CLAM TENTS

In the Damariscotta River:
An Applied, Collaborative Research Project
2000 - 2001

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THE GOALS:

A. TO INCREASE SETTLEMENT AND/OR ENTRAPMENT OF JUVENILE CLAMS UNDER THE CLAM TENTS.
B. USE CAPTURED CLAM SEED FOR RESEEDING, TRANSPLANTING, OR OTHER INDUSTRY NEED.

PROJECT BENEFITS:

1. INCREASE COLLABORATION BETWEEN INDUSTRY, RESEARCH AND MANAGEMENT.

2. CONTRIBUTE TO SCIENTIFIC UNDERSTANDING OF CLAM BIOLOGY AND BEHAVIOR.

3. PROVIDE A LEGITIMATE RESOURCE MANAGEMENT TOOL FOR SHELLFISH COMMITTEES AND OTHERS.

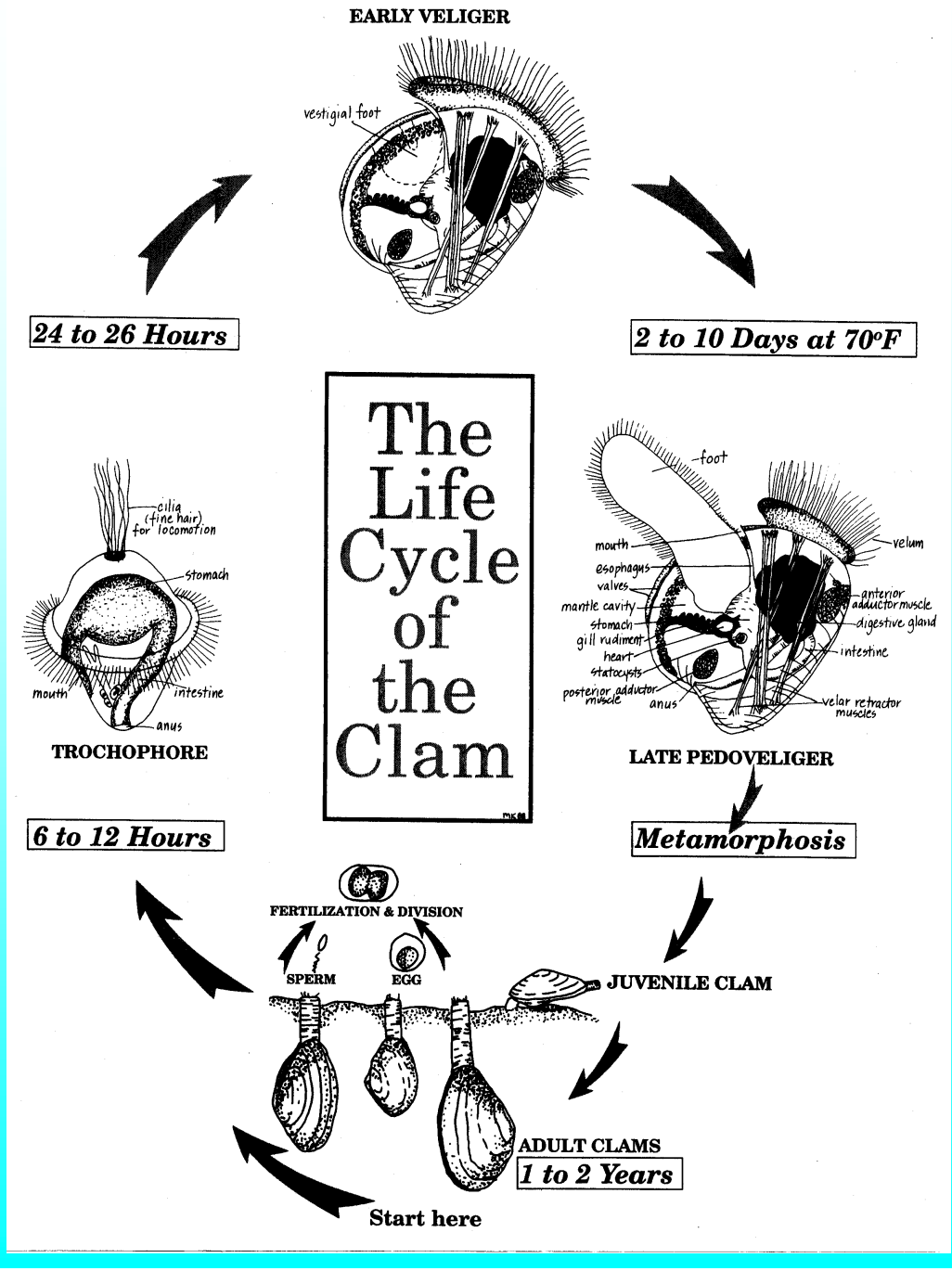
WHO'S GOTTEN INVOLVED??

