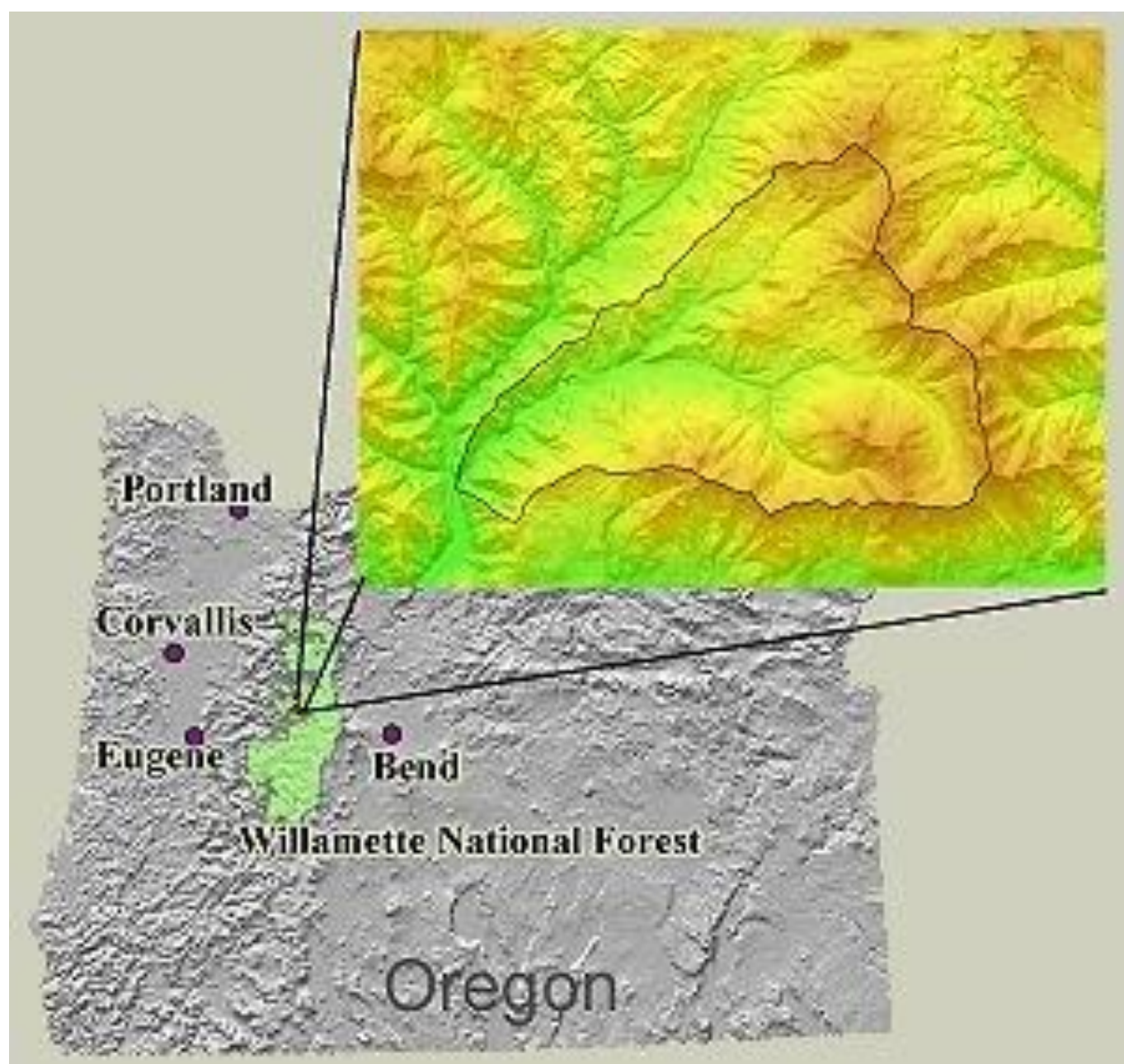


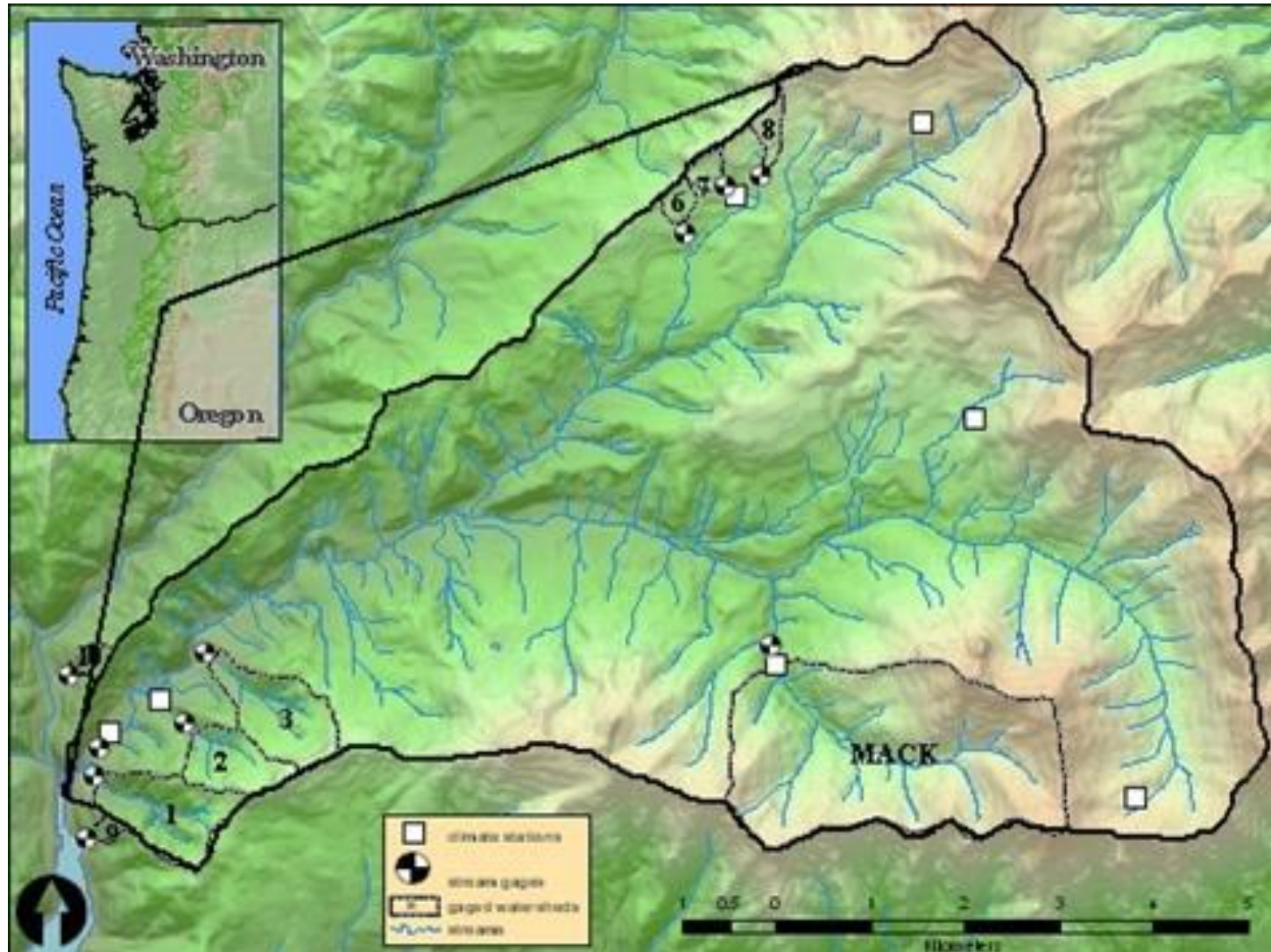
POPULATION DYNAMICS OF COASTAL CUTTHROAT TROUT IN MACK CREEK

Stan Gregory, Ivan Arismendi,
Randy Wildman, Linda Ashkenas
Department of Fisheries & Wildlife
Oregon State University





