

desperate measure to repel the mosquitoes often found inhabiting the same environment as the plant, may well have opposite the intended effect. Finally, it should be noted that the chemistry described in the *Economic Botany* paper cited above included only volatile components, due to the extraction and analysis methods employed. Nonvolatile components, potentially including such classes as glycosides, steroids, alkaloids, etc., were not studied, and therefore no inference can be drawn with respect to the plant's toxicity (or lack thereof).

The fruit of *L. benzoin* is a drupe, green when immature and bright red when ripe. A drupe has a fleshy outer part and a hard, stony endocarp which contains one seed. Spicebush is the host plant for *Papilio troilus*, the Spicebush Swallowtail.

In addition to *L. benzoin*, we found relatively small numbers of *Claytonia virginica* (spring beauty), *Cardamine concatenata* (cut-leaved toothwort), *Dicentra cucullaria* (Dutchman's breeches), *Sanguinaria canadensis* (bloodroot), and *Erigenia bulbosa* (harbinger of spring) in bloom. A few of our photos are displayed here.

Species noted by Steve Turner and George Van Brunt: **Dormant:** *Asimina triloba* (pawpaw), *Carya cordiformis* (bitternut hickory), *C. ovata* var. *ovata* (shagbark hickory); **Flowering:** *Cardamine concatenata* (cut-leaved toothwort), *Claytonia virginica* (spring beauty), *Dicentra cucullaria* (Dutchman's breeches), *Erigenia bulbosa* (harbinger of spring), *Lindera benzoin* (spicebush), *Sanguinaria canadensis* (bloodroot); **Vegetative:** *Allium vineale* (field garlic), *Aplectrum hyemale* (Adam-and-Eve orchid), *Boechera laevigata* (smooth rock cress), *Botrychium dissectum* (cut-leaf grape fern), *Chaerophyllum* sp. (wild chervil), *Cystopteris protrusa* (lowland brittle fern), *Erythronium albidum* (white dogtooth violet), *Galium aparine* (cleavers), *Geum* sp. (avens), *Mentha x piperita* (peppermint), *Packera obovata* (round-leaf ragwort), *Phacelia purshii* (Miami mist), *Phlox divaricata* (blue phlox, wild sweet William), *Polemonium reptans* (Jacob's ladder), *Ranunculus* sp. (buttercup), *Ribes missouriense* (Missouri gooseberry), *Rosa multiflora* (multiflora rose), *Viola* sp. (violet).

REFERENCE:

Tucker, A. O., M. Maciarello, P. W. Burbage & G. Sturtz. 1994. Spicebush [*Lindera benzoin* (L.) Blume var. *benzoin*, Lauraceae]: A Tea, Spice, and Medicine. *Economic Botany* 48(3):333–336.



Stag and “Stagette” Beetle

Ted C. MacRae¹

Last month I posted some photos of the very “stag beetle-ish” looking longhorned beetle, [Parandra polita](#). Chestnut brown in color with large, forward projecting mandibles, this member of the longhorned beetle subfamily Parandrinae looks almost nothing like longhorned beetles in other subfamilies but very much like a small species of stag beetle (family Lucanidae). If it weren't for the straight rather than elbowed antennae, even experienced coleopterists might be fooled by its appearance. The beetle had been attracted to an ultraviolet light setup in wet bottomland forest at the southern tip of Illinois where the Mississippi and Ohio Rivers meet. Perhaps not coincidentally, several true stag beetles representing both males and females of the species *Lucanus capreolus* were attracted to the lights that night as well.

The genus *Lucanus* contains the largest stag beetles in North America—the most desirable of the handful of species it contains being *L. elaphus* ([North America's largest stag beetle](#)) due to the male's outrageously enlarged mandibles and the species' general scarcity. *Lucanus capreolus* nearly matches *L. elaphus* in size and has an equally broad distribution across eastern North America, but it seems to be a more common species and has the male mandibles only moderately (though still distinctly) larger than the female. Despite its more routine occurrence, I rarely see more than a few individuals at a time, and they are almost always all males. This night, however, I was fortunate to encounter not only males but several females as well. I've previously photographed the female of this species ([Diminishing Stag Beetle](#)), but this was my first chance to photograph both male and female together.

While male *L. elaphus* are undeniably distinct, I frequently see confusion about how to distinguish male *L. capreolus* from *L. placidus* (the third eastern North American species of the genus, occurring

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Lucanus capreolus, female (L) and male (R), Fort Defiance Park, Illinois.



Males are distinctive by their larger, sickle-shaped mandibles.



Females have smaller mandibles (but are still capable of delivering a painful ‘nip’).



Unlike most insect groups, male stag beetles rather than females are generally larger.

more sporadically than *L. capreolus*), and separating females of all three species can be even more confusing. Male *L. elaphus* are readily identified by their greatly elongated and multi-toothed mandibles, but a suite of characters may need to be employed for females and non-*elaphus* males. The best character to use for *L. capreolus* are the distinctly bicolored femora that are yellowish at the base; however, color can be variable and some individuals will exhibit the more uniform chestnut-brown color typical of *L. elaphus*. *Lucanus placidus*, on the other hand, is usually distinctly darker in color than either of the other two species. Surface sculpture of the elytra and pronotum also offer useful characters. The elytra of *L. capreolus* and *L. elaphus* are rather smooth, while in *L. placidus* they are more distinctly punctate/rugose. The pronotum of both *L. capreolus* and *L. placidus*, however, is usually distinctly punctate compared to the relatively smooth pronotum of *L. elaphus*. The shape of the labrum (projection between the mandibles) is also usually distinctive and is not

influenced by gender like the mandibles. In *L. elaphus* the labrum is rather pointed, while in *L. capreolus* and *L. placidus* it is more blunt (indeed, in *L. placidus* the labrum can almost be described as quadrate, or “squared”). Lastly, the number of teeth on the inner margin of the mandibles is usually diagnostic for females of the three species—*L. capreolus* possessing one tooth, *L. placidus* possessing two, and *L. elaphus* possessing more than two.



What’s Black & White & Red All Over?

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Last September, labmate and fellow insect collecting enthusiast Stephen Penn and I visited

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