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Dot's Nifty Sabellid

Picture Key

Ver. 2017

Dialychone Claparède 1870

Type species: *Dialychone acustica* Claparède 1870, by original designation.

18 species.

Diagnosis: Mid- to large sized sabellids, with variable number of pairs of radiolae in semicircular radiolar lobes, each radiole with two rows of vacuolated cells. Basal membrane and radiolar flanges present, basal flanges absent. Radiolar eyes absent. Dorsal lips elongate, radiolar and pinnular appendages both absent; ventral radiolar appendages present. Ventral lips present, ventral sacs and parallel lamellae absent. Anterior peristomial ring with triangular or bilobed ventral lobe. Posterior peristomial ring collar present, low, with narrow mid-dorsal gap, dorsal margins laterally fused to faecal groove, mid-ventral incision and ventral lappets. Peristomial vascular loops absent. Peristomial eyespots absent or present. Thorax with eight chaetigers, abdomen with variable number. Glandular ridge present on chaetiger 2, in some species also on other posterior thoracic and anterior abdominal segments. Ventral shields absent. Interramal eyespots absent. Collar chaetae similar to superior notochaetae of following chaetigers, elongate, narrowly hooded; inferior thoracic notochaetae as bayonet-chaetae and paleate. Thoracic uncini acicular with teeth progressively shorter, arranged on transverse rows above main fang, hood present, handle long; neuropodial companion chaetae absent. Abdominal uncini with breast squared to rectangular, handle absent, main fang with several rows of similarly sized teeth on top; uncini progressively larger from dorsal to ventral edges of tori. Abdominal neurochaetae as elongate, narrowly hooded chaetae. Posterior body with simple pre-pygidal depression. Pygidium with eyespots. Pygidial cirrus sometimes present. Main reference: Tovar-Hernández 2008.

Paradialychone Tovar-Hernández, 2008

Type species: *Chone americana* Day, 1973, designated by Tovar-Hernández (2008).

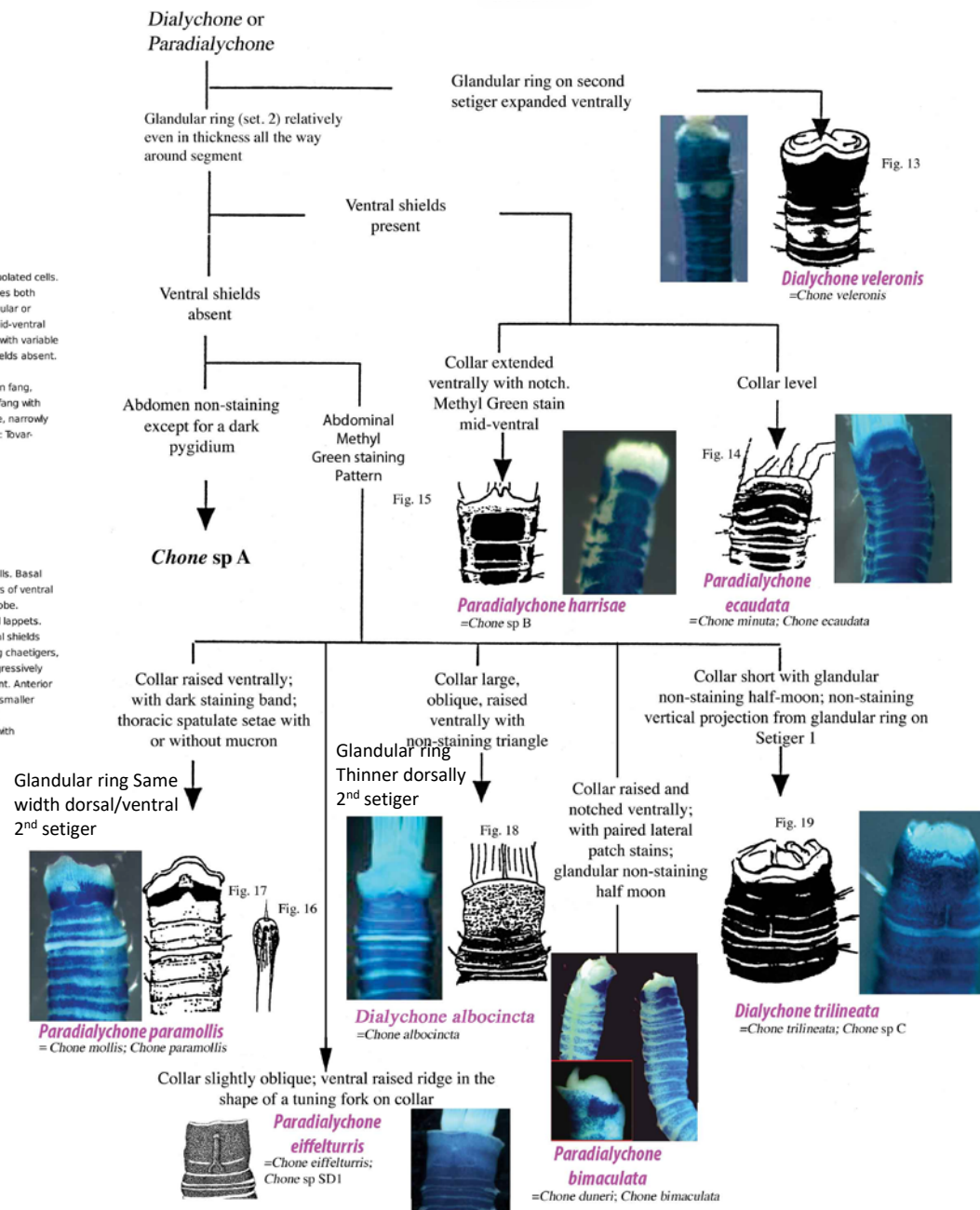
15 species.

