10.1071/IS23055
Invertebrate Systematics

Supplementary Material

A review of *Palaemonella* (Decapoda: Caridea: Palaemonidae), with clarification of the taxonomic status of *Cuapetes americanus*, *Eupontonia* and *Vir*

Pavlína Frolová[A], *Eva van der Veer*[B], *Charles H. J. M. Fransen*[B] and *Zdeněk Ďuriš*[A,*]

[A]Department of Biology and Ecology University of Ostrava, Chittussiho 10, CZ-71000 Ostrava, Czechia

[B]Naturalis Biodiversity Center, Darwinweg 2, NL-2333 CR Leiden, Netherlands

*Correspondence to: Email: zdenek.duris@osu.cz

Table S1. List of the specimens and DNA sequences used in the phylogenetic analyses.

Taxon	New name combination	Sampling location	Host	Voucher number	*16S*	*COI*	*H3*	*18S*	References
Palaemonidae Rafinesque, 1815									
***Cuapetes* Clark, 1919**	***Palaemonella* Dana, 1852**								
C. americanus (Kingsley, 1878); 1a	*P. rhizophorae*	Martinique	free-living	MNHN-IU-2016-1950	**PP584879**	**PP583006**	**PP587068**	**PP584841**	Present study
C. americanus (Kingsley, 1878); 1b	*P. rhizophorae*	Martinique	free-living	MNHN-IU-2016-7456	ON372562	ON369132	ON376683	ON507936	Frolová *et al*. 2022
C. americanus (Kingsley, 1878); 2a	*P. americana*	Martinique	free-living	MNHN-IU-2016-4399	ON372561	ON369131	ON376682	ON507935	Frolová *et al*. 2022
C. americanus (Kingsley, 1878); 2b	*P. americana*	Martinique	free-living	MNHN-IU-2016-4077	**PP584880**	**PP583007**	**PP587069**	**PP584842**	Present study
C. johnsoni (Bruce, 1987)		Vietnam	free-living	UO V12-85A	ON372568	N/A	ON376689	ON507943	Frolová *et al*. 2022
C. nilandensis (Borradaile, 1915)		Mayotte	Antipatharia	MNHN-IU-2014-5566	**PP584881**	**PP583008**	**PP587070**	**PP584843**	Present study
C. seychellensis (Borradaile, 1915)		Saudi Arabia	free-living	RSS1-2012-57	**PP584882**	N/A	**PP587071**	**PP584844**	Present study
***Eupontonia* Bruce, 1971**									
E. nudirostris Marin, 2014	*P. nudirostris*	Solomon Islands	In the hole with Echiura or Alpheus sp.	OUMNH-Solom.2016	ON372576	ON369139	ON376696	ON507951	Frolová *et al*. 2022
E. oahu Bruce, 2010	*P. oahu*	Marquesas Archipelago	free-living	MNHN-IU-2013-16342	ON372577	ON369140	N/A	ON507952	Frolová *et al*. 2022
***Palaemonella* Dana, 1852**									
P. aliska Marin, 2008		New Caledonia	In the hole with gobi fish and *Alpheus* sp.	MNHN-IU-2019-3493	**PP584883**	N/A	N/A	**PP584845**	Present study
P. aliska Marin, 2008		Papua New Guinea	In the hole with gobi fish and *Alpheus* sp.	MNHN-IU-2013-11044	ON372582	ON369144	ON376701	ON507961	Frolová *et al*. 2022
P. aliska Marin, 2008		Vietnam	In the hole with gobi fish and *Alpheus* sp.	RMNH D.51918 **(allotype)**	**PP584884**	**PP583009**	**PP587072**	**PP584846**	Present study
P. asymmetrica Holthuis, 1951; 1a		Clipperton Island	free-living	MNHN-IU-2016-8901	ON372583	ON369145	N/A	N/A	Frolová *et al*. 2022
P. asymmetrica Holthuis, 1951; 1b		Clipperton Island	free-living	MNHN-IU-2016-8898	**PP584885**	N/A	**PP587073**	N/A	Present study
P. atlantica Holthuis, 1951; 1a		St Helena	free-living	OUMNH 131244/55/04	ON372584	ON369146	ON376702	ON507962	Frolová *et al*. 2022
P. atlantica Holthuis, 1951; 1b		St Helena	free-living	OUMNH 140115/61/08	**PP584886**	**PP583010**	**PP587074**	**PP584847**	Present study
P. burnsi Holthuis, 1973		Hawaii	free-living	RMNH D.28957 **(paratype)**	ON372585	ON369147	ON376703	ON507963	Frolová *et al*. 2022
P. burnsi Holthuis, 1973		Taiwan	free-living	UO Tw17-37	**PP584887**	**PP583011**	**PP587075**	**PP584848**	Present study
P. disalvoi Bruce, 1978		Papua New Guinea	free-living	MNHN-IU-2013-10803	ON372586	ON369148	ON376704	ON507964	Frolová *et al*. 2022
P. disalvoi Bruce, 1978		Easter Island	free-living	RMNH D.37161 **(paratype)**	**PP584888**	N/A	**PP587076**	N/A	Present study
P. disalvoi Bruce, 1978		Taiwan	free-living	NMMBCD4117	**PP584889**	**PP583012**	**PP587077**	**PP584849**	Present study
P. disalvoi Bruce, 1979		New Caledonia	free-living	MNHN-IU-2019-2994	**PP584890**	N/A	N/A	**PP584850**	Present study
