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THE NUANCE AND WIT OF CAROLUS LINNAEUS

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“What’s the use of their having names,” the Gnat said, “if they won’t answer to them?” “No use to them,” said Alice; “but it’s useful to the people that name them, I suppose.” Lewis Carroll, *Alice in Wonderland*.

Anyone having even the slightest contact with biological names has encountered Linnaeus, usually reduced to the abbreviation “L.” Carl Linne (in Latin Carolus Linnaeus) has been dubbed the “Father of Taxonomy” because he made the first consistent usage of two-word scientific names (binomial nomenclature). Linnaeus was the first to use a genus and species name for plants, animals, rocks, minerals, and even diseases (he was, after all, a licensed physician even though he went through medical school in less than two weeks). As unpalatable as these Latin and Greek names are to non-biologists, they are still better than the sentence names (polynomials) used before 1753. Consider, for example, the difference between *Caryophyllum saxatilis foliis gramineis umbellatus corymbosis* and what we now call *Gypsophila fastigata* (baby’s breath). Binomials are much better than

the dozens of common names that any single species may have. One white water lily, for example, has at least 245 local common names in four European languages.

An aspect of Linnaean names rarely appreciated is their sporadic underlying humor. While the most obvious example of Linnaeus’ whimsy was in the naming of our own species, *Homo sapiens*, this was obscured by the author’s own monumental ego. Some even think that it was not a wry comment on man’s cupidity that Linnaeus had in mind when he named our species, but a description of himself. He was so egocentric that he is thought by some to have considered himself the best individual of our species.

Scott Spitz, one of my former students, brought me another example of Linnaeus’ caprice. This 18th century scholar has been misunderstood even in this blatant example. The animal in question was the blue whale. Linnaeus named this marine mammal in his book *Systema Naturae* in 1758. He called this largest animal that has ever lived on earth *Balaenoptera musculus*. Literally the genus name means “whale wing,” in reference to the dorsal fin. The species *musculus* means “little mouse.” The largest organism known on earth Linnaeus compared to a little mouse! Linnaeus cannot have mistakenly used a double-meaning word, because he also named at the same time *Mus musculus*, the house mouse. Richard Ellis, in his 1988 *The Book of Whales* knew these facts, and yet declared (p. 57) that “The word *musculus* is Latin for “muscle...” He then noted that

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PRESIDENT'S MESSAGE

BARB SKYE

Dear ANPS Members –

Every week I learn more about Horace Miller's contributions to The Arizona Native Plant Society. Different aspects of operating our nonprofit organization are carefully organized in Horace's files. These files provide gentle reminders to all who access them that Horace was truly one in a million and he amazingly is still taking care of us. Horace's wonderful example of "tending to business" has provided inspiration for others to follow suit.

The dynamic duo, Gail and George Virtes, continue to amaze me as they streamline our operations with financial management, communications, marketing, and membership services. Marilyn Hanson, our State Secretary, has created a comprehensive updated filing system for ANPS. Ana Novak, Flagstaff Chapter President, has led her dedicated chapter members to create a wonderful newsletter and wildflower poster of northern species. Board member Greg Corman is coordinating our 25th Anniversary State meeting to be held in Wickenburg April 28th and 29th. Mark your calendars! Past President Mima Falk has graciously agreed to join our Board once again to help lead ANPS to new heights. Our tree booklet will be updated by the very capable hands of Julia Fonseca, Matt Johnson, Dave Bertelsen, Antoinette Segade and Jeff Kreamer. Thank you to the Board of Directors and all members who continue to support ANPS in a myriad of ways!

Also, I am pleased to report that the Tucson Chapter of ANPS has very generously accepted sponsorship of The Tucson Mountain Weedwackers, previously managed by the Desert Museum. These community volunteers are battling invasive exotic grasses in Saguaro Park West and Tucson Mountain Park. The Weedwackers meet every second Friday and third Saturday of the month to "recon" (reconnaissance) and "rad" (eradicate) invasive weeds such fountain grass and buffelgrass. For information call Skye at 740-1981 or E-mail Marilyn at mfhanson@mindspring.com.

As many of you might already know, my last day of work as Curator of Botany at the Desert Museum was February first. I am ready to shift gears and try some new teaching adventures which include substitute teaching in the Biology Department at Pima Community College West and Desert Vista campuses. Also, I will try my hand at hosting a pilot national TV program called "Southwest" for Home and Garden television (HGTV). The show will focus on southwest gardening with an intent similar to the ANPS mission of raising appreciation and strengthening stewardship of natural resources. "Southwest" is meant to inspire wise desert gardening practices.

Thanks for appreciating Arizona's native plants in the wild and in desert gardens.

Barb Skye, President

LANDSCAPING TIPS IV: ROSEWOODS IN THE DESERT

MARY F. IRISH

I have long held the plant, Arizona rosewood, in high esteem. It has an irresistible combination of attributes for the garden; dense, evergreen foliage, moderate size and extreme toughness in the growing conditions of the low desert. I find that I recommend it whenever I am asked to recommend a good plant for an evergreen hedge.

Arizona rosewood (*Vauquelinia californica*) is native to the mountains of the southern counties: Gila, Maricopa, Pima, Pinal and Cochise and to Sonora and Baja California. It occurs at elevations from 2,500 to 5,000 feet on rocky hillsides and canyons.

Plants grow 10 to 15 feet tall, occasionally larger under cultivation.. This complexly branching shrub but it is easily trained to be a small tree. The dark, glossy green leaves are evergreen, up to one inch wide and two to four inches long and have a relatively long petiole that is reddish or pink when young. In most individuals the top of the leaf is dark green and the underside is covered in fine hairs, giving it a silvery sheen. The leaf margin is serrated and there is considerable variation in the size of the teeth. All this variability means that there is plenty of room for selection of outstanding garden plants in this species, but I know of none at this time.

The white flowers are tiny and held in dense 3 to 4 inch wide heads that bloom from May to July. The small fruits are woody, brown capsules that remains on the plant for months. Some people find them ugly and prune them quickly a practice I can recommend.

As an ornamental, Arizona rosewood demands sharp drainage and full sun. I have known plants to grow satisfactorily in dense shade, but these individuals do not bloom well nor grow as densely as those in the sun. Young plants need to be watered at least weekly in the summer for two or three years. The plant can be slow growing at first. While Arizona rosewood is winter hardy in its natural range, young plants can be damaged by a hard freeze in other areas.

Populations of rosewoods in southeastern Arizona formerly described as *Vauquelinia paucifolia*, are more recently recognized as *Vauquelinia californica* ssp.

paucifolia.

This subspecies, often known as narrow-leaf rosewood is found in

southeastern Arizona and north to northeast Mexico. It is an attractive, but little grown form, with widely spaced, narrow leaves with prominent serration. The leaves lack the whitish blush on the underside of the typical form. Even less well known is the ssp. *sonorensis* which has even narrower leaves, usually less than a quarter of an inch wide, and more exaggerated teeth. This form is found only in the Ajo Mountains in Arizona.

There are nine species in the genus all of them from the southwestern United States and Mexico, but only one other than Arizona rosewood has shown up in cultivation. Chisos rosewood (*Vauquelinia angustifolia* also known as *Vauquelinia corymbosa*) is from the far western regions of Texas and adjacent eastern Mexico. It is a superb ornamental rosewood for all elevations up to 6,500 feet.

Plants grow 9 to 15 feet tall but individuals up to 30 feet tall are known. The leaves are a quarter to half inch wide and 4 inches long with a serrated edge. The petioles are much longer those of Arizona rosewood and gives the plant a more elegant appearance. These petioles and the new wood near them can be bright red adding outstanding contrast to the dark, hard, green leaves.

The lightly fragrant flowers are similar to Arizona rosewood but are occasionally pink. The flowers open at the same time as Arizona rosewood but are much larger, up to 6 inches across.

