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COSEWIC definitions and abbreviations

Approved by COSEWIC in November 2019

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## A

**Alien species:** Any species that does not qualify as a Canadian native wildlife species.

**Aboriginal Traditional Knowledge:** ATK includes but is not limited to the knowledge Aboriginal Peoples have accumulated about wildlife species and their environment. Much of this knowledge has accumulated over many generations.

**Aboriginal Traditional Knowledge subcommittee:** A permanent COSEWIC subcommittee that facilitates access to the best available Aboriginal Traditional Knowledge and the integration of that knowledge into the COSEWIC wildlife species status assessment and classification processes.

**Allee effect:** Positive density-dependence in population growth rate that may occur at low density. If there is a density threshold below which population growth rate becomes negative, the Allee effect can lead to extinction. It can be due to many causes, including increased predation risk, difficulties in finding a mate, inbreeding, or lowered efficiency in obtaining food, raising young or obtaining shelter when group size is small.

**Addendum:** The addendum to a status report process is used as a review of classification for Wildlife Species in specific cases where the status will likely change to not-eligible, data deficient, extirpated, or extinct. It is similar in format to a status appraisal summary and presents new information that outlines the reasons for the change in status. (Approved by COSEWIC Nov 2019).

**Area of occupancy:** The area within 'extent of occurrence' that is occupied by a taxon, excluding cases of vagrancy. The measure reflects the fact that the extent of occurrence may contain unsuitable or unoccupied habitats. In some cases (e.g. (for example) irreplaceable colonial nesting sites, crucial feeding sites for migratory taxa) the area of occupancy is the smallest area essential at any stage to the survival of the wildlife species/designatable unit considered (in such cases, this area of occupancy does not need to occur within Canada). The size of the area of occupancy will be a function of the scale at which it is measured, and should be at a scale appropriate to relevant biological aspects of the taxon, the nature of threats and the available data. To avoid inconsistencies and bias in assessments caused by estimating



























area of occupancy at different scales, it may be necessary to standardize estimates by applying a scale-correction factor. Different types of taxa have different scale-area relationships. (Source: adapted from IUCN (International Union for Conservation of Nature) 2010)

**Assessment criteria:** Quantitative criteria used by COSEWIC to guide status assessments. These criteria are adapted from the IUCN Red List Categories and Criteria V 3.1, 2001.

The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) is an independent advisory panel to the Minister of Environment and Climate Change Canada that meets twice a year to assess the

**Benign introduction:** An attempt to establish a taxon for the purpose of conservation, outside of its status of wildlife species at risk of extinction. Members are wildlife biology experts from academia, government, non-governmental organizations and the private sector responsible for designating wildlife tool only when there is no remaining area left within the natural range of a taxon. (Source: adapted from IUCN 2010)

**Best available information:** All existing information that is pertinent to assessing the status of a wildlife species, including scientific knowledge, community knowledge, and Aboriginal Traditional Knowledge that has been subjected to appropriate quality controls and can be obtained from literature sources or from the holders of the information. Information that is not in the literature, that is kept secret by its holders, or that cannot be located following a reasonably diligent search, cannot be included in reports.

COSEWIC secretariat

**Canadian range of occurrence:** The geographical distribution of a wildlife species described in terms of the provinces, territories and oceans in which the wildlife species occurs. For birds, it includes the

Canadian breeding and wintering distribution; for marine species, it includes the oceans in which the

species occurs (Arctic, Pacific or Atlantic); for freshwater species, it includes the province or territory in which the waterbody occurs; and, for species that occur in brackish waters, move between marine and freshwater environments (e.g., Atlantic Salmon), or move between oceans and land, range of occurrence

includes a list of both the oceans and provinces in which the species occurs (Source: adapted from Canadian Species at Risk book).

**Canadian wildlife species at risk:** A publication produced by the COSEWIC Secretariat at least once per year. It includes all wildlife species assessed by COSEWIC, with their status designations and the history of their evaluations.

Contact us

**Captive population:** A group of individuals resulting from the process of breeding in a human-controlled environment, usually with the intent of releasing the individuals, or their offspring, into the wild.

- [COSEWIC members \(/index.php/en-ca/about-us/cosewic-members.html\)](/index.php/en-ca/about-us/cosewic-members.html)
- [Contact the COSEWIC secretariat \(/index.php/en-ca/home-e/contact-secretariat.html\)](/index.php/en-ca/home-e/contact-secretariat.html)

**CDC:** Conservation Data Centre. In some provinces it is also referred to as Natural Heritage Information Centre. (Accepted by COSEWIC prior to May 2003).

