Volume 4, Issue 3, 2006

Northwest Native Plant Journal

A Bi-Monthly Web Magazine

(formerly NW Native Plant Newsletter)

Rock Cress--Rare Native / Perennial

The 'Milkweed Phenomenon

Native plant resources on the internet

Published by The Wild Garden: Hansen's Northwest Native Plant Database

### Northwest Native Plant Journal

### A Bi-Monthly Web Magazine

(formerly NW Native Plant Newsletter)

### **Departments**

About this Journal3
On the Cover4
Rare Plant Puzzle
Name this plant!5
Garden chores to do now6
Garden chores to do now6 Sparky's Corner7



### **Contents**

NW Native Rock Cress	
Photos by Don Eastman	9
What is Cress?	
Mustard family members	.15
Camas	
Poetry in the wild	.28
The edibility factor	
Safe to eat or not	31
Native Plant Resources	
Information on the Web	40

Jennifer Rehm, Editor, author, webmaster for The Wild Garden: Hansen's Northwest Native Plant Database website: www.nwplants.com; e-Mail: chillipepper6@comcast.net

All rights reserved. This entire publication Copyright © 2012 The Wild Garden: Hansen's Northwest Native Plant Database. No part of this work may be reproduced or used in any form or by any means--graphic, electronic, or mechanical--without the written permission of Jennifer Rehm, The Wild Garden, except for reviewers who may quote brief passages. Any request for photocopying, recording, taping or information storage and retrieval systems of any part of this publication shall be directed in writing to the publisher: Jennifer Rehm, The Wild Garden: Hansen's Northwest Native Plant Database.

# About this Web Magazine

This Journal was created under the direction of Wally Hansen – a dedicated Grower, Aficionado and Passionate Lover of Northwest Native Plants.

This Journal is not 'commercial.' Our goals are:

- A To generate interest, even passion, concerning the magnificent Native Plants of the Pacific Northwest.
- B To help you create your own Native Plant Gardens, large or small, for home or work.
- C To help you propagate and "grow on" those species that interest you the most.
- D To inform both Home Gardeners and interested Professionals of many disciplines concerning trends and news items from my little corner of the world.
- E To help the reader enjoy native plants more by understanding the historical and cultural role of native plants (i.e.—use by Native Americans, Pioneers, Early Botanists, etc.).

Serviceberry (Amelanchier alnifolia) Botanical painting by Heidi D. Hansen





## On the Cover

### Milkweed

This is one of those plants that generates lots of conversation about whether it is edible or not, or invasive or not. One fact that is not disputed is that Monarch butterflies depend on it for survival. Their larvae eat this plant and, in fact, it's the only thing they eat. Because of the unsettled dispute about whether Milkweed is invasive or desirable, many gardeners have decided to err on the side of safety and decimate milkweed wherever they find it. Other gardeners of the opposite viewpoint plants lots of them and carefully tend them, hoping for a bumper crop of Monarch butterflies.

A dear friend of mine lives in a house that was named "Milkweed Cottage" by a previous owner. She celebrates this lovely home by growing a modest bed of Milkweed to honor the lady who named her abode.

We're not taking sides in either debate--edibility or invasivity. We enjoy the photograph of this plant and present it as our cover of this issue of the journal in the hope that it may bring interest and curiosity and knowledge about Northwest Native Plants.



Milkweed (Asclepias) Photo by JoAnn Onstott



# Rare plant puzzle



Photo © Donald C. Eastman

### Name this plant!

A clue to help you on your quest for the correct answer:

"I bloom from March into July - I like 'Douglas.' My bright scarlet nodding bells are spotted with yellow - I am beautiful - Treat me with respect, please!"

Send me an email with the correct botanical name of this plant. A small prize to those who correctly identify by May 10, 2006.

Good luck! Wally

### Answer to last Journal's puzzle:

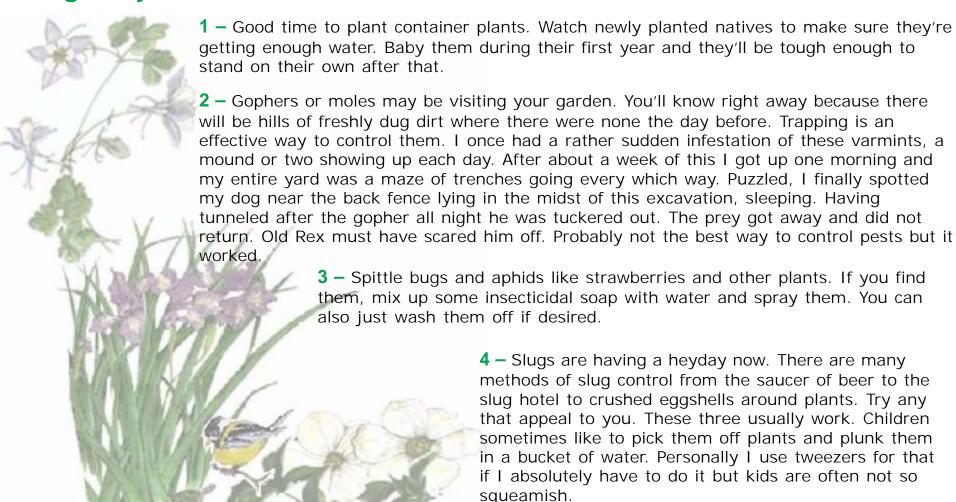
Ivesia rhypara (Grimy ivesia)

Congratulations to all who correctly answered!



### To Do List

### Caring for your NW Native Plant Garden



# Sparky's Corner

### A special message from our frisky contributor

It's scampering time again, a favorite activity of squirrels. We scamper here, we scamper there, always busy chasing and investigating and thoroughly enjoying ourselves.



We love to jump through the trees. Sometimes we aim for a branch in the next tree but we miss and fall down--OW! It hurts but not too much. That's one reason our tails are so big. They are our built-in parachutes! We just land on them and usually bounce right back up. Bet you thought our tails were just for looking good. Well, that too.

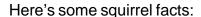
The first thing we do when we wake up in the morning is groom ourselves so we are presentable. You never ever see a squirrel looking all messy. Then we go scout out some breakfast. Today I had some acorns I buried last fall. They were delicious. Then I had some fun flying through the trees and talking to my buds (that's what I call my friends). We did a spring dance in the oaks, sort of like a jitterbug but more smooth. Now it's late afternoon and time for me to write up my journal entry.

