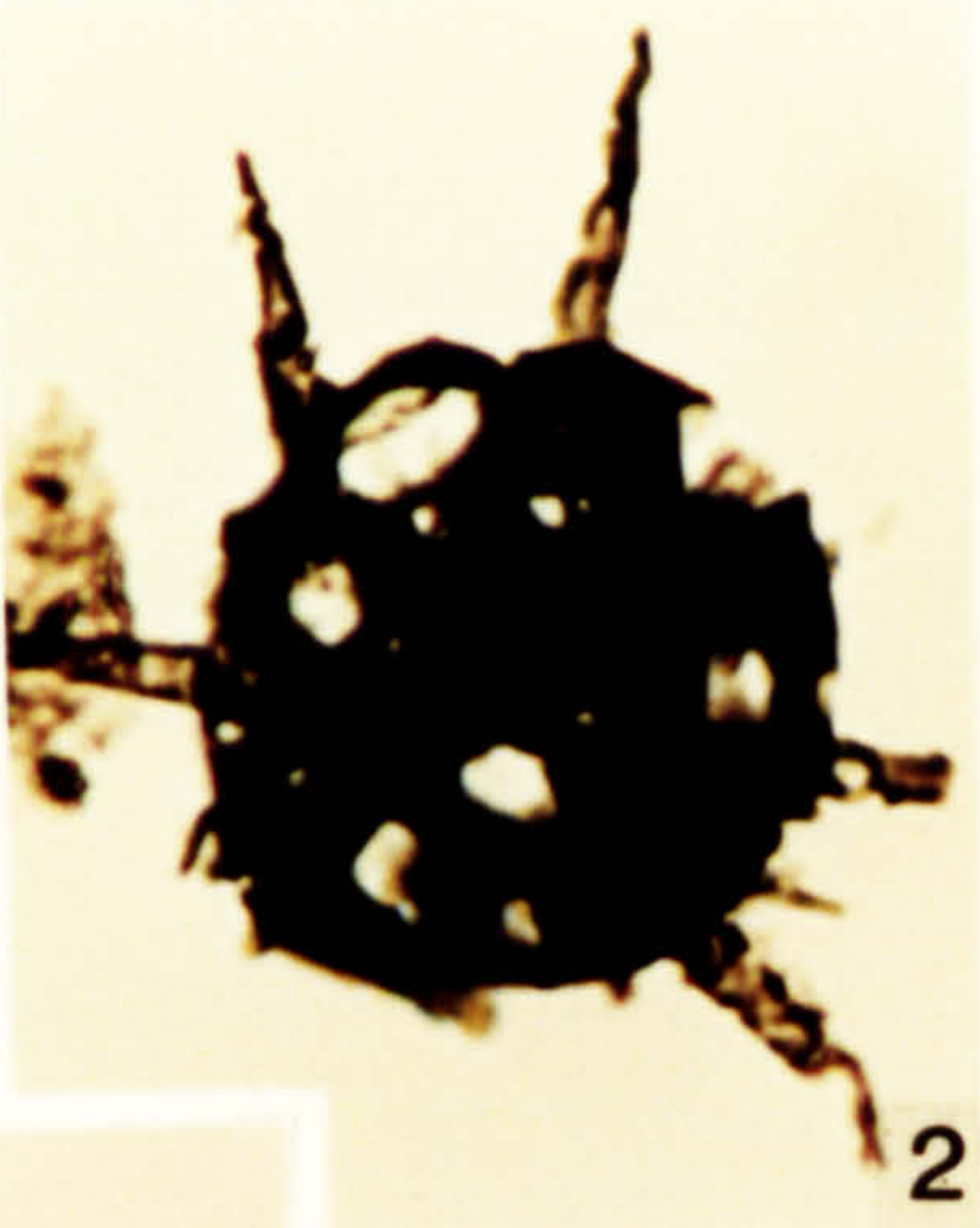
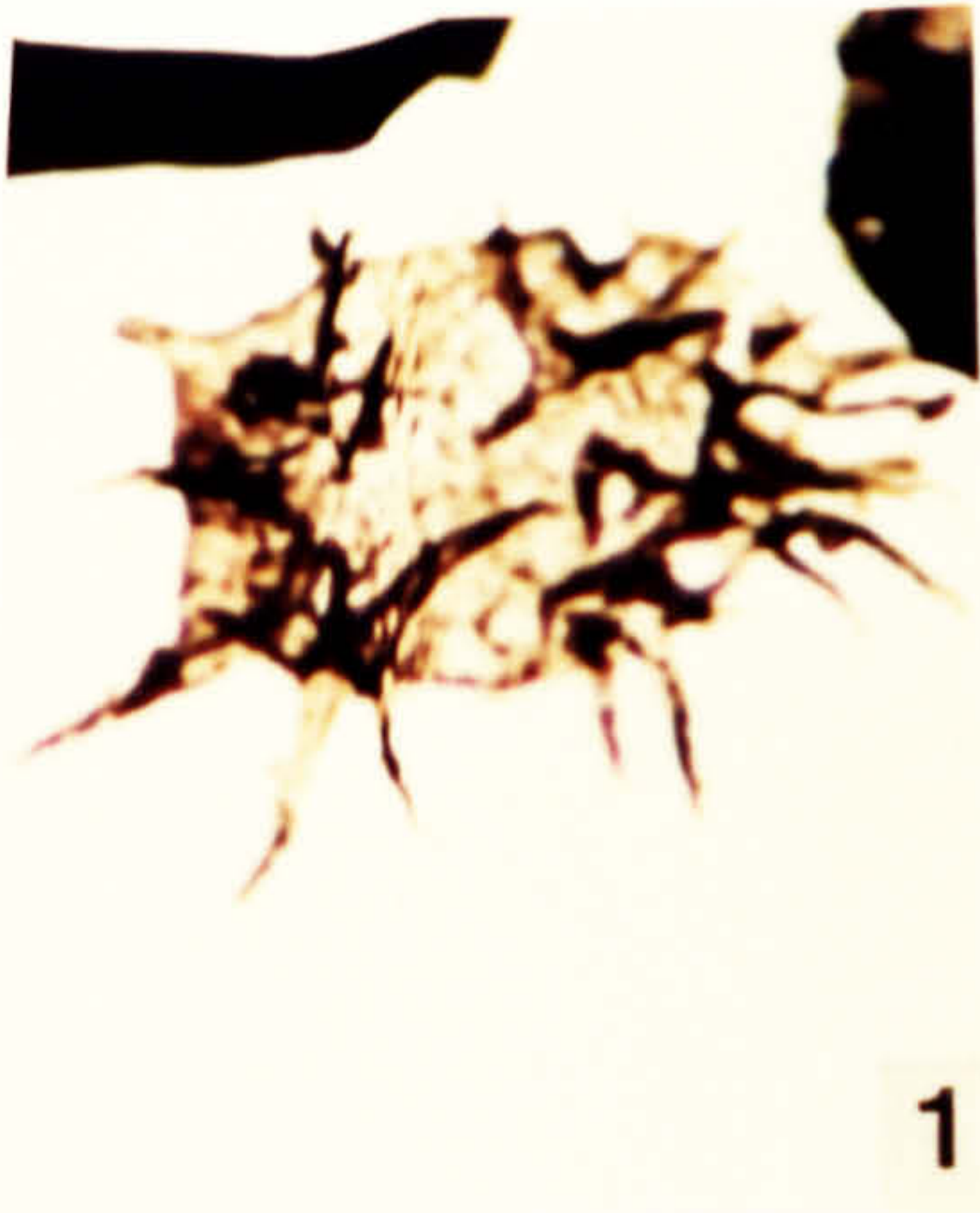
1. *Sagenachitina cf. retifera* (Taugourdeau & Jekhowsky) Jenkins 1970. JD 29, 2-1, N24\2, X230.
2. *Sagenachitina cf. retifera* (Taugourdeau & Jekhowsky) Jenkins 1970. JD 29, 2-1, N24\2.
3. *Sagenachitina cf. retifera* (Taugourdeau & Jekhowsky) Jenkins 1970. JD 29, 2-3, O36\1, X230.
4. *Sagenachitina cf. retifera* (Taugourdeau & Jekhowsky) Jenkins 1970. JD 29, 2-3, O36\1.
5. *Sagenachitina oblonga* (Benoit & Taugourdeau) Jenkins 1970. JD 29, 2-1, W31\4.



**Plate 31.**

**Acritarchs from the Tachilla Formation, Llanvim in age.**

1. *Actinodissus* sp. 1. DW 310, 1-2, E14\1.
2. *Baltisphaerosum klabavense* (Vavrdova) Kjelstrom 1971. DW 309, 1-1, H12\2.
3. *Baltisphaerosum klabavense* (Vavrdova) Kjelstrom 1971. DW 310, 1-1, T17\3.
4. *Coryphidium elegans* Cramer et al. 1974. DW 309, 1-1, T20\1, X2300.
5. *Coryphidium elegans* Cramer et al. 1974. DW 309, 1-1, T20\1.
6. *Baltisphaerosum klabavense* (Vavrdova) Kjelstrom 1971. DW 309, 1-1, Q20\4.
7. *Coryphidium* sp. DW 309, 1-1, W25\3.
8. *Coryphidium* sp. DW 310, 1-1, L6\4.
9. *Coryphidium* sp. DW 310, 1-1, X20\2.
10. *Comasphaeridium* cf. *denseprocessum* Cramer & Diez 1977. DW 309, 1-1, F14\1.
11. *Comasphaeridium* cf. *denseprocessum* Cramer & Diez 1977. DW 309, 1-1, G17\1.
12. *Baltisphaeridium*\*Baltisphaerosum* sp. DW 309, 1-1, E24\1.

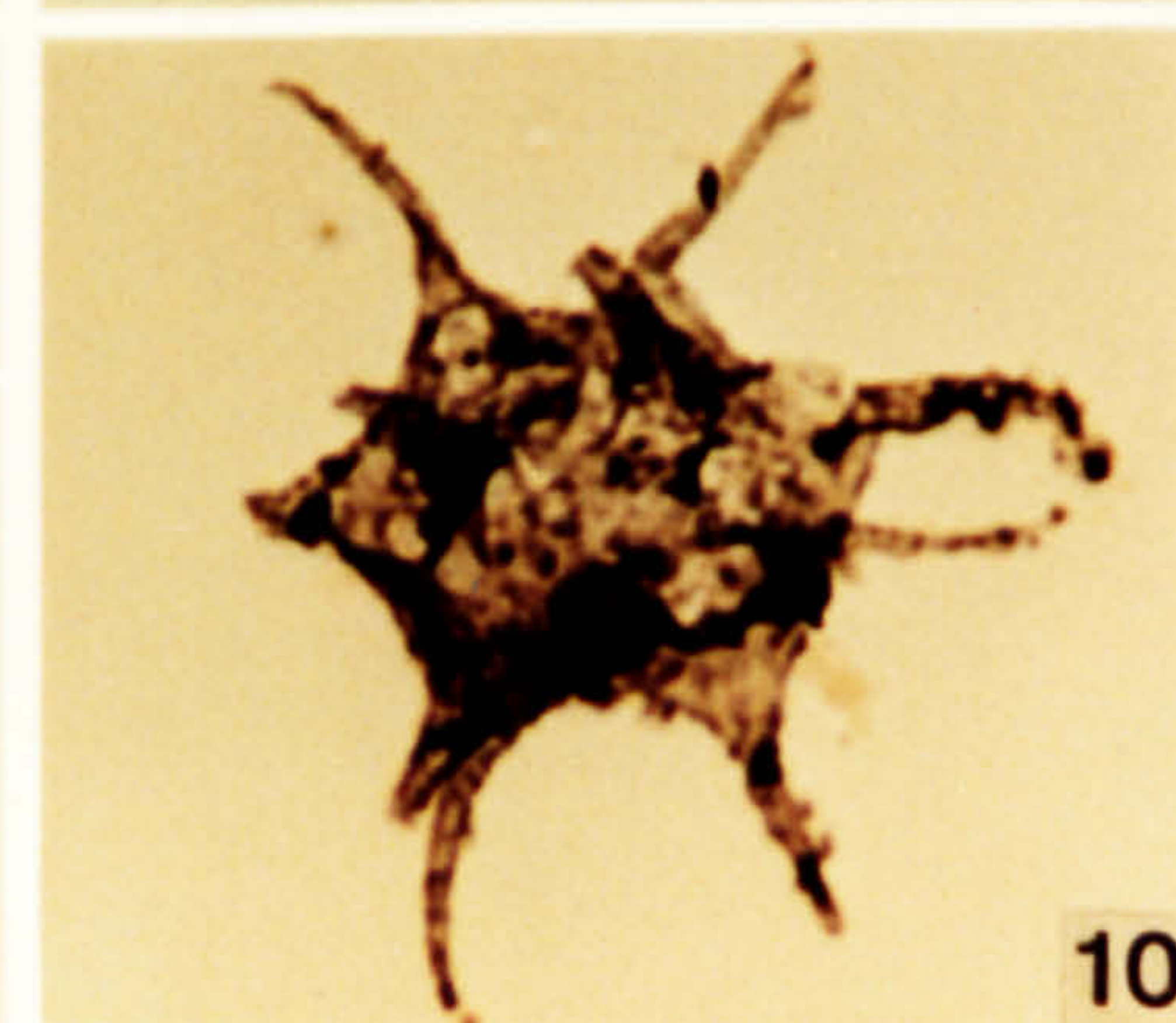
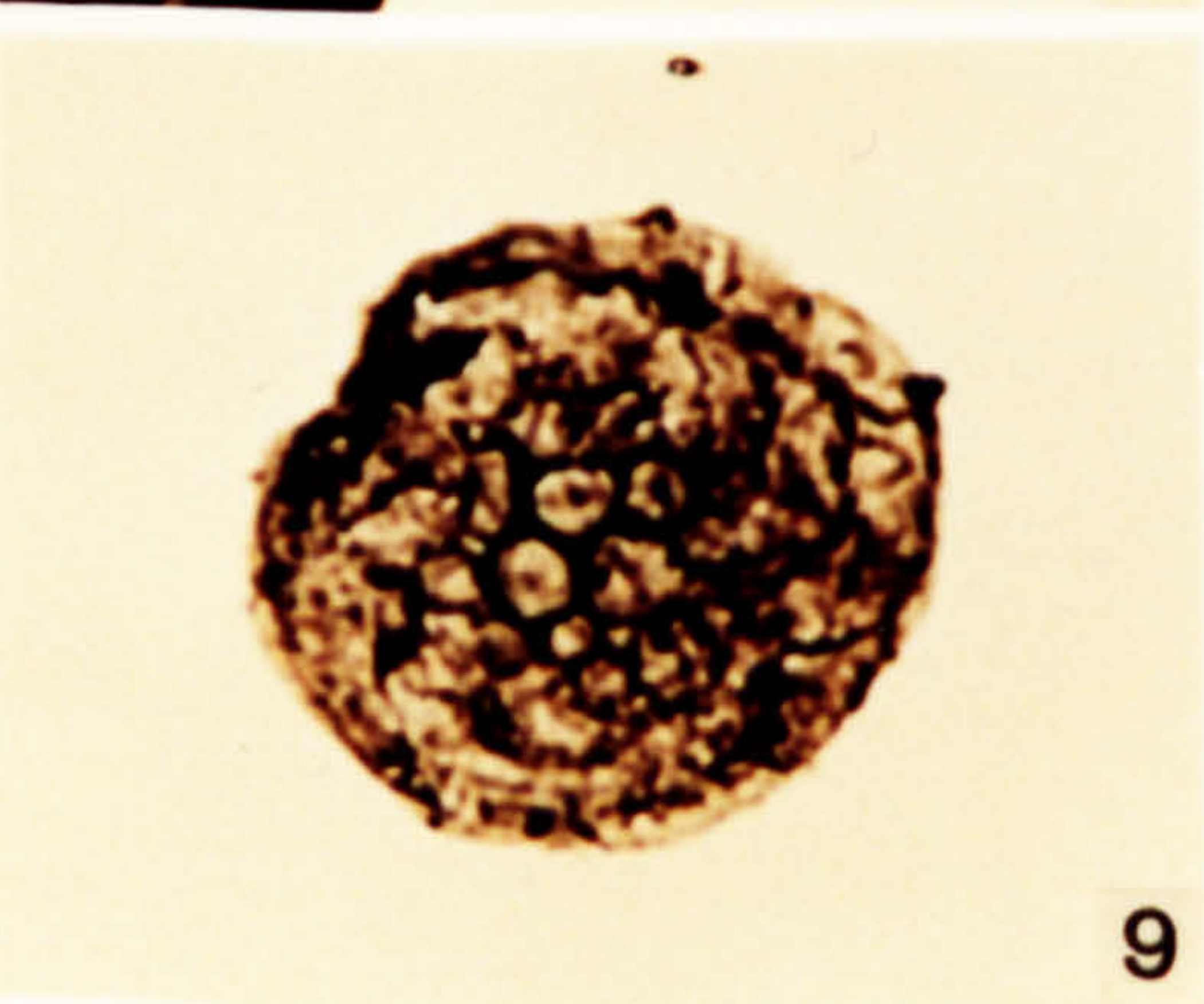
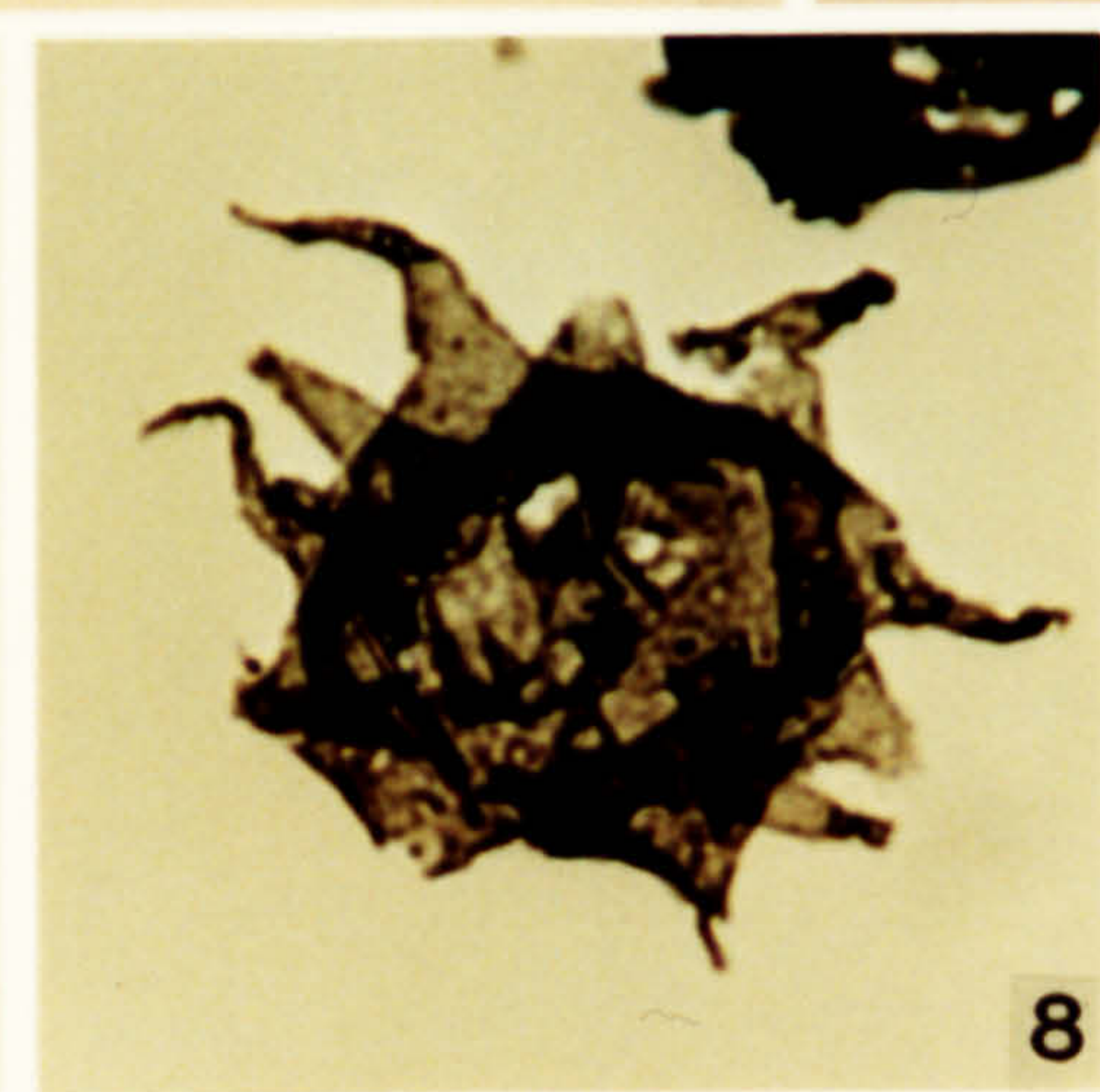
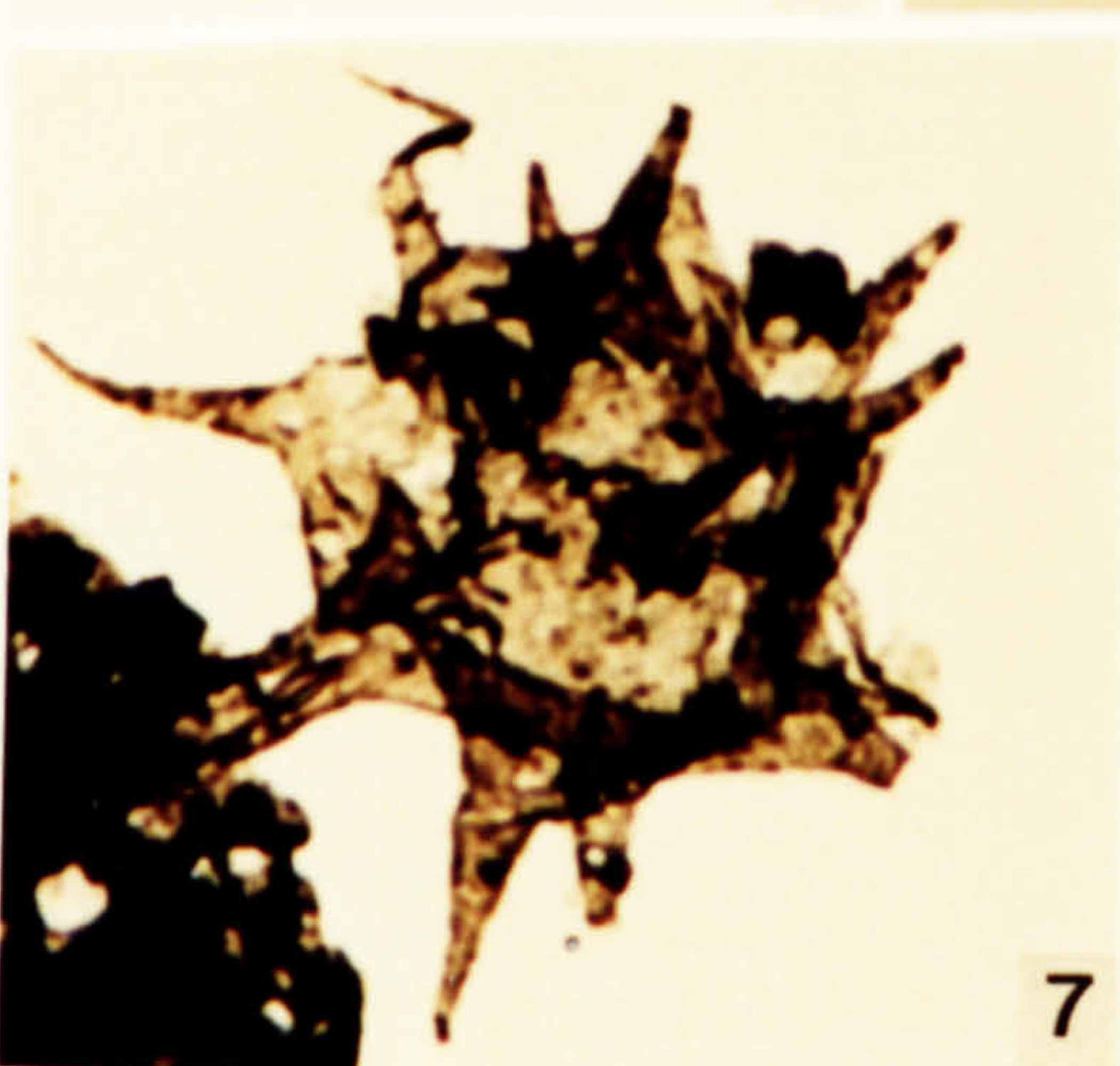
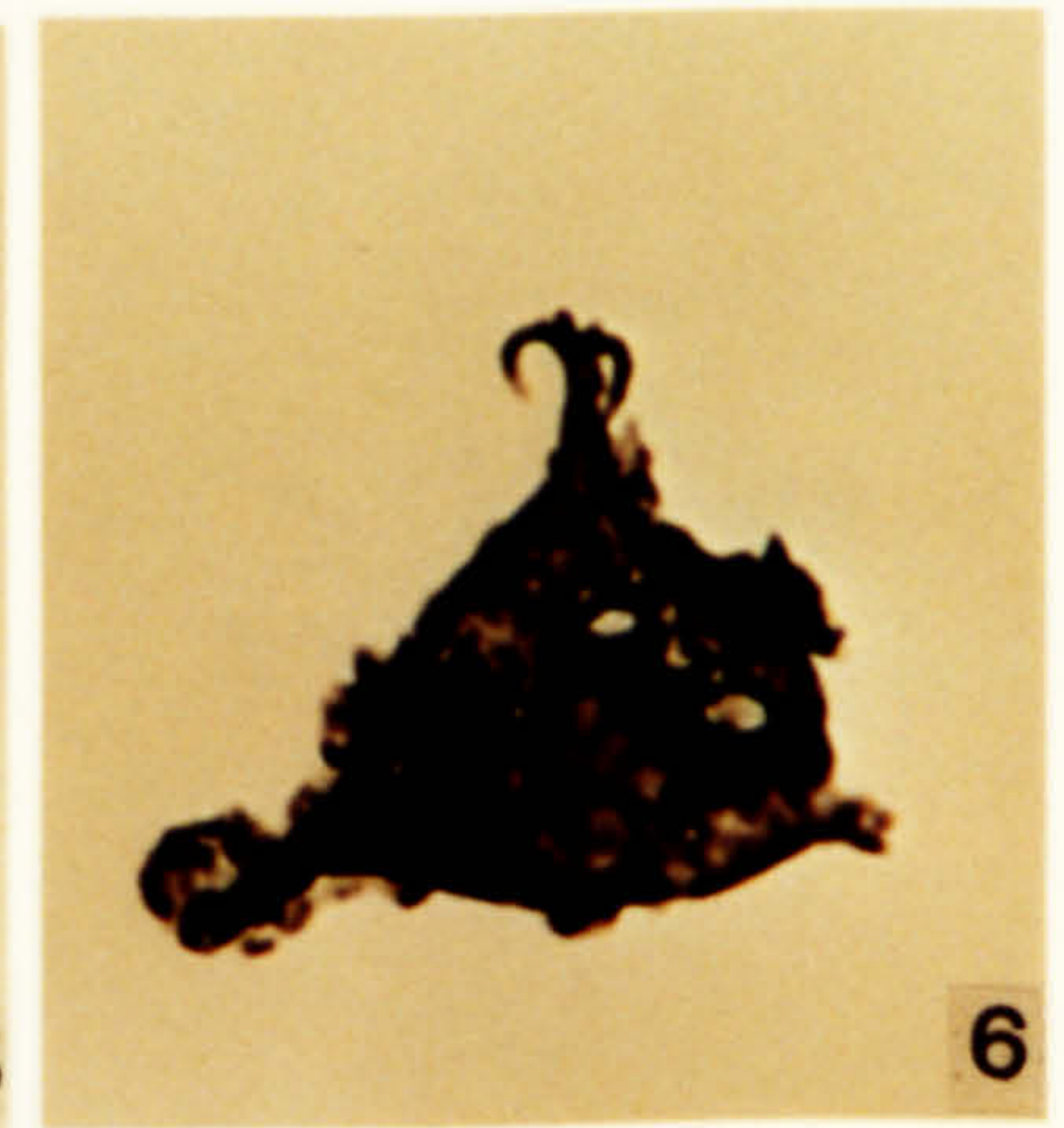
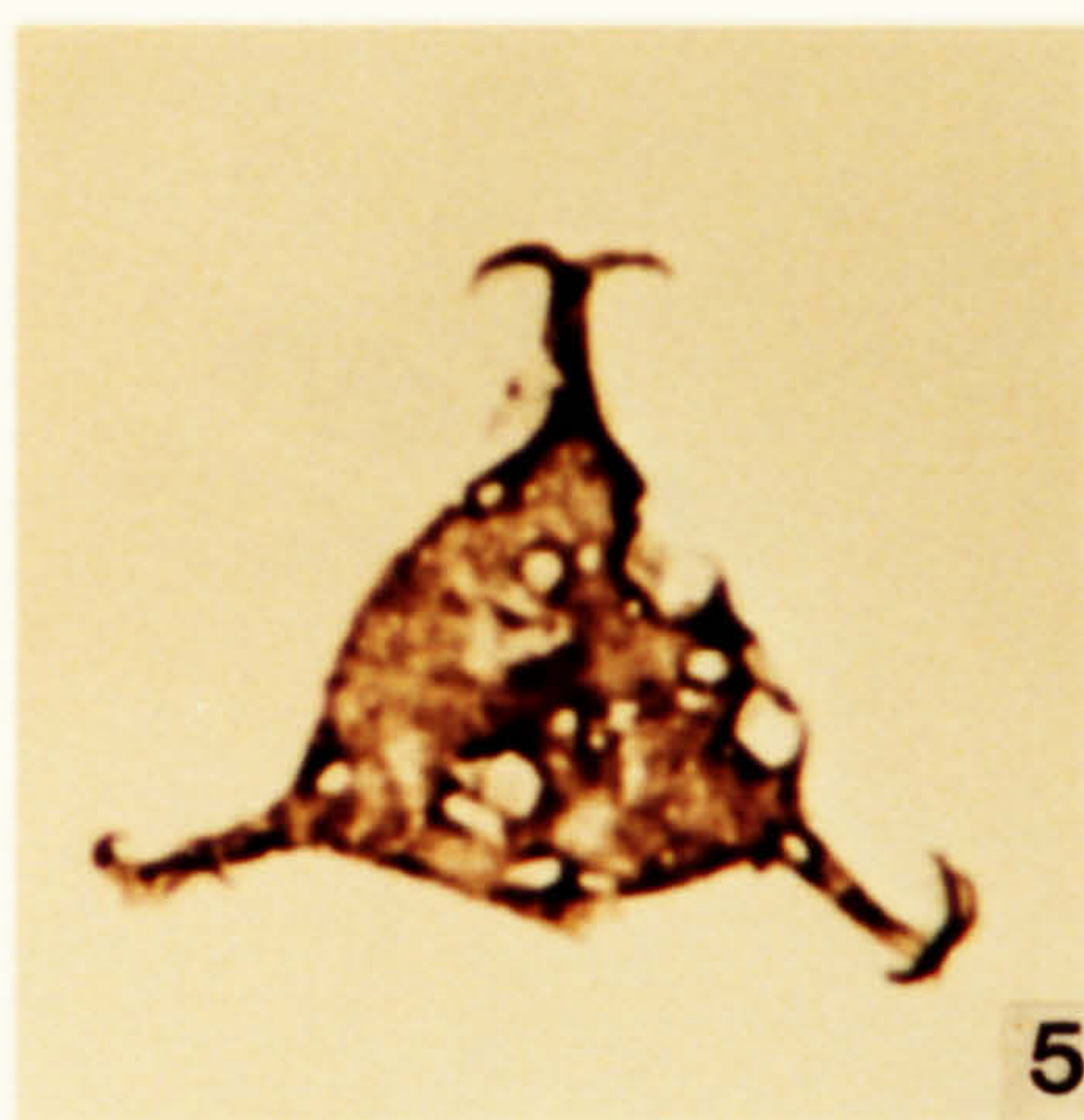




**Plate 32.**

**Acritarchs from the Tachilla Formation, Llanvirn in age.**

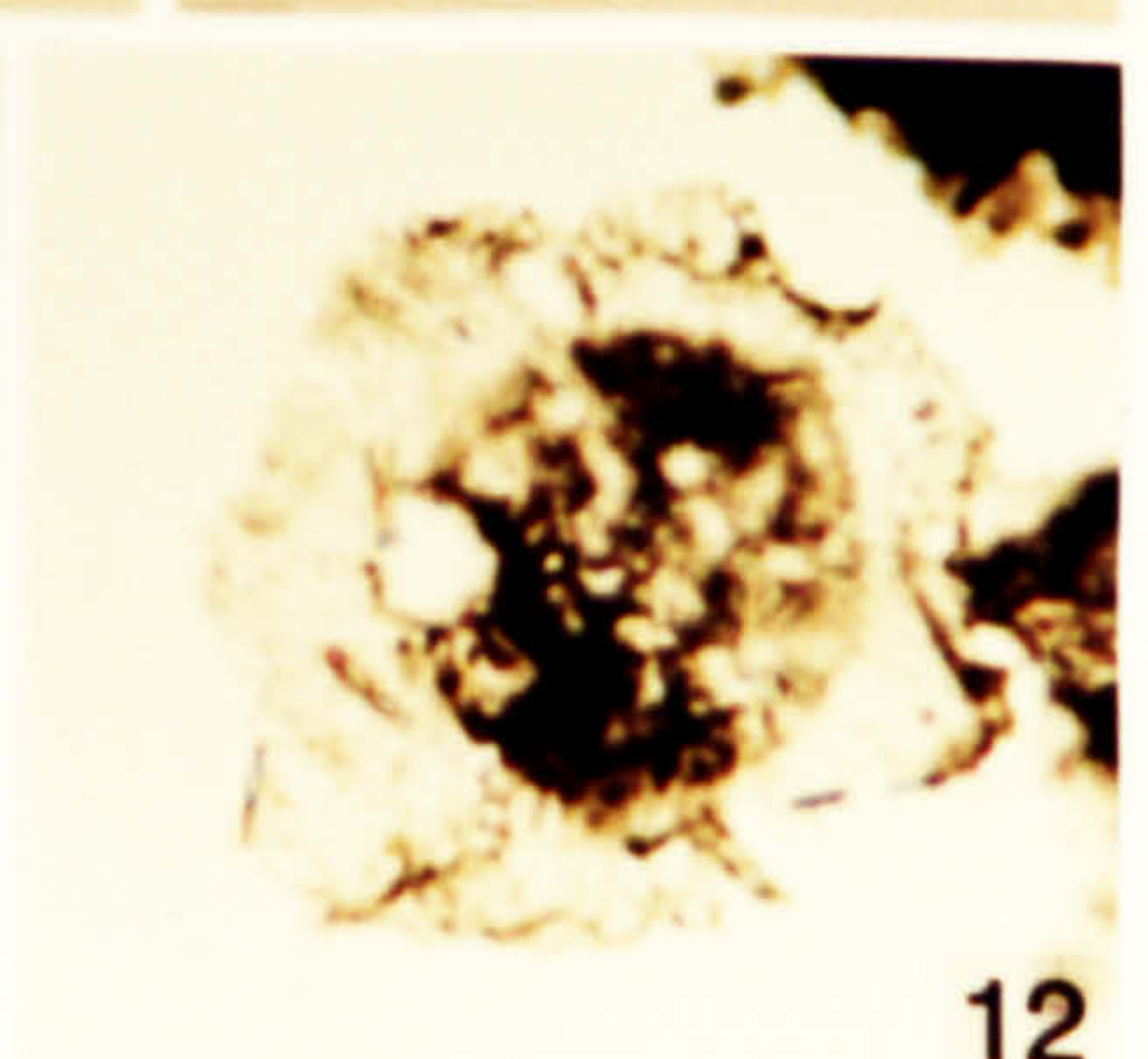
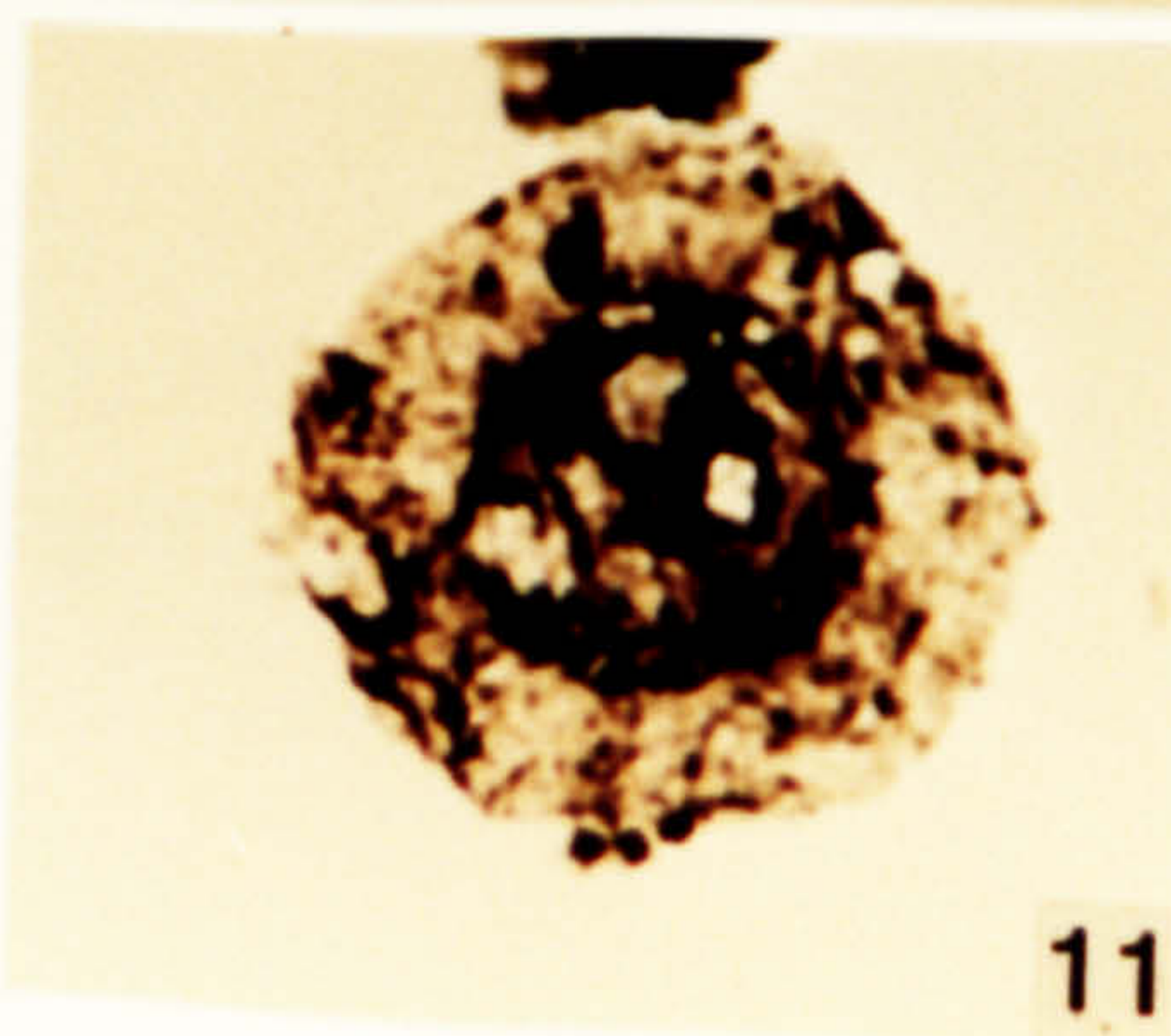
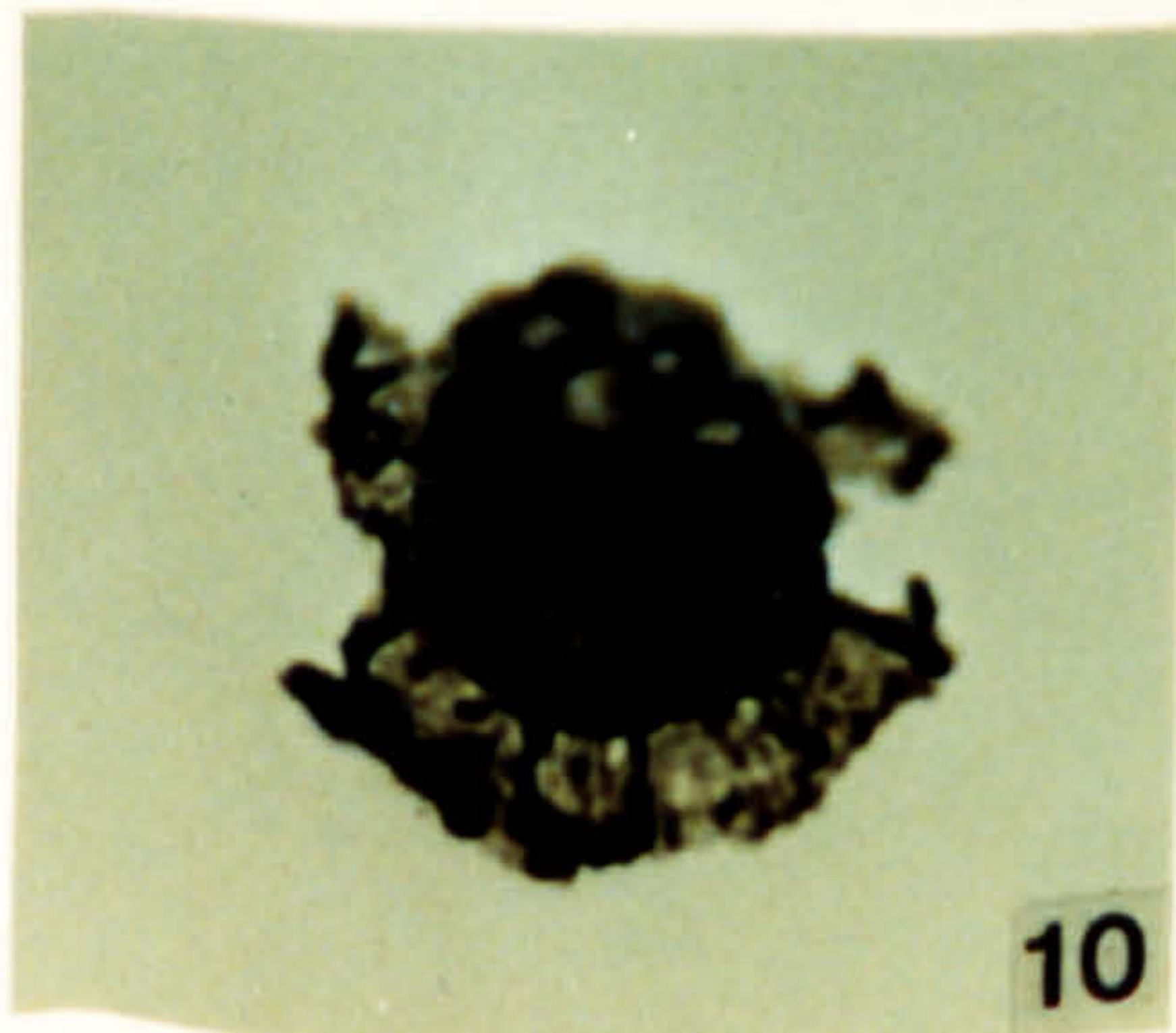
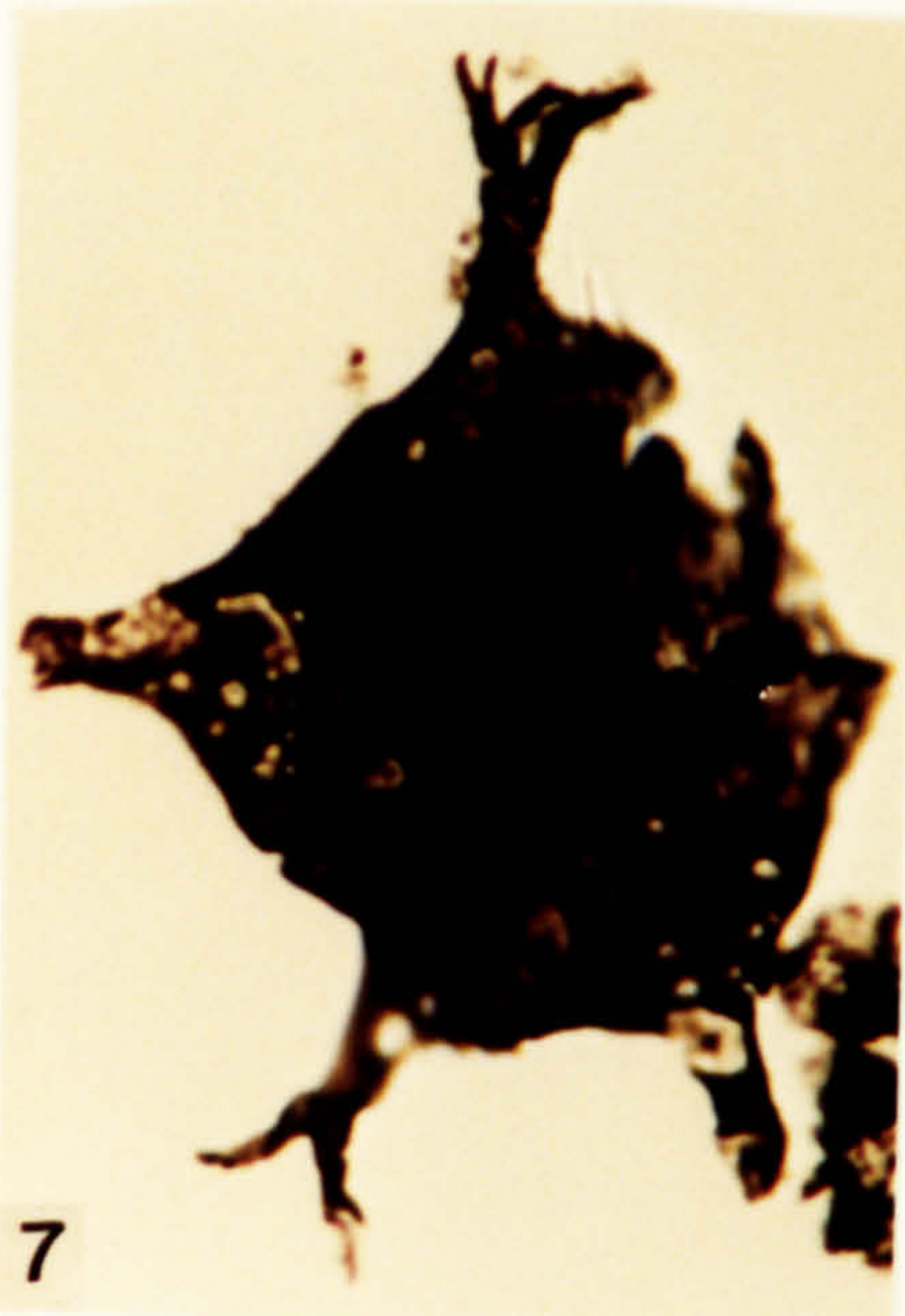
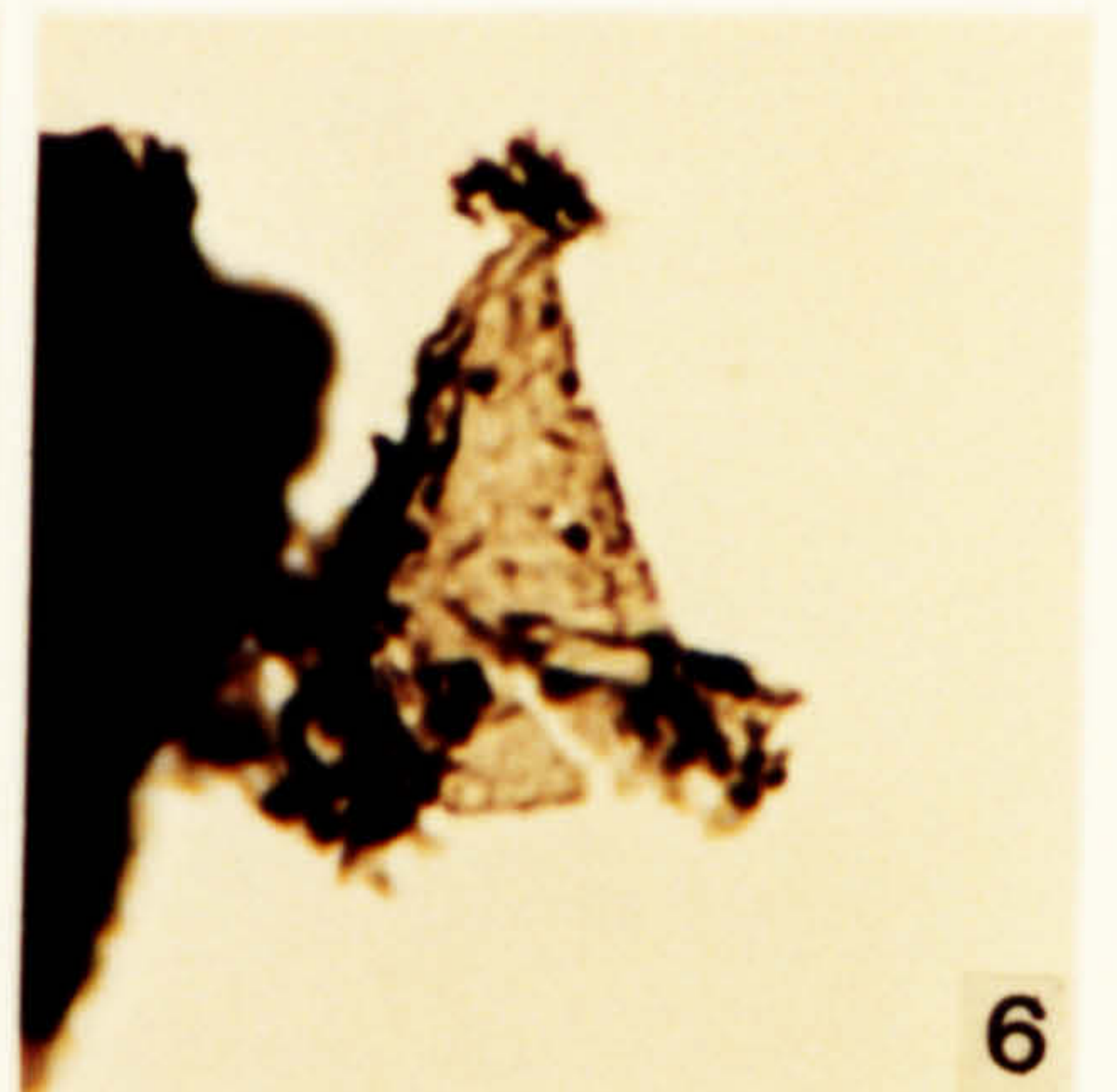
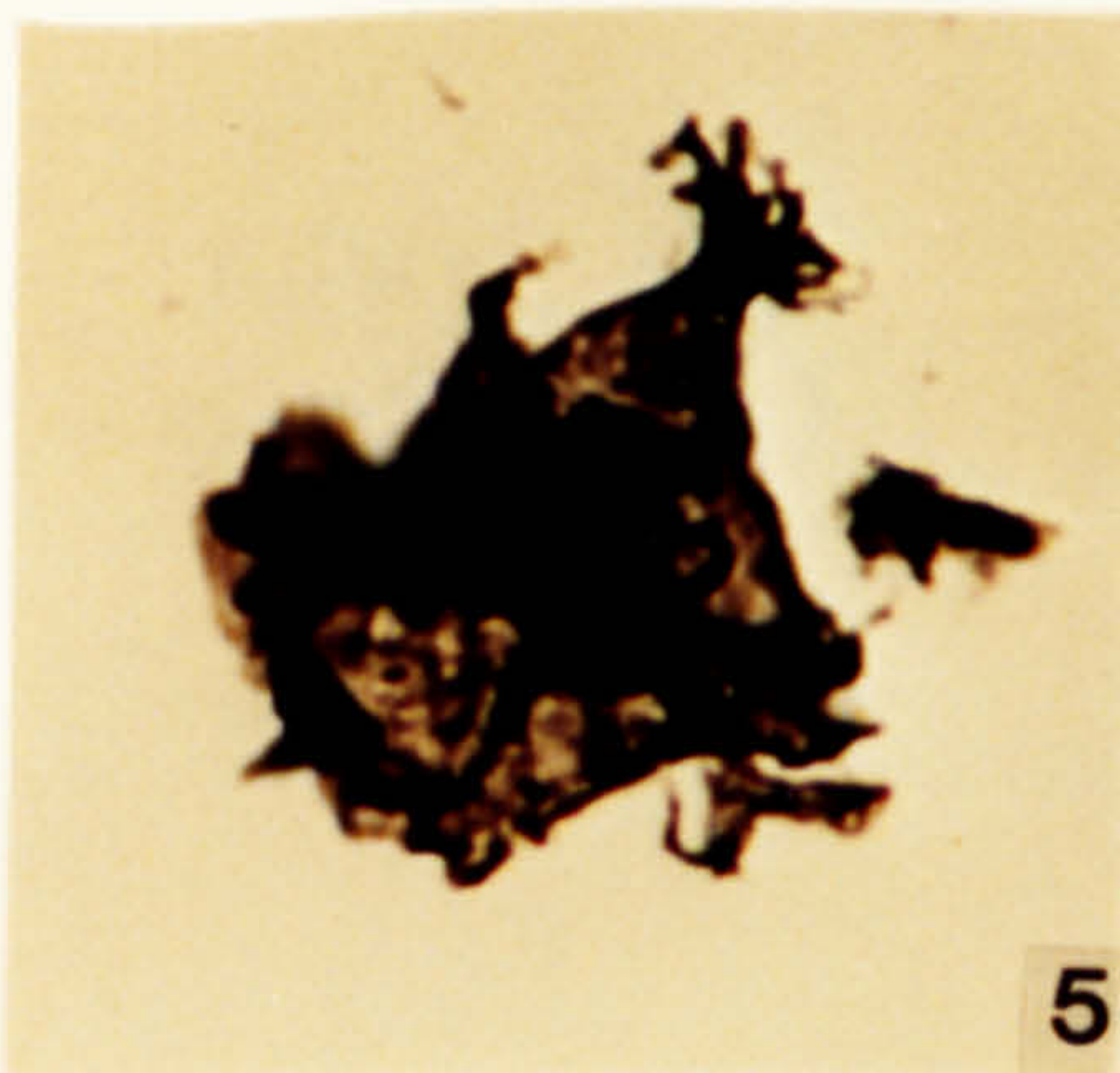
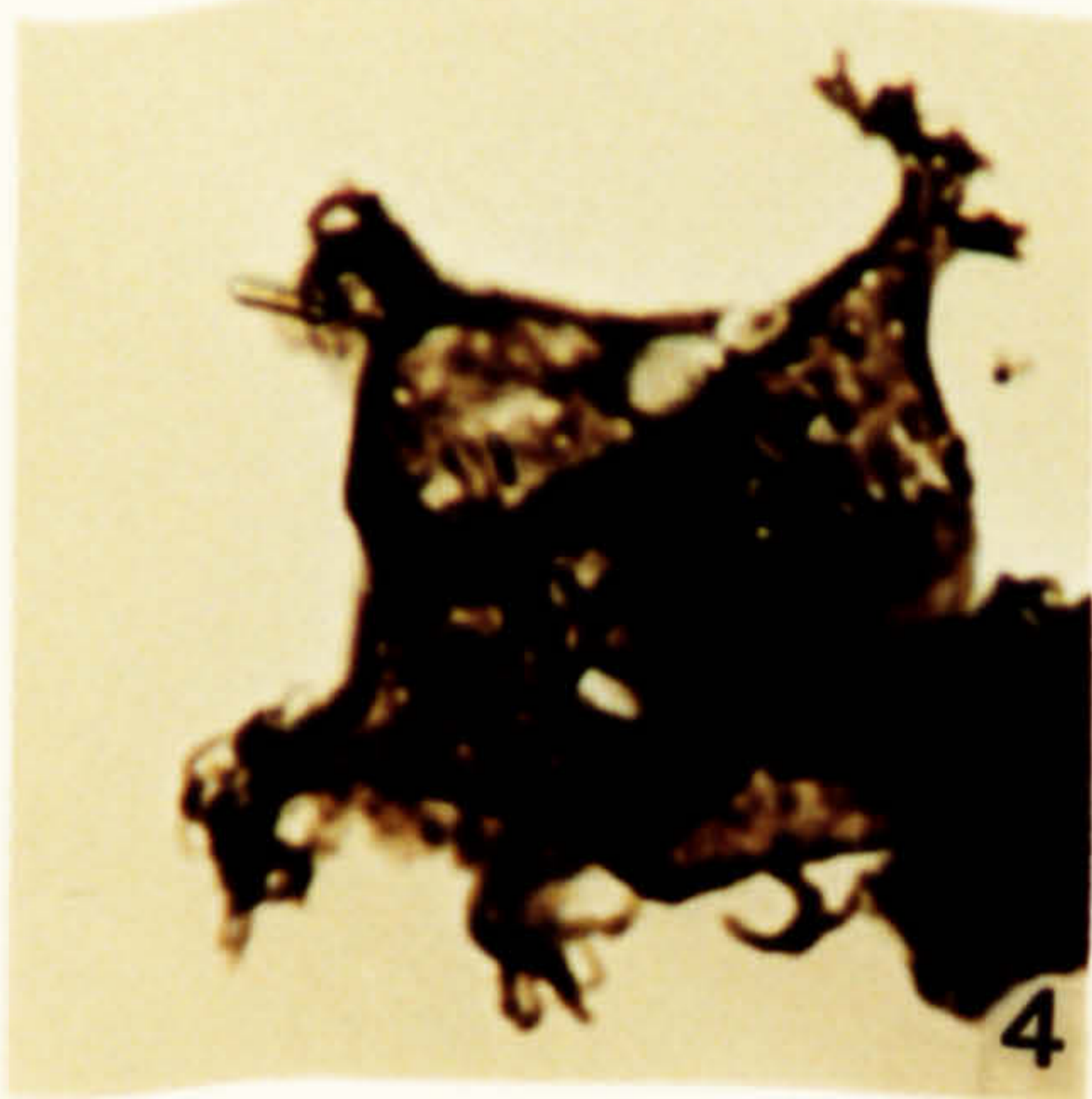
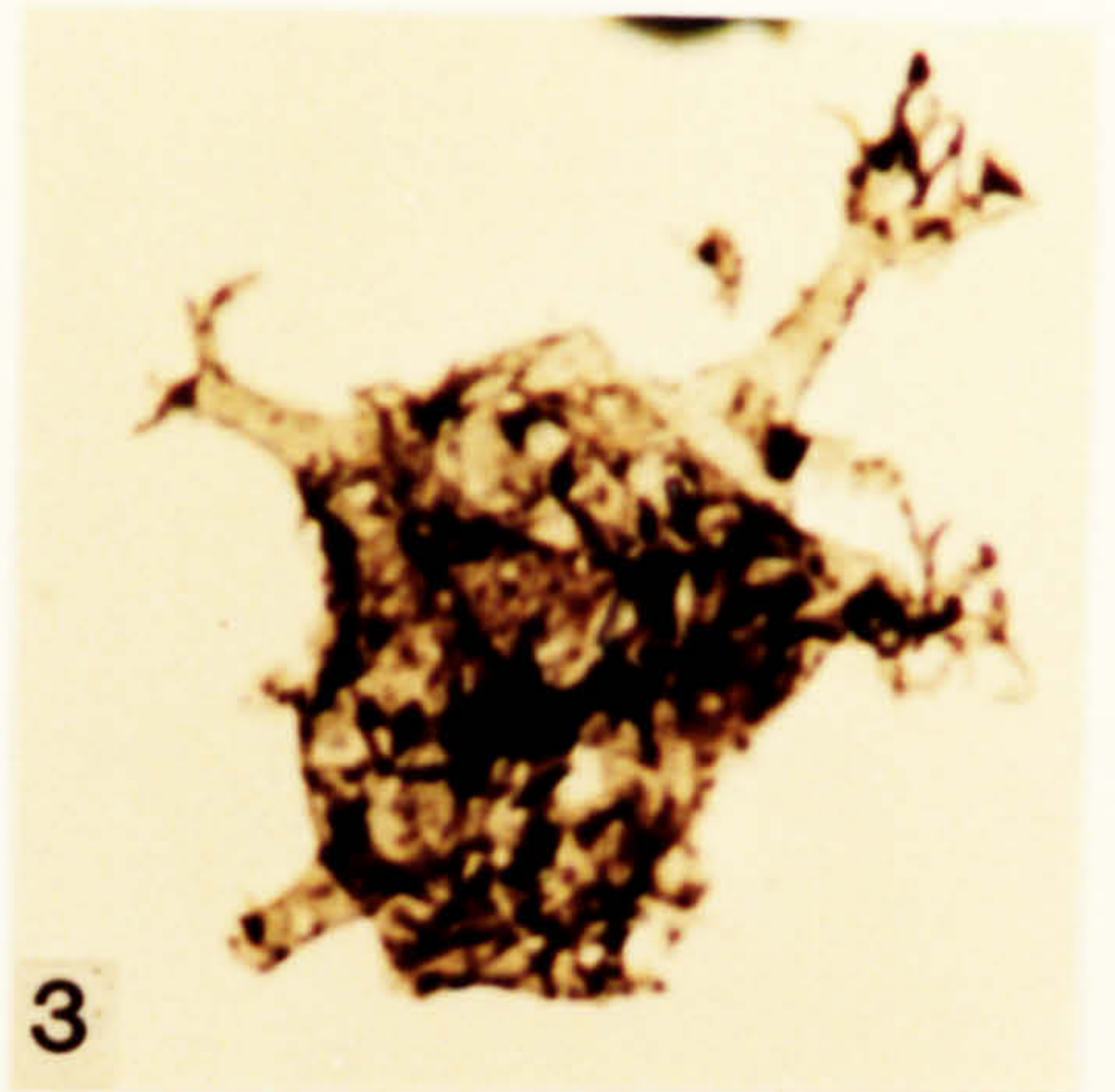
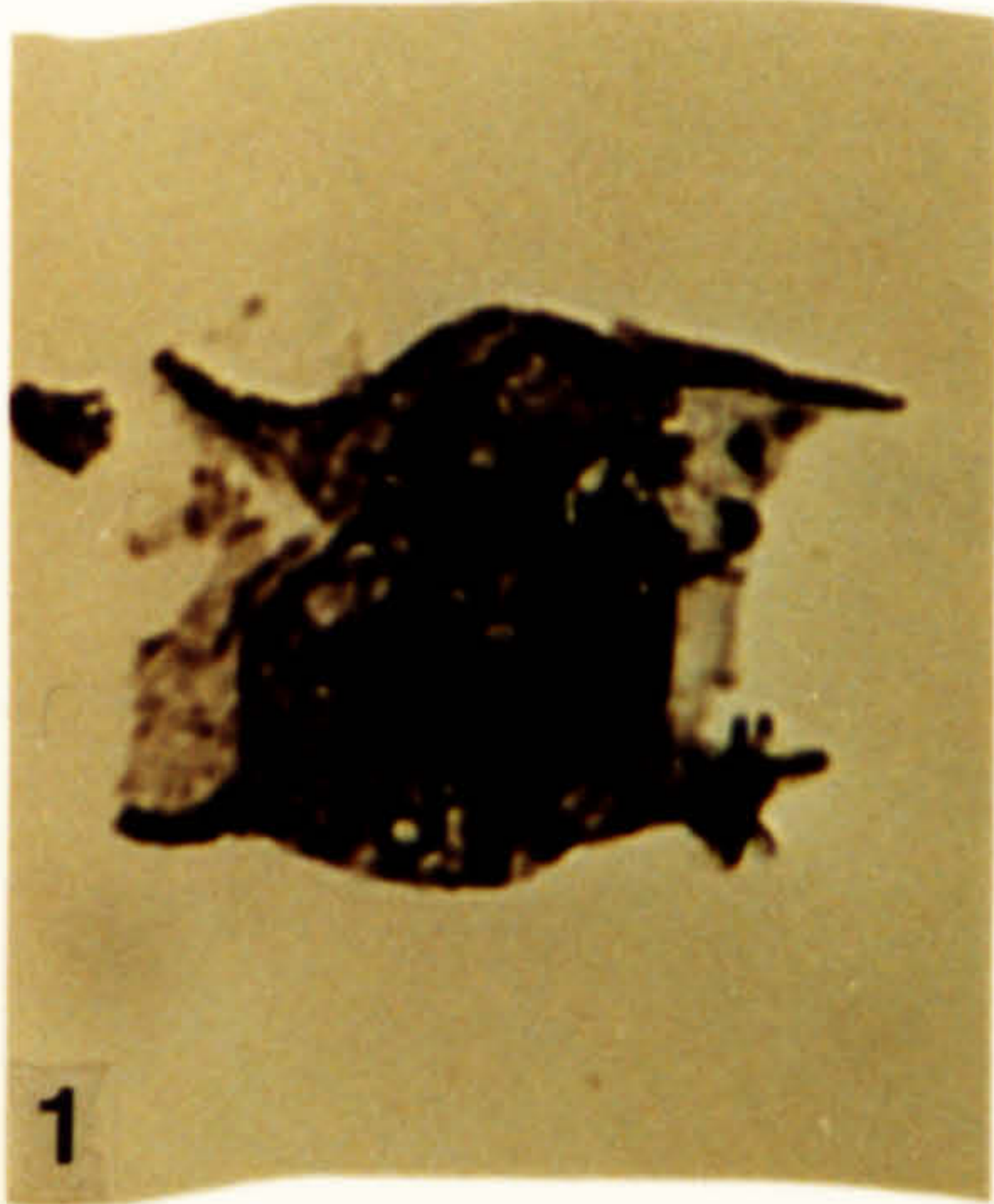
1. *Dateriocradus tenuatum?* (Burmann) comb. nov. DW 309, 1-1, P37\2.
2. *Dicrodiacrodium ancoriforme* var. *minutum* Burmann 1968. DW 310, 1-1, M10\3.
3. *Frankea sartbernardensis* (Martin) Colbath 1986. DW 309, 1-1, E26\1.
4. *Frankea sartbernardensis* (Martin) Colbath 1986. DW 310, 1-1, P15\2.
5. *Frankea sartbernardensis* (Martin) Colbath 1986. DW 310, FS-5, R13\3.
6. *Frankea sartbernardensis* (Martin) Colbath 1986. DW 309, 1-1, T19\4.
7. *Goniosphaeridium polygonale* subsp. *polygonale* (Eisenack) Fensome *et al.* 1990. DW 310, 1-1, K19\2.
8. *Goniosphaeridium polygonale* subsp. *polygonale* (Eisenack) Fensome *et al.* 1990. DW 310, 1-1, Q13\3.
9. *Lophosphaeridium* sp. DW 309, 1-1, W25\3.
10. *Polygonium gracile?* Vavrdova 1966. DW 310, 1-2, M25\1.
11. *Leiofusa* sp. DW 309, 1-1, T19\4.



**Plate 33.**

**Acritarchs from the Tachilla Formation, Llanvirn in age.**

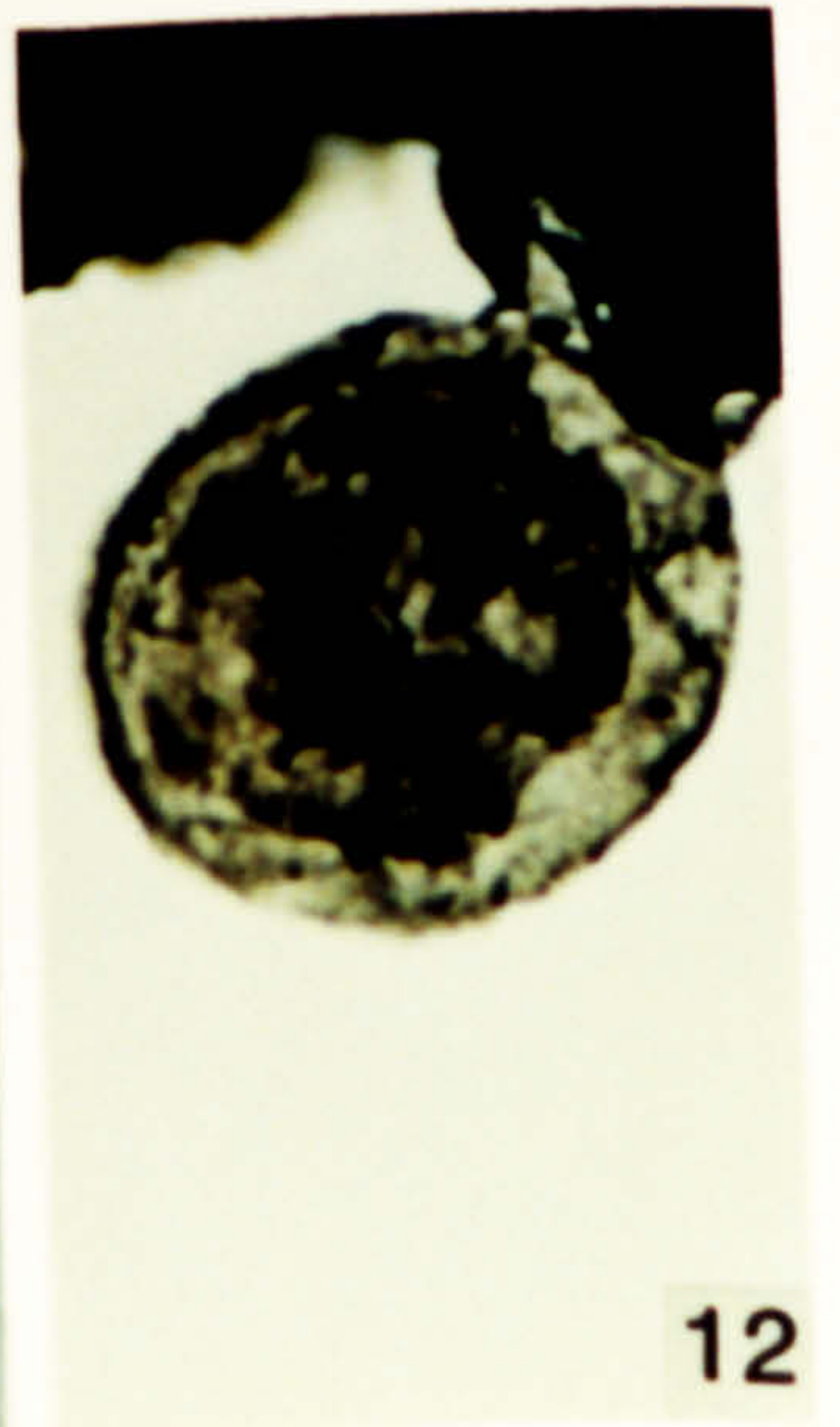
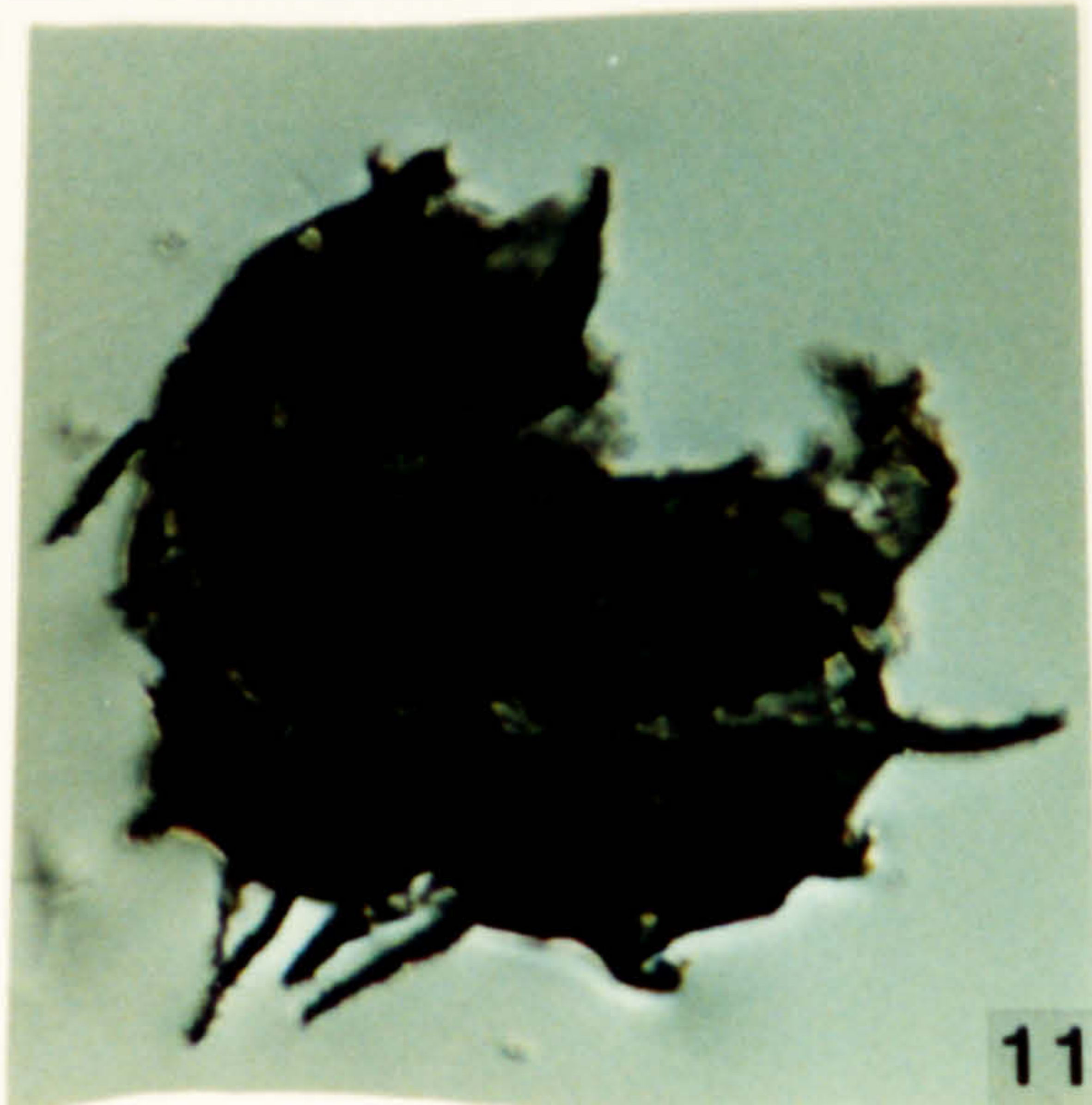
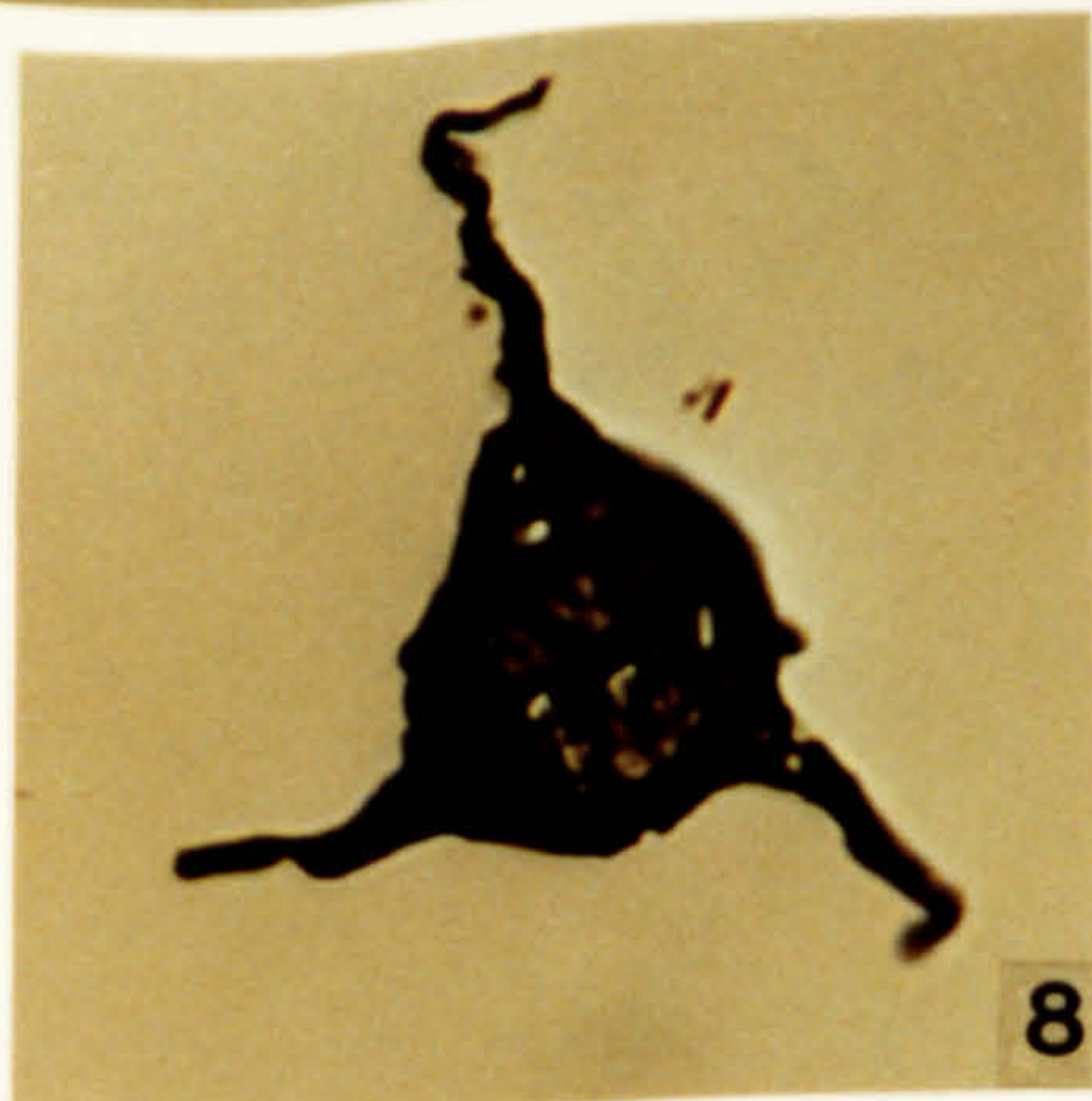
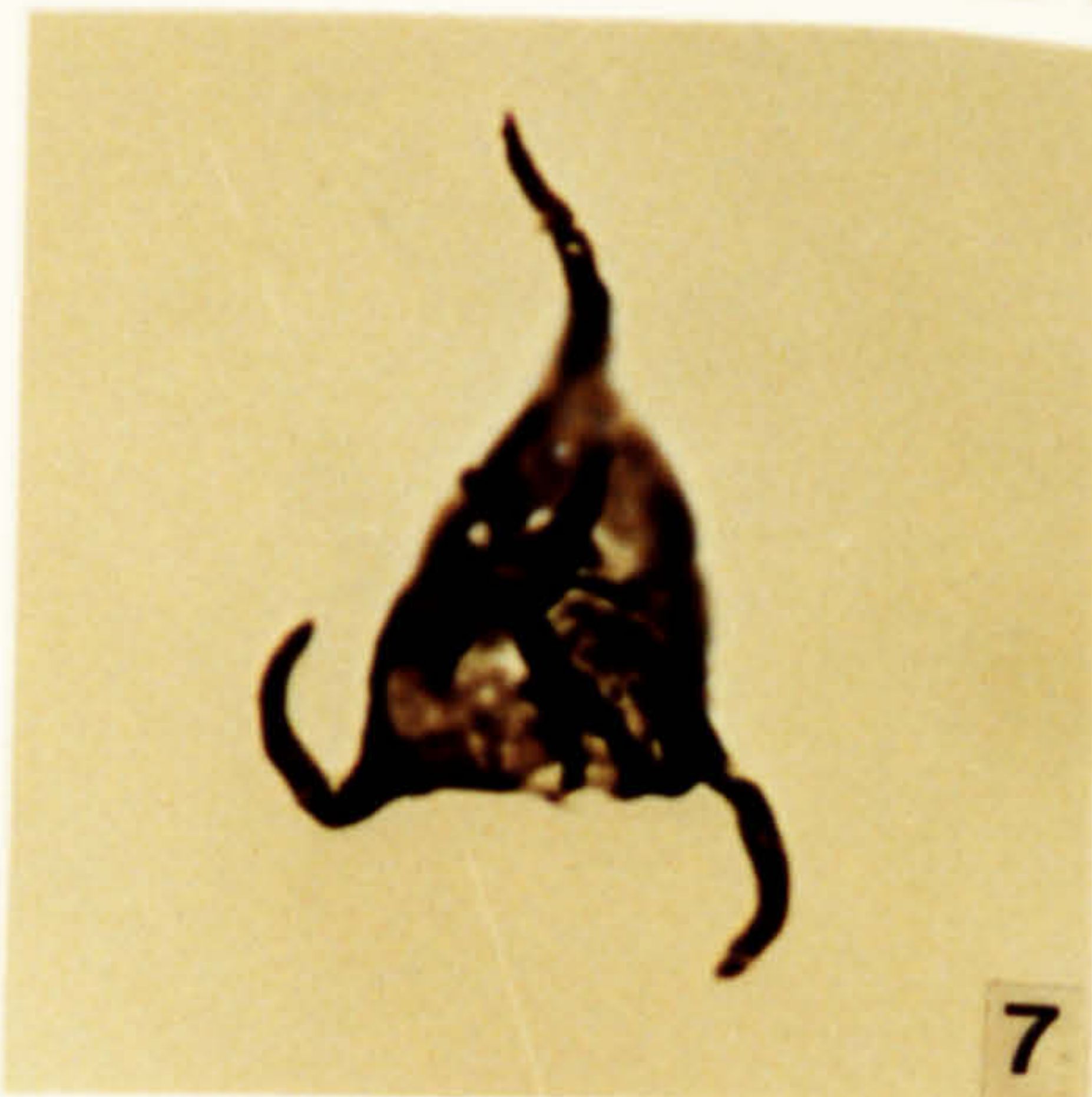
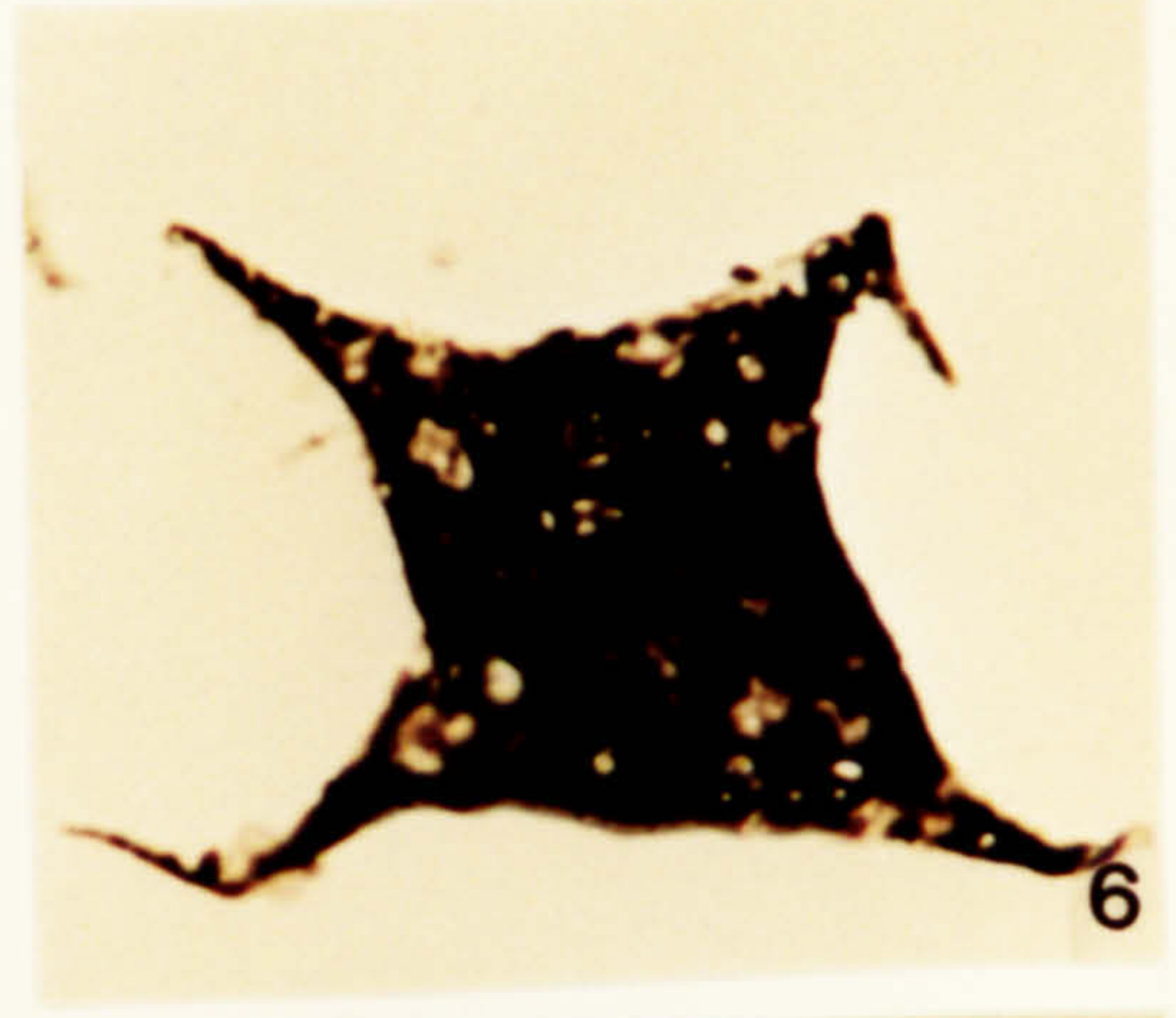
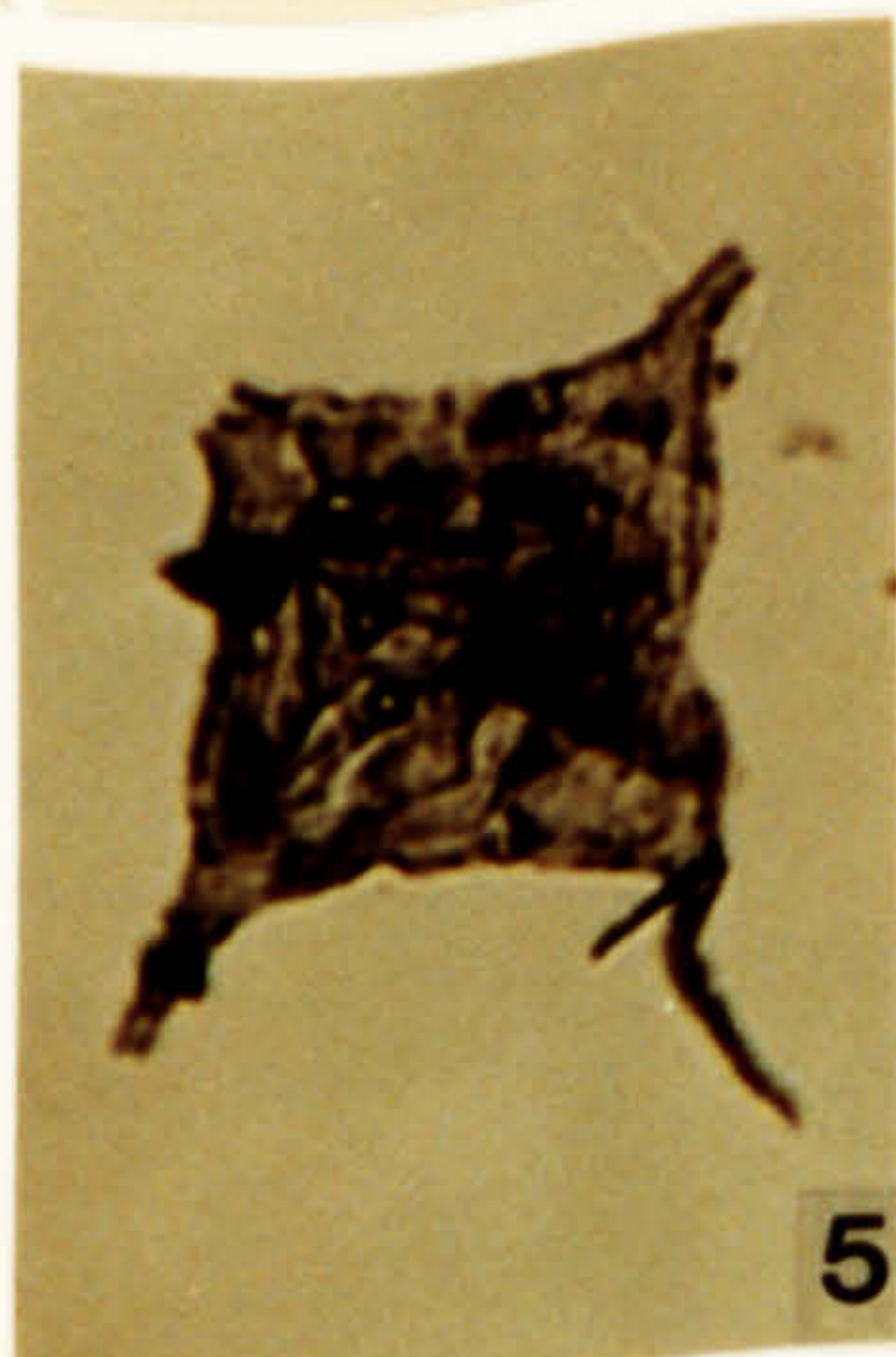
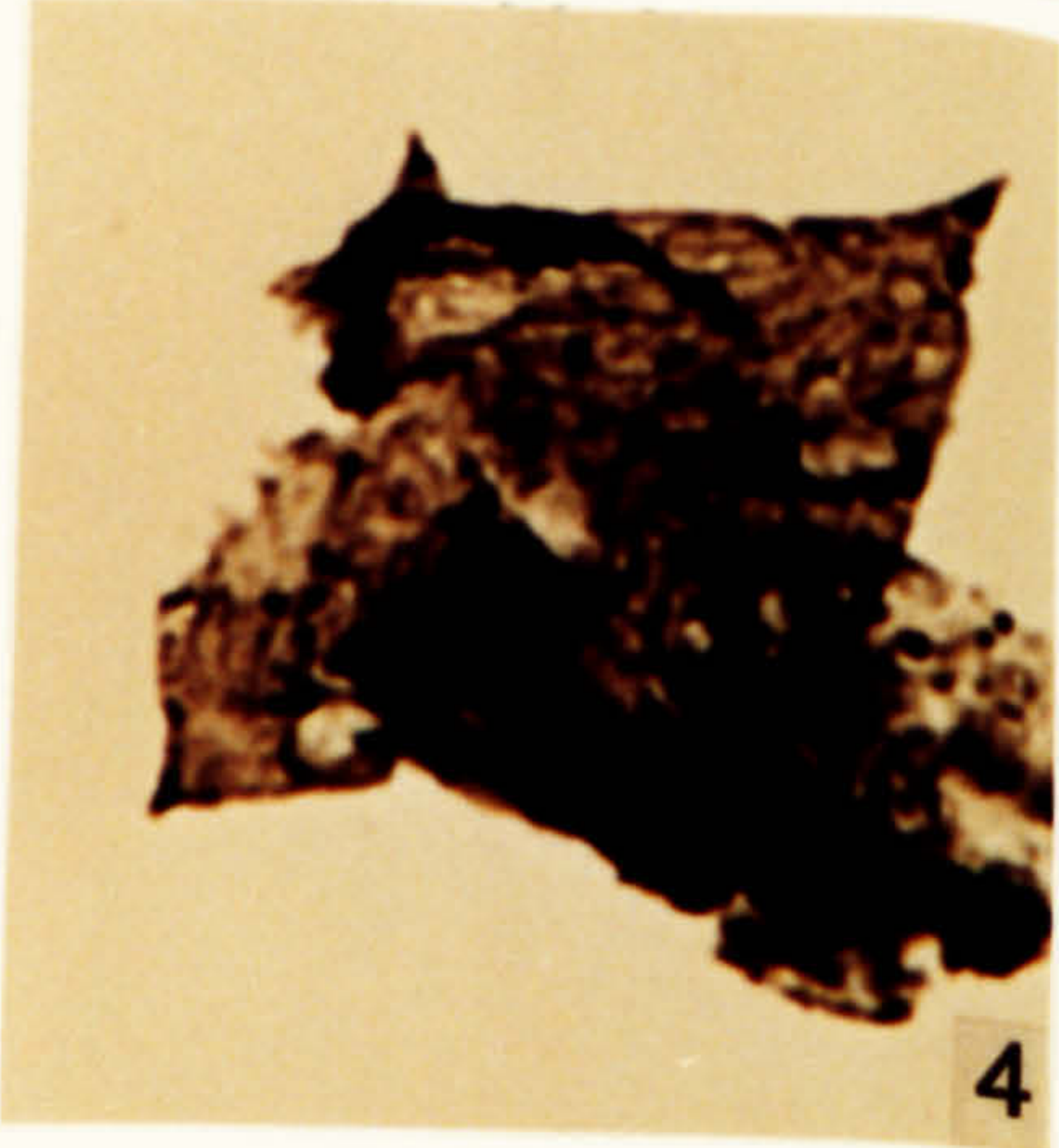
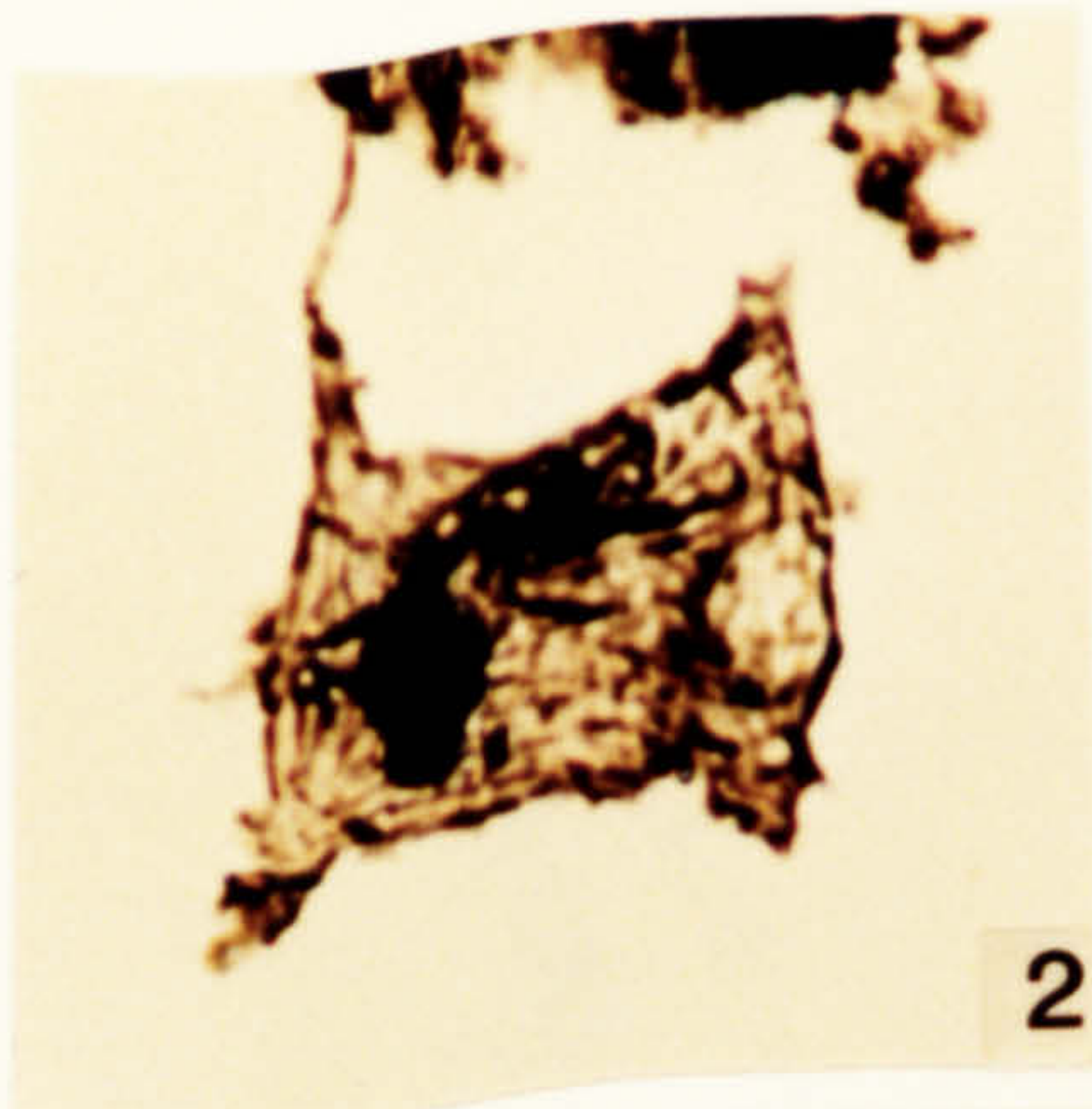
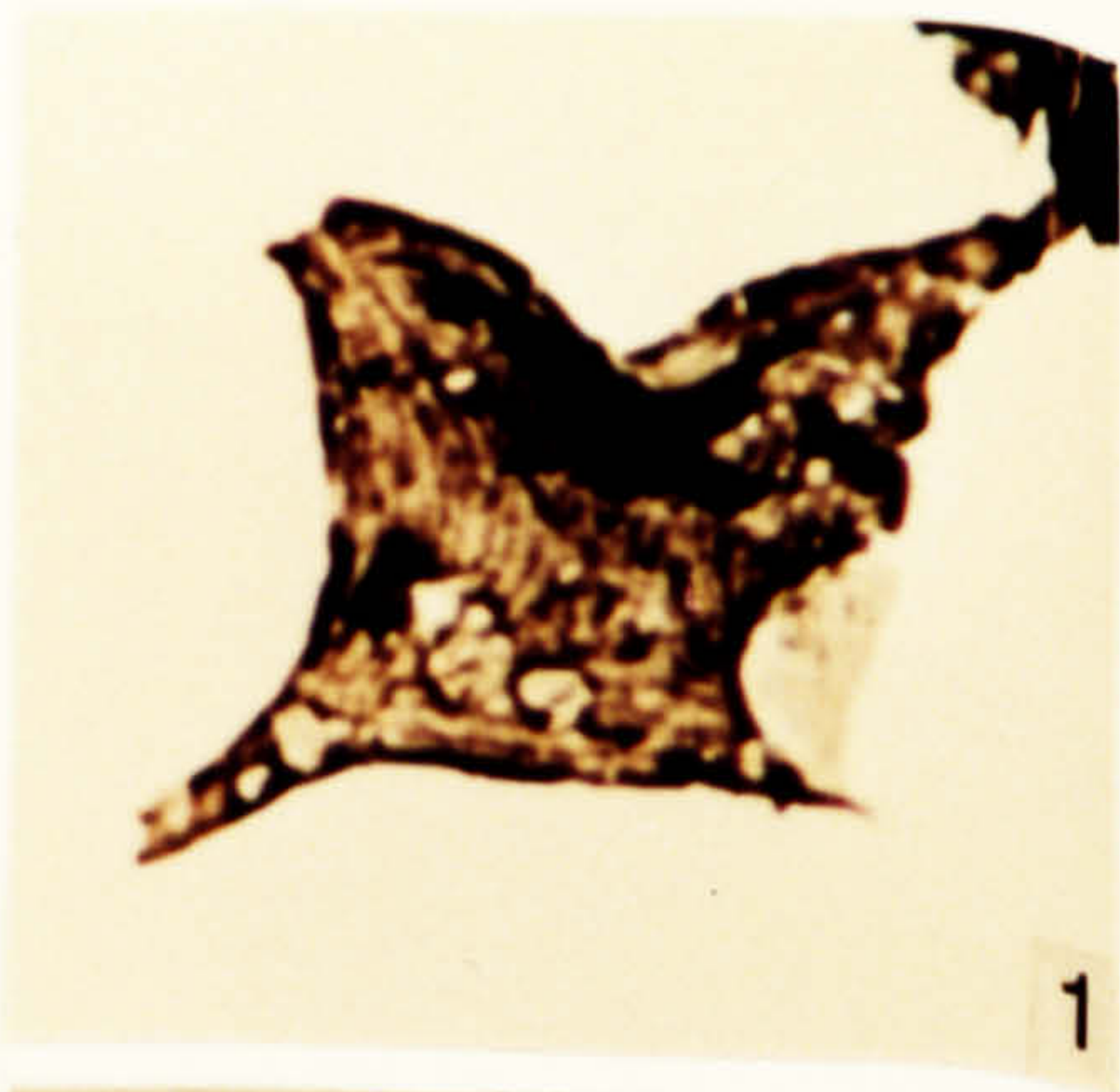
1. *Marrocanium simplex* Cramer *et al.* 1974. DW 310, 1-1, C9\1.
2. *Marrocanium simplex* Cramer *et al.* 1974. DW 309, 1-1, K18\3.
3. *Multiplicisphaeridium crispum* (Vavrdova) comb. nov. DW 310, 1-1, M12\1.
4. *Multiplicisphaeridium firmum* (Burmann) Fensome *et al.* 1990. DW 310, 1-1, H7\1.
5. *Multiplicisphaeridium firmum* (Burmann) Fensome *et al.* 1990. DW 309, 1-1, V29\4.
6. *Multiplicisphaeridium firmum?* (Burmann) Fensome *et al.* 1990. DW 309, 1-1, M34\4.
7. *Multiplicisphaeridium inconstans* Cramer & Diez 1977. DW 309, 1-1, S27\2.
8. *Multiplicisphaeridium inconstans* Cramer & Diez 1977. DW 310, 1-2, E30\4.
9. *Multiplicisphaeridium inconstans* Cramer & Diez 1977. DW 310, 1-1, O22\1.
10. *Pterospermella* sp. DW 310, 1-1, W26\4.
11. *Pterospermella* sp. DW 310, 1-1, P32\2.
12. *Pterospermella* sp. DW 310, 1-1, P37\1.



**Plate 34.**

**Acritarchs from the Tachilla Formation, Llanvirn in age.**

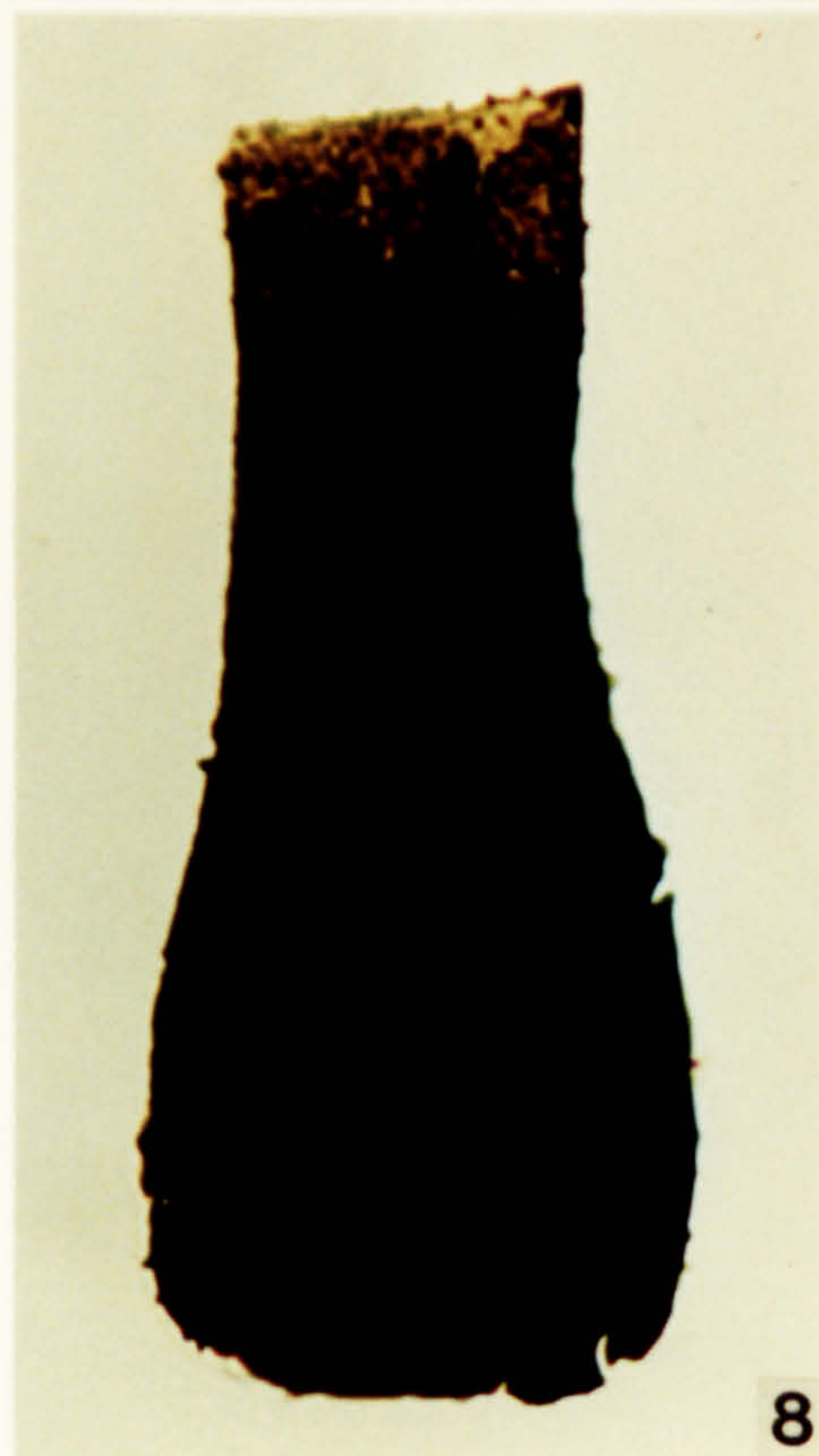
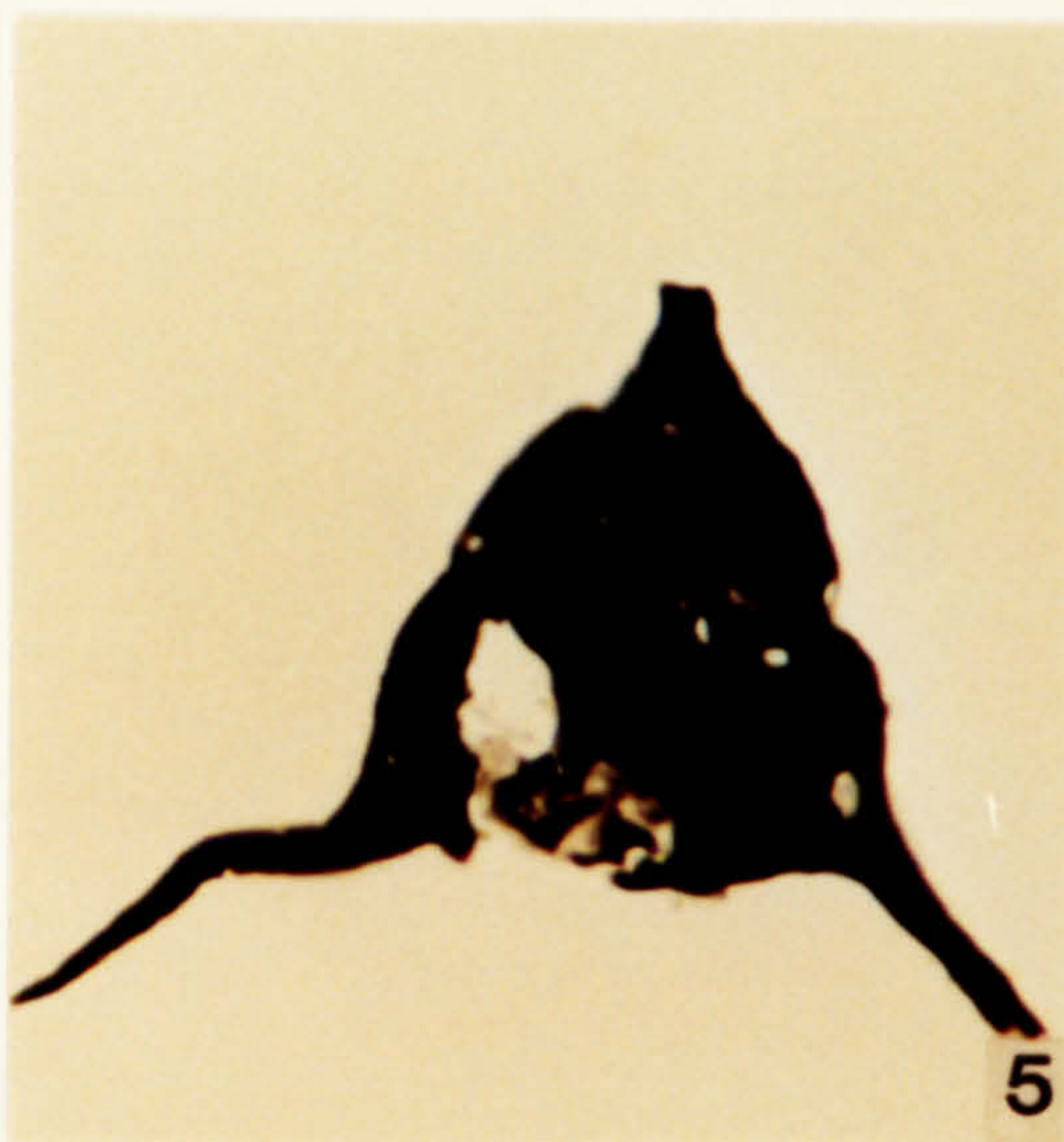
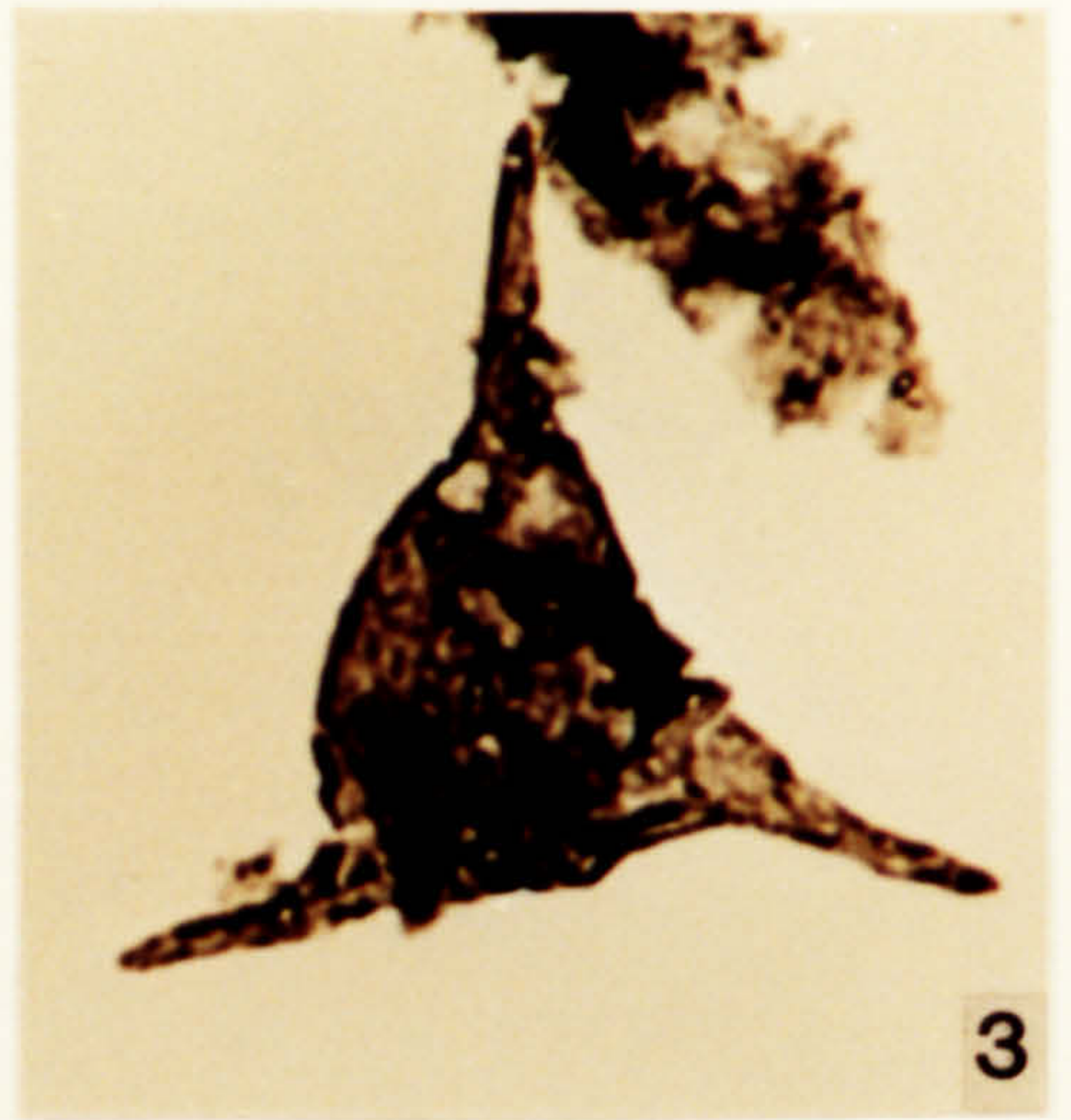
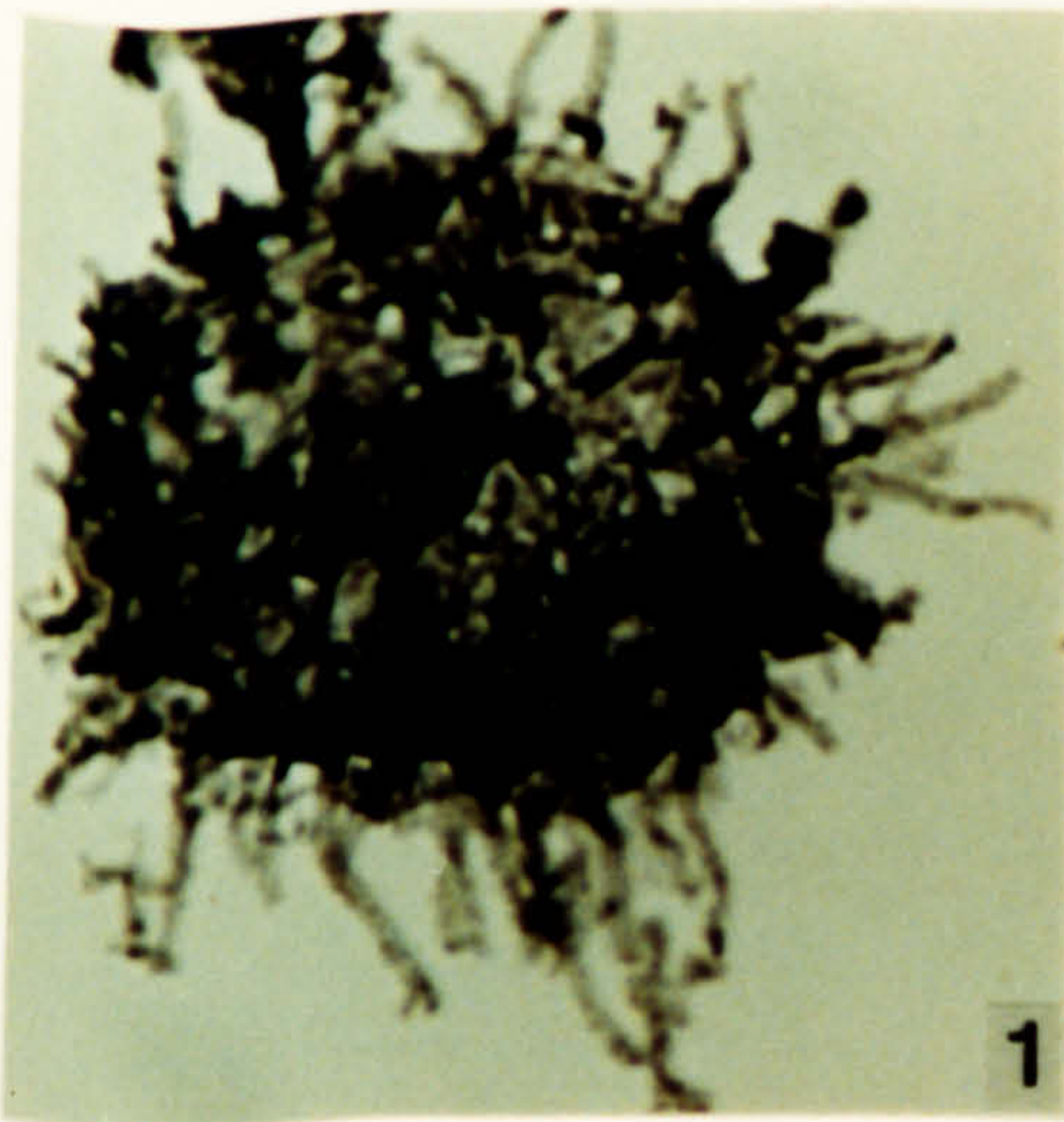
1. *Striatotheca principalis* Burmann 1970. DW 310, 1-2, N5\1.
2. *Striatotheca principalis* var. *parva* Burmann 1970. DW 309, 1-1, M23\4.
3. *Striatotheca principalis* var. *parva* Burmann 1970. DW 309, 1-1, R25\2.
4. *Striatotheca quieta* (Martin) Rauscher 1973. DW 310, 1-1, N36\3.
5. *Striatotheca* sp. DW 309, 1-1, V13\1.
6. *Veryhachium lairdii* Deflandre 1946 ex Loeblich 1970. DW 309, 1-1, H38\1.
7. *Veryhachium*.sp. DW 309, 1-1, Q36\2.
8. *Veryhachium* sp. DW 309, 1-1, O25\4.
9. *Tasmanites martinssonii* Eisenack 1958. DW 309, 1-1, V27\1.
10. *Uncinisphaera?* sp. 1. DW 310, 1-1, W18\4.
11. *Uncinisphaera?* sp. DW 309, 1-1, U11\1.
12. *Tasmanites martinssonii* Eisenack 1958. DW 309, 1-1, W12\3.



**Plate 35.**

**Acritarchs and chitinozoa from the Tachilla Formation, Llanvirn in age.**

- 1. Acritarch Form N. DW 310, 1-1, R36\-.**
- 2. *Veryhachium* sp. DW 309, 1-1, P16\s1.**
- 4. *Veryhachium reductum* (Deunff) Downie & Sarjeant 1965. DW 310, 1-1, G20\4.**
- 5. *Veryhachium reductum* (Deunff) Downie & Sarjeant 1965. DW 309, 1-1, C22\4.**
- 6. *Belonechitina micracantha* (Eisenack 1931). DW 310, FS-5, S37\2.**
- 7. *Belonechitina micracantha* subsp. *microcantha* (Eisenack 1959). DW 310, FS-5, F26\3.**
- 8. *Belonechitina micracantha* subsp. *microcantha* (Eisenack 1959). DW 310, FS-5, F26\3.**
- 9. *Belonechitina micracantha* (Eisenack 1931). DW 310, FS-5, N20\4.**





**Plate 36.**

Chitinozoa from the Tachilla Formation, Llanvirn in age.

1. *Belonechitina micracantha* subsp. *pellifera* (Eisenack 1959). DW 310, FS-5, J23\2.
2. *Belonechitina micracantha* subsp. *robusta* (Eisenack 1959). DW 309, 1-1, J26\1.
3. *Belonechitina micracantha* subsp. *robusta* (Eisenack 1959). DW 310, 1-1, G31\-.
4. *Belonechitina micracantha* subsp. *pellifera* (Eisenack 1959). DW 310, FS-5, P17\1.
5. *Belonechitina micracantha* subsp. *pellifera* (Eisenack 1959). DW 310, FS-5, O24\4.
6. *Cyathochitina campanulaeformis* (Eisenack) Eisenack 1955. DW 310, FS-5, J12\2.



**Plate 37.**

**Chitinozoa from the Tachilla Formation, Llanvirn in age.**

1. ***Cyathochitina calix* (Eisenack) Eisenack 1958. DW 310, FS-5, R26\1, X230.**
2. ***Conochitina* cf. *chydaea* Jenkins 1967. DW 310, FS-5, H31\4.**
3. ***Conochitina* cf. *chydaea* Jenkins 1967. DW 310, FS-5, S22\2.**
4. ***Conochitina chydaea* Jenkins 1967. DW 310, FS-5, Q7\1.**
5. ***Conochitina chydaea* Jenkins 1967. DW 310, FS-5, P19\3.**
6. ***Conochitina chydaea* Jenkins 1967. DW 310, FS-5, Q15\4.**
7. ***Conochitina chydaea* Jenkins 1967. DW 310, FS-5, J16\1.**



**Plate 38.**

**Chitinozoa from the Tachilla Formation, Llanvirn in age.**

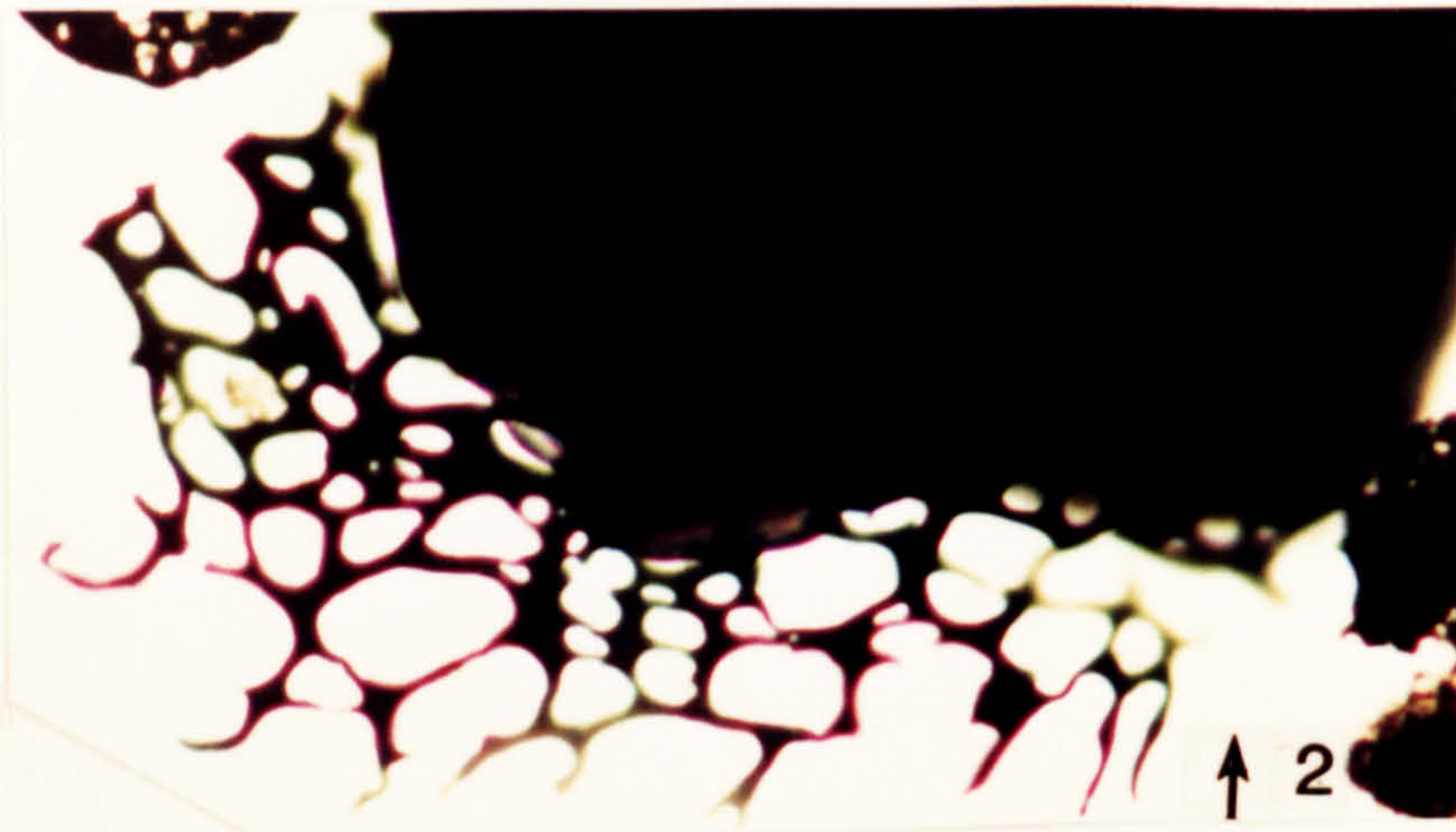
1. *Desmochitina piriformis* Laufeld 1967. DW 309, 1-1, J29\2.
2. *Desmochitina minor* forma *cocca* Eisenack 1931. DW 310, 1-1, Q24\3.
3. *Desmochitina minor* Eisenack 1931. DW 310, FS-5, R28\4.
4. *Desmochitina minor* Eisenack 1931. DW 310, FS-5, U7\2.
5. *Desmochitina minor* forma *cocca* Eisenack 1931. DW 310, 1-1, Q7\3.
6. *Jenkinochitina vulgaris* (Jenkins) Paris 1981. DW 310, FS-5, N32\4.
7. *Lagenochitina capax* Jenkins 1967. DW 310, 1-1, E34\2.
8. *Lagenochitina baltica* Eisenack 1931. DW 309, 1-1, R10\2, X230.
9. *Lagenochitina* sp. DW 310, FS-5, T38\1.



**Plate 39.**

**Chitinozoa from the Tachilla Formation, Llanvirn in age.**

- 1. *Sagenachitina oblonga* (Benoit & Taugourdeau) Jenkins 1970. DW 310, FS-1, R17\3.**
- 2. *Sagenachitina* sp. DW 309, 1-1, G27\2. Aboral fragment.**
- 3. *Velatachitina* sp. DW 309, FS-3, P12\1.**
- 4. *Pogonochitina? secunda* (Schallreuter) Paris 1981. DW 310, FS-5, S12\4, X230.**
- 5. *Velatachitina veligera* Poumot 1968. DW 310, FS-5, S12\4.**
- 6. *Velatachitina veligera* Poumot 1968. DW 310, FS-5, T19\1, X230.**
- 7. *Velatachitina veligera* Poumot 1968. DW 310, FS-5, T19\1, X920.**

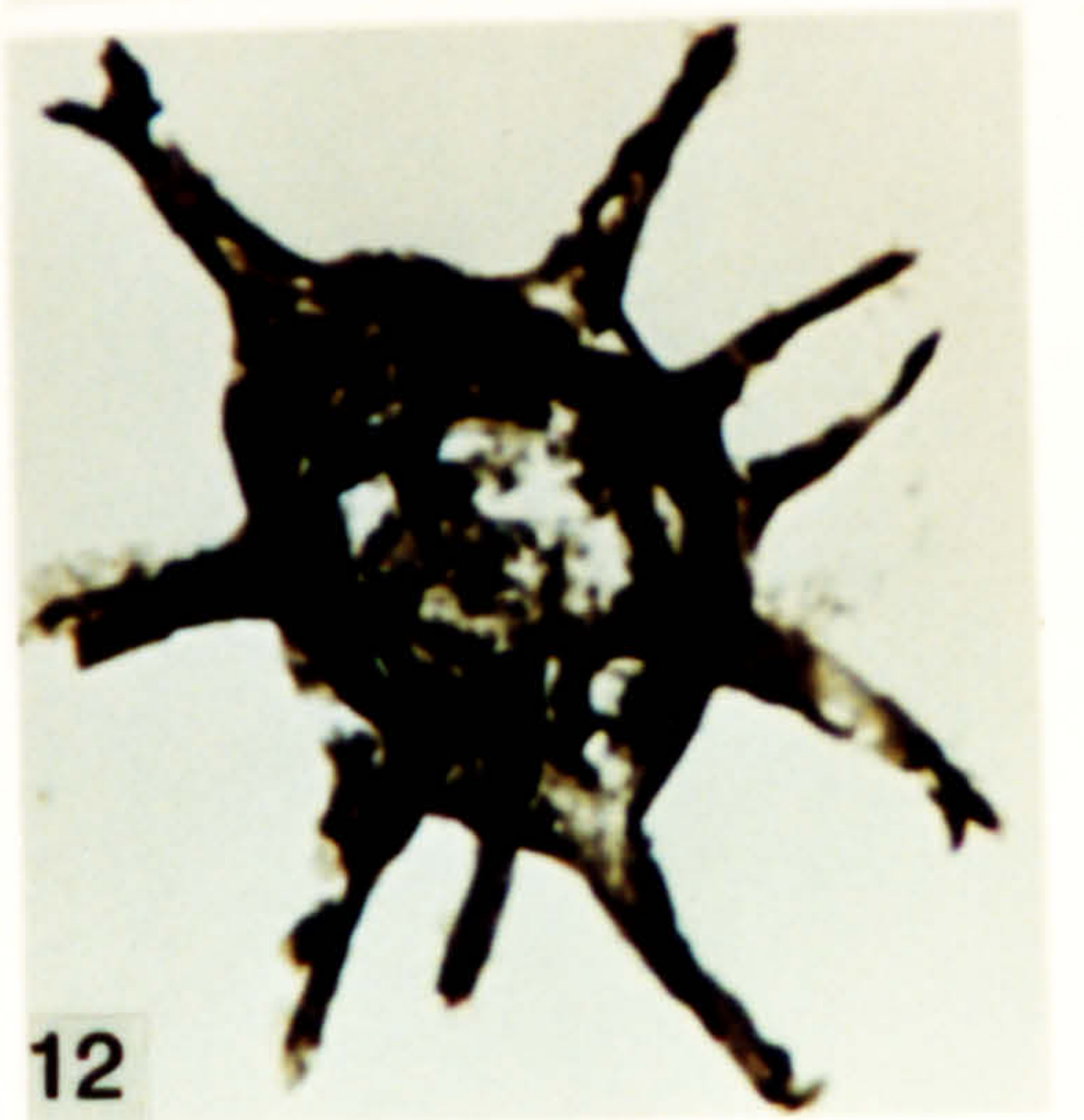
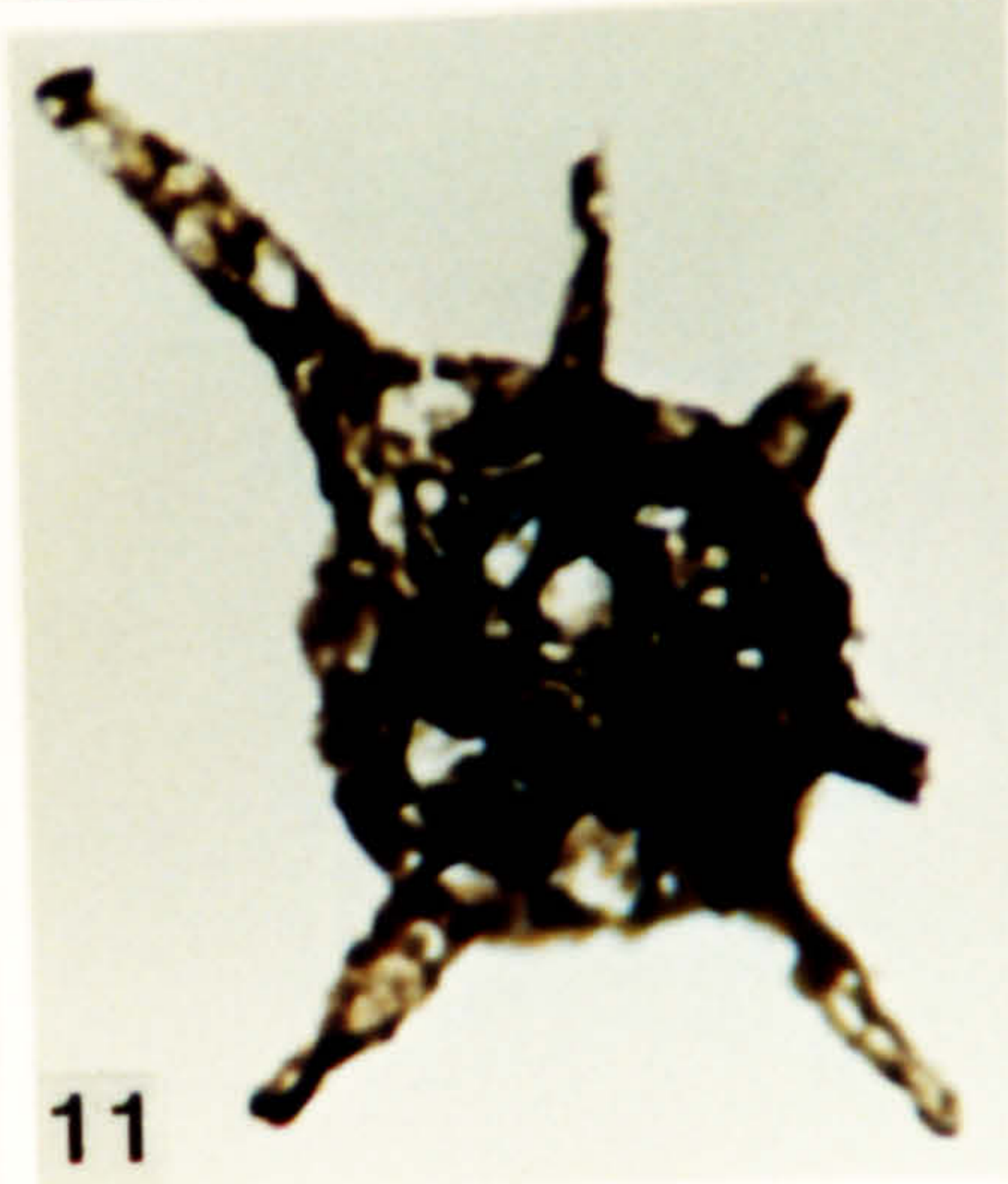
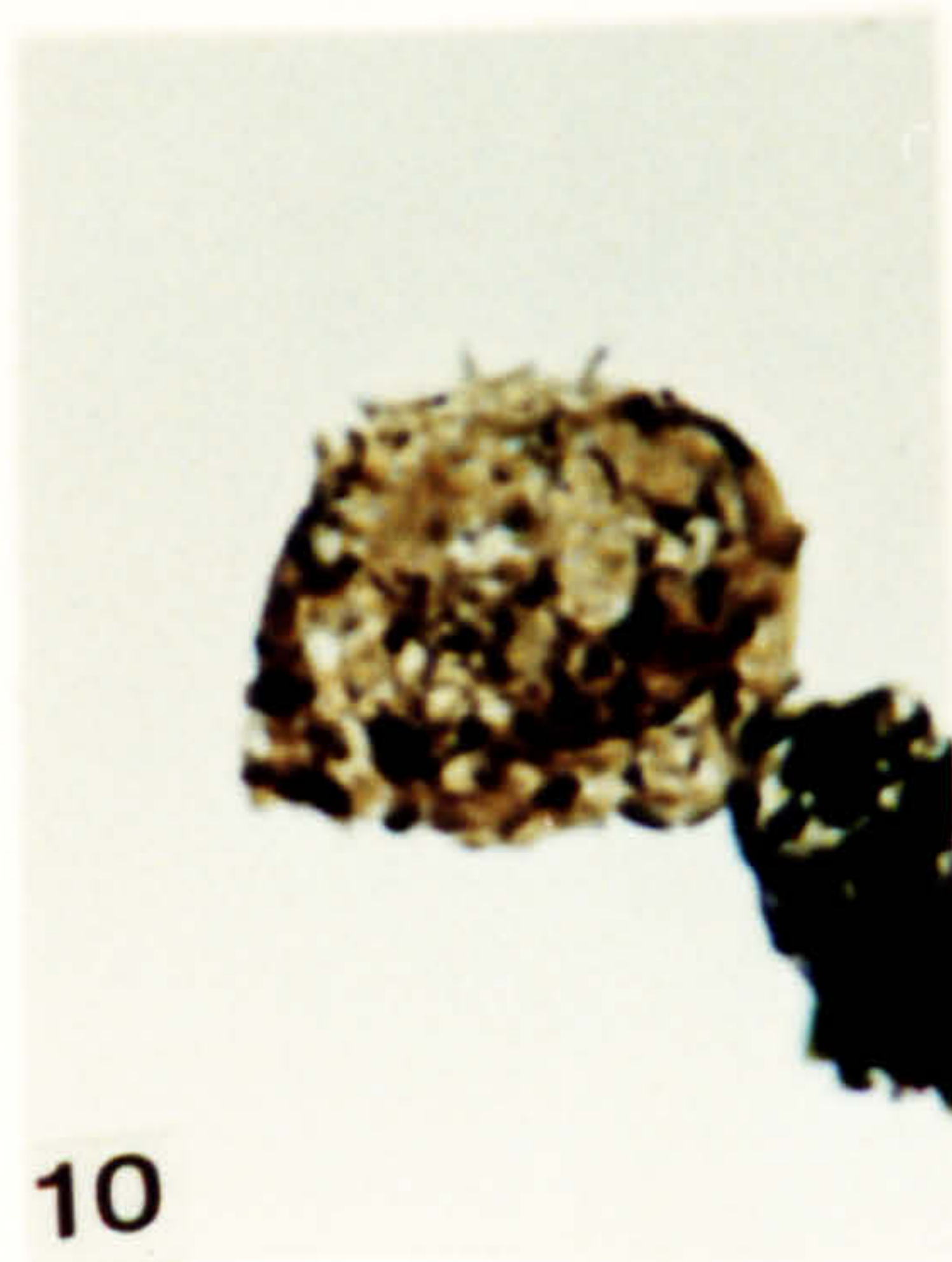
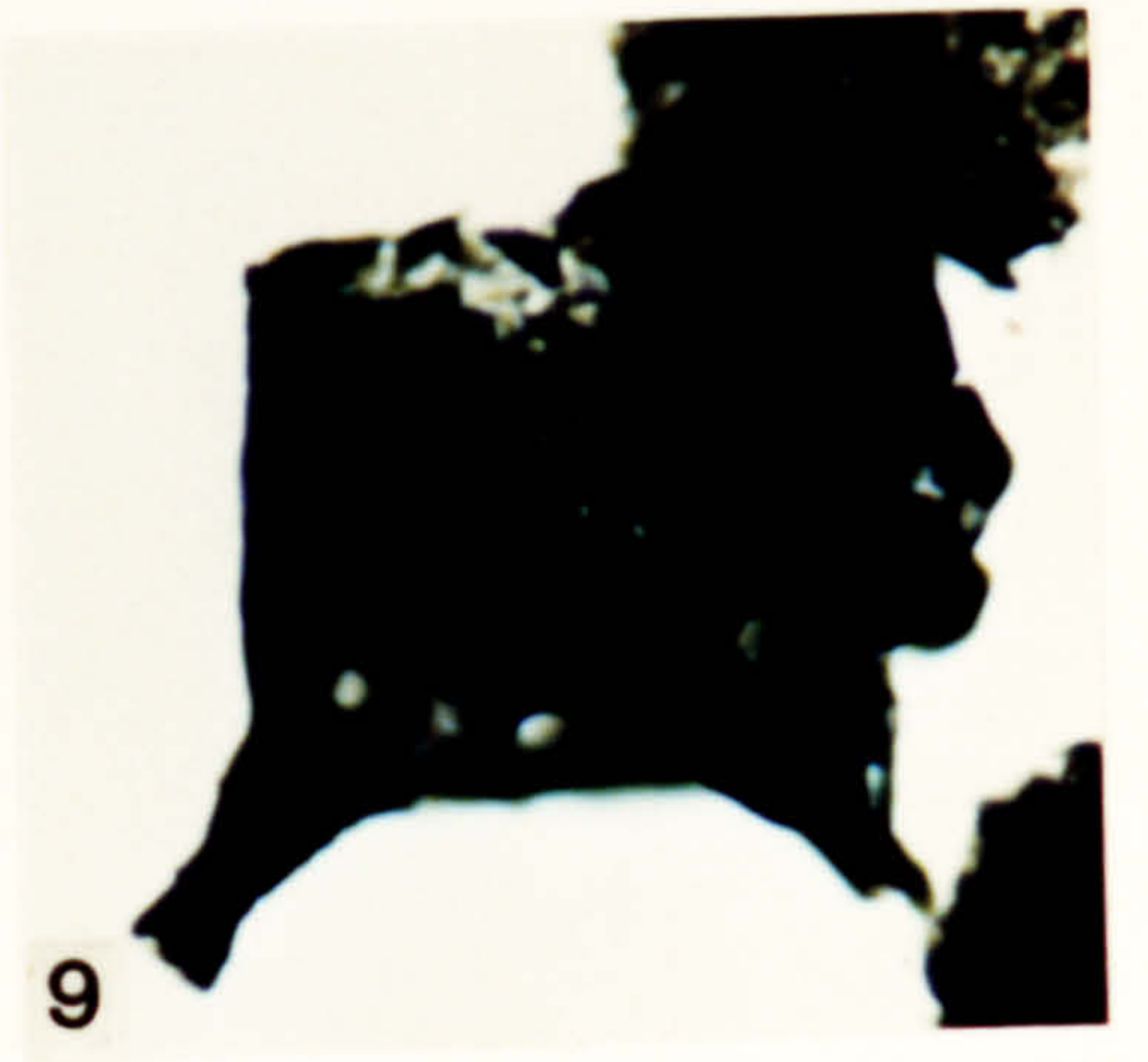
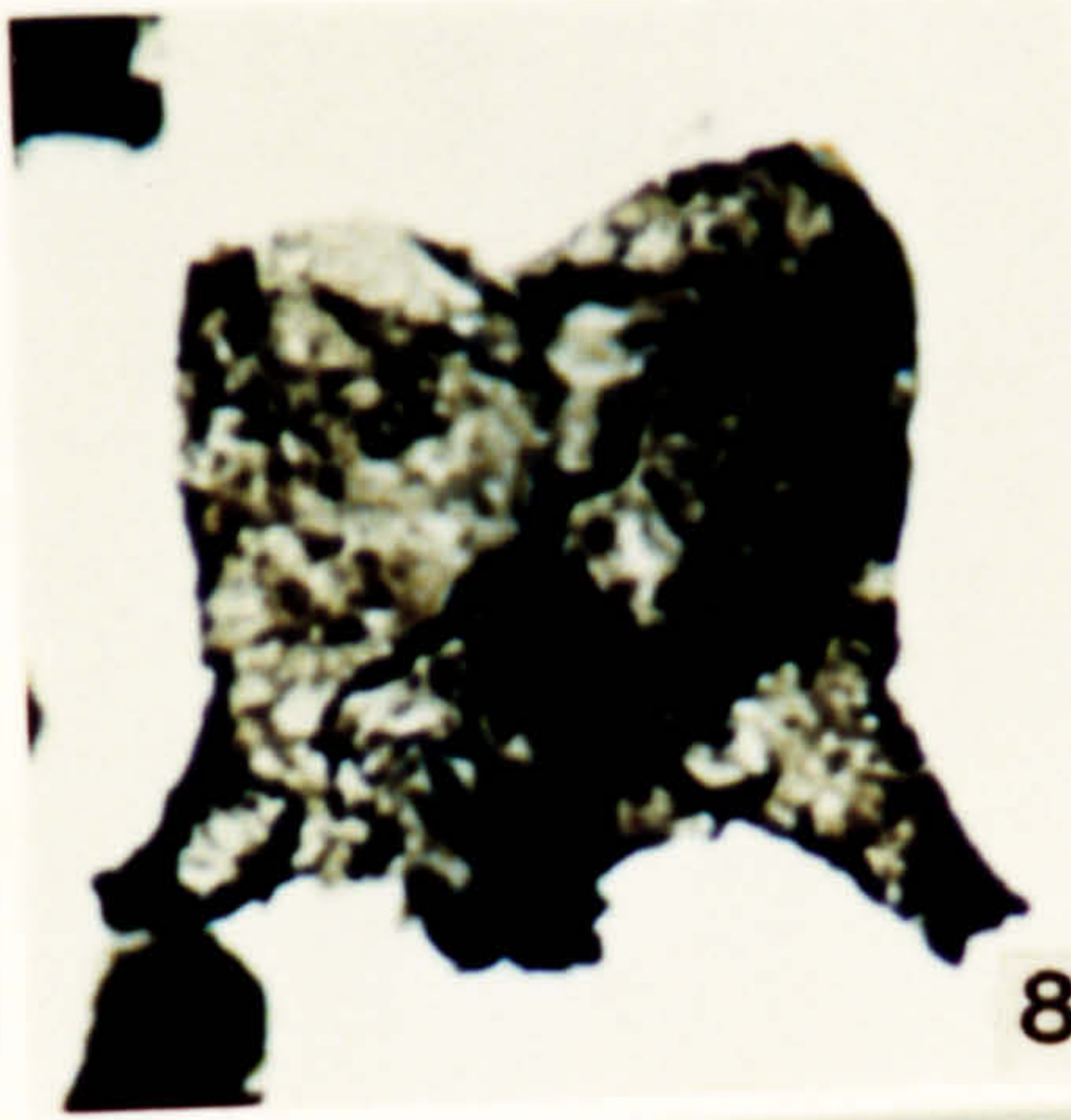
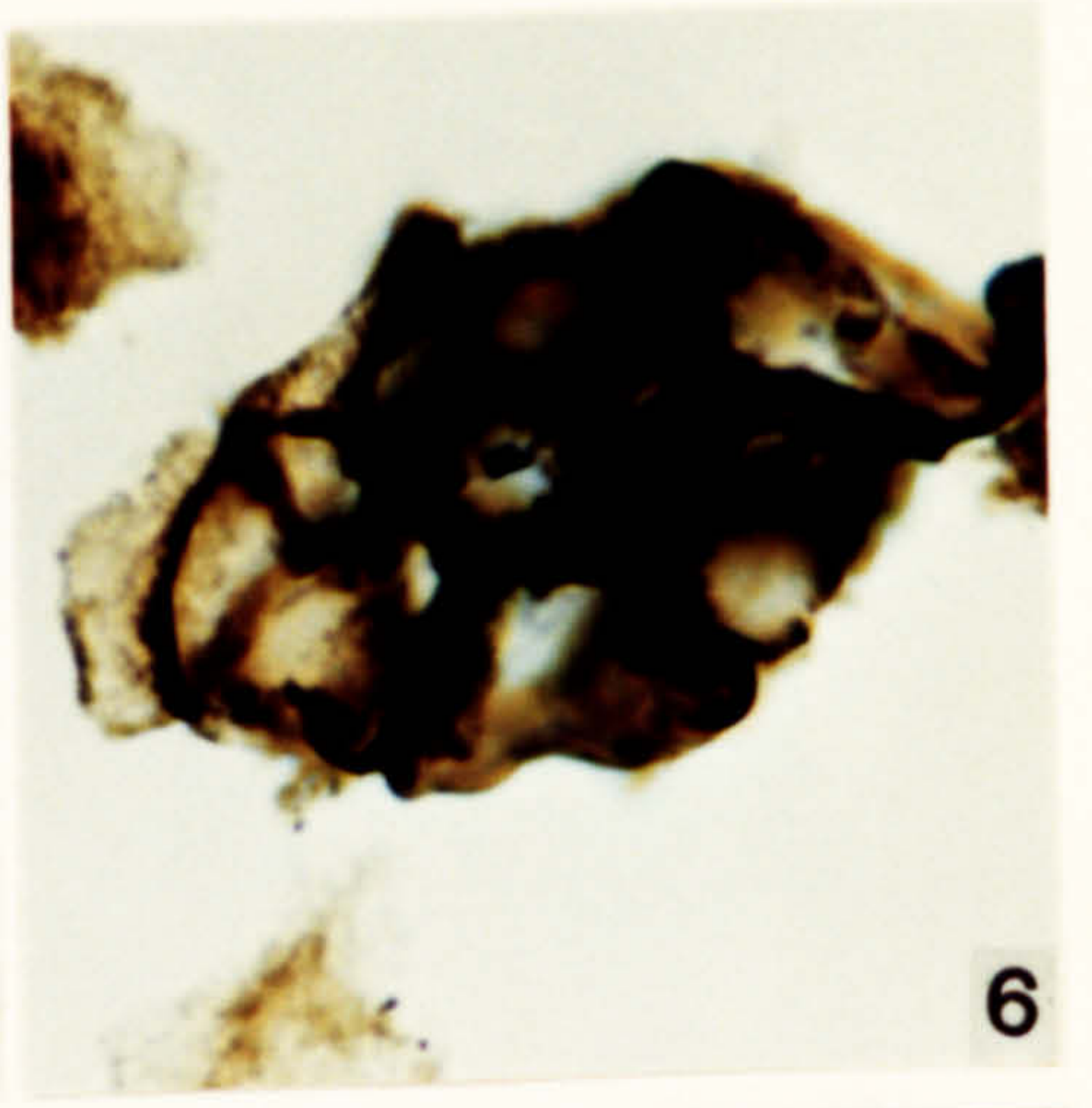
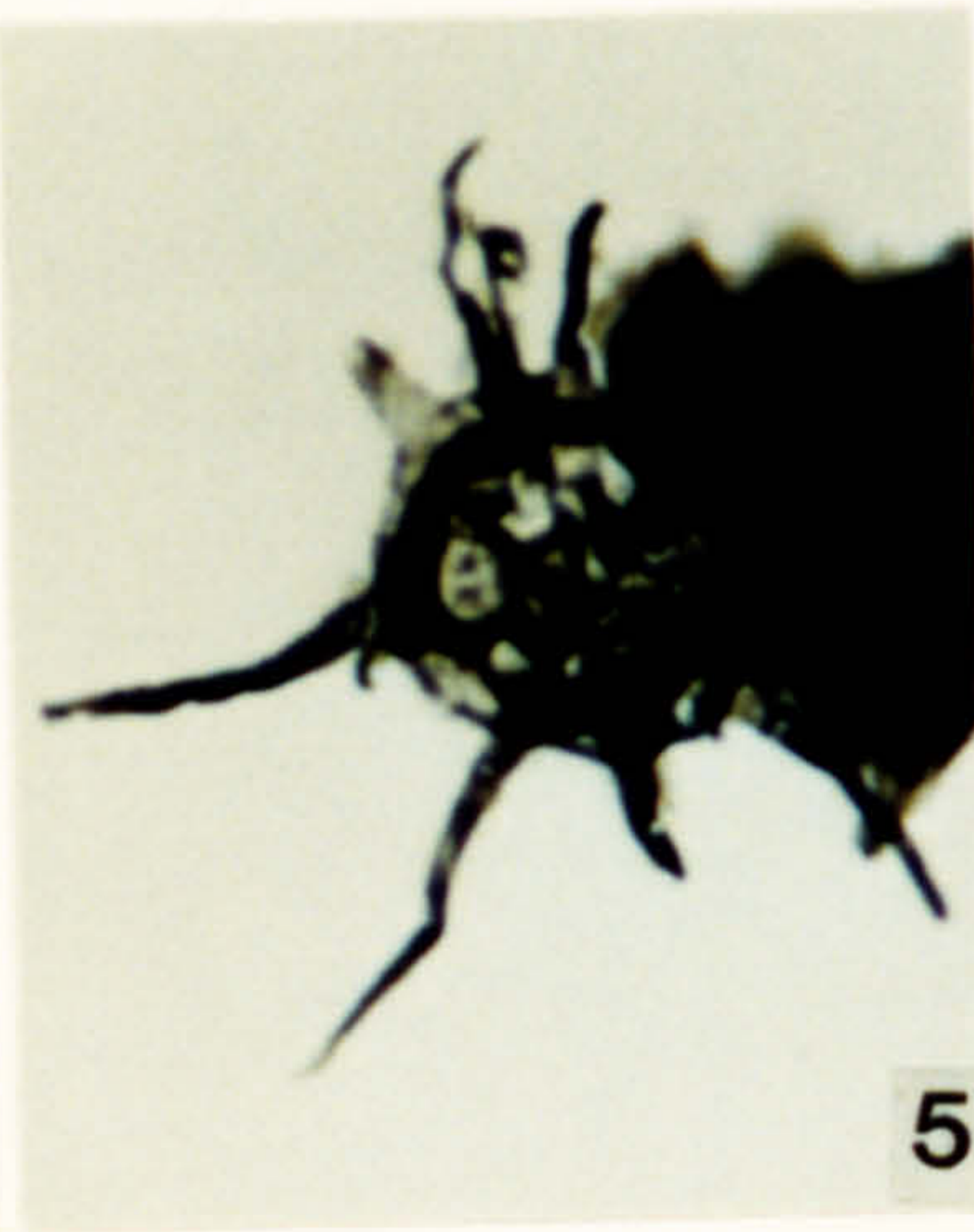
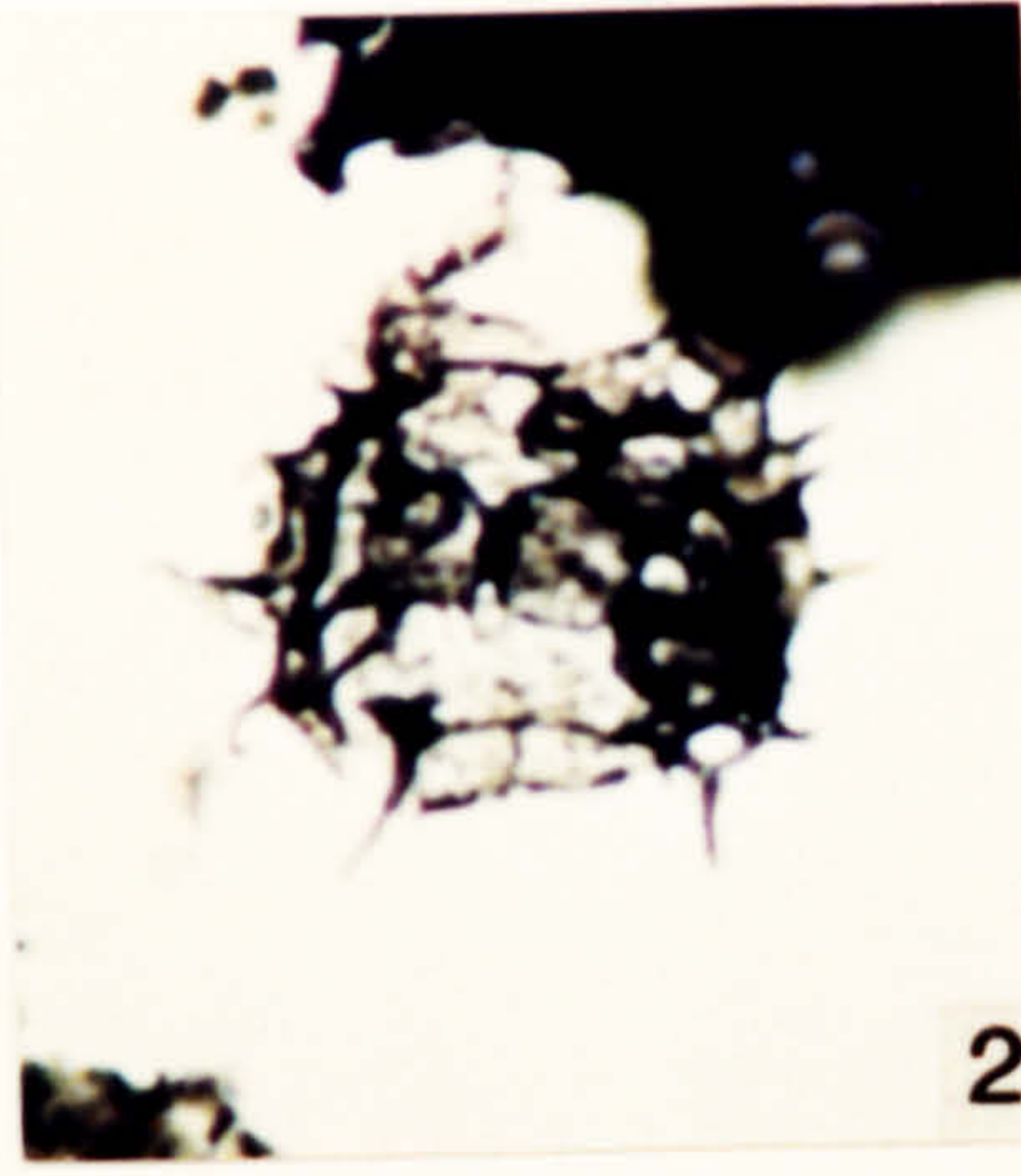
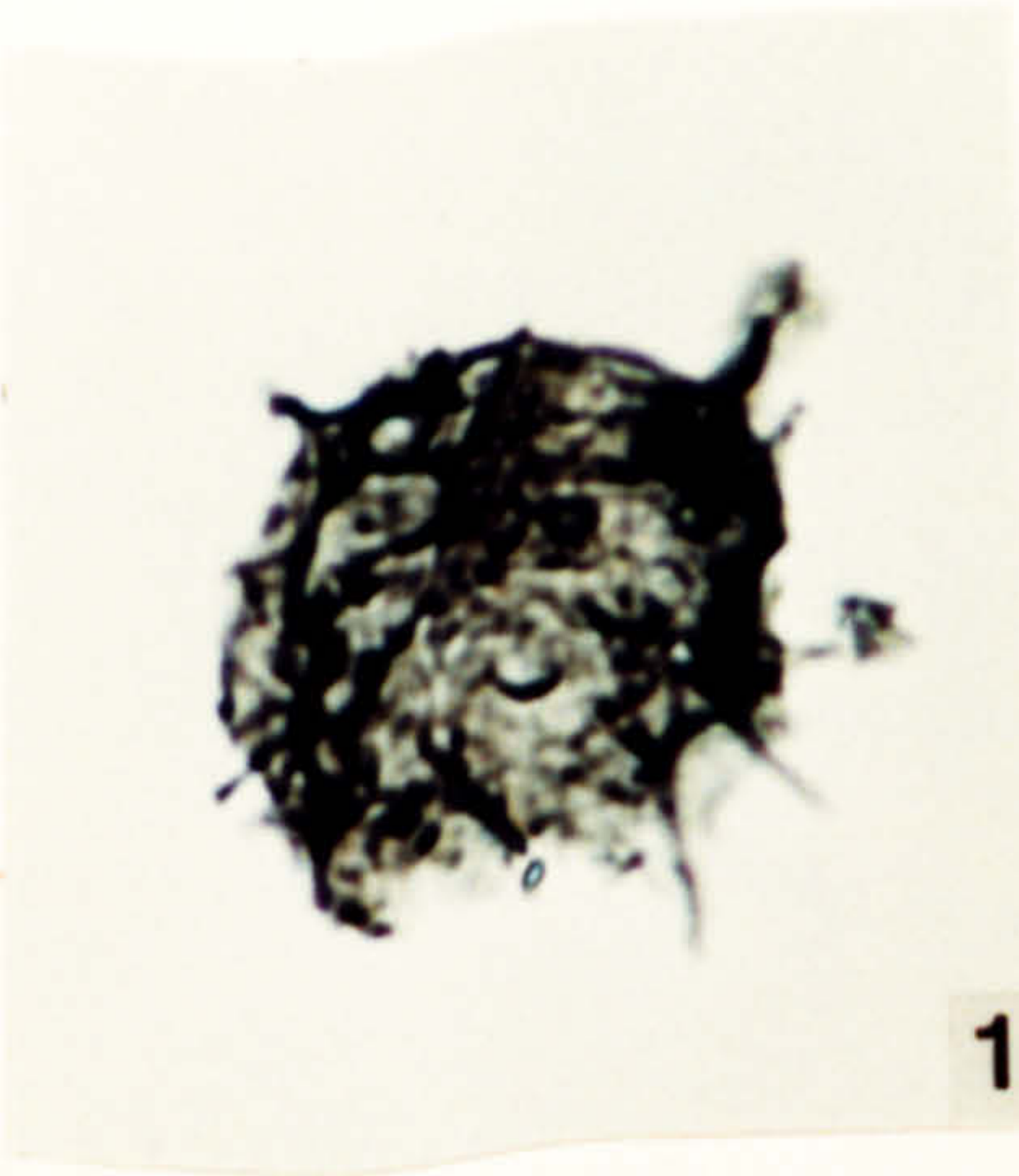




**Plate 40.**

**Acritarchs from the Ktaoua Formation, Caradoc-early Ashgill in age.**

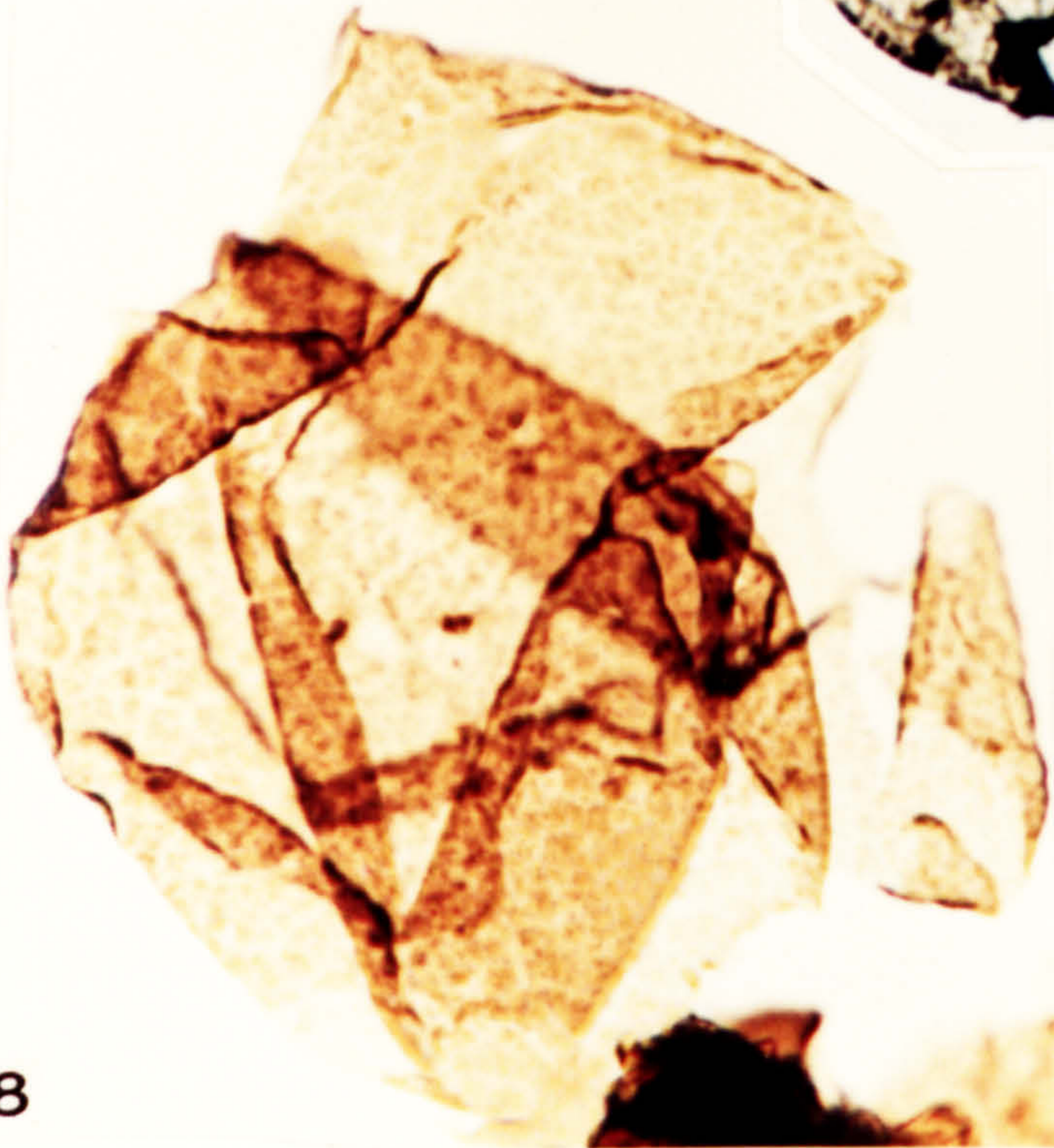
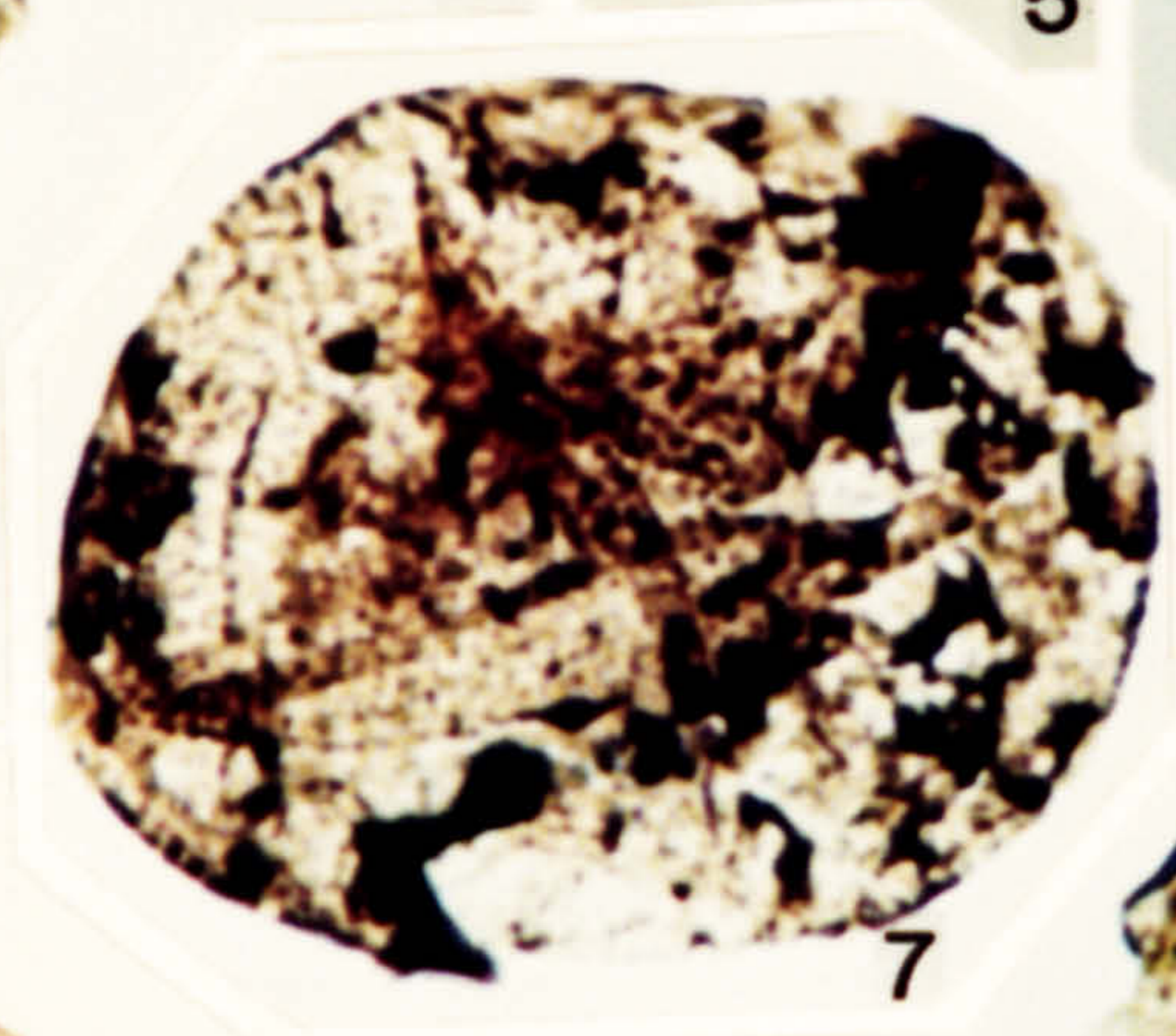
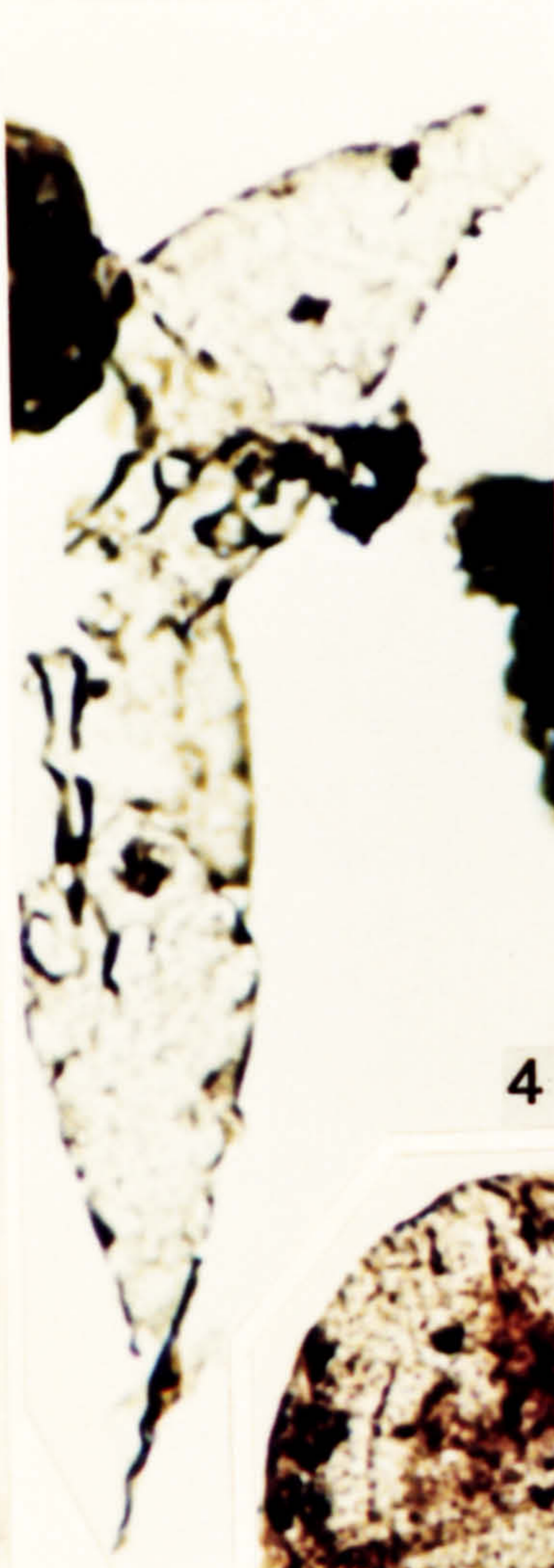
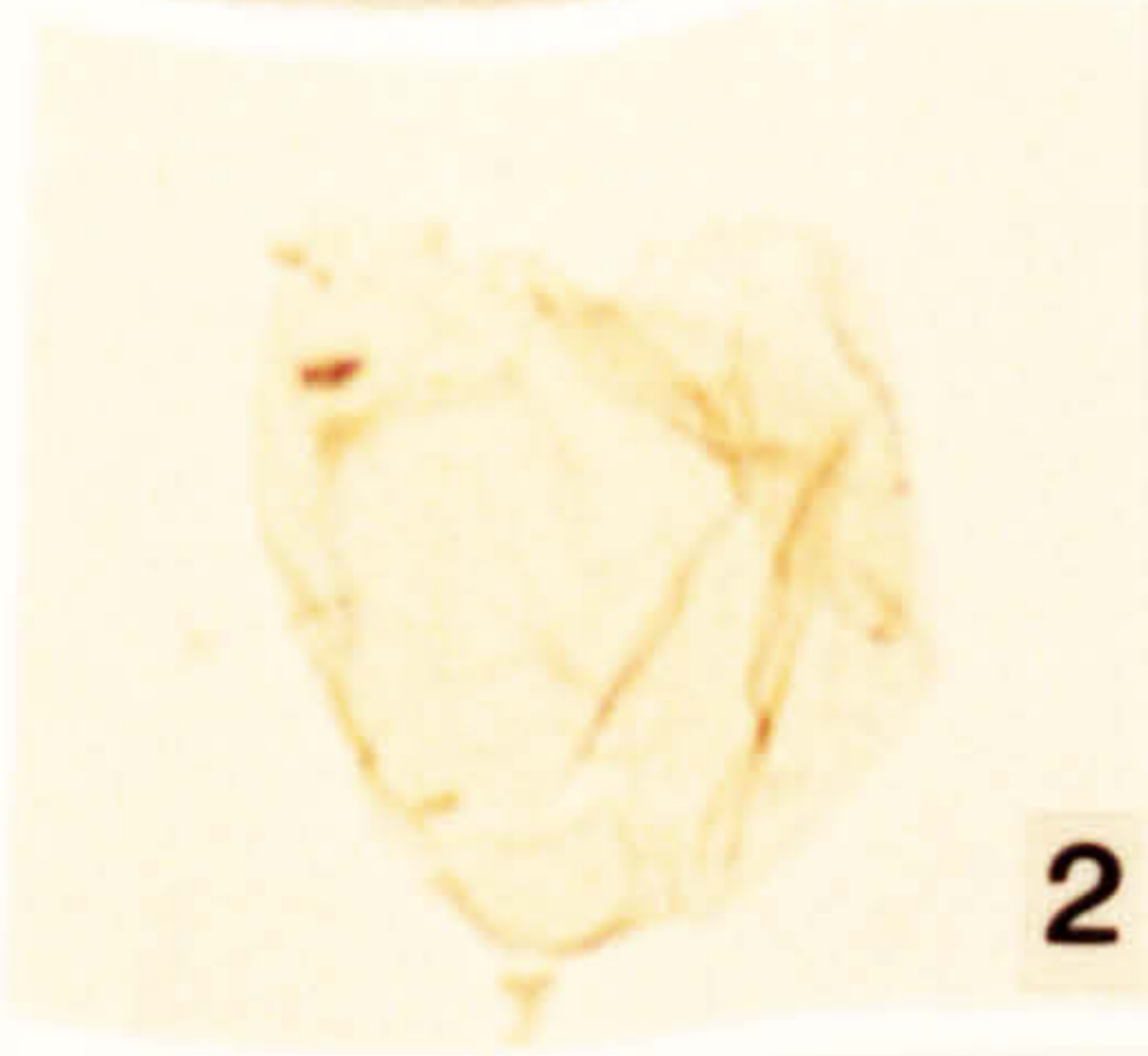
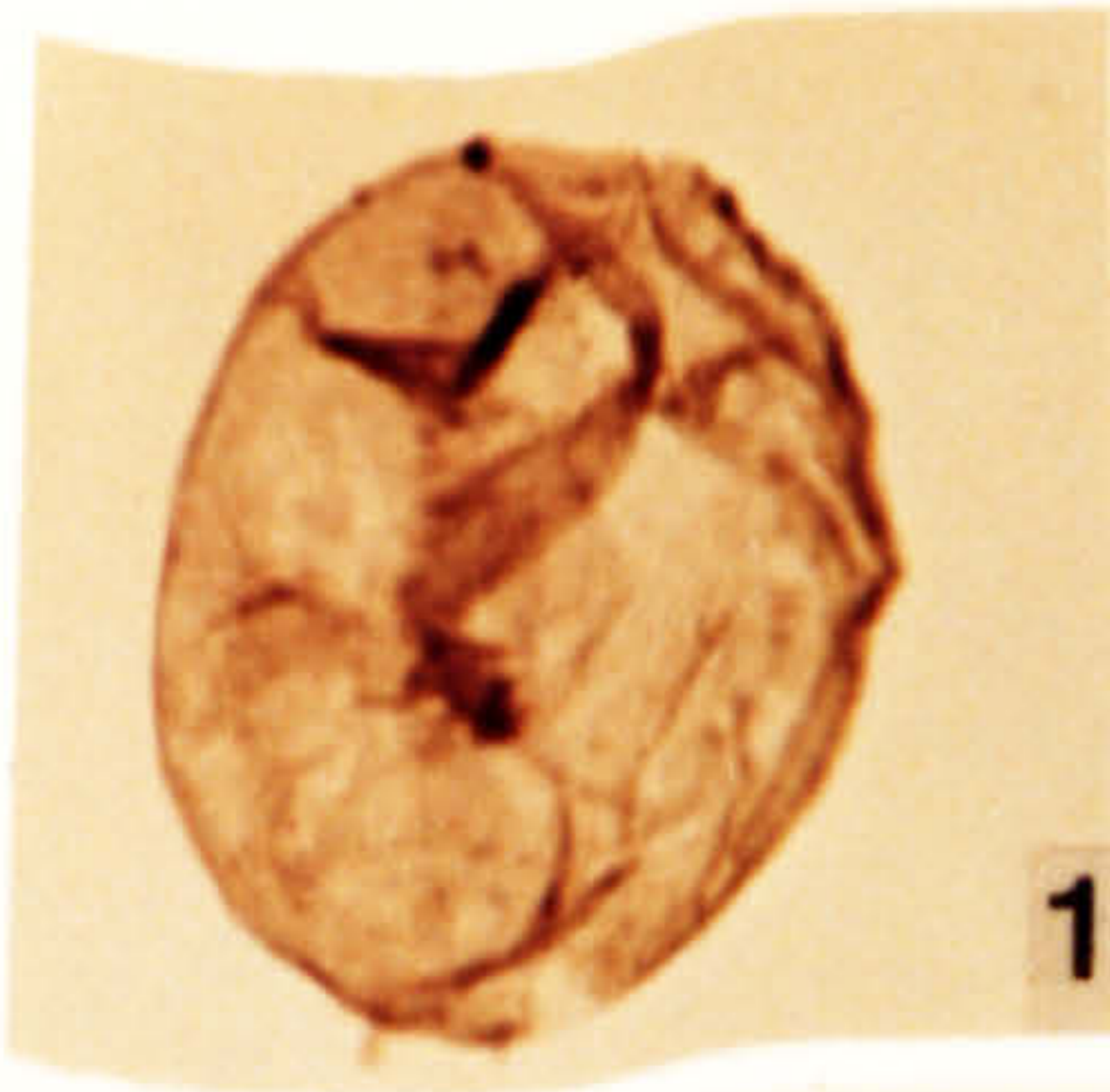
1. *Actinodissus rectinerve* (Burmann) comb. nov. DW 352, 2-1, S11\2.
2. *Actinodissus rectinerve* (Burmann) comb. nov. DW 352, 2-1, R29\2.
3. *Actinodissus rectinerve* (Burmann) comb. nov. DW 352, 2-1, R13\1.
4. *Baltisphaeridium* sp. 1. DW 360, FS-1, X41\4.
5. *Baltisphaeridium* sp. 2. DW 359, 2-1, D19\4.
6. *Cymatiosphaera* sp. DW 361, FS-2, P37\4.
7. *Coryphidium* sp. DW 362, FS-4, M12\2.
8. *Diexallophasis?* sp. 1. DW 359, 2-1, E35\1.
9. *Diexallophasis?* sp. 1. DW 359, 2-1, F38\1.
10. *Coryphidium* sp. DW 362, FS-4, M16\4.
11. *Diexallophasis denticulata* var. *gotlandica* (Cramer) comb. nov. DW 359, FS-3, T29\1.
12. *Diexallophasis denticulata* var. *gotlandica* (Cramer) comb. nov. DW 359, FS-3, Q36\2.



