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A NEW *PECTEN* FROM THE UPPER MIOCENE  
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BY

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## A NEW *PECTEN* FROM THE UPPER MIOCENE OF CALIFORNIA

U. S. GRANT AND ROBERT E. STEVENSON

**ABSTRACT**—A new species of *Pecten* from the Neroly formation of the Upper Miocene of California, *Pecten (Pecten) juanensis*, is illustrated and described. The similarities between the new species and *Pecten coalingaensis* and *P. vogdesi* suggest a genetic relationship between the three forms with *P. juanensis* apparently being ancestral to the latter two species.

A number of years ago Mr. E. H. Quayle and the senior author made a collection of upper Miocene Mollusca and Echinoidea in the San Juan River area of eastern San Luis Obispo County, California. The collections consisted largely of *Pectens* and specimens of *Astrodapsis*, the latter being a common scutellid echinoid of the upper half of the Miocene and lower half of the Pliocene of California. The *Pectens* include *Lyropecten estrellanus* (Conrad) and a new species of typical *Pecten* belonging to the *Pecten coalingaensis* clan. A description of this new species follows, together with a discussion of its probable relationships.

**PECTEN (PECTEN) JUANENSIS** Grant and Stevenson, n. sp.

Shell of moderate size; right valve highly ventricose; left valve flattish (none well preserved); right valve sculptured with 18 to 21 rounded ribs which are less convex near their medial portions though not flat, with evenly rounded interspaces which are somewhat narrower than the ribs; no inter-ribs nor radial striations present on type material; ears of right valve about equal in length, smooth, with occasional subdued growth lines; byssal notch under right ante-

rior ear slightly developed; hinge apparently similar or identical to that of *Pecten coalingaensis*. Dimensions of type: Height,  $2\frac{1}{8}$  inches (54 mm.); width,  $2\frac{1}{4}$  inches (57 mm.) ventricosity of right valve, 15/16 inch (24 mm.); length of hinge, 13/32 inch (27 mm.)

**Holotype**.—Catalogue No. 10441 in the collection at the University of California at Los Angeles; a large right valve adherent to an echinoid, from UCLA Locality 435, sandstone fossil reef on east side of valley of San Juan Creek, at elevation of about 1500 feet above sea level, in west middle half of section 32, Township 28 south, Range 16 East (Mount Diablo Base and Meridian), eastern San Luis Obispo County, California. Stratigraphic position: approximately at conformable contact between lower and upper Neroly, in lower half of the upper third of the Miocene. U. S. Grant and E. H. Quayle, collectors, July 1933. Associated fauna: *Lyropecten estrellanus*, *Astrodapsis* sp. (at Locality 437, same horizon NW across valley) and *Ostra panzana* Conrad, etc.

**Paratype**.—California Academy of Sciences, No. 7729, from UCLA Locality 438

### EXPLANATION OF PLATE 124

- FIGS. 1-4**—*Pecten (Pecten) juanensis*, new species, Grant and Stevenson, from the Upper Miocene of eastern San Luis Obispo County, California. All figures approximately natural size. 1, right valve of Holotype. Note the smooth ears. 2, right valve of Paratype, California Academy of Sciences Collection. 3, right valve of Paratype in U. S. National Museum. 4, side view of the Holotype of *Pecten juanensis*, showing the ventricosity of the right valve.
- 5, 6**—*Pecten coalingaensis* Arnold, from Pliocene of Kettleman Hills, California. Right valve of hypotype, catalogue number 3445, Univ. of Calif. at Los Angeles, for comparison; 6, side view of right valve of *P. coalingaensis* for comparison of ventricosity with that of *P. juanensis* shown in fig. 4.