2D ANNUAL TEXAS COASTAL CLEANUP AT BOCA CHICA AND DEL MAR BEACHES

The Valley Nature Center and Native Plant Project have joined with the Center for Environmental Education to sponsor the second annual cleanup of Boca Chica and Del Mar Beaches as part of the Texas Coastal Cleanup. Beach Buddies last year included Texas Land Commissioner Garry Mauro; many legislators; other elected city, county, and state officials; and officers and members of this group.

This year's cleanup of Boca Chica and Del Mar Beaches will take place on the morning of Saturday, 19 September 1987. Those who wish to volunteer to participate should call 512-969-2475 (9 am to 1 pm; recorder at other hours) or 380-0310 (evenings; 10 to midnight is fine if you cannot get an answer earlier) and let the coordinator or the VNC director know you are coming. Knowing how many are coming is important in order to have enough needed materials on hand for everyone. On cleanup day, Beach Buddies will sign in and pick up their materials on the beach at the east end of Highway 4 at 9 am. The cleanup will last until noon. Be sure to bring the necessary items (such as long sleeves, sunglasses, hats, sun screens, liquids to replenish lost fluids) to protect from the Sun, especially in the event the current heat wave continues that long. Lunches, towels, swimwear, etc. would be useful to those who decide to relax and enjoy the clean beach afterwards.

Last year, the turnout on forgotten Boca Chica and Del Mar was pretty puny. The five from the Native Plant Project, Frontera Audubon, and Sierra group may be astonished at the potential turnout to help them this year from the Adapt-a-Beach groups. Numerous happenings have followed that first cleanup last September.

* The Government Land Office's Adapt-a-Beach program
* The "Stow It -- Don't Throw It" campaign for boaters and fishermen
* Stepped up efforts for the U.S.A. to ratify Annex V of the Marpol Treaty and ban dumping plastic wastes at sea
* Efforts to require garbage facilities at ports so ships have an alternative to dumping garbage in the Gulf of Mexico
* Efforts to add Texas' coast to coastal zone management

Table of Contents

p. 1 -- Beach Cleanup
p. 3 -- Meeting Announcement
p. 3 -- Bushy Sea-oxeye
p. 4 -- Madagascar Periwinkle
p. 5 -- First Annual Texas Rare Plants Conference
p. 8 -- August NPP Minutes
p. 9 -- July NPP Minutes
You have not heard what the problem is with plastics and ocean dumping? Endangered sea turtles, seals, whales, dolphins, and other sea life that feed on jellyfish especially mistake plastic bags for food and try to consume them; the plastic bags hang up in their digestive tracks and kill thousands of marine animals each year. Thousands more seals, whales, dolphins, sea turtles, and seabirds entangle themselves in plastic debris and die when they cannot free themselves. How many pictures have we seen of birds with heads through one part of a plastic six-pack carrier and a leg or wing through another? Only the few who are found and released in time survive. And there already are six-pack carriers identical in appearance available which break down quickly when left exposed to sunlight and the outdoor environment; but no one has yet required their use. Why are we so reluctant to follow the enlightened states and require deposits on all beverage containers? Oregon showed 15 years ago that highway cleanup costs were reduced dramatically on passage of a deposit law; people went out and gathered the discarded bottles for the deposit. The world's commercial ships dump over 5.5 million plastic, metal, and glass containers overboard daily. Add on what the commercial fishermen, oil rigs, cruise ships, naval ships, and recreational boaters and fishermen contribute to our oceans. During last year's CEE Texas Coastal Cleanup more than 124 TONS of trash were collected along 122 miles of Texas coastline by 2,772 Beach Buddies. About 56% of the items collected that day was plastic, 16,000 plastic bottles, 12,000 plastic caps, 15,000 plastic bags, and 10,000 six-pack rings.

