



Environment and
Climate Change Canada

Environnement et
Changement climatique Canada

Conversation Biology

*Community-based
conservation of wildlife in
Labrador through ongoing
dialogue and sharing
knowledge systems*

Paul MacDonald

CAFF ABC 2018: Community-based monitoring of Arctic biodiversity
Rovaniemi, Finland



Canada

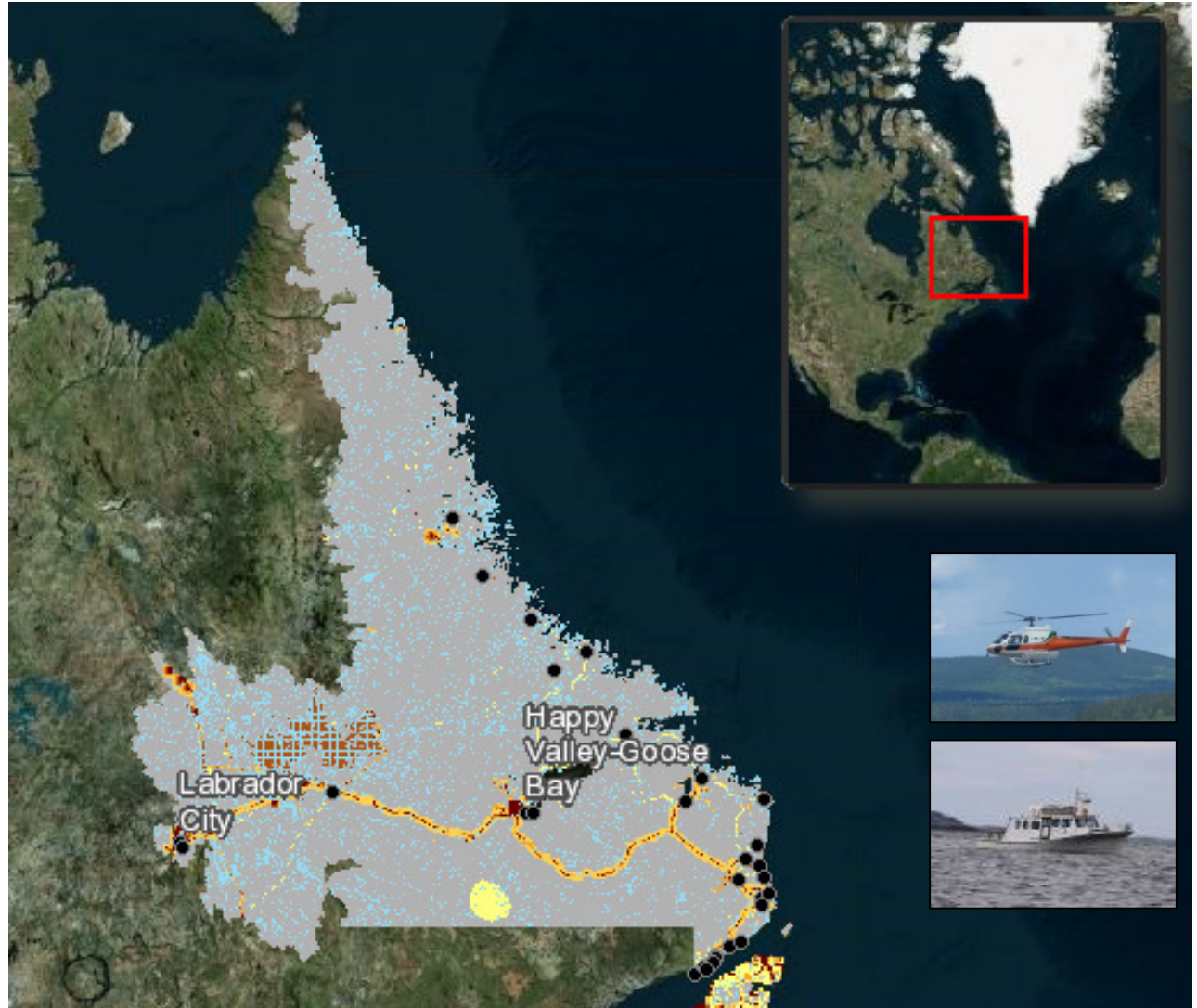


We count birds



Bird Counting Considerations in Labrador

- Size
- Accessibility
- Staff Resources



Labrador Considerations – Indigenous Population

- Three Indigenous groups in Labrador (~ 50% of total population):
 - Innu Nation (First Nation)
 - NunatuKavut Community Council (Southern Inuit)
 - Nunatsiavut Government (Labrador Inuit)



