

## **Kent State University Budget Justification**

### **A. Senior Personnel:**

Christie Bahlai, Principal Investigator, (1.0 Summer Mo.): Assistant Professor of Computational Ecology. Will be responsible for project administration, supervising all project personnel, drafting and editing materials, and leading reporting.

Rebecca Catto, Key Personnel (0.5 Summer Mo., Years 1 and 2): Assistant Professor of Sociology. Will be responsible for co-hosting podcast, recruiting experts from the social sciences for interviews, and supporting curriculum development and assessments.

Bridget Mulvey, Key Personnel (0.5 Summer Mo., Years 1 and 2): Associate Professor of Science Education. Will be responsible for co-hosting podcast, and will support curriculum development and lead educational assessments.

For the purpose of NSF senior personnel salary compensation limits, Kent State University defines the term "year" as a calendar year.

### **B. Other Personnel:**

One Post-Doctoral Scholar (12.0 CY Mo., Years 2 and 3): I request one postdoctoral associate to assist with project co-ordination, data analysis, software development and manuscript preparation. The post-doc will be recruited to commit 100% of their time to the project in these years.

One Lab Technician (12.0 CY Mo. Years 1 and 2): I request salary support for a technician to coordinate sampling, process arthropods and identifications, curate collections, and provide general lab support for first two years of the project to set protocols for sample collection and database compilation.

Two years of funding for Graduate Students <Ph.D. in Ecology and Evolutionary Biology> (9.0 AY Mo. plus 3.0 Summer Mo., years 1 and 2) will be supported on this project. Elaborate role: The funding will be split between two graduate students, who will otherwise be supported on teaching assistantships provided by the Department of Biological Sciences. These two students will lead research activities outlined in Aims 1ai and 1aii in the project description.

Two Undergraduate Students (Part Time Hourly, Years 2-4) Undergraduate students will assist in sample processing from specimens produced in Aim 1ai, and assist in compiling test databases required for all research activities described in Aim 1. Depending on interest, undergraduates may also assist in testing software developed in Aims 1b,c.

### **C. Fringe Benefits:**

Kent State University's fringe benefit rates are based on actual costs. The fringe benefit rate for a faculty summer appointment is 16% and includes retirement, worker's compensation and Medicare. The fringe benefit rate for part-time hourly student employees and GA summer appointments is 14.5% and includes retirement and worker's compensation. Fringe benefits for faculty and Graduate Student academic year appointments and for full-time staff vary by pay rate and classification and include retirement, worker's compensation, insurance and Medicare. Benefits have been budgeted in accordance with Kent State University policy.

### **D. Equipment:**

None

### **E. Travel Costs:**

Domestic Travel: Annual pool of \$2,500 (Years 1, 4, and 5) and \$5,000 (Years 2 and 3) are requested. We request an additional these funds to cover travel for Bahlai and the postdoc to travel to scientific conferences to present results, including flights, lodging and meeting registration, and to supplement graduate student travel costs that are not covered by their yearly conference travel allowance. We expect

to attend the Ecological Society of America meeting each year, and will likely attend the International Congress of Entomology at least once prior to 2026 to present research results.

**F. Participant Support:**

None

**G. Other Direct Costs**

*G1. Materials and Supplies*

\$35,000 is requested in year 1 for the purchase of computers, field monitoring, and digital material production. In the first year, the bulk of these funds will be used to purchase cameras, data loggers, and sensors to collect contextual data at sites where insect trapping stations will be deployed. The remainder of these funds will be used to cover laboratory and arthropod collection supplies, costs associated with mailing or sample transport, cloud data hosting services, and similar costs. Annual pool of \$2,500 is requested in years 2-5 for consumable supplies and equipment replacement, as needed.

*G2. Publication Costs/Documentation/Dissemination*

Annual pool of \$2,500 is requested in Years 3-5 to help offset the cost of publication in peer-reviewed/open-access journals. We will publish our findings in PLoS Computational Biology, Ecosphere, Global Change Biology and similar journals and insure all final research products are openly accessible.

*G3. Consultant Services*

In Year 2, \$10,000 is requested for Media Engineer and web design services for podcast editing, audio finishing, and design of website and promotional materials. We estimate a rate of \$75 per hour and ~70 hours of work (assuming each podcast episode takes one business day of work to edit), and approximately 100 hours of web development, logo design and content management for a designer at an hourly rate of \$47.50

*G4. Computer Services*

Annual pool of \$5,000 is requested in Years 3 and 4 to cover the costs of access to high performance computing systems at the Ohio Supercomputer Center for processing and compiling derived data.

*G6. Other Direct Costs*

Tuition is requested for the Graduate Students on this project in accordance with Kent State University policy.

**I. Indirect Costs**

Kent State University's indirect cost rate for research is 52.0% MTDC per DHHS negotiated agreement of 04/03/2020.

Total amount of indirect costs requested: \$269,129