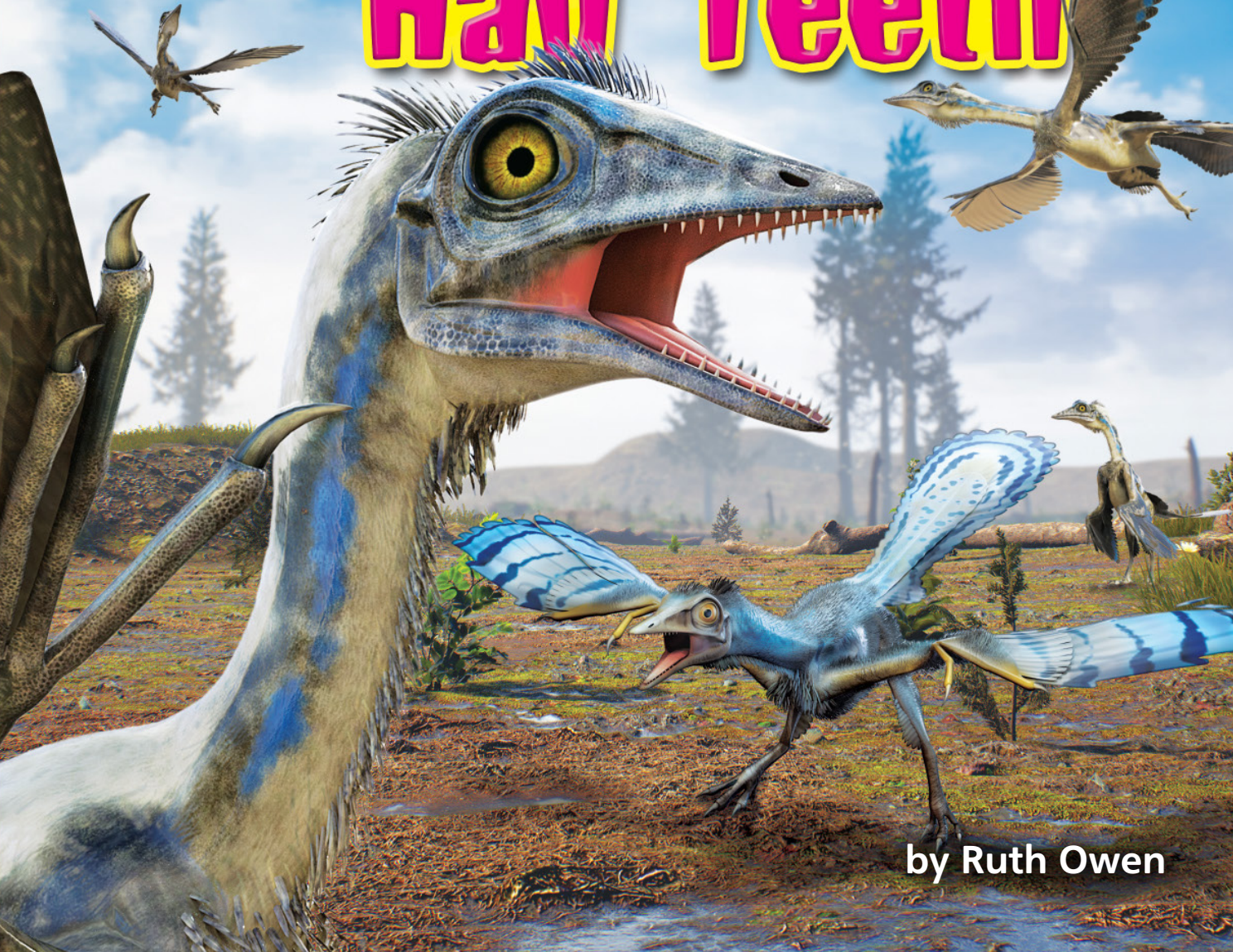




When Birds Had Teeth



by Ruth Owen

[Intentionally Left Blank]



When Birds Had Teeth

by Ruth Owen

Consultant:

