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Josephine Skehan and the Mountains Near Gray

Eugene Jercinovic

P.O. Box 246 Torreón, NM 87061

Many areas of New Mexico were initially botanized by naturalists in the company of contingents of armed soldiers or in large trading caravans. Some intrepid collectors braved unknown territory and harsh conditions in lonely solitude. However, very few women had any part in plant collection prior to the dawn of the twentieth century. This is the tale of one. The story ends in the Capitan Mountains, but, as is not uncommon in the botanical history of this state, the story begins east of the Mississippi River in the middle of the nineteenth century with four men.

Parker Earle (1831-1917)

Parker Earle was born in Mt. Holly, Vermont on the 8th of August, 1831. As a young man he developed an interest in horticulture, becoming associated with Charles Mason Hovey, a seeds man and nursery man in Boston. Hovey founded the American Gardener's Magazine (later the Magazine of Horticulture) which he edited for 34 years. Hovey served as president of the Massachusetts Horticulture Society for four years. Hovey was also the first notable American breeder of strawberries. It was undoubtedly Hovey who got Parker Earle started in raising strawberries.

By the mid-1850's Parker had moved to Dwight, Illinois where in 1855 he married Melanie Tracy. The couple produced three children, Franklin Sumner Earle, Charles Theodore Earle and Mary Tracy Earle. The family relocated to southern Illinois in the Cobden-Anna area (Union County) where Parker developed orchards and extensive vegetable gardens, in which he put his expertise in strawberries into practice. After the Civil War, Parker developed a new method of transporting fruit by using insulated wooden crates with ice in the bottom which allowed him to ship his strawberries by rail to Chicago, where they sold for $2 per quart, a princely sum at the time.

By the mid-1870's Parker had become a noted horticulturalist. He was a horticultural judge at the 1876 Philadelphia Centennial Exposition. In 1880 he was named the first president of the newly formed Mississippi Valley Horticultural Society (now the American Horticultural Society). In 1884 he was selected as horticultural director of the World Industrial and Cotton Centennial Exposition in New Orleans. While in Louisiana, Parker visited and fell in love with southern Mississippi, particularly the area around Ocean Springs.

Around 1886 the Winter Park Land Improvement and Livestock Company was formed with Parker as president. He and his two sons owned 97% of the stock. By the end of 1887, the company had invested in 15,000 acres of land in the vicinity of Ocean Springs in Jackson County, Mississippi, most of which was pine forest. Parker left Illinois and built a home in Mississippi. His sons also set down roots there. In 1889 Parker's wife died in Ocean Springs. In 1890 he married Agnes Cook in Mt. Holly and then returned to Mississippi and resumed his horticultural pursuits, cultivating tomatoes, peaches and grapes on 80 acres. However, on October 1, 1893, Parker's bucolic dreams were shattered as a category 4 hurricane with sustained winds of 135 mph ripped across southeastern Louisiana and southern Mississippi. Two thousand people were killed. Parker once again pulled up stakes and moved to the New Mexico Territory.

Samuel Mills Tracy (1847 - 1920)

Samuel Mills Tracy was born in Hartford, Vermont on April 30, 1847. In 1863, the family moved to Illinois, near Bloomington. After moving to Platteville, Wisconsin in 1864, Tracy joined the Union Army in the 41st Regiment Wisconsin Volunteers. After the Civil War, he entered Michigan Agricultural College (now Michigan State University), receiving a B.S. in 1868 and an M.S. in 1871. After graduation he developed an interest in commercial horticulture and even became secretary of the Mississippi Valley Horticultural Society. In the 1870's he served as editor of the *Practical Farmer*. In 1877, he became Professor of Botany at the University of Missouri. He served as Secretary of the State Horticultural Society of Missouri

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Botanice est Scientia Naturalis quae Vegetabilium cognitiorem tradit.

— Linnaeus

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from 1881 to 1882 and as President from 1883 to 1884. Certainly he met and became a friend of Parker Earle during this period. In 1886 he published the first Flora of Missouri. In 1887 he was selected as the first Director of the Mississippi Experiment Station. In June 1887, before assuming the position, he made a trip to Raton New Mexico to collect fungi. He retired in 1897 and enjoyed the Mississippi environment enough to live in Laurel until his death in 1920. In his later life, he specialized in grasses. He donated his collections to the Agricultural College of Texas (now Texas A&M). This formed the core of the S.M. Tracy Herbarium (TAES), the third largest herbarium in Texas with over 200,000 specimens, over 70,000 in grasses.

