



Universität  
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## Master Thesis

# Grassland overgrowth with Bracken: Causes, Trends and Problems in the Black Forest of Germany and Brazil

Bracken ferns (*Pteridium* sp.) are originally woodland plants, which can become dominant species in late successional ecosystems of deforested uplands, particularly when exposed to extensive grazing pressure (Mars et al., 2004; Ebuele et al., 2016). As bracken outcompetes grass vegetation and is toxic to life stock it is regarded as a problematic weed species in many parts of the world. Thus, control of bracken is considered high priority in grassland management.

Although bracken is frequently used as an indicator of low soil fertility, preliminary research in the Black Forest grasslands has shown that soil chemical parameters do not explain the spatial patterns of bracken occurrence. However, we hypothesize that time since deforestation, soil texture, root penetration depth, and geomorphic characteristics might be confounding factors.

The aim of this Master project is therefore to investigate soil properties, terrain attributes, and land use history of bracken-infested grasslands in the Black Forest. Potentially, it might also involve a comparison with bracken occurrence in Brazilian grasslands. The project will involve field and lab work, as well as basic GIS analysis.

## Open for Master-Students of Environmental Geosciences



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