

Errata

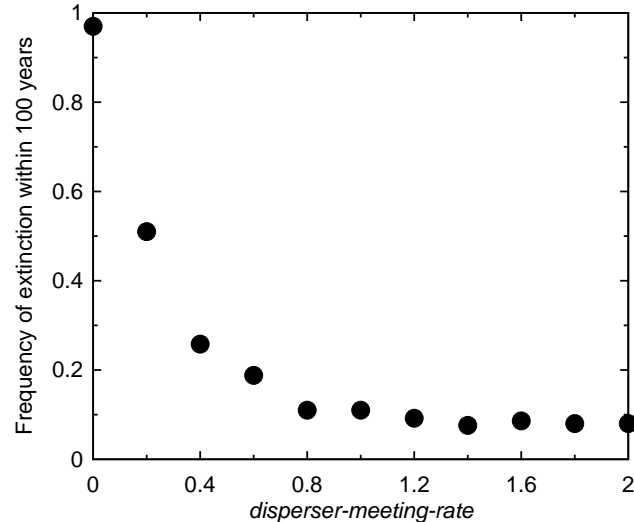
Agent-based and Individual-based Modeling: *A Practical Introduction*
Steven F. Railsback and Volker Grimm
Princeton University Press, 2012

Location	Correction	Date added
(Throughout)	Please see the information on characteristics of Version 5.0 of NetLogo not fully implemented in the book, on the “NetLogo Information” page of the book’s web site.	23 May 2013
Preface, page xiii Ch. 2, page 15	At first mention of NetLogo we should have cited: Wilensky, U. (1999). NetLogo. http://ccl.northwestern.edu/netlogo/ . Center for Connected Learning and Computer-Based Modeling, Northwestern University, Evanston, IL.	18 Oct 2011
Section 2.3, page 20	When the Check button is used here (after <code>setup</code> and <code>go</code> buttons have been added to the Interface but before the <code>go</code> procedure is written), it takes you to the Interface tab because the <code>go</code> button has an error: the procedure it calls— <code>go</code> —does not exist. This behavior will stop when the <code>go</code> procedure is added to the Code (Procedures) tab.	23 May 2013
Section 2.3, page 21	The first bullet on page 21 should read: <ul style="list-style-type: none">▪ Just as we created the <code>setup</code> procedure (with two lines saying <code>to setup</code> and <code>end</code>), write the “skeleton” of the <code>go</code> procedure.	4 June 2013
Section 5.4, page 68	Replace this statement: <pre>export-plot "Corridor width" word "Corridor-output-for-q-" q</pre> with this: <pre>export-plot "Corridor width" (word "Corridor-output-for-q-" q ".csv")</pre> The revised statement appends the file extension “.csv” to the file name created via the <code>word</code> primitive. Note that when <code>word</code> is used to concatenate more than two values together, it and all the values must be inside parentheses.	2 Nov 2011
Chapter 5, exercise 11, page 73	The parameter <i>SD</i> has a value of 10.0, not 1.0.	23 May 2013

Location	Correction	Date added
Section 6.3.7, example test procedure	Starting with version 6.0 of NetLogo, the <code>foreach</code> statement uses a different syntax, associated with the introduction of “anonymous procedures” (which have their own section of the NetLogo User Manual). In NetLogo 6.x, the code we provide for a <code>go-back</code> test procedure becomes: <pre>ask turtles [set color blue ; Make the return path a different color foreach path ; See "foreach": executes once for each ; patch on list, where next-patch is the ; patch currently being executed [next-patch -> set heading towards next-patch fd 1]]</pre>	13 Oct 2017
Section 6.3.10, Figure 6.4	The column labels in the very top row of the figure’s spreadsheet are wrong: what is labeled col. B should be col. A, the column labeled O should be N, etc.. In the figure caption, reference to col. N should be to the corrected col. M (which is currently labeled N); and references to col. M should be to the corrected col. N (currently labeled O).	22 Feb 2017
Section 6.5, page 91	Note that the “social network” of young people can potentially include other people below the marriage age of 16. Hence it is possible for a person less than 16 to be selected as a spouse and married.	23 May 2013
Section 9.3, page 119	The discussion of histograms mentions potential difficulties setting the x axis to a useful range, so all the bars are visible. One solution is to use the <code>set-plot-x-range</code> primitive. For example, add this statement: <code>set-plot-x-range (min [elevation] of turtles) (max [elevation] of turtles)</code> just before the statement: <code>histogram [elevation] of turtles</code> . Or, if the histogram should always start at zero: <code>set-plot-x-range 0 max [elevation] of turtles</code> . (You may need to use primitives such as <code>ceiling</code> and <code>precision</code> to convert the inputs to <code>set-plot-x-range</code> to nice round numbers.)	17 Nov 2011
Section 10.4, page 140	The first statement in the first block of code near the top of p. 140 should be: <pre>let potential-destinations ...</pre> instead of <code>set potential-destinations ...</code>	17 Nov 2013
Section 13.6, page 180	Starting with version 5.0 of NetLogo, the Programming Guide no longer says that putting items on a list using <code>fput</code> is better (faster) than putting them on the end of the list using <code>lput</code> . NetLogo’s lists were reprogrammed to	23 May 2013