H.J. Andrews Experimental Forest











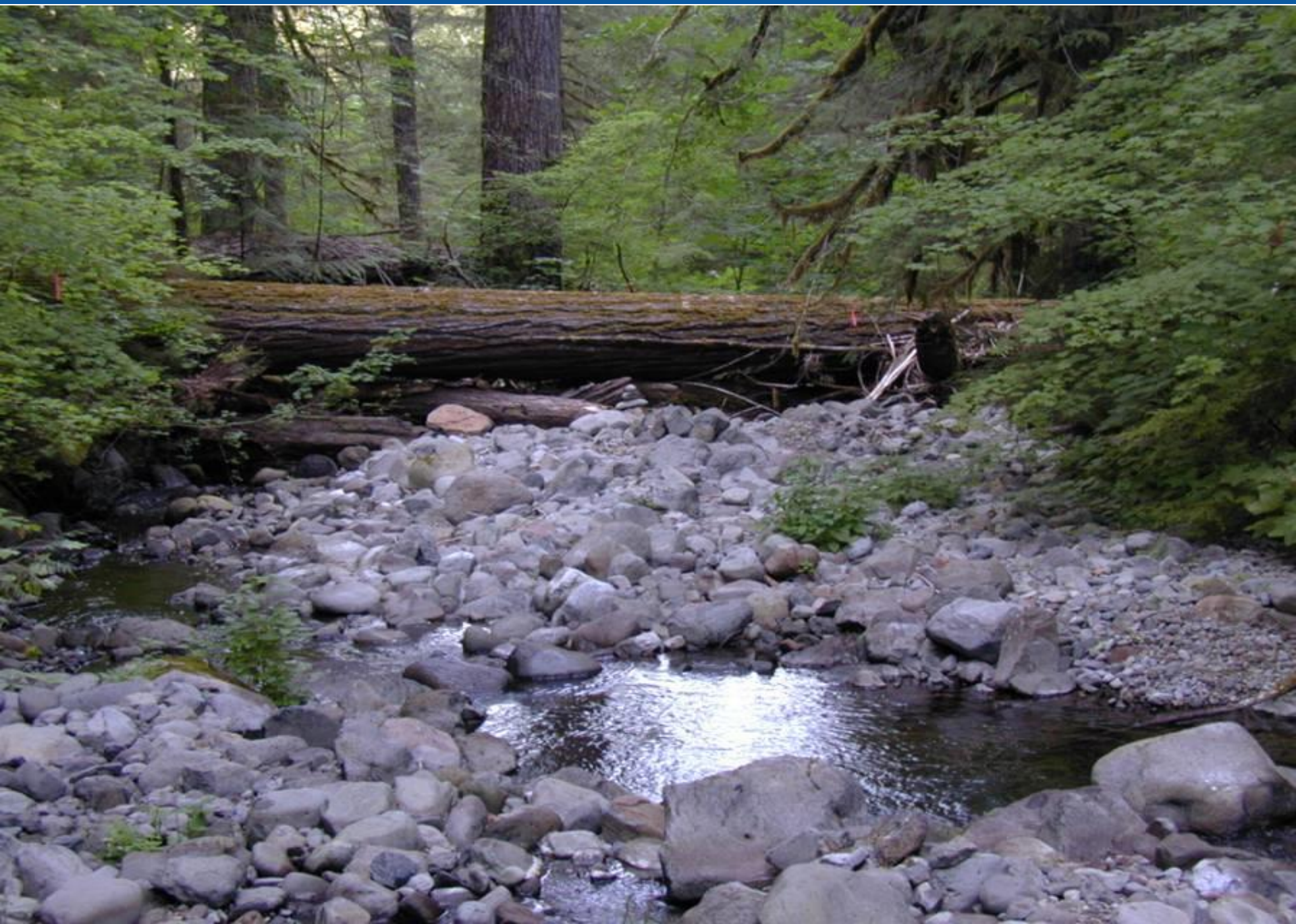
Legacy



Jim Hall and Dick Aho

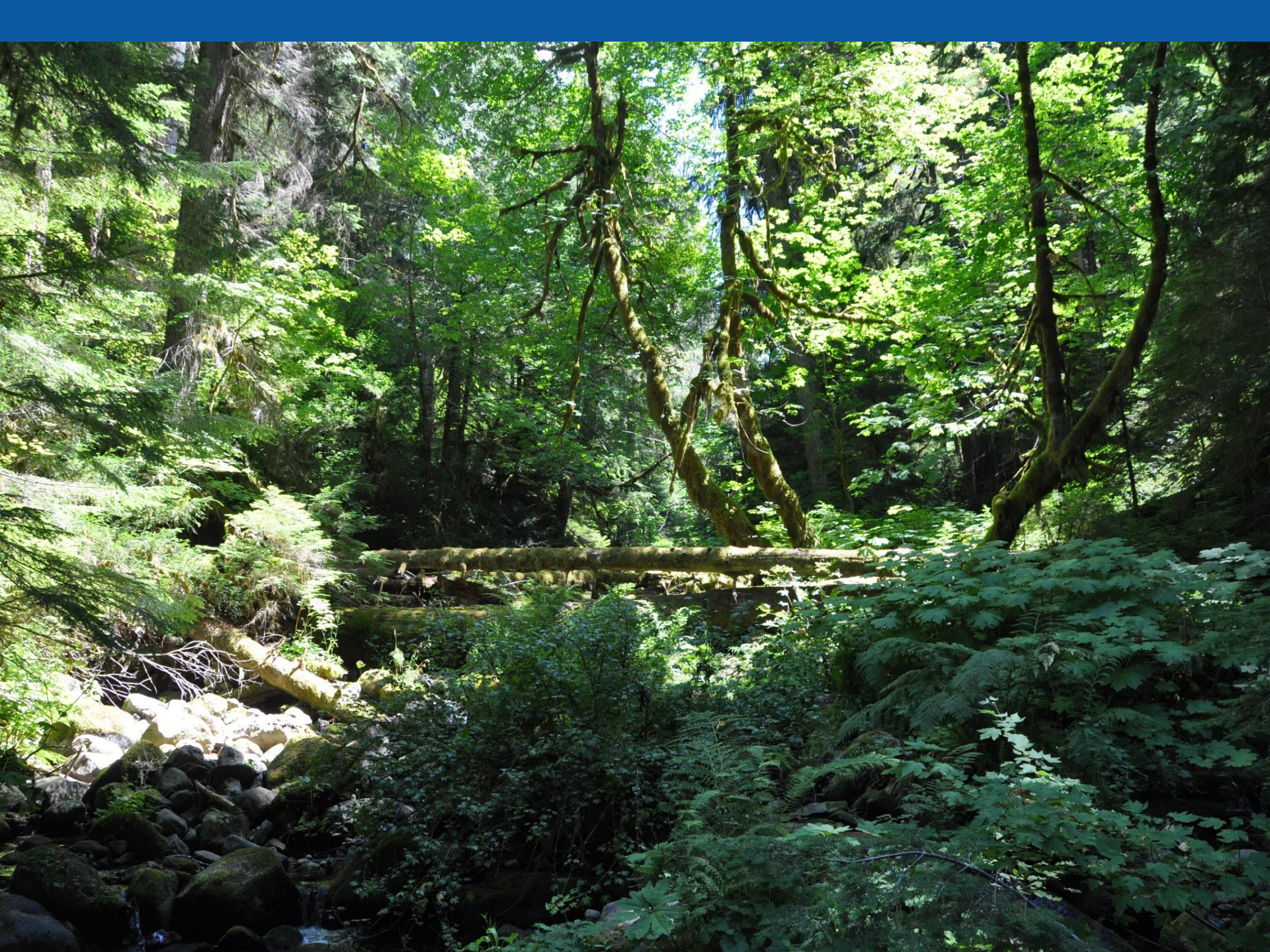
















Coastal Cutthroat Trout





Pacific Giant Salamander



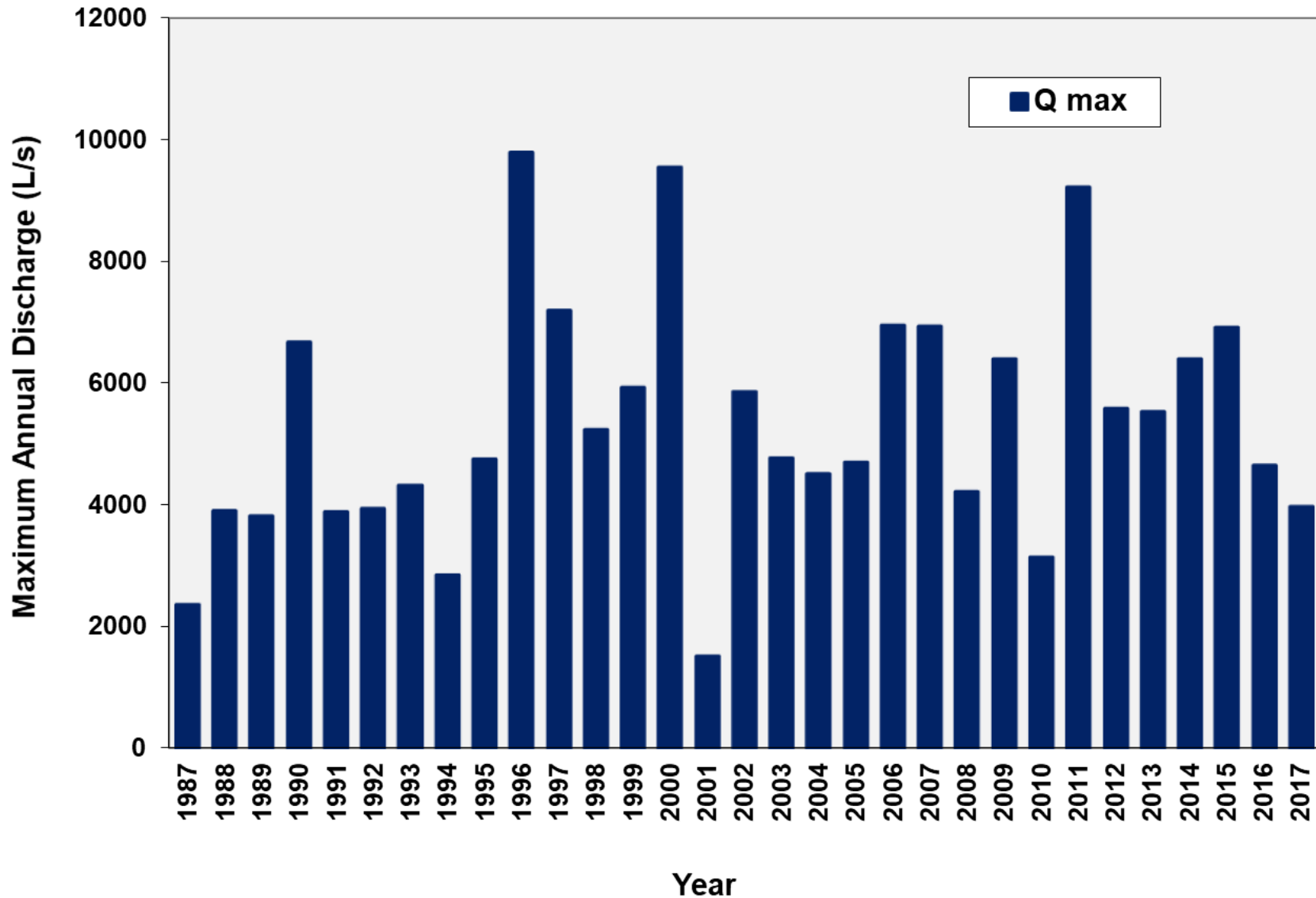
Adult Giant Salamander



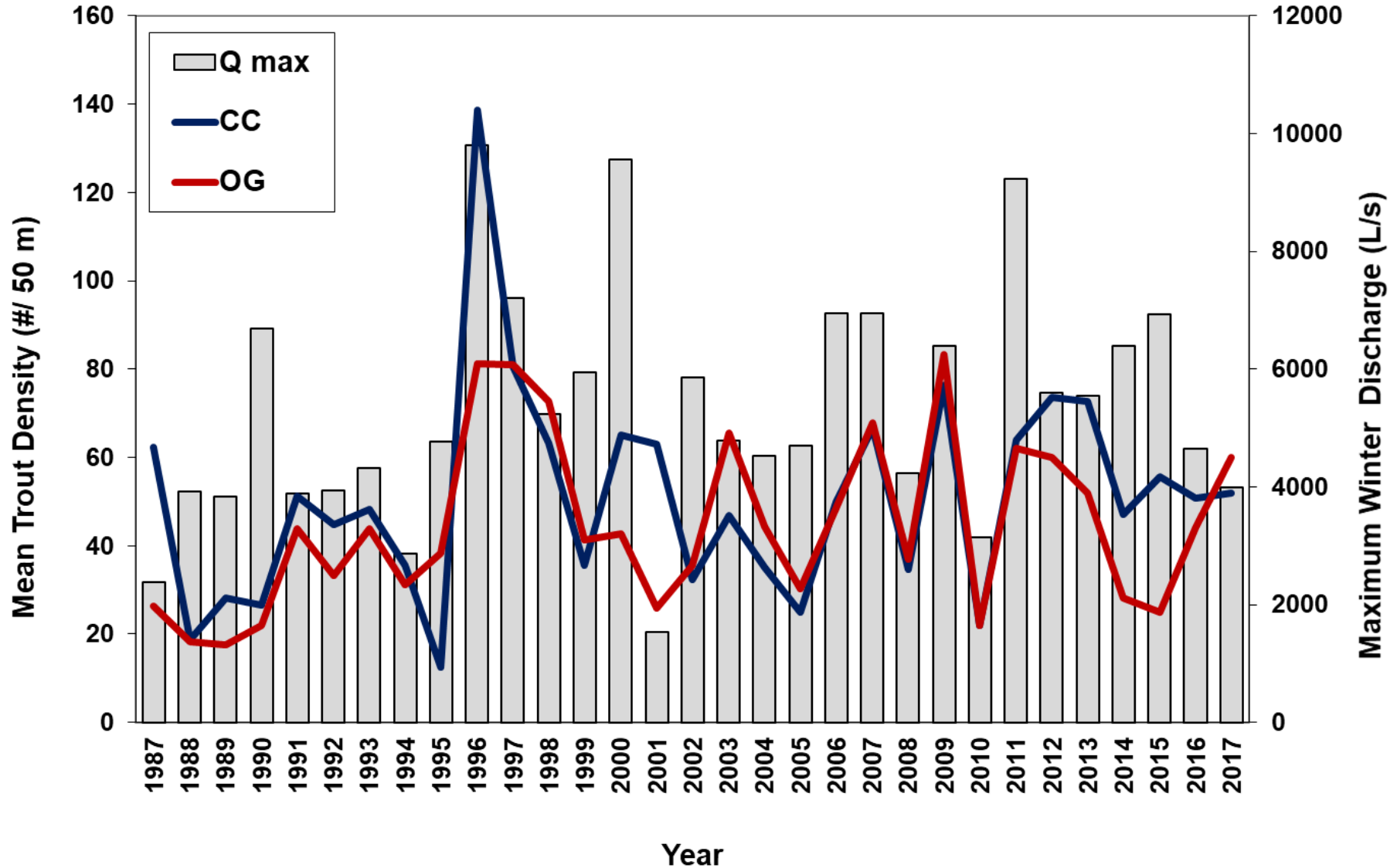
Mack Creek Gaging Station in Winter



