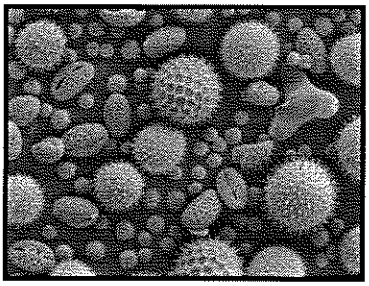
LIGHTS and SHADOWS from the Dishman Hills
June 2007

THE BIRDS AND THE BEES

Summer is here and the Hills are alive with the sound of...sneezing? Yes, for many the season is about allergies to the stuff in the air, much of which is very important stuff called pollen. It is both one of the smallest parts and one of the most important part of the Natural Area's ecology. It involves the "love life" of plants and how they communicate when it becomes time to reproduce.



The word pollen derives from the Greek word *palynos* for dust. Pollen comes in a wide variety of shapes, sizes, and surface markings (see photo) that are characteristic of the species. Most are spherical, but pollen grains from our pine and fir trees are winged.

Plants product the "male" component for reproduction in a compact, tiny, hard-shelled packet called pollen. They contain just two living cells. This packet lands on the flower stigma and one cell forms a pollen tube by digesting its way into the flower to transport the other cell, the sperm, to the egg. Plants will double fertilize which starts the growth of both the embryo and the endosperm that unite to form the seed. From here the plant has many choices. A few plants self-pollinate, the easy solution, but this really limits genetic diversity. Most cross-pollinate, or the transfer the pollen from one plant to another of the same species, and this requires some more decisions to develop a strategy to get the pollen to a suitable mate. Many plants depend on insects such as bees, butterflies, moths, and flies to do the job. Others use animals such as birds and a variety of critters that rub themselves against the flowers as they move through the ecology. These type of plants need to attract the pollinators someway. Brightly colored flowers will attract, especially if you add wonderful smells and delicious, sugary nectar to the menu. Flower construction often includes wide peddles for landing pads for insects and structures that provide food as payment for the pollinator's services. One has only to check out Rose Hill in Spokane's Manito Park on a Sunday afternoon to see pollinators at work (tourist work with insects here!).

Many other plants use the wind to do the job, a more dependably way to transport the pollen. These plants are engineered with long stamens and pistils to better release and catch the pollen. There is less need for bright colors or large petals. Pollen grains are usually very small, light weight, and are produced in large quantities. The onset of hay fever in our community is because of these anemophilous (wind-loving) plants. However, it does not appear to be part of the plant's plan unless it is to supplement the wind with our sneezing.

Fossilized plant pollen is a tools to discover more of the Earth's history. Recent studies are using various chemicals in pollen walls that block the destructive radiation of sunlight to document possible changes in the Earth's ozone layers both in modern and in ancient times. Present-day pollen from parts of the planet have three times as much protective chemical as those from 40 years ago.

Nature is a self-made machine, more perfectly automated that any automated machine. To create something in the image of nature is to create a machine, and it was by learning the inner workings of nature that man became a builder of machines.— Eric Hoffer

Pollen is also an important tool for archeologist, since it is often well preserved and gives details about ancient climates, ecologies, and cultivates crops. Pollen is used to solve crimes and as a health food product. So the next time you sneeze (god bless you) remember that this is a small price to pay for such a important link in the chain of life on the planet.

HAPPENINGS

The Association made a presentation to the Spokane Chapter of the Retired Federal Employees Assoc. last month as part of our community outreach efforts. A presentation was made that included a history of the Association, a summation of our accomplishments, and some of the task we are faced with for the present and the future. The presentation was well received, many questions asked, and a generous donation was made.

This month, association geologist Michael Hamilton ran several tours covering the geologic sites and stories of the Natural Area. The first tour filler up fast and a second tour filled up as well. We hiked from Camp Caro to Eagle Peak covering a variety of topics ranging from ancient tectonics to recent volcanic eruptions, all of which left something behind in the Natural Area to see. This tour will be repeated in the Fall and is titled Head for the Hills. It will be listed in the Community Colleges Continuing Education course Fall catalog.

Association annual dues are due by June 30th

ASSOCIATION NEWS

We are a non-profit organization dedicated to saving nature areas in the Spokane region for public enjoyment and education. Call Michael Hamilton, 747-8147, if you have questions. We meet every other month on the third Tuesday of the month at 7pm, in the teacher's lounge at Opportunity Elementary School, S. 1109 Wilbur. Our next meeting will be September 18th since we will be taking the traditional summer break.

The following are our May donors that have consented to be listed: Jon Barstad, Nacy Cashon, John Cobb, David & Gail Duba, William Eagle, William Fix, Dianne Huggar, Janette Lentes, Kerry Masters, National Retired Federal Employees Assoc., Neil Prescott, Lorna & Joel Ream, Helen Stowell, Elnora Wildermuth, and one anonymous donor. Thank you all very, very much for your continuing support. Have the best of summers!

Please use this form when sending **CONTRIBUTIONS or DUES**
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3415 S. Lincoln Dr.
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