

# The Bountiful Butterflies and Birds of Buena Vista Grassland

by Ann Swengel

This premier grassland is interesting and valuable for butterflies and outstanding for birds. You won't be at all deceived that you're in a wilderness here, though. A westerly or northwesterly breeze brings the pungent smell of paper factories. Extensive aerial pesticide spraying occurs in adjacent private farm fields. In Buena Vista proper, the vegetation clearly declares its history with humans as well. While some native prairie grasses and flowers live here, the overall classification of the site is "old field"—a weedy reversion from previous agricultural use.

I'm particularly partial to Buena Vista because it presented a dramatic test of our butterfly research. State-listed as threatened in 1989 (later changed to endangered) the Regal Fritillary had few known populations in Wisconsin at that time (we apparently arrived too late to see any at Spring Green, and Muralt Bluff's population was and is fragile). So we traveled throughout the Midwest in subsequent years to get enough study populations to understand our few Wisconsin populations. Those travels and others' research provide the details of that species' account starting on page 5. Based on what we learned, Scott wanted to look for Regals at Buena Vista. But in the early 1990s, in the two-year statewide status survey for Regal Fritillary, no one went to Buena Vista Grassland. No one including me thought it was worth checking, except Scott, who finally prevailed on me to try in 1997. I thought the site was too beat up by its agricultural history to be able to have Regals still.

Poetically, on July 2, 1997, I found the first Regal here, a glorious moment of being wrong. I and everyone else had been using a vegetative approach: Regals live in prairies, Buena Vista isn't a prairie, therefore Regals shouldn't be at Buena Vista. And it's true that Regals are here despite the vegetation, as we sure have trouble finding Regals in other old fields. But Scott noticed that Buena Vista had the resources Regals elsewhere preferred most strongly,

like large patch size and active but un-intensive land management, not to mention strong correlation with rare grassland birds, and only a mild sensitivity to floristic quality. I have a much greater respect for scientists, like Scott, who follow the logic of data regardless of humans' preconceived notions, and even more respect for the unswerving, relentless reliability of the "logic of the species," a phrase I've enthusiastically adopted from a Japanese lepidopterist, Toshitaka Hidaka.

Since then, our surveys here have been year-round for birds, then targeted to both birds and butterflies during the warm season. We use a standardized "unit" size of a 40-acre square as much as possible, and focus on grassland vegetation, away from roadside edges. Since we avoid wet ditches and woodlots, our reports will not cover those habitats. It's also hard to cover the entire site. Buena Vista is big and it is challenging to get appropriate timing and weather. As a result, there's lots of room for more learning. Our flight period information in each species account here is necessarily incomplete and sketchy. But it's all collected by the same method by one research team (us), and accounts for abundance, so I hope it gives some idea of what's possible for one group to find.

Looking for butterflies in central Wisconsin is particularly dicey. It's a rare season 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 butterflies. Many a time a perfect weather forecast from just the night before completely misrepresents the dismal weather that actually happens. It helps to have some backup plans: if the weather is poor in the spot you plan to visit, you may be able to drive a few hours to a different site where the weather may be tenable. 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!

## About the author

An enthusiast of butterflies since childhood, Ann became serious about them in the mid-1980s, with the encouragement of ornithologist Scott Swengel. We married then and have been field partners in bird and butterfly surveys ever since. We've studied prairie butterflies and birds 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 and fluctuations, and responses to site management, as well as non-technical articles. A past vice president of the North American Butterfly Association and co-editor of the annual 4th of July Butterfly Count report, Ann is currently honored to serve on the editorial board of the *Journal of Insect Conservation*.

## Acknowledgments

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with the bird data in this article. Thank you!

## Good spots at Buena Vista

Buena Vista shows the benefit of long-term management of a large habitat patch for a “keystone” species, the Greater Prairie-Chicken, which serves as an “umbrella” species conferring conservation benefit on other grassland species, both butterflies and birds. In a world of gloomy news, this demonstrates hope for the future. A variety of organizations have participated in aggregating this grassland together under management by the Wisconsin Department of Natural Resources. But all areas marked with the yellow Prairie Chicken Management signs (placed at quarter mile intervals) are open to public visitation. Just be watchful not to cross into areas not so marked.

Management at Buena Vista is with cattle-grazing, brush-herbicide, brush-cutting, mowing, haying, and burning, as well as food plots and light plowing (as a vegetation management, without crop planting or native seeding). All of this occurs in relatively small patches of usually 20-80 acres, and in any given year, most of the areas are unmanaged, or at most lightly managed. However, you do need to be prepared to find a favorite spot from a previous visit noticeably different.

We’ve seen other changes in our 13 summers of butterfly surveying here. The last few summers have been extremely dry, compounding the long-term trend of the water table lowering, as reported by prairie-chicken researchers. As a general pattern, management activities have succeeded in decreasing brush and increasing open grassland. Butterfly changes in our surveys correspond to these patterns. Associated with brush, Acadian Hairstreak has decreased. Associated with wetlands, Bronze Copper has decreased. Meanwhile, Gray Copper has increased, perhaps benefiting from the drying of the vegetation.

Traversing the grassland is relatively easy because the terrain is pretty level, although the grass can be fairly thick. It’s not particularly buggy, although sometimes ticks are apparent. In Wisconsin, they come in

two versions: small (wood ticks) and smaller (deer ticks). The latter have high infection rates of Lyme disease, and 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. Be sure to arrive well apprised on how to cope with ticks. Beware occasional poison ivy patches. Be prepared for more wind than the forecast predicted, as this is very wide open land.

Since we survey in 40-acre-square units (1/4 mile x 1/4 mile, also known as a “quarter-quarter” of a square-mile section), you’ll find that block shape is the building block of the specific locations described below and indicated on the map.

### 1. Griffith Road between Highway F and Town Line Road:

Except for a few privately owned tracts near Highway F and between 130th Street and Town Line Road, the entire length of Griffith Road fronts publicly accessible grassland on both sides of the road. This is an excellent area for Regal Fritillary. On the south side of the road is excellent habitat for Gray and Bronze coppers. Try also on the north side of the road at the west end of the quarter-quarter that’s 1/4 to 1/2 mile west of 130th Road. Leonard’s Skipper occurs on the elevated berms with flowering blazing stars. This entire block of land is also a good area to watch for Short-eared Owls. Halfway between Highway F and 130th Street on the south side of Griffith Road is a reliable Greater Prairie-Chicken booming ground. If they’re “dancing” (or “booming”), primarily from late March to early May, stay on the road so as not to disturb them (but you still see and hear them). If I only had time for a brief visit to one spot at Buena Vista Grassland, this would be the area I’d pick.

### 2. Lake Road between Town Line and Taft roads:

Except for the private land around the house on the west end, and the tilled private farmland on the north side of the road on the east end, all the land on both sides of Lake Road between Town Line and Taft Roads is contiguous publicly accessible grassland. This

is an outstanding area for grassland birds, including Short-eared Owl, Greater Prairie-Chicken, and Henslow’s Sparrow. Regal Fritillaries are present but usually in low numbers, along with the occasional copper (Gray and Bronze). If my visit was mainly about birds, this area would be a very high priority to visit.

