



Gunpowder Brown Trout



New Zealand Mud Snail found in Gunpowder tailwater 2017



Electrofishing with backpack electrofishers at the Dam/Falls station on the Gunpowder tailwater



Barge electrofishing unit used at Masemore and Bluemount stations



Electrofishing and netting trout at Masemore station





Anesthetized trout in holding box



Large brown trout weighing 978 grams



Young of year brown trout (a trout that was hatched in the current year)

Young-of-Year brown trout densities and confidence intervals (yoy/hectare \pm 95% CI) in the Gunpowder Falls tailwater (2001-2017).



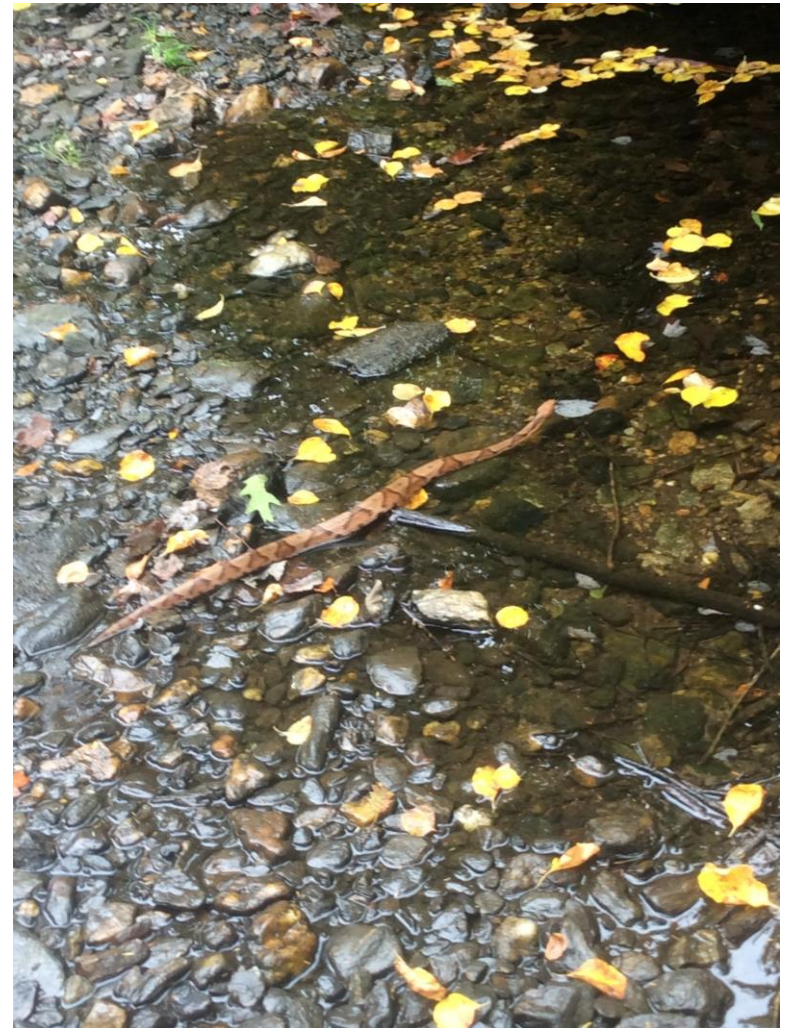
Year	Dam/Falls	Masemore	Blue Mount
2001	31 \pm 14	410 \pm 116	253 \pm 4
2002	365 \pm 37	1447 \pm 50	283 \pm 147
2004	208 \pm 57	536 \pm 28	No Sample
2005	289 \pm 650	1284 \pm 54	634 \pm 125
2006	371 \pm 124	1189 \pm 49	193 \pm 13
2007	925 \pm 111	811 \pm 83	67 \pm 16
2008	509 \pm 77	1296 \pm 76	131 \pm 43
2009	44 \pm 13	505 \pm 49	229 \pm 53
2010	31	289 \pm 53	421 \pm 34
2011	0	75 \pm 8	77 \pm 17
2012	245 \pm 20	502 \pm 11	131 \pm 12
2013	19	235 \pm 76	156 \pm 14
2014	88 \pm 9	808 \pm 32	243 \pm 10
2015	358 \pm 91	1573 \pm 155	200 \pm 15
2016	94 \pm 12	541 \pm 224	220 \pm 25
2017	220 \pm 12	915 \pm 126	40 \pm 7



