

Al and Betty Schneider Discover Two New Plant Species in SW Colorado

In 2008 plant enthusiasts and CoNPS life members Al and Betty Schneider discovered two new plant species. It is not often that someone gets a chance to find two new species, and even less common that neither are trained botanists. The new species, *Packera mancosana* and *Ipomopsis ramosa* were found in Lone Mesa State Park, a 11,760-acre state park located 23 miles north of the town of Dolores. Lone Mesa is a new state park which is not yet opened to the public.

In the spring of 2008 Al and Betty volunteered to compile a list of flora for the Park before it opened. Even though neither is a trained botanist, years of looking at and loving native plants have made them a skilled team. Al was a college English professor for 18 years, but his love of the outdoors and plants, hiking trails, and photography led him in 1981 to set up a back packing and hiking company outside of Washington DC, a company that he ran for eight years. Earlier, from 1978-1980 Al was the original designer of the 600 mile Ozark Trail from St. Louis into eastern Oklahoma. In 1990 he moved to Colorado and after a summer guiding tourists at Mesa Verde he headed up a computer based education program for seven years for the Ute Mountain Ute Indian Tribe in southwest Colorado, where he and Betty live today.

Al and Betty had met briefly several times in their home town of St. Louis and then met again and married in 1997. At that time Betty was a complete native plant novice. Her botanical experience included being a special education teacher and paramedic fire fighter. Al tells the story (not verified by Betty) of one of their first plant walks together in the Painted Desert badlands at Petrified Forest National Park in Arizona.

Al said that they started walking along and Betty said, “What is that plant?”.

“That’s rabbitbrush”, Al replied.

A while later Betty said, “What is that plant?”.

Al replied, “That’s rabbitbrush too.”

And again later on, “What is that plant?”.

“Rabbitbrush”.

“Oh!”

As they neared their car at the end of the walk Betty pointed to a shrub, “Don’t tell me. That’s the plant we have seen so many times today. That’s.... Don’t tell me. That’s.... I know. That’s bunny-bush!”

Al and Betty like to tell this story so that people just beginning their love of wildflowers know that we all started small and we all made funny mistakes. That’s learning.

With a beginning like the bunny-bush, one might be surprised to find that it was, in fact, not Al, but Betty who actually saw *Packera mancosana* (Mancos Shale Packera) first in Lone Mesa State Park in the summer of 2008.



Packera wernerifolia

Photo: Al Schneider,

<http://www.swcoloradowildflowers.com>

“Betty isn’t one for going through the often laborious process of keying plants to learn their identity. But she loves to find plants in the field, she is much better at finding unusual plants in the field than I am, and she

knows if it isn't something we have seen before.” Al explains further: “When she sees something new, she stands near the plant with a certain look on her face. When this happens I know that it is time for me to get myself over there and pull out Weber.” (Al told me that Weber’s Colorado Flora: Western Slope is in his pants pocket on every hike. Al jokes that he asked Weber to please keep the new edition of Colorado Flora the right size for the pocket.)

In the summer of 2008 while compiling a plant list in the southern part of Lone Mesa State Park, Betty “got the look”. Al got out Weber and keyed the plant to *Packera werneriiifolia*. But *Packera werneriiifolia* was described as growing on rocky alpine and sub-alpine ridges, and they were on somewhat barren Mancos shale at 7,600 feet. And in addition to that, the plant did not quite fit the description.



Ipomopsis ramosa
Photo: Al Schneider

<http://www.swcoloradowildflowers.com>

They collected some specimens and took them to some

well-known botanists. But those botanists keyed them to the same species and said that this was not a new species. Winter came.

The next summer they went back to the *Packera*, but this time they brought Loraine Yeatts, also not a trained botanist, but through years of experience a highly skilled native plant expert [see footnote].

They took Loraine to the *Packera* population and as she said, “I suspected right away it was something new.” They collected several plants and dissected them to identify every characteristic. Then they went to Guy Neesom an aster specialist in Fort Worth, Texas. Guy told them that it was really important to describe the plant and submit it to a journal for peer review. So with the help of Guy, Al and Loraine scrupulously described every aspect of the plant, comparing its characteristics with morphologically similar *Packeras* proving that it was unique.

The description was reviewed by several expert botanists and then was published in the on-line publication, Phytoneuron on June 3, 2011.

The other plant that Al and Betty found together is *Ipomopsis ramosa* (Coral Ipomopsis) which they found in 2006 in a side canyon along the Dolores River. Al and Betty had driven this road scores of times over the years on their way to hikes along the Colorado Trail. But in 2006, as they were driving along, this rather unobtrusive but lovely plant caught their eye.

They got out of the car and went over to see what it was. It was gorgeous, but they were unable to identify it using several different botanical keys. Again they took specimens and sent them to several prominent botanists. And again, they were told it was just another well-known species, this time an *Ipomopsis*.

Over the years, they visited this lovely plant again and again, noting the extent of the population and its characteristics. Al was never convinced that it wasn't something new, so in 2011, he decided to settle the question. He collected the plant and tore it apart to identify every characteristic, again comparing it with every known *Ipomopsis* species in the area. No other species was identical or even very close to it so he

shared his description with his old botany buddy John Bregar and once again with Guy Nesom. They all agreed that they should write a very detailed and convincing description and publish it as a new species.

They sent the description to two experts in the Polemoniaceae (Phlox) family, and they both agreed that Al and Betty had found another new species. The description was published in Phytoneuron on September 14, 2011.

(You can read more about these two new species (and *Gutierrezia elegans*, a third species that Al discovered) on Al's web site: www.swcoloradowildflowers.com .)



Gutierrezia elegans

Photo: Al Schneider

<http://www.swcoloradowildflowers.com>

Footnote: Loraine Yeatts' story:

Although Loraine Yeatts is currently one of the “go-to” people at the Denver Botanic Gardens Herbarium for plant identification, and has published an excellent plant key called “The Alpine Flower Finder”, she is not a trained botanist. She is actually a physicist with a love of photography. She moved to Colorado in 1964. “At that time I didn't know anything about native plants except what grew in my garden,” she says.

Soon after arriving, she volunteered at the

Denver Botanic Gardens, working with Dr. Helen Zeiner who was the (volunteer) head of the herbarium at the time. Dr. E. H. Brunquist, a retired physician and amateur botanist, and Helen organized plant walks on a regular basis and Loraine went on all of them. Encouraged by Dr. Brunquist to photograph plants for use by the Denver Museum of Natural History gave her incentive to study and learn about Colorado's native plants. Soon her passion shifted from photography to botany.

Soon Helen gave her the task of collecting stems of blooming native plants each week that she found in locations near Denver. She arranged the stems in vases of water, labeled them for an educational display and put them in a glass case which is still in the lobby at the Denver Botanic Gardens. “Through that project I learned so much about the local flowers”, Loraine says.

In 1987 she became principle investigator for a plant inventory of Rocky Mountain National Park, conducted by herbarium volunteers and staff over a period of 8 years. “That is where I really became knowledgeable about the identification of our native flora”, she says.