

# Borealis

the newsletter of the



PO Box 141613, Anchorage, Alaska

April- May 2016

Think Summer!!

## Join us at our Next Meetings!

### Monday, April 4, 7:00 p.m

**Main Topic:** "Saxifraga & Micranthes – and a glimpse at the fascinating and often remote places where they are found"

With 46 genera in these two species, it is much too large a topic for a short "Plant Family" discussion.

**Speaker:** Forrest Baldwin

**Endangered Plants:** *Cicuta bulbifera*

**Presenter:** Marilyn Barker

**Saxifrage Family Plant:** *Heuchera* and *Tellima*

**Presenter:** Annie Ronsse

### Monday, May 2, 7:00 p.m

**Main Topic:** "Mushrooms – Fungus Among Us!"

**Speaker:** Dr. Gary Laursen, UAF

**Endangered Plants:** *Astragalus robinsii*

**Leader:** Ginger Hudson

**Saxifrage Family Plant:** *Tiarella*

**Presenter:** Ginny Moore



For the latest information about ANPS events and field trips, go to [www.aknps.org/](http://www.aknps.org/)

"Like" Us on Facebook!

## SUMMER FIELD TRIP PLANNING

It is Spring Solstice time and all over Alaska we're wondering what happened to winter. But lest we get too carried away with focusing on the past, let's start planning for the beautiful summer ahead!

As we do every spring, the Alaska Native Plant Society is beginning to develop a schedule for field trips all around the state to take advantage of the short growing season and add more plants to our Life Lists.

And as always, we need your help in creating this calendar. Marilyn Barker, "Field Trip Coordinator Extraordinaire", is asking everyone to participate by suggesting places, dates and offering to lead trips. She reminds us that you don't have to be a plant expert to lead a trip – you just have to be willing to come up with a good location and time and coordinate it. There are always attendees who will be able come up with names, or help in identifying what you find. That has often been the fun part and may be what helps you learn that elusive species! Trips can be short, long, evening, all day, weekend, easy, strenuous....

Marilyn asks that you submit your information to her by April 16, so we can print up a Field Trip Calendar that will be available for the May meeting. You can contact her at her new e-mail address:

[Marilynbarker29@gmail.com](mailto:Marilynbarker29@gmail.com).

The information we need is:

**Date:** **Time:** **Location:**

**Leader:**

**Meeting time:**

**Meeting place:**

**Level of difficulty:**

**Minimum age:**

**Description of trip:**



# Verna's MYSTERY PLANT

At the present time, this plant seems to be growing only in alpine areas of the Alaska Range.

This small plant has a thick rhizome that is fragrant when cut, and grows very close to the ground, especially in exposed areas. The short upright thick fleshy stems have very small leaves that are stacked close together. They are distinctly green and glossy, and have obvious notches around the edges. The flowers have 4 petals and 8 stamens and are bright red. The clusters of seeds are bright red also.



## IT WORKS!

ANPS HAS ALREADY EARNED \$\$\$

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### ALASKA NATIVE PLANT SOCIETY

#### State and Anchorage Chapter Officers

President	Beth Baker
Vice President	Dennis Ronsse
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#### Anchorage Chapter Program Coordinators

Membership	Bernadine Raiskums
Plant Family	Dennis Ronsse
Mini-Botany	Dennis Ronsse
Field Trips	Marilyn Barker

#### Newsletter ("Borealis")

Editor	Ginny Moore
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*Borealis* is published bi-monthly, fall through spring. Articles may be sent to Ginny Moore, , Anchorage, AK 99516. Phone or FAX: , E-mail: [elfinwood@gmail.com](mailto:elfinwood@gmail.com)

# *Cicuta bulbifera*

At our March monthly meeting Marilyn Barker focused on *Cicuta bulbifera* as a member of the Rare Plant list. We have all learned a bit about the Rare Plant list so we can begin by saying that this plant is listed as G5, S2, meaning that while it is relatively secure, globally, it is considered rare in the state of Alaska, rather than imperiled.

*Cicuta bulbifera*, commonly known as Bulb-bearing Water-hemlock, is a small perennial plant which hides among the grasses and sedges of fens, marshes and swamps. It can also grow on hummocks and floating mats, on partially submerged rotting logs, and is even known to grow on beaver dams.

*C. bulbifera* is native to North America and has a wide range of distribution from Newfoundland and Labrador to British Columbia in Canada, to Virginia, Indiana, Nebraska and Oregon in the United States. It is rarely found in Alaska.



**Flower:** Flowers are in flat clusters (umbels) about 2 inches across arising from leaf axils and at the end of branching stems. Each cluster has about 15 groups (umbellets) of 1/8 inch flowers. Individual flowers have 5 notched white petals, a greenish center, and 5 stamens. The entire inflorescence may be lacking.



**Leaves** alternate, all cauline (growing from stem), to 6" long and 4" wide, with very narrow leaflets, typically 3/4"-3 1/2" long. Uppermost leaves much smaller, with few if any subdivisions, and bearing small bulblets in leaf axils.

**Stem** slender, not thickened at the base.



**Fruit:** If the inflorescence is present, the light-colored flowers produce tiny, dry seed capsules that seldom mature. Tiny bulblets form in the leaf joints in the upper part of the plant, giving the plant its scientific and common names.

**Roots:** Roots are fibrous, or with a few thickened, tuberous roots.

## Notes:

All plants of the genus *Cicuta* contain cicutoxin. Cicutoxin is an oily yellow liquid that is exuded from the cut stock. The juice of crushed plants can cause poisoning if transferred from hand to mouth. All parts of the *cicuta* plants are poisonous, though the root is the most toxic part of the plant.

*Cicuta* are often mistaken for edible root plants in the Carrot/Apiaceae such as parsnip, wild carrot or wild ginseng, but the bulblets in the leaf axils are a distinguishing characteristic. The leaves with fine, very narrow segments and the spindly look distinguish if from related *Cicuta* species.

Mystery Plant Answer (See Page 2):

Sorry, you will have to wait for the answer to this one. For the present time this is the ultimate mystery plant. It used to be considered to be a clone of *Sedum rosea* ssp. *integrifolium*. It is now believed to be a different subspecies or variety. It may be some time before it is named.

It is in the Crassulaceae / Stonecrop family.

# *Geum pentapetalum*/*Sieversia pentapetala*

Alaska's Rare Plants



Glenn Brown's Rare Plant talk in March highlighted *Geum pentapetalum*, the Aleutian Avens in the Rosaceae family. This plant has numerous scientific synonyms, including *Sieversia pentapetala* and *Dryas pentapetala*. At least it is agreed that there are five petals, but isn't it interesting that it is masculine as a *Geum* and feminine as a *Sieversia*! As *Sieversia pentapetala* it is named for Johann August Carl Sievers, 1762-1795, a German-born apothecary who explored eastern Russia in search of medicinal rhubarb. It is native only to wet, wind-swept slopes

of Japan, Kamchatka and the Aleutian Islands, so it is understandable that it is considered rare. Globally it is listed as G3-G4, and in Alaska it is listed as S2-S3. In Japan its common name is chin-guruma – Children's pinwheel.

Plants grow in a wide clump or mat-forming, and at 3-10 cm. in size, are considered sub-shrubby. Leaves are 3-6 cm. long, composed of seven to nine lustrous, deep green obovate leaflets which can turn crimson in autumn. Flowers are 2-3 cm across, creamy-white, solitary on stems 10 cm high.

## The Naming Game

The name *Geum* first appeared in 77 AD. In 1753 Linnaeus included 5 species in *Geum*. Since that time the number of species have increased or decreased with every new botanical cataloging system.

