

Supplementary material

Table S1: Summary of mangrove fish communities surveys carried out across two bioregions of the Galapagos Archipelago in April 2015 using two sampling methods: stereo-Baited Remote Underwater Video Stations (stereo-BRUVS) and Underwater Visual Censuses (UVC). The summary includes information about the taxonomy, endemism, preferred habitat, and number of individuals (MaxN for stereo-BRUVS and total abundance for UVC) of fish species observed in mangrove areas of the Galapagos. Endemic species to the Galapagos are marked with an asterisk (*). Dashes (-) indicate that no individuals of that species were detected at that bioregion using that sampling method. MaxN refers to the maximum number of individuals observed per species per video. Preferred habitat data was obtained from Fishbase and Robertson & Allen (2015).

Family	Genus	Species	Preferred habitat	Number of individual fish sampled			
				Stereo-BRUVS		UVC	
				CSE	Western	CSE	Western
Acanthuridae	Prionurus	<i>Prionurus laticlavus</i>	Reef	10	-	27	-
Apogonidae	Apogon	<i>Apogon atradorsatus</i>	Reef	-	-	3125	-
Aulostomidae	Aulostomus	<i>Aulostomus chinensis</i>	Reef	1	-	1	-
Balistidae	Balistes	<i>Balistes polylepis</i>	Reef	1	-	4	-
	Sufflamen	<i>Sufflamen verres</i>	Reef	-	-	1	1
Blenniidae	Ophioblennius	<i>Ophioblennius steindachneri</i>	Reef	-	-	10	13
	Plagiotremus	<i>Plagiotremus azaleus</i>	Reef	19	5	74	-
		<i>Caranx caballus</i>	Pelagic/nearshore	161	2	83	-
	Caranx	<i>Caranx caninus</i>	Pelagic/nearshore	93	8	15	-
		<i>Caranx</i> sp	-	2	9	-	-
Carangidae	Decapterus	<i>Decapterus</i> sp	-	20	-	-	-
	Gnathanodon	<i>Gnathanodon speciosus</i>	Reef	-	-	11	-
	Naucrates	<i>Naucrates ductor</i>	Reef/pelagic	1	1	-	-
	Selar	<i>Selar crumenophthalmus</i>	Reef/pelagic	501	-	-	-
		Carangidae sp	-	14	-	-	-
Carcharhinidae	Carcharhinus	<i>Carcharhinus limbatus</i>	Reef/pelagic	40	3	23	1
	Triaenodon	<i>Triaenodon obesus</i>	Reef/pelagic	3	2	-	-
Centropomidae	Centropomus	<i>Centropomus viridis</i>	Estuarine/nearshore	-	3	-	-
Chaetodontidae	Chaetodon	<i>Chaetodon humeralis</i>	Reef	31	3	46	14
	Johnrandallia	<i>Johnrandallia nigrirostris</i>	Reef	-	2	1	2
Chanidae	Chanos	<i>Chanos chanos</i>	Estuarine/nearshore	7	-	-	-
Cirrhitidae	Cirrhitus	<i>Cirrhitus rivulatus</i>	Reef	-	-	3	-
Dasyatidae	Hypanus	<i>Hypanus dipterurus</i>	Benthic	6	10	4	1
		<i>Hypanus</i> sp	-	2	-	-	-

