Wild Animal Initiative

wildanimalinitiative.org

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Call for proposals
Seed Grants Program

Closing date: August 4, 2023
Grant size: USD $2,000-$30,000

Background

Although the natural world is a source of great beauty and happiness, vast numbers of animals routinely face serious challenges such as disease, hunger, or natural disasters. There is no "one-size-fits-all" solution to these threats. However, even as we recognize that improving the welfare of free-ranging animals is complex and difficult, we believe humans have a responsibility to help whenever we can.

The scope of wildlife research has largely been limited to the harms humans cause. Therefore, much uncertainty remains about what animals' lives are like in the wild, and what humans could do to help responsibly. Answering those questions will not be easy. The diversity of animal species and the complexity of ecosystem interactions requires a wider range of research expertise than any one research group might have.

Our grants empower wild animal welfare researchers to explore topics neglected by other funders. We support research that advances understanding of the fundamental concepts, novel methods, and preliminary interventions that will most rapidly accelerate progress in the field.

How to apply

- If you are interested in preparing a project proposal to meet one of the themes described below, please submit an Expression of Interest (EOI) form **by August 4, 2023.** The form allows you to provide a brief statement of the study you plan to propose. (Only projects meeting our selection criteria will be invited to submit a full proposal.) We recommend carefully considering our general selection criteria, relevant definitions, and the Seed Grants program eligibility guidelines. In particular, it is crucial that your project address wild animal welfare, which is distinct from related concepts such as fitness, health, or conservation. We will invite full proposal submissions only from candidates who clearly address the research themes and objectives described below in their EOI:
    - **Theme #1: Wild fish welfare**
    - **Theme #2: Near-term welfare interventions**
- We will evaluate and communicate the outcome of your EOI **by August 25, 2023**. During this time, we may also reach out for clarifications. Selected projects will be invited to proceed to the next stage, which will include submitting a full proposal, animal impact form (if applicable), and CVs. Further information will be shared at that time.
- If you are invited to submit a full proposal, we will reach out to discuss the details of the project with you and to support your full proposal submission. Full proposals will be due by **October 13, 2023.**
- We aim to share final funding decisions in **January 2024**.

We encourage all applicants to reach out at any stage of the proposal development process to request feedback on their project ideas or draft proposals.

Theme #1: Wild fish welfare

Understanding the welfare of the most numerous and neglected vertebrates.

Fishes have different neurological structures from terrestrial vertebrates, and as such might experience the world very differently. This has led some to suggest that fish are incapable of experiencing pain, and thus to claim that they are not sentient. But research exploring fish cognition and behavior clearly demonstrates that at least a significant proportion of fish species experience pain and are consciously aware of their environment (e.g. Lambert et al. 2022).

The aquatic environment and small size of many fishes also makes them challenging to study and monitor on an individual level in the wild. Fishes have major physiological and behavioral differences from terrestrial vertebrates whose welfare is more often considered, so the applicability of welfare indicators designed for those species is limited. But because fishes are extremely numerous and diverse, they are of great importance to Wild Animal Initiative's goal of understanding and ultimately improving the welfare of as many wild animals as possible.

Wild Animal Initiative invites applicants to propose projects that explore ways to measure, monitor, and evaluate the welfare of wild fishes. We particularly encourage applicants to pursue studies that seek to go beyond lab experiments and hatchery welfare to obtain an understanding of wild fish welfare *in situ*.

Examples

Suitable research avenues that could be explored under this theme include, but are not limited to:

- Developing novel techniques for measuring and monitoring the affective states of fish in their wild environments, and/or piloting such techniques in the wild.
- Applying or validating welfare indicators developed for farmed fishes for use with non-captive fishes in their wild environments.
- Developing ways to recognize, evaluate, and quantify specifically positive-valenced experiences in wild fishes (see Browning and Veit 2023; c.f. Horta 2015).
- Application of acoustic technology for monitoring changes in wild fish welfare at a population or community scale.
- Use or development of assays, such as hormonal EIAs, that assist with real-time welfare monitoring.
- Comparing the welfare of wild-born vs stocked (captive-bred) fishes in wild environments.
- Determining the welfare implications of networked effects of fishing, such as trophic interactions and density-dependent (compensatory) demographic responses.
- Characterizing the direct and indirect impacts of near-term interventions that could benefit large numbers of individual wild fish beyond fisheries (see Theme #2).

Under certain conditions, we would also consider supporting lab-based studies on model species that seek to understand and demonstrate generalizable life experiences of fishes, especially those focused on determining affective states — for example, studies exploring age-specific sentience and/or welfare of early life stages (e.g. eggs, fry, larvae, juveniles).