- 1870: Swedish botanist Georg Scheutz included 34 species, divided into 8 sections. All species with non-deciduous styles were in section *Sieversia*. That name had been previously used at the generic level by German botanist Carl Ludwig Willdenow (1811), for a single species, *S. Anemonoides*, including what had been described as 2 species, *Dryas pentapetala* and *Anemone pusilla*. Today these two species are classified either in *Sieversia* (Russian botanist Yuzepchuk 1941) or *Geum* (Eric Hultén 1968).
- Wilhelm Oelbers Focke (German - 1894) divided *Geum* into two sub-genera: *Geum* and *Sieversia*. The former was characterized by partly deciduous styles and the latter by non-deciduous styles.
- American botanist, Edward Lee Greene (1899) accepted the broad circumscription of *Sieversia* of previous authors but ranked it as a genus. Later, however, (1906) he stated that the North American species were not congeneric with *Sieversia pentapetala* (*S. anemonoides* in part) and described two new genera: *Acomastylis* for the species with yellow flowers and straight non-plumose persistent styles and *Erythrocoma* for species with a reddish calyx and plumose accrescent styles.
- Swedish-born American Per Axel Rydberg (1913) went back to a broader circumscription of *Sieversia*, but kept *Acomastylis* for species with non-elongating styles. *Geum*, on the other hand, was circumscribed narrowly, comprising only the species with fish-hook fruit type.
- Eric Hultén (1929) lumped all species, including *Sieversia*, in *Geum* and thus followed Scheutz's (1870) concept of *Geum*.
- In a second monograph, Bolle (1933) divided *Geum* into several genera, two of them new:
- *Novosieversia* for a single circumboreal Arctic species, *N. glacialis* with solitary yellow flowers and plumose styles, and *Oncostylus* comprising a number of southern hemisphere species characterized by persistent styles with an apical hook (Fig. 1G). Bolle (1933) included in *Geum* not only the fish-hook species, but also two species with harpoon type fruits (Iltis 1913), characterized by an apical deciduous portion of the style, and a straight basal segment with deflexed bristles toward the apex (Fig. 1C). He also included some species with plumose styles in *Geum*, treated *Sieversia* narrowly like Willdenow (1811) and recognized *Acomastylis* and *Erythrocoma*. Bolle's (1933) work is the most comprehensive recent treatment of the group.

Authors have continued splitting or realigning the species into new constellations emphasizing various characteristics. A 2002 Swedish team performed a molecular phylogenetic study based on DNA sequencing that suggests widespread parallel evolution and reversals – or possibly the effects of reticulations.

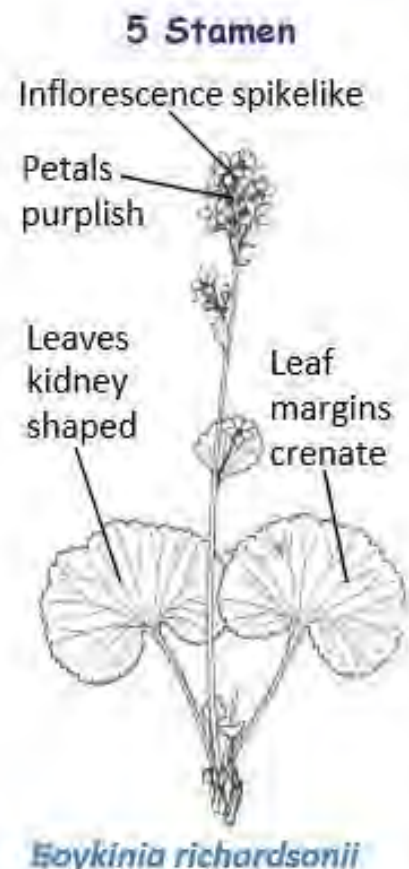
***Boykinia richardsonii***

In February, Verna Pratt led a discussion on the large-leaved species in the Saxafrage family, known as the "Alaska Boykinia", "bear flower" or "Richardson's brookfoam".

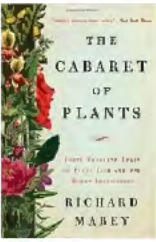
- *Boykinia* honors Dr. Samuel Boykin (1786-1848), physician, botanist and naturalist from Georgia. He was the discoverer of several species of flowers and shells that bear his name. He was one of the many collectors who sent significant numbers of plant samples to John Torrey and Asa Gray.
- The species *richardsonii*: honors Sir John Richardson (1787-1865), a Scottish naturalist, meteorologist, doctor, cartographer and Arctic explorer. From Leonard Huxley's *Life and Letters of JD Hooker*: "Sir John Richardson (knighted 1846) saw much active service as naval surgeon, 1807-15, then returned to Edinburgh and took his M.D., at the same time studying botany and mineralogy. He was Naturalist to Sir John Franklin on two Arctic expeditions, 1819-22 and 1825-27. [Only a handful of the original members of Sir John Franklin's first Arctic expedition returned. John Richardson was one of them. His journal recounts their journey across the Barren Grounds, providing many details not found in Franklin's own 1823 narrative and raising questions about Franklin's ability as a leader. Entitled *Arctic Ordeal, The Journal of John Richardson, Surgeon-Naturalist with Franklin, 1820-1822*, 'His journal made such an outstanding contribution to ornithology, ichthyology, botany, and geology that much of modern Arctic research is founded upon his observations.' From McGill-Queen's University Press]. For the next 10 years he was a physician and surgeon, but in 1848-9, he returned to the arctic and led the expedition in search of Franklin. [Franklin's third Arctic expedition had begun in 1845 and it eventually became clear that it had been lost with no survivors. Richardson could not find any remains of the expedition. He wrote of this in his book *Arctic Searching Expedition*.] His second wife, m. 1833, d. 1845, was a niece of Franklin's. In addition to his works on Polar Zoology and Travel, his special subject was Fishes." Richardson made accurate surveys of more of the coastline of the Canadian Arctic than any other explorer.
- “Richardson’s brookfoam”: The 9 species of *Boykinia* are also known as brookfoams. Brookfoams are glandular rhizomatous creeping perennials with highly lobed or toothed leaves and inflorescences of petite flowers. They are native to North America and Asia.
- “Bear flower”: In the young stage bears like to forage on these plants giving rise to one of its common names.

