

# 30 years of moth monitoring in the Boreal context

**Susu Rytteri & Ida-Maria Huikkonen**

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Suomen ympäristökeskus  
Finlands miljöcentral  
Finnish Environment Institute

# Finnish Moth Monitoring Scheme

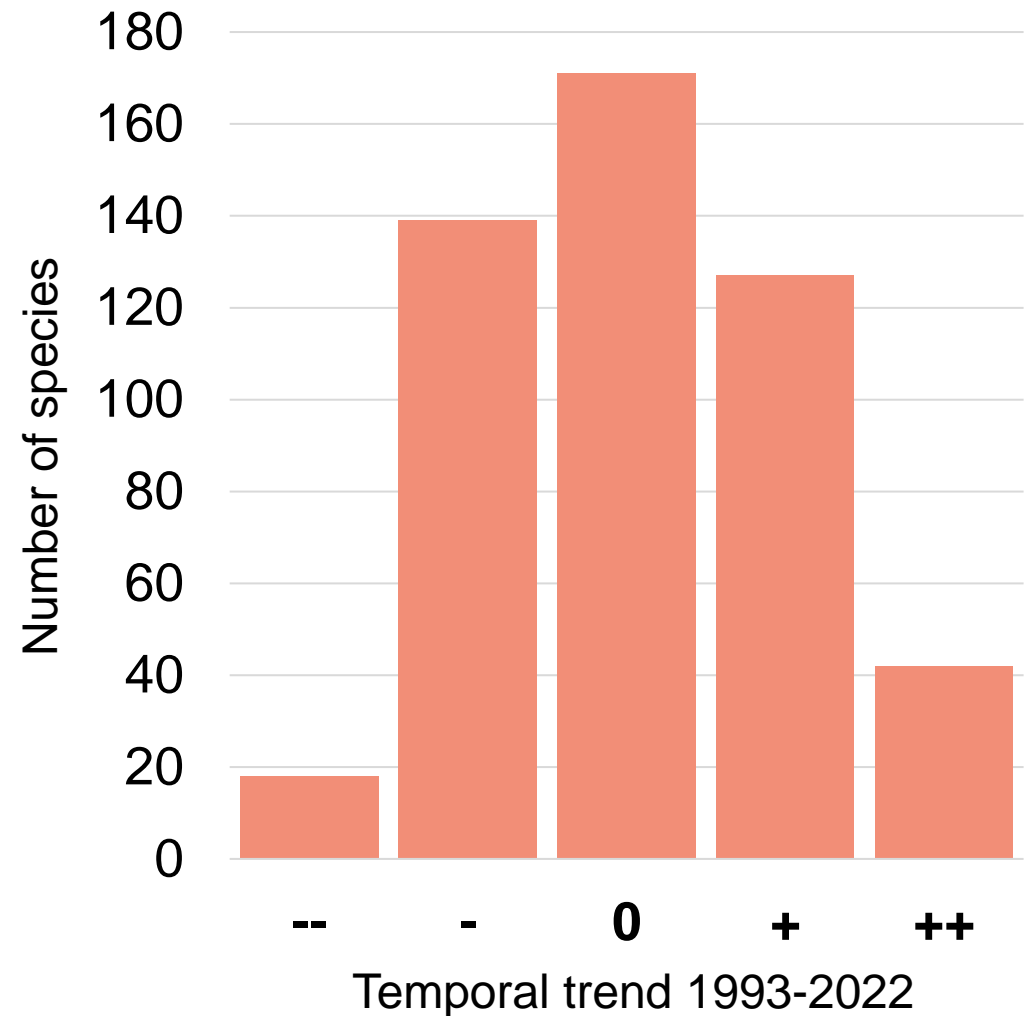
- The longest available pollinator abundance time series from Boreal region (1993 → )
- Data collected by light trapping
- Volunteer-based
- 312 trap sites in total (41-154 / year)
- In 2022 around 100 trap sites