References that could serve as a starting point for investigating the welfare of wild fish:

- Positive Welfare for Fishes: Rationale and Areas for Future Study (Fife-Cook and Franks 2019)
- Cognitive appraisal of environmental stimuli induces emotion-like states in fish (Cerqueira et al. 2017)
- Aggressive encounters lead to negative affective state in fish (Rogers et al. 2020)
- Pair-bonding influences affective state in a monogamous fish species (Laubu et al. 2019)
- Use of conditioned place preference/avoidance tests to assess affective states in fish (Millot et al. 2014)
- Cognitive enrichment to increase fish welfare in aquaculture: A review (Kleiber et al. 2023)
- Looking beyond the Shoal: Fish Welfare as an Individual Attribute (Torgerson-White and Sánchez-Suárez 2022)
- Identification of Potential Welfare Indicators for Commercially Farmed King Salmon (Hāmana, *Oncorhynchus tshawytscha*) (Norris 2022)
- Fish welfare evaluation index (fWEI) based on external morphological damage for rainbow trout (*Oncorhynchus mykiss*) in flow through systems (Weirup et al. 2022)
- Qualitative Behavioral Assessment in Juvenile Farmed Atlantic Salmon (*Salmo salar*): Potential for On-Farm Welfare Assessment (Jarvis et al. 2021)

Previously funded projects related to this theme:

- Understanding the links between welfare and wild fish survival to adulthood — Raf Freire
- Impacts of human activities on welfare of elasmobranch species in San Francisco Bay — Meghan Holst

Theme #2: Near-term welfare interventions

Identifying ways to improve the welfare of a large number of wild animals within the next decade.

We are interested in near-term interventions that are designed to improve the welfare of wild animals and could potentially be implemented within the next 5-10 years. While these interventions must address current welfare threats, these may include perennial challenges animals face, such as starvation, disease, and predation.

Before it will be possible to implement large-scale interventions with long-term objectives, we must first be able to anticipate and manage indirect impacts, which requires a better understanding of ecosystem dynamics and wild animal welfare. Therefore, near-term interventions should be highly reversible, with the targeted biological or ecological parameters able to regress to their pre-intervention state within a few years, or a generation, of the intervention coming to an end. In practice, this means that until indirect effects have been thoroughly investigated, near-term interventions should focus on affecting the welfare of directly treated animals and/or their immediate offspring.

Wild Animal Initiative will not be funding implementation of near-term interventions as part of this call for proposals. Instead, we are interested in supporting projects that pilot or model potential near-term interventions to test their viability or underlying concepts. We will also support projects that aim to evaluate the welfare implications of interventions that are already being implemented for non-welfare reasons (e.g. conservation or human health), but for which the welfare implications have not yet been examined.

We are especially interested in projects that consider indirect effects of interventions, including interactions with other species. For example, if an intervention reduces the incidence of disease in one species, does it also reduce the incidence of that disease in others that might exchange pathogens with the focal species? Or, in the other direction, does a wildlife crossing that protects animals from being struck by cars actually reduce their life expectancy by increasing their exposure to predators?

Examples

Suitable interventions that could be explored under this theme include, but are not limited to:

- Wildlife fertility control/contraception (see project suggestions here)
- Supplemental feeding (see Murray et al. 2016, Knutie 2020)
- Immunization or treatment of infectious disease (see Cross et al. 2007, Dixon et al. 2023)
- Wildlife corridors (see Jung et al. 2016, Bain et al. 2017, Ottburg and van der Grift 2019, Hill et al. 2020)
- Reducing impacts of anthropogenic light/noise pollution (see Raap et al. 2016, Welbers et al. 2017)
- Predator deterrence (see Götz and Janik 2014)
- Additional examples and discussion can be found here.

All projects must focus on the use of an intervention to *improve* wild animal welfare, not merely to mitigate welfare costs associated with non-welfare interventions (e.g. by replacing a method with a less harmful one). This distinction is not always obvious; for example, wildlife fertility control is typically seen as a means to reduce human-animal conflict humanely, but a strong case can also be made for its potential to improve wild animal welfare beyond a natural baseline. If you are unsure whether your project would meet this requirement, please contact us.

Previously funded projects related to this theme:

- Physiological and behavioral effects of chemical contraception on pigeons — Jessica Wright-Lichter
- The impact of road noise on the welfare of free-living juvenile white-footed mice (*Peromyscus leucopus*) — Michael Sheriff
- Estimating the impacts of farmland management on invertebrate welfare — Ruth Feber and Paul Johnson

Additional Information

Selection criteria

- **Scope:** The approximate number of animals who could potentially benefit from the results of a project.
- **Impact:** The likelihood that a project will lead to an improvement in wild animal welfare now or in the future, and the magnitude of that potential improvement.
- **Engagement:** The extent to which a project is likely to accelerate or inspire other research or action in support of wild animal welfare.
- **Neglectedness:** The distinctiveness of a project's relevance to wild animal welfare, such that it would be unlikely to attract funding from another organization.
- **Feasibility:** The likelihood that a project could be carried out as described and accomplish its objectives.
- **Research ethics:** The risk of a project causing harm to human or non-human animals through its methods.

- **Cost-effectiveness:** Given two projects of approximately equal overall merit (considering the above criteria), we will give preference to the one with the lower budget.

  Further information is provided on our website.

Key definitions

- **Welfare:** The aggregate quality of an individual's subjective experiences over a given time period (or the sum of the welfare of each individual in a group). This can also be called "well-being" or "quality of life." We use "improving welfare" interchangeably with "reducing or preventing suffering." *For more information, see Core Concepts: Welfare*.
- **Wild animal:** Any individual animal whose life is not closely managed by humans. This includes animals living freely in human-dominated environments, such as parks and urban spaces, but excludes pets, farmed animals, and animals kept in zoos or in laboratories.