P. dolichodactylus Bruce, 1991		Vanuatu	free-living	MNHN-IU-2014-12007	**PP584891**	**PP583013**	N/A	**PP584851**	Present study
P. dolichodactylus Bruce, 1991		New Caledonia	free-living	MNHN-IU-2019-3470	**PP584892**	**PP583014**	**PP587078**	**PP584852**	Present study
P. foresti Bruce, 2002		Australia	free-living	WAM C 24850 **(holotype)**	N/A	**PP583015**	**PP587079**	**PP584853**	Present study
P. hachijo Okuno, 1999		Papua New Guinea	free-living	MNHN-IU-2015-556	ON372587	ON369149	ON376705	ON507965	Frolová *et al*. 2022
P. holmesi (Nobili, 1907); 1a		Panama	free-living	UF 59988	**PP584893**	**PP583016**	N/A	**PP584854**	Present study
P. holmesi (Nobili, 1907); 1b		Panama: Las Perlas	free-living	MZUSP 33965	ON372588	ON369150	ON376706	ON507966	Frolová *et al*. 2022
P. komaii Li & Bruce, 2006		Philippines	free-living	NTOU 06.08.2004, T4	**PP584894**	**PP583017**	N/A	**PP584855**	Present study
P. komaii Li & Bruce, 2006		Fiji	free-living	MNHN-IU-2013-16387 **(paratype)**	**PP584895**	**PP583018**	**PP587080**	N/A	Present study
P. komaii Li & Bruce, 2006		French Guiana	free-living	MNHN-IU-2013-19827	**PP584896**	**PP583019**	**PP587081**	**PP584856**	Present study
P. komaii Li & Bruce, 2006		New Caledonia	free-living	MNHN-IU-2017-2771	**PP584897**	N/A	**PP587082**	**PP584857**	Present study
P. longidactylus Hayashi, 2009		Papua New Guinea	free-living	MNHN-IU-2015-1344	ON372589	ON369151	ON376707	ON507967	Frolová *et al*. 2022
P. longidactylus Hayashi, 2009		Philippines	free-living	NTOU T29	**PP584898**	**PP583020**	**PP587083**	N/A	Present study
P. okunoi Komai & Yamada, 2015		Japan: Okinawa Island	free-living	CBM-ZC 13082 **(paratype)**	ON372591	ON369152	ON376708	ON507968	Frolová *et al*. 2022
P. pottsi (Borradaile, 1915)		Taiwan	Crinoidea	NMMBCD5614	ON372590	ON369153	ON376709	ON507969	Frolová *et al*. 2022
P. pottsi (Borradaile, 1915)		New Caledonia	Crinoidea	MNHN-IU-2018-1246	**PP584899**	**PP583021**	**PP587084**	**PP584858**	Present study
P. pusilla Bruce, 1975		Australia: Lizard Island	free-living	MTQ W-33321	ON372592	N/A	ON376710	ON507970	Frolová *et al*. 2022
P. pusilla Bruce, 1975		Papua New Guinea	free-living	MNHN-IU-2015-1568	**PP584900**	**PP583022**	**PP587085**	**PP584859**	Present study
P. rotumana (Borradaile, 1898)		Taiwan	free-living	NMMBCD6107	**PP584901**	**PP583023**	N/A	**PP584860**	Present study
P. rotumana (Borradaile, 1898)		New Caledonia	free-living	MNHN-IU-2018-473	**PP584902**	N/A	**PP587086**	**PP584861**	Present study
P. rotumana (Borradaile, 1898)		Madagascar	free-living	MNHN-IU-2010-3946	**PP584903**	**PP583024**	**PP587087**	N/A	Present study
P. rotumana (Borradaile, 1898)		Australia: Lizard Island	free-living	MTQ W-33176	ON372593	ON369165	ON376711	ON507971	Frolová *et al*. 2022
P. rotumana (Borradaile, 1898)		Jordan	free-living	UO Aq09-43B	**PP584904**	**PP583025**	**PP587088**	**PP584862**	Present study
P. rotumana (Borradaile, 1898)		Vietnam	free-living	UO V10-15D	**PP584905**	**PP583026**	**PP587089**	**PP584863**	Present study
P. rubrolineata Fransen, van der Veer & Frolová, 2022; 1a		Indonesia	Scleractinia: *Seriatopora hystrix*	RMNH D.53067	OP326597	N/A	**PP587090**	**PP584864**	Fransen *et al*. 2022; present study
P. rubrolineata Fransen, van der Veer & Frolová, 2022; 1b		Indonesia	Scleractinia: *Pocillopora damicornis*	RMNH D.53070 (paratype)	OP304831	OP306073	**PP587091**	**PP584865**	Fransen *et al*. 2022; present study
P. sandyi Fransen, van der Veer & Ďuriš, 2023; 1a		Taiwan	Scleractinia: *Euphyllia glabrescens*	UO Tw12-53	**PP584906**	**PP583027**	**PP587092**	**PP584866**	Present study
P. sandyi Fransen, van der Veer & Ďuriš, 2023; 1b		Taiwan	Scleractinia: *Euphyllia glabrescens*	NMMBCD4106	**PP584907**	**PP583028**	**PP587093**	**PP584867**	Present study
P. spinulata Yokoya, 1936		Japan	Crinoidea	CBM-ZC 9515	**PP584908**	**PP583029**	N/A	N/A	Present study