Diagnosis: Medium to large sized sabellids, with 3-13 pairs of radiolae in semicircular radiolar lobes, each radiole with two rows of vacuolated cells. Basal membrane and radiolar flanges present, basal flanges absent; radiolar eyes absent. Dorsal lips with radiolar and pinnular appendages; 1-6 pairs of ventral radiolar appendages. Ventral lips present, parallel lamellae and ventral sacs absent. Anterior peristomial ring with triangular or bilobed ventral lobe. Posterior peristomial ring collar low, with narrow mid-dorsal gap, dorsal margins laterally fused to faecal groove, mid-ventral incision and ventral lappets. Peristomial vascular loops absent. Peristomial eyespots absent or present. Thorax with eight chaetigers, abdomen with variable number. Ventral shields absent. Glandular ridge on chaetiger 2 present, narrow or laterally broader (Fig. 10B). Collar chaetae similar to superior notochaetae of following chaetigers, elongate, narrowly hooded; inferior thoracic notochaetae as bayonet-chaetae and paleate chaetae. Thoracic uncini acicular, with transverse rows of progressively shorter teeth above main fang, larger tooth offset from midline on basal row, hood present, handle long; neuropodial companion chaetae absent. Anterior abdominal uncini, with roughly rectangular breast, handle absent, and large tooth at midline main fang on proximal row, followed by a series of smaller teeth; uncini progressively larger from dorsal to ventral edges of tori. Posterior abdominal uncini with hooked breast, handle absent. Abdominal neurochaetae as elongate and modified, elongate, narrowly hooded chaetae. Posterior body segments with pre-pygidal depression. Pygidium with eyespots. Pygidial cirrus may be present in some species. Main references: Tovar-Hernández 2008.

A) Uncini in anterior-abdominal segments with homodont teeth (capitum) surmounted over a reduced main fang (rostrum); thoracic uncini with teeth gradually decreasing in size surmounted over a main fang.....*Dialychone* Claparède, 1870

B) Uncini in anterior-abdominal segments with a distinct tooth (secondary tooth) surmounted over main fang, followed by a series of smaller teeth; Thoracic uncini with a large main fang surmounted by a series of smaller teeth.....*Paradialychone* Tovar-Hernandez, 2008

From Page 2

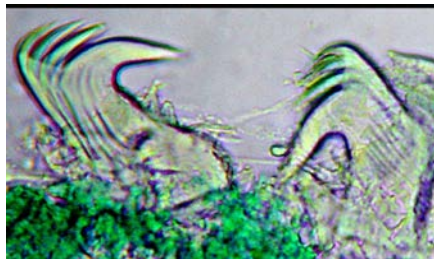


Dialychone Claparède 1870

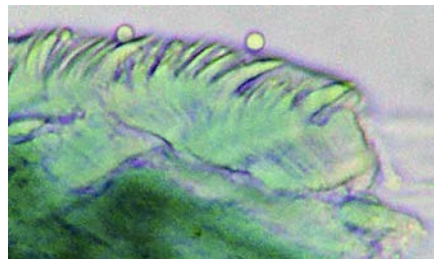
Type species: *Dialychone acustica* Claparède 1870, by original designation.

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Paradialychone bimaculata



Paradialychone Tovar-Hernández, 2008

Type species: *Chone americana* Day, 1973, designated by Tovar-Hernández (2008).

15 species.

Diagnosis: Medium to large sized sabellids, with 3–13 pairs of radioles in semicircular radiolar lobes, each radiole with two rows of vacuolated cells. Basal membrane and radiolar flanges present, basal flanges absent; radiolar eyes absent. Dorsal lips with radiolar and pinnular appendages; 1–6 pairs of ventral radiolar appendages. Ventral lips present, parallel lamellae and ventral sacs absent. Anterior peristomial ring with triangular or bilobed ventral lobe. Posterior peristomial ring collar low, with narrow mid-dorsal gap, dorsal margins laterally fused to faecal groove, mid-ventral incision and ventral lappets. Peristomial vascular loops absent. Peristomial eyespots absent or present. Thorax with eight chaetigers, abdomen with variable number. Ventral shields absent. Glandular ridge on chaetiger 2 present, narrow or laterally broader (Fig. 10B). Collar chaetae similar to superior notochaetae of following chaetigers, elongate, narrowly hooded; inferior thoracic notochaetae as bayonet-chaetae and paleate chaetae. Thoracic uncini acicular, with transverse rows of progressively shorter teeth above main fang, larger tooth offset from midline on basal row, hood present, handle long; neuropodial companion chaetae absent. Anterior abdominal uncini, with roughly rectangular breast, handle absent, and large tooth at midline main fang on proximal row, followed by a series of smaller teeth; uncini progressively larger from dorsal to ventral edges of tori. Posterior abdominal uncini with hooked breast, handle absent. Abdominal neurochaetae as elongate and modified, elongate, narrowly hooded chaetae. Posterior body segments with pre-pygidal depression. Pygidium with eyespots. Pygidial cirrus may be present in some species. Main references: Tovar-Hernández 2008.

