

High-resolution molecular identification of smalltooth sawfish prey

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Supplementary Figure S1.

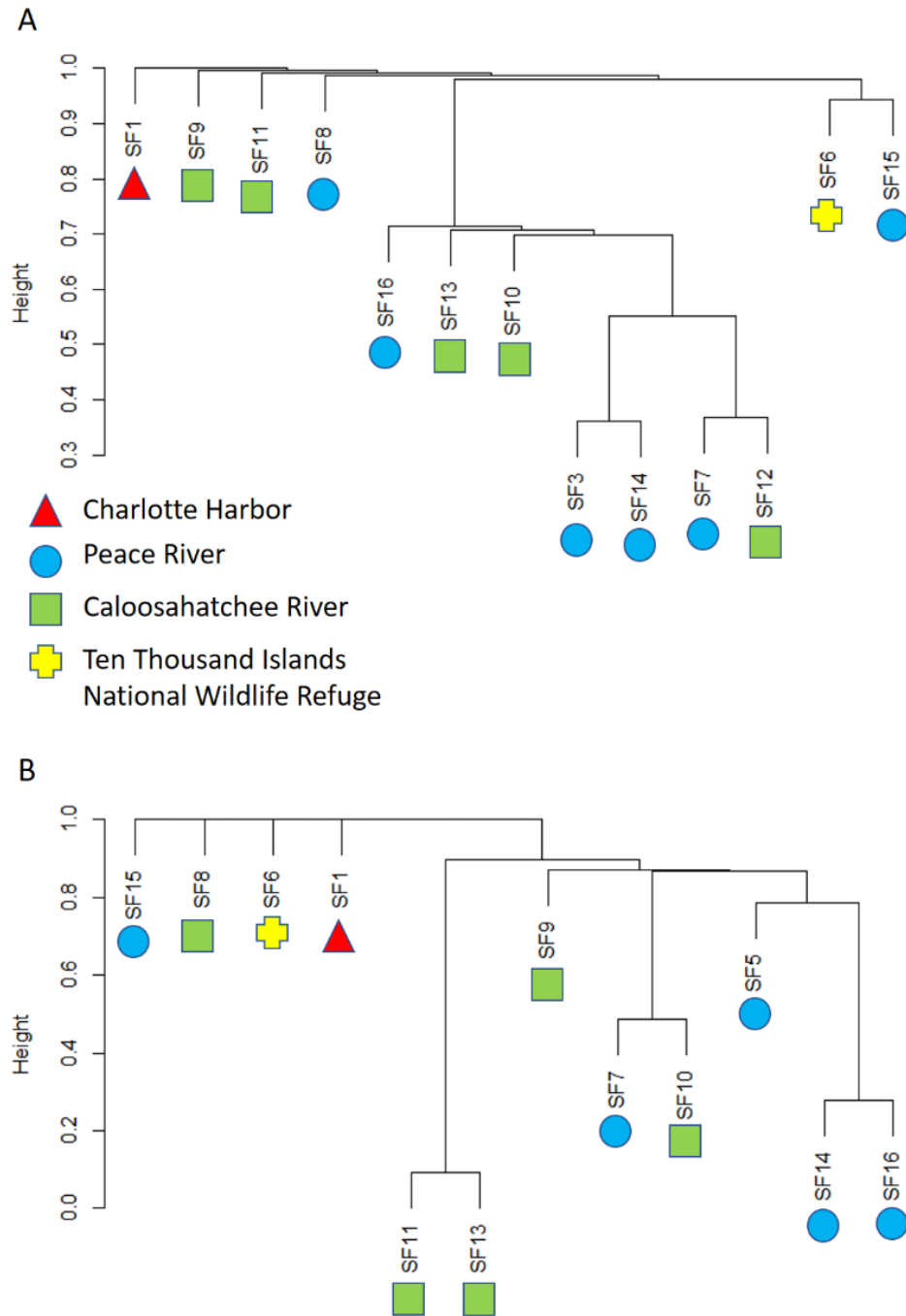


Fig. S1. Hierarchical clustering dendrogram of Bray Curtis similarity analysis of samples for mitochondrial 12S (A) and 16S (B) rRNA genes after removing individuals in which no prey taxa were detected. River originated samples (Peace River and Caloosahatchee River) exhibited some similarities and clustered together.

Supplementary Figure S2.

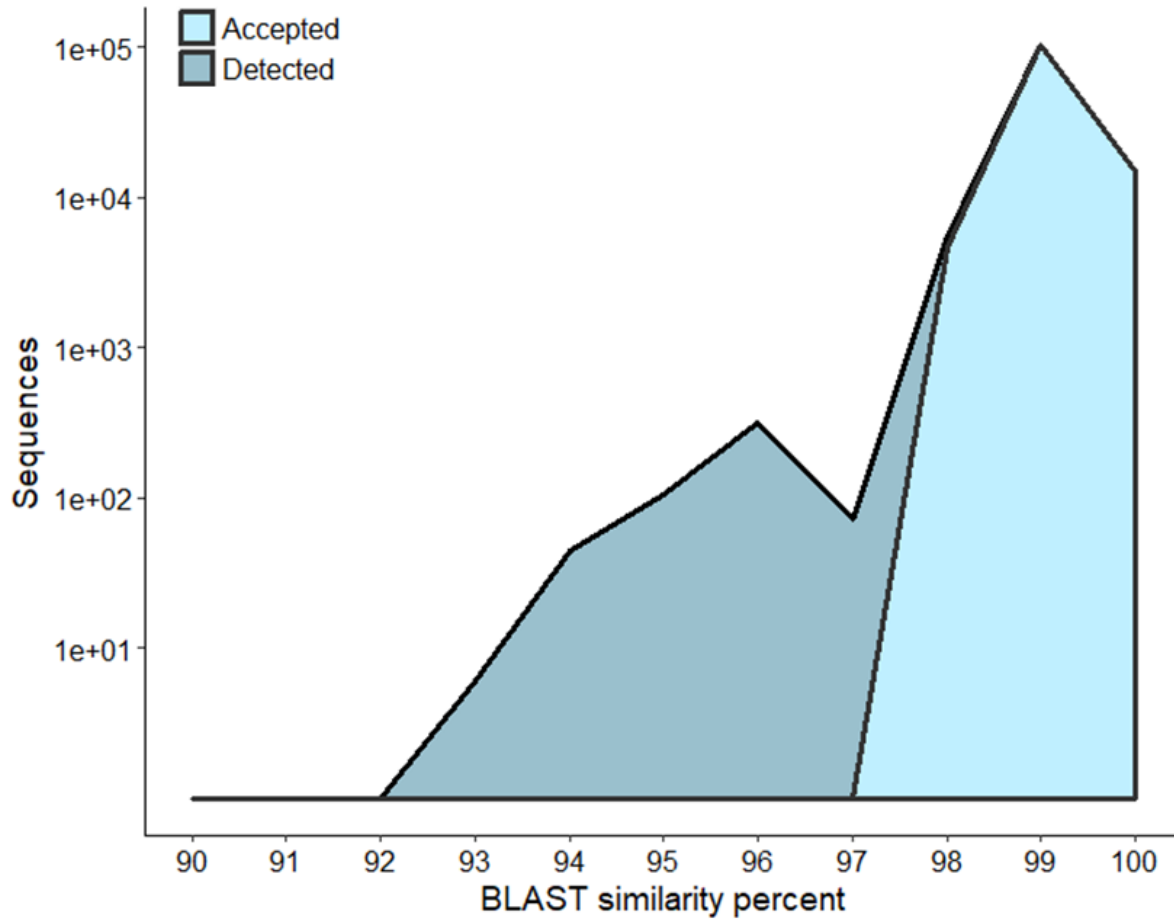


Fig. S2. Estimation of smalltooth sawfish host sequencing errors determined using sequence distributions in Basic Local Alignment Search Tool similarity scores. Distribution of mitochondrial 12S and 16S rRNA sequences identified as smalltooth sawfish are shown as areas (dark blue, errors were detected and rejected; light blue, accepted) on a logarithmic scale with corresponding BLAST similarity scores. These distributions were used to estimate sequencing error, resulting in the conclusion that a BLAST similarity score of $\geq 98\%$ was accurate in our prey identification protocol.

