



Arizona Game and Fish

Lees Ferry long term monitoring

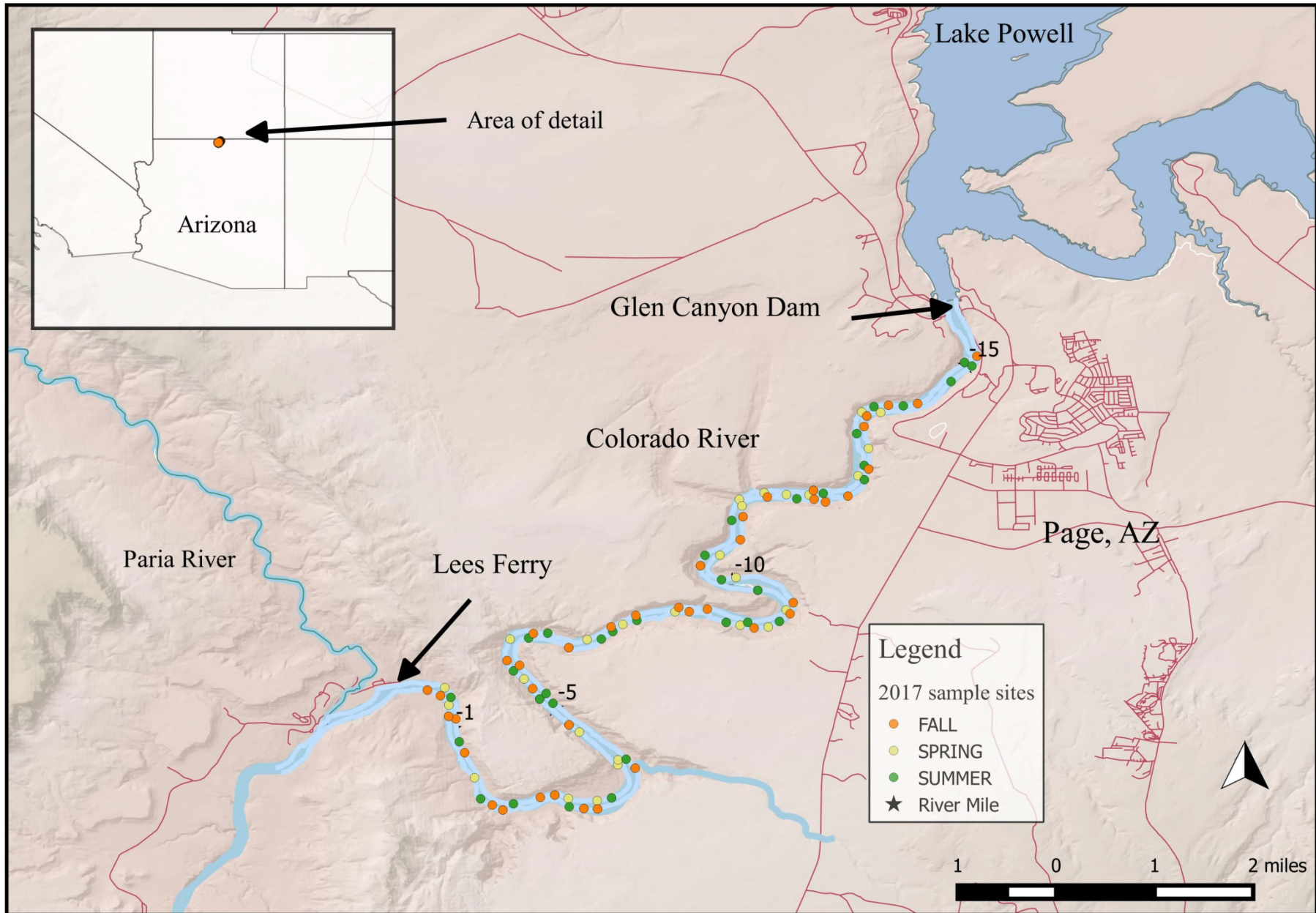


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Arizona Game and Fish Department