## Description:

- **Stem:** With dark brown glands, from stout rhizome, thickly covered in old leaf sheaths, and sending out dark brown roots. Usually 12" to 20" tall but can be up to 30".
- **Flower:** July and August, Spike of showy flowers; Individual flowers arise from the axils of the stem leaves, which are reduced as the stem is ascended, strongly nerved petals, white or pink especially at base, maroon sepals.
- **Leaves:** Basal, large, 2" to 4", kidney shaped, on long stems, with shallow lobes and teeth, coarse looking, nerves below have scattered coarse hairs, stem leaves smaller. Leaves turn an attractive copper color after the first frosts.
- **Habitat:** Subalpine forest, tundra meadows, on edges of snowfields, along creeks.
- **Global Range:** Central-NW Alaska, W Yukon; endemic.



# FROM OUR BOOKSHELVES



## **The Cabaret of Plants: Forty Thousand Years of Plant Life and the Human Imagination by Richard Mabey January 2016**

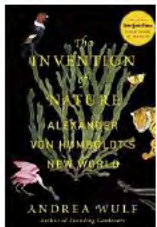
*The Cabaret of Plants* is a globe-trotting exploration of the relationship between humans and the kingdom of plants by the British naturalist Richard Mabey.

Highly entertaining...Without being sentimental about it, Mr. Mabey gets us to look at life from the plants' point of view. His science is sound, he's witty, and his language is engaging." —Constance Casey, *New York Times*

Each section opens with a brief essay presenting a theme—e.g., “How To See A Plant,” “The Shock of The Real: Scientists and Romantics,” “The Victorian Plant Theatre”—followed by an exploration of specific plants. The author ranges across the globe from the Himalayas to Madagascar to the Amazon to our own backyards. He ranges through the work of writers, artists, and scientists such as da Vinci, Keats, Darwin, and van Gogh and across nearly 40,000 years of human history: Ice Age images of plant life in ancient cave art and the earliest representations of the Garden of Eden; Newton's apple and gravity, Priestley's sprig of mint and photosynthesis, and Wordsworth's daffodils; the history of cultivated plants such as maize, ginseng, and cotton; and the ways the sturdy oak became the symbol of British nationhood and the giant sequoia came to epitomize the spirit of America. Numerous drawings and photographs enhance the book.

What Mabey does best is invite readers to think about plants in a radical new way, even posing the question as to whether a plant's sensory abilities—electrostatic charges, chemical communication through pheromones and bio-acoustic sound waves—actually constitute intelligence.

Richard Mabey has often been described as Britain's greatest living nature writer. He is the author of some thirty books including the bestselling plant bible *Flora Britannica*, *Food for Free*, *Turned Out Nice Again*, *Weeds: the Story of Outlaw Plants* and *Nature Cure* which was shortlisted for the Whitbread, Ondaatje and Ackerley Awards. His biography, *Gilbert White* won the Whitbread Biography Award.



## **"The Invention of Nature. Alexander von Humboldt's New World"**

**By Andrea Wulf Knopf Publishing September 15, 2015**

"The Invention of Nature" reveals the extraordinary life of the visionary German naturalist Alexander von Humboldt (1769-1859) and how he created the way we understand nature today. Though almost forgotten today, his name is everywhere from the Humboldt Current to the Humboldt penguin.

