CHINQUAPIN

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The Well-Traveled Tallow Wood, *Ximenia americana*

By Lytton John Musselman, Old Dominion University

In an earlier issue of Chinquapin, I wrote about *Cassytha filiformis*, a parasitic vine that is pan-tropical in its distribution. Joining that elite club along with such notables as coconut and various sea beans is the parasitic shrub of southern Florida sometimes known as hog plum. Several other plants in the Caribbean are called hog plum, so I am, with minor reluctance, using tallow wood as a common name, a reference to use as firewood and probably also to a valued oil expressed from the large seeds. In fact, tallow wood, *Ximenia americana*, has the largest seeds of any of our North American parasitic plants, about the size of a medium olive. The genus name honors the Spaniard Francisco Ximeniz, a Dominican priest credited with preserving a Mayan history in the early 1700s.

Figure 1. Two cosmopolitan parasites making connection in Florida: Cassytha filiformis *(the vine right center) parasitizing the parasitic shrub* Ximenia americana.

Figure 2. Flowers of Ximenia americana*, thorn evident at right.*

Tallow wood is a straggly often multi-stemmed shrub reaching a height of ten feet with alternate, shiny rather thick leaves and thorny spur shoots (Fig. 1). Flowers are creamy-white with abundant hairs on the four petals (Fig. 2).

Figure 3. Fruits of Ximenia *near Sebring, Florida.*

The fruits (Fig. 3) bear a close resemblance to a plum hence the common name hog plum. Fruits are lemon yellow, sometimes tinged with red, with a tasty flesh that I think resembles a plum but with a juicier sweeter flesh. Fresh fruits are sometimes sold in African markets.

In Africa this parasite is widespread and seeds are collected for the expression of oil. In the northern part of Namibia a cottage industry for oil production has developed with some success, especially for use in cosmetics.

You can find tallow wood in the Lake Wales Ridge, but also in other scrub oak communities throughout peninsular Florida. It has a very wide range in the tropics. I have seen it in Sudan as well as several West African countries and New Caledonia.

Ximenia americana is a root parasite with a broad host range though in Florida I have found it chiefly on woody hosts. The haustoria (Fig. 4) are large and distinctive in the way they wrap around the host root, a feature of other members of its family, the Olacaceae.

Figure 4. Haustoria of Ximenia americana *on unidentified woody host in Florida. The clasping nature of the haustoria is evident in the folds below the main body of the parasitic organ.*

From The Editor's Desk:

Joe Pollard, Newsletter Editor

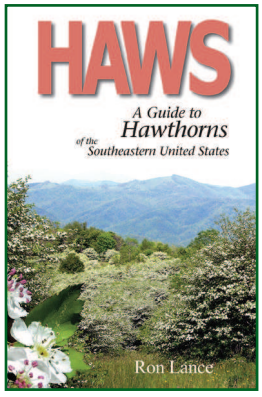
As editor of Chinquapin, I am a member of the SABS Council, the governing body of our society. This is a responsibility, but it's also a privilege to serve with a group of dedicated individuals who have volunteered their time for the benefit of botanical research and education in the southeast. The arrival of cooler temperatures in the Southern Appalachians means that it's time for the council to have our fall meeting, which was held on September 13 at the Highlands Biological Station, hosted by President Kathy Mathews. We spent a full day discussing the financial status of SABS (healthy), our membership base (declining), and several new initiatives for the future (exciting). Those one-word descriptions are in no way intended to be a full report to the membership; that will come at the SABS breakfast business meeting at next spring's annual meeting in Chattanooga. But we thought you would like to know that your elected representatives are working behind the scenes to keep the society going strong. If you have any comments, suggestions, or questions, please feel free to address them to any member of the council, whose names are printed on the left side of this page.

Council members at the fall meeting: Horn, Keener, Kelly, Bolin, Karen Ridgeway (Allen Press), Randle, Pollard, Mathews. (Zomlefer, Held, and Farmer were unable to attend.)

