

## In the Field with Spiders

Did you know that you're rarely more than six feet away from a spider? Or that these abundant predators—the largest entirely carnivorous order of animals—structure the terrestrial food chain? In this seminar, Dr. Vladimir Ovtsharenko, Research Scientist in the Museum's world-renowned spider lab, introduces the study of spiders. As an example of how to study invertebrates, he explains the importance of counting and cataloging spiders, how each new species is a treasure, and why he has devoted his career to studying them.



### Key Science Concepts:

- **You are rarely more than six feet away from a spider.**
- **Spiders live everywhere**, from Alpine peaks to deserts—even underwater. There are more individual spiders, and more spider species, than in any other group of predators.
- Their sheer numbers, coupled with their enormous appetites, make spiders **the planet's dominant terrestrial predators**. By controlling insect populations, they play a vital role in maintaining the balance of nature.
- **Special adaptations**—including spinning silk, producing venom and using sophisticated hunting tactics—have contributed to the spider's extraordinary evolutionary success.
- As the strongest natural fiber known to man, **spider silk** is specialized for tasks such as building webs and trapping prey.
- **Field journaling and drawing** are important techniques for arachnologists, who use specialized microscopes, cameras, dissecting instruments and illustrations to study spiders in depth.
- **Collecting spiders** involves a variety of techniques, including sweep nets, funnel and pitfall traps, and collecting by hand.
- **Well-maintained collections** are crucial to ongoing scientific work. Over 36,000 species of spider have been described, but they represent only a third to a half of those that still await discovery.

### Authoring Scientist:

**Dr. Vladimir Ovtsharenko** is a research scientist in the Division of Invertebrate Zoology at the American Museum of Natural History (AMNH), and Curator of the Arachnological Collections at the Zoological Institute of the Russian Academy of Sciences. Dr. Ovtsharenko's research is on spider taxonomy: the science of identifying and classifying species according to their evolutionary relationships. Since the AMNH houses the largest spider collection in the world, with over a million spider specimens, and the arachnological research carried out there is among the best in the world, it is an ideal place for Vlad to work.

