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ED BARRIOS, THE PREZ, SEZ

First, I would like to congratulate Bebe Brown and Billy Heck for being voted Woman and Man of the Year! A nice tribute from our members for recognition of all they have contributed in the last 12 months. I would also like to thank Cindy Goodrum for leading the awards committee and setting up the recognition program.

Well June has been record setting for heat and lack of rain. So far no real break in the future forecasts. Plants are under stress and we could see some real setbacks for many of the gardens. On the other hand the native plants are doing just great. If this hotter, drier climate continues for a few years, we may become a large native landscape demonstration garden. (Al Fedoruk will be really busy.)

Finally, Lee Withers will submit the Houston-Galveston Area Council grant application this month for making improvements in our Education Station. The grant is due July 17th and H-GAC will decide on the winning grants on July 30th. Good luck Lee and to her team of writers!

Happy Gardening!

NATIVE, INVASIVE, INVADER, ADAPTIVE, AGGRESSIVE! OH MY!

Many of us have an interest in adding native plants to our gardens, and the subject of invasive plants comes up frequently, as well. So, several of us sat down recently to talk about these ideas. As we discovered, there are formal definitions, and there are personal, working definitions. We need to be clear on which we are using. The participants in this discussion were Barbara Burkhardt, Monica Krancevic, and Ann McLain.

So, What is a Native Plant?

Barbara: Anything that grows in the state of Texas. Of course, there are nine ecological regions, or something like that, and you have to consider that. But for me, a native is what grows in Texas.

Ann: Relative to what? Because someone planted it here, or what?

Barbara: I'm saying things that were originally here - here when the early Texans started bringing things. I guess I'm including some stuff that naturalized here.

Ann: My definition is different.

My views comes from biogeography; I'd say a native is something that has been here in this Gulf Coast ecosystem since before settlement.

Barbara: You're looking at it from a scientific viewpoint. I'm using a gardener's viewpoint. Things that will do well here, things that will withstand our extreme temperatures, and - most important - things that conserve water. In my garden, I tend to use things that are from the Hill Country and Central Texas, or maybe South Texas down toward Corpus Christi.

Ann: Let's pull a species out of the hat - good old Vitex, the chaste tree that everyone knows.

Barbara: But that's not a native..

Ann: That's right, it's not a native, not even to North America. But a lot of people seem to think it's a native, and I think that's because it seems to run loose so easily in some places.

Barbara: As long as I can remember, at the house where I grew up, there was a Vitex right

outside the window, and it's probably still there. I never thought much about Vitex. Only when I started educating myself about what's invasive and what's not - that's when I learned that Vitex isn't native to the U.S.

Ann: So would you use it in your yard?

Barbara: If I had the room for one, I probably would. Hummingbirds love it, plus other birds like the seed pods. It's also very low maintenance and low water. As long as we watch it to keep it from becoming invasive, I think it's perfectly fine.

Monica: It seems to me that this area, except for the pH of the soil, has much more in common with the Gulf Coast region of Louisiana and states further east from here. Normally we get a lot of rain like those areas. Anywhere west or south of here is much drier. So, normally, we're way too wet for Hill Country plants. The whole business of raised beds is so that plants that

(Continued on page 7)

COMING UP

⇒ **BCMGA BOARD MEETING**
Tues, 07/14/09
5:30 pm AgriLIFE Office
All members welcome!

⇒ **BCMGA MEETING**
Tues, 07/14/09
6:30 pm AgriLIFE Office
Herbs

⇒ **BCMGA BOARD MEETING**
Tues, 08/11/09
5:30 pm AgriLIFE Office
All members welcome!

⇒ **BCMGA MEETING**
Tues, 08/11/09
6:30 pm AgriLIFE Office
Build Your Own Rain Barrel
(see Announcements, p. 8)

THE BEES BUZZ

WILL WE WEATHER THIS?

You know there's a problem when BEES has to use well water to fill the rainwater harvesting tanks.

As of June 30, the U.S. Drought Monitor listed the county as D-2, "Severe Drought". Even more troubling, the July 2 release of the U.S. Seasonal Drought Outlook predicts the "drought to persist or intensify" through September.

How can we harvest humidity? Evaporation collectors? Notice that Lake Jackson had 79% average humidity, but less than 1/10" of rain in June.

