

Site fidelity and temporal consistency of red-throated divers (*Gavia stellata*) during migration, moult & wintering

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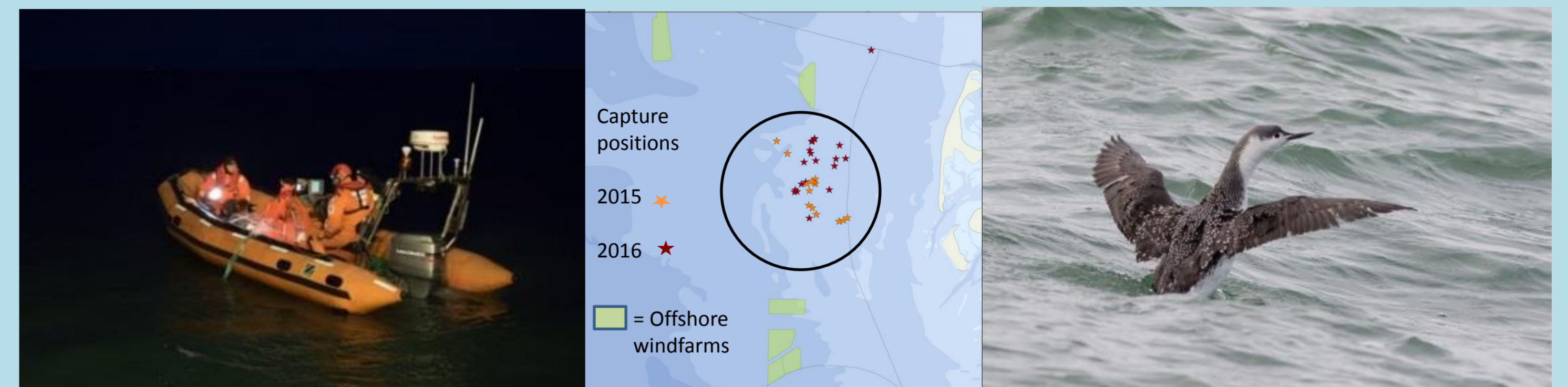
