BASH Strike Sample Collection, Shipping and RMI Entry Training Module

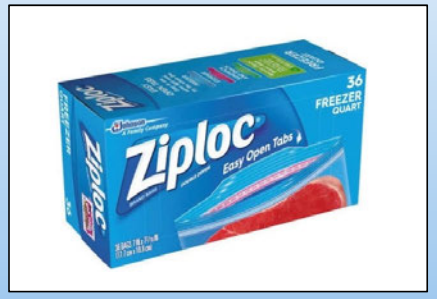
Why is it Important?

- The installation Bird/Animal Aircraft Strike Hazard (BASH) Program's BASH Working Group relies on installation specific data to make targeted mitigation decisions to reduce hazardous species on an airfield.
- Of this data, the species involved in a strike is the most important data set available as it tells the installation BWG which species are being struck (i.e. which species is the most hazardous to a safe flying environment).
- Without this data you are guessing at the most hazardous species and how to mitigate.
- **Be part of the safety solution by reporting all strikes and submitting all samples!**

Contents of Strike Collection Kit

- Re-sealable Poly Bags (e.g. Ziploc storage bags)
  - Freezer grade is recommended
  - Quart-size for wiped snarge samples
  - Larger if storing a carcass in a freezer
- Permanent Marker (e.g. Sharpie)
- Alcohol Wipes
  - Pre-packaged or Paper Towels and 70% Ethyl or Ethanol Alcohol in a spray bottle
  - Minimum acceptable alcohol level is 60%
  - No bleach should be used for sample collection, it destroys DNA
- Pair of Tweezers for plucking feathers
- Cotton Swabs (e.g. Q-tips) for getting hard to reach snarge
- Pair of Scissors to cut off a wing or feet. Never cut feathers, always pull out.
- Pair of rubber gloves or disposable latex gloves for personal protection
- Eye protection for personal protection
- Hand sanitizer for personal cleaning after completion

This is really all you need for a sample to be properly collected!