Alvin (near FM 1462 & Rosharon Road) KTXALVIN4				
	April	May	June	Year to Date
High Temp	89.6°	95.5°	104.7°	104.7°
Low Temp	39.0°	56.8°	65.8°	32.5°
Avg Temp	69.6°	78.0°	84.0°	68.7°
Historical Temp	68.0°	75.0°	80.0°	64.8°
Avg Humidity	53.0%	53.2%	52.2%	52.8%
Max Wind (mph)	35 N	19 ESE	23 SSE	35 N
Avg Wind (mph)	4.1	3.0	2.8	3.5
Rain	9.65"	0.24"	4.03"	17.74"
Historical Rain	2.80"	4.40"	5.70"	22.00"

Angleton (BEES-FM 523 & Hospital Drive) Compiled by Ted Jagen				
	April	May	June	Year to Date
High Temp	87.6°	91.1°	99.4°	99.4°
Low Temp	36.2°	55.1°	63.1°	28.1°
Avg Temp	69.1°	77.1°	82.1°	67.7°
Historical Temp	68.6°	75.6°	80.9°	66.3°
Avg Humidity				
Max Wind (mph)	38 ESE	29 ESE	25 ESE	38 ESE
Avg Wind (mph)	6.3	3.3	1.7	4.0
Rain	6.14"	1.00"	2.59"	11.93"
Historical Rain	3.74"	5.20"	6.44"	27.40"

Lake Jackson (Willow Drive & Old Angleton Road) KTXCOLDS3				
	April	May	June	Year to Date
High Temp	86.3°	91.0°	98.6°	98.6°
Low Temp	37.5°	56.5°	64.3°	30.6°
Avg Temp	69.3°	76.6°	82.7°	68.4°
Historical Temp	70.0°	76.0°	82.0°	66.5°
Avg Humidity	78.1%	82.6%	77.9%	79.4%
Max Wind (mph)	27 E	16 SSE	13 S	27 E
Avg Wind (mph)	3.8	1.7	1.2	2.9
Rain	4.70"	1.31"	0.06"	08.16"
Historical Rain	2.80"	3.90"	5.50"	21.60"

Caveat lector (let the reader beware). These readings are for specific places. Given the random raindrops in the county, one mile away may have different precip readings. Also, these are all personal weather stations and may or may not adhere to National Weather Service standards.

Historical data is from U.S. State Department Country Studies for Alvin and Lake Jackson; and weatherbase.com for Angleton.

TROPICAL BED UPDATE

Submitted by Ed Barrios



Carole Wenny, Ann McLain and I have installed the galvanized edging around our beds in the oldest section of the tropical garden. We also made sure there are 4 foot wide walkways for ADA (Americans with Disability Act) compliance. It has really dressed up the garden and we have been getting many compliments. We will add edging around the newer section in the next few months.

After waiting patiently for some plants to sprout this spring, we lost the following from winter damage: about 5 Hibiscus cultivars, several Plumeria, a Clerodendron, and two Jatrophas. This was with a low of 28°.

We have planted an ornamental grass called Baby Panda Bamboo (*Pogonatherum paniceum*), a *Jatropha multifida*, a white bird of paradise (*Strelitzia alba*), a *Croton* (*Codiaeum variegatum*), and a Hong Kong Orchid Tree (*Bauhinia x blakeana*).

Other plans for the summer include updating our spreadsheet showing all the plant types and locations and getting labels made for the newer plants. Also I know there are some very good, experienced tropical gardeners out there. If you would like to help Carole and I with planning let us know.

Long term we would like to remove duplicate plants to make room for more types of tropicals.



NEW FUNGUS AMONG US BY PAULA CRAIG

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SNOOP SISTERS SEEK FUN-GUS

It started last March in our newsletter editor's front yard. A young visitor to Monica Krancevic's home walking by the 3-year-old Yellow Bells (*Tecoma stans* 'Gold Star') shrieked "Eeewww! What's that?!" as only a teenage girl can do. Swollen distorted stem tissue in the upper branches was engulfed in cinnamon brown fuzz. Gross! Similar swellings and fuzz affected leaf midribs and flowers.

The Texas A&M Plant Diagnostics Lab identified the fungus as "likely" to be *Prospodium appendiculatum*, a rust fungus never seen before in Brazoria County and only documented twice in Texas—in the Valley both times, 1907 and 1961. Further samples sent to Dr. Joe Hennen, a *Prospodium* expert, of the Botanical Research Institute of Texas confirmed that the rust was *Prospodium appendiculatum* var. *abortivum*. He added that this rust is producing all stages of its life cycle in the county, and is wide-spread in the West Indies and Central America.

