

Supplement Table 1: Genbank accession numbers for newly collected sequences

	COI	ENC1	GLYT	MYH6	PLAG	PTR	RAG1	SH3	SREB	TBR	ZIC1
<i>Alepocephalus bicolor</i>	KJ190022	KX227793	KX227812	NA	KX227893	NA	NA	KX227950	NA	KX227989	KJ190108
<i>Argyropelecus affinis</i>	KJ190035	KX227794	NA	KX227850	KX227894	KX227913	KX228066	KX227951	NA	KX227990	KJ190121
<i>Aulopus filamentosus</i>	EU366546	EU366593	KX227813	KX227851	EU366642	NA	EU366688	NA	NA	NA	EU366733
<i>Avocettina infans</i>	KX228016	NA	KX227814	KX227852	KX227895	KX227914	NA	KX227952	NA	KX227991	NA
<i>Bathyclupea gracilis</i>	NA	NA	KX227815	KX227853	NA	KX227915	NA	KX227953	KX227980	KX227992	KX228050
<i>Bathysaurus ferox</i>	EU366547	EU366594	KX227816	KX227854	EU366643	KX227916	EU366689	NA	NA	NA	EU366734
<i>Benthoosema glaciale</i>	KF768167	NA	KX227817	NA	NA	KX227917	KF768155	KX227954	NA	KX227993	KF768160
<i>Chauliodus danae</i>	KX228017	KX227795	KX227818	KX227855	NA	KX227918	NA	KX227955	NA	KX227994	KX228049
<i>Coccorella atlantica</i>	EU366554	EU366601	KX227819	KX227856	EU366649	KX227919	EU366696	NA	NA	NA	EU366741
<i>Diplophos taenia</i>	KJ190028	KX227796	KX227820	KX227857	KX227896	KX227920	KJ190079	KX227956	KX227981	NA	KJ190114
<i>Evermannella indica</i>	EU366555	EU366602	KX227821	KX227858	EU366650	NA	EU366697	NA	NA	NA	EU366742
<i>Facciolella gilbertii</i>	KF768170	KX227797	NA	KX227859	KX227897	KX227921	NA	KX227957	KX227982	KX227995	KF768162
<i>Gadella jordani</i>	KX228018	KX227798	KX227822	KX227860	KX227898	NA	NA	KX227958	NA	NA	NA
<i>Gigantura indica</i>	EU366557	EU366604	KX227823	KX227861	EU366652	KX227922	EU366699	NA	NA	NA	EU366744
<i>Harpadon nehereus</i>	EU366558	EU366605	KX227824	KX227862	EU366653	KX227923	EU366700	NA	NA	NA	EU366745
<i>Hime japonicus</i>	EU366545	EU366592	KX227825	KX227863	EU366641	KX227924	EU366687	NA	NA	NA	EU366732
<i>Holtbyrnia latifrons</i>	KJ190023	NA	KX227826	KX227864	KX227899	KX227925	NA	KX227959	NA	KX227996	KJ190109
<i>Ipnops sp</i>	EU366560	EU366607	KX227827	KX227865	EU366655	KX227926	EU366702	NA	NA	NA	EU366747
<i>Lepidophanes guentheri</i>	KJ190062	NA	NA	NA	KX227900	KX227927	KJ190094	KX227960	NA	NA	KJ190147
<i>Leuroglossus stilbuis</i>	KX228019	KX227799	KX227828	KX227866	KX227901	KX227928	KX228065	KX227961	NA	KX227997	KX228048
<i>Lucigadus nigromarginatus</i>	NA	KX227800	KX227829	KX227867	NA	KX227929	KX228064	KX227962	NA	KX227998	KX228047
<i>Margrethia obtusirostra</i>	KJ190029	KX227801	NA	KX227868	NA	KX227930	KJ190080	KX227963	NA	KX227999	NA
<i>Mirorictus taningi</i>	KX228020	NA	KX227830	KX227869	KX227902	NA	KX228063	NA	NA	NA	KX228046
<i>Myctophum punctatum</i>	KJ190065	NA	KX227831	KX227870	KX227903	KX227931	KX228062	KX227964	NA	KX228000	NA
