

Sensing an Inland Wetland

Glitches, Patches and Mosaics

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Northern Institute People. Policy. Place.
Seminar, 16 September 2026

< slide deck



I acknowledge Larrakia country,
where we meet today

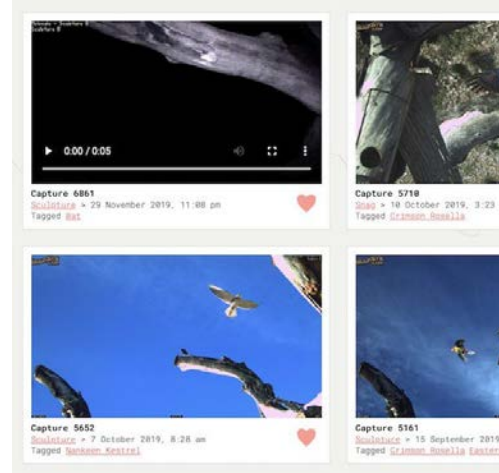
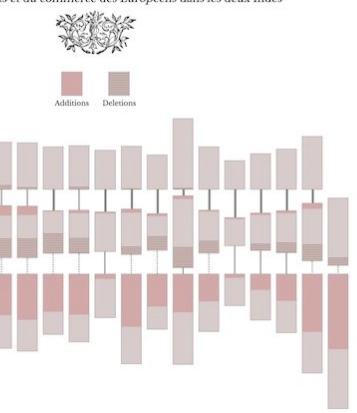
I acknowledge Ngunnawal & Ngambri
country, where I live and work

I acknowledge Mutthi Mutthi country,
the site of this project

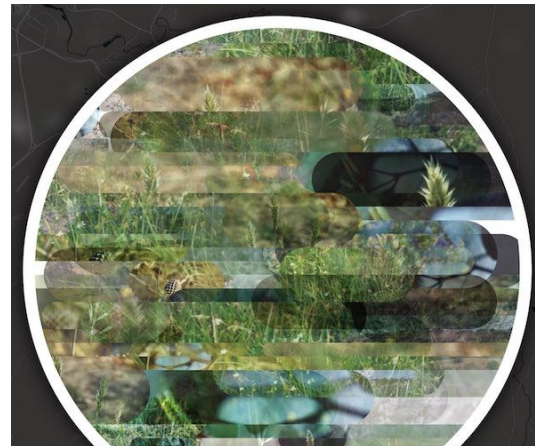
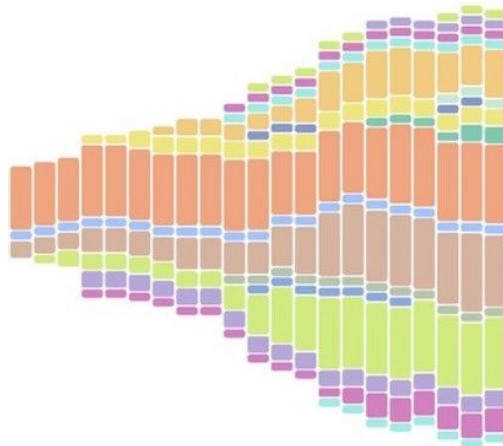


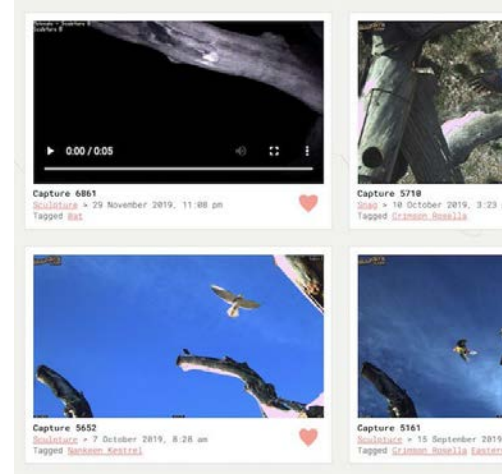
Thanks to: Michaela Spencer & CDU

**Annie Risk, Dr Lorraine Williams,
Donna Jackson & Stephanie Williams**



my research practice: designing & making with data





biodiversity / living places / more-than-human data



Today: a project case study

A quick demo of [Mosaic](#)

Sensing an inland wetland:

- Deployment and patchy data

- Captures and tags, figure and ground

- Audio: listening and listing

Environmental sensing / patching things together

Introducing *Mosaic* (2026)

<http://media.flow-mer.org.au/mosaic>

With Flow-MER, Commonwealth
Environmental Water Office

CSU Gulbali Institute: Prof Skye Wassens,
Fleur Stelling, Emmalie Sanders, Sarah
Talbot

