

APPENDIX D: Unique Individual Response.

In addition to *density*, we calculated a second striped bass response variable, *unique individuals*. This response variable quantified sites visited by the most individual fish and was calculated by counting each individual fish only once at each of the 40 sites, then dividing the number of *unique individuals* per site by the total number of individuals detected throughout the season ($N = 37$; season = July-September). Results for this second striped bass response, *individuals*, were similar to *density* for the multiple regression (Table D1), CART (Fig. D1A), and multivariate indices (Fig. D1 B-D) (below).

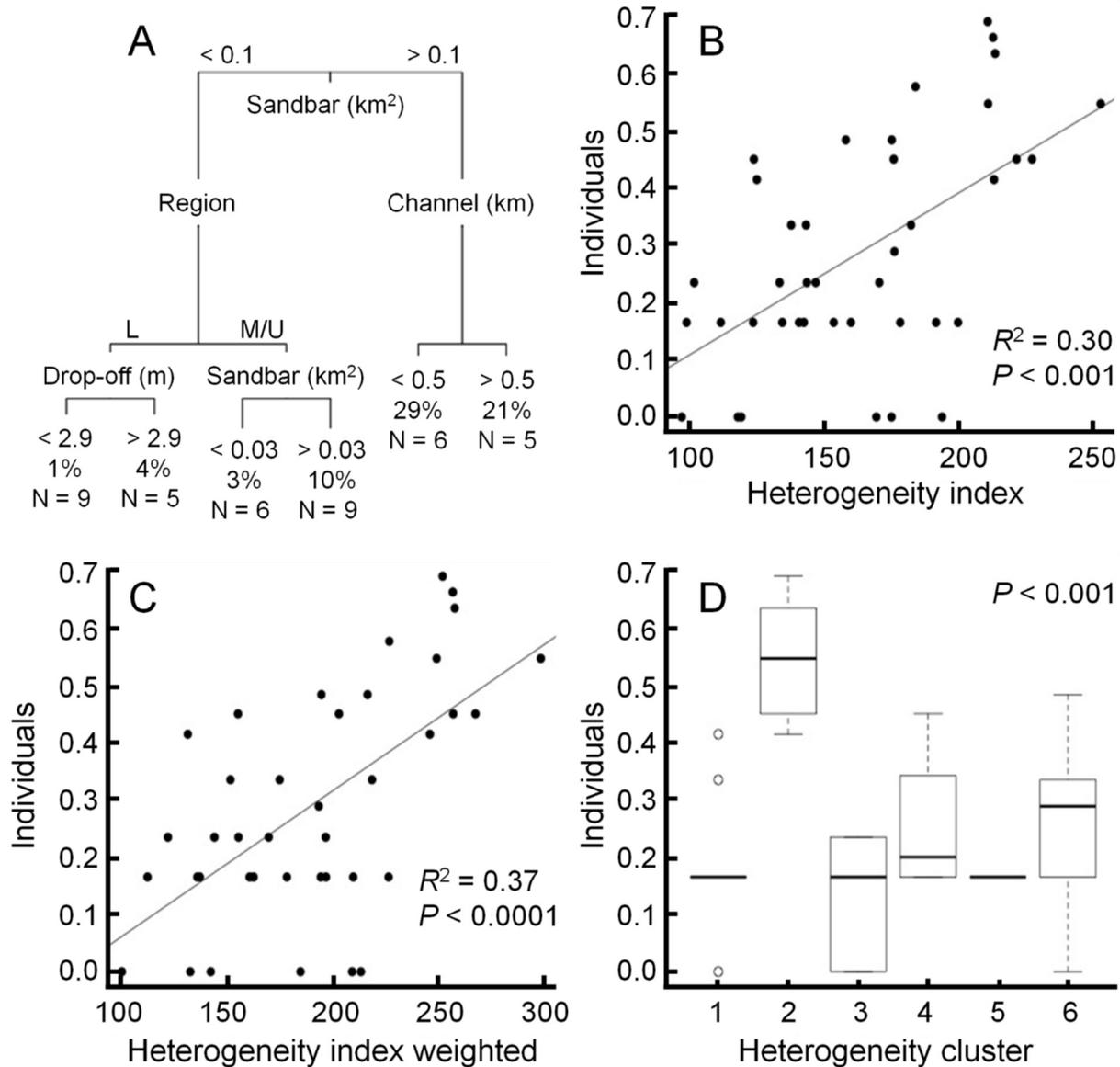


FIG. D1. Statistical results for the relationship between *unique individuals* and explanatory variables. (A) Regression tree analysis of striped bass *unique individuals* (percent of total fish) showing the influence of the explanatory variables *sandbar* (km²), *region* (U, M, L), *channel proximity* (km) and *median drop-off size* (m). Each split is labeled with the relevant values. Percent fish and number of sites in each terminal node are indicated. Relationship between striped bass *unique individuals* (arc sine-transformed percent of total fish) and three measures of multivariable heterogeneity: (A) heterogeneity index (no units), (B) heterogeneity index weighted by multiple linear regression results (no units) and (C) heterogeneity cluster group. For A and B, P -values and R^2 values result from linear regressions. For C, results of a Kruskal-Wallis test ($N = 40$) are shown.

TABLE D1. Top multiple regression models for striped bass *individuals*.

Model	Sandbar area (km ²)	Median depth variation (m)	Median drop-off size (m)	Confluence diversity	Channel proximity (km)	M vs. L	U vs. L	ΔAIC_c
1	1.68 ± 0.33					0.20 ± 0.05	0.13 ± 0.05	0.00
2	1.69 ± 0.33				-0.03 ± 0.04	0.20 ± 0.05	0.15 ± 0.06	2.26
3	1.65 ± 0.34			0.03 ± 0.05		0.20 ± 0.05	0.12 ± 0.05	2.37
4	1.62 ± 0.35	-0.02 ± 0.04				0.19 ± 0.05	0.11 ± 0.05	2.50
5	1.66 ± 0.34		-0.01 ± 0.01			0.20 ± 0.05	0.12 ± 0.05	2.63
β_j	1.67 ± 0.15	-0.003 ± 0.004	-0.001 ± 0.001	0.005 ± 0.006	-0.004 ± 0.005	0.20 ± 0.02	0.13 ± 0.02	

Notes: The response was arc-sine transformed. Explanatory variables include sandbar area (km²), depth variation (m), drop-off size (m), confluence diversity (no units), channel proximity (km) and geographic region [Middle (M) vs. Lower (L), Upper (U) vs. Lower (L)]. Calculations for all variables are shown in Table 1. $N = 40$. Also shown are the coefficients with standard errors for the averaged model β_j .