Although much of the trash that washes up on the beaches comes from ships and drilling rigs in the Gulf of Mexico and carried around the Gulf by currents and deposited on local beaches, that is not the only source. Many people use Boca Chica and Del Mar Beaches for recreation, especially on weekends and holidays. The problem is with those who leave their trash behind -- even four or five barbeque grills some days. Each family frequently leaves a trash can-sized pile of trash behind. Somehow these individuals need to be taught the environmental values of taking their trash to where it will be properly disposed of. It does not take any more room in the car to take it home to the trash can than it took to haul it to the beach. Can we teach the children to teach their parents these values? What happened to the children who used to say, "Don't be a litterbug!"? Remember, as Garry Mauro says, "Don't mess with Texas beaches."

We are going to have a great big beach party! -- albeit an unusual one -- one that leaves the beaches cleaner than when all the new Beach Buddies hit the beaches. Last year's handful may go into shock, but they will welcome the additional hands with open arms!

(Continued from page 7.)

All in all, the First Annual Texas Rare Plants Conference was quite informative and offered a rare opportunity for many of those working for the myriad of federal, state, and private sector agencies, groups, and businesses involved with or interested in saving imperiled plants to get better acquainted with the Texas Natural Heritage Program program, the listing process, federal and state rules, the private sector role, work in progress, and each other. The exchange between the audience of involved individuals during the latter portion of the afternoon was exceptionally valuable and educational. Many continued to discuss their interests long after the conference was over.
BUSBY SEA-OXEEYE

*Borrichia frutescens* (L.) DC.

**FIELD IDENTIFICATION.** Small fleshy, whitened shrub to 4 ft. of saline marshes and sandy shores.

**FLOWERS.** Throughout the year, but usually April-September, borne on solitary stiff, stout peduncles, or sometimes a few together; heads of both ray and disk flowers; rays 15-25, short, each about ½ in. long, pistillate and fertile; disk yellowish brown, corolla perfect and fertile, cylindric, funnelform, 5-toothed, tube short, anthers dark-colored; style branches slightly flattened and hairy.

**FRUIT.** Involucres hemispheric, about ½ in. broad, the imbricate bracts spreading, leathery, chaffy, ovate, those of the receptacle rigid, lanceolate and spiniferous; achenes wedge-shaped, 3-4-angled, pappus crown short, 4-toothed. The spiny, persistent, chaffy heads are conspicuous at maturity.

**LEAVES.** Erect or ascending, simple, opposite, thick-fleshy, blade length 1-3 in., width ½-¾ in., spatulate to obovate or lanceolate, apex acute to obtuse and mucronulate, base tapering or somewhat connate, margin entire or often toothed toward the base, surface finely whitish-canescent above and below.

**STEMS.** Sparingly branched, stout, rounded, grooved, whitened with silky hairs or more glabrous on older stems.

**RANGE.** Salt marshes, sandy shores, sea beaches, and saline prairies. Near the coast from Texas eastward to Florida and northward to Virginia. Also in the West Indies and Bermuda. In Mexico in Tamaulipas, Veracruz, and San Luis Potosi.

**REMARKS.** The genus name, *Borrichia*, honors Ole Borch (Latinized Olaus Borrichius), a Danish botanist (1626-1690). The species name, *frutescens*, refers to the shrubby habit.
The following article is well written, but one more aspect needs to be added to it. This planet remains faced with widespread destruction of tropical habitats, especially tropical rainforests. Many do not understand why such destruction so alarms the environmentally-concerned. There still exist thousands of plant and animal species in these tropical habitats that remain unknown to science. No one knows what beneficial substances yet-to-be-discovered plants many contain. Nor will anyone ever know if the species vanish from the globe before being discovered and studied. This periwinkle is an excellent example since it comes from a tropical country (Madagascar) whose habitats are imperiled by continuing destruction (see a recent National Geographic) and contains useful substances -- medicines for fighting the cancers known as leukemia and Hodgkin's disease.

Valley flower used to fight cancer

by Kathleen Holton

The Valley is known for growing all types of vegetables and citrus but one father and son farming team grow something a little more unusual.

