

Data Sheet Green Harbor River Study

Left 11:45 AM

Date 8/22/03 Time 8:30 (AM) PM Tide High in ocean 7:43 AM

Height of water above sea level ~ -1' bit 1.055 -1' 3" Tide coming in though not much current

Location of testing Front of dike for most water testing
Did locations by island for biology, pH, specific gravity
8:45 AM

Air temperature 76° F Water temperature (surface) by dike 74° F
Warmed up fast ~85° F when I left

Water temperature (1 meter deep) by dike 108° F

Specific gravity (20 degrees C) 1.004 8:45 AM Salinity by chart 5.55 ppt
1.004 10:45 AM

Specific gravity (1 meter deep) 1.020 dike Salinity by chart 27.76

" " " 1.010 1/2 way ^{down} island-channel 7.2 pH (1 m. deep)
Salinity 13.88 ppt

pH (surface) 7.2
pH 7.1 depth 1 m.

Nitrate — Nitrite ✓

Poor Dissolved oxygen 4

Secchi disk 2 m

Poor General observations: Water clarity Turbid - opaque
Brown - bucket of water looks like tea

Odor Slightly Salty Water color appears Brown/red

By island Sediment sample Varies along island. Sand w/ black silt near landing, some clay (grayish) to E, mud/silt brown/black all along S. side of island. Fairly firm and easy to walk in wader

Biological data:

Species Plankton sample (see other pages) Barnacle molts 13, daphnia 3, insect larvae 1

Birds Cormorant, swallows ~25, gull

Invertebrates 8 amphipod, 1 grass shrimp, skating type insect damselfly larva, damselfly blue, dragonfly (orangeish-shurt)

off island Fish 2 Flounder, 5 banded killifish

Comments:

Foam in front of dike; more foam on L inside grates
more foam on R outside; thin layer of foam on left

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2003 AUGUST 2003

Morning		BOSTON	Afternoon	
HIGH	3:23	SUNDAY	HIGH	3:46
Height	9.7	17	Height	9.6
LOW	9:32		LOW	9:57
Height	0.8		Height	1.0
Sunrise	5:54		Sunset	7:43
HIGH	4:09	MONDAY	HIGH	4:30
Height	9.1	18	Height	9.4
LOW	10:15		LOW	10:46
Height	1.3		Height	1.3
Sunrise	5:55		Sunset	7:42
HIGH	4:58	TUESDAY	HIGH	5:16
Height	8.7	19	Height	9.2
LOW	11:01		LOW	11:37
Height	1.7		Height	1.5
Sunrise	5:56		Sunset	7:40
HIGH	5:50	WEDNESDAY	HIGH	6:06
Height	8.3	20	Height	9.1
LOW	11:50		LOW	---
Height	2.1		Height	---
Sunrise	5:57	THIRD QUARTER	Sunset	7:39
HIGH	6:46	THURSDAY	HIGH	7:00
Height	8.0	21	Height	9.0
LOW	12:32		LOW	12:43
Height	1.7		Height	2.3
Sunrise	5:58		Sunset	7:37
HIGH	7:43	FRIDAY	HIGH	7:54
Height	7.9	22	Height	9.1
LOW	1:28		LOW	1:37
Height	1.7		Height	2.3
Sunrise	5:59		Sunset	7:36
HIGH	8:40	SATURDAY	HIGH	8:48
Height	8.0	23	Height	9.4
LOW	2:24		LOW	2:32
Height	1.5		Height	2.2
Sunrise	6:00		Sunset	7:34

Eastern Standard Time - Corrected For Daylight Savings Time

Height of water above sea level

Location of testing

Air temperature

Water temperature (1 meter deep) by disk

Specific gravity (30 degree)

Specific gravity (1 meter deep)

Wind direction

Wind speed

Water level

Dissolved oxygen

Secchi disk

General observation: Water clarity

Water color appears

Color

Sediment sample

Biological notes

Plankton sample (see other pages)

