

# The Xerces Society, Inc.

## Web Database Development and Maintenance Request for Proposal

### Responses due Tuesday, February 1, 2022

#### About Xerces

The Xerces Society is a nonprofit organization that protects wildlife through the conservation of invertebrates and their habitat. Established in 1971, the Society is at the forefront of invertebrate protection worldwide, harnessing the knowledge of scientists and the enthusiasm of citizens to implement conservation programs.

Butterflies, dragonflies, beetles, worms, starfish, mussels, and crabs are but a few of the millions of invertebrates at the heart of a healthy environment. Invertebrates build the stunning coral reefs of our oceans; they are essential to the reproduction of most flowering plants, including many fruits, vegetables, and nuts; and they are food for birds, fish, and other animals. Yet invertebrate populations are often imperiled by human activities and rarely accounted for in mainstream conservation.

Over the past three decades, we have protected endangered species and their habitats, produced ground-breaking publications on insect conservation, trained thousands of farmers and land managers to protect and manage habitat, and raised awareness about the invertebrates of forests, prairies, deserts, and oceans.

#### I. RFP Summary

There are two related projects with some overlapping functional requirements which are described in this RFP. In addition, each project has project specific requirements, also set out in this RFP. **Your proposal should clearly identify if you are submitting a proposal for one or both projects.**

One project requires the creation and maintenance of a publicly accessible, interactive website with a standardized spatially explicit database to engage public reporting of observations made by researchers, community scientists, agency biologists, and site managers. The other project requires the maintenance of an existing website with similar functionality. The websites allow (or will allow) users to register, upload photos or videos, access photo identification guides, and geo-reference their observations. The ultimate goal of both projects is to use web portals to collect information in robust, relational databases on locations and the abundance and biodiversity of certain invertebrates in the United States.

#### II. Project Descriptions; Bumble Bee Watch and Firefly Atlas

1. **Bumble Bee Watch** ([www.bumblebeewatch.org](http://www.bumblebeewatch.org)) is an existing database/website which is the basis for a collaborative effort to track and conserve North America's bumble bees. This community science project

allows for individuals to: (a) Upload photos of bumble bees to start a virtual bumble bee collection; (b) have identifications verified by experts; (c) Help researchers determine the status and conservation needs of bumble bees; (d) Help locate rare or endangered populations of bumble bees; (e) Learn about bumble bees, their ecology, and ongoing conservation efforts; and (f) Connect with other community scientists. In addition to incidental submissions of bumble bees throughout North America (as described above), Bumble Bee Watch is also used as the portal to collect data for various Xerces Society bumble bee atlas projects (e.g. the Pacific Northwest Bumble Bee Atlas, Nebraska Bumble Bee Atlas, Missouri Bumble Bee Atlas, and California Bumble Bee Atlas — additional projects are likely to be added in the future). These are systematic survey efforts that, in addition to the bumble bee data described above, collect habitat data and allow users to build survey checklists following a standardized protocol. The successful vendor's work for Bumble Bee Watch will be to host and maintain the existing BBW database and website, as well as provide incremental and overhaul upgrades consistent with the developing IT framework and the nexus with community science.

2. **Firefly Atlas** is a new website/database to be developed, similar to Bumble Bee Watch, which will allow community scientists, researchers, and site managers to track and conserve North American fireflies. Through the planned portal, users will be able to: (a) register and select a region and/or specific sites to survey for threatened and data deficient firefly species; (b) find information about how to survey and record observations; (c) access the forms to submit data to the website; and (d) learn about fireflies and firefly conservation. The successful vendor's work for the Firefly Atlas will be to develop a data entry tool to allow users to submit firefly data, develop a backend database for safe storage of data (combining pre-existing data with new submissions), and develop a public interface for visualization of underlying data and sharing of firefly conservation resources.

### III. Website Content

Xerces and its partners will gather, create, develop and maintain all text and graphic content for the websites. **Proposals should include recommendations for content management software that would (a) facilitate the creation and maintenance of website content; (b) facilitate the translation of the content into languages other than English.**

### IV. Shared Functionality Requirements

#### User Experience

The website must allow new users to register and existing users to have access to their accounts. There must be a data entry system for users to submit survey data, observations and photos/videos, as well as see observations submitted by others

#### Responsive Design

The website must be responsive, so that it seamlessly adjusts to fit desktops, laptops, tablets and smartphones.

#### Social Media Integration

The site must have the ability for web content to be shared to social media networks. The organization's social media networks must be linked to the website to allow for easy "follows."

#### News Feed and/or Blog

The website should include a built-in news/blog platform that will enable Xerces staff to create, edit and publish news articles and/or blogs to the website as needed.

### **Mapping Features**

The online database and user submissions must allow for the user to visualize data, including fast rendering with a large (>100,000) number of records via the integration with a mapping service such as Google API or ArcGIS Online.

### **Website Analytics**

Analytics tracking (preferably Google analytics) must be integrated on the site to allow for website visitor tracking, page tracking, etc.

### **Technical requirements**

No use of Flash. The website must be compliant with Mac and PC, as well as with the latest two versions of Internet Explorer, Mozilla Firefox, Chrome and Safari. Detailed technical specifications are available upon request.

### **Accessibility**

The goal is for the website to be ADA and Section 508 compliant.

