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Invertebrate Systematics

Supplementary Material

Reappraisal of the hyperdiverse *Platynereis dumerilii* (Annelida: Nereididae) species complex in the Northern Atlantic, with the description of two new species

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Table S1. Primers and PCR conditions used in this study.

Marker	Primer	Fragment (bp)	Direction (5′–3′)	PCR thermal cycling conditions	Reference
COI	PolyLCO	658	(F) GAYTATWTTCAACAAATCATAAAGATATTGG	1) 94°C (1 min); 2) 5 cycles: 94°C (40 s), 45°C (40 s), 72°C (1 min); 3) 35 cycles: 94°C (40 s), 51°C (40 s), 72°C (1 min); 4) 72°C (5 min).	Carr *et al*. (2011)
	PolyHCO		(R) TAMACTTCWGGGTGACCAAARAATCA		
COI	LCO1490	658	(F) GGTCAACAAATCATAAAGATATTGG	1) 94°C (1 min); 2) 5 cycles: 94°C (30 s), 45°C (1 min 30 s), 72°C (1 min); 3) 35 cycles: 94°C (30 s), 51°C (1 min 30 s), 72°C (1 min); 4) 72°C (5 min).	Folmer *et al*. (1994)
	HCO2198		(R) TAAACTTCAGGGTGACCAAAAAATCA		
	COI-E		(R) TATACTTCTGGGTGTCCGAAGAATCA		Bely *et al*. (2004)
16S	16SAR-L	~368	(F) CGCCTGTTTATCAAAAACAT	1) 94°C (3 min); 2) 40 cycles: 94°C (30 s), 47°C (30 s), 72°C (1 min); 3) 72°C (7 min).	Kessing *et al.* 1989
	16SANN-F		(F) GCGGTATCCTGACCGTRCWAAGGTA		
	16SBR-H		(R) CCGGTCTGAACTCAGATCACGT		
28S	28SR	~420	(R) GAATTGCAGGACACATTGAAC	1) 96°C (4 min); 2) 45 cycles: 94°C (30 s), 48°C (30 s), 72°C (1 min); 3) 72°C (8 min).	Hassouna *et al.* (1984)
	28sC1		(F) ACCCGCTGAATTTAAGCAT		
	28s-D2		(R) TCCGTGTTTCAAGACGG		

Table S2. Voucher data, origin of the specimens and GenBank accession numbers for each of the analysed genetic markers original to this study.

Species	Vial code	Location	Museum voucher	GenBank *COI*	GenBank *28S-D2*	GenBank *16S*
MOTU 10 – *P. agilis* comb. nov.	JAPM06	Portugal, Lisbon (Parque Natural Arrábida)	MB29-000377	OP347481	OP347752	OP347634
MOTU 10 – *P. agilis* comb. nov.	JAPM07	Portugal, Lisbon (Parque Natural Arrábida)	MB29-000378	OP347417	OP347719	OP347601
MOTU 10 – *P. agilis* comb. nov.	JAPM08	Portugal, Lisbon (Parque Natural Arrábida)	MB29-000379	OP347520	OP347765	OP347647
MOTU 10 – *P. agilis* comb. nov.	JAPM10	Portugal, Lisbon (Parque Natural Arrábida)	MB29-000380	OP347392	OP347703	OP347585
MOTU 10 – *P. agilis* comb. nov.	JAPM11	Portugal, Lisbon (Parque Natural Arrábida)	MB29-000381	OP347470	OP347745	OP347627
MOTU 10 – *P. agilis* comb. nov.	JAPM12	Portugal, Lisbon (Parque Natural Arrábida)	MB29-000382	OP347496		
MOTU 10 – *P. agilis* comb. nov.	JAPM16	Portugal, Lisbon (Parque Natural Arrábida)	MB29-000383	OP347435		
MOTU 10 – *P. agilis* comb. nov.	JAPM26	Portugal, Lisbon (Parque Natural Arrábida)	MB29-000370	OP347519		
MOTU 10 – *P. agilis* comb. nov.	JAPM28	Portugal, Lisbon (Parque Natural Arrábida)	MB29-000371	OP347388		
MOTU 10 – *P. agilis* comb. nov.	JAPM29	Portugal, Lisbon (Parque Natural Arrábida)	MB29-000372	OP347410		
MOTU 10 – *P. agilis* comb. nov.	JAPM30	Portugal, Lisbon (Parque Natural Arrábida)	MB29-000373	OP347446		
MOTU 10 – *P. agilis* comb. nov.	JAPM31	Portugal, Lisbon (Parque Natural Arrábida)	MB29-000374	OP347367		
MOTU 10 – *P. agilis* comb. nov.	JAPM34	Portugal, Lisbon (Parque Natural Arrábida)	MB29-000375	OP347403		
MOTU 10 – *P. agilis* comb. nov.	JAPM05	Portugal, Lisbon (Parque Natural Arrábida)	MB29-000384	OP347506		
MOTU 10 – *P. agilis* comb. nov.	JAPM24	Portugal, Lisbon (Parque Natural Arrábida)	MB29-000369	OP347517		
MOTU 10 – *P. agilis* comb. nov.	PVEC30	South Spain, Calpe	DBUA0002421.01.v01	OP347378	OP347695	OP347576
MOTU 10 – *P. agilis* comb. nov.	PVEC34	South Spain, Calpe	DBUA0002421.01.v02	OP347456	OP347738	OP347620
MOTU 10 – *P. agilis* comb. nov.	PVEC42	South Spain, Calpe	DBUA0002421.01.v03	OP347385	OP347698	OP347579
MOTU 10 – *P. agilis* comb. nov.	PVEC50	South Spain, Calpe	DBUA0002421.01.v04	OP347513		
MOTU 10 – *P. agilis* comb. nov.	PVEC51	South Spain, Calpe	DBUA0002421.01.v05	OP347468		
MOTU 10 – *P. agilis* comb. nov.	CHFM1-1	North France, Morlaix bay	MTPD191-20	OP347424	OP347721	OP347603
MOTU 10 – *P. agilis* comb. nov.	CHFM1-2	North France, Morlaix bay	DBUA0002422.01.v01	OP347361	OP347686	OP347567
MOTU 10 – *P. agilis* comb. nov.	PLY2017_154	Great Britain, Plymouth	DBUA0002423.01.v01	OP347683	OP347357	OP347564
P. agilis comb. nov.	MTPPA01	Portugal, Lisbon (Parque Natural Arrábida)	DBUA0002519.01.v01	No DNA voucher		
P. agilis comb. nov.	MTPPA02	Portugal, Lisbon (Parque Natural Arrábida)	DBUA0002519.01.v02	No DNA voucher		
P. agilis comb. nov.	MTPPA03	Portugal, Lisbon (Parque Natural Arrábida)	DBUA0002519.01	No DNA voucher		
P. agilis comb. nov.	MTPPA04	Portugal, Lisbon (Parque Natural Arrábida)	DBUA0002519.01	No DNA voucher		
P. agilis comb. nov.	MTPPA05	Portugal, Lisbon (Parque Natural Arrábida)	DBUA0002519.01	No DNA voucher		
P. agilis comb. nov.	MTPPA06	Portugal, Lisbon (Parque Natural Arrábida)	DBUA0002519.01	No DNA voucher		
P. agilis comb. nov.	MTPPA07	Portugal, Lisbon (Parque Natural Arrábida)	DBUA0002519.01	No DNA voucher		
P. agilis comb. nov.	MTPPA08	Portugal, Lisbon (Parque Natural Arrábida)	DBUA0002519.01.v03	No DNA voucher		
MOTU 9 – *P. cf. massiliensis*	SFC20-4	Portugal, Praia Norte	DBUA0002424.01.v01	OP347415		
MOTU 9 – *P. cf. massiliensis*	SFC20-5	Portugal, Praia Norte	DBUA0002424.01.v02	OP347340		
MOTU 9 – *P. cf. massiliensis*	SFC20-6	Portugal, Praia Norte	DBUA0002424.01.v03	OP347489		
MOTU 9 – *P. cf. massiliensis*	MTCM4	Portugal, Canto Marinho	DBUA0002425.01.v01	OP347515	OP347764	OP347646
MOTU 9 – *P. cf. massiliensis*	MTCM6	Portugal, Canto Marinho	DBUA0002425.01.v02	OP347477	OP347749	OP347631
MOTU 9 – *P. cf. massiliensis*	MTCM7	Portugal, Canto Marinho	DBUA0002425.01.v03	OP347480	OP347751	OP347633
MOTU 9 – *P. cf. massiliensis*	MTCM8	Portugal, Canto Marinho	DBUA0002425.01.v04	OP347445		
MOTU 9 – *P. cf. massiliensis*	MTCM9	Portugal, Canto Marinho	DBUA0002425.01.v05	OP347534	OP347776	OP347658
MOTU 9 – *P. cf. massiliensis*	MTCM12	Portugal, Canto Marinho	DBUA0002425.01.v06	OP347450		
MOTU 9 – *P. cf. massiliensis*	MTCMJ1	Portugal, Canto Marinho	DBUA0002425.01.v07	OP347545		
MOTU 9 – *P. cf. massiliensis*	MTCMJ2	Portugal, Canto Marinho	DBUA0002425.01.v08	OP347484		
MOTU 9 – *P. cf. massiliensis*	MTCMJ3	Portugal, Canto Marinho	DBUA0002425.01.v09	OP347324		