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Photo – Lees Ferry Anglers

Lees Ferry Reach monitoring 2017





Purpose

AGFD manages the Rainbow Trout fishery based on a variety of guidance documents

- NPS 2013
- Rogers 2015 (AGFD Management Plan)
- LTEMP ROD: US DOI 2016a, 2016b
 - (5) maintenance of a high quality sport fishery in the Lees Ferry reach



AGFD Fisheries Management Plan for Colorado River-Lees Ferry

- *Maintain a healthy population of Rainbow Trout at Lees Ferry to support recreational fishing*
 - *Rainbow Trout ≤ 6 inches compose 20-50% of the Lees Ferry population as determined by fall electrofishing*
 - *Rainbow Trout electrofishing CPUE exceeds 1 fish per minute*
- *Provide a quality trout fishing experience with catch frequency commensurate with the Blue Ribbon status of the fishery*
 - *Angler catch rate ≥ 1 Rainbow Trout per hour*
- *Grow quality sized trout that are available to the angler, consistent with the Blue Ribbon status of the fishery*
 - *10 Rainbow Trout ≥ 14 inches caught by the angler in a 10-hour day, at least one ≥ 20 inches*
 - *Maintain trout condition factor ≥ 1 during the summer months*

Lees Ferry – Long term monitoring

- Electrofishing
- Creel (angler) surveys
- Game camera



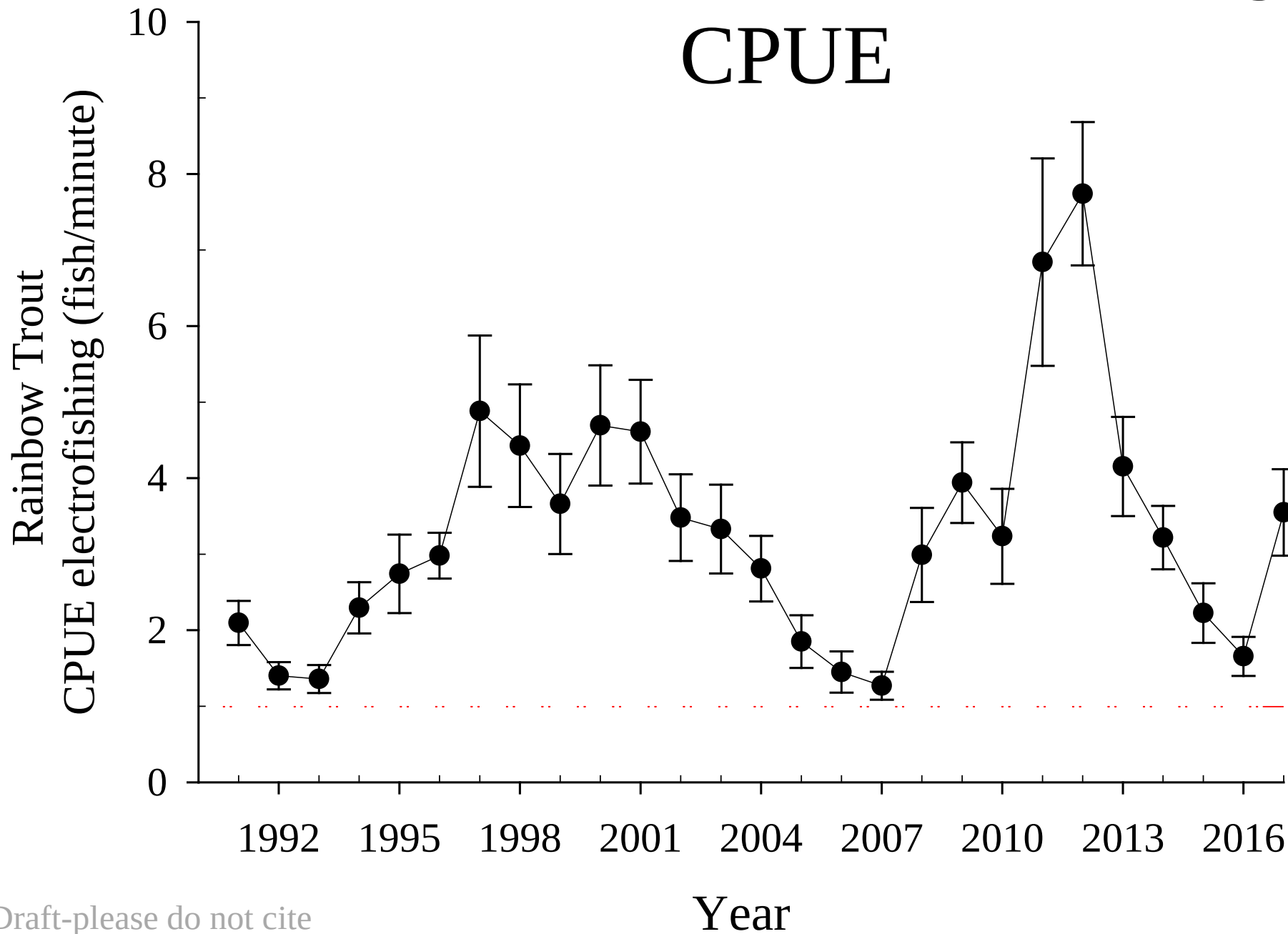
Photo by Lees Ferry Anglers,
6 November 2017