**Plate 41.**

Acritarchs from the Ktaoua Formation, Caradoc-early Ashgill in age.

1. *Leiosphaeridia* sp. DW 349, FS-1, E33\3.
2. *Leiosphaeridia* sp. DW 349, FS-2, N22\1.
3. *Lophosphaeridium* sp. 1. DW 354, FS-2, H29\4.
4. *Leiofusa fusiformis* Eisenack 1934 ex Eisenack 1938. DW 359, FS-3, H19\4.
5. *Dactylofusa ctenista* (Loeblich & Tappan) Fensome *et al.* 1990. DW 359, 2-1, K42\1.
6. *Dactylofusa ctenista* (Loeblich & Tappan) Fensome *et al.* 1990. DW 359, FS-3, M23\3.
7. *Leiovalia* sp. 1. DW 352, FS-3, J23\2.
8. *Lophosphaeridium* sp. 1. DW 354, FS-6, S32\1.
9. *Lophosphaeridium* sp. 1. DW 354, FS-2, S21\4.



**Plate 42.**

Acritarchs from the Ktaoua Formation, Caradoc-early Ashgill in age.

1. *Lophosphaeridium* sp. 2. DW 353, FS-1, J12\1.
2. *Lophosphaeridium* sp. 2. DW 353, FS-1, J12\1, IC, X2300.
3. *Lophosphaeridium* sp. 3. DW 361, FS-2, V29\2.
4. *Multiplicisphaeridium* cf. *ramispinosum* Staplin 1961. DW 359, 2-1, W42\1.
5. *Multiplicisphaeridium bifurcatum* Staplin, Jansonius & Pocock 1965. DW 359, FS-3, P32\4.
6. *Multiplicisphaeridium bifurcatum?* Staplin, Jansonius & Pocock 1965. DW 359, FS-3, U30\-.
7. *Multiplicisphaeridium* cf. *ramispinosum* Staplin 1961. DW 359, FS-3, S29\2.
8. *Multiplicisphaeridium* cf. *ramispinosum* Staplin 1961. DW 359, 2-1, M19\3.
9. *Multiplicisphaeridium* cf. *ramispinosum* Staplin 1961. DW 359, 2-1, D28\2.
10. *Multiplicisphaeridium rusticum?* Martin 1973. DW 353, 1-2, H14\3.
11. *Multiplicisphaeridium rusticum?* Martin 1973. DW 360, 2-1, N9\1.
12. *Multiplicisphaeridium rusticum?* Martin 1973. DW 360, 2-1, J30\3.

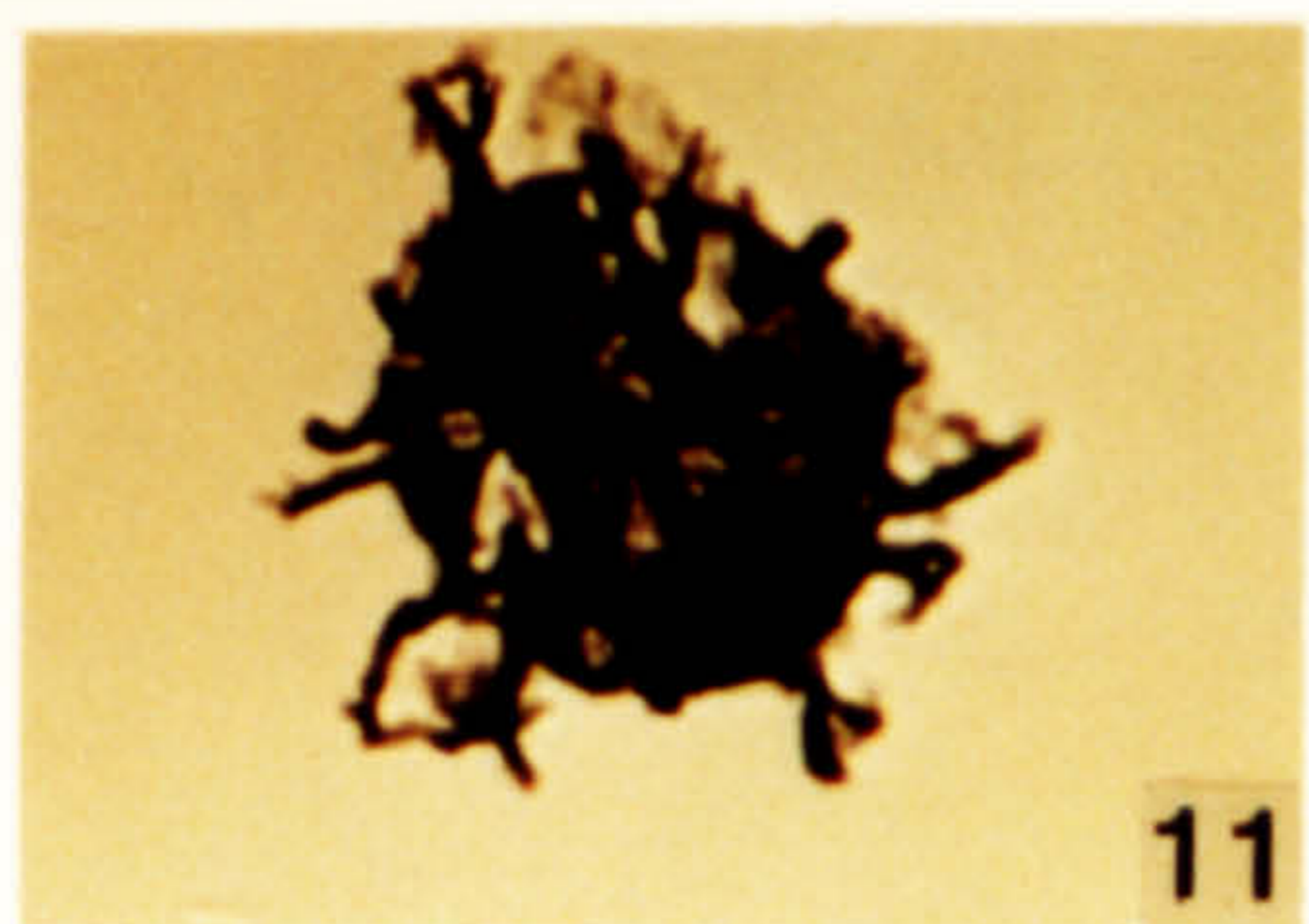
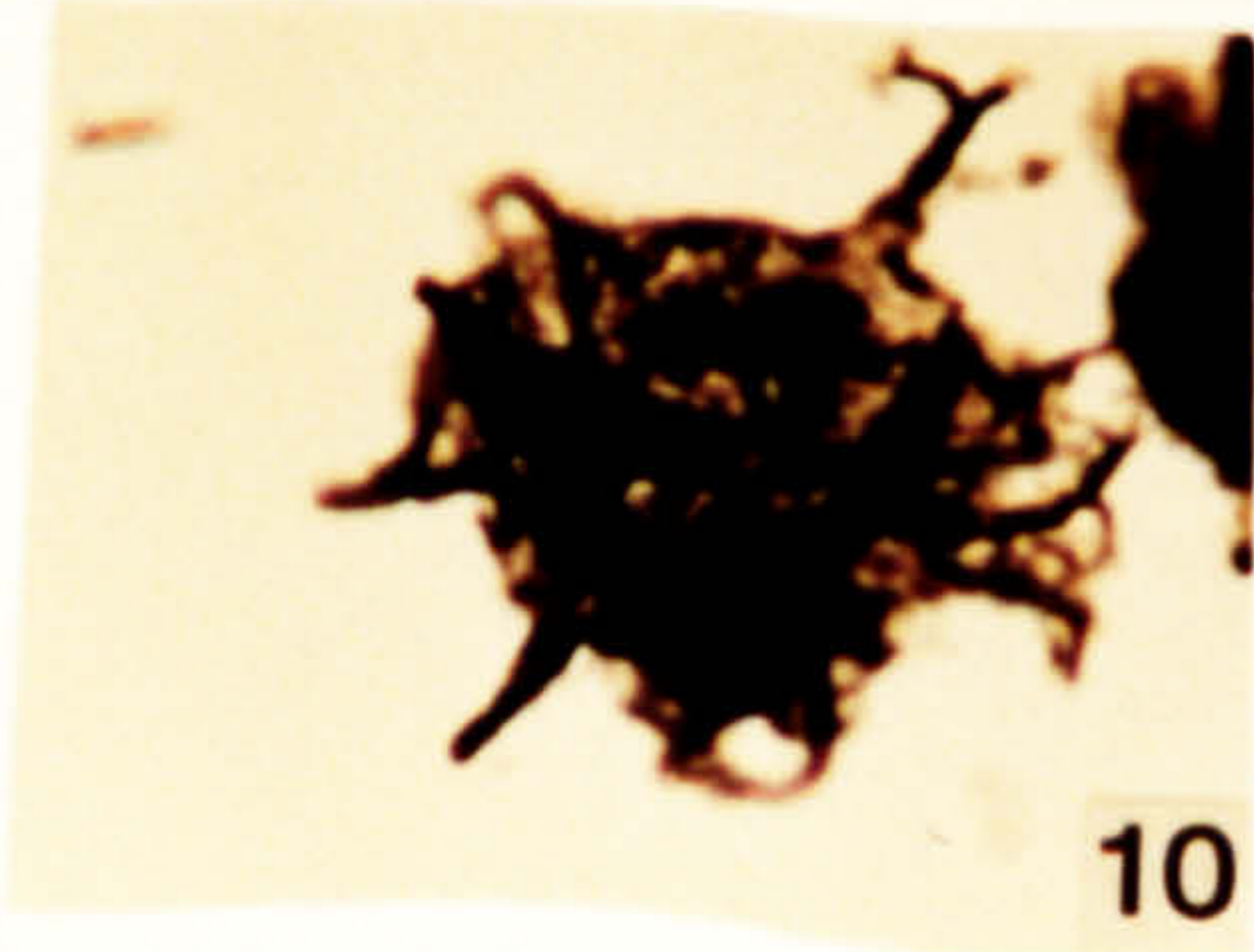
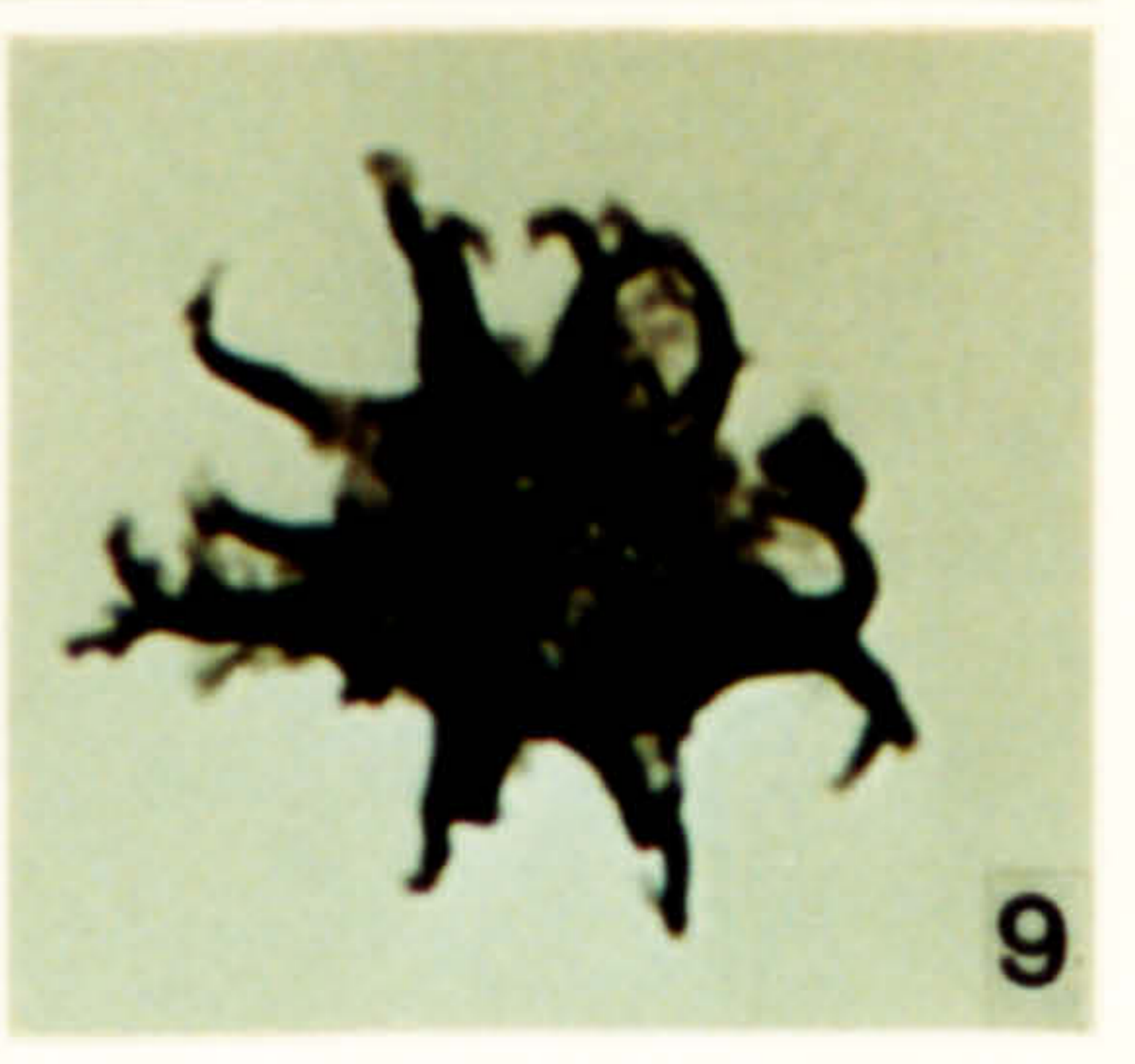
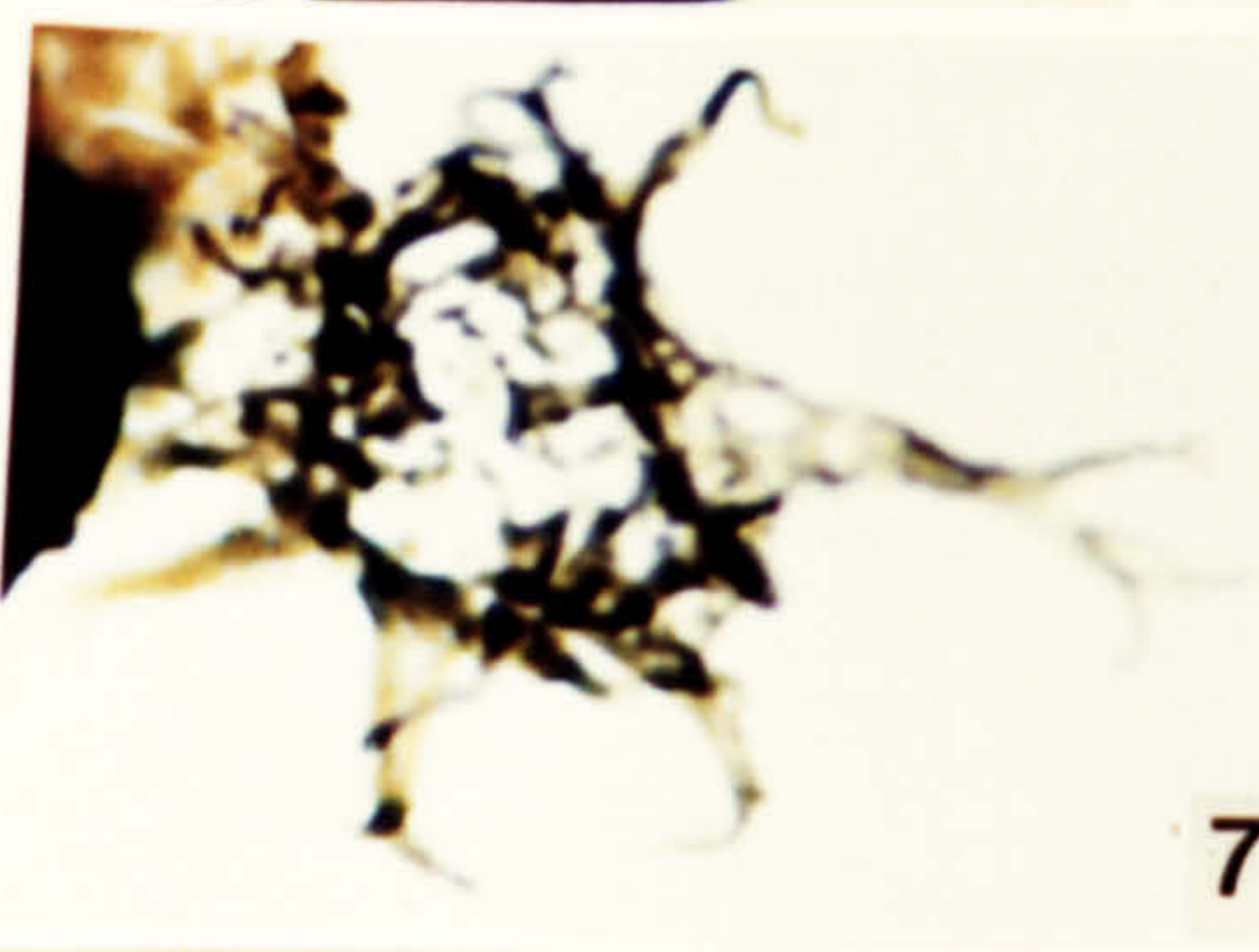
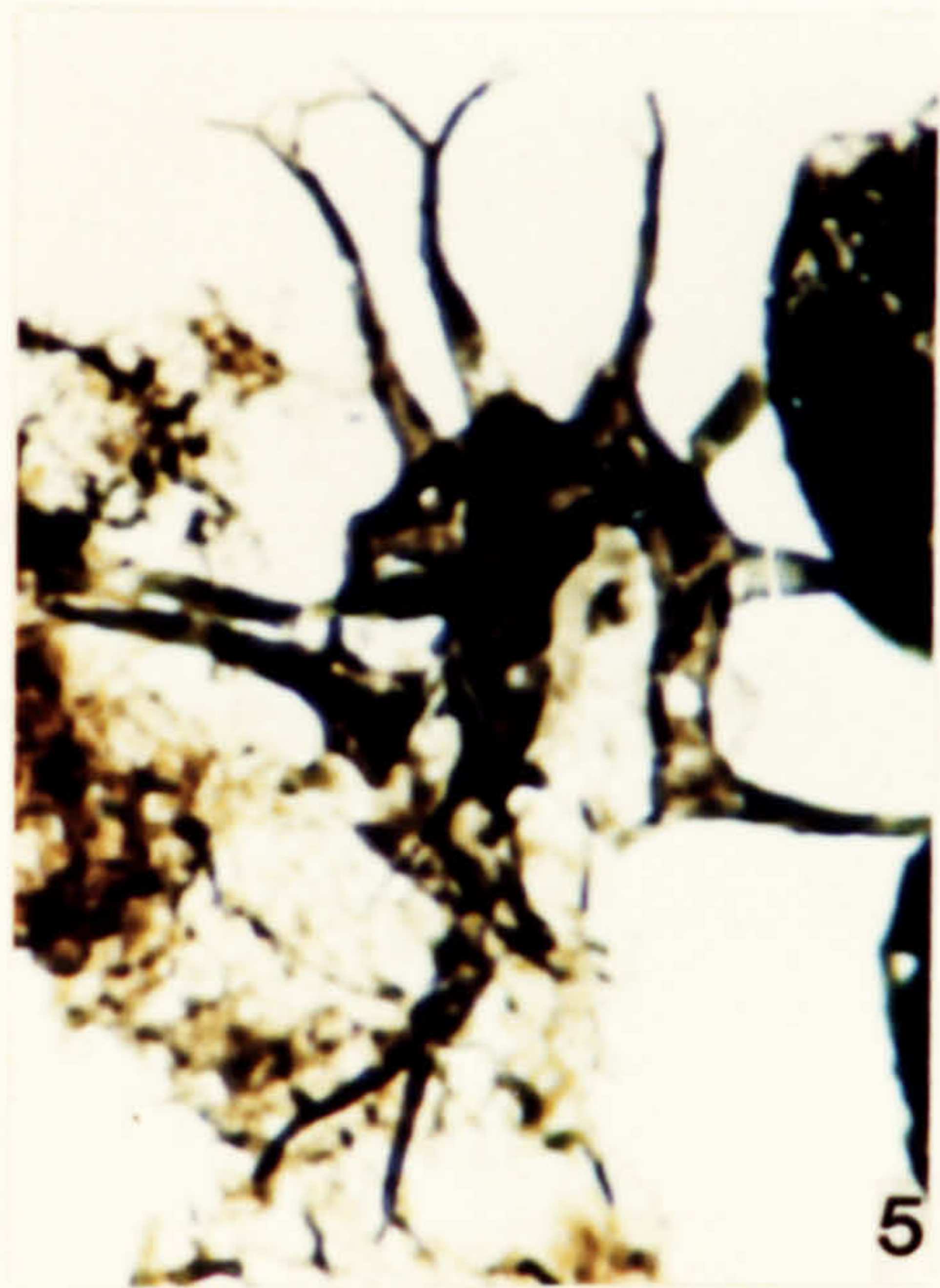
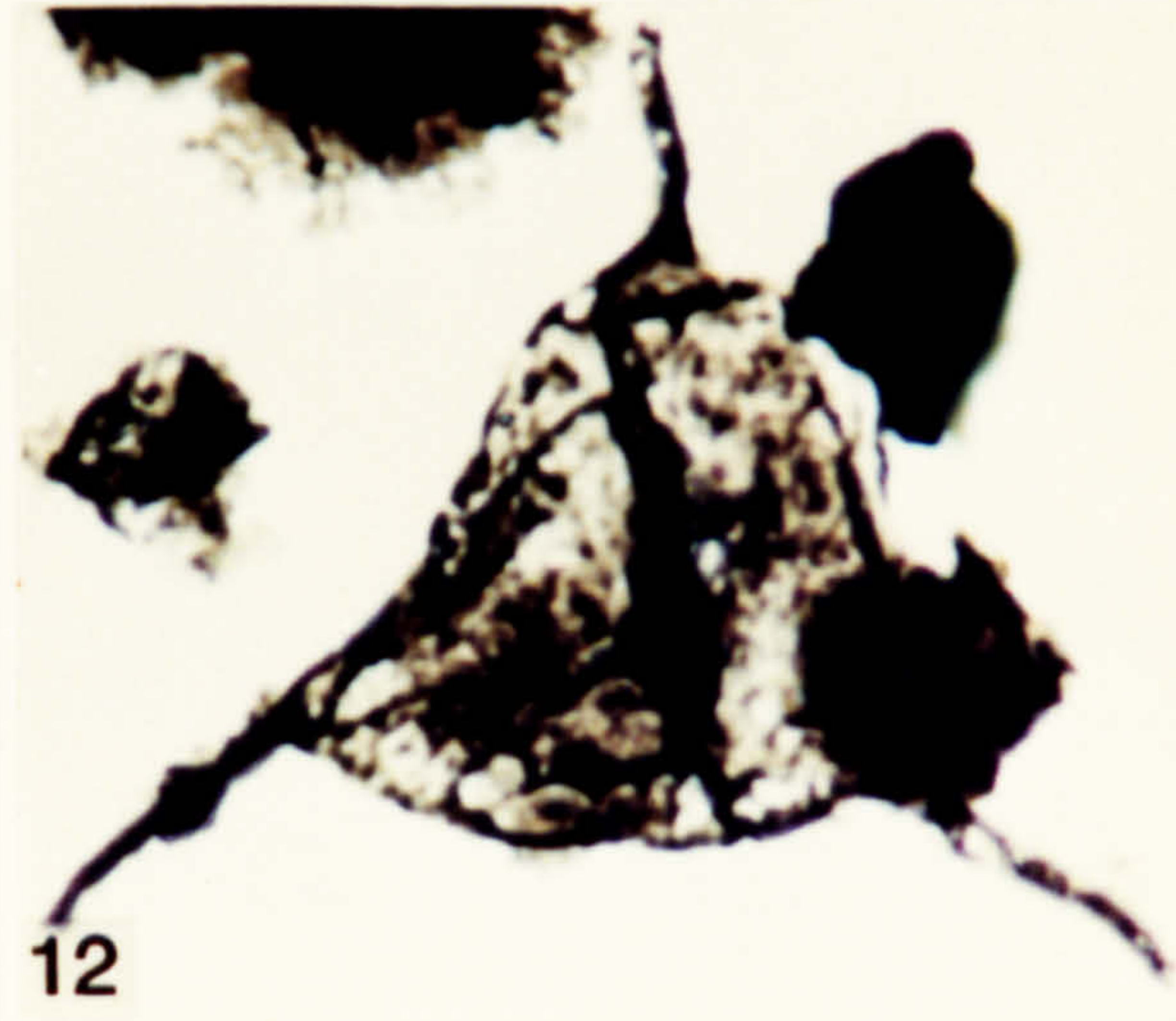
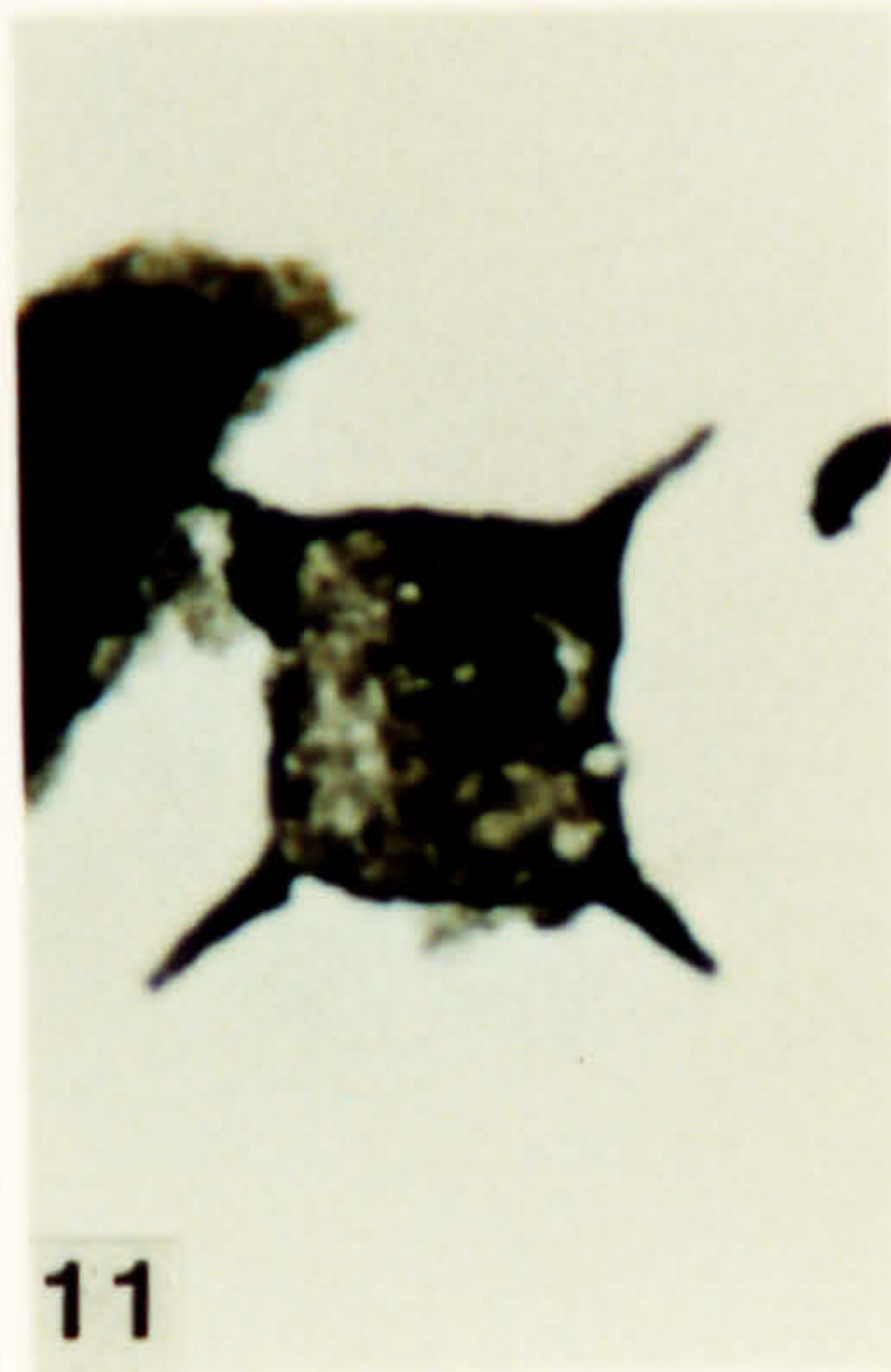
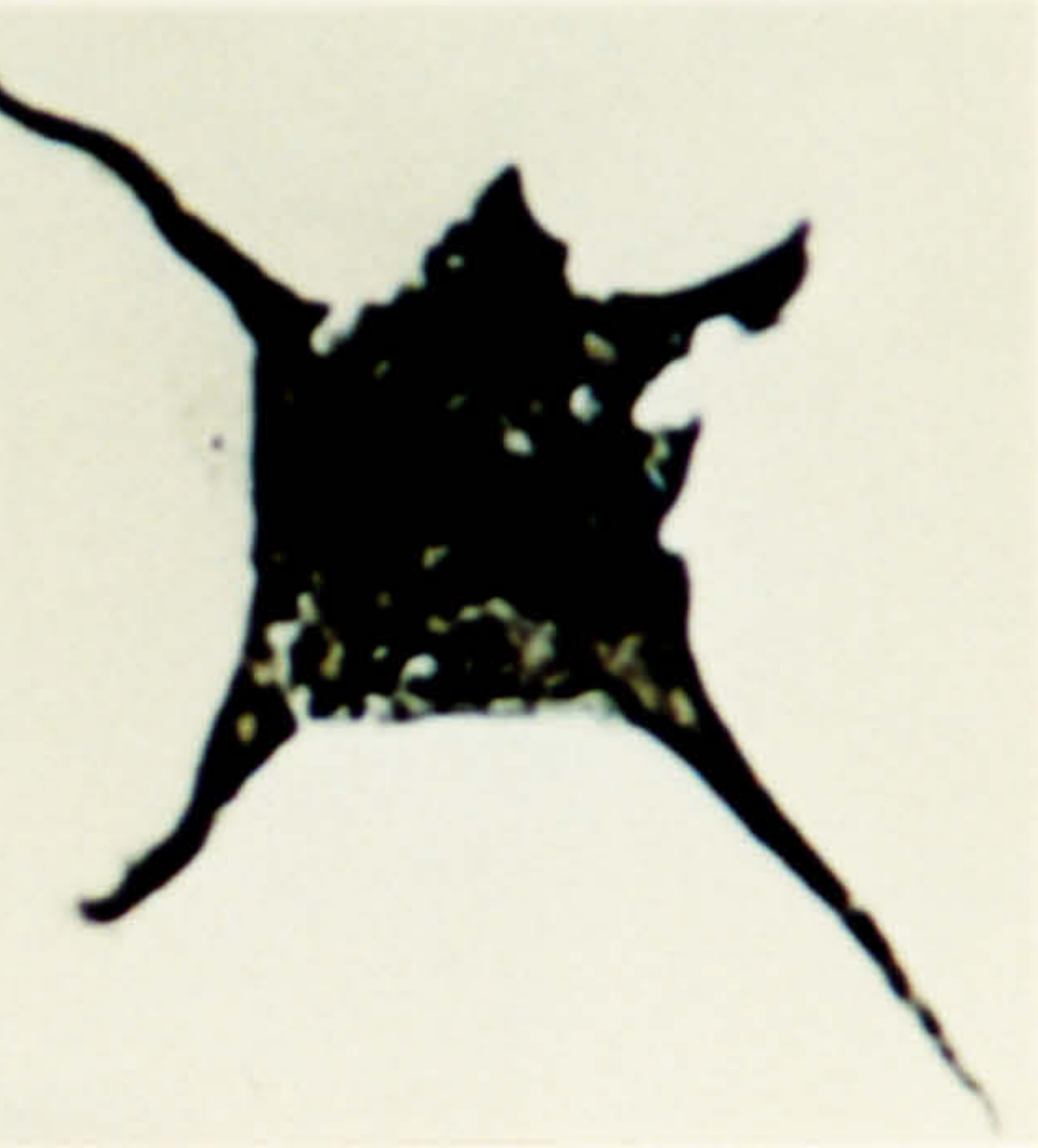
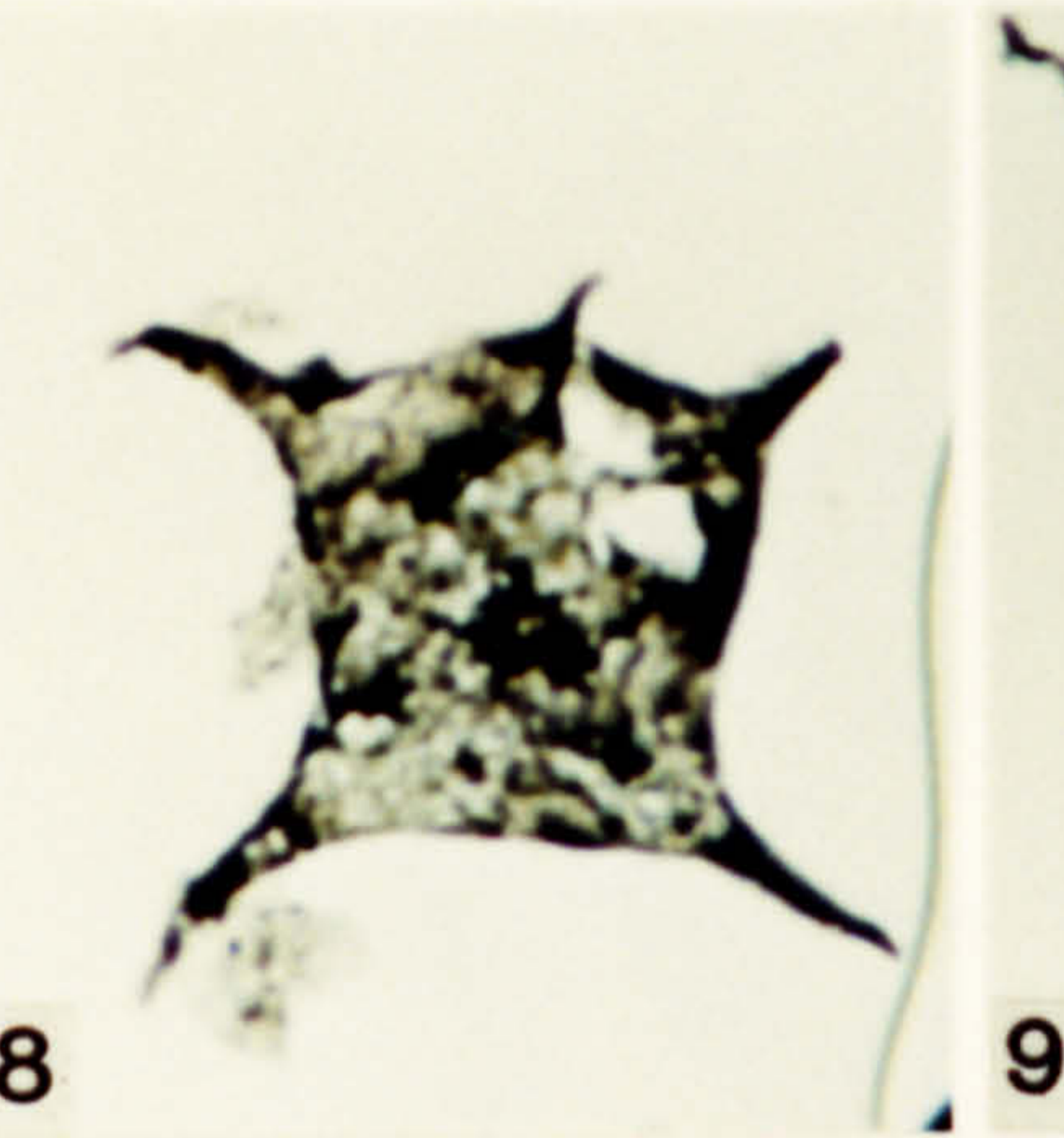
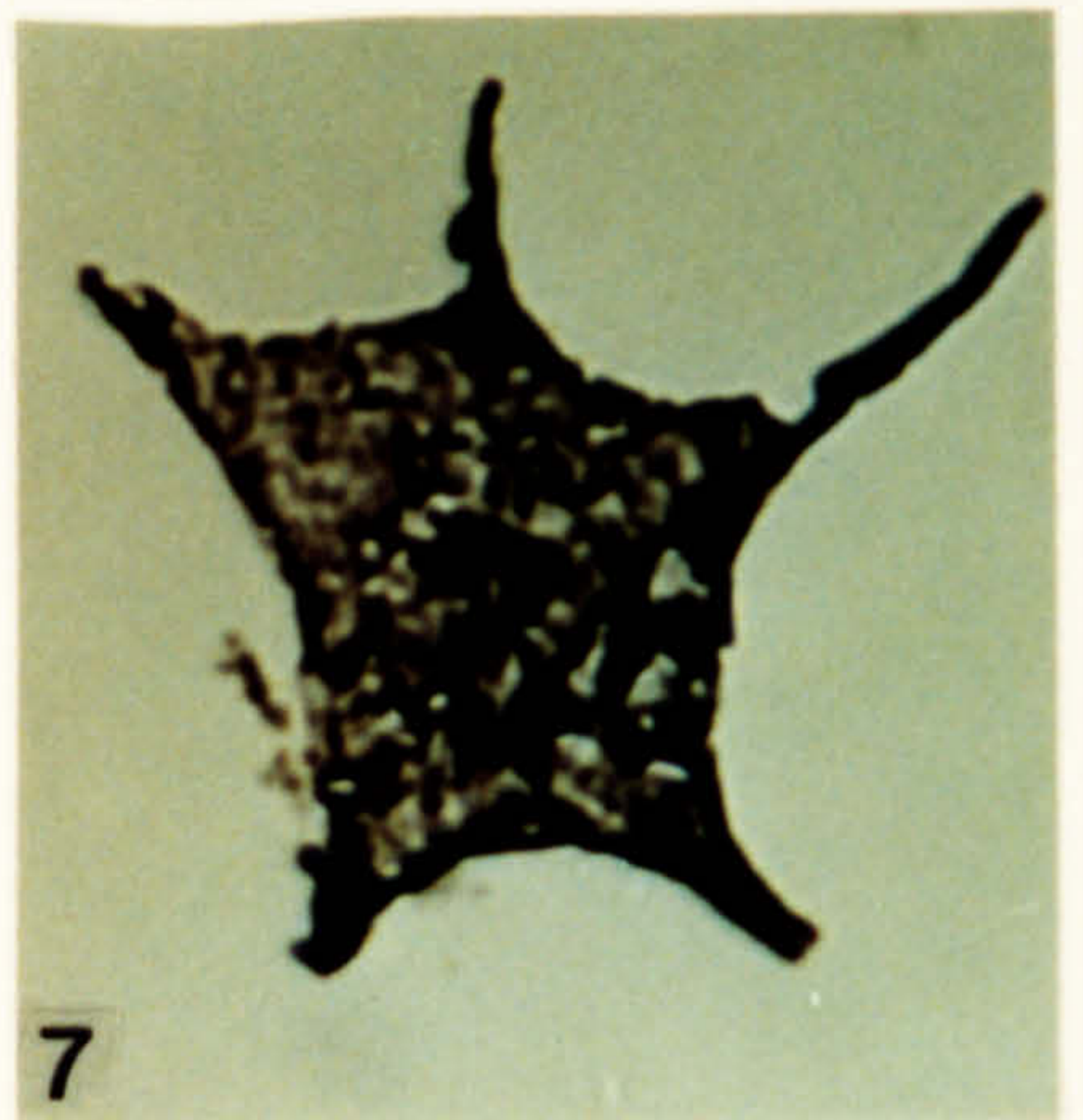
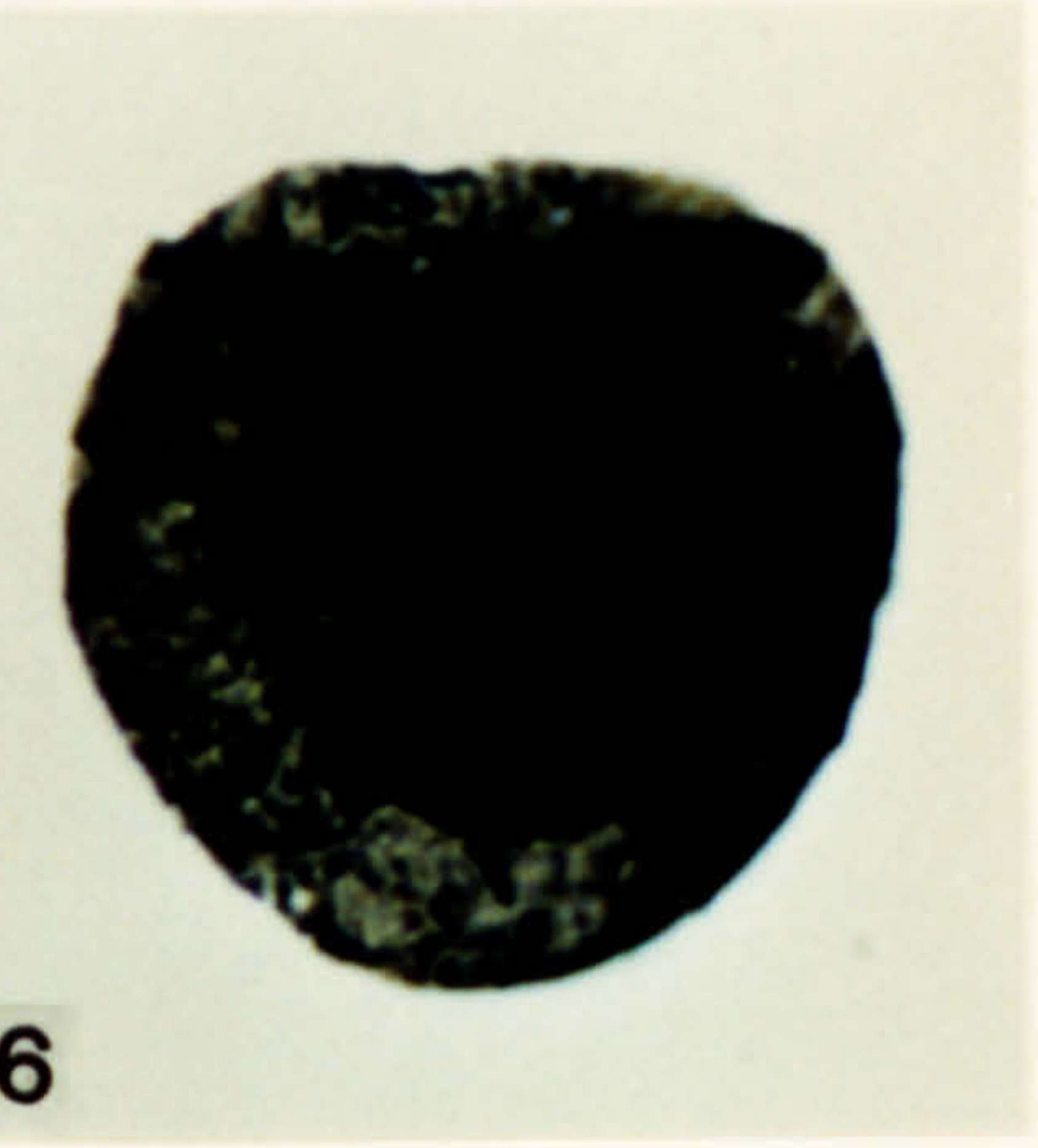
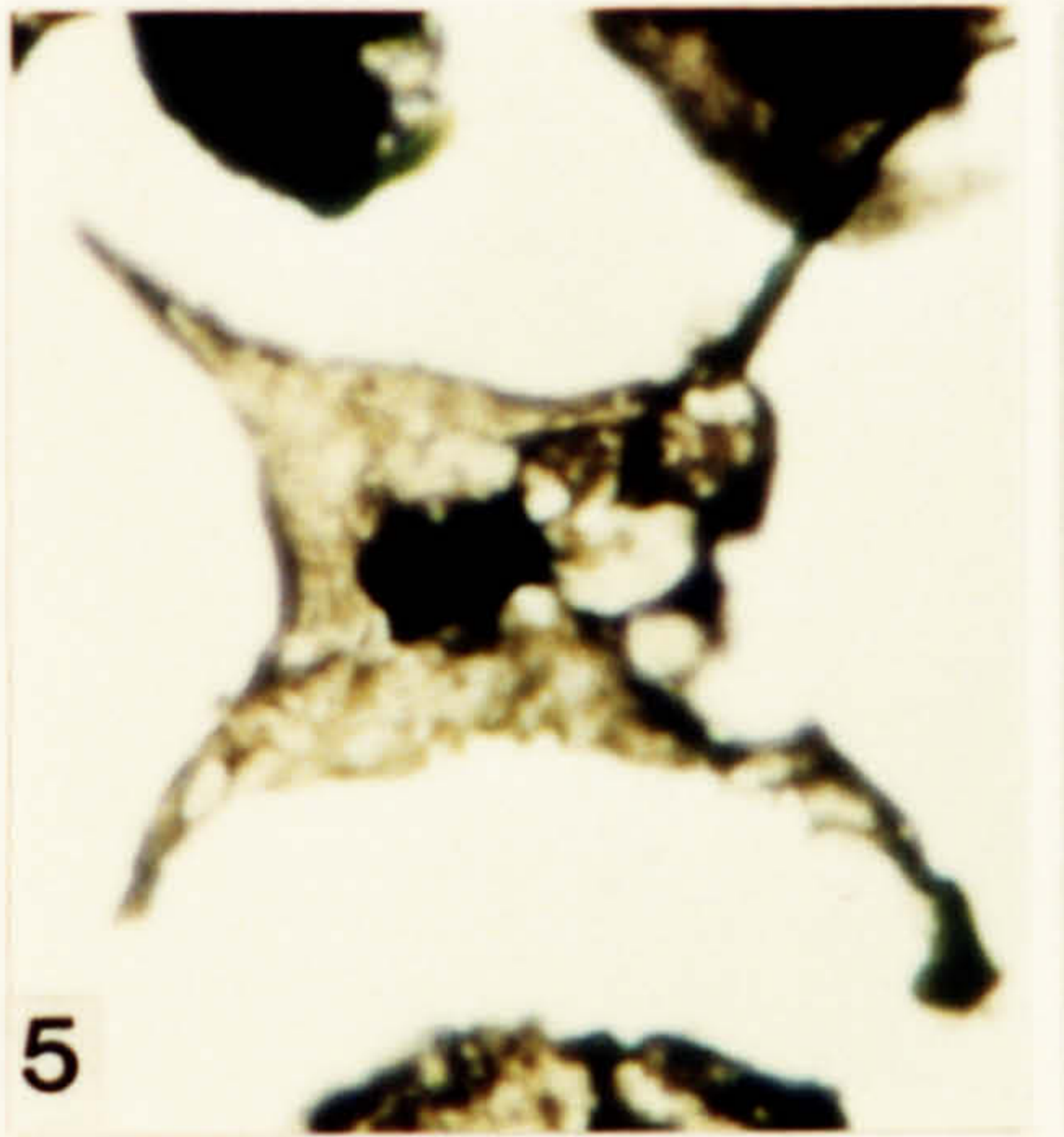
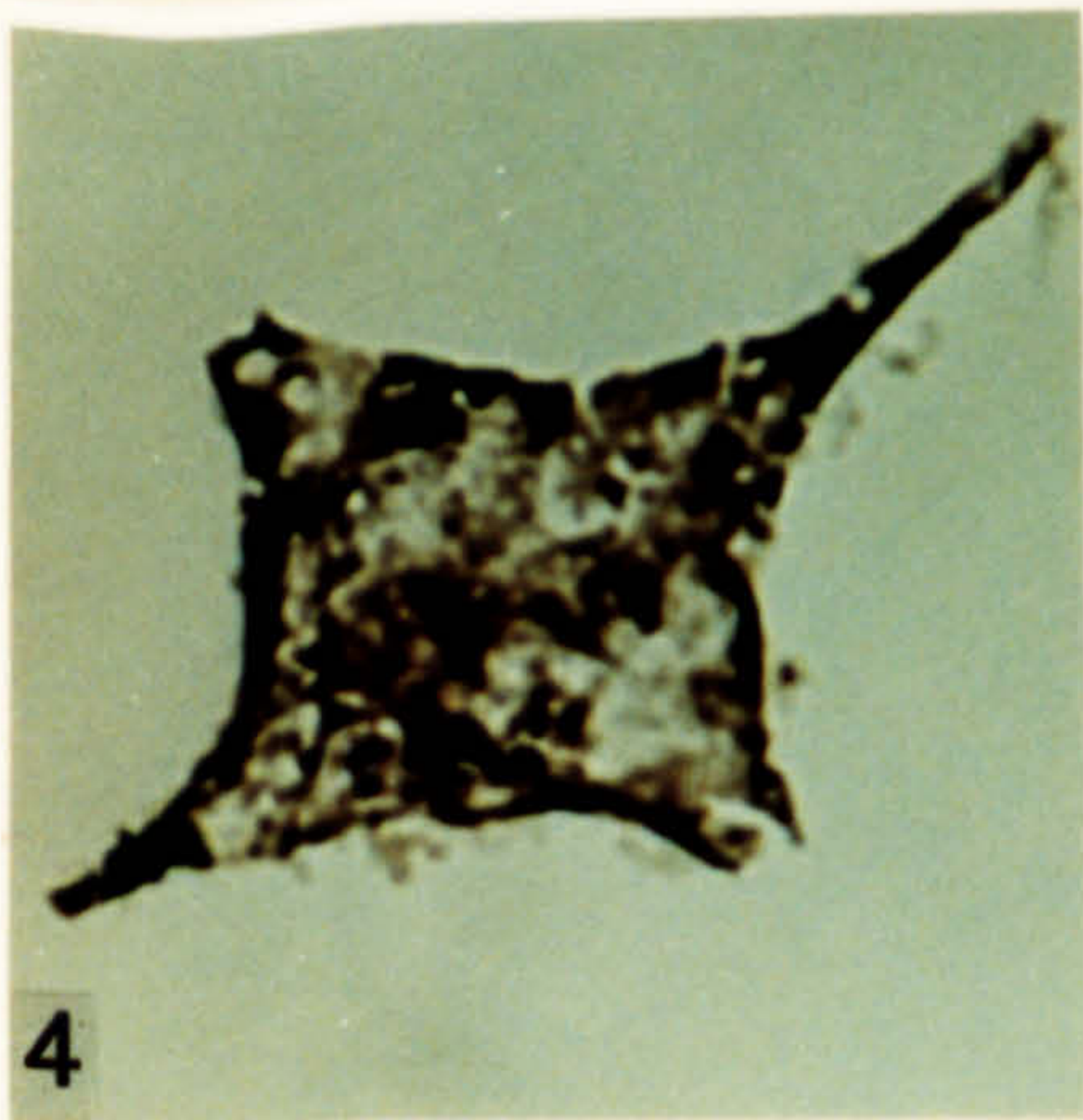
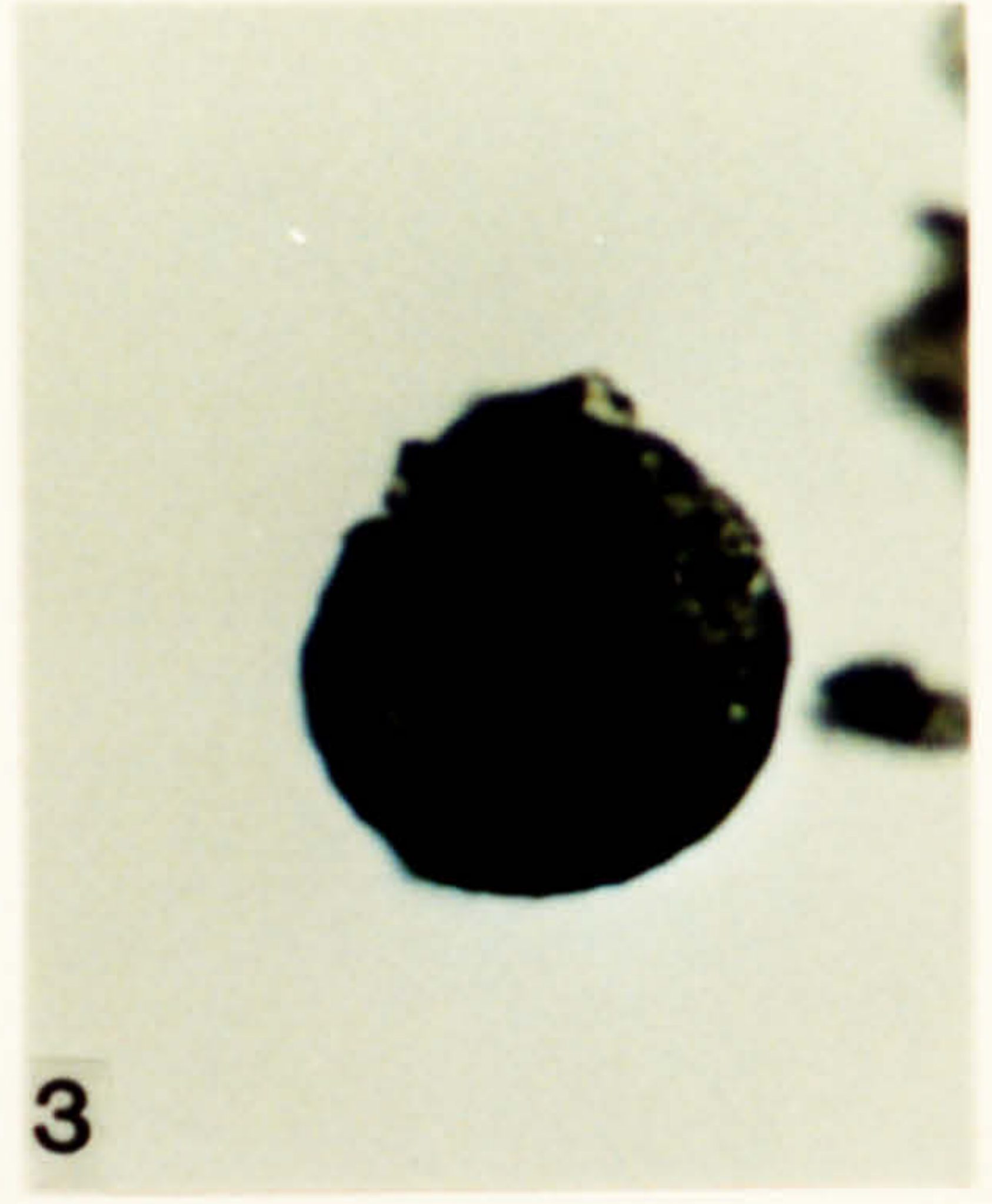
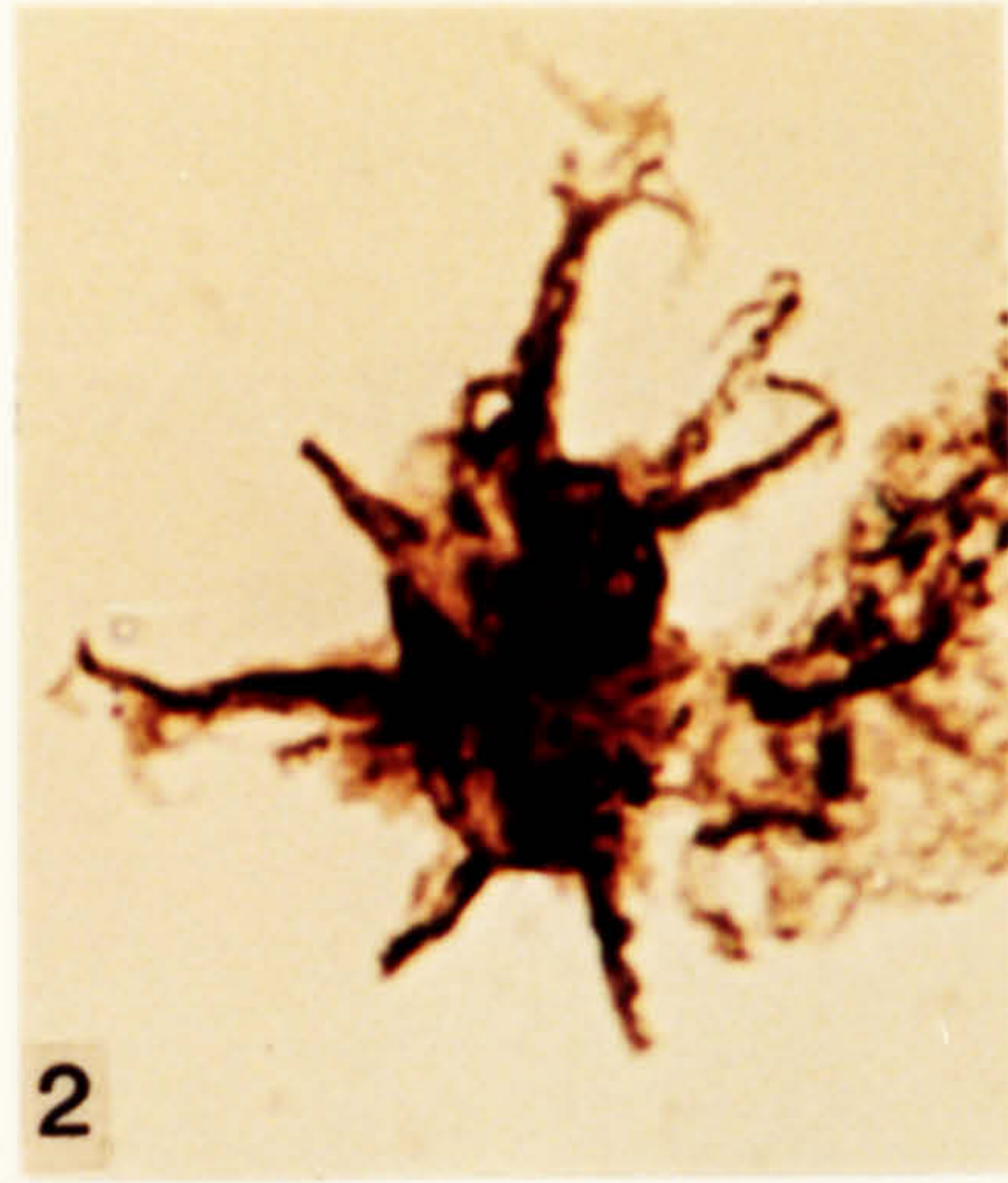


Plate 43.

Acritarchs from the Ktaoua Formation, Caradoc-early Ashgill in age.

1. *Ordoviciidium* sp. DW 323, 1-1, K23\4.
2. *Peteinosphaeridium* sp. DW 353, FS-2, C12\2.
3. *Tasmanites martinssonii* Eisenack 1958. DW 352, 2-2, U18\-..
4. *Striatotheca principalis* Burmann 1970. DW 359, FS-3, C36\4.
5. *Striatotheca principalis* Burmann 1970. DW 359, 2-1, U17\2.
6. *Tasmanites martinssonii* Eisenack 1958. DW 352, 2-2, W28\2.
7. *Veryhachium minutum* var. C. DW 359, 2-1, V30\3.
8. *Veryhachium minutum*.var. C. DW 359, 2-1, E40\4.
9. *Veryhachium minutum* var. B. DW 359, 2-1, C28\1.
10. *Veryhachium minutum*.var. A. DW 359, FS-3, K27\4.
11. *Veryhachium minutum* var. A. DW 359, 2-1, B25\1.
12. *Veryhachium trisulcum* var. *venutum* Deunff 1959. DW 415, 2-1, P25\3.

PLATE 43

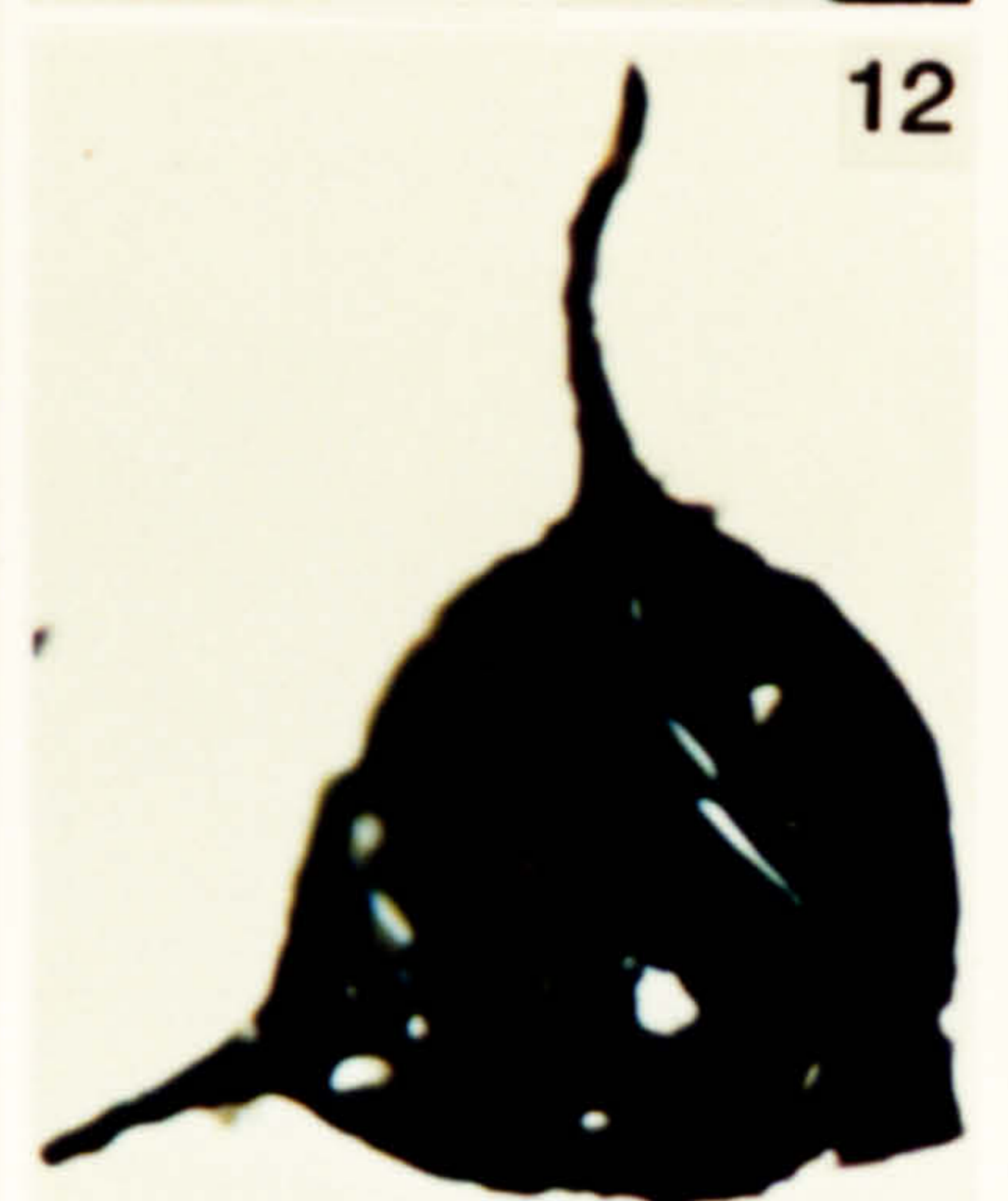
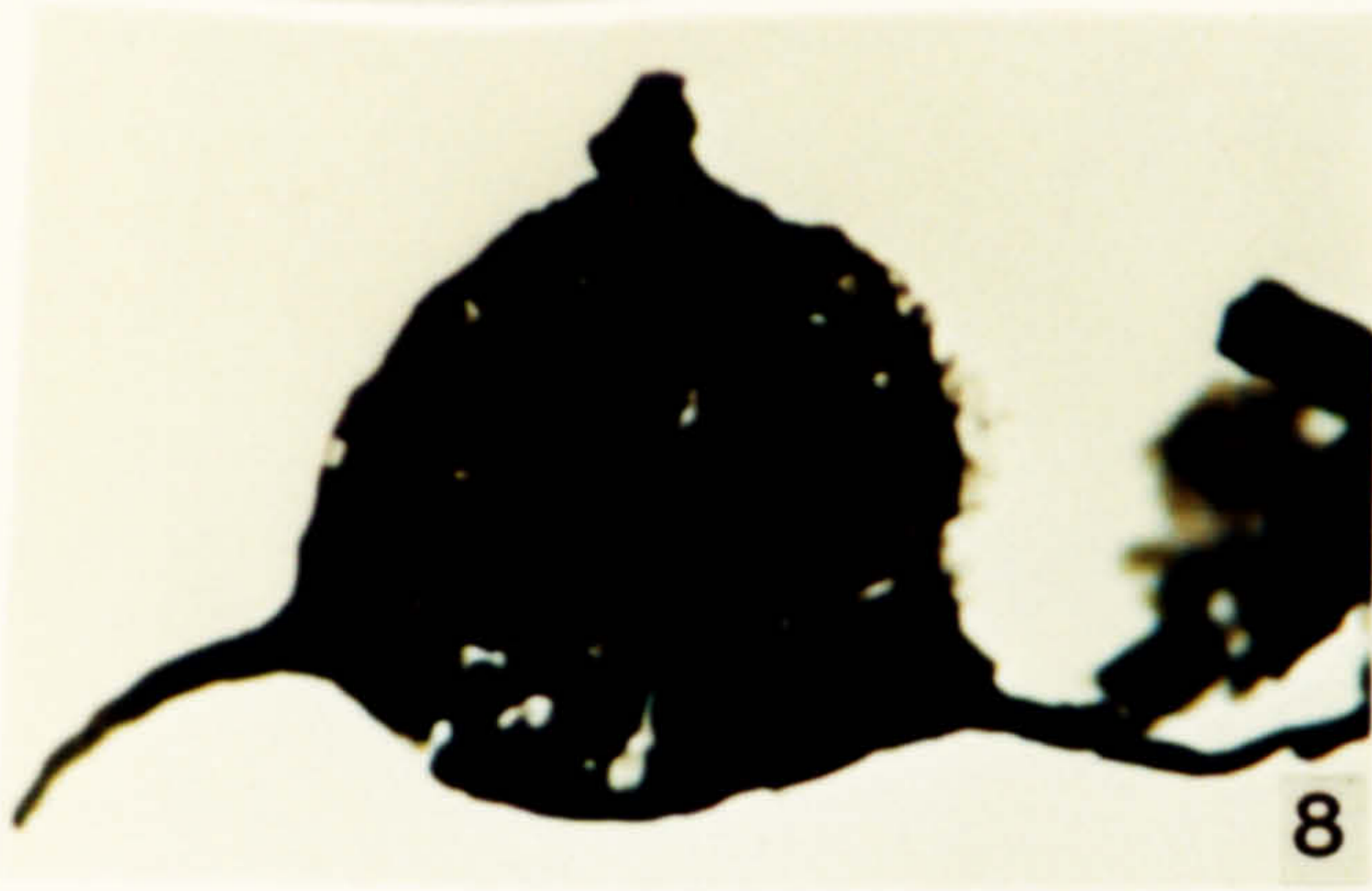
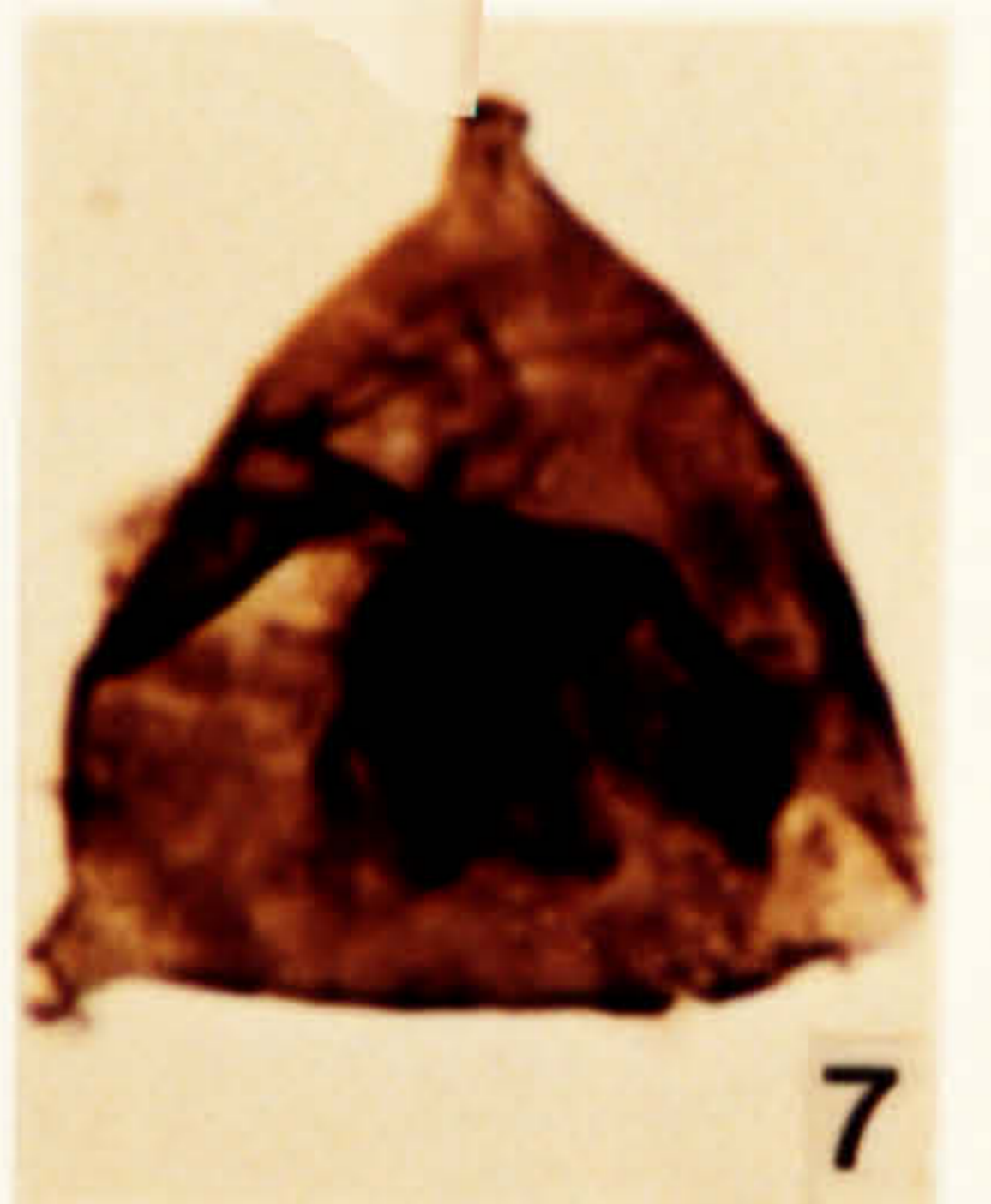
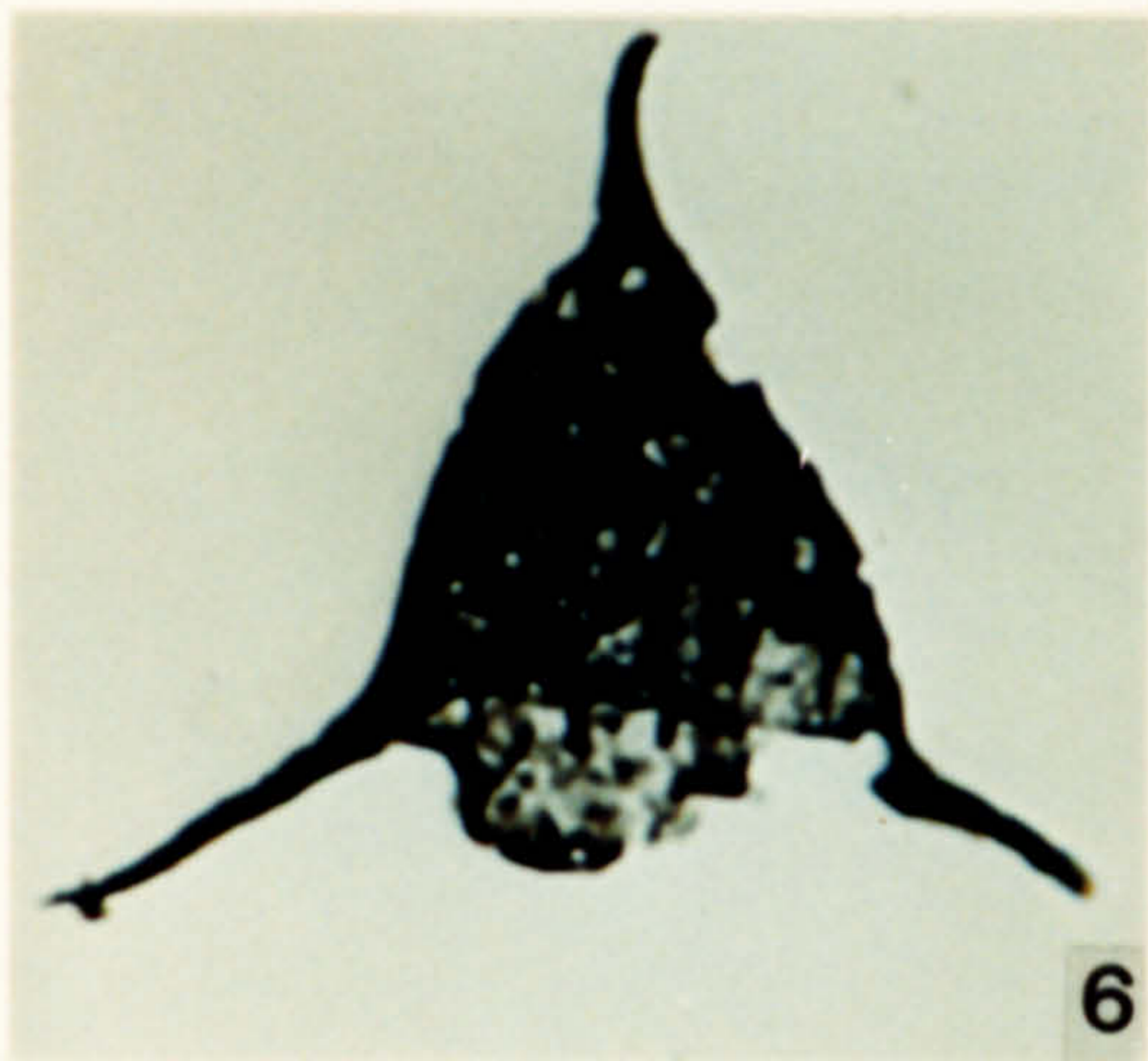
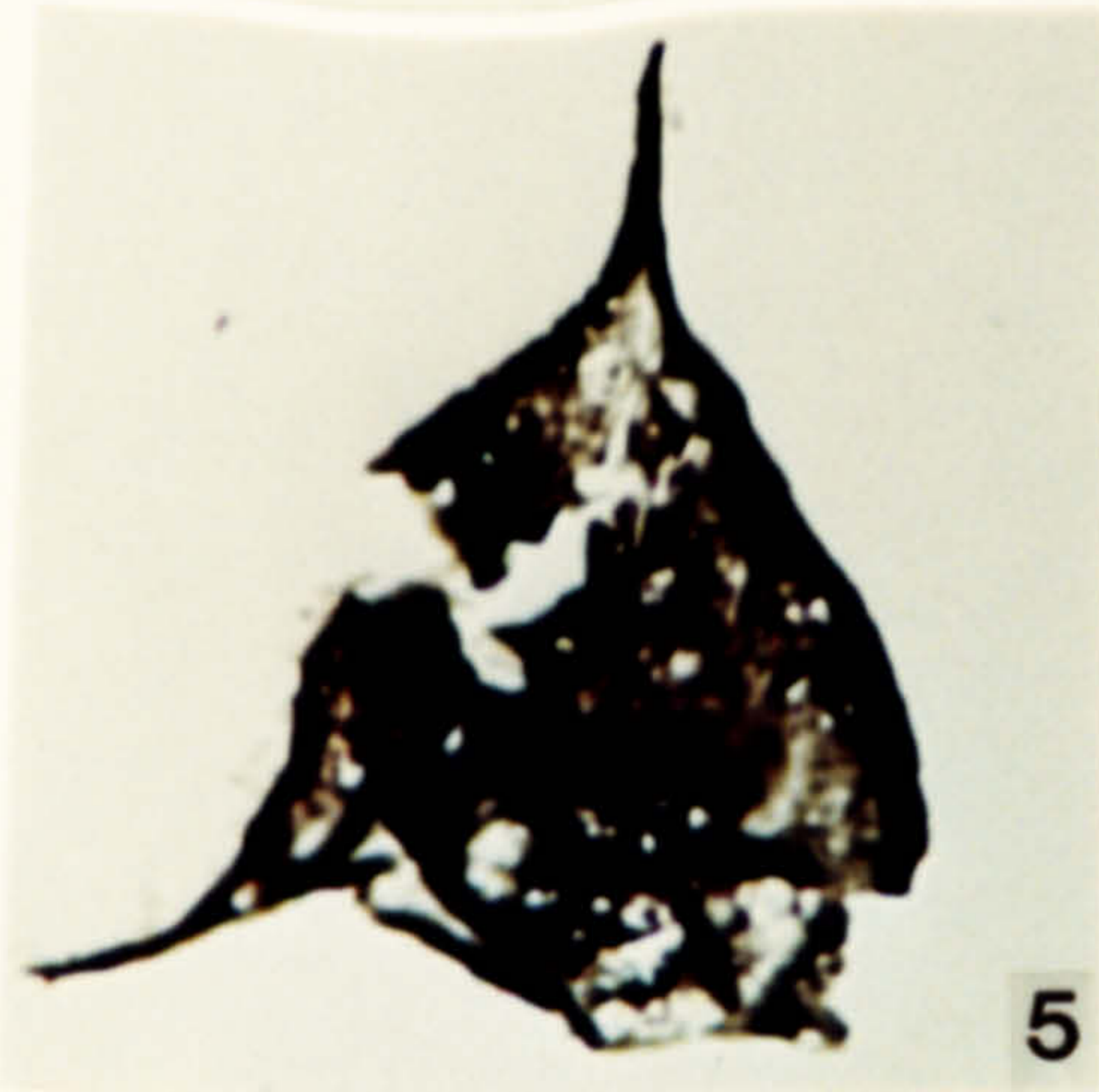
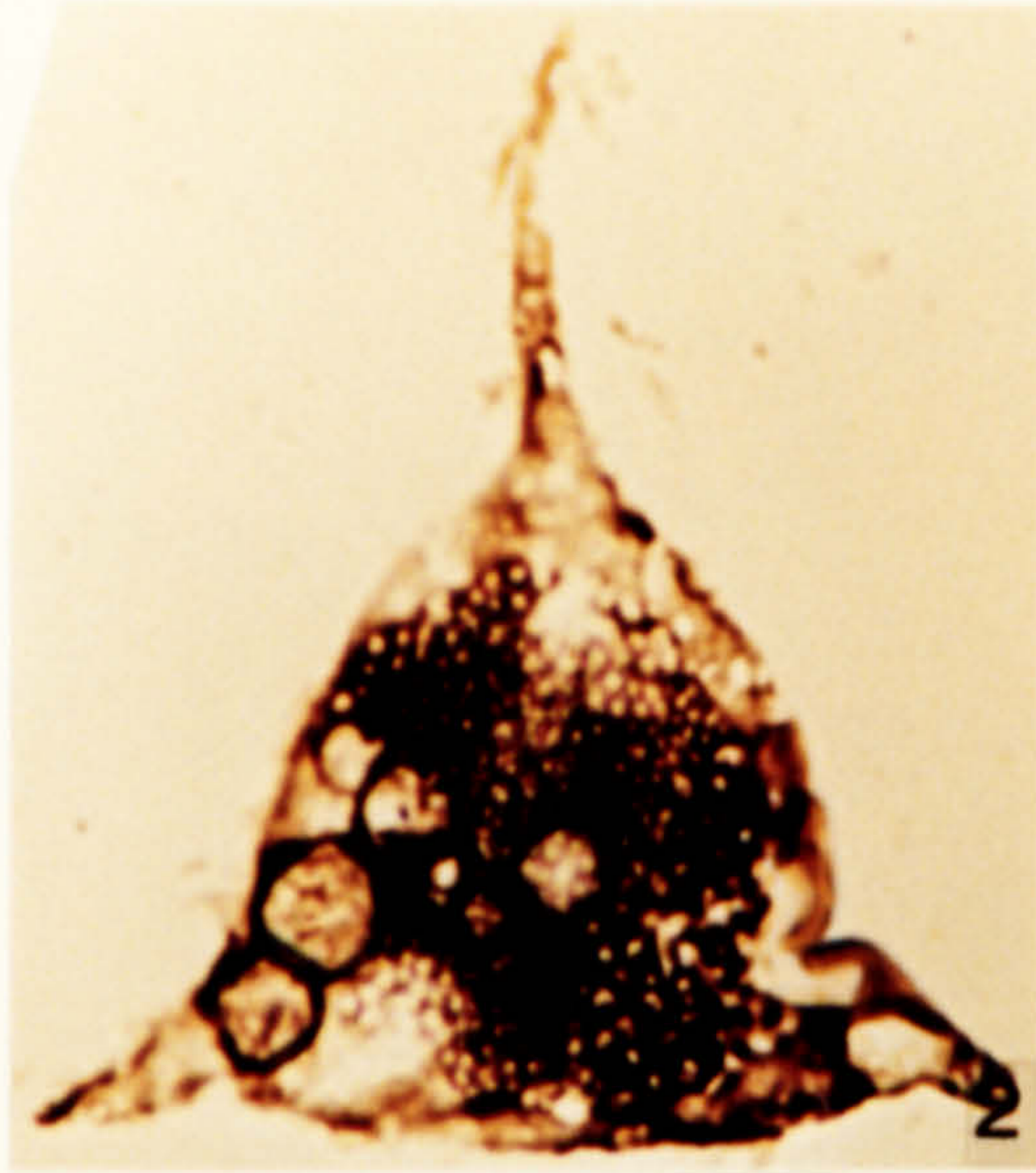
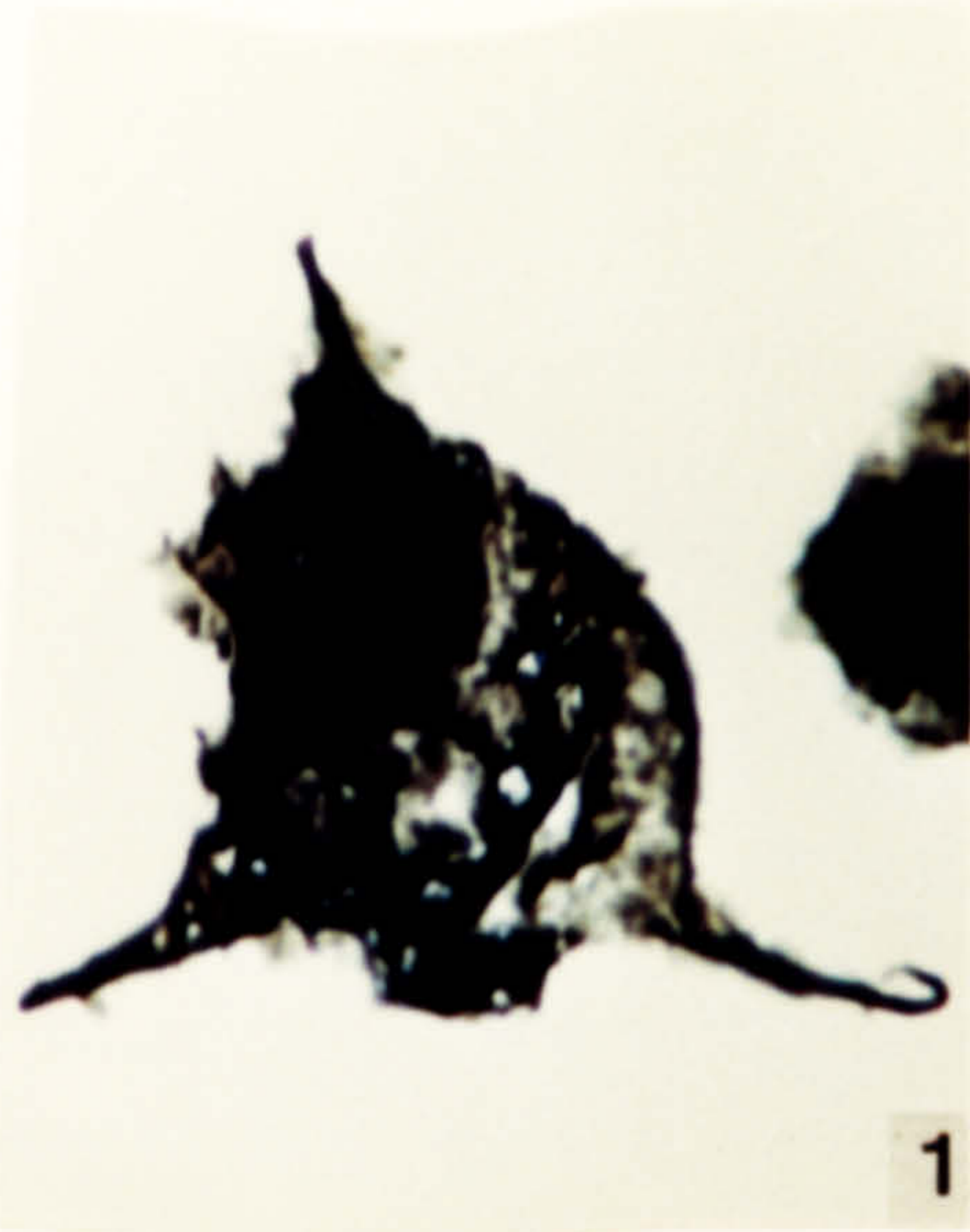




**Plate 44.**

Acritarchs from the Ktaoua Formation, Caradoc-early Ashgill in age.

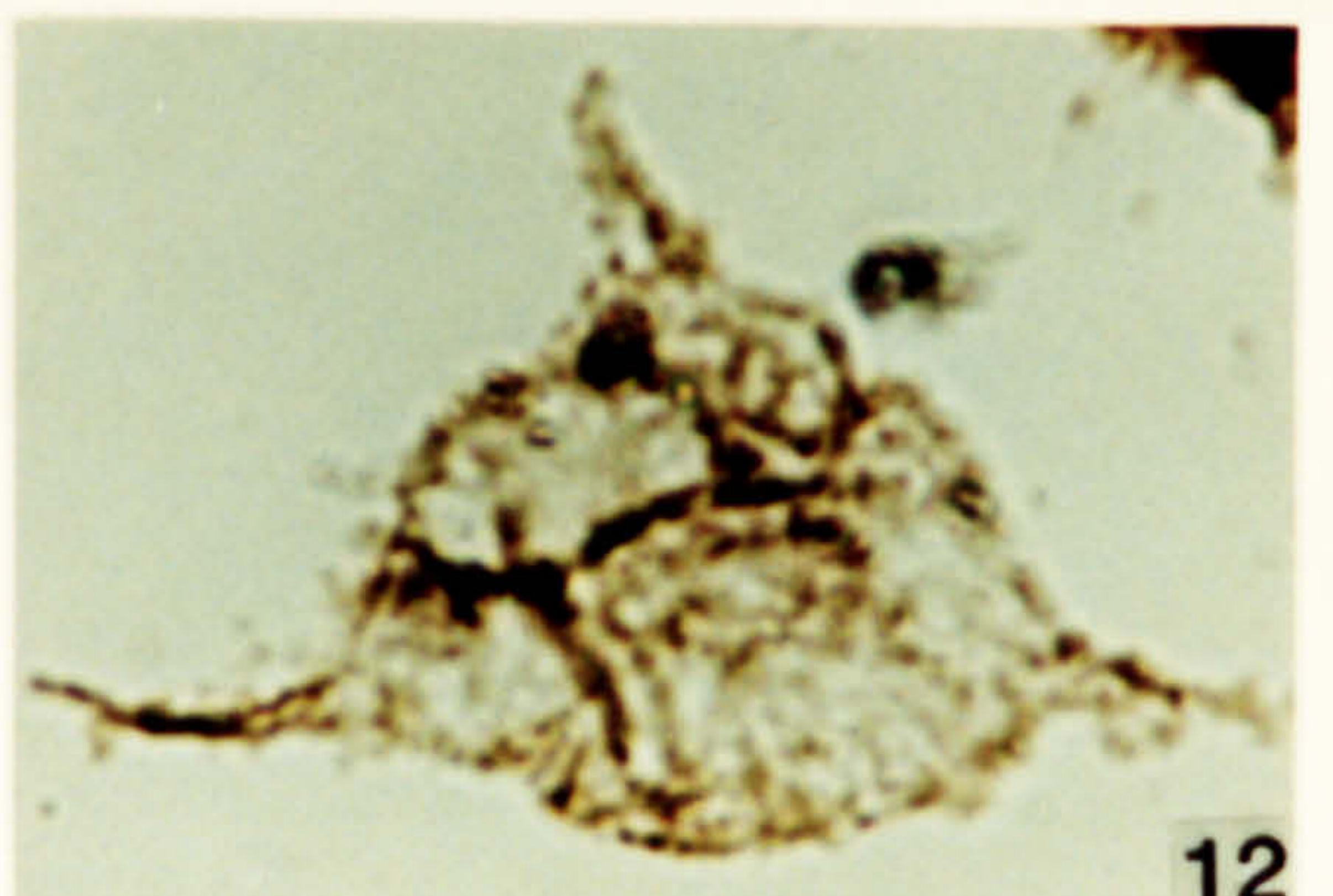
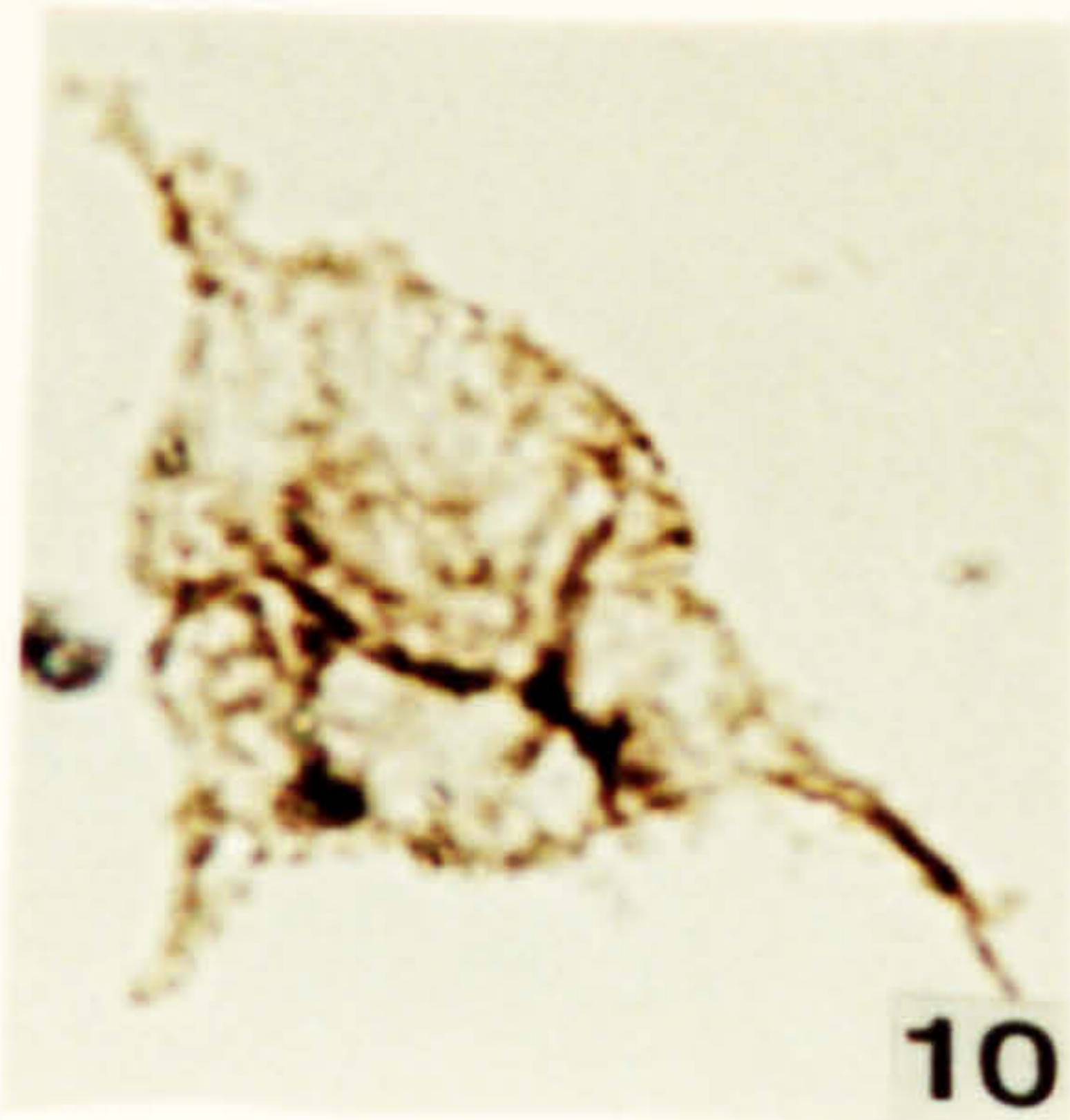
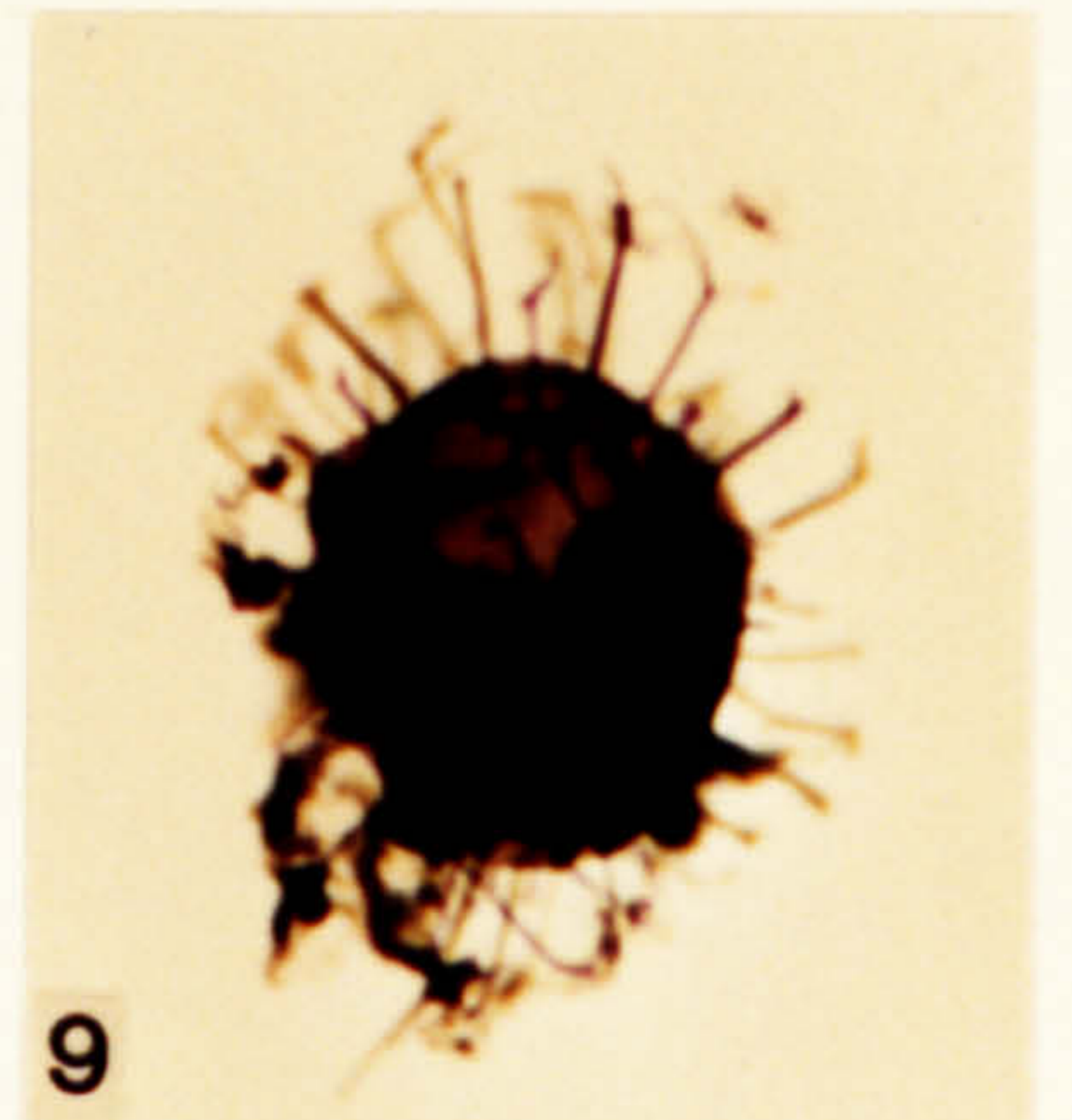
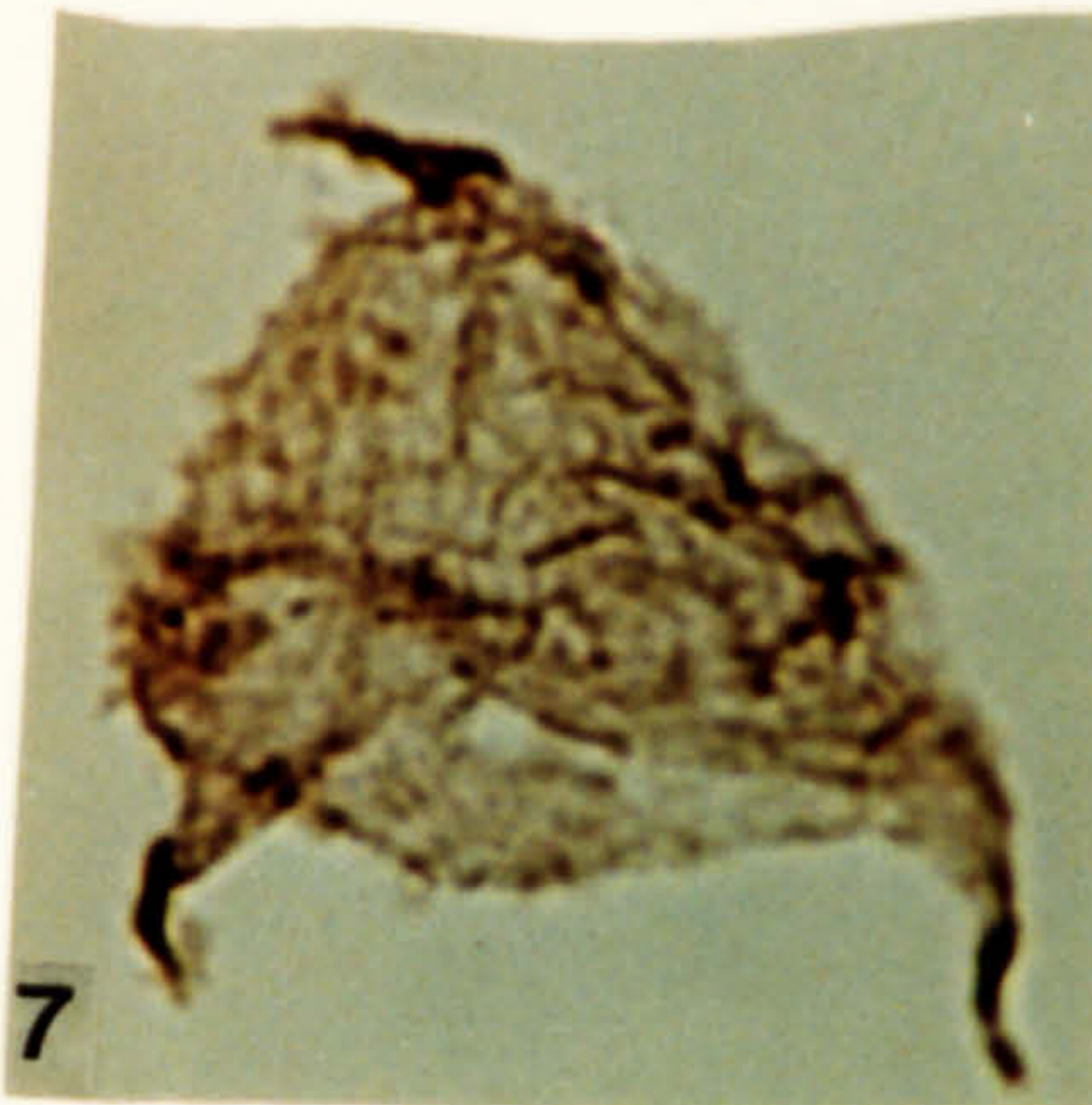
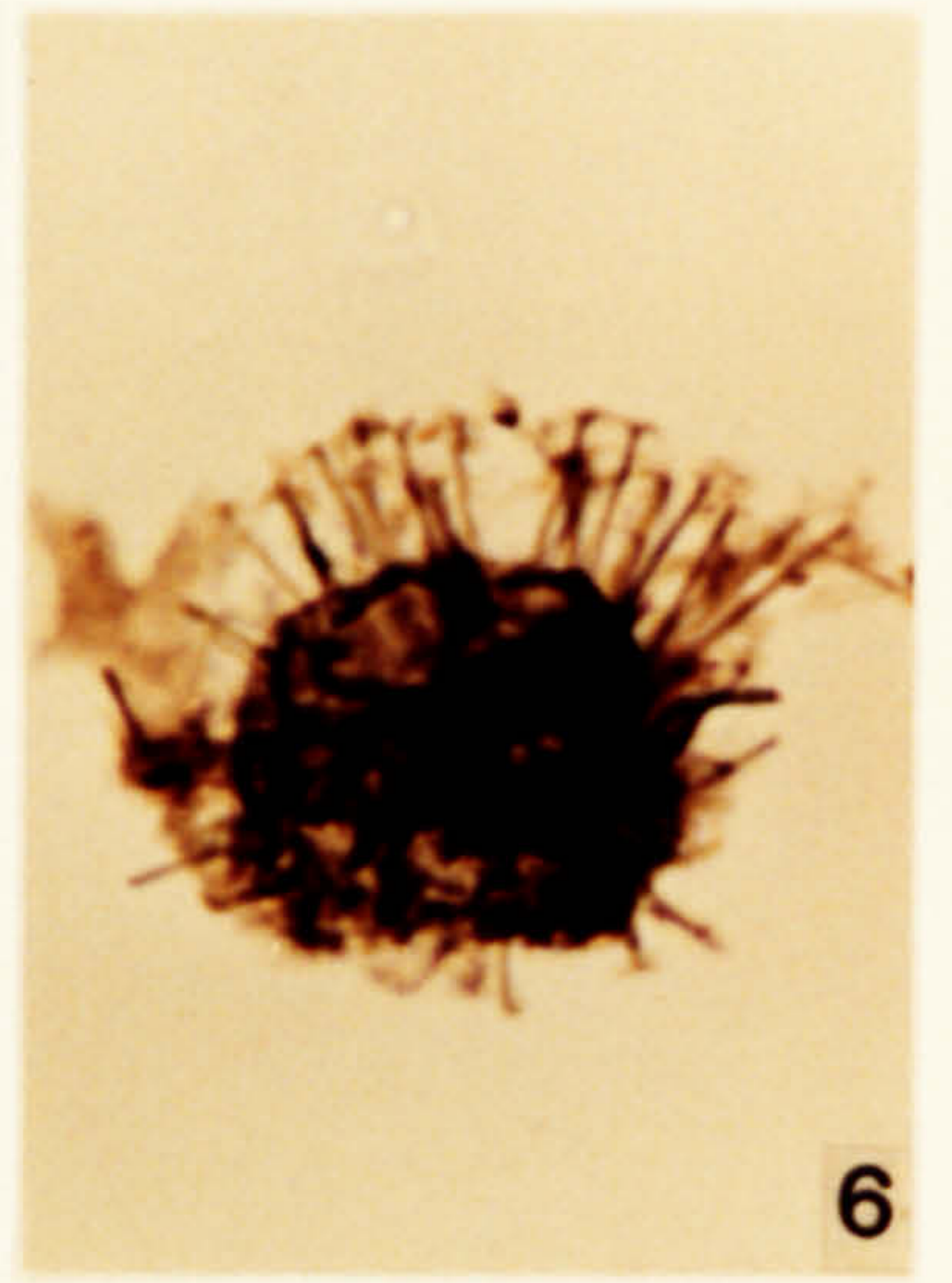
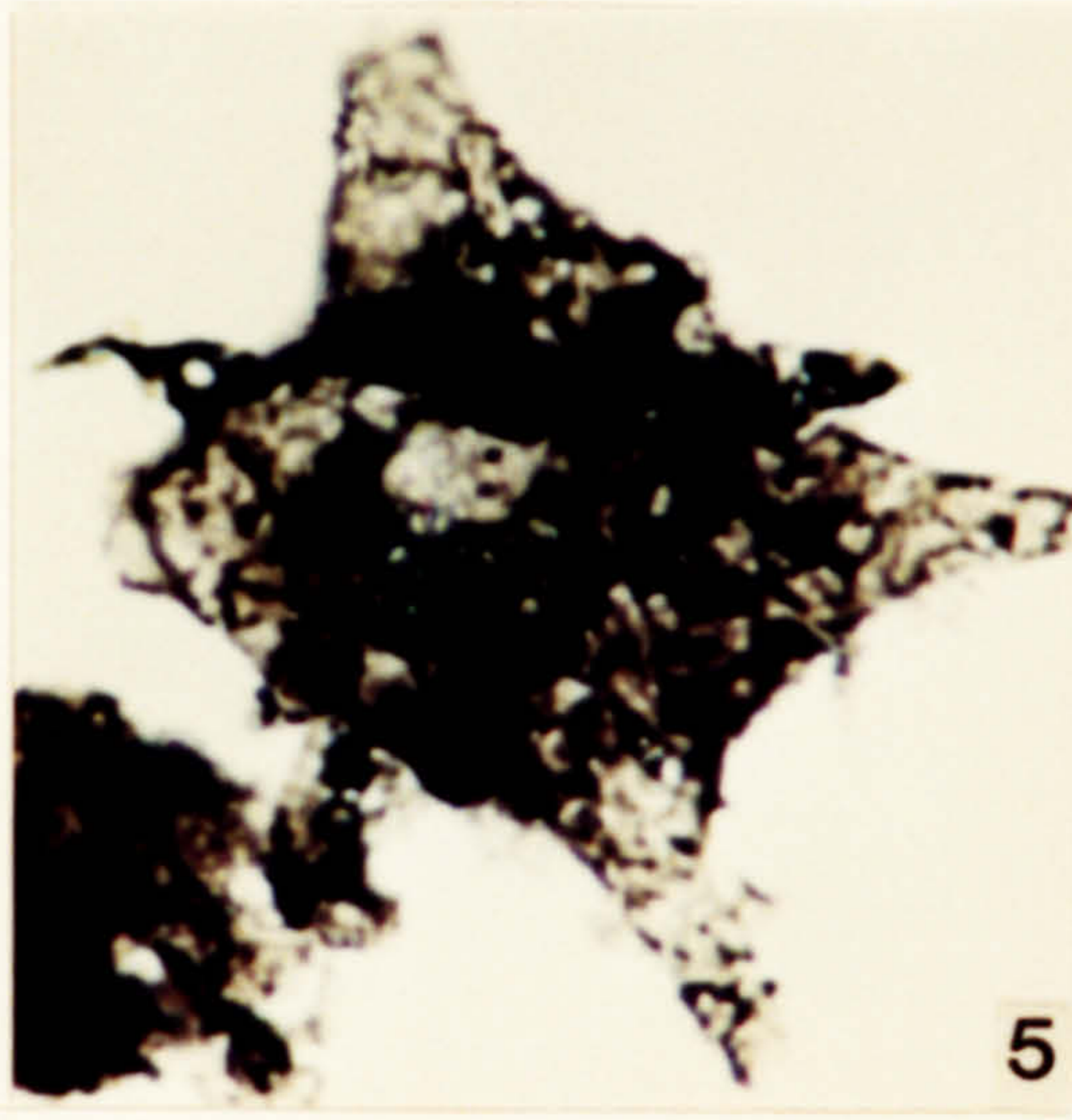
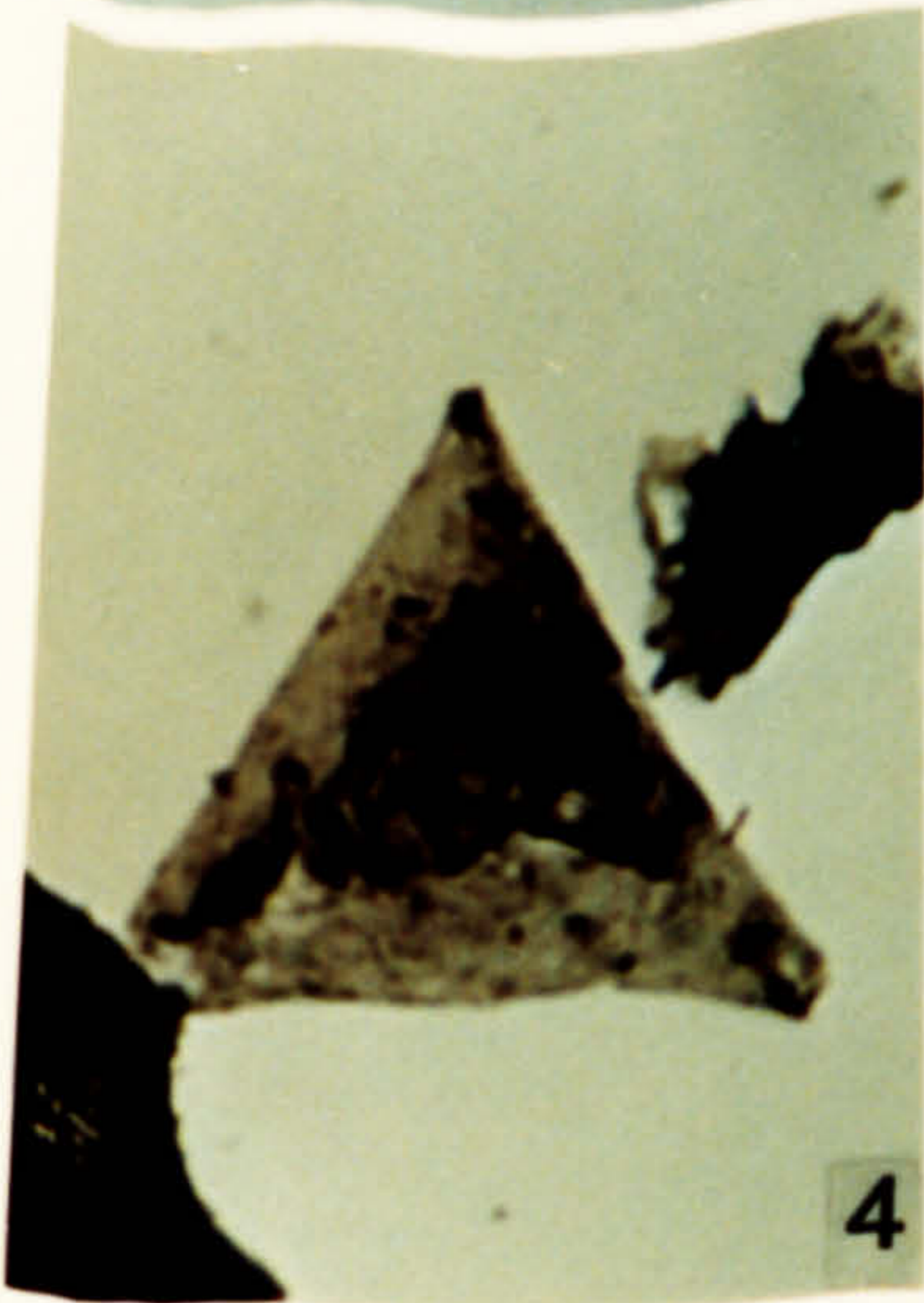
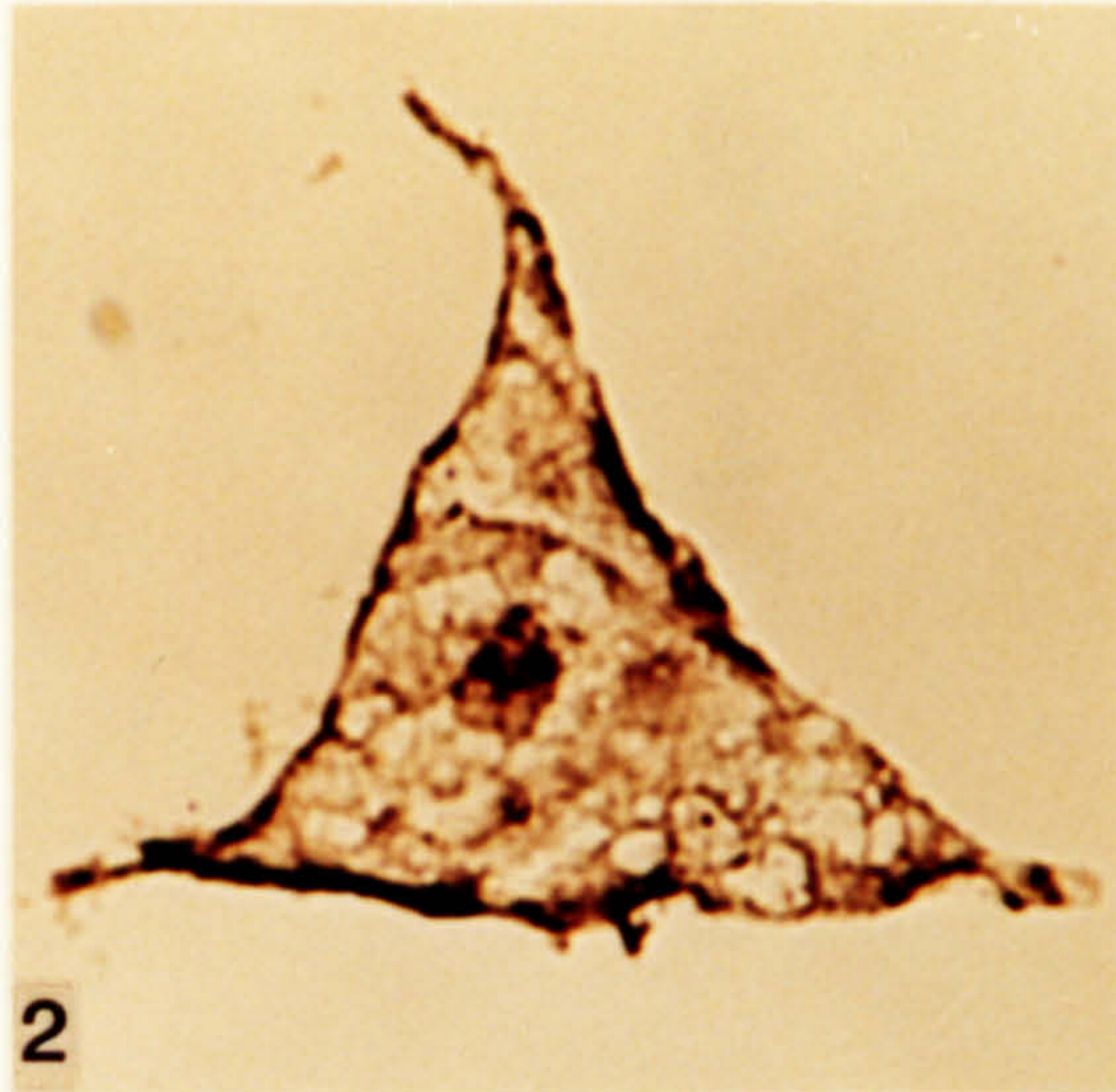
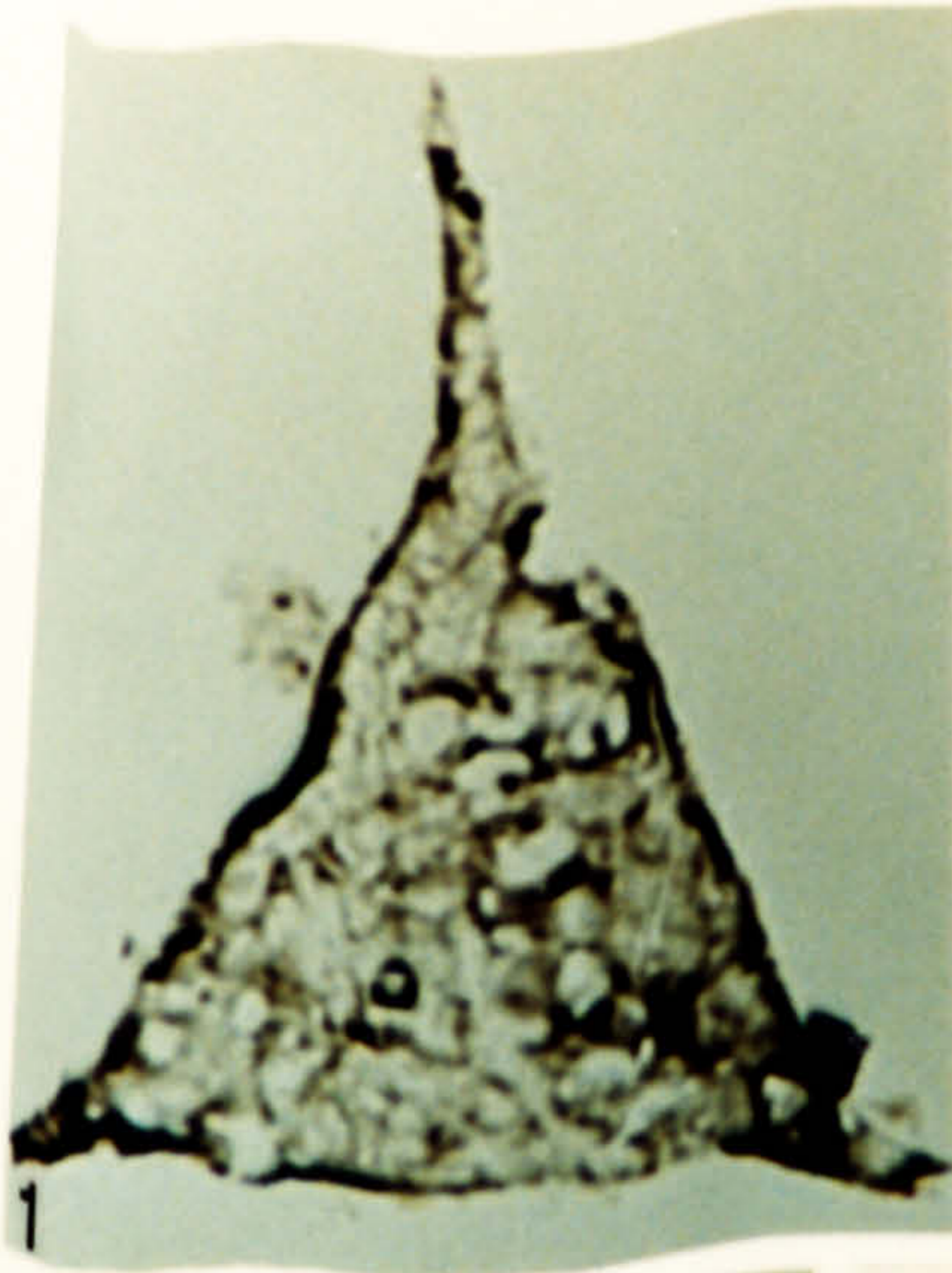
1. *Veryhachium reductum* (Deunff) Downie & Sarjeant 1965. DW 351, 2-1, F38\1.
2. *Veryhachium trisulcum* var. *venutum* Deunff 1959. DW 353, FS-2, C10\2.
3. *Veryhachium* sp. 4. DW 353, 1-2, J29\3.
4. *Veryhachium* sp. 4. DW 353, 1-2, E9\1.
5. *Veryhachium reductum* (Deunff) Downie & Sarjeant 1965. DW 360, FS-1, K11\1.
6. *Veryhachium reductum* (Deunff) Downie & Sarjeant 1965. DW 359, 2-2, J37\3.
7. *Veryhachium* sp. 4. DW 349, FS-1, R8\1.
8. *Veryhachium subglobosum* Jardine *et al.* 1974. DW 359, 2-1, M19\3.
9. *Veryhachium* sp. 4. DW 354, 1-1, N38\3.
10. *Veryhachium subglobosum* Jardine *et al.* 1974. DW 359, 2-1, C24\2.
11. *Veryhachium subglobosum* Jardine *et al.* 1974. DW 415, 2-1, M24\1.
12. *Veryhachium subglobosum* Jardine *et al.* 1974. DW 359, 2-1, C44\2.



**Plate 45.**

Acritarchs from the Ktaoua Formation, Caradoc-early Ashgill in age.

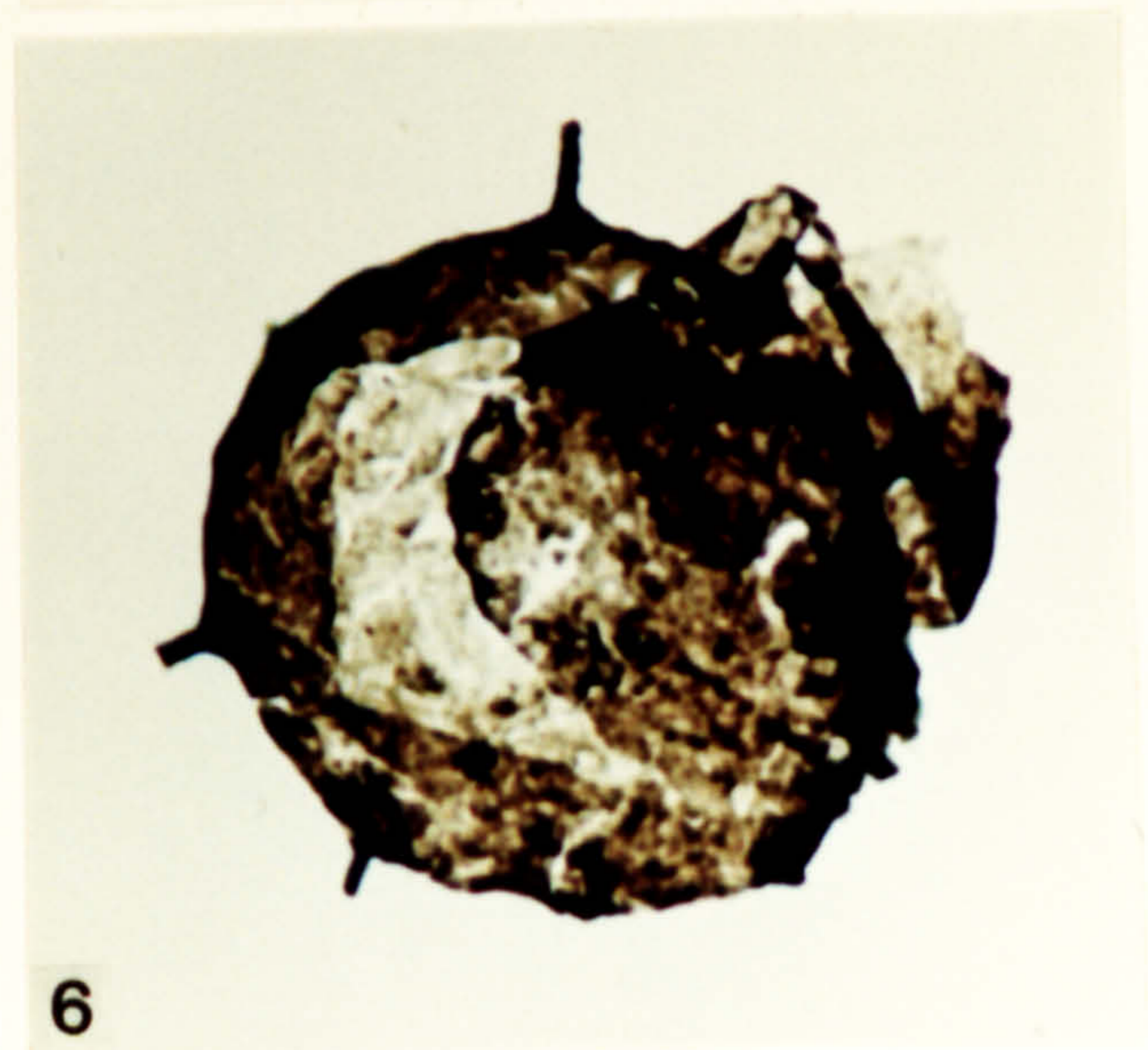
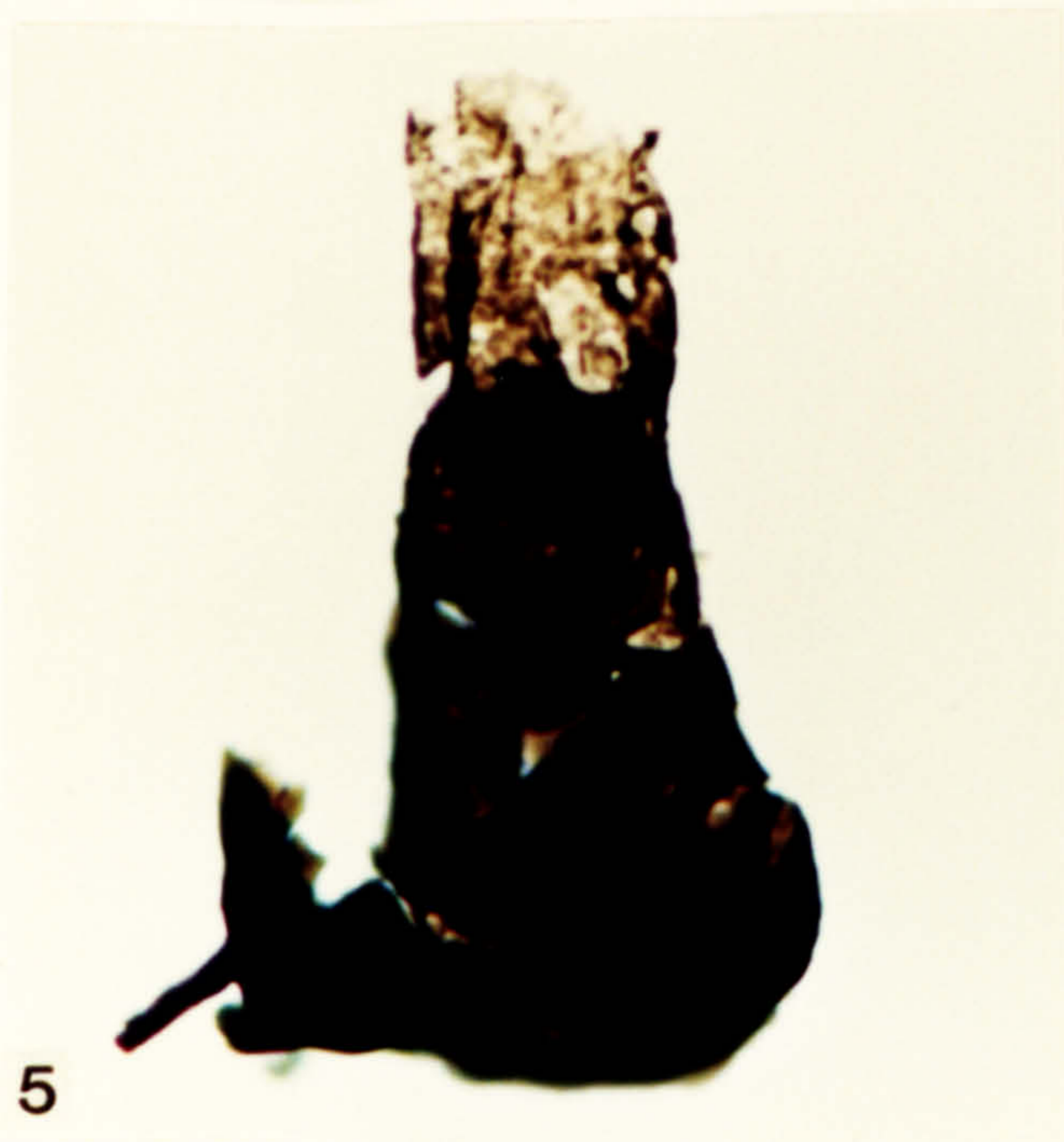
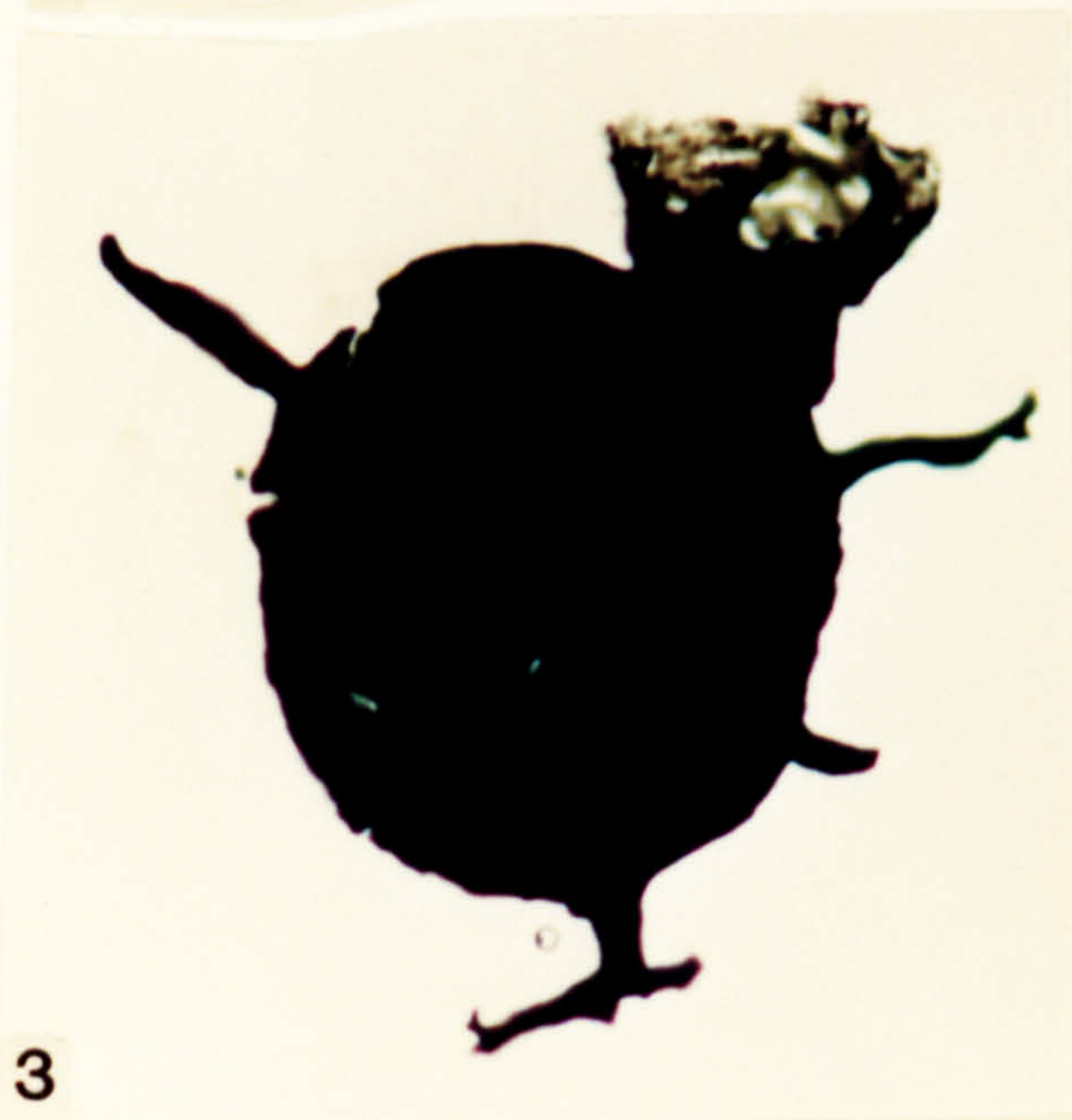
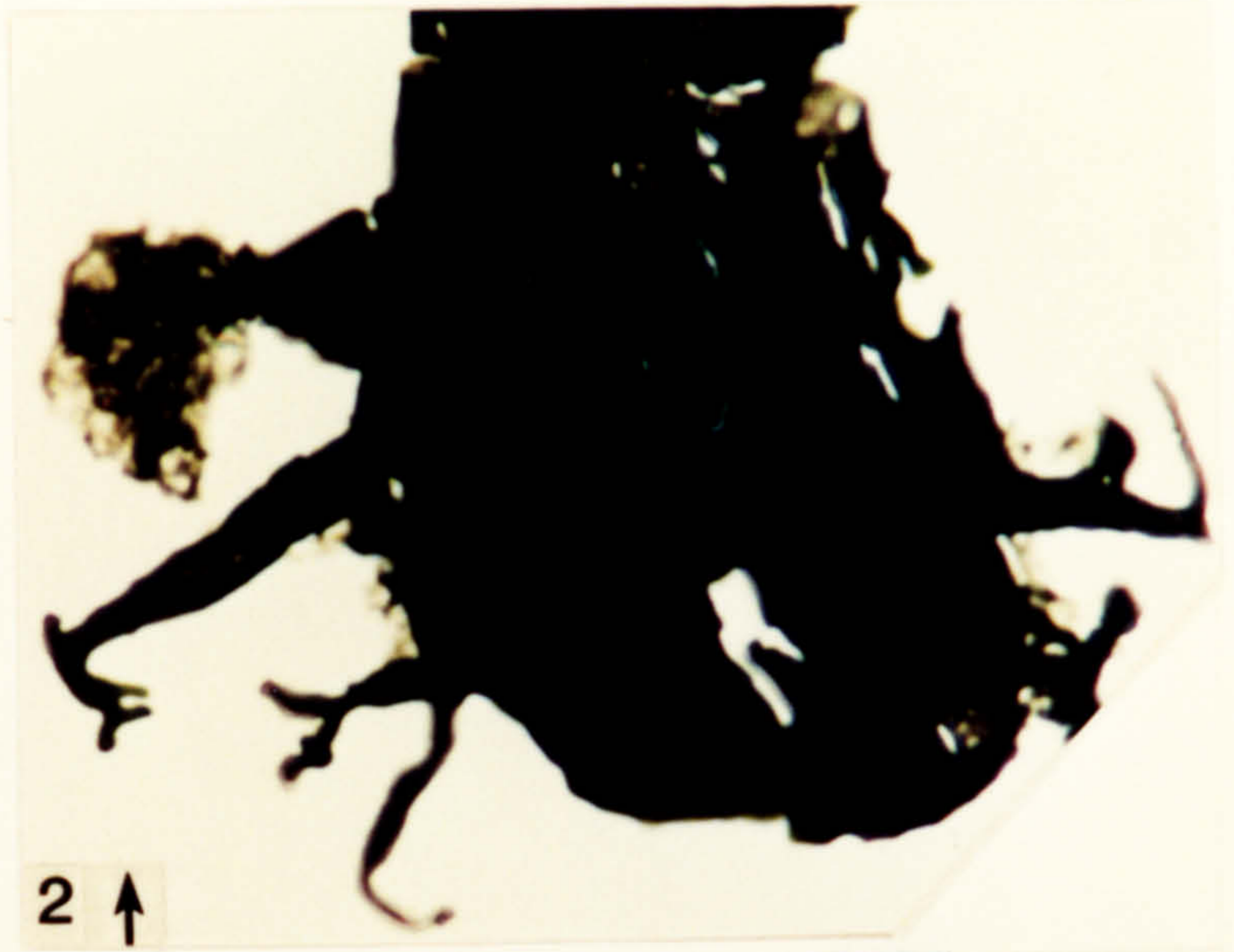
1. *Veryhachium* sp. 1. DW 359, FS-3, O41\3.
2. *Veryhachium* sp. 1. DW 353, FS-2, M40\-. .
3. *Veryhachium* sp. 3. DW 349, FS-1, T29\1.
4. *Veryhachium* sp. 5. DW 361, 1-1, T13\4.
5. *Villosacapsula horridum* (Paris & Deunff) comb. nov. DW 415, 2-1, J20\2.
6. Acritarch Form C. DW 349, 2-1, B10\1.
7. *Villosacapsula setosapellicum* (Loeblich) Loeblich & Tappan 1976. DW 337, FS-1, H5\1.
8. *Villosacapsula setosapellicum* (Loeblich) Loeblich & Tappan 1976. DW 337, FS-1, K17\1.
9. Acritarch Form C. DW 337, 1-1, P36\4.
10. *Villosacapsula setosapellicum* (Loeblich) Loeblich & Tappan 1976. DW 337, FS-1, F32\4.
11. *Villosacapsula setosapellicum* (Loeblich) Loeblich & Tappan 1976. DW 337, FS-1, Q16\4.
12. *Villosacapsula setosapellicum* (Loeblich) Loeblich & Tappan 1976. DW 353, 1-2, M19\1.



**Plate 46.**

Chitinozoa from the Ktaoua Formation, Caradoc-early Ashgill in age.

1. *Ancyrochitina ancyrea* (Eisenack) Eisenack 1955. DW 359, 2-1, O46\4.
2. *Ancyrochitina ancyrea* (Eisenack) Eisenack 1955. DW 359, 2-1, O46\4, X920.
3. *Ancyrochitina ancyrea* (Eisenack) Eisenack 1955. DW 359, 2-1, D18\1.
4. *Ancyrochitina* sp. DW 359, 2-1, G39\3.
5. *Ancyrochitina* sp. DW 359, FS-7, D28\4.
6. *Ancyrochitina* sp. DW 359, FS-7, G40\3.



**Plate 47.**

Chitinozoa from the Ktaoua Formation, Caradoc-early Ashgill in age.

1. *Belonechitina capitata* (Eisenack) Paris 1981. DW 336, FS-1, Q12\2.
2. *Belonechitina capitata* (Eisenack) Paris 1981. DW 335, FS-1, Q16\4.
3. *Belonechitina capitata* (Eisenack) Paris 1981. DW 336, FS-1 53um, L15\3.
4. *Belonechitina capitata* (Eisenack) Paris 1981. DW 336, FS-1 53um, H16\1.
5. *Belonechitina micracantha* (Eisenack 1931). DW 337, FS-1, P45\3.
6. *Belonechitina micracantha* subsp. *microcantha* (Eisenack 1959). DW 359, 2-1, U20\4.
7. *Belonechitina micracantha* subsp. *microcantha* (Eisenack 1959). DW 351, FS-3, P35\1, X230.
8. *Belonechitina micracantha* subsp. *microcantha* (Eisenack 1959). DW 415, 2-2, W28\4, X230.



1



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6



↓ 7



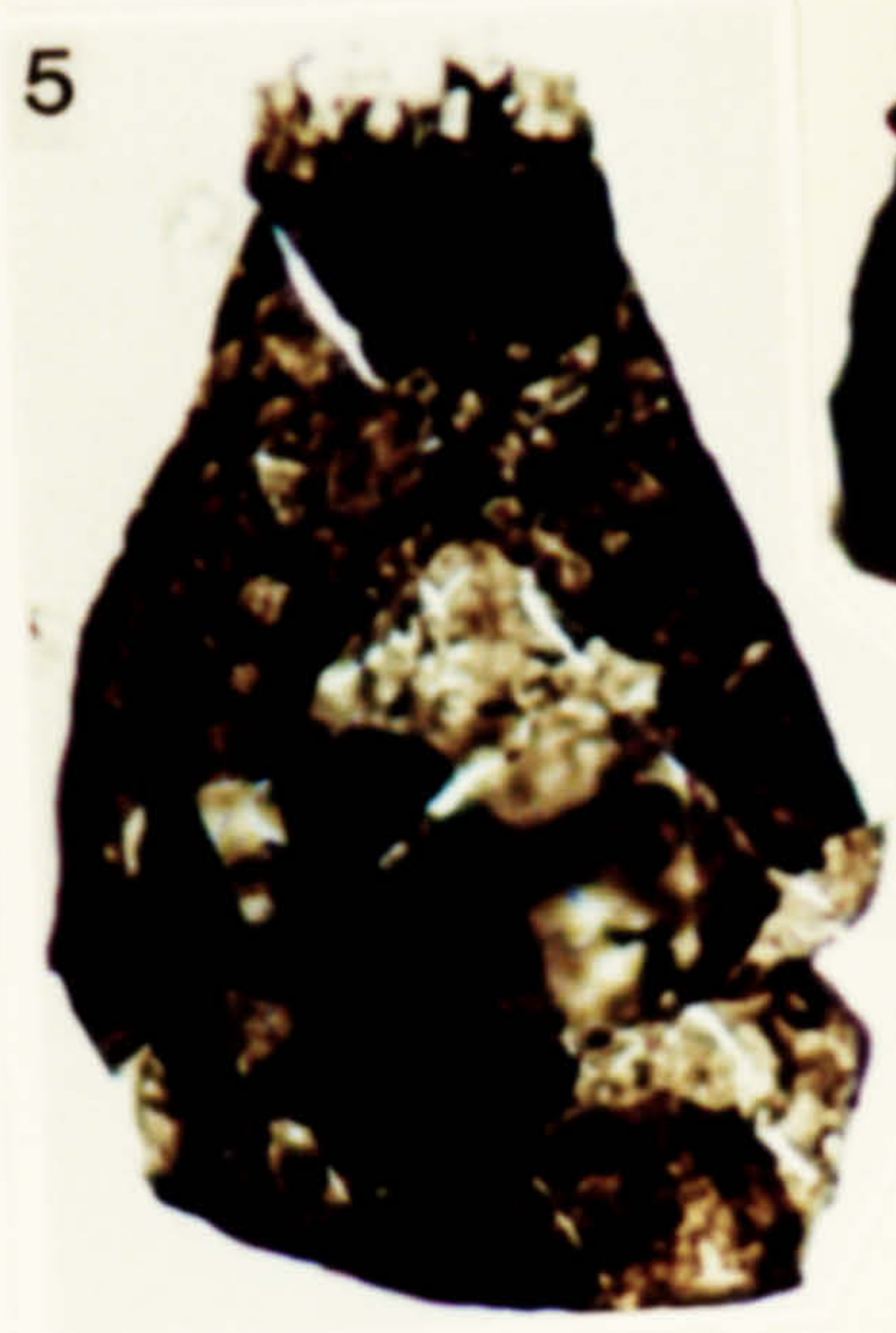
↓ 8



**Plate 48.**

Chitinozoa from the Ktaoua Formation, Caradoc-early Ashgill in age.

1. *Belonechitina micracantha* (Eisenack 1931). DW 336, FS-1, L22\1.
2. *Conochitina* sp. DW 349, 2-2, D43\1
3. *Cyathochitina?* sp. DW 337, FS-1, D41\1.
4. *Cyathochitina?* sp. DW 336, FS-1, N17\4.
5. *Conochitina* cf. *lepida* Jenkins 1967. DW 359, FS-7, R15\1.
6. *Belonechitina micracantha* (Eisenack 1931). DW 336, FS-1, R17\3.
7. *Cyathochitina dispar* Benoit & Taugourdeau 1961. DW 415, 2-1, G43\2, X230.
8. *Cyathochitina?* sp. DW 336, FS-1, V33\3.



**Plate 49.**

**Chitinozoa from the Ktaoua Formation, Caradoc-early Ashgill in age.**

1. *Cyathochitina dispar* Benoit & Taugourdeau 1961. DW 362, FS-1, P20\.
2. *Cyathochitina campanulaeformis* (Eisenack) Eisenack 1955. DW 415, 2-2, N37\1, X230.
3. *Desmochitina minor* forma *cocca* Eisenack 1931, DW 336, FS-1, Q42\1.
4. *Desmochitina minor* Eisenack 1931. DW 337, 1-1, K18\3.
5. *Cyathochitina campanulaeformis* (Eisenack) Eisenack 1955. DW 415, 2-2, U19\3, X230.
6. *Desmochitina piriformis* Laufeld 1967. DW 354, 1-1, T11\2.
7. *Lagenochitina* cf. *deunffi* Paris 1974. DW 415, 2-1, J23\1.
8. *Jenkinochitina vulgaris* (Jenkins) Paris 1981. DW 359, FS-6, J33\4.
9. *Jenkinochitina vulgaris* (Jenkins) Paris 1981. DW 351, 2-1, R14\2.
10. *Lagenochitina* cf. *deunffi* Paris 1974. DW 415, 2-1, J9\2.



