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School of Biology
Dr Andy Gardner
Reader in Biology

7th July 2015

To Whom It May Concern

I am writing in support of **Fraser Embleton-Smith's** application for admission to your Masters programme.

Apart from a small number of lectures and classes, my only interaction with Fraser has been in conjunction with my supervision of his undergraduate project, which was on the topic of social evolution in viscous populations, during 2012-2013 in the Department of Zoology at the University of Oxford. So, I'm not able to comment on his overall academic ability.

Fraser contacted me with regards to the possibility of doing his undergraduate project in my lab, on a theoretical topic in social evolutionary biology. This willingness to undertake a challenging theoretical topic, with the understanding that this would involve a very steep learning curve in terms of gaining familiarity with state-of-the-art mathematical methodology, immediately set Fraser apart from most of his year group.

Fraser showed real commitment to learning and properly understanding the requisite methodology (including the mathematics of kin selection / adaptive dynamics and use of *Mathematica* software), and through a combination of close supervision and working on his own, he derived some very nice analytical predictions relating the evolutionary investment of individuals into helping behaviour as a function of patterns of dispersal modulated by environmental disturbances. These are novel results on a topic of genuine scientific interest and our plan is to prepare this work for publication. (My recent move to the University of St Andrews has delayed our preparing this for publication, but that is still very much on the agenda.)

Fraser is friendly and intelligent. He applies himself, and he responds well to comments and suggestions. Based on his project work, I believe he would be a diligent, hard-working MSc student, and a fun person to have on your course.

Yours sincerely,

Andy Gardner