

Whitewashing the exposed trunks reflects the sun's rays, keeping the tree at or a little below atmospheric temperature. This keeps the tissues of the tree dormant, even during a sunny day, and not subject to injury when the temperature drops gradually at night.

Heretofore it was thought that sun scald occurs during the hot dry days of summer. A study of the temperature of the trunks and twigs of the trees during summer shows that this is not the case.

The upward passage of cool water from the roots and its evaporation from the twigs and leaves cools the parts of the tree above ground. During a hot, dry day in summer the trunk and twigs of a tree are usually cooled to a temperature from 15° to 20° below the temperature of the air. This cooling is most marked adjacent to green leaves, which evaporate much water. It is least marked on long, bare trunks and main limbs which have no twigs and leaves to evaporate water. This emphasizes the desirability of preserving rosettes of leaves and short fruiting twigs all up and down the trunks and main limbs to shade and cool the parts where sun scald usually occurs. It also emphasizes the desirability of low-headed trees.

These leaves also digest plant food to nourish the limbs, trunks, and roots, maintaining a thicker, healthier annual ring of new sap wood.

If sun scald begins on the south side of the trunk and main limbs in winter, it can continue during summer. Winter sun scald dries out the tissues and opposes the development of sap wood and green leafy twigs on the exposed parts. Cool sap is not readily carried through these dried and injured parts so they are less cooled during hot summer days.

A good whitewash which will stick may be made as follows: Slack 15 pounds of lime, in which 2 pounds of salt and 3 pounds of sulphur are sifted while the lime is slacking. The heat of the slacking lime acts on the salt and sulphur so as to form a wash which will stick. Add water to make a thick whitewash and apply to the tree trunks by means of a spray pump or a brush.

Whitewashing the trunks of young trees or sun-scalded parts of older trees is desirable, especially in winter. It is not necessary on older trees with thick bark and which possess twigs that shade the limbs.

## ABSTRACTS, REVIEWS, AND NOTES.

### BRITISH RAINFALL ORGANIZATION.

On July 25, 1919, in accordance with an arrangement approved by H. M. Treasury, the responsibility for the management of the British rainfall organization was transferred by the trustees of the organization to the director of the meteorological office. In accordance with the terms of the transfer, the publication of *British Rainfall* will be continued and *Symons's Meteorological Magazine* is also assured of continuance in association with the *Circular* of the Meteorological Office.

The news of the retirement of Dr. H. R. Mill on account of his impaired eyesight was recently announced, and has been received with much regret by all who are interested in the study of rainfall. The 19 years of his connection with the organization have shown continuous development of the study of the subject on scientific lines.—*Meteorological Office Circular*, 39, Sept. 1, 1919, p. 1.

### THE "METEOROLOGICAL GLOSSARY" OF THE BRITISH METEOROLOGICAL OFFICE.<sup>1</sup>

The title of this exceedingly useful compend is somewhat misleading. It is really a pocket encyclopædia of meteorology and kindred sciences. The name "glossary" suggests that one may find here definitions of at least all the more usual words and expressions pertaining to meteorology, but such is not the case. No meteorological glossary worthy of the name has yet been published. The lists of definitions found in Bartholomew's "Atlas of Meteorology" and Marriott's "Hints to Meteorological Observers" supply even less adequately than the new publication of the Meteorological Office the lexicographic information needed by meteorologists.

Only about 400 terms or subjects are treated in the work under review. Taking the letter "A" as a sample of the book in general, we note the omission of *afterglow*, *air-drainage*, *Alpenglow*, *anchor-ice*, *anomaly*, *antitrade*, *arched squall*, and *atmometer* (*atmidometer*), besides hosts of rarer expressions belonging to the language of meteorology, such as *advection*, *aelloscope*, *Æolus*, *aerobioscope*,

*aeroclinoscope*, *aeroconiscope*, *aeroscope*, *aerotherm*, *æthrioscope*, *air-tester*, *All-Hallowen summer*, *allobar*, *ammil*, etc.

The size of the meteorological vocabulary is realized by very few meteorologists. The present reviewer has labored desultorily during the past 10 years in gathering material toward a comprehensive meteorological dictionary, including in its scope both scientific and non-scientific terms relating to weather and climate, and although upward of 10,000 terms have already been listed the enumeration is still fragmentary.

While the glossary of the Meteorological Office contains many definitions, it is primarily a series of articles, some of them several pages in length, on topics that either are directly meteorological or have some important meteorological application. Under the latter head we find several physical and mathematical articles of rather exceptional interest to the meteorologist, to whom they supply information not easily obtainable elsewhere in a form so convenient for his use. There are, for example, excellent brief discussions of harmonic analysis, correlation, heat, entropy, and buoyancy.

The articles on purely meteorological subjects represent the fruit of the latest investigations, and are therefore a valuable and indispensable supplement to all existing textbooks of meteorology. Aerological subjects are well represented, and there are succinct presentations of recent views and data relating to such topics as the audibility of explosions, visibility, gusts, eddies, and gradients.

The definitions of terms are generally valid and accurate, though a few are open to improvement. We regret to find that British meteorologists persist in using the word *isopleth* (p. 168) as a synonym of *isogram*, the generic name for the "iso-" lines. Ever since the former term was introduced by Ch. Vogler, in 1877, it has been applied almost exclusively, outside of recent British writings, to an isogram drawn on a system of coordinates at least one of which indicates *time* rather than space. Isograms of this class are described by Hann, in his "Lehrbuch der Meteorologie," 3d ed., p. 91, and in this connection he says: "Der Name 'Isoplethen,' der eigentlich Kurven gleicher Zahlenwerte bedeutet, was ja auch z. B. die Isothermen usw. sind, wird nur auf diese Darstellungsmethode angewendet." (Our italics.) The important

<sup>1</sup> Great Britain. Meteorological office. Meteorological glossary. 4th issue. London, 1918. 358 p. 24". (M. O. 225 il.)