My own plant grows in full sun on weekly irrigation in the summer, but I have read recommendations to grow this plant in morning sun or filtered shade. Young plants need supplemental irrigation for the first two to three years to establish but like Arizona rosewood are low water users thereafter. Irrigation one or two times a month in summer is recommended. This species is extremely cold hardy



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ARIZONA HERBARIA 4: THE UNIVERSITY OF ARIZONA HERBARIUM

PHIL JENKINS

Who We Are and What We Do

The University of Arizona Herbarium is a repository of pressed, dried plants that are used by a wide variety of people who want to know an equally wide variety of information. It is located in the basement of the Shantz Building on the University campus, and is open to the public as well as researchers, students and agencies (we serve all the county extension agents, the veterinary diagnostic lab, poison control and the police, for examples). Our services are free of charge with two exceptions: there is a nickel a page charge for using the copy machine, and we ask consulting companies and others who stand to increase their monetary profit from our time and services to make a small contribution to the University of Arizona Foundation. We receive everyone on a first-come-first-serve basis, and appointments are unnecessary unless you need to do so if you are making a specific visit from out of town. Most of our plants are native to the place where they were collected, but we do have cultivated plants as well (i.e. we have devoted one part of the collection for the plants of the University Campus, and we are playing an active part in the formation of the new University of Arizona Arboretum). A wide variety of literature is available, from picture books, local floras and field guides to detailed studies of relationships of plant groups using the latest molecular techniques. Table space, dissecting scopes, and computers are available.

We do not offer much advice about care of cultivated plants, their diseases and horticultural needs. When asked such questions, we refer people to the University Agricultural Center. Permanent herbarium staff are curators Philip Jenkins and Michael Chamberland. The interim Director is Stephen P. McLaughlin. Curators emeriti still working at the herbarium are Charles Mason (Vascular Plants) and Robert Gilbertson (Fungi).

Our History and the Nature of our Collections

The herbarium at the University of Arizona (ARIZ for short) houses the world's best scientific collection of vascular plants from the arid Southwest and Northwest Mexico. It was established even before the university

began operation. The university's first botanist, James W. Toumey, arrived in 1891 to find that classroom facilities were not yet ready to be occupied. He therefore took to the field to collect plants and had amassed 700 specimens before the university opened. Since then we have grown steadily, from collections made by researchers, explorers, and by exchanging our duplicates with literally hundreds of other herbaria around the world. Our collection grows at a rate of 4000-7000 specimens every year.

With about 400,000 specimens at present, ARIZ is the largest herbarium between TEX (University of Texas, Austin) and RSA (Rancho Santa Ana Botanical Garden, Claremont, California). ARIZ is unique in having the largest collection in the world of plants from Arizona and Sonora, Mexico. We also have an extensive holdings of specimens from New Mexico, southern California and Western North America in general. We have collections from practically every corner of the planet. These collections support a rich diversity of research projects by herbarium staff as well as by resident and visiting researchers. Our collections document the exciting biological diversity of our region. Arizona is home to an incredible richness of natural habitats, from low desert near the Colorado River to alpine habitats above treeline in the San Francisco Peaks. ARIZ holds a number of historically important collections including those of R. S. Felger, H. S. Gentry, L. N. Goodding, G. B. Hinton, T. H. Kearney, E. Palmer, R. H. Peebles, W. S. Phillips, C. G. Reeder, J. R. Reeder, F. Shreve, J. J. Thornber, T. R. Van Devender, and S. S. White. The herbarium, as a branch of the University of Arizona library, houses about 40 serials and 300 individual volumes, plus 27 journals and publications on microfiche. These are available to all herbarium users and may be checked out by anyone who has library privilege at the University of Arizona. We also maintain a library of about 500 carefully selected reference books. In addition, during its 111 year history, the herbarium has developed an extensive reprint file, which is arranged 1) by families, and 2) by geographical regions.

There are numerous reasons for the value of the collections. Beside identification, you may determine the range of

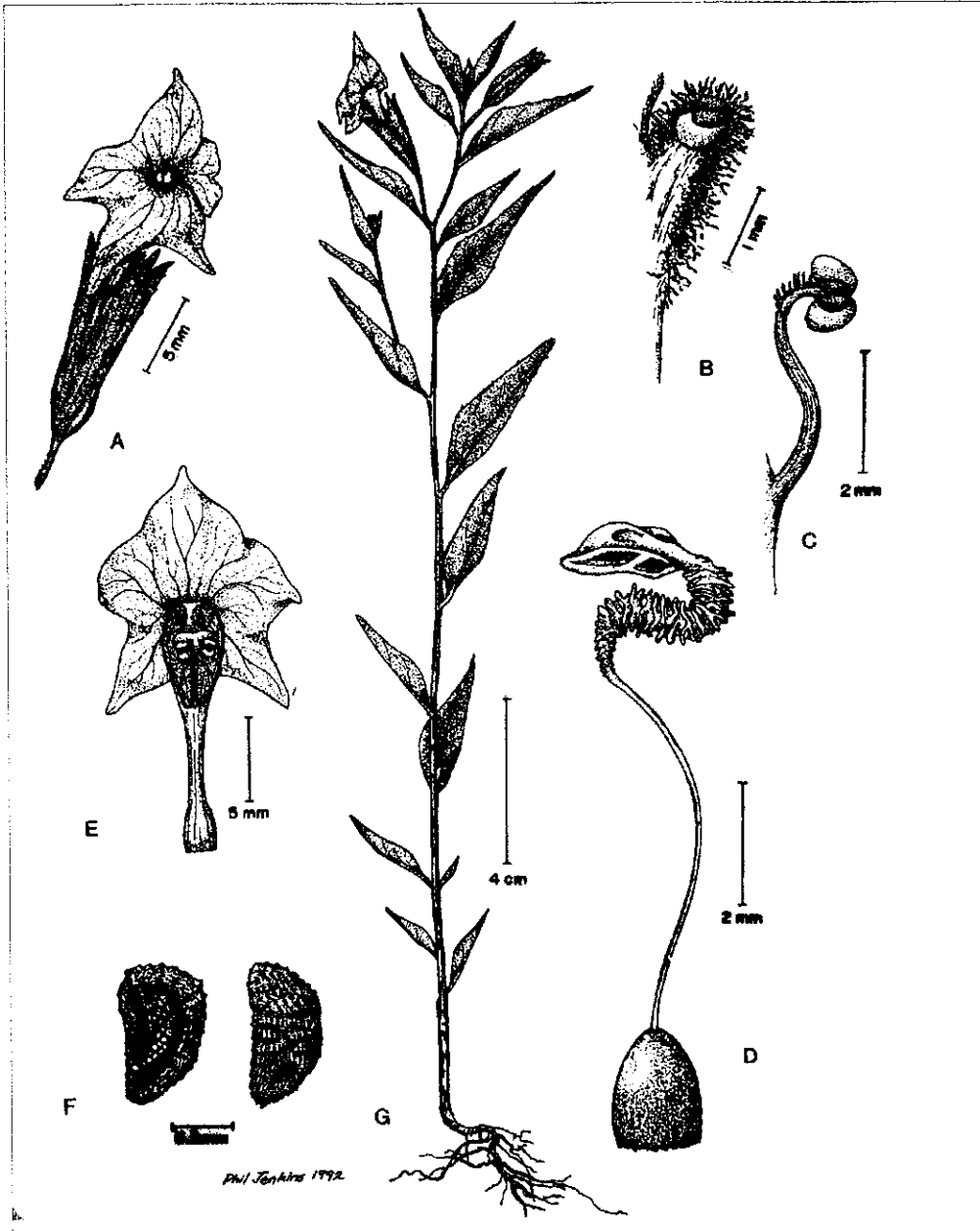
the plants, both geographically and ecologically. You may find water plants from the Santa Cruz in Tucson, and by the date of collection, determine when that part of the river ceased to flow.. You can track the spread of invasive weeds, seeing when they first appeared, and when they became widespread. These are but a few examples of the kind of information available by looking at the collections.