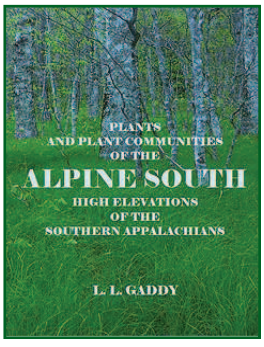
Book Corner

Two new publications may be of interest to SABS members:

Haws - A Guide to Hawthorns of the Southeastern United States by Ron Lance (2014). This new field guide and natural history covers the hawthorns (*Crataegus*) of the Southeastern U.S. region. Hawthorns are both familiar and infamous. They are all shrubs or small trees that grace the spring season with white blooms, ripen miniature apple-like fruits and defend themselves with sharp thorns, but the taxonomy and identification of hawthorns in eastern North America is one of the most notorious challenges in regional botany. Here for the first time, all significant species and their variations known to occur in this region are presented. Copious photographs, identification keys, range maps, natural histories, descriptions and reference tables are used to guide the recognition and appreciation of all our hawthorns. Available from www.floramontivaga.com, 520 pp., $29.95 paperback, ISBN 978-0-9903689-0-8.



Alpine South - Plants and Plant Communities of the High Elevations of the Southern Appalachians by L. L. Gaddy (2014). This colorful paperback includes photographic images of high-elevation communities (over 4000 feet) of the southern Appalachians from West Virginia south to northern Georgia, and some of the characteristic herbs and endemic flowers associated with these communities. A guide to the high elevation ranges, geology, and climate is included in the introduction. Available from Terra Incognita Books (www.tibooks.org), 123 pp., $19.98 paperback, ISBN 978-0-615-90598-3.



Joseph Lord, Natural Scientist

By Amy Hackney Blackwell

Joseph Lord was not a scientist. By trade he was a minister. He graduated from Harvard in 1691 and spent four years studying theology and teaching in Dorchester, Massachusetts. In 1695 he and a group of parishioners went to South Carolina to found a new town: Dorchester, on the Ashley River 15 miles inland from Charleston (Anon, 1920). There he became a plantation owner, the father of a large family – and a natural historian.

Around 1700, Lord got involved with James Petiver, an apothecary in London who maintained a stable of collectors who eagerly sent him specimens of plants and animals from newly discovered lands. Petiver advertised on ships sailing away from England, soliciting contributions to his collections in return for glory for the collector (Bellis, 2009). Some of his contributors never met him. Lord certainly never went to London. Nevertheless, Petiver seems to have had quite a virtual presence in Charleston; John Lawson heard of him through Robert Ellis and Edmund Bohun, Charleston residents who themselves sent specimens to Petiver. Lord's neighbor Daniel Henchman also collected for Petiver, reportedly traveling more than 300 miles into the country, but he died in 1709 and none of his specimens survive (Dandy, 1958).

Lord's specimens did survive, or at least some of them did. Petiver took Lord's herbaria, along with those of Lawson, Ellis, and many others, and bound them in volumes that ended up in Sir Hans Sloane's collection after Petiver died in 1718. Today the Sloane Herbarium of the Natural History Museum London holds about 125 specimens collected by Lord between 1704 and 1707. My colleagues Patrick McMillan and Christopher Blackwell and I have digitally photographed these specimens, which are posted on our Botanica Caroliniana website. We published an article including determinations of taxa in *Phytoneuron* last summer.

Two things make Lord's specimens particularly noteworthy. First, they were collected very early in the period of European colonization of the Carolinas, well before the region was thoroughly transformed by agriculture and introduced plants. Second, Lord sent Petiver meticulous notes along with his plant specimens – describing habitat, habit, taste, medicinal uses, supposed taxonomy, bloom dates and collection dates. Lord's handwriting is tiny, beautiful, and easy to read.

Lord's notes together with his surviving letters reveal a natural scientist – by which I mean a person naturally inclined to observe details of the world around him and to ask how those details fit with others. He didn't have many resources – his only references were a borrowed copy of John Gerard's 1597 Herbal and the slightly more up-do-date Culpepper's English Physician, published in 1652 – and had no way of getting more books. His letters and notes to Petiver constantly plead for more information, and if possible some books sent from London (Lord, 1920).

But that didn't stop Lord from jumping into this science project with both feet. He tried to send Petiver as much information about his world as he could, through the medium of dried plants, bits of shell, and other oddments. He had a talent for description. For instance, he wrote of a *Trillium maculatum* Raf. (H.S. 284 f. 4) that "This plant grows in moist fertile ground that has a deep loose (or light) soil. It has three leaves at the top of the stalk, amidst which stands upright one dark reddish purple flower, when it is full; but greenish before it is full blown. You may see the flower in it's perfection in one of the samples, & the shape & manner of standing of the leaves, in the other. Gathered May 3d, 1704. Those spots in the leaves that now (dried) look most green, when they are fresh look of the color of the liver of a beast…, as it is when taken out of the beast."

Wow! The color of the liver in a freshly killed beast? That's evocative!

