

Coastal Cutthroat Trout Survey 1984

Robert Franklin
William Mitchell

Introduction

The following is a summary of results obtained during surveys of coastal streams in Humboldt and Del Norte Counties in summer, 1984. The purpose of the surveys was to document occurrence and relative abundance of coastal cutthroat trout (Salmo clarki clarki), and to record information on physical/biological characteristics of streams investigated. Cutthroat were observed in the following streams:

Stream	Tributary to
<u>Humboldt County</u>	
Centerville Slough	Eel River estuary
Strongs Creek, North Fork	Eel River
Salmon Creek	Humboldt Bay
Ryan Creek	Humboldt Bay
Washington Gulch	Humboldt Bay
Lindsay Creek	Mad River
Mill Creek	Mad River
Widow White Creek	Mad River
Little River	Pacific Ocean
Mill Creek	Pacific Ocean
MacNeil Creek	Pacific Ocean
Penn Creek	Pacific Ocean
Beach Creek	Pacific Ocean
Maple Creek	Big Lagoon
MacDonald Creek, North Fork	Stone Lagoon
Boyes Creek	Prairie Creek
Browns Creek	Prairie Creek
<u>Del Norte County</u>	
Richardson Creek	Klamath River estuary
Bummer Lake Creek	Mill Creek, East Fork
Jordan Creek	Lake Earl
Tryon Creek	Smith River estuary
Dominie Creek	Rowdy Creek

Dominie Creek (T 18N R 1W S 26 NE1/4)

Surveyed 7/20/84

Method: Electrofishing (spot check)

Species composition: S.g., S.c.c.

We sampled a 200 ft section above the Rowdy CK hatchery water intake. Discharge was estimated as 2.5 cfs; Water temperature was 58 F at 1430 hours. The watershed is privately owned by a lumber company and has been logged in the past. The surveyed reach was of moderate gradient and flowed beneath a 90% alder/willow canopy adjacent to Highway 101. The channel bottom was covered by moderate amounts of fine sediments (50% pools; 10% riffles). Immediately upstream of 101 the stream bottom is concrete; No fish were found in this stretch. There was a scarcity of cover in the stream. No aquatic vegetation was observed.

Two coastal cutthroat (130 & 140mm) were captured along with 14 steelhead parr (52-160mm). Fishing pressure appeared to be light.

Boyes Creek (T 12N R 1E S 2 SE1/4)

Surveyed 6/26/84

Method: Electrofishing (spot-check)

Species composition: S.g., S.c.c.

Rough fish: Sticklebacks

We surveyed a 100 ft section from the confluence with Prairie Creek to Highway 101. Estimated flow was 4 cfs; Water temperature was 58 F at 1600. The lower portion of Boyes Creek is located within Prairie Creek State Park. Upstream the watershed is **probably** under private ownership by a lumber company. Within the park the stream **Flows** through stands of old-growth redwood which, along with alder, form a 50% canopy. The stream channel contains moderate amounts of fine sediments suggesting that **upstream** disturbances of the watershed have occurred.

One S.c.c. (161mm) was captured. Cutthroat have been **observed** in greater abundance upstream by Redwood Park personnel. Fishing pressure is believed to be moderate because of the stream's proximity to Prairie Creek Campground.

Browns Creek (T 12N R 1E S 25 SW1/4)

Surveyed 6/26/84

Method: Electrofishing (spot-check)

Species composition: S.g., S.c.c., O.k.

We surveyed a 400 ft section upstream from Highway 101. Estimated flow was 4 cfs; Water temperature was 53 F at 1315. The watershed is located within State Park boundaries. Old-growth redwood **forest** borders the surveyed reach. Canopy cover approximated 25%. Streamside vegetation included alder, berries and ferns. The channel was stabilized by bedrock outcrops and dense vegetation. The stream is characterized by low gradient, **ubundunt** gravels (of appropriate size for salmon/steelhead spawning), and very **clear** water.

We captured 3 coast cutthroat (86-103mm), 8 steelhead (30-132mm) and 2 coho salmon (52 and 54mm). Coastal cutthroat are reportedly the dominant salmonid in upstream reaches. Fishing pressure appears to be light,

CDEG
Eureka Files

The following accounts are of Surveyed streams where we did not observe coastal cutthroat trout, Refer to field notes for additional information.

