RESEARCH

Physcraper: A Python package for continually updated phylogenetic trees using the Open Tree of Life

Luna L. Sanchez Reyes[1*], Martha Kandziora[1,2] and Emily Jane McTavish[1*]

*Correspondence:
sanchez.reyes.luna@gmail.com;
ejmctavish@ucmerced.edu
[1]School of Natural Sciences, University of California, Merced, USA
Full list of author information is available at the end of the article

Abstract

First part title: Text for this section.

Second part title: Text for this section.

Keywords: sample; article; author

Content

Text and results for this section, as per the individual journal's instructions for authors.

Section title

Text for this section...

Sub-heading for section

Text for this sub-heading...

Sub-sub heading for section

Text for this sub-sub-heading...

Sub-sub-sub heading for section Text for this sub-sub-sub-heading...

In this section we examine the growth rate of the mean of Z_0, Z_1 and Z_2. In addition, we examine a common modeling assumption and note the importance of considering the tails of the extinction time T_x in studies of escape dynamics. We will first consider the expected resistant population at vT_x for some $v > 0$, (and temporarily assume $\alpha = 0$)

$$E\big[Z_1(vT_x)\big] = \int_0^{v\wedge 1} Z_0(uT_x)\exp(\lambda_1)\,du.$$

If we assume that sensitive cells follow a deterministic decay $Z_0(t) = xe^{\lambda_0 t}$ and approximate their extinction time as $T_x \approx -\frac{1}{\lambda_0}\log x$, then we can heuristically estimate the expected value as

$$E\big[Z_1(vT_x)\big] = \frac{\mu}{r}\log x \int_0^{v\wedge 1} x^{1-u}x^{(\lambda_1/r)(v-u)}\,du. \tag{1}$$

Thus we observe that this expected value is finite for all $v > 0$ (also see [1, 2, 3, 4, 5, 6]).

Appendix

Text for this section...

Acknowledgements
Text for this section...

Funding
Text for this section...

Abbreviations
Text for this section...

Availability of data and materials
Text for this section...

Ethics approval and consent to participate
Text for this section...

Competing interests
The authors declare that they have no competing interests.

Consent for publication
Text for this section...

Authors' contributions
Text for this section ...

Authors' information
Text for this section...

Author details
[1]School of Natural Sciences, University of California, Merced, USA. [2]Department of Botany, Faculty of Science, Charles University, Prague , Czech Republic.

References

1. Koonin, E.V., Altschul, S.F., Bork, P.: Brca1 protein products: functional motifs. Nat. Genet. **13**, 266–267 (1996)
2. Jones, X.: Zeolites and synthetic mechanisms. In: Smith, Y. (ed.) Proceedings of the First National Conference on Porous Sieves: 27-30 June 1996; Baltimore, pp. 16–27 (1996)
3. Margulis, L.: Origin of Eukaryotic Cells. Yale University Press, New Haven (1970)
4. Schnepf, E.: From prey via endosymbiont to plastids: comparative studies in dinoflagellates. In: Lewin, R.A. (ed.) Origins of Plastids, 2nd edn., pp. 53–76. Chapman and Hall, New York (1993)
5. Kohavi, R.: Wrappers for performance enhancement and obvious decision graphs. PhD thesis, Stanford University, Computer Science Department (1995)
6. ISSN International Centre: The ISSN register (2006). http://www.issn.org Accessed Accessed 20 Feb 2007

Figures

Figure 1 Sample figure title

Figure 2 Sample figure title

Tables

Table 1 Sample table title. This is where the description of the table should go

	B1	B2	B3
A1	0.1	0.2	0.3
A2	...	..	.
A3	..	.	.

Additional Files

Additional file 1 — Sample additional file title
Additional file descriptions text (including details of how to view the file, if it is in a non-standard format or the file extension). This might refer to a multi-page table or a figure.

Additional file 2 — Sample additional file title
Additional file descriptions text.