Lord's notes are full of such details. He describes *Ilex ambigua* (Michx.) Torrey (H.S. 285 f. 8) as having leaves that smell like potatoes beginning to rot, and notes that an Indian recommended it as a treatment for "the Head-ack in such as have Agues." He observes that *Lobelia nuttallii* Schultes (H.S. 284 f. 42) "chiefly seems to delight in ground that is somewhat moist, & grows only among Grass & weeds." *Ctenium aromaticum* (Walter) Wood (H.S. 268 f. 1) has a root that "tastes somewhat like Pellitory of Spain, but I think a little more subtile, hot, & Pierceing." Of *Crotalaria rotundifolia* Walter ex J.F. Gmelin (H.S. 284 f. 75) he writes: "This plant spreads on

Lord continued on Page 23

Joseph Lord's specimen of Trillium maculatum *Raf. (H.S. 284 f. 4)*

BOTANICAL EXCURSIONS

Bracken: Random Thoughts & Musings

By George Ellison; artwork by Elizabeth Ellison

"Here and elsewhere, bracken is such an aggressive plant that one wonders why it has not taken over the world."

-- R.C. Moran, "A Natural History of Ferns"

I am a fern aficionado, not a fern authority. Nevertheless, ferns are my favorite plant. And bracken is one of my favorite ferns, when it's not on my property. I do have some company in this regard. One of my favorite authors, Oliver Sacks, the neurologist and author of The Man Who Mistook His Wife for a Hat, is also a fern aficionado, and he admits in his Oaxaca Journal that he, too, is "fond of bracken."

Bracken (*Pteridium aquilinum*) is said to be one of the five most common plants in the world. Standing up to five feet high (but usually about 2.5 feet), it is the coarse leathery fern you have almost certainly encountered in disturbed areas, thickets, and dry open woodlands.

Figure 1. Leaf of Pteridium aquilinum.

Bracken morphology is fairly complex and has, through the years, stimulated the descriptive resources of more than a few taxonomists. A non-technical description of the blade might go something like this: tri-parted with a lower pair of pinnae that are nearly opposite and highly dissected, while the upper pinna consists of numerous leaflets that are less divided and become almost entire as they approach the apex. (Fig. 1) The sori, which give the appearance of being stitched in place, are located along leaflet margins that curl over to protect the sporangia.

There are two varieties or subspecies of bracken in the Southern Appalachians: long-tailed (*P. aquilinum* var. *pseudocaudatum*), which has pinna tips up to 15 times as long as broad; and short-tailed (*P. aquilinum* var. *latiusculum*) which has pinna tips not more than 4 times as long as broad. The latter is by far the most common in the Smokies region where I reside. Intermediate forms are not unusual.

Other common names are eagle fern (because the fiddleheads as they are unfurling resemble the claws of an eagle - Fig. 2) and hog fern (because feral swine are reported to feed on the plant).

Figure 2. Young frond of Pteridium aquilinum, *showing unrolling fiddleheads.*

Not many observers have anything positive to say about bracken. But I do. Ferns as a plant type have for millions of years explored the possibilities of leaf form and function. Ever attentive, Thoreau, as usual, summed it up: "Nature made ferns for pure leaves to show what she could do in that line." Bracken (along with devil's walking-stick, *Aralia spinosa*) is one of the more intricately "designed" plants in our flora. The fronds are a maze of interrelated stems and segments that are a delight to behold.

Indigo buntings and chestnut-sided warblers like bracken, too. They nest in the disturbed areas that the fern favors and have discovered that the tri-pronged "cup" formed by the lower-most pinnae (as in the illustration of the fiddlehead) serves as the perfect support for nesting materials. Both species, in return, no doubt feed on the insects that feed on the bracken.

Bracken does have its negative aspects. It can be so invasive as to form an almost impenetrable ground cover that shades out less aggressive plant species. Dense stands can persist from rhizomes for hundreds of years.

Bracken contains an array of poisons (including hydrogen cyanide) that cause vitamin deficiencies in livestock, "blind staggers" in horses, and death in humans. Studies have verified that the incidence of stomach cancer increases in countries like England and Japan, where quantities of bracken fiddleheads emerging in spring are harvested. In Japan they are soaked overnight in cold water and then boiled and sautéed with onions, soy sauce and sesame seed oil.

These poisons evolved as defenses against grazing animals and insects that chew, suck and gnaw on the fronds. Bracken attracts more than 100 insect species, including grasshoppers, bees, wasps, beetles, aphids, leafhoppers, bracken borers, and fern moth caterpillars.

