**Comments on the SCR book**

14 April 2012, 15 April 2012, 18 April 2012, 27 April 2012

Here are some more general comments. In addition, I used Track Changes in Word to write stuff directly into the .tex document and marking comments by dollar signs on either side.

**General comments:**

I love the book and think that it will represent a similar milestone as does the R&D book. However, I think that it will benefit from quite a bit of cleaning up to increase the “flow” for the reader. For instance, make things internally as consistent as possible; write the same things always in the same way (e.g., now we have “all zero”, “all-zero” and “all 0”). Or, we have “GLM and WinBUGS” as chapter title and then at the start of chap 3, you say you just covered hierarchical models. I feel that then you should change the title of the preceding chapter to something like “Hierarchical models and their analysis using likelihood and Bayesian methods”. Inside of that chapter, you could of course start with the GLM and say that we can look at all these models as a series of GLMs and so forth.

Never forget what the reader, who is supposed to include real beginners, likely knows: s/he has not been reading the cap-recap literature for 20 years and may never have come across the term M\_0 or M\_h before. Therefore, such and similar terms must be briefly explained at the first place where they occur (or else a reference given, in this case to Otis et al. 1978 or perhaps Williams et al. 2002). Then, even later, readers could be reminded what such things mean at strategic places, for instance at a the start of a chapter, by saying something like “... in model M\_0, which assumes constancy of detection probability over time and all individuals in N”.

Another example is data augmentation. I would start by calling it PX-DA, since you recently called it that way in the important paper in the Euring with Bob and since the PX part emphasizes that there is something else going on apart from just adding a bunch of zeroes. So I would call it PX-DA where you introduce it and then perhaps say that you also abbreviate it simply as DA and then later you can simply say DA.

Another example is N. To us, it is very clear what this is, but not to a beginner. So define at beginning and later occasionally say “abundance N” instead of just N.

I would make figure legends much more informative. I find that a figure ought to be completely understandable without referring to the text (or mostly), for instance, by somebody just browsing though the book. Therefore, I would most of the times repeat the key things of the study and the analysis underlying a figure (and the same really with tables). I will give some examples of this in the text.

The text is rather poor in references so far. I would add in more pertinent ones and sometimes also courtesy ones (e.g., cite Borchers et al. 2002, Buckland I and II whenever you mention closed pop models and DS models). Courtesy appeases the enemy ;) In this respect, be sure to cite Borchers and especially Effors enough !

In the R and BUGS code, I would add in more hashed-out comments to structure the code and make it more easily legible.

I am not sure whether I would show R2WinBUGS output as well as output from CODA. Perhaps yes, because this heterogeneity reflects the way how different people work, or no, because it’s nicer in the book if most things are as consistent as possible.

Somewhere, typically at the start of the book, or else in the concluding chapter, I would give an overview of the state of the construction site which represents the devleopment of SCR models. I.e., sketch ALL the main challenges that remain to be solved (e.g., species interactions, ....) and those that have been solved, or at least, for which \*a\* solution has been proposed in a paper or in this book. I feel that SCR models are so new and there is so much development that is going on that such an overview would help many people seeing where we are currently with them.

**Comments about the TOC**

1. in the TOC (and the section structure) I would avoid singleton sections (e.g., section 3.1.1 is not accompanired by any other section) by all means. This looks very funny. I would either add another section or else drop the section title and, in the example mentioned, simply have one big chunk of text that goes under the general heading of 3.1 (The simplest closed population model: Model M\_0). Same thing happens repeatedly.
2. in 4.9., you have discrete state-space, but continuous state-space never appears at this level. Would think that you need that when you emphasize the discrete case at the level of a section heading. To me, from solely skimming over the Table of Contents, one should understand exactly where is what and where things are heading
3. I was wondering whether you could combine chapter 5 (Obs models) and 9 (modeling encounter prob) ?
4. Avoid abbreviations in chapter titles, such as in planned chap. 16. Again, I think that the TOC should be understandable without reference to the actual chapters.

**Comments about Chap 3**

1. All directly in chapter .tex file.

**Comments about Chap 4**

1. Is it really necessary to say ‘classes of models’ ? I know this sounds fancier, but it is more straightforward to just say ‘models’.
2. Although I am quite guilty of this, too, I would suggest to reduce the number of terms in quotes.