

## *The Old Fisherman's Critique*

of paper titled:

"NJ blue crab regulations and the Northern Diamond-backed Terrapin...."

prepared by Jeanette Bowers-Altman (staff member of NJFW ENGS program).

### ===== PREFACE =====

A paper with the above title was distributed to members of The NJ Marine Fisheries Council (NJMFC) and referred to the NJDEP blue crab advisory panel for analysis and recommendations. This *Old Fisherman* has been asked to review it. After spending countless hours reading and researching the information presented in this paper, (and finding obvious errors. i.e. pg 14 dot 3), This *Old Fisherman* has reached the conclusion that this paper is a college Marine Science term paper worth a grade of "D-" based on 3 findings.

1. Its disorganized style expanded with superfluous information.
2. By accessing the New Jersey State library and **Browsing "Fish and Wildlife, Division of by Author "Bowers-Altman, Jeanette"** This document is not found as being produced by any Bureau, of any Agency, in NJ State Government. (Therefore the "prepared by" statement on the title page is NOT TRUE.)
3. It cannot have been produced by ENGS since NJ law NJSA 23:2A-4.1(c) states:

"the commissioner shall investigate populations.... concerning the State's terrapin population....to determine the management programs...." "On the basis of such determinations, the commissioner shall develop management programs...."

YET, At the bottom of page 5, the paper states that:

"No statewide or regional assessments that determine overall terrapin population size and trends have been completed."

IF ... the paper was produced as an official publication of the ENGS program (which point #2 shows to be false) it points out the Commissioner has not done his job as outlined in the law - and that the ENGS is acting on its own bypassing the

Commissioner's assessing of the turtle population's status. **BIG RED FLAG !!** The MFC should not have taken the official action of referring this leaked document from another department to one of its subcommittees<sup>1</sup> for action.

It is therefore not worth anybody's time and energy to take its recommendations as a legitimate formal proposal by ENGS.

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<sup>1</sup> taken from the minutes of the November ENGS meeting:

"Update on the Northern Diamondback Terrapin "white paper." DFW staff have taken the issue to the Marine Resources Administration and to the Marine Fisheries Council's blue claw crab subcommittee. That subcommittee will be discussing the issues and recommendations at their January meeting, which may result in recommended regulatory changes. J. Galetto asked that this be a "pending action item" to revisit at the January meeting."

## ABSTRACT

The paper identifies two purposes for its existence. They are to:

1. support internal agency discussions regarding current threats to the Northern Diamond-Backed Terrapin, and
2. support recommendations of the Endangered and Nongame Species Program's potential actions specific to blue crab regulations that can be implemented by the NJ DFW\_\_\_\_ and/or to formally recommend to applicable Councils for consideration.

The paper accomplishes part of its first objective because it contains some historical and biological turtle information. However, it falls far short of accomplishing this objective because it contains NO information on population size, and minimal information concerning population dynamics.

As to its second objective, it makes recommendations for changes to crab trap regulations. However, most of the recommendations have not been thought through as to how they would work and their unintended consequences. Furthermore, in order for the NJMFC to implement changes to regulations, NJMFC needs to identify a problem and have a scientific basis on which to base changes. This paper does NOT identify any problem, nor does it provide adequate data to support the recommended changes that it proposes.

Although this paper was "reviewed" (read or scanned) by three persons, the title page shows that it was authored by only one. (Jeanette Bowers-Altman). This should be seen as a red flag as to usefulness in making regulations affecting an industry that affects thousands.

The paper appears to be a college *Marine Science- term paper* on terrapin turtles and organizations that have opinions about them. As such it is worthy of a "D" grade. (It is hardly worth the time it takes to read it.) This is clearly NOT a scientific white paper identifying any problem with the population of terrapin turtles. The paper simply assumes that because dead turtles have been found in the environment, and that crabbers have been seen discarding turtles (alive and dead), there is problem in the population of turtles and that more regulations should be placed on crabbers. (It is a shining example of one person expressing a Chicken Little syndrome.)

The only thing that the NJMFC need to know is found at (pg 5; dot 5). It says:

"No statewide or regional assessments that determine overall terrapin population size and trends have been completed."