Is it potentially deadly? We are told "probably" not, although the fungus is being tested as a bio-control for Yellow Bells in South America, South Africa, Kenya and Australia.

Where did it come from? We don't know. Maybe it came in on nursery stock; maybe it blew in with Ike. This fungus is well documented in Cuba only 800 miles from Houston — fungal spores can travel thousands of kilometers and have been retrieved at 20,000' altitude.

Can it be controlled? We don't know. The most complete information we've found about *Prospodium appendiculatum* mentions that several fungicides were tested (1961) and that each "killed only part of the overwintered spores". The A&M Lab suggested the systemic fungicides of Eagle/Systhane, Terraguard, Strike or Banner Maxx, alternated with a contact fungicide such as Dithane. Thorough leaf coverage and canopy penetration would be required. As always, READ THE LABELS, especially the potential hazards, before beginning any death-to-fungus program.

How wide spread is it? We didn't know and set out to find out. We started at the farthest reaches of the coastal county, in old Freeport. Nothing. We snooped around DOW headquarters risking arrest as bio-terrorists. Nothing. In Clute, we found a few samples but no definite pattern of dispersal. Lake Jackson has 7 cases of the 17 plants checked which are scattered throughout the city. Angleton has patches around the public library but not city hall. Carole Wenny and Monica found infected container plants at Enchanted Gardens nursery in Richmond, Fort Bend County. Apparently the nursery propagates Yellow Bells from their own stock—wherever that might come from. Oddly, the large specimens of *Tecoma stans* in the nursery's landscaping showed no sign of it. Down the road, at Caldwell's, all their plants are fungus-free.

Monica's has a bad case, but only a block away there's no sign of it. The only noticeable difference between landscape specimens that have it and those that don't is whether the plant was trimmed (old seed pods and winter kill removed) earlier this year. Of 30+ landscape plants checked, only 3 untrimmed have it and only 1 trimmed plant doesn't have it.

The result of this brief survey shows about a 40% infection rate. Some are worse than others, but we haven't returned to see if the rust has spread.

What Do We Know?!

- ☑ Most rusts attack only specific hosts. All the limited literature cites *Tecoma stans* as the host for *Prospodium appendiculatum*.
- ☑ This rust doesn't require an alternate host. It cycles through all its stages on the plant, and keeps right on cycling throughout the growing season, sending forth millions of spores.
- ☑ It attacks all parts of the plant except the woody material: leaves, young stems, seed pods and flowers can be engulfed. It may defoliate the plant. Besides, it's really ugly!
- ☑ Many rusts go through periods of increased activity followed by noticeable decreases. We may find that in one or two years it's hardly noticeable. The agent from the Rio Grande area where the 1961 analysis was done hasn't seen any outbreaks at present. Did it disappear? Or is it going through a long stage of quiescence?

I have asked Monica not to cut down her Yellow Bells so that we can continue to monitor the fungus and its effect on this Texas Superstar Plant.

We need your help to continue the survey of this rust! Please check any Yellow Bells you run across. Contact one of us with:

▲Physical location, ▲Size of plant, ▲Infected or Not, ▲Extent of infection if present, ▲Plant untrimmed or trimmed



ANN McLAIN, THE INQUIRING GARDENER: A HABITAT GARDEN



One very hot afternoon this month I paid a visit to a well established habitat garden in Lake Jackson. This is the garden of Barbara Burkhardt, a long time Master Gardener. This garden offers food, water, and safety for all sorts of wildlife, but especially birds and butterflies. The garden is a **Certified Texas Wildscape**, and it has a wall plaque to prove it.

Barbara made her garden twelve years ago, and she says that getting it certified as a Texas Wildscape under the rules that existed then was a lot easier than it would be today.

Now, not only are the requirements a bit more stringent, but there are two different certification plans. One kind is the **Texas Wildscape**, same name but slightly different rules. Barbara's garden, even certified under the old rules, does seem to conform to this plan quite well. The second kind of official habitat garden is the **Best of Texas Backyard Habitat**, which uses only native plants, and attempts to reconstruct a sort of mini-refuge for both animals and plants, conserving the sort of habitat that was here before we were.