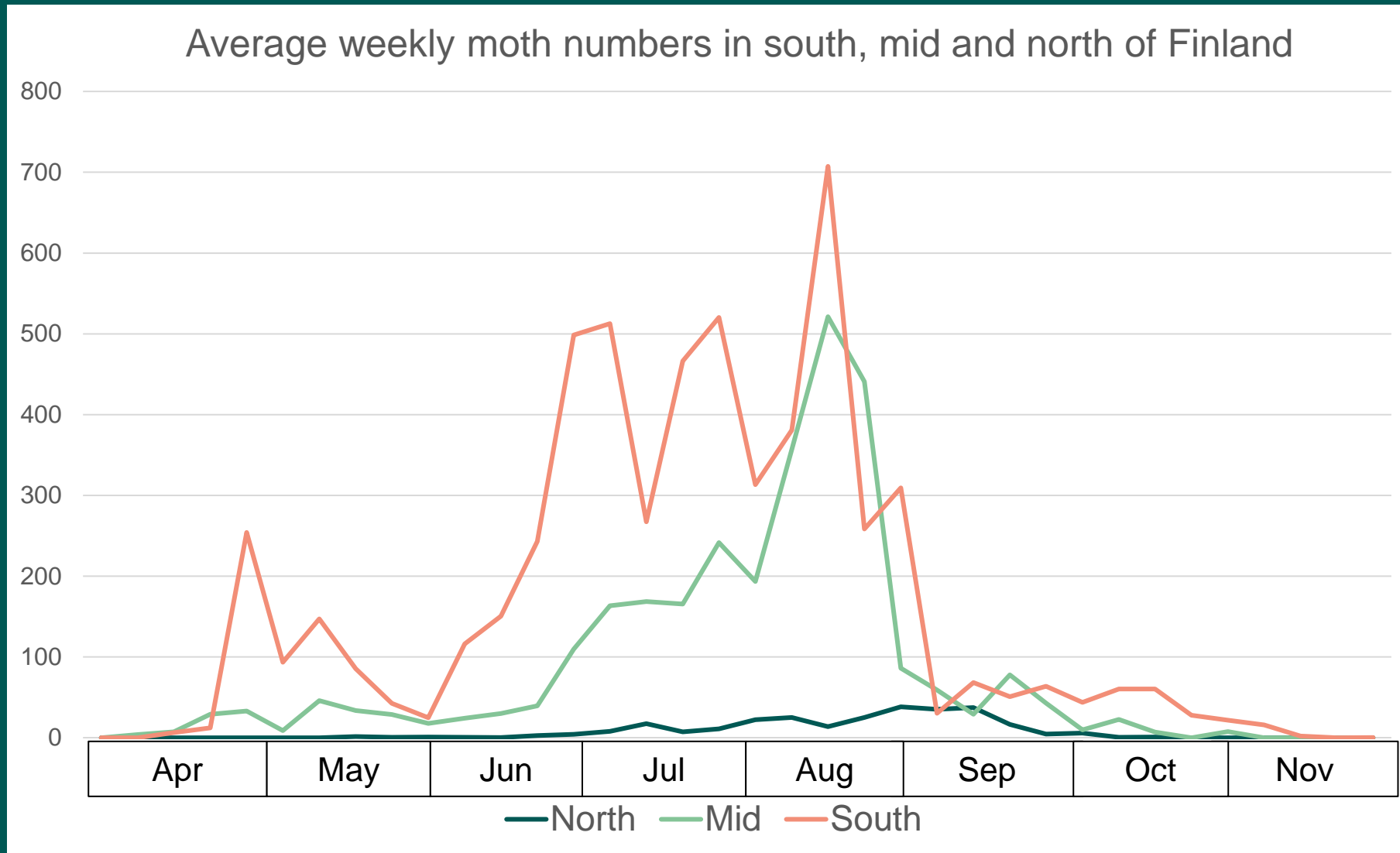
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# No large-scale decline in Boreal moth richness or abundance during last 30 years

- Biomass of Boreal moths has remained stable (Yazdanian et al. 2023)
- Spatial and temporal turnover of species increased particularly in the north Boreal zone (Antão et al. 2020, 2022)
- Community synchrony and multivoltinism increased (Pöyry et al. 2011, Antão et al. 2020, Dallas et al. 2020)



# Light pollution



# Conclusions

- Boreal moth richness has increased and abundance remained relatively stable
- Climate change reduces northern moth community integrity
- Long-term monitoring is vital for understanding these changes

Thank you



Photo © Susu Rytteri

# Literature

**Antão**, L. H., Pöyry, J., Leinonen, R., & Roslin, T. (2020). Contrasting latitudinal patterns in diversity and stability in a high-latitude species-rich moth community. *Global Ecology and Biogeography*, 29(5), 896-907.

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**Dallas**, T. A., Antão, L. H., Pöyry, J., Leinonen, R., & Ovaskainen, O. (2020). Spatial synchrony is related to environmental change in Finnish moth communities. *Proceedings of the Royal Society B*, 287(1927), 20200684.

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