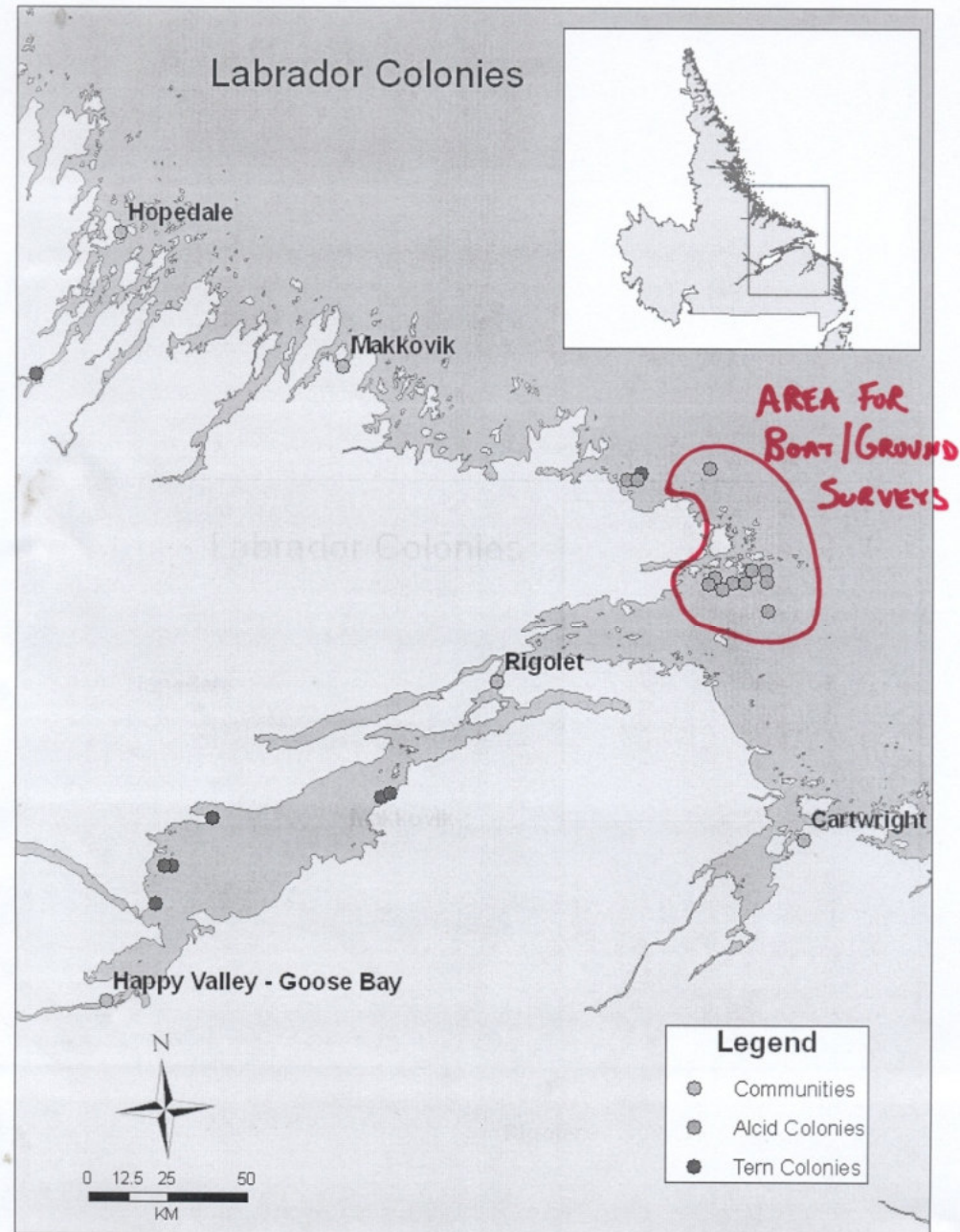
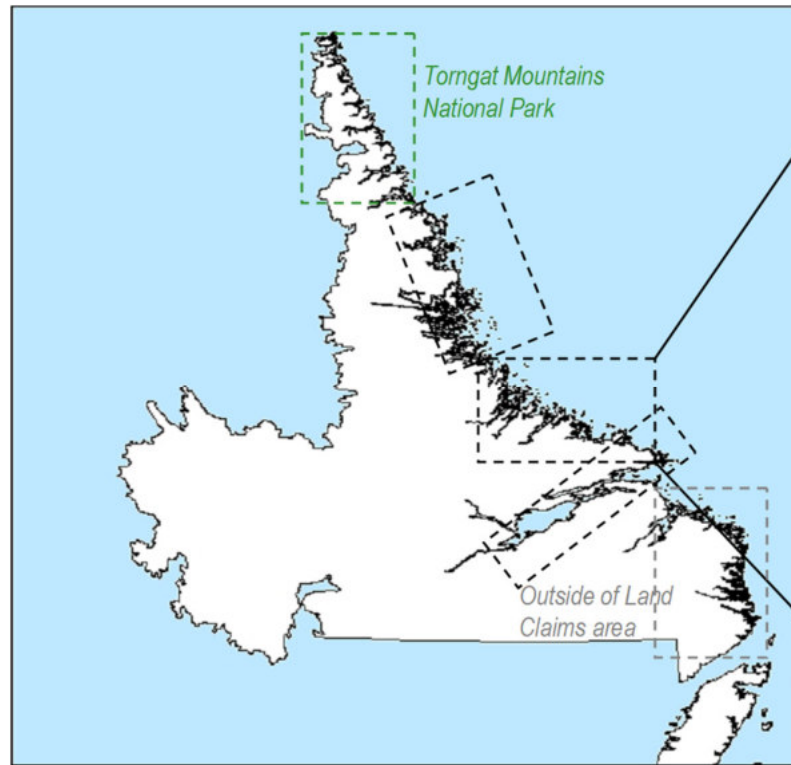
Standard CWS Monitoring



