



Volume 1 No. 4

Friends of Guadalupe River Honey Creek, Inc.

A non-profit organization

3350 Park Rd 31, Spring Branch, TX 78070 ☎ Voice Mail 210-935-4012 (after 6:00 p.m.) Feb - Apr 1995

Superintendent's Corner

The Guadalupe River State Park Store opens the last week of March! We will be offering our visitors a mixture of customer service items such as basic camping supplies that are sometimes forgotten, park T-shirts and mugs, and numerous nature items and books. Come visit -- we welcome your ideas and support! (Open on weekends, then daily during the summer season)

We are also pleased to introduce our new Park Hosts - Donald and Nancy McLean from Ohio and Mel & Jewel Clapp from Nacogdoches, Texas. Ginger Andrews and her family continue to be enthusiastic helpers!

Jan Tutschke

Try Our New Voice Mail System!

The Friends organization has a voice mail system and we've set up a series of mail boxes for members to browse for current information on programs, events and Board meetings. The phone number is 210-935-4012 and is available after 6:00 p.m.

Listen carefully to instructions that will guide you through the different "mail boxes" for information, to make reservations or leave messages.

This system also accepts faxes. Send faxes as you normally would and the software will recognize the fax tones and automatically switch to fax mode.

Currently we have several mail boxes set up to describe upcoming events and take reservations. Mail box numbers are listed with articles on the back calendar to speed you through the system. We are still working out the bugs so be patient. Of course your newsletter will be the main source of information and calendar of events.

READ ME: When entering numbers, press the key pad firmly and make each tone long and clear. If the tone is too brief, the system will not "hear" it. Please don't hang-up to exit. Try to use the proper exit sequence and please speak slowly and clearly (that's for me!)

Earth Day Celebrates 25th Anniversary

This April marks the 25th Anniversary of Earth Day. We have some great activities lined up this year -- so mark the weekend of April 22 and April 23 as special days to participate in events at our two state parks.

We will begin the weekend at the Honey Creek trailhead with guest Val Roessling, plant enthusiast and gardener. Mr. Roessling, well known in the New Braunfels area, will join us on the morning hike along Honey Creek Canyon and give us practical landscape uses for native plants and tips on how to grow them.

Children's activities commence at the Rust Visitor Center from 2:00 - 4:00 p.m. Somerset High School Science Club will facilitate activities that kid's and adults of all ages can participate in and build awareness of the world around us.

David Mckelvey will end the day's activities at the amphitheater. Mr. Mckelvey is a well known children's book author and area naturalist. His programs are filled with fascinating information about animals and birds and amazing imitations of animal calls (and sometimes behavior).

Sunday promises two very special tours into Honey Creek Canyon. Both are limited attendance events so make reservations early for your choice. The first is a spring birding tour lead by Sue Bayley of S.A. Audubon and an artist & photo outing in another section of the canyon. See calendar, page 5.

1st Annual Spring Science Day Camp for Kids Announced for May 8 - 13th

Texas Environmental & Wildlife in Danger Interpretive Program. May 8th - 13th. Sponsored by Friends of Guadalupe River/Honey Creek, Guadalupe River State Park and the community. Program will be presented by Thomas Vermersch, Living Jungle Science Programs.

Program is designed for students and schools grade levels 3 through 6 as well as youth groups and individuals.

Monday, May 8th - Friday, May 12th will be reserved for schools. Classroom rates are \$2.00 per child. Saturday, May 13th will be available for youth groups and individuals at a \$5.00 per child fee. The day camp will take place at Guadalupe River State Park.

There will be two program sessions presented each day. The first program session is from 9:00 - 11:30 a.m., the afternoon session is from 12:30 - 3:00 p.m. Each session will be limited to 50 kids.

The activity units will include: how people of Texas affect our wildlife, understanding our environment and how we as people fit into it, identification of Texas ecosystems, community and food web, pond and soil, niche, adaptations of wildlife, protection/camouflage coloration, wildlife management, water pollution and organic matter, oil spills, and biodegradable materials.

Students will participate in question-and-answer, hands-on activities with live and preserved insects, spiders, reptiles, amphibians, birds, and mammals. The students will solve real-life related wildlife problems as they roleplay scenarios involving real-world environmental problems.

