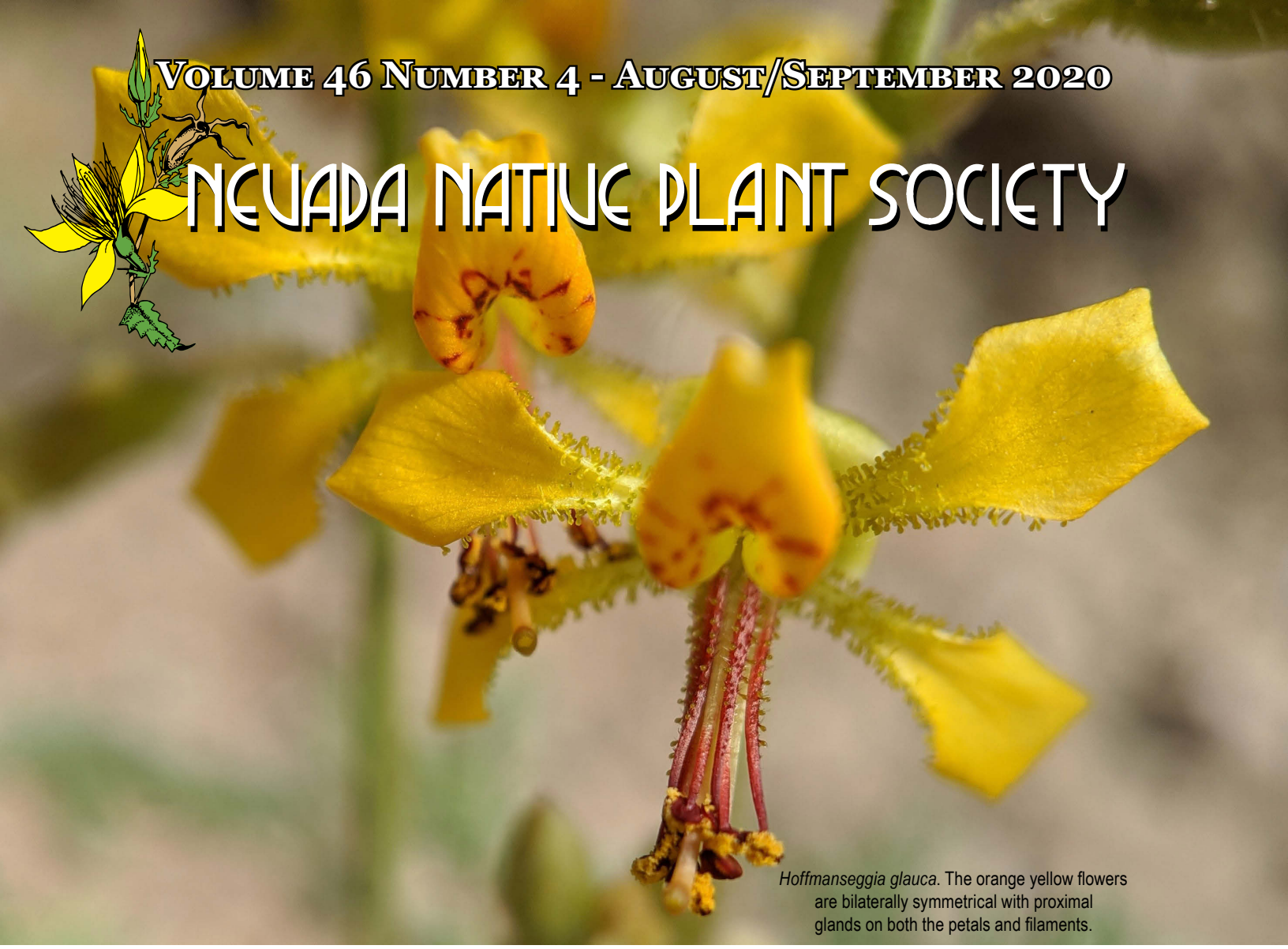
Volume 46 Number 4 - August/September 2020

Nevada Native Plant Society



Hoffmanseggia glauca. The orange yellow flowers are bilaterally symmetrical with proximal glands on both the petals and filaments.