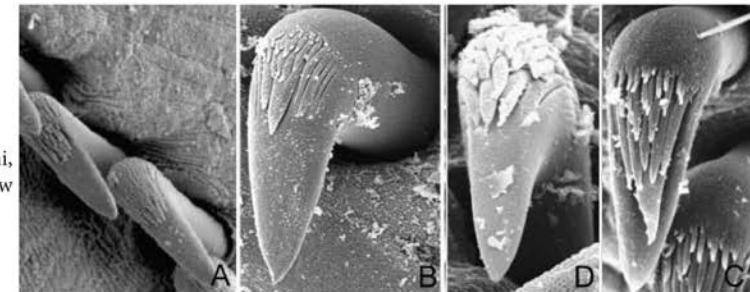
Sabellidae
K. Barwick
30JAN2012

Euchone

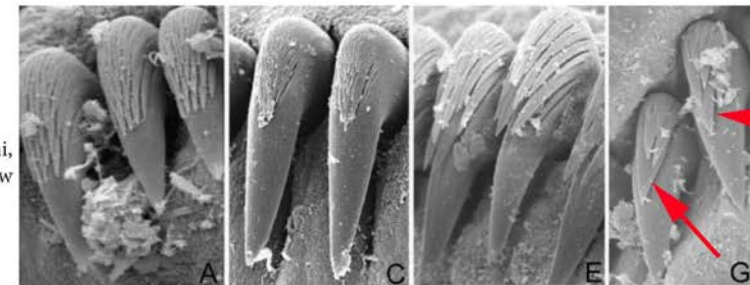
Chone

Dialychone

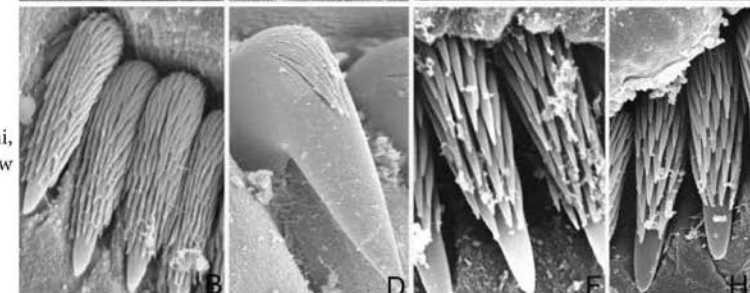
Paradialychone



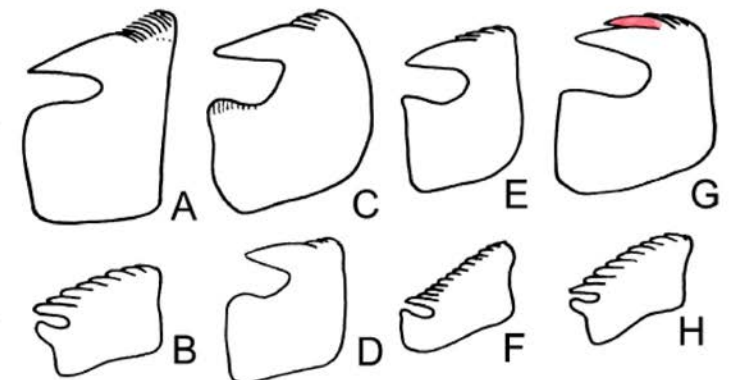
Thoracic uncini,
frontal view



Anterior abdominal uncini,
frontal view



Posterior abdominal uncini,
frontal view



Anterior abdominal uncini,
lateral view

Posterior abdominal uncini,
lateral view

Dialychone veleronis (Banse 1972)

Revision of Chone from North America 557

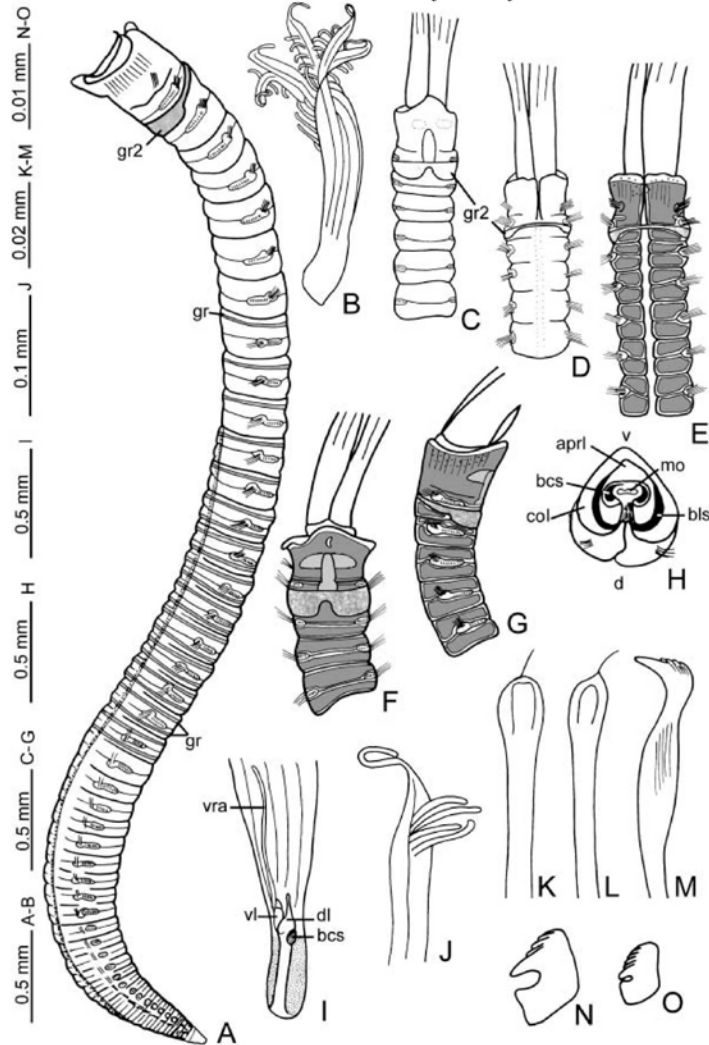


Figure 17. *Chone veleronis*. (A) Body, lateral view; (B) branchial crown; (C, F) anterior end, ventral view; (D, E) same, dorsal view; (G) same, lateral view; (H) peristomium, frontal view; (I) branchial lobe; (J) radiolar tip; (K, L) paleate chaetae; (M) thoracic uncinus; (N) anterior abdominal uncinus; (O) posterior abdominal uncinus. (A, C, D) Unstained worms; (E-G) methyl green staining. [LACM-AHF 0460, paratype].

Dialychone veleronis (Banse 1972)

C. veleronis

- collar level or slightly higher ventrally; no incisions.
- branchial lobes very long, extending well beyond collar.
- 6-7 pairs of radioles.
- palmate membrane beyond distal pinnules.
- radioles w/ filamentous free ends.
- stained individuals show the glandular ridge on setiger 2 to be very broad ventrally.
- setiger 1 with fascicles much smaller than others.
- postsetal lobes not seen.
- paleate setae w/ tips.



Chone veleronis Banse, 1972.
Sabellidae

Scamit Vol. 5, No. 3

SCAMIT code: LACO 73 (as Chone ecaudata)

Date Examined: 14 April 1986
Voucher By: Larry Lovell (MEC)

Literature:

Banse, 1972
Rowe, 1980.