Dick Wiesehan and his son Roger of McAllen, raise periwinkle flowers on 80 acres of land and sell them to a national pharmaceutical company for cancer treatment drugs.

The Wiesehans have raised the unusual crop for 16 years.

Periwinkles are common in Valley yards because of their summer color and ability to withstand heat. But since the early 1970s the flower has become a lifesaver.

Eli Lilly, a pharmaceutical company in Indiana contacted the Wiesehans to grow the flowers that contain the organic base alkaloid.

The alkaline component of periwinkles is used to produce two cancer-fighting drugs called Oncovin, given to children fighting Leukemia, and Velban used for treatment of Hodgkin's disease. There's been an 80 percent cure rate with Velban.

According to Eli Lilly media representative, Takia Mahmood, the two drugs are highly effective in the battle against cancer.

Although periwinkle is commercially grown in other parts of the world, Eli Lilly wanted an American supplier. Several different areas of the country were considered when periwinkle was discovered to contain the alkaloids, according to the elder Wiesehan, but the weather and soil in this area provided the best growing conditions.

The Wiesehans have a mid-July harvest and will harvest again in late September. "The flowers, stems and leaves are all harvested; however, the leaves have been shown to contain more of the precious alkaloid."

The next time you drive by a field of periwinkles, remember you're not only looking at an aesthetically appealing flower but a flower that saves the lives of cancer patients.

PERIWINKLE FLOWERS are not only pretty but also a useful product in manufacturing medicines. The flowers are harvested and then processed by Texas Citrus Exchange in Mission.

The dried pellets are then sent to Eli Lilly, a pharmaceutical company in Indiana for use in cancer-fighting drugs.

Continued from Pg. 1
The Texas Natural Heritage Program hosted the First Annual Texas Rare Plants Conference in Austin on 21 July 1987. Registered participants totaled 87; with the addition of unregistered Texas Natural Heritage Program employees, participants totaled at least 93. Bob Murphy, Coordinator of the Texas Natural Heritage Program, outlined the Texas Natural Heritage Program and answered questions about it. He also reviewed some of the early botanical explorations in Texas. The Texas Natural Heritage Program is four years old. It employs five scientists, (including Jackie Poole, Steve Orzell, and David Diamond), two data managers, and one secretary. The Texas Natural Heritage Program information records include rarity, threats, and current protective status. The Texas Natural Heritage Program originated with the Nature Conservancy, then moved to the Government Land Office. On 1 September 1987, the Texas Natural Heritage Program moved to the Texas Parks and Wildlife Department, which would seem to be its natural location.

Texas Land Commission Garry Mauro was the keynote speaker. Commissioner Mauro was graduated from the Texas A&M University business school and the University of Texas law school. He brought the Texas Natural Heritage Program into government under the auspices of the General Land Office. The Nature Conservancy and the Government Land Office share the Texas Natural Heritage Program's million dollar annual budget. Commissioner Mauro stated that it is "good politics to be an environmentalist today." He is extremely amiable and appears to be a supersalesperson. The Texas Land Commissioner manages about 29.2 million acres (19.1 million acres of mineral rights, 4.1 million acres of submerged lands, and 3 million acres of surface lands) of the total of 179 million acres of land in Texas.

Dr. Charlie McDonald, botanist with the U.S. Fish & Wildlife Service's (FWS) Region 2 Office of Endangered Species (OES) in Albuquerque, reviewed federal responsibilities and the listing process. Federal responsibilities for imperiled species include 1) listing, 2) protection, and 3) recovery. The first listing was in 1973. The Smithsonian Institution was directed to produce a list of recommended listings. In June 1976, the FWS published a notice intending to list about 1700 species, but was forced to withdraw it. They now add one or two species at a time. Complete lists were published in 1980, 1983, and 1985 and the next is expected in early 1988.

