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NOTES ON THE VAQUEROS AND TEMBLOR
FORMATIONS OF THE CALIFORNIA MIOCENE
WITH DESCRIPTIONS OF NEW SPECIES

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Turritella montereyana Wiedey, sp. nov.

Plate 21, figures 2, 3

Shell very large, highly turreted, sides sloping moderately toward the apex. Whorls number seven or more. Earlier ones are flat-sided, while the later whorls become markedly convexly rounded. Suture very shallowly impressed in the younger portion of the shell, becoming more deeply impressed with the growth of the individual until in the older specimens it is very deep. The principal sculpturing consists of about four spirally revolving ridges, approximately equally spaced. They are marked by very fine and closely spaced nodes which seem to appear at the points where the growth lines intersect the ribs. In some cases the interspaces between the ribs are sculptured by a very fine single, or paired set of riblets, similar in character to the heavier ribs. Length of type (broken specimen), 102 mm.; breadth of top whorl, 12.5 mm.; breadth of bottom whorl, 37 mm.

Syntype: S.D.S.N.H. type collection, type number 51, from S.D.S.N.H. and L.S.J.U. locality 447. Collected from a locality in the Bryson quadrangle about 1.5 miles south of the San Antonio River in Sec. 3, T. 24 S., R. 8 E., Monterey County, California. *Syntype*: L.S.J.U. type collection, type number 435. W. F. Loel, collector; Monterey formation, middle Miocene.

From *Turritella variata* Conrad (plate 12, figure 5) this new species may be distinguished by its lacking the prominent collar-like ridge which marks the upper part of the whorls and by lacking the distinct excavation between the two bottom ribs at the base of the whorls. *Turritella inezana* Conrad (plate 12, figures 1, 2, 3, 4, 6, 7), besides being a more slender form, lacks the sculpturing of this new species.

Superfamily *Toxoglossa* Troschel

Family CONIDAE Adams

Genus *CONUS* LinnéTYPE: *C. marmoreus* Linné*Conus juanensis* Wiedey, sp. nov.

Plate 9, figure 3

Shell of small size; elongate conical in outline, with a moderately elevated spire. Whorls, about six, rounded, the succeeding increasing

but slowly in size. Apical angle slightly acute, being a little under ninety degrees. Whorls nearly flat on their sides, each with a sharp shoulder at their angulation above which the whorl tends to be slightly tabulate or concavely curved. Apex sharp and approximately central. The suture is visibly depressed. The aperture is moderate in width and nearly straight. Surface sculptured only by fine incremental lines of growth. Length, 26 mm.; breadth, maximum, 16 mm.; height of spire, about 10 mm.

Holotype: S.D.S.N.H. type collection, type number 16, from S.D.S.N.H. and L.S.J.U. locality 432. Collected from the east side of the first ridge west of Syncline Hill, two miles west of Simmler, San Luis Obispo County, California. L. Wm. Wiedey, collector; Temblor formation, middle Miocene.

This new species of *Conus* is resembled most closely by a form from the Kern River Miocene, of Temblor age, *C. owenianus* F. M. Anderson.⁶¹ It may be distinguished from the latter by lacking the prominent spiral sculpture which characterizes it. This new form also has a more sharply angulated spire of greater height than the Kern River form. Upon examination of more extensive collections of both of these compared species, sufficient variation of the Kern River form to embrace this group of individuals might be shown. It is also resembled by *C. interruptus* Broderip⁶² of the living cones of the Gulf of California in having a similar spire, but, for shells of corresponding stages of growth, the latter has a much higher body whorl than the fossil species.

Found associated with this form were: *Agasoma barkerianum* Cooper, *Antiplanes piercei* Arnold, *Crepidula princeps* Conrad, *McLongena californica* Anderson and Martin, *Turritella ocoyana* Conrad, *Chione temblorensis* F. M. Anderson, *C. panzana* Anderson and Martin, *Clementia pertenuis* Gabb, *Dosinia mathewsonii* Gabb, *Pecten andersoni* Arnold.

⁶¹ Proceedings of the California Academy of Sciences, 3d ser., Vol. 2, No. 2, p. 201, pl. 15, figs. 58, 59, 1905.

⁶² Conchologia Iconica, Vol. 1, pl. 22, sp. 125, 1843.

PLATE 9

FIGURE		PAGE
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