American Beautyberry
(*Callicarpus americana*)

Berries forming; metallic purple when ripe in August; gobbled up almost immediately

Requirement—50% Native Plants

The first requirement for certification as a Texas Wildscape is that the garden be composed of at least 50% native plants. It's not easy to tell, just by looking, what the proportions might be – for that, I think we might need to make a complete list of the plants grown, sorted to "native" and "non-native". Barbara says that when she is planting, she puts in several plants for the birds and butterflies, which are usually natives. Then, because like most real gardeners she wants to try something new, she plants something for herself. Those plants are often non-native. So based on this "a plant for the birds, a plant for me" principle, her garden may be about 50/50.

Requirement—Year-Round Food

The next requirement is that the garden should provide food for wildlife year round. The best way to accomplish that is to provide a wide variety of food types and sources: berries in different seasons, seeds, even insects and invertebrates for the insect eaters like the warblers and the frogs. The more varied the food sources, the more likely it is that wild visitors to the garden will find something good to eat.

In Barbara's garden there are a lot of salvias, many of which are native or derived from our native species; they are a good source of nectar. There is a big beautyberry bush, which will be covered with purple berries in a few months. There are clumping grasses, very striking now in bloom, with seeds to come later. There's a Barbados cherry, which Barbara recommends highly. And there are plants of red firespike and pentas, neither native, but both very popular with hummingbirds.

Feeders can be a help, but they are not sufficient on their own. For instance, Barbara puts up hummingbird feeders, as many of us do. But the sugar water from the feeder doesn't entirely replace natural nectar as gathered from plants. However, the feeders can help fill in the gaps on days when nothing tasty happens to be in bloom, or when there are a lot of extra birds coming through in migration.

Requirement—Dependable Water Supply

Water is essential to life, and a habitat garden must provide a dependable source of water. A bird bath can do the trick, but only if the water is replaced with fresh on a daily basis. In Barbara's garden there are a several

water sources, but the main attraction is a two-tier bowl arrangement with a recirculating pump. The water provided must also be accessible for the various critters that will use it. Often birdbaths and water feature basins are rather deep for small birds. To solve this problem, Barbara has put rocks in the bottom of the bowls to provide some shallower areas.



Requirement—Shelter

A final requirement for good habitat, and for a habitat garden, is shelter. We may think of this as a nesting spot, and simply provide a bird house, but there is a greater need than that. Contrary to what my granddaughters seem to think, adult birds don't live in bird houses. Adults sit on the nest, which may be in a bird house, to keep the eggs and naked hatchlings warm, but otherwise the adults need other safe places to roost, escape bad weather, and hide from predators. Safe habitat needs to include tall trees as well as shrubs, evergreens as well as deciduous plants, and both dense and open structures.



Barbara has a big old azalea in her garden, and
(Continued on page 5)

A HABITAT GARDEN

(Continued from page 4)

she says that shrub is very popular with all sorts of birds. Although the front of the azalea is solid with green leaves, its back side, in a shadier position, has lots of openings. The branch structure inside the azalea provides many perching spots, and the cool dampness under the plant attracts worms and other tasty tidbits. Every habitat garden needs a feature like that.

Does the idea of a habitat garden interest you? Not sure you want to tackle filling out paperwork and submitting plans? There's no reason why you can't improve your garden to increase habitat without going through the formality. Of course, without certification, you won't be eligible for that nifty plaque, but you will be doing your part for the natural world.

If you just want to encourage wildlife in the garden, it's not actually necessary for the plants to be all or mostly native, although using natives is probably the easiest way to be sure the food supply is suitable.

Many butterfly larvae are very specific about the food they need to successfully pupate and emerge as butterflies. Butterfly mothers take care of that requirement by being very particular about the plants that they lay their eggs on.

Also, remember that if you are going to invite birds and butterflies into your garden, you really should be inviting a full spectrum of wildlife. Many adult birds, and nearly all hatchlings, rely on insects for food, so a garden that has been dosed with insecticide won't provide adequate habitat. Many of us use Bt (*Bacillus thuringiensis*) to knock down

pest caterpillars, feeling that it is relatively safe, but if used indiscriminately Bt will kill the beauties as well as the beasties. It doesn't seem very hospitable to plant nectar plants, luring butterflies in, and then slaughter their offspring.

Most gardens offer at least some habitat. But if you want your garden to bustle with a lively and interesting community of wildlife, you can improve that habitat. Provide a variety of food sources, a dependable water supply, and lots of cover, and you're on your way. The Texas Parks and Wildlife website offers good advice and information, even if you don't plan to try for certification. Check it out <http://www.tpwd.state.tx.us/huntwild/wild/wildscapes/>.