Candidate species fall into three categories. Category 1 species (11 in Texas) have enough biological information accumulated and should be listed as time permits. Category 2 species (109 in Texas) may warrant listing, but require more biological information before any decision to list or not can be finalized. Category 3 species (151 in Texas) have completed review, failed to meet required criteria, and are no longer under consideration. They are retained on a Category 3 list for reference purposes, such as to show they have been considered. Reasons for being removed from consideration include a) the taxon is extinct, b) the taxon is taxonomically not an entity (misclassified), and c) the taxon is found to be more abundant or widespread than previously believed. Texas' 120 plants in Categories 1 and 2 rank fifth behind Hawaii's over 700, California's 647, Florida's 176, and
Oregon's L32. The Texas Natural Heritage Program helps to supply data. [A taxon refers to any taxonomic entity without referring to its taxonomic level; genus, species, subspecies, and variety are examples of taxa (taxons). Recall that the Endangered Species Act defines "species" as including any species, subspecies, or variety.]

The listing process involves numerous required steps: 1) listing is proposed, 2) a written proposal is prepared, 3) the proposal is published in the Federal Register, 4) a notice is published in newspapers where the taxon occurs requesting comment from state and federal agencies, landowners, interested organizations, biologists, experts, and other known interested individuals, 5) the public has 60 days to input its comment and 45 days to ask for a hearing, 6) the process must be completed within 12 months; publication of the final rule is the equivalent of creating new law protecting the taxon. In Texas, 15 plants have been listed federally as Endangered and three as Threatened; three more have been proposed for listing. For plants, listing prohibits collection from federal lands and interstate and international trade. The bad news is that listing does not prohibit collection or destruction of habitat. If plants had protection equal to that of listed animals, plants, like animals, could not be possessed without permits from the Office of Endangered Species and Texas Parks and Wildlife. Threats endangering plants include: 1) loss or modification of habitat, 2) taking or collecting (i.e., cactus rustling), 3) disease, herbivores, and predators, 4) inadequate regulations and enforcement, and 5) other natural (i.e., all one gender) or numerous human-made factors.

Under Section 7 of the Endangered Species Act, neither federal agencies nor federal funds may be used to jeopardize listed species or their habitat and the FWS must be consulted. Nine of the 18 recovery plans for Texas plants have been completed, with six more expected to be completed by the end of 1987. Categories of recovery plan tasks include 1) management and protection of species and habitat, 2) studies of species' biology, 3) public education to gain support, and 4) law enforcement. The biology of listed species (such as pollinators, germination requirements, etc.) is generally little known. Recovery costs of 2.5 million dollars have been projected for the 18 listed and proposed Texas plant species plus any necessary land acquisition. The Region 2 OES has a total annual budget of $570,000 for 101 species in Region 2. Some species remain well funded (whooping crane, sea turtles) and receive about half of the budget. The Texas Plant Recovery Team helps with updating the candidate list, determining status survey needs, making listing decisions, and setting recovering priorities. The Region 2 OES can afford to do only two or three plants for Texas per year. The list is required to be published annually.

Leland Roberts of the Texas Parks and Wildlife Department's (TPWD) Resource Protection Division spoke next. Texas' endangered species law first included only state lands. In 1983, it was extended to cover private lands. It also protects plants of historical or cultural value, but none yet have been listed in this third category. To amend the state lists, the TPWD director files an order or letter with the Secretary of State if the species is federally listed. If the plant has not been federally listed, the full process must be gone through.
State-listed plants may be collected UNDER PERMIT from state lands for propagation, for education, and for scientific purposes. State-listed plants may also be collected UNDER PERMIT from private lands for commercial use or for the collector's own use; each plant must be individually tagged and the landowner must provide written permission. One can get permission to collect and propagate and sell the offspring. A first offense results in a $25 to $200 fine; if caught thrice within five years, a fine of $500 to $2,000 plus a possible year in jail can be imposed. Protection may involve acquiring property such as for a state scientific area or private sanctuary. Education of involved landowners remains essential. Management necessary may require fencing of plots, prescribed burns, or grazing and/or mowing. State funding remains insufficient and requires federal (FWS, Forest Service, etc.) and private source assistance.

