An underwater photograph showing a dense field of seagrass in a shallow body of water. The water is clear, and the seagrass blades are visible, extending from the bottom towards the surface. The background shows a wooden pier or dock structure.

**Underwater Grasses:
Chesapeake Bay's Underappreciated
Habitat**

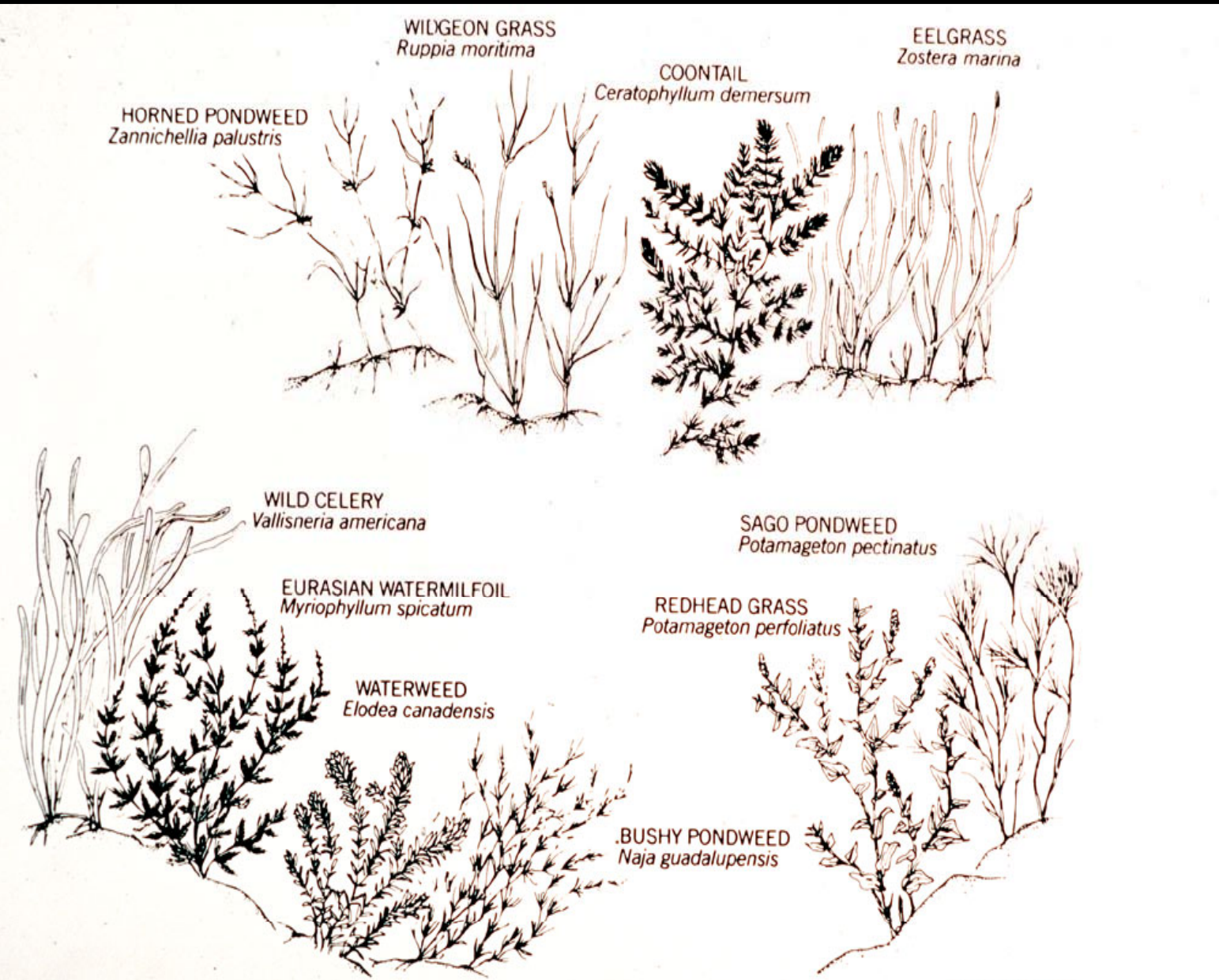
Dr. Ken Moore

VIMS

What Are Underwater Grasses?

- **Rooted, vascular plants**
 - “SAV” or “Seagrasses”
 - does not include marsh grasses or algae
- **Completely submerged**
- **Flowers and seeds**
- **17 common species (26 total) in Chesapeake Bay**
- **Grow in shallow, tidal waters, usually <2 meters deep, in fresh and salt water**





