Oikos

OIK-01035

Hughes, A. R., Moore, A. F. P. and Piehler, M. F. 2013. Independent and interactive effects of two facilitators on their habitat-providing host plant, *Spartina alterniflora*. – Oikos 000: 000–000.

Appendix A1

Figure A1.1. Abundance of fiddler crabs (gray triangles) and ribbed mussels (black squares) over a one-year period in a natural salt marsh in Florida. Error bars represent ±1 SE.

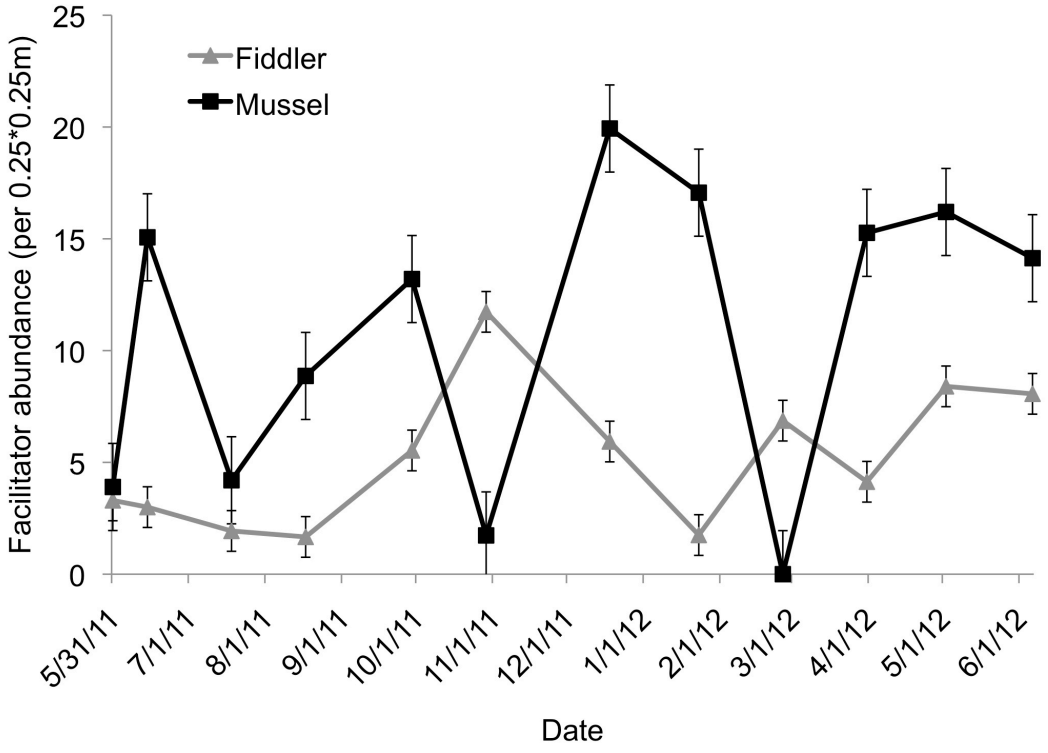


Figure A1.2. Deviations from replacement (x-axis) and additive (y-axis) expectations for *Spartina* plant responses to mussels and fiddler crabs. Circles represent plant density, triangles represent plant height, and squares represent plant biomass. Open symbols represent a total density of two facilitators, gray symbols represent a total density of four facilitators, and black symbols represent a total density of eight facilitators. Error bars represent ± 1SE.

