

KEY TO WEST COAST ORBINIIDAE

Adapted from Fauchald, 1977, 1972, and Hartman, 1969

- 1a. Two asetigerous anterior segments 2
- 1b. A single asetigerous segment 5
- 2a. Branchiae present on all but a few anterior and posterior segments PROTOARCIELLA 3
- 2b. Branchiae absent 4
- 3a. 1 to 5 furcate setae in all notopodia (may be absent in few posteriormost notopodia); notopodial postsetal lobe begins as short digitate lobe, elongates thru setigers 4 to 16, then gradually shortens to become a short conical papilla PROTOARCIELLA OLIGOBRANCHIA
- 3b. Furcate setae absent in first 9 notopodia, then 2 in tenth and succeeding notopodia; notopodial postsetal lobe elongate thruout body, does not change size or shape PROTOARCIELLA SP. A Williams
- 4a. Thoracic setae all capillaries. . . ORBINIELLA NUDA
- 4b. Thoracic setae includes capillaries and acicular spines GENUS A Williams
- 5a. Prostomium rounded or truncate. . . NAINERIS 6
- 5b. Prostomium more or less pointed 8
- 6a. Branchiae present from setigers 20-23, small and inconspicuous NAINERIS NANNOBRANCHIA
- 6b. Branchiae present from anterior thoracic setiger, large and conspicuous 7
- 7a. Branchiae present from setiger 4-5; postsetal lobe of thoracic neuropodia simple; thoracic neuropodia with uncini but not subuluncini . NAINERIS QUADRICUSPIDA (1)
- 7b. Branchiae present from setiger 5-6; postsetal lobe of thoracic neuropodia bifid from setiger 7 on; no subuluncini in thoracic neuropodia . . . NAINERIS UNCINATA (2)
- 7c. Branchiae present from setiger 7-15; postsetal lobe of thoracic neuropodia changes from a simple low fold to short and fleshy with a small superior papilla; subuluncini present in thoracic neuropodia NAINERIS DENDRITICA
- 8a. All thoracic parapodia with only slender, pointed setae LEITOSCOLOPLOS 9
- 8b. Some thoracic neuropodia with setae of another kind . . 12
- 9a. Subpodial lobe on posterior thoracic neuropodia; thorax with 16-18 setigers; branchiae present from setiger 11-12 LEITOSCOLOPLOS PANAMENSIS
- 9b. No subpodial lobe 10



- 10a. Thorax with 15 to 21 setigers; branchiae present from setigers 13-18 LEITOSCOLOPLOS ELONGATUS
- 10b. Thorax with less than 15 setigers; branchiae present on setiger 13 or before 11
- 11a. Thorax with 13 to 15 setigers; branchiae start on setiger 12-13 (on at least one of the last thoracic setigers) LEITOSCOLOPLOS SP. A Williams (3)
- 11b. Thorax with nine or ten segments; branchiae first present on the 2nd or 3rd abdominal segment LEITOSCOLOPLOS KERGUENSIS
- 12a. Thoracic setae of 2 abruptly different kinds 13
- 12b. Thoracic setae not abruptly different 17
- 13a. Anterior three thoracic neuropodia with bristle-tipped setae CALIFIA 14
- 13b. Posterior thoracic neuropodia with thick, modified spines associated with a glandular pouch PHYLO 15
- 14a. Branchiae from setiger 8 or 9 through remaining setigers CALIFA CALIDA
- 14b. Branchiae from setiger 8 or 9 through setigers 18 - 20 only CALIFIA MEXICANA
- 15a. Ventral fringe absent; posterior thoracic segments 4; modified spines weakly hastate, dark brown; branchiae start on setiger 6 PHYLO NUDUS
- 15b. Ventral fringe present; posterior thoracic segments number 6 or more 16
- 16a. Modified spines sagittate, dark brown; 6 to 9 posterior thoracic segments; interramal cirrus present in some abdominal parapodia PHYLO FELIX
- 16b. Modified spines acicular, yellow; 13 or more posterior thoracic segments; interramal cirrus missing. PHYLO ORNATUS
- 17a. Some thoracic neuropodia with rows of papillae along the ventrum ORBINIA JOHNSONI
- 17b. Without rows of papillae on the ventrum 18
- 18a. 10 - 15 large un^{ci}eni in each thoracic neuropodia; abdominal neuropodia with thick, projecting acicula; branchiae from setiger 12 SCOLOPLOS (LEODAMAS) MAZATLANENSIS
- 18b. Thick projecting acicula absent in abdominal neuropodia, only pointed setae. SCOLOPLOS (SCOLOPLOS). 19
- 19a. Subpodial lobe present in neuropodia from setigers 14-17 to about setiger 32 SCOLOPLOS (SCOLOPLOS) ARMIGER
- 19b. Without subpodial lobes 20

- 20a. Transition from thorax to abdomen at setigers 19-26
(in adult worms; smaller worms change at 17/18-23);
branchiae usually present from transitional setigers
(from 14th at earliest) . . .SCOLOPLOS (SCOLOPLOS) ACMECEPS
- 20b. Transition from thorax to abdomen at setiger 14-15; branchiae
present at setiger 11-13. . . SCOLOPLOS (SCOLOPLOS) ACMECEPS
PROFUNDUS

- (1)
There are two forms of quadricuspid^s found in southern California.
The first has notopodial postsetal lobes that are long and
cirriform instead of short and triangular, and its branchiae
are long, slender and cirriform instead of simple flat lobes
(see Hartman, 1969). The other has posterior neuropodia with
2 postsetal lobes (Sue Williams, per. com.)
- (2)
Large specimens in southern California have been found with 3
postsetal lobes beginning at setigers 12-15.
- (3)
This species is similar to ^{L.} Y. mexicanus Fauchald (1972),
which has 13 to 14 thoracic segments and branchiae present
from segment 11-13. It differs in having a definite color
pattern on the pro-and peristomium, the anterior third of
the prostomium is abruptly tapered. The position of the
neuropodial postsetal lobe is also distinct. Found at Coal
Oil Point, (SW) off Orange County and Pt. Dume in 300-
600 m (LH).

Special thanks to Sue Williams for sharing her notes on new
taxa and variations.

WEST COAST LEITOSCOLOPLOS

species	subpodial lobe	number of thoracic setigers	branchiae begin in/ on setiger	shape thoracic neuropodial lobe	furcate setae	pigmentation (preserved)
ELONGATA	absent	15 to 21; 1-3 usually transition	thorax/ 13 to 18	low transverse ridge with small papillar lobe at midlength	present	reticulated brown on dorsum between branchial bases; branchial tips & foliaceous flanges on ventrolateral sides of abdomen often dark
KERGUELENSIS	absent	9 to 10	abdomen/ 11 to 16	short, triangular lobe	only in immatures, not adults	none
MEXICANUS	absent	13 to 14	thorax/ 11 to 13	cirriform to digitate, ventral to acicular lobe in thorax	absent	either all white or evenly brown
PANAMENSIS	present	16 to 18; transition abrupt	thorax/ 11 to 12	simple lobe at midlength in anterior; posterior lobes divided, lower one resembles a ventral cirrus*	present	none
sp. A	absent	13 to 15	thorax/ 12 to 13		?present	transverse band on peristomium; pro-stomium w/ 2 eye-like patches & 1 large median spot

* "A second lobe is present at segments 13 or 14 below the subpodial lobe and in the 15th or last thoracic segment a third lobe is present which is continued back through the first 8 to 10 abdominal segments." Hartman, 1957



SOUTHERN CALIFORNIA ASSOCIATION OF
MARINE INVERTEBRATE TAXONOMISTS