



<https://www.openwings.org/>

Collaborator Agreement

## 1. About the Project

The goal of the OpenWings Project (“OpenWings”) is to combine existing museum tissue resources with cutting edge genomic techniques (targeted enrichment of UCE loci) to collect data from the roughly 10,560 named species of birds and to infer a time-calibrated evolutionary hypothesis for birds using these data. A secondary goal of the project is to release UCE data to the public for use in other research projects at lower taxonomic levels (e.g. species, genus, family, and order; see **Data Sharing Policy** and **Restrictions on Data Use**).

## 2. What We May Request from Institutions and Institutional Collaborators

For most institutional collaborators, we have already contacted the appropriate curators and collections managers to discuss the goals of our project and terms associated with tissue sharing. The general terms of these agreements are that we will attempt to process tissues of high priority for collaborating institutions, but that we will still release the data collected from these tissues to the public according to both our **Data Sharing Policy** and under our **Restrictions on Data Use**. If you would like for your institution to join OpenWings, please contact us at [tissues@openwings.org](mailto:tissues@openwings.org).

## 3. What We Will Provide

The goal of OpenWings is to upload, for public use, raw-read sequence data from sequencing libraries of birds that have been enriched for a set of ultraconserved element loci (*sensu* Faircloth et al. 2012; 10.1093/sysbio/SYS004). We will upload these data for permanent archival by the NCBI Sequence Read Archive (SRA), and we will provide easy-to-use links to all of these data from [www.openwings.org](http://www.openwings.org). Data that we upload will generally be from paired-end, 150 bp reads collected using Illumina sequencing instruments, these data will have been validated for species identity and checked for contamination, and these data will be provided with metadata that allow individual users to clean and trim them for downstream bioinformatic processing.

## 4. Data Sharing Policy

OpenWings will provide raw-read sequence data from libraries enriched for ultraconserved element loci for use by the public in research projects that focus on birds at or below the species, genus, family, and order levels of taxonomy. We will not restrict the use of these data by research

groups in any way, nor will we manage the use of these data among different research groups. We will provide these data on a first-come, first-served basis.

## 5. Restrictions on Data Use

The primary investigators of OpenWings reserve the right to publish studies using the data collected at taxonomic levels above order (e.g. interordinal and higher levels), and to infer and time-calibrate phylogenies using the entire complement of data collected from all bird species before these data are used by other investigators for similar purposes.

## 6. Institutional Recognition and Secondary Loans

When we use tissues loaned to the OpenWings project, we will recognize the originating institution in all publications, data uploads, brochures, etc. using the appropriate museum code and sample accession numbers. We will not make secondary loans of material loaned to OpenWings or allow use of these materials in other projects without permission of the original lender, consistent with the loan terms specified by each institution.

We recognize that the collection of specimen and tissue resources represents the outlay of an extraordinary amount of funding over many years, as well as hard work by thousands of museum scientists. To maximize this return on investment, the value of tissues loaned to OpenWings, and the investment of public funds from the National Science Foundation in our project, we are creating a collection of sequencing libraries we are generating from loaned material. Loan conditions of originating institutions will be logged in the OpenWings database, and we will either: 1) return prepared libraries to the originating institution, or 2) archive aliquots of sequencing libraries in the Genetic Resources collection of LSU. Loans of these libraries will be made available consistent with the original loan conditions. If secondary loans of sequencing libraries are not compatible with the conditions of the original loan, we will direct requests for library aliquots to the originating institution prior to making libraries available to requestors. For all approved uses, any data developed using an archived sequencing library must be publicly archived with a link to the voucher specimen (also see **Data And Library Use Requirements**, below).

## 7. Authorship

Researchers that use data from OpenWings for studies below the ordinal level should determine authorship according to their own policies. OpenWings investigators make no claims to authorship of these studies (but see **Data And Library Use Requirements**, below).

Individuals and institutions contributing material to OpenWings can elect to become part of the **The OpenWings Consortium**. The OpenWings Consortium will be included in the authorship line of all publications produced as part of this project, unless the editorial policy of the journal precludes this (in which case The OpenWings Consortium will be acknowledged in some way). The OpenWings Consortium will then link to and/or provide a description of the role(s) of particular individuals as part of the overall project (e.g. **Contributed Tissues**: Jane Doe, John Smith;



**Contributed Analyses:** Bob Jones; Sheila Jonson). Separate authorship on OpenWings research products may be extended to individuals providing a substantial intellectual contribution.

## 8. Data and Library Use Requirements

Studies that use data, libraries, or other resources generated by OpenWings should acknowledge support from the following National Science Foundation grants: DEB-1655559, DEB-1655624, DEB-1655683, DEB-1655736.

We also request that authors of research products using these resources return information to OpenWings regarding publication/presentation of their work so that we can track the impact of this research project. We will provide easy-to-use forms for this purpose.

We are preparing several manuscripts that all studies using resources from OpenWings should cite. We will update this document with citation information once these manuscripts are citable.

## 9. Major Participating Institutions

- [American Museum of Natural History](#) (Brian Smith)
- [Australian National Wildlife Collection](#) (Leo Joseph)
- [University of Minnesota / Bell Museum of Natural History](#) (Keith Barker)
- [UW / Burke Museum of Natural History and Culture](#) (John Klicka)
- [Bruce Museum](#) (Dan Ksepka)
- [Field Museum of Natural History](#) (Shannon Hackett, John Bates, Ben Marks)
- [LSU / LSU Museum of Natural Science](#) (Brant Faircloth, Robb Brumfield, Carl Oliveros)
- [Moore Laboratory of Zoology](#) (John McCormack)
- [Museu de Zoologia da USP](#) (Luís Fábio Silveira)
- [University of Florida](#) (Rebecca Kimball, Ed Braun)
- [University of Kansas Biodiversity Institute](#) (Rob Moyle)
- [NMNH, Smithsonian Institution, USGS Biological Survey Unit](#) (Terry Chesser)
- [University of Alaska Museum of the North](#) (Kevin Winker)

