RIOGONUM SOCIETY NEWSLETTER

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FROM THE EDITOR

A ^s we are preparing for our annual meeting we remember our friend and mentor, James Reveal, and dedicate the first half of this edition to a look at his life and career. Later, we look back on last year's annual meeting, hunt for buckwheats in West Virginia, and take a road trip to Samoa. Enjoy and keep your eyes on the ground!

ANNUAL MEETING

THIS YEAR WE WILL EXPLORE the higher regions near Reno. Fortunately, recent snowfall in the Sierras gives us hope of a decent wildflower season in the upper elevations. We will have a slightly different format than in past years with identification held in the field rather than a lab. Those of you who attended our inaugural meeting in Reno please note that this meeting will feature sites not visited then.

Things begin July 24 in Sparks, Nevada, with the Board of Officers meeting and open registration.

The 25th will feature a trip to Steamboat Hot Springs followed by excursions to high elevation sites to view exquisite Eriogonums and other choice genera. The day concludes with dinner at Galena Creek Park and an Eriogonum Board review of business.

On Sunday we'll explore the Sierra Valley area located in Sierra and Lassen Counties of California, about 40 miles northwest of Reno and a prime wildflower location. Surrounded by high mountains, this enormous meadow and grassland is the headwaters of the Middle Fork of the Feather River and one of the most botanically diverse regions of the United States with over 1,000 species of plants.

On the 27th we travel southwest of Reno to Carson Pass and take the Round Top – Winnemucca Lake Trail. This is one of the premier wild flower hikes of the Northern Sierra.

For detailed information about the field trips please see the 'Field Trip' webpage.

Registration is now available. This event is open to Eriogonum Society and Nevada Native Plant Society members only.



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A TRIBUTE TO MY FIELD COMPANION, COLLEAGUE, AND FRIEND

by Noel H. Holmgren

JIM WAS BORN 29 MARCH 1941 in the Washoe County Hospital near Reno, Nevada, the first of two children to Jack Liburn Reveal (1912-1988) and Arlene Hadfield Reveal (1916-2005). Prior to Jim's birth, Jack was working summers in the Elko County range survey with my father, Arthur Holmgren, while both were students at Utah State Agricultural College (now Utah State University). By 1941 Jack had graduated and the Reveals were living in Yerington, Nevada. Soon after Jim was born, they moved to California where Jack, as part of the war effort, worked in the management of tree harvest in the coastal redwood forests.

Jim grew up in California. He attended kindergarten and first grade in Dunsmuir, then, in 1948, the family moved to the small Sierra Nevada resort town of Pinecrest, where his father served as a district ranger on the Stanislaus National Forest. While living in Pinecrest, Jim completed his schooling from grades two through twelve. His second and third grades were in a two-room school house in Long Barn, a ten-mile ride from home. In 1950 a one-room school house was established in Pinecrest, from which he and one other student graduated in 1955. From Pinecrest he rode the bus 30 miles to a high school in Sonora.

In 1951, at the age of ten, he began working summers for a high Sierra packer, working around horses and guiding pack trips into the Emigrant Wilderness Area of the high Sierra Nevada of Tuolumne County, developing skills that have served him well on several occasions later in life. These early years in Jim's life are possibly fairly accurately reflected in the fictitious character of Jerrit Trover in the novel by Jim and his childhood friend, Joanne Knowles, whose *nom de plume* is Jo DeEds (DeEds & Reveal, 2013).

After graduating from high school in 1959 and a summer working on the Toiyabe National Forest, he entered Utah State University, majoring in forestry, and in Jim's own words:

I arrived in Logan in the fall of 1959, majoring in forestry; my mother drove me there from California and took me around to meet all of her old professors. My father drove me to Logan in the fall of 1960, and one of his stops was the herbarium atop the botany building where we visited Art Holmgren: I was scheduled to take his plant taxonomy class in the spring of 1961 so meeting the professor was a nice touch. I listened to tales of the old days and looked around the fourth floor seeing all the tall cases filled with specimens. I had collected plants for my high school advanced biology class, and in anticipation of taking taxonomy I had spent the summer of 1960 collecting on the east side of the Sierra Nevada.

I was in Art's taxonomy course that spring, and about halfway through his class, and under the intense prodding of Arthur Cronquist who was in the West collecting plants for the Intermountain Flora project, I changed majors and was now a botany student and Art



Holmgren's newest protégé ... In September of 1961 Noel and I were in the field gathering plants in Dinosaur National Park for his dad. Later, in late September, we were sent to southern Utah to search for Asclepias tuberosa so that Robert Woodson of the Missouri Botanical Garden could drive West and gather specific populations without having to actually search them out.