- [Required contacts for information on wildlife species \(/index.php/en-ca/reports/preparing-status-reports/required-contacts.html\)](/index.php/en-ca/reports/preparing-status-reports/required-contacts.html)

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**CESCC:** The Canadian Endangered Species Conservation Council consists of federal, provincial and territorial ministers who are responsible for the conservation and management of wildlife species in that province or territory.

- [Environmental conservation and protection \(https://www.canada.ca/en/services/environment/conservation.html\)](https://www.canada.ca/en/services/environment/conservation.html)

**CITES:** The Convention on International Trade in Endangered Species regulates the international trade of endangered species. Species are listed in three Appendices with decreasing levels of regulation. No international trade is permitted for species in Appendix I. Canada is a signatory to CITES and must abide by its regulations. (Internet address: CITES (<https://www.cites.org/>))

- [Indigenous peoples \(/index.php/en-ca/assessment-process/atk-guidelines.html\)](/index.php/en-ca/assessment-process/atk-guidelines.html)
- [COSEWIC: related links \(/index.php/en-ca/related-links.html\)](/index.php/en-ca/related-links.html)

**Continuing decline:** A recent, current or projected future decline (which may be smooth, irregular or sporadic), which is liable to continue unless remedial measures are taken. Fluctuations will not normally count as continuing declines

*Estimated continuing decline* (under criterion C1) had quantitative thresholds and requires a quantitative estimate, which can be calculated using the same methods as for population reduction.

Under criteria B1b, B2b, and C2, continuing declines can be observed, estimated, inferred or projected.

Although not explicitly mentioned in criteria B or C2, estimated continuing declines are permissible. Under criterion C1, continuing declines can only be observed, estimated or projected. A continuing decline under criteria B or C can be projected, thus, it does not have to have started yet. However, such projected declines must be justified and there must be high degree of certainty that they will take place (i.e., merely 'plausible' future declines are not allowed).

Continuing declines need not be continuous; they can be sporadic, occurring at unpredictable intervals, but they must be likely to continue into the future. Relatively rare events can be considered to contribute to a



continuing decline if they happened at least once within the last three generations or 10 years (whichever is longer), and it is likely that they may happen again in the next three generations or 10 years (whichever is longer), and the population is not expected to recover between the events.

If habitat is declining (in area or quality) but abundance is not, this may be because (i) there is a delay in the population's response to lower carrying capacity, perhaps because the population is below the carrying capacity for other reasons (such as harvest), (ii) habitat is declining in areas not currently occupied by the taxon, or (iii) habitat is not correctly identified. In the case of (i), the population will eventually be impacted; in the case of (ii) the loss of recolonization options may eventually impact the population. In both cases, criteria B1b(iii) or B2b(iii) may be invoked even if the population is not undergoing a continuing decline. (Source: IUCN Standards and Petitions Subcommittee 2019).

For more guidance on the concept of “Continuing Decline” see the most recent versions of the IUCN Guidelines.

**COSEWIC:** Committee on the Status of Endangered Wildlife in Canada. (Accepted by COSEWIC prior to May 2003).

**COSEWIC candidate list:** A list of high priority wildlife species reviewed, ranked, and approved by COSEWIC to reflect the relative urgency with which each wildlife species will receive a status assessment. The COSEWIC Candidate List is composed of high priority wildlife species from each SSC candidate list.

**Cultivated population:** A population no longer in the natural state; developed by human care and for human use (e.g., for commercial purposes).

**CWDC:** The Canadian Wildlife Directors Committee, made up of the Directors of provincial and federal agencies responsible for wildlife conservation.

**CWS:** Canadian Wildlife Service of Environment and Climate Change Canada. (Accepted by COSEWIC prior to May 2003).

## D

**Data deficient (DD):** A category that applies when the available information is insufficient (a) to resolve a wildlife species' eligibility for assessment or (b) to permit an assessment of the wildlife species' risk of extinction.

**Data sensitive species (DSS):** A wildlife species for which COSEWIC has determined that the publication of specific information related to where it occurs may negatively affect its survival or recovery. ^

**Demographic stochasticity:** Random variation in demographic variables, such as birth rates and death rates, sex ratio and dispersal, for which some individuals in a population are negatively affected but not others. In small populations, these random events increase the risk of extinction.

