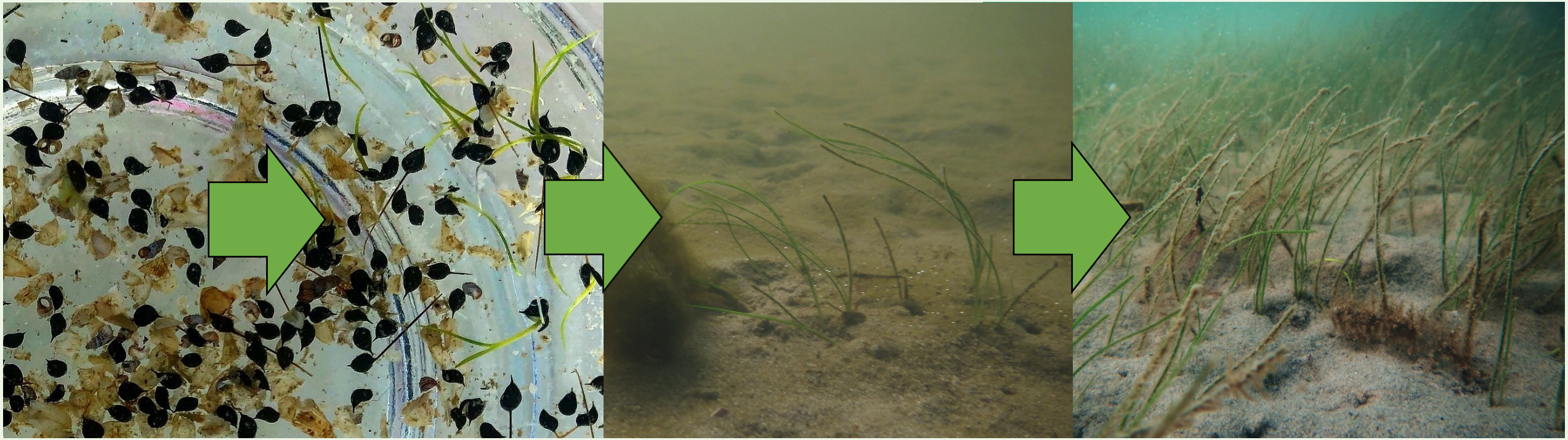
MUD FLAT TO UNDERWATER GRASSLAND
Ruppia seed based planting experiment

