



News LNPS

LOUISIANA NATIVE PLANT SOCIETY Fall 2016 Vol. 30 No. 3

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Looking Ahead



Purpose

The Louisiana Native Plant Society was founded in 1983 as a statewide, non-profit organization. Its purposes are to preserve and study native plants and their habitats, to educate people about the value of native plants and the need to preserve and protect rare and endangered species, to promote the propagation and use of native plants in the landscape, and to educate people on the relationship between our native flora and wildlife.

The Genus Senna/Cassia/Chamaecrista in Louisiana

BY DR. CHARLES ALLEN

The great work on *Louisiana Legumes* by Alex Lasseigne¹ includes the genus *Cassia*. Since its publication, botanists have moved some *Cassia* species to other genera:

- The genus *Chamaecrista* (*fasciculata* and *nictitans*) and
- The genus *Senna* (*marilandica*, *obtusifolia*, and *occidentalis*).

Alex's work was published by the Center for Louisiana Studies in Lafayette and is no longer in print, but everyone really should have a copy of it in their library. It is the best way to identify many of the legume species in the state. Today, the genus *Cassia* still exists, but none of the species presently in that genus are in Louisiana. The two smaller leafleted species are now in the genus *Chamaecrista*: *C. fasciculata* and *C. nictitans*. Since Alex's work, three additional species of the genus *Senna* (*alata*, *bicapsularis*, and *corymbosa*) are cultivated in the state with some plants from these species escaping or persisting. Today, the genus *Senna* includes six species in Louisiana: *alata*, *bicapsularis*, *corymbosa*, *marilandica*, *obtusifolia*, and *occidentalis*. The six species are mostly perennials but *obtusifolia* and *occidentalis* are annuals. All are members of the *Fabaceae* or Legume

or bean family. Four of the species are introduced and two are native. Three of the species are widespread across the state: *Senna marilandica*, *obtusifolia*, and *occidentalis*.² Two are native (*marilandica* and *obtusifolia*), while *Senna occidentalis* is an introduced weed that has become widespread. Three species (*alata*, *bicapsularis*, and *corymbosa*) are cultivated.

Most of these species are herbaceous, but two (*bicapsularis* and *corymbosa*) are somewhat woody. It should be noted that *alata* is



Senna alata

¹ Alex Lasseigne, *Legumes* (Lafayette, LA: Southwestern Studies, Science Series, No. 1, University of Southwestern Louisiana), 1973.

² These three species are available from Almost Eden Plants: <http://www.almostedenplants.com>

KEY

- A. Leaflets shorter than 2 cm; legume (pod) shorter than 7 cm, very dehiscent.....B
- A. Leaflets longer than 2 cm; legume (pod) longer than 7 cm, slightly to not dehiscent....C
 - B(A). pedicel of flower and fruit longer than 5 mm; petals longer than 10 mm; stamens 10...
.....1. *Chamaecrista fasciculata*
 - B. pedicel of flower and fruit 5 mm or shorter; petals shorter than 10 mm; stamens 5.....
.....2. *Chamaecrista nictitans*
- C(A). Inflorescence in a terminal spike; leaflets mostly more than 20; leaf glandless; legume
distinctly winged and quadrangular; plants taller than 10 ft.....1. *Senna alata*
- C. Inflorescence mostly lateral clusters or racemes; leaflets mostly fewer than 20; leaf with gland(s);
legume flattened to rounded, but not winged; plants shorter than 10 ft.....D
 - D(C.) Legume terete or 4-sided, not flattened; gland(s) on rachis between leaflets; leaflets
mostly six or fewer, if more than six, then plant woody.....E
 - D. Legume flattened; gland on petiole; plants herbaceous.....G
- E(D). Plant herbaceous; leaflets six, obovate; legume curved.....5. *Senna obtusifolia*
- E. Plant woody; leaflets eight or six, elliptic to ovate; legume straight.....F.
 - F(E.) Leaflets elliptic; flowering July-September.....3. *Senna corymbosa*
 - F. Leaflets ovate; flowering October to December.....2. *Senna bicapsularis*
- G(D). Leaflets 6-12, apex acuminate; legume brown at maturity with lighter margins, narrower than
8 mm; flowers three per axil or fewer.....6. *Senna occidentalis*
- G. Leaflets 10-20, apex acute; legume black at maturity, 8 mm or wider; flowers four per axil or
more.....5. *Senna marilandica*

reported to be woody in tropical areas; it could also be woody in southern Louisiana but is herbaceous and annual at Allen Acres. All have alternate, pinnately compound leaves. There is a gland present on the petiole or the rachis in all except for *Senna alata*.

