



The (Un)Common Snapping Turtle

by Gail Brown

On July 15, 2012, in a tributary off of the Rappahannock River called Totuskey Creek, Ben Colteaux punctures a can of sardines and baits a hoop net. Within 15 minutes, he moves on. He repeats the process, 20 times total. To avoid bias, he does not choose the sites; a computer does. He will follow this same routine each day, four days a week, three weeks each month, until the end of October. Colteaux, a doctoral candidate in Derek Johnson's Lab at Virginia Commonwealth University, is after snapping turtles (*Chelydra serpentina*). Snappers mean data, and data is what Colteaux needs to complete a four-pronged study structured to characterize the density, distribution, habitat use, and home ranges of the snapping turtle in our coastal river systems. Data from the study will also help assess the sustainability of the common snapping turtle under current harvest rates in Virginia.

Colteaux will return in the morning to check all traps, gather physical data on captured snappers, and attach a numbered tag to one of the turtle's posterior marginal scutes. Should Colteaux find "by-catch" in any trap (a turtle that is not a snapper), the shell will be notched before release. The following week, he will repeat the process in the Walkerton area of the Mattaponi River, then in Morris Creek (Chickahominy watershed). These tributaries represent a historic range of turtle-harvesting intensities, from consistently harvested (for the last 8–12 years) to never harvested.

Three field seasons later, this past October in fact, Colteaux had completed the process 2,640 times. He now has his data.

Colteaux, a doctoral candidate at VCU, holds the object of his research study—an extraordinary snapping turtle.



Ben Colteaux and field technicians Stephany Helbig and Tyler Twyford set a turtle trap in Morris Creek.

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That same July day in 2012 in Glebe Gut, a shallow creek off the coastal waters of the James River, John Gammon, waterman, baits and sets 12 turtle "pots" (traps). He, too, is after snappers. Snappers mean food. And money. Before the next high tide, he will check each pot, release all other species of turtle as well as any undersized snappers and harvest what is legal. What he takes he will eat or sell. He records details of each catch in a notebook, a waterman's history of sorts. It's a process Gammon has repeated each season for half a century. "I learned when I was 8 or 10 from my father and from Norris (N.W.) Nixon. I 'turtled' with Norris in the summer. I've trapped turtles everywhere around here. I have gone in the Nottoway, James, Rappahannock, York, Mattaponi, and Piankatank. In those days people might use a cane-pole with a hook and line. No one I know uses a pole any more except Wayne Marin. He's about 80 years old."

Looking back, Gammon remembers when there were plenty. As he sees it now, things have changed for the worse. "Back in the '70s and '80s you might get 300–400 pounds when you trapped. One time I think I got 17 turtles in one trap! Now you are doing good if you get 6 or 7."

And that goes straight to the crux of the situation as Gammon sees it. Today, Gammon gives things 20 years or so before no one will be getting snappers anymore.

Gammon isn't the only one concerned. "In order to know what is and is not sustainable, we need information pertaining to population dynamics of snapping turtles inhabiting large Coastal Plain river systems like we have here in Virginia," states JD Kleopfer.

Kleopfer is a herpetologist, specializing in reptiles and amphibians, with the Department (DGLF). He continues, "Historically,



Colteaux records the length of the carapace.



Waterman John Gammon believes a limit is needed on the number of traps that can be set and the number of turtles that can be taken

the focus on turtle harvest has been conducted in closed-water systems, such as lakes and reservoirs. To the best of my knowledge, no one has investigated the sustainability of a commercial harvest of any species of turtle in a large open-water system. And with the current harvest rates, we aren't sure the commercial harvest of snapping turtle is sustainable. This is why we started this investigation. What we don't want to see is the snapping turtle go the way of the buffalo or the passenger pigeon. Both were once believed to be inexhaustible resources."



More information is needed about snapping turtles in open river systems in Virginia.

Conservation Police Officer Lt. Scott Naff also sees the need. "The enforcement of the laws and regulations pertaining to the harvest of snapping turtles helps to ensure their presence in Virginia's ecosystems for years to come. The snapping turtle is a highly skilled and adaptable predator that plays a very important role in river, pond, and lake ecosystems throughout Virginia."

Yet while Colteaux's research may or may not support Gammon's contentions, his analyses of Virginia's licensing statistics (since 2002) reveal trends that are disconcertingly reflective of what Gammon sees. Trends like these: In 2002 the reported number of snapping turtles taken from Virginia's waterways was 648, or 11,522 pounds. By 2010, the record showed 5,600 turtles, or 98,000 pounds. The numbers dipped in 2012 to 4,700 turtles, or 76,000 pounds, but returned with a vengeance in 2013 when a record 130,000 pounds, or about 8,500 turtles, were taken from Virginia's waters! In one year, the harvest nearly doubles! Worse yet, the 2013 numbers are 13 times greater than those recorded for 2002. And that is the reported number taken, as harvesters self-report—a

practice which opens the door to human error or the decision not to report. In addition, these numbers don't include recreational harvesters who take five or fewer turtles, as reporting is not required at that level. (Recreational harvesting requires a valid fishing license; commercial harvesters are permitted.)

