

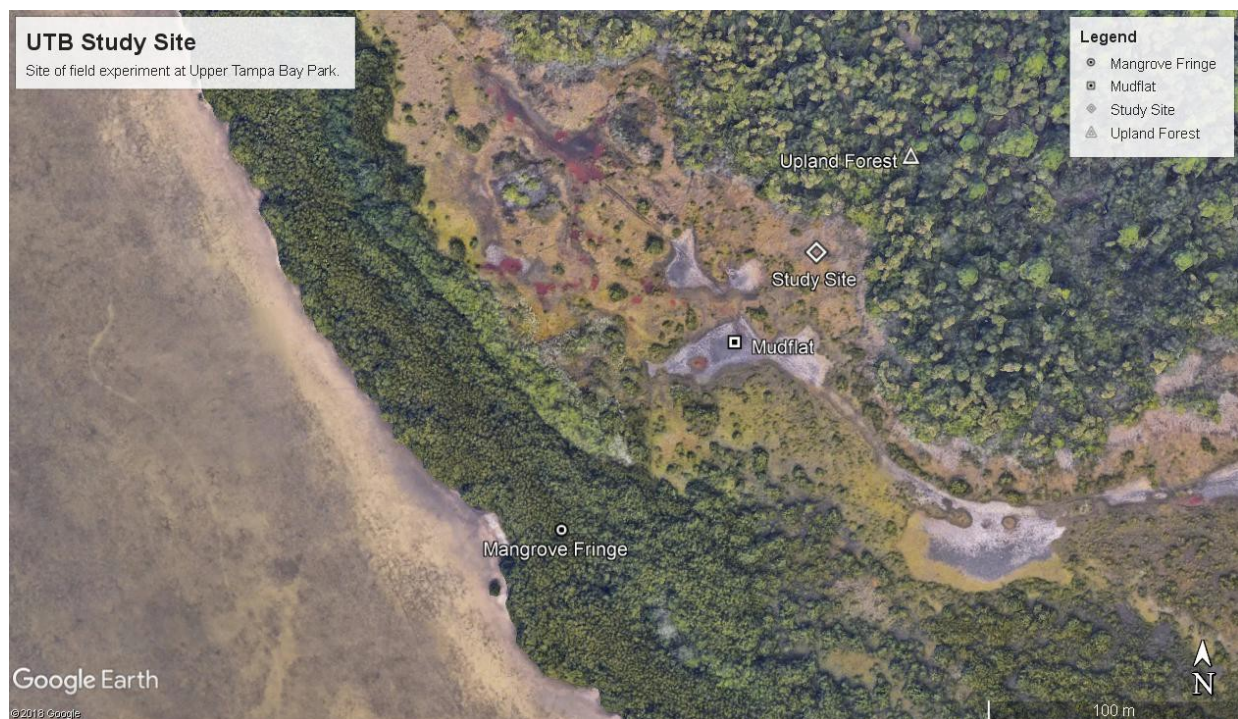
# Species composition of patches influences mangrove recruitment in a saltmarsh mosaic

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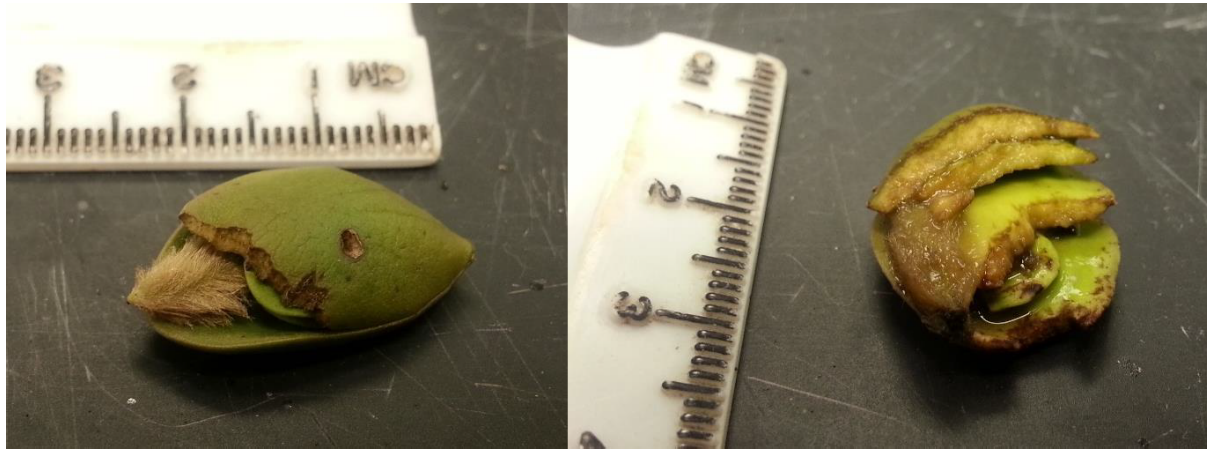
*Marine Ecology Progress Series 602: 103–116 (2018)*

**Fig. S1.** Map of study site in the mangrove-saltmarsh mosaic at Upper Tampa Bay with aerial image from Google Earth. The location of the study site is shown relative to the mangrove fringe, mudflat, and upland forest.



