

Kids Korner



Ladd Williams, conservation planner for The Nature Conservancy, Pennsylvania Chapter, stands in front of Ft. Indiantown Gap Military Base and discusses the plight of the regal fritillary, a rare butterfly found in an area of the base. The butterfly, once much more prevalent in the East is now only located on the base.



Regal fritillary, a rare butterfly which is near extinction, can be found behind the mountain pictured here. In the foreground is part of the Ft. Indiantown Gap Military Base vehicle storage area. The butterfly shares the air with many types of helicopters flown as part of the Pennsylvania National Guard's training program.

Butterflies, Helicopters Share Military Base

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ANNVILLE (Lebanon Co.) — What do the military's sleek Blackhawk Helicopter and an elegant and delicate rare regal fritillary have in common?

You'll find the answer if you go to the Fort Indiantown Gap Military Base where the two can be found sharing the same airspace.

Another commonality between the unlikely duo is their need for care — the Blackhawk needs its pilot and crew and the endangered butterfly needs people like Ladd Williams.

As the helicopters fly overhead, Williams, conservation planner for The Nature Conservancy, Pennsylvania Chapter, contracted with the Pennsylvania National Guard to prepare a basewide environmental impact statement, talks about the butterfly and efforts to save it from extinction in the East. It is still found in the Midwest, but declining there too.

Currently it is rated a three globally, which means "it is very rare and local throughout its range," and in the Commonwealth it is rated a one which means, "it is critically impaired."

Its range was once from Manitoba to East Montana east to South Ontario and Maine, south to East Colorado, North Arkansas, and west to North Carolina, according to The Audubon Society's "Field Guide to North American Butterflies."

Ironically, Williams, who has a bachelor's degree from the University of West Virginia in wildlife biology, and a master's degree in human dimensions/wildlife management, said it is thought that the beautiful, large orange and black butterfly lives on the base because of the activities of the military.

While he warns that the butterfly is "close to the edge" at "The Gap," the military appar-

ently provides just the right "amount of disturbance to these fields to create the vegetation composition" that the butterfly needs.

It feeds on butterfly milkweed, thistle, dogbane, mountain mint and knapweed, he said, with milkweed its favorite.

The Guard's land management practices of mowing and burning, which were developed to insure fire safety on the bombing range, have had the unintentional benefit of maintaining habitat for the regal.

Burning the fields, something the military does, also is one of the activities that generates new vegetation, Williams said. An ecologist who starts work in a few weeks will try to determine how often and when this burning is needed. For example, Williams said, if the disturbances to the fields does not take place the area reverts to forest and the butterfly leaves. "It needs an open grassy area to survive," he said.

The ecologist will also try to determine how close to the netter plants the host plants should be. "These are critical questions for the regal's survival," Williams said.

The butterfly's host plant is either an arrow/leaved or ovate/leaved violet, both herbaceous perennials, he said.

The first male regals emerge from their chrysalis at "the Gap" in mid-June. Males patrol their habitat in search of freshly emerged females, while the females rest in the grasses or bask in the sun. The males die off late in the season and the females enter diapause (a resting stage) during the month of August. After this period of rest and relaxation, the females will re-emerge to lay eggs and die.

The eggs will then hatch in three to four weeks and the miniscule first instar larvae will seek shelter near the ground's surface and immediately enter diapause without feeding. As temperatures rise the following spring the larvae will begin to

feed on the host violets.

Feeding only at night, the larvae will molt five times before forming a chrysalis in late May or early June. After 17 days a new generation of adults will emerge to perpetuate their brief life cycle.

"The butterfly is an indicator of things that go wrong in an environment. They are sensitive to habitat fragmentation. They're not like the white tail deer where if you build a development they'll still come into your yard. If you take away the plants that these insects need to survive they're gone and that's what happened in Southcentral Pennsylvania to the regal fritillary," Williams said.

Weather is a factor too with wet and warm winters thought to be the most detrimental to the regal larvae because of the molds. Of course extremely cold

weather kills them too.

The regal is visible in a corridor between Blue Mountain and Second Mountain where the military trains, Williams said, and it is also thought to be in a restricted section of the base so he estimates that it lives on 500 acres.

Thought to have "winked out," a "butterfly person" spotted a regal fritillary in the early 1990s. TNC then began to quietly monitor it and finally decided this was a good opportunity to work with the federal government.

The North American Butterfly Association also sued the Pennsylvania National Guard and the courts mandated the environmental impact statement. Williams, who is responsible for the biological components of that document will coordinate the fieldwork of five subcontractors throughout this summer, fall and winter.

TNC says, "Loss of habitat, pesticide use, and possibly a viral pathogen have had a devastating effect on this sensitive insect. Declining throughout its range, the regal has suffered most alarmingly in the east. Due to more recent changes in land use practices (i.e. intensive cropping, feed lots, development and reforestation), the regals preferred habitat pasture/hayfield ecotype — is now almost gone. In the past 20 years the regal fritillary has virtually disappeared in the east, reduced to a single population in Southcentral Pennsylvania."

Volunteers who would like to help monitor the butterfly's activities are welcome to call Williams at his base office at (717) 861-2449.



Third grade students from Stiegel Elementary School, Marhelf, visit Hershey Brother's Dairy Farm, Penryn, recently as part of the Ag in the Classroom program. Here Brenda Hershey explains how to take care of calves. Ag in the Classroom has been part of Manheim Central's curriculum for 15 years. The goal of the program is to make students aware of how agriculture affects their lives. The students also learned about beef, apples, potatoes, and hogs. Photo by Jill Gagliano