SUPPLEMENTARY MATERIAL

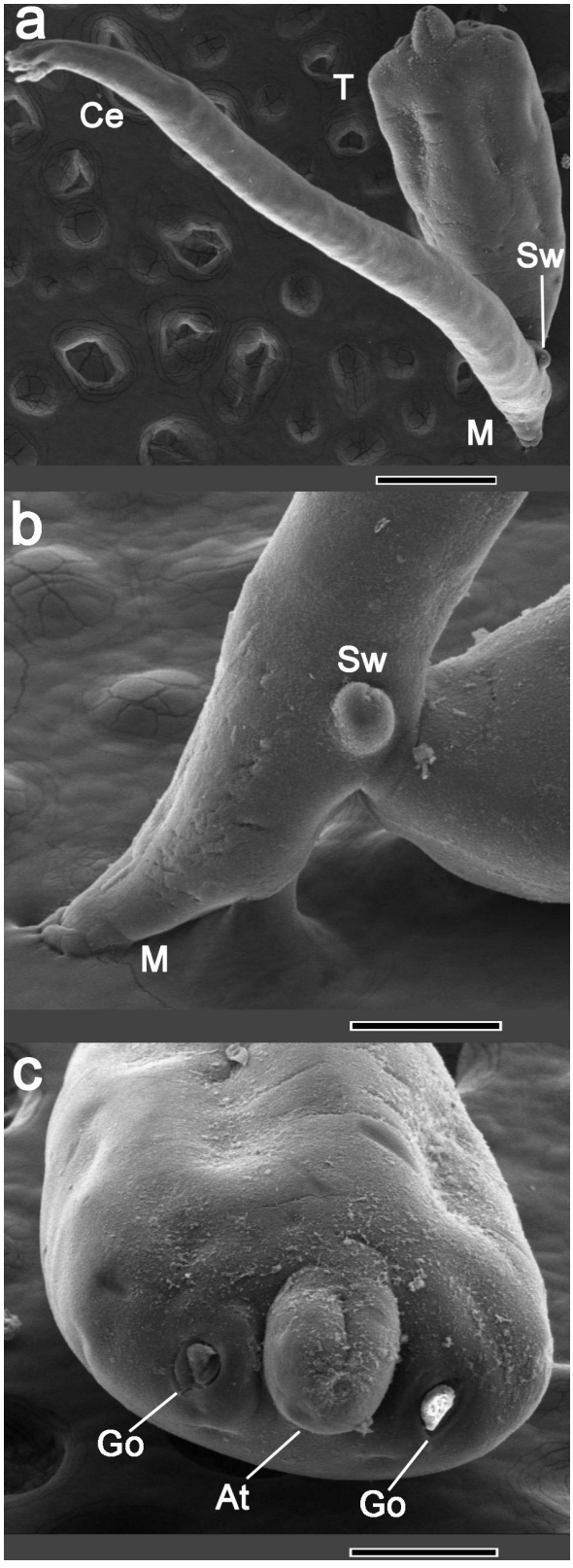

Figure S1. Female Maxiclavella simplex n. gen. et comb., SEM. (a) Whole female, trunk, dorsal view; (b) maxilla and base of cephalothorax; (c) anal tubercle on trunk, posterior margin. At = anal tubercle, Ce = cephalothorax, M = maxilla, Sw = swelling, and T = trunk. Scale bars: Fig. a = 500 µm, Figs. b and c = 200 µm.