An aquatics session will teach about reptiles and amphibians and collect and examine aquatic life found in the algae growth of streams.

Each teacher will be provided with a Texas Environmental & Wildlife in Danger Interpretive Guide Booklet and a Honey Creek Nature/Wildlife Check List and Guide with related program questions for students which will include a glossary of terms used during the program.

Somerset High School Science Club.

Our thanks to the Somerset H.S. Science Club and teacher, Connie Petruskevich, for their \$29.00 donation this past January to the Friends organization. Students save their change and take items to be recycled and donate the proceeds to the Friends of Guadalupe River/Honey Creek, Inc. All donations will be used for special programs and events such as the May Science Camp for elementary children. Again, thank you Somerset High School Science Club for your commitment and enthusiasm. Read On! On April 23rd, the Science Club, under direction of Mrs. Petruskevich will coordinate the children's afternoon activities for our Earth Day weekend. Mrs. Petruskevich is a Project Wild facilitator. Activities get underway at 2:00 p.m. at the entrance to Honey Creek SNA.

New Braunfels Middle School Science Club

under the direction of Christy Thompson spent a December Saturday afternoon working at the Rust Visitor Center. Young science students swept and cleaned the house while others trimmed back invading brush from around the house and collected litter in the camping area. These 7th and 8th graders did a fantastic job. Thanks again!!

Our Flintknapping workshop took place on January 14th and was blessed with a beautiful warm day. Allen Bettis, was our instructor and conducted a very professional seminar. We all went home with a greater appreciation of prehistoric life and perhaps our own.

Texas Birdhouse Day was celebrated at Guadalupe River State Park by Troop & Pack 163 of New Braunfels. Cleaning, wasp proofing, positioning and repair was accomplished on 51 blue bird nest boxes. Some 30 volunteers were lead by Devin Koehler. Park guests Caitlin, Jessica and Terry Dunphy joined in the effort, too. Boxes are designed for Bluebirds, but also attract Carolina wrens, Bewick's wrens, Carolina Chickadees or tufted Titmouse.

Board Members of

- Guadalupe River/Honey Creek, Inc.**
 Richard Solis President
 Jeanne Manry Treasurer
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 Henry Wagner Board Member
 Janet Wagner Board Member
 Duncan Muckelroy Superintendent
 Joan Nitschke Volunteer Coordinator

The "Friends" organization offers many volunteer and service project opportunities!

Do you enjoy behind the scenes activities, planning programs, working with kids? We can use your help and your creative ideas in 1995. We want to expand our offering of trail walks for schools into the week as well as expand family activities on the weekends. *And you can help.* It's easy to learn an activity and we will train you. Already got a busy schedule? Spend as little or as much time with us as you'd like. We'll make it work around your needs. We also have the library resources that you can use.

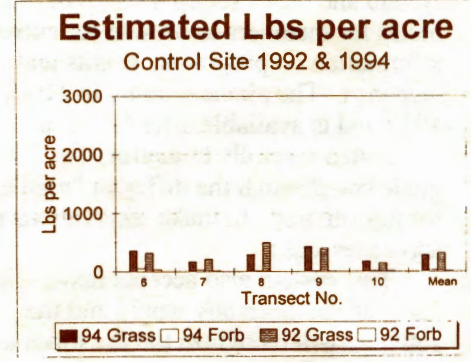
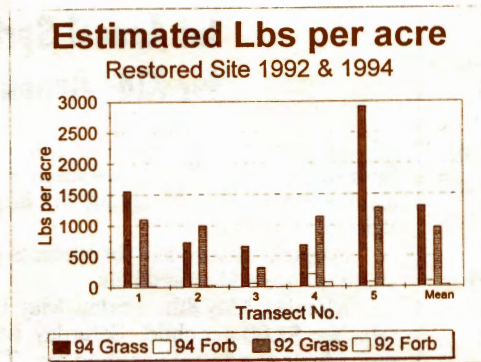
Check our *volunteer opportunities* in the Spring calendar on page 5. Do you know a student or youth group with a service project objective? We can help. Call our voice mail, write us or just drop into Honey Creek SNA on any Saturday morning. Penny is there for the nature hike from 8:40 a.m. - 12:00 and will be glad to fill you in. Check us out! Or contact us on our voice mail line 210-935-4012.