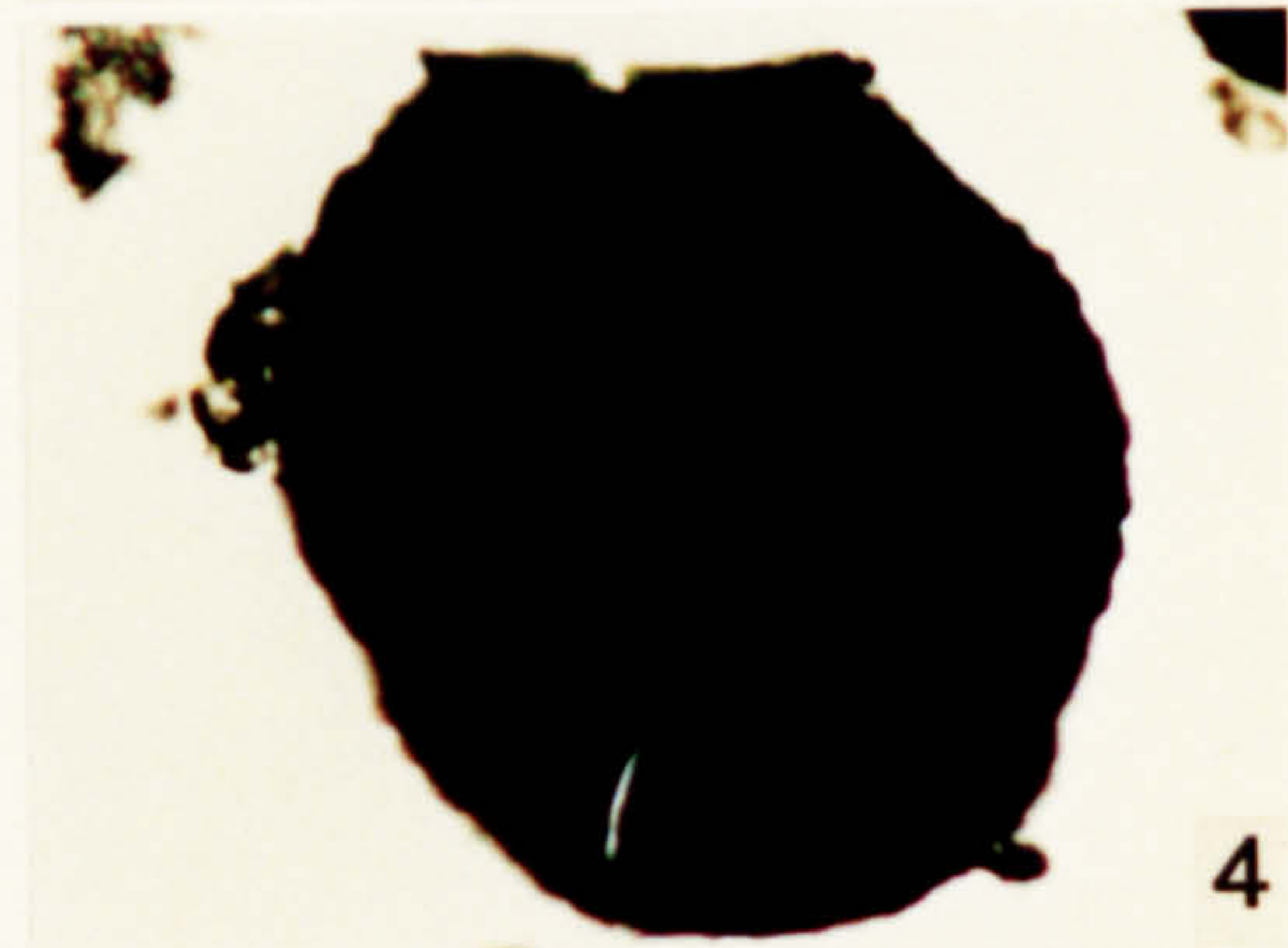
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2



3



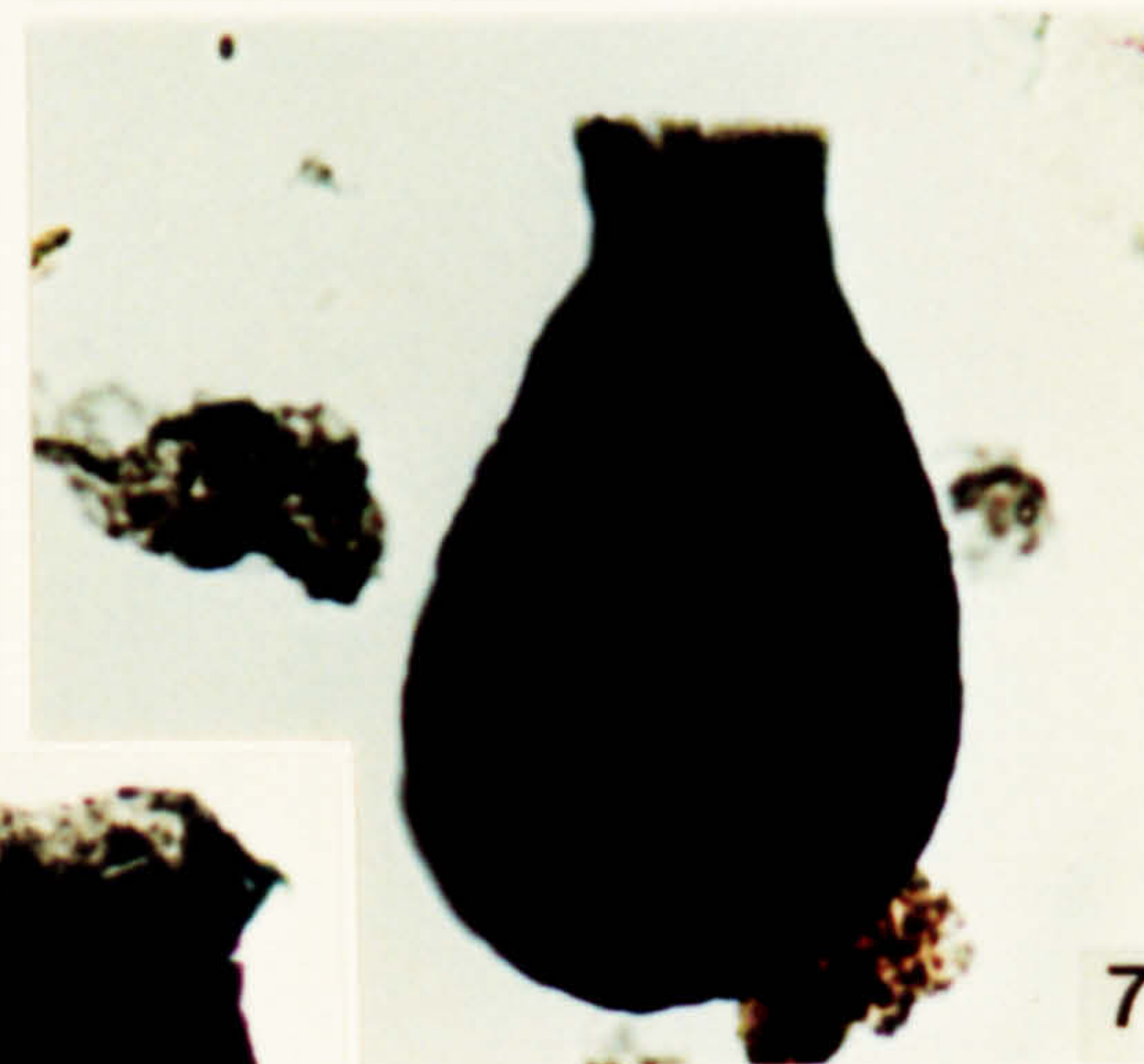
4



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**Plate 50.**

**Chitinozoa from the Ktaoua Formation, Caradoc-early Ashgill in age.**

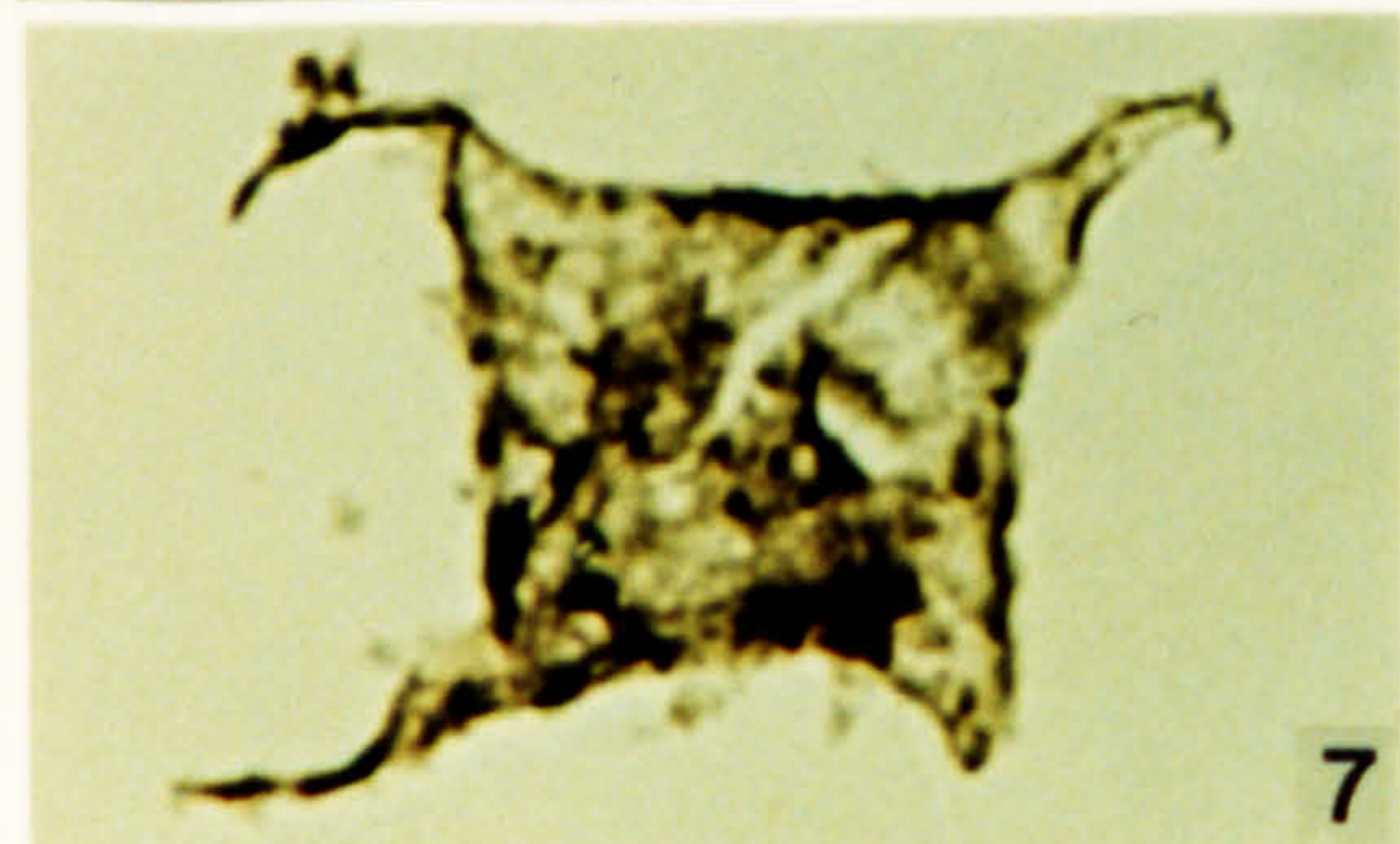
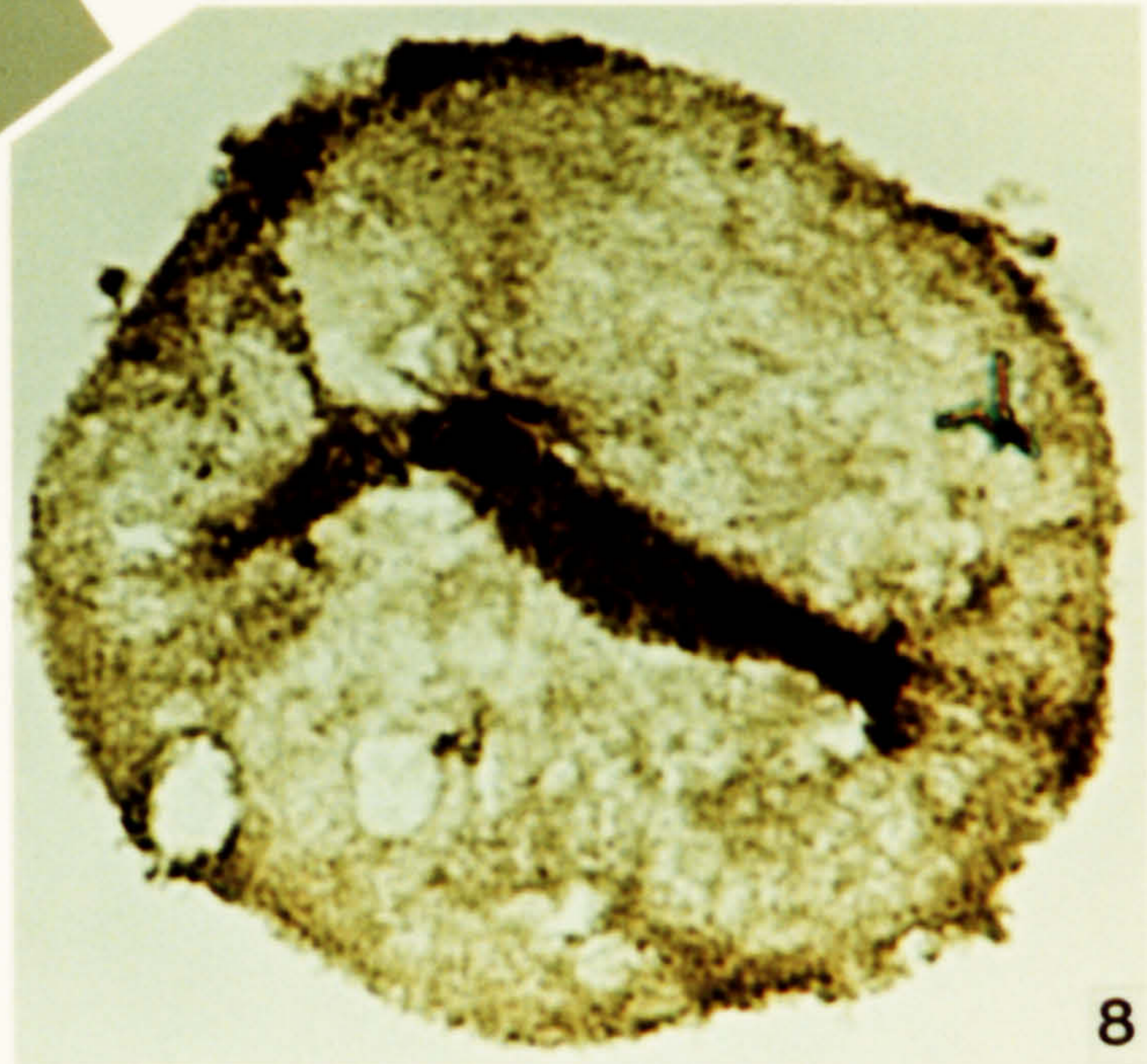
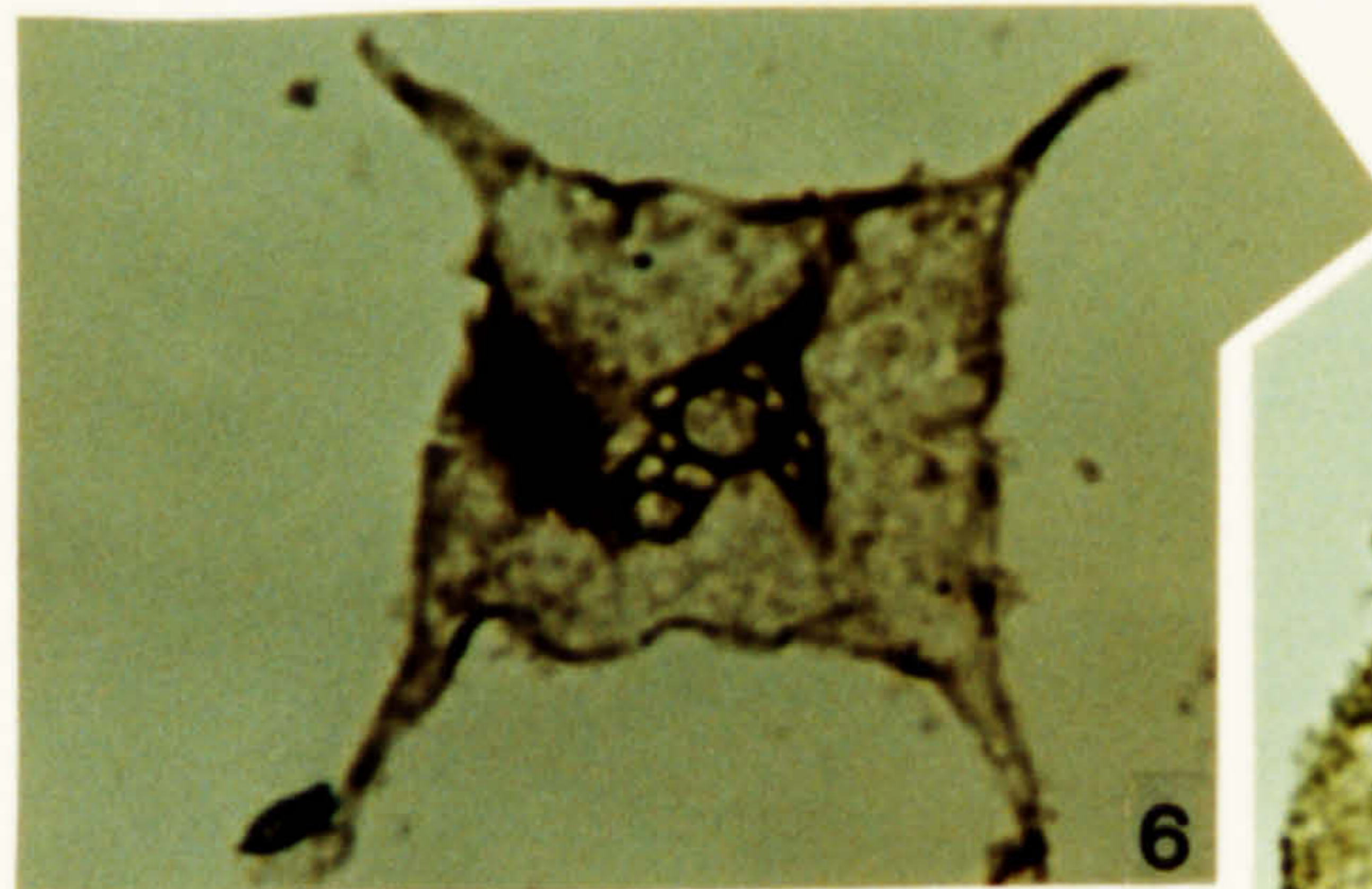
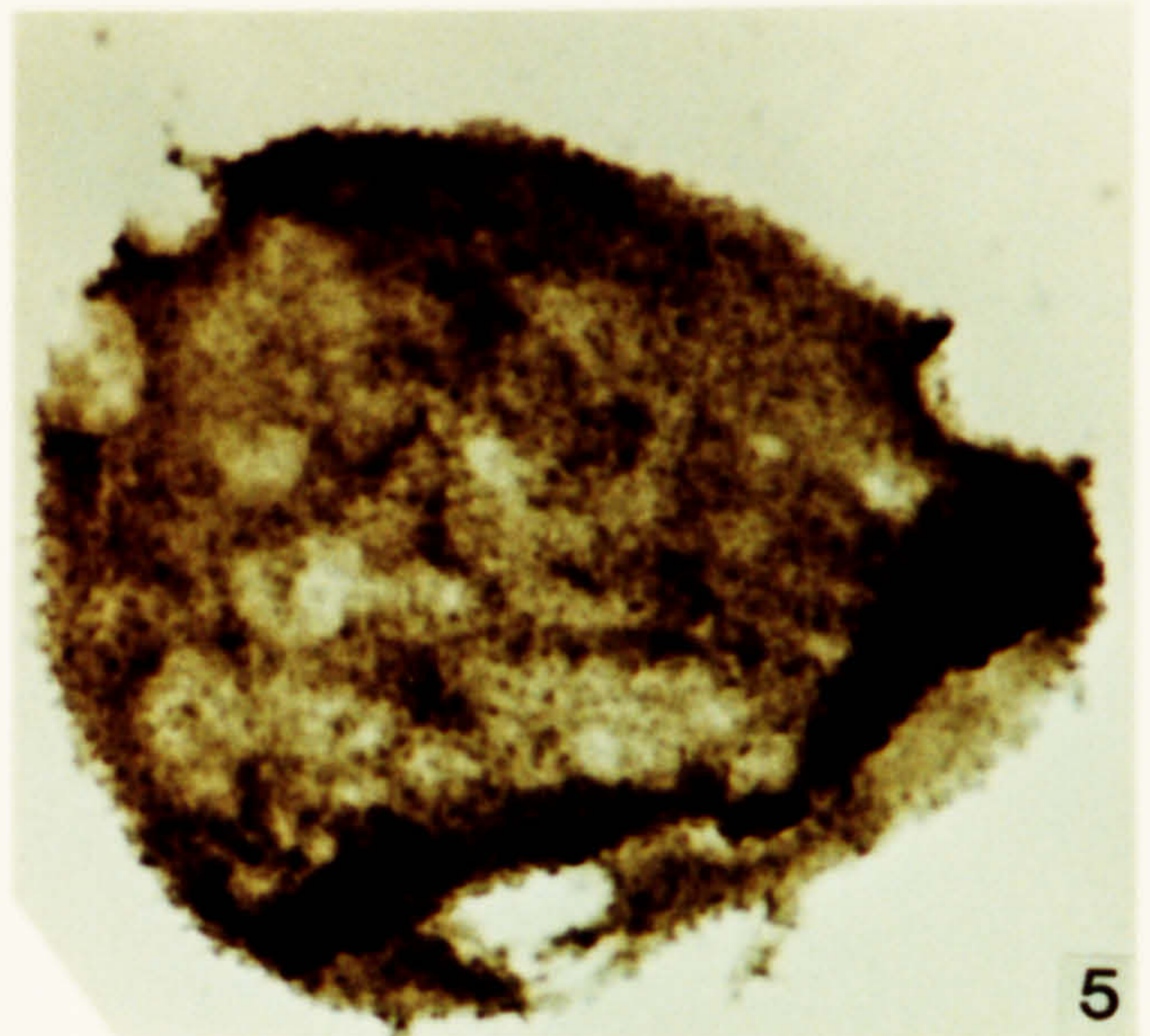
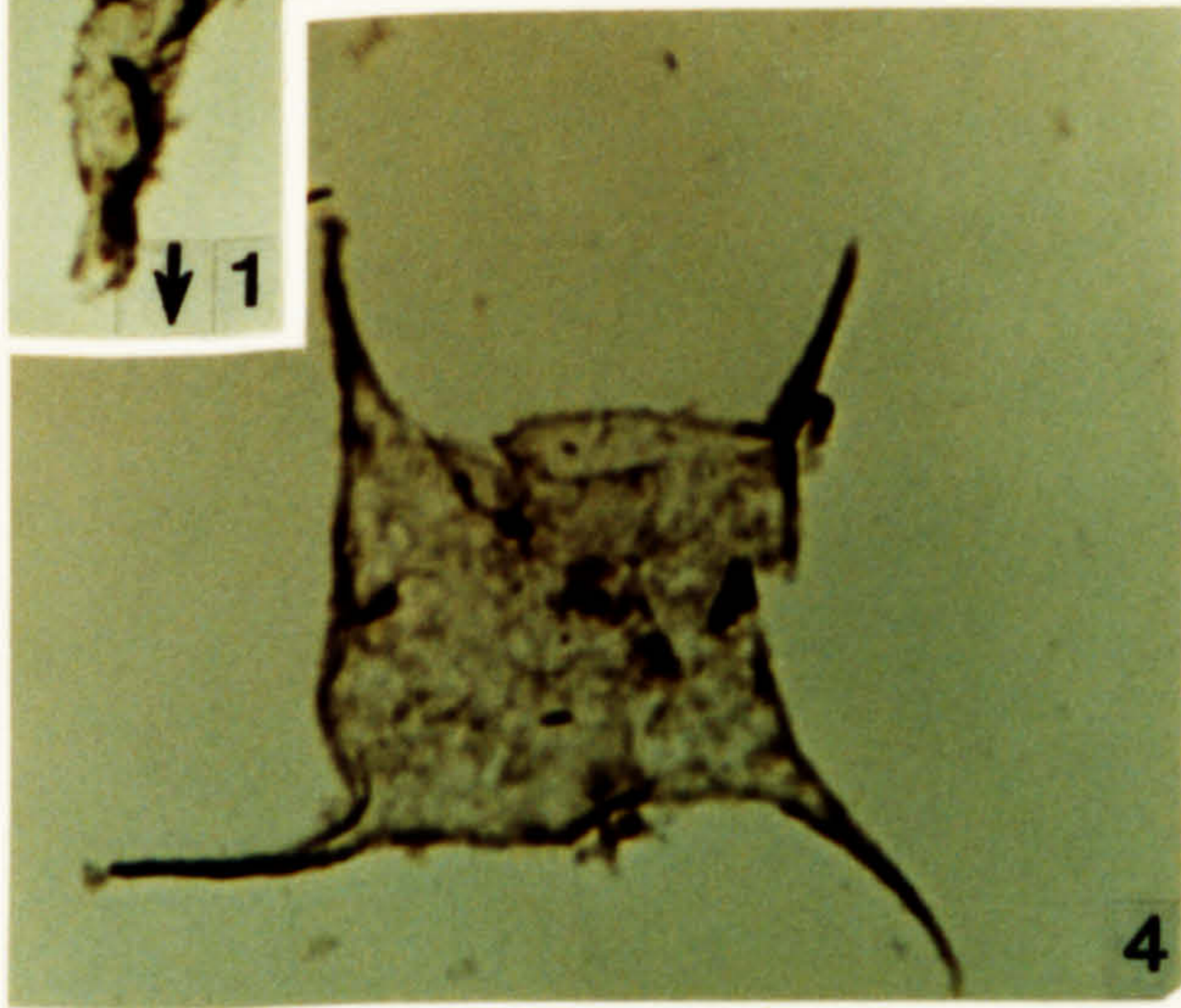
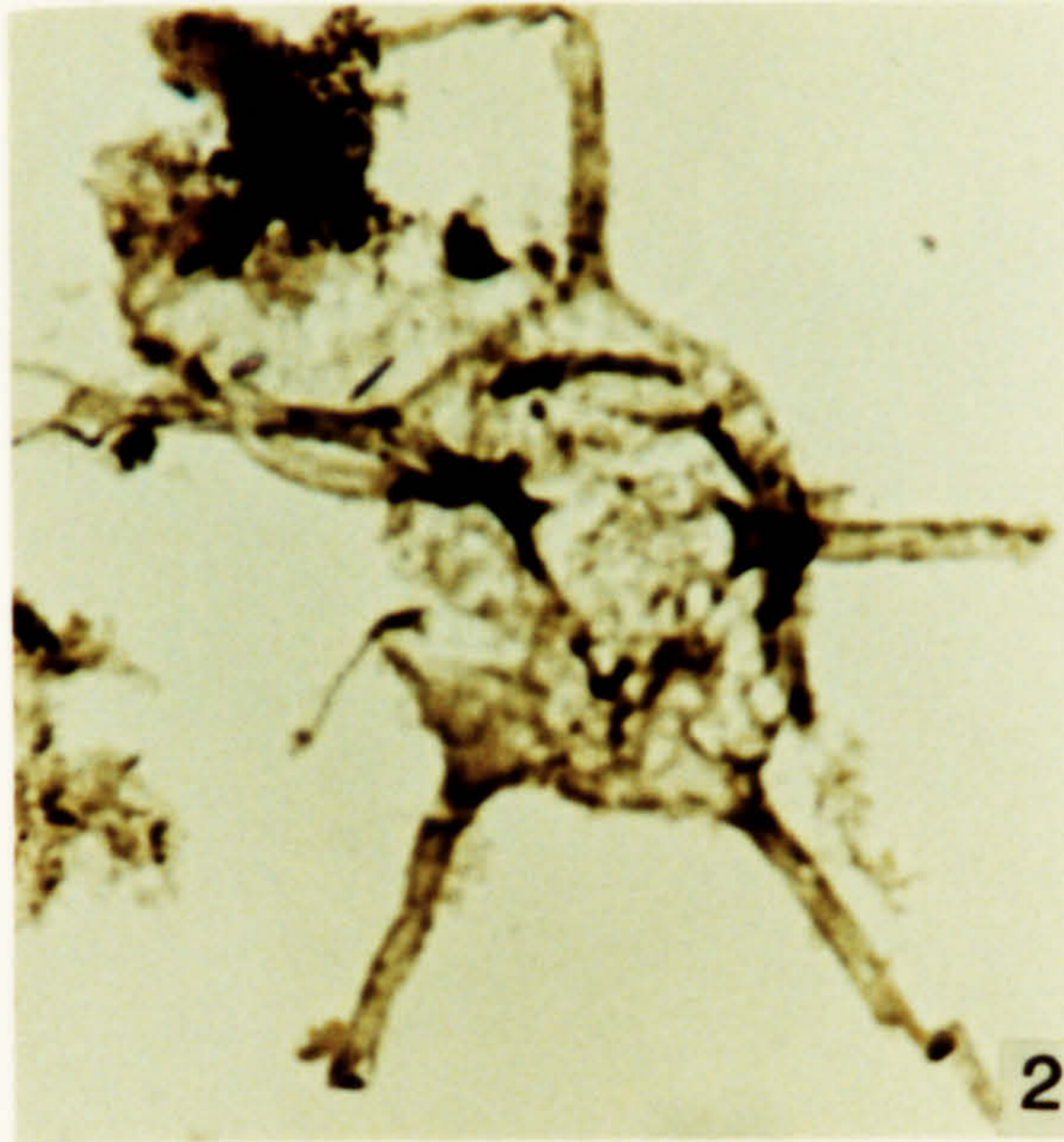
1. *Lagenochitina deunffi* Paris 1974. DW 336, FS-1, N33\2.
2. *Lagenochitina deunffi* Paris 1974. DW 337, 1-1, D11\1.
3. *Sphaerochitina sphaerocephala* (Eisenack) Eisenack 1955. DW 336, FS-1, U26\3.
4. *Sphaerochitina sphaerocephala* (Eisenack) Eisenack 1955. DW 359, FS-7, O45\-..
5. *Lagenochitina deunffi* Paris 1974. DW 337, FS-1, C43\1.
6. *Lagenochitina deunffi* Paris 1974. DW 337, FS-1, J45\-..
7. *Sphaerochitina sphaerocephala* (Eisenack) Eisenack 1955. DW 337, FS-1, C47\3.
8. Chitinozoan Form A. DW 353, FS-2, V32\1.
9. Chitinozoan Form A. DW 353, FS-2, O30\1.



**Plate 51.**

Acritarchs from the Ktaoua Formation, mid-late Ashgill in age.

1. *Leiofusa* sp. DJ 10, FS-1, E10\-, X550.
2. *Diexallophasis* sp. DJ 10, FS-1, F19\1.
3. *Lophosphaeridium?* sp. 9. DJ 10, FS-1, G31\3.
4. *Veryhachium minutum* var. A. DJ 10, FS-1, P11\3.
5. *Lophosphaeridium?* sp. 9. DJ 10, FS-1, J16\3, X550.
6. *Veryhachium minutum* var. A. DJ 10, FS-1, X37\4.
7. *Veryhachium minutum*.var. A. DJ 10, FS-4, P1\1.
8. *Lophosphaeridium?* sp. 9. DJ 10, FS-4, J37\1.

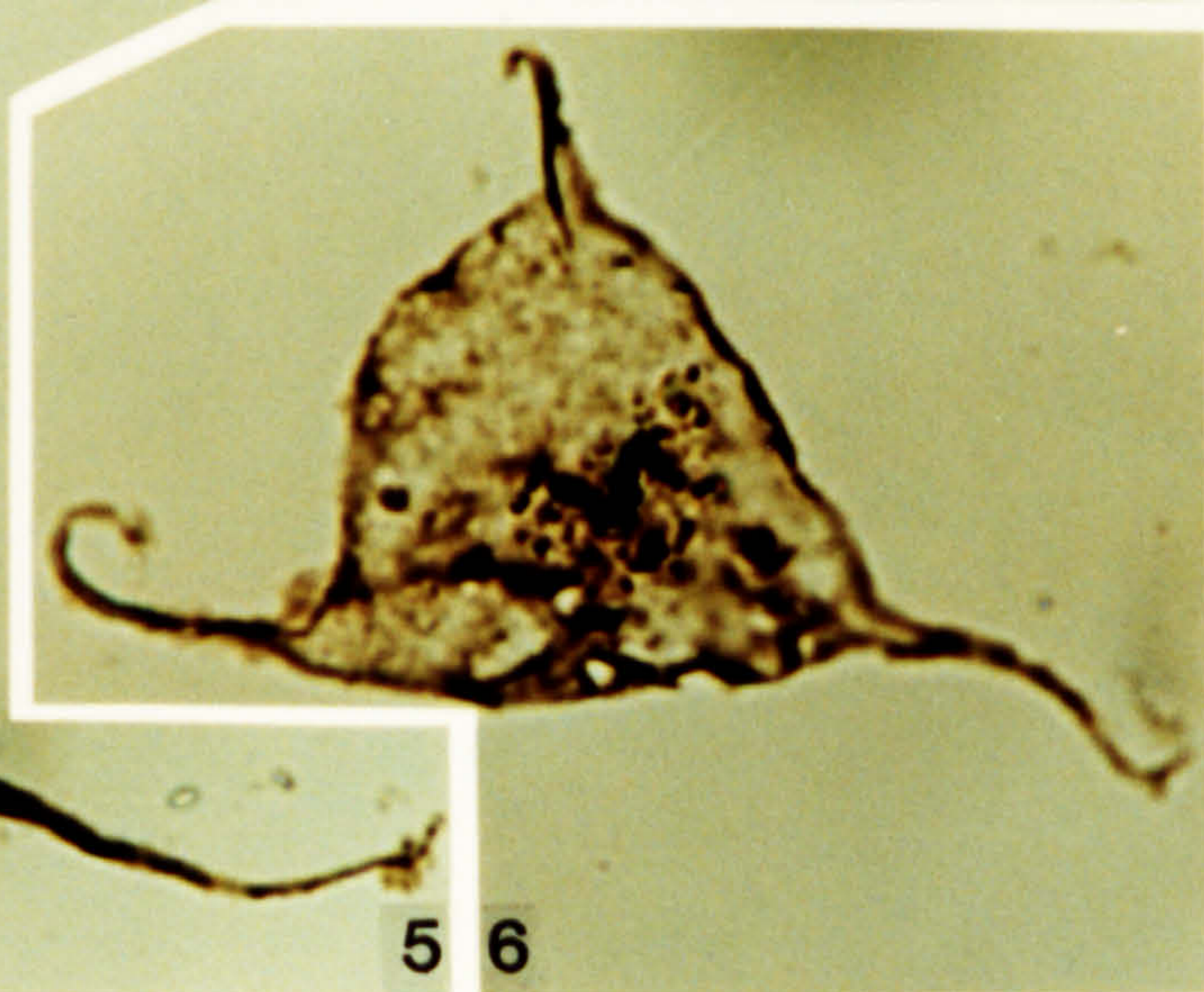
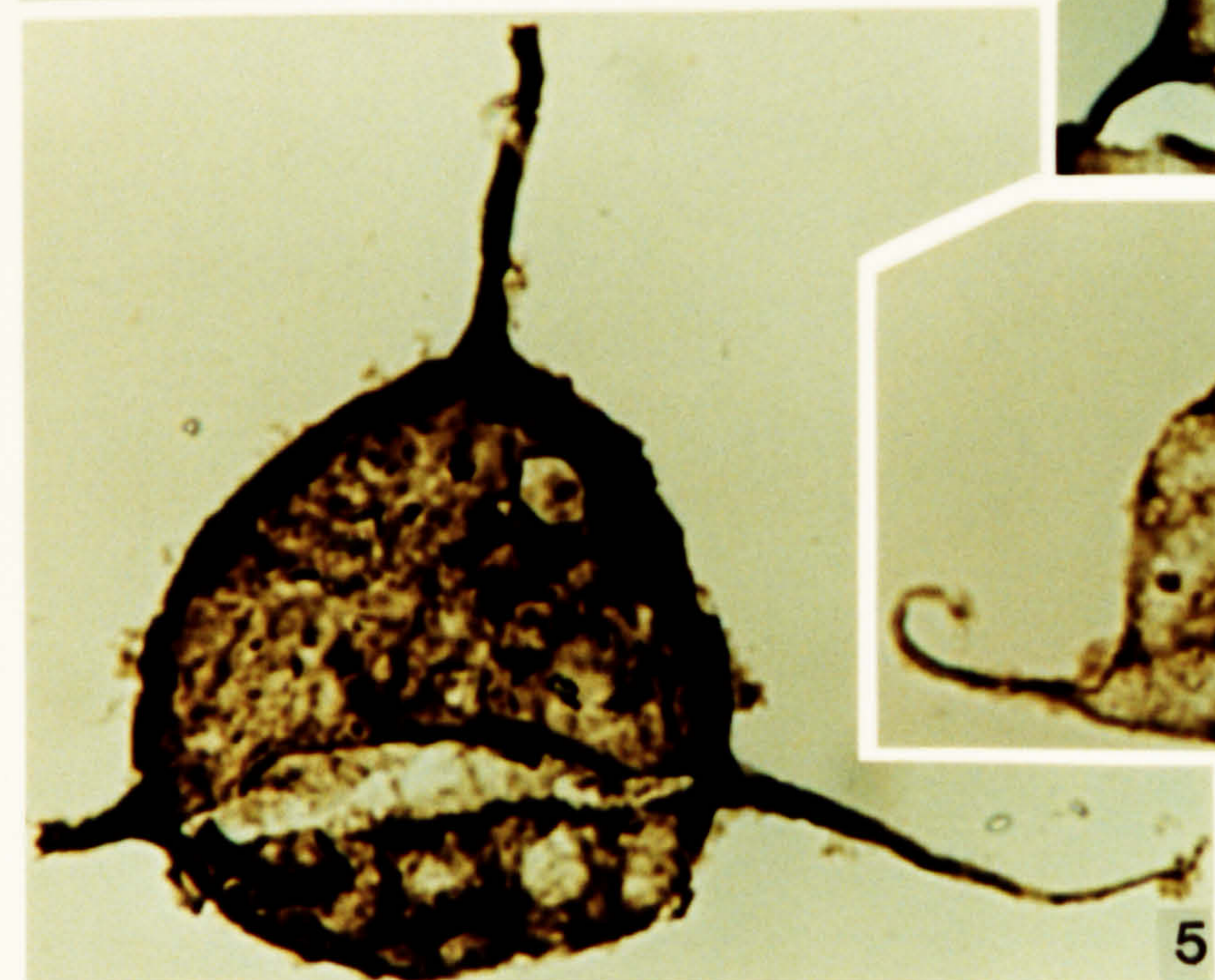
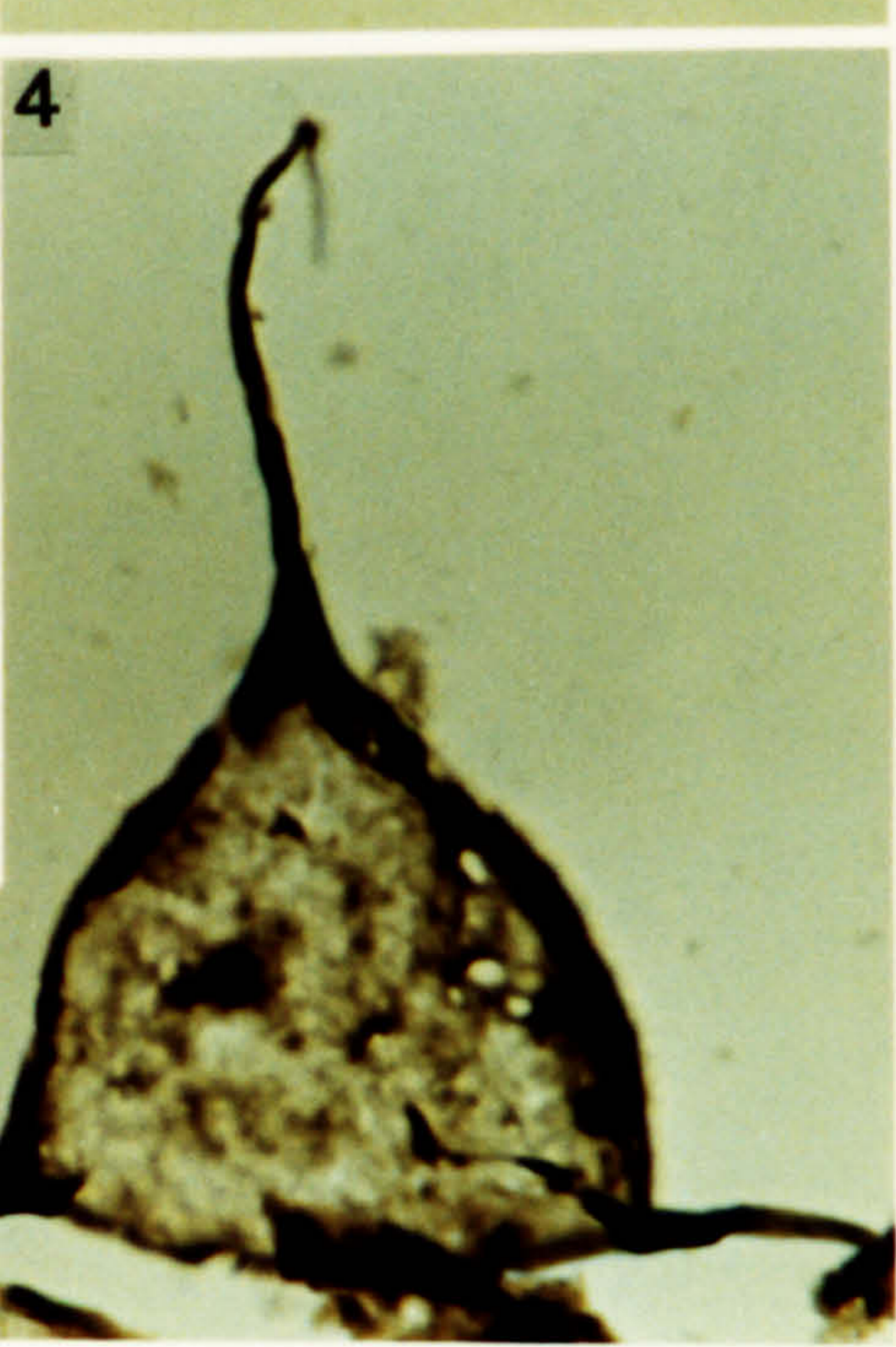
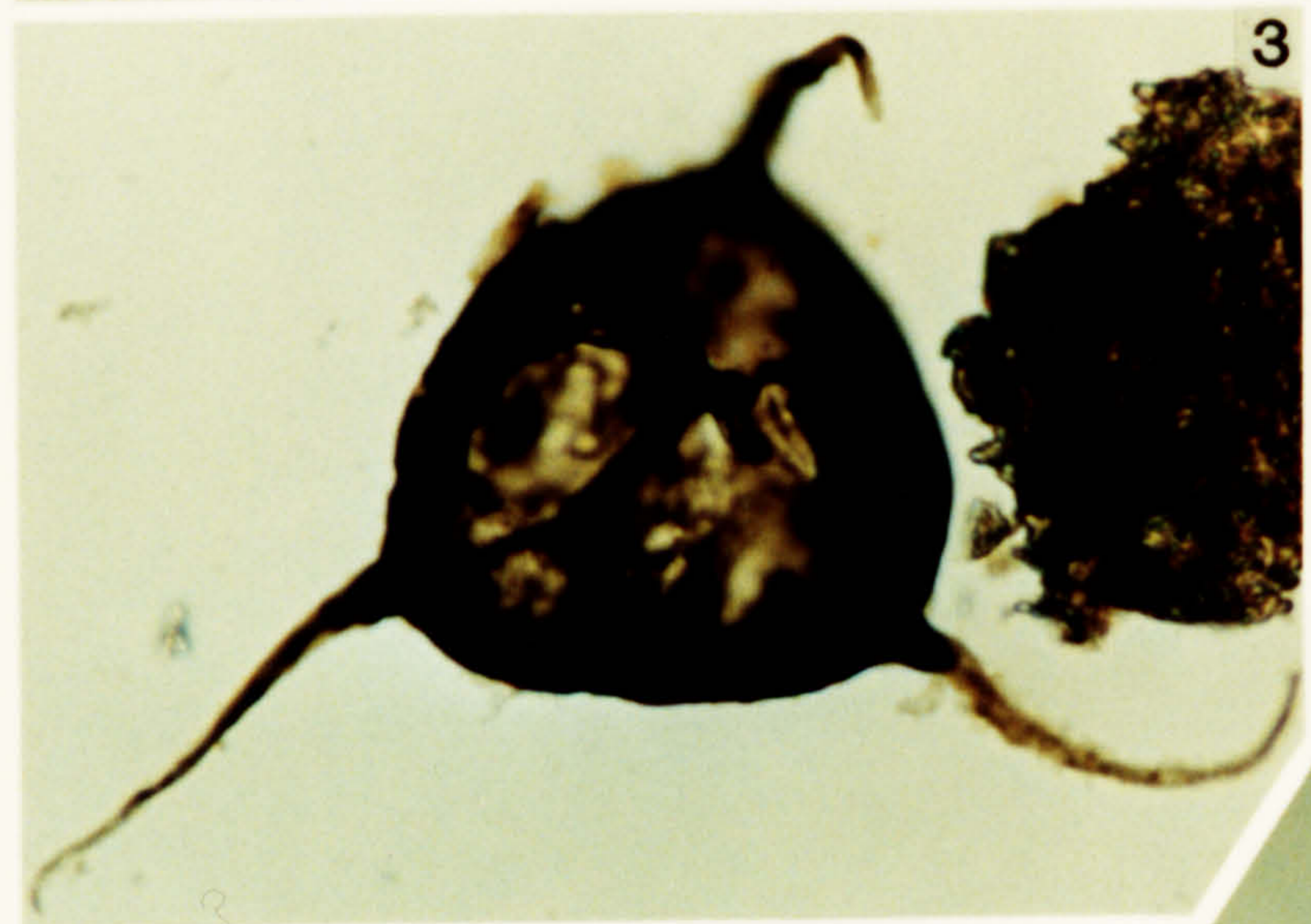




**Plate 52.**

Acritarchs from the Ktaoua Formation, mid-late Ashgill in age.

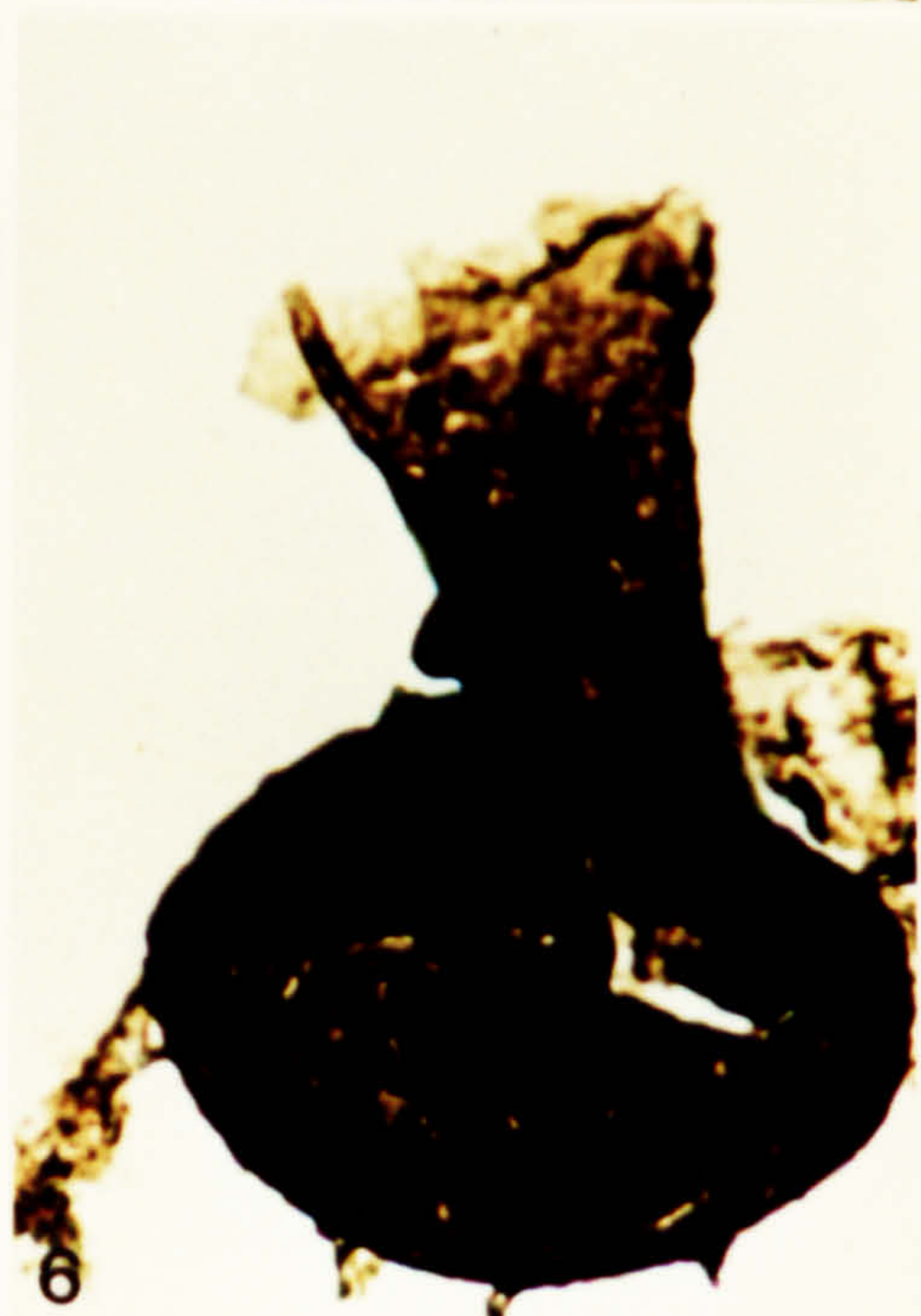
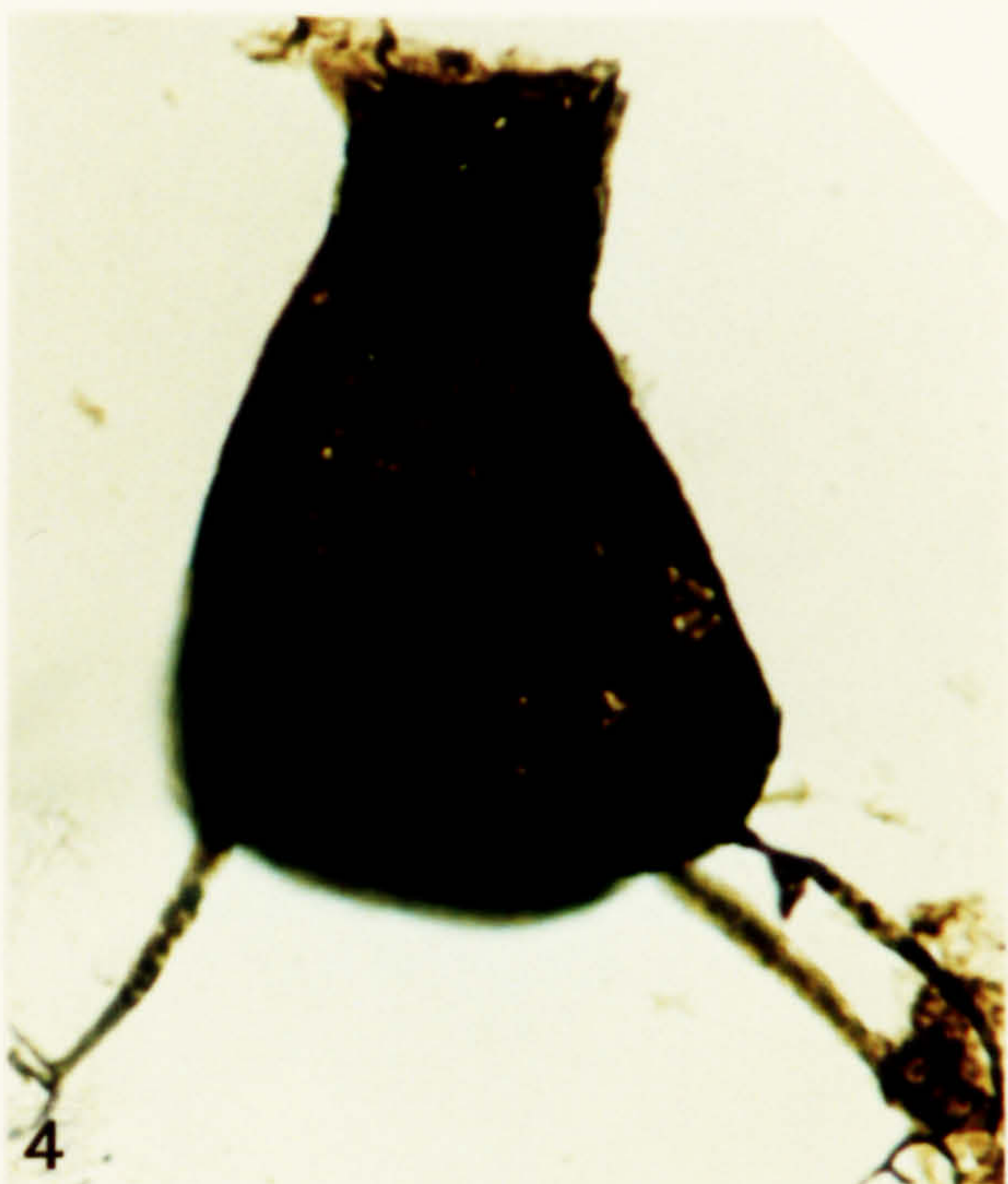
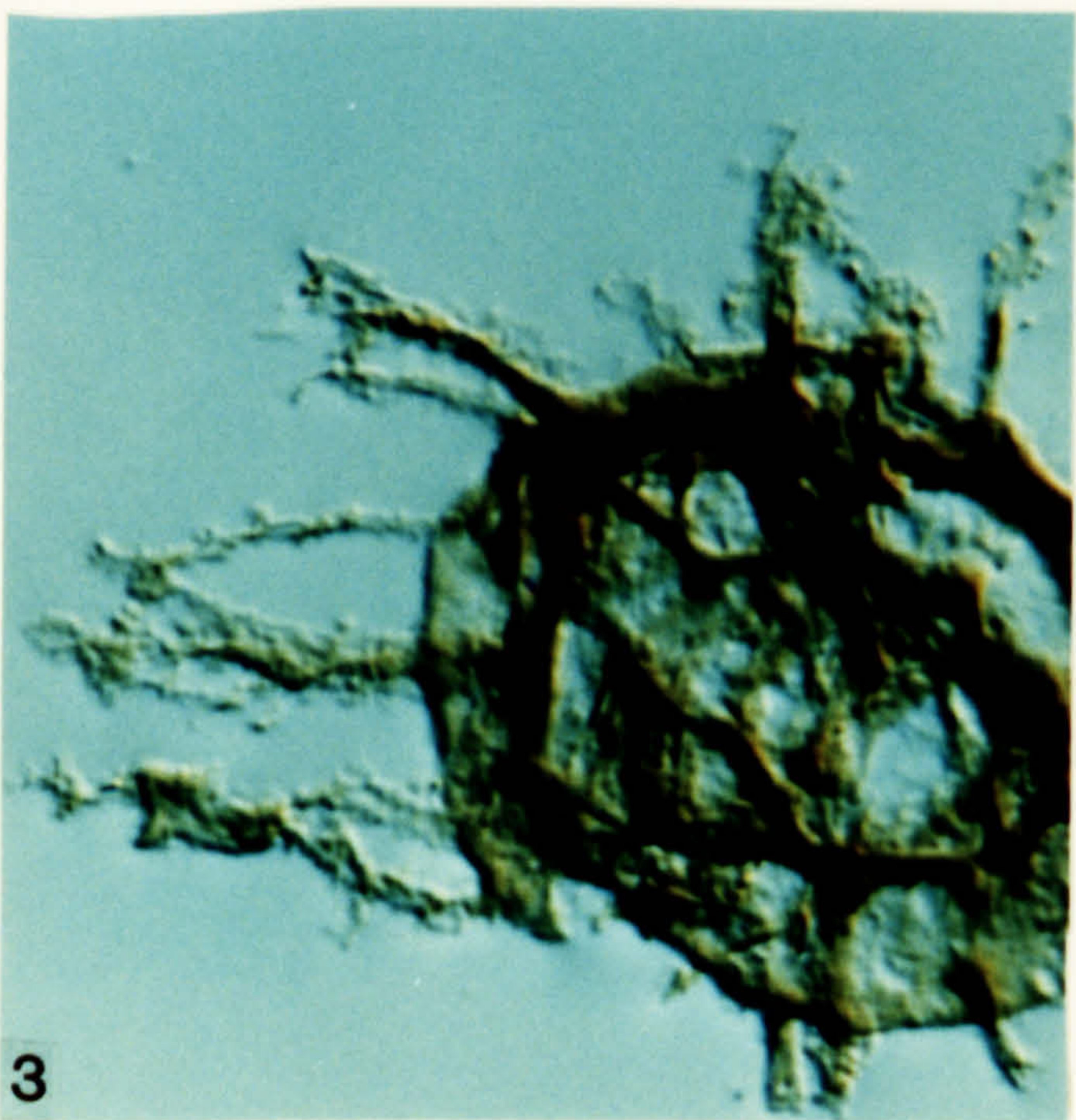
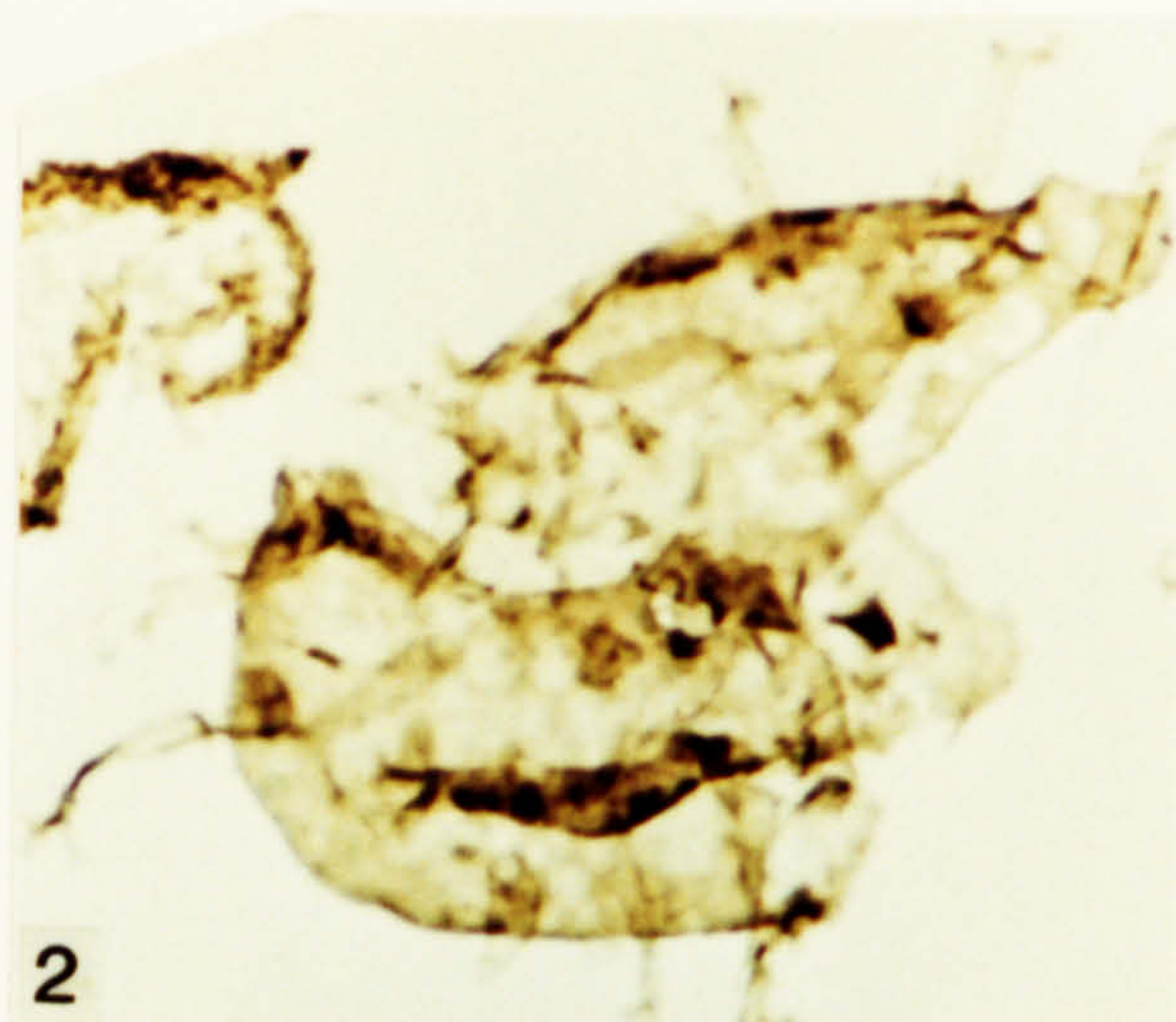
1. *Veryhachium subglobosum* Jardine *et al.* 1974. DJ 10, FS-2, Q18\3.
2. *Veryhachium reductum* (Deunff) Downie & Sarjeant 1965. DJ 10, FS-4, N2\2.
3. *Veryhachium subglobosum* Jardine *et al.* 1974. DJ 10, FS-1, R27\4.
4. *Veryhachium reductum* (Deunff) Downie & Sarjeant 1965. DJ 10, FS-1, P17\2.
5. *Veryhachium subglobosum* Jardine *et al.* 1974. DJ 10, FS-2, M13\1.
6. *Veryhachium reductum* (Deunff) Downie & Sarjeant 1965. DJ 10, FS-2, W42\2.



**Plate 53.**

**Acritarchs and chitinozoa from the Ktaoua Formation, mid-late Ashgill in age.**

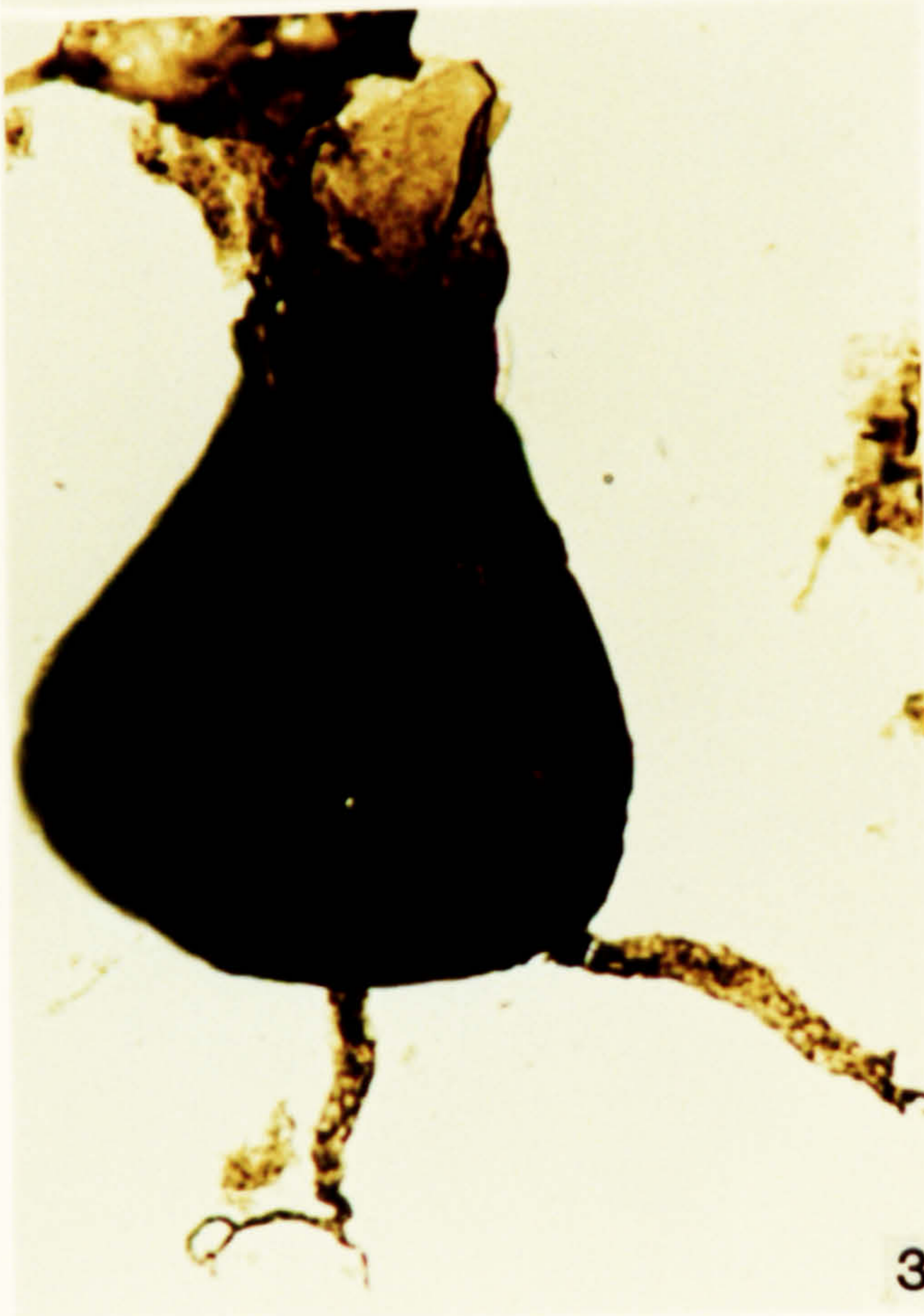
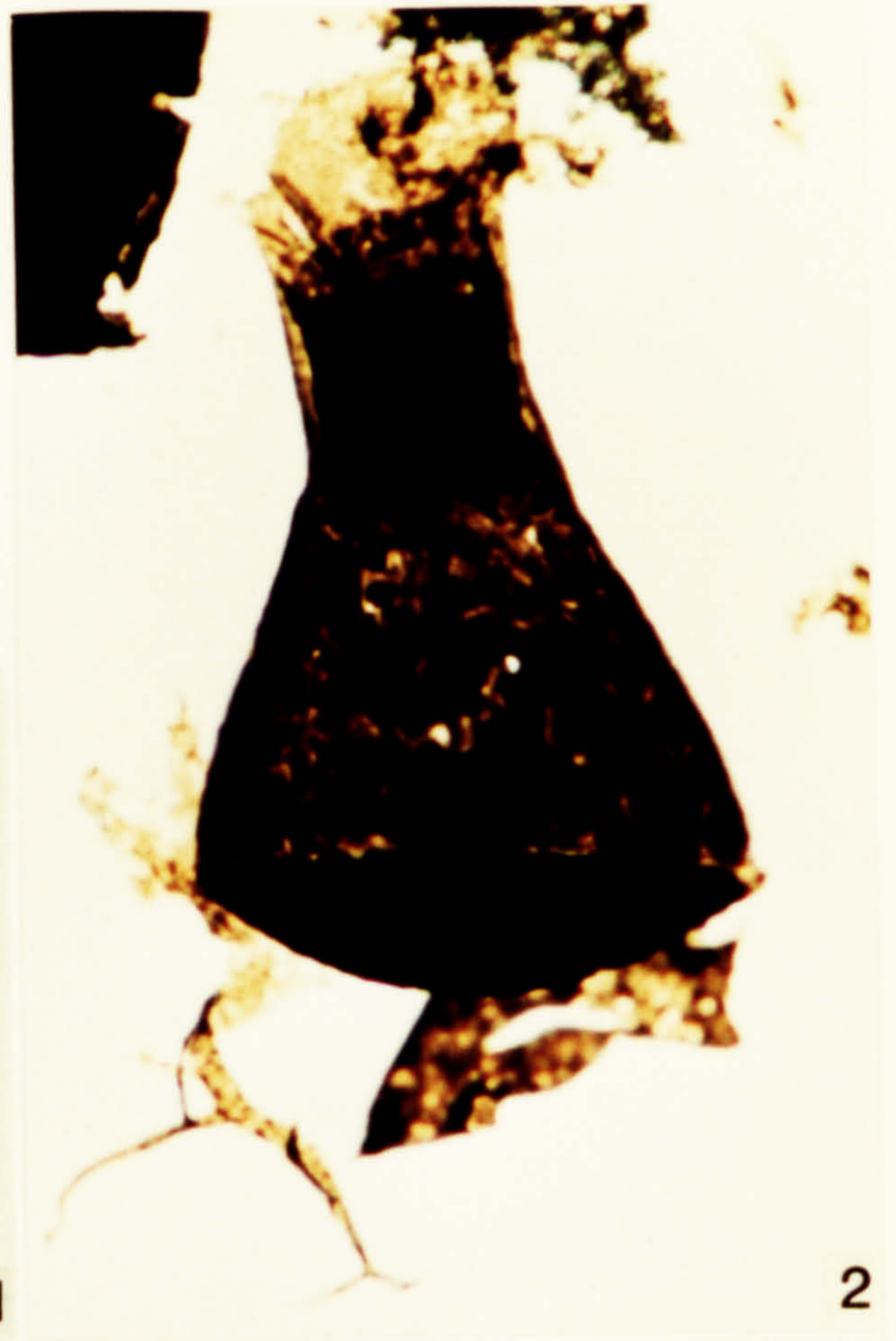
- 1. Acritarch Form K. DJ 10, FS-1, P35\2.**
- 2. Acritarch Form K. DJ 10, FS-1, H40\2.**
- 3. Acritarch Form K? DJ 10, FS-4, M32\1.**
- 4. *Ancyrochitina* sp. 1. DJ 10, FS-1, Y39\2.**
- 5. *Ancyrochitina* sp. 1. DJ 10, FS-4, G5\1.**
- 6. *Ancyrochitina* sp. 1. DJ 10, FS-4, N24\1.**



**Plate 54.**

Chitinozoa from the Ktaoua Formation, mid-late Ashgill in age.

1. *Ancyrochitina* sp. 1. DJ 10, FS-2, V34\2.
2. *Ancyrochitina* sp. 1. DJ 10, FS-4, R31\3.
3. *Ancyrochitina* sp. 1. DJ 10, FS-2, H8\3.
4. *Ancyrochitina* sp. 1. DJ 10, FS-1, N21\3.



**Plate 55.**

**Chitinozoa from the Ktaoua Formation, mid-late Ashgill in age.**

- 1. *Armoricochitina nigerica* (Bouche) Molyneux & Paris 1985. DJ 10, FS-1, M14\1.**
- 2. *Armoricochitina nigerica* (Bouche) Molyneux & Paris 1985. DJ 10, FS-1, O28\3.**
- 3. *Armoricochitina nigerica* (Bouche) Molyneux & Paris 1985. DJ 10, FS-1, H42\2.**
- 4. *Armoricochitina nigerica* (Bouche) Molyneux & Paris 1985. DJ 10, FS-4, E7\1.**
- 5. *Armoricochitina nigerica* (Bouche) Molyneux & Paris 1985. DJ 10, FS-1, L8\4.**



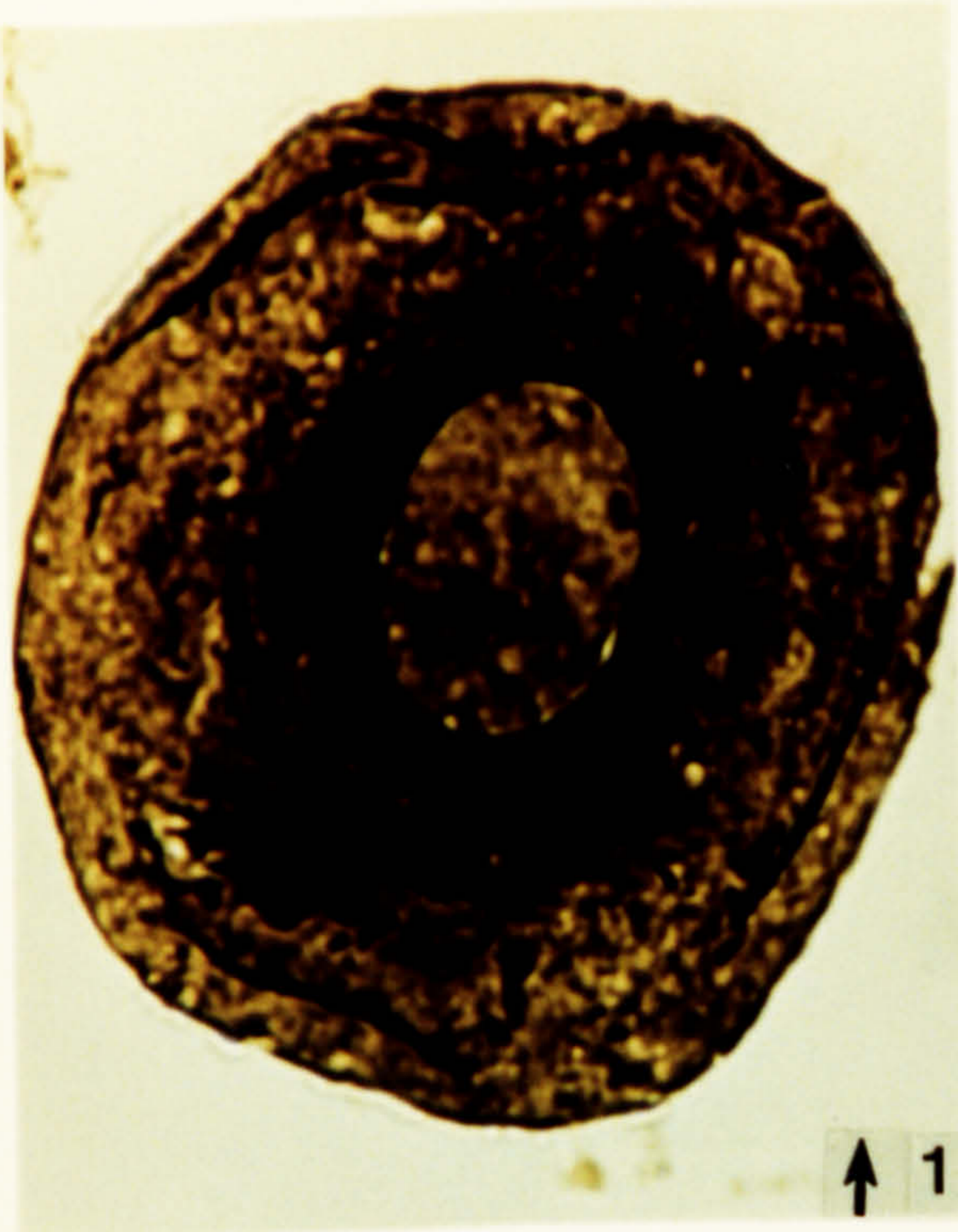


**Plate 56.**

Chitinozoa from the Ktaoua Formation, mid-late Ashgill in age.

1. *Calpichitina lenticularis* (Bouche) Paris 1981. DJ 10, FS-2, F5\1.
2. *Calpichitina lenticularis* (Bouche) Paris 1981. DJ 10, FS-2, P7\2.
3. *Rhabdochitina magna* complex. DJ 10, FS-1, W21\2, X230.
4. *Belonechitina capitata* (Eisenack) Paris 1981. DJ 10, FS-1, G16\1.
5. *Belonechitina capitata* (Eisenack) Paris 1981. DJ 10, FS-2, F32\3.

PLATE 56



**Plate 57.**

Acritarchs from the Carbonaceous Shale Formation, upper Llandovery, Telychian in age.

1. *Ammonidium* cf. *ludloviense* Lister 1970 ex Dorning 1981. DW 246, FS-1, E25\4.
2. *Ammonidium microcladum* (Downie) Dorning 1981. DW 249, FS-3, H25\2.
3. *Ammonidium microcladum* (Downie) Dorning 1981. DW 249, FS-1, K43\3.
4. *Ammonidium* cf. *ludloviense* Lister 1970 ex Dorning 1981. DW 246, FS-1, T39\3.
5. *Ammonidium* sp. DW 250, FS-1, W41\2.
6. *Ammonidium* sp. DW 248, FS-1, J20\2.
7. *Ammonidium* sp. DW 250, FS-5, L9\2.
8. *Ammonidium* sp. DW 250, FS-1, D16\1.
9. *Ammonidium* sp. DW 250, FS-1, R4\4.

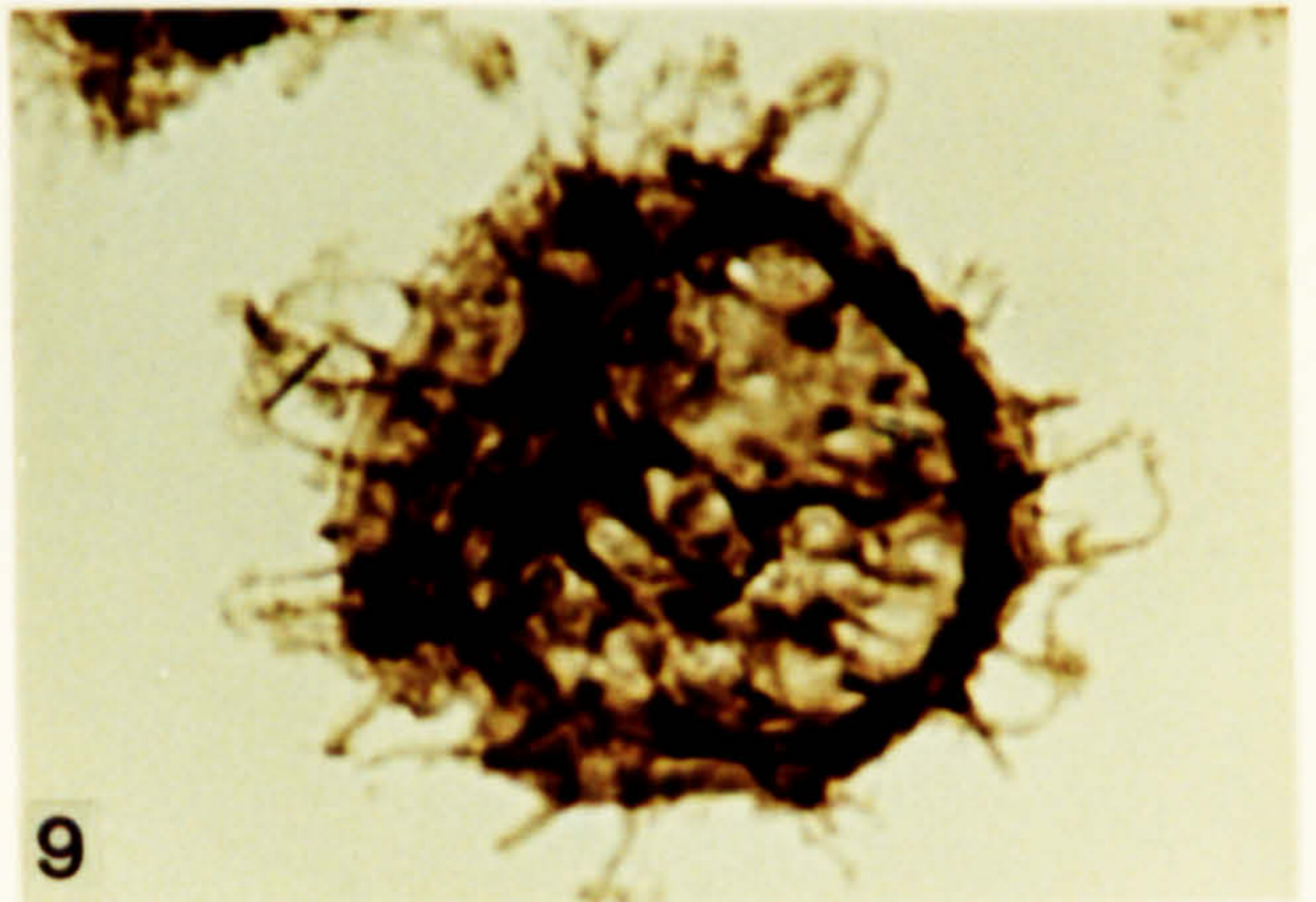
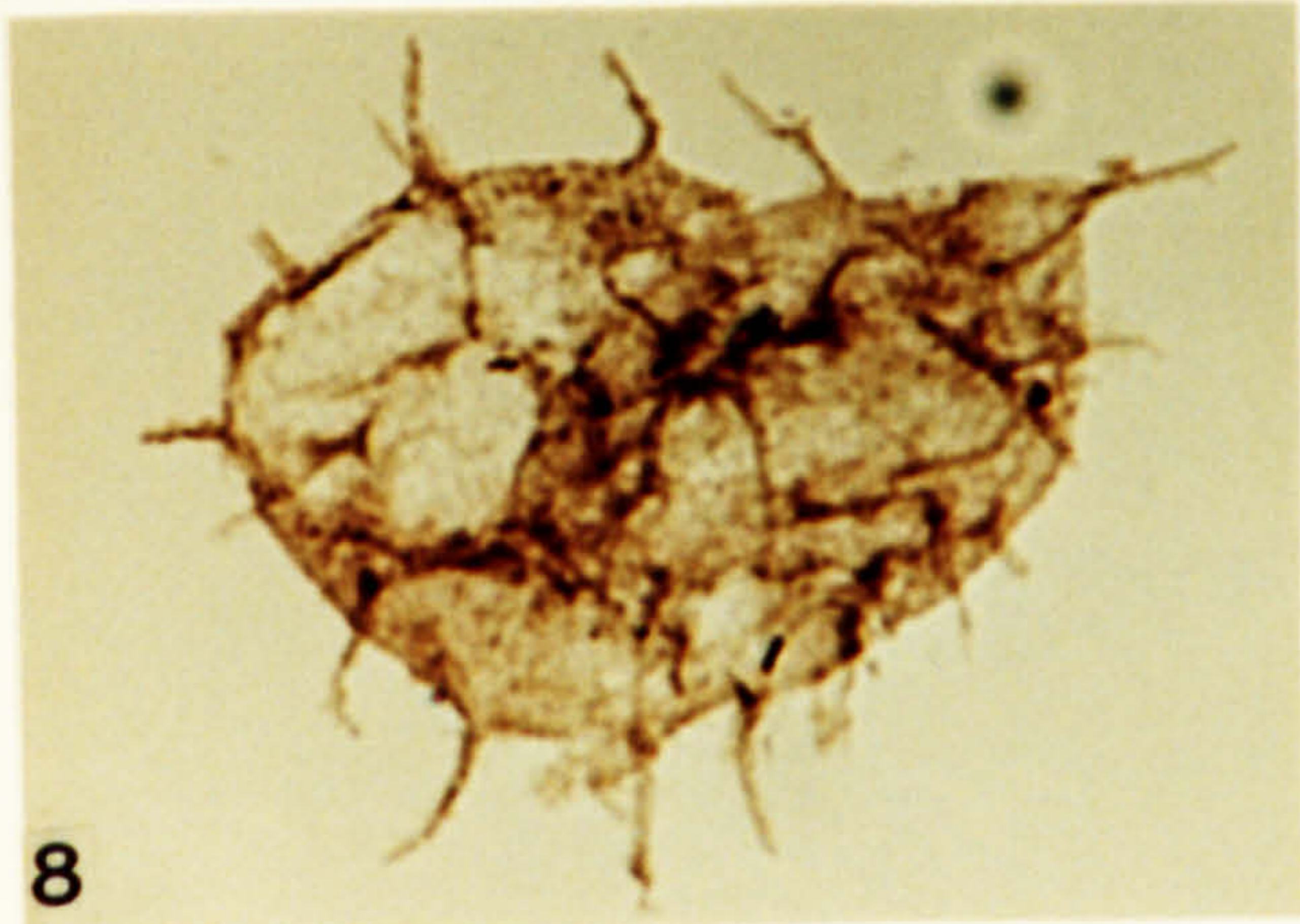
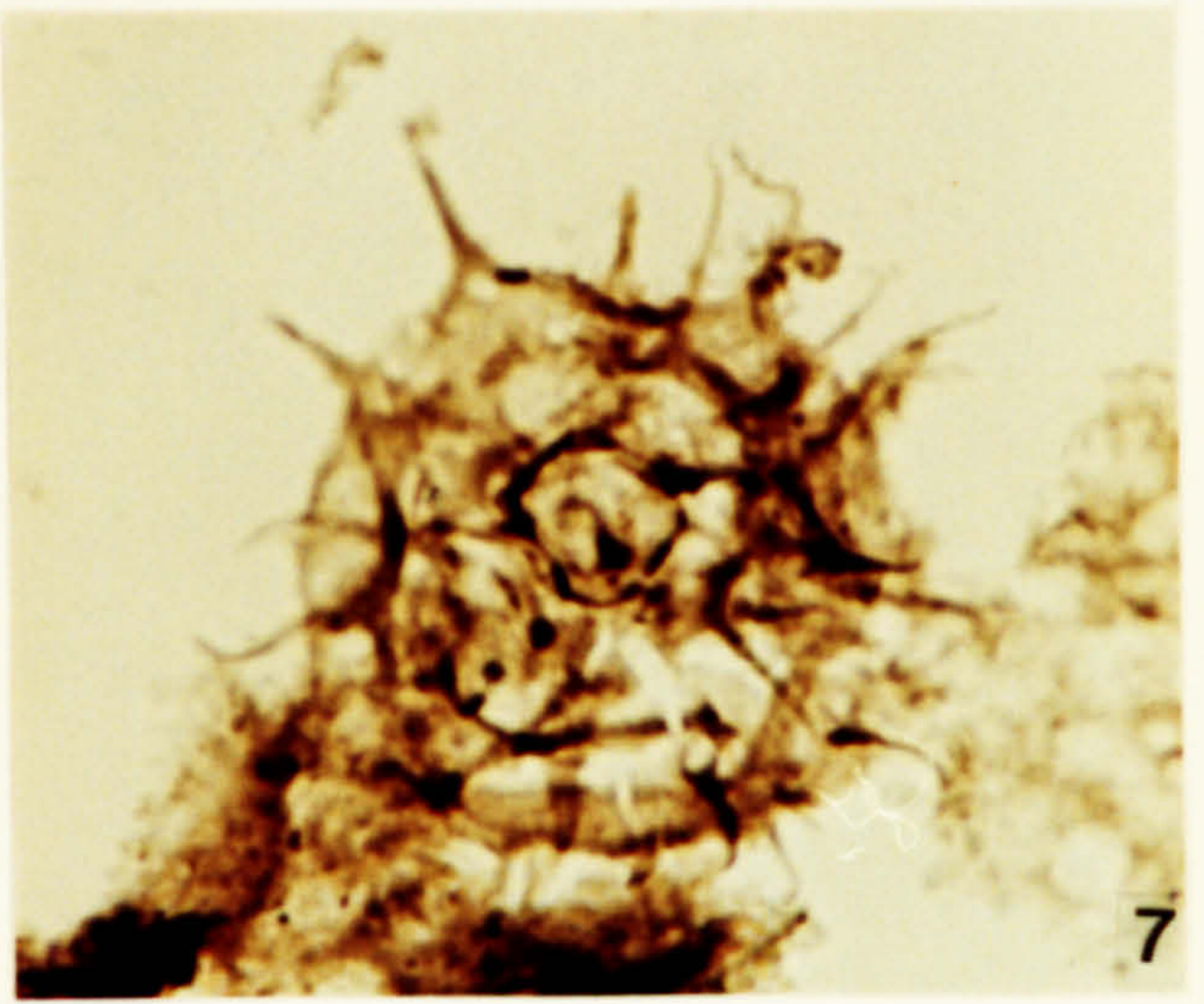
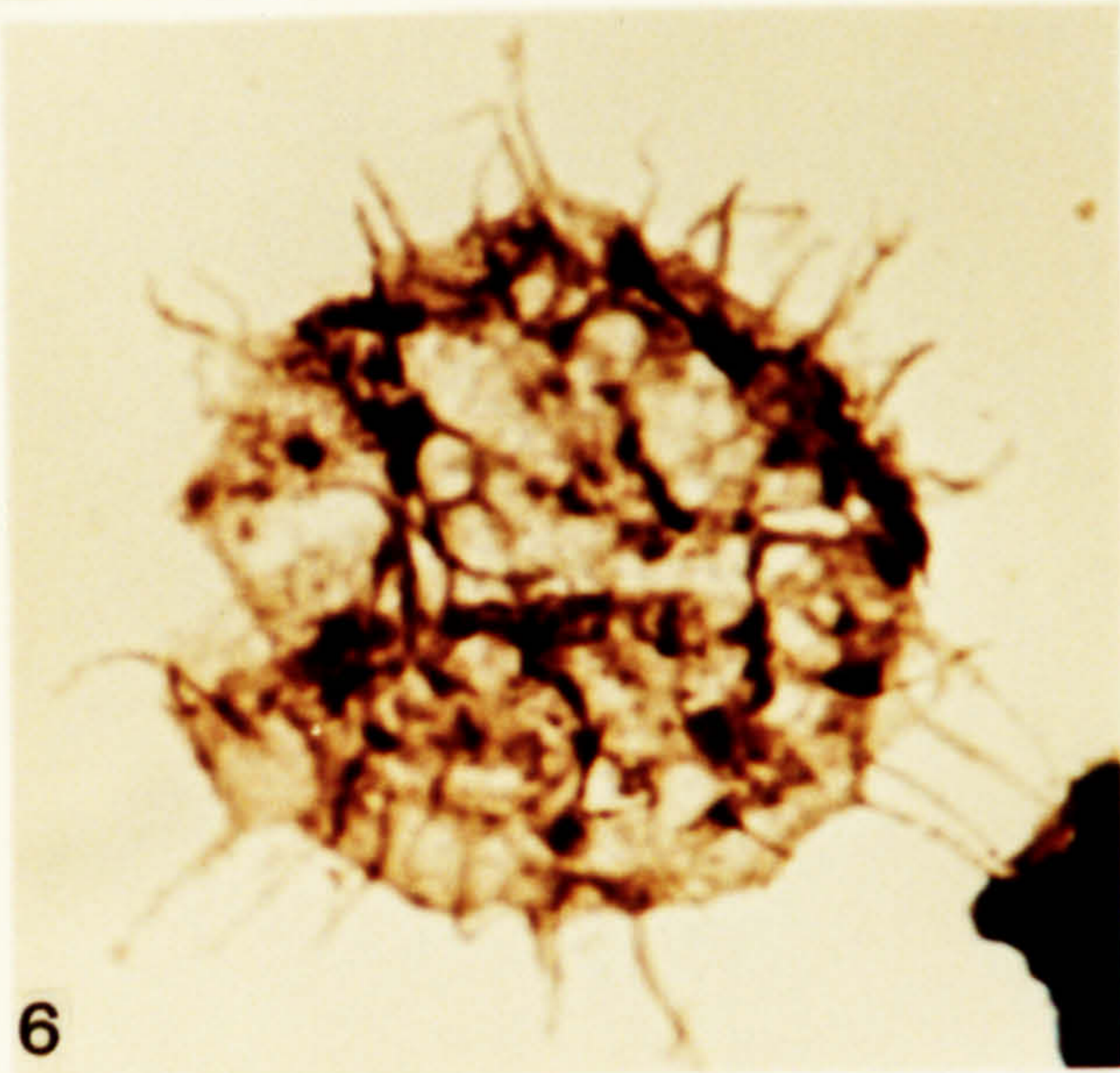
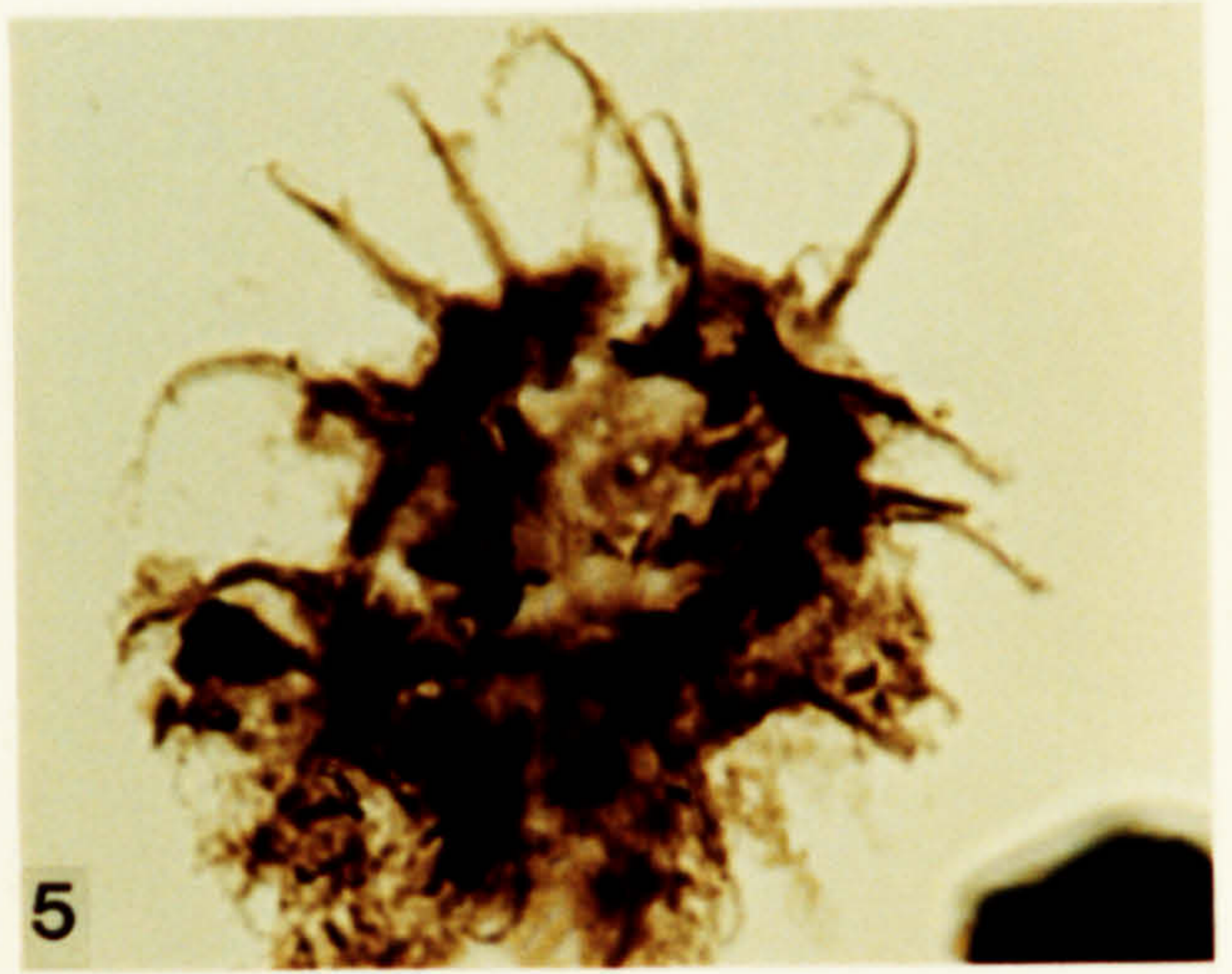
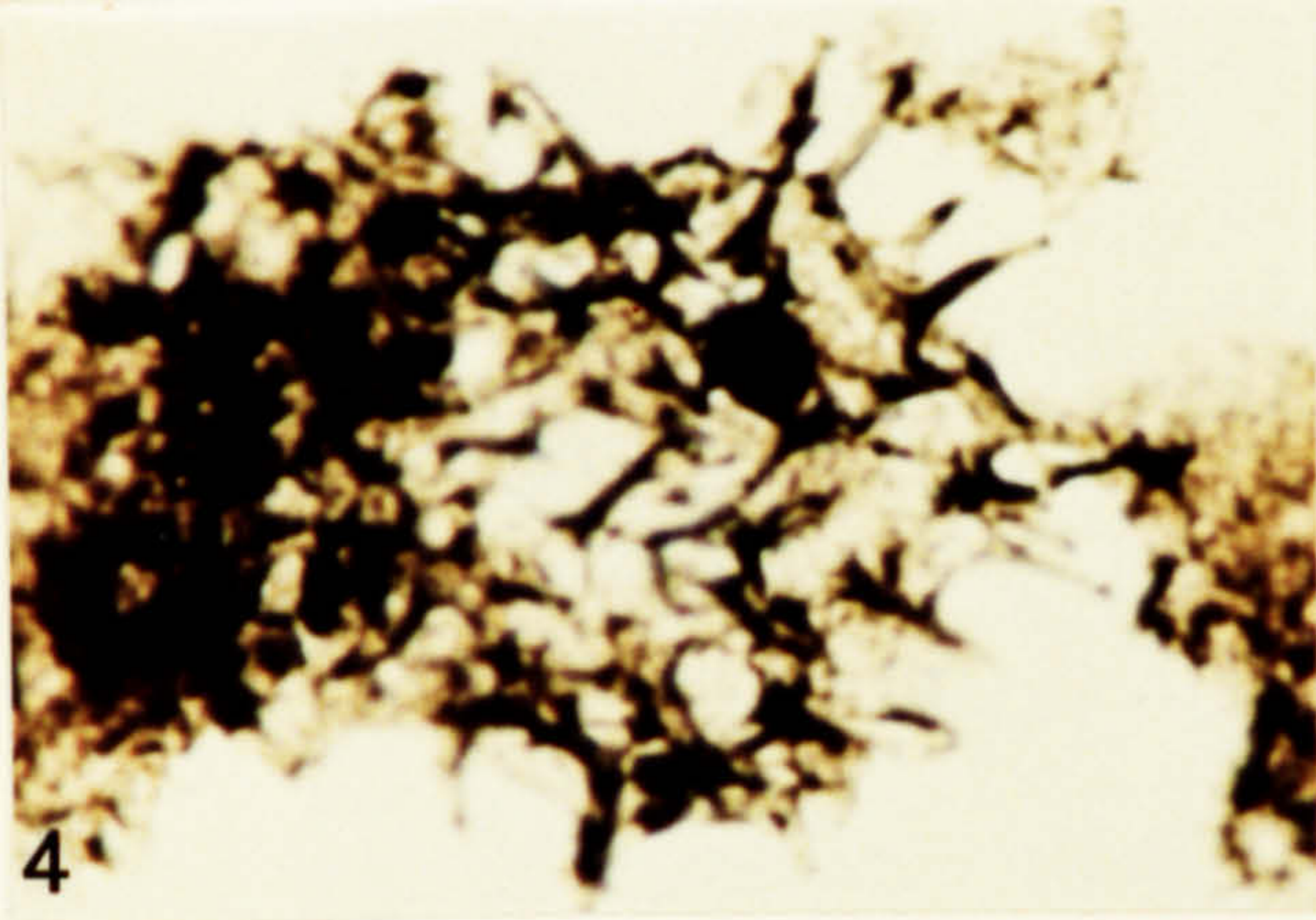
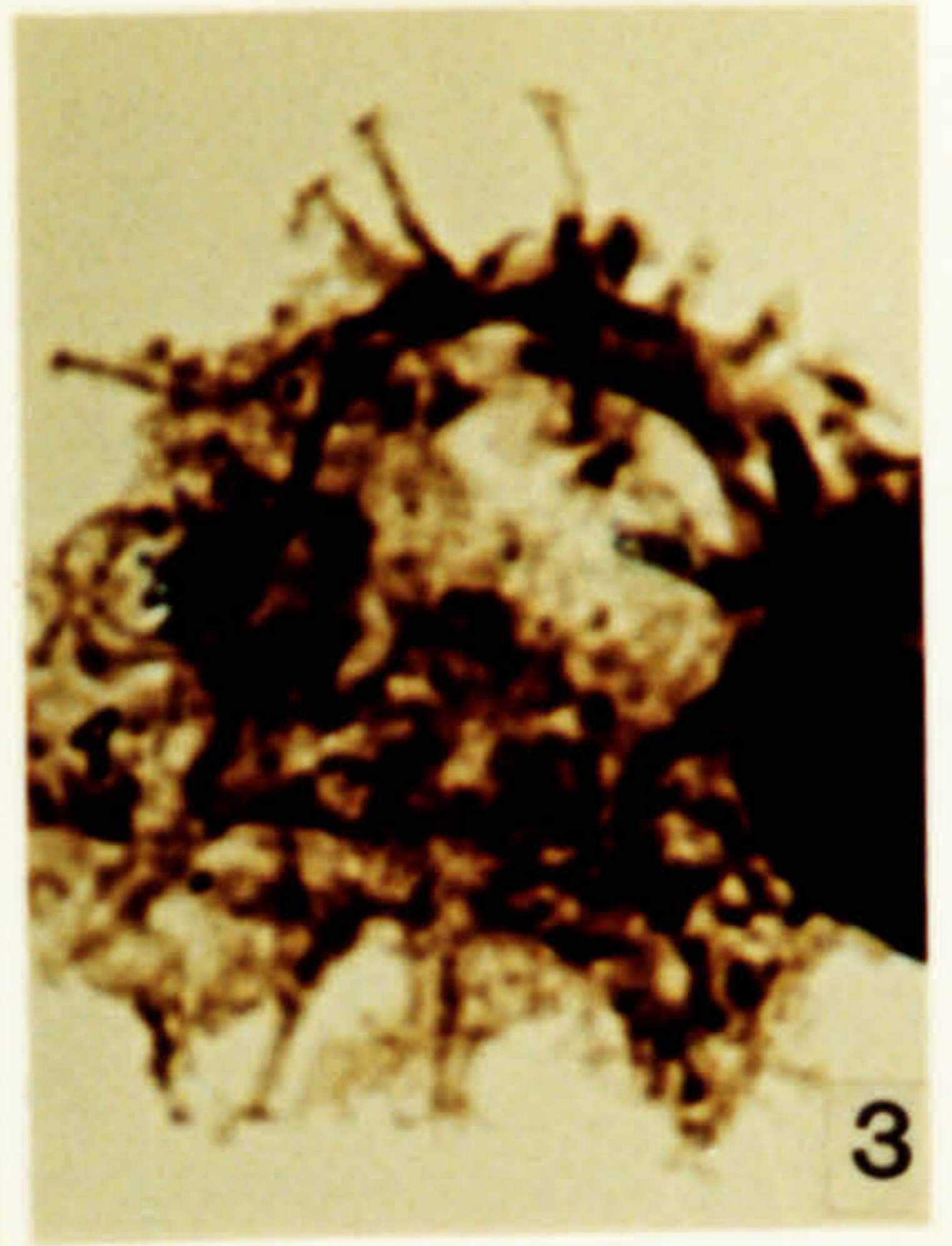
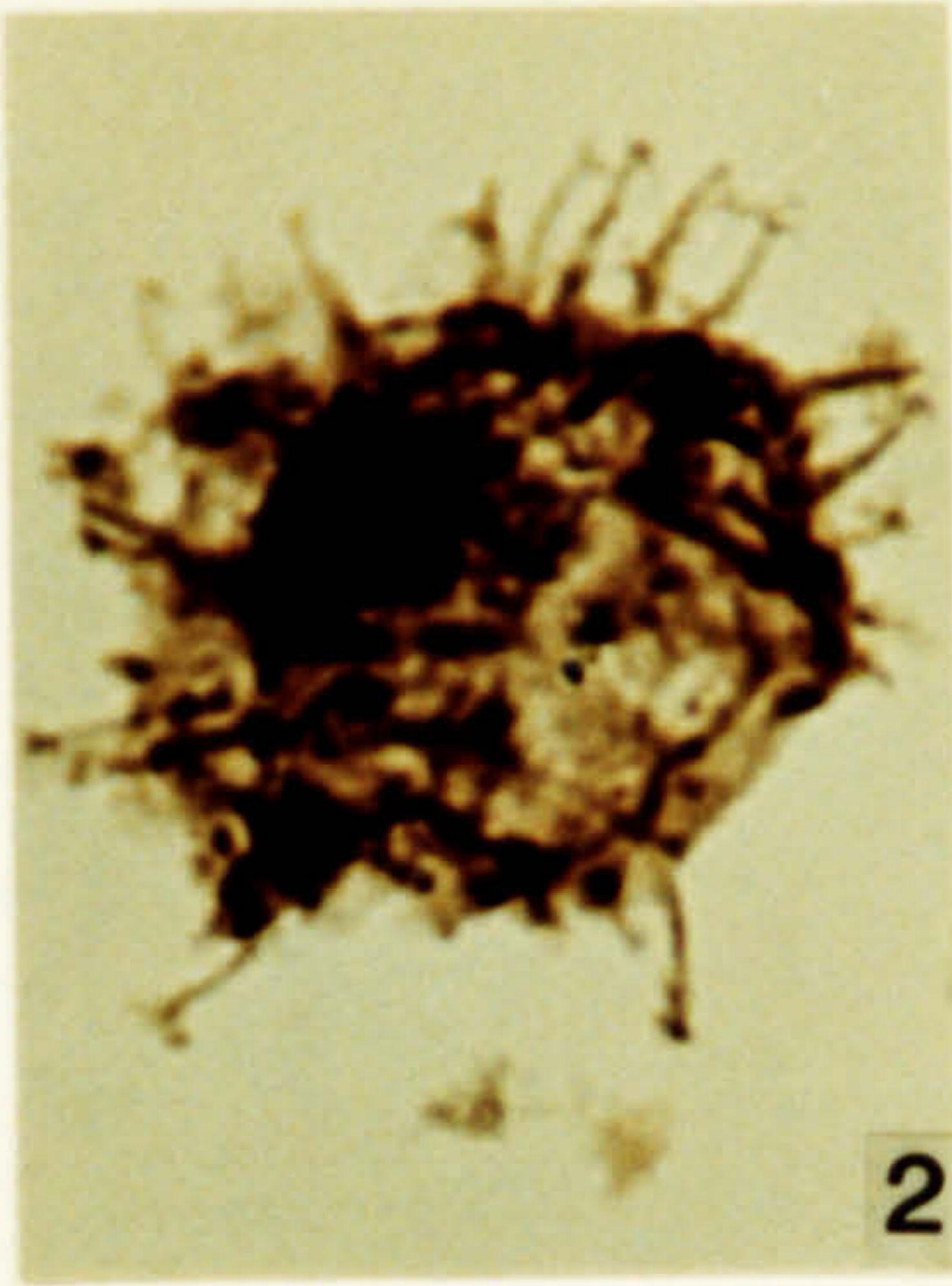
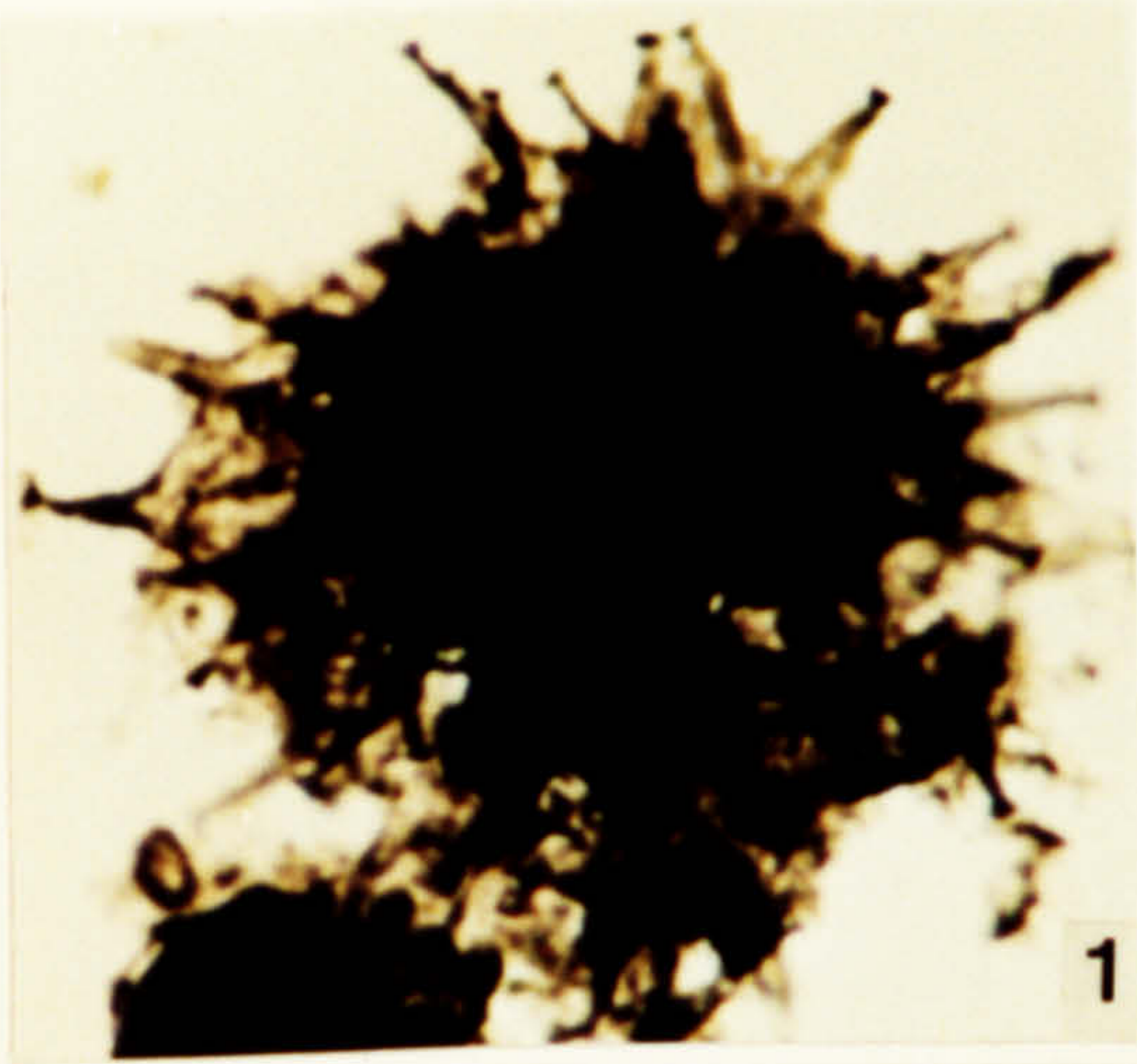
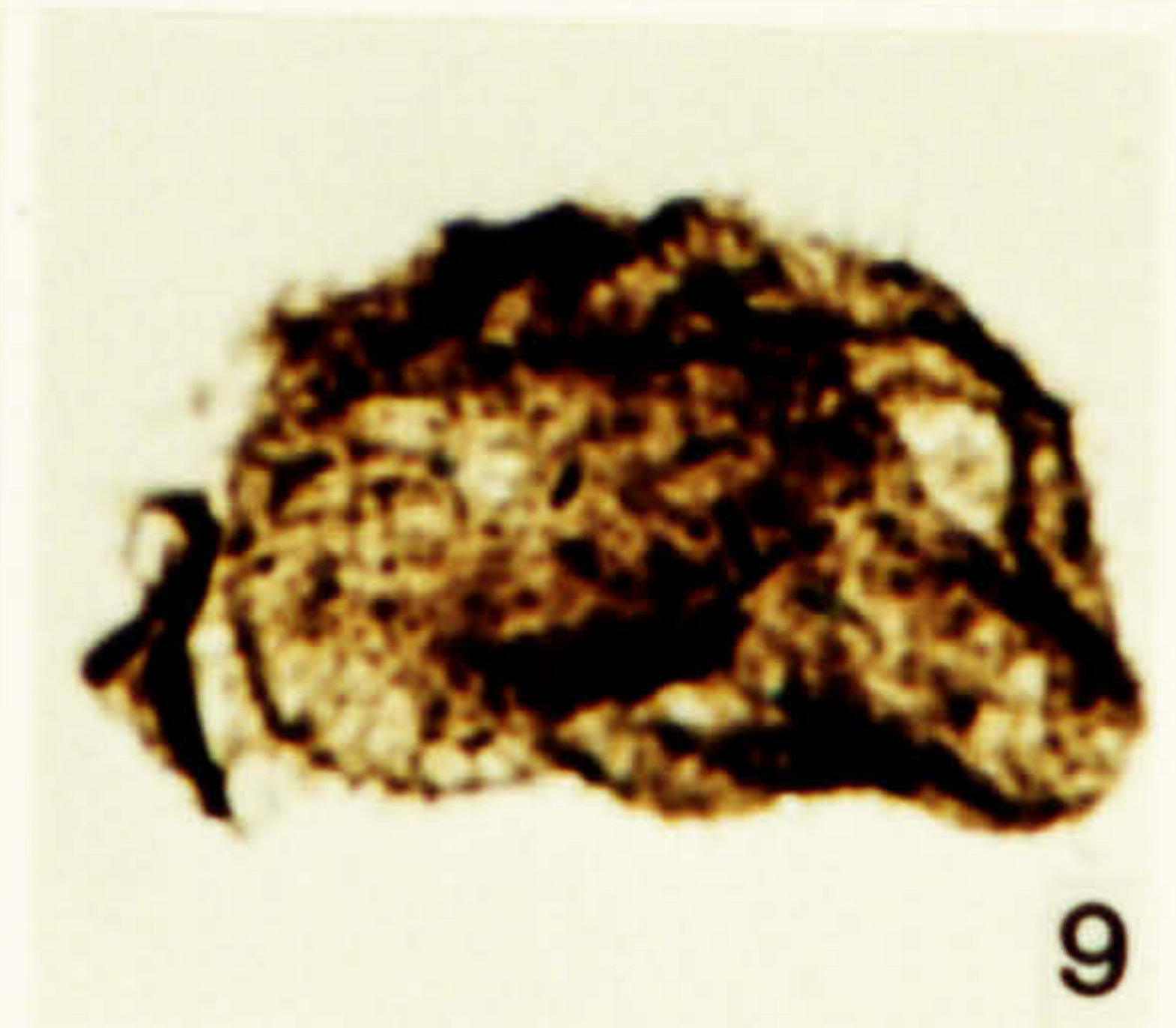
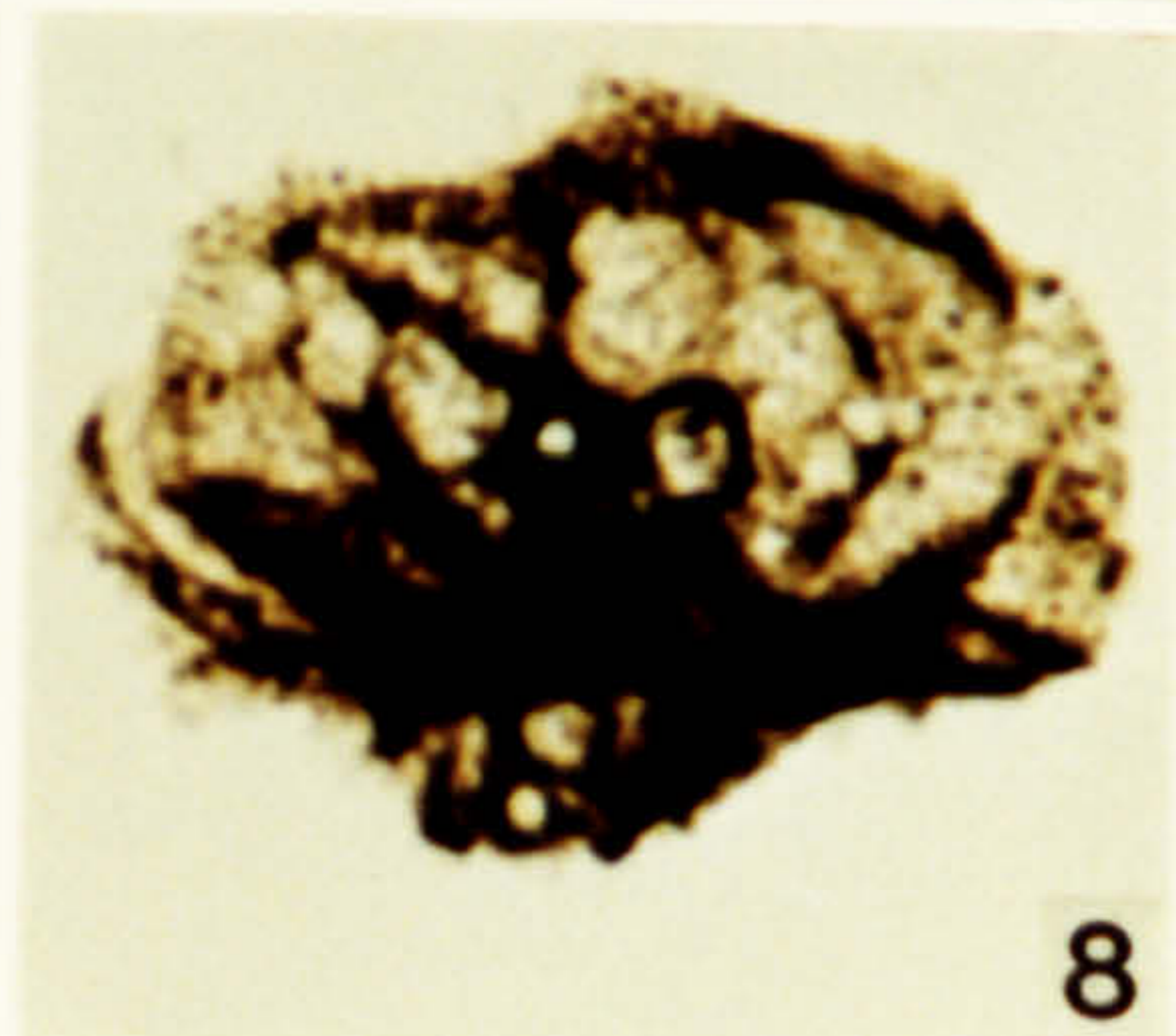
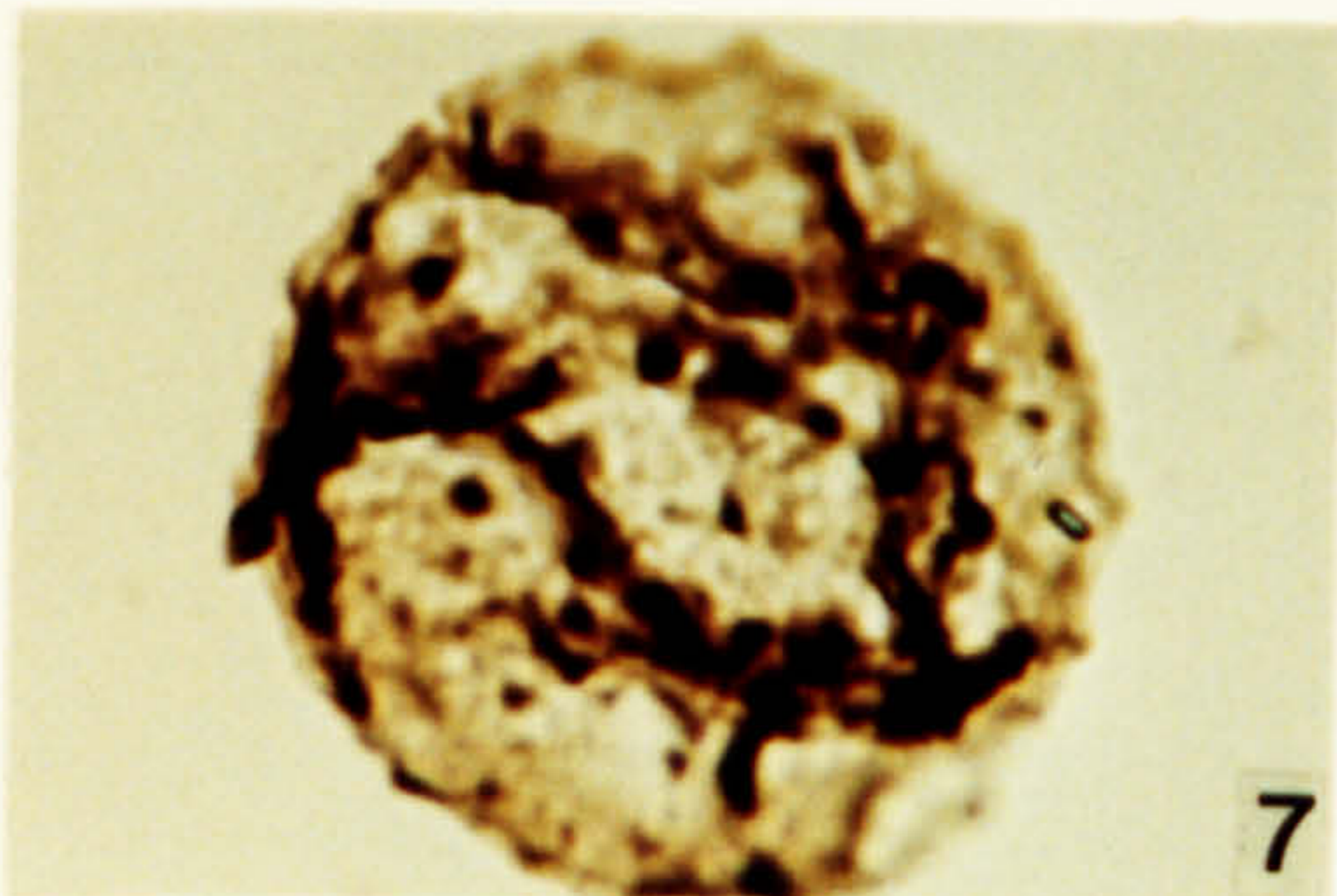
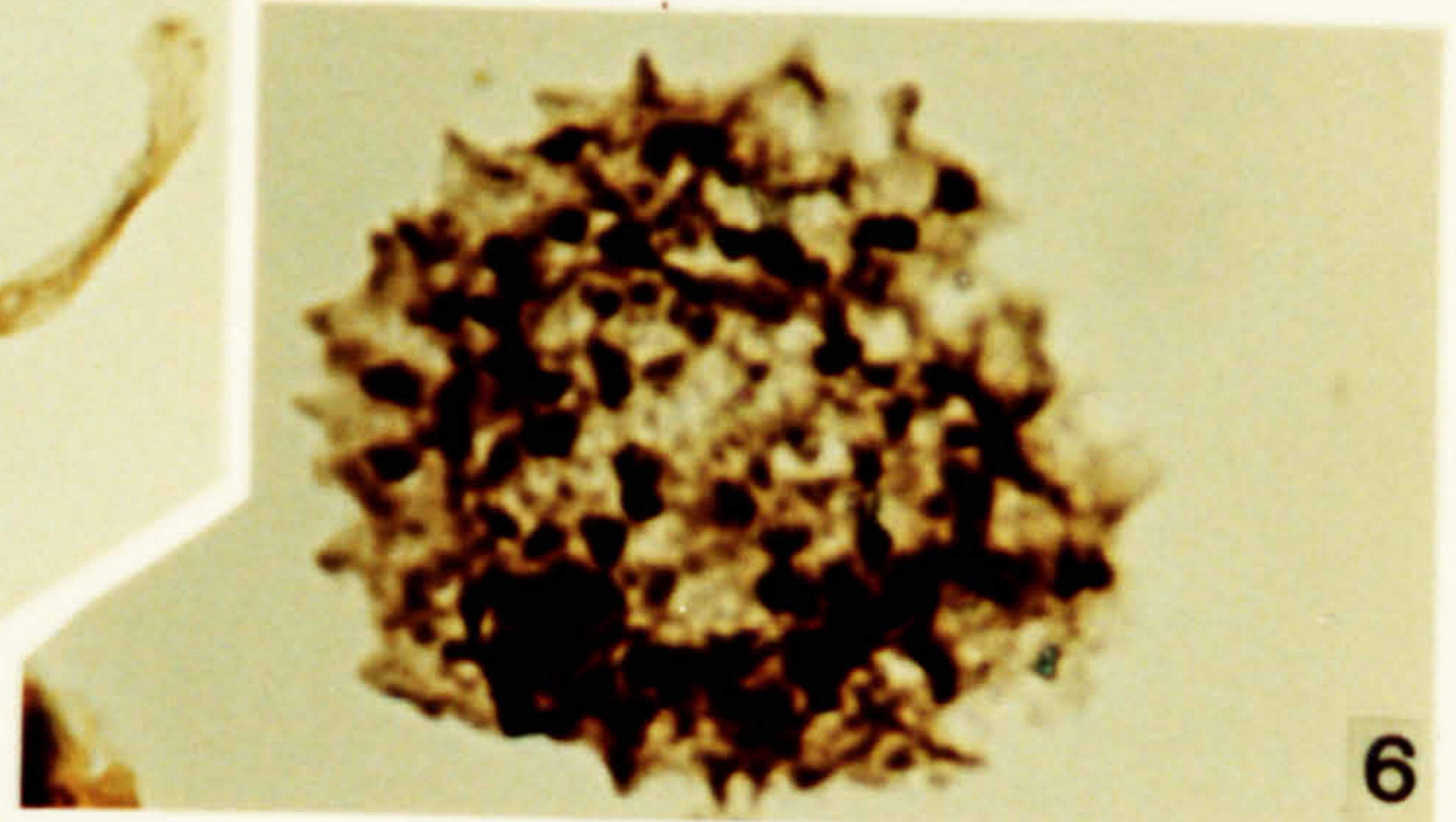
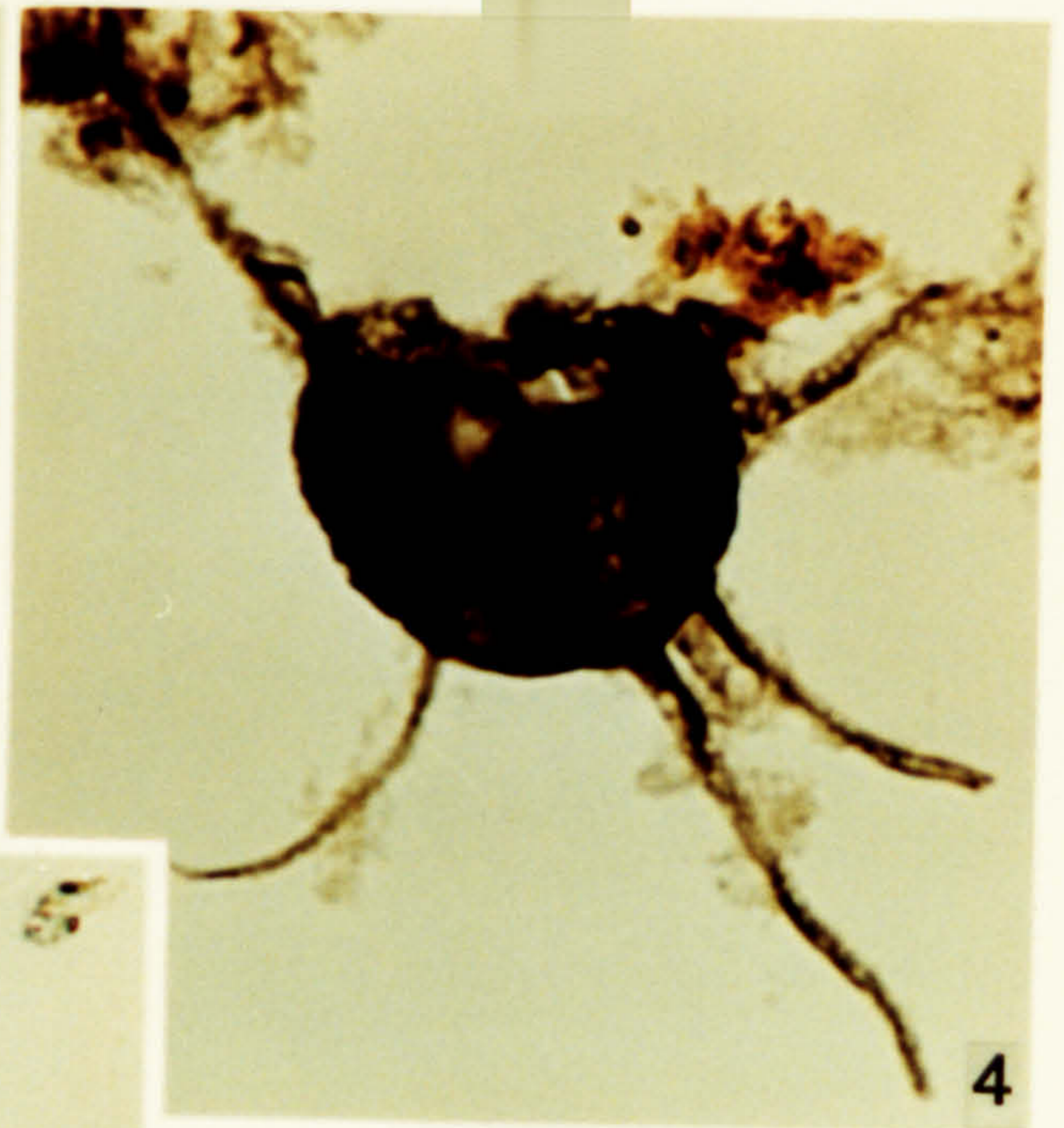
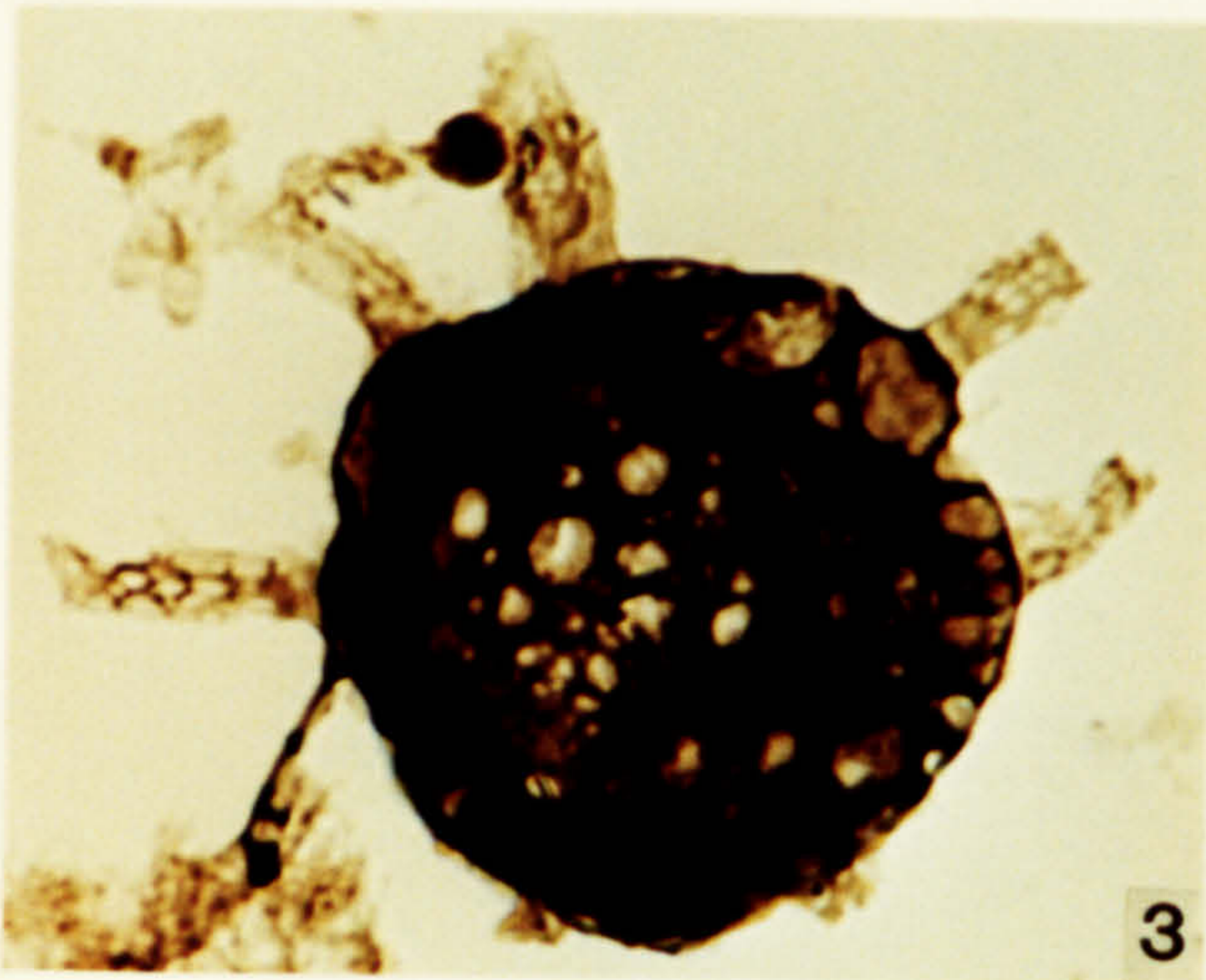
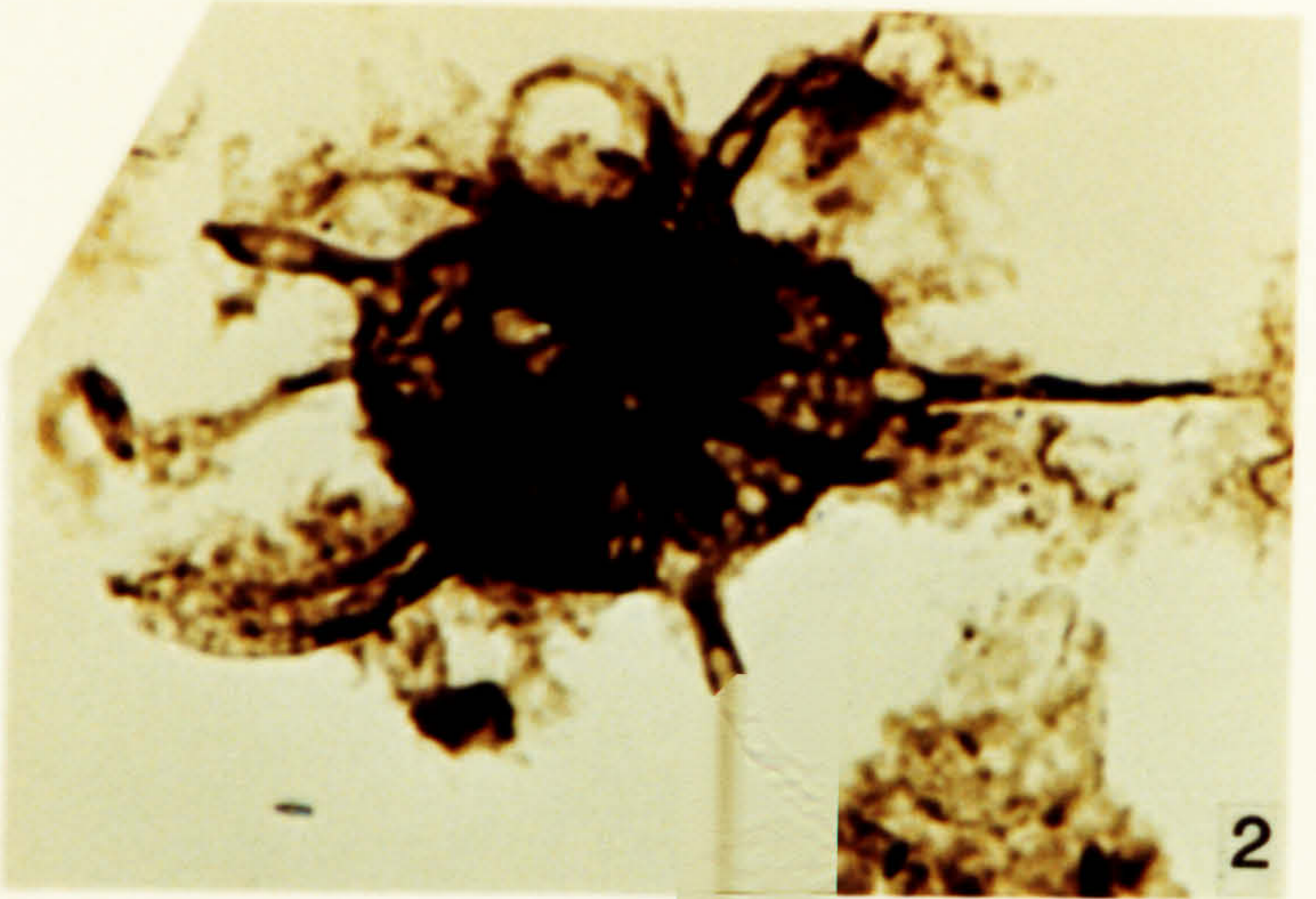
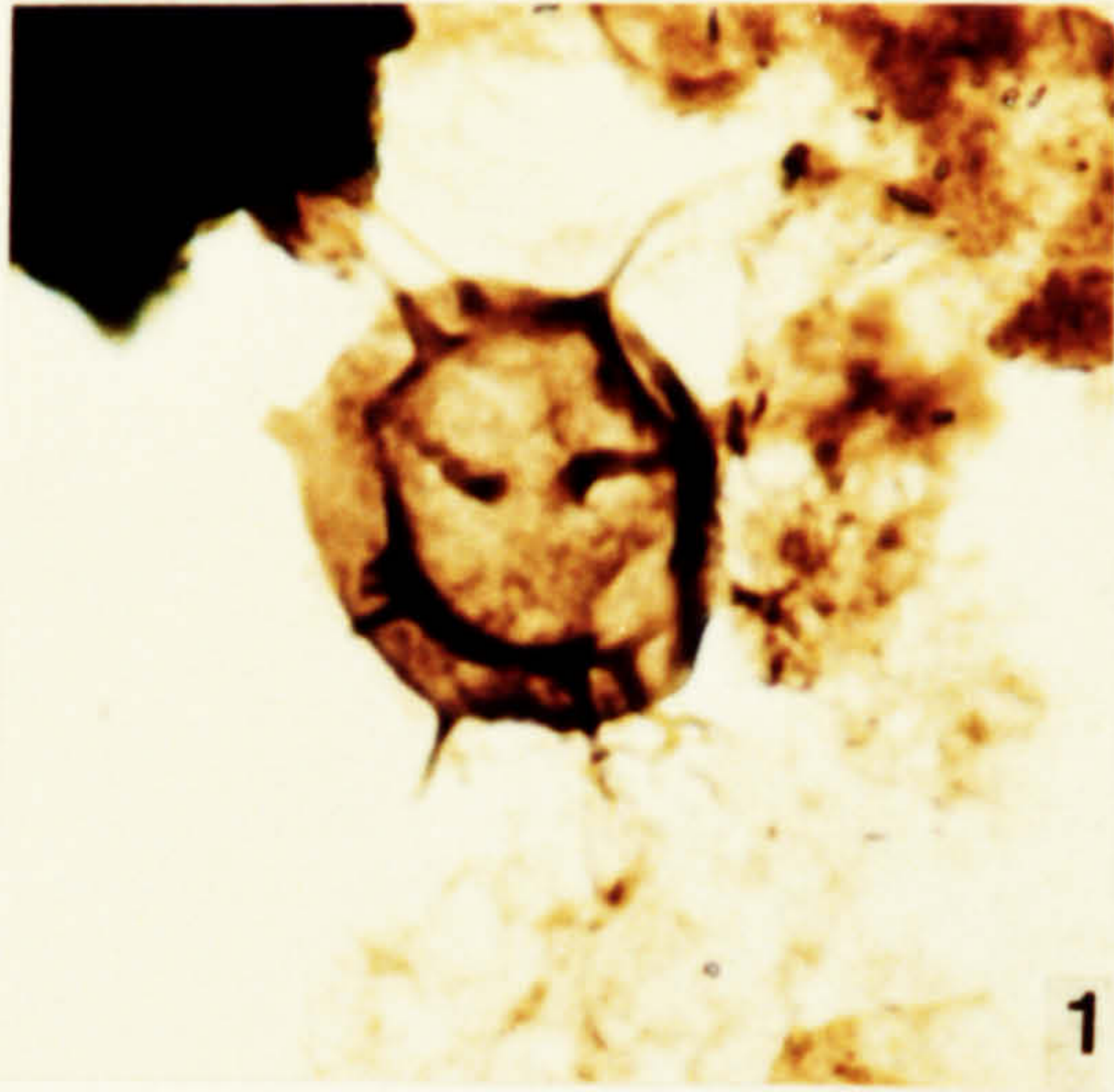


Plate 58.

Acritarchs from the Carbonaceous Shale Formation, upper Llandovery, Telychian in age.

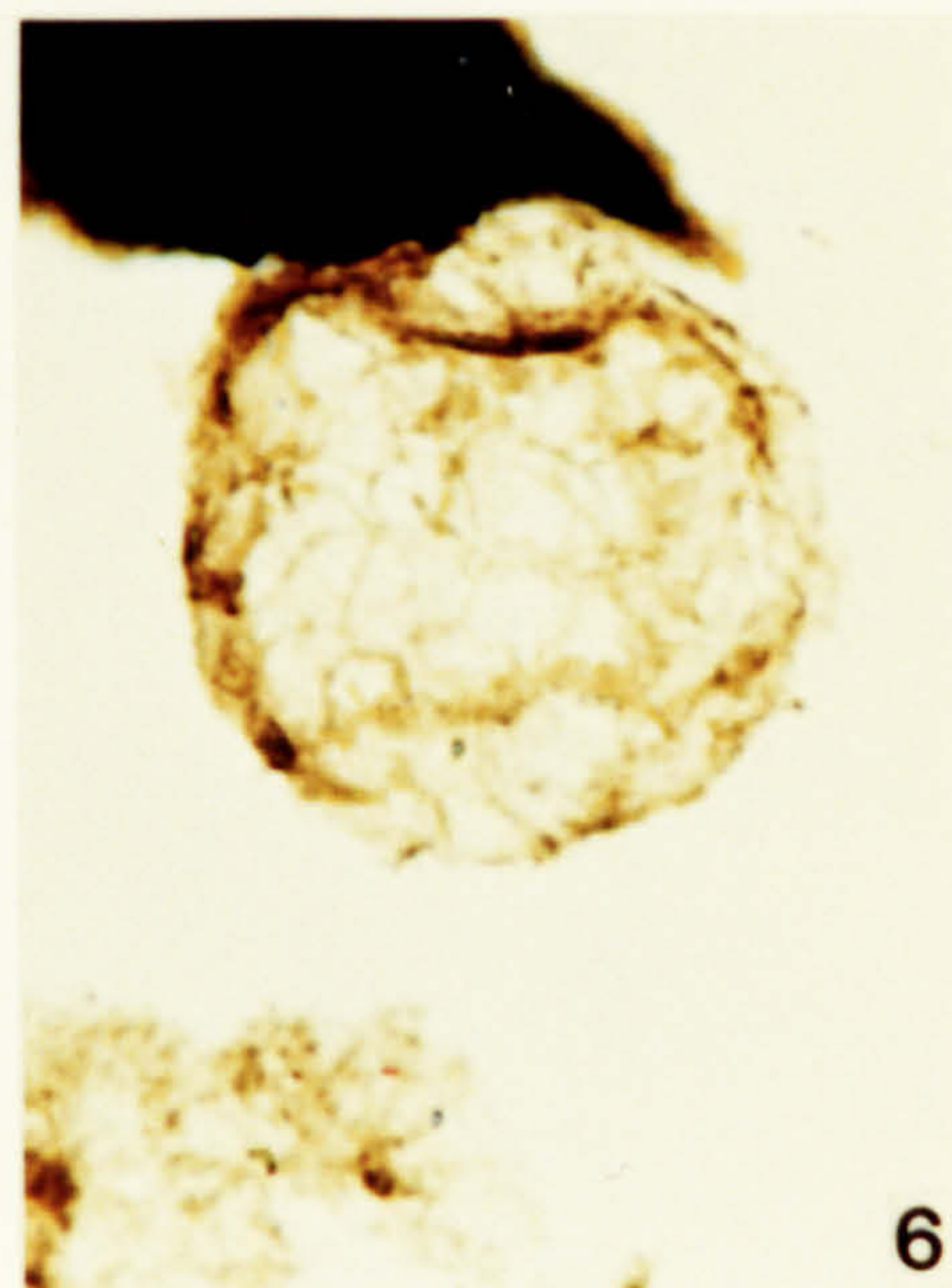
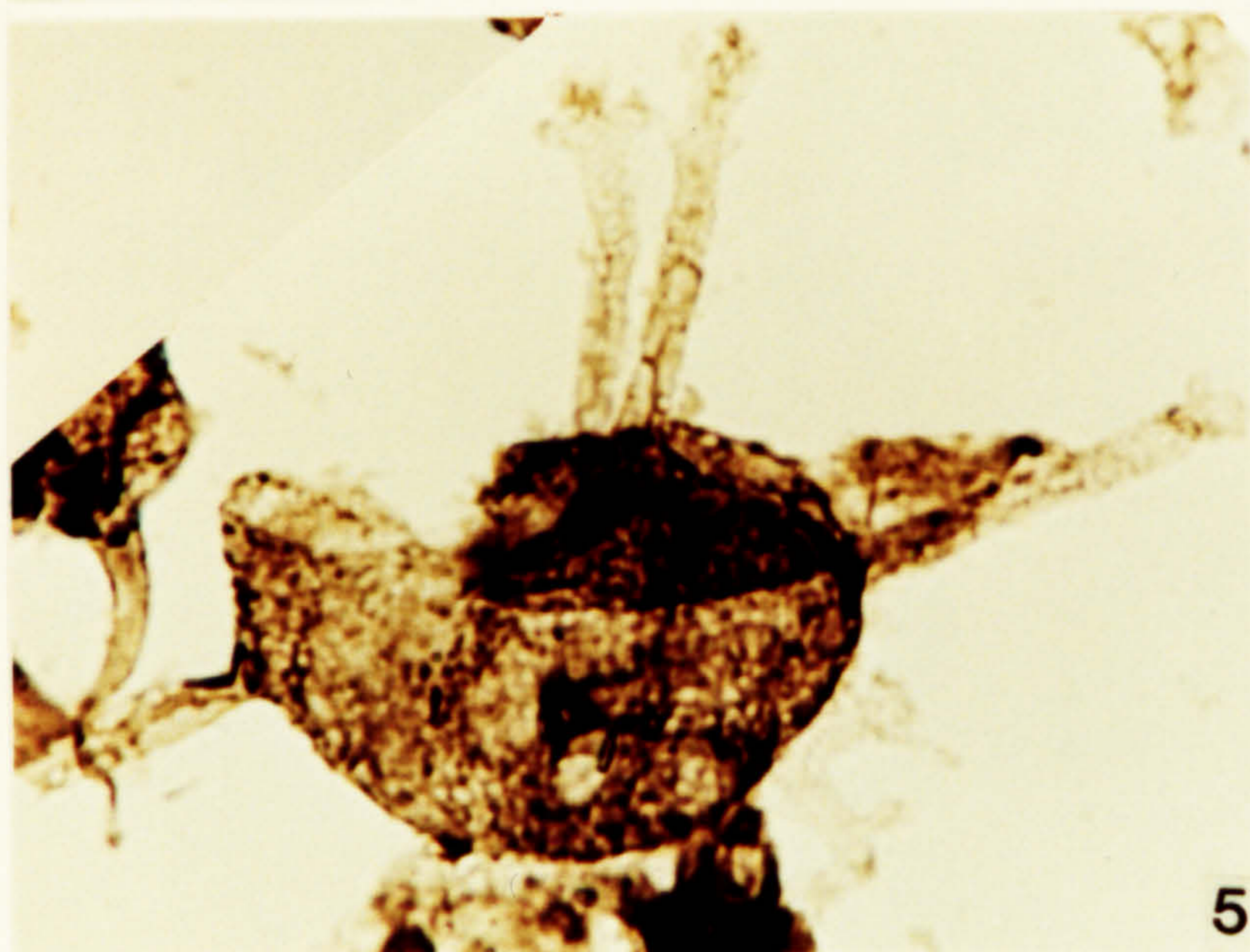
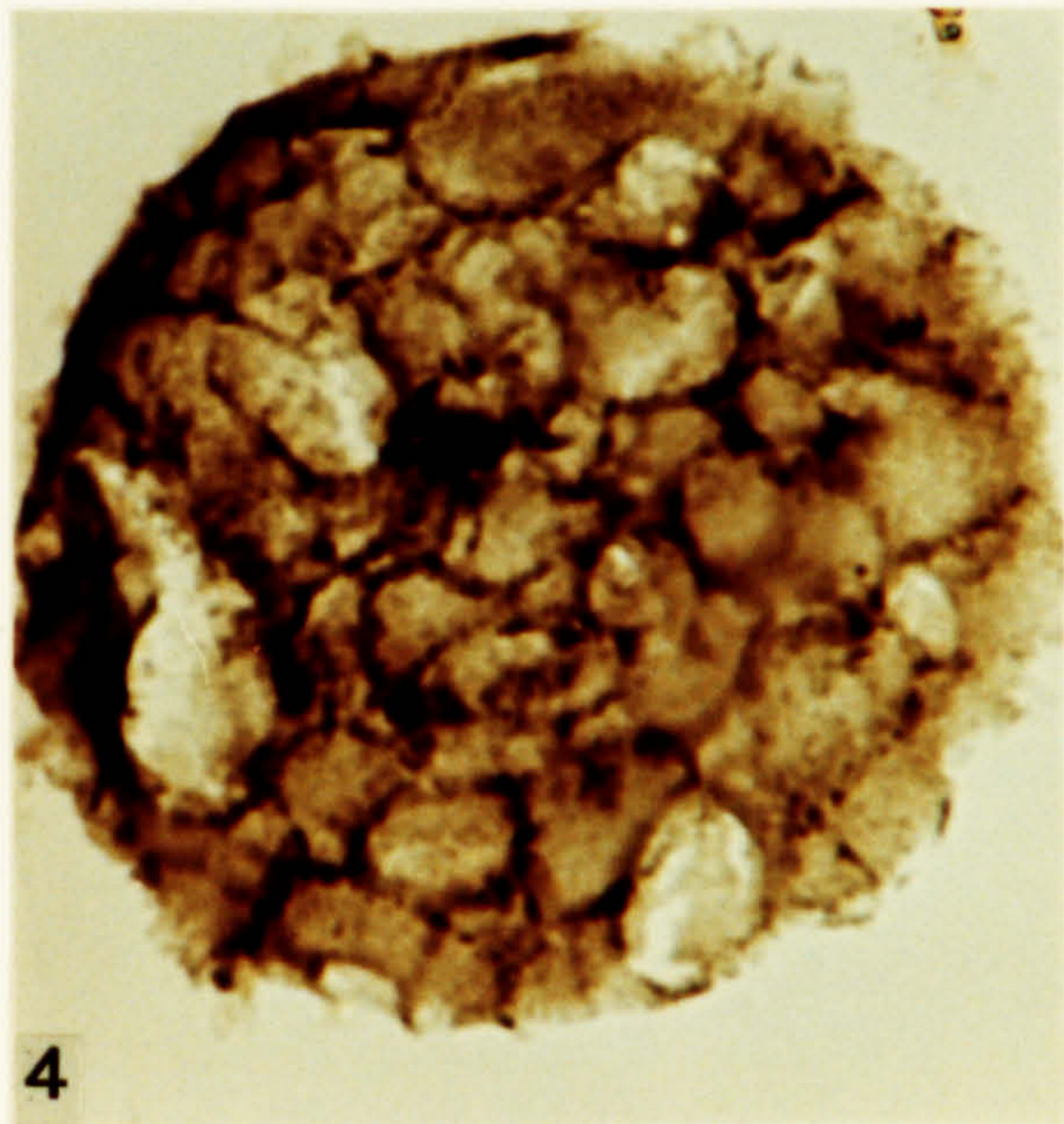
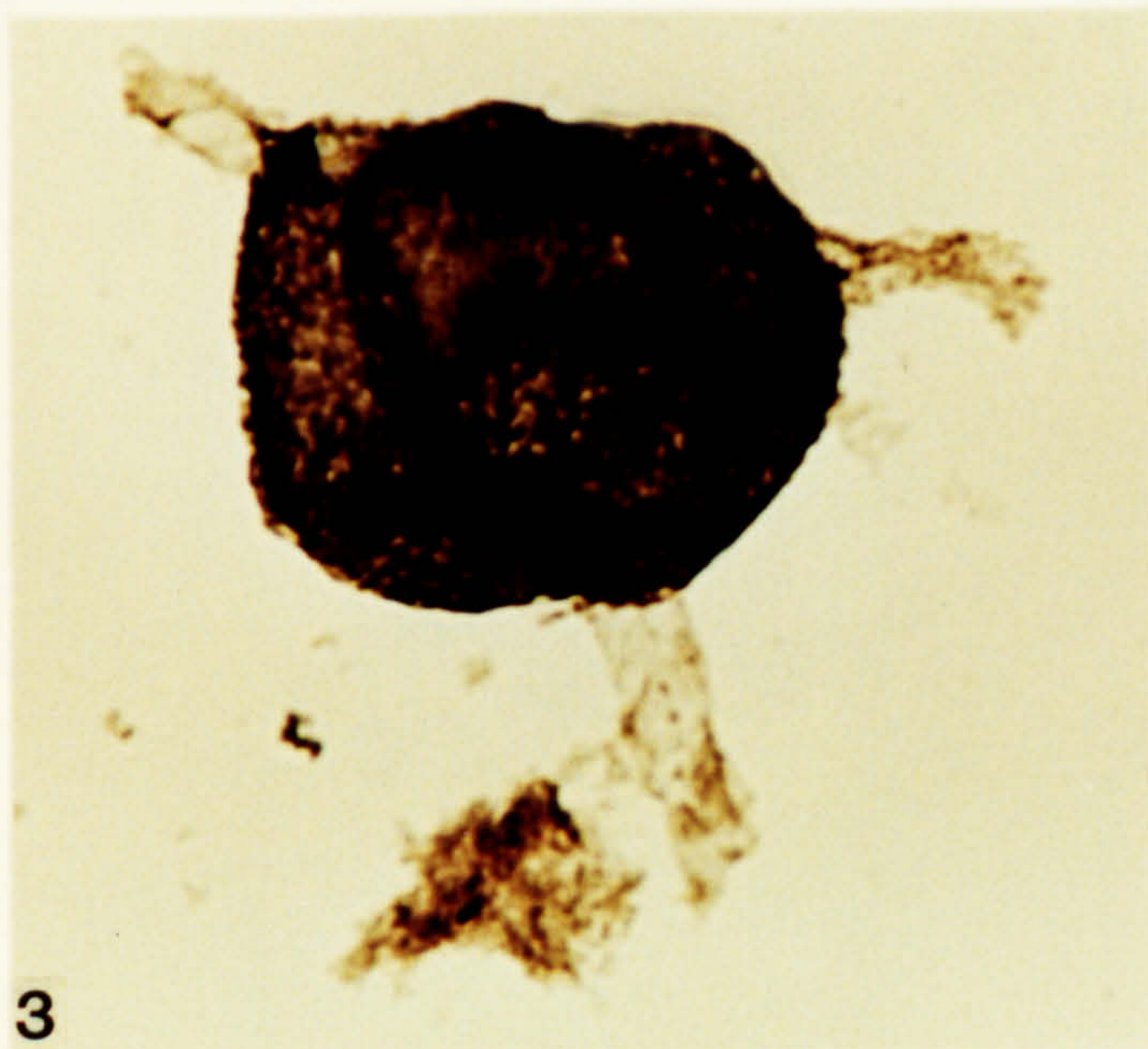
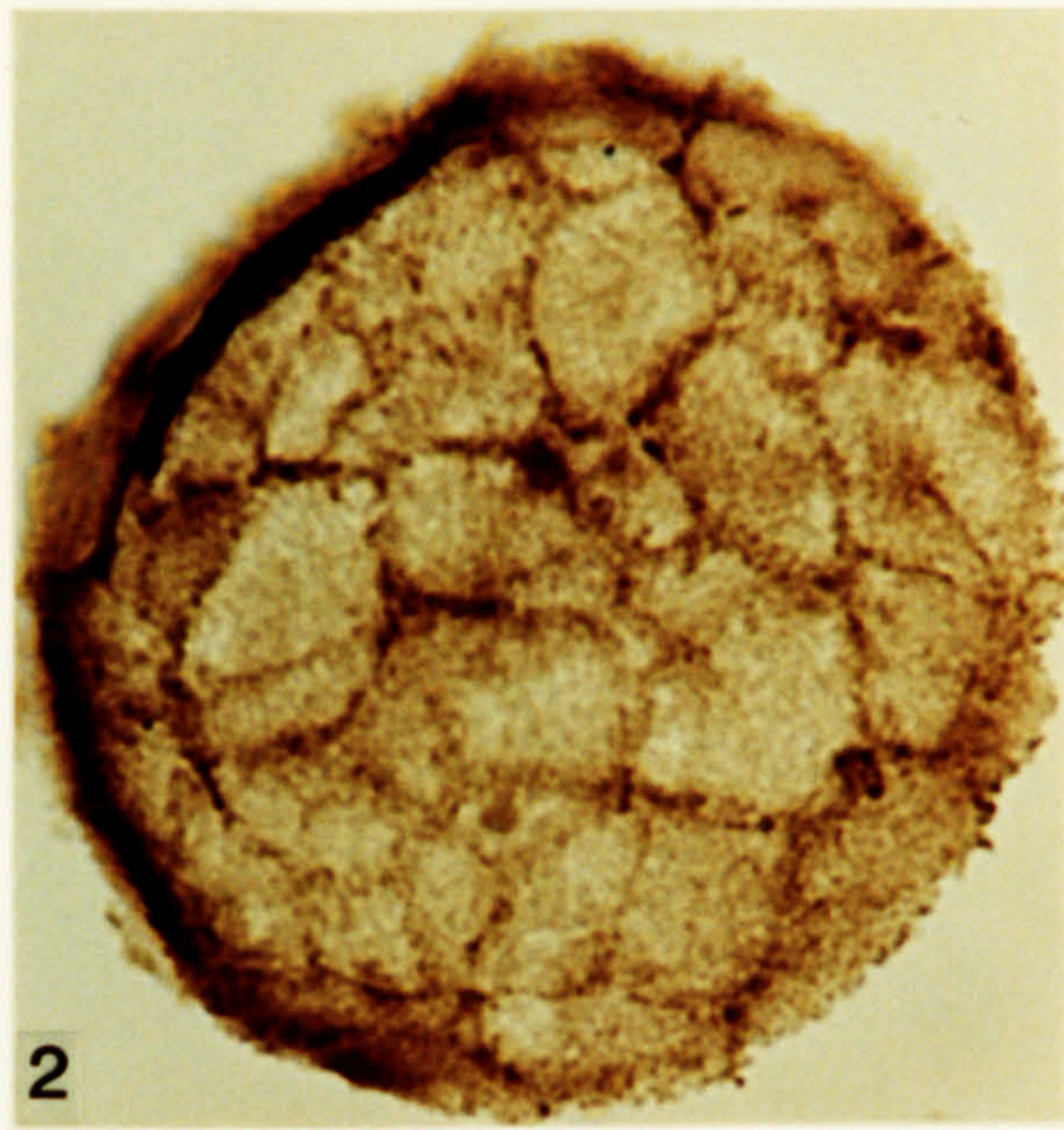
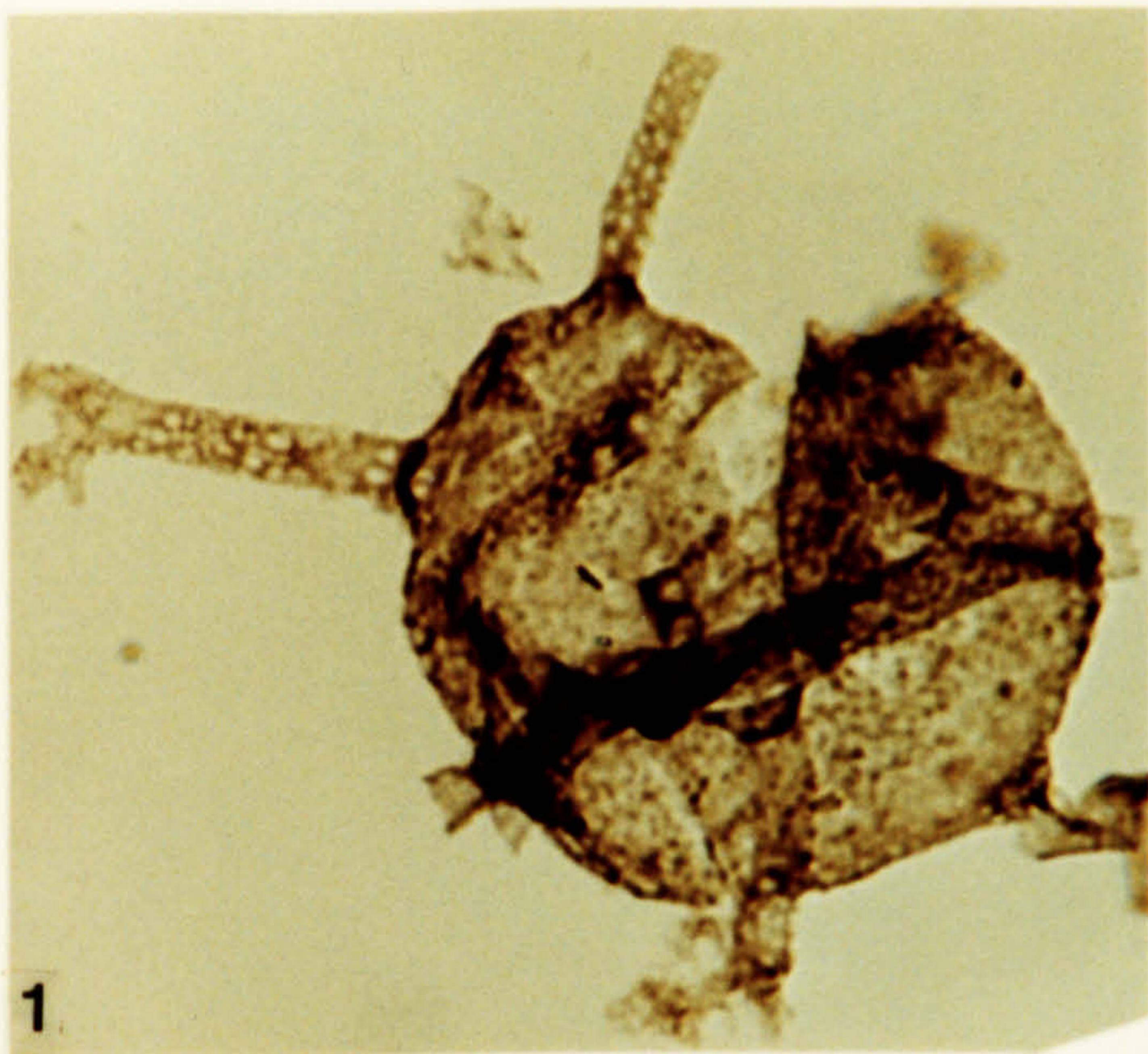
1. *Baltisphaeridium archaicum* Cramer & Diez 1972. DW 250, FS-5, L9\2.
2. *Baltisphaeridium?* sp. 3. DW 249, FS-1, R19\4.
3. *Baltisphaeridium?* sp. DW 250, FS-1, T39\1.
4. *Baltisphaeridium?* sp. 3. DW 249, FS-3, H14\3.
5. *Baltisphaeridium?* sp. DW 250, FS-6, O23\4.
6. *Buedingisphaeridium* sp. 1. DW 249, FS-1, D43\3.
7. *Buedingisphaeridium lunatum* Le Herisse 1989. DW 249, FS-1, G46\1.
8. *Comasphaeridium hirtum* Le Herisse 1989. DW 246, FS-1, R39\1.
9. *Comasphaeridium hirtum* Le Herisse 1989. DW 246, FS-1, U36\1.



**Plate 59.**

Acritarchs from the Carbonaceous Shale Formation, upper Llandovery, Telychian in age.

1. *Cymbosphaeridium* cf. *ravum* (Downie) Dorning 1981. DW 250, FS-6, E24\4.
2. *Dictyotidium dictyotum* (Eisenack) Eisenack 1955. DW 250, FS-5, G23\4.
3. *Cymbosphaeridium* cf. *ravum* (Downie) Dorning 1981. DW 250, FS-1, P17\2.
4. *Dictyotidium dictyotum* (Eisenack) Eisenack 1955. DW 249, FS-1, U28\3.
5. *Cymbosphaeridium* cf. *ravum* (Downie) Dorning 1981. DW 250, FS-1, H10\2.
6. *Dictyotidium* cf. *arctum* Kiryanov 1978. DW 250, FS-1, G8\2.