Supplementary Table S1. Relative taxonomic abundance of 18S rRNA gene sequences (%) in smalltooth sawfish fecal samples after removal of host sequences.

Taxa	Classification	SF1	SF3	SF4	SF5	SF6	SF7	SF8	SF9	SF10	SF11	SF12	SF13	SF14	SF15	SF16
Actinopterygii	Class	7.67	96.22	0.47	89.01	48.78	82.71	95.92	97.60	92.43	55.08	44.94	48.42	99.60	95.87	77.20
Amoebozoa	Phylum								0.12							
Anthozoa	Class												18.63	0.03		
Asterales	Order								0.78							
Bacillariophyceae	Phylum								0.10							1.18
Bivalvia	Class								0.12							1.53
Chlorophyceae	Class	22.81	0.06		0.06				0.44					0.06		0.70
Chondrichthyes	Subclass	1.03	1.03		7.17	18.90	6.45	1.68	0.13	6.17	34.76		0.21	0.16	4.04	0.58
Chromadorea	Class	24.72	0.17							1.03		32.58	31.92			0.02
Conoidasida	Class	0.47	0.05		0.32			0.19			10.16	2.81	0.45			16.63
Coscinodiscophyceae	Class	11.55												0.01		
Dinophyceae	Phylum	16.58		19.81	3.31		10.84									
Enoplea	Class											8.43	0.13			
Gastrotricha	Phylum											11.24				
Haptophyceae	Class								0.41							
Hexanauplia	Class														0.03	
Katablepharidophyta	Class			23.07												
Labyrinthulomycetes	Class							0.12								0.04
Malacostraca	Class		2.47	56.65	0.13			0.17		0.33				0.12		
Malpighiales	Order	0.20														
Mammalia	Class															0.82
Maxillopoda	Class	6.87														
Myxosporea	Class	6.19				32.32		1.92		0.04					0.06	1.12
Spirotrichea	Class								0.30							
Poales	Order	0.57												0.02		
Saccharomycetes	Class	1.34														
Streptophyta	Class															0.18
Trematoda	Class												0.24			

Supplementary Table S2. Fish species in sampling area sequenced for mitochondrial 12S and 16S rRNA genes.

Family	Species	Common name	Gene(s) sequenced	GenBank Accession #
Belontiidae	<i>Strongylura notata</i>	Redfin Needlefish	16S	MH716001
Dasyatidae	<i>Dasyatis americana</i>	Southern Stingray	12S, 16S	MH715301, MH715984
Dasyatidae	<i>Dasyatis sabina</i>	Atlantic Stingray	12S, 16S	MH715302, MH715985
Gerreidae	<i>Eucinostomus gula</i>	Silver Jenny	16S	MH715986
Gerreidae	<i>Eucinostomus harengulus</i>	Tidewater Mojarra	12S, 16S	MH715303, MH715987
Gerreidae	<i>Eugerres plumieri</i>	Striped Mojarra	16S	MH715988
Gobiesocidae	<i>Gobiesox strumosus</i>	Skilletfish	16S	MH715989
Gobiidae	<i>Bathygobius soporator</i>	Frillfin Goby	12S, 16S	MH715298, MH715981
Gobiidae	<i>Ctenogobius boleosoma</i>	Darter Goby	12S, 16S	MH715299, MH715982
Gobiidae	<i>Ctenogobius smaragdus</i>	Emerald Goby	12S, 16S	MH715300, MH715983
Gobiidae	<i>Gobionellus oceanicus</i>	Highfin Goby	12S, 16S	MH715304, MH715990
Gobiidae	<i>Gobiosoma longipala</i>	Twoscale Goby	12S, 16S	MH715305, MH715991
Gymnuridae	<i>Gymnura micrura</i>	Smooth Butterfly Ray	12S, 16S	MH715306, MH715992
Lutjanidae	<i>Lutjanus griseus</i>	Gray Snapper	12S	MH715307
Lutjanidae	<i>Lutjanus synagris</i>	Lane Snapper	12S, 16S	MH715308, MH715995
Mugilidae	<i>Mugil trichodon</i>	Fantail Mullet	12S, 16S	MH715311, MH715998
Rajidae	<i>Raja eglanteria</i>	Clearnose Skate	16S	MH715999
Sciaenidae	<i>Bairdiella chrysoura</i>	Silver Perch	12S, 16S	MH715297, MH715980
Sciaenidae	<i>Leiostomus xanthurus</i>	Spot	16S	MH715994
Sciaenidae	<i>Menticirrhus littoralis</i>	Gulf Kingfish	12S, 16S	MH715309, MH715996
Sciaenidae	<i>Micropogonias undulatus</i>	Atlantic Croaker	12S, 16S	MH715310, MH715997
Scorpaenidae	<i>Scorpaena brasiliensis</i>	Barbfish	12S, 16S	MH715312, MH716000
Sparidae	<i>Lagodon rhomboides</i>	Pinfish	16S	MH715993
Synodontidae	<i>Synodus foetens</i>	Inshore Lizardfish	16S	MH716002

Supplementary Table S3. Analyzed sequence reads (SE: ± 39647) of 18S rRNA gene and relative abundance (SE: $\pm 7.0\%$) of host sequences.

Sample	Analyzed sequence reads	Smalltooth sawfish sequences (%)
SF1*	29493	57.2
SF3	23835	58.0
SF4	28667	88.9
SF5	20692	50.9
SF6*	28434	99.4
SF7	24764	70.0
SF8	33341	87.5
SF9	28583	74.5
SF10	29794	51.8
SF11	38248	97.7
SF12	334831	99.8
SF13	421995	86.9
SF14	156696	15.7
SF15	26773	22.0
SF16	436500	91.3
Total	1662646	
Mean	110843	70.1

*Sample obtained from necropsy

Supplementary Table S4. Mitochondrial 12S and 16S rRNA gene species-signature sequences identified for analysis, with those resulting from our sequencing effort denoted by bold text. Data are in alphabetical order by family. Mean = 40.0 bp; Min = 36 bp; Max = 44 bp.

