| Characters | Caecognathia crenulatifrons | $\begin{gathered} \text { Caecognathia } \\ \text { Sp. A } \end{gathered}$ | $\begin{gathered} \text { Caecognathia } \\ \text { SD1 } \end{gathered}$ | Caecognathia sanctaecrucis | $\begin{gathered} \hline \text { Caecognathia } \\ \text { CS1 } \end{gathered}$ | Gnathia MBC1 | Gnathia steveni | Gnathia tridens | Gnathia coronadoensis | $\begin{gathered} \text { Gnathia } \\ \text { clementensis } \end{gathered}$ | Gnathia trilobata | Gnathia productatridens |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Overall Body Size | $\begin{gathered} \text { Average } \\ (3.5-4.75) \\ \mathrm{mm} \end{gathered}$ | $\begin{gathered} \text { Small } \\ (2.6 \mathrm{~mm}) \end{gathered}$ | $\begin{gathered} \text { Small } \\ (2.76-3.36) \\ \mathrm{mm} \end{gathered}$ | $\begin{gathered} \hline \text { Average } \\ (4.4-4.6) \\ \mathrm{mm} \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { Average } \\ (4.1-5.0) \\ \mathrm{mm} \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { Very Small } \\ (2.2 \mathrm{~mm}) \end{gathered}$ | $\begin{gathered} \hline \text { Very Small } \\ (1.2-2.2) \\ \mathrm{mm} \\ \hline \end{gathered}$ | $\begin{gathered} \text { Small } \\ (2.35-3.35) \\ \mathrm{mm} \end{gathered}$ | $\begin{gathered} \text { Small } \\ (2.45 \mathrm{~mm}) \end{gathered}$ | $\begin{gathered} \text { Large } \\ (4.6-8.5) \\ \mathrm{mm} \\ \hline \end{gathered}$ | $\begin{gathered} \text { Average } \\ (3.15-3.6) \\ \mathrm{mm} \end{gathered}$ | $\begin{gathered} \text { Average } \\ (2.75-3.74) \\ \mathrm{mm} \end{gathered}$ |
| Body <br> Pigmentation | Brown Mottling | Brown Mottling | None | Tiny Black Dots | None | None | Brown Motlling | None | None | None | None | None |
| Overall body setosity | Light | Setose but not hirsuit | Hirsute | Hirsute | Hirsute | Light | Light | Setose but not hirsuit | Asetose | Hirsuit | Setose but not hirsuit | Setose but not hirsuit |
| Mandibles with distinct outer tooth | Present | Present | Absent | Absent | Absent | Present | Present | Present | Absent | Absent | Present | Absent |
| Mandibles <br> 1 or 2 articles | One article | Two articles | One article | One article | One article | One article | One article | One article | One article | One article | One article | One article |
| Mandibular blade | Microcrenulate | Crenulate | Microcrenulate | Microcrenulate | Smooth | Dentate | Dentate | Crenulate | Crenulate | Crenulate | Crenulate | Crenulate |
| Eyes | Sessile | Sessile | Sessile | Sessile | Sessile | Sessile | Sessile | Sessile | Absent | Peduncular | Sessile | Sessile |
| Eye Color | Dark Brown | Reddish Brown | Golden or Amber | Dark Brown | No Pigment | Reddish Brown | Dark Brown | Reddish Brown | No eyes | No Pigment | Golden or Amber | Red and White Checkerboard |
| Eye Shape | Oblong and Flat | Round and Convex | Oblong and Convex | Round, Convex | Round, Convex, | Round and Convex | Round and Convex | $\begin{aligned} & \text { Round and } \\ & \text { Flat } \end{aligned}$ | No eyes | Round and Convex | Oblong and Convex | Oval and Flat |
| Eye Lens Texture | Compound but smooth | Compound but smooth | Compound but smooth | With many tuberculations | With many tuberculations | Compound but smooth | Compound but smooth | Compound but smooth | None | Compound but smooth | Compound but smooth | Compound but smooth |
| Eye Lens Supraoccular Ornamentation | No | Yes | Yes | Yes | Yes | Yes | Slight | No | No | Yes | Slight | No |
| Dorsal Sulcus | Yes | Yes | Yes | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Cephalic Pit | No | No | No | No | No | No | No | No | Yes | Yes | No | No |
| Cephalon | Tuberculate | Setose but Smooth/No Tubercles | Setose, <br> Tuberculate with spines | Setose and Tuberculate | Setose and Tuberculate | Setose but Smooth/No Tubercles | Setose and Tuberculate | Asetose and Smooth | Asetose and Smooth | Setose and Tuberculate | Setose and Tuberculate | Setose and Tuberculate |
