

Hutton tui chub

(*Gila bicolor* ssp.)

Synonym: (*Siphateles bicolor* ssp.)

5-YEAR REVIEW: Summary and Evaluation

Current Classification: Threatened



Photo: Alan Mauer, US Fish and Wildlife Service 2005



Photo: Alan Mauer, US Fish and Wildlife Service 2005

August 2013

**U.S. Fish and Wildlife Service
Oregon Fish and Wildlife Office
Portland, Oregon**

5-YEAR REVIEW

Species Reviewed: Hutton tui chub (*Gila bicolor* ssp.)

Synonym: (*Siphateles bicolor* ssp.)

TAILS Number: 01EOFW00-2013-CPA-0033

1.0 GENERAL INFORMATION

1.1 Reviewers:

Lead Regional Office: Region 1, Endangered Species Branch, Sarah Hall (503) 231-6868

Lead Field Office: Oregon Fish and Wildlife Office - Bend Field Office

Nancy Gilbert (541) 383-7146

Alan Mauer (541) 383-7146

Cooperating Field Office(s) and Regional Office(s): Not Applicable

1.2 Methodology used to complete the review: In order to conduct this 5-year review for the Hutton tui chub, the U.S. Fish and Wildlife Service (Service): 1) gathered available information and reviewed activities undertaken since the completion of the previous 5-year review in 2008; 2) determined if recovery actions have progressed; 3) determined if there is new information regarding the status of threats to the species; 4) reviewed the recovery criteria in the recovery plan; and 5) made recommendations. This review was conducted by the Oregon Fish and Wildlife Office's Bend Field Office.

In addition, we reviewed the best scientific and commercial data received from the public and information from knowledgeable individuals who could provide recent data relevant to the status of the species.

1.3 Federal Register notice announcing initiation of this review: The Service announced the initiation of a 5-year review of 44 species including the Hutton tui chub under section 4(c)(2)(B) of the Endangered Species Act (Act) through a February 5, 2013, *Federal Register* notice (78 FR 8185) (U.S. Fish and Wildlife Service 2013). The notice requested any information that may facilitate conducting the 5-year review.

Of the two responses received in response to the Federal Register notice only one was substantive and was submitted by Dr. Douglas Markle, Professor Emeritus, Oregon State University. Dr. Markle's comment was made in regards to the thesis recently presented by S. Remple. Information from that thesis is presented in the discussion below.

2.0 REVIEW ANALYSIS

2.1 Application of the 1996 Distinct Population Segment (DPS) Policy: Not Applicable

2.2 Review Summary: The Hutton tui chub was listed as threatened on March 28, 1985 and a recovery plan was completed April 27, 1998. The Service conducted a 5-year review of the Hutton tui chub on February 12, 2008. The 2008 5-year review gathered and assessed information since the 1985 listing decision and concluded with a recommendation of no change in the threatened classification for the Hutton tui chub. Please refer to the 5-year review dated February 12, 2008, for additional information regarding species status including life history, population, taxonomic classification, habitat conditions, five-factor analysis of threats, management efforts, recovery criteria, and recommendations.

The known range of the Hutton tui chub is limited to two small springs (Hutton Spring and 3/8 Mile Spring, southeast of Hutton Spring) located on private lands in Lake County, Oregon. In 2005 Scheerer and Jacobs (2005) estimated that the total habitat available for this species in Hutton Spring was 100 m² and the unvegetated open water habitat comprised approximately 36 m². The 3/8 Mile Spring is described as two small pools with a surface area of approximately 2 m² (U.S. Fish and Wildlife Service 2008). Hutton tui chub are the only fish species that occur within these springs.

Surveys conducted by the Oregon Department of Fish and Wildlife (ODFW) in 2005 resulted in a population estimate of 809 Hutton tui chub (95% CI=703-932) in Hutton Spring (Scheerer and Jacobs 2005). In 2007, ODFW conducted an additional population estimate that resulted in 959 (95% CI= 735-1,251) Hutton tui chub in Hutton Spring and 87 (95% CI=65-116) in 3/8 Mile Spring (Scheerer and Jacobs 2007).

ODFW has requested access to both Hutton and 3/8 Mile springs in 2009 and 2012 to conduct surveys of the species and its habitat and permission to access the private property was denied. There have been no additional population surveys for the Hutton tui chub since 2007.