P. tenuipes Dana, 1852		New Caledonia	free-living	MNHN-IU-2018-1286	**PP584909**	**PP583030**	**PP587094**	**PP584868**	Present study
P. tenuipes Dana, 1852		Taiwan	free-living	NMMBCD5615	ON372594	ON369154	ON376712	ON507972	Frolová *et al*. 2022
***Vir* Holthuis, 1952**									
V. euphyllius Marin & Anker, 2005	*P. euphyllius*	Taiwan	Scleractinia: *Euphyllia* sp.	NMMBCD6102	**PP584910**	**PP583031**	**PP587095**	**PP584869**	Horká *et al*. 2022; present study
V. longidactylus Marin, 2008; 1a	*P. smiti*	Vietnam	Scleractinia: *Physogyra lichtensteini*	RMNH D.51919-M **(allotype)**	**PP584911**	N/A	N/A	N/A	Present study
V. longidactylus Marin, 2008; 1b	*P. smiti*	Vietnam	Scleractinia: *Physogyra lichtensteini*	RMNH D.51919-F **(holotype)**	**PP584912**	**PP583032**	**PP587096**	N/A	Present study
V. orientalis (Dana, 1852)	*P. orientalis*	Australia: Lizard Island	Scleractinia: *Pocillopora* sp.	MTQ W-33130	KU064865	KU065022	KU065110	ON507981	Horká *et al*. 2016; Frolová *et al*. 2022
V. orientalis (Dana, 1852)	*P. orientalis*	New Caledonia	Scleractinia: *Pocillopora* sp.	MNHN-IU-2018-844	**PP584913**	**PP583033**	**PP587097**	**PP584870**	Present study
V. philippinensis Bruce & Svoboda, 1984; 1a	*P. philippinensis*	Papua New Guinea	Scleractinia: *Plerogyra* sp.	MNHN-IU-2013-10723	**PP584914**	**PP583034**	**PP587098**	**PP584871**	Present study
V. philippinensis Bruce & Svoboda, 1984; 1b	*P. philippinensis*	Papua New Guinea	Scleractinia: *Plerogyra* sp.	MNHN-IU-2013-10955	**PP584915**	**PP583035**	**PP587099**	**PP584872**	Present study
V. philippinensis Bruce & Svoboda, 1984	P. philippinensis	Vietnam	Scleractinia: *Plerogyra* sp.	UO V10-48	KU064866	KU065023	KU065111	ON507982	Horká *et al*. 2016; Frolová *et al*. 2022
V. philippinensis Bruce & Svoboda, 1984	*P. philippinensis*	Taiwan	Scleractinia: *Plerogyra* sp.	NMMBCD6103	**PP584916**	**PP583036**	**PP587100**	**PP584873**	Present study
V. philippinensis Bruce & Svoboda, 1984	*P. philippinensis*	Australia	Scleractinia: *Plerogyra* sp.	MTQ W-33131	**PP584917**	**PP583037**	**PP587101**	**PP584874**	Present study
V. smiti Fransen & Holthuis, 2007	*P. smiti*	Papua New Guinea	Scleractinia: *Physogyra* sp.	MNHN-IU-2013-10769	**PP584918**	**PP583038**	**PP587102**	**PP584875**	Present study
V. smiti Fransen & Holthuis, 2007	*P. smiti*	Philippines	Scleractinia: *Physogyra lichtensteini*	RMNH D.48539 **(holotype)**	**PP584919**	N/A	N/A	N/A	Present study
V. smiti Fransen & Holthuis, 2007	*P. smiti*	Taiwan	Scleractinia: *Physogyra* sp.	NMMBCD5619	ON372600	ON369160	ON376718	ON507983	Frolová *et al*. 2022
V. colemani Bruce, 2003; 1a	*P. colemani*	Papua New Guinea	Scleractinia: *Plerogyra sinuosa*	NTM Cr13446 **(holotype)**	**PP584920**	N/A	**PP587103**	**PP584876**	Present study
V. colemani Bruce, 2003; 1b	*P. colemani*	Papua New Guinea	Scleractinia: *Fimbriaphyllia divisa*	MNHN-IU- 2013-10614	**PP584921**	**PP583039**	**PP587104**	**PP584877**	Present study
Outgroup									
***Brachycarpus* Spence Bate, 1888**									
B. biunguiculatus (Lucas, 1846		Taiwan	free-living	NMMBCD4093	MH286365	ON369161	MH286368	ON507984	Frolová and Ďuriš 2018; Frolová *et al*. 2022
B. crosnieri Bruce, 1998		Taiwan	free-living	NMMBCD6108	**PP584922**	**PP583040**	**PP587105**	**PP584878**	Present study
***Leander* Desmarest, 1849**									
L. tenuicornis (Say, 1818, in Say 1817–1818)		Taiwan	free-living	NMMBCD5620	ON372601	ON369162	ON376719	ON507985	Frolová *et al*. 2022
***Palaemon* Weber, 1795**									
P. debilis Dana, 1852		Taiwan	free-living	NMMBCD5621	ON372602	ON369163	ON376720	ON507986	Frolová *et al*. 2022
P. elegans Rathke, 1836		England	free-living	KACpael	DQ079729	N/A	DQ079696	DQ079764	Porter *et al*. 2005
***Urocaridella* Borradaile, 1915**									
U. degravei Prakash & Baeza, 2018		Vietnam	free-living	UO V08-110	KY197944	KY197953	KY197960	KY197949	Horká *et al*. 2018
U. pulchella Yokes & Galil, 2006		Egypt	free-living	UO Eg-10	KY197943	KY197952	KY197959	KY197948	Horká *et al*. 2018