The plant seemingly upped the ante in its never ending war against its enemies by evolving "extra-foliar" nectaries, a feature shared with but a few other fern species in the world. (Tim Spira, a biologist at Clemson, points out that ferns don't have flowers, so the oft-used "extra-floral" designation is a misnomer.) The nectaries are situated in or just below the point where the pinnae join the central stem (rachis) of the blade. They can resemble tiny nipples

Bracken continued on Page 23

SERNEC Receives Grant to Digitize Herbaria and Expertise

By Zack Murrell, Appalachian State University

SERNEC (SouthEast Regional Network of Expertise and Collections) is a consortium of 233 herbaria in 13 states in the Southeast USA. We organized in 2006 and were supported for six years by the National Science Foundation as a Research Coordination Network (NSF RCN #0542320). Over this period of time, we engaged 165 herbarium scientists in workshops and training sessions to mobilize the community and promulgate best practices in biodiversity informatics science. We focused our efforts at building state level structure, by identifying state representatives and then developing a "hub and spoke" model for each state, with smaller collections in each state partnering with the larger or more active collections to increase efficiency of information flow and resource allocation. Most active herbaria have an affiliate community of professional scientists in their institutions and in the surrounding area. These are professional scientists from various fields of study in their home institutions, scientists in state or federal agencies or in corporations, along with amateur botanists, students and teachers. The name for our group, SERNEC: SouthEast Regional Network of Expertise and Collections, highlights the value of both the collections and this broad community of experts associated with the collections. We are now organized as the Southeast Chapter of the Society of Herbarium Curators (SHC) and SERNEC is an ongoing project supported by the SE Chapter.

We have recently been funded by the NSF Advancing Digitization of Biological Collections (ADBC) program as a Thematic Collections Network. That project is entitled "Digitization TCN: Collaborative Research: The Key to the Cabinets: Building and sustaining a research database for a global biodiversity hotspot." In this project we will partner with GEOLocate (http://www.museum.tulane.edu/geolocate/), Symbiota (http://symbiota.org/tiki/tiki-index.php), Notes from Nature (http://www.notesfromnature.org/), the Adler Museum (http://www.adlerplanetarium.org/), and the Texas Advanced Computing Center (https://www.tacc.utexas.edu/) to build a data pipeline to gather data from 106 herbaria in the SE USA and expose these data to portals that will empower SERNEC to put our community skillset to work using the latest photographing and information capture tools. We intend to utilize the SERNEC scientists to engage citizen scientists and students to assist in transcribing and georeferencing this large dataset. This project is part of a larger national effort funded by the National Science Foundation in the ADBC Program. They have funded one "hub" project called iDigBio (https://www.idigbio.org/) and twelve other Thematic Collections Nodes (TCNs).

With these funds we will build collaboration among four communities, using cutting edge information technologies to forge effective lines of communication. The four communities are 1) the scientists working with the collections and their students, 2) affiliates who use the herbaria in their day-to-day work, such as conservation biologists, 3) information technologists who will build the data pipeline to move information and facilitate communication, and 4) citizen scientists who will gain virtual access to the collections and the working scientists via this data pipeline. In building collaboration among these communities, we will be exploring methods to engage citizen scientists in the process of doing science. The data generated through this effort will be of significant value in basic fields of biology, such as ecology and evolution, as well as in applied areas of conversation and regional planning. Ultimately, we intend to use the information gained from these community interactions to inform other scientific efforts on ways to give the public opportunities to do science and have a real impact on the world around them.

We estimate that there are about 15 million specimens housed in 233 herbaria in the southeast, with collections from the region also found in several of the larger herbaria in the US. The southeast US is one of the most floristically diverse regions in North America and a global hotspot of plant diversity. Specimens in southeastern US herbaria represent a valuable data source for research on the response of vegetation to climate change, human development, and rapid migrations of recently introduced species. To date, herbarium-data based studies of California are the only comprehensive assessment of global change for a US floristic province. The developing southeast US dataset will facilitate large-scale research questions in a region that has been a biodiversity hotspot for 100 million years. Upon completion, the dataset will facilitate exploration of the effects of climate change on this floristic province, speed the discovery of vulnerable populations through species distribution modeling, and improve the ability of land managers to conserve regional biodiversity.

