

The admixture of Arctic and southern forms may be accounted for by changes of climate, the Arctic species coming south during a cold period. The abyssal fauna, clearly derived from the littoral and not at all modified, may have originated quite recently.

These conclusions agree perfectly with those of Professor Forel, though in the Lake of Geneva the abyssal fauna has undergone some modification. The biology of the lakes indicates a very recent origin.

*Phosphorescence.*—No trace of luminosity has been observed among the fresh-water plankton-fauna, though it has been looked for under suitable conditions. The chemical composition of fresh water would no doubt lead one not to expect luminosity, yet it seemed worth while to look out for it, and put the negative result on record.<sup>1</sup>

### CONCLUSION

The shortcomings of this Report are sufficiently obvious—the inequality of the work, and the total neglect of large sections of the field. Many points of interest in the biology are not touched upon, for lack of time to do so adequately. The including of previous work in the same field, especially the work of Dr Scott and Messrs W. and G. S. West, which would have greatly added to the value of the compilation, was prevented by lack of time to go over the literature with sufficient care.

Finally, the interruption of the work when still far from complete, and the consequent necessity for bringing it to a conclusion somehow, caused parts of it to be written with a haste which is highly undesirable when accurate results are aimed at. Nevertheless, with all these disadvantages, it seemed well that some summary of the biological work done by the Lake Survey should be attempted. If it fail in all other respects, it at least provides a trustworthy series of records of the life in the Scottish lochs, which should be of some service to other students.

<sup>1</sup> It is stated that Loch Builg in Aberdeenshire occasionally exhibits luminosity, but the observations recorded are not conclusive, and both the occurrence and its cause call for further investigation (see article by Thomas Jamieson in the *Aberdeen Free Press*, Nov. 19, 1908).