



Welcome to the National Boreal Caribou Knowledge Consortium (NBCKC)'s Glossary, *Creating a common language*. The goal of this glossary is to provide clarification of terms used across NBCKC knowledge products, including, for example, the [Boreal Caribou Monitoring Methods Toolkit](#), and [Beyond Conservation: A Toolkit for Respectful Collaboration with Indigenous People](#).

As collaborative initiatives surrounding boreal caribou recovery gain popularity across Canada, there is a need to ensure that all collaborators are on the same page. As a result, members of the Monitoring Working Group of the National Boreal Caribou Knowledge Consortium felt there was a need to ensure a common language between program planners, decision-makers, and practitioners. The current document was drafted to meet this need. However, as revisions occurred, and more perspectives were shared, it became clear that the objective of this document should be expanded.

The current objectives of this glossary are to:

- Document definitions for terms used in the context of boreal caribou monitoring or stewardship programs in Canada.
- Identify any variations in the use/application of terminology.
- Present French and English terms alongside each other.

This glossary is to be considered evergreen. As new terms are suggested by members, they can be included in this glossary. In addition, in the future, we plan to include Indigenous language translations for terms where applicable. We may also add terms pertaining to caribou habitat restoration and caribou management.

To date, the content of this glossary has been informed by a literature review (see reference list), as well as the insight and collective knowledge of members of the Monitoring Working Group and Indigenous Knowledge Circle. Should the reader have suggested edits to propose, kindly contact the [National Boreal Caribou Knowledge Consortium Secretariat](#).



## Abundance (English)

*Abondance (Français)*

References: 11, 13, 35

- Refers to the number of individual animals.
- Often expressed as density: the number of animals per unit area.
- Information on abundance is commonly used to show trends over time or to collect detailed information on numbers or density at one point in time.
- Abundance can be expressed as *absolute abundance*, or as *relative abundance*.
- Can be used as evidence towards population state (see probability of persistence).

## Absolute abundance (English)

*Abondance absolue (Français)*

- A population estimate with corrections made for sightability bias.
- The number of individual animals in the population is known or estimated.

## Population abundance (English)

*Abondance de la population (Français)*

- The relative representation of a species in a particular ecosystem.

## Relative abundance (English)

*Abondance relative (Français)*

- An index of the abundance of animal individuals in the population, for comparison across space or time.
- Populations are ranked according to population size.
- No correction is made for sightability or detection bias.

## Accuracy (English)

*Exactitude (Français)*

References: 11, 14, 35

- In the case of a population estimate, accuracy is how close the parameter estimate is to the true population parameter.
- Compare against "Precision".





## Aerial survey (English)

*Relevé aérien (Français)*

References: **11, 35**

- A population monitoring method wherein a predetermined number of transects are flown in an aircraft, animals are counted, and population metrics such as occupancy, abundance, and density can be determined.
- Aerial surveying is considered a direct sampling method.

## Aerial count (English)

*Inventaire aérien (Français)*

- Use of aircraft to systematically fly over a study area, where onboard observers count the number of caribou seen.

## Aerial imagery (English)

*Imagerie aérienne (Français)*

- Use of aircraft (unmanned/manned), fitted with camera(s) (RGB or thermal) to capture recordings (still image or video footage) of animal(s) in the area.

## Aerial occupancy (English)

*Survols d'étude d'occupation (Français)*

- Use of aircraft to systematically fly over a study area, where onboard observer(s) record occupancy of an area (see 'occupancy').

## Age-sex structure (English)

*Structure d'âge et rapport des sexes d'une population (Français)*

References: **27, 30, 35**

- The composition of a population as determined by the number or proportion of males and females in each age category.
- The age-sex structure is a product of birth (recruitment rate), death (survival rate), immigration and emigration rates (dispersal rates).

## Animal stress (English)

*Le stress d'un animal (Français)*

References: **32, 35**

- Occurs when an animal undergoes physiological and/or behavioral responses to environmental or internal perturbation.
- A stress *hormone* is a chemical compounds synthesized in the body to chemically communicate a stress reaction to various systems within that organism.



## Birth rate (English)

*Taux de natalité (Français)*

References: **35**

- The average number of offspring produced per individual per unit time.

