

SMT 1

Detail of sampling stations, ecosystems and depths in the Tukakas Bay

Stations	Ecosystem	Method	Latitude	Longitude	Depth
E1-A	CR	Specimen collection	11°54'44.44"N	71°16'21.04"O	2 m
E2-A	CR	Specimen collection	11°54'22.98"N	71°16'53.34"O	3 m
E2-C	CR	Specimen collection /Visual census	11°54'23.58"N	71°16'35.01"O	3 m
E2-D	CR	Specimen collection	11°54'17.34"N	71°16'54.99"O	2 m
E3-A	CR	Visual census	11°54'25.11"N	71°17'29.08"O	1.8 m
E3-B	CR	Specimen collection	11°54'20.56"N	71°17'2.29"O	3 m
E4-A	SB	Specimen collection/ Visual census	11°54'47.59"N	71°17'24.64"O	1 m
E4-E	SB	Specimen collection	11°54'52.60"N	71°17'20.75"O	1 m
E5-A	SG	Specimen collection	11°55'1.81"N	71°18'23.79"O	1.5 m
E5-B	SG	Specimen collection	11°55'5.18"N	71°18'29.84"O	1.5 m
E5-C	SG	Specimen collection/Visual census	11°54'58.20"N	71°18'19.55"O	2.7 m
E5-E	SG	Specimen collection	11°55'3.63"N	71°18'7.13"O	2 m
E6-B	MB	Specimen collection	11°54'49.25"N	71°19'12.23"O	1.5 m
E7-A	MB	Specimen collection	11°54'42.18"N	71°18'43.09"O	1.5 m
E7-B	MB	Specimen collection	11°54'53.68"N	71°18'49.22"O	0.5 m
E7-C	MB	Specimen collection /Visual census	11°54'44.17"N	71°18'43.39"O	0.5 m
E7-D	MB	Specimen collection	11°54'54.01"N	71°18'44.72"O	0.5 m
*E8-A	PL	Specimen collection	11°53'35.78"N	71°10'57.60"O	17.5 m
S1	SB	eDNA	11°54'49.49 N	71°17'23.12 O	1 m
S2	SG	eDNA	11°54'57.39 N	71°18'09.36 O	1 m
S3	MB	eDNA	11°54'56.78 N	71°19'11.75 O	1 m
S4	CR	eDNA	11°54'16.20 N	71° 17'40.70 O	1 m

*Outgroup station.

SMT 2

Taxonomic list of fish composition found in Tukakas Bay through eDNA, Visual census and Integrative Taxonomy-ITF (Morphology / DNA Barcoding)

Order	Family	Species	Detection method					
			eDNA	Station	Visual census	Station	ITF	Station
Acanthuriformes	Acanthuridae	<i>Acanthurus tractus</i> Poey, 1860			X	E2-C		
		<i>Bagre bagre</i> (Linnaeus, 1766)			X	E3-A		
		<i>Bagre filamentosus</i> (Swainson, 1839)	X	S2-S4				
Siluriformes	Ariidae	<i>Cathorops wayuu</i> Betancur-R., Acero P. & Marceniuk, 2012					X	E4-E
		<i>Sciades herzbergii</i> (Bloch, 1794)					X	E4-A-E4-E
		<i>Sciades proops</i> (Valenciennes, 1840)					X	E5-C
Atheriniformes	Atherinopsidae	<i>Atherinella brasiliensis</i> (Quoy & Gaimard, 1825)					X	E4-A-E4-E
Batrachoidiformes	Batrachoididae	<i>Batrachoides manglae</i> Cervigón, 1964					X	E5-B
Beloniformes	Belonidae	<i>Strongylura timucu</i> (Walbaum, 1792)	X	S1-S3-S4	X	E5-C	X	E4-E
		<i>Tylosurus crocodilus</i> (Péron & Lesueur, 1821)	X	S4				
Blenniiformes	Blenniidae	<i>Scartella cristata</i> (Linnaeus, 1758)	X	S4				
Carangiformes	Carangidae	<i>Caranx hippos</i> (Linnaeus, 1766)	X	S3				
		<i>Trachinotus falcatus</i> (Linnaeus, 1758)	X	S4				
		<i>Centropomus ensiferus</i> Poey, 1860					X	E4-E
Carangaria incertae sedis	Centropomidae	<i>Centropomus parallelus</i> Poey, 1860					X	E4-E
		<i>Centropomus undecimalis</i> (Bloch, 1792)					X	E4-E
Tetraodontiformes	Diodontidae	<i>Diodon hystrix</i> Linnaeus, 1758	X	S4				
		<i>Harengula clupeola</i> (Cuvier, 1829)	X	S2-S3-S4				
Clupeiformes	Dorosomatidae	<i>Harengula jaguana</i> Poey, 1865	X	S1-S2-S3-S4				
		<i>Opisthonema oglinum</i> (Lesueur, 1818)	X	S4				
Carangiformes	Echeneidae	<i>Echeneis naucrates</i> Linnaeus, 1758			X	E4-A		

