From: Juliusson, Lara
To: Kevin Doherty
Cc: Brad Fedy; Jason Tack; Woodbridge, Brian; Todd Lickfett
Subject: Re: Homework assignment
Date: Thursday, May 15, 2014 8:56:49 AM

Yes. Thanks Brad. We discussed your student's thesis and I am doing a shorter lit review, which will get me personally up to speed on the resource selection work that has been done for sage-grouse.

Lara

Lara Juliusson, Geographer/Ecologist
Sage-grouse Energy Team
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On Thu, May 15, 2014 at 7:27 AM, Kevin Doherty <kevin_doherty@fws.gov> wrote:

> Thanks Brad, Lara and I discussed the thesis yesterday!
>
> Sent from my iPhone
>
> On May 15, 2014, at 4:05 AM, Brad Fedy <bfedy@uwaterloo.ca> wrote:
>
>> Lara,
>>
>> One of my undergraduate students recently completed a thesis with me that summarized all the literature for sage-grouse resource selection. It is a high-quality thesis. I recently shared it with Kevin. I am happy to share it with you also. However, we are going to try to publish the results, so I would prefer that it does not get distributed widely.
>>
>> Thanks,
>> Brad
>> --
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From: <Juliusson>, Lara <lara_juliusson@fws.gov>
Date: Tuesday, May 13, 2014 at 7:21 PM
To: Jason Tack <jasontack@gmail.com>
Cc: Kevin Doherty <kevin_doherty@fws.gov>, "Woodbridge, Brian" <Brian_Woodbridge@fws.gov>, Todd Lickfett <todd_lickfett@fws.gov>, Bradley Fedy <bfedy@uwaterloo.ca>
Subject: Re: Homework assignment

All -

I am looking more in-depth at the various moving window sizes and moving window types used in the literature for sage-grouse resource selection, including, how and at what scale was the source data derived, were multiple scales evaluated, what order of selection was being studied, and what were the study results (important covariates). I hope to have a compiled document that could provide some insights into the appropriate analysis scales for at least the sage-grouse modeling work.

Lara

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On Tue, May 13, 2014 at 1:22 PM, Juliusson, Lara <lara_juliusson@fws.gov> wrote:

> Interesting. I've got a couple of meetings coming up, but I'll weigh in before the end of the day with my thoughts on moving window radii distances.
>
> Lara Juliusson, Geographer/Ecologist
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>
> On Tue, May 13, 2014 at 1:15 PM, Jason Tack <jasontack@gmail.com> wrote:
>
>> Sorry for the confusion the buffers are 30-990m moving windows (circular). So, a 30m buffer would encompass 5 - 30m pixels (150m^2); 60m moving window would encompass 13 pixels (390m^2); 90m would encompass 25 cells (750m^2); etc. etc.

-Elmer Keith on criticism of using a .475 for mule deer- "are you worried you're gonna kill it too dead?"

On Tue, May 13, 2014 at 12:59 PM, Doherty, Kevin <kevin_doherty@fws.gov> wrote:

Tack,

To make sure I am understanding this, you used a 90 to 120 meter buffer? Which would equate to a cell size of 210m^2 (90 + 90 + 30) meters or 270m^2 (120 + 120 + 30) meters as a minimum mapping unit. Then within each cell (either 210 or 270 m^2) we would have the mean number of cliff cells so it would equate to a moving window. If we asked Jack O'conner which was his beloved I am pretty sure he would go with .270, o-wait I digress we are not talking about calibers!

Cheers
Kevin

On Tue, May 13, 2014 at 12:47 PM, Jason Tack <jasontack@gmail.com> wrote:

Hi all,

I did a quick look into model sensitivity across scales using our most predictive variable for the wyoming basin.

Basically I:

1) ran moving windows from 30-990m at 30 increments across the Wyoming Basin (32 rasters took ~ 5 hours of processing time on crappy laptop).

2) Ran use-available models using each cliff variable univariately

3) and summarized coefficient estimate and model likelihood (attached figure in document).

The take home message is that for cliffs, 90-120m windows are ideal, and going out to 1km reduces explanatory power by ~15%. Also cliffs summarized near 1km is only moderately correlated (r=.6) with the most predictive scale.

Cheers,
tack

--

Kevin Doherty, PhD

Spatial Ecologist

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