Charles Fuller Baker (1872 – 1929)

Charles Fuller Baker was born on March 22, 1872 in Lansing, Michigan. He, like S.M. Tracy, attended Michigan Agricultural College. After completing his studies, he became the assistant to Clarence Preston Gillette at Colorado Agricultural College (now Colorado State University). Here he pursued his interests in entomology and botany. He began collecting specimens and publishing. Together with Gillette, he published *A Preliminary List of the Hemiptera of Colorado*, a summary of the true bugs of the state. In 1893, he was chosen to present the forestry and zoology of Colorado at the Columbian Exposition of Chicago (The Chicago World's Fair) to celebrate the 400th anniversary of the arrival of Columbus to the New World. In 1897, Baker left Colorado and accepted a position at the Alabama Polytechnic Institute (now Auburn University), where he remained until 1899. Between 1899 and 1901 he taught biology at a High School in St. Louis. Moving to California in 1901, he attended Stanford University, obtaining an M.S. under Albert Kellogg in 1903. During this time he became associated with the growing group of California botanists who believed that western American plants should be described by western botanists and began sending his specimens to Edward Lee Greene in Berkeley for determination. Baker then accepted a position at Pomona College, but only remained for one year before becoming director of botany at the Estación Agronómica at Santiago de Las Vegas in Cuba, serving until 1907. The well-travelled Baker then moved to Brazil, where he accepted a position at the herbarium and botanical garden at the Emilio Goeldi Museum in Belem where he spent one year, also collecting extensively in the surrounding area. In 1908 he returned to Pomona College where he remained until 1913 when he moved to the Philippines to become professor of agronomy at the University of Manila. He remained outside the United States until his death in 1927. His extensive insect collection is housed at the Museum of Natural History, his herbarium of U.S. plants at Pomona, and his herbarium of plants collected around the Pacific Ocean at the University of the Philippines.

Franklin Sumner Earle (1856-1929)

Parker's son, Franklin Sumner Earle, was born on the 4th of September, 1856, in Dwight, Illinois. He spent the majority of his youth at the Earle farm in southern Illinois. He attended the University of Illinois sporadically in the 1880's, but did not earn a degree. He studied with Thomas J. Burrill, a mycologist, who founded the herbarium at the University of Illinois and who, in 1895 would travel to Mississippi to work on fungi with S.M. Tracy. At the Mississippi Valley Horticultural Society meeting in New Orleans in 1885, Franklin read a paper on the white rust and other diseases of strawberry. In 1887, he co-authored a paper with Burrill, *Parasitic Fungi of Illinois: Part II. Erysipheae*, which established his reputation in mycology. Franklin also shared his father's interest in horticulture. The Earle fruit and vegetable operations in Cobden led to a friendship between their family and that of William Skehan, his wife Esther and their five daughters. Franklin married the oldest Skehan daughter, Susan Bedford Skehan, on August 11, 1886 in Cobden. The couple produced a son, William Parker Earle, born in Cobden in 1887 and two daughters, Melanie Tracy Earle, born in 1889 in Ocean Springs, Mississippi, and Ruth Esther Earle, born in 1891 in Ocean Springs. Tragically, Susan died in Ocean Springs shortly after the birth of Ruth. During this difficult period, Franklin became associated with the Mississippi Experiment Station and in 1892 became superintendent serving until 1895, and developed a friendship with Samuel Mills Tracy.

Franklin's mycological professionalism was recognized. In 1895-96, he served as assistant pathologist for the USDA collection at the U.S. National Herbarium. From 1896 to 1900 he served as biologist and horticulturalist at the Alabama Agricultural Experiment Station and was awarded an honorary M.S. by the Alabama Polytechnic Institute. When Charles Fuller Baker arrived in 1897, Franklin suddenly had another scientific colleague and friend. The two collected extensively around Auburn, Alabama in the summer of 1897. In 1901, Franklin became an associate with the New York Botanical Garden for three years as assistant curator of mycological collections, even publishing *The Genera of North American Gill Fungi*. In 1904 Franklin accepted the position of director of the Estación Agronómica at Santiago de Las Vegas , reestablishing contact there with his old friend C.F. Baker. He established a farm at Herradura and cultivated fruit. He remained in Cuba for the rest of his life, functioning as a business consultant, as president of the Cuba Fruit Exchange, and becoming a USDA investigator in the sugar cane industry. A year before his death in 1929 he published *Sugar Cane and Its Culture*.

