

ing obliquely forward, and with their connecting resilium sustaining a proportionately large triangular lithodesma; the chondrophores are supported behind by well-developed clavicular props, which are inserted posteriorly on the surface of the valve below the linear hingeline. Length 32, height 27, diameter of right valve 6 and of the left valve 4 mm.

This elegant shell, in a somewhat damaged condition, was thrown upon the beach at San Pedro, Cal., after one of the heavy winter storms and collected by Mrs. T. S. Oldroyd, to whom we owe so many additions to the fauna of this region.

This species is, we believe, the first *Periploma* known to possess an undulated sculpture, and bears to those of the ordinary type such a relation as that of *Cyathodonta* to *Thracia* or *Labiosa* to *Raeta*. The differences of sculpture and in the form of the lithodesma suggest that, as in the case above cited, *P. sulcata* is entitled to a sectional name for which *Halistrepta* is proposed.

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#### A NEW DENTALIUM FROM CALIFORNIA.

BY WILLIAM J. RAYMOND.

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##### *Dentalium vallicolens* n. sp.

Adult shell large, rather slender, moderately curved posteriorly, the latter half nearly straight; cream-white, often yellowish toward the mouth, shining where not eroded, earlier portion usually dull and chalky because of erosion; growth-lines fine, irregular, distinct, rarely an encircling groove due to repaired fracture; at the apex there are longitudinal, low, rounded, inconspicuous threads, of which seven or eight are more prominent and three to six in each interspace are less prominent; these die out, and fine, superficial striae appear, visible under the glass and continued to the mouth of the shell, seven or eight per millimeter of circumference; aperture simple, circular, mouth slightly oblique.

Two specimens measure: length 64.5, diam. of aperture 5.3, of apex 1.5, at middle 4.6, height of arch from chord 2.5 mm.; length 64.0, diam. of aperture 4.7, of apex 1.4, at middle 4.2, height of arch from chord 3.0 mm.

Young shell strongly curved, very slender for the first eight or ten millimeters of length, then rapidly enlarging; at first seven or



eight angled, the angles defined by sharp ribs with channeled interspaces, then passing into the sculpture of the adult by successive interpolations of secondary riblets, while the primary ribs lose in prominence and the section of the shell becomes circular.

Length 16.7, diam. of aperture 2.0, of apex 0.3, at middle 0.1, height of arch from chord 1.8 mm.

University of California Marine Biological Laboratory: Station 12, Vincente (or Redondo) Submerged Valley, Santa Monica Bay, 145 fathoms, temp.  $45.5^{\circ}$  F., bottom sand and mud; also scattering specimens from station 14 off Point Fermin, 100 fathoms, temp.  $46^{\circ}$ ; station 70, La Jolla Submerged Valley, between 117 and 54 fathoms; station 79, off San Diego, 64 fathoms.

The Vincente submerged valley where this species was found in considerable numbers, is one of a series of such valleys described and mapped by Prof. George Davidson, of the University of California, in Proc. Cal. Acad. Sci., 3 Ser. Geology, Vol. 1, No. 2. Opposite Redondo the 100-fathom line marks the edge of a gently sloping, submarine plateau which extends seaward about seven miles. Outside of this plateau the bottom descends much more abruptly. The Vincente valley is nearly 300 fathoms deep and about one and one-half miles wide where it breaks through the edge of the plateau. It carries a depth of 100 fathoms to within one and one-half miles of the beach, thus bringing the colder water of greater depths, with its accompanying fauna, close inshore. It is probable that the *Dentalium* here described will be found in deeper water as marine exploration proceeds along the coast of southern California.

The sculpture of this fine, large species recalls *D. ceratum* Dall (Florida, Cuba, Barbados), but the former is larger, the adult shell is proportionately wider, the young is more attenuated at the apex, and the superficial striae are continued to the mouth, even on the largest specimens. At the length of Dall's species, *D. vallicolens* is more than twice as wide. The peculiar sculpture of the earlier portion and the striation of the latter, readily separate the present species from *D. pretiosum* and *D. indianorum*, even if the angled apex be lost, as is almost invariably the case in the adult. Erosion has in some specimens proceeded so far that patches only of the outer layer of shell are left. In others it seems to have attacked the shell beneath the outer layer so that longitudinal lines and encircling rings of opaque white appear beneath the outer, shining layer which then begins to scale off.



Raymond, W J. 1904. "A new Dentalium from California." *The Nautilus* 17, 123–124.

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