



The Sabal

www.nativeplantproject.org

White Blooming *Lantana velutina* Attracts Butterflies

by Christina Mild

FLORA FACTS

Scientific Name: *Lantana velutina*

Common Names: Velvetleaf Lantana, Oregano Xiu

Family: Verbenaceae

Velvetleaf Lantana, *Lantana velutina*, has become a star performer in Harlingen's Ramsey Nature Park. Growing in a wide range of locations, soils, and sunlight there, it is in almost constant bloom. White Peacock butterflies are frequent nectarers, and a wide range of other butterflies and pollinators visit the blooms.

Is *Lantana velutina* also beneficial to birds? Mike Heep thinks it is. "They pick the fruit off before I get a chance to collect it," he explains.

Birds seem ever-present nearby, but I've been able to collect the fruit and have planted it in many places along Ramsey's oldest caliche trail and the Upper Arroyo Trail. My planting method is simple: mix the fruit around with damp soil, let it sit overnight, and spread the damp soil mixture over loosened soil just before

rain. Velvetleaf Lantana is also available from our native plant growers.

Dr. Alfred Richardson of Brownsville grows two species of native white-blooming Lantana, having acquired both from Heep. "The growth is outstanding," Al tells me, in regards to Velvetleaf Lantana. He continues, describing the plant's appearance in his yard in early November. "*Lantana velutina* looks as if it has just been watered and fertilized – bright green foliate, and lots of flower heads. It shows no sign of insect damage. I'm very enthusiastic about it for a garden plant."

In virtually every season, Velvetleaf Lantana has been attractive in Ramsey Park, with a bit of supplemental watering to promote blooms. I was amazed that it suffered little damage from the December 2004 snowfall. The leaves of most other species of native and cultivated Lantana were killed by the cold. They took quite awhile to recuperate.

Dr. Richardson's comment regarding insect damage is equally important. Many of our colorful Lantanas seem to attract more than their share of insects, viruses and mold. They transform rapidly from gorgeous to tragic in appearance.

The online herbarium of Texas A & M University gives these details regarding



Lantana velutina: “Velvet Lantana’ has year-round showy white flowers with yellow throats: very attractive to butterflies

Lantana velutina: “Velvet Lantana can be found in open woods, thickets, mesas, sandy loams, cliffs and dry soils of the South Texas Plains. It stands up to 6 1/2 feet tall and has a rhubarb odor. The leaves are about 1 1/2 inches long and 1 inch wide. The flowers start as white with a yellow throat and then turn lavender or pinkish as they age. The young flowers begin in the middle of the bunch of flowers giving it the appearance of white in the center and pink or lavender on the outer edges. The fruit of this plant is bluish-black... Velvet Lantana blooms from February to June.”

In this area, we see a different picture. Velvet Lantana seems to bloom in Ramsey Park throughout the year. I haven’t seen or photographed the flowers in any shade of lavender or pink. Older stems have an attractive dark red tint, a very nice contrast to the lovely velvet green of new foliage. The “rhubarb” odor smells to me like a typical “Lantana” smell, a bit less pungent than the brightly-colored Lantanas. I haven’t seen a bluish-black fruit, either. The birds probably eat the fruits before they darken, or fruits drop from the plant before they reach this stage of ripeness.

Most sources report *Lantana velutina* to be widely-distributed in Mexico. An old book given to me by Bernice Thompson provides further information in this regard. The book is P. C. Standley’s “Trees and Shrubs of Mexico.” It’s a compilation of Standley’s contributions to the United States National Herbarium from 1920

to 1926. It’s a difficult publication to find. Bernice found it in the Library’s room of discarded volumes for sale. Standley’s work is the best English-language publication I’m aware of on woody plants of Mexico. It’s an incredible resource for local botanists, as many if not most of our native plants are found in greater numbers across the border.

Standley lists the botanical name for Velvetleaf Lantana as *Lantana involucrata*, with *Lantana velutina* as a synonym.

He also lists a wide range of common names, different ones in common use in various Mexican states. In Tamaulipas, the plant was known as Oregano and peonia colorada. In Sinaloa, it was called confite. In Michoacan, tarepe was the common name. Cuba, El Salvador and Guatemala each had different names for this plant.

Standley credits a fellow botanist, Palmer, regarding medicinal use of the plant in Tamaulipas. “...pieces of the leaves or stems are put in the ears as a cure for deafness.” Perhaps people speak more clearly if they see foliage protruding from your ears!

Reports on edibility are a bit scary. Some sources list all parts of the plant as toxic; others report that Tarahumara Indians consumed the ripened fruit. My advice is to admire the plant rather than eating it.

In Florida, this or a very similar species of native Lantana is listed as *Lantana involucrata*.

