

SAES-422

Participants:

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*Klett, Jim (jim.klett@colostate.edu) – Colorado State University, Fort Collins, CO
Kratsch, Heidi (kratschh@unce.unr.edu) – University of Nevada, Reno, NV
*Burls, Kevin (kevin@nevadabugs.org) – University of Nevada, Reno, NV
*Love, Stephen (slope@uidaho.edu) – University of Idaho, Aberdeen, ID
*Panter, Karen (kpanter@uwyo.edu) – University of Wyoming, Laramie, WY
*Chalker-Scott, Linda (lindacs@wsu.edu) – Washington State University, Puyallup, WA
*Sun, Youping (youping.sun@usu.edu) – Utah State University, Logan, UT
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Brief Summary of Minutes:

Oct 4, 2019 – Washington State University Spokane County Extension office, 222 N Havana St # 205, Spokane Valley, WA 99212

--- Linda Chalker-Scott presented an overview of how a book she co-wrote might be used within our group. Photos from the book are available for our use, and those involved with writing the book could be contacted about speaking to various groups.

--- State conferences in Colorado and Nevada commonly have had speakers who focus on use of natives overtly or by incorporating them into talks that are more broadly focused. Stephen Love emphasized the need for more information on maintenance and care of natives, along with framing realistic expectations consumers should have. Jim mentioned native plants masters training program like is done for master gardeners. Linda mentioned problem of a lack of definition of native. There was consensus that plants need to be perceived by consumers as beautiful.

--- The website master at Wyoming retired about six months ago, Karen Panter reported. Karen is not aware of who, if anyone, has been assigned to that website. If we need to make changes, Karen would need to check who is responsible. Karen suggests this is a good time to move the website, in part due to her retirement in the next few years. Karen will ask at Wyoming about the website master position, and Christina at Wyoming may also be a representative for the group down the road. If Christina is not interested or cannot commit to being a long-term member of the group, we will need to explore alternatives. Heidi mentioned that we should be thinking about new members from states where retirements are possible within the next several years. ADA accessibility will be a need as we proceed. Kevin mentioned that his experience suggests we could do the website ourselves, but Stephen mentioned that we need someone who is an expert.

--- Research reports and project reviews were given (* in the participant list indicates presentation of a report)

--- Discussion of WERA-1013 strategic objectives: members discussed collaborative ideas for obtaining grants for research activities on native plants, the main focus of WERA1013. It was suggested that each member check with their state regarding USDA Specialty Crop Initiative Block grants. Heidi finds funds via IPM and other sources. Some of us get funds from nursery and other state associations. As individuals, each of us is finding a way to get by. USDA funding is via two options: Block grants, and competitive federal awards. Pollinators and climate change may be angles to leverage funds. Linda suggested adding an urban soils specialist to our group.

--- Regional publication collaboration: Heidi Kratsch suggested to publish the presentation reports as Proceedings. Stephen Love volunteered to head up the subcommittee. A possible deadline for the first draft is December 1, 2019.

---Election of officers: Youping Sun will step in as Chair for 2020. Stephen Love was elected secretary/chair elect for 2020. Tracy Dougher will serve in this role if Stephen is unable to attend our meeting.

---Planning for 2020 meeting: Jim Klett agreed to host WERA 1013 for 2020 at Colorado State University, Fort Collins, CO.

--- Stephen Love asked for suggestions on how to address the topic of how to market native plants (for a talk he's been invited to give). Labels, display, in bloom or picture with blooms, info on pollinators and why it's important to use natives. Use big backdrop of native ecosystem to provide emotional connection and a sense of place. Plant demo gardens are useful.

--- Meeting adjourned, the group toured Plants of the Wild Nursery (Tekoa, WA) with Kathy Hutton and Maniko Park (Spokane, WA) with Jim Flott.

Accomplishments

--- Colorado State University

----- Plant Select® program introduced five plants [*Penstemon pinifolius* ‘P019S’ (Steppe Suns™ Sunset Glow Penstemon), *Delosperma* ‘PJS01S’ (Granita® Orange Ice Plants), *Salvia lemmonii* ‘PWIN04S’ (Windwalker® Desert Rose Salvia), *Achnatherum calamagrostis* ‘PUND02S’ (Undaunted® Alpine Plume Grass), *Prunus* ‘P002S’ PP 25,767 (Surker Punch® Chokecherry)] and promoted two additional plants [*Rhus trilobata* ‘Autumn Amber’ (Autumn Amber Sumac) and *Prunus besseyi* ‘P011S’ – (Pawnee Buttes® Sand Cherry)] in 2019.

----- Numerous plant explorations have been conducted in both United States and to Kazakhstan and Argentina. Plant materials collected on these trips have been planted and being evaluated at Denver Botanic Gardens Chatfield location.