A Note to Visitors

We are happy to identify plants anyone brings to us. This can usually be done on the spot, but, depending on the number of plants you have, the volume of visitors we have, and the condition of the material (e.g., a leafless twig may be a challenge) you may be asked to leave the material and either pick it up later or have us to contact you. Sometimes it is impossible to identify a specimen but we love to try, and will do everything we can to do so. In 90% of the

cases reproductive parts will be necessary to identify your plant ... be it a flower (please try to remember the flower color when you collected the plant, as the color often changes with age), or seed pod, a fruit and the like. Often pieces of the root are also needed, as in many grasses and ferns. Note what the bark looks like if your specimen is from a tree.

If you wish to visit the collection and do your own research, you should ask for a "5-minute tour" to learn how to find your way around and how to properly handle the specimens. They are often delicate and very valuable. You may also come in to satisfy your curiosity, to look around, visit, or read our books. We ask visitors to sign our guest book every time they come to assist us in justifying our needs and importance. So you are welcome at the herbarium. Come by and discover us.



Research at the Herbarium. *Browallia eludens* R.K. Van Devender and P. Jenkins (Solanaceae). Described at the herbarium in 1993 as a new species. Figures A,B,C,D, and E show the flower and flower parts, F the seeds and G the whole plant. Illustration: Phil Jenkins.

Phil Jenkins is curator of the Herbarium.

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previous people had “confused the matter” by suggesting that Linnaeus might have been in a jocular mood when he named the whale.

Linnaeus was not only remarkable in some of the names he gave organisms. He absolutely delighted in words with double meanings. Undoubtedly he knew that people would wonder which he meant, the little mouse or the muscle, when he named the blue whale. To make this view even more persuasive, both “mouse” and “muscle” are derived from the same Latin (*mus*) and Greek (*mys*) base.

One simply has to look superficially into the organisms that Linnaeus named to find examples of his humorous double-meanings scattered about. Consider, for example, *Ipomoea nil*, a blue-flowered morning glory. Most people assume that Linnaeus was not impressed with the beauty of the plant, and named it *nil*, meaning “nothing.” This is not the case. Indeed, this humorist from 200 years ago was actually using an Asian word, possibly from Sinhalese (from Sri Lanka) or even Arabic. In both languages *nil* means “blue.” Linnaeus clearly knew what he was doing.

The most repulsive association I have found applies to the plants which were later placed in the same family with those that give us that delightful substance chocolate. Linnaeus named trees from India *Sterculia foetida*. The genus was based on *Sterculus*, the Roman god of manuring, from *stercus*, “dung or excrement.” *Foetida*, the specific epithet, means “having an offensive smell.” One of my students nicknamed our tree on campus the “septic-tank tree” because the flowers are so putrid. In the same book where Linnaeus named *Sterculia* he gave us *Theobroma cacao*—food of the gods called cacao. Chocolate may now be considered “food of the gods” because of its taste, but Linnaeus was probably making a reference to the exclusive use of these plants in the Americas by the elite. As a result of these names, we now have the “food of the gods” united in the family *Sterculiaceae* with the “god of feces”—biologically accurate perhaps, but hardly a pleasant commentary.

Looking around at plants and animals we find even more earthy meanings for names. Such vulgar titles should not be surprising since Carl launched his medical career by specializing in treatments for venereal diseases.

Linnaeus named the marine barnacles *Balanus*. This genus is based on the Greek word *balanos*, and is usually translated as “acorn.” But, R. W. Brown’s book *Composition of Scientific Words* has a variety of meanings listed under *balanos*. Brown has, in this order, “acorn, barnacle, peg, bar, and glans penis.” You may well dismiss this as an exceptional case, but if we look at plants we find the genus *Chrysobalanus* (coco plum). Most books translate this as “golden acorn or fruit,” but it may obviously be rendered with another English meaning. Linnaeus surely saw this duality. We have no need to speculate on his intent when we study the *Orchidaceae*. This family name is based on *Orchis*, a pantemperate terrestrial orchid. Although M. L. Fernald, in the 8th edition of *Gray’s Manual*, contended that this Greek word meaning “testicle” is based on ancient usage, Linnaeus chose to continue its application.

The first publication by Linnaeus to receive notoriety was his sexual system (he entitled the concept *Nuptiae plantarum*—marriages of plants). This volume, published in 1735, ostensibly produced an artificial system of filing and retrieving specimens and information about the organisms known to the scientific community. Linnaeus based the system on the number of “male” and “female” parts in the flowers of plants. For example, he had one category that he called in Latin *Pentandria-Monogynia*. To a botanist, this meant a plant with a flower having five stamens and a single style and ovary. Thus interpreted, it seems straightforward enough. To Johann Georg Siegesbeck, a powerful botanist in Russia at the time, it meant something else. The least lascivious translation of the category might be “a woman with five husbands,” but the clear allusion of most interpretations is that the woman was not legally married to any of the men.

Siegesbeck so strongly disliked the crude and licentious nature of Linnaeus’ book that he had it banned from use in Russia. Whenever he had an opportunity, Siegesbeck spoke against Linnaeus and denigrated his ideas, concepts, and methods. Not surprisingly, Linnaeus took exception to this behavior. To get revenge, a mean streak and his burlesque struck again. Linnaeus picked out the most despicable, ugly, notably small-flowered [an insult within an insult] plant that he could find, and dedicated it to Siegesbeck. Hence, today we have *Siegesbeckia*. This is a group of nine species of daisy

relatives (Asteraceae) native to the Old World. Although native to the India region, this herb was introduced into Europe where it has become a pest. Apparently the fruits get entangled in the fur of sheep and have been spread as contaminants from wool. There is a delicious irony in that Linnaeus accidentally predicted that this plant would become a weed at least causing problems for those in the wool industry.

Perhaps the most famous of Linnaeus' prurient names for plants in southern Florida and the Caribbean is *Capparis cyanophallophora*. Oswald Tippo and Bill Stern, in their book *Humanistic Botany*, relate the story of this plant, and translate the technical name as the Caribbean caper "...which bears a dog's penis."

From the examples I have given, you might think that Linnaeus had a male fixation. While he may not have given equal time to females, he did not completely ignore them. He named the water lilies *Nymphaea* after the water nymphs of Greek legend. Indeed, he went a step further and gave us not only a double-meaning word, but one with a triple message—Musa, the banana. According to different sources this genus has been named after Antonius Musa (63-14 BC), from the Arabic musz for banana, or for the nine Greek muses themselves.

From among the muses Linnaeus selected Thalia, for our flag in southern Florida and tropical America. Various sources list this genus as being derived from the name of Johann Thal, a German physician who died in 1583. Apparently these people have overlooked the most obvious source from the muse Thalia—who presided over comedy. Definitely Linnaeus did not miss that. Everyone seems to agree that Carl named *Polymnia* (Asteraceae) after the muse Polyhymnia who presided over sacred poetry. Augustin DeCandolle later got in the act and named *Erato* (Asteraceae), and Carl Martius gave us *Euterpe* (Arecaceae). *Calliope pectoralis* (Himalayan rubythroat), *Trochilus calliope* (a hummingbird), *Clio pyramidata* (a pteropod mollusk), *Clione sulphurea* (a sponge), *Terpsichore delapidans* (an annelid) and *Choreutes nemorana* (a butterfly) are other names commemorating muses. Biologists seem to have neglected only Melpomene, and Urania.

Linnaeus even named *Helenium* (Asteraceae) after Helena (Helen of Troy), wife of King Menelaus of Sparta. Carl also gave us *Artemisia*—ancient name of the

mugwort (Asteraceae), in memory of Artemisia, wife of Mausoleus (whence our word mausoleum). He called our colic-root *Aletris* after a female Greek slave who ground wheat, apparently in allusion to the "mealy" look of the flowers. *Circaea* (enchanter's nightshade) was based on Circe, the enchantress, for a member of the Onagraceae. He even gave us *Siren lacertina* (the greater siren) for some aquatic amphibians. The association on these was certainly not beauty so he must have been talking about their relationship with water and the Greek legends of temptresses.