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Background & Motivation

- Red-throated diver is a strictly protected migratory species
- Breeding in arctic regions
- Wintering in temperate coastal waters
- Eastern part of the North Sea represents an important area within winter & spring season
- Movement ecology mostly unknown
- A better understanding of site fidelity and timing of movements is crucial for conservation implications

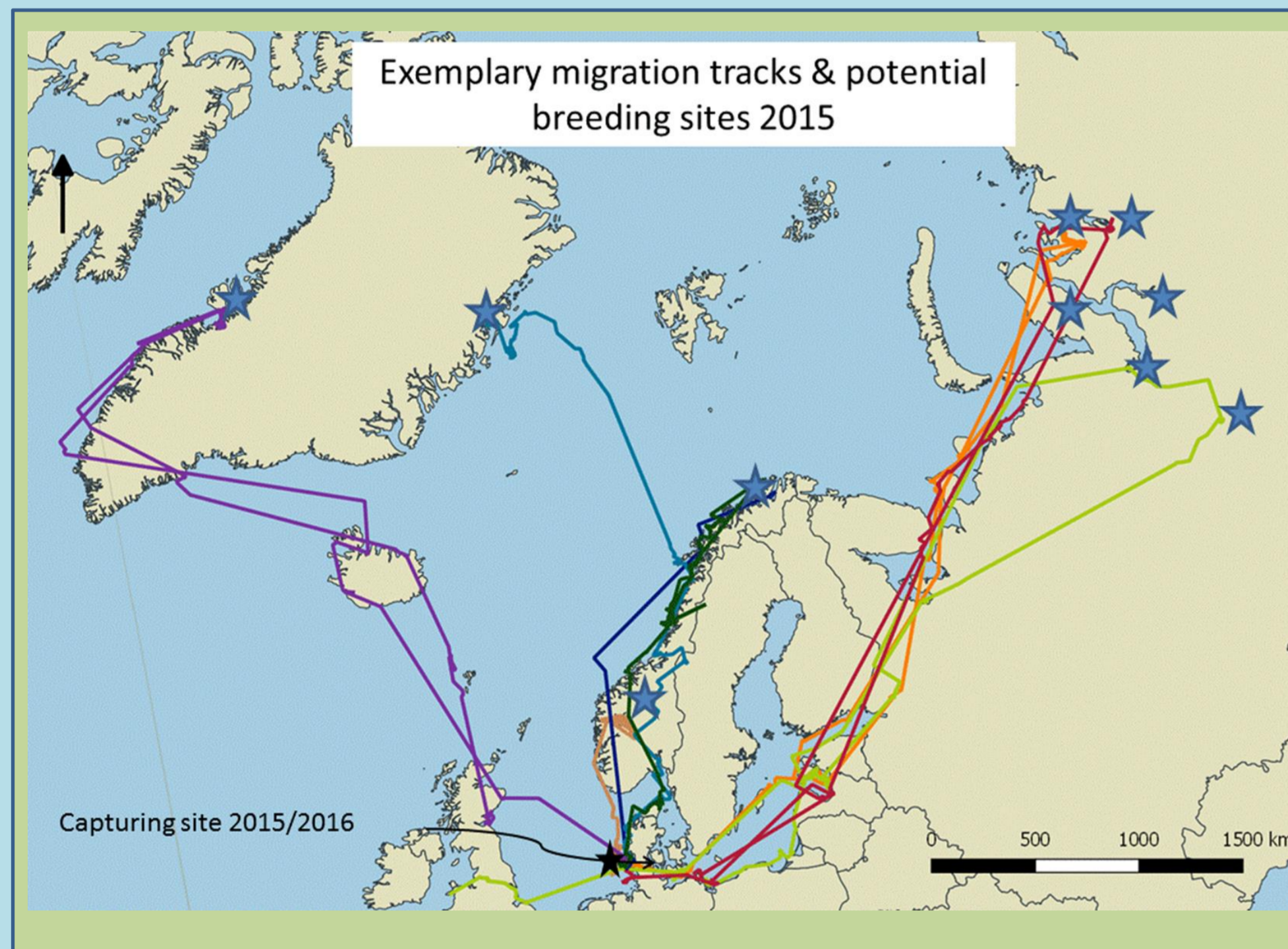
Methods