Thinking back on the events of early 1964, I do not now remember when I learned that Noel and I would be collecting plants for the Intermountain Flora project. (Reveal, 2013)

I also don't remember the details that led up to this pairing, except for the fact that Dr. Cronquist and my father made the arrangements for Jim and me to use of the Intermountain Herbarium pickup and plant collecting equipment, and Cronquist had the funds on his Intermountain Flora NSF grant to pay mileage and \$7.00 per diem for each of us. We were thrilled. IN JUNE OF 1964, as soon as school was out, Jim and I loaded the truck and headed out for an adventurous summer of field work, not realizing then that we would have those same opportunities for the following two summers as well.

The first two summers Jim was a masters student at Utah State, and the third season he had moved to Brigham Young University for his doctorate. That third season (1966) we were allowed to stray beyond the region boundaries to collect *Eriogonum* and *Castilleja* for our thesis studies.

The three years are described in more detail by Jim in *Memoirs of the New York Botanical Garden* (Reveal, 2013).

I was the designated leader of the expeditions, so the collection numbers were mine. I did all the driving, but we both had equal say in where we were to collect. It turned out to be the best division of labor, taking advantage of Jim's uncanny ability to spot interesting plants at highway speeds and my ability to negotiate the slower, but sometimes tricky, unmaintained, back roads.

We gathered 2,164 collections during the three years, 1,031 of them from Nevada. Among the 891 collections made in 1964, four

A mes was a botanical inspiration. I was honored to have taken him out in the southwestern deserts of the Navajo Indian Reservation. To share my Navajo botanical theories, Navajo classification, sacred Navajo botanical deities and the sacredness of the many uses of Eriogonums by the Navajo people. Sharing personal time with James has bettered my understanding and of this complex family of plants. To a friend, your life time's work and knowledge is blessed to very few as you have been. A blessing from the Holy People. Sacred herbal knowledge he was given and I miss him at that level.

Hagonee Shi Kiis, Arnold Clifford (field trip leader from the 2013 Eriogonum Society Meeting in Farmington, NM)

from Nevada became types for names new to science. The numbers in parentheses are my collection numbers: two buckwheats, *Eriogonum nutans* var. *glabratum* Reveal (1037) from west of Deeth and *E. holmgrenii* Reveal (1576) from the ridge above Johnson Lake in the Snake Range, *Geranium toquimense* N. H. & A. H. Holmgren (1518) from a cirque just below Jefferson Peak in the Toquimas, and *Cirsium eatonii* var. *viperinum* D. J. Keil (1588), not far from the Holmgren buckwheat locality in the Snake Range.

In 1965 our collections included the types for *Primula nevadensis* N. H. Holmgren (2216) from Mount Washington in the Snake Range and *P. capillaris* N. H. & A. H. Holmgren (2154) from the Ruby Mountains. In 1966 most of our collections were from out of state, but in Nevada our collections included types for *Castilleja salsuginosa* N. H. Holmgren (2764) from Monte Neva Hot Springs, *C. dissitiflora* N. H. Holmgren (2772) from the White Pine Range, *Eriogonum heermannii* var. *clokeyi* Reveal (2990) from the Spring Mountains, *Draba oreibata* var. *serpentina* Tiehm & P. K. Holmgren (2761) from the Snake Range, and *Potentilla holmgrenii* D. F. Murray & Elven (2818) from the Snake Range.

In 1967, while I remained in New York working on my dissertation, Jim spent eight days in early June collecting in southeastern Utah with Johnnie Gentry (Cronquist's new graduate student) and Gerrit Davidse (a master's student of my father). Beyond that, Jim was taking short trips collecting eriogonums, often assisted by his first wife (Caroline Grace Powell Reveal). The summer concluded with



a September trip into New Mexico and Texas with Gerrit Davidse.

Most of Jim's summer of 1968 was spent collecting on the Nevada Test Site for Dr. Janice C. Beatley (1919-1987), an ecologist working on the flora of that area. For eleven days in August 1968, I joined him, collecting in and around the Test Site. This time he did the driving and was owner of the collection numbers.

Eight of his collections became types, six of which he described himself: Eriogonum umbellatum var. vernum Reveal, near Yucca Flat (Reveal 1139); Townsendia jonesii var. tumulosa Reveal, Las Vegas Valley (Reveal 1326); Eriogonum cernuum Reveal, Timber Mountain (Reveal 1501); Machaeranthera ammophila Reveal, Ash Meadows (Reveal & N. H. Holmgren 1882); Grindelia fraxinopratensis Reveal, Ash Meadows (Reveal & N. H. Holmgren 1887), and Eriogonum microthecum var. lapidicola Reveal, South Belted Range (Reveal & N. H. Holmgren 1926); and two by other authors: Astragalus beatleyae Barneby, South Gold Flat (Reveal 1071); Penstemon pahutensis N. H. Holmgren, on Rainier Mesa (Reveal 1206).