Although Linnaeus was comfortable naming plants after male genitals, he seems to have been less prone to use female parts, with one marked exception. There is a legume genus Linnaeus called *Clitoria*. One species of this blue-flowered vine has been brought into cultivation under the popular name "butterfly pea," and few of those growing the plants are aware of the anatomical origin of the generic name.

Most of the names Linnaeus gave us were not of dual or pedestrian nature. Linnaeus named the genus *Rudbeckia* (black-eyed Susan) after Olaf Rudbeck, his mentor and professor at the University of Uppsala in Sweden. Linnaeus was apparently grateful for the encouragement and help given by Rudbeck since the plants in the genus named for him are attractive. Perhaps it is the comparative rarity of the dual-meaning and bawdy names applied by Linnaeus that led to his being misunderstood and neglected as a humorist.

Many of the epithets he applied were based on classical names in Latin or Greek. We have, from the classical times, *Acer* (maples), *Quercus* (oaks), *Ricinus* (castor bean), *Rhus* (sumac) and the like. Moreover, a number of words clearly honor herbalists who had gone before such as *Avicennia* (black mangrove), *Cordia* (geiger tree), *Dioscorea* (true yams), and *Malpighia* (Barbados cherry); showed intent to strengthen political ties as in *Kalmia* (laurel), *Rudbeckia*, and *Waltheria* (Sterculiaceae); or they were descriptive. Examples of descriptive words are *Diadelphus marsupialis* (opossum), *Glaucomys volans* (southern flying squirrel), *Lutjanus griseus* (gray snapper), *Acer saccharum* (sugar maple), *Panax quinquefolia* (ginseng), and *Urena lobata* (Caesar's weed).

Other names meant to be descriptive at the time are almost lost on us now. Consider the herbs called

Commelina (day flowers). Linnaeus named these plants after the three Dutch brothers Commelijns. In his time, the allusion was obvious because they were either contemporaries to Linnaeus or recently dead. Since the plants have three petals, two blue and one white, Linnaeus was reminded of these brothers. Two of the Commelijns (Jan and Kaspar) were prominent botanists (the two blue petals), while the third died young and was poorly known (the small white petal). Equally obscure to us today is the origin of the legume genus *Bauhinia*. It is fairly obvious to a historian that the name commemorates the Bauhin brothers, but which one Johann or Caspar? In reality, Linnaeus was reminded of both—because of the twin leaflets on these plants.

Even some of the designations that Linnaeus intended as serious have turned out to be humorous from our perspective. Linnaeus was a deserving biologist, but he was a despicable geographer. His concept of the New World apparently consisted of Canada, Virginia, Carolina and Florida. We see these regions appearing repeatedly in scientific names like *Branta canadensis* (Canadian goose), *Prunus virginiana* (choke cherry), *Centurus carolinus* (red-bellied woodpecker), and *Sylvilagus floridanus* (cottontail rabbit). One of the species showing his faulty concept of American geography is *Ipomoea carolina*, a name he proposed for another morning glory. Although Carl obviously thought it was from Carolina, this particular plant is restricted to small areas in the Bahamas and Cuba. The vine has never been found anywhere in North America, much less the Carolinas. Linnaeus undoubtedly did not intend comedy in this instance, but he gave us a chuckle anyway.

I suggest that, when confronted with a scientific name, you do not turn away with a derisive expression and curse the biologist that gave it that unpronounceable title. Accept the words as a challenge, and dissect them to see what they mean. Usually the long, apparently mysterious names are not as bad as they seem. Often they are made up of smaller units. These smaller unit words are strung together to make up names that are often descriptive, but occasionally humorous.

Do not expect witticism only in the names proposed by Linnaeus. There is humor sprinkled throughout the names of the plant and animal kingdoms. Consider, just as three examples, *Bastardia* (Malvaceae) named by the German

botanist C. S. Kunth, *Schizea* (the fern in the family Schizaeaceae) named by the Englishman Sir J. E. Smith, and the fossil python from the East Indies, *Montepythonoides riversleighensis*. The first of these genera was supposedly named for Toussaint Bastard, a French botanist who lived from 1784–1846. Surely Kunth did not miss the meaning that most people think of when they first see the name; the obvious word is spelled the same in English and German. The second name is remarkably similar to a German word for feces, although it is declared to be based on the Greek word for “to split.” This splitting is supposed to be a reference to the incised leaf blades of some species. Monte Python as the source for the generic name is obvious; the species is named after a river near which the fossil was found.

After all, coming up with names for the known half-million plants and a million or so animals has been a difficult job. There are just so many descriptive terms that can be used before they begin to run out. Subtle and dual meanings not only break the monotony for the creator of the name, but helps us remember the Latin name as well. I propose Carolus Linnaeus as not only the “Father of Taxonomy,” but also the “Father of Humor” in science.

For additional information on the derivation of words and names in plants and animals consult the following:

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Fernald, M. L. 1950. Gray's Manual of Botany. New York, American Book Co.

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Munz, P. A. 1973. A California Flora. Berkeley, Univ. California Press.

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ADDITIONAL SAMPLES OF
LINNAEUS' APPARENT HUMOR

Ambrosia (ragweed)—Greek and Latin name of several plants, as well as of the “food of the gods.” If Linnaeus was aware of the misery caused by these plants to hay-fever sufferers, this is his humor at its sardonic nadir.

Bromelia (type genus of Bromeliaceae)—Said to be named for Olaf Bromelius a Swedish botanist who died in 1705. The name is remarkably similar to Greek *broma*+*meli* or “honey-food.”

Cnemidophorus sexlineatus (six-lined racerunner)—Greek for a “six-lined sleeve or legging.” He could not have thought much of the lizard.

Cynanchum (a milkweed vine)—An ancient Greek name for some plant thought to be poisonous to dogs, based on *cyon* or “dog” and *anchein*, “to strangle.” Strangling a dog hardly seems comical to us, but Linnaeus had an odd sense of humor.

Elephantopus (elephant’s foot)—Greek form *elephas* or “elephant” and *pous* or “foot.” There is nothing about these plants resembling an elephant’s foot in North America, but the genus was apparently translated from an aboriginal name. Linnaeus cited the east Indian name “*Anaschovadi*” in *Species Plantarum* from 1753.

Eupatorium (dog fennel)—This looks like a combination of *pater* or “father” and the prefix *eu* which means “true,” seeming to be an allusion to the “true father” of some offspring. According to authorities, however, it is dedicated to Mithridates Eupator (132-63 BC), who is said to have used a species in medicine. Was Linnaeus trying to say something else?

Histrionicus histrionicus (Harlequin duck)—The name is based on the Latin *histrion* or “actor.” In the original and modern sense *histrionics* refers to a deliberate exaggeration of emotions for effect.

Ipomoea (morning glory)—Greek words *ips* or “worm” and *homoios* or “resembling” are combined. This is supposed to be a reference to the twining habit. I always found the allusion a bit capricious.

Lycoperdon (puffball mushroom)—From the Greek words *lyc* or wolf and *perdon* or flatulence. In other words, a “wolf fart.” You guessed it, Linnaeus named the genus. I have not idea why he called this edible mushroom this name.

Mirabilis jalapa (four-o'clock)—The genus means “wonderful.” This is a droll name, unless it refers to the flowers—the root is a notorious purgative.

Momordica (balsam apple)—Latin for “to bite,” said to be in reference to the seeds that are sometimes jagged as if bitten. It seems more likely that Linnaeus was telling us about the “biting” taste of the bitter gourd, or at least making us wonder.

Ranunculus (buttercup)—Latin diminutive of “little frog” said to have been applied by Pliny to the plants because they grow where these amphibians abound.

