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***Pediomelum argophyllum* (Pursh) J. Grimes**
Silverleaf Indian breadroot

Documenting plants relies on precise records and descriptions. Lewis tried to develop a recording system for his plant collection, but practices in collection management at that time allowed for mix-ups between specimens collected on different expeditions. Several specimens in Lewis' herbarium were actually harvested by botanists who came along later.

The specimen of *Pediomelum argophyllum* kept in the Lewis and Clark Herbarium, at the Academy of Natural Sciences of Philadelphia, is probably not the plant Lewis found along the Missouri River in North Dakota on October 17, 1804. Botanists and historians believe that it is instead a specimen collected by Thomas Nuttall (1786-1859) during his 1811 field trip following in Lewis and Clark's steps (Reveal et al. 1999: 36.)

Psoralea argophylla Pursh, syn. *Pediomelum argophyllum*, Britton & Brown's Illustrated Flora. Photo Smithsonian Institution

Replacing a specimen in an existing collection was standard practice two hundred years ago. Existing specimens were considered to be mere illustrations of a species, and, therefore, could be discarded from a collection when better ones were found. Following this practice, Nuttall's specimen was simply pasted on the mounting

sheet Lewis had assembled for his own plant, possibly by the botanist Frederick Pursh, who gave the plant its scientific name (see vignette of *Clarkia pulchella*).

Such a mix-up would not happen today. Plant recording is far more precise than it used to be and carries a broader purpose. Each new specimen in a collection is now catalogued individually, complete with data that answer the three-dimensional question "what, where, and when?" Thus, records detail the name of the plant, the location of the specimen, and a precise date. It is common for museum collections to hold several specimens of each species, collected at various times and various locations. In this way plant specimens are points in time and location, which, when analyzed in aggregate, provide scientists with understanding of biodiversity changes.

Information recorded for each question used to be quite simple; for example, the location was often a rough indication, while today the exact location of the plant collection might be identified with a Global Positioning System (GPS) point. Going through alien country, Lewis had a difficult task recording the locations of his plant collection. Throughout their journals, he and Clark assigned names of their own to many locations and important landmarks.

Lewis worked out a basic recording system, as he explained to Jefferson in the letter attached to the batch of specimens he shipped from Fort Mandan on April 7, 1805: "*these are accompanied by their respective labels expressing the days on which obtained, places where found, and also their virtues and properties when known*" (Jackson 1978:231). He also attempted to provide a method to determine at a later date where the specimens were found: "*by means of these labels, reference may be made to the Chart of the Missouri …., on which the encampment of each day has been carefully marked; thus places at which these specimen*[s] *have been obtained may be easily pointed out, or found again, should any of*

them prove valuable..." (*Idem*). With respect to *P. argophyllum*, Lewis apparently provided no exact location for the specimen. However, we have the date on which the plant was collected, October 17, 1804 and the corresponding journal entry that says the party was in North Dakota, near the mouth of the Cannonball River in Sioux Co (Moulton 2002: vol.11.)

Describing the physical nature of the plant, another important aspect of plant documentation, has not changed much. To his credit, Lewis's descriptions are often very complete and thorough.

Other specimens from Nuttall's collection

Psoralea argophylla Pursh, syn. *Sphaeralcea Coccinea* (Nutt.) Rybdb, Britton & Brown's Illustrated Flora.
Photo Smithsonian Institution

Six specimens held in the Lewis and Clark Herbarium were identified as possibly non-authentic Lewis collections. Three others were collected by Nuttall in 1811: *Linum lewisii* Pursh, prairie flax, *Lupinus pusillus* Pursh, rusty lupine, and *Psoralidium lanceolatum* (Pursh) Rydb., lemon scurfpea. Two represent garden material grown by nurserymen from Philadelphia: *Sphaeralcea coccinea* (Nutt.) Rydb., scarlet globemallow and *Symphoricarpos albus* var. *laevigatus* (L.) Blake, common snowberry (Reveal et al. 1999: note 1).

Click on these links to access these plants' pages on the "Lewis and Clark as Naturalists" website.

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Internet Resources

Thomas Nuttall (1786-1859) The life of a printer, by Reveal James L. "Discovering Lewis&Clark" website, electronic resource: www.lewis-clark.org/content/content-article.asp?ArticleID=501

The text of the University of Nebraska edition of the Lewis and Clark journals edited by Gary Moulton is available at *"The Journals of the Lewis and Clark Expedition Online Edition "* - http://lewisandclarkjournals.unl.edu/

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