Released upon receipt
but intended for use
May 13, 1932

? WHY THE WEATHER ? Mailed May 6, 1932

By Charles Fitzhugh Talman,
Authority on Meteorology.

POLAR PARADOXES

The climate of the polar regions, a topic of timely interest in view of the forthcoming "International Polar Year," is paradoxical in certain respects, from the standpoint of people living in the temperate zone. For example -- suppose you are traveling north in midsummer from the 60th parallel (the latitude of southern Norway) to the north pole. The meridian altitude of the sun (i.e., the sun's height above the horizon at noon) steadily diminishes as you proceed, and the more and more acute angle of the sun's rays tends to diminish your supply of solar heat, but the effect of the increasing length of the day is so much more important that you will actually get more heat per 24 hours the farther north you go. It is a remarkable fact that at the summer solstice the north pole receives a larger share of heat per day from the sun than is received by any other part of the earth at any time of the year -- except the south pole at the winter solstice. This does not mean, however, that the weather at either pole is particularly warm in summer. The air is kept cold by the ice-covered land or sea beneath it. The mean air temperature at the north pole in July is probably a little below the freezing-point (32 degrees Fahrenheit), as compared with a mean of something like 40 below zero at the same place in January.

Warm sunshine is found everywhere in the Arctic on clear summer days. The dryness of the air, moreover, permits free passage of the ultraviolet rays that cause sunburn.

(All rights reserved by Science Service, Inc.)

SCIENCE SERVICE
21st and Constitution Ave.
Washington, D. C.