## Body condition (English)

*Condition physique (Français)*

References: **5, 35**

- The state of body components (primarily fat and lean (protein) tissues) which influences an animal's future fitness.

## Camera trap (English)

*Caméra à déclenchement automatique (Français)*

*Caméra espion (Français)*

References: **35**

- A motion- or heat-activated camera which is usually fixed to a stationary structure (such as a tree).
- This specialized camera has an infrared sensor, or another motion detector that records data (photo or video) if a moving object of different temperature passes by.

## Capture-mark-recapture (English)

*Méthode capture-marquage-recapture (Français)*

References: **11, 25, 35**

- A method in which an individual of a population is captured, marked with an individual identifier, and then released back into the population. The proportion of marked individuals captured or re-sighted in subsequent samples can be used to estimate population size and other parameters.
- The technique can be based on capturing animals, or in the case of fecal sampling, can be based on 'capturing' animal fecal samples.

## Spatially explicit capture-mark-recapture (English)

*Méthode capture-marquage-recapture spatialement explicite (Français)*

- An extension of the capture-mark-recapture monitoring sampling design/ technique, which takes into account the location of the capture; is used to model detection probability based on trap location and individuals' home range centre.



## Classification survey (English)

References: 1, 11, 35

### *Inventaire de classification (Français)*

- Categorization of animal by sex, life stage, and/or age.
- A classification survey may be used to determine the composition of a population or herd.
- Note: *Classification*, *Composition* and *Recruitment* survey all refer to the same activity- counting the number of caribou seen that belong to different categories. Depending on the number of categories used, different information can be determined. As long as there is information collected on the number of calves per number of females (or adults), the counting can be considered a recruitment survey. If more information is gathered (e.g. identify adult males and adult females, or the number of caribou in different life stages), it becomes a classification or composition survey.

## Conclusion (English)

References: 35

### *Conclusion (Français)*

- When preparing a report or publication, the conclusion is the summary of the work, and can be thought of as the “take-home messages” section.
- Compare against "Results" and "Interpretation".

## Co-led by Indigenous communities (English)

References: 19, 35

### *Codirigé par les communautés autochtones (Français)*

- Any initiative where Indigenous governments, organizations, or communities share decision-making with partners.
- Indigenous government/Peoples OR external partners OR both initiate the work together.
- See [Proposed Spectrum for Distinguishing Indigenous-led Stewardship](#) for more information.
- Compare against “Indigenous involved” and “Indigenous-led”.





## Decolonization (English)

References: 17, 18, 19 35

### *Décolonisation (Français)*

- Challenging and changing the supremacy and privilege of Western thought, ideologies, systems, and ways of doing things.
- Centering and respecting Indigenous Knowledge Systems, legal and governance systems, and ways of knowing and doing.
- Concerted efforts to address systemic and institutional colonialism in all areas of Canadian society, including conservation and environmental governance.

## Detection factor (English)

References: 35

### *Taux de détection (Français)*

- The term for "sightability correction factor" if the experimental design is based on distance sampling.

## Direct sampling (English)

References: 35

### *Méthode d'échantillonnage directe (Français)*

- Sampling based on observation of an animal (an individual or herd of the target species).
- Note: compare against 'Indirect sampling'.

## Disease [of an animal] (English)

References: 4,5,6,15, 21, 31, 35

### *Maladie [d'un animal] (Français)*

- An impairment of the normal state of an animal that interrupts or modifies its vital functions.
- Diseases and parasites usually have more pronounced impacts in animals facing poor body condition.
- The impacts of diseases and parasites on the body condition of individuals and ultimately on the population dynamics generally depend on the prevalence of infection in the population (number of infected individuals), the intensity of infection, and the total parasite load of individuals.

## Dispersal (English)

References: 35

### *Dispersion (Français)*

- The movement of individual(s) away from the natal population to a new geographic location or population.
- Facilitates gene flow and has fitness consequences at the individual and population level.



## Distance sampling (English)

References: 11, 35

### *Échantillonnage par distance à un transect (Français)*

- An experimental design where distances from a transect line, point station, or trapping web to detected animals are recorded, from which the abundance and/or density of animals is estimated.

