“Crossings: How Road Ecology is Shaping the Future of Our Planet”

Ben Goldfarb, 2023



Ch. 1

1. What is road ecology?

Ch. 2

1. What is a fliverboob? (An inconsiderate motorist)
2. What is Umwelt?
3. Jakob von Uexküll coined the term Umwelt to describe the subjective world of animals. The world that animals perceive is not an objective, veridical representation of the physical world, he argued, but is instead a product of the particular sense organs that each species has acquired in its evolutionary history [[1](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1074815/#pbio-0030137-b1)]. Many animals have sensory abilities that humans don't, such as a magnetic compass sense in birds [[2](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1074815/#pbio-0030137-b2)] or sensitivity to electric fields in fish [[3](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1074815/#pbio-0030137-b3)]. But even within sensory modalities shared by many animals, such as vision, hearing, and olfaction, there are strong differences between species. For example, bees, but not humans, can see UV light [[4](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1074815/#pbio-0030137-b4),[5](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1074815/#pbio-0030137-b5)] and smell carbon dioxide [[6](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1074815/#pbio-0030137-b6)], and bats can hear ultrasound
4. Why did deer collisions decrease significantly along I-80 in the 1970s?

Ch. 3 because more vehicle traffic made for moving fence barrier.

1. How do mule deer navigate through their migration patterns and routes?
2. What is stotting? What deer do when jumping.
3. What difficulties do species face when inhabiting islands?too small DNA pool causes genetic problems ie.,
4. What is genetic drift?
5. What problems did engineers and planners face in constructing the overpass at Liberty Canyon?

Ch. 4

1. If faced with a vehicle collision with an ungulate, how should you hit it?
2. Is funding for wildlife crossings supported in red states? Why or why not?
3. What is the Anthropocene era?
4. How have road crossings evolved in the planning of the I-90 wildlife crossing over Snoqualmie pass?
5. What is extirpation?
6. What are chelonophiles?
7. What problems were faced by the bucket brigade in helping frogs in Forest Park?

Ch. 5

1. What are theodolites?
2. What is the Roadless Rule?
3. How does a road change when being decommissioned?
4. How do roads impact fires?
5. What are some of the values of roadless areas?

Ch. 6

1. How does noise impact species?
2. How does the book break down the dichotomy

between humans and wildlife?

Ch. 7

1. What are the benefits and dangers of median strips to species?
2. What are the benefits and dangers of roadsides to species?
3. Where are the flyways for the Monarch Butterfly? Which ones are the most populous? Which are the least populous? Why?
4. What is killing the monarchs?

Ch. 8

1. What are synanthropes?
2. What is necrobiome?
3. How are turkey vultures designed to feed on roadkill?
4. Is harvesting roadkill legal in Washington? In Oregon? In California?

Ch. 9

1. What are some impacts of culverts to salmon?
2. What was the treaty of Medicine Creek?
3. What did the culvert case in Washington State determine?

Ch. 10

1. Do we have a responsibility to build wildlife crossings?
2. What are padymelons?
3. How do animal carers cope with the mental anguish of being animal caretakers?
4. How does Australia care for its injured wildlife? How does that compare to Tasmania?

Ch. 11

1. What can we learn from roadkill?
2. What impacts do daylight savings time changes impact wildlife?
3. What are sentinel species?
4. What impact do driverless cars have on roadkill?
5. What role will self-driving cars have in monitoring roadkill do you think?

Ch. 12

1. What were some of the challenges faced in building the Trans Amazon highway in Brazil?
2. What is greenwashing?
3. What is the Belt and Road Initiative (BRI)?
4. What are other ways to allow wildlife to cross roads other than building wildlife crossings?

Ch. 13

1. What are redlined districts?
2. How did I-81 in NY transform the city of Syracuse?
3. How do highways and freeways impact people?

Epilogue

1. How did the COVID pandemic impact wildlife?
2. What could wildlife crossings be like in the future?
3. How did you feel about the author’s writing style?
4. Why is the I-90 wildlife crossing over Snoqualmie Pass so successful?

Other Resources

Utube: <https://www.youtube.com/watch?v=6KzD_UilTvA&t=1723s>

Utube: https://www.youtube.com/watch?v=HbRNGJ7S\_O0&t=15s