



Lights and Shadows from the Dishman Hills, November, 1998

NEW GEOLOGIC MAPPING

Washington State's Dept. of Natural Resources, Geologic Div. just finished remapping the geology of the Spokane NE and SE 71/2 minute maps, an area that covers from Bigalow Gulch on the north, south past Tower Mt. down to California Crk., east to Argonne Rd and west to east Spokane. The Dishman Hills are about in the middle. Preliminary results suggest some very interesting geology. While the bedrock of the Hills has long been known as very old, 1.5 billion years, there are some questions about how they got there. Bedrock in the Hills are metamorphic rocks called gneiss, believed to have formed from high pressure and heat typical of the environment of 10 to 15 miles below the Earth's surface. Bedrock tilt measurements from mapping outlined part of a large dome structure. This structure has been mapped to the north and given the name of the Spokane Gneiss Dome. Tremendous forces associated with plate tectonics and continental drift "warped" the planet's crust about 50 million years ago, resulting in this uplift. Well, what happened to all that rock above the present surface? The dome flanks were steep enough so that the overlying rock strata slid off in several directions. Some of these large slide blocks were found south of Tower Mt. around the Palouse Highway and further to the SW.

Granite, an igneous intrusive rock, was mapped at several locations near where it was quarried on the east side of the Hills. This rock was injected into the older gneiss about 70 million years ago near the end of the Dinosaur Age when plate tectonics was very active in the Northwest. Parts of the Pacific floor crustal plate were being shoved under the North American plate, melting, and rising as molten bodies of magma. There is no evidence that this magma ever reached the surface here to form volcanoes, but slowly cooled deep down, waiting to be exhumed by the uplift 20 million years later.

Other geologic features to appear during the mapping project included a series of parallel faults on the northeast side of the Natural Area. Evidence for these northwest-trending faults are the deep canyons that cut into bedrock where eroded was faster due to broken and ground rock associated with the faults. Deep Ravine and the long canyon behind Camp Caro are excellent examples of these features. Their northwest trends are also parallel with Hangman Creek canyon, another possible local fault structure, and for that matter, parallel to the San Andreas Fault in California, and maybe a result of the the same forces (at different times and scales of course).

The glacial flooding that occurred in the last 100,000 years is well documented in the Spokane area and has been accredited with carving much of the present landforms in the Hills. Additional flood deposits were mapped on the leeward or west side of the Dishman Ridge where flood current velocities dropped and deposited material ranging from sand to Volkswagen-sized boulders.

FOREST CLEANUP

There has been some cleanup activity on the east side of the Natural Area in response to request from people in the Siesta Court neighborhood to reduce fire and falling tree hazards in the forest directly behind their homes, which are snugled up to the DH boundry. DNR and county convict crews removed about ten tons of ground debris and cut a number of small trees already dead from bark beattle. A second phase of live tree cutting will involve about 30 hazard trees that are leaning towards people's property. We are considering a different management policy for border areas where these special problems occur.

ORGANIZATION NEWS

We are a non-profit organization dedicated to saving natural areas in the Spokane region for public enjoyment and education. Call Michael Hamilton at 747-8147 with any questions. We will have our monthly meeting in December at Opportunity Elementary School, South 1109 Wilbur, the third Tuesday of the month at 7PM. Net income for October was only \$457, we still owe \$103,324 on the Tower Mt. property so keep the donations poring in!

We regret the passing of Bernice Oglebee Hahn, who as a long time Camp Caro caretaker, welcomed many visitors to the Natural Area. She also was on the Board of Directors for many years.

Our thanks to you who who donated and have given permission to be listed here: Diane Allison, Helen Blackwell, Joseph Collins, Marie English, Grace Fellows, Camille Kovarik, Helen Lininger, Ora Mae Orton, Francis & June Potter, Tom Rogers, Lois Smith, Walter Trefry, Dwight Vance, Bernadine Van Thiel, Jeanne Wilson, and Arthur Zack.

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