

Heritage Rank Definitions

The Alabama Natural Heritage Program uses the Heritage ranking system developed by NatureServe. Each species is assigned two ranks; one representing its range-wide or global status (G rank), and one representing its status in the state (S rank). Species with a rank of 1 are most critically imperiled; those with a rank of 5 are most secure. Rank numbers may be combined when there is uncertainty over the status, but ranges cannot skip more than one rank (e.g., an element may be given a G-rank of G2G3, indicating global status is somewhere between imperiled and vulnerable).

Global Ranking System

- G1 Critically Imperiled – At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.
- G2 Imperiled – At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.
- G3 Vulnerable – At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.
- G4 Apparently Secure – Uncommon but not rare; some cause for long-term concern due to declines or other factors.
- G5 Secure – Common; widespread and abundant.
- GX Presumed Extinct (species) – Not located despite intensive searches and virtually no likelihood of rediscovery.
Eliminated (ecological communities) – Eliminated throughout its range, with no restoration potential due to extinction of dominant or characteristic species.
- GH Of historical occurrence throughout its range.
Possibly Extinct (species) – Missing; known from only historical occurrences but still some hope of rediscovery.
Presumed Eliminated – (Historic, ecological communities)-Presumed eliminated throughout its range, with no or virtually no likelihood that it will be rediscovered, but with the potential for restoration, for example, American Chestnut Forest.
- GU Unrankable – Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.
- GNR Not ranked to date.
- G#T# Intraspecific Taxon (trinomial) – The status of infraspecific taxa (subspecies or varieties) are indicated by a "T-rank" following the species' global rank. Rules for assigning T-ranks follow the same principles outlined above for global conservation status ranks. A T-rank cannot imply the subspecies or variety is more abundant than the species as a whole- for example, a G1T2 cannot occur. At this time, the T rank is not used for ecological communities.

State Ranking System

- S1 Critically imperiled - Critically imperiled in Alabama because of extreme rarity (often 5 or fewer occurrences or very few remaining individuals or acres) or because of some factor(s) making it especially vulnerable to extirpation from Alabama.
- S2 Imperiled - Imperiled in state because of rarity - very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from Alabama.
- S3 Vulnerable - Rare or uncommon in Alabama – at moderate risk of extirpation due to a restricted range, relatively few populations (often 100 or fewer), recent and widespread declines, or other factors.
- S4 Apparently Secure - Apparently secure in Alabama, may be uncommon, but not rare.
- S5 Secure - Demonstrably secure in Alabama; common, widespread, and abundant in the state.
- SX Presumed Extirpated – Species or community is believed to be extirpated from Alabama. Not located despite intensive searches of historical sites and other appropriate habitat, and virtually no likelihood that it will be rediscovered.
- SH Historical (Possibly Extirpated) – Species or community occurred historically in Alabama, and there is some possibility that it may be rediscovered. Its presence may not have been verified in the past 20-40 years. A species or community could become SH without such a 20-40 year delay if the only known occurrences in a nation or state/province were destroyed or if it had been extensively and unsuccessfully looked for. The SH rank is reserved for species or communities for which some effort has been made to relocate occurrences, rather than simply using this status for all elements not known from verified extant occurrences.
- SNR Unranked – State conservation status not yet assessed.
- SNA A conservation status rank is not applicable because the species is not a suitable target for conservation activities in the state. ¹
- SU Unrankable – Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.
- SE An exotic established in Alabama.

Variant Ranks and Rank Modifiers

G#G# Range Rank – A numeric range rank (e.g., G2G3) is used to indicate the range of uncertainty in the status of a species or community (e.g., an element may be given a G-rank of G2G3, indicating global status is somewhere between imperiled and vulnerable). Ranges cannot skip more than one rank (e.g., GU should be used rather than G1G4). Also applies to state ranks (e.g., S2S3)

HYB Hybrid

Q Questionable taxonomy – Taxonomic distinctiveness of this entity at the current level is questionable; resolution of this uncertainty may result in change from a species to a subspecies or hybrid, or the inclusion of this taxon in another taxon, with the resulting taxon having a lower-priority conservation priority.

? Inexact Numeric Rank – Denotes inexact numeric rank (e.g., G2?)

Breeding Status Qualifiers²

B Breeding - Conservation status refers to the breeding population of the species in the state. Regularly occurring, usually migratory and may be present only during the breeding season.