Newly sequenced data are marked in bold. Used abbreviations and symbols: CBM, Natural History Museum and Institute, Chiba, Japan; MNHN, National Museum of Natural History, France; MTQ, Museum of Tropical Queensland, Australia; MZUSP, Museu de Zoologia, Universidade de São Paulo, São Paulo, Brazil; NMMBCD, National Museum of Marine Biology and Aquarium (Crustacea Decapoda), Taiwan; NTOU, National Taiwan Ocean University, Taiwan; OUMNH, Oxford University Museum of Natural History, United Kingdom; RMNH, Naturalis Biodiversity Center, Leiden, Netherlands; RSS, Red Sea Surveys, King Abdulaziz University, Jeddah, Saudi Arabia and Senckenberg Nature Research Society, Frankfurt, Germany; UF, University of Florida, Florida, the United States of America; UO, University of Ostrava, Czechia; WAM, Western Australian Museum, Perth, Australia; N/A, sequence not available.

Table S2. List of the specimens and DNA sequences used in phylogenetic analyses based on *16S* gene.

Taxon	New name combination	Sampling location	Host	Code	Voucher number	16S	References
***Palaemonella* Dana, 1852**	***Palaemonella* Dana, 1852**						
P. rubrolineata Fransen, van der Veer & Frolová, 2022		Indonesia	*Seriatopora hystrix*	S72	RMNH.CRUS.D.53068	OP326598	Fransen *et al.* 2022
P. rubrolineata Fransen, van der Veer & Frolová, 2022		Vanuatu		FR18	MNHN-IU-2014-22476	OP326599	Fransen *et al.* 2022
P. rubrolineata Fransen, van der Veer & Frolová, 2022		Indonesia	*Seriatopora hystrix*	S68	RMNH.CRUS.D.53067	OP326597	Fransen *et al.* 2022
P. rubrolineata Fransen, van der Veer & Frolová, 2022		Indonesia	*Pocillopora damicornis*	S65	RMNH.CRUS.D.53070 **(paratype)**	OP304831	Fransen *et al.* 2022
P. sandyi Fransen, van der Veer & Ďuriš, 2023		Taiwan	*Euphyllia glaberescens*	266	UO Tw12-53	**PP584906**	Present study
P. sandyi Fransen, van der Veer & Ďuriš, 2023		Taiwan	*Euphyllia glaberescens*	1671	NMMBCD5638	**PP577215**	Present study
P. sandyi Fransen, van der Veer & Ďuriš, 2023		Taiwan	*Euphyllia glaberescens*	1677	NMMBCD4106	**PP584907**	Present study
P. sandyi Fransen, van der Veer & Ďuriš, 2023		Indonesia	*Euphyllia glaberescens*	E03	RMNH.CRUS.D.53062	OQ384733	Fransen *et al.* 2023
P. sandyi Fransen, van der Veer & Ďuriš, 2023		Indonesia	*Euphyllia glaberescens*	E05	RMNH.CRUS.D.53061	OQ384734	Fransen *et al.* 2023
P. sandyi Fransen, van der Veer & Ďuriš, 2023		Indonesia	*Euphyllia glaberescens*	E07	RMNH.CRUS.D.53066	OQ384735	Fransen *et al.* 2023
P. sandyi Fransen, van der Veer & Ďuriš, 2023		Indonesia	*Euphyllia glaberescens*	E15	RMNH.CRUS.D.53057 **(holotype)**	OQ384736	Fransen *et al.* 2023
P. sandyi Fransen, van der Veer & Ďuriš, 2023		Indonesia	*Euphyllia glaberescens*	E19	RMNH.CRUS.D.53058	OQ384738	Fransen *et al.* 2023
P. sandyi Fransen, van der Veer & Ďuriš, 2023		Maldives	*Euphyllia glaberescens*	MAL.03	RMNH.CRUS.D.58052	OQ384737	Fransen *et al.* 2023