## Distinctions-based approach (English)

References: 7, 35

### *Approche fondée sur les distinctions (Français)*

- An approach to relationship-building that recognizes the First Nations, the Métis Nation, and Inuit as the Indigenous Peoples of Canada, who have distinct, rights-bearing communities and their own histories.
- This approach reflects the unique interests, priorities, and circumstances of each Indigenous People.

## Distribution (English)

References: 35

### *Répartition (Français)*

- The geographic extent of a population. Where caribou can be found at a given time, season, or throughout the year.

## Elder [Indigenous Elder] (English)

### *Aîné [Aîné autochtone] (Français)*

References: 12, 18, 35

- An Elder is a respected individual with life experience who plays key roles in Indigenous communities. They are explicitly named as an Elder by members of their community, i.e. not all people of a certain age become Elders.
- Elders are important Knowledge Keepers, and they also help to ensure cultural continuity.
- As living connections to the past, Elders serve as teachers, healers, advisors, and counselors.
- Not all communities have the same criteria; the culture or community defines what makes an Elder. However, one common trait among Indigenous Elders is a deep spirituality that influences every aspect of their lives and teachings.
- Elders strive to show by example, by living their lives according to deeply ingrained principles, values, and teachings.



## Effective population size (English)

References: 29, 35

### *Taille de population effective (Français)*

- The number of breeding individuals that effectively contribute to producing a subsequent generation in a viable population.
- The effective population size ( $N_e$ ) is the size of an ideal viable population (i.e., one that meets all the Hardy-Weinberg assumptions) that would lose heterozygosity at a rate equal to that of the observed viable population.

## Encounter transect (English)

References: 11, 35

### *Ligne ou transect d'observation (Français)*

- Specialized transects are flown by either fixed-wing aircraft or helicopter, where all visible animals are counted and classified.
- Transects may follow predetermined straight lines, contours, or drainages.

## Experimental design (English)

References: 13, 35

### *Design expérimental (Français)*

- A way to carefully plan an experiment in advance so that results are both objective and valid.

## Fecal sampling (English)

References: 35

### *Échantillonnage de fèces (Français)*

- Collecting samples of animal fecal matter directly from animals or from the land, to be analyzed in a lab with the goal of learning more about the animal's genetics, health, demographics, or ecology.
- Genetic tags (unique DNA sequences) can be extracted from the fecal pellets to identify individuals and/ or sex.







## Foraging (English)

References: 2, 10, 35

*Recherche de nourriture (Français)*

- The life strategy to maximize the long-term rate of energy intake; searching for and consuming food.
- The collective term for browsing and grazing.

## Browsing (English)

*Brout (Français)*

- Type of feeding where animals eat high-growing plants.

## Grazing (English)

*Paître (Français)*

- Type of feeding where animals eat vegetation that grows near the ground.

## Forager (English)

References: 2, 10, 35

*Herbivore\* (Français)*

*\*There is no set translation for the word "foragers" in French.*

*Practitioners report using the words "les herbivores s'alimentent..."*

- Animal that feeds by foraging. The collective term for browsers and grazers.
- Caribou are foragers: throughout the year, caribou are both browsers and grazers.

## Browser (English)

*Brouteur (Français)*

- Herbivore that feed by browsing.
- A trick to remember this term is "browsers browse browse". Examples of browsers include deer and goats.

## Grazer (English)

*Paisseur (Français)*

- Herbivore that feed by grazing.
- A trick to remember this term is "grazers graze grass". Examples of grazers include sheep, rabbits, and cows.





## Forage (English)

References: 2, 10, 35

### *Fourrage (Français)*

- Any vegetation consumable by herbivores.

## Browse (English)

### *Brout (Français)*

- Consumable material of high-growing plants such as leaves, the bark of trees, and shrubs. This material peeks above the snow during the winter.
- Examples of browse that are consumed by caribou include: willow, alder, birch, common juniper, and rose.

## Graminoid (English)

### *Graminoïde (Français)*

- The collective term for grass-like plants with narrow leaves and barely noticeable flowers. Includes grasses, sedges, and rushes.
- Caribou consume grasses and sedges.

## Forb (English)

### *[Plante] herbacée (Français)*

- Herbaceous, broad-leaved, flowering plant, with leaves that have net-like veins.
- Examples of forbs that are consumed by caribou include lilies, asters, and peas.

