

SUPPORTING STATEMENT

PART A

SYSTEMATICS SCIENTISTS COMMUNITY SURVEY

OMB CLEARANCE NUMBER 3145-NEW

A.1. CIRCUMSTANCES THAT MAKE DATA COLLECTION NECESSARY

Explain the circumstances that make the collection of information necessary. Identify any legal or administrative requirements that necessitate the collection. Attach a copy of the appropriate section of each statute and regulation mandating or authorizing the collection of information.

The Systematics and Biodiversity Science Cluster (SBS) of the Division of Environmental Biology (DEB) at the National Science Foundation (NSF) supports research and methods development that advances understanding of the diversity, systematics, distribution and evolutionary history of extant and extinct organisms. SBS has a longstanding commitment to support research and taxonomic capacity building across the breadth of life on earth. The impact of SBS science cuts across all biological disciplines, and is foundational to modeling/predicting/and adapting to modern challenges imposed by climate and other anthropogenic changes.

SBS requests the Office of Management and Budget (OMB) approval to initiate a new survey that will capture the current state of systematic research in the U.S. across subdisciplines, taxonomic groups, and scientific training and ranks. No such prior survey, or complete dataset, on the status of systematics science, and those who practice it in North America, exists. These data will be necessary for long term strategic planning by SBS to ensure that the U.S. has systematic capacity across the tree of life, capacity that will impact our ability to respond to various threats and initiatives such as impacts of climate change on ecosystems, addressing invasive biological species, and meeting the challenges of developing a bioeconomy.

A.2. PURPOSE AND USE OF THE INFORMATION

Indicate how, by whom, how frequently, and for what purpose the information is to be used. Except for a new collection, indicate the actual use the agency has made of the information received from the current collection.

The purpose of this collection is to solicit feedback from U.S. scientists that conduct research in systematics. The survey is designed to take no more than 10 minutes and will provide information on taxonomic groups, new trainees, and professional roles of systematists. This information will be used to help improve the reach, outreach, and future programmatic planning of the Systematics and Biodiversity Science cluster in DEB. Results may also be compiled for the purposes of publication in a white paper or similar. This survey represents a new data collection.

A.3. USE OF INFORMATION TECHNOLOGY AND BURDEN REDUCTION

Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses, and the basis for the decision for adopting this means of collection. Also, describe any consideration of using information technology to reduce burden.

The survey will be administered online via a unique survey in SurveyMonkey, and is designed to be completed in 10 minutes. Potential respondents will be initially reached via email sent through their scientific societies. SBS will submit a link to the survey and email message under cover to the executive officers of each scientific society in North America of which some portion of members are systematists (American Society for Microbiology, American Society of Virology, Mycological Society of America, Phycological Society of America, International Society of Protistologists, Botanical Society of America, The American Fern Society, American Society of Plant Taxonomists, California botanical Society, Southern Appalachian Botanical Society, Torrey Botanical Society, American Bryological and Lichenological Society, American Society of Parasitologists, Paleontological Society, Entomological Society of America, Society of Nematologists, American Ornithological Society, American Society of Ichthyologists and

Herpetologists, American Society of Mammalogists, Society for Marine Mammalogy, Society of Systematic Biologists, American Society of Naturalists, Society for the Study of Evolution, Association of Southeastern Biologists, Society for the Preservation of Natural History Collections, Society of Herbarium Curators).

A.4. EFFORTS TO IDENTIFY DUPLICATION AND USE OF SIMILAR INFORMATION

To our knowledge, there is no source for the type of information we are trying to collate (e.g., how many scientists in the U.S. are trained in systematics, what taxonomic groups do they work on, what types of jobs do they hold). Therefore, the potential for duplication is nearly negligible.

A.5. IMPACTS ON SMALL BUSINESSES OR OTHER SMALL ENTITIES

If the collection of information impacts small businesses or other small entities, describe any methods used to minimize burden.

No small businesses will be involved as respondents.

A.6. CONSEQUENCES OF COLLECTING THE INFORMATION LESS FREQUENTLY

Describe the consequence to Federal program or policy activities if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to reducing burden.

If the data are not collected, SBS will not have information that may help it to make long term strategic decisions and tailor programs and funding to fill the gaps and meet the needs of, for instance, a developing bioeconomy and the challenges of climate change and other anthropogenic disturbance.

The survey will only be administered once; thus, the question about conducting the survey less frequently is not applicable.

A.7. SPECIAL CIRCUMSTANCES RELATING TO THE GUIDELINE OF 5 CFR 1320.5

Explain any special circumstances that would cause an information collection to be conducted in a manner:

There are no special circumstances involved with this data collection.

