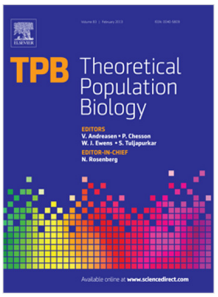
Accepted Manuscript



Harnessing uncertainty to approximate mechanistic models of interspecific interactions

Adam Thomas Clark, Claudia Neuhauser

PII: S0040-5809(17)30187-9
DOI: https://doi.org/10.1016/j.tpb.2018.05.002
Reference: YTPBI 2647

To appear in: *Theoretical Population Biology*

Received date : 11 November 2017

Please cite this article as: Clark A.T., Neuhauser C., Harnessing uncertainty to approximate mechanistic models of interspecific interactions. *Theoretical Population Biology* (2018), https://doi.org/10.1016/j.tpb.2018.05.002

Harnessing Uncertainty to Approximate Mechanistic Models of Interspecific Interactions

Revision 1: TPB_2017_136
Due: 8 June 2018
Running Head: Harnessing Uncertainty

Abstract Word Count: 163
Main Text Word Count: 5897
Number of References: 50
Number of Figures: 5

Key words: Lotka-Volterra competitive equations; process noise; model uncertainty; interspecific competition; model abstraction; interspecific tradeoff

Adam Thomas Clark[1,2,3,4*] and Claudia Neuhauser[1,5,6]

[*]*Corresponding author adam.tclark@gmail.com;* [1]*University of Minnesota, Dept. of Ecology, Evolution, and Behavior, 1987 Upper Buford Circle, Saint Paul, MN 55108, USA;* [2]*German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig, Synthesis Centre for Biodiversity Sciences (sDiv), Deutscher Platz 5e, 04103 Leipzig, Germany (current address);* [3]*Department of Physiological Diversity, Helmholtz Center for Environmental Research (UFZ), Permoserstrasse 15, Leipzig 04318, Germany;* [4]*Leipzig University, Ritterstrasse 26, 04109 Leipzig, Germany;* [5]*University of Minnesota, University of Minnesota Informatics Institute, Minneapolis, MN, 55455, USA;* [6]*Division of Research, University of Houston, Houston TX 77204 (current address).*