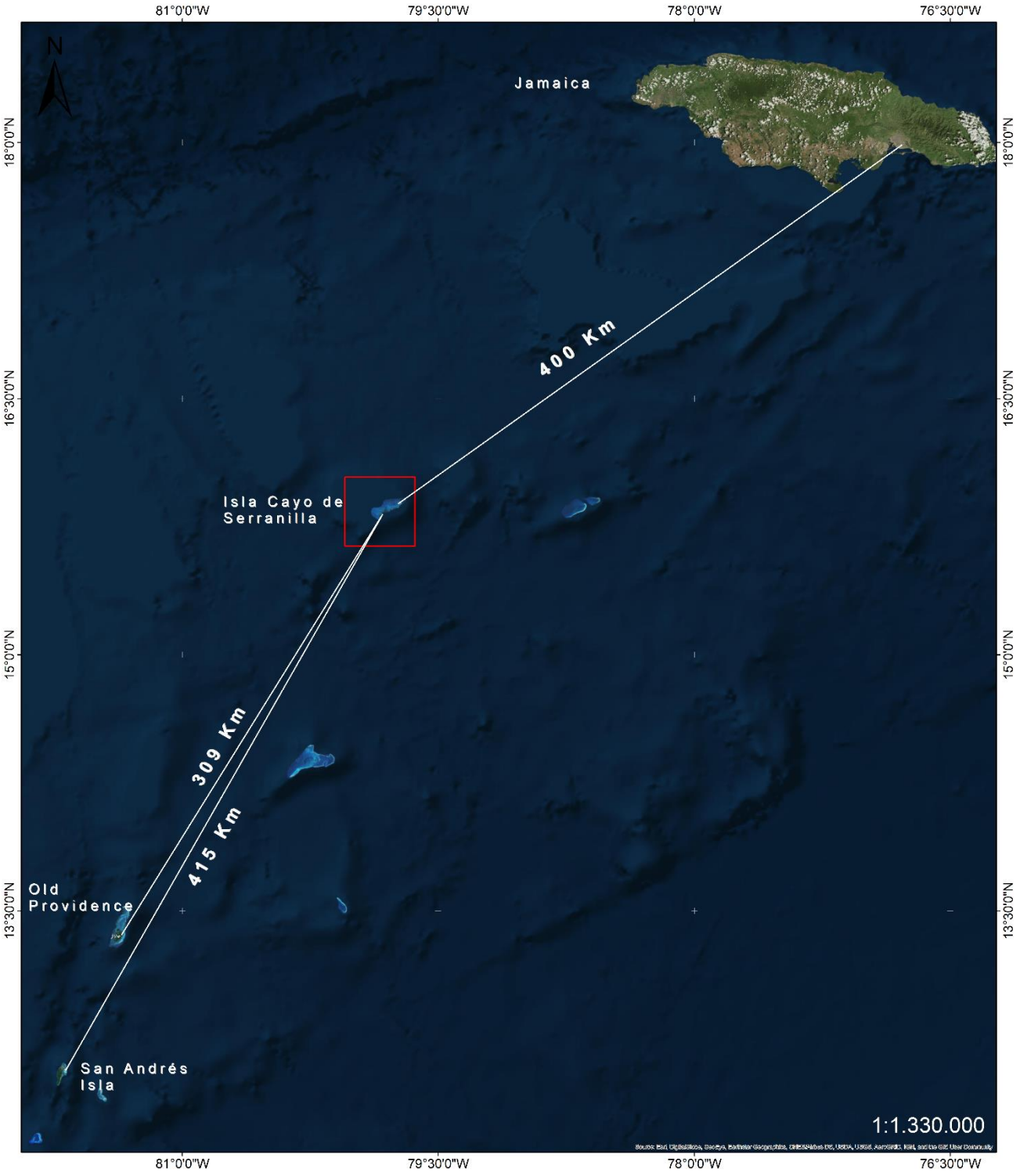

Figure S1. Serranilla Island and distances between islands (San Andres 415 km, Providencia 309 km, Jamaica 305 km).