Read that as .... The State (ENGs) has not identified any problem that needs to be fixed. **It's not worth anybody's time reading the rest of the paper.**

## CONCLUSION:

This paper is clearly the work of one person (RED FLAG) using their association with the ENGs program to further their personal agenda to protect terrapin turtles. It provides no basis on which to impose any additional restrictions on commercial crabbers. It contains little data and gives no indication of what effect the proposed additional restrictions on crabbers would have on existing businesses. Because of the red flag identified above, and the fact that the NGES program has NOT accomplished its mandate identifying population size and dynamics as outlined in NJSA 23:2A-4.1(c), NO further action to restrict the commercial crabbing industry

(draft version 3/8/2023)

and negatively affect those retail business that rely on its product is justified. The NJMFC should consider this paper to be the opinion of its singular author; NOT the result of an investigation by the NJDEP-ENGs program.

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*The Old Fisherman* (upscope!) What follows is point by point analysis of the Jeanette Bowers-Altman white paper as to its usefulness to the Council. It is best read with a copy of the Jeanette Bowers-Altman white paper in one hand and this point by point analysis in the other. Items in the white paper to which comments are being made are identified in the analysis as being found at location (Page x; dot x).

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- (pg 2; dot 1) NJSA 23:2A-4.1 (c) says: "The Commissioner shall investigate populations, distributions,.....". So where is it? This paper contains no turtle population data.
- (pg 2; dot 2) irrelevant... The NJDEP web site says: (<https://dep.nj.gov/njfw/wildlife/wildlife-species-of-special-concern-in-new-jersey/>)

"The term "Species of Special Concern" applies to species that warrant special attention because of some evidence of decline, inherent vulnerability to environmental deterioration, or habitat modification that would result in their becoming a threatened species.

This category also applies to species that meet the foregoing criteria and for which there is little understanding of their current population status in the state"

Yet there is NO "evidence of decline, inherent vulnerability or evidence of habitat modification that would result in this species becoming a threatened species" presented in this paper. The species of special concern designation is therefore being used because ENGs has "little understanding of the population status".

However, it does point out an obvious omission in the white paper.... The paper contains NO DATA about the turtle population in NJ (or anywhere else in its range). Since these turtles are not a migratory species, and their population status in NJ is unknown, the MF Council has no basis on which to consider further restrictions on commercial crabbers to fix a turtle problem that hasn't been identified.

- (pg 2; dot 3) Irrelevant fact... Being on the 21 year old National Association of Fish and Wildlife Agencies "focal species of greatest conservation need (FSGCN)" list doesn't indicate an impending crisis for any of the 101 species on that list. Because the NJ turtle population status is unknown, it shouldn't be on anybody's *concerned species list*. (If NJ is going to list all species for which it doesn't know the population status, it should add hundreds of others to list like mosquitoes, gnats, starfish, sand fleas and green head flies.)
- (page 3: dot 1) Irrelevant ... Why doesn't the table of current state listings in this paper include NJ's status??? (It's easy to find.) NJ's website: [https://www.nj.gov/dep/fgw/ENGs/pdf/herp\\_status\\_rprt.pdf](https://www.nj.gov/dep/fgw/ENGs/pdf/herp_status_rprt.pdf), shows it as S3 (special concern). But S3 (special concern) doesn't mean, threatened, endangered, or even vulnerable. It means that the ENGs is "concerned". Concern is not a valid reason to disrupt a healthy viable commercial crab fishery.