Birds

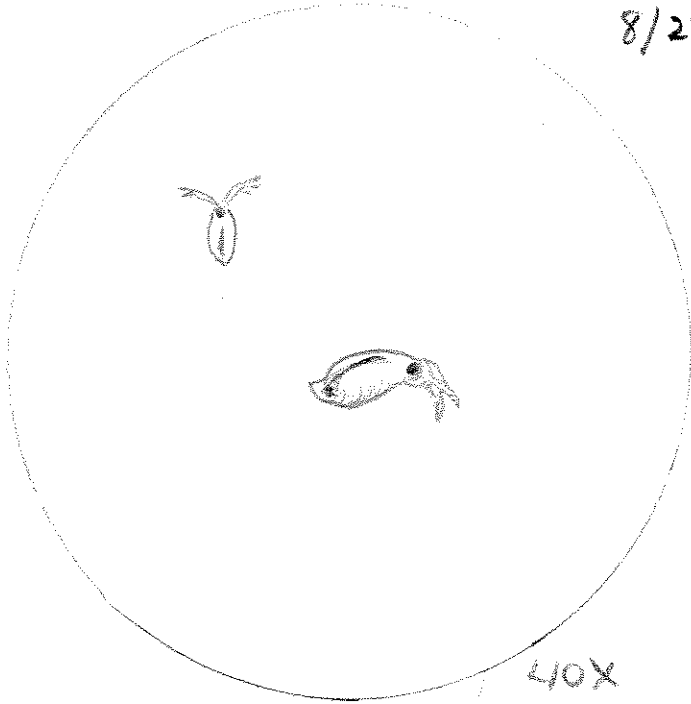
Invertebrates

Fish

Comments

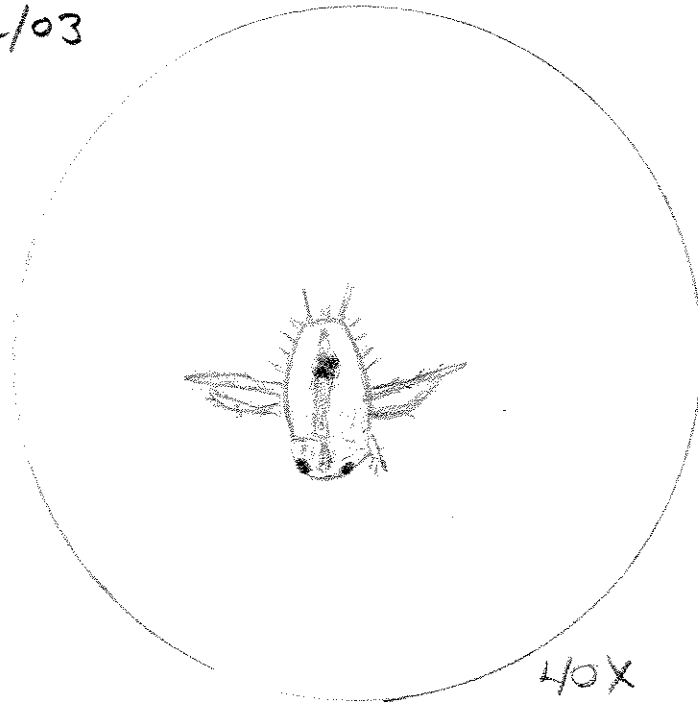
Green Harbor River

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Daphnia or similar species

2 antennae; jointed, hairy
moves with fast, jerky method
Tiny legs appear inside
transparent body

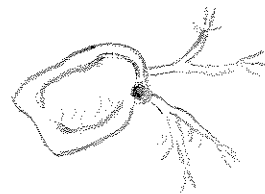


Larval insect

2 pairs of long legs
1 pair of small legs near
head. Two dark eyes
longest legs are posterior.
Skating type of insect.
Thousands of adults
skimming surface today.
Probably the larva of the
species. Tiny projections
of posterior end. 4 larger
on each side



100X
Daphnia



40X

Barnacle molts

Dried 3 molts and lifted with tape

HT HT III

(13)



Actual Molts

Amphipod dead 1

↑
These were even visible floating in the water as I walked with waders chest deep.

Daphnia III

(3)

Abundant insect skating along surface. This is most likely

enlarged view



Body Shape



All block insect glides on surface of water. Two pairs of visible legs. Moves very fast.

4 small antennae/
Antennules

Legs are very thin

Yellowtail flounder *Pleuronectes ferrugineus*

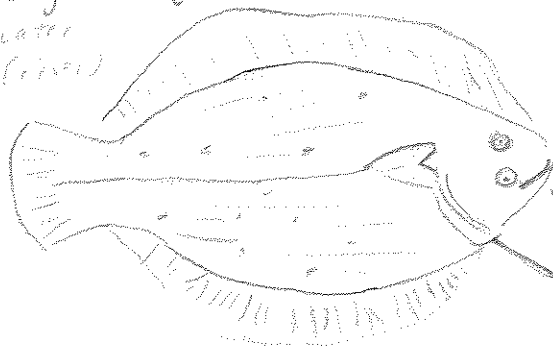
6 cm. flounder

7.6 cm flounder

Right-eyed Flatfish

(2)

Quick sketch in water
returned to water (free)
ASAP ~ 5 min.



~ 13
spines in
caudal fin

mouth

operculum

by island
So. side

seine
net

Brown with spots

like a windowpane (but windowpanes are left-eye)
Highly arched lateral line

J.g. 1.004 Surface
Water

white on underside

Also ^{banded} 5 killifish, 1 grass shrimp, 8 amphipods
Dip net

back day yellowtail are not
common in estuarine water

Family Pleuronectidae: right eye
flounders

8/22/03

Flounders caught in seine net ~ 6 m. off
south side of island in front of submerged boat.