FEATHER SAMPLING PROTOCOL
2020 Season

The Bird Genoscape Project welcomes feathers from any migratory or resident species, collected any time of the year, including migration. However, if you would like to prioritize your local efforts, the categories below lists our species of emphasis (Category I and II are higher priority):

Category I: Species for which we are currently building population-specific range maps. We are actively collecting samples from all stages of the annual cycle.
- American Robin (AMRO)
- Canada Warbler (CAWA)
- Kentucky Warbler (KEWA)

Category II: Species for which we have completed building population-specific range maps. We are specifically interested in additional migrating and wintering samples:
- American Redstart (AMRE)
- Common Yellowthroat (COYE)
- Hermit Thrush (HETH)
- Painted Bunting (PABU)

Category III: Species for which we will build population-specific range maps as funding becomes available. We are actively collecting samples from all stages of the annual cycle:
- American Goldfinch (AMGO)
- Audubon’s Warbler (AUWA)
- Black-and-white Warbler (BAWW)
- Blackpoll Warbler (BLPW)
- Black-capped Chickadee (BCCH)
- Black-headed Grosbeak (BHGR)
- Carolina Wren (CARW)
- Chipping Sparrow (CHSP)
- Dark-eyed Junco (DEJU)
- Fox Sparrow (FOSP)
- Gray Catbird (GRCA)
- Hooded Warbler (HOWA)
- Indigo Bunting (INBU)
- Lincoln’s Sparrow (LISP)
- Mountain Chickadee (MOCH)
- Myrtle Warbler (MYWA)
- Nashville Warbler (NAWA)
- Northern Waterthrush (NOWA)
- Orange-crowned Warbler (OCWA)

Species: MacGillivrays’s Warbler (MGWA), Ovenbird (OVEN), Western Tanager (WETA), Willow Flycatcher (WIFL), Wilson’s Warbler (WIWA), Yellow Warbler (YWAR), Oregon Junco (ORJU), Pine Siskin (PISI), Prothonotary Warbler (PROW), Red-eyed Vireo (REVI), Ruby-crowned Kinglet (RCKI), Rusty Blackbird (RUBL), Slate-colored Junco (SCJU), Song Sparrow (SOSP), Spotted Towhee (SPTO), Swainson’s Thrush (SWTH), Tennessee Warbler (TEWA), Virginia’s Warbler (VIWA), Warbling Vireo (WAVI), White-eyed Vireo (WEVI), White-crowned Sparrow (WCSP), White-throated Sparrow (WTSP), Wrentit (WREN), Wood Thrush (WOTH), Yellow-breasted Chat (YBCH)
FEATHER COLLECTION PROTOCOL

When tail feathers are pulled, a small amount of skin cells remain attached to the quill of the feather. These skin cells are a valuable source of DNA that can be used to determine the population origin of an individual bird. Moreover, a portion of the feather itself can be used for stable isotope analyses, which can provide important information on the location (at least latitude) where the feather was grown. We recommend that two tail feathers be collected during the banding process from each bird (excluding woodpeckers for which tail feathers are critical to their foraging ability). **There is no need to collect feathers from the same individual more than once during the same season.**

1. Collecting Feather Samples

Before taking any feather samples, make sure that your hands are clean. If you are collecting samples from multiple birds, wash or sanitize hands between each collection.

To collect a sample, pluck one central and one outer tail feather (e.g., R1 and R6). To pluck the feathers, just hold them firmly, relatively close to the base, and pull gently. See illustration.

Do not touch the quill, as the DNA is extracted from the skin cells attached to it. **There is no need to collect feathers from the same individual more than once.**

2. Metadata Requirement

Place the feathers from each bird into one of the BGP provided pre-printed envelopes and fill out metadata. Using your own envelopes is fine, but please use **coin-sized envelopes** and ensure that each envelope contains the required information listed below.

On each envelope, please provide the following information:

- Species name
- Band number
- Date (Please use letters for the month instead of numbers, e.g. Apr 25, 2019)
- Station and location codes, or nearest town and city
- Age, sex and breeding condition (as determined by brood patch or cloacal protuberance)
- Whether or not the bird was a recapture

*UCLA # will be assigned once the samples are received

On a separate paper or in an email, please also provide the following location details:

- Nearest town, state/province, country
- GPS coordinates in decimal format

3. Feather Storage

Feathers are preferably stored in 4°C refrigerators but can also be stored at room temperature away from direct sunlight. Please store samples until the end of field season to minimize shipments (see shipping instructions below).
4. Sample Shipment

When you’re ready to mail your samples, please email Teia Schweizer (teia@rams.colostate.edu) with the following information and she will email you a prepaid FedEx or UPS label:

- Approximate weight of package
- Preference for UPS or FedEx label
- Return address
- Contact number

If using your own label please mail the samples to the following address:

Teia Schweizer  
Colorado State University  
200 W. Lake Street  
Campus Delivery 1878  
Fort Collins, CO 80523

**Copies of the following Permits must be included in the shipment:**

For domestic shipments of samples collected within the U.S., please include:
1. A copy of your (the collector’s) federal bird banding permit
2. A copy of your (the collector’s) state scientific collecting permit

For domestic shipments of samples previously imported to the U.S., please include:
1. A copy of your (the collector’s) federal bird banding permit
2. A copy of your (the collector’s) state scientific collecting permit
3. A copy of the importer’s USDA transit permit #138961 *

For shipments from outside of the U.S. please include:
1. A copy of the importer’s USDA import permit #138972 *
2. A copy of the importer’s USFWS Migratory Bird import/export permit *
3. A copy of your (the collector’s) federal bird banding permit
4. A copy of your (the collector’s) provincial scientific collecting permit (for Canada)
5. USFWS Form 3-177 (Declaration of importation or exportation of fish or wildlife) – can also be filled online at https://edecs.fws.gov/  
6. FedEx Declaration of Biological Shipments  
7. FedEx Commercial Invoice  
8. CITES export permit as necessary

* forms provided by the Bird Genoscape Project

Thank you very much for your participation in this important project! If you would like to collaborate on a particular species or learn more about the current sample distribution for our target taxa, please visit our website: