

Beta diversity changes in estuarine fish communities due to environmental change

Andrew T.M. Chin*, Julia Linke, Monica Boudreau, Marie-Hélène Thériault, Simon C. Courtenay, Roland Cormier, Marie-Josée Fortin

*Corresponding author: atm.chin@mail.utoronto.ca

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Supplement 1. Species list

Table S1. Species detected in the Community Aquatic Monitoring Program (CAMP) in the estuaries of New Brunswick, Canada from 2005 to 2012.

Family	Common name	Scientific name
Clupeidae	Alewife	<i>Alosa pseudoharengus</i>
Anguillidae	American Eel	<i>Anguilla rostrata</i>
Ammodytidae	American Sand Lance	<i>Ammodytes americanus</i>
Atherinopsidae	Atlantic Silverside	<i>Menidia menidia</i>
Gadidae	Atlantic Tomcod	<i>Microgadus tomcod</i>
Fundulidae	Banded Killifish	<i>Fundulus diaphanus</i>
Gasterosteidae	Blackspotted Stickleback	<i>Gasterosteus wheatlandi</i>
Salmonidae	Brook Trout	<i>Salvelinus fontinalis</i>
Labridae	Cunner	<i>Tautoglabrus adspersus</i>
Cyprinidae	Cyprinidae family	
Gasterosteidae	Fourspine Stickleback	<i>Apeltes quadracus</i>
Cottidae	Grubby	<i>Myoxocephalus aeneus</i>
Cyprinidae	Lake Chub	<i>Couesius plumbeus</i>
Fundulidae	Mummichog	<i>Fundulus heteroclitus</i>
Gasterosteidae	Ninespine Stickleback	<i>Pungitius pungitius</i>
Syngnathidae	Northern Pipefish	<i>Syngnathus fuscus</i>
Osmeridae	Rainbow Smelt	<i>Osmerus mordax</i>
Pholidae	Rock Gunnel	<i>Pholis gunnellus</i>
Cottidae	Shorthorn Sculpin	<i>Myoxocephalus scorpius</i>
Pleuronectidae	Smooth Flounder	<i>Pleuronectes putnami</i>
Moronidae	Striped Bass	<i>Morone saxatilis</i>
Gasterosteidae	Threespine Stickleback	<i>Gasterosteus aculeatus</i>
Salmonidae	Trout <i>sp.</i>	
Catostomidae	White Sucker	<i>Catostomus commersonii</i>
Scophthalmidae	Windowpane Flounder	<i>Scophthalmus aquosus</i>
Pleuronectidae	Winter Flounder	<i>Pseudopleuronectes americanus</i>

Supplement 2. Salinity

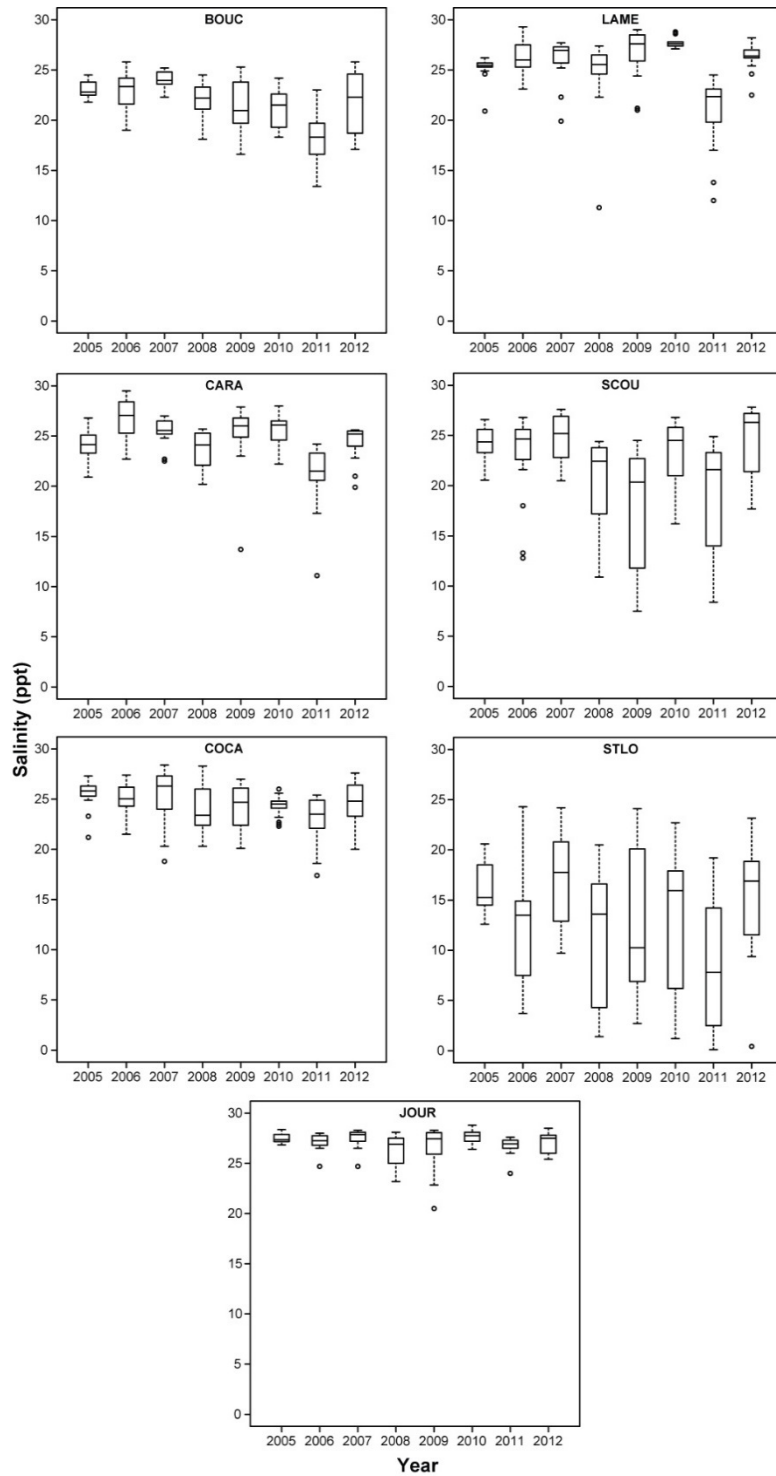


Fig. S1. Salinity at the 42 stations in the seven estuaries during each sampling event from June to August of 2005 to 2012. The box indicates the interquartile (IQR) range, the bars are the minimum and maximum, and the solid line is the median. Outliers indicated by the circles are 1.5 times the IQR.

Supplement 3. Local contribution to spatial beta diversity each year



Fig. S2. Maps of local contribution to spatial beta diversity (LCBD) represented as relative proportional symbols and significant sites across 42 sampling stations considering each year (2005 to 2012). Higher LCBD values indicate greater differences in community composition at a site compared to all sites in a region in a given year. Maximum LCBD value is 0.099.