



# Birds of Paradise

AMAZING AVIAN EVOLUTION



The Cornell Lab  
of Ornithology

## EXPEDITION JOURNAL

EXPLORER'S NAME:

EXPEDITION DATE:

NATIONAL  
GEOGRAPHIC





Hi there-

We're Ed Scholes and Tim Laman, the explorers behind the Birds-of-Paradise exhibition. We are so glad you are here to learn about the thirty-nine species of birds that have fascinated us for over eight years and eighteen expeditions. We didn't always know that we would spend nearly a decade tracking down birds in one of the most remote places in the world.

Tim is a scientist who loved photography and climbing trees. Ed made a promise to see the birds-of-paradise in person after watching a special on television. After ten days into our first expedition, without any good photographs, Tim wrote in his journal that this project was going to be tougher than he imagined.

Eventually, we started getting some breaks and soon we were hooked. It took years of careful observation, note-taking, creativity, and hard work to be able to share our results with you. Enjoy the exhibit, explore as much as you can, and maybe someday you can apply these skills to a project of your own. **GOOD LUCK!**

*ED AND TIM*

# GROUND DANCING

HOW DO MALE BIRDS-OF-PARADISE ATTRACT FEMALES?

LEARN THE MOVES AND STRUT YOUR STUFF AT THE DANCE, DANCE EVOLUTION GAME.

LOOK FOR THE PANEL TITLED "ALL THE RIGHT MOVES." Can you name these four steps in the typical dance of a parotia?



CHECK OUT THE VIDEO IN "THE FEMALE POINT OF VIEW" SECTION.

What would you name the bird-of-paradise dance in this video?

I watched hours and hours of video of birds-of-paradise dancing to break down the dances into individual steps.

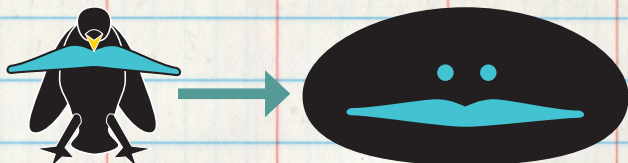
- Ed

# SHAPE SHIFTERS

HOW DO MALE BIRDS-OF-PARADISE CHANGE THEIR SHAPES?

USE THE MOVEABLE SCULPTURE TO CHANGE THE SHAPE OF A RIFLEBIRD.

TURN THE DIAL AT THE "MASTERS OF ILLUSION" ACTIVITY TO SEE THE SUPERB-BIRD-OF-PARADISE TURN INTO A SMILEY FACE.



Which parts of the bird's body form the blue "eyes" and "mouth?"

- HEAD
- BACK
- BREAST
- WING
- TAIL

I spent weeks trying to get a photograph of a male superb Bird-of-paradise changing shape-but the only shot I got was from the back!

-Tim

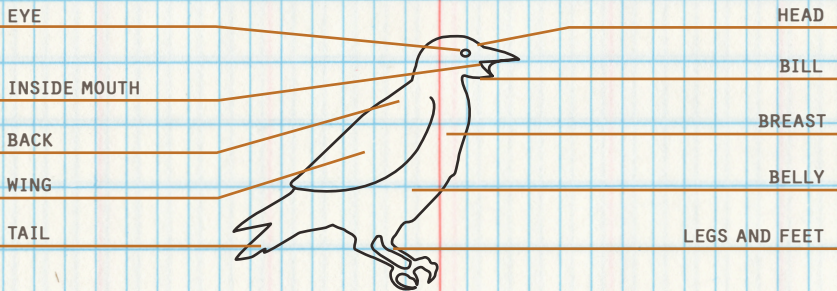
# OUT ON A LIMB

## WHAT BODY PARTS DO MALE BIRDS-OF-PARADISE USE TO ATTRACT FEMALES?

LOOK AT THE PHOTOS ON THE BOLD AND THE  
BEAUTIFUL WALL AND WATCH THE FLASHERS VIDEO  
TO FIND OUT.

### WHICH OF THESE BODY PARTS ARE COLORED IN SOME MALE BIRDS-OF-PARADISE?

Write down the colors you find for each body part.



# CALL ME

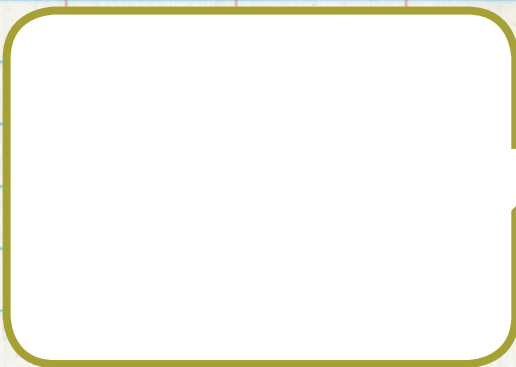
**WHY DO MALE BIRD-OF-PARADISE MAKE DIFFERENT CALLS?**

**LISTEN TO SOME BIRD-OF-PARADISE CALLS.**

**PICK YOUR FAVORITE CALL.** Write down the bird's name.

Why does the bird make this call?

Write down exactly what you think the bird is saying.



# NEW GUINEA

HOW DO PEOPLE IN NEW GUINEA SHOW THEIR  
RESPECT FOR BIRDS-OF-PARADISE?

LOOK CLOSELY AT ALL THE COLORS AND SHAPES OF  
FEATHERS IN THE CEREMONIAL HEADDRESS.

FIND YOUR FAVORITE OBJECT WITH BIRD-OF-PARADISE IMAGES.

