

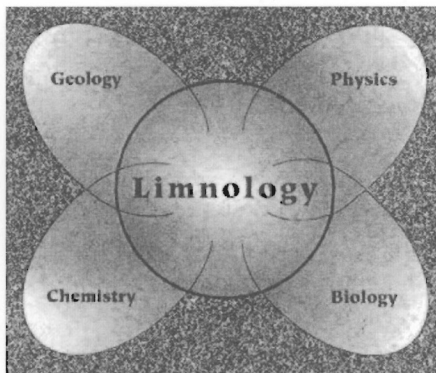
# Limnology in Winter – The Concept, its consequences and challenges

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Students entering the aquatic sciences are usually confronted with a specialization – of more or less relevance to the science of limnology – and they may remain specialists. To pursue limnology at the scientific level requires a vision of the object of interest in limnology – most often a lake in its catchment area. In this context, the professional must see the relevance of her/his own specialization for this science, and let it interfere with other's specialties. A depiction of the multidisciplinary and interdisciplinary nature of limnology was made by a committee for the study of challenges for Limnology (Lewis et al. 1995):



Left: "- a depiction of the multidisciplinary nature of limnology". From the front (cover) of Lewis et al. 1995. Challenges for Limnology in the United States and Canada: An Assessment of the Discipline in the 1990's. Report of the American Society of Limnology and Oceanography Challenges for Limnology Committee. ASLO Bulletin 4 (2), III + 1-20 + cover

The introduction of winter limnology as a subdiscipline of the science of limnology may be a challenge to specialists within inland water sciences. Interactions between climate, geology and physical and chemical processes are accentuated, and the importance of biological processes appear to fade during winter. Limnology as an interdisciplinary science is easier to visualize

from the winter situation. The most serious challenges in limnology, from the past, at present and in the future, can only be approached within an interdisciplinary context.

Major challenges in limnology are

- to discriminate between significant information and insignificant details – identifying the determinants of the locality's particular character
- to comprehend the past, the present and the possible future of any locality
- to present and explain, in teaching and publications, the results of qualified interdisciplinary judgement and research

In winter, basic multidisciplinary and interdisciplinary duties have to be fulfilled before optimal results within the core of limnology can be reached. In this presentation, a number of examples will be presented and opened for discussion.