JIM FINISHED ALL THE REQUIREMENTS for a Ph.D. in the spring of 1969. His thesis was a revision of the genus *Eriogonum*, consisting of 546 double-spaced pages, which represented a condensed version of an 1,800-page manuscript. Dr. Reveal had a job waiting for him as Assistant Professor at the University of Maryland, but before heading east he made a quick trip to southern Nye County to collect the type of *Eriogonum inflatum* var. *contiguum* Reveal (Reveal & M. E. Matthews 2157).

Promotions during his career at UM included Associate Professor in 1974 and full Professor in 1981. During his first few years he was able to concentrate his research on the first two volumes of *Intermountain Flora* and on his beloved *Eriogonum*. During a sabbatical in 1975-76, he spent six months working with his former major professor, Stanley L. Welsh (b. 1928), on the Utah Cruciferae (Brassicaceae).

Fieldwork during his University of Maryland years included *Eriogonum* hunting trips throughout the western United States and Mexico. Trips further afield include Panama (1979), the People's Republic of China (1981), and Nicaragua (1994), and, in retirement, a brief respite from *Eriogonum* collecting in the Eurasian country of Georgia (2005), where there are no eriogonums.

> **S** o sad to hear this news. Jim was truly a gentleman, and a scholar of tremendous breadth and depth. And of great courage too, for taking on Eriogonum (and relatives) as his life's work. His **contributions in areas** such as botanical nomenclature, botanical history, western North American floristics, plant conservation, and Angiosperm classification were no less profound.

Besides his **prolific published work**, he was an early, enthusiastic, and productive user of computer technology and the Internet in compiling and sharing his botanical knowledge. Start at **plantsystematics.org/reveal** and be prepared for long exploration! This web resource in itself is a priceless part of Jim's vast legacy that I hope will be preserved in perpetuity.

It was a privilege to have met and corresponded with Jim over the years. I will remember and miss his gentle soul. He rests forever among the greatest botanical minds of this century and the last. Though his career was long, he is gone much too soon and will be sorely missed.

Jim Morefield

(botanist for the Nevada Natural Heritage Program)



Jim (center with cowboy hat) at Sunday classroom at McGee Creek - 2011 Erigonum Society, California

During the 80's and early 90's his research focus changed to studying the colonial flora of Maryland (1680-1725), which involved travel to England, including a year and a half (1990-1992) residence in London as Visiting Research Fellow at the Natural History Museum, studying specimens of American plants named by Carl Linnaeus.

During the 90's he was doing research and writing about history of botanical explorations in the west and on validating supra-generic nomenclature. The latter work earned him the name *The Great Validator*.

He retired in 1999 from the University of Maryland with the title Professor Emeritus and moved to a country home near Montrose, Colorado, where he and second wife, C. Rose Broome (b. 1939), had a couple horses and a truck that would pull a horse trailer and sometimes a large fifth-wheel trailer. The two of them traveled widely throughout the west collecting *Eriogonum* species and camping in style with the comforts of their fifth-wheel trailer. Back in the 60's, Jim and I would dream about such comforts when for two summers we camped with a rickety, somewhat reinforced, plywood box, built to resemble a camper, anchored to the bed of the Intermountain Herbarium pickup truck. The trailer came in handy for one of his projects, which was following the path of the Lewis and Clark Expedition and collecting the plants observed by them. This resulted in the book *Lewis and Clark's Green World: the expedition and its plants*, co-authored with Earle A. Scott (Scott & Reveal, 2003).

Jim was a Research Associate at the Philadelphia Academy of Natural Science from 2001 to 2006, during which time he studied the collections of the Lewis and Clark expedition. Since 2003 he has been an Honorary Curator at the New York Botanical Garden, where he spent time doing library research and working on the Eriogonoideae for *Flora of North America* and Polygonaceae for *Intermountain Flora*.

In 2007 he and Rose opened yet another chapter in their lives, selling the Colorado farm and moving to Ithaca, New York, where he was an Adjunct Professor in Cornell University's Department of Plant Sciences and where he continued to work on *Eriogonum* and various other genera. He was a popular speaker. His CV lists more than 80 invited talks on a host of subjects in addition to *Eriogonum*, including biogeography, ecology, the Endangered Species Act, pre-Linnaean collectors in North America, and botany of the Lewis and Clark expedition.

ONE OF THE MANY REMARKABLE things about Jim is his voluminous list of publications, which exceeds 530 titles of scientific papers and books. Even before completing his doctoral degree, he had 36 publications in print or in press, the first ten of them in print before he had finished his masters degree.

Awards received include: Washington Academy of Sciences Outstanding Biologist for 1972 and again for 1978; the Edger T. Wherry Award from the North American Rock Garden Society in 2009; the Merritt Lyndon Fernald Award by the New England Botanical Club in 2009; the Outstanding Academic Book Award from the Association of College and Research Libraries for his 1992 book *Gentle Conquest: The botanical discovery of North America with illustrations from the Library of Congress* (Reveal 1992).