ZOOM
Presenter Spot
if in standard
fullscreen mode

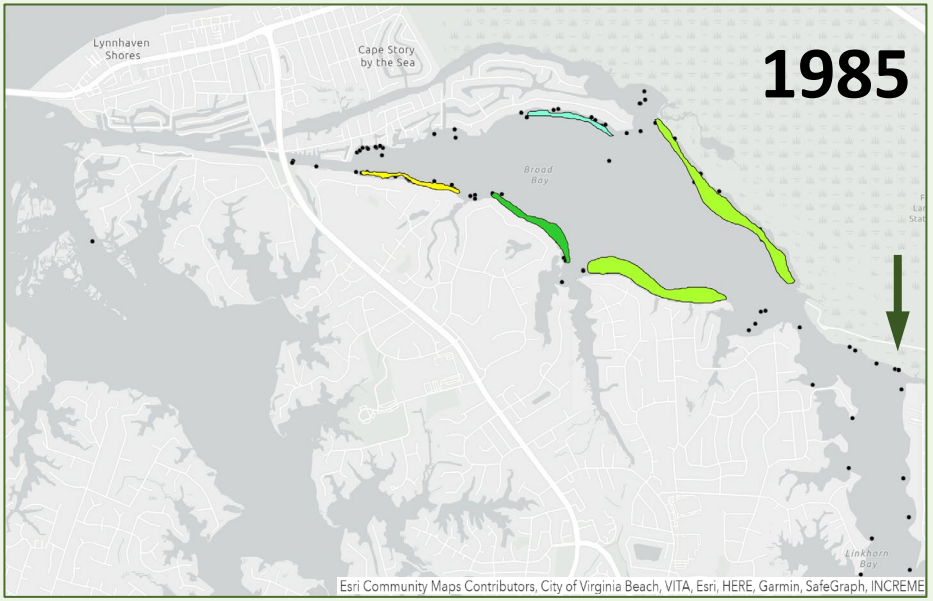


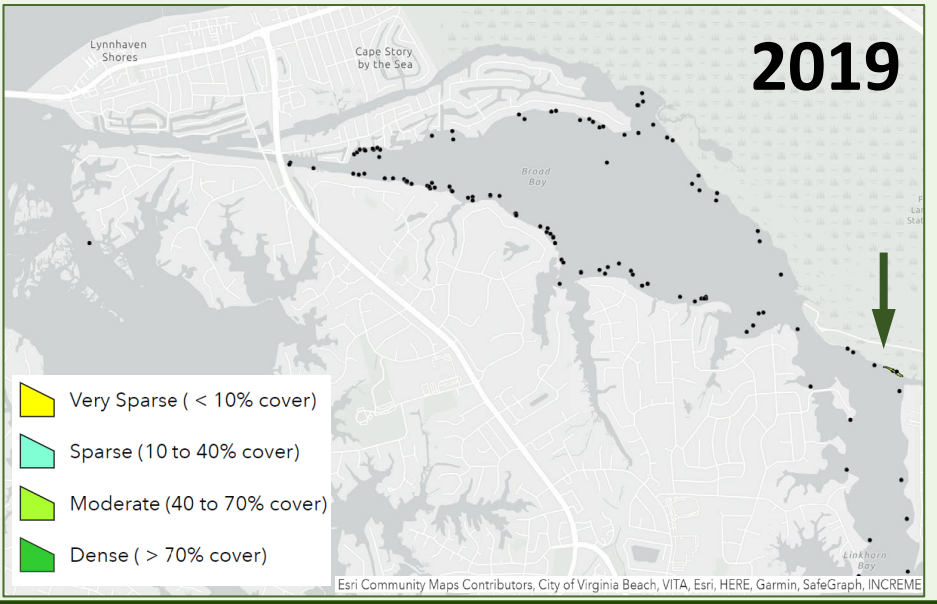
presented by
Dr. Enie Hensel
eniehensel@gmail.com

VIMS | William & Mary
Virginia Institute of Marine Science

Images by E.Hensel, ian.umces.edu

Lynnhaven River SAV History





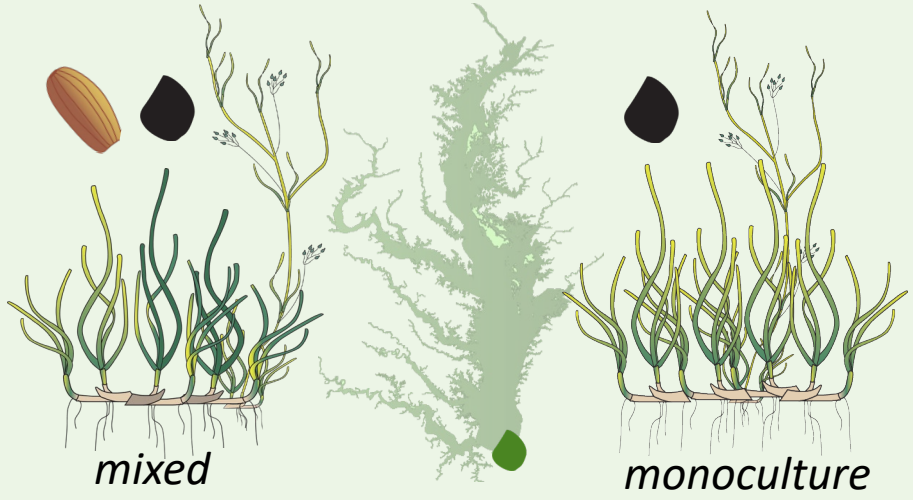
SAV

conservation & restoration of seagrasses maintain critical ecosystem functions & services for coastal systems

Introduction / Objectives + Methods / Current Observations • *Ruppia maritima* seed-based planting experiment w/ Enie Hensel (she/her-s)

