An animal inhabits its space, whether in a zoo or in the wild, in the same way chess pieces move about a chessboard – significantly. There is no more happenstance, no more “freedom”, involved in the whereabouts of a lizard or a bear or a deer than in the location of a knight on a chessboard. Both speak of pattern and purpose. In the wild, animals stick to the same paths for the same pressing reasons, season after season.

- Yann Martel, Life of Pi

**Animals as Landscape Agents of Change**

This seminar will examine the role animals play in shaping the current and future landscape at multiple scales, from puddles to forests. We will seek to understand the world as an animal perceives it; our demands on animals as co-inhabitants and co-creators of landscapes; and the conflicts and unintended consequences of our relationship with animals as we design and steward landscapes. In doing so, we will consider landscape architects as form-makers, place-makers and ecosystem engineers; and question our role and capacity as design collaborators with other organisms.

**Course objectives**

Through the seminar, students will:

- Understand animals as co-creators of cultural and designed landscapes
- Understand the challenges and opportunities of designing landscapes with animal actions in mind
- Develop a method for identifying significant animals in a landscape, researching the animals, and predicting and monitoring their role as co-creators of a landscape
- Synthesize research data into spatial infographics using digital tools
- Apply research into a design solution that incorporates time, animals, and landscape formation

**Course assignments**

Assignments for this seminar will document the world of an animal – its ümwelt – and the cultural demands and expectations placed on that animal using critical mapping. Based on this, students will design an artful interaction with the animal that engages both the animal and human worlds. The work will be compiled in a booklet; students will work individually, but within a standard format, and will compile their work into a seminar booklet for distribution.

We will work iteratively, developing three projects through a series of draft reviews. Students will post iterations to the course website on Canvas for instructor and peer feedback.
Assignment 1: Mapping the animal’s ümwelt
Students will select an animal to study, and document its ümwelt – its own perception and conception of its world. Using readings and research, you will produce a critical map for the animal, showing its primary concerns (food, migration, reproduction, shelter); how those concerns play out over the landscape (migration patterns, for example); and how the animal shapes its environment to better suit its needs.

Assignment 2: Mapping the cultural animal
Either layering onto the first map, or as a second map, students will document the cultural perception of the animal (food, fur, entertainment, beauty, pest); how the animal’s environmental construction helps or hinders cultural demands on a landscape; and how humans shape the animal’s world to meet our demands. Does it chew down our forest, undermine our field, eat our livestock? Do we constrain it, destroy its constructions, guide its migrations, observe it as it conducts its routines?

Assignment 3: “Crossing the narrow abyss of non-comprehension”
Students will develop one of two designs, through sketch models, photo collage, or other media:
1. An artwork that is developed over time or co-created with the animal. Based on the animal’s concerns and actions, how can you create a framework for the animal’s activity that results in the animal creating an art object or land art installation over time? (See the work of Garnett Puett as an example)
2. A research experiment station that artfully collects data on the animal while also acting as an aesthetic and revealing element in the landscape. (See Natalie Jeremijenko’s Amphibious Architecture as an example)

Optional mapping workshop
Research will be aided by a GIS mapping workshop, led by Karen Lewis of the Ohio State University. Lewis will speak to the seminar on Friday 4/22, and give a 3-hour workshop on Saturday 4/23. The workshop will cover GIS basics, and the workflow of taking GIS data into Adobe Illustrator to create artful, informative maps of data sets. Priority will be given to students in the seminar, but the workshop will be open to all students in the landscape architecture department. Please confirm attendance by 4/15.

Readings
Each lecture session will have assigned readings, which will be posted on Canvas.

References
Various. Reaktion Books Animal Series (Salmon, Pig, etc.)
Schedule

4/1  Course introduction: Animals as landscape agents of change
     Pig: Coevolution and fitness of species
     Thick sections and temporal maps

Students select animals for study

Readings:

Note:
GTF Kelly Stoecklein will offer media work sessions this week. Schedule TBD

4/8  Crystal Grinnell: Water resources engineer, Biohabitats
     Beaver: wetland construction, groundwater recharge

Peer review pin up: Preliminary research on animal and cultural demands

Readings:

Note:
GTF Kelly Stoecklein will offer media work sessions this week. Schedule TBD

4/15  (Speaker TBA)
     Salmon: waterways; stream complexity

Assignment 1 due: Review of critical mapping the ümwelt

Readings:

4/22  Karen Lewis: Assoc. Professor of Architecture, Knowlton School of Architecture, The Ohio State University
     Artful data: Designing the interpretation and visual communication of research

Peer review / work session: Layering cultural demands on ümwelt map

Readings:

4/23  Optional Saturday workshop: GIS mapping
     Space is limited; sign up in advance

Bear: Direct and indirect structural changes in the landscape and trophic cascades

**Peer review:** Draft critical mapping conflicts and unintended consequences

Readings:

5/6  James Gibbs: Professor of Vertebrate Conservation Biology, SUNY ESF

Director Roosevelt Wildlife Station; Adjunct scientist, Galapagos Conservancy

Leaving tracks: Lessons from the field

**Assignment 2 due:** Critical mapping the cultural animal

Readings:

5/13  Clive Jones: Terrestrial ecologist, Carey Institute of Ecosystem Studies

General principles for predicting change and co-creating with animals

**Peer review:** Preliminary studies designing with animals

Readings:

Gutiérrez et. al. “Physical Ecosystem Engineers and the Functioning of Estuaries and Coasts”, (53-81)

5/20  Alex Felson: Assistant professor, Yale School of Forestry and Environmental Studies; School of Architecture

Director, Urban Ecology and Design Laboratory

Designed experiments: Artful monitoring for ecosystem change

(RT in CA)

**Peer review:** Draft designing with animals

Readings:

5/27  **Assignment 3 due:** design projects