

CHIHUAHUAN DESERT RESEARCH INSTITUTE

EXECUTIVE DIRECTOR'S REPORT

FEBRUARY – SEPTEMBER 2013

IN NOVEMBER 2012, THE CDRI BOARD OF DIRECTORS ADOPTED A FIVE-YEAR STRATEGIC PLAN ENTITLED *CONNECTING PEOPLE TO NATURE FOR 40 YEARS*. THE DIRECTOR'S REPORT IS ORGANIZED ACCORDING TO THE FOUR MAJOR GOALS AND INITIATIVES OUTLINED IN THE PLAN.

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NOTE: THE NARRATIVE IN THIS REPORT COVERS THE PERIOD FEBRUARY-SEPTEMBER, AS PROVIDED BY THE CDRI STAFF. THE DATA REFLECTED IN THE CHARTS GENERALLY RUNS FROM JANUARY-SEPTEMBER WITH THE *EXCEPTION OF THE EDUCATION PROGRAM ATTENDANCE CHART* WHICH REFLECTS JANUARY-OCTOBER AND INCLUDES *THE EARTH ROCKS!!!* THE DATA HAS BEEN PROVIDED BY STAFF AND THE CDRI QUICKBOOK ACCOUNTS FROM THE ORGANIZATION'S ACCOUNTANT.

EDUCATION

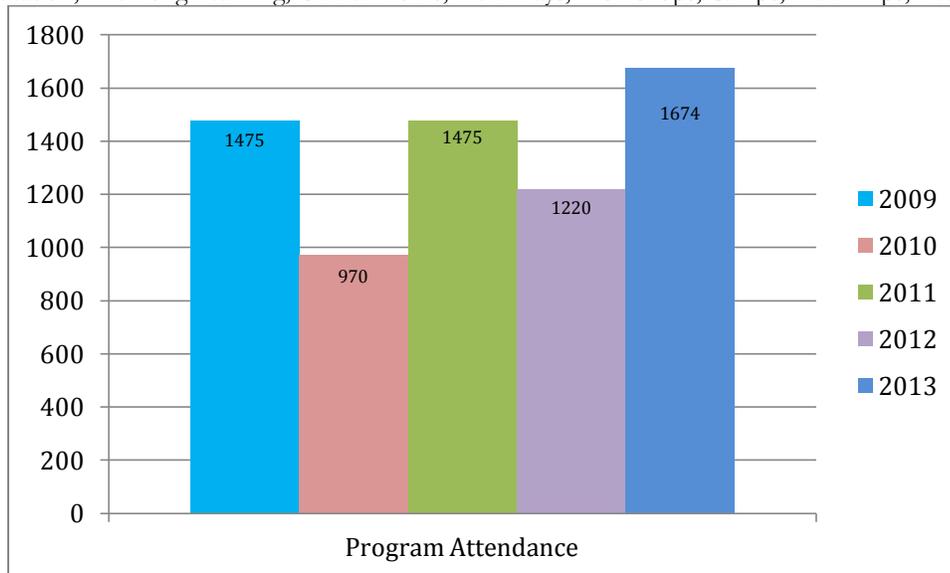
PROVIDE EXEMPLARY SCIENCE-BASED EDUCATION PROGRAMS DEALING WITH THE PLANTS, ANIMALS, ENVIRONMENT AND RESEARCH ON THE CHIHUAHUAN DESERT REGION AND THEIR CONTRIBUTIONS TO INTERDEPENDENT SUSTAINABILITY; DEVELOP INTERPRETATIONS THAT PROMOTE UNDERSTANDING OF THE CONNECTIONS BETWEEN PEOPLE AND THE ENVIRONMENT

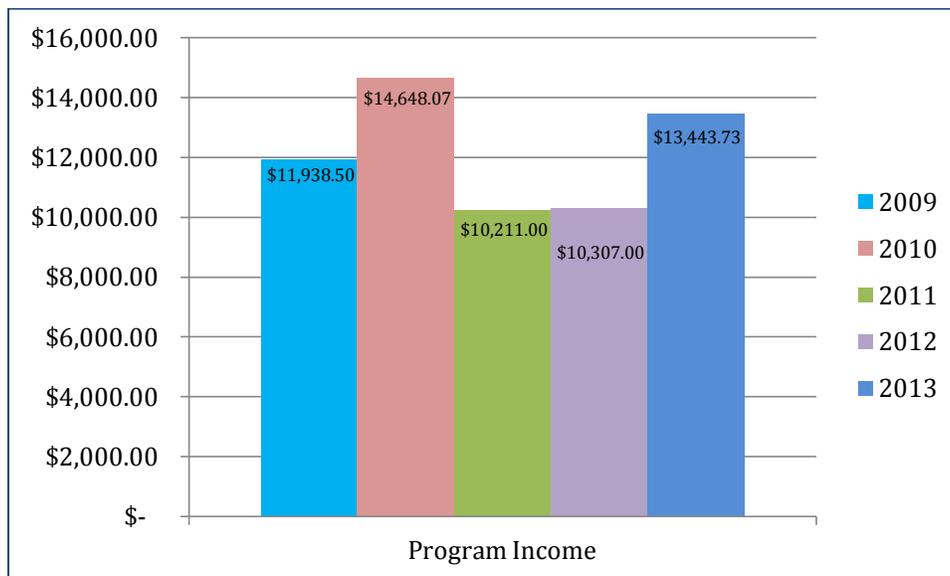
Initiatives:

- Design and deliver highly effective early childhood, youth, teacher and adult science education programs that are recognized for their innovation and best practices.
- Provide year-round programming so that the Nature Center is a four-season destination for learning and enjoyment.
- Serve as a major resource for homeowners, architects and builders on ways to create an inspiring and sustainable desert landscape and building program through energy-saving, environmentally sensitive design.
- Publish a variety of educational and scientific research materials to advance public awareness of the diversity of the Chihuahuan Desert and promote future research in the region.

Program Attendance & Income

Education, Life Long Learning, Guided Tours, Field Days, Workshops, Camps, Field Trips, Lectures





Under the leadership of Education Director Jessica Glasscock, CDRI offers a full range of Life Long Learning opportunities for adults, teachers and students statewide. From February through October, these programs served 1674 participants, an increase of over 25% from 2012. Jessica created, organized and executed the programs, including curriculum development, speaker recruitment, advertisement, volunteer training, and outreach/partnering, often leading the events. CDRI staff and volunteers are integral in leading and supporting these events.

