

Artificial Key to Genera of Shallow-Water,
Holothuroidea from California

- 1. Tube feet and papillae absent..... 2
- 1. Tube feet and/or papillae present..... 7
- 2. Body cylindrical; spicules as anchors and plates or wheels or sigmoid bodies, but not as tables or phosphatic deposits..... 3
- 2. Body more or less tapering posteriorly to a caudal appendage; spicules as tables, fusiform rods or perforated plates, anchors sometimes present, wheels and sigmoid bodies absent, phosphatic bodies often present..... 6
- 3. Deposits as anchors and anchor plates..... 4
- 3. Deposits as wheels..... 5
- 4. Anchor plates elongate, irregular in outline.....
..... Rynkatorpa Rowe and Pawson, 1967.
- 4. Anchor plates oval, regular in outline.....
..... Leptosynapta Verrill, 1867.
- 5. Wheels with 8 or more spokes.....
..... Myriotrochus Steenstrup, 1851.
- 5. Wheels with 6 or less spokes.....
..... Chiridota Escholtz, 1829.
- 6. Tentacles with an unpaired terminal digit; phosphatic bodies present; spicules in caudal appendage as tables with round to fusiform disk or fusiform rods or as anchors and racquet-shaped plates.....
..... Molpadia Cuvier, 1817.
- 6. Tentacles lacking a terminal digit; phosphatic bodies absent; spicules as perforated plates or rods or, in juveniles, small tables; spicules often reduced or entirely lacking..... Caudina Stimpson, 1853.
- 7. Body flattened, bilaterally symmetrical; distinct sole present..... 8
- 7. Body cylindrical; distinct sole absent..... 9

Do not use this key on specimens collected outside of California or in more than 200 m of water.

Dorsal scales present, but covered by granular deposits (no hour-glass shaped spicules); tube feet present on the dorsal surface & on mid-ventrum. ... Psolidium

8. Dorsal scales present, but covered by a layer of deposits including hour-glass shaped spicules; tube feet present on the dorsal surface and in the midventral radius of the sole.....Lissothuria Verrill, 1867.
8. Dorsal scales naked; tube feet absent from the dorsal surface and the midventral radius of the sole..... Psolus Oken, 1815.
9. Tentacles peltate, ventrally placed; retractor muscles absent; tube feet restricted to ventral surface; dorsal surface with papillae.....Parastichopus H.L. Clark, 1922.
9. Tentacles dendritic, terminally placed; retractor muscles present; tube feet present on both the dorsal and ventral surface..... 10
10. Calcareous ring simple, lacking posterior processes.... 11
10. Calcareous ring complex, with paired or unpaired posterior processes..... 12
11. Spicules flat, rounded, sometimes with spines..... Cucumaria Blainville, 1834.
11. Spicules knobbed, three-dimensional, often with a dentate handle..... Pseudocnus Panning, 1949.
12. Processes short, cartilaginous, entire..... 13
12. Processes long, in pieces..... Thyoninae Panning, 1949
13. Tube feet restricted to ambulacra; spicules knobbed plates and baskets or cups..... Eupentacta Deichmann, 1938.
13. Tube feet not restricted to the ambulacra; spicules reticulated plates and regularly-knobbed 4-holed buttons; no baskets or cups present..... Pachythone Deichmann, 1941.