PLEAS FOR PROTECTION OF AIYANSH LAVA FLOW

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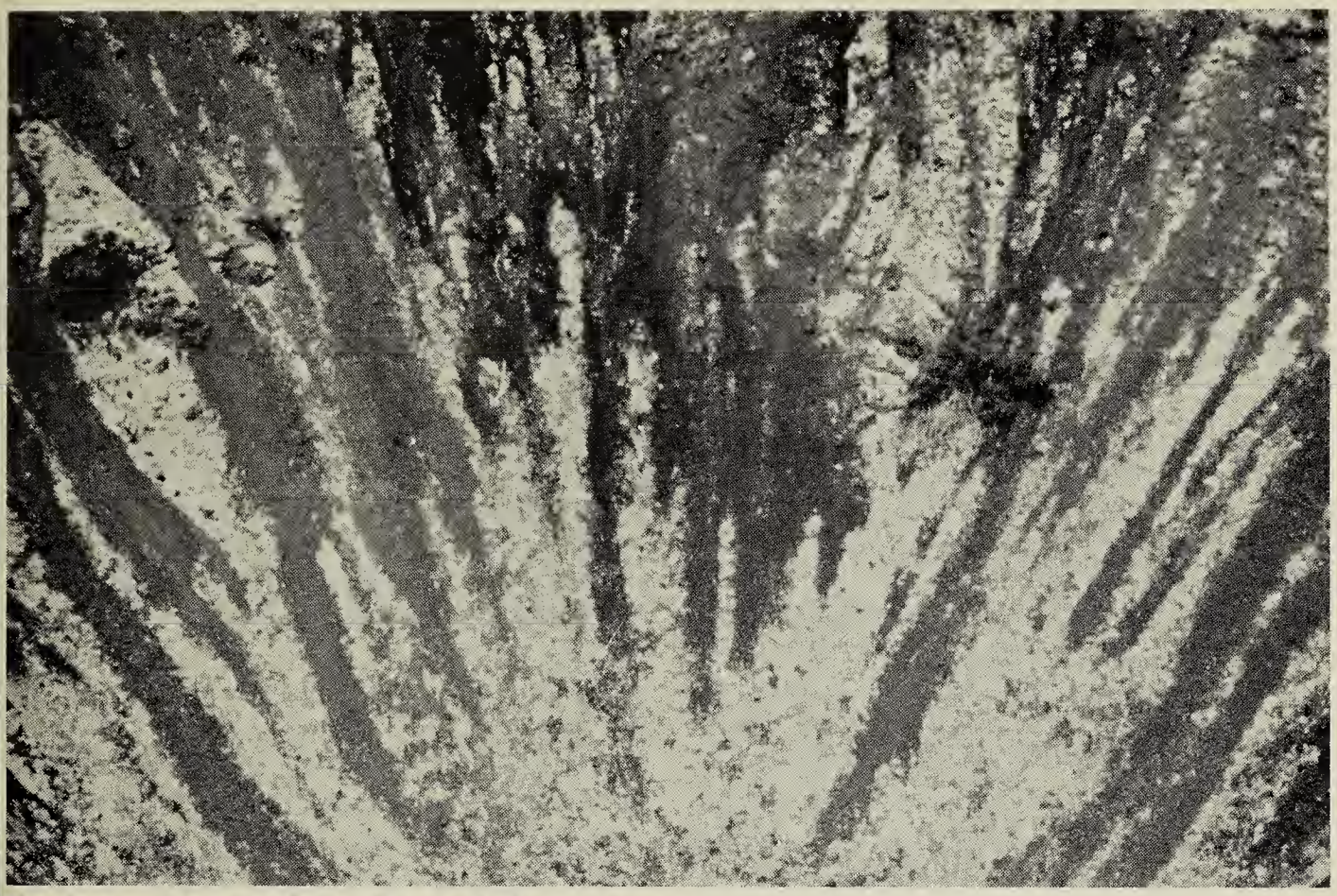
Just north of Terrace, British Columbia, lies a unique and fascinating geological phenomenon. Only 200 years ago, according to Indian legend, lava erupted from a fissure in a tributary of the Tseax River. The lava flowed down the tributary for three miles, along the Tseax River for 11 miles and then spread over the floor of the Nass River valley to form a plain six miles long and three miles wide. The lava flow formed two lakes, one in the tributary and the other in the Tseax River; now called Lava Lake, this latter expanse is seven miles long and 180 feet deep. At the source of the lava eruption, volcanic cones were created; the largest, 950 feet across and 300 feet high, has a crater in the top which is 250 feet across and 100 feet deep.