WILGEON GRASS
Ruppia maritima

EELGRASS
Zostera marina

HORNED PONDWEED
Zannichellia palustris

COONTAIL
Ceratophyllum demersum

WILD CELERY
Vallisneria americana

SAGO PONDWEED
Potamogeton pectinatus

EURASIAN WATERMILFOIL
Myriophyllum spicatum

REDHEAD GRASS
Potamogeton perfoliatus

WATERWEED
Elodea canadensis

BUSHY PONDWEED
Najas guadalupensis

SEAGRASSES of Chesapeake Bay

Elaine Kasmer

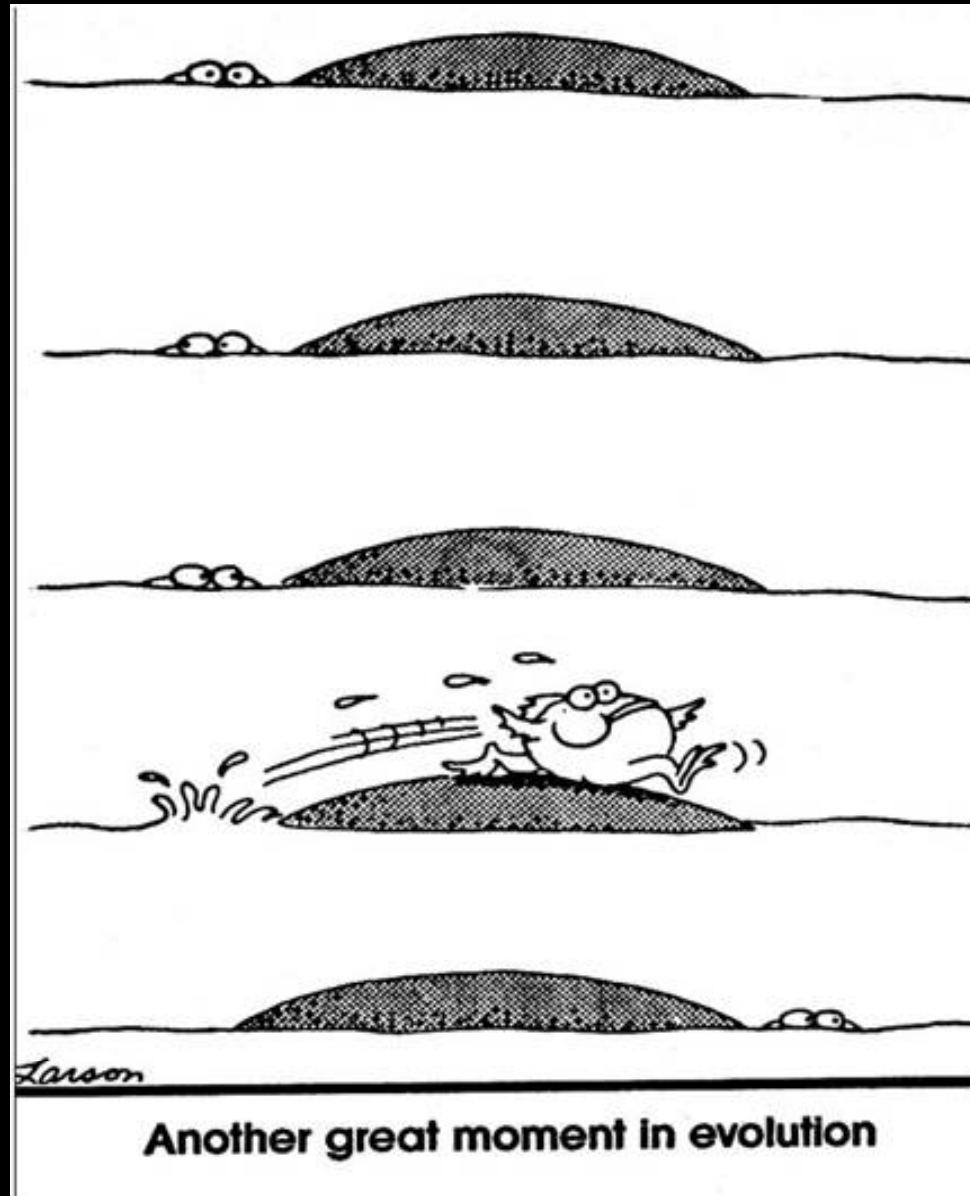
Algae



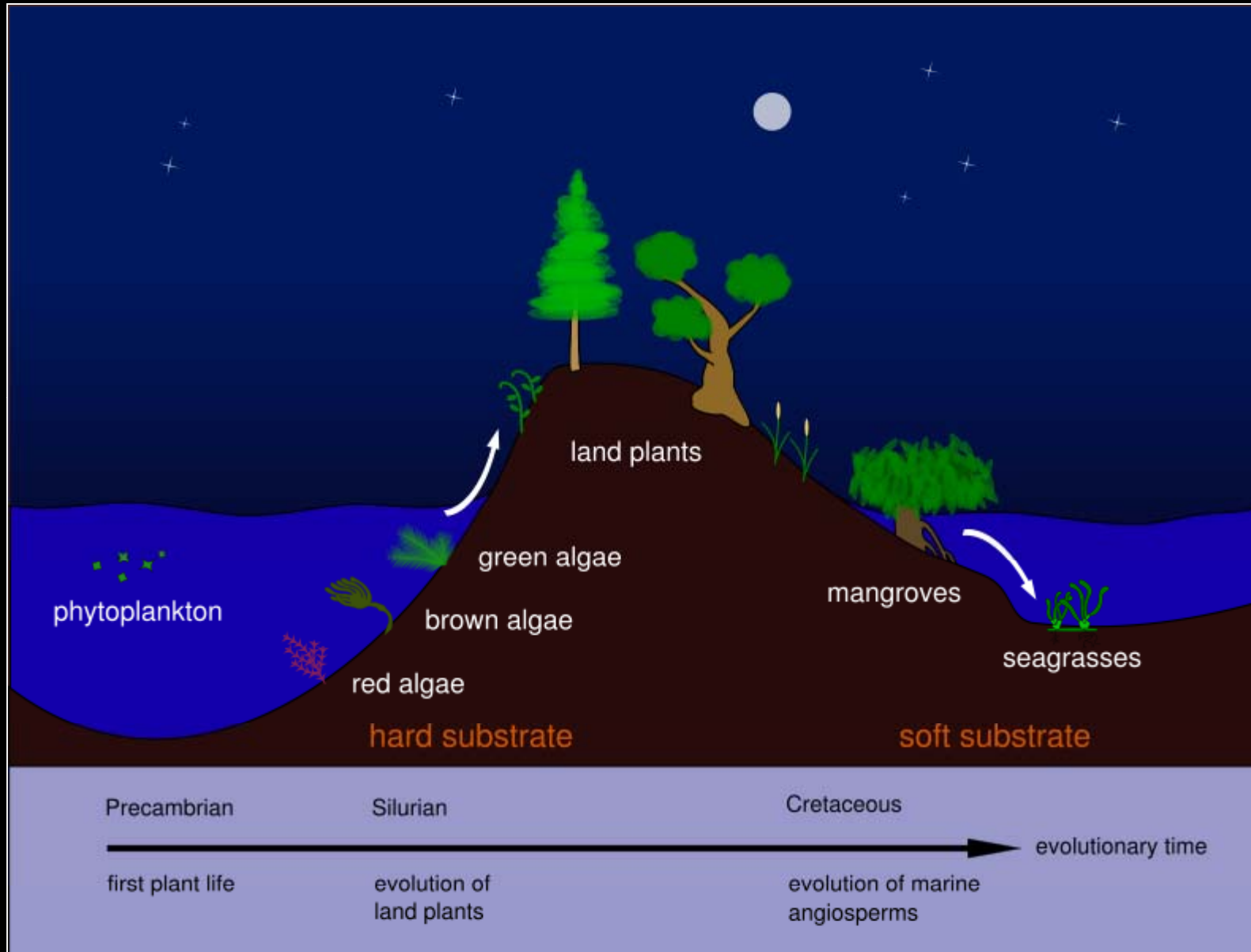
Land Plants



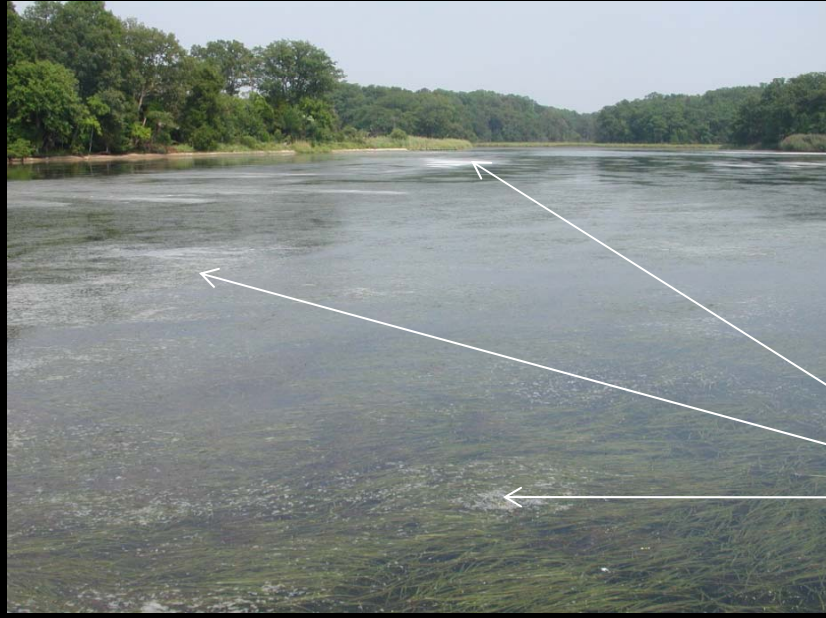
Underwater Grasses



Underwater Grasses Evolution



Flowering and pollination



**Freshwater SAV
surface pollinate**

Note surface pollen



**Saltwater
seagrasses
pollinate
underwater**

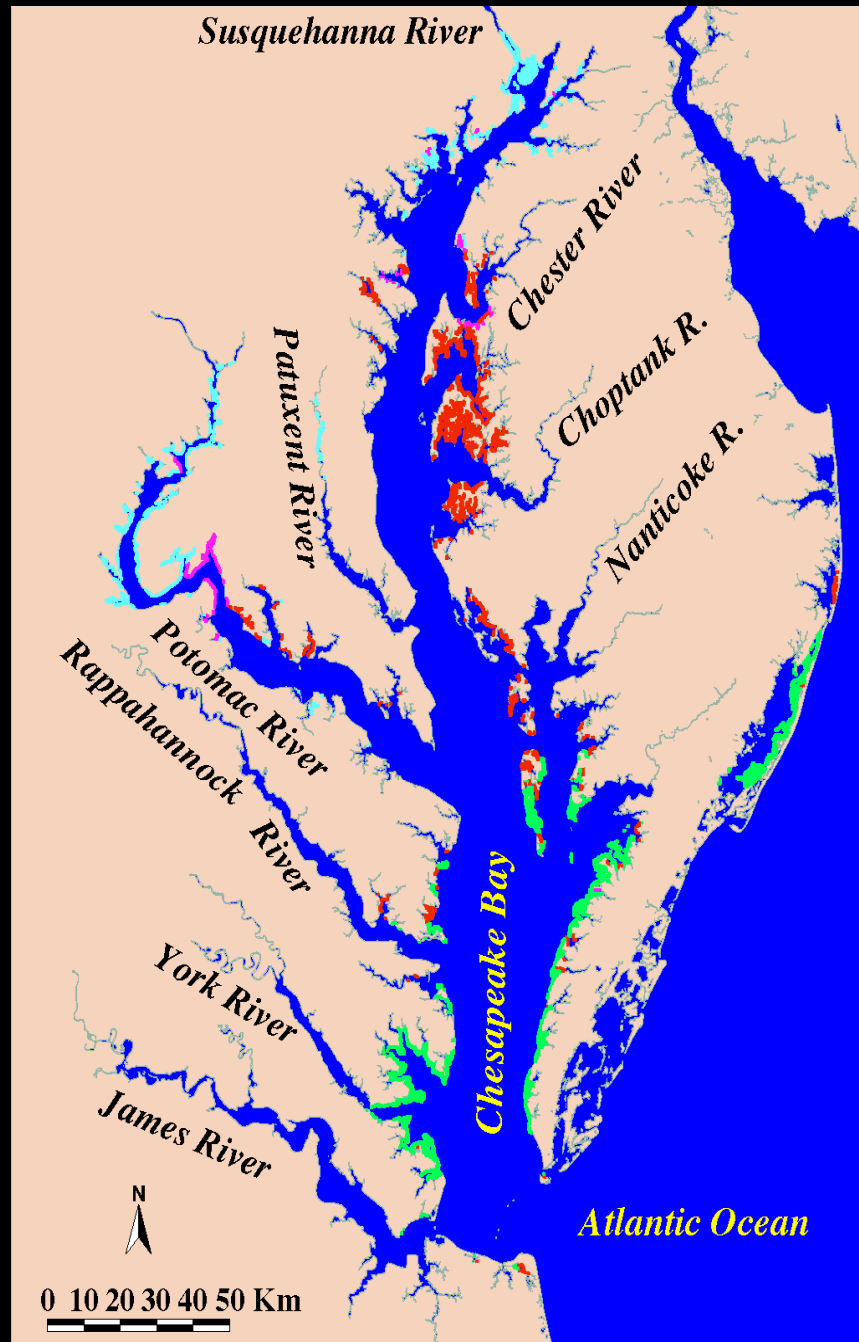
Chesapeake Bay Underwater Grass Communities

