

Formation and locality.—Middle Cambrian, Georgia Formation. Conglomerate limestone on the ridge east of the city of Troy, N. Y.; also, one mile south of Schodack Landing, in Columbia County, New York.

LINGULELLA ELLA H. & W.

Plate vii, fig. 2; pl. viii, fig. 4, 4a-c.

Lingulepis Ella Hall & Whitfield, 1877. Geol. Expl. Fortieth Par., vol. iv, p. 232, pl. i, fig. 8.

Original description.—"Shell below the medium size. Dorsal valve subcircular or oblate, the width slightly exceeding the length; the beak perceptibly projecting beyond the general contour of the shell, but very obtuse and slightly truncate; sides and base rounded, the latter more broadly curved. Surface of the valve depressed-convex, a little the most prominent on the umbone; marked by fine, irregular, concentric lines of growth on the upper part, becoming more strongly marked and finally quite lamellose toward the margin of the valve. A few very indistinct, radiating lines may be seen near the beak by the aid of a strong magnifier. Ventral valve unknown. Shell-substance phosphatic.

"There may be some doubt as to the true relations of this shell. The broadly oblate form would be an objection to considering it as a true *Lingula*, while the truncation of the beak of the dorsal valve would accord more nearly with what is known of some forms of *Lingulepis*. It is possible it may prove to be *Lingulella*, but in the absence of the ventral valve it cannot be satisfactorily determined. It differs from most known species very perceptibly in the oblate form of the valve.

Formation and locality.—In greenish argillaceous shales of the age of the Quebec group, in the cañon above Call's Fort, north of Box Elder Cañon, Wasatch Range, Utah. Collected by S. F. Emmons, esq."

The reference of the species to the Quebec Formation is incorrect, as it occurs with a characteristic Middle Cambrian fauna, 2,000 feet below the Potsdam horizon of the Upper Cambrian.

More perfect specimens of the dorsal valve show the surface characters, and also show that the beak is slightly more projecting.

The ventral valve is longer than wide; angle formed by the cardinal slopes about 65° in uncompressed specimens and 90° to 120° in flattened, compressed specimens; sides arching to the broadly rounded frontal margin; area flattened, rather broad, and with a narrow median groove. The cast of an interior of a dorsal? valve from the Oquirrh Range shows two long lateral scars gradually diverging from near the beak, also a central median depression with two posterior adductor scars, and the anterior adductor scars near the terminus. The system of scars, so far as preserved, is much like the dorsal valve of *Obolella crassa*. (See pl. x, fig. 1e. Compare also with *Lingula*, Monographs United States Geological Survey, vol. viii, plate xxi, figs. 18-20.)