

occasion do so. *Asterionella*, *Notholca longispina*, *Asplanchna priodonta*, *Ceratium hirundinella*, and even on one occasion the rather uncommon Rotifer *Dinocharis Collinsii*, have been observed to form a "Wasserblut" in the shallower lochs.

The abundance of certain species in a loch on a single visit may be exceptional or temporary; the small lochs may vary greatly at different seasons. It is believed that, except for the seasonal appearance of certain species which are known to live for only a few months of the year, a loch is pretty uniform in character throughout the year. This is known to be the case with the large lochs and with some small ones.

The points to which attention will be called in reviewing the biology of the Tay lochs will be—the abundance or scarcity of life on the whole; the preponderance of one or a few species in each loch; the abundance of an animal or plant that is usually scarce; the absence or scarcity of some very common species.

The lochs of the valley of the Earn differ much in size and physical conditions, so that they might be expected also to differ much in their biology. There is one great lake, Loch Earn, two hill lochs, Turret and Uaine, the latter at a great elevation, one deep but stagnant pond, and one shallow artificial dam.

*Loch Earn.*—The only abundant organism was *Diaptomus gracilis*, which was bright red in colour. There was almost no life at the surface, the *Diaptomus* being in myriads at a depth of 40 or 50 feet. The loch was rather remarkable for the scarcity of common lacustrine species. *Bythotrephes* was somewhat frequent; *Polyphemus*, *Cyclops strenuus*, and *Bosmina obtusirostris* were present, but not plentiful. *Daphnia* was very rare, only one example being seen. Smaller organisms were almost entirely absent, except for a few examples of the two commonest pelagic Rotifers *Anuraea cochleare* and *Notholca longispina*, and some unicellular Algæ.

*Loch Turret.*—This was one of the lochs where *Holopedium* filled the net with a slimy mass, and rendered it difficult to catch anything else. *Diaptomus gracilis*, *Daphnia* (typical *D. lacustris*), *Asterionella*, *Peridinium tabulatum* were noted.

*Lochan Uaine.*—This little shallow tarn, in a corrie at a considerable elevation, had nothing remarkable in its pelagic life. *Diaphanosoma brachyurum* was most numerous, *Diaptomus gracilis*, of a brown colour, and *Polyphemus* were common. Only a few examples of *Daphnia lacustris* and *Holopedium* were seen.

*Loch Monzievaud (or Ochertyre)*—This loch, though fairly deep, was almost stagnant at the time it was visited. As might be expected from this and from the very high surface temperature, life was abundant and varied. The collection was green from the abundance of *Volvox*. *Bosmina cornuta*, *Daphnia lacustris*, *Diaptomus gracilis* (of a brown