Diagnostic Characters:

1. Absence of ventral shields, presence of a greatly broadened postsetal glandular girdle ventrally on the second setiger.
2. Branchiae crown long with high basis. Six to seven pairs of radioles with filiform free ends and palmate membrane reaching beyond distal pinnules.
3. Pre and postsetal whitish glandular rings of tissue in posterior thoracic and anterior to median abdominal setigers.

Related Species and Differences:

C. veleronis is the only known species of Chone with a greatly broadened postsetal glandular girdle ventrally on the second setiger.

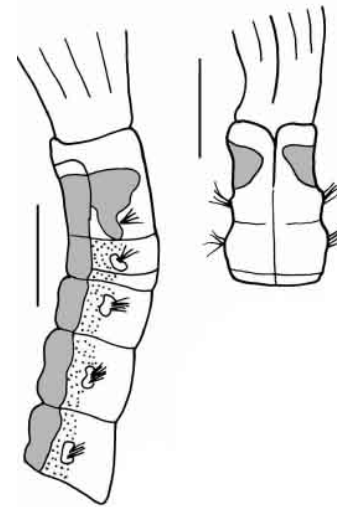
Distribution:

San Diego to Ft. Bragg, Ca in shelf and nearshore depths.

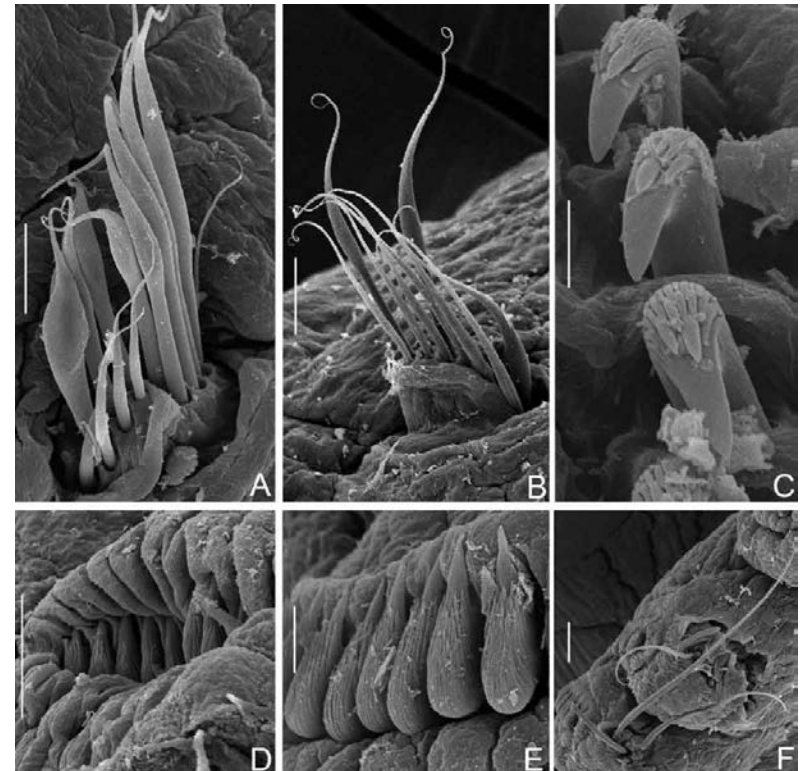
Paradialychone harrisae Tovar-Hernandez 2009

Chone sp B

CITY OF SAN DIEGO, CALIFORNIA MEMORANDUM		ED-503 (Rev. 11-89)
1. FROM (Name and Dept.) <i>Dot</i>	2. DATE <i>1/23/89</i>	
3. TO (In order indicated below, for purpose checked at right):		
	ACTION	INFORMATION
1. <i>All benthic pickers</i>		
2.		
3.		
4.		
5.		
4. SUBJECT <i>New Chone @ B stations</i>		
5. COMMENTS <i>We've been finding a new species of Chone at the 'B' stations. Provisionally we are calling it Chone sp. B. It has weak ventral shields and sparse staining ventrally, like Chone minuta, but the collar extends ventrally and is bilobed. It is also a longer worm than C. minuta with a dark staining pygidium. Leslie will send us a copy of her description when she recovers.</i>		



Collar bilobed
Ventral shields



Paradialychone ecaudata (Moore 1923)

