



The Sabal

www.nativeplantproject.org

The Flora of North America: Do, or Should We, Know What's Growing Here?

by Christina Mild

In seeking to learn about the flora of this region, I've come to know people involved on many different levels with identifying plants and keeping records of them. I was lucky to find two seasoned taxonomists, professors willing to accept a new student.

Those who engage in plant taxonomy as professionals are shrinking in number. Dr. R. Lonard and Dr. A. Richardson, taxonomists at UTPA-Edinburg and UT-Brownsville, have retired. Neither has been replaced with a full-time plant taxonomist. Dr. Richardson tells me that plant taxonomists are regarded as "dinosaurs" in today's academic circles. Bill Carr, field botanist with Texas Nature

Conservancy in Austin, tells me that few professional, trained botanists of today see value in time spent in the field.

As I search for information about plants known to occur locally, I find that: (1) many species are inadequately documented by photograph, (2) many are undocumented in areas where local plant buffs know them to exist, (3) species documented as native here are classified as "non-native to the U.S." or "invasive" on national websites, and (4) species not known to exist here continue to surface.

In researching articles for "Rio Delta Wild," I came upon an excellent piece of research which explores these and related issues. My perceptions are solidified by data presented in this study. Herewith, excerpts with comments on how that information fits into the current state of affairs in the LRGV and why the current lack of information is a critical issue.

Barbara Ertter first published “Floristic Surprises in North America North of Mexico” in Annals of the Missouri Botanical Garden 87:31-109. 2000. The entire publication can be found at [http://ucjeps.berkeley.edu/floristic_surprises.html]. In my estimation, Ertter has compiled an excellent body of data and addresses vitally important issues. All quotes which follow are from her publication.

Ertter first points out a recurring perception that the flora of North America north of Mexico has been fully explored and catalogued. Since the mid-1800’s, expert after expert has voiced and published this notion.

This misconception is startling when one realizes the impact: “Underlying much of our current land-use management planning, legislation, funding allocations, and hiring decisions is the assumption that the flora of North America north of Mexico has been fully explored, catalogued, and mapped, at least to the extent that is needed for informed decision-making.” Ertter provides the very concrete illustration that impact assessment studies are often based on species lists which are woefully outdated and incomplete.

Ertter asserts: “Environmental consultants ... are ... persons most likely to have access to poorly botanized areas... Unfortunately, a great many biological consultants lack the training or orientation needed to recognize potential novelties, and may in fact be discouraged from taking note of anything but a mechanically generated list of rare species determined to be potentially present at a given site.” One seasoned environmental consultant described the often under-trained and overworked botanical consultant as “myopically focused on the punchlist of expected sensitive species.” This consultant favored a new approach: “It seems to me much better to approach any botanical inventory from the point of ‘what is present overall?’ vs. ‘which sensitive plants are present?’”

Pertinent to my concerns about the local lack of academic taxonomists, Ertter finds that: “Taxonomic botany is regarded by many as a descriptive, vs. scientific activity, thus worthy of lower funding or staffing.” Yet, it is assumed

that “the existing academic infrastructure is adequately addressing the gaps in our floristic knowledge...Of the 48 western universities with significant herbaria, five currently lack faculty-level vascular plant systematists...The value of new species descriptions in terms of professional prestige and satisfaction of university administrators...seems low relative to other publications...publication of regional novelties...is actually counter-productive to career development in the current academic environment.”

(Ertter explained her use of the term “novelty” in an e-mail: “I used “novelty” as shorthand for recently described taxa (e.g., genera, species, subspecies, varieties) not previously known to science.”)

On lands which are privately owned, Ertter found that floristic knowledge is especially lacking. There is a common perception “that floristic surveys inevitably represent a threat to private landowners.” Supporting that perception, “the majority of newly described species qualify for some level of sensitive species status, with immediate implications for land-management activities on public and private lands.” Gena Janssen, state botanist, shared these insights in summarizing her efforts to gain access to ranchland in Zapata County, Texas. “As I began to meet and get to know more and more landowners, I began to notice that most of them did basically the same thing when they met me: They yelled at me... Finally, they had a person, a warm body, in front of them that represented all these endangered species issues that had been scaring them for so long.” Encouragingly, Janssen’s work became a success story. Because she was patient, honest, and willing to listen compassionately, she was able to work with landowners to develop a “voluntary conservation plan.”

If we had complete plant surveys for all of North America, this discussion would be moot. Ertter collected a wealth of data to the contrary.

Published in 1987, “Plant exploration in California: the frontier is still here,” by Shevock & Taylor” provided important data. These authors “tallied 219 vascular plants described from California for the two decades from 1968

to 1986, an average of 11 taxa per year.” Even if that rate of discovery tapers off, as it has in more fully-cataloged areas of the U.S., another researcher estimates that a minimum of “300 or more undescribed vascular plant taxa are still waiting in the wings in California alone.”

Another researcher found that “from 1975 through 1994, a total of 1,197 vascular plant taxa were described as new to science... The overwhelming majority are from the western and southeastern United States...Most are angiosperms, but 78 pteridophytes and 6 gymnosperms are represented.” “...newly discovered species distinctive enough to be described as new genera are particularly common among algae.” That study ranked Texas as 3rd regarding newly-described plants, behind California and Utah.