Dr. Linda McMahan of the Center for Plant Conservation discussed the work of several arboreta and botanical gardens. (The Center for Plant Conservation is a network of 19 arboreta and botanical gardens.) Land acquisition alone is not enough. Public education programs and off-site propagation frequently prove necessary. Populations on private land must be protected. State-required consultation plans work well in California. Some endangered species will be lost despite all efforts to save them.

Additional gleanings from her talk follow. Fifty unrelated plants approximate 90 percent of the genetic variability of a species. Cuttings of shrubs usually root readily, better than the seeds germinate. Plants FREQUENTLY do better in common potting mixes than in a mimic of their natural soil. Propagated plants remain essential for reintroductions into natural habitat.

Helen Ballou is a landowner contact-person with the Nature Conservancy out of San Antonio. She is more interested in critical area (habitat) protection than in individual species protection. Money remains too hard to come by for plants. A great need exists for private involvement, volunteer protection by landowners, a unified front, and private fund raising. She is working on the Ashy Dogweed site.

Jackie Poole, botanist with the Texas Natural Heritage Program, was unable to do her scheduled "Who's on First" routine because of the absence of the other player. The Texas Natural Heritage Program wants to be a clearinghouse for projects and information on rare and endangered plants to reduce unnecessary duplication of effort which could harm each other's projects. The Texas Natural Heritage Program plans a quarterly newsletter which would include who's doing what. Even plants in state parks and refuges are not safe. One problem is the deer overpopulation in state parks; others include people pressure on the park resources and, as recently happened, the removal of state parks from the state park system for other uses. Jackie commentated for a slide show, "Texas Rare Plants, Their Habitats and Distribution." Paul Montgomery was the photographer. The presentation is to become a brochure on Texas' rare plants.

Jackie reviewed the 18 listed or proposed species one by one. She called on those with projects to tell what they were working on. Susan Rust, May's The Sabal in hand, brought up the Native Plant Project's proposal to work with Ashy Dogweed and Johnston's Frankenia. Dr. McDonald is to get back to the Native Plant Project on the nature of its involvement; coordination had not been completed before the meeting.

(Concluded on page 2.)
The Board of Directors of the Native Plant Project met at the home of President and Mrs. Robert I. Lonard in Edinburg on 14 August 1987. Seven (7) Directors (Nancy M. Gilbertson, Joe Ideker, Robert I. Lonard, Jean Anne Pearcy, Susan M. Rice, A. Clayton Scribner, and Lynette Scribner) attended. President Lonard called the meeting to order about 1935.

President Lonard asked if there were any corrections to the minutes. The treasurer is still out of town.

A.C. Scribner brought in the display board he made. Various, appreciated contributions to the project included the Valley Nature Center (material transport, wood, cork) and Glenn Boward (lineoleum paste and finish).

President Lonard passed around Jackie Poole's rare plants list from the Texas Natural Heritage Program (TNHP). TNHP's path was briefly traced from the Nature Conservancy to the General Land Office to the Texas Parks and Wildlife Department. He also passed around a script from the Native Plant Society of Texas that he contributed to. The script was for the Texas Nature Celebration's "audiovisual filmstrip" entitled "Our Native Trees". Slide donations were requested to accompany the script. He also distributed an announcement of a symposium, "Planting for the Future with Native Plants and Wildflowers", at Texas Tech University in Lubbock on 25-26 September.

The Board will meet at 1830 on 11 September at the Coastal Studies Laboratory. President Lonard will lead a field trip at 1930 in lieu of a general meeting. It costs a dollar now to enter the park to drive to the Coastal Studies Lab. President Lonard plans a field trip to one of three suggested sites: Pope-Garza tract, Val Verde Ranch, or Laguna Atascosa NWR, perhaps to all three during the next year.

Gilbertson said a San Benito nursery gave some Texas Ebonies to RGVNWR, they will give some to the NPP.