Coming up this spring we need help for March 25th, Spring Break activities. You can help to facilitate a children's activity, hand out activity booklets, Friends organization information, greet arriving families and get them oriented, take photographs. Hope to see you at the park soon.

Vegetation Survey Published. Devin Koehler of New Braunfels coordinated a vegetation survey of Guadalupe RSP and Honey Creek SNA this past October as part of a environmental improvement service project. This data is important scientific follow up on changes in burned and unburned areas of the park that was first conducted in September, 1992.

Devin Koehler took on the formidable task and coordinated the vegetation survey last October, the analysis of the field data and the publishing of the final report.

Habitat restoration efforts, begun in 1989 by Matt Wagner, and Kevin Good of TPWD, have produced remarkable results. Data was collected in 10 quadrats from each of 10 transects. Transects 1-5 are located in an area of Guadalupe River SP that had cedar hand-cut from it in 1989. The area was then intentionally burned in February, 1992. Transect numbers 6-10 are located in adjacent Honey Creek SNA with a severe infestation of second-growth cedar. Teams of students from BSA Troop 163 and Pack 163, New Braunfels, Boerne High School, area 4-H clubs, and Friends of Guadalupe River/Honey Creek collected basal and standing crop cover to be identified, dried and later analyzed by Devin Koehler. The data is displayed graphically as follows:



The grass production is nearly one and one-half times the amount it was in 1992 (961 lbs./acre vs. 1313 lbs./acre) in Guadalupe RSP, the restored site. The forb production is three and one half times the amount it was in 1992 (251 lbs./acre vs. 90 lbs./acre) in the restored site.

In Honey Creek SNA, the control site, grass production has decreased (313 lbs./acre vs. 287 lbs./acre) from the 1992 study while the forb production has increased (14 lbs./acre vs. 26 lbs./acre).

Scientific data such as this, collected over time, is an important tool in resource management within our state parks. The 1994 vegetation survey coordinated by Devin Koehler is a step towards protecting the native habitat of central Texas within the boundaries of Guadalupe River SP and Honey Creek SNA.

Our thanks also go to the support of H.E.B. of New Braunfels for their donation of grocery bags for vegetation collection, the Coleman Company for use of their lab and gram scales and Friends of GR/HC for assistance in publishing the report and financial support.

What is that plant?

TINY SPRING TASTE TREATS

Native Plants of the Hill Country and their cultural uses by Penny Solis



Cucumber Plant (Pellitory - *Parietaria* species) - Urticaceae. The flavor and smell of this tiny herb is that of the garden cucumber. Young fresh growth of late winter and early spring is best. The leaves are often added to salads. Though related to stinging nettles, the soft hairs that coat the stems of Pellitory do not sting. Spin the stem of the herb between your fingers and feel the square stem often found on herbs. Look for the herb in low-growing colonies in sheltered patches of ground.



Mock Pennyroyal (*Hedeoma Drummondii*) - Libiatae. A small sweet-scented herb that provides a tasty lemony or minty-flavored tea. When crushed the plant produces the same pleasant smell which makes it easy to recognize. Mock Pennyroyal is usually less than one foot tall and is found late spring into fall.

It has several other uses. The plant is also used as an insect repellent, bundles of the plant are hung indoors to repel flies and bugs.

As with all herbs - know them before you use them. Pennyroyal is a good example for caution. A similar species, *Hedeoma pulegioides* and *nana* were once used as part of a compound to induce abortion - although there is no proof of its effectiveness. *H. Drummondii* is little studied, so avoid its use during pregnancy. Consuming large amounts of the tea may induce a feeling of lethargy and dizziness.



Peppergrass, *Lentejilla* - *Lepidium* Species - Brassicaceae. Use the seeds of peppergrass as a peppery spice. Add the young basal leaves that appear in winter and spring to salads, or use them as cooked greens. The leaves are high in vitamin C and a good source of iron.

