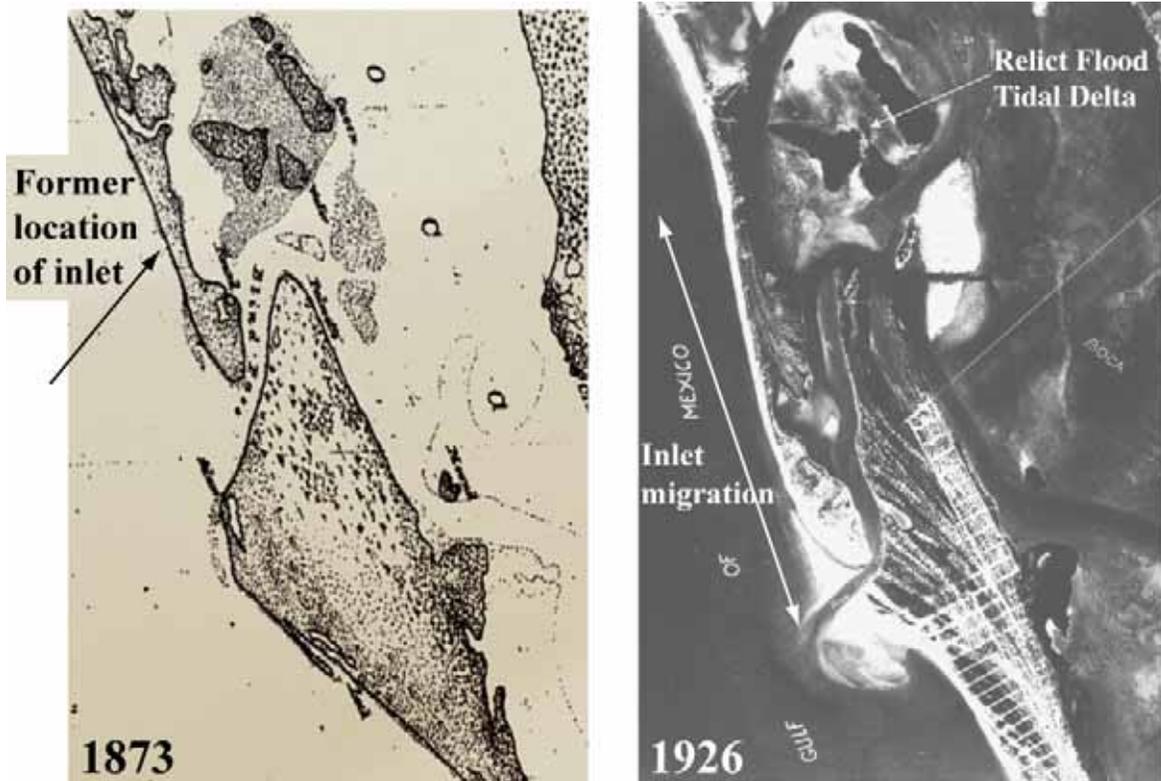


## Blind Pass Coastal Management History

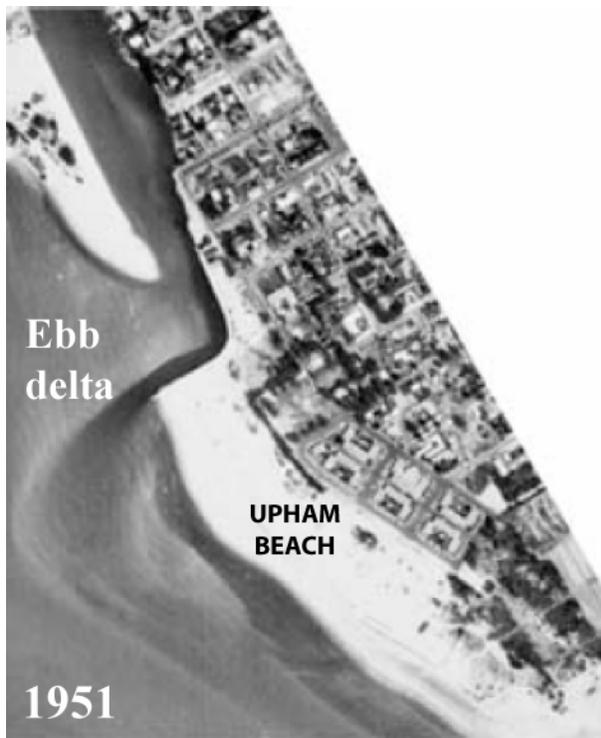


In the 1800's, **Blind Pass** was a well-established tidal inlet with prominent ebb- and flood-tidal deltas. The relict flood tidal delta is shown above. Blind Pass deteriorated due to a lack of tidal flow caused by several factors (namely the opening of John's Pass and dredge-and-fill activities in Boca Ciega Bay).

In 1873, Blind Pass was located 2 km north of its present location (see above). The opening of John's Pass in 1848 initiated the destabilization of Blind Pass. When John's Pass opened, it captured a portion of the tidal prism of Blind Pass, causing instability. In response to longshore sediment transport to the south, the inlet began to migrate to the south and erode the wide north end of Long Key. By the location of the flood tidal delta, it is evident that the southerly migration had already begun in 1873.

By 1926 (see above), Blind Pass had been migrating to the south, eroding the beach ridges on the north end of Long Key for 75 years. The inlet migrated over 1 km during this time. The ebb delta of Blind Pass had been forced onshore by wave energy as a result of reduced tidal flows.

Records indicate that cities of St. Pete Beach and Treasure Island began dredging Blind Pass in 1936 when the first jetty was built on the south side of the inlet.



These photos illustrate final collapse of the ebb shoal of Blind Pass and the poorly-located construction that occurred during the 1960's. In 1951, the ebb delta is visible, but by 1967 it had been significantly reduced. During this time, Upham Beach was wide and stable due to onshore sediment transport as the ebb delta collapsed and migrated onshore. No coastal construction control line building regulations existed at the time and condos were built on the beach. Due to this poorly-located construction, erosion problems were imminent. Once the sediment source from the collapsing ebb shoal disappeared, erosion began to plague this region.

The U.S. Army Corps of Engineers began dredging Blind Pass in 1969. Jetty construction on both sides of the inlet continued. Despite these efforts, Blind Pass closed in 1978 due to shoaling (below).



After this shoaling, the jetties were raised, lengthened, and sand tightened. A detached breakwater was added to the south jetty in 1986. During the 1960's, 70's, and 80's, Blind Pass was dredged nearly every 2 ½ years. By the 1990's, the downdrift erosion at Upham Beach was seemingly unstoppable. Due to the large volumes of sand trapped by Blind Pass, the only sediment source for the downdrift beach was nourishment. Blind Pass was last dredged in 2000 and the next dredging is planned for 2009.

Since 1990, Blind Pass has only been dredged every 9 years. As a result, Blind Pass shoals considerably between dredging events, but remains navigable. Note the breaking waves in the inlet, which indicates shallow water, in the photo below. Hydrographic surveys conducted by the University of South Florida's Coastal Research Laboratory indicate that the ebb shoal has actually reformed. The ebb shoal serves to better protect Upham Beach from wave energy and should eventually allow for sediment bypassing around Blind Pass. This ebb shoal come-back suggests that reducing the dredging interval improved the morphology and functionality of Blind Pass.



In 2005, the gap in the south jetty was filled with rock as a part of the Upham Beach Geotextile T-head Groin project. Blind Pass and John's Pass will be dredged as the borrow areas for the next federal Treasure Island/Long Key beach renourishment project.