Peter Morton (landholder)



Mosaic Demo

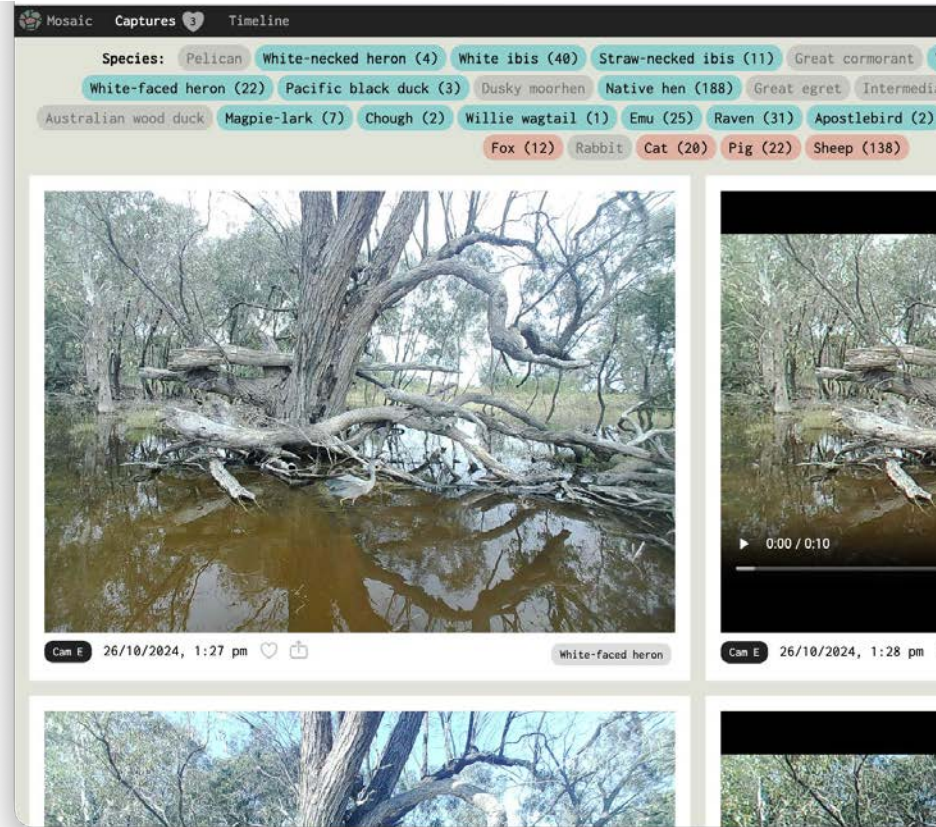
Initial research questions:

“Multimodal” capture for public engagement with wetlands?

Motion-triggered and time-lapse cameras (stills + video)

Long-duration audio

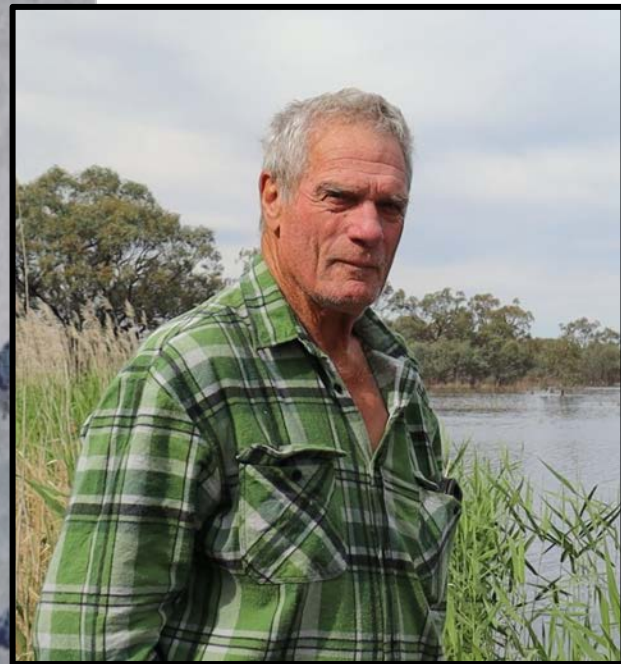
Practical approaches to visualisation, exploration & storytelling...



1. Deployment and Patchy Data



Deploying on site with Emmalie Sanders, October 2024



Peter Morton
- "what are you hunting?"