Pepper grasses, members of the mustard family, are annuals, biennials, or perennials and are available from fall to early summer. The herbs are often much-branched, forming a rounded mass of seeding stalks around 1 - 2 feet tall. The Spanish name, meaning "little lentil," refers to the more or less circular, partly flattened siliques. The edges

of the silique are winged, the wings forming a shallow V-shaped notch at the top of the pod. The siliques are 1/8-1/4 inch wide.



Shepherd's Purse, *Paniclesillo* (*Capsella Bursa-Pastoris*) - Brassicaceae The green pods of *paniclesillo* are a peppery spice and the plant is also a member of the mustard family. You can taste the peppery seeds right off the plant. The pods, young leaves and stems are a tasty addition to soups and stews. The herb is high in vitamins A and C. The species name of this low-growing member of the mustard family literally means "shepherd's purse." Usually less than one foot tall, shepherd's purse blooms in winter, and young plants are available from fall to early spring. All

of the brassicas growing wild in Texas were introduced from Eurasia as garden greens. Medicinal uses included uses for external and internal bleeding, as a diuretic, and to prevent scurvy.

To learn more about these herbs, how to recognize them and other useful plants within our area, join me on one of the Spring ethnobotany walks at Honey Creek. We will see, taste, and smell these and other interesting plants along the trail. Until then, please, use caution when looking for wild herbs you are unfamiliar with. Mistakes are usually no more harmful than a temporary foul taste or unpleasant stir in your hands, but it's still no way to enjoy nature.

Sources for article from *Wildflowers of the Texas Hill Country*, by Marshall Enquist; Illustrations and information from *Edible & Useful Plants* by Delena Tuli; *Los Remedios* by Michael Moore; *Indian Herbarology of North America* by Alma R. Hutchens.

say, Hoot!



Solar Cooking

We were disappointed not to hear from you in time for this newsletter. Hoot has a challenge for you, though. Earth day is coming up April 22nd and we challenge any family or youth group to build a solar cooker for display at the children's afternoon activities. The cooker must be able to bake cupcakes or other yummie treats for us to admire. The family or youth group(s) that participate will be featured in our next issue (see instructions for solar cooker on page 6).

We still want to show off your creative articles. Send us a nifty nature fact, share a neat thing to do, form a think-tank team to research a question and share your discoveries with us. We've even got a sponsor that will provide us with a small prize for the children that are published in this column. Your topics can be the outdoors, camping, nature, science, history and culture, but things that occur in our area of Texas. Deadline is April 15th. Write to "Say, Hoot" at address on front page. Good Luck!



An adult leafhopper just after emerging from the nymph.

The Texas Hill Country

The cultural and environmental history of the Hill Country of the Edwards Plateau, including Guadalupe River SP and Honey Creek SNA.

The rugged geology and fragile water resources of the Edwards plateau are two very important elements that have shaped the character of the land by creating special habitats for plants and animals. And, in more recent time has affected settlement patterns which have indirectly influenced the cultural history of the Texas Hill Country.

Unfortunately, there is little known of the prehistoric Indian cultures that once lived here except that they were small groups of hunting and gathering peoples.

We do know that the difficult terrain of the Texas Hill Country discouraged settlement by the Spanish and early Anglo American settlers. They were quite satisfied to leave this area to the Comanche Indians who considered the hill country their favorite hunting grounds.

By the late 1830's the cultural history becomes better defined. Texas had just won independence from Mexico and the new Republic was badly in need of money. Land taxation was the best source of revenue, but, there were few people to tax in those early days. To encourage settlement, the Congress of the Republic of Texas passed laws based on the old Mexican *Impresario* system which would grant generous tracts of land to colonizers who would bring in settlers. Texas would allow 640 acres to families and 320 acres for the single man and a bonus to the colonizer of up to 10 sections for every 100 families.

News of such favorable terms spread world-wide. Texas was already well known at that time, even in Germany. It had been popularized by German writers who spread thrilling stories of hardy

Leafhoppers

This spring you want to watch for the emergence of an interesting little insect. Sometimes called a spittle bug or cuckoo-spit insect, these insects are related to cicadas (order Homoptera, Family Cicadellidae). The larvae of this species complete their development in a frothy, bubbly envelope of their own making and are found feeding on many kinds of plants and grasses. Some are barely a half inch long, but are present almost everywhere, in temperate as well as tropical zones, and there are about 3,000 species. They feed on plant juices and the frothy envelope that protects them as they mature, reminds many people of, well, yes -- *spit*. Join us along the Honey Creek trail this spring and we will be able to check the development of these nymphs each Saturday.

settlers, the Alamo, Goliad, and San Jacinto.

