

A Preliminary Assessment of The Impact of The
"Small Footrope" Regulation on The Spatial Distribution
of Oregon Bottom Trawl Effort In 2000

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Analysis Conducted

Oregon bottom trawl logbooks were analyzed to determine how the new "small footrope" regulation might have changed fishing patterns so far this year. The emphasis was placed on determining the degree to which trawl fishing effort had been shifted away from traditional shelf rockfish fishing grounds.

To delineate traditional rockfish grounds, the 1993-95 logbook data were used. All bottom trawl tows resulting in a combined rockfish catch per unit effort (CPUE) greater than 800 lbs/h were identified. Tows with depths greater than 250 fathoms were not included (about 30 out of 5800 tows). The start locations for these tows were then mapped (Figure 1) and polygons were drawn around the clusters of tow start locations. These areas were assumed to roughly represent the traditional shelf rockfish grounds for Oregon bottom trawlers.

Mapping analysis was then conducted on the Oregon trawl logbooks for January through June 2000. Tow start locations were mapped for gear code 392 (sole trawl). This gear code in Oregon's 2000 logbook database is equivalent to the "small footrope" category. These start locations are shown overlaid on the high rockfish polygons in Figure 2. The data in Figure 2 suggest that the "small footrope" regulation significantly shifted fishing effort away from traditional rockfish grounds. In most of the polygons, no effort is shown. In some of the polygons, some fishing effort is shown near the edges of the "high rockfish" areas. Since these are only tow start locations, caution should be used in interpreting the data; the edge tows in particular. While these tows may have started at the edge of the "high rockfish CPUE" areas, the lack of start locations in the middle of the polygons suggests the tows may have proceeded away from, or along the side of, rocky areas rather than directly across these areas. The great abundance of tows in the 1993-95 data that originate within these polygons suggest that those tows were targeted at these areas.

We also examined trawl logbook data for gear code 391 (roller trawl) for January through June 2000 (Figure 3). We restricted our analysis to tows with a bottom depth less than 250 fathoms. These tows also largely avoided traditional shelf rockfish grounds, however in a few instances the tows were heavily clustered along the edges of the "high rock CPUE" polygons.

