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Key to the species of Clausocalanidae Clausocalanus occurring in the China Seas

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REVIEW-TAXONOMIC INDEX

Key to the Species of Clausocalanidae *Clausocalanus* Occurring in the China Seas (*Modified and Expanded from Frost & Fleminger, 1968)

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Clausocalanus arcuicornis, *dubius*(13a/f) (male only), *farrani*(4a/18b/f), *furcatus*(2a/19a/f), *ingens*(7a/22a/f), *jobei*(4b/17a/f), *laticeps*(6a/21a/f), *lividus*(8a/23a/f), *mastigophorus*(8b/24a/f), *minor*(10a/18a/f), *parapergens*(12b/24b/f), *paululus*(9a/15a/f), *pergens*(12a/20a/f)

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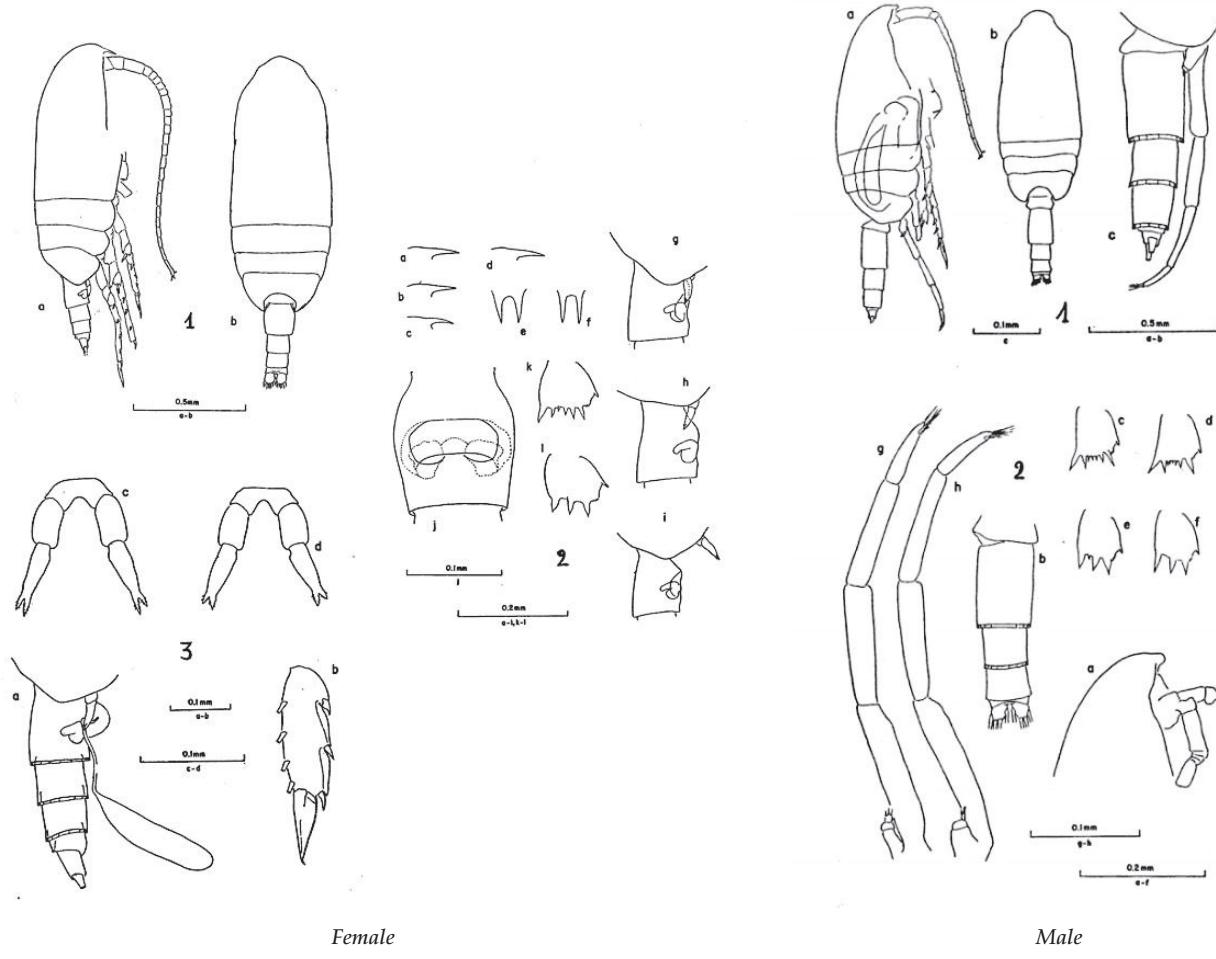
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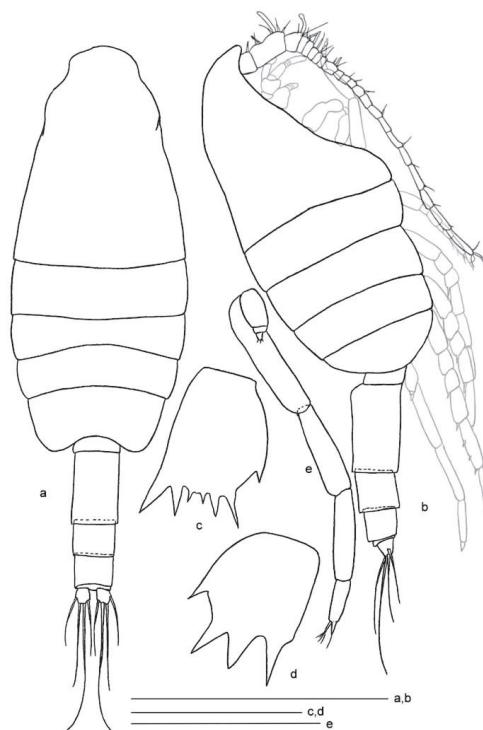
Clausocalanus arcuicornis (Dana, 1849) (Size: Female, 1.08–1.62 mm; male, 0.90–1.25 mm)



Clausocalanus arcuicornis (Dana, 1849)

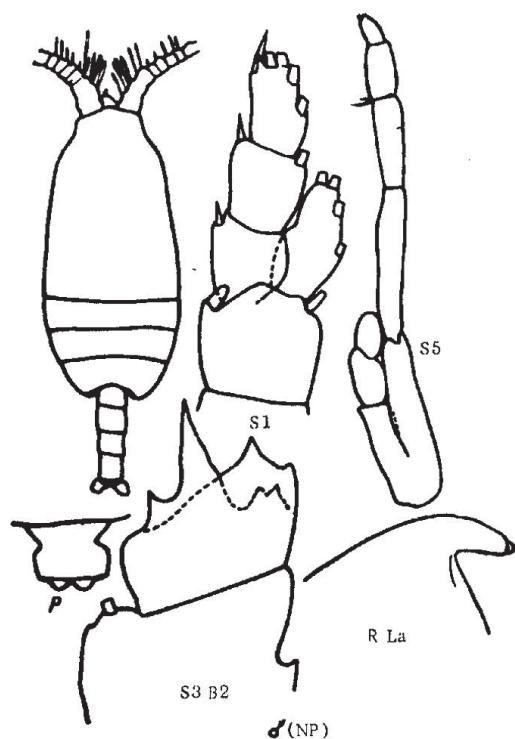
Frost & Fleminger, 1968: pls. 29–31. *Clausocalanus arcuicornis* (Dana, 1849), Female. Pl. 29. 1a/b. habitus (lateral/dorsal). Pl. 30, 2a-d. rostrum (lateral); 2e-f. rostrum (anteroventral); 2g-i. posterior prosome & urosome (lateral); 2j. genital double-somite (ventral); 2k. leg 2 basis; 2l. leg 3 basis. Pl. 31, 3a. pediger 5 & urosome (lateral); 3b. leg 3 exopod segment 3; 3c/d. leg 5 (2 different specimens). Male. Pl. 32. 1a/b. habitus (lateral/dorsal); 1c. posterior prosome & urosome (lateral). Pl. 33. 2a. forehead (lateral); 2b. urosome (dorsal); 2c/d. leg 2 basis; 2e/f. leg 3 basis; 2g/h. leg 5 (posterior).

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Clausocalanus arcuicornis (Dana, 1849)*Clausocalanus arcuicornis* (Dana, 1849)

Original. *Clausocalanus arcuicornis* (Dana, 1849), Male, 1.08 mm, Taiwan Strait ($22^{\circ}49'N$, $120^{\circ}12'E$): a/b. habitus (dorsal/lateral); c. basis of right leg 2 (posterior); d. basis of left leg 3 (posterior); e. leg 5 (posterior). Scales: a, b = 0.5 mm, c, d = 0.25 mm; e = 0.25 mm.