Location	Correction	Date added
	eliminate this difference and improve the speed of adding and accessing list items.	
Chapter 13, Exercise 1	This exercise can be more clearly defined. Assume that “the number of sales that a telemarketer must make to stay in business” refers to the minimum number of sales needed to keep from immediately going out of business when the telemarketer grew on the previous time step.	11 Nov 2011
Section 14.2.3, page 187	The foreach statement in the example code for executing turtles in size order is not compatible with NetLogo versions 6.0 and higher. For version 6.0.2, the statement should be: <pre>foreach sort-on [size] turtles [next-turtle -> ask next-turtle [do-sales]]</pre>	13 Oct 2017
Section 14.2.5, page 189	This code statement: <pre>while [count patches with [trigger-time > ticks] > 0]</pre> should of course be: <pre>while [any? patches with [trigger-time > ticks]]</pre> (This Mousetrap model also has a small flaw: it does not represent the possibility that a trap scheduled to be triggered by one ball could be triggered sooner by a different ball that is launched later but has a shorter trajectory.)	23 May 2013
Section 16.4.1, page 213	The description of social status is not clear: it assumes ages are real numbers instead of integers. It should read: <p><i>The social status of a dog can be (a) “pup,” meaning its age is less than one; (b) “yearling,” with age of 1 year; (c) “subordinate,” meaning age is 2 or greater but the dog is not an alpha; (d) “alpha,” the dominant individual of its sex in a pack; and (e) “disperser,” meaning the dog currently belongs to a disperser group, not a pack.</i></p>	6 October 2014
Section 16.4.1, page 213	The first bullet of the description of pack formation should start “Determine how many times the <i>disperser group</i> meets another...”	10 August 2015
Section 16.4.1, Figure 16.1	Be aware that this figure does not depict the logistic function parameters in the Wild Dog model description. The figure shows a probability of 0.5 when the number of dogs in the population is 67% of carrying capacity (40 out of 60), while the model description says the probability is 0.5 when the population is 50% of carrying capacity. To match the model description, the figure’s curve should go through X = 30, Y = 0.5.	10 August 2015

Location	Correction	Date added
Section 16.4.2, page 217	<p>Setting the dog's variable <code>my-pack</code> to the pack that created it (via the statement <code>set my-pack myself</code>) can cause a subtle error in the pack formation submodel. Disperser groups cannot form a pack with other disperser groups that originated in the same pack. In most people's code, disperser groups use the value of <code>my-pack</code> from one of their dogs to determine which pack they came from. The error can occur when two disperser groups came from packs that have since died; when a disperser dog's pack dies, NetLogo automatically changes its value of <code>my-pack</code> to the keyword <code>nobody</code>. Because disperser groups cannot form a new pack with another group that has the same value of <code>my-pack</code>, groups whose packs have died cannot combine with each other, even if they really came from two different packs.</p> <p>A solution is to set <code>my-pack</code> to the unique who number of the dog's pack. Instead of <code>set my-pack myself</code>, use <code>set my-pack [who] of myself</code>. Use a similar statement when new dogs are created in the reproduction submodel. Then change the statements where a dog's value of <code>my-pack</code> is compared to a pack, from (for example) :</p> <pre>set pack-members dogs with [my-pack = myself] to: set pack-members dogs with [my-pack = [who] of myself]</pre> <p>And because <code>my-pack</code> now contains a who number instead of a pack, one of the last lines in the <code>create-disperser-group-from</code> code (page 22) needs to be changed, from:</p> <pre>ask dogs-former-pack [set pack-members ... to: ask pack dogs-former-pack [set pack-members ...]</pre> <p>This error appears to have little effect on model results.</p>	10 August 2015
Section 16.4.3, Figure 16.2	Figure 16.2 should look like this:	

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	 <table border="1" data-bbox="443 296 1073 814"> <caption>Data points from the scatter plot</caption> <thead> <tr> <th>disperser-meeting-rate</th> <th>Frequency of extinction within 100 years</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>0.95</td></tr> <tr><td>0.1</td><td>0.50</td></tr> <tr><td>0.4</td><td>0.25</td></tr> <tr><td>0.6</td><td>0.18</td></tr> <tr><td>0.8</td><td>0.10</td></tr> <tr><td>1.0</td><td>0.10</td></tr> <tr><td>1.2</td><td>0.08</td></tr> <tr><td>1.4</td><td>0.07</td></tr> <tr><td>1.6</td><td>0.08</td></tr> <tr><td>1.8</td><td>0.07</td></tr> <tr><td>2.0</td><td>0.07</td></tr> </tbody> </table>	disperser-meeting-rate	Frequency of extinction within 100 years	0.0	0.95	0.1	0.50	0.4	0.25	0.6	0.18	0.8	0.10	1.0	0.10	1.2	0.08	1.4	0.07	1.6	0.08	1.8	0.07	2.0	0.07	
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Section 20.5, page 264	The first bullet of the description of the simple trait for how subordinate adults decide whether to scout should say “If there are no <i>older</i> subordinate adults” instead of “other subordinate adults”.	25 Oct 2011																								
Section 20.7, exercise 2	The model equation has parentheses in the wrong place. It should be: $N_t = N_{t-1} + rN_{t-1}[1 - (N_{t-1}/K)] - H_{t-1}$	16 Nov 2014																								
Section 24.6, page 314	The statement “You cannot just look up how the primitives work, because their exact algorithms and code are not public” is no longer true. The code for NetLogo primitives can be examined (by very knowledgeable users) at its repository: https://github.com/NetLogo/NetLogo .	17 Apr 2014																								
Section 24.7	We no longer believe that many modelers will “outgrow” NetLogo: our recent experience has been that NetLogo is suitable for very large model. In fact NetLogo is usually much more suitable than home-made code in basic programming languages and less-sophisticated ABM platforms. The reasons, and methods for using NetLogo for large models, are addressed at: www.railsback-grimm-abm-book.com/JASSS-models.html .	13 Oct 2017																								