

PATCHES OF PRAIRIE

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As I walked back through the research plots near the West Loop Trail the other day, I again noticed how obviously the Hulbert Fire Demonstration Plots showed the effects of burning on the tallgrass prairie. Viewing them from a distance is like looking at a patchwork quilt. The Hulbert Plots, as most of us call them, were set up by Dr. Lloyd Hulbert in 1979 to illustrate the effect of burning at various times of year and at different frequencies on the growth of vegetation and on species diversity. Dr. Hulbert intended that these plots would be educational, especially for visitors to Konza Prairie. I hope he would be pleased to know what an important part of the Konza Environmental Education Program (KEEP) they have become.

KEEP uses the plots when guided tours are given to adult groups and our docents have been trained in the details of their importance. Teachers in our summer workshops have carried out activities in the plots and students are taken there to see the effects of fire. Most recently the plots have become an important part of the Schoolyard LTER program. High school students are studying the effects of fire on plant diversity. And more recently, middle school and elementary students are discovering the intimate details of the lives of certain insects that are affected by fire as well.

These insects have a relationship with Canada goldenrod. A female fly lays an egg in the stem of the goldenrod. Chemicals injected by the female with the egg or provided by the larva stimulate the plant to grow more tissue around the site until a swelling is noticeable. This swelling is called a gall. Inside the gall the larva is not only protected by the plant, but also has plenty of food. It overwinters inside the gall as a pupa and emerges as an adult in May. The time when the prairie burns can be of major importance to the survival of these insects. Historically, a large number of fires occurred in the spring—especially in April and May.

The galls are easy to find in the fall and students can count them using the same sampling method as researchers. This allows students to hypothesize about the effect of fire on the insect populations and demonstrates how scientists take a sample to get

information about a larger part of the ecosystem. The Hulbert Plots are a perfect place for kids to learn science. Their enthusiastic response is reflected by the feedback received, such as these thank you notes from fourth graders:

Dear Dr. Wright:

Thank you for teaching us about galls. I really liked going to the Konza Prairie. It taught me a lot. I wish I could work there too. Your assistant Jan helped me out a lot.

From, Cooper

My teacher and most of the people in my class including me really love science so that made it really fun learning about it. I thought it was incredible to see the inside of a gall and a tiny baby fly!

Sincerely, Lisa

I had fun studying galls at the Konza Prairie. I learned a lot of facts about prairies. I have never learned so much in one day. Thank you, Andrew



A student from Most Pure Heart of Mary Catholic School holds an opened gall during a Schoolyard LTER activity.