Rivina humilis (blood berry)—Named for August Quirinus Rivinus, 1652-1723, a German botanist. The species name means “lowly.” It seems an honor to have a genus named after a person, but the species epithet makes me question Linnaeus’ intent to praise.

Salsola kali (tumbleweed)—Latin *salsus* or “salty” gives us the genus. The species name came from an old generic Persian name for a rug. Together they yield “salty carpet.”

Senecio (groundsel)—Latin from *senex*, an “old man.” This refers to the white hairs of the pappus on the fruits of the species.

Silene (catchfly)—This name Linnaeus adopted from earlier authors. Based on *Silenus*, the intoxicated foster-father of *Bacchus* (the Greek god of wine) who was described as being covered with foam. Said to refer to the sticky droplets on the stems of many species.

Stercorarius parasiticus (parasitic Jaeger)—Literally, the parasitic bird that associates with dung.

Daniel F. Austin, is the Book Review Editor for Economic Botany and works in the Conservation & Science Department, Arizona-Sonora Desert Museum. This article is reprinted from The Palmetto, the newsletter of the Florida Native Plant Society.

FLORAL OBSERVATIONS OF A WINTER VISITOR TO GILA BEND

MALCOLM MARTIN

Snowbirds are often depicted as idling the winter away in the southwestern deserts. This Canadian snowbird prefers enjoyment of the desert environment for its own sake. This article is condensed from a longer piece written from notes made over a 20 years in an area just east of Gila Bend. In the main, they were written without benefit of guide books specifically for Arizona. Vascular plant information depended to a large extent on the Jepson Manual Higher Plants of California. The season covered, January/February, is before the flush of spring growth and before many botanists start annual explorations, and so the desert is viewed in a somewhat different light.

The initial impressions of a new area are overwhelming and confused. Everything is new. Everything needs looking at individually. No overall pattern is immediately obvious. As the elements become more familiar they start to interrelate and a degree of ecological sense begins to arise. At Gila Bend it became convenient to correlate flora of the ridge with elevation and that of the desert floor with water-based features, i.e. certain plants and plant associations seemed to favor certain water-modified situations in the landscape.

The area in question fell into three categories:

▶ **The highland ridge**, influenced by water mainly as precipitation, and divisible into exposed, shaded and basal or 'piedmont' sections;

▶ **The bajada/ desert flats**, with rock fields and desert pavement closest to the ridge, and flats of finer grained sediments farther away; and

▶ **Water drainages** progressing in size from 'gutters' (shallow features dividing sections of desert pavement), through 'ditches' (forming where water flow is enough to start down-cutting prominently into the surface), and small washes (drainages of at least 1 m in width and with stretches of sand bed), to major washes (wide features with predominantly sandy or gravelly beds, often wide enough to create vegetated islands).

What ever merit an unsophisticated system such as this may have is restricted to convenience for the amateur. Unknown to me at the time was that Dr. J.R McAuliffe

had been carrying out surveys in Arizona and developing results showing correlation among landscape evolution (as represented by alluvial flow events of different ages), soil formation (caused by length of time of exposure to weathering), and vegetation (showing consistent preference to certain conditions provided by the other two factors). As this work is based on scientific principles and not on casual speculation so it would have provided a better basis for floristic investigation. However, amateurs must manage as best they can.

A full list of vascular plants identified in the winter months is on pages 12 and 13 and only a few representative species are mentioned below in the landscape categories that were used.

Ridges

Saguaro (*Carnegiea gigantea*) shows a preference for the coarser soil of rocky upland, its numbers decreasing steadily with distance away from the ridge. Teddy-bear Cholla, too, reaches its greatest numbers on the ridges along with Brittlebush (*Encelia farinosa*) and Indigo bush (*Psoralea schottii*). Several interesting ferns, including Scaly Cloak Fern (*Astrolepis cochisensis*), occur only in this habitat, and Desert Spike-moss (*Selaginella eremophila*) also. Not seen but reported from the north side of the ridge is a small stand of Organ Pipe Cactus, well north of its expected range.

Rock Fields and Desert Pavement

These longitudinal features, where finer particles had been blown or washed away, are notable for their sparseness of woody growth. Small coppices of Teddy-bear Cholla (*Opuntia bigelovii*) intermittently make use of the coarse substrate as does Range Ratany (*Krameria parvifolia*) but generally bushes found elsewhere are either absent or are represented by a few small unthrifty individuals. Early in the year what initially appears to be a first flush of spring grass turns out to be but one species of grass, Six-weeks Fescue - *Vulpia octoflora* plus various comb-burs (*Pectocarya* spp.) and Indian Wheat (*Plantago* spp.)

in sufficient volume to color distant surfaces. A few poor-looking Beavertail Cactus occurring in this habitat appear to be beyond their recorded range.

Desert Flats

This wide-sweeping unit is the domain of Creosote Bush. In the upper bajada reaches desert flats tend to inter-finger with rock fields and desert pavement but beyond there holds sway unchallenged. In upper parts, closest to the ridge where they are coarser and somewhat dissected, there are sections that may correspond to McAuliffe's older alluvial flows and it is here that a healthy but small population of Mexican Jumping Bean (*Sapium biloculare*) holds its ground, possibly a remnant from a former climatic age. Away from the ridge Chain-fruit Cholla (*Opuntia fulgida*) gathers in natural plantations awaiting wet years to support renewal by the rooting of fallen cladodes. Disturbed ground carries Triangle-leaved Bursage (*Ambrosia deltoidea*). Under all shrubs, large or small, a variety of forbs utilizes the shade and protection: Phacelias are prominent, Desert Chicory (*Rafinesquia neomexicana*) and Gordon Bead-pod (*Lesquerella gordonii*). Out in the open Filaree (*Erodium cicutarium*) and the native Texas Storksbill (*E. texanum*) are among the early starters followed by Ajo (*Hesperocallis undulata*) in favored places as the weather warms. Dried annual grasses, covering small 'pastures' of fine-grained material, remain from the previous year showing their preference for the warmer rains of summer and fall.

Influencing all is the drainage pattern, not strictly hierarchical as in temperate regions, but dividing and merging as driven by opportunism and the vagaries of water flow. The smallest of these are gutters.

Gutters

These shallow lineaments carry water tilted off the areas of desert pavement, though without enough force to cut to any extent into the surface. Community composition is quite limited, with only a few small individuals of species dominant along larger channels.

Ditches

As water gains power farther out on the flats it begins incising the surface, creating ditches. Small mosses and lichens tint the shaded sides, clumps of Big Galleta

(*Pleuraphis jamesii*) colonize the steep sunny sides, Needle Cactus (*Opuntia ramosissima*) makes an appearance and modest-sized Palo Verde (*Cercidium microphyllum*) begin to appear. These drainages are halfway to becoming washes.

Washes

Once a fairly continuous line of Palo Verde and Catsclaw (*Acacia greggii*) follows a watercourse through the desert flats, that drainage may be thought of as a wash. Canyon Ambrosia (*Ambrosia ambrosioides*) and Thornbushes (*Lycium* spp.) join the assemblage. Under their protection are weak-stemmed dicots like the strange umbellifera, Bowelsia (*B. incana*), and Eucryptas, while in open areas various Evening Primroses, Arizona Filago (*F. arizonica*) and the nonnative Mediterranean Grass (*Schismus* spp.) lead the way towards what will become a rich display as spring approaches.

Finally Ironwood (*Olneya tesota*) marks wash maturity. Only water of sufficient volume and power to create a large wash can provide the abrasion of Ironwood seeds necessary for germination. Swirling currents often create a braided structure to the sandy bed leaving 'islands' in the wider parts where Thornbushes dominate. Climbing Milkweed (*Sarcostemma cynanchoides*) and Brandegia (*B. bigelovii*) clamber for height and light. Beneath shrubs the nettle-relative, Western Pellitory (*Parietaria hespera*), seeks shade.