The nursery is full of flowers right now and the bees are having a party. They do that every year, buzz buzz buzz all over the place. They're not happy until they visit every blossom. Then they go back to the hive to deposit the catch and then it's back to the flowers. Busy is what they are!

## Sparky's Corner, continued

There are some new squirrels in the neighborhood! Little bitty squirrel babies! They are so tiny, they hardly look like squirrels. Momma squirrels are very good to the little ones. They feed them and keep them warm and make sure they're OK. Sometimes baby birds fall out of their nests but squirrels hardly ever do.

Know what to do if you find a baby squirrel on the ground? Don't touch it with your bare hands because it might be sick or it might have bugs or something that could hurt you. First see if you can locate the nest. If you can find the nest, put the baby back in it. If not, carefully pick it up and put it in a box at the base of the tree nearest where it was found. Keep a close eye on it for an hour or so to protect it from harm--dogs or cats or curious children for instance. Lots of times it's mother will come and get it. If she doesn't come for it in an hour, call a veterinarian's office or Humane Society and ask for the number of the closest rehabilitation people. Taking care of baby animals is not a job for beginners without a lot of help. These folks will tell you just what to do until they can come rescue the baby. They'll help treat it if it's injured and care for it until it can be re-introduced to it's natural world. Wild animals are not pets, but sometimes they need some two-legger help until they can go back to being wild. This also goes for baby birds.



The biggest squirrel in the world is the Ratufa (ratufa indica), sometimes called the Indian giant squirrel. These boys and girls can grow up to 3 feet long! They live in Asia and parts of Nepal.



The smallest squirrel is the African Pygmy (myosciurus pumilo). Only 5 inches long including the tail, the little ones live in Southeastern Nigeria, Cameroon and Gabon.

That's all I have for today. Come out to the nursery. We'd love to see you. If the weather's sunny, maybe my buds and I will put on a show for you!

Sparky

### NW Native Rock (garden) Star

### Photographic study of Rock Cress by Donald C. Eastman

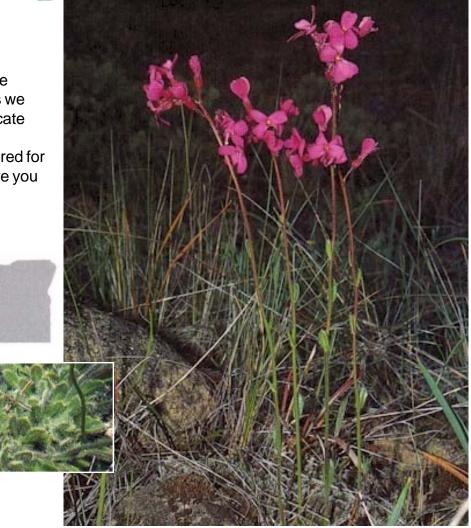
Rock Cress is a perennial or biennial plant, several varieties of which are native to Oregon. These are not large plants, and grow naturally in areas we strive to imitate with our rock gardens. The Rock Cress group have delicate flowers, mostly in bright pink to rose to purple shades. Most are rare or endangered in the wild and it is unusual to find nursery-grown plants offered for sale. If you find some, do consider them for your rock garden. They'll have you tickled pink with their colorful flowers, and the basal leaves are lovely.

### Waldo Rock Cress (Arabis aculeolata Greene)

Mustard Family (Brassicaceae)

Found in serpentine soil in southwestern Oregon, chiefly in Josphine and Curry counties, extending into northern California, this plant is considered to be rare in both Oregon and California.

Arabis aculeolata grows to fifteen inches tall. It has a rosette of small (one-half to one inch long) basal leaves that are thickly covered by coarse simple and branched hairs. The stem leaves are also small, sessile, seeming to hug the stem, and less hairy than the basal leaves. The raceme is short, maybe six to eight lovely deep rose-purple, four-petaled flowers. Even the calyx is deep red. The seed pods (siliques) are straight and erect, up to two and one-half inches long. It blooms from April to June.



Photos, description and distribution map © Donald C. Eastman

### Brewer's Rock Cress (Arabis breweri Wats.)

Mustard Family (Brassicaceae).

Found only in southern Jackson and Josephine counties, Oregon, and in northern California, it is presently considered to be secure within its narrow range.

Arabis breweri grows up to twelve inches tall, has basal leaves up to an inch in length, which are entire or fewtoothed, and heavily ciliated with three-forked hairs. The petals are purplish-red, three-eighths of an inch long; the sepals, also purple, are about one-eighth of an inch long. It blooms from April to June.



Photo, description and distribution map © Donald C. Eastman



### Koehler's Rock Cress (Arabis koehleri Howell var. koehleri)

Mustard Family (Brassicaceae).

This very rare rock cress is known only from a few rocky cliff sites in the vicinity of Roseburg, where it is considered to be endangered throughout it's range.

Arabis koehleri var. koehleri is an unusual rock cress in that it is a small shrub rather than an herb. It grows to about eight inches tall with the flower stems extending another six inches. The flowers have bright, purple-red flower petals, each about one-half an inch long. It blooms early in April.





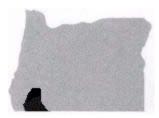
Photo, description and distribution map © Donald C. Eastman

### Koehler's Stipitate Rock Cress (Arabis koehleri Howell var. stipitata Rollins).

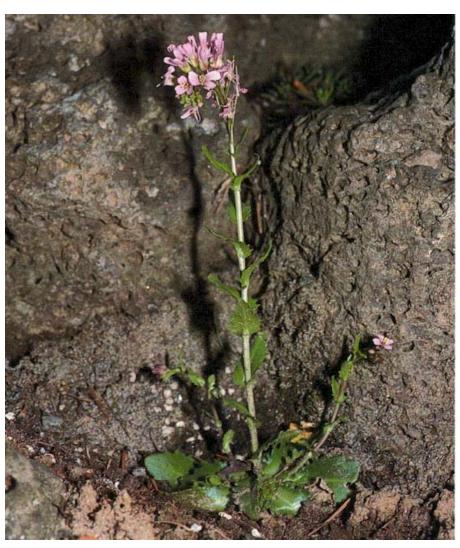
Mustard Family (Brassicaceae).

This variety is found in serpentine soil in Josephine and Curry counties in Oregon, and south into northern California. It is currently stable but could become threatened in Oregon in the foreseeable future. Though it is considered to be a variety of *Arabis koehleri*, it is morphologically quite different. It is not a shrub as is *Arabis koehleri var. koehleri*, although its base is somewhat shrubby.

