



U.S. Forest Service
Pacific Southwest Region

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Sequoia National Forest Draft Proposed Species of Conservation Concern

Species of Conservation Concern Identification Process

As part of the process for revising the forest plan for the Sequoia National Forest, we have compiled a proposed list of Species of Conservation Concern. The Species of Conservation Concern list is required by the 2012 Planning Rule, and identifies species at risk of being lost from a forest.

We evaluate species for proposed Species of Conservation Concern listing by following a process outlined in a national directive (FSH 1909.12 § 12.52c-d). As species are considered, Forest Service specialists do research using databases, scientific studies, local information, and expert knowledge.

In addition to research conducted by Forest Service specialists, the national directive requires use of threat status rankings, determined in large part through [NatureServe](#), a non-profit organization that provides proprietary wildlife conservation-related data, tools, and services. The conservation status rank of a species is represented by a letter and a number. The letter represents one of two distinct geographic scales: global (G) and state (S). The status rank number is on a scale of one to five, where a ranking of one indicates a species at the highest level of risk and a ranking of five indicates the lowest level of risk (Table 1). The status rank number is preceded by the letter reflecting the appropriate geographic scale of the assessment. For example, a status rank of G5 represents a species that has an extensive range of distribution and has a low risk of extinction.

Intraspecific taxa refer to subspecies, varieties, and other designations below the level of species. The status rank of intraspecific taxa (subspecies or varieties) is indicated by a supplementary T-rank, following the species' global rank. Rules for assigning T-ranks follow the same principles outlined above. For example, the rank of a critically imperiled subspecies of an otherwise widespread and common species would be G5T1.

A description of the process used in evaluating species is provided below and, since it is not a completely linear process, is also displayed in a flowchart (Figure 1). The flowchart visually captures the main steps in the Species of Conservation Concern determination process and demonstrates that the questions asked are at times taxon specific.

Steps in the Species of Conservation Concern Identification Process:

Mandatory criteria that must be met in order for a species to be considered a Species of Conservation Concern:

- The species is native to, and known to occur in, the area covered by the forest plan.

- The best available scientific information about the species indicates substantial concern about the species' capability to persist over the long term in the forest plan area.

Species that must be considered:

- Species with a NatureServe G/T1 or G/T2 status rank (Table 1).
- Species that were removed within the past 5 years from the Federal list of threatened or endangered species, and other delisted species that regulatory agencies (e.g. US Fish & Wildlife Service) still monitor.

Species that should be considered:

- Species with NatureServe status rank of G/T3 or S1 or S2 (Table 1).
- Species listed as threatened or endangered by relevant states or federally recognized Tribes.
- Species identified by Federal, State and federally recognized Tribes as a high priority for conservation.
- Species that have been petitioned for Federal listing and for which a positive “90-day finding” has been made by a regulatory agency (e.g. US Fish & Wildlife Service).
- Species for which the best available scientific information indicates there is local conservation concern about the species' capability to persist over the long-term in the plan area due to:
 - ◆ Significant threats, caused by stressors on and off the plan area, to populations or the ecological conditions they depend upon (habitat), including threats from climate change;
 - ◆ Declining trends in populations or habitat in the plan area;
 - ◆ Restricted ranges (with corresponding narrow endemics, disjunct populations, or species at the edge of their range); and
 - ◆ Low population numbers or restricted ecological conditions (habitat) within the plan area.

Table 1. NatureServe¹ conservation status ranks and definitions.

Status Rank	Status Rank Definition
1	<i>Species is Critically Imperiled:</i> At very high risk of extinction or elimination due to very restricted range, very few populations or occurrences, very steep declines, very severe threats, or other factors.
2	<i>Species is Imperiled:</i> At high risk of extinction or elimination due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors.
3	<i>Species is Vulnerable:</i> At moderate risk of extinction or elimination due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors.
4	<i>Species is Apparently Secure:</i> At fairly low risk of extinction or elimination due to an extensive range and/or many populations or occurrences, but with possible cause for some concern as a result of local recent declines, threats, or other factors.
5	<i>Species is Secure:</i> At very low risk of extinction or elimination due to a very extensive range, abundant populations or occurrences, and little to no concern from declines or threats.

¹NatureServe is a non-profit organization that provides proprietary wildlife conservation-related data, tools, and services to private and government clients, partner organizations, and the public.