Stream	Tributary to
<u>Humboldt County</u>	
✓ Mill Creek	Mattole River
✓ Guthrie Creek	Pacific Ocean
✓ Barber Creek	Van Duzen River
✓ Wolverton Gulch	Barber Creek
✓ Reas Creek	Eel River estuary
✓ Elk River	Humboldt Bay
✓ Agate Beach Creek	Pacific Ocean
✓ MacDonald Creek	Stone Lagoon
✓ <u>Little Lost Man Creek</u>	Prairie Creek
<u>Del Norte County</u>	
✓ Wilson Creek	Pacific Ocean
✓ Nickel Creek	Pacific Ocean
✓ Cushing Creek	Pacific Ocean

Stream Descriptions

✓ Mill Creek (T 2S R 3W S 16 NW1/4)

Surveyed 7/9/84

Method: Electrofishing

Species composition: S.g., O.k.

We surveyed a 400 ft reach immediately above the mouth. Estimated flow was 4 cfs; Water temperature was 58 F at 1430. Private residences are located nearby. Rearing facilities (i.e., hatchboxes, doughboy pools) are located along the stream but were not being used at the time of the survey.

Forty-one steelhead trout (35-129mm) and 2 coho salmon (69 & 76mm) were captured in the first 100 ft segment. Estimated capture efficiency was 40% for fish less than 100mm in length and 80% for fish greater than 100mm. The remainder of the reach was spot-checked with the electrofisher. Steelhead were dominant throughout this reach. Fishing pressure is probably light.



MacDonald Creek (T 10N R 1E S 29 SW1/4)

Surveyed 6/21/84

Method: Electrofishing

Species composition: S.g.

We surveyed a 420 ft stream section extending upstream from the fence above Highway 101. Estimated flow was 4 cfs; Water temperature was 61 F at 1430. This reach is bordered by private grazing land. Livestock are excluded from a 50 ft wide area bordering the stream. Natural revegetation (primarily by grasses) is taking place in this area. Only one tree was present along the surveyed reach. Cover is represented only by a few shallow bank undercuts. Fine sediments are abundant within the channel.

Ten steelhead trout (105-156mm) were captured. Estimated number of trout fry in this reach was 144. Little fishing pressure on this reach is experienced.

Little Lost Man Creek (T 11N R 1E S 23 NE1/4)

Surveyed 7/19/84

Method: Electrofishing

Species composition: S.g.

We electrofished a 30 ft section immediately above the National Park gaging station and then proceeded upstream 1800 ft, spot-checking pools. Estimated flow was 2.5 cfs; Water temperature was 58 F at 1510. The drainage is located within Redwood National Park boundaries. Mixed old-growth/second-growth redwood stands border the lower portion of this stretch. Old-growth redwoods dominate the upper stretch. Two large log jams (apparent barriers to fish passage) are present in the middle portion. Proportion of gravel/cobble substrates increase upstream; Slight siltation of streambed is apparent throughout reach.

We captured 22 steelhead fry (32-60mm) and missed 5 of similar size in the 30 ft section. A noticeable decrease in trout abundance was observed upstream from the first large log jam. Here the fish may be resident as indicated by gonad development of a 100mm specimen.

Jordan Creek (T 16N R 1W S 3 SE1/4)

Surveyrd 7/17/84

Method: Electrafishing

Species composition: S.c.c., O.t.

Rough fish: Sculpins

We surveyed a 200 ft stretch flowing through private land within one mile of Lake Earl. Estimated flow was less than 1 cfs; Water temperature was 61 F at 1230 hours. The watershed is in private ownership. Land use is divided between residential plots and pastureland. The channel in this area is of low gradient. Meanders are deeply incised. The streambed is composed almost entirely of fine sediments which blanket the shallow pools and riffles. Large woody debris is common and has caused local scouring. The largest pools (and cutthroat) were associated with these channel features. Riparian vegetation included dense growths of overhanging berries, alders and occasional conifers. Canopy cover approximated 70%.

We captured 17 coast cutthroat trout (74-177mm). Two O.t. (88mm) were also collected*

Fishing pressure appears to be significant in the spring when local youths are said to poach some very large cutthroat (presumably spawners from Lake Earl) from the stream.