■ FRESHWATER

■ POTAMOGETON

■ RUPPIA

■ ZOSTERA



Tidal Freshwater SAV Bed



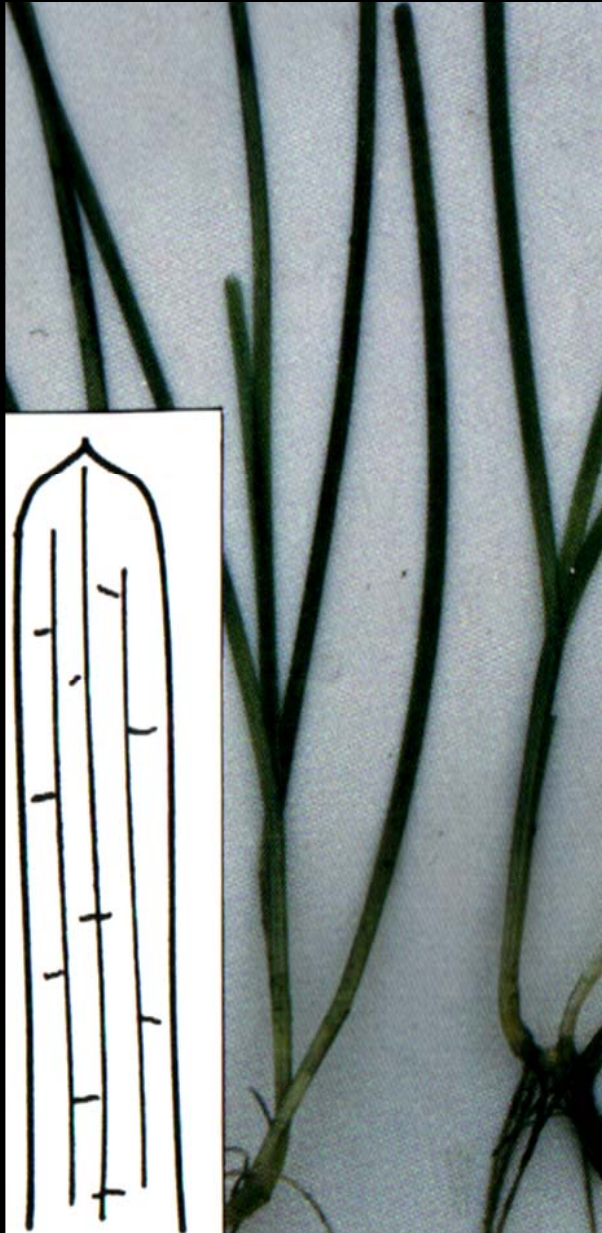
Seagrass Meadow in York River



Seagrass Bed



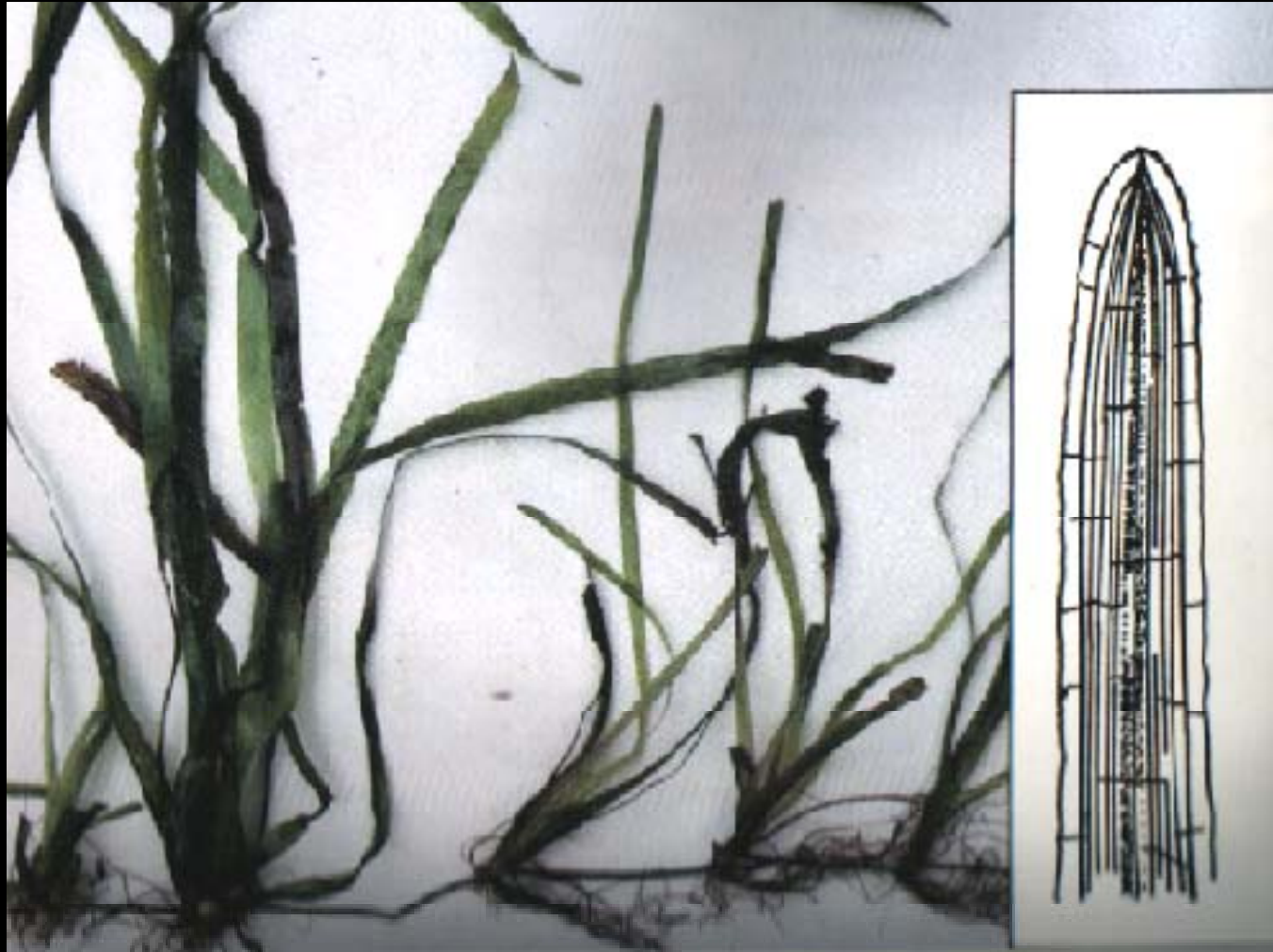
Eelgrass (*Zostera marina*)



Widgeon Grass (*Ruppia maritima*)



Wild Celery (*Vallisneria americana*)
"Freshwater Eelgrass"



