

Table S1: Details of the COI and 16S sequences analysed in this study

Gene	GenBank Accession	BOLD Accession	Submitted as	Clade	Sampling Location	Reference
COI	OM025233	pending	<i>Tremoctopus violaceus</i>	B	Apulia, Italy —Mediterranean Sea	present study
COI	AF377978	GBCPH0220-06	<i>Tremoctopus violaceus</i>	A	Florida, U.S.A. — Atlantic Ocean	[55]
COI,16S	KY649286	GBML12075-19	<i>Tremoctopus violaceus</i>	A	Taiwan — Pacific Ocean	[56]
COI	MH379648	GBML35597-19	<i>Tremoctopus gracilis</i>	A	India — Indian Ocean	Geetha <i>et al.</i> , unpublished
COI	MN443917	GBMNB71454-20	<i>Tremoctopus violaceus</i>	A	South Korea — Pacific Ocean	Kim, unpublished
COI	MW025168	GBMND9913-21	<i>Tremoctopus violaceus</i>	A	South Korea — Pacific Ocean	Oh <i>et al.</i> , unpublished
COI	MK186001	KERCE079-17	<i>Tremoctopus robsoni</i>	C	New Zealand — Pacific Ocean	[52]
COI	MN560197	GBMNC27345-20	<i>Tremoctopus sp.</i>	C	Chile — Pacific Ocean	[57]
COI	---	CEPHW173-11	Octopoda	A	Japan — Pacific Ocean	Finn & Steinke, unpublished
COI	---	CEPHW176-11	Octopoda	A	Japan — Pacific Ocean	Finn & Steinke, unpublished
16S	OM025092	---	<i>Tremoctopus violaceus</i>	B	Sardinia, Italy — Mediterranean Sea	present study
16S	OM025093	---	<i>Tremoctopus violaceus</i>	B	Sardinia, Italy — Mediterranean Sea	present study
16S	OM025094	---	<i>Tremoctopus violaceus</i>	B	Apulia, Italy — Mediterranean Sea	present study
16S	MT271737	---	<i>Tremoctopus violaceus</i>	B	Mexico — Atlantic Ocean	[3]
16S	AJ252767	---	<i>Tremoctopus violaceus</i>	A	Hawaii — Pacific Ocean	Hudelot, unpublished
16S	MN435565	---	<i>Tremoctopus violaceus</i>	A	South Korea — Pacific Ocean	Kim, unpublished