----- Greenhouse experiments were also conducted in 2019 to evaluate Plant Select® taxa (*Salvia pachyphylla*, *Osteospermum* x ‘Avalanche’, *Pterocephalus depressus*, and *Scutellaria* x ‘Pat Hayward’) in growing media, fertilizers, and plant growth regulator experiments.

--- University of Idaho

----- Acquisition of new plant materials in a plant collection foray in Steens Mountain region of southeastern Oregon in August, 2019, jointly with colleagues from Utah State University, BloomHort Inc. and the Sawtooth Botanical Garden.

----- Evaluation and selection of native plant accessions continued in a 3-acre field on the Aberdeen R & E Center

----- Native plant seeds increased from superior native species in a seed increase block in 2019

----- Seven native plant species [Purple prairie clover (*Dalea purpurea*), Rough prickly poppy (*Argemone hispida*), Tasselflower brickellbush (*Brickellia grandiflora*), New Mexico hyssop (*Agastache neomexicana*), Lewis flax (*Linum lewisii*), Sand love grass (*Eragrostis trichodes*), and Birchleaf mountain mahogany (*Cercocarpus montanus*)] with market potential were legally transferred to Native Roots, LLC in the spring of 2019

--- University of Nevada

----- Demonstration pollinator gardens including gardens in urban, recreational and agricultural settings were established across the state for educational programs on native pollinators and other beneficial insects.

--- University of Wyoming

----- Native annuals including *Tagetes patula* ‘Super Hero Spry’ (orange flowers in Figure 1), *Salvia* ‘Summer Jewel White’, *Verbena* ‘Endurascape Pink Bicolor’, *Gypsophila* ‘Gypsy White Improved’, and *Dianthus* ‘Jolt Pink’ and ‘Supra Pink’ were grown All-America Display Garden, University of Wyoming campus, Laramie, WY, in 2019.

----- Five species of fresh cut flowers, such as *Daucus* ‘Dara’, were produced in the greenhouse and in two high tunnels in 2019.

----- More materials were added in the WERA1013 Intermountain Native Plants web site, hosted by the University of Wyoming. The site can be found at <http://www.wyoextension.org/westernnativeplants/index.php>.

--- **Utah State University**

----- Four Sego Supreme™ plants [*Aquilegia barnebyi* (oil shale columbine), *Clematis fruticosa* (Mongolian gold clematis), *Epilobium septentrionale* (northern willowherb), and *Tetraneuris acaulis* var. *arizonica* (Arizona four-nerve daisy)] were evaluated for salinity tolerance in a greenhouse study.

----- Cutting propagation and tissue culture were conducted for *Cercocarpus montanus* (alder leaf mountain mahogany, pictured) and *Ceanothus velutinus* (snowbrush ceanothus), two species native to the western United States

--- **Washington State University**

----- The 3rd edition of *Gardening with Native Plants of the Pacific Northwest* was released in March 2019 and has been favorably reviewed in both the Western United States and British Columbia. It is selling well, with nearly 2500 copies sold in the US and 1200 copies sold in British Columbia.

Short-term Outcomes

--- More than 2,063,322 million Plant Select® plants sold in 2019 shows a continued growth over a seven-year period from 1.7 million in 2012.

--- Public education and tours at Demonstration Gardens continued to give both commercial growers and home gardeners exposure to native plants.

--- Seven domesticated accessions delivered to Native Roots, LLC, bringing a total of 185 new and improved native plant products for potential use by the western U.S. landscape nursery industry.

--- Educational information delivered through web sites, workshops, and conferences led to a greater awareness of the value of drought-tolerant native plants among citizens of Idaho and the greater western U.S.

--- All-America Display Garden increased the awareness of those who study the display garden during the summer growing season.

--- The web site continued to provide information for enhanced production of various native plants in the intermountain west, which resulted in reduced losses and costs for commercial growers and increased success in producing these plants, increased knowledge of native plants available and their general care requirements.

--- Research results and publications increased knowledge about whole plant responses to water stresses, the reliability and adaptability of native plants in water efficient landscapes, and propagation techniques of native plants.

--- Published book gave an educational tool for both commercial growers and home gardeners to enhance the introduction and evaluation of native plants and to provide education concerning their use and propagation.

Outputs

- A promotional brochure introducing the 2019 Plant Select® plants was produced.
- Web presence and monthly newsletters with YouTube videos for supporters of Plant Select® has increased to 4606 readers.
- Drought tolerant plant materials developed were distributed via a partnership agreement with the Native Roots, LLC.
- Extension programming, including a web presence and personal contributions to workshops and conferences aimed at education on topics related to water-conserving landscape practices.
- All eight planned gardens have been established across the state.
- Continued to update the web site <http://www.wyoextension.org/westernnativeplants/>.
- A peer-reviewed paper and two conference abstracts have been published on HortScience.
- The 3rd edition of *Gardening with Native Plants of the Pacific Northwest* was released in March 2019.