Species	**Vial code**	**Location**	**Museum voucher**	**GenBank *COI***	**GenBank *28S-D2***	**GenBank *16S***
MOTU 9 – *P. cf. massiliensis*	MTCMJ4	Portugal, Canto Marinho	DBUA0002425.01.v10	OP347505		
MOTU 9 – *P. cf. massiliensis*	MTCMJ5	Portugal, Canto Marinho	DBUA0002425.01.v11	OP347472		
MOTU 9 – *P. cf. massiliensis*	PVM4	Morocco, Mazagan	DBUA0002426.01.v01	OP347495	OP347756	OP347638
MOTU 9 – *P. cf. massiliensis*	JLIL2	Western Italy, Livorno	DBUA0002427.01.v01	OP347460	OP347740	OP347622
MOTU 9 – *P. cf. massiliensis*	JLIL3	Western Italy, Livorno	DBUA0002427.01.v02	OP347404	OP347711	OP347593
MOTU 9 – *P. cf. massiliensis*	JLIL4	Western Italy, Livorno	DBUA0002427.01.v03	OP347409	OP347715	OP347597
MOTU 8 – *Platynereis* sp.	PVMS1.1	Portugal, Madeira – Porto Santo	DBUA0002441.01.v01	OP347542	OP347781	OP347663
MOTU 7 – *P. nunezi* sp. nov.	PVAS1.2	Portugal, Azores – Santa Maria	DBUA0002428.01.v01	OP347370	OP347573	OP347692
MOTU 7 – *P. nunezi* sp. nov.	PVAS1.3	Portugal, Azores – Santa Maria	DBUA0002428.01.v02	OP347365		
MOTU 7 – *P. nunezi* sp. nov.	PVAS1.5	Portugal, Azores – Santa Maria	DBUA0002428.01.v03	OP347395		
MOTU 7 – *P. nunezi* sp. nov.	PVAT1.3	Portugal, Azores – Terceira	DBUA0002428.02.v01	OP347510	OP347762	OP347644
MOTU 7 – *P. nunezi* sp. nov.	PVAT1.6	Portugal, Azores – Terceira	DBUA0002428.02.v02	OP347331	OP347671	OP347552
MOTU 7 – *P. nunezi* sp. nov.	PVAT1.9	Portugal, Azores – Terceira	DBUA0002428.02.v03	OP347444	OP347733	OP347615
MOTU 7 – *P. nunezi* sp. nov.	PVMF1.2	Portugal, Madeira – Funchal	DBUA0002428.03.v01	OP347473	OP347746	OP347628
MOTU 7 – *P. nunezi* sp. nov.	PVMF1.1	Portugal, Madeira – Funchal	DBUA0002428.03.v02	OP347486		
MOTU 7 – *P. nunezi* sp. nov.	PVMF1.3	Portugal, Madeira – Funchal	DBUA0002428.03.v03	OP347348	OP347680	OP347561
MOTU 7 – *P. nunezi* sp. nov.	PVMF1.4	Portugal, Madeira – Funchal	DBUA0002428.03.v04	OP347413	OP347717	OP347599
MOTU 7 – *P. nunezi* sp. nov.	MTCT1.1	Spain, Canary – Tenerife	DBUA0002429.01.v01	OP347379		
MOTU 7 – *P. nunezi* sp. nov.	MTCT1.2	Spain, Canary – Tenerife	DBUA0002429.01.v02	OP347536		
MOTU 7 – *P. nunezi* sp. nov.	MTCT1.4 – holotype	Spain, Canary – Tenerife	DBUA0002429.01.v03	OP347411	OP347716	OP347598
MOTU 7 – *P. nunezi* sp. nov.	MTCT1.11	Spain, Canary – Tenerife	DBUA0002429.02.v01	OP347402		
MOTU 7 – *P. nunezi* sp. nov.	MTCT1.12	Spain, Canary – Tenerife	DBUA0002429.02.v02	OP347447	OP347734	OP347616
MOTU 7 – *P. nunezi* sp. nov.	MTCT1.15	Spain, Canary – Tenerife	DBUA0002429.02.v03	OP347475	OP347748	OP347630
MOTU 7 – *P. nunezi* sp. nov.	MTCL1.1	Spain, Canary – Lanzarote	DBUA0002429.03.v01	OP347528	OP347773	OP347655
MOTU 7 – *P. nunezi* sp. nov.	MTCL1.2	Spain, Canary – Lanzarote	DBUA0002429.03.v02	OP347465		
MOTU 7 – *P. nunezi* sp. nov.	MTCL1.3	Spain, Canary – Lanzarote	DBUA0002429.03.v03	OP347414		
MOTU 7 – *P. nunezi* sp. nov.	MTCL1.5	Spain, Canary – Lanzarote	DBUA0002429.03.v04	OP347436	OP347728	OP347610
MOTU 7 – *P. nunezi* sp. nov.	MTCL1.6	Spain, Canary – Lanzarote	DBUA0002429.03.v05	OP347354		
MOTU 7 – *P. nunezi* sp. nov.	MTCC1.1	Spain, Canary – Gran Canaria	DBUA0002429.04.v01	OP347438		
MOTU 7 – *P. nunezi* sp. nov.	MTCC1.2	Spain, Canary – Gran Canaria	DBUA0002429.04.v02	OP347420		
MOTU 7 – *P. nunezi* sp. nov.	MTCC1.3	Spain, Canary – Gran Canaria	DBUA0002429.04.v03	OP347323		
MOTU 7 – *P. nunezi* sp. nov.	MTCC1.4	Spain, Canary – Gran Canaria	DBUA0002429.04.v04	OP347405	OP347712	OP347594
MOTU 7 – *P. nunezi* sp. nov.	MTCC1.5	Spain, Canary – Gran Canaria	DBUA0002429.04.v05	OP347462	OP347741	OP347623
MOTU 7 – *P. nunezi* sp. nov.	MTCC1.6	Spain, Canary – Gran Canaria	DBUA0002429.04.v06	OP347341	OP347676	OP347557
MOTU 7 – *P. nunezi* sp. nov.	MTCC1.12	Spain, Canary – Gran Canaria	DBUA0002429.04.v07	OP347384		
MOTU 7 – *P. nunezi* sp. nov.	MTCC1.15	Spain, Canary – Gran Canaria	DBUA0002429.04.v08	OP347338		
MOTU 7 – *P. nunezi* sp. nov.	MTCC1.20	Spain, Canary – Gran Canaria	DBUA0002429.04.v09	OP347518		
MOTU 7 – *P. nunezi* sp. nov.	MTCC1.23	Spain, Canary – Gran Canaria	DBUA0002429.04.v11	OP347461		
MOTU 7 – *P. nunezi* sp. nov.	MTCC1.25	Spain, Canary – Gran Canaria	DBUA0002429.04.v12	OP347346		
MOTU 7 – *P. nunezi* sp. nov.	MTCP1.1	Spain, Canary – La Palma	DBUA0002429.05.v01	OP347512		
MOTU 7 – *P. nunezi* sp. nov.	MTCP1.2	Spain, Canary – La Palma	DBUA0002429.05.v02	OP347499		
MOTU 7 – *P. nunezi* sp. nov.	MTCP1.3	Spain, Canary – La Palma	DBUA0002429.05.v03	OP347347		
MOTU 7 – *P. nunezi* sp. nov.	MTCP1.4	Spain, Canary – La Palma	DBUA0002429.05.v04	OP347439	OP347730	OP347612
MOTU 7 – *P. nunezi* sp. nov.	MTCP1.5	Spain, Canary – La Palma	DBUA0002429.05.v05	OP347502	OP347761	OP347643