P. sandyi Fransen, van der Veer & Ďuriš, 2023		Indonesia	*Euphyllia glaberescens*	BAL.35	RMNH.CRUS.D.49852	OQ384727	Fransen *et al.* 2023
P. sandyi Fransen, van der Veer & Ďuriš, 2023		Indonesia	*Euphyllia glaberescens*	S05	RMNH.CRUS.D.53063	OQ384730	Fransen *et al.* 2023
P. sandyi Fransen, van der Veer & Ďuriš, 2023		Indonesia	*Euphyllia glaberescens*	S21	RMNH.CRUS.D.53060	OQ384731	Fransen *et al.* 2023
P. sandyi Fransen, van der Veer & Ďuriš, 2023		Indonesia	*Euphyllia glaberescens*	S37	RMNH.CRUS.D.53065	OQ384728	Fransen *et al.* 2023
P. sandyi Fransen, van der Veer & Ďuriš, 2023		Indonesia	*Euphyllia cristata*	S38	RMNH.CRUS.D.53064	OQ384729	Fransen *et al.* 2023
P. sandyi Fransen, van der Veer & Ďuriš, 2023		Indonesia	*Euphyllia cristata*	S41	RMNH.CRUS.D.53059	OQ384732	Fransen *et al.* 2023
***Vir* Holthuis, 1952**							
V. colemani Bruce, 2003	*P. colemani*	Papua New Guinea	*Fimbriaphyllia divisa*	1151	MNHN-IU-2013-10614	**PP584921**	Present study
V. colemani Bruce, 2003	*P. colemani*	Papua New Guinea	*Fimbriaphyllia ancora*	1673	MNHN-IU-2013-10543	**PP577216**	Present study
V. colemani Bruce, 2003	*P. colemani*	Papua New Guinea		1674	MNHN-IU-2013-10566	**PP577217**	Present study
V. colemani Bruce, 2003	*P. colemani*	Papua New Guinea		1675	MNHN-IU-2013-10938	**PP577218**	Present study
V. colemani Bruce, 2003	*P. colemani*	Papua New Guinea	*euphyllid coral*	1676	MNHN-IU-2013-10999	**PP577219**	Present study
V. colemani Bruce, 2003	*P. colemani*	Papua New Guinea	*Plerogyra sinuosa*	1694	NTM Cr13446 **(holotype)**	**PP584920**	Present study
V. colemani Bruce, 2003	*P. colemani*	Indonesia	*Fimbriaphyllia ancora*	S09	RMNH.CRUS.D.53094	OQ384740	Fransen *et al.* 2023
V. colemani Bruce, 2003	*P. colemani*	Indonesia	*Fimbriaphyllia ancora*	S15	RMNH.CRUS.D.53096	OQ384741	Fransen *et al.* 2023
V. euphyllius Marin & Anker, 2005	*P. euphyllius*	Vietnam	*Euphyllia glaberescens*	65	UO V10-46	KU064864	Horká *et al.* 2016
V. euphyllius Marin & Anker, 2005	*P. euphyllius*	Taiwan		1678	NMMBCD6102	**PP584910**	Present study
V. euphyllius Marin & Anker, 2005	*P. euphyllius*	Vietnam	*Euphyllia glaberescens*	1679	UO V07-90	**PP577220**	Present study
V. euphyllius Marin & Anker, 2005	*P. euphyllius*	Indonesia	*Fimbriaphyllia divisa*	E02	RMNH.CRUS.D.53053	OQ384743	Fransen *et al.* 2023
V. euphyllius Marin & Anker, 2005	*P. euphyllius*	Indonesia	*Fimbriaphyllia divisa*	E06	RMNH.CRUS.D.53054	OQ384744	Fransen *et al.* 2023
V. euphyllius Marin & Anker, 2005	*P. euphyllius*	Indonesia	*Fimbriaphyllia divisa*	E16	RMNH.CRUS.D.53055	OQ384745	Fransen *et al.* 2023
V. euphyllius Marin & Anker, 2005	*P. euphyllius*	Indonesia	*Fimbriaphyllia ancora*	E17	RMNH.CRUS.D.53056	OQ384746	Fransen *et al.* 2023
V. euphyllius Marin & Anker, 2005	*P. euphyllius*	Indonesia	*Fimbriaphyllia ancora*	BAL.15	RMNH.CRUS.D.49851	OQ384747	Fransen *et al.* 2023
V. euphyllius Marin & Anker, 2005	*P. euphyllius*	Indonesia	*Fimbriaphyllia divisa*	BAL.21	RMNH.CRUS.D.49853	OQ384748	Fransen *et al.* 2023