**Designatable unit (DU):** Species, Subspecies, variety, or geographically or genetically distinct population that may be assessed by COSEWIC, where such units are both discrete and evolutionarily significant (see [COSEWIC Guidelines for Recognizing Designatable Units \(/index.php/en-ca/reports/preparing-status-reports/guidelines-recognizing-designatable-units.html\)](/index.php/en-ca/reports/preparing-status-reports/guidelines-recognizing-designatable-units.html)).

**DFO:** The federal Department of Fisheries and Oceans (Accepted by COSEWIC prior to May 2003).

## E

**Endangered (E):** A wildlife species facing imminent extirpation or extinction. (Accepted by COSEWIC prior to May 2003).

**Endemic:** A wildlife species native to, and restricted to, a particular geographical region.

**Environmental stochasticity:** Random variation in physical environmental variables, such as temperature, water flow, and rainfall, which affect all individuals in a population to a similar degree. In small populations, these random events increase the risk of extinction.

**Estimated:** Information that is based on calculations that may include statistical assumptions about sampling, or biological assumptions about the relationship between an observed variable (e.g., an index of abundance) to the variable of interest (e.g., number of mature individuals). These assumptions should be stated and justified in the documentation. Estimation may also involve interpolation in time to calculate the variable of interest for a particular step (e.g., a 10-year reduction based on observations or estimations of population size 5 and 15 years). (Source: IUCN 2010)

**Extent of occurrence:** The area included in a polygon without concave angles that encompasses the geographic distribution of all known populations of a wildlife species.

**Extinct (X):** A wildlife species that no longer exists. (Accepted by COSEWIC prior to May 2003)

**Extirpated (XT):** A wildlife species that no longer exists in the wild in Canada, but exists elsewhere. (Accepted by COSEWIC in April 2008)

**Extreme fluctuation:** Changes in distribution or in the total number of mature individuals of a wildlife species that occur rapidly and frequently, and are typically of more than one order of magnitude. (Source: adapted from IUCN 2010)

## G

**Generation:** Generation length is the average age of parents of a cohort (i.e. newborn individuals in the population). Generation length therefore reflects the turnover rate of breeding individuals in a population. Generation length is greater than the age at first breeding and less than the age of the oldest breeding individual, except in taxa that breed only once. Where generation length varies under threat, the more natural, i.e. pre-disturbance, generation length should be used. (Source: adapted from IUCN 2010). Revised guidance on calculating generation length is available in section 4.4 of IUCN 2011.

**Genetic drift:** Random change of allele frequencies, within and among subpopulations of a species, due to chance (stochasticity). Drift occurs more rapidly in smaller populations, and may result in loss or fixation of alternative alleles in different populations of a species.

**Genetically modified organisms:** Plants or animals produced by the process of directly transferring or modifying genetic material, using recombinant DNA techniques.

## I

**Imminent extirpation or extinction:** A 20% or greater probability of extinction or extirpation within 20 years or 5 generations (up to a maximum of 100 years), whichever is longer, according to COSEWIC's criteria.

**Inferred:** Information that is based on indirect evidence, on variables that are indirectly related to the variable of interest, but in the same general type of units (e.g., number of individuals or area or number of subpopulations). Inferred values rely on more assumptions than estimated values. Inference may also involve extrapolating an observed or estimated quantity from known subpopulations to calculate the same quantity for other subpopulations. Whether there are enough data to make such an inference will depend on how large the known subpopulations are as a proportion of the whole populations, and the applicability of the threats and trends observed in the known subpopulations to the rest of the taxon. The method of extrapolating to unknown subpopulations depends on the criteria and on the type of data available for the known subpopulations. (Source: IUCN 2010)

**IUCN:** World Conservation Union (formerly known as the International Union for the Conservation of Nature). An umbrella conservation organization whose members are governments, government departments, and non-governmental organizations. (Approved by COSEWIC in May 2003)

## J

**Jurisdiction:** A government responsible for exercising official legislative authority in the geographical

area where a native wildlife species occurs or formerly occurred (e.g., provincial and territorial governments, Wildlife Management Boards, federal government departments).