Q & A at end of presentation – chat box & reactions encouraged

Ruppia maritima | ecology & restoration

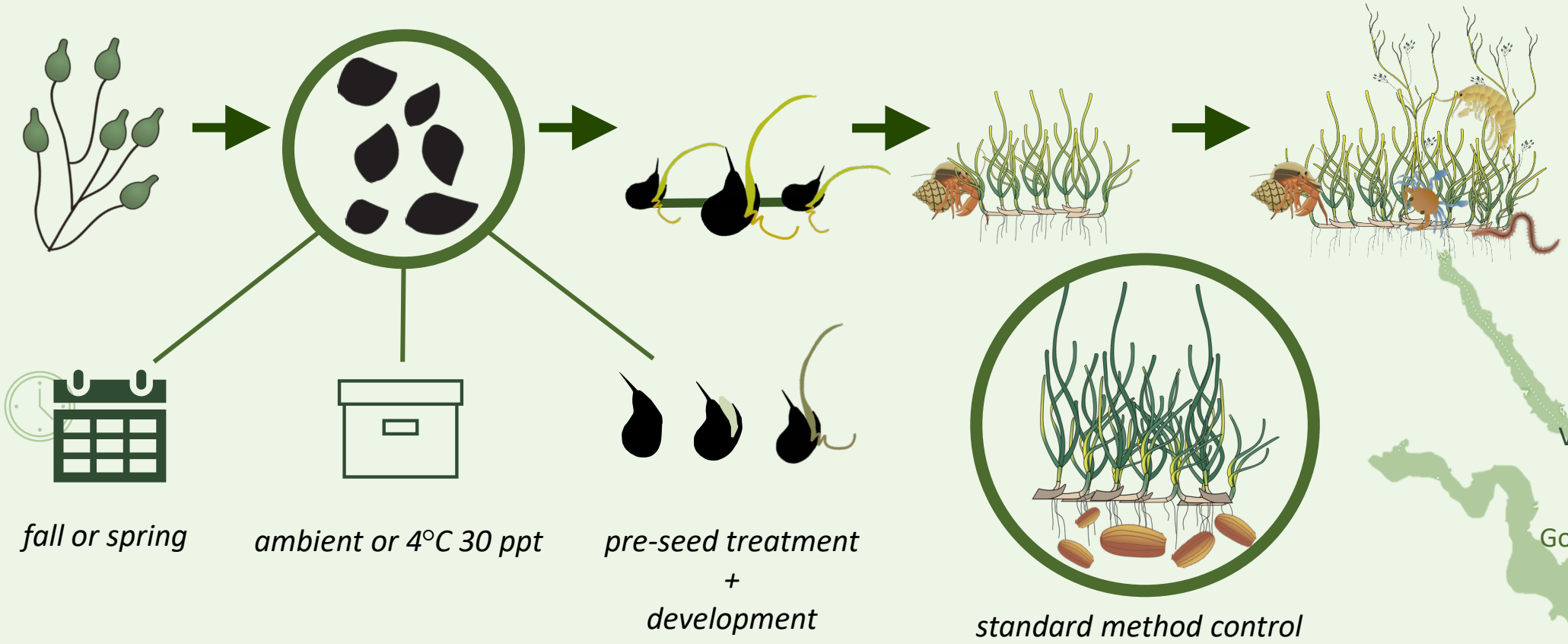


Lynnhaven River System

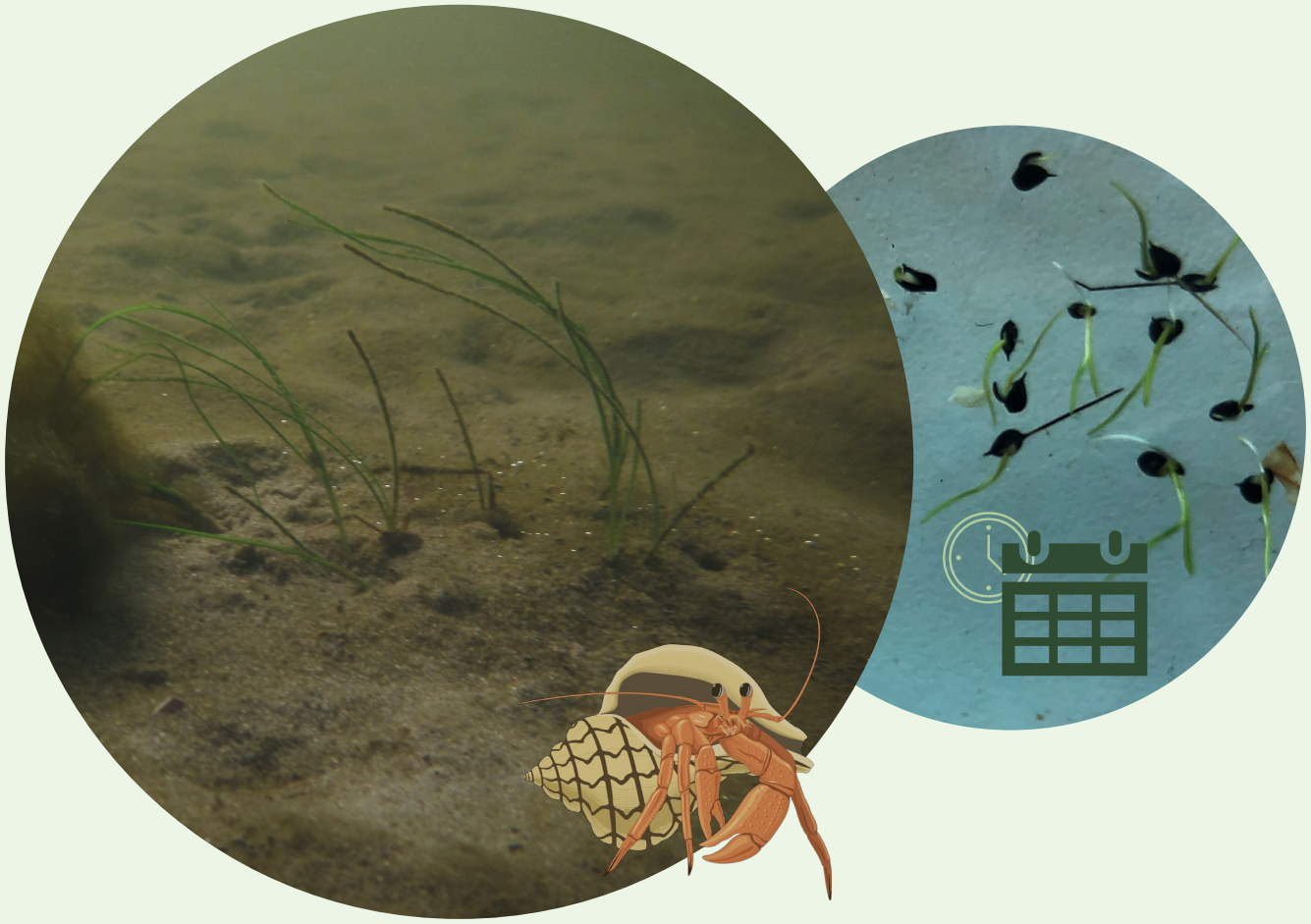
Introduction / Objectives + Methods / Current Observations • *Ruppia maritima* seed-based planting experiment w/ Enie Hensel (she/her-s)

Q & A at end of presentation – chat box & reactions encouraged