New Mexico

After Susan's death in 1891, Franklin was left with three young children and a busy life. His connection with the Skehan family became a godsend. Susan's sisters Esther Jane (1867-1948) and Josephine (*ca.*1871-?) continued their involvement with Franklin in Ocean Springs, becoming part of Parker and Agnes Earle's extended family, which also included Franklin's brother Charles and his wife, Cora. In 1893, Parker and Agnes set up their new life in the New Mexico Territory, settling in Roswell. Esther and Josephine continued to help in Mississippi. Both Esther and Josephine were interested in plants. During 1895, doubtless under the tutelage of Franklin, Josephine began collecting plants. She made 8 collections in Ocean Springs in the spring and summer. Her first specimen, labeled as #1, was the moss *Ditrichum pallidum* collected on March 26, 1895, followed by 7 *sine numero* (s.n.) collections. Josephine had much more to contribute three years later. On August 12, 1896 Franklin married Esther Jane in Cobden, Illinois. Esther contributed significantly to Franklin's natural history pursuits. She became a co-collector with him and a notable botanical artist, making illustrations for Franklin's later studies of Caribbean fungi which are now part of the William A. Murrill collection at the New York Botanical Garden.

With grandfather Parker ensconced in the wilds of the New Mexico Territory, it seems inevitable that Franklin might become interested in the botanical exploration of the west. The opportunity arose when S.M. Tracy retired in 1897. Since Tracy had visited Raton a decade earlier and C.F. Baker had considerable experience in Colorado, the three botanical amigos decided to make a trip to Colorado in the summer of 1898. Baker, Earle, and Tracy botanized in the vicinity of Durango and Mancos and in the La Plata Mountains, making extensive collections in June and July. They made these collections available for sale in the United States and overseas. The UC and Jepson herbaria show five sheets in their types database from these Colorado collections.

The Colorado expedition provided a chance for the rest of the Earle family to make an extended visit with Parker and Agnes in Roswell. In August of 1897, the ever opportunistic Parker had filed a mining claim in the Nogal Canyon area of the Capitan Mountains. The nearest settlement was the village of Gray (now called Capitan) which was about 70

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miles from Roswell. Gray was to be the center of activity for the spring and summer of 1898. The Earle family arrived in early April. Josephine came along on the trip apparently committed to collecting plants. Her first New Mexico specimen was gathered on the 10th of April "near Gray". On April 15 she made two collections in Roswell, and on April 18, another (see listing at end). She continued to collect at an average rate of 6 plants per week from April until the 6th of September. Review of the 92 available sheets from her next 114 specimens show that all were gathered at Gray, near Gray, or at Nogal, less than 10 miles from Gray.

The highest specimen number found in the course of this study was 118 with 7 additional s.n. specimens. 103 of the 125 specimens were located. Josephine's collections are remarkable, spanning 35 families and 90 genera in only 103 sheets. More than a century later it is virtually impossible to assess how her association with S.M. Tracy, F.S. Earle, and C.F. Baker might have influenced what she collected and what was retained. Grass specimens were determined by Frank Lawson Scribner at the USDA. The vast majority of other specimens were determined by Edward Lee Greene, who was then at the University of California at Berkeley. Specimens and duplicates were distributed to at least 10 herbaria. Tracy, Earle, and Baker clearly were involved.

Josephine's work not only helped define the plants of a mountain range of New Mexico, but also affected the circumscription of botany in all of the United States. Five specimens were particularly important because of their designation as a **holotype** (the one collection which is permanently attached to a name), an **isotype** (a collection believed to be a duplicate of the holotype), a **syntype** (a specimen used by an author when no holotype was designated), or a **lectotype** (a specimen selected to serve as a type if a holotype was not designated at publication or if the holotype is missing).

#	Specimen	Designation	Herbarium(a)
78	*Gutierrezia sarothrae*	syntype	NY
78	*Gutierrezia sarothrae*	isotype	COLO, NY, US
79	*Argemone squarrosa*	isotype	NY, UC
79	*Argemone squarrosa*	lectotype	US
89	*Physaria valida*	isotype	NY, US
108	*Ambrosia confertiflora*	holotype	NY
108	*Ambrosia confertiflora*	isotype	NY, US
112	*Oxalis caerulea*	holotype	NY
112	*Oxalis caerulea*	isotype	US

COLO University of Colorado
UC University of California at Berkeley
NY New York Botanical Garden
US U.S National Herbarium, Smithsonian Institution

Very little is known about Josephine's life. Without question, her place in botanical history is connected to the Earle family and to the colleagues of Franklin and Parker, but it was Josephine walking the woods and fields of the area around Gray. It was her interest, intelligence and tenacity that produced the first significant collections in the Capitans. To this day, the Capitan Mountains are not thoroughly known botanically. They are curious geologically. More work needs to be done. It is interesting to note that in 2006 Patrick J. Alexander, a graduate student at New Mexico State University, came upon an alumroot (genus *Heuchera*) new to science, while exploring in the Capitans, not that far from Gray.

