analyzed. None of the network indices was affected by the flood regime. Hence it is concluded that, although floods may have strong effects on wild bee populations in the short term, stable and diverse bee communities are restored only after a few years. These findings underline the exceptionally high value of floodplain areas as habitat for wild bees and reinforce earlier studies in which other insect groups seemed to show a low resistance but high resilience towards flooding. The observed resilience surely highly depends on the surrounding landscape, which acts as a starting point for recolonization processes. Hence it is important to consider biodiversity on a landscape scale beyond the limits of the nature reserve.

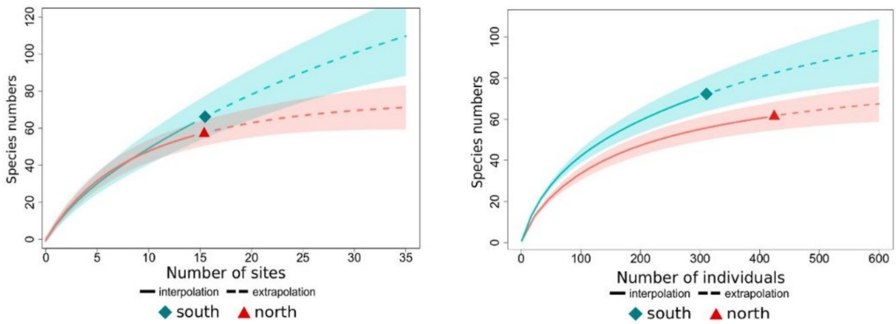

Fig. 1.: Sample site based (left) and individual based (right) randomized species accumulation curves of wild bee species numbers north (rarely inundated) and south (flood-prone) of the levee. The shaded areas represent 95% confidence intervals.

DNA barcoding for species identification of cryptic species: The case of wild bees

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Many insect species, including several wild bees, are difficult to identify using morphological characters. DNA barcoding, that is, the DNA sequence of a ca. 650 basepair fragment of the mitochondrial cytochrome oxidase I gene, is often used to aid identification of species. This approach is facilitated in Germany by the publication of a DNA barcode dataset of most German bees (Schmidt *et al.* 2015 *Molecular Ecology Resources* 15: 985-1000). Using examples from the genera *Andrena*, *Bombus* and *Nomada*, I show how useful DNA barcoding can be to recognise and separate among cryptic species. It is not, however, a panacea for all taxonomic difficulties. Therefore, at the same, I highlight some pitfalls and limitations in DNA barcoding for species identification. With additional sampling of bees, additional DNA barcoding and incorporation of other DNA-based methods, it is likely that additional cryptic species will be revealed in our fauna.