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TURRITELLA GRANTI, A NEW PLEISTOCENE
GASTROPOD FROM PALOS VERDES HILLS,
CALIFORNIA

BY

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TURRITELLA GRANTI, A NEW PLEISTOCENE GASTROPOD FROM
PALOS VERDES HILLS, CALIFORNIA

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A large collection of fossils was made in 1949 by Mr. Carl Helms from an exposure of Lower Pleistocene strata on the northern margin of Palos Verdes Hills, California (Text-fig. 1). Mr. Helms, now of the Standard Oil Company of California, was at that time working under the direction of Prof. W. P. Popenoe, University of California, Los Angeles. Among the fossils is a single specimen of a new *Turritella*. This shell is so distinctive that its formal description is justified.

The strata collected by Helms have been assigned to the Timms Point silt by Woodring et al. (1946, pl. 1, loc. 66) on the basis of the occurrence of *Pandora grandis*, *Mya truncata*, and a small form of *Panomya beringianus*, all cold water pelecypods that characterize Timms Point silt assemblages. Two species of *Turritella* are previously known from Lower Pleistocene deposits of California, *cooperi* and *pedroensis*. Both are abundant in the Helms collection. Efforts to obtain additional specimens of the new *Turritella* by re-collecting were unsuccessful.

Genus *TURRITELLA* Lamarck, 1799

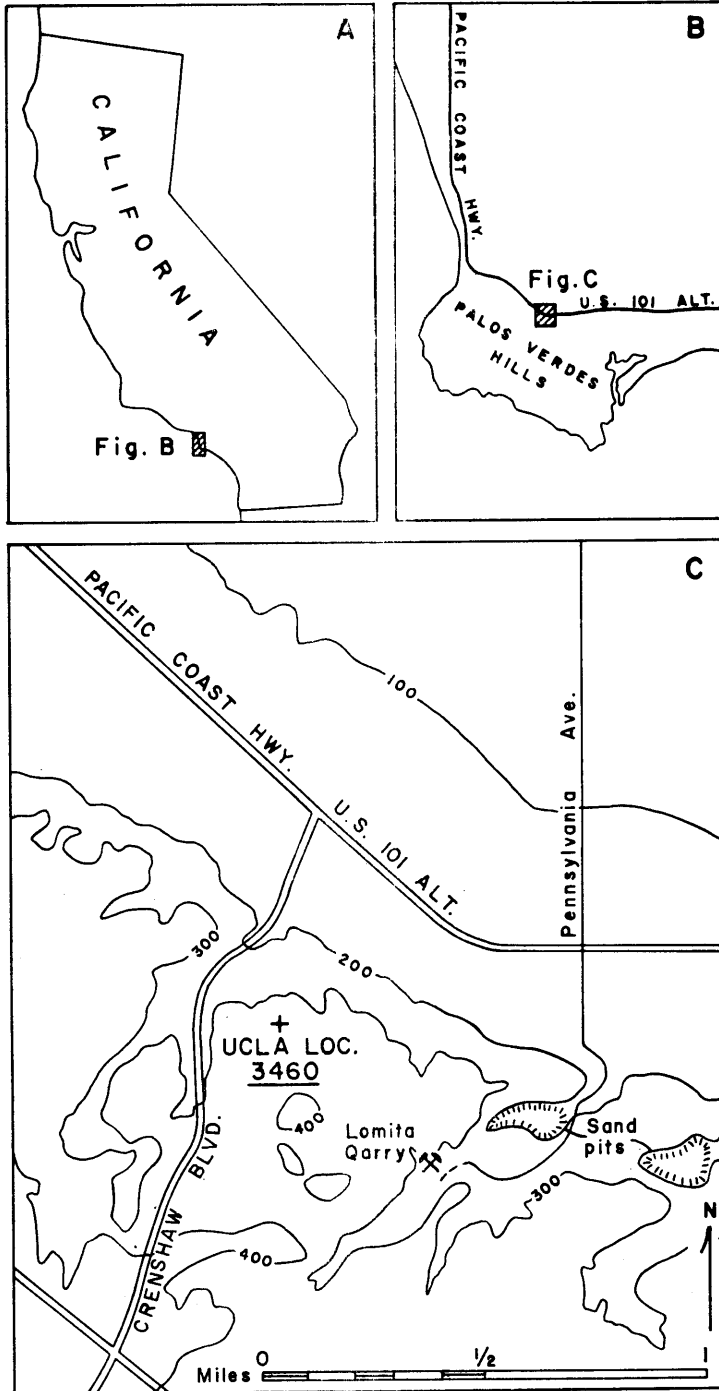
Turritella LAMARCK, 1779, Mem. Soc. Hist. Nat. Paris, ser. 1, v. 1, p. 74; GUILLAUME, 1924, Bull. Soc. Geol. France, ser. 4, v. 24, p. 281-311,

pls. 10-11; MERRIAM, 1941, Univ. Calif. Pubs. Dept. Geol. Sci. Bull., v. 26, no. 1, 214 p., 41 pls; MARWICK, 1957, Malac. Soc. London Proc., no. 32, pt. 4, p. 144-166.

TURRITELLA GRANTI Valentine &
Susuki, n. sp.
Text-figs. 2B-C, 3A

The shell is rather small for the genus and the pleural angle is narrow, 17°, on the type. The apical whorls are missing. Adult whorls are carinate below the center; the whorl profile is concave above and gently convex to straight below the carina. In addition to a spiral cord at the carina, the whorls are ornamented by two faint spiral threads, placed above the carina and just posterior to the center of the whorls. Both spiral threads are absent on early whorls and strengthen towards the aperture; the anterior thread is strongest and is developed earliest. A few faint spiral lines also ornament the whorl sides and the base. The sutures are deeply impressed. The apertural margin is broken and the aperture appears nearly rounded.

The growth line angle is slightly negative, about 6°-8° on the early whorls and 2°-4° on later whorls, as the antispiral sinus is shallow, and the growth line at the maxi-



TEXT-FIG. 1—A, map showing location of outcrop from which holotype of *Turritella granti* was collected. B, index map showing relation of area in A (ruled) to Palos Verdes Hills, California. C, enlargement of ruled area in B.