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# Heavenly Finds atop Wisconsin's Hogback Prairie

By Ann Swengel

## Why is this area so special?

Hogback Prairie is a magnificent long ridge of native, never tilled tallgrass prairie. This habitat has been about 99% destroyed due to human development (intensive agriculture, urbanization), with tremendous decline and loss of the butterflies and other species specialized to live there. In our long-term monitoring of Regal Fritillaries in Wisconsin, Hogback has both the densest population and the best trend (wonderfully positive). This exemplifies why I consider Hogback on the cutting edge of implementing 21<sup>st</sup> century solutions to the very great conservation challenge of maintaining fragments of the plant and animal communities of a nearly extinct ecosystem.

Besides the breath-taking views, this ridge is also the best place I know of in Wisconsin to see hilltopping. This is a butterfly behavior apparently used for mate-finding where individuals of a species congregate at high points, even if that isn't their breeding habitat. There are other bluffs in the state, of course. But the keys here, I think, are how long the ridge is, how wide open the ridge is on both its east and west slopes, and how broad the level valleys are in three directions around the ridge (east, north, and west). For miles around, the view to the ridgetop is easy to see, both for butterflies and humans. So while (in season) the Regals are careening past you up there, then nectaring for your viewing pleasure, all sorts of other butterflies representing a wide range of habitats may also be congregating up there.

This butterfly guide derives from the research my husband Scott Swengel and I have conducted here from 1992 to date. Our surveys, analyses, and papers using data from this site have especially focused on Regal Fritillary and Ottoe Skipper. But in our research, we count all butterflies seen in our study sites, and of course we pay attention to what we see en route. So the butterfly abundances and flight periods I discuss are not idealized, but very much reflect what it's like when you can't be here every day and can't pick your weather in this state of wild climatic variation.

Looking for butterflies in Wisconsin is particularly dicey in spring, but challenging season-long. It's a rare year when my co-researcher Scott

Swengel and I have a comfortable time getting all our field work in at the right timing at all the sites we want to check for their special butterflies. Many a time a perfect weather forecast from just the night before (or even that morning!) completely misportrays the dismal weather that actually happens. It helps to have some backup plans. If the weather is poor in one spot, somewhere else with tenable weather may be within reach that day. On the other hand, perfectly fine butterfly weather sometimes occurs on days with dismal forecasts—all just to keep us gambling about what might happen next! We appreciate your understanding that on our field days, we are very busy completing formal butterfly monitoring surveys. If you see us, we greatly appreciate your understanding that we need to continue our surveys uninterrupted, as we never have enough time when the weather and timing are right!

A huge aid is this website:

<http://www.wisconsinbutterflies.org>. You can find both up-to-date reporting on what's being seen and detailed information on range and flight period.

## About the author

A butterfly enthusiast since childhood, I became serious about them in the mid-1980s, with the encouragement of ornithologist Scott Swengel, whom I met then and married. Field partners in bird and butterfly surveys ever since, we've studied prairie butterflies in seven states, as well as Wisconsin's barrens and bog butterflies. We've published a number of peer-reviewed scientific papers on butterfly detection, habitat associations, phenology (seasonal timing) and fluctuations, and responses to site management, as well as non-technical articles. A past vice president of the North American Butterfly Association (NABA) and past co-editor of the annual 4<sup>th</sup> of July Butterfly Count report, I was also honored to serve a term on the editorial board of the *Journal of Insect Conservation*.

## Acknowledgments

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Resources, U.S. Fish and Wildlife Service, Jed Bromfield and Henya Rachmiel, Mrs. Sandra McKibben, and Drs. William and Elsa Boyce. Most of all, I thank Scott Swengel for his enthusiasm, encouragement, and partnership. Between us, I really can't tell where one person's ideas and insights end and the other's begin.

## **Cautions**

Be prepared for poison ivy, as well as other toxic plants such as wild parsnip and giant hogweed (a relative newcomer here). Even if these aren't in a particular site I'm recommending, they are a possibility anywhere in the state you might also choose to visit. Unfortunately, Hogback Prairie is the site that wins the prize for giving us the most chiggers in Wisconsin.

Beware ticks! They come in two versions; small (wood ticks) and smaller (deer ticks). The latter have high infection rates of Lyme disease. Both kinds offer other tick-borne illnesses too. The size and color of a skin mole, ticks gradually (and utterly painlessly) bite into your skin to suck blood, especially by lurking in parts of your body you don't even know you have. If you do not arrive well apprised on how to cope with ticks, be sure to consult the website of the Wisconsin Department of Health Services for more information on ticks and tick-borne infections.

Here in Wisconsin, bright sunny heat in mid-May can resemble a desert summer day, or it may frost in late June. Dangerous thunderstorms and tornadoes, are a distinct possibility throughout the growing season. Remember that a vehicle furnishes shelter from lightning but danger during a tornado. For the latter, seek a basement or interior of a reinforced building. We always keep an eye on the forecast and an eye on the sky, year-round.