Activities

- Plant Select® celebrated its 22nd anniversary and held a conference in June inviting all of our members and cooperators, demonstration garden personnel and industry.
- Presentations were also given at the 2019 Pro Green Conference, 2018 Rocky Mountain Turf Conference in Denver, Colorado and at Colorado Garden and Home Show, Cultivate in Columbus, Ohio and at Association of Botanical Gardens and Arboreta in Washington D.C..
- Native plant domestication included collection from wild populations, field establishment, evaluation, selection, and improvement using a modified bulk selection procedure, while demonstration of native plant efficacy in public gardens and instruction for professionals and the general public on topics related to native plant landscaping and water-conserving landscape design.
- Six urban demonstration plots and two agricultural/recreational lands plots were established, and plant survival and growth of the native species were measured.
- Grew native annuals in All-America Display Garden and produced five fresh cut flower species in the greenhouse and in two high tunnels.
- Evaluated the timing for cutting collection, different rooting hormones, types of cuttings (terminal and stem cuttings) for cutting propagation of *Cercocarpus montanus* and *Ceanothus velutinus* and various cytokinins for micropropagation.
- Sold 2500 copies of *Gardening with Native Plants of the Pacific Northwest* in the US and 1200 copies sold in British Columbia

Milestones

- Held the first 'Bring on the Heat Event' at 10 local gardens center in June introducing 2020 Plant Select® plants to more accomplished gardens.
- Held the first conference in Denver, Colorado specifically for Landscape Architects professionals to explain the benefits of planting Plant Select® plants.
- Delivered potentially valuable and publicly acceptable plant products through product transfer in 2019 and effectively distributed native plant utilization information through annual field days, demonstration gardens, instructional publications, workshops and conferences, and a web presence
- Established eight demonstration gardens.

- Cut flower project is currently being funded by a state Specialty Crop block grant and is scheduled for completion in September 2020.
- A state Specialty Crop Block Grant has been awarded to develop best water management practices for sustainable green industry production.
- Sold 2500 copies of *Gardening with Native Plants of the Pacific Northwest* in the US and 1200 copies sold in British Columbia.

Impact Statements:

- The overall greatest impact is the water conservation by planting these plants and the proactive of more sustainable landscaping utilizing Plant Select® introductions and recommendation plants.
- The ultimate impact of the Idaho native plant domestication project will be water conservation through public acceptance of adapted, drought-tolerant plants and water-conserving landscape practices.
- Increasing stakeholders' knowledge of which native plant species can thrive, and attract and/or support a diversity of pollinators and other beneficial insects will contribute to conservation of pollinator habitat, facilitate pollination of dependent crops, and add to the tools available for effective management of plant pests, while minimizing overuse of chemical pesticides.
- Growers will increase their production of these cultivars and the general public will increase their purchase and use of these materials in their own landscapes.
- Increasing the knowledge about whole plant responses to water stress and improving vegetative propagation of native plants will allow us to promote the use of stress tolerant plants for water conservation and native plants for water efficient landscaping.
- *Gardening with Native Plants of the Pacific Northwest* will serve as an educational tool for home gardeners, but for public garden curators, restoration ecologists, nursery owners, and landscape designers, architects, and managers as well.

Publications:

- Klett, James E. and David McKinney. 2019 CSU Research Update. *Dianthus* Trials at Colorado State University, CNGA Looseleaf 2019 Research Update. 36(6)20.
- Klett, James E. CSU Research Update. Top Perennials from our Three-Year Perennial Trial, CNGA Looseleaf 37(1)20.
- Klett, James E. 2019 CSU Research Update, Plant Select® 2020 Introductions CNGA Looseleaf 37(3)20-21.
- Klett, James E. 2019 CSU Research Updates, Top Picks of Off-Season Color. CNGA Looseleaf 37(4)22.
- Klett, James E. 2019 CSU Research Update, Consumer Favorites from 2019 Annual Trial Gardens. CNGA Looseleaf 37(5)20-21.
- Klett, James E. and David McKinney, CSU Research Update. Shade Solution: Colorful Helleborus adopts well in Colorado. 35(1)56-57.

- Klett, James E. 2019. CSU's Top Five Perennials are showy and taught. *Colorado Green* 35(2)48-49.
- Klett, James E. 2019. Try These Underutilized Woody Plants, *Colorado Green* 35(3)57-59.
- Klett, James E. 2019. Use These Columnar Trees and Shrubs in Small Spaces, *Colorado Green* 35(5)50-51.
- Lauryn Shriner and James E. Keltt, 2019. Tough and Proven Perennials for Colorado. *Colorado Green*, 35(5)50-51.
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- Love, SL, Akins, CJ. Second summary of the native seed germination studies of Norman C. Deno: species with names beginning with letters C through E. 2019. *Native Plants Journal* 20(1):65-98.
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- Paudel, A., N. Snow, Y. Sun, L. Rupp, and J. Carman. 2019. Micropropagation of *Cercocarpus Montanus*: Stage II. *HortScience* 54(9): S198.