

THE BORING CLAM, *PENITELLA CONRADI*, (BIVALVIA: PHOLADIDAE)
IN NEPHRITE FROM MONTEREY COUNTY, CALIFORNIA

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ABSTRACT

*Cobbles and boulders of nephrite jade collected subtidally and on Pleistocene marine terraces in Monterey County, California, contain numerous teardrop-shaped burrows typical of pholadid clams. Most burrows examined were vacant or occupied secondarily by nestling clams and other organisms. One burrow contained valves of a primary borer, *Penitella conradi* Valenciennes, and represents the first record of pholadids boring nephrite. Emendation of the widespread belief that pholadids burrow only by mechanical abrasion seems justified.*

In May, 1982, one of us (Wilson) was astonished to recognize a vacant pholadid burrow in a slabbed cobble of nephrite jade (Fig. 1) offered for sale at Gorda, Monterey County, California. Inquiry disclosed that the cobble had been collected by divers off the coast nearby between Jade Cove and Willow Creek (Fig. 2). Subsequently, more than 100 burrows in cobbles and boulders of nephrite from the same area were observed by us, including some reportedly from local Pleistocene marine terraces. Such burrows are common enough to be considered a minor nuisance by the local jade dealers. Most of the burrows were empty or occupied secondarily by the nestling clams, *Hiatella arctica* (Linnaeus, 1767) or *Petricola carditoides* (Conrad, 1837), and other organisms. One burrow (Fig. 3) however, contained shells (Fig. 4) of a primary borer, the pholadid *Penitella conradi* Valenciennes, 1846, a species that ranges from

Washington to Baja California Sur on the west coast of North America.

In addition to the pholadid burrows, unoccupied cup-shaped depressions with diameters as great as 80 mm occur on the surfaces of some of the nephrite boulders (Fig. 5). They are

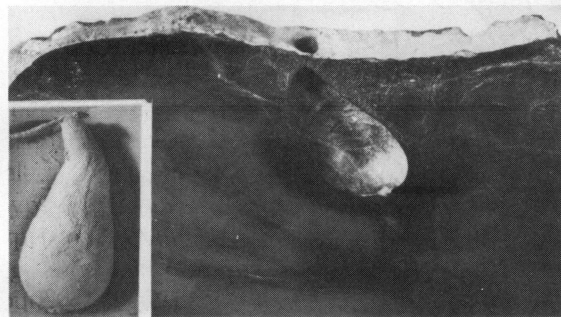


FIG. 1. Cut piece of nephrite cobble showing longitudinally sectioned pholadid burrow surrounded by dark halo. LACMIP hypotype 2480. Inset: latex cast made from this burrow. Both Figs. $\times 1$.