Family	Species	Common name	Gene	GenBank Accession No.	Species specific sequence	Base pairs
Achiridae	<i>Achirus lineatus</i>	Lined Sole	12S	NC_023768	CTACAACAGCATAGCACGAATTTTGTGTTTGAAACATACAA	40
			16S	NC_023768	CTCCCGGATTCTTCCCTCAAGGACATTTAATTAATATATA	40
	<i>Gymnachirus melas</i>	Naked Sole	16S	JQ939050	CTCCCGGCTTCTTCCAGACCGAGAGAGTTAGTCAAAAGG	40
	<i>Trinectes maculatus</i>	Hogchoker	12S	NC_023769	CTACCACAGCACACTACGAATGTTATGTTGAAACACACAA	40
			16S	NC_023769	CTCCCGGCTTCTTTCCTCACCACCACTTCAACACACCCCA	40
Acipenseridae	<i>Acipenser oxyrinchus</i>	Atlantic Sturgeon	12S	KP997217	CTGATACAGAAAATACACGAATAACACTGTGAAACCAGTG	40
			16S	KP997217	CTTAAGGCTTCTACTGCCACCCAGGTTATTACCAACAAAG	40
Albulidae	<i>Albula vulpes</i>	Bonefish	12S	X99180	CTGGTTCAGAATATTACGGATAATGCTTTGAAACAAGCAT	40
Amiidae	<i>Amia calva</i>	Bowfin	12S	NC_004742	CTAACTACAGAATACTACGGATGATTCTATGAAACATAGA	40
			16S	NC_004742	TTTAAGGATACTCAAACCACTACAGTGTTACCACCAAAG	40
Anguillidae	<i>Anguilla rostrata</i>	American Eel	16S	KJ564271	CTTATGTAATTCTATAATCAAACATTACCGACCAAAAGA	40
Aphredoderidae	<i>Aphredoderus sayanus</i>	Pirate Perch	12S	NC_004372	CTCAATGAGATTATTACTAATGGTAAATTGAAATATTAAC	40
			16S	NC_004372	CCTTTAATCTCTTAACCCCTAGACGATAATCCCCAACAGG	40
Rivulidae	<i>Kryptolebias marmoratus</i>	Mangrove Rivulus	12S	AF283503	CTACACAGGGAACCACGGATAGTACAATGAAATGTGTACA	40
			16S	AF283503	TATTCTTTAATCAAAACTAATTTAATTTTAAGTAGACAAC	40
Ariidae	<i>Ariopsis felis</i>	Hardhead Catfish	12S	DQ990564	CTATAATAATAGAATACTACGGACGGCACTCTGAAATCAG	40
	<i>Bagre marinus</i>	Gafftopsail Catfish	12S	JX899751	CTATAATAATAGAATATTACGGACGGCACCCCTGAAACCAG	40
			16S	JX899751	CTCACACTCCTTGACTCACAACTATTTATTAATATATGAA	40
Atherinidae	<i>Atherinomorus stipes</i>	Hardhead Silverside	12S	AF150001	CTAACCCAGGTAATACGAAAAATGCAATGAAAGCGTTAGA	40
Atherinopsidae	<i>Labidesthes sicculus</i>	Brook Silverside	16S	AY655511	CCCTAGACTTCTATAGTTTCGACTGGTACAACCTTTTCCC	40
	<i>Menidia beryllina</i>	Inland Silverside	12S	KX686069	CTGACCCAGGAAATCACGGACAGGGCCATGAAATTGGGCC	40
Balistidae	<i>Balistes capricus</i>	Gray Triggerfish	12S	AY700238	CTGCCCCAGGTAACCACGGACGATTTATTGAAAAATAAAT	40
Belonidae	<i>Strongylura marina</i>	Atlantic Needlefish	12S	AF231554	ACTACTAATAAGCAGAATTGGCACAGCCCCAAAACGTCAGG	40
	<i>Strongylura notata</i>	Redfin Needlefish	12S	AF150002	CTAACTCAGGGTATACGAAAAATGTCATGAAAAACACAT	39
			16S	MH716001	CTATTAACTTTTTTACCCTTAATTGGTCTCACCCTTAAAC	40
	<i>Strongylura timucu</i>	Timucú	12S	AF231570	CTAACCCAGGTAATACGAAAAATGCAATGAAAAAAGCAT	39

Family	Species	Common name	Gene	GenBank Accession No.	Species specific sequence	Base pairs
	<i>Tylosurus crocodilus</i>	Houndfish	12S	AF231578	CTAAACCAGGGTATACGGAAAATACAATGAAATACGTAT	39
Blenniidae	<i>Chasmodes saburrae</i>	Florida Blenny	12S	GQ865562	ACCCTCGTTAAACCTCACCCCTTTCTTGCCTATTTCCCGCC	40
	<i>Hypsoblennius hentz</i>	Feather Blenny	12S	GQ865559	CTGAAATCAGGATATACGAATAATGTTTTGAAAAAGGCAC	40
Bothidae	<i>Bothus robinisi</i>	Twospot Flounder	12S	AF488509	GAGAAGGACAAGTCGTGTGCAGAATTGGCAAAGCCCAAGA	40
			16S	JQ939056	CCCCTAGTTTTTCCGCACCCCAGGGGAGTTATTCACAGG	40
Callichthyidae	<i>Hoplosternum littorale</i>	Brown Hoplo	12S	HM114386	GCTACATTTTCTATTACAGAATATTACGAATAGCACTATG	40
Carangidae	<i>Caranx hippos</i>	Crevale Jack	16S	DQ533167	CTCATGGCTTCTCCCTTCATATAATAATAACCACCTAATG	40
	<i>Chloroscombrus chrysurus</i>	Atlantic Bumper	12S	AY141387	CTACCCCTAGCGAACACGAATGATGCATTGAAACATGCAG	40
	<i>Hemicaranx amblyrhynchus</i>	Bluntnose Jack	16S	JQ939028	CTCATAGCTTCTCCTTAAACTGTGAGAGTTAGTCAAAGGG	40
	<i>Trachinotus carolinus</i>	Florida Pompano	12S	NC_024184	CTAAGATAGCGAACACGAATGATGCATTGAAACATACAAC	40
			16S	NC_024184	CTCCCGGGTTCTTCCCTCACCCCAATATGGTTTTTAACCA	40
	<i>Trachinotus falcatus</i>	Permit	16S	JQ939038	CTCCCGGCTTCTCCCTAAACCGCGAGAGTTAGTCAAAGGA	40
Carcharhinidae	<i>Carcharhinus acronotus</i>	Blacknose Shark	12S	NC_024055	TGAAGGACCAAAAAGTAAGCAAAAAGAATTAACCTCCAAAA	40
			16S	NC_024055	GCATTACAGAGCCAAACCGTCTCTGTGGCAAAAGAGTGGG	40
	<i>Carcharhinus brevipinna</i>	Spinner Shark	12S	NC_027081	AGAGGAGATCAGAGTACTCCTCTGAAACTGGCTCTGGGAT	40
	<i>Carcharhinus isodon</i>	Finetooth Shark	16S	AY830729	TTCACCATCTAAACAAGACTTACTCGTCAAAGAAATATAT	40
	<i>Carcharhinus leucas</i>	Bull Shark	12S	NC_023522	CACCCTGTGAAGGATCAAAAAGTAAGCAAAAAGAATT	36
			16S	NC_023522	TTTTTCACTATCTAGACAAGACTTACTCGTCAAAGAATTC	40
	<i>Carcharhinus limbatus</i>	Blacktip Shark	16S	AY830732	TTTTTTACCATCTAAACAAGATTTTCTTGTTAAAGAAACC	40
	<i>Galeocerdo cuvier</i>	Tiger Shark	12S	NC_022193	CCTGTGAAGGACTAAAAGTAAGCAAAAAGAATAAACTTC	40
			16S	NC_022193	ATTTTAAATATTTAAACAAGACTTACTCGTTAAAGACCT	40
	<i>Negaprion brevirostris</i>	Lemon Shark	12S	AY830756	TTCCTAAAAATATACGAATGGTGAAGTGAACACACCTA	40
			16S	AY830756	ATTTTTTATTATCTAAACAAGACTTACTCGTCAAAGAAAC	40
	<i>Rhizoprionodon terraenovae</i>	Atlantic Sharpnose Shark	12S	AY830764	TTTTCAAAAATAAACGAATGGTAAACTGAAAAACACCTA	40
			16S	AY830764	ATTTTTTACTACCTAAACAAGATTTACTCGTCAAAGGAAT	40
Catostomidae	<i>Erimyzon sucetta</i>	Lake Chubsucker	12S	KM273816	CTATTCCAGAATAACACGAACAGCACTATGAAAAAATGCT	40
			16S	KM282468	GGTGAGCTACCCCGAGACAGCCTACATAGGGCCAACCCGT	40
Centrarchidae	<i>Enneacanthus gloriosus</i>	Bluespotted Sunfish	16S	AY742519	CTCCCGGCTCTTTTCTCATCTTAGTCTTTTCTCCCTACA	40
	<i>Lepomis gulosus</i>	Warmouth	12S	KM273835	TTAATAGAAAGTACACGAATGACTGACTGAAACGTCTTTC	40