		<i>Hypanus longus</i>	Reef, bethic	-	-	-	1
		Dasyatidae sp	-	1	2	-	-
Diodontidae	Diodon	<i>Diodon hystrix</i>	Reef	3	-	-	1
		Diodontidae sp	-	-	1	-	-
Fistulariidae	Fistularia	<i>Fistularia commersonii</i>	Reef	8	-	12	-
		<i>Eucinostomus currani</i>	Estuarine/nearshore	17	14	-	-
	Eucinostomus	<i>Eucinostomus dowii</i>	Estuarine/nearshore	26	5	519	20
Gerreidae		<i>Eucinostomus</i> sp	-	96	38	-	-
	Gerres	<i>Gerres simillimus</i>	Reef	15	9	20	-
		Gerreidae sp	-	-	1	-	-
Gobiidae		Gobiidae sp	-	1	-	-	-
	Anisotremus	<i>Anisotremus interruptus</i>	Reef	10	14	39	15
		<i>Haemulon scudderii</i>	Reef	62	-	141	3
	Haemulon	<i>Haemulon sexfasciatum</i>	Reef	2	-	4	-
		<i>Haemulon</i> sp	-	1017	1	-	-
		<i>Haemulon steindachneri</i>	Reef	9	-	-	-
Haemulidae		<i>Orthopristis cantharinus</i>	Reef	5	4	-	-
	Orthopristis	<i>Orthopristis forbesi</i> *	Reef	5	-	49	-
		<i>Orthopristis lethopristis</i> *	Reef	25	8	-	-
		<i>Orthopristis</i> sp	-	185	1	-	-
	Xenichthys	<i>Xenichthys agassizii</i> *	Reef/nearshore	-	-	3575	-
	Xenocys	<i>Xenocys jessiae</i> *	Reef/nearshore	300	-	772	200
		Haemulidae sp	-	2005	6	500	-
Hemiramphidae	Hemiramphus	<i>Hemiramphus</i> sp	-	7	-	-	-
	Girella	<i>Girella freminvillii</i> *	Reef/nearshore	-	32	-	69
Kyphosidae	Kyphosus	<i>Kyphosus elegans</i>	Reef	-	1	-	-
		<i>Kyphosus vaigiensis</i>	Reef/benthopelagic	-	-	3	-
	Bodianus	<i>Bodianus diplotaenia</i>	Reef	25	5	57	20
		<i>Halichoeres dispilus</i>	Reef	6	-	52	1
Labridae	Halichoeres	<i>Halichoeres nicholsi</i>	Reef	7	-	42	1
		<i>Halichoeres melanotis</i>	Reef	-	-	1	-
		<i>Halichoeres notospilus</i>	Reef/nearshore	-	-	1	-
	Stethojulis	<i>Stethojulis bandanensis</i>	Reef	-	-	1	-

	Thalassoma	<i>Thalassoma grammaticum</i>	Reef	1	-	-	-
		<i>Thalassoma lucasanum</i>	Reef/nearshore	47	23	92	21
		Labridae sp	-	15	2	-	-
Labrisomidae	Labrisomus	<i>Labrisomus dendriticus</i>	Benthic	-	1	-	-
	Malacoctenus	<i>Malacoctenus tetranemus</i>	Reef/benthic	-	-	12	-
	Hoplopagrus	<i>Hoplopagrus guentherii</i>	Reef	7	2	1	-
		<i>Lutjanus aratus</i>	Reef/nearshore	-	5	27	2
		<i>Lutjanus argentiventris</i>	Reef	94	67	1563	264
Lutjanidae	Lutjanus	<i>Lutjanus novemfasciatus</i>	Reef	25	28	585	27
		Lutjanus sp	-	5	6	-	-
		<i>Lutjanus viridis</i>	Reef	-	8	1	-
		<i>Lutjanus jordani</i>	Reef	-	-	40	1
		<i>Mugil cephalus</i>	Estuarine/benthopelagic	230	155	152	44
		<i>Mugil curema</i>	Reef/estuarine	57	3	270	44
Mugilidae	Mugil	<i>Mugil galapagensis*</i>	Estuarine/nearshore	52	5	12	-
		<i>Mugil sp</i>	-	434	220	1197	315
	Xenomugil	<i>Xenomugil thoburni</i>	Estuarine/pelagic	400	825	-	-
Mullidae	Pseudupeneus	<i>Pseudupeneus grandisquamis</i>	Reef	-	1	-	-
	Enchelycore	<i>Enchelycore lichenosa</i>	Reef/benthic	-	-	1	-
	Gymnothorax	<i>Gymnothorax dovii</i>	Reef/benthic	1	-	-	-
Muraenidae	Muraena	<i>Muraena clepsydra</i>	Reef/benthic	1	-	-	-
		<i>Muraena lentiginosa</i>	Reef/benthic	-	-	1	-
		Muraenidae sp	-	1	-	-	-
		<i>Aetobatus laticeps</i>	Reef	12	2	-	-
	Aetobatus	<i>Aetobatus sp</i>	-	-	1	-	-
Myliobatidae		<i>Aetobatus ocellatus</i>	Benthopelagic	-	-	4	1
	Rhinoptera	<i>Rhinoptera steindachneri</i>	Reef/estuarine	4	-	-	1
		Myliobatidae sp	-	1	-	-	-
Ophichthidae	Myrichthys	<i>Myrichthys tigrinus</i>	Reef	-	-	2	-
		Ophichthidae sp	-	1	-	-	-
Pomacanthidae	Holacanthus	<i>Holacanthus passer</i>	Reef	5	-	14	2
		<i>Abudefduf concolor</i>	Reef	3	-	87	24
Pomacentridae	Abudefduf	<i>Abudefduf troschelii</i>	Reef	143	42	1964	450

