Investigating predation by introduced Brown Trout on native salmonids in the Trinity River, CA

Justin Alvarez
How Many Fish Would A Brown Trout Eat If A Brown Trout Could Eat Fish
1 Brown Trout of each Age 2-12

Select Size

Select Growth Rate

Consumption by a single fish for each day

Population size by age

Proportion still alive

Consumption for that population for that Day

Sum of daily consumption by size class

Yearly Population Level Consumption

Proportion of Diet Prey Items

Biomass Of Prey Consumed
1 Brown Trout of each Age 2-12

Select Size
Select Growth Rate

Consumption by a single fish for each day
Population size by age
Proportion still alive

Consumption for that population for that Day
Sum of daily consumption by size class

Yearly Population Level Consumption
Proportion of Diet Prey Items

Biomass Of Prey Consumed
1 Brown Trout of each Age 2-12

Select Size

Select Growth Rate

Consumption by a single fish for each day

Population size by age

Proportion still alive

Consumption for that population for that Day

Sum of daily consumption by size class

Yearly Population Level Consumption

Proportion of Diet Prey Items

Biomass Of Prey Consumed
\[ y = -0.8875x + 8.6782 \]

\[ R^2 = 0.9679 \]
1 Brown Trout of each Age 2-12

Select Size

Select Growth Rate

Consumption by a single fish for each day

Population size by age

Proportion still alive

Consumption for that population for that Day

Sum of daily consumption by size class

Yearly Population Level Consumption

Proportion of Diet Prey Items

Biomass Of Prey Consumed
Yearly Population Level Consumption

Proportion of Diet Prey Items

Biomass Of Prey Consumed

1 Brown Trout of each Age 2-12

Select Size

Select Growth Rate

Consumption by a single fish for each day

Population size by age

Proportion still alive

Consumption for that population for that Day

Sum of daily consumption by size class

Biomass Of Prey Consumed
• Lamprey
• Pacific Giant Salamanders
• Yellow Legged Frogs
• Three-spine stickleback
• Speckled Dace
1 Brown Trout of each Age 2-12

Select Size ➔ Select Growth Rate

Consumption by a single fish for each day

Population size by age ➔ Proportion still alive

Consumption for that population for that day

Sum of daily consumption by size class ➔ Yearly Population Level Consumption

Proportion of Diet Prey Items ➔ Biomass Of Prey Consumed
What does that mean?

- 6,000 kg of hatchery fish
- 1,000 kg of wild fish
- 600kg ammocoetes
Questions?