

## A Native Orchid in Pine Knoll Shores

(Continued from page 1)

on the coast: in the maritime forest at Cape Hatteras (Buxton-Frisco area) and in the maritime forest of the Theodore Roosevelt Natural Area in Pine Knoll Shores.

Finding Three Birds Orchids, and especially finding them in flower, can be difficult because of their extremely ephemeral nature. Plants may remain "dormant," i.e., not producing above-ground shoots, for multiple years, apparently emerging only when conditions are suitable. Further, after they do emerge, they are likely to be noticed only when they flower, and flowering lasts for only a day. A plant flowers only about three to four times a year. Further, all (or almost all) plants in an area synchronize their flowering to occur on the same day. So, during those periodic years when the plants emerge, there may be only three to four days when flowering plants will be seen in an area.

Plants in the Theodore Roosevelt Natural Area flower mostly from about mid- or late August to about mid-September. Study of the species throughout its range has documented that flowering events typically occur about two days after a noticeable drop in overnight temperatures for two consecutive nights.

Three years ago, 2017 was an excellent year for seeing the species in the Roosevelt Natural Area. There were at least three flowering events from late August through September. The major event of that season was on September 10. On that day, I found literally thousands of the plants in flower. They could easily be seen along the Hoffman Trail and the eastern half of the Roosevelt Trail.

In contrast, very few plants emerged in 2018 and 2019. They were "anemic" looking and produced almost no flowers. Looking back at weather data for area weather stations, August and September of those years had above-average nighttime temperatures. Some of you may remember this especially for 2018 (the year of Hurricane Florence), when we had almost no below-average nighttime temperatures for a long string of consecutive days.

In spite of its abundance on September 10, 2017, the species apparently has a very limited range on Bogue Banks. There are about 120 acres of maritime forest in the Roosevelt Natural Area, and I found the orchid on only about half of that, thus on about 60 acres. (I did not observe any of the orchids in the westernmost portion of the Natural Area or on the soundward portions of the various ridges that project toward the sound.) I did observe a few of the orchids on undeveloped town property between the Roosevelt Natural Area and Pine Knoll Boulevard, but in a lower density than in the Natural Area. A problem that the orchids may be experiencing in both the Natural Area and on town property is the spread and increase of the Southern Magnolia in the area (a species that is not native to Bogue Banks). Where there is an abundance of magnolia leaf litter, I found no (or very few) orchids present.

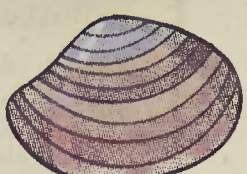
Perhaps the orchid also occurs (or once occurred) in the maritime forests of western Emerald Isle, but I have not found it there. I do plan to check the two tracts of maritime forests in Emerald Isle that are still somewhat intact again this year.

In the 1970s, I found Three Birds Orchids on some undeveloped lots in Pine Knoll Shores as far east as the "old" portion of town (i.e., Yaupon-Willow-Holly roads area), and the species may once have occurred throughout much of the area that is now Pine Knoll Shores. If anyone observes the species away from the Theodore Roosevelt Natural Area and adjoining town property, I would be very interested in knowing about it.

Obviously, the window of opportunity for a sighting is narrow, and your help in documenting their continued presence in our area is much appreciated. If you are able to get a picture of your sighting, please send it to me with any details you can share. My email address is jofuss@ec.rr.com.

Finally, two sources of information about this species are the "Vascular Plants of North Carolina" ([auth1.dpr.ncparks.gov/flora](http://auth1.dpr.ncparks.gov/flora), which is a state parks website that includes all native North Carolina vascular plant species and which has excellent, non-technical summaries of the species) and information provided by an internet search of "Jim Fowler photography Three Birds Orchid" and especially "Jim Fowler photography Triphora 2017."


*John Fussell is a biologist, with primary interests in birds and plants. He has always been intrigued by the distribution of the Three Birds Orchid in the state, i.e., its occurrence primarily in the mountains, but also with the couple of highly disjunct populations of at least the maritime forests in the Cape Hatteras area and Bogue Banks—and the fact that it has not been found in any other maritime forests in the state. In the process of redoing some of his 1970s biological survey work, remapping the habitats of the Roosevelt Natural Area and updating the lists of plants and birds (especially breeding birds), and searching for and mapping the locations of rare plants, his interest in the distribution of the Three Birds Orchid on Bogue Banks has been reignited.*



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