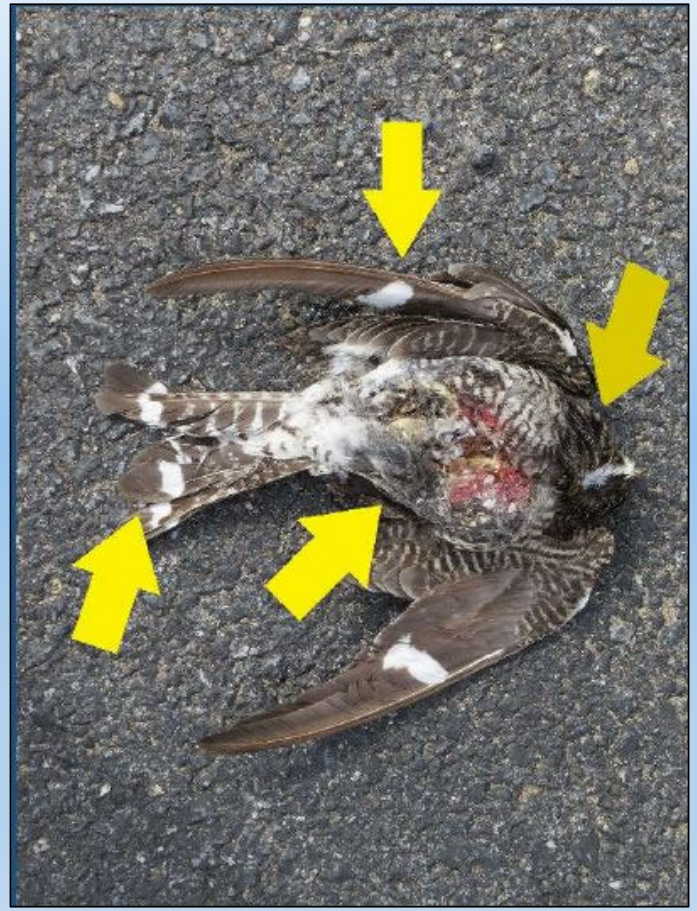
Types of Strikes Samples

- **Full Body Type:**
  - Includes complete body or virtually complete body (head, most of torso, at least one wing, and at least one leg)
  - Are generally found on or near runway
- **Full Body Photo Submission:**
  - Collect entire carcass initially, photograph following parts of carcass. Place something of known size in photos. Ruler is best. Photos may cover more than one body part. Photos should include:
    - Head and beak
    - Back
    - Belly
    - Top and underside of wing
    - Tail
    - Feet
  - Submit photos as part of RMI submission by adding photo/s to Manage BASH Files tab
  - Keep body with RMI number in freezer until ID from photos is confirmed
  - Once confirmed, discard carcass in appropriate manner

Examples on how to correctly stage photos for RMI insertion

Types of Strikes Samples

- **Full Body Feather Submission:**
  - **If Photo ID by Smithsonian was not possible and further analysis is required.**
  - **Thaw out carcass that you have in freezer.**
  - **Once unfrozen, pluck (or pull-out) but do not cut, feathers from several areas of the body like the photo.**
  - **Collect feathers from the tail, wing, breast, back, and head.**
  - **Include additional feathers that have strong colors and patterns.**
  - **Do not clean off any flesh or blood that may remain attached to feathers.**
  - **Dry feathers and bag in poly bag and ship to Smithsonian for ID.**
  - **Properly discard the rest of the carcass.**



Types of Strikes Samples

- **Blood, flesh, feather remnants**:
  - Collect feathers, trying to gather many samples of different types as possible. If only a few collect all of them. Place in poly bag.
  - Use alcohol wipes or paper towel and alcohol solution to wipe up blood/tissue sample and place in poly bag
- **Blood only:**
  - Use alcohol wipes or paper towel and alcohol solution to wipe up blood/tissue sample and place in poly bag

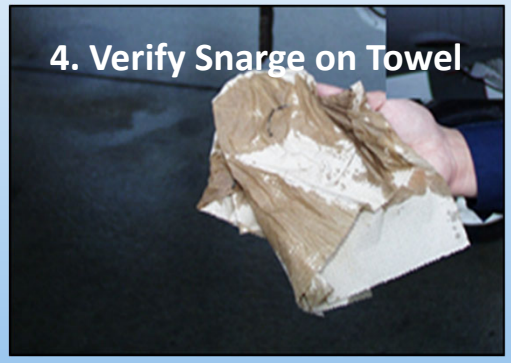
- **Dry out all samples before sealing and shipping to Smithsonian to prevent fungal/bacterial growth and sample spoilage.**
- **Enter Strike into RMI**
- **Include RMI Shipping Sheet with shipment.**

How to take a Snarge Sample

1. Find the Snarge

2. Spray with 70% Alcohol

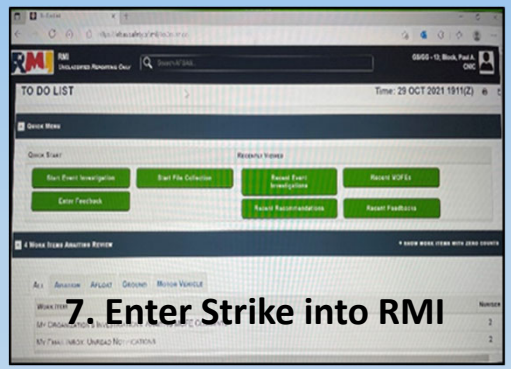
3. Wipe with Paper Towel



4. Verify Snarge on Towel

5. Place Towel in Poly Bag

6. Let Paper Towel Dry-out before shipping



7. Enter Strike into RMI

8. Ship ASAP include RMI Shipping Sheet

RMI: Lessons Learned

(from Bird Strike Brief 2021)