Family	Species	Common name	Gene	GenBank Accession No.	Species specific sequence	Base pairs
			16S	AY742525	CTCCCGGCTTCTTACCTCAAACCCGTCGTAACCCCTTACA	40
	<i>Lepomis macrochirus</i>	Bluegill	12S	JN389795	TTAATAAAAAGAATACGAATGACTGACTGAAACGTCTTTC	40
			16S	JN389795	CTCTCGGATTCTTACCTCACTCTCGTCTAAACACCCAACA	40
	<i>Lepomis marginatus</i>	Dollar Sunfish	16S	AY742531	CTCTCGGGTTCTTATTTCATCTCCGCCTAAGCACCAAGCA	40
	<i>Lepomis microlophus</i>	Redear Sunfish	16S	AY742535	CTCCCGGCTTCTTATTTCATGTCCGTCTTTGCACCCAACA	40
	<i>Lepomis punctatus</i>	Spotted Sunfish	12S	MF621732	TTAACAAAAAGAATACGAATGATTGACTGAAATGTCTTTC	40
			16S	MF621732	CTCCCGGCTTCTTATTTCATATTCTGCTTCACACCCAACA	40
	<i>Micropterus salmoides</i>	Largemouth Bass	12S	NC_014686	CAGGGAATACGAACGATAAACTGAAATGTTTTCCAAAGG	40
			16S	NC_014686	CTCGCAGCTTCTTCACTCACCCCTGTCCTACTCCCTACAG	40
	<i>Pomoxis nigromaculatus</i>	Black Crappie	12S	NC_028298	TACATTAGGGAATACGAACGACGTACTGAAATCTTACGTC	40
			16S	NC_028298	CTCCCGGCTTCTTTTTCTACCCTTGTCTAACACCTATA	40
Centropomidae	<i>Centropomus undecimalis</i>	Common Snook	12S	KC441979	CTACCACCAGCGCATACGAATAATGTATTGAAACATACTA	40
			16S	HQ731428	CCCCCGGCTTCTACATTCAGTACATCATAGTACATGATC	40
Clariidae	<i>Clarias batrachus</i>	Walking Catfish	12S	KC572134	CTACATCAGAATATTACGAACGGCACCCCTGAAAAAGTGCC	40
			16S	KC572134	CTCGCACTCTCAACTCAAAAACACACGTTAAACACGAA	40
Clupeidae	<i>Brevoortia patronus</i>	Gulf Menhaden	16S	DQ912068	CCCGCCGCGCCCTCGCCACAACAGTTTTACTTAAACAAG	40
	<i>Dorosoma cepedianum</i>	Gizzard Shad	12S	NC_008107	CTGAAGCAGATTATTCACGAAAAGTCATCTGAAATCGATG	40
			16S	NC_008107	CCCGTTTTACCCTTGCCACCGCAGTCTTACTAAAATTAG	40
	<i>Dorosoma petenense</i>	Threadfin Shad	16S	NC_009580	CCCGTTTTACCCTCATCCGCCATAGTTTTACTCAAATTAG	40
	<i>Harengula jaguana</i>	Scaled Sardine	12S	NC_016667	GAGCCAGATGACTACGGAGAGTCGCCTGAAACCTGGCGAT	40
			16S	NC_016667	CCCGAAAGCCCTAGCCATTGCGGTCCCACCAAGATAAAGG	40
	<i>Opisthonema oglinum</i>	Atlantic Thread Herring	12S	EU552701	CTGAAGCAGATTATTCACGAAAAGTCACCTGAAATTAGTG	40
			16S	DQ912074	CCCGTTTAACCCTTATCCACCGCAGTTTCACTAAAATTAG	40
	<i>Sardinella aurita</i>	Spanish Sardine	12S	EU552700	CACAACAAATATCCGCCTGGGAACTACGAGCGTTAGCTTA	40
			16S	DQ912067	CCCGCCGAACCCTCGTACACAACAGTTTTACTTAAATTAA	40
Coryphaenidae	<i>Coryphaena hippurus</i>	Dolphinfish	12S	KF814117	CTAACATAGTGAATACGAATAGTATATTGAAACATATACT	40
			16S	KF814117	CTCCCAGCTTCTCTTTCACCTATTGTACACACAAAACAA	40
Cyprinidae	<i>Ctenopharyngodon idella</i>	Grass Carp	16S	NC_010288	CCTCGCACACCCCAAATCAAAAACATAACATCAAGACAAT	40
	<i>Notemigonus crysoleucas</i>	Golden Shiner	16S	NC_008646	CCTCGTATTACCCCAAACCAAGAACATATCACTAAGGTA	40

Family	Species	Common name	Gene	GenBank Accession No.	Species specific sequence	Base pairs
	<i>Opsopoeodus emiliae</i>	Pugnose Minnow	12S	NC_033926	CTATTATAGAATATTACGAATATGTAACATGAAATAGTGC	40
			16S	NC_033926	CTCGTACCCCTTAATCAAAAATATATTATTAAGACTACG	40
	<i>Pteronotropis hypselopterus</i>	Sailfin Shiner	12S	NC_033939	CTACTACAGAATACTACGGACATGCAACATGAAATAGTGC	40
			16S	NC_033939	AGCCTATATAATTTAGGGCTAACCCGTCTCTGTAGCAAAA	40
Cyprinodontidae	<i>Cyprinodon variegatus</i>	Sheepshead Minnow	12S	NC_028088	CTCATGGAGGAAATACGAATTGTGCCATGCAACAGCAC	38
			16S	NC_028088	ACCTTCTCCTATCAACCCCTGGCCTGCCCTAAGCCCAGAAA	40
	<i>Floridichthys carpio</i>	Goldspotted Killifish	12S	AF449407	CTCTTCGAGGAAATACGGATTGTGCCATGAAACAGCAC	38
			12S	NC_011387	CTCATTGAGGAAATACGAATTGTGCCATGCAACAGCAC	38
	<i>Jordanella floridae</i>	Flagfish	12S	NC_011387	TCTTACCTTCTTCCCTCATCTCTGGCTTGCCCTAAACCCA	40
			16S	NC_011387	TCTTACCTTCTTCCCTCATCTCTGGCTTGCCCTAAACCCA	40
Dasyatidae	<i>Dasyatis americana</i>	Southern Stingray	12S	MH715301	TTTCTAGAATACACGGACAGAAGCATGAAAACTTCTTAA	40
			16S	MH715984	ATTAATTTTTCAACTCGATAACAAAAAATTCTTTTAACAA	40
	<i>Dasyatis sabina</i>	Atlantic Stingray	12S	MH715302	TTTCTAGAGTACACGAACAAAAGCATGAAAACTTCTTGA	40
			16S	MH715985	ATTAATTTTTCAACTCGATAACAAAATCTTTTTTAACAAA	40
Diodontidae	<i>Chilomycterus schoepfi</i>	Striped Burrfish	12S	AY700256	CTTCAACAGGGAACCTACGAATGGCATTTTGAAATACATGC	40
			12S	NC_009866	GCCCCCGCGGGAACCTACGAGCACCAGCTTAAACCCAAAG	40
	<i>Diodon holocanthus</i>	Balloonfish	12S	NC_009866	TTTTGACTTCTTCCCCCAAAAACCTTAATTAACCCACCA	40
			16S	NC_009866	TTTTGACTTCTTCCCCCAAAAACCTTAATTAACCCACCA	40
Echeneidae	<i>Echeneis naucrates</i>	Sharksucker	16S	NC_022508	CCCTGTAATTTTCTTCTTCATATATTTACTTCCTTAAAT	40
Elassomatidae	<i>Elassoma evergladei</i>	Everglades Pygmy Sunfish	12S	NC_003175	CTACTCAGCGAAAACGAACGACAAAATGAAATGTTTGTCT	40
			16S	NC_003175	CTTTTGGCTTCTCTAGTCATAGTAGATATTAGACCCCAAG	40
Eleotridae	<i>Dormitator maculatus</i>	Fat Sleeper	12S	KF415347	GACACAGTAAATACGAACGATGCGTTGAAACTAAGCATCT	40
			16S	KF415347	CTTTTGGTTTCTTTTGTCCAGCCTGGCTACGCCCCACTTCA	40
Elopidae	<i>Elops saurus</i>	Ladyfish	12S	NC_005803	ACCAATAGTAAGCCTAATGAGCACAACCTCAAAACGTCAGG	40
			16S	NC_005803	CCCACGACCTGCTTAAATCAAAAGAGCTAATTCTACCAAA	40
Engraulidae	<i>Anchoa hepsetus</i>	Striped Anchovy	12S	DQ912040	AAAAGTAAGCGAAATGGAAAATCTCCAGAACGTCAGGTCGA	41
			16S	DQ912075	CCTGCCTAGCCCAACTCACACCAGTTCTACAAAGAAAGAC	40
	<i>Anchoa mitchilli</i>	Bay Anchovy	12S	DQ912042	CACGAAGTGGGAAGAAATGGGCTACATTGCCTAATCTAGGCTAC	44
			16S	DQ912077	GTCAAGTTATAGCTGGTTGCCCAATAAATGAATACAAGTT	40
Ephippidae	<i>Chaetodipterus faber</i>	Atlantic Spadefish	12S	EF616894	CTGCCACAGAGAACACGCACGACATAATGAAAACAGATGT	40
			16S	DQ533172	CTCCCGGCTTCTTCCCTCCCTGGCACTCTGCCCCCGCGA	40