Regardless of what name you call it, this white-blooming, velvet-leaved *Lantana* grows very well here. Martin Hagne of the Valley Nature Center planted a specimen acquired from Mike Heep. "It does grow fast, I can say that," Martin reports. "We planted a small plant about 1' and few stems... which a month later was at least 2' and bushy and very healthy. Now, a year or so later, it is about 3 feet tall and very bushy, blooming profusely." Martin has found this species growing in the wild as well. "I found a stand in southern Willacy County last year on a

private tract of land just north of the Cameron Co line. It was confirmed by Dr. Al Richardson and Ken King some time later." Martin tells me.

Mike Heep has encountered *Lantana velutina* growing out on one of the lomas which rise from the sands along the coast. I expect this will become a favorite in local landscapes.

Technical assistance by Mike Heep, native plant nurseryman [www.heepsnursery.com] and UTPA Instructor. Mrs. Mild holds a Masters degree in Biological Sciences. She may be contacted at mild.christina@gmail.com.

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Native Plant Rescue: The Valley Nature Center will rescue native plants about to be destroyed by construction companies, developers, or no longer wanted by home owners. Call 956-969-2475.

“MY SOIL ISN’T ANY GOOD”

by Mike Heep

“My soil isn’t any good”. This is what many people say to explain why they haven’t been able to get plants to grow well in their yard. It would be nice if plants would grow well for them. But the plants don’t grow, so the soil must not be very good.

But their soil probably isn’t that bad. It probably isn’t bad at all. It’s likely to be a potentially very good soil. Some of the clay soils in the Valley are tough to work with, particularly the Harlingen/Mercedes clays near the Arroyo, and the Lomalta Clay in northern and eastern Brownsville.

But, by far, most of the soils in the Valley are very good soils. Some of the soils that aren’t “any good” have been depleted of nutrients and/or have had their structures damaged. That’s what has happened. The soils are now low in nutrients or they are now in poor physical condition. Or both. But almost any soil here can be improved and restored.

The Soil Conservation Service has mapped the soils of the entire Valley. They recognize dozens of soil types. And most of these soil types are very good soils for plants to live and grow.

The purpose of this article is to pass on some tips on how to make your soil better. If you open a soil science text you will very quickly discover that it is chock full of chemistry. Soil is a chemical entity and most of what happens in the soil happens according to the laws of

chemistry. What I hope to accomplish is to explain as non-technically as possible what you can do to improve your soil and why you would want to do it.

A very important point is that soil is not just dirt. It is a complex mineral structure full of living organisms. An entire ecosystem of organisms lives, or should live, in your soil. In this article I will use the terms "soil organisms" or "soil microbes" because they have less letters than "soil microorganisms". More about these organisms later.

Once again, improving your soil involves mostly accomplishing two things: (1) Raising the levels of nutrients and (2) Improving its physical condition.

RAISING NUTRIENT LEVELS

The most common reason that plants don't grow in a yard is low amounts of one or more nutrients. The 3 nutrients required in the highest amounts are nitrogen, phosphorus and potassium, which are, respectively, the three numbers on any container of fertilizer. For example, 15-5-5 on a sack of fertilizer means it is 15% nitrogen, 5% phosphorus, and 5% potassium. The percent phosphorus is actually lower as the number on the sack is the percent phosphate, about half of which is actually phosphorous. And, the percent potassium is actually the percent potash, a mineral that contains potassium. In this article I use the abbreviation "N-P-K" to refer to the respective percentages of nitrogen, phosphorus, and potassium.

Nitrogen, phosphorus, and potassium are what are called the primary macronutrients. Three other nutrients, calcium, sulfur, and magnesium, are required in somewhat smaller amounts. These three are referred to as secondary macronutrients.

Plants also require at least seven other elements: iron, zinc, manganese, copper, molybdenum, chlorine, and nickel. These are called micronutrients as they are required in very small amounts.

Before we go any further, I want to emphasize that the aforementioned nutrients are not food. With the exception of the Venus Fly-Trap and a few other carnivorous plants, plants do not eat. Plant material, wood, leaves, flowers, roots, etc. is composed almost entirely of carbon, hydrogen, and oxygen. Ninety percent of the dry material of a plant is these three elements.

Most of the remaining ten percent is the 6 macronutrients previously mentioned especially the nitrogen, phosphorus, and potassium. The remaining nutrients make up generally less than 1% of the total dry weight.

Plants make this plant material by the process of photosynthesis. If that whole process confounded you in school, all you really need to understand is that the plants take carbon dioxide out of the air and water out of the soil and then stick it all together in various ways, forming carbon compounds (carbohydrates, proteins, DNA, oils, and waxes, etc). They then use these molecules to form stems, leaves, flowers, fruits, roots, thorns, and any other plant structure imaginable.

So why do they need all of those nutrients? They need the nitrogen and sulfur to make proteins. The phosphorus is used to make a number of necessary things, particularly the genetic material. The others are used for various and sundry little parts of the machinery inside the cell that the plant uses to make all the plant material.