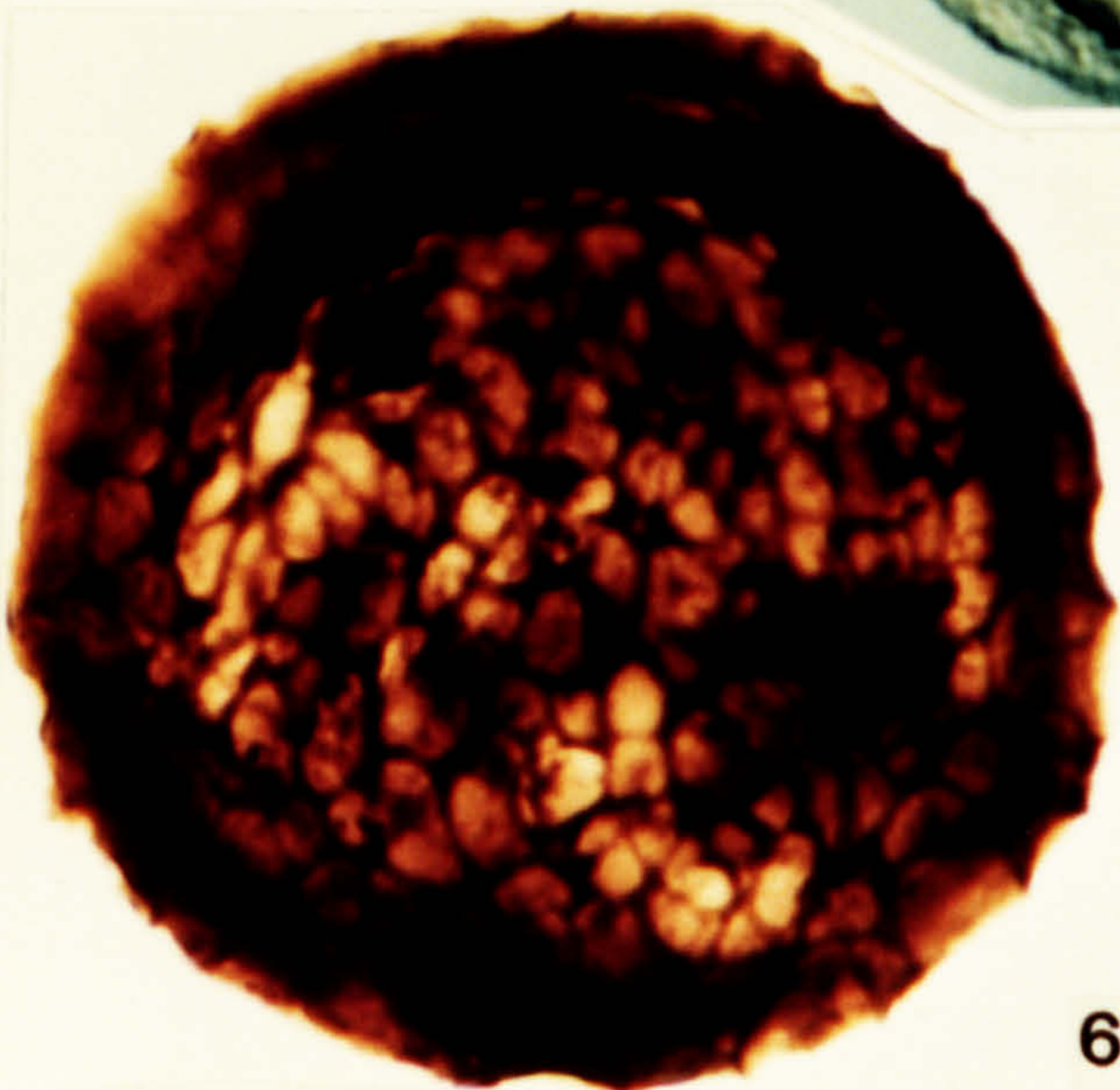
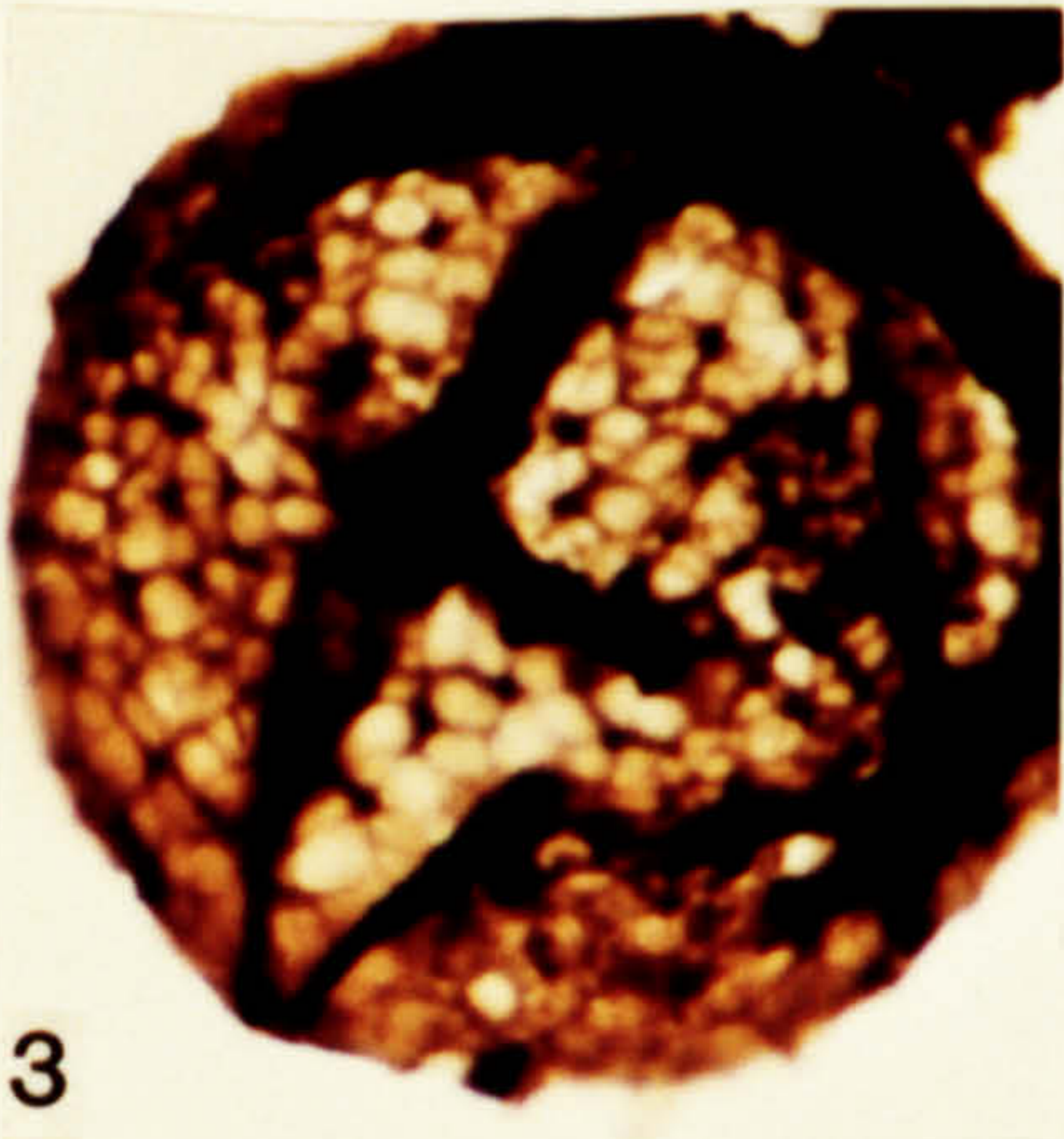
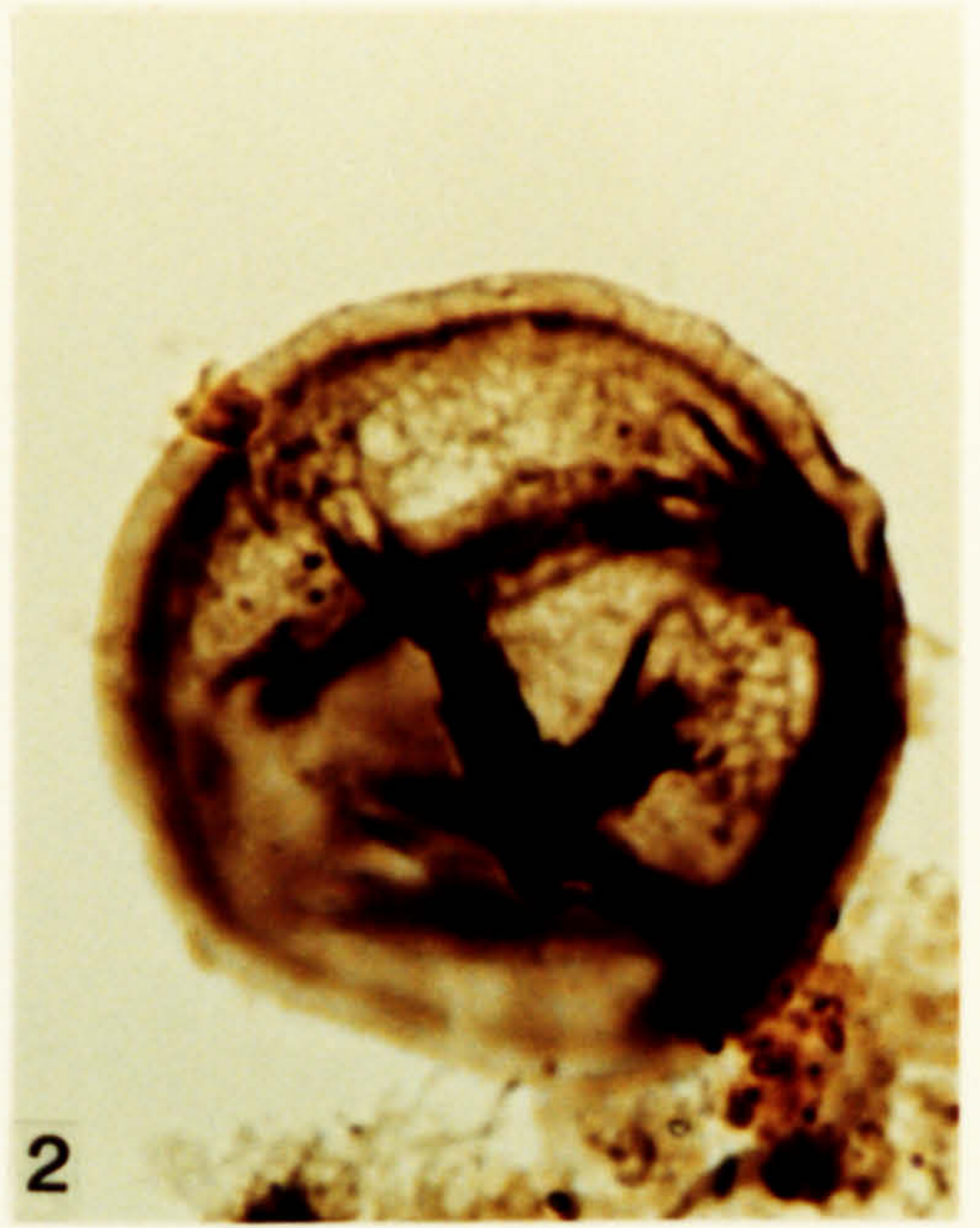
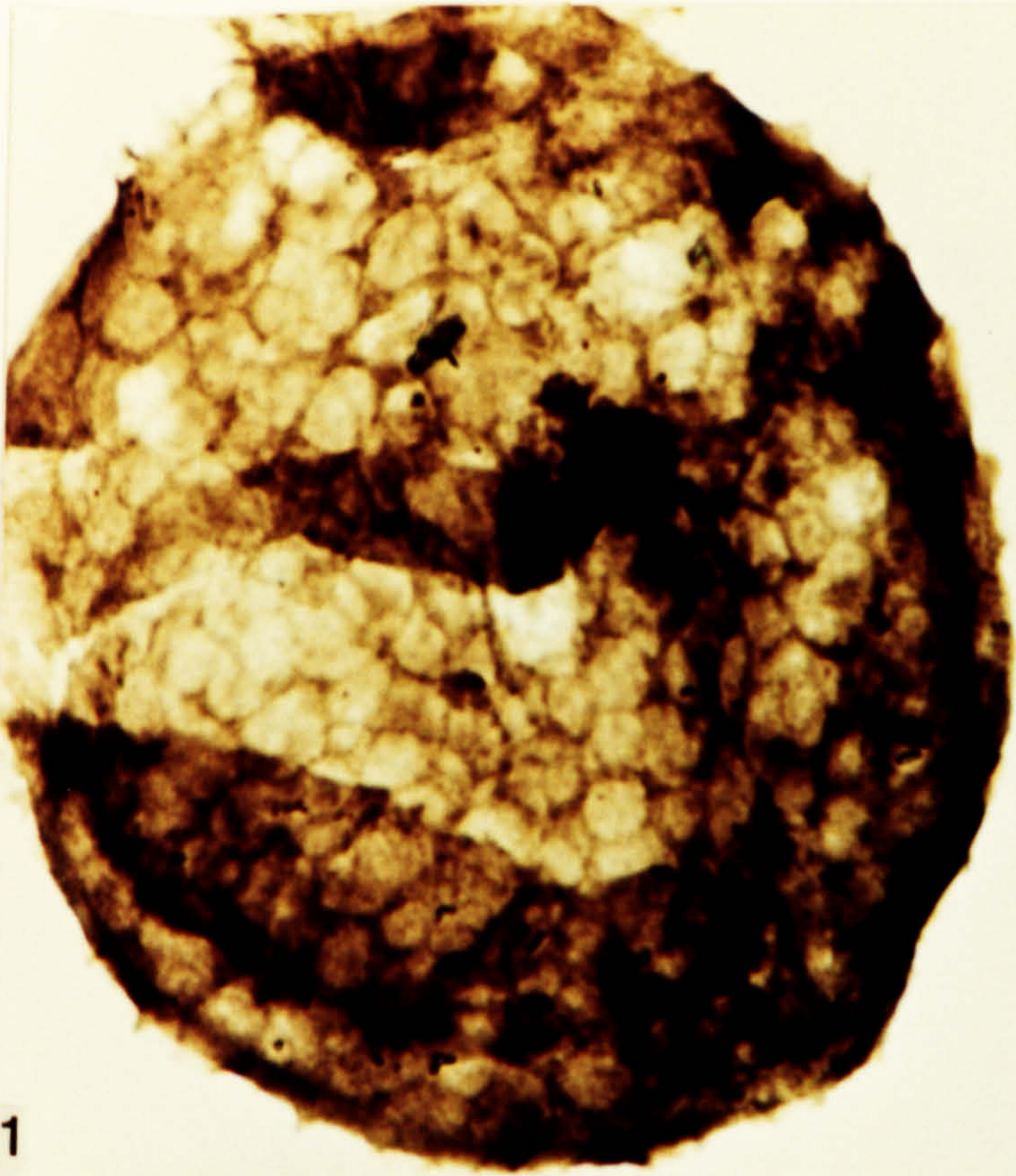




**Plate 60.**

**Acritarchs from the Carbonaceous Shale Formation, upper Llandovery, Telychian in age.**

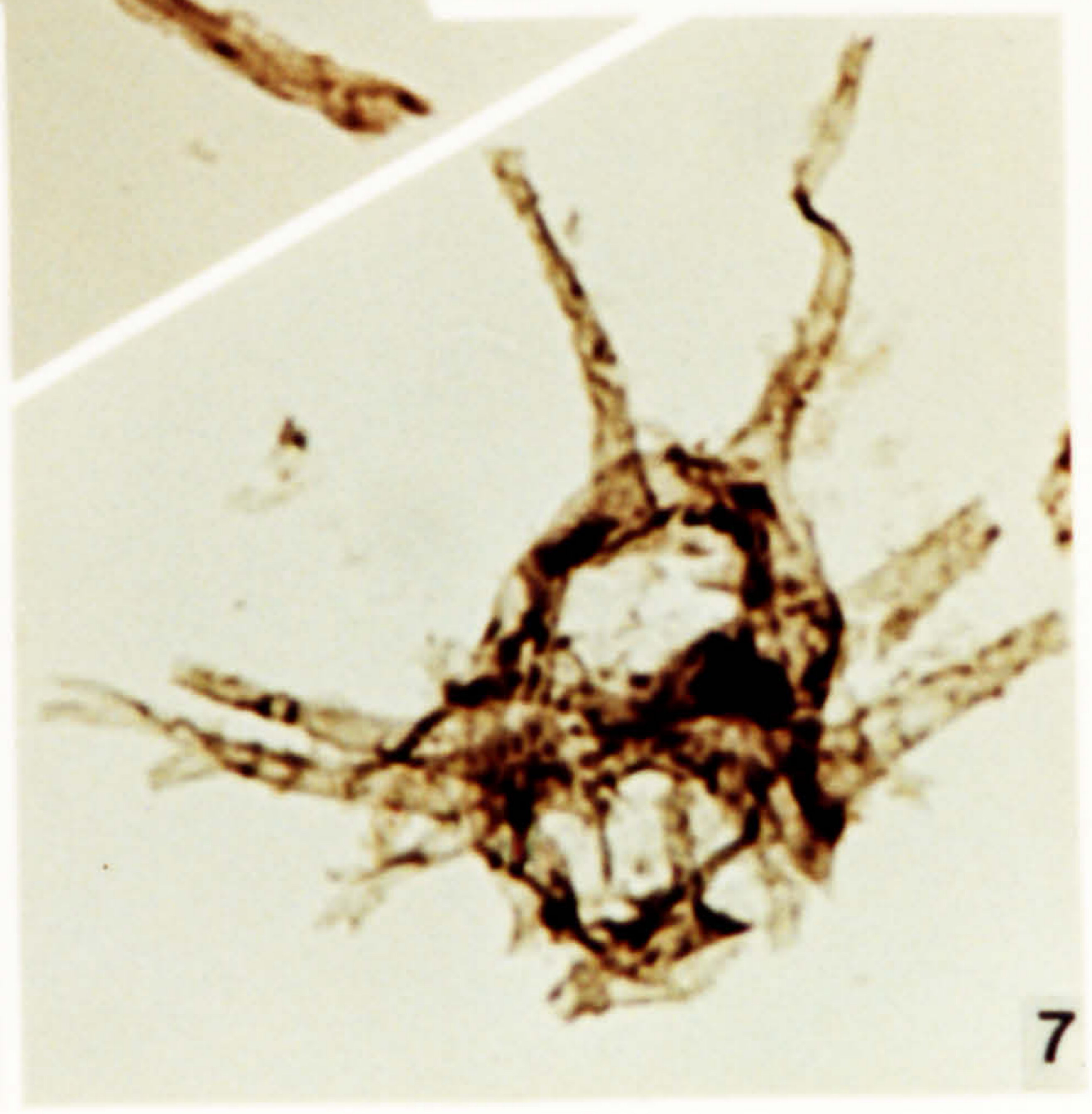
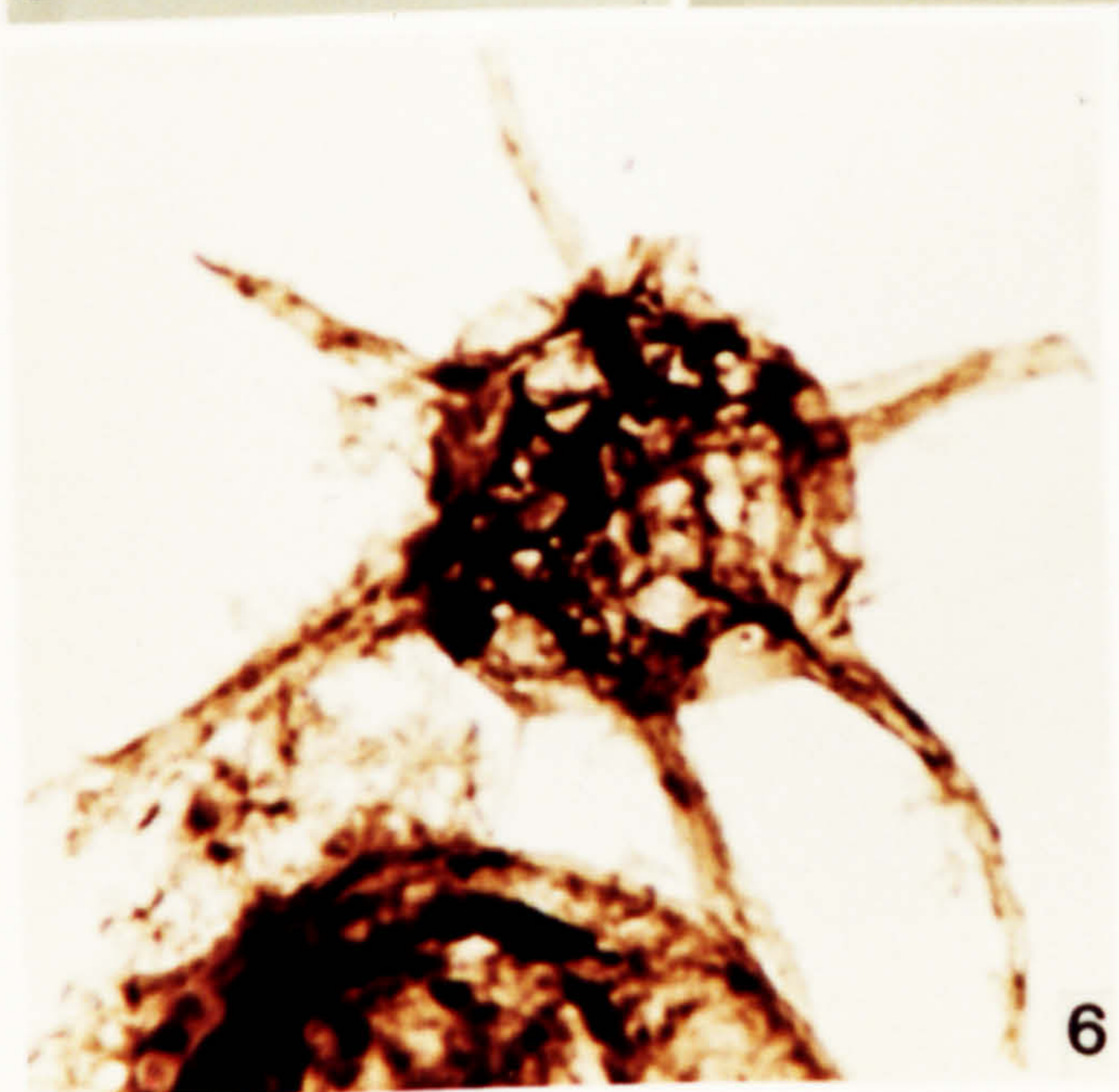
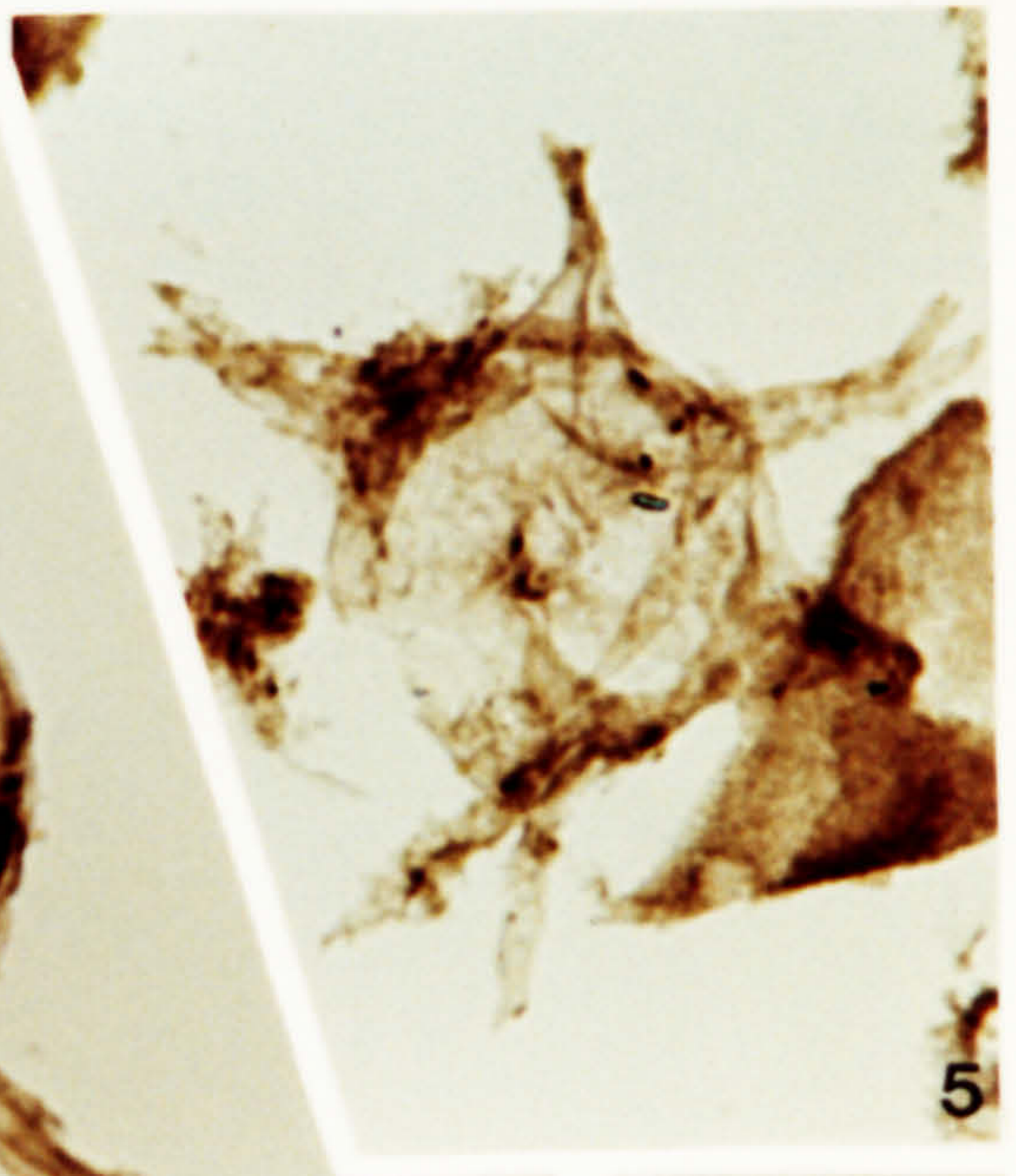
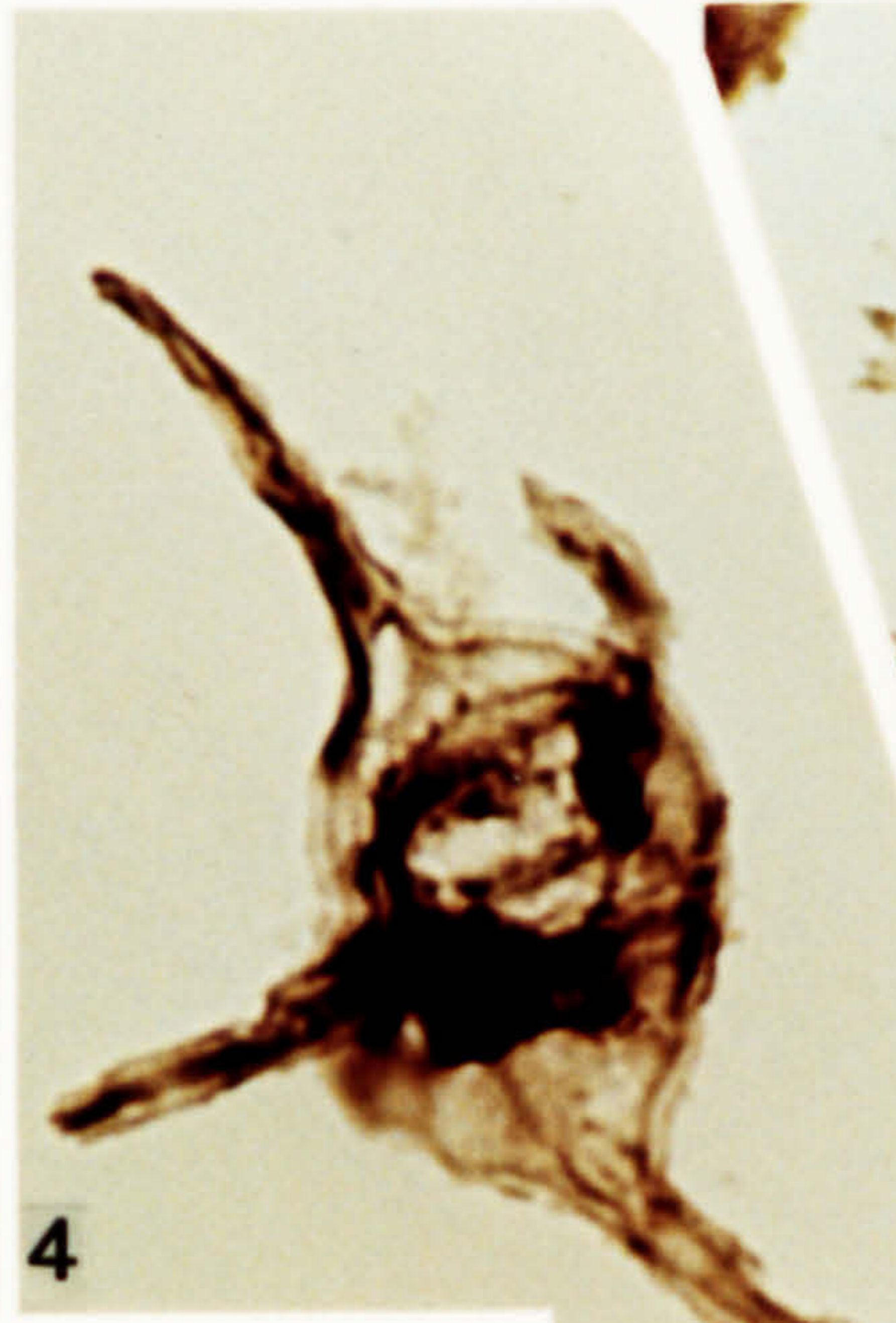
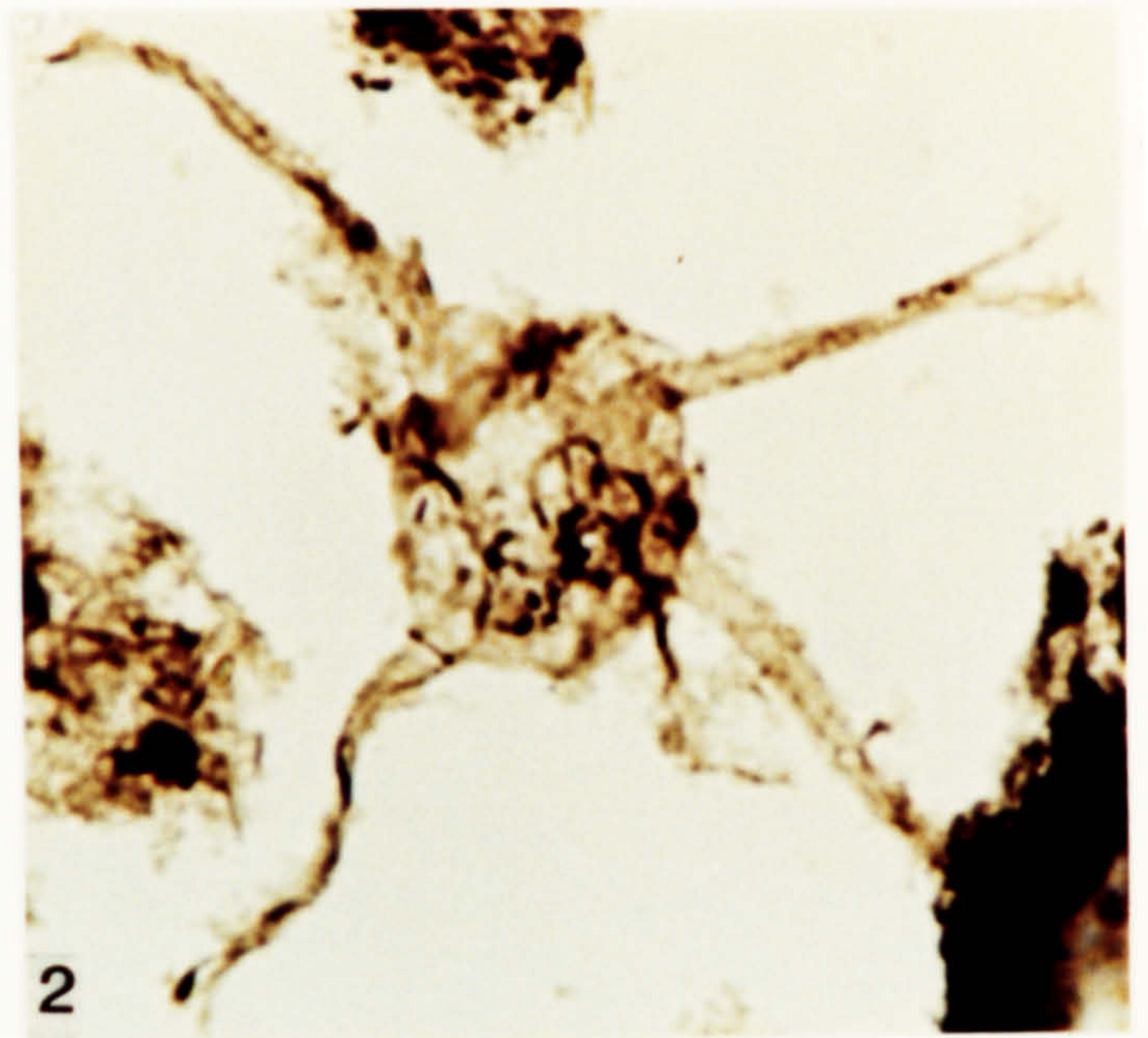
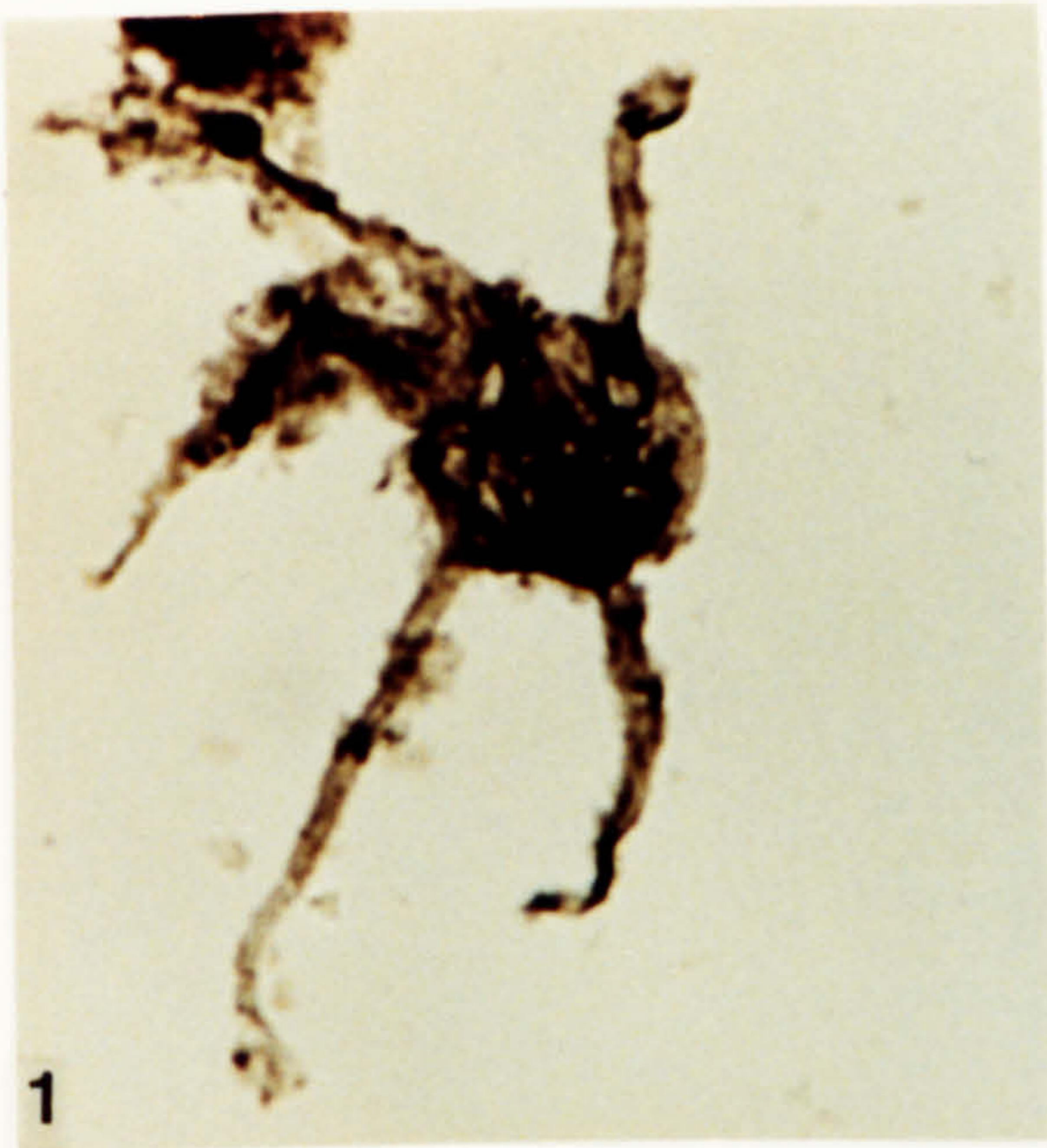
1. *Dictyotidium* sp. 2. DW 250, FS-6, E23\1.
2. *Dictyotidium* sp. 1. DW 249, FS-1, E32\2.
3. *Dictyotidium stenodictyum* Eisenack 1965. DW 249, FS-1, L27\-.
4. *Dictyotidium coarctum* (Kiryanov) Colbath 1983. DW 248, FS-1, D17\2, IC.
5. *Dictyotidium* sp. 1. DW 249, FS-1, H31\2.
6. *Dictyotidium stenodictyum* Eisenack 1965. DW 248, FS-6, J4\2.
7. *Dictyotidium* sp. 1. DW 250, FS-6, M43\3.



**Plate 61.**

Acritarchs from the Carbonaceous Shale Formation, upper Llandovery, Telychian in age.

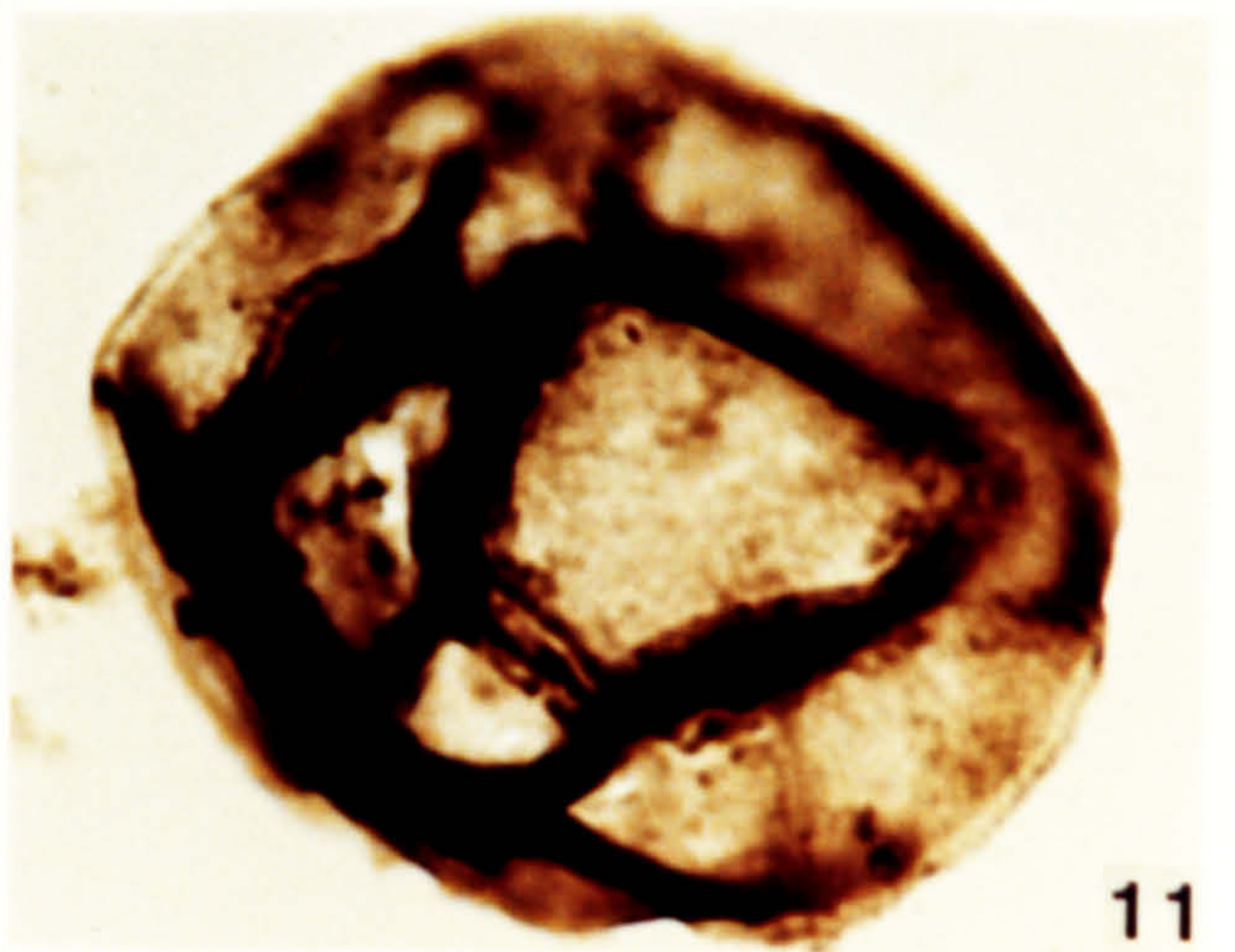
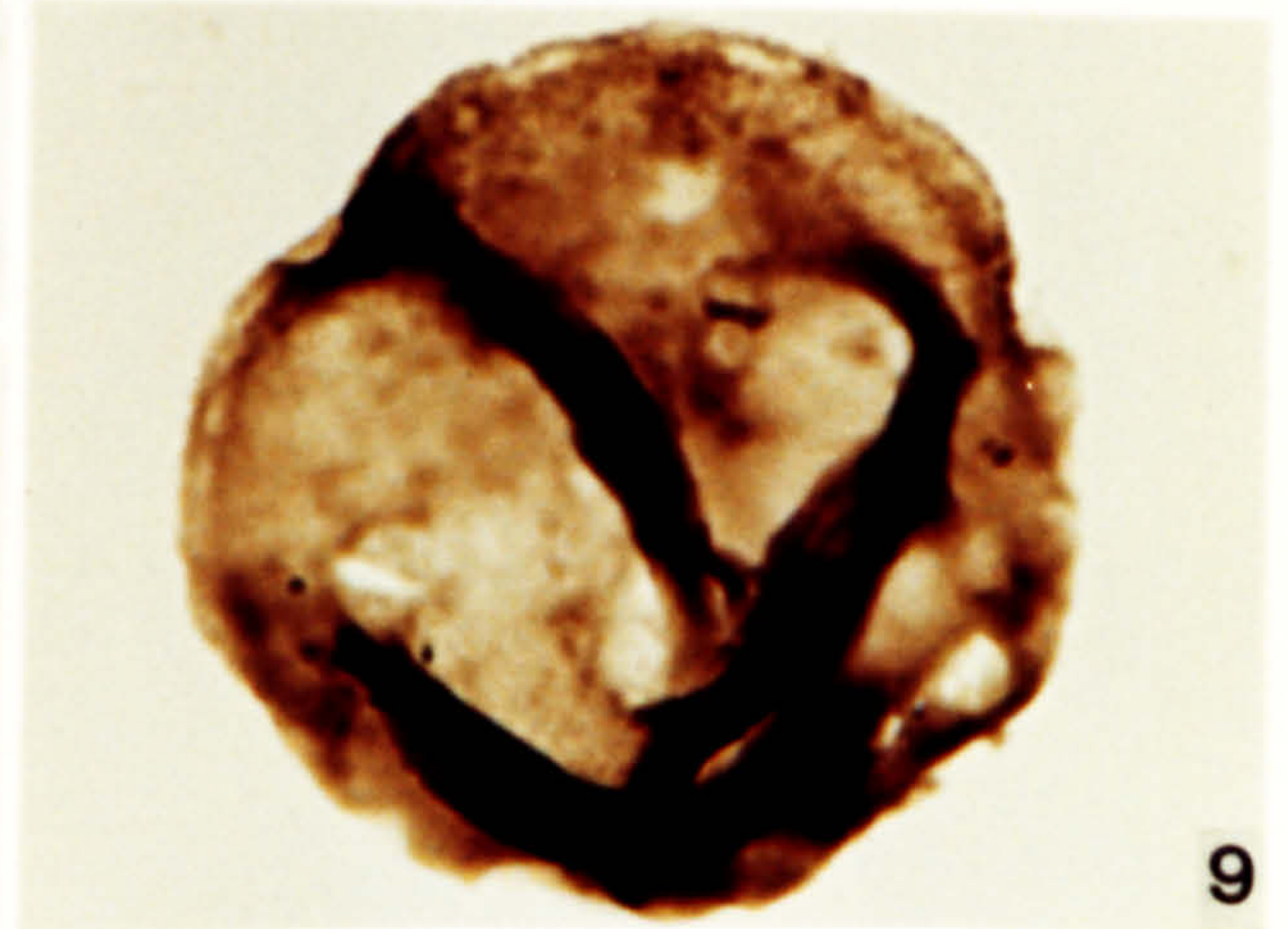
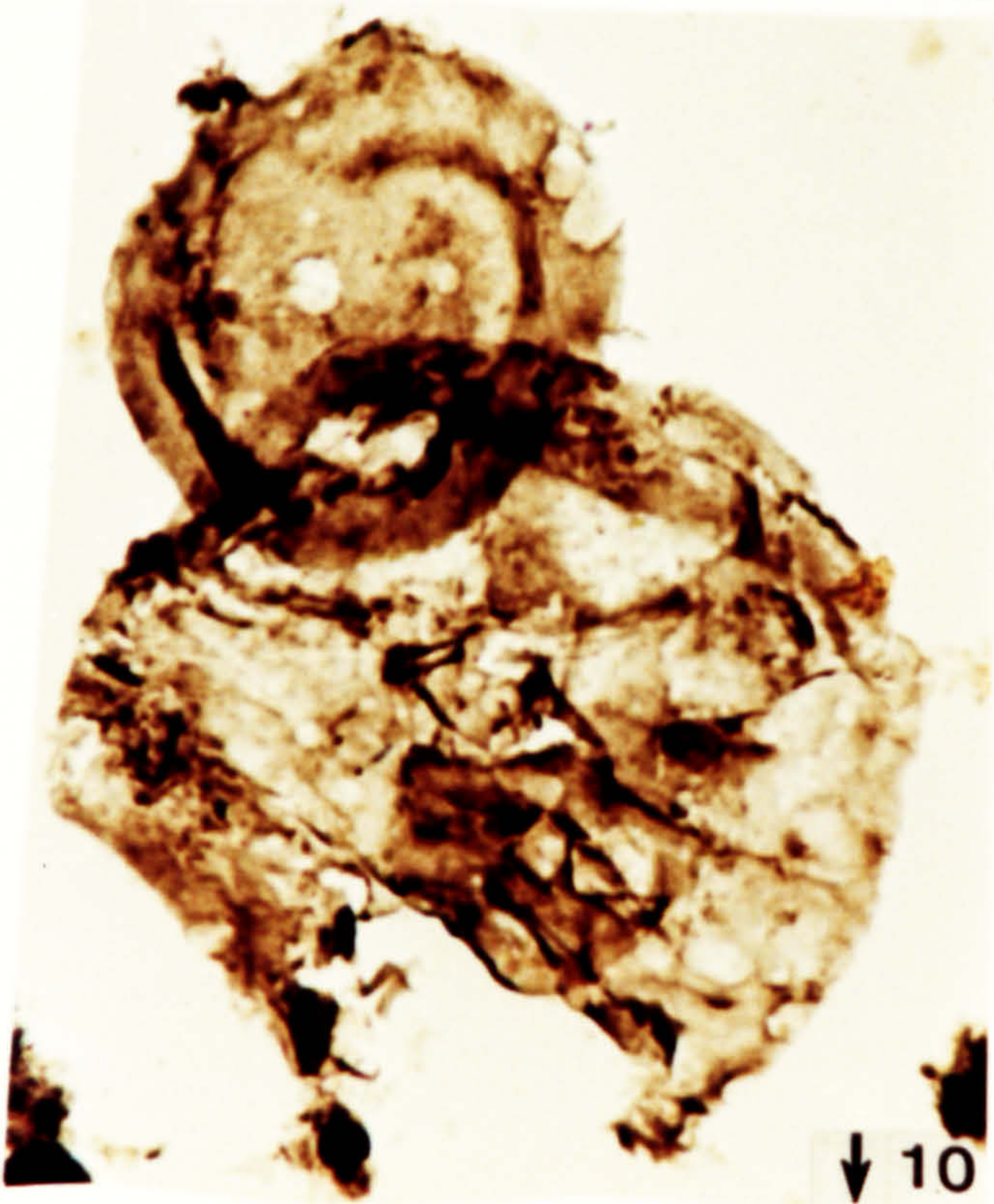
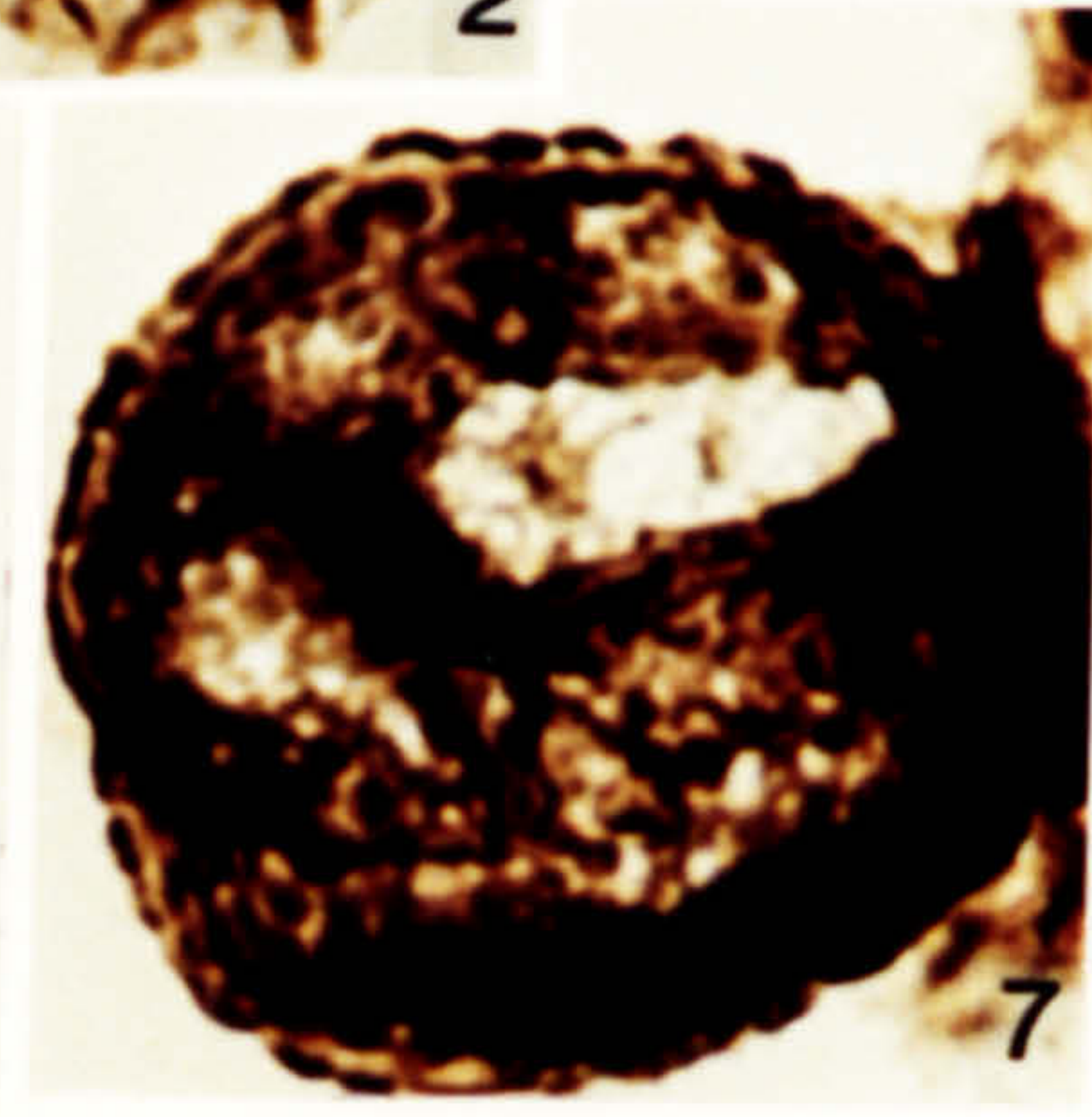
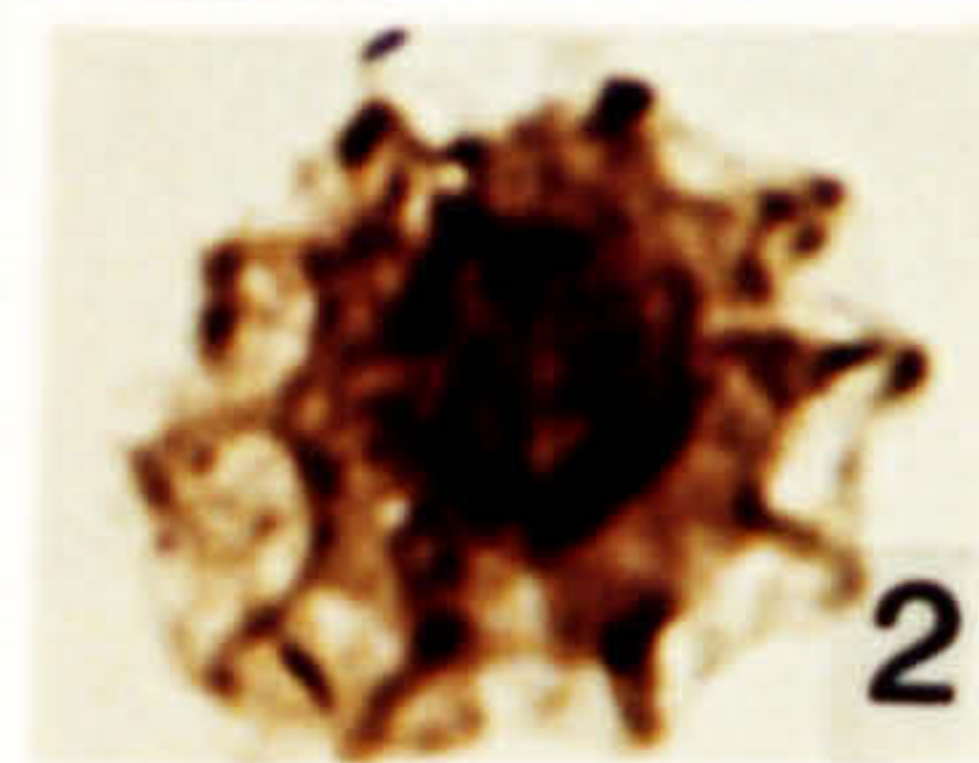
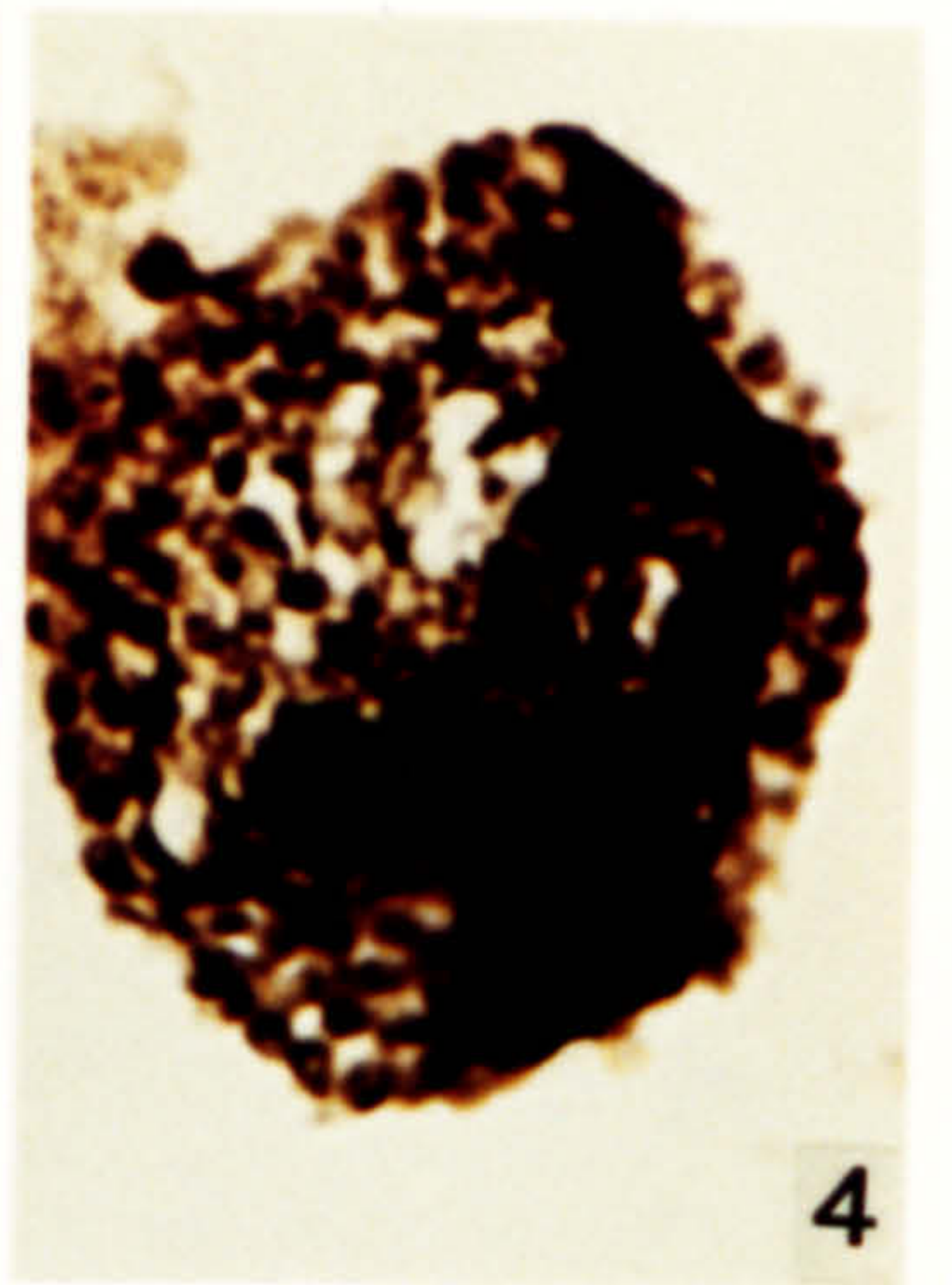
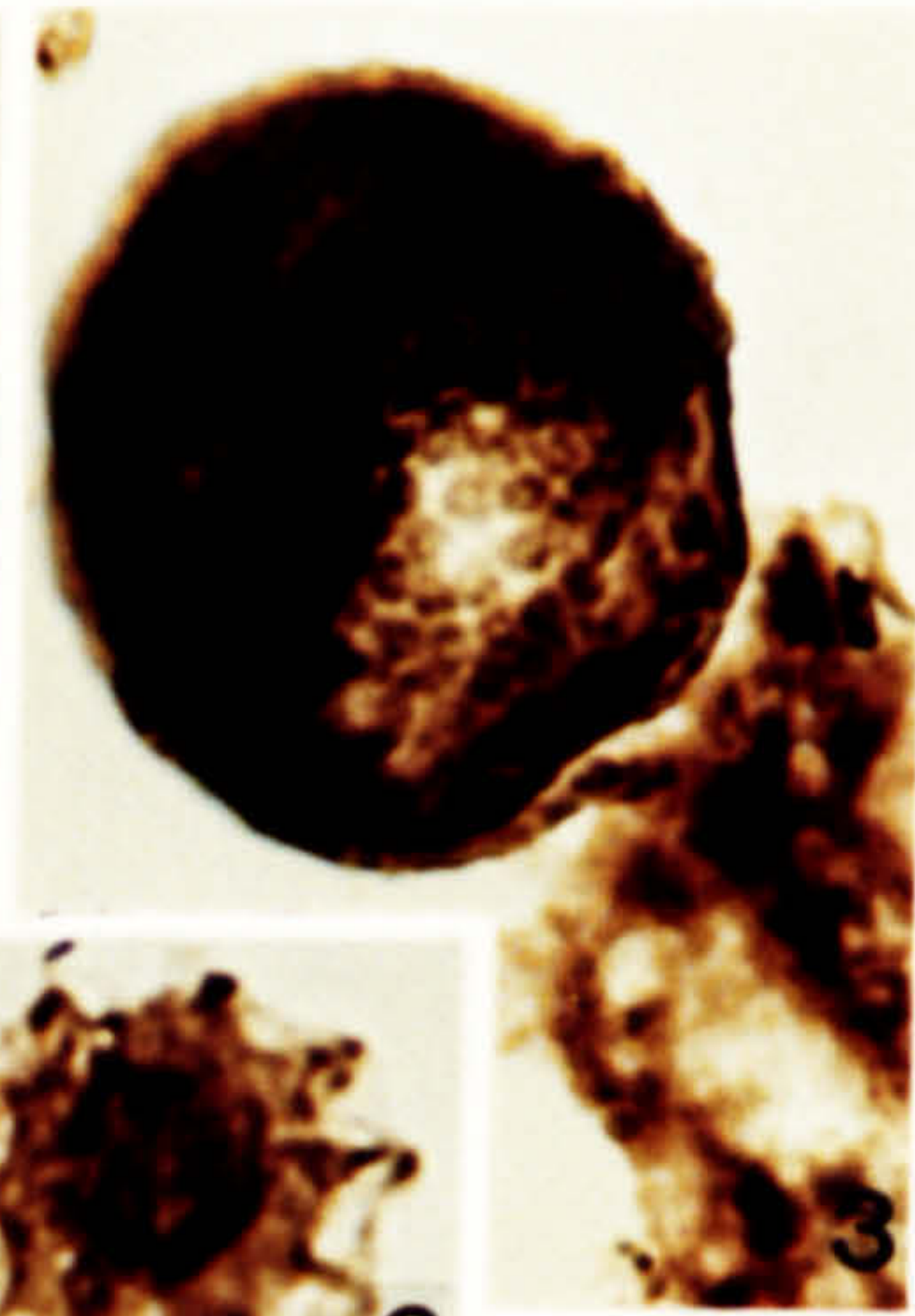
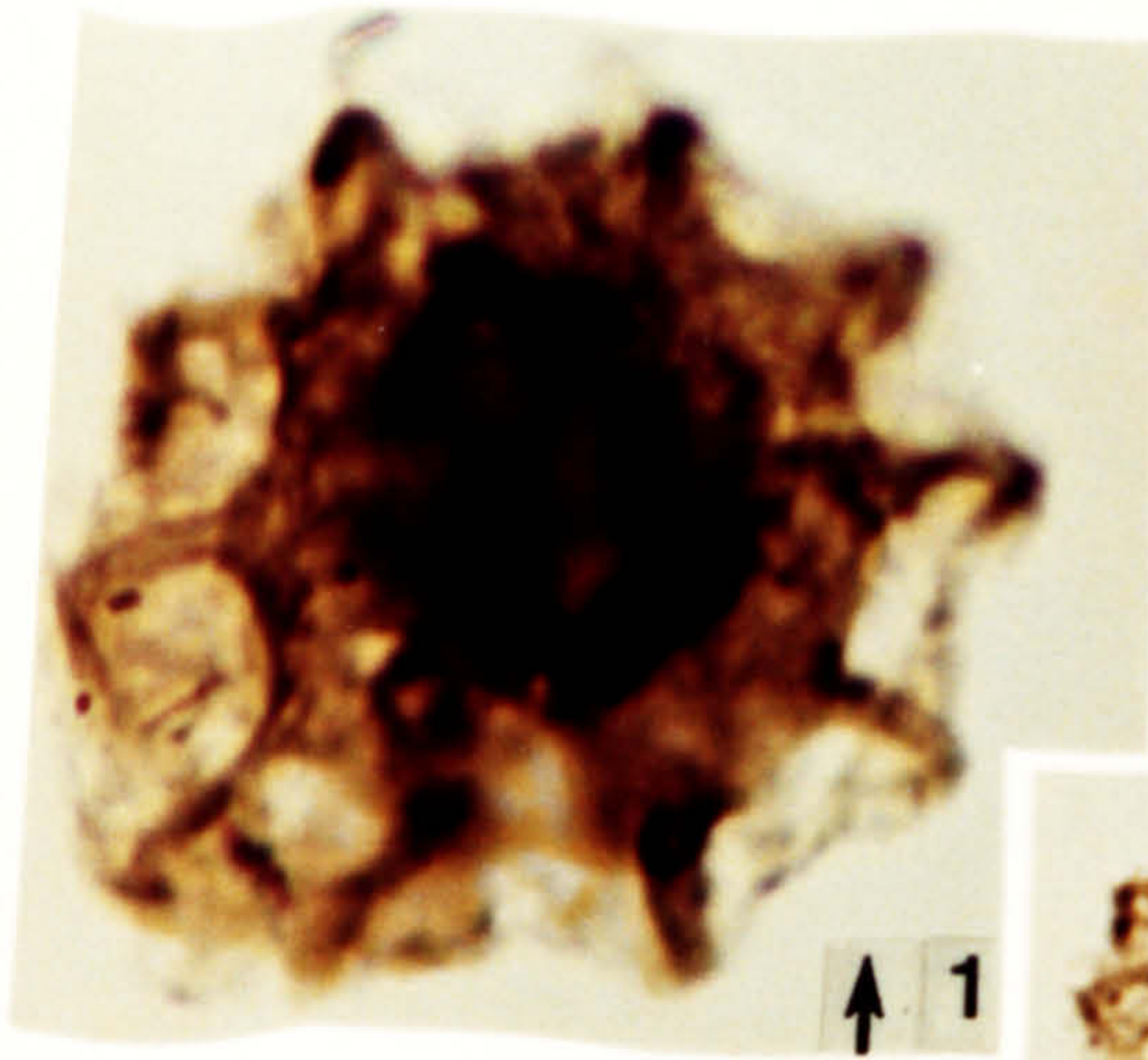
1. *Diexallophasis denticulata* var. *granulatispinosa* (Downie) comb. nov. DW 249, FS-1, N28\2.
2. *Diexallophasis denticulata* var. *granulatispinosa* (Downie) comb. nov. DW 249, FS-1, R6\4.
3. *Diexallophasis denticulata* var. *granulatispinosa* (Downie) comb. nov. DW 249, FS-1, E27\1.
4. *Diexallophasis denticulata* (Stockmans & Williere) Loeblich 1970. DW 249, FS-1, F22\3.
5. *Diexallophasis denticulata* (Stockmans & Williere) Loeblich 1970. DW 250, FS-1, M36\3.
6. *Diexallophasis denticulata* (Stockmans & Williere) Loeblich 1970. DW 248, FS-1, T19\3.
7. *Diexallophasis denticulata* (Stockmans & Williere) Loeblich 1970. DW 249, FS-1, J39\4.



**Plate 62.**

Acritarchs from the Carbonaceous Shale Formation, upper Llandovery, Telychian in age.

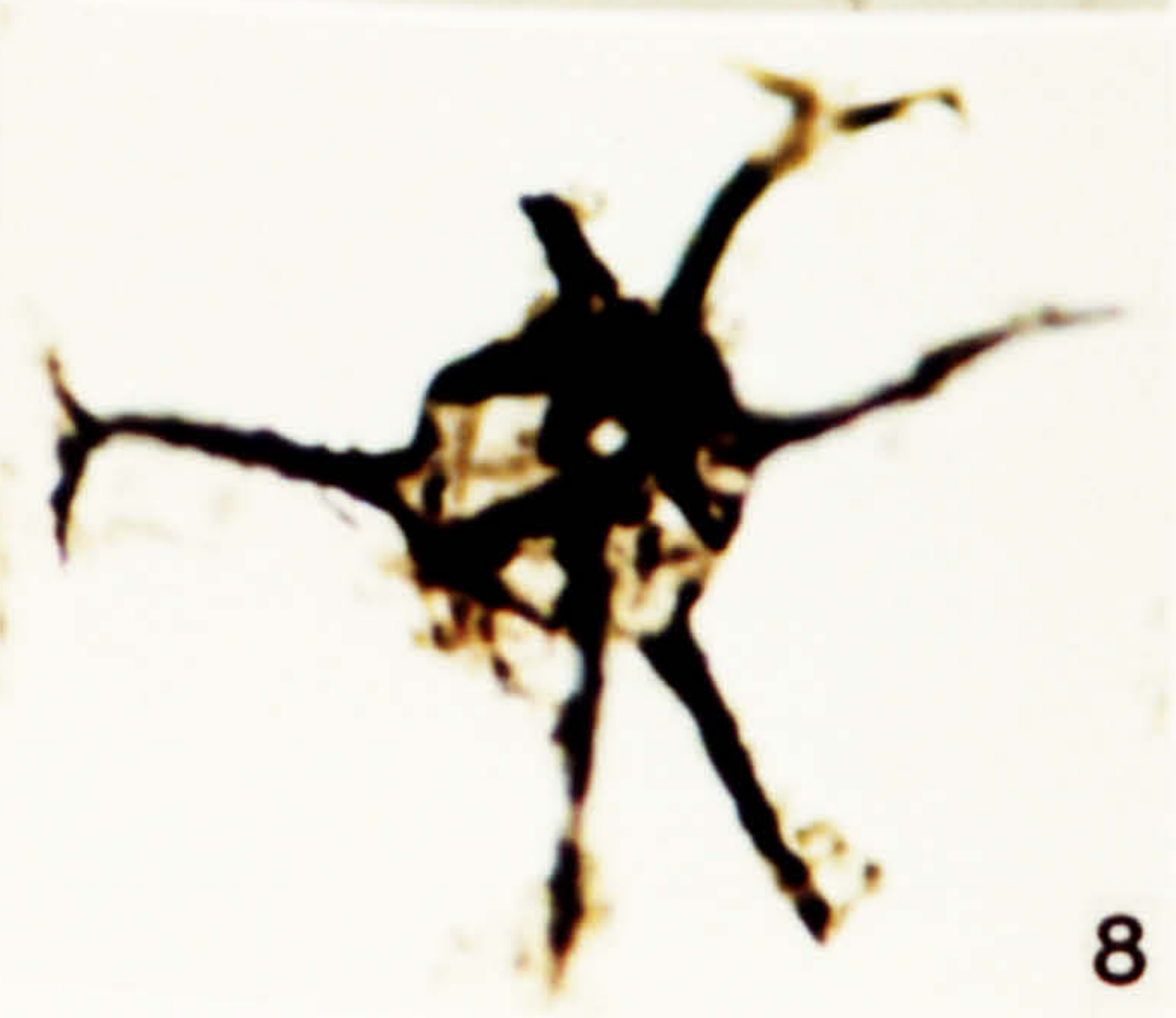
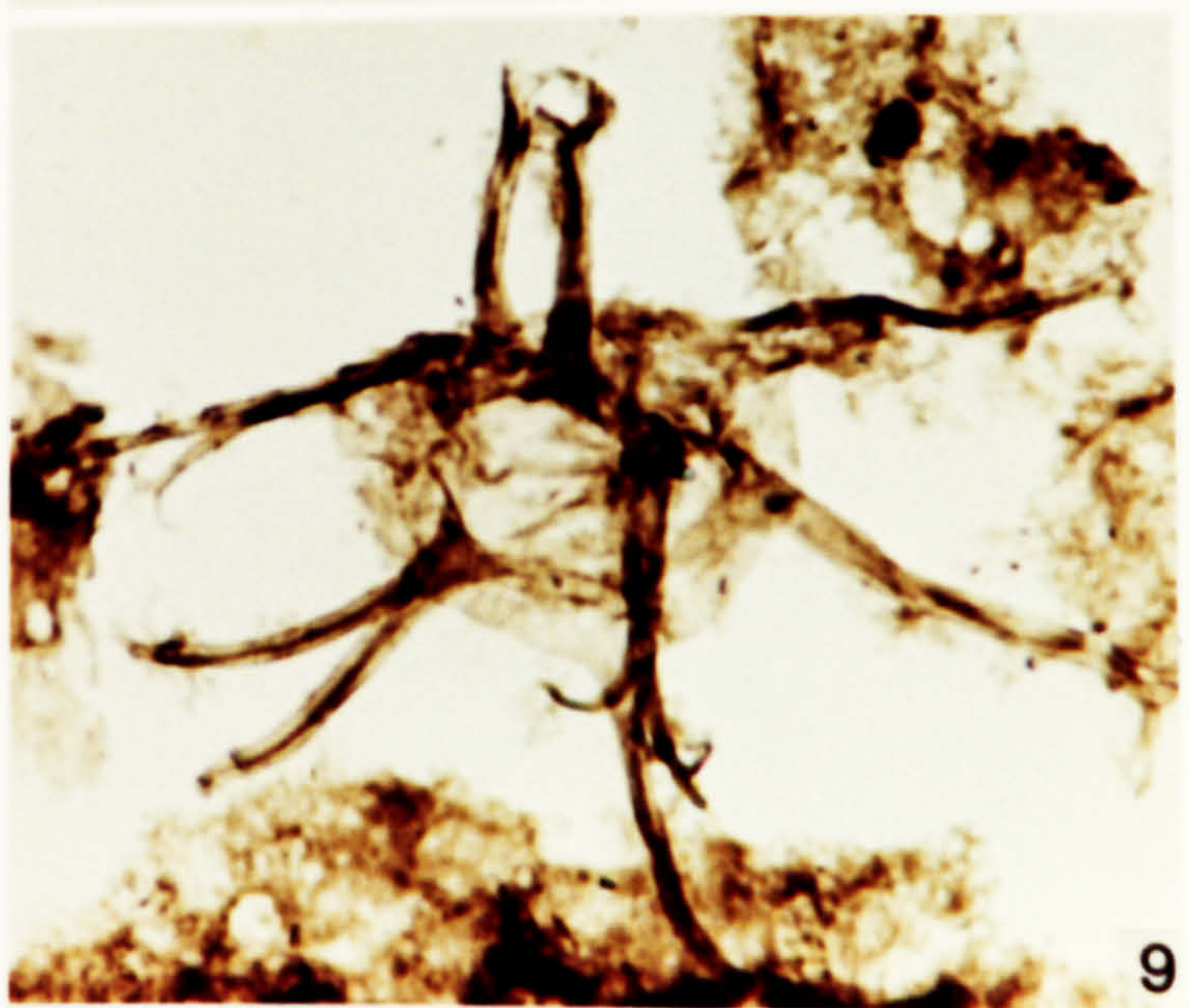
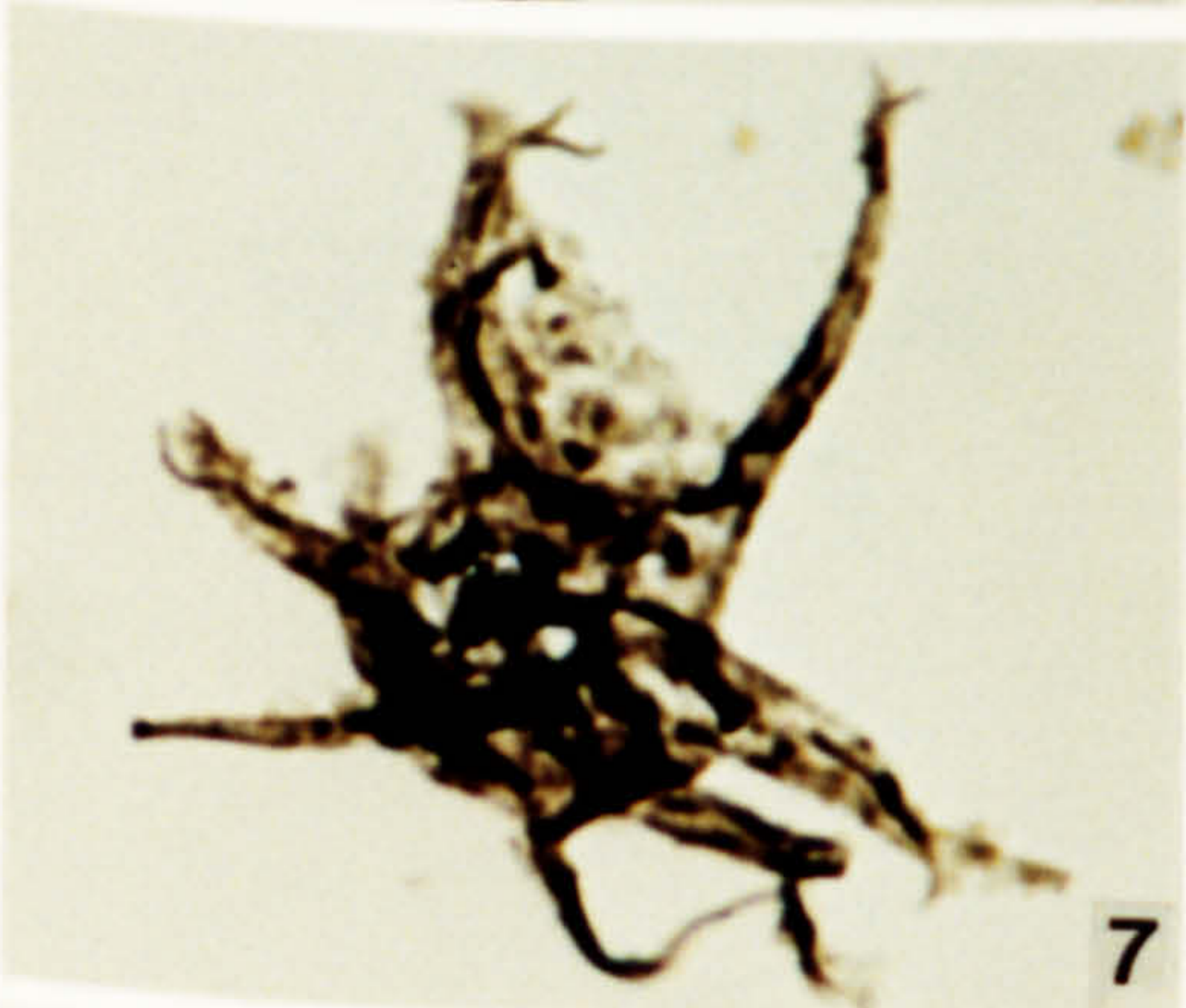
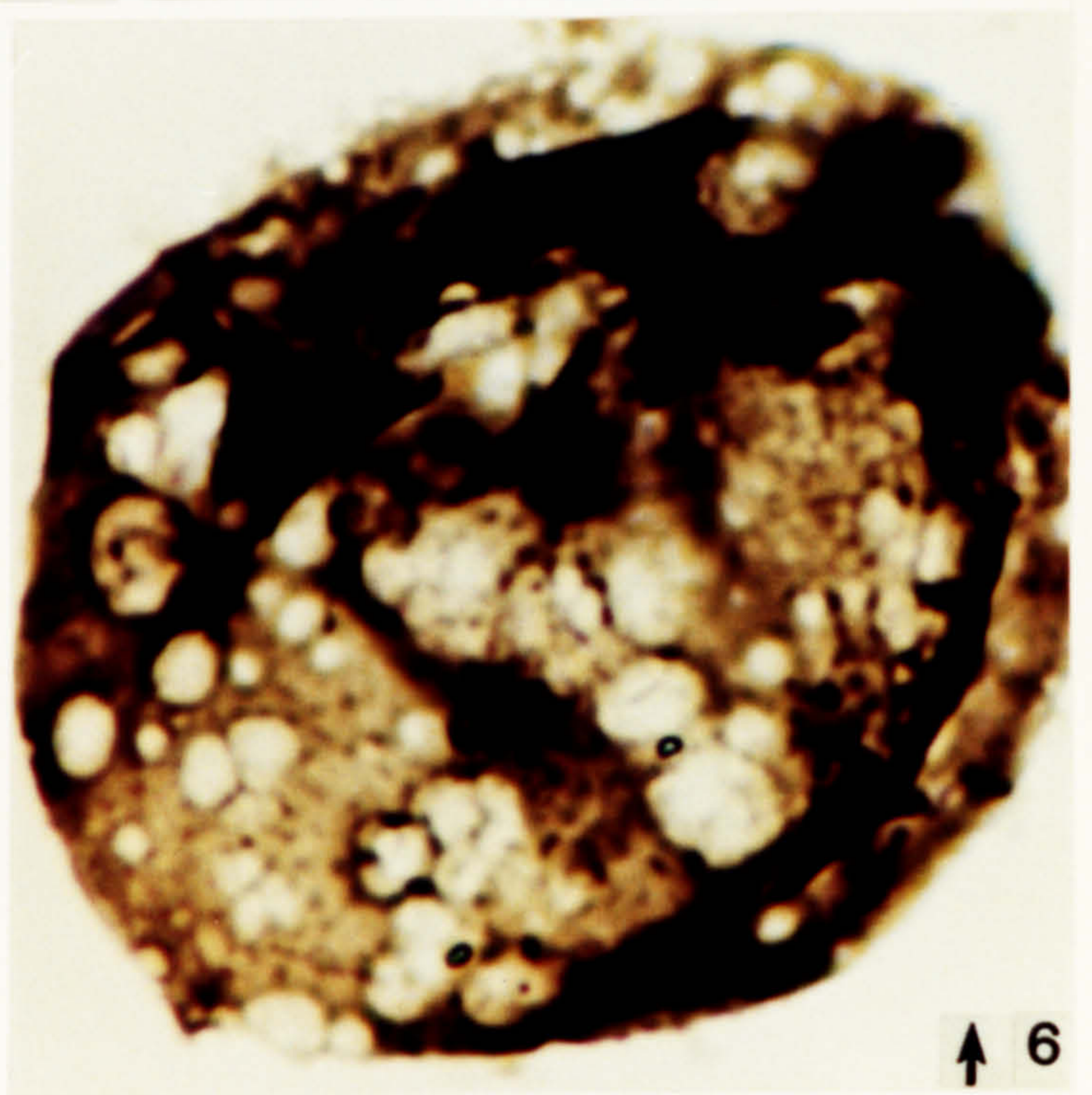
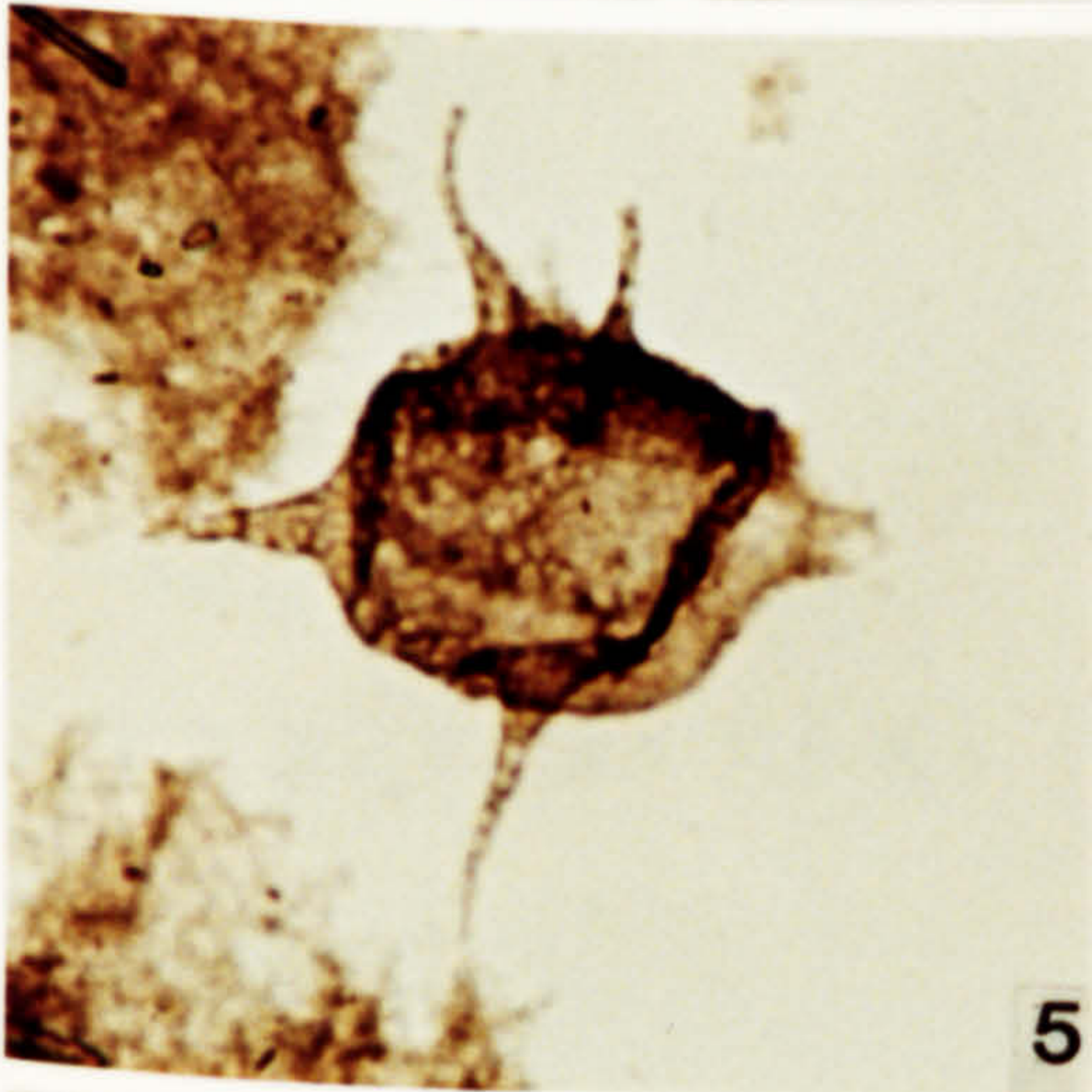
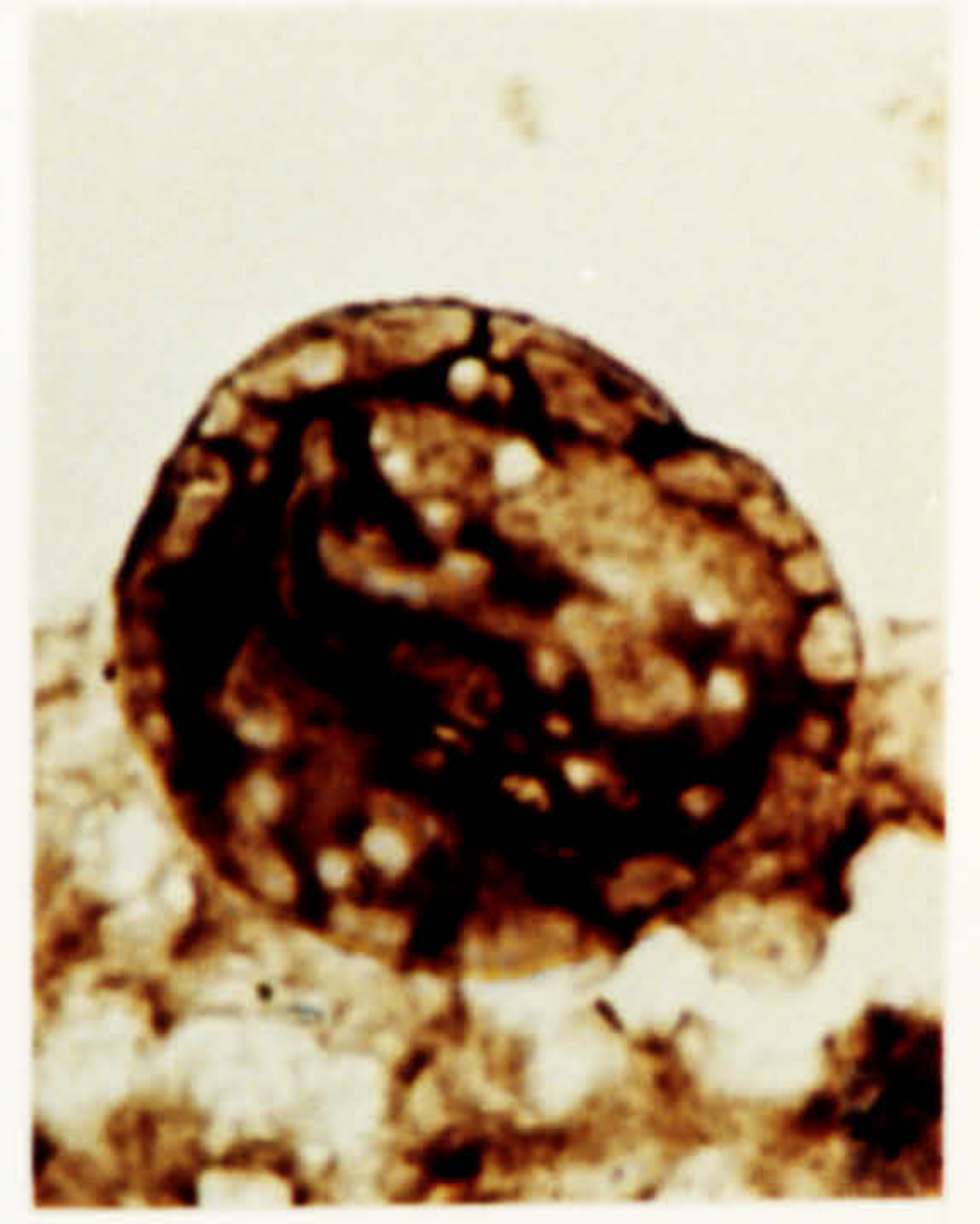
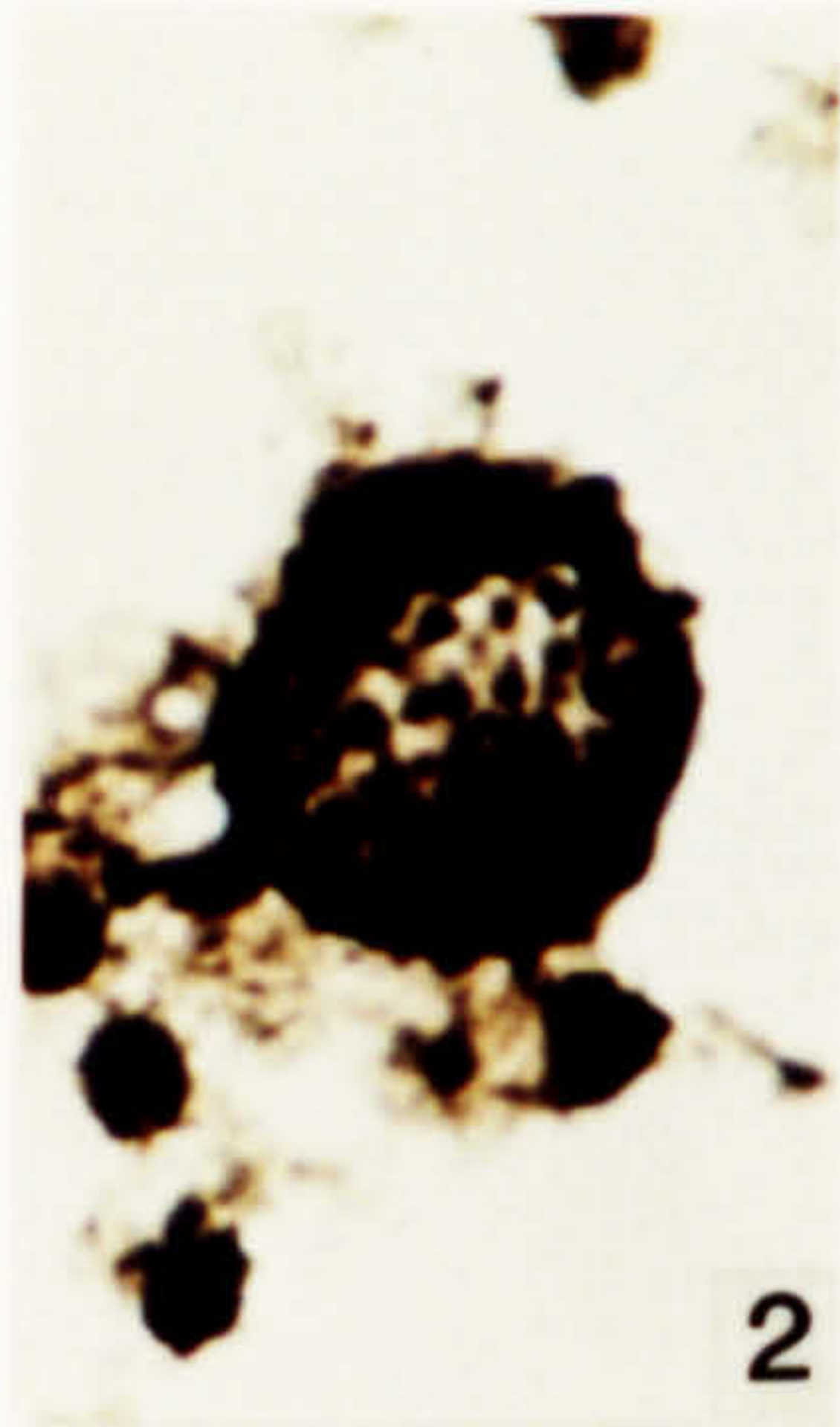
1. *Duvernaysphaera gothica* Martin 1967. DW 249, FS-1, R30\4, X2300.
2. *Duvernaysphaera gothica* Martin 1967. DW 249, FS-1, R30\4.
3. *Heliosphaeridium* cf. *citrinipeltatum* (Cramer & Diez) Dorning 1981. DW 250, FS-1, D10\4.
4. *Heliosphaeridium* cf. *citrinipeltatum* (Cramer & Diez) Dorning 1981. DW 249, FS-1, N46\1.
5. *Leiofusa tumida* Downie 1959. DW 246, FS\1, U36\2.
6. *Leiofusa* cf. *bernesgae* Cramer 1964. DW 246, FS-1, S16\1.
7. *Heliosphaeridium* cf. *citrinipeltatum* (Cramer & Diez) Dorning 1981. DW 249, FS-1, O25\2.
8. *Heliosphaeridium* cf. *citrinipeltatum* (Cramer & Diez) Dorning 1981. DW 249, FS-1, S37\3.
9. To the south *Leiosphaeridia* sp. 1 and to the north *Leiosphaeridia microcystis* Eisenack 1938 ex Eisenack 1958. DW 249, FS-1, M30\2, X550.
10. *Leiosphaeridia microcystis* Eisenack 1938 ex Eisenack 1958. DW 249, FS-1, F41\1.
11. *Leiosphaeridia microcystis* Eisenack 1938 ex Eisenack 1958. DW 249, FS-1, L37\2.



**Plate 63.**

Acritarchs from the Carbonaceous Shale Formation, upper Llandovery, Telychian in age.

1. *Lophosphaeridium citrinum* Downie 1963. DW 246, FS-1, T8\1.
2. *Lophosphaeridium* sp. 5. DW 246, FS-1, U37\2.
3. *Lophosphaeridium* sp. 5. DW 246, FS-1, E10\4.
4. *Lophosphaeridium* sp. 6. DW 250, FS-1, G13\3.
5. *Micrhystridium* sp. DW 250, FS-1, M19\1.
6. *Lophosphaeridium* sp. 6. DW 249, FS-1, D26\4, X2300.
7. *Multiplicisphaeridium fisheri* (Cramer) Lister 1970. DW 246, FS-1, F23\1.
8. *Multiplicisphaeridium fisheri* (Cramer) Lister 1970. DW 246, FS-1, F11\1.
9. *Multiplicisphaeridium* sp. DW 250, FS-1, J28\2.

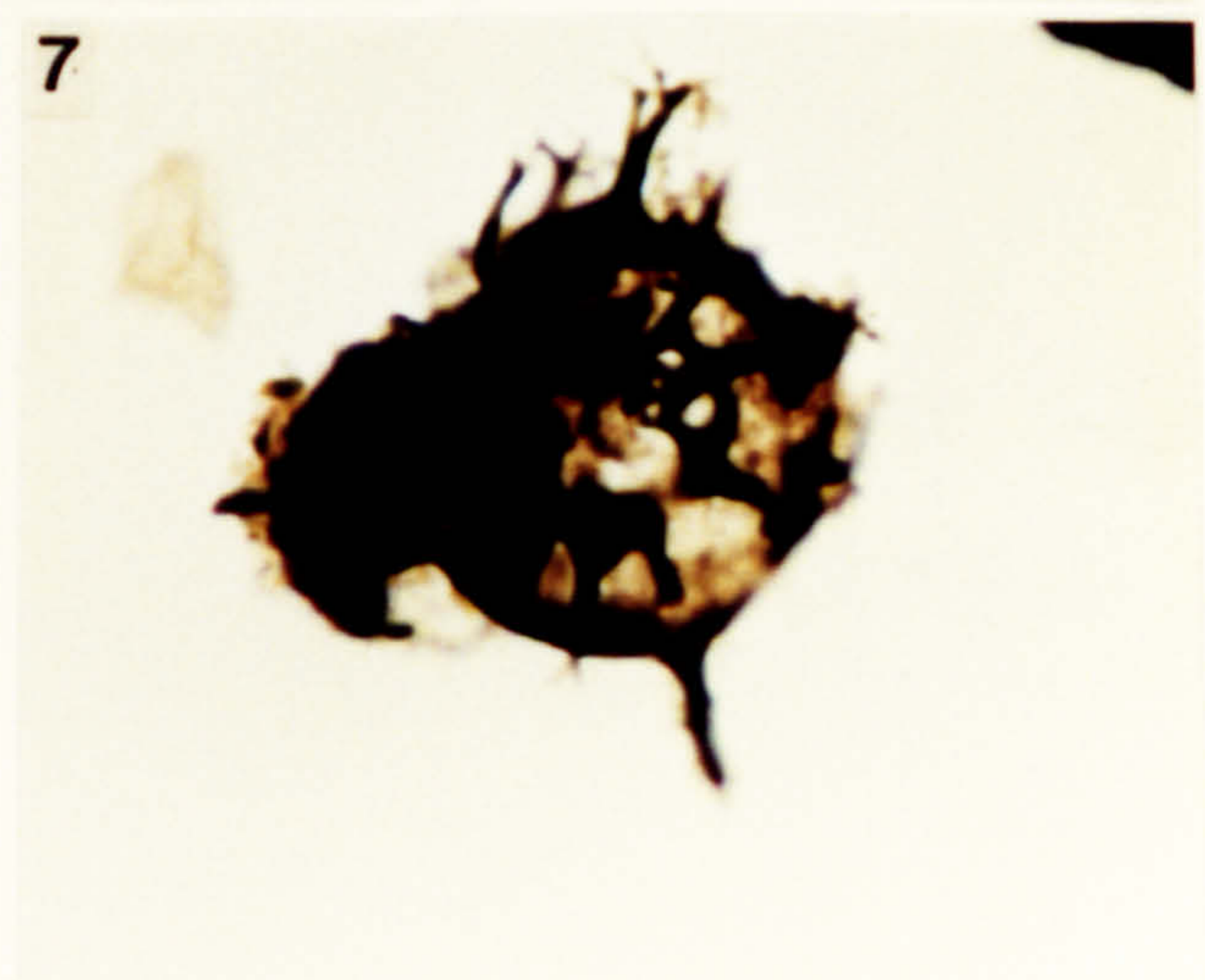
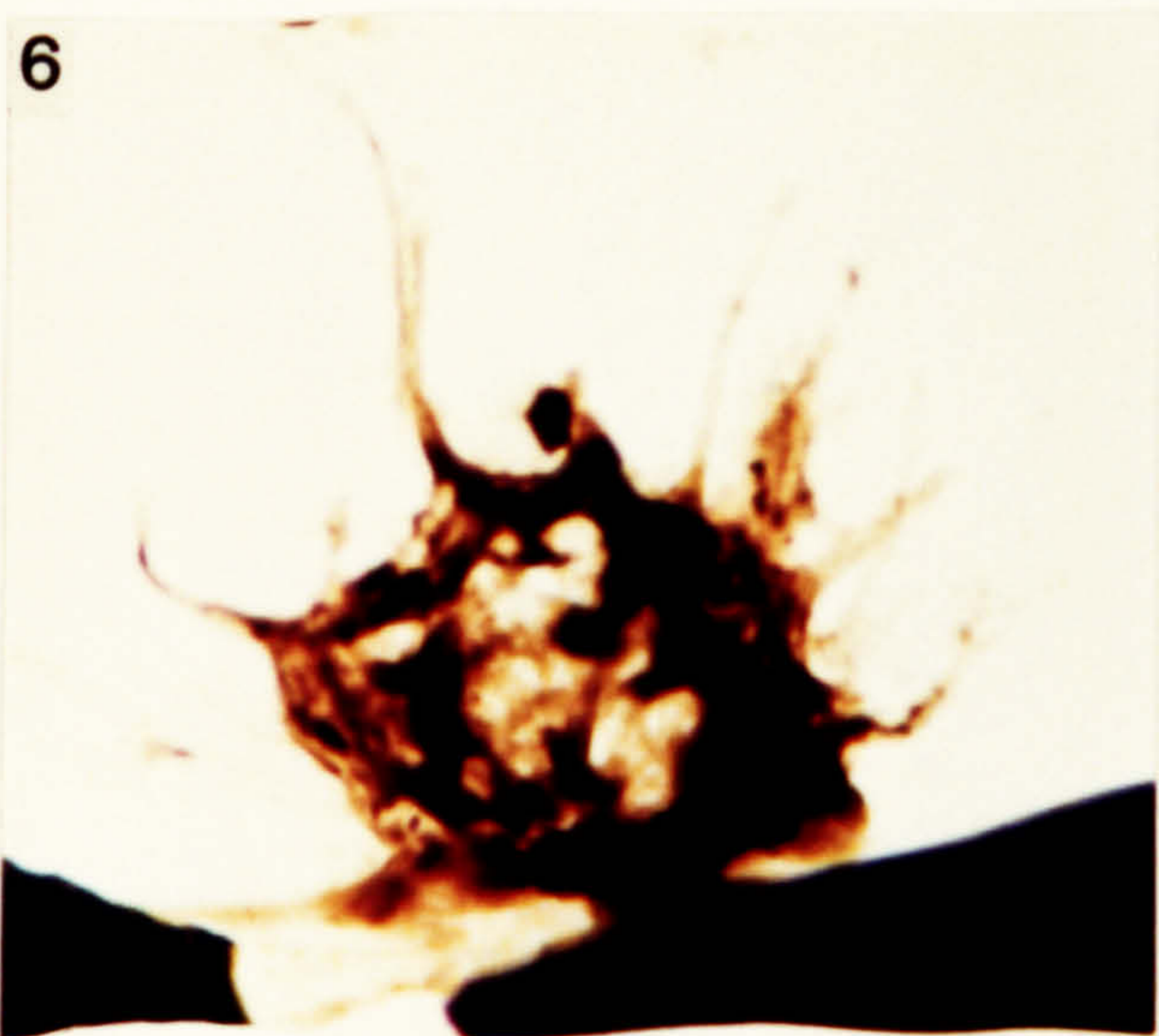
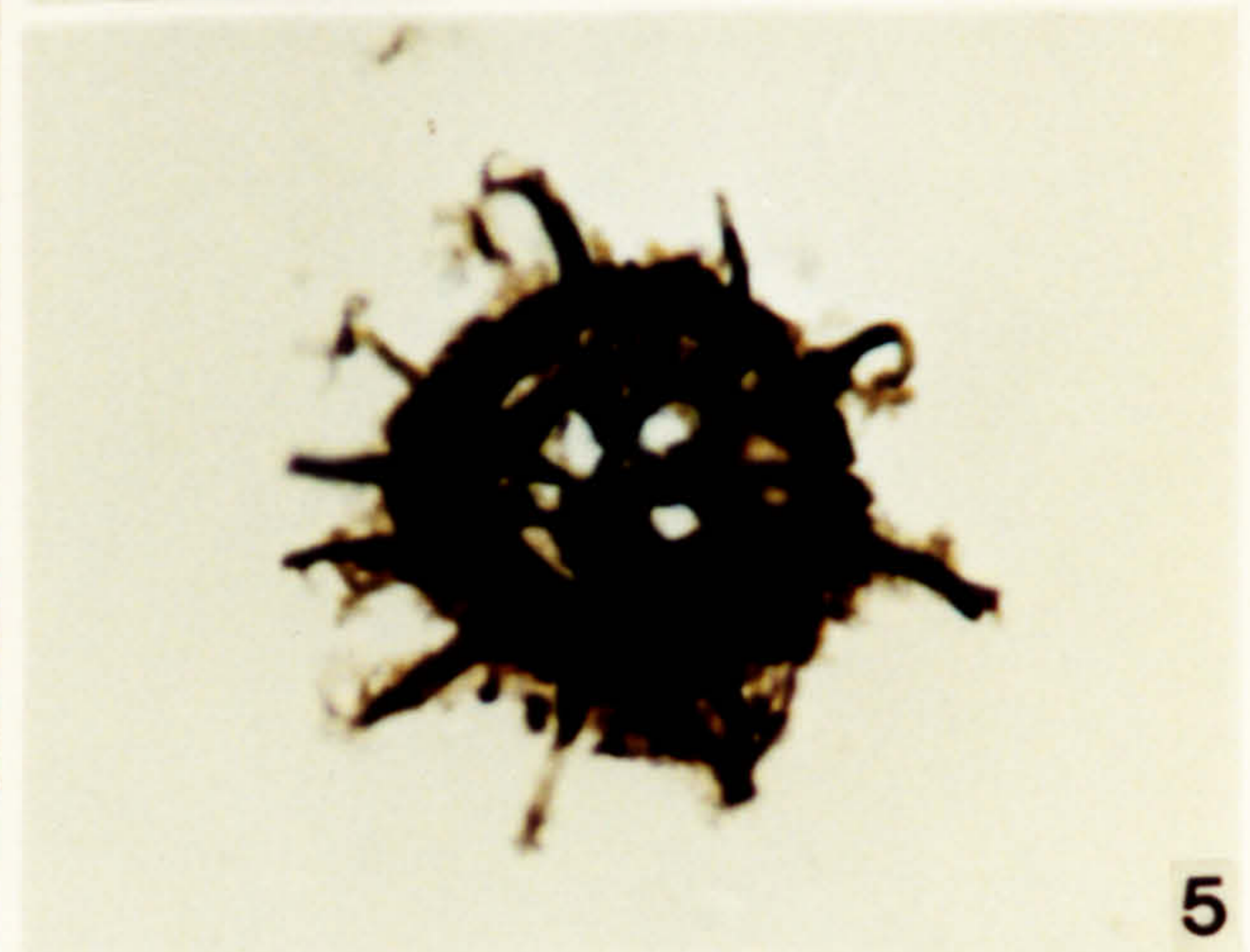
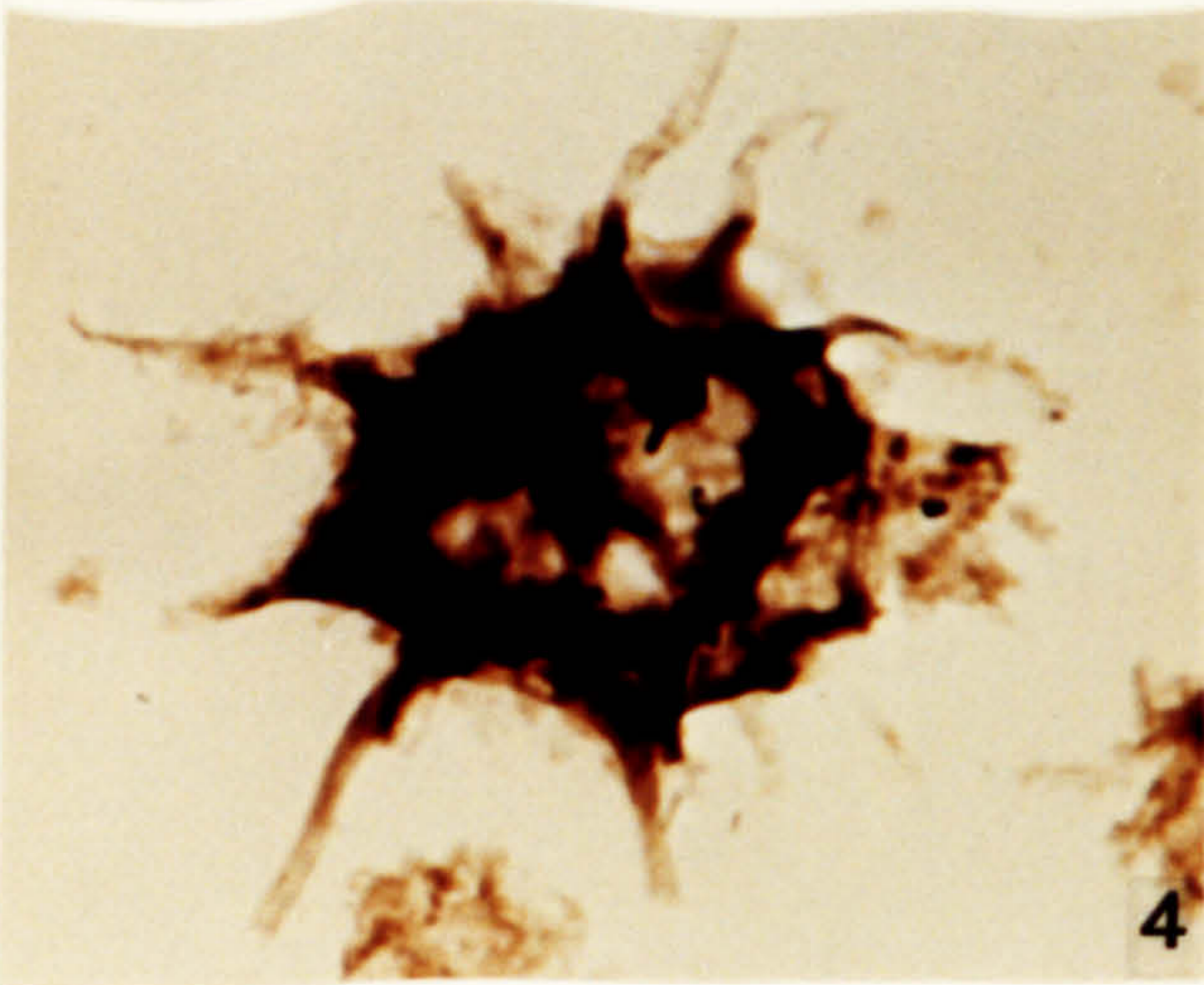
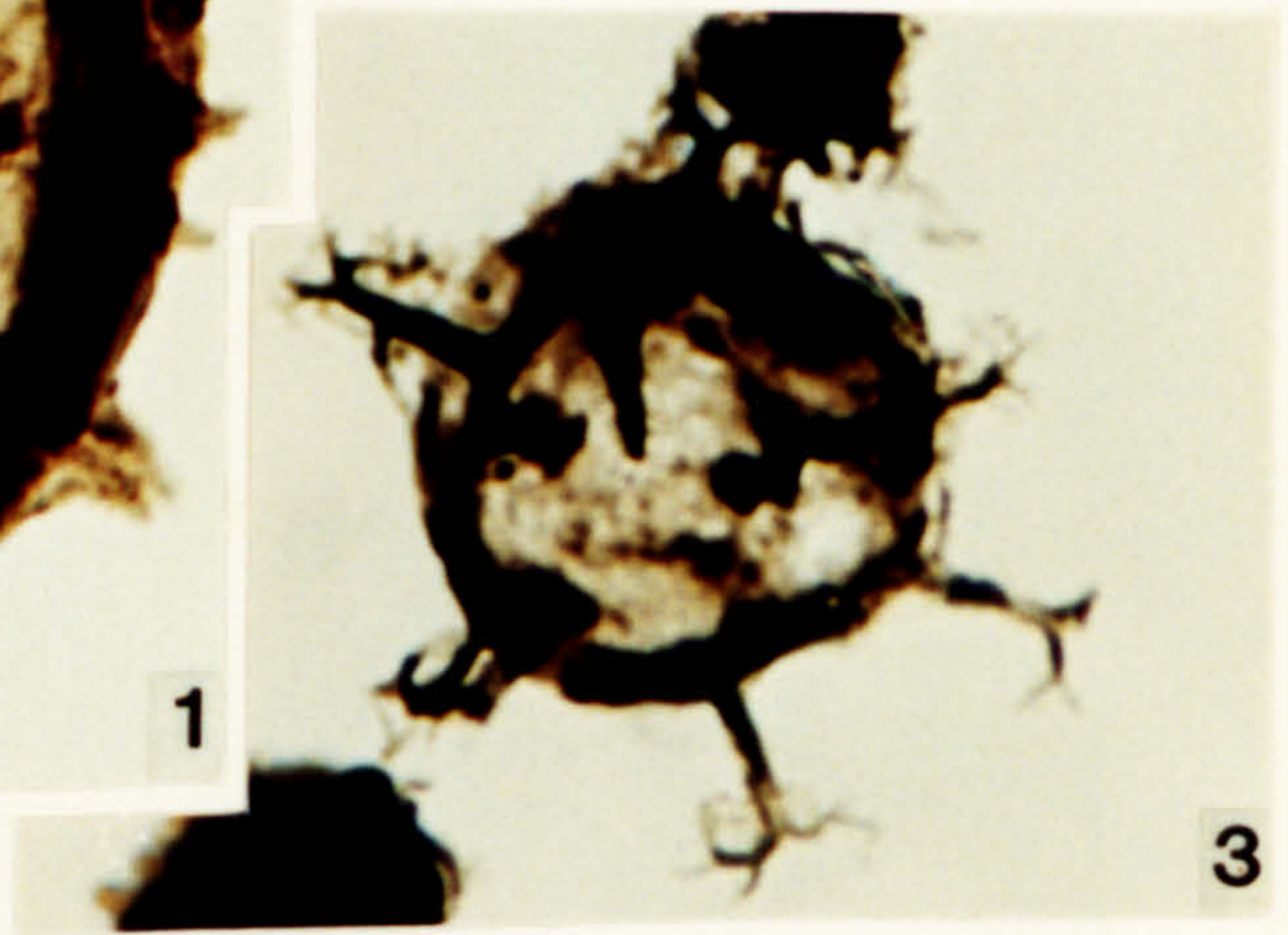
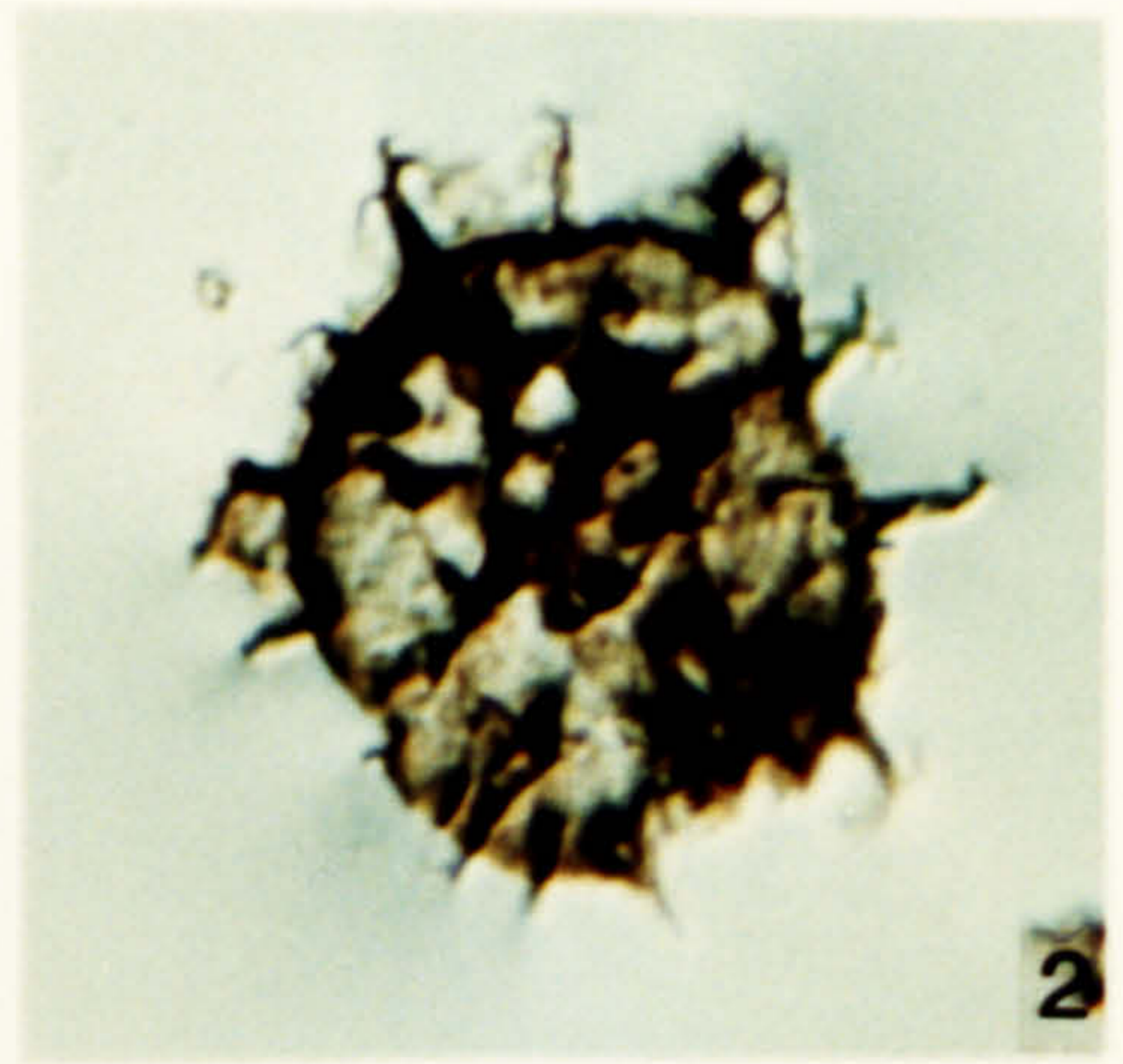




**Plate 64.**

Acritarchs from the Carbonaceous Shale Formation, upper Llandovery, Telychian in age.

1. *Tylotopalla* cf. *deerlijkianum* (Martin) Le Herisse 1989. DW 250, FS-5, K34\1.
2. *Oppilatala?* *frondis* (Cramer & Diez) Dorning 1981. DW 246, FS-1, F29\4, IC.
3. *Oppilatala?* *frondis* (Cramer & Diez) Dorning 1981. DW 246, FS-1, U13\4.
4. cf. *Salopidium woolhopensis* Dorning 1981. DW 248, FS-1, C34\4.
5. *Oppilatala?* *frondis* (Cramer & Diez) Dorning 1981. DW 246, FS-1, M20\2.
6. cf. *Salopidium woolhopensis* Dorning 1981. DW 248, FS-1, M34\1.
7. *Oppilatala?* *frondis* (Cramer & Diez) Dorning 1981. DW 246, FS-1, K39\1.

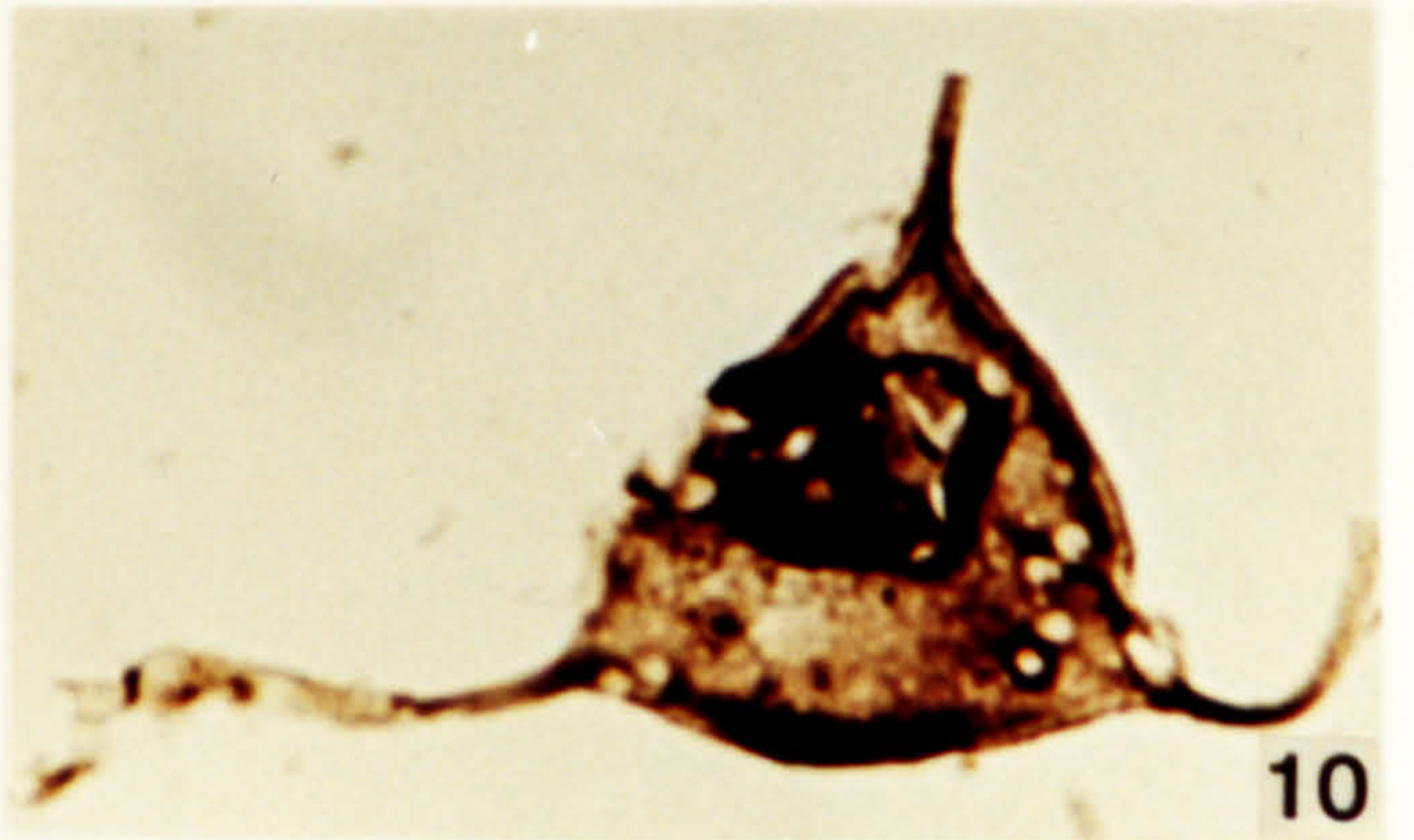
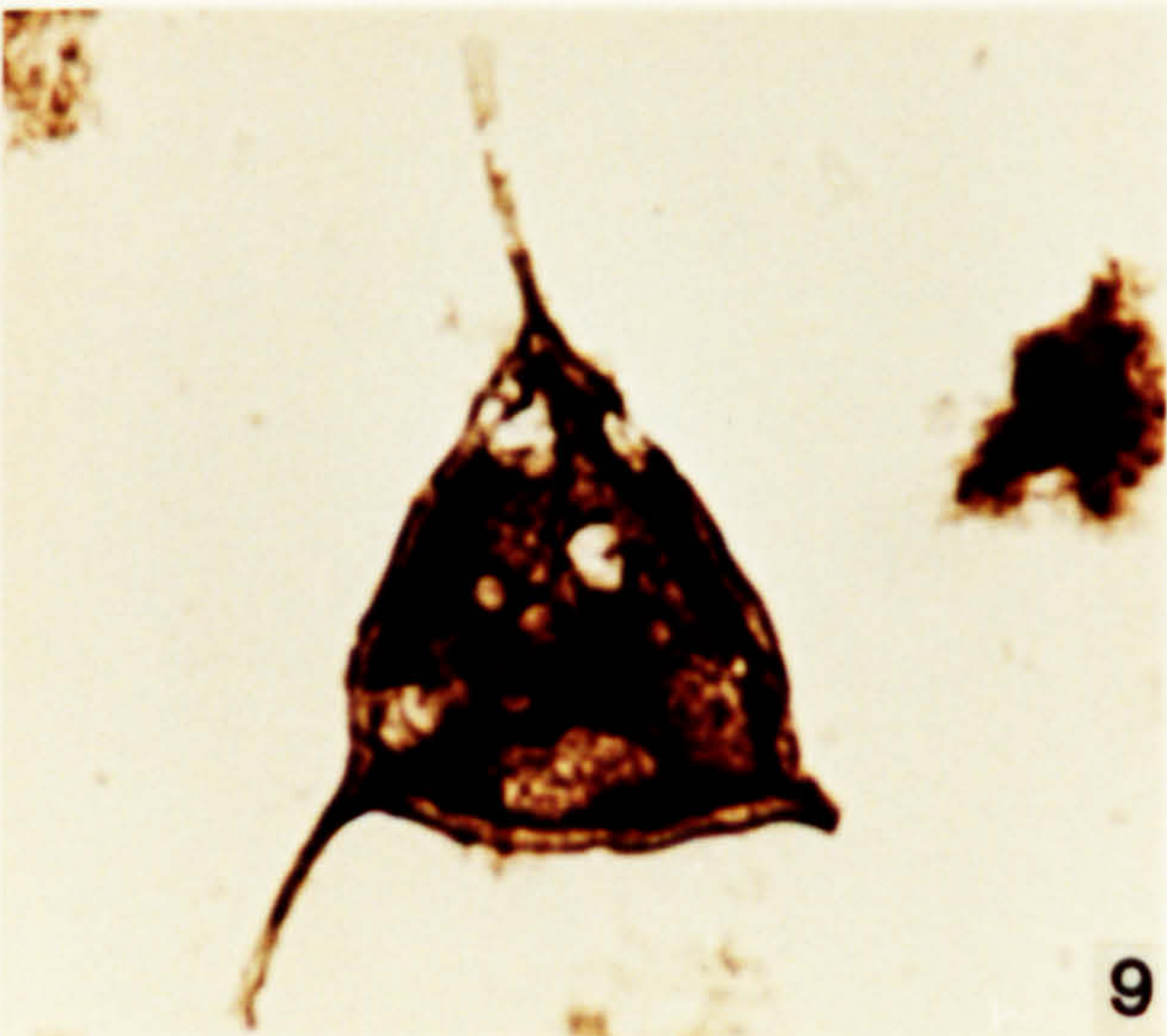
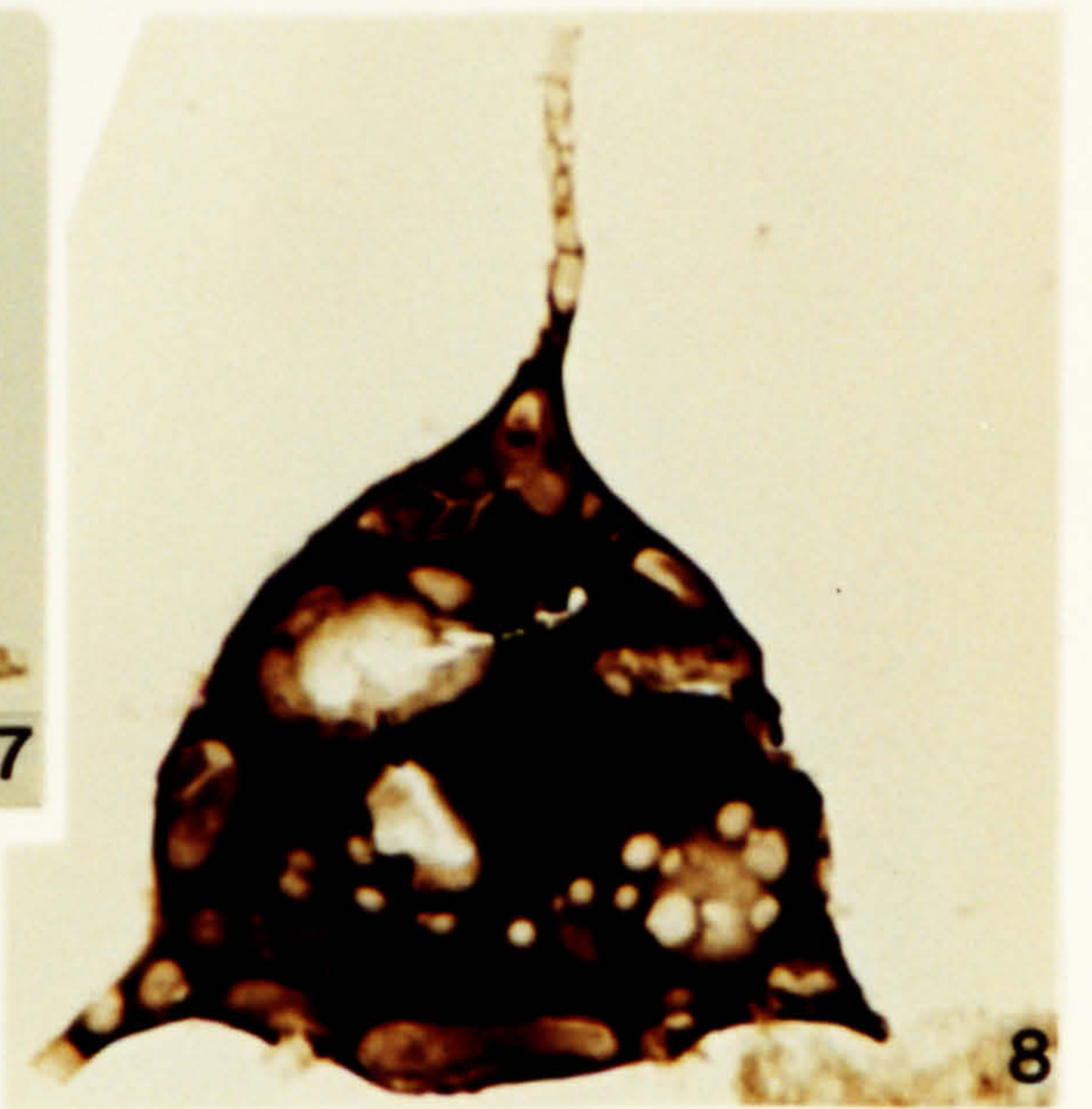
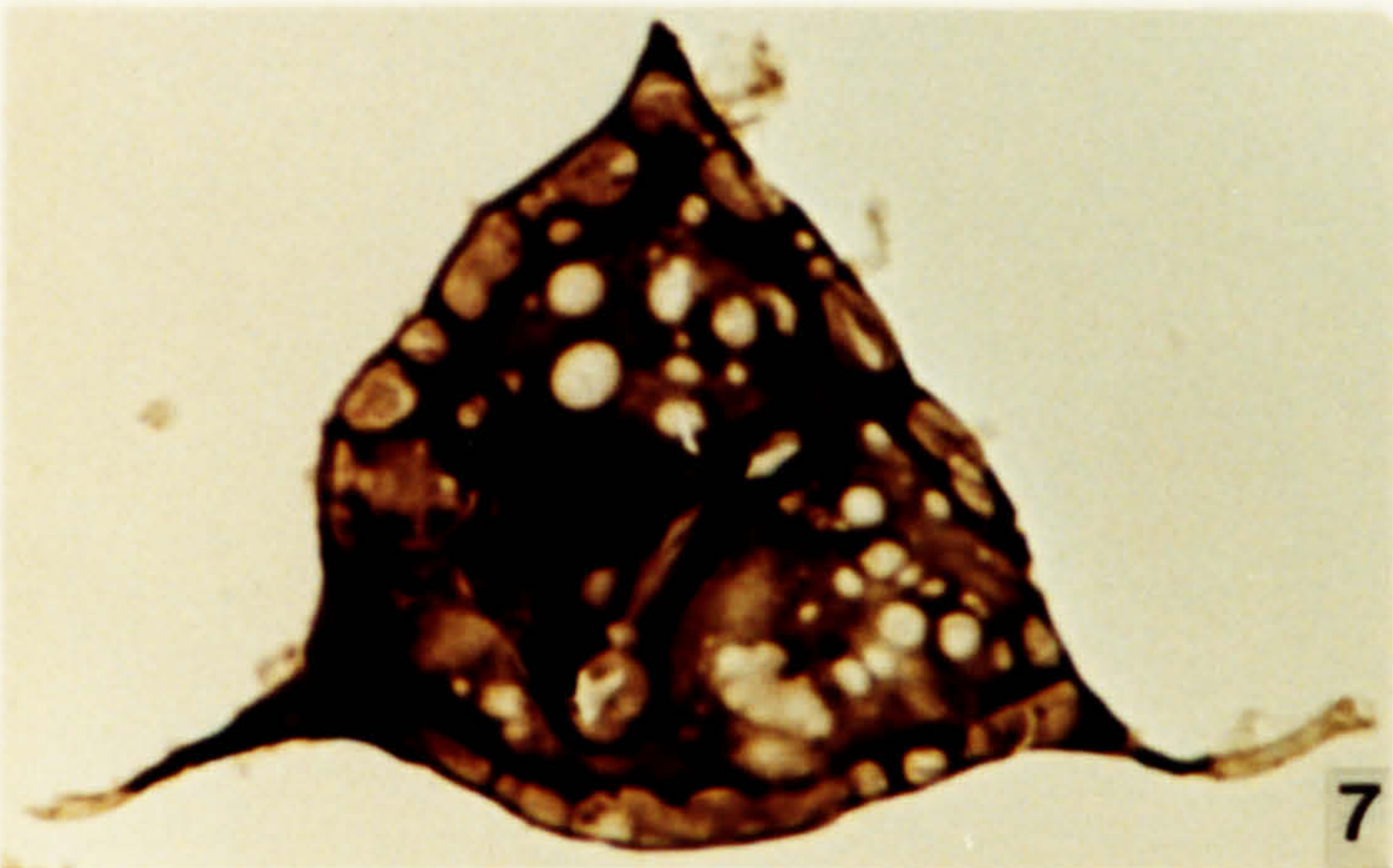
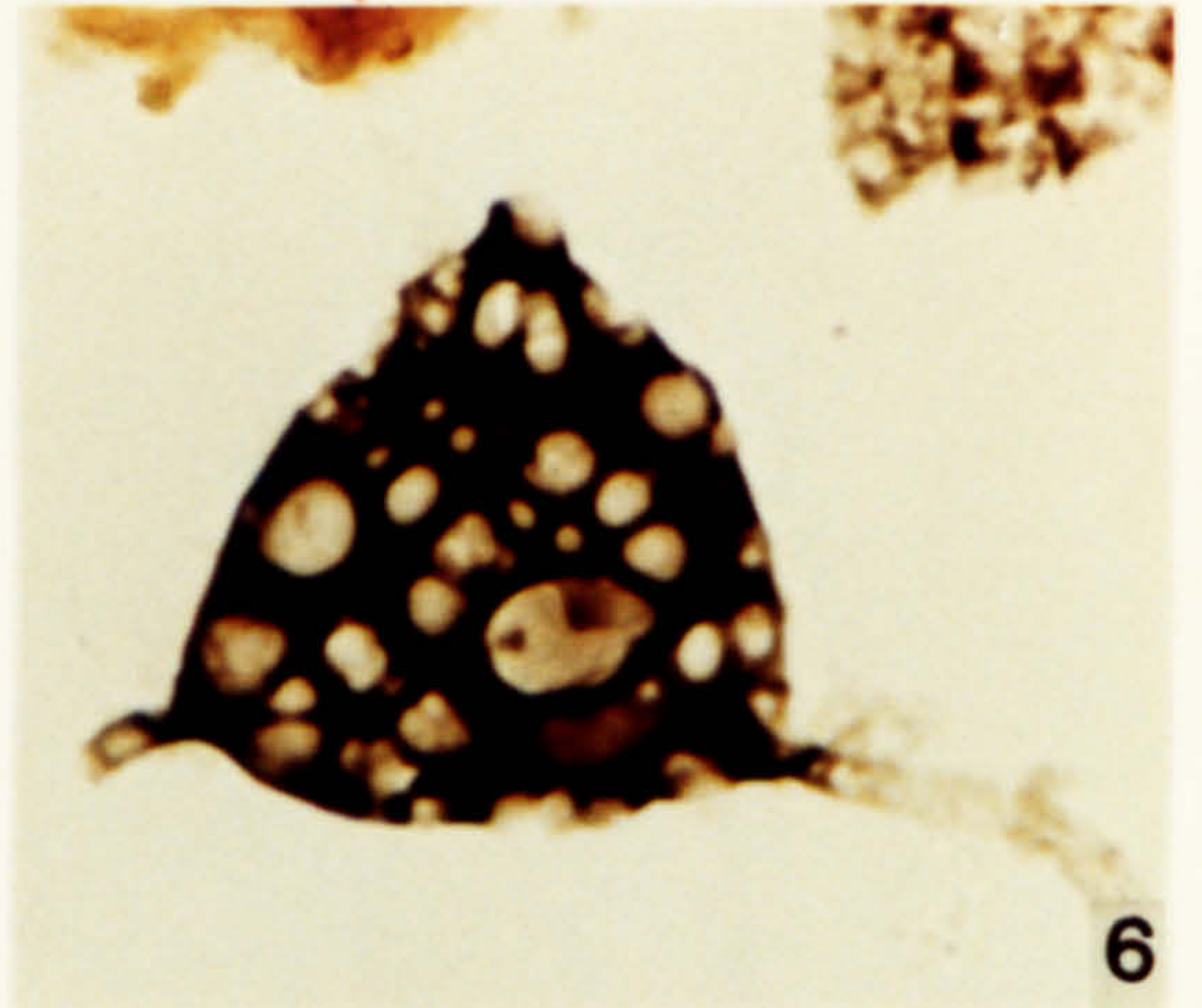
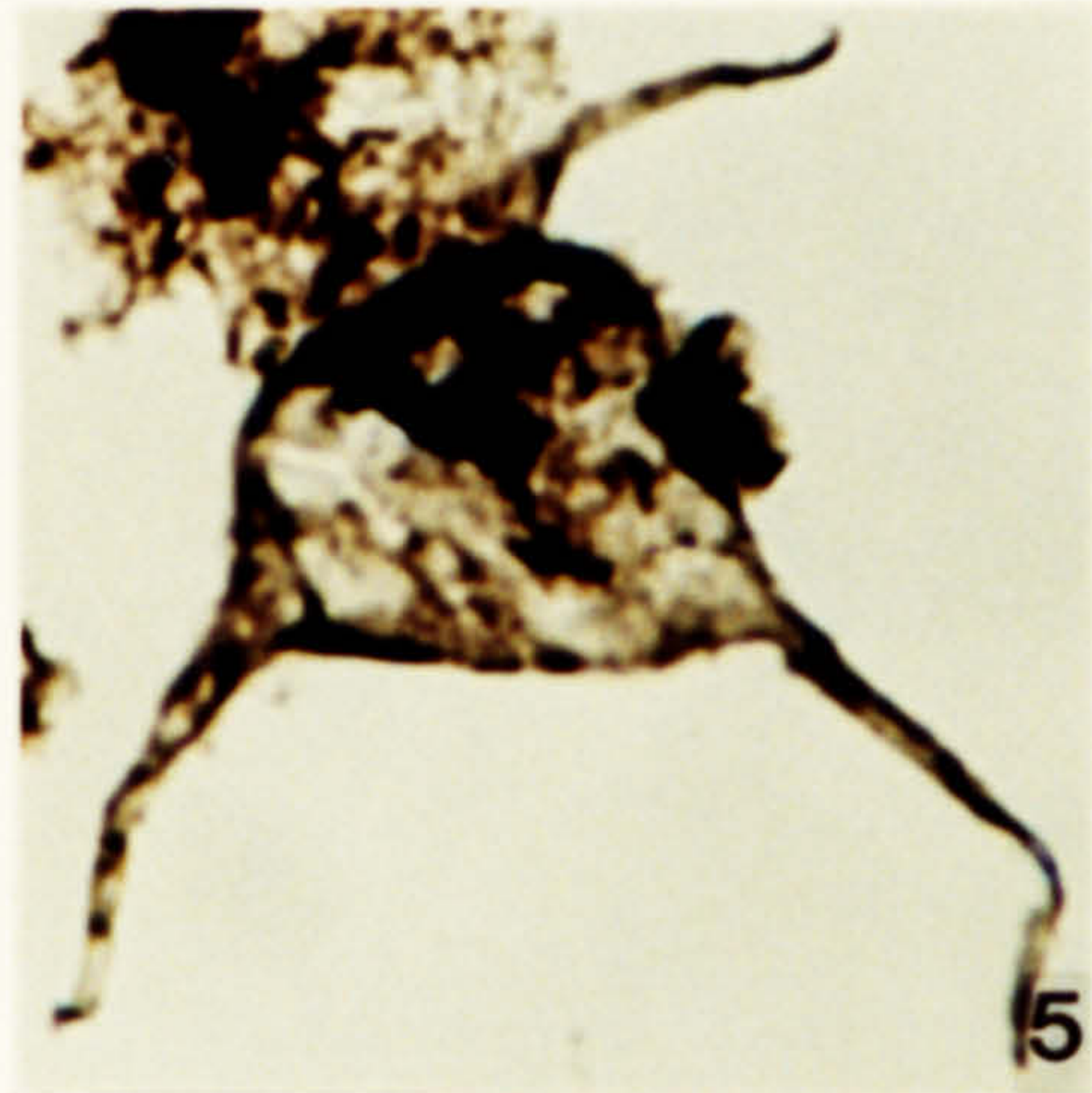
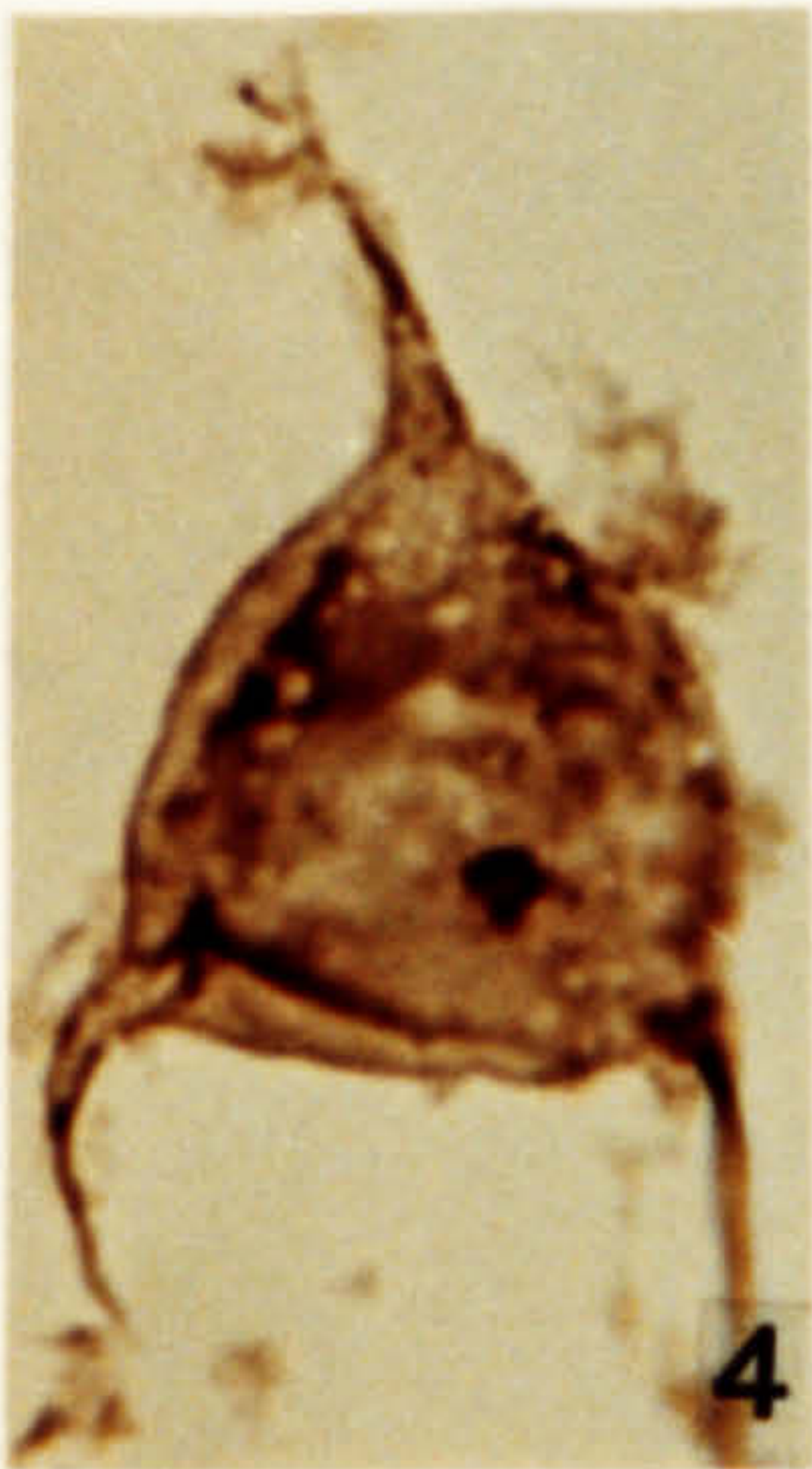
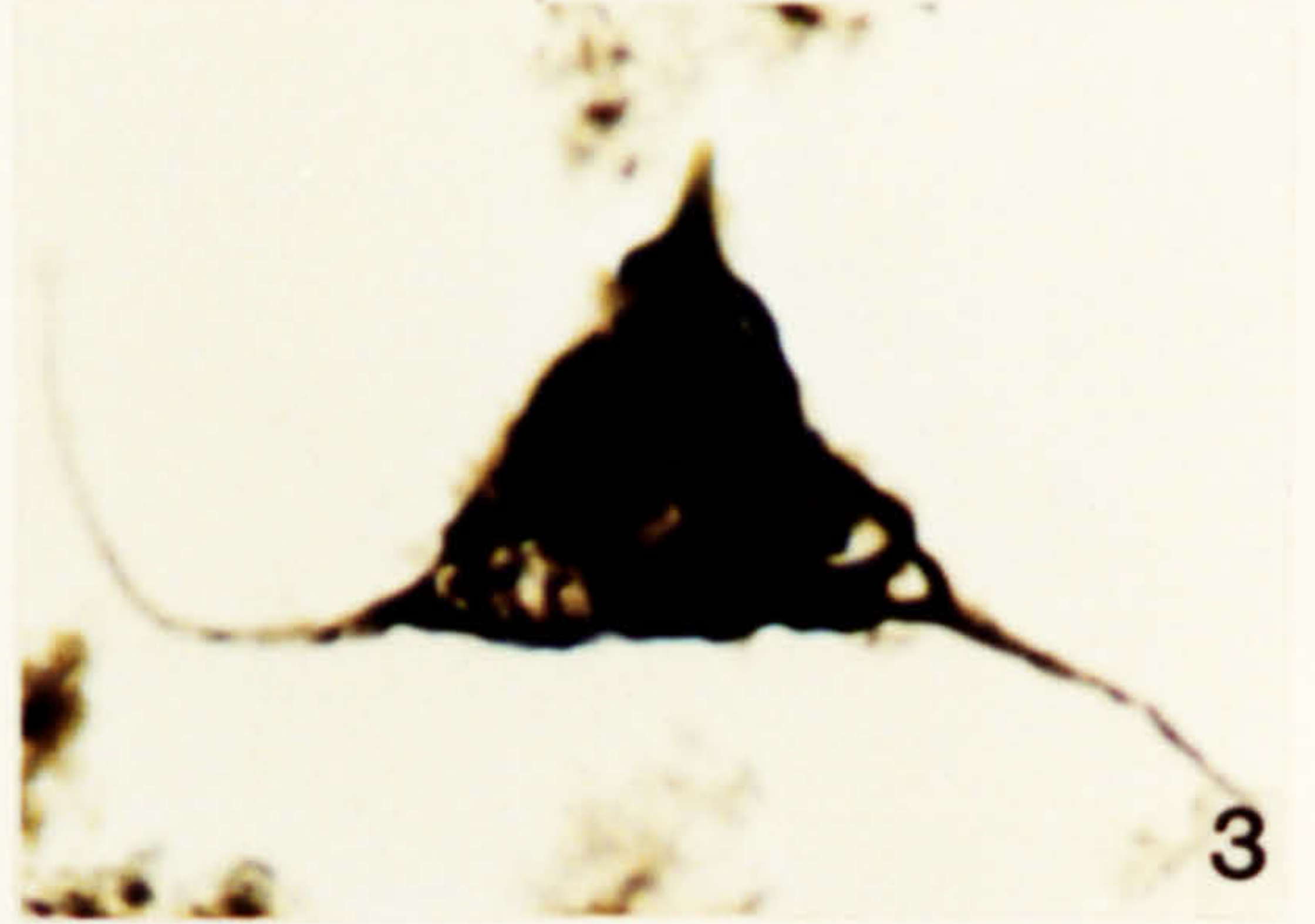
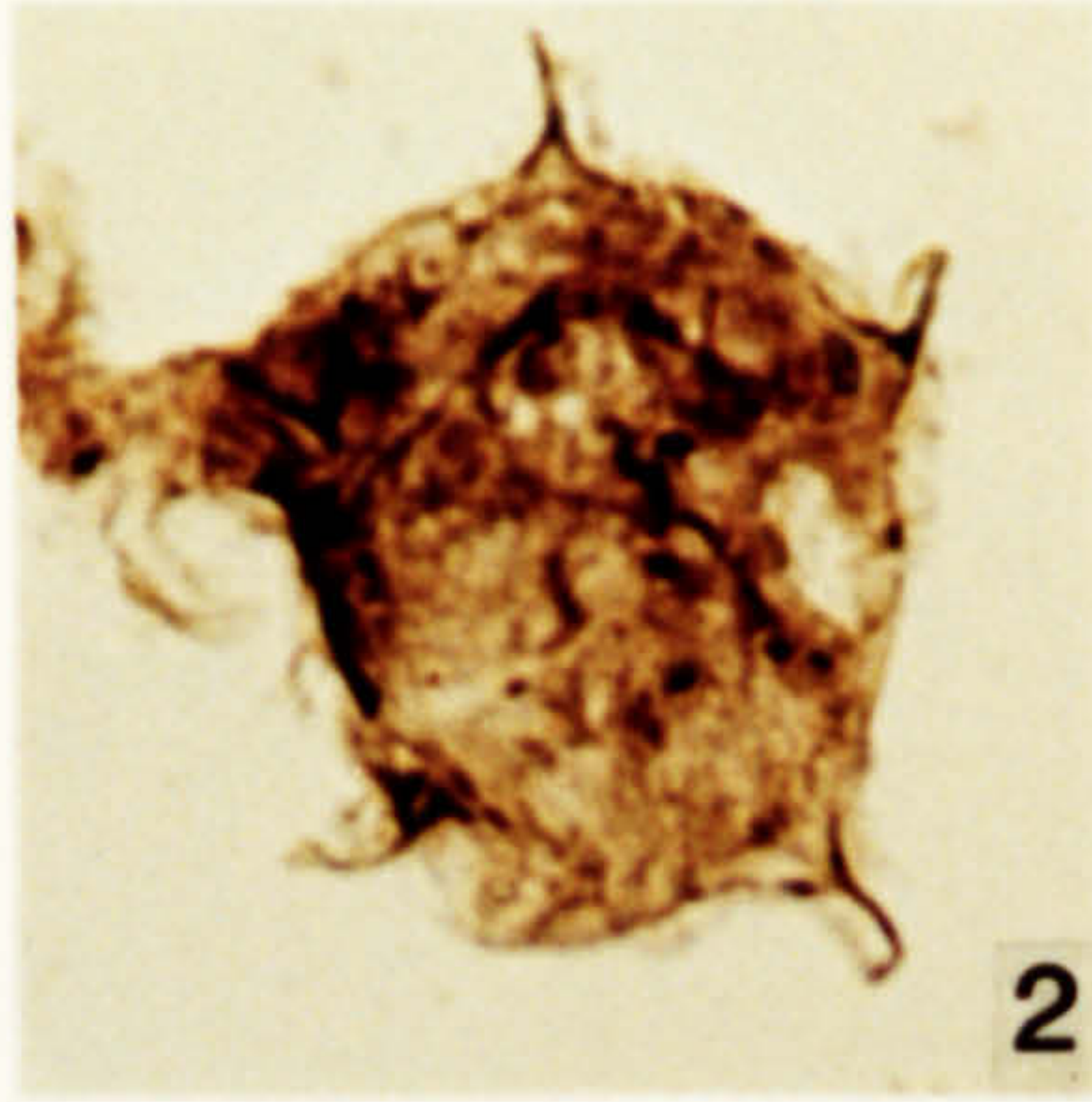
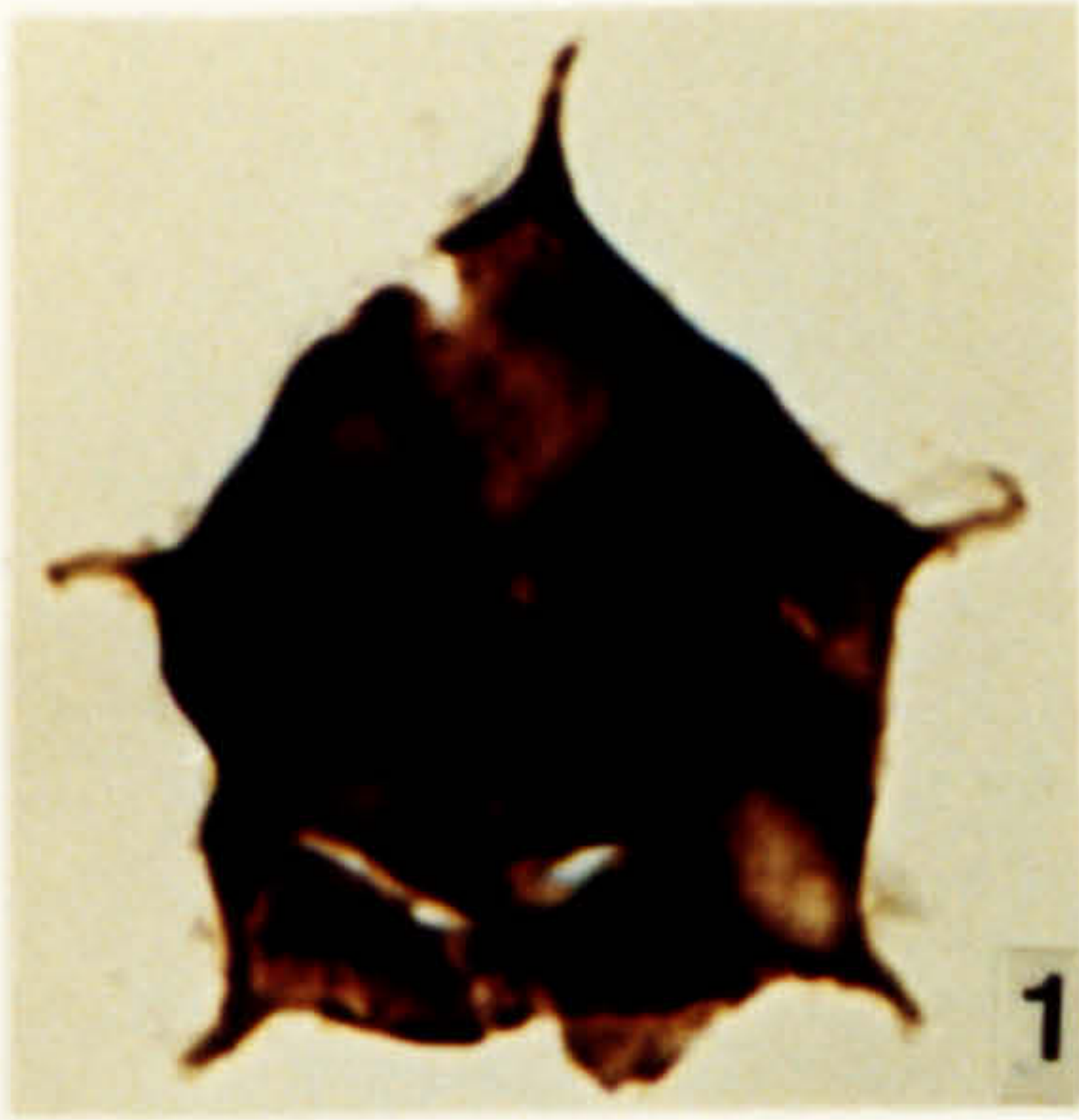


**Plate 65.**

Acritarchs from the Carbonaceous Shale Formation, upper Llandovery, Telychian in age.

1. *Veliferites?* sp. DW 250, FS-1, C11\3.
2. *Veliferites?* sp. DW 250, FS-1, O30\2.
3. *Veryhachium wenlockianum* (Downie ex Wall & Downie) Downie & Sarjeant 1965. DW 246, FS-1, M23\1.
4. *Veryhachium reductum* (Deunff) Downie & Sarjeant 1965. DW 249, FS-1, J25\2.
6. *Veryhachium* sp. DW 246, FS\1, X18\4.
7. *Veryhachium?* sp. 9. DW 249, FS-1, L44\1.
8. *Veryhachium?* sp. 9. DW 250, FS-1, C38\4.
9. *Veryhachium?* sp. 9. DW 250, FS-1, E37\2.
10. *Veryhachium?* sp. 10. DW 251, FS-1, V21\2.
11. *Veryhachium?* sp. 10. DW 251, FS-2, M36\3.