### 3. Highway W/130th Street Junction (Northwest and Northeast):

The quadrant on the northwest side of this junction is very much old field. Weedy as the thistles are, they are a magnet for nectaring butterflies in mid-summer. This area is also excellent Henslow’s Sparrow habitat. The quadrant on the northeast side of this junction is a good Gray Copper area; focus on the subtly lower lying areas with weedy docks.

### 4. Remnant Pine Barrens:

From the junction of Lake Road at Taft Road, walk east-southeast on the truck track about 1/4 mile around the south side of a small oak knoll. On this knoll you will find wild lupine (*Lupinus perennis*). Do not go farther north than where Lake Road would go if it projected east across Taft Road. This is one of the few spots for the federally endangered ‘Karner’ Melissa Blue in this region. We haven’t found the other two lupine-associated butterflies here (Frosted Elfin, Persius Duskywing). We’ve only tried during Karner flight, but their flight periods overlap well with spring Karners.

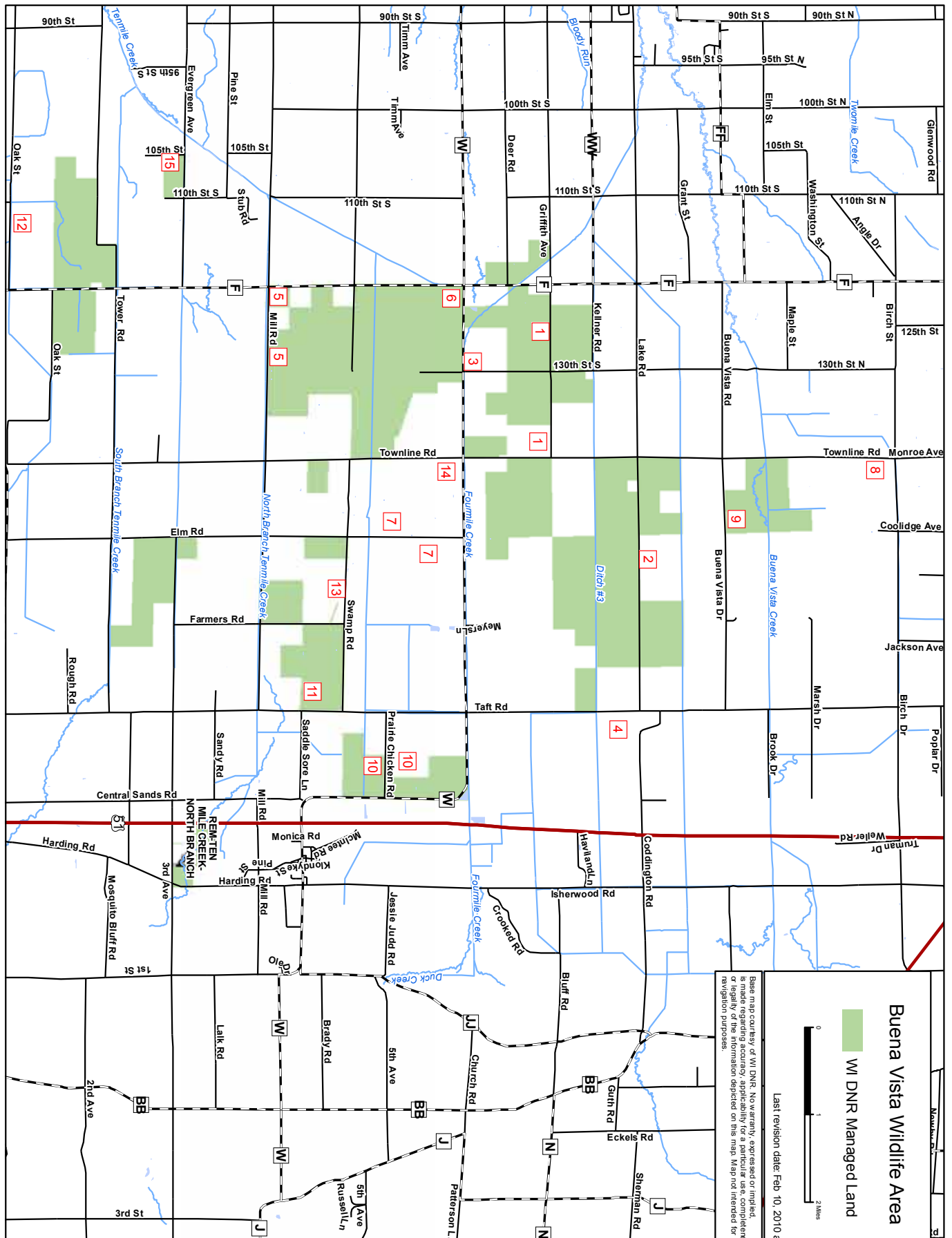
### 5. Mill Road between Highway F and Town Line Road:

This section fronts a very large patch of contiguous grassland that stretches all the way north to Highway W. Some wetter grassland occurs in the first quadrant on the north side of Mill Road east of Highway F. The third quadrant (1/2 to 3/4 mile east of Highway F on the north side of Mill Road) also has some lower lying areas that support Bronze Copper, as well as drier parts with American Copper.

### 6. Kiosk at Highways W/F Southeast:

A small prairie planting occurs around this small rest area with an informational kiosk. You may find some photogenic moments with butterflies on native flowers here. We’ve spent very little time here but Gray Coppers occur here.

### 7. Elm Road between Highway



Numbers on this map correspond to locations in the text of this article on pages 2 and 4. Note that on this map, DNR-managed lands are shaded. These lands are open to the public, but additional areas marked with yellow Greater Prairie Chicken property signs are also open to the public.

**W and Swamp Road:** Two interesting wetter units occur on this stretch: the second quarter-quarter (1/4 to 1/2 mile south of Highway W east of Elm Road) and the third quarter-quarter (1/2 to 3/4 mile south but west of Elm Road). Both of these have wetland characteristics and can be interesting for Bronze Copper, Silver-bordered Fritillary, and other wetland associates.

**8. Birch Road at Town Line Road (Southeast):** This is at the north end of the grassland. It's been very dry in recent years and less productive for fritillaries (Regal, Meadow, and Silver-bordered). But the best area has traditionally been on the east end of the first quarter-quarter, from about 1/8 to 1/4 mile east of Town Line Road.

**9. Buena Vista Road:** The fourth quarter-quarter 3/4 to 1 mile east of Town Line Road on the north side of Buena Vista Road is interesting for fritillaries (Regal, Meadow) and the occasional Gray and Bronze copper.

**10. Prairie Chicken Road between Highway W and Taft Road:** Proceed 1/4 to 1/2 mile west of Highway W on Prairie Chicken Road to get to the units on both sides of the road. Proceeding farther west on Prairie Chicken Road can be dicey in wet weather. The south unit is very weedy but abounds in docks and supports Gray Copper. The north unit is one of the few places where we've seen Purplish Copper.