	Microspathodon	<i>Microspathodon bairdii</i>	Reef	2	-	1	-
		<i>Microspathodon dorsalis</i>	Reef	-	-	1	2
		<i>Stegastes arcifrons</i>	Reef	220	137	2301	1453
	Stegastes	<i>Stegastes beebei</i>	Reef	2	4	88	162
		<i>Stegastes</i> sp	-	-	9	-	-
		<i>Stegastes acapulcoensis</i>	Reef	-	-	12	2
		Pomacentridae sp	-	-	2	-	-
	Nicholsina	<i>Nicholsina denticulata</i>	Reef	4	-	21	-
		<i>Scarus compressus</i>	Reef	1	-	1	1
Scaridae	Scarus	<i>Scarus ghobban</i>	Reef	166	108	92	75
		<i>Scarus rubroviolaceus</i>	Reef	1	-	1	-
		Scaridae sp	-	49	33	-	-
Sciaenidae	Odontoscion	<i>Odontoscion eurymesops</i>	Reef	-	-	464	-
Scombridae	Scomberomorus	<i>Scomberomorus sierra</i>	Pelagic	9	1	-	-
	Epinephelus	<i>Epinephelus labriformis</i>	Reef/benthic	17	10	25	2
	Mycteroperca	<i>Mycteroperca olfax</i>	Demersal	30	35	42	154
Serranidae	Paranthias	<i>Paranthias colonus</i>	Reef	-	-	-	4
	Serranus	<i>Serranus psittacinus</i>	Reef	5	2	-	5
		Serranidae sp	-	1	-	-	-
		Schools silvery fish	-	2043	300	-	-
Sparidae	Archosargus	<i>Archosargus pourtalesii</i> *	Reef	71	62	264	43
	Calamus	<i>Calamus brachysomus</i>	Reef	-	-	1	-
Sphyraenidae	Sphyraena	<i>Sphyraena idiastes</i>	Reef/pelagic	51	-	32	-
	Arothron	<i>Arothron meleagris</i>	Reef	2	-	-	-
	Arothron	<i>Arothron hispidus</i>	Reef	-	-	1	2
Tetraodontidae	Sphoeroides	<i>Sphoeroides angusticeps</i> *	Reef	3	-	-	-
		<i>Sphoeroides annulatus</i>	Reef	342	130	1198	52
		Tetraodontidae sp	-	-	1	-	-
		Total number of individuals		9307	2420	19786	3516
		Total number of species		61	42	66	41

Table S2: Summary of non-fish species detected in mangrove areas across two bioregions of the Galapagos Archipelago during surveys carried out in April 2015 using two sampling methods: stereo-Baited Remote Underwater Video Stations (stereo-BRUVS) and Underwater Visual Censuses (UVC). The summary includes information about the taxonomy and number of individuals (MaxN for stereo-BRUVS and total abundance for UVC) of non-fish species observed in mangrove areas of the Galapagos. Dashes (-) indicate that no individuals of that species were detected at a bioregion using that sampling methodology. MaxN refers to the maximum number of individuals observed per species per video.

Family	Genus	Species	Number of individuals			
			UVCs		Stereo-BRUVs	
			CSE	Western	CSE	Western
Cheloniidae	Chelonia	<i>Chelonia mydas</i>	-	6	10	25
Gecarcinidae	Cardisoma	<i>Cardisoma crassum</i>	-	-	-	1
Otariidae	Zalophus	<i>Zalophus wollebaeki</i>	-	-	5	9
Phalacrocoracidae	Phalacrocorax	<i>Phalacrocorax harrisi</i>	-	-	-	2
Scyllaridae	Scyllarides	<i>Scyllarides astori</i>	-	-	1	-
Spheniscidae	Spheniscus	<i>Spheniscus mendiculus</i>	-	2	-	2
		Total individuals	-	8	16	39
		Total species	-	2	3	5

Table S3 – Univariate PERMANOVA results based on Euclidean distances testing for differences in relative proportions of carnivores (A), apex predators (B), herbivores (C), and planktivores (D) between methods (UVC and stereo-BRUVS) and across bioregions (CSE and Western). Significant results highlighted in bold.