Clausocalanus dubius Brodsky, 1950 (Size: Female, 1.80 mm; male, 0.97–1.80 mm)

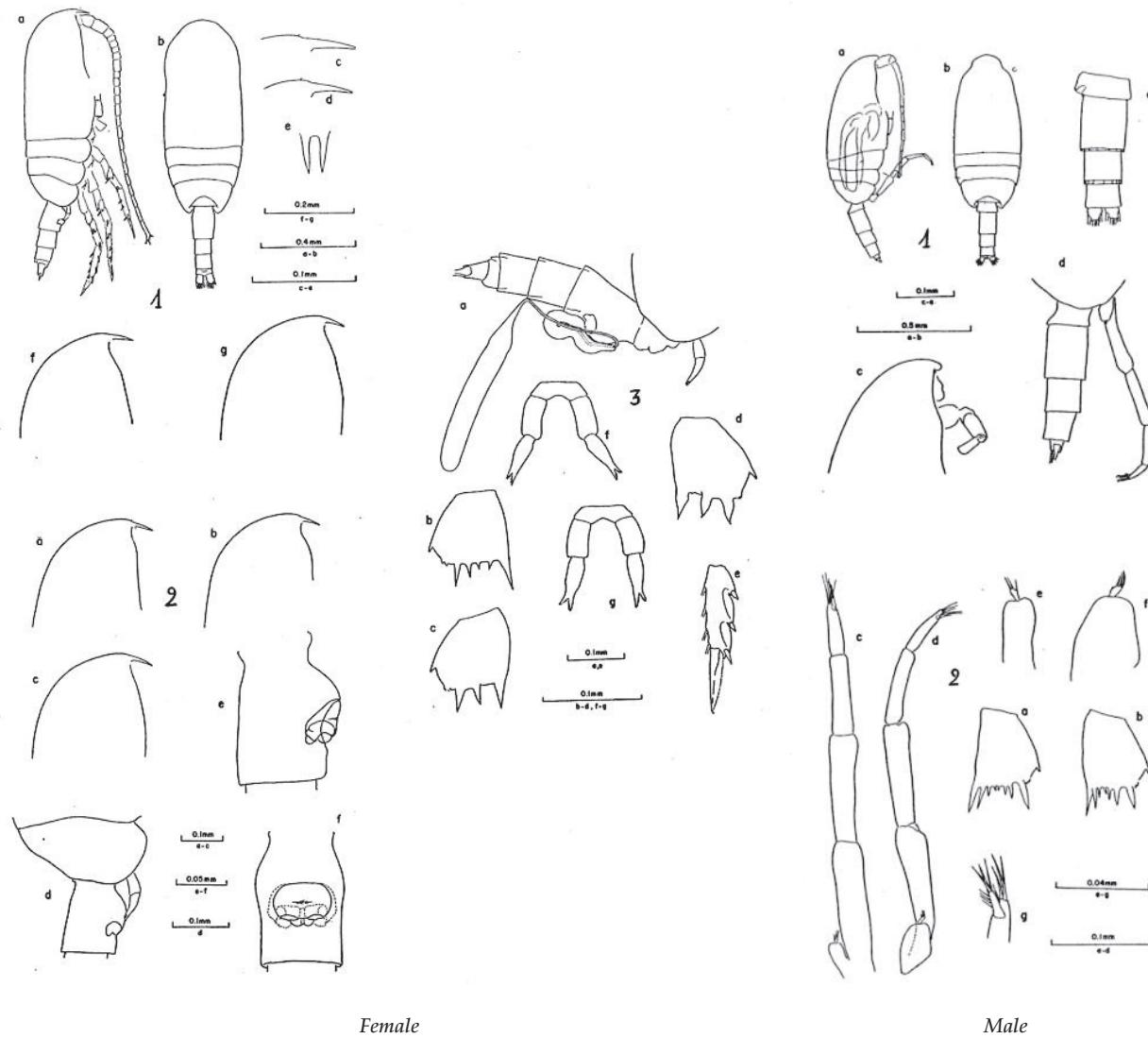


Clausocalanus dubius Brodsky, 1950

Brodsky, 1950: Fig. 41. *lausocalanus dubius* Brodsky, 1950, Male habitus (dorsal); RLa. rostrum (lateral); p. rostrum (frontal); S1. Leg 1; S3B2. Leg 3, coxa & basis; S5. Leg 5.

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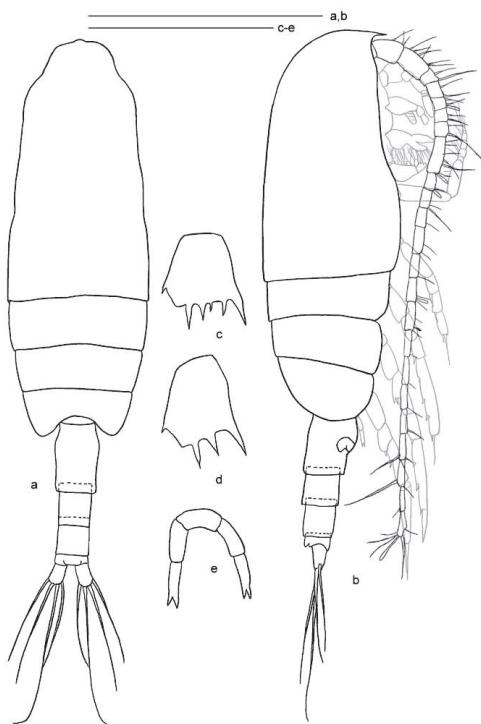
Clausocalanus farrani Sewell, 1929 (Size: Female, 1.04–1.26 mm; male, 0.87–0.99 mm)



Clausocalanus farrani Sewell, 1929

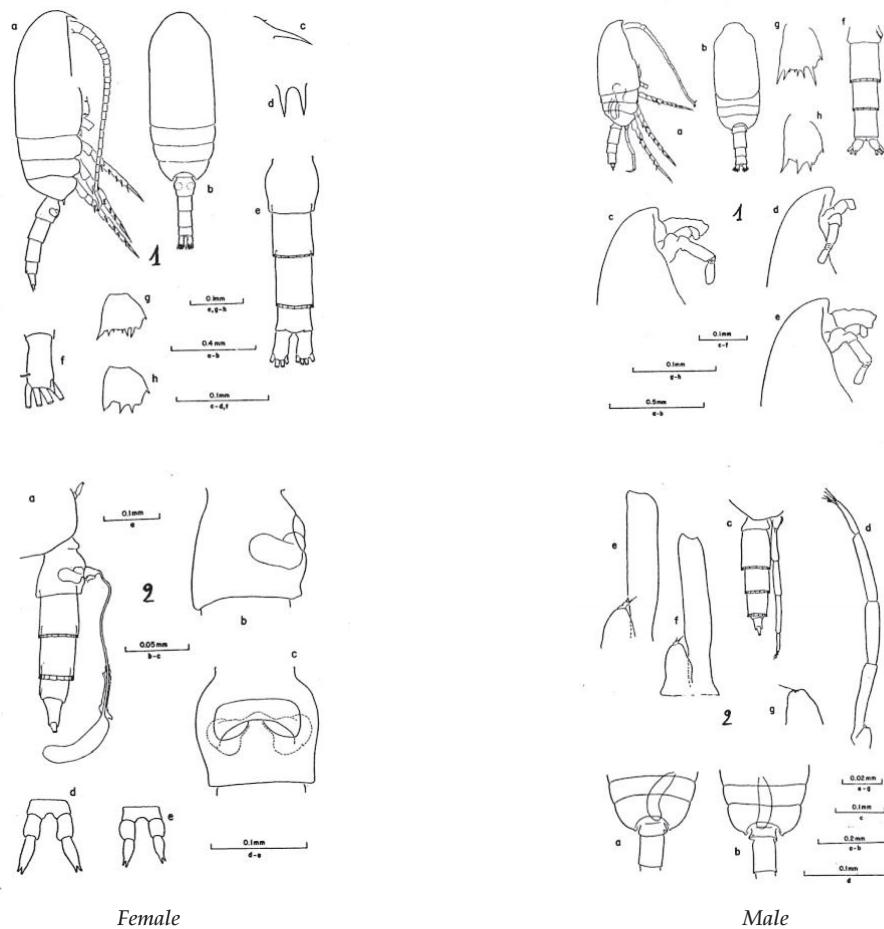
Frost & Fleminger, 1968: pls. 34–38. *Clausocalanus farrani* Sewell, 1929, Female. Pl. 34, 1a/b habitus (lateral/dorsal). 1c/d. rostrum (lateral); 1e. rostrum (anteroventral); 1f/g. forehead (lateral). Pl. 35, 2a-c. forehead (lateral); 2d. posterior prosome & genital double-somite (lateral); 2e. genital double-somite (lateral/ventral). 2f. genital double-somite (ventral). Pl. 36, 3a. posterior prosome & urosome (lateral); 3b. leg 2 basis; 3c/d. leg 3 basis; 3e. leg 3 exopod segment 3; 3f/g leg 5 (from 2 specimens). Male. Pl. 37. 1a/b. habitus (lateral/dorsal); 1c. forehead (lateral); 1d. posterior prosome & urosome (lateral); 1e. urosome (dorsal). Pl. 38, 2a. leg 2 basis; 2b. leg 3 basis; 2c/d. leg 5 (posterior/lateral); 2e/f. right leg 5 (anterior/lateral); 2g. left leg 5 segments 4 & 5 (posterior).