NOW READ THIS

Butterflies of Houston & Southeast Texas. 1996. Tveten, John & Gloria. Austin: University of Texas Press.

Reviewer: Monica Krancevic

Quite frankly, it's simply impossible to garden for habitat in Brazoria County without this book. It's equally impossible to identify all the butterflies you're likely to see in Brazoria County without this guide.

The authors studied butterflies in the Houston area for thirty-five years before publishing. They share their extensive knowledge of over 100 species of butterflies including good photos of both caterpillars and adults.

The introduction includes descriptions of a butterfly's life cycle, complete with illustrations of egg, larva and adult types; how to raise butterflies; butterfly gardening and conservation.

The guide is broken into families of butterflies: swallowtails; whites and sulphurs; gossamer-winged; metalmarks; snouts; longwings; brush-footed; satyrs, nymphs and browns; milkweed; and skippers.

The authors give an overview for each family, noting their abundance, general look and any special identifying characteristics.

Then the individual species' accounts begin. If you're new to butterfly identification, take the time to look through all the species. You'll probably run across some that you've seen. A photo of the top (dorsal) and underneath (ventral) sides, and a late stage caterpillar accompanies the text description. At the end of each description is a synopsis that includes size, brief description, similar species and how to differentiate among them, seasons of flight and broods, what the larva look like and, finally, caterpillar food plants.

To lure them into your garden, the authors suggest lantana, butterfly bush, button-bush, milkweeds, pentas, phlox, verbenas, coneflower,

asters, and zinnias. *Lantana camara* is escaping; try *L. horrida*, the Texas native, instead. The authors didn't mention several plants that are butterfly magnets: plumbago, duranta and porterweed.

Once you've got them in your garden, the key to habitat gardening for butterflies lies in the caterpillar food plants. Here, the authors shine. Do you want to encourage the Gulf Fritillary (or maybe even a rare tropical Julia) to take up housekeeping in your yard? Plant anything in the *Passiflora* (Passionflower) genus, native or introduced.

Some are more catholic in their demands. The Black Swallowtail will lay eggs on any plant in the *Apiaceae* (Parsley) family, a huge family that includes carrots, fennel, parsley, dill. These are all non-natives, but if you want to stay with natives, grow prairie parsley, a common mid-summer blooming wildflower.

Many of the little skippers use various grasses for breeding, while the Southern Pearly Eye only uses giant cane.

And think again before you call the hackberries trash trees — two species of butterflies only breed on hackberry species.

Salted throughout the guide are explanations of how species came by their names, what time of day they fly, how they attract mates, and what kind of ecosystem they prefer.

There's even a checklist at the end of the guide that gives the names of very uncommon or rare butterflies that aren't included in the book.

Besides the delight of having a guide specifically for our region, we come away with the understanding that monoculture won't work if we want butterflies in our gardens. Let's hear it for polyculture!

And thanks to the Tvetens for sharing their indispensable knowledge.

PLANT OF THE MONTH

THE BRAZORIA PALMETTO: *Sabal x texensis* (for now)**Size:** Up to 25'H x 16'W**Shape:** Upright; arching fronds**Light:** Filtered to part sun**Soil/Water:** Moist/wet**Flowers:** Small white**Fruit:** Olive-sized black**Fertilize:** Palm fertilizer**Propagation:** Fresh seeds

SPECIES? SPECIATION IN PROCESS? HYBRID?

In southwestern Brazoria County live *Sabal minor*. In fact, *Sabal minor* lives all over the county. Most of us know them as dwarf palmettos, typically residing in poorly drained areas. There's even a few eking out a tough living in Oklahoma and a small population in the Hill Country. Most have their trunks underground, as much as 5' deep, but a few will make a stubby above-ground trunk. Anyway, some of the palms in that southwestern area (now called the Palm Unit of San Bernard Wildlife Refuge) had trunks that sure weren't stubby, and they sure weren't dwarf. When noticed by those whose living is to find the biggest of something, they were hailed as the largest *Sabal minor* in the U.S. The argument was that the little population on 40+ acres had reached its optimum genetic size: 27' tall, 16' crown spread and 43" trunk circumference! WHAT?!! IMPOSSIBLE! No, it had to be because there were no other species of tree palms nearby. So they couldn't be *S. mexicana* (found further down the coast) and *S. minor* couldn't be swapping genes with something that wasn't there. And, besides, those two *Sabal* species weren't genetically close, preferred different ecosystems, and had never been seen to hybridize anywhere, ever. So there.