Indigenous Involvement

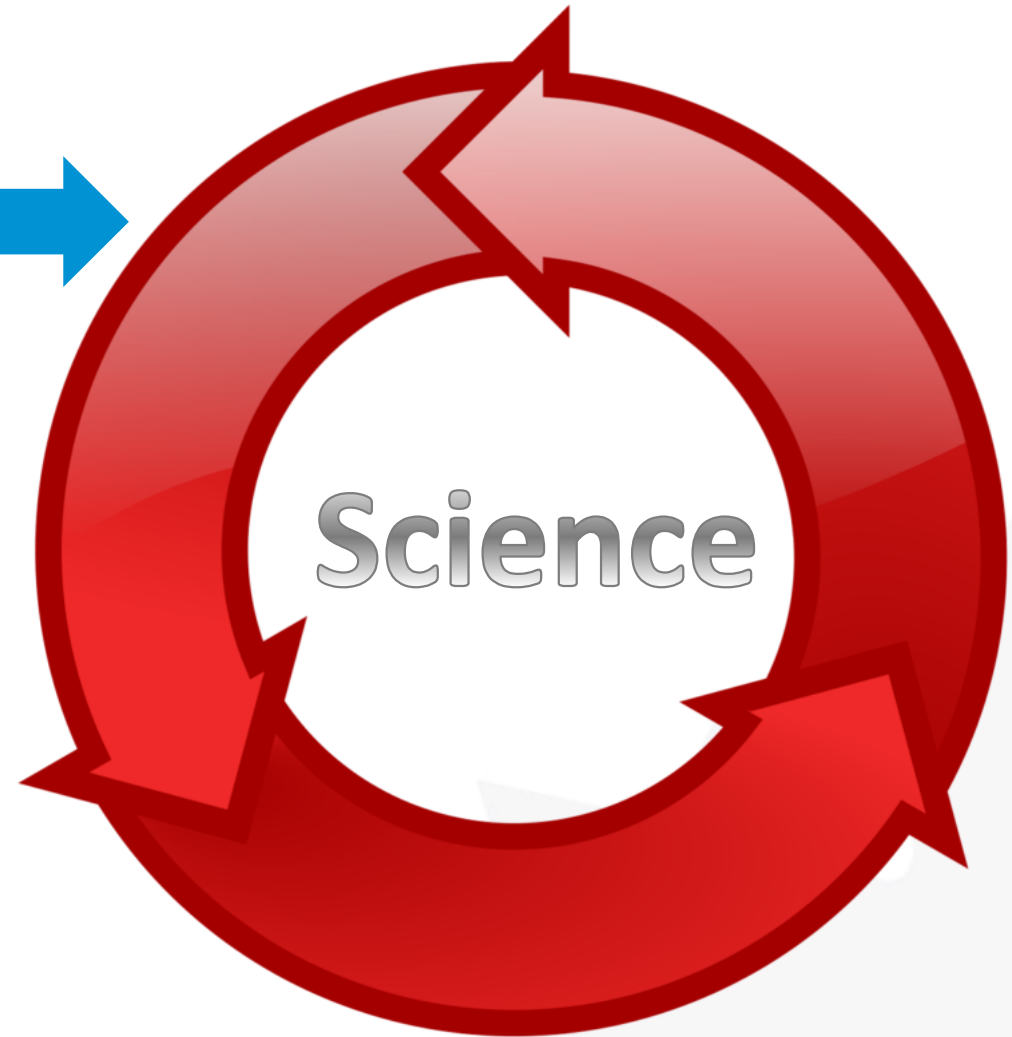
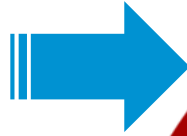


