

CHATS WITH THE WEATHER MAN

Friday, March 7, 1931.

ANNOUNCEMENT: And now for our chat with the weather man. Our old friend, Ob. Server, has again been to the United States Weather Bureau, and again learned some of the important new developments in weather science. ---- This time it is the plans for that great adventure of science, the Second Polar Year.

This is not only a weather talk, but a radio talk, and an aviation talk.

As you know, the North and South polar regions are the biggest, among the most important blind-spots on our weather map. Those shimmering Northern Lights and Southern Lights are also believed to be closely connected with the same electrical and magnetic phenomena which may have something to do with radio transmission. And the future development of aviation across the Arctic Ocean, as a short-cut to the old World, depends a lot on conditions in the upper-air in those regions.

Mr. E. B. Calvert, chief of the forecast division of the United States Weather Bureau, has been telling me about the plans being worked out by a committee of the International Meteorological Organization to get a complete picture of North and South Polar weather and magnetic and electrical phenomena during the course of an entire year. It is the most ambitious polar investigation undertaken in the last fifty years. Mr. Calvert, who has been our country's representative in a number of recent arrangements for cooperation in weather work with other nations, calls it "a great adventure in science."

For hundreds of years, there has been a glamor of romance and adventure about Arctic and Antarctic exploration; for any cause, at any time. Most of us thrill when any little group of explorers pit their powers against Nature in the polar wastes.

But this plan for a systematic day-by-day check on polar conditions for a year seems awesome in its vastness. Instead of one expedition by one nation, there will be many expeditions by many nations. Practically every country holding lands fronting on the polar seas is expected to take some part. Many will send out parties to set up these weather and magnetic outposts. A number of the parties will consist of only three men.

Later all the observations made by all the stations and expeditions which will rim the two poles will be collected and mapped. With these musketeers of science, it is "All for one, and one for all," so the

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scientists of the world may know the year around changes in conditions in all parts of the Arctic and Antarctic.

August 1932 to August 1933 has been proposed as the "Polar Year," during which these observations will be made. Those dates have been selected because they mark the fiftieth anniversary of the First Polar year.

Back in 1875, Lieut. Karl Weypecht, of the Austrian Navy, launched a plan for the first such charting of polar conditions, and twelve nations, including the United States, made the observations during the year extending from August 1882 to August 1883. At that time, there were fourteen expeditions in the field, twelve in the Arctic and two in the Antarctic.

Two very famous Arctic expeditions of the United States were part of our participation in that First Polar Year. On the western side of our continent, we had the famous Point Barrow expedition under Lieut. P. H. Ray, who set out in September 1881 with 9 men and remained at Point Barrow for two years, where he made an expensive record of weather observations every day during the polar year period. The other expedition was that of Gen'l (then Lieut) A. W. Greeley in the Baffin Bay region on the eastern side of the continent, remarkable in the history of Arctic exploration for the hardships encountered. He started out in 1881 with 23 men, nearly all of whom were dead before the final heroic rescue by Admiral Schley in 1884.

Partly in celebration of the work of the First Polar Year and partly because of the convenience of the fifty-year period for a re-check on conditions, it is planned to have the Second Polar Year begin in August of next year.

This time, however, Mr. Calvert says, it won't be necessary for the United States to send out an expedition. We already have three or four weather stations within the Arctic Circle which report surface weather conditions twice every day by radio. We also have two aerological stations in western Alaska where observations in the upper air are being made by means of pilot balloons.

Mr. Calvert thinks it likely that we will take additional upper air-observations during the Second Polar Year at the Point Barrow station which is nearly the northermost point of our territory.

You see, radio and aviation have developed since that First Polar Year and upper air observations have taken on an importance undreamed of fifty years ago. In the plans for the Second Polar Year therefore, the upper-air observations will play a prominent part.

The height of the clouds and the direction and velocity of the winds aloft can be readily calculated by releasing small balloons and watching their flight with instruments on the ground.

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Temperature and other measurements of the upper air are often obtained in this and other countries by sending up self-recording instruments in free balloons. But on the rough ice of the lonely polar regions, such a method is impractical due to the difficulty in recovering the instruments and records.

However, the director of the Danish meteorological service, who is chairman of the committee in charge of the plans for the Second Polar Year, has pointed out that most of the existing weather stations in the Arctic are located in sheltered fiords where the cold air settles, and do not give a true picture of the temperature of the free-moving air of the polar regions in general. To overcome that difficulty, he proposes the establishment of high-level stations in mountainous parts of the Arctic.

The plans call for two such high-level stations on the west coast of Greenland, two on the east coast of Greenland, two in Iceland, one in the Faroe islands, others in Norway, or Spitzbergen, and probably other parts of the Arctic. These positions would be occupied by larger parties and more complete equipment than the expeditions equipped to make surface and pilot-balloon upper-air observation.

In the South Polar region, it is planned to have most of the stations located on sub-Antarctic islands rather than on the Antarctic continent itself. The island stations will be supplemented by observation parties on board whalers and other ships in the Antarctic Ocean.

All the details of the observation of the Second Polar Year have not been worked out yet, Mr. Calvert says, but Canada, Norway, Sweden, Holland, Russia, Germany, England, the United States, Argentina, and some other nations are expected to take part. Observations in the Arctic and Antarctic will also be supplemented by similar observations taken at special stations in the tropics, as well as those from the regular stations throughout the world.

ANNOUNCEMENT: You have just heard a brief sketch of the plans for the observation of the Second Polar Year, as the golden jubilee of the famous First Polar Year. These chats with the weather man are presented once every two weeks by Station _____ in cooperation with the United States Department of Agriculture.

National Oceanic and Atmospheric Administration

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