Factors Influencing the Distribution of Cottids in Small Forested Watersheds Upstream from Naturally Occuring Migration Barriers in Western Oregon

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In small forested watersheds of western Oregon, upstream from natural barriers to migration, fish communities are dominated by coastal cutthroat trout (*Oncorhynchus clarki clarki*) and Cottid spp. Although cutthroat trout are more ubiquitous in these environments, cottids represent a potentially important, though poorly understood component. To evaluate distribution and spatial extent of cottids, we conducted spatially continuous surveys of stream habitat noting the presence or absence of cottids throughout the entire fish bearing portion of the channel in thirty five randomly selected watersheds (500–1000 ha) in the ascades, oast Range, and Klamath Mountains ecoregions of western Oregon. A regression tree approach was used to identify variables useful in separating watersheds where cottids were present from those where they were absent. Cottids were present in 10 of the 35 watersheds and the two factors most effective in delineated presence or absence were the number of fish-bearing tributaries and watershed area upstream from the migration barrier. These results suggest that cottid presence in headwater streams is linked to the spatial distribution of refugia, channel connectivity, and how those factors influence the process of ebb and flow.