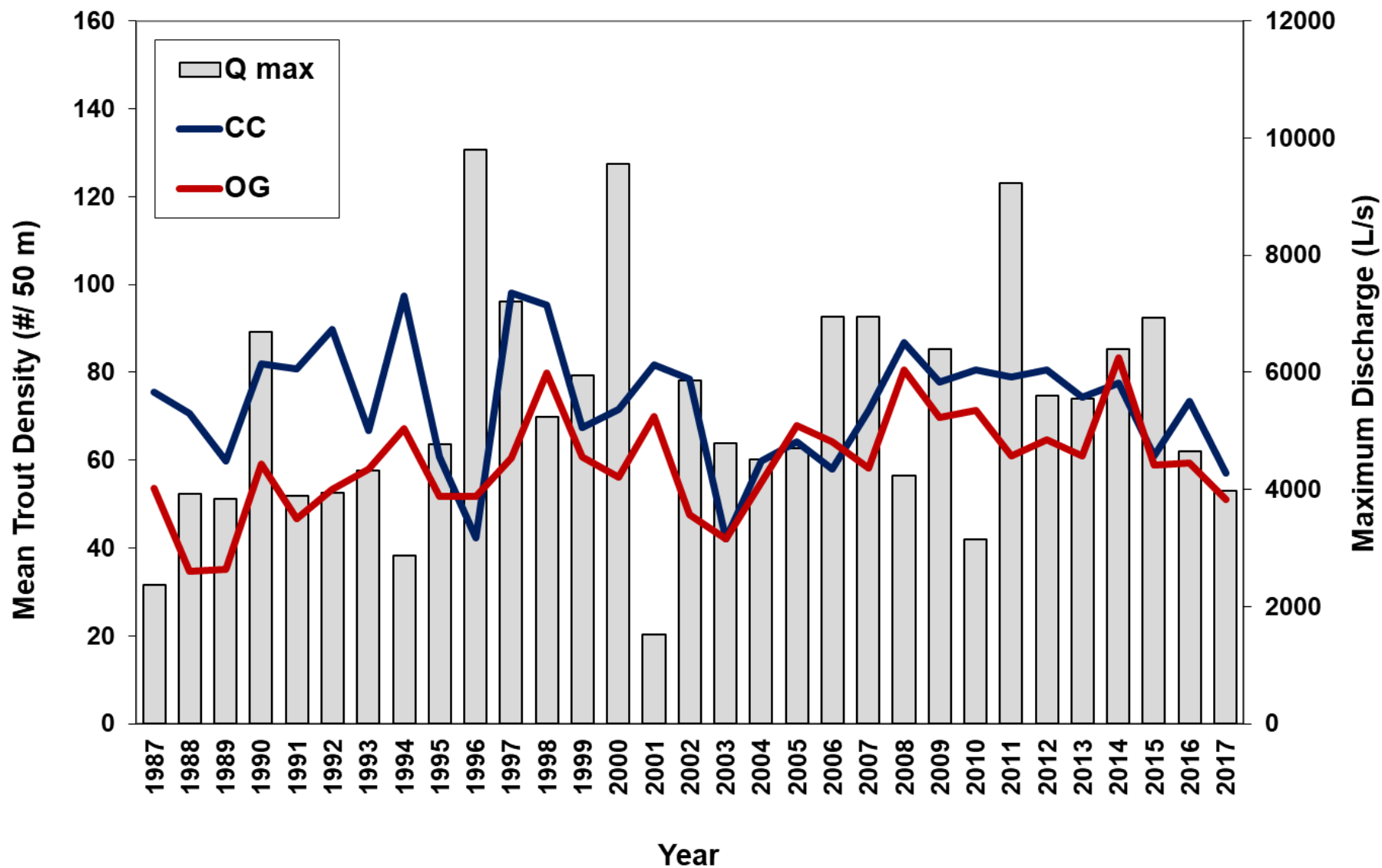
Maximum Winter Discharge



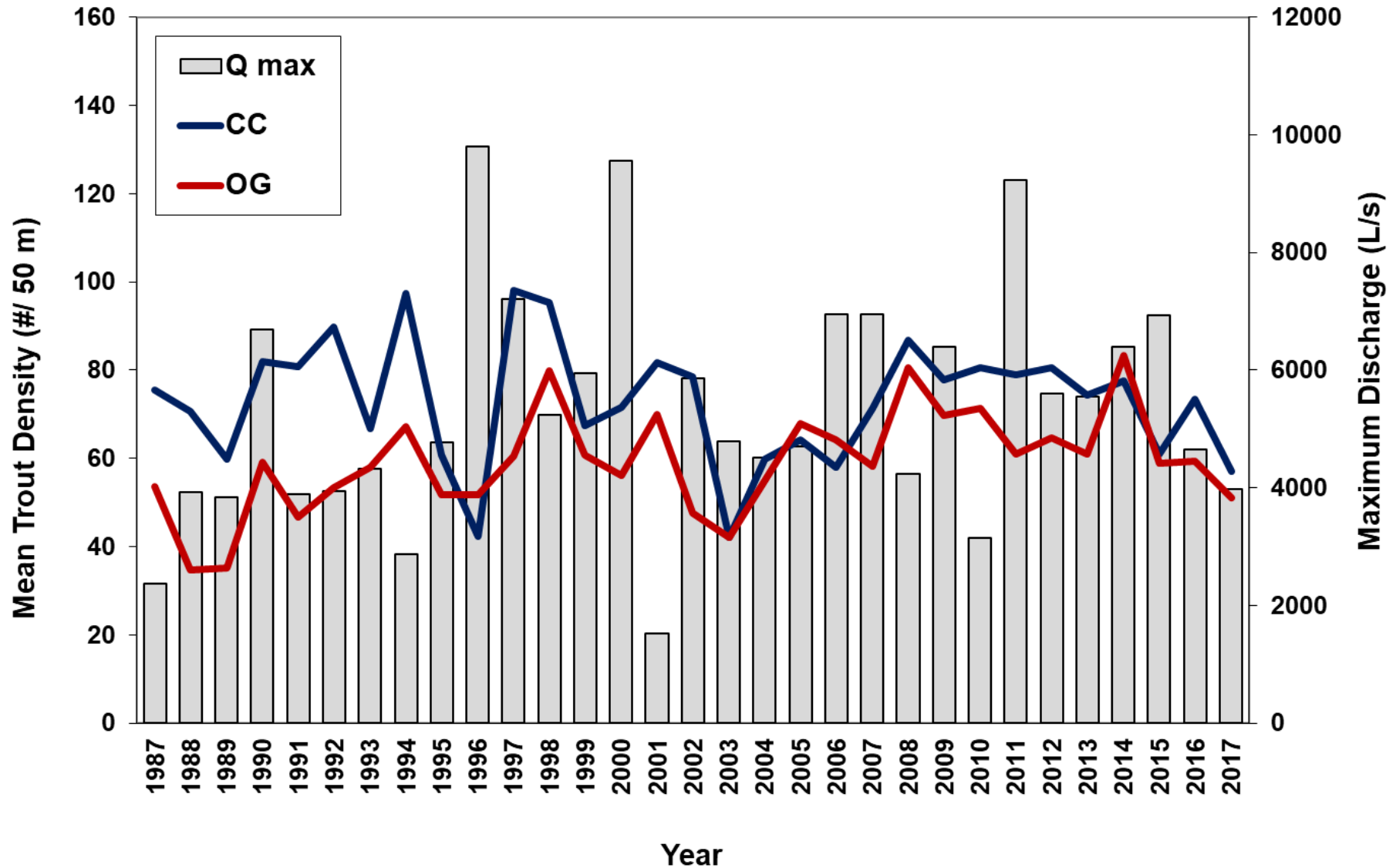
Mack Creek Age 0 Trout



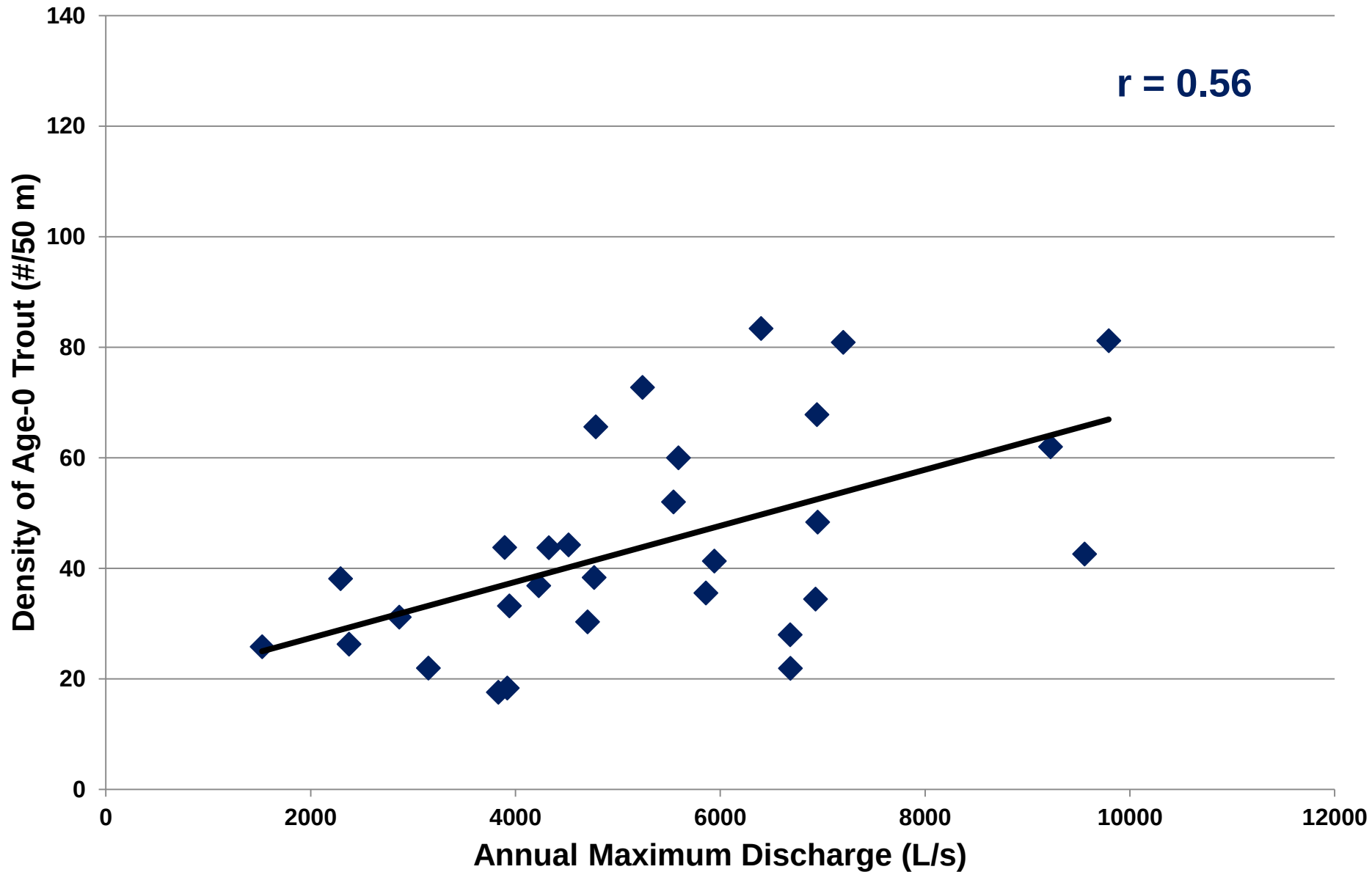
Mack Creek Adult Trout



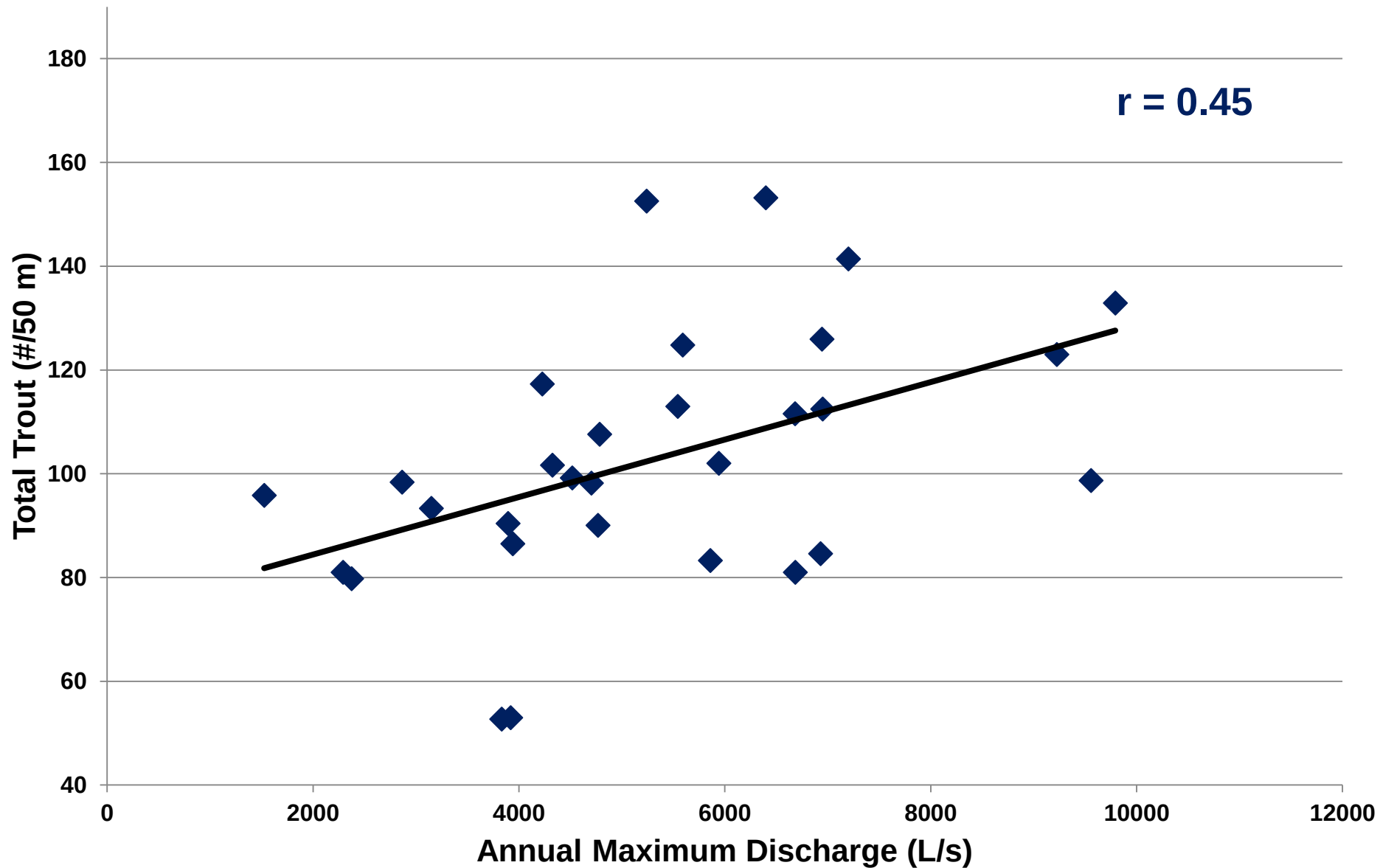
Mack Creek Total Trout



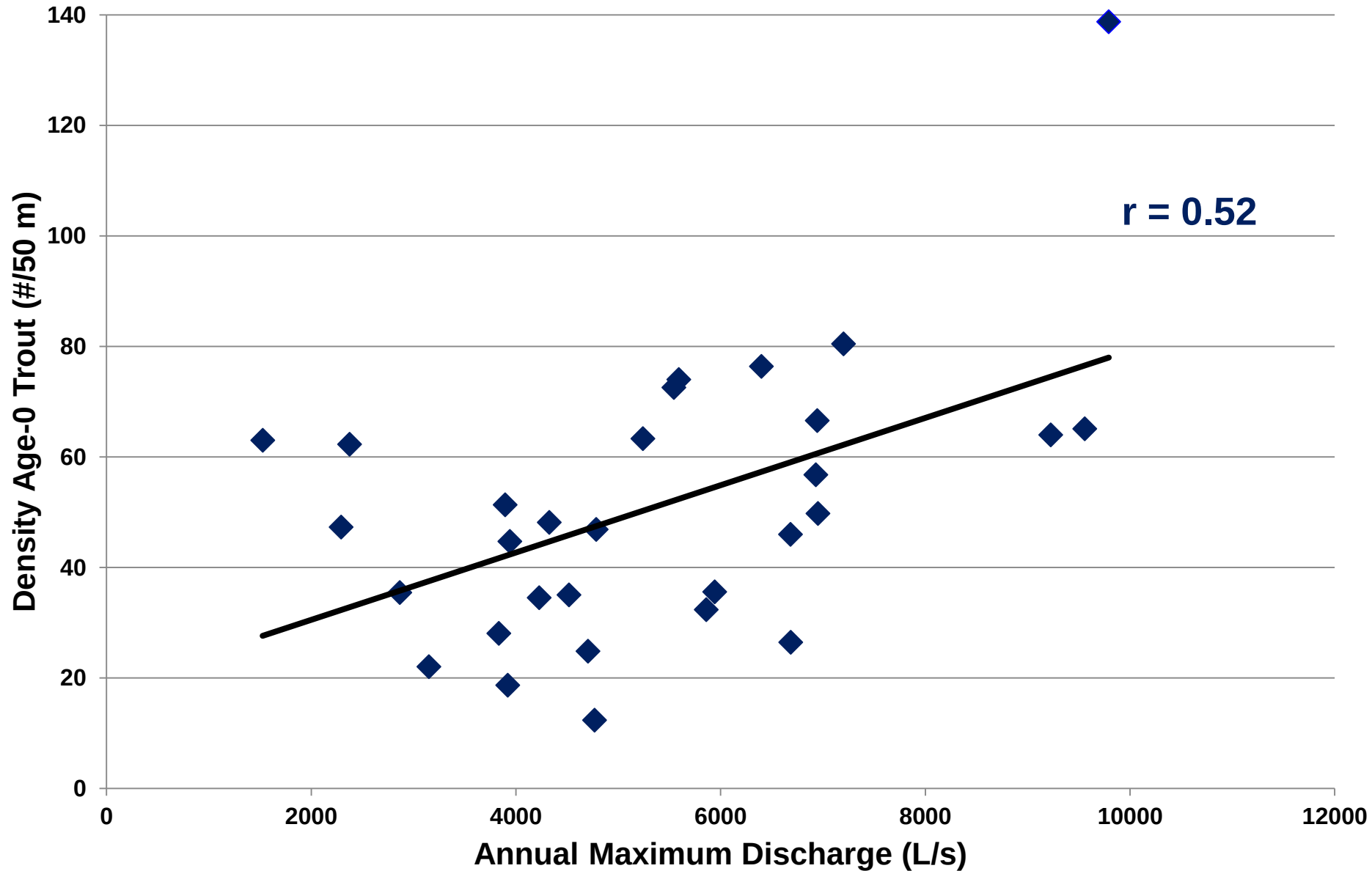
Old-Growth Age-0 Trout



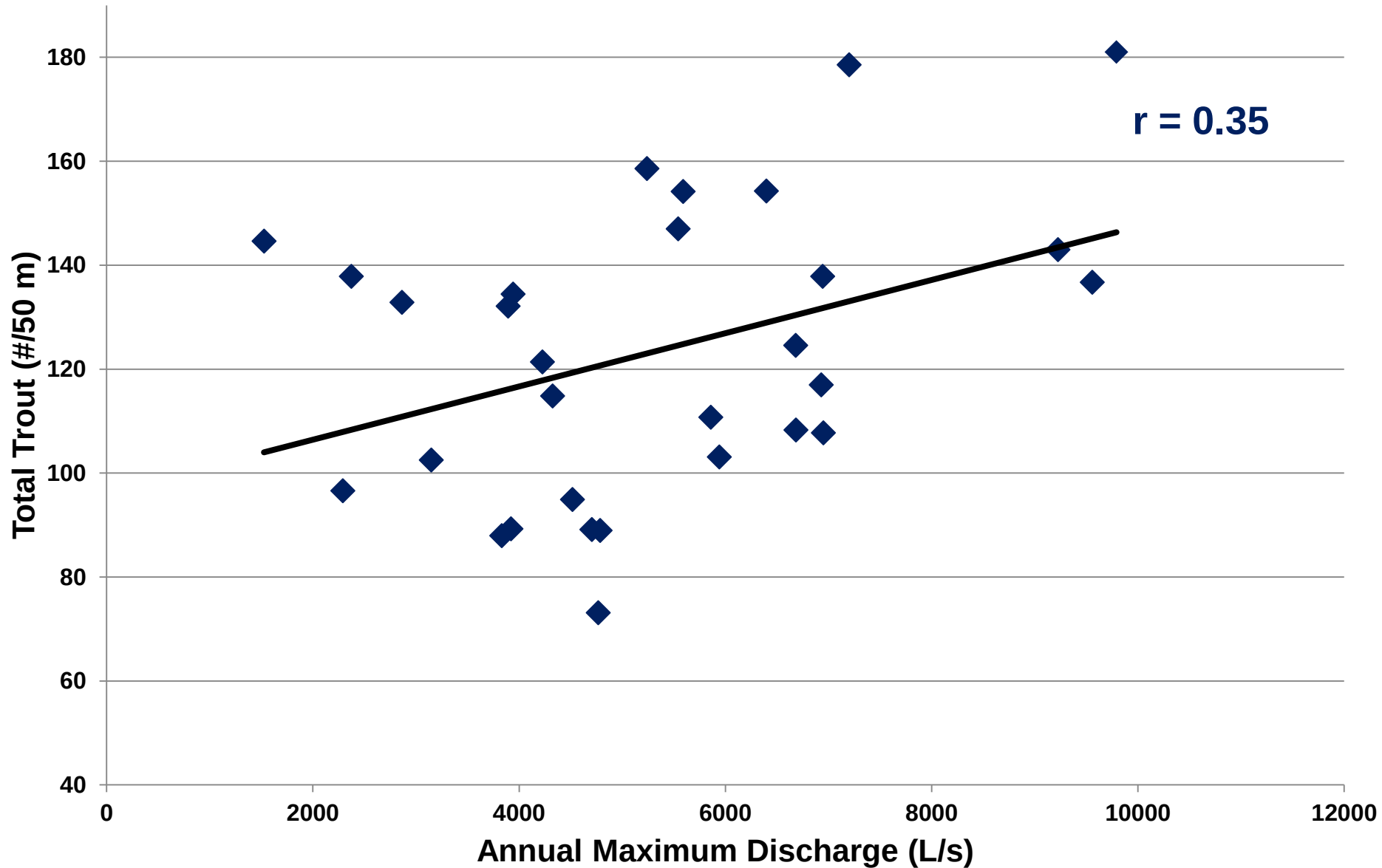
