

From: van Manen, Frank
To: [Haroldson, Mark](#)
Cc: [Fortin-Noreus, Jennifer](#)
Subject: Re: citation
Date: Thursday, September 24, 2015 9:42:30 AM

Nothing to add other than that I hope to hear from JWM this week about a decision on the density-dependence paper.....

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On Thu, Sep 24, 2015 at 8:44 AM, Haroldson, Mark <mharoldson@usgs.gov> wrote:

Jenn,

The attached paper has been accepted for publication and should be out in early release very soon. Probably by next week. You will be able cite this work for observed changes in generations time in the GYE. See the paragraph starting on line 502. As to this result being a consequence of density dependence, Eberhardt (2002) suggested reduced survival of immatures, increase in age of first reproduction, and reduced reproductive rate of adult females would result from density dependence effects in long-lived vertebrates, all of which would translate to an increase in generation time. Frank has a paper submitted to JWM still in review that provides evidence for density dependent effects, primarily on immatures and sum evidence for an effect on reproductive output of females. Again the observed changes support the Eberhardt's predictions

Frank, anything to add on this?

Sincerely,

Mark

On Wed, Sep 23, 2015 at 3:10 PM, Fortin-Noreus, Jennifer <jennifer.fortin-noreus@mso.umt.edu> wrote:

Hi Mark,

In the proposed rule there is a note from Rebecca that at the 10/30/14 study team meeting it was said that known-fate analyses demonstrates that increases in generation time is an indicator of density-dependent population regulation. Do you have a citation for this or would you please provide me an email that I can cite?

Thanks!

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