

## Genus BATHYNOTUS Hall.

*Bathynotus* Hall, 1860. Thirteenth Ann. Rep. N. Y. State Cab. Nat. Hist., p. 117.  
*Idem*, 1861. Geology of Vermont, vol. i, p. 371.

To the description of the parts given by the author, we are now able to add that of the eye-lobe and the direction of the facial suture. The eye-lobe is narrow, elongate, and extends from opposite the anterolateral angle of the glabella obliquely backward nearly to the posterior margin, resembling in this the eye-lobe of *Centropleura Loveni* Ang., the type of the genus *Centropleura* (Pal. Scan., p. 95, tab. iii, figs. 1, 1a, 1854), and also the eye-lobe of the genus *Anopolenus* Salter (Quart. Jour. Geol. Soc. vol. xx, p. 236, 1864; also, note by Dr. Henry Hicks in vol. xxi, p. 477, 1865). The facial suture passes nearly around the extended eye-lobe and cuts the margin before reaching the posterior extension of the eye-lobe. This is another character of the genus *Anopolenus*. Anteriorly it appears to pass around the front of the glabella and the narrow frontal limb, and, from the fact that the free cheeks are united with the frontal margin, even when detached from the central portions of the head, there is a strong presumption that the sutures pass around in front within the margin without cutting the latter, as in the later genera *Phacops* and *Homalonotus*. This is not proven absolutely, but the evidence is very strong in its favor. Number of segments in the thorax, thirteen.

The genus is related to the *Paradoxidæ* in most of its characters, and is well defined from other described genera.

Dr. Emmons figures, of the typical species, the pygidium, six thoracic segments, and the two large genal spines under the name *Paradoxides? quadrispinosus* (Manual of Geology, 1860, p. 80). In a note on page 280 of the same book, he gives among fossils characterizing the Taconic slates *Paradoxides (Pagura) quadrispinosus*, mentioning at the same time *Paradoxides Thompsoni* and *P. Vermontana*, which were described by Prof. Hall in 1859 (Twelfth Rep. N. Y. State Cab. Nat. Hist.), at the same time with *Peltura (Olenus) holopyga*. Why Dr. Emmons failed to note this fact is unknown. It may be that he intended a new genus by placing the name *Pagura* as above, but, without a description or a reference, I do not think we are warranted in assuming what was meant, and replacing the generic name *Bathynotus* based on a description and a figure by the name *Pagura*.

## BATHYNOTUS HOLOPYGA Hall.

Plate xxxi, figs. 1, 1a.

*Peltura (Olenus) holopyga* Hall, 1859. Twelfth Ann. Rep. N. Y. State Cab. Nat. Hist., p. 61; Pal. N. Y., vol. iii, p. 528.

*Bathynotus holopyga* Hall, 1860. Thirteenth Ann. Rep. N. Y. State Cab. Nat. Hist., p. 118; Geology of Vermont, vol. i, p. 371, pl. xiii, fig. 3, 1861.

*Paradoxides? quadrispinosus* Emmons, 1860. Manual of Geology, p. 80, fig. 57. On p. 280 the name *P. (Pagura) quadrispinosus* occurs.

*Description*.—"Entire form elongate subelliptical, having a length of about twice and a half the width. Head somewhat semielliptical; the