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Online Resources

Family histories http://www.familysearch.org

Baker, C.F. http://siarchives.si.edu/findingaids/FARU7113.htm
http://fr.wikipedia.org/wiki/Charles_Fuller_Baker

Earle, F.S. http://sciweb.nybg.org/Science2/libr/finding_guide/earlwb2.asp

Earle, Parker http://www.oceanspringsarchives.com (The Rose-Money Farm)

Hovey, C.M. http://www.nal.usda.gov/pgdic/Strawberry/book/boktwel.htm

Tracey, S.M. http://www.csdl.tamu.edu/FLORA/taes/tracy/TRACYNF.htm

Virtual Herbarium UC http://ucjeps.berkeley.edu/db/types/types_table.html

Virtual Herbarium COLO http://cumuseum.colorado.edu/Research/Botany/Databases/typeSpecimens.pdf

Virtual Herbarium NY http://sciweb.nybg.org/science2/hcol/allvasc/index.asp

Virtual Herbarium US http://acsmith.si.edu/emuwebbotweb/pages/nmnh/bot/Query.php

Other Resources

Herbaria and data bases: NMC, NMCR, UNM

Karen Mills, Historical Records Clerk. Lincoln County Records. Lincoln County Courthouse. Carrizozo, NM

(Continued on page 4, Skehan)

Botany is the natural science that transmits the knowledge of plants.

— Linnaeus

(*Skehan, continued from page 3*)

Known specimens of Josephine Skehan

Family	#	*Specimen*	Date	Location	Herbarium
DITRICHACEAE	1	*Ditrichum pallidum*	3/26/1895	MS	NY
ASCLEPIADACEAE	39	*Asclepias subverticillata*	7/16/1898	Gray, NM	NMC
ASTERACEAE	26	*Acourtia nana*	6/18/1898	Nogal, Gray, NM	NMC
ASTERACEAE	108	*Ambrosia confertiflora*	9/1/1898	Gray, NM	NMC, NY
ASTERACEAE	107	*Artemisia carruthii*	9/1/1898	Gray, NM	NMC
ASTERACEAE	11	*Baccharis wrightii*	5/26/1898	Gray, NM	NMC
ASTERACEAE	14	*Baccharis wrightii*	5/26/1898	Gray, NM	NMC
ASTERACEAE	33	*Berlandiera lyrata*	7/15/1898	Gray, NM	NMC
ASTERACEAE	77	*Brickellia californica*	8/?/1898	Gray, NM	NMC
ASTERACEAE	105	*Brickellia fendleri*	8/1/1898	Gray, NM	NMC
ASTERACEAE	4	*Chaetopappa ericoides*	4/10/1898	Gray, NM	NMC
ASTERACEAE	91	*Cirsium ochrocentrum*	7/12/1898	Gray, NM	NMC
ASTERACEAE	110	*Cosmos parviflorus*	8/31/1898	Gray, NM	NMC
ASTERACEAE	84	*Engelmannia peristenia*	8/13/1898	Gray, NM	NMC
ASTERACEAE	78	*Gutierrezia sarothrae*	8/?/1898	Gray, NM	NMC, NY, COLO
ASTERACEAE	98	*Helianthus annuus*	8/16/1898	Gray, NM	NMC
ASTERACEAE	45	*Pectis angustifolia*	7/28/1898	Gray, NM	NMC
ASTERACEAE	63	*Ratibida columnifera*	8/12/1898	Gray, NM	NMC
ASTERACEAE	32	*Ratibida tagetes*	7/12/1898	Gray, NM	NMC
ASTERACEAE	106	*Sanvitalia abertii*	8/1898	Gray, NM	NMC
ASTERACEAE	21	*Senecio flaccidus*	6/4/1898	Gray, NM	NMC
ASTERACEAE	70	*Solidago wrightii*	7/?/1898	Gray, NM	NMC
ASTERACEAE	43	*Thelesperma megapotamicum*	7/29/1898	Gray, NM	NMC
ASTERACEAE	72	*Xanthisma blephariphyllum*	8/13/1898	Gray, NM	NMC
BERBERIDACEAE	9	*Berberis haematocarpa*	5/26/1898	Gray, NM	NMC
BRASSICACEAE	48	*Lepidium alyssoides*	7/22/1898	Gray, NM	NMC
BRASSICACEAE	87	*Nasturtium officinale*	4/15/1898	Roswell, NM	NMC
BRASSICACEAE	3	*Physaria fendleri*	4/18/1898	Roswell, NM	NMC
BRASSICACEAE	89	*Physaria valida*	5/11/1898	Gray, NM	NY
BRASSICACEAE	53	*Schoenecrambe linearifolia*	7/22/1898	Gray, NM	NMC
BRASSICACEAE	42	*Thelypodium wrightii*	7/22/1898	Gray, NM	NMC
CHENOPODIACEAE	56	*Atriplex canescens*	7/28/1898	Gray, NM	NMC
COMMELINACEAE	sn	*Tradescantia hirsutiflora*	5/13/1895	MS	US
CONVOLVULACEAE	80	*Ipomoea purpurea*	1898	Gray, NM	NMC
CUCURBITACEAE	104	*Sicyos parviflorus*	9/6/1898	Gray, NM	NMC
CUPRESSACEAE	75	*Juniperus deppeana*	8/2/1898	Gray, NM	NY, NMC
CYPERACEAE	59	*Cyperus esculentus*	8/4/1898	Gray, NM	UNM
DROSERACEAE	sn	*Drosera tracyi*	5/22/1895	MS	US
EUPHORBIACEAE	8	*Chamaesyce albomarginata*	5/21/1898	Gray, NM	NMC
EUPHORBIACEAE	118	*Chamaesyce revoluta*	1898	Gray, NM	NY,US
EUPHORBIACEAE	71	*Chamaesyce serpyllifolia*	8/13/1898	Gray, NM	NMC, NY
EUPHORBIACEAE	51	*Chamaesyce stictospora*	7/29/1898	Gray, NM	NMC, GH, NY
FABACEAE	31	*Acacia angustissima*	8/11/1898	Gray, NM	NMC
FABACEAE	2	*Astragalus mollissimus*	4/15/1898	Roswell, NM	NMC
FABACEAE	7	*Astragalus mollissimus*	5/12/1898	Gray, NM	NMC
FABACEAE	sn	*Chamaecrista fasciculata*	8/31/1895	MS	US
FABACEAE	sn	*Chamaecrista nictitans*	7/18/1895	MS	US
FABACEAE	55	*Dalea candida*	8/2/1898	Gray, NM	NMC