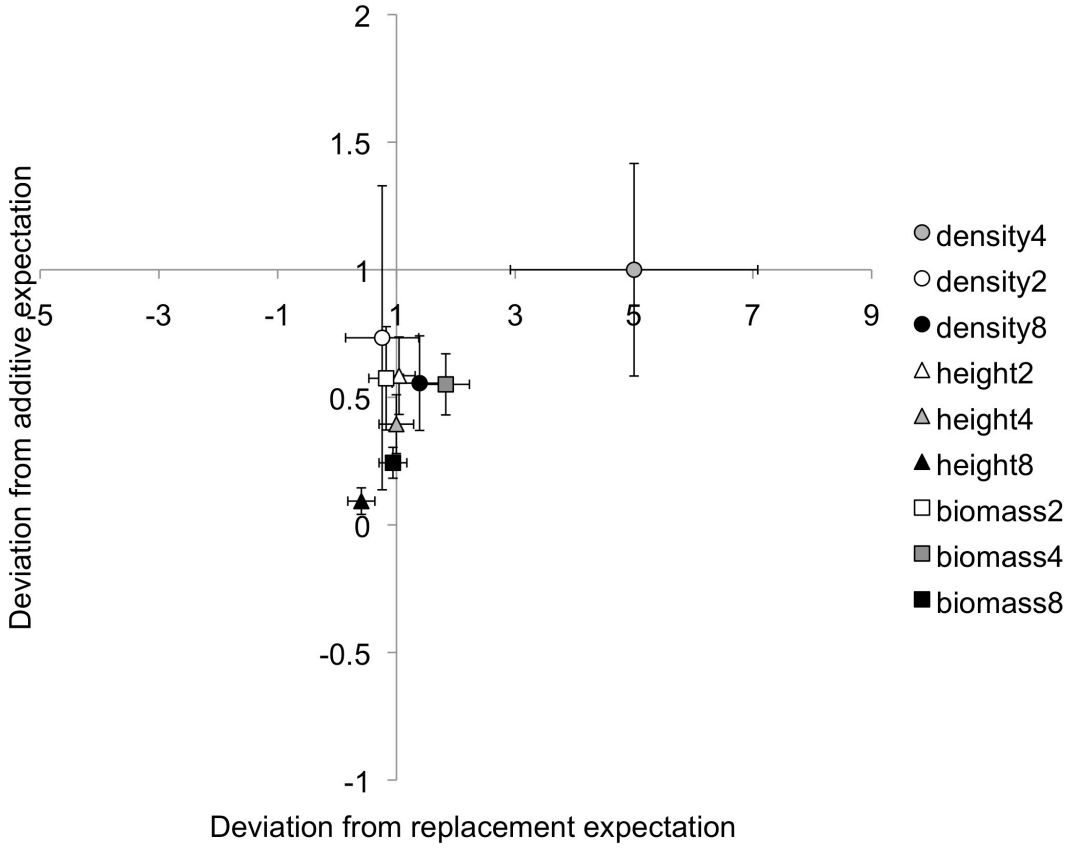
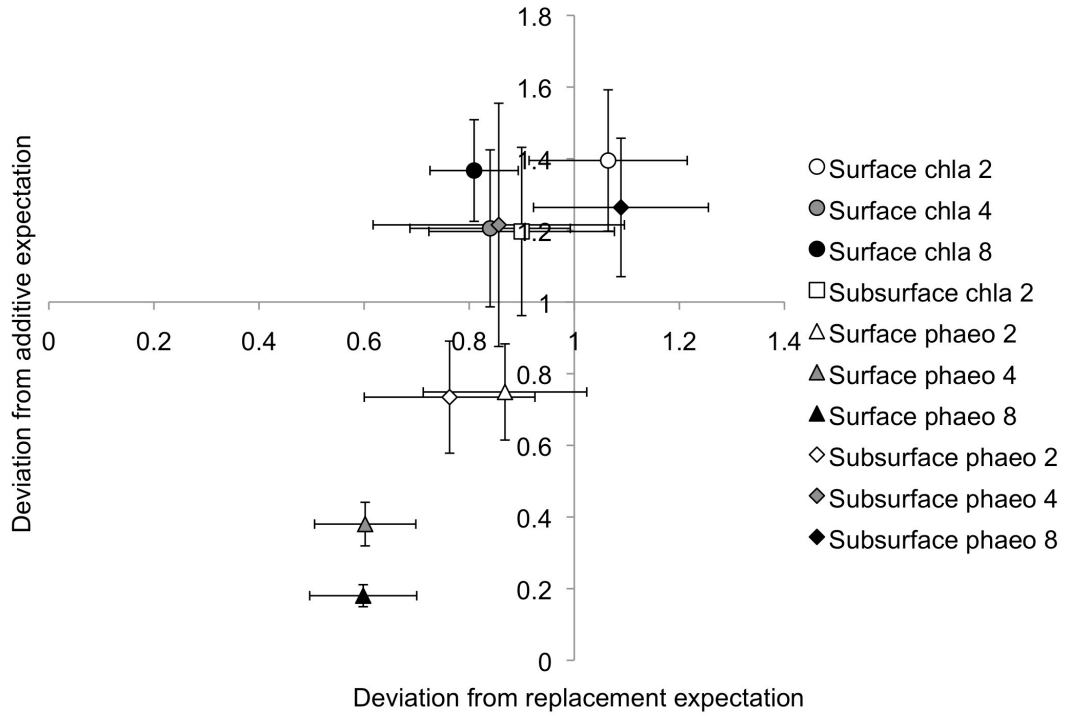


