WILDLIFE SOCIETY BULLETIN

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Reply to:

Dr. George Feldhamer
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5 August 1993

Dr. Jeff Yeo
Department of Fish & Wildlife Resources
University of Idaho
Moscow ID 83843

Ref: 02 WSB#: 112-93

Dear Dr. Yeo:

I would appreciate your review of the enclosed manuscript for possible publication in the Wildlife Society Bulletin. If this is a manuscript that you are willing to referee, I urge you to complete your review by **6 September 1993.** If you will not be able to respond by that date please return the manuscript and forms as soon as possible. Do not pass the manuscript on to a colleague for review.

I am especially interested in your assessment of the paper's content with regard to adequate techniques, appropriate interpretations, sound conclusions, and relevance to readers of the Bulletin. Recommendations for possible revisions will also be appreciated. Additional editorial suggestions are welcomed, but are of secondary importance to points mentioned above.

Suggestions for referees are included in "Guidelines for authors and reviewers of Wildlife Society Bulletin manuscripts" (Wild. Soc. Bull. 16 [1]:Suppl.). We will be glad to send a copy upon request.

Thank you for your assistance. Willing and conscientious referees are essential to maintenance of high quality in the Wildlife Society Bulletin.

Sincerely,

Bruce C. Thompson, Editor

TAYLOR RANCH FIELD STATION
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August 31, 1993

Dr. George Feldhamer
Department of Zoology
S. Illinois University
Carbondale, IL 62901

Dear Dr. Feldhamer:

Enclosed please find my review of WSB #112-93. Most of my comments are on the forms with some comments in the manuscript in pencil. Our solar system at the field station doesn't supply sufficient power for a copier (I'm not sure I'd want one here anyway) so my second set of comments are on a separate sheet.

I'm ambivalent about the significance of this paper. I think it's pretty obvious that electronic compass systems accurately registered with an antenna system are going to be more accurate than hand-held compasses. I'm surprised the differences were so small. I guess the paper could be used to justify the additional expense to someone's boss but I worry that if we get too automated that we spend more time staring at equipment and less time watching the critters. We're more efficient but learn less about the animals we study. Despite my misgivings I've categorized this ms as acceptable with moderate revisions.

Thank you for the opportunity add my comments

Regards,

Jeffrey J. Yeo
Scientist/Manager

1. From your description (p. 5) it's not clear to me how you calculated bearing determination times and how electronic compass bearing determination times were determined compared to hand-held compasses. It appears that bearing determination time for electronic compass systems was the difference between alignment of the compass rose with the electronic compass and alignment of the spotting scope on the antenna with the fixed location. For hand-held compasses, bearing determination time, I guess, was the difference between alignment of the spotting scope on the antenna with the fixed location and the time it took you to jog the 5 m behind the vehicle and take a fix. (Did you test for observer differences in jogging time? Could money be saved with sleek, quick observers rather than the cost of an electronic system? - - - a little humor). Anyway, this point should be clarified.

2. Your determination of true bearings isn't clear to me. It may be that the text isn't typed correctly or that I'm slow. I don't understand why you need such a convoluted approach. If you're considering the mapped locations accurate, why not simply determine bearings directly from the maps using a standard compass? corrected for local declination

3. Table 1. I think bearing errors should be presented as absolute values. All the reader wants to know is deviation from true bearings.

4. I would like to see the error among compass systems presented in comparison to overall relocation error. From your discussion, apparently you have 2 studies of actual radio-tagged animals. Did you test relocation accuracy using transmitters at known locations but unknown to observers? If so, then the difference between hand-held compasses and electronic compasses could be expressed as percentage of the entire relocation error. I suspect that compass error probably encompasses < 10% of total relocation error.

5. I think you should present the approximate costs of each compass type used so that the reader can evaluate the cost savings you report.