Habitat in the Dam/Falls station on Gunpowder tailwater

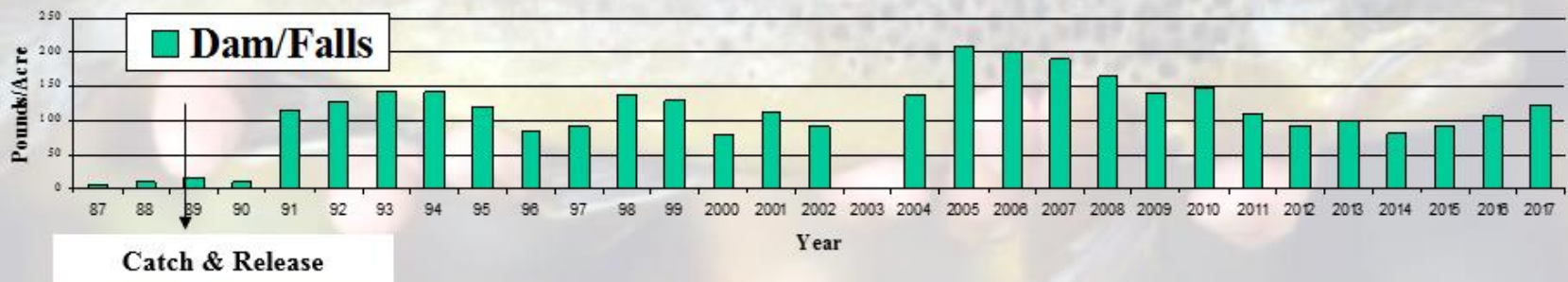


Dam/Falls station on the Gunpowder tailwater



Copperhead encountered at Dam/Falls station

Standing crop of adult brown trout at Dam/Falls station on Gunpowder Falls, 1987-2017.



Mean size, condition and confidence intervals (\pm 95% CI) of yearling and older brown trout in Gunpowder Falls tailwater at Dam/Falls Station (2001-2017).

Year	N	Mean TL (mm)	Mean W (g)	Mean K Factor
2001	205	204 \pm 5	87 \pm 7	0.93 \pm .01
2002	145	221 \pm 5	109 \pm 8	0.95 \pm .02
2004	126	261 \pm 5	188 \pm 14	1.01 \pm .01
2005	152	262 \pm 6	192 \pm 15	0.99 \pm .01
2006	280	233 \pm 12	125 \pm 10	0.91 \pm .01
2007	305	223 \pm 4	109 \pm 6	0.91 \pm .01
2008	251	220 \pm 4	109 \pm 6	0.97 \pm .01
2009	266	209 \pm 4	89 \pm 6	0.90 \pm .01
2010	245	215 \pm 3	99 \pm 5	0.96 \pm .01
2011	181	220 \pm 5	107 \pm 7	0.95 \pm .01
2012	123	236 \pm 5	133 \pm 7	0.98 \pm .01
2013	173	213 \pm 6	105 \pm 8	0.96 \pm .01
2014	123	222 \pm 6	117 \pm 9	1.00 \pm .01
2015	146	215 \pm 6	111 \pm 15	1.01 \pm .01
2016	237	198 \pm 4	79 \pm 5	0.96 \pm .01
2017	187	224 \pm 4	115 \pm 6	0.98 \pm .01

