

# Animal Mouths



By Mary Holland

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What are some things we can learn about animals from the shape of their mouths, beaks, or bills? What can we infer about animals with sharp teeth compared to large, flat teeth? Are there any animals that don't have mouths? In this second book of her "Animal Anatomy and Adaptation" series, award-winning nature photographer and environmental educator Mary Holland shares fascinating animal mouths with readers of all ages.

Animals in this book include: American bittern, American goldfinch, American kestrel, brown creeper, common loon, coyote, dogbane beetle, evening grosbeak, gray squirrel, great blue heron, great egret, human, long-tailed weasel, luna moth, milbert's tortoiseshell, milk snake, monarch, moose, muskrat, opossum, porcupine, raccoon, red fox, red-shouldered hawk, red squirrel, robber fly, ruby-throated hummingbird, snapping turtle, spring peeper, and yellow warbler.

It's so much more than a picture book . . . this book is specifically designed to be both a fun-to-read story and a launch pad for discussions and learning. We encourage adults to do the activities with the young children in their lives both at home and in the classroom. Free online resources and support at [www.ArbordalePublishing.com](http://www.ArbordalePublishing.com) include:

- For Creative Minds as seen in the book (in English & Spanish):
  - ° Mouths: Other Uses
  - ° Mammal Teeth
  - ° Bird Beaks
  - ° Glossary
- Teaching Activities (to do at home or school):
  - ° Reading Questions
  - ° Math
  - ° Language Arts
  - ° Geography
  - ° Science
- Interactive Quizzes: Reading Comprehension, For Creative Minds, and Math Word Problems
- English and Spanish Audiobooks
- Related Websites
- Aligned to State Standards, Common Core & NGSS
- Accelerated Reader and Reading Counts! Quizzes
- Lexile and Fountas & Pinnell Reading Levels

eBooks with Auto-Flip, Auto-Read, and selectable English and Spanish text and audio are available for purchase online.

Thanks to Bill Creasey, Chief Naturalist for the Cincinnati Nature Center, for reviewing the accuracy of the information in this book.

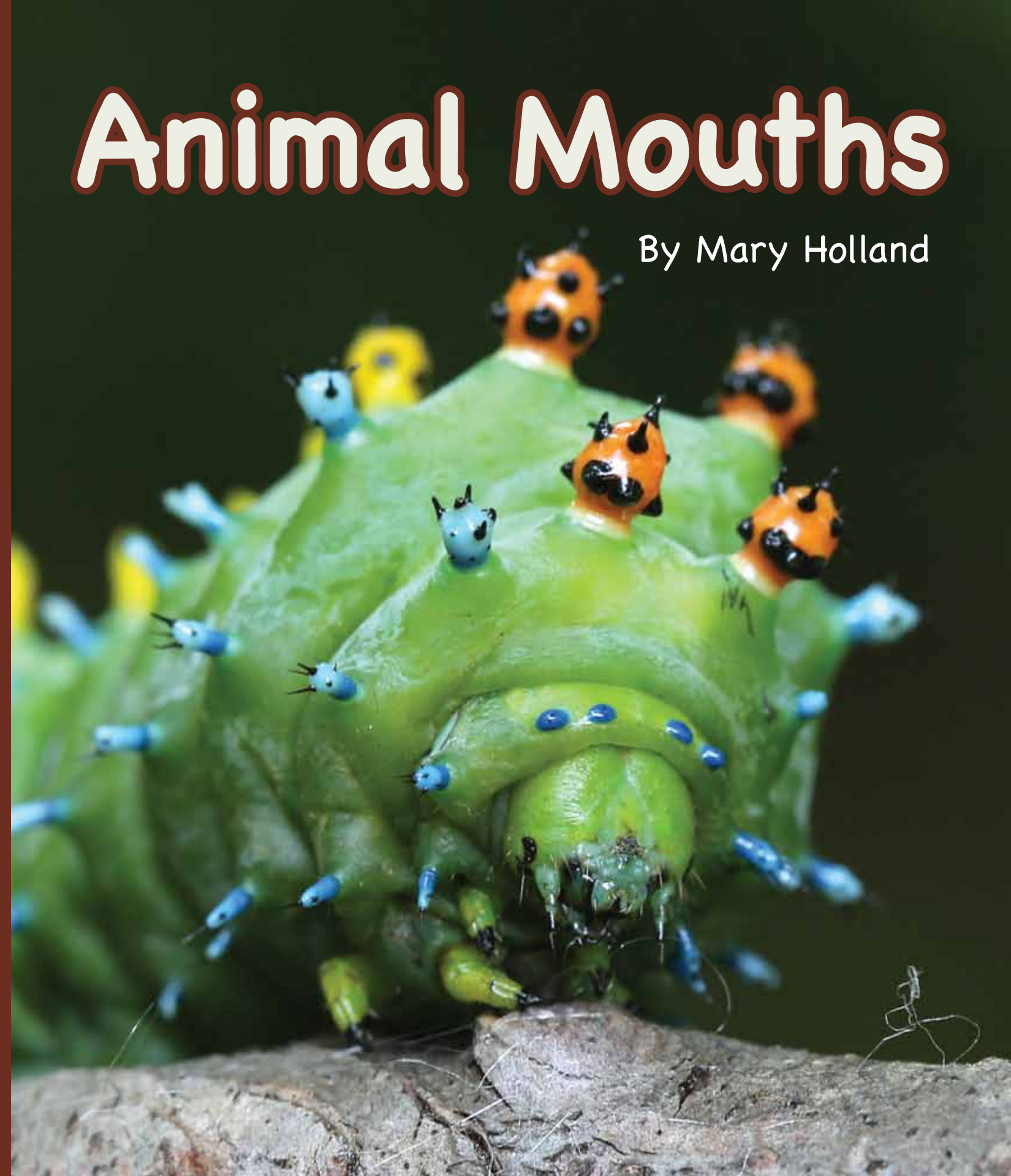
**Mary Holland** is a naturalist, nature photographer, columnist, and award-winning author with a life-long passion for natural history. After graduating from the University of Michigan's School of Natural Resources, Mary worked as a naturalist at the Museum of the Hudson Highlands in New York state, directed the state-wide Environmental Learning for the Future program for the Vermont Institute of Natural Science, worked as a resource naturalist for the Massachusetts Audubon Society, and designed and presented her own "Knee-High Nature Programs" for libraries and elementary schools throughout Vermont and New Hampshire. Her other children's books with Arbordale include *Ferdinand Fox's First Summer* (NSTA / CBC Most Outstanding Science Trade Book and Moonbeam Children's Book Award), *The Beavers' Busy Year* and *Animal Eyes*. Mary's book *Naturally Curious: a Photographic Field Guide and Month-by-Month Journey Through the Fields, Woods and Marshes of New England* won the 2011 National Outdoor Book Award for the Nature Guidebook category. Mary lives in Vermont with her lab, Emma. Visit Mary's blog at [naturallycuriouswithmaryholland.wordpress.com](http://naturallycuriouswithmaryholland.wordpress.com).



