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FOGS AND CLOUDS

Fogs and clouds are identical in nature, aggregates of liquid or solid particles, but distinguished from each other on the basis of whether or not the aggregate reaches the ground. Thus a fog of which the lower portion evaporates becomes a cloud. A "cloud" to a man in the street, may be a "fog" to an observer on a skyscraper. Fogs and clouds are "dense" or "thin" according to their light transmitting qualities, which depend more on the number of particles per unit volume than on the amount of condensed moisture. Thus a cloud or fog originally dense may forthwith become thin by virtue of the increase in the size and decrease in the number of droplets or crystals. Fogs or clouds may disappear in this manner, though commonly their dissipation, like their formation, is the result of a change in the temperature of the foggy air. Foggy air rising will have condensation continue, while ^{if} descending it will tend to clear, e.g. on the windward and leeward sides of a mountain.

It is not difficult to surmise in a general way, at least, the process or processes forming a fog or a cloud. There are chill fogs, from the chilling of moist air, and "steam" fogs, the "vapor storms" of Cape Cod, from the moisture discharge of a relatively warm surface into cold air. Up in the air, clouds form commonly by mixture of moist air masses of different temperature, and by the cooling that comes with radiation, falling pressure, or ascent of humid air. If the ascent is local, the clouds have a bunched, or cumulus, form, while if it is general, the clouds are sheet-like, or stratiform. Cumulus types are most common in summer when local heating is important, while stratus types are most characteristic of winter.

(Tomorrow: Atmospheric Pollution)

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