

EXPLORATIONS IN THE ANTARCTIC*

Sir Hubert Wilkins

I DEEM it an honor to appear before the Photogrammetry Society, and a great privilege to be able to introduce my good friend, Commander Ronne.

Few of us realize that Commander Ronne had a remarkable record before he went on his own expedition. As mentioned tonight, he was with the United States Antarctic Expedition 1939-41, and together with Dr. Ecklund made one of the finest two-man sledge journeys ever to be made over the southern continent, and in the straits, and up on the plateaus that are just as difficult and dangerous to travel over as any part of the world I have seen. I have been on the high plateau of the Palmer Peninsula and down over the sea ice; it is just as difficult as climbing the mountains in Switzerland or in Canada or Greenland. The sea ice in the Antarctic is just as treacherous as is the Arctic ice.

One of our contemporary explorers said that a modern polar explorer, to be successful, has only to press the button and make his machinery work, and the most successful explorer is the one who makes his machinery work, the farthest away from the factory in which it is made. I think Commander Ronne has evolved into that field. He is one of the explorers who now has shown definitely that he can push the button and make his machinery work successfully. But before he did that, he ventured out by the old method, using dog teams; he and Dr. Ecklund did a great deal of mapping, using cameras, and also mapping and surveying from the ground. I think their record stands above most others that have been made in the Antarctic.

Few of you realize, perhaps, what it means to travel 1,264 miles over the Antarctic Area in less than 90 days. That would have been a feat in itself, but they were not satisfied with that. They were interested in carrying out their work and we know that as the result of that journey, they were able to map and fix the position of some 320 major mountain peaks and nunataks. It is not the privilege of everyone, even explorers with years of experience, to have named or to have located so many mountain peaks, and to have located them accurately. It is no difficult matter to see a mountain peak as you travel along the Antarctic, but to be able to fix its position and to map it, is a very important and useful thing to do.

My interest in photogrammetry goes back to a great many years ago, to World War I when I was a pilot in the Australian Air Force and tried my best to persuade the Army that in time, we could develop aerial photography to the point of producing satisfactory maps. But I was not listened to with much interest in those days. Most of the specialists said that we would never produce an airplane map that would be serviceable to the Army—they had to be more particular—so when I first went to the Antarctic in 1919, I could not get any support for the use of aerial mapping.

We did not take our airplanes eventually but tried to carry out some mapping in the area which Commander Ronne has been covering. We used the old-time method of boats. I remember well, traveling along that coast with two others in an open whaleboat, doing our best to map the coastline. In a full summer season's work of over three months, we succeeded in mapping just thirty miles of the coastline, by taking angles and planetable work. That was extremely hazardous because frequently as we were traveling along the coast from point to point in a whaleboat, bad weather would come up and we would be

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driven off the course. Unfortunately, I had with me two assistants who were susceptible to wave motion and on every boat trip, they were seasick. They fought it off very bravely, but it was not long before they were down in the bottom of the boat moaning for the shore; usually before we got to the other part of the coast or the other side of the bay, they were so weak from seasickness that they were hardly able to carry the transit or planetable.

It wasn't only getting ashore on the rocks at the edge of the coast, but sometimes during a storm when we tried to hit the face of the glacier or glacier tongues, we were not always successful. I remember one time when we ran ashore on a glacier foot and one of the seasick boys, lying on the bottom of the boat, thought we had reached land. He jumped up and saw we were under an ice cliff and he started throwing things out, the instruments and the boxes of food. Fortunately, we were on a ledge where the water was only about two feet deep. It was his job to get out, in his bare legs, and fish out the instruments and the food from the glacier foot.

Commander Ronne did not have to do that, because he was sensible enough to see and was able to persuade people that he could do much better work with his airplanes and his trimetrogon cameras. We know very well from the results he has brought back that he has done a wonderful job.

The job he has done was in an interesting area. I do not know how many of you know the history of the discovery of that part of the Antarctic. We call a part of it, the Antarctic Area because there is no agreement as to the name. In England they refer to it as Graham's Land, but of course in this country, we call it Palmer Land or Palmer Peninsula. The British claim that they discovered it and I think they have proof that they saw the continent before Palmer, the American after whom it was named, saw the major part of that sector. Bransfield, one of the British captains down there, saw what he thought was mainland, sent his mate ashore with the flag, and claimed the area in the name of George III. It was not an official claim, of course, because he had no authority; he had not been appointed by the King of England to make any such claims, but he did it as a matter of course.

It was not until about eleven months later that Palmer, one of the whalers with an American group, saw what he believed to be the mainland in a different area; shortly thereafter he met a Russian expedition that was traveling around the Antarctic Continent. They had been traveling around high latitudes in the south for nearly three years. When Palmer went on board Bellingshausen's ship, a Navy frigate from the Russian Navy, and told Bellingshausen he had discovered what he thought was the mainland, Bellingshausen was very much perturbed. He said "What in the world am I going to say to His Imperial Majesty?" showing that, even in those days, the Russians feared failure as they do today. "I can say nothing in my defense, because for three years, I have been searching for this continent with a great outfit of Navy ships, and here you, with a little boat no bigger than my launches, have discovered the continent. But, after all, you deserve credit for that, so I am going to name the land that you have discovered Palmer Land," and so it has been called Palmer Land ever since on the American maps.

Of course, it was a Russian proclamation and so far the Americans have not seen fit to veto it. Really, accepting the name, Palmer Land, that the Russians gave it is quite an indication of our tolerance.

After it was claimed, there was a good deal of work done there by the American and British sealers, but a Swedish expedition under Dr. Otto Nordenskjöld was the first to winter in that area. He took his boat down on the eastern coast of Palmer Land. (A slide was shown.)* The screen gives you an

* See pages 198 and 213.

outline of the area. In the corner on the slide, the Antarctic Continent itself is outlined in green. Thus you can get an idea of the relative size of the area in which Commander Ronne is working.