<i>Nannobranchium lineatum</i>	KX228021	NA	KX227832	NA	NA	KX227932	KX228061	KX227965	NA	NA	KX228045
<i>Neoscopelus macrolepidotus</i>	EU366587	EU366632	NA	KX227871	EU366678	KX227933	EU366727	KX227966	KX227983	KX228001	EU366771
<i>Normichthys yahganorum</i>	NA	NA	KX227833	KX227872	KX227904	KX227934	NA	KX227967	NA	KX228002	KX228044
<i>Opisthoproctus grimaldii</i>	NA	KX227802	NA	KX227873	NA	NA	KX228060	NA	NA	KX228003	KX228043
<i>Parasudis truculenta</i>	EU366569	EU366616	KX227834	KX227874	NA	KX227935	EU366710	NA	NA	NA	EU366753
<i>Paraulopus oblongus</i>	EU366568	EU366615	KX227835	KX227875	EU366664	KX227936	EU366709	NA	NA	NA	EU366752
<i>Persarsia kopua</i>	KX228022	NA	NA	KX227876	KX227905	KX227937	NA	KX227968	NA	KX228004	KX228042
<i>Plecoglossus altivelis</i>	KJ190025	KX227803	KX227836	KX227877	NA	NA	KJ190076	KX227969	KX227984	KX228005	KX228041
<i>Polymetme thaeocoryla</i>	KJ190039	KX227804	NA	KX227878	NA	KX227938	KX228059	KX227970	KX227985	KX228006	KX228040
<i>Pseudoscopelus sp</i>	KX228023	KX227805	KX227837	KX227879	KX227906	KX227939	KX228058	KX227971	KX227986	KX228007	KX228039
<i>Pseudotriconotus altivelis</i>	EU366570	EU366617	KX227838	KX227880	NA	KX227940	EU366711	NA	NA	NA	EU366754
<i>Rhynchohyalus natalensis</i>	KX228024	KX227806	KX227839	KX227881	NA	NA	KX228057	KX227972	NA	KX228008	KX228038
<i>Rosenblattia robusta</i>	KX228025	KX227807	KX227840	KX227882	KX227907	KX227941	KX228056	KX227973	NA	KX228009	KX228037
<i>Rouleina guentheri</i>	NA	NA	KX227841	KX227883	NA	KX227942	NA	KX227974	NA	KX228010	KX228036
<i>Saurida tumbil</i>	KF768174	KX227808	KX227842	KX227884	NA	KX227943	KX228055	NA	NA	NA	KX228035
<i>Scopelosaurus harryi</i>	EU366572	EU366619	KX227843	KX227885	EU366666	KX227944	EU366713	NA	NA	NA	EU366756
<i>Sigmops elongatum</i>	KX228026	KX227809	KX227844	KX227886	KX227908	NA	NA	NA	NA	NA	KX228034
<i>Sternoptyx pseudobscura</i>	KF768176	NA	NA	KX227887	KX227909	NA	KX228054	KX227975	KX227987	KX228011	KX228033
<i>Stomias atriventer</i>	KF768177	KX227810	NA	KX227888	KX227910	KX227945	KX228053	KX227976	NA	KX228012	KF768166
<i>Synaphobranchus oregoni</i>	KX228027	NA	KX227845	KX227889	KX227911	KX227946	NA	KX227977	NA	KX228013	KX228032
<i>Synodus kaianus</i>	EU366578	EU366625	KX227846	KX227890	EU366672	KX227947	EU366719	NA	NA	NA	EU366761
<i>Talismania bifurcata</i>	KX228028	KX227811	KX227847	NA	KX227912	NA	KX228052	NA	NA	NA	KX228031
<i>Thaleichthys pacificus</i>	KX228029	EU366635	KX227848	KX227891	EU366681	KX227948	AY380537	KX227978	KX227988	KX228014	EU366774
<i>Triphoturus mexicanus</i>	KJ190074	NA	KX227849	KX227892	NA	KX227949	KX228051	KX227979	NA	KX228015	KX228030