

- Olenus* (*Olenellus*) *Howelli* Gilbert, 1875. Geog. and Geol. Expl. and Surv. West 100th Merid., vol. iii, Geology, p. 183.
- Olenellus* *Gilberti* White, 1875. Geog. and Geol. Expl. and Surv. West 100th Merid., vol. iv, p. 44, pl. ii, figs. 3a-c.
- Olenellus* *Howelli* White, 1875. Geog. and Geol. Expl. and Surv. West 100th Merid., vol. iv, p. 47, pl. ii, figs. 4a, b.
- Olenellus* *Gilberti* Walcott, 1884. Monographs U. S. Geol. Survey, vol. viii, p. 29, pl. ix, figs. 16, 16a; pl. xxi, fig. 13.
- Olenellus* *Howelli* Walcott, 1884. Monographs U. S. Geol. Survey, vol. viii, p. 29, pl. ix, figs. 15, 15a, b, and pl. xxi, figs. 1-9.

In the original notice of this species by Mr. Meek, he compares it with *Mesonacis* (*O.*) *Vermontana* to show the differences between the two forms.

Mr. White gives an elaborate description of the head and fragments of the thorax; and the writer has described the Eureka (Nevada) forms, remarking that the differences between them and the type specimens are almost entirely in the frontal limb, the former having a much broader space between the front of the glabella and the marginal rim.

Mr. Meek, in describing *O. Howelli*, compared it with *O. Thompsoni* without giving a description of the parts known. Dr. White gave a detailed description of the type specimens (Geog. and Geol. Surv. West 100th Merid., vol. iv, p. 47), and the writer described them as they occur in the Eureka District.

*O. Howelli* was considered by Mr. Meek as distinct from *O. Gilberti*, and Dr. White and the writer followed his authority. The same specimens were studied by each observer, and it was not until after the writer had visited the type locality and secured a large collection of specimens that it was shown that the large convex head preserved in the granular limestone matrix, and named *O. Howelli*, was the same as the flattened heads in the argillaceous shales referred to *O. Gilberti*. We now have a series of heads uniting the characters shown in the typical *O. Howelli* with the typical forms of *O. Gilberti*, and, as the latter species comes first in the order of description, the specific name is retained.

The following is a description of the adult form: Outline of body ovate to elongate-ovate. The general outline of the head is semi-elliptical or semicircular, and more or less strongly convex. The margin is bordered by a narrow, rounded rim, which becomes thickened near the genal angles and is continued posteriorly in rather short, sharp spines. The glabella is elongate and more or less expanded in front and behind, contracting a little midway; four pairs of glabellar furrows penetrate from each side; they are somewhat strongly impressed on each lateral third of the width of the glabella, becoming more shallow as they pass into the less marked furrow that unites them across the center of the glabella; in the younger specimens this furrow is undistinguishable from the lateral furrows, and they all unite as one distinct furrow, crossing the glabella from side to side, and, even in the adults, this feature is strongly marked in some individuals; the anterior lobe of