One then must consider how to add the nutrients to the soil. In what form should they be added? Basically one can choose to use either an inorganic or an organic fertilizer. Inorganic fertilizers are man-made. They are composed of mineral salts. Some examples are ammonium sulfate (21-0-0), and potassium nitrate (13-0-44). They are usually more concentrated and less expensive than organic fertilizers. They usually contain only nitrogen, phosphorus, and potassium. If ammonium sulfate is the nitrogen source, the fertilizer will also contain sulfur. Some of the inorganic fertilizers, such as the Peters and Miracle-Gro brand types that come in little round containers, also contain some of the micronutrients.

In addition to generally getting more fertilizer for your money than you do with organic fertilizers, inorganic fertilizers usually give quicker results. But there are also disadvantages. It's very easy to add too much if one is not careful. There will then be osmotic problems in the soil and upward into the plant: "fertilizer burn". Overfertilizing may also damage or kill some of the soil organisms. Another point to consider is that overfertilization may lead to some pollution of nearby waterways as the nutrients are leached from the soil. They also must be

applied somewhat frequently as the nutrients, especially the nitrogen but also the potassium, will leach out of the soil over time.

Organic fertilizers are usually made of composted organic matter. Other organic fertilizers and their respective N-P-K ratios are fish emulsion (5-2-2), blood meal (14-0-0) seaweed/kelp formulations (1-0.5-3), and bone meal (1-11-0). Basically, almost any material that came from something that used to be alive will have some value as an organic fertilizer.

There are several advantages to using organic fertilizers. The nutrients provided are slow to leach from the soil. They therefore will not need to be applied as frequently. Your plants and the soil microorganisms will not receive any kind of shock when applied.

Other soil creatures will actually benefit and increase in number. Also, all of the micronutrients are provided. The compost type inorganic fertilizers also improve soil structure.

But there are some disadvantages to using organic fertilizers. The amount of N-P-K is considerably lower than what you get from an inorganic fertilizer. If you are hoping for a quick result you are not likely to get it because they take time to decompose and become available to the plants. The cost of the N-P-K you get is considerably higher.

Some of these disadvantages sort of take care of themselves if one uses organic fertilizers for a long time. With repeated application, the nutrient levels rise and your plants have a steady, reliable supply of the nutrients. As far as the cost goes, if you make your own compost it will cost almost nothing.

Plants and soil organisms cannot tell the difference between organic and inorganic nutrients. Here's what I mean: If you water in some granules of man-made ammonium sulfate, it will break apart into ammonium ions and sulfate ions. (Ions are atoms or small molecules that have either positive or negative charges. Any nutrient in this article that is dissolved in water is an ion). If you bury a fish in the soil, the soil microbes will eat up that fish protein and some of what will result are ammonium ions and some sulfate ions. The ammonium and sulfate ions from both sources are exactly alike.

Another important point: The soil organisms have first shot at any nutrients that are added to the soil. They are better at grabbing them and incorporating them into their cells than are the

plant roots. When they die, which some of them are always doing, they decompose and release those nutrients into the soil, making them available to the plant. So, whatever the source, organic or inorganic fertilizer, much of it gets taken up by the soil organisms.

This is why it isn't worth the extra money you could spend to buy a time release fertilizer. They work very well for plants that are growing in potting soil in a pot. But, any fertilizer is time release to some extent when applied to soil.

If you intend to buy a sack or more of an inorganic fertilizer, read the label very carefully. This caution is especially important if the product is called "lawn fertilizer".

Many of them contain an herbicide that specifically targets broad leaf plants. Broad leaf plants are trees, shrubs, and most vines. The herbicide is in that fertilizer in order to kill lawn weeds, which are mostly broad leaf plants. That herbicide is capable of severely damaging or even killing your trees and shrubs and vines. One of these fertilizers that I have seen has "weed and feed" on the sack.

NITROGEN: Usually if your plants are not growing, it is because the levels of nitrogen are too low. Nitrogen is for producing green growth. Without it the plants are just not going to produce any new growth, no matter if there is plenty of all of the other nutrients. Nitrogen deficiency is common because it is very soluble in water and readily leaches out of the soil.

If the leaves on a plant are a uniform yellow color, especially the older leaves, low nitrogen is usually the problem.

Nitrogen can be added to the soil in a number of ways: Inorganic commercial fertilizers, organic fertilizers, or composted plant and animal remains.

If one uses an inorganic fertilizer it is important to read the label and identify the form in which the nitrogen is present. The most common forms in which the nitrogen occurs are nitrate, ammonium, and urea. Nitrate fertilizers provide a lot of soluble, readily available nitrogen that will give a very quick result. With ammonium fertilizers, much of the ammonium sticks to the soil particles or is absorbed by the soil organisms. So, ammonium nitrogen is more slowly available to your plants. Urea is mostly absorbed by soil organisms and so is also more gradually available.

