



Plant Hunting for *Aliciella (Gilia) sedifolia*, the stonecrop gilia

by Tim Hogan, Collections Manager, Botany



Aliciella habitat

In early July of 2007, Tim Hogan of the University of Colorado Herbarium and Luke Tembrock, a former student employee now working at the Denver Botanical Gardens, spent a week of fine weather in the San Juan Mountains, searching for the very rare stonecrop gilia (*Aliciella sedifolia*).

Stonecrop gilia is an alpine endemic, known from only two sites in the San Juans of southwestern Colorado. In 1892, C. A. Purpus collected the species in at an uncertain type locality. (The “type locality” is the site from where a species is first described). This Holotype (or first described specimen) is held at the University of California, Berkeley Herbarium (UC). In the case of *Aliciella sedifolia*, there is limited information on the original historical label, and its exact location has been a mystery for over a hundred years. It was not seen again until the species was “rediscovered” in 1995 on Half Peak, about five air miles from the suspected type locality by Sue Komarek, a botanist from southwestern Colorado.

Luke and I spent the first day of our trip in an alpine basin southeast of Silverton, making general collections for the herbarium and familiarizing ourselves with the lovely San Juan flora. Lush carpets of paintbrush, penstemons, and many other wildflowers delighted us as we cataloged our finds. The next day we traversed a 12,000’ ridge above the basin, looking intently for our quarry. We didn’t come upon the fine gravel habitat in which Komarek had discovered her plants, and by early afternoon found ourselves ascending loose gravel up a 13,000’ peak. When we topped out and observed the flat summit plateau with – yes – fine gravels, our hopes rose. After ten minutes of searching, a striking blue plant emerged from the pea-sized gravels, and a plant “lost” for 115 years had been found!

With an afternoon storm appearing to gather, we continued to search, finding the uncommon alpine poppy (*Papaver kluanense*) and wandering fleabane (*Erigeron vagus*), but only a few more of the stone crop gilia. Thunder and the threat of lightning drove us down, although in the end it never amounted to much.

The next day we headed directly up our mountain, and over the course of an hour we found 14 more individuals within about 100 meters of our initial find (for a total of seventeen). Having documented (with photos and one specimen) the occurrence of *Aliciella sedifolia* at its type locality for the first time in over a century, we decided to devote the rest of the day to searching the ridgeline and flat summit of another 13,000’ peak about one mile away. Despite the promising topography, we never found the flat-lying, fine-gravel substrate the stone crop gilia seems to prefer. After an hour or more on the other summit, we descended from the saddle between the two Thirteeners, and traversed back to our truck across the alpine basin we had become acquainted with over the past three days.





The following day we drove from our camp in San Juan County, and set up our tents about ten miles above Lake City, in Hinsdale County. The next day we climbed the six miles and four thousand vertical feet of Half Peak, relocating the site where Komarek collected her specimens and where she noted “about one thousand plants present” on the broad south face “just before [the] hogback leading to the summit” at 13,400’. We found a similar number of individuals and, as previously, we documented our find with photographs and specimens.

This documentation is an essential responsibility of natural history museums and herbaria. Collecting a voucher specimen provides tangible, objective evidence of a particular plant or animal at a specific time and place. It has been said that, “without a voucher, it is only hearsay.” Our understanding of the distribution and abundance of life forms on this little known planet – the earth’s biodiversity – is based on the worldwide holdings in natural history museums and herbaria. These holdings come from the labors of many generations reaching back hundreds of years, and are, in a very real sense, our culture’s way of preserving the stories of our natural heritage.

Looking across the country from the two sites where we found *Aliciella sedifolia*, it was impossible not to imagine suitable habitat on the surrounding mountains where the species might be growing. Surely, there must be more flat-lying areas, with the pea sized gravels similar to where we found our plants! Curiously, during the week prior to our visit, Elaine and Dave Hill from Boulder, CO, spent several days camped at an alpine lake, climbing Half Peak and other mountains in the area with two friends. Elaine has a keen eye for plants, and recognized the stone crop gilia as something unusual and of special concern. Half Peak was the first mountain they climbed, and over the next few days Dave, Elaine, and their friends kept an eye out for the plant and its habitat. They did not see any more of the gilia, and in looking at maps with them later, they only identified one site where the micro-habitat appeared similar to the population on Half Peak. So perhaps there is less of the specific habitat than one might imagine.

Finally, it is worth noting that Half Peak is among the one hundred highest Thirteeners in Colorado, and climbing these “Centennials” is a goal for many of the avid climbers in the state. At least a half dozen people had climbed Half Peak in the week prior to our visit according to the summit register, and tracks were clearly evident in the site where we found the stone crop gilia. An additional threat to the species may be sheep grazing. Large allotments are open to grazing in the basin below the type locality and in the vicinity of Half Peak, and while the specific sites where we found the plant would probably not be attractive to sheep, it is impossible to say how many unknown populations might be wiped out without our ever knowing of their existence.

From Half Peak, we were chased down earlier than we wanted by thunder and lightning. Nevertheless, there was a certain spring to our step as we walked out through the soft hail and rain – happy to have spent some time getting to know one of Colorado’s rarest alpine plants. The next day we drove back to the Front Range beneath overcast skies.



Aliciella

Photos: Luke Tembrock