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Clausocalanus farrani Sewell, 1929*Clausocalanus farrani* Sewell, 1929

Original. *Clausocalanus farrani* Sewell, 1929, Female, 1.17 mm, East China Sea (24°18'N, 121°46'E, surface); a/b. habitus (dorsal/lateral); c. basis of leg 2 (posterior); d. basis of leg 3 (posterior); e. leg 5 (posterior). Scales: a, b = 0.5 mm; c-e = 0.2 mm.

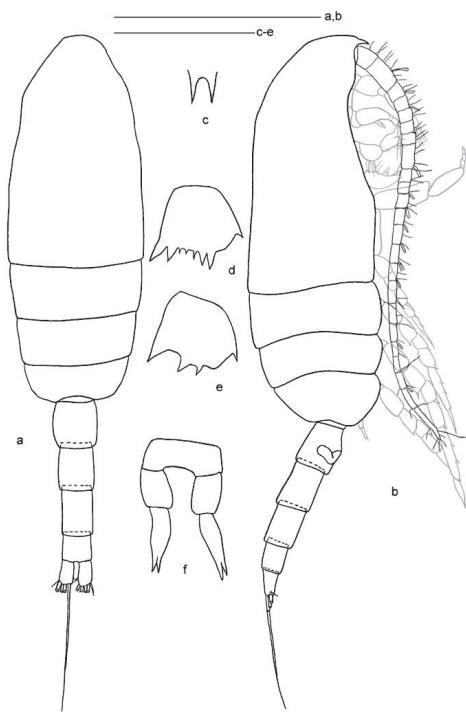
Clausocalanus furcatus (Brady, 1883) (Size: Female, 0.80–1.75 mm; male, 0.70–1.14 mm)



Clausocalanus furcatus (Brady, 1883)

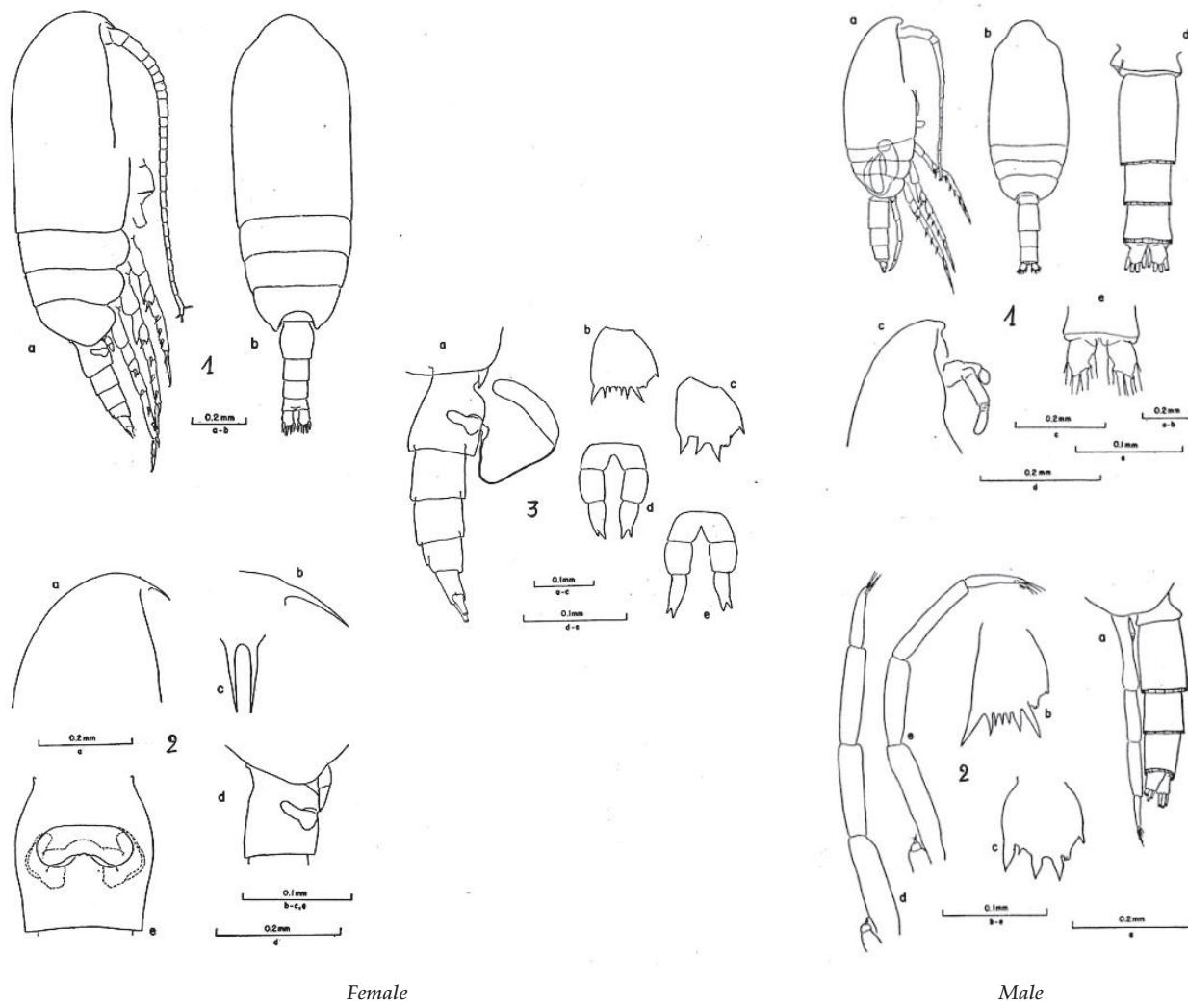
Frost & Fleminger, 1968: pls 64–67. *Clausocalanus furcatus* (Brady, 1883), Female. Pl. 64. 1a/b. habitus (lateral/dorsal); 1c/d. rostrum (lateral/anteroventral); 1e. urosome (dorsal); 1f. right caudal ramus (dorsal); 1g, leg 2 basis; 1h. leg 3 basis. Pl. 65. 2a. posterior prosome & urosome with spermatophore attached (lateral); 2b/c. genital double-somite (lateral/ventral); 2d/e. leg 5. Male. Pl. 66. 1a/b. habitus (lateral/dorsal); 1c-e, forehead (lateral); 1f. urosome (dorsal); 1g. leg 2 basis; 1h. leg 3 basis. Pl. 67. 2 a/b, posterior prosome to urosomite 3 (dorsal); 2c. posterior prosome & urosome (lateral); 2d. leg 5 (left posterolateral); 2e/f, left/right leg 5 (anterior); 2g. right leg 5.

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Clausocalanus furcatus (Brady, 1883)*Clausocalanus furcatus* (Brady, 1883)

Original. *Clausocalanus furcatus* (Brady, 1883), Female, 1.32 mm, East China Sea ($25^{\circ}24'N$, $122^{\circ}19'E$, 200 m); a/b. habitus, (dorsal/lateral); c. rostrum (ventral); d. leg 2 basis (posterior); e. leg 3 basis (posterior); f. leg 5 (posterior). Scales: a, b = 0.5 mm; c-f = 0.1 mm.