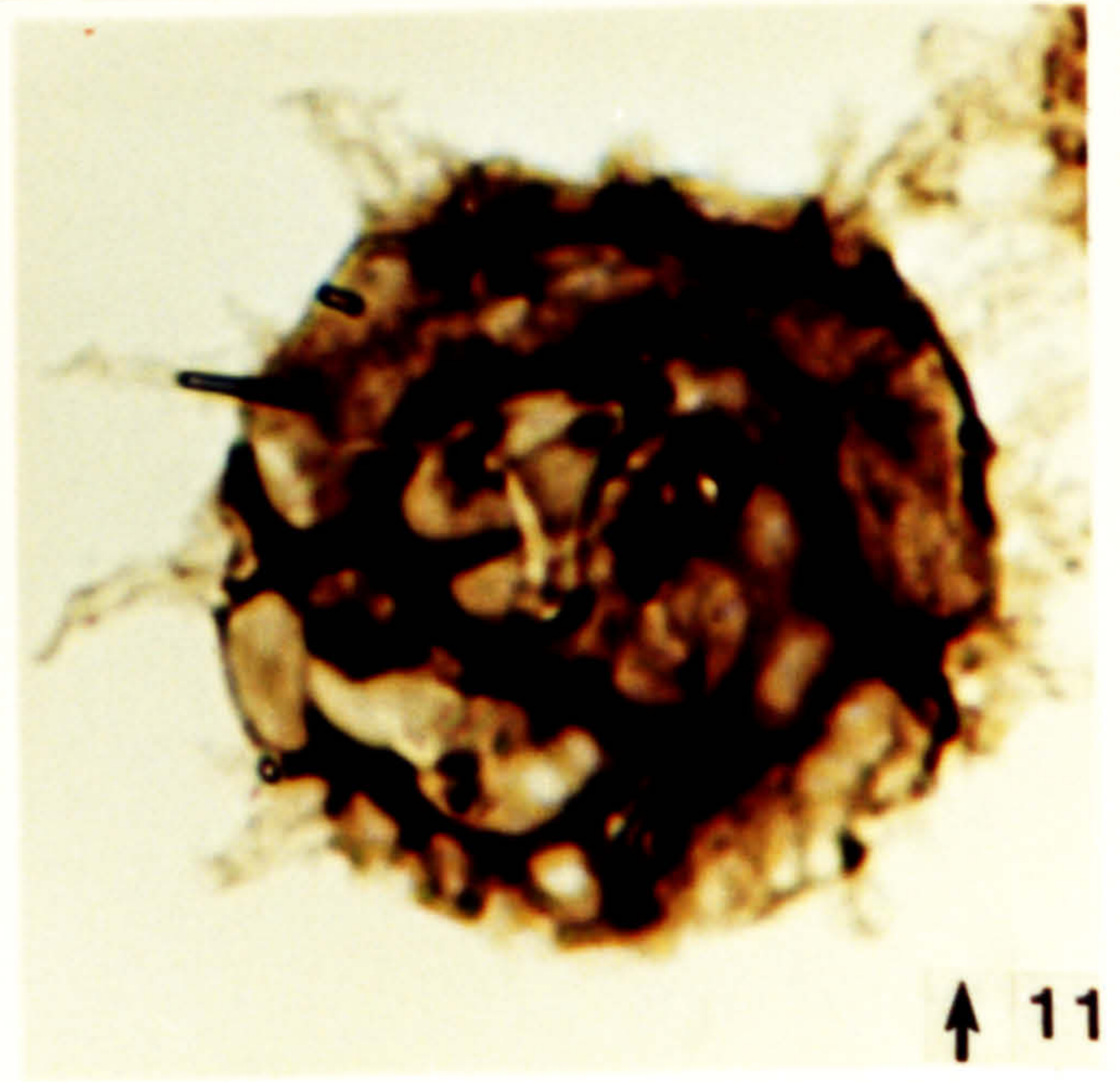
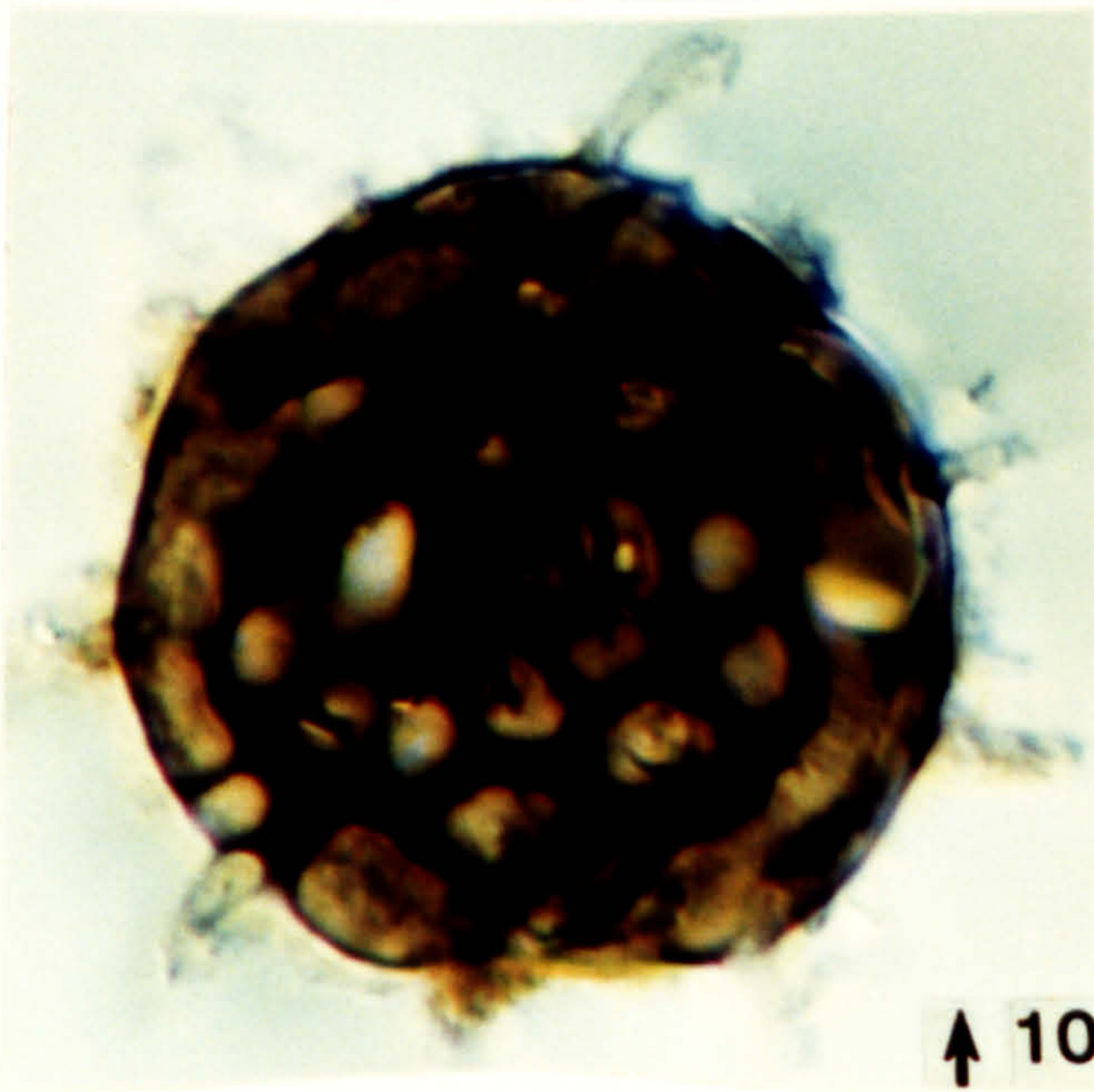
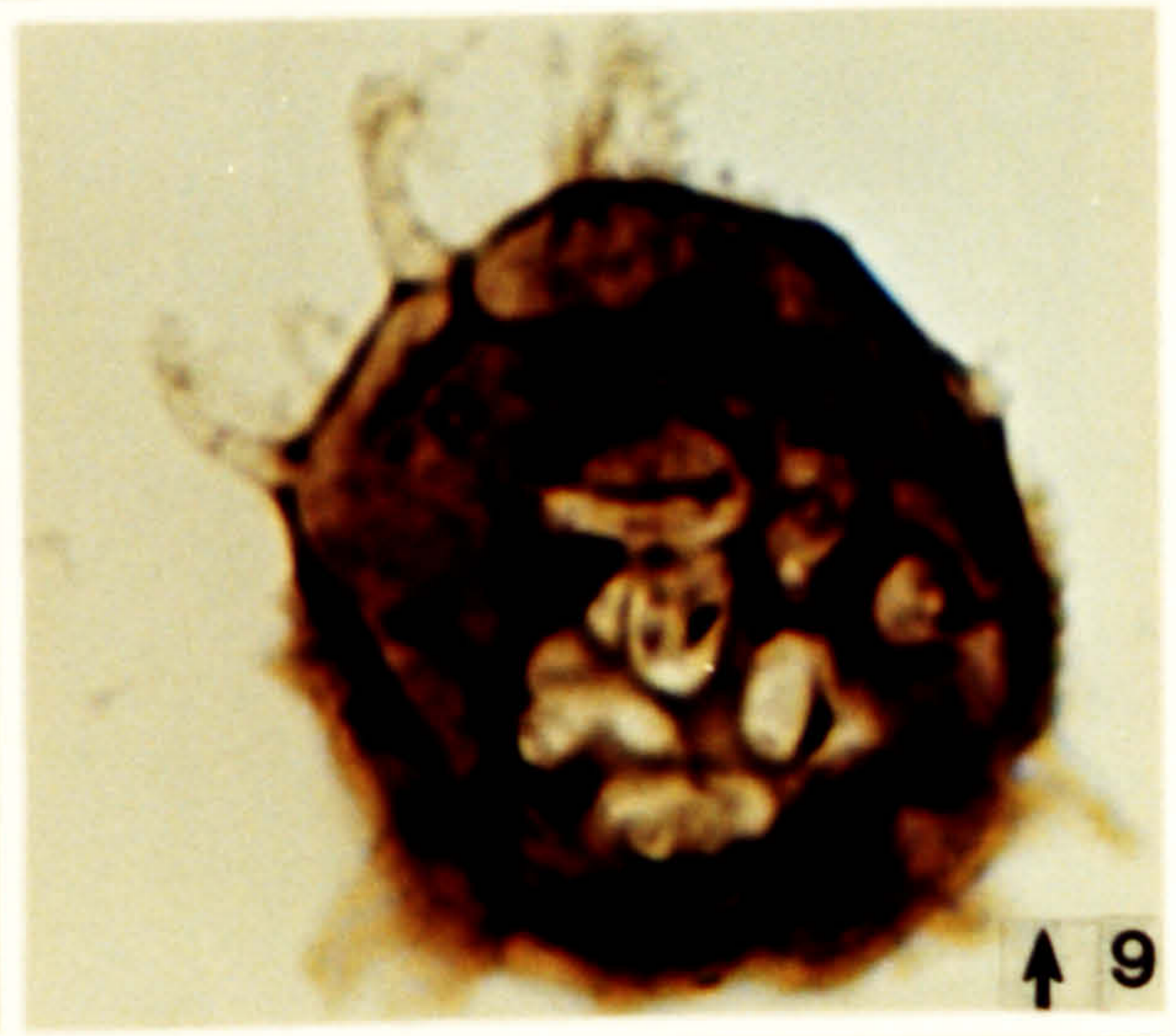
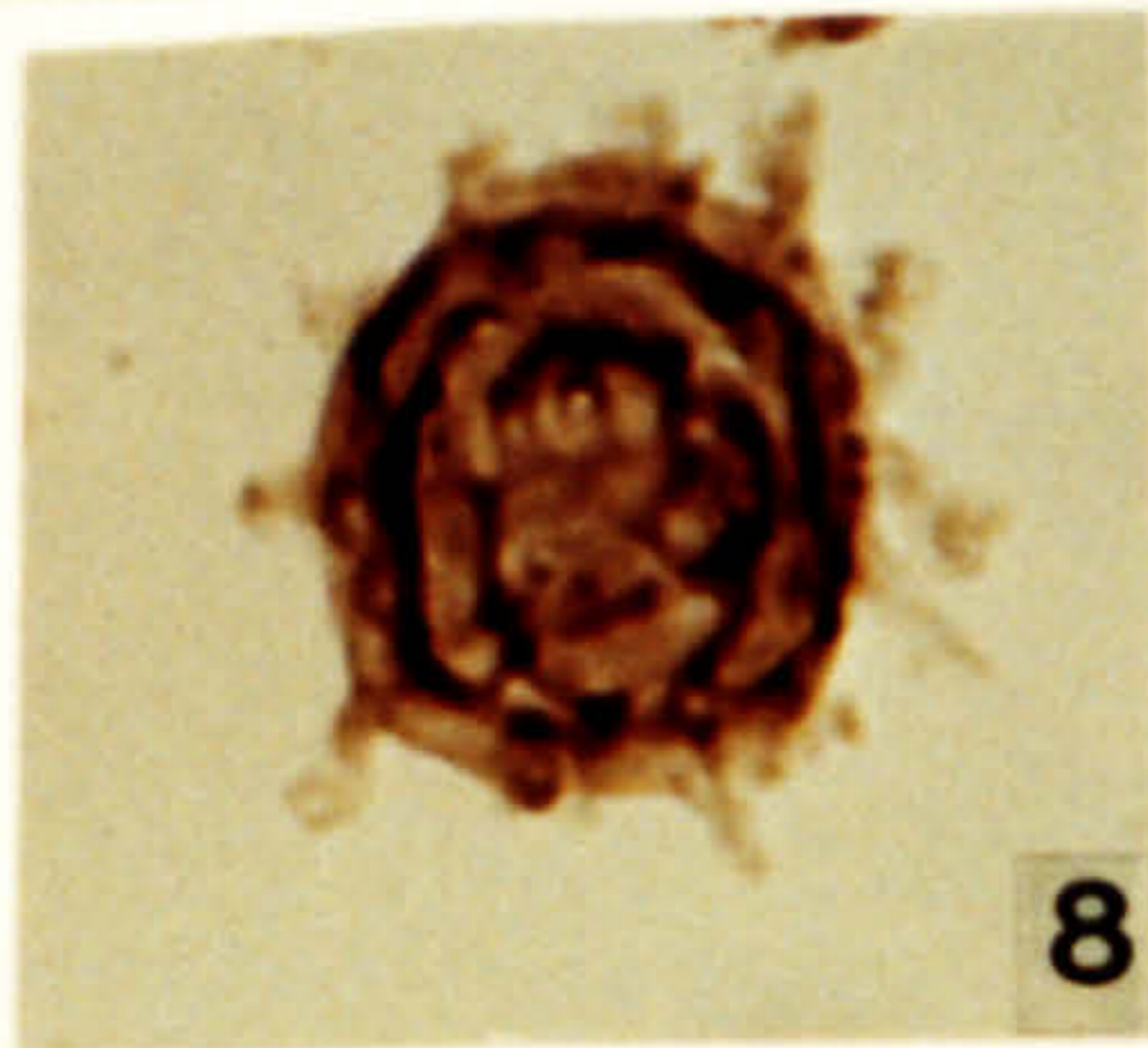
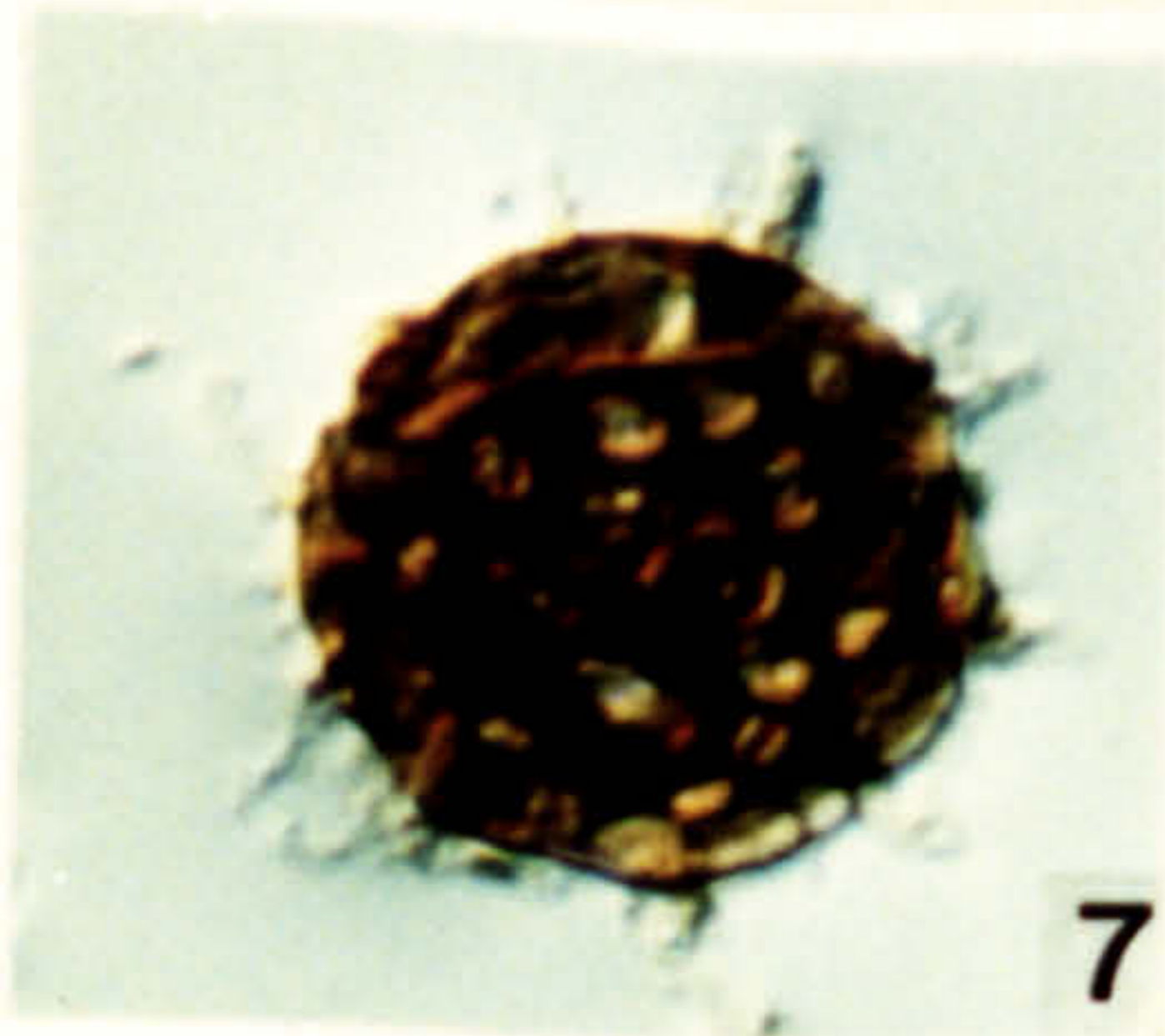
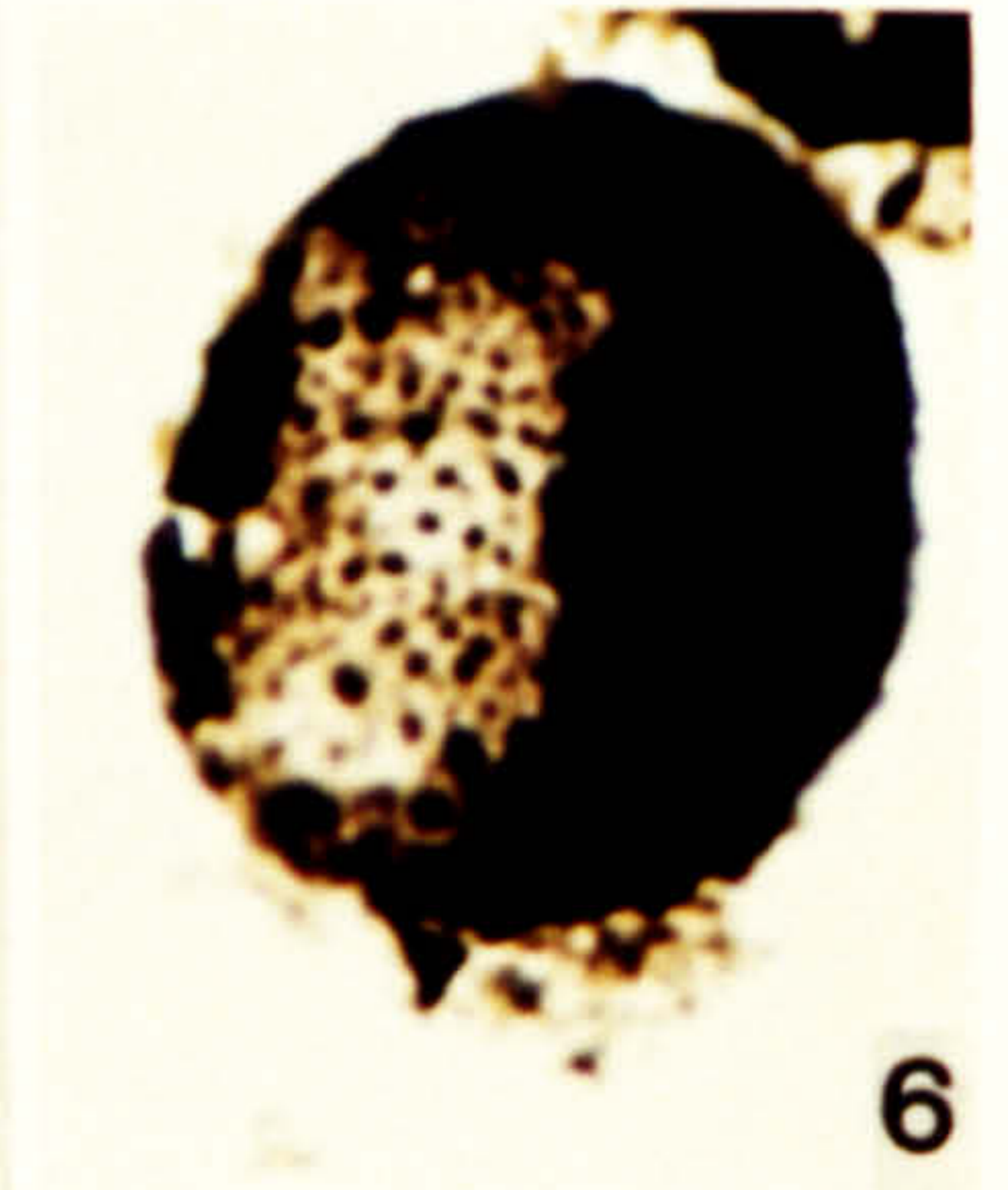
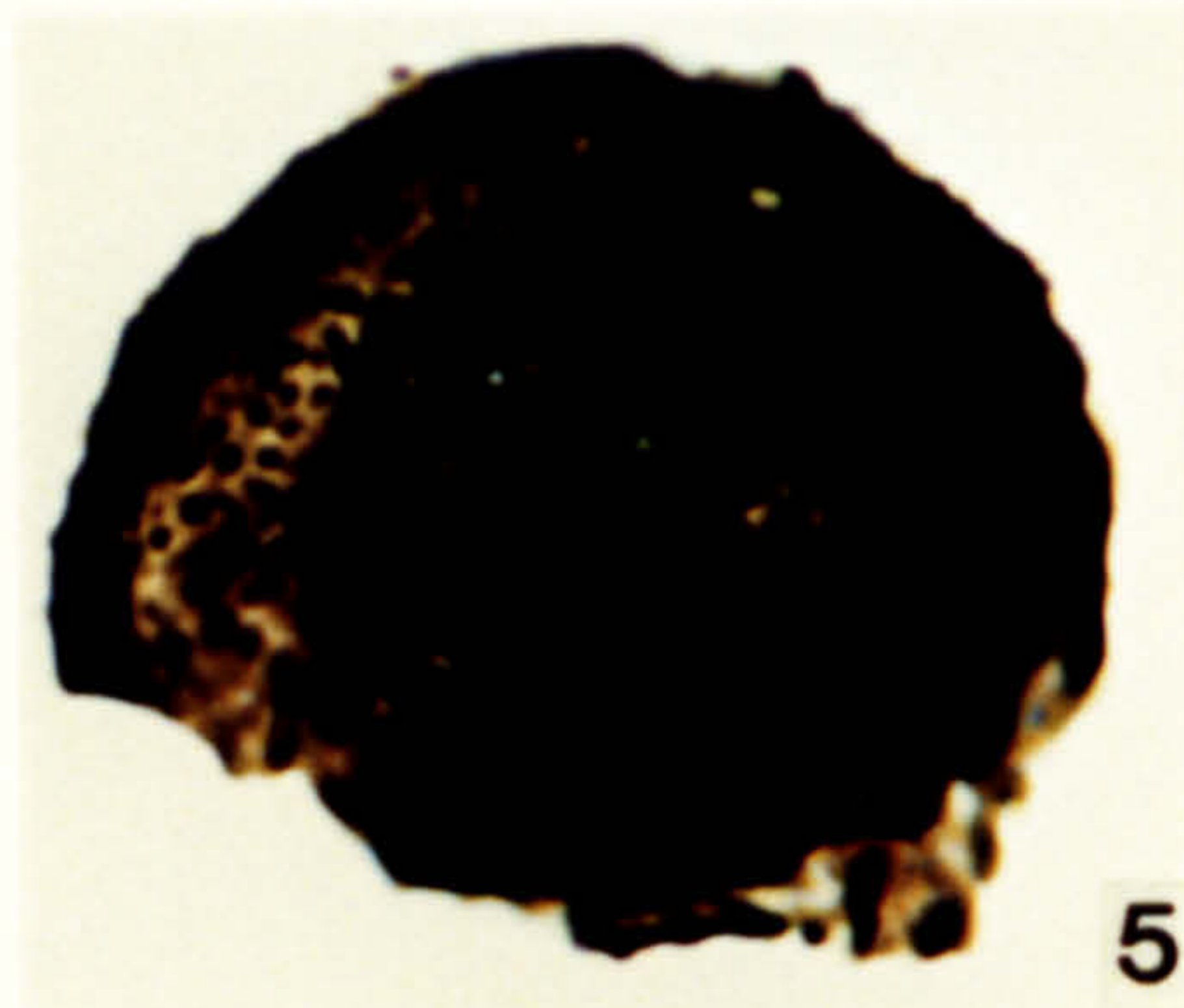
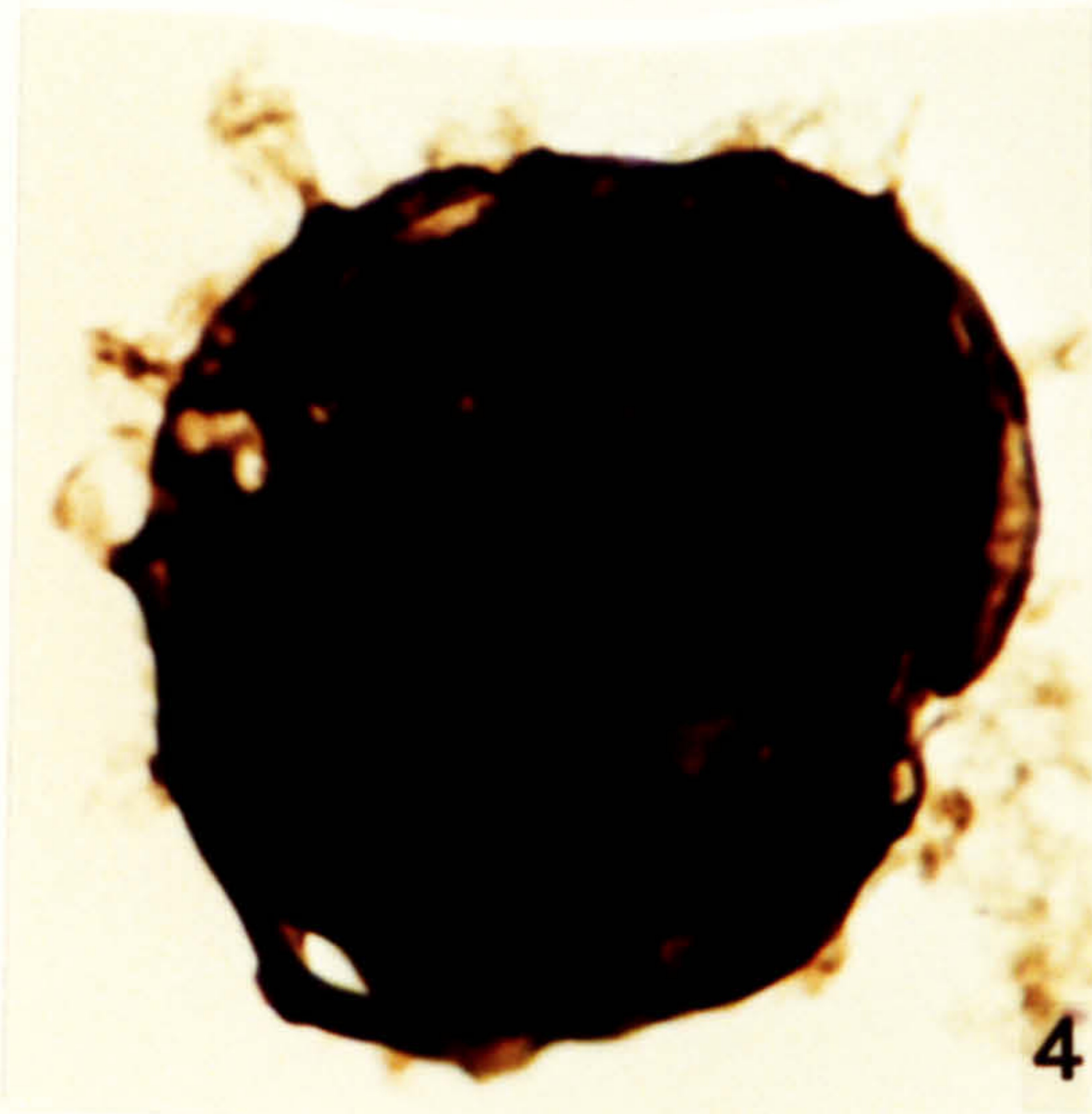
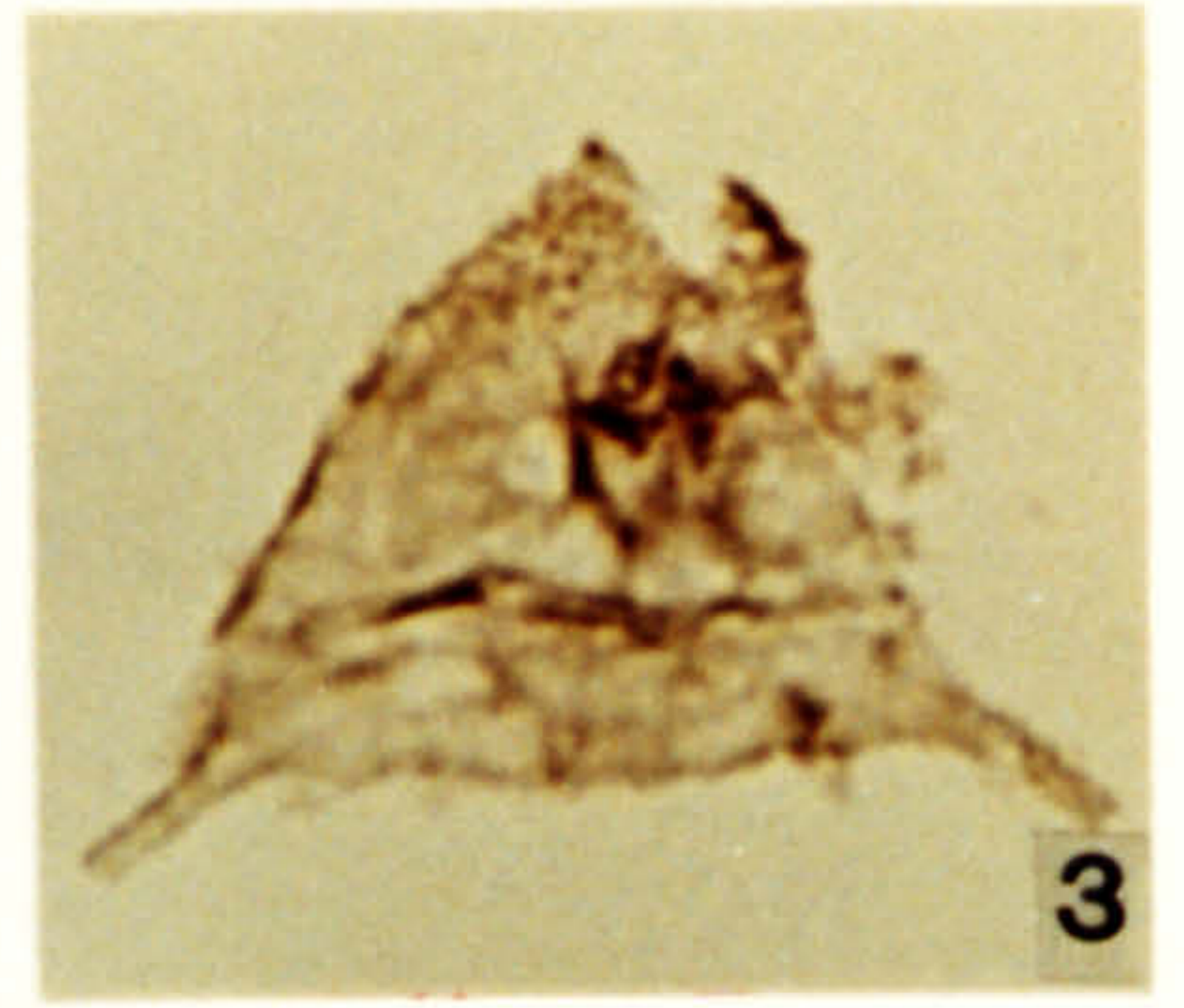
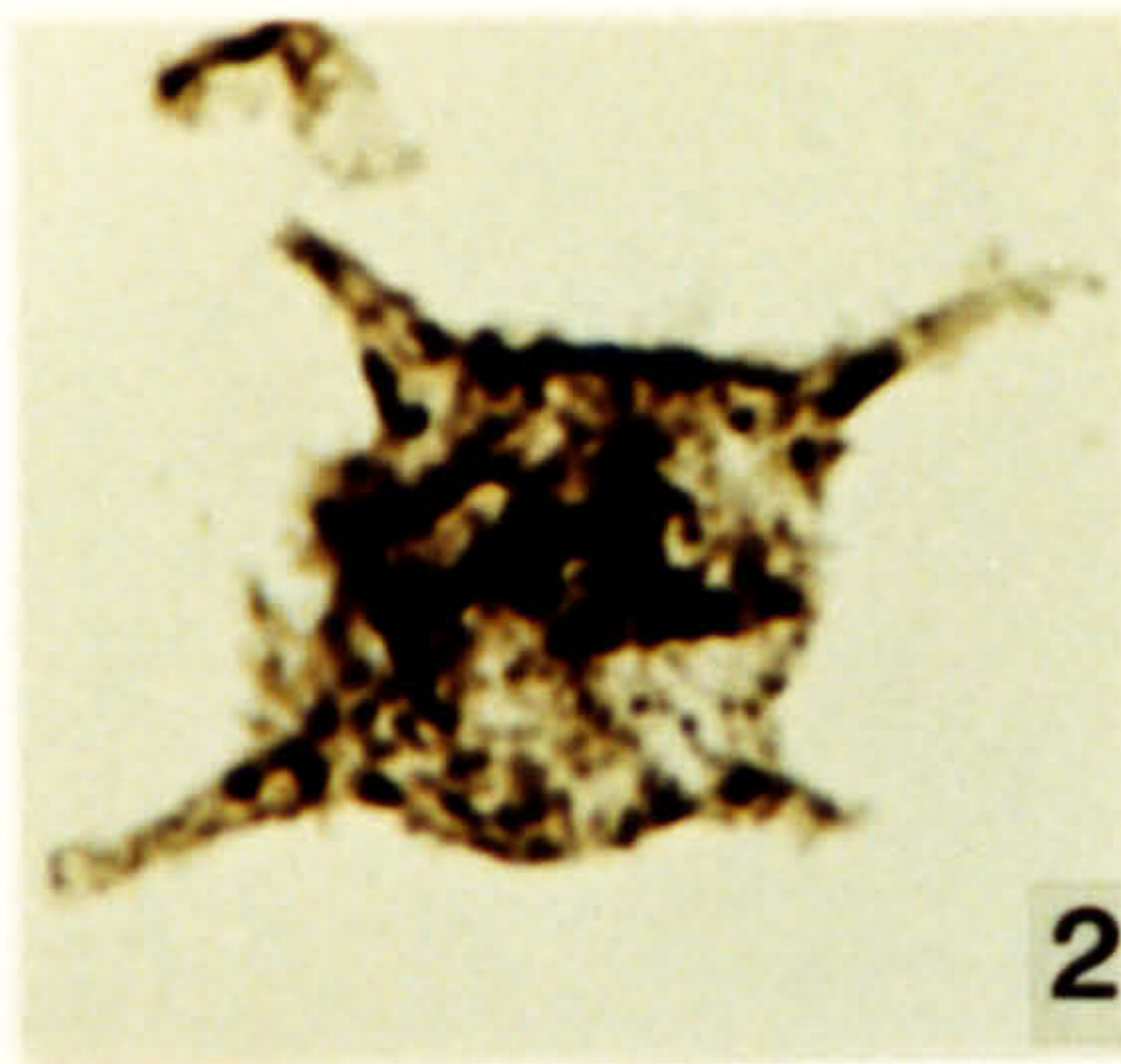
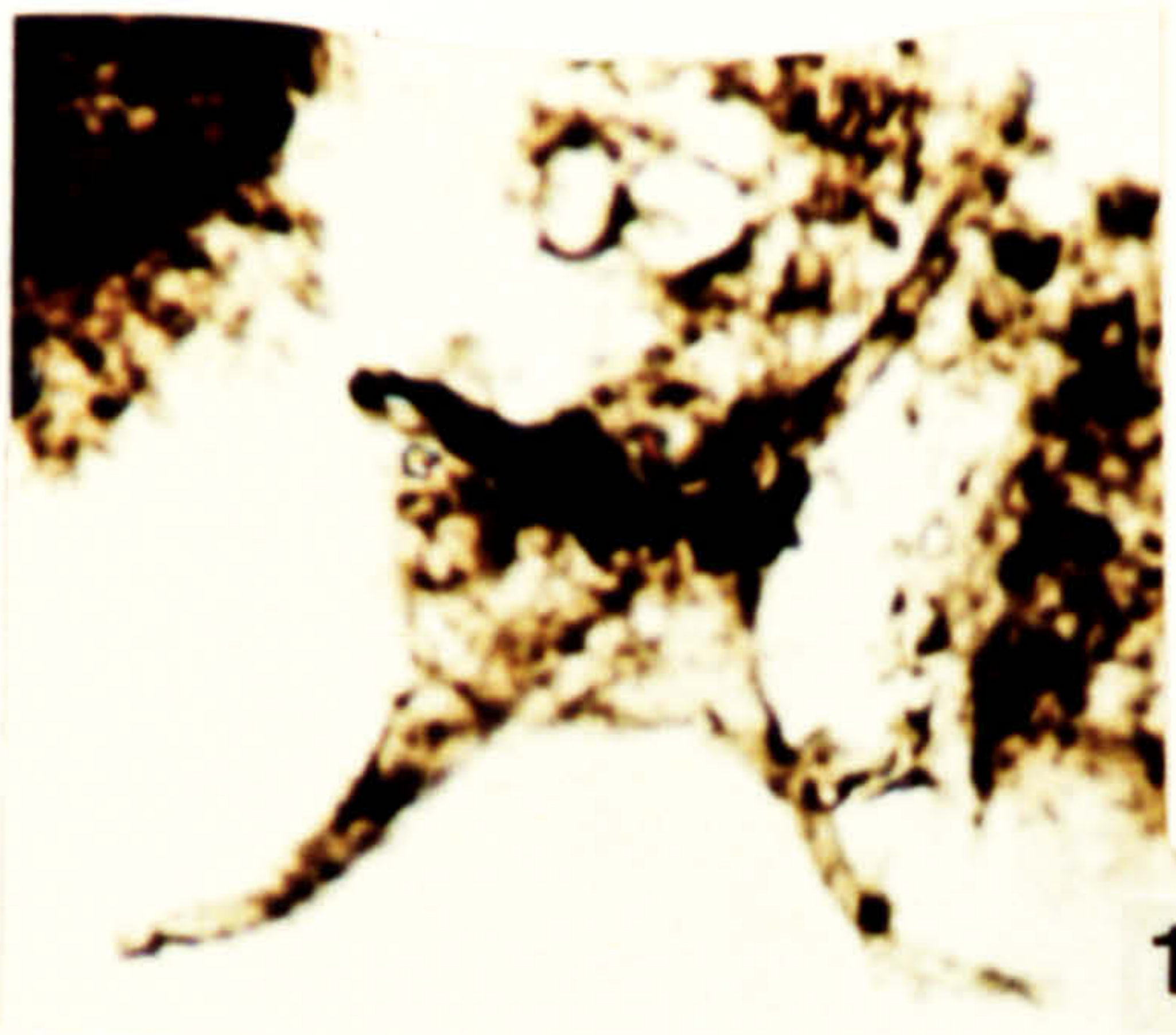
PLATE 65



**Plate 66.**

Acritarchs from the Carbonaceous Shale Formation, upper Llandovery, Telychian in age.

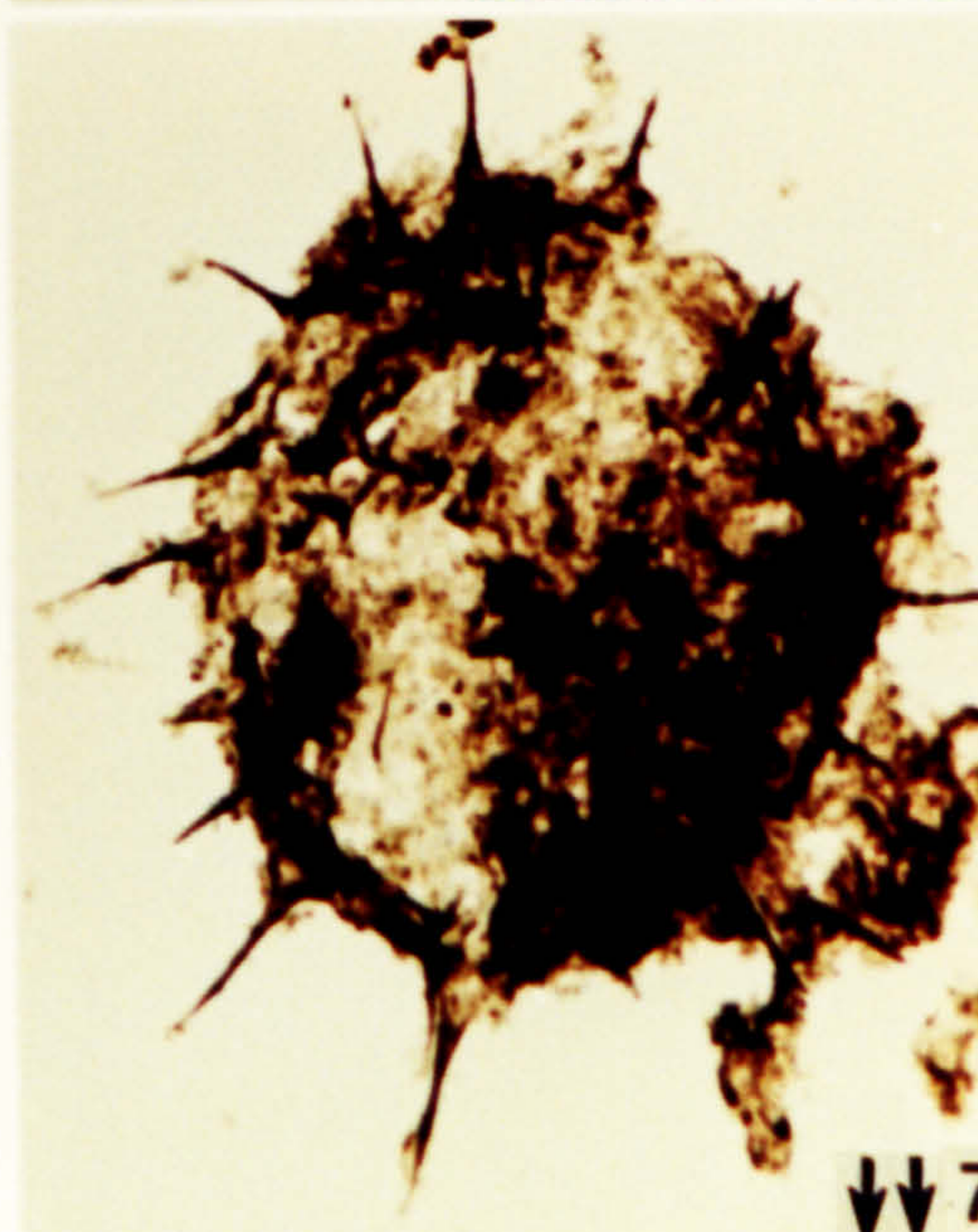
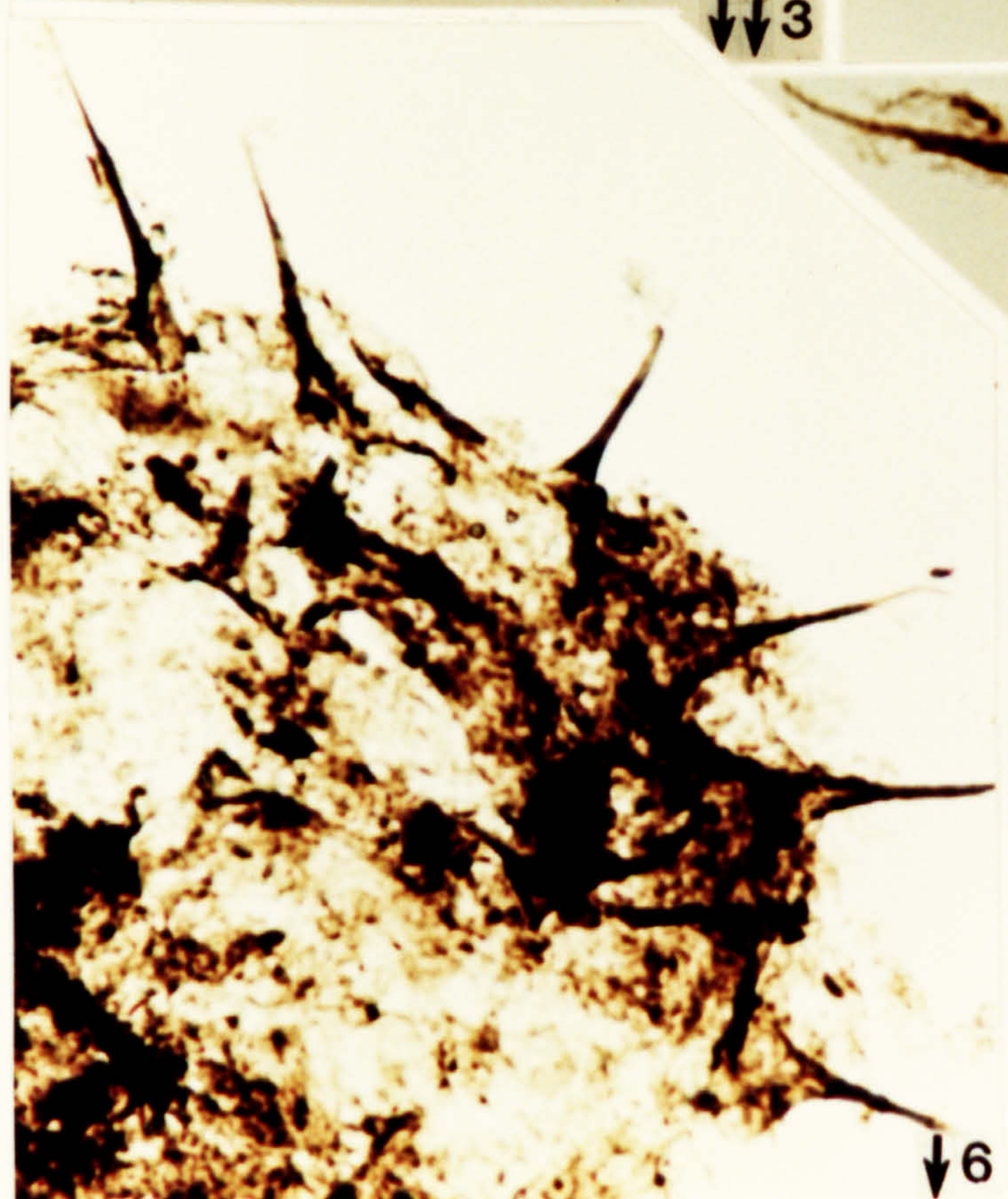
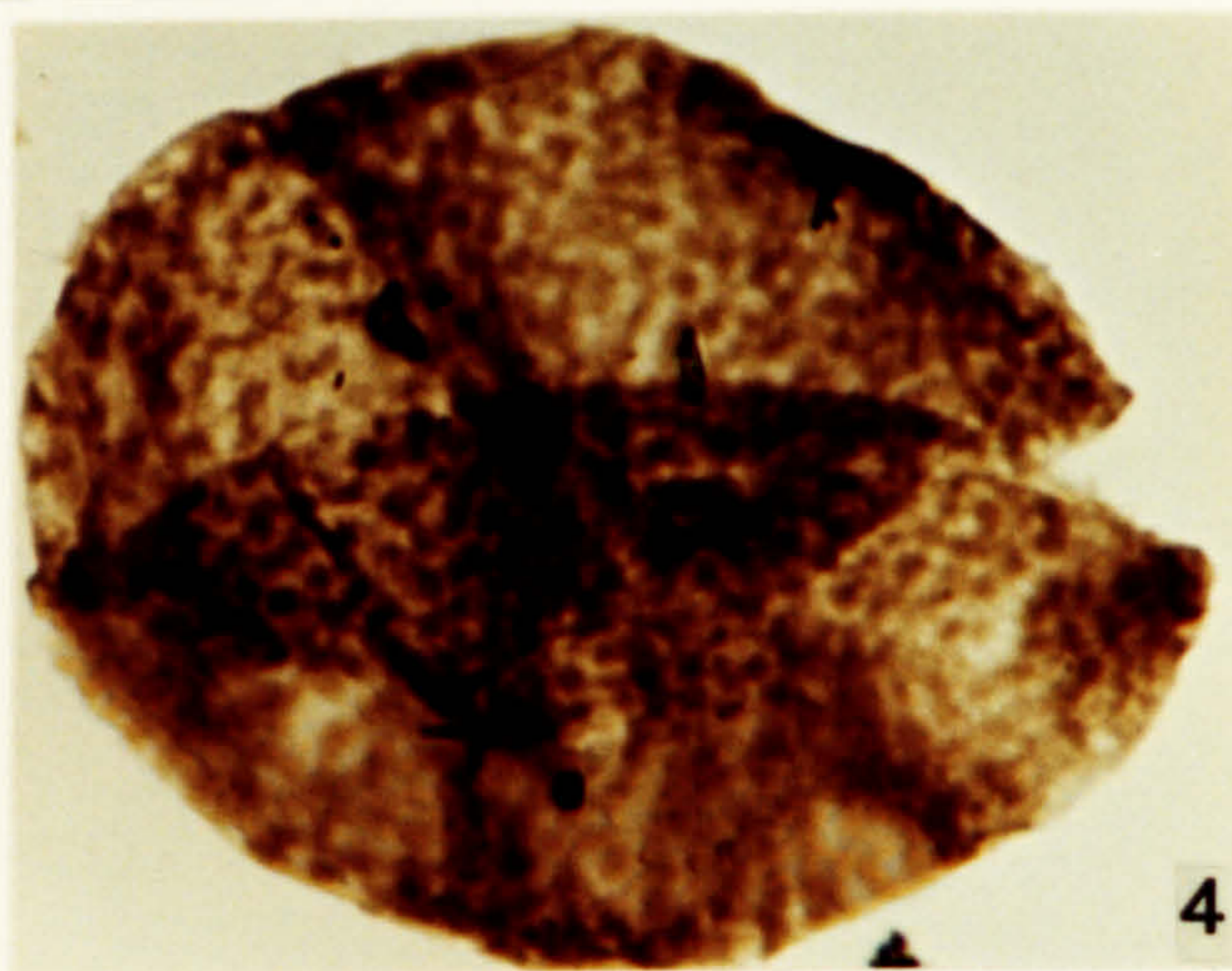
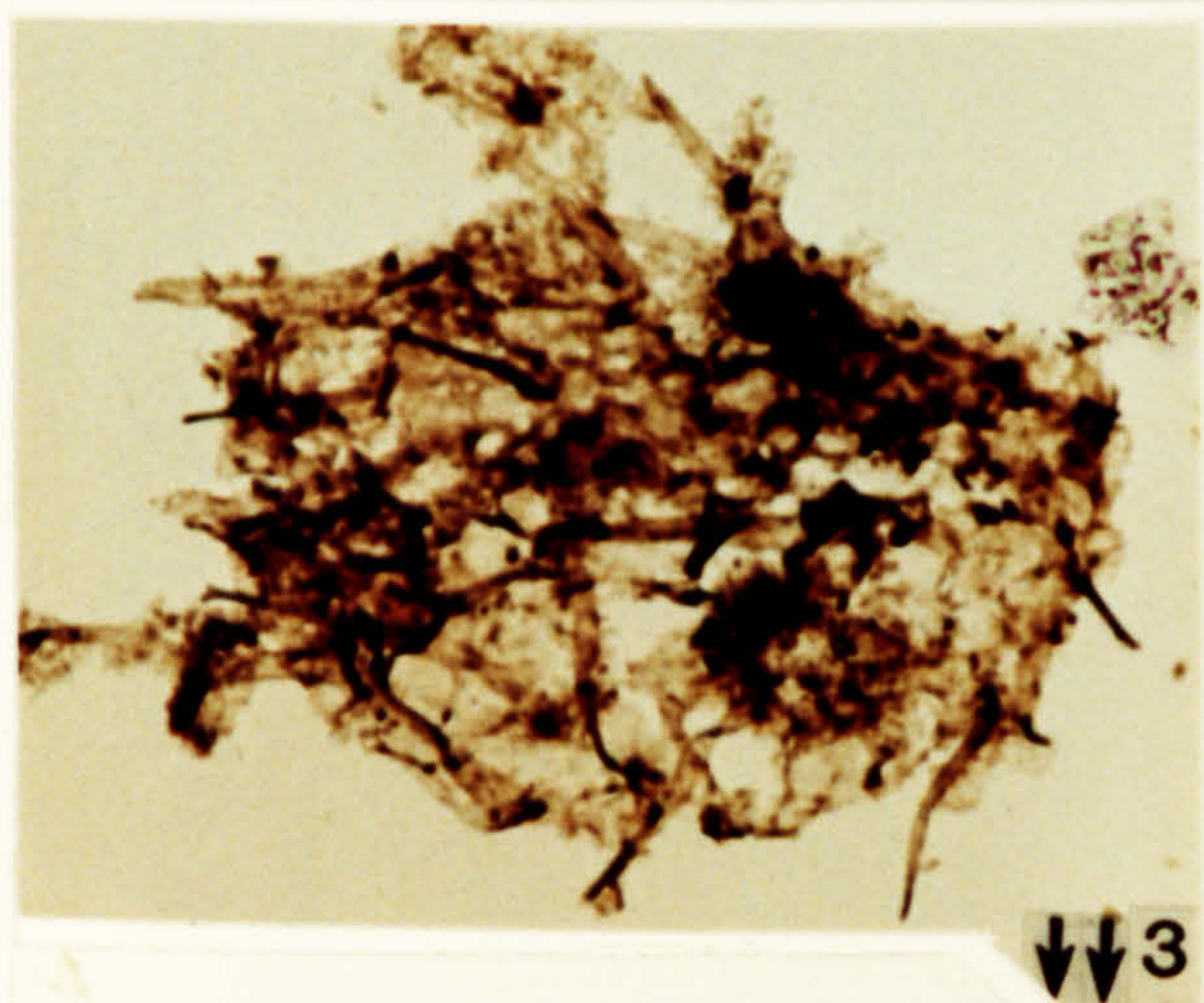
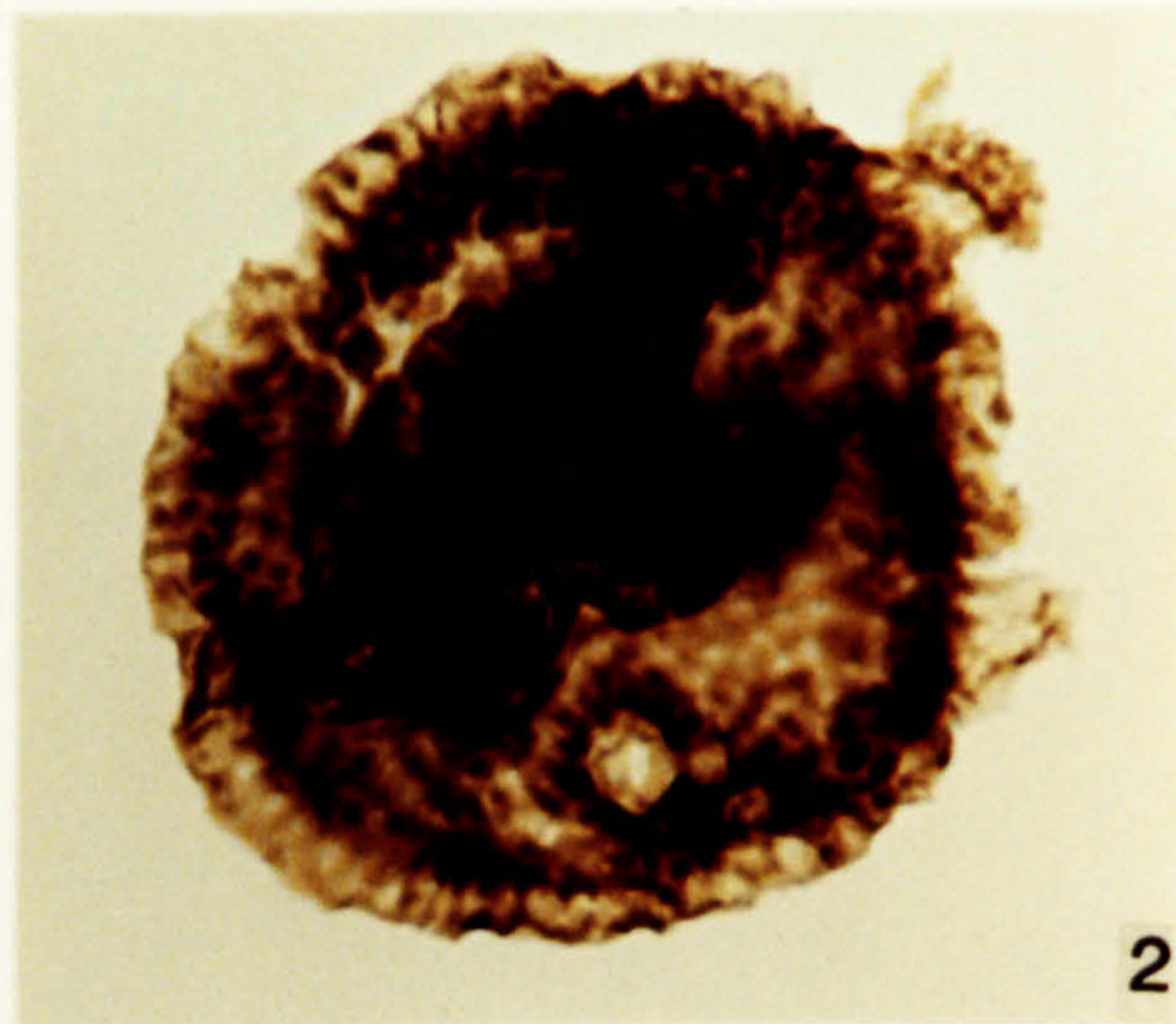
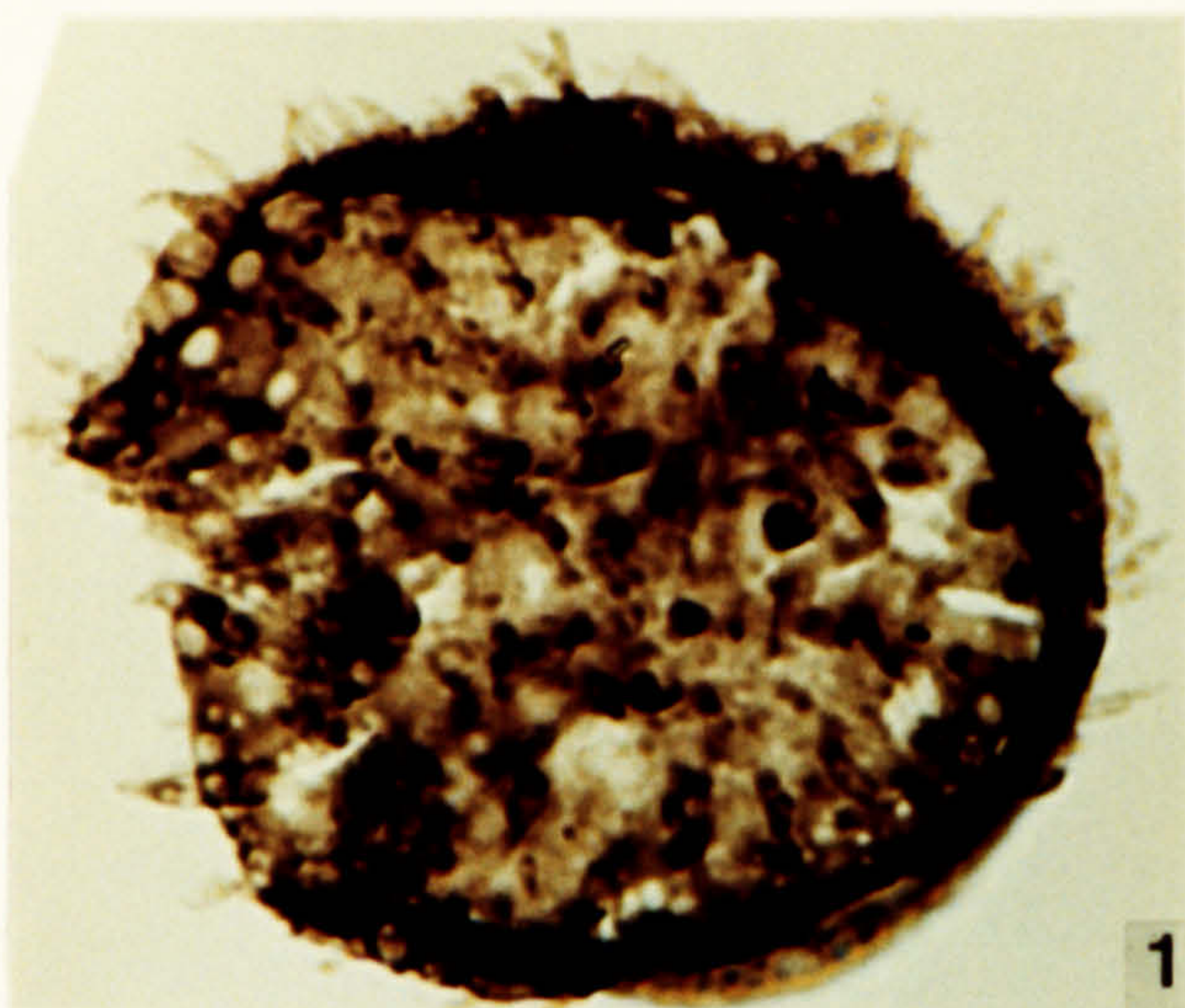
1. *Villosacapsula* sp. 2. DW 246, FS-1, L38\1.
2. *Villosacapsula* sp. 2. DW 246, FS-1, F41\2.
3. *Villosacapsula* sp. DW 250, FS-1, P7\3.
4. *Visbysphaera pirifera* (Eisenack) Kiryanov 1978. DW 249, FS-1, W32\1.
5. *Visbysphaera microspinosavar.* A. DW 246, FS-1, X22\1.
6. *Visbysphaera microspinosa* var. A. DW 246, FS-1, X18\2.
7. *Visbysphaera* sp. 1. DW 250, FS-1, Q9\1, IC.
8. *Visbysphaera* sp. 1. DW 250, FS-1, D36\1.
9. *Visbysphaera* sp. 1. DW 250, FS-1, V21\4, X2300.
10. *Visbysphaera* sp. 1. DW 250, FS-1, Q9\1, IC, X2300.
11. *Visbysphaera* sp. 1. DW 250, FS-1, V20\3, X2300.



**Plate 67.**

**Acritarchs from the Carbonaceous Shale Formation, upper Llandovery, Telychian in age.**

- 1. *Visbysphaera* sp. 3. DW 250, FS-6, C40\2.**
- 2. Acritarch Form E. DW 250, FS-5, N14\2.**
- 3. Acritarch Form L. DW 249, FS-1, H11\3, X230.**
- 4. Acritarch Form E. DW 250, FS-6, N27\4.**
- 5. Acritarch Form L. DW 249, FS-1, R44\1.**
- 6. Acritarch Form L. DW 249, FS-1, R44\1, X550.**
- 7. Acritarch Form L. DW 249, FS-1, R44\1, X230.**

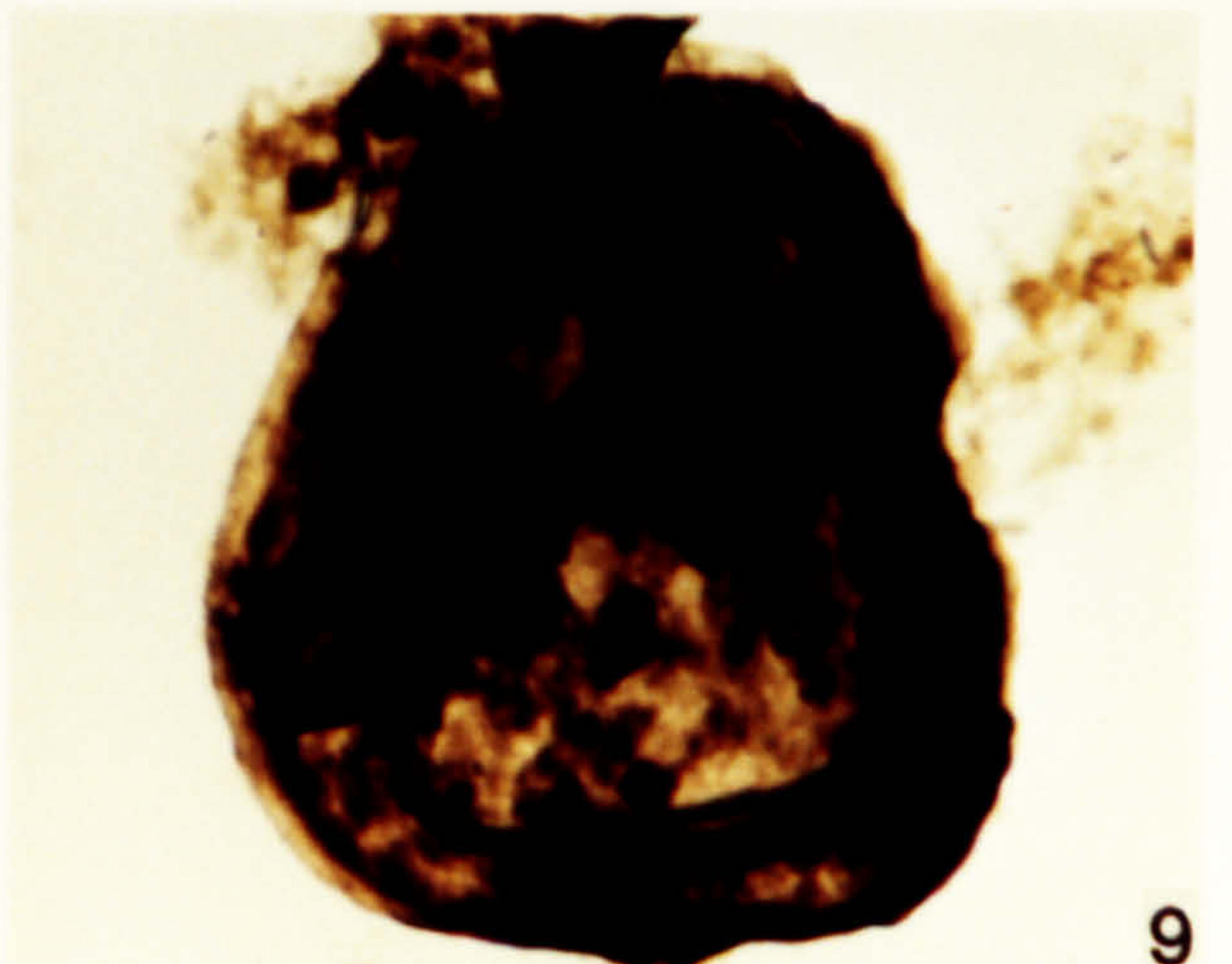
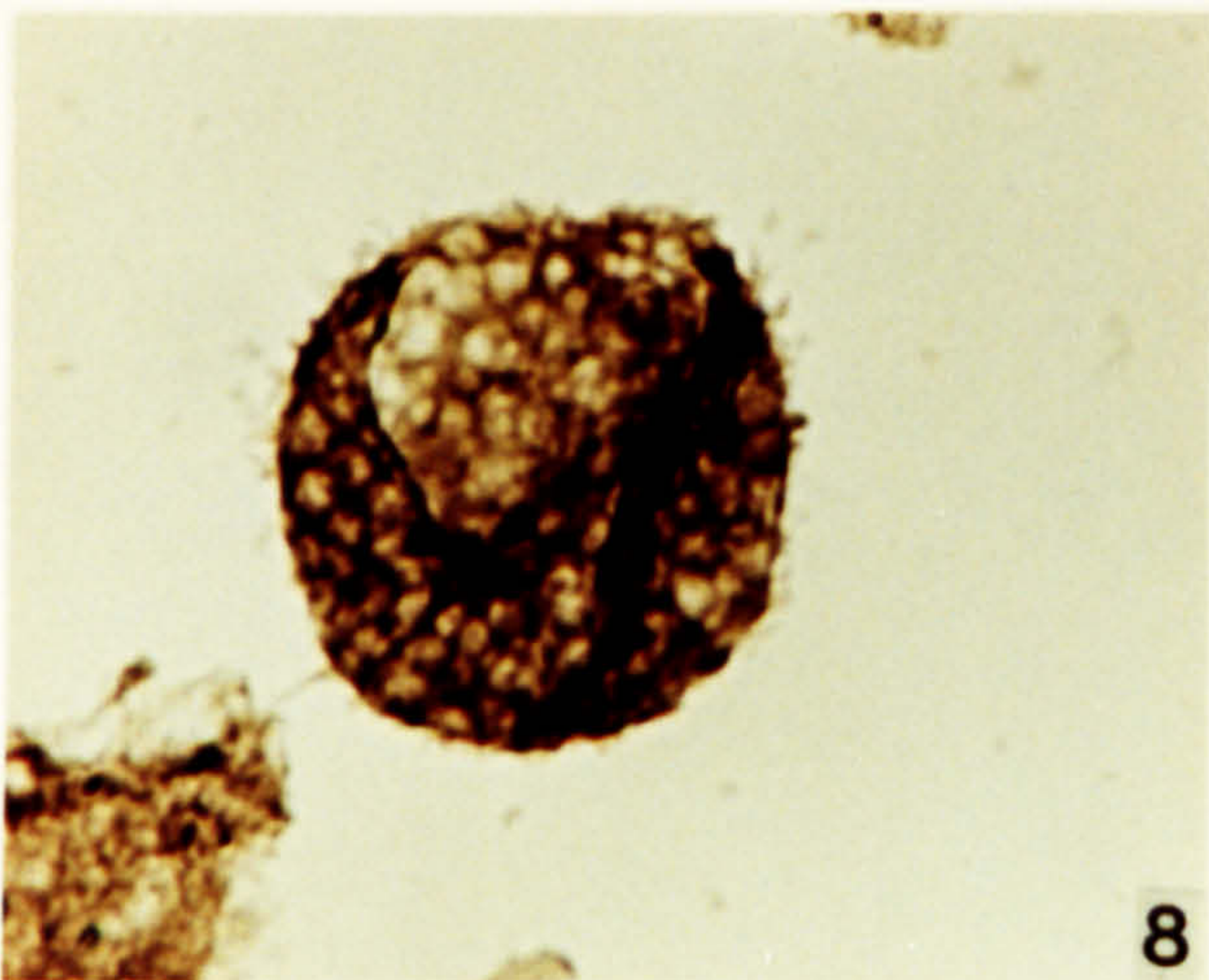
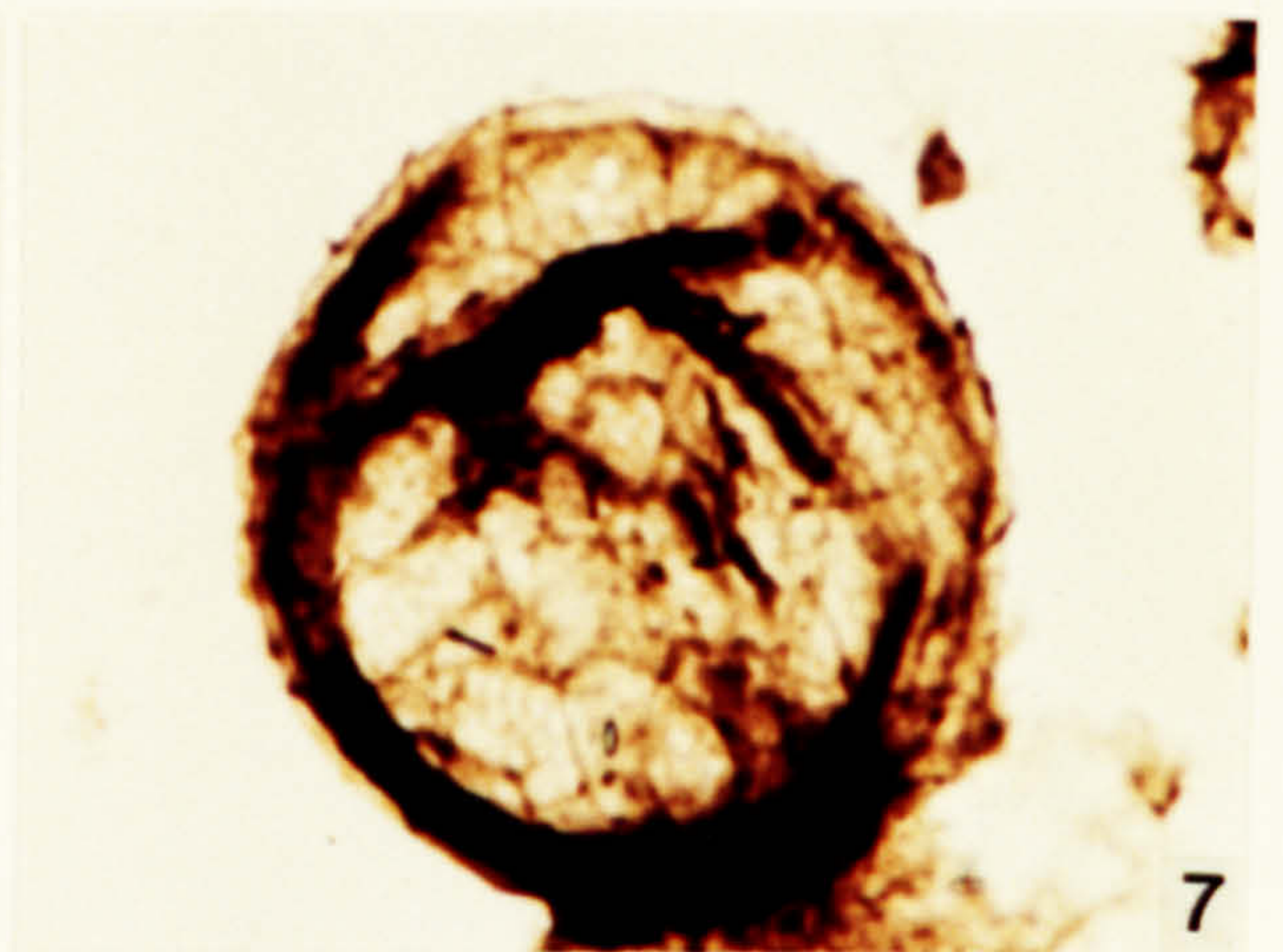
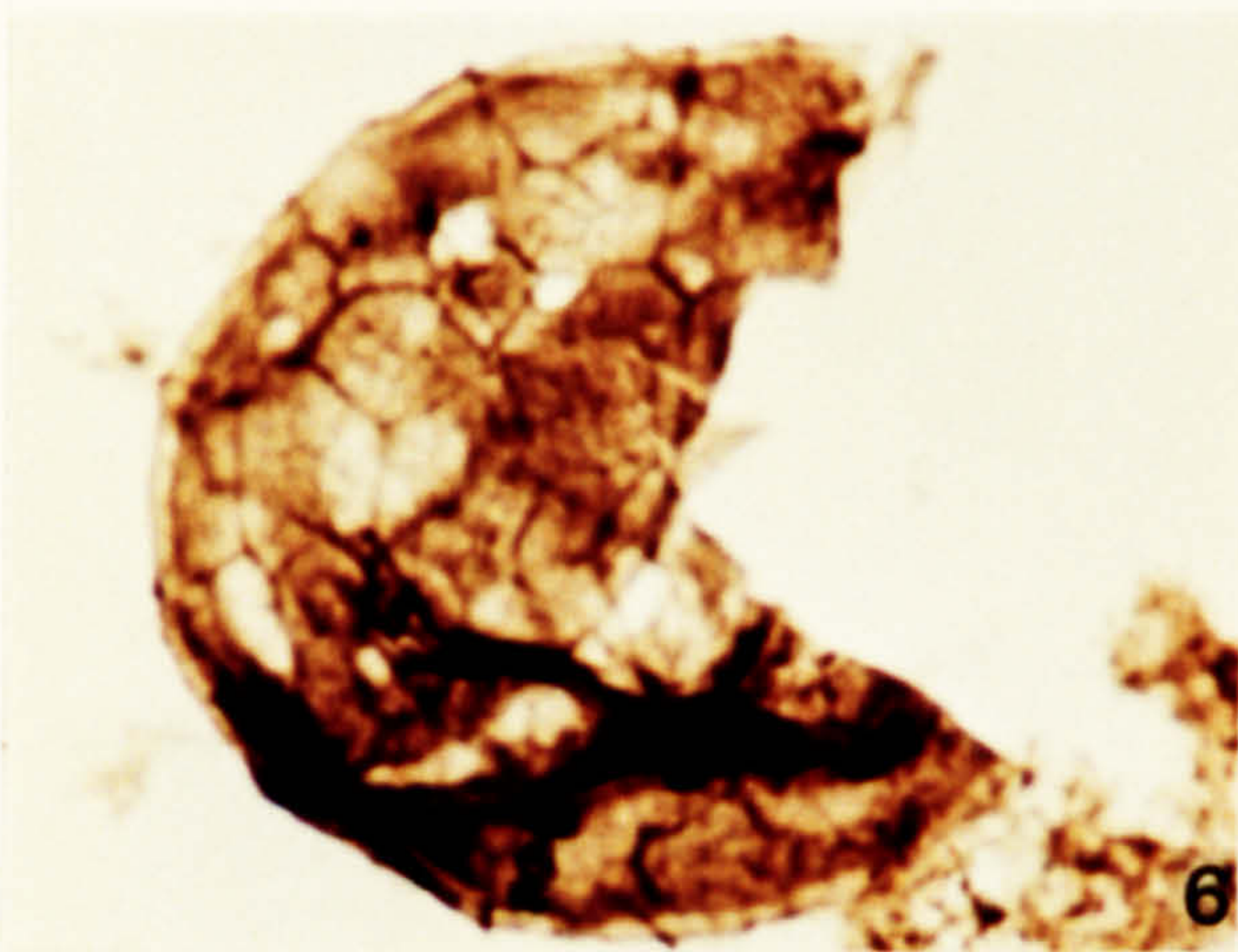
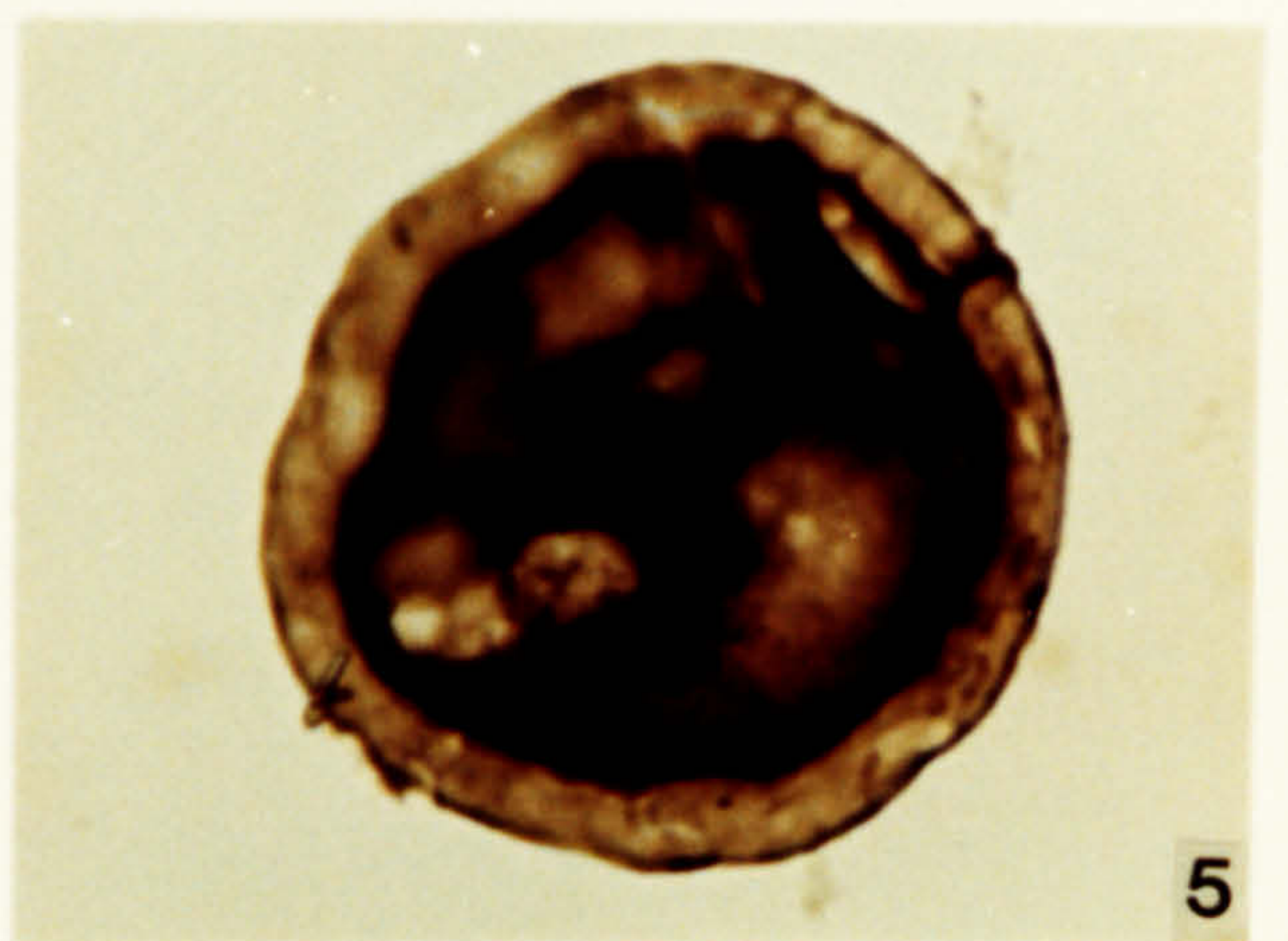
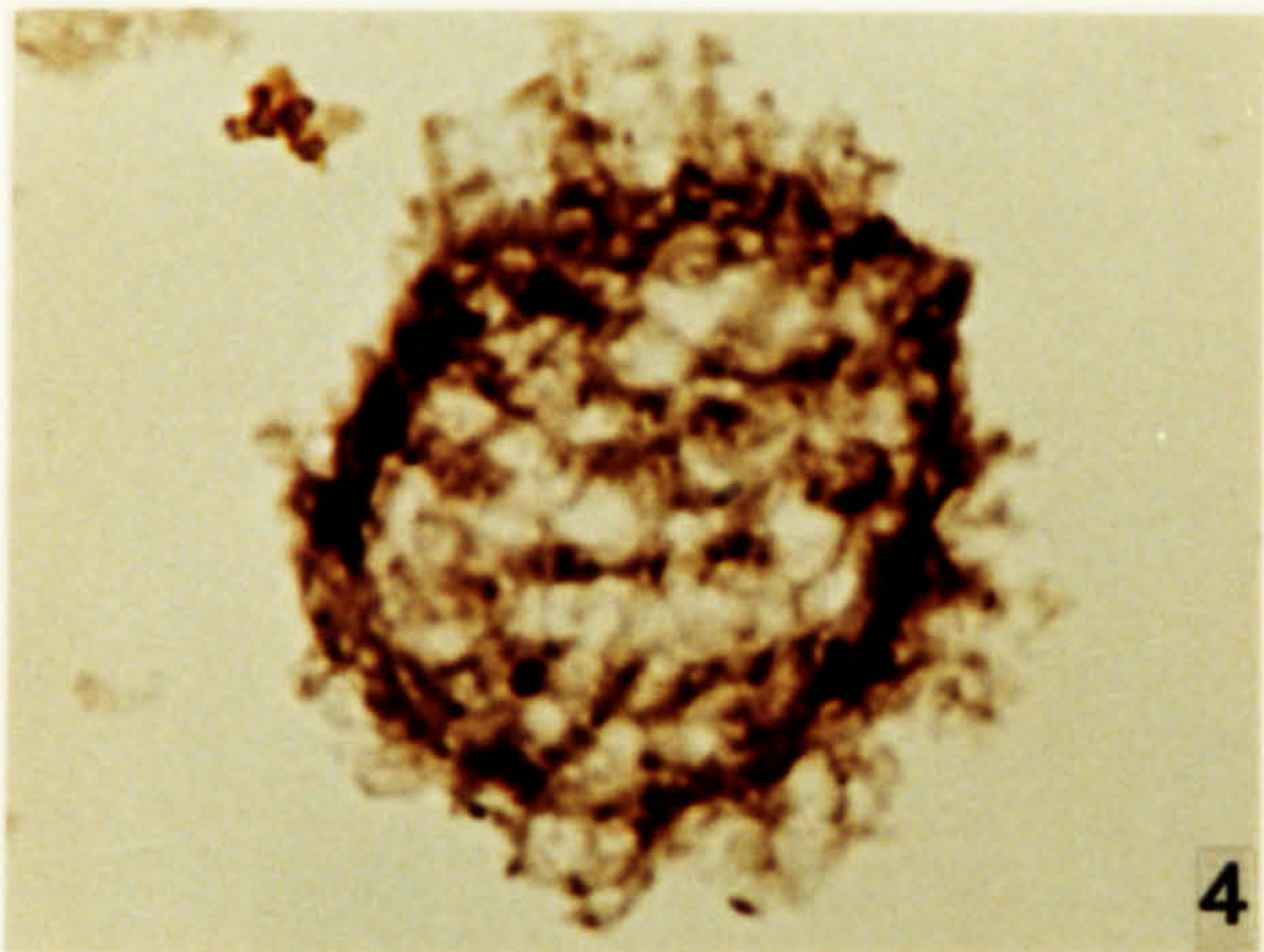
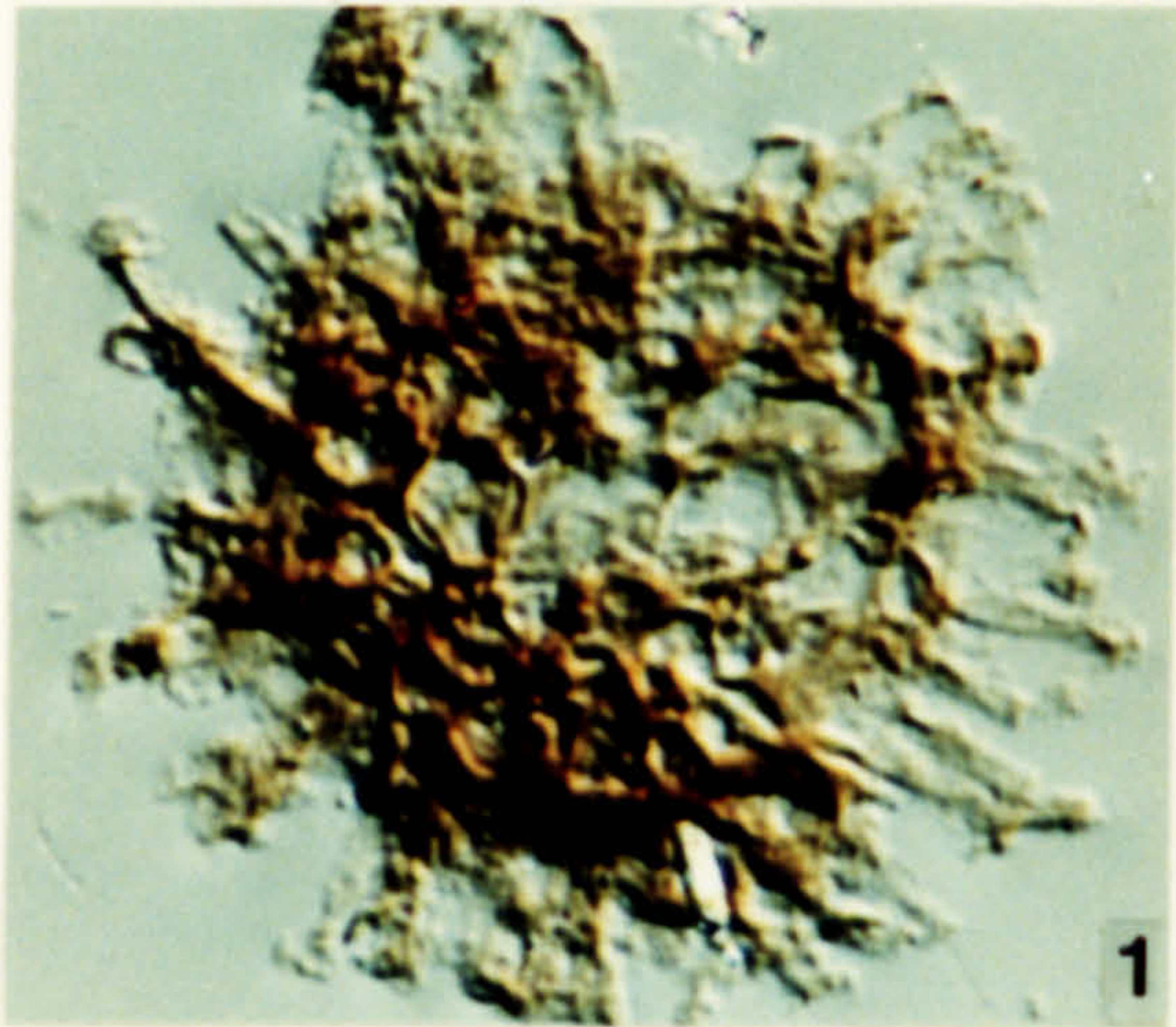




**Plate 68.**

Acritarchs and prasinophycean algae from the Carbonaceous Shale Formation, upper Llandovery, Telychian in age.

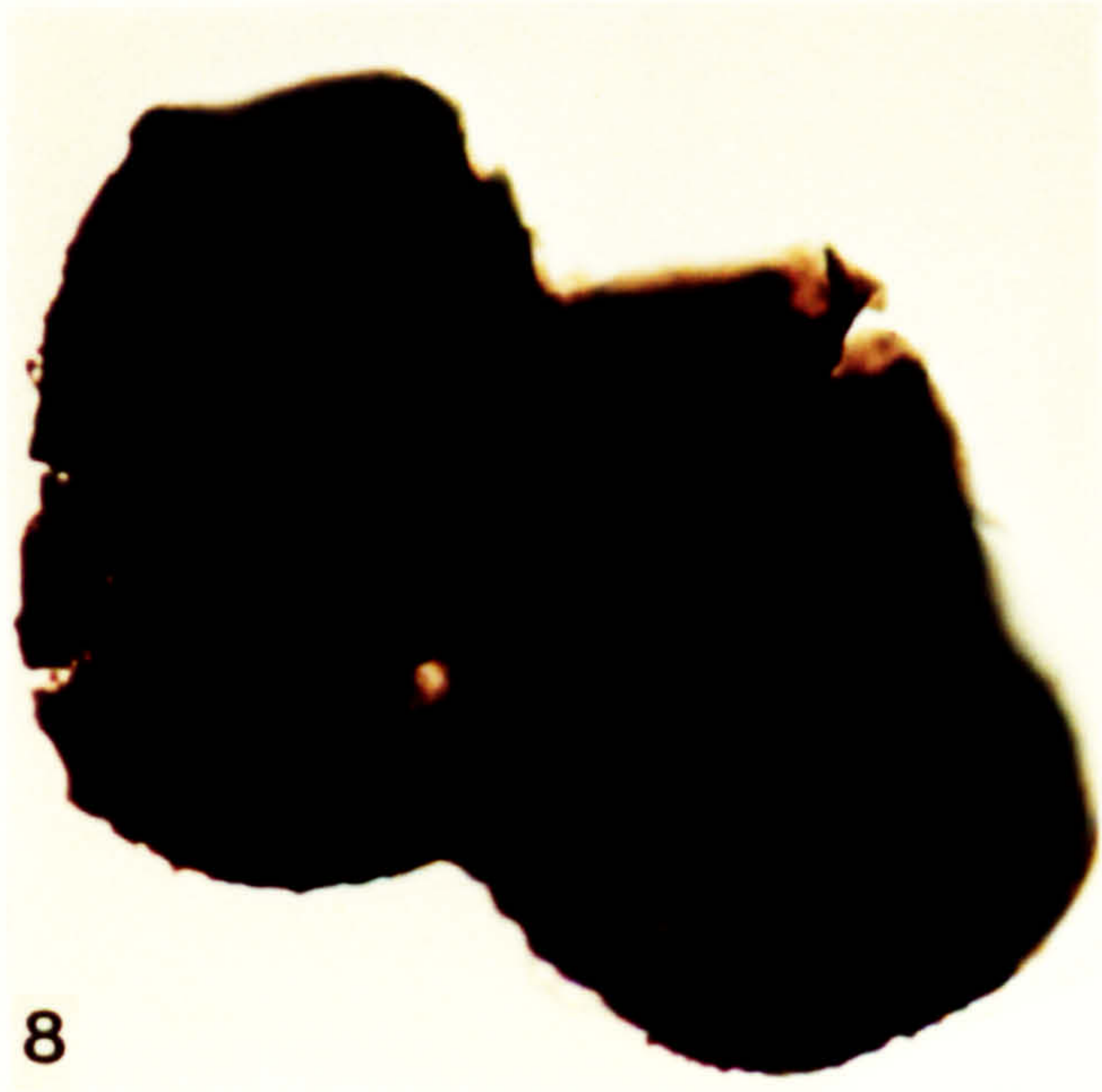
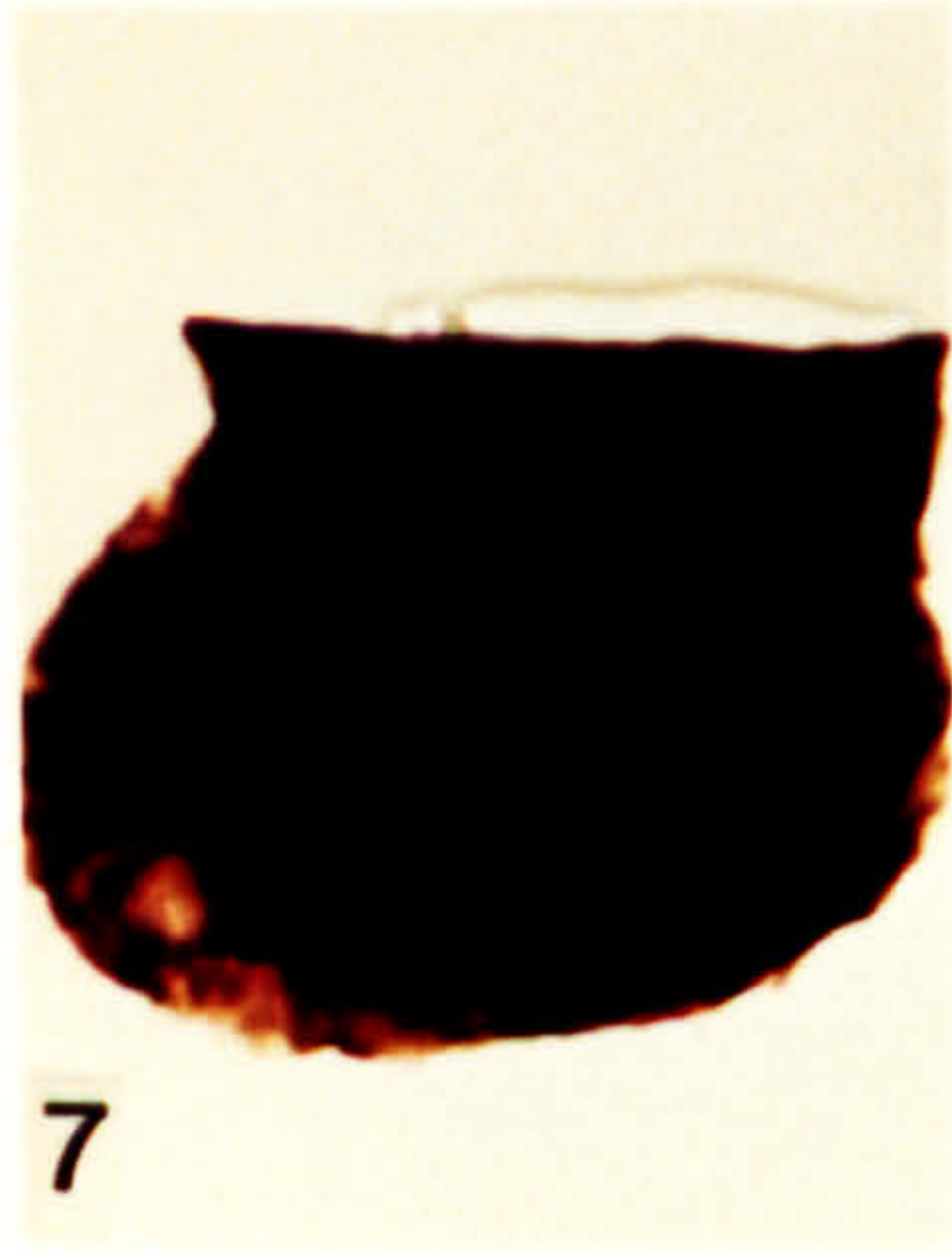
1. Acritarch Form F. DW 250, FS-1, D27\1, IC.
2. *Tasmanites medius* Eisenack 1931. DW 249, FS-1, S34\1.
3. *Tasmanites medius* Eisenack 1931. DW 249, FS-1, N18\2.
4. Acritarch Form F. DW 249, FS-1, F29\3.
5. *Tasmanites medius* Eisenack 1931. DW 249, FS-3, Y41\4.
6. *Cymatiosphaera Kiryanovii* (Kiryanov) Fensome *et al.* 1990. DW 251, FS-2, U15\2.
7. *Cymatiosphaera Kiryanovii* (Kiryanov) Fensome *et al.* 1990. DW 251, FS-2, T22\1.
8. *Cymatiosphaera?* sp. DW 250, FS-1, G20\4. .
9. *Punctatisporites dilatus sensu* Downie 1963. DW 249, FS-1, R29\1.



**Plate 69.**

Chitinozoa from the Carbonaceous Shale Formation, upper Llandovery, Telychian in age.

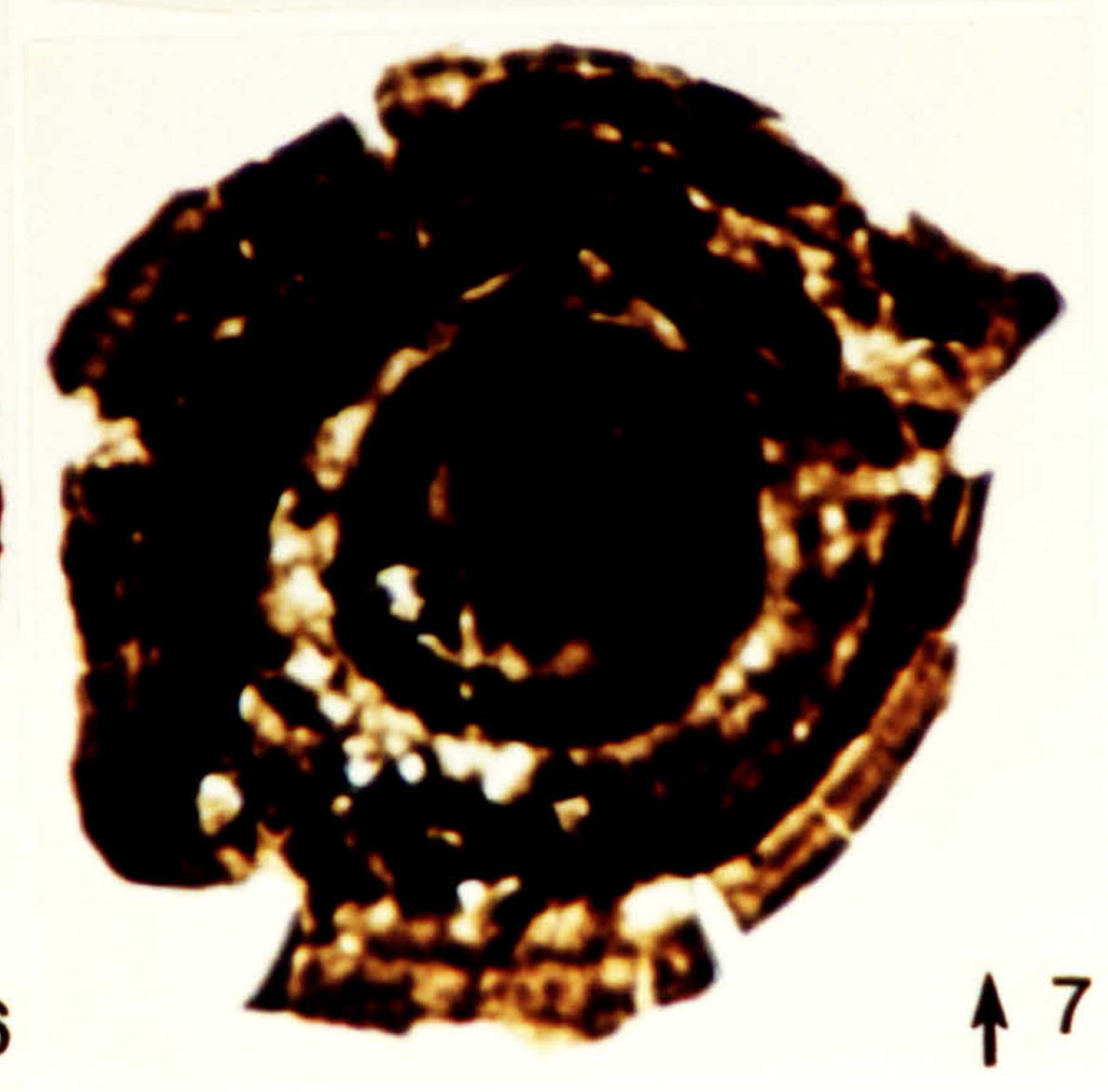
1. *Ancyrochitina primitiva* Eisenack 1964. DW 250, FS-6, P23\2.
2. *Ancyrochitina primitiva* Eisenack 1964. DW 250, FS-6, G40\3.
3. *Ancyrochitina* sp. DW 246, FS-1, C38\2.
4. *Cingulochitina* sp. DW 250, FS-5, E13\2.
5. *Ancyrochitina* sp. DW 246, FS-4, V20\4.
6. *Ancyrochitina?* sp. DW 246, FS-3, R32\1.
7. *Desmochitina* sp. DW 248, , FS-5, X44\3.
8. *Desmochitina* sp. DW 249, , FS-4, V21\4.
9. *Conochitina* sp. DW 250, FS-6, P10\2.



**Plate 70.**

Chitinozoa from the Carbonaceous Shale Formation, upper Llandovery, Telychian in age.

1. *Ancyrochitina* sp 2. DW 246, FS-1, P11\1.
2. *Ancyrochitina* sp 2. DW 246, FS-3, L16\1.
3. *Conochitina brevis* Taugourdeau & Jekhowsky 1960. DW 246, FS-5, T17\2.
4. *Angochitina?* cf. *seurati* Paris 1988. DW 246, FS-4, U28\2.
5. *Angochitina?* cf. *seurati* Paris 1988. DW 246, FS-3, U20\3.
6. *Angochitina?* cf. *seurati* Paris 1988. DW 246, FS-5, S15\4.
7. *Calpichitina?* sp. DW 248, FS-5, D42\2.



**Plate 71.**

Chitinozoa from the Carbonaceous Shale Formation, upper Llandovery, Telychian in age.

1. *Cyathochitina* sp. 1. DW 246, FS-4, R9\1.
2. *Cyathochitina* sp. 1. DW 248, FS-1, S39\1.
3. *Cyathochitina* sp. 1. DW 246, FS-4, B32\3.
4. *Cyathochitina campanulaeformis* (Eisenack) Eisenack 1955. DW 246, FS-3, U38\1, X230.
5. *Rhabdochitina magna* Complex. DW 246, FS-5, T15\3.
6. *Pseudoclathrochitina* cf. *carmenchuae* (Cramer) Cramer 1967. DW 250, FS-5, K33\2.
7. *Pseudoclathrochitina* cf. *carmenchuae* (Cramer) Cramer 1967. DW 249, FS-4, S31\1.
8. *Pseudoclathrochitina* cf. *carmenchuae* (Cramer) Cramer 1967. DW 250, FS-6, P15\2.
9. *Pseudoclathrochitina* cf. *carmenchuae* (Cramer) Cramer 1967. DW 250, FS-6, P15\2, X920.

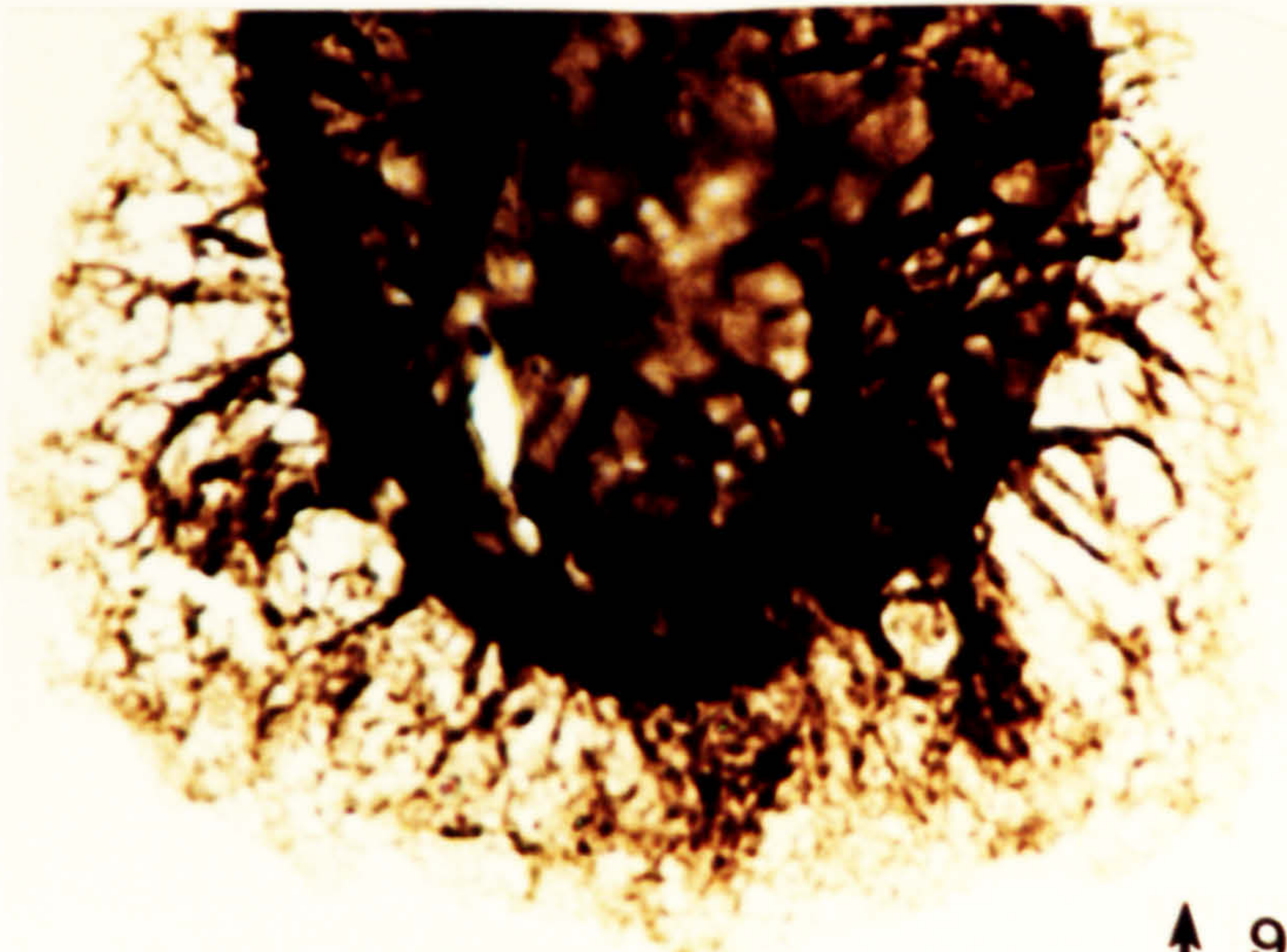
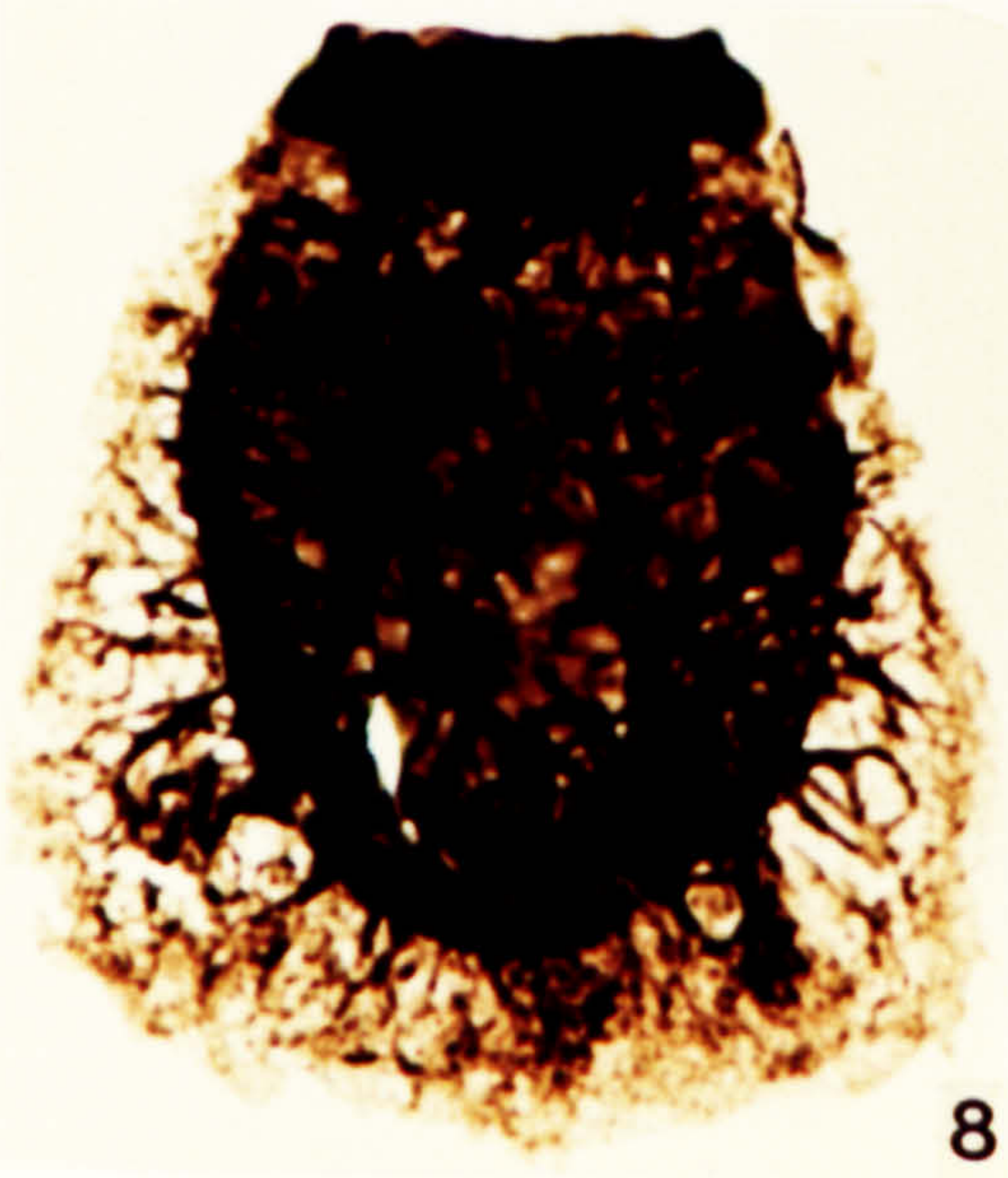
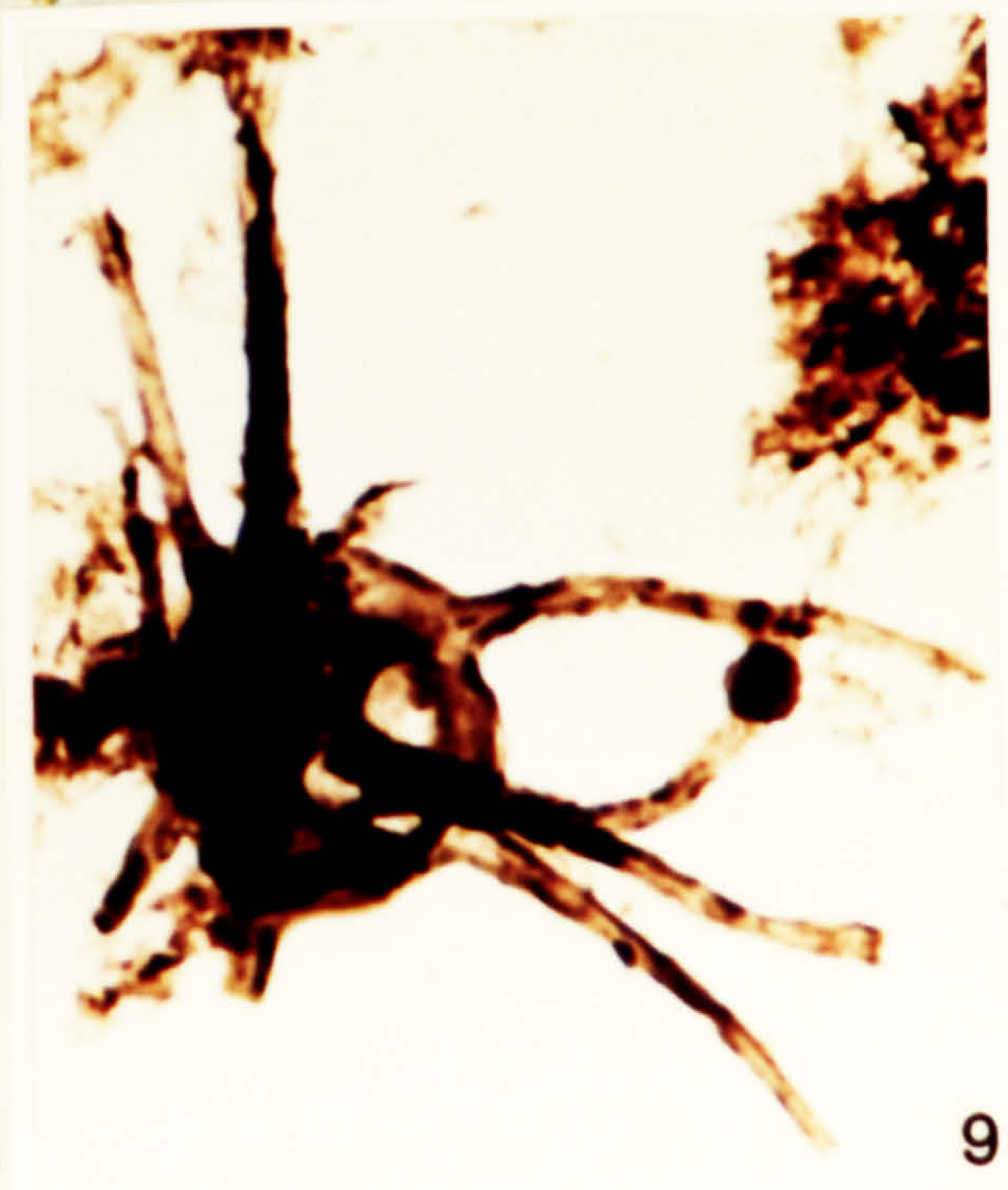
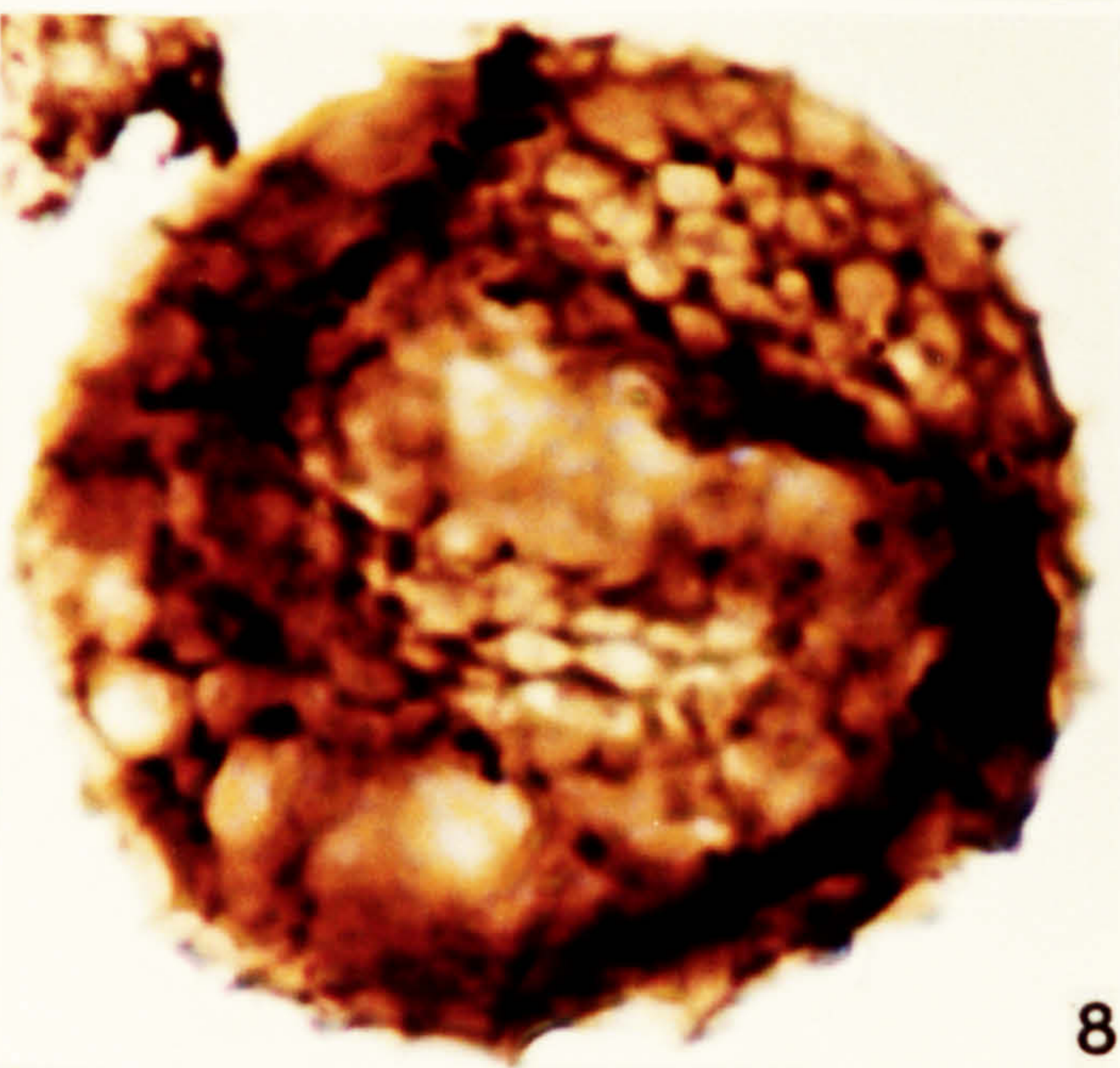
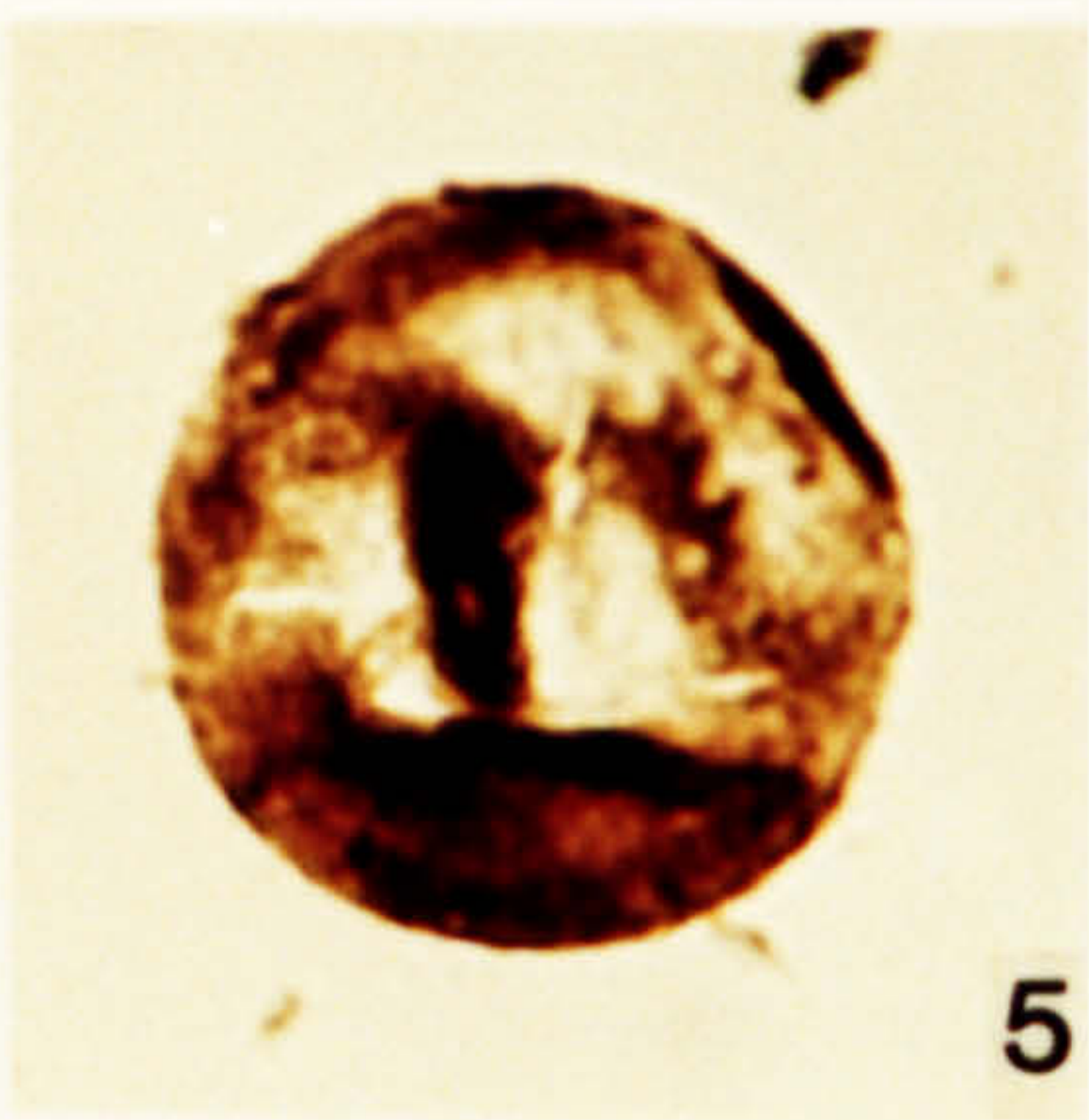
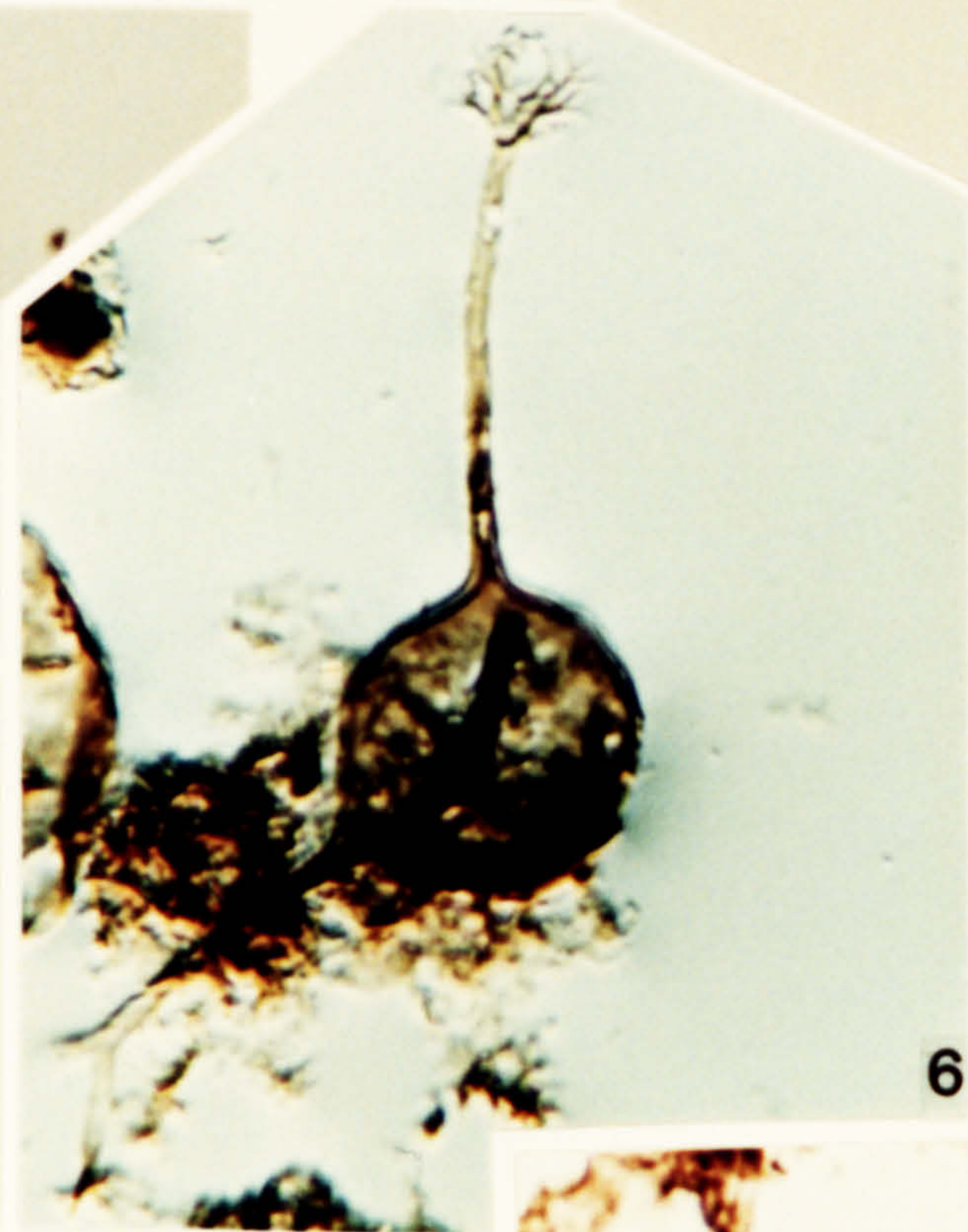
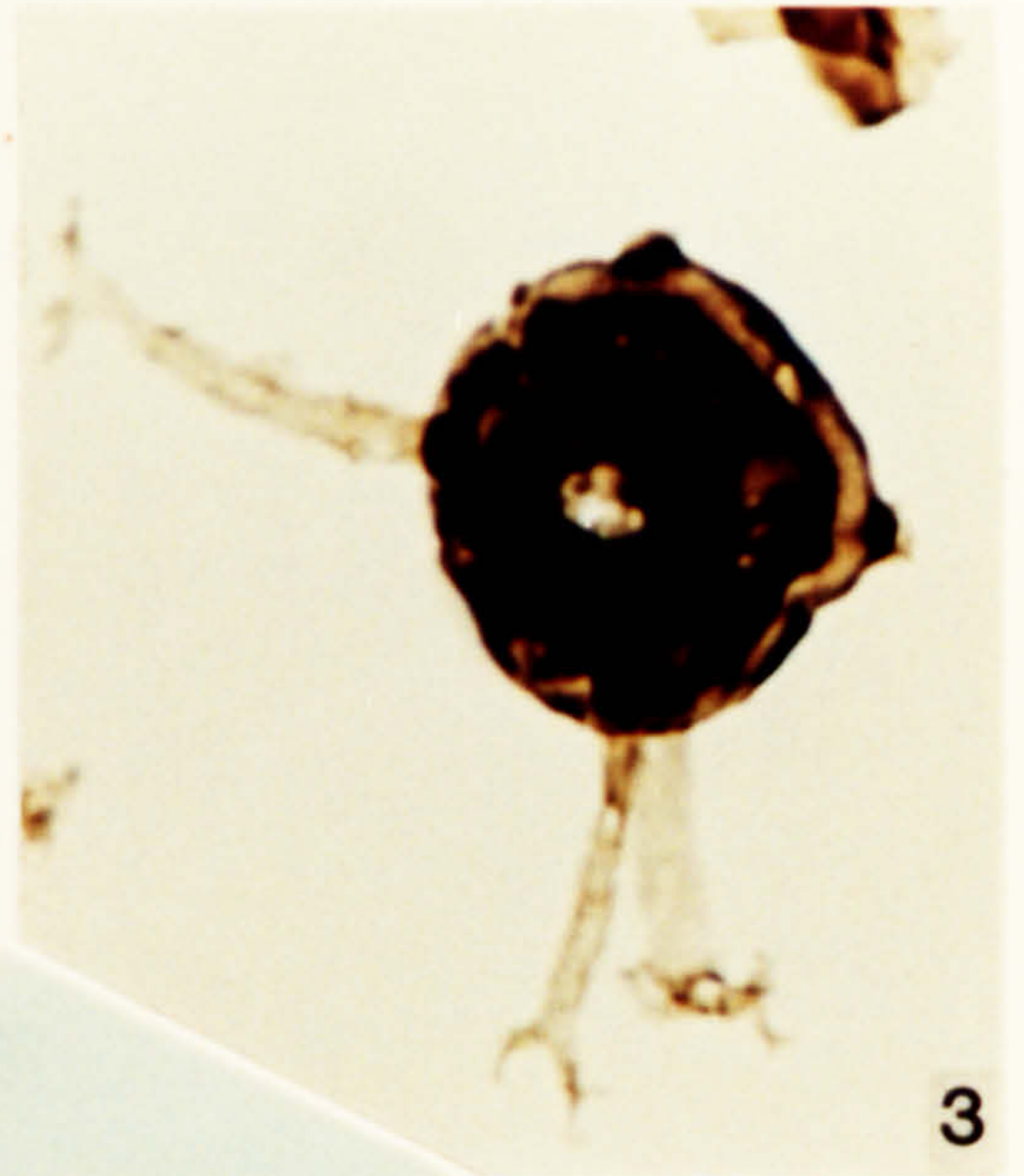
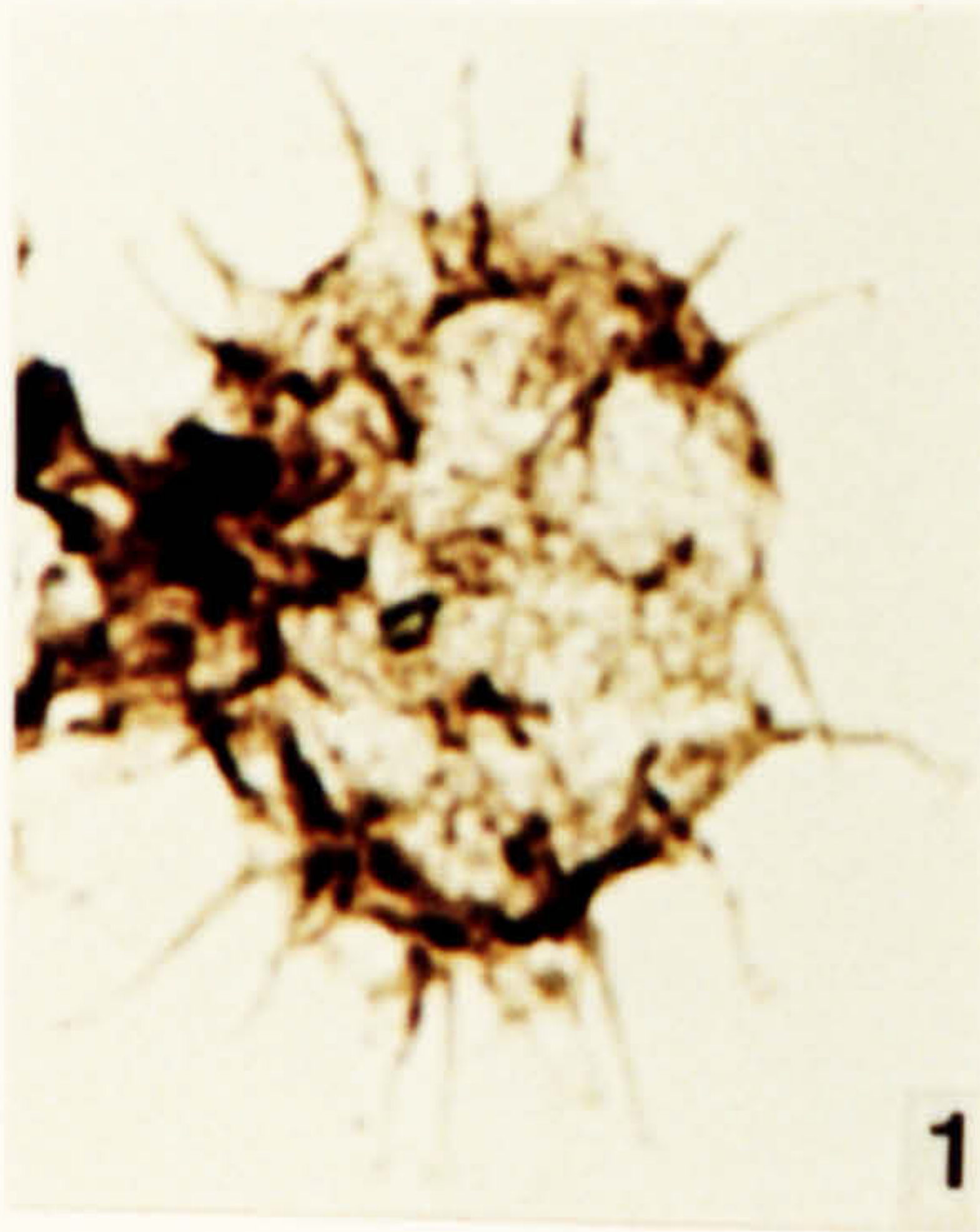




Plate 72.

Acritarchs from the Carbonaceous Shale Formation and/or the Argillaceous Shale Formation, Lower Wenlock, Sheinwoodian in age.

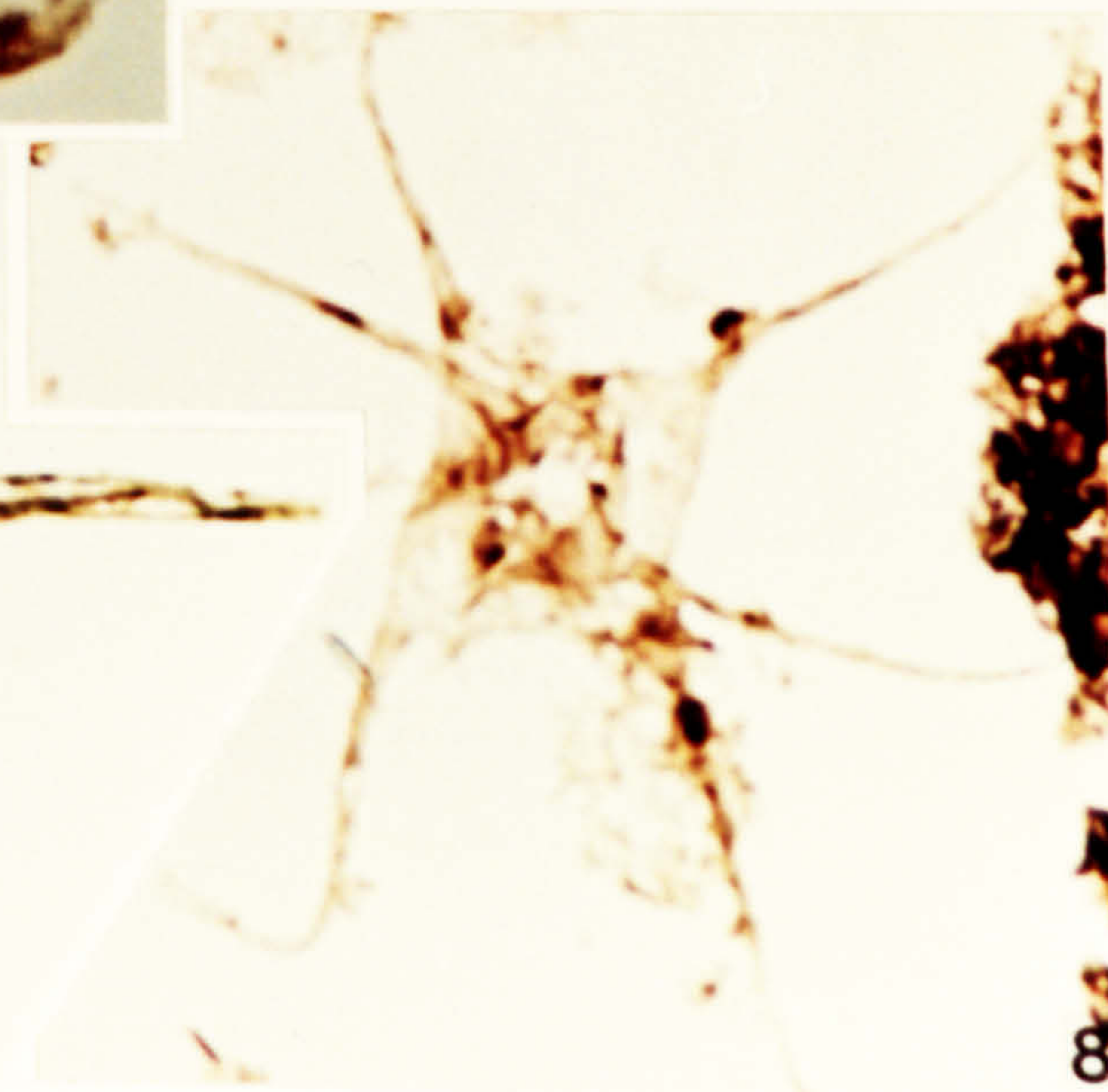
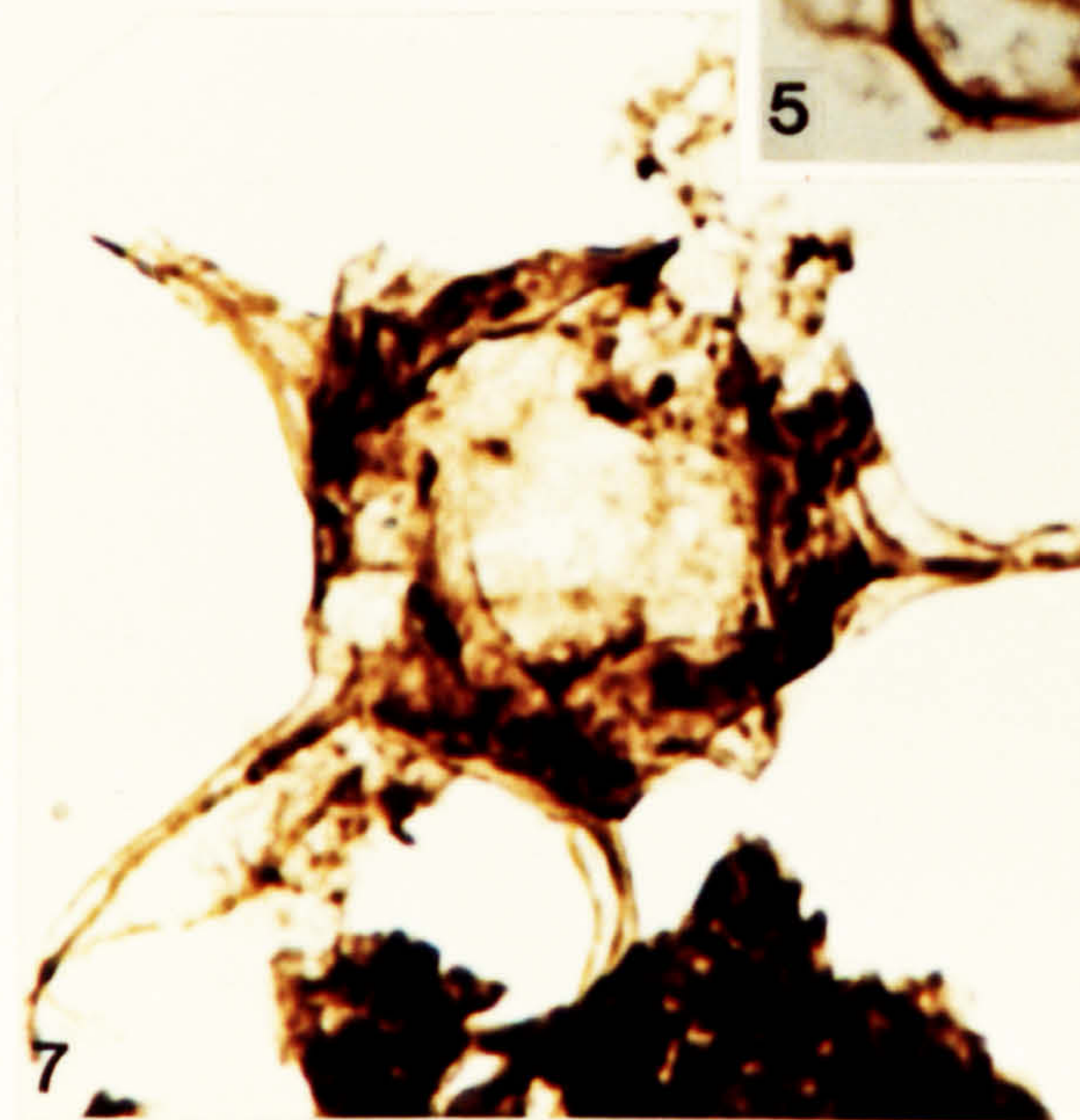
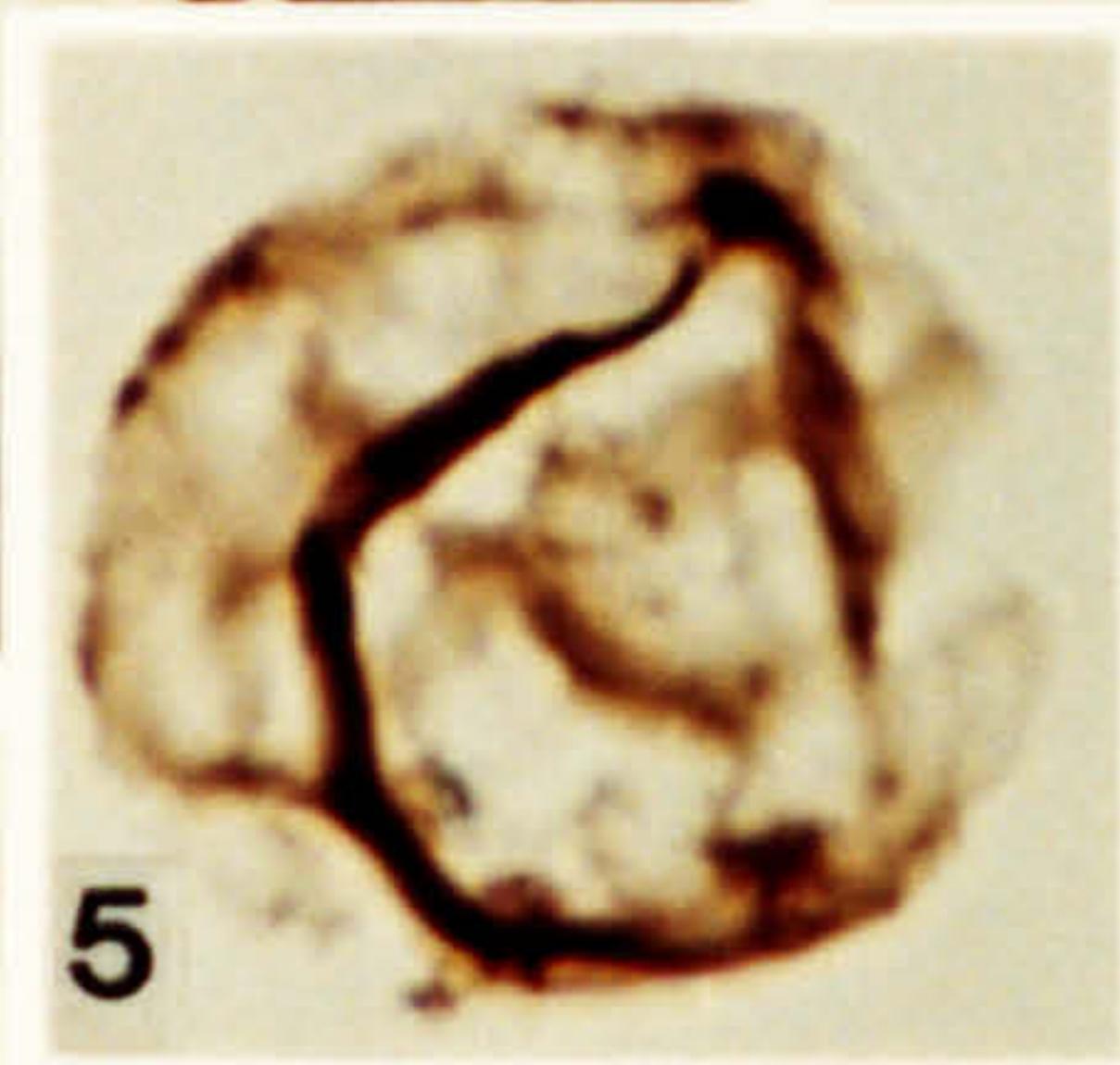
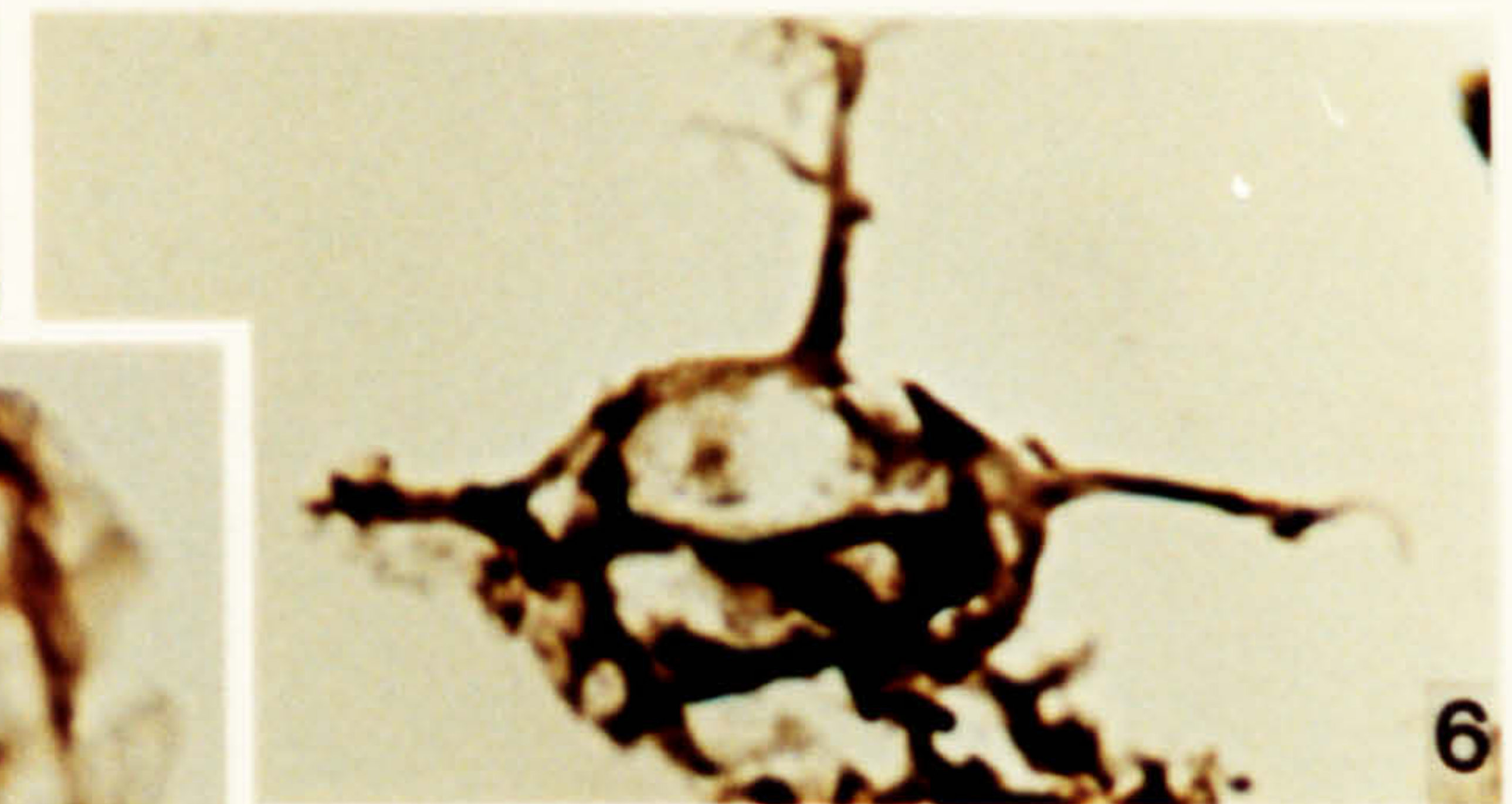
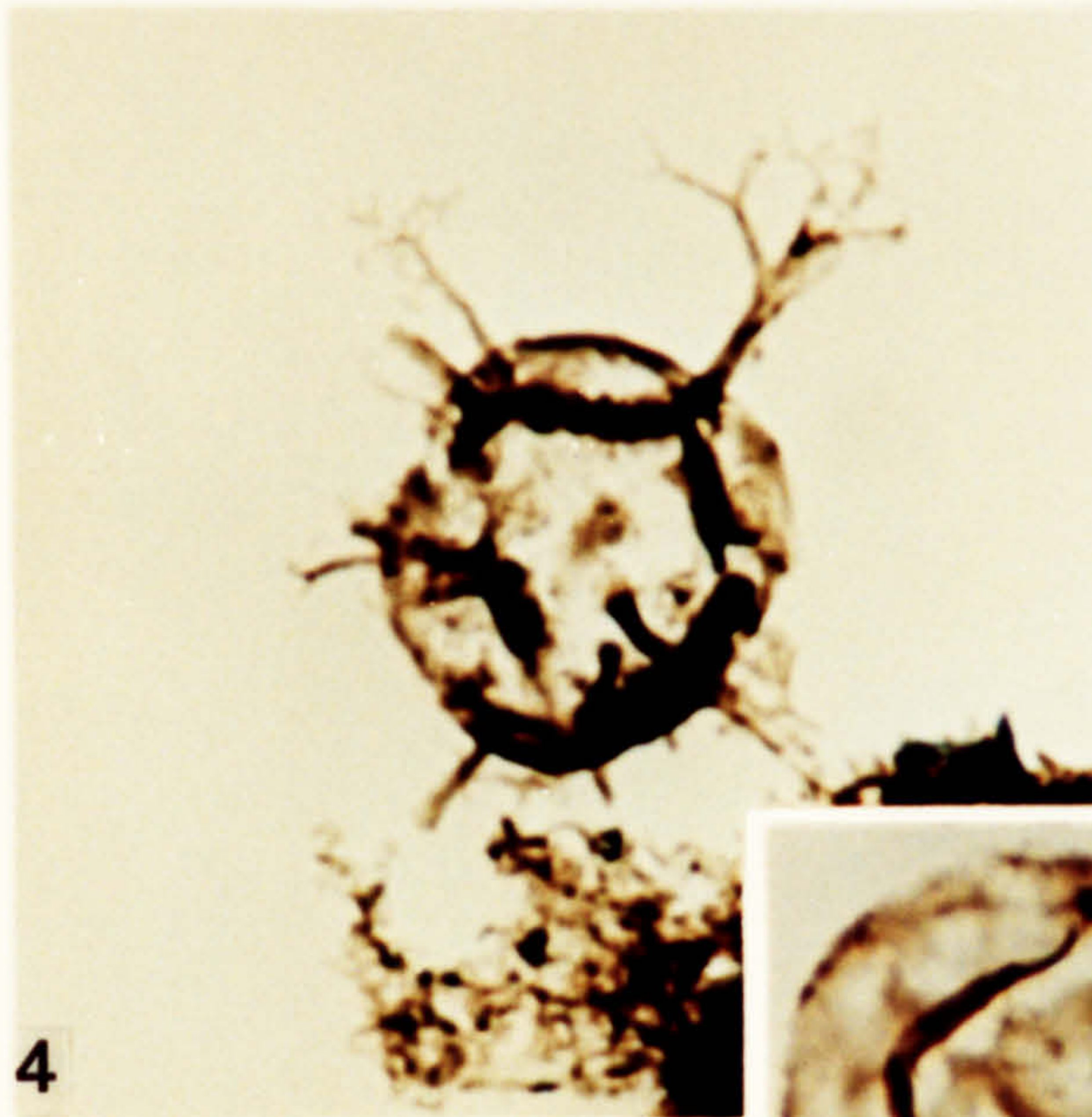
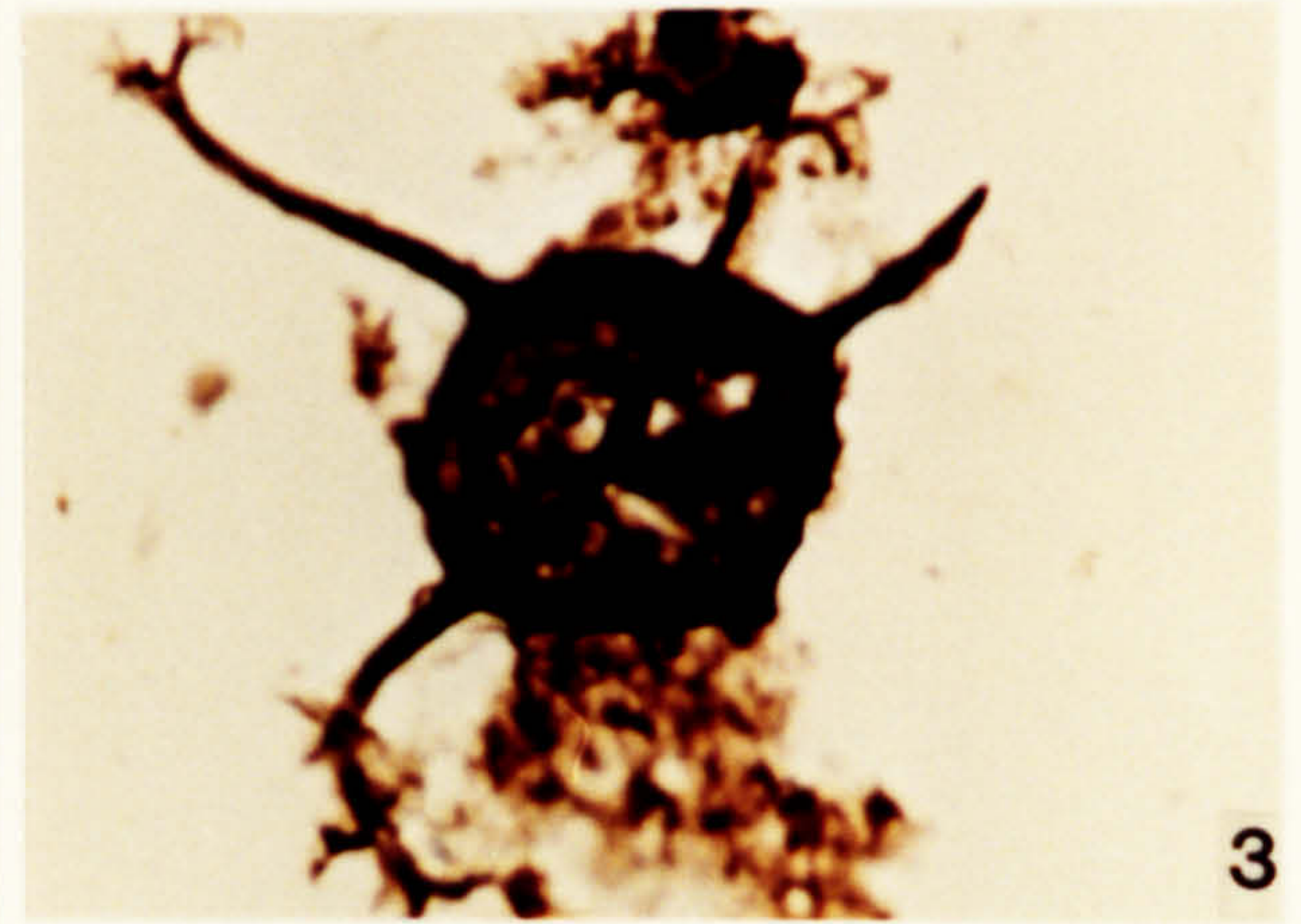
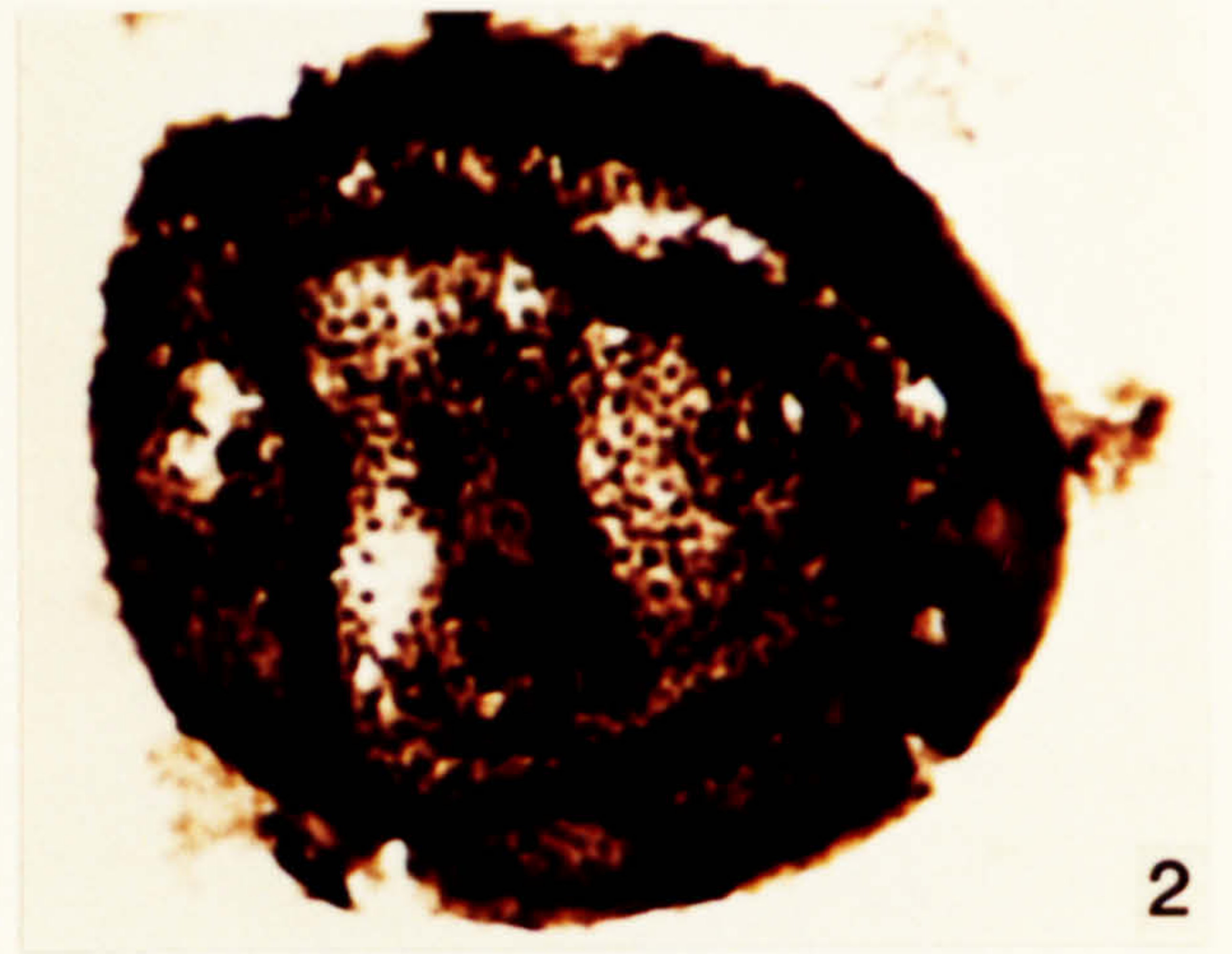
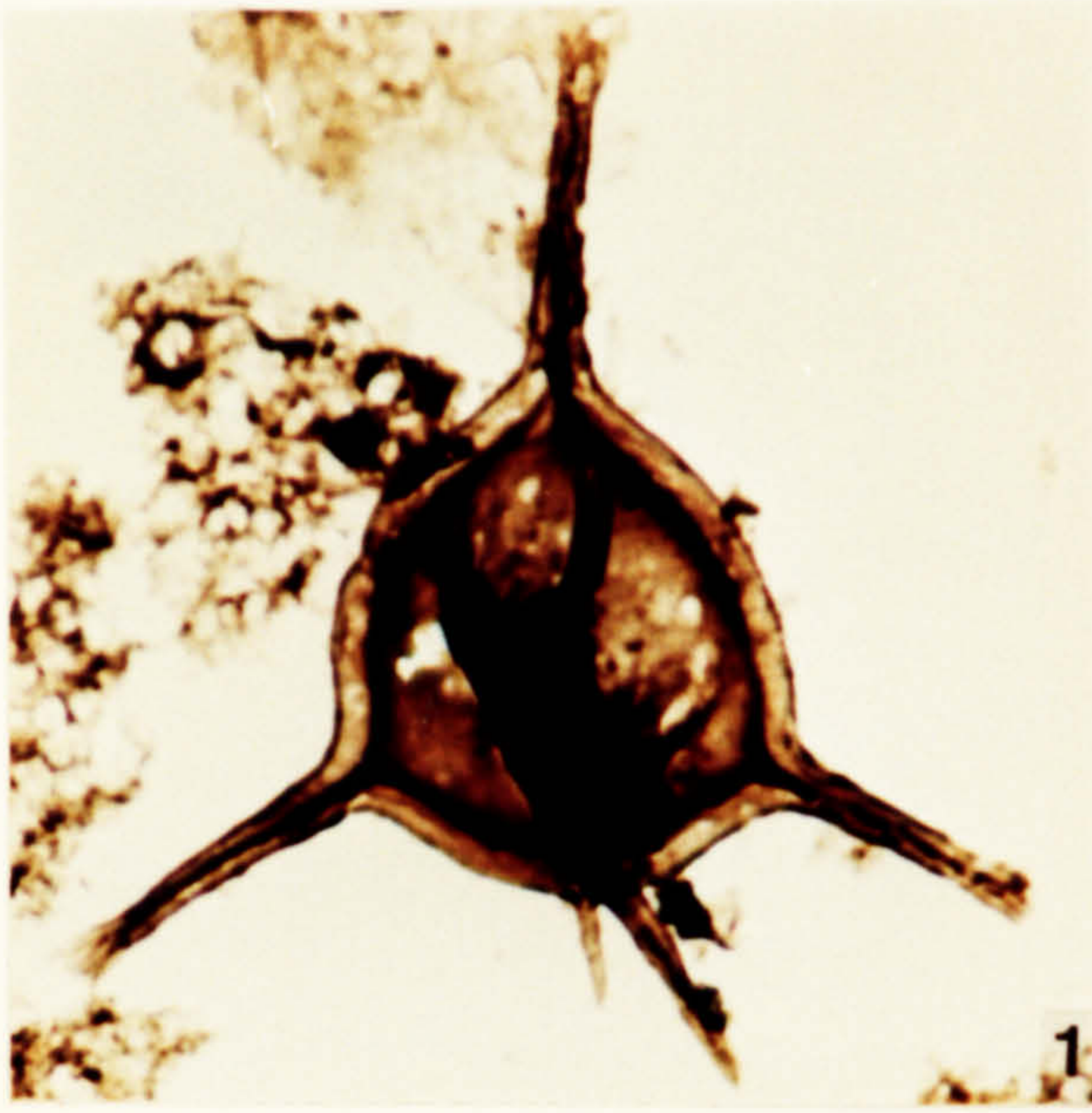
1. *Ammonidium microcladum* (Downie) Dorning 1981. DW 358, FS-1, L10\2.
2. *Baltisphaeridium archaicum* Cramer & Diez 1972. DW 357, FS-1, K26\1.
3. *Cymbosphaeridium?* sp. DW 358, FS-1, S8\2.
4. *Dictyotidium coarctatum* (Kiryanov) Colbath 1983. DW 355, FS-1, E12\1.
5. *Dictyotidium coarctatum* (Kiryanov) Colbath 1983. DW 356, FS-1, J11\1.
6. *Dateriocradus monterossae* (Cramer) Pothe de Baldis 1981. DW 357, FS-1, H29\2, IC.
7. *Dateriocradus monterossae* (Cramer) Pothe de Baldis 1981. DW 357, FS-1, O18\3.
8. *Dictyotidium stenodictyum* Eisenack 1965. DW 357, FS-1, T13\3.
9. *Diexallophasis denticulata* (Stockmans & Williere) Loeblich 1970. DW 357, FS-1, K11\4.



**Plate 73.**

Acritarchs from the Carbonaceous Shale Formation and/or the Argillaceous Shale Formation, Lower Wenlock, Sheinwoodian in age.

