

THE OFFSET



Central Oklahoma Cactus and Succulent Society

August 2017

Editor: Rosario Douglas



Meeting time: 7:00 pm Third Thursday of the month.

Location: Will Rogers Garden Center, Oklahoma City

Echinocereus reichenbachii subsp baileyi
in the Wichita Mountains NWR, Oklahoma.
Photo by Mike Douglas.

Oklahomacactus.com

August 17th meeting



**Program: Zoological Horticulture
and a brief update on the Zoo's
cactus and agave collection**

by Lance Swearengin

Time: 7:00 pm

Refreshments by Joan Galbraith



CENTRAL OKLAHOMA CACTUS AND SUCCULENT SOCIETY

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August 2017



President's message

Niki Furrh

As we are gradually leaving summer, many of us are getting kids ready to return to school, some of our favorite water activities are slowing down and if you were one of the lucky ones this year, you got to take a cool vacation. Don't feel too depressed if you didn't get past Yukon this summer – there are many of us who didn't get to take some time off from the regular grind and many of us who would have gladly settled for 'the regular grind' in place of what we had to endure.

Believe our fall will pull us into new areas with the club and 2018 is showing signs already of some changes both interesting and challenging. Are we up for it? I hope we are. Our Show and Sale was the biggest producer to-date and if we are to match 2018 and hope for continued improvement, we are all going to have to adapt to innovative ideas and walk more swiftly towards the ever-changing ways of the internet and social media. We will need to keep pace with newer members and plan programs and activities which will cater to a broad range of interest in cacti and encourage more involvement in the club.

To those members who would prefer things stay status quo, be prepared to accept more responsibility in the club with less outcome or else we will slowly begin a demise. The cacti and succulent interest in Oklahoma is on an increasing high and we need to be prepared and educated to what the majority of the public would like. Talk with friends, family, co-workers, (anyone who will 'talk') and ask what they would like to see in the area of cacti and succulents and encourage, encourage, encourage, participation in our club!

The board needs new ideas and opinions regarding programs, field trips, and other activities. Along with that, we need members who will help support the field trips and other activities planned. In August we will begin working on the 2018 Show and Sale to be sure that we are equipped and capable in handling a larger Show and that volunteers are available to assist with the many aspects of putting on a great show. Ideas are needed so it's time to get up out of the pool chair (or pond chair, or simply "hot" chair), rev-up the engines and look forward to cooler weather and the beginning of a great fall!

Niki Furrh



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August 2017

COC&SS Coffee/tea in the garden

August 12

Fred Hill's garden

Time: 9-12

Address: 609 South Howard Avenue, Moore.

Phone: 794-4160 Email: f-hill@sbcglobal.net

Wander through the wheelchair paths to our gardens, each having a different style and function. After the destruction of the May, 2013 tornadoes, some gardens were restored, some were redesigned for handicapped use. Included are butterfly gardens, keyhole garden, succulent gardens, prairie garden and plantings surrounding the area. Our water garden is a larger structure, with raised features, two bio-filter waterfalls and eye-catching plantings.





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From the Editor

Rosario Douglas



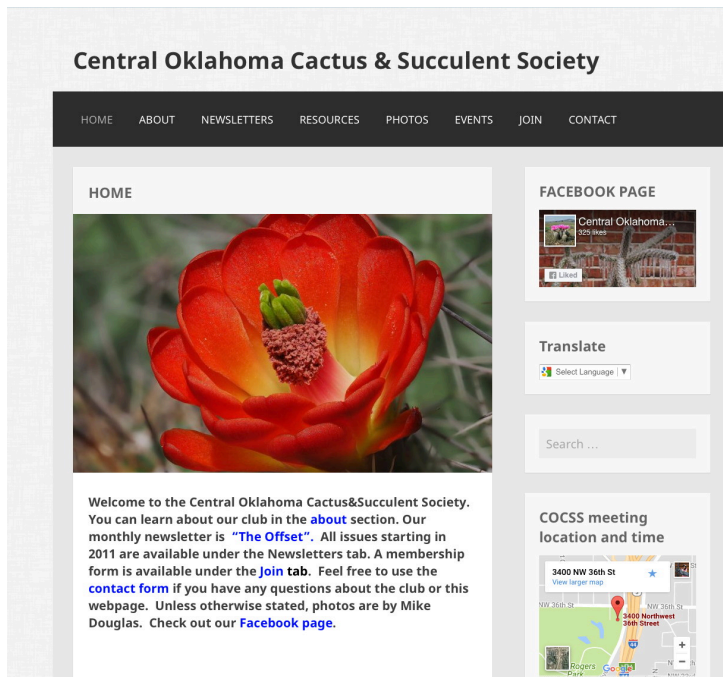
The cooler weather and the rains have been a welcome change to our usual hot and dry August weather. The outdoor succulents in my garden are enjoying this welcome break. Speaking of breaks, it is almost that time of year when we start thinking of Fall, cooler weather, fall foliage and our annual picnic. The picnic will be held at two member's houses (they live on the same street), our president Niki Furrh and Peggy Anglin. The dates are September 21st and more details will be posted next month.

