

## DEPARTMENT OF THE INTERIOR

## Fish and Wildlife Service

## 50 CFR Part 17

**Endangered and Threatened Wildlife and Plants; Proposed Designation of Critical Habitat for the Endangered Unarmored Threespine Stickleback**

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Proposed rule.

**SUMMARY:** The Service proposes Critical Habitat for the unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*). This fish subspecies is presently found only in northwestern Los Angeles County and western Santa Barbara County, California. It was listed as Endangered on October 13, 1970 (35 FR 16047), and is protected under the provisions of the Endangered Species Act of 1973 as amended. Its Critical Habitat was not designated, pending receipt and review by the Service of recommendations made by the Unarmored Threespine Stickleback Recovery Team. The proposed rule would identify habitat subject to Federal agency consultation under Section 7(a) of the Act. Comments and data related to this proposal are solicited.

**DATES:** Comments on this proposed rule must be submitted by February 17, 1981. Public meetings on this proposal will be held at 10:00 AM on Friday, December 19, 1980.

**ADDRESSES:** Interested persons or organizations are requested to submit comments to Director (OES), U.S. Fish and Wildlife Service, Department of the Interior, Washington, D.C. 20240. Comments and materials relating to this rule are available for public inspection by appointment during normal business hours at the Service's Office of Endangered Species, Suite 500, 1000 North Glebe Road, Arlington, Virginia. Public meetings on this proposal will be held at Los Angeles County Library, 23743 Valencia Boulevard, Valencia, California.

**FOR FURTHER INFORMATION CONTACT:** For further information on the proposed rule contact Mr. John L. Spinks, Jr., Chief, Office of Endangered Species (703/235-2771).

**SUPPLEMENTARY INFORMATION:****Background**

The unarmored threespine stickleback is a small, scaleless, freshwater fish originally described from the headwaters of the Santa Clara River in northwestern Los Angeles County, California. Previously found also in low

gradient portions of the nearby Los Angeles, San Gabriel and Santa Ana Rivers, and from a few localities in Santa Barbara County, California, it has been eliminated from most of its original range. It was reported in 1917 to be abundant throughout the Los Angeles basin. By 1942 it was no longer found, and believed to be extinct there. In the Santa Maria River drainage, populations regarded as the unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*) were replaced by another stickleback (*G. a. microcephalus*) and by intermediate types, through competition, introgressive hybridization or both, following introduction of the latter in trout plants. So far as known, it persists only in the area where it was first found and in one creek in Santa Barbara County.

The upper Soledad Canyon locality from which this fish was originally named in 1854, then known as Williamson's Pass, was described in an 1857 Pacific Railroad Survey as similar in some respects to its present condition. A continuous flow of water in the upper canyon was maintained in dry seasons by several feeder springs, but water levels in the lower canyon then as now retreated for much of the year below the surface of the stream bed. Several studies on the biology of California sticklebacks suggest that a slow, continuous flow of water in a headwater stream, isolated, except during rainy periods, from the ocean by stretches of dry stream bed, is necessary for this particular form to thrive. The intermittent lower watercourse evidently confers a necessary degree of isolation from other related sticklebacks found in most lower stream segments connected above ground with the ocean. A similar form of isolation is provided at the mouth of San Antonio Creek by beach sandbars formed by ocean currents that block the entrance of all fishes, except during periods of high water and swift currents that could be expected to prevent entry of other sticklebacks.

Apparently intolerant of turbidity, since it is not found in muddy water, this stickleback also avoids zones of swift current and those without any current. An additional biological requirement suggested by studies on similar fishes elsewhere is relative freedom from predation by larger carnivorous fish. Although trout are present in the Santa Clara River system, they are confined to separate habitats from the stickleback by a different range of temperature tolerance.

A document entitled "Recovery Plan for Unarmored Threespine Stickleback,

*Gasterosteus aculeatus williamsoni*, an Endangered Fish" was submitted to the Fish and Wildlife Service in 1977 by a recovery team assigned to this species. The team is headed by Shoken Sasaki of the California Department of Fish and Game, and includes biologists and wildlife specialists from other State and Federal agencies. The recovery team also submitted to the Service in 1977 a draft proposal of essential habitat recommendations, which was reviewed by the Bureau of Land Management, Office of State Director for California; by the Director of the California Department of Fish and Game; and by the Regional Forester of the U.S. Forest Service (San Francisco). The present proposal incorporates recovery team recommendations.