The BLM requested and was allowed access to the private property. On March 19, 2010, BLM staff accessed the property for the purpose of viewing the Hutton Spring habitat. The BLM staff biologist was able to observe Hutton Spring and the 3/8 Mile Spring. The fence at Hutton Spring was in functional condition and effectively excluding cattle. Vegetation appeared healthy and vigorous. Hutton tui chub were observed present at both locations and appeared healthy (Leal 2013). The Service is not aware of any additional observations regarding the Hutton tui chub or habitat conditions at Hutton and 3/8 Mile springs.

New information that the Service is aware of since the previous 5-year review is a master's thesis, "Taxonomy and Systematic Relationships of Tui Chubs (*Siphateles: Cyprinidae*) from Oregon's Great Basin", describing the taxonomic similarity of Hutton tui chub to other tui chub in the region (Remple 2013). Remple conducted mitochondrial DNA, microsatellite, morphologic, and meristic analyses of tui chub from the northern Great Basin in Oregon, California, and Nevada. Her data indicates that there could have been movement of tui chubs involving multiple basins. However, she states that

“whether these introductions are all recent or pre or post-European settlement will be hard to determine”. She also cites anecdotal evidence from field notes made by W. B. Evermann on his collecting trip to southeast Oregon in 1897, which indicated tui chub in XL Spring had been introduced. Evermann did not name the source population for this introduction. He noted that no one had ever seen fish in Lake Abert and chubs were placed by Alvin Randall several years prior into a large spring three miles North of Lake Abert (Remple 2013). XL Spring is located approximately 3.56 miles north of Lake Abert and approximately 17 miles southwest of Hutton Spring.

Abert Basin tui chub are nearly identical in mitochondrial DNA to Hutton Spring tui chub and both are closely related to tui chub from Nevada Railroad Valley, approximately 350 miles south of XL Spring (Remple 2013). Genetically, XL Spring (Abert Basin) and Hutton Spring (Alkali Basin) tui chub are very similar (14 of 19 from Alkali Basin were identical to Abert Basin fish in cytochrome b) (Markle 2013). It is possible that XL Spring fish might have been transplanted from Hutton Spring. However, the closest relatives of the XL Spring and Hutton Spring tui chub are in Nevada so it is also possible that the transplants of all Abert/Alkali basin chubs came from Nevada (Markle 2013). The next closest relatives are in Summer Lake Basin where introductions by humans have likely happened (Markle 2013).

It is unknown whether XL Spring and Hutton Spring fish are native or introduced. It is possible that XL Spring tui chub could have been from Hutton Springs, and Hutton Spring tui chub is natural; or that the source of XL Spring tui chub could have been from Nevada and they were subsequently moved to other springs including Hutton Springs (Markle 2013). The possibility that Hutton Spring tui chub are native seems as reasonable, at this point, as the possibility that they are not native (Markle 2013).

The 2008 5-year review discussed the taxonomic classification and nomenclature for Hutton tui chub. In 2008, the most recent information on nomenclature was the 2004 American Fisheries Society publication “Common and Scientific Names of Fishes from the United States, Canada and Mexico 6th edition” which discusses the common use of the genus name *Siphateles* for three of the species of *Gila* including *bicolor*, of which Hutton tui chub is a subspecies (Nelson et al. 2004). The discussion described the unresolved synonymy between *Gila* and *Siphateles*, and we acknowledged in the 2008 5-year review, the potential for a name change in the future. Since then, the American Fisheries Society published the “Common and Scientific Names of Fishes from the United States, Canada, and Mexico, 7th edition” in April, 2013 (Page et al. 21013). This latest edition recognizes a name change for tui chub from *Gila bicolor* to *Siphateles bicolor*, which includes the Hutton tui chub.

The Service can change *Gila* to *Siphateles* in accordance with 50 CFR 17.11 or 17.12 technical correction, via a direct final rule. The direct final rule will change the listings in 50 CFR 17.11 and 17.12 without going through the normal notice-and-comment process inherent in publishing a proposed rule. The process for a direct final rule to finalize documentation of the name change has not yet been initiated.