After our June garden tour at Robert Millison's house, our series "Coffee/tea in the gardens" continues this month. Member Fred Hill's garden will be open to visitors on August 12 from 9-12 (see more information in this newsletter).

Our August 17 meeting will feature Oklahoma City Zoo and Botanical Garden Horticultural curator, Lance Swearingin. His presentation is titled: **Zoological Horticulture and a brief update on the Zoo's cactus and agave collection.** In his own words Lance describes the title: "What is zoological horticulture? Gardening within a zoo may be more complicated than you might think"! Join us as Lance shares his thoughts and insights on zoological gardens and zoo horticulture.

Remember that all the newsletters since 2011 are available on our webpage at:

Oklahomacactus.com Follow us on [Facebook](#) to read about events and miscellaneous information about succulents.



Mark your calendars for **August 12th.**

You will have the chance to visit Fred Hill's garden in Moore.

609 South Howard Avenue Moore.

Phone: 794-4160

A volunteer is needed to bring refreshments for our November meeting. Contact me or Niki if you are able to help.



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Minutes of last meeting

Robert Millison

COCSS Meeting 7-20-17

At 7pm, Keith Warren presented a program on Bonsai; he is the co-founder of the Central Oklahoma Bonsai Society and Vice-President of the Oklahoma Orchid Society. Mr. Warren presented two video slide-shows about Bonsai which gave the definition of what is considered to be "bonsai", including the different shapes of bonsai and the guideline ratios regarding trunk thickness/height and shaping. The presentation was very informative, and Mr. Warren included a brief slide-show of succulent plants he photographed at the COCSS Show/Sale of succulent plants that he thought might do well as bonsai. The most humorous part of the evening was the abject look of horror on Mr. Warren's face when Joyce mentioned that she lets adeniums sit or hang to dry for up to two weeks before re-potting.

The business meeting was called to order at 8:34pm with 16 people present. The Treasurer reported a club bank balance of \$11,735.29 and the addition of one new member.

Minutes from previous meeting were approved.

Niki informed attendees that the old COCSS library cabinet is for sale (forward offers to Niki or Tony). Fred mentioned that he felt the show/sale would have benefited from a "re-potting" station; Fred will be in charge of this at the 2018 Show/Sale. Niki requested help with club t-shirts; there were a few left over that were offered for sale at the Show/Sale; many customers asked about obtaining t-shirts, so Mark has volunteered to see about having a new batch of t-shirts made prior to the 2018 show/sale. The "Coffee/Tea In The Garden" tour continues with Robert Millison's yard on 7-22-17; Fred's tour date is August 12th from 9am to 12noon (address: 609 S. Howard Ave., Moore). Fred reported that the Master Gardener's bus tour is scheduled for September 9th; also, the Water Garden Tour is scheduled for September 10th. OETA's Oklahoma Gardening has filmed a segment in Fred's yard; he will notify us when this is scheduled to air. Niki reported that she received a call regarding the OKC Home Show January 19-21, 2018; they are asking if the COCSS would be interested in doing a Dish Garden Workshop the Home Show and also would like to have someone from the club speak; more info will be obtained before any commitments are made.

Meeting was closed at 8:55pm.

Regarding the Garden Tour (7-22-17): I had 11 people show up at my house to see my yard. Many great conversations were had, and I appreciate everyone's positive remarks.



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Photos of last month's Coffee/tea in the garden at Robert Millison's house. A hot day in a cool garden.





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Happenings Joyce Hochtritt and Rosario Douglas

August 12 Coffee tea in the garden at Fred Hill's house form 9-12. Address is: 609 S Howard Ave. Moore.

Wander through the wheelchair paths to our gardens, each having a different style and function. After the destruction of the May, 2013 tornadoes, some gardens were restored, some were redesigned for handicapped use. Included are butterfly gardens, keyhole garden, succulent gardens, prairie garden and plantings surrounding the area. Our water garden is a larger structure, with raised features, two bio-filter waterfalls and eye-catching plantings.

