

Re: Falcon Multi-state Occupancy Analysis - Gavin's time?

Wakamiya, Sarah M <Sarah_Wakamiya@nps.gov>

Tue 2021-04-20 3:12 PM

To: Becker, Benjamin H <Ben_Becker@nps.gov>; Hickey, Jena R <jena_hickey@nps.gov>

 2 attachments (677 KB)

FalconAnalysis_ConsultationOverview_202006.pptx; SFAN_Falcon_Analysis_MultiState.R;

Hi Ben,

The general objectives were the following:

- Primary: Evaluate trend in number of sites occupied and fecundity of prairie falcons: occupancy estimates on presence/absence, trend analysis on number of hatchlings and fledglings detected in occupied sites.
- Extension: Use multi-state occupancy modeling to
 - Investigate trend in breeding success
 - Identify patterns in breeding state transitions
 - Understand rate of imperfect detection of breeding states (e.g. how good are we at truly detecting breeding status)
 - Investigate the influence of peregrine falcons on occupancy and breeding state transitions (PEFA present/absent at territory during the year)

I attached a power point describing the general plan (slides 3-5) which I had put together for Point Blue when we initially consulted with them. Generally I followed the strategy you and Renee were taking on the spotted owl analysis. If you're on github I can add you to our repo [NPS-SFAN/Falcon_MultistateAnalysis: R script for formatting SFAN falcon data and running a multi-state occupancy analysis in RMark \(github.com\)](#). Otherwise I've also just attached the R script (apologies - it's a bit messy as I was doing a lot of learning and exploring!).

Basically I got to the point where the basic models run, but I just needed to gather and add covariates and do the final runs and tests. I'll also need to update the dataset to include 2020 - which hopefully won't be too problematic since we had a major database update since then.

Let me know if you have any other questions.

Sarah

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From: Becker, Benjamin H <Ben_Becker@nps.gov>
Sent: Tuesday, April 20, 2021 2:24 PM
To: Hickey, Jena R <jena_hickey@nps.gov>
Cc: Wakamiya, Sarah M <Sarah_Wakamiya@nps.gov>
Subject: Re: Falcon Multi-state Occupancy Analysis - Gavin's time?

Sarah, is it possible for me to see what the planned analysis was? and if there is any existing code? That will help me understand the scope.

Jena - I assume you mean we would include this funding in the UCB Task agreement for a grad student or advanced undergrad to work with me on starting in the Fall?

thanks!

-Ben

From: Hickey, Jena R <jena_hickey@nps.gov>
Sent: Tuesday, April 20, 2021 11:07 AM
To: Becker, Benjamin H <Ben_Becker@nps.gov>
Cc: Wakamiya, Sarah M <Sarah_Wakamiya@nps.gov>
Subject: Re: Falcon Multi-state Occupancy Analysis - Gavin's time?

Hi Ben & Sarah,
I wanted to update you that I'd like to go with CESU for the falcon multi-state occupancy analysis. Point Blue is willing to be a backup for us if we can't make the CESU option work. However, Mike Johns is not available, so they'd need to identify another staff member with the skills and availability to work on this. Such a staff member would be outside Diana Humple's shop, and therefore the CESU option is preferable.

Let's chat and decide how to proceed!

Cheers-

-Jena

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From: Becker, Benjamin H <Ben_Becker@nps.gov>
Sent: Monday, April 12, 2021 7:02 PM
To: Hickey, Jena R <jena_hickey@nps.gov>
Cc: Wakamiya, Sarah M <Sarah_Wakamiya@nps.gov>
Subject: Re: Falcon Multi-state Occupancy Analysis - Gavin's time?

the spotted owl paper is being revised for JWM. we should have a new draft in a month? But here is the version JWM just asked us to resubmit.

not for circulation other than Paul/Gavin...it's getting a major rewrite..

thanks,

-en

From: Hickey, Jena R <jena_hickey@nps.gov>
Sent: Monday, April 12, 2021 6:42 PM
To: Becker, Benjamin H <Ben_Becker@nps.gov>
Cc: Wakamiya, Sarah M <Sarah_Wakamiya@nps.gov>
Subject: Re: Falcon Multi-state Occupancy Analysis - Gavin's time?

Hi Ben & Sarah,
Thanks! (And "GREAT!"). You (Ben) and a CESU student are looking more and more likely, as I received an email from Diana saying that Mike Johns is NOT available, after all. I don't recall if one or both of you were CCed on that.

In terms of an example manuscript or report to provide Paul Johnson and Gavin, is there an appropriate spotted owl document that would serve that purpose?

Cheers-
-Jena

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From: Becker, Benjamin H <Ben_Becker@nps.gov>
Sent: Monday, April 12, 2021 5:52 PM
To: Hickey, Jena R <jena_hickey@nps.gov>
Cc: Wakamiya, Sarah M <Sarah_Wakamiya@nps.gov>
Subject: Re: Falcon Multi-state Occupancy Analysis - Gavin's time?

Jena,

If Point Blue doesn't take this on and I end up helping with the analysis, I can certainly help a lot with the MS write up in the event that Gavin needs help.

From what I can see from an email that Sarah sent me a year or two back, the data looks like they are in pretty good shape.

-Ben

From: Johnson, Paul G <Paul_Johnson@nps.gov>
Sent: Monday, April 12, 2021 5:46 PM
To: Hickey, Jena R <jena_hickey@nps.gov>; Emmons, Gavin <Gavin_Emmons@nps.gov>

Cc: Wakamiya, Sarah M <Sarah_Wakamiya@nps.gov>; Becker, Benjamin H <Ben_Becker@nps.gov>

Subject: Re: Falcon Multi-state Occupancy Analysis - Gavin's time?

Hi Jena,

Would you be able to send more info about what writing the manuscript would entail? How much data interpretation would we need to do? Do you have any relevant examples of completed reports you could send us?

Thanks,

Paul

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From: Hickey, Jena R <jena_hickey@nps.gov>

Sent: Thursday, April 8, 2021 12:35 PM

To: Johnson, Paul G <Paul_Johnson@nps.gov>; Emmons, Gavin <Gavin_Emmons@nps.gov>

Cc: Wakamiya, Sarah M <Sarah_Wakamiya@nps.gov>; Becker, Benjamin H <Ben_Becker@nps.gov>

Subject: Falcon Multi-state Occupancy Analysis - Gavin's time?

Hi Paul and Gavin,

Sarah, Ben, & I have been strategizing on how to move the falcon-occupancy analysis forward. We are exploring either increasing our funding to Pt Blue and having them (likely Mike Johns) lead and complete the analysis (he's available starting this fall/winter) >OR< Ben could potentially tackle this with a grad student.

In either case, we're wondering if the analysis is handled/completed outside of PINN, would Gavin be available to write up the associated manuscript? Whoever does the analysis will also likely need to make periodic inquiries to Gavin regarding falcon life-history/biology and field-related questions.

Does this seem workable from the Pinnacles perspective? Are there times that would be better/worse for Gavin to contribute?

Thanks for considering. I should mention that in either case, we need to move quickly, as the contract/agreement deadlines are FAST approaching!

Cheers-
-Jena

4/23/2021

Mail - Becker, Benjamin H - Outlook

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