V. euphyllius Marin & Anker, 2005	*P. euphyllius*	Indonesia	*Fimbriaphyllia ancora*	S12	RMNH.CRUS.D.53095	OQ384739	Fransen *et al.* 2023
V. euphyllius Marin & Anker, 2005	*P. euphyllius*	Indonesia	*Fimbriaphyllia divisa*	S77	RMNH.CRUS.D.53069	OQ384742	Fransen *et al.* 2023
V. longidactylus Marin, 2008	*P. smiti*	Vietnam	*Physogyra lichtensteini*	1927	RMNH.CRUS.D.51919-F **(holotype)**	**PP584912**	Present study
V. orientalis (Dana, 1852)	*P. orientalis*	Indonesia	*Acropora* sp.	LEM.25	RMNH.CRUS.D.58035	OP326602	Fransen *et al.* 2022
V. orientalis (Dana, 1852)	*P. orientalis*	Maldives	*Pocillopora* sp.	MAL.19	RMNH.CRUS.D.58034	OP326601	Fransen *et al.* 2022
V. orientalis (Dana, 1852)	*P. orientalis*	Vanuatu		FR18	MNHN-IU-2022-2001	OP326600	Fransen *et al.* 2022
V. orientalis (Dana, 1852)	*P. orientalis*	Australia	*Pocillopora* sp.	145	MTQ W-33130	KU064865	Horká *et al.* 2016
V. orientalis (Dana, 1852)	*P. orientalis*	New Caledonia		1189	MNHN-IU-2018-844	**PP584913**	Present study
V. philippinensis Bruce & Svoboda, 1984	*P. philippinensis*	Vietnam		66	UO V10-48	KU064866	Horká *et al.* 2016
V. philippinensis Bruce & Svoboda, 1984	*P. philippinensis*	Australia		144	MTQ W-33131	**PP584917**	Present study
V. philippinensis Bruce & Svoboda, 1984	*P. philippinensis*	Taiwan		916	NMMBCD6103	**PP584916**	Present study
V. philippinensis Bruce & Svoboda, 1984	*P. philippinensis*	Papua New Guinea	*Physogyra lichtensteini*	1091	MNHN-IU-2013-10955	**PP584915**	Present study
V. philippinensis Bruce & Svoboda, 1984	*P. philippinensis*	Papua New Guinea	*Plerogyra sinuosa*	1149	MNHN-IU-2013-10956	**PP577221**	Present study
V. philippinensis Bruce & Svoboda, 1984	*P. philippinensis*	Papua New Guinea	*Plerogyra sinuosa*	1150	MNHN-IU-2013-10723	**PP584914**	Present study
V. philippinensis Bruce & Svoboda, 1984	*P. philippinensis*	Vietnam	*Plerogyra sinuosa*	1666	UO V07-91	**PP577222**	Present study
V. philippinensis Bruce & Svoboda, 1984	*P. philippinensis*	Papua New Guinea		1669	MNHN-IU-2013-10561	**PP577223**	Present study
V. philippinensis Bruce & Svoboda, 1984	*P. philippinensis*	Papua New Guinea	*Plerogyra sinuosa*	1689	MNHN-IU-2013-10718	**PP577224**	Present study
V. philippinensis Bruce & Svoboda, 1984	*P. philippinensis*	Indonesia	*Plerogyra sinuosa*	E14	RMNH.CRUS.D.53093	**OQ384762**	Present study
V. philippinensis Bruce & Svoboda, 1984	*P. philippinensis*	Philippines	*Plerogyra sinuosa*	CEBU.10	RMNH.CRUS.D.48528	OQ384763	Fransen *et al.* 2023
V. philippinensis Bruce & Svoboda, 1984	*P. philippinensis*	Indonesia	*Physogyra lichtensteini*	S07	RMNH.CRUS.D.53085	**OQ384754**	Present study
V. philippinensis Bruce & Svoboda, 1984	*P. philippinensis*	Indonesia	*Physogyra lichtensteini*	S10	RMNH.CRUS.D.53080	OQ384749	Fransen *et al.* 2023
V. philippinensis Bruce & Svoboda, 1984	*P. philippinensis*	Indonesia	*Physogyra lichtensteini*	S16	RMNH.CRUS.D.53086	OQ384755	Fransen *et al.* 2023