A						
Carnivores						
	df	SS	MS	F	R2	<i>p</i>
Bioregion	1	0.164	0.164	3.043	0.010	0.080
Method	1	5.226	5.226	97.094	0.305	< 0.001
Bioregion:Method	1	0.010	0.010	0.188	0.001	0.659
Residuals	218	11.733	0.054		0.685	
Total	221	17.133			1.000	
B						
Apex predators						
	df	SS	MS	F	R2	<i>p</i>
Bioregion	1	0.007	0.007	1.418	0.006	0.234
Method	1	0.038	0.038	7.969	0.035	< 0.001
Bioregion:Method	1	0.011	0.011	2.370	0.010	0.130
Residuals	218	1.046	0.005		0.949	
Total	221	1.102			1.000	
C						
Herbivores						
	df	SS	MS	F	R2	<i>p</i>
Bioregion	1	0.070	0.070	9.785	0.042	0.002
Method	1	0.034	0.034	4.827	0.021	0.026
Bioregion:Method	1	0.003	0.003	0.414	0.002	0.526
Residuals	218	1.550	0.007		0.936	
Total	221	1.657			1.000	
D						
Omnivores						
	df	SS	MS	F	R2	<i>p</i>
Bioregion	1	0.069	0.069	1.481	0.006	0.230
Method	1	1.243	1.243	26.732	0.108	< 0.001
Bioregion:Method	1	0.069	0.069	1.476	0.006	0.236
Residuals	218	10.137	0.047		0.880	
Total	221	11.518			1.000	

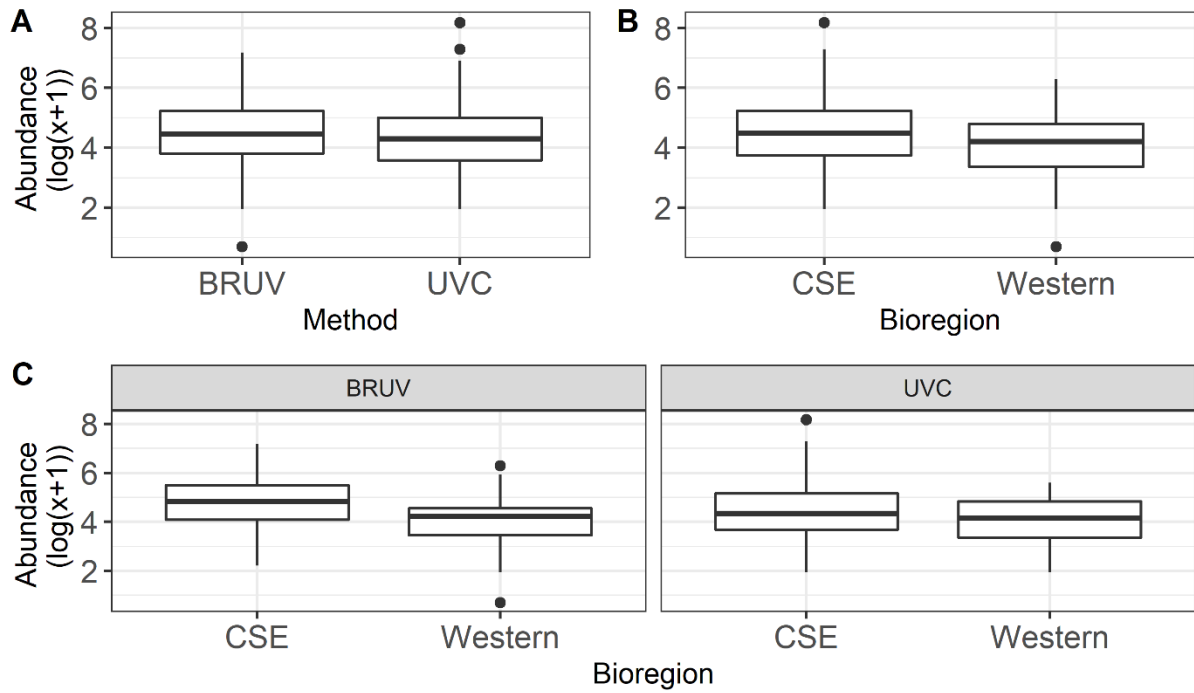


Figure S1 – Boxplot comparing log(x+1) transformed abundance per method (A), across bioregions (B), and between methods and across bioregions (C). Horizontal bars represent the median, the boxes are the interquartile range (IQR), and the black dots represent outliers, which are data points above 1.5*IQR.

