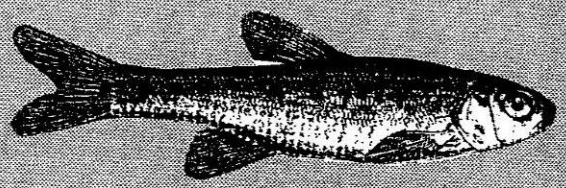
BIG SPRING SPINEDACE RECOVERY PLAN



U. S. Fish and Wildlife Service
Portland, Oregon

BIG SPRING SPINEDACE

(*Lepidomeda mollispinis pratensis*)

RECOVERY PLAN

U.S. Fish and Wildlife Service
Region 1
Portland, Oregon

DON WEATHERS

Approved: Don Weathers
Acting Regional Director

Date: 1/20/94

DISCLAIMER

Recovery plans delineate reasonable actions which are believed to be required to recover and/or protect listed species. Plans are published by the U.S. Fish and Wildlife Service, sometimes prepared with the assistance of recovery teams, contractors, State agencies, and others. Objectives will be attained and any necessary funds made available subject to budgetary and other constraints affecting the parties involved, as well as the need to address other priorities. Recovery plans do not necessarily represent the views, official positions, nor approval of any individuals or agencies involved in the plan formulation, other than the U.S. Fish and Wildlife Service. They represent the official position of the U.S. Fish and Wildlife Service *only* after they have been signed by the Regional Director or Director as *approved*. Approved recovery plans are subject to modification as dictated by new findings, changes in species status, and completion of recovery tasks.

Literature Citation should read as follows:

U.S. Fish and Wildlife Service. 1993. Big Spring Spinedace, *Lepidomeda mollispinis pratensis*, Recovery Plan. Portland, Oregon. 42 pp.

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Fish and Wildlife Reference Service
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Bethesda, Maryland 20814

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The fee for this recovery plan will depend on the number of pages it contains.

ACKNOWLEDGEMENTS

The Nevada Ecological Services State Office of the U.S. Fish and Wildlife Service appreciates the efforts of Donna Withers for preparing this document and those individuals and agencies who reviewed and commented on the draft version of this document, as identified in Appendix A. These comments have been incorporated into this final document as appropriate.

EXECUTIVE SUMMARY OF THE BIG SPRING SPINEDACE RECOVERY PLAN

Current Status: Big Spring spinedace, a federally threatened species, occurs in an 8-kilometer section of Meadow Valley Wash in Condor Canyon, north of Panaca, Lincoln County, Nevada. The species has been extirpated from its type locality, the outflow stream from Panaca (Big) Spring, which historically connected with Meadow Valley Wash just below Condor Canyon. The remnant population is vulnerable to catastrophic events, adverse habitat modification, and nonnative species introductions. Big Spring spinedace are relatively abundant within Condor Canyon, although actual population size has not been determined.

Habitat Requirements and Limiting Factors: Big Spring spinedace life history and habitat requirements and limiting factors are poorly understood.

Recovery Objective: Delist

Recovery Criteria: Big Spring spinedace may be proposed for delisting when a self-sustaining population exists in Meadow Valley Wash at Condor Canyon for at least 5 consecutive years and its habitat is secured from all known threats. Recovery efforts should include restoration of habitat between Condor Canyon and Panaca Spring to allow the Big Spring spinedace population to expand into its historic habitat. Additionally, one or more self-sustaining refugia populations of Big Spring spinedace should be established to prevent the extinction of the species should unforeseen catastrophic events severely impact or eliminate the Condor Canyon population.

Actions Needed:

1. Secure Big Spring spinedace habitat in Condor Canyon by obtaining conservation agreements with private landowners and instream flow water rights.
2. Monitor Big Spring spinedace population in Condor Canyon.
3. Establish Big Spring spinedace refugium population.
4. Enhance Big Spring spinedace population in Condor Canyon.
5. Enhance Big Spring spinedace habitat in Condor Canyon.
6. Implement public outreach program.

Total Estimated Cost of Recovery ($1,000's):

Year	Need 1	Need 2	Need 3	Need 4	Need 5	Need 6	Total
1994	4	3	12	5	15	5	44
1995	4	0	12	11	15	4	46
1996	0	0	12	8	12	0	32
1997	0	0	4	10	2	0	16
1998	4	0	4	0	5	0	13
1999	4	0	13	0	8	0	25
2000	0	0	3	0	5	0	8
2001	0	0	0	0	2	0	2
2002	0	0	0	0	2	0	2
2003	0	0	0	0	2	0	2
2004	0	0	0	0	2	0	2
2005	0	0	0	0	2	0	2
2006	0	0	0	0	2	0	2
Total:	16	3	60	34	74	9	196

Date of Recovery: Delisting of the Big Spring spinedace should be initiated in 2006, if recovery criteria are met.

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