

MANZANITA

NEWSLETTER OF THE KANE
COUNTY CHAPTER OF THE
UTAH NATIVE PLANT SOCIETY

February 2006 News

Upcoming Events

February Monthly Meeting: Monday, February 6: **Seed Exchange.** Come prepared to learn some seed basics, from what seeds are (and do), to how to grow them and how to find a seed buddy to share seed orders and catalogs. I will resurrect Botany 101 to briefly describe the biology and function of seeds. Jan Gisler will follow with a discussion of the volunteer work she and others have done at the Zion NP greenhouse coaxing native plant seeds to germinate. The meeting will conclude with the sharing of seeds and catalogs. I have some Two-needle pinyon, Utah juniper, Fourwing saltbush, and Smooth penstemon (*Penstemon laevis*) seed available to good homes. Come prepared with your own seed to swap and catalogs and order forms to collaborate with others in making bulk orders. As always, desserts and hot drinks will be in abundance for amiable botanical socialization. The meeting will begin at 7PM in the public meeting room of the Grand Staircase-Escalante National Monument Visitor Center (between Walker's and Holiday Inn on Hwy 89 heading east from Kanab).

March meeting: Monday, March 6:

Arborist

David Temple of Cortez, Colorado will give a presentation on trees – the exact title to be announced for next month's newsletter.

Upcoming Zion Canyon Field Institute

classes: (for more details go to www.zionpark.org or call the Zion Canyon Field Institute at 435-772-3264 or 1-800-635-3959).

Saturday, Feb. 11: Native Plants & Xeriscaping.

Learn about native plants adapted to our local climate and the seven basic principles of xeriscaping. The instructor for this course is Doug Reynolds, who many will remember as our Halloween meeting guest speaker. Cost: \$45.



*Above: Hey buddy, want some Penstemon seeds? I have seed available from Smooth Penstemon (*Penstemon laevis*), shown above, for anyone interested. Smooth penstemon is the tall, purplish-blue penstemon with thick, deep green leathery leaves found scattered through The Sand Hills and Coral Pink Sand Dunes northwest of Kanab. It is found primarily on deep, sandy soils derived from Navajo Sandstone and can grow up to 3 ½ feet tall. Smooth penstemon has a relatively small geographic range, occurring only in southeast Utah (Kane, Garfield, and Washington counties) and adjacent areas of the Arizona Strip. This species can hybridize with the red-flowered *Penstemon eatonii* to yield a burgundy-flowered plant often called *Penstemon x jonesii* (for pioneer Utah botanist Marcus E. Jones). The hybrid and both parents can be seen growing side by side in Lick Wash on the Grand Staircase-Escalante National Monument. Photo by W. Fertig.*

Saturday Feb. 25: Annual Propagation Workshop. Washington County extension agent Rick Heflebower will be filling in for Susan Meyer this year (rumored to be on sabbatical writing a book on native plant gardening). The workshop will be at Zion NP, with materials provided by the park to keep costs to a very economical \$15. Space is limited, so Contact Zion Canyon Field Institute for additional details.

Saturday, March 18: Basic Botany for Gardeners: Doug Reynolds is also teaching this course through Zion Canyon Field Institute on basic concepts of gardening (planting, watering, fertilization, and such). Cost: \$45.

Other courses this spring and summer (all by Dr. Reynolds, through ZCFI):

April 14: Life zones I, Mojave to Zion.

July 8: Life zones II, Zion to Cedar Breaks.

July 12: Wildflower photography at Cedar Breaks.

Free Plants? Astute reader Mary Greene found a website that offers free surplus nursery stock (shipping does cost extra, however). The website is <http://freetreesandplants.com> and has a listing of forbs, shrubs, and trees that are available. Many of these are not native to our area, but if you are searching for some plantings at an affordable price, take a look.

Family Portraits: The Caper Family

By Walter Fertig

The Caper family (Capparaceae) suffers from something of an identity crisis in the west. Worldwide, the family numbers about 700 species and is especially abundant in dry, tropical areas of Africa. Only six to seven species (depending on one's taxonomic view) in four genera manage to make it to Utah. These species are often mistaken for mustards (Brassicaceae) when in flower or legumes (Fabaceae) when in fruit. Worst of all, the very name of the family is somewhat demeaning. The word *Capparis* (the genus for which the name of the family is based) is derived from the Latin term for goat (Capra), in reference to the foul odors associated with both organisms.

Despite the bad rap, the Caper family can claim its share of successes. The capers of commerce are derived from the flower buds of *Capparis spinosa* and related species. Capers are typically picked by hand in the morning, just before they would open to unfurl their flowers. Once picked, capers are sun-dried and then pickled in vinegar brine. Noted Colorado botanist (and amateur gourmet?) William Weber considers capers "essential to the preparation of the German meatball disk 'Konigsberger klops'". Many capers are also grown as ornamentals, including Spider-flower (*Capparis spinosa*), and species in the genera *Gynandropsis* and *Polanisia*.

