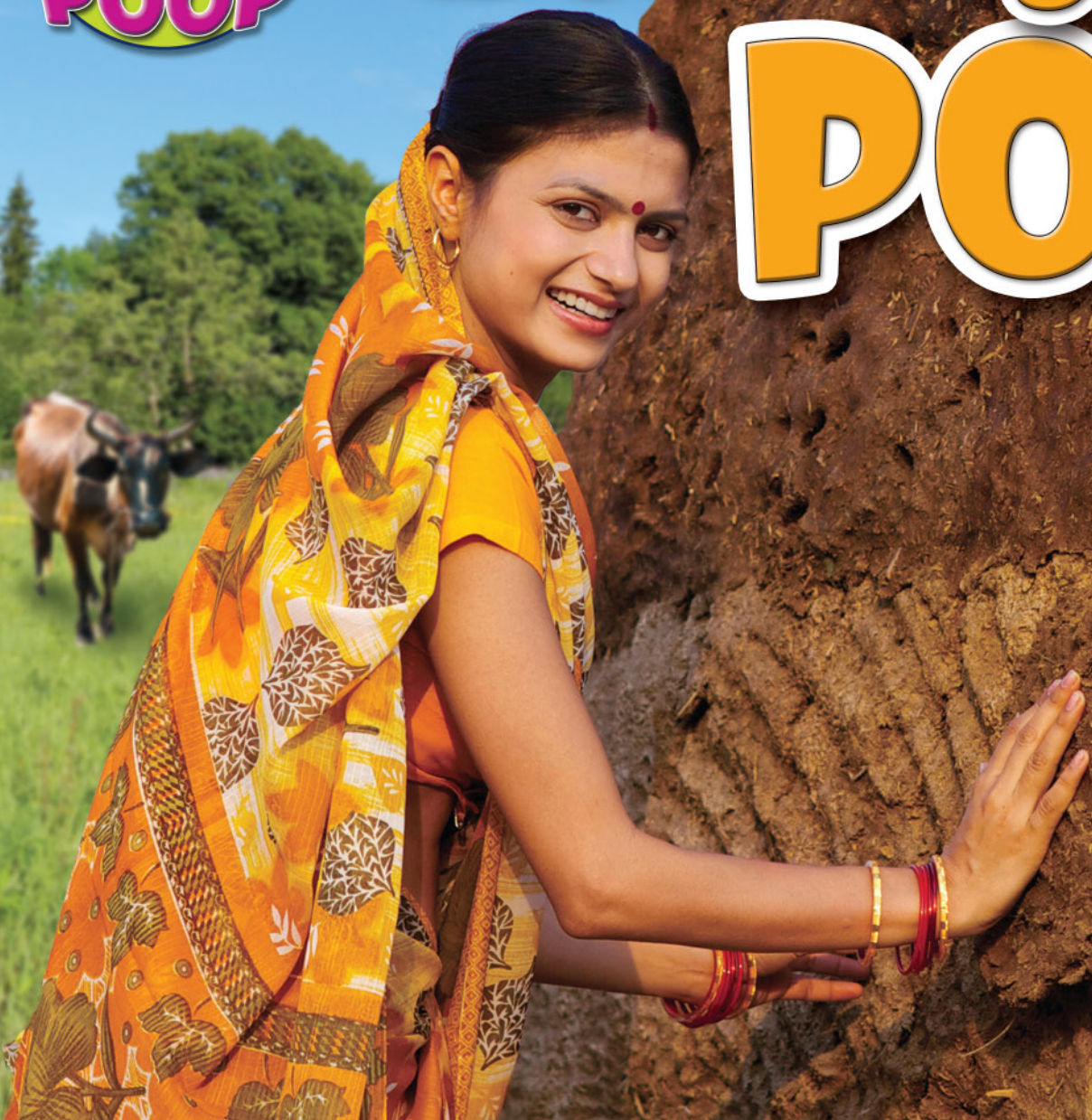




# Building with POOP



by Ellen Lawrence

**[Intentionally Left Blank]**





# Building with **POOP**

by Ellen Lawrence

**Consultant:**

**Garret Suen, Assistant Professor**  
Department of Bacteriology  
University of Wisconsin  
Madison, Wisconsin

**BEARPORT**  
PUBLISHING

New York, New York

## Credits

Cover, © SIBSA Digital Pvt. Ltd./Alamy, © Jacky Serko/Shutterstock, and © Jaroslaw Saternus/Shutterstock; 4, © aDam Wildlife/Shutterstock; 5, © Hemis/Alamy; 6, © Tim Plowden/Alamy; 7L, © Malcolm Schuyt/Alamy; 7R, © Tim Laman/Nature Picture Library; 8T, © Sari Oneal/Shutterstock; 8B, © Kelly Teague/Creative Commons; 9, © Michael Lewis/Getty Images; 10, © Craig K. Lorenz/Science Source/Ardea; 11, © Roberta Olenick/Getty Images; 12, © 7th Son Studio/Shutterstock; 13, © You Touch Pix of EuToch/Shutterstock; 14T, © rootstock/Shutterstock; 14B, © Viacheslav Rubel/Shutterstock; 15, © Drew Buckley/Alamy; 16T, © Paulette Sinclair/Alamy; 16B, © PhotoStock-Israel/Alamy; 17, © Gary Cook/Alamy; 18, © Ann Schunior; 19, © Joerg Boethling/Alamy; 20, © talyonen/Shutterstock and © Pepsco Studio/Shutterstock; 21T, © Ruslan Shaforostov/Shutterstock; 21B, © David McNew/Getty Images; 22L, © holbox/Shutterstock; 22 (Boxed): TL © andersphoto/Shutterstock, TC © Olhastock/Shutterstock, TR © design56/Shutterstock, ML © Andrey Arkusha/Shutterstock, MR © FabrikaSimf/Shutterstock, BL © Vitaly Korovin/Shutterstock, BC © nito/Shutterstock, and BR © pingphoto 17/Shutterstock; 23TL, © meunierd/Shutterstock; 23TC, © Mauricio S. Ferreira/Shutterstock; 23TR, © Simon Shim/Shutterstock; 23BL, © birdbyb stockphoto/Shutterstock; 23BC, © spwidoff/Shutterstock; 23BR, © Andrii Zhezhera/Shutterstock.