Species	**Vial code**	**Location**	**Museum voucher**	**GenBank *COI***	**GenBank *28S-D2***	**GenBank *16S***
MOTU 7 – *P. nunezi* sp. nov.	MTCF1.1	Spain, Canary – Fuerteventura	DBUA0002429.06.v01	OP347448		
MOTU 7 – *P. nunezi* sp. nov.	MTCF1.2	Spain, Canary – Fuerteventura	DBUA0002429.06.v02	OP347464		
MOTU 7 – *P. nunezi* sp. nov.	MTCF1.3	Spain, Canary – Fuerteventura	DBUA0002429.06.v03	OP347508		
MOTU 7 – *P. nunezi* sp. nov.	MTCF1.6	Spain, Canary – Fuerteventura	DBUA0002429.06.v04	OP347501	OP347760	OP347642
MOTU 7 – *P. nunezi* sp. nov.	MTCF1.8	Spain, Canary – Fuerteventura	DBUA0002429.06.v05	OP347382	OP347697	OP347578
MOTU 7 – *P. nunezi* sp. nov.	PVCH3	Spain, Canary – El Hierro	DBUA0002429.07.v01	OP347344	OP347679	OP347560
MOTU 7 – *P. nunezi* sp. nov.	PVM1	Morocco, Mazagan	DBUA0002430.01.v01	OP347474	OP347747	OP347629
MOTU 7 – *P. nunezi* sp. nov.	PVM3	Morocco, Mazagan	DBUA0002430.01.v02	OP347482	OP347753	OP347635
MOTU 2 – *Platynereis* sp.	MTSTF7	Sweden, Tjärnö	DBUA0002442.01.v01	OP347437	OP347729	OP347611
MOTU 2 – *Platynereis* sp.	JAPM21	Portugal, Lisbon (Parque Natural Arrábida)	MB29-000376	OP347524	OP347769	OP347651
MOTU 2 – *Platynereis* sp.	76323	Norway, Bergen	NTNU-VM-76323	OP347343	OP347678	OP347559
MOTU 2 – *Platynereis* sp.	75155	Norway, Stavanger	NTNU-VM-75155	OP347333	OP347673	OP347554
MOTU 3 – *Platynereis* sp.	N2	Greece, Mazoma	MTPD194-20	OP347503		
MOTU 3 – *Platynereis* sp.	N73	Greece, Mazoma	MTPD195-20	OP347362	OP347687	OP347568
MOTU 3 – *Platynereis* sp.	N74	Greece, Mazoma	MTPD196-20	OP347494		
MOTU 3 – *Platynereis* sp.	N75	Greece, Mazoma	MTPD197-20	OP347390	OP347701	OP347583
MOTU 3 – *Platynereis* sp.	N79	Greece, Mazoma	MTPD198-20	OP347376		
MOTU 3 – *Platynereis* sp.	N146	Greece, Mazoma	MTPD199-20	OP347339	OP347675	OP347556
MOTU 6 – *P. jourdei* sp. nov.	PVEP2	Spain, Calpe	DBUA0002431.01.v01	OP347360		
MOTU 6 – *P. jourdei* sp. nov.	PVEP3 – holotype	Spain, Calpe	DBUA0002431.01.v02	OP347458		
MOTU 6 – *P. jourdei* sp. nov.	PVEP5	Spain, Calpe	DBUA0002431.01.v03	OP347511		
MOTU 6 – *P. jourdei* sp. nov.	PVEP6	Spain, Calpe	DBUA0002431.01.v04	OP347351		
MOTU 6 – *P. jourdei* sp. nov.	PVEP8	Spain, Calpe	DBUA0002431.01.v05	OP347507		
MOTU 6 – *P. jourdei* sp. nov.	PVEC22	Spain, Calpe	DBUA0002431.01.v06	OP347371	OP347693	OP347574
MOTU 6 – *P. jourdei* sp. nov.	PVEC24	Spain, Calpe	DBUA0002431.01.v07	OP347427	OP347724	OP347606
MOTU 6 – *P. jourdei* sp. nov.	PVEC31	Spain, Calpe	DBUA0002431.01.v08	OP347406		
MOTU 6 – *P. jourdei* sp. nov.	PVEC48	Spain, Calpe	DBUA0002431.01.v09	OP347487		
MOTU 6 – *P. jourdei* sp. nov.	JLIC1-1	Western Italy, Calafuria	DBUA0002432.01.v01	OP347329	OP347669	OP347550
MOTU 6 – *P. jourdei* sp. nov.	JLIAn1	Western Italy, Antignano	DBUA0002432.01.v02	OP347498	OP347758	OP347640
MOTU 6 – *P. jourdei* sp. nov.	JLIHB2	Western Italy, Antignano	DBUA0002432.01.v03	OP347442	OP347732	OP347614
MOTU 6 – *P. jourdei* sp. nov.	JLIHB4	Western Italy, Antignano	DBUA0002432.01.v04	OP347443		
MOTU 6 – *P. jourdei* sp. nov.	JLIHB6	Western Italy, Antignano	DBUA0002432.01.v05	OP347463	OP347742	OP347624
MOTU 6 – *P. jourdei* sp. nov.	JLIHB10	Western Italy, Antignano	DBUA0002432.01.v06	OP347429		
MOTU 6 – *P. jourdei* sp. nov.	JLIHA2	Western Italy, Antignano	DBUA0002432.01.v07	OP347426	OP347723	OP347605
MOTU 6 – *P. jourdei* sp. nov.	JLIHA3	Western Italy, Antignano	DBUA0002432.01.v08	OP347397	OP347707	OP347589
MOTU 6 – *P. jourdei* sp. nov.	JLIHA6	Western Italy, Antignano	DBUA0002432.01.v09	OP347535	OP347777	OP347659
MOTU 6 – *P. jourdei* sp. nov.	JLIM1-1	Western Italy, Montecristo Island	DBUA0002432.01.v10	OP347525	OP347770	OP347652
MOTU 6 – *P. jourdei* sp. nov.	JLIM1-2	Western Italy, Montecristo Island	DBUA0002432.01.v11	OP347342	OP347677	OP347558
MOTU 6 – *P. jourdei* sp. nov.	JLIM1-4	Western Italy, Montecristo Island	DBUA0002432.01.v12	OP347322	OP347667	OP347548
MOTU 6 – *P. jourdei* sp. nov.	JLIM1-5	Western Italy, Montecristo Island	DBUA0002432.01.v13	OP347374		
MOTU 6 – *P. jourdei* sp. nov.	JLIM1-8	Western Italy, Montecristo Island	DBUA0002432.01.v14	OP347467		
MOTU 6 – *P. jourdei* sp. nov.	JLIM1-13	Western Italy, Montecristo Island	DBUA0002432.01.v15	OP347350		
MOTU 6 – *P. jourdei* sp. nov.	JLIPI1-1	Western Italy, Pianosa Island	DBUA0002432.01.v16	OP347353	OP347681	OP347562
MOTU 6 – *P. jourdei* sp. nov.	JLIPI1-3	Western Italy, Pianosa Island	DBUA0002432.01.v17	OP347497	OP347757	OP347639