## Lichen (English)

### *Lichen (Français)*

- The product of a symbiotic relationship between a fungus and algae. A very slow-growing organism. Can be found on the ground or on trees.
- Caribou consume a wide variety of lichens, and these make up a large portion of their diet.

## Goal (English)

### *But (Français)*

References: 35

- A broad statement of what one hopes to achieve.
- A Goals is usually broad in scope, provide a general intention or direction over a long period of time, and is supported by an (or multiple) objective(s).
- Note: Compare against 'objective'.



## Habitat (English)

References: 9, 35

### *Habitat (Français)*

- The suite of resources (food, shelter) and environmental conditions (abiotic variables such as temperature, and biotic variables such as competitors and predators) that determine the presence, survival, and reproduction of a population.
- Habitat conditions will influence range (see 'range').

## Harvester observations (English)

References: 35

### *Observations faites par les chasseurs récoltants (Français)*

- Local community members, Elders and harvesters hold vast knowledge of caribou health and population status.

## Harvester interviews (English)

### *Entrevues avec chasseurs (Français)*

- A means of engaging knowledge holders and people on the land in sharing their understanding. These interviews can be verbal or written, and often take a systematic approach to answer specific questions.
- Interviews can be conducted in large groups (e.g. "community interviews"), or one-on-one.

## Harvester-based sampling (English)

### *Échantillonnage par les chasseurs (Français)*

- Harvesters can collect samples (e.g. blood, feces, hair, tissue) directly from the animals they hunt to inform monitoring of individual and population health.
- Sampling typically follows specific guidelines/protocols and can be tailored to specific pathogens.

## Herd (English)

References: 32, 35

### *Populations\* (Français)*

*\*Veillez noter qu'au Québec, le terme "troupeaux" est réservé au caribou migrateur.*

- Note 1: In the caribou context, many groups are moving away from using the term "herd", and using the terms "population" or "local population" instead. See "range" for more.
- Note 2: The following 'definitions' have been found in the literature or shared by members of the NBCKC. The reader is encouraged to verify the definition on a case-by-case basis.
  - At the range scale; a geographically and demographically defined local population that is governed by births, deaths, and to a minor extent, immigration and emigration.
  - A social group of caribou moving together.
  - The caribou occupying a particular defined area.



## Indigenous Knowledge (IK) (English)

### *Connaissances autochtones (Français) \**

*\*Note an alternate translation exists, which is: "savoir traditionnel"*

References: 3, 9, 16, 19, 20, 22, 25, 28, 33, 35

- No single formal definition exists for Indigenous Knowledge (IK). Readers can verify how the government, organization, or community they are working with defines or describes IK and Indigenous Knowledge Systems (IKS), in their own terms and in their language of choice, prior to seeking, requesting, accessing, considering, and applying IK. The following may be used as a starting point:
  - The knowledge held by First Nations, Inuit, and Métis Peoples, the Indigenous Peoples of Canada.  
Indigenous Knowledge:
    - is an integral, inseparable feature of Indigenous Knowledge Systems,
    - is place-based, usually transmitted orally, and rooted in the experience of multiple generations,
    - is determined by an Indigenous community's spirituality, environment, region, culture, and language; Indigenous Knowledge is usually described by Indigenous people as holistic, involving body, mind, feelings, and spirit,
    - May be expressed through symbols, the arts, ceremonial and everyday practices, narratives, and, especially, in relationships,
    - is held collectively by all members of a community, although some members have specialized knowledge and others may have particular responsibility for its transmission, and
    - includes preserved ancestral knowledge created by and received from past generations and innovations as well as new knowledge transmitted to subsequent generations.
- Note: Indigenous Knowledge has been interchangeably referred to as Traditional Knowledge, Aboriginal Traditional Knowledge, Traditional Environmental Knowledge, Traditional Ecological Knowledge, and Ancestral Knowledge, among other terms. Products of the National Boreal Caribou Knowledge Consortium use the term Indigenous Knowledge.

## Traditional Ecological Knowledge (TEK) (English)

### *Savoir écologique traditionnel (Français) \**

*\*Note that an alternate translation exists: Connaissances traditionnelles (Français)*

- Indigenous Knowledge pertaining specifically to the natural environment and human-environment relationships, which are passed down across generations.