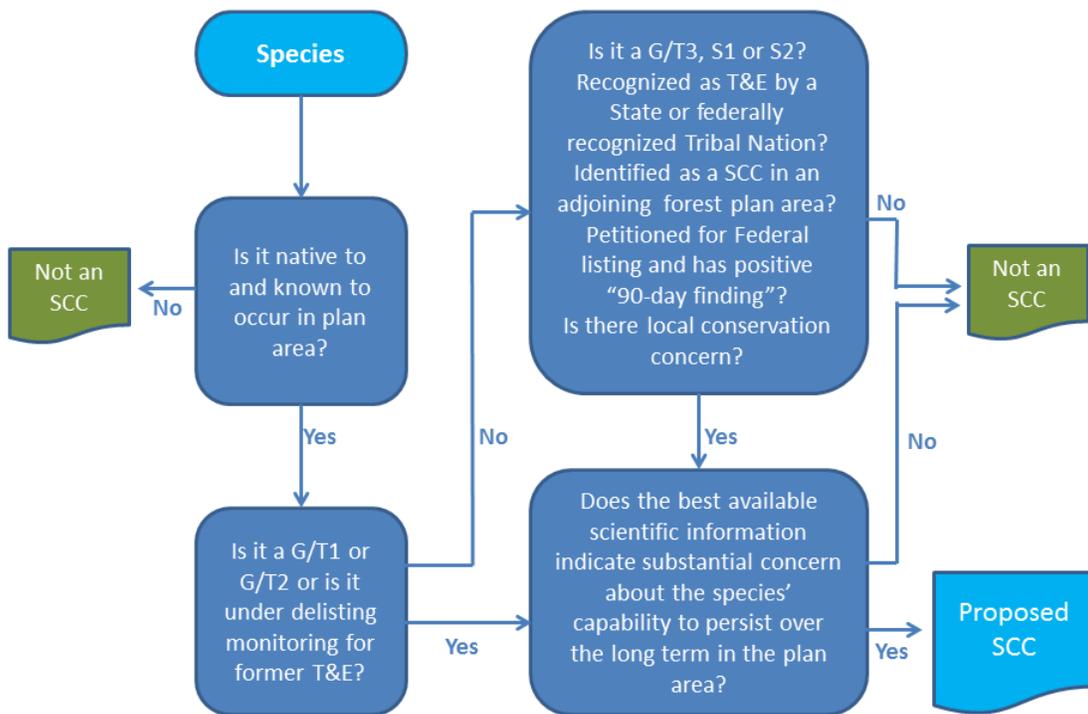


Figure 1. The directive-based process used by the Forest Service for determining species of conservation concern. (Note: The NatureServe rankings that are included here by letters and numbers are explained above).

Proposed Species of Conservation Concern for the Sequoia National Forest

The proposed list of Species of Conservation Concern for the Sequoia National Forest is shown in Table 2. The proposed list includes species of mammals, birds, amphibians, fish, terrestrial invertebrates, aquatic invertebrates and plants. The proposed species have a high threat rank in NatureServe and there is scientific information to indicate substantial concern about the species' capability to persist over the long term in the plan area. A few terrestrial invertebrate species have been placed in a separate row labeled "potential terrestrial invertebrate." The reason these are considered potential Species of Conservation Concern is that although they have a high threat rank in NatureServe, scientific information is lacking to indicate substantial concern about the species' capability to persist over the long term in the plan area. We are asking the public for their expertise to support or not support their listing.

Table 2. Proposed list of Species of Conservation Concern on the Sequoia National Forest.

