

BIOL/ENST/NORT 3313: ECOLOGICAL STRUCTURE IN NORTHERN ENVIRONMENTS

TOPIC 3: LATITUDINAL GRADIENTS IN BODY SIZE

Bergmann's Rule

Northern mustelids

Ecological character displacement

Fasting endurance

Woodrats: a definitive test?

An optimum body size?

Human influence

Dependence on primary productivity?

What about insects?

Something to think about:

Contemplate how you would design a definitive experiment in order to test for Bergmann's Rule. What sorts of data would you require? Would you use data on only one species or several? What would you use as the competing 'null model'.

Required reading:

Pallarés, S. et al. 2019. An interspecific test of Bergmann's rule reveals inconsistent body size patterns across several lineages of water beetles (Coleoptera: Dytiscidae). *Ecological Entomology* 44:249-254. <https://onlinelibrary.wiley.com/doi/full/10.1111/een.12701>

Related reading:

Martin, J. M., J. I. Mead and P. S. Barboza. 2018. Bison body size and climate change. *Ecology and Evolution* 8:464-4574. <https://onlinelibrary.wiley.com/doi/epdf/10.1002/ece3.4019>

Tseng, M. and S. Soleimani Pari. 2019. Body size explains interspecific variation in size-latitude relationships in geographically widespread beetle species. *Ecological Entomology* 44:151-156. <https://onlinelibrary.wiley.com/doi/10.1111/een.12684>