(*Continued on page 5, Skehan*)

(*Skehan, continued from page 4*)

Family	#	*Specimen*	Date	Location	Herbarium
FABACEAE	18	*Dalea jamesii*	6/1/1898	Gray, NM	NMC
FABACEAE	27	*Hoffmanseggia glauca*	6/20/1898	Nogal, NM	NMC
FABACEAE	24	*Lathyris eucosmos*	6/13/1898	Gray, NM	NMC
FABACEAE	6	*Oxytropis sericea*	5/12/1898	Gray, NM	NMC
FABACEAE	35	*Robinia neomexicana*	6/17/1898	Gray, NM	NMC
FABACEAE	sn	*Senna occidentalis*	Jul or Sep'95	MS	US
FABACEAE	19	*Sophora nuttalliana*	6/2/1898	Gray, NM	NMC
FABACEAE	15	*Vicia ludoviciana*	5/25/1898	Gray, NM	NMC
FABACEAE	88	*Vicia ludoviciana subsp. ludoviciana*	Spring 1898	Gray, NM	NMC
FAGACEAE	68	*Quercus gambelii*	8/9/1898	Gray, NM	NMC
HYDRANGEACEAE	114	*Fendlera rupicola* var. *falcata*	1898	Gray, NM	NMC
JUGLANDACEAE	29	*Juglans major*	6/18/1898	Nogal, NM	NMC
LAMIACEAE	74	*Monarda aristata*	7/?/1898	Gray, NM	NMC
LAMIACEAE	101	*Salvia reflexa*	8/5/1898	Gray, NM	NMC
LAMIACEAE	73	*Salvia subincisa*	8/6/1898	Gray, NM	NMC
LAMIACEAE	61	*Teucrium laciniatum*	8/5/1898	Gray, NM	NMC
MALVACEAE	117	*Anoda cristata*	8/9/1898	Gray, NM	NMC
MALVACEAE	23	*Sphaeralcea coccinea*	6/6/1898	Gray, NM	UNM
NYCTAGINACEAE	102	*Allionia choisyi*	8/6/1898	Gray, NM	NMC
NYCTAGINACEAE	38	*Mirabilis multiflora*	7/6/1898	Gray, NM	NMC
NYCTAGINACEAE	13	*Mirabilis oxybaphoides*	8/?/1898	Gray, NM	NMC
ONAGRACEAE	17	*Gaura coccinea*	6/1/1898	Gray, NM	NMC
ONAGRACEAE	92	*Oenothera coronopifolia*	7/18/1898	Gray, NM	NMC
ORCHIDACEAE	sn	*Calopogon pallidus*	5/9/1895	MS	US
ORCHIDACEAE	sn	*Cleistes divaricata var. bifaria*	5/15/1895	MS	US
OXALIDACEAE	112	*Oxalis caerulea*	6/17/1898	Gray, NM	NMC, NY
PAPAVERACEAE	79	*Argemone squarrosa*	8/1898	Gray, NM	NMC, JEP, NY
PINACEAE	25	*Pinus edulis*	6/13/1898	Gray, NM	NY,NMC
POACEAE	57	*Aristida havardii*	8/2/1898	Gray, NM	NMC
POACEAE	94	*Bouteloua curtipendula*	8/27/1898	Gray, NM	NMC
POACEAE	64	*Bouteloua gracilis*	8/16/1898	Gray, NM	NMC
POACEAE	58	*Eragrostis erosa*	8/3/1898	Gray, NM	NMCR
POACEAE	34	*Erioneuron pilosum*	6/27/1898	Gray, NM	NMC
POACEAE	49	*Hilaria jamesii*	8/26/1898	Gray, NM	NMC
POACEAE	62	*Lycurus setosus*	8/12/1898	Gray, NM	NMC
POACEAE	47	*Muhlenbergia torreyi*	7/26/1898	Gray, NM	NMC
POACEAE	65	*Muhlenbergia torreyi*	8/13/1898	Gray, NM	NMC
POACEAE	97	*Panicum obtusum*	8/1898	Gray, NM	NMC
POACEAE	67	*Scheddonardus paniculatus*	8/6/1898	Gray, NM	NMC
POLEMONIACEAE	50	*Ipomopsis longiflora subsp. neomexicana*	7/30/1898	Gray, NM	NMC
POLEMONIACEAE	10	*Phlox triovulata*	5/23/1898	Gray, NM	NMC
POLYGONACEAE	96	*Eriogonum hieracifolium*	8/17/1898	Gray, NM	NMC, GH, K, NY, POM, US, UC
POLYGONACEAE	44	*Eriogonum jamesii var. jamesii*	7/28/1898	Gray, NM	NMC
POLYGONACEAE	22	*Rumex hymenosepalus*	5/25/1898	Gray, NM	NMC
RANUNCULACEAE	69	*Clematis ligusticifolia*	8/9/1898	Gray, NM	NMC
ROSACEAE	30	*Fallugia paradoxa*	8/4/1898	Gray, NM	NMC

