

**ECO²SCAPE** Co-design of ecologically and economically efficient policy instruments and measures for conserving biodiversity and ecosystem services in cultural landscapes

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## Mapping and Modeling of bird habitats

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As part of the project, bird species occurring in the study region were tracked. The survey serves as a basis for determining the ecological impact of current and potential conservation measures for birds and their habitats.



Figure 1: 91 detected bird species, like Bee-eater (n=15), Stonechat (n=67), Red-backed shrike (n=72), Nightingale (n=25), Common quail (n=17)

Two **methods** were used to collect the data:

1. At four time points between April and June 2022, covering different breeding periods, ornithologists walked 20 defined transects of 3 km each and mapped bird species.
2. AudioMoth devices were installed in the study area. The eco acoustic recordings were then automatically analyzed using algorithms.

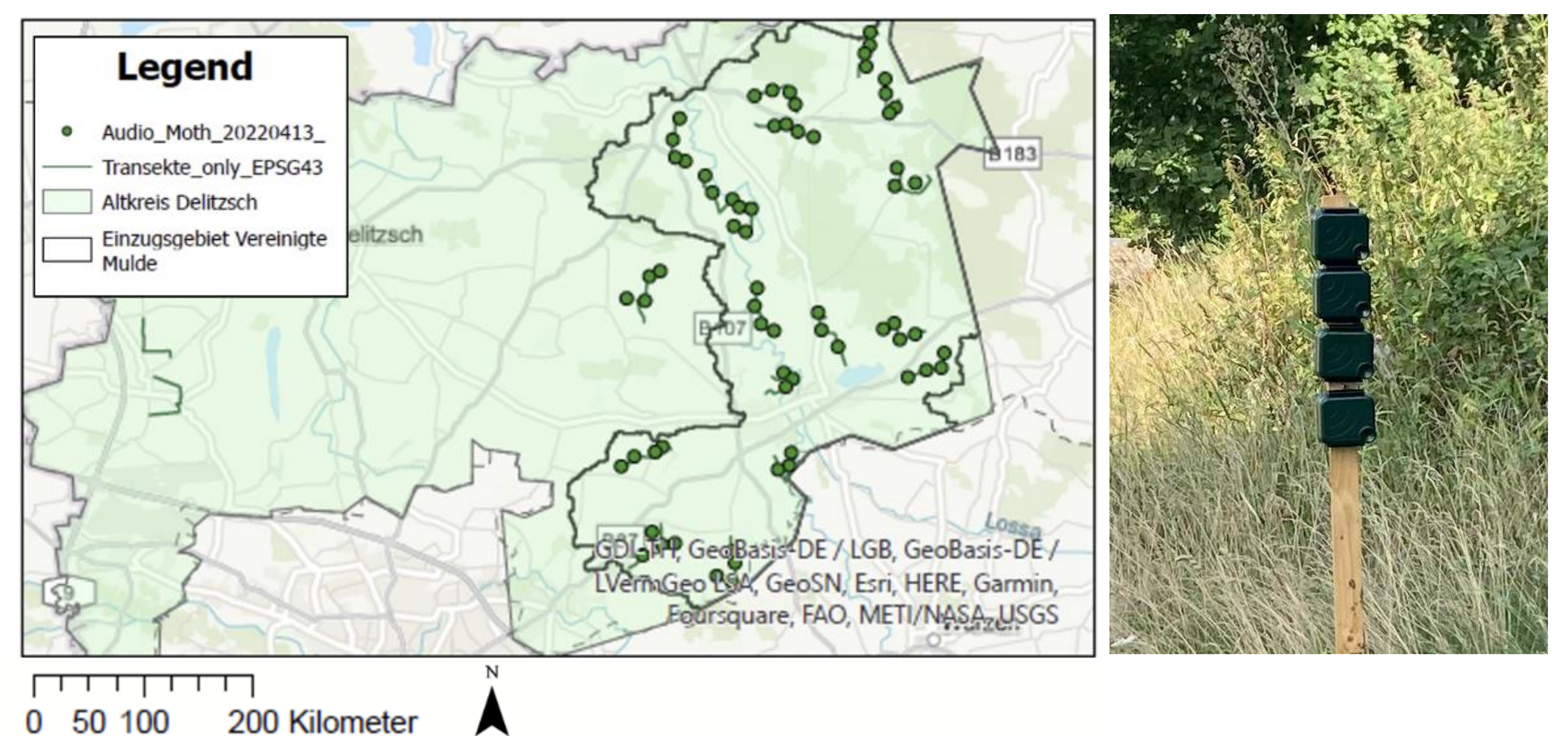


Figure 2: Location of transects and audiomoths during the first survey period

All in all 91 bird species were detected. The most common ones are:

- Skylark (*Alauda arvensis*, n=1600),
- Common whitethroat (*Curruca communis*, n=435),
- Yellowhammer (*Emberiza citrinella*, n=384),
- Corn bunting (*Emberiza calandra*, n=255).

Their habitat have been analyzed in relation to seven land use variables.



<b>Skylark:</b>	cropland without woody features
<b>Common whitethroat:</b>	AES grassland with woody features
<b>Yellowhammer:</b>	AES grassland with woody features
<b>Corn bunting:</b>	Fallows and flowering lands (set-asides)

Figure 3: habitat preferences of the 4 most common bird species