N Nonbreeding - Conservation status refers to the non-breeding population of the species in the state. Regularly occurring, usually migratory and may not breed in Alabama; this category includes migratory birds, bats, sea turtles, and cetaceans.

M Migrant - Migrant species occurring regularly on migration at particular staging areas or concentration spots where the species might warrant conservation attention. Conservation status refers to the aggregating transient population of the species in the nation or state/province.

¹ A conservation status rank may be not applicable for some species, including long distance aerial and aquatic migrants, hybrids without conservation value, and non-native species or ecosystems, for several reason

² A breeding status is only used for species that have distinct breeding and/or non-breeding populations in the state. A breeding-status S-rank can be coupled with its complementary non-breeding-status S-rank if the species also winters in the state. In addition, a breeding-status S-rank can also be coupled with a migrant-status S-rank if, on migration, the species occurs regularly at particular staging areas or concentration spots where it might warrant conservation attention. Multiple conservation status ranks (typically two, or rarely three) are separated by commas (e.g., S2B,S3N or SHN,S4B,S1M).

For more information regarding Conservation Status Ranks, see <http://www.natureserve.org/explorer/ranking.htm#globalstatus>

Federal Status Definitions

U.S. Fish and Wildlife Service

The U.S. Endangered Species Act (U.S. ESA) is the primary legislation that affords federal legal protections to threatened and endangered species in the United States, and is administered by the U.S. Fish and Wildlife Service (USFWS) (<http://endangered.fws.gov/>) and U.S. National Marine Fisheries Service (NMFS) (http://www.nmfs.noaa.gov/prot_res/overview/es.html). As defined by the Act, endangered refers to species that are "in danger of extinction within the foreseeable future throughout all or a significant portion of its range," while threatened refers to "those animals and plants likely to become endangered within the foreseeable future throughout all or a significant portion of their ranges." Plant species and varieties (including fungi and lichens), animal species and subspecies, and vertebrate animal populations are eligible for listing under the Act. Status under the U.S. Endangered Species Act in data provided by ALNHP is based on formal notices published by USFWS or NMFS in the Federal Register. Where names used by the USFWS differ from those used by ALNHP, ALNHP records include notes indicating under what name the USFWS lists the species and how that relates to the name used by ALNHP.

ESA Status Definitions

- LE Listed Endangered: A species in danger of extinction throughout all or a significant portion of their range.
- LT Listed Threatened: A species likely to become endangered within the foreseeable future throughout all or a significant portion of their range.
- PE Proposed Endangered: A species proposed to be listed as endangered.
- PT Proposed Threatened: A species proposed to be listed as threatened.
- PS Partial Status: An infraspecific taxon or population has federal status but the entire species does not-- status is in only a portion of the species range.
- C Candidate: A species under consideration for official listing for which there is sufficient information to support listing. The USFWS encourages other agencies to give consideration to such taxa in environmental planning.
- XN Experimental Population, Nonessential: Experimental reintroduced population.
- SAT Similarity of Appearance to a Threatened Taxon: A species listed as threatened due to a similarity of appearance to a listed species. Species listed as SAT are not biologically endangered or threatened and are not subject to Section 7 consultation.
- SC Species of Concern – Species that have not been petitioned or been given Endangered, Threatened, or Candidate status, but have been identified as important to monitor. (An unofficial status with no regulatory requirements.)
- UR Under Review in the Candidate or Petition Process: A species under review in the candidate or petition process. A 90-day finding indicated that listing may be warranted, and a full status review has been initiated to determine if listing is warranted. (An unofficial status with no regulatory requirements)

State Status Definitions

State - Alabama Department of Conservation and Natural Resources (ADCNR)

Wildlife & Freshwater Fisheries Division

Alabama does not have a state law equivalent to the federal endangered species act so species do not have regulatory protection as state endangered or threatened species. However, some species do receive regulatory protection through the *Alabama Regulations on Game Fish and Fur Bearing Animals* published annually. These are the primary regulations affording state protection for some species in Alabama, and are administered by the Alabama Department of Conservation and Natural Resources. Copies of these regulations may be obtained from the Division of Wildlife & Freshwater Fisheries, Alabama Department of Conservation & Natural Resources, 64 North Union Street, Montgomery, AL 36104. A digital version of these regulations is available online at <http://www.outdooralabama.com/season-and-bag-limits>.

