

# IDS 702: MODULE 3.2

## POISSON REGRESSION (ILLUSTRATION)

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# SPRINGBOK ANALYSIS

The data contains counts of springbok antelope around 25 watering holes.



The data is in the file `springbok.csv` on Sakai.

# SPRINGBOK ANALYSIS

- Springbok are counted at each site (hole) at an altitude of 200-300 meters.
- A survey normally includes counts at all 25 sites but occasionally some sites could not be counted because of poor weather.
- For larger groups of springbok, color photographs were taken and springbok were counted later from the photos.
- Several surveys, usually 7-10, were made each year.
- Within a year, springbok are faithful to a single site. That is, if a springbok goes to site  $i$  on one day, it will return to site  $i$  on other days.
- We want to
  - Analyze trend
  - Estimate the effects of predictors

# SPRINGBOK ANALYSIS DATA

- $n = 1050$  counts from 1990-2002 for sites 12-21, 23, and 24.
- The other sites were excluded because they usually don't have many antelope.
- Three time variables: year, date (week) and hour from noon.

Variable	Description
LOCNUMBER	Location Number
SITEI	Site
YEAR	Year (1990 - 2002)
DATE	Week (14 - 42)
HourFromNoon	Hour From Noon (Numeric)
COUNTS	Springbok Count (Discrete)

IN-CLASS ANALYSIS: MOVE TO THE R  
SCRIPT HERE

# WHAT'S NEXT?

MOVE ON TO THE READINGS FOR THE NEXT MODULE!