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EARLY MISSISSIPPIAN PLANT AND TRILOBITE REMAINS FROM NORTHWESTERN GEORGIA

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INTRODUCTION

In 1966, I reported trilobites belonging to *Australosutura georgiana* Rich and to the genus *Proetus* Steininger from a small outcrop of the Lavender Shale Member of the Fort Payne Chert, 1.2 miles east of Ringgold, Catoosa County, northwesternmost Georgia. Associated with the trilobites is a marine fauna including remains of bryozoans, echinoderms, brachiopods, and ostracodes. Subsequent collection of abundant samples at the same outcrop has uncovered the glabella of a trilobite genus not previously reported from the locality as well as a fragmentary flora consisting of *Archaeocalamites* Stur and algae(?) assigned to *Confervites* Brongniart. The purpose of this note is to report the occurrence of the newly obtained material.

The co-occurring flora and marine fauna are in gray silty claystone and silty clay shale that are variegated along bedding and parting planes into combinations of yellow, brown, and maroon. The outcrop is at the east foot of Whiteoak Mountain, along the west side of Cherokee Valley Road, 0.55 miles north of the intersection of that road with U. S. Highway 41. The outcrop is on the east side of a small southward projecting spur separated from the main part of Whiteoak Mountain by the lower reaches of a canyon trending along the outcrop trace of the Chattanooga Shale (Devono-Mississippian). Between the Chattanooga Shale and Lavender Shale Member and just below the top of the small spur, on its west side, are outcrops of greenish mudrock containing small spherical phosphatic nodular masses. This greenish mudrock has been considered equivalent to the Maury Shale of Tennessee (Butts, 1948; Swingle, 1959), and has, for mapping purposes, been included with either the Chattanooga Shale (Cressler, 1963) or Fort Payne Chert (Swingle, 1959).

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SYSTEMATIC PALEONTOLOGY

Phylum ARTHROPODA
Class TRILOBITA

Genus GRIFFITHIDES Portlock, 1843 (emend. Weller, 1936)

GRIFFITHIDES sp.
Text-figs. 1a,b

Description.—One partial glabella is referred to this genus. Glabella elongate, in-

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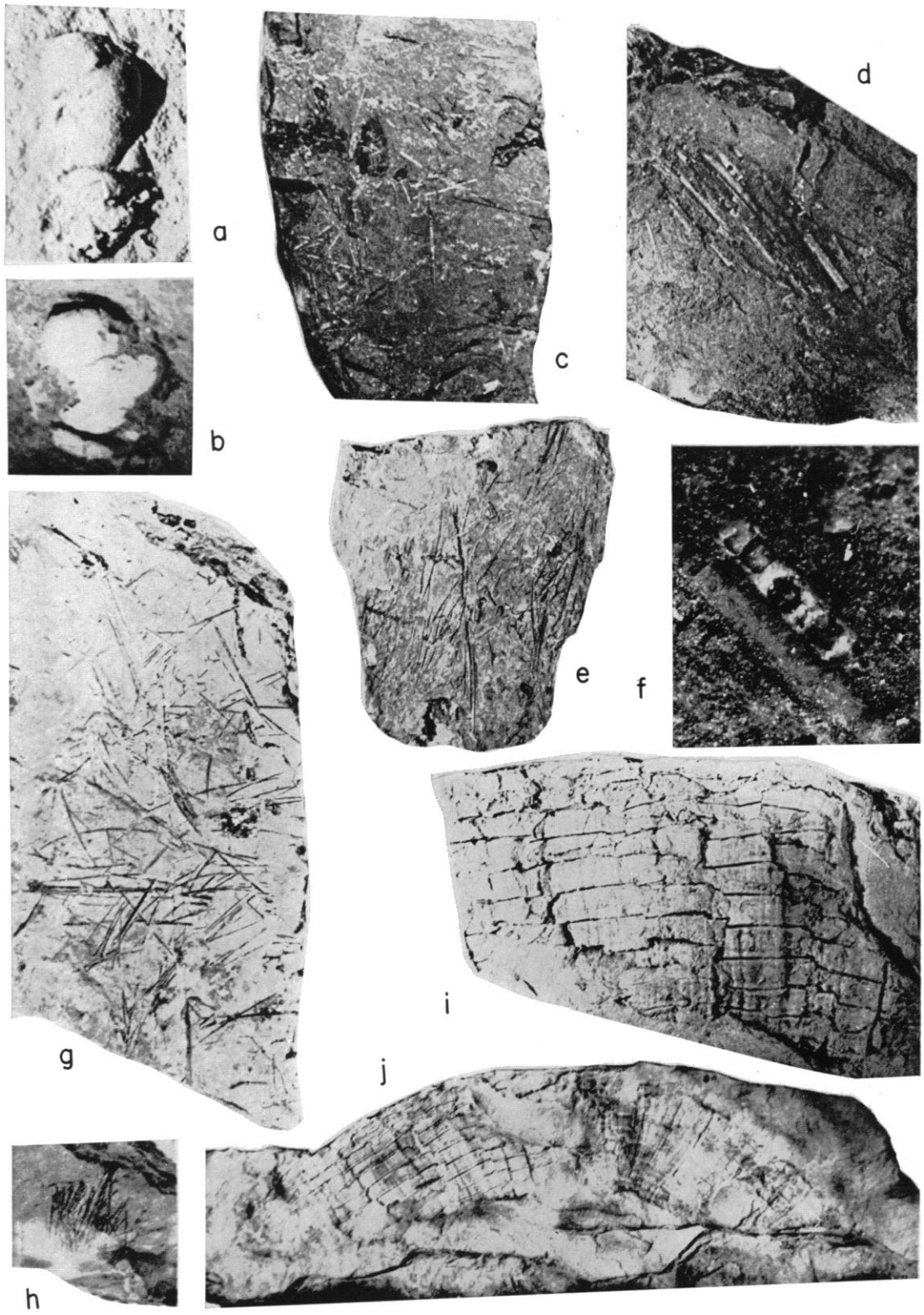
TEXT-FIG. *1—a,b, Griffithides* sp. *a,* Incomplete glabella, dorsal view, ×12. *b,* Oblique anterior view of specimen in Text-fig. 1a showing anterior margin descending beneath frontal lobe, ×16.5. *c,e,g,h, Confervites*? sp., ×2.4, ×2, ×2.1, ×1.7, respectively, *d,f, Confervites* cf. *C. Fasciculata* Brongniart. *d,* Rodlike filaments, ×2.2. *f,* Enlarged portion of Text-fig. 1d showing cellular structure, ×12. *i,j, Archaeocalamites* sp. *j,* Pith cast, ×1.1. *i,* Enlarged portion of specimen in Text-fig. 1j, ×2.4.



