

## **From Jeff Laake on the Distance sampling List Serve-Exponential Model and Estimation**

That estimator for effective strip width has been around for 40 years at least. It is the correct estimator IF the detection curve is negative exponential and the data are not truncated. See the 1968 article by Gates in Biometrics or a review of it in Seber's book. In general the negative exponential is a poor approximation to most detection functions.  
--jeff

Falk Huettmann wrote:

Hi all,

interacting with industrial contractors, I came recently across an approach dealing with detectability in a peculiar way:

they DO collect detection distances ( $w$ ) in the field, but then eventually just use AVERAGE  $W$  to obtain the area ( $2lw$ ) for linking animal numbers with, and for the computation of densities ( $n/2lw$ ).

Does somebody has experience with that concept ?

Effects of using avg  $w$  should be relatively straight forward to figure out (e.g. overestimate of density estimate due to left-skewed  $w$ 's, no confidence interval, high variance, overly global estimates).

I assume four reasons why that method is used:

- no expertise running DISTANCE software or with the analysis
- no appropriate research design
- trying to achieve a hybrid survey (new data collection, and compatibility with old data)
- trying to give the impression that detection is dealt with

Lastly, what can one say to such surveyors and their contracting offices ?

Thanks for any input or feedback on this.

Best

Falk Huettmann PhD, Assistant Professor  
-EWHALE lab- Biology and Wildlife Dept., Institute of Arctic Biology  
419 IRVING I, University of Alaska Fairbanks AK 99775-7000 USA  
Email [ffh@uaf.edu](mailto:ffh@uaf.edu) Phone 907 474 7882 Fax 907 474 6716

--

distance-sampling list home page:

<http://www.jiscmail.ac.uk/lists/distance-sampling.html>