Figure A1.3. Deviations from replacement (x-axis) and additive (y-axis) expectations for benthic microalgal responses to mussels and fiddler crabs. Circles represent surface live microalgae, squares represent subsurface live microalgae, triangles represent surface dead microalgae, and diamonds represent subsurface dead microalgae. Open symbols represent a total density of two facilitators, gray symbols represent a total density of four facilitators, and black symbols represent a total density of eight facilitators. Error bars represent ± 1 SE.



Appendix A2

Results of model selection analysis for field surveys

Table A1. Results of nested linear mixed-effect models for the relationship between facilitator identity, density, and plant responses in natural marshes. Bold indicates best model. Parentheses denotes random effect. dAIC is the difference between the AICc of a particular model compared to the lowest AICc observed. When multiple models had dAIC less than 2.0 from the best model, we chose the simplest of those models. The Akaike weight is calculated as the model likelihood normalized by the sum of all model likelihoods; values close to 1.0 indicate greater confidence in the selection of a model.

Response variable	Model	DF	dAIC	Weight
Spartina live stem density	Live stems = Intercept + (Julian date)	3	10.3	0.003
	Live stems = Number fiddler burrows + (Julian date)	4	12.3	0.001
	Live stems = Number mussels + (Julian date)	4	16.4	<0.001
	Live stems = Number mussels + Number fiddler burrows + (Julian date)	5	18.5	<0.001
	Live stems = Number mussels × Number fiddler burrows + (Julian date)	6	25.8	<0.001
	Live stems = Mussel presence + (Juilan date)	4	5.8	0.035
	Live stems = Fiddler presence + (Julian date)	4	9.1	0.007
	Live stems = Mussel presence + Fiddler presence + (Julian date)	5	4.6	0.063
	Live stems = Mussel presence × Fiddler presence + (Julian date)	6	0.0	0.623
	Live stems = Mussel presence × Fiddler presence + Number mussels + (Julian date)	7	6.2	0.028
	Live stems = Mussel presence × Fiddler presence + Number fiddler burrows + (Julian date)	7	2.0	0.228
	Live stems = Mussel presence + Fiddler presence + Number fiddler burrows + Number mussels + (Julian date)	8	8.2	0.010
Spartina average stem height	Height = Intercept + (Julian date)	3	7.1	0.017
	Height = Number fiddler burrows + (Julian date)	4	10.3	0.003
	Height = Number mussels + (Julian date)	4	13.8	<0.001
	Height = Number mussels + Number fiddler burrows + (Julian date)	5	16.9	<0.001

	Height = Number mussels × Number fiddler burrows + (Julian date)	6	24.6	<0.001
	Height = Mussel presence + (Juilan date)	4	7.1	0.017
	Height = Fiddler presence + (Julian date)	4	2.9	0.136
	Height = Mussel presence + Fiddler presence + (Julian date)	5	2.9	0.136
	Height = Mussel presence × Fiddler presence + (Julian date)	6	0.0	0.591
	Height = Mussel presence × Fiddler presence + Number mussels + (Julian date)	7	6.2	0.027
	Height = Mussel presence × Fiddler presence + Number fiddler burrows + (Julian date)	7	4.3	0.068
	Height = Mussel presence + Fiddler presence + Number fiddler burrows + Number mussels + (Julian date)	8	10.5	0.003
Spartina biomass	Biomass = Intercept + (Julian date)	3	17.8	<0.001
	Biomass = Number fiddler burrows + (Julian date)	4	18.3	<0.001
	Biomass = Number mussels + (Julian date)	4	19.5	<0.001
	Biomass = Number mussels + Number fiddler burrows + (Julian date)	5	20.1	<0.001
	Biomass = Number mussels × Number fiddler burrows + (Julian date)	6	25.7	<0.001
	Biomass = Mussel presence + (Juilan date)	4	12.5	<0.001
	Biomass = Fiddler presence + (Julian date)	4	13.0	<0.001
	Biomass = Mussel presence + Fiddler presence + (Julian date)	5	7.7	0.006
	Biomass = Mussel presence × Fiddler presence + (Julian date)	6	0.2	0.256
	Biomass = Mussel presence × Fiddler presence + Number mussels + (Julian date)	7	0.0	0.289
	Biomass = Mussel presence * Fiddler presence + Number fiddler burrows + (Julian date)	7	0.6	0.211
	Biomass = Mussel presence + Fiddler presence + Number fiddler burrows + Number mussels + (Julian date)	8	0.4	0.235