Arabis koehleri var. stipitata, as the name implies, is "stipitate," meaning the pistil (and subsequently the fruit) is supported by a short stalk (stipe). The flowers are purplish-red, with petals that are one-half inch long, and siliques (fruits) that are three inches long, erect, or spreading. The basal leaves are numerous, and pubescent with star-like hairs. The upper portion of the stem is usually hairless. It blooms March and April.



Photo, description and distribution map © Donald C. Eastman

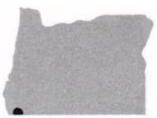


## McDonald's Rock Cress, also known as Red Mountain Rock Cress (*Arabis macdonaldiana Eastw.*).

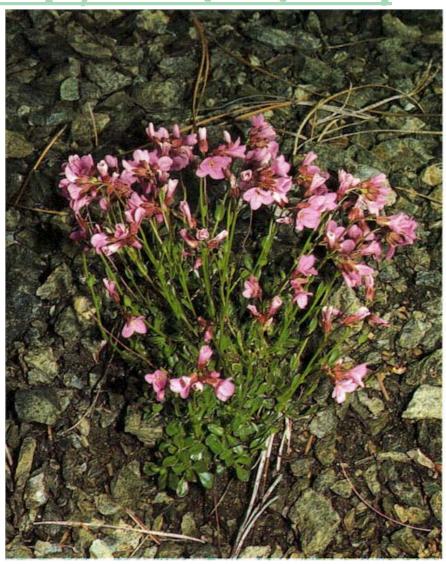
Mustard Family (Brassicaceae).

There is much confusion at this time as to the validity of this name for the species found in Curry County, Oregon. Some argue that the only true *Arabis macdonaldiana* is the one found on Red Mountain in California, and that the one in Oregon is a new species, simply being referred to as *Species novum*. *Arabis macdonaldiana* is listed Federally as endangered. *Species novum* in Oregon, whatever its name, is considered to be threatened throughout its range.

Characteristic of this plant are its rose-purple petals, each about three-eighths of an inch long, its spatulate basal leaves which are three-quarters of an inch in length, shiny, and hairless with one or two teeth on each margin, and its siliques that are about one and one-half inches long. It blooms in April.



Photo, description and distribution map © Donald C. Eastman

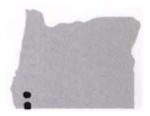


### Rogue Canyon Rock Cress (Arabis modesta Rollins).

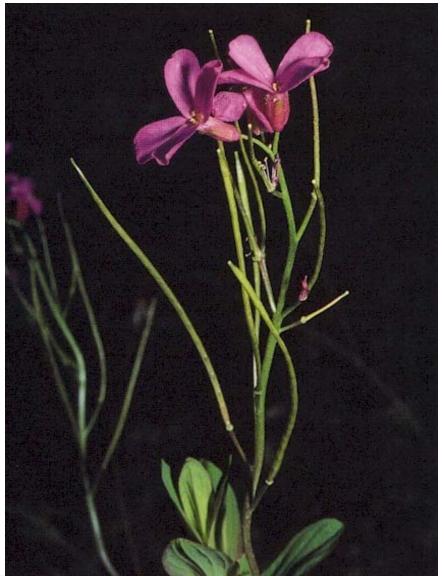
Mustard Family (Brassicaceae).

This rare, possibly threatened rock cress is known only from the Rogue River canyon near Galice, Josephine County, Oregon, and perhaps a few isolated locations in California.

Arabis modesta is an herb growing to twenty inches tall, with numerous basal leaves that are stemmed and are up to two and one-half inches covered with very small, appressed, four-parted hairs. The stem is hairless; the stem leaves (one inch long) are sessile but not auriculate. The flowers are pinkish-purple and have petals about one-half inch long. The fruits (siliques) are two inches long, ascending and hairless. It may be found blooming in April and May.



Photo, description and distribution map © Donald C. Eastman





## What is "Cress?"

### Herbal information on this group of plants of the family Cruciferae

My mother talks sometimes about eating Water Cress when she was a girl growing up in the Appalachian Mountains. She and her sisters loved exploring the woods around their home, and she was especially fond of Water Cress that they found growing along a mountain stream up above their place. They would gather a bunch of it and

take it home and their mother put it into salad, along with lettuce she grew in the kitchen garden and some young dandelion greens they picked in early spring. She said the flavor was fresh and peppery and made the salad taste delicious.

I began searching for more information about this herb so loved by my mother and found it is related to the Rock Cress in Don's photos in the previous article in this journal.

### From Wikipedia, the free encyclopedia

Cress can refer to several edible members of the family Brassicaceae used as leaf vegetables including watercress, land cress (also known as Belle Isle cress, Early yellowrocket, American cress, dryland cress, upland cress, cassabully, creasy salad, Early winter cress, American cress and American watercress), garden cress (also known as garden pepper cress, pepper grass or pepperwort), winter cress (also known as Yellow rockets, Barbarea) and rock cress.



Watercress photo from website www.prodigalgardens.com

From an online dictionary, Hyperdictionary, <a href="http://www.hyperdictionary.com/dictionary/cress">http://www.hyperdictionary.com/dictionary/cress</a>

Meaning of CRESS

Pronunciation: kres

1. Definition: [n] pungent leaves of any of numerous cruciferous herbs

2. [n] any of various plants of the family Cruciferae having edible pungent-tasting leaves

Synonyms: cress plant

Definition: \Cress\ (kr[e^]s), n.; pl. {Cresses} (kr[e^]s"[e^]z). [OE. ces, cresse, kers, kerse, AS. cresse, cerse; akin to D. kers, G. kresse, Dan. karse, Sw. krasse, and possibly also to OHG. chresan to creep.] (Bot.)

A plant of various species, chiefly cruciferous. The leaves have a moderately pungent taste, and are used as a salad and antiscorbutic.

Note: The garden cress, called also {peppergrass}, is the {Lepidium sativum}; the water cress is the {Nasturtium officinale}. Various other plants are sometimes called cresses.

To strip the brook with mantling cresses spread. —Goldsmith.

{Bitter cress}. See under {Bitter}.

A river of Watercress Photo from www.prodigalgardens.com

{Not worth a cress}, or {"not worth a kers."} a common old proverb, now turned into the meaningless "not worth a curse." —Skeat.

