

From: [Gerry McChesney](#)
To: [Russell Bradley](#)
Cc: [Dan Grout](#); [Gabrielle Feldman](#)
Subject: RE: My Summary of the Burrowing Owl diet data for EIS
Date: 05/18/2012 03:50 PM

Dan,
I agree, nice summary. A few points:

- Be sure to clarify that this is preliminary data, until Sara actually gets it out in her thesis.
- The storm-petrels could have included both Ashy and Leach's, but most if not all were Ashy. Clarify this at start, then refer to them as just storm-petrels.
- Biomass of birds is a bit over-represented because the owls don't consume the entire carcass (they usually leave behind the wings, at least). On the other hand, they spit out the bone portion of the mice and hard parts of the inverts, too, so that fairly substantial weight portion isn't included in actual food biomass either. Is there any way to adjust for non-consumed and regurgitated portions? Not sure if its really worth it or necessary for this, though.
- Would be good to add something on this to purpose and need. Largely, it confirmed what we already knew but went a step further. ID of the crickets is a new twist that needs to be pointed out. Also important to point out that switch following mice crash to not just storm-petrels but also inverts is another indication of the influence of mice on burrowing owl retention. The inverts are there when the owls show up, but they don't feed on them until the favored prey (mice) disappear.
- Run this by Sara and get her input. Want to make sure you're not coming to any different conclusions than what will be in her thesis. Maybe there's something else she could provide so its more of a Chandler unpubl. data citation. Its mostly her work and I want to make sure she is credited properly.

Gerry

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05/18/2012 03:01 PM

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Subject RE: My Summary of the Burrowing Owl diet data for
EIS

Looks good Dan

Very neat summary: 2 quick things. LHSP is Leach's Storm Petrel, LESP is Least Storm Petrel from Mexico – no need to confuse the 2. Second I would downplay CAAU from discussion of bird prey. Only 2 CAAU were ever found in BUOW pellets, so they are an extremely minor prey item for BUOW.

Russ

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From: Dan Grout [mailto:dan.grout@islandconservation.org]
Sent: Friday, May 18, 2012 2:42 PM
To: Gabrielle Feldman; Gerry_McChesney@fws.gov
Cc: Russell Bradley
Subject: My Summary of the Burrowing Owl diet data for EIS

Gabrielle, Russ:

Here is my summary of Sara Chandler's Owl Data for the EIS:

Research Period: ~Oct 1 2010 - May 15 2011: ~ 8 months

Approximately 9 owls captured and tracked; several owls were not captured.

412 pellets (896 prey items) collected and analyzed from banded owl roosts;

267 pellets were also collected from unbanded owls (722 prey items);

Totals = 679 pellets; 1575 prey items: 453 mice; 98 birds (82 ASSPs); 1067 inverts.

From Oct 1 to Dec 31, mice were >60% of the items in the owl diet, peaking in November (<2% birds during this time: No ASSP LESP or CAAU);

From Jan 1 - May 15, however, mice were only 9% of diet, and birds were ~47% (ASSP show up in diet beginning in January).

82 petrels were found in owl pellets. Of all the birds eaten by owls, ASSP/LESP made up 85% of all birds eaten. Most ASSPs eaten in Feb - March - April

Inverts <2-3% of diet from Sept- Dec 30, but in January they increase dramatically (>30% of prey items by number, but biomass still very small)

Overall inverts make up 67% of the prey items in owl diet over the winter, and over 42% of those inverts were endemic Farallon camel crickets!

I calculated the relative % of biomass of mice vs petrels taken by owls for these two similar length time periods:

Oct 1- Feb 1:

There were 229 mice @ 15g = 3435g over 8 weeks; No ASSP taken, so....

Biomass percentages are: ASSP+CAAU = 0%; Mice = 96%; (Inverts = ~3%? by weight)

Feb 1 - May 15:

There were 9 mice @ 15g = 135g over 7 weeks; and there were 82 ASSPs x 38g = 3116g ASSPs + 2 CAAU@50g? = 3216 g ASSP/CAAU;

Biomass percentages are: ASSP+CAAU= ~94%; Mice = 4%; (Inverts = ~2%? by weight)

This summary seems to represent the relevant items of the study for the EIS.

Do you have any questions or comments? Perhaps a better total biomass (and invert) calculation is needed?

This should be added to purpose and need section, I think, yes?

Dan Grout

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- Michael Soule, Cofounder, the Society for Conservation Biology