Population distribution and abundance

How many & where?

Salicornia on Waties Island

So, what's a population?

Some characteristics:
- Distribution
- Abundance
- Density
- Birth rate
- Death rate
- Immigration rate
- Emigration rate
- Age structure

Carolina bays

Lecture outline

- Distribution
  - Broad
  - Local
- Metapopulations
- Abundance
- Rarity

Lecture outline

Range

- Where's Kanga & Roo?

Western grey kangaroo

Eastern grey kangaroo

Macropus giganteus

Red kangaroo

Distribution across scales

Distribution at smaller scales

- Random
- Uniform (regular)
- Clumped

Roberts & Oosting (1958)

Fig. 9.2

Fig. 9.10
Distribution at smaller scales

A (realistic) complication

Local applications?

Roughly predicting densities
Synthesizing distribution and abundance data

- Rabinowitz (1981): seven forms of rarity
- Based on a combination of:
  - Geographic distribution (extensive vs. restricted)
  - Habitat specificity (broad vs. narrow)
  - Local population size (large vs. small)