FogLife and Visual/Soundscapes:

Exploring the past and future ecology of the Namib through photography and acoustics

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tagline: Combining repeat photography and soundscape ecology in order to explore natural and human adaptations to climate change

Repeat landscape photography using historical images provides detailed and accurate empirical evidence for vegetation change over time.

- Many archival photographs of the FogLife study area exist, ranging in time from 1876 to 1992
- These record vegetation composition and cover of undisturbed sites; sites close to settlements, mines, ephemeral rivers etc.
- +/- 50 repeat photos will form the basis for statistical analysis of historical vegetation change;
- The results will be correlated with historical climatic variables to provide insights into the effects of climate change, anthropogenic impacts and ecological processes.

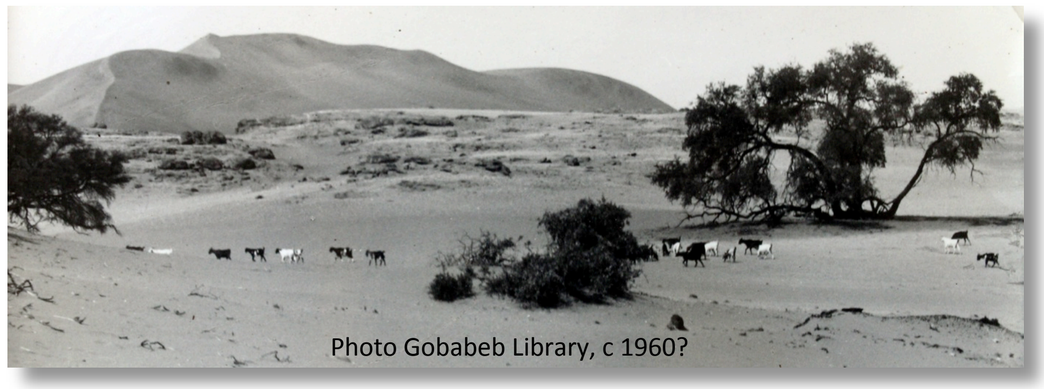

Photo Gobabeb Library, c 1960?

An archival photograph taken from behind the Gobabeb Library

c. 1963

A repeat photograph taken from behind the Gobabeb Library

9.iii.2014

Dune vegetation: *Stipagrostis sabulicola; Cladoraphis spinosa*

Soundscape ecology is a field of study that emphasizes the ecological characteristics of sounds and their spatial-temporal patterns as they emerge from landscapes, focusing on the causes and consequences of, and interactions between biological (biophony), geophysical (geophony), and human-produced (anthrophony) sounds.

The project will focus on the monitoring of environmental sound variables through high definition recordings at strategic coordinates across the FogLife study area. Recordings will be repeated annually for the next 4-years to maximize potential for comparative analysis.

Soundscape ecology will also be used to examine the functional and symbolic significance of environmental sounds in the cultural lives of the people who inhabit FogLife landscapes by staging 'soundwalks' with local residents. Soundwalking is a creative research practice that involves listening, narrating and recording while moving through a landscape.

An Example:
Wild Fig Forest,
Ndumo Game Reserve,
South Africa

Data from the acoustic recorders are used to construct three-dimensional maps of acoustic complexity plotted across the landscape.

Click here:

Soundscape ecology analyses the environmental characteristics of sounds and their spatial-temporal patterns as they emerge from landscapes. The birds in this recording have a complex system of acoustic communication, creating sonic patterns that are characterized by variability in space, time and function. This allows researchers to infer information about the status of resources and the dynamics of populations. This example of an acoustic recording from Maputaland reveals how sound deepens and expands the visual experience of a landscape photograph.

We propose to combine repeat landscape photography and repeat soundscape ecology in the following ways:

- To make repeat photographic and acoustic recordings of desert land/soundscapes at selected FogNet climate station sites over four years creating a baseline for long-term monitoring.
- Identify a network of +/- 50 repeat photo sites from archival images of (a) undisturbed desert sites; (b) sites adjacent to mines, (c) sites overlooking the Kuiseb River including areas adjacent to human settlements. Several of these sites will incorporate repeat sound recordings to document population changes in desert fauna. These separate and combined methodologies will enable a statistical analysis of biological change in relation to climatic conditions over time.
- Repeat soundscape recordings will be made at selected sites within the Kuiseb in order to gauge the effects of climate, disturbance and hydrological events on riverine biota.
- Soundwalks with people who reside close to the Kuiseb will elicit the awareness and interpretation of environmental conditions and climate change. Similarly, responses from local residents in relation to repeat photographs will also elucidate local knowledge and the symbolic significance of the environment in the daily and ritual life of the people.

We will contribute a **historical ecology** perspective to FogLife's climatic and biophysical research. In addition, we will apply this methodology to the social and cultural dimensions of environmental change and thereby provide **a human ecology** approach to the FogLife project.

Angela Impey and ***Rick Rohde***
are part of a project team conducting environmental research in western Namibia called 'Future Pasts' (for short). This project investigates how different ideas of the past, in particular imagined past relationships between people and nature, are conditioning the futures being urgently created now in pursuit of 'sustainability' and the avoidance of 'environmental crisis'. We are affiliated to the National Museum of Namibia and funded by the UK Arts and Humanities Research Council until September 2018.

Arts & Humanities Research Council