The inflorescences are racemes or clusters of flowers and can be axillary or terminal. The perfect flowers are irregular, with five sepals, five yellow petals, and ten stamens (five in *Chamaecrista nictitans*).

The ovary is superior, and the fruit is a flattened to terete legume. Some people report sensitive leaves for some of the species but I have not seen any species in this group that are sensitive to touch (thigmotropism).

The leaflets of several (maybe all) of these species close up at night (sensitive to darkness) and this is called nyctinasty (one species is actually named *nictitans*). It is really something to see when the large leaves and leaflets of *Senna alata* are closed at night at Allen Acres. Look closely at the leaflets of these species and to see that each has a swollen base called a pulvinus. The pulvinus



Senna alata

can lose water rapidly to cause the “sleeping” of the leaflets. I have seen the nyctinasty in the two species of *Chamaecrista*, *Senna alata*, and *Senna bicapsularis* at Allen Acres. I will have to add the other species to our inventory and check that out for those species next year.

All of these plants are great butterfly caterpillar hosts. We have a lot of cloudless sulphur butterflies and other “yellow” butterflies at Allen Acres because

we have lots of these plants. We plan to add more species next year including *Senna marilandica* and *Senna occidentalis*. All the others are here at Allen Acres already or have been. The flowers are also great nectar sources for bees.

1. *Senna alata* (candelabra, emperor’s candlesticks, emperor’s candlesticks, candle bush, candelabra bush, empress candle plant, ringworm tree, or candletree). A cultivated species with spectacular spikes of flowers at the top of the plant and large leaves with more than 20 leaflets. The rachis and petiole are quadrangular with no

glands. The legumes are distinctly quadrangular and winged on all four edges. The legumes turn black at maturity. Cultivated across the state and persisting or perhaps spreading in a few locations. Reports from eight parishes; Cameron, East Baton Rouge, Franklin, Lafayette, Orleans, Ouachita, Tangipahoa, and Tensas.

2. *Senna bicapsularis* (Christmas bush, rambling senna, money bush, and yellow candlewood). A semiwoody species that is cultivated. The inflorescence is of axillary racemes. The leaves are 6-8 leaflets with a gland between the lowest most pair of leaflets. The leaflets are ovate to obovate. The legume is terete.



Senna bicapsularis

Note: I have not seen this species produce seeds in the central part of Louisiana since it seems to flower so late (October to December)



Senna corymbosa

but it may produce seeds in south Louisiana. No current herbarium records for this species in the state. I'm cultivating this species at Allen Acres.

3. *Senna corymbosa* (Argentine senna, buttercup bush, flowering senna, Texas flowery senna or tree senna). Another semi-woody cultivated plant very similar to *Senna bicapsularis*. The inflorescences are axillary racemes. The leaves have 6-8 leaflets that are elliptic and the legume is terete. It flowers July to September. I had this growing a couple of years ago but lost it and will get it back in 2016.

4. *Senna marilandica* (Maryland senna). This is a native herbaceous perennial species. The leaflets number 10-20 with an acute

apex. The gland is near the base of the petiole. The flowers are produced four or more in clusters (racemes) in the axils of the leaves or may be terminal. The legume is black at maturity, flattened, and 8 mm or wider. Widely distributed across the state with reports from thirty-three parishes; Avoyelles, Bienville, Caddo, Caldwell, Catahoula, Claiborne, Concordia, De Soto, East Baton Rouge, East



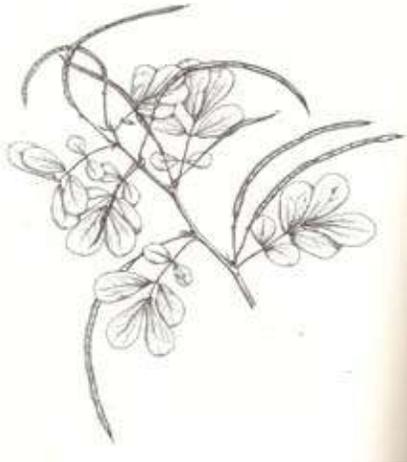
Senna marilandica

Carroll, Evangeline, Franklin, Grant, Jackson, Lafayette, LaSalle, Lincoln, Madison, Morehouse, Natchitoches, Orleans, Ouachita, Rapides, Red River, Richland, Sabine, St. Landry, Tensas, Union, Vernon, Webster, West Carroll, and Winn.

