

**Testimony of
Monica G. Turner, President of the Ecological Society of America**

Regarding the National Science Foundation FY 2017 Budget

**To the
Senate Committee on Appropriations**

Subcommittee on Commerce, Justice, Science and Related Agencies

March 18, 2016

The Ecological Society of America appreciates the opportunity to provide testimony about the fiscal year (FY) 2017 budget for the National Science Foundation. **On behalf of the world's largest society of professional ecologists, I write to request that you support \$8 billion for the National Science Foundation in Fiscal Year 2017.**

The 2016 National Science Board Science and Engineering Indicators report found that China, South Korea and India are rapidly increasing their investment in scientific research and development. China now leads the United States as the world's number one producer of undergraduates with degrees in science. China graduates 49 percent of science bachelor's degrees among degrees in its country, compared to 33 percent of bachelor's science degrees given in the United States. The \$8 billion for NSF funding is necessary for NSF to keep pace with inflation and allow our nation to maintain its place as a global leader in innovation and discovery.

NSF provides critical funding for Science, Technology, Mathematics and Engineering (STEM) research and education programs that are vital to fostering and sustaining American jobs in scientific fields. In a given year, NSF awards reach nearly 1,900 colleges, universities, and other public and private institutions in all 50 states, the District of Columbia, and five territories. These awards fund early career scientists and enable undergraduate and graduate students to conduct research with leading scientists, thus ensuring future generations obtain the skillset to pursue careers in science that are vital for creating jobs and maintaining our nation's global competitiveness.

This funding will also sustain NSF's Biological Sciences Directorate (BIO), which is the primary federal funding source for basic biological research at US colleges and universities. Sixty-eight percent of academic basic research in non-medical biology is supported by BIO. Its research disciplines include botany, zoology, microbiology, ecology, basic molecular and cellular biology and other fields that help foster new scientific discoveries in the realms of food, fiber, fuel, pharmaceuticals, and bio-inspired innovation. This research contributes to the development of sustainable solutions to environmental challenges posed by natural resource scarcity, wildland fires, droughts, flooding, and emerging threats from invasive species and zoonotic diseases.

ESA recognizes the critical role that all of NSF's directorates play in furthering research innovation and discovery. As the sole agency funding all fields of science, we are grateful that House and Senate appropriators continue to grant NSF the discretion to determine funding for its individual directorates. This allows the agency the flexibility to adapt to unanticipated discoveries and meet future challenges. NSF's research agenda is informed by a rigorous non-partisan process, which includes decadal reports, convening expert workshops, and input from the scientific community. It is important that NSF continues to carry out its mission untainted by partisan or ideological motivations.

The Society is appreciative of the strong bipartisan, bicameral support NSF has received from Congress over many years. We hope you will continue to grant the agency the resources it needs to advance scientific careers and ensure that our nation retains its competitive edge in scientific discovery and innovation.