**11. Railroad Berm south side (west of Taft Road at Saddlesore Road):** As you first walk out along the berm, there's private farmland on the south. But soon you'll have prairie chicken land on the south as well as north sides of the berm. This area south of the berm contains somewhat wetter grassland that supports Gray Copper as well as lesser fritillaries (Meadow, Silver-bordered), with American Copper in drier areas.

**12. Oak Street west of Highway F:** Proceed one mile on Oak Street west of Highway F to reach some of the nicest prairie flora that's easily accessible here. It will be on the north side of the road for the next 3/4 mile. This is a good spot for Field Sparrow.

**13. Swamp Road:** We've had relatively good luck seeing prairie

chickens fly to roost on the south side of Swamp Road between Farmers and Elm roads. This is also a good area for Northern Shrike.

**14. Town Line Road from Lake to Swamp roads:** This is a good area to drive in search of Upland Sandpipers perched on posts. They are also relatively easier to pick out on the ground in the more heavily grazed private pasture land.

**15. Evergreen Road:** Proceed 1 1/4 to 1 1/2 miles west of Highway F, south of Evergreen Road for 1/4 mile only. Low numbers of Regal Fritillaries can be found here, and the occasional copper (Gray and Bronze in lower lying areas, American in drier areas). But the star of the show is Leonard's Skipper, which is reliable on the subtly elevated berm with blazing stars toward the south end of the unit.

## Finding Gray Coppers

The size of a quarter, and as flashy, the Gray Copper is remarkably localized, at least in the eastern Midwest, for a butterfly reputed to be widespread in weedy places. Its range is large but centered on the vast open spaces of the Great Plains. Buena Vista Grassland is the most reliable place in Wisconsin we've found for enjoying this butterfly, possibly becoming more reliable with the long-term drying of this landscape—something a Great Plains grassland species needs to know how to handle!

**Location, location, location:** It's useful to walk in the swales, which are subtle topographical features here that are just a bit lower-lying than the remaining terrain. These seem to be focuses of Gray Copper activity, presumably in correspondence with the location of docks, the caterpillar food plant. Likewise, roadside ditches can be productive.

**Timing, timing, timing:** With a single generation per year, Gray Copper occurs in the adult life stage squarely in mid-summer here. Our earliest date is June 25 (in 1998, a very warm and seasonally early year) and latest is August 15 (in 2009, with a protracted cool summer), all the more remarkable in that our first date that year was on July 5, 2009, resulting in an astonishing span of 42 days. This was

also our best year in terms of numbers, once again illustrating the relationship of total observed to span of days the observations occur in. In fact the last five years have been our best years for finding Gray Coppers here. Admittedly, we've been trying harder, but trying sure doesn't always equal succeeding, so either a series of good years for annual fluctuations and/or possibly a trend toward larger numbers here may be in the offing. Only additional years of surveys will answer that. Meanwhile, we can report considerable variation on first and last sighting dates among years. The first sighting was as late as July 18 (in 2004, a very cool and seasonally slow year) and the last sighting as early as July 15 (in 1998 and 2007, another seasonally fast, hot, and dry year). Before 2009, our latest date was August 2 (2008).

**Other tips:** Gray Copper is fond of nectaring on milkweeds (especially swamp) and Indian hemp, but will visit other flowers as well, such as yarrow and thistles. If you flush a Gray Copper, you'll find that rapid flash of silver not as easy to track as you might expect for all its glittering appearance. It can come in and out of view, presumably due to angles of sunlight reflectance as well as alternating the shimmering underside with the dark above in wing beats. Instead of chasing after it, it can pay instead to freeze, staying alert for it to return or for another individual in the vicinity to become apparent (they're often clustered in groups, and can set each other off). Often a copper flies for a while back and forth before landing—you may eventually catch a glimpse of that flashing silver again, hopefully alighting near where it launched.

**Good spots:** Our top spots are Highway W/130th Street Junction Northeast, Griffith Road (south side from 1/2 mile west of 130th Street to 1/2 mile east of 130th Street and north side 3/8 to 1/2 mile west of 130th Street), and the west side of 130th Street 1/4 to 1/2 mile north of Highway W. But we've also seen this copper in low numbers widely around the grassland, in 18 other units in all.

**Other coppers:** The most similar species, **Bronze Copper** is more brightly colored with orange. Although double-brooded, Bronze

Copper overlaps in flight period with Gray Copper quite a bit. We've found Bronze Copper once in May (on the 27th, in that hot early summer of 1998). Otherwise, our dates seem to divide between the first and second broods like this: June 9 to July 16, and August 3-29. The last four years have been in the bottom five for our detection of Bronze Coppers at Buena Vista (1997 was also low), and in the last four years we've also consistently failed to find the second brood (our latest dates being June 15 to July 14 in those years). We've only failed to find the second brood in one other year (2000: individuals found during June 22-July 12 only). As a result, overall we've found about four times as many Bronze Coppers in that first brood. So if you're wanting to find Bronze Copper, aim for that first brood, with wetter spots being better bets, such as Griffith Road (south side from 1/2 mile west of 130th Street to 1/2 mile east of 130th Street and north side 3/8 to 1/2 mile west of 130th Street), the third quarter-quarter on Mill Road (north side of road 1/2 to 3/4 mile east of Highway F), and the west Elm Road unit (1/2 to 3/4 mile south of Highway W).

Occasionally, in a roadside or sparsely vegetated, dry section of the grassland, we've encountered an **American Copper**, which is tiny, with much orange on the front wing below, but primarily silvery on the hindwing below. Our span of dates is from May 20 (1999) to September 15 (2001), but as noted in the Jackson County online article, how many broods and which ones we detect in a year vary greatly. Sometimes we've only happened upon this species later in summer, sometimes only in May-June, and sometimes only in July. The low numbers observed overall here are presumably contributing to this pattern. You could try at these spots: Railroad Berm south side, the northwest quadrant of the Griffith Road/130th Street junction, and drier areas of the third quarter-quarter on Mill Road (north side of road 1/2 to 3/4 mile east of Highway F).

Even more rarely, we've encountered **Purplish Copper** (a bright orange on both wings below, although not quite as bright as on American Copper, and a bit larger than

American Copper) in the "lek" unit (but in the low areas, not on the ridge) south of Griffith Road 1/4 to 1/2 mile west of 130th Street (July 22, 2006) and on the north side of Prairie Chicken Road 1/4 to 1/2 mile west of Highway W (July 31, 2001). The other coppers known in Wisconsin are **Bog Copper** and **Dorcus Copper**. We've not found either in this vicinity, although Bog Copper is definitely in range. You'll need to find bogs with cranberry (see the Jackson County online article for a bog about an hour's drive west of here). Not a copper, **Acadian Hairstreak** is actually the most similar in appearance to Gray Copper. Look closely for the blue spots near the hair-thin "tail" that may be even harder to spot. Acadian Hairstreak has a jerkier, more zigzag flight path than Gray Copper, and may go up more than Gray Copper. Gray Coppers fly in a rapid but steady, direct-line path that is usually horizontally oriented. Our observed flight period here is July 2 to August 2, with better spots (relatively speaking) being Griffith Road 1/4 to 1/2 mile west of 130th, on both sides of the road.

