

GILA NATIVE PLANT SOCIETY

A CHAPTER OF THE NATIVE PLANT SOCIETY OF NEW MEXICO

B U L L E T I N

JANUARY, FEBRUARY, MARCH 2012

Editor: Charles Holmes

PROGRAMS

All programs are free and open to the public. Meetings are usually the third Fridays at 7:00 pm at WNMU's Harlan Hall, with refreshments following the program.

Activity updates and further details will be posted on our website www.gilanps.org.

You will also receive a reminder before the date of the program.

January 20th – Patrice Mutchnick, Biology Lab Director at WNMU, will talk to us about “Plant Collecting in the Tropics, with an introduction to Tropical Plant Families.” She will comment on the practical side of finding, collecting and documenting tropical plant species. In discussing some general characteristics of tropical plant families, she will focus on the ethnobotanically useful trees of Mesoamerica.

Mutchnick holds an MS in Environmental Studies from Ohio University. She has done research in the Peten area of Guatemala (Maya country) and the ethnobotany of tree species in the Maya Biosphere Reserve. She is a past resident collector for the Biological Diversity of the Guianas Program, Smithsonian, Guyana, South America.

2.

February 17th - Mark Dimmitt, of the Arizona-Sonora Desert Museum, will present a program entitled "The Madrean Sky Island Archipelago: Summary of Recent Botanical Surveys, with Notes on the Aftermath of the Monument Fire in the Huachuca Mountains."

He envisions the program as an audience participation event, proposing that attendees will point out differences and commonalities between local flora and flora of the Sonoran Desert with which he is familiar.

Dimmitt has a PhD in biology from the University of California at Riverside. He has worked at the Arizona-Sonora Desert Museum for over 30 years as a curator of botany and as a field ecologist. He has researched and published extensively in the fields of botany, ecology and horticulture. Dimmitt is also a plant breeder of cacti, bromeliads and adeniums (Desert Roses). He is also a Fellow of the Cactus and Succulent Society of America.

March 16th – Mike Natharius, Forest Soil Scientist for the Gila National Forest, will discuss the "Midscale Vegetation Mapping Project for Region 3 (New Mexico and Arizona) of the US Forest Service."

This remote sensing project incorporated field-collected training data and vegetation macroplots to map the major dominant types of the Gila National Forest, at a 1:100,000 scale. The results were then subjected to an accuracy assessment.

Natharius has a BS in Soil Science from New Mexico State University.

A N N O U N C E M E N T S

2012 NATIVE PLANT SALE

Mark your calendars now! On March 10th, the GNPS plant pre-sale will again be held at the Silco Theatre, a location we found to be very community-friendly last year. The information regarding the plant sale will be posted on the GNPS website (gilanps.org). So, if you are unable to attend, want a preview or prefer to order online, we have the solution. The plant pick-up will be on Friday, April 20th at either Penny Park or Gough Park, depending on construction at Penny Park. We will keep you updated. This year, Earth Day will be happening at Gough Park instead of Penny Park. As always, we are dependent on your purchases and your contribution as volunteers to make the sale successful.

Allison Boyd and Pam Bryant, coordinators

3.

REPORTS

On October 21st – Dr. Keller Suberkropp, our Vice President, discussed the importance of the decomposition of plant litter to ecosystem function. He then focused on the decomposition of leaf litter in woodland streams which provides the base for the food webs in these ecosystems. The major focus of his talk was an ecological group of stream fungi that exhibit several adaptations to decomposing plant litter in streams, such as growth at low temperatures, production of exoenzymes to degrade plant polysaccharides and spore shapes that allow dispersal in flowing water.

Of particular interest were the interactions of these fungi with invertebrate detritivores that consume decomposing leaves in streams. These animals exhibit “feeding preferences” for certain fungi that grow better when provided with leaves colonized by these fungi. Using radiolabeled carbon, these animals were shown to obtain a majority of their nutrition from the fungi-colonizing leaves rather than the leaves themselves.

Keller finished the talk by briefly describing methods for study of decomposition in streams and presenting results of studies that examined nutrient enrichment of streams with nitrogen and phosphorus (nutrient pollution). Nutrient enrichment stimulates fungal growth and reproduction and increases rates of leaf decomposition. This reduces the amount of leaf detritus in streams, but increases their food quality to animals that consume it.

On November 18th, Van Clothier, owner of Stream Dynamics, presented a program on “Water Harvesting for Native Plant Gardens” in which he showed slides of local water-harvesting projects and described how preserving rain water could turn nuisance storm water runoff into a free water source. The early slides consisted of views of natural desert marshes, cienagas and other kinds of streams.

In addition, we saw the unnatural effects of floods, like the “Big Ditch,” beaver dams, cattle grazing, and roads that added an entirely new, unnatural drainage network causing water to be lost or wasted.

Of particular interest were the slides that demonstrated his water harvesting projects in which a regenerative resource was created. Those projects included the catchments at the Silva Creek Botanical Gardens, the Montessori school and the end of Grant Street, among others.

We saw many examples of how the very valuable practice of water harvesting can really work in Silver City.

4.

On December 11th – We held our annual Holiday Party at the Old Elks Club.

Over 50 of us experienced great delight when eating so many wonderful, pot luck, scrumptious foods in the festive surroundings. Most of you who brought your specialties should apply to the various TV food shows to get your well-deserved national recognition.

