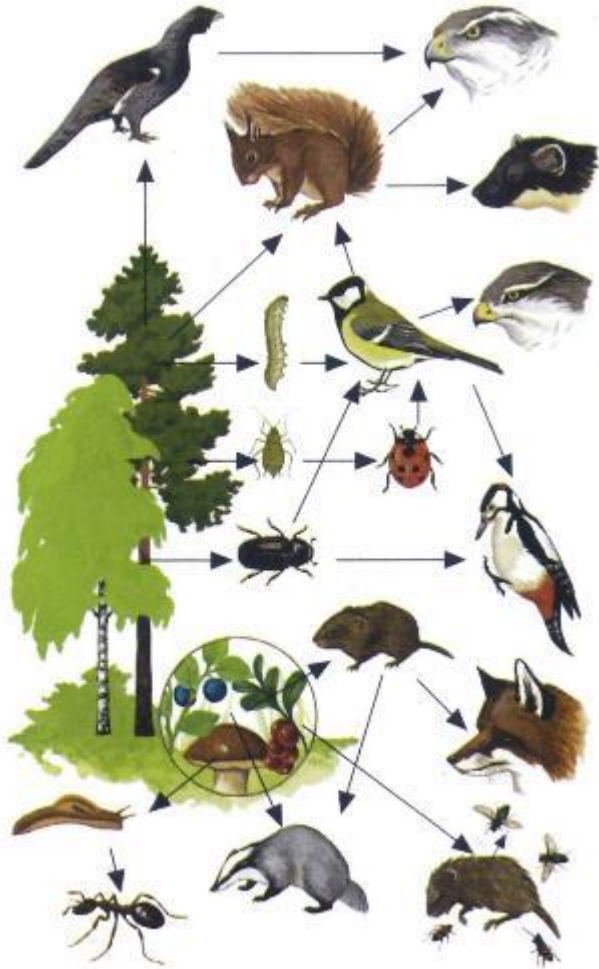


Randomly dispersing the height of a tree to avoid making

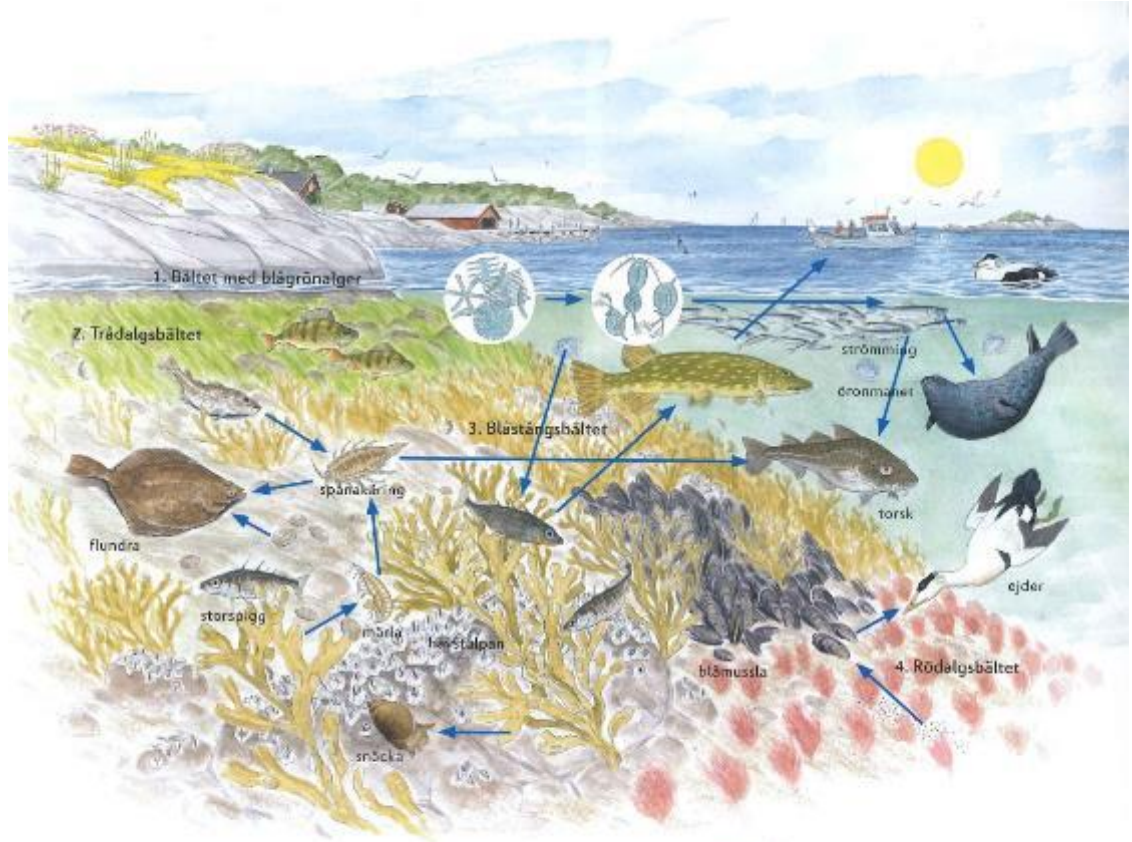


© Juha Syvärianta

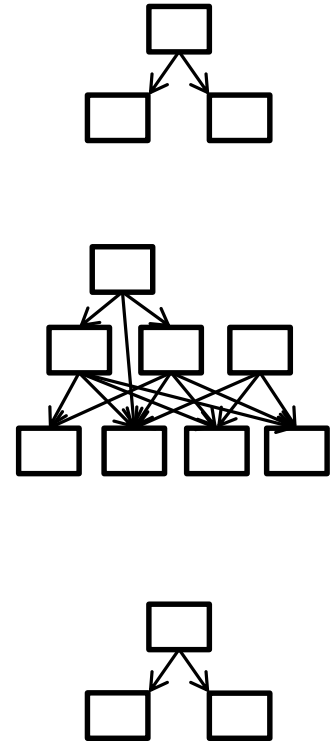
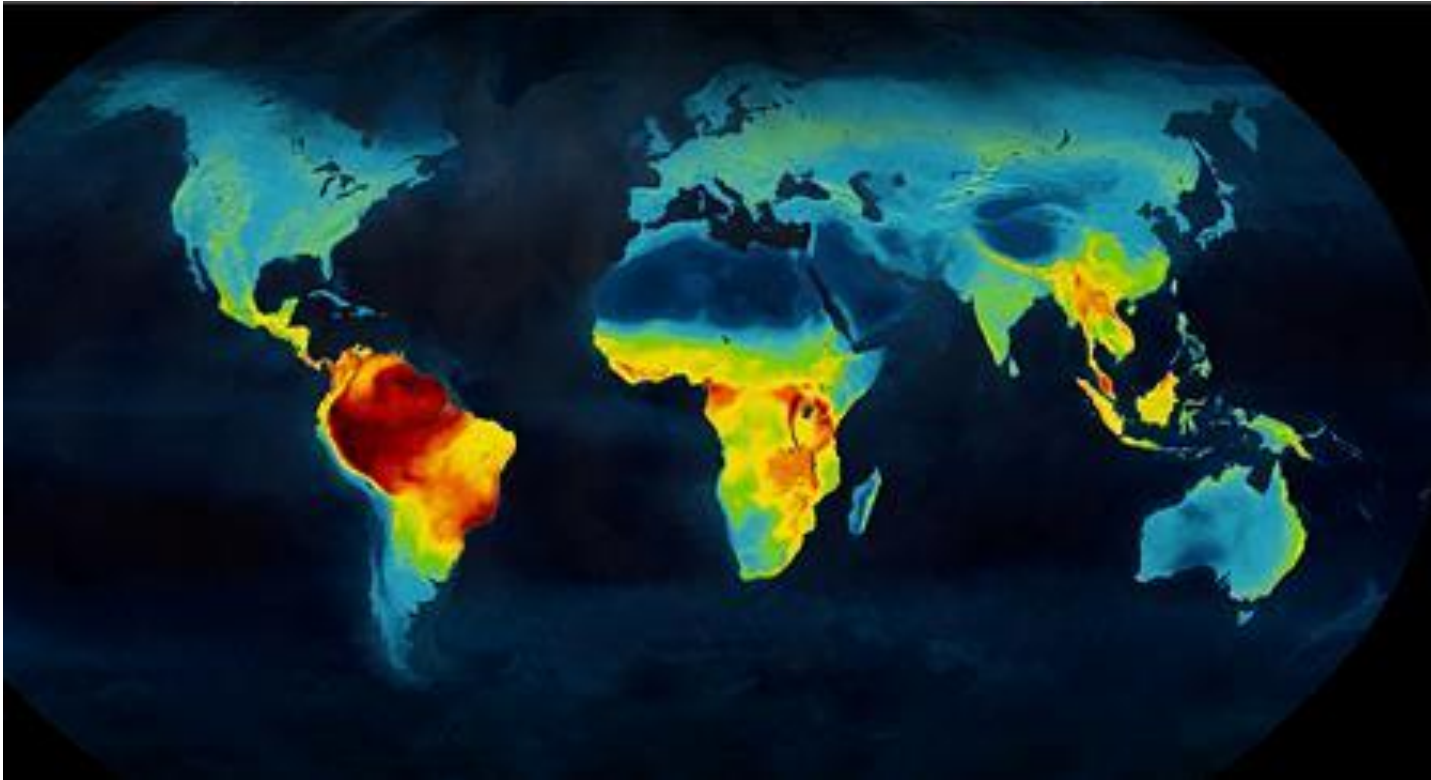
Tomas Roslin
University of Helsinki



51A Näringskedjorna bildar en invecklad näringsväv.

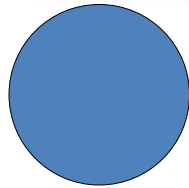


107A I Östersjöns ekosystem bildar näringskedjorna en komplicerad näringsväv.

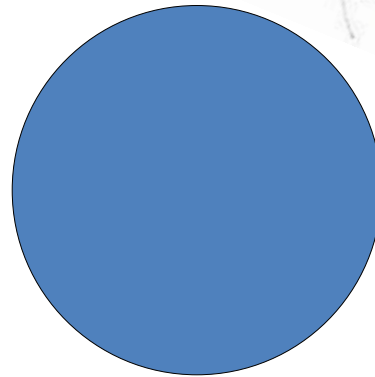


Jenkins, C. N., Pimm, S. L. & Joppac, L. N. 2013. Global patterns of terrestrial vertebrate diversity and conservation. *PNAS* 110: E2602–E2610