“deployment”

routine
procedural
systematic
comprehensive

improvised
speculative
partial & selective
situated
polyvocal
constrained

anticipating sensor & site

expertise: Sanders, Morton

by site access & scale

Our data:

Deployed 25th October 2024 - 25th February 2025

Over 4000 camera trap images and videos

26 days of continuous audio

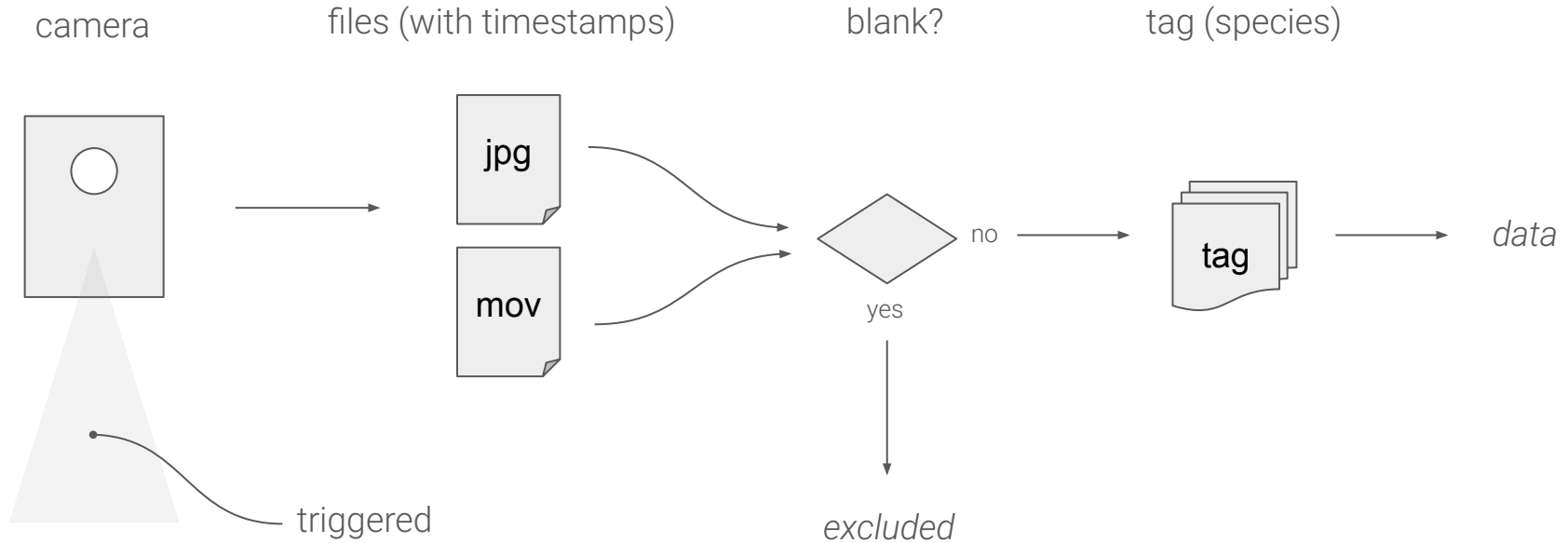
26 days of continuous time-lapse images

Patchy data:

Sensor	Phase 1 (25/10/24 - 19/11/24)	Phase 2 (20/11/24 - 25/2/25)
Audio	continuous	13:00 – 23:00 only
Cam TL East	continuous	n/a (card corrupt)
Cam TL West	continuous	29 Jan (partial) (card issues)
Cam A	203 captures	736 captures to 30/1/25
Cam B/F	8 captures	Levee top: 52 captures. Redeployed to east wetland (30/1/25): 30 captures
Cam C/G	42 captures	31 captures. Redeployed to east wetland (30/1/25): 78 captures
Cam D	203 captures to 27 Oct (blanks)	328 captures
Cam E	107 captures	419 captures (to 30/1/25)

2. Captures and Tags, Figure and Ground

Camera traps - from trigger to data



blank?

"What are you hunting?"



blank?



Figure / Ground

figure: mobile,
human-scale,
discernable, “thing”

ground: static,
background, “nothing”

An “ontological” design
(Anne-Marie Willis):
design designs worlds



ENDURO

CHE 091F 32°C 11/12/2024 17:22:39

Breaking the frame?

“The animals, humans, and machines are all enmeshed in hermeneutic labor (and play) by the material–semiotic requirements of getting on together in specific lifeworlds.”

Haraway, *When Species Meet*, 262



In an ethnography of researchers using camera traps to study the 'rewilding' of wolves in Europe:

"This illegible excess of camera-trap footage resembles ... haunted data: the errors, misunderstandings, or 'weird' excesses which are often considered blind spots in scientific approaches, but which might develop affective potential of their own."

