

## Exploring Canaveral's Benchmarks

It's early morning, and the sun is just peeking over the Atlantic. The cool breeze is a precursor to a sunny winter day. The tide is low, and fishermen are already established at the water's edge. Robert Macomber is volunteering to help recover benchmarks for the National Geodetic Survey (NGS). The benchmarks have been hiding along the seashore, some dating as far back as the 1930s. There are approximately 146 at Canaveral National Seashore from Playalinda Beach up through the Klondike Beach backcountry and Apollo Beach. We spend a couple of days exploring Klondike Beach as well as Apollo Beach.

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The first marker found was at the southern entrance of the backcountry. Heading north from Playalinda's last parking area, we ride north along the beach and find the first backcountry marker named JAX302. It seemed to stick out above the sand about a foot. It was exciting to find it so easily. This, however, was the first and most easily found marker of the entire adventure. Corn starch is wiped over the top of the disk to make it easier to read it.

Robert holds the record, at over 10,000 reports sent into NGS and over 6,000 found markers! He hunts for these tiny disks all over the country. The excitement that is had by finding one of these obscure markers can be compared to finding an egg at an Easter egg hunt. This I can attest to after finding a few myself! Robert has dedicated many hours to the venture. Armed with a GPS unit, his meticulously organized coordinate folder, and cornstarch, he helps scientists collect accurate location data. After he finishes up at Canaveral, he plans to cover other areas of Florida. Since he is a new resident of Florida, he will have plenty of places to choose from!

Notice in the photo the sand erosion caused by a recent northeastern storm. It is possible we may never have seen this marker if the sand had not been eroded at the time. Do markers move? While they may or may not move, the shoreline sure does. According to the logs on the NGS website data sheets, the marker sticking out on the beach was last reported 58 years ago in 1963. In 63', it's recorded location was 130 feet southwest of the dune ridge. Today, as you can see the marker, is most definitely on the east side of the dune ridge between the dune and the water's edge. The shoreline naturally moves east and west with seasonal erosion and accretion of sand as well.

The National Geodetic Survey (NGS) is a part of the National Oceanic and Atmospheric Administration (NOAA). Its mission is "To define, maintain and provide access to the National Spatial Reference System to meet our nation's economic, social, and environmental needs." For each marker, the elevation, longitude, and latitude are recorded of numerous markers located all over the country. Finding these markers and reporting back their current location can update mapping systems, GPS data, and data for land surveyors.

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