526 M. A. Tovar-Hernández

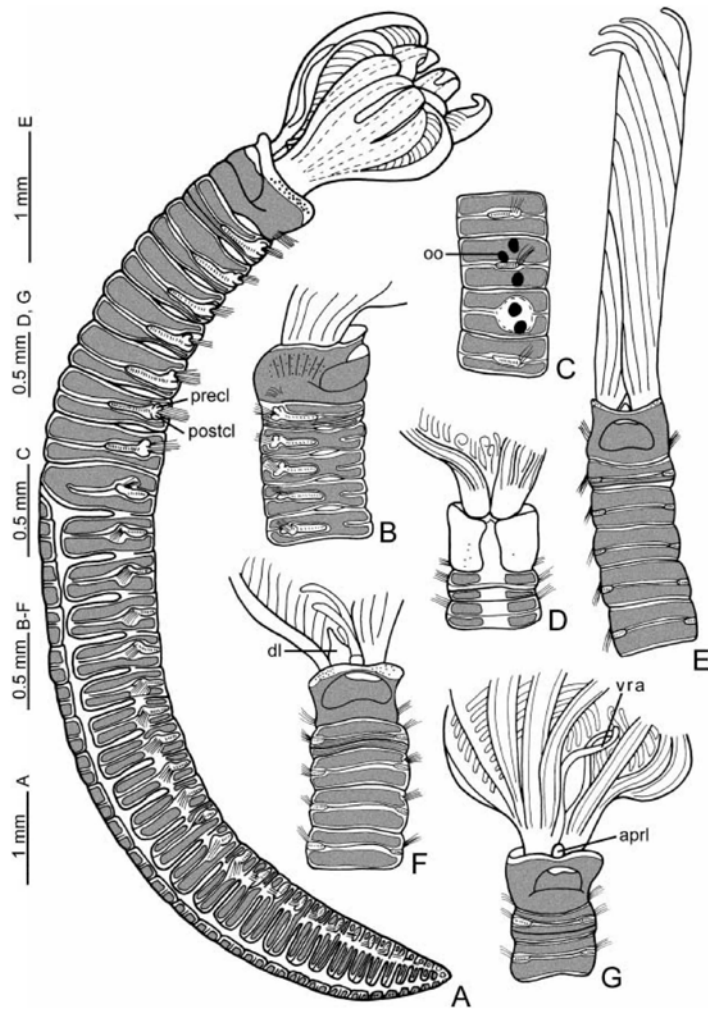


Figure 4. *Chone ecaudata* (with methyl green staining). (A) Whole worm, ventro-lateral view; (B) anterior end, lateral view; (C) posterior thorax, lateral view showing oocytes; (D) anterior end, dorsal view; (E-G) same, ventral view. (A-C, F) [LACM-AHF 0183, paratype *C. minuta*]; (D, G) [USNM 17319, holotype *C. ecaudata*]; (E) [LACM-AHF 2472-53, 003213].

Paradialychone ecaudata (Moore 1923)



C. minuta
(=*C. ecaudata*?)

- collar roughly even; no incisions.
- branchial lobes extend slightly beyond collar.
- 6-8 pairs of radioles.
- palmate membrane up to 1/2 radiole length.
- radioles w/ filamentous free ends or more blunt.
-
- setiger 1 with fascicle same size as others.
- postsetal lobes present.
- paleate setae with tips.
- ventral shields absent.

Paradialychone ecaudata (Moore 1923)

Chone minuta
Sabellidae

SCAMIT Vol. 5, No. 3

SCAMIT Code: OC 65

Date Examined: 14 April 1986

Voucher By: Larry Lovell(MEC)

Literature:

Banse, 1972 (syn. C. ecaudata)
Hartman, 1944
Hartman, 1969
Rowe, 1980

Diagnostic Characters:

1. A short tumid species of Chone.
2. Collar stains lightly with a ventral unstained crescent shaped area just anterior of setiger one, no stain on the collar dorsally.
3. Ventral shields present.

Related species and Differences:

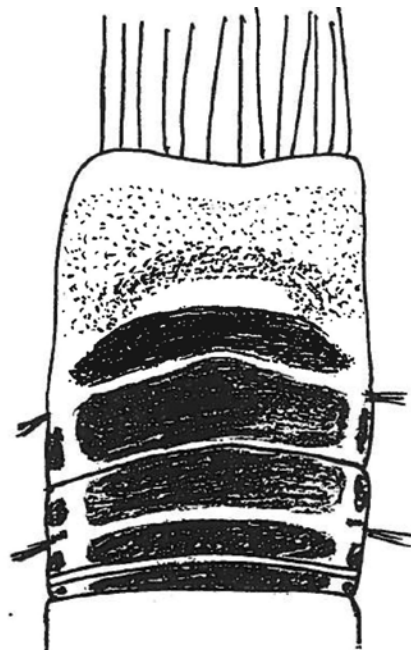
1. C. ecaudata is a slimmer bodied animal and is found in finer sediments.
2. C. sp. B (*sensu* Harris) is very small (*Euchone* sized) and has very dark lateral staining on the collar and setiger one.
3. All other species of Chone from California lack ventral shields.

Additional Remarks:

Banse, 1972 considered C. minuta a synonym of C. ecaudata, but local taxonomists consider them as separate species. C. minuta is found in rocky and mixed sediment, while C. ecaudata is found in mud and sand.

Distribution:

Baja to Pt. Conception, intertidal to 60m.



Anterior end, ventral view showing methyl green staining pattern.

Dialychone trilineata (Tovar-Hernandez 2007)

556 M. A. Tovar-Hernández

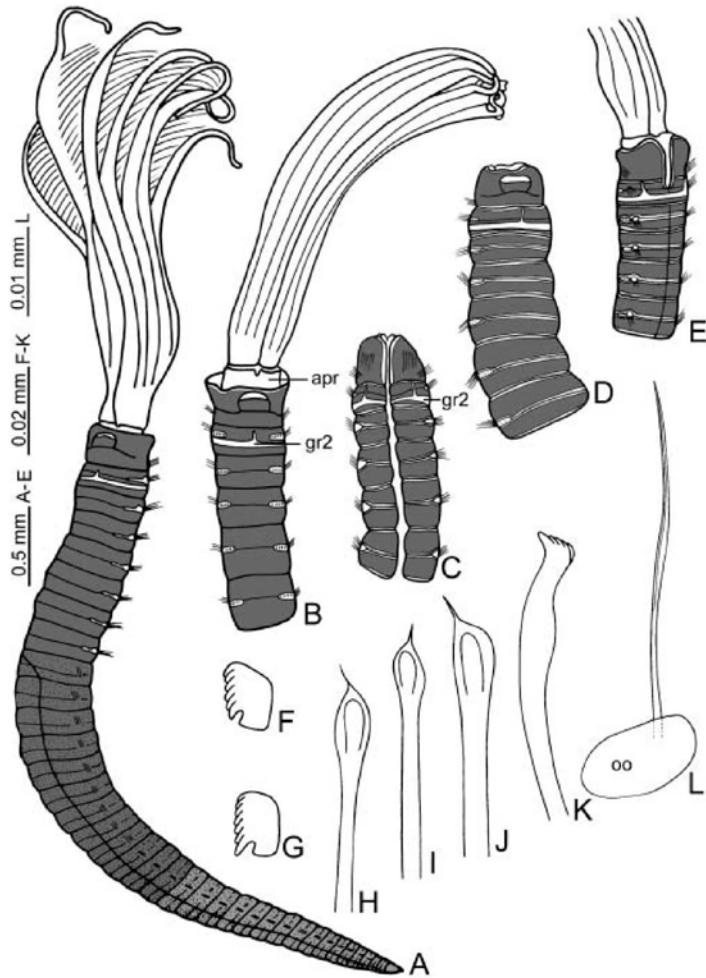


Figure 16. *Chone trilineata* n. sp. (A) Body, lateral view; (B, D) anterior end, ventral view; (C) same, dorsal v (E) same, dorsolateral view; (F, G) posterior abdominal uncini; (H-J) paleate chaetae; (K) thoracic uncinus; abdominal elongate narrowly hooded chaetae. (A) [PC-RR, Sta. B-13]; (B, C) [LACM-AHF, holotype]; (D) [LACM-AHF, paratype].