From Thomas J. Elpel's Wildflowers & Weeds Home Page, <a href="http://www.wildflowers-and-weeds.com/Plant\_Families/Brassicaceae.htm">http://www.wildflowers-and-weeds.com/Plant\_Families/Brassicaceae.htm</a>

Mustard Family (also known as Cruciferae)

Key Words: 4 petals and 6 stamens—4 tall and 2 short.

Mustard flowers are easy to recognize. If you have a radish or turnip blooming in the garden, then take a close look at the blossoms. When identifying flower parts, it is best to start on the outside of the flower and work towards the middle like this: sepals, petals, stamens, and pistil(s).

On the outside of the mustard flower you will see 4 sepals, usually green. There are also 4 petals, typically arranged like either the letters "X" or "H". Inside the flower you will see 6 stamens: 4 tall and 2 short. You can remember that the stamens

pistil 4 petals 4 sepals 4 tall stamens 2 short stamens Patterns of the Mustard Family Mustard seed pods come in many shapes and sizes, but always occur on the plant in Wall Flower The seed pods the same radial pattern around the stalk, a split open from "raceme". both sides to expose a clear membrane in the middle.

are the male part of the flower because they always "stay men". The female part is the pistil, found at the very center of the flower.

⇒ More⇒





### Thomas J. Elpel's Wildflowers & Weeds, continued

For the purposes of the Mustard family, all you need to remember is "4 petals with 6 stamens—4 tall and 2 short". If you find that combination in a flower, then you know it is a member of the Mustard family. Worldwide there are 375 genera and 3200 species. About 55 genera are found in North America.

All species of Mustard are edible, although some taste better than others. In other words, it doesn't matter which species of mustard you find. As long as you have correctly identified it as a member of the Mustard family, then you can safely try it and see if you want it in your salad or not.

Most members of the Mustard family are weedy species with short lifecycles like the radish. Look for them in disturbed soils such as a garden or construction site, where the ground is exposed to rapid drying by the sun and wind. The Mustards sprout quickly and grow fast, flowering and setting seed early in the season before all moisture is lost from the ground.

Also be sure to look closely at a Mustard seedpod, called a silicle or silique, meaning a pod where the outside walls fall away leaving the translucent interior partition intact. They come in many shapes and sizes, as you can see in the illustration, but they always form a raceme on the flower stalk, which looks something like a spiral staircase for the little people. With practice you can easily recognize the mustards by their seed stalks alone, and from fifty feet away. Identification by the seed stalks is helpful since many of the flowers are too small to peer inside and count the stamens without a good hand lens.

Top, Arabis spp. Rock cress, Pony, Montana Bottom, Nasturtium officinale. Watercress. Introduced from Eurasia. Watercress is most often found in the water from fresh springs, where it continues to grow all winter long, no matter the weather above the water.

### Thomas J. Elpel's Wildflowers & Weeds, continued

Interestingly, six of our common vegetables—cabbage, cauliflower, kohlrabi, Brussels sprouts, broccoli, and kale—were all bred from a single species of mustard, Brassica oleracea. Plant breeders developed the starch-storage abilities of different parts of the plant to come up with each unique vegetable. Commercial mustard is usually made from the seeds of the black mustard (B. nigra) mixed with vinegar.

As you become more familiar with this family, you will begin to notice patterns in the taste and smell of the plants. While each species has its own unique taste and smell, you will soon discover an underlying pattern of mustardness. You will be able to recognize likely members of the family simply by crushing the leaves and smelling them.

Notice the similarity in the flowers and the way they are attached to the flower stalk in each of the pictures.

Top, Hesperis matronalis. Sweet Rocket. Escaped from cultivation. Pony, Montana.

Bottom, Erysimum spp. Wall Flower. Near Denver, Colorado.





From Plants for a Future, <a href="http://www.pfaf.org/index.html">http://www.pfaf.org/index.html</a>



Cress: It is hardy to zone 5 and is not frost tender. It is in flower from March to May, and the seeds ripen in June. The flowers are hermaphrodite (has both male and female organs) and are pollinated by Bees, Lepidoptera (Moths & Butterflies). The plant is self-fertile.

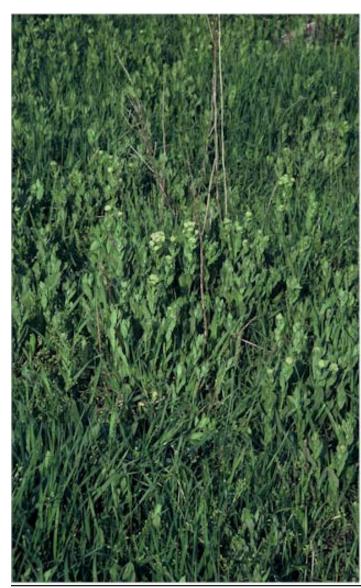
The plant prefers light (sandy) and medium (loamy) soils and requires well-drained soil. The plant prefers acid, neutral and basic (alkaline) soils. It can grow in semi-shade (light woodland) or no shade. It requires moist soil.

Habitats: Cultivated Beds; East Wall In; South Wall In; West Wall In;

Edible Parts: Young leaves - cooked or raw[105, 177]. An agreeable cress-like flavour[183]. Flowers - raw or cooked[105, 177]. A cress-like flavour[183].

There is no more explanation here about "cress-like flavour" so we can draw our own conclusions? Since Watercress and Mustard are both peppery, perhaps that is the meaning of this description.





Plants for a Future lists these references for their discussion of the edibility of Cress:

[105] Tanaka. T. Tanaka's Cyclopaedia of Edible Plants of the World. Keigaku Publishing 1976

The most comprehensive guide to edible plants I've come across. Only the briefest entry for each species, though, and some of the entries are more than a little dubious. Not for the casual reader.

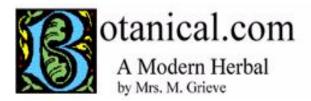
[177] Kunkel. G. Plants for Human Consumption. Koeltz Scientific Books 1984 ISBN 3874292169

An excellent book for the dedicated. A comprehensive listing of latin names with a brief list of edible parts.

[183] Facciola. S. Cornucopia - A Source Book of Edible Plants. Kampong Publications 1990 ISBN 0-9628087-0-9 Excellent. Contains a very wide range of conventional and unconventional food plants (including tropical) and where they can be obtained (mainly N. American nurseries but also research institutes and a lot of other nurseries from around the world.

