

By Nuchael Wentzel and Michael Shultz

## The River You Drink – 1

# Gunpowder River Shows Many Moods, Vistas, and Plant Varieties

The Evening Sun – ACCENT – Baltimore, Monday, February 21, 1977 The Gunpowder is a river of many distinct moods. Big Gunpowder Falls rises in Pennsylvania and runs through rugged terrain only to be locked twice by reservoirs as the city's water supply for more than 1.3 million people. Little Gunpowder Falls acts as a legal boundary for two counties and provides a wilderness setting a stone's throw from busy, sign cluttered U.S. 1. The two falls, a peculiarly local name for streams, make up virtually all the Gunpowder River system, the last and shortest part really an estuary of the Chesapeake Bay. And along

the two falls and the river is the largest park in the state, only a quick ride from the congestion of the city. This is the first article in a five-part series by Michael Wentzel and Michael Shultz on the Gunpowder River, as part of The Evening Sun's continuing look at Maryland waterways.

The broad mouth of the Gunpowder River becomes part of the Chesapeake Bay just past Carroll Island and Rickett Point at Aberdeen Proving Ground. The last moments of the river's journey have taken it past tidal marshes and rich wetlands, then, quickly a set of tributaries, Bird River, Dundee and Saltpeter creeks.

The journey of this river has not been long in comparison to the great rivers of America, but it has been varied and useful. The waters of the Gunpowder, before finding the bay, have cut through deep rolling hills and rocky valleys, meandered in shallow pools, and silently settled in long, thin reservoirs that feed a city's thirst.

The river is really split for most of its length, but does not have a split personality. The Big Gunpowder and the Little Gunpowder Falls, except for size and stream flow are twins.

There are sections in the boulder strewn beds of each that are truly interchangeable. The hiker who walks serenely along the banks of each stream can lose himself easily and wonder which Gunpowder he has chosen to spend the day with.

Big Gunpowder Falls rises in the hills of York county in Pennsylvania just above the Carroll county town of Lineboro. It is the thinnest of blue lines on a map and a slim stream until it travels into Baltimore county beyond the community of Roller.

The hills at the Pennsylvania-Maryland border are nearly 1,000 feet above sea level. Here, the Big Gunpowder wanders through the Piedmont Plateau, which is characterized by the rolling hills, quickly rising ridges, and steep narrow stream valleys. The stream bed itself is rocky, and there are frequently stretches of rapid and small waterfalls.

The Little Gunpowder Falls. Which begins at a farm near Blackhorse in Harford county many miles east of Lineboro, travels through similar terrain and then meets the Big Gunpowder Falls a few miles from the bay, and together they become Gunpowder River. The base of the Piedmont is a varied and complex mix of rock formations: schist, Baltimore gneiss, marble and serpentine. This mixture and the differing resistance to erosion give the Piedmont its varying texture.

The fall line is where geologists mark the crossover from the Piedmont Plateau to the coastal plain. Interstate 95 roughly marks the fall line in this region. Here, the rivers become somewhat navigable. The coastal plain probably formed by millions of years of erosion from the Piedmont, is marked by few hills and flat meadows where the broadening river tends to meander. This trip through the geological styles gives the river its changing moods and variety of plant life.

The Big Gunpowder above Prettyboy Reservoir runs through a series of pools and rocky rapids surrounded by a rugged, heavy forest. The reservoir, which is just over 7 miles long, lies between steep slopes. At the dam, the water drops 130 feet and runs another 8 miles or so through a forested, gorge-like area. The water is clear and often deep enough for swimming.

A large section of state park land surrounds I-83 and the Sierra Club has wound trails in and out of sections of the river, crossing several of its tributaries, Bush Cabin Run, Mingo Branch and Panther Branch. This is a typical section of the Big Gunpowder, the small tributaries slipping into the mainstream almost unnoticed except for the quiet gurgle of the stream meeting stream or a quick rapid. Where some tributaries meet, there often is an extended rapid just below a curve in the falls, giving both an added dimension of sound and a new view around the bend.

Panther Branch, with its many mile ruins, joins the Big Gunpowder west of Falls road. A walk upstream along a narrow path follows a sudden northern sweep of the river. At the top of the stream's swing - about 2 miles in from the road - is Raven Rock Falls. There are several flat rocks here warmed by the afternoon sun that make a perfect resting stop. The falls reach upward at least 10 feet with several sudden drops and leveling pools along the way.

In the early winter before the brutal, heavy cold, a thin coat of ice made the climb slippery, somewhat dangerous and mostly hilarious.

At the top, by the high outcropping of rock, was a pure spring. Someone had built a 6 inch high, three-sided rock cabin around it, protecting the pool of water from dirt and pollution. The water in this spring was pure and cold.

