

THE AMERICAN BIOLOGY TEACHER



About Our Cover

On the cover, an Atala Hairstreak (*Eumaeus atala*) rests above a patch of its host plant in Abaco National Park, a large tract of pine forest on the island of Great Abaco in the outer Bahama Islands.

The Atala butterfly is classified as one of the large tropical hairstreaks, in the diverse subfamily of "gossamerwing" butterflies, Theclinae. Primarily, the Atala inhabits islands of the Caribbean where its preferred host plant still exists in local abundance in dry pine forest. This striking butterfly lays its eggs on cycads, specifically coontie plants in the genus *Zamia*. Cycads are prehistoric gymnosperms that were common during the Jurassic Period, but are now relatively rare. The ecosystem these plants create is quite special and includes a mutualism with larvae of the Atala, whose feces provide fertilizer for the coontie plants growing in nutrient-deficient soils. Cycads contain several toxic chemicals, which the larvae are able to sequester in their tissues. This provides them protection from predators, hence their vibrant aposematic coloration.

As is the case with many butterflies, the Atala experiences years of abundance and years of scarcity. The dynamic nature of their populations and additional habitat loss could mean their Florida population is still imperiled.

The camera settings for this photo were 1/320 at f/10, 420mm, ISO 800. The photographer is Mitchell Pruitt, a graduate student in conservation biology at the University of Arkansas, mlpruitt24@yahoo.com.

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