The "What?!! Impossible!" camp, led by Landon Lockett, conducted historical research on the tall-trunked *Sabal mexicana* (aka *S. texana*). Common belief held that tall-trunked palms never grew as far up the coast as Matagorda. Early Spanish documents, however, showed that there were indeed tall-trunked palms populating the central Texas coast. Further research documented their almost complete removal in the last century for use as wharf pilings and for landscaping. In 1989 fishermen told Lockett about a group of 20' tall palms growing along Garcitas Creek, about 60 miles from the Brazoria site. Those palms positively are second growth *S. mexicana*. Therefore, the ranges of the two species overlap as *S. minor* is found well south of the Garcitas Creek site. Besides their trunk, our Brazoria palms exhibit differences in leaf structure from regular *S. minor*. On the basis of "morphology and phytogeography", Lockett proposed calling them *Sabal x texensis* — they are hybrids and they're only in Texas. Well, if he'd been precise, he should have called them *S. x brazoriensis*. So there.

Does everyone agree now? Of course not...Dr. Robert Harms of UT-Austin argued that the Spanish documents don't specifically refer to *S. mexicana*, only to tall-trunked palms. Why, maybe the Brazoria Palmetto is really a species and could be the palm the early explorers saw; what we have in our county is the last refuge of a previously far-flung species. Or, he posits that extensive palm lowlands existed before the Gulf of Mexico changed the coastline 12,000 years ago. Perhaps there was another now extinct (in this area) tree-sized palm, possibly *S. palmetto*, with which *S. minor* had unsafe sex, resulting in the Brazoria Palmetto.

A partial vindication of Dr. Harms' reasoning came in 2004 when DNA analysis by Dr. Mark Brunell showed that "The Brazoria palmetto and *S. minor* are largely differentiated but closely related, a pattern suggesting limited gene flow between the two entities. The Brazoria palmetto likely represents either a species closely allied to *S. minor* or a hybrid between *S. minor* and another currently unknown parent. *Sabal mexicana* does not appear to be a factor in the origin of the Brazoria palmetto." So there, sort of...possibly...

The U.S. Fish & Wildlife Service is conducting further DNA analysis as you read this. Perhaps the findings will help determine what exactly our Brazoria Palmetto is. We couldn't wait, though, so a refuge volunteer, Phil Huxford, took four of us out to the unmarked Palm Unit so we could see these palms in person. In a sea of *S. minor*, the Brazoria Palmettos were immediately noticeable. Even the young ones, without a trunk, just look different—bigger greener leaves, lush growth. Although we didn't see every one of them, Phil reported that the younger ones seem stout-trunked, possibly due to the old frond stalks (called the "boots"). The tallest we saw, about 20', had a thinner trunk, without "boots" in the lower section.

Phil has approval from the refuge to collect seeds. He's started a number of them and BEES has one of the seedling palms. On-line vendors are selling plants, possibly from seed collected when the Palm Unit was still privately owned (or, *caveat emptor*, possibly another *Sabal* species entirely). Find out from Phil when he'll have more seeds this autumn: plant a mystery and a lot of history.



Photos above courtesy of Robert Harms



Brunell, Mark. 2004. Origin and Relationships of the Brazoria Palmetto (Arecaceae: *Sabal*) Based on AFLP Data. Salt Lake City, UT: Botany 2004. Harms, Robert. Date unknown. The Brazoria Palmetto. <https://webpace.utexas.edu/harms/Praha-Brazoria/Brazoria.html>

Date unknown. Identifying the Praha Palms. <https://webpace.utexas.edu/harms/Praha-Brazoria/PrahaPalmID.html> Lockett, Landon. 1991. Native Texas Palms North of the Rio Grande Valley. *Principes*, 35(2), pp 64-71 cited in http://dallaspalms.com/brazoria_county_palms.htm

NATIVE, INVASIVE, INVADER (CONT'D FROM PAGE 1)

really aren't native here can grow in our wet climate.

So I don't get this whole thing - Texas is huge, with a large number of ecotypes. It seems to me that a plant from the Trans-Pecos doesn't belong here.

Barbara: I think I agree with you in theory. But I don't garden in raised beds for the reason you said [to help dry land plants survive here]. I do it to have improved soil, so I don't have to put up with that darned black gumbo.

Monica: Yes, but that's my point. People in Louisiana have gumbo - their plants are a better fit for Brazoria County. Of course, their gumbo is acidic, where ours is pretty basic. The average pH in Brazoria County is supposed to be about 7.8.