Humboldt was an intrepid explorer and the most famous scientist of his age. His restless life was packed with adventure and discovery, whether climbing the highest volcanoes in the world, paddling down the Orinoco or racing through anthrax-infested Siberia. Perceiving nature as an interconnected global force, Humboldt discovered similarities between climate zones across the world and predicted human-induced climate change. He turned scientific observation into poetic narrative, and his writings inspired naturalists and poets such as Darwin, Wordsworth and Goethe but also politicians such as Jefferson. Wulf also argues that it was Humboldt's influence that led John Muir to his ideas of preservation and that shaped Thoreau's 'Walden'. Wulf traces Humboldt's influences through the great minds he inspired in revolution, evolution, ecology, conservation, art and literature. In *The Invention of Nature* Wulf brings this lost hero to science and the forgotten father of environmentalism back to life.

ANDREA WULF was born in India and moved to Germany as a child. She lives in London, where she trained as a design historian at the Royal College of Art. She is the author of *Chasing Venus*, *Founding Gardeners*, and *The Brother Gardeners*, which was long-listed for the Samuel Johnson Prize and awarded the American Horticultural Society Book Award. She has written for *The New York Times*, the *Financial Times*, *The Wall Street Journal*, and the *Los Angeles Times*. She appears regularly on radio and TV, and in 2014 copresented *British Gardens in Time*, a four-part series on BBC television.

# From What We Gather - Around the Web

## [The Native Plant Network](#)

Establishing in 2001, the goal of the Native Plant Network is to provide technical and practical information on the growing and planting of North American (Canada, Mexico, and US, including US insular areas in the Caribbean and Pacific) native plants for restoration, conservation, reforestation, landscaping, roadsides, and so on. The Network includes the [Native Plants Journal](#) and the [Propagation Protocol Database](#).

Funding to initiate the Network came from the USDA Forest Service, State & Private Forestry; Ducks Unlimited Canada; Cooperative Ecosystems Studies Units National Network; and the University of Idaho. Experts from USDA Forest Service, Agricultural Research Service, and Natural Resources Conservation Service; Department of Interior Bureau of Land Management; and the University of Idaho developed the initial format and goal of the *Native Plants Journal*. Funding to continue the Native Plant Network comes from the US Forest Service through the National Center for Reforestation, Nurseries, and Genetic Resources, which is supported by State & Private Forestry, National Forest System, and Research & Development.

Native Plants Journal was first published in 2000 as a cooperative effort of the USDA Forest Service and the University of Idaho. The impetus was a perceived need for a journal dedicated to the practical aspects of growing and planting North American (Canada, Mexico, and US and US insular areas) native plants. The primary goal was to publish in a format that included both refereed research and general technical articles to encourage "cross pollination" between researchers and field workers.

Now published through the University of Wisconsin Press, the goal remains the same: provide technical and practical information on the growing and planting of North American native plants for restoration, conservation, reforestation, landscaping, roadsides, and so on. Annual subscriptions include access to all journal content.

The journal thrives on contributions from scientists, academics, field personnel, nursery managers, and others concerning all aspects of growing and planting native plants. Papers are published either refereed or general technical. Please [contact the editor](#) if you have questions about making a contribution.

## Endangered Cacti

Thirty-one percent of all known cactus plants (1478 species assessed) are threatened with extinction, according to an extensive [report](#) published in *Nature Plants* in October 2015.

The situation is so bad that cacti now outpace both mammals and birds on the "Endangered Species" list which is compiled by the International Union for Conservation of Nature.

The most significant threat processes comprise land conversion to agriculture and aquaculture, collection as biological resources, and residential and commercial development. The dominant drivers of extinction risk are the unscrupulous collection of live plants and seeds for horticultural trade and private ornamental collections, smallholder livestock ranching and smallholder annual agriculture. The authors suggest that their study demonstrates that global species assessments can be undertaken for major plant taxa (groups) with relatively moderate resources, and highlight different conservation priorities and actions to those derived from species assessments of key animal groups.



## ANNUAL MEMBERSHIP APPLICATION/RENEWAL

The Alaska Native Plant Society was organized in 1982 by an enthusiastic group of amateur and professional botanists. It is a non-profit educational organization with the goal of uniting all persons interested in the flora of Alaska. Membership is open to any interested individual or organization. If you wish to join us, please indicate the category of membership you desire, fill in the form below and mail it with the appropriate remittance to:

**Alaska Native Plant Society,  
P.O. Box 141613,  
Anchorage, AK 99514**

STATUS  New  RENEWAL

### CATEGORY

- |                          |                   |      |
|--------------------------|-------------------|------|
| <input type="checkbox"/> | Full-time Student | \$12 |
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**Membership is on a calendar year basis.**

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