If you are looking for butterflies along a road, even a seemingly seldom traveled unpaved forest road, be alert for traffic, including logging trucks and all-terrain vehicles.

You also need to be prepared to find a favorite spot from a previous visit noticeably different in both its appearance and its butterflies on your next visit. Burning occurs primarily in spring and fall, so if you visit after the plants have regrown, it may not appear to be a dramatic change. The grass may be greener and taller. While wide-ranging and immigrant butterflies like the Monarch may not show much effect, or in fact may be drawn in by the flowers, the more localized butterfly

species usually recolonize more slowly (or in some cases, may not successfully recolonize).

Since this article is restricted to the timings and locations of our visits, it does not reflect some species' overall abundances, or even all the noteworthy species present, in this region. There's a lot of room for more learning. Even the locations we've visited a lot have gaps in our seasonal coverage, plus many other sites have gotten way less attention than these, or none at all. The flight period information provided here is necessarily incomplete. But it's all collected by the same method by one research team (us) and accounts for the abundances we've observed, so I hope it gives some idea of what's possible for one group to find.

## **Site description**

Hogback Prairie lies on a north-south ridge that towers over a portion of the Kickapoo River valley in southwestern Wisconsin. The ridgetop affords a spectacular view but expect it to be particularly hot on a sunny summer day. Also beware how exposed you are up there if a summer storm develops. Since the slopes are steep and the rocks loose, be very careful of your footing. This prairie is distinctive to us because we were able to survey it for years before it got conserved, back when it was still a dairy farm, thanks to the kind permission and stewardship of the Zinkle family. But this site is also dear to us because a substantial part of this prairie remains never-burned, even two decades after conservation activities began here.

An important landmark for us is the old fenceline that crossed this ridge co-linear with the east-west portions of Citron Valley Road (before the road turns north to go around the north end of the Hogback ridge). The ridge north of that fenceline is the old pasture most recently grazed by the Zinkles. The entire west half of the ridge north of that old fenceline has been a never-burned refugium the entire time we've surveyed here.

South of the Zinkle tract was retired from pasturage longer ago. We never saw any farm grazing there. The west side still had some open prairie areas, but the east slope had grown up into forest. After conservation, this east slope has been cleared more than once. Brush and trees re-grew in the interim. But the most recent effort to remove the woody plants and open up this slope to prairie vegetation has been more successful, through a combination of cutting, burning, and goat grazing. We had always noted Regal Fritillary usage south of

that fenceline. Earlier in our experience here, that was in low numbers, given the lack of any management. As it turns out, even when the prairie vegetation persists, unintensified management (such as light grazing) can be beneficial for maintaining the violets Regal caterpillars feed on, while also keeping the Regals themselves surviving in sufficient numbers and therefore benefiting from the management activities. More recently, with both ongoing management mindful to care for the Regals and a much greater habitat area south of the fenceline, Regals have increased in both number and area occupied.

Wisconsin's Department of Natural Resources has a long-term large-scale conservation project here, not only on the ridge but also in the former farm fields in the surrounding valley. As the prairie plantings develop in the valley, they warrant investigation for their butterflies. These plantings also supply more butterflies to hilltop on the ridge.

## Directions

Directions and maps are easily found with an online search for Hogback Prairie State Natural Area. The Wisconsin Department of Natural Resources's website provides detailed maps and information.

From the junction of Highway 131 and Highway 179 on the south side of Steuben, go north 1 block on Highway 131 to the junction with Railroad St. Go west one block where it ends in a T intersection with Bridge St. Turn right to go north on Bridge Street about 0.1 miles, then veer west when the road curves and becomes Hughes Road. Follow Hughes Road about 2.1 miles as it wends west and north. Watch for Citron Valley Road on the left (west). Turn west on Citron Valley Road and you will see ahead of you the prominent ridge that is Hogback Prairie. In 0.25 miles, you may park to the left (south) along the road where it turns north at the ridge. However, I recommend that you continue driving on Citron Valley Road as it wends north and then west around the ridge. Right as you turn south along the northwest side of the ridge, look for a convenient place to park off the road to the west, where farm buildings used to be. The old farmhouse used to stand on the slope-side of the road here on the relatively level base of the slope. The easiest way up is a walk from here, up the north end of the west slope. You may be able to see and follow a truck track up this slope. This type of access is necessary for the managements that occur

here, which include rotational goat-grazing, brush-cutting, as well as some management burning.

## Finding Regal Fritillaries

"The Bountiful Butterflies of Buena Vista Grassland" (2010) provides pointers on the behavior and flight period of Regal Fritillary, and similar species to watch out for.

**Location, location, location:** I highly recommend walking up atop the spine of the ridge (see Directions, above). Once you are up there, it's a relatively easy walk on a relatively wide broad ridgetop. You can safely watch and track Regals and follow them to nectar flowers such as butterfly milkweed.