GROUPS

EDUCATION PROGRAMS ON NATURE AND THE DESERT REGION WERE OFFERED TO 23 GROUPS SERVING 433 STUDENTS AND ADULTS

- February Highland Home School ~ 14 students
Marfa International ~ 6 students
Radford School ~ 10 students
- March Athens Middle School ~ 31 students
Woodlands Christian Academy ~ 29 students
Royse City High School ~ 12 students
Boy Scouts, Lubbock ~ 20 children
Davis Mountains Trails Lodge ~ 20 children
Socorro ISD ~ 20 students
Heritage School ~ 25 students
Heritage School ~ 13 students
- April St. James Episcopal ~ 20 students
Sherwood Forest Montessori School ~ 20 students
- May St. Marks School ~ 31 students
Senior Circle Tour ~ 10 adults
- June Marfa Summer Class ~ 15 students
Fort Stockton Jr. Master Gardeners ~ 30 students
- July Permian Basin ROTC ~ 22 students
- August Rio Grande Chapter of the Master Naturalist ~ 15 adults
Davis Mountains Fitness Camp ~ 16 adults
- September Trinity Episcopal School ~ 11 students
St. James Episcopal ~ 28 students
Midland High School Astronomy Class ~ 15 students

YOUTH

Between April – June, CDRI provided 4 *Toddle on the Wilde Side* programs serving 83 children and for the first time, a *Nature Themed Birthday Party* serving 10 youngsters.

FIELD DAY

250 STUDENTS

May 8 *Bugs, Bugs, Bugs* Field Day – 250 participants

Curriculum for the Bugs, Bugs, Bugs field day is designed for students in the 2nd and 3rd grades. Students participating in the field day have the opportunity to visit over 15 stations related to bugs such as edible bug sampling, learning bug anatomy, bug viewing, building a bug, and much more.

SUMMER NATURE CAMPS

2 CAMPS; 20 YOUTH

July 8-12 *Critter Camp* ~10 participants

Critter Camp is open to children aged 4 to 6. Participants spend half a day for 5 days at the CDRI participating in nature-based activities such as hiking, birding, and arts and crafts.

July 22-26 *Desert Rat Club* ~ 10 participants

Desert Rat Club is open to children aged 7 to 10. Participants spend half a day for 5 days at the CDRI participating in nature-based activities such as learning camping skills, water sampling, small mammal trapping, hiking, and much more.

LIFELONG LEARNING

LECTURES

8 LECTURES ON A RANGE OF ISSUES SERVING 145 ADULTS

| | |
|-----------|---|
| January | Water in the Desert presented by Dr. Kevin Urbanczyk- Director of the Rio Grande Research Center at Sul Ross State University; 20 participants |
| February | Sustainability Trends, Diversity & Issues presented by David A. Alvidrez, AIA- Founder of Alvidrez Architecture; 15 participants |
| March | Texas Climate Change presented by Dr. John Nielsen-Gammon- Texas State Climatologist; 50 participants |
| May | Drought, Wildfire, and the Avian Community of the Davis Mountains presented by Dr. Richard Kostecke- The Nature Conservancy; 15 Participants |
| June | The Nature Conservancy's Davis Mountains Preserve: Past, Present and Future presented by Shawn Benedict- The Nature Conservancy's Davis Mountains Preserve Manager; 10 participants |
| July | Herpetological Diversity of the Western Sierra Madre Oriental presented by Michael S. Price- Former Director of the San Angelo Nature Center; 10 participants |
| August | Chronic Wasting Disease and its Presence in West Texas presented by Shawn Gray- Texas Parks & Wildlife Mule Deer and Pronghorn Program Leader; 10 participants |
| September | Chihuahuan Desert Bighorn Restoration presented by Froylan Hernandez-Texas Parks & Wildlife Big Horn Program Leader; 15 participants |

FIELD TRIPS

3 TRIPS SERVING 39 ADULTS

| | |
|-----------|---|
| April | Miter Peak Climb ~ 10 participants |
| August | Hiking Mount Livermore~ 14 participants |
| September | In Search of the Desert Bighorn: Field Trip to Elephant Mountain Wildlife Management Area ~ 15 participants |

WORKSHOPS

SERVING 9 TEACHERS

6/14 to 6/24 *Conservation Across Boundaries* (CAB) teacher workshop ~ 9 participants

Working with Dr. Selma Glasscock, Welder Wildlife Foundation, created and executed the West Texas Conservation Across Boundaries program. CAB is a science-based teacher education program focused on conservation of wildlife and natural resources. During this program teachers traveled from the mountains of West Texas to the coastal plains of South Texas. Through a combination of classroom lectures and hands-on experiences, participants compare wildlife, ecosystems, and socio-cultural aspects of the eco-regions they travel through. CAB is sponsored by the Boone and Crockett Club, Welder Wildlife Foundation, and the Chihuahuan Desert Research Institute. *Over \$19,000 in grants* was raised to fund this project. *\$3,500 was directly distributed to CDRI* to cover the salary of the education coordinator.

SPECIAL EVENTS

March 11-16 *Cactus Showcase*

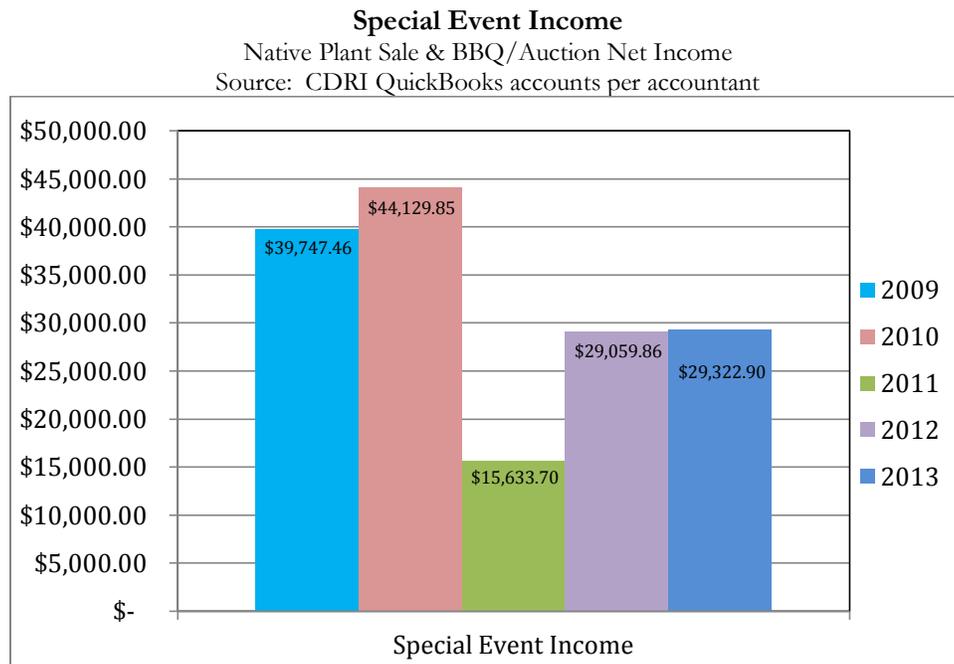
April 26-27 *Native Plant Sale*

The Native Plant Sale this year required travel to other locales, including Phoenix AZ, to acquire the plants. Plants that were not readily available when CDRI initiated this event, now are more plentiful in regional greenhouses and plant stores. Income has steadily declined. Balanced against staff time, travel, plant cost and other factors, the question has been raised whether this event has run its course and should be replaced with a new venture.