Clausocalanus ingens Frost & Fleminger, 1968 (Size: Female, 1.44–1.90 mm; male, 0.99–1.08 mm)

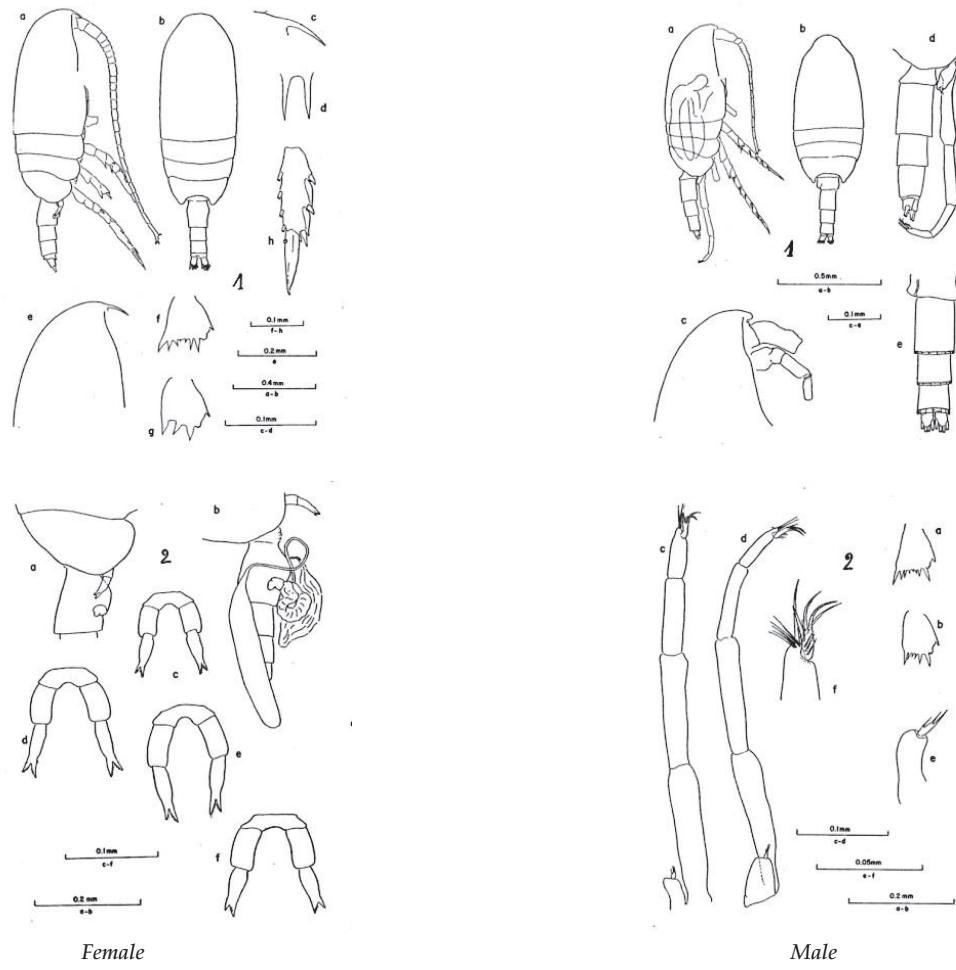


Clausocalanus ingens Frost & Fleminger, 1968

Frost & Fleminger, 1968: pls. 19–22. *Clausocalanus ingens* Frost & Fleminger, 1968, Female. pl. 19. 1a/b. habitus (lateral/dorsal). Pl. 20. 2a. forehead (lateral); 2b/c. rostrum (lateral/anteroventral); 2d. pedigers 4–5 & genital double-somite (lateral); 2e. genital double-somite (ventral). Pl. 21. 3a. pedigers 4/5 & urosome with spermatophore attached (lateral); 3b. leg 2 basis; 3c. leg 3 basis; 3d/e. leg 5. Male. Pl. 22. 1a/b. habitus (lateral/dorsal); 1c. forehead (lateral); 1d. urosome (dorsal); 1e. urosomite 4 to caudal rami (dorsal). Pl. 23. 2a. posterior prosome & urosome (lateral); 2b. leg 2 basis; 2c. leg 3 basis; 2d/e. leg 5 (posterior/anterolateral).

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Clausocalanus jobei Frost & Fleminger, 1968 (Size: Female, 1.01–1.56 mm; male, 0.87–1.07 mm)

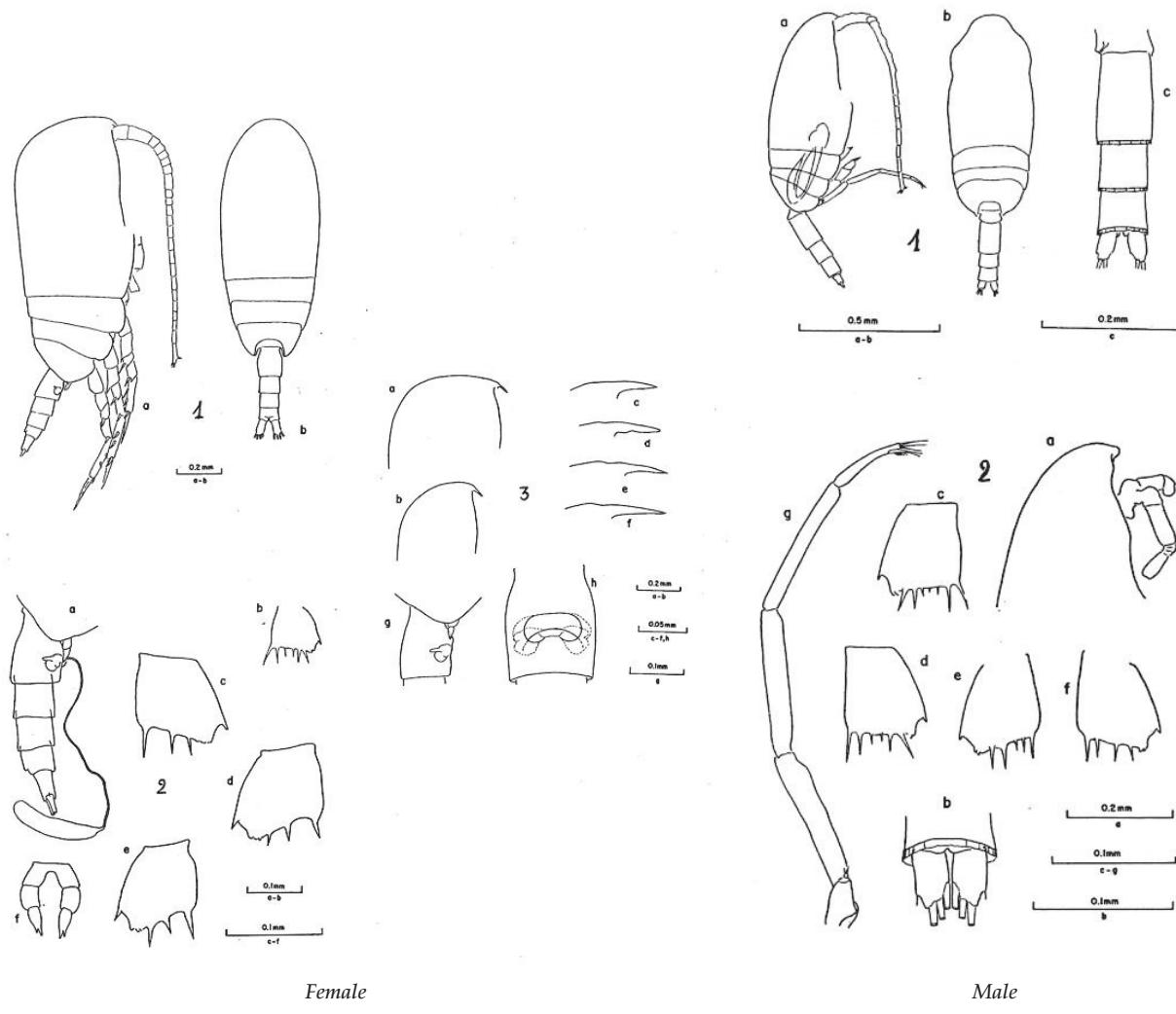


Clausocalanus jobei Frost & Fleminger, 1968

Frost & Fleminger, 1968: pls.39-42. *Clausocalanus jobei* Frost & Fleminger, 1968, Female. Pl. 39. 1a/b. habitus (lateral/dorsal); 1c/d. rostrum (lateral/anteroventral); 1e. forehead (lateral); 1f. leg 2 basis; 1g. leg 3 basis. Pl. 40. 2a. posterior prosome & genital double-somite (lateral); 2b. posterior prosome & urosome with spermatophore attached (lateral). Pl. 41. 1a/b. habitus (lateral/dorsal); 1c. forehead (lateral); 1d. posterior prosome & urosome (lateral); 1e. urosome (dorsal). Pl. 42. 2a. leg 2 basis; 2b. leg 3 basis; 2c/d. leg 5 (posterior/lateral); 2e, right leg 5 (posterior); 2f. left leg 5 segments 4/5 (posterior).

