

The Mesotaeniaceae in North Carolina, U.S.A.

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美國 North Carolina州의 綠藻類 Mesotaeniaceae에 對하여

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摘 要

美國 North Carolina州의 淡水産 綠藻植物 Mesotaeniaceae를 究明하기 위하여 1962년부터 1969년 사이에 200餘個所에서 採集한 材料를 調査한 結果, 6屬 16種 7變種 1亞種이 同定되었다. 그中 3種 1變種은 North Carolina州의 未記錄種 植物이었다.

The first report on this family in North Carolina was made by Poteat in 1888. He listed 5 taxa of this group. Whitford(1943) described 10 taxa of Mesotaeniaceae in his statewide survey of fresh water algae of North Carolina. Later, Whitford(1958), Schumacher and Whitford(1959, 1961), and Schumacher *et al.* (1963) added 10 more taxa to the previous report.

This paper represents materials from statewide areas of the North Carolina. It contains reports on 24 taxa. 20 of these are extensions of previous records, and 4 are new records for the State of North Carolina.

Collections were made from 1962 to 1966 by the writer and Dr. L.A. Whitford from more than 200 localities, which included lakes, ponds, roadside ditches, borrow pits, and edges of streams.

Collections were made from the squeezings of submerged higher plants and plankton tows.

Fresh materials were brought back to the laboratory (except on overnight trips) and was observed in-living condition. It was possible to keep the material alive for several days in a refrigerator. After taking a quick note of living specimens, they were preserved in Transeau's solution for further detailed study.

(* New record for the state)

Description of species

Division Chlorophyta

Class Chlorophyceae

Order Zygnematales

Family Mesotaeniaceae

Gonatozygon aculeatum Hastings

L. 153-220, W. 12-14, Ap. 16, Sp. 6-8, Pyr. 6-11; southeastern Coastal Plain.

G. brebissonii DeBary

L. 230, W. 6.8, Ap. 4.5, W. just below apex 3.3, Carteret Co.

G. kinahani (Arch.) Rabenh.

L. 272, W. 12, Pry. 5-8; uncommon but apparently widespread.

G. monotaenium DeBary

L. 137-171, W. 7-9; from several ponds in Wake Co., sand pits in Brunswick Co.

G. pilosum Wollé

L. 156, W. 7; Whitford says that this plant is occasionally abundant in Piedmont and Coastal Plain ponds.

Spirotaenia condensata Breb.

