

FIRST PLACE WINNER 2009-10

Phragmites Australis

By Grace A. Perkins

Phragmites australis. I could hardly pronounce it, and I knew I did not want to spend my summer vacation studying it. However, the Chesapeake Bay Governor's School for Marine and Environmental Science requires a two year investigative project. Having learned to curse *P. australis*' very existence in class, I decided a relevant yet simple study would be a comparison of the effects of this invasive non-native marsh grass versus those of a native grass on the fish population of a Chesapeake Bay salt marsh.

My first mistake was believing this would be a leisurely undertaking. Field studies are intense, especially those dealing with tides. The second mistake was choosing a site forty minutes from my house. The tide cycles must be Mother Nature's practical joke. To cast my seine nets at low tide, I rose before sunrise and reached the marsh by daybreak. Then, I returned home and, six hours later, drove back to the marsh to pull in the nets. While my classmates woke up at noon, loaded the toaster with Pop-Tarts, and logged onto Facebook, I was in my maroon pick-up truck, dressed in old t-shirts, shorts, and water shoes (the ugliest article of clothing ever invented) on my way to wade in cold, brackish water. Despite weeks of sinking up to my knees in the darkest, slimiest mud imaginable, slapping at mosquitoes, and watching out for spiders and cottonmouths, I repeatedly reeled in empty nets in the *P. australis* marsh. It was disheartening, but I redesigned my experiment and it has since produced meaningful results.

This summer, I learned firsthand how *P. australis* can devastate a marsh. As importantly, however, I experienced the Chesapeake Bay in a new way. Although I have grown up in a small, rural area where many of my classmates' families depend on the menhaden and oyster industries, I only knew the Bay through tubing and jet skiing. For ten years, I have lived a short distance from the waterfront, but until this summer, I had never experienced its natural rhythms and beauty. I can now say I have watched the pinks and oranges of the rising sun paint the sky over Rockhole Creek. I have cast a net in cool water up to my ankles and caught marsh killifish and

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fiddler crabs. A blue heron has shared the mornings with me, and at the time, we seemed like the only living things in the world. I have driven with the windows down, the salty air blowing my hair around and big band music from the only available radio station turned all the way up. I felt infinite, like I was a part of something larger than myself.

This project taught me that science is not always the neat, controlled labs conducted in school. It can involve hard, even smelly, work. Experiments may require revision or redesign, and they do not always produce the intended results. These unlooked-for findings can lead to new ideas and experiences. Sometimes, unexpected results become the most important lessons of all.

Grace Perkins is a Senior at Lancaster High School in White Stone where she is in the marching, symphonic, and jazz bands and plays alto saxophone. She's the goalkeeper for her field hockey team and was recently "Simba" in her school's production of "The Lion King." In her spare time, she enjoys reading. Grace attends the Chesapeake Bay Governor's School, where each senior conducts a scientific study. She drew the inspiration for her article from her project, a comparison of native versus non-native marsh grasses. She is interested in environmental science, history, and international relations. She has been accepted at The College of William & Mary as a Monroe Scholar and plans to pursue one of these three interests in the fall.