DATE: 30 November 2005

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

FROM: Nicholas Kalodimos, Ph.D. student/Biological researcher
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RE: Status Report: Determination of foraging and movement patterns of Aratinga erythrogenys (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