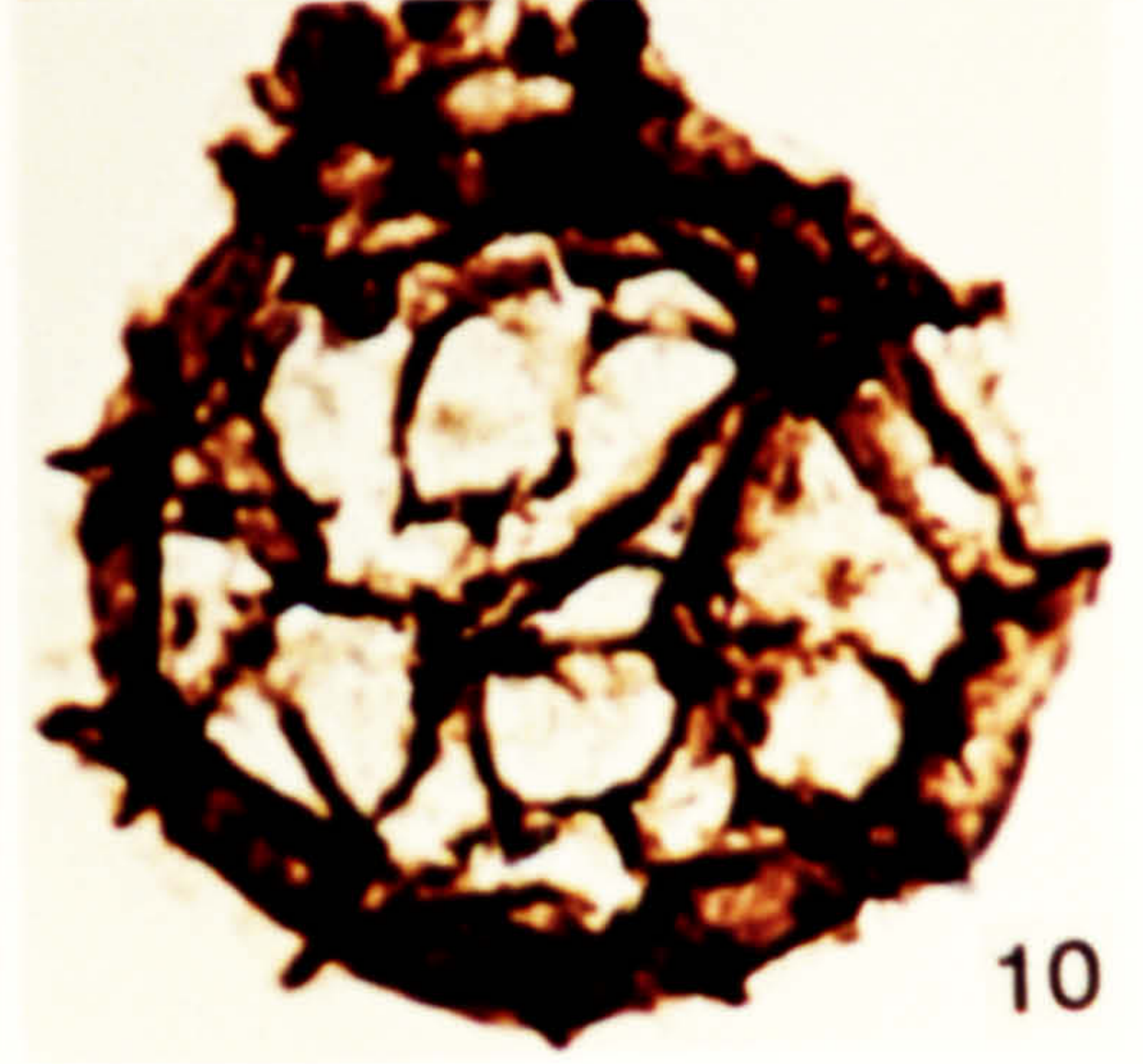
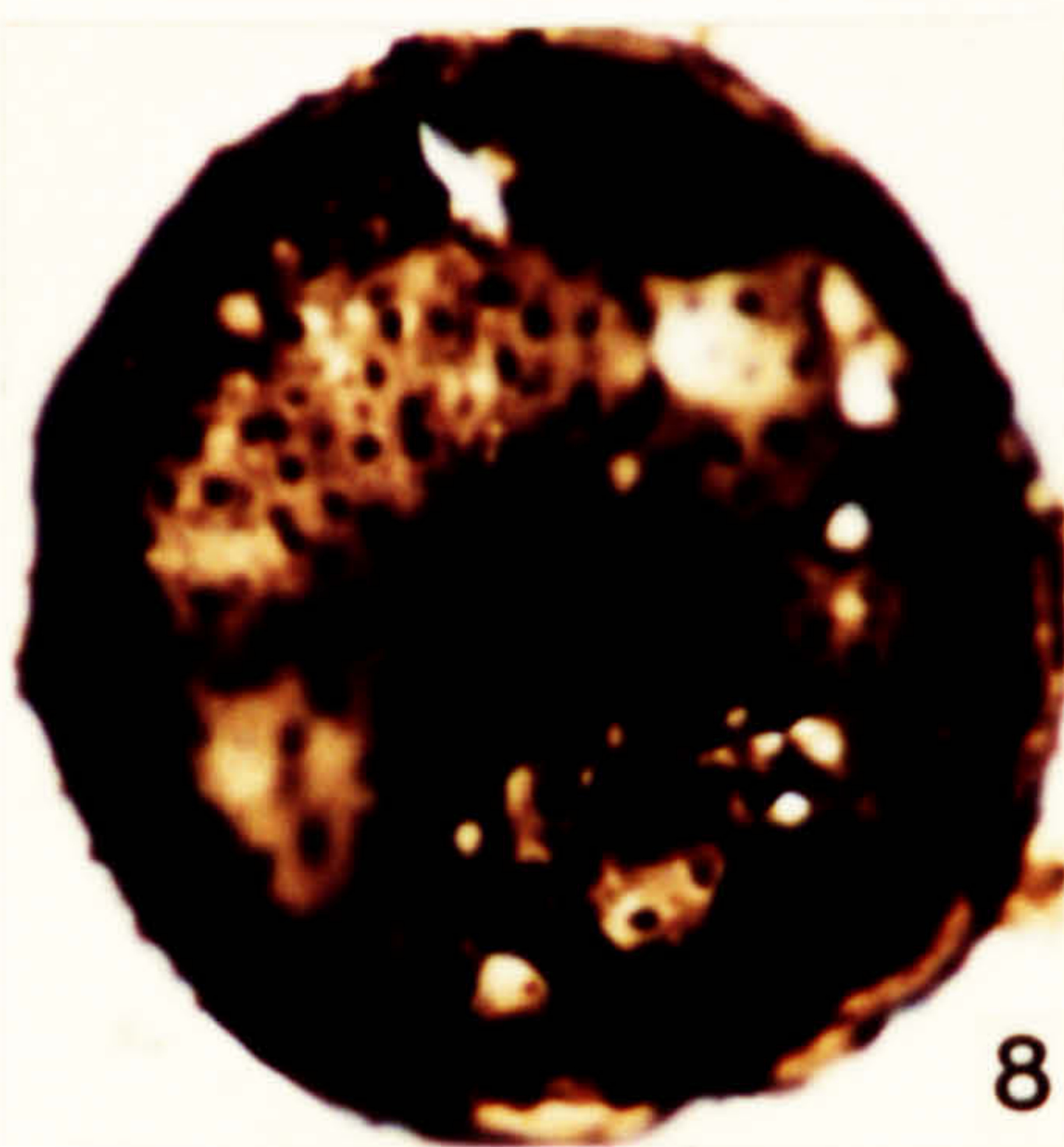
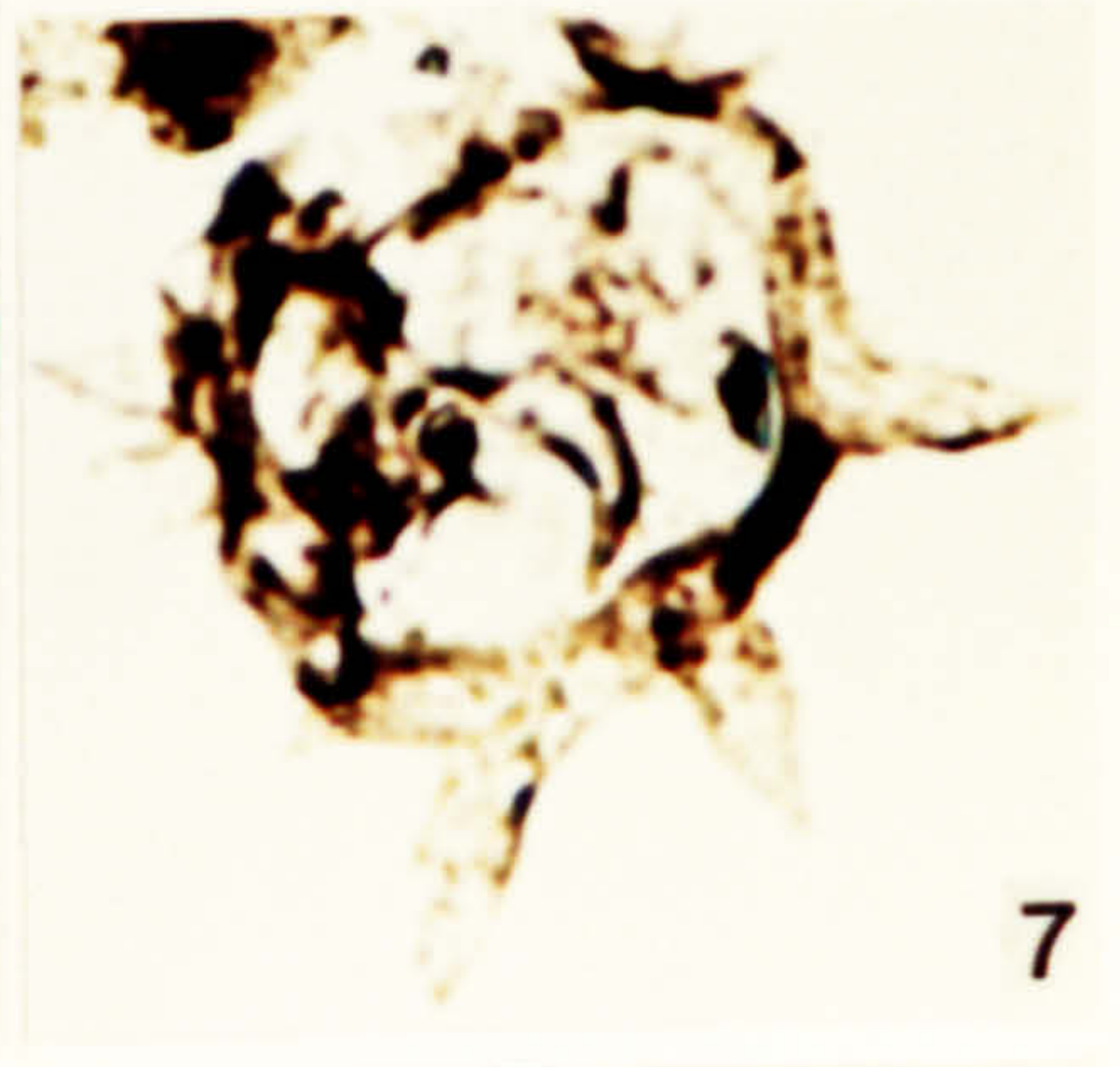
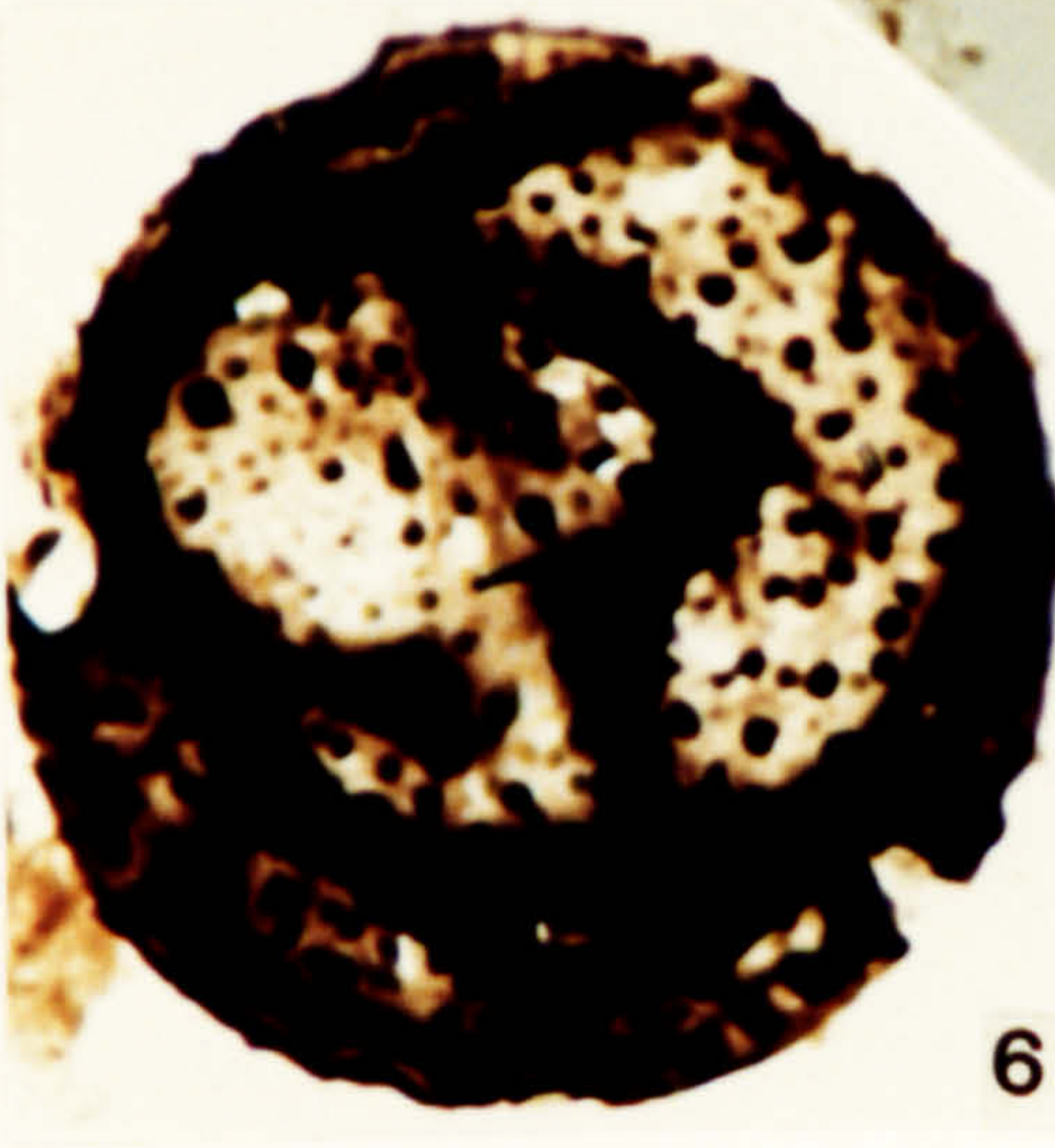
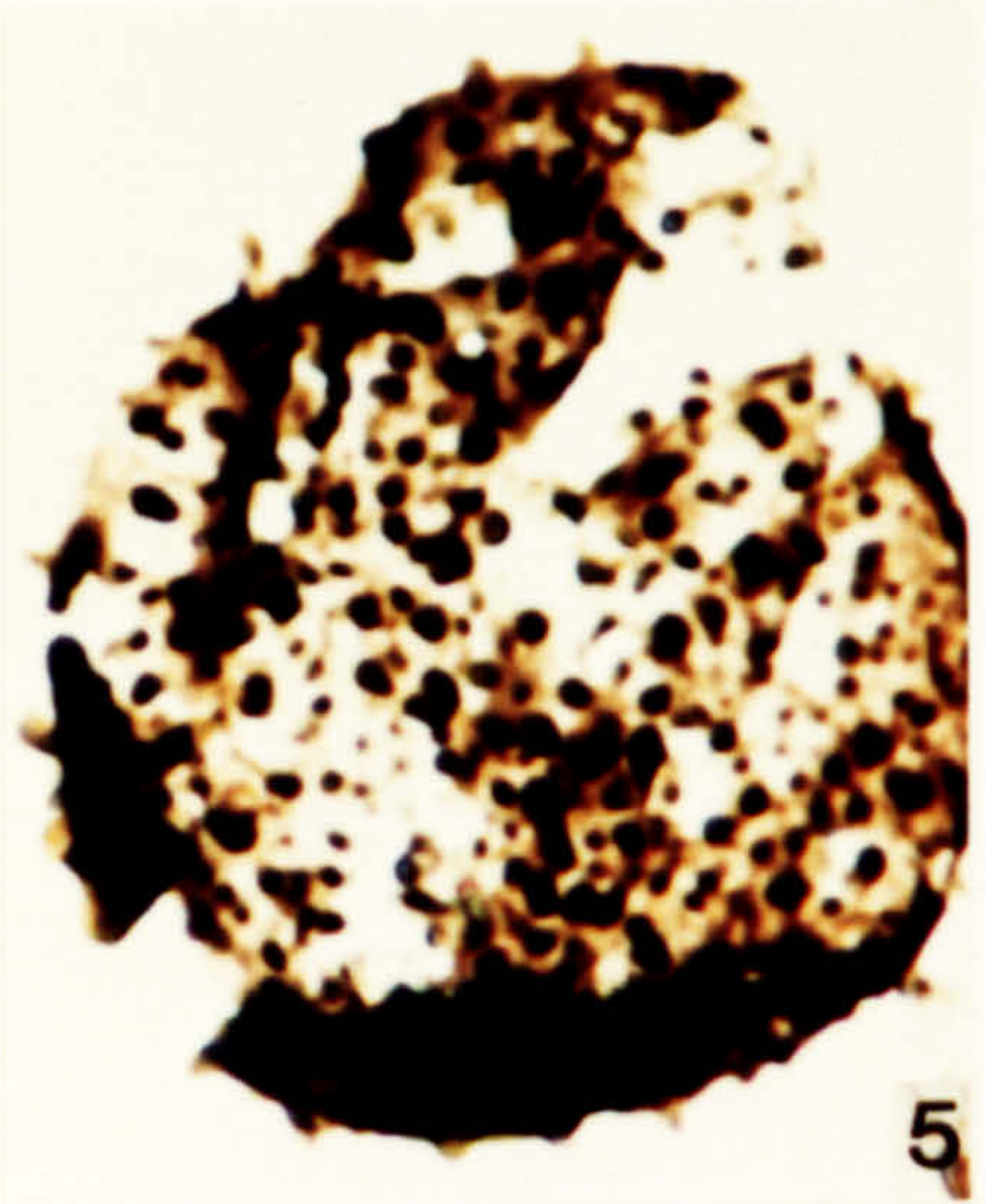
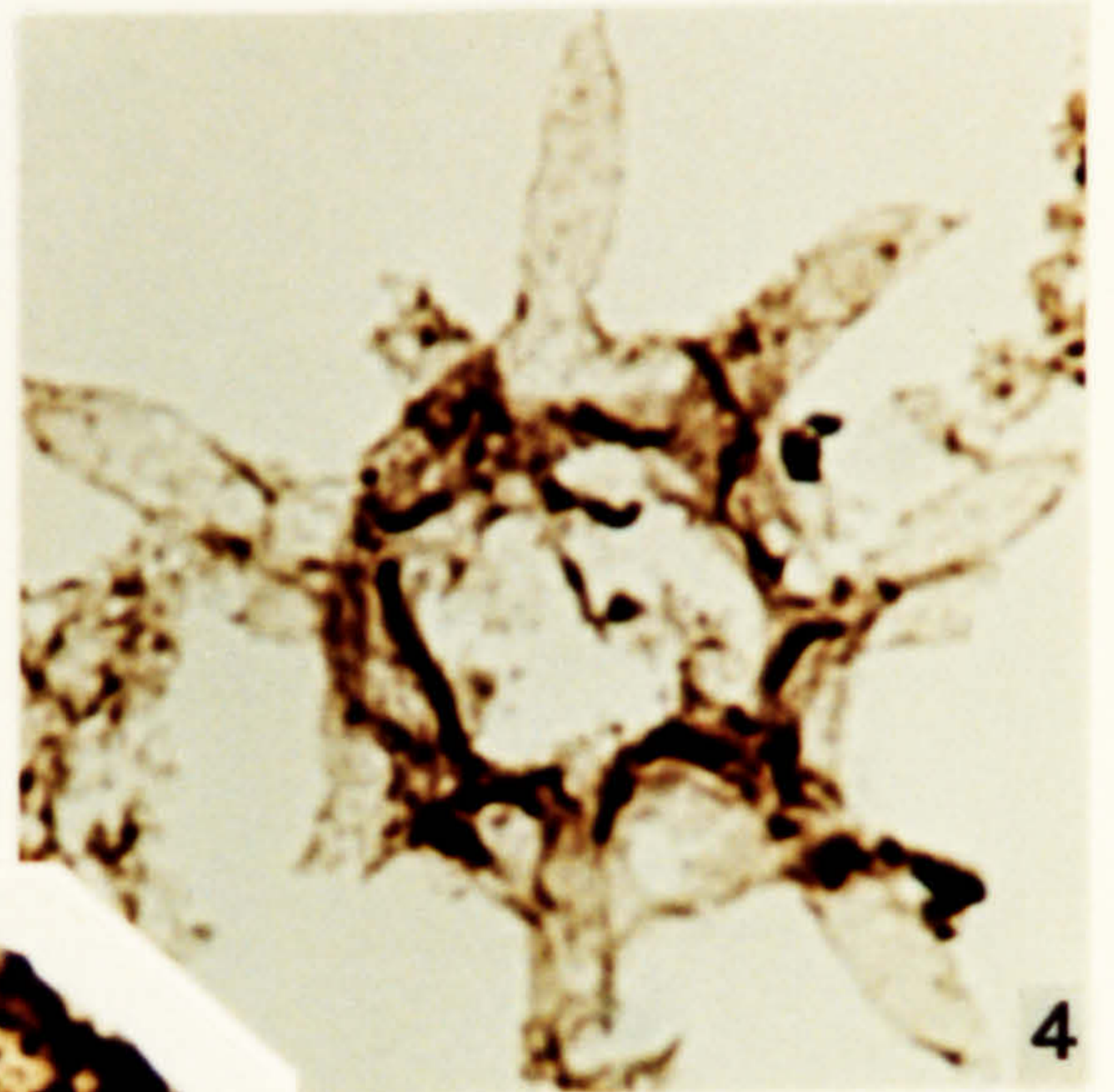
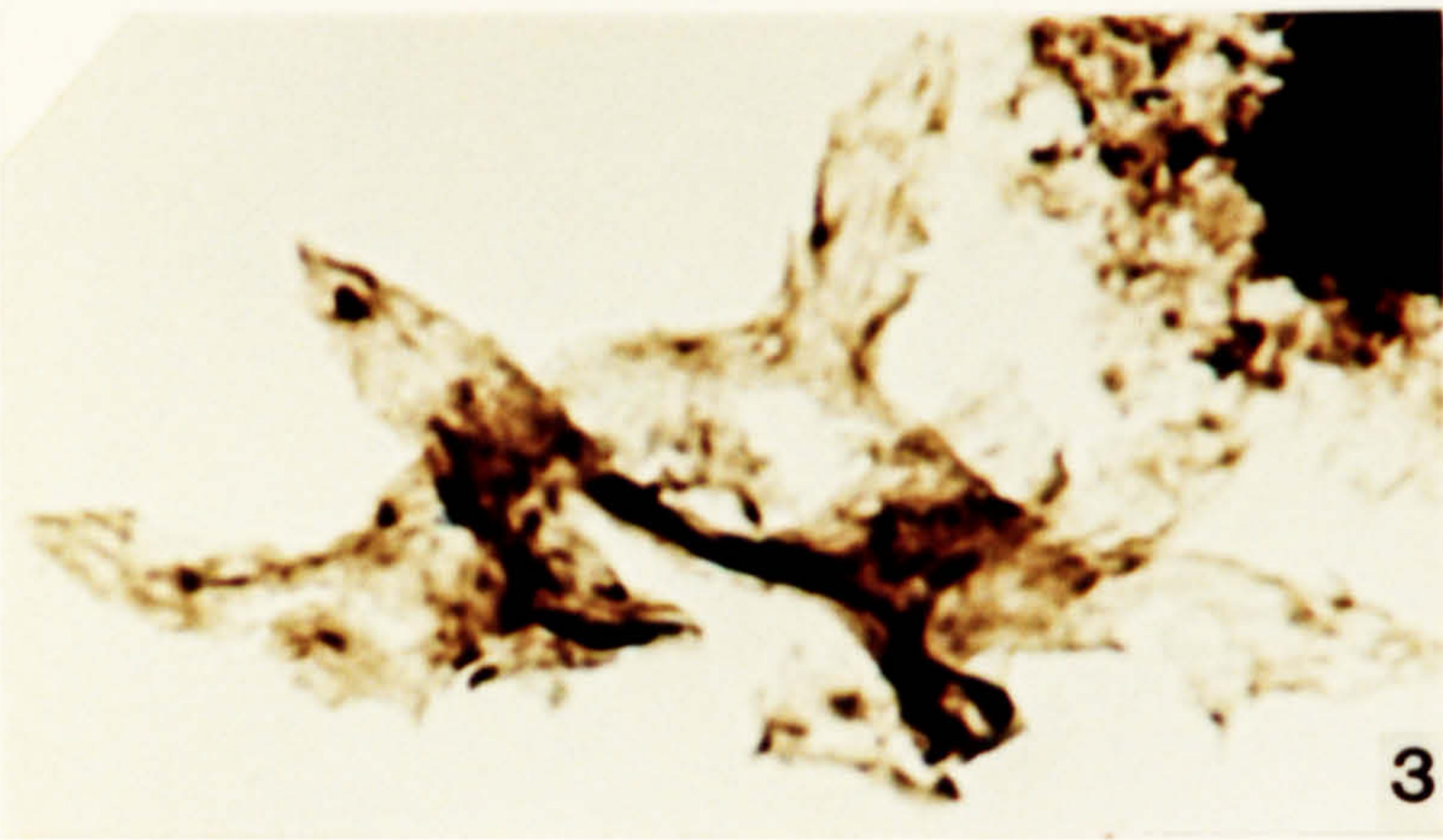
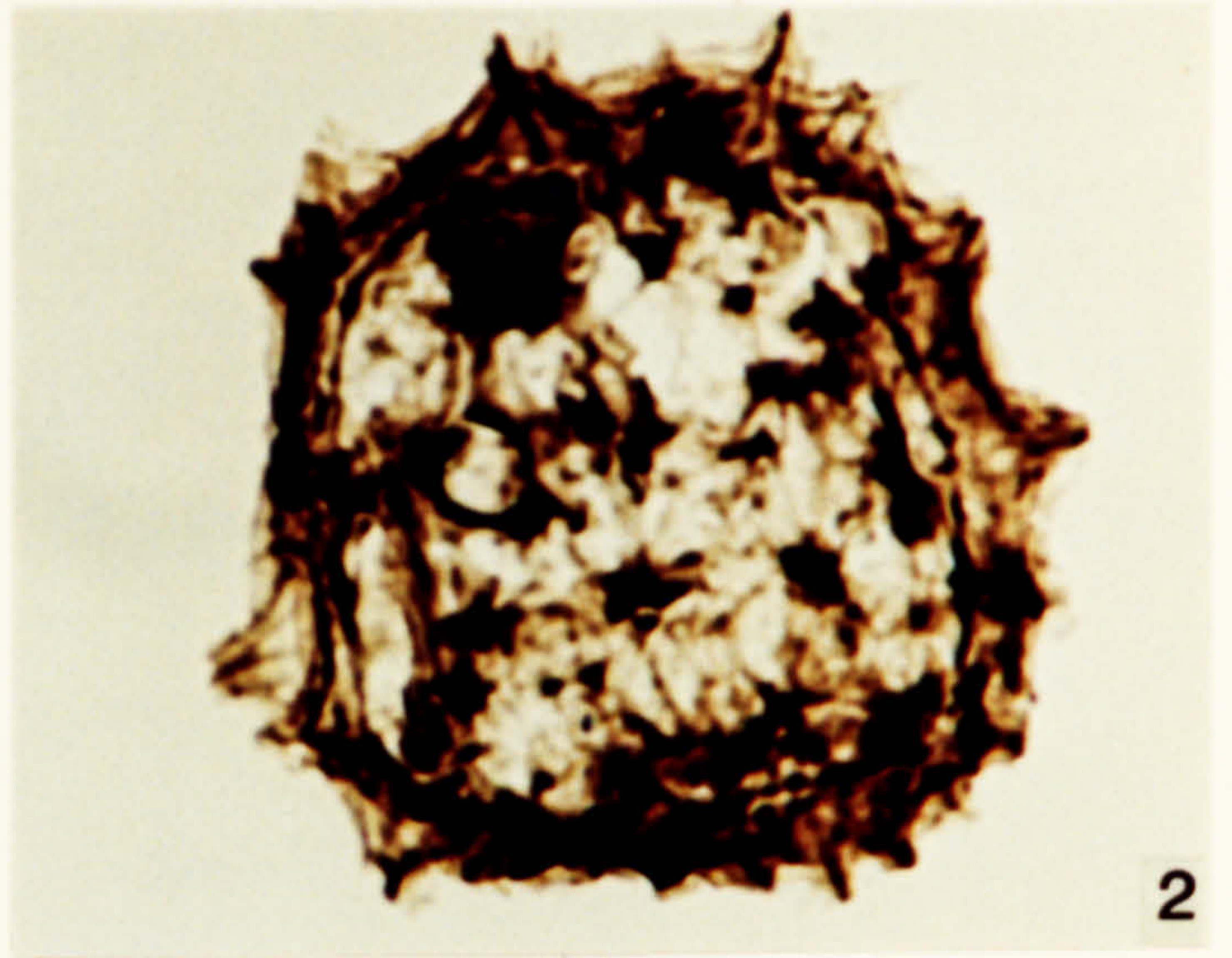
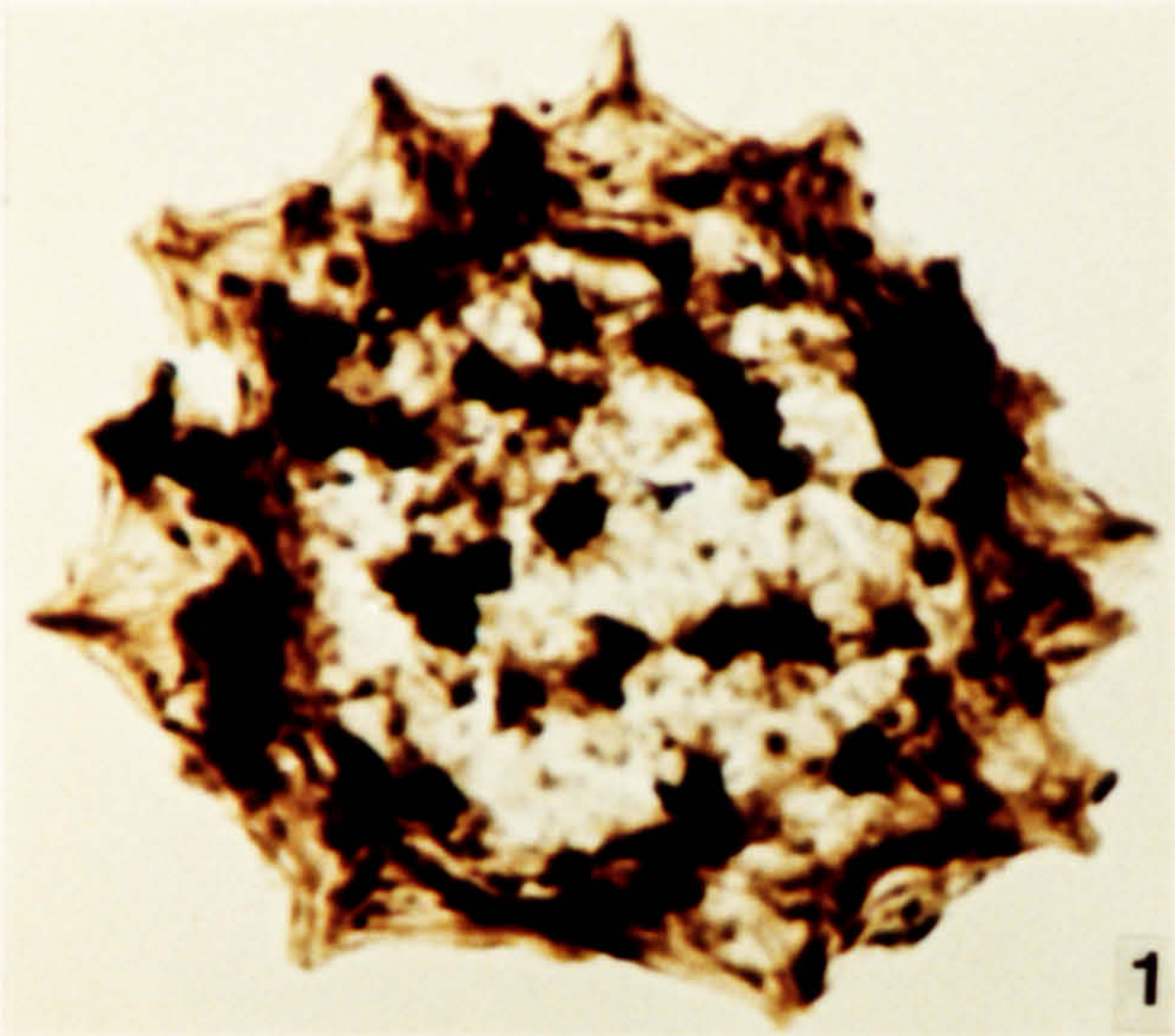
1. *Diexallophasis* sp. DW 358, FS-1, T11\1.
2. *Lophosphaeridium* sp. 4. DW 357, FS-1, G21\1.
3. *Oppilatala eoplanktonica-ramusculosa* Complex. DW 357, FS-1, N21\1.
4. *Oppilatala eoplanktonica-ramusculosa* Complex. DW 355, FS-1, R6\2.
5. *Leiosphaeridia wenlockia* Downie 1959. DW 365, FS-1, D28\1.
6. *Oppilatala eoplanktonica-ramusculosa* Complex. DW 355, FS-1, N31\2.
7. *Salopidium?* sp. DW 358, FS-1, O29\4.
8. *Veryhachium* cf. *trapezionarion* Loeblich 1970. DW 357, FS-1, T24\2.



**Plate 74.**

Acritarchs and prasinophycean algae from the Carbonaceous Shale Formation and/or the Argillaceous Shale Formation, Lower Wenlock, Sheinwoodian in age.

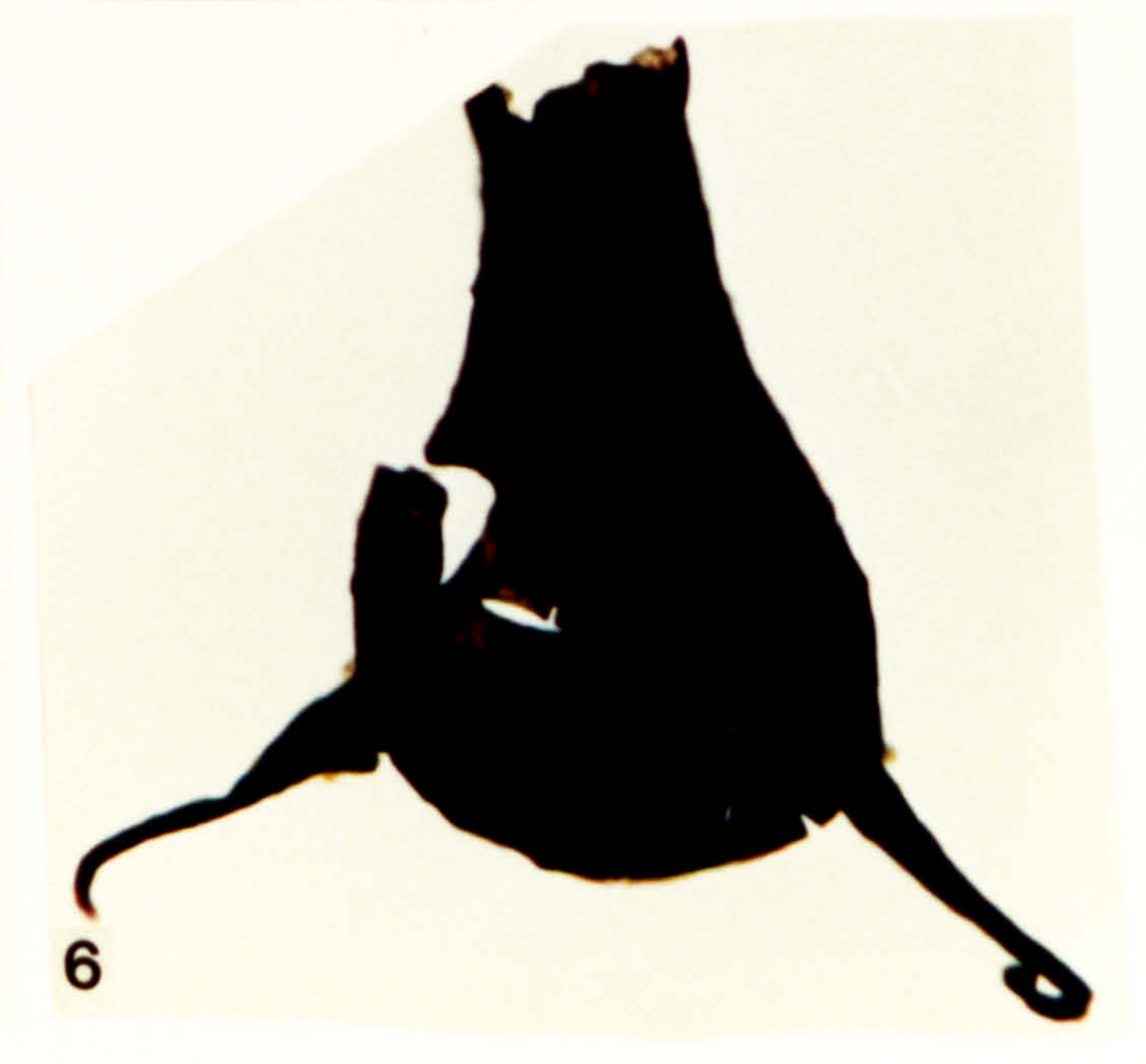
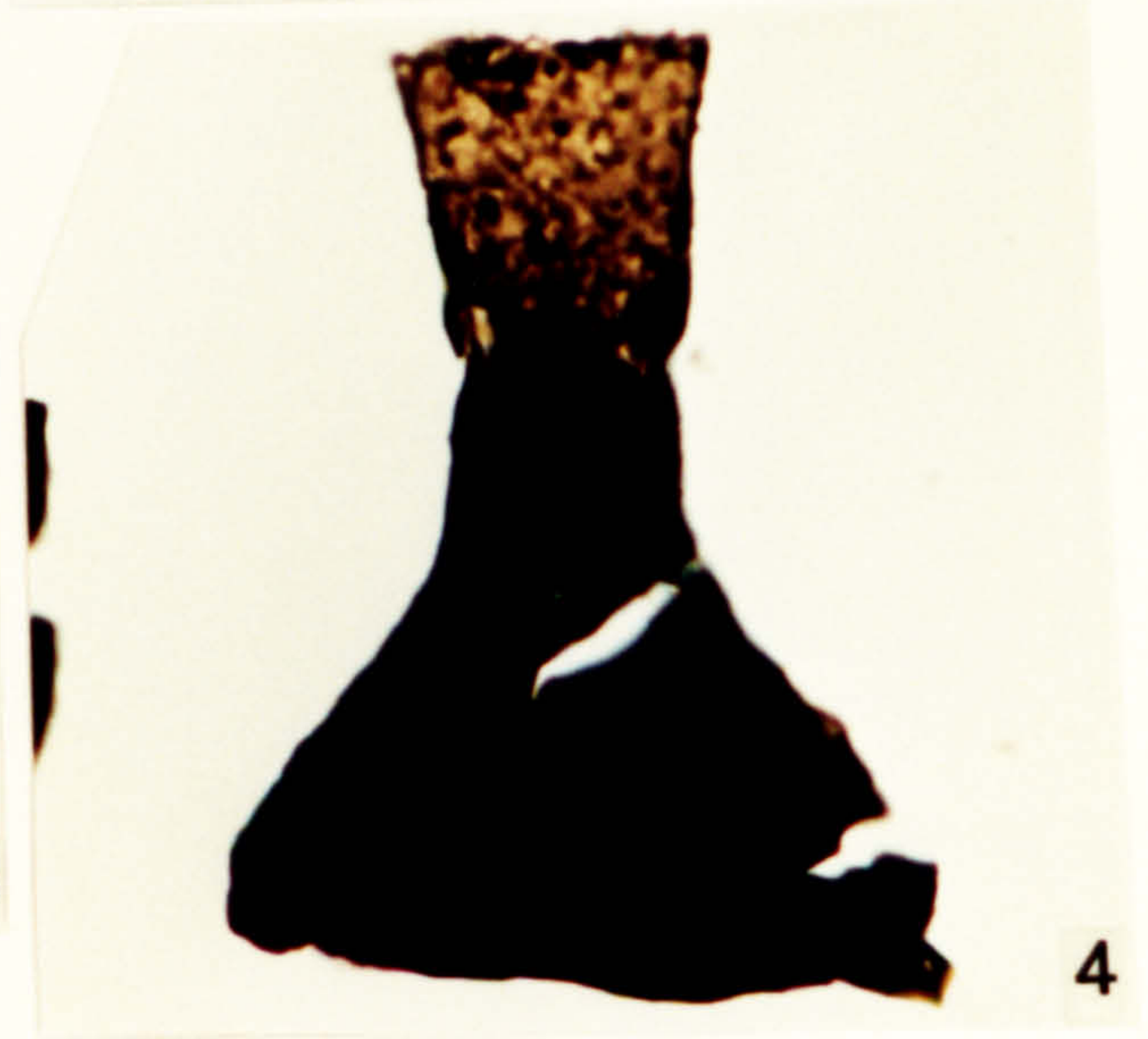
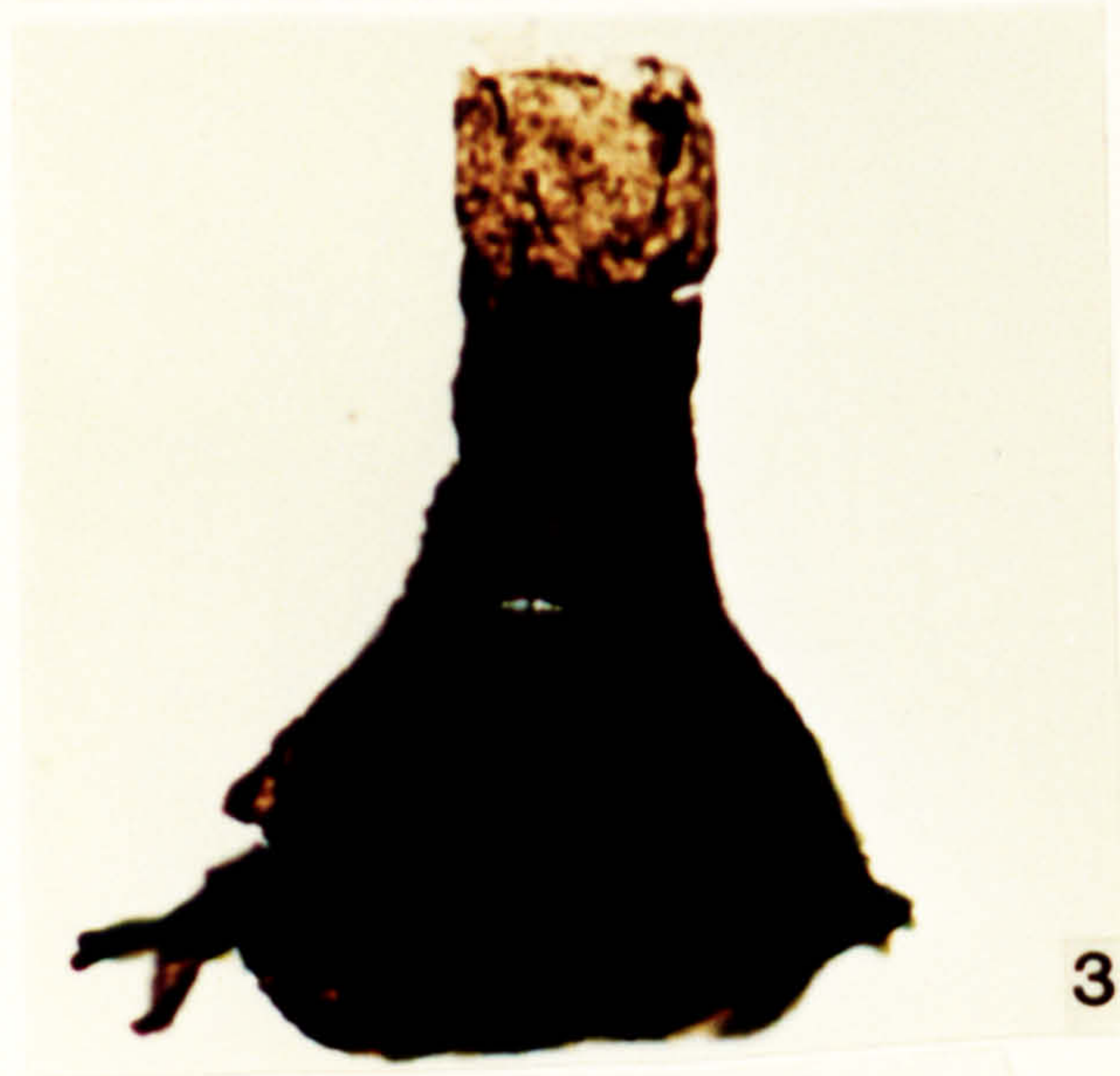
1. *Tylotopalla astrifera* Kiryanov 1978. DW 358, FS-4, E8\1.
2. *Tylotopalla astrifera* Kiryanov 1978. DW 358, FS-4, G8\1.
3. *Tylotopalla* cf. *wenlockia* Dorning 1981. DW 358, FS-1, S27\2.
4. *Tylotopalla* cf. *wenlockia* Dorning 1981. DW 358, FS-1, F20\2.
5. *Visbysphaera microspinosa* var. A. DW 355, FS-1, M8\4.
6. *Visbysphaera microspinosa* var. A. DW 367, FS-1, T27\2.
7. *Tylotopalla* cf. *wenlockia* Dorning 1981. DW 355, FS-1, E15\2.
8. *Visbysphaera microspinosa* var. A. DW 367, FS-1, L21\3.
9. *Visbysphaera microspinosa* var. A. DW 367, FS-1, U13\1.
10. *Cymatiosphaera gorstia* Dorning 1981. DW 357, FS-1, W18\3.



**Plate 75.**

**Chitinozoa from the Carbonaceous Shale Formation and/or the Argillaceous Shale Formation, Lower Wenlock, Sheinwoodian in age.**

- 1. *Ancyrochitina primitiva* Eisenack 1964. DW 356, FS-1, T29\1.**
- 2. *Ancyrochitina primitiva* Eisenack 1964. DW 358, FS-6, L43\3.**
- 3. *Ancyrochitina primitiva* Eisenack 1964. DW 358, FS-4, J17\3.**
- 4. *Ancyrochitina primitiva* Eisenack 1964. DW 358, FS-6, L8\4.**
- 5. *Ancyrochitina primitiva* Eisenack 1964. DW 358, FS-6, C10\3.**
- 6. *Ancyrochitina* sp. DW 358, FS-4, L6\4.**

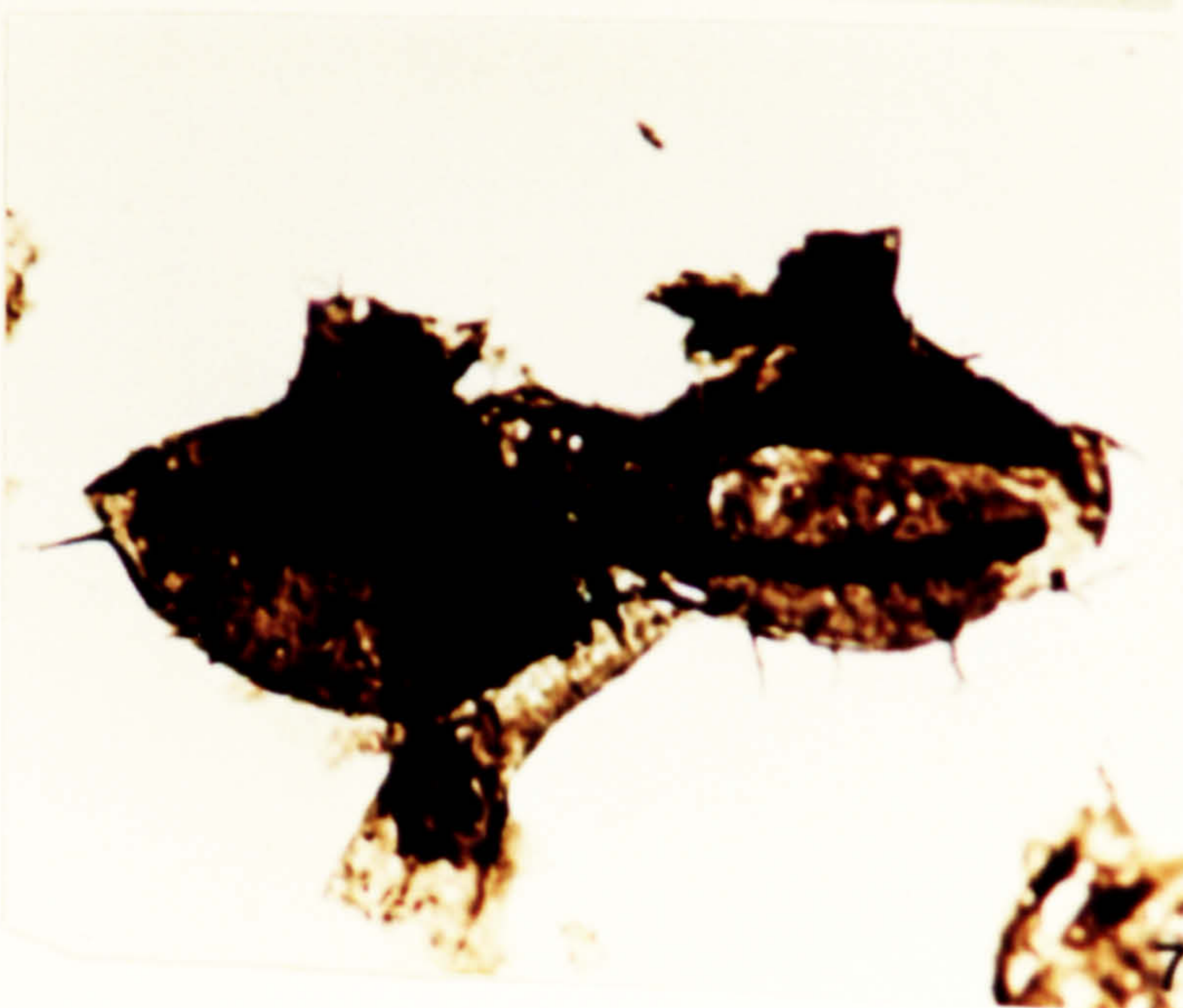
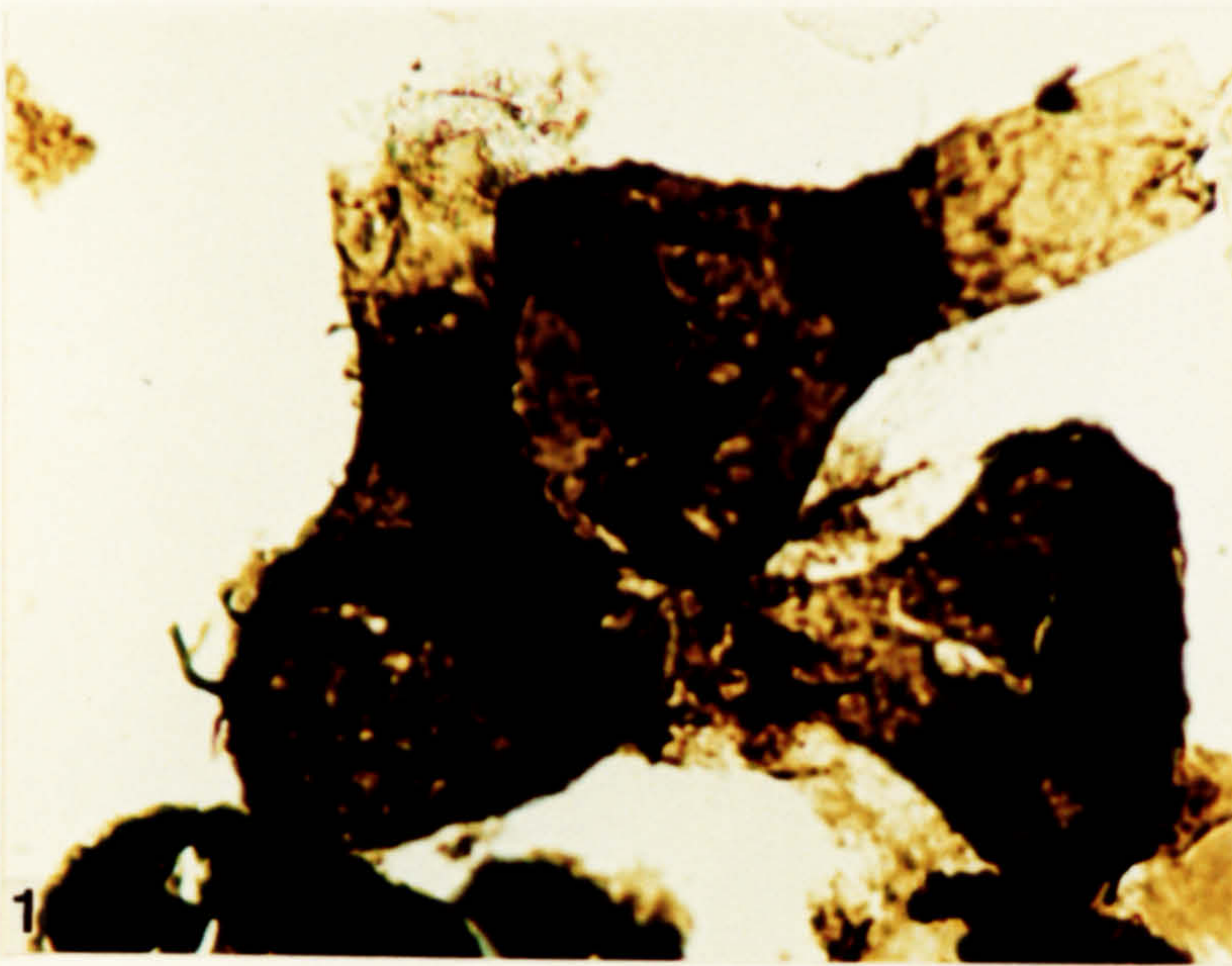




**Plate 76.**

**Chitinozoa from the Carbonaceous Shale Formation and/or the Argillaceous Shale Formation, Lower Wenlock, Sheinwoodian in age.**

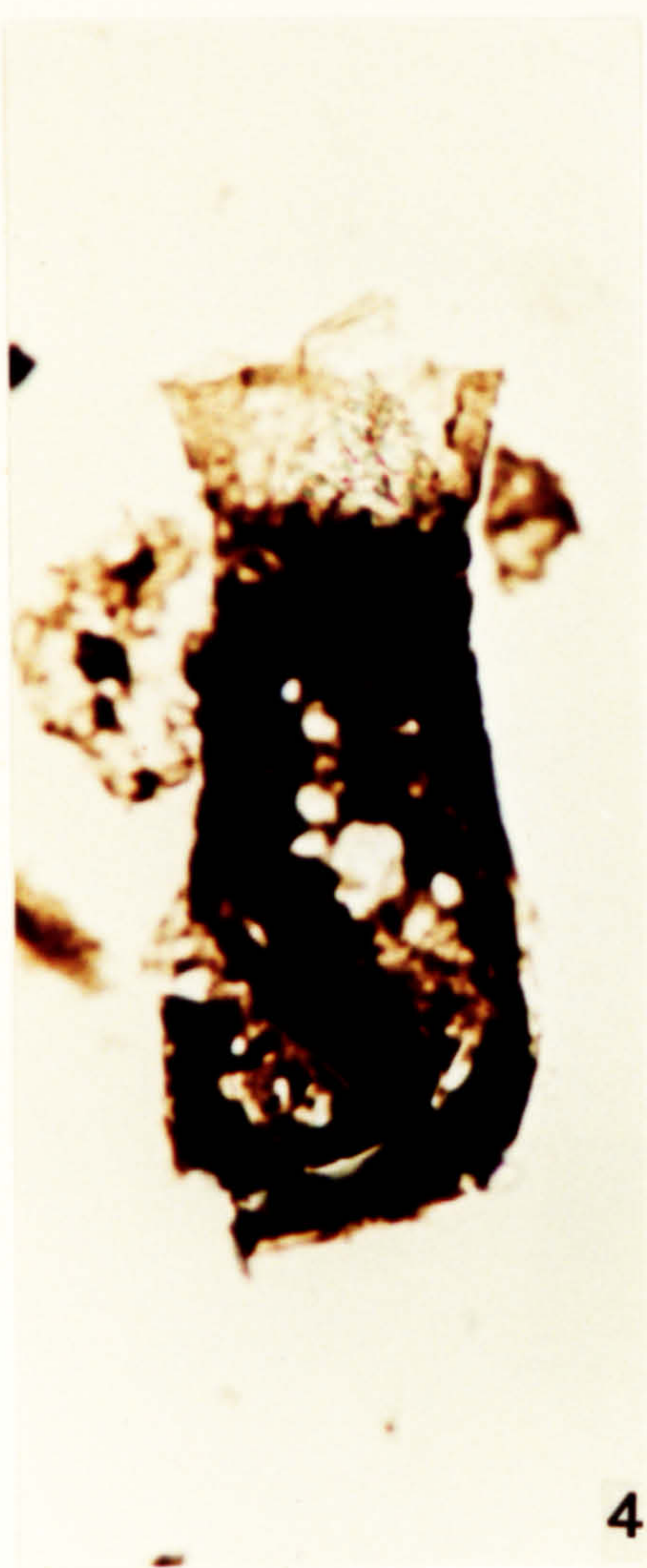
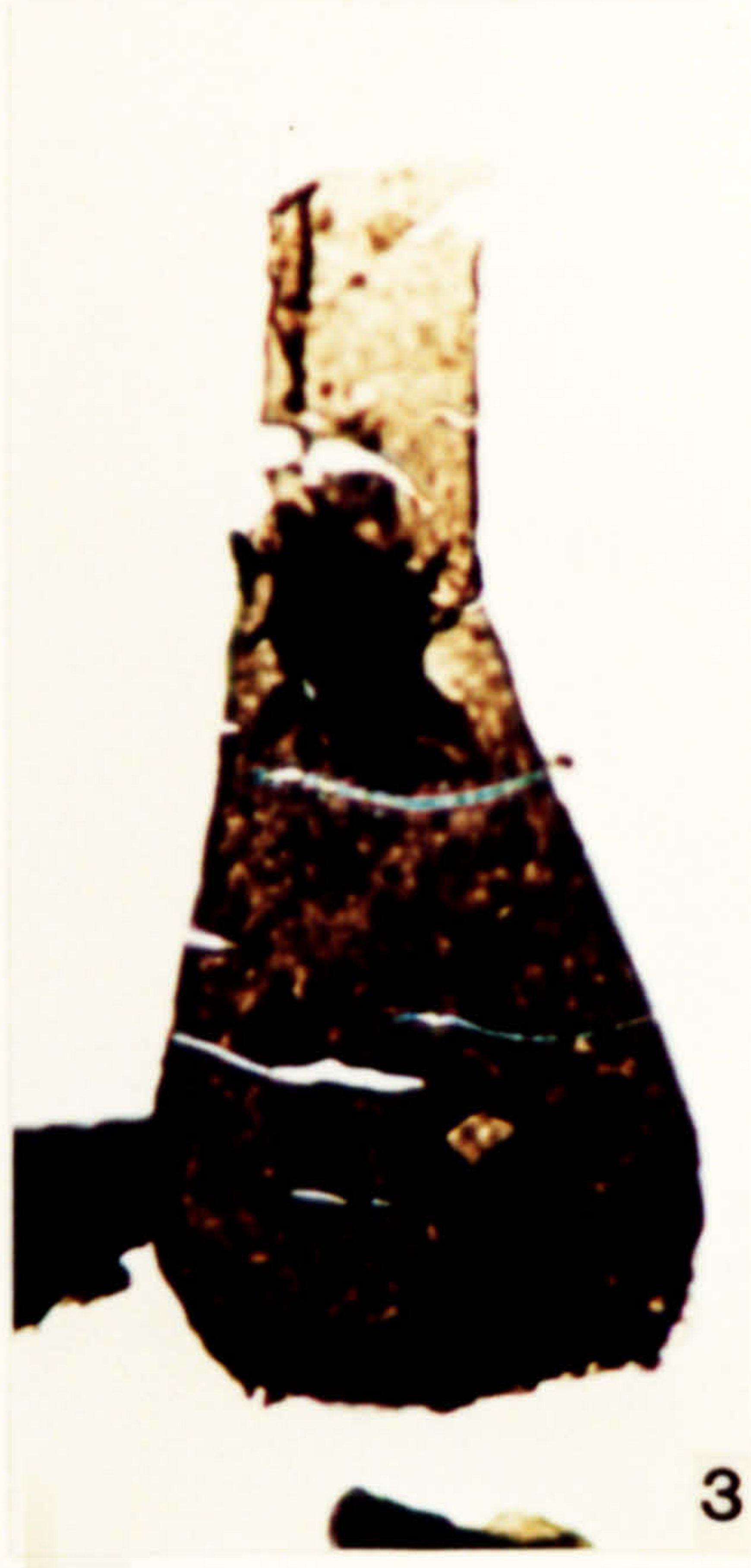
- 1. *Angochitina* sp. 1. DW 367, FS-1, J26\1. A cluster of three individuals..**
- 2. *Angochitina* sp. 1. DW 367, FS-1, N30\3.**
- 3. *Angochitina* sp. 1. DW 367, FS-1, L36\4.**
- 4. *Angochitina* sp. 1. DW 367, FS-1, M24\2.**
- 5. *Angochitina* sp. 1. DW 367, FS-1, F14\4.**
- 6. *Angochitina* sp. 1. DW 367, FS-1, R41\1.**
- 7. *Angochitina* sp. 1. DW 367, FS-1, W38\2 A cluster of three individuals..**



**Plate 77.**

**Chitinozoa from the Carbonaceous Shale Formation and/or the Argillaceous Shale Formation, Lower Wenlock, Sheinwoodian in age.**

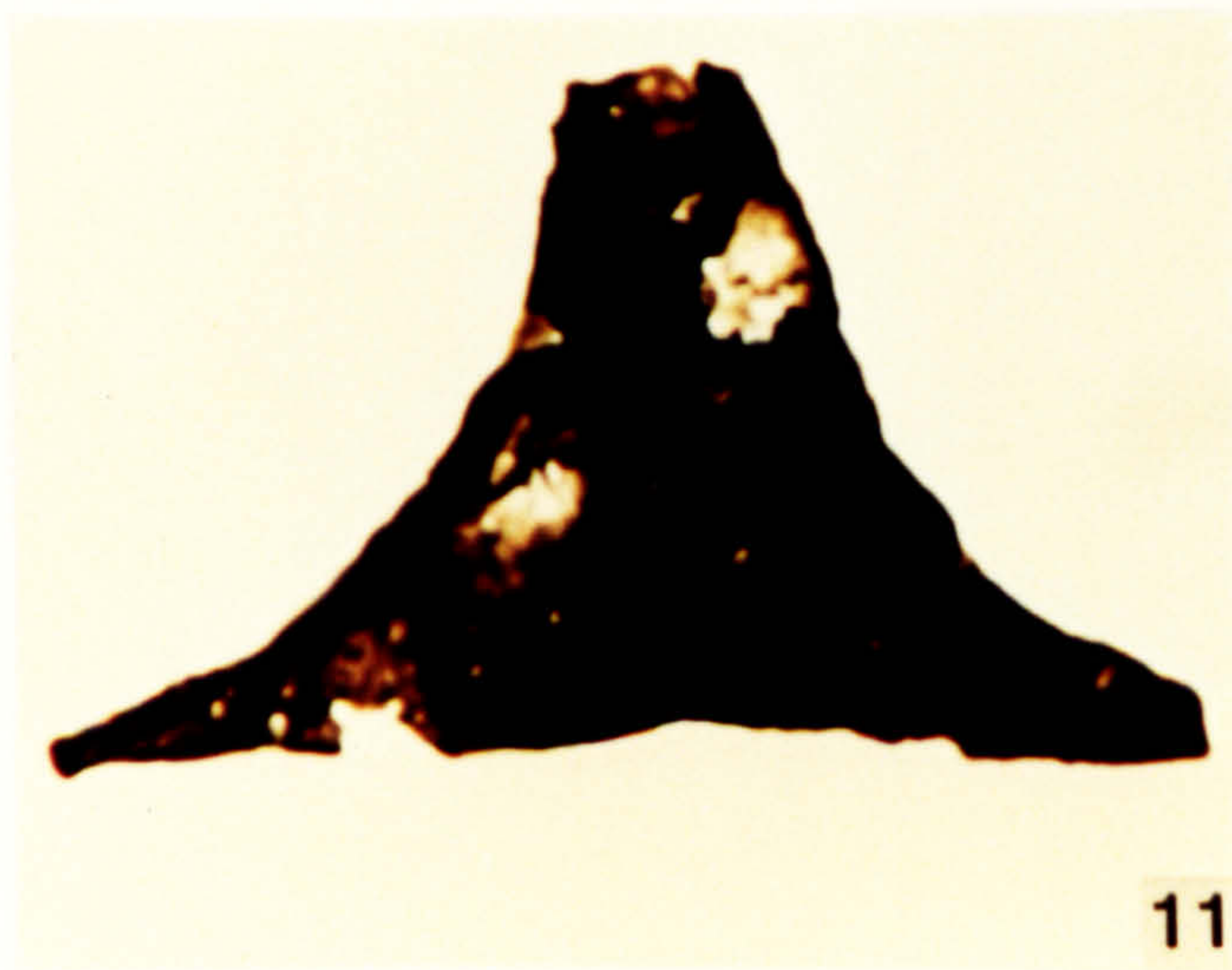
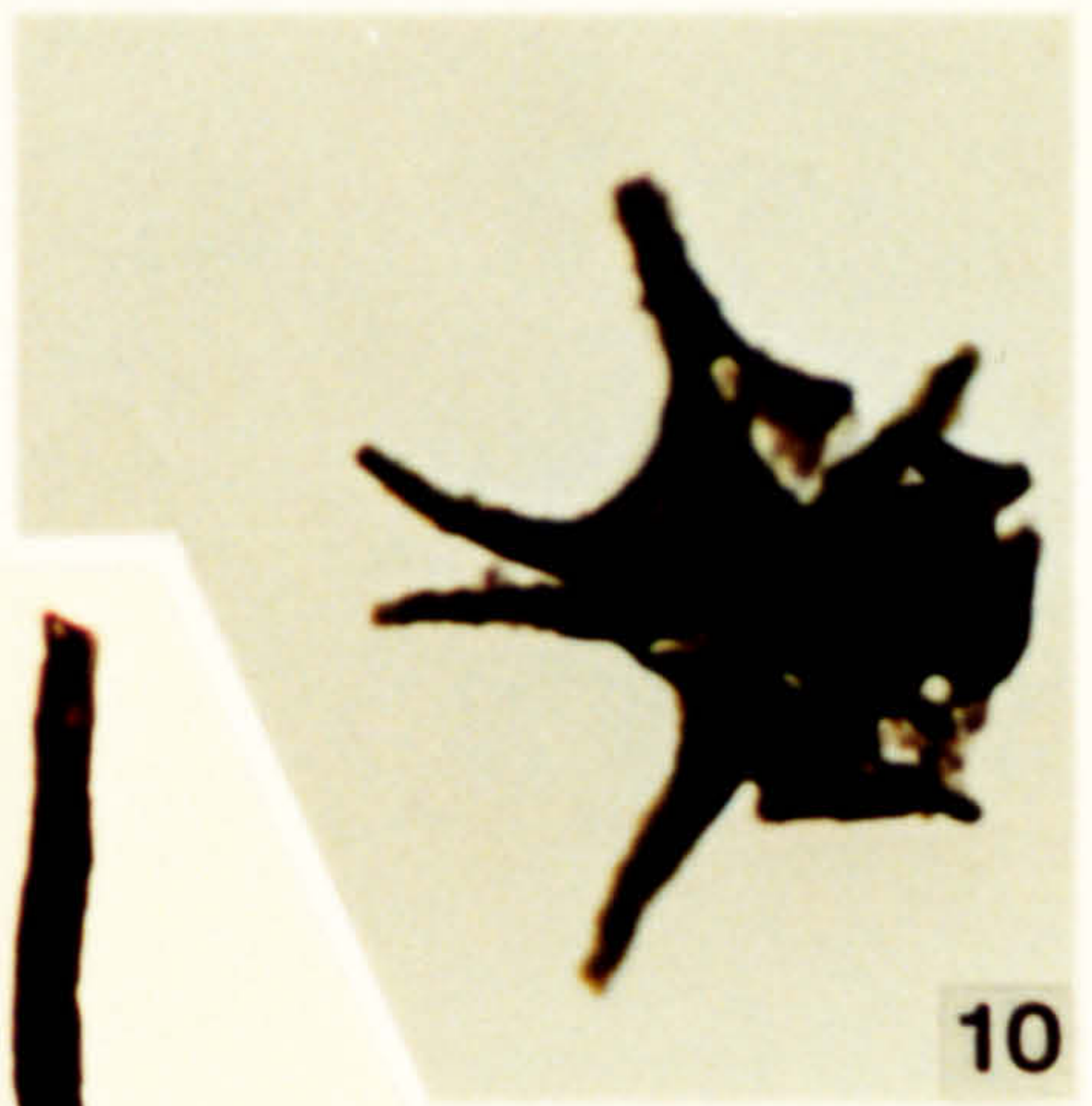
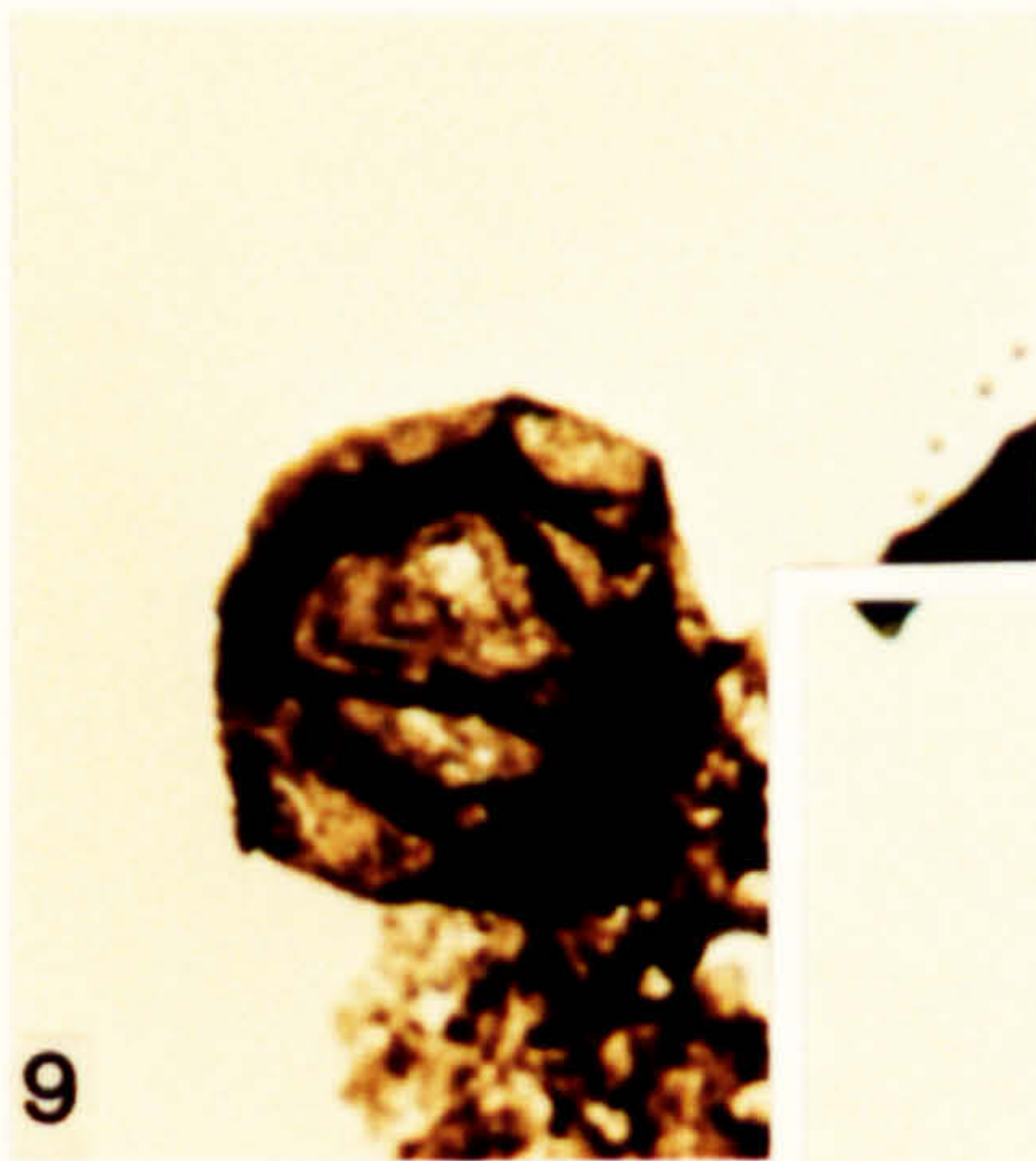
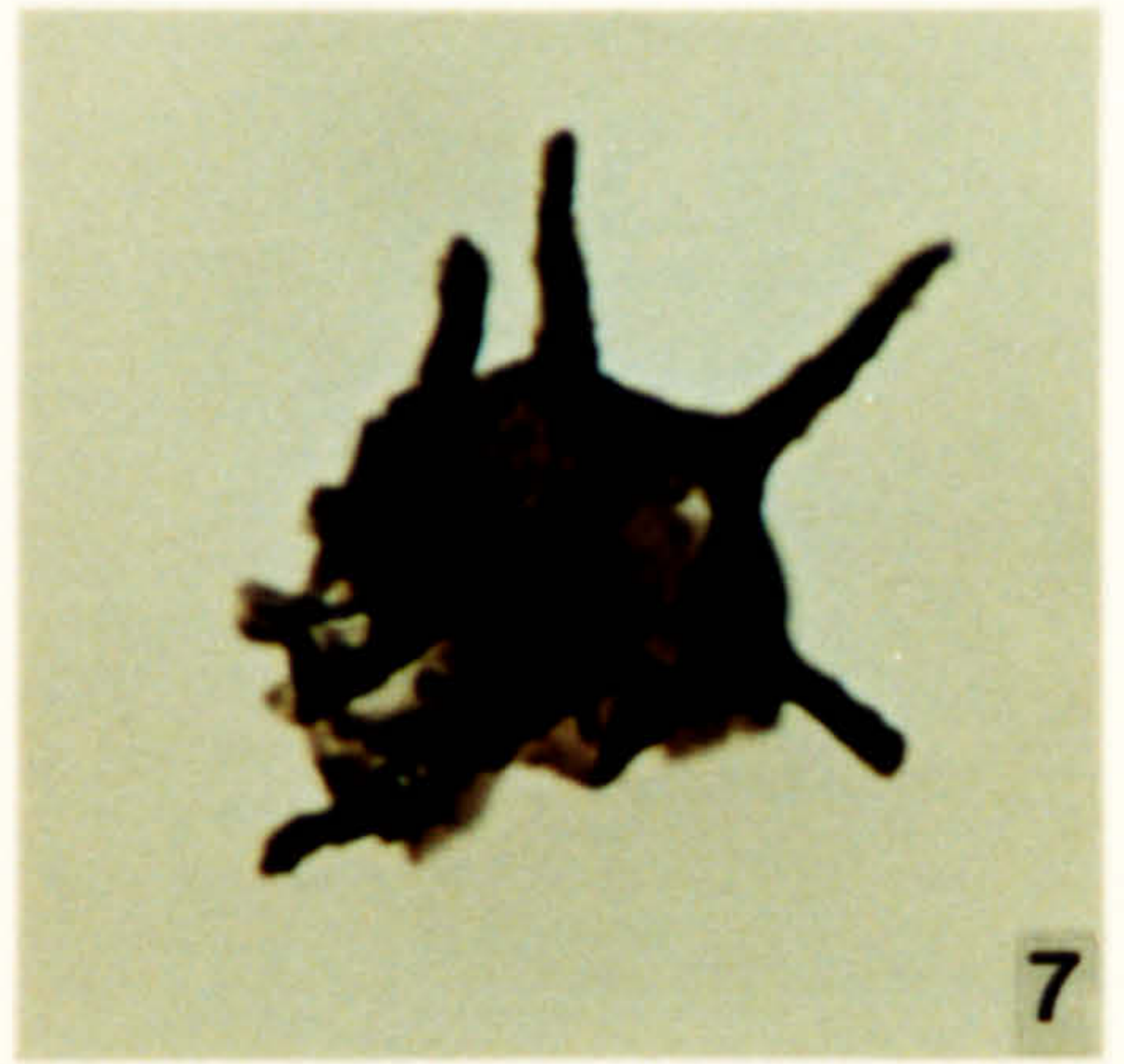
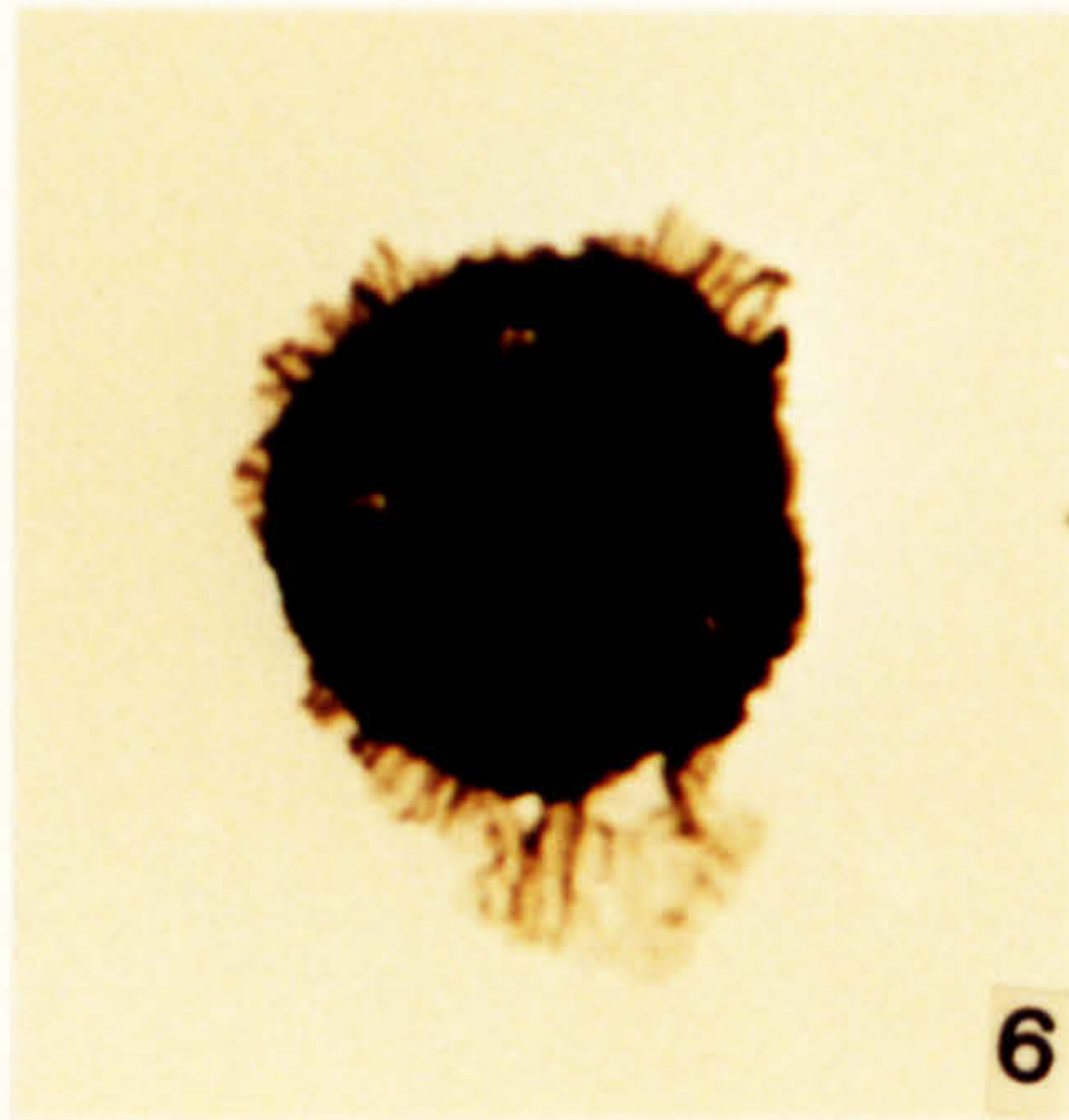
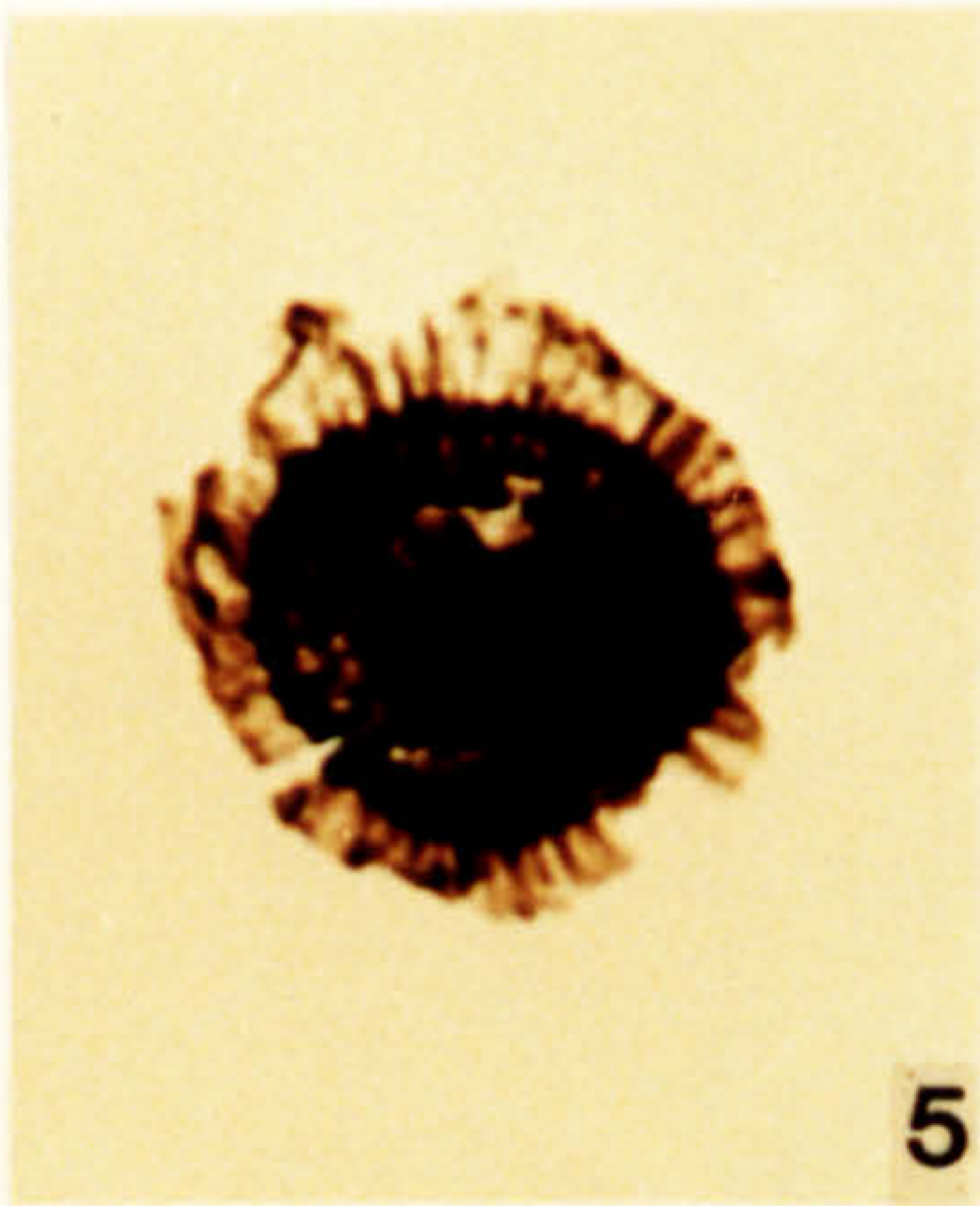
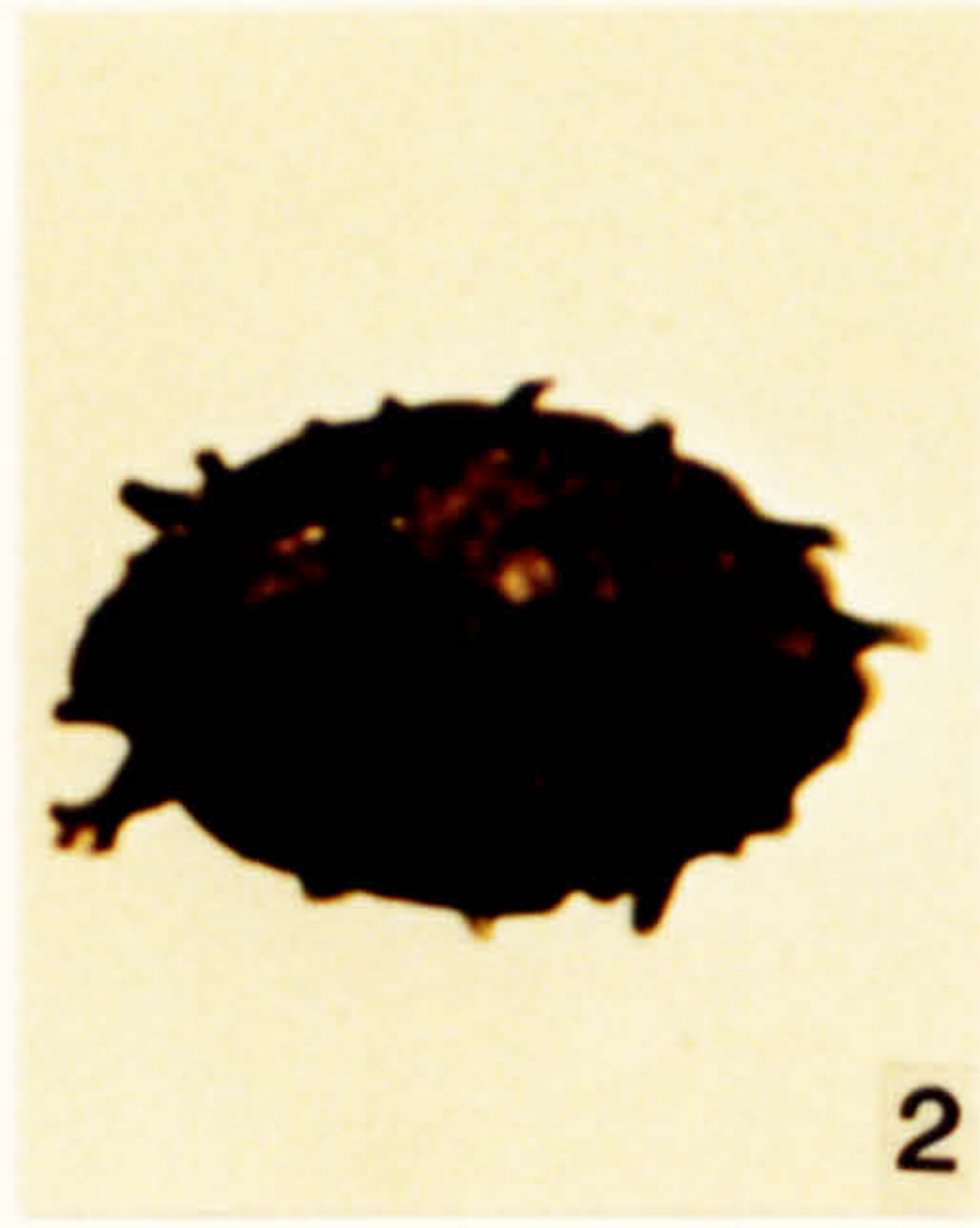
1. ***Cyathochitina cf. elenitae* Cramer 1964. DW 358, FS-4, W30\2.**
2. ***Cyathochitina cf. elenitae* Cramer 1964. DW 358, FS-5, K31\2.**
3. ***Cyathochitina cf. elenitae* Cramer 1964. DW 358, FS-5, K37\1.**
4. ***Cingulochitina?* sp. DW 367, FS-1, M26\2.**
5. ***Rhabdochitina magna* Complex. DW 367, FS-1, P35\4, X230.**
6. **Graptolite fragment. DW367, FS-1, Q20\1, X230.**



**Plate 78.**

Acritarchs from the Argillaceous Shale Formation, upper Wenlock, Homeric in age.

1. *Ammonidium* sp. 1. DW 231, 1-1, D36\3.
2. *Ammonidium* sp. 1. DW 231, 1-1, G23\2.
3. *Ammonidium* sp. 1. DW 231, 1-2, G23\1.
4. *Ammonidium* sp. 1. DW 231, 1-1, C39\4.
5. *Duvernaysphaera* sp. DW 231, 1-1, V38\2.
6. *Duvernaysphaera* sp. DW 231, 1-1, N13\3.
7. *Diexallophasis* cf. *sanpetrensis* (Cramer) Dorning 1981. DW 231, 1-1, N26\1.
8. *Lophosphaeridium* sp. 7. DW 231, 1-2, L26\4.
9. *Lophosphaeridium* sp. 7. DW 231, 1-2, E21\3.
10. *Diexallophasis* cf. *sanpetrensis* (Cramer) Dorning 1981. DW 231, 1-1, P36\1.
11. *Onondagella deunffii* Cramer 1966. DW 231, 1-1, K12\2.
12. *Leiofusa estrecha* Cramer 1964. DW 231, 1-2, J39\3.
13. *Leiofusa estrecha?* Cramer 1964. DW 231, 1-1, G31\3.



**Plate 79.**

Acritarchs, prasinophycean algae and chitinozoa from the Argillaceous Shale Formation, upper Wenlock, Homeric in age.

1. *Trematophora radiata?* Eisenack 1965. DW 231, 1-1, M28\2.
2. *Trematophora radiata?* Eisenack 1965. DW 231, 1-2, J20\4.
3. *Trematophora radiata?* Eisenack 1965. DW 231, 1-1, H12\3.
4. *Veryhachium* sp. DW 231, 1-1, E37\4.
5. *Veryhachium* sp. DW 231, 1-1, W38\3.
6. *Veryhachium?* sp. DW 231, 1-1, U22\1.
7. *Cymatiosphaera octoplana?* Downie 1959. DW 231, 1-1, F32\3.
8. *Cymatiosphaera octoplana?* Downie 1959. DW 231, 1-1, U31\3.
9. *Cymatiosphaera octoplana?* Downie 1959. DW 231, 1-1, N9\3.
10. *Cingulochitina* sp. 1. DW 231, 1-1, S30\1.
11. *Cingulochitina* sp. 1. DW 231, 1-1, X31\3.
12. *Cingulochitina* sp. DW 231, 1-1, L31\2.

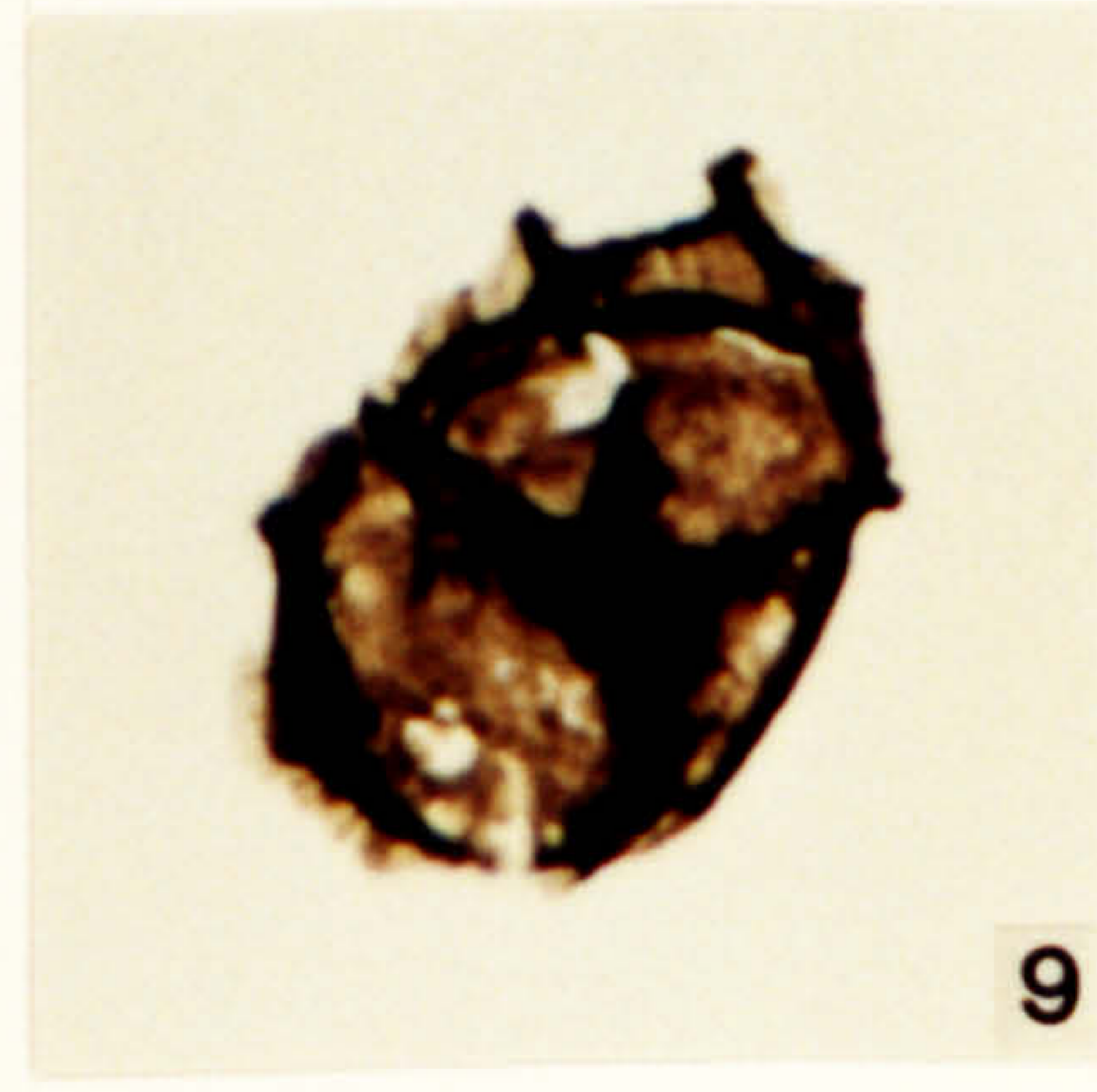
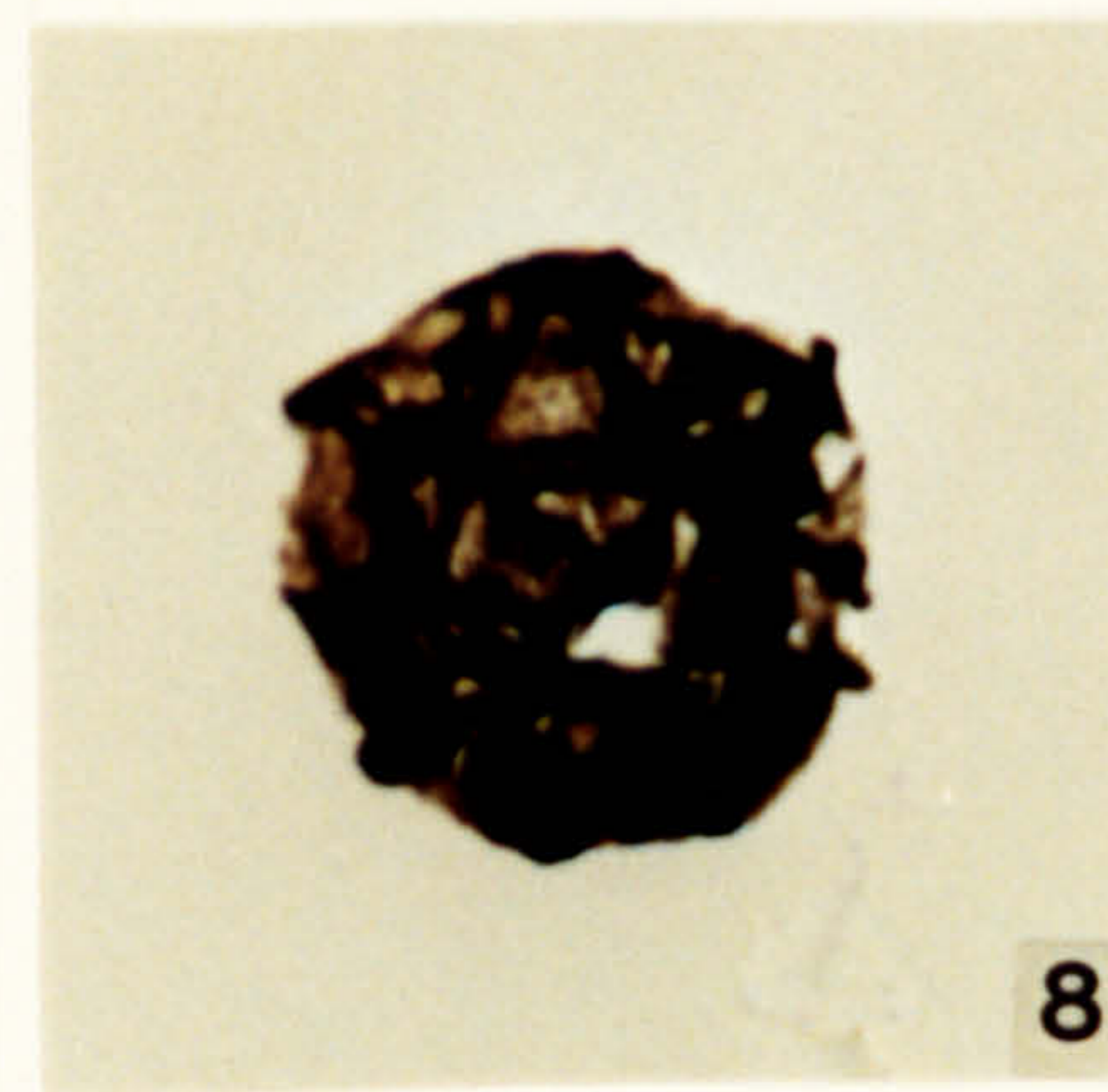
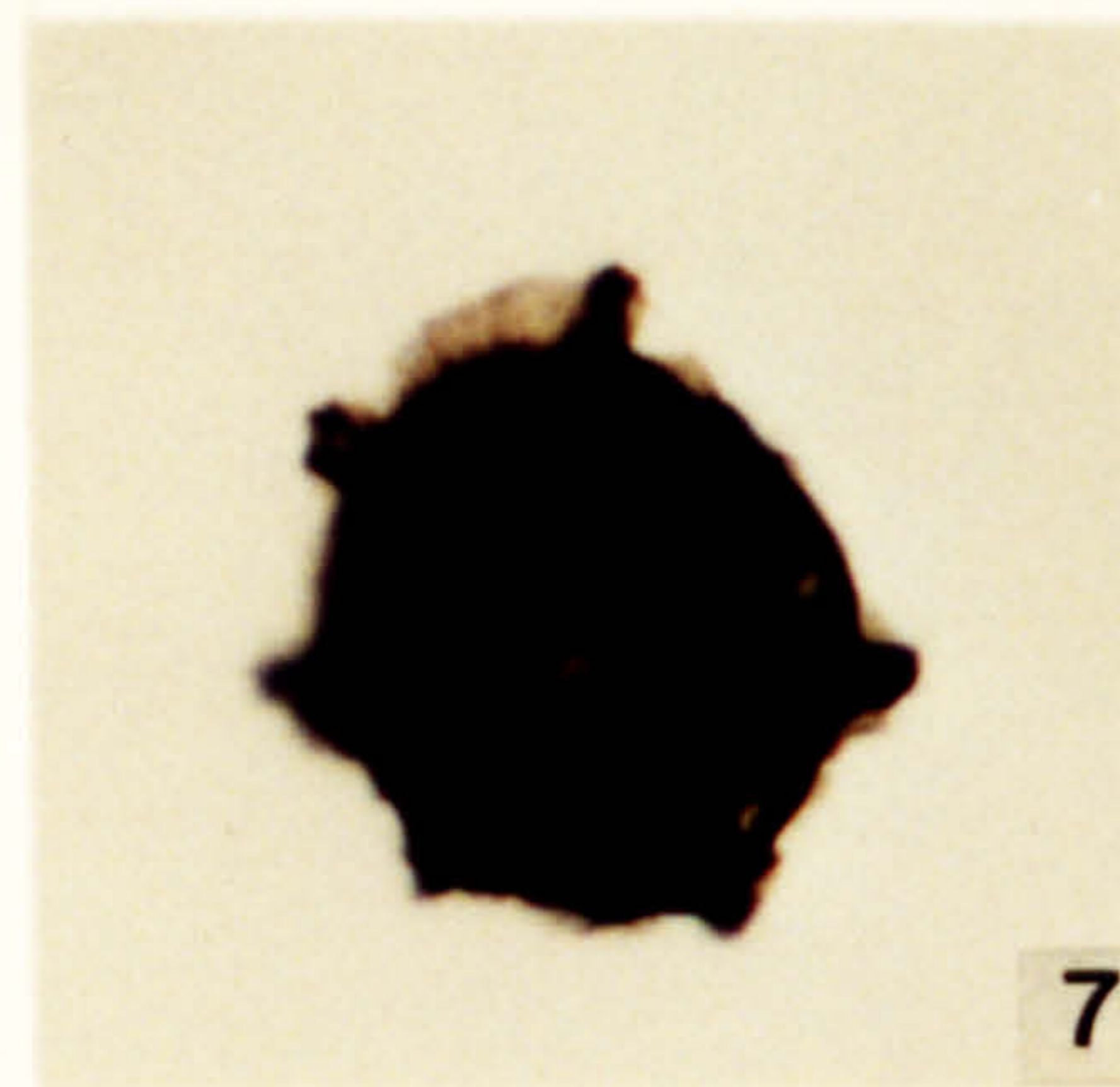
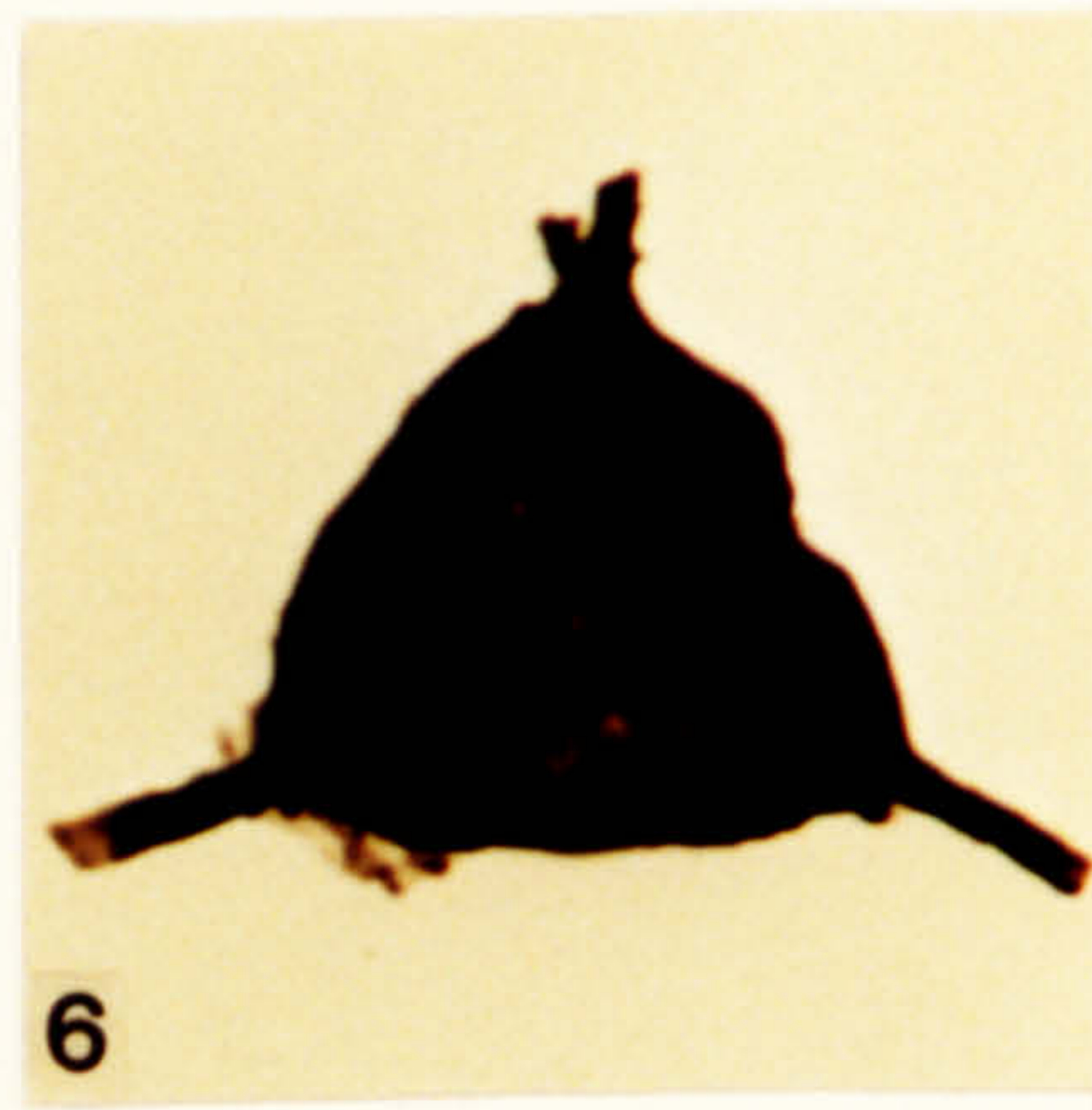
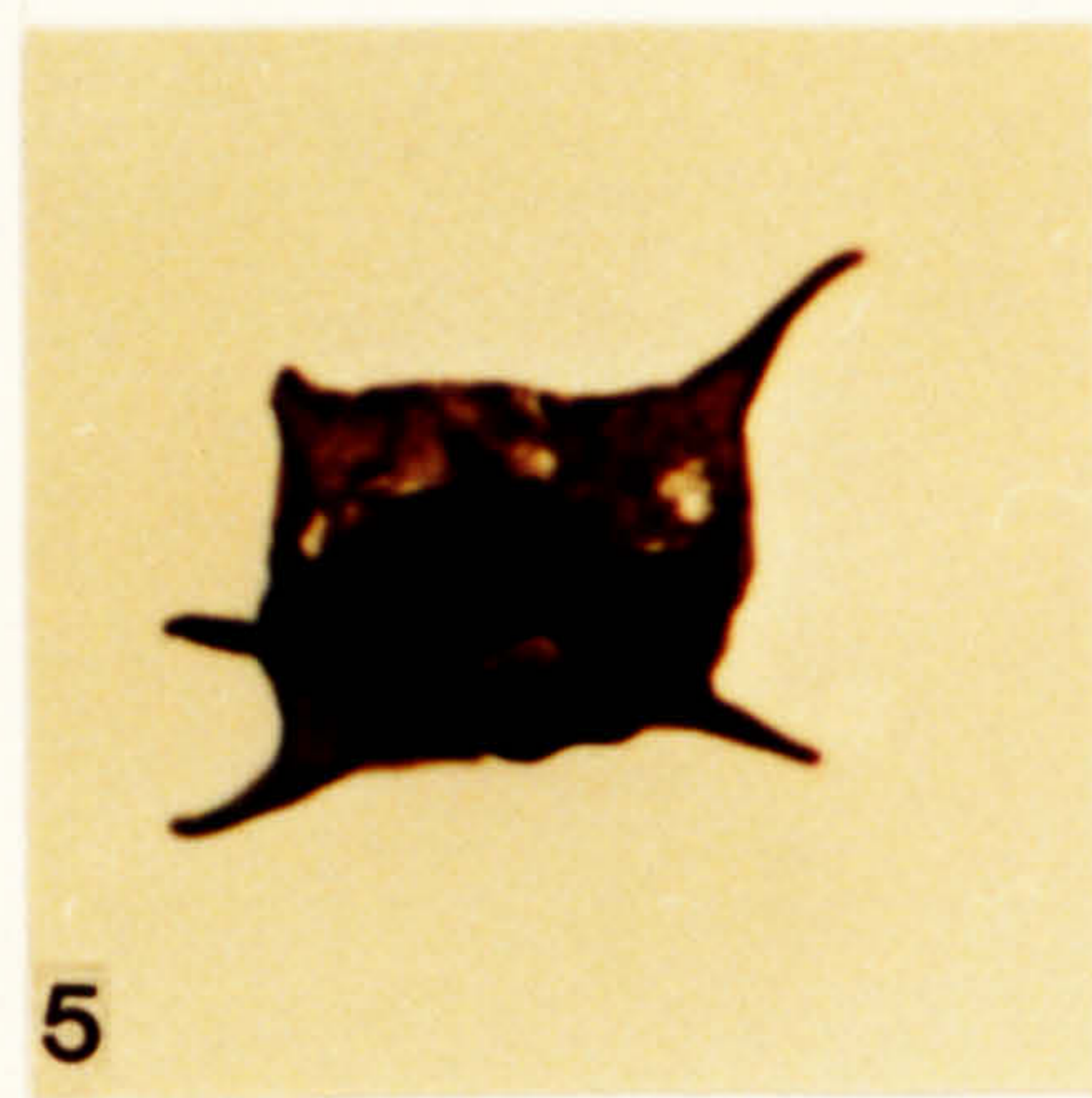
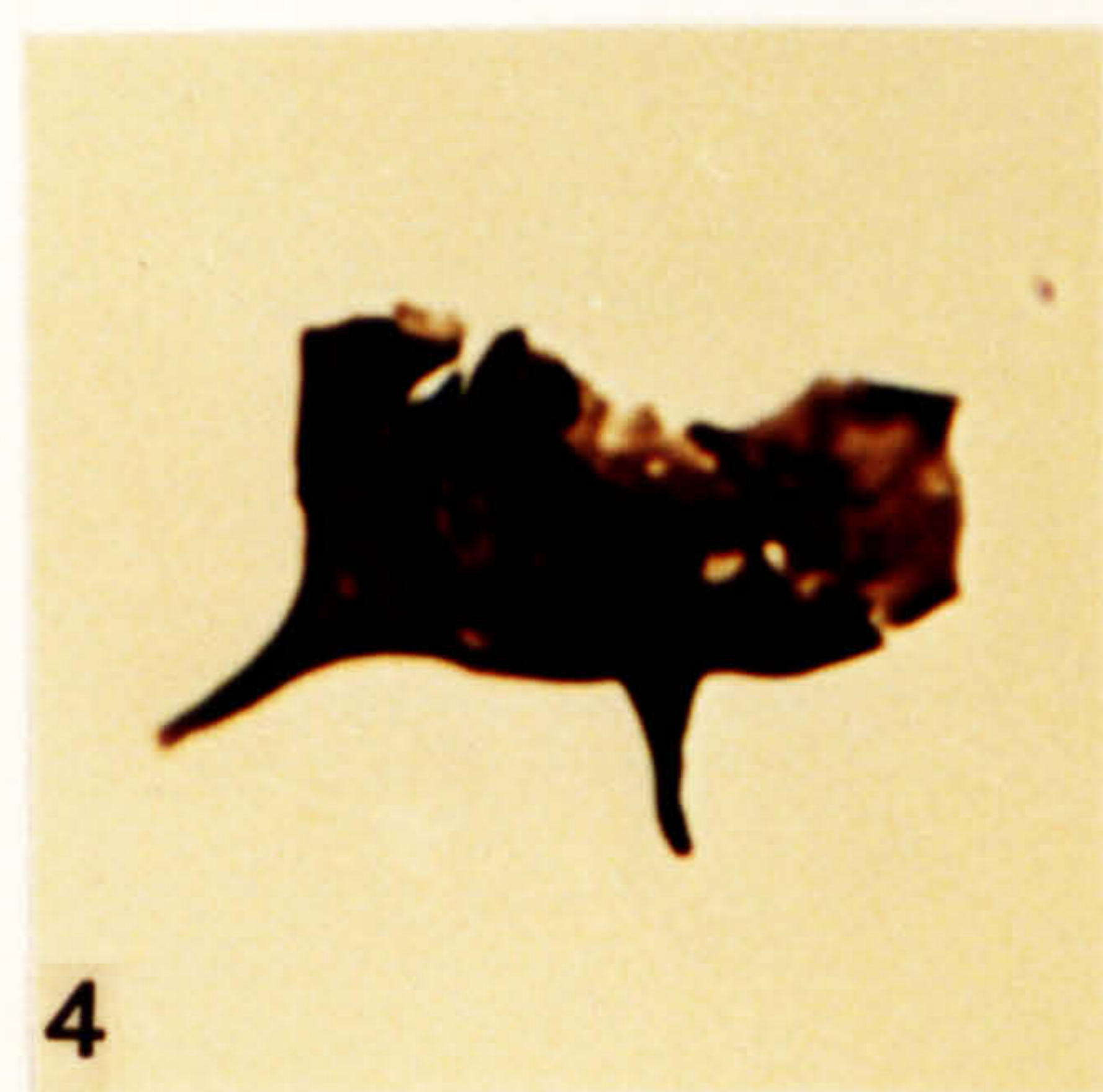
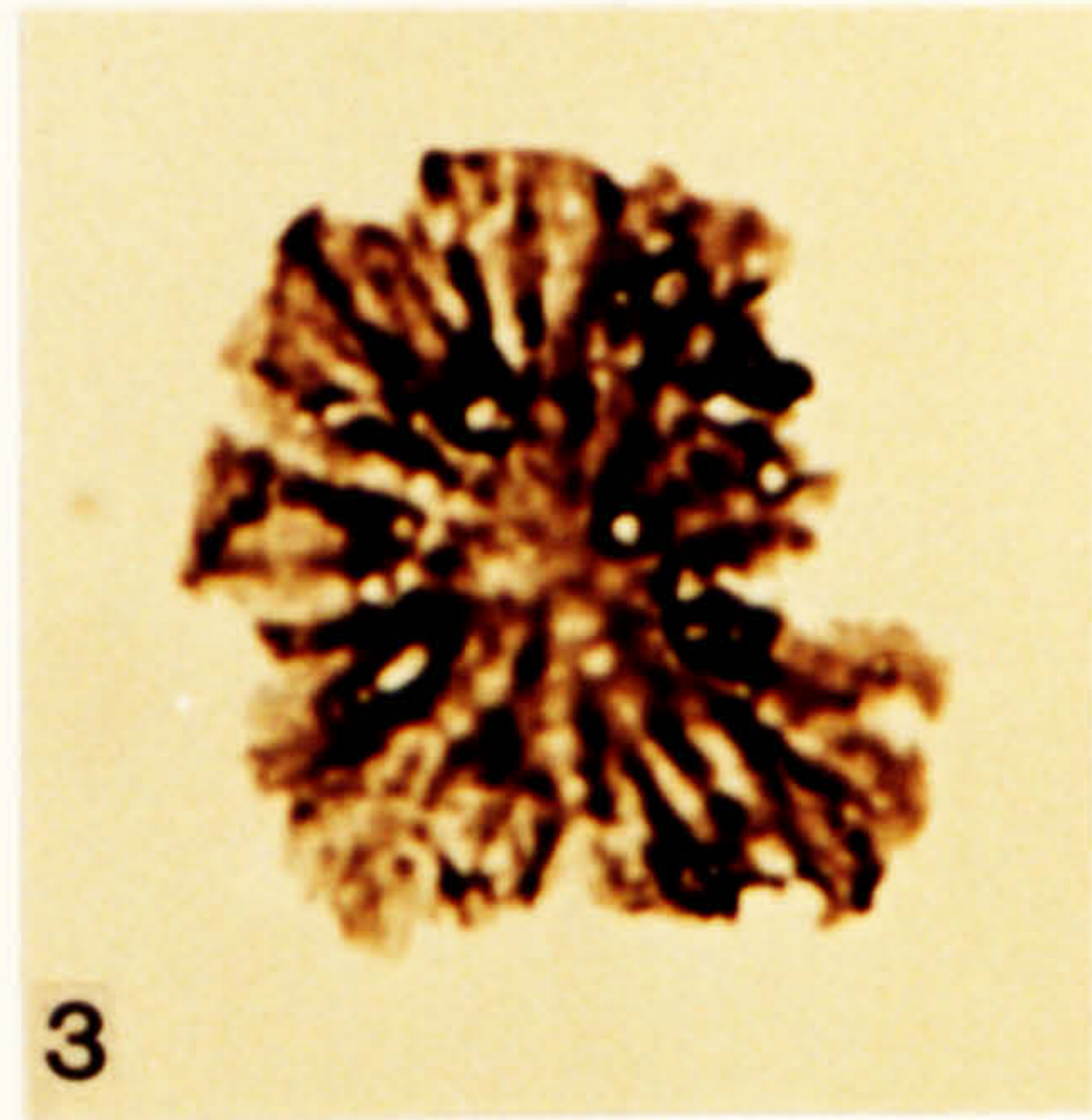
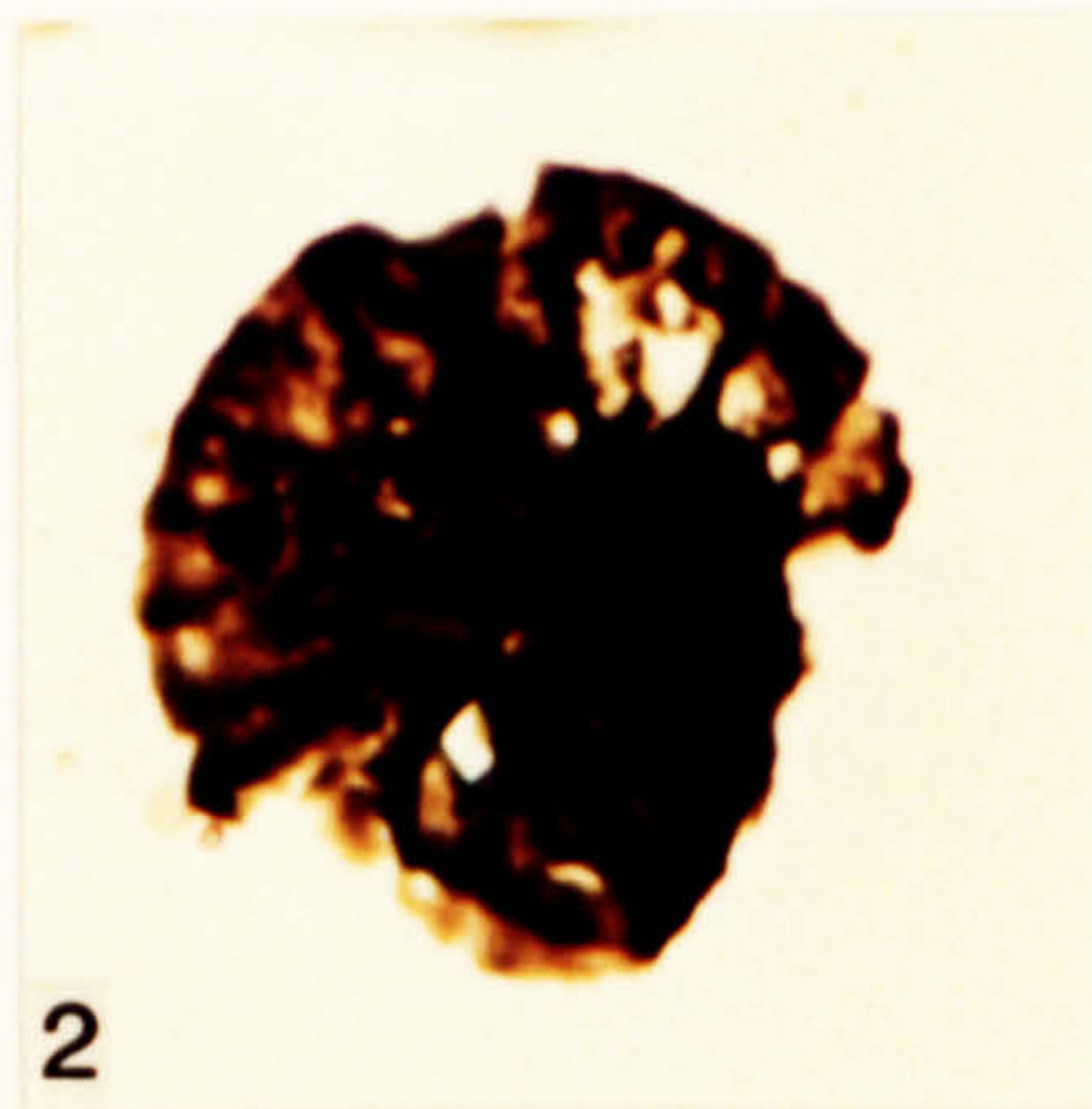
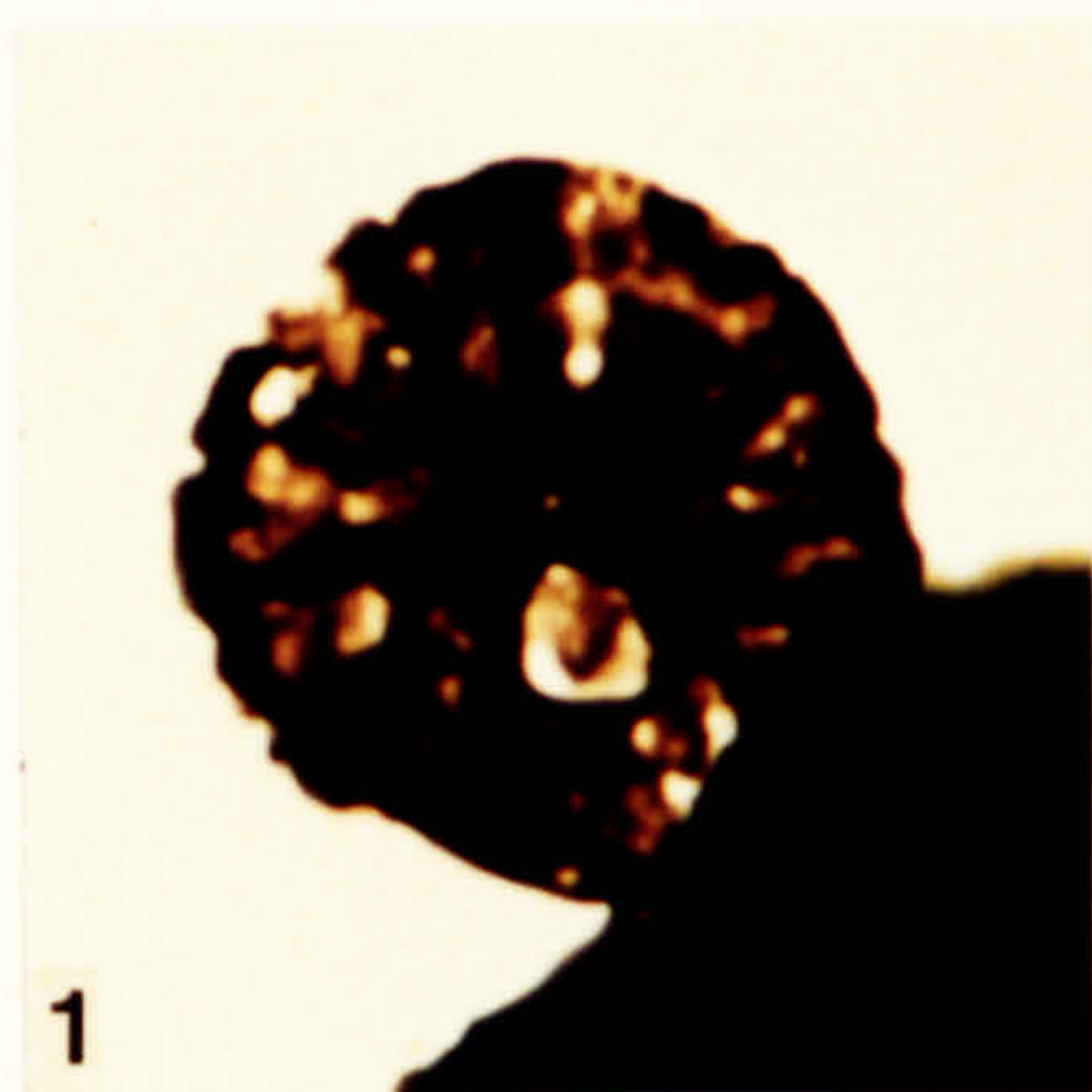
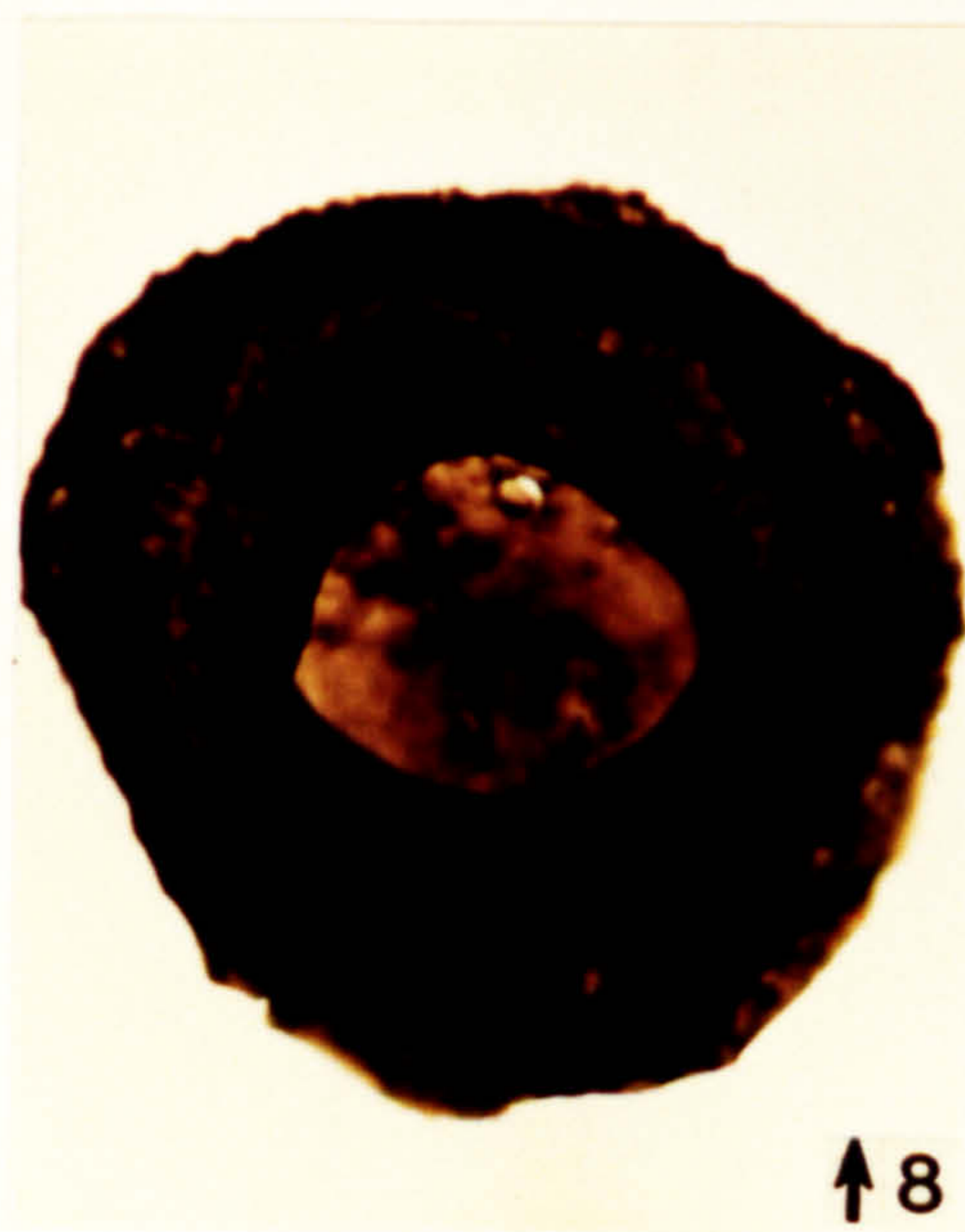
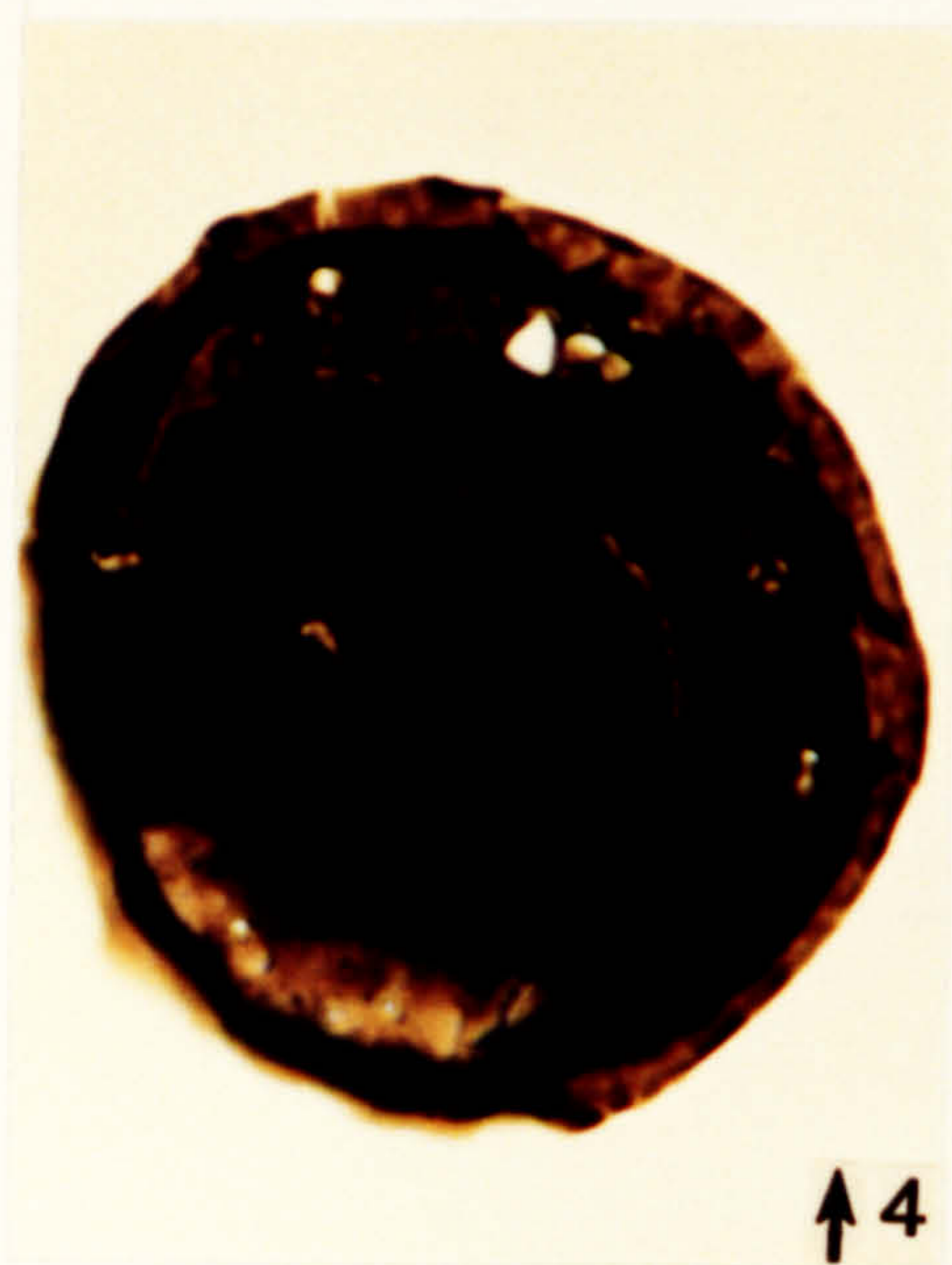




Plate 80.

Chitinozoa from the Argillaceous Shale Formation, upper Wenlock, Homeric in age.

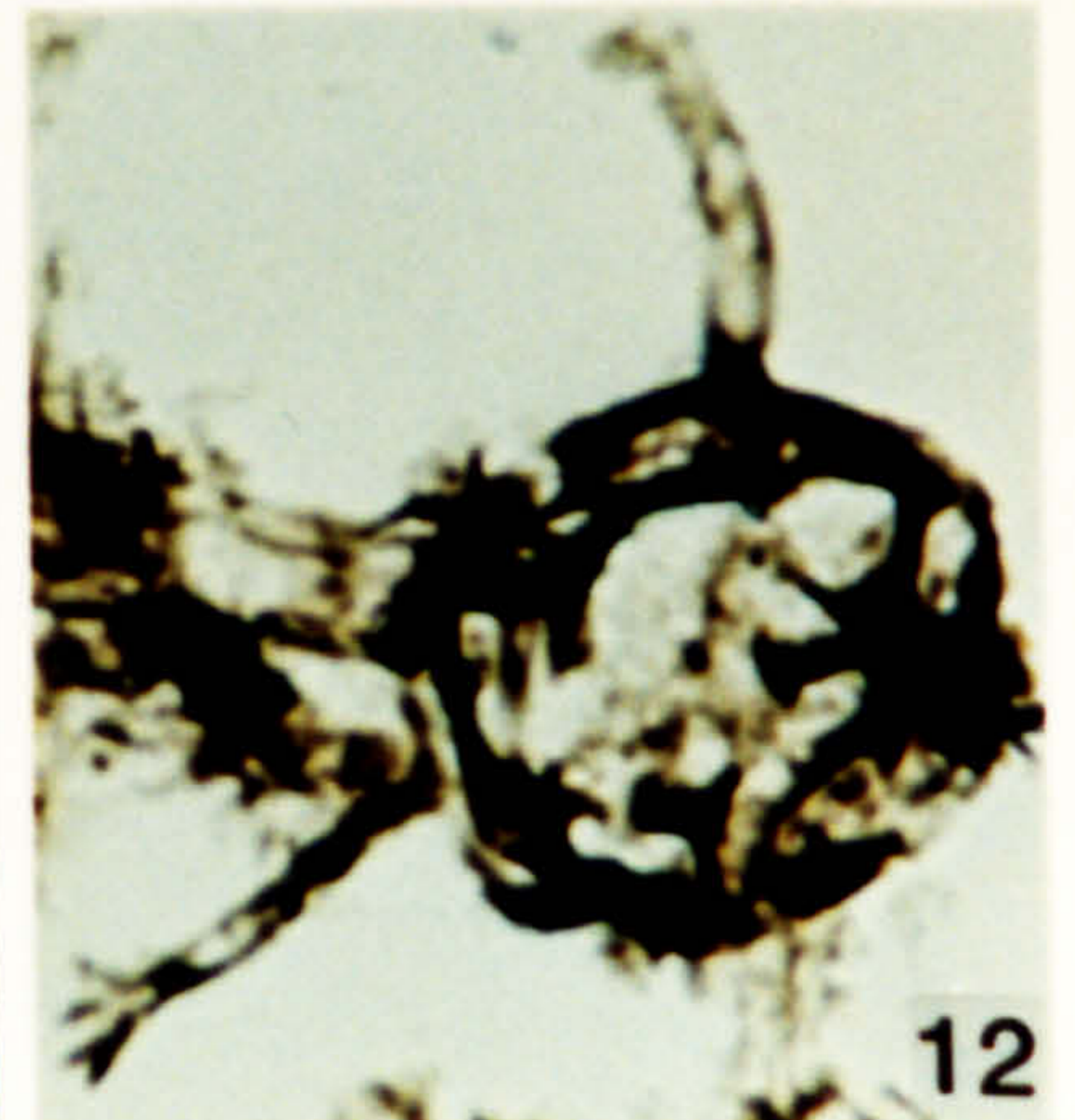
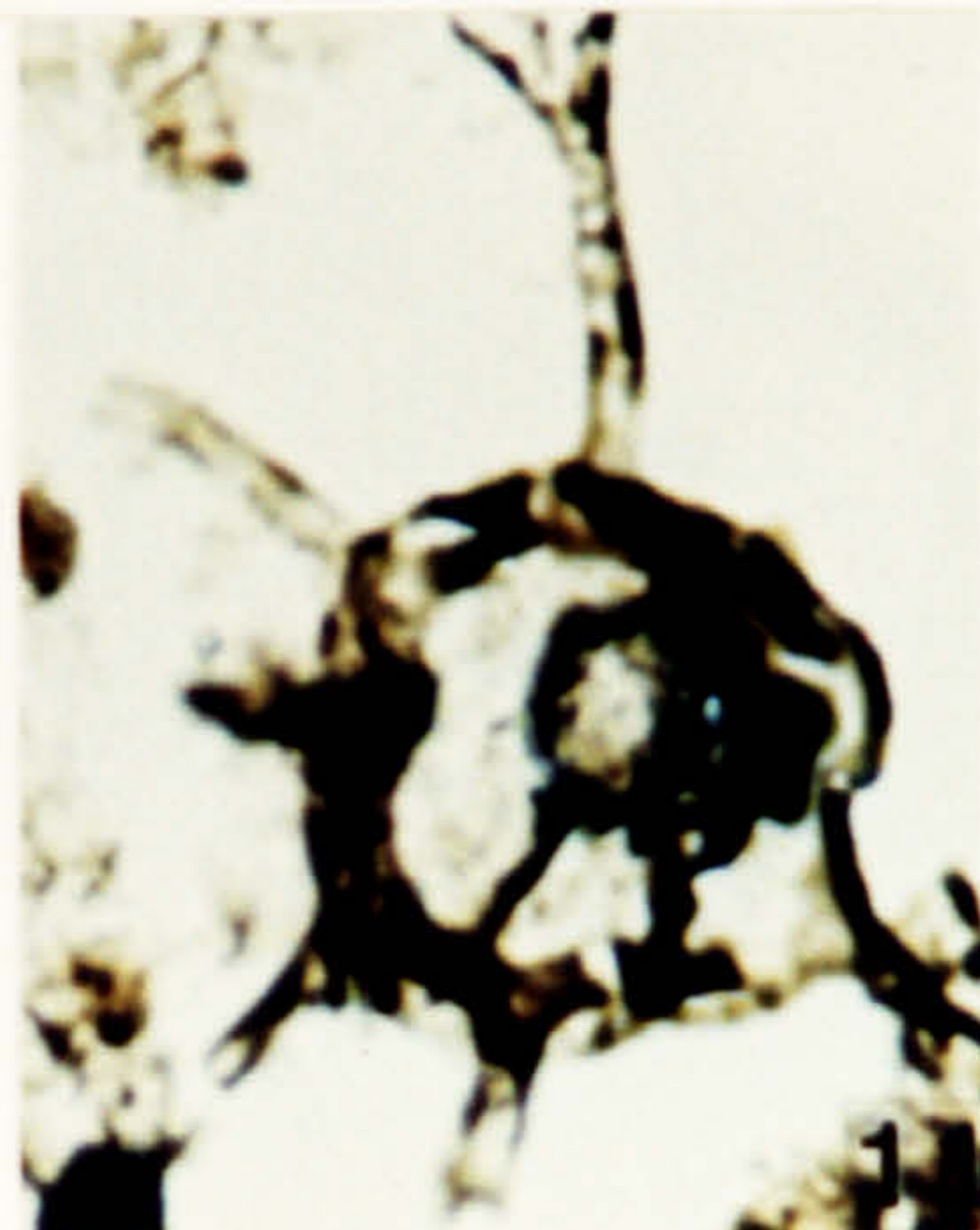
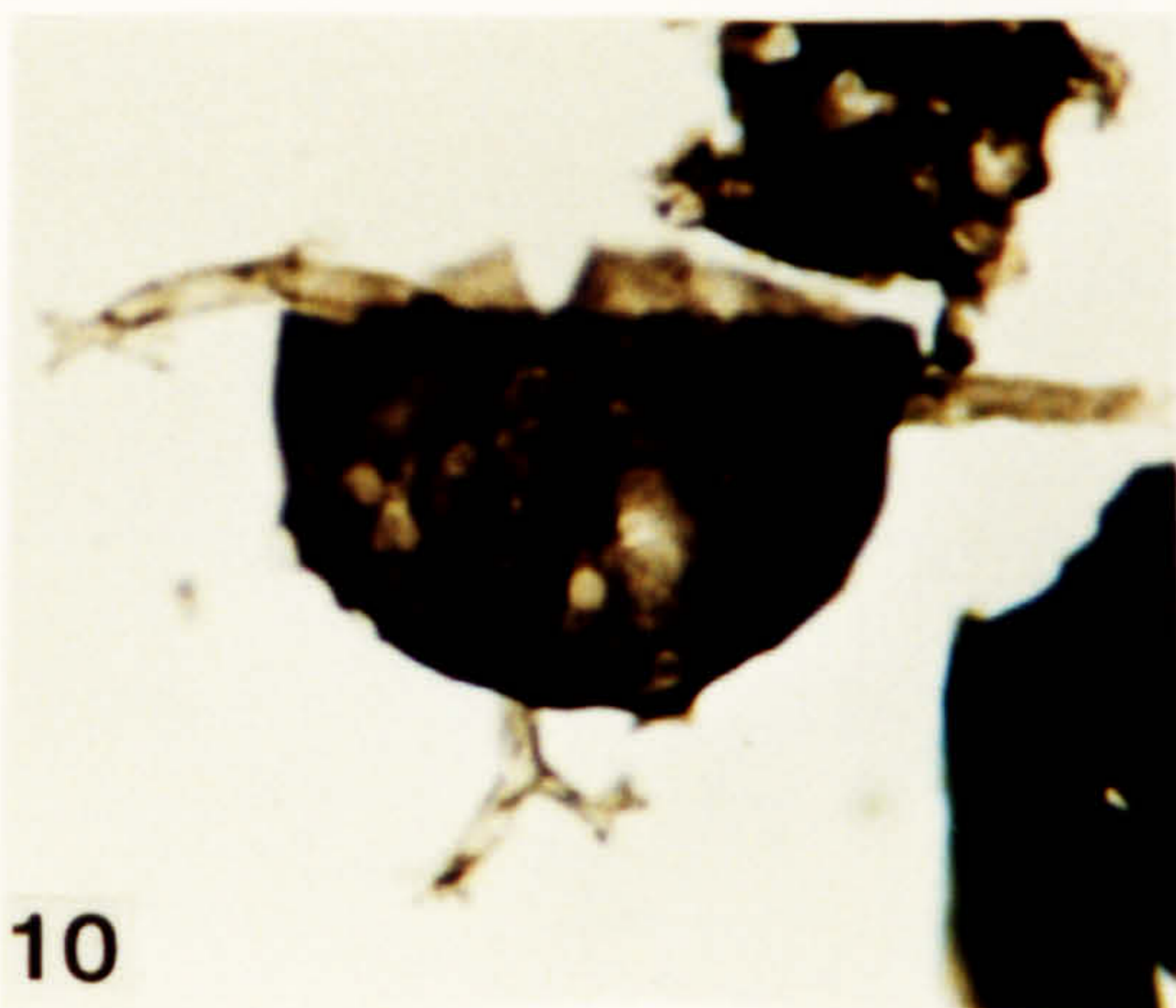
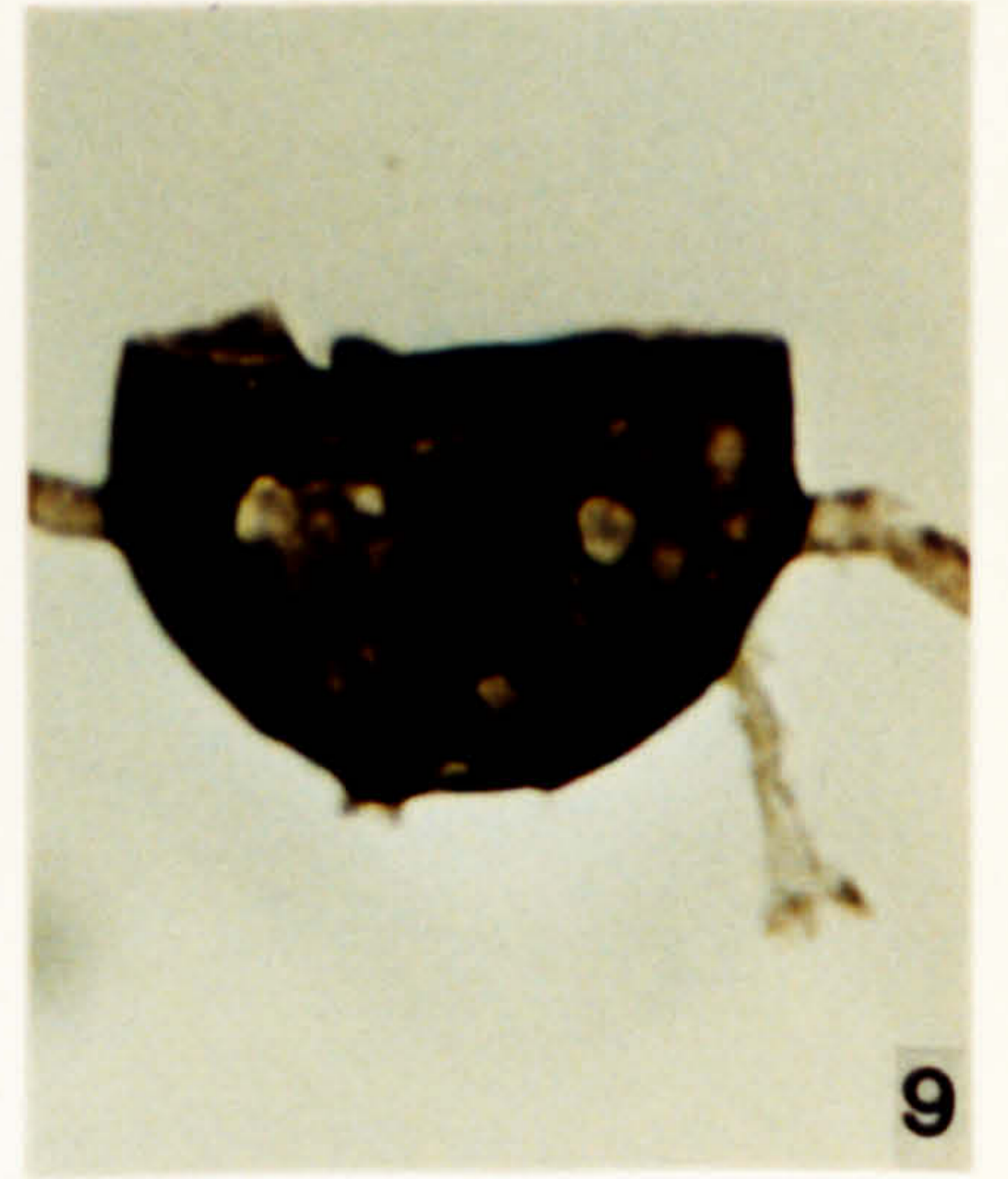
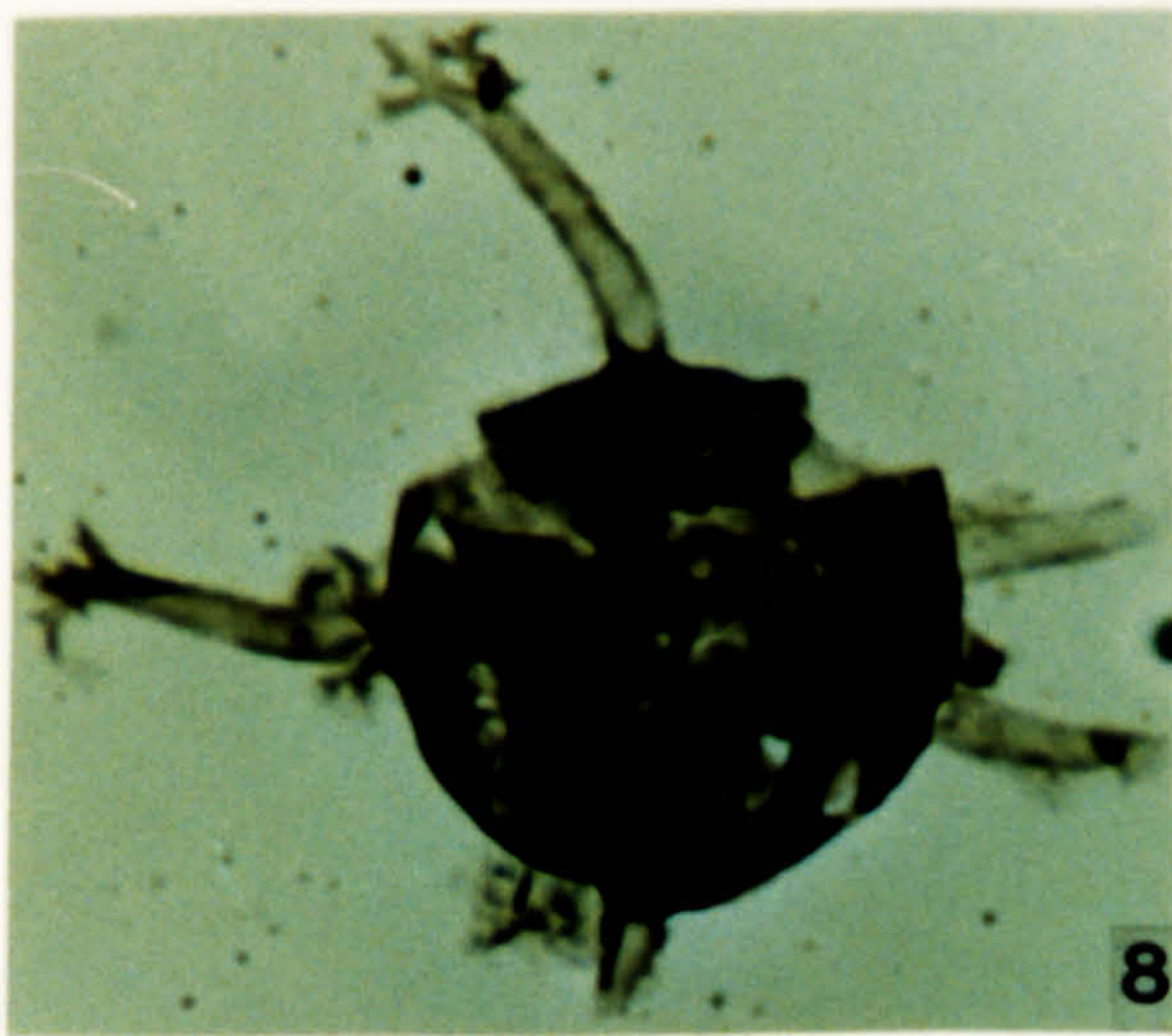
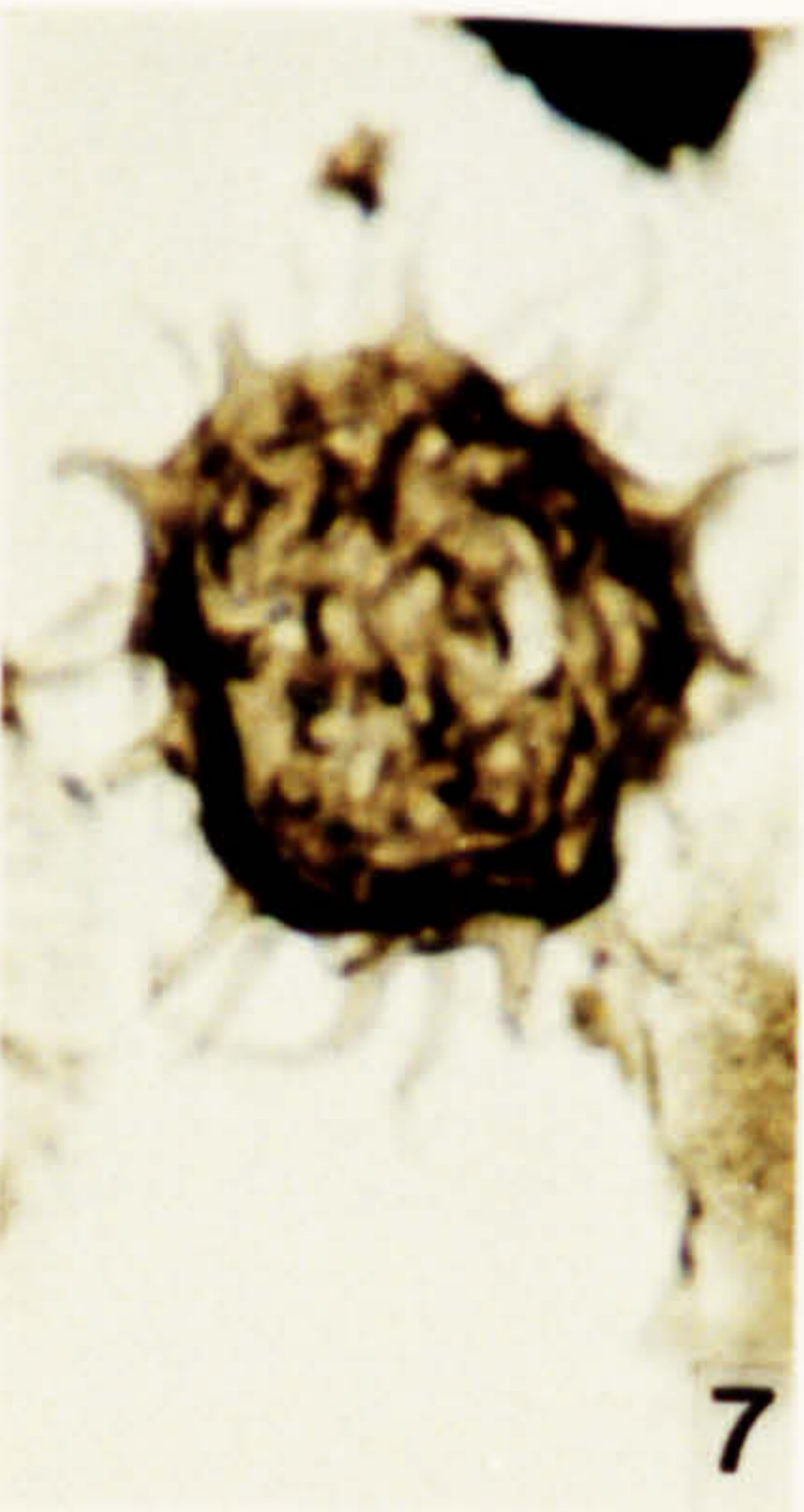
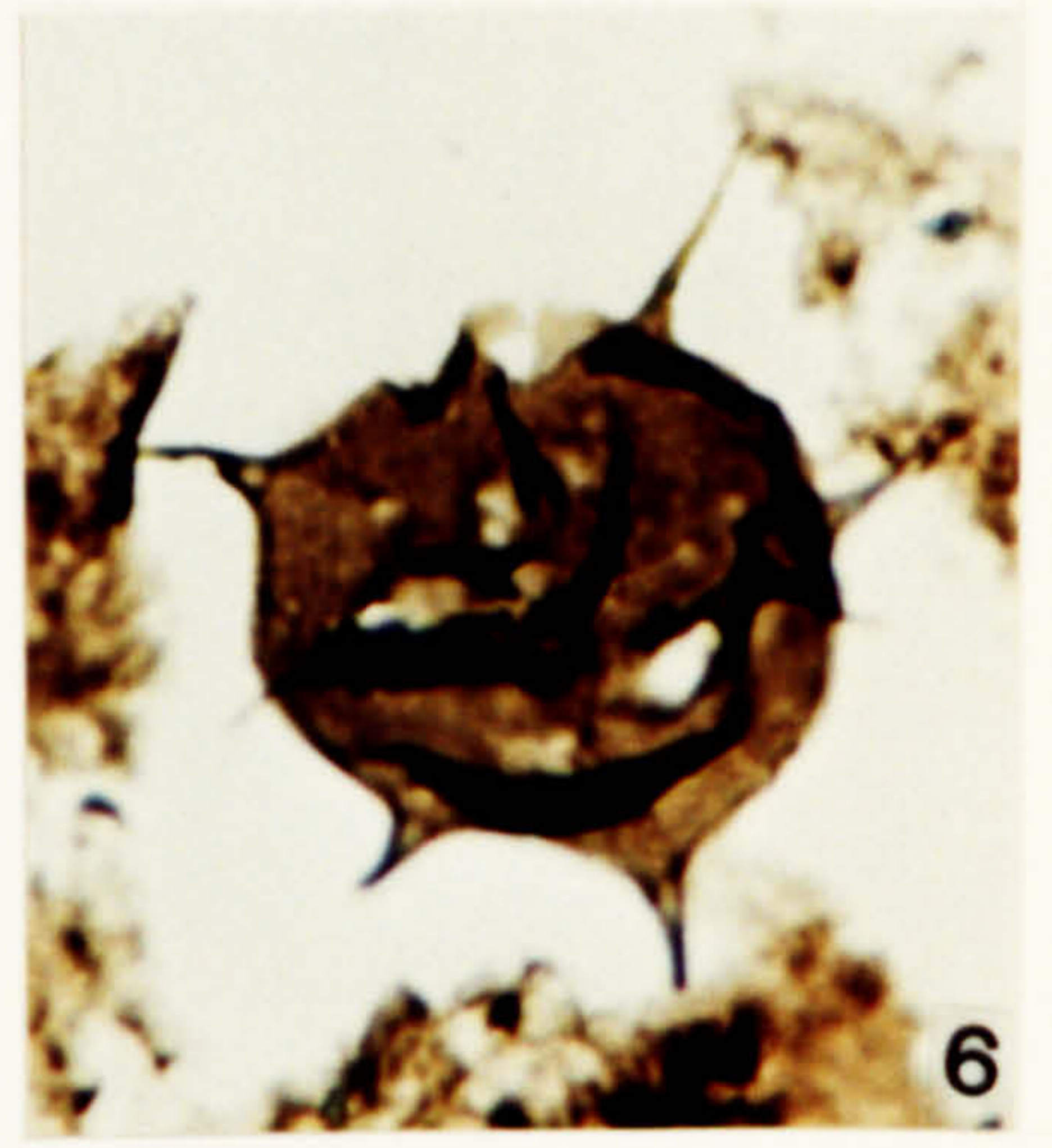
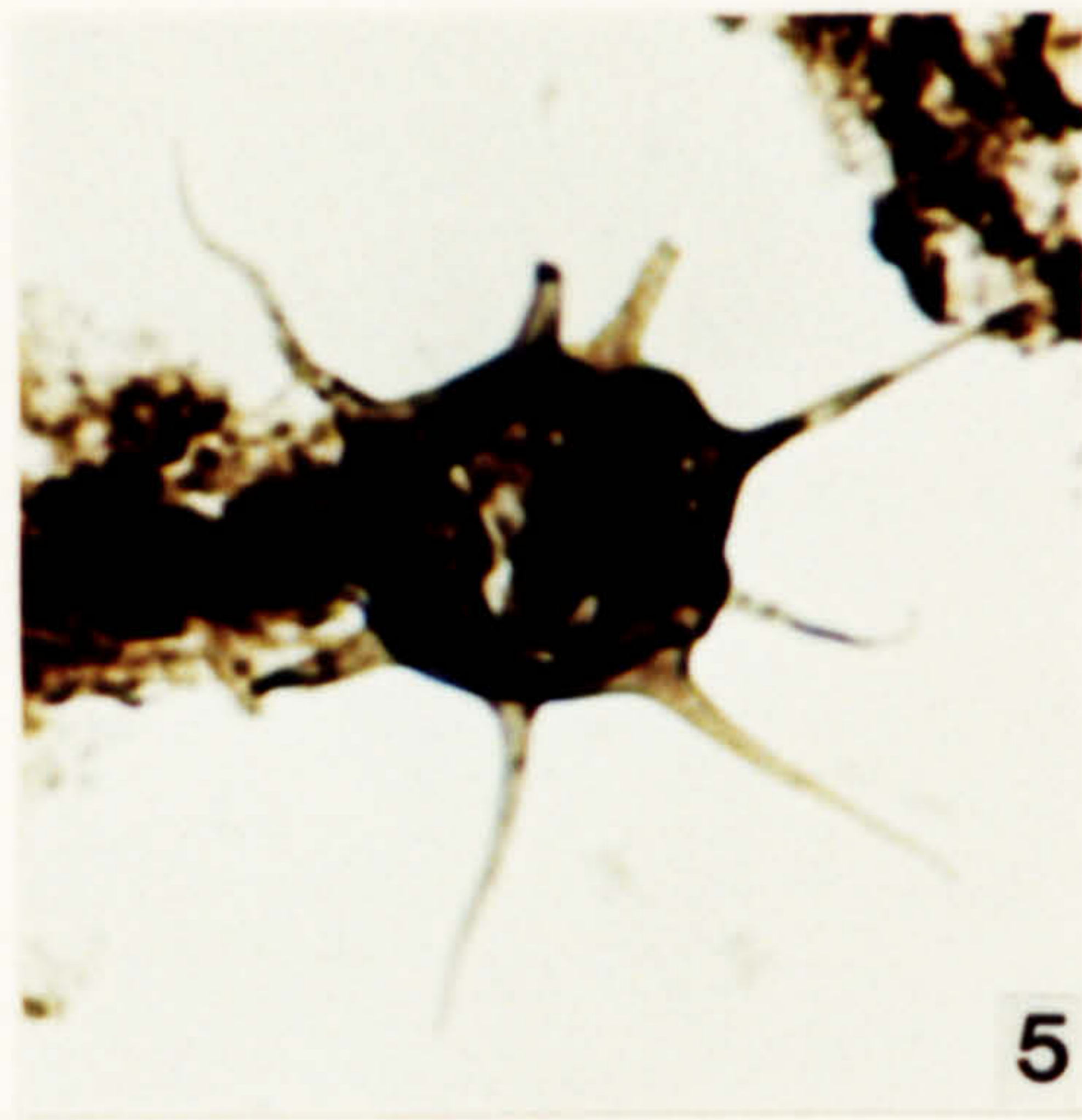
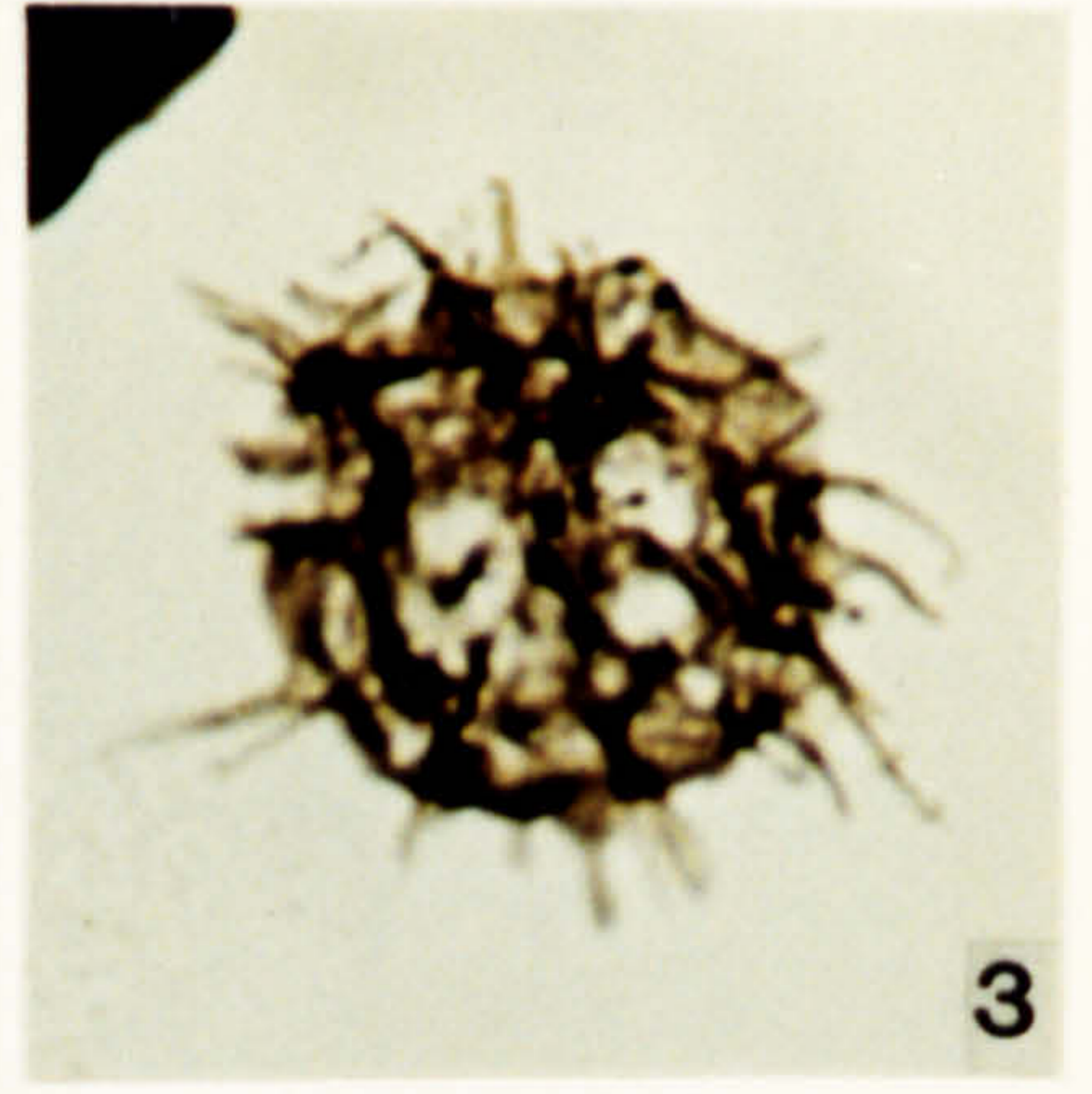
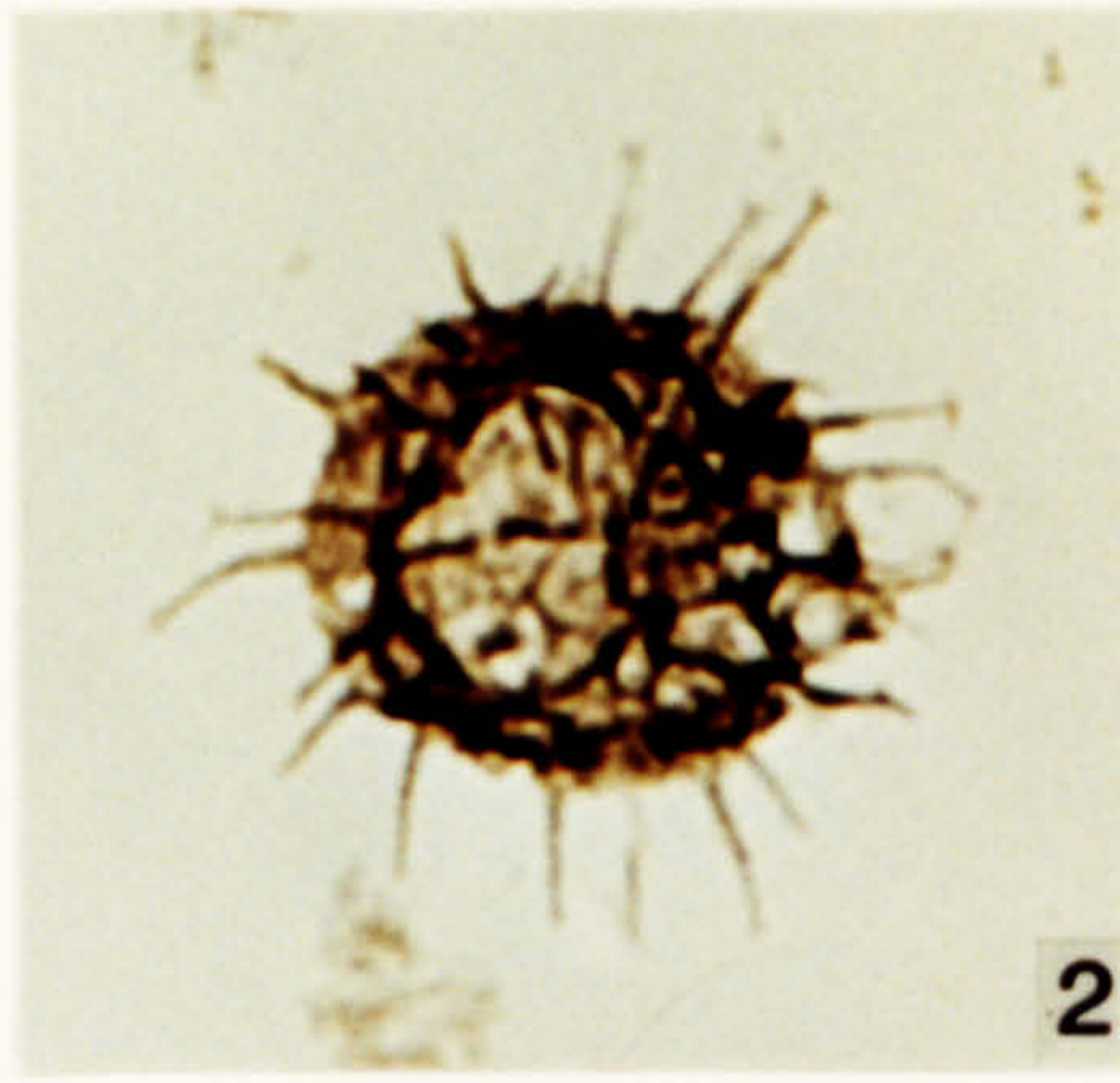
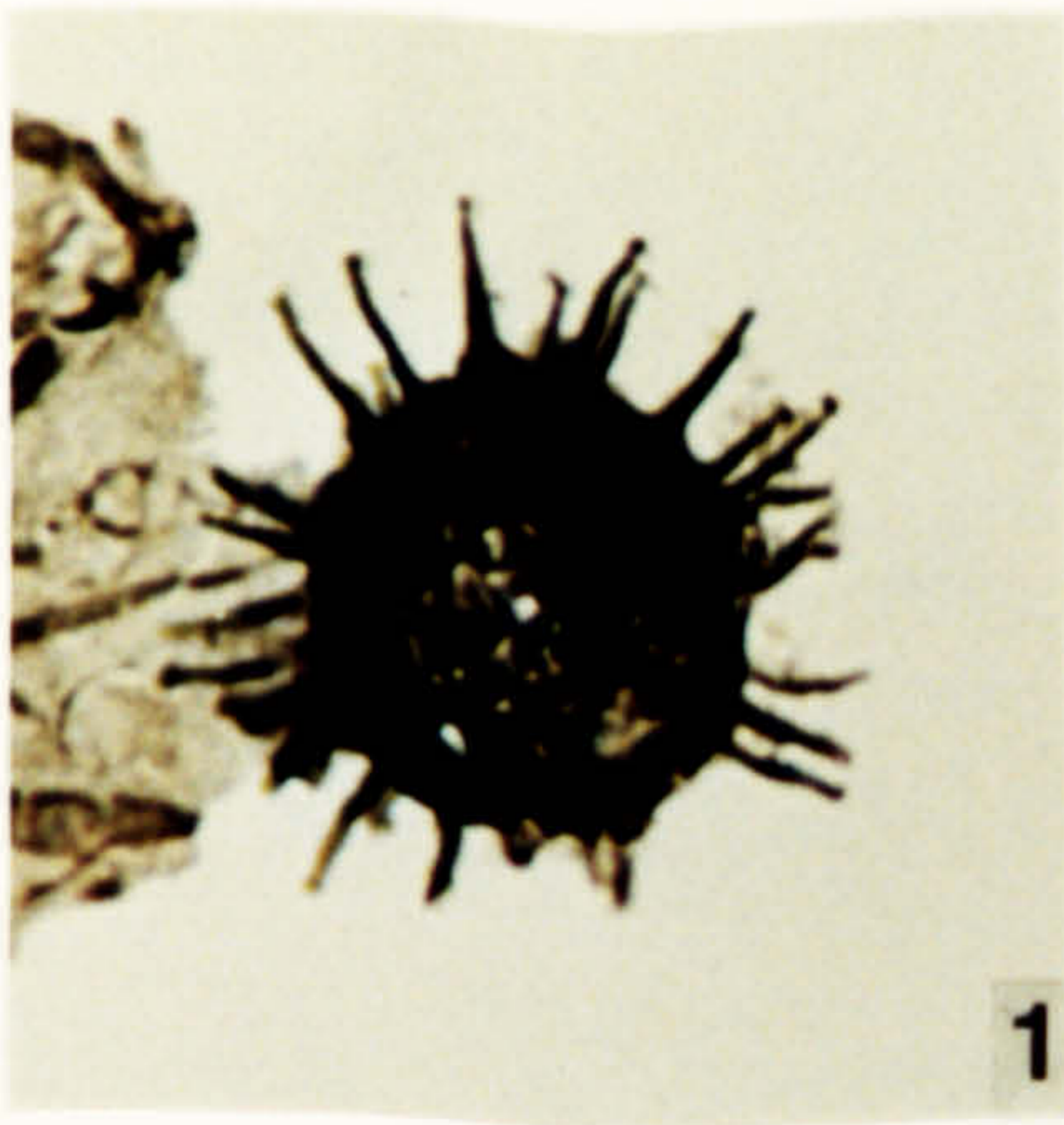
1. *Cingulochitina* sp. DW 231, 1-1, M36\1.
2. *Conochitina brevis* Taugourdeau & Jekhowsky 1960. DW 231, 1-2, J21\2.
3. *Conochitina armillata* Taugourdeau & Jekhowsky 1960. DW 231, 1-1, M30\3, X230.
4. *Hoegisphaere* cf. *glabra* Staplin 1961. DW 231, 1-1, N24\4, X920.
5. *Conochitina* sp. DW 231, 1-2, J15\4, X230.
6. *Conochitina* sp. DW 231, 1-1, M36\4, X230.
7. *Conochitina* sp. DW 231, 1-2, B33\3.
8. *Calpichitina* sp. 2. DW 231, 1-1, L13\4, X920.
9. *Calpichitina* sp. 2. DW 231, 1-2, F23\3, X920.
10. *Sphaerochitina?* sp. DW 231, 1-1, H13\2.