On the other hand, Germany was suffering from economic insecurity, overpopulation, political oppression, revolution and war. There were many people who believed that things were so bad that it could be no worse elsewhere.

Thus, the appeal for immigrants began one of the most extraordinary stories in the romantic history of Texas. It began in Germany with the Count of Castell who founded a corporation for the purpose of immigration in 1842. It was called the Society for the Protection of German immigrants in Texas. It is also referred to as the *Adelsverein* or as the *Verein*.

The costs (in today's dollars) to the prospective immigrant were \$240 per family and \$120 per single man. The immigrant had to live on his land and cultivate at least 15 acres continuously for 3 years. In return the *Verein* would provide free transportation to Texas and the colony, free land - 320 acres per family or 160 acres per single man, free log house, credit and provisions and all goods necessary to begin farming until the 2nd successive crop *and* they promised public improvements such as schools, roads, mills, cotton gins, hospitals, churches, etc.

It is little wonder then, that when the *Verein* published their appeal for immigrants that thousands of Germans responded.

Of course, Count Castell and the other German noblemen who backed the *Verein* expected to make a profit by this venture. But, historical records show that it was also in part humanistic and truly meant to provide Germans a chance for a better life. In fact, some of the noblemen, such as Prince Carl von Solms Braunfels, hoped to eventually create a model German state in the new world. They would establish new settlements in traditional European farm village style and populate them with

Germans only. In this way, they would be bound together by language, customs and traditions and be isolated from Anglo-American influences.

The *verein* society choose two agents to travel to Texas to secure land. The men were Count Joseph of Boos-Valdeck and Prince Victor of Leiningen. As a result of their scouting expedition, Count Joseph recommended against emigration believing it to be too costly. Count von Castell chose to ignore his advice.

Prince Victor soon began negotiations with Texas for a grant, but he made too many demands and was refused. Soon afterwards, the *Verein* noblemen in Germany, were approached by Alex Bourgeois D'Orvanne, a Frenchman, who already held a grant from Texas.

D'Orvanne convinced the *Verein* to purchase his grant contract located northwest of San Antonio de Bexar near present day Castroville. He was even made a member of the *Verein* and appointed Colonial Director.

In May of 1844, D'Orvanne and Prince Carl, the commissioner general of the colony were dispatched to Texas to prepare the way for colonist. The voyage to Galveston, Texas would take two months. From Galveston smaller ships were boarded and sailed down the coast to Indianola. In the 1800's Indianola was a major port for trade from Texas to California. Prince Carl chose to land at Indianola because routes north to the grant lands would require fewer river crossings than from Galveston.

Upon their arrival, Prince Carl soon discovered that D'Orvanne's grant contract had expired and that Texas considered any unfulfilled contracts as forfeited. Appeals to Texas to extend the grant failed.

What would the Prince do?? There was no grant and immigrants were already waiting at Indianola. The story continues in May's newsletter.

Call the "Friends" voice mail line at 210-935-4012— after 6:00 p.m., to make reservations for limited attendance events, to find out the latest information on an event, or to let us know your coming.

Every Saturday morning Lower Edwards Plateau Ecosystem Tour. 9 - 11 a.m. (TCP) HCSNA, Take a leisurely walk along beautiful Honey Creek canyon with interpretation of the cultural and environmental history of the hill country. Topics vary, please see dates below.

Volunteer Work Opportunities Feb 11; Mar 4, 25; Apr 1, 8, 22; May 6, 13, 27; June 3, 17. at Rust Visitor Center, Saturday, GRSP - HCSNA Please join us at 9:00 a.m. with a hike through Honey Creek Canyon. Afterwards we will have lunch back at the Rust Visitor Center and spend the afternoon with the day's project at the Rust House.
Feb 11, Mar 4, Apr 1, Jun 3 - brush clearing
Mar 25, 8, 22, Apr 16, 23, May 6, 13, 27, Jun 17 - you can participate in Spring Break & Earth Day activities, plant identification sessions, learn your way along the Honey Creek trail system and more. Call and let us know you are coming (Voice Mail box 13#), but reservations not required. **Camping reservations** available through Guadalupe RSP by calling 210-438-2656. Please, **pets** are not allowed on the HC trail and must be leashed at all other times.