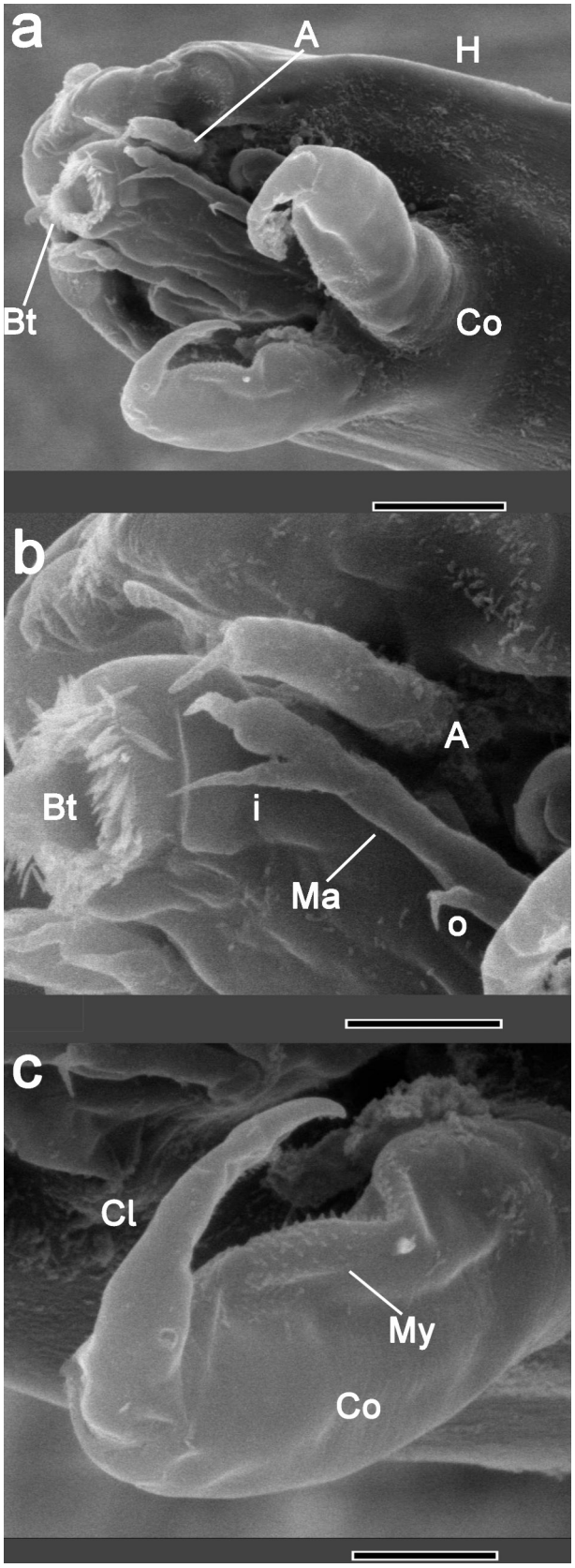

Figure S2. Female Maxiclavella simplex n. gen. et comb., SEM (a) cephalothorax and head, ventral view; (b) position of antennule and maxillule; (c) maxilliped. Abbreviations: A = antennule, Bt = buccal tube, Cl = claw, Co = corpus, H = head, i = inner lobe, Ma = maxillule, My = myxal area, o = outer lobe. Scale bars: Fig. a = 50 µm, Figs. b and c = 20 µm.

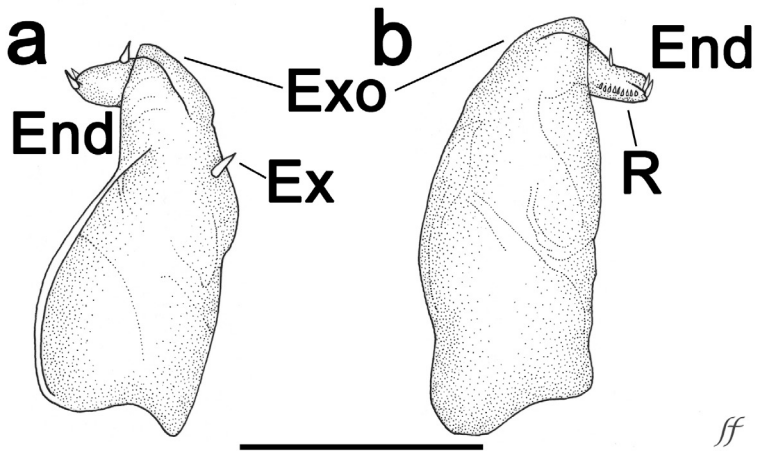

Figure S3. Female Maxiclavella simplex n. gen. et comb., whole antenna from (a) outer view and (b) inner view. Abbreviations: End = endopod, Exo = exopod. Ex = spine, R = row of denticles. Scale bars: Figs. a and b= 50 µm.

