CONTRIBUTION OF WILD AND HATCHERY-REARED COHO SALMON, ONCORHYNCHUS KISUTCH, TO THE OREGON OCEAN SPORT FISHERY

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ABSTRACT

	<i>,</i>	Eight scale characters of known hatchery and wild coho salmon, Oncorhynchus kisutch, were compared, and a linear discriminant function was used to determine whether hatchery and wild adult coho pared, and a linear discriminant function was used to determine whether hatchery and wild adult coho	
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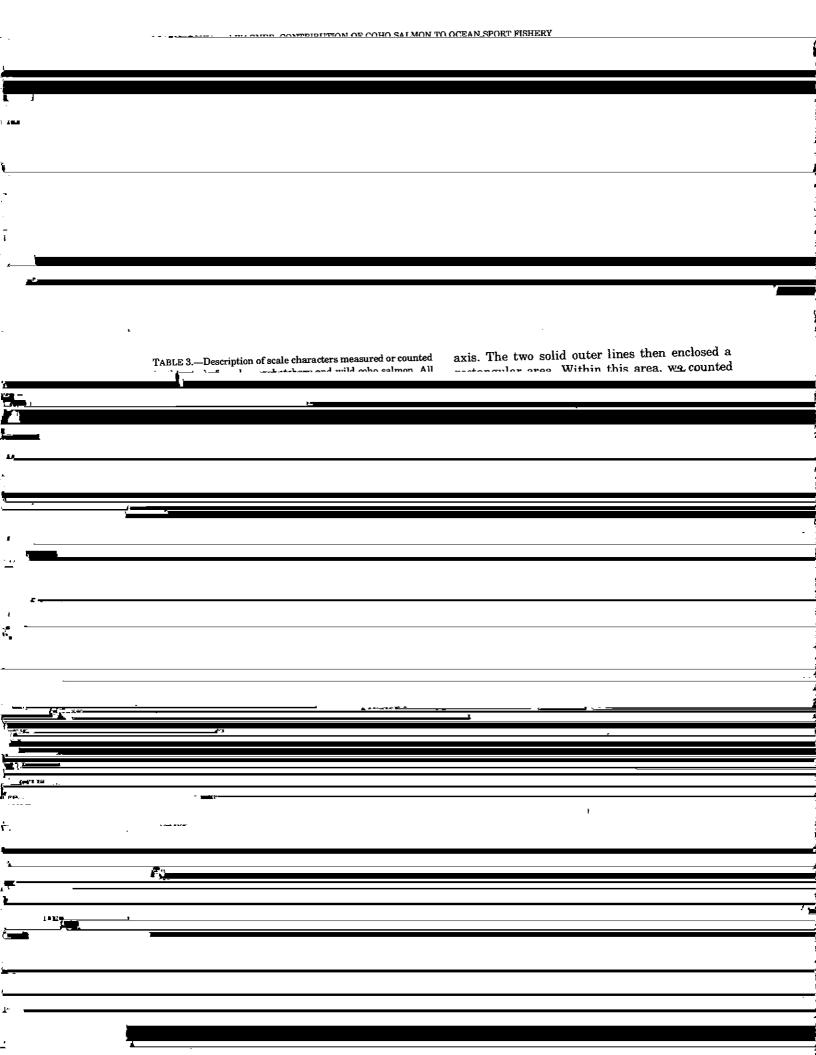
rivers (Berry⁶; Cummings see footnote 5). The escapement of wild fish is also declining in the lower Columbia River (Oregon Department of Fish and Wildlife and Washington Department of Fisheries 1976).

Management agencies do not know how many wild fish are caught in Oregon's troll and sport

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ings. We obtained scales from 178 adipose clipped salmon and from 2,054 unmarked salmon (Table 1).

Because few wild fish were available, we had to use wild fish of several different brood years to increase our sample. Geographic location, brood year, and number of scale samples used in the



sured from scales from 2,054 unmarked coho salmor (Toble 1) In all scale readings only scales marked hatchery fish to find the total number of hatchery fish caught in that stratum (Table 5)

Fewer than 0.5% of the fish were age 2.1, and the scales indicated that the fish grew slowly in their first year of life. These scales were assumed to be from wild fish.

Wild and hatchery fish were assumed to have similar numbers of regenerated scales, most of which were regrown because of scale loss during freshwater rearing. If wild fish tend to lose more from unmarked fish for several strata, we combined 2-wk periods for a given port where necessary to obtain a sample of at least 50 fish. Small sample sizes necessitated combining samples for Brookings and Gold Beach.

The observed percentage of hatchery coho salmon in the unmarked sample was corrected for wild fish incorrectly classified as hatchery fish, and

Winchester Bay (Table 6). Late in the season, and 63 at Brookings/Gold Beach. An estimated hatchery fish may be proportionately less abun-75% of all coho salmon landed by the entire sport dant along the south and central coast, since most fishery from mid-June to mid-September 1977 Columbia River fish would have moved northward originated from hatchery releases. Percentages of by this time, leaving mostly coastal hatchery and hatchery coho salmon by port and period, along wild fish contributing to the south and central with confidence intervals, are shown in Table 6. coast fisheries. The lowest percentage of hatchery Since the sport fishery is mainly composed of fish noted was 49.7 at Winchester Bay, from 1 private and charter boats on day-long trips, our August to 15 September. estimated percentages of hatchery and wild fish by Another possible factor contributing to lower port probably reflect fairly well the actual perpercentage of hatchery coho salmon in the fishery centages occurring near each nort, assuming simifish intermingle extensively with wild fish, it will be difficult to protect wild stocks while maintaining high rates of harvest of hatchery fish in the fering valuable comments; Robert Mullin, Robert McQueen, and District Biologists of the Oregon Department of Fish and Wildlife for providing the

SCARNECCHIA and WAGNER: CONTRIBUTION OF COHO SALMON TO OCEAN SPORT FISHERY

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