



DARE TO EXPLORE

Three Nat Geo explorers share the adventure behind the science.

BY C.M. TOMLIN

ZOLTAN TAKACS HOLDS A YELLOW-LIPPED SEA KRAIT IN THE SOUTH PACIFIC OCEAN.

THE HERPETOLOGIST

Zoltan Takacs tracks dangerous reptiles all over the globe. Below, he describes an encounter in the Amazon rain forest—and shares how studying deadly venom could create new medicines.



TAKACS HOLDS A VENOMOUS RHINOCEROS VIPER IN A TUBE TO EXTRACT ITS BLOOD.

“One night in the forests of Peru, I encountered an eight-foot-long bush-master snake, the longest venomous snake in the Western Hemisphere. I had managed to wrangle it into my bag when suddenly it shot out toward me! I was surprised, but I managed to dodge out of its way.”

“Since I was a kid, my dream has been to track dangerous creatures. Venomous animals kill their prey with toxins, but many of those toxins could be used to create new medicines. That’s why I chase them. I help study their toxins, which can hopefully be used one day to save lives.”



“You have to be a little crazy to want to be a herpetologist. Normal people wouldn’t spend their vacations catching deadly snakes!”

WANT TO BE A HERPETOLOGIST?

STUDY Biology
WATCH Movies that you make. Use cameras to observe and document nature.
READ *Snakes: The Evolution of Mystery in Nature* by Harry W. Greene

GRAB A PARENT TO SEE MORE COOL JOBS ON THE SHOW *BEST JOB EVER*.
youtube.com/natgeokids

THE WILDLIFE CONSERVATIONIST

Hotlin Ompusunggu works to protect the forests of Indonesia in Southeast Asia. She talks about saving orangutans and educating illegal loggers.

“I’ll occasionally see orangutans frolicking in the trees above me. We’ve placed cameras in the forests to monitor their movements, and sometimes it looks like they might be posing for a picture—sort of like an orangutan selfie! Their population in Indonesia is decreasing, mostly because of logging, so when I see one of these photos I’m very happy. It means orangutans are still there and it’s like they’re saying ‘thank you for protecting our home.’”

“The forests of Indonesia provide natural resources like fruit, meat, and wood. Often loggers will try to gain these resources illegally, which is dangerous for animals and people. By educating loggers on the impact of their actions, we can begin to create new forest guardians.”



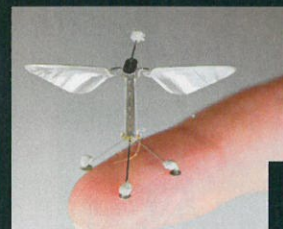
“People may not always agree with you, but don’t let that stop you from sharing your ideas.”

WANT TO BE A CONSERVATIONIST?

STUDY Biology and ecology
WATCH *Dr. Seuss’ The Lorax*
READ *My Life With the Chimpanzees* by Jane Goodall



AN ORANGUTAN HANGS OUT IN THE FORESTS OF INDONESIA.



ONE OF ROBERT WOOD’S ROBOTS RESTS ON A FINGER; BELOW, HE WORKS ON A ROBOT’S WINGS IN HIS LAB.

THE ROBOTICIST

Robert Wood is an expert in robots: robots you wear, squishy robots, tiny robots. He recalls when he figured out how to make a flying robot.



“Almost nothing works perfectly the first time. If we build something right from the start, we wouldn’t learn anything.”

“Once I was in the lab trying to design an insect-size robot with wings. But I was stuck; I needed to understand how a real-life insect moved. “After my team observed a common housefly up close, we discovered that its wing movements weren’t completely controlled by muscles. A major

part was simply how the wing was structured. Knowing that, we built the wing designs for the robot. And guess what? The bot could fly! “I think of robots as problem solvers; for example, a flying robot

could be useful for things like search and rescue. Each time my team tries to use a robot to solve a problem and it doesn’t work, we rebuild. Eventually we’ll build a bot that will solve the problem.”

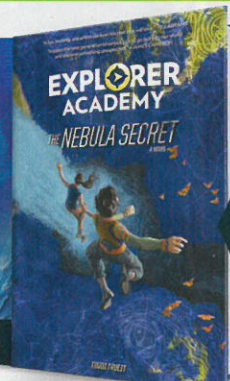
WANT TO BE A ROBOTICIST?

STUDY Math and technology
WATCH *Big Hero 6*
READ National Geographic Kids’ *How Things Work*

EXPLORER ACADEMY: THE NEBULA SECRET

is packed with action inspired by some of the real-life technology and people on these pages.

ExplorerAcademy.com



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