A few of us really overdid it and had to be carried out, smiling, on stretchers.

Thanks very much to those who worked so hard to present this wonderful affair.

SPECIAL FEATURES

Frangula betulifolia

By Angela Flanders

One of my favorite plants (I admit to having many favorites) is *Frangula betulifolia*. What a lovely name, but, alas, it is now *Rhamnus betulifolia*. Sometimes it is commonly referred to as Birchleaf Buckthorn or Beechleaf Frangula. I suppose someone will eventually start to call it Beechleaf Rhamnushorrors! It is quite a lovely plant. Just the words *Frangula betulifolia* bring forth a vision of gracefully arching branches and leaves, refreshing to see on a hot summer day, accompanied by the song of water cascading over rocks.

Many native people used *Frangula (Rhamnus) betulifolia* in ceremonies and/or as traditional medicines for treating toothache, oak dermatitis, poisoning, burns, infections, constipation, kidney problems, grippe, mania, rheumatism, among others. The Pomo people (of California) considered the berries to be poisonous, while the Costanoan (California), Paiute (western U.S.) and Kawaiisu (So. California) peoples considered the berries to be food! Some tribes ate them fresh; some dried the berries and then saved them for winter food.

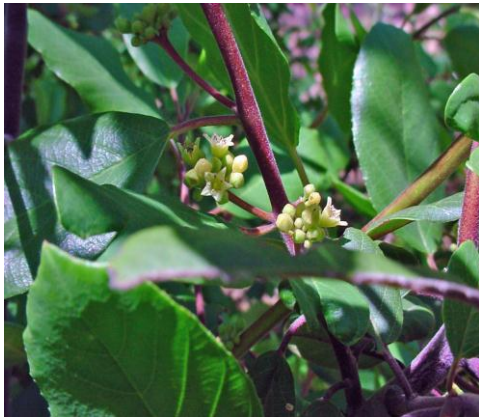
The genera of the *Rhamnaceae* family in New Mexico are *Adolphia*, *Ceanothus*, *Condalia*, *Rhamnus*, *Sageretia*, and *Ziziphus*. That's right, no longer are there any *Frangula*! (Continued Next Page).

5.

Rhamnus betulifolia is a perennial shrub with opposite, simple, elliptic to oblong, dentate leaves. Growing in sun to part shade, *Frangula betulifolia* (Oops!...I slipped again) *Rhamnus betulifolia* may flower from April through September. It produces a greenish flower and a black to dark purple drupe. While it can reach a height of 20 feet and a width of 10 to 15 feet, we normally see plants that are about 5 feet tall. It grows along stream banks and in moist canyons from 4,000 to 7,000 feet in elevation. It is a large shrub to small tree, frequently branched near the base. Shiny, bright green leaves, 2 to 6 inches long and 1½ inches wide, are a lighter color on the underside and somewhat hairy. *Rhamnus betulifolia* is browsed by mule deer, but I haven't seen it decimated. The black fruit matures from July through October and is a source of food for a variety of birds.

Rhamnus tomentella subsp. *ursina* is a plant closely related to *Rhamnus betulifolia*. California Buckthorn and California Coffeeberry are common names used for *R. tomentella* subsp. *ursina*, a perennial tree with simple leaves. It receives the common name of Coffeeberry from its seeds which resemble coffee beans. *Rhamnus serrata* var. *serrata* and *Rhamnus smithii* constitute the remainder of the *Rhamnus* genus in New Mexico.

For now, farewell *Frangula*!



Which Timber for the Best Timbre **By Russ Kleinman**

There has been music everywhere for the past month or two. It's a great time of the year. All of this great music is created by instruments, many of which are made of wood. But, which wood is the best for which instrument?

Is the piano your favorite instrument? If so, you have spruce to thank for the beautiful sound board, and it is maple that makes the action parts strong. Basswood is light, and so it is used for making the keys so that they move quickly and easily. Beech, commonly laminated, is used for the pin block.

If the agility of the violin or sonorous tones of the cello are more to your liking, maple and spruce are still the two woods that are responsible for your holiday cheer. The tops are made from spruce, and the back, sides and neck are made from maple. These woods are specially cut for exactly this purpose, and then aged for 50 years or more. The age of the wood and its density definitely affect the quality of the musical tone, while the color pattern of the wood adds beauty but does not add to the tone. Ebony, one of the strongest of all light woods, is used for the fingerboard and pegs.

The piano, violin and cello produce sound by resonating the sound made by vibrating strings. What about another type of musical instrument – the woodwinds? You may be surprised that the wood prized by professionals for clarinets, oboes and perhaps even recorders is African Blackwood, also known as *Mpingo* or *Grenadilla*.

African Blackwood! I have enjoyed the music of clarinets, oboes, recorders and other woodwinds all my life but had never heard of this plant. The scientific name for it is *Dalbergia melanoxylon*. It's a *Fabaceae*, which means that it's in the Pea Family. *Dalbergia melanoxylon* grows to the size of a small tree and apparently is approaching threatened status in its native range (East Africa). Other species of *Dalbergia* are also used for recorders to produce different types of tones.

The next time you hear a beautiful piece of music being played on a piano and woodwinds, remember that it is wood from trees from all over the world that makes it possible!