Western Tiger Salamander - Ambystoma mavortium

Abundance: Common

Status: NSS4 (Bc) NatureServe: G5 S4

Population Status: Widely distributed, populations appear stable.

Limiting Factor: Habitat: habitat fragmentation and energy development have resulted in habitat loss. Disease is also a likely limiting factor for this species.

Comment: Changed to a SGCN species from the 2010 SWAP. Three subspecies are incorporated into this account. A. m. melanostictum, A. m. mavortium, and A. m. nebolosum.

Introduction

In Wyoming, the Western Tiger Salamander is found throughout the state at elevations lower than about 10,000 feet (Baxter and Stone 1985). Western Tiger Salamanders are primarily active from March to September. From March to June, adults migrate to temporary or permanent ponds with shallow water to breed. Eggs are adhered to submerged vegetation singly or in clusters of up to 20. Larvae are abundant in ponds from late May to August. Larval salamanders are sometimes referred to as waterdogs or mudpuppies. Larval transformation into adults may occur within a few months. However, in colder conditions larvae may overwinter and not mature until 2-3 years of growth. Larvae feed on aquatic invertebrates when small, but become predacious and sometimes cannibalistic when larger. Adults eat insects, earthworms, and other small invertebrates. Western Tiger Salamanders may remain in a paedomorphic form (an adult with larval characteristics). Three subspecies of the Western Tiger Salamander occur within the state. Because all subspecies have similar life histories and large integration zones, they have been reported at the species level.

Habitat

In Wyoming, Western Tiger Salamanders can be found in rodent burrows, cellars, window wells, and manure heaps, where they can escape desiccation (Baxter and Stone 1985). The adult form is primarily terrestrial except during the breeding season in the spring and summer. However, a fairly moist environment is required. Larvae may be found in intermittent streams, ponds, lakes, and stock troughs.

Problems

- Mountain lakes formerly inhabited by tiger salamanders may experience population declines after the stocking of trout, which can consume larval populations
- Under certain conditions, larval populations may be vulnerable to bacterial infections associated with livestock grazing
- Diseases such as Ambystoma tigrinum virus and Regina ranavirus have been implicated in massive die-off events. There are also reports of Batrachochytrium dendrobatides infections of tiger salamanders, although it is possible that they are sub-lethal
- Natural resource development, especially coal bed methane mining, has the potential to change the landscape in a manner that could negatively affect tiger salamanders
- Salamanders make large coordinated movements to breeding sites, which put them in danger of road mortalities. Interruption of normal movement paths can severely impact tiger salamander populations

Conservation Actions

- A systematic study of this species should be conducted with respect to distribution, abundance, habitat associations, and disease status within Wyoming.
- The disease status of the Western Tiger Salamander in Wyoming needs to be studied
- Continue efforts to educate landowners and the public about the importance of amphibians.
- Develop management recommendations based on survey data.

Monitoring/Research

Conduct baseline surveys to gain better understanding of species distribution within the state. Monitor known areas of ranavirus outbreak to determine effect of disease on local populations.

Recent Developments

Amphibians have received increased attention within Wyoming. Incidental observations are encouraged to be reported to the herpetology program. Ranavirus has been documented in populations of Western Tiger Salamander associated with Coal Bed Methane discharge in the Powder River drainage. Many new populations of Western Tiger Salamanders (>30) have been documented over the past seven years. Several of these populations have been tested for chytrid fungus and only six sites have tested positive for the fungus over the past 13 years.

References

Baxter, G.T. and M.D. Stone. 1985. Amphibians and Reptiles of Wyoming. Second Edition. Wyoming Game and Fish Department, Cheyenne. 137pp.

Snoberger, C.E. and Z.J. Walker. 2012. Reptile and amphibian habitat associations in southwest Wyoming. Wyoming Game and Fish Department Administrative Report. Cheyenne, Wyoming.

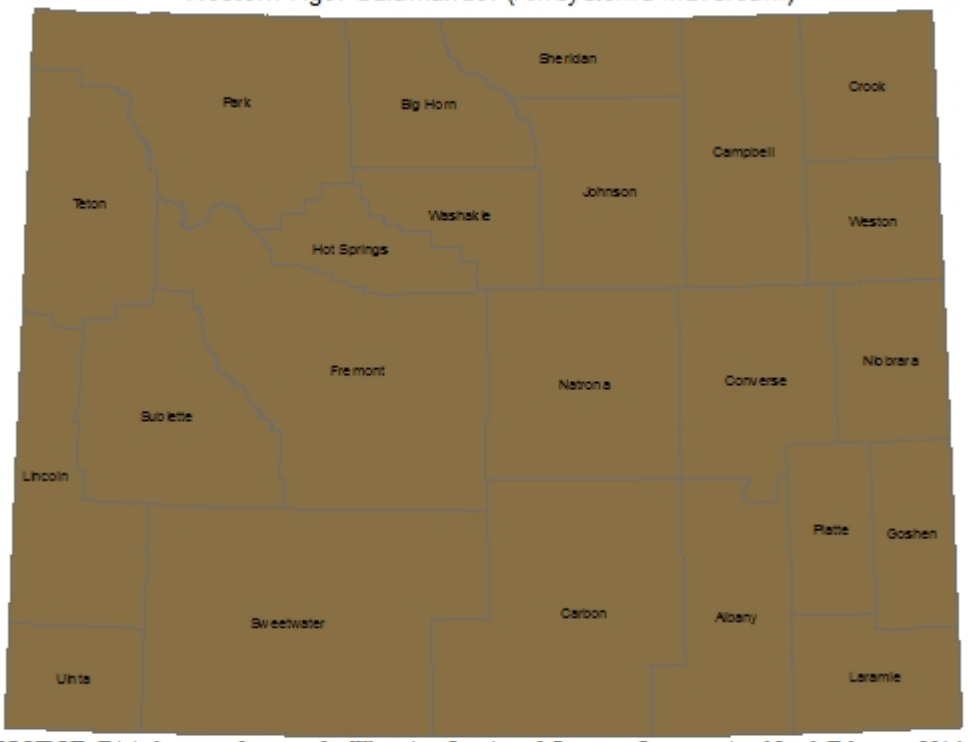
Hammerson, G.A. 1982. Bullfrog eliminating leopard frogs in Colorado? . Herpetological Review 13:115-116.

Snoberger, C.E. and Z.J. Walker . 2012. Southwest Wyoming reptile and amphibian surveys 2009-2010 . Wyoming Game and Fish Department Administrative Report. Cheyenne, Wyoming.

Snoberger, C.E. and Z.J. Walker. 2013. Southeast Wyoming reptile and amphibian surveys 2011-2012. Wyoming Game and Fish Department Administrative Report. Cheyenne, Wyoming.

Snoberger, C.E. and Z.J. Walker. 2014. Reptile and amphibian habitat associations in southeast Wyoming. Wyoming Game and Fish Department Administrative Report. Cheyenne, Wyoming.

Western Tiger Salamander (*Ambystoma mavortium*)



SOURCE: Digital maps of ranges for Wyoming Species of Greatest Conservation Need: February 2016. Wyoming Game and Fish Department. Note that brown indicates the current known range of the species.