though it, and there at the bottom sat a most stunning example of *B. rufipes* (literally meaning red-legged buprestis). I hadn't expected the specimen to be sent alive when I gave my mailing instructions (but I did not, after all, specify that it should be otherwise), and I felt a little sorry for the beast when I saw it drinking eagerly after I put it in a terrarium with wood chips and a stick and misted it with water. Once it was rehydrated, I was glad to have this unexpected opportunity to photograph a living individual of this beautiful species.

Buprestis rufipes is not a rare species, but it is certainly not very commonly encountered either. For many years the only specimens in my collection were two dead adults that I found in Japanese beetle traps that I monitored during my early days with the Department of Agriculture. I finally cued into this species when I chopped some big buprestid larvae out of the trunk sapwood of a very large, standing dead slippery elm (*Ulmus rubra*). They resembled the larvae of *Chrysobothris* but were larger and not so flattened, so I retrieved my chain saw from the truck and extricated the lower 6ft of the 6-8" diameter trunk from the swamp in which it was growing. My efforts were rewarded with a nice series of this species, and I have since reared it from even larger trunk sections of *Acer saccharum* and *Quercus palustris*. In each case, the wood was in early stages of decay with the bark partly sloughed and the outer wood layer slightly softened (MacRae and Nelson 2003, MacRae

REFERENCES:

2006). Knull (1925) recorded this species breeding in a variety of other hardwoods, thus, it would seem that the size and condition of the wood are more important than the species.

Knull, J. N. 1925. The Buprestidae of Pennsylvania (Coleoptera). *Ohio State University Studies* 2(2):1–71.

MacRae, T. C., and G. H. Nelson. 2003. Distributional and biological notes on Buprestidae (Coleoptera) in North and Central America and the West Indies, with validation of one species. *The Coleopterists Bulletin*57(1):57–70.

MacRae, T. C. 2006. Distributional and biological notes on North American Buprestidae (Coleoptera), with comments on variation in *Anthaxia* (*Haplanthaxia*) *viridicornis* (Say) and *A.* (*H.*) *viridfrons* Gory. *The Pan-Pacific Entomologist* 82(2):166–199.

Flaming the Debate

Ted C. MacRae[1]

As my interest in prairie insects has increased over the past few years, so has my interest in their conservation. Many insects are restricted to prairies through dependence upon prairie plants or their unique physical and trophic characteristics. Thus, preservation of not only prairie plants but their insect associates as well is a major goal of conservationists. The task is daunting – for example only ~1% of tallgrass prairie remains in the central U.S., the rest long ago converted to agriculture or otherwise irreparably altered.

Prairies are dynamic natural communities that rely upon disturbance – this need to "disturb to preserve" creates an oxymoronic conundrum for restoration ecologists that is made even more difficult by the fragmented nature of today's prairie

Eastern redcedar encroaching loess hilltop prairie, a critically imperiled natural community in Missouri.

[1] Reprinted from an article posted September 5, 2010 on the author's website: http://beetlesinthebush.wordpress.com. All photos by the author.

landscape. The situation here in Missouri is even more difficult, as nearly all of our grassland preserves (tallgrass prairie, sand prairie, loess hilltop prairie and glades) are exceedingly small and highly disjunct relicts not connected as parts of larger systems.

In recent years, prescribed burning has become the management tactic of choice for restoring and maintaining grassland preserves. There are good reasons for this – not only are increased floral diversity and reversal of woody encroachment well-documented responses to fire, but burning is also highly cost-effective (a critical consideration in today's climate of shrinking public budgets). As the use of prescribed burning on grassland preserves has become widely adopted, however, concerns about the impacts of fire on invertebrate populations have been raised. The subject is now an area of intense research, but studies are hampered by the limited availability of large, long-unburned tracts of native prairie, and no scientific consensus has yet emerged. Regrettably, the debate has polarized into "pro-" and "anti-fire" camps that seem unable to communicate with each other constructively. This is unfortunate, since both ends of the spectrum offer ideas that could be used to achieve the goal of preserving prairie remnants while mitigating concerns about invertebrate impacts. I have previously expressed my own views on the subject, a position that I suspect some might mistakenly characterize as "anti-fire." While I do support the use of prescribed burning, I do not support its use with no consideration of other prairie management strategies such as haying and light grazing (not to be confused with the heavy, abusive, unmanaged kind of grazing that has degraded so much of our landscape). All of these tools (as well as parcels that receive no management at all) have potential value in prairie management and should be considered.

Those interested in potential fire impacts on prairie invertebrates will be interested in this latest salvo by Scott Swengel and colleagues, who used metadata analysis to correlate declines of prairie butterflies in the Midwest with the widespread adoption of prescribed burning as a management tactic. The authors present convincing evidence that tallgrass prairie butterfly populations are not co-evolved with fire regimes currently used for prairie management, although their conclusions will no doubt be challenged. Nevertheless, until a firmer scientific consensus can be achieved, prudence should dictate some measure of caution in the use of fire as an exclusive prairie management tactic.