State Status Code Definitions

SP – State Protected: Species protected by Regulation 220-2-.92 (Nongame Species Regulation), 220-2-.98 (Invertebrate Species Regulation), 220-2-.26(4) (Protection of Sturgeon), 220-2-.94 (Prohibition of Taking or Possessing Paddlefish), or 220-2-.97 (Alligator Protection Regulation).

PSM – Partial Status Mussels: All mussel species not listed as a protected species under the Invertebrate Species Regulation are partially protected by other regulations of the Alabama Game, Fish, and Fur Bearing Animals Regulations. Regulation 220-2-.104 prohibits the commercial harvest of all but the 11 mussel species for which commercial harvest is legal. Regulation 220-2-.52 prohibits the take, capture, kill, or attempt to take, capture, or kill of any freshwater mussel from Wheeler Lake from Guntersville Dam downstream to the mouth of Shoal Creek and from the upstream end or head of Hobbs Island downstream to Whitesburg Bridge, Pickwick Lake from Wilson Dam downstream to the upper end or head of Seven Mile Island, Wilson Lake from Wheeler Dam downstream to the mouth of Town Creek on the south bank and the mouth of Bluewater Creek on the north bank, and the Cahaba River.

RT – Regulated Turtle: Species for which the Turtle Catcher/Dealer/Farmer Regulation (Regulation 220-2-.142) imposes a limit on the number which can be possessed or size limits.

GA – Game Animal (Managed hunting regulations).

GANOS – Game Animal - No Open Season: Species designated a game animal by Regulation 220-2-.07, but for which there is no open season.

GB – Game Bird (Managed hunting regulations).

GBNOS – Game Bird - No Open Season: Species designated a game bird by Regulation 220-2-.04, but for which there is no open season.

GF – Game Fish (Managed fishing regulations).

GF-HP – Game Fish – Harvest Prohibited: Species designated a game fish by Regulation 220-2-.34, but harvest of the species in the state is prohibited.

CNGF – Commercial or Non-Game Fish (Managed fishing regulations).

State Wildlife Action Plan (SWAP) Status Definitions

In order to receive funds through the Wildlife Conservation and Restoration Program and the State Wildlife Grants Program, Congress charged each state and territory with developing a wildlife action plan. These proactive plans, known technically as “comprehensive wildlife conservation strategies,” assess the health of each state’s wildlife and habitats, identify the problems they face, and outline the actions that are needed to conserve them over the long term. The wildlife action plans identify a variety of actions aimed at preventing wildlife from declining to the point of becoming endangered, and outline the steps that are needed to conserve wildlife and habitat before they become rarer and more costly to protect. One component of the plan was identifying Species of Greatest Conservation Need (GCN). Species were assigned a status based on the expert opinion of taxa committees. The taxa evaluated for inclusion on the SGCN list were birds, mammals, amphibians, reptiles, fishes, mussels, aquatic snails, and crayfishes.

SWAP Status Code Definitions

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| P1 | Priority 1/Highest Conservation Concern: taxa critically imperiled and at risk of extinction/extirpation because of extreme rarity, restricted distribution, decreasing population trend/population viability problems, and specialized habitat needs/habitat vulnerability due to natural/human-caused factors. Immediate research and/or conservation action required. |
| P2 | Priority 2/High Conservation Concern: taxa imperiled because of three of four of the following: rarity; very limited, disjunct, or peripheral distribution; decreasing population trend/population viability problems; specialized habitat needs/habitat vulnerability due to natural/human-caused factors. Timely research and/or conservation action needed. |
| EX | Extirpated: taxa that historically occurred in Alabama, but are now absent; may be rediscovered in the state, or be reintroduced from populations existing outside the state. |
| EXCAU | Extirpated/Conservation Action Underway: taxa that historically occurred in Alabama, were absent for a period of time, and currently are being reintroduced, or have a plan for being reintroduced, into the state from populations outside the state. |
| Extinct | Extinct: taxa that historically occurred in Alabama, but are no longer alive anywhere within their former distribution. |

Element Occurrence Rank (EO Rank)

The Element Occurrence Rank Code is a value that indicates the relative value of the Element Occurrence (EO) with respect to other occurrences of the Element, based on an assessment of estimated viability (i.e., probability of persistence) for species. In other words, EO ranks provide an assessment of the likelihood that if current conditions prevail the occurrence will persist for a defined period of time, typically 20-100 years. EO ranks may be used effectively in conjunction with NatureServe Conservation Status Ranks for the Element to guide which occurrences should be recorded and mapped, and to help prioritize EOs for purposes of conservation planning or action, both locally and rangewide.