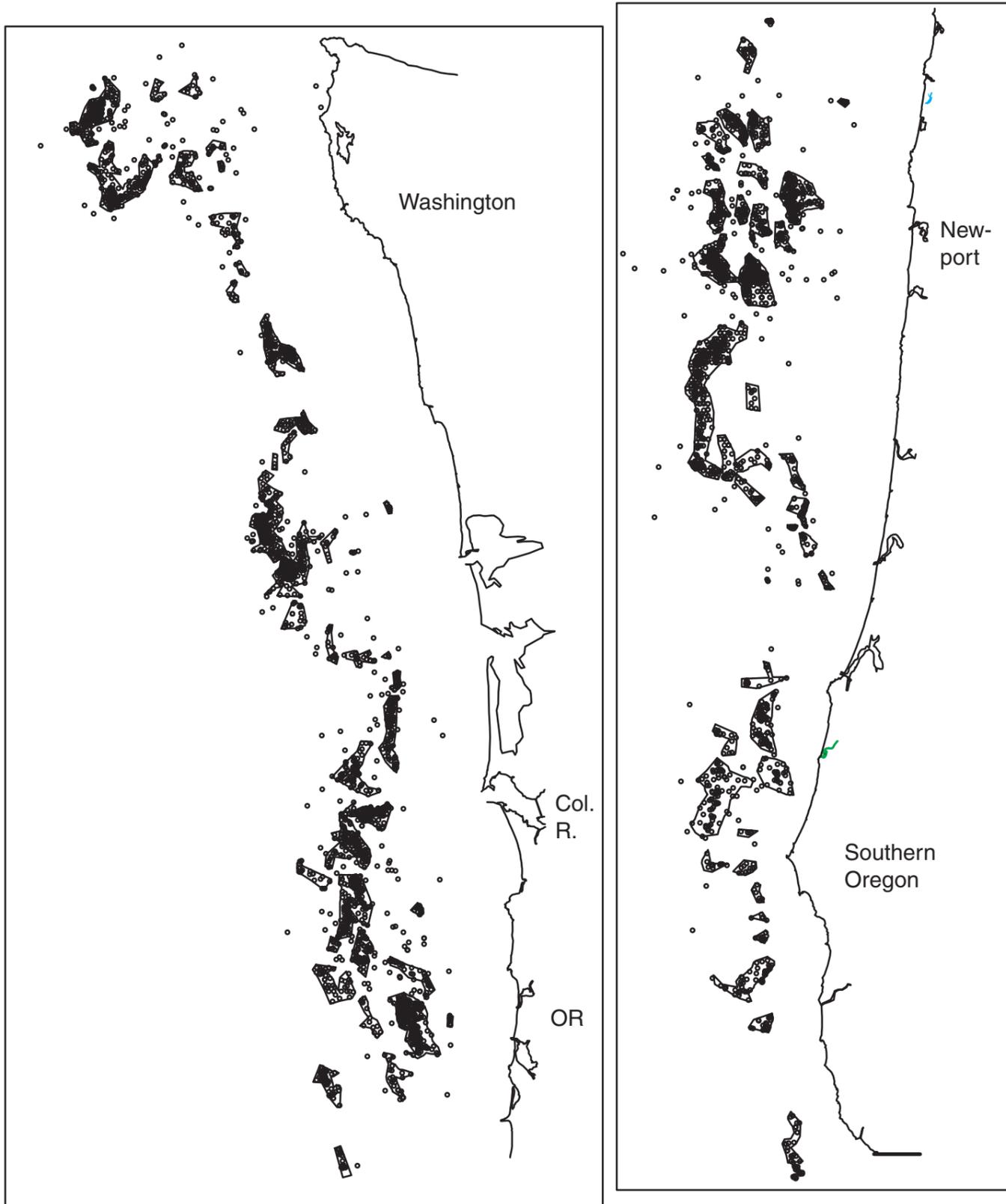


Figure 1. Distribution of high CPUE (>800 lbs/h) rockfish tows (Oregon logbooks) from 