

## Supplements

**Supplementary Table S1.** Comparison of TL for yellow and silver eels in different seasons using Dunn's multiple comparison post hoc test.

comparison	Z	p unadjusted	p adjusted
Silver eels in autumn - Silver eels in winter	-1.5754	0.1152	1.0000
Silver eels in autumn - Yellow eels in autumn	2.2689	0.0233	0.2327
Silver eels in winter - Yellow eels in autumn	3.9894	0.0001	0.0007
Silver eels in autumn - Yellow eels in spring	1.1834	0.2366	1.0000
Silver eels in winter - Yellow eels in spring	2.9821	0.0029	0.0286
Yellow eels in autumn - Yellow eels in spring	-1.2828	0.1996	1.0000
Silver eels in autumn - Yellow eels in summer	2.2204	0.0264	0.2639
Silver eels in winter - Yellow eels in summer	3.8737	0.0001	0.0010
Yellow eels in autumn - Yellow eels in summer	0.0294	0.9765	1.0000

**Supplementary Table S2.** Comparison of OI for yellow and silver eels in different seasons using Dunn's multiple comparison post hoc test.

comparison	Z	p unadjusted	p adjusted
Silver eels in autumn - Silver eels in winter	-1.0381	0.2992	1.0000
Silver eels in autumn - Yellow eels in autumn	4.3395	0.0000	0.0001
Silver eels in winter - Yellow eels in autumn	5.5806	0.0000	0.0000
Silver eels in autumn - Yellow eels in spring	4.0415	0.0001	0.0005
Silver eels in winter - Yellow eels in spring	5.3671	0.0000	0.0000
Yellow eels in autumn - Yellow eels in spring	-0.5988	0.5493	1.0000
Silver eels in autumn - Yellow eels in summer	3.7299	0.0002	1.9153
Silver eels in winter - Yellow eels in summer	4.8990	<0.0001	<0.0001
Yellow eels in autumn - Yellow eels in summer	-0.4786	0.6322	1.0000
Yellow eels in the spring - Yellow eels in the summer	0.0650	0.9482	1.0000

**Supplementary Table S3.** Comparison of W for yellow and silver eels in different seasons using Dunn's multiple comparison post hoc test.

comparison	Z	p unadjusted	p adjusted
Silver eels in autumn - Yellow eels in autumn	2.2093	0.0272	0.2715
Silver eels in autumn - Yellow eels in spring	1.0771	0.2814	1.0000
Yellow eels in autumn - Yellow eels in the spring	-1.3646	0.1724	1.0000
Silver eels in autumn - Yellow eels in summer	2.3851	0.0171	0.1708
Yellow eels in autumn - Yellow eels in summer	0.2196	0.8262	1.0000
Yellow eels in spring - Yellow eels in summer	1.5737	0.1155	1.0000
Silver eels in autumn - Silver eels in winter	-0.4193	0.6750	1.0000
Yellow eels in the autumn - Silver eels in winter	-2.5897	0.0096	0.0961
Yellow eels in spring - Silver eels in winter	-1.5143	0.1300	1.0000
Yellow eels in summer - Silver eels in winter	-2.7562	0.0058	0.0585

**Supplementary Table S4.** ANOVA output for CF of yellow and silver eels in different seasons

	df	SS	Mean Sq	f	p
Yellow and silver eels in different seasons	4	0.0025	0.0006	0.948	0.441
Residuals	72	0.04624	0.0007		

**Supplementary Table S5.** ANOVA output for HSI of yellow and silver eels in different seasons

	df	SS	f	p
Yellow and silver eels in different seasons	4	1.86	3.106	0.0204
Residuals	72	10.8		

**Supplementary Table S6.** Comparison of HSI for yellow and silver eels in different seasons using Tukey's range post hoc test.

Comparison	diff	lwe	upr	p adj
Yellow eels in autumn-Silver eels in autumn	-0.0335	-0.4509	0.3840	0.9994
Yellow eels in spring-Silver eels in autumn	0.1168	-0.2657	0.4993	0.9123
Yellow eels in summer-Silver eels in autumn	-0.1035	-0.5286	0.3217	0.9600
Silver eels in winter-Silver eels in autumn	-0.3253	-0.7300	0.0794	0.1737
Yellow eels in spring-Yellow eels in autumn	0.1503	-0.2237	0.5242	0.7931
Yellow eels in summer-Yellow eels in autumn	-0.0700	-0.4874	0.3475	0.9899
Silver eels in winter-Yellow eels in autumn	-0.2919	-0.6885	0.1048	0.2493
Yellow eels in summer-Yellow eels in spring	-0.2203	-0.6027	0.1622	0.4952
Silver eels in winter-Yellow eels in spring	-0.4421	-0.8018	-0.0825	0.0084
Silver eels in winter-Yellow eels in summer	-0.2219	-0.6266	0.1828	0.5441