

North American Pollinator Protection Campaign Call for Research Proposals Related to Imperiled *Bombus* Conservation

Background

The North American Pollinator Protection Campaign (NAPPC) is seeking proposals for research related to improving the recovery and persistence of imperiled *Bombus* species. Proposals should focus on evaluating the effects of stressors on bumble bees, enhancing knowledge of bumble bee biology and ecology, contributing to improved monitoring practices, or utilizing emerging techniques to best conserve imperiled bumble bees.

Imperiled *Bombus* includes species currently defined by the International Union for Conservation of Nature (IUCN) as critically endangered, endangered, near threatened, or vulnerable. Imperiled North American species currently include *B. affinis*, *B. ashtoni/bohemicus*, *B. caliginosus*, *B. crotchii*, *B. fervidus*, *B. franklini*, *B. fraternus*, *B. morrisoni*, *B. occidentalis*, *B. mckayi*, *B. mexicanus*, *B. pensylvanicus*, *B. suckleyi*, *B. terricola*, *and B. variabilis*.

Research Needs

We anticipate supporting several proposals, for a maximum of \$10,000 each. Graduate students and post-doctoral researchers are encouraged to apply. Funds must be used within a 1-year period. Targeted projects with a high likelihood of providing tangible results that directly inform actions to improve the recovery, persistence, and conservation of bumble bees are preferred. Proposals providing valuable additions to existing projects will be considered, but funds from this grant must provide distinct value. Recipients of project funds are expected to present results at the 2024-2025 NAPPC Grantee Reporting Symposium and are strongly encouraged to serve on the Imperiled *Bombus* Task Force in the future.

Priority Areas

The Imperiled *Bombus* Conservation Task Force has identified five priority areas for funding; however, other areas will also be considered. If the subject of your research is not an imperiled bumble bee species, please provide an explanation of how the results of your research could impact imperiled bumble bee conservation or address project area foci.

- 1. Analysis/modeling of **individual and/or interacting stressors** (e.g., pathogens and disease, pesticides, small populations, competition and disease transmission from managed bees, habitat fragmentation and degradation, and climate change) on imperiled bumble bee species abundance, distribution, and health.
- 2. Assessment of imperiled bumble bee **colony-level factors**, including habitat requirements, foraging, colony growth, overwintering, and nesting.
- 3. Assessment of imperiled bumble bee **population-level factors**, including population health, dispersal ecology of reproductive males and gynes, mating biology, population genetics, and pesticide registration to guide recommendations for long-term recovery.

- 4. Contributions to **improve monitoring techniques** to document or increase detection probability, document population health and occupancy, and improve data quality standards of imperiled bumble bee species.
- 5. Development of novel, **emerging techniques** to improve conservation of imperiled bumble bees, such as nest detection, pathogen sampling, the collection of genetic materials, modeling approaches, and/or use of molecular technologies.

Proposal Requirements

- 1. Maximum 3 page project proposal (Arial, 12-pt font, single spaced, 0.5 " margins, with page numbers, references and resumes are not included in this page limit). This should include:
 - a. Proposal title and research team with contact information, including email(s), physical mailing address, and telephone number(s).
 - b. Priority area focus/foci.
 - c. Sufficient background with concise description of the problem(s) being addressed; the rationale and significance behind the proposed project with an explanation of how the research will directly inform actions to improve the recovery, persistence, and conservation of bumble bees; an overview of the methods used to carry out the proposed project; and expected outcomes/project deliverables.
- 2. Detailed budget and budget justification. Pollinator Partnership/NAPPC does not pay overhead on funded research grants.
- 3. Research timeline by month from 2025 to 2026.
- 4. Curriculum vitae from the Principal Investigator(s).
- 5. If applicable, please explain whether the proposal is under consideration by other funding organizations or is supplementing a project funded elsewhere.
- 6. If the PI has previously received funding from NAPPC, please include information about the outcomes of that funding, including publications, presentations, and/or leveraging to obtain additional funding (up to 1/2 additional page).

Submission

Submit your proposal packets as a single PDF file to our application platform here by 5 PM EST on January 31. Email hombus@pollinator.org with any questions or concerns.

Funding Decisions

The proposals will be evaluated, and funding notifications will be made in early April.

Evaluation Criteria

Scientific Merit: Scientific impact and novelty of the proposed research

Feasibility: Does the PI have the qualifications/facilities to complete this work in a 1 year period? Is there a high likelihood for success?

Relevance: Will this research provide useful information or tools to improve imperiled bumble bee conservation?

Budget: Is the budget appropriate (sufficient but not excessive) for the proposed work?

Please note: One time at the midpoint of the grant-cycle, grantees will be asked to provide inprogress photos or videos, and/or a short written description of their project to be utilized by the grant program's funders and by Pollinator Partnership/NAPPC. Grantees can work with the

Imperiled Bombus Task Force to meet this requirement in a manner that makes sense for them.