

Norton Point – Pete Ogden’s Eye-witness Account

Various Articles

Jo-An Taylor article in MV Gazette 2007

The Vineyard's own J. Gordon (Pete) Ogden III witnessed the breach wrought by Hurricane Edna in 1954 and wrote a detailed account in the journal *Quaternary Research* in 1974. The storm tide, he wrote, was receding from the ocean side but still flooding in the bay, so that the water level on the bay side was higher than on the ocean side. He saw a small "fault cliff" in the sand, stepped onto the lower part, and sank in up to his knees.

He watched successive waves widen and deepen the drop, until, "losing track of both time and the responsibility to keep accurate notes," he watched the waters of Katama Bay "follow retreating ocean waves and effect a complete breach of the beach.... The effect on the ocean side of the beach was spectacular, to say the least. Where the receding waters of Katama Bay met the storm waves on the ocean side, a maelstrom resulted, with spray being thrown high into the air both alongshore and offshore of the new opening."

The breach was made from the bay side, not from the ocean. Storm waves may overtop the beach, but the hydraulic head, or difference in height between the higher water level in Katama Bay and the lower water level on the ocean side, is what dumps millions of gallons of water out of the bay, tearing a wider and wider gap as it pours out. So, for all the thundering surf on the ocean side, only the noiseless power of gravity can tear open a barrier beach.

And what of the influences of us humble humans in all this? We do have our part in the story. Human activities can have a huge influence on the integrity of the dunes. In spite of the strength of dune grass, the legendary endurance in the face of drought, wind, salt spray and other unfriendly natural conditions, it only takes one pass by a car's or truck's tires to kill this otherwise remarkably sturdy plant. Without the dune grass holding the beach together, it is much easier for a breach to open. Ogden reported that Hurricane Carol had done quite a bit of damage to the dunes two weeks prior to the breach by Hurricane Edna.

EDITORIALS *Thursday, October 4, 2012*

Losing Wasque

.....In fact there is ample historic precedent for erosion in this area, where breaches in the barrier beach have occurred naturally for many decades. A Gazette reader reminded us this week that rates of erosion at Wasque Point following a breach through the barrier beach at Norton Point were well documented in a report by J. Gordon (Pete) Ogden 3rd, published in *Quaternary Research* 4 in 1974. Mr. Ogden found that Wasque Point lost some seven hundred and seventy feet of earthen embankment during successive openings that spanned the late 1940s and late 1960s. Photographs of the Wasque coastline in the late 1960s show the same process at work then as now. Mr. Ogden’s research also shows the general retreat of the coastline along Norton Point and Wasque from the late 1700s onward.

Based on history, the erosion will not stop until the breach closes, which could take five to ten more years.

But as we stand in awe of the forces of nature at work on the extreme southeastern corner of Chappaquiddick, we wonder about the impact of larger environmental changes on the shoreline of the Island. Climate change and rising sea levels are no longer distant academic concepts but real facts of life, and the Island is in the front lines. Severe erosion along the south side of the Vineyard not only has the Schifters worried about the safety of their Wasque home but also Chilmark town leaders pondering the fate of Lucy Vincent beach which has been carved into new pieces in the last three years by the Atlantic Ocean.

Many new homes have been built near the shore since Mr. Ogden wrote his report more than three decades ago. As the sea continues to encroach on the Island's outermost places, many will be at risk.

May 1, 2011

[An eyewitness account as the beach gives way](#)

BY TOM DUNLOP

One man claims to have stood on the Norton Point beach nearly sixty years ago, at the very moment it gave way almost beneath his feet, opening Katama Bay to the Atlantic. It was the afternoon of August 31, 1954, and J. Gordon "Pete" Ogden III – an Oak Bluffs native, paleobotanist, and specialist in the study of inland waters – later wrote that he went for a walk along the bay side of Norton Point just a few hours after a hurricane had spun out to sea.

In his dramatic account, part of a study of the Norton Point openings published in 1974 in *Quaternary Research*, a scientific journal, Ogden described the ocean surf still washing over Norton Point as he walked along the beach after the storm:

"I observed a small 'fault cliff' in the sand as I approached the area where the waves were washing furthest toward Katama Bay. A wave had just passed, almost reaching Katama Bay water," and Ogden wrote that he stepped down into the shallow pathway through which the wave had just washed.