2017 Electrofishing summary

Date	n	RBT	BNT	Carp	FMS	GSF	Walleye
14-17 March	41	551	37	2	3	0	0
17-21 July	41	1178	15	0	0	1	1
12-15 Sept.	40	2458	16	5	17	1	0
Total		4187	68	7	20	2	1
% catch		97.7	1.59	0.163	0.47	0.047	0.023

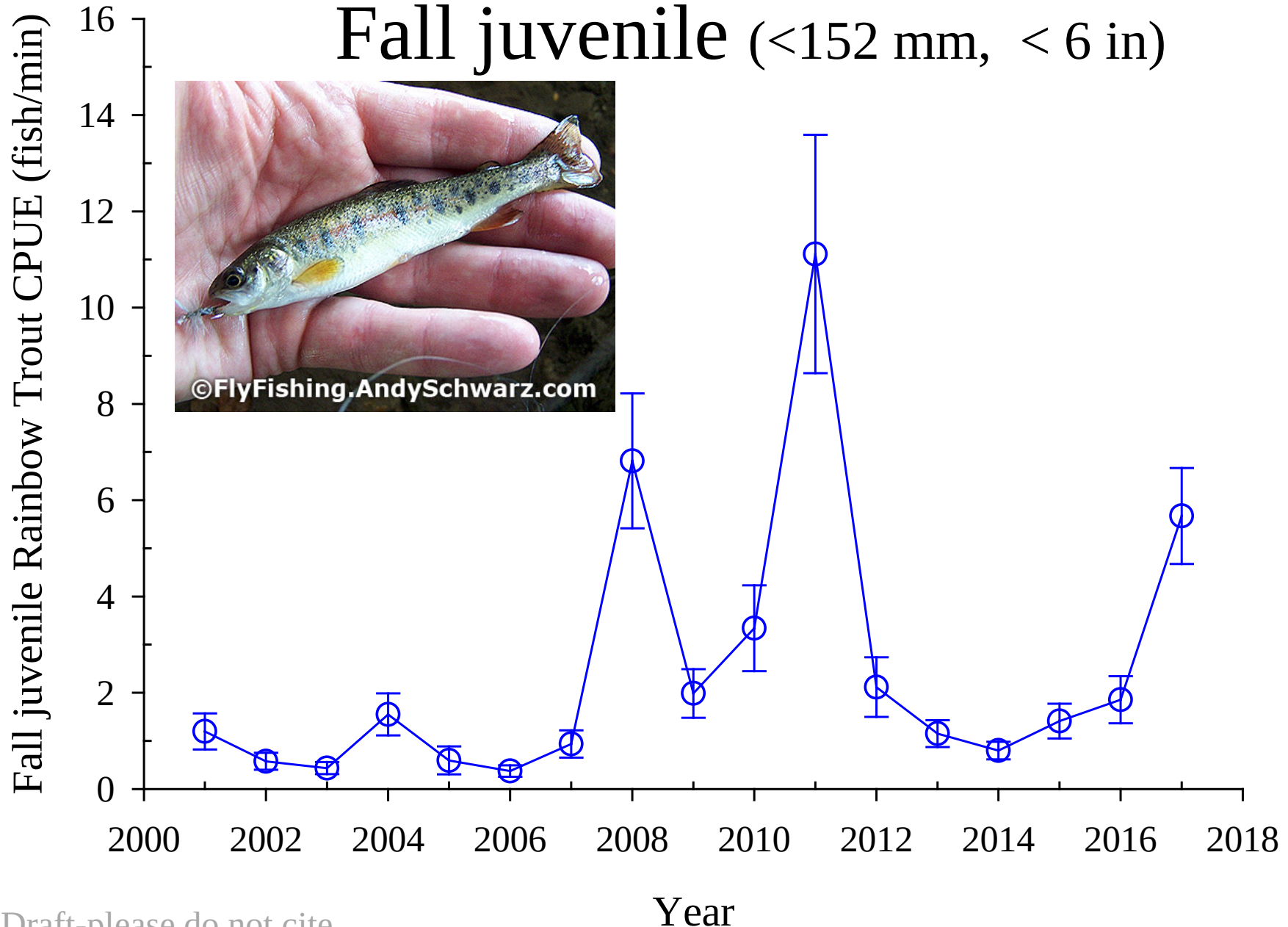


Rainbow Trout electrofishing CPUE

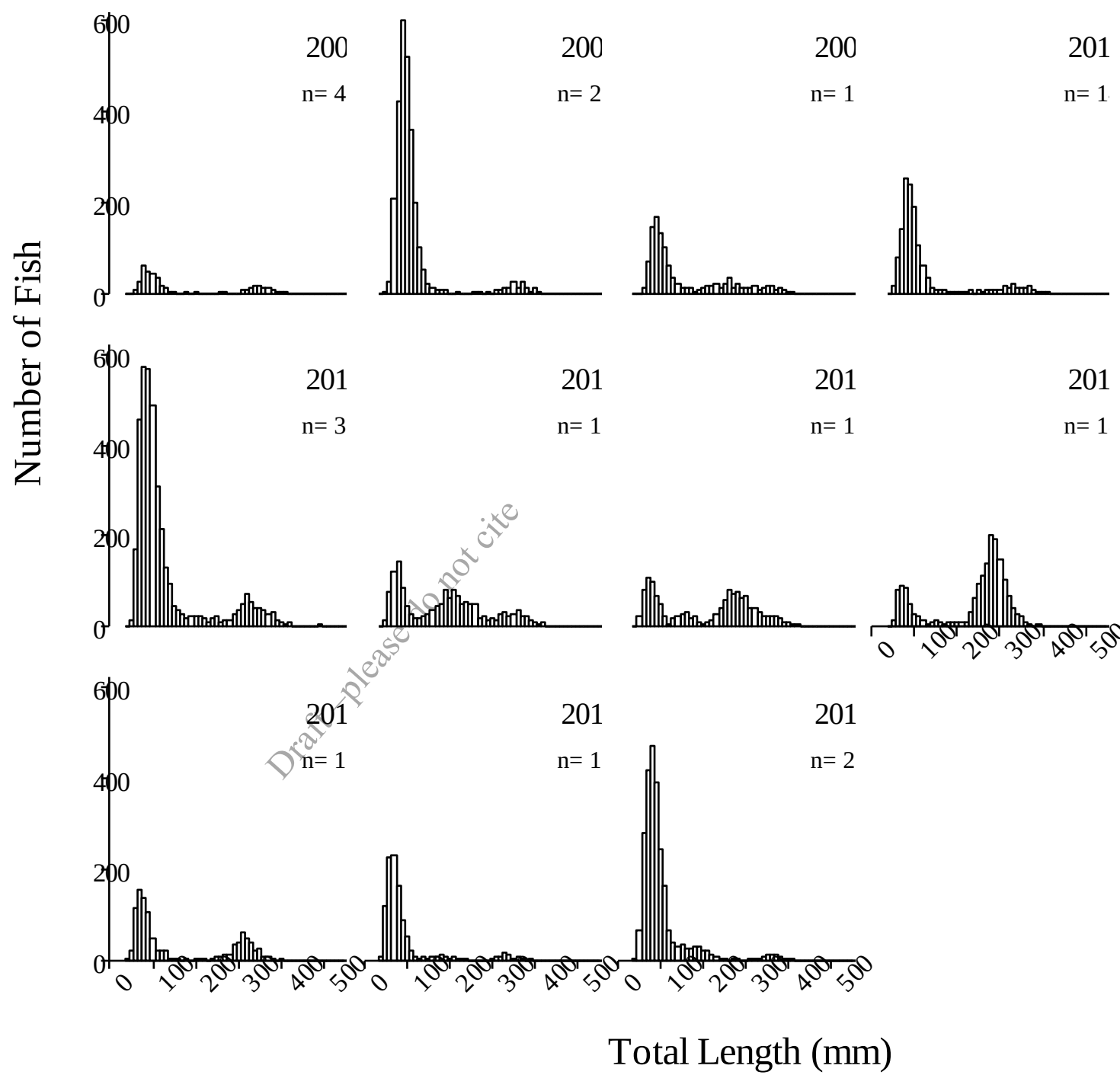


Rainbow Trout CPUE (fish/minute)