September 14 *Annual BBQ and Auction Fundraiser*

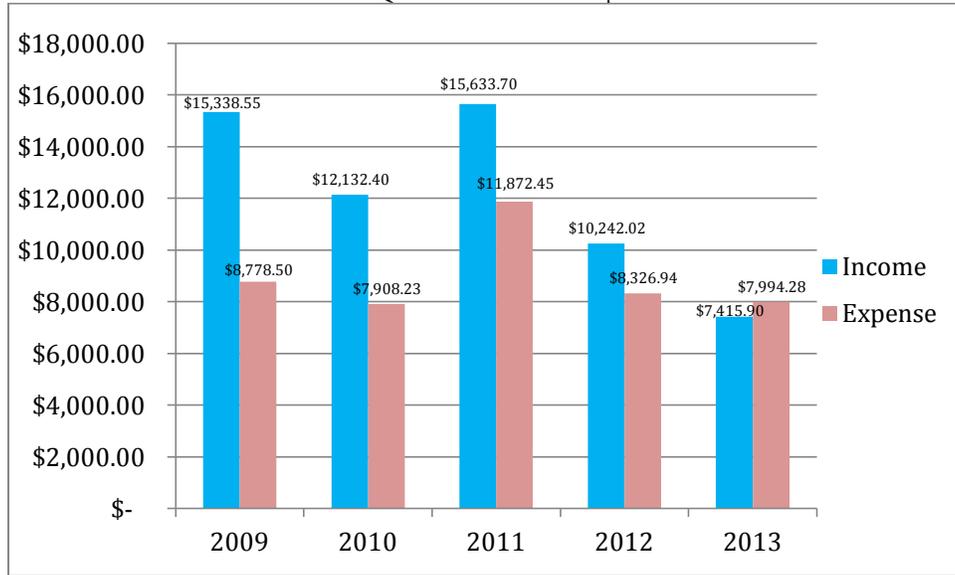
The BBQ/Auction this year was a popular success according to the folks who attended and the bottom line for CDRI. The quality of the donated auction items was high and the food drew rave reviews (shrimp and steak). J. Glasscock took the lead in organizing this event; the Board did yeoman's work in procuring donations, bidding on items and putting on the event – cooking, serving, cleaning up! As in everything CDRI does, the staff members are critical in making it happen.

The following three charts reflect net income from the Native Plant Sale and BBQ/Auction and the profitability of each event.



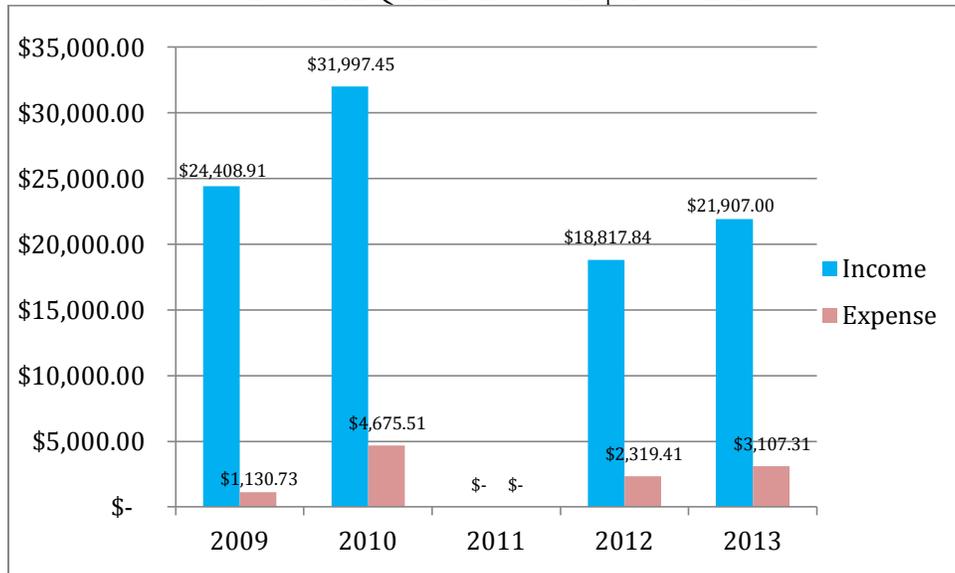
Native Plant Sale

Source: CDRI QuickBooks accounts per accountant



Annual BBQ/Auction

Source: CDRI QuickBooks accounts per accountant



ADVERTISING, PUBLICATIONS & MEDIA

To garner support and attendance, Jessica did a variety of advertising, outreach and building partnerships.

- *News Releases:* Wrote 15 releases, distributed to 10 news outlets
- *Underwritings:* Wrote or helped create for major events such as Native Plant Sale, Cactus Festival, and the Annual BBQ & Fundraiser
- *My Emma emails:* Wrote many My Emma marketing emails informing members and other audiences about upcoming CDRI events
- *Rack Cards:* Cactus Showcase – Spring Break at the Nature Center, created & distributed in Marfa, Alpine, Ft Davis
- *Posters:* Created numerous posters to advertise CDRI events; distributed in Marfa, Alpine, Ft Davis
- *Native Plant Sale Invitation:* Created & distributed to over 550 members & in the surrounding towns

- *Annual Life Long Learning Brochure:* Completed & distributed to 550 members in January 2013
- *Quarterly Life Long Learning Tri-Fold of Events:* Created & mailed each quarter to 550 members
- *Facebook:* Frequently updated our media outlet with new pictures and upcoming events
- *CDRI Website:* Updated the CDRI webpage with 2013 Life Long Learning events & education programs

OUTREACH AND PARTNERING

Big Bend Livestock Show Association (BBLSA)

Annual 4-H Food Show Judge for Texas AgriLife Family & Consumer Sciences Agent Evans Kott: 49 entries in 4 categories; 30 participants ages 5-18 from the Tri-County Area (Jeff Davis, Presidio, Alpine, Marfa, Marathon)

Sul Ross Strategic Planning Committee

Selected by Sul Ross Alumni Coordinator Karen Brown to serve as one of 25 individuals on the Sul Ross Strategic Planning Committee; participated as part of the “Alumni and External Relations” team. This opportunity allowed us to build relationships with Sul Ross faculty, alumni, etc.

Sul Ross Career Fair

Organized CDRI's attendance at the Career Fair. Gathered and organized information, materials, and display boards for Susan Penney to attend the Career Fair on 3/20.

Earth Day

Helped in the organization and attendance of CDRI at the Earth Day Event in Alpine and ran the booth with CDRI volunteer Jennifer Jordan for 5 hours.

RESEARCH

EXPAND THE CURRENT RESEARCH PROGRAM FOCUSED ON THE CHIHUAHUAN DESERT REGION, DISSEMINATE RESEARCH FINDINGS FOR DIVERSE PURPOSES, AND SERVE AS A RESOURCE FOR THE SCIENCE AND CONSERVATION COMMUNITIES.