## L

**Limiting factors:** Activities and processes that may not cause a population level decline, but limit growth, resilience, or recovery of the Wildlife Species. Limiting factors can become threats if a species has lost its resilience due to other threats and is thus prone to decline. Characteristics that make the Wildlife Species particularly susceptible to disturbance should be discussed as should biological, environmental, or other factors limiting population size, growth, and/or distribution of the Wildlife Species. (Accepted by COSEWIC in November 2019).

**Living document:** A document that can be updated or revised by COSEWIC without infringing on intellectual property rights. A written work is a living document only if copyright has been ceded to the Crown, and if a moral rights waiver has been provided by the contributors (report writers) of the work. (Approved by COSEWIC in November 2008)

**Location:** The term 'location' defines a geographically or ecologically distinct area in which a single threatening event can rapidly affect all individuals of the taxon present. The size of the location depends on the area covered by the threatening event and may include part of one or many subpopulations. Where a taxon is affected by more than one threatening event, location should be defined by considering the most serious plausible threat. Where the most serious plausible threat does not affect all of the taxon's distribution, other threats can be used to define and count locations in those areas not affected by the most serious plausible threat. (Source: IUCN 2010, 2011). In the absence of any plausible threat for the taxon, the term "location" cannot be used and the subcriteria that refer to the number of locations will not be met. See also Rapidly (in regards to "Locations"). (Source: IUCN 2010, 2011)

## M

**Mature individuals (number of):** The number of mature individuals is the number of individuals known, estimated or inferred to be capable of reproduction. When estimating this quantity, the following points should be borne in mind:

- Mature individuals that will never produce new recruits should not be counted (e.g. densities are too low for fertilization).
- In the case of populations or subpopulations with biased adult or breeding sex ratios, it is appropriate to use lower estimates for the number of mature individuals that take this into account.

- Where the (sub)population size fluctuates, use a lower estimate. In most cases this will be much less than the mean.
- Reproducing units within a clone should be counted as individuals, except where such units are unable to survive alone (e.g. corals).
- In the case of taxa that naturally lose all or a subset of mature individuals at some point in their life cycle, the estimate should be made at the appropriate time, when mature individuals are available for breeding.
- Re-introduced individuals must have produced viable offspring before they are counted as mature individuals.

(Source: IUCN 2010)

## N

**NACOSAR:** The National Aboriginal Council on Species at Risk, established by the Species at Risk Act (SARA, section 8.1) to advise the federal Minister of Environment and Climate Change Canada and CESCC on the administration of SARA.

**Native wildlife species:** A wildlife species that occurs in Canada naturally, or that has expanded its range into Canada without human intervention from a region where it naturally occurred, has produced viable subpopulations, and has persisted in Canada for at least 50 years.

**Natural range:** Range of taxon, excluding any portion that results from an introduction to another region or neighbouring region. The delimitation between wild and introduced subpopulations within a region may be based on a preset year or event when there is a biological justification for doing so. (Source: adapted from IUCN 2010)

**Non-government science member:** One of three COSEWIC members who is an expert in wildlife conservation but not a federal, provincial or territorial government employee. University professors are not considered government employees. (Accepted by COSEWIC in April 2006)

**Not at risk (NAR):** A wildlife species that has been evaluated and found to be not at risk of extinction given the current circumstances.

## O

**Observed:** Information that is directly based on well-documented observations of all known individuals in the population. (Source: IUCN 2010)

**Observer:** A person who asks and receives permission to be present at, or who has been invited to, all or part of COSEWIC's deliberations. (Accepted by COSEWIC prior to May 2003)

## P

**Population:** The term "population" is used in a specific sense in the Red List Criteria that is different to its common biological usage. Population is here defined as the total number of individuals of the taxon. For functional reasons, primarily owing to differences between life forms, population size is measured as numbers of mature individuals only. In the case of taxa obligately dependent on other taxa for all or part of their life cycles, biologically appropriate values for the host taxon should be used. (Source: IUCN 2001). The interpretation of this definition depends critically on an understanding of the definition of "mature individuals". For application of Criteria A, C, and D, the word population usually applies to the "Canadian population". See also "Subpopulation".

