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Mustela frenata

This species is not complete.
January 7, 2014 by Amber Lankford
Author(s) Expertise: **2**
Print species as a PDF [1]

Sensitivity Factor	Sensitivity 1 - 7 (one being least sensitive, seven being most sensitive)	Confidence 1 - 5 (one being least sensitive, five being most sensitive)
Generalist/Specialist	2 Medium-Low	2 Poor
Physiology	2 Medium-Low	2 Poor
Life History	2 Medium-Low	2 Poor
Habitat		2 Poor
Dispersal Ability	2 Medium-Low	1 Very Poor
Disturbance Regimes		
Ecology		1 Very Poor
Non-Climatic	3 Medium	
Other (weight)		

Sensitivity Score : 18 Low

Sensitivity Score

100 * [(0.5 *(Dispersal Distance + Dispersal Barriers) + Disturbance Regimes + (0.5 * Generalist/Specialist) + Physiology + (0.5 * Life History) + Sensitive Habitats + Ecology + Non-Climatic Stressors + (Other * Weight) / 49 + (7 * Weight)]

Note: if Sensitive Habitats are identified, this factor automatically gets a value of seven, otherwise it remains zero.

Confidence Score : 1 Very Poor

Confidence Score

The Confidence Score is an average of the Confidence column above.

Overall User Ranking: 2 Medium-Low

Author Expertise:
2

Common Name:
Long-tailed weasel

Is this Species completed:
No

Taxonomy

This is a description of the whole group

Scientific Name:
Mustela frenata

Geography:
Idaho

Realm:
Terrestrial

Kingdom:
Animal

Phylum:
CHordata

Class:
Mammalia

Order:
Carnivora

Family:
Mustelidae

Genus:
Mustela

Global Rank:
G5 (1996)

Rounded Global Rank:
G5 - Secure

IUCN:
Least Concern ver 3.1 (2008)

Generalist/Specialist

Broadly, where does this species fall on the spectrum of generalist to specialist? :
2

Confidence in your assessment of the degree to which the species is a generalist or specialist:
2 Poor

Comments:
Capable of taking a wide variety of prey, typically small mammals, but also poultry, eggs of waterfowl, and rarely songbirds.

Citations:
Svendsen, G.E. 2003. Weasels and black-footed ferret. In: Wild Mammals of North America: Biology, Management, and Conservation. 2nd edition. Editors: Feldhammer, G.A., B.C. Thompson, and T.A. Chapman. Johns Hopkins University Press. Baltimore, Maryland.

Physiology

Species' physiological sensitivity:
2

Confidence in how physiologically sensitive the species is to climate change:
2 Poor

Please specify whether or not this species is physiologically sensitive to one or more of the following:
temperature

Comments:
Long-tubular shape of the body increases the surface area-to-volume ratio

Life History

Species' reproductive strategy:
2

Confidence in your assessment of the species' reprodcutive strategy:
2 Poor

Is the species polycyclic, iteroparous, or semelparous?:
Iteroparous (reproduces in successive cycles--characteristic of K-strategists)

Average length of time to reproductive maturity:
males: 1 year, females: 3-4 months

How many surviving young can an individual produce during a single reproductive event under optimal conditions?:
6

How many reproductive events can an individual undergo in a single year under

optimal conditions?:
1

Comments:
Long-tailed weasels have delayed implantation.

Citations:
Svendsen, G.E. 2003. Weasels and black-footed ferret. In: Wild Mammals of North America: Biology, Management, and Conservation. 2nd edition. Editors: Feldhammer, G.A., B.C. Thompson, and T.A. Chapman. Johns Hopkins University Press. Baltimore, Maryland.

Sensitive Habitats

Confidence in whether the species depends on the listed sensitive habitat types:
2 Poor

Level of philopatry:
medium

Comments:
Favors late seral stages and ecotones, and typically found close to water which provides access to ecotone habitats. Found along riparian grassland, marshes, swamps, field edges, and open woodland.

Citations:
Reid, F. & Helgen, K. 2008. Mustela frenata. In: IUCN 2013. IUCN Red List of Threatened Species. Version 2013.2. <www.iucnredlist.org>. Downloaded on 15 January 2014.

Dispersal Ability

Confidence in maximum annual dispersal distance:
1 Very Poor

Within the context of dispersal distance above, do barriers to dispersal exist?:
4 Some

Confidence in barriers to dispersal exists:
2 Poor

Please select the types of barriers relevant to dispersal:
Agriculture

Citations:
Gehring, T.M., and R.K. Swihart. 2003. Body size, niche breadth, and ecologically scaled responses to habitat fragmentation: mammalian predators in an agricultural landscape. Biological Conservation 109:283-295. Gehring, T.M., and R.K. Swihart. 2004. Home range and movements of long-tailed weasels in a landscape fragmented by agriculture. Journal of Mammalogy 85:79-86.

Ecological Relationships

Confidence in how sensitive the species is to other effects of climate change on its ecology:
1 Very Poor

Interacting non-climatic stressors

To what degree do other, non-climate-related threats, to the species make it more sensitive to climate change?:
3

Please check all of the stressors that make the species more sensitive to climate change:
habitat loss or degradation
direct human conflict (including harvesting)
pollution

Comments:
Pesticide use impacts reproductive output, food supply, and habitat. Long-tailed weasels are sensitive to habitat fragmentation as a result of agricultural expansion, particularly as it reduces connectivity and ecotone habitat.

Citations:
Reid, F. & Helgen, K. 2008. Mustela frenata. In: IUCN 2013. IUCN Red List of Threatened Species. Version 2013.2. <www.iucnredlist.org>. Downloaded on 15 January 2014.

Overall User Ranking

In your opinion, how would you rank the overall sensitivity of this species to climate change?:
2

Confidence in your overall assessment of the sensitivity of this species to climate change:
2 Poor