**Fig. S2.** Representative photos of herbivore damage on *Avicennia germinans* propagules.

**a)** Damage caused by grasshoppers (left) and crabs (right) in the laboratory



**b)** Damage observed on propagules remaining within experimental plots.



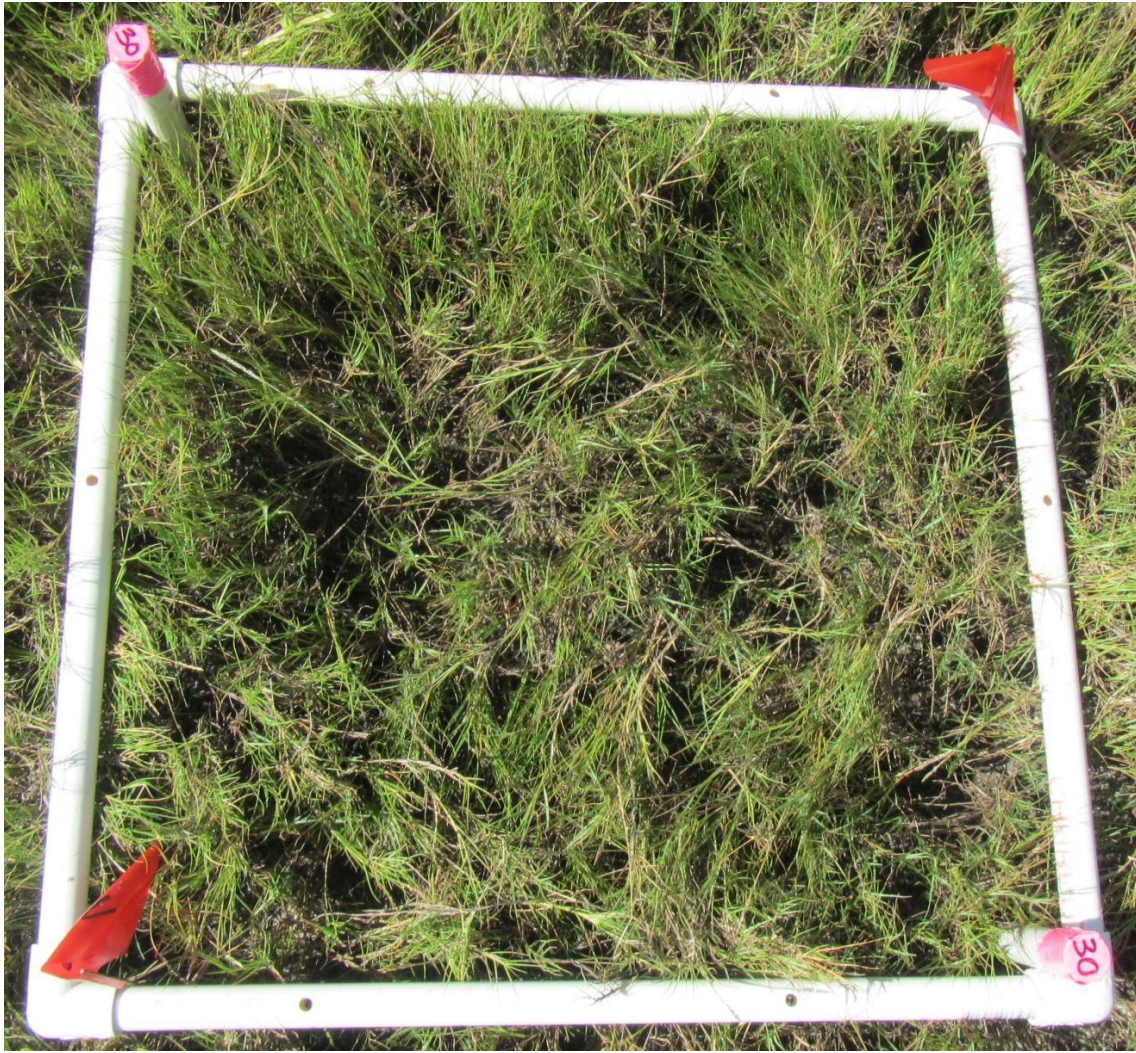


**Fig. S3.** Landscape photograph of study site at UTB showing position of experimental plots (marked with PVC poles in the foreground) within the mangrove-marsh mosaic, near the upland forest boundary (right).