Hoary Cress Photo from website of the Hoary Cress Consortium www.sidney.ars.usda.gov

From Botanical.com, A Modern Herbal by Mrs. M. Grieve



#### Watercress

Botanical: Nasturtium officinale

Family: N.O. Cruciferae

--Parts Used---Leaves, flowers, seeds.

—Habitat—-Europe and Russian Asia.

—Description—-A hardy perennial found in abundance near springs and open running watercourses, of a creeping habit with smooth, shining, brownish-green, pinnatifid leaves and ovate, heart-shaped leaflets, the terminal one being larger than the rest. Flowers small and white, produced towards the extremity of the branches in a sort of terminal panicle.

Watercress has also been used as a specific in tuberculosis. Its active principles are said to be at their best when the plant is in flower.



Mrs. Grieve includes this caution: Bear in mind "A Modern Herbal" was written with the conventional wisdom of the early 1900's. This should be taken into account as some of the information may now be considered inaccurate, or not in accordance with modern medicine.

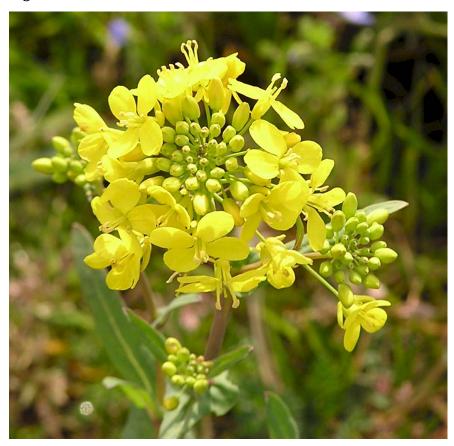
Most, if not all, of the Cress's are in the same family as mustard which grows wild all across North America and most of the known world. It is said that Spanish padres scattered mustard seed to mark the trail as they travelled from mission to mission. They knew the plant reproduces so quickly that it would help them find their way back. In Ancient Rome, mustard was used as flavoring and for medicine. In the Bible, Matthew 13:13, there is comparison of a grain of mustard seed to the kingdom of heaven. Mustard was raised in Paris as a cash crop in 800 A.D. Vasco da Gama brought mustard along on his first voyage around the Cape of Good Hope in 1497. Mustard is known as the Spice of Nations because of it's universal usage.

Today you can buy mustard in the grocer's spice aisle. This is nothing but ground seeds of mustard, and it's discovery is attributed to a Mrs. Clements of Durham, England. She ground the seeds and sold the ground product as Durham Mustard. She turned a tidy profit with this cottage business. There was even a Mustard Club in 1926 that urged it's use for healing through eating and also bathing in it.



Field of mustard Photo by Jennifer Rehm

Nutritionally, mustard contains large amounts of beta carotene and vitamin C that are important antioxidants. Although scientists do not fully understand how, these vegetables seem to have cancer-preventive properties. The greens are also a source of calcium, important to lactose intolerant individuals. Mustard greens also contain a significant amount of iron.



Mustard closeup by Jennifer Rehm

Nutrition Facts (1/2 cup cooked mustard greens)

Calories 11
Dietary Fiber 1.4 grams
Protein 1.6 grams
Carbohydrates 1.5 grams
Vitamin A 2121 IU
Vitamin C 18 mg
Folic acid 130 micrograms
Calcium 52 mg
Iron 0.5 mg
Potassium 140 mg

There are 3 species of mustard grown for their seeds:

- -White Mustard (Brassica alba or Brassica hirta) has milder flavour and good preservative qualities and is most commonly used in ballpark mustard and in pickling.
- -Black Mustard (Brassica nigra) is the most pungent of the three.
- -Brown Mustard (Brassica juncea) is more pungent than the white, less than the black.

The seed itself has no aroma but the flavour is sharp and fiery. 

→ More→

My personal favorite of the commercially available ground mustards is Coleman's Mustard which began a contract farming operation in 1878, still a practice on Canada today. The Coleman's tin is appealing and there was a recipe on the side that I have used for years.

### **Sweet Hot Mustard (Colemans)**

- · 1/4 cup Colemans Mustard
- 1 1/2 Tbs cornstarch
- · 1/2 tsp salt
- · 1/4 cup sugar
- · 2/3 cup water
- · 1/3 cup vinegar
- · Mix mustard with a little water and let stand
- Mix cornstarch, sugar, salt with remainder of water until smooth
- Add vinegar and cook over low heat stirrring contsantly for 5 minutes
- · Remove from heat and cool
- · Add mustard and mix well

### Makes 1 cup

Warning: Mustard is seriously spicy and when cooking, be very careful of the fumes arising from the pot--they'll sear your nose! I was cooking up a batch of this once when a friend stopped by to visit. He was sure I was making horseradish because the aroma was so similar to that herb and the mustard was quite as powerful as horseradish. It took a demonstration of the recipe to convince him it was simply mustard!



Every family, it seems, has a less than reputable member and Brassicaceae is no exception. Hoary Cress has been declared detrimental in most states. Here is what the State of Washington Noxious Weed Control Board says about Hoary Cress (their website is http://www.nwcb.wa.gov/weed%20info/Cardaria\_draba.html:



Hoary Cress (Cardaria draba (L) Desv.)

Family: Brassicaceae (Cruciferae)

<u>Description and Variation</u>: Hoary cress is a perennial plant with a spreading root system from which many aerial shoots are produced. The stem is 30-60 cm, erect to occasionally nearly procumbent. The basal leaves are irregularly dentate to entire with scattered to dense pubescence. The middle and upper leaves are sparsely pubescent to glabrous, obovate, elliptic-oblong or lanceolate, irregularly toothed to nearly entire. The flowers are white and the seed pods are heart shaped.

Economic Importance: Detrimental - Cardaria draba is the most weedy of all three Cardaria species occurring in the United States. It has the potential to reduce the value of high-price wheat lands. Beneficial - The flowers of hoary cress serve as pollen and nectar sources for many insects.

Geographical Distribution: Hoary cress is native to the Balkans, Georgia, Armenia, Azerbaijan, Irkutskaya Oblast, Turkey, Israel, Syria, Iraq, and Iran. It is widely introduced and is naturalized throughout Europe and all other continents.