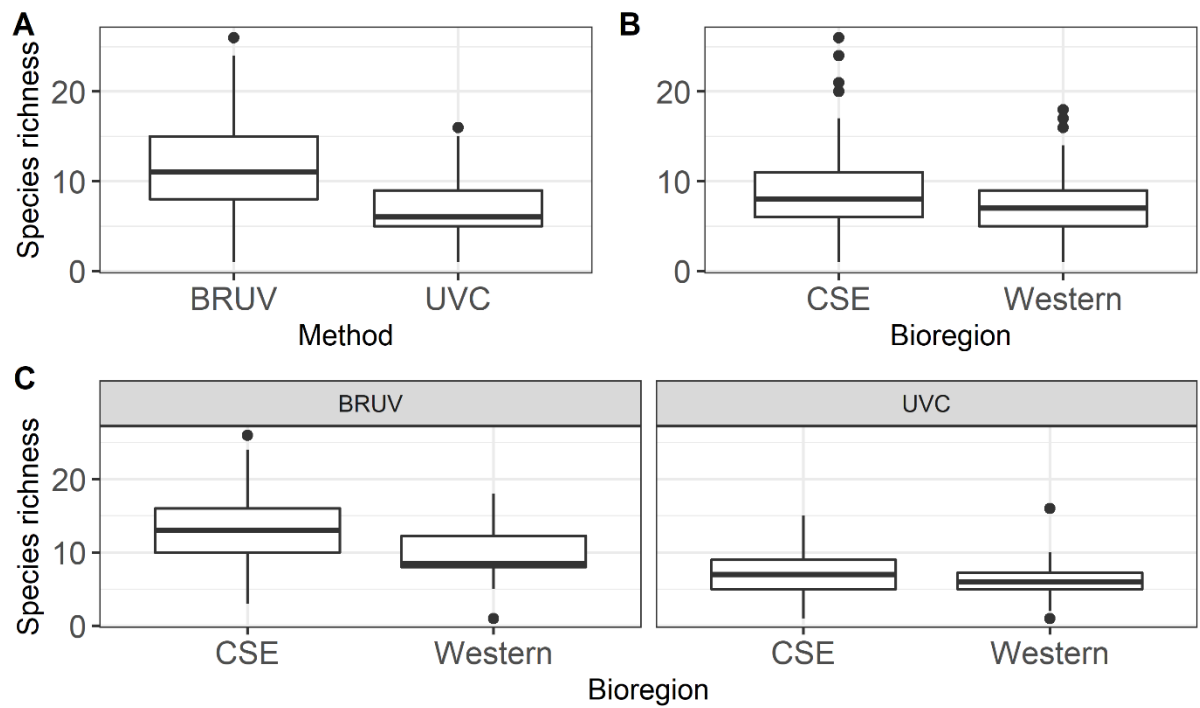


Figure S2 – Boxplot comparing species richness per method (A), across bioregions (B), and between methods and across bioregions (C). Horizontal bars represent the median, the boxes are the inter-quartile range (IQR), and the black dots represent outliers, which are data points above 1.5*IQR.