- CNIC is not Convening Authority for aircraft mishaps—the Controlling Custodian is.
- If the report states that remains were found/collected, submit remains to Smithsonian for analysis and tracking.
- Always ship remains with an RMI BASH Shipping Sheet.
- All remains submitted to the Smithsonian must have a corresponding BASH event in RMI.
- Factors and Recommendations are not required for standard BASH reports.
- Do not enter "Submitted for tracking purposes" or something similar as a Recommendation. Put that in the Investigation Conclusions section.
- Do not dual-report USAF bird strikes on Navy bases: one event = one report
- We cannot mandate reporting for strikes on non-DoD, foreign or contractor aircraft. If incident details and remains can be obtained, then submit report. Facilitate data sharing between different airfield users.
- USDA cannot release reports, so add an additional Navy investigator (ASO).
- If USDA enters a HAZREP, ensure the ASO monitors Smithsonian entry of species ID so message release is not delayed.
- No longer required to enter LT (b) (6) [redacted] as an Investigator for QC purposes.

Data Fields for RMI Strike Reports:

(from Bird Strike Brief 2021)

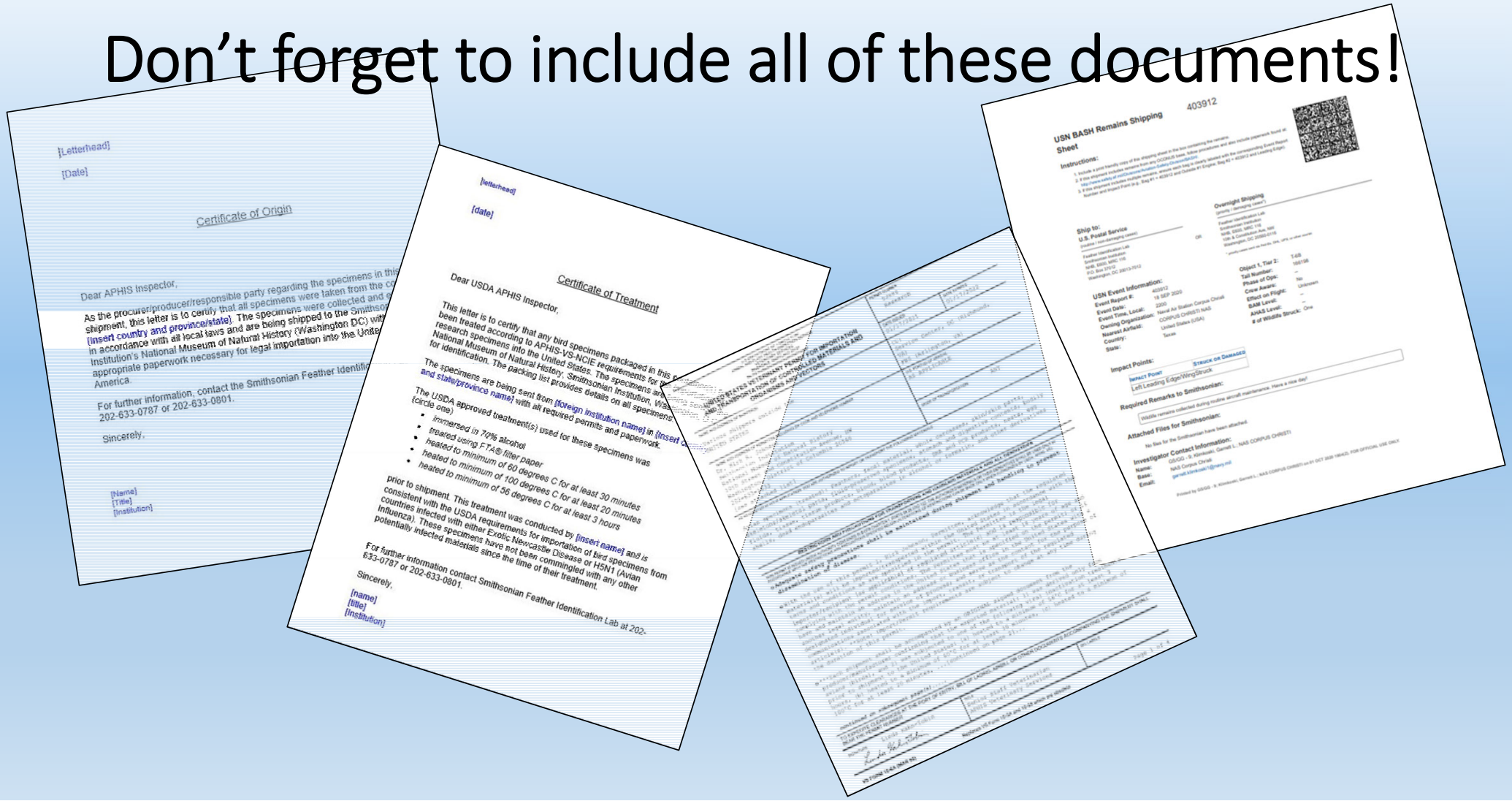
- Date of strike
- Time of strike
- Location of Aircraft when Struck
- Altitude of Aircraft when Struck
- Origin of Flight (airfield)
- Aircraft Organization
- Model of Aircraft
- Phase of Flight
- Weather conditions
- Location of Strike on Aircraft
- Damage Description and Estimate
- Effect on Flight
- Species ID (Smithsonian)
- Other notes**
- Photos of full carcass samples