**Plate 81.**

Acritarchs from the Argillaceous Shale Formation, Ludlow in age.

1. *Ammonidium microcladum* (Downie) Dorning 1981. DW 235, 1-4, V27\2.
2. *Ammonidium microcladum* (Downie) Dorning 1981. DW 232, FS-1, R3\2.
3. *Ammonidium microcladum* (Downie) Dorning 1981. DW 235, FS-5, P23\1.
4. *Buedingisphaeridium lunatum* Le Herisse 1989. DW 232, FS-1, B27\1.
5. *Baltisphaeridium* cf. *cantabricum* Cramer 1964. DW 232, FS-1, B22\3.
6. *Baltisphaeridium* sp. DW 232, FS-1, M17\3.
7. *Baltisphaeridium* sp. JW 10, FS-4, H23\1.
8. *Cymbosphaeridium bikidium* Lister 1970. JW 10, FS-5, V21\3.
9. *Cymbosphaeridium bikidium* Lister 1970. JW 10, FS-4, E17\4.
10. *Cymbosphaeridium bikidium* Lister 1970. JW 10, FS-4, H13\4.
11. *Cymbosphaeridium bikidium* Lister 1970. DW 34, FS-4, E28\2.
12. *Cymbosphaeridium bikidium* Lister 1970. DW 34, FS-4, S24\3.



**Plate 82.**

Acritarchs from the Argillaceous Shale Formation, Ludlow in age.

1. *Cymbosphaeridium carinosum* (Cramer) Jardine *et al.* 1972. JW 10, FS-4, Q5\2.
2. *Cymbosphaeridium carinosum* (Cramer) Jardine *et al.* 1972. JW 10, FS-4, J17\3.
3. *Cymbosphaeridium carinosum* (Cramer) Jardine *et al.* 1972. JW 10, FS-4, J16\3.
4. *Cymbosphaeridium carinosum* (Cramer) Jardine *et al.* 1972. JW 10, FS-4, E20\2.
5. *Cymbosphaeridium carinosum* (Cramer) Jardine *et al.* 1972. DW 232, FS-1, F17\1.
6. *Cymbosphaeridium pilar* var. *scabratum* Cramer 1970. DW 235, FS\5, X13\2.
7. *Cymbosphaeridium pilar* var. 1. JW 10, FS-5, T19\3.
8. *Cymbosphaeridium pilar* var. 1. JW 10, FS-5, L4\3.
9. *Deflandrastrum millepedi*? Combaz 1962. JW 10, 1-1, Q23\1.
10. *Dictyotidium coarctatum* (Kiryanov) Colbath 1983. DW 34, FS-4, Q35\1.
11. *Dictyotidium coarctatum* (Kiryanov) Colbath 1983. DW 232, FS-1, E16\2.

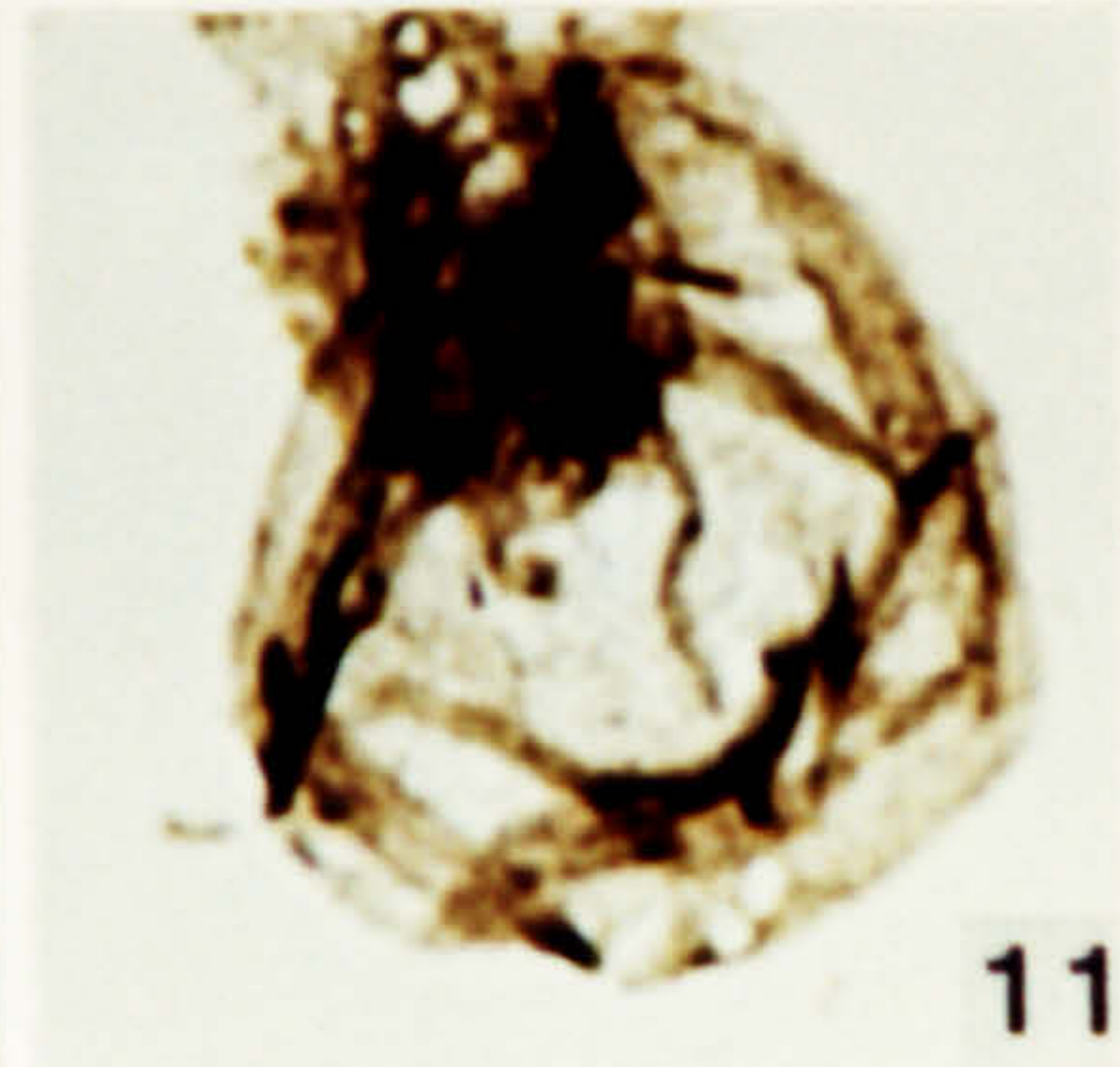
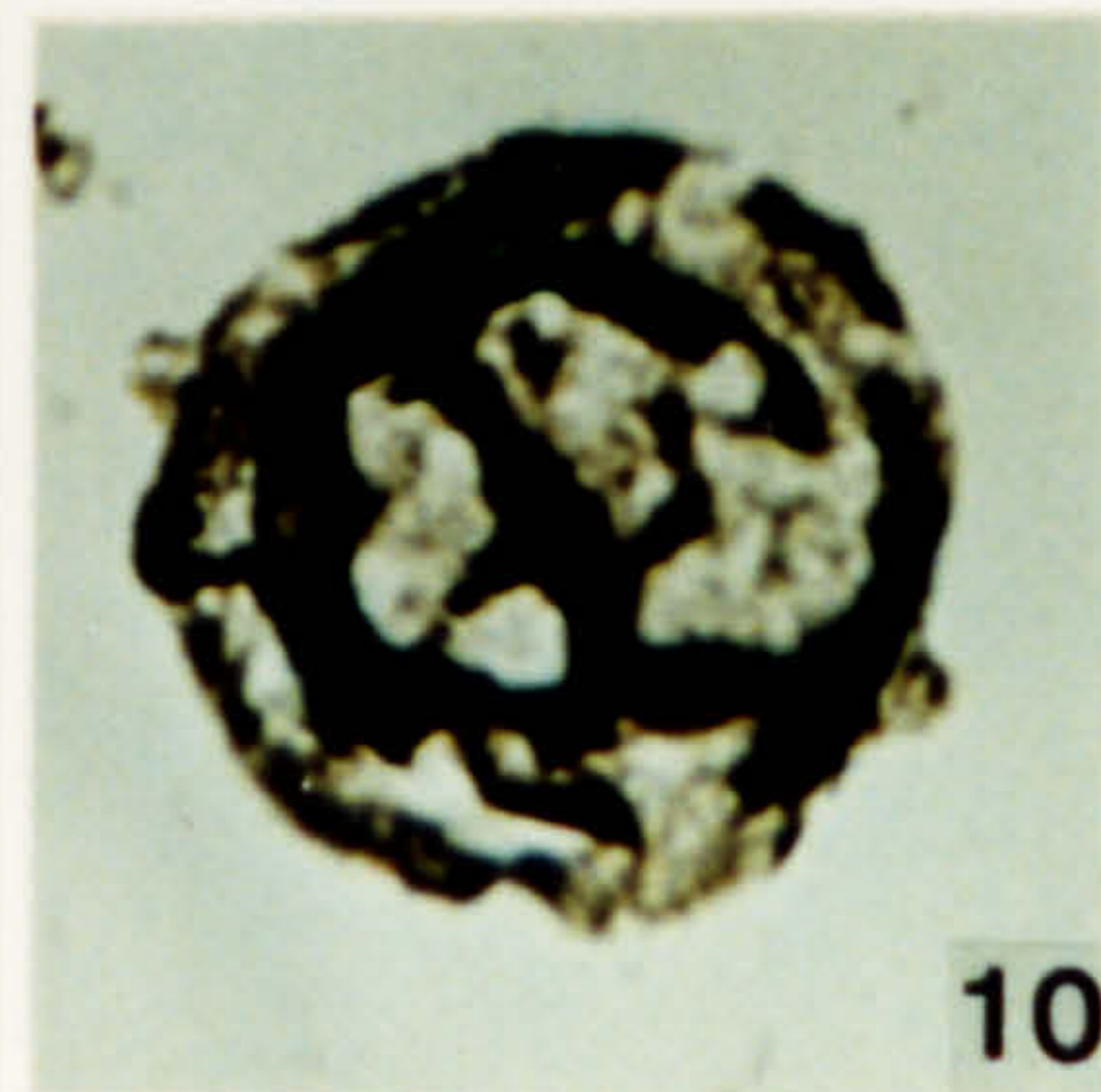
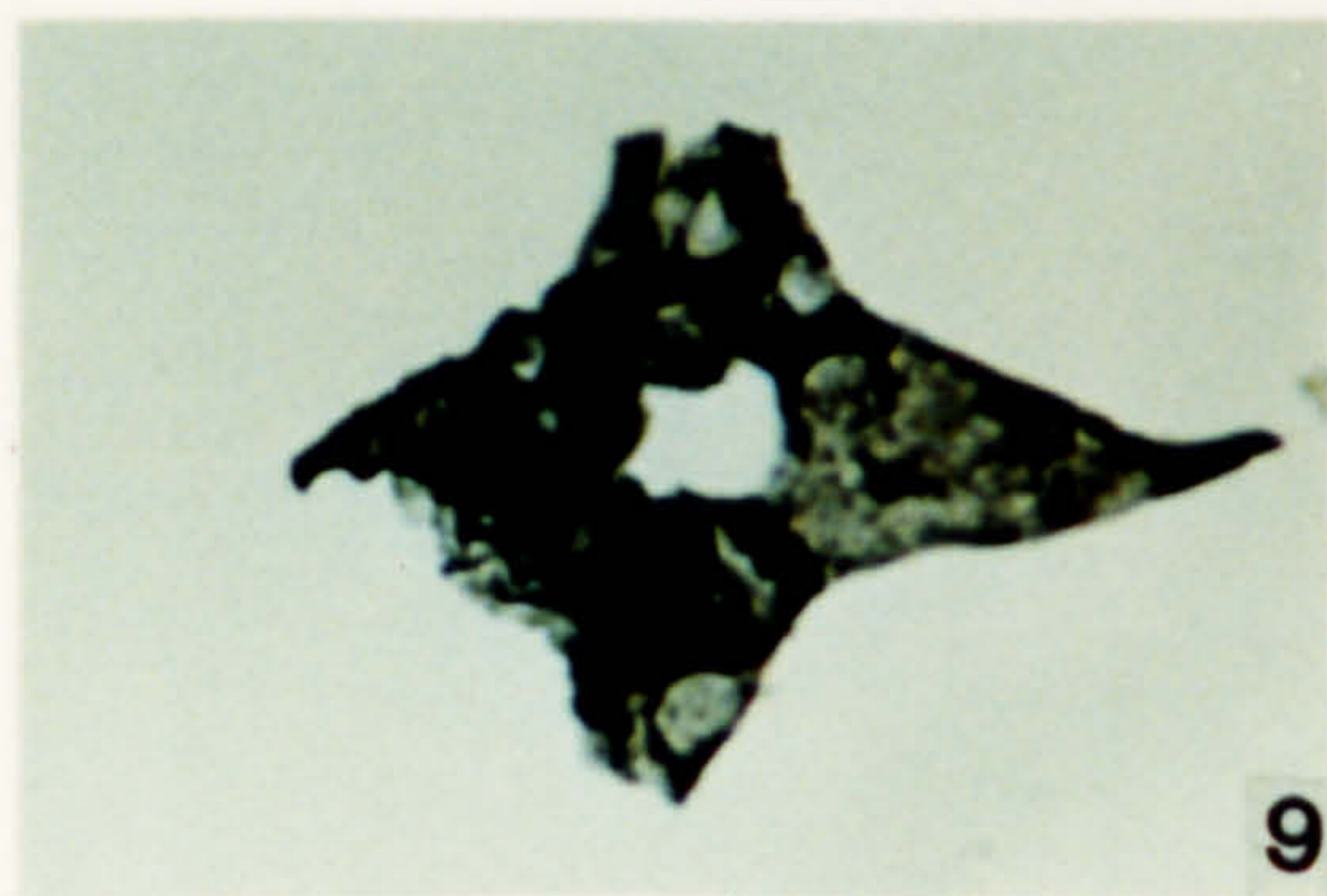
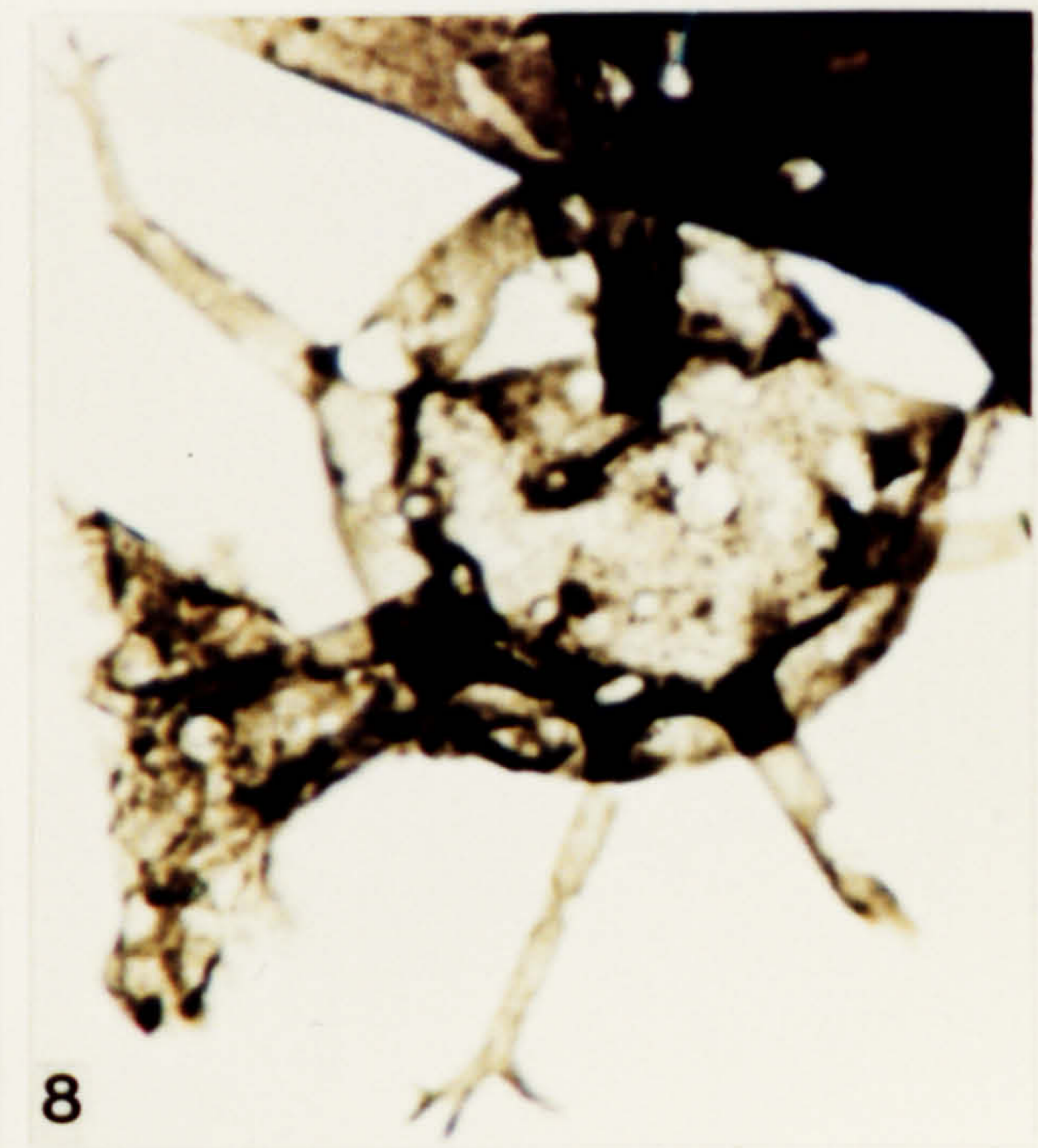
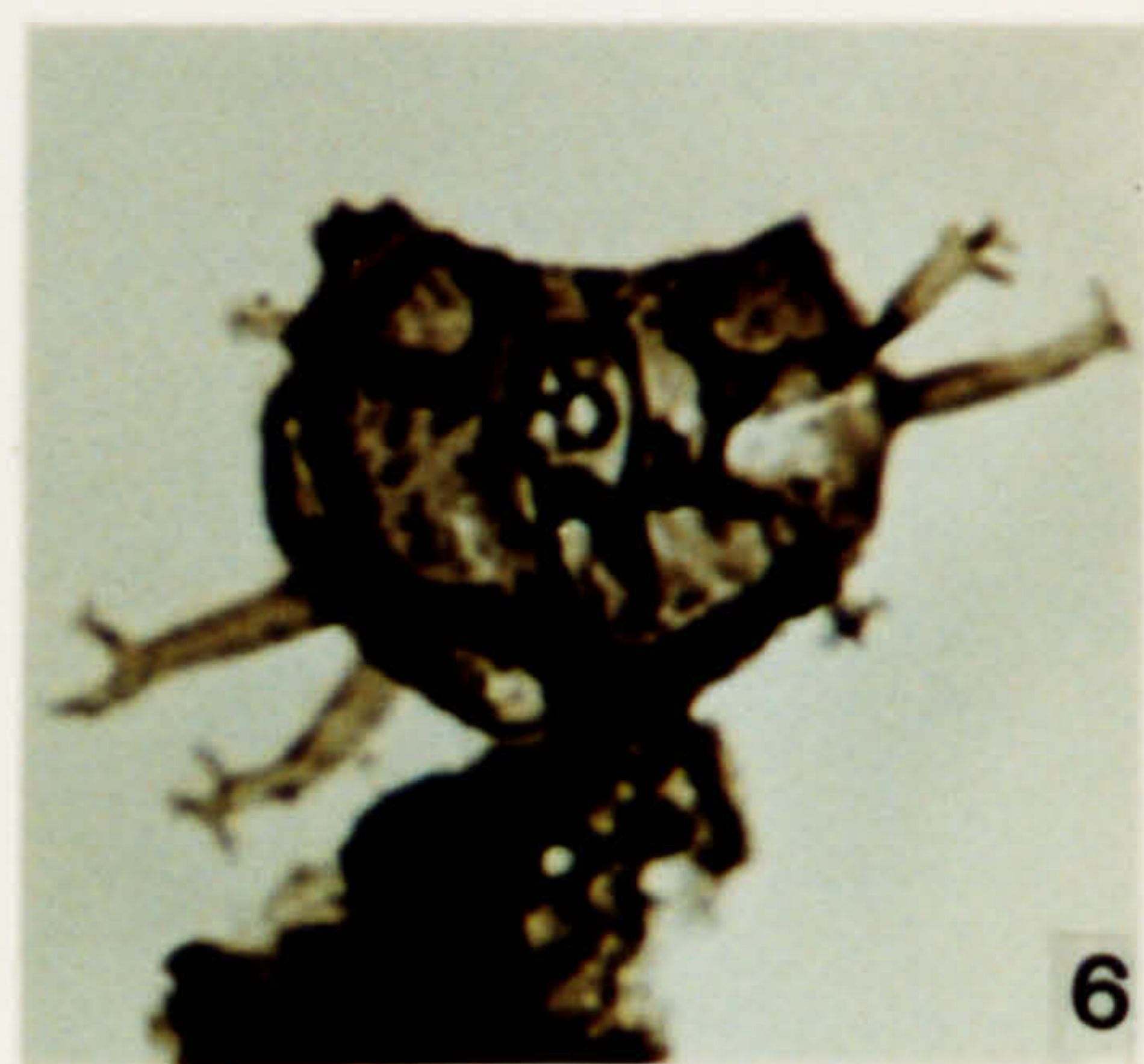
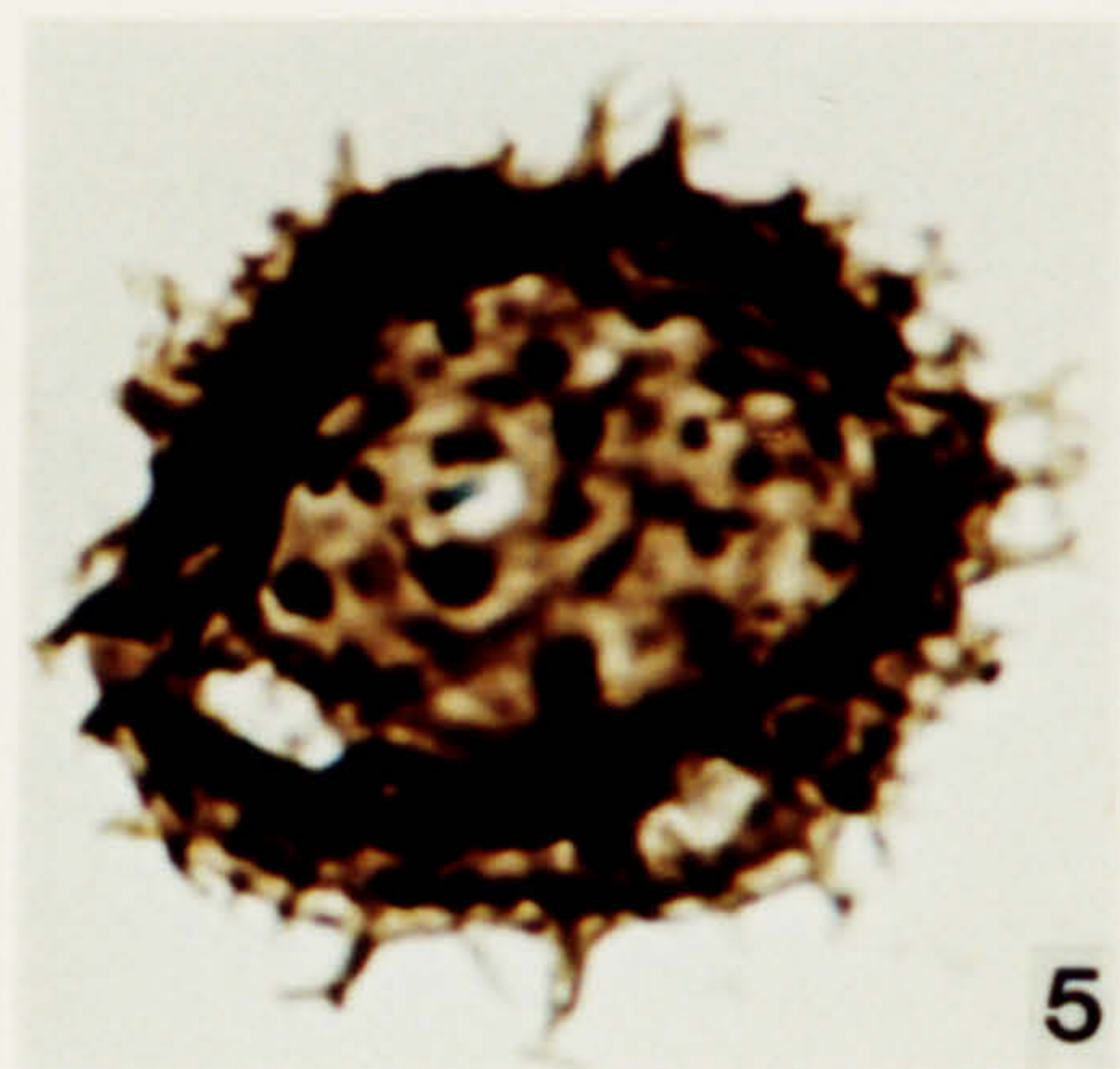
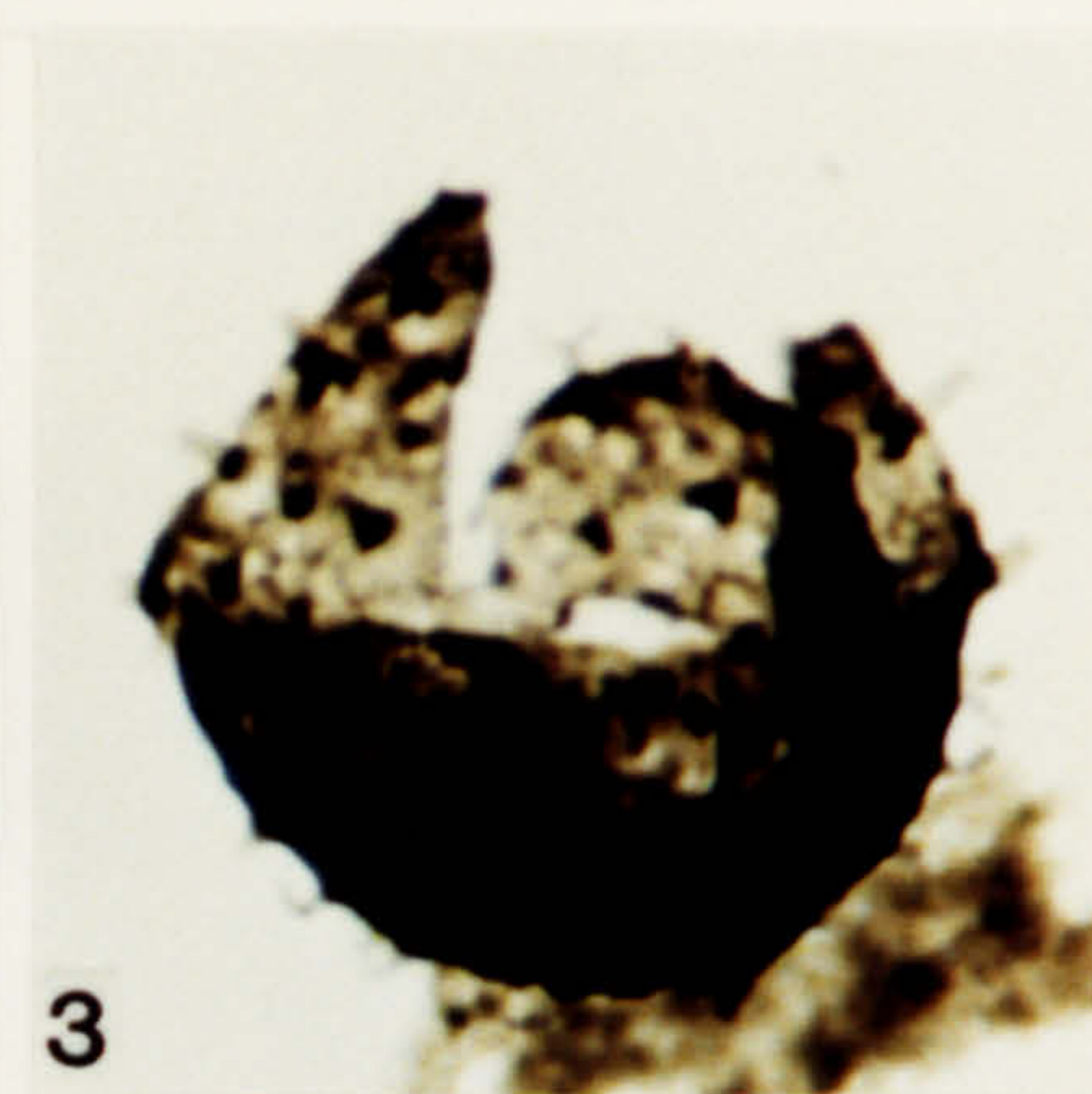
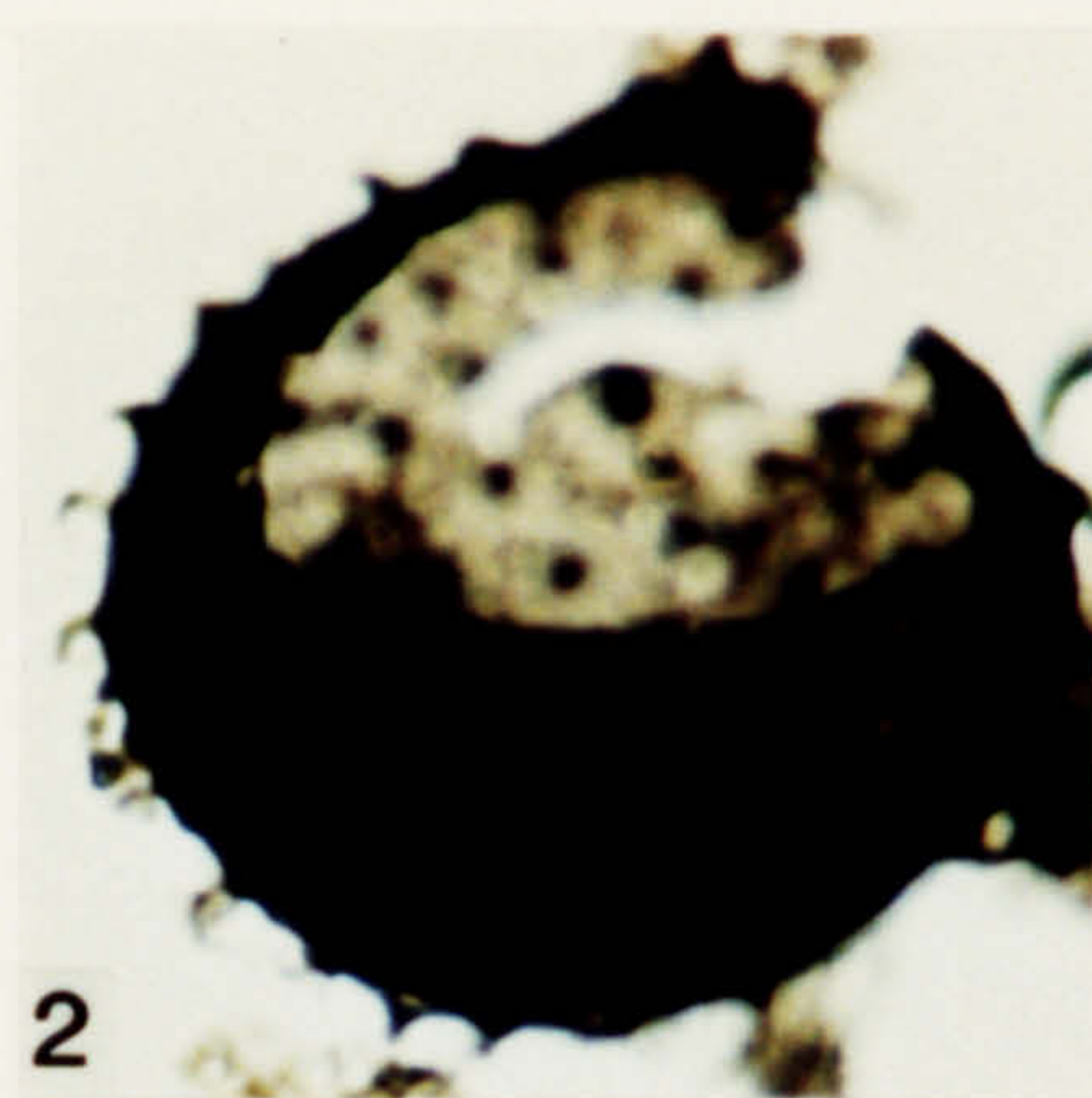
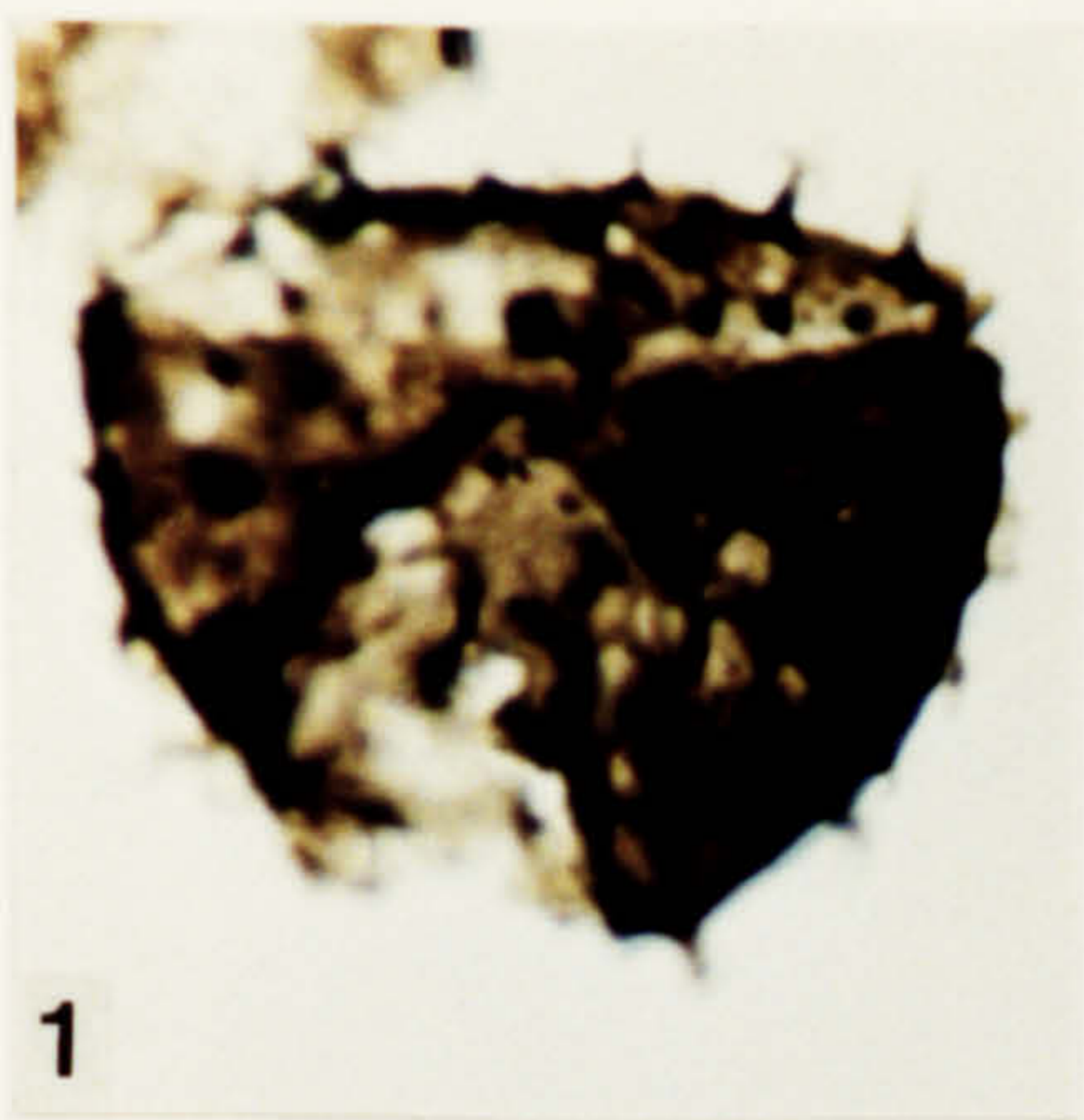
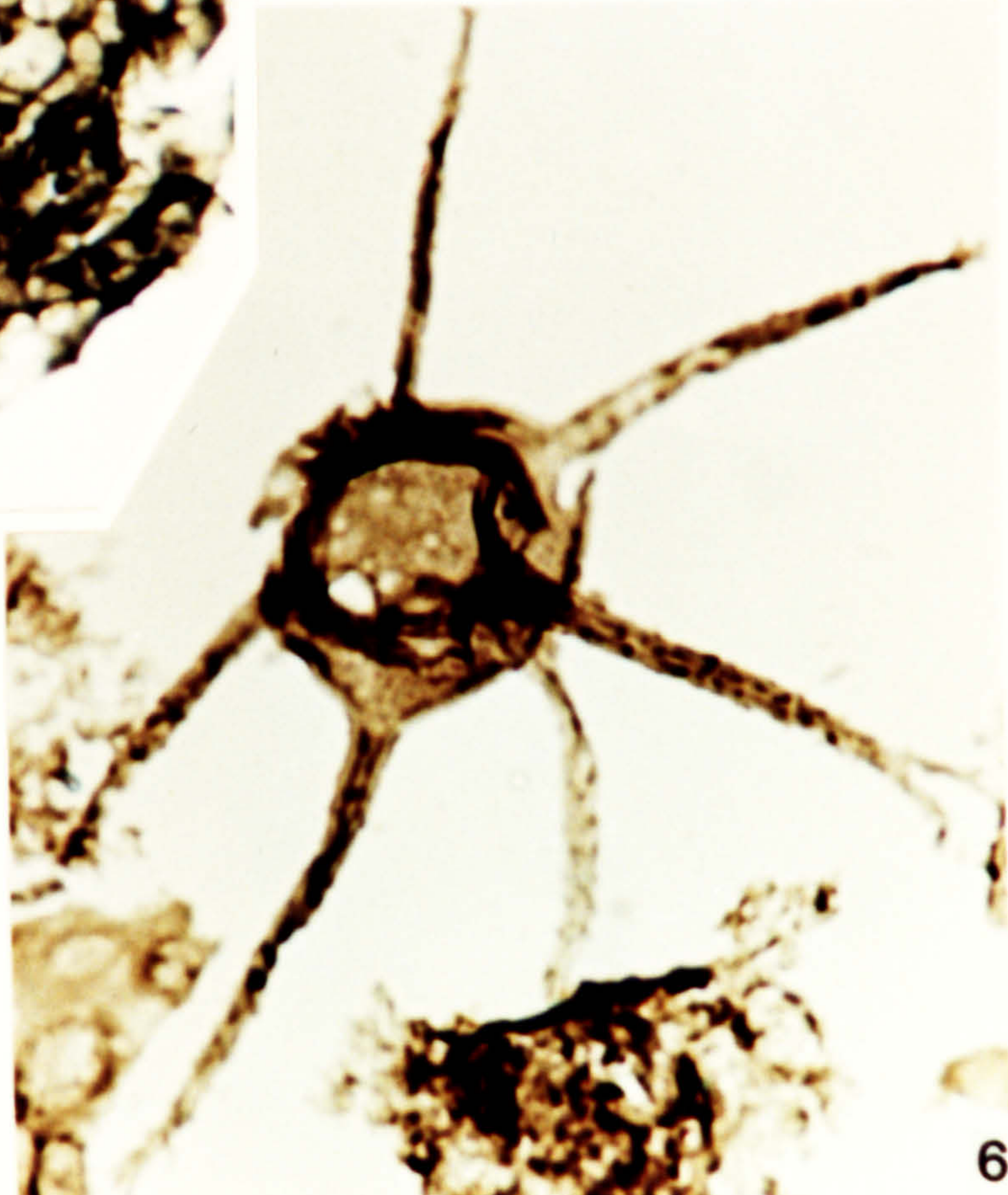
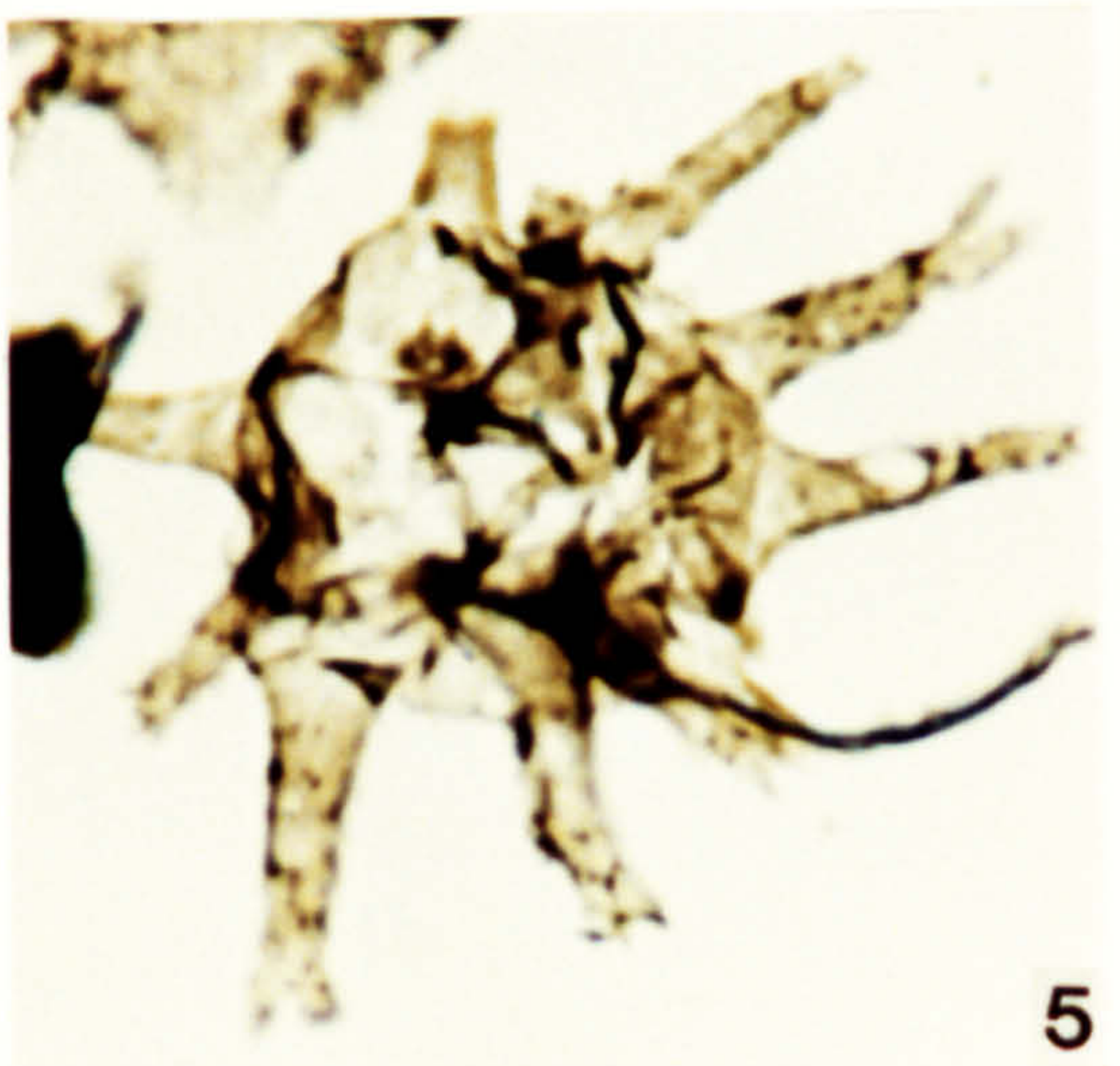
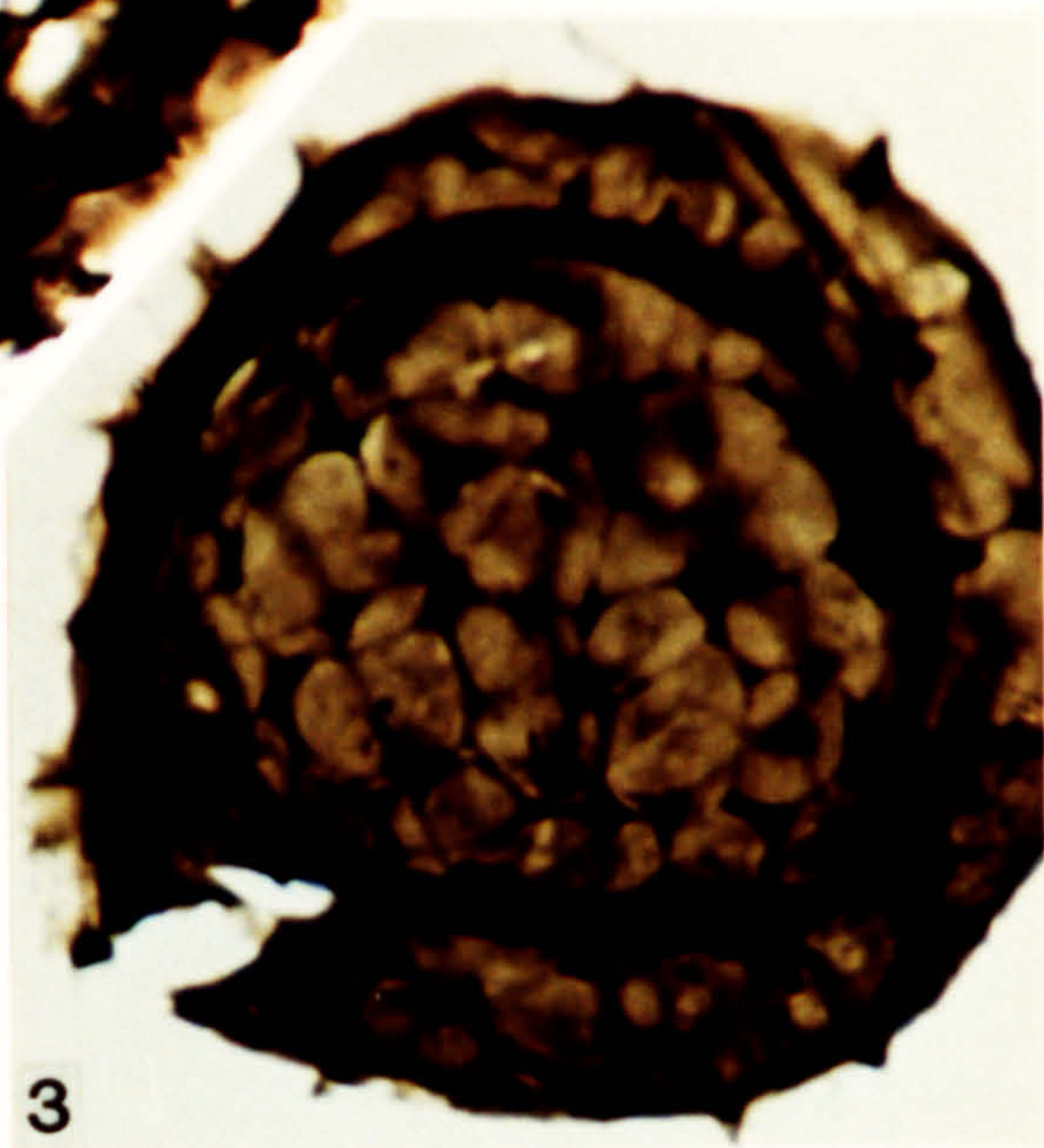
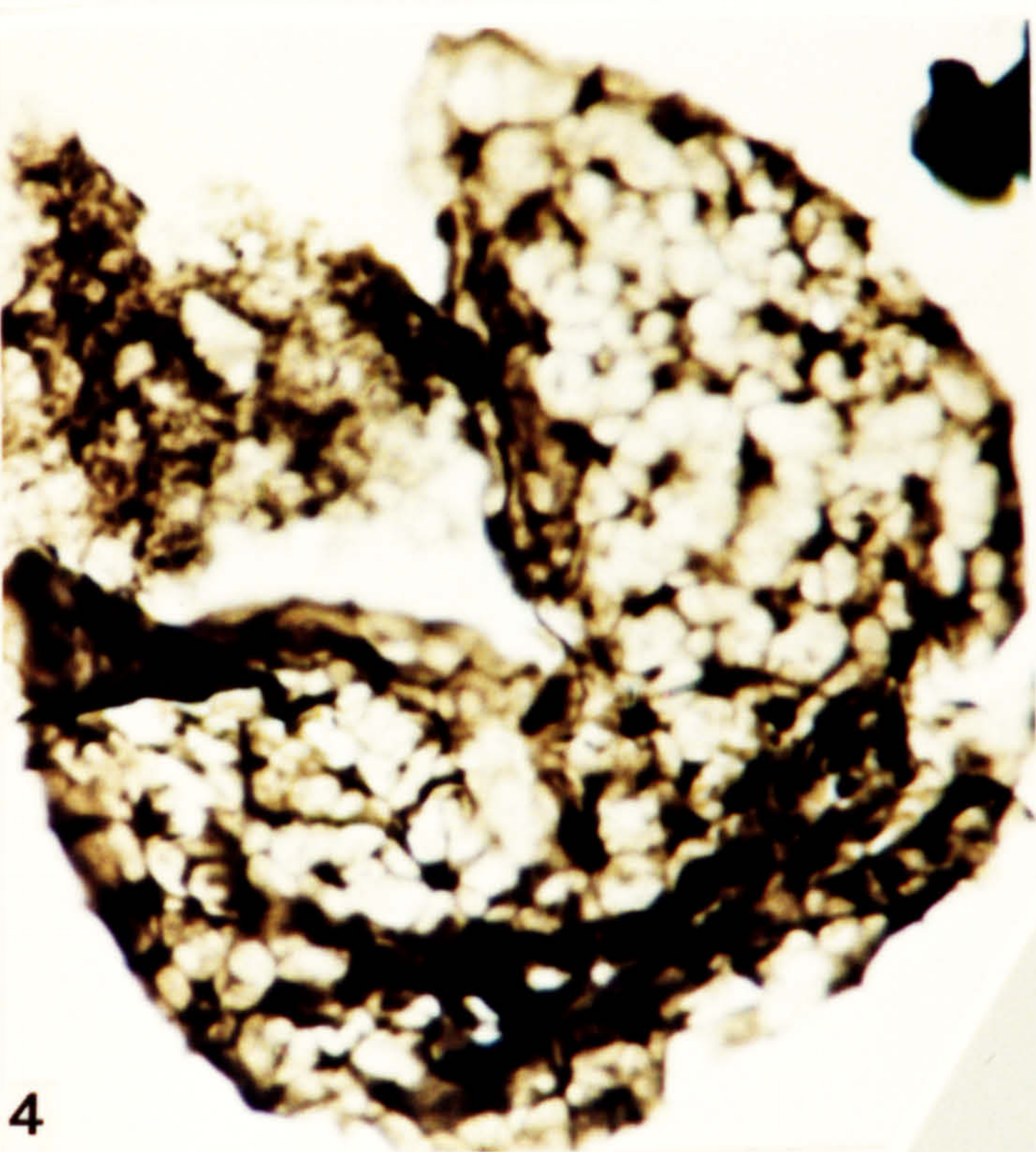
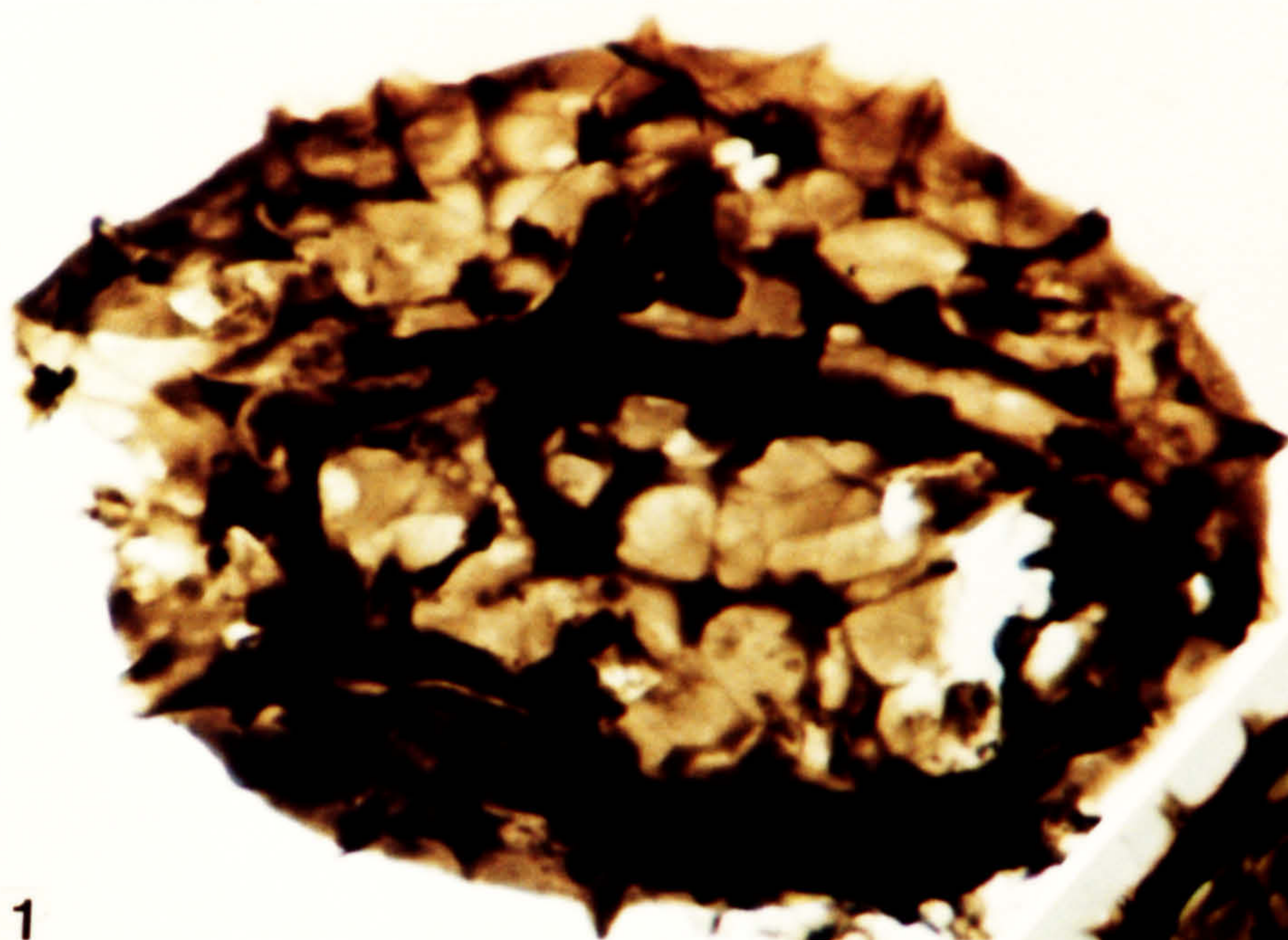


Plate 83.

Acritarchs from the Argillaceous Shale Formation, Ludlow in age.

1. *Dictyotidium* sp. 2. DW 232, FS-1, K32\1.
2. *Dictyotidium dictyotum* (Eisenack) Eisenack 1955. JW 224, FS-2, T25\3.
3. *Dictyotidium* sp. 2. JW 10, FS-4, G12\2.
4. *Dictyotidium dictyotum* (Eisenack) Eisenack 1955. DW 235, FS-6, X39\2.
5. *Diexallophasis denticulata* (Stockmans & Williere) Loeblich 1970. JW 10, FS-4, J28\4.
6. *Diexallophasis denticulata* var. *rigida* (Cramer) comb. nov. DW 232, FS-1, D28\1.





**Plate 84.**

Acritarchs from the Argillaceous Shale Formation, Ludlow in age.

1. *Diexallophasis denticulata* (Stockmans & Williere) Loeblich 1970. JW 10, FS-4, R12\4.
2. *Diexallophasis?* sp. DW 235, 1-3, N19\2.
3. *Diexallophasis remota* var. *remota* (Deunff) Fensome *et al.* 1990. DW 235, 1-3, E5\1.
4. *Diexallophasis remota* var. *remota* (Deunff) Fensome *et al.* 1990. DW 232, FS-1, U14\4.
5. *Diexallophasis remota* (Deunff) Playford 1977. DW232, FS-1, B7\2.
6. *Leiosphaeridia* sp. DW 232, FS-1, B19\3.

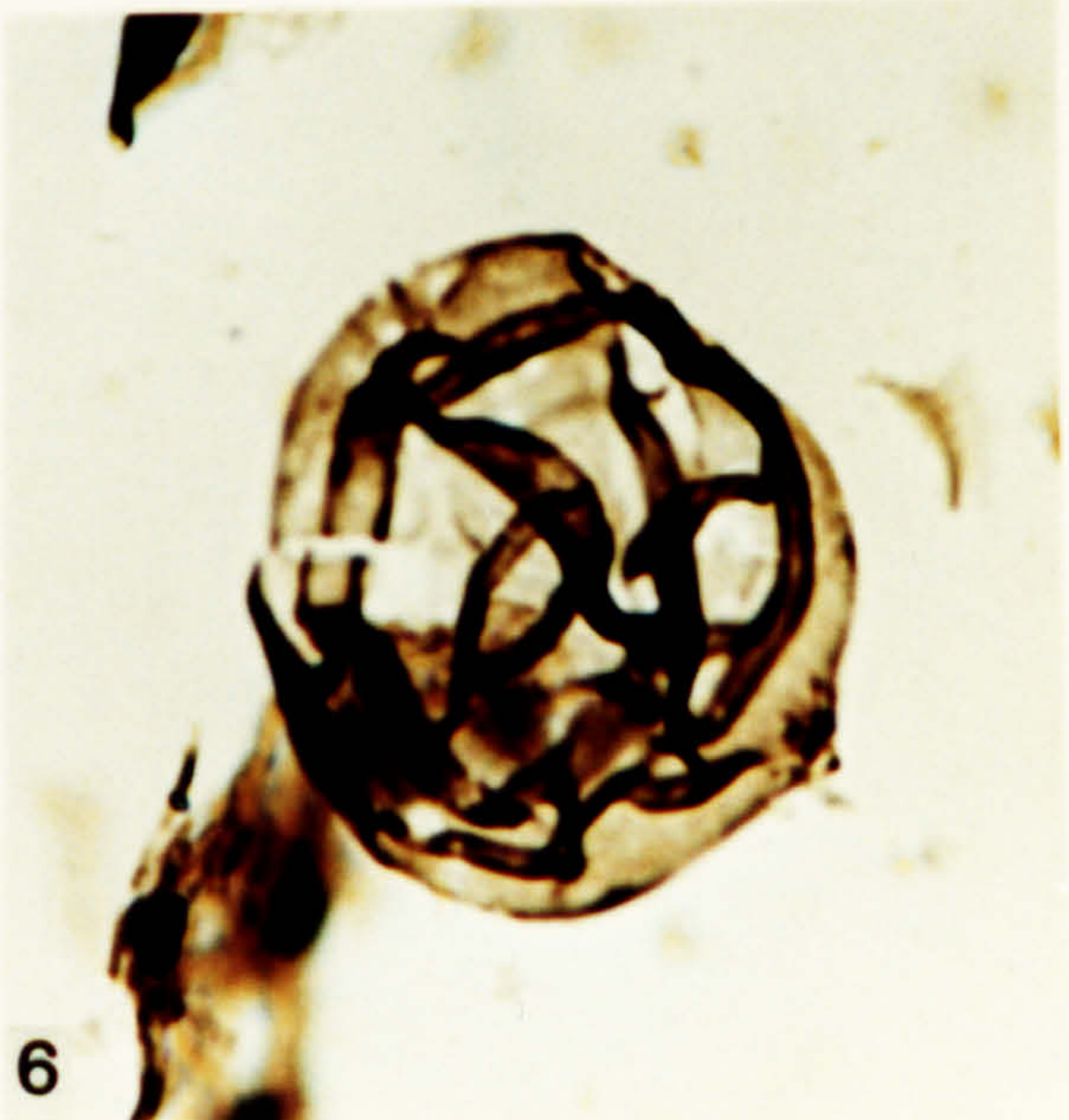
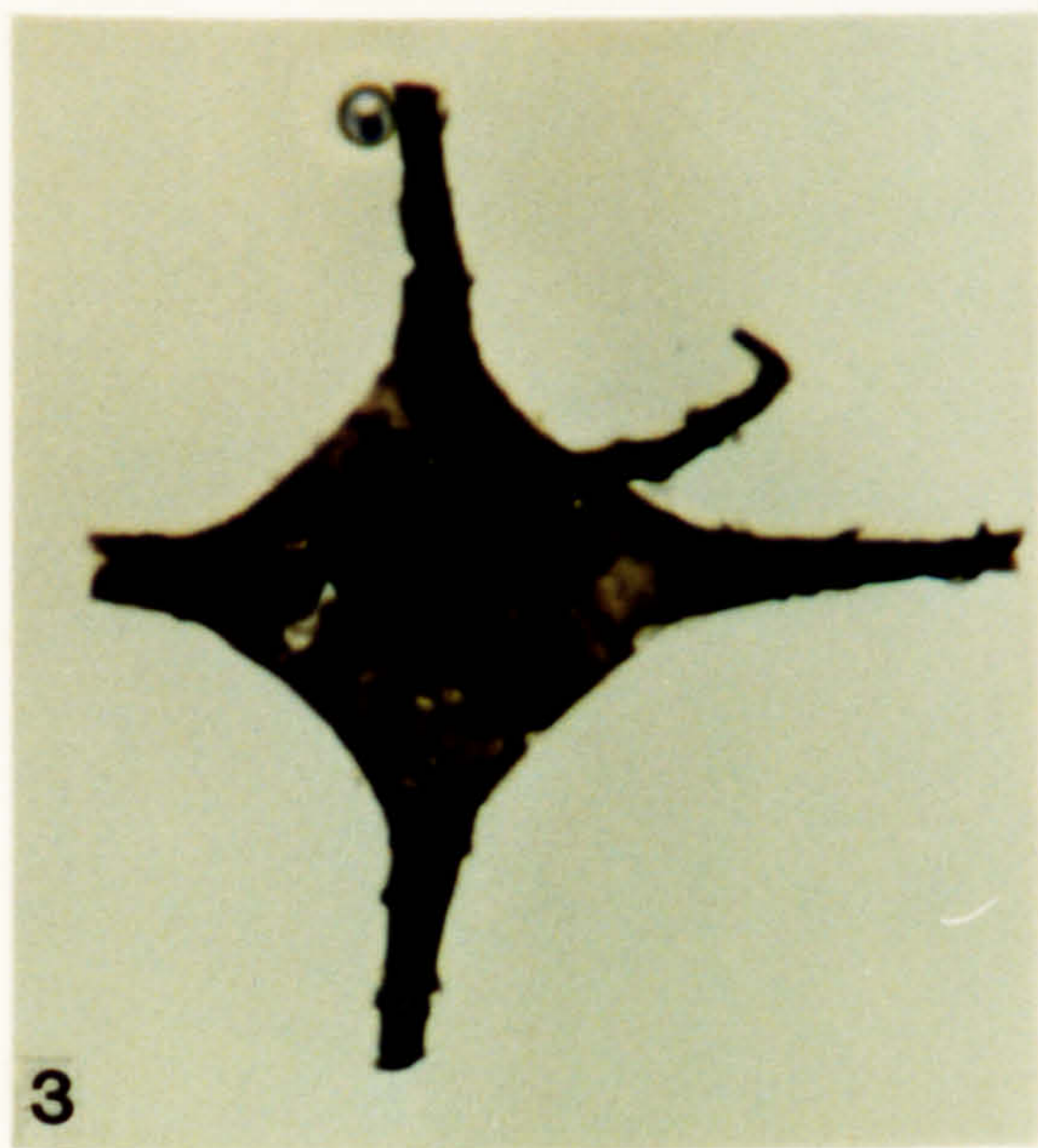
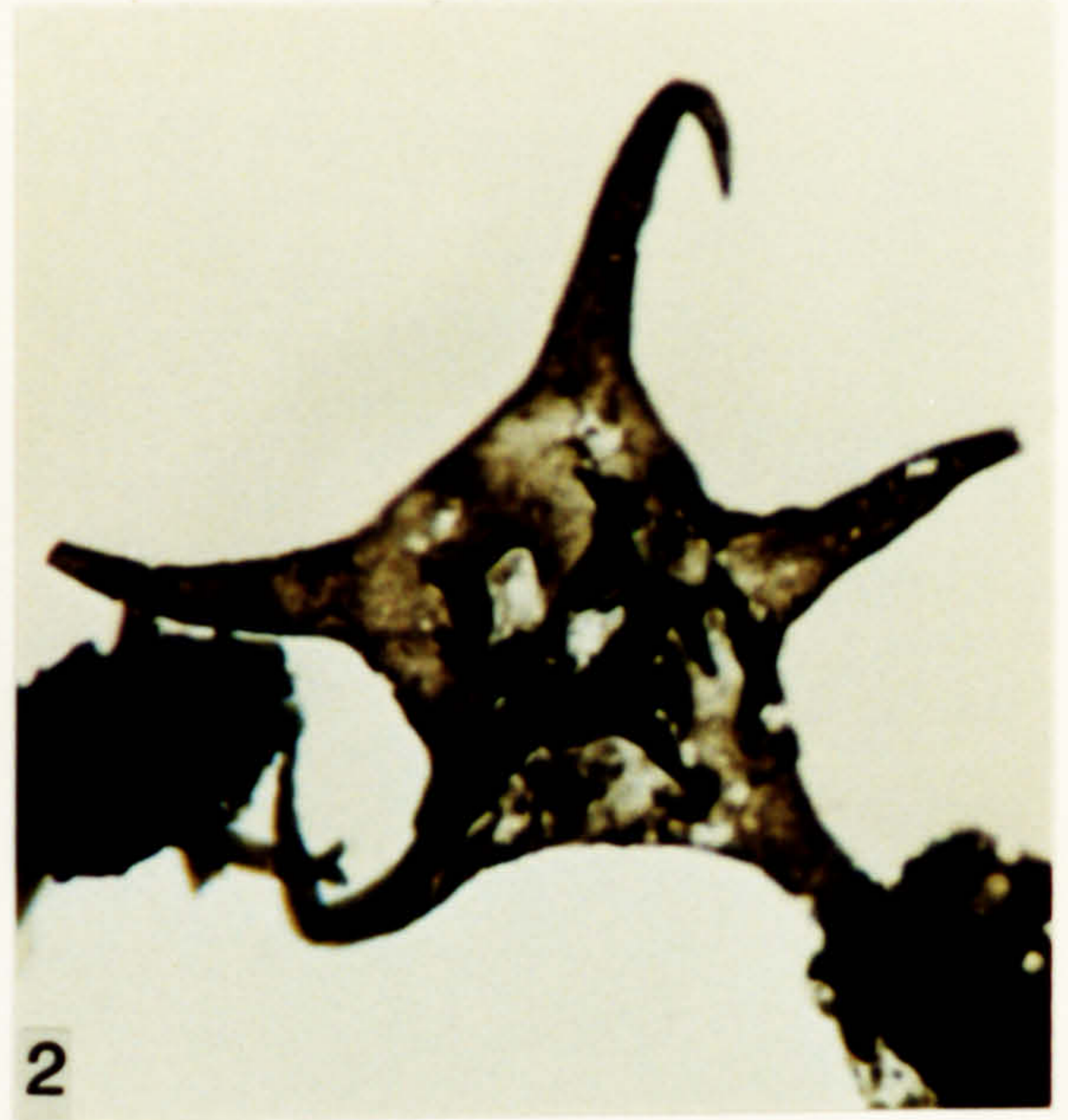
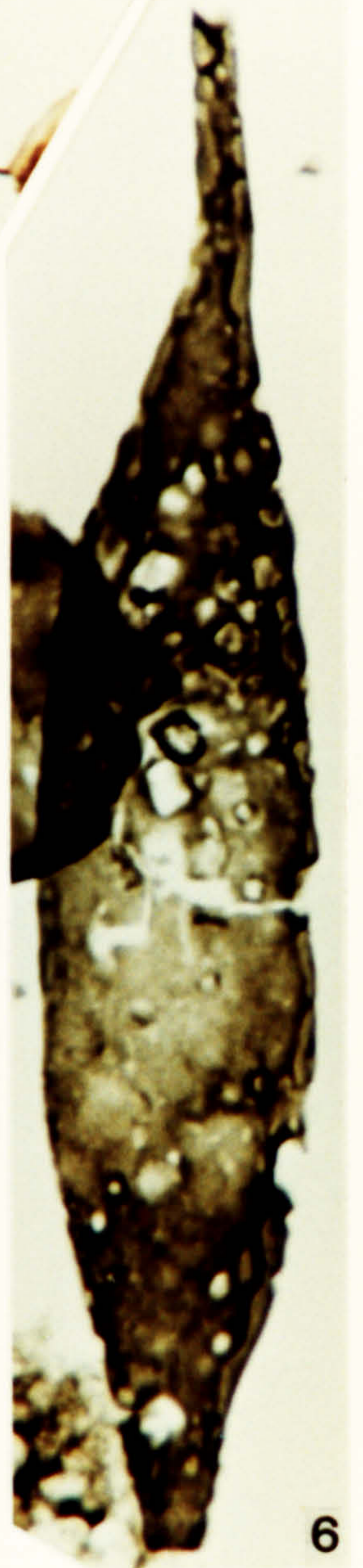
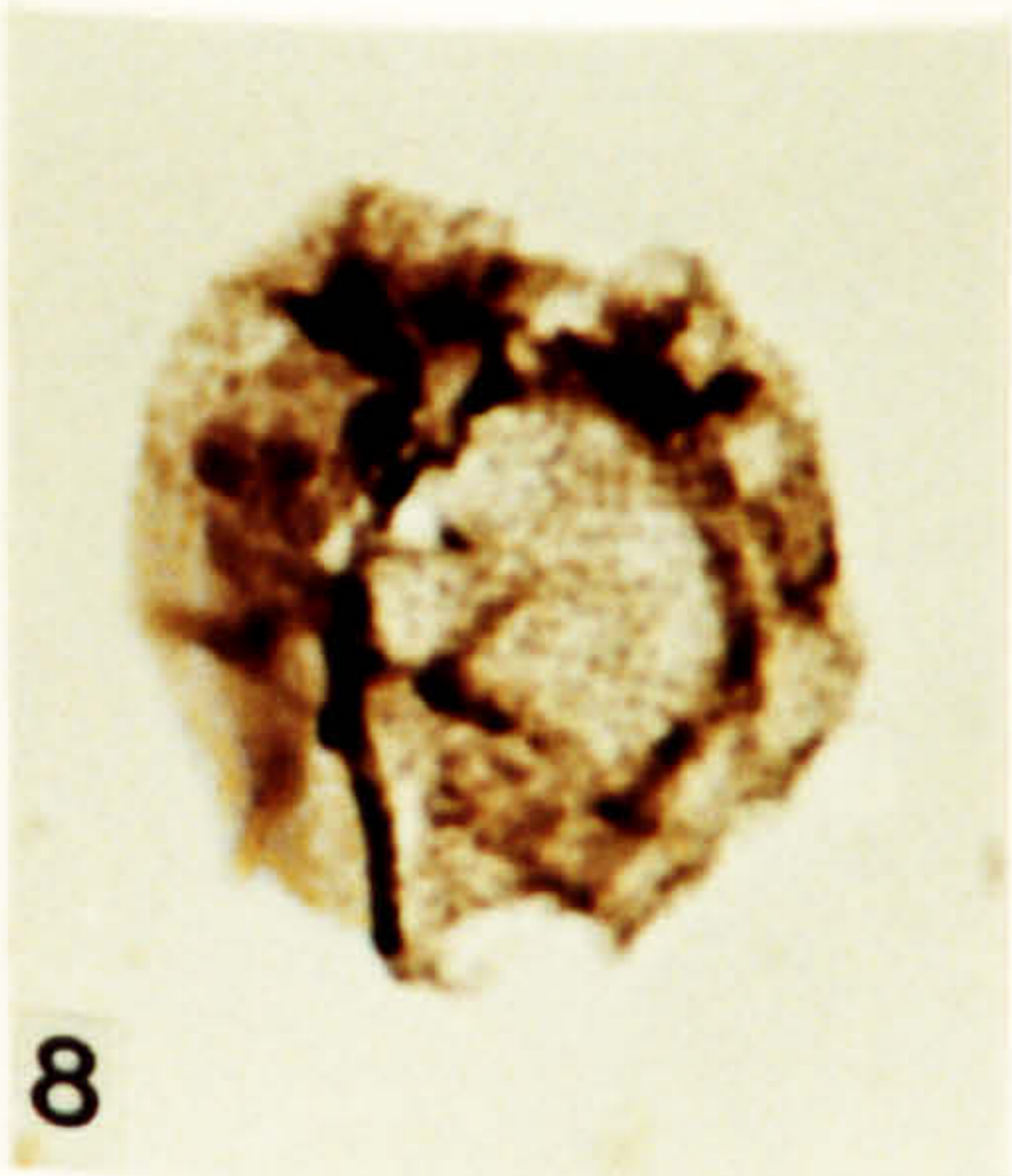
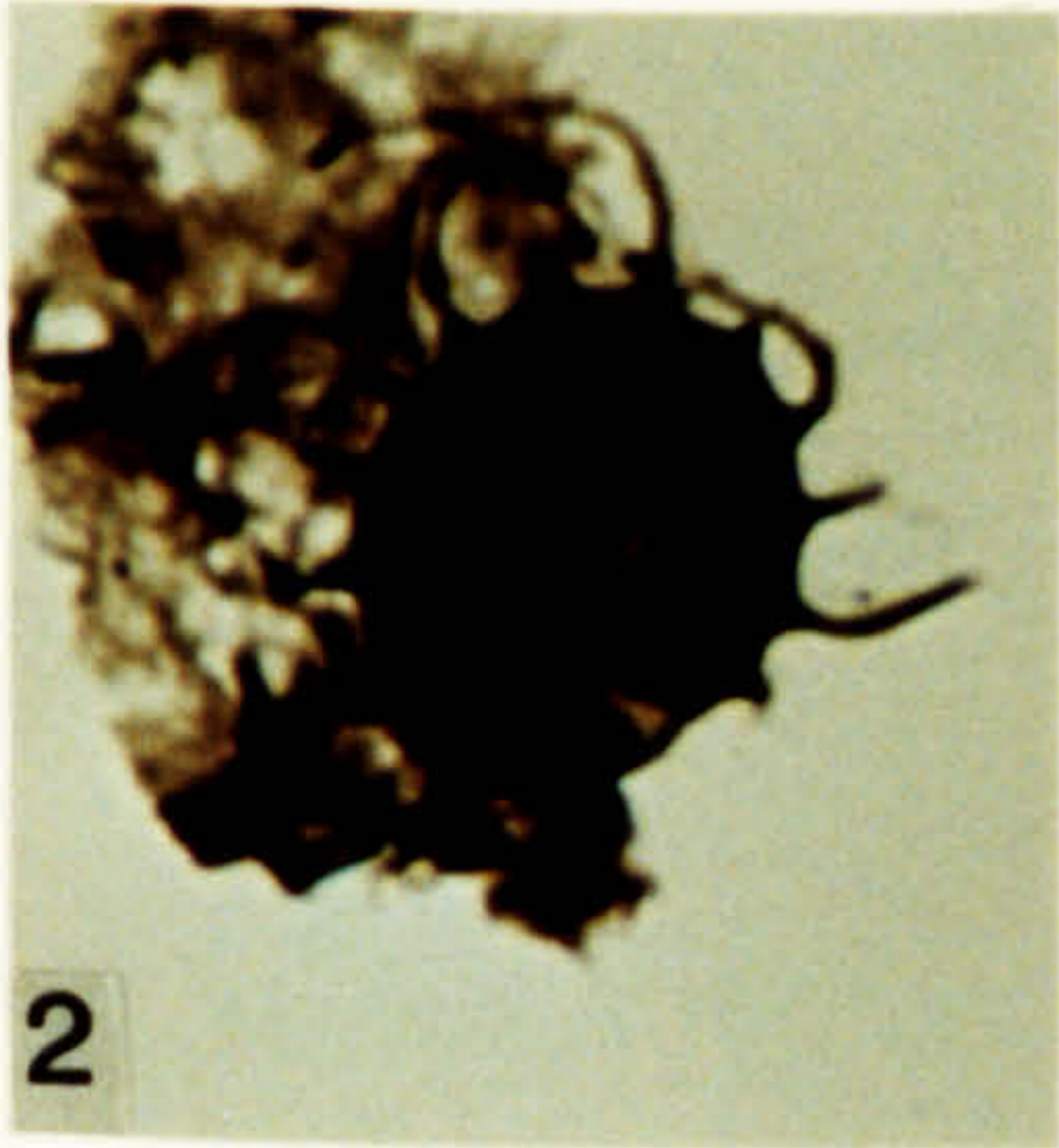
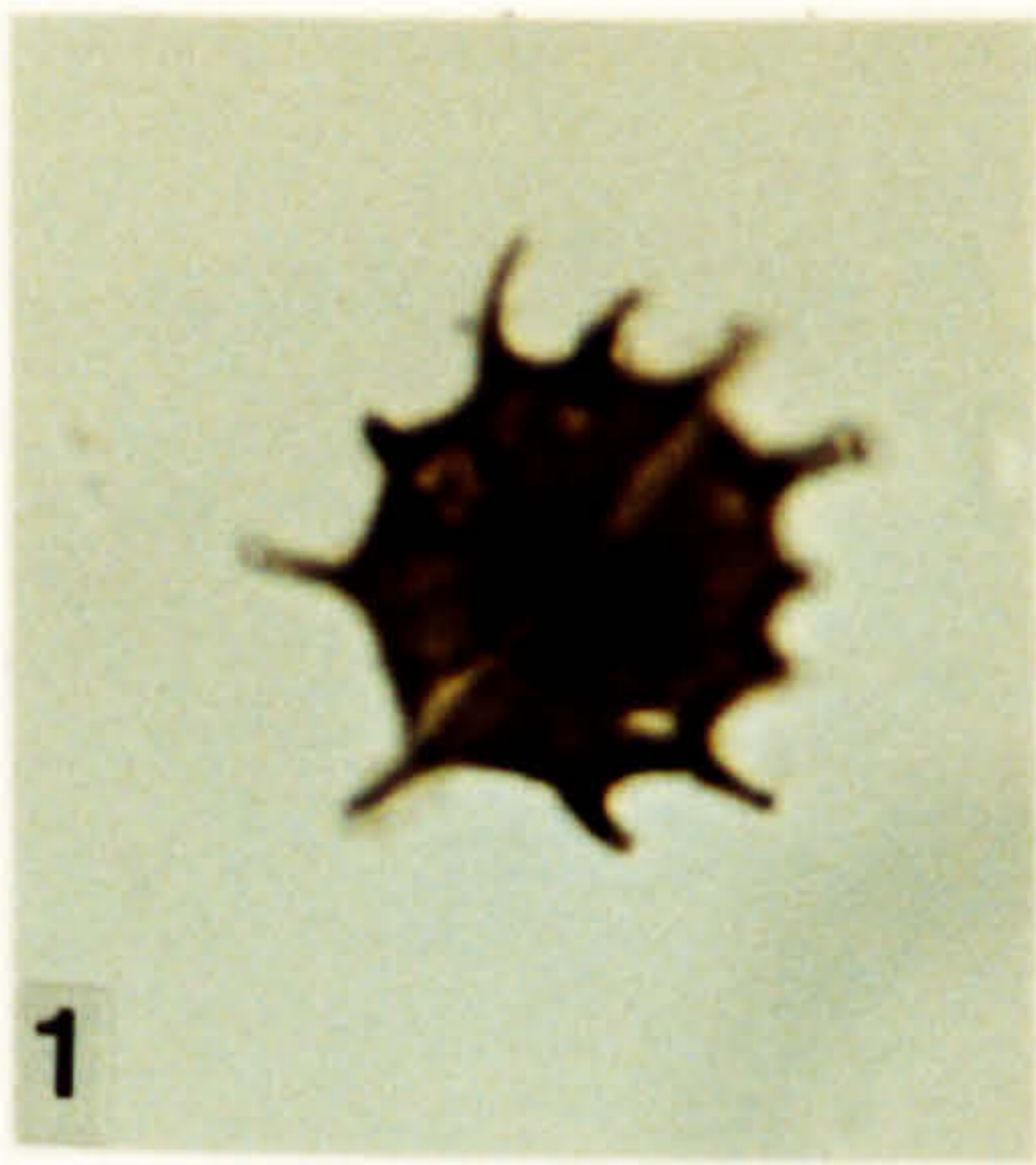


Plate 85.

Acritarchs from the Argillaceous Shale Formation, Ludlow in age.

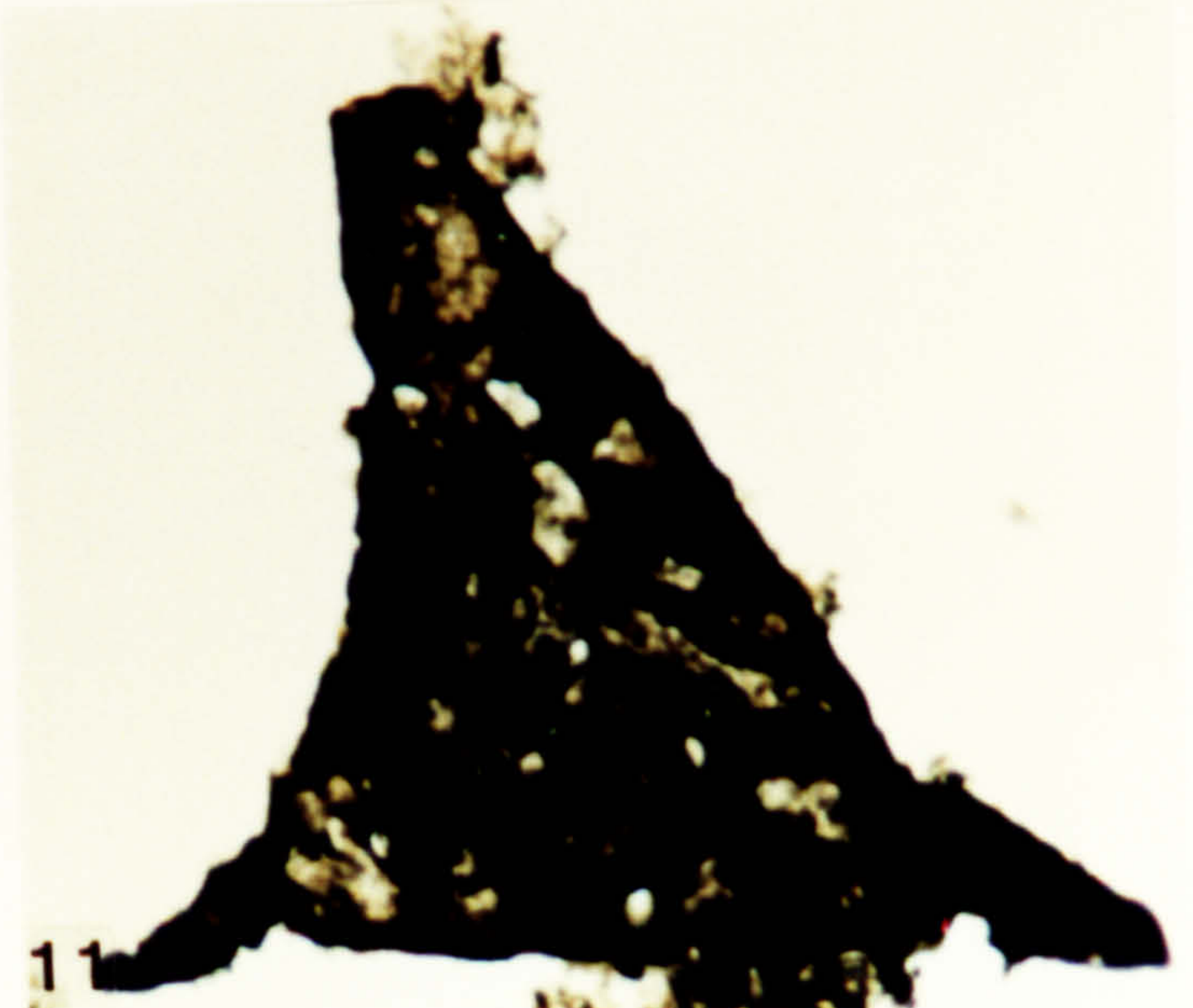
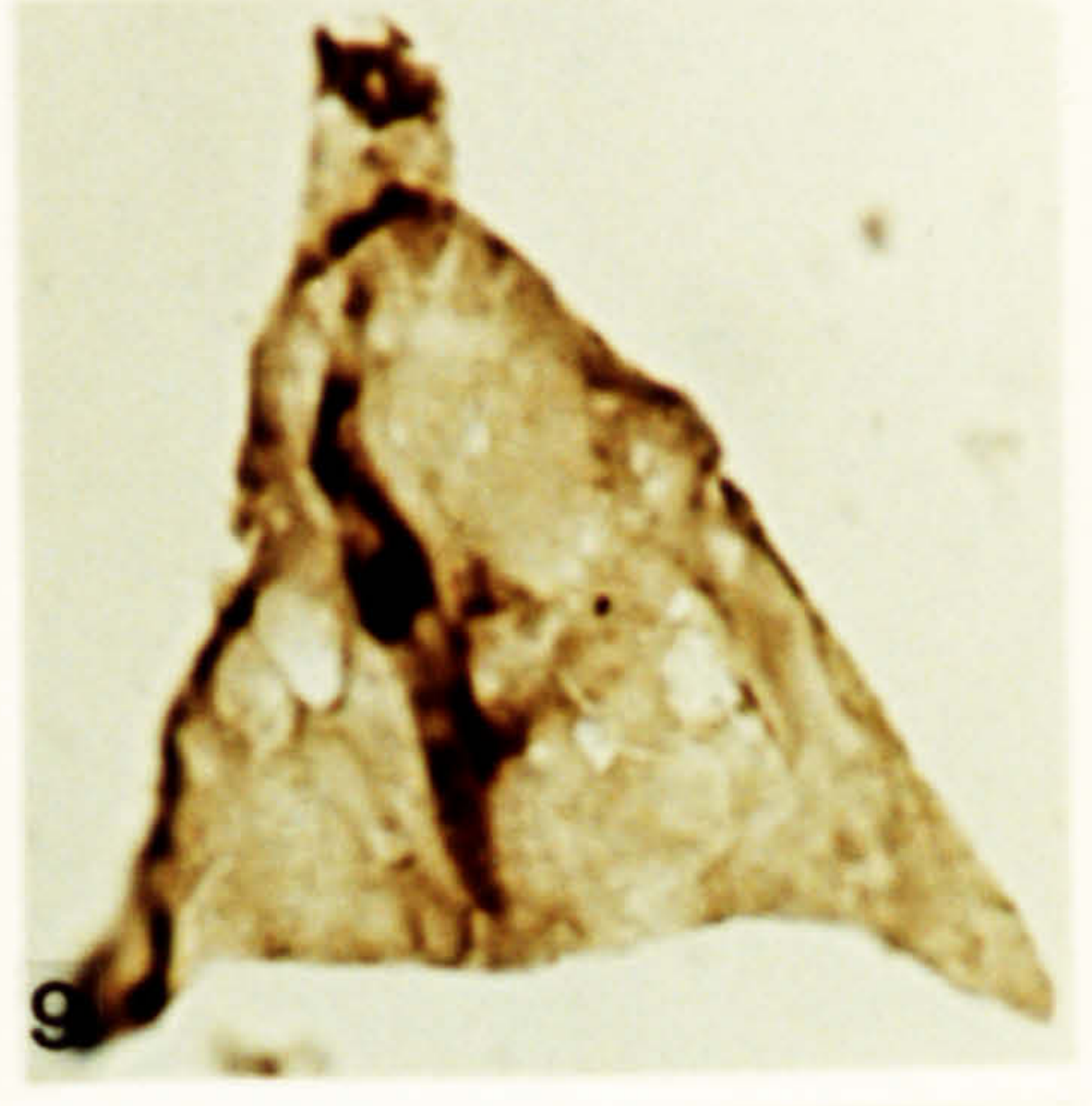
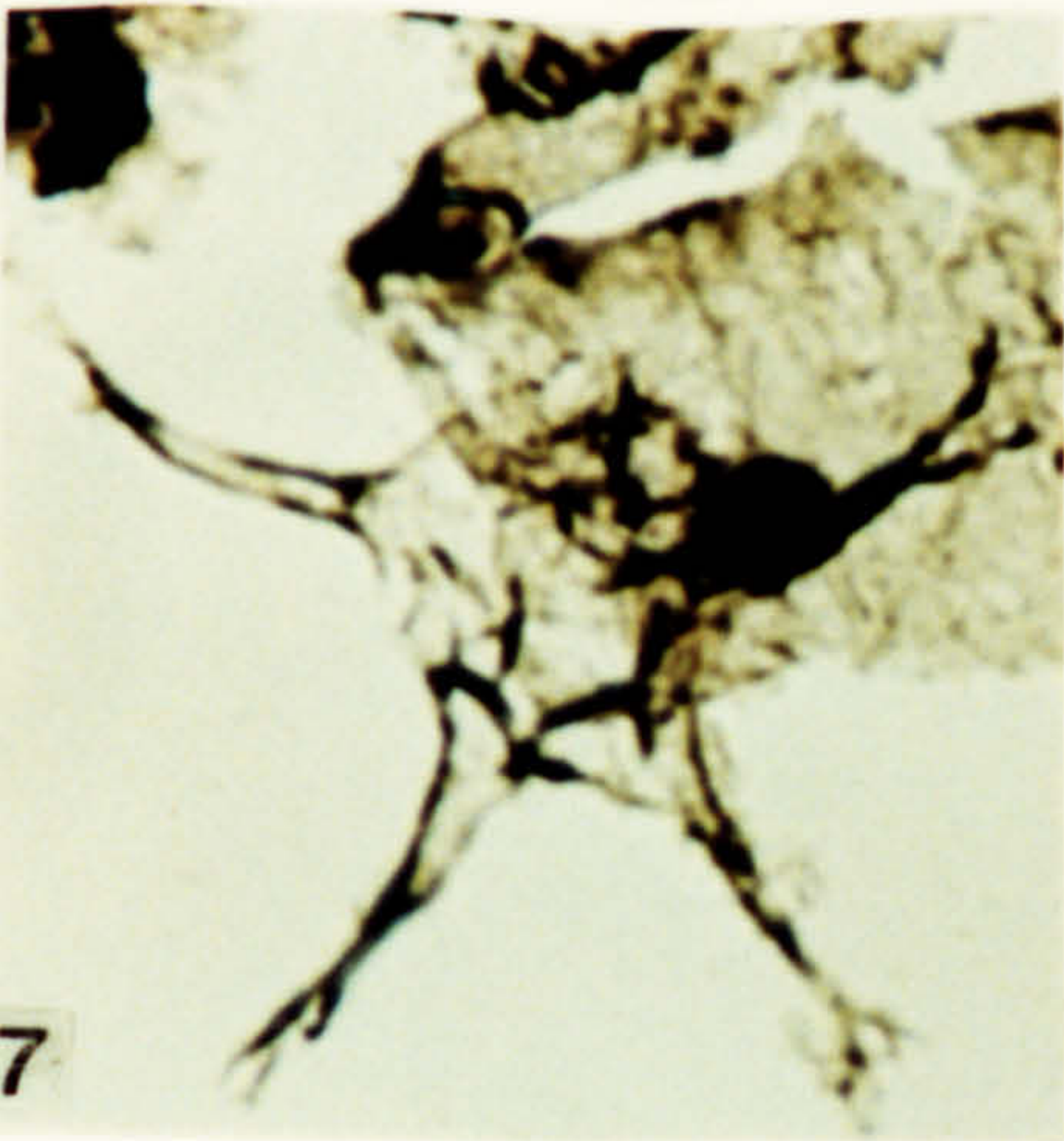
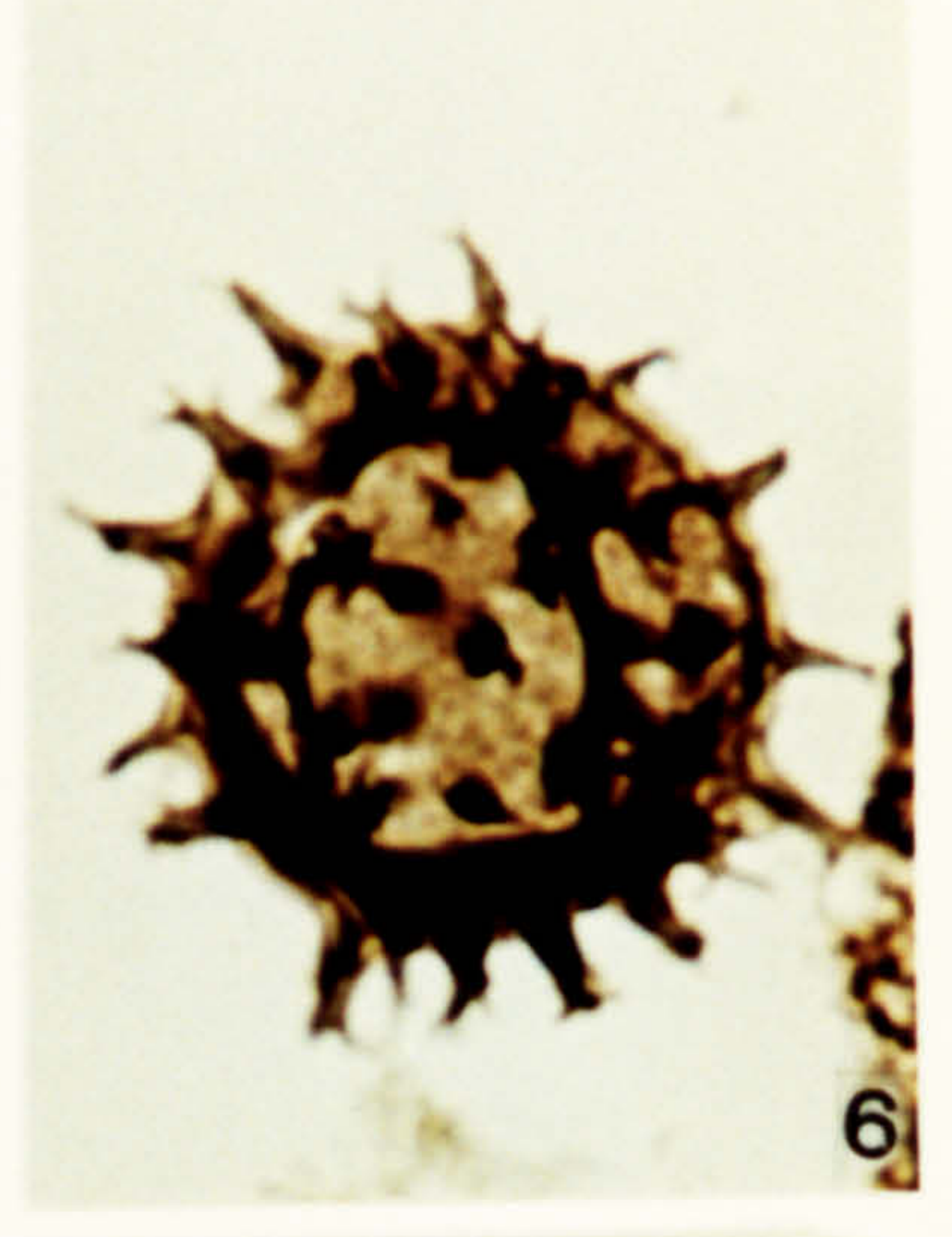
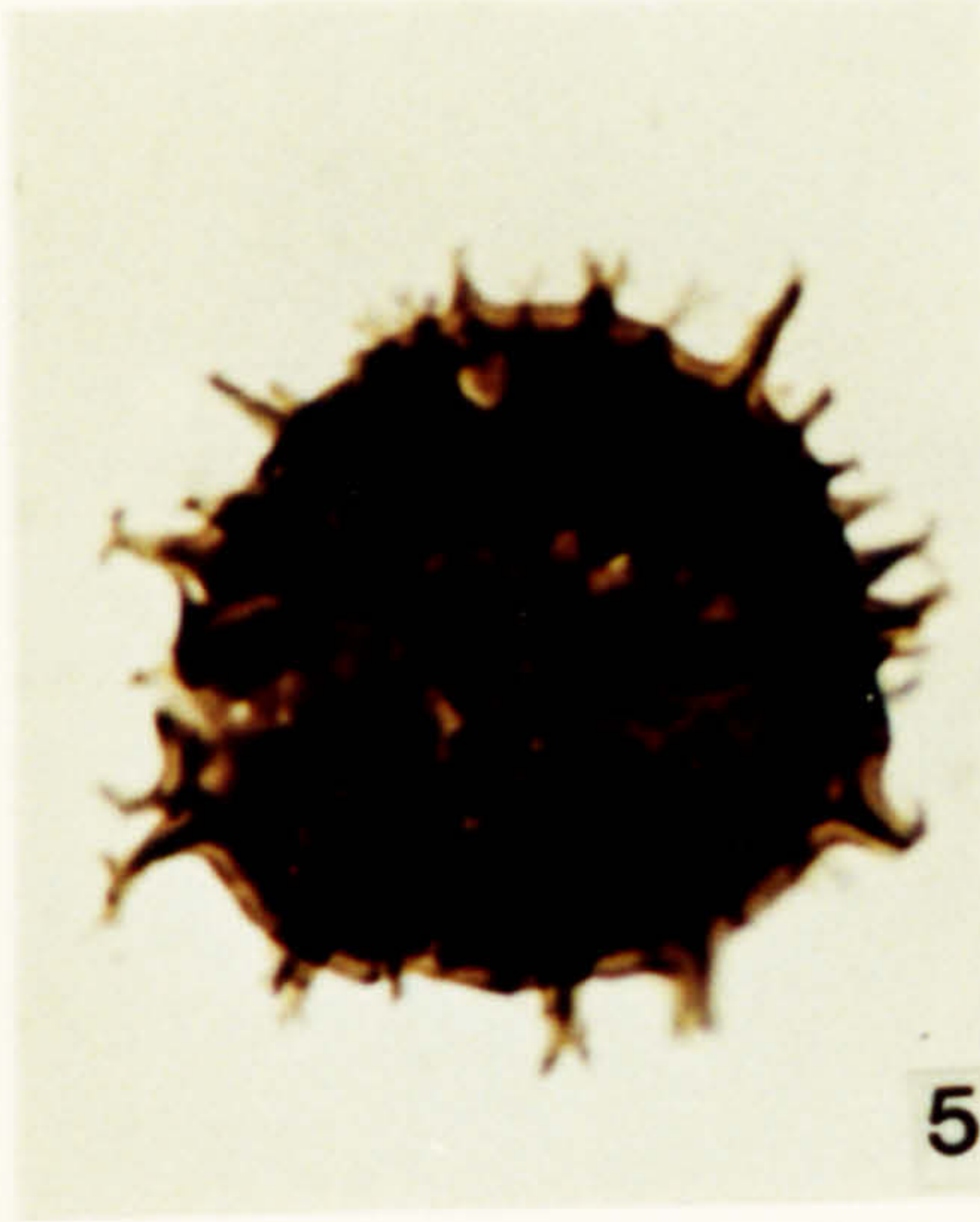
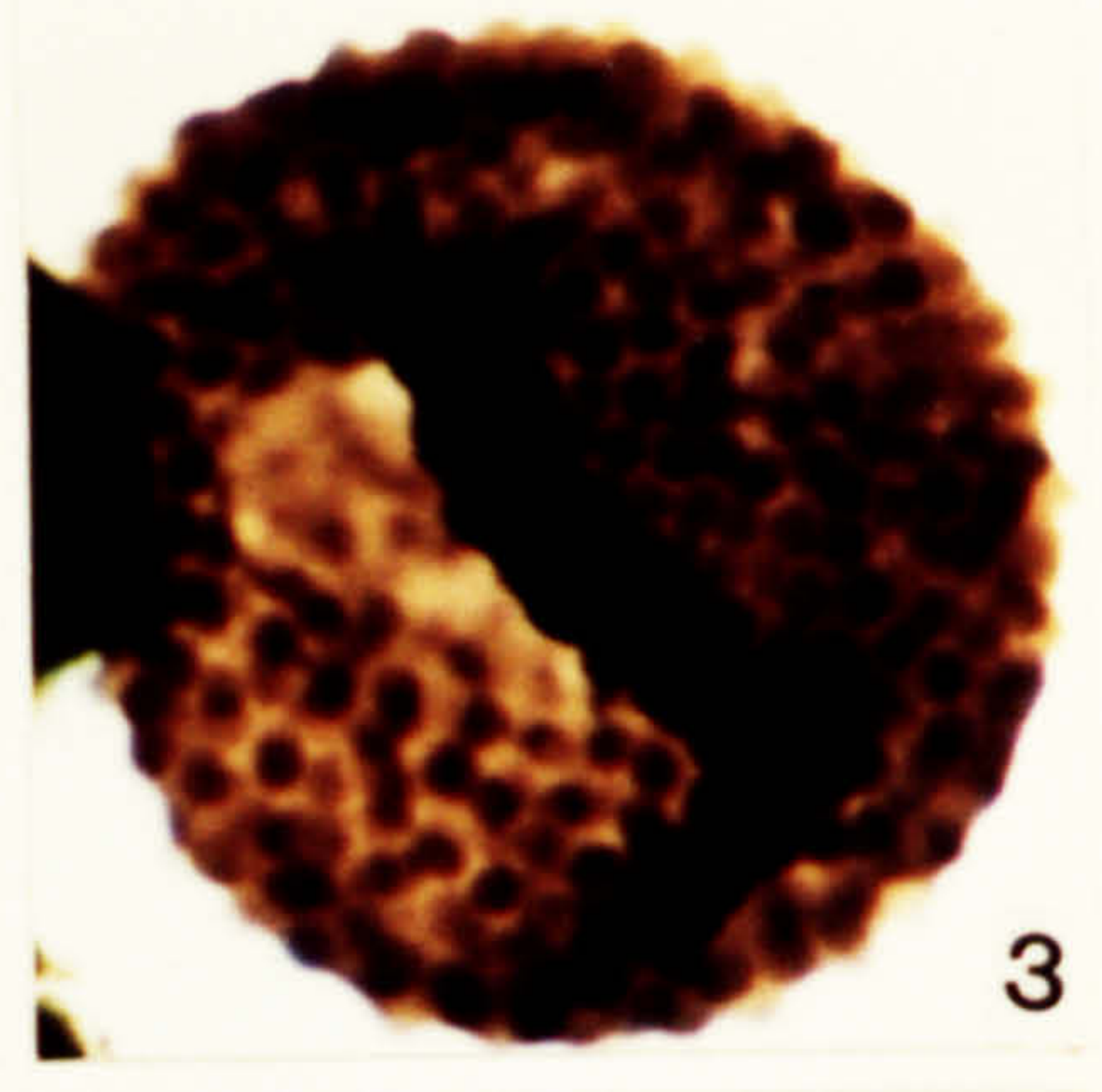
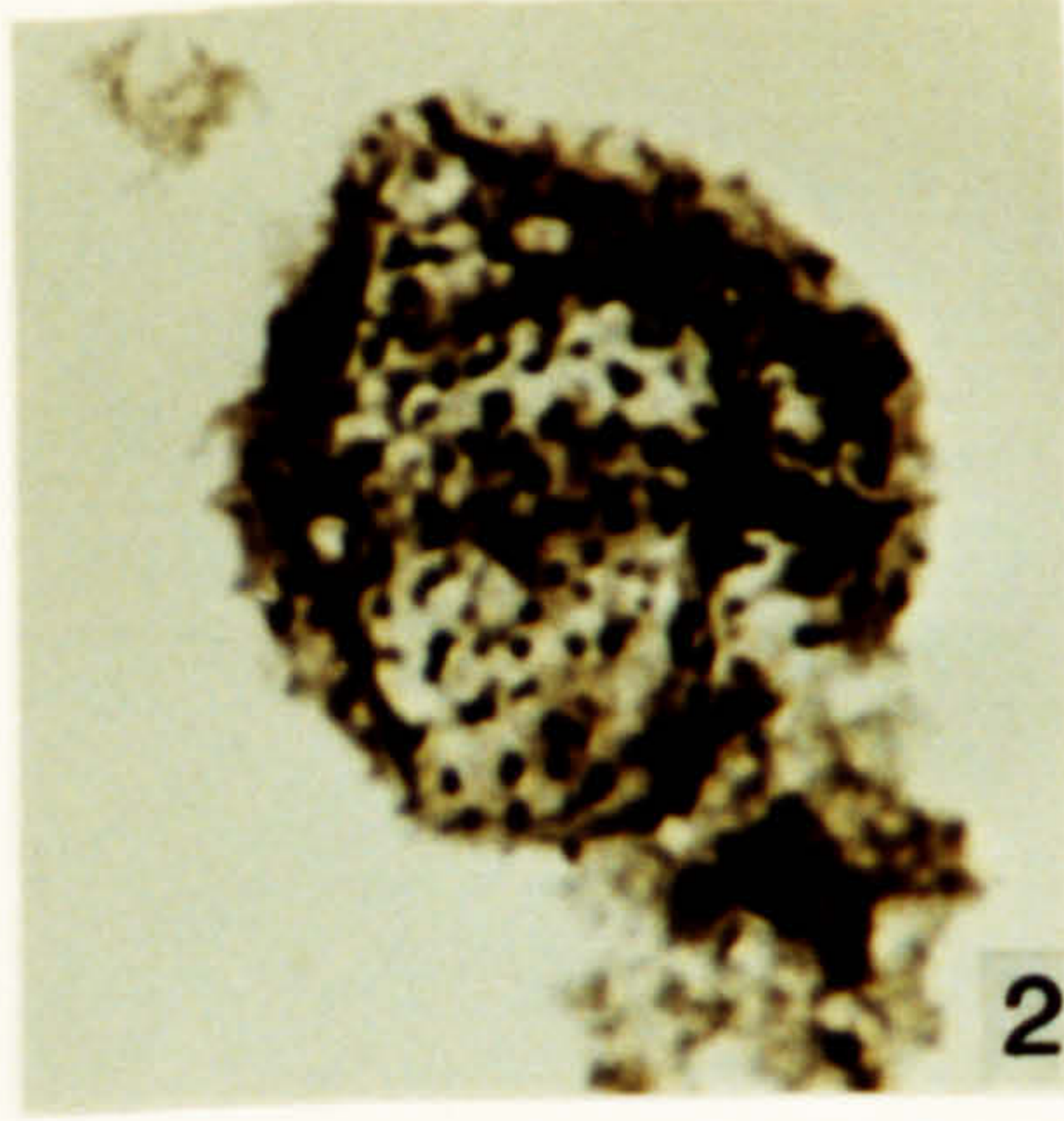
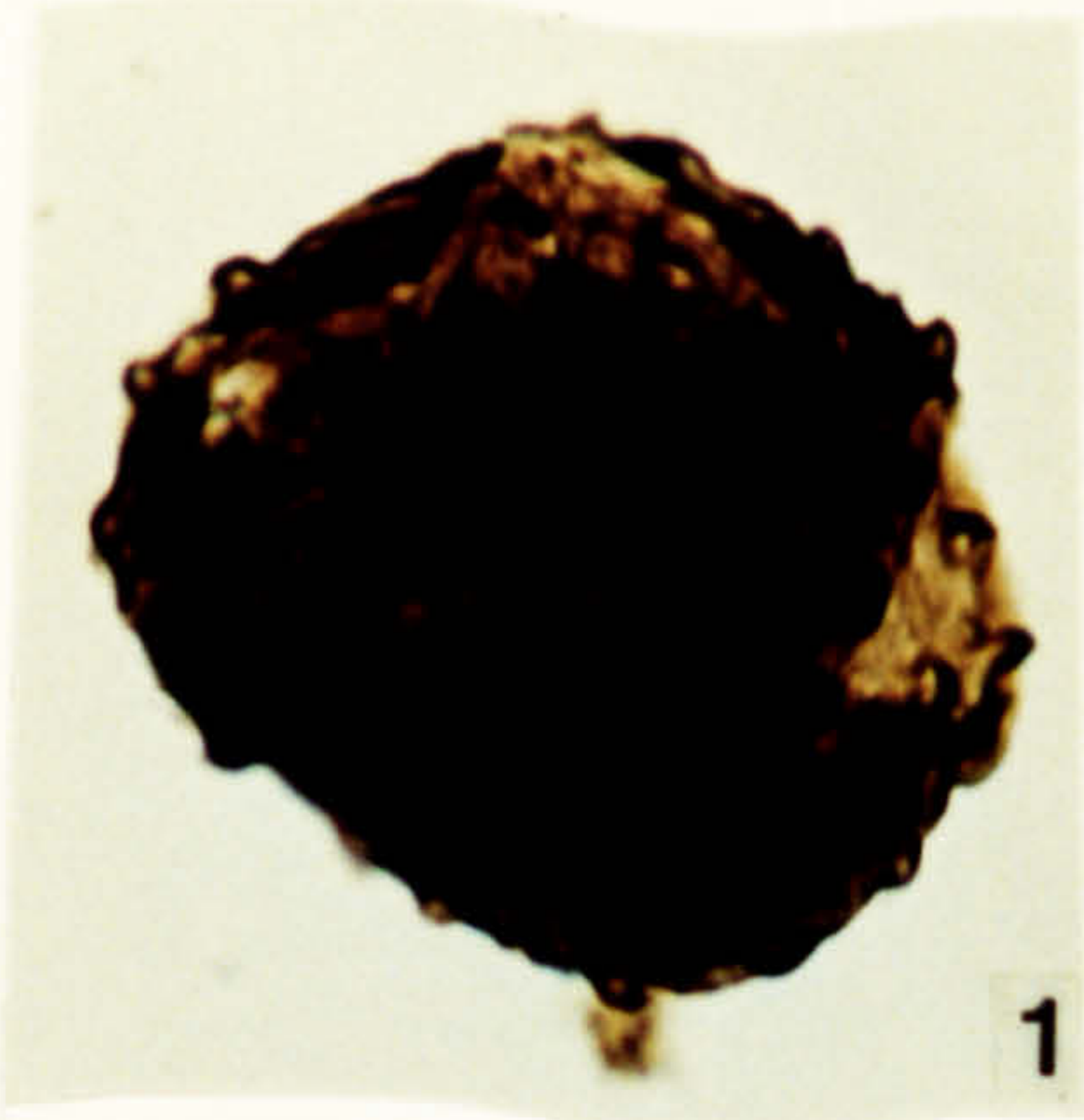
1. *Duvernaysphaera gothica* Martin 1967. DW 235, FS-5, Q16\1.
2. *Duvernaysphaera gothica* Martin 1967. DW 235, FS-5, U32\4.
3. *Lophosphaeridium* sp. 7. DW 235, FS-5, N9\4.
4. *Leiofusa estrecha* Cramer 1964. DW 232, FS-1, F11\3, X550.
5. *Leiofusa estrecha* Cramer 1964. DW 232, FS-1, H28\4, X550.
6. *Leiofusa estrecha* Cramer 1964. JW 10, FS-4, X25\1.
7. *Lophosphaeridium* sp. 7. DW 235, FS-5, N9\3.
8. *Lophosphaeridium* sp. 7. DW 232, FS-1, F20\1.
9. *Dactylofusa striatifera* var. *striatifera* (Cramer) Fensome *et al.* 1990. DW 232, FS-1, B28\2, X550.
10. *Dactylofusa striatifera* var. *striatifera* (Cramer) Fensome *et al.* 1990. DW 232, FS-3, E15\4, X550.
11. *Dactylofusa striatifera* var. *striatifera* (Cramer) Fensome *et al.* 1990. JW 10, FS-4, X27\3.



**Plate 86.**

Acritarchs from the Argillaceous Shale Formation, Ludlow in age.

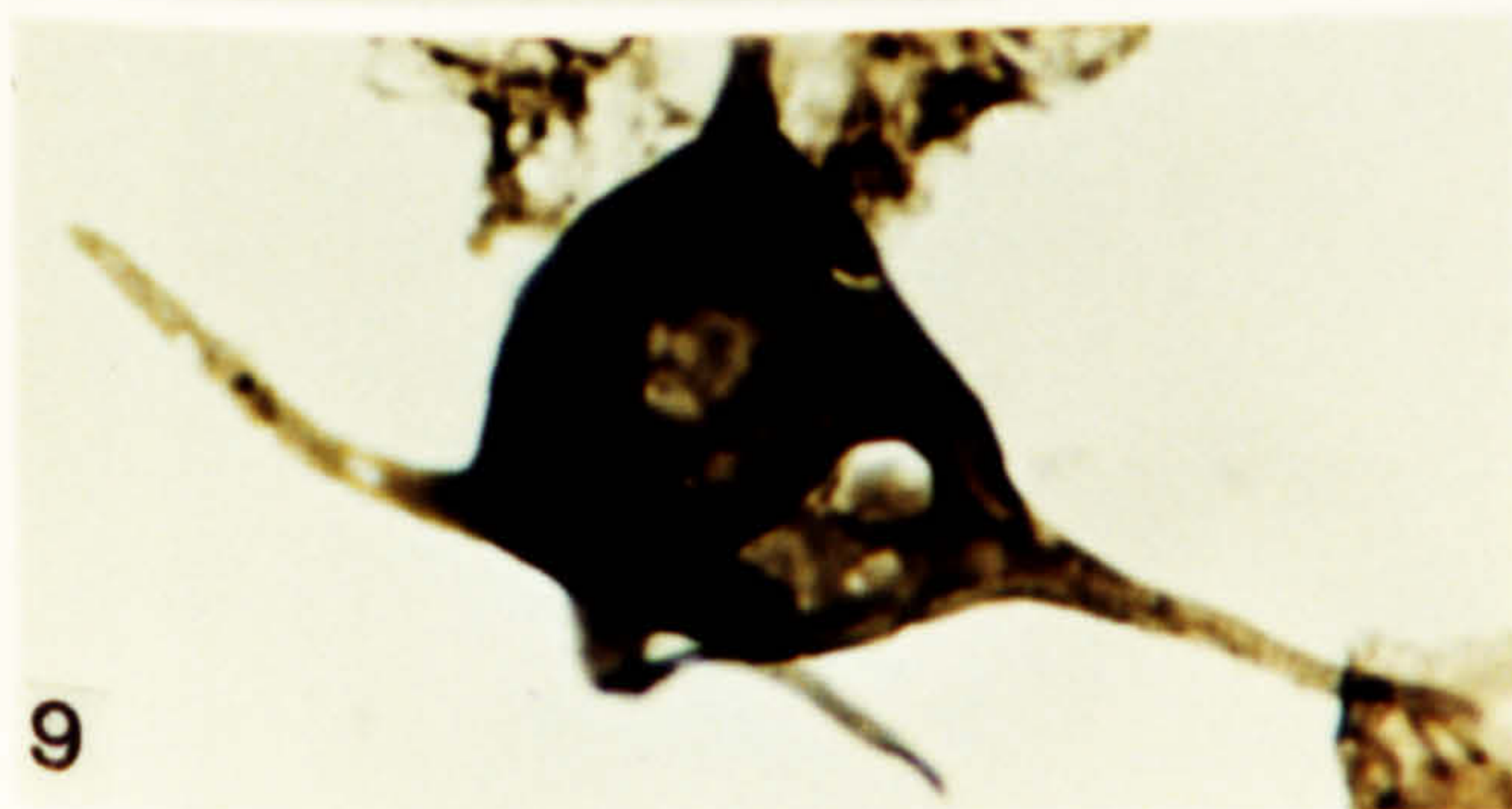
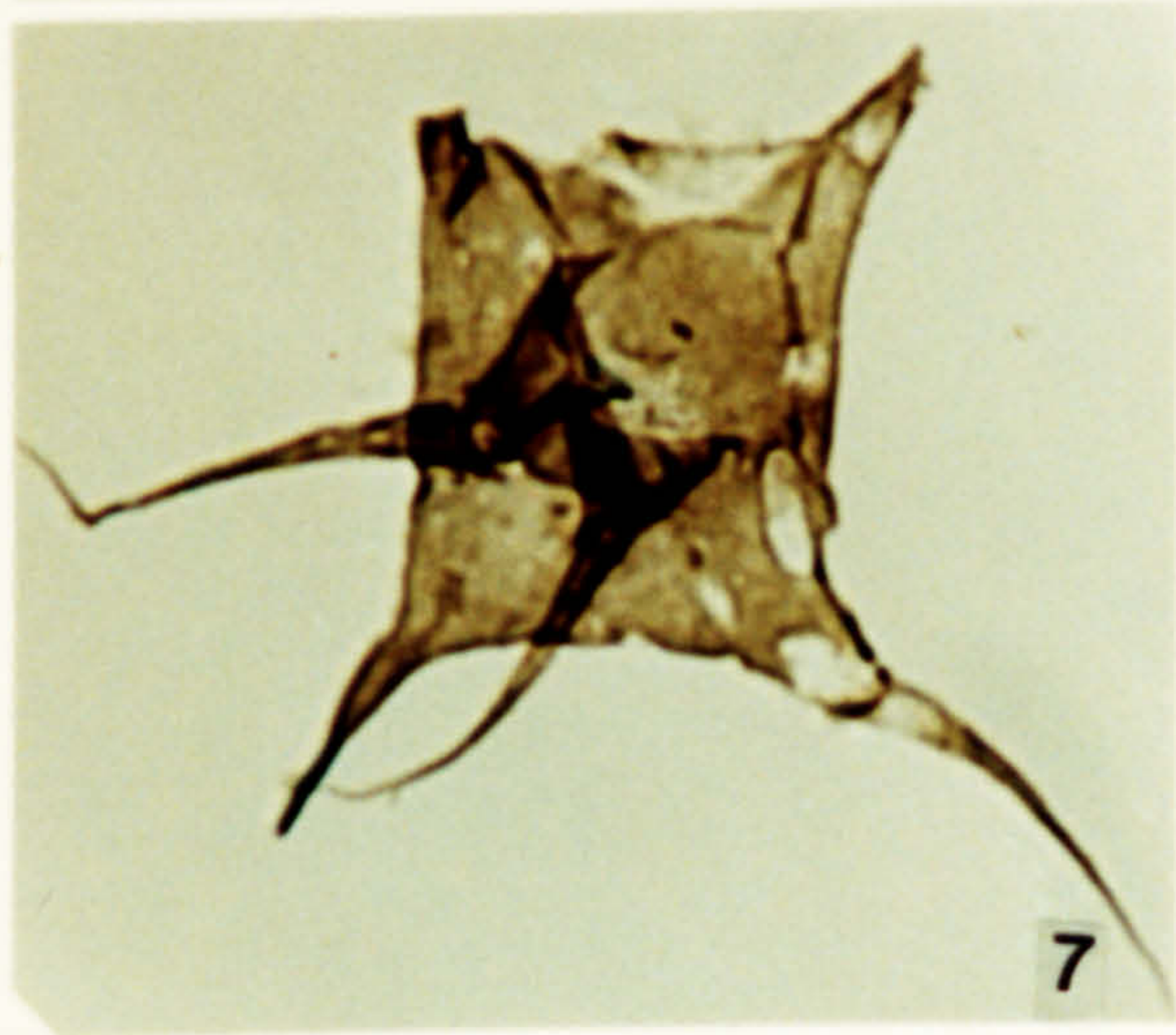
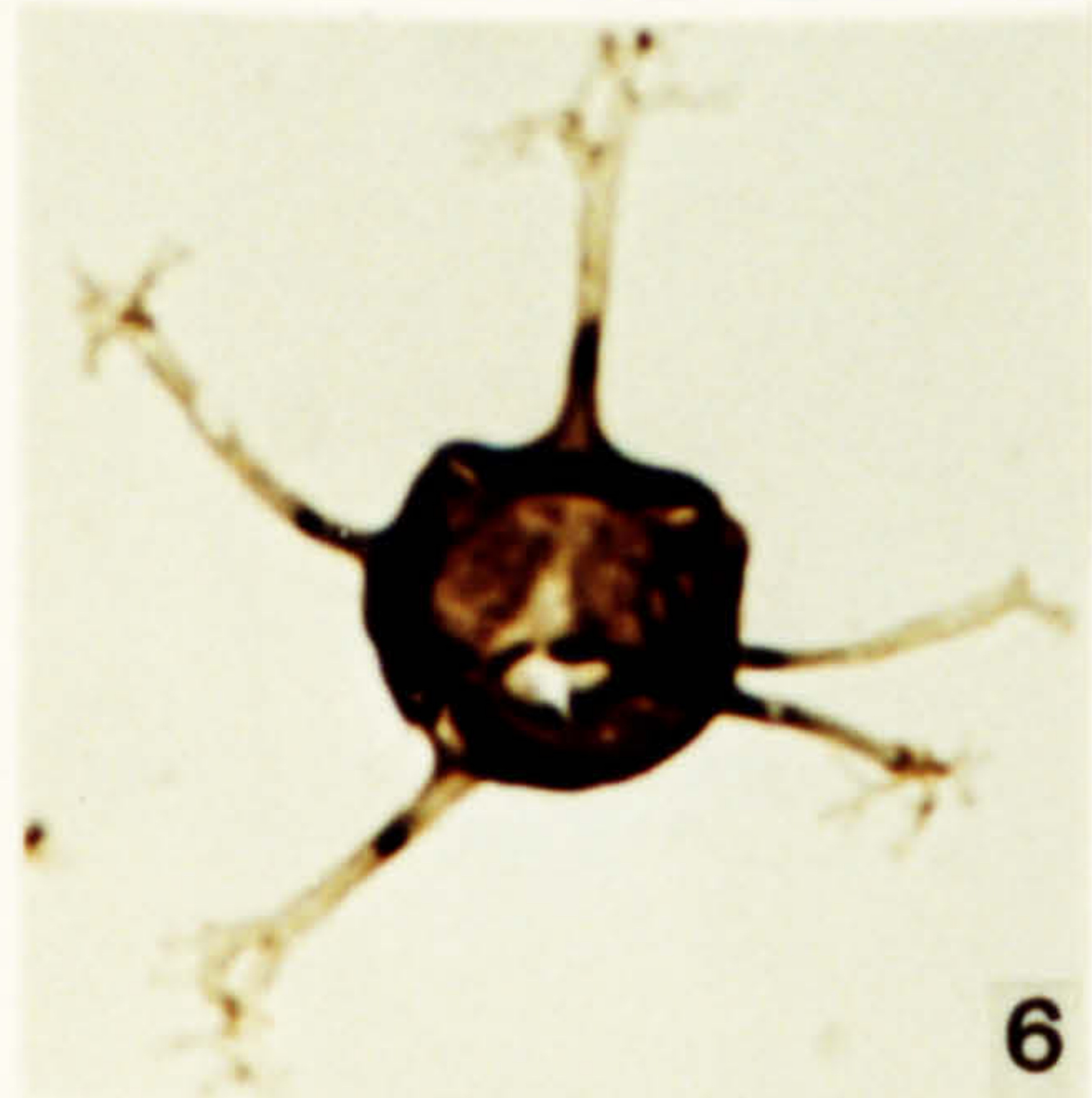
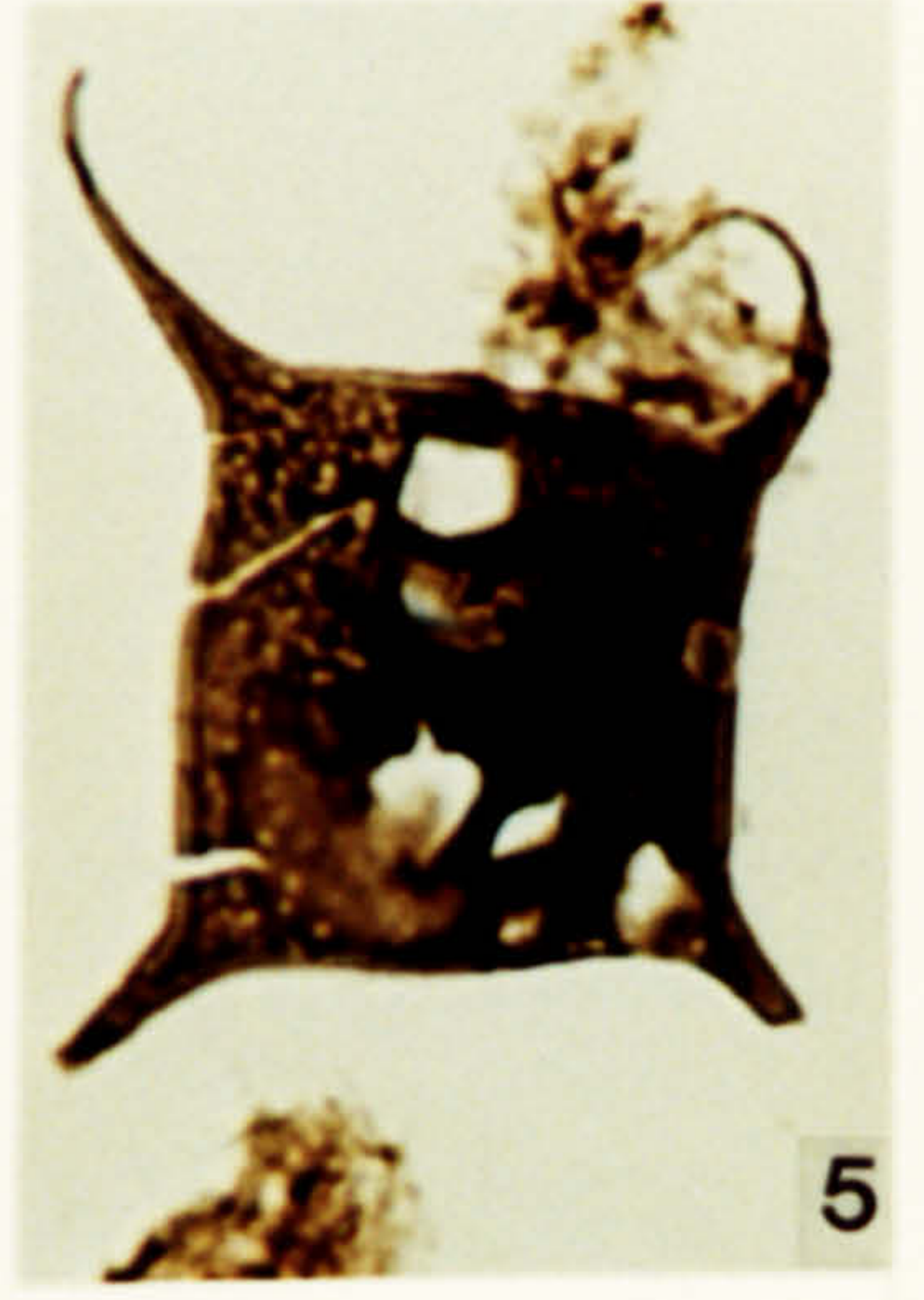
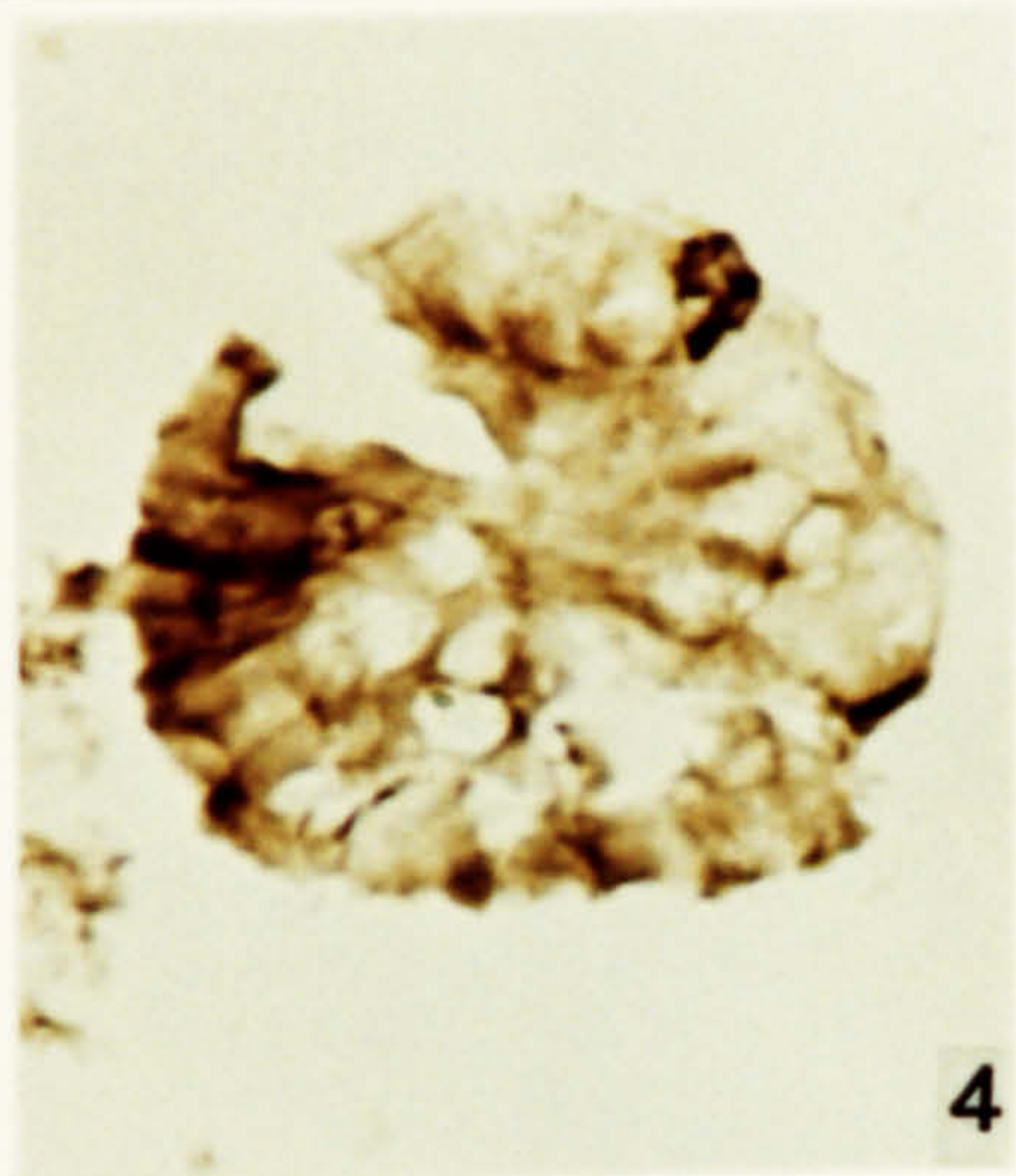
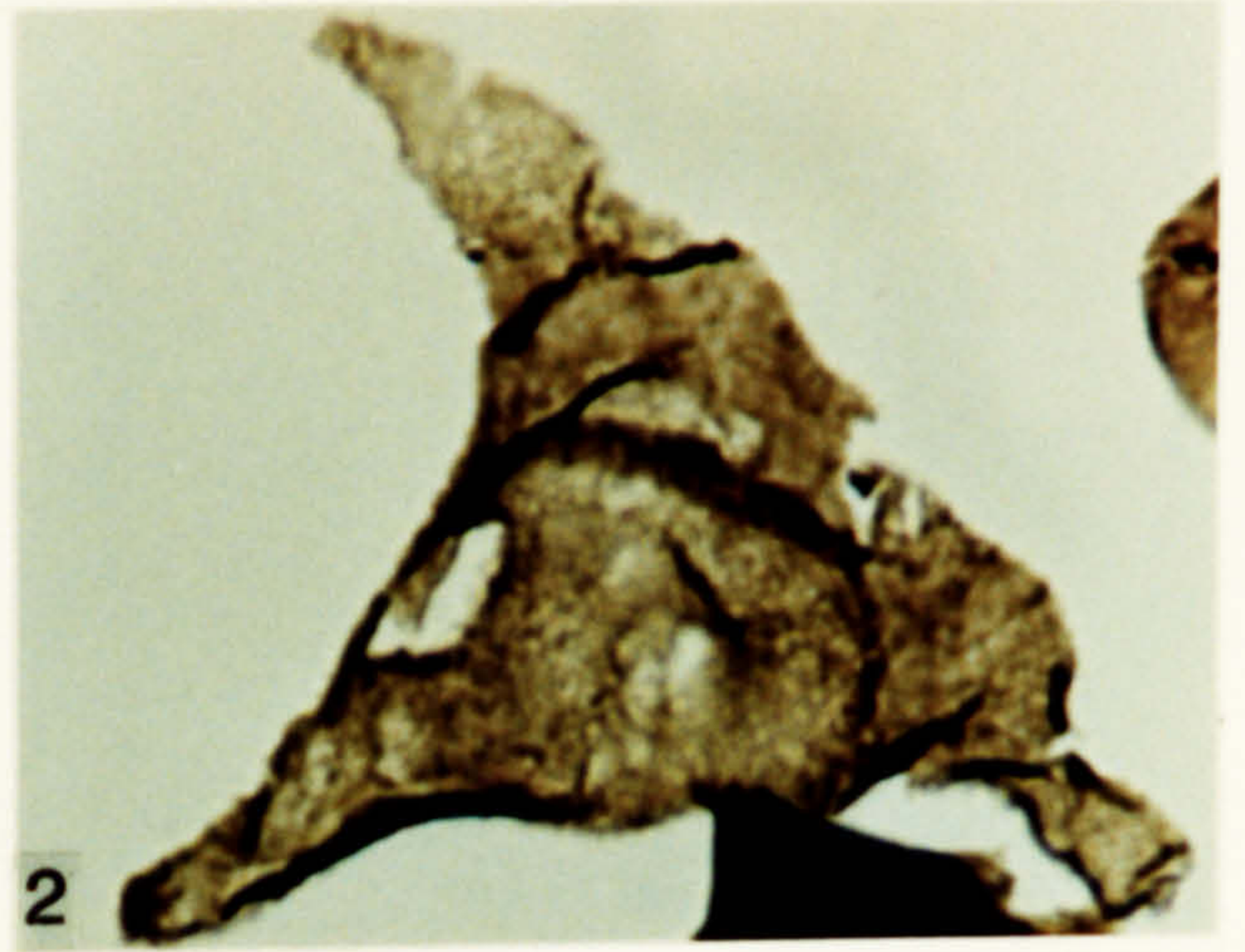
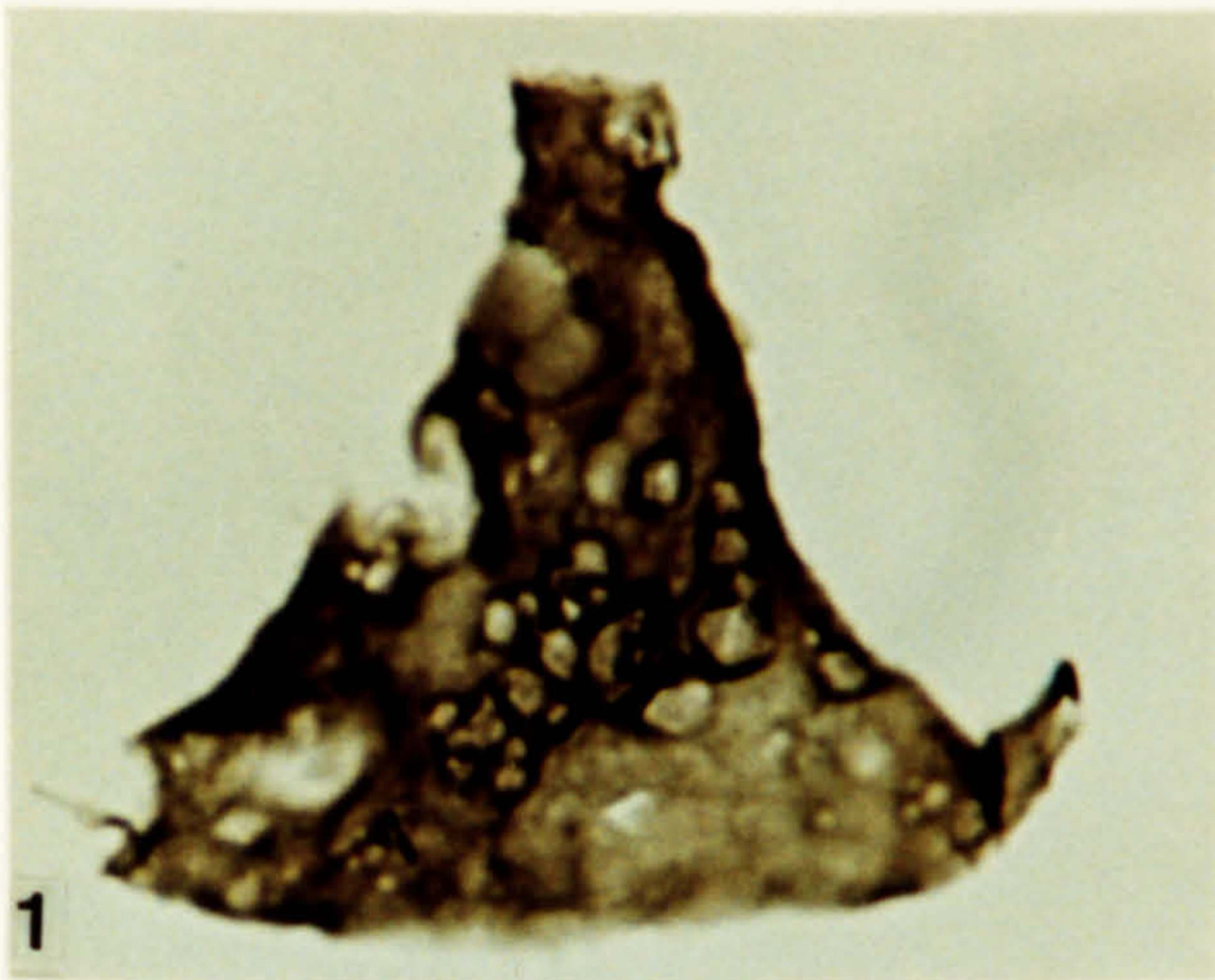
1. *Lophosphaeridium* sp. 8. DW 232, FS-1, X25\1.
2. *Lophosphaeridium* sp. JW 10, FS-4, F32\3.
3. *Lophosphaeridium* sp. DW 232, FS-1, D27\1.
4. *Micrhystridium stellatum* Deflandre 1945. DW 232, FS-1, H34\1.
5. *Multiplicisphaeridium* cf. *saharicum* Lister 1970. DW 232, FS-1, D12\3.
6. *Multiplicisphaeridium* cf. *saharicum* Lister 1970. DW 232, FS-1, F14\4.
7. *Multiplicisphaeridium fisheri* (Cramer) Lister 1970. DW 34, FS-4, S7\4.
8. *Neoveryhachium carminae* (Cramer) Cramer 1970. DW 232, FS-1, E33\1.
9. *Onondagella deunffii* Cramer 1966. DW 232, FS-1, Y14\1.
10. *Onondagella deunffii* Cramer 1966. DW 232, FS-1, J6\4.
11. *Onondagella deunffii* Cramer 1966. JW 10, 1-3, U14\4.



**Plate 87.**

Acritarchs from the Argillaceous Shale Formation and the Orthoceras Limestone-Shale Formation (sample DW 215, figure 8), Ludlow in age.

1. *Onondagella deunffii* Cramer 1966. DW 235, FS-5, R28\3.
2. *Onondagella deunffii* Cramer 1966. DW 235, FS-5, H36\4.
3. *Oppilatala eoplanktonica* (Eisenack) Dorning 1981. DW 232, FS-2, L26\4.
4. *Trematophora radiata?* Eisenack 1965. DW 232, FS-1, U32\2.
5. *Veryhachium valiente* Cramer 1964. DW 232, FS-1, W7\2.
6. *Oppilatala eoplanktonica* (Eisenack) Dorning 1981. DW 232, FS-1, E32\1.
7. *Veryhachium trapezionarion* Loeblich 1970. DW 232, FS-1, N3\2.
8. *Quadraditum fantasticum* Cramer 1964. DW 215, 1-1, N23\1.
9. *Veryhachium cf. europeanum* Stockmans & Williere 1960. JW 10, FS-4, F13\1.
10. *Veryhachium cf. europeanum* Stockmans & Williere 1960. JW 10, FS-4, G19\4.

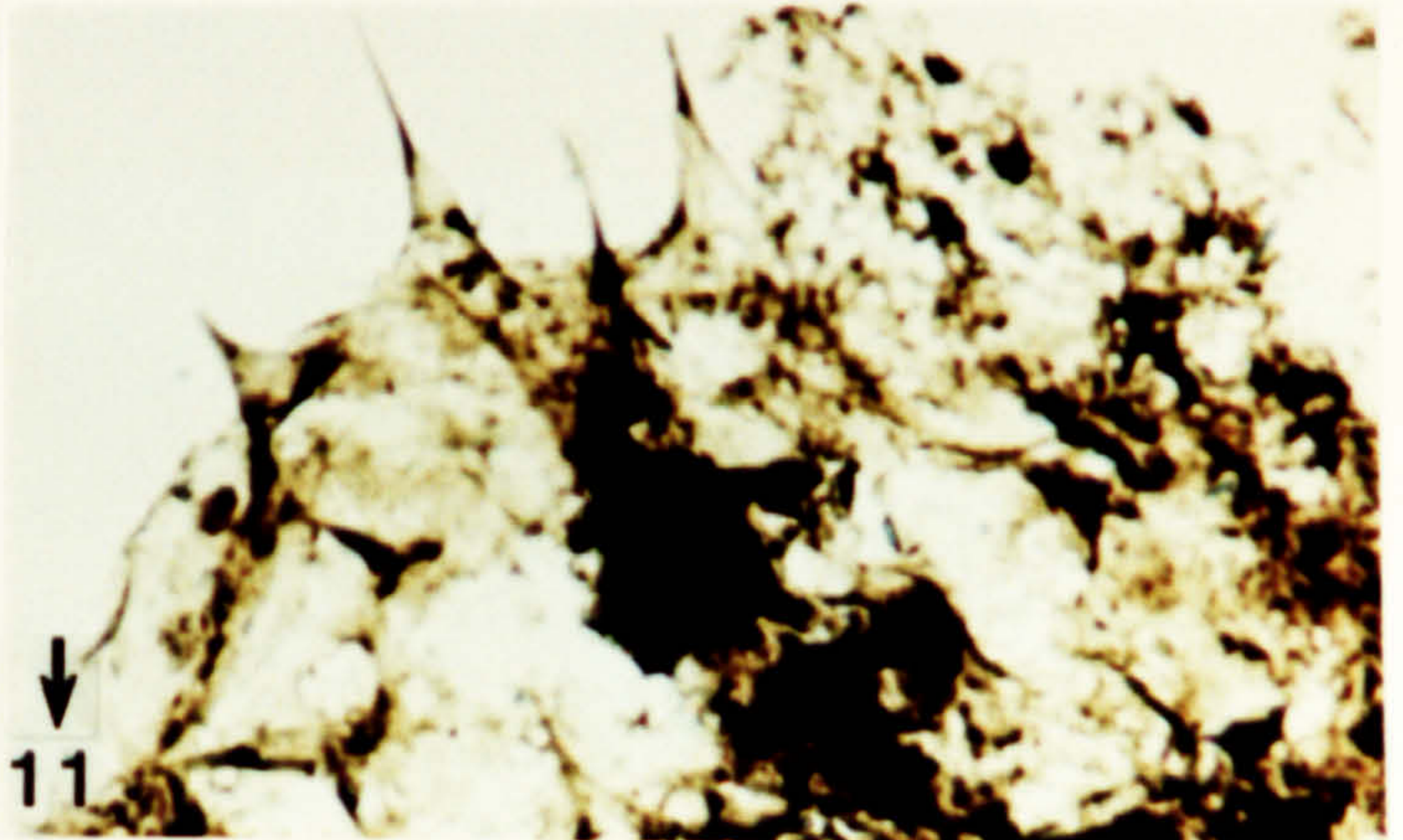
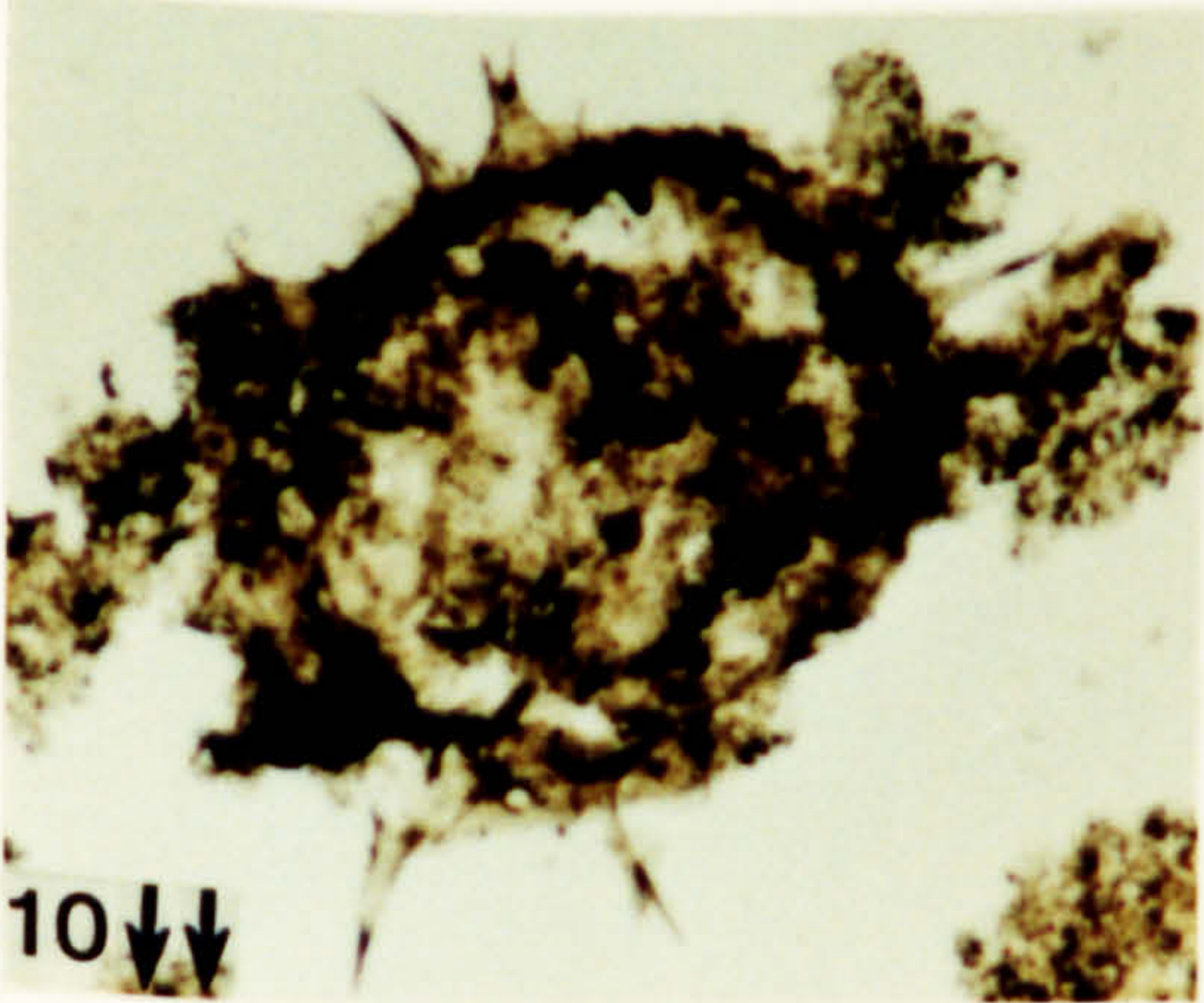
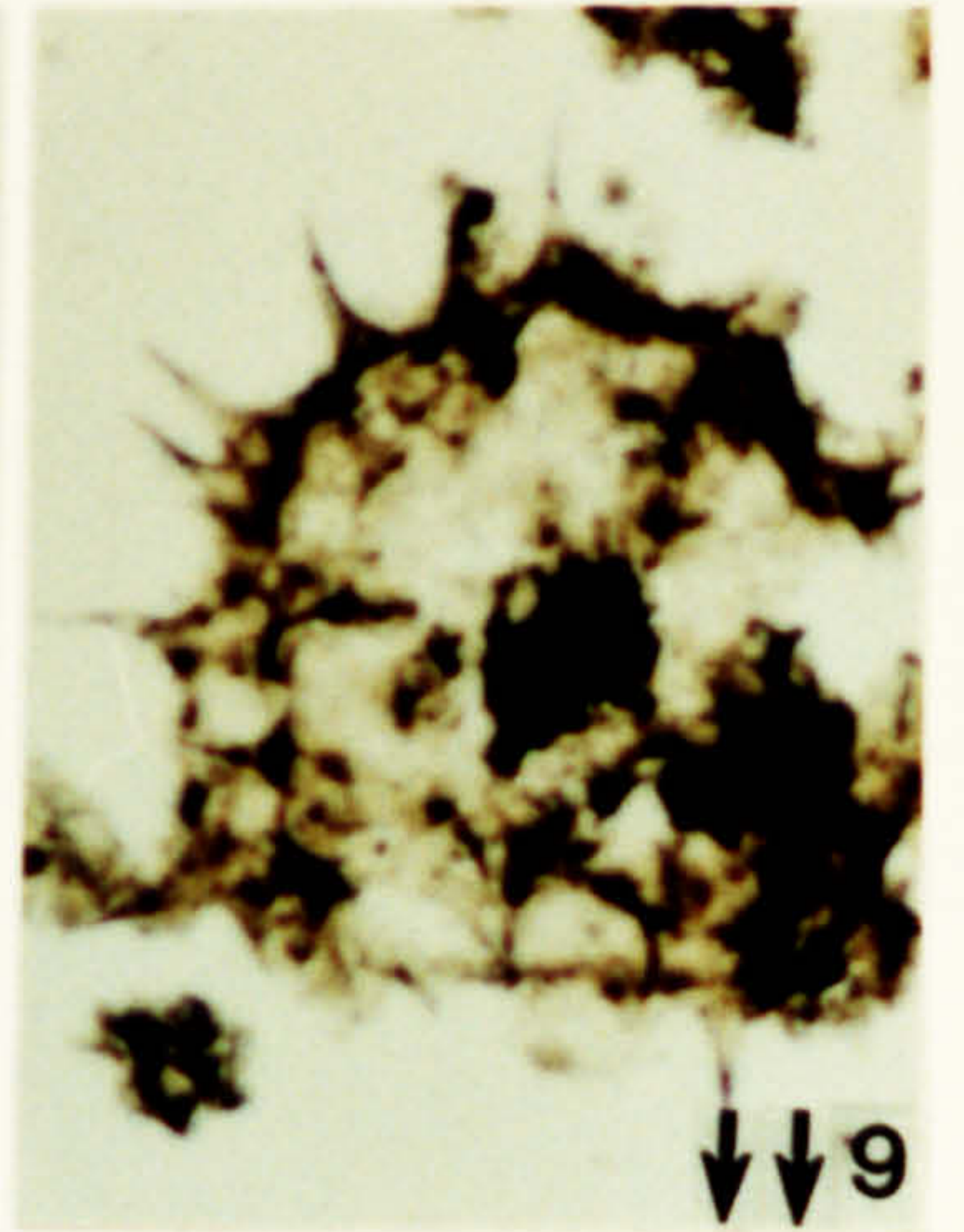
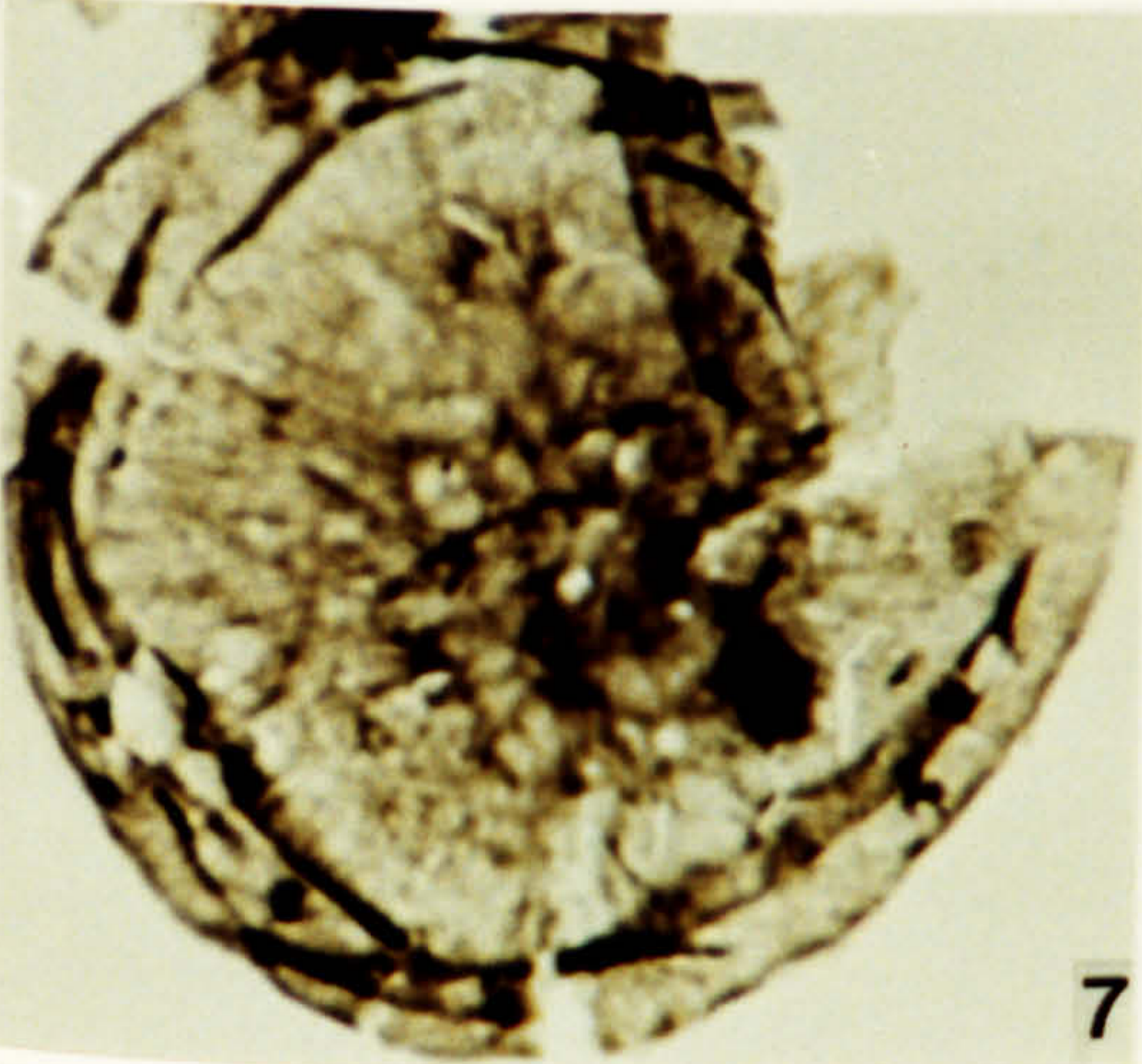
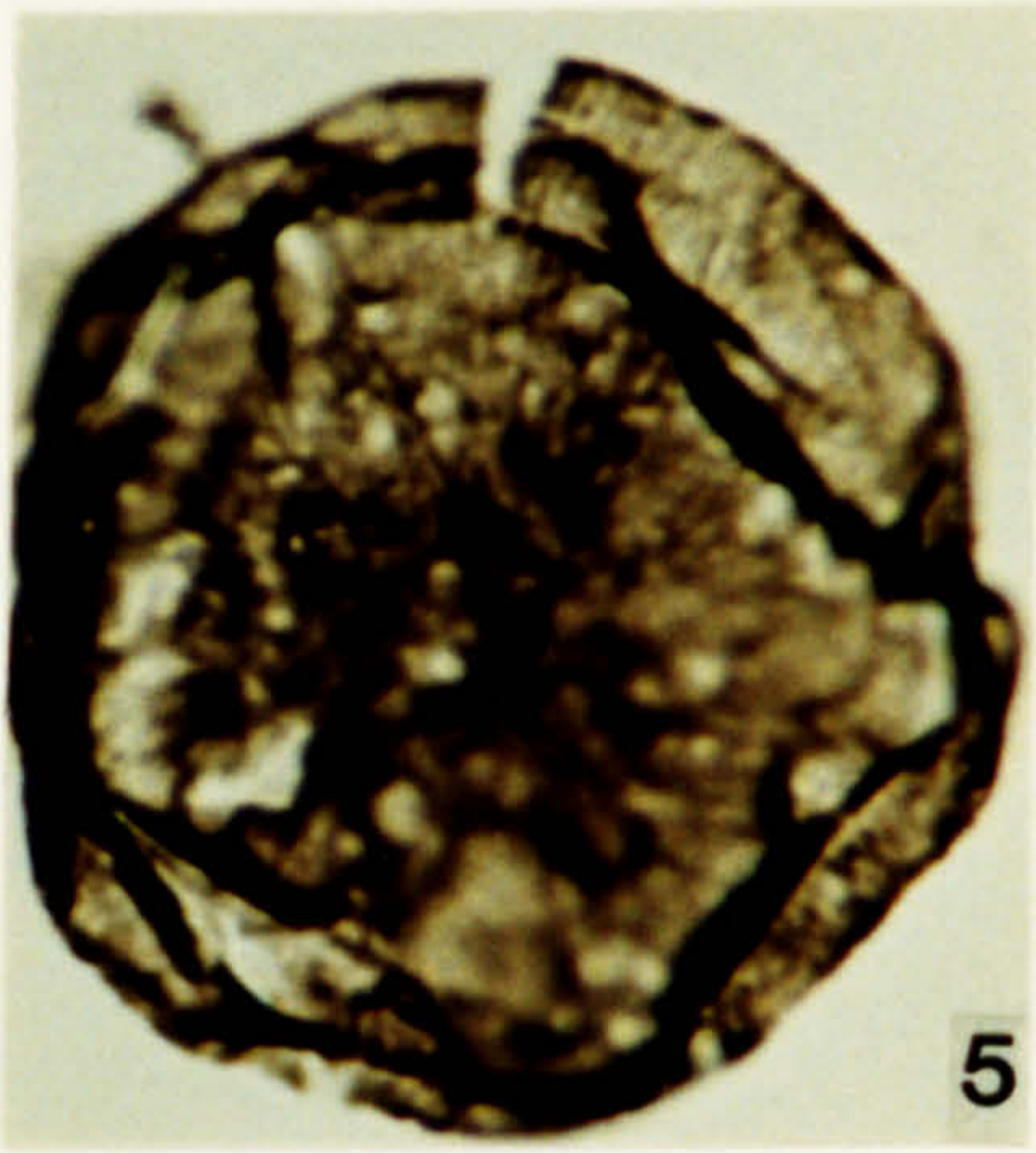
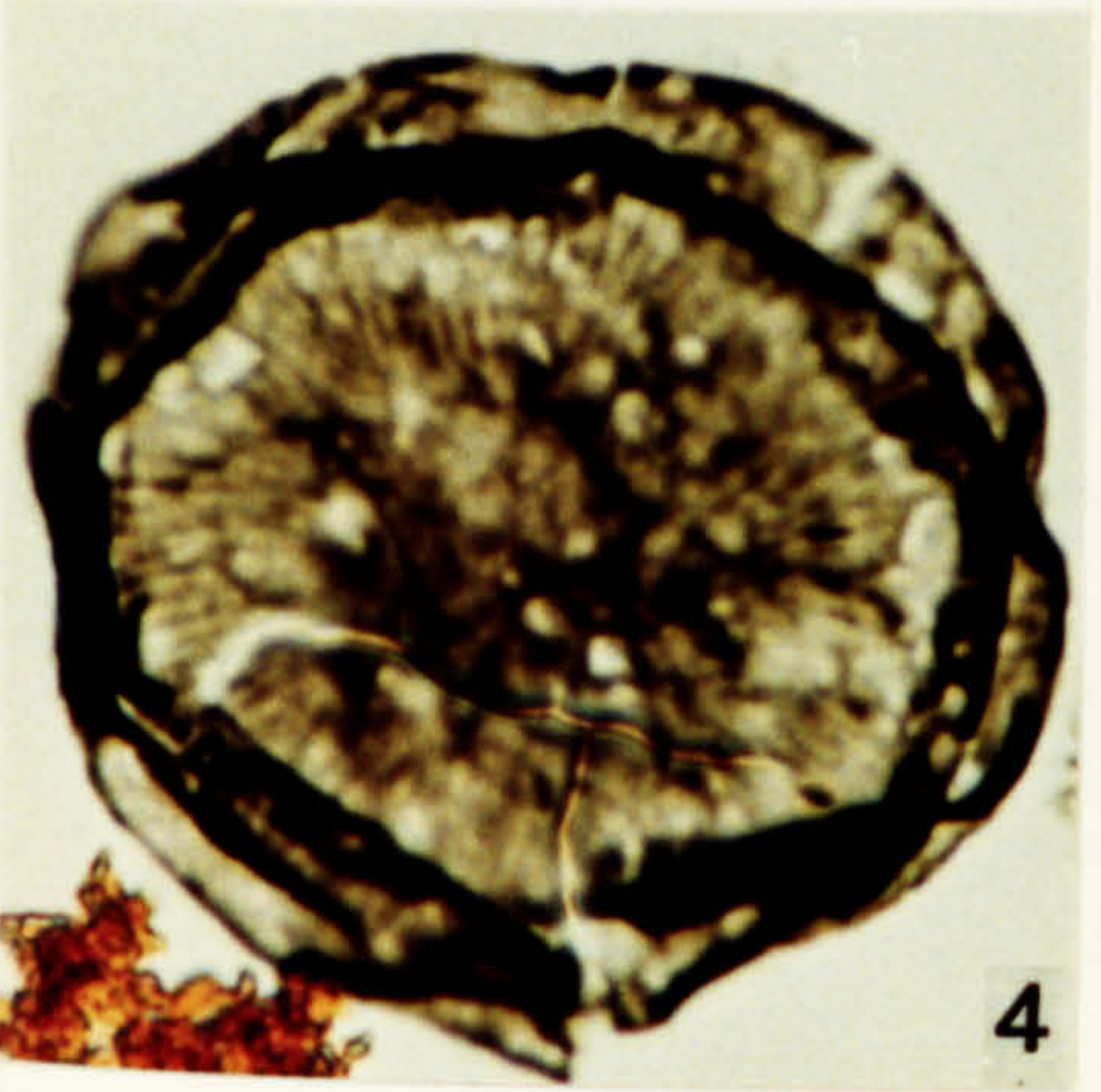
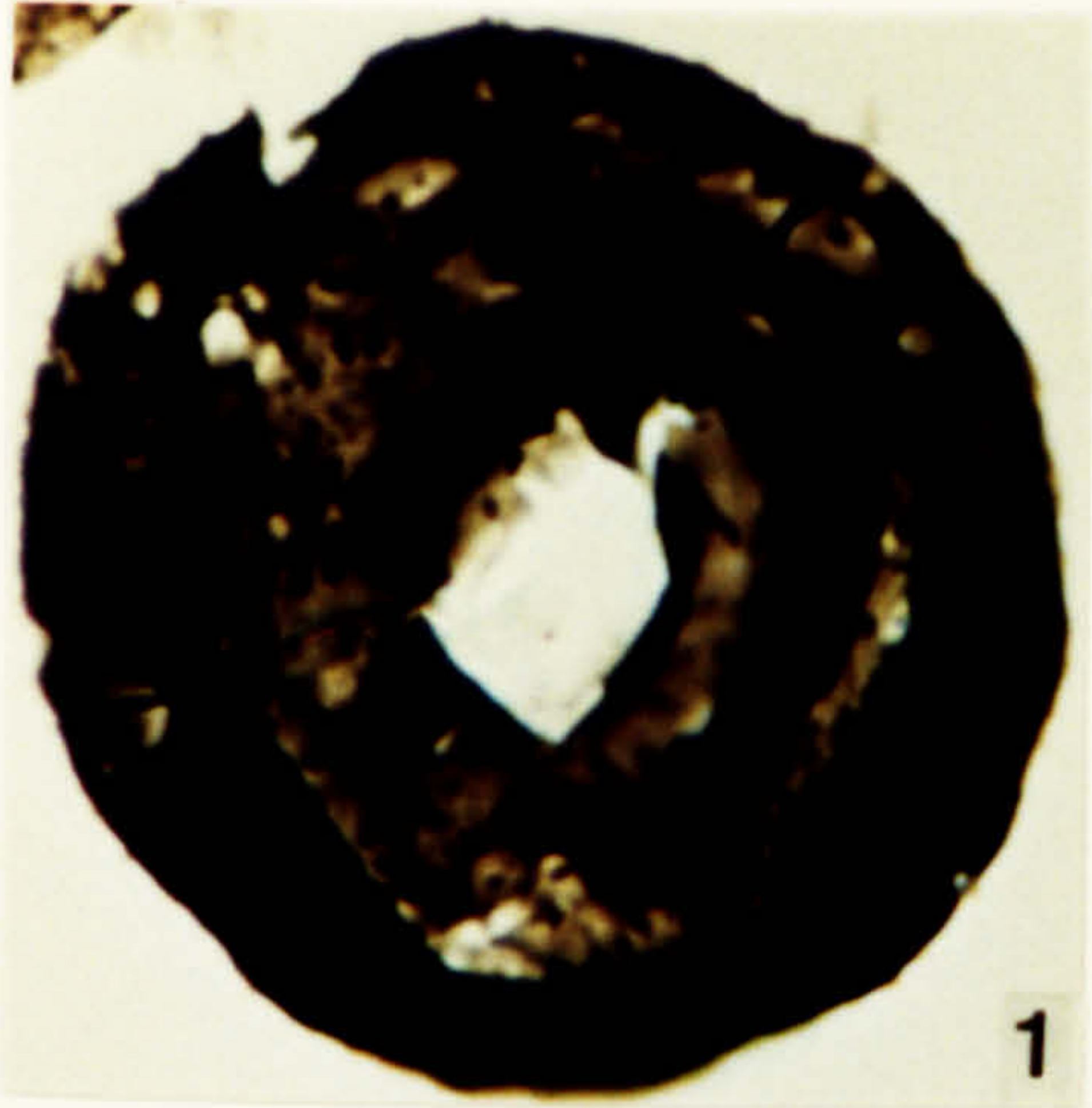




**Plate 88.**

Acritarchs from the Argillaceous Shale Formation, Ludlow in age.