Element Occurrence Rank Codes

- A Excellent estimated viability (species), Excellent ecological integrity (communities) - Based on current information on EO rank factors (i.e., condition, size, and landscape context) for the EO, it is believed to have an excellent probability of persisting, if current conditions prevail, for a defined period of time, typically 20-100 years (within the bounds of natural disturbance regimes).
- B Good estimated viability (species), Good ecological integrity (communities) – Based on current information on EO rank factors (i.e., condition, size, and landscape context) for the EO, it is believed to have a good probability of persisting, if current conditions prevail, for a defined period of time, typically 20-100 years (within the bounds of natural disturbance regimes).
- C Fair estimated viability (species), Fair ecological integrity (communities) – Based on current information on EO rank factors (i.e., condition, size, and landscape context) for the EO, it is believed to have a fair probability of persisting, if current conditions prevail, for a defined period of time, typically 20-100 years (within the bounds of natural disturbance regimes).
- D Poor estimated viability (species), Poor ecological integrity (communities) – Based on current information on EO rank factors (i.e., condition, size, and landscape context) for the EO, it is believed to have a poor probability of persisting, if current conditions prevail, for a defined period of time, typically 20-100 years (within the bounds of natural disturbance regimes).
- E Verified Extant (viability not assessed) - EO has been recently verified as still existing, but sufficient information on the factors used to estimate viability (species) or ecological integrity (communities) of the occurrence has not yet been obtained.
- H Historical – There is a lack of recent field information verifying the continued existence of the EO, such as when the occurrence is based only on historical collections data, or when the occurrence was ranked A, B, C, D, or E at one time and is later, without field survey work, considered to be possibly extirpated due to general habitat loss or degradation of the environment in the area.

- F Failed to find – Species has not been found despite a search by an experienced observer at a time and under conditions appropriate for the Element at a location where it was previously reported, but that still might be confirmed to exist at that location with additional field survey efforts.
- X Extirpated – There is documented destruction of its habitat or environment, or persuasive evidence of its eradication based on adequate survey (i.e., thorough or repeated survey efforts by one or more experienced observers at times and under conditions appropriate for the Element at that location).
- NR Not ranked – An EO rank has not yet been assigned to the occurrence.
- U Unrankable – An EO rank cannot be assigned due to lack of sufficient information on the occurrence.

Representational Accuracy

The procedural features that comprise EOs are derived from observed features through a series of steps that translate observation data into mapped features. This translation process may complicate interpretation of the data since the final polygon EO representations include locational uncertainty that is not readily apparent in the mapped features. In many cases, EO representations will appear to be similar on a map despite having very different amounts of associated locational uncertainty. For example, two identical EO representations derived from line source features could have very different amounts of incorporated locational uncertainty if one was developed from a point conceptual feature and the other from a line conceptual feature.

To facilitate the proper interpretation of data when making comparisons between mapped EOs, a measure reflecting the accuracy of each feature, that is the amount not attributable to added locational uncertainty, is provided for every EO. This measure is referred to as Representation Accuracy (RA). The value of RA is determined by the percentage of the mapped feature corresponding to the observed area of occupancy. This value that indicates the level of accuracy associated with the Element Occurrence (EO). Accuracy varies on the basis of area observed to be occupied by the Element relative to the area contained within the footprint of the EO. Differences in these two values result from incorporation of additional area within the EO boundary to incorporate associated locational uncertainty.

RA Definitions

Very High Accuracy - Negligible locational uncertainty associated with the EO (actual size of observation is >95% of mapped EO).

High Accuracy - Minimal locational uncertainty associated with the EO (actual size of observation is >80 - 95% of mapped EO).

Medium Accuracy - Moderate locational uncertainty associated with the EO (actual size of observation is >5 - 80% of mapped EO).

Low Accuracy - Large degree of locational uncertainty associated with the EO (actual size of observation is 0 - 5% of mapped EO).

Very Low Accuracy - Very large degree of locational uncertainty associated with the EO (actual size of observation is 0 - 1% of mapped EO).

Unknown – Representation Accuracy of the EO is unknown.