Wide-ranging botanical travels offer an unending feast of new pleasures for those who can undertake them, but frequent visits to one new destination can offer pleasures of a different kind as learning and understanding grow. The author Wade Davis wrote knowingly of this on a larger scale in his book 'One River' - "After several trips across the Andes, the pattern of the flora was gradually coming into focus. This to me was the great revelation of botany. When I knew nothing of plants, I experienced a forest only as a tangle of forms, shapes, and colors without meaning or depth, beautiful when taken as a whole but ultimately incomprehensible and exotic. Now the components of the mosaic had names, the names implied relationships, and the relationships resonated with significance".

VASCULAR PLANTS RECORDED NEAR GILA BEND DURING THE MONTHS OF JANUARY AND FEBRUARY

MALCOLM MARTIN

Asclepiadaceae		<i>Opuntia echinocarpa</i>	Golden, Thorny-fruited prickly pear
<i>Asclepias albicans</i>	White-stemmed milkweed	<i>Opuntia fulgida</i>	Chain cactus
<i>Sarcostemma cynanchoides</i>	Climbing milkweed	<i>Opuntia ramosissima</i>	Pencil cactus
Apiaceae		<i>Peniocereus greggii</i>	Queen of the Night
<i>Bowlesia incana</i>	Bowlesia		
Asteraceae		Chenopodiaceae	
<i>Ambrosia ambrosioides</i>	Canyon bursage	<i>Atriplex hymenelytra</i>	Desert holly
<i>Ambrosia deltoidea</i>	Triangle-leaved bursage	Crassulaceae	
<i>Ambrosia dumosa</i>	Burrobush	<i>Crassula connata</i>	Pygmyweed
<i>Bebbia juncea</i>	Sweetbush	Cucurbitaceae	
<i>Encelia farinosa</i>	Incenso, Brittlebush	<i>Brandegea bigelovii</i>	Brandegea
<i>Filago arizonica</i>	Arizona filago	Euphorbiaceae	
<i>Hymenoclea salsola</i>	Cheese-bush	<i>Chamaesyce abramsiana</i>	Abrams sand-mat
<i>Monoptilon bellioides</i>	Desert star	<i>Chamaesyce arizonica</i>	Arizona sand-mat
<i>Perityle emoryi</i>	Emory rock daisy	<i>Chamaesyce micromera</i>	Sonoran sand-mat
<i>Psathyrotes ramosissima</i>	Turtleback	<i>Chamaesyce polycarpa</i>	Small-seeded sand-mat
<i>Rafinesquia neomexicana</i>	Desert chicory	<i>Chamaesyce setiloba</i>	Bristle-lobed sand-mat
<i>Trixis californica</i>	Trixis	<i>Croton californicus</i>	Desert croton
Boraginaceae		<i>Ditaxis lanceolata</i>	Lance-leaved ditaxis
<i>Amsinkia menziesii</i>	Menzies fiddleneck	<i>Sapium biloculare</i>	Mexican jumping bean
<i>Cryptantha</i> spp. ? <i>C. barbiger</i>	Bearded cryptantha	Fabaceae	
? <i>C. pterocarya</i>	Wingnut cryptantha	<i>Acacia greggii</i>	Catclaw
<i>Pectocarya heterocarpa</i>	Hairy-leaved comb-bur	<i>Cercidium microphyllum</i>	Small-leaved palo verde
<i>Pectocarya platycarpa</i>	Broad-seeded comb-bur	<i>Dalea mollis</i>	Silky dalea
<i>Pectocarya recurvata</i>	Arched comb-bur	<i>Krameria parvifolia</i>	Range ratany
<i>Plagiobothrys</i> sp.		<i>Lotus strigosus</i>	Hairy lotus
Brassicaceae		<i>Lupinus arizonicus</i>	Arizona lupine
<i>Brassica tournefortii</i>	Wild cabbage	<i>Olneya tesota</i>	Ironwood
<i>Descurania pinnata</i>	Yellow tansy mustard	<i>Prosopis juliflora</i>	Mesquite
<i>Dithyrea californica</i>	Spectacle-pod	<i>Psoralea schottii</i>	Indigobush
<i>Draba cuneifolia</i>	Wedge-leaved draba	Fouquieriaceae	
<i>Thysanocarpus curvipes</i>	Fringe pod	<i>Fouquieria splendens</i>	Ocotillo
Cactaceae		Geraniaceae	
<i>Carnegiea gigantea</i>	Saguaro	<i>Erodium cicutarium</i>	Filaree
<i>Echinocereus engelmannii</i>	Calico hedgehog	<i>Erodium texanum</i>	Texas storksbill
<i>Ferocactus wislizenii</i>	Barrel cactus		
<i>Mammillaria</i> sp.			
<i>Opuntia bigelovii</i>	Teddy-bear cactus		
<i>Opuntia basilaris</i>	Beavertail prickly pear		

Hydrophyllaceae

Eucrypta chrysanthemifolia Torrey eucrypta
Eucrypta micrantha Small-flowered eucrypta

Lamiaceae

Hyptis emoryi Desert lavender

Malvaceae

Hibiscus denudatus Paleface
Sphaeralcea ambigua Apricot mallow
Sphaeralcea coulteri Coulter globe mallow
Sphaeralcea emoryi Emory globe mallow

Martyniaceae

Proboscidea parviflora Devil's claw

Nyctaginaceae

Mirabilis bigelovii Wishbone bush

Onagraceae

Camissonia brevipes Yellowcups
Oenothera flava Yellow evening primrose

Plantaginaceae

Plantago purshii Patagonia plantain

Polygonaceae

Chorizanthe rigida Spiny-herb
Eriogonum deflexum Skeletonweed
Eriogonum fasciculatum California buckwheat
Eriogonum inflatum Desert trumpet
Eriogonum trichopes Little trumpet

Polemoniaceae

Gilia spp.
Linanthus jonesii Jones linanthus

Portulacaceae

Calandrina sp.

Resedaceae

Oligomeris linifolia Linear-leaved cambess

Scrophulariaceae

Orthocarpus purpurascens Mohave owl-clover

Solanaceae

Lycium andersonii Narrow-leaved thornbush
Lycium torreyi Squaw-thorn
Nicotiana clevelandii Cleveland tobacco
Nicotiana obtusifolia Desert tobacco

Urticaceae

Parietaria hespera Western pellitory

Visciaceae

Phoradendron californicum Desert mistletoe

Liliaceae

Hesperocallis undulata Desert lily, Ajo

Poaceae

Aristida adscensionis Six-week three-awn
Aristida purpurea Purple three-awn
Bromus arizonicus Arizona brome
Bromus madritensis rubens Foxtail chess
Erioneuron pilosum Hairy erioneuron
Erioneuron pulchellum Fluff grass
Pleuraphis jamesii Big Galleta
Poa bigelovii Bigelow bluegrass
Schismus arabicus Mediterranean grass
Schismus barbatus Mediterranean grass
Vulpia octoflora Six-week brome

Pteridaceae

Astrolepis cochisensis Scaly cloak fern
Cheilanthes parryi Parry lace fern
Notholaena californica California cloak fern

Selaginaceae

Selaginalla eremophila Desert spike-moss

Martin Malcolm considers himself a superannuated naturalist in British Columbia where he provides the occasional article for the journal "Menziesia" of the Native Plant Society of British Columbia. His summers are spent hunting for red and blue listed species for the provincial Conservation Data Centre (part of the Natural Heritage Program network) and provincial museum, acting as Volunteer Warden at two Ecological Reserves, and destroying Purple Loosestrife around his home town of Vernon in the south-central part of BC. It is his regret that he no longer winters in southern Arizona and California.'

