

OVERVIEW--STRAIT OF JUAN DE FUCA **BULL TROUT/DOLLY VARDEN STOCKS**

DUNGENESS/GRAY WOLF **UPPER DUNGENESS** **LOWER ELWHA** **UPPER ELWHA**

STOCK DEFINITION AND ORIGIN

In the Strait of Juan de Fuca, four stocks of bull trout/Dolly Varden have been tentatively identified: Upper Dungeness River, Dungeness/Gray Wolf, Lower Elwha River, and Upper Elwha River. The stocks are considered separate based on the geographic distribution of their spawning populations. One 660 mm char was observed about one mile above Highway 101 in the anadromous zone in the late 1980s by a WDFW biologist during a snorkel survey to identify steelhead parr habitat (Hal Beecher, WDFW, personal communication). Two presence/absence day time snorkel surveys were conducted by WDFW biologists in the resident fish zone at RM 6.0 and above the water diversion structure at RM 7.0 in October 1996. A 100-meter section was surveyed at each location. No bull trout/Dolly Varden were observed, although rainbow trout of various sizes were seen at both locations. WDFW biologists believe that the one reported bull trout/Dolly Varden in Morse Creek was probably a stray from the Elwha or Dungeness rivers and that no distinct stock exists in Morse Creek .

Run timing and spawning timing are unknown at this time.

Using the Haas (1988) bull trout/Dolly Varden species differentiation formula, both bull trout and Dolly Varden have been identified in the Dungeness and upper Elwha rivers. See individual stock reports for more specific information.

STOCK STATUS

The status of the Dungeness/Gray Wolf, Lower Elwha and Upper Elwha stocks is Unknown. The Dungeness is tentatively considered Healthy.

Plans for the summer of 1997 are to collect more population data and samples for genetic analysis in the Dungeness River.

Information for the Lower Elwha stock includes incidental trap counts and angler reports.

STRAIT OF JUAN DE FUCA -- UPPER DUNGENESS

DOLLY VARDEN

In the 1998 inventory, this stock was called a bull trout/Dolly Varden stock. Subsequent genetic analysis of a sample collected in 1998 (N =49) indicated that all fish in the sample were Dolly Varden.

STOCK DEFINITION AND ORIGIN

Dolly Varden in the Dungeness River above the falls at Gold Creek (RM 18.8) have been identified as a distinct stock based on their geographic distribution.

Resident and fluvial life history forms are present.

Spawn timing and locations are unknown.

Upper Dungeness Dolly Varden are native and are maintained by wild production.

STOCK STATUS

Stock status is tentatively considered Healthy based upon the number, distribution and age composition of Dolly Varden seen in a survey conducted by WDFW biologists in the upper mainstem Dungeness in August, 1996. Data quality is excellent.

Four sections, selected at random, were electrofished. The first section at approximately RM 28.4 yielded 41 bull trout/Dolly Varden ranging in size from 35 mm to 220 mm. Densities were 0.77 fish per meter and 0.11 fish per square meter. The second section was at approximately RM 29. Twenty-one /Dolly Varden were sampled. Sizes ranged from 30 mm to 170 mm, and densities were 0.51 fish/m and 0.08 fish/m². The third section was approximately 200 meters below the second section. Twenty-five Dolly Varden were sampled. Sizes ranged from 35 mm to 190 mm, and densities were 1.09 fish/m and 0.16 fish/m². The fourth section was at approximately RM 26. Forty Dolly Varden were sampled ranging in size from 50 mm to 205 mm at densities of 0.87 fish/m and 0.11 fish/m². The total sample was 127, and total densities were 0.78 fish/m and 0.108 fish/m².

Most of the four plus miles surveyed were also hook-and-line sampled. Fifty-six Dolly Varden were caught and released in 7.42 hours for an average of 7.5 fish per hour.

