

Article

6 Assembly history dictates ecosystem functioning: evidence from wood decomposer communities.

Fukami T, Dickie IA, ..., Buchanan PK, Allen RB
 Ecol Lett. 2010 Jun; 13(6):675-84

[Abstract](#) | [Full Text](#) | [Related Articles](#) | [Citations on Google Scholar](#) | [Order Article](#)

Relevant Sections

Export Email Add to MyF1000

Post to

Comments

Only users with full subscription access can leave comments.
 No comments yet.

Evaluations

Evaluated by [Luke McCormack](#) and [Erica Smithwick](#) NEW EVALUATION

The most powerful science can often be done using the simplest design. In this paper, Fukami et al. utilize a simple experimental design to test whether the order of colonization by multiple species impacts ecosystem function.

Using a suite of 10 fungal species known as common wood decomposers in forest systems, this paper showed that not only did the order of colonization by the 10 species impact the total species richness throughout the system but it also had a tremendous effect on the rate of decomposition observed in a wooden disk. Differences in decomposition were shown in several ways (total biomass lost, N:C ratio, N content, and respiration rate) to complete a convincing argument that a natural 'order of operations' matters in ecological systems. The use of this system was particularly elegant as it may have immediate relevance to actual processes in the field. Wood resources available for decomposition in forest systems are constantly being replenished by way of breaking branches or fallen/dead trees. Apparently, which species colonize first may have longer term impacts for the turnover of nutrients and carbon stored in the wood.

The results discussed in this paper are certainly not translatable to all systems. In fact, they may only be relevant to a select few. However, this simple experiment adds plenty of interesting information to the discussions of community structure, importance of dispersal and colonization, and competition in ecology.

The results discussed in this paper are certainly not translatable to all systems. In fact, they may only be relevant to a select few. However, this simple experiment adds plenty of interesting information to the discussions of community structure, importance of dispersal and colonization, and competition in ecology.

Competing interests: None declared

Cite this evaluation

McCormack L, Smithwick E: "The most powerful science can often be done using the simplest design. In this paper..." Evaluation of: [Fukami T et al. Assembly history dictates ecosystem functioning: evidence from wood decomposer communities. Ecol Lett. 2010 Jun; 13(6):675-84; doi: 10.1111/j.1461-0248.2010.01465.x]. Faculty of 1000, 25 Jan 2011. F1000.com/7772959

Short form
 McCormack L, Smithwick E: 2011. F1000.com/7772959

Evaluated by:
[Luke McCormack](#) and
[Erica Smithwick](#)
 The Pennsylvania State
 University, USA
[Ecology](#)
 25 Jan 2011

**Rating 6
 Recommended**

Classification Key Changes Clinical Practice Novel Drug Target Technique Clinical Trial Review

Cite this page

Faculty of 1000

Faculty of 1000 Ltd

Science Navigation Group
 Middlesex House
 34-42 Cleveland Street
 London W1T 4LB UK

[Home](#)

[About](#)

[FAQs](#)

[Press Office](#)

[Contact F1000](#)

[Rankings](#)

[Faculty](#)

[The Scientist](#)

[F1000 Reports](#)

[Evaluations](#)

[Register](#)

[Subscribe](#)

[Sponsorship](#)

[Affiliates](#)

[Science Navigation Group](#)

Follow F1000:



Memory, sex and stroke: F1000 posters, 2010 in review <http://bit.ly/e4ZHfd>
[#naturallyselected](#) ^rpg
 about 21 hours ago