Kumpf [2024](#)

In a participatory study of camera trap use in suburban Brisbane backyards:

"participants were ... intrigued by events that were hinted at but could not be clearly understood"

"noticed something (not sure what) fly past at 00:10:39 (RCNX0020). It was a blur, so I am unable to identify it, but it was something!"

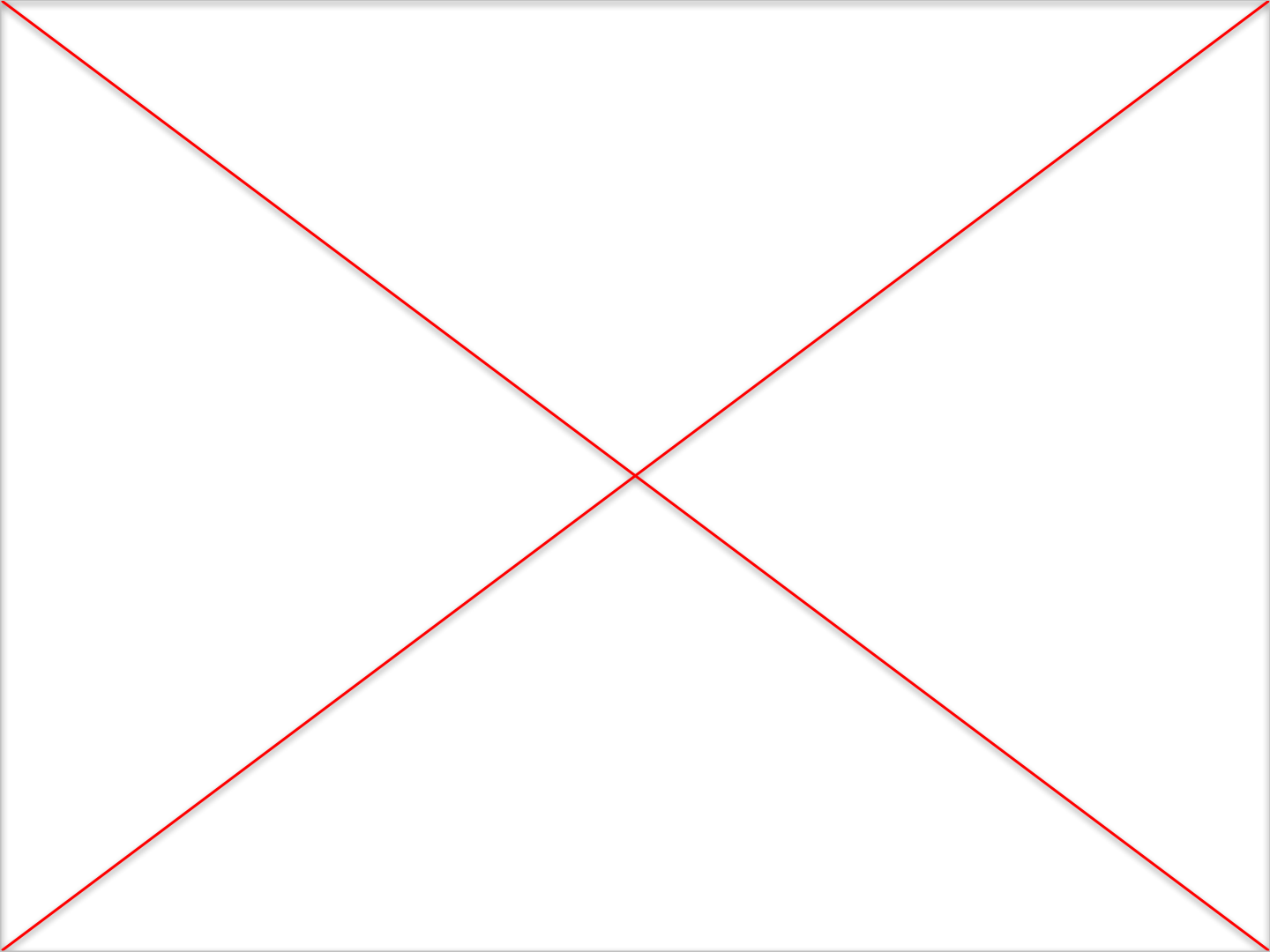
Vella et al [2021](#)

Leanne Allison, creator of interactive documentary [Bear71](#) on developing the story from camera trap images:

“After any given session spent ... going through hundreds of images of wildlife, I’d look out my window and see where I lived in a completely different way. I could imagine a cougar slinking by just a kilometre from my house, a wolf pack on a kill a valley or two away, or a grizzly bear scratching himself on a rub tree on a popular hiking trail...”

