

Chapter 1 : The Healing Power of Plants - Fireweed (*Epilobium angustifolium*)

Summer of Weeds: Willowherbs and Fireweed Last week we discussed a plant that was introduced as an ornamental and has become a widespread weed. This week we discuss some native plants that have become weedy in places dominated by humans.

Anatomy The stem runs up the middle of the upright plant with flowers alternating around it. The fireweed is a tall erect perennial that grows from rhizome-like roots. Its leaves are 5 to 15 cm. The leaves alternate around the stem, and have veins on the underside [5]. They are pale and purplish in color and are crowded densely around the stem. The flower has 4 sepals, and 4 petals. It has 8 stamens and 4 internal ovaries [6]. Its flowers are in a long dense spike, with around four petals. The lowest flowers open first, and the individual flowers are about 2 cm. The flowers appear in the later stages of summer. Its fruit are long and narrow, growing up to around 7 cm. The pod is colored, and it opens to release numerous silky-haired seeds which ripen late in the summer. **Reproduction** The flowers are in bloom here, and you can see the four petals and eighth sepals. The Fireweed reproduces sexually by seed and vegetatively by rhizome [8]. So the fireweed has both vegetative and sexual reproduction even though vegetative reproduction is more prevalent than sexual reproduction. The fireweed is grown as an ornamental, but it can become a very aggressive weed. Each fruit has to seeds, and each seed has a tuft of long hairs on one of the ends [10]. The sprouts from rhizomes are capable of rapid growth, and may be able to bloom within one month. The rhizomes are capable of fragmentation to speed up sprout production. Sexually the fireweed is capable of self-crossing or outcrossing [11]. It is pollinated primarily by insects, and a single plant may be able to produce up to 80, seeds per year. The seeds germinate over different temperatures and are non-dormant [12]. Some seeds germinate within ten days, and the seeds loose viability after months. The flower withers away and is replaced by a long, narrow seed pod in the late summer [13]. **Ecology** The places that are green represent the presence of fireweed, and the white places represent the absence of fireweed. The fireweed is usually found in solitary spots or scattered in forest habitats. It is found in upland pine and spruce stands, and is often common in cleared areas or areas where burning has occurred [14]. It is even said to have been one of the first plants to appear in some bomb sites during the London Blitz or World War 2 [15]. This plant is also found in acidic soils in open fields and in chalky ground [16]. The fireweed occurs all throughout the U. It is however most abundant along the outer coast of the Pacific Northwest. It is present in Canada, and also throughout Eurasia [17]. The fireweed is the national flower of Russia. The fireweed likes moist to dry ground, and thrives best in full sun but can tolerate partial shade [18]. It is said to bloom from July to September [19]. The fireweed occupation of forests declines with the rise of other competing plants and weeds. Also humans have a negative effect on the fireweed because it has a low tolerance to trampling [20]. The young shoots are high in vitamins A and C, and they have been known to colonize areas that have been burned or disturbed [21]. The people of the Coast Salish used the seed fluff for weaving and padding because of its soft texture. Some of the early Indians are the central pith of the fireweed stems in the early spring. Many people used it as a green potherb, and its leaves can be used for tea. The flowers of the fireweed produce ample nectar, and can make an excellent honey Pojar, Mackinnon, p. The fireweed is eaten by hares, muskrats, moose, and white-tailed deer [22]. Small mammals like chipmunks eat the seeds, and it is a nectar source for hummingbirds. You can also buy it through mail order, or at a store, to plant as decoration [23].

Chapter 2 : Set the Summer Calendar, as Fireweed Begins to Bloom - theinnatdunvilla.com