Appendix A3

Results of model selection analysis for the additive and interactive effects of mussels and fiddler crabs on plant and benthic microalgal responses in a mesocosm experiment

Table A2. Results of nested linear mixed-effect models for the effects of facilitator identity and density on *Spartina* ecosystems in experimental mesocosms. Bold indicates best model. Parentheses denotes random effect. dAIC is the difference between the AICc of a particular model compared to the lowest AICc observed. When multiple models had dAIC less than 2.0 from the best model, we chose the simplest of those models. The Akaike weight is calculated as the model likelihood normalized by the sum of all model likelihoods; values close to 1.0 indicate greater confidence in the selection of a model.

Response variable	Model	DF	dAIC	Weight
Change in *Spartina* live stem density	Change in live stems = Intercept + (Genotype)	3	6.4	0.024
	Change in live stems = Fiddler presence + (Genotype)	4	0.0	0.604
	Change in live stems = Mussel presence + (Genotype)	4	6.4	0.025
	Change in live stems = Fiddler presence + Facilitator density + (Genotype)	5	3.6	0.101
	Change in live stems = Mussel presence + Facilitator density + (Genotype)	5	7.9	0.011
	Change in live stems = Fiddler presence + Mussel presence + Facilitator density + (Genotype)	6	4.3	0.069
	Change in live stems = Fiddler presence × Mussel presence + Facilitator density + (Genotype)	7	3.7	0.094
	Change in live stems = Fiddler presence × Facilitator density + Mussel presence + (Genotype)	7	7.5	0.014
	Change in live stems = Fiddler presence + Facilitator density × Mussel presence + (Genotype)	7	7.1	0.017
	Change in live stems = Mussel density + (Genotype)	4	10.4	0.003
	Change in live stems = Fiddler density + (Genotype)	4	6.0	0.030
	Change in live stems = Mussel density + Fiddler density + (Genotype)	5	10.0	0.004
	Change in live stems = Mussel density × Fiddler density + (Genotype)	6	14.5	<0.001
Change in *Spartina* stem height	Change in height = Intercept + (Genotype)	3	6.8	0.017
	Change in height = Fiddler presence + (Genotype)	4	2.4	0.150

	Change in height = Mussel presence + (Genotype)	4	4.0	0.066
	Change in height = Fiddler presence + Facilitator density + (Genotype)	5	6.1	0.024
	Change in height = Mussel presence + Facilitator density + (Genotype)	5	6.7	0.018
	Change in height = Fiddler presence + Mussel presence + Facilitator density + (Genotype)	6	4.9	0.043
	Change in height = Fiddler presence × Mussel presence + Facilitator density + (Genotype)	7	0.0	0.497
	Change in height = Fiddler presence × Facilitator density + Mussel presence + (Genotype)	7	3.3	0.093
	Change in height = Fiddler presence + Facilitator density × Mussel presence + (Genotype)	7	6.9	0.016
	Change in height = Mussel density + (Genotype)	4	7.9	0.009
	Change in height = Fiddler density + (Genotype)	4	4.8	0.045
	Change in height = Mussel density + Fiddler density + (Genotype)	5	7.4	0.012
	Change in height = Mussel density × Fiddler density + (Genotype)	6	7.8	0.010
Change in *Spartina* aboveground biomass	Change in biomass = Intercept + (Genotype)	3	25.2	<0.001
	Change in biomass = Fiddler presence + (Genotype)	4	16.0	<0.001
	Change in biomass = Mussel presence + (Genotype)	4	19.5	<0.001
	Change in biomass = Fiddler presence + Facilitator density + (Genotype)	5	13.3	<0.001
	Change in biomass = Mussel presence + Facilitator density + (Genotype)	5	15.8	<0.001
	Change in biomass = Fiddler presence + Mussel presence + Facilitator density + (Genotype)	6	7.6	0.017
	Change in biomass = Fiddler presence × Mussel presence + Facilitator density + (Genotype)	7	0.0	0.753
	Change in biomass = Fiddler presence × Facilitator density + Mussel presence + (Genotype)	7	3.5	0.131

