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A Science Service Feature

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? WHY THE WEATHER ?

Dr. Charles F. Brooks,
of Clark University,
tells of:

SPRING SUNSHINE IN LATE WINTER

It seems rather odd that in many regions of the United States the strongest sunlight is experienced in February - a month surpassed for cold only by January. North of latitude 40 degrees the maximum intensity may not come until March. In January we are nearest to the sun and so might expect the most intense sunlight, but the obliqueness of the rays decreases the amount of light received. When the sun is low, the rays must pass through a much greater thickness of atmosphere.

Thus, figures for Washington, D.C. show that if 1 represents the air mass which would be traversed by perpendicular rays, 2 is the air mass traversed when the sun is 30 degrees above the horizon, 3 the figure for 19 degrees, and 5 for 11 degrees. The intensity of sunlight is measured on a surface perpendicular to the rays. At latitude 42 degrees N. in the eastern United States this intensity increases 11 per cent from January 21 to February 21, remains about the same in March and then gradually decreases, reaching a minimum in December. The greatest change is from January to February. Not only is the sunlight brighter, but there are more hours of sunshine, for while along the Atlantic Coast January has an average of 4 to 5 hours of sunshine daily, February enjoys about 6. In each case this is about half the amount of sunlight possible were there no clouds. In February, then, we find sunlight an important factor in the melting of snow, and notice the disappearance of a snow cover and the awakening of plants first on southern slopes.

(Tomorrow: Blackened Snow Melts Fast)

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