Initiatives:

- Strengthen CDRI's collections for scientific and academic research purposes; ensure that current and future collections are appropriately documented, and that access is provided both physically and virtually.
- Facilitate and support active research by developing strong relationships with academic institutions and organizations dealing with the Chihuahuan Desert region.
- Develop a model for a Board of Scientists to help guide future research agendas and hosting of periodic symposia to highlight major research initiatives.
- Provide training for volunteer citizen scientists and encourage their participation in research projects at the Nature Center and throughout the Chihuahuan Desert region.
- Increase the Scudday Scholarship Fund to a minimum of \$10,000 in order to provide financial support for students conducting research in the Chihuahuan Desert region.
- Develop and communicate clear information about research findings and sustainability to diverse audiences through published media.

C. HOYT BECOMES DIRECTOR OF RESEARCH

After 12 years as the Executive Director of the Chihuahuan Desert Research Institute, Dr. Cathryn Hoyt accepted the position of Director of Research. This new position will allow her to focus on strengthening the research programs of the Chihuahuan Desert Research Institute. Her position will be funded through a combination of operating funds and grants.

BIODIVERSITY OF THE CHIHUAHUAN DESERT NATURE CENTER

Over 50,000 photographs have been taken of the flora and fauna of the Chihuahuan Desert Nature Center over the past 10 years. Data from bioblitzes, bird counts, butterfly counts, and vegetation transects fills the filing cabinets and server files. However, there has never been an easy way to access the data or images.

This spring, C. Hoyt began development of an Access database that will store, organize, and allow queries and searches of information gathered about the biodiversity of the Nature Center. The database currently contains basic information about the flora and butterfly fauna. In the early spring of 2014, Hoyt will apply for an IMLS grant to identify and catalog images, develop the database, and make it accessible on the web as a research tool.

CURRENT RESEARCH

Effective Pollinators of Rare Plants of the Trans-Pecos Region of Texas

In January, 2013, C. Hoyt was awarded a grant from Texas Parks and Wildlife Department to study the effective pollinators of rare plants in the Trans-Pecos region. The effective pollinators of only a few rare plants are known. In order to recover listed plants and to help keep non-listed species from becoming listed, it is very important to know which species are effective pollinators so that the pollinator species can be conserved as well.

The objectives of the project were threefold:

1. Produce a review of potential effective pollinators for the 212 species of greatest conservation need (SGCN) plants in the Chihuahuan Desert ecoregion
2. Test the predictions through field studies of at least 12 species.
3. Compile basic information on the phenology and habitat requirements for the pollinators listed in Objective 2 for conservation purposes.

This project was conducted during the spring and summer with the assistance of Patty Manning (Sul Ross State University), Jack Neff (Central Texas Melittological Institute), Dr. Allan Hook (University of St. Edwards, Austin), Richard Newbold (summer intern for CDRI), and several volunteers.

As part of the project, an Access database was created combining data on SGCN plants, bees, flies, and Lepidoptera. By filtering using location, phenology and hostplant, a list of potential pollinators for all SGCN plants is being developed.

Although documentation of pollinators during field studies was primarily through photography, a few bees were collected for identification. According to Jack Neff, the bee authority, two of the bees collected from *Escobaria albicolumnaria* are “rarely collected” and one bee *Lasioglossum (Dialictus) droegei* was only described a few years ago from four specimens from the Chisos Mountains. Collecting it in the Davis Mountains represents “a nice range extension.”

The final report was submitted to Texas Parks and Wildlife by the end of October.

Butterfly Monitoring at the Nature Center

Butterflies along the 2.5 mile Pollard transect continued to be monitored during 2013 although not as frequently as in the past due to the field work associated with the Effective Pollinator project. Data for the monitoring project has been updated in the database and a summary of the 2013 data will be submitted to the Texas Lepidoptera Survey.

This year, two county (and Nature Center) records were set on the same day:

- OrangeBarred Sulphur (*Phoebis philea*)
- White Angled-Sulphur (*Anteos clorinde*)

Three additional Nature Center records were set this summer:

- Palmer’s Metalmark (*Apodemia palmeri*)
- Fatal (*Calephelis nemesis*) or Rawson’s Metalmark (*Calephelis rawsoni*). Metalmarks are extremely difficult to identify and the authorities are currently arguing over which one we’ve seen.
- Zebra Heliconian (*Heliconius charithonia*) This beautiful tropical butterfly was spotted and photographed by Leslie Spicer in the pollinator garden.

CDRI continues to organize and host the Fort Davis Butterfly Counts. This count circle includes the Nature Center, the town of Fort Davis, Davis Mountains State Park, and extends up to the Observatory. During this reporting period, two counts were conducted and reported to the North American Butterfly Association.

Vegetation Transects

M. Foreman and C. Hoyt completed data entry for the 14 vegetation transects in the burned and unburned grasslands. These data will provide baseline information about the recovery of the grasslands from fire and drought and will be used for numerous projects being conducted by CDRI staff and volunteers.

Informal vegetation transects documenting blooming forbs conducted approximately once per month in the burned/unburned grasslands. These data provide information for the flora of the Nature Center as well as information about host plants available for Lepidoptera.

Birding Transects

The Breeding Bird Census was conducted every 4 days through the breeding bird season this year with the assistance of Josh Burns, Laura Belkin, Bill Sain, Mark Foreman, and Cathryn Hoyt. Josh Burns continues to submit all data collected during the counts to eBird.

POTENTIAL COLLABORATIVE RESEARCH PROJECT

C. Hoyt and J. Glasscock met with Dianne Doan-Crider and others at Big Bend National Park to learn about black bear studies in the region. Possible research collaborations include CDRI serving as the bank for black bear genetic samples and hosting a website on “Keep Texas Bears Wild.”

VISITS BY RESEARCHERS, CLASSES, AND ORGANIZATIONS

University of Connecticut Moth Research

Dr. David Wagner recently published *Owlet Caterpillars of Eastern North America* (Princeton University Press, 2011) and is now working on a volume for Western North America. He, his students, and collaborators made three trips to the Nature Center to collect caterpillars and adult moths for their research.

During Dr. Wagner’s 4-hour visit to the Nature Center, he was able to collect 15 species of caterpillars. Highlights from the visit included:

- The first images of the caterpillar of *Neoprocris aversa* and of direct relevance to Ben Gagliardi’s MS thesis research.
- The first images of the caterpillar of *Hyparpax aurostriata*.
- The first images of *Elasmia cave*. These images will be used in an upcoming monograph and Dr. Wagner’s caterpillar guide.
- The caterpillar of the day-flying sphinx (bumble moth, *Hemaris diffinis*) differ from that of eastern populations. A colleague in Hawaii will do a molecular analysis of this specimen.

Dr. Wagner notes that the collecting at the Nature Center “was better than in the Davis Mountains Preserve.”

Following Dr. Wagner’s successful visit, Dave Wikle, a colleague from California, came out to trap adult moths. He set up two light traps one evening. His preliminary list for the first trap included 20 species, but did not include those that needed spreading or dissection for identification purposes, nor the Pyraloidea (a tedious group that takes time to identify). Wikle will provide CDRI with a collection of pinned and identified moths to display or use as a reference collection.