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Even in clear-cuts, roadsides and burns, fireweed plants itself and rises up " stately, steadfast and strong. It rarely stands solo. Fireweed builds a thriving plant community through spreading seeds and lateral root networks. In summer, rose to violet-colored flowers bring immeasurable beauty to stark landscapes. They are so papery thin that they appear luminescent. I blush sometimes when I take a close look. They remind me of the tender blaze of love, or a sweet encounter that leaves me breathless and awed. The most distinctive thing about fireweed is its gorgeous pink to purple colored flowers, which grow in a spike shape in sunny pockets all over the Northwest. Flowers have four petals, and resemble the flowers of other evening primrose plant relatives. They will occasionally create secondary branches of flowers " especially when grazed by deer or other foragers. Unlike most other plants, flowers bloom low on the stem first and work their way up toward the top. On a recent trip to Alaska I learned how beloved this plant is, but many people feel bitter-sweet when they see it flower because it foretells the coming of winter. It begins blooming low on the stem in the height of summer and by the time the blooms reach the very top the first snow is imminent. Fireweed fruits are long and very narrow. They spit open to release hundreds of seeds, each with a white feathery tuft that easily flies in the wind. Each above-ground plant may be connected to others by roots. Purplish-red stems grow up to seven feet tall and are covered with willow-shaped leaves that are dark green above and silvery below. The central vein is distinctly light-colored and extends straight out to the tip of the leaf. Lateral leaf veins have a unique quality " they do not extend to the outer edge of the leaf, but loop together near the margin. This makes it easy to identify before it flowers. It prefers a wet start followed by good sun exposure. You will find patches along roadsides, forest edges, clear cuts, and in open fields throughout the Northwest. Fireweed offers something useful in every stage of its growth. Early shoots can be eaten raw or lightly cooked. Harvest when the leaves are still close to the stem and pointing upward. Snap off at the base. Young leaves can be pinched off and eaten like spinach. As plants age they become very fibrous and unpleasant to eat. Flower buds are edible and make a colorful addition to salads. Leaves are harvested for tea around the time the plant flowers. An elder taught me how to harvest by holding the stem just below the flowers with one hand and then pinch the stem with my other thumb and pointer finger and pushing down the length of the stem, gathering the leaves that are green and vibrant looking. This way insects can enjoy the flower nectar fireweed honey is one of my favorites and the plant can reseed itself. Dry the leaves in baskets or paper bags. Store in glass jars or bags. They will remain potent for about a year. I LOVE the smell of dried fireweed, which has notes of berry and citrus, and find that I crave it sometimes. Making Tea " Use one small handful of leaves per cup of boiled water and steep about 15 minutes. Drink up to three cups a day. The tea has a pleasant mild taste and can be mixed with other herbs for flavor. Seeds can be used as a fire-starter and as a cotton-like stuffing. They are so abundant on stalks that you can easily harvest a large amount from a stand of plants. Salish People wove fireweed with the down of mountain goat wool for making blankets. In spring through fall roots can be dug and mashed into an anti-inflammatory and soothing poultice. Remember that if you miss fireweed at lower elevations you can often travel to the high country and find it at much earlier stages of growth. I have eaten fireweed shoots in mountain meadows in August! Eating Fireweed Fireweed shoots are a nutritious spring food containing Vitamin C, flavonoids and beta-carotene. They are delicious when eaten fresh or lightly cooked. You can taste a little mucilage in them " a slippery substance that makes your mouth feel smooth. Once the shoots become a little older you may want to peel the fibrous outer skin off. Try pinching young leaves off and eating them like spinach. Larger stalks can be split and inner pith scraped out and eaten as a sweet treat. This is also high in mucilage and has been used as a thickener for soups and other dishes. Fireweed Medicine When I think of fireweed I think of building strong digestive tone. What does this mean? Remember how fireweed comes into a clear cut or burn and creates an environment that will sustain a strong plant community " not just its own species, but pioneering the process to rebuilding a healthy ecosystem? Fireweed leaf tea works on our small

