

# S&F

**SCIENCE BOOKS & FILMS**

Your Online Review Guide to  
Science Resources for all Ages

Books to Celebrate  
Women's History

Plus: Learn All About  
Eggs



#### EXPLANATION OF REVIEW PROCEDURES

*SB&F* reviewers are scientists in academia and industry, teachers, librarians, and media specialists. Reviewers are asked to "write a critical evaluation...describing (1) the merits and/or demerits of the book or film and any accompanying supplements, (2) the content, technical quality, and instructional value, (3) the audience(s) the material is most appropriate for and why, and (4) how the material could be used for collateral reading or viewing, reference, or classroom use."

*SB&F* reviewers summarize their overall opinion of materials in terms of quality and level of difficulty by choosing ratings symbols from the list below. When rating materials, reviewers take into account accuracy of scientific information, scope, quality of illustrations or cinematography, and value when compared to other titles. Second opinions will be obtained for materials rated "NR" when requested by the author or publisher.

*SB&F* reviews are normally signed by reviewers, but if a reviewer so requests or if substantial changes are made, reviews are signed "Staff."

*SB&F* evaluations are the personal appraisals of the reviewers or of the staff and do not represent official recommendations or decisions of the reviewers' affiliations or of the AAAS.

#### EXPLANATION OF SYMBOLS

Appraisal

**★★ Highly recommended.** The material contains no serious errors or deficiencies, and the reviewer thought the content and presentation were excellent.

**★ Recommended.** The material contains no serious errors or deficiencies, and the reviewer thought the content and presentation were above average.

**Ac Acceptable.** The material contains no serious errors or deficiencies, and the reviewer thought the content and presentation were average.

**Q Questionable.** The material contains errors of fact, deficiencies in development, and/or the reviewer thought the content and presentation were below average.

**NR Not recommended.** The material contains serious errors of fact and/or deficiencies in development.

#### LEVEL OF DIFFICULTY

**K** Preschool or kindergarten

**EP** Elementary, grades 1 & 2

**EI** Elementary, grades 3 & 4

**EA** Elementary, grades 5 & 6

**JH** Junior high, grades 7 & 8

**YA** Young adult, grades 9-12

**C** College

**T** Teaching professional

**GA** General audience

Two consecutive levels are separated by a comma; for example, **K, EP**. Three or more consecutive levels are condensed to show the youngest and oldest age groups, and the symbols for these are separated by a dash; for example, **K-EI**. **GA** and **T** are always noted separately.

#### LETTERS

*SB&F* is written for librarians and science teachers in schools, colleges, and public libraries. Letters may be edited and will be published as space permits. Letters submitted for publication should be addressed to "Letters," Science Books & Films, 1200 New York Avenue, NW, Washington, DC 20005.

## In This Issue

It's March and the weather is starting to get warmer for those of us in the Northern Hemisphere. Before we turn to our thoughts of spring, though, we'll take a quick look back at last month and the award ceremony for the 2018 AAAS/Subaru SB&F Prize for Excellence in Science Books. Five of the six winning authors for the 2018 prize were able to attend the award ceremony held during the AAAS Annual Meeting in Austin, TX. We changed the format for this year's award from an evening reception to the morning and held it right in the convention hall! Our winners treated us to glimpses into their lives and the writing of their award-winning books. In this issue, we share the remarks of the co-authors for *Beauty and the Beak*.

In honor of Women's History Month, we once again share our bibliography of books that provide an introduction to women scientists and engineers. We've updated our list with selections from 2017.

Since spring is right around the corner, we thought it would be a good time to do a Read-Around-A-Theme on the incredible egg. The books in this feature can help young and old alike learn about this amazing object.

Finally, as in every issue, we feature our reviews of books and films as well as a look at the upcoming science programming on TV.

We wish you all a happy spring!



## Notes from the SB&F Prizes Award Ceremony

The 2018 AAAS/Subaru SB&F Prizes Award Ceremony went off without a hitch on Saturday, February 17, 2018 in the Austin Convention Center. Most of the prize winners, along with family and friends, attended the ceremony in the AAAS Pavilion. While guests snacked on muffins and pastries and drank some much-needed coffee, Maria Sosa, editor-in-chief of SB&F, presented the awards to the winners.

We've asked each of the winners to provide us with their remarks and we hope to feature them over the next few months. To start us off, we offer the remarks from Deborah Lee Rose and Jane Veltkamp, authors of *Beauty and the Beak*.

### Deborah Lee Rose Remarks

My deepest thanks to AAAS and Subaru for this cherished honor, and for all the work of AAAS and Subaru staff in bringing me to the national meeting and Family Science Days. Accepting the AAAS/Subaru prize today seems like a dream—except for the evidence-based reality that you are all here to witness it.

