

## **An empirical and simulation study of recreational route choices**

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Knowledge about recreational route choices is necessarily in management of visitor flows in the nature. It is important to know the motivation for different visitor groups to apply different route choice strategies: Some groups are more likely to follow fixed routes, where as others make their spatial choices in a more freely, browsing manner, making choices during the visit. Further, it is important to know to which extend and for what reasons visitors leave the path network. This is especially important when assessing the visitors' 'foot print' on biodiversity.

By means of an interview survey in three Danish nature areas visitor's behavior in terms of route choices were assessed. The survey was conducted in the summer of 2005 and 2006, and will be continued in 2007. Issues investigated included the over all strategy of route choice; i.e. if a fixed, known route was followed, if the visit was aimed at visiting given locations, or if the visitor simply was 'browsing', making spatial decisions along the way. Further also if, and to what extent, of-track activities took place. In the analysis applied the route choices are related to respondent's knowledge of the location and type of activity performed.

Besides gaining basic knowledge about recreational route choice strategies, the objective of the study is to estimate parameters for an agent-based simulation model of recreational behavior; including visitors' impact on the nature, in front country environments. In a simulation model context it is important to be able to distinguish every day visitors (e.g. those who are walking their dog) from visitors not knowing the location and who might have more adventurous objectives. Whereas the first type will be likely to follow a fixed route the latter will tend to change direction as reaction to e.g. perceived opportunities or to avoid crowding.