Title: Aquatic Vertebrate Population Study in Mack Creek, Andrews Experimental Forest, 1987 to present

Abstract:

Populations of Coastal Cutthroat trout (Oncorhyncus clarkii clarkii) in two standard reaches of Mack Creek in the H.J. Andrews Experimental Forest have been monitored since 1987. Monitoring of Coastal Giant Salamanders, Dicamptodon tenebrosus began in 1993. The two standard reaches are in a section of clearcut forest (ca. 1963) and an upstream 500 year old coniferous forest. Sub-reaches are sampled with 2-pass electrofishing, and all captured vertebrates are measured and weighed. Additionally, a set of channel measurements are taken with each sampling. This study constitutes one of the longest continuous records of salmonid populations on record.

Keywords: Amphibians; Animal populations; Aquatic habitats; Biomass; Demography; Disturbance; Ecology; Fish; Fish habitat; Fish populations; Floods; Herpefauna; Population dynamics; Resistance and resilience; Stream ecology; Streams; Timber harvesting; Trout; Vertebrates; Populations; Habitats; Populations;demography; ecology; stream ecology; population dynamics; floods; biomass; resistance and resilience; disturbance; timber harvest; aquatic ecosystems; streams; animals; vertebrates; amphibians; fishes; trout; reptiles;

Date data commenced: 1987-10-06
Date data terminated: 2019-09-05
Principal Investigator: Ivan Arismendi

List of Entities:
1. Vertebrate numbers and size
2. Habitat dimensions

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2. Habitat dimensions

Measurements of channel units within vertebrate sampling area

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**Attributes Definitions:**

**CLIP**

Fin clip type (Onchoryncus recaptures only). Ended in 2006.

**DBCODE**

Database Code

**DEPTH1**

Depth 1 along width1 transect

**DEPTH10**

Depth 2 along width3 transect

**DEPTH11**

Depth 3 along width3 transect

**DEPTH12**

Maximum depth along width3 transect

**DEPTH13**

Depth 1 along width4 transect

**DEPTH14**

Depth 2 along width4 transect

**DEPTH15**

Depth 3 along width4 transect

**DEPTH16**

Maximum depth along width4 transect

**DEPTH17**

Depth 1 along width5 transect

**DEPTH18**

Depth 2 along width5 transect

**DEPTH19**

Depth 3 along width5 transect

**DEPTH2**

Depth 2 along width1 transect
DEPTH20
    Maximum depth along width5 transect

DEPTH3
    Depth 3 along width1 transect

DEPTH4
    Maximum depth along width1 transect

DEPTH5
    Depth 1 along width2 transect

DEPTH6
    Depth 2 along width2 transect

DEPTH7
    Depth 3 along width2 transect

DEPTH8
    Maximum depth along width2 transect

DEPTH9
    Depth 1 along width3 transect

ENTITY
    Entity number

LENGTH
    Channel unit length

LENGTH1
    Length type 1 (total or snout-fork length for Onchorhyncus, snout-vent for Dicamptodon). See supplemental information in metadata.

LENGTH2
    Length type 2 (Dicamptodon only--snout-tail)

MAXDEPTH
    Maximum depth channel unit

NOTES
    Comments

PASS
    Electoshocking pass number

PITNUMBER
    Unique pit tag number; tag is embedded in vertibrate. Began in 2007.

REACH
    Reach sampled (in 50 m distances)

SAMPLEDATE
    Date sampled

SECTION
Location of sampling section

SITECODE
Coded name of sample area

SPECIES
Vertebrate species sampled

UNITNUM
Channel unit number (sequential)

UNITTYPE
Channel unit classification type

VERT_INDEX
Unique numerical index of vertebrates measured (for creating key field)

WEIGHT
Weight of individual organism (not taken after 1999)

WIDTH1
Wetted width of channel unit -- transect 1

WIDTH2
Wetted width of channel unit -- transect 2

WIDTH3
Wetted width of channel unit -- transect 3

WIDTH4
Wetted width of channel unit - transect 4

WIDTH5
Wetted width of channel unit - transect 5

YEAR
Year of Survey

Enumerated Domains:

Enumerated Domain for Attribute: CLIP
LV
Left ventral fin
LVRV
Left and right ventral fins
RV
Right ventral fin
NONE
No ventral fin clip

Enumerated Domain for Attribute: DBCODE
AS006
FSDB database code AS006

Enumerated Domain for Attribute: REACH
L
Lower reach of section, 0-50 m
M
Middle reach of section, 50-100 m
U
Upper reach of section, 100-150 m
Enumerated Domain for Attribute: SECTION
  AL   Above Lava Falls, in old-growth forest (1996 only)
  CC   Cleacut
  OG   Old Growth

Enumerated Domain for Attribute: UNITTYPE
  C    Cascade
  I    Riffle
  IP   Isolated Pools --not connected to main channel
  P    Pool
  R    Rapid
  S    Step (small falls)
  SC   Side Channel
  NA   Not sampled by unit

Enumerated Domain for Attribute: DBCODE
  AS006  FSDB database code AS006

Enumerated Domain for Attribute: REACH
  L    Lower reach of section, 0-50 m
  M    Middle reach of section, 50-100 m
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