flated, about 2.5 times as long as wide, and widest anteriorly. When viewed obliquely toward the frontal lobe (Text-fig. 1b), a portion of the anterior margin can be seen to disappear beneath the frontal lobe, signifying absence of an anterior border. Sides of frontal lobe steeply inclined. Preoccipital furrows deep and straight, sharply segregating well-defined preoccipital glabellar lobes. Occipital furrow and ring well-defined.

Remarks.—The glabellae of *Griffithides* Portlock and *Griffithidella* Hessler possess the same characteristics. The former genus is distinguished from the latter mainly on the basis of its lacking an anterior border and in having nine thoracic segments (Hessler, 1965). The specimen described here is referred to *Griffithides* because of its apparent lack of anterior border with the resultant extension of the frontal portion of the glabella to the anterior margin.

THE FLORA

Phylum SPHENOPSIDA
Genus ARCHAEOCALAMITES Stur, 1875
ARCHAEOCALAMITES sp.
Text-figs. 1i,j

Description.—The material consists of one poorly preserved and presumably partially deformed pith cast. The ribs, which do not appear to alternate at the nodes but rather appear to be partially offset, are flat and are 1.7 to 2.4 mm wide. The nodes are indistinct.

ALGAE?

Genus CONFERVITES Brongniart, 1828
CONFERVITES cf. C FASCICULATA Brongniart, 1828
Text-figs. 1d,f

Confervites fasciculata BRONGNIART, 1828, p. 35, Pl. 1, figs. 1–3

Description.—This form occurs as silicified, smooth, thin, straight to slightly curved rods that are bunched parallel to each other along bedding. The rods are 0.9 to 1.0 mm wide. Although their length was not determined because of breakage along exposed surfaces, they are judged to have been at least 15 mm long. Under high magnification, one partially exfoliated rod (Text-fig. 1f) reveals an interior arranged into a series of flat barrel-shaped cells.

Remarks.—The material bears a striking resemblance to the type specimens of *Confervites fasciculata* illustrated by Brongniart (1828). Inasmuch as the taxonomic affinities of *Confervites* are not known and because there is some doubt as to whether the specimens described here are algal, the forms referred to *Confervites* are questionably included in the algae. Brongniart (1828 assigned the generic name to forms resembling recent species of *Conferva.* The very old name *Conferva* generally has been abandoned in favor of the name *Tribonema* Derbes & Solier, 1856 (West & Fritsch, 1927; Fritsch, 1935; Lanjouw *et al.*, 1952) for reasons noted in West & Fritsch (1927, p. 310).

CONFERVITES? sp.
Text-figs. 1c,e,g,h

Description.—Consists of apparently unbranched smooth filaments that are scattered along bedding planes or overlap in subparallel fashion to form bundles. Preservation, however, is mainly as semicylindrical depressions which constitute portions of the external molds of the filaments. Iron oxide commonly is concentrated along the margins of these molds; what is thought to be a carbonaceous residue is also locally common. The filaments are 0.12 to 0.30 mm in width. Internal structure was not determined.

Remarks.—This form superficially resembles and may be a representative of *Confervites? aegagropiloides* Brongniart, 1828.

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