**Fig. S4.** Representative plots of saltmarsh treatments.



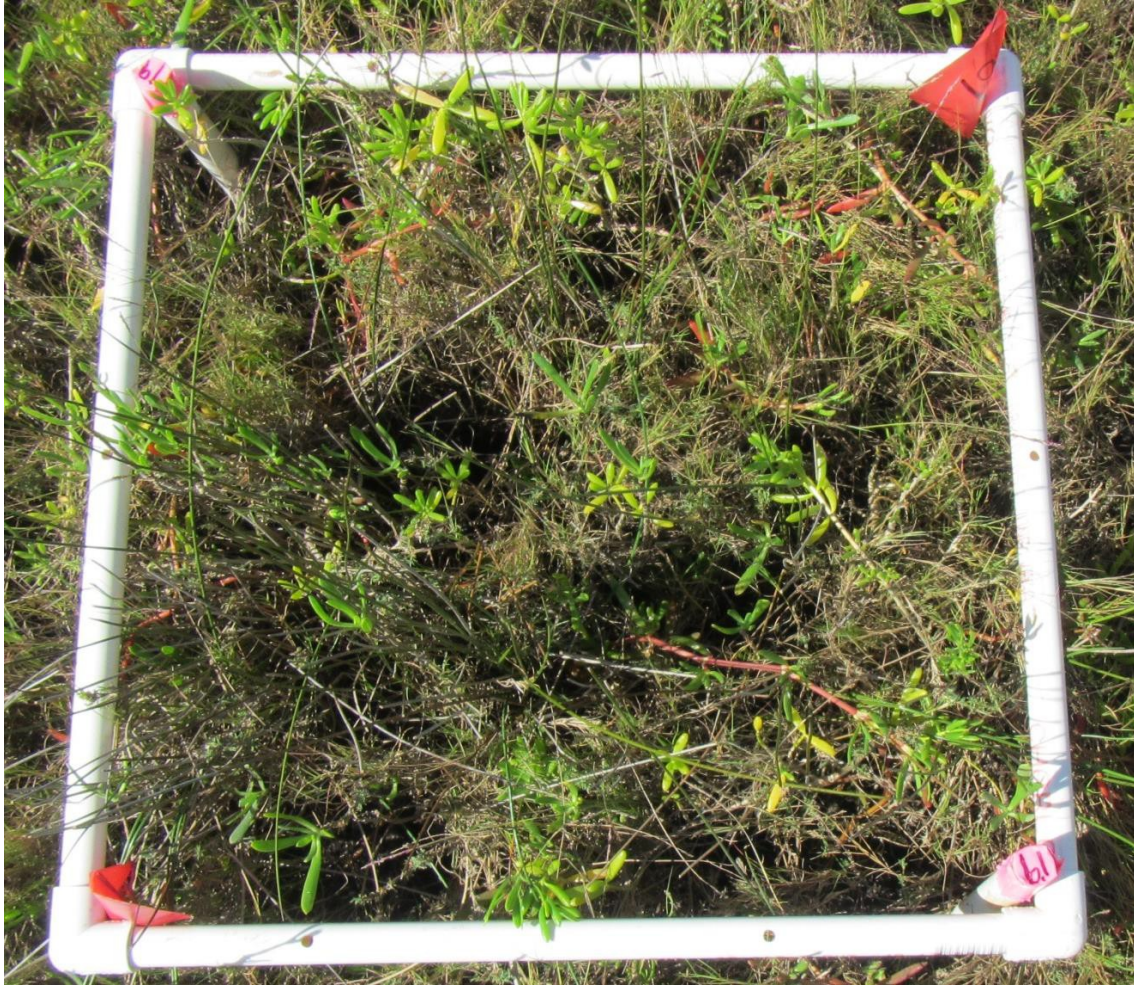
*a) Sporobolus virginicus*





**b)** *Distichlis littoralis*





c) Polyculture containing *S. virginicus* and *D. littoralis*

**Table S1.** Potential interactions among plants operating on *A. germinans* are presented for each life-history stage. \*During all early life history stages vegetation surrounding mangrove recruits may influence behavior of fauna interacting with mangroves; e.g., pollinators, herbivores

