

Eastham Diamondback Terrapin Conservation Report 2020

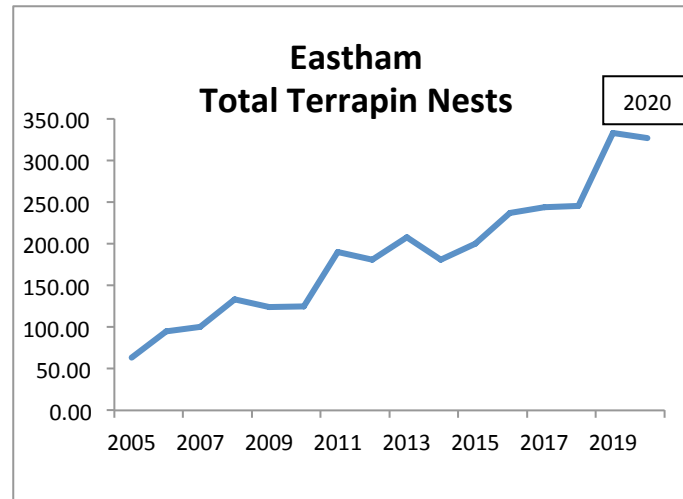
Summary

They're back! The general observations during nesting season at sites around Boat Meadow & Bee's River Marshes was "there were turtles everywhere". This year's nest total of 327, slightly less than last year's 333, continued to support the tremendous growth of 36 % over the prior 3-year average. Hatchling recruitment was lower than last year (1720 vs. 2294) due to significantly increased raccoon & skunk predation. I believe we are entering the period where terrapins are serving a broader ecological role as both food & support for their own population stability. Looking to the future, the hatchling recruitment over the past 9 years was double the recruitment over the years 2002-2011, which has supported the growth in nesting to date. So, significant future growth can be expected. Note, in Eastham the growth in nests is used as a proxy for the growth in the population of female terrapins.

Nests

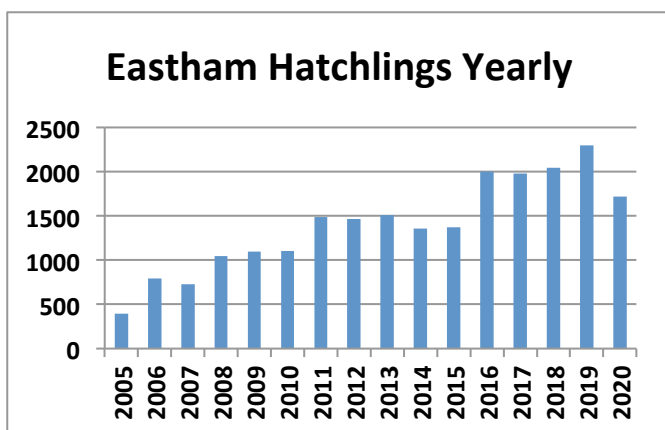
The increased level of nesting continued in 2020 with 327 nests. There are 8 major nesting sites in Eastham that are monitored. All sites recorded slightly lower nesting except for Mixer Sanctuary (TNC barrier beach) which had 58 nests vs. 48 last year, & Bridge Rd (15 nests vs. 6 last year)*. The geographic distribution of nests was much broader with more nests in vegetative places.

- See chart below of nest activity by site



Hatchlings

Hatchling recruitment of 1720 was significantly lower than the prior 4 years due to increased predation, but not of any concern. This is still higher than any year before 2016 & should be enough to maintain the



population. Total hatchling recruitment since the start of Eastham's conservation program in 2002 is over 22,000, with about 2/3rds in the past 9 years.

