

A KEY TO THE ECHIURA
OF SOUTHERN CALIFORNIA

1. Circlet of setae on the posterior end of body: open vascular system.....Order Xenopneusta, Urechis caupo
- No posterior setae; closed vascular system. Order Echiuroinea..2

2. Proboscis bifid, cylindrical, or triangular; sexually dimorphic, males parasitic on females; nephridia 1 or 2; ventral setae may be absent; anal vessicles branched. Family Bonellidae.....3
- Proboscis furrowed; no sexual dimorphism; nephridia paired; ventral setae present; anal vessicles sac-like. Family Echiuridae.....9

3. Posterior end expanded into a mushroom shape.....4
- Posterior end without such an expansion.....5

4. Anus terminal; tongue-like structure surrounds anus and is directed along the ventral line to the end of the expansion. Bonellidae, Genus D
- Anus situated near posterior end on the mid-ventral line: no tongue-like structure surrounding anus.....Bonellidae, Genus C

5. Proboscis bifid; no ventral setae; single external nephridiopore. Nellobia eusoma
- Proboscis cylindrical or triangular; paired ventral setae and nephridia.....6

6. Collar surrounding the base of the proboscis; anal vessicles sac like with numerous ciliated funnels inset.....7
- No collar at base of proboscis; anal vessicles with bud-like branches from main sac..... Bonellidae, Genus B

7. Collar with 14 lobes; nephrostomes distal.....Bonellidae, Genus A
- Collar cup-like; nephrostomes basal.....Prometor sp......8

8. Proboscis triangular; tips of setae spatulate; nephridia oval sacs.....Prometor pocula
- Proboscis cylindrical; tips of setae tapering; nephridia elongate.....Prometor benthophila

- 9. Longitudinal musculature of body wall grouped into distinct bands; nephrostome lips elongate.....10
- No longitudinal muscle bands; nephrostomal lips expanded into a leaf-like structure with sculptured border.
Arhynchite californicus
- 10. Inner oblique muscle layer fasciculated between longitudinal muscle bands; interbasal muscle absent.....Ochetostoma octomyotum
- Oblique muscle layer not fasciculated; interbasal muscle present.....Listriolobus sp......11
- 11. 6 longitudinal muscle bands; 2 nephridia...Listriolobus hexamyotus
- 8 longitudinal muscle bands; 4 nephridia.....Listriolobus pelodes