Research commissioned or conducted by the Unarmored Threespine Stickleback Recovery Team indicates that the present status of this fish is precarious. Negative impacts resulting in or contributing to complete elimination of populations in various river systems are documented from large scale impoundments, stream channelization, increased water turbidity, introduction of non-native competitors and predators, and from water pollution of several kinds. Many of these impacts are corollary to increased urbanization in the Los Angeles Basin area. In contrast, some stickleback populations have appeared to benefit from certain kinds of very small scale impoundments, and from legally mandated, limited but sustained release of water from storage reservoirs.

Endangered status of the unarmored threespine stickleback under the provisions of Section 4(a) of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.) is not affected by this proposal to determine Critical Habitat.

**Critical Habitat**

The Act defines "Critical Habitat" to include (a) areas within the geographical area occupied by the species at the time that the species is listed, which are essential to the conservation of the species and which may require special management considerations or protection; and (b) specific areas outside the geographic area occupied by the species at the time of listing, upon a determination by the Secretary that such areas are essential for the conservation of the species.

As specified in the rules for listing Endangered and Threatened species and designating Critical Habitat (to be codified at 50 CFR Part 424, see 45 FR 13010), the Director shall consider in determining what areas are critical

increases in erosion and stream turbidity. Residential and resort planning should carefully consider potentials for habitat damage such as the discharge of water containing sewage, chlorine or other chemical additives.

To the extent such activities are not Federal activities or federally authorized actions, they will not be affected by the Critical Habitat designation. Critical Habitat for the unarmored threespine stickleback is as follows: Three stream zones of the upper Santa Clara River watershed in northwestern Los Angeles County, California, including a zone near Del Valle, one in San Francisco Canyon, and one in Soledad Canyon; and the lower segment of San Antonio Creek on the Vandenberg Air Force Military Reservation in Santa Barbara County, California.

The Service is required to consider economic and other impacts of specifying a particular area as Critical Habitat. The Service has prepared a draft economic impact analysis, and will prepare a final economic impact analysis prior to the time of preparing a final rule.

The Service is notifying Federal agencies that may have jurisdiction over the land and water under consideration in this proposed action. These Federal agencies and other interested persons or organizations are requested to submit information on economic or other impacts of this proposed action.

#### Effect of This Proposal if Published as a Final Rule

Section 7(a) of the Act, as amended, provides (in part):

(1) The Secretary shall review other programs administered by him and utilize such programs and furtherance of the Act. All other Federal agencies shall, in consultation with and with the assistance of the Secretary, utilize their authorities in furtherance of the purposes of this Act by carrying out programs for the conservation of endangered species and threatened species listed pursuant to Section 4 of this act.

(2) Each Federal agency shall, in consultation with and with the assistance of the Secretary, insure that any action authorized, funded, or carried out by such agency (hereinafter in this section referred to as an 'agency action') is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification or habitat of such species which is determined by the Secretary, after consultation as appropriate with the affected States, to be critical, unless such agency has been granted an exemption for such action by the Committee pursuant to Subsection (h) of this section. In fulfilling the requirements of this paragraph each agency shall use the best scientific and commercial data available.

If published as a final rule this proposal would require Federal agencies to insure that activities they authorize, fund or carry out are not likely to result in the destruction or adverse modification of these Critical Habitats which have been determined by the Director (who has been authorized to make such designations on behalf of the Secretary). Provisions for Interagency Cooperation are codified at 50 CFR Part 402.