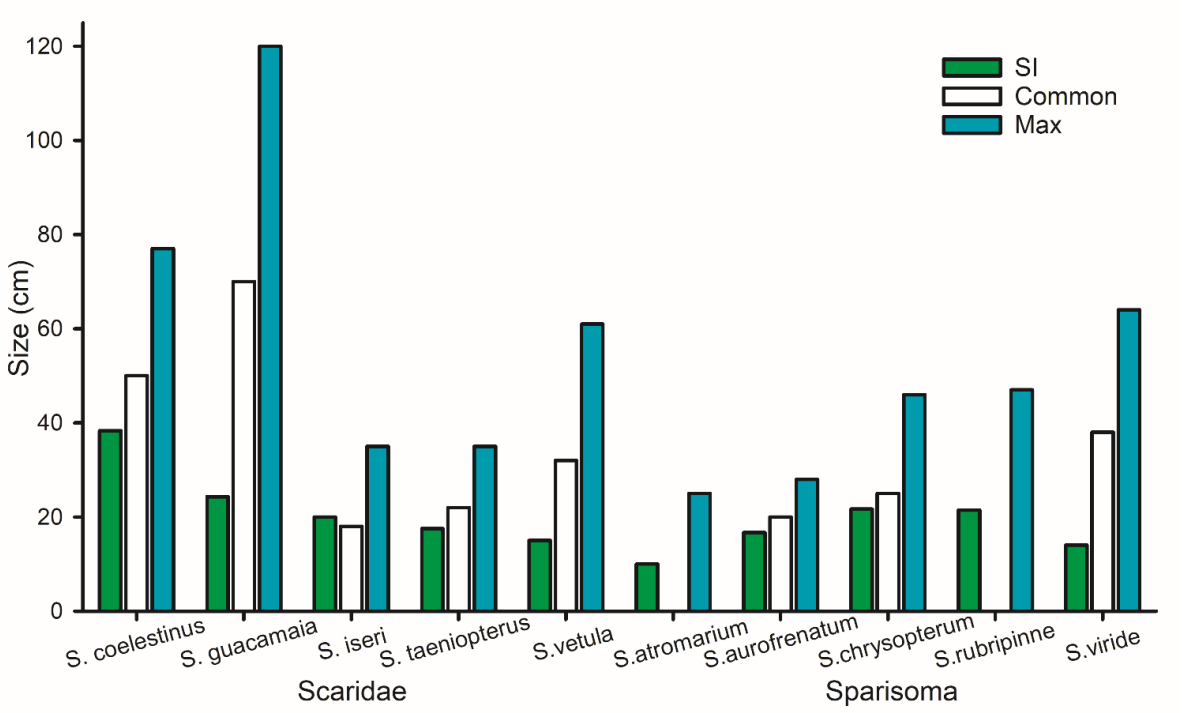

Figure S2. Mean observed fish sizes during census at Serranilla Island (SI) compared with the common and maximum (Max) reported in FishBase [1].

Table S1. Site summary of the metrics of fish assemblages in Serranilla Island with average value per metric ± SD.

