

quickly escaped and became the scourge it is today. The take home message from Quinn Long is that invasives are most often produced from human manipulation.

So what turns an exotic plant into an invasive? No one can say with certainty, but the life history of the plant often provides useful clues. Dr. Long presented a useful list of plant traits to watch out for. These include rapid growth, adaptable to a wide range of habitats, disease resistance, outcompetes native vegetation, high reproductive output, and long range dispersal (typically by birds). Dr. Long indicated that Amur honeysuckle has all of these adaptations “in spades”. Honeysuckle is one of the first plants to leaf out in the spring and retains the leaves until long after most other species have lost their leaves. Honeysuckle roots secrete a chemical that inhibits other plant growth. The ecological consequences are that honeysuckle changes the surrounding soil and water chemistry. Research has shown that a high abundance of honeysuckle leads to reduced amphibian diversity and higher deer and tick populations. Though readily eaten by birds, the honeysuckle berry is nutritionally poorer than berries produced by native plants. To illustrate the point, Quinn took a slide filled with honeysuckle berries and overlaid M & M candies for each berry. Birds are eating honeysuckle berries as if they were candy. Finally, once the vegetation gets dense enough, nearly all other plants are crowded out.

The history of invasives is filled good intentions gone wrong. Winter creeper (*Euonymus fortunei*), Bradford pear (*Pyrus calleryana*), autumn olive (*Elaeagnus umbellata*) and multiflora rose (*Rosa multiflora*) are just four local examples presented by Dr. Long. In each case, the plants were introduced for one purpose (e.g., erosion control, natural fencing, ground cover etc.) and then escaped, quickly taking over natural habitats and causing numerous headaches.

What does the future hold? Dr. Long described a number of species that have the potential to be invasives in the near future. Japanese berberry (*Berberis thunbergii*), burning bush (*Euonymus alatus*), Chinese silvergrass (*Miscanthus sinensis*) and heavenly bamboo (*Nandina domestica*) are just a few examples of plants that could soon be considered invasives. They may already have escaped and the scientific community doesn't

know about it yet. There is a great need for better documenting of invasive plants. Dr. Long described several phone apps and web sites where anyone can send in a photo to get it identified and have its location recorded. The “Early Detection and Distribution Mapping System” website (<https://www.eddmaps.org/>) is a great place to enter data on invasive plants. The Missouri Botanical Garden also maintains a website, <http://www.mobot.org/invasives>, where everyone is invited to learn more about invasives and the options available to control them.

Ultimately, with a lot of effort, Dr. Long feels that invasive plant species can be eradicated from native habitats. Dr. Long described the many techniques and tools used to kill honeysuckle. It's not an easy process. As Quinn describes it, it is a lot easier to prevent an invasion from occurring in the first place than to have to control it after a habitat is destroyed.



## Flower Ants? Check Again!

*Ted C. MacRae*<sup>1</sup>



*Tilloclytus geminatus* on *Cornus florida*, North Fork Section, Ozark Trail, Howell Co., Missouri.

Last spring while hiking the North Fork Section of the Ozark Trail in southern Missouri (Howell Co.), I made sure to check the abundant flowering dogwood (*Cornus florida*) blossoms that were in gorgeous peak bloom at the time (early May). I've learned to check flowers of dogwood whenever I

<sup>1</sup> Originally posted January 11, 2015 at *Beetles in the Bush*: <http://beetlesinthebush.wordpress.com>.



© Ted C. MacRae 2014

Adults in profile greatly resemble ants of the same size.

can, as they are quite attractive to a variety of insects but especially those groups of longhorned beetles (family Cerambycidae) that tend to frequent flowers as adults. In the case of flowering dogwood, most of the cerambycids that I encounter belong to two genera: *Molorchus* and *Euderves*. Both of these genera are known for their great resemblance to small ants, no doubt representing examples of Batesian mimicry (where a harmless species adopts the appearance or warning signals of a harmful species to gain protection from predators).

During this particular hike I was determined to photograph *Molorchus bimaculatus*, common in Missouri during early spring on a great variety of flowering trees. On this day, however, the tiny (<10 mm length) beetles were rather scarce, and I had been frustrated in my attempts to get good photographs of the few that I had found. I've seen enough of these beetles over the years that I can recognize them quickly for what they are without the need to closely examine every "ant" that I see. So when I saw an "ant" that was too big and convex in profile to be *Molorchus* I almost discounted it as a true ant. Something about it, however, gave me pause, and when I looked closer I saw that it was, indeed, a longhorned beetle. But, it was not *Molorchus*, nor was it *Euderves*. Instead, it was the species *Tillochlytus geminatus*—an exciting find!

*Tillochlytus geminatus* has been recorded only sporadically from across the eastern U.S., where it has been reared from a variety of deciduous hardwoods (Craighead 1923, Rice et al. 1985). Perry (1975) did report rearing this species from *Pinus virginiana* (along with several other species



© Ted C. MacRae 2014

The anterior, oblique markings give the illusion of a constricted "waist", while the posterior, transverse markings resemble the "sheen" of a shiny abdomen.

normally associated with hardwoods); however, that record likely represents an "overflow" host (Hespenheide 1969) that is not typical of the species' normal host preferences. I myself had never seen the species until the years after I published my checklist of Missouri cerambycids (MacRae 1994), having succeeded in rearing adults from a variety of previously unrecorded hardwood hosts that I collected at several localities across southern Missouri (MacRae & Rice 2007). It remains, for me, an infrequently encountered species—perhaps part of this a result of being overlooked due to its effective ant mimicry.

