

# Evolutionary Change And Heterochrony

Home > Geological Magazine > Volume 133 > Issue 04 > K. J. McNamara (ed.) 1995. Evolutionary Change and Heterochrony. xii + 286 pp. Chichester, New York, Brisbane [http://www.journals.cambridge.org/abstract\\_S0016756800007664](http://www.journals.cambridge.org/abstract_S0016756800007664)

Background Heterochrony, evolutionary change in developmental rate or relative timing of developmental events, plays a key role in the transformation of morphology in

[http://digitalcommons.uri.edu/cgi/viewcontent.cgi?article=1052&context=bio\\_facpubs](http://digitalcommons.uri.edu/cgi/viewcontent.cgi?article=1052&context=bio_facpubs)

Abstract: Development is the usual arena of evolutionary change in morphology, and much of evolution obviously depends on it. It is very common, however, for

<http://www.santafe.edu/research/working-papers/abstract/e9a66fc372de8dc076f0264bbd99bdf/>

This chapter discusses heterochrony, which is an ancestor descendant difference in the relative timing of events during development. This phylogenetic pattern

<http://www.sciencedirect.com/science/article/pii/B9780127309354500067>

Gastropod heterochrony model. Heterochrony in helicoid spiral cones: Consequently, heterochrony applied to such forms cannot result in evolutionary change in shape.

<http://palaeo-electronica.org/content/2015/1120-gastropod-heterochrony-model>

Evolutionary and experimental change in egg volume, heterochrony of larval body and juvenile rudiment, and evolutionary reversibility in pluteus form

[http://www.sfu.ca/biology/wildberg//papers/BertrametalEvol\\_Devel09.pdf](http://www.sfu.ca/biology/wildberg//papers/BertrametalEvol_Devel09.pdf)

Understanding the link between ontogeny (development) and phylogeny (evolution) remains a key aim of biology. Heterochrony, the altered timing of developmental events

<http://rspb.royalsocietypublishing.org/content/280/1769/20131479>

Evolutionary Change and Heterochrony. John Wiley and Sons, Chichester, pp. 286, Journal of Evolutionary Biology, 9: 1034-1036. doi: 10.1046/j.1420-9101.1996

<http://onlinelibrary.wiley.com/doi/10.1046/j.1420-9101.1996.9061034.x/abstract>

Beyond Heterochrony: The Evolution of Development. Miriam L. Zelditch, ed. Wiley-Liss, New York, 2001. 371 pp., illus. \$99.95 (ISBN 0471379735 cloth).

<http://bioscience.oxfordjournals.org/content/52/10/944.full>

Evolutionary developmental biology (evolution of development or informally, evo-devo) is a field of biology that compares the developmental processes of different

[http://en.wikipedia.org/wiki/Evolutionary\\_developmental\\_biology](http://en.wikipedia.org/wiki/Evolutionary_developmental_biology)

Chapter 4 Is Heterochrony Still an Effective Paradigm for Contemporary Studies of Evo-devo? James Hanken 4.1 Introduction If there is one topic that can be most

<http://www.oeb.harvard.edu/faculty/hanken/documents/Hanken.2014.Heterochrony.pdf>

Evolutionary modifications of ontogeny: heterochrony and beyond Mark Webster and Miriam Leah Zelditch Evolutionary change and heterochrony. Wiley,  
<http://www.jstor.org/pss/4096940>

A heterochronic change is, in general, a change in the rate or timing of development of some cell lines in the body relative to others. A mutation that alters the  
<http://www.blackwellpublishing.com/ridley/a-z/Heterochrony.asp>  
Intraspecific heterochrony and life history evolution: Decoupling somatic and sexual development in a facultatively paedomorphic salamander  
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC20432/>

Recent analyses of the fossil record have revealed that heterochrony has played a significant role in the evolution of most marine invertebrate groups. Recognit  
<http://www.sciencedirect.com/science/article/pii/S0169534788900365>

This has resulted in a situation whereby almost all morphological evolution is attributed to heterochrony, and the remainder is modes of ontogenetic change,  
<http://paleobiol.geoscienceworld.org/content/31/3/354.short>

Evo-devo: Explaining major evolutionary change. Changes in the genes controlling development can have major effects on the morphology of the adult organism.  
[http://evolution.berkeley.edu/evolibrary/article/evodevo\\_04](http://evolution.berkeley.edu/evolibrary/article/evodevo_04)

The connection between development and evolution has become the focus of an increasing amount of research in recent years, and heterochrony has long been a key  
<http://journals.cambridge.org/action/displayAbstract?aid=681>

USING HETEROCHRONY TO DETECT MODULARITY IN THE EVOLUTION OF STEM heterochrony, evolutionary change in the timing of developmental events.  
<http://www.explorelifeonearth.org/people/OlsonRosell2006.pdf>

Evolutionary change and heterochrony. Added by Laurie Godfrey. potential certification reach. To share this paper with the field, you must first certify it.  
[http://www.academia.edu/3980196/Evolutionary\\_change\\_and\\_heterochrony](http://www.academia.edu/3980196/Evolutionary_change_and_heterochrony)

Heterochrony in dinosaur evolution. Added by John Long. potential certification reach. Journal Name: Evolutionary change and heterochrony Publication Date: 1995.  
[http://www.academia.edu/4012817/Heterochrony\\_in\\_dinosaur\\_evolution](http://www.academia.edu/4012817/Heterochrony_in_dinosaur_evolution)

Heterochrony can be defined as change to the timing or rate of development relative to the ancestor. Because organisms generally change in shape as well as increase  
<http://link.springer.com/article/10.1007/s12052-012-0420-3>

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<http://www.worldcat.org/title/evolutionary-change-and-heterochrony/oclc/32133316>

Heterochrony has become a central organizing concept relating development and evolution. Unfortunately, the standard definition of heterochrony  
<http://www.pnas.org/content/94/3/907.short>