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Long Island Horseshoe Crab Network Annual Inventory Report

CERCOM, Molloy University

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Center for Environmental Research and Coastal Oceans Monitoring

(CERCOM)

Molloy College

Long Island Horseshoe Crab Network

Annual Inventory Report

2020

FINAL REPORT

Director; **Dr. John T. Tanacredi**

Scientific Research Technical Assistant; **Mr. Kyle F. Maurelli**

Administrative Coordinator; **Ms. Regina Gorney**

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2020

Student Intern

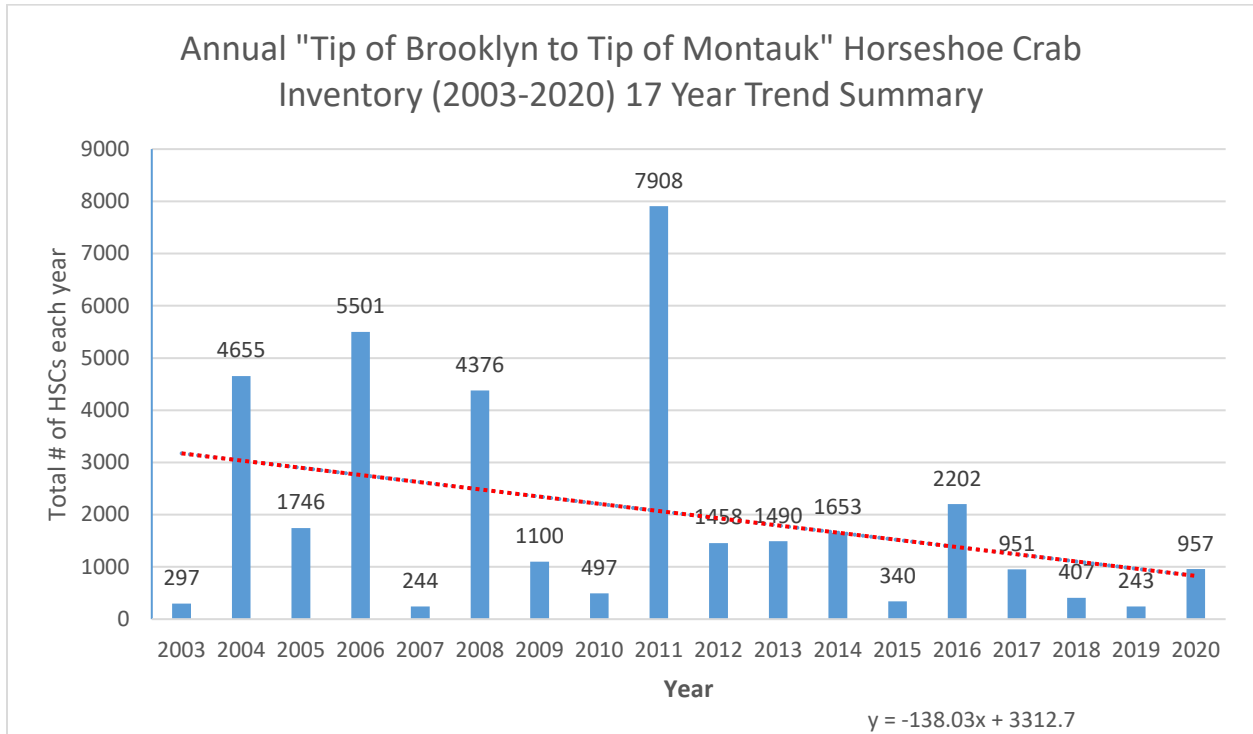
Participation:

Emma Hahn	Environmental Law	Binghamton
Bailey Rosen	Earth & Environmental Studies	Molloy College
Richard Kevan	Education	Molloy College
Mason Hermges	Education	Molloy College
Kathleen Doherty	Pre- medicinal	Molloy College
Zuberi Symister	Pre- medicinal	Molloy College
Caroline Kane	Earth & Environmental Studies	Molloy College

CERCOM monitors 115 beach locations from Brooklyn – Montauk during optimal *Limulus Polyphemus* breeding season. These beach surveys take place for approximately 15 weeks, ranging from May- August. These beach locations are marked specifically using GPS coordinates, to assure the same location is visited each year. Students and volunteers are required to attend a HSC Survey training orientation lead by CERCOM's research assistant, Mr. Kyle Maurelli. Surveying is done around tide and moon cycles (New/Full Moon). Each site takes about 1-2 hours and data is recorded along an approximate 1 mile distance. Walking along the water's edge the number of male and female HSCs are counted as well as the dead and or molted HSCs. This data is recorded and submitted to Molloy College's online HSC inventory form on the Molloy College website. CERCOM provides data for total observed HSC populations per site as well as whether or not HSC breeding has or is occurring at each beach location. Trends in breeding beach existence and overall Long Island populations is recorded annually.