Seabird example...

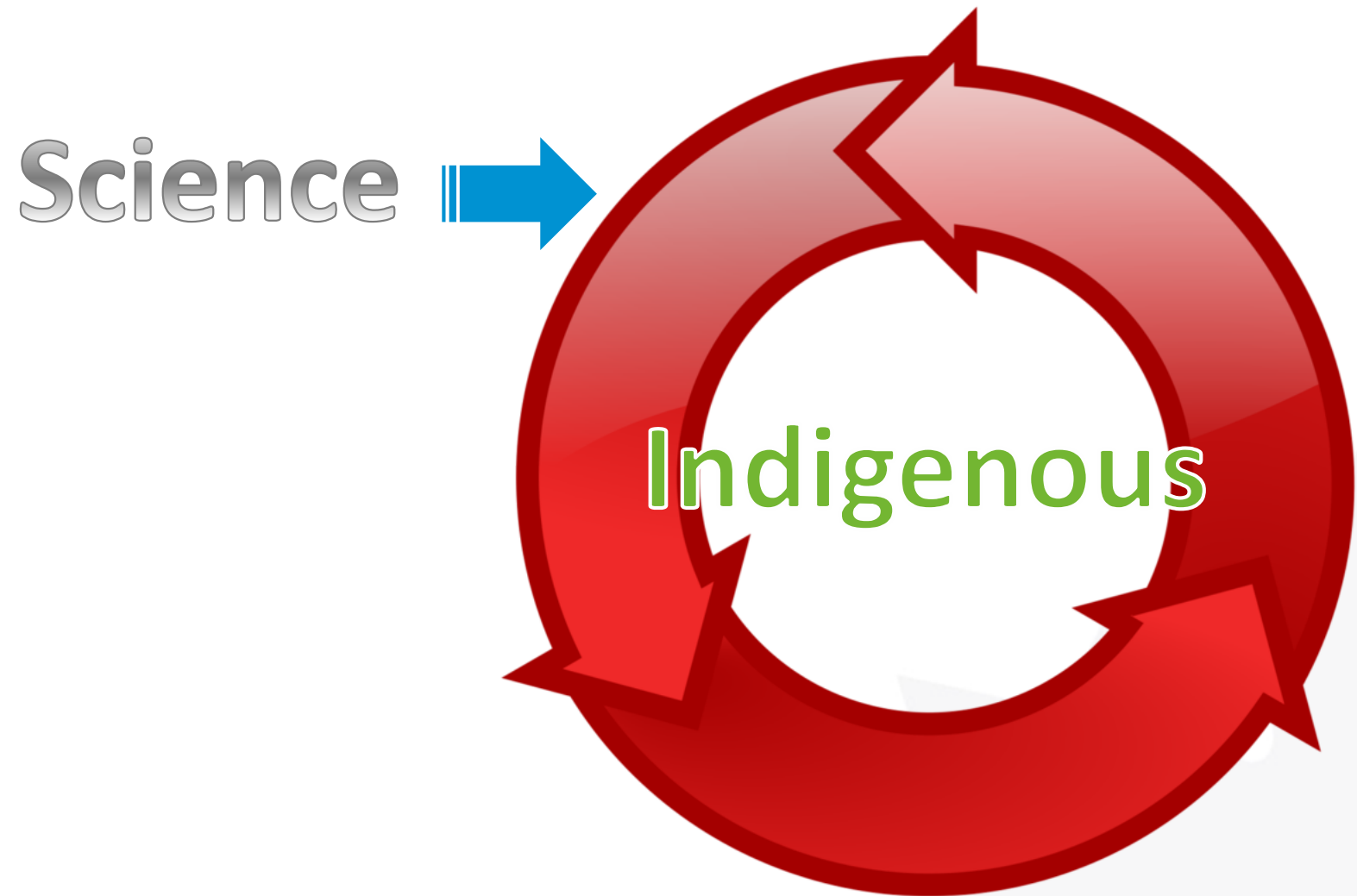


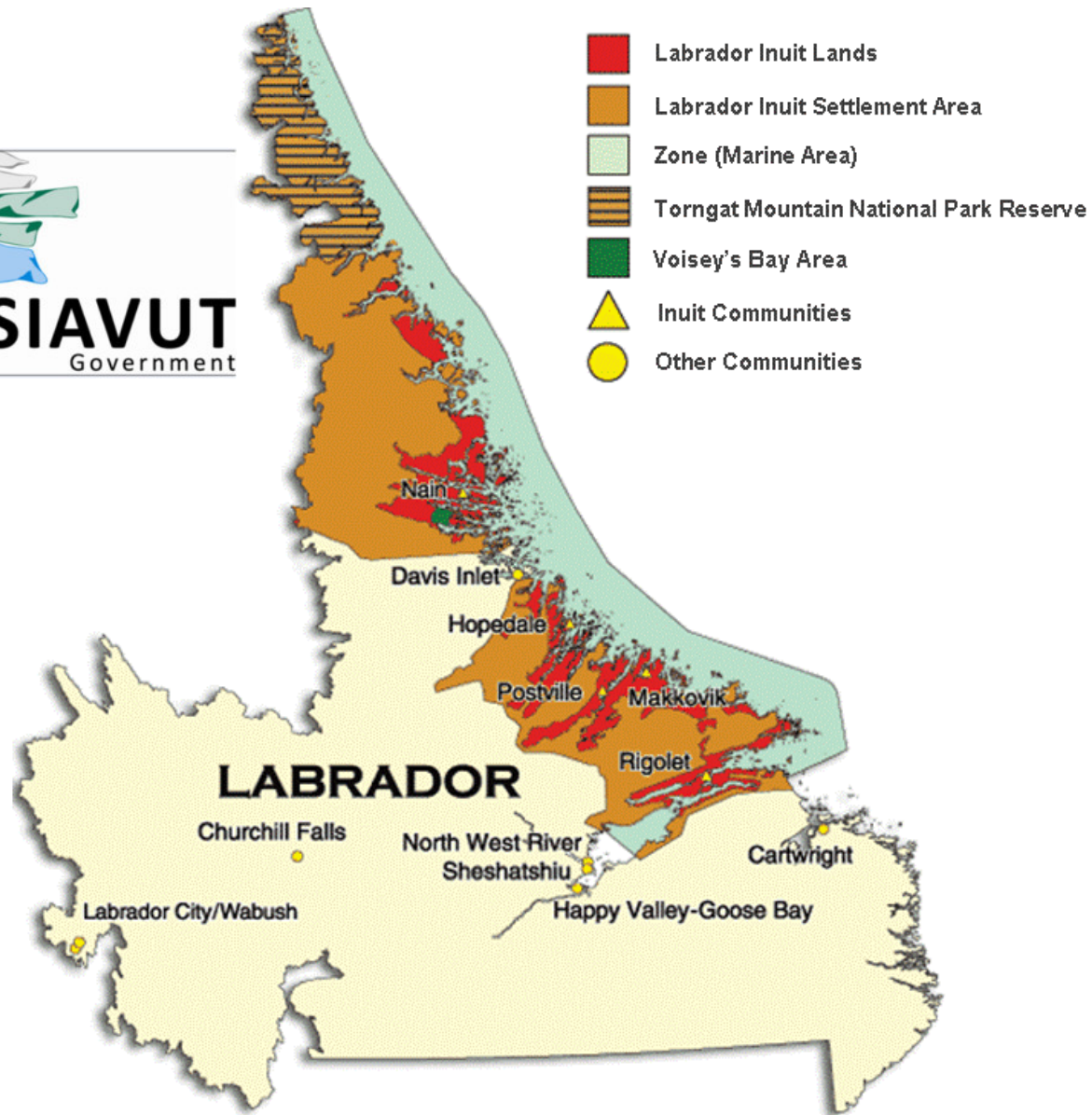
Community-based Monitoring

Indigenous



Community-based Monitoring





Nunatsiavut Community Freezer Program



Community-based monitoring Nunatsiavut “Wing-bee”