Old Growth Total Trout



Young Stand Age 0 Trout



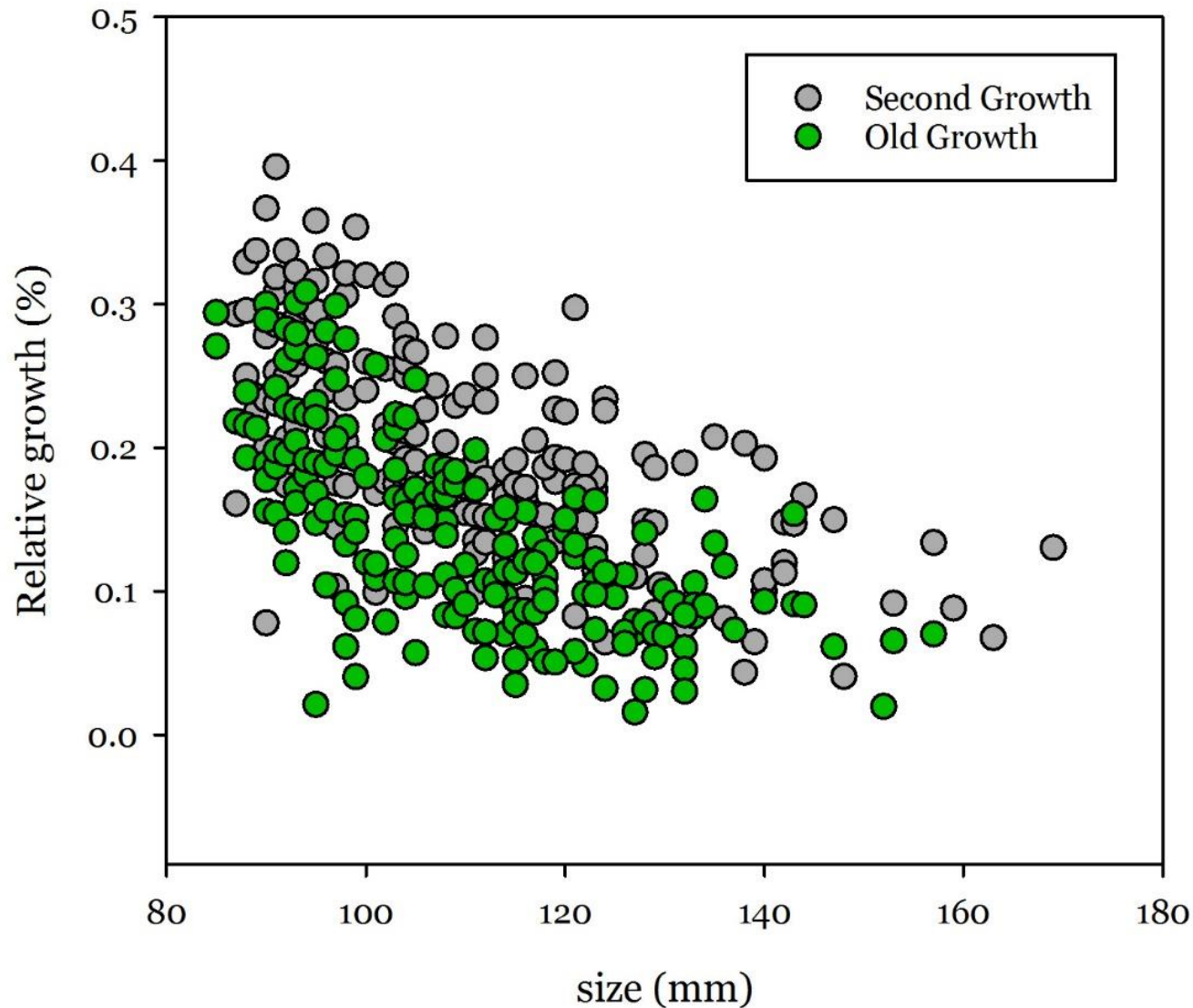
Young Stand Total Trout



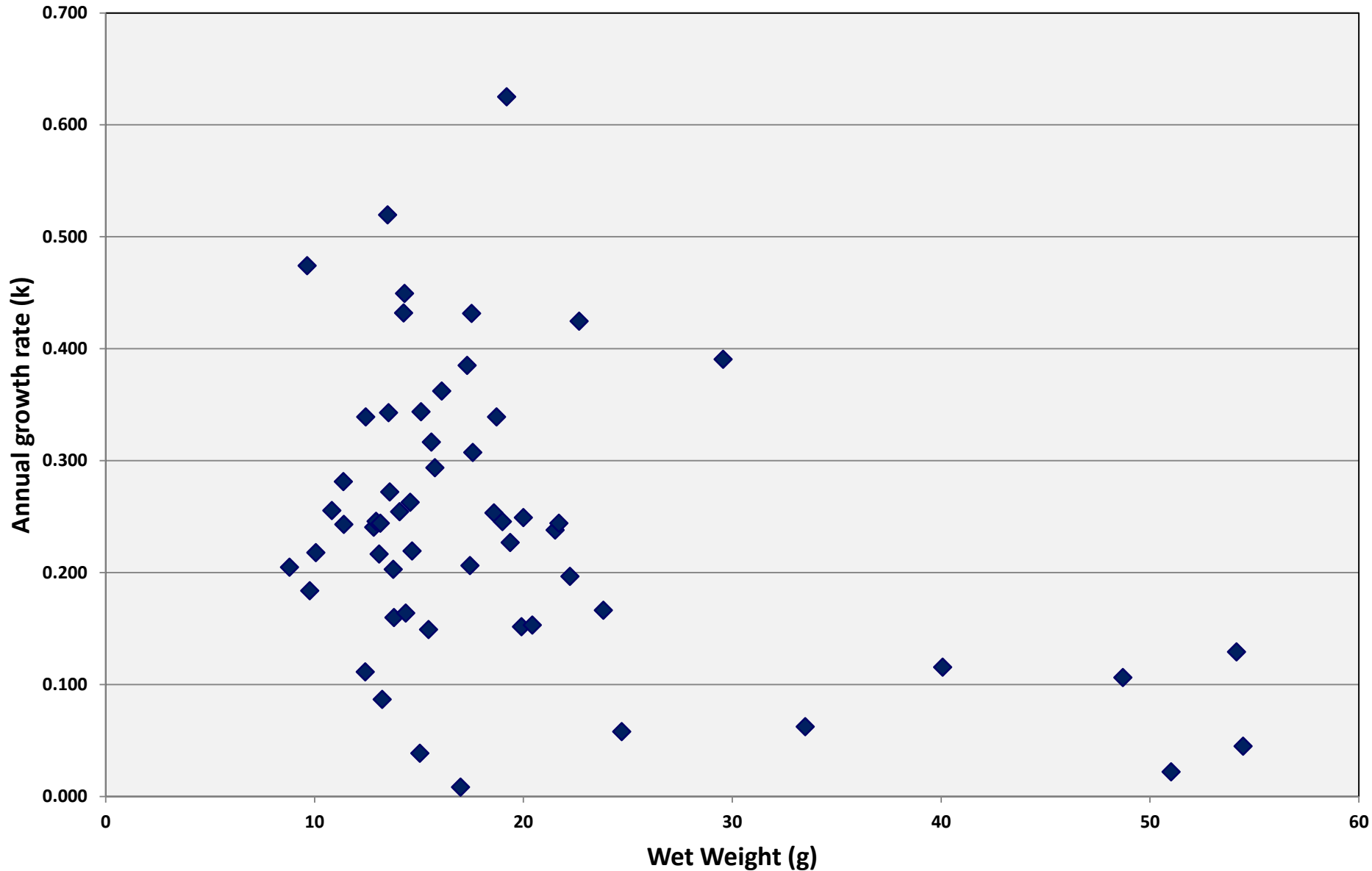
PIT Tag



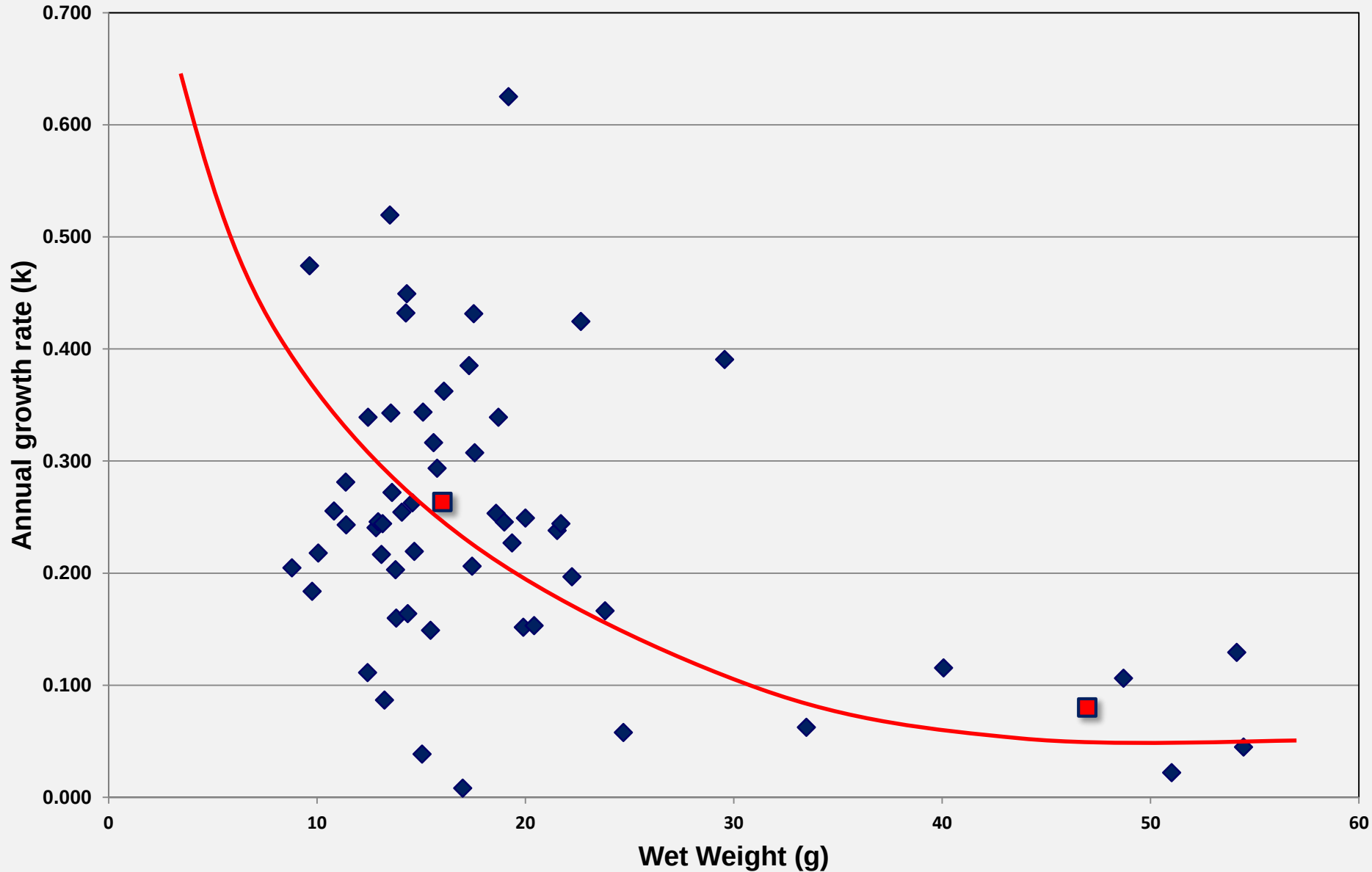
Difference in Salamander Growth



Dicamptodon Annual Growth Rate



Dicamptodon Annual Growth Rate



Pacific Giant Salamander in Mack Creek