Native, Invasive, Invader, Aggressive?

Barbara: I have some plants in my beds, and they are natives, and if you don't keep an eye on them, they're invasive as the devil. That's the fall obedient plant.

Monica: Yes, indeed.

Barbara: I love it.

Ann: I do too, and I keep it in some parts of my garden. But there's another word I'd like us to define here: "invasive". Actually, the word "invasive" means something specific to me, and this isn't it. What I use to describe fall obedient plant is "bully plant".

Monica: Or a thug.

Ann: Or a pushy plant. And, in fact, if the obedient plant gets loose and runs out into the woods or fields, it is just going to meet all the pests and predators that have always eaten it, and it's not going to take over or change the world.

Barbara: No, no it's not. But in your flower bed ...

Ann: But if the McCartney rose gets loose and runs out to the pasture, it's going to be a disaster.

Monica: First it's pushed as a flowering hedge, now it's everywhere, changing open grassland to impassable scrub.

Barbara: How about mesquite and huisache? They're natives, but they act invasive.

Ann: But that's on grazing land, isn't it? In their natural community, that behavior is what they're supposed to do - they are pioneer species, they need to grow fast and propagate generously.

Monica: How did Dr. Rector describe *Baccharis*? That's a native, and it's overly abundant

in open areas.

Barbara: It's a colonizer, a pioneer, like Ann just said.

Monica: But he called it an invader, as opposed to an invasive. *Baccharis* is from here, but he described it as "out of synch", out of proportion.

Ann: That's because we've tromped the ground so thoroughly that the other grassland plants, things would have competed with it, aren't there any more.

I think we need to make a point of using the words precisely. Invasive means a very specific thing; it refers to a species that's not native to the ecosystem in question, which causes environmental or economic damage.

Can We Prevent Invasions?

Monica: So how would you go about avoiding potential invasives when you're buying plants? I notice that some places that have been hit hard by biological invasions, like Australia, New Zealand, and Hawaii, have developed check lists to decide whether to permit the importation of a new plant. They ask a series of questions, such as: Where did it originate? What are its requirements? How is it used? Does it have berries? Is it known to spread outside its native area?

And they use the answers to try to predict if a new plant is likely to become invasive. So, should we as individuals go through a mental check-list of some kind when we're looking at a new plant in a nursery?

Barbara: Well, here's an example. I saw a gorgeous plant at a local nursery. The guy said it was wonderful, and tough, it would grow through cement....

Ann: That's actually a bad sign when you stop to think about it.

Barbara: So I bought it, came home, and looked it up. Turns out it's said to be extremely invasive. So I went back to the nursery and told the guy. I urged him to warn people what they're getting into. If they buy it, when they decide to get rid of it, don't just throw it aside, or into the drainage ditch, or into a compost pile - put it in a plastic bag and dispose of it.

Well, he just looked at me, and I could tell he was thinking, "I'm not going to tell my customers that".

Well, if he's a responsible nurseryman, he should tell his customers to keep it under control, and not be like the lady in Florida who threw the water hyacinth into the canal and

let it loose on North America.

Ann: Exactly. This is a real issue. Personally, I don't think he should warn his customers, I think he shouldn't be selling the thing in the first place. But the nursery industry has been very behind the curve on this.

Monica: They're still selling *Ligustrums*! I think part of the problem is that the big growers are growing for the whole country, and many invasives are a problem just in some regions.

Ann: Even if the nurseries are thinking about the problem, they may not be thinking about it on the scale we need them to be.

Barbara: It's all about education-people need to know what to plant and where to plant it.

Why Are We Growing Natives?

Monica: So we're not in total agreement as to what a native is. But each of us seems to be growing them. When I write the Plant of the Month articles in the newsletter, I try to feature a plant that is known to have been growing in Brazoria County, pre-settlement. I don't know how long I can keep doing this - there aren't all that many that a lot of gardeners would like...not showy enough.

Ann: True. When I teach ornamental woodies to our new Master Gardeners, I always start with native trees, because that's what most of us find in our yards when we move in.

Barbara: Because they grow!

Ann: And when I talk about cedar elm and hackberry, everyone says "boo, hiss - trash trees."

Barbara: Hackberries and cedar elms may not be the most beautiful trees in the world, and I may mutter bad things about them when I have to pull out all their miserable seedlings, but - they're very good food plants for birds and larval plants for butterflies and well worth having.

Ann: Plus, in a hot dry summer like this, I'm not worrying about water for my hackberries and cedar elms - they're adapted to this. They would be happy in an exceptionally wet year as well.

Monica: Why is it that so many people look down on native trees? Like the yaupon, for example.

Barbara: Yaupon's a wonderful small tree.

Monica: Is it that people, especially gardeners, want something rare and unusual? So,

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Native: A plant growing in a specific geographic ecosystem pre-European settlement.

Invasive: A plant from another geographic ecosystem that causes environmental or economic damage.

Invader: A native plant that is out of proportion when compared to its historical numbers.

Adaptive: A garden term used to define a plant that isn't native as defined above, but stays confined to cultivated gardens.

Aggressive: A garden term for any plant, native or not, that spreads beyond where the gardener wants it. If non-native, it could have the potential to become invasive.

NATIVE, INVASIVE, INVADER (CONT'D FROM PAGE 7)

something that's everywhere, like yaupon, isn't good enough?

Ann: Of course, yaupon is everywhere in Brazoria County because it's so well adapted to life here. Once established, it soldiers on through anything.

Monica: At one time, Barbara, it seemed like when you talked about habitat gardens, you talked only about native plants. Now you talk just as much about non-natives.

Barbara: I do use a lot of natives in my garden, because they're good for

the birds and butterflies, and they're good for my water bill. But before I was a habitat gardener, I was a gardener, and like we were saying, gardeners like to try new stuff. So I plant non-natives, too. And, you know, the birds don't give a hoot whether the plant is native to Brazoria County or not, so long as it makes edible berries or nectar or gives shelter. Butterflies often do need to find native plants as a place to lay their eggs, though.

But one last thing I'd like to say about planting

natives. When people hear about "wildscapes", they seem to focus on the "wild" part. Planting natives in a habitat garden is doing good for wildlife. But it's not an excuse for not mowing the yard and not taking care of the garden.

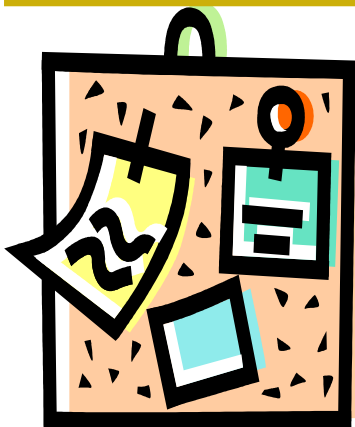
Monica: A lot of people seem to think planting natives means you can just plop them in, and walk away. No care needed.

Barbara: In my experience, a native garden requires all the same good gardening practices that any garden needs.

Oh My! What can we conclude from this free-wheeling conversation?

- © We need more precision and agreement in defining categories of plants. Public education is difficult when individual definitions are used.
- © In ecology, native, invasive and invader have specific meanings attached to a specific geographic ecosystem; gardeners may have much looser definitions, especially of native and invasive. Loose definitions confuse non-gardeners.
- © As Master Gardeners we need to be more pro-active about educating homeowners, garden centers and public officials about commonly used plants that may not be best for our area, with recommendations for substitutions.
- © Gardeners should assess new plants for their potential invasiveness. That requires learning as much as possible about the plant before it becomes a problem. Talk to other gardeners or research through the internet.
- © Any cultivated garden is an artificial construct. Native plants require care to establish, yet they can become aggressive as they're out of their home ecosystem with its checks and balances.

ANNOUNCEMENTS AND VOLUNTEER OPPORTUNITIES



Volunteers Always Needed: B.E.E.S. (the gardens), every Tuesday and Friday, 7:30am—12:00pm

Garden Club of Houston Bulb & Plant Mart Pre-Order Deadline: August 1

The annual Bulb Mart is scheduled for October 8-10 at Westminster United Methodist Church. To get exactly what you want, you can pre-order now for pick up on October 8-9.

The order form and requirements are at: <http://tinyurl.com/hbm-preorder>

Build Your Own Rain Barrel: BCMGA Meeting, August 11

Demonstration on how to build a rain barrel.

If you want to build one at the meeting, you need to call Lee Withers at (713) 702-8599 or (281) 482-1454. Cost for supplies is \$22.

Pay at the door and take home a completed rain barrel!

Fall Vegetable Gardens: Tuesday, September 1, 7:00 p.m.— 9:00 p.m.

BCMGA Community Education Program at the Brazosport Garden Club Meeting
Lake Jackson Public Library, 250 Circle Way, Lake Jackson