Barry Nall, a collaborator of Dr. Wagner, asked Leslie Spicer to conduct an experiment to whether certain caterpillar eggs would successfully hatch if placed on their host tree, the Emery Oak. He gave Leslie a canister of eggs, which she placed on the tree branch with its leaves for food. One caterpillar successfully hatched – a *Nadata anastomosa* moth. Nall did not require Leslie to send it to him.

Crayfish Research

Dan Johnson, a crayfish researcher from Houston, visited the Nature Center to collect crayfish from Modesta Canyon. For many years we have tried to get these crayfish identified without any luck. Johnson was able to collect 9 individuals, mostly immatures, which he will raise out and identify for us. This is part of a larger “Crayfish of Texas” study that Johnson is doing.

CITIZEN SCIENCE PROJECTS

Three citizen science projects were conducted this year including:

- Great Backyard Bird Count (February 19): 28 species documented

- Fourth of July National Butterfly Count (July 13th): 37 species and 441 individuals. This is a significant increase in both species and individuals compared to the last two years: 2012 25 species, 153 individuals; 2011 12 species; 65 individuals.
- Fall Butterfly Count (September 27): 48 species and 674 individuals.

GRANTS

The Brown Foundation

The CDRI received a \$2,000 grant from The Brown Foundation in support of the research program. The funds were used to purchase a computer that will have GIS mapping software as well as hold the digital image and document collection.

Klorane Desert Date Sponsorship

Klorane, a hair-product company based in France, approached us in June about a corporate sponsorship of the Pollinator Project as they were launching their new “Desert Date” product line. In August, they announced they were to give a \$2,000 gift to the pollinator project and have the CDRI logo and information about the project on all their products and advertising. C. Hoyt sent the CDRI logo and a write-up about the project. A search of the internet in October showed that the product-line was launched, but we’ve never received a contribution, nor have the marketing firm responded to several emails requesting an update on this sponsorship.

NOTE: In correspondence C. Hoyt received in early October, Klorane’s marketer said it had publicized its partnership with CDRI and expected that the Desert Date products would be available in November, suggesting a raffle in the gift shop. C. Hoyt let them know that Thanksgiving, Christmas or spring breaks are the busiest times for the Nature Center and the best advertising opportunity. She has not heard further from them.

PUBLICATIONS & MEDIA

Chihuahuan Desert Discovery Published

The 2011 issue of the *Chihuahuan Desert Discovery* was completed and mailed in early 2013. This issue contained brief reports current research projects including:

- West Texas Hummingbird Project
- Vegetation and Butterfly Recovery after the Rock House Fire
- Bird studies at the Nature Center
- Pollinator Research
- A feature-length article on the Rock House Fire

2012 Edition of Chihuahuan Desert Discovery in Production

The 2012 edition of the Chihuahuan Desert Discovery is in production and should be completed by the end of the year. Feature articles include a report on the Breeding Bird Census by Josh Burns.

Discovery of Spotless Comma Makes the News

AP Story

The story of the discovery of the Spotless Comma (*Polygonia baroldii*) was picked up by the AP and distributed worldwide. The story appeared in newspapers such as the *San Francisco Chronicle*, the *Houston Chronicle*, *San Antonio Express-News* and on numerous news websites.

Article in American Butterflies

In addition, an article titled “Spotless Comma: A New Species in the United States” by Cathryn Hoyt was published in the Summer 2013 issue of *American Butterflies* (vol. 21[2]: 42-43).

PUBLIC OUTREACH

Army Corps of Engineers Interpretive Project

Alicia Johnson, project manager for the US Army Corps of Engineers, contacted me in the summer requesting assistance with an interpretive project she was working on. The Corps was finishing an

ecosystem restoration project in the city of Las Cruces, NM. The project focused on the enhancement of Chihuahuan Desert plant species for playa, wetland, meadow, and arroyo riparian habitats. Ms. Johnson needed maps and photographs for interpretive signs that would be placed along a trail through the restoration area. I provided 25 photographs of plants and animals to be used for their signs.

Advertisement Designed for Big Bend and Texas Mountains Travel Guide

C. Hoyt provided photographs and worked with the designer of the *Big Bend and Texas Mountains Travel Guide* to put together a full-color, 1/3 page vertical advertisement for the Chihuahuan Desert Nature Center. The guide is one of the largest regional publications in Texas and is distributed to over 100 locations.

Feature Story on Chihuahuan Desert Nature Center to Appear in TPWD Magazine

We're not a state park, but TPWD likes what we're doing. C. Hoyt was interviewed by TPWD Media Relations Coordinator Rob McCorkle for the article and worked with TPWD photographer Earl Nottingham as he photographed the Nature Center grounds. The story should appear this winter.

BBC Show Films at the Nature Center

The Nature Center was used as a film site for the popular *Deadly 60* series broadcast by the BBC (and NatGeo Wild in the U.S.). While at the Nature Center, C. Hoyt worked with host Steve Backshall and his crew as they filmed black widows, scorpions, tarantula hawks, and a copperhead hunting near the spring.

According to Wikipedia, the series *Deadly 60: Deadly Pole to Pole* features Steve Backshall and his crew travelling the world in an attempt to find the 60 "most deadly" animals in the world. Each episode features Backshall tracking the animal in its habitat, and giving details of what makes the animal notable, with particular emphasis on its impact on the wider ecosystem and the manner of its predatory behavior; thus, why it is "deadly."

Resource Services

C. Hoyt worked with a textbook editor to find an image of a fenceline showing the effects of heavy grazing and light/no grazing. Although several photographs were submitted for consideration, none showed the drastic difference that the editor was looking for. We'd had too much rain and our ranchers take care of their land!

C. Hoyt also worked with a National Geographic writer to clarify information about tumbleweeds that he was using in a story about the Plains states.

Presentations & Tours

C. Hoyt gave several presentations this year including:

- Presentation on the CDRI and tour of botanical gardens given to Leadership Big Bend
- Effective Pollinators of Rare Plants. Presentation given to CAB Teacher's Workshop
- Presentation on the CDRI given to CAB Teacher's Workshop
- The Rock House Fire. Presentation given to the Austin Cactus and Succulent Society
- Welcome to the CDRI. Brief orientation given to Tierra Grande Chapter of Master Naturalists
- Chihuahuan Desert Weather and Climate. Presentation given to Tierra Grande Chapter of Master Naturalists
- Took members of the Twin Lakes Audubon Society birding in the quarry area.

VISITOR EXPERIENCE

OPERATE A NATURE CENTER THAT IS A MAJOR DESTINATION IN THE SOUTHWEST UNITED STATES, OFFERING OUTSTANDING SCIENCE-BASED NATURE EXPERIENCES TO VISITORS OF ALL AGES AND ABILITIES; CONTINUALLY DEVELOP EDUCATIONALLY APPEALING EXHIBITS AND PROGRAMS AND PROVIDE EXCELLENT EXAMPLES OF SUSTAINABLE DEVELOPMENT.

