

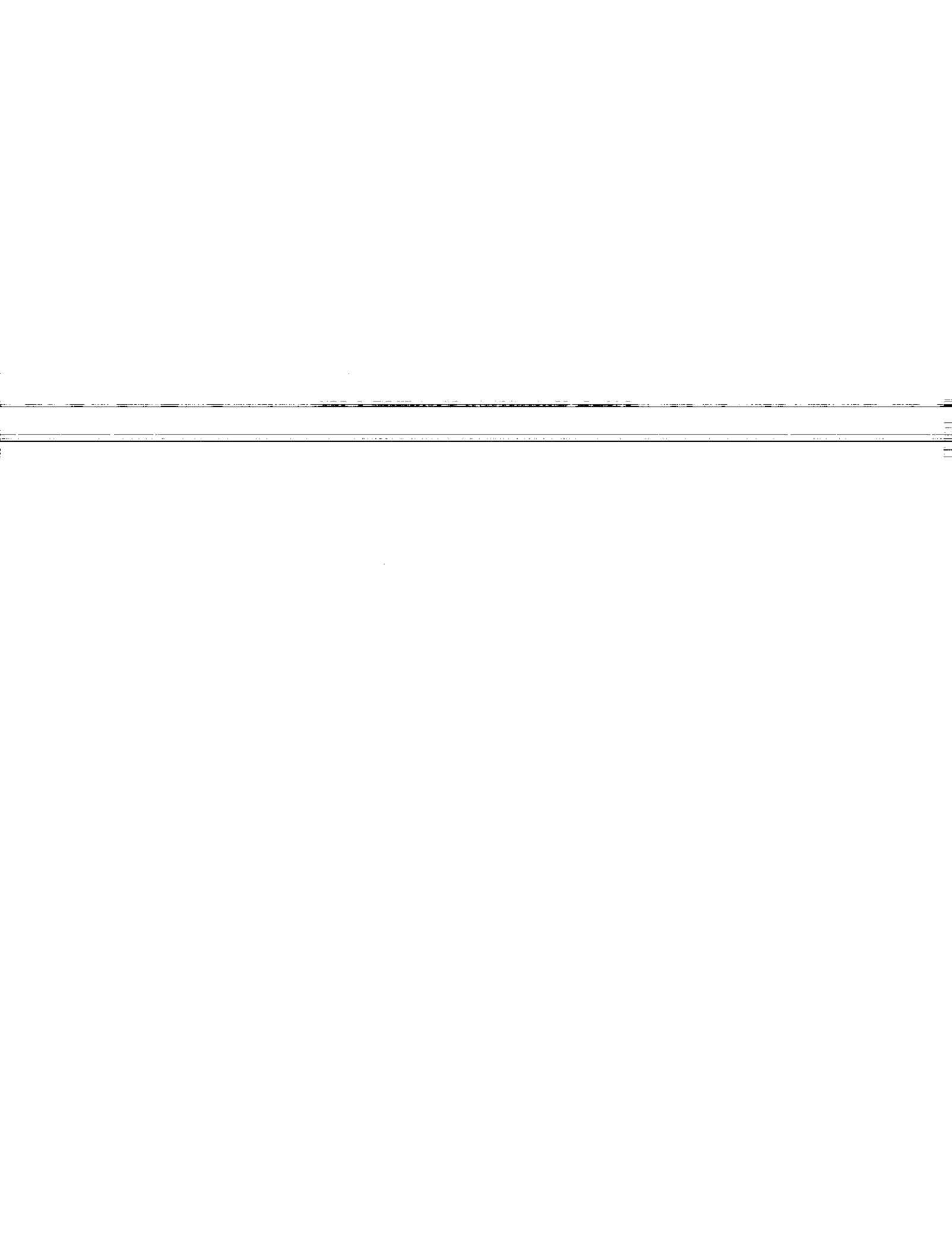


**State of Utah
Department of Natural Resources
Division of Wildlife Resources**

Utah Sensitive Species List

May 12, 2006

This list has been prepared pursuant to Utah Division of Wildlife Resources Administrative Rule R657-48. By rule, wildlife species that are federally listed, candidates for federal listing, or for which a conservation agreement is in place automatically qualify for the *Utah Sensitive Species List*. The additional species on the *Utah Sensitive Species List*, "wildlife species of concern," are those species for which there is credible scientific evidence to substantiate a threat to continued population viability. It is anticipated that wildlife species of concern designations will identify species for which conservation actions are needed, and that timely and appropriate conservation actions implemented on their behalf will preclude the need to list these species under the provisions of the federal Endangered Species Act. Please see Appendix A for the rationale behind each wildlife species of concern designation.