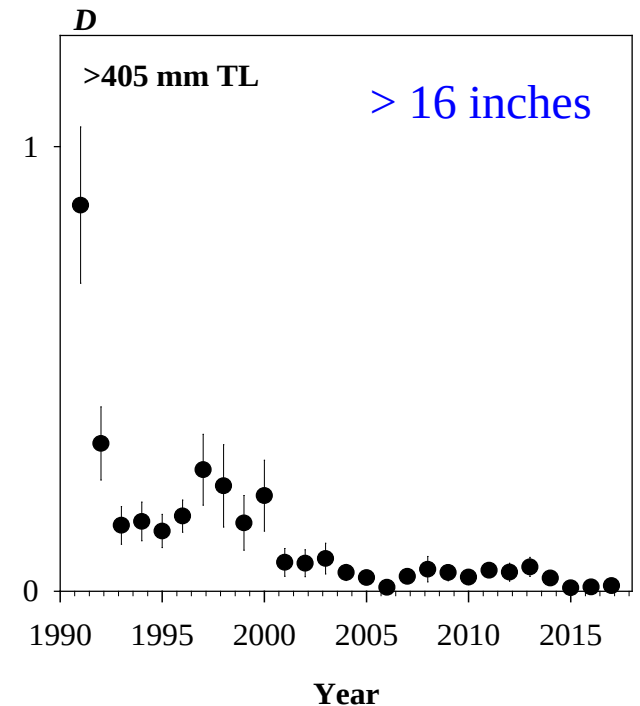
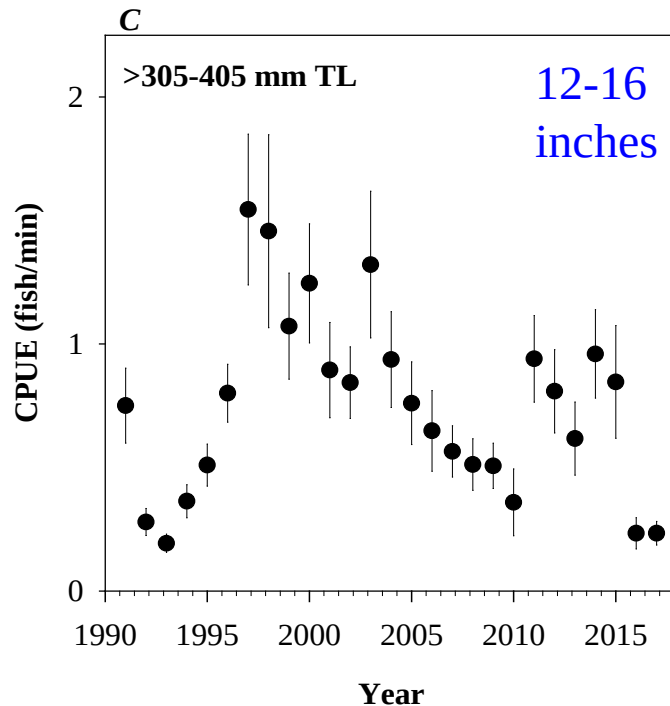
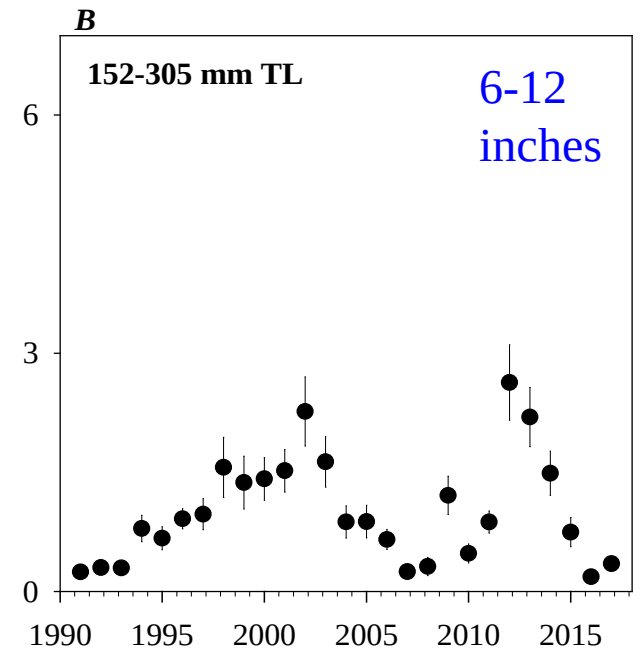
