

### **Abstract:**

This thesis contains a limnological survey of the tributaries and outflows of eight glacial lakes on both the Czech and German sides of the Bohemian Forest (Šumava, Böhmerwald) that have been affected by anthropogenic acidification. Samples of macrozoobenthos and water chemistry were taken in May and October 2007 from all flowing tributaries found, for many of which there had been no previous biological data.

The survey was performed during the period when the first signs of recovery from acidification of these lakes had been detected. This positive trend was more clear at less-acidified lakes (pH ~5.0) such as Prášilské lake, Laka, Kleiner Arbersee and Grosser Arbersee. Species known as being acidotolerant were found in these lakes, e.g. *Diura bicaudata*, *Siphonoperla torrentium* and the mollusk *Pisidium casertanum*. This reflects a more advanced stage of biological recovery in these lakes compared with the heavily acidified lakes (pH under 4.5) Čertovo lake, Černé lake, Plešné lake a Rachelsee. A positive correlation between numbers of taxa and pH values was clear. However, some indications of biological recovery in these heavily acidified lakes were seen as well. For instance, acidotolerant species like *Diura bicaudata* and acidosensitive *Crenobia alpina* were found in the main tributary of Plešné jezero.

**Key words:** Acidification, macrozoobenthos, lake recovery.