

Table S1. Voucher specimens. List of ceriantharian species, analysed for their cnidomes, showing catalog number, museum for deposit voucher specimens, sampling method, geographical locality, and country. IORAS, P.P. Shirshov Institute of Oceanology RAS, Moscow, Russian Federation; SIO-BIC, Scripps Institution of Oceanography Benthic Invertebrate Collection, San Diego, USA; United States of America; UNIGE, Università degli Studi di Genova, Genova, Italy; ZSM, Zoologische Staatssammlung München, München, Germany. * RV *Western Flyer*, ROV *Doc Ricketts*, Dive 472.

Species	Catalogue number	Museum	Sampling method	Locality	Country
CERIANTHIDAE					
<i>Cerianthus membranaceus</i> (Gmelin, 1791)	MPIT01	UNIGE	SCUBA	Mare Piccolo	Italy
<i>Cerianthus</i> sp. 1	RS03 Co3331	SIO-BIC SIO-BIC	SCUBA SCUBA	Red Sea Red Sea	Saudi Arabia Saudi Arabia
<i>Pachycerianthus multiplicatus</i> (Carlgren, 1912)	Co2864 / /	SIO-BIC / /	Dredging Dredging Dredging	Gullmar Fjord Gullmar Fjord Gullmar Fjord	Sweden Sweden Sweden
<i>Pachycerianthus torreyi</i> (Arai, 1965)	Co2998 Co3000	SIO-BIC SIO-BIC	SCUBA SCUBA	Scripps Canyon Scripps Canyon	USA USA
<i>Pachycerianthus dohrni</i> (van Beneden, 1923)	20170051 Co2997	ZSM SIO-BIC	SCUBA SCUBA	Capo Noli Ischia	Italy Italy
BOTRUCNIDIFERIDAE					
<i>Botrucnidifer</i> sp. 1	Co2832	SIO-BIC	ROV*	Del Mar Methane Seep	USA
<i>Botruanthus benedeni</i> (Torres and Kleeberger, 1909)	Co2831	SIO-BIC	SCUBA	San Clemente Island	USA
ARACHNACTIDAE					
<i>Isarachnanthus maderensis</i> (Johnson, 1861)	Co3008 Co2866	SIO-BIC SIO-BIC	SCUBA SCUBA	Ionian Sea Ionian Sea	Italy Italy