### **Finding 'Karner' Melissa Blues**

The Jackson County online article provides a full treatment of this delightful butterfly. Here's additional information specific to Buena Vista.

#### **Location, location, location:**

We have only one small spot at Buena Vista where we find Karners. It illustrates well how acres of habitat are not created equal. This one happens to have a very dense patch of lupine, as do some other Karner sites in Wisconsin, indicating that there's more than one way to measure patch "size"—by acres (the human way) or by the number of butterflies that can be supported in that patch. For being small, this patch does manage to provide some variety in microhabitat by having some tall trees and shorter trees and shrubs scattered about in it, and variation in slope.

**Timing, timing, timing:** Based only on 2000-2009 data, familiar patterns from longer-term observations elsewhere hold consistently here as well. Large fluctuations in abundance are apparent here, within the range of variation observed elsewhere, with a persistent set of low years recently,

as also seen elsewhere in Wisconsin. These persistent low points are nerve-wracking, because it's not possible to distinguish a string of bad-luck fluctuations from a longer-term downward trend setting in. While the stereotype is for Karners to have higher numbers in the summer brood than in spring, there have been a few years where this pattern hasn't held generally in central Wisconsin. More interestingly, this site at Buena Vista has had more years with higher counts (by us, anyway) in spring than summer, but again, we've had a few other sites elsewhere that do the same thing. Our highest count ever here was in spring (32 individuals on June 22, 2002) but single digits have been more the norm. Our peak summer counts routinely hit double digits until the last four years. Even with these lower numbers, our spring counts have been exceeding our summer counts, causing me to wonder if the recent droughty mid-summers are contributing to this pattern. Our spring sightings have ranged from May 29 to June 22 (high counts also on June 8, 2006, and June 7, 2000), with no attempts earlier than that, and no Karners on June 28. Our summer dates have ranged from July 15 to August 23 (highest counts on August 2 in 2000 and 2003, August 7, 2004, then August 3, 2002), with none on July 5-14 and August 16-September 3. From this, I note no hint of a possible partial third brood here, so far anyway, plus a tendency for this to be a "slower" site, peaking later than many others in central Wisconsin.

**Good spots:** Remnant pine barren.

**Other blues:** As elsewhere in the region, **Eastern Tailed-Blue** is the most frequent other blue in this site. Although scarcer than the Karner in our surveys, this tailed-blue has a flight period fully spanning the Karner's (our dates happen to be June 9 to August 27 here). While all the other blues mentioned as possible in the online Jackson County article could be found here, the only other one we've actually recorded here is the **Spring Azure** species complex (June 22, July 15).

### **Finding Regal Fritillaries**

Spectacularly patterned and prominently sized, Regal Fritillary

is also of high conservation interest. Many declines and disappearances are documented, especially in the tallgrass prairie region and meadows east of that. But where a reliable population occurs, the Regal is a showy butterfly particularly amenable to observation. Their flight period is long, and individuals are readily sexed. Their wide open habitat affords a wide stage upon which their size and pattern, as well as active behaviors, stand out.

**Location, location, location:**

Compared to other prairie-specialized butterfly species, Regals actually occur in a wide variety of grassland types. But Regals still express a lot of preferences via their relative abundance cross-referenced to vegetative characteristics. By far the strongest responses are to grassland patch size, topography, and land management. Bigger is better, even if a lot of that large grassland is not high-quality native prairie. “Up-low” (having both upland and lowland grassland in the same patch) is more beneficial than a more uniform topography containing only lowland or upland grassland. Up-low can be dramatic, with streams dissecting steep ridges, or more subtle berms and swales. Unintensive land uses keep the grassland turf itself at ground level intact (where Regal immature life stages are) while addressing issues higher up in the turf, such as weeds going to seed and brush. Examples include mowing (leaving the clippings) and haying (removing the clippings) no more than once a year in part of the site, brush-cutting, and light grazing. Such managements are more favorable for Regals than more intensive land uses such as burning, heavy continuous grazing, and repeated mowing within a growing season, which excessively harm the Regals themselves and/or alter the turf unfavorably.

Regal abundance reacts, but not nearly so strongly, to open-habitat violet abundance (the caterpillar food plant), herbaceous vegetative degradation, and prairie type (wet, mesic, dry). I haven’t seen analysis, but my informal assessment would be that nectar flower type and abundance would also fall in the minor category. It’s not that violets don’t matter—it’s that lots of places, including grasslands, have lots of violets but don’t have the

Regals. So other factors matter more. Certainly, if violets are sparse, Regals can’t abound. But violets can also escape human observation, yet still exist. We’ve found the other violet-feeding fritillary species (see “Other fritillaries” below) to be a reliable guide. If there’s a lot of them in the area, violets must also be abundant. Vegetative quality also ranks low on the list. By this I mean how diverse and intact the native prairie flora is, and how much it’s degraded by non-native weeds. Regals show a mild positive response to higher vegetative quality of original (not planted) prairie vegetation (more on this below). I make this distinction because I haven’t seen this tested in planted prairies. Shrubs (native or not) matter more, as Regals don’t seem to thrive in brushy areas, even though other violet-feeding fritillaries can. For example, while central Wisconsin pine barrens can be large, high-quality, abundant in open-habitat violets, and have lowland open habitats nearby, I know of no recent Regal records in such sites (and don’t know how much canopy was associated with the old records), even though they are within the Regal’s historic range. In prairies, while Regals may perch on or under shrubs, we have not seen Regal populations except in sites with vegetation that is primarily herbaceous.

When Regals make use of planted prairies, and that’s not very often, it’s most often in the context of overflowing out to nectar flowers from the core population area in a never-tilled grassland nearby, even if the core area is more degraded in vegetative quality than the prairie planting. I know of no Regal presence in a prairie planting without this neighboring source population.

While not a strong pattern, in the tallgrass prairie biome, Regals peak in dry prairie. However, they also occur regularly in mesic to wet prairie (in the absence of dry prairie). Farther west, in an increasingly dry climate, Regal abundance shifts more toward wet grassland. I suspect this all relates to occurrence of grassland species of violets. In our region, prairie species of violets can abound in dry prairie but also in mesic and wet vegetation. Farther west, violets may become more restricted to wetter areas.