"Field notes record a distinct sense of fright as I sank in 'quick' sand up to my knees. Recovering solid ground, I stayed near the 'cliff' edge and watched as successive waves struck further toward Katama Bay, widening and deepening the 'graben' [fault cliff] I had originally observed."

For half an hour, Ogden looked on as "a steady succession of waves approached, reached, and extended into Katama Bay. As each wave receded, the level of the beach fell more, until within 1 hr of my arrival at the scene, it became apparent that a new opening was in the making, as waters of Katama Bay were following the recedence of waves from the Atlantic side of the beach. At this point, losing track of both time and the responsibility to

keep accurate notes, I observed the waters of Katama Bay follow retreating ocean waves, and effect a complete breach of the beach.”

At first, he wrote, the water streaming from Katama Bay was no more than two to four meters wide and less than thirty centimeters deep. But it “rapidly widened and deepened to produce a sand cliff near where I stood, 2–3 m high and a channel at least 50 m across....Within 2 hr of the first breach of the beach by ocean waves, the new opening was almost 300 m wide, and water was boiling seaward from Katama Bay. The following morning, under clear skies and a bright sun, the opening looked as if it had always been there, and the tide was flowing quietly into the bay from the ocean.”

A few questions trail this account. Ogden does not mention it, but a storm and tide had broken through the beach on February 15–16, 1953, eighteen months before the landfall of Hurricane Carol on August 31, 1954.

In the year and a half that followed the 1953 opening, the Vineyard Gazette recounted a rescue at the inlet, its effect on the currents through the herring creek at Mattakesett and Edgartown harbor, and how it carried the body of a drowning victim from the harbor to the ocean and beyond. After Hurricane Carol, the paper also reported that the existing opening was “receiving some of the blame for much of the surge which affected the Edgartown waterfront.”

Ogden’s report was published twenty years after his afternoon on the beach, and it is not known why he neither saw nor reported the existence of the 1953 opening in his uniquely personal and detailed account of the creation of a new one after the hurricane. Pete Ogden died in Oak Bluffs on April 17, 1996. Despite the differing evidence from 1953 and 1954, his study remains the definitive work on the historic cycle of openings through Norton Point.

MV Times

Storm breaches Norton Point Beach. *Chappaquiddick Island is an island for real*
By Nelson Sigelman - April 19, 2007

The one-two punch of crashing storm-driven ocean waves and powerful spring tides knocked open a breach in Norton Point Beach that one observer described as significant and growing. Chappaquiddick, the easternmost community on Martha's Vineyard, is now an island in name as well as spirit.

With the barrier beach route closed, travel between Chappaquiddick and Edgartown is possible only on the small private vehicle ferry that regularly crosses Edgartown Harbor.

Speaking from Norton Point by telephone Tuesday afternoon, Chris Kennedy, regional director for The Trustees of Reservations (TTOR), the conservation organization that manages the county owned beach, said, "I can tell you that this is a significant breach. There is a lot of water going through."

Mr. Kennedy said the breach in the narrow barrier beach was about 100 yards across and growing.

On Wednesday afternoon, Mr. Kennedy reported that the breach was getting wider and deeper. He said the beach is closed to vehicles and advised against anyone trying to venture out on the sand because beach conditions are hazardous.

Historically, storm breaches have occurred with some regularity in the two-mile long barrier beach that separates relatively shallow and normally placid Katama Bay from the Atlantic Ocean.

In February 2001, then County beach manager Robert Culbert expected a breach to occur, after erosion had narrowed the beach to a width of 100-200 feet near the eastern end. But the beach came through that winter without a breach and remained intact until this week.

Norton Point has been breached during other storms, including the gale of January 1886, the 1938 hurricane, Hurricane Edna in 1954, and Hurricane Bob in 1991.

The breach creates something of a hardship for Chappy residents who rely on the beach route, particularly during the late night and early morning hours when the ferry does not operate.