1993-95. Polygons enclose clusters of productive tows.

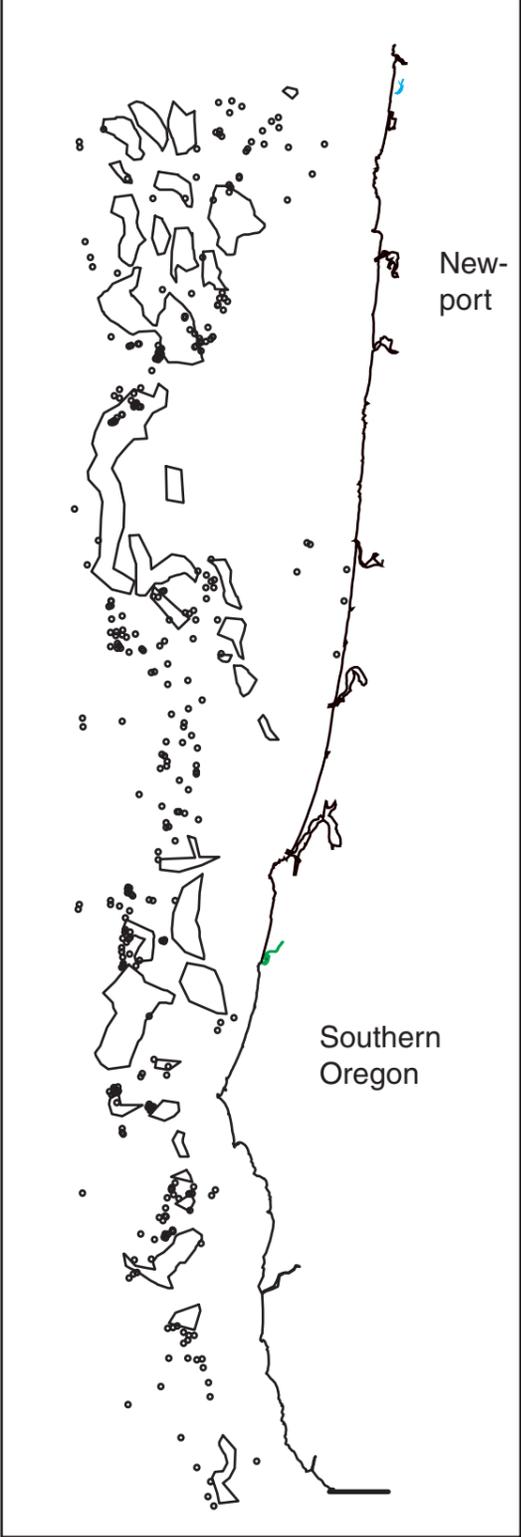
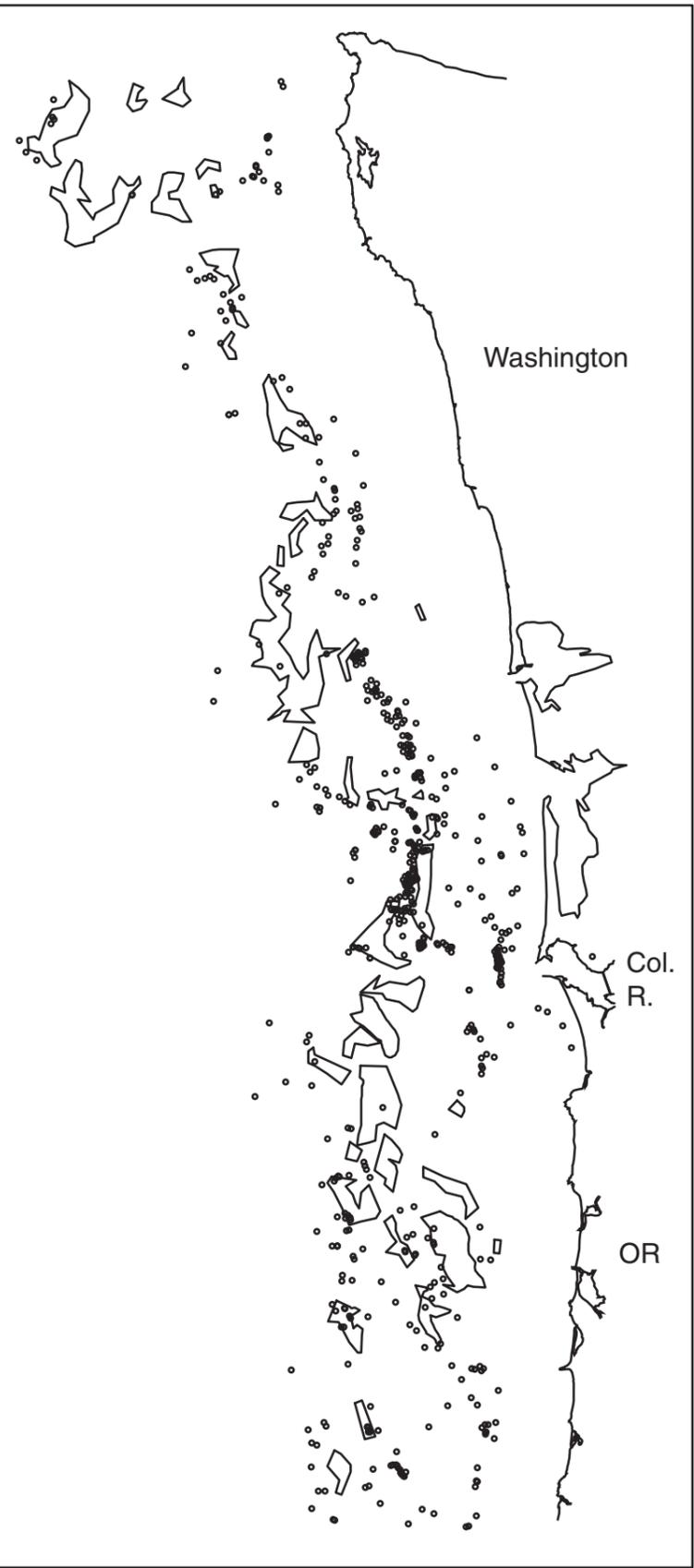