Hoffmannseggia glauca (*Caesalpiniaceae*) in Nevada

Story by Arnold Tiehm, photography by Jan Nachlinger

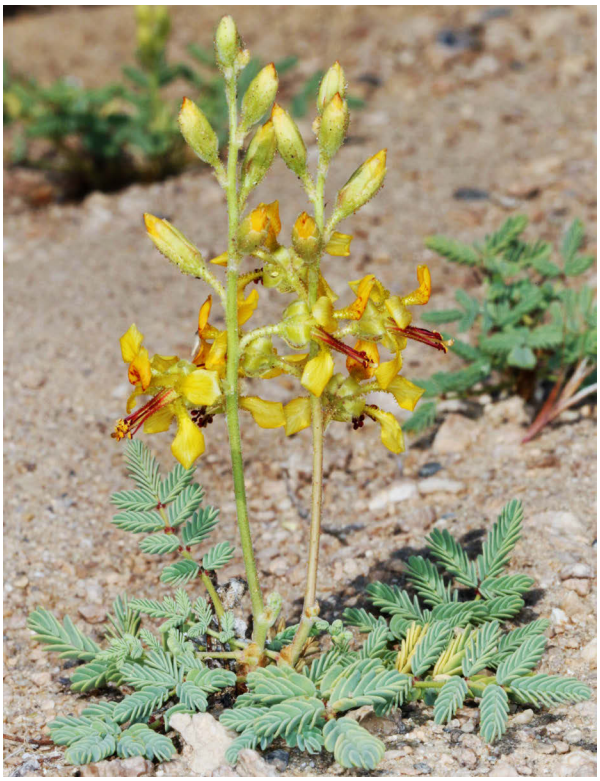
The pea family (*Fabaceae*) in floristic treatments of the western United States includes three families or subfamilies depending on which author you prefer to follow. They are the *Mimosaceae* (or *Mimosoideae*), *Caesalpiniaceae* (or *Caesalpinioideae*), and *Fabaceae* (or *Papilionoideae*). I consulted with Matt Lavin, the director of the herbarium at Montana State University and a UNR graduate, about the *Mimosaceae*, *Caesalpiniaceae*, and *Fabaceae* and he replied:

Traditionally and generally the three families or subfamilies might best be distinguished as follows (from a worldwide rather than regional perspective): Mimoisoids *(*Mimosaceae*) with small regular flowers aggregated into heads or spikes and with stamens being the showiest part of the flower, leaves bipinnate;* Caesalpinioids *(*Caesalpiniaceae*) with all flower parts free including separate sepals, flowers bilaterally symmetric, leaves bipinnate or pinnate;* Papilionoids *(*Fabaceae*) with flowers strongly bilaterally symmetric (rendering the "pea"*

flower) with sepals fused into a tube or cup that surrounds the hypanthium, along the rim of which are attached the petals and stamens, leaves mostly pinnate or sometimes simple.

Matt also pointed out a recent article that recognizes six subfamilies within the *Fabaceae* (Azani et al., 2017). In Nevada the *Fabaceae* is represented by 27 genera: *Acmispon*, *Alhagi*, *Astragalus*, *Cotulea*, *Dalea*, *Glycyrrhiza*, *Hedysarum*, *Hosackia*, Lathyrus, *Lotus*, *Lupinus*, *Marina*, *Medicago*, *Melilotus*, *Onobrychis*, *Oxytropis*, *Pediomelum*, *Peteria*, *Pisum*, *Psoralidium*, *Psorothamnus*, *Robinia*, *Securigera* (*Coronilla*), *Sphaerophysa*, *Thermopsis*, *Trifolium*, and *Vicia*. We also have *Acacia*, *Desmanthus*, and *Prosopsis* representing the *Mimosaceae*. What is of interest to this article is the *Caesalpiniaceae* which is represented by *Caesalpinia*, *Cercis*, *Hoffmannseggia*, and *Parkinsonia*.

In early April I was botanizing east of Pahrump when I came across some basal leaves that at first glance looked like an *Astragalus*. I was headed back to the car to press and did not give it much thought. A little later I again encountered these basal leaves and took some time to study them. The first



Opposite page: *Hoffmannseggia glauca* with *Astragalus lentigenosus* var. *fremontii* growing in a shadscale shrub community in Pahrump Valley. It was often seen on disturbed ground.
Above: A young plant with emerging flowers and bipinnate leaves; the primary leaflets are odd-pinnate and the secondary leaflets are even-pinnate.
Right: A bouquet of *Hoffmannseggia glauca* plants destined for the plant press as biological specimens to be distributed to near and far-flung herbaria.

thing that jumped at me was that they were bipinnate. So much for *Astragalus* which has once pinnate leaves. I also noticed that what had appeared to be basal leaves were, in fact, just somewhat clustered lower stem leaves.