Gobiiformes	Eleotridae	<i>Erotelis smaragdus</i> (Valenciennes, 1837)			X	E5-C		
Elopiformes	Elopidae	<i>Elops smithi</i> McBride, Rocha, Ruiz-Carus & Bowen, 2010						
		<i>Anchoa lyolepis</i> (Evermann & Marsh, 1900)	X	S4				
Clupeiformes	Engraulidae	<i>Anchovia clupeoides</i> (Swainson, 1839)	X	S3				
		<i>Lycengraulis grossidens</i> (Spix & Agassiz, 1829)	X	S1-S2-S3				
Acanthuriformes	Ephippidae	<i>Chaetodipterus faber</i> (Broussonet, 1782)	X	S1-S2-S3-S4			X	E4-E
		<i>Diapterus auratus</i> Ranzani, 1842	X	S2				
		<i>Diapterus rhombeus</i> (Cuvier, 1829)	X	S1-S2-S3-S4				
		<i>Eucinostomus argenteus</i> Baird & Girard, 1855	X	S4				
Eupercaria incertae sedis	Gerreidae	<i>Eucinostomus gula</i> (Quoy & Gaimard, 1824)	X	S1-S2			X	E4-A
		<i>Eucinostomus jonesii</i> (Günther, 1879)	X	S4			X	E4-A
		<i>Eugerres plumieri</i> (Cuvier, 1830)	X	S2				
		<i>Gerres cinereus</i> (Walbaum, 1792)	X	S2-S4			X	E4-E
		<i>Bathygobius soporator</i> (Valenciennes, 1837)	X	S1				
	Gobiidae	<i>Ctenogobius boleosoma</i> (Jordan & Gilbert, 1882)					X	E4-A
Gobiiformes		<i>Evorthodus lyricus</i> (Girard, 1858)					X	E4-B
		<i>Lophogobius cyprinoides</i> (Pallas, 1770)					X	E5-A
	Eleotridae	<i>Eleotris amblyopsis</i> (Cope, 1871)					X	E4-A
		<i>Anisotremus surinamensis</i> (Bloch, 1791)	X	S4				
		<i>Anisotremus virginicus</i> (Linnaeus, 1758)	X	S4		X		E2-C
		<i>Haemulon aurolineatum</i> Cuvier, 1830				X		E3-A
Eupercaria incertae sedis	Haemulidae	<i>Haemulon bonariense</i> Cuvier, 1830				X		E3-A
		<i>Haemulon flavolineatum</i> (Desmarest, 1823)				X		E3-A
		<i>Haemulon parra</i> (Desmarest, 1823)	X	S4				
		<i>Haemulon plumierii</i> (Lacepède, 1801)				X		E3-A
		<i>Orthopristis scapularis</i> Fowler, 1915				X		E2-C
Beloniformes	Hemiramphidae	<i>Hyporhamphus unifasciatus</i> (Ranzani, 1841)	X	S1-S2-S3-S4				
Blenniiformes	Labrisomidae	<i>Malacoctenus delalandii</i> (Valenciennes, 1836)					X	E2-C-E1-A