Species	**Vial code**	**Location**	**Museum voucher**	**GenBank *COI***	**GenBank *28S-D2***	**GenBank *16S***
MOTU 6 – *P. jourdei* sp. nov.	JLIPI1-4	Western Italy, Pianosa Island	DBUA0002432.01.v18	OP347358	OP347684	OP347565
MOTU 6 – *P. jourdei* sp. nov.	JLIPI1-5	Western Italy, Pianosa Island	DBUA0002432.01.v19	OP347368		
MOTU 6 – *P. jourdei* sp. nov.	JLIPI1-6	Western Italy, Pianosa Island	DBUA0002432.01.v20	OP347533		
MOTU 6 – *P. jourdei* sp. nov.	BA2020_39	South France, Banyuls	DBUA0002433.01.v01	OP347399	OP347709	OP347591
MOTU 4 – *P. dumerilii*	PVEC4	Spain, Calpe	DBUA0002434.01.v01	OP347372	OP347694	OP347575
MOTU 4 – *P. dumerilii*	PVEC23	Spain, Calpe	DBUA0002434.01.v02	OP347523	OP347768	OP347650
MOTU 4 – *P. dumerilii*	MTSTM37	Sweden, Tjärnö	DBUA0002435.01.v01	OP347352		
MOTU 4 – *P. dumerilii*	MTSTF1	Sweden, Tjärnö	DBUA0002435.01.v02	OP347451	OP347735	OP347617
MOTU 4 – *P. dumerilii*	MTSTF2	Sweden, Tjärnö	DBUA0002435.01.v03	OP347393	OP347704	OP347586
MOTU 4 – *P. dumerilii*	MTSTF3	Sweden, Tjärnö	DBUA0002435.01.v04	OP347526	OP347771	OP347653
MOTU 4 – *P. dumerilii*	MTSTF4	Sweden, Tjärnö	DBUA0002435.01.v05	OP347363	OP347688	OP347569
MOTU 4 – *P. dumerilii*	MTSTF5	Sweden, Tjärnö	DBUA0002435.01.v06	OP347492		
MOTU 4 – *P. dumerilii*	MTSTF6	Sweden, Tjärnö	DBUA0002435.01.v07	OP347428		
MOTU 4 – *P. dumerilii*	MTSTF8	Sweden, Tjärnö	DBUA0002435.01.v08	OP347546		
MOTU 4 – *P. dumerilii*	MTSTF9	Sweden, Tjärnö	DBUA0002435.01.v09	OP347500	OP347759	OP347641
MOTU 4 – *P. dumerilii*	MTSTF10	Sweden, Tjärnö	DBUA0002435.01.v10	OP347335		
MOTU 4 – *P. dumerilii*	76216	Norway, Trondheim, Grillstad	NTNU-VM-76216	OP347527	OP347772	OP347654
MOTU 4 – *P. dumerilii*	MTCM10	Portugal, Canto Marinho	DBUA0002436.01.v01	OP347332	OP347672	OP347553
MOTU 4 – *P. dumerilii*	JJFR1-1	North France, La Rochelle	DBUA0002438.01.v01	OP347416	OP347718	OP347600
MOTU 4 – *P. dumerilii*	JJFR1-2	North France, La Rochelle	DBUA0002438.01.v02	OP347398	OP347708	OP347590
MOTU 4 – *P. dumerilii*	JJFR1-3	North France, La Rochelle	DBUA0002438.01.v03	OP347396	OP347706	OP347588
MOTU 4 – *P. dumerilii*	JJFR1-4	North France, La Rochelle	DBUA0002438.01.v04	OP347330	OP347670	OP347551
MOTU 4 – *P. dumerilii*	JJFR1-5	North France, La Rochelle	DBUA0002438.01.v05	OP347328	OP347668	OP347549
MOTU 4 – *P. dumerilii*	JJFR1-6	North France, La Rochelle	DBUA0002438.01.v06	OP347349		
MOTU 4 – *P. dumerilii*	JJFR1-7	North France, La Rochelle	DBUA0002438.01.v07	OP347356		
MOTU 4 – *P. dumerilii*	JJFR1-8	North France, La Rochelle	DBUA0002438.01.v08	OP347327		
MOTU 4 – *P. dumerilii*	JJFR1-9	North France, La Rochelle	DBUA0002438.01.v09	OP347540		
MOTU 4 – *P. dumerilii*	JJFR1-10	North France, La Rochelle	DBUA0002438.01.v10	OP347509		
MOTU 4 – *P. dumerilii*	JJFR1-11	North France, La Rochelle	DBUA0002438.01.v11	OP347483		
MOTU 4 – *P. dumerilii*	JJFR1-12	North France, La Rochelle	DBUA0002438.01.v12	OP347418		
MOTU 4 – *P. dumerilii*	JJFR1-13	North France, La Rochelle	DBUA0002438.01.v13	OP347377		
MOTU 4 – *P. dumerilii*	JJFR1-14	North France, La Rochelle	DBUA0002438.01.v14	OP347491		
MOTU 4 – *P. dumerilii*	JJFR1-15	North France, La Rochelle	DBUA0002438.01.v15	OP347544		
MOTU 4 – *P. dumerilii*	JJFR1-16	North France, La Rochelle	DBUA0002438.01.v16	OP347375		
MOTU 4 – *P. dumerilii*	JJFR1-17	North France, La Rochelle	DBUA0002438.01.v17	OP347490		
MOTU 4 – *P. dumerilii*	NLFA1-1	North France, Arcachon Bay	DBUA0002439.01.v01	OP347514	OP347763	OP347645
MOTU 4 – *P. dumerilii*	JLIM1-3	Western Italy, Montecristo Island	DBUA0002437.05.v01	OP347538	OP347779	OP347661
MOTU 4 – *P. dumerilii*	JLIM1-6	Western Italy, Montecristo Island	DBUA0002437.05.v02	OP347466	OP347743	OP347625
MOTU 4 – *P. dumerilii*	JLIM1-7	Western Italy, Montecristo Island	DBUA0002437.05.v03	OP347459	OP347739	OP347621
MOTU 4 – *P. dumerilii*	JLIM1-9	Western Italy, Montecristo Island	DBUA0002437.05.v04	OP347419		
MOTU 4 – *P. dumerilii*	JLIM1-10	Western Italy, Montecristo Island	DBUA0002437.05.v05	OP347516		
MOTU 4 – *P. dumerilii*	JLIM1-11	Western Italy, Montecristo Island	DBUA0002437.05.v06	OP347449		
MOTU 4 – *P. dumerilii*	JLIM1-12	Western Italy, Montecristo Island	DBUA0002437.05.v07	OP347325		
MOTU 4 – *P. dumerilii*	JLIHB1	Western Italy, Antignano	DBUA0002437.01.v01	OP347373		