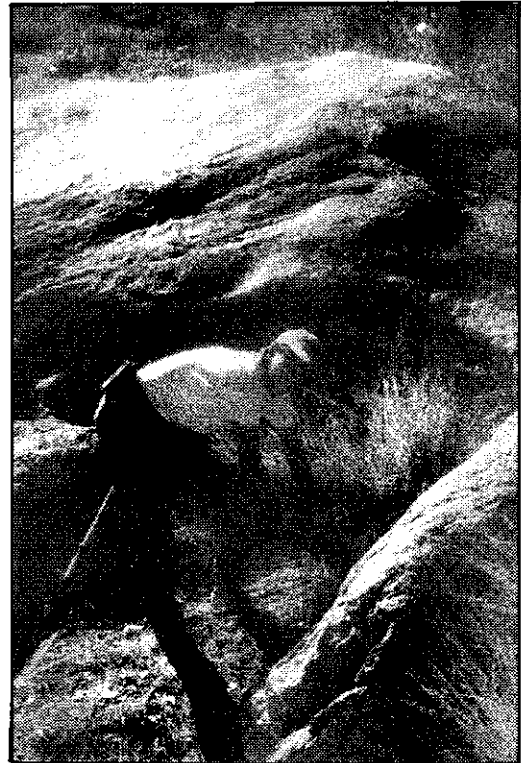
CONSERVATION NEWS

BATTLING FOUNTAIN GRASS

Fountain grass (*Pennisetum setaceum*) has long been viewed as a fine landscape grass. It is widely used as an accent plant, largely for its attractive seed plume. In recent years, however, it has become clear that fountain grass is creating serious problems in desert washes in the Tucson area and elsewhere.

It forms dense clumps, in places choking out native plants and presenting a severe fire hazard among Sonoran Desert plants that are not adapted to fire. It forms seeds several times a year and spreads rapidly along washes and along roadsides. Once the grass has invaded natural areas, it is a real challenge to eliminate.

Last summer Jeff Kreamer was hiking in Sabino Canyon and was alarmed to see many clumps along the road. Upon further investigation, he found it had moved from the road to invade the banks of the stream. In some places it has formed a monoculture.



Fountain grass that has become established in rock crevices is especially hard to remove.

Photo: A. Segade



Drawing by Kim Duffek

Under Cindy Salo's leadership, an agreement was reached with the Forest Service to initiate volunteer eradication efforts. Heidi Schewell, representing the Forest Service has led several eradication trips along the canyon. So far 26 truckloads of grass have been hauled out of the area by ANPS members, Friends of Sabino Canyon members, and the Weedwackers.

Working in Sabino Canyon has the benefit of serving a public information function when tourists stop to ask the workers why they are tearing out such beautiful grass. This gives the volunteers a golden opportunity to tell people about fountain grass and about invasive species problems generally.

Much more work remains to be done in the Canyon. Prospective volunteers should contact Matt Johnson at mjohnson@ag.arizona.edu.

PIMA COUNTY NATIVE PLANT NURSERY

On February 14, 2002, Pima County officials ceremoniously dedicated the new Native Plant Nursery. This nursery is a component of the Sonoran Desert Conservation Plan. The nursery has three purpose:

- ▀ To grow native plants that have become rare so that they can be reintroduced. Initially, the nursery will propagate screwbean mesquite, arrowweed, and Huachuca water umbel.

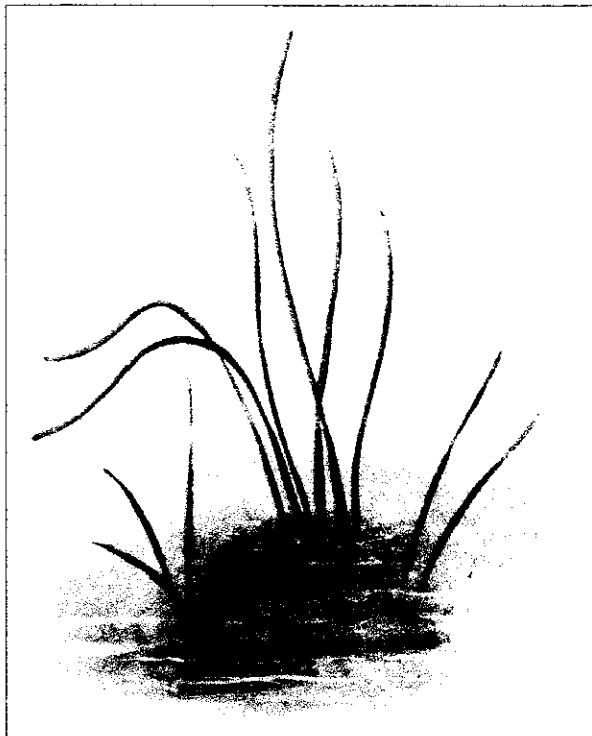
- ▀ To grow common native plants that will be useful in landscaping county projects, such as street medians and parks. Plants to be grown initially include mesquites, palo verdes, acacias, creosote, and jojoba.

- ▀ To serve as a collection place for plants salvaged from county projects so they can later be used on other county projects.



Screwbean mesquite.

Drawing by Bill Singleton, Pima County Graphics.



Huachuca water umbel.

Drawing by Bill Singleton, Pima County Graphics.

The Pima County Wastewater Management Department built the nursery and provides treated wastewater for irrigation. The Pima County Natural Resources, Parks, and Recreation Department will manage the nursery, under the guidance of a board made up of heads of the county departments that will be providing and utilizing the plants. The nursery is designed to serve county needs and will not be in competition with private nurseries.

ANPS members Gary Bachman and Jeff Kreamer played major roles in envisioning and making this nursery a reality



BOOK REVIEWS

BARBARA TELLMAN

Changing Plant Life of La Frontera: Observations on Vegetation in the U.S./Mexico Borderlands. Edited by Gardy L. Webster and Conrad J. Bahre. University of New Mexico Press. Albuquerque. 2001. 260 pages. \$60.

This is a book well worth reading by anyone interested in the borderlands and how vegetation has changed in the region. The thirteen chapters deal with a great variety of topics. M.L. Shelton has an in-depth discussion of changing climate along the border. VanDevender talks about "Deep History and Biogeography" taking us far back in time to examine the vegetation history of La Frontera. Bahre and Hutchinson discuss historic vegetation change. Gurtin and Brown look at how climate and

herbivory influence the vegetation of the Malpai Borderlands while Swetnam and others look at forest fire histories of the Sky Islands. Minnich, too, looks at fire and elevational zonation in the chaparral and conifer forests of the peninsular ranges, while Sosa-Ramirez and Franco-Vizcaino look at grazing impacts on mountain meadows in those areas. The Sierra de los Ajos and the Animas Mountains are the subject of a chapter by McPherson and Villanueva-Diaz which includes information on land use, climate, soils, and forest structure. Fulbright looks at human-induced change in the Tamaulipan Scrub and Espejel and other examine the coastal strand vegetation. Oaks are the subject of a chapter by Spellenberg and of an appendix that provides a taxonomic overview of the oaks of La Frontera.

The book is beautifully produced with numerous maps, graphs, tables, and photos. For the most part this is a book for the person with some technical background and expertise, not for the novice, although several chapters are accessible to the nontechnical but interested plant-lover.

ARIZONA RARE PLANT FIELD GUIDE

This long-awaited book has finally been published by the U.S. Government Printing Office! The book was produced by the Arizona Rare Plant Committee, a collaboration of agencies and organizations, including ANPS. This handsome notebook-style field guide lists more than 125 species of plants that are rare in Arizona. For each species there is a description, including phenology, management responsibility, habitat, range, and notes. Beautiful drawings and color photos illustrate each species, along with a very general map. In addition, the species are listed not only by botanical name, but also by management responsibility (e.g., Coconino National Forest), and by county.

The book is available free from the sponsoring organizations. Copies may be obtained from Forest Service offices, the Native Plant Society, the Arizona Nature Conservancy, and botanical gardens. If you cannot find one in your locale, contact the state office of ANPS to request a copy.

PIMA COUNTY PLANT INFORMATION AVAILABLE TO THE PUBLIC

JULIA FONSECA, PIMA COUNTY FLOOD CONTROL DISTRICT

The Sonoran Desert Conservation Plan (SDCP) is a regional planning effort to protect and restore the diversity of native plants and animals Pima County. Many studies have been undertaken to improve our knowledge regarding plant distribution, protection and threats.