- CWS and Nunatsiavut Government are developing a species composition survey which is based on birds donated to the community freezers
 - Species, sex and age composition of harvested birds
 - Truthing and verification of previous surveys
 - Other research / monitoring (e.g “small geese”)
- Nunatsiavut results for Nunatsiavut management



Examples of materials developed

Common waterfowl in Labrador

Freshwater, intertidal, brackish and saltwater habitats

American Black Duck <i>Mittluuk</i> Light head, dark body Black Duck, Wild Duck	Northern Pintail <i>Mittluuk</i> Long neck, dark head Sea Pheasant	Green-winged Teal <i>Gaggak</i> Short neck, dark head Teal, Pie Duck	Canada Goose <i>Niilik</i> Black head and neck White on neck and under Goose, Honker
Ring-necked Duck White ring on bill Black on head Golden on sides Ring-billed Diver	Lesser Scaup Dark head Spoonbill	Greater Scaup Dark head Spoonbill	Common Merganser <i>Palik</i> Red head and neck White on sides of green head Saw bill, Gosard
Red-breasted Merganser <i>Palik</i> Crested head Red on head Small Bird	Long-tailed Duck <i>Aangik</i> Long neck, dark head Oldsquaw, Hound, Winter Duck	Barrow's Goldeneye <i>Katjuk</i> White on neck Whistler	Common Goldeneye <i>Inglutalik</i> White on neck White on sides of green head Lady Bird, Pie Duck
Common Eider Black on head Sea Duck, Shore Duck	Harlequin Duck <i>Kutalik</i> Black on head White on neck Lords and Ladies	White-winged Scaup <i>Pitlutalik</i> White on neck Brass-winged Diver	Surf Scaup <i>Guglutuk</i> Black on head Bottle-nosed Diver
Black Scaup <i>Inglutalik</i> Black on head Gleepy Diver, Black Diver, Whistling Diver			

Photos Courtesy by: Tim Eason, Peter Thomas, Janet Clark, Regine Wells, Bill Hays, Glen Henderson, Chris M. Hall, Paul Harris, Environment Canada

Common Seabirds in Labrador

Gulls and Gannets

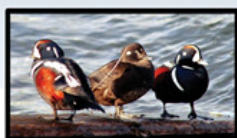
Black-legged Kittiwake <i>Nautak</i> Black on head and neck Tickle Aas	Herring Gull <i>Naujak</i> Black on head and neck Blue-backed Gull	Great black-backed Gull <i>Kullik</i> Black on head Gaddler	Ivory Gull <i>Naujakuk</i> All white White tips Ice Gull, Ice Partridge
Glaucous Gull <i>Naujak</i> White on head, grey on neck Blue Gull	Iceland Gull <i>Naujaluk</i> Black on head and neck White on neck White-winged Gull	Ring-billed Gull <i>Naujaluk</i> Black on head and neck Yellow legs Pond Gull	Northern Gannet <i>Niilikuk</i> Black on head and neck Long and thin bill Gaunt, Gannet

Terns and Auks

Common Tern Black on head and neck Gleanin	Arctic Tern <i>Inlutalik</i> Black on head and neck Gleanin	Caspian Tern Black on head and neck Gleanin	Thick-billed Murre <i>Alpak</i> Black on head and neck Turne	Common Murre <i>Alpak</i> Black on head and neck Murre
Dovekie <i>Alpakutuk</i> Black on head and neck Bullbird	Razorbill <i>Gavlatuk</i> Black on head and neck Tinker	Black Guillemot <i>Pitluk</i> Black on head and neck Pigeon	Atlantic Puffin <i>Kingutuk</i> Black on head and neck Sea Parrot	

Photos Courtesy by: Bruce Stewart, John Channing, Brian Patterson, John W. Wilson, David Colwell, and Tim Eason, Environment Canada

Wing Identification Guide Labrador Region 2014



Introduction

Identifying Species

The first step in wing identification is to determine which species the wing represents. Feather shape, color, pattern and wing size are helpful when distinguishing species. A good place to start is by looking at color patterns or markings on the wing. Some birds have large white patches, green primaries, or black and white tertials. Taking note of these differences will help you determine which species the wing belongs to.