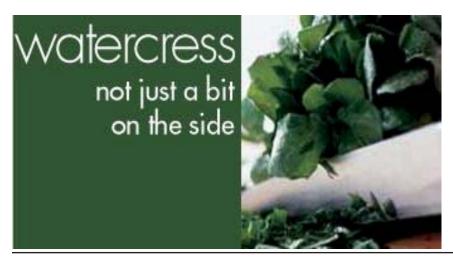
Hoary Cress Photo from Idaho's BLM website

### From State of Washington Noxious Weed Control Board, continued

<u>Habitat</u>: Hoary cress is a significant hazard to crop production under moist conditions and on irrigated land, but is unlikely to be a problem in arid areas. C. draba shows a preference for alkaline soils, but does well on a variety of soils where moisture conditions are moderate. It grows under open, unshaded conditions in grain fields, hayfields, sugar beets, vegetable crops, and along roadsides.

<u>History</u>: Hoary cress was first collected in the United States at Long Island, New York in 1862 and Ontario, Canada in 1878. It was probably introduced by early European settlers.

What about that Watercress my mom loved? Peterson and McKenny in their A Field Guide to Wildflowers say it's growth is "widespread" so it may very well grow right here in the Northwest. However, given the difficulty of positively identifying plants growing in the wild and the fact that you never know what manner of poison a wild plant may have been exposed to, I'll buy my Watercress from the market. I've seen it there on occasion. Next time I find it, maybe I'll pick up a bunch and take it to my mom for a surprise.



In the UK, Watercress is often termed a 'superfood.' If you're in England around Alresford in Hampshire area in May, you may want to take in the Watercress Festival.

Read all about British ways with this herb on the website www.watercress.co.uk. The slogan, "Watercress: not just a bit on the side," is quite as delightful as this herb is reputed to be!



## Camas: True Blue

### Northwest Native Treasure brightens the countryside

Three photographs by JoAnn Onstott. Three poems about springtime by William Blake, Robert Browning and Sidney Lanier

### Wild Flower's Song, The by William Blake

As I wandered the forest, The green leaves among, I heard a Wild Flower Singing a song.

"I slept in the earth In the silent night, I murmured my fears And I felt delight.

"In the morning I went As rosy as morn, To seek for new joy; But oh! met with scorn."



# Camas: True Blue, continued

### Pippa's Song by Robert Browning

The year's at the spring, And day's at the morn; Morning's at seven; The hill-side's dew-pearl'd; The lark's on the wing; The snail's on the thorn; God's in His heaven— All's right with the world!



⇒More⇒

The Wild Garden: Hansen's Northwest Native Plant Database

## Camas: True Blue, continued

### Spring Greeting by Sidney Lanier

From the German of Herder.

All faintly through my soul to-day,
As from a bell that far away
Is tinkled by some frolic fay,
Floateth a lovely chiming.
Thou magic bell, to many a fell
And many a winter-saddened dell
Thy tongue a tale of Spring doth tell,
Too passionate-sweet for rhyming.

Chime out, thou little song of Spring, Float in the blue skies ravishing. Thy song-of-life a joy doth bring That's sweet, albeit fleeting. Float on the Spring-winds e'en to my home:

And when thou to a rose shalt come That hath begun to show her bloom, Say, I send her greeting!





# Edible or Not?

### The Milkweek Phenomenon and other thoughts on this deep dilema

The question came up recently of whether or not a particular plant was edible or poisonous. On our website at <a href="https://www.nwplants.com">www.nwplants.com</a> we have a site called Practical Uses of Native Plants which addresses ways you can use natives for edible, household, medicinal, and personal care. On the edible page we show the flowers and fruit of Elderberry as being good to eat. The gardener who wrote to us asked if we were sure this was true, as there are other sources



who state the Elderberry, particularly the Red Elderberry (Sambucus racemosa) is extremely poisonous. They wondered why there are such very different recommendations about this.

Though I thought I knew the answer about the Elderberry, both Red and Blue (Sambucus racemosa and s. cerulea), I undertook several hours of research over a week or so and consulted with some experts I believe in. The consensus of these experts and the results of my research were agreed in one aspect: Both Red and Blue Elderberry flowers and ripe fruit are edible. Further, it was also agreed that caution must be taken not to eat the unripe fruit. Some contend that eating copious amounts of the unripe fruit would be life-threatening and others maintain it would give a severe bellyache. All agree that the roots and seeds were to be avoided,

but the severity of imbibing was in dispute. Some sources felt the stems were quite poisonous but others did not. Apparently children like to use the stems as pea-shooters and adverse reactions had been experienced at some time by some children. This is not documented or proven however.

Blue Elderberry (Sambucus cerulea) fruit and flower This is a composed photo as the fruit does not appear at the same time as the flower

The question about why there are so many different opinions was simpler and at the same time more complex than the Elderberry edibilty issue but it is at the end a simple matter of common sense. There are as many opinions as there are people sharing them. It's a fact of life. If one can think, one can opine. If the subject of these opinions is whether or not eating a weed will kill you, it is better to get some evidence than listen to an opinion. Correctly identifying the plant in question is best of all.

There is a wonderful article called **The Milkweed Phenomenon (You Most Certainly Cannot Believe Everything You Read)** by Sam Thayer which appeared in The Forager, Volume 1, Issue 2, June-July 2001.

The first time that I ate milkweed shoots, it was done with extreme care. I mean, extreme. I knew that the shoots were mildly poisonous when raw and that they would be terribly bitter and still a little toxic if not cooked properly. I knew that I had to boil them in several water changes, making sure that the shoots were covered with boiling instead of cold water - for the use of cold water would "set" the bitter principle in the vegetable. I also knew that this bitterness was caused by a toxic, milky latex. I knew all of this because I had read it in half a dozen books.

Not surprisingly, such elaborate and exacting preparation requirements, with such severe consequences if wrongly performed, caused me to put off trying milkweed for several years. When so many excellent wild vegetables exist, why waste my time with one that is described as "only marginally edible"? Or so I reasoned.



Exploding milkweed pod Photo by Steven Pinker, Professor at Harvard

Nevertheless, one day in early May, responding to some insuppressible forager's curiosity, I brought home a handful of the thick, succulent shoots for a trial. I prepared them meticulously according to the instructions of my several books, then sampled hopefully. They were wonderful! I wanted to thank the genius who had discovered that such a common poisonous and distasteful plant could be made delectable through this

special process. Over the few weeks that followed, I ate milkweed shoots on several occasions, and soon they became one of my favorite vegetables.

