

**POLYCLADIDA OF THE SOUTHERN CALIFORNIA BIGHT**

- 1. Ventral surface without a sucker; pharynx ruffled; tentacles when present of nuchal type.....2
- Ventral surface with sucker; pharynx tubular; tentacles, when present, situated at anterior margin.....24
- 2. Dorsal surface covered with pointed papillae; pair of conspicuous nuchal tentacles.....3
- Dorsal surface smooth, nuchal tentacles present or absent.....4
- 3. Tentacular eyes in ring at base of tentacles, not within tentacles; cerebral eyes medial and anterior to tentacles, in circular to loose rectangular grouping .....Hoploplana californica
- Tentacular eyes in ring at base of tentacles, not within tentacles; cerebral eyes in linear pattern between to slightly anterior of tentacles.....Hoploplana sp A
- 4. With marginal band of eyes.....5
- Without marginal band of eyes.....13
- 5. Marginal band of eyes limited to anterior one-quarter to one-half of body margin; with or without nuchal tentacles.....6
- Marginal band of eyes completely encircling body; with or without nuchal tentacles.....8
- 6. With nuchal tentacles.....7
- Without nuchal tentacles; marginal eyes limited to anterior one-quarter to one-half of body margin, very minute, in single row; frontal eyes present in four elongate lines that form "W" pattern.....Latocestidae sp 1
- 7. Small, oval, to 10 mm, larger specimens thick; nuchal tentacles small, sometimes recessed into body, marginal eyes limited to anterior one-quarter of body margin; tentacular eyes inside tentacles; cerebral eyes 2-5 pairs in linear arrangement between tentacles; color creamy to buff with minute brown speckling.....Stylochus franciscanus
- Large, oval, to 50 mm; conspicuous, conical nuchal tentacles; marginal eyes extending back one-quarter to one-half of anterior body margin; tentacular eyes inside tentacles; numerous cerebral eyes in elongate clusters between tentacles; color beige to buff.....Stylochus tripartitus
- 8. With nuchal tentacles.....9
- Without nuchal tentacles.....12

9. Frontal eyes present in fan-like pattern between cerebral/tentacular eyes and anterior marginal eyes; eyes inside tentacles; cerebral eyes in linear pattern between tentacles extending posteriorly of tentacles; color brown to gray with inconspicuous brown spots.....*Stylochus californicus*  
Without frontal eyes.....10
10. Cerebral eyes 3-4 pair, anterior to tentacles; tentacular eyes inside tentacles, tentacles can be recessed; small form 7-8 mm, color crème to buff with elongate patches of brown spots anterior to posterior.....*Stylochus exiguus*  
Cerebral eyes in dense clusters between nuchal tentacles.....11
11. Nuchal tentacles recessed in adult (>15-100 mm), appear as deeply placed, rounded, black areas; juveniles have tentacular eyes present within small, rounded tentacles; cerebral eyes in broad, poorly separated groups extending more posteriorly than anteriorly between the tentacles; color buff to light brown, with dark brown spots covering dorsum.....*Stylochus atentaculatus*  
Nuchal tentacles present in all forms, tentacular eyes inside tentacles; cerebral eyes in elongate, linear pattern between tentacles; color buff to tan with dark brown dashes.....*Kaburakia excelsa*
12. With large fan of frontal eyes; no cerebral or tentacular eyes; anterior marginal eyes very dense, thinning posteriorly; body very thick, dorsum brownish, intestinal diverticula present throughout body.....*Latocestidae* sp 2  
Frontal eyes absent; small cluster of tentaculate eyes with loose groupings of cerebral eyes anterior and posterior of tentacular clusters; color beige to light tan.....*Cryptocelis occidentalis*
13. With nuchal tentacles.....14  
Without nuchal tentacles.....17
14. Tentacular eyes present within nuchal tentacles.....15  
Tentacular eyes absent from nuchal tentacles, located around tentacular base in circular pattern.....16
15. Nuchal tentacles not elongate (nipple-like); tentacular eyes within tentacles and around base, extending diagonally both anteriorly and posteriorly; cerebral eyes (smaller than tentacular) begin at posterior of tentacle, expanding anteriorly in linear arrangement; color varies between transparent blueish green to light olive, dominated by chocolate-brown branching intestinal diverticulae radiating from center of body to periphery of body margin.....*Pseudoallioplana californica*