- (page 3 dot 2) **Irrelevant ...** The IUCN may consider it vulnerable, but that doesn't mean that it is vulnerable in NJ. Only an investigation by the Commissioner [as called for in NJSA 23:2A-4.1(c)] can determine that. Since that hasn't been done, the DEP doesn't have the authority under NJSA 23:2A-4.1(c) to do anything !!
- (page 3 dot 3) **Irrelevant ...** Turtle trade in NJ is already prohibited by state law. It is designated a "NON-GAME" species for which sale is prohibited. (ref: NJSA 23:2A-4.1(a), NJSA 23:2A-6)
- (pg 4: dot 2) **DATA AT LAST !** Maturing rates ... Females 6 years; Males 4 years.
- (Pg 4: dot 4) **MORE DATA!** Reproductive rates: The data presented indicates that on average turtles lay 9.76 eggs per clutch, and the turtles lay at least 2 clutches per year. Thus one female turtle could produce 19 offspring per year. If all survive, then the population would expand by  $19/2 = 976\%$  each year. However, data presented in the next dots are relevant to calculate population growth rates.
- (Pg 4: dot 5 thru pg 5: dot 3) **MORE DATA!**
  - (Pg 4: dot 5) survival rate of nests is between 7.8% and 10%
  - (pg 5: dot 1) overall survival of hatchlings shows huge variation
    - <10% in NY
    - 56.5% in RIaverage survival rate of  $(10\% + 56.5\%) / 2 = 33.25\%$

Putting it all together -- it shows that 2 turtles (1 male, 1 female) produce 2 clutches of 9.76 eggs every year (total 19 eggs/year); each surviving at the average rate of 33.25%. That's  $(19.5 * .3325\% = 6.4837)$  hatchlings per year. Two turtles, producing 6.4837 offspring per year is a population growth rate of 324.187% per year. Based on this potential population explosion, one would expect to see at least a tripling of the population, and a tripling of dead turtles in the environment each year since the 2016 legislation was enacted prohibiting the harvest of these turtles in NJ. If (based on pg 5; dot 3) the life expectancy of a turtle is  $(20+40)/2 = 30$  years, then, for the next 8 years (30 years after 2016) there will be a steady increase in natural mortality evident by more and more dead turtles being found in NJ's environment! (What a waste... Maybe the 2016 legislation should be reversed making turtles again a wintertime resource available to commercial watermen.)

- (pg 5: dot 2) The paper says that: "*Modeling suggests that population growth depends mostly on the survival of adults*" (DUH -- that's the definition of "*adult*"!!) However, if the results of pg 5: dot 1 are put into any (legitimate) model, the results would be meaningless because of the large variations in egg to hatchling survival rates. (I.e. the *Standard Error* would be huge).
- (pg 5: dot 5) thru (pg 6: dot 4) **HERE'S THE MAJOR PROBLEM.....and the reason that this entire paper with its recommendations should be ignored.** There's NO

DATA indicating NJ's turtle population size or dynamics..... NONE whatsoever even though the DEP Commissioner (via NJSA 23:2A-4.1(c)) is required to investigate it !!!!! It's a waste of time reviewing this paper because there is NO known problem with the turtle population.

- (pg 7; dot 3) (sub dot 4) note the possible unintended consequences of environmentalists' actions noted in response to (pg 14; dot 3).
- (pg 8: dot 1) "Predators" ----- "Human-subsidized predators" -- ??? Who are the humans who are *subsidizing (feeding) the raccoons, crows and red foxes?* (it's got to be the environmental extremists)
- (pg 12: dot 1) DATA concerning number of dead turtles found on Delaware Bay beaches reported by the Conserve Wildlife Foundation's "return the Favor" volunteer beach walker program is NOT usable data because it is unscientifically collected (varying number of beaches each year) and not *normalized\** relative to collection areas.
  - \*normalize: (Mathematically) is to multiply DATA by a factor that presents it relative to a fixed standard (i.e. per sq mile) The total numbers seem large, but when you consider how many turtles are in the area....{Duh ...How many are there?? Nobody knows, {there could be 4 million!}}.
- (pg 12: dot 2) These are some unbelievable numbers. Consider that it says "*in 2019, commercial pots were observed to be set an average of 71.3 meters (234 ft) from the nearest shore or creek edge .....*" But the WI surveys were done by beach walkers who were not equipped to measure the distance that pots were set from shore. So how did they come up with the precise number of 71.2 meters?? (could it be a reference to data at pg 16: dot 3 in a veiled effort to have pots banned within 100 meters of a shore line?)
- (Pg 11-12) Section titled "**Terrapin drowning associated with crab pots** "
  - Why is there no data in this section showing any dead turtles connected with crab pots?
    - (pg 12: dot 1) This is not verifiable data that can be used to make management decisions. (Twice makes reference to "L.Ferguson,TWI 2020 unpublished data". This supports my point of it being a grade D term paper .... Clearly, management decisions shouldn't be make on second hand, anecdotal information)
  - (pg 14: dot 1) Irrelevant ...
  - (pg 14: dot 2) Irrelevant ...
  - (pg 14: dot 3) don't believe this tale of 80 dead turtles found on the 11<sup>th</sup> St beach -- of Sea Isle City, because..... there is no 11th St in Sea Isle. The newspaper report states 82 turtles at 20th St. (which is 1.5 miles from the nearest inlet.) (the author of this paper can't keep numbers straight) My guess is that the turtles were collected along the turtle barrier that stops them from crossing the road from between 31 St and 20 St, then dumped on the 20th st beach at the end of the only isolated path to the beach in that area. based on the patterns in the sand, the crab trap was added for shock effect by someone who didn't like commercial crabbers!) If you believe anything other than somebody dumped the turtles there to create a story about dead turtles, then, I've got some ocean front property in the Nevada desert to sell you.

