Abstract:
Although many studies have identified the characteristics of wood stored in streams, few have attempted to measure the long-term dynamics of large wood. From 1982-1985, we developed a long-term study of input, storage, decomposition, and redistribution of large wood in Mack Creek. Each year from 1985 to the present, we have surveyed a 1.1 km section of this stream. This annual survey has allowed us to quantify the standing stocks and characteristics of large wood within the stream and floodplain of an old-growth forest and an older (ca. 1963) clear-cut. In addition, these data allow us to measure rates of input, fragmentation and movement.

Keywords: Aquatic decomposition; Biomass; Debris dams; Disturbance; Ecology; Ecosystem processes; Floods; Geomorphology; Stream ecology; Streams; Wind; Wood movement; Woody debris; Disturbance; geomorphology; ecology; stream ecology; debris flows; floods; biomass; wind; decomposition; biological processes; disturbance; wood; woody debris; ecosystems; aquatic ecosystems; streams; ecosystem processes;

Date data commenced: 1985-10-20
Date data terminated: 2008-11-10
Principal Investigator: Stanley V. Gregory

List of Entities:
1. Tagged log inventory at Mack Creek, HJA

<table>
<thead>
<tr>
<th>Attribute List:</th>
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<tr>
<td>PCTZONE3</td>
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</table>

Attributes Definitions:

**ACCUM**
Log in accumulation (5 or more logs, must be touching) or not

**BEARING**
Compass bearing along one side of log

**COMMENTS**
Notes

**DBCODE**
FSDB Database code

**DECAY**
Decay class (based on Maser & Sedell)

**DIAMETER**
Diameter in middle of log

**ENTITY**
Entity number

**FRAGCODE**
Fragmentation code

**GRID**
Reach and section within grid

**INBOARD**
Inboard-most tag

**LENGPLUS**
Length plus (one or both ends buried)
LENGTH
   Length
LOCATION
   Geomorphic location code
LOGID
   Log identification (tag color, number, letter (letter indicates log is broken & at least one tag is missing))
MOSS
   Moss percent cover code
ORIENT
   Orientation
ORIGIN
   Origin of log if known
PCTZONE1
   Percent of log in zone 1 (wetted channel) (Beschta)
PCTZONE2
   Percent of log in zone 2 (active channel) (Beschta)
PCTZONE3
   Percent of log in zone 3 (suspended above active channel) (Beschta)
PCTZONE4
   Percent of log in zone 4 (floodplain) (Beschta)
POSITION
   Geomorphic position code
ROOTWAD
   Rootwad (present or absent)
SIGHTTAG
   Sight tag from which bearing is shot
SITECODE
   Location of study site
STABILITY1
   Stability code 1 -- unstable
STABILITY2
   Stability code 2 -- stabilized by rock
STABILITY3
   Stability code 3 -- stabilized by another log
STABILITY4
   Stability code 4 -- stabilized by tree
STATUS
Condition of log during year surveyed

UPSTREAM

Upstream-most tag

YEAR

Year surveyed

Enumerated Domains:

Enumerated Domain for Attribute: ACCUM
A In an accumulation (5 or more logs touching)
X Not in an accumulation

Enumerated Domain for Attribute: DECAY
1 Bark firmly attached
1.5 Intermediate between classes 1 and 2
2 Bark loosely attached
2.5 Intermediate between classes 2 and 3
3 No bark
3.5 Intermediate between classes 3 and 4
4 Punky
4.5 Intermediate between classes 4 and 5
5 No bark, extensive decay, log fragmenting and no longer a cylinder, soon to become soil

Enumerated Domain for Attribute: FRAGCODE
C Child piece of fragmented log (portion moved from original position, or smaller of movers)
N Not fragmented
P Parent piece of fragmented log (in original position or, if mover, larger than child piece)

Enumerated Domain for Attribute: INBOARD
MA A tag would be inboard-most, but tag is missing
MB B tag would be inboard-most, but tag is missing
MC C tag would be inboard-most, but tag is missing
MD D tag would be inboard-most, but tag is missing
A A tag is inboard most tag
B B tag is inboard most tag
C C tag is inboard most tag
D D tag is inboard most tag
X Inboard determination not possible due to orientation of log or missing tags

