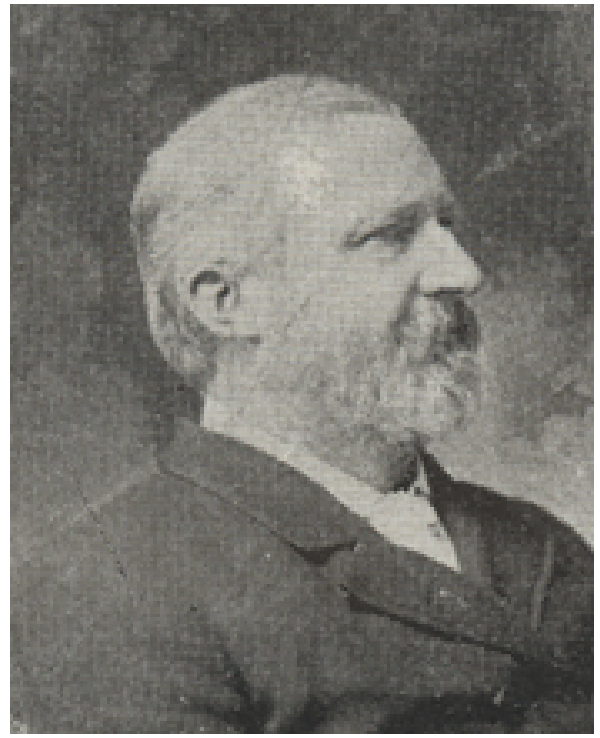
How to Write a Successful Hatch Proposal

The Hatch Proposal Outline

- *Your title* – Should be a brief, clear designation of the subject of your research. Remember, Hatch is research-only!
- Limit your title to about 140 characters, including any support letters, symbols an spaces.
- *Justification* – A statement of the overall problem that needs solving, how the research proposed will contribute to its solution, the gaps in the knowledge that the proposed research will fill, why the work needs to be done now, and if the work is successful, what will be the benefits.



Congressman William Henry Hatch

The Hatch Proposal Outline

- *Previous Work and Present Outlook* – A brief summary covering the status of current research and an estimate of the effort this project will contribute to NIFA's portfolio of science/outreach/education.
- *Objectives* – A clear, complete, and logically arranged set of statements of the specific objectives of the project. Objectives should be sufficiently specific to allow considerable progress toward their completion during the life of the project.

Hatch funds long-term and risky research

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- *Methods* – The essential working plans and procedures (“efforts”) used to meet your stated objectives. They provide the reviewers a clear description of the experimental approach, data collection, analysis, evaluation and interpretation. Include location of the work, facilities and equipment needed.
- *Duration* – Typically five years.

Mapping out the research design

The Hatch Proposal Outline

- *Target Audience* – Provide a description of the target audience(s) that will be the focus of effort for the duration of the project. Target audiences include individuals, groups, market segments, or communities that will be served by the project. Where appropriate, you should also identify population groups such as racial and ethnic minorities and those who are socially, economically, or educationally disadvantaged.
- *Products* – Identify the standard products/outputs that are expected to be achieved during the life of this project. "Standard products" include major publications, patents and others (e.g., student theses).

"Standard Products"

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- *Outcomes* – Change in knowledge; change in action; change in condition.
- *Non-technical Summary* – The non-technical summary is your opportunity to briefly sum up the importance of your project in terms that general citizens can understand in 1-2 succinct paragraphs:
  - ✓What is the current issue or problem that the research addresses and why does it need to be researched?
  - ✓What basic methods and approaches will be used to collect and produce data/results and subsequently inform target audiences?
  - ✓Through the methods mentioned above, what ultimate goals does the project hope to achieve?

"Target audience"

The Hatch Proposal Outline

- *Measurement of Progress and Results* – Include a table of milestones: Timeline-linked accomplishments that need to be completed before subsequent activities can begin, or can be completed.
- *Collaborators* – List your collaborators; state ways in which multidisciplinary collaborations might enhance the project.
- *Classification Fields* – Even though your Director's Office often chooses these for you, provide suggested values for KA's, SOI's and FOS's to ensure an accurate description of your work.

"Collaborators"

NIFA Program Areas and descriptions:

Food Security:

NIFA supports research, education and extension that will boost U.S. agricultural production and improve global capacity to meet the growing food demand. NIFA also fosters innovation in fighting hunger by addressing food security for vulnerable populations.

Climate Variability and Change:

NIFA supports projects that generate knowledge to develop an agriculture system that maintains high productivity in the face of climate changes and reduce greenhouse gas emissions. This will help producers to plan and make decisions in adapting to changing environments, sustaining economic vitality, and taking advantage of emerging economic opportunities offered by climate change mitigation technologies.

Sustainable Bioenergy:

NIFA contributes to the President's goal of energy independence by supporting science to develop biomass used for biofuels, design optimum forest products and crops for bioenergy production, and produce value-added bio-based industrial products.