Unlike *Molorchus* and *Euderves*, this species has not been frequently associated with flowers as adults. In fact, the only report I am aware of is that of Rice et al. (1985), who reported adults on flowers of hawthorn (*Crataegus* sp.). Perhaps this additional find on *Cornus* is indicative of a true adult attraction to flowers by *T. geminatus*, although a single adult provides only weak support. However, a related ant-mimicking longhorned beetle—*Cyrtophorus verrucosus*—has been collected on flowers of roughleaf dogwood (*Cornus drummondii*) (MacRae 1994) as well as flowering dogwood (Scheifer 1998a). The floral attraction of ant-mimicking cerambycids may be more characteristic of species in the subfamily Cerambycinae, as only one flower record exists (*Physocarpus opulifolius*) for *Psenocerus supernotatus* (Wheeler & Hoebeke 1985) and none exist for *Cyrtinus pygmaeus*, both in the subfamily Lamiinae rather than Cerambycinae and the only other true ant-mimicking species in Missouri of which I am aware.

## REFERENCES:

**Craighead, F. C. 1923.** North American cerambycid larvae. A classification and the biology of North American cerambycid larvae. Dominion of Canada, Department of Agriculture, Technical Bulletin No. 27 (n.s.), 239 pp. [[Internet Archive](#)].

**Hespenheide, H. A. 1969.** Larval feeding site of species of *Agrilus* (Coleoptera) using a common host. *Oikos* 20:558–561 [[JSTOR](#)].

**MacRae, T. C. 1994.** Annotated checklist of the longhorned beetles (Coleoptera: Cerambycidae and Disteniidae) known to occur in Missouri. *Insecta Mundi* 7(4) (1993):223–252 [[pdf](#)].

**MacRae, T. C. & M. E. Rice. 2007.** Distributional and biological observations on North American Cerambycidae (Coleoptera). *The Coleopterists Bulletin* 61(2): 227–263 [[pdf](#)].

**Perry, R. H. 1975.** Notes on the long-horned beetles of Virginia, part III (Coleoptera: Cerambycidae). *The Coleopterists Bulletin* 29(1):59 [[JSTOR](#)].

**Rice, M. E., R. H. Turnbow Jr. & F. T. Hovore. 1985.** Biological and distributional observations on Cerambycidae from the southwestern United States (Coleoptera). *The Coleopterists Bulletin* 39(1):18–24 [[pdf](#)].

**Schiefer, T. L. 1998a.** A preliminary list of the Cerambycidae and Disteniidae (Coleoptera) of Mississippi. *Transactions of the American Entomological Society* 124(2):113–131 [[JSTOR](#)].

**Wheeler, A. G., Jr. & E. R. Hoebeke. 1985.** The insect fauna of ninebark, *Physocarpus opulifolius* (Rosaceae). *Proceedings of the Entomological Society of Washington* 87(2):356–370 [[BioStor](#)].



## WGNSS Officer Elections: Candidate Biographies

---

### *Richard Thoma*

Election of WGNSS officers will be held at the April General Meeting on Wednesday, April 6. Positions up for election include the WGNSS President and 1<sup>st</sup> Vice-President—positions that are vital for the function of our organization. A brief biography of each candidate and the position they are applying for is presented below:

**President.** Currently, there is no one running for this position. The WGNSS board has been

fulfilling the presidential duties by committee since October 2015 and will continue to do so until a new President is found. WGNSS is seeking nominations for President. This position would begin as soon as the person was elected and last for a minimum of two years. Responsibilities for this role include organizing and leading monthly board meetings, writing the President's corner for *Nature Notes*, working with other St. Louis and Missouri natural history organizations, and assisting as needed with WGNSS Natural History Groups. The role of President is a vital position within WGNSS and needs to be filled if we wish to have a truly vibrant organization. Job requirements include an enthusiasm for the outdoors and a strong belief that WGNSS is a great organization. If you are interested in taking on the role of President or know of someone that you think would be a good president, please contact Richard Thoma (1<sup>st</sup> Vice-President) or any other WGNSS board member.

**1<sup>st</sup> Vice-President.** Richard Thoma has been a member of WGNSS for approximately 30 years. Most of that time has been spent as a participant in the Entomology Natural History Group, a group to which he has given numerous presentations. Other areas of interest include paleontology, ecology, evolution and hiking. He has hiked the entirety of the Ozark Trail and has begun hiking it again in reverse. Rich loves to be outdoors—every field trip brings something new to learn and fascinating to see. In addition, Rich has a strong desire to teach students the love of nature. He volunteers to speak to school groups and other youth organizations. Usually the talk is about the amazing world of insects. He has also been a Boy Scout leader as a camp counselor as a young adult and as a pack leader when his son was a cub scout. Richard has a long history of organizational involvement in WGNSS. In 2004 he joined the WGNSS Scholarship Committee and in 2006 became Chair of both the Entomology Group and Scholarship Committee—positions which he held for 4 years. In 2010 Richard was elected President of WGNSS and held the position for 4 years. In 2014 Rich began his first 2-year term as 1<sup>st</sup> Vice-President. He will be seeking a second term at the April elections.