How does Buena Vista line up along these characteristics? The positives are its large size and management. Although some heavy grazing and burning occurs here, overall the land management is un-intensive, as most tracts have no or little management (mowing, brush-cutting, spot-herbicide of brush) in a given year. This maintains large expanses of primarily herbaceous non-brushy flora, also an important positive for Regals. Buena Vista is weaker on up-low, which is subtle at most here, via swales, ditches, and berms in an otherwise very level landscape. While the long-term drying of the landscape here might seem favorable, prairie species of violets with an affinity for drier sites are not numerous here. Since violets here appear more associated with swales, the typical pattern of Regals being more abundant in drier grassland may not apply here (not the easiest thing to figure since the topographical variation is so subtle). Violets aren’t obvious as a widespread plant here either, except in some swales. This may make up-low here, such as it is, less beneficial than elsewhere, where violets may occur significantly in both the up and the low. However, the larger leaf and plant size of the violet species here (primarily in the *Viola papilionacea* complex) may compensate some for the lower apparent numbers. Since other violet-feeding butterflies occur here (Aphrodite Fritillary especially has a long-term record of great abundance), the violets here evidently are sufficient.

Most remarkable at Buena Vista is the herbaceous degradation of the grassland flora. We’ve surveyed many other “old fields” (reversions from agriculture) and Regal occurrence in such sites is rare. It is even more rare that such a site furnishes the core habitat for an actual population. I still pinch myself metaphorically each year that I’m not dreaming when I see my first Regals here.

However, a very strong pattern in our midwest-wide surveys is the powerful correlation of Regal abundance with abundance of rare grassland birds (especially Henslow’s and Grasshopper Sparrows). It’s not presence of these birds but higher abundance that matters, and Buena

Vista is outstanding for grassland birds and not just these, but others like Greater Prairie-Chicken and Short-eared Owl that are even harder to get enough samples to support correlational analysis. So it's the complex of factors over the history of this site that explains both the birds and the Regals here now.

**Timing, timing, timing:** Mid-to late July is reliably prime time to see Regals at Buena Vista. The flight period is long, but length relates to abundance. In our two lowest years (2008, 2009), our last observation date was in August (16 and 27, respectively), even though we were there on later dates during butterfly weather. In years of better numbers, we have reliably found a few individuals into the first half of September, as late as the 15th. We've found males in September, usually quite worn, as well as females, usually still gorgeous due to their more reserved behavior. As described in "other tips" females carry their age very well!

The first observed date for Regals varies greatly—in our experience, from June 23 to July 13—and this corresponds logically to climatic variation among years. Peak numbers usually occur about 2-4 weeks after the first observed date, but lower numbers reliably continue through early to mid-August. Females typically first appear after the first male by about 1-2 weeks. Twice, we found both sexes on our first Regal date of the year (July 2, 2005 and June 30, 2007, this latter our earliest female date here ever).

After three years in a row of declines, Regal numbers in 2009 were at the lowest we've seen since first monitoring them in 1997. The last three summers have been dry here (even though some other seasons have not been), and the low numbers have been across the board, not specific to a certain management or vegetation type. Declines to numbers this low for so many years in a row have occurred in other localized species (e.g., 'Karner' Melissa Blue in central Wisconsin), and then turned around. So Regal numbers may fluctuate back up soon too. But it's possible that the long-term trend of a lowering water table here may be contributing to unfavorable summer dryness in the vegetation.

Unfortunately, it's difficult to distinguish the development of a long-term population decline from several years of bad luck in annual fluctuations. Only time will tell which is occurring here.

**Other tips:** Regal behavior makes them more findable than smaller, more sedentary species. That is, male Regal behavior does. Males spend a lot of time actively flying just above the grassland vegetation, sometimes dipping down briefly into it, primarily it appears for the purpose of searching for a receptive female. However, they are easily sidetracked into chasing after other species, usually large orange ones. This can be explained away as a mistaken pursuit of a possible female Regal, except that Regals also chase other kinds of animals, such as large dragonflies and birds up to the size of a Mourning Dove. Regals also check us butterfly surveyors out, sometimes approaching and departing from behind, but also sometimes "taking our face out" in a rapid close swipe from the front. This can be startling! I've watched a Regal change course from 50 or more feet out to swipe by Scott, who may not realize he was inspected at all. I understand this as treating us humans as a "transient habitat feature" (a form of curiosity) but given their pursuits of potential predators (dragonflies, birds), it may also be alertness to potential hazards. I've never seen such predators, or spiders and ambush bugs for that matter, succeed in catching a Regal. Regals also spend a fair amount of time nectaring, and while we've seen them use a wide variety of flowers, they have an inordinate fondness for pink and purple blossoms. So keep an eye out for their favorites at Buena Vista: blazing stars and milkweeds and weedy thistles and spotted knapweed (in prairies, also purple coneflowers). However, we've also seen Regals make a beeline for the lone pink/purple flower in an area, check it out but not land, then make a beeline for a distant pink/purple flower. This looks like patrolling a territorial beat—searching for females at likely spots from a detailed knowledge or map of the resources in the habitat.

Meanwhile, good luck finding those females. A few females will start appearing 1-3 weeks after the first male emerges. Most likely, what females

you find will be nectaring. But the sex ratio of observed individuals is typically strongly skewed toward males through most of the main flight period. The more individuals (the larger and denser the population), the more skewed the sightings are to males. Only later in the flight period, in mid- and even late August, does the number of observed females noticeably increase, although not by a lot. However, all matings we've seen were before August. I understand this to indicate that females keep a low profile to avoid predation, and harassment from those extremely energetic males. Don't conflate that with being a shrinking violet, however. Females can out-fly the males when necessary. A low-intensity courtship-rejection involves a horizontal evasive flight. But keep an eye out for the high-intensity courtship rejection. The female flies skyward with the male chasing upward after her in spiral flight, then from 50-100 feet up, she breaks away sharply downward, possibly losing the male or breaking his spirit. But if not, up they may go again, several more times if necessary until the female succeeds in making her answer stick. Once, Scott saw a female head-butt an overly pesky male. Females have also used one of us as a "moving screen"—either the male lost sight of her as she performed a hairpin maneuver around the human proceeding so sluggishly as to seem immobile to her, or he lost heart.

Since females keep such a low profile, it's hard to prove what they're doing most of the time or how many are present. But with all our observed matings in Wisconsin during June and July (when the overall sex ratio is quite male skewed), yet all egg-laying behavior in August or later, this suggests females can live relatively long, if sedate, lives. In fact, it also suggests that some of those tattered males may have relatively long and action-packed lives. Females also apparently adjust their detectability (by male Regals) in response to male activity and abundance. By mid- to late August, the coast becomes clearer, and females behave less evasively, flying in a slower way easier to follow (the "la-di-da" flight I call it, not unlike a monarch in wing-beat cadence), lingering more at nectar. But make no mistake, they

are still fully capable of warp speed. The last Regal I saw at Buena Vista was a female I inadvertently flushed out of deep grass, and she proved once again that males can only catch a female if she lets him.

With care it's possible to sex Regals in flight. The outer row of spots on the hindwing above is orange in males, but white in females. Beware: those orange spots can fade to a creamy color, plus both sexes have an inner row of white spots, which may be more obvious (on a male) in flight. I prefer to sex based on the front wing apex (above). The dark margin is an even width on males, but thicker at the apex for females, resulting in a black triangle with white spots in it.

