Construction of Life Tables

Side note 1: What goes in a caption

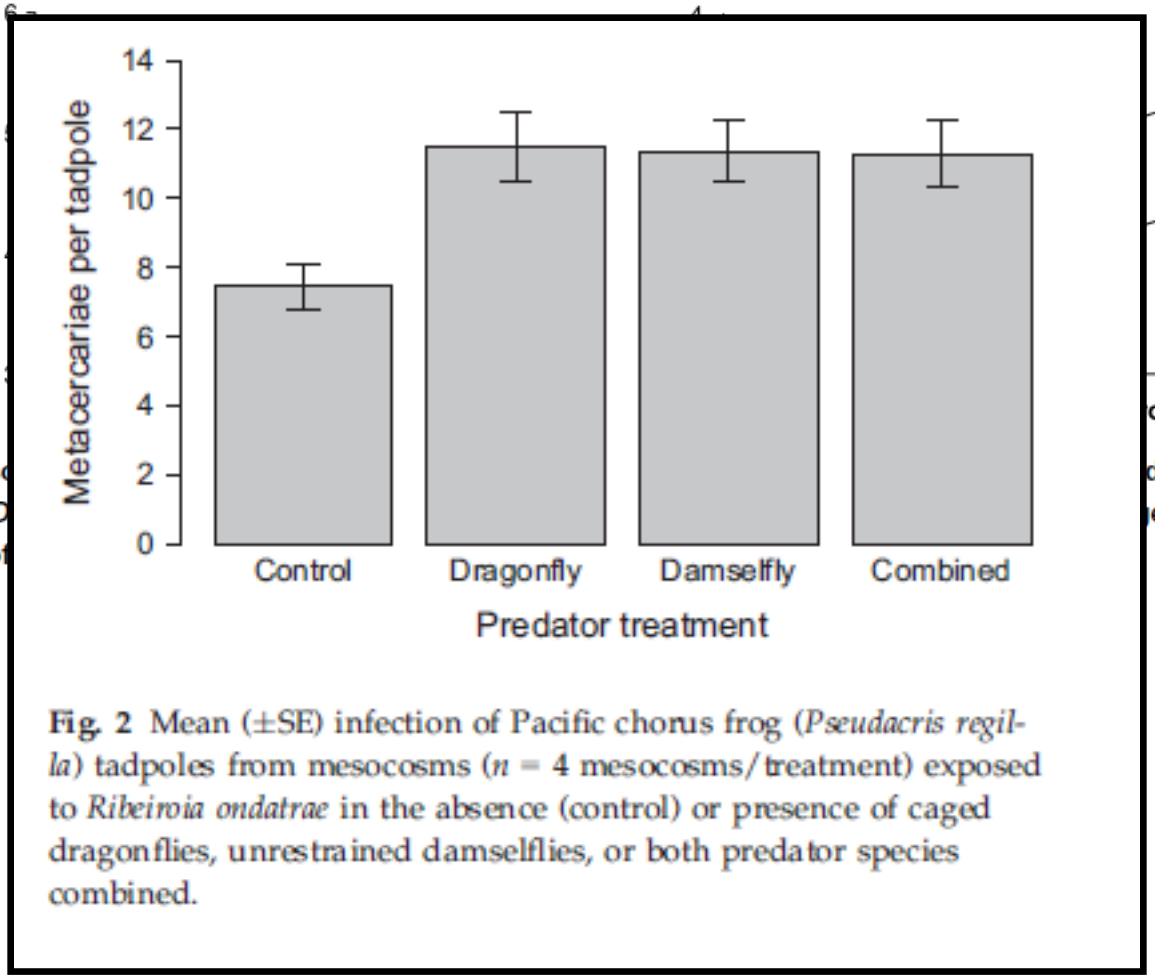


Figure 2. Comparis… …d by fish or kept in control media. In addition, *D*… …e of reproduction (mean ± SE). (B) Number of of…

…omones

Fig. 2 Mean (±SE) infection of Pacific chorus frog (*Pseudacris regilla*) tadpoles from mesocosms (n = 4 mesocosms/treatment) exposed to *Ribeiroia ondatrae* in the absence (control) or presence of caged dragonflies, unrestrained damselflies, or both predator species combined.

Side note 2: read the rubric!

- You will receive data on several replicate plants across a range of CO_2 concentrations (so called "biological replicates", as opposed to multiple measurements on the same plant at a given concentration). You'll need to average these before proceeding.
- You need to calculate the CO_2 compensation point—the concentration of CO_2 where the amount of carbon dioxide fixed by photosynthesis balances the amount of CO_2 produced by the metabolism of the leaf's machinery. Include these values in the captions.
- Make sure to explain what the graph is showing. Is one line saturating earlier? If so, why?

Points will be assigned according to this rubric:

	Points Possible
Correct axis labels (with units)	/3 pts
Clear, concise, and adequate presentation of data	/4 pts
Clear, descriptive caption	/3 pts

Life table = mortality schedule

- What is the life expectancy of an individual at a given age?
- Is juvenile mortality higher than mortality later in life?