Jim was the mentor, leader, and inspiration of the Eriogonum Society. He was still actively working on various research projects in his office at Cornell University only two days before his sudden and untimely death on 9 January 2015. He was taken far too young. Rest in peace, Jim. We miss you.

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NATIVE PLANTS SHOWCASED AT WSU TRI-CITIES

THE WINE SCIENCE CENTER (WSC) at Washington State University Tri-Cities in Richland is proud to introduce the Indicator Garden, a newly added section that showcases sustainable horticultural practices in our arid environment. The exhibit, designed by Gretchen Graber, the university's Native Plant Greenhouse Manager, features native plants adapted to the soils, climate, and pests of the west. The ancient, symbiotic, mutually beneficial relationships these plants have with the area's insects makes them a natural choice for sustainably focused horticulture. Insects obtain nectar and pollen from flowers, as well as utilize the plants for food, protection, and egg laying. Some insect-plant relationships are exclusive, like the monarch butterfly and milkweed plant, and these will be highlighted in the garden though beautiful and informative interpretive signs along the paths.

The Indicator Garden is located along the Pioneer Path that connects the Wine Science Center to the Consolidated Information Center Building. The WSC was completed in November of 2014 and the garden will be finished this spring. Homeowners are encouraged to tour the garden to get ideas for landscaping their own gardens using responsibly sourced native plants that thrive with limited water, preserve the shrub-steppe habitat, and promote pride in conservation and the appreciation of the beauty of native plants.

The garden will also be used for instruction of ecological concepts such as adaptation and symbiosis in botany, biology, ecology, entomology, and horticulture courses. The recommendations of Dr. David James were key in selecting native plants for the garden based on their importance to native insect populations, particularly butterflies.

The garden is divided into several areas. One garden section will be a shrub-steppe section that gradually transforms from a wild shrubsteppe area to a more formal native landscape as you walk along the path. The more formal section will have shrub-steppe plants nestled in with drought tolerant herbs and ornamental cultivars of local native plants. Other features in the garden are a section will showcasing buckwheat species native to the Columbia Basin in southeastern Washington, and a master gardener section with raised beds. Specimens in the buckwheat section were chosen for a long range of bloom times, from March to October, making them a good garden choice and modeling diversity within a genus. Perhaps best of all, three lovely seating areas made from basalt columns in the generous shade of trees are situated along the path. From these areas you can peacefully take in the sights of our new garden. Gretchen Graber



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NATIVE PLANT GARDEN AT WSU SEEKING ERIOGONUM SEED DONATIONS

O UR LOCAL NATIVE NURSERIES have just five buckwheat species available. Please help us expand our offerings by donating seed. At left is a list of the species we would like to grow.

If you would like to donate seed from any of these buckwheat species, please contact Gretchen Graber, Native Plant Greenhouse Manager, Washington State University, 206-265-0430 or gretchen.graber@email.wsu.edu.

- E. compositum Heartleaf
- E. codium Umtanum desert buckwheat
- E. douglasii Douglas' buckwheat
- E. flavum Piper's buckwheat
- E. heracloides Creamy, desert buckwheat
- E. niveum Snow buckwheat
- E. ovafolium Cushion buckwheat
- E. sphaerocephalum Round-headed desert buckwheat
- E. strictum Strict desert buckwheat
- E. thymoides Thyme leaved buckwheat
- E. umbellatum (var. polyanthum) Sulfur flower buckwheat

My Favorite Eriogonum: Eriogonum Alleni

ALTHOUGH I COME FROM THE EAST COAST with no botanical training, I've become fascinated with the diverse species that comprise the Eriogonum family.

I was raised in north Wisconsin just below Lake Superior. There I loved the outdoors, fishing and swimming in the lakes and tramping through the north woods and swamps. As a child, I loved to find wildflowers and tried to learn their names. Since that time, I've lived in Maryland and I have explored the Northeast and Mid-Atlantic regions and have added hundreds of new species to my "life-list" of flowering plants.

I never heard of wild buckwheats nor saw one until my 1989 vacation when I crossed through the sand plains of Nebraska and found this strange, ungainly plant that keyed out to Eriogonum annum. As I continued into the Rockies of Colorado, I still remember the wonder of the golden yellow E. umbellatum. As I paged through the floras, I saw how many other species of wild buckwheats there were. I was fascinated. I had to learn more about them and find where they lived.

Back home in Maryland, our major flora, Fernald's Manual of Botany, listed just one species for the Northeastern US: Eriogonum alleni. It described its habitat occurring on "shaly slopes and barrens, local in West Virginia and Virginia." But I had no clue where I could find it growing.

During the 1990s, I monitored several Carolina Bay preserves for The Nature Conservancy (TNC) on Maryland's Eastern Shore. In its magazine, I learned that TNC acquired a new site on Slaty Mountain in Monroe County, West Virginia, with many shale barren species including Eriogonum alleni. When internet service reached my area, I was able to go to the TNC website and get directions to the preserve up in the Appalachian Mountains.

