2. Avian Health in the Galapagos islands
3. Carnivores in Africa
4. Forest Park Conservation
5. Hellbenders in Missouri
6. Horn of Africa Conservation
7. Lemurs in Madagascar
8. Horned Guans in Mexico and Guatamala
9. Conservation in Peru
10. Native Pollinators
11. Saharan Wildlife recovery Center
12. Western Asian Wildlife

All twelve centers are staff based, relying on the specific expertise of various caretakers at the zoo, and connected to the zoo's interests and collection. All twelve involve collaborations between the zoo and other organizations interested in preserving endangered wildlife.

When first creating these centers, Dr. Miller was encouraged to start with charismatic animals such as cheetahs, rhinos and pandas. The thought was that it would be easier to raise money for animals people really cared about. What the zoo found was that it didn't matter if they chose a charismatic species or a non-charismatic species. As long as the animal had a great story associated with it, people wanted to contribute and get involved. A great example of this is the Ozark Hellbender. This amphibian spends most of its life under rocks in several of Missouri's clear, spring fed southern streams. Despite the fact that canoeing, swimming and other forms of recreation are occurring all around it, the hellbender is rarely seen. By most accounts it is an ugly creature, yet people have fallen in love with this animal because of its story. The story starts with the fact that the Ozark Hellbender was nearly extinct in the wild, and the few animals remaining were mostly old and injured. The story continues with how the St. Louis Zoo Wild Care Institute, committed to a long term effort to care and breed the animals. Where others have said it couldn't be done, the Zoo has successfully bred the hellbender and is currently raising over a thousand offspring, many of which will be returned to the wild. The story is not finished because there are still many unanswered questions about why this species has declined so rapidly. Until these questions are answered, the hellbender will continue to be a species of concern and the Wild Care Institute will stay involved.

WGNSS is proud to announce that the St. Louis Zoo Wild Care Institute was the first recipient of the **Bo Koster Grant**. This grant was established in 2012 in honor of Bo Koster, an avid birder and long time member of WGNSS. The award was set up to recognize individuals, groups and organizations who are doing outstanding work in the areas of environmental science, wildlife biology, botanical research, ecology and other areas of natural history. In honor of Bo Koster, WGNSS presented a check for $1000 to Dr. Eric Miller for the St. Louis Zoo's Wild Care Institute.

Amorpha Borer on Goldenrod

Ted C. MacRae[1]

***Megacyllene decora* (amorpha borer), Stoddard Co., Missouri.**

One of my favorite longhorned beetle species is the amorpha borer, *Megacyllene decora*. Like its close relative, the locust borer—*M. robiniae*, this large, beautiful, black and yellow beetle is a classic harbinger of fall by virtue of its late-season adult activity period and affinity to flowers of goldenrod (*Solidago*) and snakeroot (*Eupatorium*). Compared to the locust borer, however, it is larger, chunkier, and more boldly marked, and despite the commonness of goldenrod flowers it is far less commonly encountered than the locust borer due to the more restricted habitat preferences of the larval host plant (false indigo—*Amorpha fruticosa*).

[1] Originally posted 5 October 2014 at the author's website, *Beetles in the Bush*, http://beetlesinthebush.wordpress.com. All photos by the author.

The beetle in these photos is one of two that I found in late September at a site in the lowlands of southeastern Missouri. I've not seen the beetle at this site before, but I knew it must occur here because of the stands of false indigo that I noted during an earlier visit to the site. Considering the large number of plants present, two beetles is much less than I would have expected to see (in fact, both beetles were found in a single patch of goldenrod). I have previously featured this species (see A classic fall 'bycid) from a site about 50 miles east of this one. At that site also only a few beetles were seen despite an abundance of larval host plants (but the adults occurring on snakeroot flowers instead of goldenrod). Only twice have I seen this species in numbers that I would consider plentiful (both times in western Missouri).

Amorpha borers and locust borers are part of a larger complex of black and yellow insects that visit goldenrod flowers in the fall. These include a variety of bees, wasps, and other beetles (e.g., the delta flower scarab, *Trigonopeltastes delta*—family Scarabaeidae), but perhaps the most abundant is the goldenrod soldier beetle, *Chauliognathus pensylvanicus*—family Cantharidae (also called the Pennsylvania leatherwing). One can presume that any or all of these species serve as models for the longhorned beetles—bees and wasps are obviously protected from most predators by their ability to sting, and the bodies of soldier beetles are chemically protected by cantharidin, a highly toxic terpenoid that causes blistering and irritation of mucous membranes at low doses and can be fatal at higher doses. As the mimics, amorpha borers and locust borers could be expected to be less abundant than the models. However, considering how difficult-to-see these beetles can be when sitting on goldenrod flowers, their black-and-yellow coloration seems as though it could just as easily serve a cryptic function. It is even possible that mimicry and crypsis both have contributed to evolution of these beetle's coloration.

Orange and Black on Gold

Ted C. MacRae[1]

***Trigonopeltastes delta* on goldenrod (*Solidago* sp.) flowers, Stoddard Co., Missouri.**

The spectacular amorpha borer, *Megacyllene decora*, was not the only black-and-gold colored beetle that I saw on the flowers of goldenrod (*Solidago* sp.) a few weeks ago. In addition were several delta flower scarabs, *Trigonopeltastes delta*. This species is much more commonly encountered than the amorpha borer—not only geographically but also throughout the season on a greater diversity of flowers. Nevertheless, I had failed in my previous attempt to photograph the species at

[1] Originally posted 9 October 2014 at the author's website, *Beetles in the Bush*, http://beetlesinthebush.wordpress.com. All photos by the author.