intestine and colon in a similar way to create a healthy environment where beneficial digestive bacteria can flourish, nutrients can flow into our body, and waste products can easily move out. It supports our intestines in discriminating between what we need to absorb and what we need to let go of. This helps keep our whole system in a state of balance. Research shows that our guts are an important part of immune function and other aspects of our health. If they are functioning poorly due to imbalanced flora, inflammation, improper food absorption or food moving through at the wrong speed, many things can go awry. Think of fireweed as a soothing friend to the constant work of digestion. Lets break down how fireweed works. Tannins in fireweed act as an astringent see Rose Flower post for more information on how astringents work. By improving the tone of the colon, it slows water from being reabsorbed and can act as a mild laxative. It has antifungal properties and also helps to normalize the flora of the gut. As previously mentioned, fireweed is high in mucilage. Spring shoots have the most concentrated amount but it is found throughout the plant. Mucilage acts as a soothing agent to calm irritated tissue. This is helpful in digestive system, for sore throats and for lung congestion. Fireweed also has antispasmodic properties, making it useful for asthma, coughs and intestinal spasms. Fireweed has been a great remedy for my clients in Olympia. When meat and dairy are replaced with highly processed Tofudi products and daily quarts of soy milk, coupled with the fact that Olympia is a dank dark place where 8 houses out of 10 are infested with mold, it is the perfect recipe for disaster. Allergies and irritable bowel-like symptoms with soft light-colored stools show up followed by intestinal imbalances including Candida overgrowth. With a little guidance on dietary changes, introducing fermented foods and pro-biotics, and drinking fireweed tea, clients would recover quickly. Try fireweed for digestive imbalances due to a change in diet, when recovering from food poisoning, irritable bowel syndrome, and chronic low-grade diarrhea. Fireweed is great at bringing things back to a state of balance but it is not an anti-bacterial or anti-protozoal. If you have giardia or some other type of infection, make sure to treat it, and then use fireweed to get your guts back to normal. Fireweed has been embraced by many cultural groups. Northwest Native People from Alaska all the way down the West Coast use fireweed for food and medicine. Skokomish elder Bruce Miller also recommended fireweed tea for sore throats and lung congestion. Fireweed was used by early trappers, fur traders and pioneers for a variety of purposes. They used fireweed root and leaf as an astringent and soothing tonic. Through evidence-based practice they found fireweed useful for chronic diarrhea, recovering from food poisoning, prostate inflammation, sore mouth and swollen gums. It was also used for hemorrhages from the lungs, nose, bladder or uterus. Cook recommends 2 ounces of leaves steeped for half an hour in a quart of water. Take 2 ounces every hours. Fireweed is a good long-term remedy. Often, long-standing imbalances do not show up over night but develop over time, and our body takes time to recover. For me, fireweed represents the promise that beauty will return after bodily sickness or environmental destruction. When woodlands are damaged from fire, or clear-cutting, it is fireweed that brings the first promise of recovery. Fireweed was one of the first plants to return after Mt. Photograph taken in August , by Lyn Topinka Get notified when the next blog is posted!

Chapter 3 : Summer of Weeds: Willowherbs and Fireweed – awkward botany

Summer of Fireweed, brims with the true spirit of Canadas theinnatdunvilla.com LONG DAYS OF THE INTENSIVE SUMMER HAD BECOME A SEA OF TIME.. Read on the Scribd mobile app.