Draw your version of your favorite in the space below.

Guess what? A 15-year-  
old schoolgirl designed  
the national flag of  
Papua New Guinea,  
with its golden image  
of a bird-of-paradise.

-Tim & Ed

# OLD & NEW SCIENCE

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**WHAT CAN SCIENTISTS LEARN ABOUT BIRDS-OF-PARADISE THROUGH OBSERVATION? HOW HAS THAT CHANGED OVER TIME?**

**IN THE VICTORIAN STUDY, EXAMINE THE SKINS IN THE CASE CALLED “COLLECTING FOR MUSEUMS.”**

**IMAGINE YOU'RE A SCIENTIST IN THE VICTORIAN ERA.** What would you conclude about birds-of-paradise by studying these skins?

**UNDERNEATH THE SIGN “RESEARCHERS IN PARADISE,” USE THE TOUCHSCREENS TO SEE PHOTOS, VIDEOS, MAPS, AND OTHER INFORMATION ABOUT THE 39 SPECIES OF BIRDS-OF-PARADISE.**

**NOW IMAGINE YOU'RE A MODERN SCIENTIST.** What can you conclude about birds-of-paradise by studying modern photos and video footage? Can you find a species you have not seen in the exhibit yet?



# RESEARCHING BIRDS-OF-PARADISE

PRESERVED  
SKINS

PHOTOS  
AND VIDEO

COLOR:

TAIL SHAPE:

TAIL SIZE:

HABITAT:

BEHAVIOR:

OTHER:

# EVOLUTIONARY ADVENTURES

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WHAT'S IT LIKE TO GO ON A  
SCIENTIFIC EXPEDITION TO NEW GUINEA?

WATCH THE FILM AND FIND OUT.

**FIND THE PANEL TITLED "WHAT TO PACK."**

List at least three things on Tim and Ed's packing list that surprised you.

Over the years I have  
made 2,256 video  
and audio recordings  
of birds-of-paradise,  
and Tim has taken more  
than 39,540 photographs!

-Ed

# WORDS-OF-PARADISE

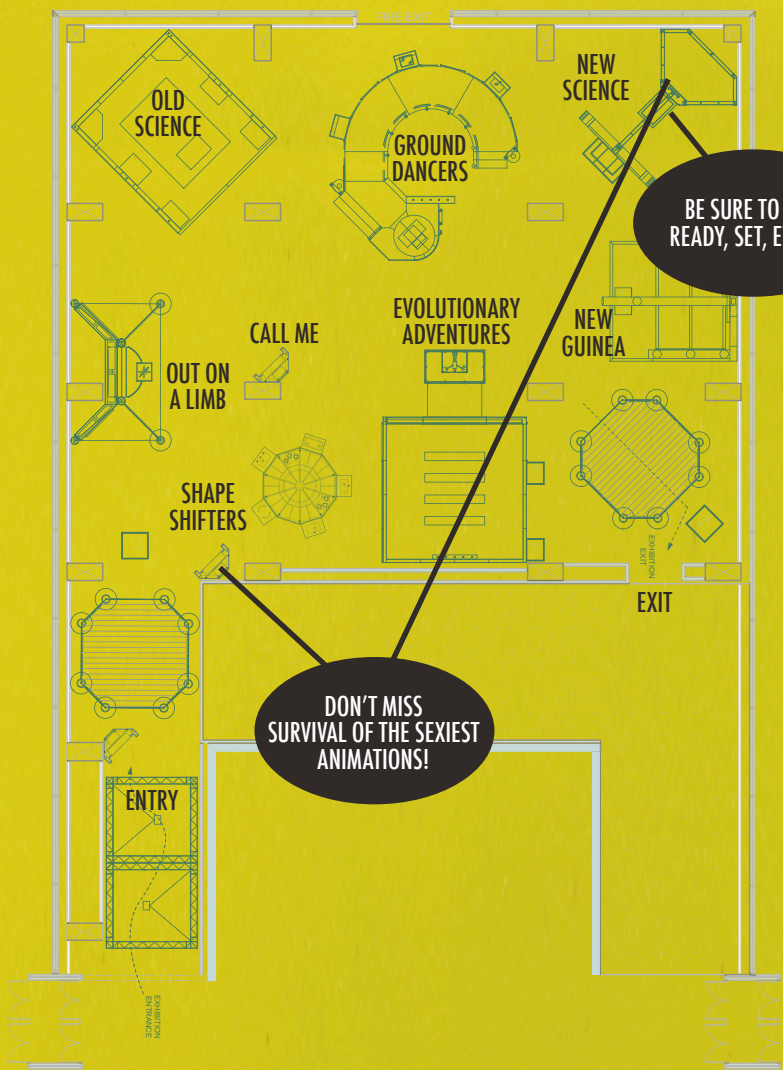
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**ADAPTATION:** The process by which the physical features or behavior of a species change over time to help it survive in its environment.

**EVOLUTION:** The process by which groups of living things change over time. Evolution can lead to the development of new species.

**EXPEDITION:** A trip organized for a specific purpose. In a scientific expedition, teams of scientists with special equipment travel to places to carry out research.

**SEXUAL SELECTION:** The process by which females or males select mates based on certain features (such as colorful feathers). Animals with those features have more young, and the features therefore become more common over time.



THIS EXHIBITION WAS DEVELOPED BY NATIONAL GEOGRAPHIC  
AND THE CORNELL LAB OF ORNITHOLOGY