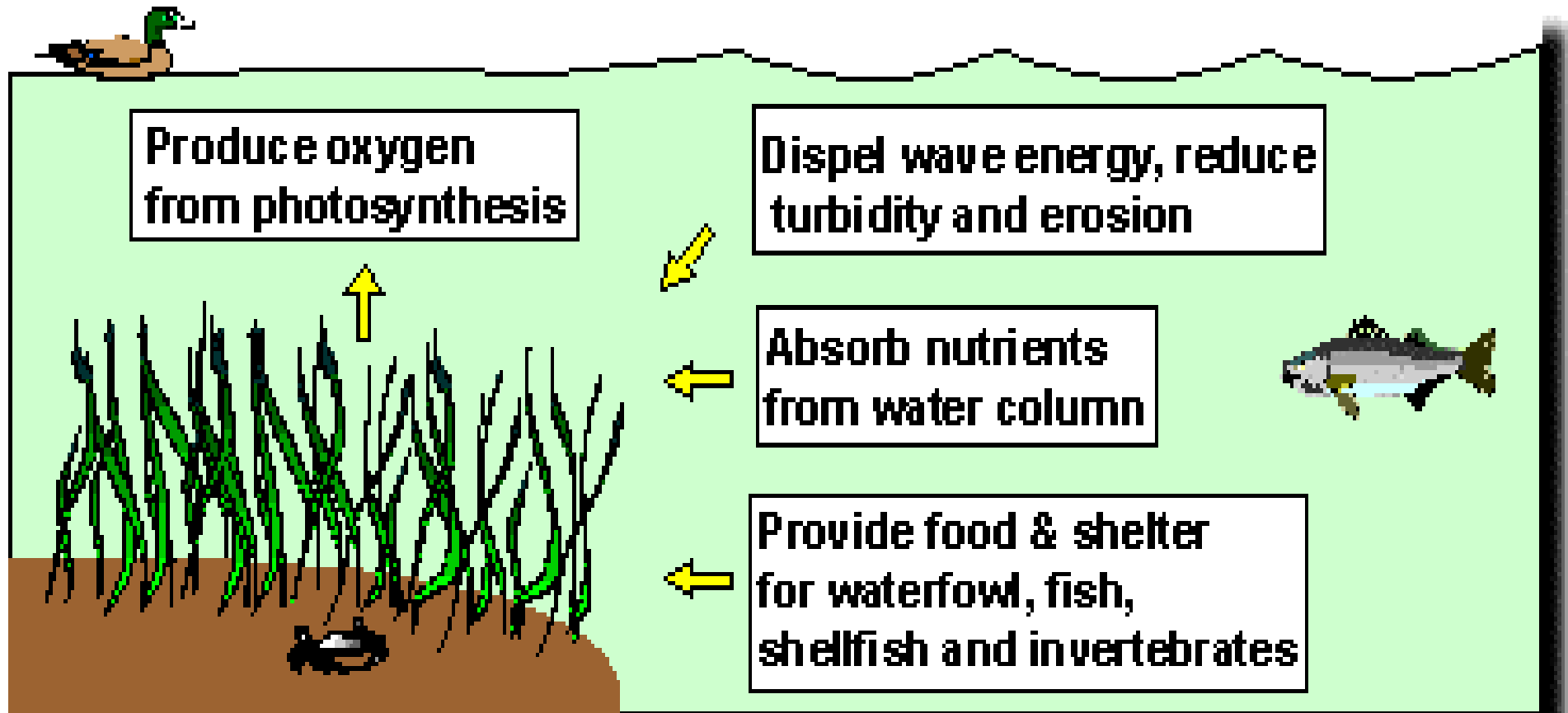


Redhead Grass (*Potamogeton perfoliatus*)



Potomac River *Hydrilla*

What do seagrasses do?

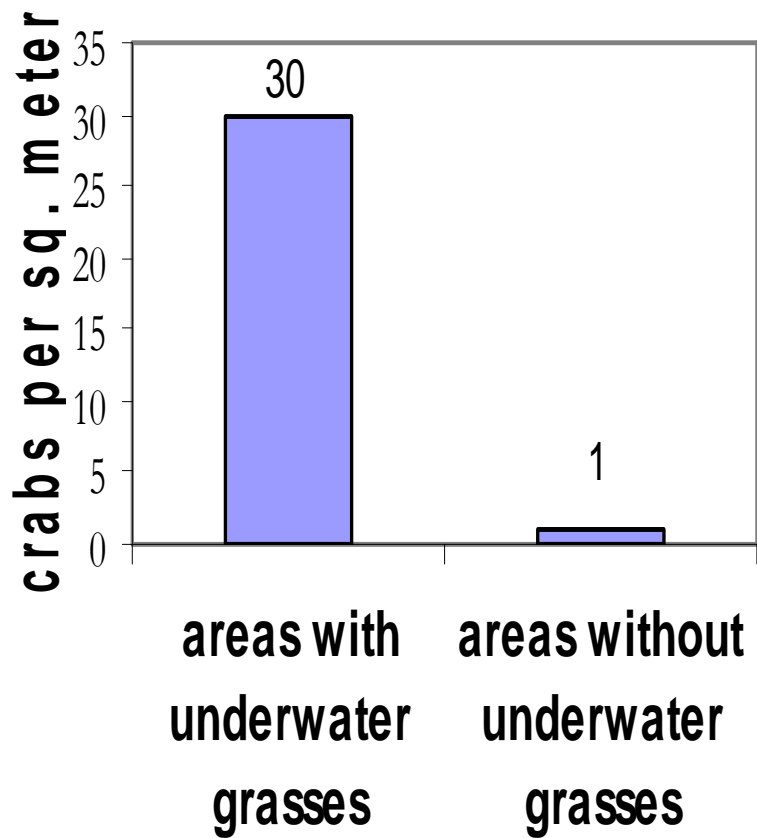


As underwater grasses naturally die-off, their decomposing matter helps form a critical food chain in bay sediment.

