

## How has photography shaped ornithology and bird conservation?

Dr Karla McManus

*This photo of a young bittern, taken by pioneering bird photographer Emma Turner in 1911, provided scientific proof that the species had returned to breed in the UK having been extinct in the country for many years*  
© Emma Turner Archives, BTO



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How do you feel when you see a photo of a majestic eagle soaring through the sky, or of a dead seabird tangled in a fishing net? What can you learn about a bird from a photo of it building its nest or feeding its young? **Dr Karla McManus**, a visual arts researcher at the **University of Regina** in Canada, is exploring the history of bird photography and its role in shaping ecological knowledge and wildlife conservation efforts.



**Dr Karla McManus**

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## Fields of research

Visual arts, art history, photography, eco-art

## Research project

Investigating the history of bird photography

## Funder

Social Sciences and Humanities Research  
Council of Canada (SSHRC)

## Website

[www.karlamcmanus.com](http://www.karlamcmanus.com)

... Talk like a ...

## visual arts researcher

**Aesthetic** — visual beauty

**Archive** — a collection of  
historical documents or materials

**Avian** — relating to birds

**Conservation** — the act of  
protecting and preserving natural  
environments

**Ornithology** — the scientific  
study of birds

Dr Karla McManus, an art history researcher and Associate Professor at the University of Regina, explores how art and science are both active components in bird photography. Her research focuses on how photos of birds have shaped ecological knowledge, from the beginnings of ornithology through to modern wildlife conservation. By examining archival images, she hopes to understand how bird photography has changed through time and helped both scientists and the public better appreciate and protect the natural world.

## How does Karla study bird photography?

Karla visits archives to look for historical photos of birds, along with books, newspapers and magazines that contain bird images, and letters written by or to bird photographers. “I spend a lot of time looking at the images and asking questions,”

she explains. “What is depicted? Why was it photographed in this way? What was the goal of the photographer? What did they plan to do with the image? These questions inform my understanding of the photos and how they helped, and continue to help, express ideas about birds and their role in our environment.”

However, it is not always easy to find such materials. “Many early photos of birds have not been considered of historical value because they were taken by photographers who weren’t famous,” Karla explains. “The history of photography has, until recently, been dominated by photographers who were either artists (whose photos were collected by galleries) or photojournalists (who documented important historical moments and gained notoriety for their daring in the field). Bird photographers fall outside these

**B**ird photography has long been more than just an artistic pursuit – it has also played a crucial role in shaping our scientific understanding of nature.

From the early days of photography, when capturing a clear image of a moving bird was a technical challenge, photos offered something remarkable – a way to observe and document birds in their natural environments without harming them. As technology advanced, so did the role of bird photography, evolving into a key tool for ornithologists, conservationists and wildlife enthusiasts. But what impact has photography had on the way we study and protect birds today?





A glass plate negative showing Ellis Hadley, William Finley and Herman Bohlman wading through a marsh in Oregon, USA, to photograph a red-tailed hawk's nest in 1902  
© Oregon Historical Society Library

categories and their work wasn't widely known except by other people interested in birds."

### How has bird photography changed over time?

"Photographic technology has been the major driver of change in the practice of bird photography," says Karla. In the early days of cameras, photographers faced numerous challenges, including poorly light-sensitive films and chemicals, slow shutter speeds and a lack of ability to zoom in on a distant subject. These restrictions made it hard to capture images of living birds, resulting in many early photos appearing grainy or blurry.

Understanding these challenges is essential for appreciating historical photos of birds, as it required great skill and patience to capture an image of an animal that rarely sits still or tolerates human presence. "As photographic technology improved, so did our ability to photograph birds," says Karla. "Today, with the amazing sensitivity of digital cameras and the incredible lenses available, photographers are capturing birds in such detail they look almost too real!"

### How has photography shaped our knowledge of birds?

Photography significantly contributed to the field of ornithology by providing insights into the lives and behaviours of birds in their natural habitats. "Early photos of birds were taken at a time when many birds had yet to be studied in the wild," explains Karla. "Before then, ornithology relied on studying dead specimens." Photography allowed

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scientists to observe and document living birds without disturbing or harming them, offering a new dimension to studying avian behaviour. Through these images, researchers could gather essential information about a bird's habitat, feeding patterns and social interactions.

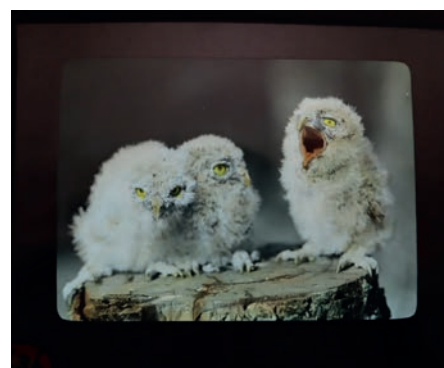
Photography also played a vital role in cultivating public interest in avian life by making the beauty and diversity of birds accessible to a wide audience. "It's important to note that photos of birds were not only exhibited in galleries, but were also published in books and magazines," says Karla. This brought the aesthetic joy of birds to the public eye.