- Nuchal tentacles not elongate (nipple-like); tentacular eyes within tentacles and around base, extending only posteriorly from base of tentacle as a loose scatter; cerebral eyes (most smaller than tentacular) start sparsely at base of tentacles, extending forward, widening into a broad group, anterior of the tentacles; color a light tan with brown patches, dominated by brown, branching intestinal diverticulae radiating from center of body to periphery of body margin.....*Pseudoalliplana sandiegensis*
16. Prominent rounded nuchal tentacles, tentacular eyes not present within tentacles; tentacular eyes form a girdle that encircles the base of each tentacle, anterior thicker than posterior; cerebral eyes groups are short, with thinly scattered eyes posterior to tentacles, extending just anterior of tentacles into expanded denser cluster; body color creme to buff; body very thin, broadly oval.....*Paraplanocera oligoglena*
- Prominent, elongate rounded nuchal tentacles, tentacular eyes not present withing tentacles; tentacular eyes form dense ring around base of each tentacle; cerebral eyes few and loosely arranged just posterior of tentacular bases, then a short clear gap with a cluster of numerous, denser eyes anterior of the tentacular bases; color buff to light brown, with brown speckling; body thick, broadly oval.....*Discosolenia burchami*
17. Eyes few or absent; when present, in two loose cerebral clusters that are composed of very small eyes (20-25); color gray-brown to brown; body thick, bluntly pointed, elongate.....*Plehnia caeca*
- Cerebral and tentacular eye clusters well developed.....18
18. Cerebral and tentacular eye clusters clearly separate.....19
- Cerebral and tentacular eye clusters distinct, but tentacular cluster within expanded, elongate cerebral cluster.....23
19. Eyes very few within each cluster; tentacular and cerebral eye clusters consist of 4-5 eyes, of similar size; cerebral cluster anterior to tentacular cluster; color light tan to brown.....*Parviplana californica*
- Eyes numerous in both tentacular and cerebral clusters.....20
20. Cerebral eyes in oblong cluster (expanded anteriorly) starting anterior or even to tentacular eye cluster.....21
- Cerebral eyes in linear pattern beginning posterior and inside of tentacular eye cluster and extending anteriorly for some distance.....22

21. Eyes in four distinct separate clusters; tentacular eyes slightly larger than cerebral eyes; tentacular eye cluster composed of 7-10 eyes; cerebral eye cluster composed of 12-20 eyes, anterior of tentacular cluster; color beige, with pink to light red tinge, brown along mid-dorsal region, clear along marginal border.....*Notocomplana rupicola*  
 Tentacular eyes clearly larger than cerebral eyes; tentacular cluster composed of 7-15 eyes; cerebral eye cluster composed of 20-30 eyes, in elongate diagonal that begins along the inner margin of tentacular cluster, expanding anteriorly; color beige to light tan, with red to dark brown spots covering entire dorsal surface.....*Pleioiplana inquieta*
22. Tentacular eyes (10-15) much larger than cerebral eyes: cerebral eyes (15-25) as uniform elongate cluster beginning at posterior, inner edge of tentacular cluster, extending halfway to anterior margin; body thin, color opaque with tan-brown hue.....*Stylochoplana* sp HYP2  
 Tentacular eyes (7-10) much larger than cerebral eyes; cerebral eyes (25-35) as uniform elongate cluster beginning at posterior, inner edge of tentacular cluster, extending halfway to anterior margin, body thick, color creme white with dorsal brownish-yellow tinge, except opaque outer margin and ocular area.....*Stylochoplana* sp HYP1
23. Tentacular and cerebral eye clusters form a continuous band; tentacular cluster (8-15 eyes) rounded, eyes much larger than cerebral; cerebral eyes (20-30) begin posterior to tentacular eyes, extending towards anterior margin; body thin, opaque to light grayish-brown.....*Phaenoplana longipenis*  
 Tentacular cluster of 20-25 closely packed eyes with loose eyes on all sides; cerebral eyes in elongate band along inner margin of tentacular eye cluster, extending both posteriorly and anteriorly; tentacular eyes at dorsal surface; cerebral eyes in subdermal layer; body thick, widest anteriorly, tapering to pointed posterior; dorsum gray to brownish, except for area of tentacular clusters which are opaque (like headlights).....*Notocomplana acticola*
24. Marginal tentacles well developed.....25  
 Marginal tentacles rudimentary or absent.....27

