

Jaguars (*Panthera onca*) are not only one of the most beautiful of all cat species, but they also play a critical role as one of the top predators in the rain forests of Central America. While once ranging from the tip of Argentina to the southern United States, modern jaguars are extinct in much of their historic range—including the United States, El Salvador, and Uruguay—and threatened in many others, including Mexico and the Amazon rain forest. Belize, once the heart of jaguar worship under the Maya, retains some of the healthiest populations in Central America, yet even there jaguars are threatened by habitat fragmentation and loss which isolates populations and threatens their genetic diversity. Because of these factors, the jaguar is listed as a near-threatened species, whose future is increasingly uncertain.

The jaguar in this picture is Junior Buddy, and until his death in 2019, Junior Buddy served as an ambassador for his species and the rain forests he called home. Junior Buddy was born in captivity at the Belize Zoo, and due to his gentle personality, and the fact that he could not be released into the wild, Junior Buddy became the leading figure in the jaguar conservation programs at the zoo. Countless students, including hundreds brought to Belize by the authors of this text, learned about the importance of rain forest conservation, and through their interactions with Junior Buddy, developed an appreciation for the wonders of these majestic animals. In appreciation, the authors of the text are working closely with the Belize Zoo in supporting their conservation efforts.

Stories, such as those of Junior Buddy, spark our interest in science. By understanding the central concepts of evolution, the connectiveness of all life through biological systems, and the nature of scientific inquiry, we can collectively work to solve problems, such as those facing jaguar conservation.

Whether you are just beginning to explore biology, or are preparing for a career in the sciences, the structure of *Biology* will help you understand the basic principles that govern the biological sciences while also allowing you to recognize how the science of biology is relevant to your life and the needs of society.



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ISBN 978-1-260-71087-8
MHID 1-260-71087-4



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