Allison, [2012](#) (emphasis mine)



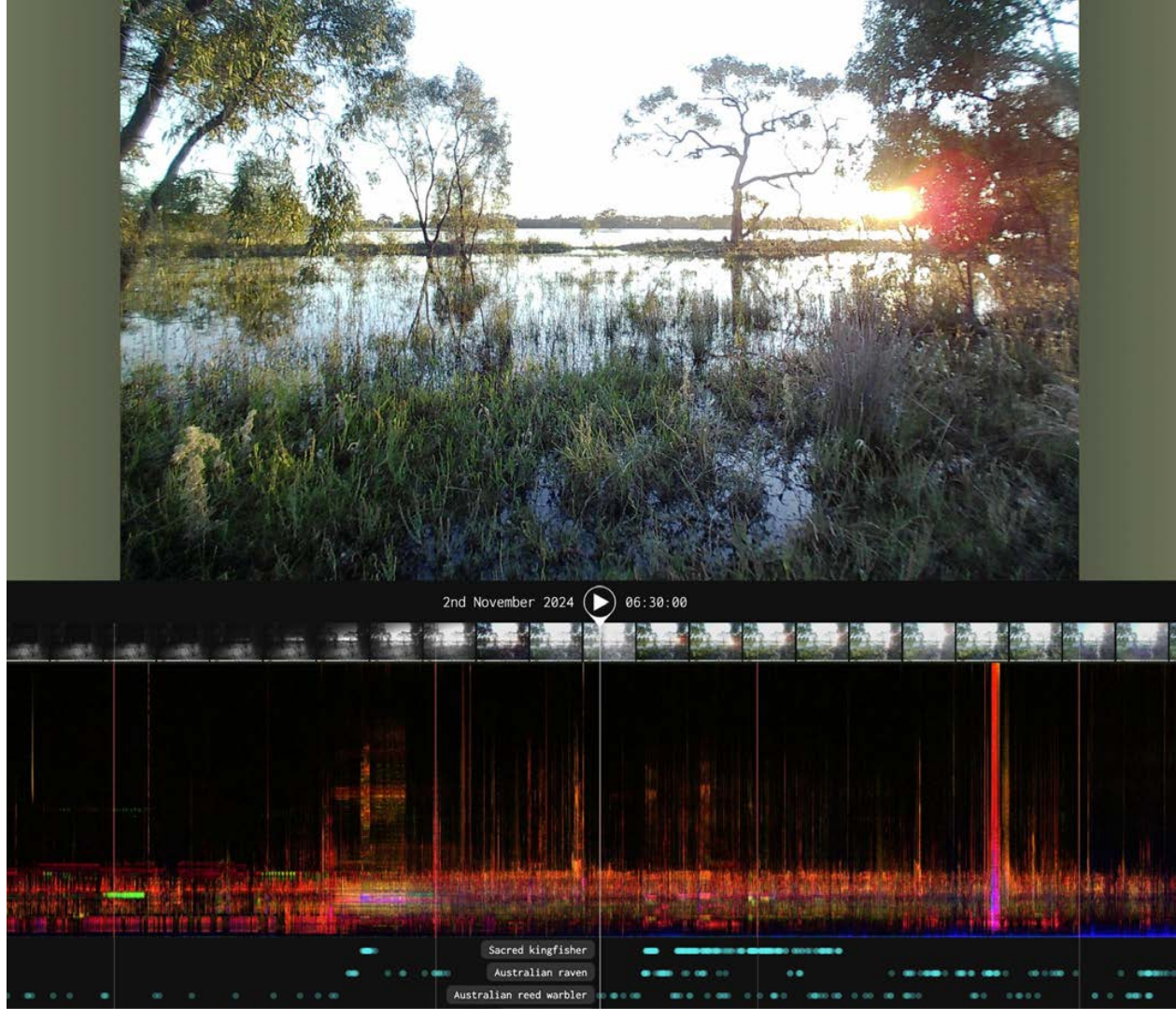


**Timelapse:
incidental figures /
expanding the
frame**

3. Audio: Listening and Listing

Timeline interface

A composition of patches:
timelapse, spectrogram,
species annotations



False colour spectrogram

Rendering / noticing /
learning complexities.