A.8. COMMENTS IN RESPONSE TO THE FEDERAL REGISTER NOTICE AND EFFORTS TO CONSULT OUTSIDE AGENCY

The 60-day Federal Register Notice was published on December 5, 2023, at 88 FR 84364, and no comments were received. NSF is moving forward with the request for approval.

A.9. EXPLANATION OF ANY PAYMENT OR GIFT TO RESPONDENTS

Explain any decision to provide any payment or gift to respondents, other than remuneration of contractors or grantees.

No payment or gifts to respondents will be made.

A.10. ASSURANCE OF CONFIDENTIALITY PROVIDED TO RESPONDENTS

Describe any assurance of confidentiality provided to respondents and the basis for the assurance in statute, regulation, or agency policy.

Participants in the interviews and survey will be informed that all of their responses will be kept confidential, and none of the findings reported to NSF will be attributed to specific participants or awardee organizations.

A.11. JUSTIFICATION FOR SENSITIVE QUESTIONS

Provide additional justification for any questions of a sensitive nature, such as sexual behavior or attitudes, religious beliefs, and other matters that are commonly considered private. This justification should include the reasons why the agency considers the questions necessary, the specific uses to be made of the information, the explanation to be given to

persons from whom the information is requested, and any steps to be taken to obtain their consent.

There are no questions of a sensitive nature in the survey or interview protocols.

A.12. ESTIMATES OF HOUR BURDEN INCLUDING ANNUALIZED HOURLY COSTS

The overall annualized cost to the respondents is estimated to be \$6,730. The following table shows the estimated burden and costs to respondents, who are generally biologists at the postsecondary level. This estimated hourly rate is based on a report from the Bureau of Labor Statistics' Occupational Employment and Wages, May 2021).¹ According to this report, the median hourly rate is \$33.65. These costs were estimated by averaging professional salaries. Survey requests will be sent to members of all North American scientific societies to which systematists belong. The total number of systematists employed in the U.S. is not known but estimated that ca. 800 will respond.

BURDEN HOURS

Collection Title	Total No. of Respondents	Burden Hours Per Respondent	Total Hour Burden	Average Hourly Rate	Estimated Cost
Survey of Systematists	800	.25	267	\$33.65	\$6,730
Total	800		267		\$6,730

A.13. ESTIMATES OF OTHER TOTAL ANNUAL COST BURDEN TO RESPONDENTS OR RECORD KEEPERS

Provide estimates of the total annual cost burden to respondents or record keepers resulting from the collection of information, (do not include the cost of any hour burden shown in items 12 and 14). The cost estimates should be split into two components: a) a total capital and start-up cost component annualized over its expected useful life, and b) a total operation and maintenance and purchase of services component.

¹ <https://www.bls.gov/oes/current/oes251021.htm>

The collection of this information does not add any additional costs to respondents or record keepers other than the hour burden costs described in Sections A.12 and A.14.

A.14. ANNUALIZED COST TO FEDERAL GOVERNMENT

Provide estimates of annualized cost to the Federal government. Also, provide a description of the method used to estimate cost and any other expense that would not have been incurred without this collection of information.

It is estimated that it will take 50 PO hours to construct the survey and analyze the results, for a salary cost of \$2644. This estimate is based on the salary of the PO.

A.15. EXPLANATION FOR PROGRAM CHANGES OR ADJUSTMENTS

Explain the reasons for any program changes or adjustments reported in Items 13 or 14 of the OMB Form 83-1.

This is a new submission. There is no request for program changes or adjustments.

A.16. PLANS FOR TABULATION AND PUBLICATION AND PROJECT TIME SCHEDULE

For collections of information whose results are planned to be published, outline plans for tabulation and publication.

Data from the systematics survey are expected to be collected over a one- to two-month period in Summer 2024. After data collection closes, SBS will spend two months preparing, analyzing, and summarizing the data, including running descriptive statistics on survey item responses. Survey data will be analyzed using SPSS and R statistical software packages. Depending on results of analysis, SBS will prepare a compilation/report of results in winter 2024/2025 that may be appropriate as a white paper, with a submission date of Spring 2025.

A.17. REASON(S) DISPLAY OF OMB EXPIRATION DATE IS INAPPROPRIATE

If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons that display would be inappropriate.

The National Science Foundation plans to display the expiration date of OMB approval on all forms/questionnaires associated with this information collection.

A.18. EXCEPTIONS TO CERTIFICATION FOR PAPERWORK REDUCTION ACT SUBMISSIONS

Explain each exception to the certification statement identified in Item 19 “Certification for Paperwork Reduction Act.”

There are no exceptions to the certification statement.