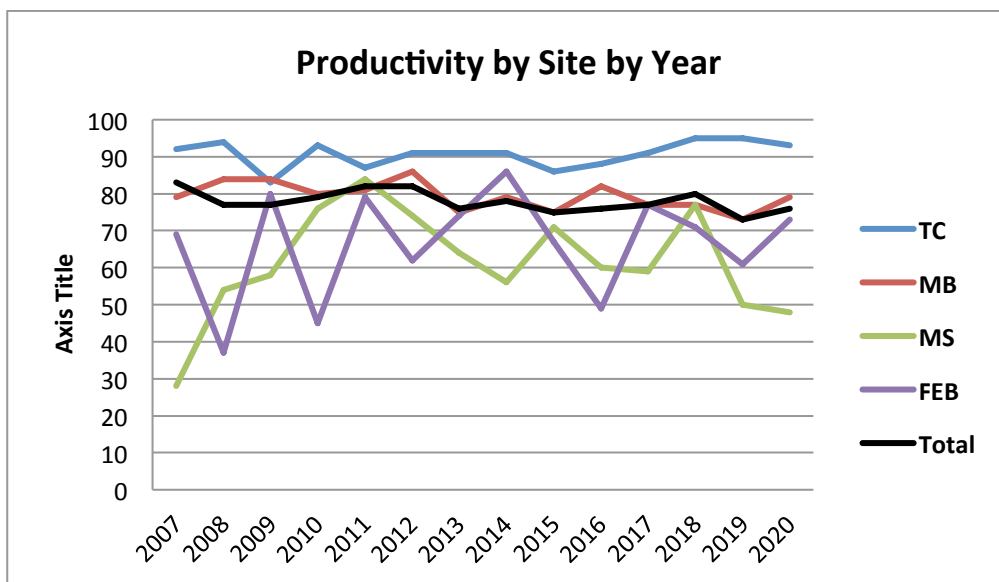
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Predation

The increase in predation was one of the larger stories for 2020 in our turtle world with almost half of the total nests being depredated (46%). The arrival of skunks last year, the most formidable opponent, & their expansion to more sites this year probably was the most significant reason for the higher predation. Raccoons also were a large contributor.

Productivity

It was no surprise that under drought conditions through the summer that desiccation was the leading cause of nest mortality. In second place was fly maggots, mostly in the sand dune habitats. Total productivity was 76%, slightly lower than recent history. Terrapin Cove continued extraordinarily high productivity of 93%.



Road Kill

There were 5 road kills this year on Samoset Rd. (2), Widgeon, Herring Brook Rd., & Bridge Rd. None were on the sections of road secured by fencing.

ECF Habitat Improvement Program (HIP)

The protection provided by road fencing to the nesting terrapins has reduced road kill to zero for the 2nd year at the Bridge Road site near the bridge & the dip on Herring Brook Rd. Many of those terrapins that otherwise would have been killed are now nesting nearby. At Bridge Rd. there was a total of 15 nests: 3 natural nests by diverted terrapins in the BRNE TG; 4 natural nests in BRNW; 6 nests in 'Collins' driveway across the street from BRNW that were relocated to BRNW; & 2 nests by the same lucky terrapin on the other side Bridge Rd after the curve. The 15 terrapins produced 151 hatchlings.

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At the Herring Brook Rd site there were 7 nests: 2 natural nests at the large HBR M2 TG on the edge of the marsh; 3 nests in the backyard of 735 HBR; & 2 depredated nests in the backyards. The 5 productive nests produced 47 hatchlings. There was 1 road kill in front of 735 HBR. There are still significant gaps in adequate fencing &, despite the addition of 4 turtle gardens there is inadequate safe nesting habitat in the area.

Acknowledgements

Thanks to Annie, Dennis, Joanna, Heather, Jerry & Carla for your help. Also, thanks to the homeowners (Deb & John, Mary & Rick, Uri) on Herring Brook Rd for your commitment to the program, allowing fencing & new TGs on your property, & being lookouts for nesting and rescuers for terrapins at risk of crossing the road.

***Nest Activity by Site**

Location	<u>Protected/ Marked</u>	<u>Depredate d</u>	<u>Wil d</u>	<u>Total Nest s</u>	<u>Hatchlin gs</u>	<u>Nests - 3 yr ave (2017- 2019)</u>
First Encounter Beach	10	31	0	41	80	48
Mixer Sanctuary	30	26	2	58	192	38
Mixer Bluff	62	62	3	127	632	106
Terrapin Cove	38	12	0	50	418	47
Bridge Road	15	0	0	15	151	3
Herring Brook Rd	5	2	0	7	47	5
Other	6	4	3	13	79	8
Subtotal Bee's R. & Boat Meadow Marshes	166	137	8	311	1599	255
North Sunken Meadow	4	1	4	9	70	14
Rock Harbor	<u>4</u>	<u>2</u>	<u>1</u>	<u>7</u>	<u>51</u>	<u>5</u>
Total Nests	174	140	13	327	1720	274

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