

Publisher's Note

Contemporary Biographies in Environment & Conservation is a collection of 30 biographical sketches of “living leaders” in the fields of environment and conservation. All of these articles come from the pages of *Current Biography*, the monthly magazine renowned for its unfailing accuracy, insightful selection, and the wide scope of influence of its subjects. These up-to-date profiles draw from a variety of sources and are an invaluable resource for researchers, teachers, students, and librarians. Students will gain a better understanding of the educational development and career pathways of the environmentalist and conservationist to prepare themselves for a career in these industries.

The geographical scope of *Contemporary Biographies in Environment & Conservation* is broad; selections span the Eastern and Western Hemispheres, covering numerous major geographical and cultural regions. All of the figures profiled are still working at one or more of their specialties, including an environmental engineer, forestry worker, geographer, marine biologist, soil scientist and wind energy engineer.

Articles in *Contemporary Biographies in Environment & Conservation* range in length from 1,000 to 4,000 words and follow a standard format. All articles begin with ready-reference listings that include birth details and concise identifications. The articles then generally divide into several parts, including Early Life and Education, and Life's Work, a core section that provides straightforward accounts of the periods in which the profiled subjects made their most significant contributions to the profiled industries. Often, a final section, Significance, provides an overview of the person's place in history and their contemporary importance. Essays are supplemented

by Selected Readings, which provide starting points for further research.

As with other Salem Press biographical reference works, these articles combine breadth of coverage with a format that offers users quick access to the particular information needed. Articles are arranged alphabetically by last name. An appendix consisting of ten historical biographies, culled from the Salem Press *Great Lives* series, introduces readers to professionals of historical significance whose work and research was integral to revolutionizing the industries profiled here.

The book ends with a general Bibliography that offers a comprehensive list of works for students seeking out more information on a particular individual or subject, plus a separate bibliography of Selected Works that highlight the significant published works of the professionals profiled. A Profession Index, listing subjects by profession is also included.

The editors of Salem Press wish to extend their appreciation to all those involved in the development and production of this work; without their expert contribution, projects of this nature would not be possible. A list of contributors appears at the beginning of this volume.

Balog, James

Photographer, photojournalist

Born: 1952; Danville, Pennsylvania, United States

Although he began his career as a photojournalist with a passion for mountaineering, James Balog's real work of more than 30 years has been to examine and document the relationship between people and the environment. His earlier photography captured the different ways in which humans see animals and trees, but his shift of focus to ice in 2005 led to the work for which he is best known. With the creation that year of the Extreme Ice Survey (EIS), documenting the rapidly changing glaciers of the Arctic, Balog embarked on a study that yielded shocking visual evidence of climate change through time-lapse photographic images. The related 2012 documentary film, *Chasing Ice*, directed by Jeff Orlowski, dramatically captured Balog's stunning findings and brought the immediacy of the problem to international attention.

In addition to his planned projects, Balog has continued to work as a photojournalist, photographing such momentous events as the Mount St. Helens volcanic eruption in 1980 the Indian Ocean tsunami in 2004, and the *Deepwater Horizon* oil spill in 2010. He has presented his work at the United Nations and the White House, among other venues, while continuing to lecture and work with his nonprofit, the Earth Vision Trust. "I believe photography is one of the most powerful mediums of communication ever invented," Balog told Claire Sykes of *Photographer's Forum* (2009). "Too much of the time, it's squandered on trivialities. I'd like to see us aspire to the angels of our higher nature. If we can pull our minds and hearts together to use the medium to its full power, we can make an important impact on the world."

Education and Early Career

James Balog was born on July 15, 1952, in Danville, Pennsylvania. Both of his grandfathers had been Pennsylvania coal miners. The family later moved to Watchung, New Jersey, and then to New York City, where Balog's father was a Wall Street financier. His mother was a homemaker. Growing up in the suburbs, and later in the city, Balog developed an early interest in nature and the outdoors. "Somehow, back then, I fixated on the natural forces and hazards of nature, feeling small within its power and being fascinated with that," he told Sykes. He joined the Boy Scouts, and, when he was 18, he went to Colorado for an Outward Bound experiential learning course. His first job was working as a counselor at a summer camp.