In late August 2000, I managed to clear three days on my calendar and headed down the Shenandoah Valley and camped out in George Washington National Forest. The next day I wound my way on county and Forest Service roads to Sweet Springs, WV. From there I followed the TNC directions and got lost. I eventually realized I had to loop into Virginia and then back into West Virginia to reach the preserve.

Finally arriving at the parking area, I spied a trail leading uphill and followed it eagerly toward "the best example of a shale barren on private property known in WV." The trail went up and down through the woods back to the road – no shale barren. I walked in frustration back toward the car. As I looked down slope, I shook my head over the mountain folk tradition of tossing garbage over the edge: bottles, used diapers, broken furniture. Rounding a curve, I spotted a bright yellow blossom some 30 feet down the cliff. I worked my way closer and smiled. An Allen's buckwheat was growing through the coils of a rusted bedspring. Carefully picking my way through the refuse, I continued further along the fractured shale, adding many more shale barren species to my life-list.

Once more a confirmation of what we've all learned: always make a large circular sweep through an area new to you. And don't step on the diapers.

Mike Hagebush, Maryland



Eriogonum caespitosum on the Sheldon Wildlife Refuge north of Reno, Nevada

Go To Samoa To Find Eriogonums!



Arcata Bay, 7 a.m.

DID YOU KNOW THERE ARE BUCKWHEATS growing in the sand dunes along the road leading to Samoa? That would be the Samoa in California, mind you. My husband and I were on an October trip to enjoy the redwood forests of coastal California. When we missed a turn, I caught a closer glimpse of some very low evergreen shrubs hugging the dunes along the road. The plants reminded me of *E. compositum*, the heartleaf buckwheat. This lovely species grows rampant in the Columbia Gorge with mostly cream-colored blossoms plus in eastern Washington, west-central Idaho, the Siskiyou Mountains of southern Oregon and northern California. There are three varieties with varying shades of yellow, from ochroleucous to very bright yellow. But something about the color didn't seem right.



Dunes near Samoa, CA with E. latifolium lower right

The northern California coast is a lovely place to visit. The weather is temperate, although it can be damp and windy in the spring and fall. There are many places to drive along the coast and inland bays to see wildfowl and elk. Many redwood forest areas were saved in the early 1900s, the best of which is the Redwood National Forest which has a 25 mile drive parallel to Highway 101, south of Crescent City. The other excellent area to see the Founder's Grove and many others is Humboldt State Redwood Park which begins as another parallel drive of about 20 miles, about 40 miles south of Eureka. This city has done an amazing job of saving and renovating its original center along the harbor. There are lovely homes and business buildings from the 1880s, with great shops and restaurants, plus a board walk along the waterfront with many sailboats moored there. It was certainly uncrowded during our visit in early October with good prices for lodging. The parks were likewise uncrowded, though not empty of sightseers.

We were going to Samoa for breakfast at the famous 'Cookhouse'. This tiny town was formerly a logging hub for shipping redwood logs in previous centuries. It is on a narrow spit of land that lies at the north end of the Humboldt Bay shipping basin, just above the Pacific Ocean, south of Arcata Bay and west of Eureka in northern California. There is a museum, school, and that neat old cookhouse where the crews were fed, with a large parking lot for tour buses. Its walls are lined with historic photos of amazingly-huge logs, some with horses standing on them, some with dozens of people lined up twenty feet in the air! The tragedy of the trees' demise takes your breath away as you marvel at their enormity.



Eriogonum latifolium Smith, pink, October 15, 2014 near Samoa

It was on our way to breakfast when we experienced our navigation failure and I spotted the dune denizens. Pulling to the side of the road, I jumped out with camera in hand and found one plant in full bloom with not yellow, but pink pompoms...this wasn't *E. compositum*! It was similar in size at 5-20 dm across and 2-7 dm high, sprawling across the stabilized dunes. Although the leaves were smaller than E. compositum at 2.5-5 cm, they were ovate and white-lanate to tawny-tomentose on both surfaces, just like heartleaf buckwheat. The flowers were congested pom-poms ranging from white, pink, and rose and. Each pom was 2-3 cm across, while the individual flowers were 3-3.5 mm and turbinate-shaped.

Thanks to the wonderful key written by Jim Reveal and provided on a flash drive to participants of the 2012 trip to Steens Mountain, I quickly realized the low, evergreen subshrubs I had found were *Eriogonum latifolium* Smith, the seaside buckwheat. Thank you, Jim!