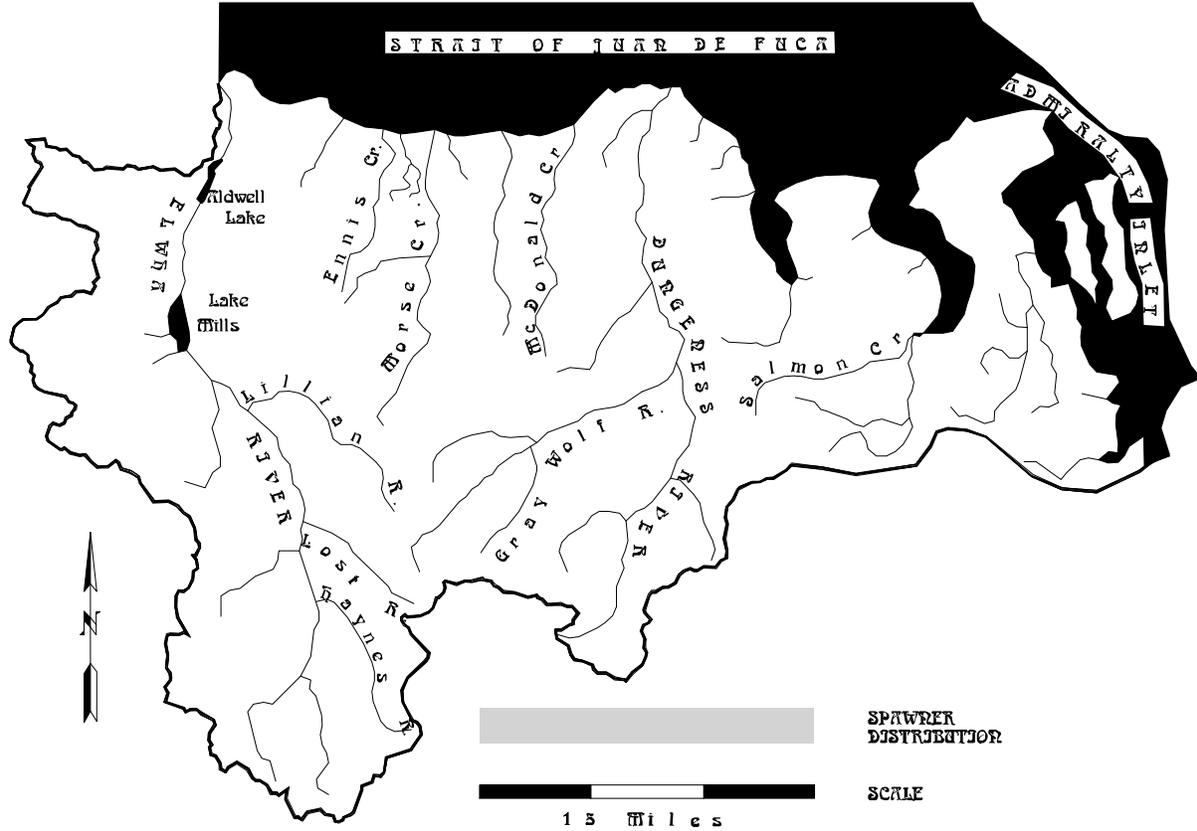
Nineteen scale samples were taken from fish sampled for age analysis. In this sample, fish in their second year ranged from 80 mm to 175 mm in length; those in their third year ranged from 155 mm to 205 mm, and the single fish in its fourth year was 220 mm

STOCK DEFINITION PROFILE for Upper Dungeness Dolly Varden

SPAWNER DISTRIBUTION

DISTINCT? -

Spawner distribution is distinct for this stock, but specific spawning locations are unknown



TIMING

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	DISTINCT?
												Unknown

Spawn timing is unknown for this stock.

BIOLOGICAL CHARACTERISTICS

DISTINCT? -

STOCK STATUS PROFILE FOR Upper Dungeness Dolly Varden

STOCK ASSESSMENT

DATA QUALITY -----> Excellent

Return Years	FW PROD No./m ²			
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73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96 0.11
97

AVERAGE RUNSIZE DISTRIBUTION

Data not available.

STOCK SUMMARY

Stock Origin
Native

Production Type
Wild

Stock Distinction
Distribution

Stock Status
Healthy

Screening Criteria

long. Examination of these fish for sexual maturity indicated that they reached sexual maturity at two to three years of age at a size of 155 mm to 180 mm. Seven native char were collected using electrofishing and hook and line and preserved for Haas (1988) bull trout/Dolly Varden species differentiation formula measurements and maturity determination. All seven fish measured as Dolly Varden. Four were mature females, one a mature male, one immature male and one immature female. The Haas formula measurements ranged from -1.57 to -3.60. Two fish were taken from RM 24 (above anadromous blocks) while electrofishing on November 4, 1994. Both fish measured as "strongly" Dolly Varden (-2.33 and - 2.88).

FACTORS AFFECTING PRODUCTION

Habitat--Freshwater habitat is basically pristine. All of the sampled area in the upper river is in the Buckhorn Wilderness in the Olympic National Forest. The headwaters are in the Olympic National Park.

Harvest Management--The Olympic National Park has catch-and-release regulations on bull trout and Dolly Varden in all park waters. There may be some mortality resulting from hook and release while fishing for other species.

Hatchery--No hatchery-origin salmonids have been released into the upper Dungeness.