#### Sources

- Baskin, J. N. 1974. Survey of the unarmored threespine stickleback, *Gasterosteus aculeatus williamsoni*, in the upper Santa Clara River drainage. Unpublished report for Contract No. 14-16-001-5387SE, U.S. Bureau of Sport Fish. Wildlife, iv + 67 pp.
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- Baskin, J. N. and M. A. Bell. 1976. Unarmored threespine stickleback survey and report. Unpublished report for the U.S. Dept. Agri. Forest Service, Contract No. 39-5495, 47 pp.
- Bell, M. A. 1976. Evolution of phenotypic diversity in *Gasterosteus aculeatus* superspecies on the Pacific coast of North America. *Syst. Zool.* 25:211-227.
- . 1978. The fishes of the Santa Clara River system, southern California. Natural History Museum, Los Angeles Co. *Contrib. Sci.* 295, 20 pp.
- Blake W. P. 1857. Part II. Geological Report. Pacific R.R. Expl. and Surv., Vol. 5, No. 2, 370 pp., IX pls., 1 map.
- Girard, C. 1854. Descriptions of new fishes, collected by Dr. Al L. Heerman, naturalist attached to the survey of the Pacific railroad route, under Lieut. R. S. Williamson, USA. *Proc. Acad. Nat. Sci., Philadelphia* 7:129-142.
- Hagen, D. W. and J. D. McPhail. 1970. The species problem within *Gasterosteus aculeatus* on the Pacific coast of North America. *J. Fish. Res. Bd. Can.* 27:147-155.
- Miller, R. R. 1960. The type locality of *Gasterosteus aculeatus williamsoni* and its significance in the taxonomy of California sticklebacks. *Copeia* 1960(4):348-350.
- Miller, R. R. and C. L. Hubbs. 1969. Systematics of *Gasterosteus aculeatus*, with particular reference to intergradation and introgression along the Pacific coast of North America: A commentary on a recent contribution. *Copeia* 1961:52-69.
- Ross, S. T. 1973. The systematics of *Gasterosteus aculeatus* (Pisces: Gasterosteidae) in central and southern California. *Nat. His. Mus. Los Angeles Co. Contrib. Sci.* 243, 20 pp.
- Sasaki, S., J. N. Baskin, B. Beall, J. A. Amant, C. Swift, and M. J. Bell. 1976. Recovery plan for unarmored threespine stickleback, *Gasterosteus aculeatus williamsoni*, an endangered fish. Unpublished Report, U.S. Fish and Wildlife Service, 60 pp.
- Williamson, R. S. 1855. Part I. Report of explorations in California for railroad routes to connect with the routes near the

35th and 32nd parallels of north latitude. *Pac. R.R. Expl. and Surv.*, Vol. 5, No. 1, 43 pp.

#### Public Comments Solicited

The Director intends that the rules finally adopted will be as accurate and effective as possible in the conservation of this Endangered species. Therefore, any comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, private interests, or any other interested party concerning any aspect of this proposed rule are hereby solicited. Comments particularly are sought concerning:

- (1) Biological, commercial, or other relevant data concerning any threat (or the lack thereof) to the species or the habitat included in this proposal;
- (2) The location of and the reasons why any habitat of this species should or should not be determined to be Critical Habitat as provided for by Section 4 of the Act;
- (3) Additional information concerning the range and distribution of this species;
- (4) Current or planned activities which may adversely affect the subject areas which are being considered for Critical Habitat; and
- (5) The foreseeable economic and other impacts of the Critical Habitat designation on federally funded or authorized projects.

#### Public Meetings

The Service hereby announces that a public meeting will be held on this proposed rule. The public is invited to attend this meeting and to present opinions and information on the proposal. Specific information relating to the public meeting is set out below:  
Date: December 19, 1980  
Place: Los Angeles County Library,  
23743 Valencia Boulevard, Valencia,  
California  
Time: 10:00 am

#### National Environmental Policy Act

A draft environmental assessment has been prepared in conjunction with this proposal. It is on file in the Service's Office of Endangered Species, 1000 North Glebe Road, Arlington, Virginia, and may be examined by appointment during regular business hours. A determination will be made at the time of final rulemaking as to whether this is a major Federal action which would significantly affect the quality of the human environment within the meaning of Section 102(2)(C) of the National Environmental Policy Act of 1969 and 40 CFR 1500-1508.

**Primary Author**

The primary author of this rule is Dr. George E. Drewry, Office of Endangered Species, Arlington, Virginia (703/235-1726).