V. philippinensis Bruce & Svoboda, 1984	*P. philippinensis*	Indonesia	*Physogyra lichtensteini*	S33	RMNH.CRUS.D.53081	**OQ384750**	Present study
V. philippinensis Bruce & Svoboda, 1984	*P. philippinensis*	Indonesia	*Plerogyra sinuosa*	S43	RMNH.CRUS.D.53082	OQ384751	Fransen *et al.* 2023
V. philippinensis Bruce & Svoboda, 1984	*P. philippinensis*	Indonesia	*Plerogyra sinuosa*	S49	RMNH.CRUS.D.53083	OQ384752	Fransen *et al.* 2023
V. philippinensis Bruce & Svoboda, 1984	*P. philippinensis*	Indonesia	*Physogyra lichtensteini*	S73	RMNH.CRUS.D.53084	**OQ384753**	Present study
V. philippinensis Bruce & Svoboda, 1984	*P. philippinensis*	Indonesia	*Plerogyra sinuosa*	S74	RMNH.CRUS.D.53087	**OQ384756**	Present study
V. philippinensis Bruce & Svoboda, 1984	*P. euphyllius ?*	Philippines	*Fungia* sp.	1294	RMNH.CRUS.D.35559 **(paratype)**	**PP577225**	Present study
V. smiti Fransen & Holthuis, 2007	*P. smiti*	Taiwan		674	NMMBCD5619	ON372600	Frolová *et al.* 2022
V. smiti Fransen & Holthuis, 2007	*P. smiti*	Papua New Guinea		1152	MNHN-IU-2013-1087	**PP577226**	Present study
V. smiti Fransen & Holthuis, 2007	*P. smiti*	Papua New Guinea		1668	MNHN-IU-2013-10982	**PP577227**	Present study
V. smiti Fransen & Holthuis, 2007	*P. smiti*	Papua New Guinea	*Physogyra lichtensteini*	1670	MNHN-IU-2013-10769	**PP584918**	Present study
V. smiti Fransen & Holthuis, 2007	*P. smiti*	Taiwan		1672	NMMBCD6101	**PP577228**	Present study
V. smiti Fransen & Holthuis, 2007	*P. smiti*	Philippinens	*Physogyra lichtensteini*	1923	RMNH.CRUS.D.48539 **(holotype)**	**PP584919**	Present study
V. smiti Fransen & Holthuis, 2007	*P. smiti*	Indonesia	*Physogyra lichtensteini*	E11	RMNH.CRUS.D.51742	**OQ384769**	Present study
V. smiti Fransen & Holthuis, 2007	*P. smiti*	Indonesia	*Physogyra lichtensteini*	E12	RMNH.CRUS.D.51743	**OQ384770**	Present study
V. smiti Fransen & Holthuis, 2007	*P. smiti*	Indonesia	*Physogyra lichtensteini*	BAL.20	RMNH.CRUS.D.49854	**OQ384771**	Present study
V. smiti Fransen & Holthuis, 2007	*P. smiti*	Indonesia	*Physogyra lichtensteini*	S20	RMNH.CRUS.D.53076	OQ384765	Fransen *et al.* 2023
V. smiti Fransen & Holthuis, 2007	*P. smiti*	Indonesia	*Physogyra lichtensteini*	S23	RMNH.CRUS.D.53077	OQ384766	Fransen *et al.* 2023
V. smiti Fransen & Holthuis, 2007	*P. smiti*	Indonesia	*Physogyra lichtensteini*	S31	RMNH.CRUS.D.53078	OQ384767	Fransen *et al.* 2023
V. smiti Fransen & Holthuis, 2007	*P. smiti*	Indonesia	*Physogyra lichtensteini*	S40	RMNH.CRUS.D.53079	OQ384768	Fransen *et al.* 2023
Outgroup							
P. rotumana (Borradaile, 1898)		Vietnam	free-living	699	UO V10-15D	**PP584905**	Present study
P. pottsi (Borradaile, 1915)		Taiwan	Crinoidea	698	NMMBCD5614	ON372590	Frolová *et al.* 2022
P. burnsi Holthuis, 1973		Taiwan	free-living	926	UO Tw17-37	**PP584887**	Present study
P. aliska Marin, 2008		Papua New Guinea	In the hole with gobi fish and *Alpheus* sp.	704	MNHN-IU-2013-11044	ON372582	Frolová *et al.* 2022