n = 65



n = 280





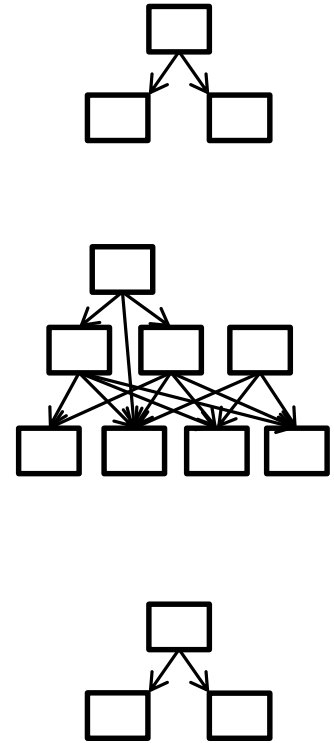
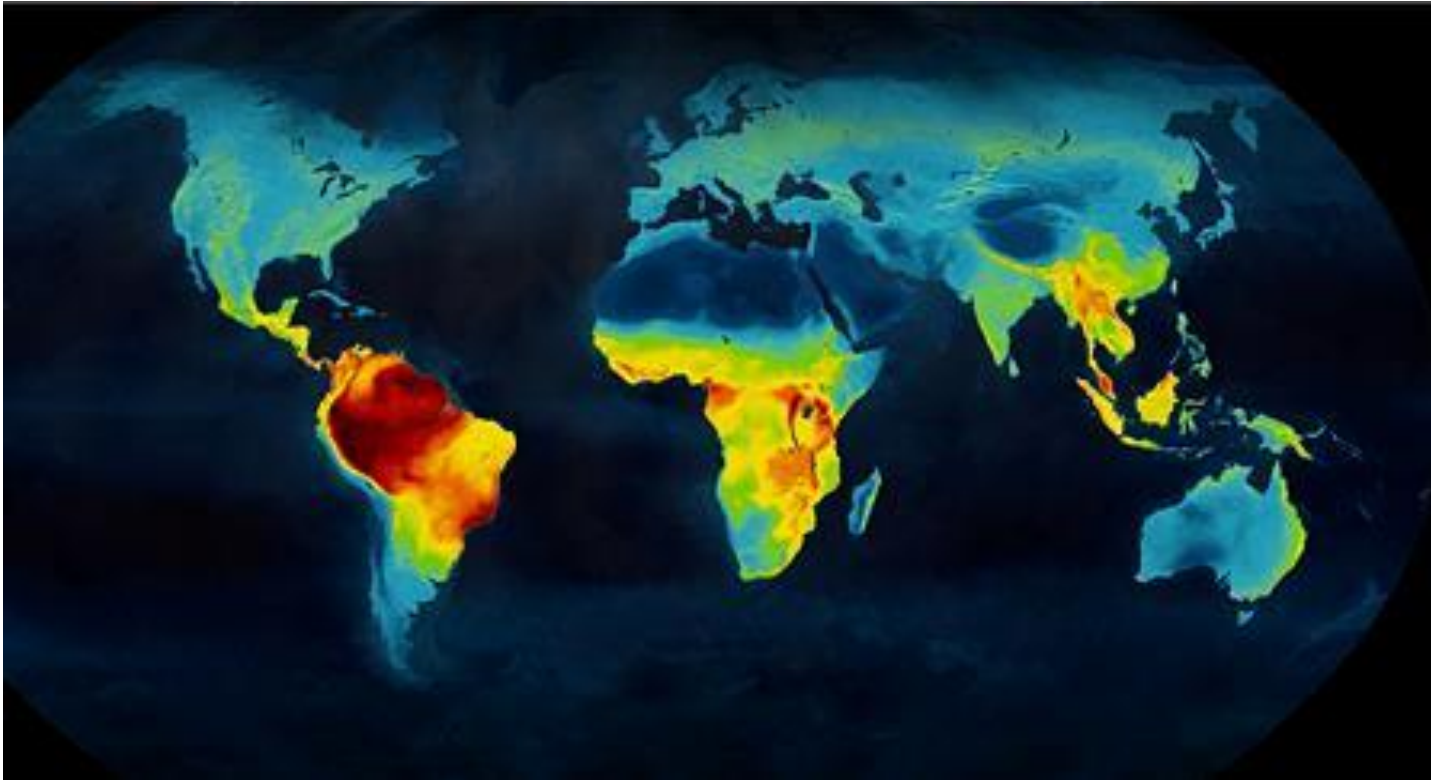