Site	Rugosity	Abundance	Biomass (gr/m²)	N0	N1	N2	N21
S1	0.14 ± 0.05	368.33 ± 322.16	229.15 ± 306.37	7.00 ± 6.56	3.68 ± 4.05	3.05 ± 3.28	0.86 ± 0.12
S2	0.10 ± 0.00	260.00 ± 87.681	134.52 ± 9.14	13.00 ± 1.41	6.80 ± 1.16	5.32 ± 0.66	0.79 ± 0.04
S3	0.27 ± 0.15	648.00 ± 455.00	187.49 ± 101.59	12.67 ± 6.03	3.98 ± 2.20	2.96 ± 1.57	0.75 ± 0.02
S4	0.07 ± 0.04	154.67 ± 134.59	120.90 ± 102.24	7.00 ± 3.46	3.87 ± 0.91	3.12 ± 0.41	0.82 ± 0.11
S5	0.02 ± 0.02	35.33 ± 6.028	18.58 ± 9.64	4.00 ± 1.00	2.37 ± 0.94	1.93 ± 0.72	0.82 ± 0.05
S6	0.41 ± 0.05	384.67 ± 28.71	513.57 ± 42.67	21.67 ± 8.08	10.81 ± 4.32	8.04 ± 2.99	0.75 ± 0.05
S7	0.10 ± 0.11	189.00 ± 128.69	117.94 ± 92.90	7.00 ± 4.24	4.72 ± 1.58	4.03 ± 1.05	0.86 ± 0.07
S8	0.19 ± 0.01	249.00 ± 67.88	153.95 ± 74.20	12.5 ± 3.54	5.72 ± 0.64	4.48 ± 0.77	0.78 ± 0.05
S9	0.31 ± 0.18	337.67 ± 181.29	369.37 ± 126.92	15.33 ± 1.53	6.77 ± 1.16	4.58 ± 0.56	0.68 ± 0.04
S10	0.35 ± 0.05	477.5 ± 405.17	322.39 ± 327.61	17.00 ± 2.83	8.33 ± 2.42	6.46 ± 1.92	0.77 ± 0.01

Table S2. Summary of fish assemblage families and species in Serranilla Island. Values of abundance and biomass with the total sum, frequency, and average ± SD.

Family	Species	Abundance				Biomass			
		Sum	Freq.	Av.	±SD	Sum	Freq.	Av.	±SD
Acanthuridae	*Acanthurus bahianus* Castelnau 1855	92	9	3.54	± 7.74	123.03	9	4.73	± 13.73
Acanthuridae	*Acanthurus chirurgus* (Bloch 1787)	137	9	5.27	± 15.56	66.29	9	2.55	± 6.41
Acanthuridae	*Acanthurus coeruleus* Bloch & Schneider 1801	33	6	1.27	± 3.35	122.80	6	4.72	± 19.36
Aulostomidae	*Aulostomus maculatus* Valenciennes 1841	1	1	0.04	± 0.20	0.42	1	0.02	± 0.08
Balistidae	*Balistes vetula* Linnaeus 1758	15	9	0.58	± 1.10	156.02	9	6.00	± 9.85
Balistidae	*Canthidermis sufflamen* (Mitchill 1815)	14	9	0.54	± 0.86	134.89	9	5.19	± 9.07
Balistidae	*Melichthys niger* (Bloch 1786)	77	8	2.96	± 9.28	495.87	8	19.07	± 49.83
Blenniidae	*Ophioblennius atlanticus* (Valenciennes 1836)	1	1	0.04	± 0.20	0.26	1	0.01	± 0.05
Carangidae	*Alectis ciliaris* (Bloch 1787)	2	2	0.08	± 0.27	5.88	2	0.23	± 0.80
Carangidae	*Caranx crysos* (Mitchill 1815)	16	3	0.58	± 2.35	51.85	3	2.11	± 6.41
Carangidae	*Caranx latus* Agassiz 1831	1	1	0.62	± 2.38	2.98	1	1.99	± 7.00
Carangidae	*Caranx ruber (Bloch 1793)*	15	4	0.04	± 0.20	54.82	4	0.11	± 0.58
Chaetodontidae	*Chaetodon capistratus* Linnaeus 1758	2	1	4.04	± 11.03	2.17	1	5.74	± 14.37
Diodontidae	*Diodon hystrix* Linnaeus 1758	2	1	0.54	± 1.84	5.65	1	0.35	± 1.33
Ginglymostomatidae	*Ginglymostoma cirratum* (Bonnaterre 1788)	2	2	0.08	± 0.27	78.73	2	3.03	± 10.70
Grammatidae	*Gramma loreto* Poey 1868	2	2	0.08	± 0.27	0.52	2	0.02	± 0.07
Haemulidae	*Haemulon album* Cuvier 1830	44	7	1.69	± 3.89	901.69	7	34.68	± 78.90
Haemulidae	*Haemulon flavolineatum* (Desmarest 1823)	61	5	2.35	± 5.50	126.03	5	4.85	± 17.30
Haemulidae	*Haemulon plumierii* (Lacepède 1801)	5	1	0.19	± 0.98	3.91	1	0.15	± 0.77
Holocentridae	*Holocentrus adscensionis* (Osbeck 1765)	8	5	0.31	± 0.84	42.60	5	1.64	± 6.38
Kyphosidae	*Kyphosus sectatrix* (Linnaeus 1758)	18	1	0.69	± 3.53	269.26	1	10.36	± 52.81
Labridae	*Bodianus rufus* (Linnaeus 1758)	6	3	0.23	± 0.82	11.89	3	0.46	± 1.56
Labridae	*Clepticus parrae* (Bloch & Schneider 1801)	6	3	0.08	± 0.39	33.82	3	0.21	± 1.09
Labridae	*Halichoeres bivittatus* (Bloch 1791)	413	19	15.88	± 24.21	68.89	19	2.65	± 3.89
Labridae	*Halichoeres garnoti* (Valenciennes 1839)	486	19	18.69	± 25.91	139.19	19	5.35	± 11.85
Labridae	*Halichoeres maculipinna* (Müller & Troschel 1848)	12	3	0.46	± 1.39	16.74	3	0.64	± 2.50