## Local Ecological Knowledge (LEK) (English)

### *Savoir écologique locale (Français) \**

*\*Note that an alternate translation exists: Connaissances traditionnelles (Français)*

- Indigenous Knowledge pertaining specifically to the natural environment and human-environment relationships, collected over the span of one person's lifetime.



## Indigenous Knowledge Systems (IKS)\* (English)

*Systèmes de savoirs autochtones (Français)*

References: 20, 22, 35

- The political, legal, economic, and cultural systems that enable the continued generation and renewal of knowledge for Indigenous Peoples to ensure their well-being.
- Indigenous Knowledge Systems represent a way of life, something that has to be lived in order to be known, understood, and practiced.
- Indigenous Knowledge Systems consider relationships not only among people but in all our relations, including with all living things, the spirit world, our ancestors, and those yet to come.

## Indigenous Ways of Knowing (English)

*Modes de savoirs autochtones (Français)*

References: 3, 7, 16, 19, 20, 22, 25, 28, 33, 35

- A term that recognizes the complexity and diversity of Indigenous ways of learning and teaching.
- Many people continue to generalize Indigenous experiences and lived realities. The phrase “Indigenous Ways of Knowing” is intended to raise awareness of the many types of knowledge that exists across a diversity of Indigenous communities.
- It signals that Indigenous Peoples don’t just learn from human interaction and relationships: all elements of Creation can be teachers, from the plant and animal nations, to the “objects” many consider inanimate.

## Indigenous-involved [project] (English)

References: 20, 19, 35

*[Projet] impliquant les autochtones (Français)*

- Initiatives where Indigenous governments, organizations, or communities inform decisions made by external partners (i.e. through an advisory committee) but are not decision-makers.
- External partners usually initiate these initiatives.
- See [Proposed Spectrum for Distinguishing Indigenous-led Stewardship](#) for more details
- Note: compare against “Co-led by Indigenous communities” and “Indigenous-led”

## Indigenous-led [project] (English)

References: 20, 19, 35

*[Projet] mené par les autochtones (Français)*

- Initiatives where Indigenous governments, organizations, or communities lead and have the primary decision-making role in determining the objectives, boundaries, management plans, and governance structures.
- The work is initiated by Indigenous governments or organizations, as mandated by Indigenous people in the exercise of self-determination.
- See [Proposed Spectrum for Distinguishing Indigenous-led Stewardship](#) for more details,
- Note: compare against “Co-led by Indigenous communities” and “Indigenous-involved”



## Interpretation (English)

References: 35

### *Interpretation (Français)*

- Interpretation (or discussion) explores the meaning or implications of results. In primary literature, this is often where the results of a study or experiment are given context, based on the information already known.
- Compare against "Results" and "Conclusions".

## Indirect sampling (English)

References: 35

### *Échantillonnage indirect (Français)*

- Sampling based on observation of signs that an animal was present (e.g. collection of scat or hair, and searching for tracks in the snow, foraging sites (cratering activity), and bedding sites).
- Compare against "direct sampling".

## Life stage (English)

References: 5, 35

### *Stade de vie (Français)*

- Refers to the phases of life that all individuals pass through in a normal lifetime.
- In caribou, these are generally referred to as calf, yearling, or adult, but can be further broken down by both age and sex.
- Note: May also be referred to as "maturity class" or "age class".

## Minimum count (English)

References: 35

### *Décompte minimaux (Français)*

- Population estimate of size, and sometimes survival and recruitment.
- The total number of caribou seen serves as the simplest finding and is considered to be the lowest possible estimate of population size.
- An absolute minimum number of animals occupying the range (for boreal caribou, usually measured in February and March) and may also be considered to be the lowest possible estimate of population size.

## Objective (English)

References: 35

### *Objectif (Français)*

- Specific and measurable action defining how a goal will be achieved.
- In the context of a boreal caribou monitoring program, these commonly include what, where and when information will be collected.



## Occupancy (English)

References: 8, 35

*Occurrence (Français)*

## Occupancy Survey (English)

*Inventaire d'occupation (Français)*

- Surveying a habitat (a particular area) at a particular point in time to observe if the target species is occupying the habitat.
- Collection of presence/ not detected data OR presence/absence data.
- Presence-absence data is particularly useful in making inference(s) about the distribution and occupancy of the landscape by uncommon species.