Greenland, 74°N

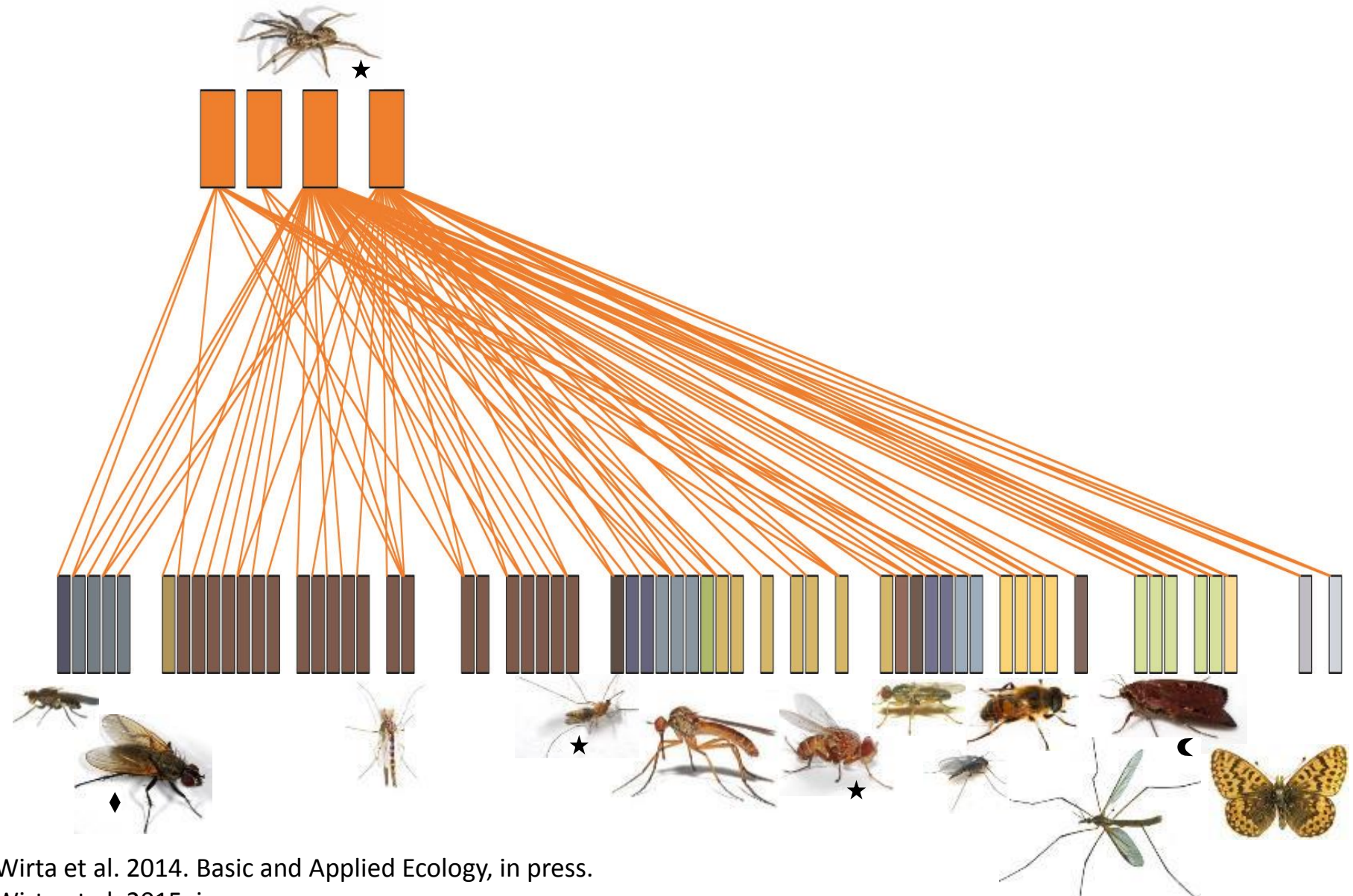
Várkonyi & Roslin. 2013. *Can. Entomol. S2*: 193–218.





Jenkins, C. N., Pimm, S. L. & Joppac, L. N. 2013. Global patterns of terrestrial vertebrate diversity and conservation. *PNAS* 110: E2602–E2610

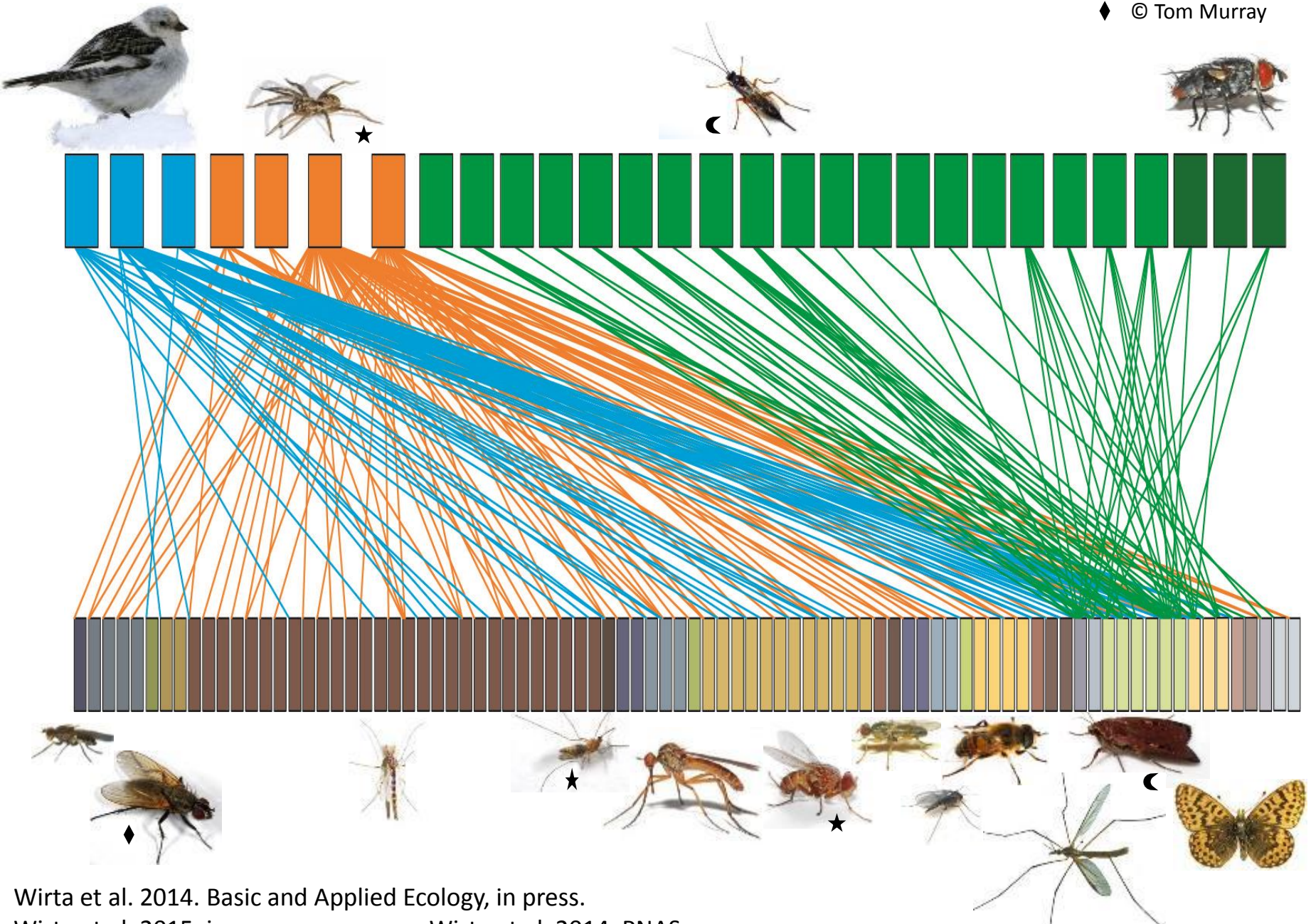
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- ★ © Fir0002_Flagstaffotos
- ◆ © Tom Murray