- (pg 14: dot 4) the data is missing showing how many turtles were in the >3100 ghost crab pots recovered. I'll assume that the number is zero because there is no reason that a turtle would go into a ghost pot (the trap has NO bait).
- (pg 15: dot 1) TWI admits that they couldn't tell if the trap was constructed in such a way that would allow turtles to escape. With no data from the recovered ghost pot recovery program of pg 14 dot 4, and no data from this note (pg 15, dot 1) about the number of turtles or crabs found in the ghost pots, what makes anyone think that ghost pots are a danger to turtles or crabs? It takes bait to attract anything into a crab trap!
- (pg 15: dot 2) This is all about biodegradable panels. It is not a reason to put the additional crab pot NGES recommendations into effect.
- (pg 15: dot 3) Where is that data??? It's hard to believe that there was no difference in crab catch between and large and small excluders. It is noted in the Hart and Crowder (2011) study referenced in pg 16: dot 3 that the 4.5 cm excluded reduced the crab catch by 21.2%.  
<sup>i</sup> (why didn't the author show that fact??? Ans: bias and personal agenda)
- (pg 16: dot 1) Since turtle excluders are flat, creating a 2 dimensional rectangular opening, a crab or turtle encounters the same opening when approaching from either direction. Decreasing the crab movement in one direction, while NOT decreasing it in the other is impossible!
- (pg 16: dot 2) Indicates that NESP did a experiment with existing NJ size excluders to show that crabs could pass through, but there is no indication that a similar experiment was done to show the excluder's effectiveness in excluding turtles.  
There is also no information included in this bullet point showing that the efficiency of a pot to catch crabs was NOT affected by the presence of an excluder.
- (pg 16; dot 3) use of the words "suggest that" and "may" indicate that there is nothing here to take as fact.

### Comments relative to recommendations.

- recommendation 1.) ... require excluders on all pots  
This may minimize terrapin entrapment, but it may also reduce crab pot efficiency.  
recommendation 1)a) Compliance and enforcement is difficult if not impossible. Most crabbers do not carry sophisticated electronics on their small boats and are unable to determine where the 1000 ft line is.  
*Better suggestion == Require excluders on all recreational pots.*  
recommendation 1)b) Commercial crabbers will lose too much of their productive crabbing areas with this approach.  
*Better suggestion == Since recreational traps are the ones most often left unattended for extended periods of time, close these areas to recreational pots.*
- recommendation 2.) ... limit soak time; 24 hour  
(Who in their right mind thought this one up?) Enforcement of this is impossible because of the number of commercial crab pots deployed. Granting and verifying exceptions for sickness, injury, market conditions, family emergencies, etc. would be an administrative nightmare.

*Better suggestion ==* Since shortening soak times will reduce the death rate of trapped turtles, and currently many recreational crabbers set their traps and retrieve them the following weekend, requiring recreational traps to be tended every 24 hrs would stop this practice (extremely long soak times for many recreational pots), and not place an undue burden on law enforcement nor the owner of the trap.