So, what was the plant? Some more searching revealed one of last year's fruits which was a flattened, one loculed, indehiscent pod that was spreading from the stem. I then realized I had stumbled onto *Hoffmannseggia*. I managed to find a few plants in early flower and those along with some of last year's pods allowed me to make a small collection. During that field trip it rained on me for three consecutive days so I figured that would make for good botanizing in a month or so. As luck would have it, Jan Nachlinger and I went back to the same area a month later. During this latter trip we saw lots of *Hoffmannseggia* as it was now in full flower and early fruit and was obvious. It occurred on gravelly clay soils, sometimes in disturbed areas, among shrubs of *Atriplex* and *Lycium*, and with *Astragalus lentigenosus* var. *fremontii*. However, we did not see plants beyond Pahrump Valley.

It took me a while to correctly identify this *Hoffmannseggia* to species. I first used ***Intermountain Flora*** which puts *Hoffmannseggia* into *Caesalpinia* (Barneby, 1989). The species that seemed like it would fit was *C. repens*, but the distribution said it was endemic to east-central Utah. I next tried the second edition of the ***Jepson Manual*** and had no trouble in identifying it as *H. glauca* (Simpson, 2012). The distribution of *H. glauca* is California in Inyo County south and west into Mexico and east to southern Nevada, Arizona, New Mexico, southern Colorado, Kansas, Oklahoma, Texas, and south again into Mexico. It also occurs in South America in Argentina, and Chile. Wow, that is quite a distribution! A closer inspection

of the distribution of *H. glauca* in Arizona revealed that it occurs south of the Grand Canyon. So, the reason for its absence in ***Intermountain Flora*** is simply that it does not occur within that geographic region. The genus is named in honor of a German Count of Hoffmannsegg, 1766-1849.

In Nevada *H. glauca* was previously known from Las Vegas Valley, Pahrump Valley, and the River Mountains all in Clark County. My collection from Pahrump Valley was farther north into Nye County thus adding a Nevada county to its distribution.

Both common names given in the ***Jepson Manual*** are unflattering, pig-nut and hog potato. Fortunately, images of the plant that Jan took suggest it is actually somewhat appealing to the eye besides apparently being forage for javalinas and wild pigs.

Literature Cited

Azani,N. + 96 more authors (incl. M. Lavin). 2017. A new subfamily classification of the *Leguminosae* based on a taxonomically comprehensive phylogeny: The Legume Phylogeny Working Group (LPWG). Taxon 66: 44-77.

Barneby, R.C. 1989. *Fabales*, pages 1-279. In: A. Cronquist, A.H. Holmgren, N.H. Holmgren, J.L. Reveal & P.K. Holmgren. Intermountain Flora 2, part B: 1-279. New York Botanical Garden, Bronx, NY.

Simpson, B.B. 2012. *Hoffmannseggia*, pp 756-757. In: Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, & D.H. Wilken eds. The Jepson Manual, 2nd ed. Univ. Calif. Press, Berkeley, CA. 1568 pp.

Southern Nevada Native Plant Opportunities

Doyle Wayman with the Native Plant Seed Initiative has several volunteer opportunities ranging from seed collecting in the wild to growing native plants and cataloging collected seeds. There is a project for anyone who loves native plants. If you're interested in volunteering for any of these projects, contact Doyle at **wayman.doyle@gmail.com**.

- ***Seeds of Success Program*** – COVID interrupted much of the collecting season this year but there might be some training sessions this fall to prepare for next year's seed collecting.

- ***Screwbean Mesquite Project*** – Mesquite bosques are an important habitat in the Mojave Desert in both Nevada and California and are usually composed of both screwbean and honey mesquite (*Prosopis pubescens* and *P. glandulosa*). Unfortunately, these habitat types are being lost at an unprecedented rate to urban and suburban development, making them one of the state's most endangered habitats.

  Recently, screwbean mesquite has been dying off in several areas of the Mojave Desert including along the Amargosa River in Shoshone, California, and in Nevada at Ash Meadows National Wildlife, along the Amargosa River in Beatty, and at Warm Springs near the Muddy River. A die off along the lower Colorado River began in 2005. The cause of the die-off is still unknown, but it is probably a combination of factors including declining ground water levels, insect and fungal pests, and non-native salt cedar invasion.

  The goal of this project is to compensate for the die-off by planting more screwbean mesquite trees and to monitor these trees rigorously so that we learn if they are having health issues.

Above: *Prosopis pubescens* by Lonny Holmes.
Right: *Prosopis glandulosa* by Lonny Holmes.
Below: The San Miguel Community Garden.