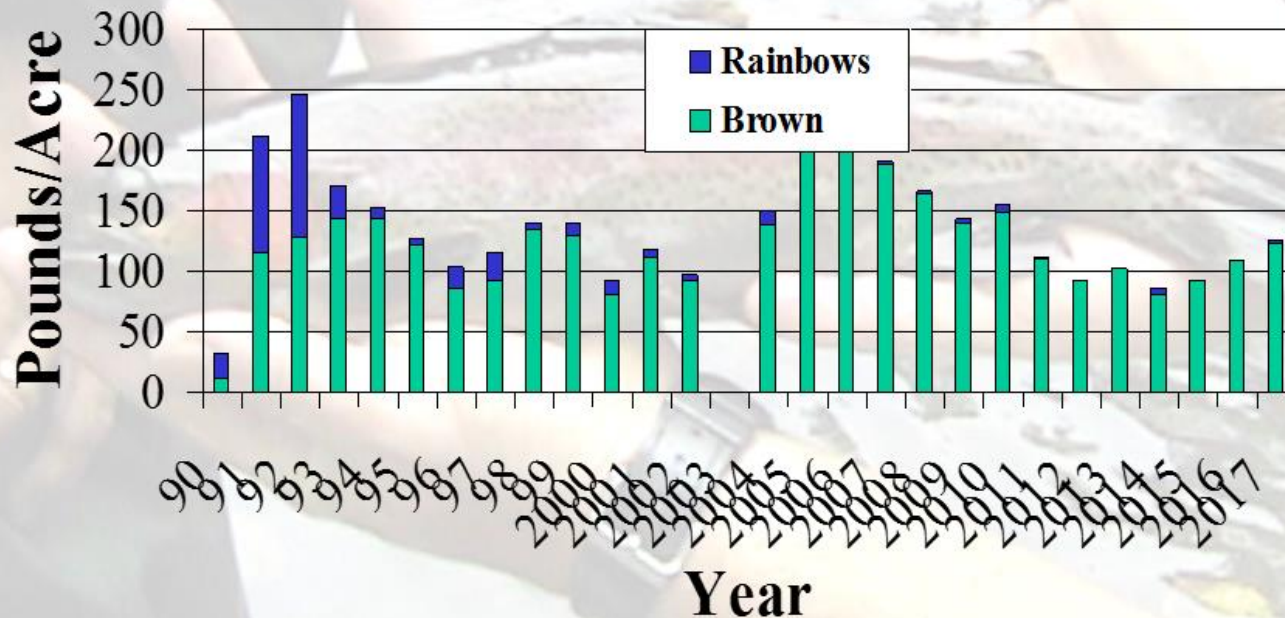


Brook X Brown Hybrid "Tiger Trout" 2016



Young of the year Rainbow Trout

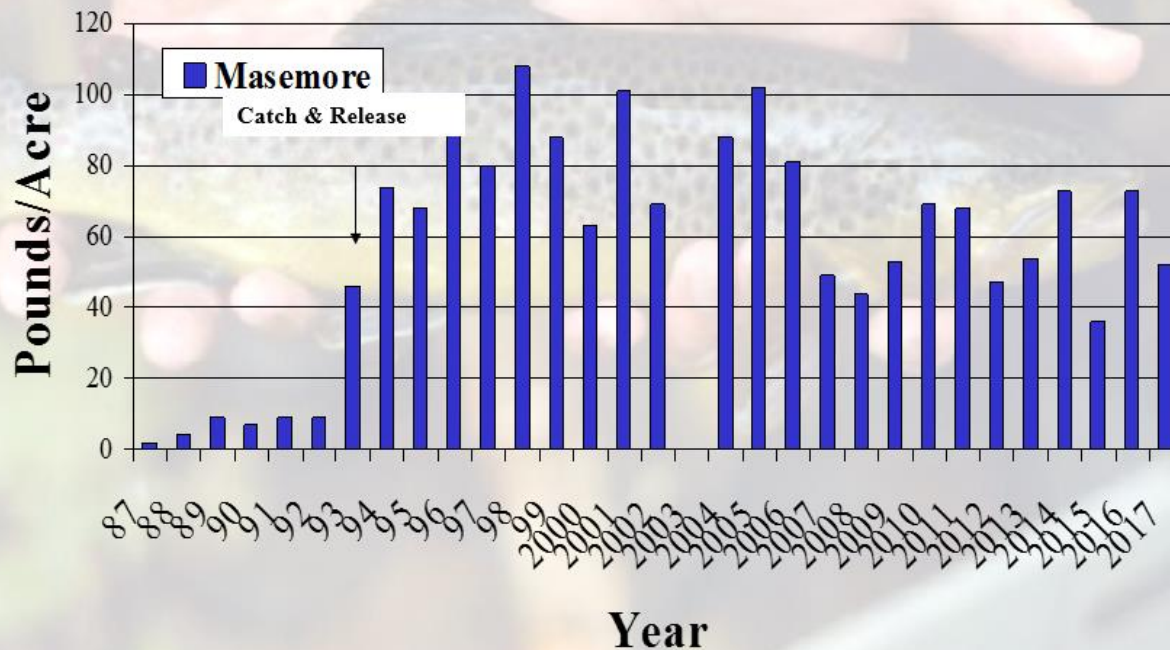
Standing crop comparison of brown and rainbow trout at Dam/Falls station on Gunpowder Falls 1990 - 2017.





Weighing,
measuring, and
recording trout data
at Masemore station

Standing crop of adult brown trout at Masemore Road station on Gunpowder Falls, 1987-2017.



Mean size, condition and confidence intervals (\pm 95% CI) of yearling and older brown trout in Gunpowder Falls tailwater at Masemore Station (2001-2017).

Year	N	Mean TL (mm)	Mean W (g)	Mean K Factor
2001	429	215 \pm 4	105 \pm 7	0.93 \pm .01
2002	316	216 \pm 4	100 \pm 6	0.91 \pm .01
2004	254	247 \pm 5	161 \pm 13	0.99 \pm .01
2005	333	237 \pm 4	142 \pm 8	0.98 \pm .01
2006	385	212 \pm 8	96 \pm 6	0.89 \pm .01
2007	218	214 \pm 5	103 \pm 7	0.96 \pm .01
2008	189	215 \pm 6	107 \pm 9	0.97 \pm .01
2009	250	210 \pm 5	98 \pm 8	0.93 \pm .01
2010	282	222 \pm 4	114 \pm 7	0.97 \pm .01
2011	261	225 \pm 5	120 \pm 9	0.94 \pm .01
2012	143	246 \pm 6	152 \pm 11	0.96 \pm .02
2013	211	225 \pm 5	118 \pm 9	0.94 \pm .01
2014	270	228 \pm 5	125 \pm 9	0.96 \pm .01
2015	153	216 \pm 6	108 \pm 11	0.97 \pm .01
2016	428	193 \pm 4	76 \pm 6	0.93 \pm .01
2017	236	213 \pm 5	101 \pm 8	0.95 \pm .01