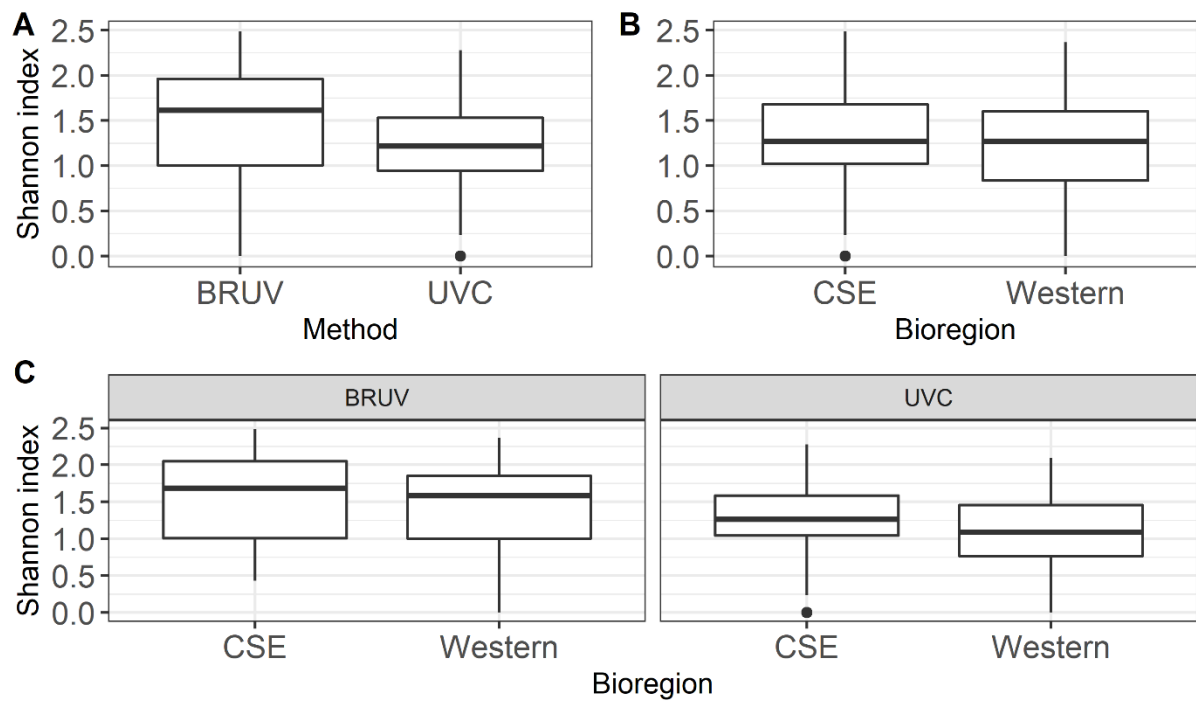


Figure S3 – Boxplot comparing Shannon diversity index per method (A), across bioregions (B), and between methods and across bioregions (C). Horizontal bars represent the median, the boxes are the inter-quartile range (IQR), and the black dots represent outliers, which are data points above $1.5 \times \text{IQR}$.

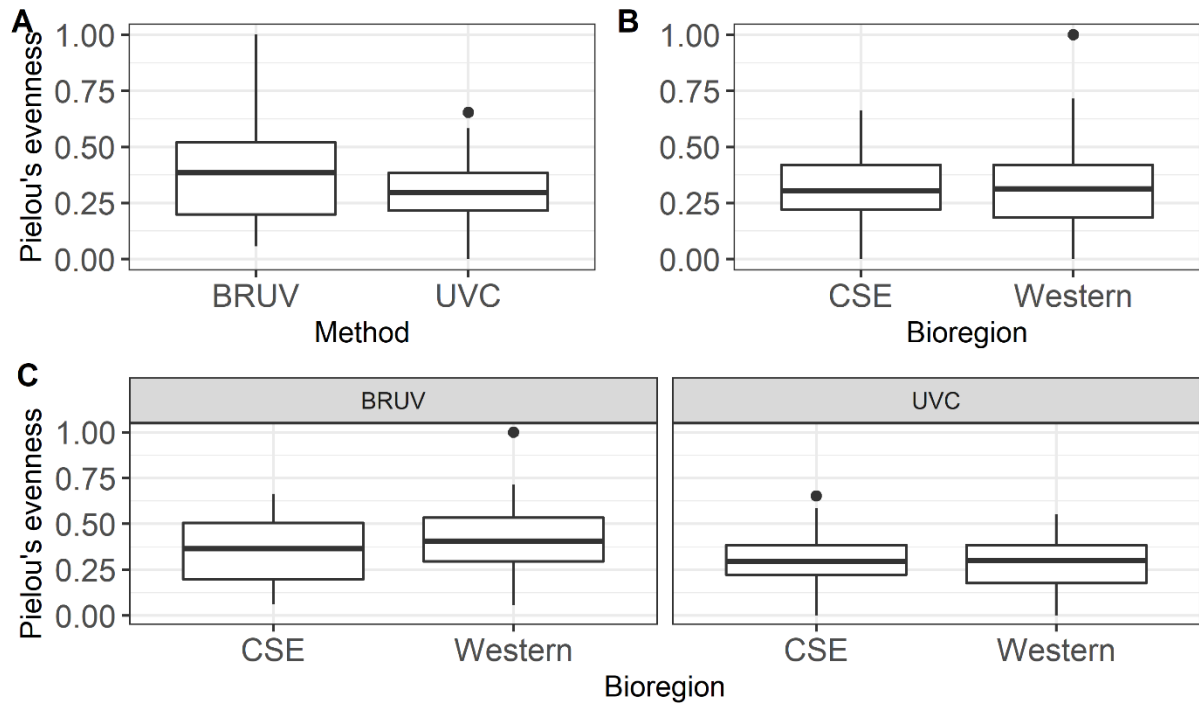


Figure S4 – Boxplot comparing Pielou's evenness per method (A), across bioregions (B), and between methods and across bioregions (C). Horizontal bars represent the median, the boxes are the inter-quartile range (IQR), and the black dots represent outliers, which are data points above 1.5*IQR.