

New Species of Butterfly Discovered at the Crystal Coast

A rare butterfly, whose range is limited almost entirely to the Crystal Coast region of North Carolina, has been given an official scientific name - *Atrytonopsis quinteri*. The name was revealed in a recent paper published in the Journal of the Lepidopterists' Society by Dr. John Burns, who describes the butterfly as a full species and one of the rarest in the U.S. These small, brown butterflies, commonly referred to as crystal skippers, only exist along a 30-mile stretch of the coast. The largest populations are found at Bear Island and Fort Macon State Park, and others are scattered across adjacent islands, including the Rachel Carson Reserve, part of the North Carolina Coastal Reserve and National Estuarine Research Reserve.

Crystal skippers rely on a very specific dune plant, seaside little bluestem (*Schizachyrium littorale*), to lay their eggs, as these are the plants that the caterpillars rely upon for food. Their limited distribution means that changes to crystal skipper habitat can have truly detrimental effects on population size and viability. Some threats to crystal skipper populations include habitat loss and fragmentation from coastal development, loss of seaside little bluestem to erosion and invasive species.

At the Rachel Carson Reserve, erosion of prime habitat poses a threat to the skipper population, along with another, less obvious threat; the wild horses, who have an appetite for the seaside little bluestem.

“Both crystal skippers and the wild horses are valued for different ecological and cultural reasons, and balancing resource use and habitat availability between the two is a conservation challenge,” explains Paula Gillikin, site manager of the Rachel Carson Reserve.

In an effort to address these challenges, Paula teamed up with Dr. Allison Leidner, a scientist who studied the ecology and conservation of the crystal skipper as part of her dissertation research at North Carolina State University, and Gwendy Womble, a horticulturist at the N.C. Aquarium, to design a small habitat improvement project at the Rachel Carson Reserve in 2010.

As part of the project, volunteers and students planted seaside little bluestem in an area near the boardwalk that is fenced off to avoid trampling and grazing by horses. Since the planting, natural resource managers have monitored the growth of the seaside little bluestem plants and observed whether or not the crystal skipper is utilizing the habitat. In the last five years monitoring efforts have yielded promising results; the original plants have thrived and new plants are growing, both inside and outside of the fenced area. What's more is crystal skippers have been spotted at the demonstration site.



A crystal skipper butterfly lands on a student participating in the Coastal Conservation Fellows camp, photo by Paula Gillikin



Seaside little bluestem in bloom at the restoration site at Rachel Carson Reserve

Not only does the habitat improvement project demonstrate an effective way to offset habitat loss from erosion and balance the resource needs of two native species, it also highlights the importance of preserving and restoring as much habitat as possible throughout the limited range of the crystal skipper.

“Small-scale restoration efforts, like the one at the Rachel Carson Reserve, could play a very important role for conserving the crystal skipper butterfly,” explains Allison. “These small areas provide more habitat, and also serve as an important ‘stepping stone’ to connect larger butterfly populations.” Allison also emphasizes the importance of preserving natural areas, restoring degraded natural areas, and using native plants as way of conserving this species.

In hopes of inspiring others to take part in conservation efforts, information about the crystal skipper and the restoration project has been integrated into various educational programs offered at the Reserve. For example, students participating in the Coastal Conservation Fellows camp, part of the North Carolina Maritime Museum’s Summer Science School, are able to learn about the crystal skipper and its conservation challenges through hands-on field sampling and observation activities, including a visit to the restoration site. The Reserve and others who have worked to educate people about this Crystal Coast native hope that the skipper’s new, official name will bring even more recognition to this unique butterfly.



Students participating in the Coastal Conservation Fellows camp search for crystal skipper butterflies, photo by Allison Leidner

Interested in learning more about the Coastal Conservation Fellows? Contact Paula Gillikin at paula.gillikin@ncdenr.gov, or call (252) 838-0886.

Read about by Allison Leidner’s research on the crystal skipper in her new [blog post on the Xerxes Society website](#).