L. 130-208, W. 20-21; widespread throughout North Carolina.

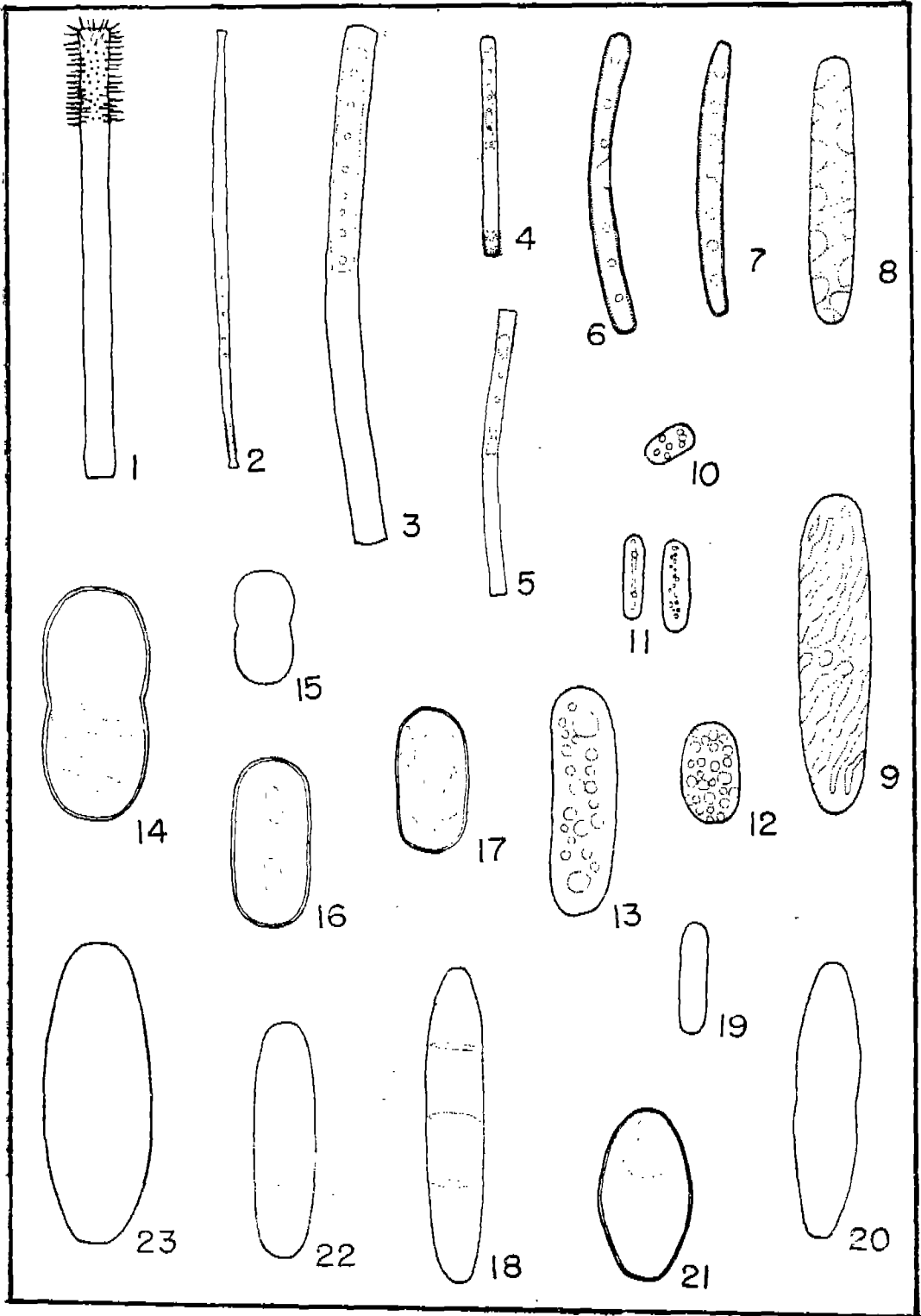
- obscura* Ralfs
L. 50—210, W. 15—30, Mitchell Co. (Brown, 1930), Wake Co. (Poteat, 1888).
- Mesotaenium chlamydosporum* var. *minor* Reinsch
Macon Co. (Silva, 1948); NMA.
- M. endlicherianum* Nägeli
L. 25—27, W. 8—9, Wake Co. (Poteat, 1888).
- M. greyi* Turner
L. 75—90, W. 20—23, Macon Co. (Silva, 1948).
- M. macrococcum* var. *micrococcum* (Kütz.) Roy et Biss.
L. 13—15, W. 8.5—10, Harnett Co. (Schumacher and Whitford, 1961).
- M. mirificum* Arch.
L. 28—35, W. 15—20, Jackson Co. (Silva, 1948)
- Roya obtusa* (Breb.) W. et G. S. West
L. 73, W. 4.5, Wake Co.
- R. obtusa* var. *montana* W. et G. S. West
L. 48—81, W. 5—6, Jackson Co., Moore Co. (Schumacher and Whitford, 1961)
- Cylindrocystis americana* W. et G. S. West
L. 52, W. 23, Jackson Co. and Washington Co.
- C. americana* var. *minor* Cush.
L. 20—25, W. 10—13; from seeps and ditches in lower Piedmont and Coastal Plain.
- C. brebissonii* Menegh.
L. 38—40, W. 14—16, Macon Co. (Silva, 1948); several ditches in the Coastal Plain.
- C. brebissonii* var. *minor* Menegh.
L. 20—34, W. 10—14; widespread in shallow water.
- C. obesa* W. et G. S. West
L. 36, W. 20, Ap. 10—12, Pyr. 1 large, Silver Hill Pond, Scotland Co.
- Netrium digitus* (Ehr.) Itzigsohn et Rothe
L. 123—370, W. 30—70; apparently widespread throughout North Carolina.
- N. digitus* var. *constrictum* G. S. West
L. 360—385, W. 80—85, Ap. 25—27, Henderson Co. and Wake Co.
- N. interruptum* (Breb.) Lütke.
L. 200—250, W. 40—43, Ap. 12—16; apparently widespread in all parts of North Carolina, but not frequent.
- N. oblongum* (DeBary) Lütke.]

- L. 116, W. 32, Mitchell Co. (Brown, 1930) Scotland Co.
- N. oblongum* var. *cylindricum* W. et G. S. West
L. 55—70, W. 17—18, Wayne Co. (Schumacher and Whitford, 1959)

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- rican desmids. *Trans. Linn. Soc. London* 5 : 229—274.
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Explanation of Plate

- Fig. 1. *Gonatozygon aculeatum* Hastings.
- Fig. 2. *G. brebissonii* DeBary.
- Fig. 3. *G. kinahani* (Arch.) Rabenhorst.
- Fig. 4. *G. monotaenium* DeBary.
- Fig. 5. *G. pilosum* Wolle. (r)
- Fig. 6. *Roya obtusa* (Breb.) W. et G. S. West.
- Fig. 7. *R. obtusa* var. *montana* W. et G. S. West: (r)
- Fig. 8. *Spirotaenia condensata* Breb.
- Fig. 9. *S. obscura* Ralfs. (r)
- Fig. 10. *Mesotaenium macrococcum* var. *micrococcum* (Kütz.) Roy et Biss.
- Fig. 11. *M. endlicherianum* Näg. (r)
- Fig. 12. *M. mirificum* Arch. (r)
- Fig. 13. *M. greyi* Turner. (r)
- Fig. 14. *Cylindrocystis americana* W. et G. S. West.
- Fig. 15. *C. americana* var. *minor* Cush.
- Fig. 16. *C. brebissonii* Menegh.
- Fig. 17. *C. brebissonii* var. *minor* Menegh.
- Fig. 18. *Netrium interruptum* (Breb.) Lütkem.
- Fig. 19. *N. oblongum* var. *cylindricum* W. et G. S. West.
- Fig. 20. *N. digitus* var. *constrictum* G. S. West.
- Fig. 21. *N. obesa* W. et G. S. West.
- Fig. 22. *N. oblongum* (DeBary) Lütkem.
- Fig. 23. *N. digitus* (Ehr.) Itzigson et Rothe.