

and in which great annual fluctuations of temperature did not occur (fig. 61). The investigations in alpine lakes in Switzerland and Austria have given quite the same result, whereas the seasonal variations in the lowland lakes of the same countries take place quite as in the Baltic lakes. Just as the seasonal variations in our lakes do not take place at temperatures above 12–16° C., they are not traceable in lakes which never reach this temperature. Where the claims for increased floating power are not pressed, those structures by which it is augmented will not be formed by the organism.

It is still more peculiar that not only the seasonal variations but also the local variations almost totally disappear under arctic con-

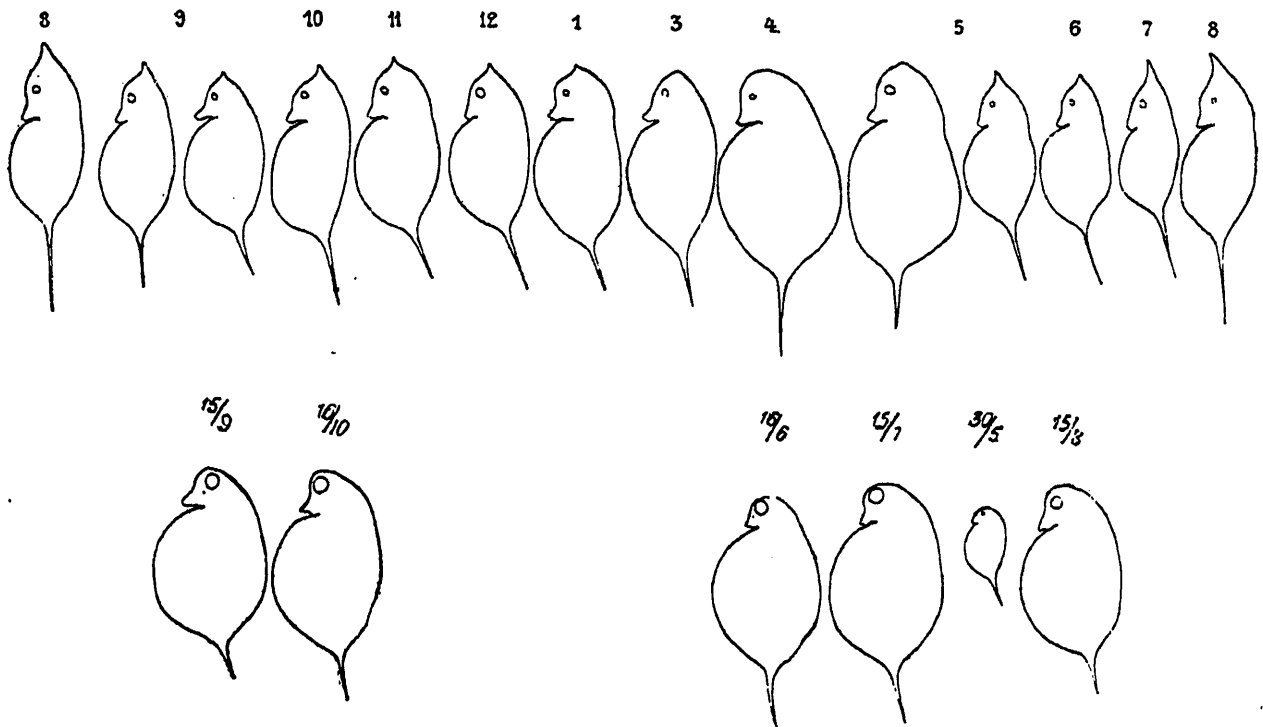


FIG. 61.—*Daphnia hyalina* in Esromsø, Denmark (above), and in Myvatn, Iceland (lower). In Esromsø we have a conspicuous seasonal variation, in Myvatn this is absent. In Esromsø, *Daphnia hyalina* overwinters as a free-swimming organism, in Myvatn only in ephippia.

ditions. On an area so small as Zealand, *D. hyalina* has in almost every lake a special, well-defined race. If, on the other hand, we compare examples from Greenland, Iceland, Sarek in Sweden, and from the northern parts of Finland it will be seen that the race characters have almost disappeared. *All these forms may without any difficulty be referred to one or two types easily distinguishable from the summer forms of southern countries*<sup>1</sup> (fig. 62). Now it has further been

<sup>1</sup> The peculiar phenomenon that the local variation is lost in the high north is in full accordance with the fact that the species of Daphnids with which we have to do in the arctic region, like the plankton organisms in large lakes, have preserved the digonic propagation. Everywhere where investigations have been made it has been shown that resting-eggs are formed; sexual propagation, which prevents race-formation, is still retained; and the resting-stages, the means of distribution, are carried by means of rivers and wind from lake to lake.