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Clausocalanus laticeps Farran, 1929 (Size: Female, 1.25–1.67 mm; male, 1.01–1.10 mm)

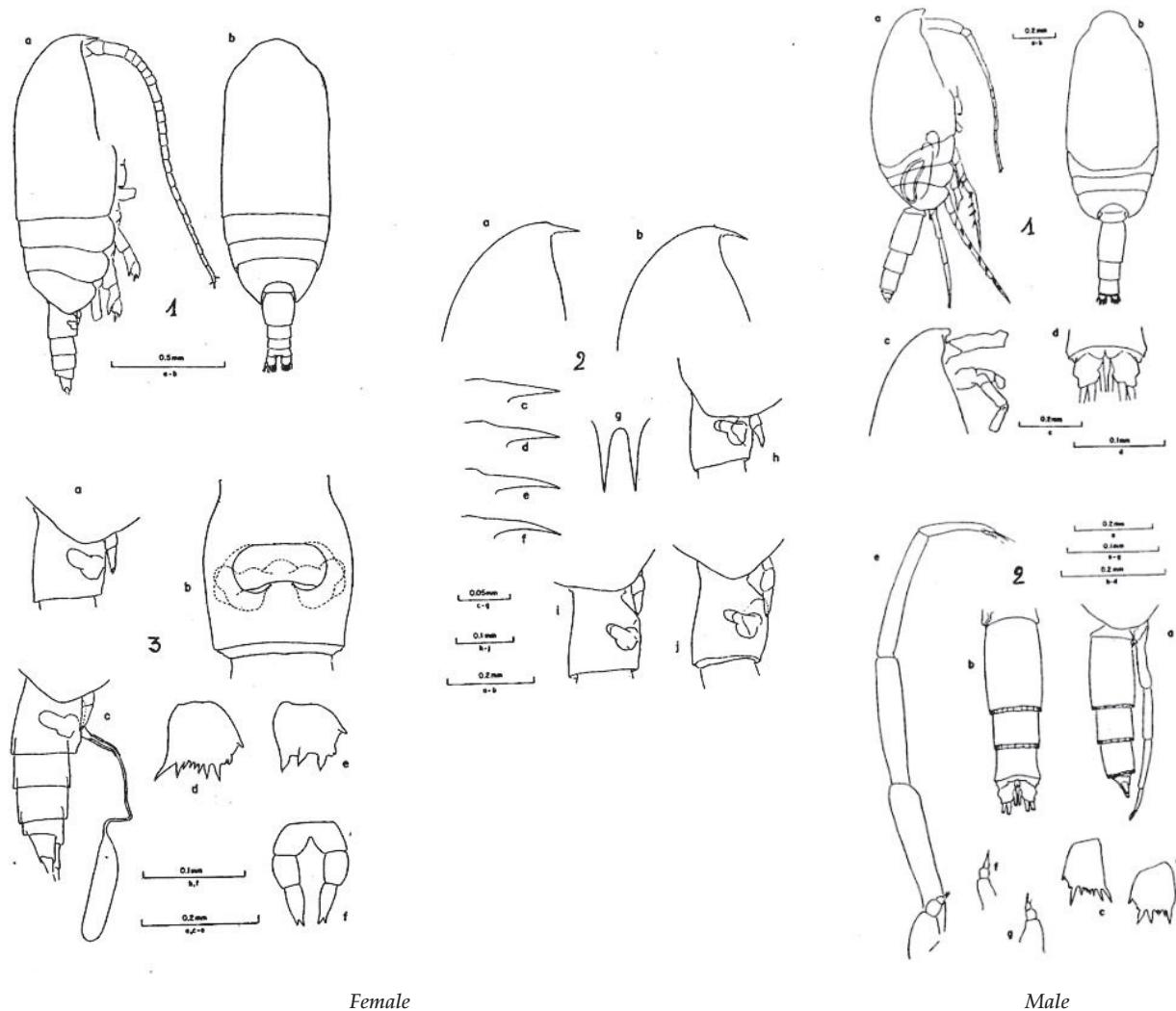


Clausocalanus laticeps Farran, 1929

Frost & Fleminger, 1968: pls. 24–28. *Clausocalanus laticeps* Farran, 1929, Female. Pl. 24. 1a/b. habitus (lateral/dorsal). Pl. 25. 2a. posterior prosome & urosome with spermatophore attached (lateral); 2b. leg 2 basis; 2c-e, leg 3 basis; 2 f. leg 5. Pl. 26. 3a/b. forehead (lateral); 3c-f. rostrum (lateral); 3g. posterior prosome & genital double-somite (lateral); 3h. genital double-somite (ventral). Male. Pl.27. 1a/b. habitus (lateral/dorsal); 1c. urosome (dorsal). Pl. 28. 2a. forehead (lateral); 2b, urosomites 4/5 & caudal rami (dorsal); 2 c/d. leg 2 basis (right and left legs of same specimen); 2e/f. leg 3 basis (right and left legs of same specimen); 2g. leg 5 (lateral).

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Clausocalanus lividus Frost & Fleminger, 1968 (Size: Female, 1.22–1.98 mm; male, 1.09–1.45 mm)

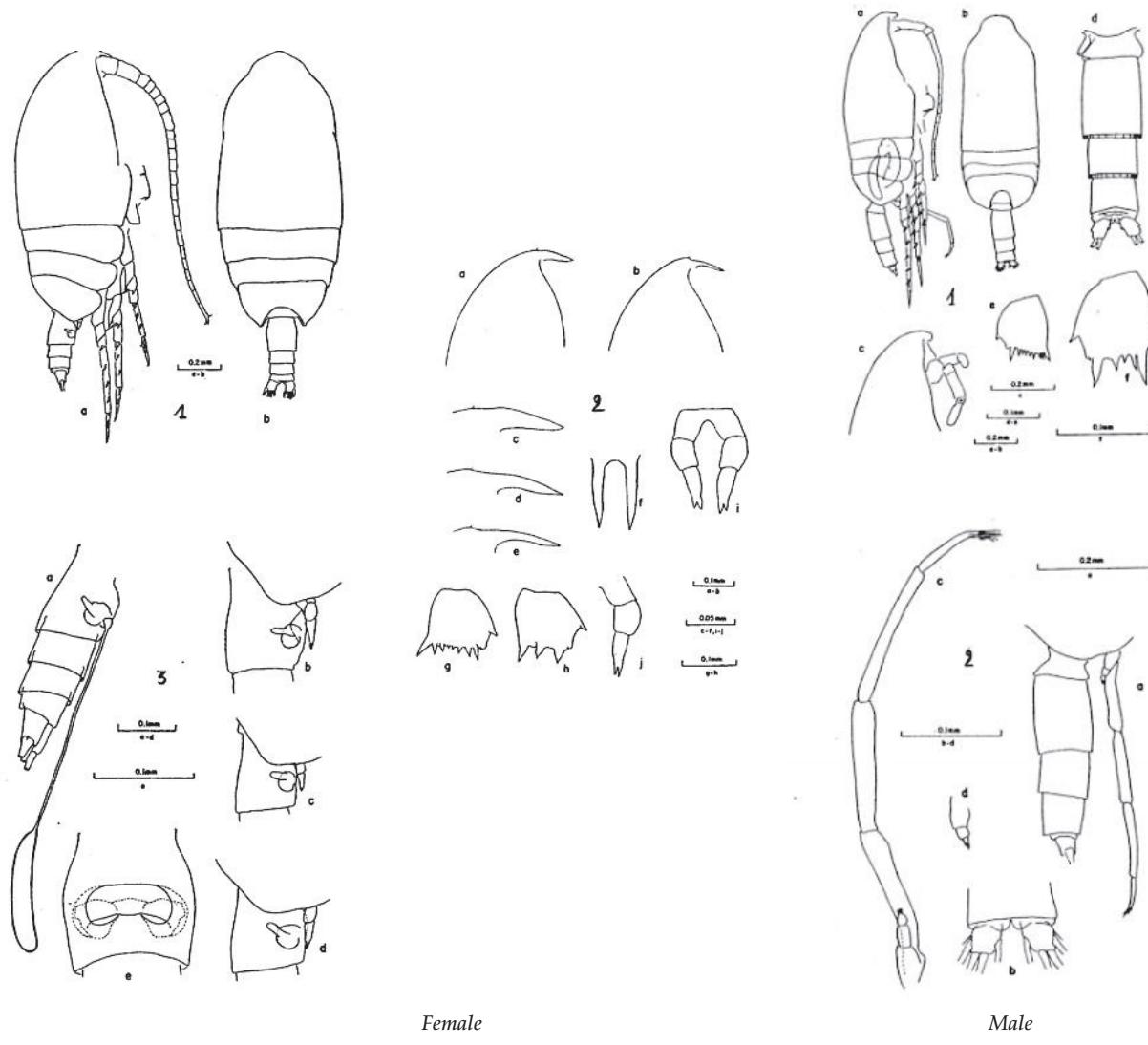


Clausocalanus lividus Frost & Fleminger, 1968

Frost & Fleminger, 1968: pls. 14–18. *Clausocalanus lividus* Frost & Fleminger, 1968, Female. Pl. 14. 1a/b. habitus (lateral/dorsal). Pl. 15. 2a/b. forehead (lateral); 2c-f. rostrum (lateral); 2g. rostrum (anterior); 2h-j. posterior prosome & genital double-somite (lateral). Pl. 16. 3a. posterior prosome & genital double-somite (lateral); 3b. genital double-somite (ventral); 3c. posterior prosome & urosome with spermatophore attached (lateral); 3d. leg 2 basis; 3e. leg 3 basis; 3f. leg 5. Male. Pl. 17. 1a/b. habitus (lateral/dorsal); 1c. forehead (lateral); 1d. urosomite 4 to caudal rami (armature incomplete) (dorsal). Pl. 18. 2a. posterior prosome & urosome (lateral); 2b. urosome (armature of caudal rami incomplete) (dorsal); 2c. leg 2 basis; 2d. leg 3 basis; 2e. leg 5 (lateral); 2f/g. right leg 5 (posterior/lateral).