How does *Ruppia maritima* broadcast seed dispersal method alter bed establishment and composition?



Current Observations



Introduction ✓/ Objectives + Methods ✓/ Current Observations • *Ruppia maritima* seed-based planting experiment w/ Enie Hensel (she/her-s)

Q & A at end of presentation – chat box & reactions encouraged

Acknowledgements | collaborators & funding

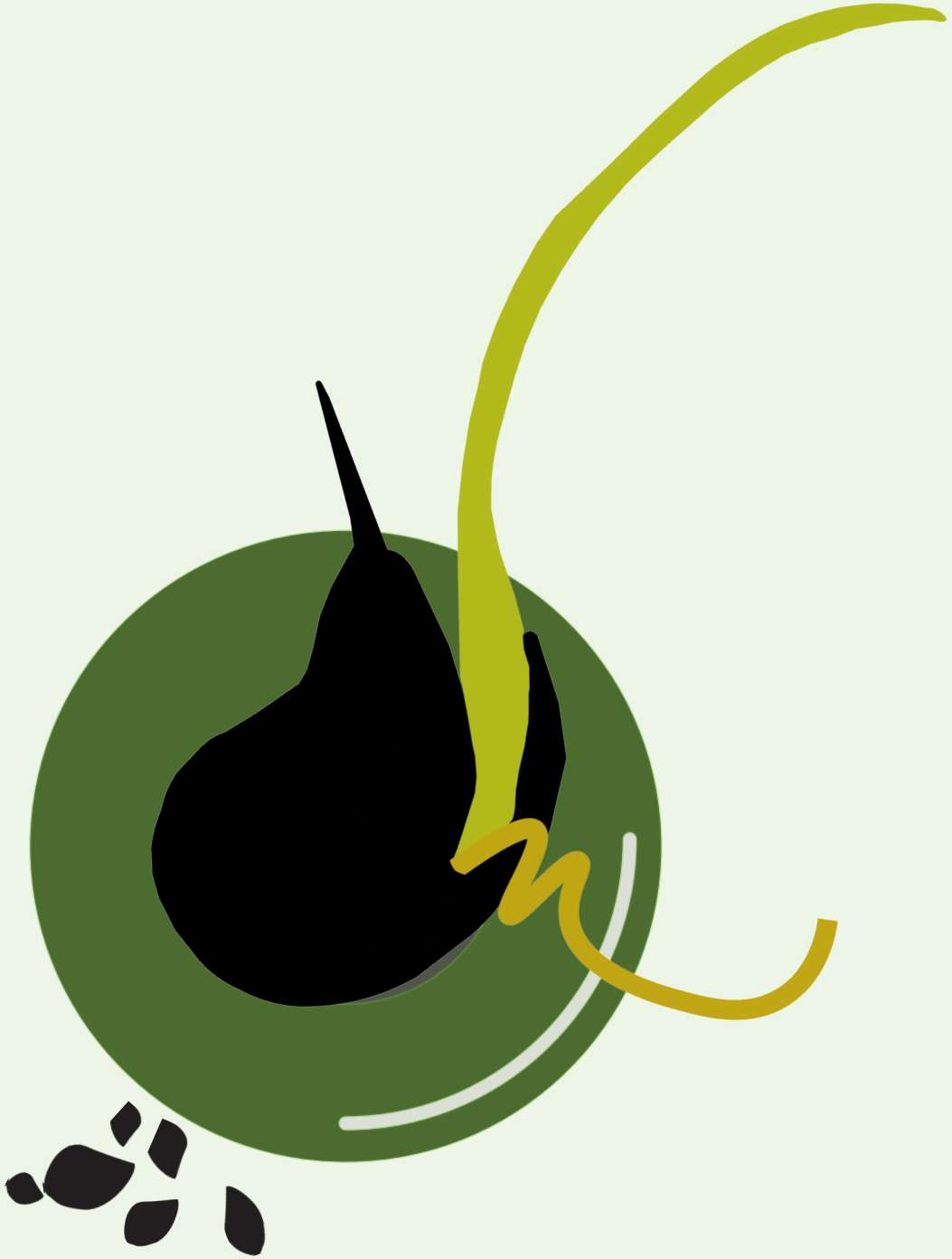
Enie Hensel, PhD
eniehensel@gmail.com
she – her – hers
eniehensel.com
@eniehensel
@enie.co

