

Abstract:

- · You can thank insect pollinators for one third of every mouthful of food that you eat.
- Without small flies in streams for young fish to eat your last grilled salmon would have been impossible.
- If you like songbirds, you can thank an insect 96 percent of birds rely on insects for survival.

With well over one million known species, insects and other invertebrates eclipse all other forms of life on Earth. They are essential to the reproduction of most flowering plants, including many fruits, vegetables, and nuts; they are food for birds, fish, and other animals; they filter water and help clean rivers and streams; and they clean up waste from plants and animals. Just four of the many insect services—dung burial, pest control, pollination, and wildlife nutrition—have an estimated annual value in the United States alone of at least \$57 billion. They truly are the "little things that run the world."

Though they are indisputably the most important creatures on earth, invertebrates are in trouble. Recent regional reports and trends in biomonitoring suggest that insects are experiencing a multi continental crisis evident as reductions in abundance, diversity and biomass. Given the centrality of insects to terrestrial and freshwater aquatic ecosystems and the food chain that supports humans, the potential importance of this crisis cannot be overstated.

If we hope to stem the losses of insect diversity and the services they provide, society must take steps at all levels to protect, restore and enhance habitat for insects across landscapes, from wildlands to farmlands to urban cores. Protecting and managing existing habitat is an essential step as natural areas can act as reservoirs for invertebrate diversity.



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Scott will explain the latest science on insect declines and highlight important ways natural areas managers can incorporate invertebrate conservation into their land management portfolio.