Being a "thinking person," Mr. Thayer wondered about the difference between the advice he had heard and his own personal experience in eating the milkweed. He experimented with various water changes and less water changes, even drank some of the water (he said the water was mild and pleasant, like green beans) and finally ate the shoots raw which were "rather tasty." At last he simply tried the milky sap and deemed it "without any noticeable unpleasant flavor. It turned out that our bitter enemy was too much of a coward to even show up."

Convinced the ill reports of milkweed were bogus, Mr. Thayer began a "crusade" to prove without doubt that milkweed was not bitter. He served the cooked shoots to 19 people, then served pods from another area to more than 20 people. He gathered the herb from other areas and served them to around 60 people who had decided beforehand they didn't like milkweed and all of them thought it was fine. In the year 2000, two dishes were served to around 100 people in another state and not only were the dishes well received, but one of them won a cooking contest.



Wapato (Indian Potato) Photo by JoAnn Onstott

So what to make of all this? Mr. Thayer quite eloquently describes his philosophy on this question.



Camas and friend Photo by JoAnn Onstott

But wait! Were all those other authors lying? Telling fibs for the fun of it? I don't think so. Did they misidentify the plant? Probably not. Did they just copy one another, the whole myth originating with one author? Well, that has some truth in it; when one reads such adamant directions one is likely to follow them as I did for several years - and nobody expects such precise instructions to be nonsense. Certainly many authors have repeated the elaborate milkweed preparation recipe and accompanying warnings without testing them, but the idea that milkweed is bitter must come from somewhere. Something strange is going on here, something I have come to call The Milkweed Phenomenon"....which is "when plants of the same species taste remarkably different in different geographic areas. It is important for us to keep in mind that this does indeed occur, for it helps to account for many of the discrepancies that one finds in print, or between literary sources and our own experience. I have many times tasted apples, both on the roadside and from grocery stores, which were terrible. If I thought that all apples tasted like that, I wouldn't recommend them to anyone, ever - but I know better. Apples are an incredibly useful and normally delicious food. Wild plants deserve to be judged by the same criteria and with the same expectations as our domestic crops are.

A further experience adds to this comment:

Dr. Elwood Fisher of Harrisonville, West Virginia, who knows more than a little about plant lore, told me on a walk through the Mountain State, "They say the nuts of the bitternut or yellowbud hickory are too bitter to eat, but I don't think they're all that bitter. They certainly aren't as good as shagbark hickory nuts, but they're not too bitter to eat." That statement caught my attention, because here in northern Wisconsin, yellowbud hickory nuts are certainly too bitter to eat. They taste quite like fresh, unleached red or pin oak acorns, and I wouldn't eat them if I were starving because I think they'd just make me die faster. So I tried one of the West Virginia bitternuts, and indeed, it was a whole lot better than those found where I grew up - good enough that I could even eat one...."

He goes on here about a plant, a variety of which is native here in Oregon:

Another example of the milkweed phenomenon which I remember vividly involved serviceberries (Amelanchier). While I certainly knew that these fruits varied considerably in their flavor, both within and between the several species, not until a few years ago while camping near Grayling, Michigan, had I ever encountered a truly bad serviceberry. On a morning walk I encountered several trees laden with plump, ripe fruit. Delighted, since I had not yet had breakfast, I shoved a handful into my mouth - only to spit it out moments later.



Photo by Jennifer Rehm

⇒More⇒

I tried a few more, just to make sure that I hadn't imagined it. Then I tested several nearby trees. Still, the same repulsive and bitter flavor. Thus, while serviceberries remain among my absolute favorite fruits, I am constrained to admit that at least sometimes they are far from choice.



Wild Ginger (Asarum caudatum) photo by JoAnn Onstott

So what is the reason for this "milkweed phenomenon?" Mr. Thayer's logical conclusions:

It could have to do with regional variation in soil composition, at least in some instances....(but).. A better explanation is something called introgression...(which is)...the mixing of the genes of one species into the gene pool of another through hybridization. While animals can recognize and reject the members of other, similar species in sexual reproduction, plants have no such ability. Their pollen just goes wherever the wind or insects take it, and their sexual organs accept whatever suitable pollen is given to them. In other words. Ms. White Oak can't turn down Mr. Bur Oak just because she thinks he's ugly. Thus plants hybridize more frequently than animals do. While most hybrids are disadvantaged because they cannot compete successfully in the niche of either parent, in a few cases hybrids have a better chance of survival. In such cases one species may "absorb" genes from a relative through repeated hybridization and backcrossing.

The butternut blight does not kill black walnuts. Thus, since the introduction of the disease, butternuts which contain some black walnut genes are more likely to have survived than are those which do not. Since they have some black walnut parentage, they are also more likely to taste like black walnuts. This

could very well be why the butternuts which still stand in West Virginia, where the disease has hit hard, taste much like black walnuts; and why the butternuts in northern Wisconsin, where the disease has not hit as hard and there are no black walnuts to cross with, taste "pure". I have not been able to find any documentation that these two nut trees do indeed hybridize, but it seems likely, and this hypothesis fits the facts that we have.

Whatever the reasons may be for particular instances of the milkweed phenomenon, it is important for us to keep in mind that it does in fact occur. Failure to recognize the regional variation in plant palatability has led to a great deal of confusion and not a little bit of anger. Those of us who are wild food instructors need to communicate with each other regarding our first-hand experiences in particular geographic locations, and those



Oregon Grape photo by JoAnn Onstott



Red Elderberry-poison?

of us who are learning should not hesitate to report when our experiences differ from what we have heard or read. Do not assume that the book is right and you are wrong! It is possible for the book to be wrong, or for both of you to be correct regarding different regions. Today, a distrust of wild food literature is prevalent among the public, and with good reason. Only through effective communication can we change this - so let's start communicating effectively.

A comment that was published at the end of Mr. Thayer's article:

I am seventy-three years of age, having harvested and eaten Connecticut's wild milkweed shoots for over forty years.

Milkweed from Connecticut is not the least bitter - so long as the shoots are harvested in early June - before the initial leaves unfold. If prepared after these little first leaves mature away from the stem - the product becomes bitter. Most interestingly, when properly harvested and cooked only once in boiling water for about as long as one cooks asparagus, the taste and

texture is incredibly similar to asparagus! These delicacies must be watched carefully during early June - it is not easy to be there when the shoots first poke their heads above the ground - if you miss it by a day - you will be bitterly disappointed!