Acanthuriformes	Lobotidae	<i>Paraclinus fasciatus</i> (Steindachner, 1876)					X	E4-A
		<i>Lobotes surinamensis</i> (Bloch, 1790)	X	S2				
	Labridae	<i>Lachnolaimus maximus</i> (Walbaum, 1792)	X	S4	X	E7-C		
		<i>Lutjanus analis</i> (Cuvier, 1828)	X	S4				
Eupercaria incertae sedis	Lutjanidae	<i>Lutjanus apodus</i> (Walbaum, 1792)			X	E4-A		
		<i>Lutjanus cyanopterus</i> (Cuvier, 1828)					X	E4-E
		<i>Lutjanus griseus</i> (Linnaeus, 1758)	X	S1-S2-S4	X	E3-A		
		<i>Lutjanus jocu</i> (Bloch & Schneider, 1801)	X	S4	X	E3-A		
		<i>Lutjanus mahogoni</i> (Cuvier, 1828)			X	E3-A		
		<i>Lutjanus synagris</i> (Linnaeus, 1758)	X	S4				
	Scaridae	<i>Nicholsina usta</i> (Valenciennes, 1840)	X	S1				
		<i>Scarus iseri</i> (Bloch, 1789)			X	E5-C		
		<i>Scarus taeniopterus</i> Lesson, 1829			X	E1-A		
		<i>Sparisoma chrysopterus</i> (Bloch & Schneider, 1801)	X	S4				
		<i>Sparisoma rubripinne</i> (Valenciennes, 1840)	X	S4				
		<i>Bairdiella ronchus</i> (Cuvier, 1830)					X	E4-E
	Sciaenidae	<i>Cynoscion acoupa</i> (Lacepède, 1801)					X	E4-E-E5-C
		<i>Macrodon ancylodon</i> (Bloch & Schneider, 1801)			X	E7-C		
		<i>Micropogonias furnieri</i> (Desmarest, 1823)	X	S2-S4			X	E4-A-E4-E
		<i>Odontoscion dentex</i> (Cuvier, 1830)			X	E3-A		
	Sparidae	<i>Archosargus probatocephalus</i> (Walbaum, 1792)			X	E5-C		
		<i>Archosargus rhomboidalis</i> (Linnaeus, 1758)					X	E4-A-E4-B
Elopiformes	Megalopidae	<i>Megalops atlanticus</i> Valenciennes, 1847	X	S1-S2-S4				
Tetraodontiformes	Monacanthidae	<i>Stephanolepis hispidus</i> (Linnaeus, 1766)	X	S4				
		<i>Mugil curema</i> Valenciennes, 1836	X	S1-S2-S3-S4			X	E4-E
Mugiliformes	Mugilidae	<i>Mugil incilis</i> Hancock, 1830	X	S1-S2-S3				
		<i>Mugil liza</i> Valenciennes, 1836	X	S1-S2-S3				
		<i>Mugil rubrioculus</i> Harrison, Nirchio, Oliveira, Ron & Gaviria, 2007	X	S1-S2-S3				

		<i>Mugil trichodon</i> Poey, 1875	X	S1-S2-S3-S4				
Anguilliformes	Muraenidae	<i>Gymnothorax funebris</i> Ranzani, 1839	X	S4	X	E4-A		
Tetraodontiformes	Ostraciidae	<i>Acanthostracion quadricornis</i> (Linnaeus, 1758)	X	S4				
Pleuronectiformes	Paralichthyidae	<i>Citharichthys spilopterus</i> Günther, 1862					X	E4-A
		<i>Abudefduf saxatilis</i> (Linnaeus, 1758)			X	E4-A		
Ovalentaria incertae sedis	Pomacentridae	<i>Abudefduf taurus</i> (Müller & Troschel, 1848)			X	E3-A		
		<i>Stegastes adustus</i> (Troschel, 1865)	X	S4	X	E5-C		
Scombriformes	Scombridae	<i>Scomberomorus maculatus</i> (Mitchill, 1815)	X	S4				
	Scorpaenidae	<i>Scorpaena plumieri</i> Bloch, 1789			X	E3-A		
		<i>Diplectrum formosum</i> (Linnaeus, 1766)	X	S4				
Perciformes	Serranidae	<i>Epinephelus itajara</i> (Lichtenstein, 1822)	X	S1-S2-S3-S4			X	E5-C
		<i>Rypticus saponaceus</i> (Bloch & Schneider, 1801)	X	S1-S2				
Carangaria incertae sedis	Sphyraenidae	<i>Sphyraena barracuda</i> (Edwards, 1771)	X	S2-S4				
		<i>Hippocampus reidi</i> Ginsburg, 1933	X	S1				
Syngnathiformes	Syngnathidae	<i>Syngnathus caribbaeus</i> Dawson, 1979					X	E7-A
		<i>Syngnathus pelagicus</i> Linnaeus, 1758					X	E7-A
		<i>Sphoeroides greeleyi</i> Gilbert, 1900					X	E7-A
Tetraodontiformes	Tetraodontidae	<i>Sphoeroides spengleri</i> (Bloch, 1785)			X	E4-A		
		<i>Sphoeroides testudineus</i> (Linnaeus, 1758)	X	S1-S2-S3-S4			X	E7-A
		<i>Sphoeroides</i> sp.					X	E4-A-E7-C

