



Figure 1: 150 shark teeth found at the Nanjemoy WMA

The forecast did not call for rain, but my friends and I arrived at the Nanjemoy Wildlife Management Area (WMA) parking lot in a downpour. Hoping it would pass, we walked about a mile along a scenic, wide trail through the woods to the beach and commenced looking for shark teeth. Almost immediately, I spotted one that I showed my group so they'd know what to look for, and soon everyone was finding them. Excited about their finds, the kids forgot about the rain, but eventually the cold got the better of us so we cut our outing short, vowing to return another day.

I made my way back a few days later with my dog, Daphne, to scout the shoreline via stand up paddleboard (SUP) to see if I could find an even better spot to look for fossils. But with no convenient place to launch at the WMA, I decided to put in further north at Mallows Bay Park in Charles County, Maryland.

That August 2021 morning, I was greeted by park staff who warned me about paddlers being attacked by wasps or hornets living on the Accomac, a steel-hulled vessel that once serviced the ferry route between Cape Charles and Norfolk, Virginia. This is just one of the more than 100 historic shipwrecks comprising the "Ghost Fleet" of Mallows Bay where folks can paddle through the largest number of visible historic shipwrecks in the Western Hemisphere. Seeing the Ghost Fleet is truly a breathtaking experience, but doing so by SUP is risky due to the numerous obstacles that lie just below the surface. I planned to stay south of the wrecks that day.

I launched from the beach adjacent to the Mallows Bay boat ramp a couple hours before low tide to give myself enough time to reach my destination and look for fossils when the shoreline was most exposed.

Paddling through Mallows Bay, I passed by the Accomac, the southernmost ship of the Ghost Fleet. I didn't see any wasps or hornets but I did notice several ospreys.



Figure 2: Osprey on the Accomac

Once I reached the Potomac River, I headed downstream (south) with some help from the ebb tide. I only had to paddle 1.4 miles to get to the beach where I took my group earlier. I stopped there briefly, then continued south so I could check out the entire shoreline. Unlike <u>Calvert Cliffs State Park</u> or other places where fossil hunting is restricted to a small area, there are at least 1.5 miles of shoreline at Nanjemoy WMA where the public can search for shark teeth.



Figure 3: Daphne at a cliff containing layers of fossilized remains

I saw quite a few people (mostly families) scouring the beach for fossils. They likely parked at one of the four lots on Riverside Road (route 224), south of Liverpool Point Road, shown on the Nanjemoy WMA map. Lot signs show the following addresses:

- <u>Douglas Point North</u>: 9275 Riverside Road, west side.
- <u>Douglas Point South</u>: 9699 Riverside Road, west side.
- <u>Douglas Point Tower</u>: 9698 Riverside Road, east side.
- Purse: 10124 Riverside Road, east side.

Trails/roads connect to the beach at

Blue Banks Beach: This site is located at the edge of Blue Bay, north of <u>Douglas Point</u>. The fastest way
to get there is to park at the Douglas Point North lot and then walk one mile on the Cal Posey and Blue
Banks Beach Trails.

- <u>Handicapped accessible waterfowl blind</u>: A Hunt from Vehicle (HFV) road leads to this blind which requires a permit and reservation to use. Contact Myrtle Grove WMA at 301-743-5161 for details.
- <u>Beach Trail access</u>: This spot is on the shore of Wades Bay in the Purse Area, formerly known as Purse State Park. It is a 0.3 mile walk from the Purse lot to the water and the easiest way to get to the beach on foot. On the water, it is approximately three miles from the Mallows Bay boat ramp.

Not surprisingly, most people were near the Beach Trail access. I landed at various places well north of this location (to avoid the crowds) but south of Blue Banks Beach, and in less than two hours of searching, I found 150 shark teeth (shown at top). Knowing what I know now, I expect the next time I take people to the WMA, they will find their fill of teeth.



Figure 4: Using my homemade floating fossil sifter

The shark teeth I collected are from the Aquia formation, dating from the late Paleocene (Selandian).

This means they are 59 to 56 million years old. In comparison, most of the teeth I've found on the Chesapeake

Bay in Calvert County are 23 to 8 million years old. My observation is that the teeth at Nanjemoy WMA are generally narrower and non-serrated.

Shark teeth weren't the only fossils I gathered. I picked up a few file-like pieces of ray dental plates, adapted for eating mollusks and crustaceans on the sea floor. I also found some turritella gastropod molds. The mold is created when the inner contents of this sea snail fossilizes and the shell later erodes.



Figure 5: Turritella gastropod molds found at Purse

Just south of Purse, I explored a small, <u>unnamed creek</u> where I saw numerous butterflies, including several tiger and eastern black swallowtails.



Figure 6: Eastern black swallowtail butterfly on pickerelweed

Paddling back to Mallows Bay, I rounded Liverpool Point and then followed the shoreline through thick submerged aquatic vegetation (SAV) to Mallows Creek. Here, I saw wild rice, American persimmon, paw paw fruit, and arrow arum. "Breadbasket marsh," a term I learned from the Piscataway Conoy Tribal Chairman on Mattawoman Creek, certainly describes Mallows Creek. I was able to get about 0.3 mile upstream on this scenic waterway before it got too narrow to continue.



Figure 7: Mallows Creek

Back at Mallows Bay Park, Daphne and I explored a hiking trail near Burning Basin and then walked to the overlook where I had a nice view of a section of the "Mallows Bay - Potomac River National Marine Sanctuary." In September 2019, the National Oceanic and Atmospheric Administration (NOAA), the State of Maryland, and Charles County announced the designation of Mallows Bay as the 14th national marine sanctuary in the nation. This status protects the remains of the collection of historic shipwrecks and archaeological artifacts, some nearly 12,000 years old. My paddleboard trip from Mallows to Purse took me through the central portion of the Maryland side of the sanctuary.



Figure 8: Fawns near Burning Basin in Mallows Bay Park

I've been paddling these waters, exploring the Ghost Fleet, and fossil hunting in Purse back before Mallows Bay Park even existed. It is nice to know that its protected status as a national marine sanctuary will ensure that future generations can appreciate its beauty, history, and recreational activities as I have.

For more information, see

National Park Service/Chesapeake Bay – Mallows Bay Paddle Guide

Maryland Department of Natural Resources (DNR) – Nanjemoy WMA

Fossil Guy

Explore Charles County – Mallows Bay – Potomac River National Marine Sanctuary

Maryland DNR – Potomac River National Marine Sanctuary