**Regulations Promulgation**

Accordingly, it is hereby proposed to amend Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations, as set forth below:

**§ 17.95 [Amended]**

1. It is proposed that § 17.95(e) *Fishes* be amended by adding Critical Habitat of the unarmored threespine stickleback after that of the yellowfin madtom as follows:

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(e) \* \* \*

**Unarmored Threespine Stickleback**

(*Gasterosteus aculeatus williamsoni*)

**California (Los Angeles County):**

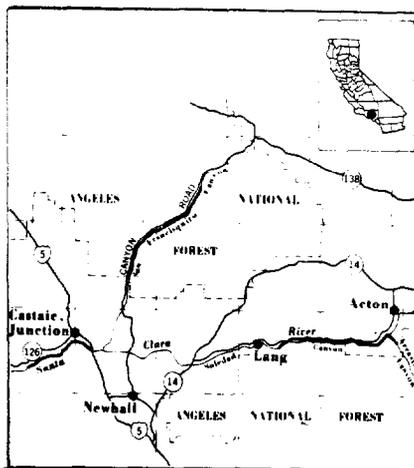
(1) *Del Valle zone*. An area of land and water with the following components (San Bernardino meridian): Santa Clara River within T4N R16W, R17W, beginning at its confluence with San Martinez Grande Canyon, at a point .9 of a mile (1.5km) southwest of Del Valle settlement, and extending upstream approximately 5.6 miles (8.8km) to the overcrossing of Interstate Highway 5.

(2) *San Francisquito Canyon zone*. An area of land and water with the following components (San Bernardino meridian): San Francisquito Canyon watercourse, within T5N R16W, T6N R15W, beginning at a point where the Angeles National Forest boundary intersects the San Francisquito Canyon watercourse approximately 2¼ miles southwest of San Francisquito Powerhouse No. 2, and extending upstream in San Francisquito Canyon approximately 8.4 miles (13.5km) to San Francisquito Powerhouse No. 1, near its junction with Clearwater Canyon.

(3) *Soledad Canyon zone*. An area of land and water in Los Angeles County, with the following components (San Bernardino meridian): Santa Clara River within T4N R13W and R14W, beginning at a point 1.4 miles (2.3km) upstream in Soledad Canyon from the community of Lang, at the downstream end of the area called River's End Park, at 34°28'7" N, 118°21'51" W, thence extending upstream approximately 8.5 miles (13.7km) to its confluence with Arrastre Canyon, at a point located about .6 of a mile (1km) southwest of Los Angeles County Rehabilitation Camp, thence upstream in Arrastre Canyon approximately .8 of a mile (1.4km) to 34°28'7" N, 118°11'51" W.

**Unarmored 3-spine Stickleback**

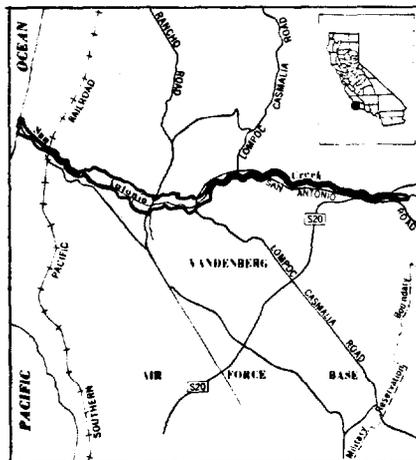
*Del Valle, San Francisquito & Soledad Zones, Los Angeles, Calif.*

**California (Santa Barbara County):**

(4) *San Antonio Creek Zone*. An area of land and water with the following components (using California Grid Zone 5 coordinates): San Antonio Creek watercourse, beginning at the Pacific Ocean beach boundary at 482,000 N; 1,213,000 E and including natural dunes or sandbars in the stream mouth, thence upstream approximately 8.4 miles (13.5 km) to the eastern boundary at 473,357 N; 1,256,250 E in Barka Slough. Lateral flood plain areas elevated less than ten feet above the main streambed constitute seasonal marsh utilized for feeding and reproduction by this species and are considered a necessary component of the Critical Habitat. Total designated area of stream and associated seasonal marsh is approximately 611 acres.

**Unarmored Threespine Stickleback**

*San Antonio Creek Zone, Santa Barbara Co., Calif.*



Primary constituent elements of these habitat areas are considered to be quality and quantity of water flow in the streams, presence of aquatic vegetation and other

biological resources on which the species depends, and isolation of the watercourse as regards predator and competitor species.

Dated: October 28, 1980.

Robert S. Cook,

Acting Director, Fish and Wildlife Service.

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