Some slides were reviewed, but not enough to select 20 from as planned. After much discussion, it was decided that President Lonard would follow up on the Rice suggestion of strips of five slides to sell to the general public (perhaps 5 herbaceous, 5 cacti, 5 shrubs, and 5 trees) and check on the possibility of having the slides made into a filmstrip for educational use in schools.

Brochures were passed out by the coordinator on the NPP's cosponsored Texas Coastal Cleanup on Boca Chica and Del Mar Beaches on Saturday, 19 September.

After enjoying Becky Lonard's excellent cake, the Directors adjourned at 2209.
The Board of Directors of the Native Plant Project met in the Community Room of the Mid-Valley Bank in Weslaco on 10 July 1987. Eight (8) Directors (James Chapman, James Everitt, John Fucik, Joe Ideker, Robert I. Lonard, Bill MacWhorter, A. Clayton Scribner, and Lynette Scribner) and chairperson Becky Lonard attended. President Lonard called the meeting to order at 1930.

President Lonard announced a meeting room at the Coastal Studies Laboratory had been reserved for 11 September, 9 October, and 13 November. The NPP also has reservations for the Community Room of the Mid-Valley Bank through January. Tonight’s meeting was announced on KURV radio.

The Treasurer will be gone for six weeks. The balance as of 12 June is $2,075.49. The Treasurer was not present to ask for the proposals he asked each to submit at this meeting.

Fucik said the port-a-display committee was on hold; it has not met because members have been out of town. He intends to set up a committee meeting after the 22d of July.

President Lonard called the highway engineer and asked about the status of Thymophylla tephroleuca. The engineer said barriers have been constructed to prevent mowing.

The Texas Rare Plants Conference is 21 July. Present Lonard is not going.

President Lonard brought up again selling groups of slides as a money making project. He knows of a good copying source. A collection of 20 slides of native plants of one type would be sold in a plastic slide storage sheet with commentary. He asked photographers to bring in slides (herbs first) and select the first 20 at the next meeting. Chapman indicated a need for title slides. Discussion indicated the types of plants least useful for education uses were to be prepared first. President Lonard thinks TEA might be interested in lower Rio Grande Valley plant teaching materials.

Fucik needs brochures to mail out to the foundations with the letters inquiring about funds for Gardner’s poster project.

President Lonard wants regular field trips every two to three months. Chapman wants his drainage and irrigation ditch clearing presentation on the agenda again for August. Everitt said Big Bend is gorgeous this year due to early rainfall.

The August Board meeting will be at 1930 on 14 August at the Lonard residence, 1116 South Thirteenth Avenue, Edinburg. Turn east along the H.E.B., turn north after two blocks; the house is on the right in mid-block.

The Board will meet at 1830 on 11 September at the Coastal Studies Laboratory. President Lonard will lead a field trip at 1930 in lieu of a general meeting. It costs a dollar now to enter the park to drive to the Coastal Studies Laboratory.

President Lonard adjourned the meeting at 1930.
President Lonard called the meeting to order at 1935, announced the September meeting, reviewed Board topics covered, the Treasurer’s Report, and the proposed slides project. He asked all to introduce themselves. Chapman laid out a list of native plant sources to be picked up at the end of the meeting.

Dr. Robert I. Lonard, Professor of Botany at Pan American University, discussed the effects of disturbances and perturbations on the native vegetation of South Padre Island. He also discussed the zonation of the island and the results of his on-going research.

Dr. John Fucik made the Native-Plant-of-the-Month presentation on Manzanita (Malpighia glabra). Manzanita can be an excellent ground, shrub, hedge, or small tree. Beautiful Manzanita hedges can be seen at the courthouse and on the Pan American campus. The fruit is very high in Vitamin C. Alan Smith received the bonzaied Manzanita.

A.C. Scribner thanked Dr. Lonard for his presentation and the thanks were seconded by a round of applause.

President Lonard adjourned the meeting at 2045.