Wirta et al. 2014. Basic and Applied Ecology, in press.

Wirta et al. 2015. in prep.

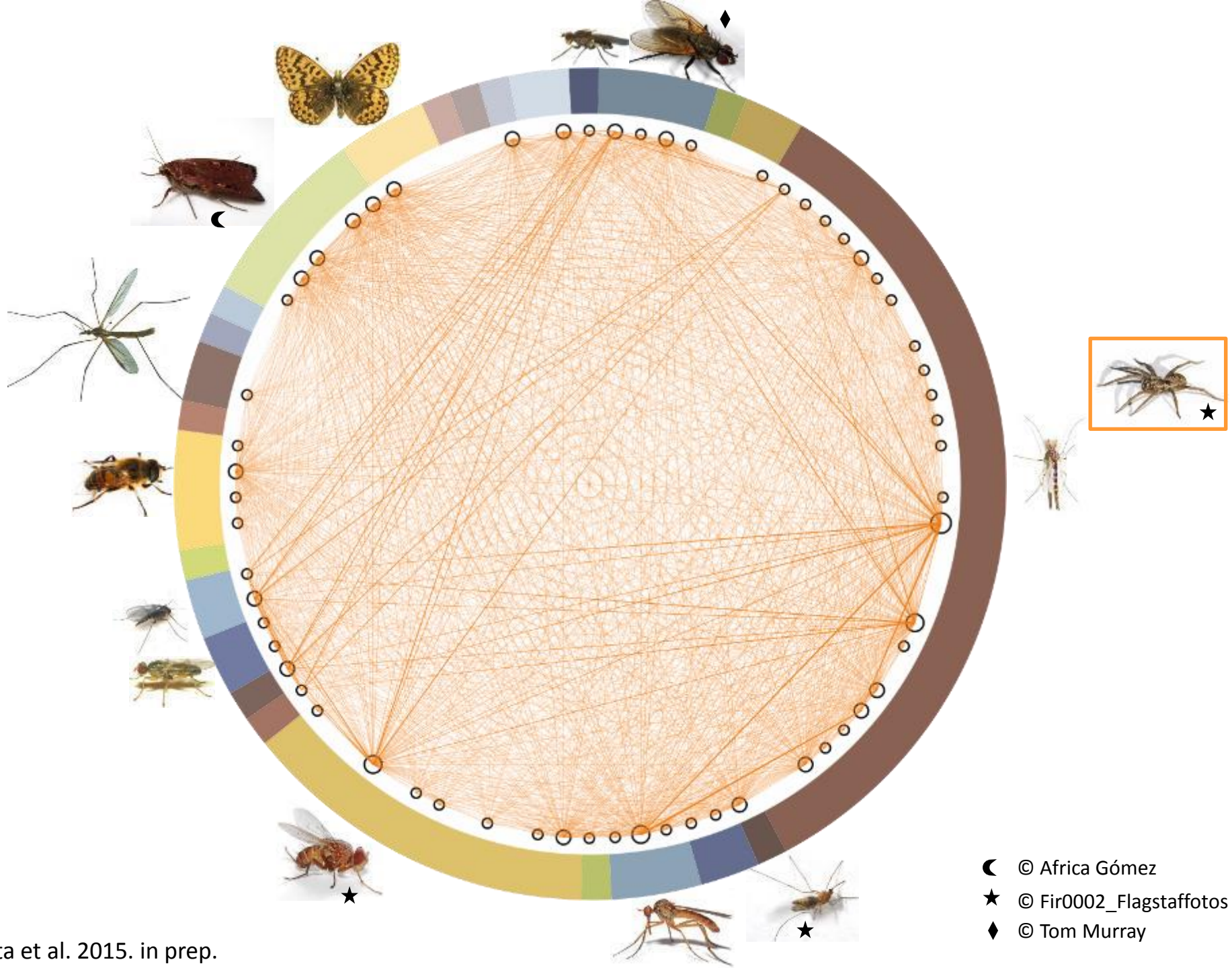
☾ © Africa Gómez
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◆ © Tom Murray