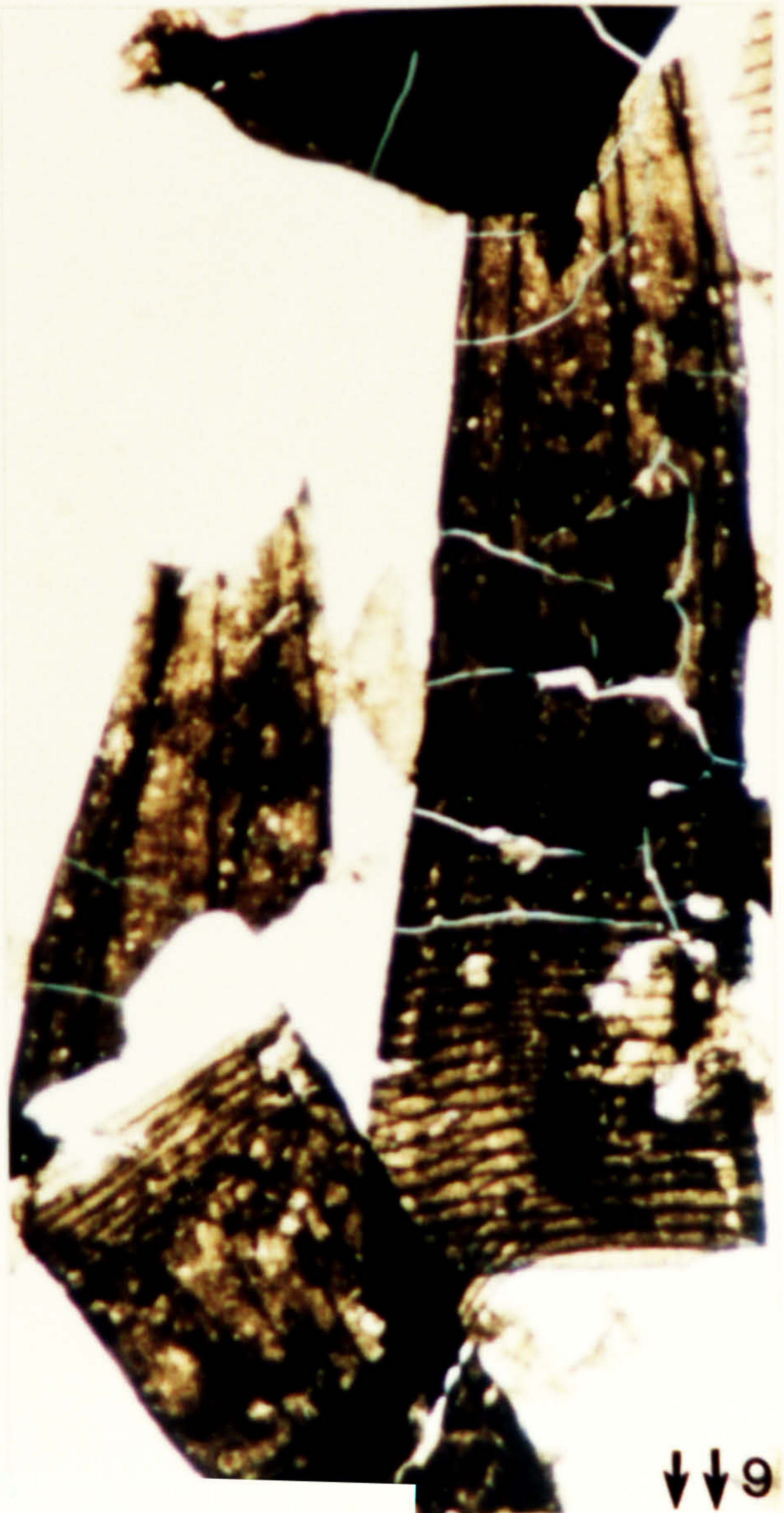
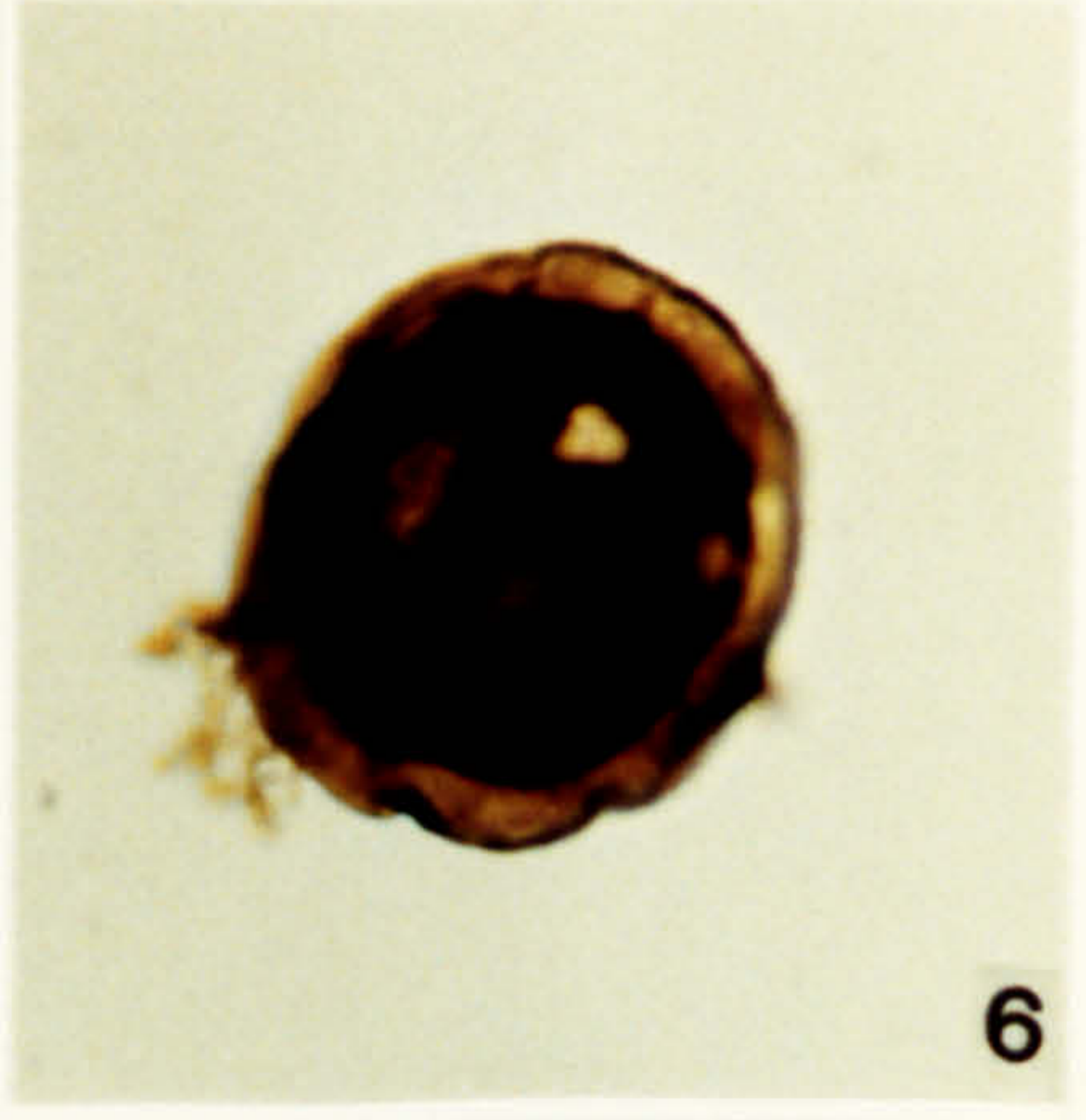
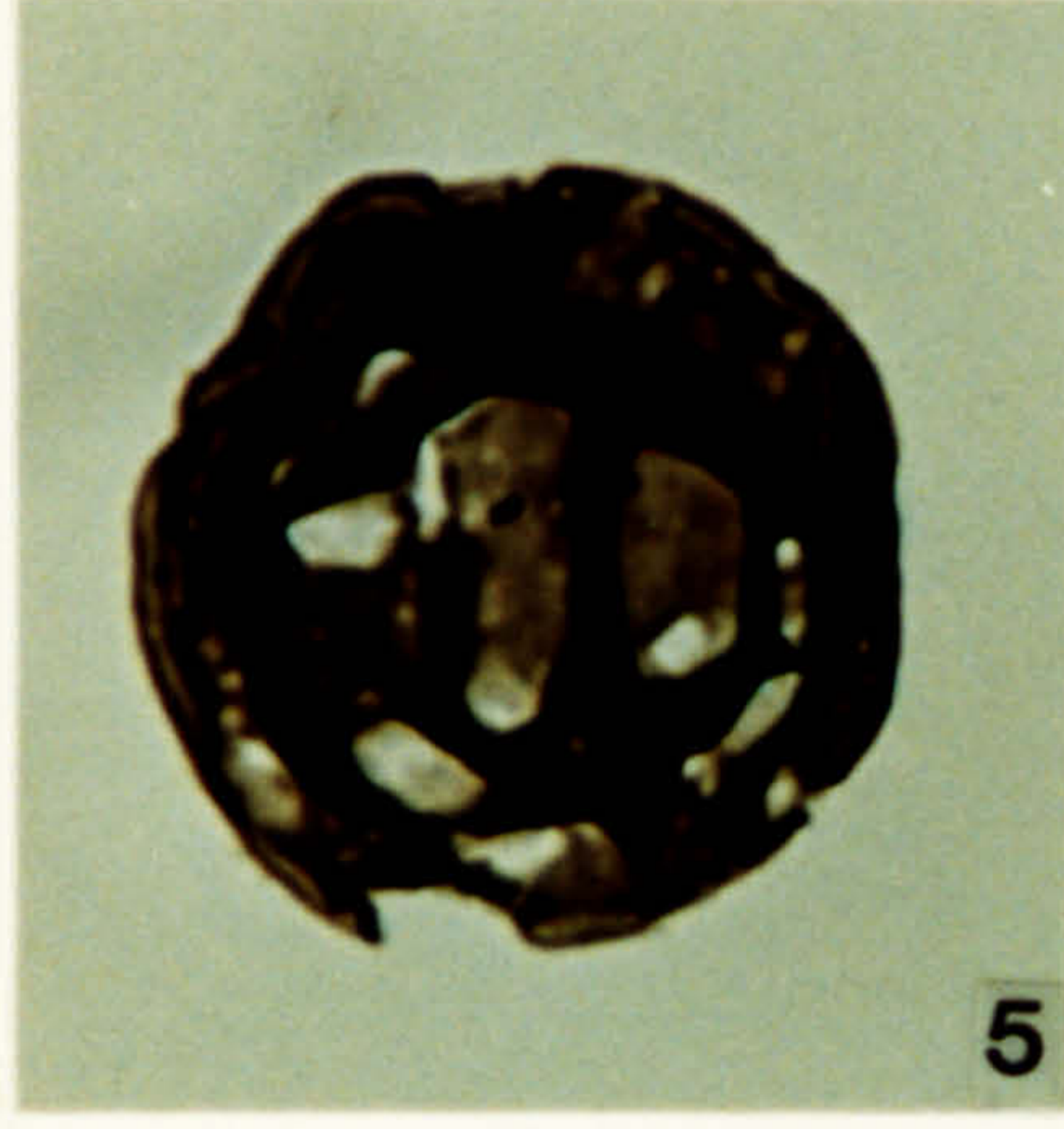
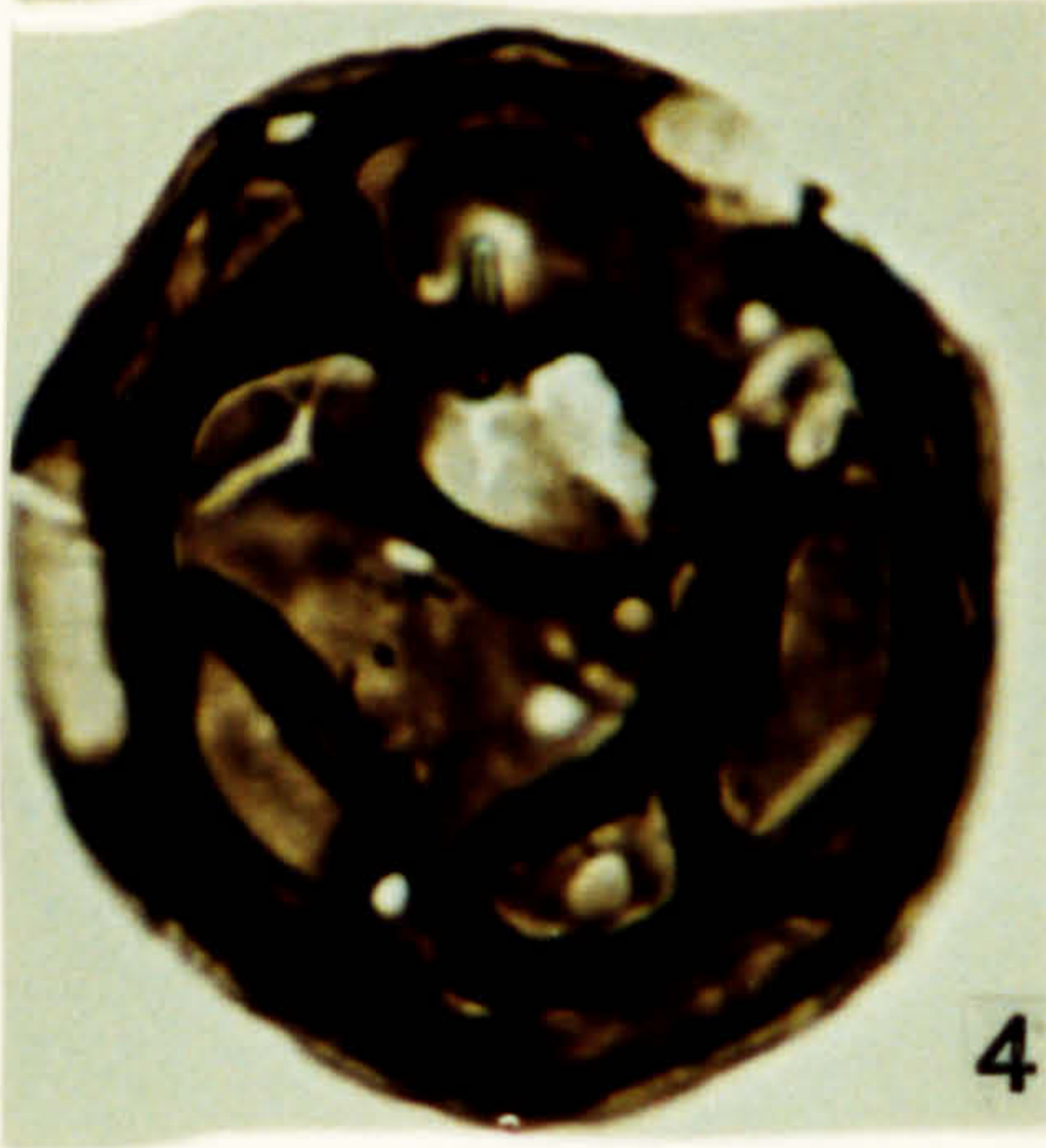
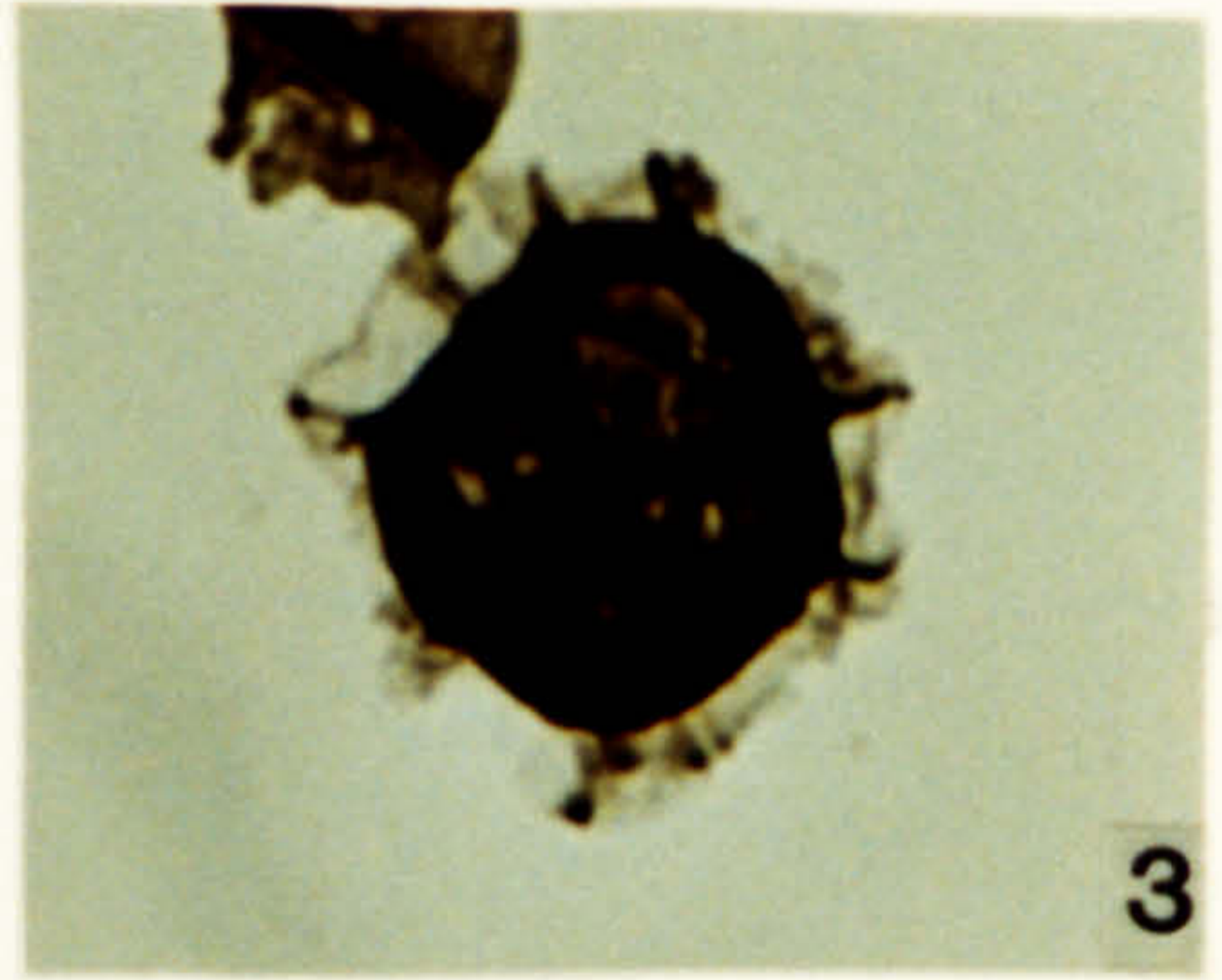
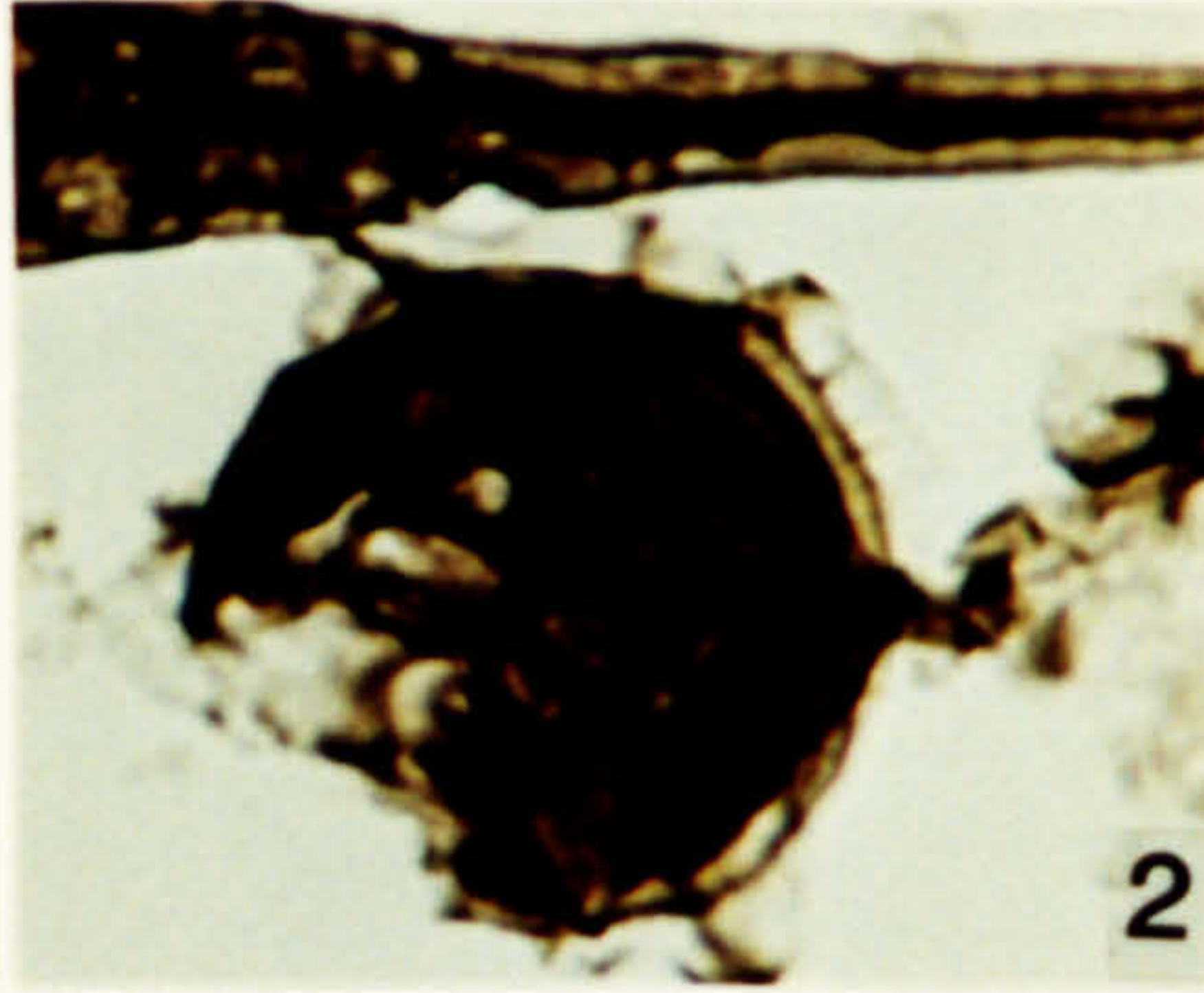
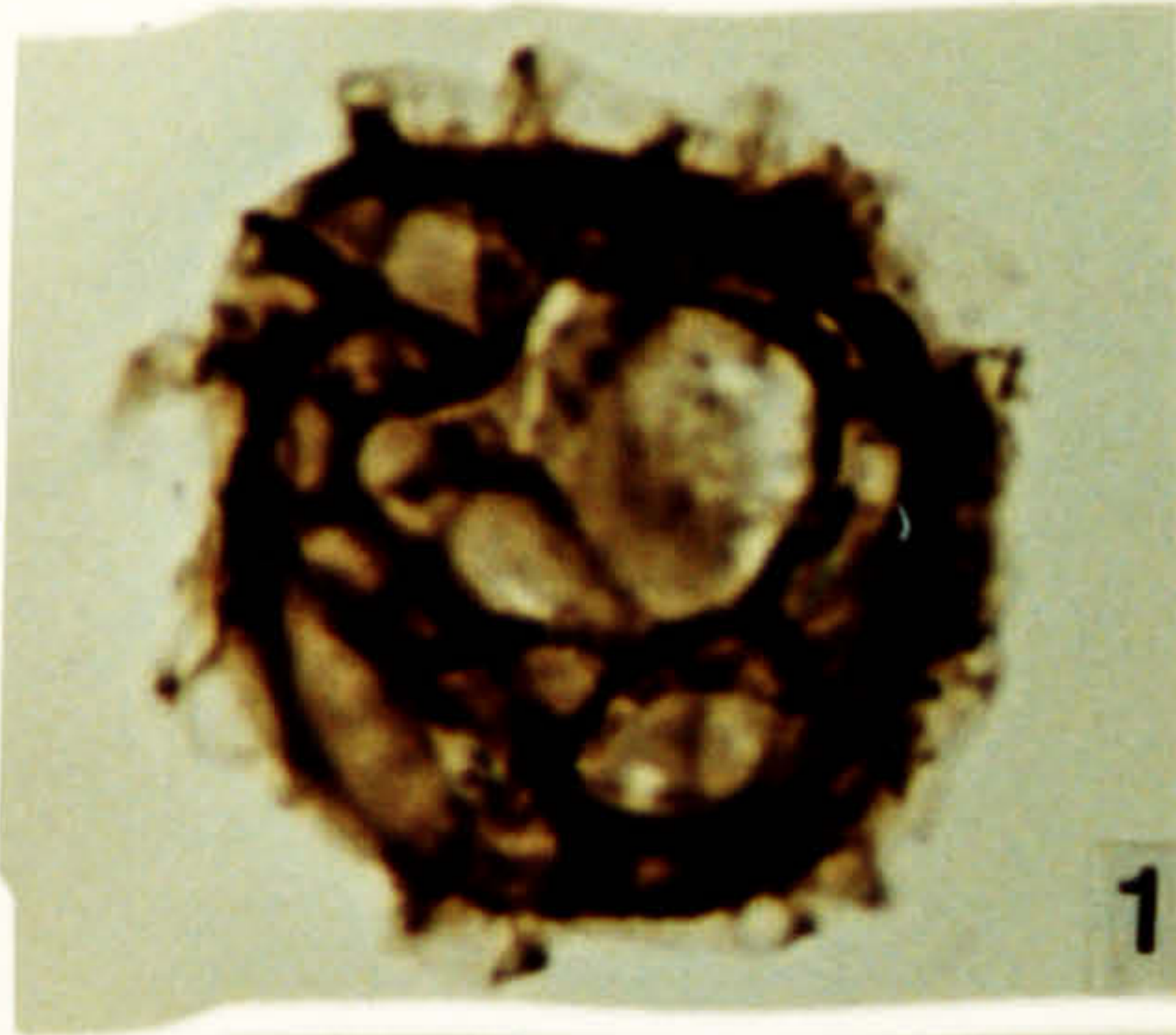
1. *Visbysphaera microspinosa* var. A. JW 10, FS-4, H24\2.
2. *Visbysphaera microspinosa* (Eisenack) Lister 1970. JW 10, FS-4, C17\4.
3. Acritarch Form I. JW 10, FS-4, X33\2.
4. Acritarch Form G. JW 10, FS-4, H32\2.
5. Acritarch Form G. JW 10, FS-4, W24\2.
6. Acritarch Form H. DW 232, FS-1, Q12\4.
7. Acritarch Form G. JW 10, FS-4, P29\3.
8. Acritarch Form G. JW 10, FS-4, D30\2.
9. Acritarch Form L. DW 34, FS-4, U25\2, X230.
10. Acritarch Form L. DW 34, FS-4, O18\1, X230.
11. Acritarch Form L. DW 34, FS-5, K19\2, X550.



**Plate 89.**

Prasinophycean algae from the Argillaceous Shale Formation, Ludlow in age.

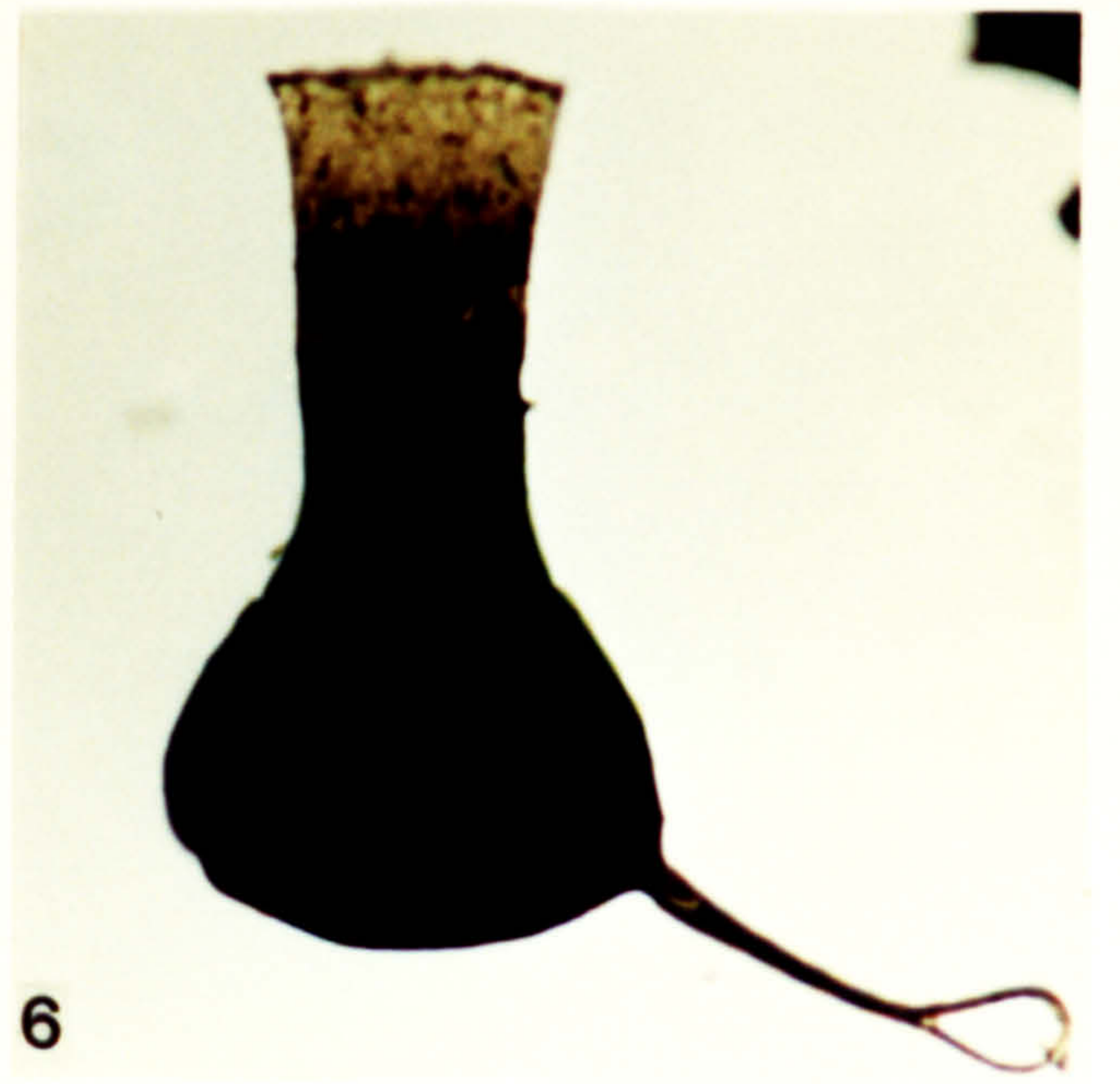
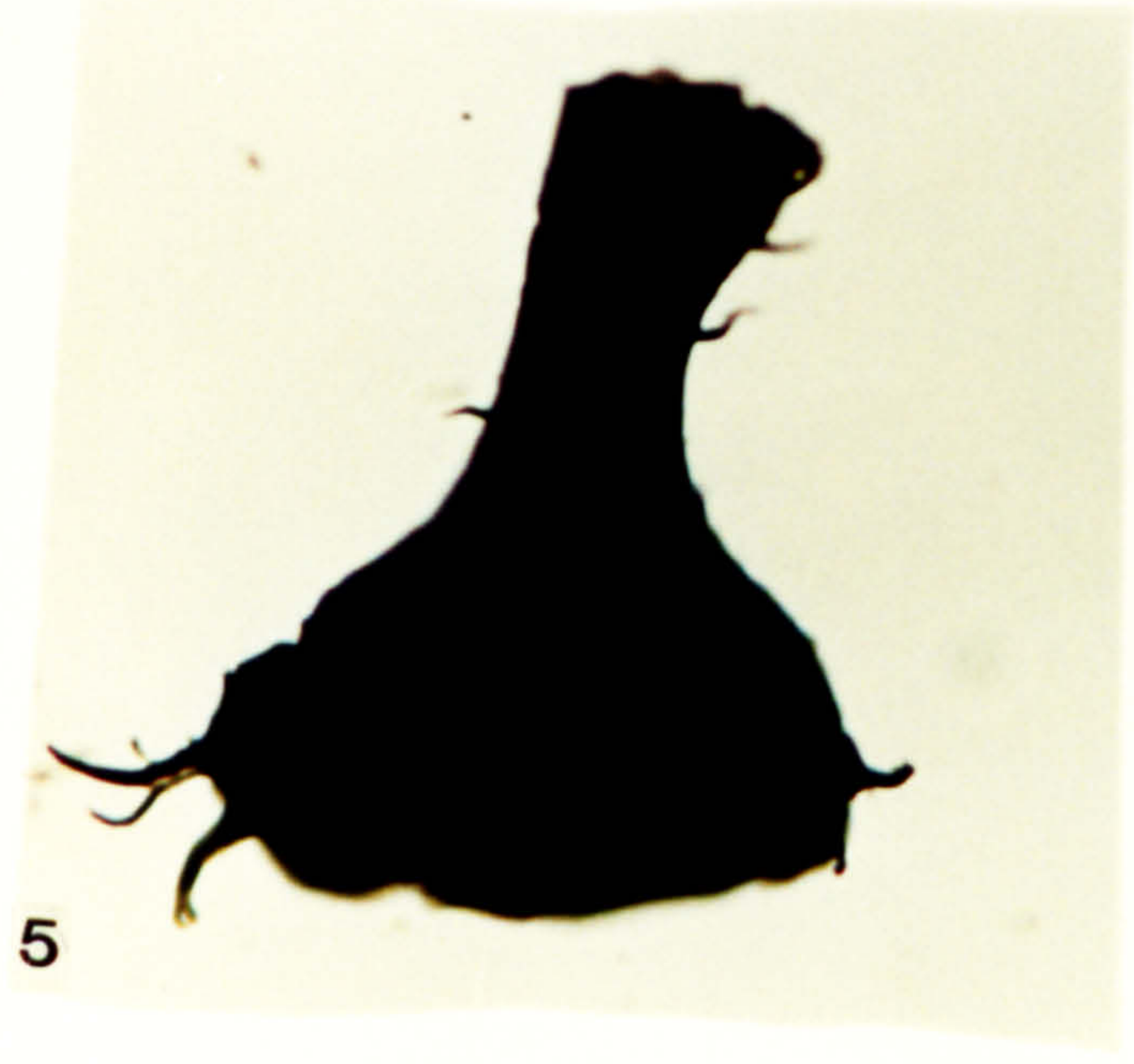
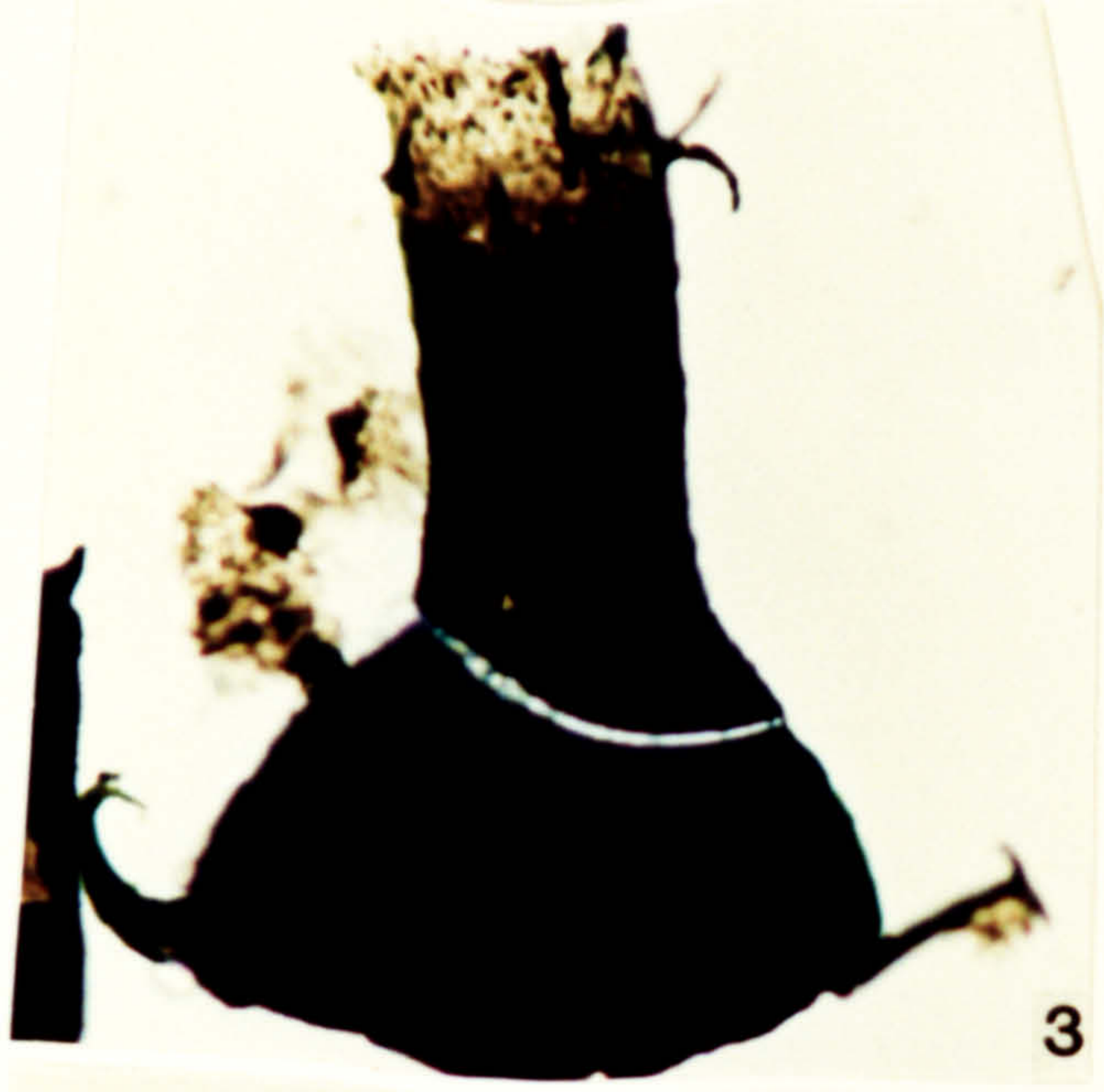
1. *Cymatiosphaera* cf. *ledburica* Dorning 1981. DW 232, FS-1, R7\2.
2. *Cymatiosphaera* cf. *ledburica* Dorning 1981. DW 232, FS-1, F32\2.
3. *Cymatiosphaera* cf. *ledburica* Dorning 1981. DW 235, FS-5, K35\2.
4. *Tasmanites* sp. DW 235, FS-5, O9\4.
5. *Tasmanites* sp. DW 235, FS-5, P16\4.
6. *Tasmanites* sp. DW 232, FS-1, B9\2.
7. Recent tintinid contaminant. DW 234, 1-1, M26\2, X550.
8. Recent tintinid contaminant. DW 234, 1-1, M26\2, X230.
9. Graptolite fragments. JW 10, FS-4, N24\3, X230.



**Plate 90.**

Chitinozoa from the Argillaceous Shale Formation, Ludlow in age.

1. *Ancyrochitina ancyrea* (Eisenack) Eisenack 1955. JW 10, 1-3, D28\1.
2. *Ancyrochitina fragilis* var. *brevis* Taugourdeau & Jekhowsky 1960. DW 235, 1-4, Q25\2.
3. *Ancyrochitina ancyrea* (Eisenack) Eisenack 1955. JW 10, FS-4, R30\4.
4. *Ancyrochitina fragilis* var. *brevis* Taugourdeau & Jekhowsky 1960. DW 235, FS-6, H9\1.
5. *Ancyrochitina ancyrea* (Eisenack) Eisenack 1955. JW 10, FS-4, C16\4.
6. *Ancyrochitina fragilis* var. *brevis* Taugourdeau & Jekhowsky 1960. DW 235, FS-5, H19\4.



**Plate 91.**

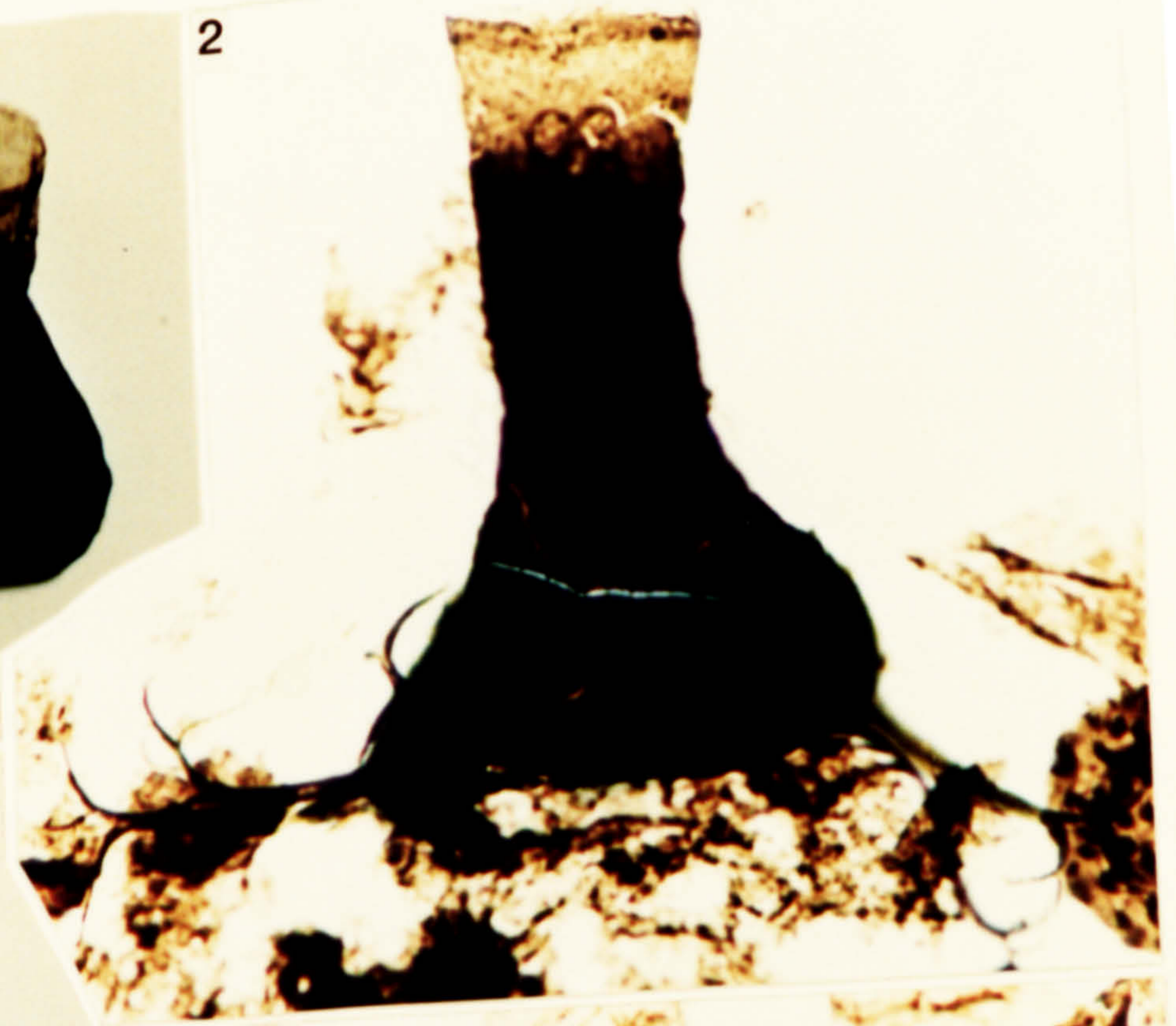
Chitinozoa from the Argillaceous Shale Formation, Ludlow in age.

1. *Ancyrochitina fragilis* var. *regularis* Taugourdeau & Jekhowsky 1960. DW 235, FS-5, P6\4.
2. *Ancyrochitina fragilis* var. A. DW 232, FS-3, M18\4.
3. *Ancyrochitina fragilis* var. *regularis* Taugourdeau & Jekhowsky 1960. DW 235, FS-6, M27\2.
4. *Ancyrochitina fragilis* var. A. DW 232, FS-1, M18\4.
5. *Ancyrochitina fragilis* var. A. DW 232, FS-2, J12\4.

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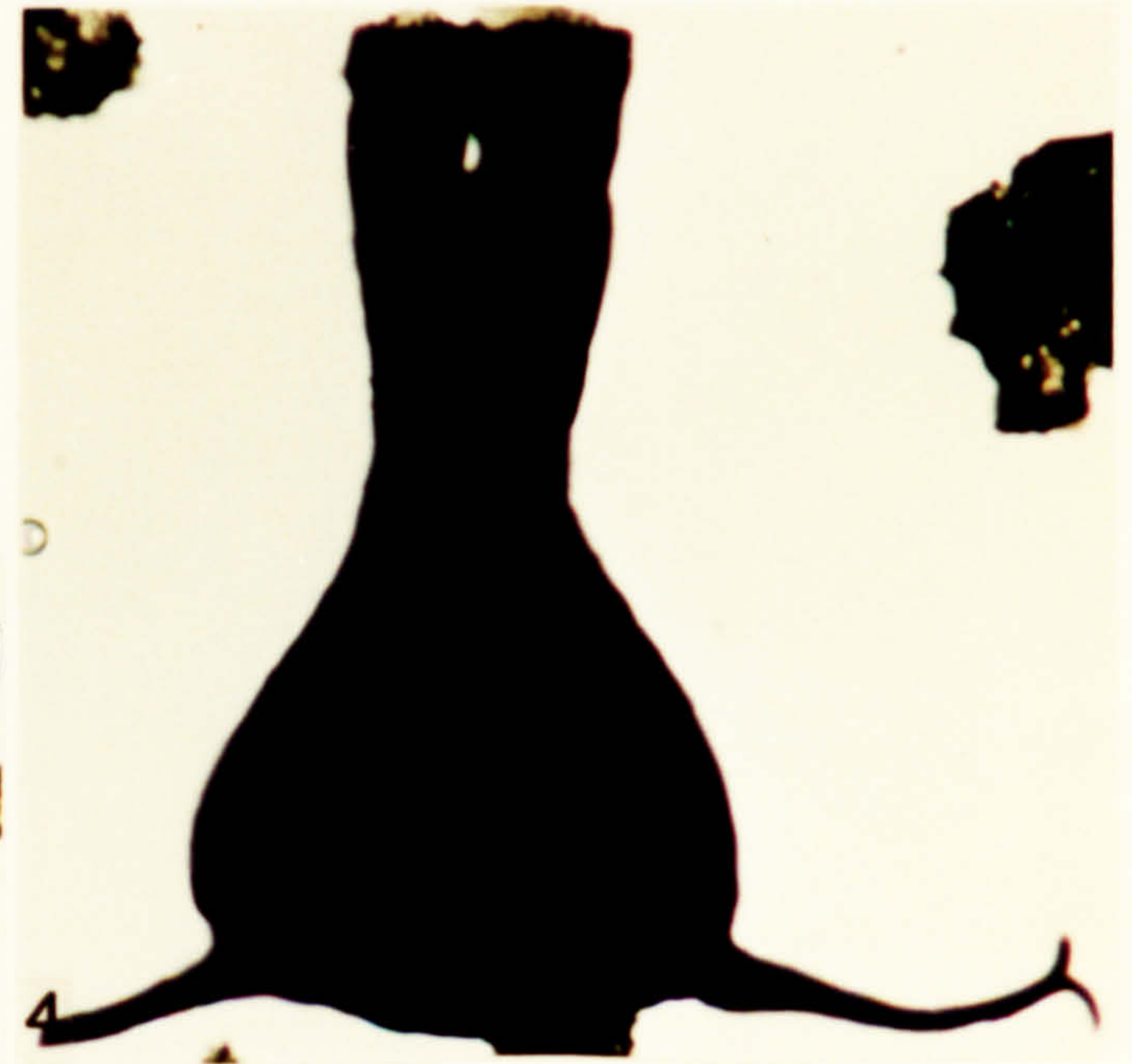
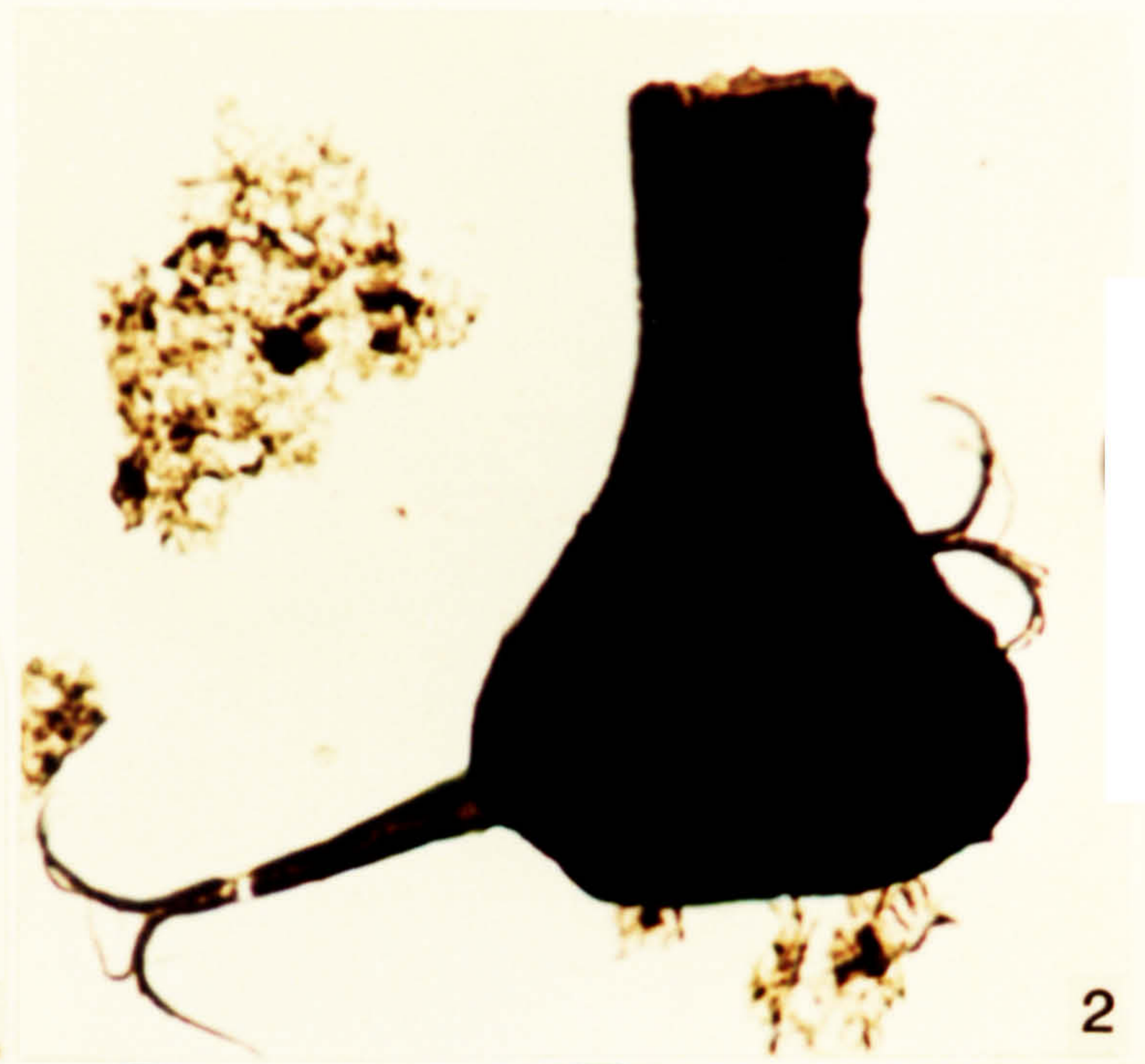
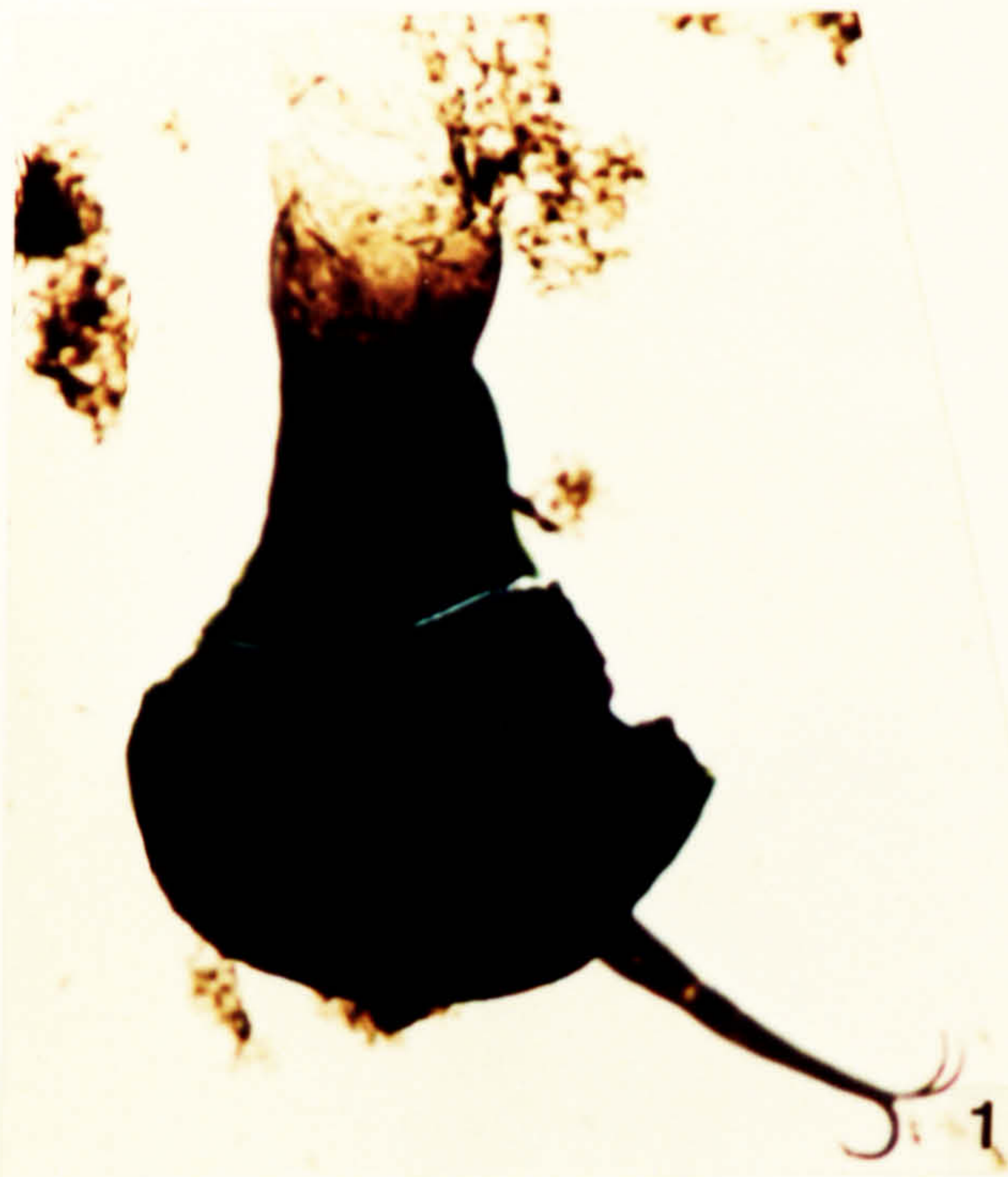




**Plate 92.**

Chitinozoa from the Argillaceous Shale Formation, Ludlow in age.

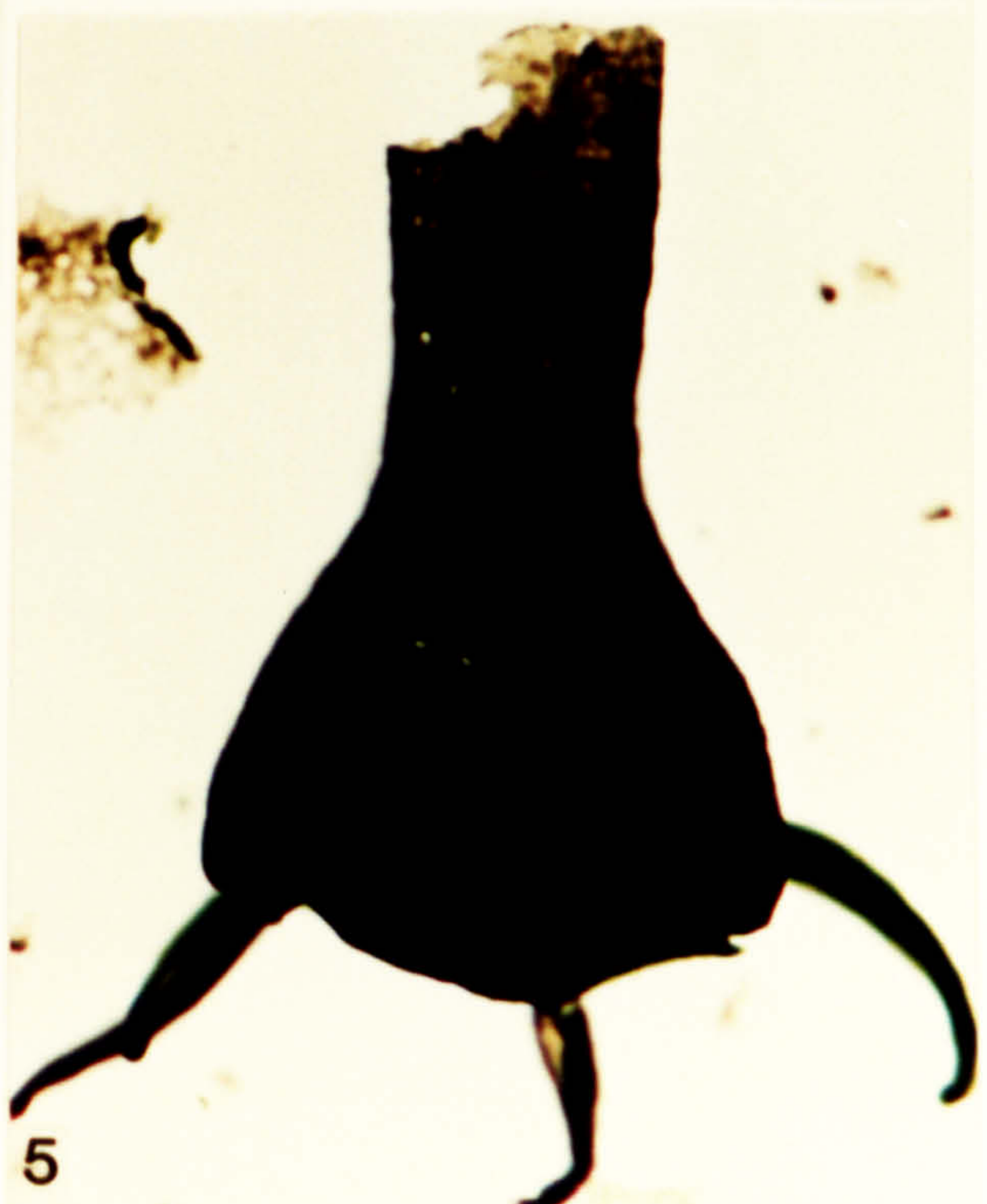
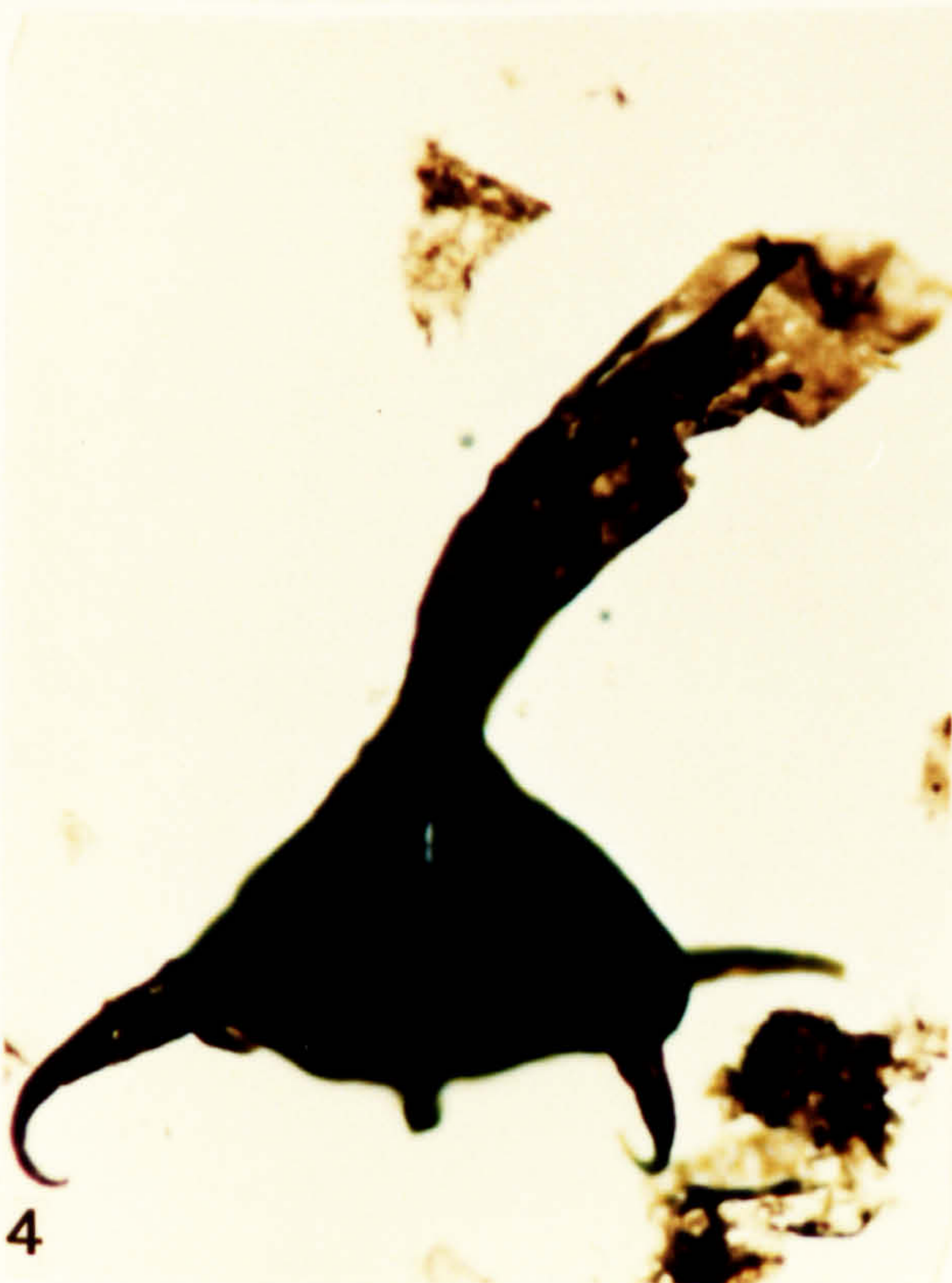
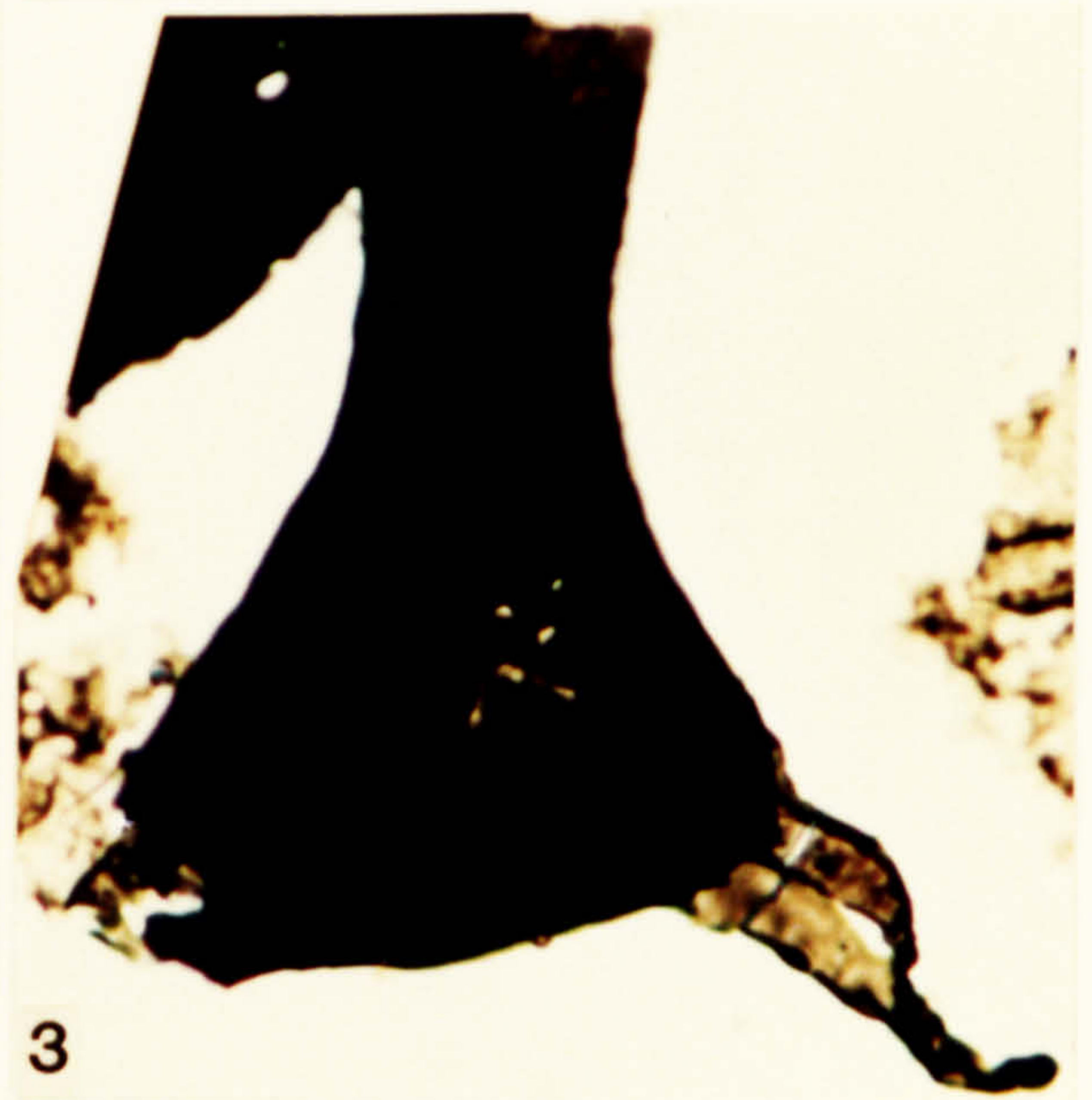
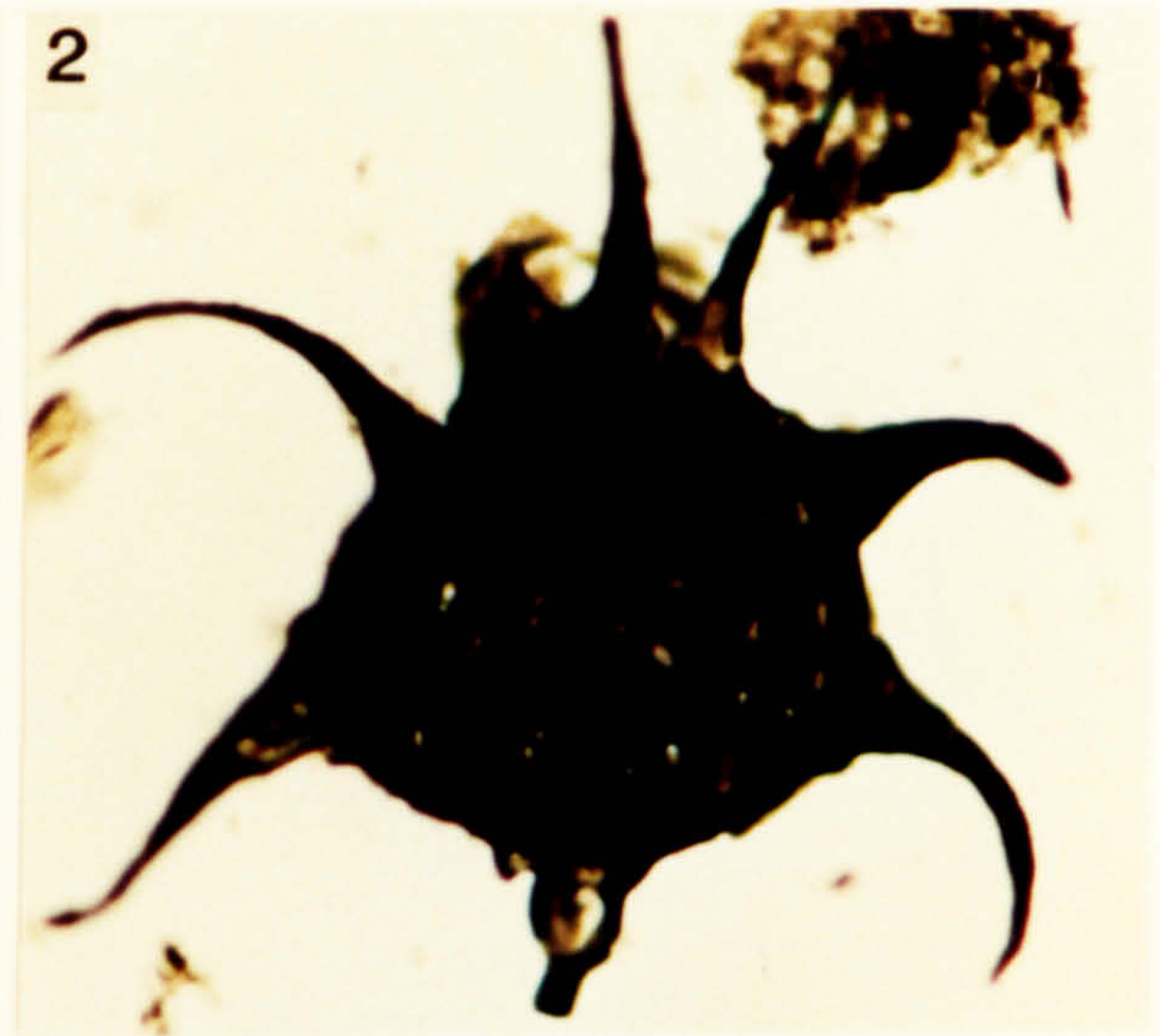
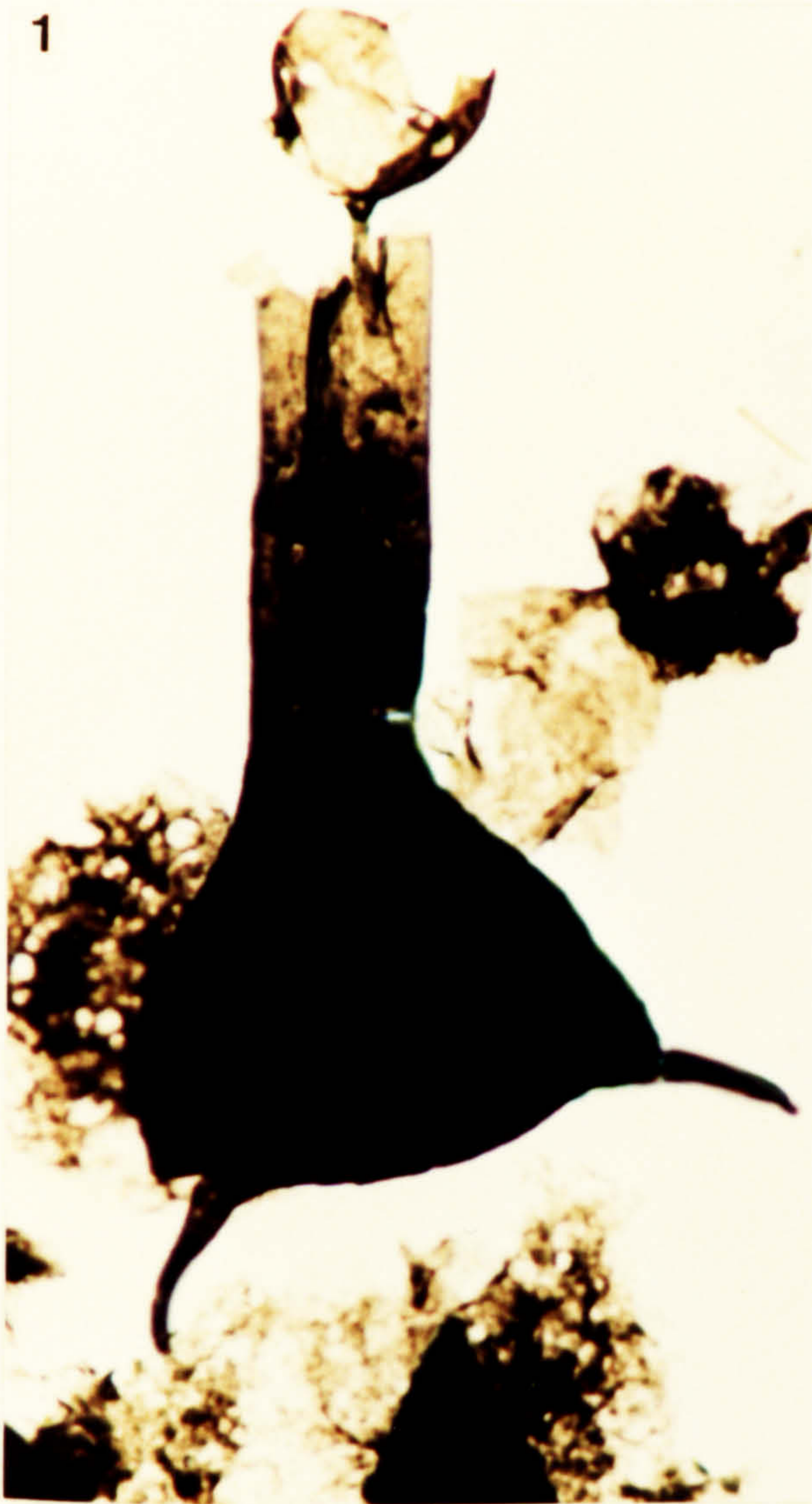
1. *Ancyrochitina fragilis* var. A. DW 232, FS-2, R12\3.
2. *Ancyrochitina fragilis* var. A. DW 232, FS-2, X28\3.
3. *Ancyrochitina fragilis* var. A. DW 232, FS-1, K14\2.
4. *Ancyrochitina fragilis* var. A. DW 235, 1-3, M13\3.
5. *Ancyrochitina fragilis* Eisenack 1955. DW 235, FS-5, E21\3.
6. *Ancyrochitina fragilis* Eisenack 1955. DW 235, FS-6, U18\2.
7. *Ancyrochitina fragilis* Eisenack 1955. DW 235, FS-5, S16\3.



**Plate 93.**

Chitinozoa from the Argillaceous Shale Formation, Ludlow in age.

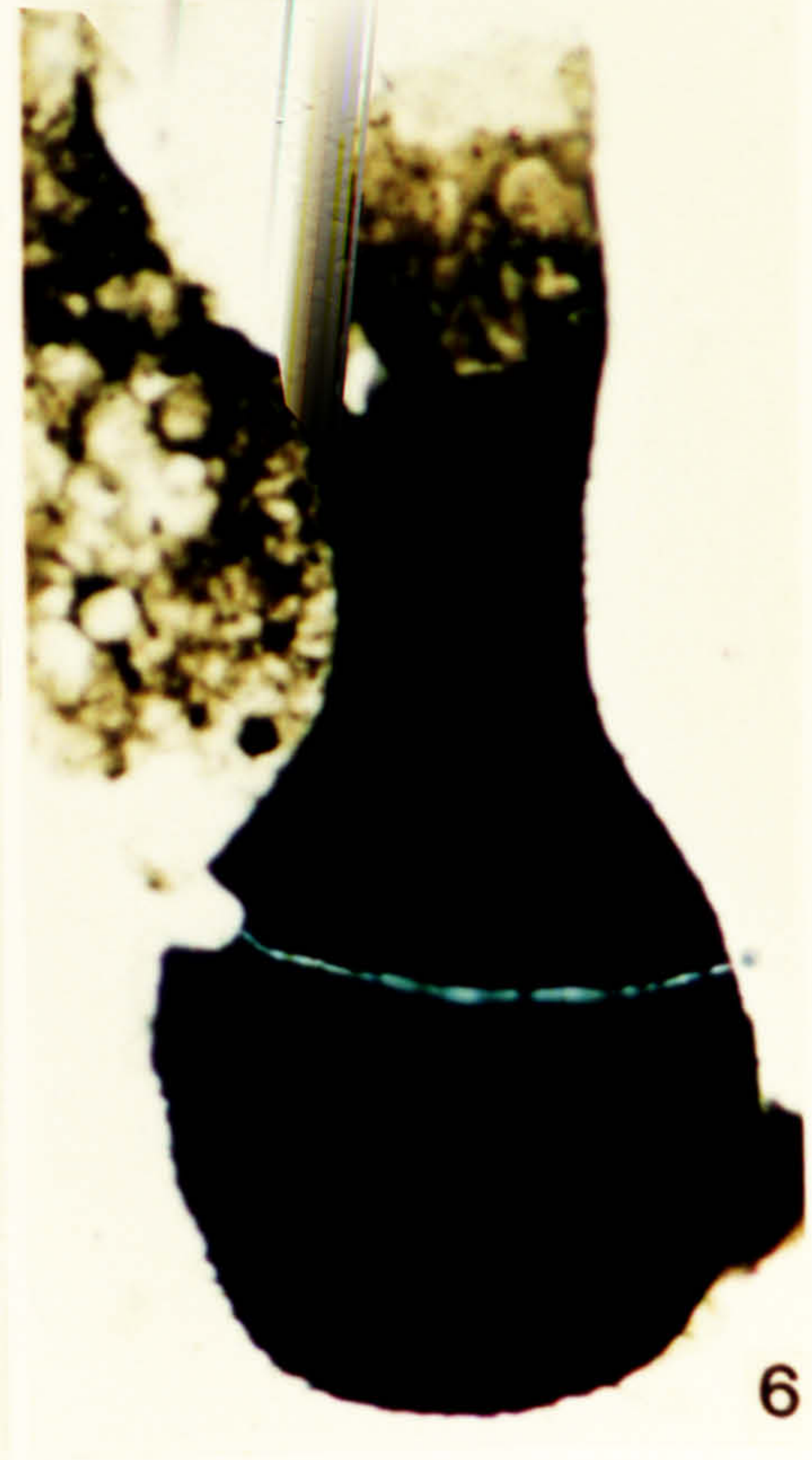
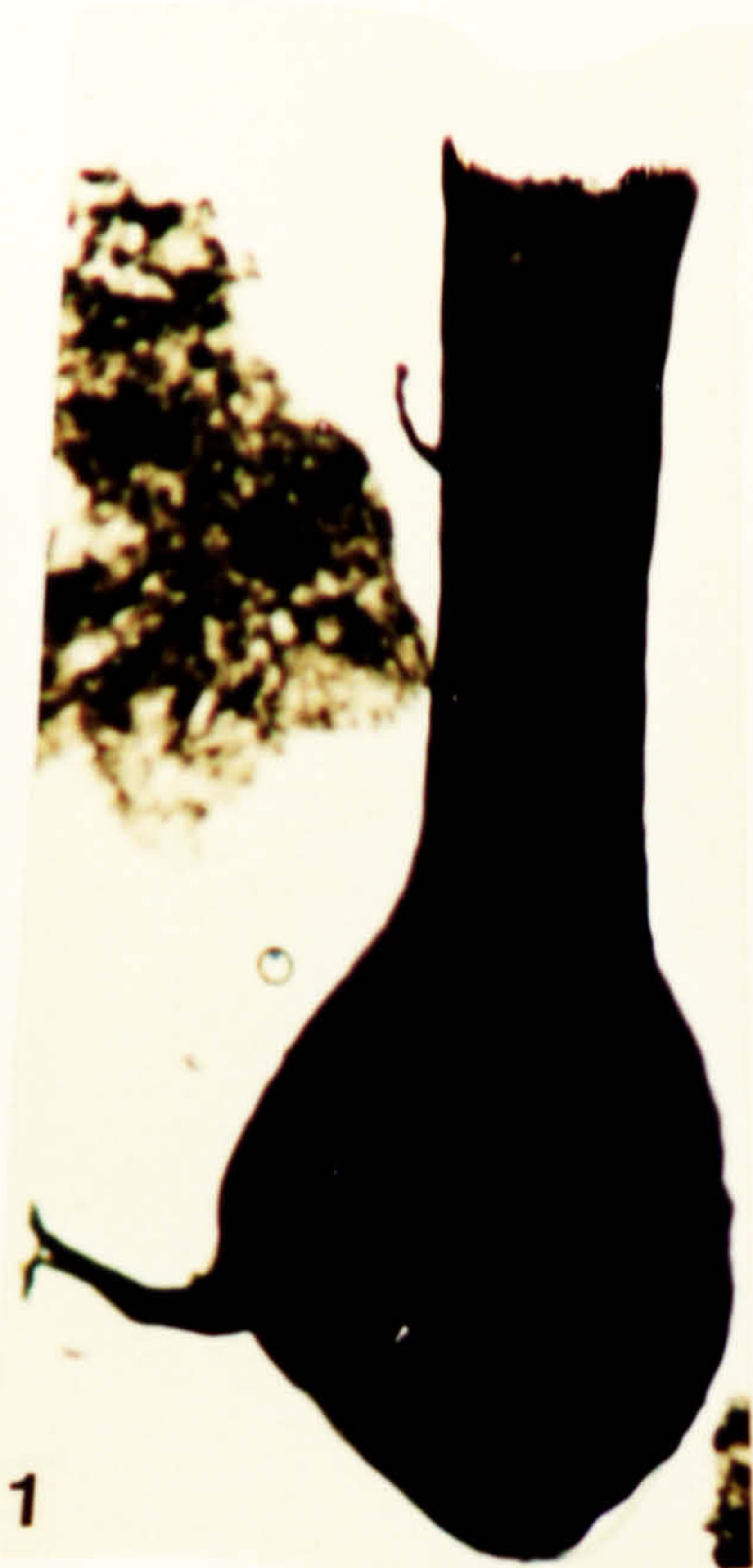
1. *Ancyrochitina pachyderma* Laufeld 1974. JW 10, FS-4, H22\2.
2. *Ancyrochitina pachyderma* Laufeld 1974. JW 10, FS-4, Y22\1.
3. *Ancyrochitina pachyderma* Laufeld 1974. JW 10, FS-4, J14\4.
4. *Ancyrochitina pachyderma* Laufeld 1974. JW 10, FS-4, L14\1.
5. *Ancyrochitina pachyderma* Laufeld 1974. JW 10, FS-4, U13\4.



**Plate 94.**

Chitinozoa from the Argillaceous Shale Formation, Ludlow in age.

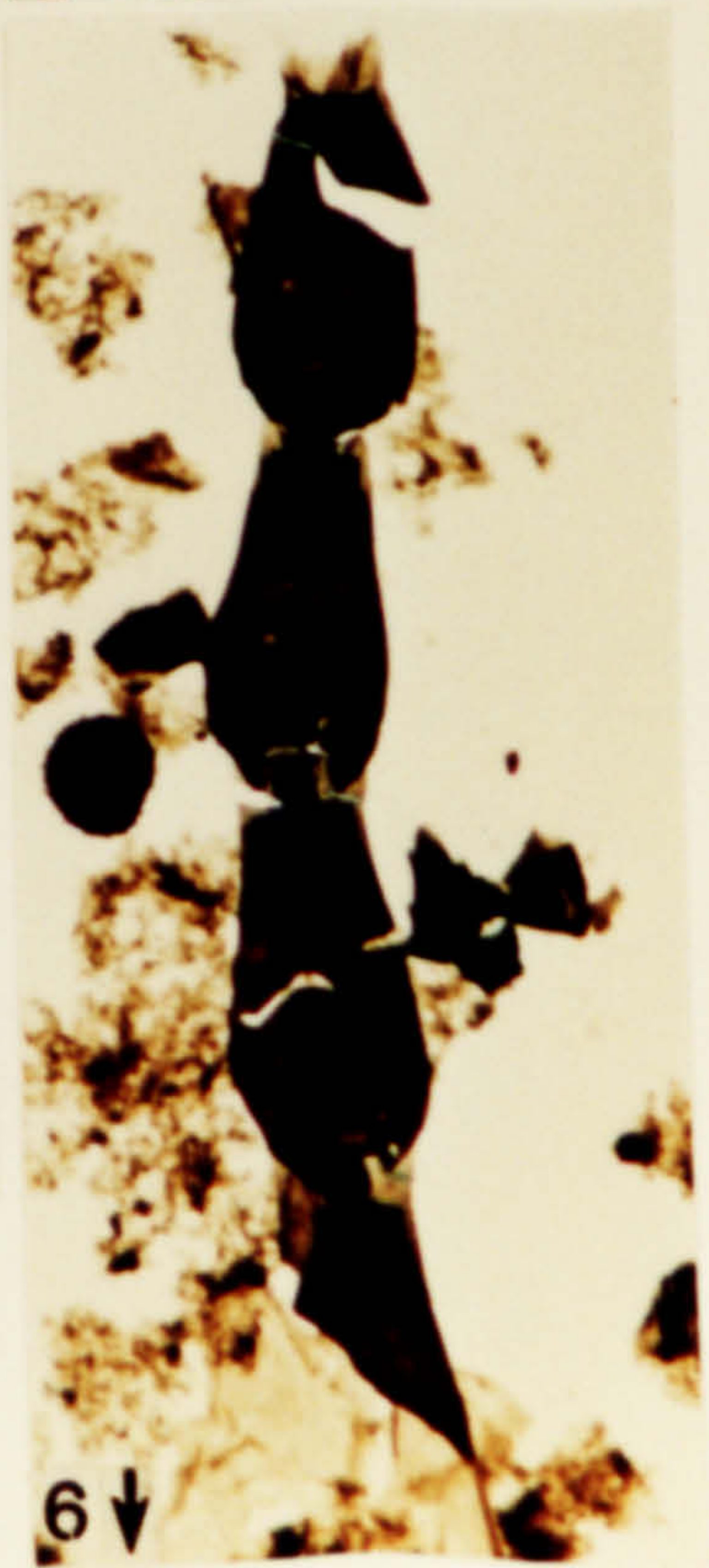
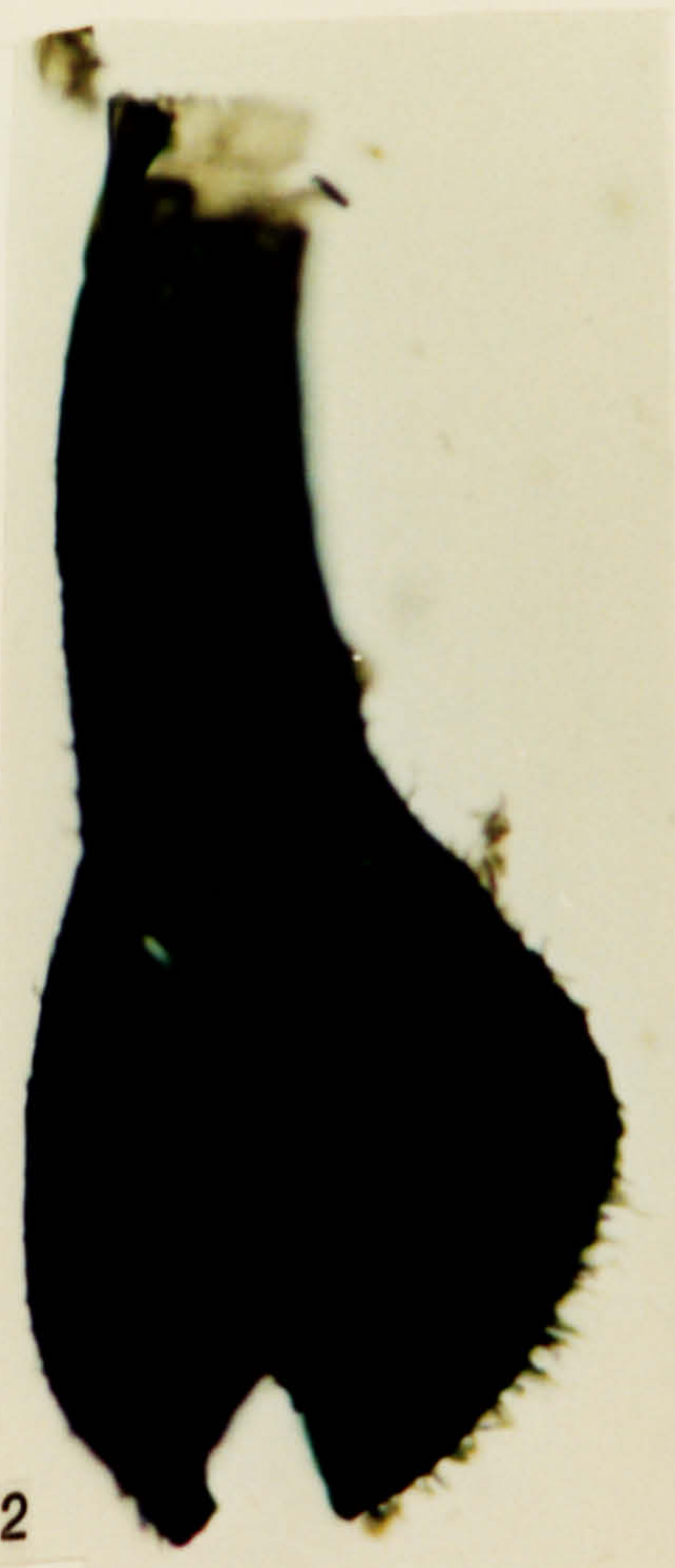
1. *Ancyrochitina pilosa* Taugourdeau & Jekhowsky 1960. JW 10, 1-3, E24\1.
2. *Ancyrochitina pilosa* Taugourdeau & Jekhowsky 1960. JW 10, 1-2, M13\2.
3. *Ancyrochitina pilosa* Taugourdeau & Jekhowsky 1960. JW 10, FS-5, T19\1.
4. *Angochitina echinata* Eisenack 1931. JW 10, FS-4, R8\2.
5. *Angochitina echinata* Eisenack 1931. JW 10, FS-4, S29\4.
6. *Angochitina echinata* Eisenack 1931. JW 10, FS-4, N34\3.



**Plate 95.**

Chitinozoa from the Argillaceous Shale Formation, Ludlow in age.

1. *Angochitina elongata* Eisenack 1931. JW 10, FS-4, X9\4.
2. *Angochitina elongata* Eisenack 1931. JW 10, FS-4, H34\3.
3. *Cingulochitina convexa* (Laufeld) Paris 1981. DW 232, FS-2, V29\3.
4. *Cingulochitina cf. convexa* (Laufeld) Paris 1981. DW 235, FS-5, U11\3.
5. *Cingulochitina cf. convexa* (Laufeld) Paris 1981. DW 235, FS-5, S23\3.
6. *Cingulochitina convexa* (Laufeld) Paris 1981. DW 232, FS-2, V29\3, X230.





**Plate 96.**

Chitinozoa from the Argillaceous Shale Formation, Ludlow in age.

1. *Cingulochitina cf. convexa* (Laufeld) Paris 1981. DW 232, FS-1, S33\3, X230.
2. *Cingulochitina cf. convexa* (Laufeld) Paris 1981. DW 235, FS-5, G36\4.
3. *Cingulochitina cf. convexa* (Laufeld) Paris 1981. DW 232, FS-1, E16\2.
4. *Cingulochitina cf. convexa* (Laufeld) Paris 1981. DW 232, FS-1, E16\2, X920.
5. *Cingulochitina cf. convexa* var A. DW 235, FS-5, P35\3.
6. *Cingulochitina cf. convexa* var. A. DW 235, FS-5, F9\2.
7. *Cingulochitina cf. convexa* var A. DW 235, FS-5, P28\1.

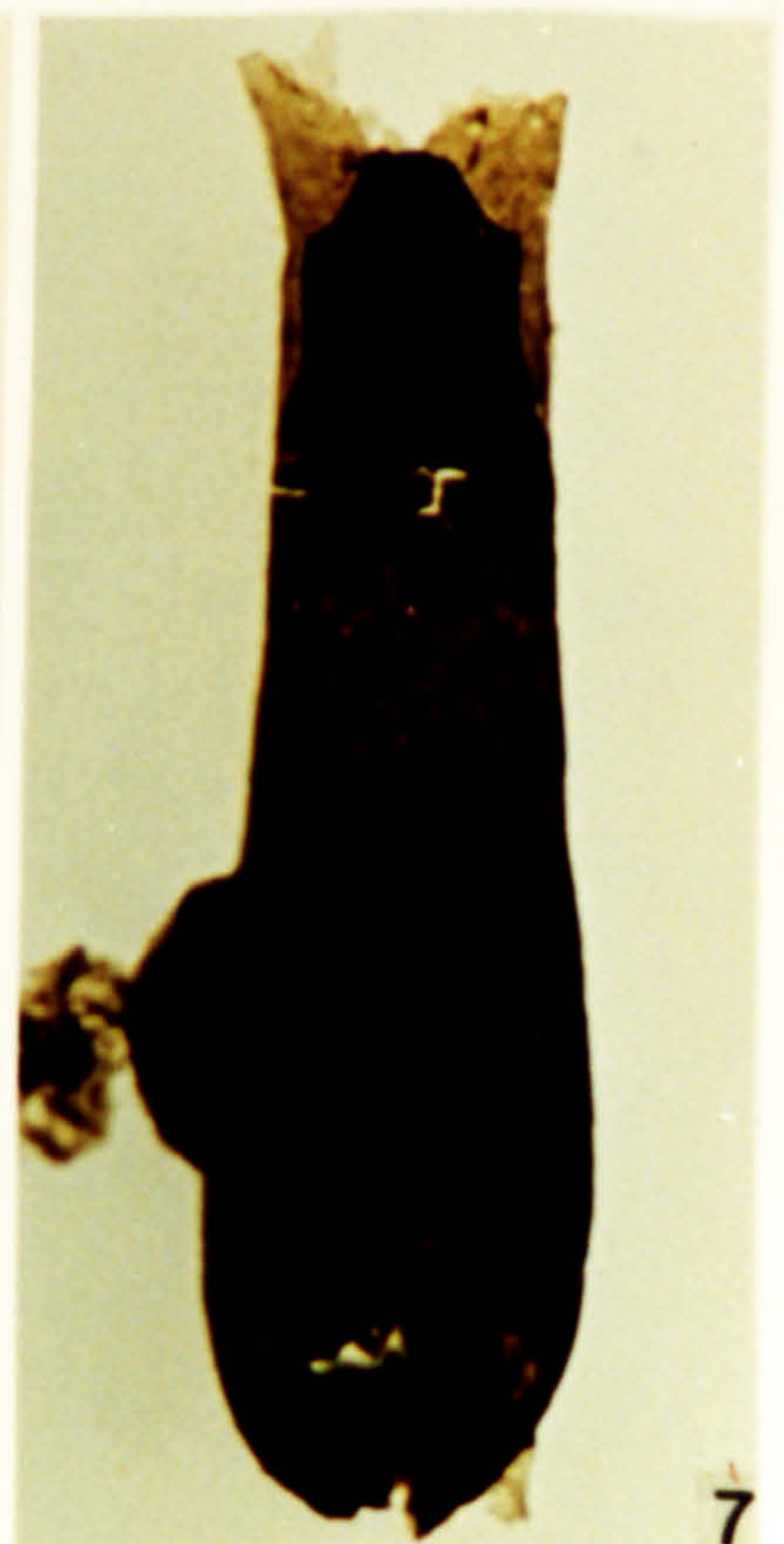


Plate 97.

Chitinozoa from the Argillaceous Shale Formation, Ludlow in age.

1. *Cingulochitina serrata* (Taugourdeau & Jekhowsky) Paris 1981. JW 10, 1-2, M16\2.
2. *Cingulochitina serrata* (Taugourdeau & Jekhowsky) Paris 1981. JW 10, 1-2, M16\2, X230.
3. *Cingulochitina serrata* (Taugourdeau & Jekhowsky) Paris 1981. JW 10, FS-7, N37\4.
4. *Cingulochitina serrata* (Taugourdeau & Jekhowsky) Paris 1981. DW 235, FS-5, Q25\3.
5. *Cingulochitina serrata* (Taugourdeau & Jekhowsky) Paris 1981. DW 234, 1-1, Q20\4.
6. *Cingulochitina serrata* (Taugourdeau & Jekhowsky) Paris 1981. DW 235, FS-5, N26\1.
7. *Cingulochitina serrata* (Taugourdeau & Jekhowsky) Paris 1981. DW 235, FS-5, E21\4.
8. *Cingulochitina cf. serrata* (Taugourdeau & Jekhowsky) Paris 1981. DW 235, FS-5, R30\2.
9. *Cingulochitina cf. serrata* (Taugourdeau & Jekhowsky) Paris 1981. DW 235, FS-5, O24\2.
10. *Cingulochitina cf. serrata* (Taugourdeau & Jekhowsky) Paris 1981. DW 235, FS-6, O10\4.



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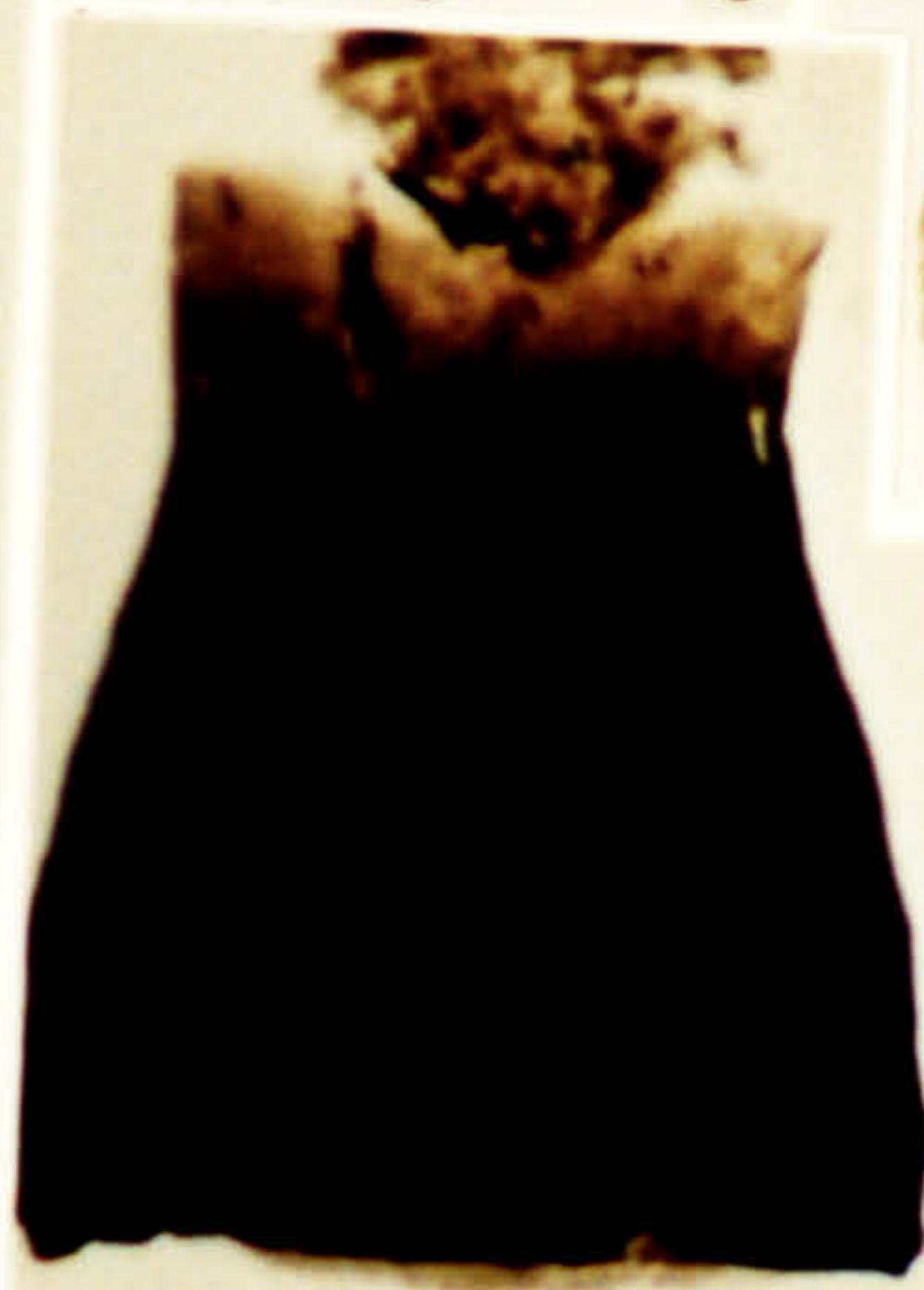
4



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**Plate 98.**

Chitinozoa from the Argillaceous Shale Formation, Ludlow in age.

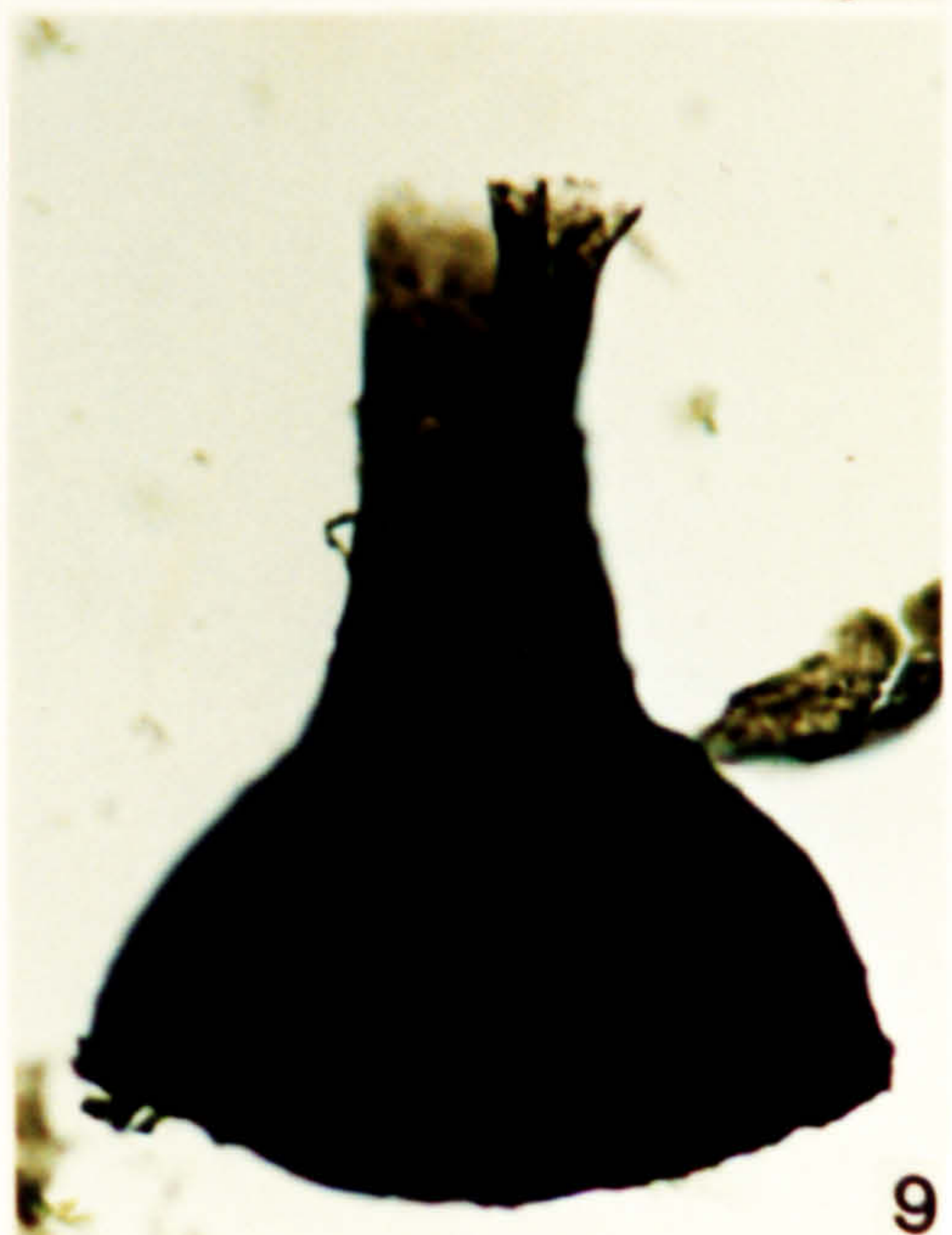
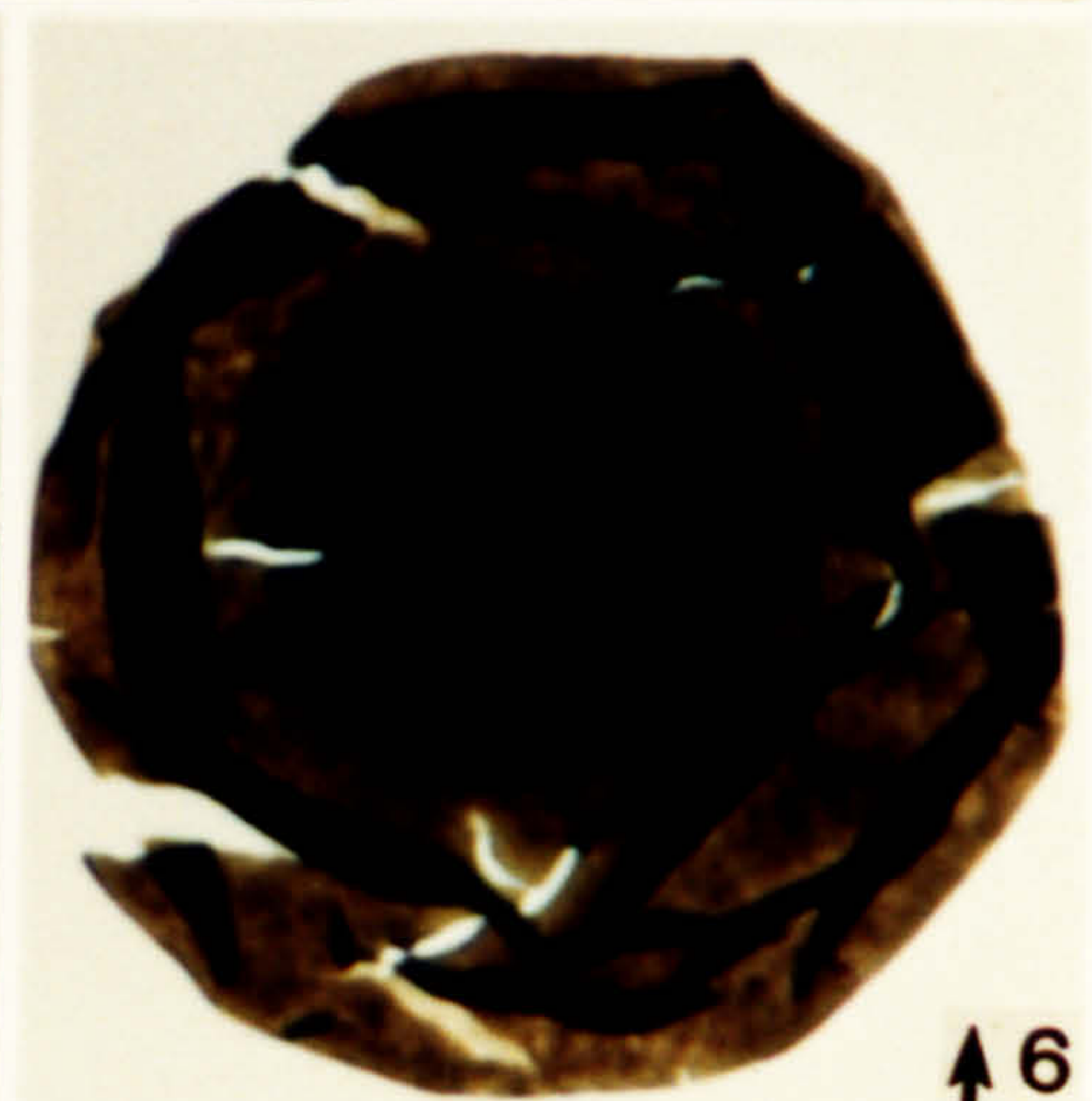
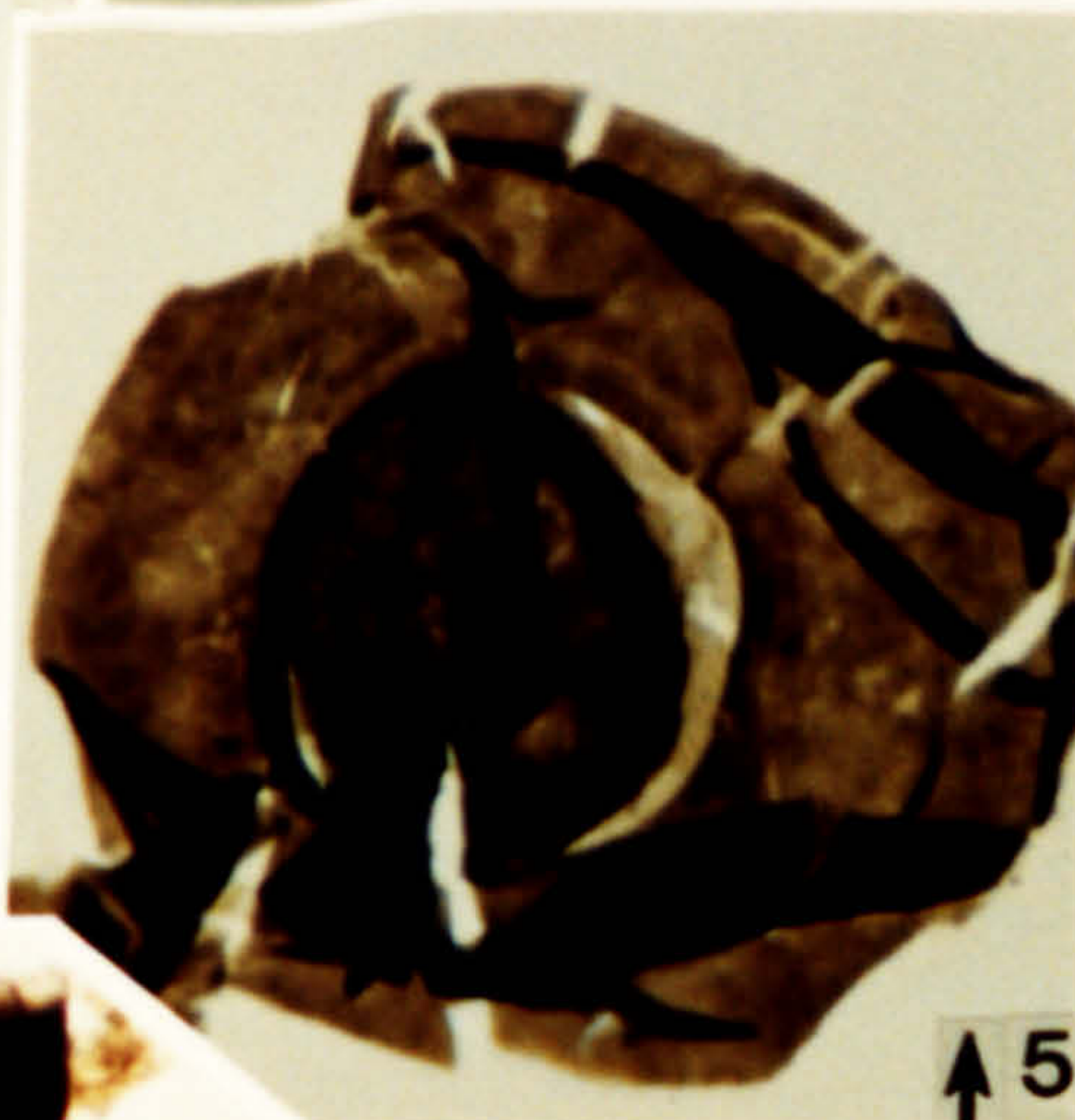
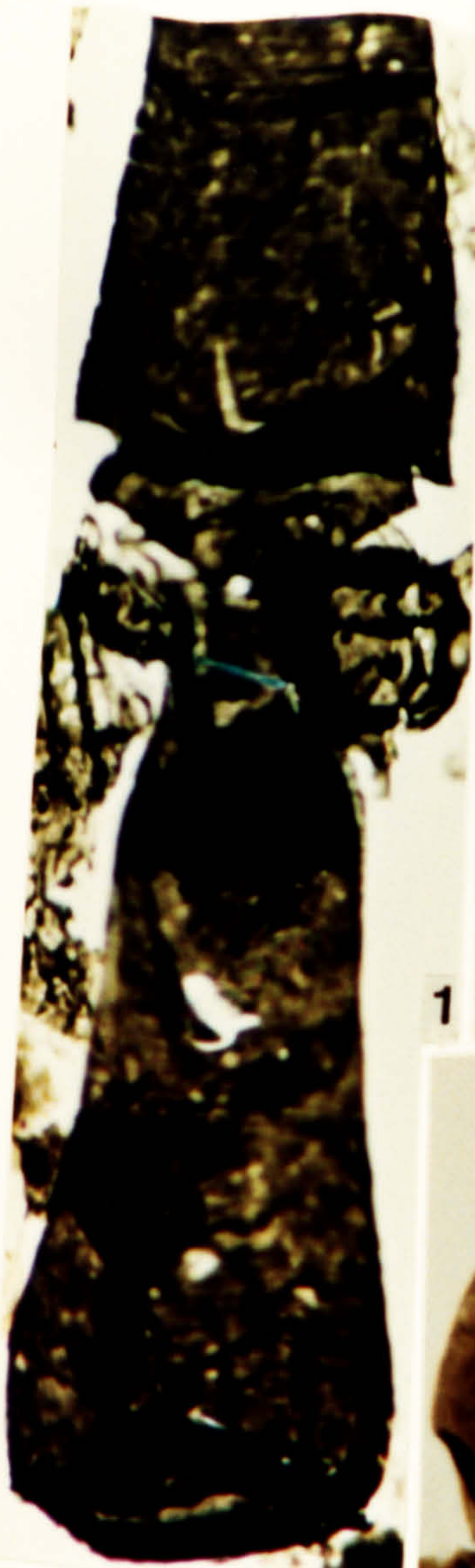
1. *Cingulochitina* sp. 1. JW 10, FS-4, Q19\2.
2. *Cingulochitina* sp. 1. JW 10, FS-4, T34\3.
3. *Cingulochitina* sp. 1. JW 10, FS-4, X25\-.
4. *Cingulochitina* sp. 1. JW 10, FS-4, U31\4, X230.
5. *Cingulochitina* sp. 1. DW 232, FS-1, E25\3.
6. *Cingulochitina* sp. 1. JW 10, FS-4, Y17\4.
7. *Cingulochitina* sp. 1. JW 10, FS-4, F13\3, X230.
8. *Cingulochitina* sp. 1. JW 10, FS-4, Y17\4, X230.



**Plate 99.**

**Chitinozoa from the Argillaceous Shale Formation, Ludlow in age.**

1. *Cingulochitina* sp. 1 var. A. JW 10, FS-4, R24\2.
2. *Cingulochitina* sp. 1 var. A. JW 10, FS-7, G40\3.
3. *Cingulochitina* sp. 1 var. A. JW 10, FS-5, F20\2, X230.
4. *Gotlandochitina labdata* Diez & Cramer 1978. DW 235, FS-5, P17\4.
5. *Hoegisphaere* cf. *glabra* Staplin 1961. DW 235, FS-5, C12\2, X920.
6. *Hoegisphaere* cf. *glabra* Staplin 1961. DW 235, FS-5, E24\3, X920.
7. *Conochitina?* sp. DW 232, FS-1, E28\4.
8. *Conochitina* sp. DW 235, 1-4, G4\2, X230.
9. *Fungochitina* sp. JW 10, FS-4, X10\3.

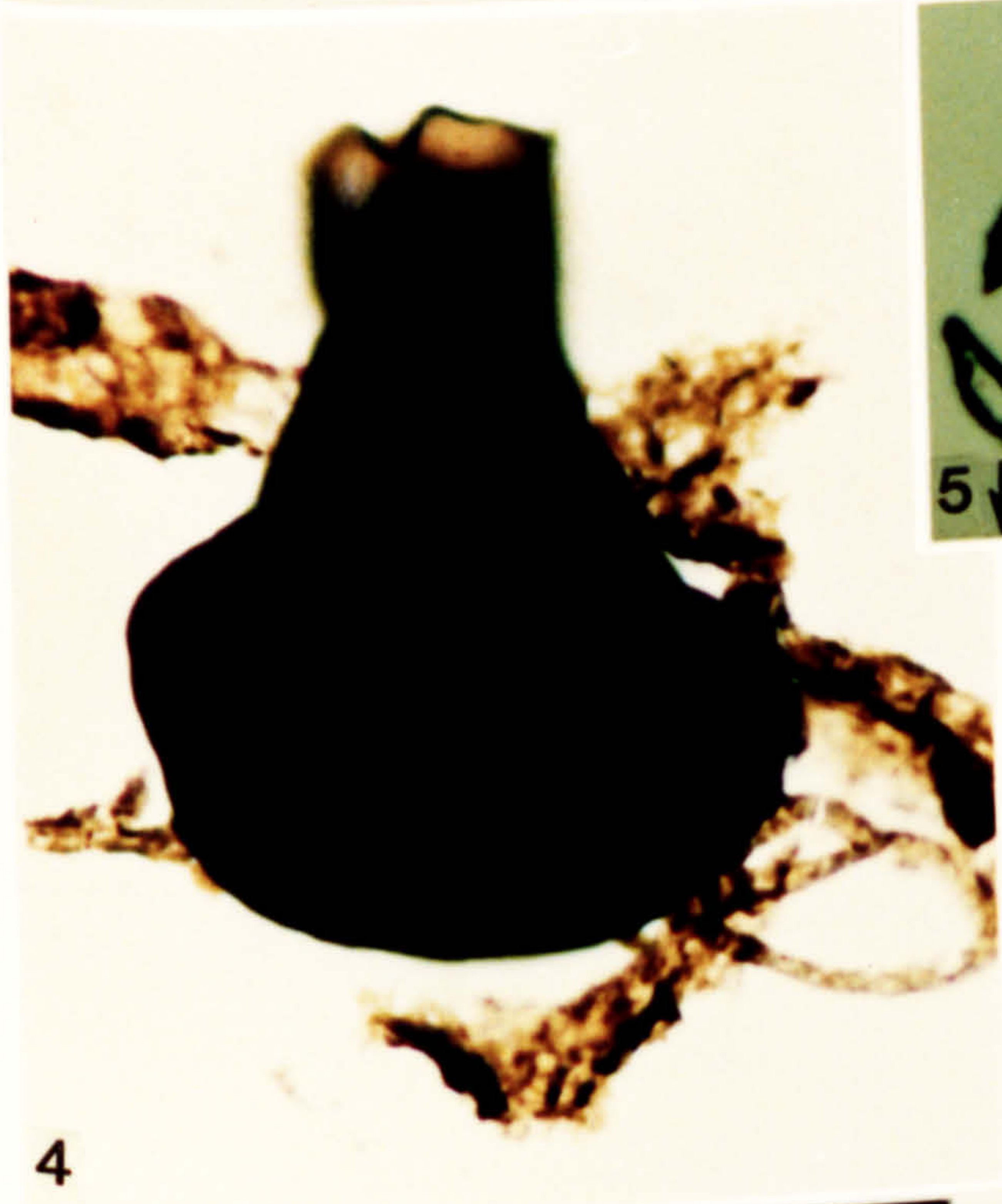
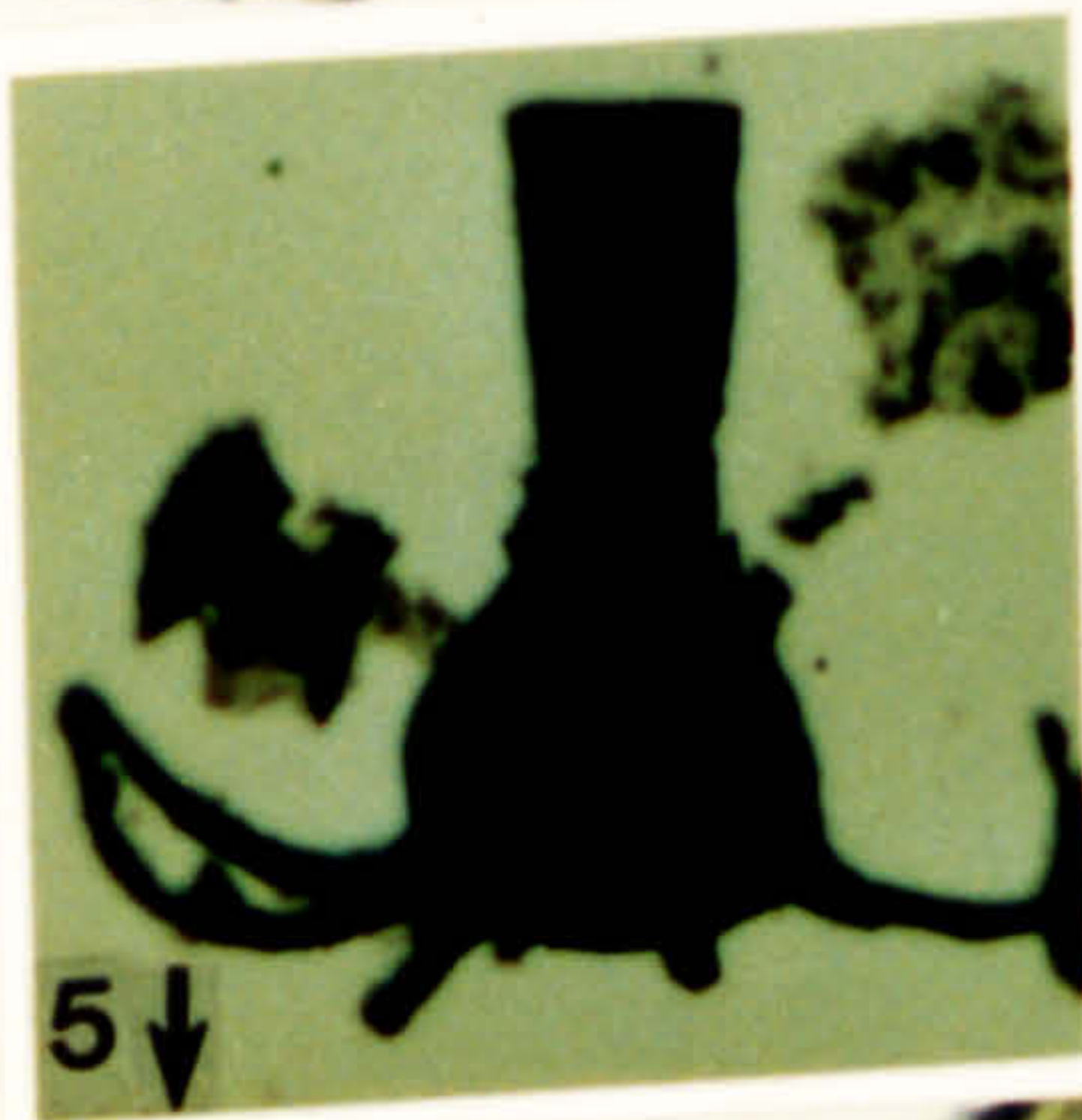
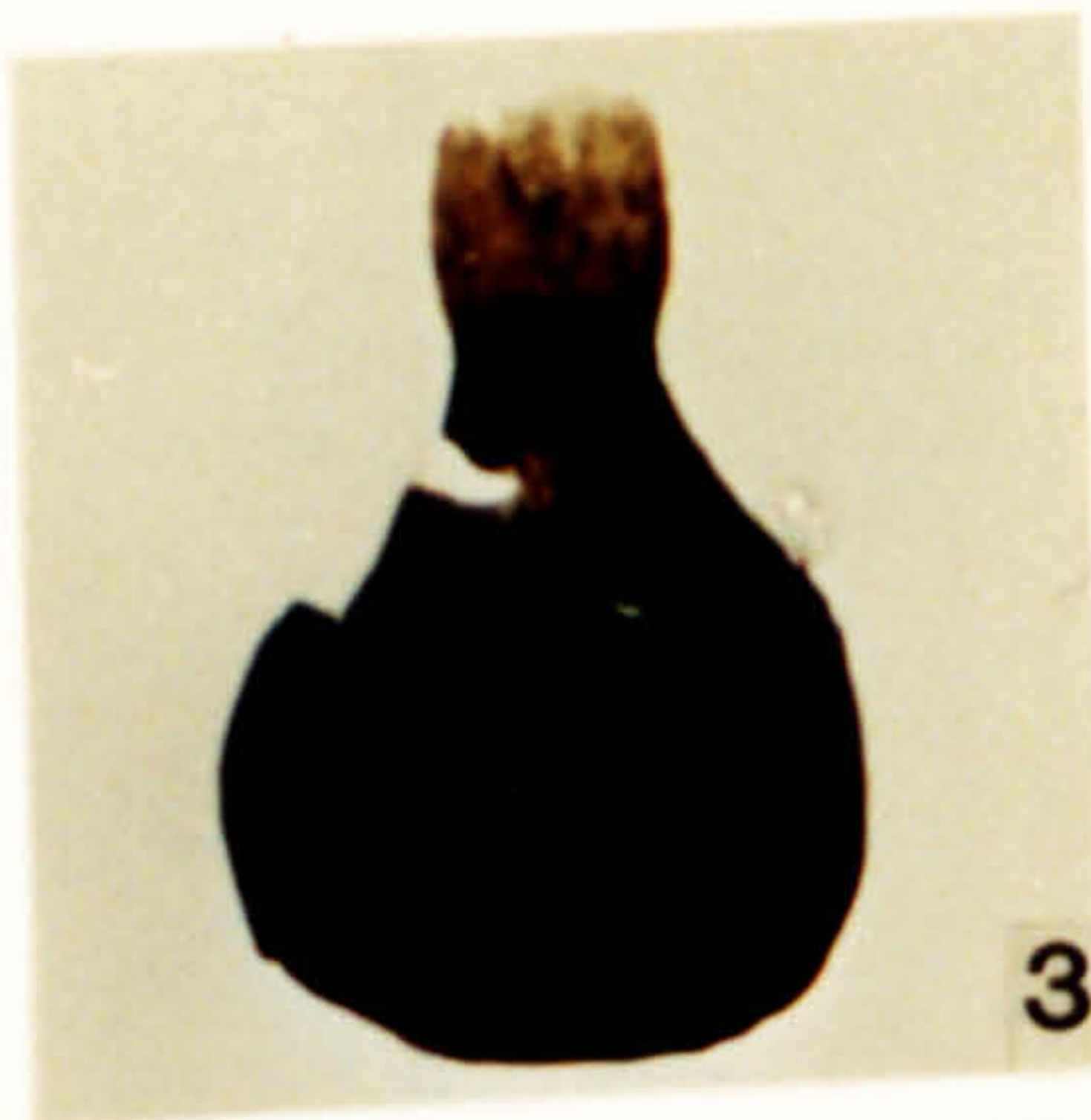
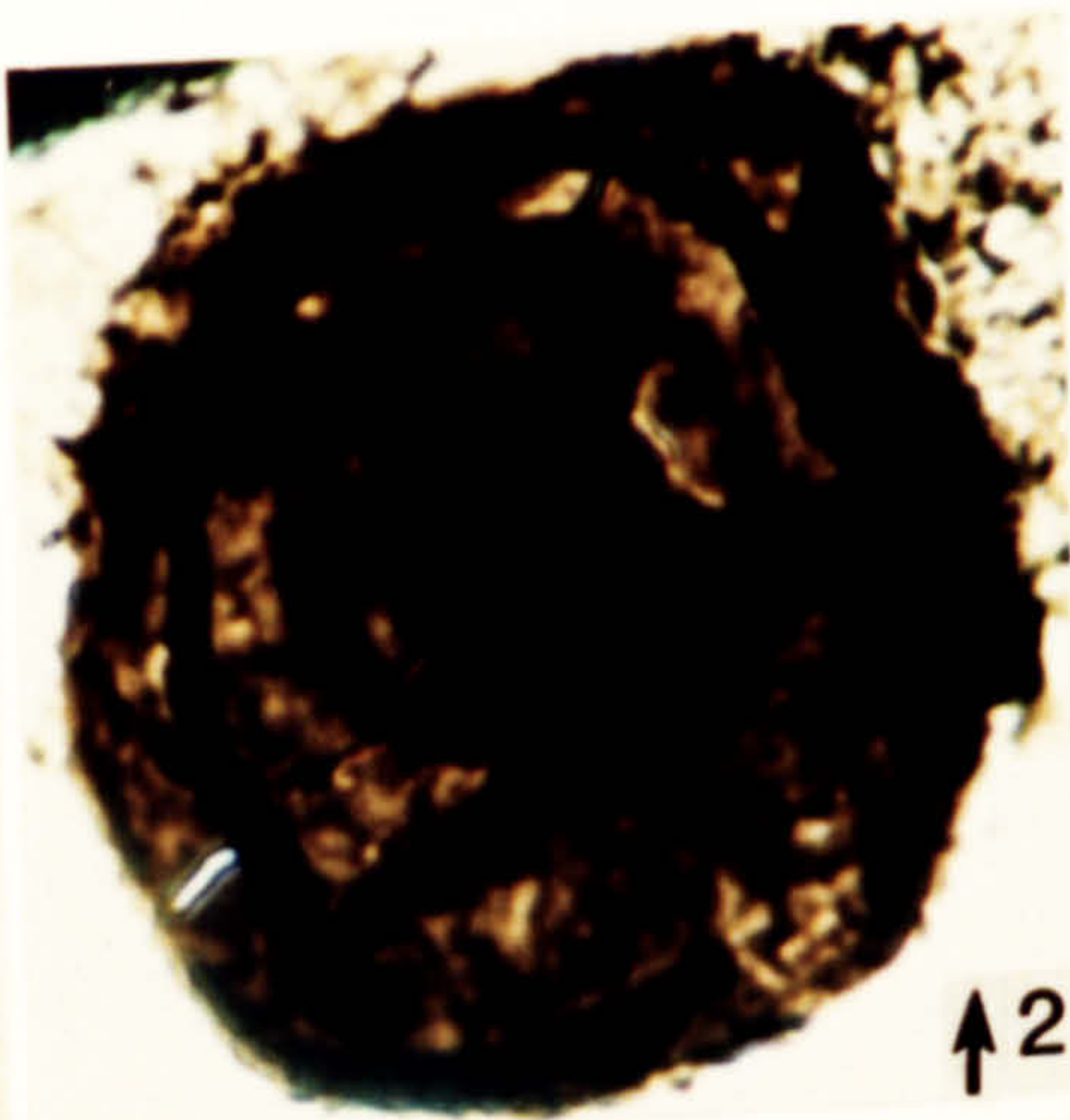
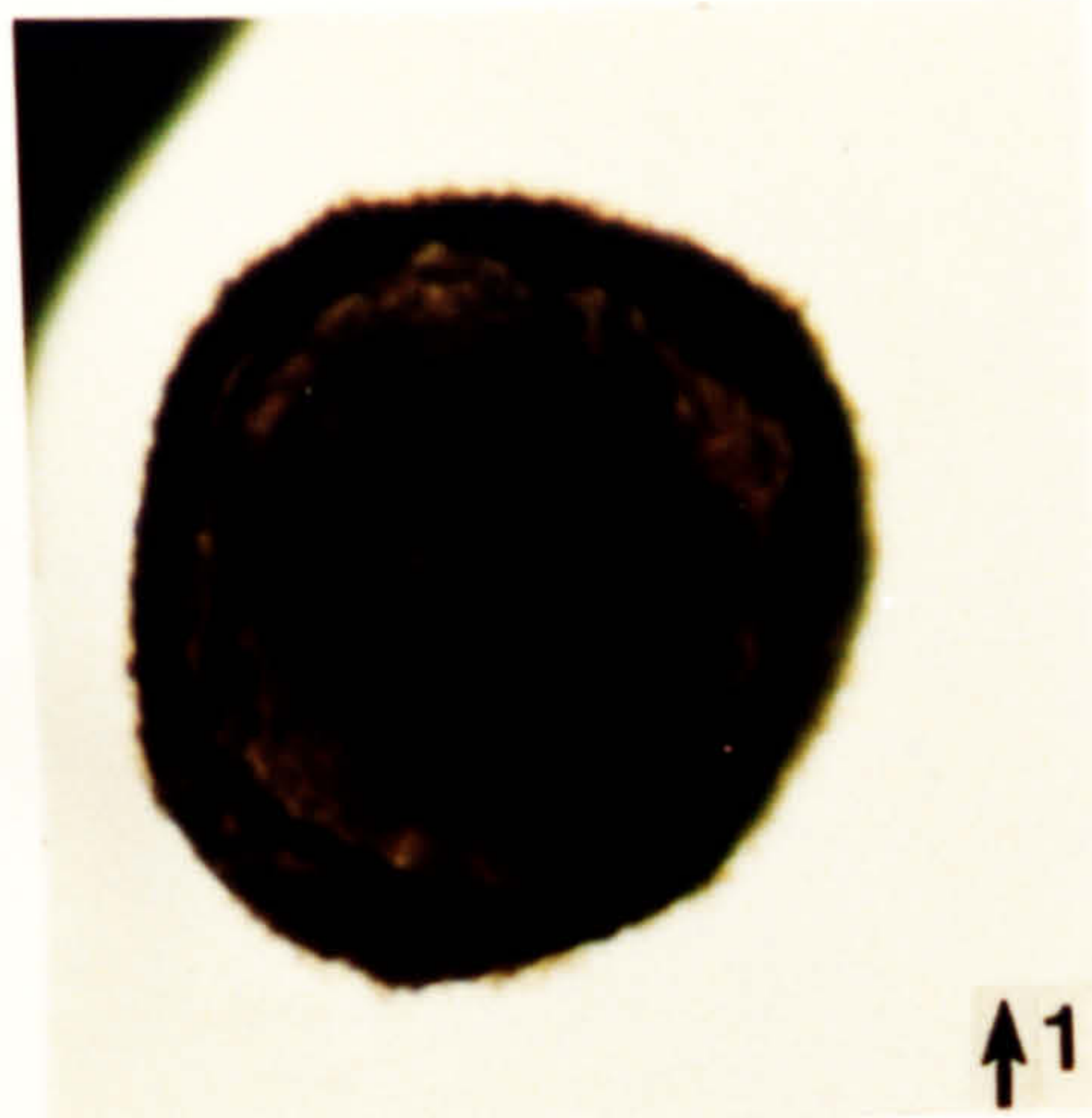




**Plate 100.**

Chitinozoa from the Argillaceous Shale Formation, Ludlow in age.

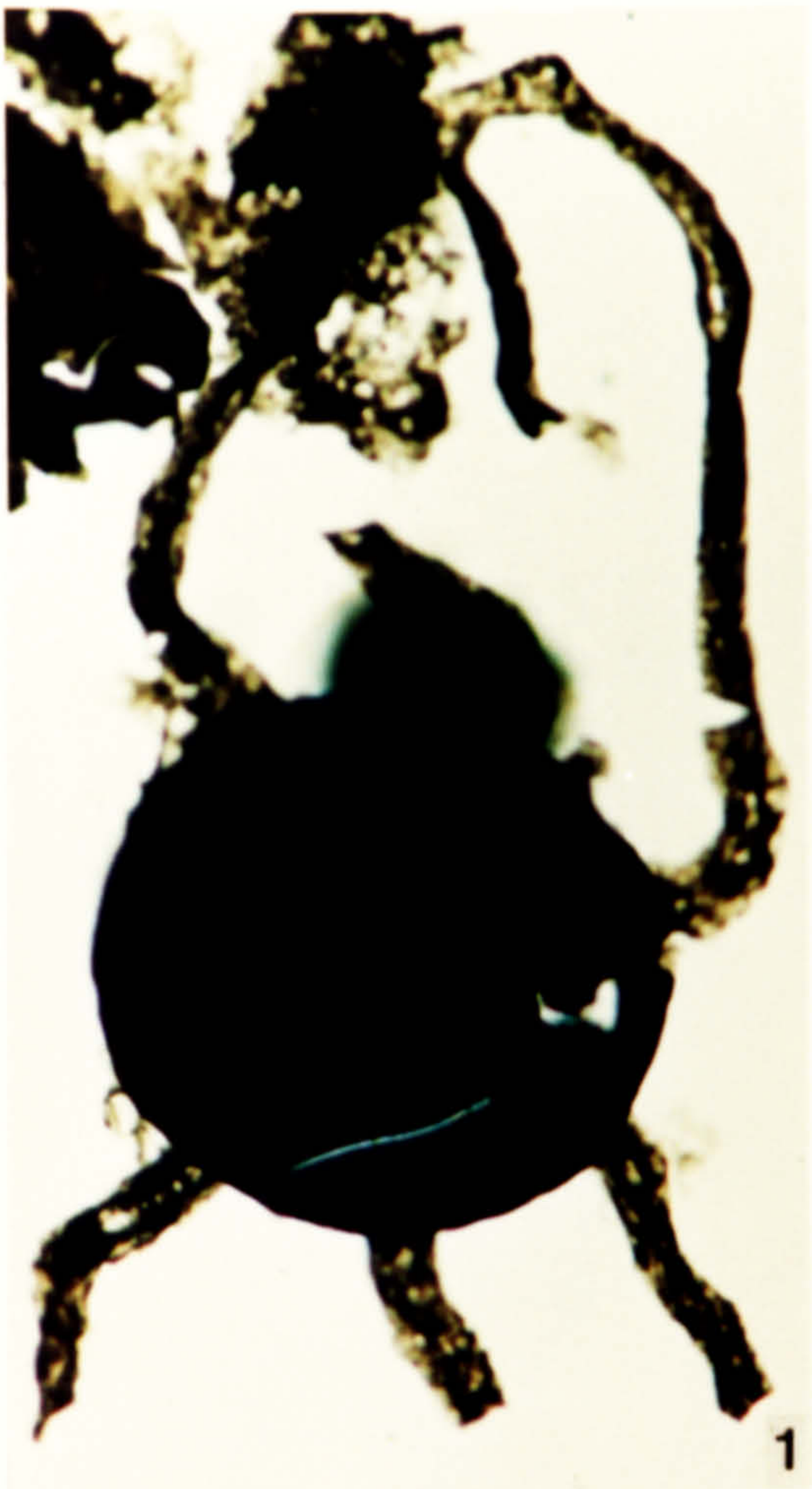
1. *Calpichitina* sp. 1. DW 235, FS-5, T15\4, X920.
2. *Calpichitina* sp. 2. DW 34, FS-4, S37\1, X920.
3. *Lagenochitina deunffi* Paris 1974. DW 235, FS-5, D33\1.
4. *Plectochitina carminae?* Cramer 1964. DW 232, FS-3, S31\4.
5. *Plectochitina carminae?* Cramer 1964. JW 10, 1-1, Y18\3, X230.
6. *Plectochitina carminae?* Cramer 1964. JW 10, 1-1, H28\4, X230.
7. *Plectochitina carminae?* Cramer 1964. JW 10, 1-1, Y18\3.
8. *Plectochitina carminae?* Cramer 1964. JW 10, 1-1, H28\4.



**Plate 101.**

Chitinozoa from the Argillaceous Shale Formation, Ludlow in age.

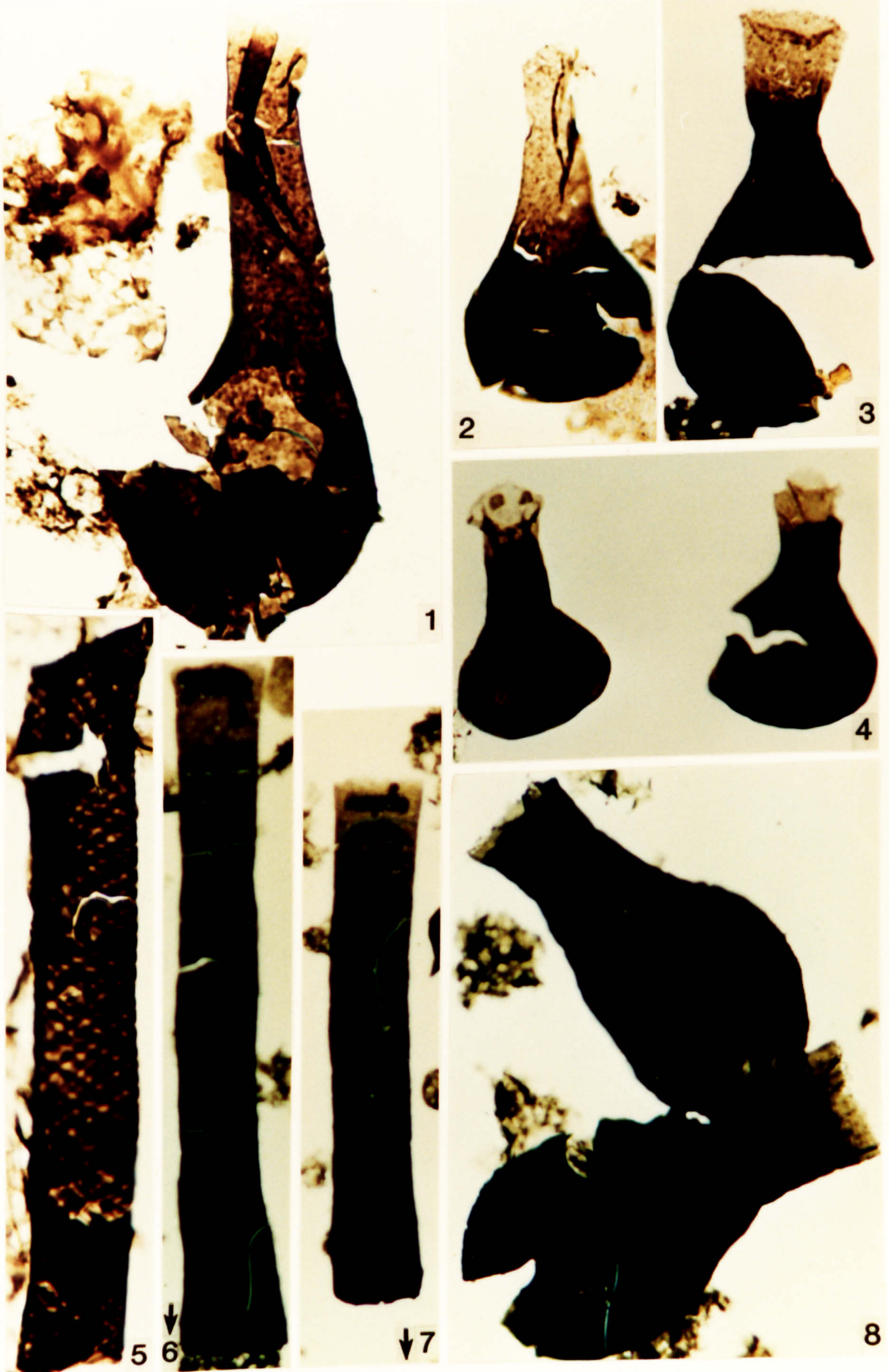
1. *Plectochitina carminae?* Cramer 1964. JW 10, FS-4, W11\2. Aboral view.
2. *Plectochitina carminae?* Cramer 1964. JW 10, 1-3, C11\4.
3. *Plectochitina carminae?* Cramer 1964. JW 10, FS-5, H36\2.
4. *Plectochitina carminae?* Cramer 1964. JW 10, 1-1, N24\4.



**Plate 102.**

**Chitinozoa from the Argillaceous Shale Formation, Ludlow in age.**

1. *Sphaerochitina sphaerocephala?* (Eisenack) Eisenack 1955. DW 232, FS-3, S11\3.
2. *Sphaerochitina* sp. DW 232, FS-1, E18\1.
3. *Sphaerochitina* sp. DW 235, FS-5, E11\3.
4. *Sphaerochitina?* sp. DW 235, FS-6, X35\1.
5. Nematoclast. DW 232, FS-1, G29\2, X920.
6. *Rhabdochitina magna* Complex. JW 10, FS-4, O10\3, X230.
7. *Rhabdochitina magna* Complex. JW 10, FS-4, S23\2, X230.
8. *Sphaerochitina navicula?* Taugourdeau & Jekhowsky 1960. JW10, FS-4, H20\1.



**Plate 103.**

Miospores from the Argillaceous Shale Formation, Ludlow in age.

1. *Emphanisporites neglectus* Vigran 1964. DW 235, FS-5, K21\1.
2. *Emphanisporites neglectus* Vigran 1964. DW 235, FS-5, D31\4.
3. *Emphanisporites neglectus* Vigran 1964. DW 235, FS-5, K34\1.
4. *Emphanisporites?* *pseudoreticulatus* Richardson & Iannides 1979. JW 10, FS-4, R32\3.
5. Spore indet. JW 10, FS-4, K19\2.
6. Spore indet. DW 235, FS-5, O9\2.
7. *Retusotriletes warringtonii* Richardson & Lister 1969. JW 10, FS-4, J8\1.
8. *Retusotriletes warringtonii* Richardson & Lister 1969. JW 10, FS-5, R16\2.
9. *Ambitisporites avitus* Hoffmeister 1959. DW 232, FS-1, M3\2.



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2



3



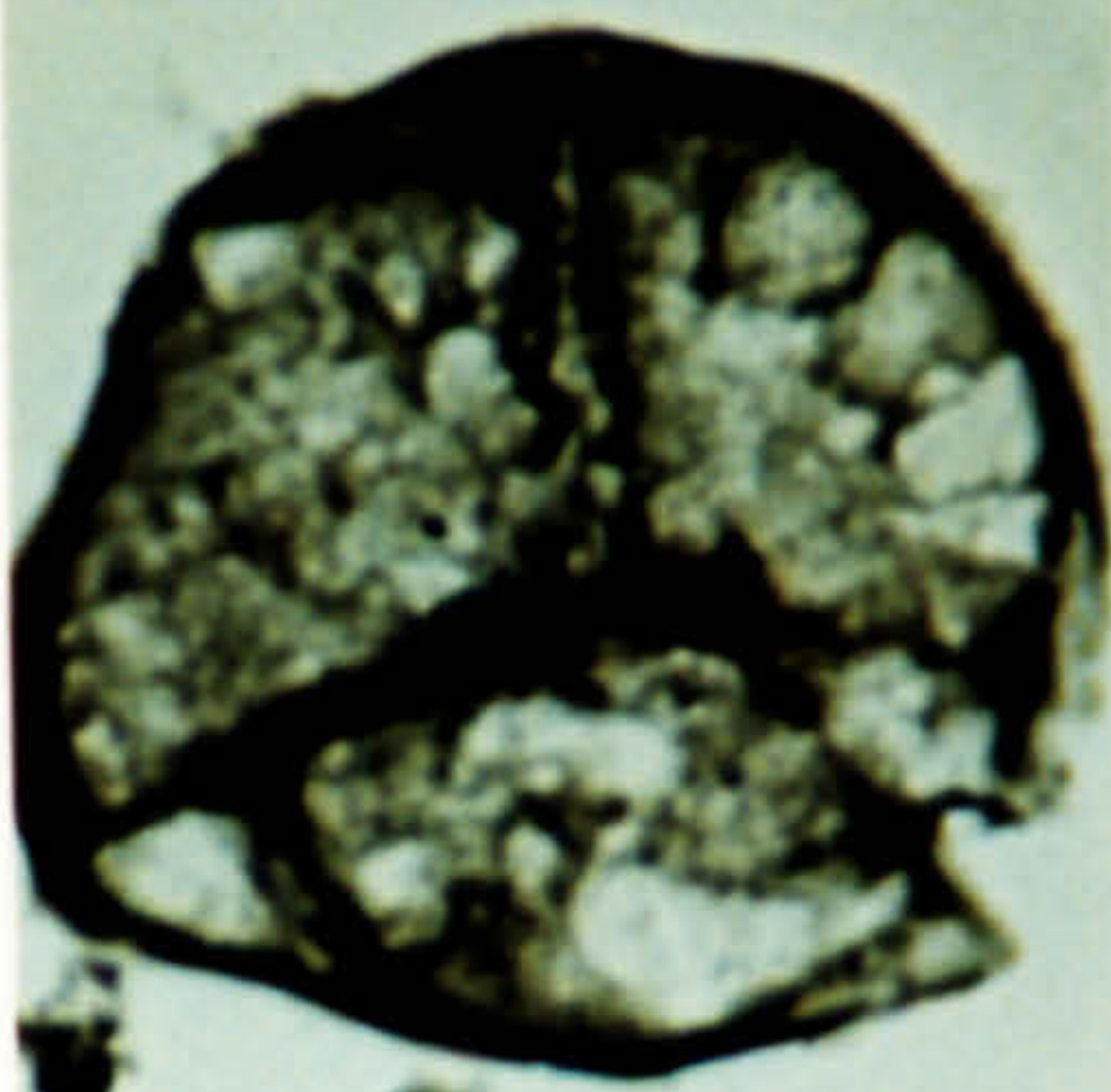
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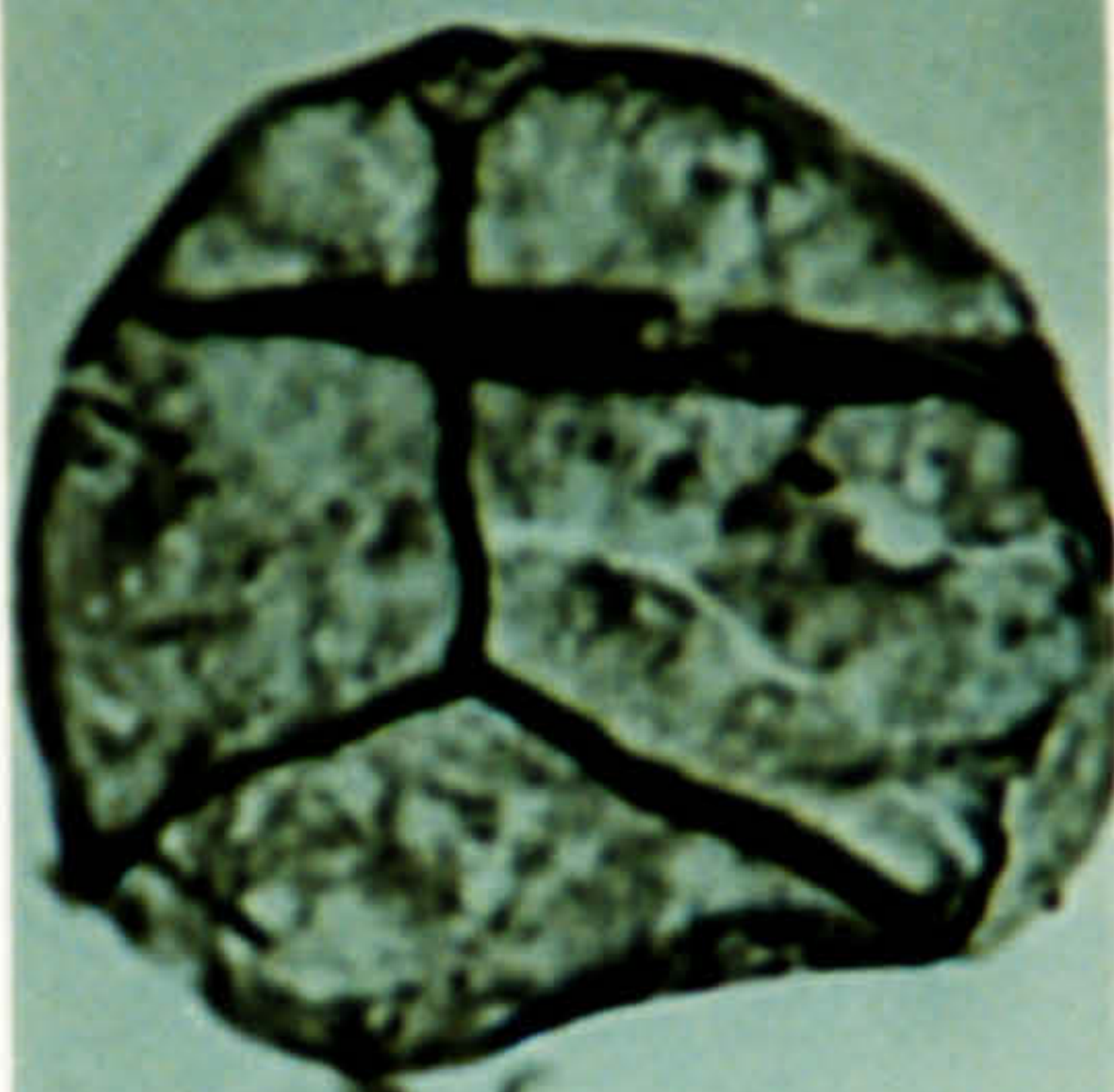
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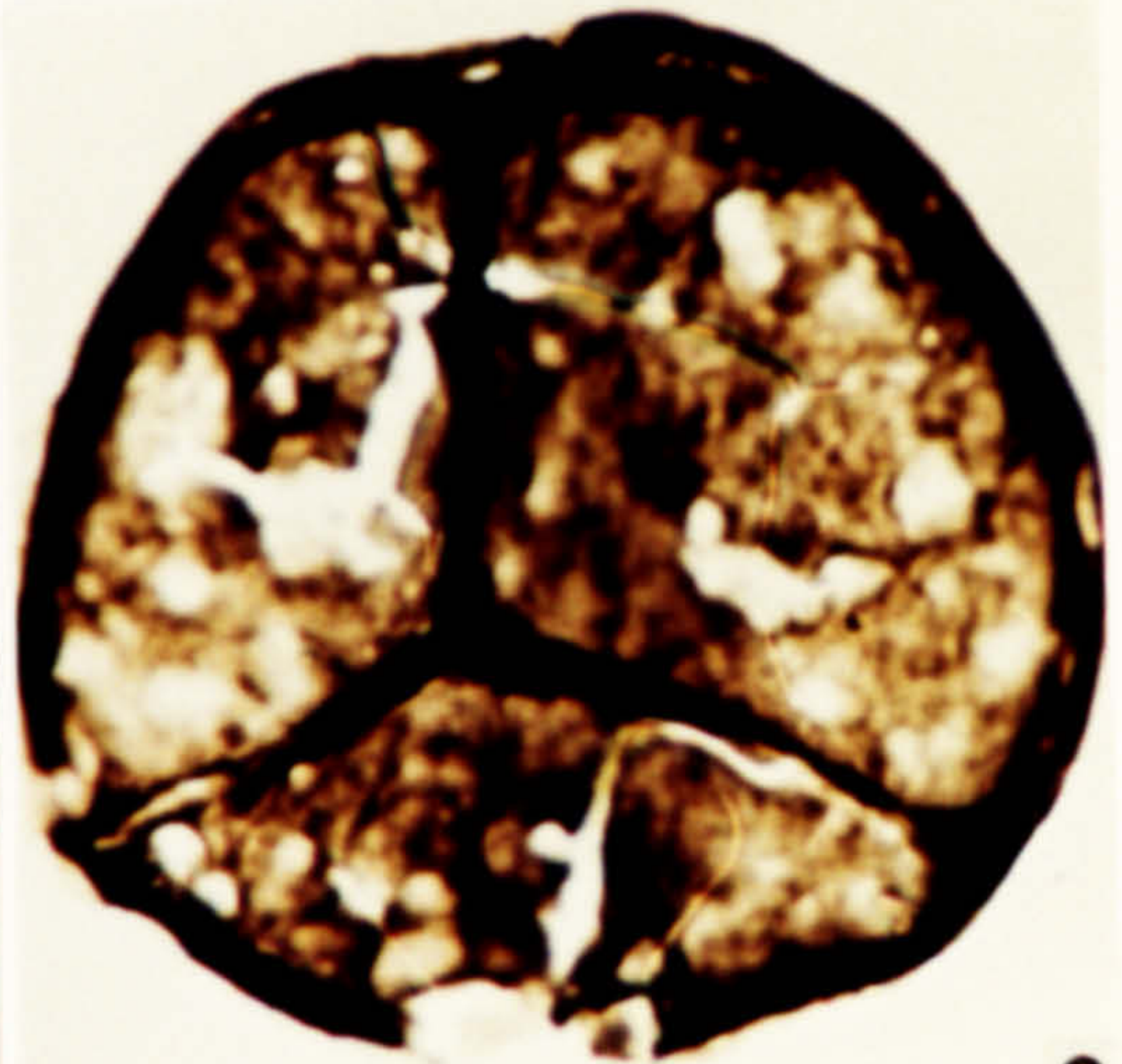
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