"It is kind of a hardship," said Chappy resident Skip Bettencourt yesterday. "Some people rely on driving the beach across to get back and forth."

Mr. Bettencourt, a volunteer firefighter, said the beach changes so there is no way to tell how long it would remain open. But he said, "Right now it looks like a pretty big opening. I think it is going to be open for a while. I'd guess it is about 200 yards across and it is pretty deep."

Current events

Edgartown Harbormaster Charlie Blair said that depending on how long the opening remains, the newly created channel would have a noticeable effect on Edgartown Harbor. Based on past experience he expects "current, a lot more current, maybe up to a knot more and that may not sound like a lot but it is." He said that if it lasts for any time the opening would also mean cleaner water and prove beneficial for shellfishing.

Speaking to The Times on Tuesday, Mr. Blair said he had not yet inspected the cut due to wave overwash which made beach travel hazardous. He said he could not even guess how long the cut would last.

"Some openings last for 20 years and some only last for a few weeks," he said. "I know that it will slowly migrate down to the eastward because they all do."

Mr. Blair, a former charter fisherman, spent his youth growing up on the waters of Katama Bay during a period when the beach was open for a considerable length of time.

He remembers a channel marked with pine trees used by boats up to 30 feet in length. "You could be at Wasque in minutes," said Mr. Blair, referencing a popular fishing spot off the southeast corner of the Vineyard.

Mr. Blair, who has supervised a number of projects using the town-owned dredge, said man's efforts are slight compared with the forces of nature at work on Norton Point. He said that had the town wanted to dredge an opening it would have required an extensive study and long state and federal permitting process. "In one night, Mother Nature not only got the permit but she did the job," said Mr. Blair. "The forces that are at work there are just amazing."

Birds may benefit

TTOR, which manages more than six miles of beach on Chappaquiddick, took over management of Norton Point pursuant to a contract with Dukes County signed last year. With assistance from the town and volunteers from the Surfcasters Association, TTOR worked to clean up the beach and lay out trails in an effort to maintain the land route and protect shorebird nesting areas.

The recent storm washed away much of the beach grass and any semblance of a trail. Dave Belcher, TTOR Chappaquiddick superintendent, said that the breach comes as a big disappointment after so much hard work.

The cut, if it lasts, is expected to prove particularly attractive to surf fishermen. The area along the beach is noted for holding bluefish and striped bass.

Water pouring through the breach will carry baitfish and that will attract gamefish to the cut and Katama Bay. But the same conditions that created the opening may hinder fishermen from traveling along the beach to fish the cut.

Mr. Kennedy said the storm created new flat stretches of sand and gravel beach; perfect habitat for nesting shorebirds. That could result in summer beach closures to protect nesting piping plovers and terns. "It's going to be an interesting summer," he said.

Forces at work

As part of a series on the Island's changing shoreline published in The Times (Feb. 8, "Norton Point Beach - the anatomy of a breach"), Jo-Ann Taylor, a coastal planner, recently described the forces at work along Norton Point.

Ms. Taylor wrote that at first glance, it would seem that the raging tumult on the Atlantic side surely must be responsible for cutting an opening through the beach. In fact, other forces are at work, and are revealed by close observation of a breach.

Vineyarder J. Gordon (Pete) Ogden III witnessed the breach wrought by Hurricane Edna in 1954 and wrote a detailed account in the journal Quaternary Research in 1974. The storm tide, he wrote, was receding from the ocean side but still flooding in the bay, so

that the water level on the bay side was higher than on the ocean side. He saw a small "fault cliff" in the sand, stepped onto the lower part, and sank in up to his knees.

He watched successive waves widen and deepen the drop and the waters of Katama Bay follow retreating ocean waves and effect a complete breach of the beach.

The breach was made from the bay side, not from the ocean. Storm waves may spill over the top the beach, but the hydraulic head, or difference in height between the higher water level in Katama Bay and the lower water level on the ocean side, is what dumps millions of gallons of water out of the bay, tearing a wider and wider gap as it pours out. So, for all the thundering surf on the ocean side, only the noiseless power of gravity can tear open a barrier beach, wrote Ms. Taylor.