(Continued on page 6, Skehan)

(Skehan, continued from page 5)

Family	#	*Specimen*	Date	Location	Herbarium
RUBIACEAE	36	*Houstonia acerosa* var. *polypremoides*	6/13/1898	Gray, NM	NMC
SCROPHULARIACEAE	113	*Castilleja integra*	6/22/1898	Gray, NM	NMC
SOLANACEAE	37	*Chamaesaracha coniodes*	6/6/1898	Gray, NM	NMC, GH, NY, US
SOLANACEAE	60	*Physalis foetens* var. *neomexicana*	May/June'98	Gray, NM	NMC
SOLANACEAE	40	*Physalis hederaefolia*	7/7/1898	Gray, NM	NMC
SOLANACEAE	16	*Solanum eleagnifolium*	6/1/1898	Gray, NM	NMC, NY
VERBENACEAE	5	*Glandularia bipinnatifida*	5/11/1898	Gray, NM	NMC
VERBENACEAE	20	*Verbena perennis*	6/6/1898	Gray, NM	NMC
ZYGOPHYLLACEAE	52	*Kallstroemia parviflora*	7/29/1898	Gray, NM	NMC

The Dismemberment of the Scrophulariaceae

Those of you following the critical analysis of various plant families using numerous lines of evidence, including DNA analysis, have been witness to the frequent reorganization and realignment now occurring throughout the plant kingdom. One of the last families left standing was the Scrophulariaceae, traditional home of penstemon, Indian paintbrush, mullein, figwort, veronica, and many other familiar and beautiful plants. Alas, the exigencies of modern monotheism, er, um, I mean modern monophyly, require (and it seems, I will admit, with good cause) a concordant reorganization of the "scrophs." Listed below are the New Mexico genera of traditional Scrophulariaceae and their current classification under the new systems, and the three genera and nine species remaining.