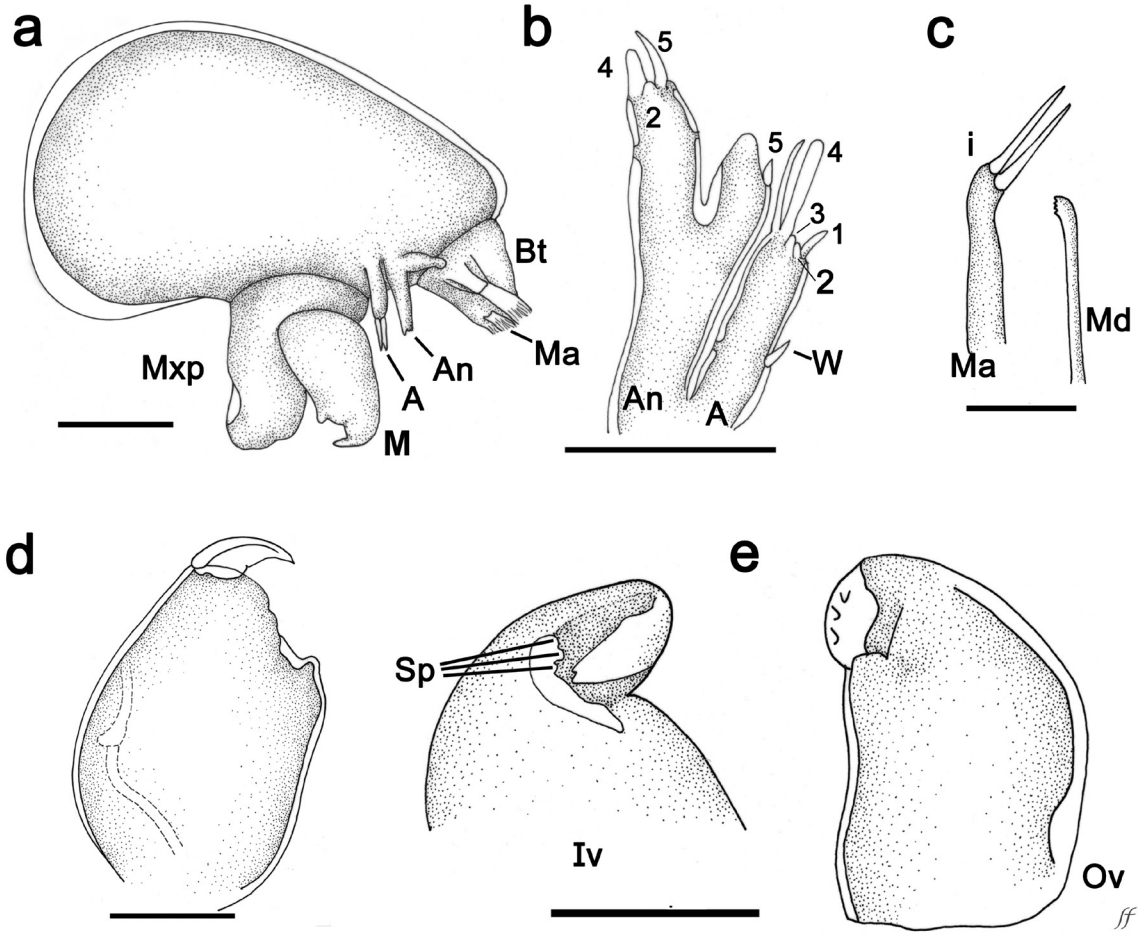

Figure S4. Male Maxiclavella simplex n. gen. et comb., (a) Whole male, lateral view; (b) antenna and antennule; (c) maxillule and mandible; (d) whole maxilla; (e) whole maxilliped with detail shown from opposite view of claw. Abbreviations: 1-5= armature, A = antennule, An = antenna, Bt = buccal tube, i = inner lobe, IV= inner view, M = maxilla, Ma = maxillule, Md = mandible, Mxp = maxilliped, Ov = outer view, Sp = small processes, and w = whip. Scale bars: Fig. a = 50 µm, Figs. b, d and e = 25 µm, Fig. c = 10 µm.