Two types of life tables

Cohort

- Follows a group of individuals born at the same time through death
- Easier for short-lived organisms (time/resource consuming for long-lived organisms)

Static

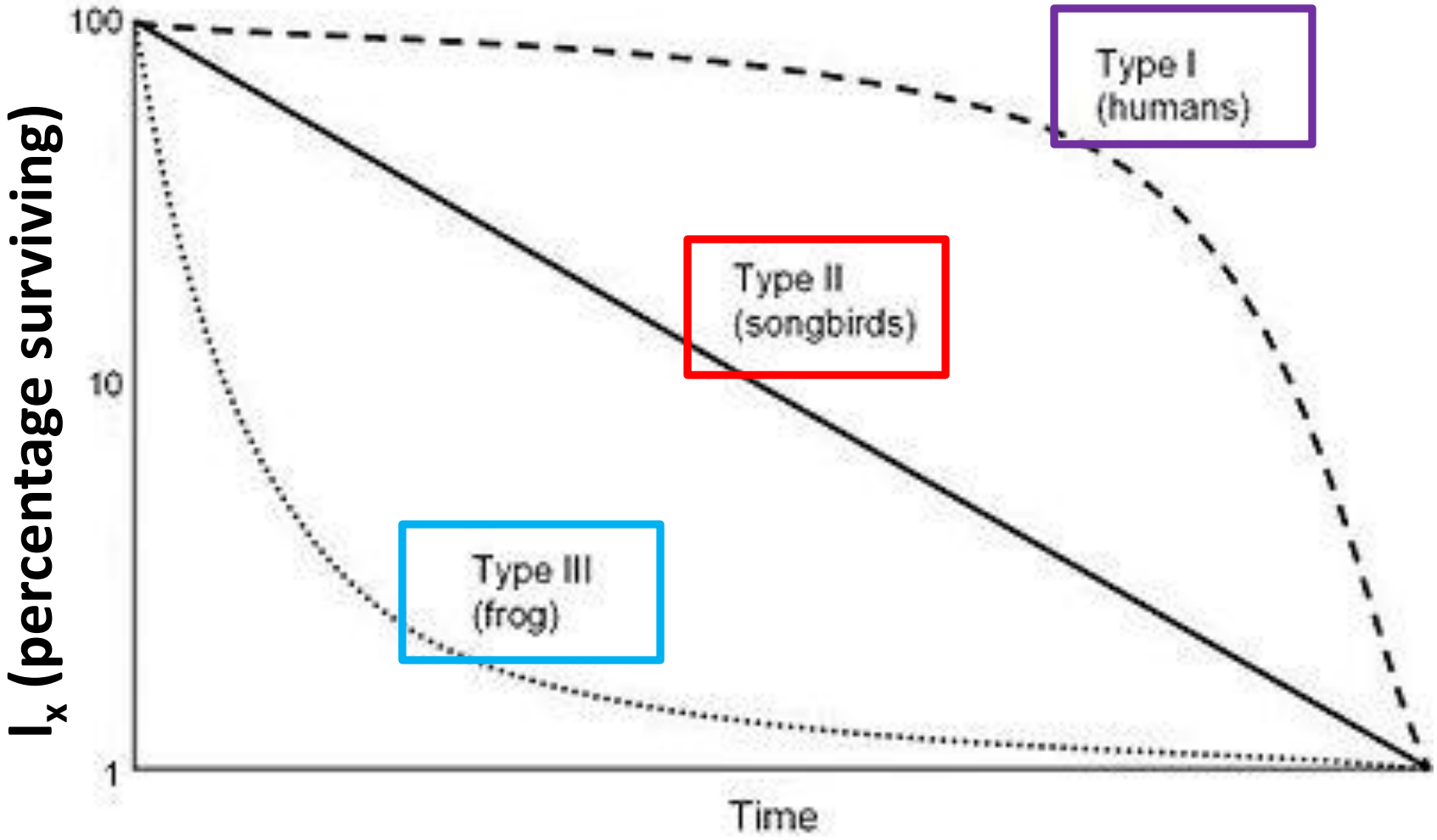
- Examines all deaths in a specific time period and tallies the age of those individuals
- For long-lived organisms

Example: Static Life Table

Age Interval	Number dying in age interval *x*	Proportion surviving to age interval *x*	Proportion dying within age interval *x*	Mortality rate
		l_x	d_x	q_x
0-9	640	1340/1340	640/1340	dx/lx
10-19	300	(1340-640)/1340	300/1340	
20-29	220	400/1340	220/1340	
30-39	100	180/1340	100/1340	
40-49	80	80/1340	80/1340	
50-59	0	0	0	
N_0	1340		*Should add to 1	

Example: Cohort Life Table

Age Interval	Number surviving to age interval *x*	Proportion surviving to age interval *x*	Proportion dying in age interval *x*	Mortality rate
		l_x	d_x	q_x
0-9	1340	1340/1340	(1340-700)/1340	dx/lx
10-19	700	700/1340	(700-400)/1340	
20-29	400	400/1340	(400-180)/1340	
30-39	180	180/1340	(180-80)/1340	
40-49	80	80/1340	(80-0)/1340	
50-59	0	0	0	
N_0	1340			


l_x (percentage surviving)
100
10
1
Time
Type I
(humans)
Type II
(songbirds)
Type III
(frog)