Clam Diggers of the Damariscotta Region
UMCE / Maine Sea Grant
ME Dept. of Marine Resources
UMaine at Machias
Maine Marittime Academy
Beals Island Regional Shellfish Hatchery
Medomak Valley High School
Shellfish Aquaculture Industry

CLAM BIOLOGY and OCEANOGRAPHY Or SO HOW DO CLAM TENTS WORK??

1. DURING EARLY LIFE STAGES, CLAMS ACTIVELY SEEK THE BEST POSSIBLE ENVIRONMENT - (FEED, TEMPERATURE, PROTECTION FROM PREDATORS).

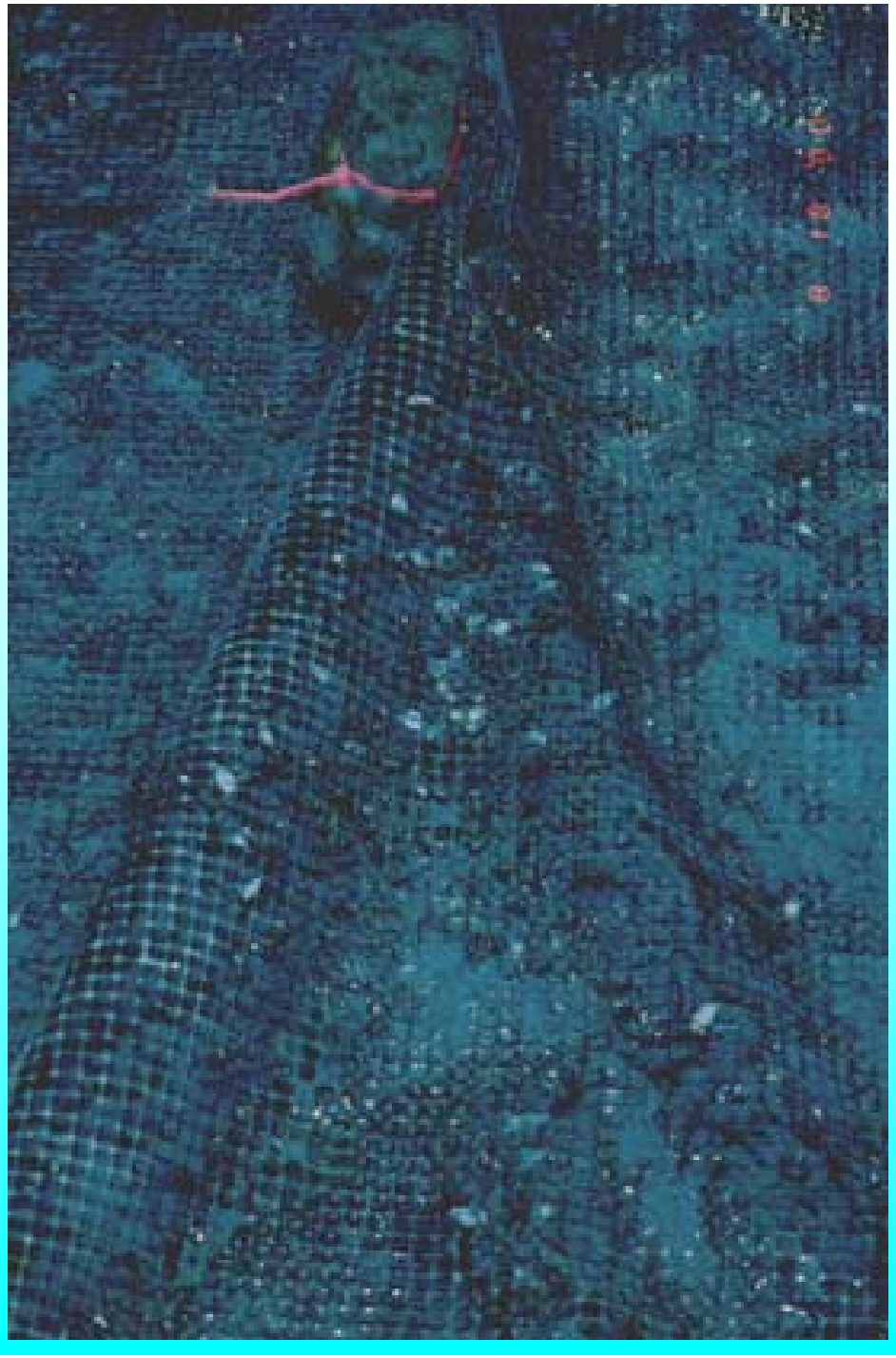
2. SMALL CLAMS, UP TO 7 mm OR SO, ARE PUSHED AROUND BY TIDES AND CURRENTS, AND COME TO REST UNDER THE MESHES OF THE TENTS.