	Change in biomass = Fiddler presence + Facilitator density × Mussel presence + (Genotype)	7	4.1	0.096
	Change in biomass = Mussel density + (Genotype)	4	22.7	<0.001
	Change in biomass = Fiddler density + (Genotype)	4	21.2	<0.001
	Change in biomass = Mussel density + Fiddler density + (Genotype)	5	18.4	<0.001
	Change in biomass = Mussel density * Fiddler density + (Genotype)	6	17.1	<0.001
Belowground biomass	Biomass = Intercept + (Genotype)	3	13.8	<0.001
	Biomass = Fiddler presence + (Genotype)	4	9.9	0.004
	Biomass = Mussel presence + (Genotype)	4	9.8	0.005
	Biomass = Fiddler presence + Facilitator density + (Genotype)	5	9.0	0.007
	Biomass = Mussel presence + Facilitator density + (Genotype)	5	9.3	0.006
	Biomass = Fiddler presence + Mussel presence + Facilitator density + (Genotype)	6	5.3	0.046
	Biomass = Fiddler presence × Mussel presence + Facilitator density + (Genotype)	7	0.0	636.000
	Biomass = Fiddler presence × Facilitator density + Mussel presence + (Genotype)	7	3.1	0.134
	Biomass = Fiddler presence + Facilitator density × Mussel presence + (Genotype)	7	2.8	0.156
	Biomass = Mussel density + (Genotype)	4	13.2	<0.001
	Biomass = Fiddler density + (Genotype)	4	13.1	<0.001
	Biomass = Mussel density + Fiddler density + (Genotype)	5	12.3	0.001
	Biomass = Mussel density × Fiddler density + (Genotype)	6	13.1	<0.001
Flowering stem production	**Flowers = Intercept + (Genotype)**	3	0.0	0.721
	Flowers = Fiddler presence + (Genotype)	4	3.1	0.152
	Flowers = Mussel presence + (Genotype)	4	4.3	0.084
	Flowers = Fiddler presence + Facilitator density + (Genotype)	5	10.8	0.003
	Flowers = Mussel presence + Facilitator density + (Genotype)	5	12.1	0.002
	Flowers = Fiddler presence + Mussel presence + Facilitator	6	14.9	<0.001

	density + (Genotype)			
	Flowers = Fiddler presence × Mussel presence + Facilitator density + (Genotype)	7	14.6	<0.001
	Flowers = Fiddler presence × Facilitator density + Mussel presence + (Genotype)	7	20.9	<0.001
	Flowers = Fiddler presence + Facilitator density × Mussel presence + (Genotype)	7	17.7	<0.001
	Flowers = Mussel density + (Genotype)	4	7.4	0.018
	Flowers = Fiddler density + (Genotype)	4	7.4	0.018
	Flowers = Mussel density + Fiddler density + (Genotype)	5	14.8	<0.001
	Flowers = Mussel density × Fiddler density + (Genotype)	6	19.1	<0.001
Live surface sediment benthic microalgae	Live chla = Intercept + (Genotype)	3	35.9	<0.001
	Live chla = Fiddler presence + (Genotype)	4	17.4	<0.001
	Live chla = Mussel presence + (Genotype)	4	22.2	<0.001
	Live chla = Fiddler presence + Facilitator density + (Genotype)	5	15.6	<0.001
	Live chla = Mussel presence + Facilitator density + (Genotype)	5	13.3	<0.001
	Live chla = Fiddler presence + Mussel presence + Facilitator density + (Genotype)	6	5.1	0.051
	Live chla = Fiddler presence × Mussel presence + Facilitator density + (Genotype)	7	0.0	0.653
	Live chla = Fiddler presence × Facilitator density + Mussel presence + (Genotype)	7	4.2	0.082
	Live chla = Fiddler presence + Facilitator density × Mussel presence + (Genotype)	7	2.3	0.211
	Live chla = Mussel density + (Genotype)	4	32.7	<0.001
	Live chla = Fiddler density + (Genotype)	4	15.9	<0.001
	Live chla = Mussel density + Fiddler density + (Genotype)	5	15.6	<0.001
	Live chla = Mussel density × Fiddler density + (Genotype)	6	15.9	<0.001
Live subsurface sediment benthic microalgae	Live chla = Intercept + (Genotype)	3	25.4	<0.001
	Live chla = Fiddler presence + (Genotype)	4	19.2	<0.001

