REMARKS ON SOME WEST AMERICAN MOLLUSKS

BY G. WILLETT

In Cornell University Bulletin of American Paleontology (vol. 8, no. 36, 1921), Katherine E. H. Van Winkle figures Carpenter's type specimens of *Opalia insculpta* and *Trophon tenuisculptus,* both from the Santa Barbara 'Pleistocene' (probably upper Pliocene). After studying these figures, together with Carpenter's original descriptions, Dr. U. S. Grant, A. M. Strong and the writer are agreed that Dall's *Epitonium crenimarginatum* is identical with Carpenter's earlier *E. insculptum* and the latter name should be used for our Recent California species.

We also believe that the description and figure of the type of *'Trophon' tenuisculptus* prove this species to be a *Tritonalia,* not a *Trophon.* The principal characters substantiating this belief are the short canal, and the thickened and denticulated lip of the fossil. We have examined similar specimens from the Santa Barbara Pliocene, Carpenter's type locality, but have not seen the species from the Recent fauna. *T. tenuisculpta* appears quite close to *Tritonalia squamulifera* (Carpenter in Gabb, Paleontology of Calif., vol. 2, sec. 1, pt. 2, 1869, p. 44) ; in fact, Gabb comments on the similarity of the two, but separates them on differences in sculpture. This feature, however, varies considerably, especially if worn specimens are included with material considered. An appreciable difference between the two lies in the number of axial ribs, which are about twelve in *tenuisculpta* and only seven or eight in *squamulifera.* Fossil specimens of the latter in the writer's collection are much more shouldered than *tenuisculpta* and are usually spined at the angle. *Squamulifera* is the shell figured by Arnold (Mem. Calif. Acad. Sci., 3, 1903, pl. 5, fig. 1) as *Ocinebra barbarensis* Gabb. It was omitted by Grant and Gale (Mem. S. Diego Soc. Nat. Hist., 1, 1931), although it is a common Californian fossil. A larger series might show that *squamulifera* grades into *foveolata* (Hds.).

The common shell that is found in most west coast collections labelled *Trophon tenuisculptus* is a true *Trophon* of the subgenus *Trophonopsis.* As this species is clearly different from *tenuisculpta* of Carpenter, it becomes necessary to find another name

for it. Fortunately, one is available, *T. lasius* Dall. A photograph of the type of the latter (pl. 1, fig. 6), furnished through the kindness of Dr. Alexander Wetmore, of the United States National Museum, appears to represent an unusually smooth specimen of the shell we have been calling *tenuisculptus.* Considering the remarkable amount of variation in this species (see pl. 1, figs. 1–5), which runs from almost smooth examples to ornately frilled ones, it is strange that more names have not been applied to it.

Tritonalia barbarensis (Gabb), a Recent shell described from Catalina Island, is figured by Dall (U. S. Nat. Mus. Bull., 112, 1921, pl. 6, fig. 5), and Oldroyd (Stanford Univ. Publ. Geol., 2, pt. 2, 1927, pl. 30, fig. 5). This species is also common in the upper Pliocene at Fifth and Hope streets, Los Angeles, at Santa Barbara, and in the lower Timms Point horizon at San Pedro. The Pliocene specimens are not quite the same as the Recent, differing in greater average number of axial ribs and less prominent spines at the shoulder. These features probably indicate a closer relationship to *T. squamulifera* in the Pliocene than exists today. *T. barbarensis* is a smaller, thinner, more slender shell than *squamulifera,* with relatively smaller aperture. However, there are Pliocene specimens of the two species that are quite similar.

Los Angeles Museum, Los Angeles, California.

NEW VARIETIES OF *ANGUISPIRA* AND *DISCUS*

BY GORDON M. KUTCHKA
CARNEGIE MUSEUM

While making a monographic study of the genera *Anguispira* and *Discus* in the Carnegie Museum as a thesis problem for my Master of Science degree, I discovered five new varieties. I am greatly indebted to Dr. S. T. Brooks for his aid in photographing the shells, also to Dr. H. A. Pilsbry for the privilege of studying the collection of Academy of Natural Sciences. These new varieties are:

ANGUISPIRA ALTERNATA JESSICA var. nov. Pl. 2, fig. 1.

Shell slightly elevated, light reddish-brown, somewhat shiny; surface above covered with rows of reddish squares, below with one row of these dots just beneath periphery; whorls 5½, angulated;