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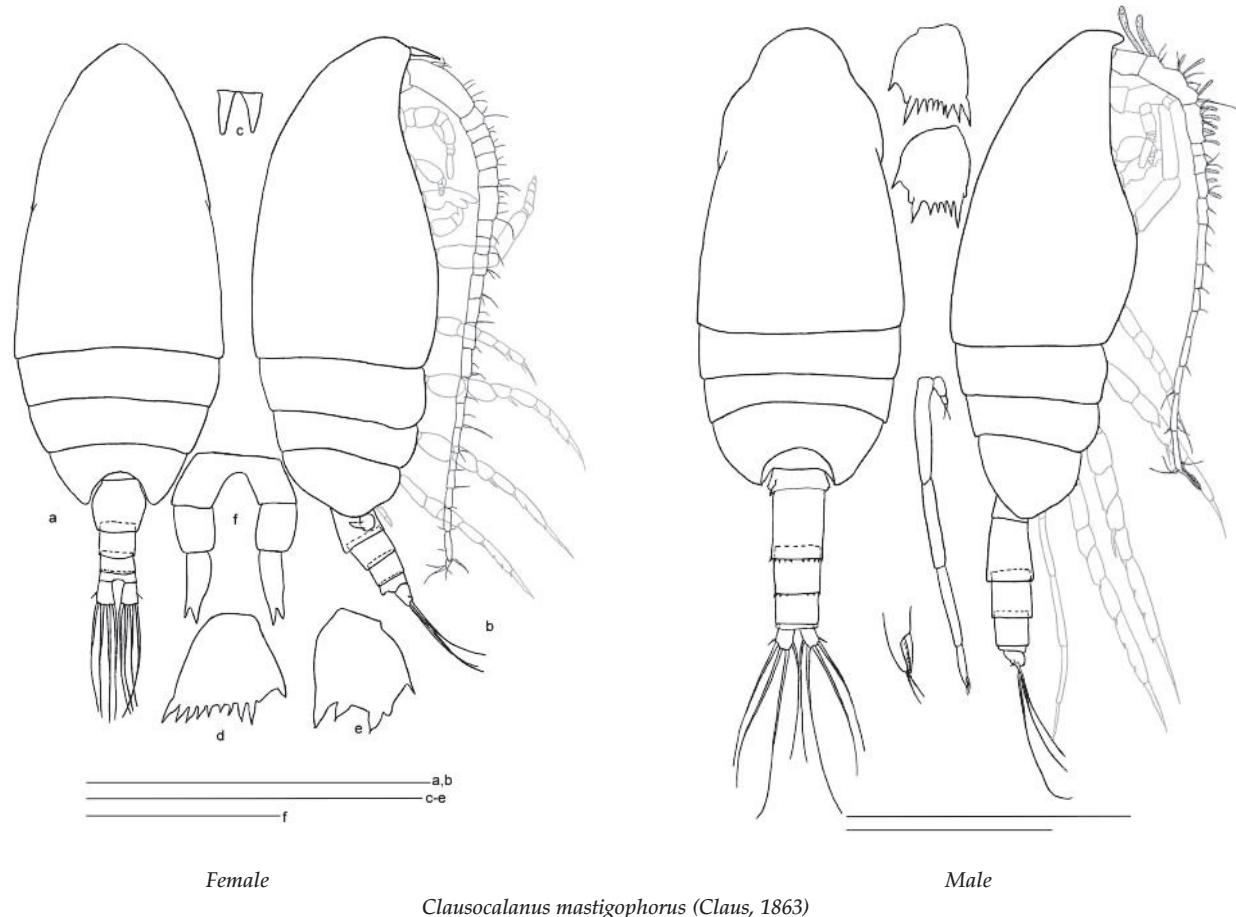
Clausocalanus mastigophorus (Claus, 1863) (Size: Female, 1.17–1.94 mm; male, 1.05–1.50 mm)



Clausocalanus mastigophorus (Claus, 1863)

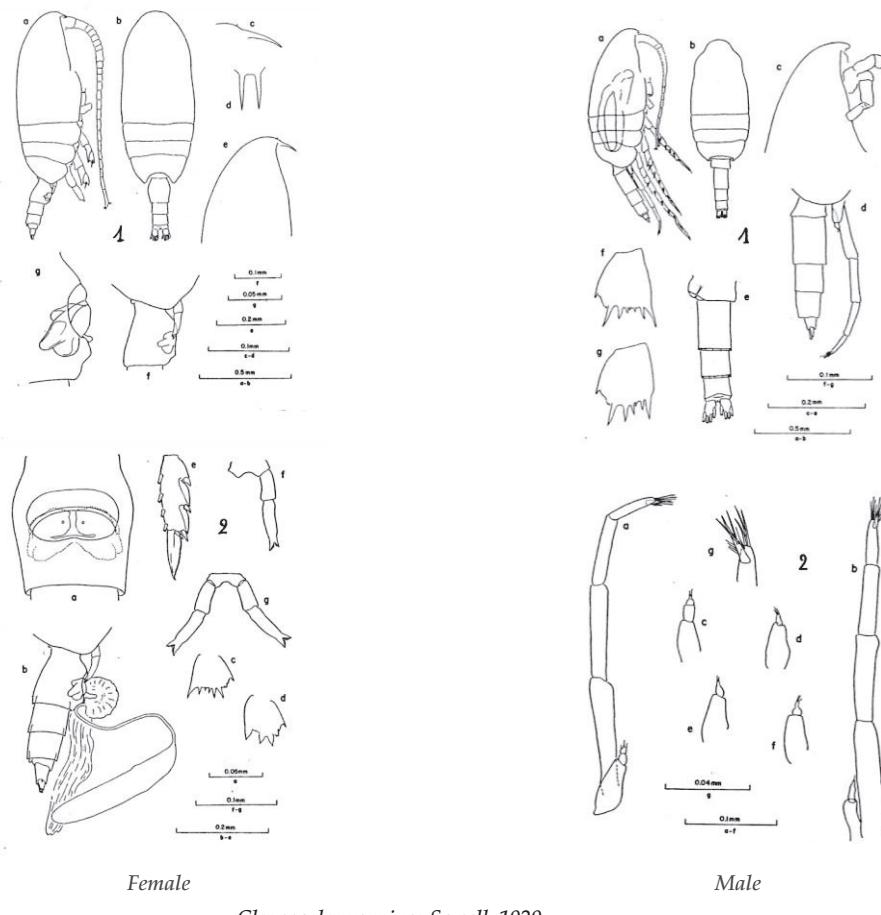
Frost & Fleminger, 1968: pls. 9–13. *Clausocalanus mastigophorus* (Claus, 1863), Female. Pl. 9. 1a/b. habitus (lateral/dorsal). Pl. 10. 2 a/b. forehead (lateral); 2c-e. rostrum (lateral); 2f. rostrum (anteroventral); 2g. leg 2 basis; 2h. leg 3 basis; 2i/j. leg 5. Pl. 11. 3a. urosome with spermatophore attached (lateral); 3b-d. posterior prosome & genital double-somite (lateral); 3e. genital-double somite (ventral). Male. Pl. 12. 1a/b. habitus (lateral/dorsal); 1c. frontal region (lateral); 1d. urosome (dorsal); 1e. leg 2 basis; 1f. leg 3 basis. Pl. 13. 2a. posterior prosome & urosome (lateral); 2b. urosomite 4 to caudal rami (dorsal view); 2c. leg 5; 2d. right leg 5.

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Clausocalanus mastigophorus (Claus, 1863)

Original. *Clausocalanus mastigophorus* (Claus, 1863), female, 1.62mm, Taiwan Strait (22°49'N, 120°12'E, surface), habitus (dorsal/lateral); rostral filament; leg 2/3, basis; leg 5. Male, 1.38 mm, same locality; habitus (dorsal/lateral); leg 2/3, b asis; leg 5.

