

# Butterfly Collecting

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As active members of the "green industry," we are all fully aware of the environmental responsibilities imposed on us, whether it be to reduce pesticide use, protect native flora and fauna, or protect native wildlife. Most of us are familiar enough with some of the more common animals worthy of protecting when we happen to see them on our courses. The red-tailed hawk, the great horned owl, the eastern bluebird, and the red fox are some worth protecting, just to name a few. The Canada goose, the house sparrow, and the groundhog are not. But every once in awhile, the opportunity to not only protect but to reintroduce a once-thriving species comes our way; and that time has come for us here at Aurora Country Club.

It all started back in mid-August when we received a phone call from one Jonathan Tolman from the Competitive Enterprise Institute (CEI). Mr. Tolman is coordinating a project to create habitat for the endangered Karner Blue butterfly. He phoned here for permission to use Aurora Country Club as a potential site (one of three in the state) to initiate his project. Upon agreement, we received from Jonathan a packet with more information than we know what to do with concerning the Karner Blue and its primary host plant, perennial lupine. But most importantly, we received over one hundred pounds of native forb seed that will be used to establish a Karner Blue-friendly habitat.

## A Bit About the Project

In addition to Aurora Country Club, two other sites in Illinois have agreed to participate. One is a golf course that all of you are familiar with: The Ivanhoe Club, where Peter Leuzinger is the superintendent. The other is a bed and breakfast located in Antioch called Serendipity. Several utility companies across the East and



Northeast are expected to participate pending their decisions, including Ohio Edison, GPU Energy in Pennsylvania, and Niagara Mohawk Utility Co. in upstate New York. All are primarily interested in implementing the program along public right-of-ways underneath utility lines.

This project is completely privately funded and, for reasons that will be discussed later, is a very important objective to Mr. Tolman and the CEI. The primary supporter, the Donner Foundation, is currently funding most of the project.

## A Bit About the Karner Blue Butterfly

In 1992, the Fish and Wildlife Service listed the once common Karner Blue as an endangered species. One of the

more common explanations for the Karner Blue's demise is habitat destruction due to development. Ironically, however, human intervention may be the only reliable means to insure its survival.

For all you lepidopterists out there, the Karner Blue's scientific name is *Lycaeides melissa samuelis*. It is a small, rather inconspicuous butterfly with an approximate one inch wingspan. Its wings are a rather plain slate grey when folded that when unfolded show off its silvery blue markings for which it is named.

The Karner Blue has two broods, or generations, per year. Eggs that overwintered hatch in April. Towards the end of May, they pupate, and the adult butterflies emerge. The adults are in flight for the first two weeks of June, during which time the females lay eggs and soon thereafter die. The eggs hatch in about a week, the larvae pupate, and the second generation of adults appear the second or third week of July. By early August, all the adults have died; the eggs are overwintered and are ready to hatch the following April.

The Karner Blue's habitat is characterized by the presence of wild lupine. The range of wild lupine extends from Maine, south to Florida, and as far west as Louisiana and Minnesota. However, the Karner Blue inhabits just a narrow band in the northern region from New England through the Great Lakes region and into Minnesota.

Presently, due to the destruction of much of its habitat, the Karner Blue is found

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in only a handful of widely-scattered sites with colonies rarely exceeding 1,000 individuals. The danger of such small, isolated colonies is their susceptibility to weather events. Such was the fate of the last of the Karner Blue butterflies in Ontario. The only stable colony with over 1,000 adults is located on the property of the Saratoga County Airport just outside Syracuse, New York. The site is home to over 14,000 adults thanks to the construction of a man-made sand prairie originally constructed to maintain good visibility for aircraft. It is this particular instance that gives promise to the notion that human intervention can play a major role in the successful reestablishment of the Karner Blue.

### A Bit About the Role of the Lupine Plant

The lupine plays two key roles in the life of the Karner Blue. First, its mere existence represents the proper habitat necessary for the Karner Blue's survival, namely a prairie void of any bushy plants or trees that easily outcompetes lupine for available sunlight. But more importantly, the lupine is the only known food source for the Karner Blue larvae and is, therefore, wholly dependent on the plant for its survival.

In June the lupine blooms, and the flower provides nectar for the adults to feed on. However, lupine is not flowering in late July, and second-generation adults must find alternate nectar sources. Butterfly weed (*Asclepias tuberosa*) appears to be the preferred secondary source; but there are numerous other flowers from which they can feed.