Figure 1.

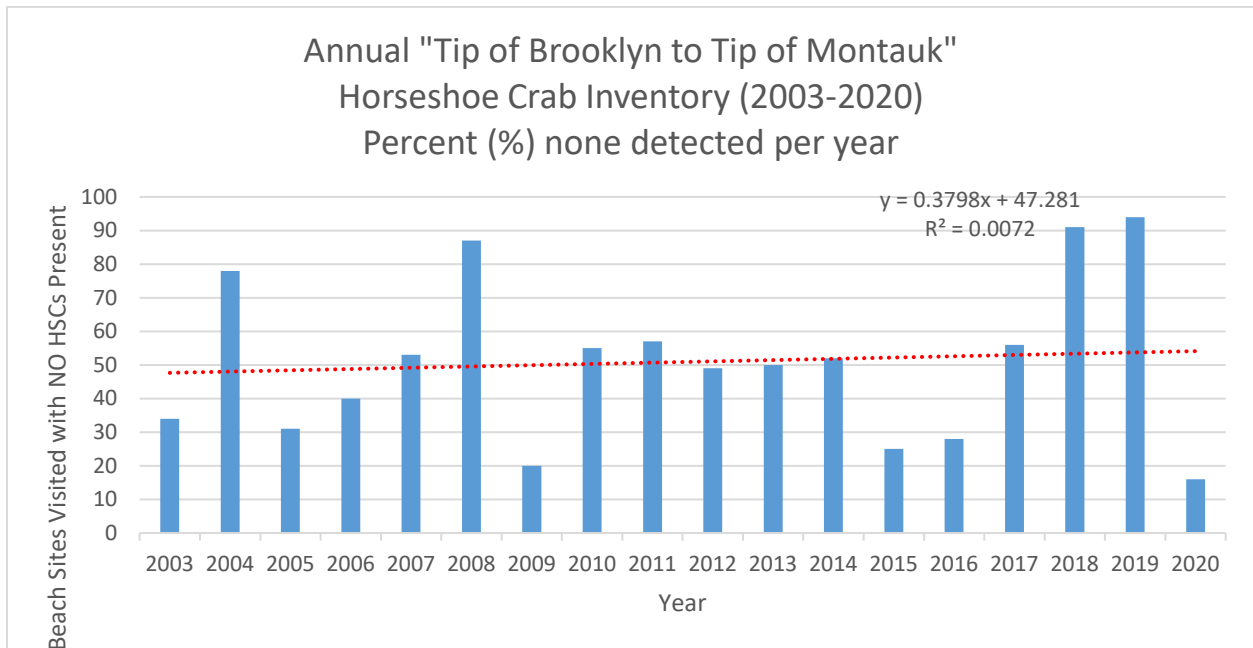
Annual totals with calculation of declining trend for 17 years of CERCOM data from 2003 – 2020.



*Raw Data available upon request, held in reserve at CERCOM.

Figure 2.

Annual totals with calculation of beach locations in with HSC absence
from 2003- 2020



*Raw Data available upon request, held in reserve at CERCOM.

Figure 3. Yes & No chart for individual CERCOM monitoring locations (HSC), to show if both male and female Horseshoe Crabs (HSCs) were present at each beach site for indication of breeding:

Breeding Records 2003-2018

Location	2014	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003
1 Stepping Stone Park	N	M	N	N/A	Y	N	Y	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2 Plum Beach Point	CLOSED	Y	N/A	N/A	N/A	N/A	N/A	N/A	Y	Y	Y	N/A	N	Y	Y	N
3 Half Moon Beach	N	Y	Y	N/A	Y	N	Y	N	Y	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4 Moonstone Beach Park	Y	Y	N	N/A	N/A	N/A	N/A	N/A	Y	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5 Pleasant Park	Y	Y	Y	Y	Y	Y	Y	N	Y	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6 Lead Point Museum Beach	CLOSED	N/A	N	Y	Y	N	N	N	Y	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7 Lead Point Museum	N	N	N	N	N	N	N	N/A	N/A	N	N/A	N	N	N	N	Y
8 North Sunnyside Beach Park	N	Y	Y	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9 Seaboard Beach	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10 Theodore Roosevelt Memorial Park	N	Y	Y	Y	Y	Y	Y	N	Y	N/A	Y	N/A	N/A	N/A	N/A	N/A
11 Center Island Beach (Hvnm)	N	N	Y	N/A	N	N/A	N/A	N/A	N/A	Y	Y	N/A	N/A	N/A	N/A	N/A
Center Island Beach (Bay)	N	N	Y	N/A	N/A	N/A	N/A	N/A	N/A	Y	Y	N/A	N/A	N/A	N/A	N/A
12 Sagamore Hill Historic Site	N	N	N/A	N/A	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
13 Lloyd Neck Beach Club	N	Y	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N	N	Y
14 Braughman Rd, Cold Spring Harbor	Y	Y	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
15 Gurnett State Park	N	Y	N/A	N/A	N/A	N	N	N	N/A	N/A	N/A	N/A	N	N	Y	N
16 Cold Spring Harbor Lab	N	Y	N/A	N/A	N/A	N/A	N/A	N	N	N/A	N/A	Y	N	N	Y	Y
17 Cold Spring Harbor Beach Club	Y	Y	N/A	N/A	N/A	N/A	N/A	N/A	N	N/A	N/A	Y	N	N	Y	Y
18 Gold Star Beach Club	N	Y	Y	Y	Y	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19 Target Rock National Wildlife Refuge	Y	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
20 Bay Mills Beach, Huntington	N	N	Y	N	N	N/A	N/A	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
21 Concrete Beach Town Park	N	N	N	N	Y	N/A	N/A	Y	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
22 Neptune Beach Park	N	Y	Y	Y	N	N	Y	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
23 Beach Cove Beach Park	Y	N	Y	Y	N	Y	Y	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
24 Outcrops Beach Park	Y	N	N	Y	N	N	Y	N	N/A	Y	Y	N/A	N	N	Y	N
25 Asharoken Beach Park	N	Y	N	Y	Y	N	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
26 Amchabon Park	CLOSED	N/A	N	N/A	N/A	N/A	N/A	N	N/A	N/A	N/A	N	N	N	Y	N
27 Short Beach, Wadingford	Y	N	Y	N/A	Y	N/A	N/A	N/A	N/A	N/A	N/A	Y	Y	Y	Y	N
28 Long Beach Town Park (Stone)	N	Y	N/A	N/A	N	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Long Beach Town Park (Bay)	N	N/A	Y	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
29 Cedarwood Park, Stony Brook Harbor	N	Y	N/A	N/A	N	N	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
30 West Meadow Wetlands Preserve	Y	Y	Y	N/A	N/A	N	N	N/A	N/A	N	N/A	N	N	N	Y	N
31 Station Beach, Walnut Ave	N	N/A	N/A	N/A	Y	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
32 Pleasant Beach, Chestnut Ave	N	Y	Y	N/A	N/A	N	N	Y	Y	N/A	Y	N/A	Y	N	Y	N
33 Mt Seal Riding Spot	Y	Y	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
34 Mt Sinai Cedar Tower Beach	M	N	Y	N	N/A	Y	N	N	Y	N/A	Y	N/A	Y	N	Y	N
35 Mt Sinai Harbor Beach Rd	N	N/A	N/A	Y	N	Y	N	N	Y	Y	N	Y	N	Y	N	Y
36 Linderoth Rd, Miller Place	N	Y	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Y	N/A	N	Y	N	Y	N
37 South Ave, Miller Place	N	N	N/A	N/A	N	N	N	N/A	N	N/A	N	N/A	N	Y	N	Y
38 Maperman Landing Rd, Rocky Point	N	N	N/A	N/A	N	N	N	N/A	N/A	N	N/A	Y	N	N	Y	N
39 Beach Ln, Shoreham	N	N	N/A	N/A	N	N	N	N	N/A	N	N/A	N	N	N	Y	N
40 Clark Rd, Wading River	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
41 Middlebrook State Park	N	N	N/A	N/A	N	N	N	N/A	N	N/A	N	N/A	N	N	Y	N
42 Beavert Beach	N	N/A	N/A	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
43 Beavert Ave	N	N	N/A	N/A	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
44 Secret Ave	N	N	N/A	N	N/A	N/A	N/A	N/A	N/A	N	N/A	Y	N	N	Y	N
45 South Jamesport Beach	N	N/A	N	N/A	N	N	N	Y	N/A	N/A	Y	N/A	Y	Y	N	Y
46 Southport Rd, Southport	N	N	N	N	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
47 Bullock Beach Park, Mattituck	N	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
48 New Suffolk Beach, Lot 22	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
49 E Rd, Southold	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
50 Peconic Dunes County Park	N	N/A	N/A	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
51 Stony Brook	N	Y	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
52 McCaskey Beach	N	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
53 South Harbor Park, Southold	N	N/A	N	N/A	N	N	Y	Y	N	N	Y	N	N	N	N	N
54 Norman E. Kilgus Marine Park	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
55 Southold Town Beach, East Marion	N	N	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
56 Ocean House	N	N/A	N	N	N/A	N	N	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
57 Miller Hills State Park	N	N/A	N/A	N/A	N/A	N	N	N	N/A	N/A	N/A	Y	N	Y	N	N
58 Moppage Harbor Rd, Montauk	N	N	N/A	N/A	Y	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Y	N	Y	N

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