Labridae	*Thalassoma bifasciatum* (Bloch 1791)	546	9	21.00	±	74.08	36.41	9	1.40	± 3.63
Labridae	*Xyrichtys martinicensis* Valenciennes 1840	30	2	1.15	±	4.96	10.09	2	0.39	± 1.67
Lutjanidae	*Lutjanus analis* (Cuvier 1828)	77	1	2.96	±	15.10	51.88	1	2.00	± 10.18
Lutjanidae	*Lutjanus griseus* (Linnaeus 1758)	19	2	0.73	±	3.53	46.75	2	1.80	± 8.68
Lutjanidae	*Ocyurus chrysurus* (Bloch 1791)	5	1	0.19	±	0.98	24.76	1	0.95	± 4.86
Malacanthidae	*Malacanthus plumieri* (Bloch 1786)	6	4	0.23	±	0.59	20.04	4	0.77	± 2.15
Mullidae	*Mulloidichthys martinicus* (Cuvier 1829)	17	4	0.65	±	2.04	611.82	4	23.53	± 79.43
Muraenidae	*Gymnothorax funebris* Ranzani 1839	1	1	0.04	±	0.20	0.14	1	0.01	± 0.03
Ostraciidae	*Acanthostracion quadricornis* (Linnaeus 1758)	15	1	0.58	±	2.94	232.44	1	8.94	± 45.59
Pempheridae	*Pempheris schomburgkii* Müller & Troschel 1848	2	1	0.08	±	0.39	0.60	1	0.02	± 0.12
Pomacanthidae	*Holacanthus ciliaris* (Linnaeus 1758)	3	3	0.12	±	0.33	11.44	3	0.44	± 1.24
Pomacanthidae	*Holacanthus tricolor* (Bloch 1795)	6	5	0.23	±	0.51	11.85	5	0.46	± 1.19
Pomacanthidae	*Pomacanthus paru* (Bloch 1787)	2	2	0.08	±	0.27	6.23	2	0.24	± 0.94
Pomacentridae	*Abudefduf saxatilis* (Linnaeus 1758)	67	3	2.58	±	9.85	37.30	3	1.43	± 4.21
Pomacentridae	*Chromis cyanea* (Poey 1860)	105	10	3.77	±	11.19	149.26	10	5.87	± 15.61
Pomacentridae	*Chromis multilineata* (Guichenot 1853)	98	7	0.23	±	0.71	152.70	7	1.30	± 4.00
Pomacentridae	*Microspathodon chrysurus* (Cuvier 1830)	143	8	5.50	±	14.05	46.72	8	1.80	± 5.54
Pomacentridae	*Stegastes diencaeus* (Jordan & Rutter 1897)	79	10	3.04	±	5.70	108.89	10	4.19	± 11.45
Pomacentridae	*Stegastes leucostictus* (Müller & Troschel 1848)	2	2	0.08	±	0.27	7.85	2	0.30	± 1.48
Pomacentridae	*Stegastes partitus* (Poey 1868)	102	10	3.92	±	14.24	73.03	10	2.81	± 12.68
Pomacentridae	*Stegastes planifrons* (Cuvier 1830)	126	11	4.85	±	9.47	111.54	11	4.29	± 10.87
Pomacentridae	*Stegastes variabilis* (Castelnau 1855)	6	2	0.23	±	0.99	0.47	2	0.02	± 0.07
Scaridae	*Cryptotomus roseus Cope 1871*	2	1	0.08	±	0.39	5.58	1	0.22	± 1.11
Scaridae	*Scarus coelestinus* Valenciennes 1840	7	4	0.27	±	0.67	94.05	4	3.62	± 10.83
Scaridae	*Scarus coeruleus* (Edwards 1771)	2	1	0.08	±	0.39	55.89	1	2.15	± 10.96
Scaridae	*Scarus guacamaia* Cuvier 1829	16	4	0.62	±	2.55	21.35	4	0.82	± 2.38
Scaridae	*Scarus iseri* (Bloch 1789)	4	2	0.15	±	0.54	6.38	2	0.25	± 1.04
Scaridae	*Scarus taeniopterus* Lesson 1829	12	3	0.46	±	1.39	8.81	3	0.34	± 0.96
Scaridae	*Scarus vetula* Bloch & Schneider 1801	3	2	0.12	±	0.43	2.02	2	0.08	± 0.29
Scaridae	*Sparisoma atomarium* (Poey 1861)	5	2	0.19	±	0.69	1.65	2	0.06	± 0.27
Scaridae	*Sparisoma aurofrenatum* (Valenciennes 1840)	13	4	0.50	±	1.27	9.32	4	0.36	± 0.89

