

DEEP FREEZE

We are entering the dead of winter, the deep freeze, the mid season doldrums, or the big chill. Most of us are enjoying our forest mainly by the warmth and cheer provided by combusting logs in our fireplaces. But the forest are out there now, asleep or in a state of suspended animation, waiting for the return of the awake seasons. It's a strategy for survival, a plan to adapt to change that it is unable to control. Here is a reprint of an article called "Sleepy Time" from a winter issue of Lights and Shadows.

It's the core of winter and the forest is a sleepy place waiting for the dawn of Spring and the alarm clock of warmer weather and longer days. So, when visiting the forest this time of year tread softly so as not to disturb the slumbering population. For the most part, everything living in the forest on a hot, humid August afternoon, is still there on a frosty, January morning. Some of the forest denizens are vacationing in the south, but those are limited to the ones with wings. Two choices are left to the remaining inhabitants, adapt or sleep (hibernate), and many choose the later. True winter sleep or hibernation involves a drop in body temperature, the slowing of metabolic rate, and the ceasing of certain body functions. Sleeping animals are split between the light sleepers and the deep sleepers.

The deep sleepers are small mammals, reptiles, insects, and amphibians that "tuck in" when the winter starts. Cold-blooded animals usually start and finished their winter sleep based on the length of daylight since their body activity depends heavily on external temperatures and they wouldn't want to be caught by a early or late frost. Warm-blooded animals usually "hit the sack" when the weather turns cold. They hide in protected spots such as burrows, crevices, and hollow trees. Most like to be underground and under the snow where temperatures are a bit higher. Their body functions slow way down or stop all together, and they can't awaken until Spring. Some squirrel's body temperature can hover several degrees above freezing when sleeping. Others animals can stop their breathing. Studies have shown that some animals can become sleep deprived during hibernation and have to wake up at times to take a nap. These guys to survive have to find a secure bedroom where they won't receive an unsuspected wake-up call from a predator. Many of the pond inhabitants burrow into the wet mud on the bottom or sink to unfrozen water to winter out. Frogs and salamanders encase themselves in mud and receive oxygen through their skin. Others huddle together to share the little warmth they have left as do snakes, bats or mice. Many mammals like the deep-sleeping marmots have the luxury of stored fat to provide needed winter energy, but others such as the slim, trim amphibians might freeze up entirely, waiting to thaw in the Spring. Insects have a variety of ways to slumber away the winter. Some go dormant, usually underground or under rocks, others survive the winter as eggs or larvae. Worms, like the birds, migrate in the winter, but instead of thousands of miles to the south, they migrate several feet down into the soil below the freeze levels where they spend the winter in subterranean darkness.

The light sleepers such as the squirrels and chipmunks have a different strategy. They sleep during cold spells, wake in warmer periods to dine on stored snacks, and stir now and then to hit the bathroom; they are easily awakened. Skunks and racoons take walks to forage between long naps and certain animals like the hummingbird sleep every day during the coldest hours. Plants also slumber the winter away.

Except for trees, the above ground portion of the plant dies off while the root, rhizome, or tuber sleep away till the soil warms up in the spring. Other plants cash out completely, like the insects, leaving behind the next generation as seeds that can survive the winter. Trees mimic the animal world by either adapting to the cold and dry winters (coniferous) or by slipping into a sleepy state (deciduous) to suspend many growth activities until the next season.

ANNUAL MEETING

The Association had its annual meeting this month. We reelected the sitting board members and Michael Hamilton was retained as president for two more years. We did add a new board member, Andrew Ashmore to the board, welcome aboard! The other members are David Cole (vice president), David Noble, Lawrence Theiman, and Mary Water (secretary). We still have a need for a treasurer. To sum up 2006, the donation report was very impressive amounting to \$70K with about \$33K from Association members and \$37K from outside supporters. About \$57K of the total was for the Big Rock fund, the rest being a mix of memorials, land fund, dues, and general fund.

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 March 20.

The following are our December donors that have consented to be listed: Steve Barrett, William Bender, James Berry, Patty Buckhardt, David Cole, James Conaty, Jeff & Brenda Danner, Water Fernau, Don Griffiths, Elaine Harris, Harry Hendron, The Hendersons, Glen Kivett, Patrick Lettenmaier, Michael & Kathryn Mann, Leo Middendorf, Dommie Oswald, Elizabeth Parsons, Neil Prescott, Carol Reardon, Elizabeth Ruscio, Betty Stratton, John & Barb Swam, Patricia Sweeney, Robert Turner, Edwin & Betty Weilep, Karen Wigel, Jeanne Wilson, Harold Wimpy, Mary Wright, and one anonymous donor. Sincere thanks to all you supporters.

Society increasingly has neglected the substructure of biology, to its own peril. - Edward Wilson, American entomologist, 1984

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