IMPORTANT NOTE: Enter RMI report regardless of how much of the above data that are available. The above list is the best case scenario of data. For example, if you find a carcass on the airfield and can not attach it to an aircraft, enter it as a strike submitting your best information and submit the strike sample to Smithsonian.

OCONUS Sample Shipping Steps

1. Place one dried bird strike sample (snarge or feathers) in a sealable poly bag (e.g. Ziploc) and seal. DO NOT MIX feathers from different carcasses or snarge from different impact points in the same bags, there may be different species involved.
2. Place sample or samples in shipping container with the following items:
   a. Certificate of Treatment
   b. Certificate of Origin
   c. USDA APHIS permit (copy)
   d. RMI BASH Shipping Sheet
   e. Include any other pertinent information such a secondary contact information
3. Secure all items in mailing container (box or envelope) and ship

Don’t forget to include all of these documents!



Smithsonian Shipping Addresses

Address for shipping carrier (sent via FedEx, UPS, or DHL):

Feather Identification Lab

Smithsonian Institution

NHB E600, MRC 116

10th & Constitution Ave NW

Washington, DC 20560-0116

Address for ALL US Postal service mail:

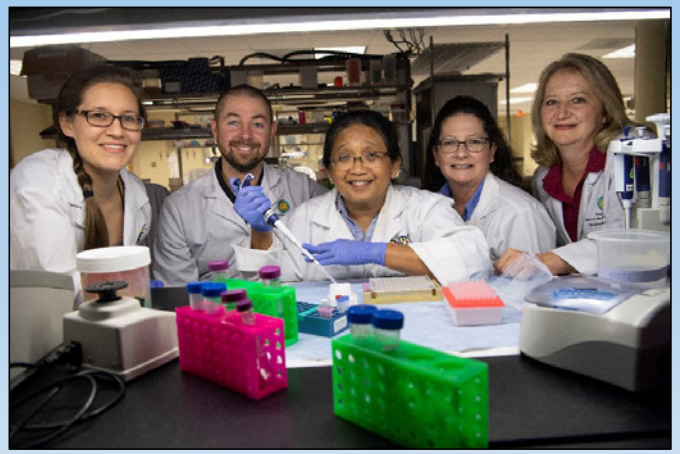
Feather Identification Lab

Smithsonian Institution

NHB E600, MRC 116

P.O. Box 37012

Washington, DC 20013-7012



Base Contacts

(Please populate with base specific information, update on turnover)

Examples (include local phone numbers, cell if available, and email)

- ASO
- AM
- ATC
- USDA WS Biologist (if applicable)
- Members of Wildlife Dispersal Team
- Natural Resources Manager or Environmental Lead
- Tenant/Squadron Command contacts
- Others