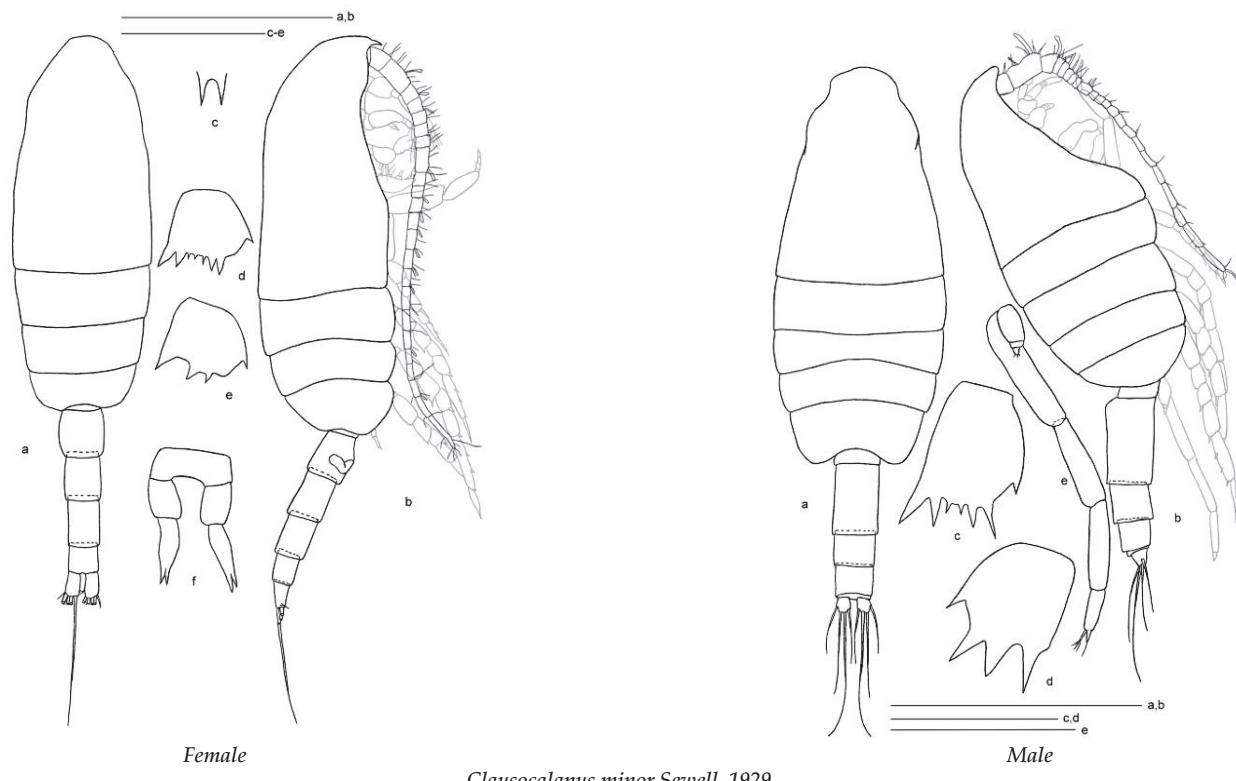
Clausocalanus minor Sewell, 1929 (Size: Female, 0.94–1.32 mm; male, 0.79–1.06 mm)



Clausocalanus minor Sewell, 1929

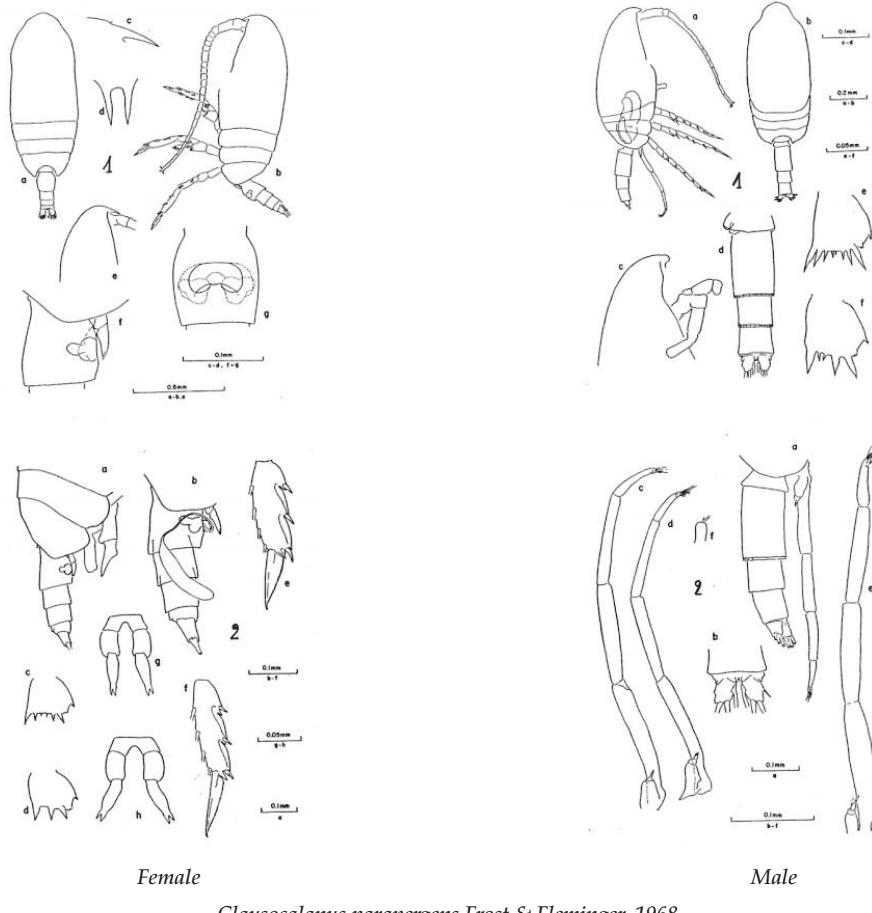
Frost & Fleminger, 1968: pls. 43–46. *Clausocalanus minor* Sewell, 1929, Female. Pl. 43. 1a/b. habitus (lateral/dorsal); 1c/d. rostrum (lateral/anteroventral); 1e. forehead (lateral); 1f. posterior prosome & genital double-somite (lateral); 1g. ventral half of genital double-somite (lateral). Pl. 44. 2a. genital double-somite (ventral); 2b. posterior prosome & urosome with spermatophore attached (lateral); 2c. leg 2 basis; 2d. leg 3 basis; 2e. leg 3 exopod segment 3; 2f/g. leg 5. Male. Pl. 45. 1a/b. habitus (lateral/dorsal); 1c. forehead (lateral); 1d. posterior prosome & urosome (lateral); 1e. urosome (dorsal); 1f. leg 2 basis; 1g. leg 3 basis. Pl. 46. 2a/b. leg 5 (lateral/posterior); 2c-f. right leg 5; 2g. left leg segments 4–5.

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Clausocalanus minor Sewell, 1929

Original. *Clausocalanus minor* Sewell, 1929. Female, 1.15 mm, East of Taiwan (off Zhibeng, 24°18'N, 121°46'E), habitus (dorsal/lateral); rostrum; basis of legs 2 & 3; LEG 5. Male, 1.08 mm, same locality, habitus (dorsal/lateral); basis of legs 2 and 3; leg 5.

Clausocalanus parapergens Frost & Fleminger, 1968 (Size: Female, 0.97–1.38 mm; male, 0.97–1.15 mm)