- ***Heirloom Trees and Herbaceous Plants of the Mojave Desert*** – This project focuses on documenting and propagating heirloom cultivated fruit trees and other historically significant plants from old homesteads and ranches. Fall is the best time to propagate cuttings, so get in touch if you want to learn to propagate heirloom trees.

- ***The San Miguel Community Garden Project*** – A demonstration garden of native plants, non-native culturally significant plants, and international xeriscape-friendly plants. We have seeds planted and in September we'll begin transplanting the seedlings to garden beds. All plants will be labeled, and we'll have data about each one to keep everyone up to date with what the plants are and how to care for them and how to make use of their many benefits.

- ***Floyd Lamb Park Nursery*** *(photo above)* – The **Nevada Division of Forestry runs a nursery** in this park at Tule Springs where volunteers grow up to 100,000 plants per year for various native plant projects. Even if you don't think you have a green thumb, come and learn how to care for native plants while helping conservation projects.

- ***Seed Vault*** – Mary Aurelia has been organizing and cataloging native seeds so that they are available for native plant projects. She could use some extra help with preparing, labeling, and cataloging the seed collections in the vault. If you want to help with native plants but hiking up a mountain to collect seeds isn't appealing, this could be a good match.

Anyone interested in helping with these projects should contact Doyle or visit his new Facebook page that lists volunteering opportunities. **https://www.facebook.com/Volunteering-for-the-Environment-in-Southern-Nevada-618701772118399**

Ventenata dubia in Nevada — an update

Story by Arnold Tiehm

In 2016 I reported what I believed was the first record of *Ventenata dubia* from Nevada (Tiehm, 2016). I previously was aware of the likelihood of this noxious weed making its way to Nevada, having heard nightmarish stories of its prevalence as a pasture weed. A check of online herbaria specimen databases yielded specimens from the following list of western states with the date of the first record: Washington (1952), Idaho (1957), Oregon (1979), California (1983), Montana (1995), Utah (1995), Wyoming (1997), and Nevada (2016). It is also known from Michigan, New York, Maine, and at least 5 Canadian provinces. The genus is native from Central and Southern Europe and North Africa to Iran and so far the only species, of eight, that has made its way to the United States is dubia (Crins, 2007).

Since the initial 2016 Nevada collection from the Mosquito Mountains in northern Washoe County, *Ventenata* was collected in 2017 in Elko County at the junction of the Lamoille and Lamoille Canyon roads and in 2018 from Washoe Valley in Washoe County.

This year, on the 16th of June, Jan Nachlinger and I were botanizing on the west side of the Bull Run Mountains in northern Elko County. Along the main road to Owyhee we found abundant *Ventenata*. It was growing as a roadside and ditch bank weed and we saw it for several miles. Then we took the road east up Indian Creek to access Forest Service lands and really had our eyes opened. In the pastures and hillsides there were acres and acres dominated by *Ventenata*. It was evident that it has been present in this area for some time but had either gone unnoticed or unreported. The areas were all part of the Petan Ranches complex and I can only speculate at the reduced forage value of their pasture lands caused by *Ventenata*. The grass contains high amounts of silica making it unpalatable for grazing animals.

Literature Cited

Crins, W.J. 2007. Ventenata. Pp. 683-684. In: Flora of North America Editorial Committee. Flora of North America 24: 1-911. Oxford University Press, New York, NY.

Tiehm, A. 2016. Botanizing Notebook: The Mosquito Mountains – Part II. NNPS Newsletter 42(7): 3-7.

Society News

Southern & Northern Nevada Events

All meetings are currently canceled.
For all cancellations and postponements, NNPS will post updates on our website, **NVNPS.org** when we have more information.

Nevada Native Plant Society
PO Box 8965
Reno NV 89507-8965

RETURN SERVICE REQUESTED

NEVADA NATIVE PLANT SOCIETY

MEMBERSHIP APPLICATION

Name_____

Phone_____

Mailing Address_____

City_____ State_____ Zip_____

Email_____ □ Renewal

Newsletter preference: □ Paper □ Electronic

- Individual, family or group for one year $20.00
- Individual, family or group for three years $50.00
- Student or senior citizen, each year $15.00
- Life membership $500.00

Dues are for the calendar year in which you join. Membership expiration dates are on the mailing labels.

Gifts, and bequests are tax deductible.
Your donation in any amount is appreciated $_____
Please make checks payable and mail to: NNPS • P.O. Box 8965 • Reno, NV 89507