Dear Colleagues:

We are pleased to announce a new article by Scott Swengel, Dennis Schlicht, Frank Olsen, and Ann Swengel, based on long-term data that has just been published online, ***Declines of prairie butterflies in the midwestern USA****. This paper is available free from Springer Open Choice at http://www.springerlink.com/content/rv6k823m46226563/ or by going to the Journal of Insect Conservation Online First section and scanning through the articles in ascending number order until getting to articles posted 13 August 2010.*

The trends of tallgrass prairie skippers shown here, although disastrous, underestimate the decline in Iowa and Minnesota for several reasons:

1. *In statistical testing we only include sites with adequate data for testing, which eliminates many sites from inclusion that had 100% declines of a specialist we know about.*
2. *Nearly all sites with long time series were the top sites to begin with, which are likely to take a longer time to show large declines than medium or low-quality sites.*
3. *Recent government sponsored surveys not included here show another round of huge declines for Poweshiek Skipperling in Iowa and Minnesota.*
4. *Some species went undetectable by the late 1980s and early 1990s, so didn't register as a presence when the study began. Hence, they cannot show a decline since then.*

Some good news is that conservation based on existing knowledge of specialists' management responses gets far better results (as shown by Regal Fritillaries and Karner Blues in Wisconsin than typical management. So declines like this are not inevitable.

The Ecological Interpretations and Conservation Conclusion section of Discussion contain some of our new insights explaining the observed about land-use effects on prairies and butterflies.

Scott Swengel

My thanks to Scott Swengel for giving me permission to reprint his introduction.

REFERENCE:

Swengel, S. R., D. Schlicht, F. Olsen & A. B. Swengel. 2010. Declines of prairie butterflies in the midwestern USA. *Journal of Insect Conservation*: DOI 10.1007/s10841-010-9323-1.

St. Louis Zoo Lecture Series

Jim Jordan[1]

The St. Louis Zoo presents two lecture series, *Science Seminar Series* and *Conservation Conversations*, co-sponsored by the Academy of Science –St. Louis. Programs are held in the Living World, with free parking available in the North parking lot. These lectures are **FREE** and open to the general public, no reservations required. Visit www.stlzoo.org or call (314) 646-4544 for more information.

SCIENCE SEMINAR SERIES

Wednesday, December 1, 7:30 – 9:00 p.m.
"Flipping the Switch: Brain Science Potentials for Smart Grid Technology" – Ganesh Kumar Venayagamoorthy, Ph.D., 2010 St. Louis Outstanding Scientist Award recipient, Academy of Science – St. Louis; Associate Professor, Department of Electrical and Computer Engineering, and founder, Real-Time Power and Intelligent Systems Laboratory, Missouri University of Science and Technology.

No program in January.

CONSERVATION CONVERSATIONS

No program in December.

Tuesday, January 18, 7:30 – 9:00 p.m.
"Aiding Armenian Vipers" – Jeff Ettling, Curator of Herps/Aquatics; Project Manager, Armenian Viper Conservation Center.

[1] Curator of Education, Saint Louis Zoo.

Group Activity/Walk Schedules

ORNITHOLOGY GROUP
Chair – David Becher

Saturday Bird Walks (Leader – David Becher). All trips begin at 8:00 a.m. and normally go through early afternoon, so bring lunch if you wish to stay out. Everyone is welcome. The leader reserves the right to change the schedule if necessary. Walks are at Des Peres Park through December. If you have questions, contact David at (314) 576-1146 or DavidBecher@msn.com.

Thursday Bird Walks (Leader – Jackie Chain). Jackie Chain will be leading Thursday birding trips from Des Peres Park parking lot (east side of Ballas Rd. just north of Manchester Rd.). Meeting time is 8:30 a.m., and return is usually by 3:30 p.m. (but you may leave at your convenience). Bring lunch, beverage, binoculars and if you have one a scope/tripod. If you have questions, contact Jackie at (314) 644-5998 or chainjac@sbcglobal.net.

BOTANY GROUP
Chair – George Van Brunt

Monday Botany Walks (Leader – Fr. James Sullivan; now in his 44th year as Botany Walk Leader!). The WGNSS Botany Group visits many of the same locations as the Bird group: Busch Conservation Area, Shaw Nature Preserve, the Missouri Botanical Garden, Babler State Park and Cuivre River State Park. Learning plants will help you learn butterfly host plants. Sign up for WGNSS Botany Group emails from Jack Harris by contacting him at jahar@mac.com or (314) 368-0655 and receive an email no later than Sunday about the following Monday's trip.

ENTOMOLOGY GROUP
Co-Chairs – Phil Koenig and Jane Walker

Thursday, November 18, 7:00 – 9:00 p.m.
Mike Arduser will host the meeting at Bush Memorial Conservation Area. Rich Thoma will give a talk on the " Evolution of Insect Flight." Please note this meeting is on a Thursday night.