## Occupancy model (English)

*Modèle de probabilité d'occurrence (Français)*

- Used to estimate the probability of occurrence at a given site during a specific time period.
- Note: Not to be confused with a presence-only model (see 'presence').

## Place-based approach (English)

References: 34, 35

*Approche locale (Français)*

- An approach that takes the specific circumstances of a place into account and that enables local people and organizations to decide, define, design, and implement a project.
- In the context of caribou monitoring, taking a place-based approach means understanding the context and history of the local and Indigenous people from the geographic area where you are considering monitoring caribou, and deciding with them whether and how to develop and undertake a monitoring project.

## Population (English)

References: 24, 35

*Population (Français)*

- A group of potentially interbreeding individuals of a single species inhabiting a specific area.

## Local population (English)

*Population locale (Français)*

- A group of animals occupying a defined area, distinguished spatially from areas occupied by other groups of the same species.
- Local populations experience limited exchange of individuals with other groups.
- Local population dynamics are driven primarily by local factors affecting birth and death rates, rather than immigration or emigration among groups.
- See also "range".



## Population density (English)

References: 13, 32, 35

*Densité de la population (Français)*

- The number of individuals, or the size of a population, per unit area.

## Population dynamic (English)

References: 35

*Dynamique des population (Français)*

- The study of how and why populations change in size and structure over time.
- The four factors that serve to measure population change are: birth, death, immigration, and emigration
- Not to be confused with population demography.

## Population Demography (English)

*Démographie des populations (Français)*

- The study of a population, especially regarding size, density, distribution, and vital rates.
- Population demography is used to study population dynamics.

## Population growth (English)

References: 11, 35

*Accroissement de population (Français)*

## Population growth rate ( $\lambda$ ) (English)

*Taux d'accroissement d'une population (Français)*

- The rate of population growth over time.
- Used as a short-term estimator of growth trend.
- May also be referred to as "The rate of population change".
- The rate of population change (increase or decrease) can be estimated, for example, from two or more population estimates (or relative abundance indices) over time.

## Population growth trend (English)

*Tendance démographique d'une population (Français)*

- Biological changes in population abundance as defined by the following equation: (natural increase of births - deaths) + (migratory increase of immigration - emigration).
- May also be called population trend.
- Can be used as evidence towards population state (see probability of persistence).





## Population size (English)

References: 32, 35

### *Taille de la population (Français)*

- The number of individuals present in a given area.
- Statistical methods can be used to convert the number of caribou counted to an estimate of the total population size.
- Can be used as evidence towards population state (see probability of persistence).

## Population state (English)

References: 9, 35

### *État de population (Français)*

- Status of a population relative to specific parameters.
- Examples of population state: Assess or monitor population performance relative to a baseline, a threshold, population trend/trajectory model, or population management threshold.
- Measures of population state: population size, growth trend, abundance/density, distribution, lambda, structure, and age ratio.

## Self-sustaining population (English)

### *Population autosuffisante (Français)*

- A local population (of boreal caribou) that on average demonstrates stable or positive population growth ( $\lambda = 1.0$ ) over the short term, and is large enough to withstand stochastic events and persist over the long-term, without the need for ongoing intensive management intervention (e.g. predator management or transplants from other populations).

## Precision (English)

References: 11, 14, 35

### *Précision (Français)*

- The closeness of repeated measurements to the mean population estimate.
- Is quantified by the sampling variance, and can be improved by replicating surveys, increasing the number of sample units, stratifying samples into groups where variation is expected to be lower, and by optimal allocation of sampling effort.
- Note: compare against "Accuracy".

## Pregnancy rate (English)

References: 35

### *Taux de gestation (Français)*

- The proportion of females in a population that are pregnant.
- Can be determined by palpation or Pregnancy Specific Protein B (PSPB) analysis.



## Presence (English)

References: 8, 35

*Présence (Français)*

### Presence- non-detection survey (English)

*Survols d'observation (Français)*

- A low-intensity survey which verifies that a species is present in an area or states that it was not detected (thus not likely to be in the area, but still a possibility). These surveys are usually area-based.
- Such surveys are particularly useful in making inferences about the distribution and occupancy of landscapes by uncommon species, however, these surveys usually produce limited data on population size, and composition ratios may be biased.