Dialychone trilineata (Tovar-Hernandez 2007)



C. duneri
(= *Chone* sp. C)

- collar slightly oblique; no incisions.
- branchial lobes extend slightly beyond collar.
- up to 10 pairs of radioles.
- palmate membrane up to 2/3 radiole length.
- radioles w/ very long filamentous free ends.
- stained individuals with
- setiger 1 with fascicles much smaller than others.
- postsetal lobes present.
- paleate setae with tips.
- ventral shields absent.

NOTE: There are a number of discrepancies between Banse's description and what I see in SCAMIT material. First, the collar is even in height except for a very shallow midventral depression or notch (you've got to look hard to see this). The branchial lobes are completely (or nearly so) exposed above the collar. I could not see a palmate membrane; if it is present it is very low and not as described

Dialychone albocincta (Banse 1972)

514 M. A. Tovar-Hernández

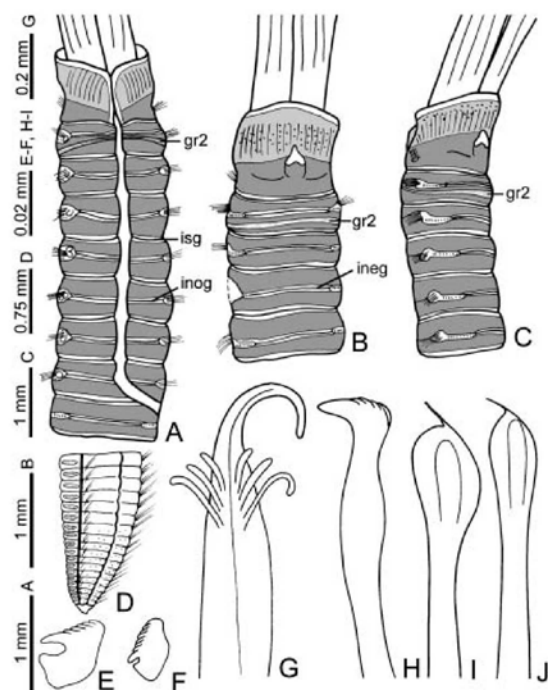


Figure 1. *Chone albocincta*. (A) Anterior end, dorsal view; (B) same, ventral view; (C) same, lateral view; (D) posterior end, latero-dorsal view; (E) anterior abdominal uncinus; (F) posterior abdominal uncinus; (G) radiolar tip; (H) thoracic uncinus; (I, J) palcate chaetae. [LACM-AHF 0455, paratype].

Dialychone albocincta (Banse 1972) No station Data-RML



- Chone albocincta*
- collar slightly oblique; no incisions. (might also be distinctly oblique)
 - branchial lobes extend slightly beyond collar.
 - 8-10 pairs of radioles.
 - palmate membrane up to distal pinnules.
 - radioles w/ filamentous free ends.
 - presetal rings in thorax in stained individuals.
 - setiger 1 with fascicle smaller than others.
 - postsetal lobes present.
 - palcate setae with tips.
 - ventral shields absent.

NOTE: The development of the palmate membrane appears to be quite distinctive. Note, however, that Banse states that the thoracic presetal rings are not visible upon methyl green staining. The type material of this species also does not show these rings very clearly. You might also watch for differences in the width of the glandular ridge on setiger 2. In this species the ridge appears to be slightly wider along the ventrum as opposed to uniform in width.