Fun Examples of Recently-Noticed Plants:

▪ Shasta Snow Wreath, 1992, northern California, publicized in *The New York Times*, “was the second species in a genus that had previously been known as a single rare species in the southern Appalachians, over a thousand miles away...this never-before-collected shrub was locally co-dominant (with poison oak) along a well-traveled highway, 25 miles northeast of Redding, CA.”

▪ *Mespilus canescens*, a 5-7 meters tall rosaceous shrub or small tree, “discovered in Arkansas in 1970, described as a member of a previously monotypic genus known only from Europe.” (“monotypic genus” denotes a plant with such unique characteristics that it goes into a completely new genus). It is of “exceptional beauty” and “only 25 individuals are known from a single 22-acre grove.”

▪ Kentucky Lady’s Slipper, among the “tallest and showiest species in a genus of showy orchids,”... “was not described until 1981, long after the author had first encountered it cultivated in a garden.”

New Plants Are Often Found in “Unique”

Areas: Newly-built roads have given botanists access to unusual substrates or isolated mountaintops which have “the potential of harboring a unique suite of endemic plants...”

▪ Ketona Glades in Bibb Cty., Alabama. In 1992, environmental consultants surveying via canoe came upon “a calcareous glade community harboring at least seven undescribed taxa...”

▪ A remote marble ridge in California’s Sierra Nevada. Three new taxa were discovered in a single day.

Plants Found in the “Backyard”:

▪ Morefield’s Leather-Flower was discovered in 1982 by a budding botanist inside the city limits of Huntsville, AL.

▪ A potential species of a monotypic genus was discovered in 1990 in Red Rock Canyon, within sight of Las Vegas casinos. (“monotypic genus” denotes a plant with such unique characteristics that it goes into a completely new genus)

▪ A new lily was discovered in 1972 growing less than 10 miles from downtown San Francisco, in an “extensively botanized county with a recently updated Flora...”

▪ In 1996, a wildflower photographer discovered *Lomatium observatorium* “within easy reach of UC Berkeley, the California Academy of Sciences and Stanford University.”

Which Species Comprise the Recently-Discovered “Novelties”

Ranked by descending prevalence: Astragalus (Fabaceae), Penstemon (Scrophulariaceae), Lesquerella and Arabis (Brassicaceae), Eriogonum (Polygonaceae), Carex (Cyperaceae). “As a rule of thumb, any complex group that has not been intensively monographed recently is likely to harbor undescribed novelties...The limiting factor for many novelties is not whether they have been encountered or not, but the existence of persons with sufficient expertise, motivation, and time to undertake the necessary scientific analysis.”

How quickly do we find out about new discoveries? I find that people are often impatient when I can’t immediately identify a plant for them. Accurate identification can be a laborious and time-consuming process. Investigating how long it takes for a new species to be described, researchers “noted a range of 1 to 121 years between earliest herbarium

specimen and publication...with an average of 41 years!” Other researchers found an even longer time span between initial collection and date of a published description.

How many undescribed plants are likely to be lurking out there somewhere? According to some statistical extrapolations, “at least 1800 more novelties can be expected for North America. If half are full-fledged species, then nearly 5% of the North American vascular plant flora is still undescribed!”

Does publication of an up-to-date flora for a region eliminate the chance of finding undescribed plants? Absolutely not. “...if anything, the appearance of an up-to-date flora has spurred essential field work and increased the likelihood of recognizing a novelty as such.”

Who’s doing the work of finding and documenting new plant discoveries? As you’d expect, plant buffs ranging from the gardener and photographer to the avid but amateur botanist have made significant contributions to our current knowledge regarding floral diversity. A significant number of active and well-trained taxonomists are employed at more lucrative professions and practice botany in their “spare” time. Organizations such as the Native Plant Project are vital tools for information exchange between interested individuals from all walks of life.

It remains important to collect and catalog herbarium specimens if sufficient numbers of an unexpected plant are encountered. I retain all photographs of plants I’m unable to identify. It may be important someday, when I can identify the plant, to know when it was blooming and where.

In summary, “the era of significant floristic discoveries in North America north of Mexico is far from over, independent of perceptions extending back to the mid-nineteenth century.” Our work in terms of studying naturally-occurring plant populations is justified and far from over. “Even more incomplete than our knowledge of what species exist is our knowledge of where they occur, what their habitat requirements are, and similar

questions that can only be answered by extensive fieldwork coupled with critical taxonomic analysis.” the end

Afternoon-blooming *Anoda pentaschista*. Ken King found 2 tall and slender specimens of this pretty mallow growing amongst guinea grass along an irrigation canal in Harlingen. There are no known published photographs of this pretty mallow. Fred B. Jones (Flora of the Texas Coastal Bend) and Correll & Johnston (Manual of the Vascular Plants of Texas)



include species descriptions.



Christina Mild hold a MS degree in botany and writes weekly newspaper articles on LRGV native plants.