CDFG
Eureka File

Wilson Creek (T 14N R 1E S 17 NW1/4)

Surveyed 7/6; 7/10/84

Method: Electrofishing (spot-check); Snorkeling

Species composition: S.g.

Rough fish: Sculpins, Sticklebacks

On 7/6 we surveyed a 900 ft section immediately above the Highway 101 bridge. Estimated flow was 8 cfs; Water temperature was 56 F at 1130. Grazing is the primary land use in this area. Simpson Timber Company owns land above the surveyed reach. Spawning gravels and pools were well developed. Few signs of habitat degradation due to logging or grazing were observed. An abundant insect fauna was present.

Electrofishing was confined to the shallower reaches (i.e., riffles, runs). A total of 63 steelhead juveniles (50-148mm) was captured. Small trout (50-80mm) were extremely dense in riffles and tails of pools. Visual inspection of pools from the banks revealed large numbers of 100-150mm trout holding in the water column. Fishing pressure is probably moderate.

On 7/10 we made direct underwater observations of fish within the stream reach between the bridge at the Simpson Gate and an old concrete bridge downstream a distance of approximately 1000 ft. We counted 120 juvenile steelhead (>100mm) and observed numerous smaller steelhead (<100mm). Trout less than 100mm were represented by two fairly distinct size classes. Also observed were sculpins and sticklebacks.

Ryan Slough (Slough Creek) (T 5N R 1E S 31 NW1/4)

Surveyed 7/5/84

Method: Electrofishing (spot check)

Species composition: S.c.c.

Rough fish: sticklebacks

We surveyed reaches above and below Mitchell Road, Estimated flow was .75 cfs; Water temperature was 54 F at 1615 hours. The watershed is privately owned. Principal land uses are logging in the upper watershed and grazing in the lower portions. Private residences are scattered throughout the drainage. Banks in the surveyed reach were heavily overgrown with blackberries, alders and willows which form a continuous canopy over the deeply incised channel. The stream bottom was covered by a thick layer of fine sediments.

The single cutthroat captured measured 179mm. Another of similar size was seen but not caught. This stretch receives little or no fishing pressure.

Wushington Gulch (T 5N R 1E S 9 NE1/4)

Surveyed 6/21/84

Method: Electrofishing (spot check)

Species composition : S.g., D.k., S.c.c.

Rough fish: Sculpins, Sticklebacks

We surveyed an 800 ft reach below Old Arcata Road which divides a steeper gradient headwater area from low gradient pasturelands. Estimated flow was 1 cfs; Water temperature was not measured. Principal land uses in this privately owned watershed are logging and grazing. The survey section has few trees and is under tidal influence. The channel is U-shaped in cross section and, except for a few short riffles, is entirely carpeted by fine sediments. Mysid shrimp (Neomysis mercedis) were abundant in the lower section of the stream, close to where it flows into Humboldt Bay.

The single cutthroat captured measured 140mm. Also captured were steelhead (average length 128mm), coho salmon (average length 72mm) and an unidentified 31mm trout. Sticklebacks and sculpins were abundant. This stretch receives little or no fishing pressure.

Wolverton Gulch (T 2N Fi 1E S 19 NW1/4)

Surveyed **7/2/84**

Method: Electrofishing

Species composition: S.g.

We surveyed a 400-500 ft stream section immediately below the Highway 36 culvert. Estimated flow was 1 cfs; Water temperature was 55 F at 1000. Pastureland borders the stream here. The channel substrate is composed largely of fine sediments and cemented gravels.

We captured 17 steelhead (57-149mm). In addition to these we observed 12 20-40mm, 8 60-80mm, and 2 120-140mm trout. Moderate fishing pressure may exist,

Reas Creek (T 2N R 2W S 3 SE1/4)

Surveyed **7/2/84**

Method: Electrofishing

We surveyed a 250 ft stream section below the Centerville Road culvert. Estimated flow was less than 1 cfs; Water temperature was 64 F at 1545. Grazing is the primary land use in this area. Private residences are located adjacent to the stream at Centerville Road. The stream channel is highly aggraded; The stream bottom is composed of fine sediments and muck. The banks are broken down and there is little in-stream cover. The only organisms observed were frogs and water striders (Gerris).