## Accepted Manuscript

Stationary moments, diffusion limits, and extinction times for logistic growth with random catastrophes

Brandon H. Schlomann

PII:S0022-5193(18)30299-6DOI:10.1016/j.jtbi.2018.06.007Reference:YJTBI 9502

To appear in:

Journal of Theoretical Biology

Received date:6 December 2017Revised date:22 May 2018Accepted date:5 June 2018

Please cite this article as: Brandon H. Schlomann, Stationary moments, diffusion limits, and extinction times for logistic growth with random catastrophes, *Journal of Theoretical Biology* (2018), doi: 10.1016/j.jtbi.2018.06.007

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



## Highlights

- New analytic results for a stochastic growth-catastrophe model are derived.
- A single, effective parameter largely controls population statistics.
- Traditional diffusion models are constructed as a limiting case.
- Random catastrophes pose higher extinction risk than continuous stochasticity.

Download English Version:

## https://daneshyari.com/en/article/8876556

Download Persian Version:

https://daneshyari.com/article/8876556

Daneshyari.com