Life History Stage	Important Processes	Direct interactions with neighboring vegetation	Indirect-interactions with fauna due to neighboring vegetation
Fruit	Development of fruit on maternal tree	Vegetation may alter resources available for investment in fruit production, which may influence the size and nutrient content of fruit	Pre-dispersal damage (e.g., moths and fruit-flies) may be influenced by vegetation; in some cases, the majority of biomass could be lost due to herbivory at this stage
	Primary dispersal or "fruit fall"	Architecture of vegetation may influence primary dispersal	Infestation by insects may influence time of abscission / abortion of the fruit by the maternal plant
Propagule	Secondary dispersal	Vegetation may dissipate wave action; shading may affect molding / desiccation	Propagule buoyancy altered by pre-dispersal damage; entire propagule may be consumed during this life-history stage
	Stranding / entrapment	Propagule entrapment by surrounding vegetation may facilitate rooting	Vegetation may alter production of burrows / mounds by crabs, altering microtopography, influencing stranding
Seedling	Initial rooting	Leaf litter and / or algal mats may prevent root penetration	Consumption of root biomass by herbivores may prevent rooting
	Roots grow, seedling becomes upright	Vegetation may influence physical factors, e.g., shade (light availability and temperature), soil water content, and pore-water salinity	Herbivory on cotyledons may reduce resources available for growth
	Seedling grows, produces true leaves, sheds cotyledons	Vegetation may alter resources available for investment in growth once cotyledons are lost following the depletion of resources	Herbivory on leaves may reduce resources available for growth
Sapling	Growth; branching	Vegetation may alter resources available for investment in growth	Herbivory may alter morphology (leaves and branches)
Mature tree	Investment in reproductive structures; pollination of flowers	Vegetation may alter resources available for investment in reproduction, which may influence the number of fruit produced	Vegetation may affect pollination; e.g., attract or deter pollinators or influence the abundance of predators on pollinators

**Table S2.** The mean ( $\pm$  SE) density is presented for *A. germinans* propagules, seedlings and saplings within quadrats (0.5 x 0.5 m) at the study site at Upper Tampa Bay during the September 2012 vegetation survey. The density of *A. germinans* is presented relative to the proximity to conspecific adults (i.e., near and far) and relative to the percent canopy cover of *S. virginicus*. Canopy cover of *S. virginicus* is the % of the 16 subsections in quadrats within which this grass was rooted; mean ( $\pm$  SE) cover of *S. virginicus* is presented for all quadrats (n = 48) and for those near and away from adult conspecifics (n = 11 and 37, respectively). The average density of *A. germinans* propagules and seedlings was higher near adults than away from adults. *Sporobolus virginicus* was always present and canopy cover was generally high in quadrats near adults. The cover of *S. virginicus* was more variable in quadrats away from adults. The density of *A. germinans* in quadrats away from adults was greatest where *S. virginicus* cover was low and was lowest where cover by *S. virginicus* was high.

	% cover <i>S. virginicus</i>	# of Quadrats	Propagules	Seedlings with cotyledons	Seedlings with true leaves	Saplings
<b>Total</b>	<b>68.9 (6.5)</b>	<b>48</b>	<b>0.3 (0.1)</b>	<b>0.6 (0.2)</b>	<b>0.3 (0.1)</b>	<b>0.0 (0.0)</b>
<b>Near adult</b>	38	1	0.0	0.0	2.0	0.0
	100 <sup>a</sup>	10	0.6 (0.3)	1.3 (0.7)	0.9 (0.3)	0.0 (0.0)
	<b>94.3 (5.7)</b>	<b>11</b>	<b>0.5 (0.3)</b>	<b>1.2 (0.6)</b>	<b>1.0 (0.3)</b>	<b>0.0 (0.0)</b>
<b>Away from adult</b>	0 <sup>b</sup>	13	0.6 (0.3)	1.1 (0.5)	0.0 (0.0)	0.0 (0.0)
	25	1	1.0	0.0	2.0	1.0
	75	1	0.0	0.0	0.0	0.0
	88	1	0.0	0.0	0.0	0.0
	94	3	0.0 (0.0)	0.0 (0.0)	0.7 (0.7)	0.0 (0.0)
	100	18	0.0 (0.0)	0.1 (0.1)	0.0 (0.0)	0.1 (0.1)
	<b>61.3 (7.8)</b>	<b>37</b>	<b>0.2 (0.1)</b>	<b>0.4 (0.2)</b>	<b>0.1 (0.1)</b>	<b>0.1 (0.0)</b>

<sup>a</sup> In one of the quadrats with 100% cover by *S. virginicus*, two propagules had evidence of herbivory.

<sup>b</sup> In quadrats with 0% cover by *S. virginicus* and high cover by *D. littoralis*, three propagules had signs of desiccation.