Initiatives:

- Develop a Master Site Plan to guide future use of the Nature Center as well as the development of new buildings and exhibits to support visitor learning, enjoyment, comfort and safety.
- Design a multi-function research and education building (LEED-certified, ADA compliant) with state-of-the-art facilities. Enhance entrance, gate and signage.
- Address needs for parking and transportation, accessibility and safety issues, pathways and lighting.
- Plan and develop new exhibits; create new programs, garden areas, amenities and services to continually improve the visitor experience.

GREENHOUSE

CDRI remodeled the main greenhouse and built a smaller greenhouse for the young cactus, an important project that was made a priority this summer. Creating optimal conditions for our exclusive collection of native Chihuahuan cactus species is crucial in keeping them healthy. We installed a new roof fabricated out of state-of-the-art material, ran new electrical and conduit, improved the light, and created screens for ventilation and more controlled air flow. With the encroachment of extinction for certain species, CDRI will contribute to the preservation of cactus through seed collection, maintenance of live specimens, and research. Former Land/Site Manager Mark Foreman lead this project until his resignation, at which time Jon Falcone joined Leslie Spicer in leading the remodel. Through the auspices of Texas Parks and Wildlife Regional Director Deirdre Hisler, CDRI received significant assistance from Duane King and a team from TPWD in finishing the project.

GARDEN

On a daily basis, Gardener Leslie Spicer tends the Botanical Garden and Cactus Houses. Visitors have commented that they've never looked better. They are thriving. The labor required to accomplish this is *significant* to say the least. Her mowing, weeding, pruning, proper watering, diagnosing and treating is just part of what makes CDRI's garden a showplace.

In addition to overhauling the main Cactus House and building the small greenhouse, Leslie oversaw moving the cactus, ensured their health while temporarily sheltered on our property and then their safe return to the greenhouses. She repotted 2/3 of the adult cactus, a huge job, with the help of Ann and Jimmy Black. She also is in the process of inventorying the cactus collection.

She inventoried accessioned plants in the Botanical Garden and added accession numbers to those plants without them.

Leslie completely overhauled the Salvia bed, overgrown and decadent; her pruning resulted in a beautiful display. She also extended the front pollinator garden bed, placing more of the bed in the sun; the result was a beautiful bloom and provided additional nectar sources for the butterflies, bees and other pollinators. She re-laid drip line throughout the garden, labeled plants, built cactus soil material bins, organized the potting shed and mowed and weeded the Visitor Center and Front Gate.

Leslie worked extensively on Cactus Sale and Plant Sale, tending to the cactus, ordering, delivering, listing, repotting, labeling, pricing, maintaining and selling the Plants. She also regularly gives tours through the garden. She jumps in on special requests such as hiking the trails to assess restoration.

SOLAR ARRAY

The solar array, funded by GME, installed by Native Inc and going live during October, is a new gemstone for the CDRI. The eye-catching effects of the three large panels provide an opportunity to capture the ever-distracted public and teach them about the benefits of renewable energy sources. Not only does the possession of the array attract visitors, but it allows our institution to become a model of sustainable stewardship and offset our energy costs through buy-back rewards programs; we anticipate a reduced energy bill using solar power. CDRI would like to make the Array the anchor of a sustainability/ADA trail. Jon Falcone assumed leadership of the project this summer, working logistics between Green Mountain and Native, overseeing the erection, and trouble-shooting problems.

SITE, LAND, TRAIL MAINTENANCE

Trails and Canyon

Jon helped Mark Foreman install interpretive panels on the trails. In addition to general oversight and weekly walking of the trails, Jon has done water bar construction, vegetation control, masonry work, repair and maintenance after a flood, construction and placement of benches, and created a map for TPWD depicting modification of the trails.

Land Maintenance

Jon fixed washed out sections of the road, cut sections of the tree over the Pavillion, removed invasive species, obtained a TDA Herbicide Applicator License, trimmed juniper, kept the equipment in repair, and collected GPS points to create a property-wide utilities map.

Site Maintenance

Leaks in the Visitor Center roof were repaired by Talent Roofing. Jon installed an 8-foot copper grounding rod into the VC power panel and worked with air conditioning repairmen to locate critical parts and recharge the freon and filters. He conducted the monthly water test delivery to Odessa, ensured upkeep of the water system, and cleaned and maintained the Visitor Center.

Gift Shop Reconfiguration

M. Foreman and C. Hoyt reconfigured the Leapin' Lizards gift shop, making it more open and welcoming. The reception desk was moved in front, shelving was built around the shop, islands added in the middle and a new hanging display allows for more appealing merchandising.

MINING EXHIBIT

A group of dedicated CDRI Board members and friends continue to fund-raise and maintain the exhibit that showcases mining history in this region.

SPECIAL EVENT - WEDDING

An area family contracted to use CDRI's pavilion for a family wedding this summer. L. Spicer spent a significant amount of time preparing for this event, as did other CDRI staff.

VOLUNTEER PROGRAM

CDRI could not operate without volunteers. They are the backbone of our education and special events. They also help us work on the property and at events to raise public awareness.

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| April | Annual Plant Sale - 163 hours volunteer help |
| May | <i>Bugs, Bugs, Bugs</i> education field day - 98 hours volunteer help |
| July | 4 th of July booth, <i>Critter Club, Desert Rat Club</i> - 37 hours volunteer help |
| September | BBQ/Auction - 396 hours volunteer help The BBQ/Auction took at least fifty volunteers – including board members – to help prepare, cook, serve and clean up. Additionally, the CDRI received community help from the National Historic Site (tables/chairs) and the Food Pantry (extra tables). |

Yank and Yak: Since its inception in the fall of 2010, *Yank and Yak* has become a very successful volunteer program. *Yank and Yak* volunteers are an extremely dedicated group, primarily working in the garden, but regularly helping staff get ready for education programs, fundraisers, you-name-it, etc. From January 1, 2013 through September 30, 2013, *Yank and Yak* has logged 442 hours.

Earth Day: CDRI hosted a booth at Earth Day in Alpine where we had volunteers helping and got our name into the public.

Volunteer Fair: We hosted a booth at the Volunteer Fair in Alpine. This event was poorly attended and probably not worth doing again.

Citizen Science: In addition to the events listed above, volunteers regularly assist in the Citizen Science programs, such as bird counts, butterfly counts, breeding bird studies, etc. Josh Burns and Laura Belkin are often seen in the early morning hours.

Toddle on the Wilde Side: During the summer, we hosted an event called *Toddle on the Wilde Side*. Just like it sounds, the program is for mothers and their toddlers (4 yrs and younger). It is led by a volunteer, who provides most of the supplies for the projects done during the Toddle time; Jessica and Susan act as assistants. CDRI provides the place and allows the mothers free admittance. Susan believes CDRI increases membership as a result.

Art Show: Member Brenda Hudson mentioned to Susan that she had been painting cactus recently and would be open to showing her art at CDRI. We promoted her art for two weeks through the 4th of July weekend. It was a lovely display. Brenda painted onsite the first Saturday of the show. However, sadly for everyone, nothing sold.

High Frontier: CDRI HAS continued to maintain our tie with the High Frontier groups. These young men and women who volunteer and receive community service hours are fun and energetic. We are lucky to have their help.