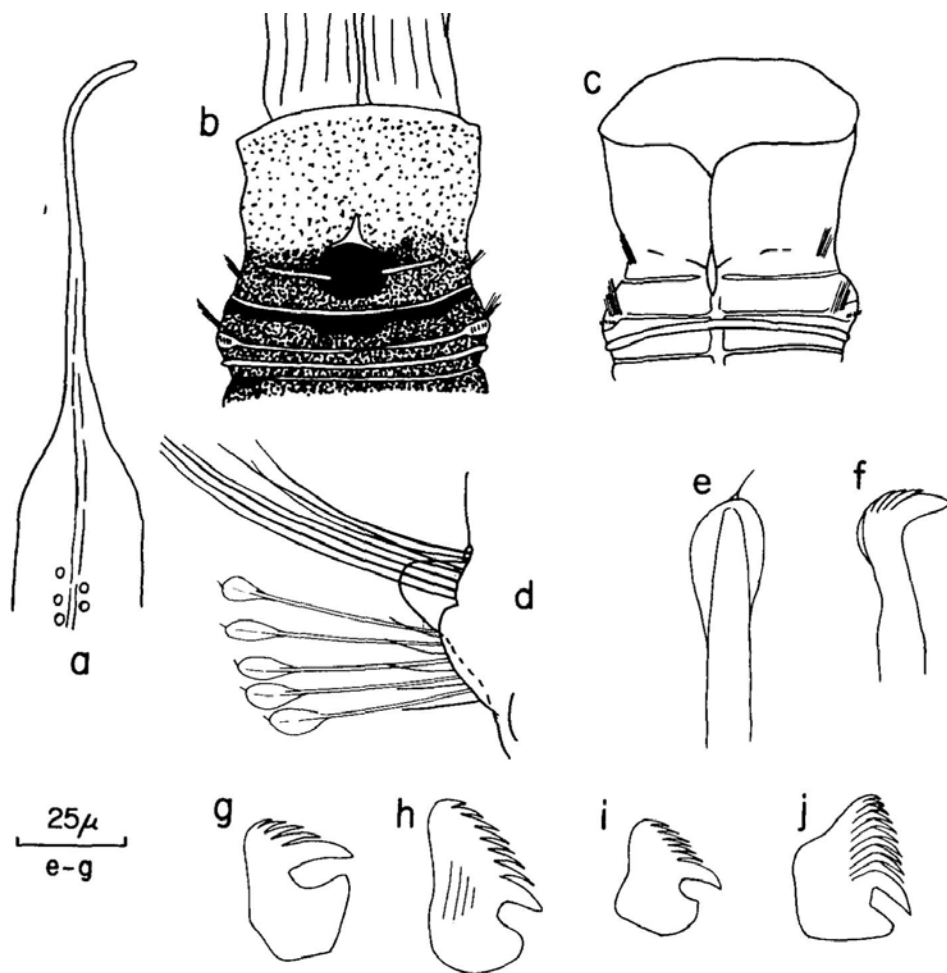


FIGURE 8.—*Chone albocincta* new species, from large types; abdominal uncini not to scale: a, end of median radiole; b, ventral view of anterior end, showing staining pattern; c, dorsal view of anterior end, branchial crown omitted; d, anterior view of fourth notopodium; e, spatulate seta; f, thoracic uncinus; g, large uncinus from fourth abdominal setiger (about $30\ \mu$ high); h, small uncinus from ninth abdominal setiger; i, j, small and large uncini from approximately 40th abdominal setiger.

Paradialychone paramollis

(Tovar-Hernandez 2007)

Revision of Chone from North America 543

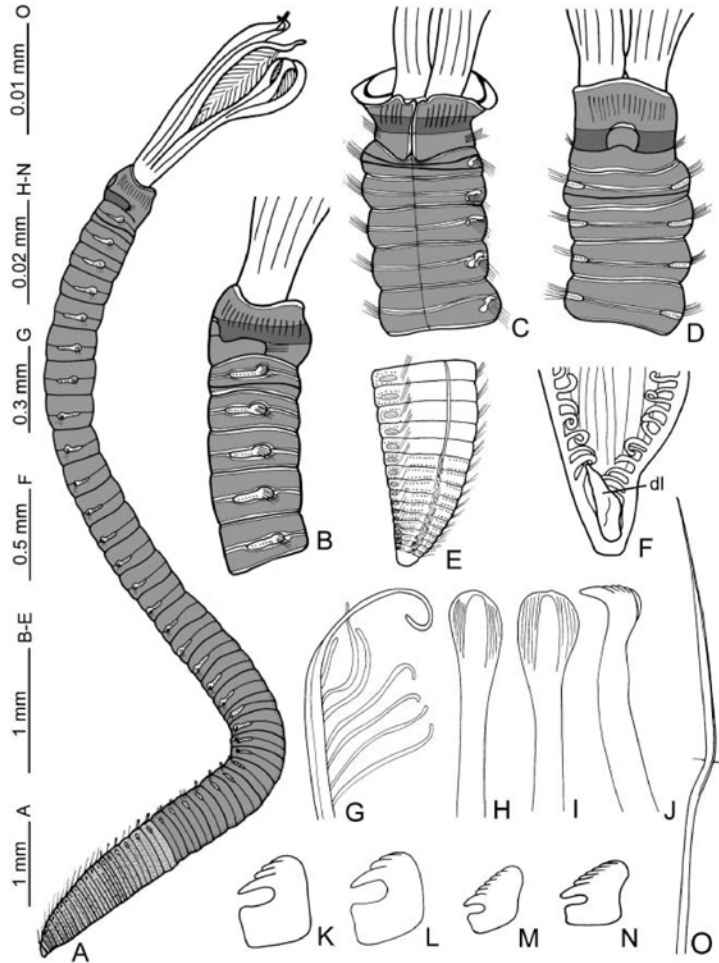


Figure 11. *Chone paramollis* n. sp. (A) Body, lateral view; (B) anterior end, dorsal view; (C) same, ventral view; (D) same, lateral view; (E) posterior end; (F) left branchial lobe; (G) radiolar tip; (H, I) palcate chaetae; (J) thoracic uncini; (K, L) anterior abdominal uncini; (M, N) posterior abdominal uncini; (O) bayonet chaeta. (A-D) Methyl green staining. (A-C, E) [LACM-AHF 003251, holotype]; (D, F, G-O) [LACM-AHF, paratype].



Chone mollis

not pub. until 1993
not released as
voucher sheet

Volume 10, No. 6

Date examined: September 1991

Voucher by : K. Fitzhugh

Literature

Banse, K. 1972. Redescription of some species of *Chone* Kroyer and *Euchone* Malmgren, and three new species (Sabellidae, polychaeta). Fishery Bulletin (70): 459-495.

Fitzhugh, K. 1991. Characters used to distinguish *Chone* species according to Banse (1972). SCAMIT handout, August 1991.

Diagnostic Characters

1. Collar level with no incisions.
2. Upto 15 pairs radioles.
3. Radioles with filamentous free ends.
4. Staining pattern with somewhat darkened "shield" below collar.
5. Ventral shields absent.
6. Paleate setae lacking tips or only minute, hair-like filaments.
7. branchial lobes short and mostly hidden by collar.

Related Species and Character Differences

Chone veteronis : Wide sinuous post collar glandular area. Branchial lobes very long, extending beyond collar.

Comments

There are apparently two staining forms of this species. One stains dark, while the other overall is lightly stained. Some Southern California specimens have a collar which is slightly oblique. Also, setiger 1 fascicles are about the same size as other fascicles.