Growing up, I never imagined I would become a national science writer or author of children's books read around the world. I didn't know any scientists



## NOTES FROM THE SB&F PRIZES AWARD CEREMONY

or authors and no one suggested those were careers to be pursued.

As an English major at Cornell University, I initially dreaded the required science credits—but courses like Physics for Poets and Beekeeping ultimately rewrote my future, because they were taught by faculty experts in their fields who made science immediate and even fun.

I'm not a scientific expert like my husband, Kenneth Bogen—who has shared his *Science* magazine subscription with me for 30 years. My work—which I love—is to capture scientists' expertise and passion for their work, then translate and share these with the broadest public audience, especially children. AAAS CEO Rush Holt writes in his January 26th, 2018 editorial in *Science* magazine: "If science seems remote to nonscientists, and if scientists themselves appear remote and untrustworthy, can the public be counted on to support science into the future?"

Raptor biologist Jane Veltkamp, my coauthor, is the opposite of remote. She is incredibly connecting and generous with her scientific knowledge and love of birds of prey. Creating *Beauty and the Beak* with her let me tell the heartbreaking and heartlifting story of an

iconic animal and a real scientist at work.

Rush Holt also writes: "It comes down to good science communication—not simply choosing the right words to explain one's research..."

Both words and images were crucial to our telling Beauty's story. Janie had the foresight to have wildlife photographer Glen Hush photograph Beauty's beak surgery, long before I came into the picture. And with stunning, public domain images of bald eagles from the U.S. Fish and Wildlife Service National Digital Library, we were able to re-create Beauty's early years in the wild.

Just as engineering Beauty's beak was a team effort, so was creating our book. I owe many thanks today.

To our agent Susan Schulman—you believed in this book even when the idea was just starting to hatch, which is what makes you such an extraordinary colleague and friend.

To Brian Sockin, publisher of the Cornell Lab Publishing Group and Persnickety Press, and your staff—you hit the ground running to get this book out in record time, for the tenth anniversary of bald eagles being taken off the endangered and threatened species list. Your acumen and artistry transformed our vision into spectacular reality.



"From the day of Beauty's surgery to attach her new prosthetic beak, I knew one day I would tell her story to many—particularly to children—through science. I am privileged to be a scientist and a science educator. Now through this AAAS/Subaru award, my conservation message is amplified many times and for that I am grateful." – Jane Veltkamp



## NOTES FROM THE SB&F PRIZES AWARD CEREMONY

“To Beauty, a special bald eagle, who lives today to teach...Thank you for your tolerance and for the opportunity to tell one eagle’s story in hopes of conserving many.” – Jane Veltkamp

To Cornell Lab of Ornithology staff—you expanded the breadth and impact of our book with special content and attention to bald eagle conservation. As a Cornellian this has very special meaning to me, because Cornell was the first place I learned the world “ecology.”

It's also critical, because all children in the U.S. are expected to know about the bald eagle as our national symbol. Yet as I've discovered, from speaking at schools nationwide, few children know that bald eagles as a species were almost wiped out in the lower 48 states, and that scientists were the champions who reintroduced bald eagles

to so many places where we can watch them today.

In memoriam, to my colleague and friend, the late Dr. Marian Diamond, world renowned UC Berkeley brain scientist and educator—you inspired me never to lose touch with the wonder of science, and to keep sharing that wonder.

Most of all to Janie Veltkamp, you answered my first call to your raptor rescue phone line, and you trusted me that *Beauty and the Beak* would amplify Beauty's unique story and the story of all bald eagles, as Rush Holt writes, “earning the public's trust that the whole enterprise is intended for societal good.”

## 2019 AAAS/SUBARU SB&F PRIZE NOMINATIONS

Nominations are now open for the 2018 AAAS/Subaru SB&F Prizes for Excellence in Science Books. Sponsored by the American Association for the Advancement of Science (AAAS) and Subaru, the SB&F Prizes began in 2005 by looking back on decades of outstanding science books and honoring authors and illustrators who made lasting contributions to children’s and young adult science literature. You can read more about the prizes at <https://www.aaas.org/page/aaassubaru-sbf-prize-excellence-science-books-about> and get submission guidelines at <https://www.aaas.org/page/sbf-prizes-submission-guidelines>.



**W**ith a revived focus on women's rights and equality, it seems more than appropriate for us to share our collection of books for all ages that provide a well-rounded introduction to the lives of women scientists and engineers once again this year. Women in a diverse range of fields are profiled in these books, and the selected titles excel in presenting their subjects as complex, multi-dimensional individuals who faced and overcame a wide variety of challenges.

This is our updated 2017 list that includes titles that provide a historical perspective on women in STEM. The annotations are adapted from reviews published in *SB&F* or, in some cases, from publisher's description.