Farther south, Regals emerge earlier in the year, as would be expected, so that in southwestern Missouri, we found peak numbers in mid-June. But the flight period continues well into late summer, as in Wisconsin. In such hotter areas, and possibly drier climates as well, Regals may pass the long hot summer by aestivation (a kind of dormancy). But I have never seen what I thought was good evidence of that here in Wisconsin. In our hotter drier summers, peak number may be both earlier and shorter, but no "bounce" in total numbers was evident later in the summer, as I assume would occur with aestivation.

**Good spots:** Regals occur widely around Buena Vista. Of the 75 units we've surveyed during Regal flight, only 12 have never turned up any Regal individuals in our experience. But units are sure not created equal in Regal abundance. Griffith Road is a reliable hotspot, and when the thistles are flowering well, the northwest side of the 130th/W junction is good. The Birch Road unit had been a good spot at the east end (1/8 to 1/4 mile east of Town Line Road) but has performed particularly poorly in the recent dry summers. If this dryness continues, I'd recommend a strategy of seeking out wetter spots such as the third quarter-quarter on Mill Road (1/2 to 3/4 mile east of Highway F on the north side), the railroad berm unit, and the two Elm Road units between Swamp Road and Highway W, even though these are not where we've found the most Regals

overall.

**Other fritillaries:** The most abundant fritillary at Buena Vista is the **Aphrodite Fritillary**. We've observed a slightly longer flight period for this species here (June 15 to September 15). It's my sense that Aphrodites peak slightly earlier than Regals. Midwesterners need to familiarize themselves with two subspecies or forms: the *aphrodite* form usually well represented in field guides and the *alcestis* form that gets less coverage. *Alcestis* has a dark rusty-red background to the hindwing below, at least as dark as the underside of many Regals, so be sure to identify your Regals based on the black background of the hindwing above. Mixed in among all the Aphrodites will be some **Great Spangled Fritillaries**, which aren't very abundant here, since they prefer more brush and trees. You may find it a challenge to sort through all those Aphrodites to pick out the few Great Spangleds, but at least the latter (with their lighter hindwing background below, and prominent band along the margin that's lighter yet) aren't so difficult to separate from Regals. Be on the lookout for **Variiegated Fritillary**, an immigrant (vagrant) that occurs with some regularity here. We've found this species here from May 18 to September 3 (most between June 24 and August 26). It's easy to overlook as a faded Aphrodite, but Variiegated also has a more pointed front wing shape. Both lesser fritillaries in range occur consistently here as well. **Meadow Fritillary** has produced the longer overall flight period (May 5 to September 26), way more observed individuals (several thousand), and more good spots: widely at Griffith Road, also in the Birch Road unit 1/8 to 1/4 mile east of Town Line Road, the Buena Vista Road unit (north of the road 3/4 to 1 mile east of Town Line Road), the railroad berm unit, and the remnant pine barren, but thinly occurring elsewhere. We've found **Silver-bordered Fritillary** from May 18 to September 3, and in much lower, more localized numbers. Good spots are the "lek" unit (but in the low areas, not on the ridge) south of Griffith Road 1/4 to 1/2 mile west of 130th Street, the railroad berm unit, and the east Elm Road unit (1/4 to

1/2 mile south of Highway W). Not a fritillary, the **Monarch** also abounds at Buena Vista, and in backlighting, can be confused for a Regal (by being large and having the illusion of a dark hindwing below) but typically beats its wings more slowly and periodically glides. In addition, every so often, a **Question Mark** flies by, way out in the grassland, where you may not be expecting one, even though there are lots of weedy nettle-like plants out there. The summer form is primarily black on the hindwing above, and some individuals can be sufficiently large to make you look closely, even as they rapidly, jerkily zoom away.

## Finding Leonard's Skippers

Buena Vista is not the best site for Leonard's Skipper. It's just amazing they're here it all. The online account for Jackson County covers this species in more detail. Here are additional notes specific to Buena Vista.

### Location, location, location:

Lots of little bluestem and large stands of rough blazing star (*Liatris aspera*), far and away the preferred nectar, are good indicators for likely Leonard's haunts here. Such locations tend to be found on berms.

**Timing, timing, timing:** We've found Leonard's in most years, but we've never found large numbers. If you find a couple, you're doing as well as us. The flight period we've observed is squarely placed in August (10-27), with a lone record from September 3. In many years, we've found the species on only a single date (August 17-26). We've failed to find Leonard's on numerous dates between July 31 and August 15, and between August 22 and September 29.

**Good spots:** the northwest quadrant of the Griffith Road/130th Street junction, Evergreen Road (south side within 1/4 mile of Evergreen Road, 1 1/4 to 1 1/2 miles west of Highway F) on the berm near the south end of the unit, and the upland berm in the "lek" unit south of Griffith Road 1/4 to 1/2 mile west of 130th Street.

**Other grass skippers:** A variety of other grass-skippers are a possibility in central Wisconsin (as described in the Jackson County online article) but they won't have as distinctive a spot-band below as on Leonard's, and

they'll by and large be pretty faded. Mostly they'll be (or once were, before fading) tan, brown, or dark in hindwing background color. Alternatively, they may be (or used to be) orangish (not rusty red as in Leonard's) in hindwing background color. Keep an eye out for **Peck's Skipper**, which has multiple broods per year, and so could be fresh at this time of year, but is much smaller, and while highly patterned, does not have a single discrete spot-band. You may have trouble identifying these other skippers, but at least you will be confident they are not Leonard's Skipper.

### Immigrant butterflies

Weedy sites like Buena Vista can be favorable for immigrant butterflies, since these generalist species make a living off of opportunistic plants (native and non-native). There's also a logic to which immigrants we've found more often here. With oodles of weedy thistles for their caterpillars, **Painted Ladies** top this list. Our observations range from May 18 to September 3, with most falling between July 9 and August 27. **Common Buckeye** is next, with butter and eggs to feed their immatures. Our records span June 9 to September 15, with most between June 15 and August 17. Next is **Variiegated Fritillary**, consistent with the abundance of other violet-feeding fritillaries here. Our observed flight period here is May 18 to September 3, with most between June 24 and August 26. Very sporadically, we've also found **Checkered White** (May 18 to September 15), **Little Yellow** (August 2-27), **Southern Dogface** (August 27 to September 5), and **Dainty Sulphur** (July 4-September 8). Immigrant skippers are conspicuously absent from this list. Either we're overlooking them, or they don't appreciate the kinds of grasses predominating here.