The Native Plant Project has just finished its fifth handbook. Butterfly Gardening with Native Plants of the Lower Rio Grande Valley, Texas, Landscape Uses and Identification includes 39 native plants which were not described in previous handbooks as well as butterfly usage of 27 species from previous handbooks. The description of each species includes information on whether it is used as a nectar plant and/or host plant.

The Butterfly Gardening with Native Plants Handbook is available for sale at LRGV nature festivals and through the Valley Nature Center in Weslaco.



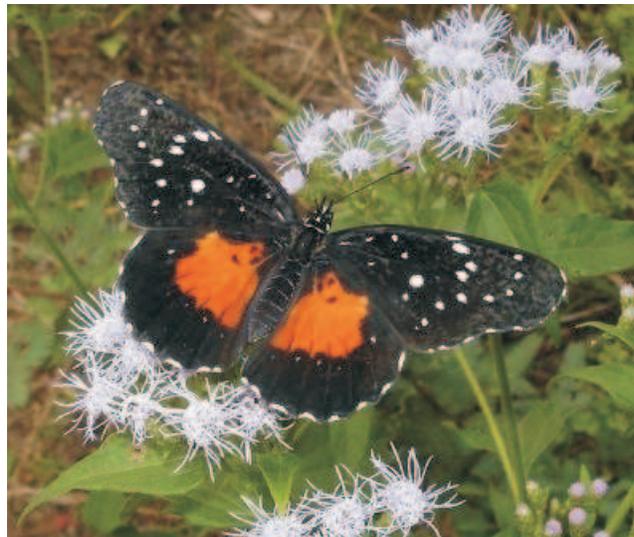
Pipevine Swallowtail on Mexican Wild Olive
Photo by Ellie Thompson



Blue Metalmark on Low Croton
Photo by Ellie Thompson



Queen caterpillar on Prairie Milkweed
Photo by Ann Vacek



Crimson Patch on Crucita
Photo by Ellie Thompson

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. **Exclusively Native plant sources:**

Benito Trevino, Landscaper/Grower, Rio Grande City 956-487-4626

Valley Nature Center – Native Plants, Weslaco 956-969-2475

Mother Nature's Creations, Harlingen 956-428-4897

Heep's Nursery, Harlingen 956-457-6834

Nature Happenings in the Lower Rio Grande Valley, Texas

MISSION BUTTERFLY FESTIVAL – 2005

The Mission, Texas Chamber of Commerce is having its seventh annual butterfly festival **October 20-23, 2005**. For a listing of events and registration information call **1-800-580-2700**, or visit the Mission Chamber of Commerce, 220 East Ninth Street, Mission, Texas. NPP will be selling Mike Heep's plants

WILD IN WILLACY, Raymondville – 2005

The Raymondville & Port Mansfield, Willacy County, Texas Chambers of Commerce are having their annual nature festival entitled "Boot Fest" **October 28-29, 2005**. For a listing of events and registration information call **1-888-603-6994**, or visit the Raymondville Historical & Community Center, 427 South Seventh Street, Raymondville, Texas.

Land Management Tools for Landowners Workshop, McAllen, Texas — The workshop will be held **Saturday, November 5, 2005 from 9 AM to 4 PM** at the McAllen Chamber of Commerce. Registration fee is \$20/person. **For more information and reservations** Contact Jesús Franco at .jesus.franco@tpwd.state.tx.us.

RIO GRANDE VALLEY, BIRDING FESTIVAL, Harlingen – 2005

The Harlingen, Texas, Chamber of Commerce is having its ninth annual Birding/Nature festival **November 9-13, 2005**. For a listing of events and registration information call **1-800-531-7346**, or visit the Harlingen Chamber of Commerce, 311 East Tyler, Harlingen, Texas. NPP will be selling Mike Heep's plants.

Texas State Park Tours/ World Birding Center, Mission, Texas— Lomitas Ranch Tours and other natural area tours 7:30 a.m. – 5 p.m. every Tuesday and Friday from Benson Rio Grande State Park/World Birding Center in Mission, TX. Outings focus on native plants and their uses. Fees: \$25 per person: reservations required - call 956-519-6448. Or go to www.worldbirdingcenter.org

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.

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

The Sabal is the Newsletter of the Native Plant Project and conveys information on the native habitats, 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_lester48@msn.com. See *The Sabal* and our 4 handbooks on the

website: www.nativeplantproject.org

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Native Plant Project Annual Membership Application Form

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 or g_lester48@msn.com

Native Plant Project Meetings – October 25, 2005. **Board meeting** at 6:30 pm; **General meeting** at 7:30pm featuring: John Goolsby will present a program called “Biological Control of Invasive Weeds”.

Board and General Meeting 2005:

January 25 September 27
February 22 October 25
March 22 November 22
May 24

Board Meeting Only 2005:

April 26 December 27

Summary of the Minutes of the NPP Board Meeting on Sept. 27, 2005. The board approved the publication cost of \$6310.75 for the new handbook: Butterfly Gardening with Native Plants. The February 2006 Board and General Meetings will be held at the World Birding Center Headquarters at Bentsen State Park at the invitation of NPP Director Chris Hathcock.

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