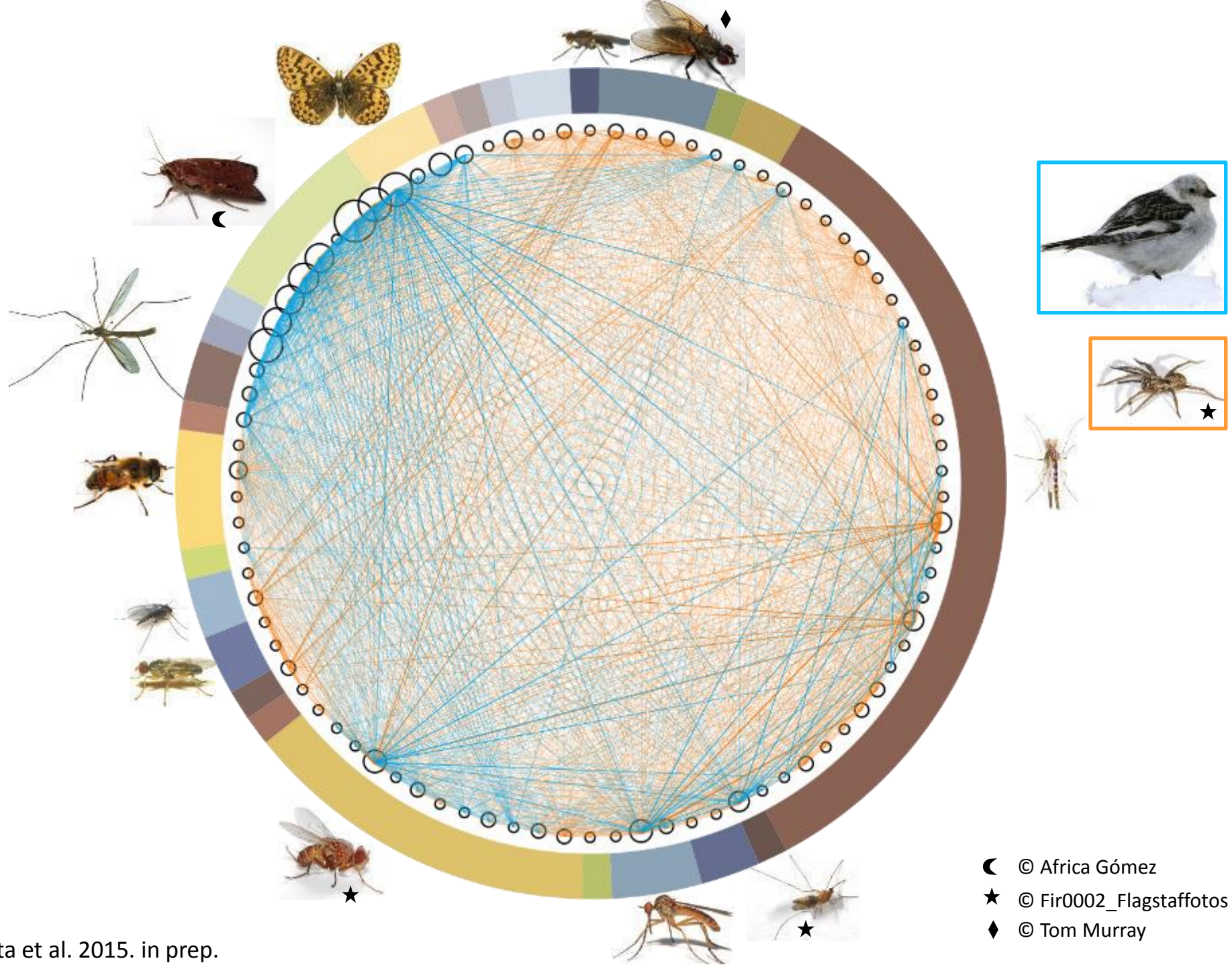


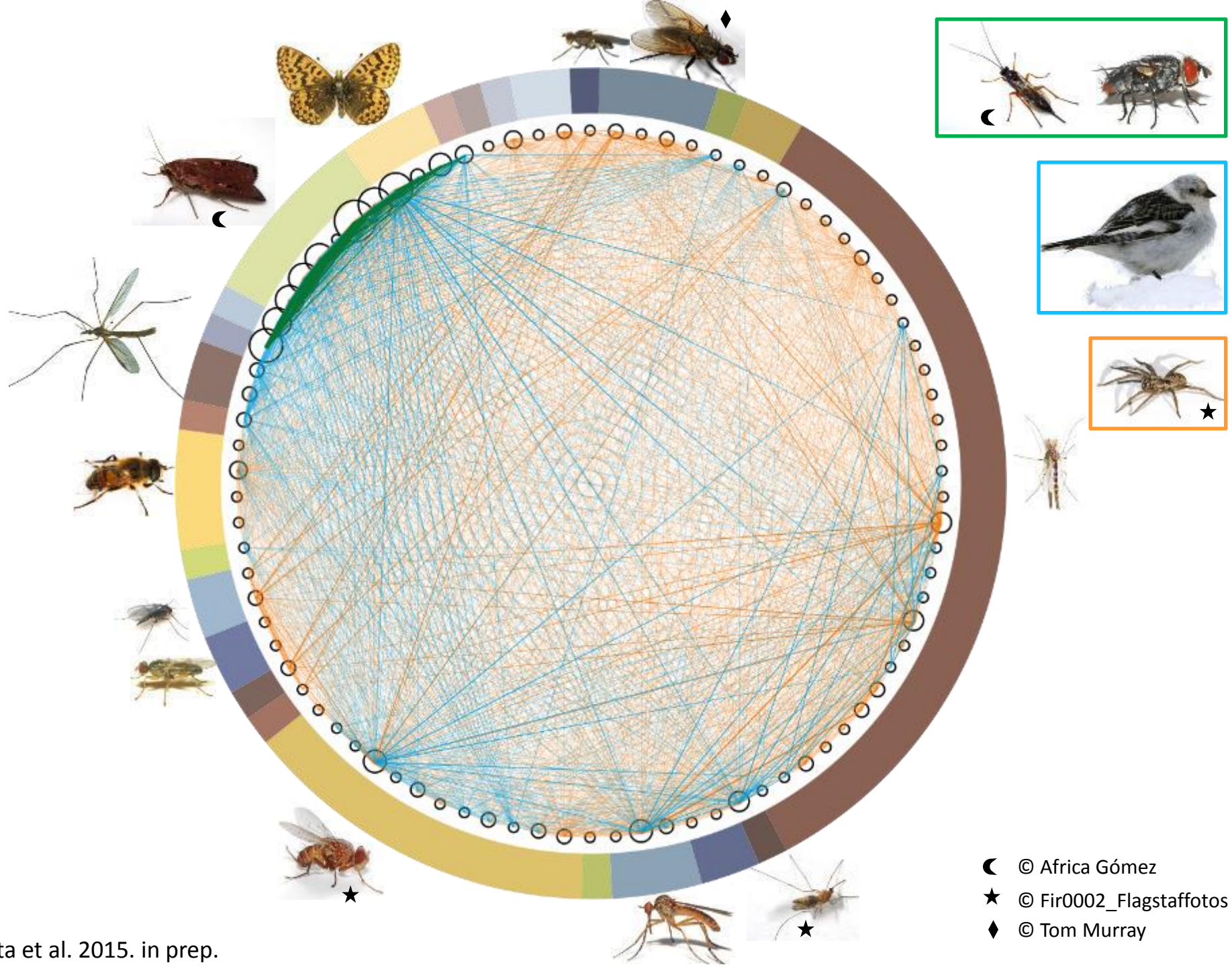
Wirta et al. 2014. Basic and Applied Ecology, in press.