Dr. Bongkeun Song | VIMS

Chesapeake Bay National Estuarine Research Reserve

VIMS | William & Mary
Virginia Institute of Marine Science

US Army Corps of Engineers®



Experimental design + set up

TREATMENTS

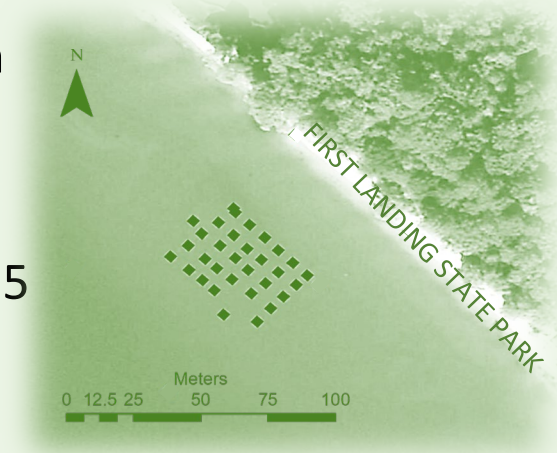
- *Ruppia maritima* – fall
- *Zostera maritima* – fall,method control
- *Ruppia maritima* – spring
- *Ruppia maritima* – spring, freshwater shock
- *Ruppia maritima* – spring, FW shock + germination initiated
- ○ bare control

FIELD SET UP

- 3 sites, tow tide depth 0.7 – 1.0 m
- 5 replicates per treatment per site
- 1m^2 plot centered in 4m^2 buffer
- control established beds, transplants of both SAV species at Broad Bay

FIELD SET UP

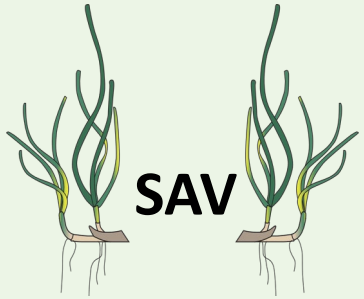
- estimate 500 seeds for each treatment
- plot ID is randomized
- treatment plots are at least 5 meters apart within ~50m^2 experimental area



Broad Bay – Lynnhaven River System

SAV + Fauna

ZOOM
Presenter Spot
DELETE AFTER PPT
MADE



SAV

- density
- bed expansion area
- canopy height
- above and below ground biomass (15 cm core to root depth)
- other flora present

FAUNA + MICROBES

<u>via 15 cm cores per plot</u>

- abundance/biomass
- species identity + density
- community structure

<u>via 50 g tube cores</u>

- microbial diversity
- microbial N activity