- In winters 2015 & 2016 red-throated divers were captured in German North Sea EEZ using night lightning technique
- Red-throated divers were equipped with implantable satellite transmitters

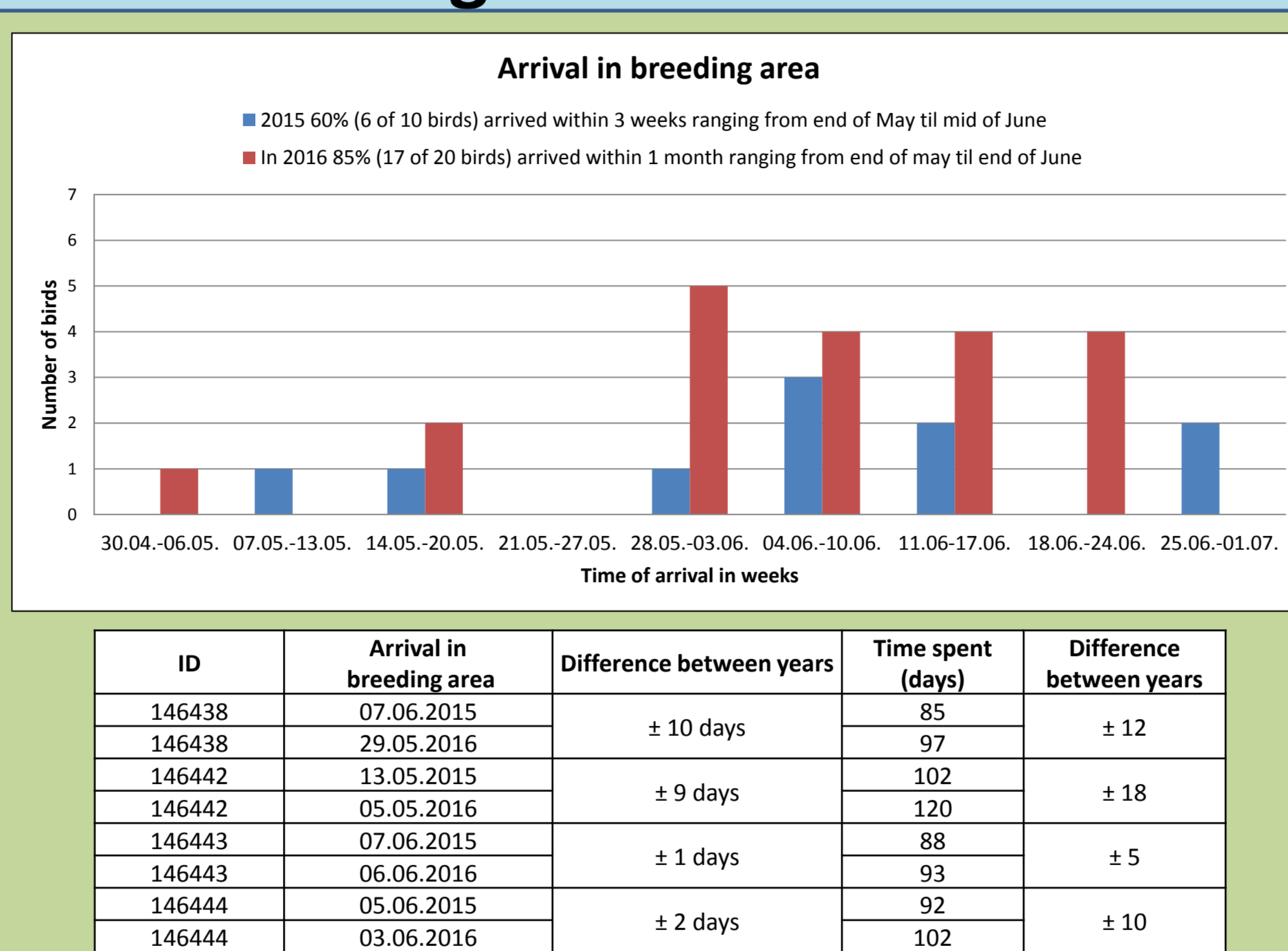