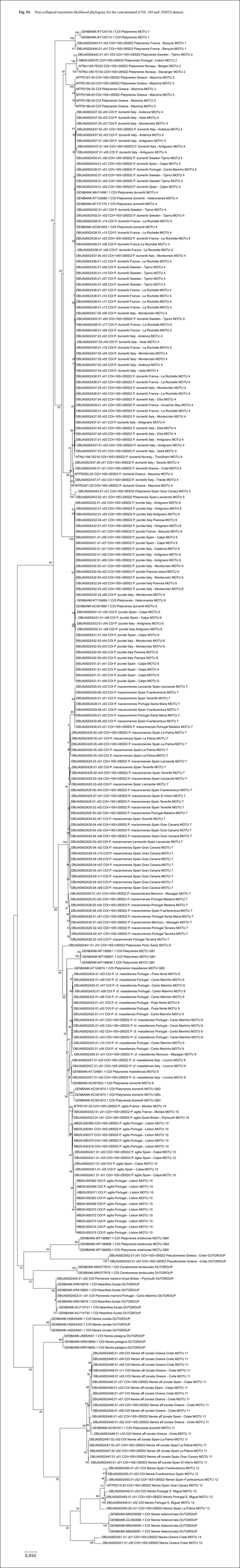
Species	**Vial code**	**Location**	**Museum voucher**	**GenBank *COI***	**GenBank *28S-D2***	**GenBank *16S***
MOTU 4 – *P. dumerilii*	JLIHB3	Western Italy, Antignano	DBUA0002437.01.v02	OP347337	OP347674	OP347555
MOTU 4 – *P. dumerilii*	JLHIHA10	Western Italy, Antignano	DBUA0002437.01.v03	OP347441	OP347731	OP347613
MOTU 4 – *P. dumerilii*	JLIAn2	Western Italy, Antignano	DBUA0002437.01.v04	OP347469	OP347744	OP347626
MOTU 4 – *P. dumerilii*	JLIAn3	Western Italy, Antignano	DBUA0002437.01.v05	OP347336		
MOTU 4 – *P. dumerilii*	JLIAn4	Western Italy, Antignano	DBUA0002437.01.v06	OP347383		
MOTU 4 – *P. dumerilii*	JLIA1	Western Italy, Ardenza	DBUA0002437.02.v01	OP347454	OP347737	OP347619
MOTU 4 – *P. dumerilii*	JLIA2	Western Italy, Ardenza	DBUA0002437.02.v02	OP347479		
MOTU 4 – *P. dumerilii*	JLIA3	Western Italy, Ardenza	DBUA0002437.02.v03	OP347529		
MOTU 4 – *P. dumerilii*	JLIA4	Western Italy, Ardenza	DBUA0002437.02.v04	OP347440		
MOTU 4 – *P. dumerilii*	JLIA5	Western Italy, Ardenza	DBUA0002437.02.v05	OP347530		
MOTU 4 – *P. dumerilii*	JLIV1	Western Italy, Vada	DBUA0002437.03.v01	OP347364	OP347689	OP347570
MOTU 4 – *P. dumerilii*	JLIV2	Western Italy, Vada	DBUA0002437.03.v02	OP347412		
MOTU 4 – *P. dumerilii*	JLIV3	Western Italy, Vada	DBUA0002437.03.v03	OP347476		
MOTU 4 – *P. dumerilii*	JLIV4	Western Italy, Vada	DBUA0002437.03.v04	OP347485		
MOTU 4 – *P. dumerilii*	JLIP1-1	Western Italy, Elba Island – Portoferraio	DBUA0002437.04.v01	OP347453	OP347736	OP347618
MOTU 4 – *P. dumerilii*	JLIP1-2	Western Italy, Elba Island – Portoferraio	DBUA0002437.04.v02	OP347359	OP347685	OP347566
MOTU 4 – *P. dumerilii*	JLIP1-3	Western Italy, Elba Island – Portoferraio	DBUA0002437.04.v03	OP347431	OP347726	OP347608
MOTU 4 – *P. dumerilii*	JLIT1-1	Eastern Italy, Taranto	DBUA0002437.06.v01	OP347493	OP347755	OP347637
MOTU 4 – *P. dumerilii*	MTGC1-1	Greece, South Crete	DBUA0002440.01.v01	OP347407	OP347713	OP347595
MOTU 4 – *P. dumerilii*	N78	Greece, Mazoma	MTPD200-20	OP347531	OP347774	OP347656
MOTU 4 – *P. dumerilii*	N60	Greece, Mazoma	MTPD201-20	OP347421	OP347720	OP347602
MOTU 4 – *P. dumerilii*	JLITR1-1	Eastern Italy, Trieste	DBUA0002437.07.v02	OP347488	OP347754	OP347636
MOTU 5 – *Platynereis* sp.	MTCC1-7	Spain, Canary – Gran Canaria	DBUA0002443.01.v01	OP347394	OP347705	OP347587
MOTU 5 – *Platynereis* sp.	MTCL1-4	Spain, Canary – Lanzarote	DBUA0002443.02.v01	OP347401	OP347710	OP347592
MOTU 1 – *Platynereis* sp.	BA2020_41	South France, Banyuls	DBUA0002444.01.v01	OP347387	OP347699	OP347581
MOTU 1 – *Platynereis* sp.	BA2020_43	South France, Banyuls	DBUA0002444.01.v02	OP347366	OP347690	OP347571
MOTU 11 – *Nereis* aff. *zonata*	PVEC18	Spain, Calpe	DBUA0002446.01.v01	OP347521	OP347766	OP347648
MOTU 11 – *Nereis* aff. *zonata*	PVEC21	Spain, Calpe	DBUA0002446.01.v02	OP347355	OP347682	OP347563
MOTU 11 – *Nereis* aff. *zonata*	PVEC28	Spain, Calpe	DBUA0002446.01.v03	OP347432		
MOTU 11 – *Nereis* aff. *zonata*	PVCH2	Spain, Canary – El Hierro	DBUA0002445.01.v01	OP347369	OP347691	OP347572
MOTU 11 – *Nereis* aff. *zonata*	MTCC1-11	Spain, Canary – Gran Canaria	DBUA0002447.01.v01	OP347321	OP347666	OP347547
MOTU 11 – *Nereis* aff. *zonata*	MTGC1-2	Greece, South Crete	DBUA0002448.01.v01	OP347400		
MOTU 11 – *Nereis* aff. *zonata*	MTGC1-4	Greece, South Crete	DBUA0002448.01.v02	OP347532	OP347775	OP347657
MOTU 11 – *Nereis* aff. *zonata*	MTGC1-5	Greece, South Crete	DBUA0002448.01.v03	OP347430	OP347725	OP347607
MOTU 11 – *Nereis* aff. *zonata*	MTGC1-6 (GC3-1)	Greece, South Crete	DBUA0002448.01.v04	OP347433		
MOTU 11 – *Nereis* aff. *zonata*	MTGC1-7 (GC3-2)	Greece, South Crete	DBUA0002448.01.v05	OP347334		
MOTU 11 – *Nereis* aff. *zonata*	MTGC1-8 (GC3-3)	Greece, South Crete	DBUA0002448.01.v06	OP347541		
MOTU 11 – *Nereis* aff. *zonata*	MTGC1-9 (GC3-4)	Greece, South Crete	DBUA0002448.01.v07	OP347381		
MOTU 11 – *Nereis* aff. *zonata*	MTGC1-11 (GC3-6)	Greece, South Crete	DBUA0002448.01.v08	OP347455		
MOTU 11 – *Nereis* aff. *zonata*	MTGC1-12 (GC3-7)	Greece, South Crete	DBUA0002448.01.v09	OP347452		
MOTU 11 – *Nereis* aff. *zonata*	MTGC1-13 (GC3-8)	Greece, South Crete	DBUA0002448.01.v10	OP347345		
MOTU 11 – *Nereis* aff. *zonata*	MTGC1-15 (GC3-10)	Greece, South Crete	DBUA0002448.01.v11	OP347423		
MOTU 11 – *Nereis* aff. *zonata*	MTCP1-38	Spain, Canary – La Palma	DBUA0002447.02.v01	OP347522	OP347767	OP347649
MOTU 11 – *Nereis* aff. *zonata*	MTCP1-42	Spain, Canary – La Palma	DBUA0002447.02.v02	OP347408	OP347714	OP347596