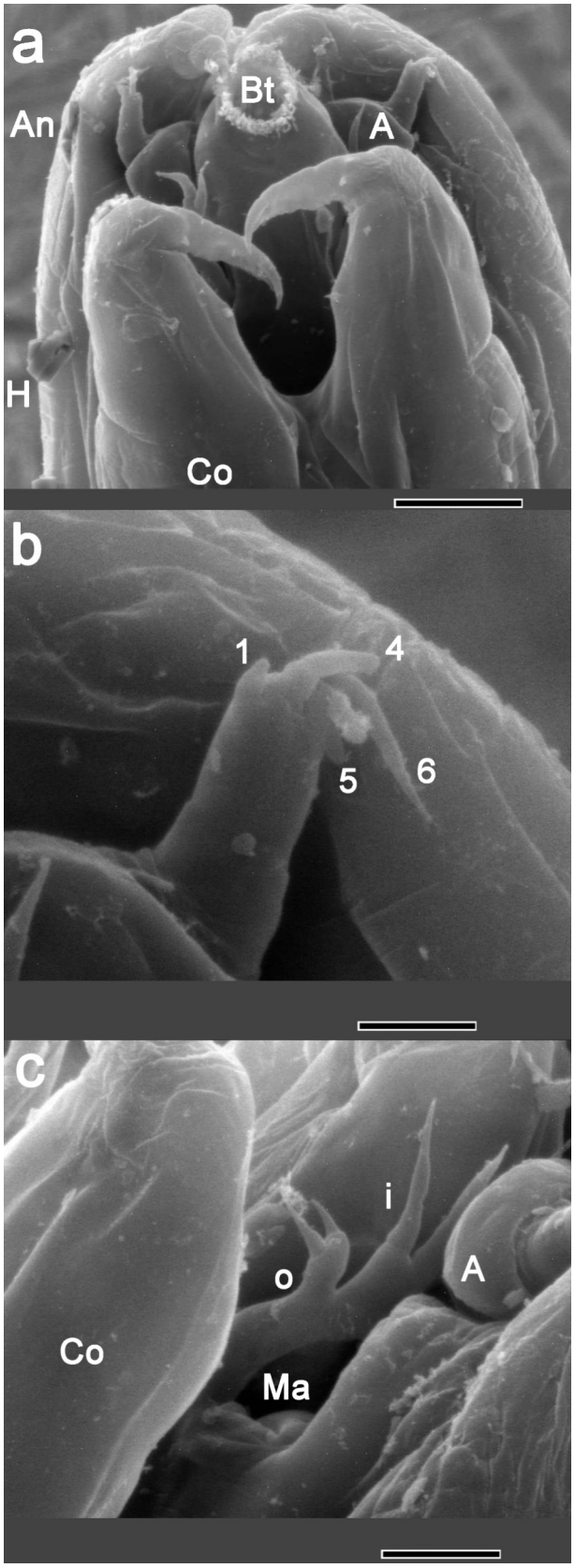

Figure S5. Female of Praeclavella nasalis n. gen. et sp. SEM. (a) Female buccal tube and distal part of antenna; (b) female antennule; (c) female buccal area, lateral view, showing maxillule position. Abbreviations: 1, 4, 5, 6 = armature, A = antennule, An = antenna, Bt = buccal tube, Co = corpus, H = head, i = inner lobe, Ma = Maxilllule, and o = outer lobe. Scale bars: Fig. a = 50 µm, Fig. b = 10 µm, Fig. c = 20 µm.

Table SI. Details of copepods parasites of marine fishes from Chile used in this study.

