

DATE: 30 November 2005

TO: Mark Defley  
Plan Implementation Manager, Hawai'i Invasive Species Council

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RE: Status Report: Determination of foraging and movement patterns of *Aratinga erythroga* (Aves: Psittacidae) using mist-net live capture and radio telemetry on O'ahu Island, Hawai'i

Accomplishments: (Itemized by the nine objectives in the Scope of Services)

Objective 1.

- a) Developed a small network of observers across the Honolulu area that record red-masked parakeet ("parakeet") presence/absence in their areas.
- b) Updated parakeet activity map from additional field observations and observer reports.

Objective 2.

- a) Located evening roosting refugia and received authorization by the private land owner to conduct observations and mist netting on the property.
- b) conducted observations of pre-roosting and roost activity flight patterns at the roost site to determine likely corridors for setting up mist nets.
- c) assembled mist net ropes at roost location - ready to mist net in the next few weeks.

Objective 3.

- a) Purchased six customized *Aratinga* radio transmitter neck collars from Wildlife Materials, Inc.
- b) Purchased stainless steel leg bands with Federal ID numbers.
- c) Range tested the transmitters within the field site.

Objective 3 preliminary findings:

Activity range larger than previously thought but is concentrated in lowland suburban Honolulu areas. Impossible to get a definitive activity range until systematic radio telemetry methods are initiated in the next month.

Objective 4.

- a) Foraging activity monitored at mapped food species within known activity range
- b) Regular parakeet fecal sampling initiated November 2005 at the roost site.

Objective 5.

- a) Parakeet nesting locations identified.
- b) Nesting initiation and completion dates documented for 2005.
- c) Nest location visitation activity monitored twice a month.

Objective 6.

- a) 2003, 2004 and 2005 total population numbers documented
- b) number of fledglings per adult breeding pair documented.

Objective 6 preliminary findings:

Population growth over the past three years is positively linear (not exponential) even though there is potentially a greater number of mature individuals in the population than actually nest or nest successfully.

Objective 7 and 8.

- a) Potential and used food trees in known core activity area (incomplete) identified and GPS ID points taken.

Supplies purchased:

- custom radio collars purchased and delivered (1.5 month turnaround time)
- One pair of binoculars
- One spotting scope
- leg bands with FWS numbers and applicator tool
- Mist net supplies, rope, poles, hardware

Constraint:

Radio collars have a six month operating lifespan thus the placement of the collars on the birds needs to be timed so that foraging and movement information for non-breeding and breeding parakeets can be collected in a six month period. This situation is achieved by initiating parakeet captures in December-January 2005 to allow monitoring over both life history periods.

Changes:

The objective of this project was to document the pattern of parakeet foraging and movements during both, the non-breeding and breeding season. Since funds were not made available for purchases until after the 2005 breeding season ended, collaring the birds (given the 6 month useful life) has been pushed back to December/January 2005-2006.

Modifications to budget:

- An additional 6 parakeet radio collars will need to be purchased (\$740) to replace the expiring 6 on birds in June 2006.
- Radio receiver directional antennas are available in-house and will not need to be purchased.
- Twelve chromosomal sexing kits to be purchased (\$120) to ID the sex of collared birds.
- Omni-directional antenna to be purchased (\$50).

Modification to time line:

- Modifications to time line: collaring in January, radio telemetry January-October 2006