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Mastering The Inlet

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Formed by the New England Hurricane of 1938, the inlets that intersect the barrier island (known to the west of the Moriches Inlet as Fire Island and to the east simply as "the barrier island") are formidable adversaries, taking a boater or swimmer every few years to grief. This column is about getting to know that adversary better, and in that knowledge is the path to safety and seamanship.

Know Thy Enemy

There are simple, ancient rules of thumb that will make you a better, safer seaman. The power of the inlet starts with the tide.

Most of us realize that there are two high tides and two low tides per day in these waters. Scientists call this type of pairing "semidiurnal" tides. But the two high tides are different from each other in scale, as are the two low tides. Scientists call all the factors that result in a tide's particular "state" its constituents. In most locations, the largest constituent is the fact that it takes Earth about 24 hours and 48 minutes to rotate once relative to the Moon (the tidal lunar day). Half of that time constitutes the driving force of the "semidiurnal" tides, as centrifugal force pulls on the sea on the side of the Earth away from the moon while the moon itself is doing its work of trying to lift the seas to it, creating low tides in between. Constituents other than the tidal lunar day (which accounts 67 percent of the tide) include the gravitational influence of the sun, the tilt of Earth's rotation axis, the inclination of the lunar orbit and the

elliptical nature of the orbits of the moon about Earth and Earth about the sun. But all of that explains but 33 percent of the tide.

Observation and Prediction

Since ancient times, people have observed and predicting the tides. Despite the puny tides of the Mediterranean (6 inches, high to low, in places), the people who lived along its shores were always conscious of it. It is believed though that Pytheas, a Greek geographer and explorer, went to the British Isles in 325 B.C. and realized the extent and power of the moon on the tides. He observed what we now call spring and neap tides. When the moon is new or full, the highs are higher and the lows are lower—what we call spring tides as the moon and sun align and pull together like a tug-of-war team. Of note, the tide arrives at the Forge River in Moriches Bay three hours after it enters the Moriches Inlet…

With all the usual caveats about "rules" of thumb—called the Rule of Twelfths—assume the rate of flow of the tide increases smoothly to a maximum halfway between high and low tide before smoothly decreasing to zero again, and that the interval between low and high tides is approximately six hours.

It says simply that starting at "slack tide" (when the tide pauses before reversing), the flow accelerates at one-twelfth of its force in the first hour, two-twelfths in the second hour and three-twelfths in the third hour before decelerating at the same rate on the way down. This "power curve," when multiplied by so many millions of gallons of water trying to force their way into the bay through an inlet (or worse, force their way OUT of the bay into the face of the natural inward wave action of the sea), is your key to starting to mastering an inlet. Leaving at slack tide or an hour afterwards is clearly the least stressful time to do so. Leave at mid-tide, when the power curve is cranked up to the max, and don't be surprised to see breakers 4 to 6 feet high waiting for you—on a good day.

With respect to Moriches Inlet, never forget that a bar lies directly across the mouth of the inlet—dead center between the jetties is about 40 degrees 45 minutes 48 seconds North, 72 degrees 45 minutes 16 seconds West—and thus you are safest making way westerly to a point of 40 degrees 45 minutes 23 seconds North 72 degrees 46 minutes 43 seconds West. Captain Kevin Osterbery of the M/V Euphoria (www.euphoriacharters.com) and I have recently charted that point as the first break in the bar allowing a passage to the open sea—but recall that this "doorway" moves with each storm.

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