Childhood Obesity Prevention:

NIFA supports research to identify effective measures that guide individuals and families to make informed, science-based decisions that will reduce child obesity and improve health.

Food Safety:

NIFA supports research that results to reduce the incidence of food-borne illnesses and provides a safer food supply by: eliminating causes of microbial contamination and antimicrobial resistance; educating consumer and food safety professionals; and developing food processing technologies to improve food safety.

Pre-proposal #108

TITLE:

Investigating the Impact of Stressors on Declining Songbird Populations

EXECUTIVE SUMMARY:

Tree swallows are iconic deep-blue songbirds that nest throughout NY. Their abundance, like that of other birds that eat flying insects, is sharply declining. This project will monitor NY swallow populations, and investigate how external stressors affect their stress load, health, and fitness. Identifying relevant stressors now will provide the best chance of protecting these beneficial birds.

INTENDED OUTCOMES AND IMPACTS:

The severe regional decline in aerial insectivores has been difficult to combat because of a lack of understanding about its causes. The major intended outcomes of this research are to determine: 1) what external factors are likely contributors to the decline in tree swallows and other aerial insectivores, and 2) how, specifically, these stressors influence the health and fitness of swallows. Only once these factors and their health outcomes have been identified can appropriate programs be designed to ensure that tree swallows and other aerial insectivores remain abundant in New York State.

Pre-proposal #114

TITLE:

Suburban, Farm, and Natural Area as habitat for the Monarch Butterfly

EXECUTIVE SUMMARY:

The monarch butterfly is native to NY State and the Northeast, and has been declining over the past 25 years. Because monarchs rely on milkweed host plants (their only food), and milkweeds occur in a diversity of habitats, including abundant plants on small farms and crop margins, suburban gardens, and wildlands, we will study the abundance and performance of monarchs in these diverse habitats.

INTENDED OUTCOMES AND IMPACTS:

With the data to be collected based on this proposal, residents, farmers, and land managers will have information needed to make decisions about leaving weedy milkweeds for monarchs, a practice which could have environmental benefits. Knowing about the value of leaves, pesticide residues, and natural use of milkweeds by monarchs is critical for such decision making. This work falls directly within the Cornell and NIFA's priority area of using "the state's vast resources of available land towards natural resource conservation". Because NY State is a major breeding ground for the monarch butterfly and because of our highly diverse mix of land management, assessing the compatibility of wild milkweeds in various land uses is critical.

Pre-proposal #128

TITLE:

Students Engaging the Environment: A Student and Scientist Collaboration to Assess Invasive and Endangered Fish Species

EXECUTIVE SUMMARY:

This project is a collaborative research effort that partners secondary school students with Cornell scientists in assessing levels of invasive and endangered native fish species in NY. The project uses innovative environmental DNA (eDNA) technology and a citizen science approach to provide critical information regarding locations and levels of invasive and endangered native fish species.

INTENDED OUTCOMES AND IMPACTS:

There are two primary outcomes associated with this proposal. First is the classroom integration of eDNA testing for invasive and endangered fish species based on a cooperative interaction between Cornell scientists and NY schools. The project introduces a citizen scientist approach to monitoring invasive and endangered fish species that provides an increased capacity to conduct rapid and widespread surveillance of NY waterways while supporting STEM educational goals. The second outcome is the production of critical data on levels and locations of fish species throughout NY State. These combined outcomes are especially relevant to NY in that they provide a potentially expandable method for engaging NY students in meaningful and stimulating research involving state of the art technologies that will increase student, and ultimately community, interest in the well-being of NY aquatic resources. The study will provide needed data regarding levels of invasive and endangered species in NY.

Pre-proposal #130

TITLE:

Oyster Restoration for Resilient Estuaries; Overcoming Constraints

EXECUTIVE SUMMARY:

Large-scale oyster restoration is being planned for the Hudson River Estuary to increase biodiversity, protect shorelines, and make the system more resilient. In collaboration with the Billion Oyster Project we propose to test whether genetic changes during hatchery propagation affect oyster fitness in ways that impact the likelihood of restoration success.

INTENDED OUTCOMES AND IMPACTS:

Science can transform perspectives and practices by challenging assumptions that have become so commonplace as to be unnoticed. Aquaculture is the primary reason that shellfish hatcheries exist on the US East Coast and it has driven much of the scientific investigation of oyster biology. In aquaculture the goal is to grow oysters to market size. Restoring natural oyster populations is a relatively recent goal and it is possible that restoration practice has been subtly channeled by aquaculture science. The most important outcome of this project will be to persuade practitioners to question their assumptions. This project will provide one of the first tests of hatchery impacts during single generation oyster propagation, based on full life-cycle analyses of fitness-related performance in diverse environmental settings. Communicating our findings and spurring a reconsideration of assumptions is particularly relevant in NYC because of plans for large-scale hatchery-based restoration.