### **Hosting and Maintenance**

Recommendations on the best systems for security, backups and updates that Xerces' staff can be trained to manage; maintain constant server access with little to no downtime; provide ongoing support and development

## **V. Bumble Bee Watch Functionality Requirements**

### **Website Upgrade**

Older website and code must be upgraded to more current standards to improve workflow, user experience and improve database efficiency

### **Database Maintenance**

Maintain a large database of users with different registration levels (user, enthusiast, expert, administrator) and maintain constant server access with little downtime

### **Portal Maintenance**

Maintain different portals for verification (but only for certain types of registered users) and for viewing

### **Data Extraction**

Site admins and other named users (see Portal Maintenance) should have the ability to export data (including all data fields) using existing filters (date, site, observer, etc.) from the website. There is also interest in making this functionality available for all registered users (potentially adding the ability to select data spatially for export).

## **VI. Firefly Atlas Functionality Requirements**

### **Online Database**

Database should be built using standard biodiversity protocols such as Darwin Core. This database will be integrated with the website via a user interface that allows users to submit and visualize data, and extract it in various formats (CSV, KML, etc.).

### **Database Maintenance**

Maintain a large database of users with different registration levels and maintain constant server access with little downtime

### **Portal Maintenance**

Maintain different portals for verification (but only for certain types of registered users) and for viewing

## Data Extraction

Site admins and other named users (see Portal Maintenance) should have the ability to export data (including all data fields) using existing filters (date, site, observer, etc.) from the website. There is also interest in making this functionality available for all registered users (potentially adding the ability to select data spatially for export).

## Community Science Integrations

Potential to integrate the database with existing external platforms (e.g. iNaturalist, SCAN)

## VII. Vendor Preferred Experience and/or Skillsets

- Experience with working with biological data and species observational databases; skills needed for building relational biological databases using Darwin Core standards, including photo and video attachments
- Experience with mapping large databases (>100,000 records) for web display that render quickly
- Experience developing interactive features for data visualization using large datasets, integrating filters, maps, charts, etc. to allow for in-depth data exploration and potential export

## VIII. Anticipated Timeline for Bumble Bee Watch

- ❖ Proposal due on Tuesday, February 1, 2022 (questions may be asked prior to January 14, 2022)
- ❖ Award on or about February 11, 2022
- ❖ Dates of availability for Beta versions of website TBD (estimated within the first 6 months of 2022)
- ❖ Launch TBD within the first 9 months of 2022

## IX. Anticipated Timeline for Firefly Atlas

- ❖ Proposal due on Tuesday, February 1, 2022 (questions may be asked prior to Friday, January 14, 2022)
- ❖ Award on or about February 11, 2022
- ❖ Beta versions of website and database available for testing by partners by April 15, 2022
- ❖ Launch by May 1, 2022

## X. Proposal Guidelines

The proposal should address the following:

### Qualifications

- Briefly describe your organization in terms of its history, staffing, location and senior management.
- Provide the URL for three web sites you have produced for similar projects; briefly describe the work done by your firm as it relates to the requirements of this RFP, particularly those listed in Vendor Preferred Experience and/or Skillsets section.
- Provide current contact information for three former or current clients.
- Include an affirmative statement that neither the proposing company nor its employees is/are presently debarred, suspended, declared ineligible or voluntarily excluded from participation in transactions with any department or agency of the Federal government or any of the State governments.

**Provide any additional information, designs and ideas that you feel would be helpful to the operation and functionality of the websites.**

## Costs

Please provide a detailed cost proposal which includes and identifies all labor and materials required for the services and deliverable described in your proposal. If your price excludes certain fees or charges, you must provide a detailed list of excluded fees with a complete explanation of the nature of those fees.

### **Workplan**

Please provide a workplan identifying the various tasks involved in the creation of the deliverable, including correction of any defects for a period of at least ninety days after the launch date, and a timeline for those tasks which correlates with the timeline which set out above. If subcontractors will be used for any portion of the work, they must be identified by name along with a description of the work to be subcontracted.

**Provisions of this RFP and the successful proposal may be incorporated into the resulting contract.**

## **XI. Proposal Process**

**Questions will be accepted** until January 14, 2022 and should be sent by e-mail to [procurement@xerces.org](mailto:procurement@xerces.org); answers to general questions will be sent to all interested parties. ONLY THOSE QUESTIONS SENT AS DIRECTED WILL BE ANSWERED; NO PHONE CALLS OR MESSAGES DIRECTLY TO XERCES STAFF WILL BE ACCEPTED.

**Proposals must be submitted** as an attachment to an e-mail to [procurement@xerces.org](mailto:procurement@xerces.org) and received on or before Tuesday, February 1, 2022 at 5:00 p.m. Pacific Daylight Time. Proposals received after this date may not be considered.

**Proposals will be evaluated** on the following criteria: (a) the extent to which the proposal meets the needs identified in this RFP; (b) experience with creating sites with multiple interactive features that interface with a backend database; (c) experience working with biological data and building species observational databases; and (d) pricing which is reasonable and competitive.

**XERCES RESERVES THE RIGHT TO ACCEPT OR REJECT ANY OR ALL PROPOSALS AND TO AWARD A CONTRACT OR CONTRACTS WHICH XERCES DEEMS, IN ITS SOLE DISCRETION, IS/ARE IN XERCES' BEST INTERESTS. COSTS OF DEVELOPING THE PROPOSAL ARE SOLELY THE RESPONSIBILITY OF THE PROPOSER. ALL MATERIALS SUBMITTED IN RESPONSE TO THIS REQUEST FOR PROPOSAL BECOME THE PROPERTY OF XERCES AND WILL NOT BE RETURNED.**