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**Most, but not all, animals have mouths. As a caterpillar, this luna moth had chewing mouthparts that it used to eat leaves. An adult luna moth doesn't have a mouth. Because luna moths only live for about a week, they don't need to eat!**



Animals with mouths usually have teeth, but not always. Turtles don't have teeth. They use the sharp edges of their jaws to eat both plants and animals.



**Birds have beaks instead of teeth. Beaks come in all different shapes and sizes, depending on what the birds eat. Evening grosbeaks have large, strong beaks for cracking seeds.**



Eagles and hawks—like this red-shouldered hawk—have strong, curved beaks to tear the flesh of the animals they eat (prey).

## For Creative Minds

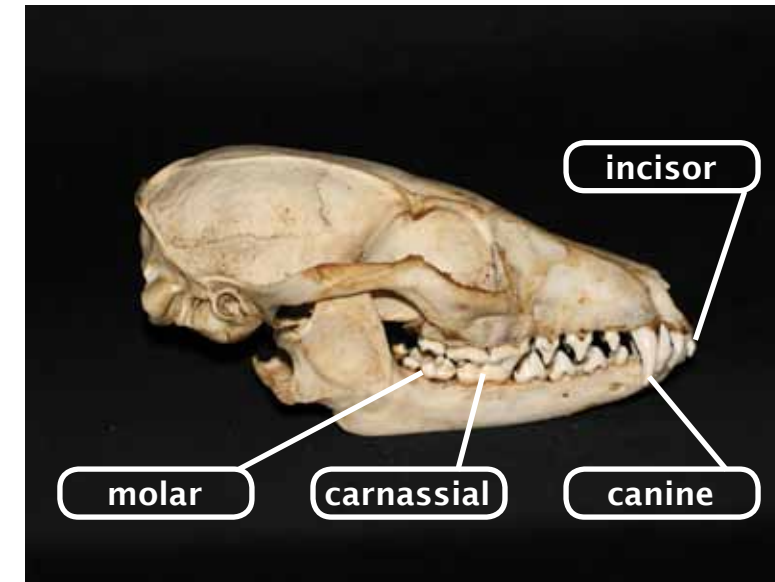
This For Creative Minds educational section contains activities to engage children in learning while making it fun at the same time. The activities build on the underlying subjects introduced in the story. While older children may be able to do these activities on their own, we encourage adults to work with the young children in their lives. Even if the adults have long forgotten or never learned this information, they can still work through the activities and be experts in their children's eyes! Exposure to these concepts at a young age helps to build a strong foundation for easier comprehension later in life. This section may be photocopied or printed from our website by the owner of this book for educational, non-commercial uses. Cross-curricular teaching activities for use at home or in the classroom, interactive quizzes, and more are available online. Go to [www.ArbordalePublishing.com](http://www.ArbordalePublishing.com) and click on the book's cover to explore all the links.

