

Introduction to zero-inflated models in glmmTMB

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This video covers

- zero-inflation and hurdle models in general
- how to do them in `glmmTMB`
- a zero-inflated negative binomial example

Basics

- zero-inflation (Martin et al. 2005)
 - extra zeros in addition to those from the conditional distribution
 - i.e. non-structural zeros
 - not “true” and “false”
- hurdle models
 - a specific type of zero-inflated model
 - conditional model is a zero-truncated distribution
 - zeros come from separate processes from conditional mean
- choice depends on meaning of zeros
- `glmmTMB`'s zero-inflation model always has a logit link
- random effects possible

Ex. Salamanders (Price et al. 2016)

- salamanders in streams affected by mining
- multiple species per site

Recap

- basics
- zero-inflated negative binomial example

See the 2nd part of beta distribution video for another example.