5. *Senna obtusifolia* (native Java bean, sicklepod, Chinese senna, Foetid Sassa, Sickle Senna, Coffeeweed or Arsenic



senna coffee, Stephanie coffee, stinkingweed or styptic weed.) This is a non-native herbaceous annual species. The leaflets are six to twelve that are lanceolate with an acuminate apex. The gland is on the petiole about 3-5 mm from base. The flowers are produced in clusters of three in the axils of the leaves. The legume is flattened, 5-8 mm wide, brown at maturity with a lighter margin. Throughout



Senna obtusifolia

Weed, blunt-leaved senna, coffee pod). This is a native?? That is what USDA Plants says: a herbaceous annual species. The leaflets are almost always six that are obovate with a rounded to obtuse apex. The gland is between the lower most pair of leaflets. The flowers are produced solitary or paired in clusters in the axils of the leaves. The legume is terete and curved. Throughout the state in disturbed areas, fields, gardens etc. Sometimes planted for wildlife food. It is reported from sixty parishes: The four parishes without a record include Assumption. Grant, Plaquemines, and St. Bernard. Someone collect a record in these next year or maybe you can find a collectogenic one this fall.

6. *Senna occidentalis* (septicweed, coffee senna, coffeeweed, Mogdad coffee,



Senna occidentalis

the state in disturbed areas, fields, gardens et cetera, with reports from thirty-nine parishes: Assumption, Beauregard, Bienville, Bossier, Caldwell, Cameron, Claiborne, De Soto, East Feliciana, Evangeline, Franklin, Iberia, Jackson, Jefferson, Lafayette, Lincoln, Morehouse, Natchitoches, Orleans, Ouachita, Pointe Coupee, Rapides, Red River, Richland, Sabine, St. Landry, St. Martin, St. Mary, St. Tammany, Tangipahoa, Tensas,

Terrebonne, Union, Vermilion, Vernon, Washington, Webster, West Feliciana, and Winn.

Today in Louisiana, the genus *Chamaecrista* includes two species (*fasciculata* and *nictitans*); both are native herbaceous annuals in the *Fabaceae* family. These species were in the genus *Cassia*, and many books still list them as being in this genus. The leaves are alternate, single even-pinnately compound, and have a gland on the petiole. The inflorescences are axillary and have a solitary flower or fascicle or a raceme of two to six flowers. The perfect flowers are irregular, with five sepals, five yellow petals, and five or ten stamens. The ovary is superior, and the fruit is a flattened legume.

The two species large partridge pea (*C. fasciculata*) and little partridge pea (*C. nictitans*) are similar, with large partridge pea having larger petals (longer than 1 cm), larger sepals (longer than 8 mm), and ten stamens. The gland is on the petiole about halfway between last pair of leaflets and stem. It is also the more common



Chamaecrista fasciculata

species, with records from 60 parishes. We need records from these four parishes: Ascension, Assumption, Lafourche and St. Bernard.

Chamaecrista (Cassia) nictitans (little partridge pea or sensitive partridge pea) is restricted to the pine forest regions of the state and has reports from 38 parishes. Little partridge pea has



Chamaecrista nictans

petals that are 8 mm or shorter, sepals that are 5 mm or shorter, and only five stamens. The gland is on the petiole just below the last pair of leaflets. Both species may be in flower from May to October. Allen, Bienville, Bossier, Caddo, Calcasieu. Caldwell, Catahoula, Claiborne, De Soto, East Baton Rouge, East Carroll, East Feliciana, Evangeline, Franklin, Grant, Jackson, Jefferson Davis, LaSalle, Lincoln, Livingston, Madison, Morehouse, Natchitoches, Orleans, Ouachita, Rapides, Red River, Richland, Sabine, St. Helena, St. Tammany, Tangipahoa, Union, Vernon, Washington, Webster, West Feliciana, and Winn.

Busy Folks



LNPS members have been engaged in worthwhile projects, educational activities and fun.

Above: a group worked on October 22 to “tame” growth in the Memorial Garden at Gloster Arboretum. They include, from left, Jacalyn Duncan, Cathy Troy, Al Troy, Pamela Leak, Dr. James Leak, Darrell Patterson, Dragana Alford, Mac Alford, Linda Auld, and Jeanell Strickland.