Agalinus = see OROBANCHACEAE
Andenostegia = see OROBANCHACEAE
Antirrhinum = see PLANTAGINACEAE
Bacopa = see PLANTAGINACEAE
Besseya = see PLANTAGINACEAE
Brachystigma = see OROBANCHACEAE
Castilleja = see OROBANCHACEAE
Chelone = see PLANTAGINACEAE
Collinsia = see PLANTAGINACEAE
Conobea = see PLANTAGINACEAE
Cordylanthus = see OROBANCHACEAE
Dasystoma = see OROBANCHACEAE
Elephantella = see OROBANCHACEAE
Epixiphium = see PLANTAGINACEAE
Gerardia = see OROBANCHACEAE
Gratiola = see PLANTAGINACEAE
Illysanthes = see PLANTAGINACEAE
Leiostemon = see PLANTAGINACEAE
Leucophyllum Texas sage
minus Gray
Big Bend Texas sage
Limosella = see PLANTAGINACEAE
Linaria = see PLANTAGINACEAE
Lindernia = see PLANTAGINACEAE
Maurandella = see PLANTAGINACEAE
Maurandya = see PLANTAGINACEAE
Mecardonia = see PLANTAGINACEAE
Mimulus = see PLANTAGINACEAE
Monniera = see OROBANCHACEAE
Nuttallanthus = see PLANTAGINACEAE
Orthocarpus = see OROBANCHACEAE
Pagesia = see PLANTAGINACEAE
Pedicularis = see OROBANCHACEAE
Penstemon = see PLANTAGINACEAE
Rhinanthus = see OROBANCHACEAE
Schistophragma = see PLANTAGINACEAE
Scrophularia figwort
laevis Wooton & Standley
Organ Mountain figwort
lanceolata Pursh
lance-leaf figwort
macrantha Greene ex Stiefelhagen
New Mexico figwort
Scrophularia coccinea Gray
Scrophularia neomexicana Shaw
montana Wooton
mountain figwort
parviflora Wooton & Standley
piney figwort
Synthyris = see PLANTAGINACEAE
Verbascum mullein
blattaria Linnaeus
white mullein
thapsus Linnaeus
moth mullein
virgatum Stokes
wand mullein
Veronica = see PLANTAGINACEAE

Plant Distribution Reports

New records and significant distribution reports for New Mexico plants should be documented by complete collection information and disposition of a specimen (herbarium). Exotic taxa are indicated by an asterisk (*), endemic taxa by a cross (+).

— Ken Heil [San Juan College, 4601 College Blvd., Farmington, NM 87402]

Arctostaphylos patula Greene (Ericaceae, green-leaf manzanita): San Juan County: Navajo Reservation, Chuska Mountains, east rim above Whiskey Creek, ca 4.5 mi northwest of Berland Lake and 6.75 mi southwest of Toadlena Lake, scattered ponderosa pine with aspen and Gambel oak, Fendler mountain lilac, and needle-thread grass, shallow silty to silty sand soils over Chuska sandstone caprock, 8890 feet, 8 Jul 2001, Arnold Clifford 01-851 (SJNM). Det. John Spence.

Astragalus flexuosus (Hooker) Douglas ex G. Don var. ***diehlii*** (M.E. Jones) Barneby (Leguminosae, pliant milkvetch): San Juan County: T22N R11W S19 NW ¼sec, Navajo Nation, ca 5 mi ENE of Lake Valley, 1 mile east of Ah-shi-sle-pah Wash, sandy soils, 1850 m, 3 Jun 1995, Ken Heil 8932 (SJNM). Det. Stan Welsh.

Astragalus missouriensis Nuttall var. ***humistratus*** Isely (Leguminosae, Missouri milkvetch): Rio Arriba County: Rolling low hills of sage and grassland WSW of Eagle Point, 1.2 miles west of highway 84 on County Road 349, Mancos clay soils, 36º56'15"N 106º48'58"W, 2312 m, corolla light purple with white "eye", 6 Jun 2000, S.L. O'Kane and Ken Heil 4823 (SJNM). Det. Stan Welsh.

Lupinus argenteus Pursh var. ***moabensis*** (D. Dunn & Harmon) S. Welsh (Leguminosae, silvery lupine): San Juan County: Navajo Nation, Snake Bridge, 1.5 mi E of Arizona border, up Sanostee Wash to about 13 mi W of Sanostee, sand and gravel wash and wooded area, N36º25'07" W109º01'01", 6400 ft, 8 Jun 1995, Cyndie Holmes 348 (SJNM). Det by Stan Welsh.

Lupinus caudatus Kellogg var. ***utahensis*** (S. Watson) S. Welsh (Leguminosae, Utah lupine): San Juan County, Navajo Nation, northeast rim of Beautiful Mountain, ponderosa pine, N36º30'01" W108º58'14", 8695 ft, 30 Jun 2004, Ken Heil, Arnold Clifford, Les Lundquist, & Wayne Mietty 24172 (SJNM). Det. Stan Welsh. McKinley County: ca 4 mi W of Tohatchi on Red Will Creek Road, S0697386 E3976206, ponderosa pine, pinyon pine, Juniperus monosperma, J. scopulorum, sandy soils, 8027 ft, 17 May 2000, Ken Heil, S.L. O'Kane, Jr & Arnold Clifford 14601 (SJNM).