Guided Tours: Our educational tours, taking a guided hike and/or a tour through the Mining Exhibit, require a constant need for volunteers. The guided hike volunteer hours aren't broken out; the Mining Exhibit volunteer hours totaled 191 through September.

Night Hikes: Normally in July CDRI offers extended hours and guided night hikes into Modesta Canyon. These have been a big success and well attended. Former Board President Tom Bruner asked that we not have them this past summer.

Photo Contest: The photo contest, normally held just prior to BBQ/Auction and then judged during the event, was cancelled this year. There were not enough entries, perhaps due to not advertising early enough. Votes are cast with 'quarters' into a jar and the jar with the largest number wins. The 'winning' photo is sold in the live auction. This was fun last year – hopefully we can advertise earlier next year.

Miscellaneous:

- Live Music: Susan McDonald, via a grant, provided live music to various towns during her West Texas visit. She played acoustic guitar and sang during the Member's Night of our Plant Sale.
- 4th of July: The CDRI exhibited at *Fort Davis' Coolest 4th* - we set up the 10x10 tent, a display table with pertinent CDRI literature, a few items for sale (caps, hummer feeders, etc) and our bright red, logo table cloth. Volunteers, along with staff, manned the booth all day.
- CDRI served as a training site for new Texas Master Naturalist and Leadership Big Bend classes and for the Conservation Across Boundaries Teacher's Workshop.
- CDRI, via BrewsterFreecycle, received two new vacuums for house cleaning, bamboo/cane for an education project, jars for the BBQ tables, plants dug up from yards for Plant Sale, etc.

CAPITAL CAMPAIGN AND ORGANIZATION SUSTAINABILITY

CREATE AND IMPLEMENT A PLAN FOR ORGANIZATION EXPENSION, SUSTAINABILITY AND VITABILITY INCLUDING COMPREHENSIVE CAPITALIZATION, MARKETING AND DEVELOPMENT, VOLUNTEER RECRUITMENT AND WORKFORCE DEVELOPMENT/RETENTION STRATEGIES.

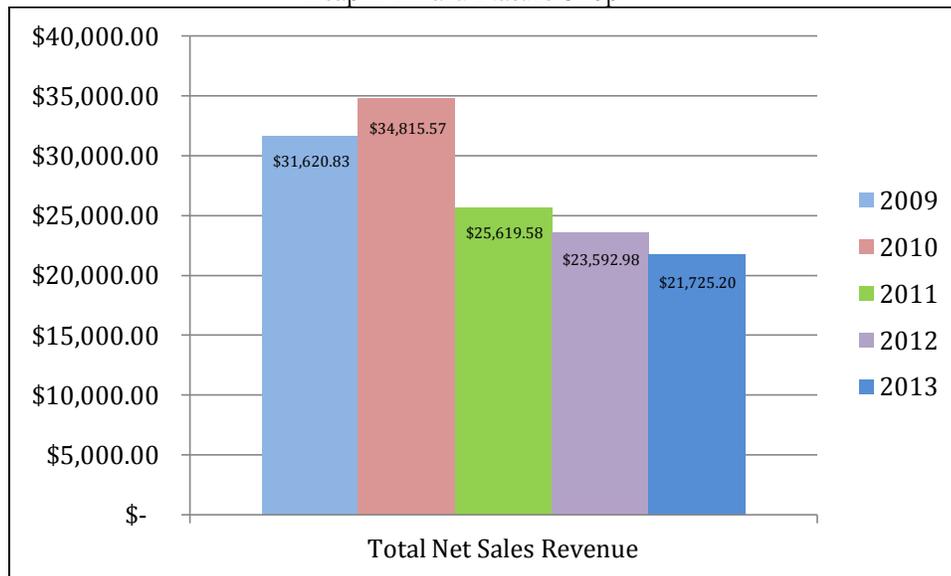
Initiatives:

- Plan and conduct a multi-million dollar Capital Campaign for construction of the research and education building.
- Create a resource development team of staff and volunteers to identify and cultivate donors, ensure effective donor stewardship by adhering to the Donor Bill of Rights, and develop a full list of donor opportunities, including naming opportunities, in support of the Capital Campaign.
- Secure substantial funding for capital improvements, personnel, critical maintenance projects and communication technology.
- Build an operating reserve equal to 10% of the annual budget.
- Implement a planned giving program to increase the number of bequests.
- Increase memberships, admissions and gift shop sales.
- Establish a comprehensive program to increase the number and impact of volunteers.
- Implement a compensation policy so that CDRI is competitive with similar institutions and can attract/retain a high quality workforce.
- Provide meaningful professional development opportunities for staff.

ADMISSIONS AND SALES



Net Sales Revenue
Leapin' Lizard Nature Shop



CDRI Business Manager Doris King has focused on providing an accurate, easily obtained accounting for all aspects of CDRI business and making the Leapin' Lizards gift shop more profitable by revised marketing and merchandizing.

The manual visitation log has been replaced with POS codes. Instead of manually writing hash marks for every visitor, codes have been set up in Point of Sale to capture each visitor (paying or non-paying) electronically which will create a more accurate reporting system.