Species	**Vial code**	**Location**	**Museum voucher**	**GenBank *COI***	**GenBank *28S-D2***	**GenBank *16S***
MOTU 11 – *Nereis* aff. *zonata*	MTCP1-43	Spain, Canary – La Palma	DBUA0002447.02.v03	OP347422		
MOTU 14 – *Nereis* sp.	MTGC1-10 (GC3-5)	Greece, South Crete	DBUA0002451.01.v01	OP347389	OP347700	OP347582
MOTU 15 – *Nereis* sp.	MTGC1-14 (GC3-9)	Greece, South Crete	DBUA0002451.01.v02	OP347543	OP347782	OP347664
MOTU 12 – *Nereis* sp.	PVAM1.2	Portugal, Azores – São Miguel	DBUA0002449.01.v01	OP347539	OP347780	OP347662
MOTU 12 – *Nereis* sp.	PVAM1.3	Portugal, Azores – São Miguel	DBUA0002449.01.v02	OP347504		
MOTU 12 – *Nereis* sp.	PVAM1.4	Portugal, Azores – São Miguel	DBUA0002449.01.v03	OP347326		
MOTU 12 – *Nereis* sp.	MTCC1-8	Spain, Canary – Gran Canaria	MTPD144-20	OP347425	OP347722	OP347604
MOTU 12 – *Nereis* sp.	MTCF1-4	Spain, Canary – Fuerteventura	DBUA0002450.01.v01	OP347457		
MOTU 12 – *Nereis* sp.	MTCF1-7	Spain, Canary – Fuerteventura	DBUA0002450.01.v02	OP347478	OP347750	OP347632
MOTU 12 – *Nereis* sp.	MTCF1-9	Spain, Canary – Fuerteventura	DBUA0002450.01.v03	OP347471		
MOTU 13 – *Nereis* sp.	MTCP1-41	Spain, Canary – La Palma	DBUA0002450.02.v01	OP347434	OP347727	OP347609
OUTGROUP – *Pseudonereis* sp.	MTGC1-3	Greece, South Crete	DBUA0002452.01.v01	OP347391	OP347702	OP347584
OUTGROUP – *Pseudonereis* sp.	MTGC6-1	Greece, South Crete	DBUA0002452.01.v02	OP347537	OP347778	OP347660
OUTGROUP – *Perinereis marionii*	MTCM50	Portugal, Canto Marinho	DBUA0002453.01.v01	OP347386		
OUTGROUP – *Perinereis marionii*	PLY2017_69	Great Britain, Plymouth	DBUA0002454.01.v01	OP347380		