Scaridae	*Sparisoma chrysopterum* (Bloch & Schneider 1801)	17	5	0.65	±	1.60	36.34	5	1.40	± 3.65
Scaridae	*Sparisoma rubripinne* (Valenciennes 1840)	21	5	0.81	±	2.14	26.92	5	1.04	± 2.91
Scaridae	*Sparisoma viride* (Bonnaterre 1788)	102	17	3.92	±	5.83	124.93	17	4.80	± 7.96
Scombridae	*Thunnus atlanticus* (Lesson 1831)	38	2	1.46	±	6.87	0.91	2	0.04	± 0.12
Serranidae	*Cephalopholis cruentata* (Lacepède 1802)	14	4	0.12	±	0.43	9.11	4	0.28	± 1.33
Serranidae	*Cephalopholis fulva* (Linnaeus 1758)	2	2	0.08	±	0.39	7.37	2	0.08	± 0.43
Serranidae	*Epinephelus guttatus* (Linnaeus 1758)	2	2	0.08	±	0.27	7.08	2	0.27	± 1.28
Serranidae	*Serranus tigrinus* (Bloch 1790)	2	1	0.08	±	0.39	1.12	1	0.04	± 0.22
Sphyraenidae	*Sphyraena barracuda* (Edwards 1771)	7	4	0.27	±	0.72	89.13	4	3.43	± 9.41
Tetraodontidae	*Canthigaster rostrata* (Bloch 1786)	8	4	0.31	±	1.01	0.99	4	0.04	± 0.09

Table S3. Summary of the abundance and biomass of the Scaridae species in Serranilla and San Andrés with the average values ± SD.