Much of this new information pertaining to riparian areas is summarized in the September 2000 report "Riparian Protection, Management, and Restoration" (available to the public through the SDCP website www.sdcponline.org). Since then, a number of important new studies have been completed. An example is the recent report entitled "Biological Values of the West Branch of the Santa Cruz River", available on the website. This report helped to inspire the Pima County Board of Supervisors to acquire one of the last, best places along the Santa Cruz floodplain in Tucson. Another study, "Native Plant Program Report", proposes improved plant protection, salvage and restoration efforts.

These and more than 175 other reports are available for purchase at the SDCP print shop at 17 E. Pennington, Tucson, AZ, 85701, (520) 205-8300. Plant-related reports include the following:
Priority Vulnerable Species (at www.sdcponline.org)
Desert Ironwood Primer (\$10)

Geological and Ecological Diversity in the Proposed Ironwood Preserve (\$14)
Suitability Analysis and Representation Goals for Cottonwood-Willow Forest Habitat (\$11)
SDCP Riparian Vegetation Mapping and Classification (\$25)
Reclassification of Vegetation Mapping Units (\$7)
Groundwater Level Changes in the Tanque Verde Valley (\$15)
Bingham Cienega Restoration (\$27)
Resources of the Middle San Pedro (\$20)
Resources of the Altar Valley Subarea (\$25)
Native Plant Program Report (\$14)
Pima County Riparian Habitat Mitigation Ordinance: Effectiveness Review (\$7)
Water Resources and the SDCP (at www.sdcponline.org)
Issues of Non-Native Species in Existing Reserves (\$7)
Land Cover Data Assessment in Pima County (\$15)
Species Re-establishment in Pima County (\$10)
Huachuca Water Umbel Report (\$11)
Wetlands Plant Evaluation for Agua Caliente Park (\$11)

Julia Fonseca is the Principal Hydrologist for the Pima County Flood Control District, and a prime mover behind the Sonoran Desert Conservation Plan. She is an active ANPS member.

PUBLICATIONS AWARDS FOR 2002

ANPS is now accepting applications for awards under the Publications Grants Program. These grants are made possible through proceeds from ANPS publications. Approximately \$3,000 is available for awards this year to help support projects that will result in publication of materials about native plants, plant conservation, and landscaping with native plants. Awards are given to assist in publication only, not to support research. All applications must be made on the official application forms. These may be downloaded from the ANPS web site along with additional information or requested by mail at the address on the last page of this newsletter. Applicants do not have to be members of the Society to qualify.

Some grants awarded in the past were to help support the journal *Desert Plants*, publication of a new version of the Big Trees Book, Flora of Organ Pipe Cactus National Monument, Rare Plants of Arizona, and other publications. The Rare Plants book was published in winter 2002. See page 16 for information about that publication.

Rosewood cont. from page 3.

having withstood temperatures to zero degrees F. in plantings in Texas.

Whichever rosewood strikes your fancy, or fits your garden, give it a try. These are some of the most outstanding native shrubs and deserves a much more prominent place in all our gardens.

WHAT DO THOSE NAMES MEAN?

angustifolia describes the leaf: *angusta*, narrow; *folia*, leaf.

californica is a commonly attached epithet to plants collected in this region whether or not the species occurs in the state of California. This species does not occur in California.

corymbosa refers to the type of inflorescence, in this case a corymb, a flat head.

paucifolia refers to the quantity of leaves: *pauci*, few; *folia*, leaves.

sonorensis refers to the state of Sonora.

rosewood refers to the color of the heartwood which ranges from dark, rich brown to bright red.

vauquelinia honors the French chemist, Louis Vauquelin.

Mary Irish is a freelance garden writer and the author of a fine University of Arizona book on agaves.

ANPS STATE MEETING APRIL 27 AND 28, 2002 - WICKENBURG, AZ.

Wickenburg lies in the northernmost stretches of the Sonoran Desert at the base of the Bradshaw Mountains. Its flora will be familiar to most Arizonans who live in desert towns, but it has the Hassayampa Preserve (a rich riparian area) and Joshua tree populations as added attractions for plant enthusiasts. There is great hiking nearby and accommodations that range from simple motels to upscale guest ranches for those wanting to be pampered. It should prove to be a very interesting place for our State Meeting. We're lining up speakers on local habitats and plant life, Joshua trees, landscaping with Mohave Desert plants, and other topics. Hikes will include Vulture Peak, a Joshua tree habitat, and the Hassayampa Preserve. More information will be on the ANPS web site www.aznps.org.

State Meeting details and reservation forms will be mailed to ANPS members in mid-March. Questions may be addressed to Greg Corman by email at gregcorman@sprintmail.com.

CACTUS CONFERENCE

SAVE THE DATE! May 3 - 5, 2002, the Tucson Cactus & Succulent Society presents the Sonoran IV Conference at the Inn Suites Hotel in Tucson. Participate in informative workshops with experts in their field, view living displays, find a unique specimen, dine at the Arizona-Sonora Desert Museum and take part in a host of other "happenings." Don't miss this memorable event. Register early and save \$\$\$\$. Call Dick Wiedhopf for more information 885-6367 Email: wiedhopf@pharmacy.arizona.edu

ANPS NEWS

PHOTOS OF DESERT LANDSCAPE TREES NEEDED JULIA FONSECA

In January, Board President Barb Skye convened a group to review and revise the ANPS Desert Trees brochure. Jeff Kreamer, David Bertelsen, Matt Johnson, Antoinette Segade and myself attended. If you are interested in joining us or have suggestions, please contact me at 520-792-2690.

Do you take tree photos? We are looking for photographs of lovely specimens of Catclaw Acacia, Canyon Hackberry, Alligator Juniper, Blue Palo Verde, Desert Willow, *Lysiloma*, Desert Willow, Texas Ebony, Ironwood, Emory Oak, Velvet Ash, Walnut, Elderberry, and Velvet Mesquite. Please mail prints or slides to Antoinette Segade, 6719 E. Cooper, Tucson, AZ 85710.

We want to emphasize some of the native trees more in the brochure, and broaden the selection to include high desert trees more suitable for places like Sierra Vista and the Prescott area. We hope to be able to update the brochure to reflect new information on the damaging effects of trees such as African sumac and the eucalypts.

CENTRAL HIGHLANDS CHAPTER

Chapter president Heidi Romppanen has moved to take a new job in northern California. Heidi did a fine job arranging meetings, providing speakers, and conducting conservation activities. She will be missed. Until a new president is found, the chapter is temporarily inactive. Members who live in the Prescott area are urged to regroup and find new leadership so the chapter can be reactivated again. Contact Barb Skye at www.aznps.org for information.

NEW WILDFLOWER POSTER COMING SOON

The Flagstaff Chapter has a beautiful new poster of wildflowers in Northern Arizona that will soon be available. Watch the ANPS web site www.aznps.org for information on ordering the poster.

HELP WANTED

ANPS seeks a new editor for the Plant Press. The job involves soliciting and editing articles, some writing, preparing copy for printer using desktop publishing software, and distribution. Small honorarium for each issue. Contact Barb Skye at www.aznps.org.

The Plant Press welcomes contributions of articles, plant drawings, and book reviews. Please contact the editor, Barbara Tellman at bjt@ag.arizona.edu or 520 792-4515 with your ideas.

NEW MEMBERS WELCOME

People interested in native plants are encouraged to become members. People may affiliate with chapters in Central Highlands (Prescott), Flagstaff, Phoenix, Tucson, and Yuma or may be members only of the statewide organization. For more information, write to ANPS at the address below, visit the Web site www.aznps.org or contact one of the people below.

State President: Barb Skye 520-883-3009
Central Highlands (Prescott): Inactive chapter
Flagstaff President: vacant
Phoenix President: Kathy Rice 602 808 -9304
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