

## Known Fate Activity

## Quantitative Analysis of Vertebrate Populations

1. What are the assumptions of known fate models of estimating survival?
2. Describe three types of data or things that can be estimated with a known fate approach.
3. What are the probability statements for these known fate capture histories of survival? Imagine they are weekly relocations of turtles with radio transmitters
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  - 10
  - 110

4. Imagine we had radiotransmitters on 30 woodfrogs at each of two sites. At the end of the 50 days of radiotracking (lifespan of a battery in a sufficiently sized transmitter), we had 22 alive at site one and 17 alive at site two. Estimate the survival in each population (site).

5. What is censoring and how does it influence survival estimation? What is the difference between left and right censoring?

6. What does the Kaplan-Meier model attempt to account for relative to the simple estimator of  $\hat{S} = \frac{y}{n}$ ? What are the assumptions of this model?

7. Calculate the survival rates for each decade from Frostburg, MD cemetery data (on canvas). Use the females pre-1950.

8. What are things you're unsure about in this chapter? Think about how you would set up a known fate study. What are things you would like clarified further before starting your study?