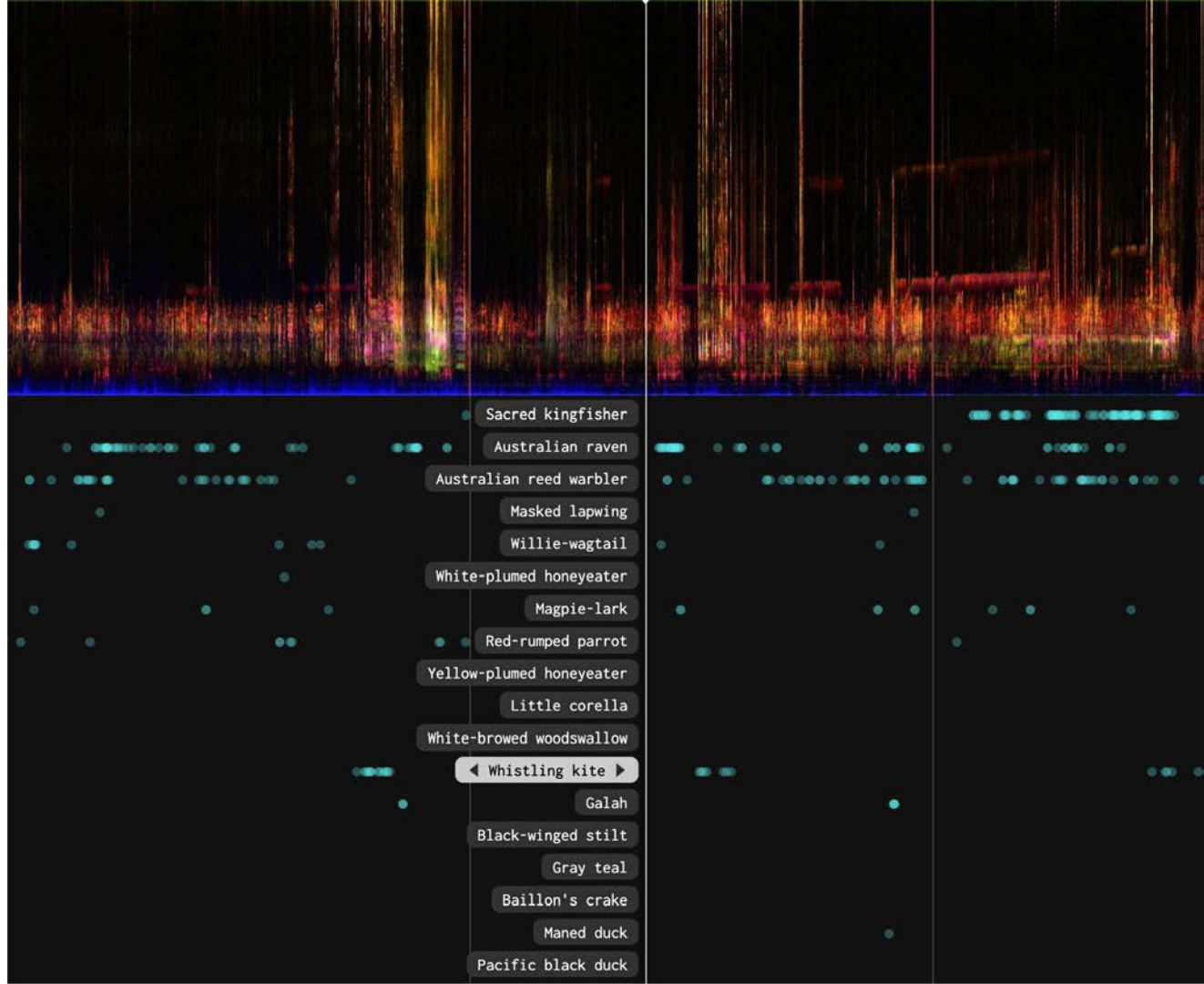
Continuous, immanent field

Species annotations

A list of figures, selected by
BirdNET machine learning
model.