White-tailed bumblebee on a flower Disturbance ecology[edit] Fireweed is often abundant in wet calcareous to slightly acidic soils in open fields, pastures, and particularly burned-over lands. It is a pioneer species that quickly colonizes open areas with little competition, such as the sites of forest fires and forest clearings. Plants grow and flower as long as there is open space and plenty of light. Fireweed reaches its average peak colonization after 5 years and then begins to be replaced as trees and brush grow larger. Seeds remain viable in the soil seed bank for many years. Some areas with heavy seed counts in the soil can, after burning, be covered with pure dense stands of this species and when in flower the landscape is turned into fields of color. Fireweed is an effective colonizer; it may not be present until after a fire has moved through a landscape. Because of its very high dispersal capacity, "propagule pressure" from its regional presence will let it quickly colonize a disturbed area. Once seedlings are established, the plant quickly reproduces and covers the disturbed area via seeds and rhizomes. It is somewhat adapted to fire as well and so can prevent the reintroduction of fire to the landscape. Fireweed is well adapted to seed in severely burned areas as well, because the mineral soil that is exposed due to the removal of organic soil layers provides a good seedbed. It was misidentified as great hairy willowherb in contemporary floras. The plant became locally known as bombweed due to its rapid colonization of bomb craters in the second world war. One example of this is the moth species *Deilephila elpenor*, in which females lay their eggs on the plant and the emerging larvae feed on its leaves. Events such as logging, fires and mass wasting can leave the land barren and without vegetation. This causes the land to be more susceptible to erosion because of the lack of root structure in the soil. Fireweed is a useful tool that can be utilized after prescribed fires and logging events because of its fire resistance and ability to recycle the nutrients left in the soil after a fire. Reestablishment of vegetation is crucial in the recovery time of disturbed lands. In many cases, fireweed establishes itself on these disturbed lands, but implementing the introduction of fireweed to a disturbed area as a management practice could prove useful in speeding up the recovery of disturbed lands. Disturbed and burned over lands are generally unpleasant to look at and pose a risk to habitats and nearby communities because of their susceptibility to mass wasting events. Fireweed can quickly establish itself across the landscape and prevent further damage, while providing a blanket of vegetation for recovering fauna to create new habitats in and for pollinators to foster the re-establishment of a diverse set of flora. As the plant matures the leaves become tough and somewhat bitter. The southeast Native Americans use the stems in this stage. They are peeled and eaten raw. This is said to draw the pus out of the cut or boil and prevents a cut with pus in it from healing over too quickly. The root can be roasted after scraping off the outside, but often tastes bitter. To mitigate this, the root is collected before the plant flowers and the brown thread in the middle removed. Monofloral honey made primarily from fireweed nectar has a distinctive, spiced flavor. In Russia, its leaves were traditionally used as a tea, before the introduction of tea from China starting in the 17th Century, it was greatly valued and was exported in large quantities to Western Europe as Koporye Tea, Russian Tea or Ivan Chai. Today, koporye tea or Ivan Chai is still commonly sold and consumed in Russia, though it is not nearly as popular as it was in Pre-Soviet Russia. A white form, *C. Rosebay Willowherb* was voted the County flower of London in following a poll by the wild plant conservation charity Plantlife. McClelland and Stewart Ltd. Botanical Society of Britain and Ireland. Archived from the original xls on Revised classification of the Onagraceae. American Society of Plant Taxonomists. The vegetative key to the British flora.

Chapter 4 : theinnatdunvilla.com: Summer of Fireweed (): Dieuwke Rusch: Books

Watch the landscape this summer and pay attention to the locations you see fireweed. This plant is called a "pioneer species" because it is often found first in areas that have been altered. It stabilizes the soil in areas that include roadside construction, avalanche paths, gravel bars, and in forests after fires – hence its name.

This week we discuss some native plants that have become weedy in places dominated by humans. Some species in this genus have been deliberately introduced for their ornamental value, but others have come in on their own. In all cases the story is similar, humans make room and opportunistic plants take advantage of the space. Epilobium species number in the dozens and are distributed across the globe. North America is rich with them. They are commonly known as willowherbs and are members of the evening primrose family Onagraceae. They are herbaceous flowering plants with either annual or perennial life cycles and are commonly found in recently disturbed sites, making them early successional or pioneer species. Many are adapted to wet soils and are common in wetlands and along streambanks; others are adapted to dry, open sites. Although considered desirable members of natural habitats, they can be weedy in managed urban and agricultural sites. It reaches up to five feet tall and has oppositely arranged, lance-shaped leaves with toothed margins that are often directly attached to the stems. Its flowers are tiny – around a quarter of an inch wide – and white, pink, or purple with four petals that are notched at the tip. They sit atop a skinny stalk that is a few centimeters long, which later becomes the fruit. When dry, the fruit or capsule splits open at the top to reveal several tiny seeds with tufts of fine hairs. Its leaves are short and narrow and mostly alternately arranged. Its flowers and seed pods are similar to E. At first glance it can appear as one of many weeds in the mustard family; however, the tuft of hairs on its seeds distinguishes it as a willowherb. Seeds and seed pods of panicked willowherb *Epilobium brachycarpum* Weeds of North America by Richard Dickinson and France Royer describes one weedy species of willowherb that was introduced to North America from Europe – E. It is commonly referred to as great hairy willowherb, but some of its colloquial names are worth mentioning: It has small, rose-purple flowers and is frequently found growing in wetlands along with purple loosestrife *Lythrum salicaria*. It is a rhizomatously spreading perennial that grows to nine feet tall; has lance-shaped, stalkless leaves; and spikes of eye-catching, rose to purple flowers. It is a true pioneer species, found in disturbed sites like clear-cuts, abandoned agricultural fields, avalanche scars, and along roadsides. It gets its common name for its reputation of being one of the first plants to appear after a fire, as John Eastman describes in *The Book of Field and Roadside*: With that in mind, it is otherwise a welcome guest thanks to its beauty and its benefit to pollinators.