Family	Species	Common name	Gene	GenBank Accession No.	Species specific sequence	Base pairs
Fundulidae	<i>Fundulus grandis</i>	Gulf Killifish	12S	NC_012377	CTGCTTAAGGAAATACGGATTGTGTATGAAAAATCACAT	40
			16S	NC_012377	CTCTTGTCTTCTTATGCCAAATATGGATACCCAAACCTCA	40
Gerreidae	<i>Fundulus majalis</i>	Striped Killifish	12S	KX686099	CTGTCTAAGGAAATACGAATTGTATTCTGAAATGATTACA	40
	<i>Diapterus auratus</i>	Irish Pompano	12S	KJ468671	AACACCAGGGAATACGAATACTACGTTGAAACACGTACTT	40
	<i>Eucinostomus argenteus</i>	Spotfin Mojarra	12S	KJ622117	CTAATTCAGGGTATACGGATAATGAACTGAAACATTCAAT	40
	<i>Eucinostomus gula</i>	Silver Jenny	12S	KT067840	CTAATACAGGGCACACGAACGATGACTTGAAATATACATT	40
			16S	MH715986	AAGAGTTATTCAAAGGGGGGACAGCCCCTTTGAAAGAAAAA	41
	<i>Eucinostomus harengulus</i>	Tidewater Mojarra	12S	MH715303	CCGCCTATATACCGCCGTCGTAAGCTTACCCTGTGAAGGAA	41
			16S	MH715987	AAGAGTTATTCAAAGGGGGGACAGCCCCTTTGAAAGAAGAT	41
	<i>Eucinostomus jonesii</i>	Slender Mojarra	12S	KT067842	CTAATATAGGGCACACGGATAATGCACTGAAACGTGCGTA	40
	<i>Eugerres plumieri</i>	Striped Mojarra	12S	KT067857	CTGCAATCAGGGAATTACGGATAACGCGTTGAAATACGTG	40
			16S	MH715988	CTCTTGGCTTCTCTGCTCCGCGCCCTTCTACCCTGTCACCC	41
	<i>Gerres cinereus</i>	Yellowfin Mojarra	12S	KY815278	CTATTATAGGGAACACGGACAACGTACTGAAATACGCGTT	40
			16S	JQ938957	CTCTCGGCTTCTTCCCAAACCTAGAGAGTTATTCAAAGGG	40
Ginglymostomatidae	<i>Ginglymostoma cirratum</i>	Nurse Shark	12S	NC_030189	TTTAACCAAAAAACACGGACAGTAACTGAAAAATTACTT	40
			16S	NC_030189	ATTAATTTTTTATCACTAAACAAGACTATCTCATTAAAGT	40
Gobiesocidae	<i>Gobiesox strumosus</i>	Skilletfish	12S	KY656387	CTACTCAAGAGCACACGAAATAGGAATTGAAAAATCTCTT	40
			16S	MH715989	CCCAGGCATCTACAACCCAAAAAAGGCCCCCGCCTATTACA	40
Gobiidae	<i>Bathygobius soporator</i>	Frillfin Goby	12S	MH715298	CTGCCTCAGTACATACGGACGATGACCTGAAATTACATCCG	41
			16S	MH715981	CCTTTAATGTCTTAATTCCACCTCAGACTCGCTCACTTAAT	41
	<i>Ctenogobius boleosoma</i>	Darter Goby	12S	MH715299	CTATAAAGTGAGCAGAGTTGGCAATGCCCAAAACGCCAGGT	41
			16S	MH715982	TTACTCCAAGACAGCCTAATAATAGGGCAAAACCCGTCTCTG	41
	<i>Ctenogobius smaragdus</i>	Emerald Goby	12S	MH715300	TTATAAAGTGAGCAGAGTTGGCAATGCCCAAAACGCCAGGT	41
			16S	MH715983	CTTTTGAGCTGCTCACCCACCGTATTATTGTACCCCCAGG	41
	<i>Gobionellus oceanicus</i>	Highfin Goby	12S	MH715304	CCGCCTATATACCGCCGTCGTAAGCTTACCCTGTGAAGGAA	41
			16S	MH715990	CTCTTTAATTATTTTTTCTCAAGGCAAGGCCTAACAAGGAT	41
	<i>Gobiosoma bosc</i>	Naked Goby	12S	AF491095	CTGTCCCAGTAAACACGGATCTTGCAATGAAACAAGCATT	40
			16S	AF491095	CTTTTGGATGCTCCCACCCATAAAAAACACACTTCTCAAC	40
	<i>Gobiosoma longipala</i>	Twoscale Goby	12S	MH715305	CTGACACAGTGAAATACGAAAGATAGCTTGAAACAACCATC	41