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### A Bit About Our Site and Planting Technique

We received the 100+ pounds of seed in early October and planted it about a week or two later. The seed was comprised of more than just wild lupine. More specifically, the mix was comprised of six native forbs, four of which were perennials and two were annuals, that will freely self-sow. The four perennials were perennial lupine (*Lupinus perennis*), black-eyed Susan (*Rudbeckia hirta*), purple coneflower (*Echinacea purpurea*) and catchfly (*Silene armeria*). The two annuals were Indian blanket (*Gaillardia pulchella*) and Mexican hat (*Ratibida columnaris*).

We seeded four areas on the golf course, all of which were already "no-mow" areas, totaling five acres ranging in size from half an acre up to two acres. Our planting procedure was quite simple and straight-forward. We

first went in and sprayed all areas to be planted using some Finale to get a little quicker action. A few days later, we went in with the Woods rotary mower and mowed everything down to about eight inches. We then came in with our slit seeder filled with the seed mix and planted directly into the leaf litter. We were careful not to disturb the soil at all so as to prevent unnecessary weed seed germination.

At this point, it should be pointed out that since the seed mix contained only native forbs, we decided to incorporate a few native grasses on our own to get the full prairie effect. We included four: Indian grass (*Sorghastrum nutans*), big and little bluestem (*Andropogon gerardi* and *A. scoparius*) and sidecoats grama (*Bouteloua cartipendula*). This spring, we anticipate minimal aftercare, as these sites have historically been relatively weed-free. What little weeds do come in will be spot-treated with a back-

pack sprayer or hand-pulled wherever feasible. Presently, controlled burning is not an option as our course is surrounded on three sides by residential neighborhoods.

Pete Leuzinger at Ivanhoe used very similar planting techniques. But unlike us, who used previously undisturbed, unmowed areas to plant in, Pete planted into several sites that were previously disturbed as a result of various construction projects such as new washroom facilities and storm shelters. Pete figured that the planting areas totalled three-quarters to one acre. Pete also took it a step further and planted seed in approximately 600 one-gallon pots as a source of plugs to be planted out in the spring to either fill in areas that didn't come in strong over the winter or to use at his discretion around the golf course. Pete also anticipates minimal weeding and will hand-pull or spot-spray as needed. Since

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Ivanhoe is located in Lake County, Pete doesn't need a burn permit and plans to make that a regular part of his prairie maintenance program.

Once the areas have been established with the lupine-rich seed mix, it will require approximately two years to mature before it will be ready to support a Karner Blue population. At that time, the butterfly will be introduced to the new site; and if all goes as planned, the small initial population will not only survive but thrive and grow.

### **A Bit More About the Project**

This project is about more than just saving the Karner Blue from extinction, as important as that is. It's also about educating policy makers and the public about privately funded conservation and the important role it can play. One way of doing this is by documenting successful privately funded projects and publishing the results in magazines and newspapers. One such case that is relevant to our industry is the work being done to create a new cultivar of the native American chestnut that is resistant to the chestnut blight that wiped out nearly every American chestnut in the U.S. Mr. Tolman, during a phone interview, told me that breeders are one generation away from mass-production of this new cultivar. In fact, those interested can receive a sapling of their own through the Chestnut Society, which is the primary funder of the project. For those interested, I have phone numbers and additional information regarding this.

But why is public awareness of privately funded projects important? Interestingly, the government took early steps to protect the Karner Blue butterfly

but failed primarily due to the approach it took. The government usually sets up one general set of policies for dealing with endangered species rather than dealing with each species on an individual basis. Unfortunately, this "blanket policy" is set up for the larger, more "charismatic" animals like the bald eagle and the like; and for those types of animals, the government's policies have proved quite successful. However, such policies are not effective when

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dealing with smaller, less conspicuous animals that impact us and the land to a much smaller degree. And that's where private conservation comes in to play. Since privately funded projects are generally smaller and target one animal at a time, they can take the time to investigate the best means of successfully protecting them. Such was also the case with the American chestnut, as early attempts by the government failed, and the Chestnut Society stepped in and carried out the project with great success.

Private conservation also represents an important way of thinking that should be adopted by the general public. Rather than seeing conservation as allotting space for the target species, it should be understood that in most instances, space can be shared with endangered species and be incorporated into society with minimal compromise.

And what project better exemplifies both of these principles than the reestablishment of the Karner Blue on golf courses? I can think of few better sites where land is shared by both man and nature than a golf course, which brings up an interesting point. The golf course can play a number of roles other than simply providing a place of recreation for its users. It can also serve literally as a sort of interactive "museum" of native plant and animal species, some of which may even be endangered. As curator, the superintendent should strive to maintain, and when possible, increase the size of the "collection" in order to maximize the value of the property and enhance the public's perception of golf courses during such an environmentally-conscious time. 