of classification which has yet been proposed can be regarded as completely satisfactory.

Classification by physical characters.

Lakes have been arranged according to :—

(1) Their superficial area.
(2) Their cubic contents of water.
(3) Their depth.
(4) Their latitude.
(5) Their elevation above or below sea-level.
(6) Their being salt or fresh.

All these classifications must be regarded as more or less artificial. Some of the principal lakes, arranged according to these methods, will be found at the end of this paper.

Classification by temperature.

Another system is to arrange lakes according to their temperature conditions. For instance, Forel divides lakes into three types—polar, temperate, and tropical—and bases the distinction upon bottom temperatures as follows :—

(1) Tropical type: temperature of deep layers varies from and above that of maximum density.
(2) Temperate type: temperature of deep layers varies above and below that of maximum density.
(3) Polar type: temperature of deep layers varies from and below that of maximum density.

He subdivides each type into two classes, deep and shallow, defining deep lakes as those which have a constant bottom temperature, and shallow lakes as those which have a variable bottom temperature.

George C. Whipple, in a paper in the *American Naturalist*, 1898, on "Classification of Lakes according to Temperature," suggests that lakes be divided into three types according to their surface temperatures, and into three orders according to their bottom temperatures.[1] These three types are :—

(1) Polar type: surface temperature never above that of maximum density.
(2) Temperate type: surface temperature sometimes above and sometimes below that point.
(3) Tropical type: surface temperature never below that of maximum density.

This division into types corresponds somewhat closely with geographical location.

His three orders may be defined as follows :—

(*a*) Lakes of the first order have bottom temperatures practically constant at or near the point of maximum density.

[1] See note by E. M. Wedderburn on p. 144.