Maximum Vent Length
165 mm

Maximum Wet Weight
135 g

Pacific Giant Salamander in Mack Creek



**Age to
Maximum Size
26 Years**

**Maximum Vent Length
165 mm**

**Maximum Wet Weight
135 g**

Population Variation in Mack Creek



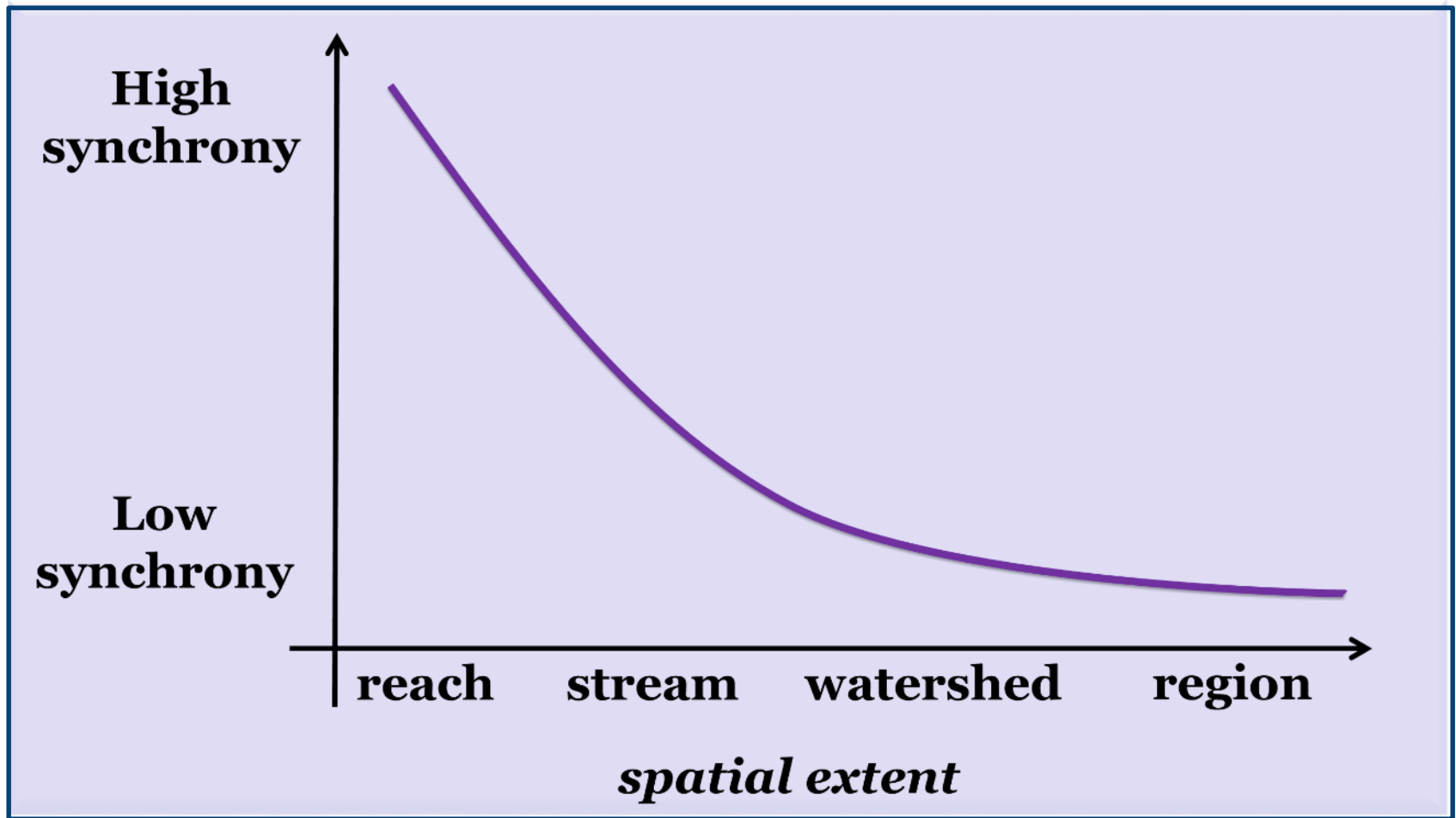
Coefficient of Variation for Population

species	site	YOY	Adults	All	# of years