Seagrass Important in Life Cycle of Many Bay Species



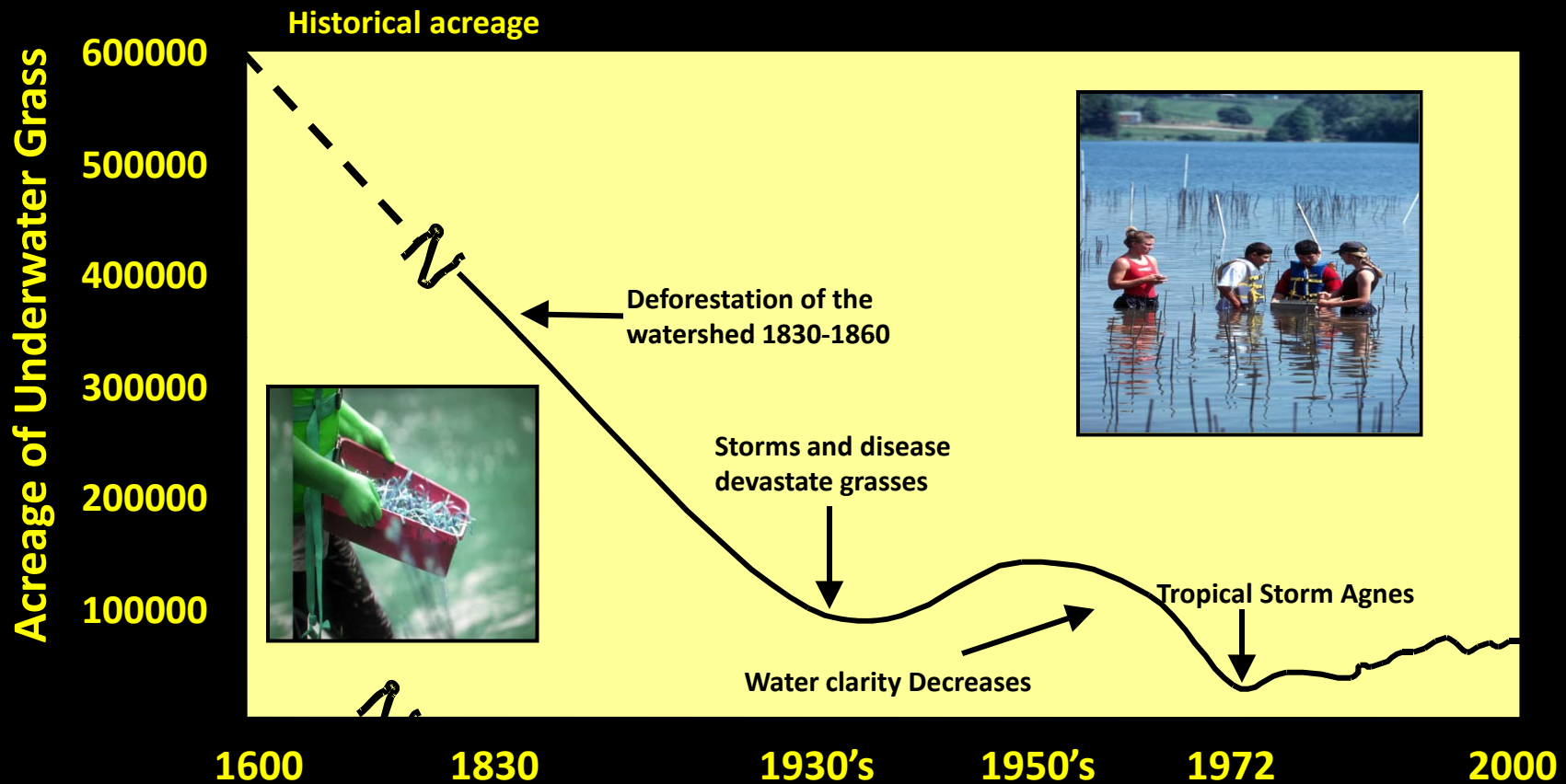
Juvenile Crab Density



Declining blue crab population and seagrass abundance

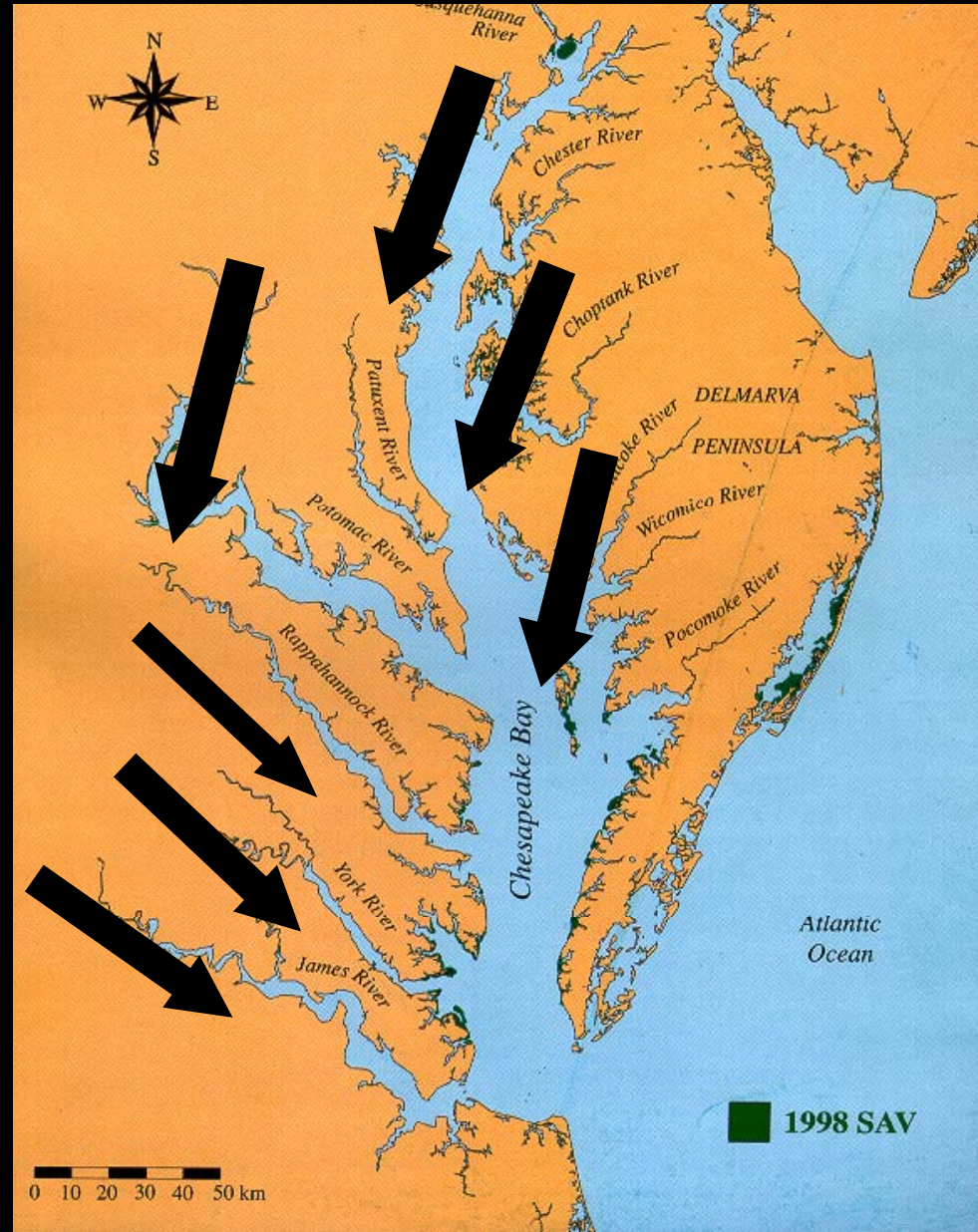


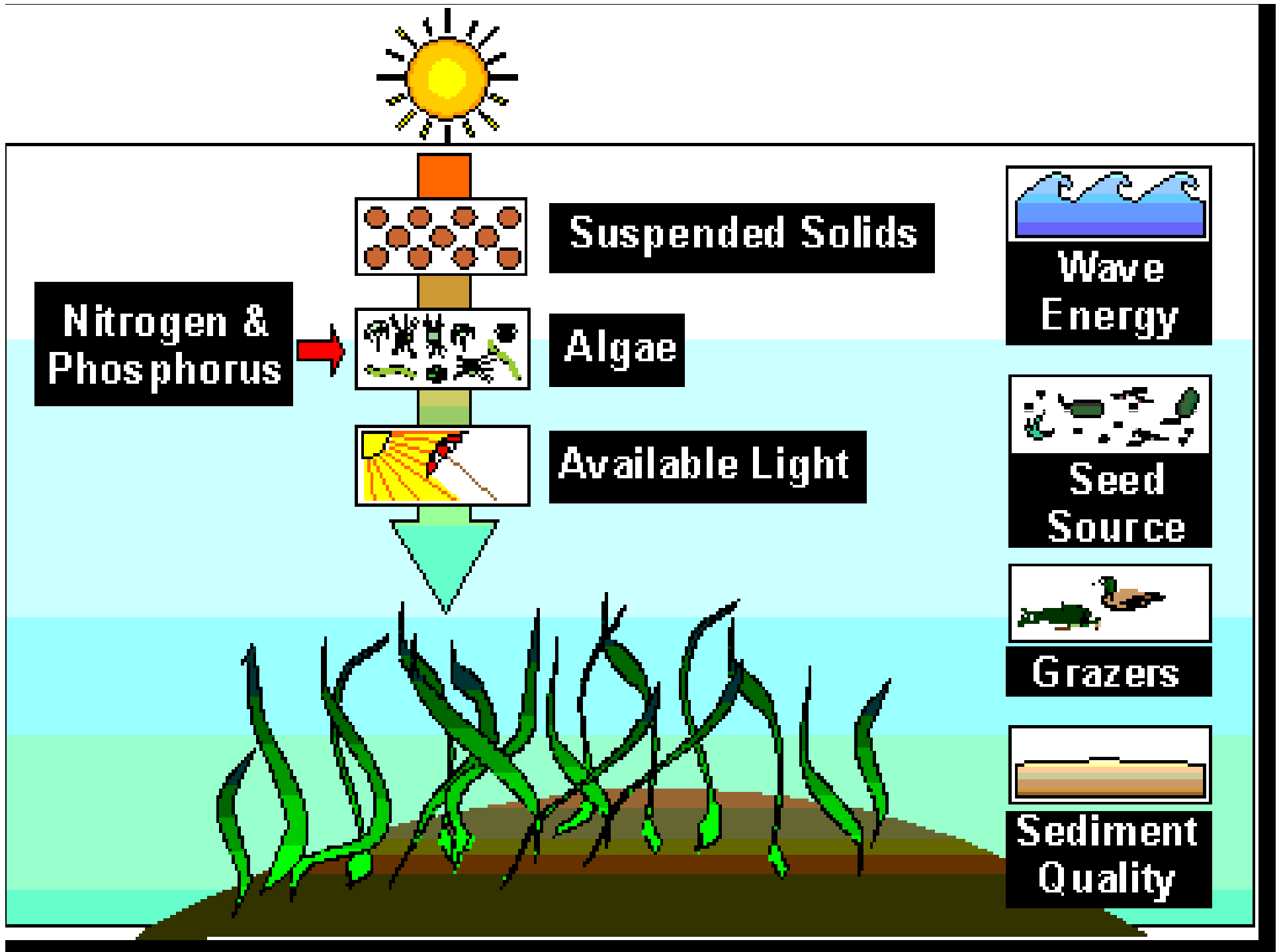
