

The Necessity of the Big Bad Wolf

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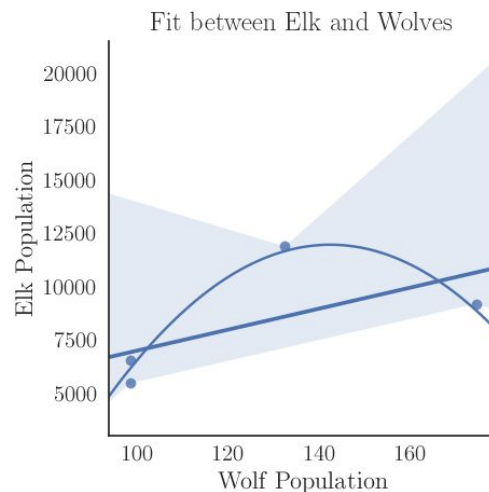
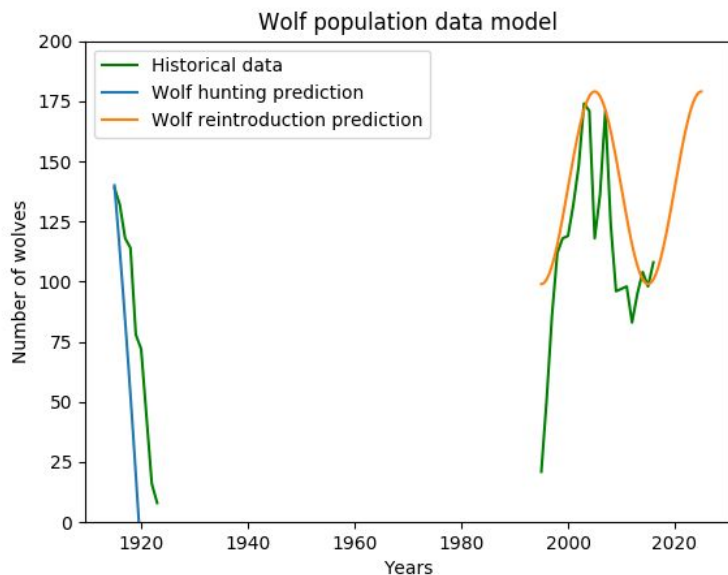
Objective

- What will happen to wolf and elk populations if wolf hunting is re-legalized?
 - Important to environmentalists for preserving diversity in Yellowstone
 - Useful for Yellowstone locals: many consider wolves a nuisance
 - However, they also draw tourists



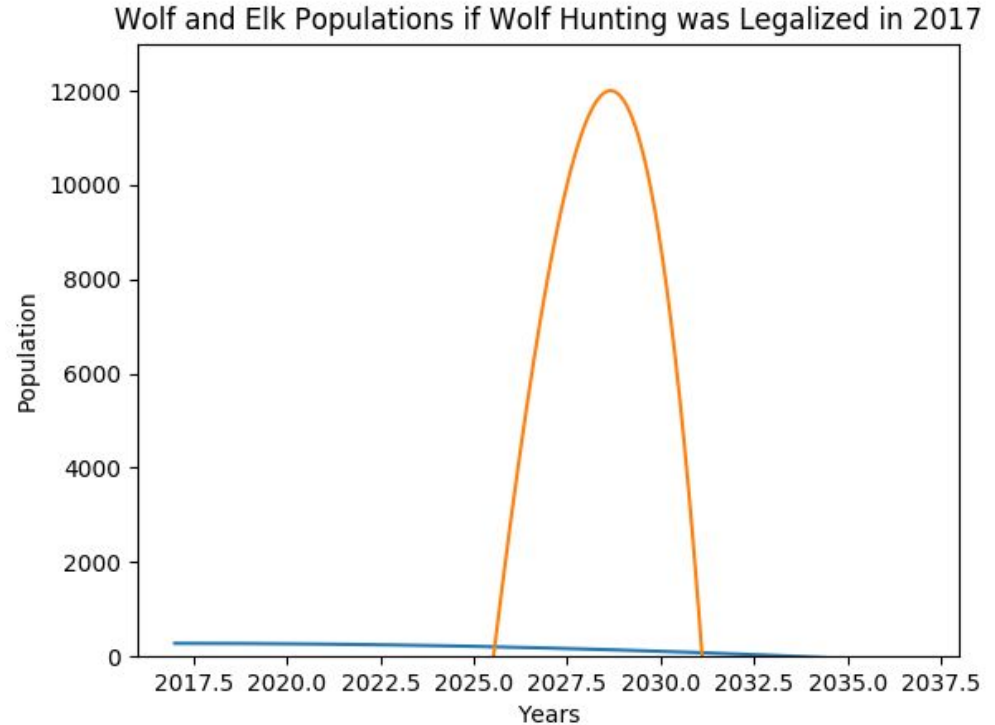
Methodology

- Modeled wolf population following hunting and reintroduction
- Quantified relationship between wolf and elk populations



Results

- Simulation of result if wolf hunting was re-legalized in 2017



Conclusion

- Re-legalizing wolf hunting could cause the elk population to promptly become 0, rise to 12000, then back down to zero
 - The model suggests that killing wolves is bad
- Limitations
 - There 5 years of overlap between wolf and elk data to create a relationship
 - A decrease in predators (wolves) should not lead to an immediate increase then decrease in prey (elk)