### Wetland butterflies

Wetlands aren't a study habitat of ours, so a detailed account on such species awaits another person's efforts. We've found wetland-associated butterflies here primarily in passing, in a few wetter grassland units such as those on Mill Road and Elm Road, and the lower lying areas along Griffith Road. We avoid the deeper wetter

ditches since they're an obstruction to our getting out into the grasslands we wish to survey. However, such areas might offer useful pickings for wetland-associated butterflies. Just as the grasslands here do not offer the full array of species possible in a pristine undegraded prairie, don't expect the full array of wetland species either. Plus, the ongoing lowering of the water table in this area is no doubt unfavorable for wetland associates. Even so, a few species will reward your efforts, based on what we've found (and our flight dates no doubt understate the flight periods due to our cursory treatment of this habitat). Besides **Bronze Copper** and **Acadian Hairstreak** (covered in the Gray Copper account), we've also found **Least Skipper** (June 9 to August 28), **Eyed Brown** (July 11-August 2, plus August 16, 2008), **Dun Skipper** (July 14-30), and **Black Dash** (July 14-19). While present in wetlands, **Long Dash** (June 9-August 2) occurs widely in more upland grassland here too, and has been the most abundant skipper we've found. Confusingly similar species to watch for are **European** (June 15-July 19 in our surveys), **Peck's** (June 22-August 22), and the surprisingly infrequent **Delaware** (June 22-July 30).

### Finding grassland birds

We're unabashed, unapologetic, unrepentant aficionados of grasslands. The places most people fly over or dread driving through out in the vast open stretches of North America are favorite vacation destinations for us. As turf connoisseurs, we view Buena Vista as a globally important grassland bird spot. Even if you're not into birds, I encourage you to notice the Greater Prairie-Chickens and Sandhill Cranes here. (Likewise, if you're here only because of the birds, Regal Fritillary is the butterfly for you.)

The star of this avian show is the **Greater Prairie-Chicken**, as you can tell from the yellow property signs demarking land open to public visitation here. The chickens make themselves most obvious in spring, when the males perform breeding displays on "dancing grounds" (leks) that are in wide open areas of low turf, or even no turf at all (plowed

fields). While it's possible to make arrangements to use a blind in the early morning to watch the spring "dancing" displays, this isn't necessary. We get to take in all this in passing without disturbing the birds or their human watchers, or getting up all that early in the morning either. Just stay at the road, in your car if the lek is nearby, but if it's 250 yards or more away, it's okay to get out of the car, as long as you stay by the road and don't approach them. Although daybreak is the busiest time, the chickens also dance in the evening, as well as in broad daylight (mainly in prime seasonal timing), and even after dark, which you can tell from their cackles and ghostly moans. While most of this action occurs from mid-March to early May, before butterfly season really gets under way, the lekking extends well into May and then sporadically at other times of year. A traditional lek is south of Griffith Road 1/4 to 1/2 mile west of 130th on the mowed berm, and mowed spots well off-road on either side of Lake Road, but you'll also encounter impromptu leks in non-traditional spots that change from year to year, including tilled agricultural fields.

Year-round you can find chickens loafing in short turf in hayed, plowed, and harvested farm fields as well as wildlife corn plots, this latter especially in winter. You'd be surprised how hard they can be to pick out, while still in plain sight. For example, watch for mowed areas along Griffith Road and west of Highway F between Mill and Evergreen roads. Especially in fall and winter at dusk, flocks may be spotted flying to roost, which can be in adjacent wood lots, as can be seen from Griffith Road and Swamp Road east of Elm. But outside the dancing grounds, most of the time, it's not easy to find a chicken. While you're walking around looking for Regal Fritillaries, be aware that at any moment a chicken might flush out of the grass, sometimes almost from under foot, even though most of the time, you'll encounter no chickens this way. It's just as well to watch closely where you're walking anyway, since you might turn an ankle in an animal burrow. While leks are in short turf, nests and hiding spots are in thick grass.

All this successful attention to

prairie-chicken conservation has conferred a wonderful “umbrella” of protection to other grassland birds (not to mention butterflies). Just as much a “top-dog” species as the chickens in requiring landscape-sized grasslands is the **Short-eared Owl**, but much harder to find. Unlike many other birds, this species exhibits extraordinary fluctuations in abundance among years, something we butterflyers are quite used to. It’s hit and miss whether we find any in the winter, especially unlikely in heavier snow covers, but it’s also remarkably variable how many we find during the warm season, tied to variation in prey abundance.

Given its reputation for activity during the day, it’s remarkable how hard Short-eared Owls can be to find except in certain specific time frames tied to their breeding cycle. Peak daytime activity occurs during prime breeding or territorial displays, which typically begin in mid-March, peak in late March, and continue into April. This intensive activity period often seems to begin and end abruptly rather than developing and tailing off gradually. During this period, you may be blessed with prominent flights an hour or two before sundown and continuing until dark and afterward (judging from when we’ve heard singing and the whoosh of wing clapping). While eggs and youngsters are in the nest, the adult on the nest hangs very low and tight, only flushing if we happen to bumble right upon them, and we don’t want to do this. Nests should be avoided at all cost to prevent harm to the young from predators following human actions and scent trails to find nests. However, other adult(s) may fly prominently in patrols around the territory, in a circular “frontating” flight where the owl manages to keep its piercing gaze laser-focused onto us hapless surveyors (clueless as to the actual location of the nest yet immensely offensive to the owls as trespassers) as it circumnavigates us aerially. Even after the young have wandered out of the nest, which can’t really be called fledging since their flight-worthiness is questionable, the adults have an extra burden of hunting to feed these hungry but far from self-sufficient young. So into June and even early July, adults

may be hunting during daylight (especially early and late in the day). Until young are confident in flight, they’re very hard to find, adept as they are in their evasive “grassing” walks through thick turf “tunnels.”

Around mid-summer (sometime in July), once the young acquire more hunting skills, and as nights gradually lengthen, daytime observations of the owls dwindle, and you’re stuck scanning intently in dying light for hints of owl activity. Drives after dark become relatively more profitable, as family groups bring their young to roadsides (if they’re low-travel dirt roads with unfenced thick grassland on both sides). It appears that youngsters may find it easier to hunt from perches on berms by roads and where the grassland is sparser at road edges, with adults possibly nearby to supervise. Also, once youngsters are more self-sufficient, it appears that the owls (young and adults) are more willing to flush, and from farther away, when butterfly surveyors happen to pass through their area. Even so, it can be startling, just as with the chickens, when a relatively large bird suddenly arises out of the grass ahead.

This all assumes a decent number of nesting Short-eared Owl families. But in some growing seasons (such as 2002), we’ve found very few individuals, while in other years (especially 2000), it was impossible to miss the owls. Over the long run, relatively reliable spots for daytime and night-time observations have been along Griffith Road, Lake Road, and Town Line Road between Highway W and Lake Road. The large block of grassland southeast of the Highway W/F junction is also a good steer—it’s just not as amenable to searches because there’s not as good angles and vantages from the roadway.

Similar in size, flight behavior, and preferred prey and breeding habitat, **Northern Harriers** are likely to be encountered in your owl searches, not least because they and Short-eared Owls are very mindful of each other. The owl generally seems more unhappy about the presence of harriers than vice versa. Like the owls, harriers are also often unfindable in winter, but otherwise are a standard feature of the site.