Clearly, there are questions: Why are these numbers exploding? Where are all these turtles going? Who is doing all this trapping? And the big one: Can Virginia sustain a healthy population of snapping turtles if the commercial harvest rate continues unabated?

Even as science brings us closer to determining the tipping point between uncontrolled harvesting and protective legislation, understanding "the why" as well as "the who" behind the escalation in harvesting numbers is also important in the decision-making process. According to Colteaux, "The last decade or so has seen the snapping turtle switch from being a small-scale harvest supplying local food markets to being a large-scale harvest for a global market. The international demand has exploded, largely driven by the Asian market, as they've overharvested their own native turtle

populations and, more often than not, it is more cost effective to import turtles from the United States than it is to set up large-scale turtle farming operations."

If "the why" tends to be global and complex, "the who" is specific and revealed in state records. Colteaux shares these statistics: "In 2002, there was one harvester reporting; by 2013 there were 26. Since 2008, out-of-state watermen have accounted for, on average, 70 percent of the total take from Virginia, with the high being 88 percent in 2010. So in 2010, about nine out of every ten watermen were from out of state. Records also show that out-of-state harvesters are coming farther into Virginia and covering a greater area, which may be an indication that areas are being fished out. We know this because reports include the county name and landmarks where the harvesting is done."

When asked if the waters where he traps are being affected, Gammon replies, "In certain places, yes. A lot of them. Especially if you have navigable water. In shallow water where it's hard work, you can still get a turtle. I have 20 pots and I never use more than 15 or 16. You know someone is coming behind you to take theirs. You think, 'I've got my share.' You don't try to take them all. You want to leave some so they are there next year. When they're cleaned out, you get nothing."

Veteran Conservation Police Officer Sgt. Richard Goszka understands the concerns. "We know that turtles are slow to reproduce. It could take decades for them to recover if they are over-harvested. If that happens there can be a major ecological impact down the road that cannot be seen at this time. In wildlife law enforcement we need to know all aspects of an issue to be effective. I'm interested in what this research will show, as we need to know the biology of the wildlife resources we're protecting. It helps us effectively do our jobs."

While protecting our natural resources is paramount to the Department, finding that balance between commerce and permitting regulations, as well as addressing issues such as those Gammon raises is also important. As Kleopfer points out, "No other species of turtle in Virginia grows large enough or has population sizes large enough to possibly support a commercial harvest...and the commercial harvest of snapping turtles for consumption has been around for a very long time."



An exponential increase in commercial harvesting of snapping turtles for foreign markets over the past ten years has DGF biologists extremely concerned.

Yet despite its historic foothold, data related to the current and ever-increasing harvest numbers indicate an inverse relationship has evolved, one that is not favorable to the commonwealth. "In Virginia," states Colteaux, "the permit cost is the same whether you are a Virginia resident or an out-of-state waterman. Given that roughly 80 percent of the snappers commercially harvested in Virginia are sold out of state, Virginia loses most of the tax revenue and is left with very little income from an industry that continues to grow and impact our natural resources."

Right or wrong, Gammon sees the influx of out-of-state harvesters as the biggest part of the problem. "The situation has gotten out of hand. If they allow them [out-of-state harvesters] to keep coming in, with the amount of gear they have, the snappers will all be gone." Asked how that will affect him, Gammon is direct: "It affects me because I like doing it. I get a little money each year. If they keep up the way it is, there will be nothing left."

When decision time comes, Gammon knows what he wants. "There should be a

quota on the number of turtles and pounds you can take. There should be a limit on the number of pots you can set. They are amazing creatures! I hope someone takes notice. That's all I can say."

Colteaux puts it this way: "The fact that Asian turtle populations have crashed, largely due to overharvesting, should serve as a warning to any state or country that is exporting these animals to meet international demand. That includes Virginia." ❖

Geil Brown is a retired teacher and school administrator.

RESOURCES

- "A Guide to the Turtles of Virginia" VDGIF, Special Publication No. 4 www.shopDGIF.com
- Virginia Herpetological Society: www.virginiaherpetologicalsociety.com/reptiles/turtles/turtles_of_virginia.htm
- Virginia Institute of Marine Science: Search on Snapping Turtle, www.vims.edu