Type	Common Name (<i>Scientific name</i>)
Mammals	Sierra Nevada red fox (<i>Vulpes vulpes necator</i>) Pacific fringe-tailed bat (<i>Myotis thysanodes vespertinus</i>) Townsend's big-eared bat (<i>Corynorhinus townsendii</i>) Yellow-eared pocket mouse (<i>Perognathus parvus xanthonotus</i>)
Birds	Willow flycatcher (<i>Empidonax traillii</i>) Kern Red-winged Blackbird (<i>Agelaius phoeniceus aciculatus</i>) Bald eagle (<i>Haliaeetus leucocephalus</i>) American peregrine falcon (<i>Falco peregrinus anatum</i>) Mount Pinos sooty grouse (<i>Dendragapus fuliginosus howardi</i>) (Kern County only) Great gray owl (<i>Strix nebulosa</i>) California spotted owl (<i>Strix occidentalis occidentalis</i>) Tricolored blackbird (<i>Agelaius tricolor</i>)
Amphibians	Gregarious slender salamander (<i>Batrachoseps gregarius</i>) Kings River slender salamander (<i>Batrachoseps regius</i>) Relictual slender salamander (<i>Batrachoseps relictus</i>) Kern Plateau salamander (<i>Batrachoseps robustus</i>) Kern Canyon slender salamander (<i>Batrachoseps simatus</i>) Fairview slender salamander (<i>Batrachoseps bramei</i>) Yellow-blotched salamander (<i>Ensatina eschscholtzii croceator</i>) Foothill yellow-legged frog (<i>Rana boylei</i>)
Fish	California golden trout (<i>Oncorhynchus mykiss aguabonita</i>) Central Valley hitch (<i>Lavinia exilicauda exilicauda</i>) Hardhead (<i>Mylopharodon conocephalus</i>) Kern River Golden Trout (<i>Oncorhynchus mykiss gilberti</i>)
Terrestrial Invertebrates	Behr's metalmark (<i>Apodemia virgulti davenporti</i>) Juniper hairstreak (<i>Callophrys gryneus juniperaria</i>) Comstock's blue (<i>Euphilotes battoides comstocki</i>) Gorgon copper (<i>Lycaena gorgon micropunctata</i>) Boisduval's blue (<i>Plebejus icarioides inyo</i>) Lupine blue (<i>Plebejus lupini chlorina</i>) Veined blue (<i>Plebejus neurona</i>) Arrowhead arctic blue (<i>Plebejus podarce cilla</i>)

Type	Common Name (<i>Scientific name</i>)
	San Emigdio blue (<i>Plebulina emigdionis</i>) Tehachapi fritillary (<i>Speyeria egleis tehachapina</i>) Hydaspe fritillary (<i>Speyeria hydaspe viridicornis</i>) Tight coin (<i>Ammonitella yatesii</i>)
Potential Terrestrial Invertebrates ¹	Tehachapi shoulderband (<i>Helminthoglypta berryi</i>) Kern shoulderband (<i>Helminthoglypta callistoderma</i>) Breckenridge shoulderband (<i>Helminthoglypta orina</i>) Yosemite shoulderband (<i>Helminthoglypta proles</i>) Erskine Creek shoulderband (<i>Helminthoglypta stageri</i>) Tulare shoulderband (<i>Helminthoglypta tularensis</i>)
Aquatic Invertebrates	Western pearlshell mussel (<i>Margaritifera falcata</i>) A caddisfly (<i>Anagapetus chandleri</i>) A caddisfly (<i>Homophylax nevadensis</i>) A caddisfly (<i>Glossosoma mereca/merecum</i>)
Plants	Spanish Needle onion (<i>Allium shevockii</i>) Walker Pass milk-vetch (<i>Astragalus ertterae</i>) Kern Plateau milk-vetch (<i>Astragalus lentiginosus var. kernensis</i>) Little Kern or Shevock's milk-vetch (<i>Astragalus shevockii</i>) Kern County milk-vetch (<i>Astragalus subvestitus</i>) Hidden rockcress (<i>Boechera evadens</i>) Shevock's rockcress (<i>Boechera shevockii</i>) Tulare rockcress (<i>Boechera tularensis</i>) Scalloped moonwort (<i>Botrychium crenulatum</i>) Mingan moonwort (<i>Botrychium minganense</i>) Western goblin or mountain moonwort (<i>Botrychium montanum</i>) Kaweah brodiaea (<i>Brodiaea insignis</i>) Bolander's bruchia (<i>Bruchia bolanderi</i>) Roundleaf stork's bill (<i>California macrophylla</i>) Alkali mariposa lily (<i>Calochortus striatus</i>) Shirley Meadows star-tulip, mariposa lily (<i>Calochortus westonii</i>) Pygmy pussypaws (<i>Calyptridium pygmaeum</i>) Kern River evening primrose (<i>Camissonia integrifolia</i>) Muir's tarplant (<i>Carlquistia muirii</i>) Kern Plateau bird's-beak (<i>Cordylanthus eremicus ssp. kernensis</i>) Rosette cushion cryptantha (<i>Cryptantha circumscissa var. rosulata</i>) Tulare cryptantha (<i>Cryptantha incana</i>) Rose-flowered larkspur (<i>Delphinium pupusii</i>) Mojave tarplant (<i>Deinandra mohavensis</i>) Sierra bleeding heart, Tulare County bleeding heart (<i>Dicentra nevadensis</i>) Pierpoint Springs dudleya (<i>Dudleya cymosa ssp. costatifolia</i>) Hall's daisy, Hall's fleabane (<i>Erigeron aequifolius</i>) Breedlove's buckwheat, Piute buckwheat (<i>Eriogonum breedlovei var. breedlovei</i>) King's River buckwheat (<i>Eriogonum nudum var. regirivum</i>) Monarch buckwheat (<i>Eriogonum ovalifolium var. monarchense</i>)