While not a rare species, the **Sandhill Crane** occurs abundantly in all seasons except winter at Buena Vista, one of the best places in Wisconsin we know of for getting good clear views of this majestic bird. The cranes nest in the ditches, as well as in dry upland nests out in the grassland. This can lead to interesting encounters while you’re looking for butterflies. Prime nesting time is May, but the cranes here can be on eggs from mid-April through June. Once hatched, the chicks leave the nest quickly but can’t fly for about nine weeks. So if you’re walking around looking for butterflies or grassland birds during that period of greatest vulnerability for crane youngsters (from egg through the first few weeks after hatching), be aware that a breeding pair of cranes may take umbrage at your invasion of their territory. This umbrage can take the form of alarm calls and impressive distraction displays. However, the most intense response, which I experienced up close and personal just last May, is the full frontal charge threat, with an impressively sized adult crane semi-running and semi-flying just above the ground straight at me, spear-like bill leading the charge. (I implemented the appropriate response immediately—turn tail and run!) Once the youngsters are more mobile (even on foot), the family enters the “angry crane” phase of the year, when they vocalize and glare their discontent at intruders, but walk or fly away if necessary. Feeding typically occurs in shorter turfs and agricultural fields. In the fall, migrants augment the summer resident cranes, as large flocks feed and prepare for migration. Magnificent flights occur at dusk from feeding venues to roosting sites.

An improbable sight high and dry in grassland, the **Upland Sandpiper** (a shorebird) first appears around April 20 and is fully present by May 15. We usually see our last individual between about July 25 and August 1. They’re easier to find in grazed places because there’s less obscuring vegetation, but they occur widely throughout the grassland, as they can be heard from many spots. Prime locations include Town Line Road between 1/2 mile north of Griffith Road south to 1 mile south of Highway W, Elm Road up

to 1 mile south of Highway W, and in all directions within earshot of the Highway W/130th Street junction.

Working my way down smaller in size, and subtler in identification, I now reach the blackbirds and allies. Distinctive (at least as adult males) in appearance and voice, the **Bobolink** is abundant at Buena Vista. They return in spring like clockwork around May 1-5, with full presence by May 15. In summer, they're variable in how long they're still obviously present—until July 20-30 usually. Often, after that time they are much lower in profile. Obviously a blackbird, **Brewer's Blackbird** can nonetheless be overlooked as a different species from run-of-the-mill dark songbirds. Brewer's start arriving later in April, usually around the 20th, and once fully present by about May 1, they occur in their highest numbers and most vocal behavior through mid-June. While readily findable until about August, Brewer's Blackbirds become problematic to pick out among large mixed flocks in agricultural fields. Brewer's like short turf and favor currently grazed tracts, both at Buena Vista and in neighboring private farmland. Second best are regularly hayed locations and just cut hayfields. Distinctive in appearance and voice as a group, **Eastern Meadowlark** (found by us on surveys from March 28 to October 10) and **Western Meadowlark** (March 18 to October 14) are subtle to distinguish from each other. Peak vocalization and detection occurs in April, even early in the month, possibly lingering into May in cool, late springs. Eastern favors wetter thicker grassland, while Western prefers less plant litter and shorter, sparser standing dead grassland vegetation, including private rangeland grazing in the vicinity. But both species occur widely here, and they show a propensity for tradition, so that they may seem out of place for a location's current condition. For example, Westerns may linger in a tract that used to be more heavily/frequently grazed than now, and Easterns may linger when a formerly tall thick tract becomes hayed.

Now I reach the abundance of small brown grassland sparrows, often more distinctive by voice than sight.

The star of the show for us—a primary reason for our initiating surveys here—is the **Henslow's Sparrow**. First arriving around May 1, it is in full occupancy by about May 15. It is more vocal in the first half of the morning, and also in the dusk of evening, through about July 20-25. Henslow's like abundant litter and thick (not necessarily tall) turf. Good spots include 130th north of Highway W until Griffith Road and then westward on Griffith to Highway F on the south side, as well as Lake Road. More numerous is the **Grasshopper Sparrow**, which first arrives around April 20-25 and is fully present by May 10. From then until about August 1, it is readily found by voice. More abundant yet is the **Clay-colored Sparrow**. This species favors grasslands with some shrubs or brush. Most abundant of the grassland sparrows, in fact unavoidable, is the **Savannah Sparrow**. Both of these first arrive in early to mid-April and are readily detectable by voice until late July to early August. Some other species are present but not frequently encountered at Buena Vista, at least in our surveys. At the northeastern end of its typical range, **Dickcissel** appears in low numbers in some years. Our survey dates for this bird cover a fairly short span, from June 13 to July 18. **Field Sparrow** is hard to find but occurs in the remnant pine barrens and in the grassland fronting on Oak Street west of Highway F. It first arrives around April 15 and is fully occupying by about May 1, and is actively vocal through about early August. Not actually rare here, **Vesper Sparrow** simply prefers sparser grassland that is more available in neighboring agricultural land than in Buena Vista grassland proper. It arrives by the end of March and is present through at least October. Although not a sparrow, **Horned Lark** is closely associated in habitat with the Vesper Sparrow. It is also the first harbinger of spring for grassland songbirds, a most welcome returning migrant first appearing around the end of January or early February and lingering late in fall until December, with a few wintering.

Every so often, a really unusual find turns up, including Smith's Longspur, Ferruginous and Swainson's hawks, Prairie Falcon, Loggerhead Shrike, Western Kingbird, and Whooping

Crane (birds reintroduced at nearby Necedah National Wildlife Refuge).

Winter presents its own delights for birders. **Snowy Owls** are fairly reliable, although we sure don't find them every year, especially in winters with little snow. Watch prominent perches in broad daylight, even in inclement weather (you'll need to take cover sooner than they do!). They favor sparser turfs as in agricultural fields and windswept pastures (as along Highway W, Taft Road, and Town Line Road), but if there's deep snow, even tall thick grassland takes on that sparse character due to the little of the standing dead vegetation emergent above the snow (as on Lake Road). But good luck spotting a Snowy Owl perched on deep snow in a wide open "whitescape." Large flocks of **Snow Buntings** are a possibility. They also favor sparse grassland, either in short stubble windswept of snow or in deep snow with little emergent grassland vegetation. Watch for mixed flocks including **Lapland Longspurs** in fall, spring, and mild winters. Although somewhat variable in abundance from year to year, the **Northern Shrike** is fairly reliable as well, but not all that abundant. They seem to be more findable as the day wanes, rather than in bright mid-day sun. Watch telephone wires, treetops, and brushy areas. As with all things grassland, results vary among winter visits. Whether we find any Snowy Owls the entire winter, and if so, how many, varies a lot among years. On a particular visit, we may find where the big flock of Snow Buntings is hanging out, or our foray may consist mainly of scary winter road conditions and bleak weather. When we find something neat, we sure appreciate it since we can't assume we'll find it again next time, and when we don't find much, at least we can hope the next visit will probably be better!

*You can find images of the butterflies described in this article in Butterflies through Binoculars: the East by Jeffrey Glassberg.*

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