Newly sequenced data are marked in bold. Used abbreviations and symbols: MNHN, National Museum of Natural History, France; MTQ, Museum of Tropical Queensland, Australia; NMMBCD, National Museum of Marine Biology and Aquarium (Crustacea Decapoda), Taiwan; NTM, Museum and Art Gallery of the Northern Territory, Darwin, Australia; RMNH, Naturalis Biodiversity Center, Leiden, Netherlands; UO, University of Ostrava, Czechia; N/A, sequence not available.

Table S3. Best-fit substitution models determined with Partition Finder based on the Akaike information criterion, and alignment lengths.

Gene	Substitution models
Concatenated data set	
16S	GTR+I+G
18S	HKY+I
COI[A]	SYM+I+G GTR+G
H3	GTR+I+G JC+I GTR+G
16S gene data set	
16S	HKY + G

Model for protein-coding genes (*COI*, *H3*) are shown for the 1st, 2nd or 3rd codon position; saturation test was applied according to Xia *et al*. (2003).
[A]Saturated, without 3rd position.

References

Fransen CHJM, van der Veer E, Frolová P (2022) A new species of scleractinian associated shrimp of the genus *Palaemonella* (Crustacea, Decapoda, Palaemonidae) with a redescription of *Palaemonella orientalis* Dana, 1852. *Zootaxa* **5214**, 557–580. doi:10.11646/zootaxa.5214.4.5

Fransen CHJM, van der Veer E, Ďuriš Z (2023) A new species of *Palaemonella* (Crustacea: Decapoda, Caridea, Palaemonidae) associated with scleractinian corals of the genus *Euphyllia* Dana. *Crustaceana* **96**(4): 345-381. doi:10.1163/15685403-bja10289

Frolová P, Ďuriš Z (2018) *Madangella altirostris*, a new genus and species of palaemonid shrimps (Crustacea: Decapoda: Palaemonidae) from Papua New Guinea. *Zootaxa* **4438**(2), 327–338. doi:10.11646/zootaxa.4438.2.7

Frolová P, Horká I, Ďuriš Z (2022) Molecular phylogeny and historical biogeography of marine palaemonid shrimps (Palaemonidae: Palaemonella–Cuapetes group). *Scientific Reports* **12**, 15237. doi:10.1038/s41598-022-19372-5

Horká I, De Grave S, Fransen CHJM, Petrusek A, Ďuriš Z (2016) Multiple host switching events shape the evolution of symbiotic palaemonid shrimps (Crustacea: Decapoda). *Scientific Reports* **6**, 26486.

Xia XH, Xie Z, Salemi M, Chen L, Wang Y (2003) An index of substitution saturation and its application. *Molecular Phylogenetics and Evolution* **26**, 1–7. doi:10.1016/S1055-7903(02)00326-3