February 25 - Predator - Prey Relationships Honey Creek SNA, 9:00 - 11:30 a.m. Make plans to join us on this nature walk. Special guest, Walt Schumann, who will talk about predator - prey relationships and the food chain. Afterwards, Walt will introduce us to a couple of reptile friends.

February 25, New Braunfels, 2:30 p.m. Necrogeography - regionality of burial practices. The traditional cemeteries of Texas provide one of the best insights as to the cultural diversity of the state. New Braunfels Old Town Cemetery and Comal Cemetery has some of the best remaining examples of archaic customs and practices. Anyone interested may join Penny Solis in New Braunfels to spend a few hours looking back

at the culture and history of our forefathers. We'll meet at New Braunfels Old Town Cemetery on the south end of New Braunfels. The cemetery is on the west side of IH 35, across from the National Guard Armory at intersection of Peach Street and Elliot Knox. If you are South bound on IH-35 exit at Walnut Ave and continue on the access roadway, south, to the cemetery. If you are North bound on IH 35 exit at FM 1044 and go left, then right as you pass under the expressway. We have to park on Elliot Knox road (nearest IH-35). We will end up at historic Gruene for early dinner. Please let me know you are planning to come by calling the Friends Voice Mail, box #16.

March 18 - Prehistoric Cultures of Central Texas. Honey Creek SNA, 9- 11:30 a.m. Archeologist Herb Uecker will lead our trail walk through Honey Creek Canyon and discuss prehistoric peoples, their culture and how they used resources of the land.

March 25 - Break Nature Walk. Honey Creek SNA, 9 - 11:30 a.m. Popular local Naturalist, Allen Perry will lead a pleasant walk along Honey Creek Canyon and identify native plants, discuss area folklore and predator-prey relationships.

Children's activities 2 - 4 p.m. at Rust house in Honey Creek SNA.

April 8 - Ethnobotany Walk. Honey Creek SNA, 9 - 11:30 a.m. Easy hike along Honey Creek Canyon with emphasis on native plant identification and cultural uses for food, medicine and fiber. Meet at Rust Visitor Center.

April 15 - Ethnobotany Walk. Honey Creek SNA, 9- 11:30 a.m. (See April 8 for details)

April 16 - Reservations required 210-935-4012. Artist and Photographers Outing.

You will be able to paint or photograph at your own pace along Honey Creek Canyon.
April 22 - The 25th Anniversary of Earth Day at Guadalupe RSP and Honey Creek SNA. **9 - 11:00 a.m.** Begin the morning with Val Roessling on the Honey Creek trail walk with identification and discussion of

uses of native flora in home landscaping.
Children's activities are at the Rust Visitor Center from **2 - 4:00 p.m.** Kids of all ages can participate in fun play activities that help build awareness of the world around us.
David McKelvey, children's book author and bird imitator, will be at Guadalupe River State Park Amphitheater. **6 to 7:30 p.m.**

April 23 - Earth Day Weekend. Artists and Photographers Outing. Reservations required. (see April 16th for details).

April 23 - Earth Day Weekend. Spring Birding Tour. 7:30 - 11 a.m. Reservations Required. Lead by Sue Bayley of the San Antonio Audubon Society. For more information call 210-438-2656 or visit park headquarters.

April 29 - Native Grass Identification. Honey Creek SNA, 9 - 11:30 a.m. Easy walk along Honey Creek to identify cool season native grasses. Lead by Wesley Blackman.

May 6 - Ethnobotany Walk. Honey Creek SNA (details see April 8th)

May 6 - Spring Birding Tour. Reservations required. 210-438-2656. Lead by Sue Bayley of S.A. Audubon Society. For more info call or visit park headquarters.