Research based on the project's database has the potential for significant impact on environmental planning, including federal-level strategies for habitat preservation, buffer and corridor acquisition, and environmentally sound development plans. The availability of extensive and accessible data will be particularly valuable for conservation management at the local to regional level. The application of innovative citizen science methodologies to motivate groups of various size and expertise will provide protocols and strategies that can be transferred to other projects. Our use of the Symbiota framework as our data pipeline will provide transferable technologies in the form of modules to move data into the citizen science platform Notes from Nature and the georeferencing platform GEOLocate. The further development of a robust network in the Southeast helps protect the holdings of small herbaria in the region that are faced with budget limitations, under-appreciation, and limited staffing. We believe this project will inspire the next generation of scientists and concerned citizens using targeted approaches at the undergraduate and secondary-school level, and SERNEC will continue current efforts to expose underrepresented groups to careers and opportunities in the life sciences. Our student-intern model funded by this project provides opportunities for college student professional development. Our educational strategy includes lesson plans targeting state-based standards of learning for grades 6-12; these resources will be disseminated to secondary school science teachers through the SERNEC website.

Zack Murrell is a Professor of Biology at Appalachian State University in Boone, NC, and may be contacted at murrellze@appstate.edu. The SERNEC website URL is http://sernec.appstate.edu/

Botanical Brainteasers

By Joe Pollard and Janie Marlow

The species depicted in the summer Brainteasers [Chinquapin 22(2)] were (1) *Sisyrinchium atlanticum*, (2) *Andropogon virginicus*, (3) *Xyris torta*, (4) *Parnassia asarifolia*, and (5) *Cannabis sativa*. All can be found in the Southern Appalachians, though of course the last one is not native. The puzzle was to figure which was the odd one out, and we said there was an ironic twist to the answer.

In this case, the key to the puzzle was found in the common names. In our experience, the most well-known common names are (1) Blue-eyed grass, (2) Broomsedge, (3) Yellow-eyed grass, and (4) Grass of Parnassus. Number 5, marijuana, possesses a myriad of nicknames, including – of course – Grass! So we have four species that are commonly known as "grass," yet none of them are actually grasses (family Poaceae). The irony is that the only one that actually does belong to that family is frequently known by a thoroughly misleading common name suggesting that it's a sedge. Can there be any doubt why we need scientific names?

Mark Strong of Springfield, VA submitted the first answer we received, and nailed all the ID's and the puzzle. Several others were just behind him, receiving partial credit. We'll keep this going through all four issues of Volume 22, and the person with the highest point total will receive a prize of the recently-published Woody Plants of Kentucky and Tennessee by Ronald Jones and Eugene Wofford.

This issue includes five plants that should be very familiar to Southern Appalachian botanists and naturalists. Again, which is the odd one out, and more importantly why? The ID's are pretty easy this time, but the puzzle may be rather subtle. We'll be interested to hear what you think.

Remember that color images can be seen at http://sabs.appstate.edu/chinquapin-issues. (Apologies for the technical delays in posting them last time.) Images are ©JK Marlow.

Please address all correspondence regarding Botanical Brainteasers to joe_pollard@att.net. (That's an underscore character between first and last names.) If you prefer, send snail-mail to Joe Pollard, Biology Department, Furman University, 3300 Poinsett Highway, Greenville, SC 29605.

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the ground, only it has a stalk rising from among the leaves which bears divers yellow blossoms after which succeed short cods, when they are ripe black with a blewish dust on them, which have seed in them that rattle. Gathered in the beginning of June, or end of May, 1704. Are in seed now, Jun. 15."

And so on. The majority of Lord's specimens contain observations like these. He refers back to specimens sent in previous shipments, expecting Petiver to remember them. He reports on the behavior of particular taxa over the years. He passes on bits of wisdom he has heard from Indians or local children.

Lord's specimens are organized taxonomically. Although he laments his inability to identify and classify species, and his work predates Linnaeus by half a century, his specimens are laid out in an order that fairly accurately corresponds to modern families. So despite an almost complete lack of training or scientific references, Lord and Petiver were participating in the groundwork that led to modern plant taxonomy.

Joseph Lord was a voice in the wilderness. As far as I can tell, he made his collections for the purest of reasons – fascination with his subject and a desire to both learn more and to share what he knew. He wasn't aiming at publishing a book or joining the Royal Society, like Mark Catesby, or drumming up colonists, like John Lawson. He had an identity – he was a minister and the founder of a colony. He also happened to form an interest in the natural history of his new home, and seized on a way to connect it to the larger world of scientific inquiry.