E. latifolium blooms year-round and ranges from Curry County in southernmost coastal Oregon to as far south as Santa Cruz and Sonoma County. It is found on sandy coastal flats, sandy slopes, bluffs, mesas, and coastal scrubland. The species has a fascinating history with a 'who's who' of famous botanists involved. Jim was kind enough to fill me in from his research. Archibald Menzies of England took two trips to North America in 1784 and 1790. Stopping near San Francisco in 1792, he found this species as well as *E. parvifolium* Smith, the seacliff buck-wheat at Monterey Bay. He is likely more well-known for finding the Douglas-fir tree, *Pseudotsuga menziesii*, further to the north. Sadly, Menzies didn't get the cred-it for the buckwheats which instead went to Sir James Edward Smith of England, who wrote the descriptions in 1809.

These were the second and third species ever found for genus Eriogonum. The first one was *E. tomentosum* Michx. which grows in coastal South Carolina and Georgia. Andre Micheax (Michaud) of France, explorer and botanist, was given the honor for discovering E. parviflorum Michx, while traveling across the U.S. and Canada in 1786. He was asked to make an exploratory trip similar to that of Lewis and Clark a decade before their trip (1804-06) but politics interfered and he didn't make it. He bought 111 acress for a botanic garden in South Carolina, later dying in Madagascar of a fever in 1802.

Cultivation of the seaside buckwheat would be dictated by climate. Since this plant can bloom year-round, it is likely never dormant and so is susceptible to sub-freezing temperatures. It would also require a very well-drained, sandy soil. The northern California coast is very nearly sub-tropical and temps are moderated by coastal fogs and humidity, so searing sun and high temperatures would likely be damaging as well. By the same token, seeds will likely germinate easily with no cold-stratification necessary. If other society members have experience with growing this lovely subshrub, please share them on the website!

And next you're touring the coastal redwoods, keep one eye on the ground looking for the pink blooms of the seaside buckwheat.

Ginny Maffitt, Sherwood, Oregon



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At Craters of the Moon campground

SUNDAY EVENING JUNE 21, I pulled my dusty Subaru into an empty campsite at Craters of the Moon National Monument and Preserve. RVs clustered tightly together, leaving me a one steeply inclined site rising above lava rock seas. A limber pine spread its branches over this natural rock garden; it played wind lullabies as I fell asleep dreaming of giant-headed wasps, Chobani yogurt, waterfalls, and, of course, buckwheats. As morning dawned, patches of Mimulus nana, Penstemon deustus and Eriogonum umbellatum became visible in the black volcanic landscape. I hope you, too had a chance to botanize in the Monument before you drove home from the Eriogonum Society conference.

Our 2014 Twin Falls, Idaho conference packed so many standout experiences into a single weekend. The fact that this was to be our last conference with Jim Reveal makes it all the more special in retrospect. The Idaho Native Plant Society and conference chairs LaMar Orton and Steve Love shared some spectacular Great Basin scenery and choice eriogonums growing at South Hills and Mt. Bennett / Gooding City of Rocks. We were also treated to an evening in LaMar and Rosalie's Plantasia Cactus Gardens, a masterful example of how



Roger Rosentreter (left) and Don Mansfield



Jim Reveal



Karl Holte at Plantasia Cactus Garden



Steve Love



Cicada garden art



Hardy cactus at Plantasia Gardens

eriogonums and other natives can be used effectively in a brilliant yet un-thirsty home garden.

Some well-known Idaho botanists enhanced our field trips with their knowledge. Drs. Don Mansfield (College of Idaho), Karl Holte (Professor Emeritus, University of Idaho), lichenologist Roger Rosentreter (recently retired from the BLM), and botanist Ann DeBolt, who works at the Idaho Botanic Garden joined our group. You'll remember Roger as the guy who wore Stipa antennae in his cap and demonstrated the blood-like dye of Purshia tridentata berries by tattooing it on his arms.

Pat and Noel Holmgren (New York Botanic Garden, American Penstemon Society) joined their friend Jim Reveal on Sunday's South Hills field trip. Barbara Urter, affiliated with the Jepson Herbarium and now happily residing in Idaho, also escorted Jim on the South Hills trip. She was keen to see potentillas in the field, since they're a research focus for her.

THE CONFERENCE OPENED on Friday afternoon with Dr. James Reveal's lab, which has become a Society tradition. He was in great form, patiently reviewing the intricacies of stipe and involucre, peeling away layers of the eriogononum key, and wryly observing us as we tried to ID species he'd collected on the road. Always generous with his time and knowledge, Jim gave us an incredible tool for Idaho botanizing: a field guide of Idaho eriogonums, complete with color photos.