Table S3. Inter and intra (in bold) specific distances (K2P) with 1000 bootstraps for *COI*, *16S* and the D2 region of *28S* respectively, for the ten retrieved *Platynereis* MOTUs.

	Loci	2	3	4	5	6	1	7	8	9	10
MOTU 2	*COI*	**1.7±0.4**									
	16S	**0.2±0.2**									
	28SD2	**0.1±0.1**									
MOTU 3	*COI*	14.8±1.5	**0.2±0.1**								
	16S	3.9±0.9	**0.2±0.2**								
	28SD2	0.8±0.4	**0.0±0.0**								
MOTU 4	*COI*	17.6±1.6	16.5±1.6	**0.8±0.1**							
	16S	4.0±1.0	3.2±0.8	**0.5±0.2**							
	28SD2	0.9±0.4	0.5±0.3	**0.2±0.1**							
MOTU 5	*COI*	19.7±1.7	19.4±1.7	8.2±1.0	**2.5±0.6**						
	16S	3.2±0.9	3.1±0.8	0.9±0.4	**0.0±0.0**						
	28SD2	1.0±0.5	0.2±0.2	0.2±0.2	**0.0±0.0**						
MOTU 6	*COI*	20.6±1.8	19.0±1.7	18.5±1.8	20.0±1.8	**0.4±0.1**					
	16S	3.5±0.9	3.7±0.9	4.0±0.9	3.7±0.9	**0.2±0.1**					
	28SD2	1.1±0.4	0.8±0.4	0.4±0.1	0.5±0.3	**0.5±0.2**					
MOTU 1	*COI*	22.3±1.9	21.2±1.9	20.9±1.9	24.2±2.0	25.2±2.0	**0.2±0.2**				
	16S	7.7±1.4	7.7±1.4	8.8±1.5	8.7±1.5	8.5±1.5	**0.2±0.2**				
	28SD2	2.4±0.7	2.6±0.8	2.4±0.7	2.3±0.7	2.9±0.8	**0.2±0.2**				
MOTU 7	*COI*	20.1±1.7	21.1±1.8	20.3±1.7	22.1±1.8	24.0±2.0	21.5±1.9	**2.0±0.4**			
	16S	7.1±1.4	7.3±1.3	8.1±1.5	7.9±1.5	7.4±1.4	9.3±1.5	**0.3±0.2**			
	28SD2	1.4±0.5	0.6±0.3	0.7±0.3	0.4±0.2	1.0±0.4	2.5±0.7	**0.3±0.1**			
MOTU 8	*COI*	19.1±1.7	18.9±1.8	21.3±1.8	23.2±1.9	20.5±1.8	20.5±1.9	13.5±1.3	**NA**		
	16S	5.9±1.2	6.4±1.2	7.2±1.3	6.8±1.3	6.4±1.3	8.1±1.4	4.6±1.1	**NA**		
	28SD2	1.3±0.5	0.5±0.3	1.0±0.4	0.7±0.4	1.3±0.5	2.8±0.8	0.6±0.3	**NA**		
MOTU 9	*COI*	20.5±1.7	22.5±1.9	21.6±1.9	24.0±1.9	20.4±1.8	20.4±1.9	15.5±1.5	9.9±1.2	**1.4±0.2**	
	16S	7.6±1.4	7.2±1.3	8.1±1.4	7.7±1.4	7.7±1.4	8.0±1.4	5.9±1.1	4.0±0.9	**1.0±0.3**	
	28SD2	1.2±0.5	0.4±0.2	0.9±0.4	0.7±0.3	1.2±0.4	2.7±0.8	0.5±0.2	0.4±0.3	**0.3±0.2**	
MOTU 10	*COI*	20.0±1.7	22.3±1.9	21.8±1.9	24.2±1.9	22.7±1.9	22.6±2.0	15.9±1.5	11.1±1.3	5.0±0.8	**0.8±0.2**
	16S	7.1±1.4	7.0±1.3	7.9±1.4	7.4±1.4	7.6±1.4	8.8±1.4	6.4±1.2	3.7±0.9	2.1±0.6	**0.3±0.1**
	28SD2	1.1±0.5	0.3±0.2	0.8±0.4	0.5±0.3	1.1±0.4	2.6±0.3	0.4±0.2	0.3±0.2	0.2±0.1	**0.1±0.1**

Fig. S1. Non-collapsed maximum likelihood phylogeny for the concatenated (*COI*, *16S* and *28SD2*) dataset.