May 6 - Woody Plant Identification \$5.00 fee and reservations required 210-935-4012. Participants will learn to identify common woody plants of the hill country using an easy plant key that you keep. Key is based on leaf characteristics. Guadalupe RSP Amphitheater, 2- 4:00 p.m.

May 20 - Ethnobotany Walk. Honey Creek SNA, 9 - 11:30 a.m. (details see April 8th)

May 27 - Woody Plant Identification \$5.00 fee and reservations required. Participants will learn to identify common woody plants of the hill country using an easy plant key that you take home. (see May 6 for details)

Friends of Guadalupe River/Honey Creek, Inc.
 Membership Application

Annual Membership Dues and categories:

- \$5.00 Classroom: students or youth organizations ages up to 18.
- \$5.00 Student: Age 13 to 18
- \$8.00 Individual: Adult over 18
- \$12.00 Family
- \$50.00 Sustaining
- \$100.00 Contributing
- \$500.00 Corporate
- \$1,000.00 Life

Friends of Guadalupe River/Honey Creek, Inc. is a tax exempt, non-profit organization. All donations greatly appreciated and tax deductible.

Make check payable to: Friends of GR/HC, Inc., 3350 Park Rd. 31, Spring Branch, TX 78070

Name _____

Address _____

City, State & Zip _____

Phone: home, work, fax _____

I would like to donate \$ _____ beyond membership dues in support of educational programs at the park

Cocina Solar

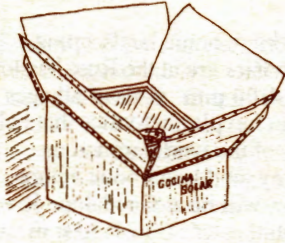


Figure 1: Tilting top allows sunlight in while base remains level.

This solar cooker is a simple design that is in use around the world. This cooker is made from readily available materials and is helping people to cook for their families with the clean, free power of the sun. We would like to challenge families, classrooms, and youth groups to build a working solar cooker for use on Earth Day. Prove your design by baking or cooking your favorite recipe for those who come to admire your ingenuity. Earth Day is April 22, and cookers will be displayed at the Rust Visitor Center all day Saturday. We are expecting a booklet soon with many other solar oven designs and will be glad to make copies of other plans available to those interested. This following design is taken from *Home Power Magazine* which is devoted to solar power. This oven design is taught by Sister Patricia Gootee of the Medical Mission Sisters in Arequipa, Peru to the local community.

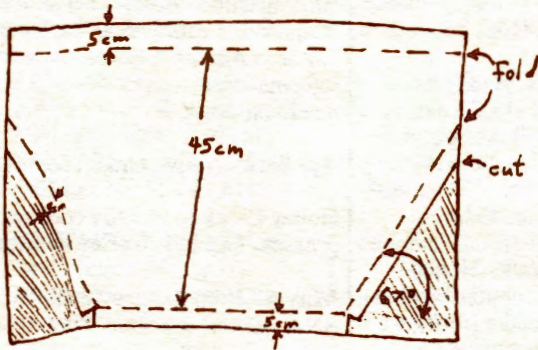


Figure 2: Cardboard Reflector Design - Top & bottom flaps are folded over to reinforce the reflector, and the side flaps are sewn to the other reflectors.

The inner box of the cocina solar is common corrugated cardboard, painted black to absorb more of the sun's energy. The cocina's walls and base each contain $2\frac{3}{4}$ inches of insulation, usually crumpled newspaper or paper bags. The base is of cardboard to prevent compression. The window of the oven is common glass and allows the sun's energy into the box while serving as the oven door. The inclination of the box top is (see figure 1) towards the sun. The trapezoidal reflectors in this design collect a lot of solar radiation while being very stable in wind. They are made of cardboard, aluminum foil, glue and string (see figure 2). The cocina solar oven can reach 350° to 400° F

Friends of Guadalupe River/Honey Creek, Inc. is created on WordPerfect 6.0a, Windows and most images are done with Logitech Scanman. Original copy is printed on HP LaserJet 4L. Editor is Penny Solis. Articles are welcomed for this quarterly newsletter from members and other sources. Please submit articles for publication in May's issue by April 15th. Suggestions for subject matter, reports on activities, etc are encouraged



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