Along this trail upstream beavers have cut and skinned numerous trees. In a mile's stretch, more than 20 good-sized trees have fallen to the chisel-edged teeth of the beavers. Some of the trees have been skinned, the bark taken as food for the winter. Many of the trees and branches had been taken away and, at several spots along the river, there were obvious slashes in the bank where the beavers dragged the trees into the river.

Beavers which once flourished in the basin, were reintroduced in 1949 after more than a 10-year absence by state game wardens who took six beavers from a pond at Aberdeen Proving Ground and placed them in the Big Gunpowder just above Prettyboy. Oscar E. Tinley, one of those game wardens, said more than 100 beavers now live in the falls, in spite of the rugged start when two beavers were stoned to death for no apparent reason. Some beavers have moved into Pennsylvania and others have been spotted in Loch Raven.

The beaver lodges are cemented to the bank with mud, leaves and sticks from the felled trees. These lodges can dam up small streams, providing new breeding areas for fish. Mr. Tinley said that the boughs from the toppled trees provide cover for smaller fish as well as feeding areas. The game warden said the beavers favor trash trees - "trees that are no good for anything" - and along the Big Gunpowder, they have attacked aspen or what Mr. Tinley calls "quaking aspen"

"They are not obnoxious or destructive animals, and are really helpful in many ways," the game warden said fondly. Still, their numbers are growing rapidly and for the second winter in a row, the county has allowed the taking of two beavers per person by trapping. The beavers have

at least one advantage over humans. The wear and tear of tree-cutting stubs their teeth, but nature has provided them with a gift - the teeth grow back. The Gunpowder basin, drained by both the Big

and Little Gunpowders, is heavily wooded in spite of the ever-moving tentacles of development, and the trees seem to have developed in broad sections down the river. /n the northern section, according to state studies, there is tulip poplar, red maple, flowering dogwood, white oak and northern red oak dominate. /n the middle section, there is tulip poplar, red maple, flowering dogwood, white oak and beech. /n the lower area, chestnut oak, blackjack oak, American holly and black oak are found most often. The American chestnut, and endangered species, can be found at many scattered locations throughout the basin, State officials say, but individual specimens almost never survive to maturity.

Although this sectioning of tree groups is evident, the two streams, flowing out of the Piedmont through the coastal plain, carries the families from one section to the next. This is most prominent in the smaller plant life - ferns and wild-flowers. The Gunpowder has created a kind of meeting ground where Piedmont and Coastal Plain life mingle on each other's territories. Many species appear in this basin at the southernmost point in the state.

Clyde Reed is the kind of man who refers to all his plants by their Latin name. "When you know a person's name and say hello to them, you use that name," he explained. "Well it's the same with plants, I know them like people." Dr .Reed, a well known botanist and Coppen State College teacher, started his hikes of the Gun powder in 1947, riding his bicycle to the river and hiking in. At 56, he has published 26 books and 120 papers and is an expert - at the very least - on Maryland ferns.

In an article he wrote for the Journal of the Southern Appalachian Botanical club, he calls the Gunpowder a "fern paradise" and lists 54 different species, varieties and forms of ferns that he has observed along the Big Gunpowder alone. And, he advises that he doesn't believe he has found all there is to find. He and a friend, Andrew Simon, who used to own Blue Mount Nursery near the Big Gunpowder, often would hunt ferns together, and Dr. Reed named one of the ferns , a crested beech fern, after Mr..Simon - in Latin of course.

Ferns seem to prefer to grow in the sudden outcroppings of rocks along the river to the soft swamp areas He sighted on these outcroppings are greenwort, and other ferns on one of the combined hikes with Mr. Simon. These ferns have minute variations and strange names. /n one section of his report, Dr. Reed described ferns growing on hillside slabs of rock at the water's edge east of the Ashland Bridge road. He wrote,"over the rocks drip water from a moss-laden, lichen-splattered face. Here, growing beside each other and even at times intermingled, are hairy lip fern, (*Cheilanthes Lanosa*) and spiderwort (*Tradescanus sy.*), with nearby neighbors strawberry bush (*Fvonymus americanus*), American bladdrnut (*Staphylea trifolia*) obtuse woodsia (*Woodsia obtusa*)and viburnum. Quite an extrodinary assemblage of species.

Dr. Reed usually is not that helpful in locating life along the Gunpowder. The ladyslipper, a terrestrial orchid, grow in many spots along the river. The pink is the more common of the ladyslippers, but the Gunpowder sports the yellow ladyslipper , too. "/ don't like to say where it is," Dr. Reed said. "Whenever you tell someone where something is, they go and dig it up.

One apparent oddball that Dr. Reed discovered is a cucumber tree grows in the Loch Raven watershed. This member of the Magnolia family has huge leaves and red fruit and can grow as high as 35 feet. The oddity is that most books placed the cucumber tree in the Kentucky to Florida range. Generally, however, there are no extremely rare plants in the Gunpowder basin, but the mix and wide range of plant life is special.