2.3 Synthesis: Since the 2008 5-year review the Service has not received any significant information regarding the Hutton tui chub other than the name change by American Fisheries Society and information regarding the taxonomic classification presented by Remple. The information presented by Remple clarifies the relationship between Hutton Spring, XL Spring, and Railroad Valley tui chub, but also brings up new questions regarding the origin, and proper taxonomic classification of Hutton tui chub (Remple 2013). The ODFW has not been able to access the private lands to conduct additional surveys of the Hutton tui chub since 2007 and no additional observations have been made in the field since the BLM field visit in 2010. The remaining threats and population size are difficult to assess at this time due to the lack of access to the private property to conduct surveys. No other additional information was found beyond what was evaluated in the 2008 5-year review. Therefore, for the reasons stated in the 2008 5-year review, the Service recommends no change to the current classification of threatened. The Service will continue to evaluate the status of this species if access and new information becomes available.

3.0 RESULTS

3.1. Recommended Classification: No change is needed

3.2. Recovery Priority Number: No change (remains 15)

3.3. Listing and Reclassification Priority Number: No reclassification is recommended.

4.0. RECOMMENDATIONS FOR FUTURE ACTIONS

In addition to the recommendations made in the previous 5-year review in 2008, the Service recommends the following future actions:

1. Continue to work with the ODFW and the landowner for permission to access Hutton Spring and 3/8 Mile Spring and work together to develop a cooperative management and monitoring plan.

REFERENCES:

- Nelson, J.S., E.J. Crossman, H. Espinosa-Pérez, L.T. Findley, C.R. Gilbert, R.N. Lea, and J.D. Williams. 2004. Common and scientific names of fishes from the United States, Canada, and Mexico sixth edition. American Fisheries Society special publication 29. Bethesda, Md. 386 pp.
- Page, L. M., H. Espinosa-Pérez, L. T. Findley, C. R. Gilbert, R. N. Lea, N. E. Mandrak, R. L. Mayden, and J. S. Nelson. 2013. Common and Scientific Names of Fishes from the United States, Canada, and Mexico, 7th edition. American Fisheries Society, Bethesda, MD. 384 pp.
- Remple, S. 2013. Taxonomy and Systematic Relationships of Tui Chubs (*Siphateles: Cyprinidae*) from Oregon's Great Basin. Masters thesis, Oregon State University, Corvallis, OR, 70 pp.
- Scheerer, P.D. and S.E. Jacobs. 2005. Hutton Spring tui chub and Foskett Spring speckled dace investigations. Oregon Department of Fish and Wildlife, Salem, Oregon. 10 pp.
- Scheerer, P.D. and S.E. Jacobs. 2007. Hutton Spring tui chub and Foskett Spring speckled dace investigations. Oregon Department of Fish and Wildlife, Salem, Oregon. 11 pp.
- U.S. Fish and Wildlife Service. 2008. Hutton tui chub (*Gila bicolor* spp.) 5-Year Review: Summary and Evaluation. U.S. Fish and Wildlife Service, Oregon Fish and Wildlife Office, Portland, Oregon. 18 pp.
- U.S. Fish and Wildlife Service. 2013. Endangered and threatened wildlife and plants; initiation of 5-year status reviews of 44 species in Oregon, Hawaii, Guam, and the Northern Mariana Islands. February 5, 2013, *Federal Register* notice (78 FR 8185).

Personal Communications:

- Leal, J. 2013. Email message from James Leal Re: Hutton Spring Information of field observations. Sent: May 8, 2013, To: Alan Mauer.
- Markle, D. 2013. Email message from Doug Markle Re: Hutton tui Chub 5-year review notice. Sent: April 1, 2013, To: 5-year review responses to Federal Register Notice, and April 26, 2013, To: Alan Mauer.

Signature Page
U.S. FISH AND WILDLIFE SERVICE
5-YEAR REVIEW of Hutton tui chub (*Gila bicolor ssp.*)

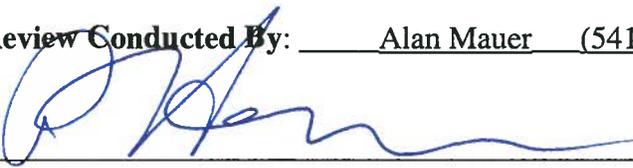
Current Classification: Threatened

Recommendation resulting from the 5-year review:

- Delist** (Indicate reasons for delisting per 50 CFR 424.11):
- Reclassify from Endangered to Threatened status**
- Reclassify from Threatened to Endangered status**
- No Change in Classification is needed**

Appropriate Listing/Reclassification Priority Number, if applicable: 15

Review Conducted By: Alan Mauer (541) 383-7146



Date 8/2/13

Lead Field Supervisor, Fish and Wildlife Service

