

110 talks. Daily evaluation (AD)

What is special about African savannas?

Large mammals extant, not extinct

Makes for unique and v complex ecology

Oz. Fire only.

Europe. People.

US. Soils, climate, veg, and one or two animals.

Kruger, soils, climate, veg, full mammal assembly, 6 Ma of hominids. Phew!

What is special about savannas in general

C4 grasses.

Why they appeared, what stopped their spread?

What effects on biota, fire, climate, soil formation?

If we know why and what, better understand how they might disappear?

So: lots of interesting questions relevant to basic and applied science

How are we doing?

## UNDERSTANDING THE SYSTEM

Ecology: What conceptual framework?

Top-down (NOS, wb) vs. Bottom-up (KR) control

### Plants

Grasses/trees. Bottom-up vs. top-down control (vs interaction)

What drives changes through time and space? Lindsey, Elinor, Carla, Sean

### Herbivores

NOS and megaherbivores. Respond to, but also create, their own habitat

Elephants: V difficult problems of spatial and temporal heterogeneity

Kruger and SANPARKs initiative

The others? Giraffe, rhino, hippo

And the really important meso-herbivores: impala and the rest

How does food quality/quantity influence animal abundance

Fire Fire, the other mega-grazer.

Fire/grazer interactions

### Carnivores

Do carnivores control ecosystems?

Kruger vs HiP  
Rare antelope  
Landscape of fear and shrub encroachment

#### Disease

How do diseases alter the above?

#### The unique African experiment

We can bring back the extinct animals and see what they do  
Not enough comparative ecology With/without megafauna  
With/without influential species

#### Bottom-up control

##### The abiotic template

Climate : variability but not directional (climate change)

Rivers, waterholes

Soils and biogeochemistry

Patterns Why broad-leaved

Why fine-leaved

What is nutrient rich/nutrient poor, dynamic, not static

Process

What do herbivores, fires do to nutrient cycles and is it different in African savannas?

Development of soils, catenas

#### EVOLUTION AND UNDERSTANDING

??? the missing element

#### MANAGEMENT

TPCs as a *monitoring* framework

Management actions which TPCs help to monitor

River behaviour

Biodiversity responses

Not good enough on spatial/temporal variation

Heterogeneity. Horrible buzzword, tricky science, imperative for management

#### ECONOMICS

What the megafauna mean for society

Communities and livelihoods (Ignas Heitkonig)

Which communities?

Africa's unique economic advantage

How to market better to Treasury?

KNP

Why so special

Data

Open to experiments

Innovative policy/management

Professional

Welcoming

Novel technologies

Bright young minds

NETWORKING and SYNERGIES

Thanks SANPARKS