Scaridae species	Abundance			
	Serranilla		San Andrés	
	Sum	Av. ± SD	Sum	Av. ± SD
Scarus coelestinus	6	0.5 ± 0.9		
Scarus coeruleus	2	0.17 ± 0.58		
Scarus guacamaia	16	1.33 ± 3.71		
Scarus iseri	2	0.17 ± 0.57	24	2.00 ± 2.70
Scarus taeniopterus	5	0.42 ± 1.44	117	9.75 ± 3.19
Scarus vetula	1	0.08 ± 0.28	3	0.25 ± 0.62
Sparisoma atromarium	5	0.42 ± 0.99		
Sparisoma aurofrenatum	10	0.83 ± 1.64	73	6.08 ± 3.53
Sparisoma chrysopterum	17	1.42 ± 2.15		
Sparisoma rubripinne	20	1.67 ± 2.96	1	0.08 ± 0.29
Sparisoma viride	107	8.92 ± 9.29	19	1.58 ± 1.00
	Biomass (gr/m²)			
	Sum	Av. ± SD	Sum	Av. ± SD
Scarus coelestinus	90.68	7.56 ± 15.31		
Scarus coeruleus	55.89	4.66 ± 16.14		
Scarus guacamaia	21.34	1.78 ± 3.32		
Scarus iseri	5.02	0.42 ± 1.45	2.51	0.21 ± 0.35
Scarus taeniopterus	2.99	0.25 ± 0.86	25.98	2.17 ± 1.66
Scarus vetula	0.67	0.06 ± 0.19	2.02	0.17 ± 0.42
Sparisoma atromarium	1.36	0.11 ± 0.38		
Sparisoma aurofrenatum	7.56	0.63 ± 1.17	30.42	2.53 ± 1.68
Sparisoma chrysopterum	36.28	3.02 ± 4.98		
Sparisoma rubripinne	35.26	2.94 ± 4.65	3.03	0.25 ± 0.88
Sparisoma viride	108.96	9.08 ± 9.84	19.20	1.60 ± 1.38

Table S4. SIMPER analysis summary. Scaridae average contribution and cumulative contribution percentage in biomass and abundance to the dissimilarity between SI and SAI. Registered and common length[a] of those species. [a] Common length obtained from FishBase [1]; [b] Max length used instead of common length.

Abundance Av. Diss 71.45	**SIMPER**		**Length (cm)**	
Species	**% Cont.**	**% Cum. Cont.**	**Registered**	**Common**
Scarus taeniopterus	26.30	26.30	17.5 ± 3.54	22
Sparisoma aurofrenatum	20.81	47.11	16.67 ± 2.89	20
Sparisoma viride	11.20	58.30	14.03 ± 4.75	38
Scarus iseri	10.07	68.37	20 ± 7.07	18
Sparisoma chrysopterum	7.03	75.40	21.67 ± 4.71	25
Sparisoma rubripinne	6.50	81.90	21.46 ± 9.44	47[b]
Scarus guacamaia	6.26	88.16	24.29 ± 11.09	70
Biomass Av. Diss 71.20				

Species				
Scarus taeniopterus	19.41	19.41	17.5 ± 3.54	22
Sparisoma aurofrenatum	18.84	38.25	16.67 ± 2.89	20
Sparisoma viride	13.23	51.48	14.03 ± 4.75	38
Sparisoma chrysopterum	9.26	60.74	21.67 ± 4.71	25
Scarus coelestinus	8.98	69.72	38.33 ± 11.55	50
Sparisoma rubripinne	8.33	78.05	21.46 ± 9.44	47 *
Scarus guacamaia	7.60	85.65	24.29 ± 11.09	70

References

1. Froese, R.; Pauly, D. Fish Base. World Wide Web Electronic Publication. Available online: www.fishbase.org (accessed on 12 December 2019).