**Projected:** Same as "estimated", but the variable of interest is extrapolated in time towards the future. Projected variables require a discussion of the method of extrapolation (e.g., justification of the statistical assumptions or the population model used) as well as the extrapolation of current or potential threats into the future, including their rates of change. (Source: IUCN 2010)

## Q

**Quantitative analysis:** An estimate of the extinction probability of a taxon based on known life history, habitat requirements, threats and any specified management options. Population viability analysis (PVA) is one such technique. Quantitative analyses should make full use of all relevant available data. If there is limited information, available data can be used to provide an estimate of extinction risk (for instance, estimating the impact of stochastic events on habitat). In presenting quantitative analyses, the assumptions, the data used and the uncertainty in the data or quantitative model must be documented. (Source: adapted from IUCN 2010)

## R

**Rapid Review of Classification (RRoC):** The rapid review of classification (RRoC) process is used as a review of classification for Wildlife Species that likely will not change status and for which there is little or no new information available. (Approved by COSEWIC Nov 2019)

**Rapidly (in regards to Locations):** ".....where the most serious plausible threat is habitat loss due to development, a location is an area where a single development project can rapidly (e.g., within a single generation or three years, whichever is longer) eliminate or severely reduce the population. Where the most

serious plausible threat is habitat loss that occurs gradually and cumulatively via many small-scale events, such as clearance of small areas for small-holder grazing, a location can be defined by the area over which the population will be eliminated or severely reduced within a single generation or three years, whichever is longer. Where the most serious plausible threat is volcanic eruption, hurricane, tsunami, frequent flood or fire, locations may be defined by the previous or predicted extent of lava flows, storm paths, inundation, fire paths, etc. Where the most serious plausible threat is collection or harvest, then locations may be defined based on the size of jurisdictions (within which similar regulations apply) or on the level of access (e.g., ease with which collectors may reach different areas), as well as on the factors that determine how the levels of exploitation change (e.g., if collection intensity in two separate areas changes in response to the same market trends in demand, these may be counted as a single location).”(Source: IUCN Standards and Petitions Subcommittee 2019)

**Reduction:** A reduction is a decline in the number of mature individuals of at least the amount (%) stated under COSEWIC criterion A over the time period (years) specified, although the decline need not be continuing. A reduction should not be interpreted as part of a fluctuation unless there is reasonable evidence for this. The downward phase of a fluctuation will not normally count as a reduction. (Source: adapted from IUCN 2010)

**Re-introduction:** An attempt to establish a wildlife species (or taxonomically defined unit within a wildlife species) in an area which was once part of its historical range, but from which it has been extirpated; re-establishment is a synonymy with the added caveat that the attempt has been successful. (Source: adapted from IUCN 1998)

**Rescue effect:** Immigration of gametes or individuals that have a high probability of reproducing successfully, such that extirpation or decline of a wildlife species can be mitigated. If the potential for rescue is high, the risk of extirpation may be reduced.

**Residence:** A dwelling-place, such as a den, nest or other similar area or place, that is occupied or habitually occupied by one or more individuals during all or part of their life cycles, including breeding, rearing, staging, wintering, feeding or hibernating. (Source: Species at Risk Act)

**Review of classification:** Any formal consideration of the status of a previously assessed wildlife species by COSEWIC at a Wildlife Species Assessment Meeting. A review of classification is done through a new status report, an addendum to an existing report, a status appraisal summary, or a rapid review of classification. (Approved by COSEWIC in November 2019)

## S

**Severely fragmented:** A taxon can be considered to be severely fragmented if most (>50%) of its total area of occupancy is in habitat patches that are (1) smaller than would be required to support a viable population, and (2) separated from other habitat patches by a large distance. Fragmentation must be assessed at a scale that is appropriate to biological isolation in the taxon under consideration. (Source: IUCN 2010). For complete guidance it is strongly suggested that IUCN 2010 (<https://www.iucnredlist.org/resources/grid>) is read.

**Special concern (SC):** A wildlife species that may become threatened or endangered because of a combination of biological characteristics and identified threats. (Accepted by COSEWIC in November 2008)

**Species specialist subcommittee (SSC):** One of the 10 permanent COSEWIC subcommittees of specialists responsible for preparing, reviewing, and submitting status reports on wildlife species of a particular taxonomic group and, in the cases of mammals and fishes, geographic region.

**SSC candidate list:** A list of wildlife species not currently in a COSEWIC at-risk category that have been identified by a Species Specialist Subcommittee or by the ATK Subcommittee as candidates for detailed status assessment based on information suggesting they may be at risk. The SSC candidate list can thus include wildlife species in the Not at Risk or Data Deficient categories or wildlife species not yet assessed by COSEWIC. They are grouped into three priority levels based on the perceived level of risk: high, intermediate, or low.