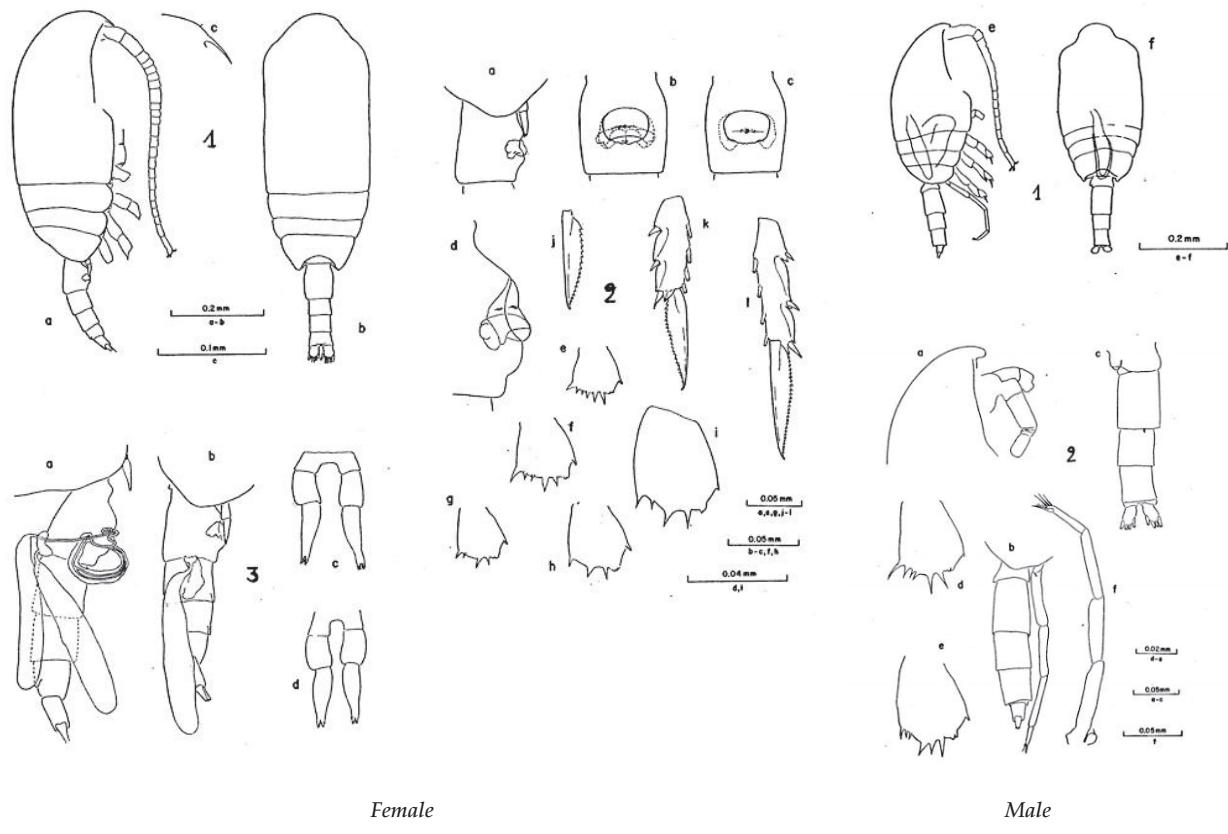


Clausocalanus parapergens Frost & Fleminger, 1968

Frost & Fleminger, 1968: pls. 60–63. Female, Pl. 60. 1a/b, habitus (dorsal/lateral); 1c/d, rostrum (lateral/anteroventral); 1e, forehead (lateral); 1f, posterior prosome & genital double-somite (lateral); 1g, genital double-somite (ventral). Pl. 61. 2a, posterior prosome & urosome (lateral); 2b, posterior prosome & urosome with spermatophore attached (lateral); 2c, leg 2, basis; 2d, leg 3 basis; 2e, leg 3 exopod segment 3; 2f, leg 4 exopod segment 3; 2 g/h, leg 5. Male. Pl. 62. 1a/b, habitus (lateral/dorsal); 1c, forehead (lateral); 1d, urosome (dorsal); 1e, leg 2 basis; 1f, leg 3 basis. Pl. 63. 2a, posterior prosome & urosome (lateral); 2b, urosomite 4/5 & caudal rami (armature incomplete) (dorsal); 2c/d, leg 5 (lateral); 2e, leg 5 (posterior); 2f, right leg 5.

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Clausocalanus paululus Farran, 1926 (Size: Female, 0.65–0.86 mm; male, 0.47–0.60 mm)

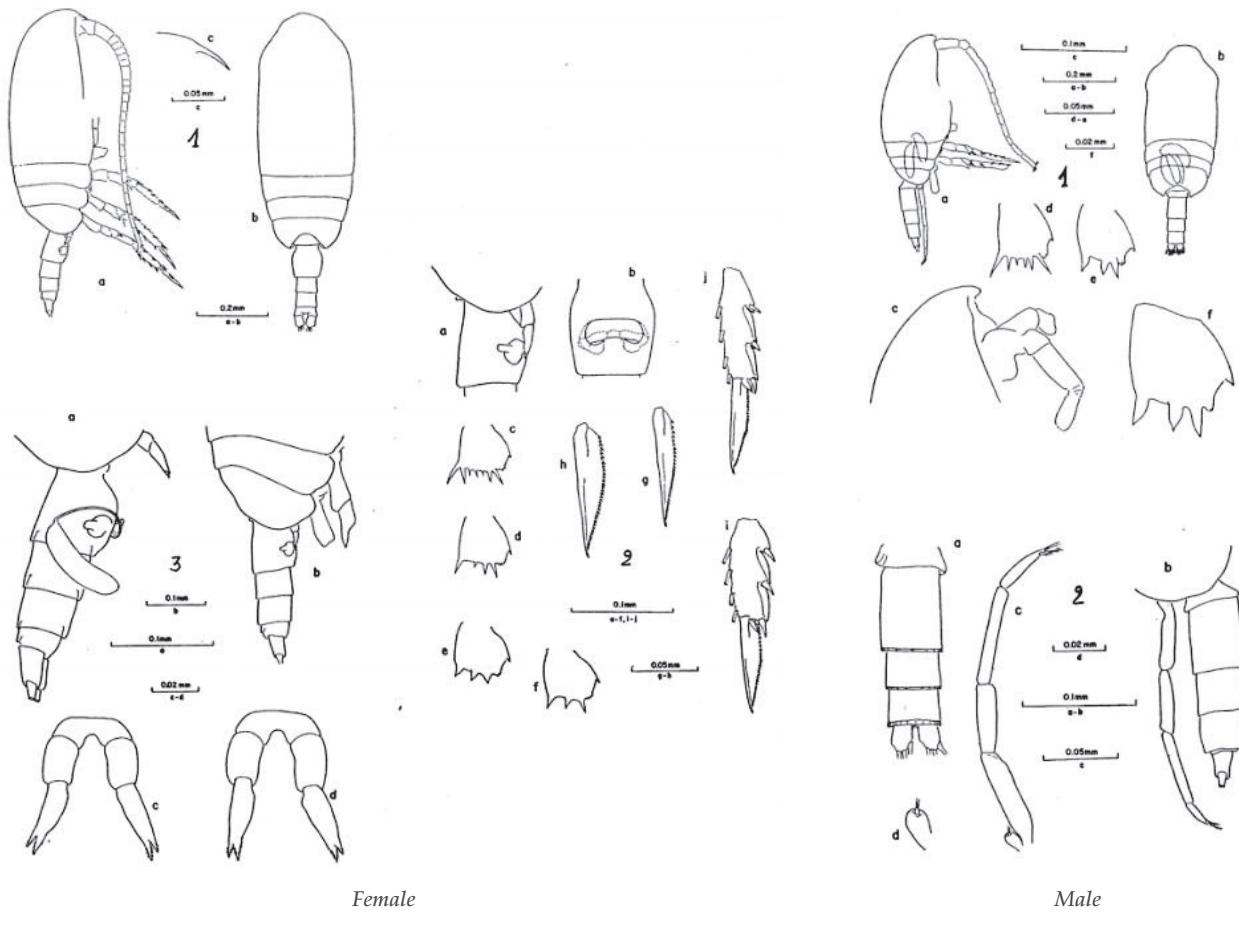


Clausocalanus paululus Farran, 1926

Frost & Fleminger, 1968: pls. 47–50. Female. Pl. 47. 1a/b. habitus (lateral/dorsal); 1c. rostrum (lateral). Pl. 48. 2a. posterior prosome & genital double-somite (lateral); 2b/c. genital double-somite; 2d. ventral half of genital double-somite (lateral); 2 e/f. leg 2 basis; 2g-i, leg 5 basis. Pl. 49. 3 a/b, posterior prosome & urosome with spermatophore attached (right lateral); 3c/d. leg 5 (from different specimens). Male. Pl. 49. 1e/f, habitus (lateral/dorsal). Pl. 50. 2a, forehead (lateral); 2b, posterior prosome & urosome (lateral); 2c, urosome (dorsal); 2d, leg 2, basis; 2e, leg 4 basis; 2f, leg 5 (anterior).

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Clausocalanus pergens Farran, 1926 (Size: Female, 0.70–1.10 mm; male, 0.52–0.67 mm)



Clausocalanus pergens Farran, 1926

Frost & Fleminger, 1968: pls. 51–55. *Clausocalanus pergens* Farran, 1926, Female, Pl. 51. 1a/b. habitus (lateral/dorsal); 1c. rostrum (lateral). Pl. 52. 2a. posterior prosome & genital double-somite (lateral); 2b. genital double-somite (ventral); 2 c/d. leg 2 basis; 2 e/f. leg 3 basis; 2g. leg 2 terminal spine; 2h. leg 3 terminal spine; 2i. leg 3 exopod segment 3; 2j. leg 4 exopod segment 3. Pl. 53. 3a. posterior prosome & urosome with spermatophore attached (lateral view); 3b. pediger 2 to urosome (lateral); 3c/d. leg 5. Male, Pl. 54. 1a/b. habitus (lateral/dorsal); 1c. forehead (lateral); 1d. leg 2 basis; 1 e/f. leg 3 basis. Pl. 55. 2a. urosome (dorsal); 2b. posterior prosome & urosome (lateral); 2c. leg 5 (posterolateral); 2d. right leg 5.

Razouls C. Desreumaux N., Kouwenberg J. and de Bovée F., 2005–2020. — Biodiversity of Marine Planktonic Copepods (morphology, geographical distribution and biological data). Sorbonne University, CNRS. Available at <http://copepodes.obs-banyuls.fr/en>. [Accessed May 03, 2021].