<i>O. clarki</i>	Mack Creek Clearcut	52.7	19.9	22.3	26
	Flynn Creek	67.6	34.6	24.5	9
	Mack Creek OG ¹	45.0	20.0	24.7	26
	NF Quartz Creek	42.5	28.9	27.4	18
	Deer Creek	72.2	22.7	37.3	9
	Quartz Creek	59.6	37.7	39.9	8
	Lookout Creek tmt	51.6	47.5	42.6	6
	Lookout Creek ref	52.7	38.2	45.2	6
	Needle Branch	151.4	80.2	128.4	9
<i>O. mykiss</i> *	Coweeta Creek		105	65	5
	multiple sites			111.0	
<i>Salmo trutta</i> *	multiple sites			123.0	

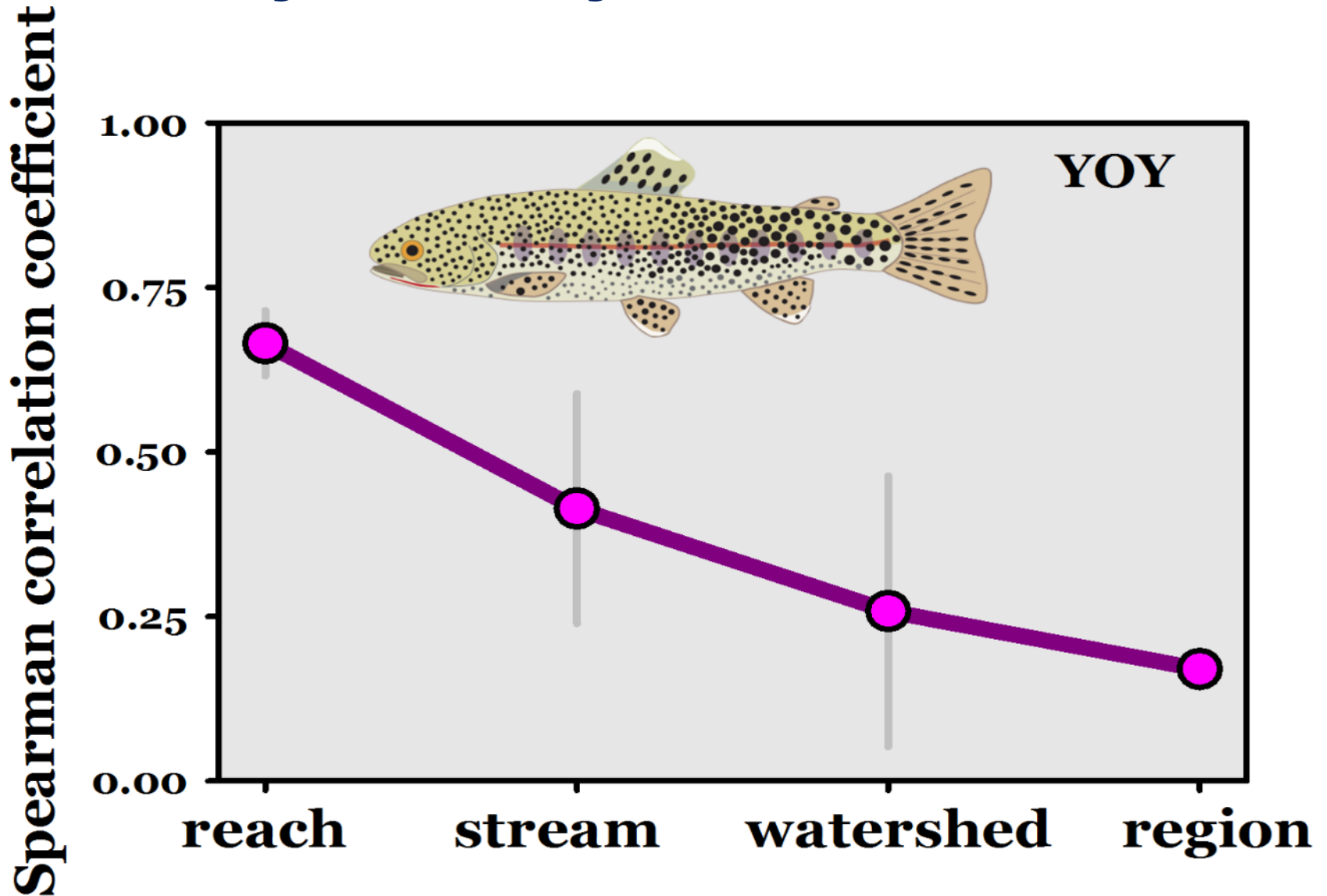
Hypothesis

- **Synchrony in population abundances across spatial extents is a function of similarity in biology, geomorphology, environmental conditions.**
- **We would expect increasing synchrony if regional drivers (e.g., climate) exert strong influences across scales.**