Publisher: Kenn Goin

Senior Editor: Joyce Tavalacci

Creative Director: Spencer Brinker

Photo Researcher: Ruth Owen Books

## Library of Congress Cataloging-in-Publication Data

Names: Lawrence, Ellen, 1967– author.

Title: Building with poop / by Ellen Lawrence.

Description: New York, New York : Bearport Publishing, [2018] | Series: The scoop on poop | Audience: Ages 5–8. | Includes bibliographical references and index.

Identifiers: LCCN 2017017300 (print) | LCCN 2017025659 (ebook) |

ISBN 9781684023011 (ebook) | ISBN 9781684022472 (library)

Subjects: LCSH: Animals—Habitations—Juvenile literature. | Animal droppings—Juvenile literature. | Animal behavior—Juvenile literature. | Building materials—Juvenile literature. | Dwellings—Juvenile literature.

Classification: LCC QL756 (ebook) | LCC QL756 .L39 2018 (print) | DDC 591.56/4—dc23

LC record available at <https://lccn.loc.gov/2017017300>

Copyright © 2018 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

|                             |    |
|-----------------------------|----|
| A Door of Droppings.....    | 4  |
| Poop Protection.....        | 6  |
| A Wall of Waste.....        | 8  |
| Home Improvements .....     | 10 |
| Tiny Termite Tunnels.....   | 12 |
| Ancient Dung Houses.....    | 14 |
| Homes in a Hurry.....       | 16 |
| Decorating Dung.....        | 18 |
| From Diapers to Roofs ..... | 20 |
| Science Lab .....           | 22 |
| Science Words .....         | 23 |
| Index .....                 | 24 |
| Read More.....              | 24 |
| Learn More Online .....     | 24 |
| About the Author .....      | 24 |



# A Door of Droppings

In India, a pair of hornbills finds a large hole in a tree trunk to use as a nest.