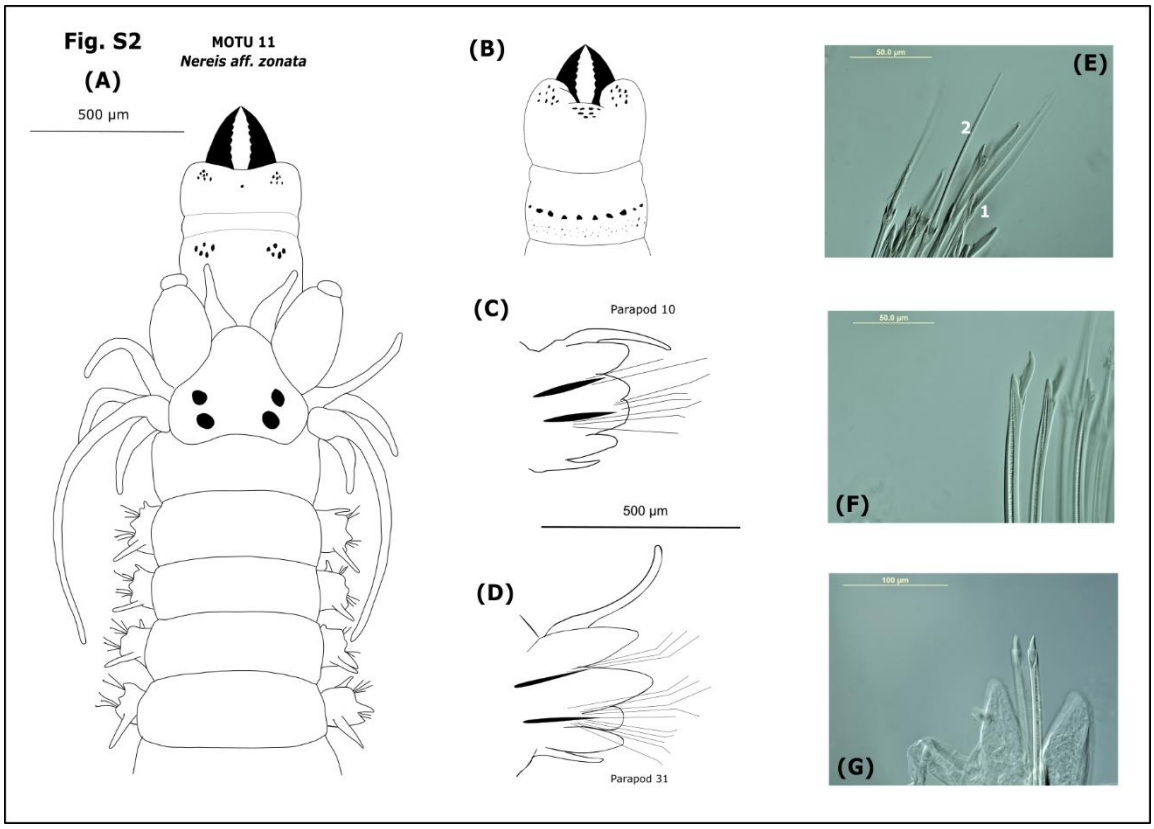


Fig. S2. *Nereis* aff. *zonata* (MOTU 11). A, dorsal view of the anterior region with absence of pigmentation in the apodous segment and in the remaining anterior chaetigers; prostomium and pharynx based on samples from Crete (DBUA0002448.01.v02 and DBUA0002448.01.v05). C, 10th parapod, posterior view. D, 31th parapod, posterior view. E, Notochaetae, chaetiger 10: heterogomph spiniger (1), homogomph spiniger (2). F, Neurochaeta, chaetiger 30: heterogomph falciger. G, Notochaetae, chaetiger 30: homogomph falciger.

Fig. S3. Specimen (DBUA0002454.01.v01) belonging to *Perinereis marionii* with focus on the pharynx, dorsal view.

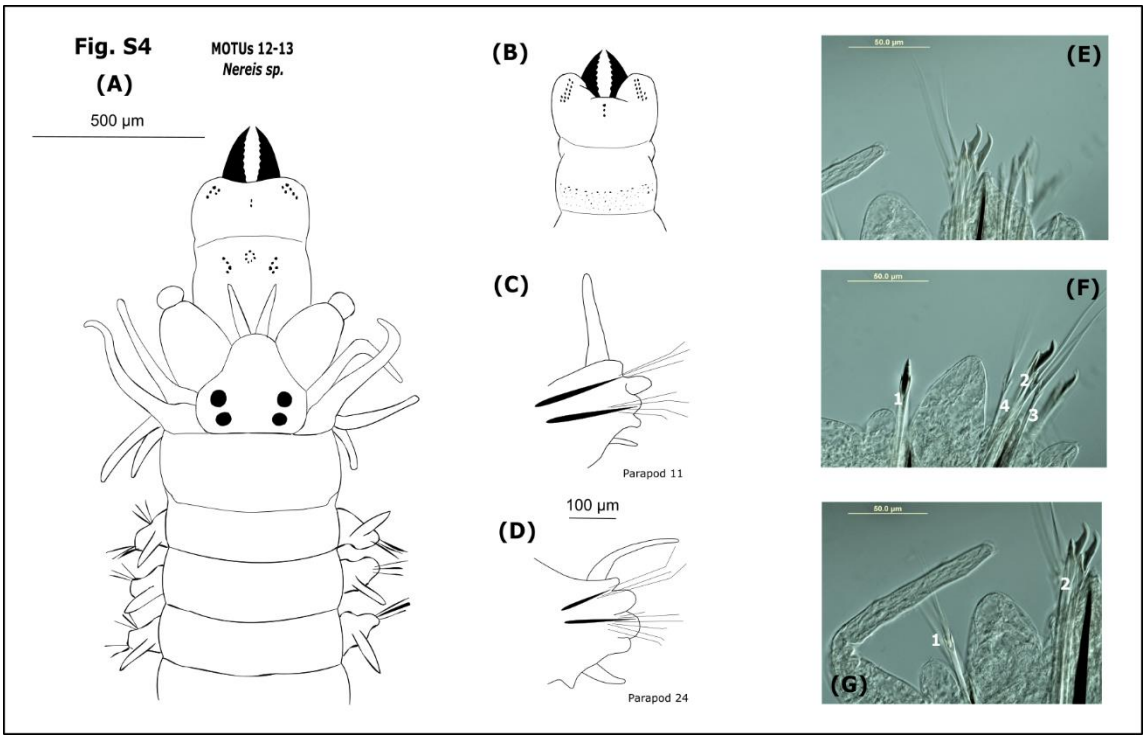


Fig. S4. *Nereis* sp. (MOTUs 12 and 13). A, dorsal view of the anterior region with absence of pigmentation in the apodous segment and in the remaining anterior chaetigers; prostomium and pharynx based on samples from the Canary islands (MTPD144-20, DBUA0002450.01.v01 and DBUA0002450.02.v01). D, 24th parapod, posterior view. E, Neurochaeta, chaetiger 1: heterogomph falciger. F, Neurochaeta, chaetiger 24: heterogomph spiniger (3), heterogomph falciger (2), homogomph spiniger (4); Notochaetae homogomph falciger (1). G, Notochaetae chaetiger 11, homogomph spiniger (1); Neurochaeta parapod 11, heterogomph falciger (2).

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