BASH Program Contacts

- (b) (6) [redacted] -CNIC N32 BASH/NATOPS Program Manager
  - Phone (w): (b) (6) [redacted]
  - Phone (c): (b) (6) [redacted]
  - Email: (b) (6) [redacted] civ@us.navy.mil
- Paul Block-CNIC/NAVFAC BASH Program Natural Resources Lead
  - Phone (w): (b) (6) [redacted]
  - Phone (c): (b) (6) [redacted]
  - Email: (b) (6) [redacted] .civ@us.navy.mil

Additional BASH Contacts

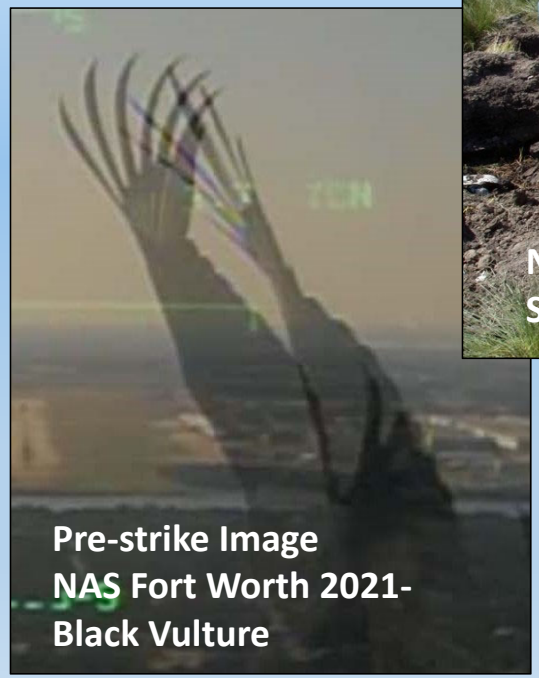
- LT [redacted]-Navy Safety Center; Aviation Facilities Branch Head (Code 113); Flight Deck/BASH/Fuels/ARFF Analyst; Airfield Operations Safety Assessment Team Lead
  - Phone (w): [redacted]
  - Phone (c): [redacted]
  - Email: [redacted].mil@us.navy.mil
- Jim Whatton-Research Assistant, Smithsonian Feather ID Lab
  - Phone (w): 011-202-633-9245
  - Email: whattonj@si.edu
- Risk Management Information (RMI) Help Desk
  - Phone (w): 011-833-637-3669
  - Email: nesd.rmi.fct@navy.mil

Naval Safety Center
Preserving Combat Readiness and Saving Lives

Smithsonian Institution

RISK MANAGEMENT INFORMATION

BASH is a Constant Threat to Flight Safety.
Be Aware, Report Wildlife Observations, and Continue to Support the BASH Program



Pre-strike Image
NAS Fort Worth 2021-
Black Vulture

NAS Kingsville 2007-
Swainson's Hawk

NAS Meridian 2008-
Pectoral Sandpiper

Jordan 2000-
Golden Eagle

NSF Diego Garcia, British Indian Ocean

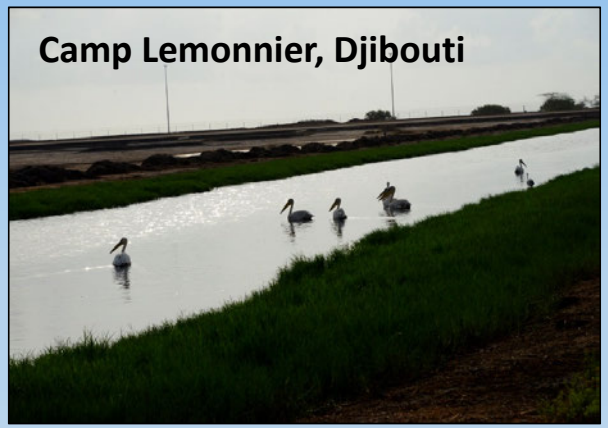
MCAS Iwakuni, Japan

NAS Sigonella, Italy

The End

NAVSTA Rota, Spain

Isa Air Base,
Bahrain


Camp Lemonnier, Djibouti