**Status appraisal:** A review of classification using a pre-existing status report plus a status appraisal summary. (Approved by COSEWIC in November 2013)

**Status appraisal summary (SAS):** A brief document with an outline of the evidence needed to demonstrate that a wildlife species' status should be retained. The status appraisal summary should contain a précis of all relevant information, with references. (Approved by COSEWIC in May 2011)

**Status assessment:** The act of assessing the risk of extinction or extirpation from Canada, and assigning the wildlife species to a risk category, if appropriate. (Approved by COSEWIC prior to May 2003)

**Status reassessment:** A status assessment based on an update status report. (Approved by COSEWIC in November 2013)

**Status report:** A comprehensive technical report that compiles and analyzes the best available information on a wildlife species' status in Canada and indicates the threats to that wildlife species. A^



status report can be a new report for a species not previously assessed, or for species previously assessed, a new fully updated report or the combination of an addendum or a status appraisal summary or rapid review of classification and the previous full report. (Approved by COSEWIC in November 2019.)

**Subpopulation:** As used in Criteria B and C, Subpopulations are defined as geographically or otherwise distinct groups in the population between which there is little demographic or genetic exchange (typically one successful migrant individual or gamete per year or less). Subpopulation size is measured as numbers of mature individuals only. (Source: IUCN 2001)

**Supplementation:** Addition of individuals to an existing population of conspecifics; also call re-enforcement. (Source: IUCN 1998)

**Suspected:** Information that is based on circumstantial evidence, or on variables in different types of units. For example, evidence of qualitative habitat loss can be used to infer that there is a qualitative (continuing) decline, whereas evidence of the amount of habitat loss can be used to suspect a population reduction at a particular rate. In general, a suspected population reduction can be based on any factor related to population abundance or distribution, including the effects of (or dependence on) other taxa, so long as the relevance of these factors can be reasonably supported. (Source: IUCN 2010)

## T

**Threats:** Activities or processes that directly and negatively affect the Canadian population. Although threats are often related to human activities, natural phenomena can be regarded as direct threats in some situations, particularly when a species has lost its resilience from other threats, and is thus vulnerable to the point where a population decline is observed, projected, or suspected. Threats can be ongoing, and/or likely to occur in the future. Threats are proximate or direct causes of decline. Where possible, links should be made between proximate threats and biological features of the species or population such as inbreeding depression, small population size, genetic isolation, or their likelihood of regeneration or recolonization for ecosystems, all of which are considered limiting factors. (Sources: Salafsky *et al.* 2008; Master *et al.* 2012; accepted by COSEWIC in November 2019).

**Threatened (T):** A wildlife species that is likely to become endangered if nothing is done to reverse the factors leading to its extirpation or extinction. (Accepted by COSEWIC in November 2008)

**Translocation:** Deliberate and mediated movement of wild individuals or populations from one part of their range to another. (Source: IUCN 1998)

## U

**Update (applies only to status reports):** A revised or amended pre-existing status report used for the purpose of a status reassessment of a wildlife species. (Approved by COSEWIC in November 2013)

## V

**Vagrant:** A wildlife species whose geographical range is outside Canadian jurisdiction and that has never established a viable population in Canada, but may occasionally be recorded in Canada.

## W

**Wild population:** A population within its natural range in which the individuals are the result of natural production (i.e. not the result of human-mediated release or translocation); if a population is the result of a benign introduction that is now or has previously been successful (i.e. self-sustaining), the population is considered wild. (Source: IUCN 2010)

**Wildlife species:** A species, subspecies, variety or geographically or genetically distinct population of animal, plant or other organism, other than a bacterium or virus, that is wild by nature and is either native to Canada or has extended its range into Canada without human intervention and has been present in Canada for at least 50 years. See Designatable Unit.

**Wildlife species expert (COSEWIC):** A wildlife species expert is a person who has a high level of scientific, traditional or local knowledge of a taxonomic group or geographical area and meets the requirements specified in the Qualifications for COSEWIC Membership. (Accepted by COSEWIC prior to May 2003)

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(1) Documents are periodically updated and downloadable from the [IUCN](https://www.iucnredlist.org/) (<https://www.iucnredlist.org/>) website.