### Mouths: Other Uses

Animal mouths are not just for eating! Animals use their mouths to communicate with other animals, to camouflage themselves, to yawn, to carry things, or to clean themselves.



## Mammal Teeth



A mammal's teeth can tell you what kind of food it eats. This is because teeth have different shapes for eating different foods.

Herbivores have teeth shaped for cutting and chewing plants (incisors and molars). Carnivores have teeth shaped for tearing and slicing meat (canines and carnassial teeth). Omnivores, like this red fox, can have many different kinds of teeth located at different places in their jaw.



Can you match the photo of the skull to the animal?



red squirrel



coyote



raccoon

Answers: 1-raccoon, 2-red squirrel, 3-coyote

## Bird Beaks

Just as mammals' teeth give us clues as to what the mammals eat, the shapes and sizes of birds' beaks tell us what they eat too. Read the descriptions for clues to match the beaks to the bird's prey. Answers are below.



Common loons have long, pointed beaks for grasping slippery prey they find in the water.



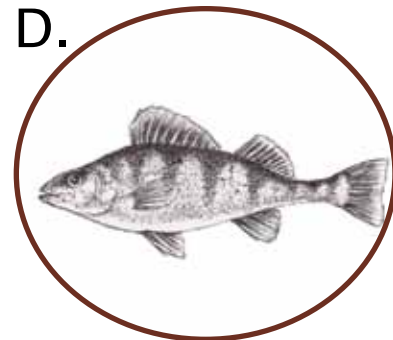
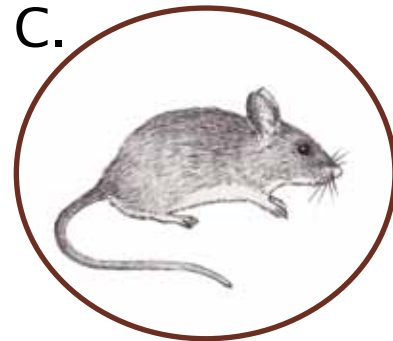
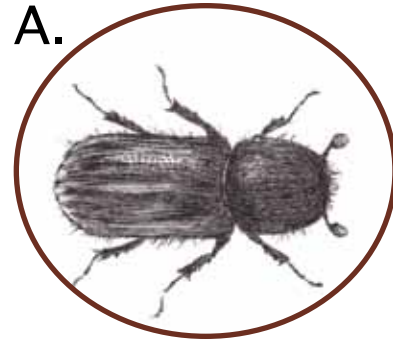
American kestrels have strong, curved beaks that they use to tear up their prey into smaller pieces.



A ruby-throated hummingbird's long beak can fit into narrow places where they often get a sweet drink of nectar.



Brown creepers have thin, curved beaks that are good for fitting under loose bark where they look for insects to eat.



Answers: 1-D, 2-C, 3-B, 4-A

## Glossary



bird



insect



mammal

beak	a protruding, horny jaw of an animal
bird	an animal with feathers
canine	a long, pointed tooth (sometimes called a fang in mammals)
carnassial	a large tooth found in many carnivores that is adapted for cutting food
fang	a long, pointed tooth that injects venom
groom	to clean and arrange fur or feathers
incisor	a tooth in the front of the jaw that has a sharp edge for cutting food
inject	to force a liquid into something
insect	a small animal with three body sections, six legs, two antennae and no backbone (spine)
jaw	the bones that form the structure of the mouth and often hold teeth. The lower jaw (mandible) moves, allowing the animal to open and close its mouth. The upper jaw (maxilla) is part of the skull and does not move.
mammal	a warm-blooded animal with a spine, fur, and the ability to produce milk
molar	a large, flat tooth in the back of the jaw that is used for grinding food
mouth	the opening in the body through which an animal takes in food
preen	to smooth, clean or apply oil to feathers
proboscis	a hollow tube-like mouthpart that some insects use to suck or to pierce and suck
skull	the bones in the head that surround and protect the brain



To Mary Sue, who with great patience refined my photographic skills.—MH  
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