

Living dinosaurs: The evolutionary history of modern birds

April 5 2011

"Even the wide interval between birds and reptiles has been shown by the naturalist to be partially bridged over in the most unexpected manner, on the one hand, by the ostrich and extinct Archeopteryx, and on the other hand, by the Compsognathus, one of the Dinosaurians". - Charles Darwin, Origin of the Species, 1872.

When Darwin penned these words the recognition by Thomas Huxley of a transitional fossil appeared to confirm a remarkable, but straightforward evolutionary story; that modern birds evolved from ancient [dinosaurs](#). Yet in the centuries following this discovery the rise of modern birds remains greatly debated and now, in their new title Living Dinosaurs: The Evolutionary History of Modern Birds , researchers Gareth Dyke and Gary Kaiser set out to unite ornithologists and paleontologists to form a modern understanding of the evolution of birds at the beginning of the 21st century.

"When Huxley discovered what was believed to be a 140-million-year-old fossil, bridging the gap between dinosaurs and birds, it was hailed as one of the great triumphs of early evolutionary history," said Dyke. "Nothing in biology is that straight forward and since the 1920's this consensus has been challenged causing a debate of such length and intensity that students studying fossil organisms have been largely isolated from those studying [living organisms](#)."

Living Dinosaurs: The [Evolutionary History](#) of Modern Birds , aims to bring the two fields of ornithology and paleontology together to present

the current understanding of avian evolution. Each chapter presents a current point of view, placed into context with discussion of the direction of future research.

The book focuses on evolutionary aspects of function and ecology, rather than technical descriptions of fossils and begins with a review of the early ancestry of birds and the conditions under which they diversified in the Cretaceous era. The book continues by providing ornithologists with an overview of the [fossil record](#), before focusing on the development of features that have contributed to the success of living species.

"Living Dinosaurs offers a snapshot of our current understanding of the origin and [evolution](#) of birds. After slumbering for more than a century avian paleontology has been awakened by startling new discoveries on almost every continent," said Kaiser. "Old controversies have been swept away and replaced by new and more difficult questions, such as how did birds learn to fly and how did they survive the great extinction that ended the Mesozoic Era?"

"Answers to these questions may help us understand how the different kinds of living [birds](#) are related to one another and how they evolved into their current niches. More importantly, they may help us understand what we need to do to help them survive the dramatic impact of human activity on the planet."

Provided by Wiley

Citation: Living dinosaurs: The evolutionary history of modern birds (2011, April 5) retrieved 19 April 2024 from <https://phys.org/news/2011-04-dinosaurs-evolutionary-history-modern-birds.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.