Aligned with FCS

Cues to guide listening

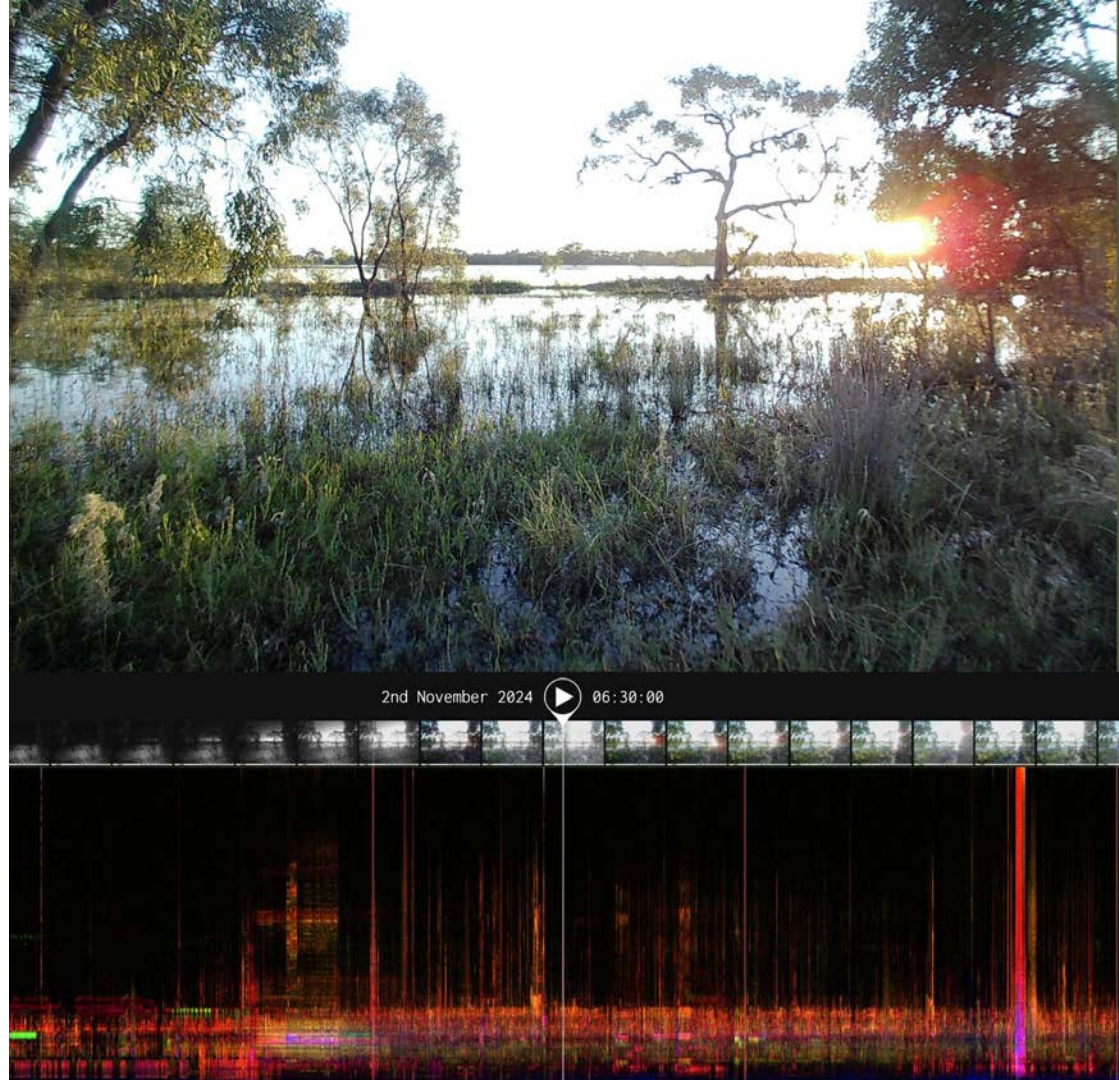


Timelapse frame as “establishing shot”

An interface for listening (in/to) place

“Blank” frames: nothing is happening

Everything continues to happen



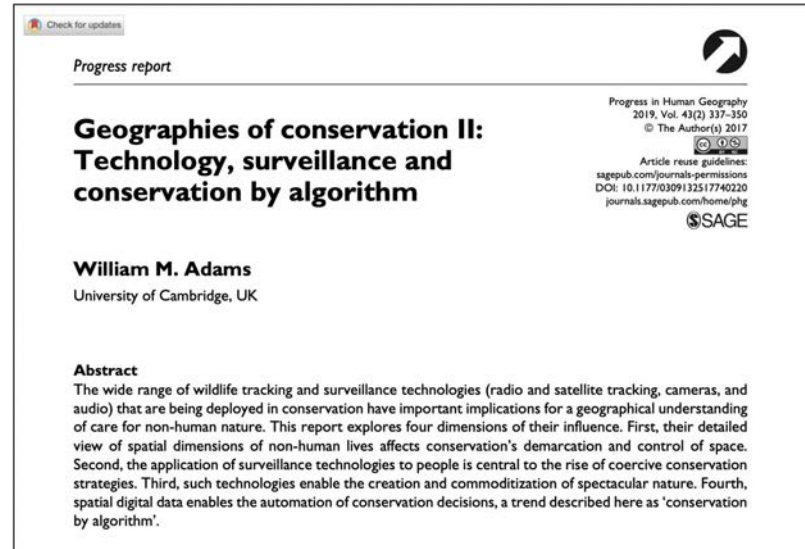
4. Environmental sensing / patching things together