SMT 4

Taxonomic list of fish composition found in outgroup station E8 and their voucher and molecular information

Class	Order	Family	ScientificName	Authority	Station	MHNMC code	Barcode (BOLD)	Detection method
Teleostei	Beloniformes	Hemiramphidae	<i>Hemiramphus brasiliensis</i>	(Linnaeus, 1758)	E8	INV TEJ3700	CBINP003-24	ITF

Teleostei			<i>Chloroscombrus chrysurus</i>	(Linnaeus, 1766)	E8	INV TEJ3735	CBINP010-24	ITF	
Teleostei	Carangiformes	Carangidae	<i>Oligoplites palometa</i>	(Cuvier, 1832)	E8	INV TEJ3747	CBINP071-24	ITF	
Teleostei			<i>Selene setapinnis</i>	(Mitchill, 1815)	E8	INV TEJ3765 INV PEC13297	CBINP073-24	ITF	
Teleostei			<i>Trachinotus carolinus</i>	(Linnaeus, 1766)	E8	INV TEJ3732 INV PEC13279	CBINP009-24	ITF	
Teleostei	Elopiformes	Elopidae	<i>Elops smithi</i>	McBride, Rocha, Ruiz-Carus & Bowen, 2010	E8	INV TEJ3717	CBINP005-24	ITF	
Teleostei			Sparidae	<i>Archosargus rhomboidalis</i>	(Linnaeus, 1758)	E8	INV TEJ3789	CBINP023-24	ITF
Teleostei				<i>Cynoscion jamaicensis</i>	(Vaillant & Bocourt, 1883)	E8	INV TEJ3756 INV PEC13283	CBINP015-24	ITF
Teleostei	Sciaenidae	<i>Cynoscion leiarchus</i>		(Cuvier, 1830)	E8	INV TEJ3768	CBINP018-24	ITF	
Teleostei		Eupercaria incertae sedis	<i>Cynoscion virescens</i>	(Cuvier, 1830)	E8	INV TEJ3738	CBINP011-24	ITF	
Teleostei			Gerreidae	<i>Diapterus rhombeus</i>	(Cuvier, 1829)	E8	INV TEJ3750	CBINP072-24	ITF
Teleostei	Lutjanidae			<i>Lutjanus synagris</i>	(Linnaeus, 1758)	E8	INV TEJ3762	CBINP017-24	ITF
Teleostei		Sciaenidae		<i>Micropogonias furnieri</i>	(Desmarest, 1823)	E8	INV TEJ3827 INV PEC13285	CBINP040-24	ITF
Teleostei			Scombriformes	Stromateidae	<i>Peprilus paru</i>	(Linnaeus, 1758)	E8	INV TEJ3753	CBINP014-24
Teleostei	Scombridae				<i>Scomberomorus brasiliensis</i>	(Bloch, 1793)	E8	INV TEJ3726	CBINP007-24
Teleostei	Siluriformes	Ariidae		<i>Bagre filamentosus</i>	(Swainson, 1839)	E8	INV TEJ3771	CBINP019-24	ITF
Teleostei			<i>Sciades herzbergii</i>	(Bloch, 1794)	E8	INV TEJ3836 INV PEC13295	CBINP042-24	ITF	
Elasmobranch ii			Carcharhini-formes	Carcharhinidae	<i>Carcharhinus porosus</i>	(Ranzani, 1839)	E8	INV TEJ3729	CBINP008-24
Elasmobranch ii	<i>Rhizoprionodon lalandii</i>	(Müller & Henle, 1839)			E8			Observation	
Elasmobranch ii	Myliobatiformes	Rhinopteridae	<i>Rhinoptera bonasus</i>	(Mitchill, 1815)	E8	INV TEJ3784	CBINP022-24	ITF	

Elasmobranch ii	Rhinopristiforme s	Rhinobatidae	<i>Pseudobatos percellens</i>	(Walbaum, 1792)	E8	INV TEJ3779	CBINP070- 24	ITF
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