Gunpowder brook trout and brown Trout

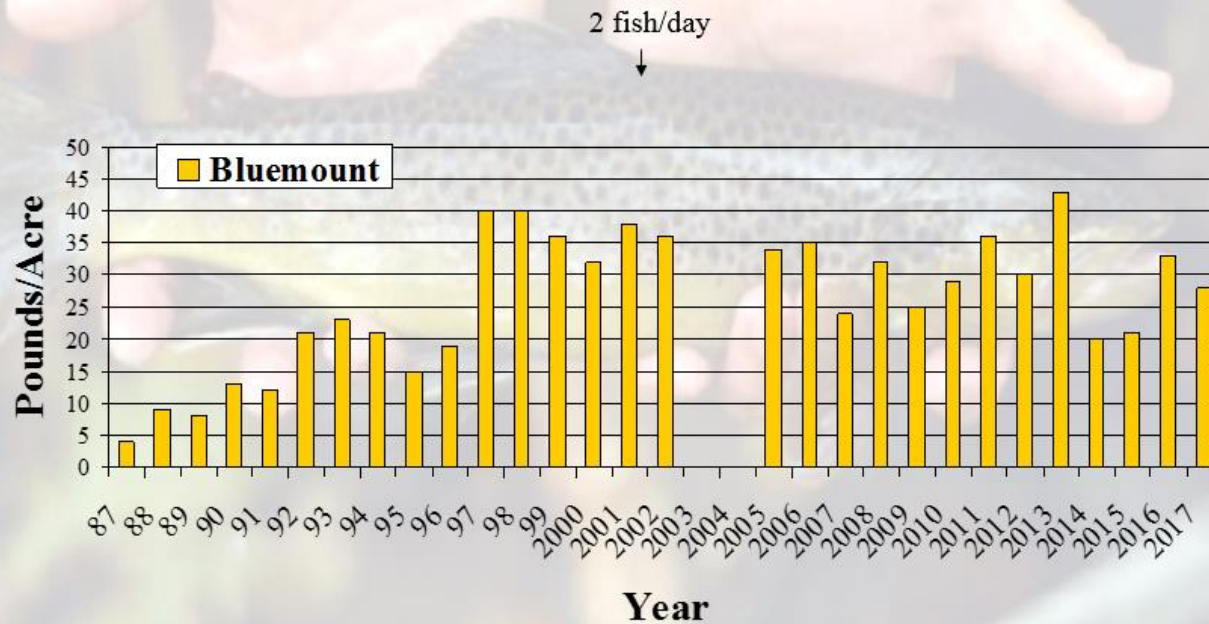


Adult brown trout that has eaten a smaller brown trout while in the holding boxes at Masemore station



Bluemont station habitat

Standing crop of adult brown trout at Bluemount Road station on Gunpowder Falls, 1987-2017.



Mean size, condition and confidence intervals (\pm 95% CI) of yearling and older brown trout in Gunpowder Falls tailwater at Blue Mount Station (2001-2017).

Year	N	Mean TL (mm)	Mean W (g)	Mean K Factor
2001	359	211 \pm 4	90 \pm 6	0.88 \pm .01
2002	314	215 \pm 5	97 \pm 8	0.85 \pm .01
2005	212	223 \pm 6	133 \pm 13	0.93 \pm .01
2006	323	205 \pm 10	91 \pm 8	0.87 \pm .01
2007	200	213 \pm 7	100 \pm 13	0.87 \pm .02
2008	176	237 \pm 7	151 \pm 17	0.98 \pm .01
2009	145	235 \pm 9	147 \pm 21	0.94 \pm .01
2010	228	214 \pm 6	107 \pm 12	0.93 \pm .01
2011	223	227 \pm 6	135 \pm 15	0.98 \pm .01
2012	209	230 \pm 6	124 \pm 12	0.90 \pm .01
2013	262	235 \pm 6	139 \pm 12	0.94 \pm .01
2014	131	229 \pm 7	127 \pm 15	0.94 \pm .01
2015	158	215 \pm 7	111 \pm 15	0.95 \pm .01
2016	255	216 \pm 6	108 \pm 14	0.91 \pm .01
2017	214	217 \pm 7	108 \pm 12	0.91 \pm .01



Anesthetized brown trout in holding box





2017 Fall Survey Summary

- Standing crop of adult brown trout at the D/F station was estimated at 123 lbs/ac. 5 yr avg = 101 lbs/ac.
- Standing crop of adult brown trout at the Masemore station was estimated at 52 lbs/ac. 5 yr avg = 58 lbs/ac.
- Standing crop of adult brown trout at the Bluemount station was estimated at 28 lbs/ac. 5 yr avg = 29 lbs/ac.
- Less trout in the <9 in size range (43% decrease), more trout in the 9-12 in size range (13% increase), and one more trout (6% increase) in the 12+ in. range.