In a workshop on landscape-worthy eriogonums, Steve Love showed us some seed processing tools. Most ingenious is the chaff scraping pad he crafted from a car mat! Steve got his start as a potato breeder at the University of Idaho Research Center. He now researches native plant selections for home garden suitability. Plants go through two to three cycles of testing in the Aberdeen demo garden "to create a uniform 'best' program." Some of his recommendations include: *E. jamesii* var. *flavescens*, *E. arcuatum*, *E. ovalifolium* var. *purpureum*, *E.*



Wasp predating on Cirsium



Mountain Bluebird



Geranium viscosum



The Plant Posse heading into the South Hills



Wedemeyer's Admiral



Eriogonum thymoides



View looking down at the City of Rocks



Horned lizard



Philadelphus



Calochortus nutallii with pink flowers



Eriogonum umbellatum

ovalifolium var. compressum, E. caespitosum for its early flowering and dwarfness (multiples are required because this species is dioecious), E. brevicaule for a long blooming period, Eriogonum niveum for its height and multi-branching grace, and several forms of Eriogonum umbellatum var. umbellatum: var. ellipticum, var. dichrocephalum, var. porteri, and var. minus, which features lime-green foliage, a very prostrate habit and dark red buds and flowers.

See the last issue of the Society newsletter for **Steve's article on this same subject**.

A Friday evening reception at the Orton's Plantasia Cactus Gardens featuring Idaho baked potato buffet capped a wonderful first day. Hummingbirds whirred over the *Penstemon palmeri* and agastaches and grasses glowed in the evening's golden light.

WE SPENT THE WEEKEND in the field botanizing in the South Hills and north of Twin Falls to Mt. Bennett and Gooding City of Rocks.

In the low sagebrush stops in the South Hills we encountered not only *Eriogonum hercleoides* and *E. caespitosum* but also fascinating invertebrates: a giant-headed wasp predating on an unidentified insect on a Cirsium and an infestation of araga moths. Plant communities here are dominated by black sage in company with Sandberg's blue grass. We also saw populations of *Arabis bolii*, rayless eriogerons, commandra, *Zigadenus venenosus*, and *Allium acuminatum*.

The second stop brought us to the first eriogonums along with Lupinus arbustus, Castilleja linearis, Ipomopsis and Linum lewisii weaving its sky blue fLowers through the sagebrush. An aspen and cottonwood riparian area came into view as we climbed in elevation. *Montia linearis, Penstemon perpulchre, Penstemon rydbergii, Silene oreganum*, and *Iris missouriensis* were identified, as was a very wellbehaved form of *Geranium viscosum incisum* that Steve Love thought might be a good candidate for the University's native plant selection program. On the road back, we stopped at an outhouse surrounded by rolling meadows and vistas. Illiamna was growing behind the outhouse along with *Comandra umbellata pallida*. Montequita Love pointed out a mountain bluebird perched in a conifer. Idaho's state bird! We refreshed ourselves with a brief hike to a waterfall. A Wedemeyer's Admiral butterfly puddled on the gravel near our vehicles. Lepidopterist David Nunnally from Washington State identified it; we were lucky to have David and ornithologist Bud Widdowson along for field IDs.

Saturday evening, the Snake River Canyon and Perrine Coulee Falls provided dramatic backdrops for our banquet and brief annual meetings of both societies. A local agency geologist acquainted us with what the surrounding site looked like 13,000 to 15,000 years ago when the Bonneville Flood carved the Snake River Canyon. Originating with snow melt overfLow in Lake Bonneville, the rush of fLood water across prehistoric central Idaho continued for a week, geologists say.

Our Sunday field trip north to Mt. Bennett ended on a desolate-looking dusty road where choice *E. thymoides, E. caespitosum, E. umbellatum* and *E. ovalifolium* were cradled in rock outcroppings. *Lomatium nudicalum, Rosa woodsii, Draba douglasii,* and *Phoenicaulis* were also in evidence. Salmon-colored *Orobanche* and *Astragalus purshii* grow there as well.

We reached Gooding City of Rocks just in time to eat lunch overlooking its hoodoos and other haunting sculptures carved by wind and water.

Hiking down into the canyon brought us into a mixture of trickling stream beds and rock gardens. Was it a canyon wren or rock wren we heard? Napping nighthawks were oblivious to the horticultural hordes storming the canyon. Orange-blossom fragrance wafted from Philadelphus lewisii cascading down clefts in the rock. It attracted numerous butterflies, including swallowtails. In the canyon we



Shoshone Falls

found Scutellaria, Eriogonum heracleoides and E. caespitosum, and a tiny Trifolium monanthum.

Heading down the road to Wendell, we were still hungry for plants! A drying clay meadow lured us – vehicles pulled over one by one as our group called out 'What did you find?' The answer was a seeming cattle-browsed wasteland full of ephemeral spring magic. Blooming amidst the *Artemisia arbuscula* subsp. *Longiloba* was a large population of *Calochortus nuttallii*. Sharp-eyed Billy Hoyer, Janel Johnson and Kim Williams found some plants with light pink instead of white flowers. Our group gathered one last time for a Sunday evening picnic at Shoshone Falls. I departed with a wish that all I learned from you in the field would stick with me until we meet again and refresh our memories! I also put Idaho on my botany bucket list for further exploration, especially of the Sawtooths. Perhaps we should aim for a week-long conference sometime in the future?

