

Wildlife Monitoring: Why, What and How?

17-20 October 2005

Pago Pago, American Samoa



Knowledge to Go Places



DEPARTMENT OF MARINE & WILDLIFE RESOURCES

AMERICAN SAMOA GOVERNMENT

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A Regional Workshop on Wildlife Monitoring 17-20 October 2005

Clarion Tradewinds Hotel / Naumati 1 Conference Room
Pago Pago, American Samoa

A Project under ASG-DMWR's State Wildlife Grant Program

WORKSHOP PRESENTERS:

Dr. James Nichols, Patuxent Wildlife Research Center, US Geological Survey

Dr. Paul Doherty, Colorado State University

"Wildlife Monitoring: Why, What and How?"

17 OCTOBER 2005 (MONDAY)

0700-0800 BREAKFAST

0800-0830 Registration: Naumati 1 Conference Room

0830-0840 Welcoming Remarks from the Director of DMWR (Ufagafa Ray Tulafono)

0840-0850 Overview of Workshop Objectives (RCB Utzurum)

0850-0915 Introduction to the Workshop (JD Nichols & PF Doherty)

0915-0945 General Introductions from Participants

0945-1000 BREAK

1000-1130 Session I: Overview and Perspective (1.5 hr, JDN, slide 6)

a. Why?

i. Monitoring as a component of a science program

ii. Monitoring as a component of an active

management/conservation program

iii. Surveillance monitoring (arguments against this focus)

b. What?

i. State variables

1. Abundance/density

2. Occupancy

3. Species richness

ii. Vital rates

1. Population level

2. Metapopulation level

3. Community level

iii. Trend (arguments against this focus)

c. How?

- i. 2 central statistical issues:
 1. detectability (indices?)
 2. spatial sampling

1130-1200 Business Issues (Per diems, ticket reconfirmations, etc)

1200-1330 LUNCH BREAK

1330-1500 Session II. Fundamentals of Sampling and Statistical inference (1.5 hr, PFD, slide 63)

- a. Probability-based sampling and sampling distributions – the basics
- b. Common and not-so-common sampling schemes

1500-1700 Session III. Fundamentals of Sampling and Statistical Inference (2 hr, PFD, slide 78)

- a. Distributions
- b. Estimation
- c. Model selection
- d. Hypothesis testing

(Evening Optional Consultations: PFD/JDN)

18 OCTOBER (TUESDAY)

0700-0800 BREAKFAST

0800-0815 Announcements

0815-0845 Session IV. Abundance estimation

- a. General approach (0.5 hr, JDN, slide 207)
- b. Observation-based methods
 - i. Miscellaneous methods (1 hr, JDN, slide 220)
 1. Marked subpopulation
 2. Temporal removal modeling
 3. Sighting probability modeling
 4. Multiple observers

0945-1000 BREAK

1000-1200 ii. Distance sampling (2 hr, PFD, slide 247)

1200-1330 LUNCH BREAK

1330-1430 c. Methods using captures/sightings of marked animals

- i. Closed population capture-recapture (1 hr, JDN, slide 335)

1430-1600 Session V. Vital rate estimation

- a. Relevance of detection probability (0.5 hr, JDN, slide 384)
- b. Radiotelemetry and nest survival (0.5 hr, JDN, slide 394)
- c. Tag recovery (0.5 hr, PFD, slide 414)

(Evening Optional Computer Exercises: PFD)

19 OCTOBER 2005 (WEDNESDAY)

0700-0800 BREAKFAST

0800-0810 Announcements

0810-1130 d. Open capture-recapture (3 hr, JDN, slide 440)

- i. Single-age
- ii. Multi-age (slide 465)
- iii. Multi-state (slide 473)
- iv. Reverse-time and direct estimation of population growth (slide 486)
- v. Robust design (slide 498)

1130-1300 LUNCH BREAK

1300-1430 Session VI. Occupancy estimation (1.5 hr, JDN, slide 510)

- a. Single-season
- b. Multiple seasons (slide 553)
- c. Multiple species (slide 596)

1430-1600 Session VII. Estimation of species richness (1.5 hr, PFD, slide 608)

- a. Single season
- b. Multiple seasons

1630

DEPARTURE FOR FIELD

1730-1830

Field Session/Wildlife Viewing

1830-2130

Evening socials

2130

DEPARTURE FOR HOTEL

20 OCTOBER 2005 (THURSDAY)

0700-0820 Breakfast

0820-0830 Announcements

0830-1145 Session VIII. Consultations

- a. 0830-0930 slot: _____
- b. 0930-1030 slot: _____
- c. 1045-1145 slot: _____

1030-1045

BREAK

1145-1330

LUNCH BREAK

1430-1530 d. 1330-1430 slot: _____

Closing Session

- a. Open Discussion on a Regional Initiative: Where to go from here?
- b. Summary/Wrap-up

1630

First departure for Airport (Flights for Samoa)

DMWR-WILDLIFE GROUP (Who to see for assistance):

KATE & VISA – flight reconfirmations; issues on accommodations
 AILAO & SIAIFOI – information on wildlife, habitat, DMWR wildlife programs
 VITALE & CHEY – information on getting around town
 RUTH & JOSHUA – workshop logistics