

A Science Service Feature

Released on receipt
but intended for use
August 6, 1928

? WHY THE WEATHER ?

Mailed July 30, 1928

By Charles Fitzhugh Talman,
Authority on Meteorology

DEW - TRUE AND FALSE

The jewel-like drops that you may see sparkling on the leaves and stems of plants in the early morning after a clear night are partly dew and partly something else. True dew is formed by the condensation of atmospheric water vapor on cold surfaces. The "sweating" of an ice pitcher is an example of the dew-making process; the surface of the pitcher is truly "bedewed", though conventional language does not apply the term "dew" to the deposit.

At night most objects out of doors are, in calm and cloudless weather, greatly cooled by radiation, and if there is considerable water vapor in the air adjacent to them some of it becomes a liquid deposit of dew drops. At the same time another process is likely to occur. Plants constantly gather water from the soil and pump it upward through their stems. This water eventually passes off into the air through the little pores on the surfaces of the leaves and other green parts. In the daytime the water is generally evaporated at these orifices and passes off into the air as a gas. Often by night and sometimes by day the air is so charged with moisture that evaporation is checked, and then water in liquid form is squeezed from the pores of the plants and gathers on the surface in drops that look like dewdrops. This process is called "guttation", and the excreted water is called "false dew".

True dew and false dew look so much alike that it is not always possible to tell them apart. Probably most of the large drops seen in the early morning along the edges of leaves and grass blades, if not the result of rain or fog, may be assumed to be false dew.

(All rights reserved by Science Service, Inc.)

SCIENCE SERVICE,
21st and B Sts.,
Washington, D.C.