### Presence-absence survey (English)

*Survols d'occupation (Français)*

- Note that in some jurisdictions, "presence non-detection surveys" may be referred to as "presence /absence" surveys, however, it has been said that non-detection does not indicate true absence, as true absence may be impossible to measure.

### Presence-only model (English)

*Modèles d'occupation (Français)*

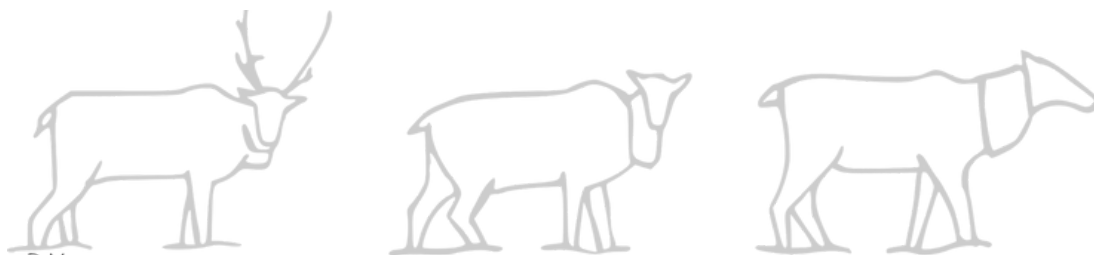
- Estimate the probability a site is selected given that it is encountered.
- Not to be confused with Occupancy models: presence-only models are less powerful than occupancy models for monitoring changes in species distribution.

## Probability of persistence (English)

References: 9, 35

*Probabilité de persistance (Français)*

- The likelihood that a population will continue to be self-sustaining into the future. See 'population state'.





## Range (English)

References: 9, 13, 35

### *L'aire de répartition (Français)*

- The geographic area occupied by a group of individuals that are subject to similar factors affecting their demography and used to satisfy their life history processes (e.g. calving, rutting, wintering) over a defined time frame. Range is a function of both spatial extent and habitat conditions.
- Environment and Climate Change Canada identified three types of boreal caribou ranges categorized based on the degree of certainty in the delineated range boundaries (i.e. conservation unit, improved conservation unit, local population unit).

## Range scale (English)

### *L'échelle de répartition de la population (Français)*

- *Ecological scale* refers to the spatial domain of the study, and varies from fine (e.g. local, small area) to coarse (e.g. regional, range), depending on the objective of the study.
- In the context of boreal caribou, a local population occupies a defined range, and thus monitoring of a local population of caribou usually occurs at or within subsets of the associated "range".

## Reconciliation (English)

References: 35

### *Réconciliation (Français)*

- An ongoing process of repairing, (re)establishing, and maintaining respectful relationships.
- Involves repairing damaged trust by making apologies, providing individual and collective reparations, and following through with concrete actions that demonstrate real societal change.
- Is informed by the revitalization of Indigenous law and legal traditions, which include First Nations, Inuit, and Metis approaches to resolving conflict, repairing harm, and restoring respectful relationships.
- Guided by Indigenous Peoples' connection to the land, and Indigenous Elders' and Knowledge Keepers' perspectives and understanding of ethics, concepts, and practices.





## Recruitment (English)

*Le taux de recrutement (Français)*

References: 1, 11, 35

- In population dynamics, recruitment is the process by which new individuals are added to an existing population, whether by birth and maturation or by immigration.
- For caribou, individuals are only considered to have been recruited once they've reached a certain age, typically one year of age. This stage of caribou age is known as “yearling”.
- Measuring and reporting recruitment: the number of animals within a population at a specified stage of life, usually juveniles less than one year of age. Recruitment is usually expressed as the cow/calf ratio, which is the ratio of the number of calves per 100 adult females.
- Note of clarification: the recruitment measurement is taken when individuals are still calves, but technically, individuals are not considered “recruited” to the population until they are yearlings. This is because mortality is high in calves, and recruitment is really a measure of how many individuals are added to the reproductive pool. The recruitment rate will then be the variations in the calf/cow ratio over a given period.