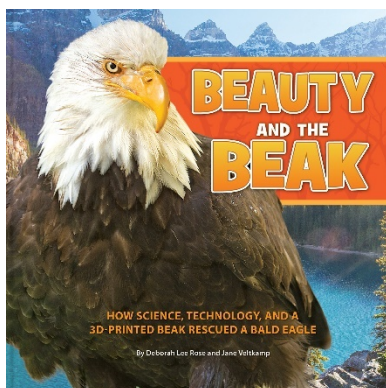
Despite the efforts of educators and many in STEM fields, women still only hold about 24 percent of STEM jobs while they fill about 47 percent of all jobs in the United States. In addition, women with STEM degrees are less likely than their male counterparts to work in a STEM occupation; they are more likely to work in education or healthcare.

It is our hope that by highlighting these books about women in STEM we can encourage girls and young women to pursue careers in those fields.

## CELEBRATING WOMEN IN STEM

citizen science. The book should make readers of all ages aware of the role that everyday citizens can play in helping to solve important science problems. The accuracy of the information presented has been verified by individuals from well-respected scientific organizations. This is an excellent addition to the vast array of science trade books written for children.

***Beauty and the Beak: How Science, Technology, and a 3D-Printed Beak Rescued a Bald Eagle***, by Deborah Lee Rose and Jane Veltkamp. (Illus.) Apex, NC: Persnickety Press, 2017.



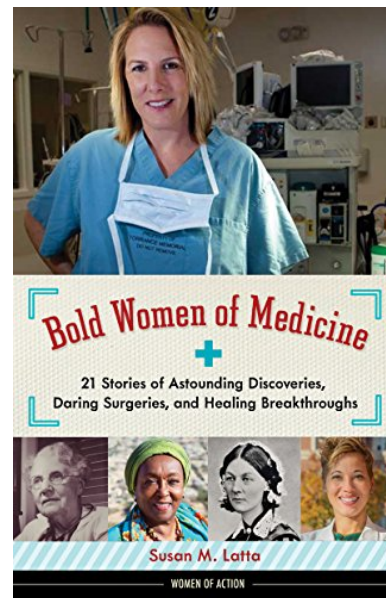
This book is a triumphant story about the positive power STEM can have in our world and how people can work with our natural environment to lend a helping hand. It chronicles the life of Beauty, a bald eagle that was shot in the beak, rescued, and fitted with the first 3D-printed prosthetic beak. The first 10 pages recount the life of a growing bald eagle with some eagle biology basics. We are then told of a devastating bullet shot (illegal) that struck Beauty squarely in the face, shattering her beak and leaving her injured and close to death. By only the goodwill of a community policeman was Beauty scooped up and rushed to a wildlife center for medical attention. Enter raptor

biologist Janie and Beauty is given a chance to heal and the quest for a way to help with Beauty's beak is begun. The book chronicles the magic that occurs when compassionate and driven people strive to help another living organism with the full-range of technology. What transpires over the second half of the book is wonderful to see and behold. The book is an opportunity to stimulate concerned citizens to get involved with the natural world around them. A fascinating story that is a must for elementary and middle school libraries.

***Beyond Jupiter: The Story of Planetary Astronomer Heidi Hammel***, by Fred Bortz. (Illus.; from the Women's Adventures in Science Series.) Washington, DC: Joseph Henry Press, 2006.

Fred Bortz has captured some of the engaging qualities of Heidi Hammel's personality through extensive work with her and with the cooperation of her friends and family. A popular caricature of a scientist as a natural genius, or at least an overachiever, is challenged in this biography. After a bad experience in college, she persevered and went on to participate in some of the most exciting discoveries in planetary science, such as the observation of comet Shoemaker-Levy's collision with Jupiter, Voyager 2's discoveries made while the spacecraft flew by Neptune, and new findings about the moons of Mars. Hammel's career, like that of all astronomers, requires patience and fortitude, which she handles with grace and enthusiasm. This book is well illustrated, but it assumes knowledge of astronomy and planetary science by the reader, so is best suited to older students.

***Bold Women of Medicine: 21 Stories of Astounding Discoveries, Daring Surgeries, and Healing Breakthroughs***, by Susan M. Latta. Chicago, IL: Chicago Review Press, 2017.



Women in science and medicine is an important topic, particularly because successful women are still striving for parity in these fields. Celebrating them is one way to remind young readers that fortitude can win the day even when a person or group of people is marginalized. The author selects good subjects for her book, 20 in all, each described in about 8 to 10 pages, from historic times to the present. The women she chose to feature in *Bold Women in Medicine* are of remarkable conviction and bravery.

***Bone Detective: The Story of Forensic Anthropologist Diane France***, by Lorraine Jean Hopping. (Illus.; from the Women's Adventures in Science Series.) Washington, DC: Joseph Henry Press, 2006.

Diane France is highly accomplished and may be the bravest in her field for opening her