Figures

1. ventral stain pattern and collar shape



Paradialychone bimaculata (Banse & Nichols 1968)

Revision of Chone from North America 523

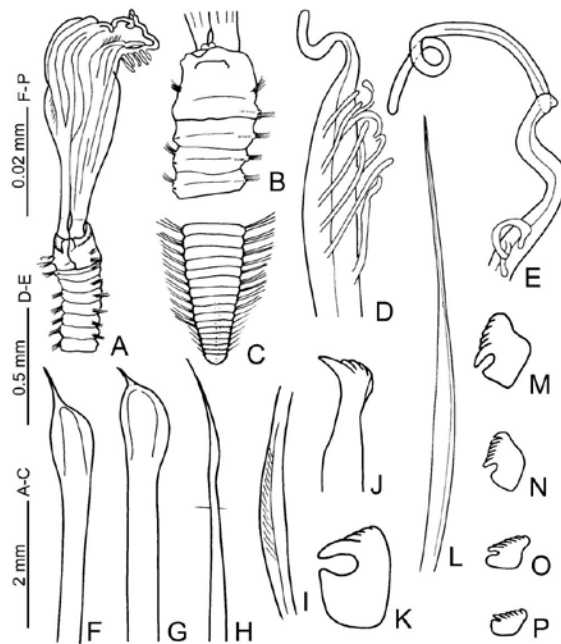


Figure 3. *Chone bimaculata*. (A) Anterior end, dorsal view; (B) same, ventral view; (C) posterior end; (D, E) radiolar tips; (F, G) paleate chaetae; (H) bayonet chaeta; (I) thoracic, elongate, narrowly hooded chaeta; (J) thoracic uncinus; (K) anterior abdominal uncinus; (L) abdominal, elongate, narrowly hooded chaeta; (M-P) posterior abdominal uncini. (A-C, E-P) [USNM 36281, paratype]; (D) [RBCM 973-187-21].



Paradialychone eiffelturris

(Tovar-Hernandez 2007)

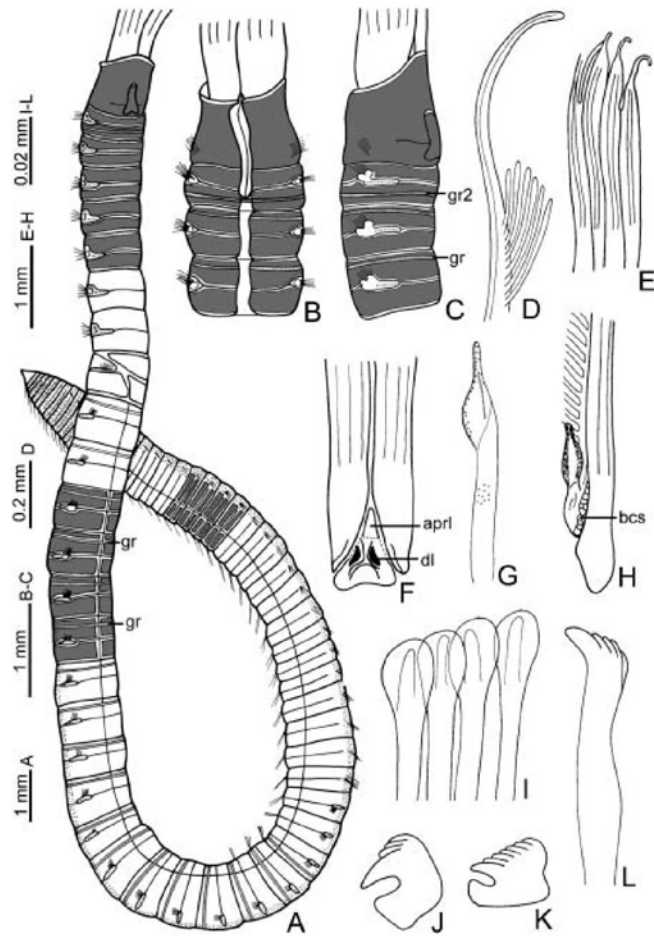


Figure 7. *Chone eiffelturris* n. sp. (A) Body, ventro-lateral view; (B) anterior end, dorsal view; (C) same, lateral view; (D) radiolar tip; (E) radioles; (F) base of the branchial crown; (G) dorsal lip; (H) dorsal lip and dorsal most radiole; (I) palcate chaetae; (J) anterior abdominal uncinus; (K) posterior abdominal uncinus; (L) thoracic acicular uncinus. (A–C) Methyl green staining, in (A) only some segments are coloured. (A–C) [LACM-AHF, holotype]; (D–L) [LACM-AHF, paratype].





CITY OF SAN DIEGO VOUCHER SHEET

Species: *Chone* sp SD 1
Authority: Pt. Loma 1997
Common Synonyms:

Taxon: Annelida: Sabellidae
Date: February 13, 1998
By: K. Langan-Cranford
Voucher Specimen(s):

Station	Date	Storage Location	Voucher#
TJ1-4	11 Aug 97; 58 ft.	KL	P-84
TJK-6	11 Aug 97; 51 ft.	DLZ	P-2013

Characters:

Collar slightly oblique.
 Branchial lobes not completely hidden by collar.
 6 pairs of radioles.
 Palmate membrane at least 2/3 radiole length.
 Raised ridge in the shape of a tuning fork on the ventral side of the collar (Fig. 1). This structure stains with methyl green.
 Setiger 1 fascicles are smaller than others, except in very small (3mm) specimens where they are the same size.
 Spatulate setae without pointed tips or with minute, hair-like filament.
 Long abdominal capillary setae, twice the length of an abdominal setiger.

Illustration:

Fig. 1

Full Description:

Specimen	Size (mm)	# of radioles	Size of notosetiger 1
San Francisco	5 cm	22 pairs	smaller than others
KL P-84	6 mm	6 pairs	slightly smaller than others
DLZ 2013	5.5 mm	no radioles	slightly smaller than others
Main P-31	3 mm	no radioles	same as others

Related Species:

Chone mollis of Banse 1972. This species does not have the collar ridge as shown in Fig. 1 and does not have long abdominal capillary setae.

Comments:

Specimens were first collected offshore of San Francisco in Feb. and Sept. 1995 at a depth of 25-30 meters. Specimens were subsequently collected at shallow stations offshore of the Tijuana River.
 See Kirk Fitzhugh's notes on "Characters used to distinguish *Chone* species according to Banse 1972". Notes in SCAMIT newsletter Vol. 10(4) August 1991.

References:

Banse, K. 1972. Redescription of some species of *Chone* Kroyer and *Euchone* Malmgren, and three new species (Sabellidae, Polychaeta). Fishery Bulletin 70(2):459-495.