

## Subject: Horseshoe Crabs and Birds

by David Clapp

21 May, 2007 - Beach Visit Mostly Horseshoe Crabs (HSC or HSCs [plural]) Large flocks of migrant shore birds as well.

I was on the beach from early afternoon until about 6:00 p.m. The water was calm, the temperature was in the low sixties and the day seemed perfect to try to locate Horseshoe Crab egg-laying areas.

As we sort of figured that the sandy stretch from the bridge north to the pavilion looked like good habitat, I started there. After that, and with less time, I drove south to the town line; stopping along the way at sandy places to walk and look for either HSCs or their trails in the sand. (They leave a series of parallel lines in the sand, as the tail and the edges of the shell drag along the bottom.)

North of the bridge I picked up 40 animals and measured them. Actually more than half were "coupled" so I did the estimated measurement from the topside. I am sure that this measurement

is not as exact as picking them up, but it seemed less intrusive.

As I headed south I realized that the beach is not uniformly suitable as egg-laying habitat. This fact will concentrate the animals in the few sandy areas and may invoke a management discussion regarding the efficacy of raking a few sections of beach (where cobble is on or in with sand) to clean them of cobble so they are more suited to nesting.

Anyway here is the summary. In addition to the beach north of the bridge, there is a spot just north of High Pines that is sandy and had HSCs. The beach below High Pines is useable for quite some distance and animals were seen in good numbers here. The tide was dropping now and the HSC were moving offshore.

Along the north section I had forty HSCs. The numbers below will be the millimeter measurement at the broadest part of the prosoma (the front part of the animal). When there are two numbers (180/155) the first is the female and the second the male and millimeter is implied but not written. The animals were arranged in the following configurations – 1 threesome, 14 pairs, 1 lone female, and 8 lone males; totaling 40 HSCs.

The paired animals were as follows:

192/146	191/136	215/167
224/145	212/148	200/158
192/152		
206/142	180/164	184/148
188/145	196/146	204/146
192/143		

The threesome: 186/142/160

The lone female: 115 (the smallest animal – perhaps a non-breeder)

The lone males:

162	174	132	148	150	173
162	199				

The paired females averaged: 191.1mm

The paired males averaged: 149mm

Largest female: 224mm

Smallest female: 115mm

Largest male: 199mm

Smallest male: 132mm

In addition to the Horseshoe Crabs I was greatly entertained by the huge number of medium and large shore birds that were loafing on the peat banks at high tide. There were about 700 birds of this sort on the marsh at High Pines and nearly the same number down at the town line, near where Gurnet Creek enters the bay.

I called Rick Bowes who does the shorebird surveys on Duxbury Beach and he will try to get a count on May 22. The numbers I have relate to species that might be of interest. In other words I didn't count gulls or cormorants (at least this time). As a matter of fact I didn't count all the shorebirds. I counted some flocks, estimated some flocks, and ball-

parked the numbers below.

I had: 800 Black-bellied Plover, 150 Ruddy Turnstone, 100 Dunlin, 25+ Greater Yellowlegs, 25 Willet, 2 Short-billed Dowitchers, 50+ Sanderling, and there were probably other tucked in here and there. Also there were still about 105 Brant and I saw 5 Red-breasted Mergansers. Rick has seen 8 Red-breasted Mergansers and Dan Furbish reported an American Oystercatcher on the beach yesterday as well.

From a management point of view there are a few things that come to mind for discussion or at least for further thought:

- Can a section of beach be made more enticing to Horseshoe Crabs by raking out the cobble,
- Do the dogs on the beach interact with anything (HSCs or birds),
- Are the eel grass beds in good shape (references the Brant population),
- What is the duration of the egg-laying period for HSCs and the passage/feeding for the migrant shore birds.

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