Family	Species	Common name	Gene	GenBank Accession No.	Species specific sequence	Base pairs
			16S	MH715991	GAGCCCAGTTATAGCTGGTTGCCTGAGAAATGAATAGAAGT	41
	<i>Gobiosoma robustum</i>	Code Goby	12S	AF491087	CTGTATCAGTAAACACGGATTTTGCAGTAAATAAGCATC	40
			16S	AF491087	CTTTTGGATGCTCCCACCTTCTAGAAATACCTTTTCTCCC	40
	<i>Lophogobius cyprinoides</i>	Crested Goby	12S	KF415410	CTGGTACAGTGAATTTACGAAACTTCATGCTCTGAAACAA	40
			16S	KF415410	CTTTTGAGCTGCTCACCCACCGTATTATTTACCCCGAGG	40
	<i>Microgobius gulosus</i>	Clown Goby	12S	AF491111	CTGAATCAGTAAAAACGGATTTTGCAGTAAATGAGCATC	40
			16S	AF491111	CTTTTCATTCTTCTACCCACCCGCACCCGCCCGGCTA	40
	<i>Microgobius thalassinus</i>	Green Goby	12S	AF491113	CTGAAACAGCAAACACGGATTATGCACTGAAATAAGCATC	40
			16S	AF491113	GGCAATACCAGCCTCCGGCTAAGAGAAATTTAAGAGTTA	40
Gymnuridae	<i>Gymnura micrura</i>	Smooth Butterfly Ray	12S	MH715306	ATCTGAAGGAGGATTTAGCAGTAAGAGGGGACTATGAGAG	40
			16S	MH715992	TTAATTCTTCAAGCAAGCAATAAAAAACTTTTAACACAAG	40
Haemulidae	<i>Haemulon aurolineatum</i>	Tomtate	12S	EF095568	CTACTGCCAGTGAACACGAATAGTGCAGTAAATATGCAC	40
Hemiramphidae	<i>Hyporhamphus unifasciatus</i>	Atlantic Silverstripe Halfbeak	12S	AF231581	CTATCATAGGACATACGGATAATGTAATGAAACGTACATT	40
Ictaluridae	<i>Ameiurus catus</i>	White Catfish	12S	DQ421868	CTACAAC TAGAATATTAACGAATGGCACTATGAAAATTA	40
	<i>Ameiurus natalis</i>	Yellow Bullhead	12S	MF621735	CTATAACTAGAATATTAACGAACGGCACTATGAAAATTA	40
			16S	MF621735	CCCTCACCTCACAAACACCTTTAAAAATACACGAGCCCGAG	40
	<i>Ameiurus nebulosus</i>	Brown Bullhead	12S	MF621733	CTACAAC TAGAATATTAACGAATGGCATTATGAAAATTA	40
			16S	MF621733	CCCTCACCTCACCAACACCTTTATACTACACGAGCCCGAG	40
	<i>Ictalurus punctatus</i>	Channel Catfish	12S	NC_003489	ACCTAGAATATTACGAATGGCACCATGAAAATAATGCCTG	40
			16S	NC_003489	CTCGTACTCCTCATCTCACAATACTTTTATATTAACGAG	40
	<i>Noturus gyrinus</i>	Tadpole Madtom	12S	AY458874	CTACATCTAGAACATAAACGAATGGCGCCATGAAAATGCT	40
			16S	AY458874	CTCGCACTCCTCACCTCACAAACACATAATTCTACGAATAT	40
Kyphosidae	<i>Kyphosus saltatrix</i>	Bermuda Chub	12S	KC136572	CTAACACAGTGAATTACGGACGATATACTGAAATTTATAT	40
			16S	KC136572	CTCCCCCTACCCCTCGTCCGACCCCCCTCTGACACCTTAAG	40
Labridae	<i>Halichoeres bivittatus</i>	Slippery Dick	12S	AY279599	GTAATTATACTAAATACGGATGACATTCTGAAAAAATATC	40
	<i>Lachnolaimus maximus</i>	Hogfish	12S	AY279618	ATACCACATTGAATACGAATAGTAGAATGAAACATCTACT	40
Lepisosteidae	<i>Lepisosteus platyrhincus</i>	Florida Gar	12S	NC_029715	CTATGTCAGAATATTACGAACAACACCATGAAATTGGTAT	40
			16S	NC_029715	CTCAAGACATGCTCCTAACCGCCCCAAGTACTTACTTCAC	40
Lobotidae	<i>Lobotes surinamensis</i>	Atlantic Tripletail	12S	NC_026233	CTATTTTCAGAGAATACGGATGGTGTAATGAAACTTACACA	40

Family	Species	Common name	Gene	GenBank Accession No.	Species specific sequence	Base pairs
			16S	NC_026233	CTTTGGGCTTCTTTACTCACTAAGCATCTTACAATTCACG	40
Loricariidae	<i>Pterygoplichthys disjunctivus</i>	Vermiculated Sailfin Catfish	16S	NC_015747	CTTGCACTCCTCACCTCACAAAAAGTTACCACTAACCTAT	40
Lutjanidae	<i>Lutjanus analis</i>	Mutton Snapper	12S	EF095569	CTAATATAGTGTAAATACGAACGATACACTGAAATACGTAT	40
	<i>Lutjanus griseus</i>	Gray Snapper	12S	MH715307	TCTCAAGAATATACGAACAGAAATATGAAAAATTTCTTAA	40
			16S	JQ938964	CTCCCGGCTTCTTTCTAAACCGAGAGAGTTAATCAAAGGG	40
	<i>Lutjanus synagris</i>	Lane Snapper	12S	MH715308	TAACATAGTGAAATACGAACGATGCACTGAAATACGCATC	40
			16S	MH715995	CTCCCGGCTTCTTTCTTCACCCCTAGTCTTTACCCCTTCT	41
Megalopidae	<i>Megalops atlanticus</i>	Tarpon	12S	NC_005804	CCCTCTCGAGTACACGAATAGAAACATGAAAACTTCTTA	40
			16S	NC_005804	CTCGAAGCCTGCCATAAACCAACACCAACAACACCAAAGA	40
Mobulidae	<i>Manta birostris</i>	Giant Manta	12S	KF413894	CTCAACCCAGAATACTTGCGAACGACACAGTGAAACCTGA	40
			16S	KF413894	ATTAACCTTTTCAATCAGGTAATAAAAAATTTTAACTAAA	40
Monacanthidae	<i>Aluterus schoepfi</i>	Orange Filefish	12S	KT600932	CTACTTAGAGAACACGAATGATAAACTGAAAAACGTATCT	40
	<i>Stephanolepis hispidus</i>	Planehead Filefish	12S	KT600974	TTTACAAAAACAATACGAACGGTAACTGAAAAACACCTA	40
Mugilidae	<i>Mugil cephalus</i>	Striped Mullet	12S	KP018403	CTTTGATAATTTATTACACCCATTATCCGCCAGGGACTA	40
			16S	KP018403	CTAGTAATAGTCAAGCAAAAAGCATTTTAGTTTGACCCCC	40
	<i>Mugil curema</i>	White Mullet	12S	NC_017889	TTTGATAGTTCAACCACGCCACTATCCGCCTGGGTACTA	40
			16S	KF375100	ACAACCTTTCCAGGAGGGTAAAGATCATATTTTCATGAAGG	40
	<i>Mugil trichodon</i>	Fantail Mullet	12S	MH715311	CTAATACAGAGAATACGAATGATGAACCTGAAATGTACATCT	41
			16S	MH715998	TTCTTATATTCTTCCCCCTTTTCGGTCATCATGGCCCTATC	41
Mullidae	<i>Mullus auratus</i>	Red Goatfish	16S	JQ938968	CCCACGGCTTCTCCTTATACCGCGGGAGTTAGTCAAAGGG	40
Muraenidae	<i>Gymnothorax saxicola</i>	Honeycomb Moray	12S	JX242931	CTGACCCAGAAATATCACGAACAGTGCAATGAAATACGCA	40
Myliobatidae	<i>Aetobatus narinari</i>	Spotted Eagle Ray	12S	JX978310	TCTCTATCAAGAACACACGAAAAGAAGCATGAAAACCCTC	40
Narcinidae	<i>Narcine bancroftii</i>	Lesser Electric Ray	12S	NC_034772	GAATAACAGTAAGCAAAATGAATAAAATATTCAATACGTC	40
			16S	NC_034772	ATTAATTATTCAATTACGTACCATATAAGAATCTTAGACC	40
Ophichthidae	<i>Ophichthus gomesii</i>	Shrimp Eel	12S	AY430249	CTGAAACAGAATACTACGAAAGGTGCCATGAAACAAACAC	40
Ostraciidae	<i>Acanthostracion quadricornis</i>	Scrawled Cowfish	12S	AY700275	CTTTTCCAGTGAAATACGAACGATGTACTGAAATATACAT	40
Paralichthyidae	<i>Anchlopsetta quadrocclata</i>	Ocellated Flounder	16S	JQ939064	CCCCTAATTTCCCCACAACTAGGAGTGTAACCTAAAGGG	40
	<i>Etropus crossotus</i>	Fringed Flounder	16S	JQ939068	CCCTTGGTTTTTCCCGAAACCAAGGGAGTTATTCATAGGG	40
	<i>Paralichthys albigutta</i>	Gulf Flounder	12S	AF316017	TAGAAGTAGCAAATACGAATGATACATTGAAATATGT	37