7.7 *Physa megalochlamys*, cloaked physa

Species status statement. The cloaked physa has a highly disjunct, relictual pattern of distribution and is known from 16 locations in interior western North America, from southern Saskatchewan to southern Colorado and west to eastern Oregon (Taylor 1988). Some of the 16 localities are clustered. Globally, there are about seven or eight widely scattered areas of occurrence. In Utah this species occurs at one location in Snake Valley in northwestern Millard County (Taylor 1988).

Statement of habitat needs and threats for the species. This aquatic snail occurs in marshland habitats and ponds throughout its range (Taylor 1988). The single Utah population is in a small, isolated wetland in an arid part of the state where human demands on water resources are great. Because the population is small and localized, the degradation of aquatic habitat through: 1) water withdrawal for agricultural purposes, 2) trampling by livestock, and 3) disturbances and contamination from adjacent development has the potential to jeopardize population viability or result in catastrophic loss of the population.

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Appendix A – Rationale for Wildlife Species of Concern Designations

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Anticipated costs and savings. Protection of the cloaked physa is of economic value to the state of Utah. A lack of proactive agricultural, petroleum, water, mining, and recreation management may lead to reduced populations of this species. If cloaked physa numbers were to be further reduced due to additional habitat degradation, government imposed recreation and development restrictions could be the result.

Rationale for designation. The limited distribution of the cloaked physa makes it susceptible to habitat loss and degradation in an area experiencing increasing development, and so is designated as a Species of Concern.

7.10 *Pyrgulopsis anguina*, longitudinal gland pyrg

Species status statement. This freshwater snail is endemic to an area on the Utah–Nevada border, Snake Valley, where it is known to occur in only two springs (Hershler 1994b, 1998). The one spring in Utah in which it occurs is in northwestern Millard County. Hershler (1994b) reported this species to be common within the limited area in which it occurs.

Statement of habitat needs and threats for the species. Hershler (1994b) described the habitat of this species as two warm, flowing springs at 16°C (61°F) and 17°C (63°F), respectively, both with intermediate conductivity. Because it is localized in a single small spring, the Utah population is vulnerable to habitat loss. Long-term maintenance of suitable aquatic conditions at this spring is essential to the continued survival of the species in this state. However, Hershler (1994b) reported a high level of disturbance of this spring from livestock and water diversion. The spring now issues from an artificial structure, a box, and its flow is mostly diverted to an irrigation ditch. Boxing and diversion of the spring artificially limit usable habitat for this species, reducing available water and suitable substrate habitat. Trampling of snails by livestock and degradation of critically important water quality through livestock use are threats to population viability of this species.

Anticipated costs and savings. Protection of the longitudinal gland pyrg is of economic

value to the state of Utah. A lack of proactive agricultural and water management may lead to reduced populations of this species. If longitudinal gland pyrg numbers were to be further reduced due to additional habitat degradation, government imposed recreation and development restrictions could be the result.

Rationale for designation. The limited distribution of the longitudinal gland pyrg makes it susceptible to habitat loss and degradation in an area experiencing increased agricultural development, and so is designated as a Species of Concern.

7.17 *Pyrgulopsis peculiaris*, bifid duct pyrg

Species status statement. This freshwater snail is endemic to six springs in Millard County, Utah, and two springs in adjacent White Pine County, Nevada (Hershler 1994b, 1998). At two of the Utah localities, it was reported to be scarce, and at three other Utah localities it was considered to be common (Hershler 1994b).

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88 Statement of habitat needs and threats for the species. The bifid duct pyrg is a spring obligate. Seven of the inhabited sites were described as flowing springs. Water temperatures of these seven springs ranged 9-13°C (48-55°F). Conductivities reported for five of the springs ranged from moderate to high (Hershler 1994b).

Only one of the Utah springs inhabited by this species was considered by Hershler (1994b) to be undisturbed. At three of the springs, disturbance was slight, and at another, spring disturbance was moderate (Hershler 1994b). Diversion of the flow of one spring was noted, livestock were present at another, and recreational use was evident at three springs. The very limited distribution of this species, together with documented disturbances of occupied sites—trampling and degradation of water quality and aquatic substrates by livestock, water diversion, and recreational activities—threaten the continued existence of this species in Utah.

Anticipated costs and savings. Protection of the bifid duct pyrg is of economic value to the state of Utah. A lack of proactive water, agricultural, petroleum, and recreation management may lead to reduced populations of this species. If bifid duct pyrg numbers were to be further reduced due to additional habitat degradation, government imposed recreation and development restrictions could be the result.

Rationale for designation. The limited distribution of the bifid duct pyrg makes it susceptible to habitat loss and degradation in an area experiencing continuing impacts to the aquatic habitat, and so is designated as a Species of Concern.