Wirta et al. 2015. in prep.

Wirta et al. 2014. PNAS.







Conclusions

- The simplicity of Arctic food webs is a myth
- Resolving both the nodes and the links exposes high complexity
- Arthropods the key players in terms of both diversity and biomass
- To understand why one species increases and another decreases, or what happens with external stress, we need to embrace this new view of the Arctic





Paul Hebert



Riikka Kaartinen



Kristiina Visakorpi



Gergely Várkonyi



Mikko Tiusanen



Bess
Hardwick



Eero Vesterinen



Malin Ek



Juha
Syväranta



Tapani
Hopkins



Sean Prosser



Jeroen Reneerkens



Olivier Gilg



Niels Martin Schmidt

The Ella & Georg Ehrnrooth Foundation

University of Helsinki

Academy of Finland

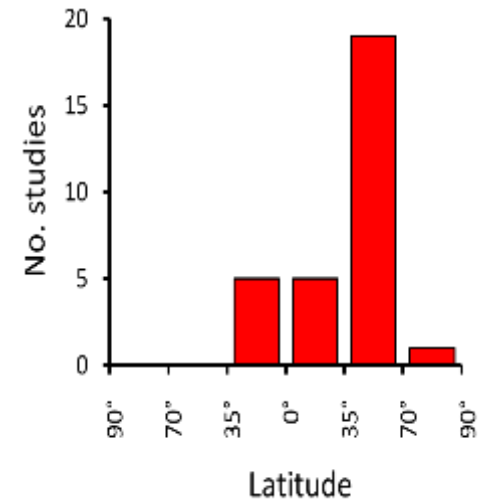
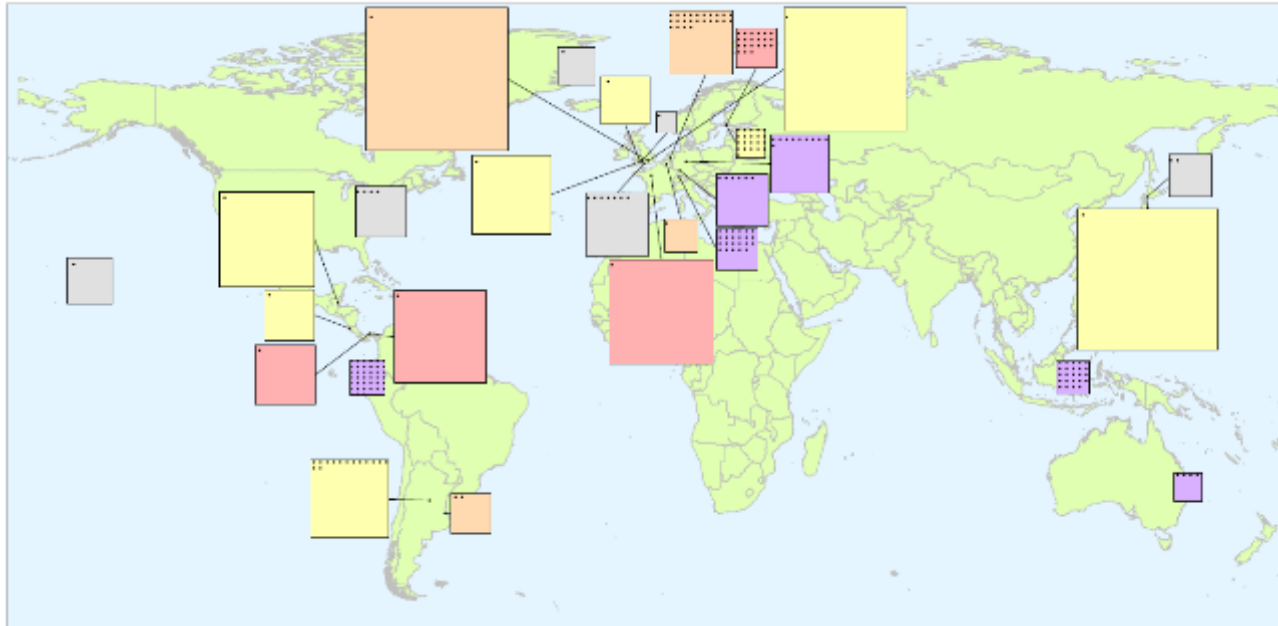
INTERACT / EC 7th FP

