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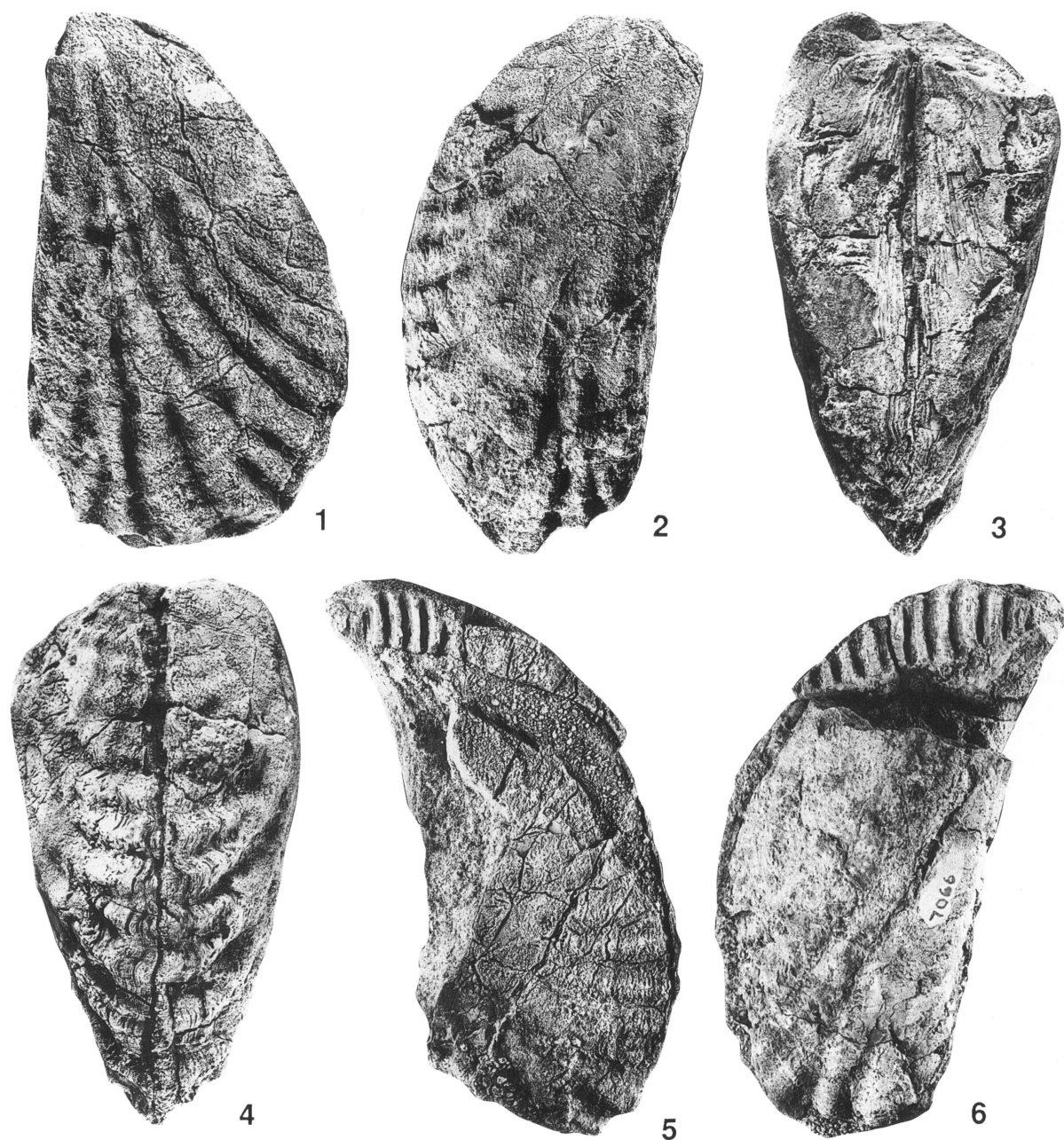
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Vol. 37, No. 2, April 1994
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**New Morphologic Information on the Bivalve
Isognomon (Isognomon) panzana
(Loel & Corey, 1932) from the Lower Miocene
Vaqueros Formation, Southern California**

by

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While searching through the University of California, Los Angeles invertebrate paleontology collections (now housed at the Natural History Museum of Los Angeles County, Invertebrate Paleontology Section = LACMIP), I recently came across several specimens of the early Miocene bivalve



