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| **Høgskolen i Telemark** | |

**EXAM**

**4502 002 Alpine biodiversity and climatic change**

**3.6.2015**

Time/Tid: 4 timer / hours

Language/Målform: Norsk / English

No pages/Sidetal: 2 + førsteside / front page

Comment/Merknade: Dictionaries are allowed

**Exam results will be available on net via Studentweb**

**Questions:**

1. Give some examples on documented effects of climate change during the last decades in:
   1. Alpine lakes
   2. Terrestrial alpine vegetation
   3. Changes for vascular plant richness on high mountain summits.
2. Ecological changes since the last glaciation (Weischel):
   1. Describe briefly what you know about ecological conditions during the Late Glacial period.
   2. What do we know about variation in tree temperature and forest limit variation during the Holocene period.
3. Biodiversity
   1. Explain, with examples, differences between Alpha diversity (α-diversity) and Beta diversity (β-diversity).
   2. Explain how species richness relate to the study area size.
   3. What is evenness?
4. Explain shortly the following terms:
   1. Random sampling
   2. Indirect ordination
   3. Intermediate disturbance hypothesis
   4. The mid-altitudinal peak in species richness
   5. Gradient analysis