August 17: COCSS Meeting & Program – 7:00 pm – Will Rogers Exhibition Center

Program: Zoological horticulture and a brief update on the Zoo's cactus and agave collection by Lance Swearengin, Horticultural Curator at the Oklahoma City Zoo and Botanical Garden.

Refreshments: Joan Galbraith

September 16 Coffee/tea in the garden at Joyce's. From 9:00 am to 12:00 pm.

Visitors are welcome to come, visit the greenhouse and check out the plants. We have hundreds of cactus and succulents are available for purchase. Visitors will need to park in the circle drive under the shade trees so not to block the driveway to the back.

Sept 21 Annual picnic. At Peggy Anglin's house. We will grill and people will bring sides. Desserts at Niki & Tony's .

September 28 Private tour of the OKC Zoological gardens for COC&SS **members only**. Time: 9:30 am. Free of charge.

October 19: COCSS Meeting & Program – 7:00 pm – Will Rogers Exhibition Center

Program: Growing small Aloes and Dickyas. By Bill Utley member from the Ft. Worth C&SS.

Refreshments: Rosario Douglas



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Book Review by Mike Douglas



Biogeography and Biodiversity of Cacti

By Wilhelm Barthlott and collaborators, 2015

This book, Schumannia 7, is part of a series of publications for succulent plant material that is either too technical or too long to be published in the German journal "Kakteen und andere sukkulenten". The book is 205 pages, with a glossy paper, large-size format, with many color photos and maps. The text is in both English and German, and well done so that reading the book seems natural, without one language getting in the way of the other. The book can be ordered from the publishers. The email is: geschaeftsstelle@dkg.eu and the website is to order is [here](#).

The introductory sections have nice maps depicting global plant diversity (a specialty of the lead author) and the vegetation and biogeographic regions of the Americas. A discussion of cacti phylogeny is presented and the usual diagrams showing the relationship

between different cacti groups will require close examination for the average cactophile to understand. While much of this book is perhaps not aimed at the average cacti hobbyist, most of the material can be read and understood by the serious hobbyist.

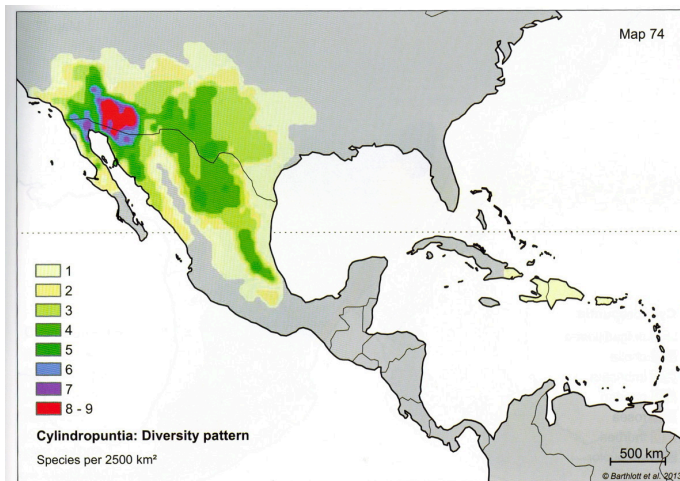


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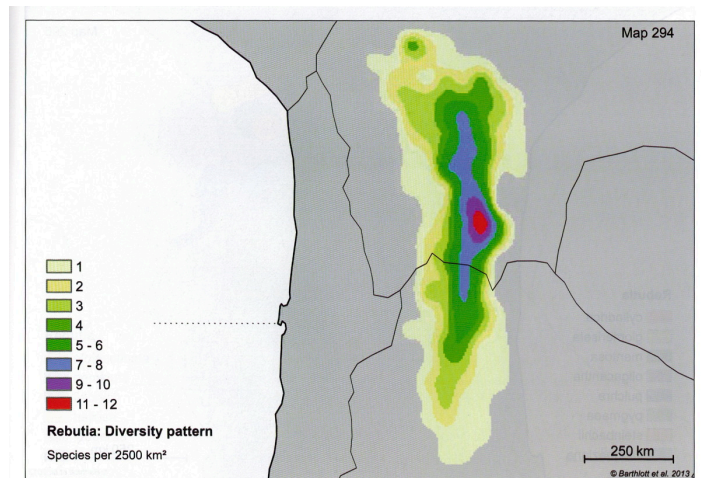
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There are sections on Cactus ecology and biogeography, phylogeny, evolution and systematics, mapping the diversity of cacti, patterns of diversity and endemism, conservation and hotspots, and a lengthy section with distribution maps of all cacti species (and of the larger genera). Biodiversity is measured in many ways, not only by maps showing the number of species in a region, but by their growth form (e.g. columnar, globular, arborescent, epiphytic), their pollination mechanisms, by cactus subfamily (like *Opuntioideae*, *Cactoideae*) or by genera. Some regions have many genera of cacti, others relatively few – but with many species. Maps are also shown for each country in the Americas, showing the diversity of cacti species. In total there are 330 maps in the book – which is great for those loving maps, but perhaps overwhelming for those who find geography challenging (only country borders are shown on the maps).