7.20 *Pyrgulopsis saxatilis*, sub-globose Snake pyrg

Species status statement. This freshwater snail is endemic to one locality, a spring complex in Millard County. Hershler (1994b) reported the sub-globose Snake pyrg to be common at this locality. Because of its extremely limited distribution, however, the overall abundance of this species is low.

Statement of habitat needs and threats for the species. The sub-globose Snake pyrg is restricted to aquatic habitats produced by thermal springs in a single spring complex. Hershler (1998) described the spring complex as a series warm flowing springs issuing from the side of a hill. Hershler (1994b) reported the springs to have a temperature of 27°C (81°F), with a moderate conductivity, and an elevation of 1500 m (5,080 ft).

Hershler (1994b) reported slight disturbance of the spring complex inhabited by this species and noted recreational use of the site. The extremely limited distribution of the subglobose Snake pyrg, coupled with recreational use of its only known habitat, constitutes a threat to the continued existence of the species.

Anticipated costs and savings. Protection of the sub-globose Snake pyrg is of economic value to the state of Utah. A lack of proactive water, agricultural, petroleum, and recreation management may lead to reduced populations of this species. If sub-globose Snake pyrg numbers were to be further reduced due to additional habitat degradation, government imposed recreation and development restrictions could be the result.

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91 Rationale for designation. The limited distribution of the sub-globose Snake pyrg makes it susceptible to habitat loss and degradation in an area susceptible development, and so is designated as a Species of Concern.

7.23 *Anodonta californiensis*, California floater

Species status statement. Seven extant populations of this freshwater mussel are known in Utah, all within the Bonneville Basin. Population losses are evident, but the magnitude of the decline is difficult to interpret. Several species of *Anodonta* have been reported in Utah historically, but the identification of populations thought to be *Anodonta* species other than *A. californiensis* cannot be confirmed because they have been extirpated. Considering only those populations identified as *A. californiensis*, at least six populations have been extirpated (see Henderson 1936, Clarke 1993, Mock and Brim-Box 2003). However, all reported populations of *Anodonta* in Utah potentially represent one morphologically variable species (see e.g., Clarke 1993, Mock and Brim-Box 2003). The inclusion of these additional extirpated populations (e.g., those in Henderson 1924, Chamberlin and Jones 1929, Jones 1940) would suggest a decline even more dramatic than a strict interpretation of the historical distribution of the California floater would indicate. Several of the extant populations appear to be at high risk of extirpation. Mock and Brim-Box (2003) found just one live individual and two empty shells at one locality, which would indicate that this population is very small. Two populations are probably not viable because genetic diversity within the population is critically low (Mock and Brim-Box 2003). The catastrophic loss of larger populations is probable as well. The population formerly occurring in Utah Lake was likely to be among the largest in Utah, yet it was the first population reported to have been extirpated. Similarly, Mock and Brim-Box (2003) found thousands of empty shells but no live individuals in one reservoir, suggesting the recent and catastrophic extirpation of a population that was once large.

Statement of habitat needs and threats for the species. This freshwater mussel occurs in lake and pond habitats, including several reservoirs, and low-gradient streams at middle elevations in Utah. Extant populations are localized and are vulnerable to habitat loss or degradation. Water withdrawal is of importance to all populations, but particularly to the several populations occurring in reservoirs (see Clarke 1993). Water pollution from agricultural run-off is of concern and may be the cause of the extirpation of some populations (Clarke 1993). Larval floaters (i.e., glochidia) are obligate parasites of fish,

and so require appropriate hosts to complete their life cycles. It is not known whether they can parasitize nonnative fish

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species. Introduced fish species, habitat degradation, and other factors affecting host-fish populations would ultimately be a threat to populations of California floaters (Clarke 1993, Mock and Brim-Box 2003). Reproductive depression arising from inbreeding is an immediate threat to two populations because critically low genetic diversity is evident in these populations. Hybridization is a threat as well; Mock and Brim-Box (2003) detected evidence of genetic introgression in one population. Limited genetic divergence among Utah populations of this mussel decreases the species' ability to adapt to environmental changes.

Anticipated costs and savings. Stable habitats are required for the long-term population viability of this species. Control of nonnative fish species may be required. Cooperative, proactive measures to stabilize habitats where the California floater occurs can help secure populations and decrease the need for governmental-imposed restrictions on development and agriculture. Locating, documenting, and protecting populations is needed to decrease the likelihood that local communities will be negatively impacted by development restrictions in the future.

Rationale for designation. The California floater is dependent on limited water sources, often in remote locations, and so is vulnerable to habitat alteration and loss. Its limited genetic diversity increases its vulnerability to future environmental changes. A large fraction of the North American mussel fauna has been lost in the last 200 years, suggesting that this species could also be lost. Utah designates this unique animal a Species of Concern to highlight the need to protect California floater from additional habitat and population losses.