Down in this corner of the map you will see a shaded area. At the top section is the area in which Commander Ronne has worked; actually he saw an area almost equal to that shaded on the map. It was the greatest section of new coastline, I think, that anyone has seen. He was able to fly on clear days. I am sure that when he tells you about it, you will agree that the work that he has done down there is extraordinarily when done and well worth while.

The earlier work was done at up the very top of the map, where you see those two islands to the eastward. It was there that Nordenskjöld wintered his boats, or rather wintered his party. His boat, coming in to relieve him, was wrecked and the party had to be rescued by an Argentine vessel.

The next expedition to winter there, was that of a Frenchman named Charcot. It came down to the west coast and wintered just about a little bit south of where you see the beginning of that dotted line, down among those islands where the black line starts. Charcot wintered on one of the islands, staying there for one year, but he did his mapping with open boats, as I tried to do in 1920, in the summertime. It was not possible to walk along that part of the coast in wintertime because the ice was not solidly fast to the shore.

Charcot, not content with one expedition, went back two or three years later and continued his work. He was able to follow down the edge of the coastline to the area you see marked on the coastline as Charcot Island. Charcot believed that he had seen a part of the mainland continent. We are not at all sure that he did not, but it appears from the evidence we now have, that what Charcot saw then is really an island.

The next expedition, I think, was our expedition in which there was some mapping done with airplanes, and in which we made the first flight ever made in the Antarctic. I had been looking forward to the days when I could get to the Antarctic with a camera and airplane to do some mapping, because I had been so impressed with the austerity of the country and the apparently unconquerableness of it from the point of view of a boat traveler or a sled traveler. There were high precipices to climb and we could not possibly reach the plateau in the more northern sections. The mountains themselves, ranging up to 15,000 feet, were really magnificent,—the most magnificent mountains that I have seen, and I have been through most of the mountain areas of the world, except in the Himalayas.

I was so impressed with their unapproachableness that I was anxious to get down there with airplanes so that we might fly over them. And we did. In 1928 we made the first flight with an airplane that was made in the Antarctic. We flew along on that day and mapped the coast more or less for about 500 miles. You might have thought we would have been very thrilled. Paul Van Arsdén was my pilot and companion. We were separated in the plane and could not communicate very much with each other. After we came back and landed, you never saw two more down-spirited fellows in your life. One would have thought that we would have been hilarious with success, because we had mapped 500 miles in one day and previously I had struggled to map thirty miles in one season. But the fact that we had flown over those magnificent mountains with such ease, looking down on the valleys and cirques, taking photographs as we flew, seemed to belittle them and we were not enthralled at all. I was rather ashamed of myself for being one of the explorers who could push a button and make my machinery work far away from the factory; but we realized that was really the beginning of the serious scientific mapping of the area.

We made many mistakes, not so much in our observations as in their interpretations. We believed we saw low-lying areas dividing that long peninsula, Palmer Peninsula, and I marked them as channels, but it was not long after that, that Byrd's expedition went down. Rymill and his party, traveling on sled and afoot, with dog teams, over the plateau, discovered that what I thought to be long channels were actually long, smooth, gently rising glaciers which came to a steep, precipitous rise on the east coast. This made it look from the airplane like they were joined on the other side; actually they were long glaciers rather than long straits.

Rymill made quite an alteration on the map, but conditions there are so deceiving to those people, not only on the ground but in the air, that when the U. S. Antarctic Service Expedition went along with their airplanes and with their dog teams, they were able to make considerable corrections to the maps made by Rymill; they changed the configuration of the coastline considerably, and some of the positions, and we thought they had done a marvelous job—and they had.

Then we were astonished to find when Commander Ronne went down this year with more expert and trained crews, and with better equipment, that he found it necessary to change the position of some of the mapping done by the U. S. Antarctic Service Expedition, moving one point, for instance, 55 miles north and 35 miles to the westward.

And so it seems that each succeeding expedition has to correct the work of the other one going to the field. At least they give a different interpretation to what they have seen. We find it very difficult in the polar regions to give the exact interpretation of what conditions are, because it depends on the conditions existing on the day you see it. It may be foggy; it may be hazy; it may be clear and you may have a better chance than the other man of accurately describing the conditions; or you may use a rather different term, depending on your training and how you describe the area. You will find that there have been a great many changes in that section, if you look at the maps that are now produced, from 1902 up to 1947 when Commander Ronne went down.

But there was still one great question in the minds of geographers, and that was whether the Weddell Sea joined the Ross Sea. Many geographers believed there was a low-lying passage, but possibly not low-lying at the surface because it might be filled with ice. We still had not traced the mountain area across from the Palmer Peninsula to the mountain range near the South Pole, and that was one of the great objectives of the Ronne Expedition, I think he is going to tell us something about that tonight.

All geographers may not agree with his conclusions. As I say, each one interprets the conditions and the evidence according to his understanding and his training, I am tempted to tell the story, in that connection, of my friend the judge who said to the man standing before him, "I should think you have a perfectly legitimate case for damages. You saw your neighbor's dog stealing your chickens and you shot him in the act. That is conclusive evidence." "Well," the plaintiff said, "Judge, you may call it shooting him in the act, but the fact is, I shot him in the behind as he climbed through the fence." Of course, they both meant the same thing and it was near enough. They understood what they were talking about.

I am sure with Commander Ronne's pictures and his clarity of description, you will understand what he is talking about. I hope you will realize the very fine and splendid work that he and the members of his crew have done.

I thank the Society very much for this opportunity of introducing to you Commander Finn Ronne.