**Timing, timing, timing:** Regal Fritillary has a very long flight period which we've not attempted to delineate fully at Hogback. Back in the 1990s, we did multiple surveys per year at Hogback and other Regal sites in southern Wisconsin to understand how the main flight period worked. That's been sufficient for us to identify the main flight period. But we've never attempted to document solidly the first and last date of the flight period – that would take a lot of re-visits in a year! We have, however, done that at Buena Vista Grassland, because of how large that site complex is and how many species of butterflies and birds we study there. Our 2017 paper, "Complex Messages in Long-Term Monitoring of Regal Fritillary (*Speyeria idalia*) (Lepidoptera: Nymphalidae) in the State of Wisconsin, USA, 1988–2015" published online in the journal *Insects* is freely available as full text online. In Table 2 of that paper, we itemized out the details of flight period timing at Buena Vista Grassland by year. I would expect that site to be a bit "slower" than Hogback, perhaps by a few days or up to a week or so.

At Hogback, our peak survey has on average occurred on July 14 (median July 13), with a range from 29 June (2012, the outlier hot year) to August 11 (1993, when we-resurveyed here as late as August 25 in that infamously cool, cloudy flood year).

## Hard to find prairie species

We've had the good fortune to study this site from before conservation, when it was a working dairy farm, through various phases of conservation management. Regal Fritillaries have benefited greatly in this process, first in the unintensified farm management that allowed this population to persist in isolation here and then forward through the

evolution and implementation of conservation strategies here.

Even though I consider the conservation efforts at Hogback exemplary for trying to retain its prairie biodiversity, Scott and I have seen change in its prairie-specialist butterflies, which unfortunately has included decline. There are both climate and habitat factors relevant to this. When grazing stopped, both the flora and fauna experienced “release” from grazing. For some (Ottoe Skipper and other grass-skippers) this was surprisingly negative. For many others (Regal, Gorgone, Mottled) there’s some reason to think the release was favorable, at least at first.

But the weeds and brush also increased. I had not appreciated how much the cattle had been holding back the brush and weeds (especially the palatable ones, but even the prickly ones) until the cows were removed. Cattle-grazing can’t be expected to control brush by itself, at least in Wisconsin’s climate. Cows simply aren’t as interested in feeding on brush as goats are. Plus the exposure of the soil surface by cattle hooves opens up opportunities for weedy seedlings to establish, even as the munching and stomping by the cattle also beat them back. I came to realize that the very processes causing imperfections in this prairie site (the brush and weeds) were also leading to the phenomenal diversity of prairie plants and animals here, including specialist butterflies.

Fire began in earnest in the mid ’00s, which added another variable to the management mix. More recently, significant brush-cutting, especially southward on the spine but also on the east side of the Zinkle tract, has been successful at maintaining and expanding the open prairie. In addition, grazing has been returned to parts of this site in the form of rotational goat grazing in some years.

Regals have been the clear winner in this story, but some other species have not. I mention them here, in part because you may be curious about what all we’ve seen here, and also because perhaps with greater observation effort over more parts of this site than we’ve been able to cover, you may find some of these species. We always remain on the lookout for them, just in case.

Hogback is far from unique in decline of prairie-specialist butterflies after conservation. In fact, such decline is the rule, not the exception, in our long-term prairie butterfly studies. So please don’t hold these declines against it. Be glad that any prairie-specialist butterfly (Regal Fritillary) has

such a positive trend over such a long period of conservation effort. This is not the norm and is to be appreciated.

**Gorgone Checkerspot:** Back in the ‘90s and early ‘00s, we sometimes found this species, on occasion readily (22 in 1997, 13 in 2002). But we’ve found none after 2005. When we surveyed more than one time in a year, and also found this species, our highest count came on our peak Regal survey day.

**Mottled Duskywing:** We occasionally found this species between 1997 and 2004, primarily near the ridgetop: from July 6 (1998, a hot year) to July 23 (2004, the year without a hot summer). Its caterpillar food plant (New Jersey Tea or *Ceanothus*) is primarily on the east slope of the Zinkle tract. This got entirely burned in the cool season between our 2004 and 2005 summer visits. Unfortunately, all we’ve found since are Wild Indigo Duskywings. No offense to that species, but Mottled is the one that worries me greatly regarding its status and trend.

**Ottoe Skipper:** On my very first visit here, in early August 1992, I saw this species. We never found a lot, but in many years in the ‘90s and ‘00s, we found one or a few. They were all on the west half of the ridge in the Zinkle tract, typically higher on the slope. We last found one here in 2011.

## Other seasons

**Dusted Skipper:** This is a dry-prairie species of late spring. We’ve never been to Hogback in appropriate seasonal timing for this species.

**Leonard’s Skipper:** The one time we were here in its flight period, we did find one (August 25, 1993).

## Hilltopping butterflies

The fun of hilltopping is that butterflies from a wide range of habitat types could be found on the ridgetop. The challenge is that on a mid-summer day of good butterfly weather, it’s awfully hot up there and the butterflies are extremely active. Any kind of hairstreak is possible.

This ridge is also an immigrant and stray attractant. We’ve even seen a Zebra Swallowtail and Gulf Fritillary careen by.

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