Decline of Seagrasses



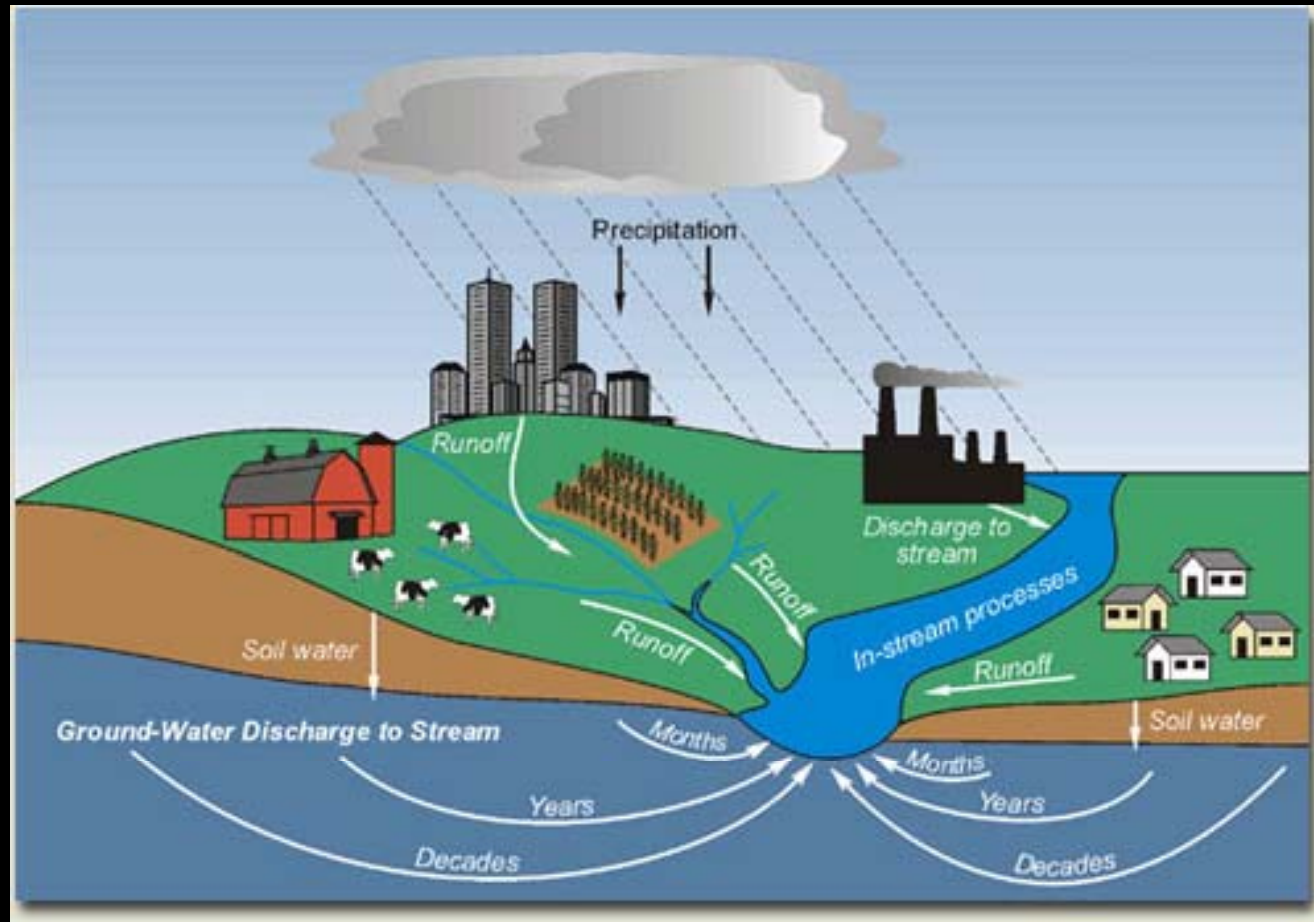
Chesapeake Bay has only 12% of historical acreage of seagrasses

Changing seagrass distribution in the Chesapeake Bay over the past 60 years.