### What role has photography played in conservation?

Many early ornithologists promoted photography as a humane way to study birds and 'collect' specimens, rather than the harmful practice of killing them for scientific observation. In this way, bird photography not only educated scientists and the public about bird behaviour, but also prevented bird deaths and

helped create a sense of appreciation and conservation. Over the years, bird photography has been used to visually track changes in bird populations and their environments over time, thereby contributing to conservation efforts.

"It's very hard to say exactly how bird photography has impacted conservation efforts," says Karla. "But, as a historian, I can clearly document a pattern of thinking and behaviour that was being promoted through conservation-minded individuals and groups, who included photos of birds in their books, talks and magazines aimed at a general audience. These photographically illustrated publications argued directly for bird protection and promoted the spiritual value of wildlife on society." In essence, bird photography captures the 'soul' of avian life, serving as a reminder of what we stand to lose if we do not conserve bird populations. By bridging the worlds of art and science, bird photography creates a sense of responsibility in all of us to protect our planet and its incredible inhabitants.



What could ornithologists learn from this photo of young owls? © Lewis McIver Terrill Slide Fonds, McCord Stewart Museum

# About *visual arts*

**F**rom painting and sculpture to photography and filmmaking, visual arts are a form of creative expression. Through the lens of art history, researchers can trace the evolution of visual arts and their ability to influence public perception.

## Why are visual arts powerful?

Visual arts not only serve aesthetic purposes but also play a crucial role in communication and inspiring people to take action on environmental and social issues. The power of visual arts lies in their ability to convey issues in a deeply engaging way. “I think most people would agree that looking at an

artwork, whether a drawing, photograph or animation, helps us to understand an idea on a whole new level,” says Karla. “This is partly because we feel something visceral and intimate when we see an image – it connects to our brain in a different way than when we read text.” Photography, in particular, has transformed how we perceive the world as it invites us to be ‘armchair travellers’, allowing us to explore and appreciate distant places and experiences from the comfort of our own homes.

## How have visual arts changed through time?

Throughout history, visual arts have

evolved in response to technological advancements. For example, the inventions of the printing press, cameras and digital photography have all expanded our ability to create and disseminate visual information. “Before there was widespread literacy, images were the main way to spread messages, from religious doctrine to identifying what a shop sold,” says Karla. “Visual arts and artists have always responded to their times. Today, with the emergence of generative artificial intelligence, visual arts are at a critical moment as we are faced with questions about artistic authorship and creative ethics.”

## Pathway from school to *visual arts*

“Visual arts are a form of culture,” explains Karla. “You can learn so much about culture from engaging in artmaking. Art has so much to teach us, so learn to make things and use the many tools of visual arts. You won’t regret it!”

At school, art and design classes will teach you about different forms of visual artistic expression, while history will introduce you to changes in culture through time.

To become a visual arts researcher, study a university degree in art or art history. To become a visual artist, develop your skills in your chosen artform by taking courses in drawing, painting, sculpture, photography, etc.

Why not take an art class at your local community centre or teach yourself a new craft from online tutorials? Look for apprenticeships with local artists, internships at art galleries and museums, and outreach programmes run by university art departments. “Find out as much as you can about the world of visual arts so that you can find where you fit!” advises Karla.

## Explore careers in *visual arts*

A career in visual arts can take many forms, including artist, educator, curator, art historian or visual arts researcher.

“To get started on a career in visual arts, get out into your community and learn from the galleries, museums and artists around you,” advises Karla. “Many museums and galleries have programmes for young people which you should explore. Visiting these institutions, which are there for all of us, can teach you so much. And many museums and galleries are producing great online content.”

Karla recommends Smarthistory ([www.smarthistory.org](http://www.smarthistory.org)) as a great place to learn more about art history.

Contact visual artists or visual arts researchers to learn more about their work. “We are always open to hearing from students in my department ([www.uregina.ca/media-art-performance/visual-arts](http://www.uregina.ca/media-art-performance/visual-arts)),” says Karla. “So, send us your questions!”





*The great auk was a flightless seabird that lived along the coast of the North Atlantic and was hunted to extinction. Visual artwork, such as this hand-coloured engraving by Robert Havell from 1836, was instrumental in trying to conserve the species, but the last two known great auks were killed in 1844. © Robert Havell after John James Audubon, National Gallery of Art, Washington, USA*



## Meet Karla

**I was lucky to have parents who encouraged me to think about visual arts and history as important topics of study.** I grew up reading any novel I could get my hands on and watching historical television shows that fed my fascination with the people and cultures of the past. I drew and painted a lot as well, which helped me understand how technical artmaking can be.