## Recruitment study (English)

*Étude du recrutement (Français)*

- A study aiming to determine how many calves are added to a population and reach maturity.
- In these studies, observers count the number of caribou seen that belong to different categories. Depending on how many categories are used, different amounts of information can be collected (see ‘classification survey’).
- In Canada, these studies are usually carried out in the winter (in February and March of the same year).

## Rights holder (English)

*Détenteur des droits (Français) \**

References: 17, 26, 35

*\*Note: an alternate translation exists, which is: "titulaires des droits"*

- This term refers to the fact that Indigenous Peoples are “rights and title holders.”
- Indigenous Peoples’ constitutionally protected rights allow them to bind up a project in a legal process.
- Indigenous communities are not mere stakeholders, they are rights-holders.

## Result (English)

*Résultat (Français)*

References: 35

- Results are a simple presentation of the data or output of statistical analyses. These can be thought of as the end of a survey or experiment.
- Compare against "Interpretation" and "Conclusions".



### Sightability correction factor (English)

References: **11, 35**

### *Taux de détectabilité (Français)*

- A numerical value, that when multiplied by a population estimate, aims to account for caribou that were present in the areas surveyed, but not seen for one reason or another.
- Sightability correction factors must often be estimated for specific surveys, ranges, or habitats. For example, in aerial studies, these help account for animals which were overlooked, and improve the precision of population estimates.

### Sign (caribou sign) (English)

References: **35**

### *Signe (Signe de présence de caribou) (Français)*

- The clues left by an animal indicating the animal was in the area. Can include fur, scat, tracks.
- Not to be confused with "tracks".

### Staff (English)

References: **35**

### *Personnel (Français)*

- For the purpose of the boreal caribou monitoring methods toolkit, this term refers to any qualified personnel who is carrying out an action related to a monitoring method.
- For the purpose of the boreal caribou monitoring toolkit, 'staff' is used as a collective term for biologist, technician, wildlife technician, researcher, trained land user, and/ or practitioner.

### Stakeholder (English)

References: **17, 35**

### *Parties prenantes (Français) \**

*\*Note: alternate translations exists, which are (1) "acteurs", and (2) "intervenants".*

- An individual or group that derives benefits from the use of resources, is concerned about a particular issue, and/or holds legal or de facto rights in management or decision-making.
- Key stakeholders in conservation and stewardship-related projects often include a mix of user groups (e.g. harvesters, industry, tourism operators), national, provincial, and local government (e.g. Department of Fisheries and Oceans), and civil society organizations (e.g. non-governmental organizations).





## Stratification (English)

References: 1, 11, 35

### *Stratification (Français)*

- The separation of a sample population into non-overlapping groups based on a habitat or population characteristic that can be divided into multiple levels. Groups are homogeneous within, but distinct from, other strata.

## Stratified Random Block Survey (English)

### *Inventaire stratifié (Français)*

- Allow statistically rigorous estimates of ungulate population numbers and density within areas being sampled. In most cases, this means using the 'Gasaway Method' (1986) to design and implement counts in a random selection of survey blocks within areas being sampled.

## Telemetry (English)

References: 35

### *Télémetrie (Français)*

- The automatic recording and transmission of data from remote or inaccessible sources to an information technology system in a different location for monitoring and analysis.

## Radio tracking (English)

### *Suivi télémétrique (Français)*

- The technique of determining information about an animal through the use of radio signals from or to a device carried by the animal.

## Telemetry collars (English)

### *Colliers émetteurs OU colliers télémétriques (Français)*

- Collars fitted with either a Very High Frequency (VHF) radio transmitter and/or a Global Position System (GPS) unit.
- May also be referred to as "tracking collars" or "radio collars".

## Camera collars (English)

### *Colliers caméras (Français)*

- Collars fitted with either a Very High Frequency (VHF) radio transmitter and/or a Global Position System (GPS) unit as well as an outward-facing camera.

## Tracks (caribou tracks) (English)

References: 35

### *Traces (Traces de caribou) (Français)*

- In the case of caribou, these are hoofprints left on the ground after caribou have crossed.
- Caribou tracks are an example of signs.

## Vital rates (English)

References: 13, 30, 35

### *Taux vitaux (Français)*

- The species-specific factors of a population that, together, play a large role in the population's trend. These include the birth rate, recruitment rate, and probability of survival and mortality.



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