Mirabilis glandulosa (Standley) Weber (Nyctaginaceae, Colorado four o'clock): San Juan County: Navajo Nation, ca 5 miles up Carrizo Mountain Road from US 160, Morrison Formation, steep hill along road cut with *Hedysarum* & *Chrysothamnus*, N36º51'44" W109º12'39", 6652 ft, 12 May 2004, Ken Heil & Les Lundquist 23576 (SJNM).

Platanthera dilatata (Pursh) Lindley (Orchidaceae, scent-bottle). Taos County: wet meadow at about 8500 ft, 2 Aug 1976, S. Williams (SJNM). Det Linda and Timothy Reeves.

****Prunus avium*** Linnaeus (Rosaceae, sweet cherry): San Juan County: Navajo Nation, Shiprock, roadside, 5000 ft, F. Eldridge s.n. (SJNM). Det. by D. Roth.

Stuckenia vaginata (Turczaninow) Holub (Potamogetonaceae, sheathing pondweed): San Juan County: Navajo Nation, Chuska Mountains, Toadalena Lake, Road 7170 west of US 491, mountain meadow pond along shallow shoreline, 36º14.184N 108º57.016W, 9062 ft, 20 Jul 2001, C.B. Hellquist 16632 & A. Clifford (SJNM). Det. C.B. Hellquist.

Valeriana occidentalis A. Heller (Valerianaceae, small-flowered valerian): Rio Arriba County: Gooding Ranch, road up eastern portion of Stove Ridge, 1.7 mi up road from main ranch road, in avalanche shoot, N36º59'09" W106º44'21", 9088 ft, 8 Jun 2000, Ken Heil & S.L. O'Kane Jr. 14793 (SJNM). San Miguel County: Santa Fe National Forest, Sangre de Cristo Mountains, found at the junction of Holy Ghost Canyon and Terraro, 7800 ft, 23 May 1996, Ken Heil 9666 (SJNM). Grant County: State Road 15, north of Silver City, ca 10 mi N of Los Pinos, ponderosa pine, alligator juniper-oak community, 3 May 2000, N.D. Atwood 25439 (SJNM). All det F.R. Barrie.

— Richard Worthington [P.O. Box 1333, El Paso, TX 79913]

Chamaesyce theriaca (L.C. Wheeler) Shinners var. ***spurca*** (M.C. Johnston) M.H. Mayfield (Euphorbiaceae, Terlingua spurge): Doña Ana County: West Potrillo Mountains, Guzman's Lookout Mt, N31° 49.3' W107° 13.6', 4696 ft, on volcanic cinders and/or basalt with wind blown silicon sand, 23 Aug 1986. R.D. Worthington 14696 (UTEP).

— Jane Mygatt [UNM Herbarium, Castetter Hall Rm 133, University of New Mexico, Albuquerque, NM 87131]

****Iris pseudacorus*** Linnaeus (Iridaceae): Bernalillo County: Albuquerque Bosque, just south of I-40, in irrigation ditch along the Rio Grande bike path, UTM 13S 0345986 E, 3886059 N, 1511 m, growing in water in with Salix exigua, Hordeum jubatum, Sisymbrium irio, flowers bright yellow, 15 May 2007, Jane Mygatt & Lolly Jones 211 (UNM).

From my continuing preoccupation with Dwight Ripley, I offer another sample of his writing, this time from "Utah in the Spring" (Quart. Bull. Alpine Gard. Soc. 49:168-172. 1942.):

"These loco-weeds (from the Spanish word for "mad") have the reputation of driving cattle crazy, so that the poor creatures are occasionally seen staggering about their pastures or lying in the most uncomfortable positions, their motor nerves at sixes and sevens. Astragali have much the same effect on the botanist. For unless he has previously made an intensive study of the genus (and Rupert fortunately is as much at home with valves and sutures and the Eleusinian mysteries of the pod as Jones or Rydberg themselves, so that identification holds no terrors for him), he is likely to find himself caught in a labyrinth from which he emerges only after long months of fruitless endeavour and often with white hair."

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Kelly Allred
The New Mexico Botanist
MSC Box 3-I
New Mexico State University
Las Cruces, NM 88003
or
Email: kallred@nmsu.edu

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Kelly Allred

54th Annual Systematics Symposium, 12 –13 October 2007

The topic of this year's symposium at the Missouri Botanical Garden is "Biodiversity and Conservation in the Andes." Speakers include Alan Graham, Jon Fjeldså, Lena Struwe, Iván Jiménez, Kenneth Young, Christa Placzek, Carolina Murcia, and John Terborgh. For more information see <http://www.mobot.org/MOBOT/research/symposium/welcome.shtml> or e-mail Mick Richardson < mick.richardson@mobot.org>.

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