Figures 1 to 6

Isognomon (Isognomon) panzana (Loel & Corey, 1932), Vaqueros Formation, LACMIP loc. 27066, Vaqueros Formation, Santa Ana Mountains, Orange County, southern California. Figure 1: hypotype LACMIP 12251, left-valve exterior, $\times 0.80$. Figures 2-4: hypotype LACMIP 12252, right-valve exterior, anterior, and posterior views, $\times 0.85$. Figure 5: hypotype LACMIP 12253, partial left-valve exterior with hingeline of right valve exposed, $\times 0.81$. Figure 6: hypotype LACMIP 12254, partial right-valve exterior with hingeline of left valve exposed, $\times 0.80$.

Isognomon (I.) panzana (Loel & Corey, 1932). Some of the specimens show much better preservation of the external sculpture than that of the worn holotypes and paratypes described and illustrated by Loel & Corey (1932: 187, pl. 9, figs. 1a, 1b, 2, 4, 5, 6). It is the purpose of this

note to provide better illustrations of the external sculpture of this species.

Moore (1983:84, pl. 25, figs. 3, 6) also illustrated the holotype and changed the taxonomic status of this species from *Pedalion panzana* Loel & Corey to *Isognomon (I.)*

* NOTE: LACM hypotype #s changed to...

12251 = 12371
12252 = 12372
12253 = 12373
12254 = 12374

due to duplication. Lo 10/20/94

OCLA specimen
→ LACMIP 16667

panzana (Loel & Corey). The species is known only from the Vaqueros Formation of southern California and has been reported only with certainty from the type locality in the La Panza Mountains, eastern San Luis Obispo County, where specimens are locally abundant (Loel & Corey, 1932). The new specimens of the species are from the Vaqueros Formation at LACMIP loc. 27066 in the Santa Ana Mountains, and they represent the first confirmed report of this species from this area. Previously, only a tentatively identified single specimen of this species was reported from the west side of Plano Trabuco, southern Santa Ana Mountains (Loel & Corey, 1932:54). Schoellhamer et al. (1981), who reported the age of the Vaqueros Formation in this area to be early Miocene, also made macrofossil collections from the Vaqueros Formation but did not include *I. (I.) panzana* in their faunal lists.

The new specimens were collected by W. C. Corey, but he did not provide any detailed locality information. He identified the specimens as *Pedalion?* n. sp. There are nine specimens, ranging in length from 8 to 10.5 cm, and they are all closed-valved and complete or nearly complete.

Loel & Corey (1932:187) correctly reported that the surface of their species is "ornamented by a number of irregular, divaricate-radial plications, triangular in shape, which become more numerous and stronger toward the crenulate posterior ventral margin." The holotype (University of California Museum of Paleontology, Berkeley (= UCMP 31780) of *Isognomon (I.) panzana* is smooth due to poor preservation (Loel & Corey, 1932:pl. 9, fig. 1b). Two of the paratypes (UCMP 31783 and 31784) do possess indications of the external sculpture, but they are incomplete specimens (Loel & Corey, 1932:pl. 9, figs. 4, 6).

All of the new specimens show the irregular, divaricate-radial plications that become more numerous and stronger toward the valve margin, and the specimen that best shows these ribs is illustrated in Figure 1. Specimens illustrated in Figures 2, 5, and 6 also show these ribs but not as well because of poor preservation in the central regions of the valves. The new specimens also show the dorsal and ventral margins (Figures 3, 4), and these views are given because they have never been illustrated for *I. (I.) panzana*. Even though the radial ribs extend to the posterior ventral margin, the commissure of the valves is essentially smooth.

The radial ribbing of *I. (I.) panzana* resembles that seen in an ostreid now referred to by Moore (1987) as *Pycnodonte?* (*P.*) *howelli* (Wiedey, 1928) [= *Ostrea howelli* Wiedey]. The interiors of *I. (I.) panzana*, including the new specimens (Figures 5, 6), however, possess the hinge teeth characteristic of isognomid bivalves. The closed-valved specimens illustrated in Figures 5 and 6 are particularly important because they are the first specimens to photographically prove that the divaricate-radial ribs of *I. (I.) panzana* are associated with valves that possess the isognomid dentition. In order to expose the hingelines of these specimens, the parts of the opposing valve that formerly

covered the hingeline in each specimen had to be temporarily removed.

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