



## **Ned K. Johnson Young Investigator Award 2016, to Mary Caswell Stoddard**

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AWARD

## Ned K. Johnson Young Investigator Award 2016, to Mary Caswell Stoddard

Published January 11, 2017

The American Ornithologists' Union is honored to present the 2016 Ned K. Johnson Young Investigator Award to Dr. Mary Caswell Stoddard of Princeton University, in recognition of her highly innovative and interdisciplinary research focused on the ecological and behavioral implications of avian color vision's complexity.

Stoddard earned her B.S. in biology from Yale University in 2008. She studied the evolution of plumage color in Rick Prum's lab, creating a program (TetraColorSpace in MATLAB) to explore color in tetrahedral space in buntings while still a freshman. This approach quantified relative impacts from a plumage color on all four types of cones in the avian retina (including ultraviolet), allowing researchers to better describe how the diversity of colors appears to the birds themselves. This groundbreaking approach was published in *The American Naturalist* while she was still an undergraduate. She followed up on this work by quantifying the diversity of avian colors across all lineages, demonstrating that birds can see many more colors than they can make, thanks to physical and metabolic constraints on plumage color production.

Stoddard went on to the University of Cambridge as a Marshall Scholar and a National Science Foundation doctoral fellow to work with Drs. Rebecca Kilner and Martin Stevens. She focused on the coevolution of egg coloration and patterning in parasitic cuckoos and their hosts, demonstrating for the first time a quantitative correlation between the degree of pattern matching and the known rate of egg rejection in various host species. Her Ph.D. received two awards from the Zoological Society of London, the Thomas H. Huxley Award and the Marsh Prize for the best dissertation in zoology in the United Kingdom.

Stoddard recently completed a three-year junior fellowship with the Harvard Society of Fellows, where she pioneered an "eggshell engineering" research program to study the mechanical properties of eggshells using cutting-edge technologies such as CT scanning and nanoindentation. She recently moved on to an assistant professorship at Princeton University.

Throughout her career, Stoddard has shown leadership in her commitment to women in STEM fields. Her work has been recognized with the prestigious 2013 L'Oréal USA for Women in Science Fellowship and 2015 L'Oréal–UNESCO International Rising Talents Fellowship.



Mary Caswell Stoddard

The AOU is confident that Dr. Stoddard will further expand her already prodigious contributions to the ornithological community and is very pleased to recognize her with the Young Investigator Award in 2016.

**Award criteria.** The Ned K. Johnson Young Investigator Award recognizes work by an ornithologist early in his or her career who shows distinct promise for future leadership in the profession. The American Ornithologists' Union (AOU) established the award in 2006 to

honor Ned K. Johnson, a lifelong supporter of the AOU and its former president (1996–1998). The award consists of a framed certificate and an honorarium provided through the endowed Ned K. Johnson Fund of the AOU.