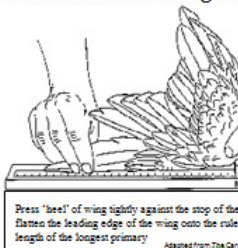
Identifying Sex

In general, male wings for most ducks have more coloration and pattern and are slightly larger than those of females. In some cases, however, adult females and immature males of the same species are often very similar in which case you would need to measure notch length (also referred to as "wing chord"). This measurement is taken from the "heel" of the wing to the longest primary using a long ruler with a stop at the end (illustrated below).

Identifying Age

When determining age it is important to note that if the wing has one or more characteristics of an immature wing, it is considered an immature individual. During the first fall and winter, immature individuals of some species will molt certain wing feather groups; tertials, greater tertial coverts, post humerals and scapulars. You should therefore pay close attention to all feather groups when identifying the age of an individual.

How to Measure Notch Length (Wing Chord)



Wing Anatomy

Flight feathers

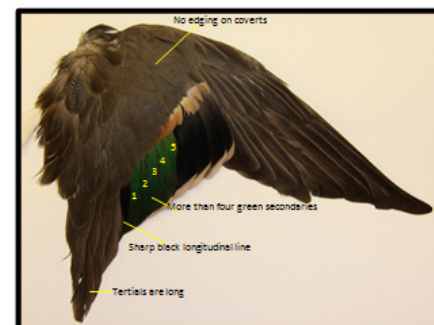
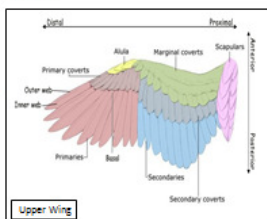
- **Alula** - three feathers found on the "thumb" of the wing
- **Primaries** - nine to ten long flight feathers attached to the "hand"
- **Secondaries** - long flight feathers growing from the "forearm"
- **Tertials** - the most proximal secondaries, usually differ in size, shape
- **Post humerals** - feathers attached to the humerus, found between the secondaries and primaries
- **Scapulars** - feathers of the upper arm found on either side of the breast and primary coverts a rounded wing
- **Axillars** - long feathers growing from the "armpit", found between the spread wing and the body

Wing Coverts

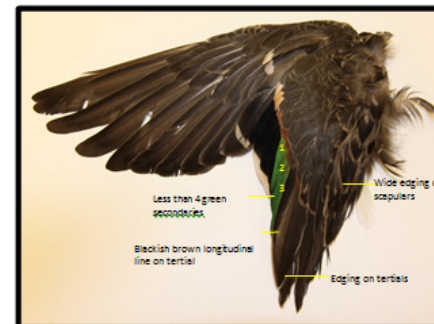
- **Greater coverts** - the first row of feathers overlapping the flight feathers, can be classed as primary coverts, secondary coverts or tertial coverts depending on which flight feathers they cover
- **Middle coverts** - coverts that overlap the greater coverts
- **Lesser coverts** - coverts that overlap the middle coverts
- **Marginal coverts** - coverts that overlap the lesser coverts

Feather Descriptors and Orientation

- **Outer web** - the leading edge of a feather during flight
- **Inner web** - opposite to the outer web and is wider than the outer web
- **Basal** - the base of a feather
- **Distal** - away from the center of the body
- **Proximal** - situated near the body
- **Anterior** - near the front or head of the body
- **Posterior** - near the back or rear of the body



Adult Male Green-winged Teal



Adult Female Green-winged Teal

Hands-on Training



Help Gather Data on Migratory Birds Harvested in Nunatsiavut

For More Information Contact:

NG CO

First Annual Makkovik Wing-bee!
Dates: Monday February 1st & Tuesday February 2nd
Time: 7:00 pm—9:00 pm
Location: Community Center 
Everybody welcome! Join us for tea and wings

First Evening (Monday): Introduction

- What is a wing-bee?
- What can it tell us about local birds?
- Hear about the wing-bee and results from Nain

Second Evening (Tuesday): Hands-on

- Learn how to "read" wings (species, sex, age)
- Discuss how this will work best in Makkovik (How can you help to understand local bird populations?)