Left: A beautiful CANPS display at the annual Hilltop Arboretum sale.

Below: The CANPS group on the field trip to the Sandy Creek Community Park, which received rave reviews.



CANPS Report

The Capital Area Native Plant Society is pleased to announce the two screenings of the new documentary Hometown Habitat featuring Doug Tallamy at the Manship Theater in the Shaw Center for the Arts (Baton Rouge) on Nov. 1st and 6th. The documentary focuses on how and why native plants are critical to the survival and vitality of local ecosystems, even in urban settings. These screenings are the result of LNPS' \$500 contribution supporting the making of the film. The first screening will take place on Tuesday, Nov. 1st at 7:45pm in conjunction with the Center for Planning Excellence's Smart Growth Summit (Nov. 1-2) at the Manship Theater. The second screening will take place on Sunday, Nov. 6th at 2:00pm at the Manship Theater and is sponsored by Baton Rouge Recreation and Parks (BREC), BREC Foundation, Friends of LSU Hilltop Arboretum, Baton Rouge Audubon Society, and Louisiana Master Naturalists of Greater Baton Rouge. Tickets are \$7.50, and more information on ticket purchases and the film schedule can be found at <http://www.manshiptheatre.org/events.asp>.

For those interested in the Smart Growth Summit, a panel "WANT SMARTER GROWTH? USE NATIVE PLANTS" featuring Marc Pastorek of Meadowmakers and Robert Seemann of Baton Rouge Green will take place on Wednesday, Nov. 2nd at 1:00pm. This panel was made possible by CANPS Co-Founder, Lauren Hull, and the Capital Area Native Plant

Society will be exhibiting during the Summit with resources and information on native plants.

In other news, CANPS has continued quarterly speakers, field trips, and propagation workdays. Our most recent speaker was Ken Bosso, CANPS Vice-President and butterfly enthusiast. Ken gave a well attended presentation on butterflies and great native pollinator plants for your garden. CANPS also had a very successful

trip to BREC's Sandy Creek Community Park on Oct. 9th. We are looking forward to more great events on the horizon!

Please visit our website at <http://www.canps.eebly.com> for up to date information on chapter happenings by joining our mailing list. We hope you will become a member and join us as we educate others about the beauty and importance of native plants in the landscape!

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Design Principles for Natives: The “In” Word in the Gardening World

BY RICK WEBB

The rightful place of native plants in created landscapes has become increasingly well recognized. This elevated status is most certainly welcome, but it leads to issues that require a fuller, common understanding of “native” by enthusiasts and experts who promote native plants and by those who grow and market them. As always, the devil is in the details.

This article is essentially an exercise in brainstorming with the industry. It began as a PowerPoint presentation to a meeting of the International Plant Propagators, Southern Region on “The Functional Landscape.” A version was later published in the newsletter of the Louisiana Nursery and Landscape Association. The issues raised are worthy of comment and discussion by all concerned.

Any discussion of natives begins with the question: How do you define “Native?” Here are two possibilities:

- Being of the place or environment in which a person was born or a thing came into being
- Of, pertaining to, or characteristic of the indigenous inhabitants of a place or country

But, when we talk about the living beings of a place, *movement* of the species also has to come in to the discussion. So Einstein had it right: Everything is about Space/Time.

If a plant originated on the Southeastern coast of Asia and it was moved to the same area of North America by humans, is it a native? If that move was nearly 200 years ago, is it native? If a plant moved with the Ice Ages and it is here now, or not now, is it a native? If the plant was moved out of its original range by the Americans, is it a native? If a plant that is native to the Pacific Northwest of North America is planted in Central Park of Manhattan, New York, is it a native? If a species collected from the northern end of its range is moved to the southern end, is it a native? Are all of the seedlings of a given individual that is indigenous to an area perfect for that area, or would a given seedling do better in another part of its range; and then is it a native? If a given individual is collected from a wet bay gall in the pinewoods and is moved 100 yards up slope to a mesic hillside, is it a native?



Rick Webb

These questions are all valid and are regularly debated in some circles. Their answers are always personal. So when presentations are made to gardeners and landscapers, it has been my take to talk about *natural forms and species in the designs and intentions of our landscapes rather than about native verses non-native*. In any such discussion, there are a number of themes to keep in mind.

