Promoting and Attracting Bees

Colony Collapse Disorder (CCD) is a phenomenon that results in the sudden disappearance of most of the bees in a hive. There are not many dead bees present in the hive and there is usually an ample store of honey. The queen may be present, attended by a few younger bees. The older worker bees that forage are missing however, creating a disturbing mystery.

While the cause it not understood, the thinking is that CCD is the result of a ‘perfect storm’ of events. Some of the factors involved include importing bees bred for pollination but lacking genetic defenses for mites and diseases, moving hives throughout the year to pollinate monoculture crops, exposing the bees to an array of chemicals which can be carried back to the hive where they can accumulate in frames that are used for up to 7 years, as well as other possible factors.

Even though many of these problems will require the help of academia and the apiary industry to solve, there are things individuals can do to help.

Improving forage and shelter for bees would be one of the most beneficial things one can do. The easiest way to ensure there are ample pollen sources available is identify and protect plants that already provide pollen from February through November. Increasing the diversity of existing flora will provide plants that bloom at different times with a variety of flower colors and shapes. The following is a list of some native plants with their blooming season.

- Red Flowering Currant - Feb. to March
- Indian Plum - Feb. to March
- Salmonberry - Feb. to May
- Willows - Apr. to May
- Oregon Grape - Mar. to May
- Maples - Mar. to June
- Madrone - Mar. to June
- Serviceberry - Mar. to June
- Golden Currant - Apr. to June
- Bitter Cherry - Apr. to June
- Elderberry - Apr. to June
- Crabapple - Apr. to June
- Twinberry - May to July
- Roses - June to August
- Oceanspray - June to August
- Spirea - June to August

These are just a few suggestions. There are many other native flowering trees and shrubs that work equally well.

Some of the trees listed here, such as Maples, Madrone and Bitter Cherry also provide nesting habitat for native bees. More mature trees with pithy or hollow cavities are the best nesting sites, as well as dead snags. Nesting habitat can be created for solitary wood nesting bees by drilling 3/32” to 5/16” holes into downed, dry wood and stumps. Ground nesting bees need un-tilled ground for the obvious reasons. Some species spend up to 11 months a year in the ground. The best sites are well drained and sunny.

It is important to consider chemical usage in promoting bee populations. The fewer chemicals used the better, but some are worse than others. Some active ingredients such as carbaryl are particularly toxic to bees. Some insecticide formulations are also more of a problem than others. Dusts and wettable powders are worse than solutions and granular products. Herbicides are not as bad as insecticides for bees, but can inadvertently eliminate pollen sources.

All things considered, there are some important things individuals can do to help the bees in our regions.
PMC’s Newest Board Member

The WACD Plant Materials Center is administered by a 5 person Administrative Board appointed by the WACD President. They meet with the staff quarterly to review operations, financials, policy and other administrative functions. One of the Board positions is filled by a Conservation District employee. That position opened up when Al Hawson of Spokane Conservation District retired. Bob Clark from Okanogan Conservation District has been selected to replace him.

Bob has been with the District since December of 2001. His current position is Technical Program Lead. He is responsible for coordinating the District’s Conservation Reserve Enhancement Program, the Irrigation Efficiencies Program, the Okanogan Watershed Planning Unit, the District’s Geographical Information System data, and is the ‘go to guy’ for computer problems at the District.

Bob has a BS in outdoor recreation (Forestry) from Utah State University with a minor in Botany (Taxonomy). He worked for the US Forest Service throughout the intermountain west in a variety of roles including a fire prevention guard, helitack and fire crew member, wilderness ranger, and crew boss of a timber stand exam crew. Before coming to Okanogan Conservation District, Bob was a land use planner for Okanogan County for nine years.

Bob’s conservation efforts extend beyond the workplace. He drives a hybrid car and is co-owner of a business installing solar and wind power electrical systems. He is also working toward his Master Gardener’s certification. His wife manages Okanogan Valley Farmer’s Market.

The PMC looks forward to working with Bob in the years to come and welcomes his diverse experience and dedication to conservation. He will undoubtedly be a valuable asset for the PMC in its mission to provide quality plant materials to the conservation community of the Northwest.

Order Early for 2010

The Plant Materials Center is taking orders for 2010! Some species are in high demand and several popular species are already sold out. It is recommended that you place your order early to reserve the species you would like. Species variety is plentiful and pricing for PMC bare root stock did not increase for 2010.

Orders for PMC stock can be cancelled up to February 1\textsuperscript{st} without paying the 25\% restocking fee. Special bundling, plugs or potted material may be cancelled until December 1\textsuperscript{st}. Brokered stock cannot be cancelled. Please contact the Plant Materials Center for a complete plant availability list with pricing.

New PMC Website

The PMC has a redesigned webpage (http://www.wacd.org/PMC). The webpage contains the same features as before, except now with a user friendly arrangement. There is an easy to use drop down menu at the top of page labeled Plant Materials Center. From this menu, you will find many topics including; helpful publications, how to contact the PMC, a list of available plants, seed sources, how to select plants, how to order plants, tips for successful planting, shipping, handling, storage and stock types. There are links to printable brochures, our photo gallery, order form, plant material fact sheets and seed zone maps.