Fisherman often refer to the Gunpowder as a lazy stream to fish because it is difficult to fill a bag with good catches. There are plenty of large smallmouth bass, gudgeon, and herring. But fisherman remember the hickory shad that used to run heavy above U.S. 40 before the reduced stream flow from the reservoirs. The Maryland Fisheries Administration classifies many of the upper tributaries as among the best trout streams in the state.

These streams, such as Sawmill Branch, supposedly support trout population, but the Big and Little Gunpowder and Bee Tree Run are stocked by the state. The controlled stream flow, which becomes more controlled as demand for water increases, has hurt fishing. There is no commercial shell fishing, but the small rangis clam is abundant in the river, as it is in Middle River, and can be harvested.

The estuary of the Gunpowder, after Big Falls and Little Falls come together, is in good enough condition that the blue crab can be found there. But, fishing is erratic except in Prettyboy and Loch Raven reservoirs, where bass are plentiful.

From Loch Raven Dam, the river runs through a stretch of land that characterizes its entire path. There is a steep hillside reminiscent of the Piedmont, and a broad meadowland that will soon become the coastal flatlands. The Big Gunpowder then begins the hard run to the fall line. Many Gunpowder enthusiasts feel the 4-mile stretch from Hartford road to Belair road is the most rugged section of the river, although the river widens and has many deep pools in this area.

Here Long Green Creek and Sweathouse Branch enter the Big gunpowder in state park land. The forest here is an extensive hardwood forest of American beech, tulip poplar, oaks and maples. Some of the best wilderness scenery in the area is found in this rugged terrain.

An ecologist for the Smithsonian Institution studying the area found great diversity in the forest, and plant life, saying that the area could act a "biological refuge for both flora and fauns." The ecologist also said that forests of such size and magnitude were rare in the "Eastern megalopolis between Virginia and New York."

Between Belair and Old Philadelphia roads, the Big Gunpowder eases, becoming what is known as the long calm, the favorite and most famous of fording places for colonial travelers making their way to Philadelphia and north. The Big Gunpowder has a final rush of rapids and then begins its way through a kind of tidal marsh that has formed only recently in the life of the river.

More than 100 years ago, ships could make their way up the river and into the Big Gunpowder. Joppa was a famous port before heavy sediment clogged the river an helped form this marshy area, ending the days of Joppa as a port, too.

In this marshy area, the Little Gunpowder also enters the final stages of its journey from Blackhorse to the bay. As it wanders, the Little Gunpowder forms the boundary between Baltimore and Harford counties. /t has made about a 25-mile run, mostly through agricultural land fed by numerous streams and creeks along the way.

A thin but lengthy section of the river in the Jerusalem Jerico area is the state park section. The rock-strewn falls here is a twin for its big brother. There are quiet places where the Little Gunpowder spreads out in elliptical pools. From some of the several bridges over this section, daring summertime swimmers dive into the pools. Because of the undeveloped nature of this area, there are long stretches of stream where there is nothing but the slow slide of the Little Falls and the sounds of the thick forest.

The two falls meet above Day's Cove the controversial wetlands area that one landowner hopes to use as sand and gravel pits. On the river's south shore is a point of land known as Day's Mount, where a Colonial mansion once stood. From the sliver of land, you can look up the valleys of both the Big and Little Gunpowder and also over the slow moving river going to the bay.

Wetlands were once thought of as being nearly useless. But, this is no longer true since various studies have shown the valuable chores that wetlands perform. Cary Hinton, a coastal zone planner for Baltimore county, has an affection for wetlands that has led him to advocate protection for these murky but fundamental stretches of shoreline. There are from 600 to 800 acres of wetlands in this area of the Gunpowder. They are the highest rated wetlands in the country, and, a Smithsonian study six years ago says, they are some of the best on the Western Shore. The question is: The best for what? "Most people aren't cognizant of the uses of wetlands and marshes," Mr. Hinton said after telling the story of a canoe trip through this area, when he spotted a great blue heron.

"Wetlands have many functions." he said. They provide a flushing function for aquifers where we get a lot of fresh water. They are traps for sediment that otherwise would fill up the river, and eventually the bay.

The wetlands also are home for much wildlife and spawning areas for fish. One state report says 50 species of fish in various stages of their live cycle find shelter in the wetlands that border the bay. Oysters, crabs, perch and striped bass are among the many species of aquatic life which, in one way or another, get their food from the wetlands. "I really believe we can say that without the wetlands, there would be no fish," Mr. Hinton said.

The Big Gunpowder, from its source in Pennsylvania, has traveled about 54.5 miles. After it joins the Little Gunpowder, they become the Gunpowder River, which is really an estuary, and travel another 8.5 miles. The Gunpowder, under its various names, has journeyed in many guises, an Appalachian-like stream, big city reservoir and peaceful run.