Key to Male Northeastern Pacific Gnathiid Isopods

All males have been observed; please refer to the species photo comparison on last page as a reference

1) Eyes present .............................................................................................................................................2

Eyes absent (frons with three central processes, laterals larger than middle; epimeres single, dorsal only, and laterally projected; telson distinctly triangular in shape) .................................................................................................................. Gnathia coronadoensis

2) Pleotelson distinctly triangular ..................................................................................................................3

Pleotelson arrowhead shaped or T-shaped (see diagram below) .......................................................... 7

3) Epimeres not laterally expanded, barely visible ..........................................................................................4

Epimeres laterally expanded, highly visible ................................................................................................ 5

4) Eyes dark brown; body mottled with brown pigment; cephalon with setae and tuberculations; frons with three processes (median process largest of the three and shaped as a step-wise pyramid) .......................................................... Gnathia steveni

Eyes reddish brown; body with no pigmentation; cephalon with setae but lacking tuberculations; frons with central 3-dimensional expansion in the shape of a box, with two large setae extending out from it centrally ..................................................................................................................... Gnathia MBC1

5) Eyes reddish brown; body with numerous setae but not hirsute; frons not transverse (lobes or processes present); pleopods with setae ................................................................................................................. Caecognathia crenulatifrons

Eyes dark brown; body without numerous setae; frons transverse with crenulations (without lobes or processes); pleopods without setae .................................................................................................................. Caecognathia crenulatifrons

6) Body mottled with brown pigment; mandibles split into two articles; frons forms centrally extended narrow lobe with crenulations ........................................................................................................ Caecognathia sp A

Body with no pigmentation; mandibles not split into two articles (single article only); frons with three central subequal processes .................................................................................................................. Gnathia tridens
7) Pleotelson distinctly T-shaped ................................................................. 8
Pleotelson arrowhead-shaped .................................................................. 10

8) Eyes sessile; eye lens with tuberculations; pleopods ovate, paddle-like; dorsal epimeres not subequal, last pair prominent and formed into spine .................................................. 9

Eyes pedunculate; eye lens without tuberculations; pleopods long and narrow; dorsal epimeres subequal (eyes without pigment; frons with two large medial lateral processes with four central subequal processes) ........................................................................................................ 9

Gnathia clementensis

9) Eyes dark brown; dorsal sulcus absent; frons extended/produced into distinct large triangular lobe; body speckled with tiny black dots .............................................. Caecognathia sanctaecrucis

Eyes present but without pigment; dorsal sulcus present; frons extended/produced as long, rounded lobe; body with no pigmentation .................................................. Caecognathia CS1

10) Epimeres single (dorsal only) ................................................................. 11

Epimeres double (dorsal and ventral) [eyes golden or amber; body with numerous setae but not hirsute; frons with three central processes, all subequal] ................................ Gnathia trilobata

11) Eyes golden/amber; body hirsute; cephalic dorsal carina present; frons as one broad truncate lobe with medial carina ................................................................. Caecognathia SD1

Eyes with red and white checkerboard pattern (see photo below); body with numerous setae but not hirsute; cephalic dorsal carina absent; frons with three central subequal processes ................... Gnathia productatridens
Epimeres

Single Dorsal Epimeres
Laterally expanded

Double Epimeres (Dorsal & Ventral)
Laterally expanded

Single Dorsal Epimeres
Barely Visible
Not Laterally expanded

Pleotelson Shape (Males)

Triangular
Arrowhead-shaped
T-shaped
Arrowhead Shaped Pleotelsons  (Males)

Gnathia trilobata  
Gnathia productatridens  
Caecognathia SD1

Eye Color

Red & White Checkerboard  
No Pigment  
Dark Brown  
Reddish Brown

Golden or Amber
Frons Shape (Males)

Caecognathia sp. A  Caecognathia crenulatifrons  Gnathia coronadoensis
Caecognathia CS1  Gnathia clementensis  Gnathia MBC1
Gnathia steveni  Gnathia productatridens  Caecognathia sanctaecrucis
Gnathia tridens  Gnathia trilobata  Caecognathia SD1