Copepod parasite species	Host (Family)	GenBank accession	Base pairs		
		COI	28S rDNA	COI*	28S rDNA*
Poecilostomatoida					
Ergasilidae					
Ergasilus sp. [Erg]	*Mugil liza* Valenciennes, 1836 (Mugilidae)	KU557411		678	
Ergasilus briani Markevich, 1933	*Misgurnus anguillicaudatus* (Cantor, 1842) (Cobitidae)		DQ107532		691
Siphonostomatoida					
Lernaeopodidae					
Clavella adunca (Strøm, 1762)	*Gadus morhua* Linnaeus, 1758 (Gadidae)	KT208702		667	
		KT208865		667	
		KT208899		667	
		KT209213		636	
		KT209376		667	
		KT209559		667	
Clavella perfida Wilson C.B., 1915	*Gadus chalcogrammus* Pallas, 1814	LC179744-49 and MH242707		683	
Praeclavella applicata (Castro Romero et Baeza Kuroki, 1985) n.gen., comb. nov.	*Anisotremus scapularis* Tschudi,1846 (Pomadasidae)	KX815891 KX815892 KX815893	KX815909	615 639 624	738
Praeclavella caudata (Castro-Romero et Baeza-Kuroki, 1985)	*Anisotremus scapularis* Tschudi,1846 (Pomadasidae)	KX815894 KX815895 KX815896	KX815910	615 654 654	792
Praeclavella nasalis gen. et	*Isacia conceptionis* Cuvier, 1830 (Haemulidae)	KX815904 KX815905	KX815912	645 657	866
Maxiclavella simplex (Castro Romero et Baeza Kuroki, 1985)	*Isacia conceptionis* Cuvier, 1830 (Haemulidae)	KX815901 KX815902 KX815903	KX815911	708 717 720	788
Clavellotis dilatata (Krøyer, 1963)	*Cheilodactylus variegatus* Valenciennes, 1833 (Cheilodactylidae)	KX815897 KX815898 KX815899 KX815900	KX815915	600 600 636 708	787
Parabrachiella anisotremi (Castro Romero et Baeza-Kuroki, 1989)	*Anisotremus scapularis* Tschudi,1846 (Pomadasidae)	KX815887 KX815888 KX815889 KX815890	KX815913	597 615 639 651	818
Parabrachiella auriculata Castro Romero et Baeza Kuroki,1987	*Cilus gilberti* Abbott, 1899 (Sciaenidae)	KX815906 KX815907 KX815908	KX815914	603 630 654	822

Abbreviations: N = number of sequences, *The COI and 28S rDNA sequences correspond to different specimens.

Table SII. *Maxiclavella* versus all other *Clavella*-clade genera.

Genera	Cep/trunk	A. armature	A. segments	An. relation exopod/ endopod	An. endopod armature	Maxillule setae number	Mxp. Myx.	Mxp. cl.
Maxiclavella	longer than the trunk	1, 4, 6	unsegment	endopod longer	1 hook	I.L. 2 setae O.L. 1 seta	1 spine and a pad	unknow
Clavellistes Shiino, 1963	medium size	2 elements	4 segments	exopod globose (?) and longer than the endopod	2 spines	I.L. and O.L. two setae	1 spine	a short barb
Clavellomimus Kabata, 1969	as long as the trunk	3 elements	3 segments	endopod shorter	4 elements	O.L. a papilla with 1 seta	1 spine	claw base with row of spinules
Margolisius Benz, Kabata et Bullard, 2000	longer than the trunk	1, 2, 4, 5, 6	unsegment	reduced exopod	N/A	without of O.L.	with process	with process
Mixtio Kabata, 1986	twice the length of the trunk	1, 2, 4, 5, 6	4 segments	rami well separated (?)	1, 2, 5	O.L. 2 setae	1 spine	a long barb, spinule
Nudiclavella Ho, 1975	as long as the trunk	5 elements	4 segments	endopod longer than the exopod	4 elements, globose, spinulated	both lobes with 2 setae	1 spine	claw base with row of spinules
Pseudomixtio Kabata, 1990	as long as the trunk	1, 2, 4, 5, 6	4 segments	endopod longer than exopod	1, 2, 5	I.L. 2 setae, O.L. 2 setae	1 spine and a pad	annexed barb
Anaclavella Heegaard, 1940	longer than the trunk	1, 2, 4, 5, 6	3 segments	same size	1, 2, 5	I.L. 3 setae O.L. 2 setae	1 spine	claw base