Family	Species	Common name	Gene	GenBank Accession No.	Species specific sequence	Base pairs
			16S	JQ939111	CCCCTGGGTTCCTCCACAAACCAAGGGTGTAGTCAAAGGG	40
	<i>Paralichthys lethostigma</i>	Southern Flounder	12S	NC_029223	CTAAGACTAGCAAATACGAACGATGCATTGAAATATGCAA	40
			16S	NC_029223	CCCCTGGGTTCCTCGACTCATTCACTGTTATCACCCTTCAG	40
	<i>Syacium papillosum</i>	Dusky Flounder	12S	AF488503	CTAATTCAGGGCACACGAAAAATATAATGAAAAACGTAT	39
Phycidae	<i>Urophycis floridana</i>	Southern Hake	12S	FJ215094	CTGCCCCAGAGAACTTATACGGATGGTATATTGAAATTAA	40
			16S	FJ215198	ATAGCTAAAGGAGTTAGTCAGAAAGGGTACAGCTTTTCTG	40
Poeciliidae	<i>Gambusia holbrooki</i>	Eastern Mosquitofish	12S	NC_028274	CTTCCCCCAGGAAACACGAATTGTGCTATGAAATAACACA	40
			16S	NC_028274	CTTTAATTATCTCGTACCCCCGACGGCCTAACCAACAGCC	40
	<i>Heterandria formosa</i>	Least Killifish	12S	EF017473	CTCTCCTAGGAAAAACGAATTGTGTCATGAAACAACACAT	40
	<i>Poecilia latipinna</i>	Sailfin Molly	16S	NC_035305	CTCTACTTATCTCCCACCCAATAGTCCCACCACAAACCT	40
Polynemidae	<i>Polydactylus octonemus</i>	Atlantic Threadfin	16S	JQ938973	GATAGGAGTTCAGCCTTAAAGATTCTTTTGAACTTTAAG	40
Pomacentridae	<i>Abudefduf saxatilis</i>	Sergeant Major	12S	FJ616293	CTAAACCAGGAAATACGGACAATGTATTGAAACGTACATT	40
Pomatomidae	<i>Pomatomus saltatrix</i>	Bluefish	12S	NC_022507	CTAATGAAGCGAACACGAATGGTGCCTGAAACTGTGCG	40
			16S	NC_022507	CTTTGGGCTTCTCTCTTCACTACAATTTATACCTTACT	40
Pristidae	<i>Pristis pectinata</i>	Smalltooth Sawfish	12S	NC_027182	CTTTTAAGAAAAAACGAACAGTACAATGAAAAATTACTCA	40
			16S	NC_027182	ATTAATTTATTCTACCTGCCACAAATGGAACATTCTCATA	40
Rachycentridae	<i>Rachycentron canadum</i>	Cobia	12S	NC_011219	CTAAAAATAGTGAATACGAATAATACATTGAAACATGTAT	40
			16S	NC_011219	CTCCTGGCTTCTCAATTCATCTCAAAACAAATGACTCAAC	40
Rajidae	<i>Raja eglanteria</i>	Clearence Skate	12S	KF317714	CACAAAAGTAAGCATAACGGATTTCTCCAAAACGTCAGG	40
			16S	MH715999	ATAATCCTTCACCTCGCCACCAAGATTACCAAAACAAGG	40
Rhinobatidae	<i>Rhinobatos lentiginosus</i>	Atlantic Guitarfish	12S	AY830717	CTATTAAGAAAAAACGGATATTATAATGAAAAACTACTTA	40
			16S	AY830717	ATTAATTTACTCCAATTGCCATAAATATTACTTATATAT	40
Rhinopteridae	<i>Rhinoptera bonasus</i>	Cownose Ray	12S	JX241047	CTCTTTAGAGTATACGGATAGAAACATGAAATCTTCTTA	40
Scaridae	<i>Nicholsina usta</i>	Emerald Parrotfish	12S	AY279624	ATGGAACAATGAATACGAATGGTTAATTGAAAGATTTTCC	40
Sciaenidae	<i>Bairdiella chrysoura</i>	Silver Perch	12S	MH715297	CTAATGCAGAGGAAACGAATGATGTGCTGAAACGCACATC	40
			16S	MH715980	CTTCCGGCTTCTCCCTCACACCTGTCTCTCTTCCCTTAG	41
	<i>Cynoscion arenarius</i>	Sand Seatrout	12S	AF128401	CTGAAATATATATCTGAAGGAGGATTTAGCGGTAAGCAT	40
			16S	AF128401	TCTCCCCTCACTCCTGTTTTCTCCCCTATGATAACCAGAT	40
	<i>Cynoscion nebulosus</i>	Spotted Seatrout	12S	AF128402	CTAACATAGAGAAAACGAATGATATACTGAAACATATATC	40

Family	Species	Common name	Gene	GenBank Accession No.	Species specific sequence	Base pairs
			16S	AF128402	TCTCCCCTCACCCCGTTTTTCTCGCCATGACAACCAAAT	40
	<i>Leiostomus xanthurus</i>	Spot	12S	KX686090	CTAATACAGAGAAAACGAATGATGTACTGAAATACACGTC	40
			16S	MH715994	CTACTCCAAGACAGCCTAATAATAGGGCAAACCCGTCTCTG	41
	<i>Menticirrhus americanus</i>	Southern Kingfish	12S	DQ874712	AGAAATGGGCTACATTCTCTCGAGCACTGAAAGAAGGAGG	40
	<i>Menticirrhus littoralis</i>	Gulf Kingfish	12S	MH715309	TAATATAGTGAAATACGAACGATACACTGAAATACGTATC	40
			16S	MH715996	TCCCGGATTTCTCCCGTCCATCCCAGTTTATACCCCTGCA	40
	<i>Menticirrhus saxatilis</i>	Northern Kingfish	12S	KX686072	AGAAATGGGCTACATTCTTAACCTCAGAGAAAACAAATG	40
	<i>Micropogonias undulatus</i>	Atlantic Croaker	12S	MH715310	CTAATCTCAGAGAAAACGAATGATGCACTGAAACACGCATC	41
			16S	MH715997	CTCTCGGATTCTTCCCTCACCCTGTTCTCTCTCCCCCTTGA	41
	<i>Sciaenops ocellatus</i>	Red Drum	12S	NC_016867	CTAATACAGAGAATACGAATGATGTACTGAAATACACATC	40
			16S	NC_016867	CTCTCGGATTCTTCCCTCACCCCTGTCTTCTCTCCCCGA	40
Scombridae	<i>Euthynnus alletteratus</i>	Little Tunny	12S	NC_004530	CTACTATTAGCGAATACGAACGATGCACTGAAAACGTTC	40
		Little Tunny	16S	NC_004530	TTCGCCATGGTCTTACCCCTACCGATACTCAAAAGAAGTC	40
	<i>Scomberomorus cavalla</i>	King Mackerel	12S	NC_008109	CTATTCTAGCGAATACGAACGATAGTACTGAAAACGTACA	40
			16S	NC_008109	CTCCAGGCTTCTCTCTTACCAGCGGTTTAACCCCTGCCGA	40
	<i>Scomberomorus maculatus</i>	Spanish Mackerel	12S	DQ874689	CCCGTCGGTAAATACGAATGGTTTATTGAAAAATAAACT	40
Scorpaenidae	<i>Scorpaena brasiliensis</i>	Barbfish	12S	MH715312	TGAAATAGAGCATACGAACGATGAAGTGAAGTCACTCTG	40
			16S	MH716000	TTTCAGATTCTTTTTTTAATTAAGTAATTCACCTCTAAAA	40
Serranidae	<i>Centropristis striata</i>	Black Sea Bass	12S	KX686079	CTATGATAGTGAATACGAATGATATCCTGAAACGGACATC	40
	<i>Diplectrum formosum</i>	Sand Perch	16S	FJ548768	CTCCCGGCTTCTTAATTCCTAATAAACCTTATCTATAG	40
	<i>Epinephelus itajara</i>	Atlantic Goliath Grouper	16S	FJ548765	TTCTTCCTTCTCCAACCCCTCTGTCTCAACAGATATTTT	40
Sparidae	<i>Lagodon rhomboides</i>	Pinfish	12S	KX686070	CTTATACACAGGGAACCTACGAATGGTATACTGAAAACGTA	40
			16S	MH715993	TCCCGGCTTCTCACCTCAATTTTGGTTTATACTTCAATTA	40
Sphyraenidae	<i>Sphyraena barracuda</i>	Great Barracuda	12S	NC_022484	GCAAATAGTAGGCAAAGTTGGCACAGCCCAAAACGTCAGG	40
			16S	NC_022484	CTCCCGGCTTCTCTCTTACACTTGACCAATGCTTTAAT	40
	<i>Sphyrna lewini</i>	Scalloped Hammerhead	12S	NC_022679	CTAACATTAGCGAATACGAACGCTGCATTGAAATATGCAA	40
			16S	NC_022679	ATTAATTTTTTATTACCCAAACAAGACTTCCTTATTAAAG	40
	<i>Sphyrna mokarran</i>	Great Hammerhead	12S	NC_035491	TTTACAAAACATATACGAATGGTAGACTGAAAAACACCT	40
			16S	NC_035491	TTTTTATTATCTAAACAAGACTTTCTCGTCAAAGAAACCC	40