The female bird climbs inside and gets ready to lay some eggs.

How will the hornbills keep their chicks safe from **predators**?

The male brings the female mud in his beak, and she mixes it with her own poop.

Then she blocks the hole with the poopey blend to keep out enemies!



a hornbill



A male hornbill is perched on a tree trunk. It has a large, yellow and red bill with a small green fruit in its beak. The bird has dark blue-black feathers on its back and wings, and a yellow throat and breast. An arrow points from the text 'male hornbill' to the bird's head. Another arrow points from the text 'nest hole' to a dark opening in the tree bark. A cloud-shaped text box explains the nesting process.

male  
hornbill

nest hole

Once the hole is blocked, the female can't leave the nest. The male collects fruit, insects, and other food. Then he passes it to her through a small slit.



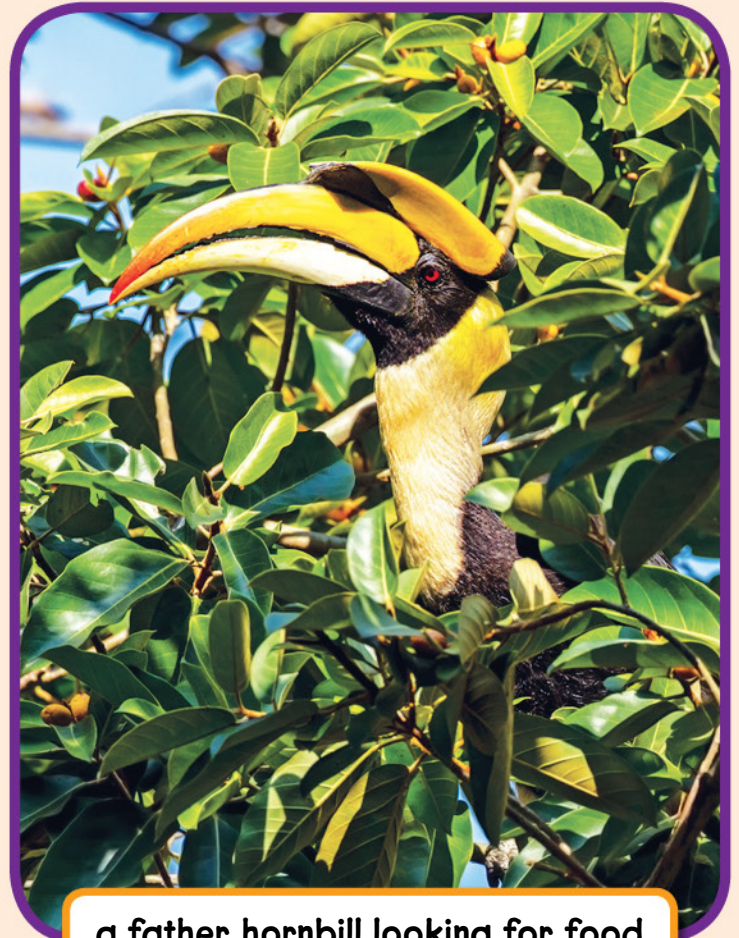
# Poop Protection

Safe behind a wall of mud and droppings, the hornbill lays her eggs.

Once the chicks hatch, the father hornbill brings food for the whole family.

After about six weeks, the female leaves the nest to help the male find food for the growing chicks.

She breaks through the hard poopy wall with her huge beak.



a father hornbill looking for food



hornbill nest hole

slit

mud and  
poop

Once the mother bird leaves the nest, she blocks up the hole again to protect her babies. When the chicks are big enough to leave the nest, they peck at the muddy wall to free themselves.

a mother hornbill and her chick inside the nest hole