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Rundio, D, E, NOAA Fisheries, Santa Cruz, USA, dave.rundio@noaa.gov
Lindley, S, T, NOAA Fisheries, Santa Cruz, USA, steve.lindley@noaa.gov

TERRESTRIAL SUBSIDIES TO STEELHEAD IN BIG SUR, CALIFORNIA: SEASONAL PATTERNS AND NON-NATIVE PREY (Abstract ID: 138)

Terrestrial prey subsidies are a major component of fish diets in some streams. Subsidies appear highest in deciduous temperate forests and lowest in grasslands, but their importance in many other systems is unknown. We sampled terrestrial subsidies, benthic invertebrates, and diet of juvenile steelhead for 15 months to determine seasonal patterns of prey availability and use in two streams in Big Sur, California, that have a Mediterranean climate and redwood-deciduous riparian forest. Inputs of terrestrial invertebrates were highest in summer and early fall and lower through the winter. Seasonal patterns of subsidies and standing crops of aquatic invertebrates were similar. Terrestrial prey composed 50-65% of the annual mass in steelhead diet, 70-85% in summer and 20-40% in winter. Non-native terrestrial pill bugs (Isopoda) were the single most dominant group of prey consumed in terms of mass (30-40%). Our results suggest that annual subsidies of terrestrial prey to Big Sur streams are similar in magnitude to other forested systems, and that while terrestrial inputs vary seasonally they contribute to steelhead diet year-round, even during winter, in this forest and climate.