- recommendation 3.) ... mandatory reporting of lost traps

You clearly should ask Division staff "WHO is going to search and retrieve lost traps?" .... If the answer is "We don't have the staff to do that.", then the crabbers are not going to get them back and there's no benefit in reporting other than the DEP knows that there are lost traps out there ... somewhere. (DUH !) And how will law enforcement know that every trap that is lost is reported???? (even my 8 year old grandson laughed at this proposal.)

- recommendation 4.) ... By-catch reduction experiments

This is something that college or ENGS people should have done before coming to the NJMFC with recommendations. It's not something that the Council should get involved in.

- recommendation 5.) ... investigate 4.5 X 12 cm excluder

Excluders (4.5 X 12) in DE and MD ONLY are required on recreational crab pots. In NY, the 4.5 X 12 excluders are required only in certain areas.

the web site referenced in this recommendation:

{ <https://sccoastalresources.com/home/2018/5/18/encouraging-results-for-turtle-saving-crab-trap-devices>}

doesn't show any data that I can analyze as to its thoroughness, or truthfulness. It's a red herring.

I won't make any comment as to the credibility of Mr. Wnek since he is the advisor to "Save Barnegate Bay", an organization of which Council member Rizzo is a board member. Except to say that I can't find his work showing the undocumented (secret) Sccoastalresources BRD ability to catch more legal size crabs (! wild goose chase !)

The paper also references a study by Hart and Crowder (2011) involving the use of smaller excluders. The study found that the (proposed) 4.5 cm X 12 cm excluder reduced the crab catch by 21.2%. That's a huge loss of income to the crabbing industry. To impose this huge loss, based on no data showing a problem is simply NOT JUSTIFIED.

*Better suggestion ==* require an "R" preceding the license number on recreational pot buoys and smaller excluders only on recreational pots.  
Enforcement is easy based on the buoy (license) number.

- recommendation 6.) ... low speed areas

Because turtles are everywhere in the back bays and meadows, this would make all back bays and meadows low speed areas. In the southern half of the state, it would mean that the entire ICW would be a 5MPH (no wake) area. Say bye-bye to the jet ski rental businesses. How would you enforce a no wake zone in the Delaware bay where there are lots of turtles near shore and natural waves higher than crabber boat waves??

This is recommending that boats go slow in areas in high turtle density areas, but why doesn't it recommend that cars slow down in areas where turtles are being killed by cars?

Objective #2 of the paper is to "support recommendations.... that could be implemented directly by NJ Fish and Wildlife....."; but recommendation #6 cannot be implemented by NJ Fish and Wildlife.

[You'll have to admit that recommendations 3,4,5 and 6 border on the absurd ! The author of the report is living in a bubble to think that they are practical]

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#### SUMMARY:

There is just too much distorted information in this paper to assume that any of the information is accurate. The bottom line is that dead turtles are being found on beaches and somebody is jumping to the conclusion that the turtle population is in trouble. But since nobody knows what the population of turtles is, the conclusion that the population is in trouble isn't justifiable. This paper provides no basis to impose more restrictions on commercial crabbers. It contains little data and no indication of what effect the proposed restrictions would have on existing businesses.

However, I am impressed with the number of un-reference-able references listed in this paper. It's clearly characteristic of an "F" grade college paper. This paper is clearly the work of one person (environmental activist) using their association with the ENGS Program as cover to further their personal agenda against commercial crabbers.

-The Old Fisherman- ..... >)))">  
(downscope.....)

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<sup>1</sup> the Upperman study (2014) and the Chambers study (2014) referenced in dot (pg 15, dot 3) appear to be the same study, Note the title page shows that both were authors of this one report:

1 March 2014

Amy J. Upperman, Timothy M. Russell, Randolph M. Chambers

ContrarThe Influence of Recreational Crabbing Regulations on Diamondback Terrapin By-Catch

Contrary to what this paper says, the abstract of the report says:

"the total legal crab catch (crabs  $\geq 12.7$  cm) in pots with no BRDs ( $29.9 \pm 10.0$  SD crabs pot<sup>-1</sup>) and large BRDs ( $27.9 \pm 6.2$  crabs pot<sup>-1</sup>) was significantly greater than catch in pots with small BRDs ( $14.0 \pm 5.8$  crabs pot<sup>-1</sup>)"