The extensive list of printable brochures includes: Bareroot Planting Guide, Firewise Brochure, Planting for Birds, Snow Fences, Wildlife Habitat and Windbreaks. Soon to be added to that list is a live stake informational brochure. Although, we are updating and making improvements, all pages are exceptionally accessible. Check it out today!
Native Plants That Merit Attention - Plants for Wet Soils

Wet soils are often looked at as a limiting factor for plants since many often find that favored species fail to thrive in heavier soils. Wet soils are an asset though for many desirable species. Here are a few favorites from the Northwest native palette. Their adaptability to wet soils is noted for each one in the following manner:

- **FAC** – Facultative: A facultative species is one that is found equally in wetland soils and non-wetland soils.
- **FACW**—Facultative Wetland: These plants are found more often in wetland soils than non-wetland. They occur in wetlands 67 to 99% of the time

**Douglas Spirea** (*Spiraea douglasii*) **FACW** - Douglas Spirea is an outstanding deciduous shrub for wet soils. It thrives about as well as any other native shrub in wet soils, even Willow. Its ability to naturalize in a wetland can in some cases be a draw back where its footprint is meant to be maintained in a limited space. Its long bloom time from June until August make it a beneficial species for bees and other pollinators (see article on attracting bees). It is also an attractive plant in the native landscape.

**Nootka Rose** (*Rosa nutkana*) **FAC** - Nootka Rose is probably the most predominant and vigorous native rose west of the Cascades. It can grow 6 to 8 feet tall and equally wide. They can spread by underground stems, creating thickets. 2 to 3 inch diameter pink flowers are typically born singly at the end of stems. Their bloom period which lasts from early to mid-summer are both attractive, and an important source of pollen for the regions native pollinators. The hips which form in late summer provide an important food source for birds.

**Oregon Ash** (*Fraxinus latifolia*) **FACW** - Oregon Ash is the most moisture tolerant large deciduous tree native to this region. Its native range lies west of the Cascades throughout Oregon and extends north to Pierce and Thurston counties. It can grow to 80 feet tall, with a trunk that can exceed 2 feet in diameter. Its roots are typically shallow, but fibrous and dense, making it wind-strong. Its wood is valuable as a hardwood saw log and as fuel wood.

**Pacific Crabapple** (*Malus fusca*) **FACW** - Pacific Crabapple has many desirable attributes as a conservation species. Most notably is its adaptability. It seems to grow with equal vigor in wet soils and also drier sites. It also tolerates competition from surrounding vegetation about as well as any species. It can grow to over 20 feet tall, with an equal spread. Its white flowers in April and May are both attractive and a good source of pollen for native pollinators. The small crabapples ripen in the fall, providing an important food source for birds all winter long.

**Paper Birch** (*Betula papyrifera*) **FACW** - Paper Birch is an outstanding restoration species for many reasons. First is its adaptability. It can be found growing from rocky out-croppings to dense muskegs. It is a good soil-building species, providing a significant volume of leaf litter that is high in many different mineral nutrients. It can grow to over 70 feet tall, with a trunk that can reach over 1 foot in diameter. It is considered an attractive ornamental tree and its wood is used for pulp, lumber and fuel-wood.

**Shore Pine** (*Pinus contorta contorta*) **FAC** - Shore Pine is a close relative of Lodgepole Pine. They are different sub-species. One notable difference between the two, is their range. Shore Pine occurs coastally and Lodgepole Pine is an inland variety. Shore Pine is an outstanding pioneer species and adapts equally well to disturbed, exposed sites, or areas with competing vegetation. Its is also the most moisture tolerant conifer native to this region. Shore Pine can grow rapidly up to 60 feet tall, but may be stunted in drier sites.

**Sitka Spruce** (*Picea sitchensis*) **FAC** - Sitka Spruce is one of the more moisture tolerant conifers native to this region. It is not as well suited to boggy areas as Shore Pine, but a good species for relatively wet ground. It is a vigorous and large growing conifer that can exceed 200 feet tall, with trunks that can reach 10 feet in diameter. Its wood has been valued for specialty uses including sounding boards for pianos, guitars, some lightweight aircraft parts and turbine blades for wind turbines.

**Willow** (*Salix spp.*) **FACW** - Willow is perhaps the most obvious species for wet soils. Everyone has noticed willows growing in thickets along streams, ponds, lakes and bogs. It is an important wildlife species providing browse and shelter for numerous species of mammals and birds. Its early blooming flowers are an important source of pollen for the regions native pollinators. It is good species for bio-engineering, where stem cuttings are used as live stakes, fascines and brush mattresses.
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Something New for 2010

The Plant Materials Center is pleased to announce that there is a healthy and vigorous crop of plug-1 Alaska Yellow Cedar (Chamaecyparis nootkatensis) growing here that will be available this winter. It is a rather uncommon conifer in this region. It is found only in isolated stands, usually within 100 miles of the Pacific coast. It is more common along the British Columbia coast and extends into Alaska.

Alaska Yellow Cedar is a large and slow growing conifer. Some of the largest trees in this state can reach over 100 feet tall and their trunks can grow to 3 feet in diameter. Some of the largest trees are over 300 years old, with many specimens over 700 years old.

Alaska Yellow Cedar have many fine qualities. One is its adaptability. It grows in sun or shade, but is most vigorous in sun. It is tolerant of wet soils and can also be found growing on rocky slopes. Its wood is valued for its strength and resistance to decay. The wood is particularly useful in boat building, dock construction and other marine applications.

Alaska Yellow Cedar is unfortunately in decline in Alaska and the cause is not completely understood. Over 250,000 acres have been affected.

The plug-1 transplants are trees that were propagated from plugs in greenhouse and transplanted here to grow for 1 season. The end result will be a seedling around 12 to 18" tall, with a full, fibrous root system. If anyone is interested in pricing or more information, please call and we will be glad to help in any way we can.