After graduating from a private Catholic high school, Balog attended Boston College, where he began as a history major but then studied photography and filmmaking. He also continued hiking and mountain climbing, often in New Hampshire's White Mountains, and developed his interest in the earth's tectonics and the environment. He graduated with a bachelor's degree in communications and secondary education in 1974.

After college Balog moved to Boulder, Colorado. There he continued to pursue photography—along with rock and ice climbing—while working toward his master's degree in geography, specializing in geomorphology, at the University of Colorado; he earned the degree in 1977. He researched the 1976 Big Thompson River flash flood for his dissertation. He told Jascha Hoffman of *Nature* (Sept. 2012): "When I was finishing my thesis, I remember looking at a stack of manila punchcards and deciding that I'd rather see the world through a camera than through data

analysis.” He added: “The data are incredibly important, but my calling is to understand the world through art.”

Although he had initially anticipated working as a consultant, Balog ultimately went in a different direction. In discussing his career path, Balog told Dennis Nishi, “I didn’t want to spend my career sitting in front of a computer screen doing mathematical models” (*Wall Street Journal*, November 26, 2009). Rather than work at a desk, Balog traveled to Alaska, the Swiss Alps, and the Himalayas, among other places, bringing his camera along to document his trips. By the late 1970s his interests and education began to coalesce, and he was able to use his love of photography, his knowledge of the environment, and his comfort in the outdoors to begin work as a photojournalist. He began to read a great deal about photography. Balog’s first substantial assignment was an article on avalanche control for *Smithsonian*. Although he occasionally had to find side work as a mountaineering instructor or soils scientist, by 1978 he was able to make a living writing magazine articles and creating photo-essays for publications such as *Mariah* (now *Outside*), *Time*, and *Life*. In a 2013 interview with the American Society of Media Photographers (ASMP), Balog noted, “I had no friends or mentors in documentary photography as a profession, but I wanted to work for the big, glossy, color-picture magazines.” He added, “Naïveté, a willingness to take risks, good luck, the determination of a Clydesdale plus a unique combination of mountaineering skills and earth science background carried me forward.” In 1980 Balog documented the eruption of Mount St. Helens, which he considered a life-changing event.

“I have to believe that there is still time.”

For the next few years Balog continued to refine his skills and to focus on the intersection of humans and nature, which he has referred to as the leitmotif of his entire career. In the early 1980s he embarked on what he called, in conversation with Sheila Roberts of *Collider* (December 4, 2012), his “animal tangent.” “It was sort of my furry period, you could say, and I did a lot of animal work for eight or ten years.” Inspired by war photography, he began to take pictures with his 35-mm camera of animals being stalked, hunted, and killed. He published his first book, *Wildlife Requiem*, in 1984; in 1986, these pictures were exhibited at the Museum of Contemporary Photography of Columbia College under the same title. “It was a study of big-game hunting in the Rockies. They’re bloody pictures and gruesome,” he explained to Nishi. “War photography had a long tradition of turning a glass eye onto horror and ugliness. I wanted to do the same here.” The collection included images of a pick-up truck bed filled with animal bodies and a bear being skinned.

After the publication of *Wildlife Requiem*, Balog shifted to a portrait-photography approach to animals. The result was *Survivors: A New Vision of Endangered Wildlife* (1990). Balog was inspired with the idea for the book while taking a picture of a rhinoceros for a magazine article. “We always look for picturesque places to photograph them that make it look like they have these idyllic lives,” he told Nishi. “Looking up close made me realize that this species is almost extinct. I wanted to put them in a setting that showed the alienation of that species from nature.” *Survivors* featured 62 images of animals, such as a Florida panther, shot in the style of fashion photography. A third work that came from Balog’s “furry period” was 1993’s *Anima*, a collection of photographs taken from 1991 to 1993 that examines the intimate relationship between humans and chimpanzees.