The Kone Foundation

iBOL and Genome Canada



No latitudinal pattern in food web structure where actively sought



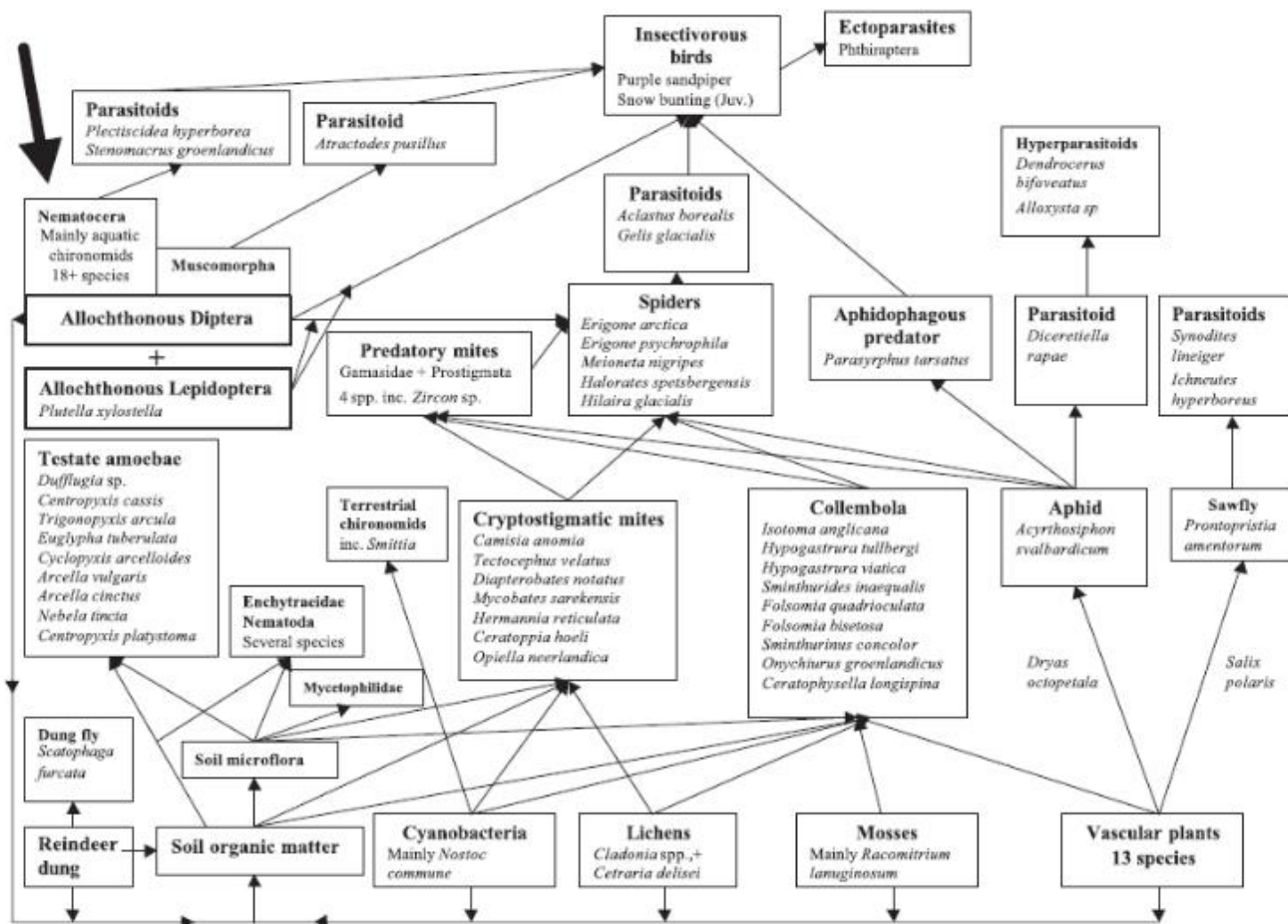


Fig. 1. Revised terrestrial invertebrate food web diagram for a site adjacent to Ny-Ålesund, Spitsbergen, Svalbard. Sources of information are summarised in the text. The large black arrow indicates inputs into the system from adjacent or distant areas. Some less important arrows from dung flies, terrestrial chironomids and Mycetophilidae etc. to insectivorous birds are omitted to prevent over-complication.

Are high Arctic terrestrial food chains really that simple? – The Bear Island food web revisited

Ian D. Hodkinson and Stephen J. Coulson, School of Biological and Earth Sciences, Liverpool John Moores Univ., Byrom St., Liverpool, UK, L3 3AF. (I.d.hodkinson@ljmu.ac.uk).

Conclusions

- The simplicity of Arctic food webs is a myth
- Biotic interactions at least as complex here as elsewhere on the globe
- Repeat picture of web: to understand why one species increases and another decreases, or what happens with stress / climate change on the web, we need to understand how they connect together
- Arthropods the key players in terms of both diversity and biomass

The myth of Arctic simplicity



The enchanted loom