A CLAM ‘TENT’ DEPLOYED ON THE FLATS -
IT HAS NEAR-ZERO PROFILE AT LOW TIDE.
THE NETTING HAS A MESH SIZE OF 1/4”, AND IS CUT IN SECTIONS ABOUT 12 FEET x 13 FEET. EDGES ARE DUG INTO THE MUD TO KEEP PREDATORS OUT. FLOATS UNDER THE NETTING KEEP IT RAISED OFF BOTTOM DURING HIGH TIDE.

LATE SUMMER, 2000

CLAM SEED OBSERVED UNDER THE NETTING OF THE TENTS……..



TAKING CORE SAMPLES TO COUNT THE CLAMS IN THE MUD. NOTE THE "HIGH TECH" SAMPLING EQUIPMENT OF COFFEE CANS AND PLASTIC BAGS.

MUCH OF THE SEED COLLECTED IS SMALL, 2 - 4 mm VALVE HEIGHT

SOME SAMPLES, LIKE THIS ONE, WERE VERY GOOD - ESTIMATED TO BE IN EXCESS OF 1000 CLAMS / FOOT. MANY OF THE CLAMS ARE OF EXCELLENT SIZE FOR REPLANTING.

RESULTS FROM 2000 NETTING EXPERIMENT:

#1 - IT GOT DONE!!!!

#2 - IT WORKED!!

UNDER NETTING

AVERAGE # CLAMS/SAMPLE = 30.0 (150 clams/ft)

Average Size of Clams = 5.5mm

OUTSIDE OF NETTING

AVERAGE # CLAMS/SAMPLE = 1.5 (7.5 clams/ft)

Average Size of Clams = 3.5mm

Trampling had a slightly decreasing effect

In 2001, the Damariscotta/Newcastle Shellfish Committe followed up. Actions taken by the Committee include:

- Completion of Expanded Army Corps of Engineers Permit

- Purchase of Entire Roll of Netting

- Preparation of Nets and organization of industry help

- Deployment of Nets in Two Sites

- Additional Gear Change: Use of PVC Pipe Frames

May 23, 2001. Tent Prep. At Newcastle F.D.

Installing Tents at Little Point.

May 24, 2001. 15 Tents installed at Little Point. 15 more tents were later installed at another location, and 5 tents with PVC hoops were added to the Little Point location

View of finished tent layout at Little Point in 2001. Three rows of five tents each are nearest the shore, with the five PVC 'hoop' tents furthest out into the cove (furthest right).

View of PVC ‘hoop’ tents in Little Point, 2001. Note the siltation that has buried the edges of the tents.

September, 2001. Similar to events in 2000, siphon holes are seen in abundance under some toggle floats and in the wrinkles of netting.

Closer view of ‘hoop’ tent at Little Point, 2001, just prior To removal on November27th.

November 27, 2001. Removing tents from the Little Point site. Participation from industry, DMR, an oyster grower and high school student from Waldoboro...

Ron Aho, Regional Biologist for DMR, before he got really muddy.