Political critiques: sensing as surveillance

“the gaze of field biology, and conservation, is not yet panoptic, but the intent – and perhaps the capacity – is clear”

“The politics of future conservation geographies is increasingly shaped by technologies and algorithms. The question of who owns, programmes and controls them is of crucial importance.”

Adams, [2019](#)

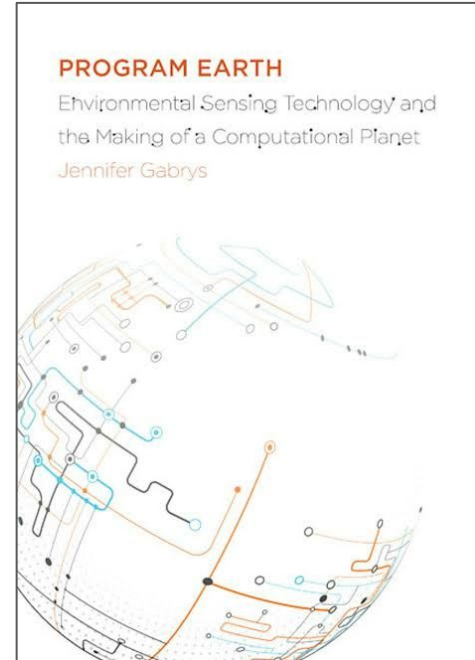


Relational / collective “sensing”

“The becoming environmental of computation ... includes the invention of a ‘technogeographical milieu’ ... where the webcam is involved in constructing distinct environments that are both technical and geographical”

“Webcams and other cameras-as-sensors operate as technologies that generate new modes of sensor data while also individuating new relations and possibilities for relations within and through environments.”

Gabrys, 2016



Gaps, failures,
discontinuities,
contingencies,
selection / exclusion,
figure / ground

Neither of these seem “patchy” enough

Place-based, site-specific,
plural in concern, plural in
knowledge / discipline

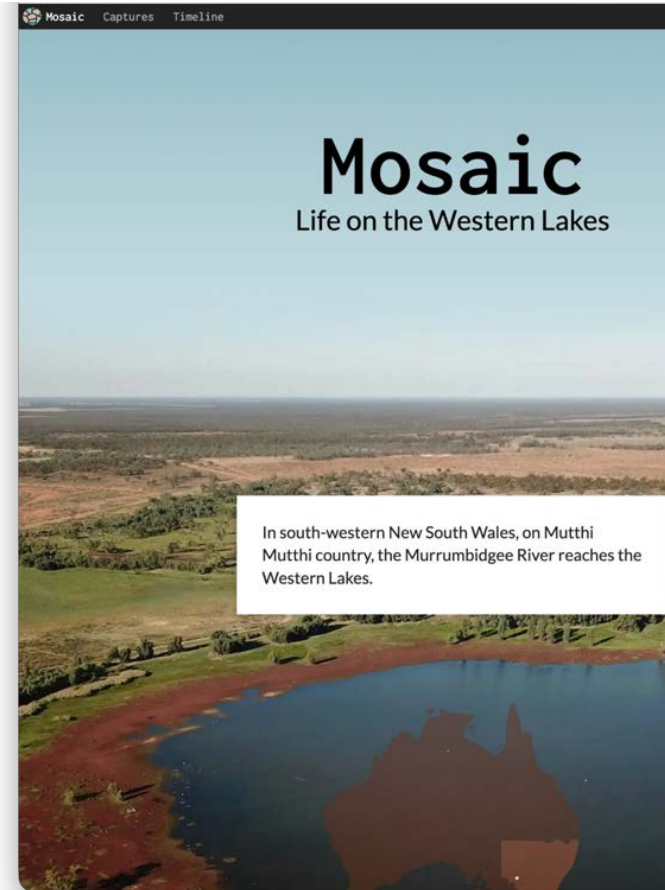
Mosaic asks:

How might we see or see around the edges of sensed data?

How might digital patches be assembled in a way that can entangle and affect?

“What are you hunting?” (Helen Verran: “hunting relations”)

Can we design a way from figure / ground to figure / figure / figure...?



Thanks!

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