Results 27 birds were tracked from wintering sites to breeding grounds, 11 birds were tracked from wintering to their moulting site, 9 birds were tracked from wintering to wintering, 5 birds were tracked for more than a full annual cycle

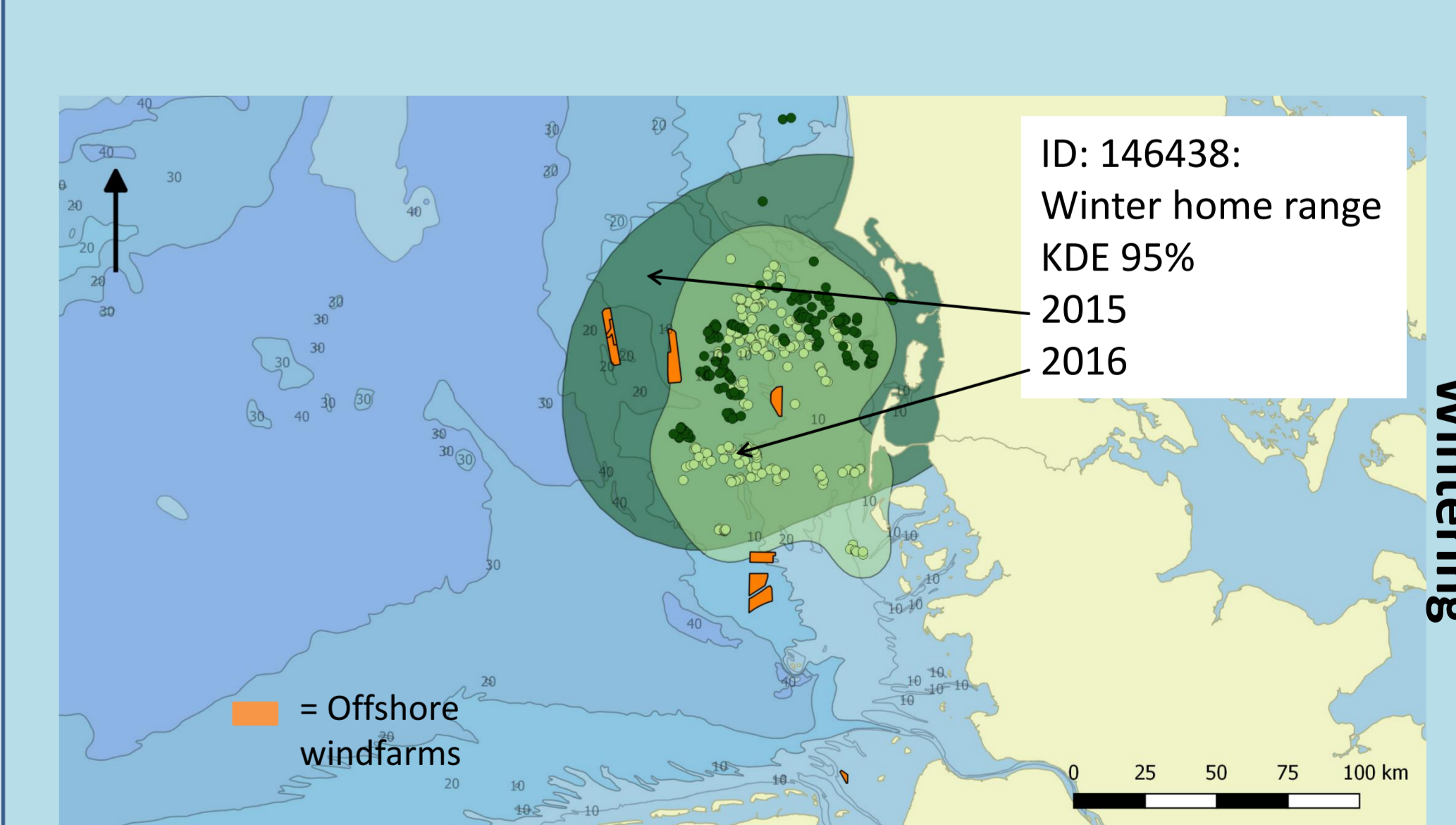
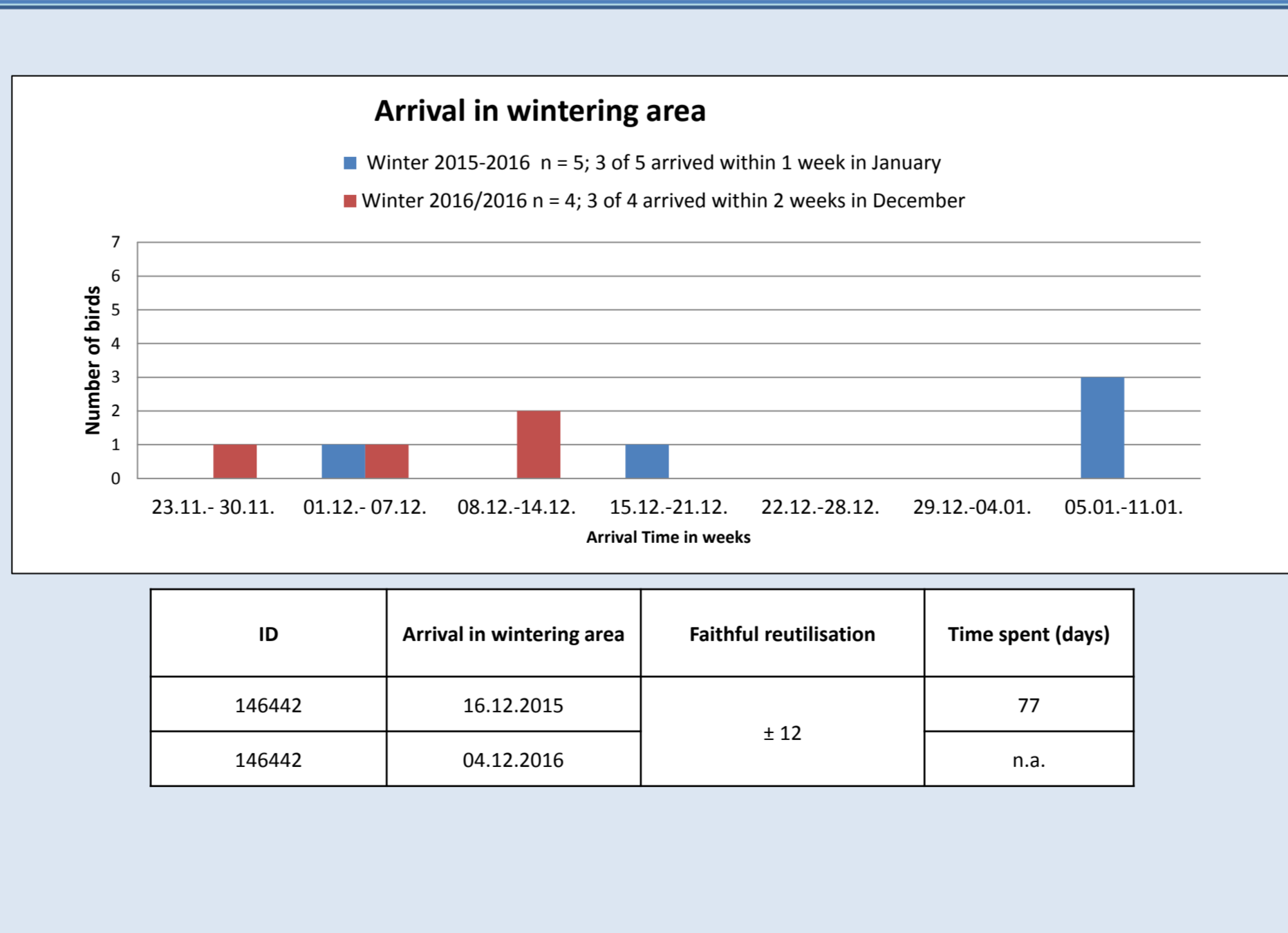
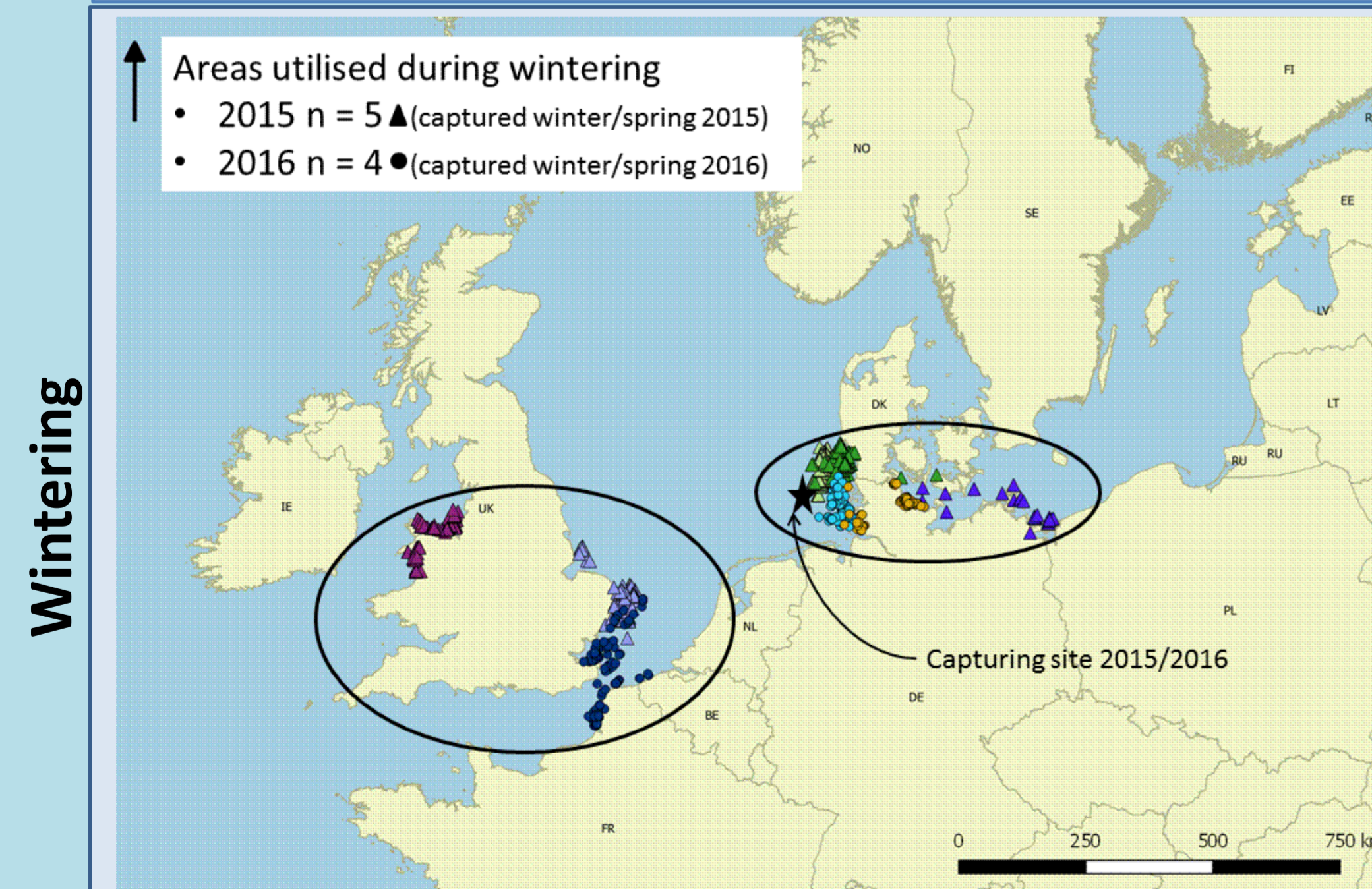
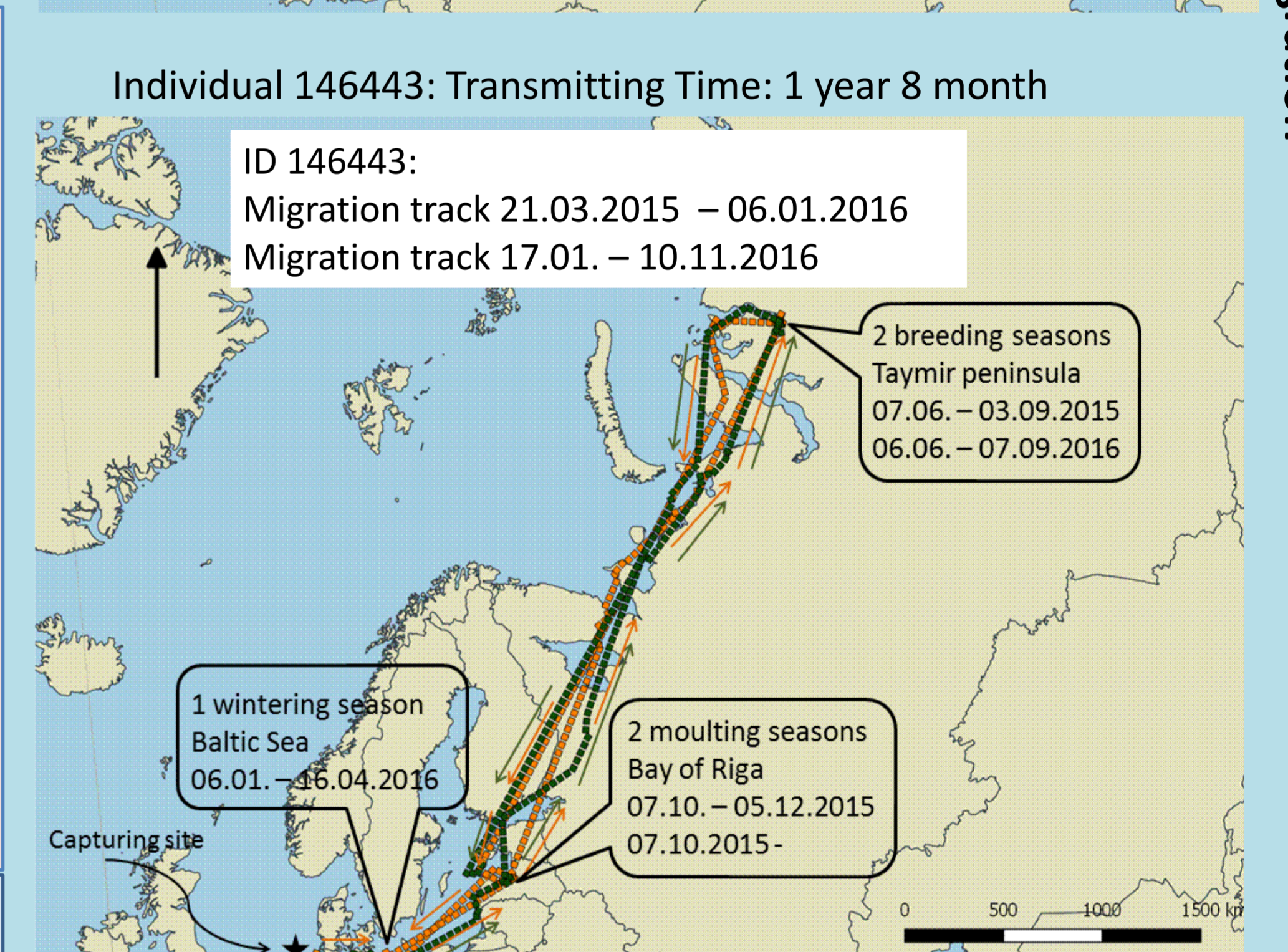
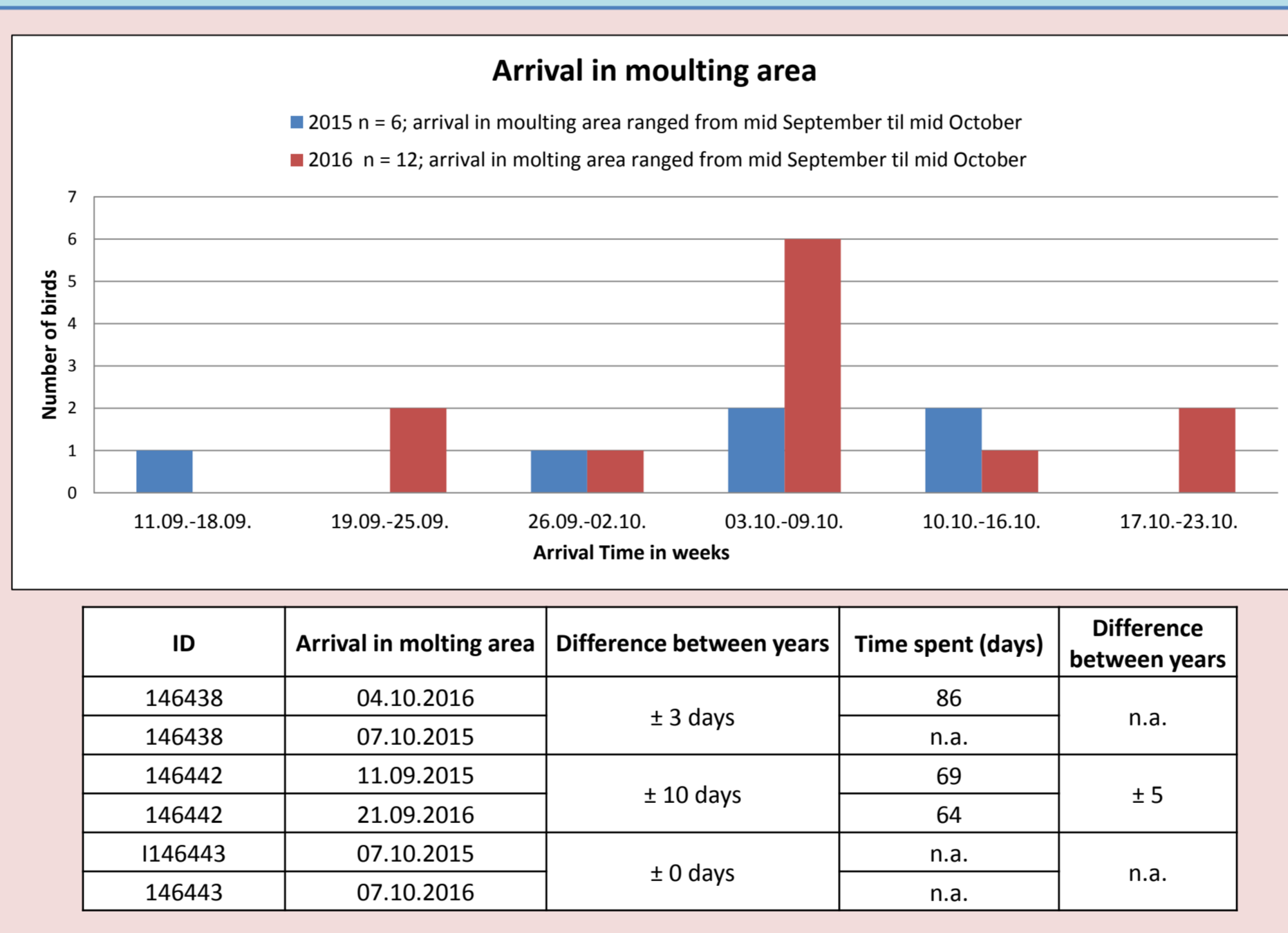
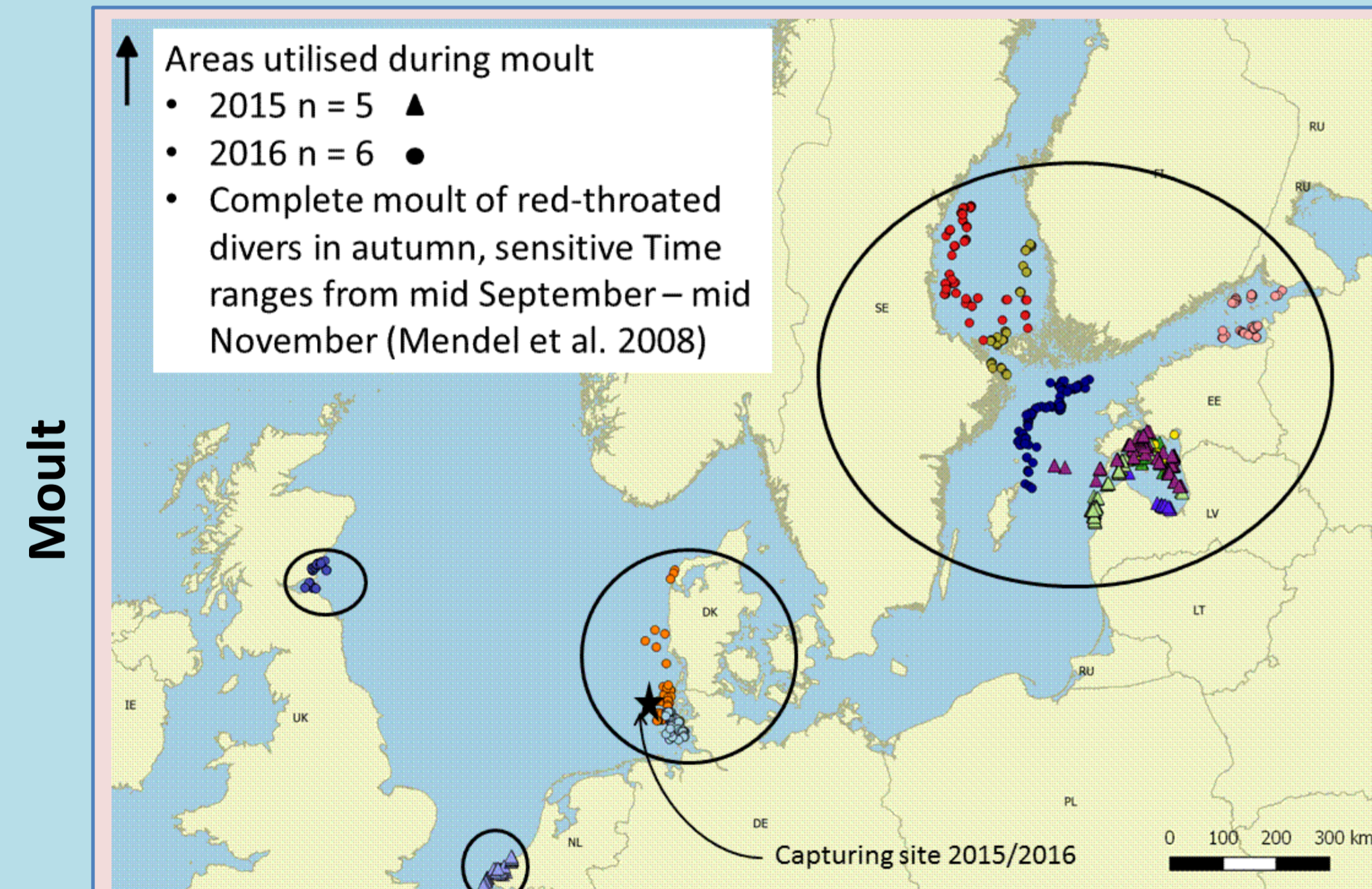