During the mid-1990s, Balog also developed the collection *Humans & Technology*, which consisted of pictures of what Balog calls “techno-sapiens”—people intersected with machines. The collection included a diver in a scuba suit, a camouflaged sniper, and a man with a prosthetic arm. Balog also became the first photographer to be commissioned by the U.S. Postal Service to create a full plate of stamps. Released in 1996, Balog’s stamps showcased wildlife species that were endangered in the United States.

Starting in 1998, Balog shifted his focus toward trees, where it remained for several years. He initially tried to create portrait studios in the forest, but he found this approach limiting and abandoned it. “I noticed that light, subject, moment, weather, scale, mood, and a hundred other variables always seemed in flux,” he told the ASMP. “An eclectic range of visual treatments, it seemed, would better reflect the chameleon reality.” These visual treatments allowed Balog to bring his unique style and methods to the composition and presentation of the shots. Some images were close-ups of leaves, branches, and trunks, rearranged for presentation. Other images were taken while Balog was suspended from climbing ropes, hundreds of feet up in a redwood; to capture some of these massive trees, he took more than eight hundred exposures, creating a mosaic through this multiframe approach. He also shifted film formats and between color and black-and-white. “With good light, proper technique, and some luck, the photo will be an easily understood celebration of the tree.” When Balog’s *Tree: A New Vision of the American Forest* was published in 2004, it was praised for its innovative approach and the diversity of trees included.

Later Career

Balog spent time in 2005 and 2006 working on long-term projects for National Geographic and the New Yorker to photograph changing glaciers. “The real story wasn’t the beautiful white top,” he told Dennis Nishi. “It ended up being at the terminus of the glacier, where it’s dying. That idea gestated in my mind for a year and eventually turned into the Extreme Ice Survey in 2006.” Based in Boulder, the Extreme Ice Survey (EIS) eventually became a massive, multiyear project photographing the ever-shrinking glaciers of the Arctic.

Balog explained his motivation for the project to the American Society of Media Photographers: “Glaciers can disappear in hours or days—with not a single human present to witness the change, let alone preserve a memory of what is gone.” He went on to note, “When these metaphorical trees in the forest fall and no one is there to hear, a collective ‘natural amnesia’ sets in. Ultimately, we hope our art not only touches the human spirit but shifts perception of humanity’s relationship to the natural environment, vital to sustainable living on a finite planet.” Balog’s EIS team included experts Jason Box, Daniel B. Fagre, and Tad Pfeffer, along with mountaineer Conrad Anker. Despite facing many challenges unique to the harsh environment, they set up time-lapse cameras using batteries and solar panels. Balog told Hoffman, “We had to tackle deep snow, torrential rain and falling rocks. Off-the-shelf gear wasn’t robust enough, and it took six months of experimenting to come up with a reliable time-lapse system.” Over time the project grew to have 48 cameras on 24 glaciers in locations in Greenland, Iceland, Alaska, the Rocky Mountains, and even on Mount Everest. The cameras took pictures in every hour of daylight. The images were combined to create stunning videos of the retreating ice, capturing astonishing glacial melt and massive shelves of ice—some miles wide—collapsing into the sea. These “calving” events shocked the public and provided jarring images of climate change. Having filmed such powerful evidence of melting polar ice caps, Balog had a unique opportunity to educate people about the ice he had grown to love decades earlier. In 2009 his work was featured in a NOVA/PBS–National Geographic television documentary called *Extreme Ice*, and in that year, Balog’s *Ex-*

treme Ice Now; Vanishing Glaciers and Changing Climate: A Progress Report was published. Balog made six presentations at the Copenhagen United Nations Climate Change Conference (COP 15) in 2009, speaking on behalf of NASA, and the U.S. State Department, and the World Wildlife Fund. In 2010 he presented his findings to the White House Office of Energy and Climate Change. Balog's overarching intention is "to show geological changes happening on a human time scale," a mission he furthered in 2010 by founding the Earth Vision Trust, a nonprofit organization for educating the public about climate change.