Type	Common Name (<i>Scientific name</i>)
Plants	Twisselmann's buckwheat (<i>Eriogonum twisselmannii</i>)
	Hocket Lakes fawn lily, Kaweah Lakes fawnlily (<i>Erythronium pusaterii</i>)
	Greenhorn fritillary (<i>Fritillaria brandegeei</i>)
	Striped adobe-lily (<i>Fritillaria striata</i>)
	Boyden Cave gilia (<i>Gilia yorkii</i>)
	Tube flower bluecup (<i>Githopsis tenella</i>)
	Blandow's bog moss (<i>Helodium blandowii</i>)
	Piute cypress (<i>Hesperocyparis nevadensis</i>)
	Shevock's golden aster (<i>Heterotheca shevockii</i>)
	Kern Plateau horkelia (<i>Horkelia tularensis</i>)
	Short-leaved hulsea (<i>Hulsea brevifolia</i>)
	Munz's iris (<i>Iris munzii</i>)
	Field ivesia (<i>Ivesia campestris</i>)
	Pale-yellow layia (<i>Layia heterotricha</i>)
	Madera leptosiphon (<i>Leptosiphon serrulatus</i>)
	Congdon's lewisia (<i>Lewisia congdonii</i>)
	Yosemite lewisia (<i>Lewisia disepala</i>)
	Meesia moss (<i>Meesia uliginosa</i>)
	Shevock's copper moss (<i>Mielichhoferia shevockii</i> (<i>Schizymerium shevockii</i>))
	Kaweah monkeyflower (<i>Mimulus norrisii</i>)
	Calico monkeyflower (<i>Mimulus pictus</i>)
	Kelso Creek monkeyflower (<i>Mimulus shevockii</i>)
	Sweet-smelling monardella (<i>Monardella beneolens</i>)
	Baja navarretia (<i>Navarretia peninsularis</i>)
	Piute Mountains navarretia (<i>Navarretia setiloba</i>)
	Chimney Creek nemacladus (<i>Nemacladus calcaratus</i>)
	Twisselmann's nemacladus (<i>Nemacladus twisselmannii</i>)
	Purple mountain-parsley (<i>Oreonana purpurascens</i>)
	Woolly mountain-parsley (<i>Oreonana vestita</i>)
	Spjut's bristle moss (<i>Orthotrichum spjutii</i>)
	Marble rockmat (<i>Petrophyton acuminatum</i>)
	Charlotte's phacelia (<i>Phacelia nashiana</i>)
	Sequoia gooseberry (<i>Ribes tulareense</i>)
	Piute Mountains jewel-flower (<i>Streptanthus cordatus</i> var. <i>piutensis</i>)
	Tehipite Valley jewel-flower (<i>Streptanthus fenestratus</i>)
	Alpine jewelflower (<i>Streptanthus gracilis</i>)
	Mason's neststraw (<i>Stylocline masonii</i>)
	San Bernardino aster (<i>Symphyotrichum defoliatum</i>)
	Dedecker's clover (<i>Trifolium kingii</i> ssp. <i>dedeckerae</i> (<i>T. dedeckerae</i>))

¹There are several terrestrial invertebrate species that are considered potential Species of Conservation Concern; they have a high threat rank in NatureServe but we lack scientific information to indicate substantial concern about the species' capability to persist over the long term in the plan area. We are asking the public for their expertise to support or not support their listing.

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