Environment and Climate Change Canada

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Photo Credits: Environment Canada (Regina Wells, Paul MacDonald, Bruce Pollock), Nunatsiavut Government (Joseph Tomlin)

Nain





Makkovik

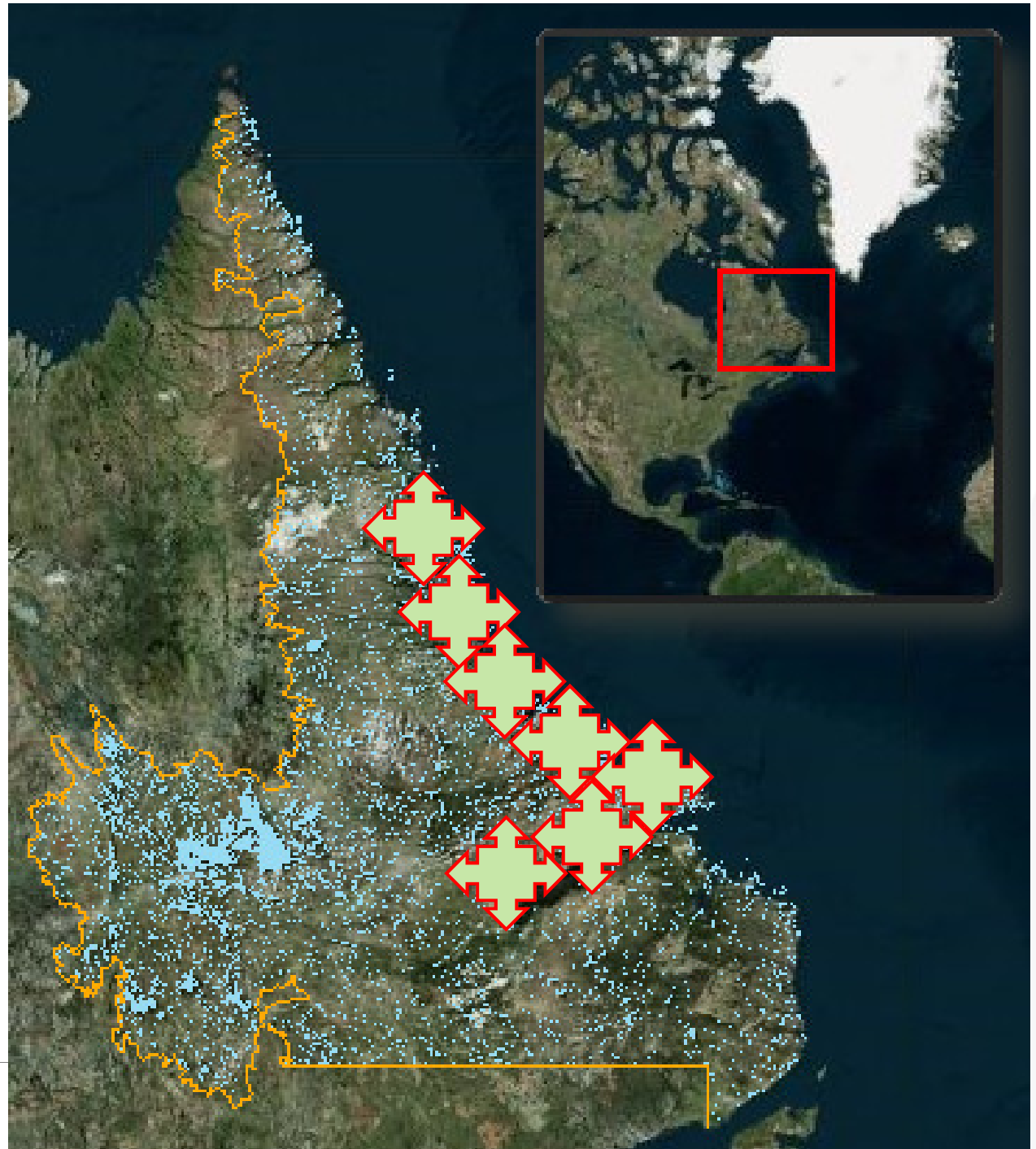




Provides **on-going**,
community-level,
baseline information
over large areas

Systematic way of
recording trends over
time - available for
management
recommendations

Wing-bee provides a
forum for regular, 2-
way communication



Nakummek – Thank You

