

# Postmortem of Peter Smits' Spring 2016 Committee Meeting

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4 Peter Smits' Spring quarter committee meeting occurred Thursday 12 May,  
2016. Michael Foote, Kenneth Angielczyk, Graham Slater, and David Polly  
6 were present. Richard Ree was out of the country and thus couldn't attend;  
arrangements have been made for an independent discussion between Peter and  
8 Richard at a later date. In total, the meeting lasted two hours.

This meeting was broadly structured into three parts: dissertation projects,  
10 collaboration projects, and moving forward (i.e. defense and post-docs). Slides  
from the structuring presentation and an academic timeline were presented but  
12 electronically and physically to all members of the committee.

Currently, Peter's dissertation is taking the form of three chapters: 1) effect  
14 of traits on extinction risk in Cenozoic mammals of North America, 2) effects  
of traits on extinction risk in post-Cambrian Paleozoic brachiopods, and 3)  
16 analysis of changes in the demographic structure of Cenozoic mammals of North  
American wrt emergent species traits and environmental context. Chapter 1  
18 of Peter's dissertation was published last year, so approximately two chapters  
remain.

20 Chapter 2 was in review as of Fall quarter's committee meeting. Since then it  
was rejected, revised, and resubmitted. As of this quarter's committee meeting,  
22 Chapter 2 was again under review.

Chapter 3 was premiered at Fall quater's committee meeting and had since  
24 undergone a great deal of statistical and conceptual revisions. We reviewed the  
current issues facing this project, primarily the extreme computational cost  
26 to fitting the full model using full stochastic sampling Bayes. The full model  
takes into account the effect of imperfect observation but requires a lot of  
28 parameters. The two major pieces of advice were given were simplify the model  
by removing the latent-discrete state, try approximate Bayesian methods to get  
30 an approximation of the posterior. Both will be tested.

The other two projects reviewed were Peter's collaboration projects. The first of  
32 these was on comparing different classification schemes to see which is best sup-  
ported by the data. This project is in collaboration with Ken. The other project  
34 discussed was a collaboration between Peter and Stewart Edie on modeling the

36 rate at which new species are identified while taking into account biogeographic  
differences and taxonomic effort. The latter is much closer to be finished than  
the former, though both could be submitted this year.

38 Finally, we discussed Peter's "research program" and post-doctoral opportunities.  
Peter needs to work on developing a coherent idea of a "research program" in  
40 terms of what type of work/questions he wants to be known for. Specifically, he  
should cast himself as an independent thinker and not just someone who cleans  
42 up other's messes ("don't make a career of cleaning up after the elephants").  
Additionally, while collaborating is fine, it was suggested that Peter try and take  
44 a stronger intellectual lead in the collaborations instead of acting as an analysis  
mercenary.

46 As with Fall quarter's meeting, Peter's committee predicted him finishing  
Spring/Summer of 2017. Peter is expected to submit post-doctoral applica-  
48 tions in the fall of 2016.

Addition from Michael Foote: [Peter's] committee [is] quite pleased with your  
50 work and satisfied that you are on track to complete a dissertation that will be  
a real credit to CEB and the U of C.