

A Science Service Feature

Released upon receipt
but intended for use
October 4, 1932

? WHY THE WEATHER ? Mailed September 27, 1932

By Charles Fitzhugh Talman,
Authority on Meteorology

ANCHOR-ICE AND FRAZIL

With the onset of cold weather we are likely to read in the newspapers that somebody has discovered a mass of ice at the bottom of a stream when the water is free from ice above. Much mystery is usually made of such a discovery, though the phenomenon in question is very common and has been fully explained. Ice formed in this situation when the water above is unfrozen is called "anchor-ice." It is found most frequently though not exclusively in running streams and occurs in spongy masses, quite unlike the glassy plates that form at the surface.

The authorities now agree that the rock or soil on which anchor-ice forms loses heat rapidly by radiation through the water above and thus cools the lower layers of the water below the freezing point. The process takes place only at night and in clear weather, and is similar to that by which deposits of hoarfrost are produced in the open air.

Still another kind of ice found in running water is called by the French-Canadian name "frazil." It consists of little icy particles that form at the surface but are prevented by the movement of the water from uniting in continuous sheets. In the River St. Lawrence vast quantities are formed in the rapids and are carried under the surface ice farther downstream, sometimes damming the river and causing disastrous "ice shoves" along its banks.

(All rights reserved by Science Service, Inc.)

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