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ANCHOR-ICE AND FRAZIL

Ice which forms at the bottom of a body of water while the water above it remains unfrozen is called "anchor-ice" or "ground-ice". It is found especially in running streams and occurs in spongy masses, quite unlike the glassy plates of ice that form at the surface of the water. When detached it rises to the top of the water, often bringing with it heavy objects from the bottom, such as rocks or lost anchors and chains. Its mode of origin was formerly a subject of much controversy.

The authorities now agree that the substances on which anchor-ice forms lose heat rapidly by radiation through the water above them and thus cool the lower layers of 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.

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