Until we meet in Reno!

Kathy Pyle

SUBMISSIONS TO THE NEWSLETTER

PLEASE CONTRIBUTE TO YOUR newsletter! Send us your *Eriogonum* articles, essays, photos, and field trip notes. Share your discoveries and voyages with your fellow members! Email your contributions to our newsletter editor at **president@nvnps.org**.

MEMBERSHIP

SINCE OUR FIRST SERIOUS discussion of starting an Eriogonum society, which occurred at the Ely Annual Meeting of the American Penstemon Society, June 2008, 266 entities have been registered as members of the Eriogonum Society. I refer to them as entities because a "member" could be either a single person, or couple. Couples do not need to enroll separately.

Our membership is slowly and steadily growing. We do see surges when our annual meeting occurs in an especially attractive venue or at an opportune time.

There have been a few complimentary memberships offered , which originally were given only for the year in which the comped member was a volunteer, but we have become more generous and extended those memberships to two years.

Of the 266 registered memberships, 124 have lapsed, leaving us with a current membership of 142. Currently there are 21 "entities" with life memberships. Hopefully, 2015 will be a big re-registration year as there are 51 members due for renewal. All parties facing expiration will be sent two to three reminders by this spring, the first having been sent out in December 2014. Any member may call, email, or write me if they are concerned that their membership is due to expire.

Our annual meetings provide a wonderful opportunity not only to explore regional *Eriogonum* populations, but to meet fellow members, catch up on the latest *Eriogonum* news, and participate in workshops and seminars. Our next meeting will be held in Reno, Nevada, July 24th through the 27th. Membership dues include qualification to register for our annual meetings, as well as an on-line newsletter, annual seed exchange, and access to the members' section of our website.

Dues run on a calendar basis, renewed at the first of each year.

- Member \$10 for 1 year, \$20 for 3 years
- Student \$5
- Lifetime Member \$150 one-time fee

You may pay either by check or by PayPal on our website at **eriogonum.org**. **Please do not send cash**.

Make checks payable to Eriogonum Society. Mail your check along with your **name**, **address**, **phone number**, and **email address** to:

Bob Pennington, Membership

1409 Agua Fria, Santa Fe, NM 87505-0907 (505) 603-9187 **aguafrianr@aol.com**

Please notify us of any changes in your contact information. Thank you for your enthusiastic support of the Society!

We do not sell, share, or distribute member data in any manner.

2013-14 SEED EXCHANGE REPORT

THE EXCHANGE RECEIVED 18 orders for a total of \$227.45; only one of the orders was from outside of the United States. After subtracting postage expense, the net income for this year's Exchange was \$175.74, which I've forwarded to Randy for deposit into the Eriogonum Society's account. Other than postage, there were no other expenses incurred for this year's Exchange.

I've really enjoyed running the Exchange for the past three years, but I think the time has come for me to pass on the responsibility for the Exchange to someone else. I want to thank everyone who has helped me with running the Seed Exchange over the past few years and I will do my best to manage a smooth transition of the program to the hands of Jim Swayne, out new Seed Exchange manager.

Ray Fletcher

THE SEED EXCHANGE

SEED WILL BE ACCEPTED whenever you can get it in the mail, any time of year. Please clearly label the donation with the species name, where it was collected, elevation, and anything special or unusual about the donation.

Please clean whatever seed you contribute if possible. If you can't for whatever reason, I will satisfy myself that there is seed present and will send it out as received.

Send your seed requests to:

Jim Swayne 4009 Old Milton Hwy Walla Walla, WA 99362

Seed lists will be mailed to all members. Orders will be filled on a first come first served basis.

I was asked to say something about seed cleaning. After many years of dealing with native plant seed I have concluded that the less you do the better. Prepare a growing site by removing weeds, but do not rototill or do anything that will bring deep buried weed seeds to the surface. Simply scatter the seed, mixed with some sand if the seed is not numerous or is small, lightly rake it in, water if weather dictates a need, and start a period of watchful waiting.

After harvesting the seed, use your fingers or a sieve to remove debris. Abrade the material that is left on the sieve screen or use fine sandpaper to loosen the non-seed material. Use a se-ries of graded screens to segregate the seed from both the heavy and fine trash. Additional steps include:

- Pour the seed along the top of a flannel covered inclined plane. The heavier seed should go to the bottom while the chaff adheres to the flannel.
- Use a fan on low speed or your breath to gently blow away any unwanted material.

Jim Swayne

ERIOGONUM SOCIETY SUMMARY BALANCE SHEET

As of February 11, 2015

Assets	
Current Assets	
Checking	\$9,032.28
Savings	\$4703.43
PayPal	\$148.35
Total Assets	\$13,884.06
Equity	\$13,884.06
TOTAL EQUITY	\$13,884.06