The SNAMP Fisher Project

Third Integration Meeting
September 17, 2008
“Science continually advances only because many cycles of independent testing by different scientists allow new knowledge to be built with confidence upon old knowledge, thereby creating a repository of reliable understandings about the world……

Scientists have an absolute obligation to honesty: They must accurately report how they arrived at their discoveries, as well as the discoveries themselves.”

Bruce Alberts, Editor, Science

Topics

- Project goals
- Camera trapping – occupancy modeling
- Live trapping
- Radio-tracking
- Vital rates – population viability modeling
Wildlife & Adaptive Management

USFS: Plan projects with existing management direction (Rod)

USFS: Change management direction as needed

Propose adjustments to management? Report on species status, conditions, mortality or disappearance

Analyse & recalculate models

Observe & measure

Monitor owl and fisher

Analyse & model expected environmental affects

Select species for study, develop research protocol, inventory and mark animals

USFS: Implement projects as treatments

Adaptive Management

(Wayne Spencer CBI)
Predicted current fisher habitat suitability
Research Hypotheses

• Spencer/CBI
  – Fisher population is increasing northward
  – SPLAT treatments will not impede this expansion

• Barrett/SNAMP
  – Fisher population is retracting southward
  – SPLAT treatments will exacerbate this contraction

The basic management question is what manner of fuel reduction is optimal for minimizing both the risk of wildfire and the loss of fisher.
Camera Trapping

One camera
One square kilometer grid
One month
Rebait weekly

Fisher detectability?

Cameras password protected
Camera Trapping Results

- October 2007 – September 2008
- 185 grids surveyed; 102 with fisher (55%)
- 8,091 total camera days
- 59,854 animal photos total
- 9,111 good fisher photos
- 688 total fisher “visits”
185 Camera Trap Months

102 Fisher Detections (55%)
83 No Detections
185 Total Camera Trap Months

102 Fisher Detections (55%)
83 No Detections

Compare with CBI prediction?

67% Correct
33% Incorrect

If cutoff is 0.4
Hypothetical First Year

Northern limit of range
Second Year  C
Pre-treatment Year
Post-treatment Year A
### Post-treatment Year B

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*Note: Data cells are marked with black squares.*
Post-treatment Year C
It will be difficult to obtain a clear result based on camera trap data and occupancy modeling.
Live Trapping

Attach radio collars

Collect genetic data

Reproductive status

Age

Health

- Single traps at fisher active cameras
- Female denning period (limited trapping)
- Multi-trap tralines focused near fisher active cameras

**Graph Details:**
- **Y-axis:** Total trap nights
- **X-axis:** Biweekly Trapping Periods
- **Key Events:**
  - DFG trapping permit - Dec 22
  - Number of traps disturbed by black bears

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**Graph Interpretation:**
- The graph shows a significant increase in total trap nights from December 15, 2007, with a peak around May 15, 2008.
- The trapping effort is divided into biweekly periods, with specific periods noted for single traps, female denning, and multi-trap tralines.
- The graph indicates a decrease in trap nights after May 15, 2008, suggesting a possible decrease in trapping activities or changes in fisher behavior.

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**Notes:**
- The graph visually represents the trapping activities and their intensity over the specified period, highlighting the changes in trapping efforts and the impact of specific events like the DENN period.
Daily aerial radio-tracking of all collared fisher

Locate mortalities within 24 hrs
Map home ranges of all collared fisher
Lower elevation (3000ft)
Upper elevation (7000ft)
Middle elevation (5000ft)