Family	Species	Common name	Gene	GenBank Accession No.	Species specific sequence	Base pairs
	<i>Sphyrna tiburo</i>	Bonnethead	12S	NC_028508	TTTTATTAAAAACATACGAACGGTAAACTGAAAAATACCT	40
			16S	NC_028508	TTTTTTTACCTAGACAAGACTTCCTTATTAAAGGAATCC	40
Stromateidae	<i>Peprilus burti</i>	Gulf Butterfish	12S	AP012947	CTAGCTTAGCGAATACGAACGATGTAATGAAAATGTACAT	40
			16S	AP012947	CTCCCGGTTTCTCCCTCACCACGGTCATACCCCTACCGA	40
Syngnathidae	<i>Anarchopterus criniger</i>	Fringed Pipefish	12S	KY065791	TCCATCGATGAACAACGAATGATTTATTGAAAAATAAACC	40
	<i>Hippocampus erectus</i>	Lined Seahorse	12S	NC_022722	AGAACAACAGTGAGCAGAACTAGTAATAACCCAAAACGTC	40
			16S	NC_022722	CCATATTATACCCTAAAACCTACATAAAATTAATAAATA	40
	<i>Hippocampus zosterae</i>	Dwarf Seahorse	12S	KY065837	TTTACTAATGAATACGGATGGCATATTGAAACATAAACCT	40
	<i>Microphis brachyurus</i>	Opossum Pipefish	12S	NC_010273	TTTACCAACGCATAACGGACAACATGTTGAAACCACATAT	40
		Opossum Pipefish	16S	NC_010273	CTGATTTTACCCTCAAGCATTACTAAATTGTATTAAAGCC	40
	<i>Syngnathus floridae</i>	Dusky Pipefish	12S	AF354957	GCTATTAAAGCACACACGGAACCTCGTATTGAAACATACGT	40
	<i>Syngnathus louisianae</i>	Chain Pipefish	12S	KY065876	TCAACCGATAAACACGGATGATTAATTGAAAAATGAATCT	40
	<i>Syngnathus scovelli</i>	Gulf Pipefish	12S	AF354970	TTTGTCAACCGATAAACACGGATGATTGATTGAAAAATAA	40
Synodontidae	<i>Synodus foetens</i>	Inshore Lizardfish	12S	KC441961	CTTCCGCAGAGAAAAACGGAAGGGGCAGTGAACCTGCC	40
			16S	MH716002	CCCTCCCCATTTTACTCAAATTCTAATACCCATCAGACA	40
Tetraodontidae	<i>Lagocephalus laevigatus</i>	Smooth Puffer	12S	NC_015345	GGCTACATTCTCTGCCAGAGAACAACGAATGATGTGTTG	40
			16S	NC_015345	TTTTTGGCTTCTTGCCCTACAAATAGTATTAATAAACAG	40
	<i>Sphoeroides spengleri</i>	Bandtail Puffer	12S	AY700284	AGAGATGGGCTACATTGCTCGAGTACTGAAAGAAGGAGG	40
Triakidae	<i>Mustelus norrisi</i>	Florida Smoothhound	12S	AY830755	TTTACCAAAAAACACGAATGGTGAAGTGAACACGCCTA	40
			16S	AY830755	ATTAATTCTTTATTATCTAGACAAGAATTCTCGTCAAAG	40

Supplementary Table S5. Mitochondrial 12S and 16S rRNA gene sequence read information of successful identifications using the species-signature sequence method.

Sample	Analyzed sequence reads		Sequences identified by this method				OTUs identified by this method	
			12S		16S			
	12S	16S	No.	%	No.	%	12S	16S
SF1	5456	21202	75	1.4	0	0	1	0
SF3	2993	3026	571	19.9	0	0	16	0
SF4	ND*	16344	ND	ND	0	0	ND	0
SF5	ND	14967	ND	ND	1712	12.3	ND	15
SF6	3675	24865	44	1.2	17	0.1	6	1
SF7	4199	11418	166	4.2	335	3.0	5	7
SF8	5958	12732	486	8.5	30	0.2	19	1
SF9	4783	8607	1458	31.0	28	0.3	3	1
SF10	7300	9213	1668	24.2	2032	22.4	17	8
SF11	9702	7080	428	4.4	0	0	3	0
SF12	7371	8584	217	3.0	0	0	4	0
SF13	16437	10169	231	1.4	12	0.1	7	1
SF14	4945	9795	1315	29.4	248	2.8	32	7
SF15	10896	4248	10698	98.5	18	0.4	4	1
SF16	933	4069	0	0	20	0.5	0	1
Total	84648	166319						
Mean	6511	11088	1335	17.4	297	2.8	9	3
± SE	± 1112	± 1593	± 796	± 7.5	± 168	± 1.6	± 3	± 1

*ND = no data

Supplementary Table S6. Relative taxonomic abundance of mitochondrial 12S and 16S rRNA gene sequences (%) in smalltooth sawfish fecal samples after removal of host sequences.

	SF1		SF3		SF4		SF5		SF6		SF7		SF8		SF9		SF10		SF11		SF12		SF13		SF14		SF15		SF16	
Species	12S	16S	12S	16S	12S*	16S	12S*	16S	12S	16S	12S	16S	12S	16S	12S	16S	12S	16S	12S	16S	12S	16S	12S	16S	12S	16S	12S	16S	12S	16S
<i>Anchoa hepsetus</i>									30.9	21.2																				
<i>Anchoa mitchilli</i>									56.9		1.0																100.0	100.0		
<i>Bairdiella chrysoura</i>			76.9								48.4				0.2		19.1		1.4		100.0		55.7		62.1	0.4				
<i>Cynoscio arenarius</i>							0.2				42.3	11.6			0.2	100.0														
<i>Cynoscion nebulosus</i>																	80.6	62.7												
<i>Cynoscion</i> sp.															85.1		0.1													
<i>Dasyatis americana</i>									12.2	78.8																				
<i>Dorosoma cepedianum</i>																									9.0	10.5				
<i>Elops saurus</i>													87.6	93.5															1.4	
<i>Eucinostomus harengulus</i>											2.6	83.2					0.2	37.3		89.9			1.6	100.0		10.8			3.8	
<i>Eugerres plumieri</i>																14.5														
<i>Lagodon rhomboides</i>			23.1																				42.7							
<i>Leiostomus xanthurus</i>							20.7																		28.9	78.3		98.6	96.2	
<i>Menticirrhus</i> sp.							2.7																							
<i>Microgobius gulosus</i>											5.7	5.2																		
<i>Micropogonias undulatus</i>							76.1												98.6	10.1										
<i>Mugil cephalus</i>	100.0	100.0																												
<i>Strongylura notata</i>													11.0	6.5																
<i>Synodus foetens</i>							0.3						1.4																	

*No data