	Live chla = Mussel presence + (Genotype)	4	18.1	<0.001
	Live chla = Fiddler presence + Facilitator density + (Genotype)	5	14.9	<0.001
	Live chla = Mussel presence + Facilitator density + (Genotype)	5	14.1	<0.001
	Live chla = Fiddler presence + Mussel presence + Facilitator density + (Genotype)	6	6.9	0.024
	Live chla = Fiddler presence × Mussel presence + Facilitator density + (Genotype)	7	0.0	0.767
	Live chla = Fiddler presence × Facilitator density + Mussel presence + (Genotype)	7	4.1	0.098
	Live chla = Fiddler presence + Facilitator density × Mussel presence + (Genotype)	7	3.9	0.109
	Live chla = Mussel density + (Genotype)	4	21.7	<0.001
	Live chla = Fiddler density + (Genotype)	4	22.8	<0.001
	Live chla = Mussel density + Fiddler density + (Genotype)	5	18.1	<0.001
	Live chla = Mussel density × Fiddler density + (Genotype)	6	17.0	<0.001
Dead surface sediment benthic microalgae	Dead surface BMA = Intercept + (Genotype)	3	40.0	<0.001
	Dead surface BMA = Fiddler presence + (Genotype)	4	16.3	<0.001
	Dead surface BMA = Mussel presence + (Genotype)	4	29.2	<0.001
	Dead surface BMA = Fiddler presence + Facilitator density + (Genotype)	5	17.0	<0.001
	Dead surface BMA = Mussel presence + Facilitator density + (Genotype)	5	24.2	<0.001
	Dead surface BMA = Fiddler presence + Mussel presence + Facilitator density + (Genotype)	6	11.3	0.003
	Dead surface BMA = Fiddler presence × Mussel presence + Facilitator density + (Genotype)	7	0.0	0.976
	Dead surface BMA = Fiddler presence × Facilitator density + Mussel presence + (Genotype)	7	8.5	0.014
	Dead surface BMA = Fiddler presence + Facilitator density × Mussel presence + (Genotype)	7	10.2	0.006
	Dead surface BMA = Mussel density + (Genotype)	4	38.1	<0.001

	Dead surface BMA = Fiddler density + (Genotype)	4	25.6	<0.001
	Dead surface BMA = Mussel density + Fiddler density + (Genotype)	5	26.3	<0.001
	Dead surface BMA = Mussel density × Fiddler density + (Genotype)	6	24.0	<0.001
Dead subsurface sediment benthic microalgae	Dead subsurface BMA = Intercept + (Genotype)	3	31.9	<0.001
	Dead subsurface BMA = Fiddler presence + (Genotype)	4	19.1	<0.001
	Dead subsurface BMA = Mussel presence + (Genotype)	4	20.2	<0.001
	Dead subsurface BMA = Fiddler presence + Facilitator density + (Genotype)	5	16.3	<0.001
	Dead subsurface BMA = Mussel presence + Facilitator density + (Genotype)	5	13.3	<0.001
	Dead subsurface BMA = Fiddler presence + Mussel presence + Facilitator density + (Genotype)	6	6.4	0.021
	Dead subsurface BMA = Fiddler presence × Mussel presence + Facilitator density + (Genotype)	7	0.0	0.511
	Dead subsurface BMA = Fiddler presence × Facilitator density + Mussel presence + (Genotype)	7	2.2	0.173
	Dead subsurface BMA = Fiddler presence + Facilitator density × Mussel presence + (Genotype)	7	1.1	0.290
	Dead subsurface BMA = Mussel density + (Genotype)	4	26.6	<0.001
	Dead subsurface BMA = Fiddler density + (Genotype)	4	13.8	<0.001
	Dead subsurface BMA = Mussel density + Fiddler density + (Genotype)	5	11.4	0.002
	Dead subsurface BMA = Mussel density × Fiddler density + (Genotype)	6	10.9	0.002
Surface sediment organic content	Surface OM = Intercept + (Genotype)	3	52.6	<0.001
	Surface OM = Fiddler presence + (Genotype)	4	8.2	0.016
	Surface OM = Mussel presence + (Genotype)	4	47.5	<0.001
	Surface OM = Fiddler presence + Facilitator density + (Genotype)	5	11.3	0.003
	Surface OM = Mussel presence + Facilitator density + (Genotype)	5	52.6	<0.001

