



## THE INSTITUTE FOR BIRD POPULATIONS

P.O. Box 1346

Point Reyes Station, CA 94956-1346

(415) 663-1436 FAX (415) 663-9482

April 6, 2009

Greetings MAPS operators,

We thank those of you have participated in the international [avian influenza monitoring and research](#) effort to collect cloacal swab and feather samples to help identify the transmission paths of avian influenza virus (AIV) among North American migratory birds and their [relationship to human influenzas](#). In total, over the last three years, we enlisted 148 operators running 276 MAPS stations to sample for influenza, and successfully collected over 20,000 cloacal swab samples and over 35,000 feather samples, from 244 species, in 37 states.

To date, UCLA's Center for Tropical Research has tested 1388 samples that were collected along the Pacific flyway in 2006 and 2008. They reported a detection rate of ~3% for Influenza A. Progress is also being made in developing techniques to distinguish between the influenza sub-types.

We ask that you continue to provide cloacal swab and feather samples or, if you have not yet participated in this effort, please [volunteer to provide samples this year](#) – this is important research.

Furthermore, [feather sample analyses](#) have increased our knowledge of [landbird population genetics and migratory connectivity](#) (i.e., where distinct breeding populations overwinter). Clearly, the sampling effort has already proved useful to bird conservation and holds great potential for future research. It is imperative, however, not only to continue current monitoring efforts but also to expand the extent of the sampling network. So, please sign up if you haven't already done so.

The project is spearheaded by Dr. Thomas B. Smith of the Center for Tropical Research at UCLA, in collaboration with Johns Hopkins University, and coordinated in the field by IBP. This document and additional information on flu sampling is available at the [IBP AIV web page](#). Also check out [UCLA's home page on the AIV project](#).

We will continue this sampling effort and hope to add AIV-sampling at more MAPS stations during the 2009 season. Our objective is to facilitate the collection of cloacal swab and feather samples from as many birds at as many MAPS banding stations as possible.

A number of questions may occur to you as you decide whether or not to participate:

*What is the current status of AIV in Asia and North America? Wild birds provide the natural reservoir of Influenza type A viruses that can infect humans, birds, pigs, horses,*

and many wild mammals. These viruses occur naturally in birds in a great assortment of sub-types; at least 144 are currently identified. Most subtypes are classified as LPAI (low pathogenic avian influenza) and are responsible for mild influenza infections. Others, such as the H5N1 virus, now observed in Southeast Asia and the Middle East, are HPAI (high pathogenic avian influenza) viruses that can rapidly evolve to potentially cause influenza pandemics.

*Can landbirds carry and transport HPAs?* Little is known of the identity or frequency of sub-types that are carried by landbirds, especially Neotropical migrants, or how those sub-types (and polymorphisms thereof) are geographically distributed. Insight into the current distribution of viruses within and between bird species, collected during this project, will help epidemiologists predict the spread of any new virus subtypes that become introduced to North America. See the [update from UCLA](#) for more information.

*What is the health risk of handling wild birds?* – To date no human has been diagnosed as having become infected with avian flu from contact with live wild birds, and the highly pathogenic H5N1 variant has not been detected in the Western Hemisphere. It is important to realize, however, that a great many of the birds you have handled and banded in past years have carried other avian influenzas. Thus, normal hygiene precautions, that include sanitizing hands before hand to mouth contact and before touching food, should always be taken when banding birds. The sampling kits contain all recommended safety gear. See the [IBP AIV web page](#) for links to additional documents on safety procedures during bird handling.

*Will cloacal swab sampling significantly increase handling time?* – The cloacal sampling should take about one minute per bird. You will also need to transcribe onto a viral sampling data sheet the bar code from the vial and band number, species, age, sex, date, and location information from the banding data sheet.

*What is the specific protocol for viral sampling?* – Avian flu viruses are present in the intestinal and cloacal wall cells and are shed into the feces. Cloacal swabbing involves inserting a small cotton swab into the cloaca and does not hurt the bird. It is a rapid and effective viral sampling method because it provides for the collection of both fecal material and, more importantly, cloacal wall cells that may contain high numbers of virus particles. An instructional video and detailed written protocols are available at the [IBP AIV web page](#), and IBP and UCLA personnel will be available for any advice or insight needed.

*How do I obtain sampling kits?* – All participants in this effort will be provided with viral swab kits which will be used to take cloacal swab samples from as many captured birds as possible. The viral swab kits will contain bar-coded 2 ml sample vials with ethanol (a medium for preserving the virus strains), individually packed, 1 mm, sterile dacron swabs, cutting pliers to snip the shaft off of the swabs after the tip is placed in the vial, a felt-tipped pen to mark the vial, cardboard sample boxes to hold vials, and protective and safety equipment including a quick-drying antiseptic gel to wash hands between each sampling session. The kits will also contain prepaid shipping labels to ship the samples back to UCLA for analysis, once the season is completed.

*Which birds should I sample?* – The focus of sampling should be adult birds of all species captured at a station, except for hummingbirds which are too small to be sampled. All recaptured birds, including within-year recaptures (repeats), should, if possible, be resampled to permit detection of new flu variants in the same individual. Moreover, cloacal swab sampling best detects virus that are actively shedding, which only happens over a limited period of time. Hatching-year birds should also be sampled in order to identify any influenza variants with which they may have become infected locally. Additionally, feathers will be pulled from sampled individuals. At any stage in the season large numbers of birds may have to be processed from a single net run. At these times, bird-safety considerations dictate minimal handling time such that viral and feather sampling should be suspended. Based on sampling rates from previous years' effort, our goal will be to sample about one-third of the captures at each station.

We strongly urge you participate in this timely and critically important project. We believe that it can provide further justification for participating in the MAPS program and may help you leverage additional funding for the operation of your station. If you plan to join us, detailed protocols and forms can be downloaded from the [IBP AIV page](#).

We have attached a registration form to fill out if you are interested in participating in this project (you need not fill out a form if you have already participated with us, but let us know that you are sampling so that we can make sure you have the necessary equipment). Please send the form or notification of your intent to sample via email to Peter Pyle ([ppyle@birdpop.org](mailto:ppyle@birdpop.org)) and/or phone him at 415-663-2053 if you have any questions. If you have any questions regarding the technical aspects of this project, please do not hesitate to email Dr. Phil Nott ([pnott@birdpop.org](mailto:pnott@birdpop.org)) or telephone him at 415-663-2050.

Thank you very much for your participation in this critically important work.  
Sincerely,

Rodney Siegel, Executive Director  
M. Philip Nott and James F. Saracco, MAPS Co-Program Directors  
Danielle R. Kaschube, MAPS Coordinator  
Peter Pyle, MAPS Avian Flu Sampling Coordinator