.....continued in the March, 2007 *The Sabal*

Nature Happenings Lower Rio Grande Valley, Texas

For a comprehensive calendar of Nature Happenings go to RGV Nature Coalition at www.rgvnaturecoalition.org Scroll down to and click on Nature Events Calendar on right side

Sabal Palm Grove Sanctuary— Native plant presentation and tour by Joseph Krause – every weekday at 10 a.m. Pre-registration required – call (956) 541-8034. Or go to www.tx.audubon.org/centers/sabal

Laguna Atascosa NWR— Nature BIKE RIDES on Saturdays from 8 a.m. - 10:30 a.m. and Nature WALKS on Sundays from 8 a.m. - 10 a.m. Call for details: (956) 748-3607.

Santa Ana NWR— Tram Tours of the park. Fees: \$3 for adults and \$1 for 12 years-old and under. Guided Nature WALKS are available. Call for details: (956) 784-7500.

Edinburg Scenic Wetlands and World Birding Center — **Bird Walks Saturday 9:30 a.m.** Native Plant Landscaping. 714 Raul Longoria Rd., Edinburg, TX (956) 381-9922.

Bentsen-Rio Grande Valley State Park & World Birding Center — **Butterfly Walk** every Wednesday, 1:30-3:30 p.m. **Tram Tours** Tuesday 9-11 a.m. **Bird Walks** 8:00-10:00 a.m. 2800 Bentsen Palm Drive, Mission, TX (956) 584-9156.

Quinta Mazatlan - McAllen Wing of the World Birding Center— Thursday "Evening Explorations" February and March. 6:00 p.m. to 7:00 p.m. \$3.00. 600 Sunset Ave., McAllen, TX (956) 688-3370.

Frontera Audubon, Weslaco Texas - Bird Walks led by Cliff Stewart every Wednesday 9:00 a.m. Meet on the deck of Frontera's Visitor's Center. Frontera is a fifteen-acre nature preserve located at 1101 South Texas Boulevard in Weslaco, TX. Entry fees \$3.00 adult and \$1.00 child. (956) 968-3275.

Valley Nature Center, Weslaco, Texas - Natural History Series. February and March. Every Saturday at 10 a.m. Fee: \$3.00. 301 S. Border Avenue, Weslaco TX. Call (956) 969-2475 to register and for more info.

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The Sabal is the Newsletter of the Native Plant Project and conveys information on the native habitat, and environment of the Lower Rio Grande Valley Texas. Co-editors: Gene Lester and Eleanor Mosimann. You are invited to submit articles for *The Sabal*. They can be brief or long. Articles may be edited for length and clarity. Black and white line drawings -- and colored photos or drawings -- with or without accompanying text are encouraged. We will acknowledge all submissions. Please send them, preferable in electronic form - either Word or WordPerfect - to: Native Plant Project, P.O. Box 2742, San Juan, TX 78589 or contact **Gene Lester @ 956-425-4005, or g-el1951@sbcglobal.net**

See *The Sabal* and our 5 handbooks on our website:
www.nativeplantproject.org

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Regular \$15 per year Contributing \$35 per year Lifelong \$250 one time fee per individual. Members are advised of meetings, field trips, and other activities through *The Sabal*. Dues are paid on a calendar year basis. Send checks to Native Plant Project, P.O. Box 2742, San Juan, Texas 78589.

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Comments/ suggestions/ speaker recommendations should be sent to: Native Plant Project, P.O. Box 2742, San Juan, TX 78589 or contact G. Lester (956) 425-4005; g-el1951@sbcglobal.net

Native Plant Project Meetings – February 27, 2007. **Board meeting** at 6:30 p.m.; **General meeting** at 7:30 p.m. Mike Heep “My Soil Isn’t Any Good” The program will include many tips and useful information on improving soil texture and the fertilization of native plants in the South Texas landscape. **This is a must attend program!**

Board and General Meetings 2007:

January 23
February 27
March 27

April 24
May 22

Board and General Meetings 2007:

September 25
October 23
November 27

SUMMARY OF THE MINUTES OF THE BOARD MEETING - January 23, 2007

Carol Goolsby asked for the Board’s endorsement of the “28 Trees” project- a park in which the 28 native trees featured in the NPP Tree handbook will be grown and in which children will be able to play creatively. The Board endorsed the project and will supply its expertise in selecting individual trees and in designing the landscape as well as ongoing advice on tree care. Chris Ramirez, a UTPA student, is organizing a nature art auction and wants the NPP to invent a theme for the auction. At the Annual General Meeting, Ballesteros, Griffin, King, and Wessling were reelected as Directors. The Board reconvened and elected Hathcock as Secretary and Wessling as Treasurer.

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