Balog and the EIS team joined forces with film director Jeff Orlowski to turn their work into a documentary. Produced by Orlowski, Jerry Aronson, and Paula DuPré Pesmen, *Chasing Ice* premiered at the Sundance Film Festival in January 2012. The film documents the team's expeditions to the Arctic and their struggles to deploy their camera equipment. Included is footage of the calving event at Greenland's Jakobshavn Glacier; the scenes were filmed during the seventy-five-minute event, the biggest of its type ever to be recorded. Other scenes come from images, taken over three years, of the receding Columbia Glacier in Alaska, which changed so dramatically that the EIS team had to move the camera to keep the glacier in the shot.

Even more than the EIS images, *Chasing Ice* shocked audiences with the scale of the effects of climate change on the glaciers. Balog did not shy away from showing the harsh truths of global warming. "We need to be grown-up enough as artists to look at this stuff with eyes wide open," he told Sam Moulton in an interview for *Outside* (December 4, 2012). *Chasing Ice* won more than 30 awards from film festivals across the globe, including the 2012 Sundance Film Festival award for excellence in cinematography and the award for best documentary, also in 2012, from the Environmental Media Association. It also won a 2013 achievement award from the Renewable Natural Resources Foundation, and it was short-listed for the 2012 Academy Award for best original song for J. Ralph's "Before My Time." The film was shown on the National Geographic television channel in April 2013 and subsequently (in 2014) won the News and Documentary Emmy Award for Outstanding Nature Programming. In 2012 Balog published the book *Ice: Portraits of Vanishing Glaciers*.

In his interview with the ASMP, Balog summarized his motivations, saying, "I feel a great obligation to preserve a pictorial memory of vanishing landscapes for the people of the future." Through the EIS, *Chasing Ice*, the Earth Vision Trust, and his continued work in photojournalism, he has become a major force in creating such a pictorial memory. Balog has no plans to stop his work because, as he told to ASMP, "I have to believe that there is still time."

In 2013 Balog embarked on a project with the University of Colorado surveying hydrology patterns in the western United States and how they are being affected by climate change. He also set out to document the effect of sudden aspen decline—a blight that kills aspen trees—for the nonprofit For the Forest, as well as filming the effect of bark beetles on ponderosas and whitebark pines. These endeavors were all part of what Balog calls the "Anthropocene in action," on the theory that the Holocene epoch is ending and being replaced by the Anthropocene epoch. Balog's goal is to document the changes while they are happening for review by geology experts who will decide if the epoch has indeed changed.

Balog married Karen Breunig, an artist, in 1976, but the two parted in 1990. Balog lives in the Rocky Mountains near Boulder, Colorado, with his wife, Suzanne, and their daughter Emily, who was born in 2002. Balog's elder daughter, Simone, who was born in 1988, graduated from Boston College in 2010.

Among many other accolades, Balog won a Leica medal of excellence in 1990 and the 2010 Heinz Award for his innovative contributions to the environment. He was also the first ever winner of the League Award

from the International League of Conservation Photographers, an organization that he helped to found. In September 2013 he won the Ansel Adams Award from the Sierra Club for conservation photography.

Further Reading

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Survivors: A New Vision of Endangered Wildlife, 1990

Anima, 1993

Tree: A New Vision of the American Forest, 2004

Extreme Ice Now, 2009

Ice: Portraits of Vanishing Glaciers, 2012

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Profession Index

Academic

Tewolde, Berhan Gebre Egziabher

White, Gilbert Fowler

Wang Canfa

Activist

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Berman, Tzeborah

Commoner, Barry

Hauge, Frederic

Hayes, Denis

Maathai, Wangari

Naidoo, Kumi

Rahmstorf, Stefan

Shiva, Vandana

Suzuki, David T.

Agriculturist

Fowler, Gary

Agricultural Ecologist

Nabhan, Gary Paul

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Brown, Lester Russell

Biologist

Commoner, Barry

Botanist

Ewango, Corneille

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Suzuki, David T.

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Fay, Michael J.

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Ecologist

Dawes-Gromadzki, Tracy

Tewolde, Berhan Gebre Egziabher