

## Feline cat population dynamics

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Feline cat populations cause ecological destruction and spread many diseases in places that people live. Here, we describe a mathematical model for their population dynamics. The gender-based model includes kittens, adult females and adult males. A net reproduction number  $R_0$  distinguishes between population extinction ( $R_0 < 1$ ) and population persistence ( $R_0 > 1$ ). In a separate talk, the model will be extended to include the spatial movement of adult males between patches and the spread of feline leukemia.