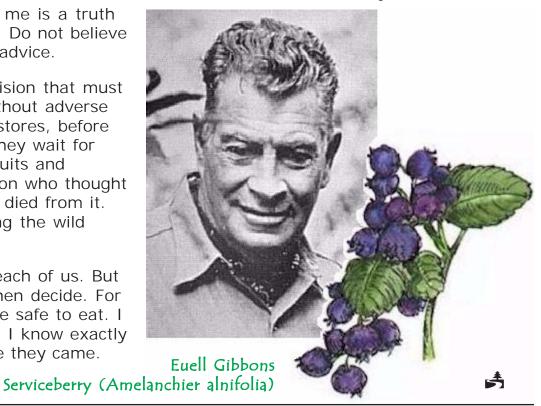
Little known: half the general population achieves a unique urine scent from eating cooked milkweed shoots - as is the case with asparagus. The other half of the population doesn't experience the scent. For the most part, nearly everyone in both population halves is not aware that the phenomena exists..or fails to exist.

Interesting—<u>very</u> interesting. What this article tells me is a truth we can take down many roads throughout our lives. Do not believe everything you read. "Consider the source" is good advice.

Whether to eat wild plants or not is a personal decision that must be made carefully. Many have feasted on weeds without adverse reactions. After all, what did we do before grocery stores, before the FDA? When the pioneers came to Oregon, did they wait for their gardens to grow before they could eat fresh fruits and vegetables? But on the other hand it's many a person who thought they were safe to eat wild harvest and were sick or died from it. Euell Gibbons lived a long and healthful life "stalking the wild asparagus," as have many others.

Eating wild things must be a personal decision for each of us. But be careful. Be cautious. Be sure of identification. Then decide. For myself, I grow my own native plants that I know are safe to eat. I know they have never been exposed to poisons and I know exactly what they are. I also know the nursery from whence they came.

-Richard (Dick) W. Hayward, Connecticut



# Useful Plant Databases on the Web

Here is a good collection of web data bases that will be useful to professional growers and all native plant gardeners. This list is from a larger list compiled by Lawyer Nursery in 2002 and published in one of their flyers. I wish to thank them for this public service.

### Wally

### **American Bonsai Society**

http://www.absbonsai.org/abs\_home.html

#### Bonsai web

http://www.bonsaiweb.com

Portal of links to educate about the art of bonsai.

#### **CalPhotos**

http://elib.cs.berkeley.edu/photos/

Over 33,000 plant images from the University of California, Berkley

### **Cornell University online grafting course**

http://instruct1.cit.cornell.edu/courses/hort494/graftage/hort494.index.html

#### Fire effects on plant species

http://www.fs.fed.us/database/feis/

USDA, Forest Service site.

#### Flora of North America Web Site

http://hua.huh.harvard.edu/FNA/

Taxonomic relationships, distributions, and morphological characteristics of all plants native and naturalized found in North America.



Enthron un oreganium

### Useful Plant Databases on the Web, Continued

#### Bonsai web

http://www.bonsaiweb.com

Portal of links to educate about the art of bonsai.

### Fire effects on plant species

http://www.fs.fed.us/database/feis/

USDA, Forest Service site.

### **Forest Types of the United States**

http://forestry.about.com/library/tree/bltypdex.htm

Maps of the most common forest types.

### **Forestry index**

http://forestryindex.net/

Links to news & info on the forestry industry.

### **Cornell University online grafting course**

http://instruct1.cit.cornell.edu/courses/hort494/graftage/hort494.index.html

### **Growit.com Rooting Database**

http://www.growit.com/Know/Rooting.htm

"Extensive information on rooting cuttings of woody plants, organized by botanical name. Developed for commercial growers."

#### The Native Plant Network

http://nativeplants.for.uidaho.edu/network/

Information on how to propagate native plants of North America.



### Useful Plant Databases on the Web, Continued

### **Woody Plant Seed Manual**

### http://www.wpsm.net/

Manual by the US Forest Service covering seed biology, genetic Improvement of forest trees, seed testing, certification of tree seeds and other woody plant materials, and nursery practices.

#### **River Corridor and Wetland Restoration**

http://www.epa.gov/owow/wetlands/restore/

Environmental Protection Agency (EPA) site

#### Soils

http://homepages.which.net/~fred.moor/soil/links/10102.htm

A website about soil fertility, chemistry, and pH with many interesting links.

### **Soil Science Society of America**

http://www.soils.org/

Website for soil science professionals. Offers information and links.



# Personal notes from Wally

Another spring, another chance – start now.

Build your wonderful garden this year.

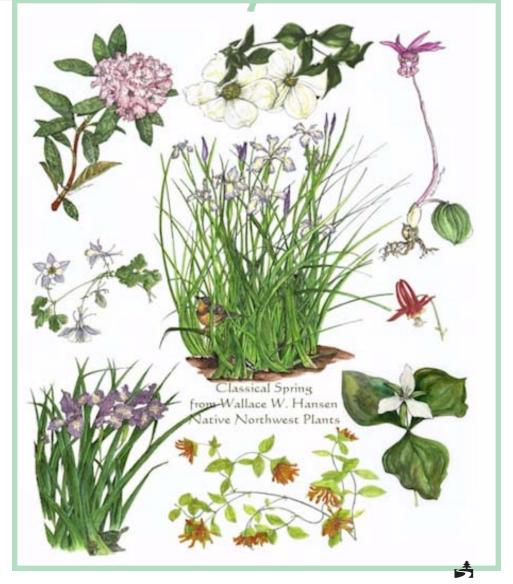
William Wordsworth said it best...

"The World is too much with us; late and soon,
Getting and spending, we lay waste our powers;
Little we see in Nature that is ours;

We have given our hearts away, a sordid boon!"

Good luck!
Wally

Painting by Heidi D. Hansen



### **NOTICE: NURSERY IS CLOSED**

In November 2010,
Wallace W Hansen Northwest Native Plants
Native Plant Nursery and Gardens
closed permanently.

Many thanks to all our gardening friends for your interest in the native plants of the Pacific northwest. It has been our pleasure to serve you.

### www.nwplants.com

Our website, www.nwplants.com, is no longer commercial. Our goal is to continue Wally's legacy of

generating interest, even passion, in the magnificent native plants of the Pacific Northwest through information and illustration.

Good luck! Good gardening!