Chapter 5 : Live From Alaska: When Alaska Hands You Fireweed

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The fireweed is the perfect example. In the summertime, Alaska turns purple as the fields of fireweed all over begin to bloom. The flower begins to blossom at the bottom. As the summer progresses, the blossoms move up the flower until the flowers are just at the top. When all the blossoms have bloomed, the flower goes to seed in a white flurry that looks like smoke. The progress of the fireweed is closely monitored as our cultural indicator of summer. Fireweed just starting to bloom. We also make sure that our freezer gets cleaned out to prepare for the annual dipnetting trip to fill it back up with salmon. These things all cost money and summer is easily our biggest spending season. Once the fireweed burns out, school has started and we try to get our garage cleaned out to put the car back in. Bikes are put away for the season except Mr. There are a few school expenses, but mainly, our spending slows down. And fall is our best financial season because we get our PFDs the first week of October! We take this time to take a good look at what our main financial priorities are and where we want this money to go to match those goals. With the darkness and the snow, our energy costs are significantly higher. Our main costs for the winter are usually travel plans for the following summer public use cabin rentals! Knowing our seasonal spending habits allows us to formulate a better plan to achieve our financial goals. As the season changes, we take a look at how we did that season and how we can improve next year. These seasonal check-ups keep us on track. The fireweed has burned out this year, so I invite you to ask yourself these questions: How did I do this summer? How can I do better next year? How can I prepare financially? Do I have the holidays planned? Where do I want my finances to be by the end of the year? What does fall mean at your house?

Chapter 6 : Life in Alaska – A View From Homer: Fireweed Summer

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Print What can one tell a Yukoner about fireweed? Here is my attempt at expanding on this: When I think of a species of plant or animal I generally consider it in three ways: Habitat Watch the landscape this summer and pay attention to the locations you see fireweed. It stabilizes the soil in areas that include roadside construction, avalanche paths, gravel bars, and in forests after fires – hence its name. The extremely large disturbance of a volcanic eruption such as Mount St. Helens in led to fireweed not just being the first to return, but returning in great proliferation. The way the plant sets up such successful pollination with this valuable nectar leads us to the next lens, adaptation. Adaptation Generally adaptation refers to how a species fits into its environment to survive. Fireweed adapts not just by having sweet nectar, but through colour and smell, all of which attract pollinating insects. It also adapts by producing up to 80, seeds – fluffy parachutes that catch the wind and travel great distances. It even has a back up system as it spreads to new areas through its root system. Waiting-to-bloom is another adaptation. It is designed to hold-out under the shaded canopy until the next fire clears the trees overhead, at which time it will take over in full sunlight. Relevance to People People use this plant for some of the same reasons bears and butterflies do; its leaves are rich in nutrients, and mixing the plant with mint tea gives a unique flavour, while delivering a good dose of vitamin C and A. In her book *The Boreal Gourmet*, Michele Genest suggests a great way to incorporate the plant into appetizers for summer guests. Pick up some halloumi cheese and fireweed honey at the market for a classic combo, or mix the honey into a vinaigrette to eat with arugula. In *Boreal Herbal*, Beverly Gray proposes fireweed as a jelly and suggests it can be used topically in creams for acne or dry, irritated skin such as eczema because of its anti-inflammatory properties. Interestingly, First Nations people have used the plant for millennia, whether it was twisted into cord for fishing nets, or the seed fluff was woven with goat wool for blankets. Choice patches of fireweed were even owned by high-ranking First Nations families in BC. If you have a story or anecdote about our territorial flower, please email me. I would enjoy hearing how people make meaning from this plant. Fireweed quickly colonized the burned ground after the bombing of London in World War II, bringing color to an otherwise grim landscape.

Chapter 7 : Chamaenerion angustifolium - Wikipedia

Fireweed is a pioneer. It's tiny seeds ride the wind like parachutes and begin new life where fate carries them. Even in clear-cuts, roadsides and burns, fireweed plants itself and rises up - stately, steadfast and strong.