Synchrony Between Populations



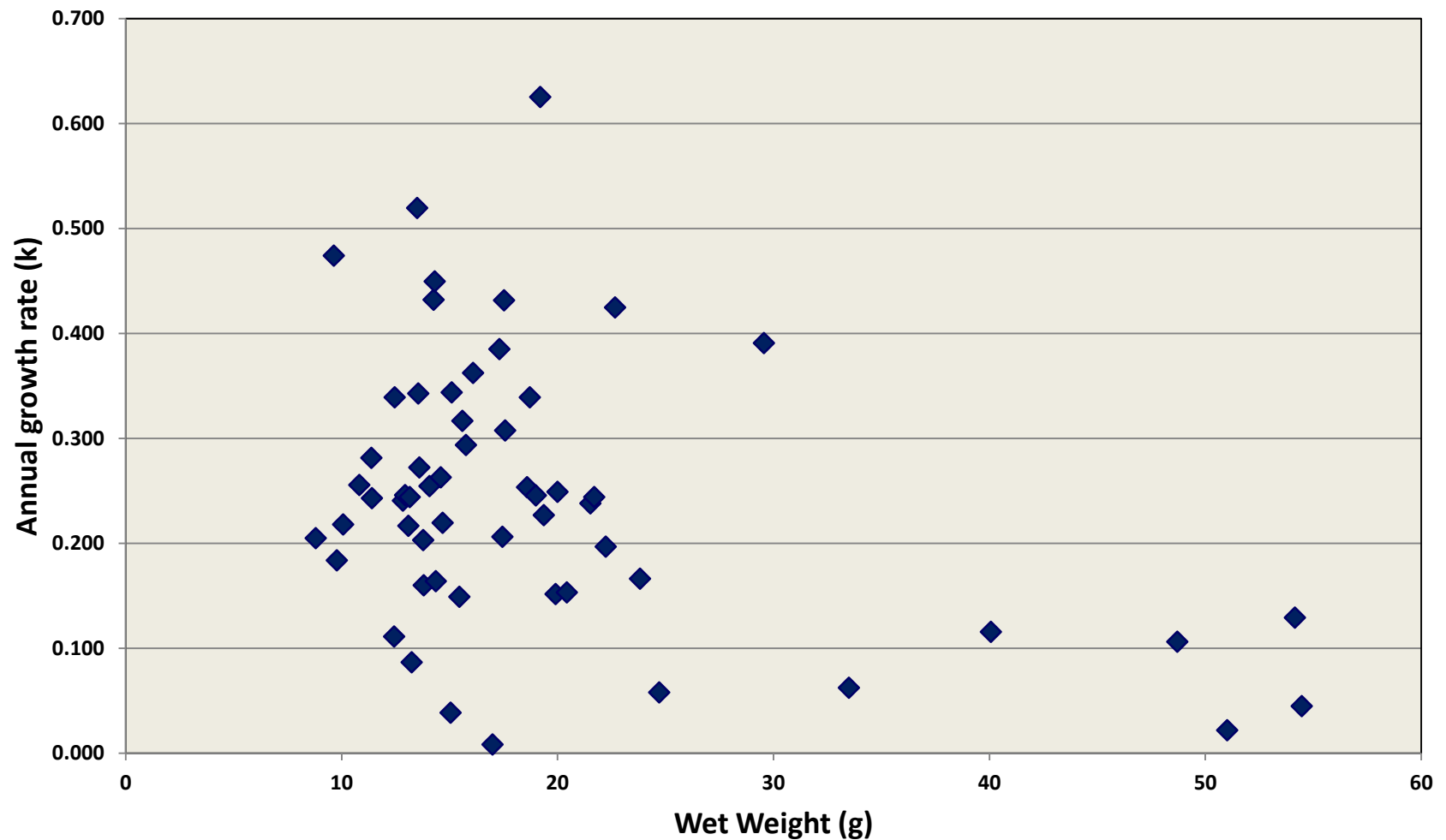
Synchrony in YOY Trout



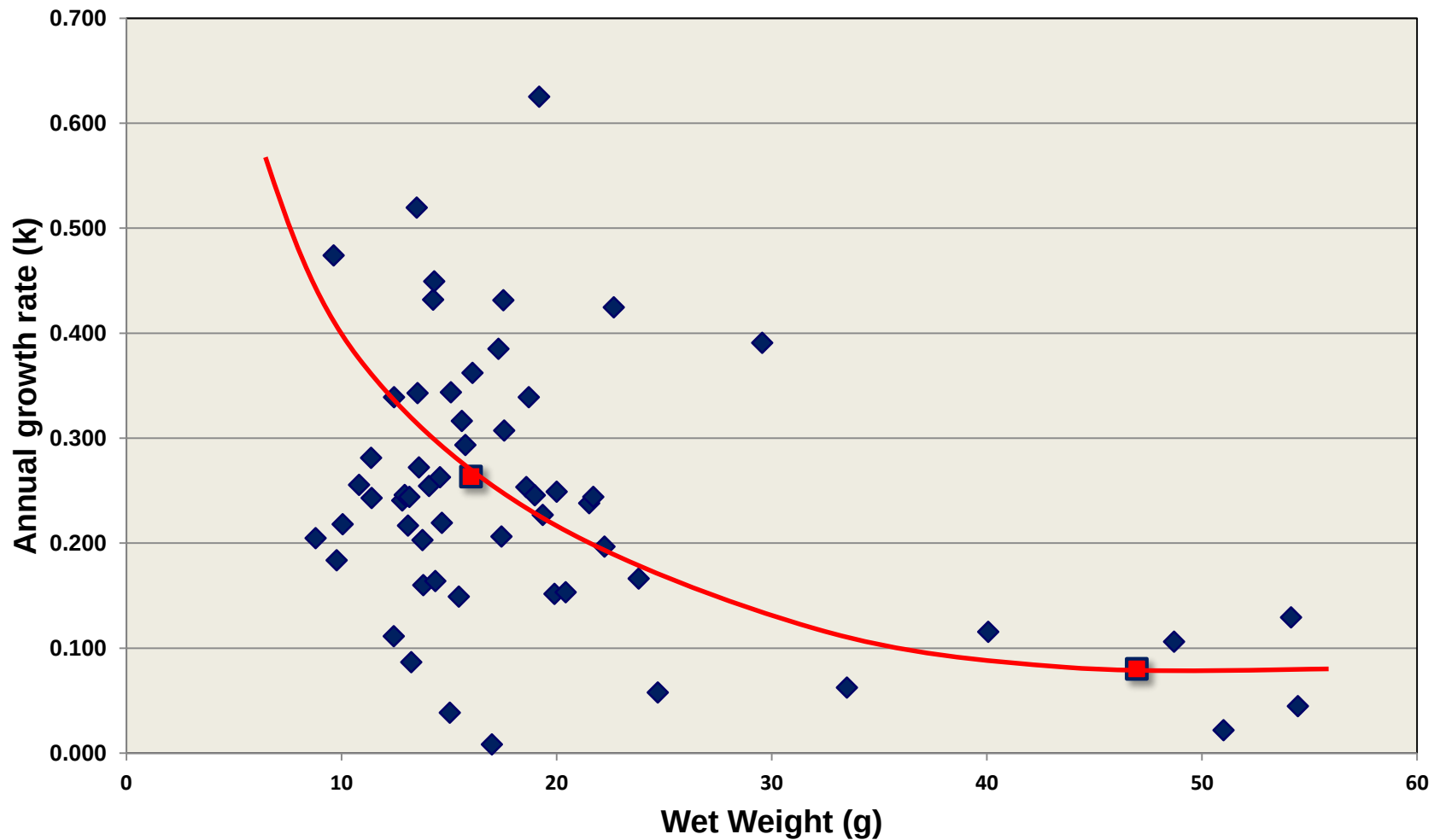
PIT Tag Operation



Dicamptodon Annual Growth Rate



Dicamptodon Annual Growth Rate



Pacific Giant Salamander in Mack Creek



Maximum Vent Length
165 mm

Maximum Wet Weight
135 g

**Age to
Maximum Size**

26 Years



Jim Sedell