In August, 1972, I had the opportunity to visit this remarkable area. One leaves the main highway at Terrace to follow a logging road north, open to private vehicles only during the evening and at night, for logging trucks pre-empt the entire width of the road during the day. There is a small camp ground at the north end of Lava Lake at the point where the lava came down the tributary and dammed the Tseax River. The three-mile walk up the tributary to the volcanic cones is a rare experience, for this is the only part of the flow still undisturbed. The surface of the lava flow is composed of broken fragments and blocks of solidified lava. The whole mass must have been slowly carried down the valley on the surface of the flowing molten lava. The constant grinding and crushing has broken the surface into blocks measuring from a few inches to 10 feet in diameter. In places it appears the surface has congealed and then slumped into a cavity as the lava flowed away from underneath; in other cases it appears the lava has erupted onto the surface for short distances.

The cinder cones are interesting in themselves, composed as they are of scoria and "bombs" of lava (fragments of congealed lava which have been ejected from the fissure). The gases

The undisturbed three miles of the Aiyansh lava flow



Looking down into a Aiyansh lava cone

Aiyansh lava in the form of large blocks

have expanded, with the result that the fragments are much like pumice. The walls of the cones and the crater on the inside appear to be at the angle of repose of the material which is approximately 40° to the vertical.

It is quite obvious that this area holds much of interest for the geolo-

gist: where else in Canada can one see an example of volcanism so young and so extensive? Volcanic cones and a 20-mile lava flow are text book examples of the geological forces that have shaped a good deal of the earth's surface.

The three-mile area of lava flow mentioned above has such a continuous growth of mosses and lichens that it appears to be carpeted in fur; in only a few places are the grasses and smaller shrubs securing a foothold. There are two disappearing streams in the tributary, and streams from the mountainside have carried mud and debris to the surface of the lava flow. This has sealed openings in the lava and enabled limited stands of beautiful trees to become established. The growth of such lush vegetation is limited since the lava is not completely sealed, and the streams get visibly smaller in a few hundred feet and disappear in the bottom of the flow. But one can imagine how interesting the plant communities that have developed on the lava in 200 years will be to those involved in the study of plant succession and ecology: a veritable outdoor laboratory!

As I have mentioned, the area is accessible. Unfortunately, its accessibility has created a problem: forestry operations have already resulted in the destruction of much of the flow. Masses of stumps and débris have been pushed downhill onto the surface, roads and trails have been built, often for no apparent reason. (The terrain is ideal for road building as the lava is fragile and easily crushed to form a road bed.) Borrow pits are taken at random in the lava flow and the material is hauled onto the forest roads for miles around.

A check with the Forestry Department indicates that there is as yet no protection for the last undisturbed three miles of this remarkable area; in fact, on the maps the area right next to the volcanic cones is shown as the next one to be logged!

As far back as 1918, Rev. J. B. McCullagh, C.M.S., warned of the danger of extinction of the area, ". . . Supposing the government have not the imagination to turn [it] into a national park . . ." (Ignis private press, B.C. Archives). Hopefully in this time of awareness of the fragility of such natural phenomena, the British Columbia and Canadian governments may be prevailed upon to preserve and protect such an interesting and valuable area.

Aiyansh lava flow is being used as a garbage dump and as road building material