Alaska is a big place and no blog could sum it up. This is my slice of life living in Homer, Alaska. From inside my house, considering foundation height, it is still taller than I am! As I looked out my window the other day I was struck by two things: Both are results of record-breaking warm weather in Homer recently. We have a saying that when the fireweed reaches the top of the stalk, blooming from the bottom up, summer is over. However, I think this may need to be revised. This year nearly everything is a month to six weeks early. July 7th--just a week ago--I was across the bay picking blueberries and salmonberries. The salmonberries were falling off the bushes they were so ripe in places. Last summer we picked berries the first weekend of August and I thought that was outrageously early. The previous 3 years I scheduled my girls weekend out across the bay, berry picking every Labor Day weekend, and the blueberries were just coming into fine form. We are a solid 6 weeks early on the berry season this year. So are the fireweed going to fluff early, but in the middle of summer? Behind the fireweed in the picture above is my glorious spruce tree. All over the Homer area, spruce trees are browning, due to an invasion of spruce aphid, which are caused in part by mild winters above 15 degrees F, according to the recent UAF Cooperative Extension handout about it. The strange thing about these aphids is they only suck sap from old needles, so new growth tips still grace the trees. Apparently cutting what appear to be dead branches off just stresses trees more and should not be done, which people in Homer have been doing. In fact, many have already cut their spruces down completely, finding the brown and dropping needles intolerable. July 2 garden is ahead of schedule I could have planted my greenhouse in late March this year and not risked much. We got a couple of mild frosts, but not enough to get excited about. We rototilled the garden in April; normally the ground is too boggy to work that early and it happens in mid-May. The garden picture above was taken July 2, and in the two weeks since, it looks like it has been hyped up, with many the plants double in size and broccoli and zucchini ready to pick. The spinach is over the top The slugs have made lunch of the strawberries, which is still a bumper crop despite them. It is both unsettling and fascinating to watch, and I have to wonder if this is like a slow motion train wreck we are in the middle of observing.

Chapter 8 : Fireweed: The Pesky Springtime Weed | Personal Lawn Care, Inc.

Fireweed. Photo by Marvin Kellar. It is the middle of summer in the Pacific northwest and the fireweed (Chamerion angustifolium) is blooming everywhere. I'm seeing it all over Mt. Hood National Forest, near Mt. St. Helens, and along the Springwater Corridor in Portland and Gresham.

July 28, Fireweed. Hood National Forest, near Mt. Helens, and along the Springwater Corridor in Portland and Gresham. A month ago it was just beginning to bloom in Alaska. Fireweed is a pioneer plant, one of the first to establish itself in disturbed soils — often along paths, roadsides, and anywhere a fire has burned hence the name. It can grow to an impressive height of nine feet, but it is more commonly seen up to six feet high. The roots connect and form large colonies of fireweed. Rarely will you see a single plant growing by itself. They bloom in a spike at the end of its stem, often with as many as 50 papery thin pink flowers. The flowers bloom from the bottom of the spike to the top. In Alaska, fireweed is an indicator of the coming of winter. Once the top flowers bloom, the first snow is likely less than 30 days away. Once the blooms are spent, they produce a capsule filled with fluffy white seeds. One fireweed plant can produce as many as 80, seeds. Photo by Marvin Kellar Fireweed is edible and a favorite of many foragers. Leaves can be used to make tea and early shoots can be eaten raw or lightly cooked as a tangy spring vegetable. Fireweed nectar is used to make honey and syrup. It has been used as a traditional medicine, too. It has anti-inflammatory properties and has been used to aid in digestive disorders, sore throats and congested lungs. Fireweed flowers bloom from bottom to top of the spike. Photo by Deb Hanson It was one of the very first plants to return to the soil after Mt. Helens erupted in On the glaciers of Alaska, a dwarf fireweed grows in the glacial silt. Photo by Deb Hanson.

Chapter 9 : Fireweed - CreationWiki, the encyclopedia of creation science

Vivid fireweed isn't hard to spot during the Alaskan summer season. It gets its name for being one of the first plants to colonize an area after a fire has passed through. 7.