The distribution maps are very colorful and of high quality, but one can see that the species distributions tend to be overly “smoothed”. For a great many species there are probably few herbarium specimens - even for wide-ranging species, and the real distributions are only educated estimates. This is the realm of species–distribution modeling, still in its early stages – for many groups of plants that are poorly documented. Fortunately, the focus of this book – biogeography of cacti, does not depend on excellent distributions of all cacti species, but rather where species overlap in their distributions. Thus, the diversity maps for *Echinopsis* (map 165), *Rebutia* (map 294, *below right*) or *Cylindropuntia* (map 74, *below left*) immediately tell us where we need to travel to see the greatest diversity of species in these genera. Of course, assuming we can find them in habitat! (The book does not provide detailed distributions of rare species (or of any species) in part, to protect rare species from poaching. Again, the distribution details aren’t needed for the essential biogeographic patterns of cacti that this book nicely illustrates.



Map 74: *Cylindropuntia*, diversity pattern.
Karte 74: *Cylindropuntia*, Diversitätsmuster (Arten pro 2500 km²).



Map 294: *Rebutia*, diversity pattern.
Karte 294: *Rebutia*, Diversitätsmuster (Arten pro 2500 km²).

The figures above shows that the greatest diversity of cholla species (*Cylindropuntia*, *left map*) is found in southern Arizona, while for *Rebutia* (*right map*) it is near Tarija in southern Bolivia.



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I am not up-to-date on cacti taxonomy, with my classifications coming from the era of Lyman Benson's books on cacti of California, Arizona or the USA (70's-80's). This book doesn't have extensive synonymy, but perhaps enough for cactophiles to find their way around. Most names haven't changed that much, though when I looked for *Backenbergia* I could not find an equivalent name in the appendix, and finally found the species name (*militaris*) under *Pachycereus*. My fault for not keeping up to date!

Some parts of the book I have only glossed over, but I caught small errors (again, these won't change any important results) – the distributions of *Cylindropuntia*'s *cholla* and *molesta* appear far too small compared with their actual distributions. This reflects in the *Cylindropuntia* diversity figure (shown above) that indicates that no chollas are found in southern Baja California – clearly not the case (as observed by this reviewer). While the location of herbarium specimens might have been a nice addition to the maps (like in Benson's books), it might also give an indication of just how poorly known the ranges of many species are! The species distribution maps should also provoke some concern that so many species (perhaps most obvious in *Mammillaria*) have very small ranges and are at potential risk of extinction.

In summary, this book is for cactophiles who want to know where their cacti are naturally found. For me, this is a "must-have" book, synthesizing so much on the biogeography of cacti. I will spend many hours referring to the maps alone.



Flowers of *Echinocereus brandegii* (left) and *Huernia confusa* flowering during August in our greenhouse. Photos by Mike Douglas.



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Article of the month

This month we are reprinting (with permission) an interesting article titled: **Succulent: Tree Aloes** by Dr. Colin C. Walker who is the current president of the British Cactus&Succulent Society. The article appeared in the latest issue (Volume 76 number 7, August 2017) of the Henry Shaw Cactus&Succulent Society.

As some of you may already be aware, there have recently been some important changes in the classification of Aloes. Although not every Aloe has a new name, some well-known large arborescent Aloes such as the iconic *Aloe dichotoma* is no longer in the genus *Aloe*, but instead it is now *Aloidendron dichotoma*. The article below discusses these somewhat drastic name changes, that succulent plant enthusiasts would want to be aware of.