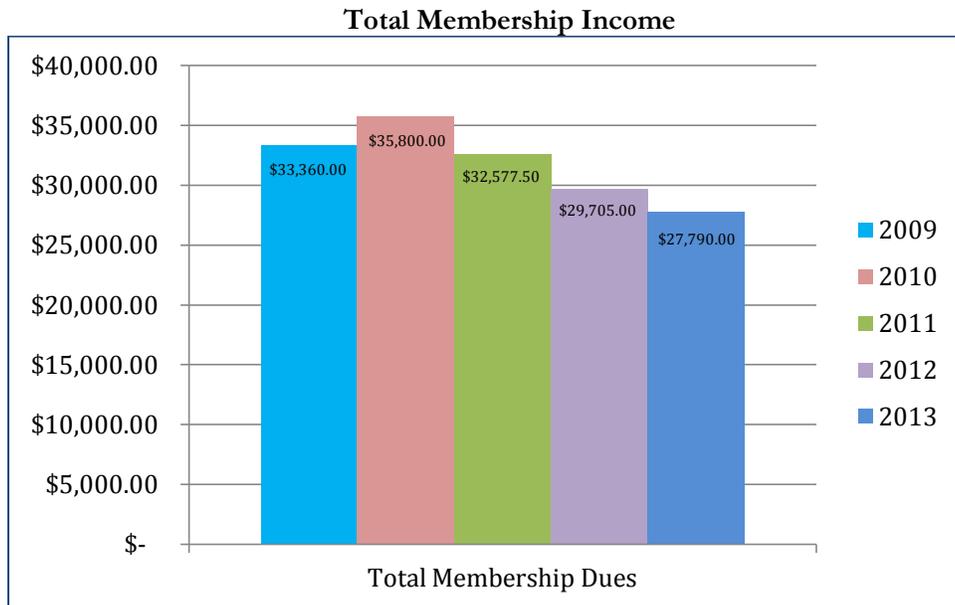
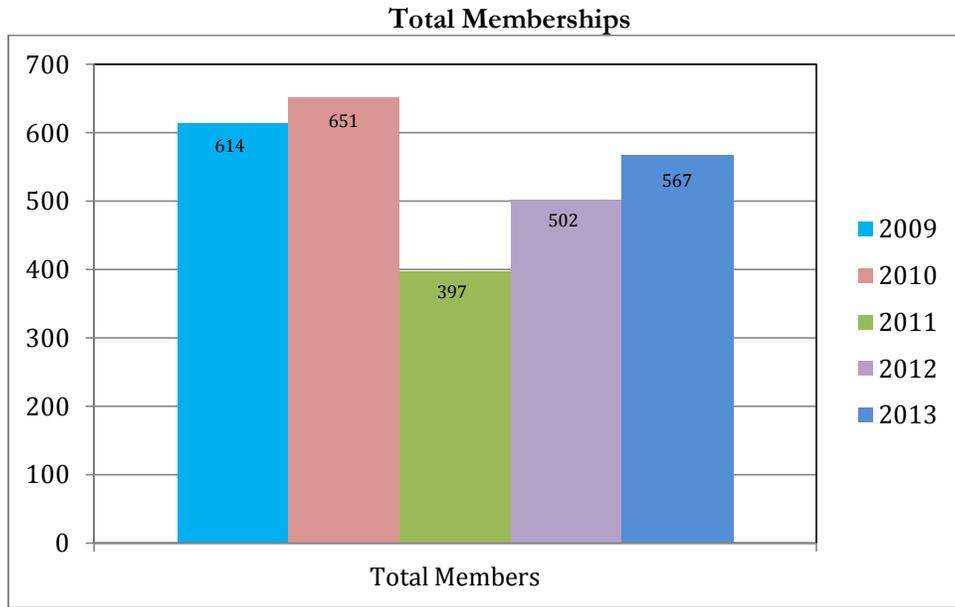
New checks and balances procedures have been implemented for opening and closing the cash drawer and removing money from the donation box along with petty cash. Dual signatures will be required at the beginning and end of each day when opening and closing the cash drawer. Two people are now required to empty the donation box.

New items are continually being added to inventory in the gift shop.

A new purchase order system has been implemented using QuickBooks. This process was previously done manually. This will expedite ordering items for the gift shop, provide an electronic record of orders, and a more accurate inventory.

In addition, shop events throughout the year give visitors 20% discounts on books, gifts and apparel; they support CDRI and get a deal.

MEMBERSHIP



We have not done an analysis of the factors reflected in the increase to membership and decline in revenue.

Following is a breakdown of membership additions/renewals this year:

- January 20 members/\$2060 6 renewals, 14 new
- February 20 members/\$2750 8 renewals, 12 new
- March 12 members/\$2420 2 renewals, 10 new
- April 73 members/\$6450 61 renewals, 12 new
- May 28 members/\$2375 28 renewals, 0 new
- June 30 members/\$2315 27 renewals, 3 new
- July 36 members/\$3010 31 renewals, 5 new
- August 48 members/\$3555 37 renewals, 11 new
- September 32 members/\$2590 23 renewals, 9 new

89.5% of our membership is from Texas

28.4% of our membership is from our local communities:

- Alpine – 20.3%
- El Paso – 1.7%
- Fort Davis – 12.8%
- Fort Stockton – 1.7%
- Marfa – 2.8%
- Midland – 5.3%

PUBLIC OUTREACH, PUBLICATIONS & MEDIA

Staff has detailed these activities under their individual program areas.

PROFESSIONAL DEVELOPMENT

Texas Natural Resource/Environmental Literacy Summit for Leadership and Action

J. Glasscock joined over 150 individuals participating in this Summit held in San Antonio and with the common goal of promoting Environmental Education. The intentions of this summit were to create and move forward with a plan that will compliment the mission of providing a framework for ongoing statewide efforts that foster natural resource/environmental literacy as a cornerstone of education, recreation and life-long learning.

ADMINISTRATIVE & BOARD

BOARD TRANSITIONS

Albert Miller and Rick LoBello were elected to the CDRI Board of Directors in February. In August, President Tom Bruner stepped down and Vice-President Martha Hansen assumed the interim Presidency. In October, she appointed Deirdre Hisler to fulfill the remainder of Suzette Ashworth's Board term upon Ashworth's resignation. Robert Dunagan resigned from the Emeritus Board in September.

HIRING AN EXECUTIVE DIRECTOR

In the period between February and September, after Cathryn Hoyt assumed the newly created Director of Research position, the CDRI Board conducted a search for a new Executive Director. Cynthia Griffin was hired and began work on September 1. During that time, Board President Tom Bruner, Interim Board President Martha Hansen, and Jessica Glasscock served as the interim Executive. In addition, C. Hoyt provided key administrative functions. The CDRI staff helped tremendously during these seven months of transition. Each was key in the daily operation and sustainability of the organization. C. Hoyt and J. Glasscock have detailed their contributions below.

J. Glasscock served as the Interim Executive Director of the Chihuahuan Desert Research Institute. Major events overseen during this time:

- Completion of the greenhouse re-skinning
- Oversight of the solar array installation with Native Inc.

- Organization, solicitation of auction items, catalogue creation, and execution of the Annual BBQ & Auction

Cathryn Hoyt provided Executive Director and Administrative Tasks as follows:
(Approximately 30 hours per week since February 1)

Board Related

- Organized and prepared materials for the February Board Meeting
- Worked with board to develop job description and post announcement on multiple websites
- Prepared financial reports for April Executive Committee meeting.
- Posted material for April Executive Committee meeting on website.
- Prepared financial report for T. Bruner in June.
- Prepared financial reports for August Executive Committee meeting.
- Helped M. Hansen put together material for board manuals.
- Updated board information on the CDRI website.
- Edited Form 990 and prepared Appendix A

Financial

- Prepared report for Mark and Tom concerning status of TPWD trail grant. Put together reimbursement requests for TPWD trail grant & TPWD Rare Plant grant.
- Prepared bills and receipts weekly for Laura. Dealt with problems related to missing receipts. Handled problems resulting from hacked credit card. Worked with Laura to determine why Variance report and Quickbooks didn't match.

Staff Management & Assistance

- Dealt with absentee staff member.
- Dealt with day-to-day supervision of staff members and urgent projects.
- Dealt with staff member suffering from mental illness.
- Prepared new staff packets for student interns and new business manager.
- Worked on Saturdays to cover for Scott May after he quit with two days notice.
- Orientation and minor training for new business manager.
- Began orientation and training of new Executive Director.
- Helped M. Foreman install interpretive panels on trail.
- Helped M. Foreman with preparation of foundation for small greenhouse.
- Worked with J. Falcone on construction of screens for greenhouse remodel.

Reports

- Prepared and filed 401k annual report

Special Events

- Prepared list of plants for plant sale.
- Updated website for plant sale and CAB Teacher's workshop
- Drove to Phoenix to pick up plants for Plant Sale.
- Helped with Plant Sale on Saturday.
- Did paste-up and editing of auction catalog.
- Worked all day for BBQ.