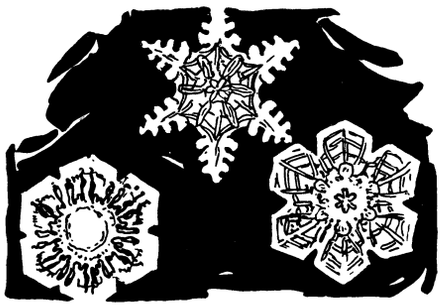
METEOROLOGY

NATURE RAMBLINGS

by Frank Thone



➤ SNOW crystal study is a fascinating pastime—if you can endure a little cold. All you need is a piece of dark cloth—the sleeve of your overcoat will do—and a good hand lens. You must also have the ability to hold your breath while examining these tiny fallen stars, for if you breathe on them they vanish, like fairy gifts when the magic spell is broken.

If you want to carry your study indoors, and even pursue it next summer, you can easily prepare the artificial "fossil impressions" invented a few years ago by Dr. Vincent Schaefer of the General Electric Company. You put a dab of a soft, self-setting plastic, known as "Formvar," which you can purchase at any paint store, on a clean, clear piece of glass, and transfer snow crystals onto it with the thin-shaved edge of a bit of wood. The crystal will vanish, but will leave its delicate, six-pointed print behind it. When the plastic hardens, you will have a permanent specimen.

Study of such prints, as well as of actual photographs of thousands of snow crystals, indicates that although they are always six-pointed they are never exact duplicates. No print or photograph precisely like another one has ever been found. It is somewhat dizzying to reflect that in the uncountable, unimaginable trillions of snow crystals that have fallen from the winter skies since the world began there have never been any duplicates. Yet considering the immense number of water molecules that go to make up even the smallest of snow crystals, and the infinite variability of the basic hexagonal pattern, it is quite definitely possible.

Differences in size of snow crystals, which is correlated with differences in the intricacy of their patterns, are believed to be correlated with the heights, and hence the temperatures, of their formation. The smallest crystals, which have a doric simplicity of outline, fall from the highest clouds. The largest and laciest crystals are the product of lower altitudes, where there is plenty of moisture but temperatures not very far below the ordinary freezing temperatures as we know them at ground level. Graceful intermediate patterns, neither very severe nor yet over-elaborate, come from the middle heights.

Of course, in the wettest type of snowstorm, where rain alternates with the fall of thick sticky flakes, the crystals are all matted together and their clean outlines are lost. Snow of this type is difficult to examine—and hardly worth the trouble of examining.

Science News Letter, January 8, 1949

JUST PUBLISHED . . .

Limited First Edition!

"PSYCHODYNAMICS and the ALLERGIC PATIENT"

By HAROLD A. ABRAMSON, M.D., F.A.C.A.

CONTENTS

- Psychosomatic Aspects of Hay Fever and Asthma Prior to 1900
- Psychodynamics and the Allergic Patient
- Panel Discussions by Ten Physicians
- General and Closing Discussions

$2.50 per copy

Order Direct, Department "A"
BRUCE PUBLISHING CO.
2642 University Avenue
Saint Paul 4 — Minnesota

MEDICINE

Stomach Rupture Danger

➤ THE STOMACH may burst after bicarbonate of soda has been taken under certain conditions.

A warning to physicians to be alert to this fortunately rare catastrophe is issued by Dr. D. Gordon Burket of Altoona, Pa., in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION (Jan. 1).

The stomach rupture apparently comes through a rather abrupt release of carbon dioxide gas caused by the action of acid on the soda. The acid may be the normal hydrochloric acid of the stomach. It may be acid from fermentation in the stomach. Or, as in Dr. Burket's patient, it may be the citric acid of citrate of magnesia taken as a cathartic. The stomach is full in all cases.

The condition is "rapidly fatal in the vast majority of cases," Dr. Burket states.

It is so rare, he says, that most physicians have never heard of it and are not likely to think of it as a possibility when diagnosing the patient's condition.

Any case with a history of taking bicarbonate of soda followed by sudden abdominal pain and severe and dramatic onset of shock and prostration should be immediately considered a case of spontaneous rupture of the stomach, Dr. Burket warns.

Dr. Burket's patient had taken a bottle of citrate of magnesia at three o'clock in the afternoon. About 7:30 that night, because she still had discomfort, she took about a tablespoonful of bicarbonate of soda in an unusually large glass of water.

Immediately after drinking it she collapsed on the floor in severe agony, turned blue and had labored breathing. Her skin became cold and clammy and her pulse was barely perceptible.

Operation was scheduled for two to three hours later, but her condition became worse and she became unconscious even before the anesthetic was given. The surgeon decided to operate anyway because he was almost certain one of the internal organs was ruptured. Rupture of the stomach, however, was not even considered, and was not diagnosed until the lesser peritoneal sac, containing the internal organs, was opened.

Here foamy white material was found. It was undoubtedly bicarbonate of soda with enclosed fine gas bubbles, Dr. Burket states. The gas bubbles boiled out through the cut. Chewed undigested food was removed by the handful from the peritoneal cavity into which it had escaped when the stomach burst.

A rent in the stomach about two inches long was found. This was sewed up but while the abdominal wound was being closed the patient rapidly became worse in spite of being given over a pint of blood plasma. She died before the surgeon had finished closing the wound.

Science News Letter, January 8, 1949

The familiar bunch of *bananas* hanging in the market is upside down from the position in which it grew on the banana plant.

A new *tire* recapping material, which is said to increase traction on icy roads by 30%, is high quality tread stock containing thousands of pieces of rock salt; in wearing the salt is released to form surface pores to grip the road surface.

Science Service, Inc. is collaborating with JSTOR to digitize, preserve, and extend access to *The Science News-Letter.* www.jstor.org