I would like to thank Jolie Krupnik, the newsletter editor of the Henry Shaw Cactus & Succulent Society, for helping us to obtain permission to reprint this article in our newsletter. I would also like to thank Dr. Colin C. Walker for graciously agreeing to share this interesting and informative article with our members.



The photo, taken near Keetmanshoop, Namibia (by Mike Douglas), shows a “forest” of former *Aloe dichotoma*, now *Aloidendron dichotoma*. They are a sight to behold, especially at sunset or sunrise. Such “forests” of *Aloidendron dichotoma* occur in parts of their range in South Africa and Namibia.

SUCCULENT: Tree Aloes

By Dr. Colin C. Walker

I promised Jolie a guest article. For those who don't know me and I'd guess that includes most members of the Henry Shaw Cactus & Succulent Society, I'm currently President of the British Cactus & Succulent Society. I've spoken at two CSSA Conventions in the past, most recently in Austin, Texas, at which I was proudly presented with a CSSA Fellowship. I've been growing succulents for nearly 50 years and my main interests are in aloes, agaves and sansevierias, although my collection includes other succulents, even a few cacti!

The classification and naming of many succulents have undergone sea changes recently, principally because new evidence has emerged, notably from molecular studies involving DNA sequence comparisons. For the aloes these changes have been relatively modest compared to some other groups of succulents. However, as a consequence just 20 Aloe species have been transferred to a small number of segregate genera:

Aloiampelos, Aloidendron, Aristaloe, Gonialoe and Kumara¹. Fortunately these splits have left most of Aloe intact, such that this very large genus still includes around 550 species, with an additional 60 or so

subspecies and varieties. Here I'm concentrating on just the tree aloes of which there are only seven species of Aloidendron and a single species in Kumara.

Let's start with the biggest, although as they say, size isn't always everything! **Aloidendron barberae** needs space to grow to its full



Aloidendron barberae with the author.

¹ In 2013 *Aloe aristata* was transferred to a new genus, so the current name is *Aristaloe aristata*. This genus is monotypic having just this single species. This does flag up its unique features. And *Aloe plicatilis* is now *Kumara plicatilis*.



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potential, so it doesn't make an imposing pot plant. In cultivation the most impressive specimen I've encountered was growing in the Company's Garden in Cape Town. The photo, taken by my friend Estrela Figueiredo, shows the plant with me beside it to give a sense of scale, from which I estimate the plant to be around 37 feet (11 m) tall. Given free root room when planted in the ground, these plants are apparently quite fast growing, so this plant is not especially old. This species, though, can get much bigger and is reported to grow up to 60 feet (18 m) tall. It branches freely to form a dense canopy. This species comes from SE South Africa north into Mozambique.

Aloidendron dichotomum also has a single stout trunk with forked branches (dichotomous branching, hence its name) that form a rounded canopy in mature specimens. It has the common names of Kokerboom or Quiver Tree and comes from NW South Africa and southern Namibia. This too grows reasonably quickly in cultivation and makes a better looking potted specimen.



Aloidendron dichotomum.

hscactus.org

Aloidendron pillansii is similar to **A. dichotomum**, but has just a few stout branches and the leaves are larger. This too occurs in NW South Africa and southern Namibia, but it has a much more restricted distribution and is, indeed, critically endangered in the wild since the natural populations are reduced to just a few thousand specimens and rejuvenation of the populations by seedlings is recorded to be very poor.

Aloidendron ramosissimum is more of a shrub than a tree, since it branches profusely (hence its name) at ground level to form a



Aloidendron pillansii

dense bush just 10 feet (3 m) tall, unlike the other species discussed that have a single stout basal trunk. This species is the most desirable for pot cultivation, since small well-branched specimens have a natural bonsai appearance. (photo next page)

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Aloidendron ramosissimum

There are three other species of *Aloidendron* which I've not personally seen. *Aloidendron tongaense* has a very restricted distribution in northern KwaZulu-Natal, South Africa and southern Mozambique. This is the most recently described species in the genus, being named in only 2010. It is very similar to *A. barberae* but only grows to 26 feet (8 m) tall. *Aloidendron eminens* comes from Somalia, whilst *A. sabbaeum* is the most northerly species from Saudi Arabia and the Yemen. I have no idea if any of these three species are currently in cultivation in the USA or in England, so these can be described as very rare in cultivation.



Kumara plicatilis is monotypic. It was formerly classified as *Aloe plicatilis*.