Genera	Trunk	Genital process	Mandible and Secondary dentition	Dental Formula	Cephalothorax base	Maxilla	Bulla
Maxiclavella	anal tubercle	absent	no secondary dentition	P4 ,P1 ,B4,	with swelling	medium size	cup-shaped, short
Clavellistes Shiino, 1963	absent	present	no secondary dentition	P1, P1, P1, B4	without swelling	globose, short	short plano-convex
Clavellomimus Kabata, 1969	absent	present, small	1 (?)	P1, S1, P1, P1, B3	without swelling	medium size	elongated
Margolisius Benz, Kabata et Bullard, 2000	no tubercle, blunt ventral swelling	absent	unknow	unknow	without swelling	medium size	short
Mixtio Kabata, 1986	absent	present, developed	2	P1, P1, S1, P1, S1, B5	swelling (aliform)	short size	cup-shaped
Nudiclavella Ho, 1975	absent	absent	3	P1, S1, P1, S1, P1, S1, B4	normal, without swelling	medium size	unknow
Pseudomixtio Kabata, 1990	absent	present	2	P1, P1, S1, P1, S1, B4	normal, short swelling	medium size	cup-shaped
Anaclavella Heegaard, 1940	short tubercle	present, small	no secondary dentition	P1, P1, P1, B3	swelling oval	medium size	cup-shaped

Abbreviations: A = antennule, An = antenna, Cep. base = Cephalothorax base, Cep/trunk = Cephalothorax length/trunk, IL = inner lobe, Mxp. cl. = Maxilliped claw. Mxp. Myx. = Maxilliped myxal area, N/A = Not available, OL = outer lobe.

Table SIII. ***Praeclavella nasalis*** **versus other species (with biramous antenna and without genital process).**

	Cep/trunk	Trunk shape	Swelling	Antennule segments and armature	Mandible	Maxillule	Maxilla
Praeclavella nasalis	twice the length	elongated pyriform	oval and other short suborbicular	3 segments 1, 4, 5, 6	P1, P1, S1, S1, P1, B3	I.L. 2 setae O.L. 2 setae	reduced bulla: suborbicular
Praeclavella applicata (Castro Romero et Baeza Kuroki, 1985)	longer than	subquadrangular	without swelling	3 segments 3 spines long 1 short 1, 2, 3, 4, 5, 6	P4, P1, B3 no secondary teeth	I.L. 2 setae O.L. 2 unequal setae	short
Praeclavella bathyalis (Kazatchenko et Avdeev, 1977)	twice the length	elongated with lobes	without swelling	2 segments 1 strong spin, 2 short fine spines	unknown	I.L. 2 setae O.L. 1 long setae	medium, fused bulla elongated
Praeclavella bowmani (Kabata, 1963)	longer than	longer than broad rounded poster-lateral corners	slight swelling	indistinct 4 or five spines (?) whip	no secondary dentition	I.L. 2+1 setae O.L. 1 setae	short, fused
Praeclavella caudata (Castro Romero et Baeza Kuroki, 1985)	longer than	suborbicular	without swelling	indistinct segments 1, 5, 4, 6	no secondary dentition	I.L. 2 setae O.L. 2 unequal seta	short
Praeclavella chiloensis (Castro Romero, 1994)	longer than	quadrangular	no developed	3 segments	P1, S1, P1, P1, S1, B2	I.L. 2 setae O.L. 2 setae spinules dorsal	short
Praeclavella convergentis (Castro-Romero, 1994)	longer than	subquadrangular with lobes	brachiform, ending into short digitiform	2 segments	no secondary dentition	I.L. 2 setae O.L. 2 setae	short long bulla
Praeclavella gracilis (Hansen, 1923)	longer than	oval	without swelling	3 segments	unknown	unknown	reduced, bulla elongated
Praeclavella hardingi (Nunes-Ruivo, 1964)	twice the length	longer than wide	without swelling	3 segments 3 elements	no secondary dentition	I.L. 2 setae O.L. 2 long setae	medium, bulla elongated
Praeclavella levis (Wilson, 1915)	longer than	elongated	without swelling	unknown	unknown	I.L. 2 setae O.L. 1 setae	medium
Praeclavella ovata (Yamaguti, 1939)	longer than	oval	without swelling	3 indistinct segments	unknown	I.L. 2 setae +1 O.L. 1 setae	unknown
Praeclavella porogadi (Nunes-Ruivo, 1964)	longer than	oval	without swelling	5 segments 1, 3, 4, 5	unknown	I.L. 2 setae O.L. 2 setae	medium fused
Praeclavella stichaei (Krøyer, 1863)	as long as	suboval, protruding perianal region					