	Surface OM = Fiddler presence + Mussel presence + Facilitator density + (Genotype)	6	13.5	0.001
	Surface OM = Fiddler presence × Mussel presence + Facilitator density + (Genotype)	7	13.4	0.001
	Surface OM = Fiddler presence * Facilitator density + Mussel presence + (Genotype)	7	14.3	<0.001
	Surface OM = Fiddler presence + Facilitator density × Mussel presence + (Genotype)	7	0.0	0.973
	Surface OM = Mussel density + (Genotype)	4	31.5	<0.001
	Surface OM = Fiddler density + (Genotype)	4	32.1	<0.001
	Surface OM = Mussel density + Fiddler density + (Genotype)	5	19.4	<0.001
	Surface OM = Mussel density * Fiddler density + (Genotype)	6	10.9	0.004
Subsurface sediment organic content	Subsurface OM = Intercept + (Genotype)	3	12.9	0.001
	Subsurface OM = Fiddler presence + (Genotype)	4	0.0	0.971
	Subsurface OM = Mussel presence + (Genotype)	4	17.3	<0.001
	Subsurface OM = Fiddler presence + Facilitator density + (Genotype)	5	8.2	0.016
	Subsurface OM = Mussel presence + Facilitator density + (Genotype)	5	23.0	<0.001
	Subsurface OM = Fiddler presence + Mussel presence + Facilitator density + (Genotype)	6	12.8	0.002
	Subsurface OM = Fiddler presence × Mussel presence + Facilitator density + (Genotype)	7	10.3	0.006
	Subsurface OM = Fiddler presence × Facilitator density + Mussel presence + (Genotype)	7	20.1	<0.001
	Subsurface OM = Fiddler presence + Facilitator density × Mussel presence + (Genotype)	7	18.6	<0.001
	Subsurface OM = Mussel density + (Genotype)	4	19.3	<0.001
	Subsurface OM = Fiddler density + (Genotype)	4	11.4	0.003
	Subsurface OM = Mussel density + Fiddler density + (Genotype)	5	19.4	<0.001
	Subsurface OM = Mussel density × Fiddler density + (Genotype)	6	25.9	<0.001

Appendix A4

Results of model selection analysis for variation in physical conditions in a mesocosm experiment

Table A3. Results of nested linear mixed-effect models for the effects of facilitator identity and density on physical conditions in experimental mesocosms. Bold indicates best model. Parentheses denotes random effect. dAIC is the difference between the AICc of a particular model compared to the lowest AICc observed. When multiple models had dAIC less than 2.0 from the best model, we chose the simplest of those models. The Akaike weight is calculated as the model likelihood normalized by the sum of all model likelihoods; values close to 1.0 indicate greater confidence in the selection of a model.

Response variable	Model	DF	dAIC	Weight
Salinity (week 3)	**Salinity= Intercept + (Genotype)**	3	0.0	0.656
	Salinity = Fiddler presence + (Genotype)	4	3.1	0.141
	Salinity = Mussel presence + (Genotype)	4	3.6	0.111
	Salinity = Fiddler presence + Facilitator density + (Genotype)	5	9.3	0.006
	Salinity = Mussel presence + Facilitator density + (Genotype)	5	9.5	0.006
	Salinity = Fiddler presence + Mussel presence + Facilitator density + (Genotype)	6	12.7	0.001
	Salinity = Fiddler presence × Mussel presence + Facilitator density + (Genotype)	7	14.6	<0.001
	Salinity = Fiddler presence × Facilitator density + Mussel presence + (Genotype)	7	18.1	<0.001
	Salinity = Fiddler presence + Facilitator density × Mussel presence + (Genotype)	7	17.8	<0.001
	Salinity = Mussel density + (Genotype)	4	6.7	0.023
	Salinity = Fiddler density + (Genotype)	4	5.1	0.051
	Salinity = Mussel density + Fiddler density + (Genotype)	5	11.6	0.002
	Salinity = Mussel density × Fiddler density + (Genotype)	6	19.4	<0.001
Water temperature (week 3)	**Temperature= Intercept + (Genotype)**	3	0.0	0.423
	Temperature = Fiddler presence + (Genotype)	4	0.6	0.311
	Temperature = Mussel presence + (Genotype)	4	5.0	0.035
	Temperature = Fiddler presence + Facilitator density + (Genotype)	5	3.7	0.066