| Cephalic Dorsal Carina | No | No | Spine crown | No | No | Yes | Yes | No | No | No | No | No |
| Frons | 1 transverse lobe with minute crenulations | 1 extended narrow lobe with crenulations | 1 broad truncate lobe w/ medial carina | 1 large triangular lobe | 1 extended, narrow lobe | One <br> extended box <br> process | 3 processes medial triangular | 3 processes all subequal | 3 processes laterals longer than middle | 2 lrg laterall \& 4subequal central processes | 3 processes all subequal | 3 processes all subequal |
| Pleopods (setosity) | Asetose | Setose | Asetose | Asetose | Asetose | Setose | Setose | Setose | Setose | Asetose | Asetose | Asetose |
| Pleopods <br> (shape) | Paddle-like | Paddle-like | Paddle-like | Paddle-like | Paddle-like | Paddle-like | Paddle-like | Paddle-like | Paddle-like | Long, <br> Narrow | Long, <br> Narrow | Long Narrow |

# Tabular Key to Male Gnathiid Isopods from the North East Pacific 

| Characters | Caecognathia crenulatifrons | $\begin{gathered} \text { Caecognathia } \\ \text { Sp. A } \end{gathered}$ | Caecognathia SD1 | Caecognathia sanctaecrucis | Caecognathia CS1 | Gnathia MBC1 | Gnathia steveni | Gnathia tridens | Gnathia coronadoensis | Gnathia clementensis | Gnathia trilobata | Gnathia productatridens |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Epimeres (condition) | Laterally projected | Laterally projected | Laterally projected | $\underset{\substack{\text { Laterally } \\ \text { projected with } \\ \text { spines }}}{ }$ | $\begin{gathered} \text { Laterally } \\ \text { projected with } \\ \text { spines } \end{gathered}$ | Not laterally projected | Not laterally projected | Laterally projected | Laterally projected | Laterally projected | Laterally projected | Laterally projected |
| Epimeres single or double | Single, Dorsal only | Single, Dorsal only | Single, Dorsal only | Double Ventral larger | $\begin{gathered} \text { Double } \\ \text { Ventral larger } \end{gathered}$ | Single, Dorsal only | Single Dorsal only | Single, Dorsal only | Single, Dorsal only | Double Ventral larger | Double Ventral larger | Single |
| Dorsal epimeres prominent posteriorly | No, subequal Visible Tapering acutely | $\begin{gathered} \text { No, subequal } \\ \text { Visible } \\ \text { Tapering } \\ \text { acutely } \end{gathered}$ | No, subequal Visible Tapering acutely | Yes, each epimere is bifid with two small spines on each side | Yes, each epimere is bifid with two small spines on each side | No, subequal, very small not easily seen | No, subequal very small not easily seen | Slightly, Epimeres Visible Tapering acutely | No, subequal Visible Tapering acutely | No, subequal Visible Tapering acutely | No, subequal all small not easily seen | $\begin{gathered} \text { No, subequal, } \\ \text { Visible } \\ \text { Tapering acutely } \end{gathered}$ |
| Ventral epimeres larger | N/A | N/A | N/A | Yes, each as one large spine | Yes, each as one large spine | N/A | N/A | N/A | N/A | $\begin{gathered} \hline \text { Yes, each as } \\ \text { one large } \\ \text { spine } \end{gathered}$ | Yes, each as one large spine | N/A |
| Ventral Epimeres prominent posteriorly | N/A | N/A | N/A | Yes | Yes | N/A | N/A | N/A | N/A | Yes | Yes | N/A |
| Telson extends beyond the endopod | No | No | No | No | No | No | No | No | No | No | Yes | No |
| Telson Size | Long and wide | Medium and narrow | Long and wide | Medium and narrow | Long and narrow | Short and wide | Short and wide | Short and wide | Long and wide | Long and narrow | Long and narrow | Long and narrow |
| Telson Shape | Triangular | Triangular | Arrowheadshaped | T-Shaped | T-Shaped | Triangular | Triangular | Triangular | Triangular | T-Shaped | Arrowheadshaped | Arrowheadshaped |

