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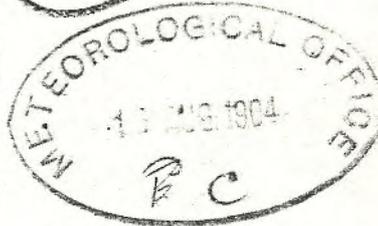
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No. 119.

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HYDROGRAPHIC OFFICE.



INSTRUCTIONS

TO THE

P29 AIR
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P32 SEA *

VOLUNTARY METEOROLOGICAL OBSERVERS *

OF THE

U. S. HYDROGRAPHIC OFFICE.

By JAMES PAGE,
U. S. HYDROGRAPHIC OFFICE.

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A mere inspection suffices to understand this table. For instance, if the temperature of the air (dry bulb) be 60°, and the temperature of evaporation (wet bulb) be 56°, the difference being 4°, look in the column headed "Temperature of the air" for 60°, and for the figures on the same row in column headed 4°. Here 78 will be found, which means that the air is 78 per cent saturated with water vapor; i. e., that the amount of water vapor present in the atmosphere is 78 per cent of the total amount that it could carry at the given temperature (60°). This total amount, or saturation, is thus represented by 100, and any increase of the quantity of vapor beyond this point would mean that the excess would be precipitated in the form of liquid water.

Over the ocean's surface the relative humidity is generally about 90 per cent, or even higher in the doldrums; over the land in dry winter weather it may fall as low as 40 per cent.

The temperature of the water at the surface.—The water whose temperature is taken should be drawn from a depth of 3 feet below the surface, the bucket in which it is drawn being weighted in order to sink it. The bulb of the thermometer should remain immersed in the water at least three minutes before reading, and the reading should be made with the bulb immersed.

Weather, state of, by symbols.—To designate the weather a system of symbols devised by the late Admiral Beaufort is employed. The system is as follows:

Upper atmosphere....	{	<i>b.</i> —blue sky.
		<i>c.</i> —cloudy sky.
		<i>o.</i> —overcast sky.
		<i>v.</i> —visibility of distant objects
Lower atmosphere....	{	<i>z.</i> —hazy.
		<i>m.</i> —misty.
		<i>f.</i> —fog.
		<i>d.</i> —drizzling.
		<i>p.</i> —passing showers.
Precipitation	{	<i>r.</i> —rain.
		<i>s.</i> —snow.
		<i>h.</i> —hail.
		<i>l.</i> —lightning.
		<i>t.</i> —thunder.
		<i>q.</i> —squally.

To indicate greater intensity, underline the letter thus: r. heavy rain; r. very heavy rain, etc.

Those symbols should be employed which describe the weather at the actual time of observation; not the average conditions throughout any period.

The information desired is a statement (by symbols) of each of the following particulars at the actual time of observation, using in general a single symbol for each; note that the absence of a symbol is in many cases significant:

1. The clearness of the upper atmosphere (sky).
2. The clearness of the lower atmosphere.