	Temperature = Mussel presence + Facilitator density + (Genotype)	5	5.9	0.022
	Temperature = Fiddler presence + Mussel presence + Facilitator density + (Genotype)	6	8.7	0.005
	Temperature = Fiddler presence * Mussel presence + Facilitator density + (Genotype)	7	12.0	0.001
	Temperature = Fiddler presence × Facilitator density + Mussel presence + (Genotype)	7	15.7	<0.001
	Temperature = Fiddler presence + Facilitator density × Mussel presence + (Genotype)	7	15.1	<0.001
	Temperature = Mussel density + (Genotype)	4	7.5	0.010
	Temperature = Fiddler density + (Genotype)	4	2.7	0.113
	Temperature = Mussel density + Fiddler density + (Genotype)	5	8.2	0.007
	Temperature = Mussel density * Fiddler density + (Genotype)	6	17.2	<0.001
Light (week 9)	Light= Intercept + (Genotype)	3	30.7	<0.001
	Light = Fiddler presence + (Genotype)	4	23.0	<0.001
	Light = Mussel presence + (Genotype)	4	21.3	<0.001
	Light = Fiddler presence + Facilitator density + (Genotype)	5	18.5	<0.001
	Light = Mussel presence + Facilitator density + (Genotype)	5	17.1	<0.001
	Light = Fiddler presence + Mussel presence + Facilitator density + (Genotype)	6	9.3	0.006
	Light = Fiddler presence × Mussel presence + Facilitator density + (Genotype)	7	0.0	0.634
	Light = Fiddler presence × Facilitator density + Mussel presence + (Genotype)	7	2.0	0.237
	Light = Fiddler presence + Facilitator density × Mussel presence + (Genotype)	7	3.3	0.122
	Light = Mussel density + (Genotype)	4	23.9	<0.001
	Light = Fiddler density + (Genotype)	4	25.4	<0.001
	Light = Mussel density + Fiddler density + (Genotype)	5	19.1	<0.001
	Light = Mussel density × Fiddler density + (Genotype)	6	14.5	<0.001
Sediment temperature (week 9)	**Temperature= Intercept + (Genotype)**	3	0.0	0.334

	Temperature = Fiddler presence + (Genotype)	4	0.8	0.222
	Temperature = Mussel presence + (Genotype)	4	0.9	0.218
	Temperature = Fiddler presence + Facilitator density + (Genotype)	5	5.1	0.025
	Temperature = Mussel presence + Facilitator density + (Genotype)	5	5.2	0.025
	Temperature = Fiddler presence + Mussel presence + Facilitator density + (Genotype)	6	5.8	0.018
	Temperature = Fiddler presence × Mussel presence + Facilitator density + (Genotype)	7	5.1	0.026
	Temperature = Fiddler presence × Facilitator density + Mussel presence + (Genotype)	7	8.1	0.006
	Temperature = Fiddler presence + Facilitator density × Mussel presence + (Genotype)	7	8.3	0.005
	Temperature = Mussel density + (Genotype)	4	3.7	0.053
	Temperature = Fiddler density + (Genotype)	4	3.6	0.056
	Temperature = Mussel density + Fiddler density + (Genotype)	5	7.3	0.008
	Temperature = Mussel density × Fiddler density + (Genotype)	6	12.4	<0.001
Redox potential (week 9)	Temperature= Intercept + (Genotype)	3	16.9	<0.001
	Temperature = Fiddler presence + (Genotype)	4	9.1	0.006
	Temperature = Mussel presence + (Genotype)	4	11.4	0.002
	Temperature = Fiddler presence + Facilitator density + (Genotype)	5	7.7	0.013
	Temperature = Mussel presence + Facilitator density + (Genotype)	5	11.3	0.002
	Temperature = Fiddler presence + Mussel presence + Facilitator density + (Genotype)	6	4.5	0.063
	Temperature = Fiddler presence × Mussel presence + Facilitator density + (Genotype)	7	0.0	0.599
	Temperature = Fiddler presence × Facilitator density + Mussel presence + (Genotype)	7	1.9	0.226
	Temperature = Fiddler presence + Facilitator density × Mussel presence + (Genotype)	7	3.9	0.085

Temperature = Mussel density + (Genotype)	4	14.7	<0.001
Temperature = Fiddler density + (Genotype)	4	16.2	<0.001
Temperature = Mussel density + Fiddler density + (Genotype)	5	14.4	<0.001
Temperature = Mussel density × Fiddler density + (Genotype)	6	14.2	<0.001