**My bird photography project started when I discovered the photos taken by Lorene Squire** in the Hudson's Bay Company Archives in Winnipeg, Manitoba, Canada. I was fascinated that Squire, who grew up in Kansas, USA, was so passionate about birds that, in the 1930s and 40s, she travelled alone into the north of Canada to photograph them. I thought this was so adventurous and I wanted to know more about her and the practice of bird photography.

**My study of photography and birds has developed as an output of my interest in the ubiquity of media images in our world today** – you can't go minutes without looking at a photograph of some kind. I have chosen to study environmental photographs because I am deeply concerned about the future of our planet, and I want to help people to understand how photography and art can play a role in helping us appreciate and protect nature.

**I love that, as a visual arts researcher, I get to talk about art all day!** Some of the highlights of my job are talking with students about art and exploring the ideas that art expresses.

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### Karla's top tips

1. Be adventurous and travel to new places to see art.
2. Read a lot and ask as many questions as you can about the world around you.
3. Learn to make art, even if you don't feel you are very good at it, because it will teach you so much about artists of the past and present.
4. Have fun!



# Visual arts

with Dr Karla McManus

## Talking points

### Knowledge

1. How did bird photography benefit early ornithologists?
2. What challenges did early photographers face when photographing birds?

### Comprehension

3. Why is ecological knowledge important for wildlife conservation?
4. Why were early photos of birds often overlooked?

### Application

5. How could you use photography to enhance awareness and appreciation of birds in your community?

### Analysis

6. What do you think Karla means when she says modern photos of birds “look almost too real”?
7. Why do you think visual arts are a powerful tool for inspiring people to care about environmental and social issues?

### Evaluation

8. Discuss the effectiveness of bird photography as a tool for promoting conservation efforts compared to other methods, such as written reports or documentaries. What are the strengths and weaknesses of each approach in raising public awareness?
9. To what extent do you believe that the aesthetic qualities of a photo of a bird influence people’s attitude towards that species and wildlife conservation in general? Provide examples to support your answer.

## Activities

### The power of visual arts

Explore the power of visual arts by creating an artistic exhibition to raise awareness of an environmental or social issue. Individually or in groups, create a piece of visual art (e.g., using painting, sculpture, photography, film) that highlights your chosen issue. Curate all the artwork into an exhibition to inspire people to fight for environmental or social justice.

### Advances in photography

As photographic techniques and equipment have advanced, our ability to document and study the natural world has improved significantly. Search online and in books and magazines to find photos of nature (e.g., animals, plants, landscapes) from the early 20th century and from within the last few years. Compare the two sets of photos, considering aspects such as the quality of the images (e.g., clarity, detail), types of nature captured, photo composition (e.g., how the subject is framed in the image) and technology used (e.g., film vs. digital camera, aerial photography, night-vision or motion sensor technology, processing techniques such as editing and focus stacking). Discuss how and why the different types of photos evoke different emotions or responses, and how and why they can teach us different things about the natural world. How have advances in photography technology impacted our ability to study, understand, appreciate and conserve wildlife and the environment?

## More resources

- Bird Photographer of the Year is an annual international competition to celebrate bird photography: [www.birdpoty.com](http://www.birdpoty.com)
- National Geographic is famous for using photography to educate people about nature and culture: [www.nationalgeographic.com/photography](http://www.nationalgeographic.com/photography)
- The British Trust for Ornithology helps to promote the protection of birds through citizen involvement in science: [www.bto.org](http://www.bto.org)
- The Cornell Lab of Ornithology has an app, MerlinID, to help you identify birds in your backyard: [merlin.allaboutbirds.org](http://merlin.allaboutbirds.org)





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**Top:** Photographer Lorene Squire hides in a 'duck blind' to photograph birds in the salt marshes of Charlton Island, Canada  
© HBC Archives, Archives of Manitoba 1981/28/71

**Middle row: Left:** A coloured lantern slide showing members of the Province of Quebec Society for the Protection of Birds on a bird watching trip in Canada © Lewis McIver Terrill Slide Fonds P423/G, McCord Stewart Museum, Montreal, Canada

**Centre:** A collection of books about birds in the Rare Books and Special Collections of McGill Libraries, Canada, which Karla visited as part of her research

**Right:** Karla examines old bird photos in the archives of the Natural History Museum at Tring, UK

**Bottom:** Despite being a grainy photo by today's standards, this picture of a nesting coot (left) and great crested grebes (centre and right) in the Norfolk Broads, UK, won Emma Turner a Gold Medal from the Royal Photographic Society in 1905 © Emma Turner Archives, BTO

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