Controlling inputs of sediments and nutrients will be a long-term process



Direct Removal by Dredging



Propeller scars

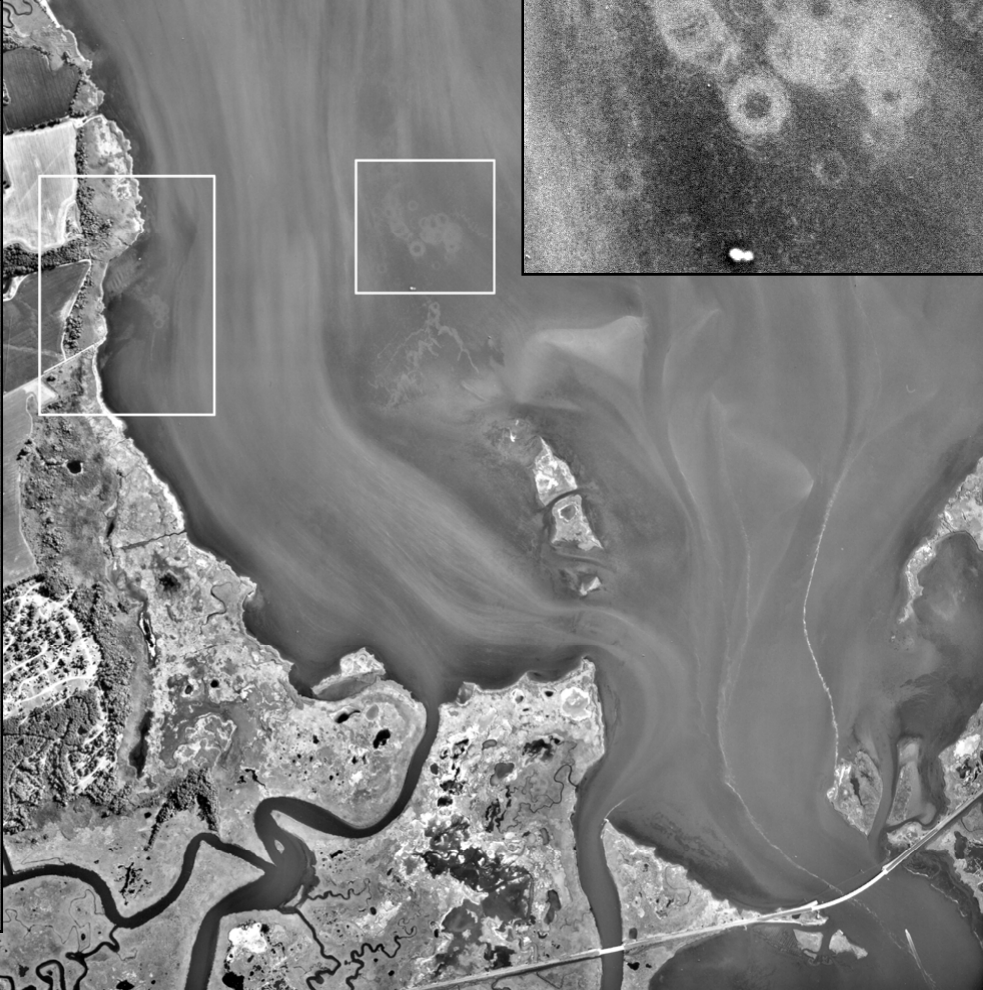
Ocean City,
Maryland



Clam Dredging Increases Local Turbidity



**Hydraulic
clam
dredging
scars**



Cownose Ray Foraging