Qualified or not, he did his best with what he had. Working with a medieval herbal and whatever he had learned in 1690s divinity school, with virtually no mail and certainly no Internet, Lord turned himself into a naturalist. And between him and Petiver, he produced a collection that could in fact make a real contribution to the development of scientific knowledge, a contribution that has even more value today. We can't go out in the field to survey the plants that were growing in 1700. But thanks to people like Lord, amateurs with the guts to submit their work to the larger scientific community, we have data we could never collect ourselves. Lord's misgivings notwithstanding, he did a great job. He ought to be proud.

Amy Blackwell is a research associate at Furman University and the South Carolina Botanical Garden.

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Lord, J. 1920. Letter from Joseph Lord. The South Carolina Historical and Genealogical Magazine 21: 50–51.

SABS Welcomes Our New Members

Catherine Cole
Scott Cory
Jim Drake
Jennifer Johnson
David Nielsen
Austin Pratar
Channing Richardson
Ariel Spurrier
Alyssa Teat
David White
Lauren Wood

"But to him who seeks something more, recreation has become a self-destructive process of seeking but never quite finding, a major frustration of mechanized society."

Leopold, Aldo. 1949. A Sand County Almanac. New York, Oxford University Press, p. 166.

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or sometimes appear as small round indentations.

They are said to be most active when the fiddleheads are opening (as in the illustration). But even in mid-summer or fall you can usually spot them (with magnification) where the lower-most pinnae join the rachis.

The nectaries secrete a sugary fluid. For many years it was supposed this fluid served as a reward for ants that, in turn, discouraged predacious insects. The relationship was often (and is still) cited as a classic instance of mutualism. But maybe not.

In a chapter titled "Interactions of Ferns with Fungi and Animals" contributed to Fern Ecology (Cambridge University Press, 2014) Klaus Mehltreter noted that it had been "found that it is not the nectaries that increase ant density, but the presence of honeydew-producing aphids (Homoptera) which gives *Pteridium* an ant protection against caterpillars [making] the fern-ant interaction . . . indirect and dependent on a third species, the aphids, that damage their fern host by sucking the phloem sap, but increase the ant protection of its host plant against other herbivores."

Bumblebees have been observed "bumping into" the areas where the nectaries are located. They probably gain some sustenance thereby. But it's hard to imagine what the benefit would be to a flowerless fern. So, why did bracken evolve nectaries?

George and Elizabeth Ellison are based in Bryson City, NC. www.georgeellison.com; www.elizabethellisonwatercolors.com

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Return Service Requested

Society Awards and Grants – APPLY NOW!

The Southern Appalachian Botanical Society presents awards and grants each year at its annual meeting in April. Information on the application process can be found on the SABS web page: http://www.sabs.appstate.edu/Awards/Index.htm.

APPLY FOR STUDENT RESEARCH FUNDS

Dr. Earl Core was a major force in the founding of the Southern Appalachian Botanical Club in 1935. The annual Earl Core Student Awards were established by the Society in 1996 to provide financial assistance in support of student research projects in plant taxonomy, systematics, and ecology. The application deadline is February1st each year. Both students and their professor must be SABS members during the year of award. Find application information at http://sabs.appstate.edu/about/awards/earl-core-student-award.

APPLY FOR STUDENT PRESENTATION AWARDS

The newest of the SABS awards recognizes exceptional student presentations at the annual meeting. Each year we present two awards: the SABS Outstanding Student Poster Award and the SABS Outstanding Student Contributed Paper Award. Each award includes an honorarium of $150, and the winners are announced at the Association of Southeastern Biologists (ASB) banquet. To submit your paper for consideration, make sure to note such as you submit your abstract to the ASB meeting. Students need to be members of SABS to receive an award.

HONOR A DISTINGUISHED BOTANIST

The Society annually presents the Elizabeth Ann Bartholomew award in memory of the namesake's untiring service to the public, to plant systematics, and to SABS. It is presented to individuals who have excelled in professional and public service that advances our knowledge and appreciation of the world of plants and their scientific, cultural, and aesthetic values, and/or rendered exceptional service to the society. If you feel a person deserves recognition, please submit a nomination and request others to write supporting letters. Forms are online at http://sabs.appstate.edu/about/awards/elizabeth-ann-bartholomew-award.

PUBLISH THE BEST PAPERS IN CASTANEA

The Richard and Minnie Windler Awards are designated for the best papers published in systematics and ecology during the preceding year in our journal Castanea. It was established by Dr. Don Windler as a memorial to his parents. If you published or will publish a paper in one of the 2014 issues, your paper will automatically be considered for the award.