Members of the caper family can be recognized by their four-petaled, slightly irregular (zygomorphic) flowers, stalked ovaries, and capsular fruits. The family is closely related to the mustards but differs in technical features of the fruit. All of

the Utah species of Capparaceae have palmately compound leaves and



Above: Palmer's cleomella (or for those unafraid of latin, Cleomella palmeriana), a low-growing member of the Caper family that superficially resembles the common Yellow beeplant. In addition to its smaller stature, Cleomella differs in its boxy rather than bean-like fruits and its preference for barren clay soils, as here on the Tropic Shale near Lake Powell on Glen Canyon NRA. Photo by W. Fertig.

pod-like fruits that superficially resemble those typical of the pea family. Unlike legumes, Capparaceae fruits are composed of two fused carpels divided by a partition and are borne on a jointed stalk called a gynophore.

Recent molecular genetic studies suggest that the caper family really consists of two distinct evolutionary lines that ought to be split into separate families. Under this system, the true capers and their relatives (about 450 species) would remain in the Capparaceae, while the western North American species and their allies would form a new family, the Cleomaceae. This would necessitate changing the common name of the family to the Cleome, or Spider-flower family.

The most common members of the caper family (in the broad sense) in Utah belong to the genus *Cleome*, better known as the beeplants, stinking clovers, or spider-flowers. All of these common names aptly describe our two representatives: the pink or purple flowered Rocky Mountain beeplant (*Cleome serrulata*) and Yellow beeplant (*Cleome lutea*). *Cleome* flowers have 6 stamens that extend far beyond the petals, much like the legs emanating from a spider's body. Each flower produces a large quantity of nectar, making the blooms popular with

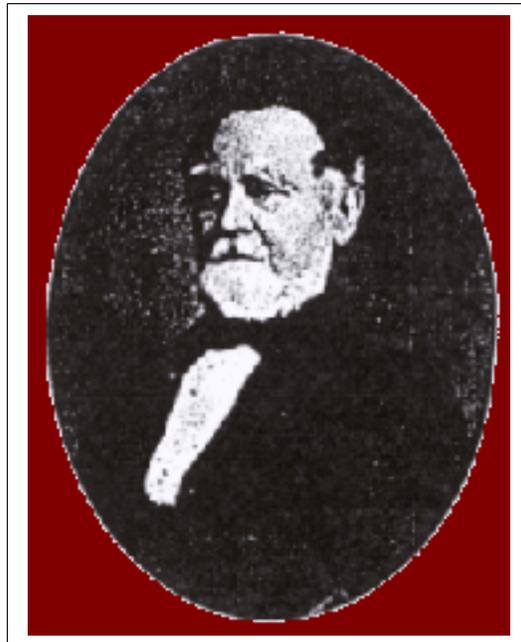
bees and bee-keepers. The flowers and foliage are strongly scented (some would say malodorous), perhaps to attract pollinators or repel grazers. The Hopi used boiled Rocky Mountain beeplant leaves to make a black paint for decorating pottery and baskets. Both species are common in Utah, especially along sandy roadsides or on disturbed soils.

Palmer's cleomella (*Cleomella palmeriana*) and other members of the genus *Cleomella* resemble stunted forms of *Cleome lutea* (the latin name *Cleomella* translates loosely as 'tiny cleome'). It can be recognized by its somewhat box-like or triangular shaped fruits, low stature, and preference for barren clay and shale soils. During wet springs, Palmer's cleomella is one of four or five annual forbs that can convert the barren gray moonscapes of the Tropic Shale (such as those along the Cottonwood Road in Grand Staircase-Escalante NM) into fields of bright yellow and gold.

Clammy weed (*Polanisia dodecandra*) earns its name from its sticky-hairy leaves and stems which feel cool (or clammy) to the touch. These sticky glands also give the plant its characteristic foul smell. Clammy weed is moderately common in salt desert shrub communities or on coarse sandy soils near reservoirs. The flowers are white or cream-colored with pink or purple stamens of various lengths. Its fruit is an erect, glandular-hairy capsule on a slender stalk.

Jackass-clover (*Wislizenia refracta*) is the rarest member of the caper family in Utah. It is known from a single collection in San Juan County at the northern tip of its range (it is more widespread through Texas, New Mexico, Arizona, California, and Mexico). This species resembles *Cleome lutea* in flower color and growth form, but has an unusual fruit, consisting of two spreading, pouch-like pods and an elongate style. The arrangement resembles a pair of spectacles. Coincidentally, another species named to commemorate Frederick Adolph Wislizenus, the mustard *Dithyrea wislizenii*, also has spectacle-like fruits. Apparently nearly 120 years after his death, Wislizenus (an early botanical collector of the southwest and Mexico) is still making a spectacle of himself.

Renewals: Don't forget to renew if it is time. Let me know if you are uncertain of your status.



Above: Frederick Adolphus Wislizenus, was a German naturalist and medical doctor who explored the western US and Mexico in the 1830s and 1840s on a self-financed journey of discovery. He conducted field work in northern Mexico during the Mexican-American war and was briefly detained under suspicion of being a spy (certainly this made more sense to the authorities than a man traipsing about the wilderness by himself looking for flowers, lizards, and bugs). Several plant species have been named in his honor, at least two of which have fruits resembling spectacles. Is this a coincidence? Image from the University of Texas-El Paso website.

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This edition of the Kane County Native Plant Society news was written by Walter Fertig. Thanks to Margaret Malm, Doug Reynolds, Jan Gisler, and Mary Greene for contributing news items. More reader submissions are welcome. For more information about upcoming events, contact Walt Fertig at 689-0224 or walt@kanab.net.