The final tree aloe is now known as *Kumara plicatilis*. This is the "fan aloe" and the unusual arrangement of the leaves (distichous) makes this species unique. It has a very restricted distribution in the Western Cape Province of South Africa, but its habitat is a mere hour's drive from Cape Town, so I've been lucky enough to visit this iconic species in its natural environment. Back in 2007 I climbed up a steep hillside from a main road and within 10 minutes I was communing with these wonderfully attractive plants in the Hex River Mountains.

For completeness, the second species of *Kumara* is *K. haemanthifolia*, but this is neither a tree nor an aloe anymore, so it doesn't fall under the remit of this current article! ■



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The Botanical Corner

Rosario Douglas

Flavus	Golden yellow
Flexispinus	With bent or curved spines
Floccose	Having tufts of soft hair; woolly
Flora	The vegetation of a given region
Floribundus	Flowering
Follicle	A capsule or pod, resulting from the maturing of simple pistil, and opening along one suture. The stapeliads have follicular fruits.



A. Cereoid cactus showing the floccose habit. Photo by Mike Douglas

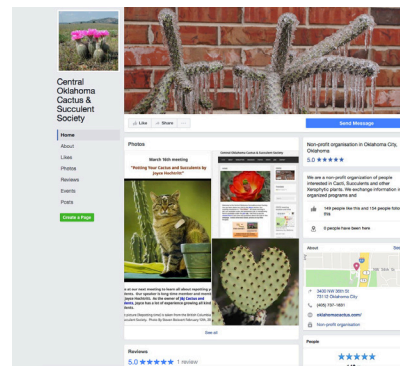
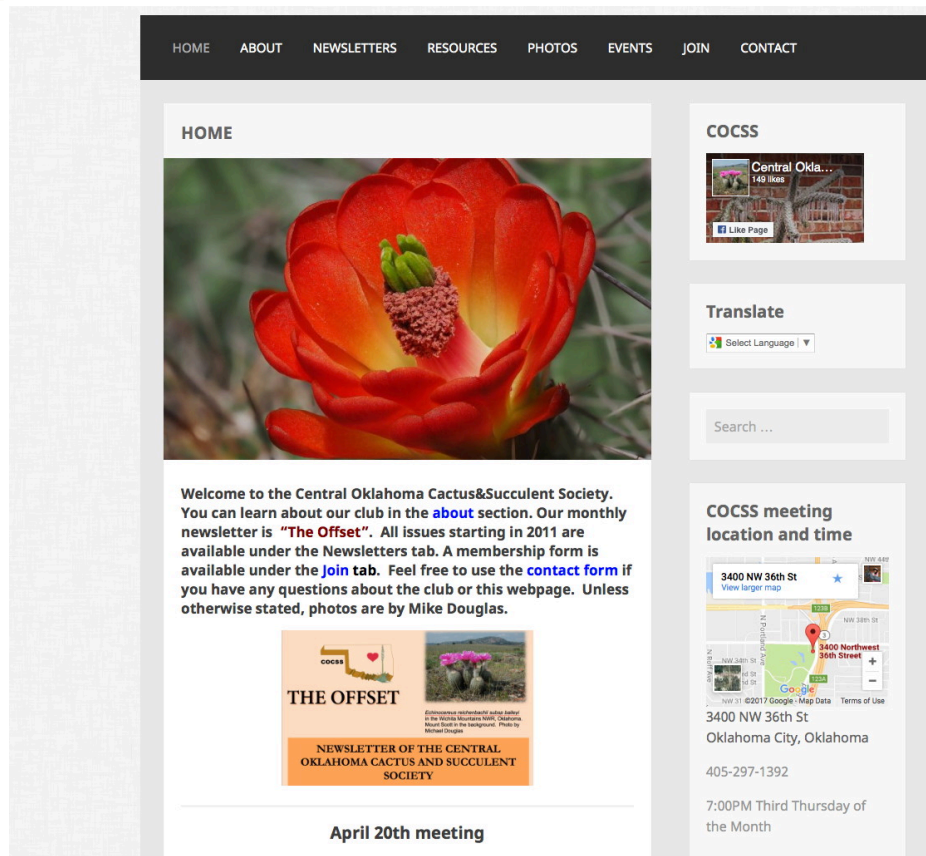
B. Follicular fruit of milkweed (*Asclepias syriaca*) revealing seeds within. Wikipedia Creative Commons.

Terms from a book by W. Taylor Marshall and R.S. Woods. The book is titled, *Glossary of succulent plant terms*, published in 1938. Also Wikipedia and from CactiGuide.com at <http://cactiguide.com/glossary/>.



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