

Key to the *Photis* (Amphipoda: Isaeidae) of the Southern California Bight
FEMALES
(Modified from Conlan, 1983)

- 1a. Articles 4 and 5 of pereopod 4 normal, slender 2
- 1b. Articles 4 and 5 of pereopod 4 grossly enlarged *Photis elephantis*
- 2a. Gnathopod 2, palm without palmar tooth, or defining tooth (though a spine may be present) 3
- 2b. Gnathopod 2, palmar process emarginate, and defining tooth large *Photis* sp E
- 3a. Gnathopod 2, palm convex to nearly flat 4
- 3b. Gnathopod 2, palm excavate or sinuous 8
- 4a. Coxae 2, 3, and 4 very long and strap-like; coxa 5 large and triangular *Photis* sp A
- 4b. Coxae 2 through 4 normal, not long and strap-like; coxa 5 not large and triangular ... 5
- 5a. Eye lobe distinctly acute (dorsal and ventral margins concave); eye small and diffuse; ventral margin of coxa 1 scalloped *Photis* sp B
- 5b. Eye lobe blunt, triangular (dorsal and ventral margin straight or nearly so); eye normal; ventral margin of coxa 1 not distinctly scalloped 6
- 6a. Coxa 1 antero-distally produced into small knob, with a fan of long stiff setae; gnathopods 1, palm scarcely sinuous; gnathopods 1 and 2 with large, stout defining spine; antenna 1, peduncular article 1 short, barely exceeding eye lobe *Photis* sp C
- 6b. Coxa 1 not produced and without fan of setae; gnathopod 1 convex; gnathopods 1 and 2, defining spine ordinary; antenna 1, peduncular article 1 long, exceeding eye lobe by one-half its length 7
- 7a. Gnathopod 1, article 5 longer than article 6; posterior margin more than one-half anterior margin; coxae 1-5 often with vertical band of pigment; body without numerous pigment spots *Photis lacia*
- 7b. Gnathopod 1, article 5 shorter than article 6; posterior margin one-third anterior margin; body with numerous pigment spots (blotchy); head with distinct anterior and posterior pigment patches dorsally *Photis macinerneyi*

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- 8a. Eye large for the genus 9
- 8b. Eye "normal" 10
- 9a. Gnathopod 1, palm concave or sinuous; specimen from depths ≥ 300 m
..... *Photis chiconola*
- 9b. Gnathopod 1, palm convex; specimen from depths ≤ 100 m *Photis macrotica*
- 10a. Gnathopod 1, palm concave or sinuous (the latter obvious in specimens ≥ 2.5 mm)..11
- 10b. Gnathopod 1, palm convex, flat or scarcely sinuous (the latter apparent in specimens
> 5.0 mm at 100X magnification) 13
- 11a. Gnathopod 2, palm distinctly concave, defining corner rounded; body and head without
pigment patches 12
- 11b. Gnathopod 2 scarcely oblique, palm nearly vertical, weakly excavate, its margin sinu-
ous, the defining corner acutely produced; body often covered with many pigment spots
(blotchy), head with distinct pigment patch dorsally along posterior margin
..... *Photis* sp OC1
- 12a. Gnathopod 2, article 2 broad (width more than one-half length, W:L = 0.6), strongly
produced antero-distally; gnathopod 1, article 2, broad, posterior margin convex antenna
1, peduncular articles with pigment stripes; coxa 5 with pigment spot.....
..... *Photis californica*
- 12b. Gnathopod 2, article 2 narrow, (width less than one-half length, W:L = 0.4), not pro-
duced antero-distally or only weakly so; gnathopod 1, article 2, narrow, posterior
margin nearly straight; antenna 1, peduncular articles without pigment stripes; coxa 5
without pigment spot *Photis parvidons*
- 13a. Gnathopod 2, article 2 strongly produced antero-distally; coxae 1-5 densely setose
(> 15 setae along ventral margin; setae approximately equal to or exceeding width of
coxae)..... 14
- 13b. Gnathopod 2, article 2 not produced or weakly so; coxae 1-5 weakly setose (≤ 10 setae
along ventral margin; setae generally one-half to two-thirds width of coxae) 15

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- 14a. Gnathopod 2 scarcely oblique, palm nearly vertical, weakly excavate, its margin sinuous, the defining corner acutely produced; antenna 2, article 3 strongly geniculate; distinct pigment spot present on coxa 5 and antero-distal margin of gnathopod 1, article 6, just below dactyl *Photis brevipes*
- 14b. Gnathopod 2 distinctly oblique, excavate, defining corner not acutely produced; antenna 2, article 3 not strongly geniculate; pigment pattern otherwise *Photis conchicola*
- 15a. Gnathopod 1, article 5 posterior margin short (less than one-third anterior margin) and produced (lobate); gnathopod 2 defining corner bulging *Photis viuda*
- 15b. Gnathopod 1, article 5 posterior margin, normal (greater than one-third anterior margin) and unproduced; gnathopod 2 defining corner rounded, but not bulging 16
- 16a. Gnathopod 1, palm oblique, elongate (\geq two-thirds the length of anterior margin), nearly flat; article 2, posterior margin setose (each over twice the width of article 2)
(may be just a few setae) *Photis bifurcata*
- 16b. Gnathopod 1, palm scarcely sinuous, approximately one-third to one-half the length of anterior margin; article 2 bare, except for 1-4 very short setae (each less than one-half the width of article 2) *Photis* sp SD7

Note: Females of *Photis linearmanus* and *Photis cf parvidons* are still unknown.