25. Dorsal surface with alternating black and white longitudinal strips of differing width, mid-dorsal stripe orange colored; ventrum crème colored without stripes; marginal tentacles black; tentacular eyes occur on margin between tentacles and on bases of tentacles, eyes absent from remainder of tentacles; cerebral eyes form dense, oval cluster a short distance behind tentacles.....*Prostheceraeus bellostriatus*  
 Dorsal surface beige to gray-brown with darker brown tint in center or crème to light brown with brown to black spots.....26
26. Nuchal tentacles short; tentacular eyes (60-70) within tentacles and between, margins and tip clear; cerebral eye clusters oval to elongate (50-60) in close proximity anteriorly; color orange brown, with darker midline and tentacles; body thick.....*Eurylepta aurantiaca*  
 Nuchal tentacles well developed; tentacular eyes (80-90) within tentacles and between, margins and tip clear; cerebral eye clusters oval to rectangular, clearly separate; color crème to light tan, with reddish-brown to black spots (can be small and uniform covering dorsum or large and irregularly spaced over dorsum.....*Eurylepta leoparda*
27. Marginal tentacles as short, blunt rudimentary tentacles, 60-80 small eyes at base (some sub-dermal); cerebral eyes form two elongate, closely approximated groups of 40-50 small eyes; color crème to gray-brown, darkened along midline area.....*Stylostomum lentum*  
 Marginal tentacles absent.....28
28. Marginal eyes reduced or not evident.....29  
 Marginal eyes well developed.....30
29. Marginal eyes reduced, 4-5 eyes that parallel anterior margin in area where marginal tentacles would occur; cerebral eyes composed of two large eyes, accompanied by 1-4 small eyes; color beige to gray-brown, with brownish flecks.....*Acerotisa californica*  
 Marginal eyes not present; lateral cerebral eyes form two rectangular groups of 20-25 small eyes that are clearly separate; central cerebral eyes composed of 2-3 pair of larger eyes between lateral cerebral eyes; color crème to tan with reddish-brown dorsal coloring.....*Polycladida* sp 43
30. Marginal eyes consist of a short band along the inner margin, becoming scattered on the inner side extending to the cerebral eye groups; cerebral groups form wedge-shaped clusters that narrow anteriorly (40-60 eyes); color beige to gray-brown; long and slender.....*Prosthiostomum latocelis*

**Marginal eyes extent beyond anterior margin.....31**

**31. Marginal eyes extend in a band anteriorly one-fifth one-quarter along body margin, approximately midway of tubular pharynx; anterior margin broad, thinning posteriorly; cerebral eyes in two elongated clusters (20-30 eyes); color beige to tan; long and slender.....Prothiostomum multiceleis**

**Marginal eyes completely encircle body, broad along anterior margin, thinning to single row along posterior margin; cerebral eyes in two elongated clusters (20-25 eyes); color crème with reddish-brown to black spots; long and slender.....Enchiridium punctatum**