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Comment

# ***Interactive comment on “Survey of the terrestrial habitats and vegetation of Shetland, 1974 – a framework for long term ecological monitoring” by C. M. Wood and R. G. H. Bunce***

## **Anonymous Referee #1**

Received and published: 30 November 2015

Review of “Survey of the terrestrial habitats and vegetation of Shetland, 1974 – a framework for long term ecological monitoring” by Wood & Bunce

General comments This paper describes and presents important baseline data on habitats and vegetation of a northern archipelago in Britain, which could serve as a basis for future evaluations of long-term changes in vegetation. The use of Shetland has increased considerably in the last decades due to developments in the oil industry and tourism, which may have affected the habitats, therefore, a resurvey or repeating of the original surveillance is warranted. The overall quality of the paper is high, it is generally well written, although the non-consequential use of some terms (site, plot,

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square, sub-square) makes it difficult to follow at places. For the above reasons, the paper is important, but as currently presented I have the feeling it has somewhat of a local importance. Relative to other parts of the world, Shetland appears to have low levels of specialized species and habitats, and more should be given as justification for the importance of this dataset. One missing piece of justification is climate change, which is not mentioned in the paper. I know climate change rules the current literature maybe too much, but in this case I believe it is relevant to mention. Northern areas, especially those so much influenced by maritime effects (as the authors note) and ocean currents, as Shetland, are certainly interesting scientifically due to their high exposure to the ongoing or likely impacts of climate change. This line of thought should be mentioned as a rationale to resurvey Shetland and to providing the baseline data here.

Specific comments I find four specific issues (by page/line). 1. Please make sure terms are used consistently, e.g. 1-km<sup>2</sup> squares are referred to as "sampling unit", "squares", "sites" etc. and there is potential confusion elsewhere regarding the non-consequential use of some terms (site, plot, square, sub-square, e.g. p. 834, lines 13-15. 2. (834/17): How representative is one 200-m<sup>2</sup> plot surveyed for a 1-km<sup>2</sup> square? This should be discussed. Sampling effort appears to have varied greatly across the 1-km<sup>2</sup> squares, thus the precision of cover/abundance estimates also varies across squares. Was there any effort to control for this in the analyses? What advice can be given to potential users of this data regarding the varying intensity of sampling? 3. (834/26): How is it possible to find these plots for someone other than the people originally surveying the sites? This is important, e.g. were the positions of the plots measured by GPS since 1974? If so, it would be a great help in potential future resurveys. If not, it should be done very fast. 4. (840/19 and on): Repeatability is certainly much more than simply being able to find the plots and carry out the survey again. Please provide some quantitative assessments regarding the repeatability of the measurements made (correlation or correspondence etc. between two or more successive measurements, if available, maybe from the report).

Technical corrections (page/line) 830/8: please use metric units (km<sup>2</sup>) throughout, same in line 10 and elsewhere 832/6: this is out of the world here, consider using an introductory sentence to the paragraph or restructuring the paragraph 832/16: replace “even although” with “even though” 834/14: what is a “square” - please be consistent in term use 835/10: probably should be “physical” or maybe “physiognomic” but certainly not “physiological” 840/12-18: give this justification in Methods when describing plot size, not here 841/14: You could cite more recent and more comprehensive work in this topic, e.g. Lengyel et al. 2008 on description of habitat monitoring in Europe if you want to make this more relevant for people outside the UK.

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Interactive comment on Earth Syst. Sci. Data Discuss., 8, 827, 2015.

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