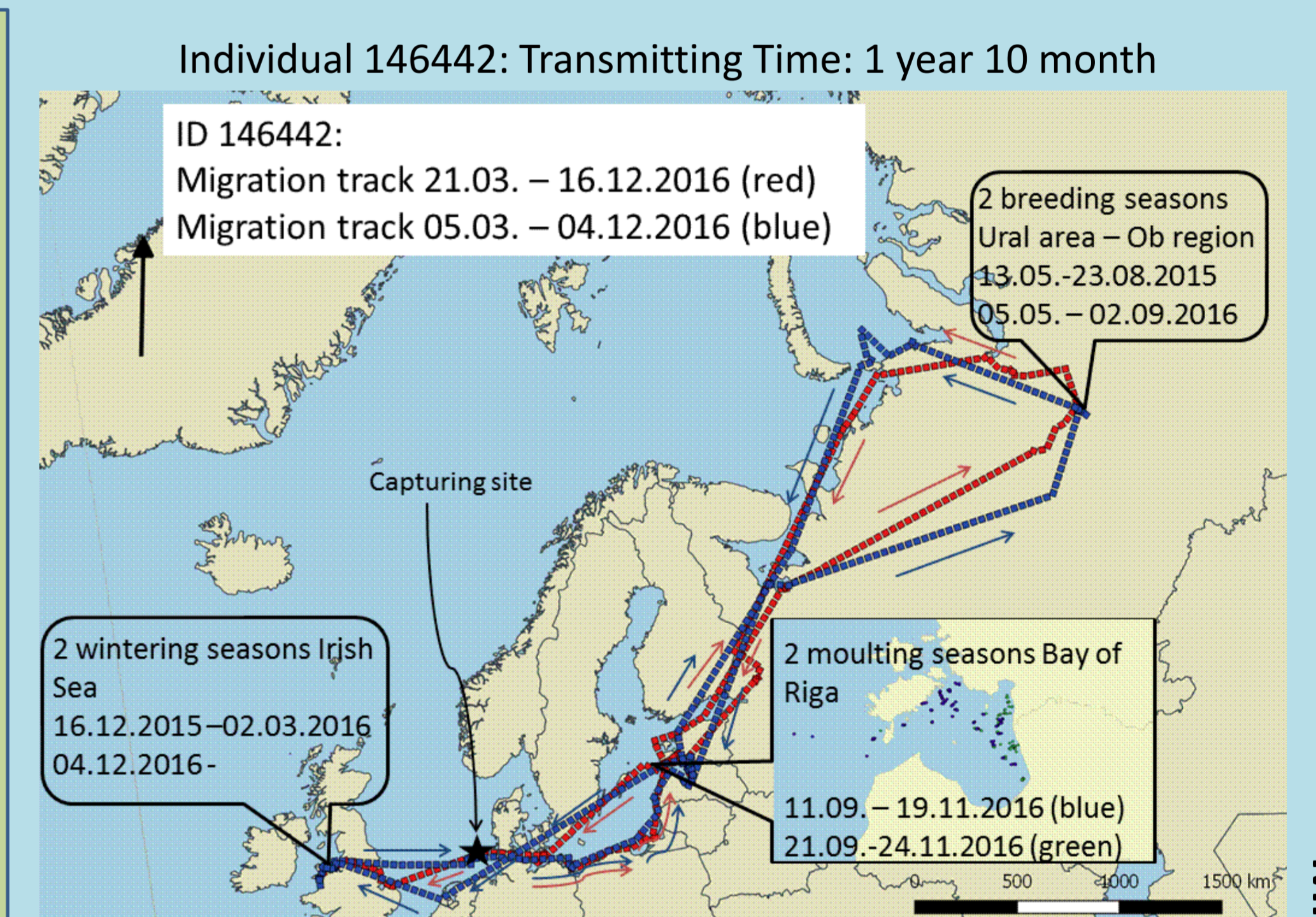
General movements



Timing



Individual movements



Summary & Conclusions

- Temporal pattern of red-throated diver showed variation between individuals and years but similarity for each individual
 - Red throated divers displayed an individual high consistency for migration routes, breeding, wintering & moulting areas
- ➔ Detailed knowledge of movement ecology is crucial for improvement of conservation measures