

Fog is most frequent during spring and summer months, especially near the coast. When warming air from the land comes in contact with ice-covered or cold seas, condensation occurs and fogs roll out to sea. Fogs are not as frequent a transportation hazard in the Western Arctic, however, as they are in Hudson Strait of the Eastern Arctic. Cambridge Bay and Coppermine average two to three days of fog each month during May, July and August. A maximum in May of eight foggy days at Coppermine and of nine at Cambridge Bay is the greatest number ever reported in one month.

Fogs are rare in the winter months when sea-ice and snow-covered land have about the same temperatures. Visibility is sometimes poor in this season, however, owing to drifting snow. During these "blizzards" all movement ceases, as Eskimo and white travellers wait in snow-houses or in tents for the storm to blow over. On the other hand, many days of spring are clear and bright, with scattered high clouds. This is the best time for travelling provided snow-goggles are worn as a precaution against snow blindness.

Winds blow predominantly from the northwest during the winter at most stations. At Coppermine, however, southwesterly winds are more common in the winter. In summer, winds from the east or northeast occur more frequently in the Western Arctic, but again shift to the northwest in autumn. Calms are more usual in winter than in summer.

**Ice Conditions.**—As in all Arctic regions, one of the main problems of accessibility is unpredictable ice conditions. For about 9 to 10 months coasts are closed to sea transportation by land-fast ice, and the open gulfs off Beaufort Sea are jammed with heavy ice floes from the shifting pack of the Arctic Ocean. During the short open season, when the ice moves off from the shores of the open coast, and melts in the enclosed seas, navigation is possible. The length of that season, and the degree of accessibility, however, vary greatly from year to year.

Early in September the lakes in the northern parts of the region begin to freeze over; by the end of the month small lakes on the mainland also have an ice-covering. Towards the end of September or early October ice forms across the harbours and inlets, and starts to build out from the shore. By the end of November or early in December, Coronation and Queen Maud Gulfs, and the connecting straits off the mainland coast, are frozen over completely except where there are unusually strong currents. If freeze-up comes during a period of calm, the ice will be hard and level, making an excellent winter highway. If the freeze-up period is stormy, and the ice is broken up several times before finally setting, the resulting ice-cover will be rough and hummocky.

One of the notable differences between Eastern and Western Arctic winter ice is the lack of a "tidal hinge" in the western region. Tides are quite minor in the Western Arctic, averaging from one to two feet on the open coast. In summer the height of the tide is influenced more by prevailing winds than any other factor. In the Eastern Arctic, high tides raise and lower the harbour ice, leaving a zone of weakened ice or open water between the main mass and the shore. In the Western Arctic, on the other hand, tides are so minor that the harbour ice freezes solidly to the shore. Its average thickness in late winter is five to seven feet.

In spring the ice breaks up first along the coasts, especially near the mouths of rivers. A strip of open water melts along the shore, and cracks appear in the harbour ice. Soon the cracks grow wider, and the floes are shifted about with the