

Master thesis proposal

Waders' migrations

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October 12, 2023

Waders migrate over the Polish Baltic coast. The data indicates that there are waves to these migrations [1] but a more sophisticated analyses with non-linear or spectral methods is necessary. The data is collected for various subspecies, so this will be another factor to analyze, and investigate potential interactions.

The thesis will be done in collaboration with the Department of Vertebrate Ecology and Zoology, University of Gdańsk, who will provide support from the “biological” side and the data (already prepared).

Goals

1. Development of stochastic models for “wave” type data.
2. Carrying out the analysis, in particular identifying and characterizing waves.
3. Providing all the methodology in R code that the biological community can easily use.

Data

The topic can be illustrated with both real and simulated data. The Department of Vertebrate Ecology and Zoology, University of Gdańsk will provide a data set with observed migratory flights..

References

- [1] P. Busse. Modelling of the seasonal dynamics of bird migration. *The Ring*, 18(1-2): 97–119, 1996.