Enumerated Domain for Attribute: LENGPLUS
Y One or both ends of log buried
Neither end of log buried

Enumerated Domain for Attribute: LOCATION
1 Complete on bank in island reach
2 Anchored on or in bank
3 Spanning active channel
4 Completely in active channel
5 Completely on island
6 Anchored on inboard bank of island
7 Completely in side channel
8 Anchored on outboard bank of island
9 Side channel spanner
10 Completely on bank in island reach

Enumerated Domain for Attribute: MOSS
1 Less than 5 percent of log covered by moss
2 Between 5 and 25 percent of log covered by moss
3 Between 25 and 75 percent of log covered by moss
4 More than 75 percent of log covered with moss

Enumerated Domain for Attribute: ORIENT
N Normal to channel
P Parallel to channel
X No particular orientation

Enumerated Domain for Attribute: ORIGIN
O Original position (fell in or missing in earlier years)
F Floated
S Slash
X Unknown

Enumerated Domain for Attribute: POSITION
L Left side of channel (facing upstream)
R Right side of channel (facing upstream)
C Center of channel
H Head of island
X None applicable

Enumerated Domain for Attribute: ROOTWAD
Y Rootwad present
X Rootwad absent
Enumerated Domain for Attribute: SIGHTTAG
MA Bearing taken from end of log where A tag should be located if the entire log were present
MB Bearing taken from end of log where B tag should be located if the entire log were present
MC Bearing taken from end of log where C tag should be located if the entire log were present
MD Bearing taken from end of log where D tag should be located if the entire log were present
A Bearing taken from A tag
AC Bearing taken from AC end of log
B Bearing taken from B tag
BD Bearing taken from BD end of log
C Bearing taken from C tag
D Bearing taken from D tag
AXIS Bearing taken along primary log axis
BANK Bearing taken from nearest stream bank
VERT Log vertical, no bearing possible
X Bearing not possible due to orientation of log and/or missing sighttags
M Bearing taken, but sighttag not recorded

Enumerated Domain for Attribute: STABILITY1
Y No stabilizing factor
X Some other stabilizing factor

Enumerated Domain for Attribute: STABILITY2
Y Log stabilized by boulder
X Log not stabilized by boulder

Enumerated Domain for Attribute: STABILITY3
Y Log stabilized by other logs
X Log not stabilized by other logs

Enumerated Domain for Attribute: STABILITY4
Y Log stabilized by tree (bole or roots)
X Log not stabilized by tree

Enumerated Domain for Attribute: STATUS
F Found
L Likely still in previous location; no search due to large size & floodplain location OR deep snow (2003)
M Moved
MR Moved and retired
NR New and retired
O Original
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>OR</td>
<td>Original and retired</td>
</tr>
<tr>
<td>P</td>
<td>Probable</td>
</tr>
<tr>
<td>R</td>
<td>Retired</td>
</tr>
<tr>
<td>V</td>
<td>Overlooked</td>
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<tr>
<td>VR</td>
<td>Overlooked and retired</td>
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<tr>
<td>X</td>
<td>Not found</td>
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<tr>
<td>XMR</td>
<td>Not found, moved, then retired</td>
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<tr>
<td>XR</td>
<td>Not found and retired</td>
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<tr>
<td>N</td>
<td>New input</td>
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</tbody>
</table>

Enumerated Domain for Attribute: **UPSTREAM**

- MA: A tag would be upstream-most, but tag is missing
- MB: B tag would be upstream-most, but tag is missing
- MC: C tag would be upstream-most, but tag is missing
- MD: D tag would be upstream-most, but tag is missing
- A: A tag is upstream most tag
- B: B tag is upstream most tag
- C: C tag is upstream most tag
- D: D tag is upstream most tag
- X: Upstream determination not possible due to orientation of log or missing tags

Enumerated Domain for Attribute: **DBCODE**

- GS006: FSDB Data set code GS006