

SPROUTS AWAY!

Spring has arrived and the buttercups and grass widows are up in the Natural Area. The Dishman Hills are teeming with growth as a new season of life starts. A lot of the action is out of sight just below the ground surface where seed germination is taking place. The rise in temperature and the spring rains soaking into unfrozen soils are primary initiators of the seed's and spore's wake up call. A seed is a stored packet of food for the plant embryo waiting for dormancy to end. Germination happens at different times for different plants depending on the ecological conditions of the plant's natural habitat.

Seeds and spores end up the summer tucked away in a thick coat that keeps the embryo dry for the cold season. A seed certainly looks dead. It does not seem to move, to grow, nor do anything. Metabolic process that we associate with life are so slow that it would be difficult to determine whether there really was anything alive at this stage. But a live embryo sleeps inside with all the genetic info for a new plant. While some seeds can last hundreds of years and then spring to life in the right conditions, most are on a yearly cycle that tries to time the new growth at just the right moment for survival. Part of the trick for a timely sprouting may not be just the arrival of warmth and wet. Many seeds have a built in mechanism to stop untimely germination and keep the seed in dormancy. Some plants in late summer produce an abundance of abscisic acid that induces dormancy in the embryo. During the winter, enzymes in the seed slowly degrade the acid until by spring it is gone and sprouting begins. Other plants use spring rains to leach away a growth inhibitor with chemicals from the litter that covers the seed. One group of plants depend on frugivores (fruit eaters) to help out by digesting the seeds, degrading the seed coat just the right amount while transporting the potential plant to a new location and leaving it endowed with a nice pile of fertilizer. Another type of plant invests



little or no food for the embryo in the seed, expecting it to be associated with a fungi in the soil to obtain the nutrients for initial growth.

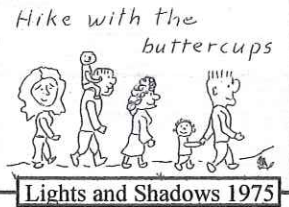
Now the time is right in the Dishman Hills and germination is happening everywhere. Phase one: Water is permeating seed coats and activating enzymes that break down stored food into sugars that can feed embryonic tissue. Oxygen in the soil, now available through a degraded seed coat, is an important source of energy prior to the onset of photosynthesis. Phase two: enzymes continue to supply food to a growing embryo and a single, primary root extends from the seed and becomes an anchor and tap for more water. Phase three: next, a shoot, now turning green, heads up in a quest for sunlight. Germination is complete and a new seedling is launched.

HIKING HISTORY

In just a few days you can be part of a hiking tradition that started back when the idea of the Natural Area hatched amongst some citizens banded together to save the Dishman Hills. It was in 1966, early spring, that the first hike that launched an effort that continues today to keep Spokane "Near Nature, Near Perfect".

Come forth into the light of things. Let Nature be your teacher.
— William Wordsworth

Here is an excerpt from a 1975 Lights and Shadows "Call to Hike in the Hills"



The tree toads will be giving their spring concert and a few of the early spring birds such as towhees and varied thrushes probably will be awaiting us. We might even find a White-breasted Nuthatch, which is uncommon in the Spokane area. Pussywillows and quaking aspen "fuzzies" ought to be out and with a little good weather we should find some grass widows and "Easter lilies". We will hike through Enchanted Ravine -- if it's raining don't complain, for the mossy cliffs there are at their best.

The Buttercup Hike will be April 1, Sunday, 1 pm, leaving from Camp Caro. We will take a 3 hour (approx.) hike to greet the Spring in the Hills. Maybe we can Hike up to the Lost Ponds or ?. Some of us will be at Camp Caro for a picnic at noon.

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, at Opportunity Elementary School, S. 1109 Wilbur. Our next meeting will be May 15.

The following are our February donors that have consented to be listed: Laura Ackerman, Joyce Alonso, Jon Barstad, Karen Behm, Sharon Carroll, Ralph & Claire Carter, Nancy Cashon, Joseph Collins, Lyndall Cook, David & Sara Donally, Lee Dominey, Barbara Gwynn, Henry & Charline Hagen, Janet Hannink, The Hobnailers, Daniel Iyall, Michael Henneberry, Mary Alice Jones, Jayce Keeling, Pat Killien, Lindgren Family, Jacqueline Mallereau, Lucille Marchand, Bettie Maron, Gloria McCuddin, Brian Miller, Bill & Gwen Nienhuis, Steve Olson, Elizabeth Parsons, James Qualls, Norma Rosenberger, Richard Severn, Mary Ann Sullivan, Beth & Ed Tietjen, Jill Thomas-Pestrin, Jeanne Wilson, Robert & Sylvia Wilson, and one anonymous donor. A wonderful month of support.

THANK YOU ALL FOR RESPONDING TO OUR MAILING REMINDING TO UPDATE MEMBERSHIP

Please use this form when sending **CONTRIBUTIONS** or **DUES**. All contributions are tax deductible.

Send contributions to: DHNAA
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