The Importance of Native Plants in Natural Designed and Constructed Spaces

In the landscape, native plants serve many purposes for us:

- To mitigate the dramatic changes the last two centuries did to our environment
- To (re)create habitat for native flora and fauna and the co-habitant humans
- To remind us of our sense of place
- To manage storm water quality and quantity
- To minimize maintenance costs
- To protect our properties
- To take business advantage of a national trend
- To add value to our real estate
- To beautify our spaces

Designing Landscapes Using Natives

There are a few principles, considerations and guidelines to keep in mind when designing with natives.

- Nature's designs are irregular, not random.
- Nature's plants fill niches. Identify those and fill them appropriately.
- Never plant an even number or a straight line or a pure arc.
- Think about how the native fauna, think about how the garden will evolve over time
- Think of the garden, as a forest, in layers.
- Study your site and surrounding similar stable sites and their species.
- Ask if the five "F's" of seasonality are important: Flowers, Form, Fruit, Fragrance and Fall Color
- Create woodlands and thickets and get rid of lawn except for small areas that mimic water.
- Mulch, mulch, mulch.
- Remember: This is not rocket science; rocket science is really simple!

Propagation, Production and Use of Native Plants

The methods of propagation, production and use employed for natives are the same as for other plant species. ***Propagation*** of each species must be method and intent specific for the particular plant, regardless of whether propagation is from seed, cuttings, division or grafting. Similarly, ***production methods***, including the soil, light and watering regimes of nursery production, and ***siting and installation*** depend upon plant requirements whether for native or non-native plants.

There are two exceptions specific to natives:

- Some who want truly diverse gardens will not accept anything but plants that originate from seedling propagation. They use a bad word, "nativars," to describe clonal selections of native plants. Others who do want some predictability, when site conditions will allow, demand cultivated varieties.
- To many the ***origin*** of a native is second only to species in importance. ***Source*** is the overriding requirement in putting the right plant in the right place. This perspective gives a special meaning to "Location, Location, Location." From this point of view, the very definition of a weed that we all learned in school (a plant out of place) is not so much about a plant's value or even its invasiveness, but its place.

Some concluding thoughts for the industry

- Are you aware that, although they don't consider themselves as "native" people, the vast majority of the members of the nursery/landscape industry propagate, grow, sell, install and maintain native plants?
- Are we willing to make the changes to the nursery industry that are necessary:
 - To promote native plants in naturalized gardens?
 - To promote native plants in naturalized gardens?
 - To encourage regionalization down to local demand matched with local production?
 - To raise awareness of the importance of viewing our spaces as shared ecosystems?

- To address the functional purposes of our landscapes, not just the ornamental value?
- Do we expect the educational and research components of our industry to pursue these same goals?

“Would I want to include native plants in this design?” If every gardener in planning their environmental enhancements would ask themselves this one question, I think they would find the answer is “yes” and would all become members of the Louisiana Native Plant Society.

Diversity Rules!

For over 25 years, Rick Webb has operated Louisiana Growers, a nursery located just east of Amite, Louisiana. His operation has been a major source of trees, shrubs and other plants native to the region or adaptable to the area. Many LNPS members know Rick from Annual Meetings and our plant auctions.

Pictures Needed

One of the needs of the newsletter is good quality images of native plants to illustrate articles or to embellish an issue.

Image files preferably should be in jpg format and of significant file size. Small files, such as below 50kb, may look fine on a monitor or in the



Lauren Hull's nice photo of a bee on goldenrod.

pdf version of the newsletter, but they almost always will look fuzzy in print. Please set cameras and phones to create larger files, say above 2 megapixels.

Contact Patrick O'Connor with any questions.



The LNPS Newsletter needs YOUR input. We encourage writers to submit articles and other items of interest, especially pictures of natives.

The deadlines are:

Spring	March 31
Summer	June 30
Fall	September 31
Winter	December 31

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Announcements

2017 LNPS Annual Meeting.

The Annual Meeting next year will have a new location: The Wesley Center, near Woodworth, south of Alexandria. The Wesley Center is a Methodist Camp, Retreat and Conference Center with facilities similar to Camp Hardtner. The meeting will be held the first weekend in February.

JOIN

Annual LNPS Dues

Circle one: Individual, \$10. Student/Senior, \$5. Family, \$15. Organization, \$25. Sustaining, \$50. Corporate, \$100.

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