Dougal Dixon, Paleontologist

Member of the Society of Vertebrate Paleontology
United Kingdom

BEARPORT
PUBLISHING

New York, New York

Credits

Cover, © Herschel Hoffmeyer/Shutterstock; 2–3, © Warpaint/Shutterstock; 4–5, © Herschel Hoffmeyer and © Kirbyzz/Shutterstock; 6, © Herschel Hoffmeyer/Shutterstock and © Catmando/Shutterstock; 7T, © MikhailSh/Shutterstock; 7B, © Marcin Perkowski/Shutterstock; 8, © Herschel Hoffmeyer/Shutterstock; 9T, © John Sibbick/Science Photo Library; 9B, © Zach Tirrell/Creative Commons; 10TL, © Phil Degginger/Carnegie Museum/Alamy; 10TR, © Gabbro/Alamy; 10B, © H. Zell/Creative Commons; 11, © James Kuether; 12, © Jaime Chirinos/Science Photo Library; 13, © Zheng et al; 14–15, © Kostyantyn Ivanyshev/Shutterstock; 15R, © Daderot/Creative Commons; 16, © Mohamad Haghani/Alamy and © Dmitry Naumov/Shutterstock; 17, © O. Louis Mazzatenta/Getty Images; 18, © solarseven/Shutterstock; 19, © Phillip Krzeminski; 20, © Roger Clark ARPS/Shutterstock; 21L, © Super Prin/Shutterstock; 21BL, © Stockphoto mania/Shutterstock; 21BR, © Narupon Nimpai boon/Shutterstock; 21R, © buteo/Shutterstock; 22T, © Andrea Danti/Shutterstock; 22C, © Elenarts/Shutterstock and © Phil West/Shutterstock; 22B, © Nor Gal/Shutterstock; 23T, © SABPICS/Shutterstock; 23C, © Akkharat Jarusilawong/Shutterstock; 23B, © Linda Bucklin/Shutterstock.

Publisher: Kenn Goin

Senior Editor: Joyce Tavalacci

Creative Director: Spencer Brinker

Image Researcher: Ruth Owen Books

Library of Congress Cataloging-in-Publication Data

Names: Owen, Ruth, 1967– author.

Title: When birds had teeth / by Ruth Owen.

Description: New York, New York : Bearport Publishing, [2019] | Series: The dino-sphere | Includes bibliographical references and index.

Identifiers: LCCN 2018053521 (print) | LCCN 2018055216 (ebook) | ISBN 9781642802573 (Ebook) | ISBN 9781642801880 (library)

Subjects: LCSH: Dinosaurs—Flight—Juvenile literature. | Birds, Fossil—Juvenile literature. | Birds—Evolution—Juvenile literature.

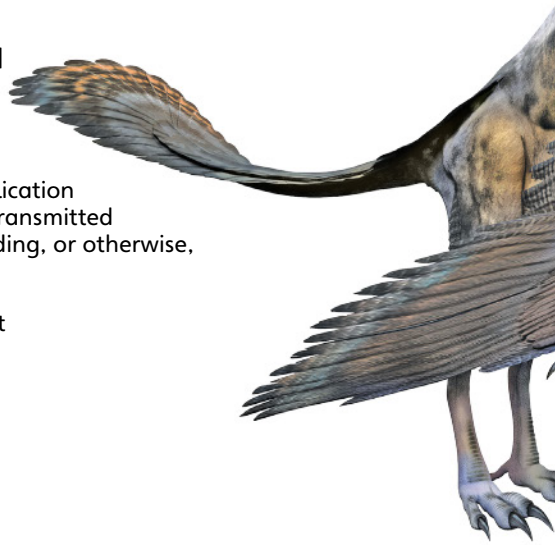
Classification: LCC QE861.6.F45 (ebook) | LCC QE861.6.F45 O94 2019 (print) | DDC 567.918—dc23

LC record available at <https://lccn.loc.gov/2018053521>

Copyright © 2019 Ruby Tuesday Books. Published in the United States by Bearport Publishing Company, Inc. All rights reserved. No part of this publication may be reproduced in whole or in part, stored in any retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without written permission from the publisher.

For more information, write to Bearport Publishing Company, Inc., 45 West 21st Street, Suite 3B, New York, New York 10010. Printed in the United States of America.

