



Mystery Moth on Last Page, Photo by Sairah Javed

# Louisiana Natural Areas Registry Quarterly Newsletter

December 2012  
Volume 9 Number 4 of 4



Working with Landowners towards Conservation of Louisiana's Native Habitats

[www.wlf.louisiana.gov/wildlife/natural-areas-registry-program/](http://www.wlf.louisiana.gov/wildlife/natural-areas-registry-program/)

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## Natural Areas Registry Update

**Note from Judy Jones:** It is with a sad heart that I have to say goodbye to the Louisiana Department of Wildlife and Fisheries Natural Heritage Program and to all of the wonderful people that I have had the pleasure of meeting over the past 10 years as the Natural Areas Registry Coordinator. Thanks for allowing me to be a part of your lives and to help you with your conservation efforts. I have learned a great deal from you and hope that you have picked up a little something from me as well. Good luck to all of you in your future endeavors and I hope to see you again. (Photo taken in calcareous forest at Kisatchie National Forest.



Judy Jones started her career with the Louisiana Natural Heritage Program in December of 2002. She was contracted to work on the Louisiana Natural Areas Registry, which at that time had only 60 active registries. Today we have 117 active registries with several more pending final approval. Judy played an important role in the development and growth of the Louisiana Natural Areas Registry and she has been a valued member of the Louisiana Department of Wildlife and Fisheries Natural Heritage Program.

## Prairies in Louisiana

**Prairie** is the French word for meadow. A prairie is an upland habitat dominated by native grasses and other herbs with trees and shrubs lacking.



Coastal Prairie in Calcasieu Parish

From a global perspective, prairies often occupy transitional areas between forests and deserts. Prairies are grasslands, but not all grasslands are prairies. Coastal marsh, for example, is not considered prairie by biologists, but has sometimes been referred to as prairie historically. **Pasture** refers to grassland established by humans, usually supporting one or a few, often exotic, forage plants. The term **range** is applied to native grasslands and woodlands that are utilized for cattle grazing.

The popular perception is that Louisiana was historically dominated by dense forests. Those living outside of the state may think Louisiana is just "swamps". Nothing could be further from the truth. While floodplains supported extensive forested wetlands, the majority of the land surface outside of floodplains experienced fire at regular intervals and supported prairies, savannas, and woodlands. Savannas and woodlands are **wooded grasslands**, having open canopies with well-developed, fire-maintained grassy ground covers. Today's landscape is much different, being dominated by forests that are densely stocked with trees and never burned, having dense shrub-dominated ground covers.

Louisiana receives adequate precipitation to support dense forests, so why do we have prairies? Soil properties and fire account for prairies and wooded grasslands in the Gulf South. Louisiana has two distinct prairie types: coastal prairie and calcareous prairie.

**Coastal prairie** historically covered 9 million acres stretching from Lafayette, Louisiana to Corpus Christi, Texas. Historically, Louisiana had approximately 2.5 million acres of prairie. The prairie land surface is dissected by drainages, with forests occurring along these drains. Forests along drainages in a grassland matrix are called **gallery forests**. There are several factors working

in concert to allow the development and maintenance of coastal prairie. First, prairie soils are relatively extreme. The presence of a clay pan near the surface restricts downward penetration of tree roots and water. This clay pan also prevents upward movement of deeper soil water resulting in drought stress which selects for grasses. Extreme soil properties plus frequent fire are adequate to maintain a virtually tree-less prairie. Coastal prairie is dominated by tall perennial grasses such as little bluestem (*Schizachyrium scoparium*), brownseed paspalum (*Paspalum plicatulum*), Indian grass (*Sorghastrum nutans*), and switch grass (*Panicum virgatum*). Most of the biomass is accounted for by a handful of grasses, but most of the diversity is provided by the many forbs that occur interstitially.



Morse Clay Prairie in Bienville Parish

Unfortunately, coastal prairie is extremely rare on today's landscape. The clay pan that retards tree establishment and growth also perches water, which makes these soils very desirable for rice cultivation. No one had the foresight to protect landscape level examples of coastal prairie. Grazing by bison historically influenced vegetation dynamics in coastal prairie. Overgrazing by domestic cattle has destroyed or degraded much prairie. Today, only a few fragments of unplowed coastal prairie remain and they are in various states of degradation.

While coastal prairie was historically a large-scale community, **calcareous prairies** are small scale communities embedded in upland pine woodlands in interior Louisiana. **Calcareous** refers to the soils having high levels of calcium carbonate. Calcareous prairies often occur in complexes consisting of several to many small prairie openings. In most calcareous prairies, the parent material is very old marine deposits. One can often find oyster and clam shells and sometimes shark teeth in the soil. Calcareous prairie soils are silty clay loams or clays with high shrink-swell potential and alkaline pH. These heavy, high-shrink-swell alkaline soils make suboptimal sites for forest development, and coupled with frequent fire, account for calcareous prairies. The species composition in calcareous prairies is similar to coastal prairies. Big bluestem (*Andropogon gerardii*) is a relatively minor component of coastal prairie, but can be very dominant in calcareous prairies. Due to extreme soil properties, calcareous prairies do not grow trees well. Calcareous prairies are often planted through with pine trees and are not detected until low seedling survival or stunted tree growth is noticed.

While both prairie types are rare, new occurrences are still being found. The best place to look for unplowed coastal prairie is in the cattle country south of Lake Charles. Brownseed paspalum is a characteristic prairie species but also increases under grazing since it is less palatable than little bluestem. Areas with brownseed paspalum and a higher diversity of native forbs may indicate a prairie remnant. Calcareous prairies are easier to find using soil surveys and

**PREVIOUS NEWSLETTER, JUNE 2012, VOL. 9 NO. 4 OF 4.** We recognized Keiffer Tancock Natural Area at Kisatchie National Forest. Articles were presented on management of calcareous prairies / calcareous woodlands, and backyard pesticide effects on pollinators. The mystery photo was a fungus called Old Man of the Woods (*Strobilomyces floccopus*).

often stick out in the field, since tree survival and growth is poor on these sites. Compass plant (*Silphium laciniatum*) is an excellent indicator plant for calcareous prairie. Protecting prairie remnants is important to keep the components of the system present on the land so larger examples of prairie habitat can be assembled sometime in the future. Thus, documenting remnants is an important component in Louisiana's prairie restoration effort.

**Mystery photo is the adult male IO Moth (*Automeris io*)**

We encountered the IO Moth (photo on the first page) in April in Caldwell Parish on Copenhagen Natural Area (shown in photo below). Adult males are mostly yellow, while females have brown forewings. Young caterpillars feed together as a group on leaves of over 100 host plants and move in long "trains" whereas other caterpillars feed alone. IO caterpillars, (shown above), have characteristic long yellow or green stinging spines covering most of the body and a well-defined red and white lateral line. Adult IO Moths do not feed because their sole purpose is to mate and lay eggs that appear as clumps on leaves or stems of host plants.



Photo by M.C. Thomas

**References:**

Butterflies and Moths of North America  
University of Florida Institute of Food and Agricultural Sciences



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