Figure 2. Comparison of geographic distribution of Oregon small footrope trawl effort, January through June 2000 (small circles- gear 392) with high rockfish CPUE areas (polygons) from 1993-95.

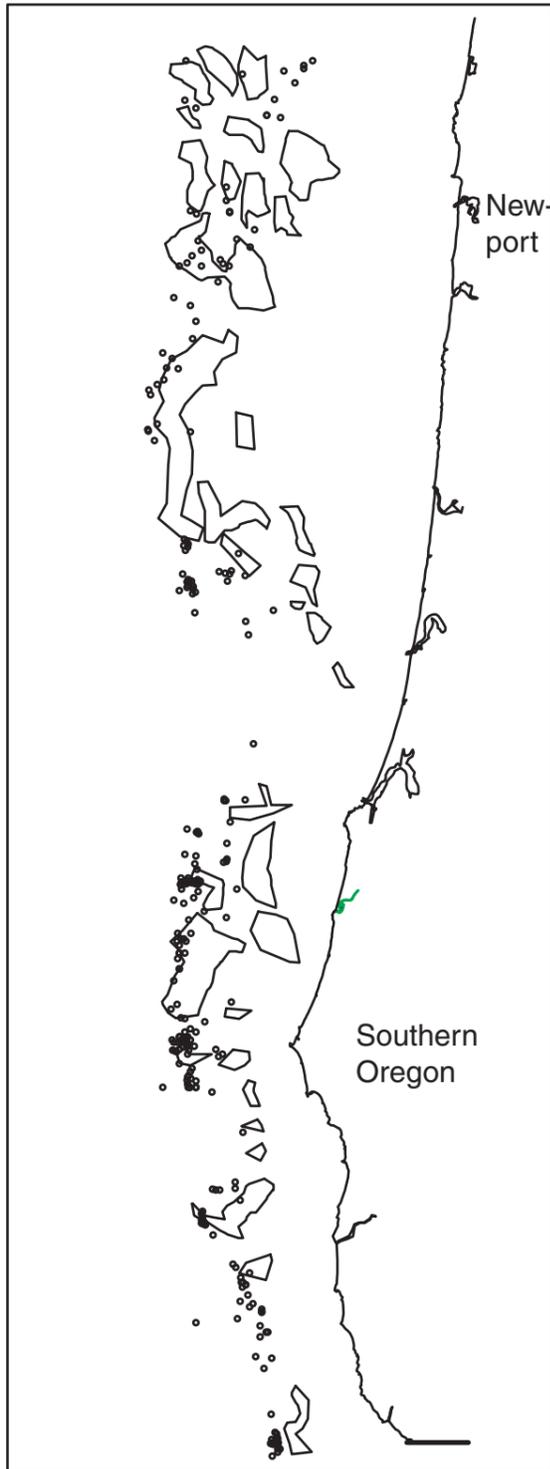
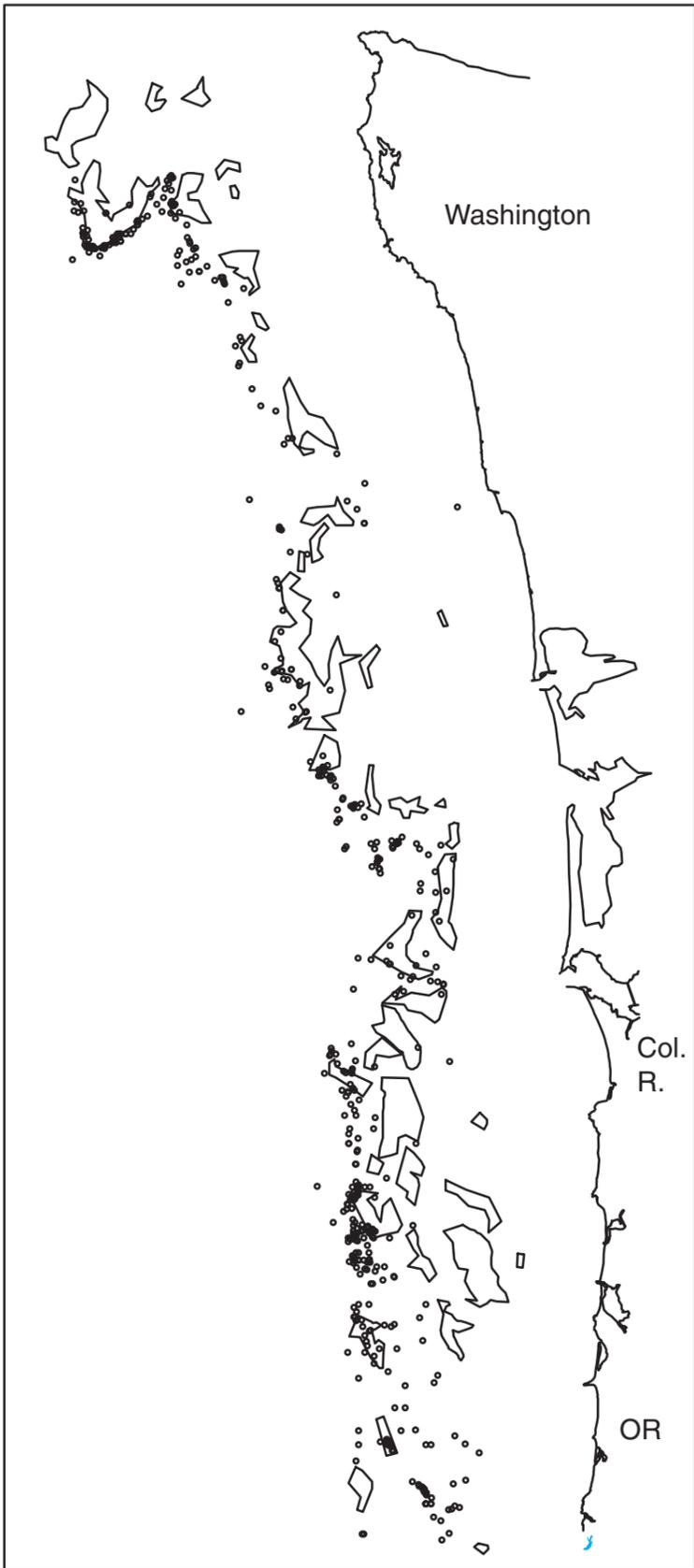


Figure 3. A comparison of January through June 2000 roller trawl gear (391) versus high rockfish CPUE areas (polygons) from 1993-95.