10 9 8 7 6 5 4 3 2 1



Contents

Crunch Time!	4
A Bird with Teeth	6
Bird or Dinosaur?	8
An Amazing Discovery	10
Lots of Birds	12
Tiny Wings	14
Beaked Bird	16
Asteroid Strike!	18
Thousands of Birds	20
Glossary	22
Index	24
Read More	24
Learn More Online	24
About the Author	24



Crunch Time!

A hungry bird grabs a dragonfly in its jaws.

Crunch! It bites the insect with its sharp teeth.

The bird is called *Archaeopteryx*.

It lived 150 million years ago in the time of the dinosaurs!



The name *Archaeopteryx* means "old wing."

A digital illustration of an Archaeopteryx in a lush, green forest. The creature is shown in profile, facing left, with its long, feathered wings spread out. Its body is covered in dark, scaly skin with some lighter patches. The background features tall, thin trees and a grassy field with small white flowers. A yellow callout box with a curved arrow points to the creature's back.

Archaeopteryx
(ahr-kee-OP-tuh-riks)

A Bird with Teeth

Scientists discovered *Archaeopteryx* fossils in 1861.

The prehistoric bird was the size of a large crow.



It had three clawed fingers on each wing.

It also had sharp teeth and a long, bony tail.

Archaeopteryx fossil

clawed fingers

long,
bony tail

Today's birds have beaks
and no teeth. They also
don't have clawed fingers
or long, bony tails.

Index

- | | | |
|---------------------------------------|--------------------------------|-------------------------|
| <i>Archaeopteryx</i> 4–5,
6–7, 8–9 | <i>Compsognathus</i> 9 | tails 6–7, 17 |
| asteroids 18–19, 20 | <i>Confuciusornis</i> 16–17 | teeth 4, 6–7, 8, 17, 21 |
| beaks 7, 16–17 | dinosaurs 4, 8–9, 10–11, 19 | <i>Velociraptor</i> 11 |
| <i>Caudipteryx</i> 14–15 | fossils 6–7, 9, 10, 13, 15, 17 | wings 4, 6–7, 14 |
| | <i>Patagopteryx</i> 12 | <i>Yanornis</i> 13 |

Read More

Rissman, Rebecca. *Velociraptor and Other Raptors (The Need-to-Know Facts)*. North Mankato, MN: Capstone (2016).

Shone, Rob. *Archaeopteryx: The First Bird (Graphic Dinosaurs)*. New York: Rosen (2012).

Learn More Online

To learn more about prehistoric birds, visit
www.bearportpublishing.com/dinosphere

About the Author

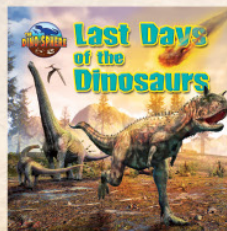
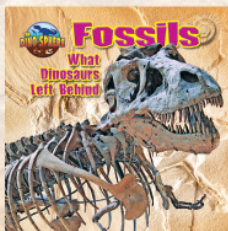
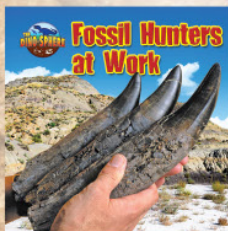
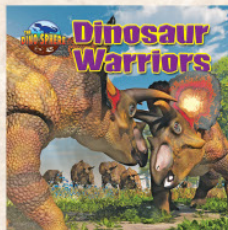
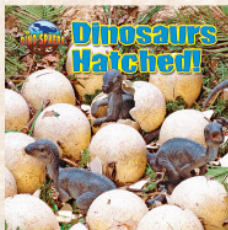
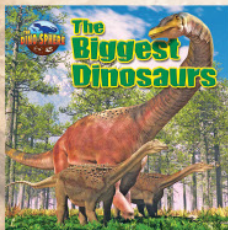
Ruth Owen has been developing and writing children's books for more than ten years. She first discovered dinosaurs when she was four years old—and loves them as much today as she did then!

[Intentionally Left Blank]



Take a step back in time to explore
all things dinosaur—from fossil
hunters to baby dinosaurs!

Read all the books in this series:



BEARPORT
PUBLISHING

www.bearportpublishing.com



ISBN-13: 978-1-64280-188-0



9 0000

9 781642 801880