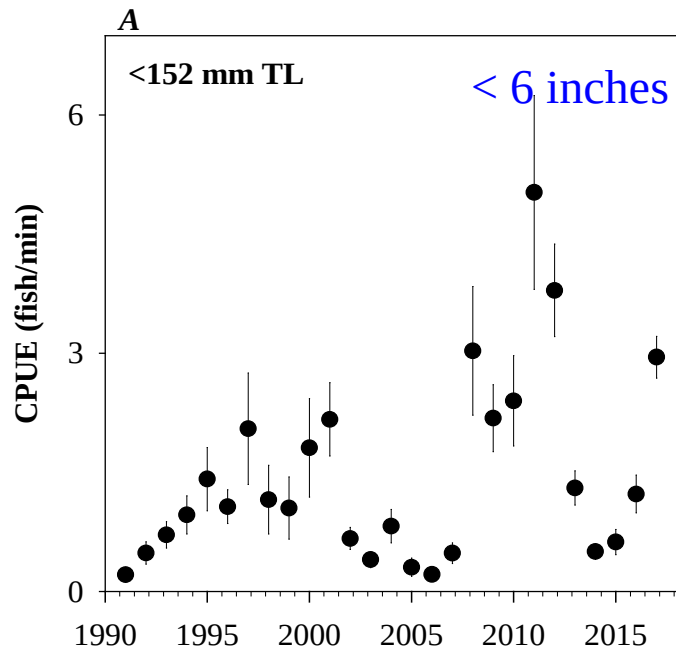
Fall juvenile (<152 mm, < 6 in)



Fall
Rainbow
Trout
length
frequency
histograms
by year

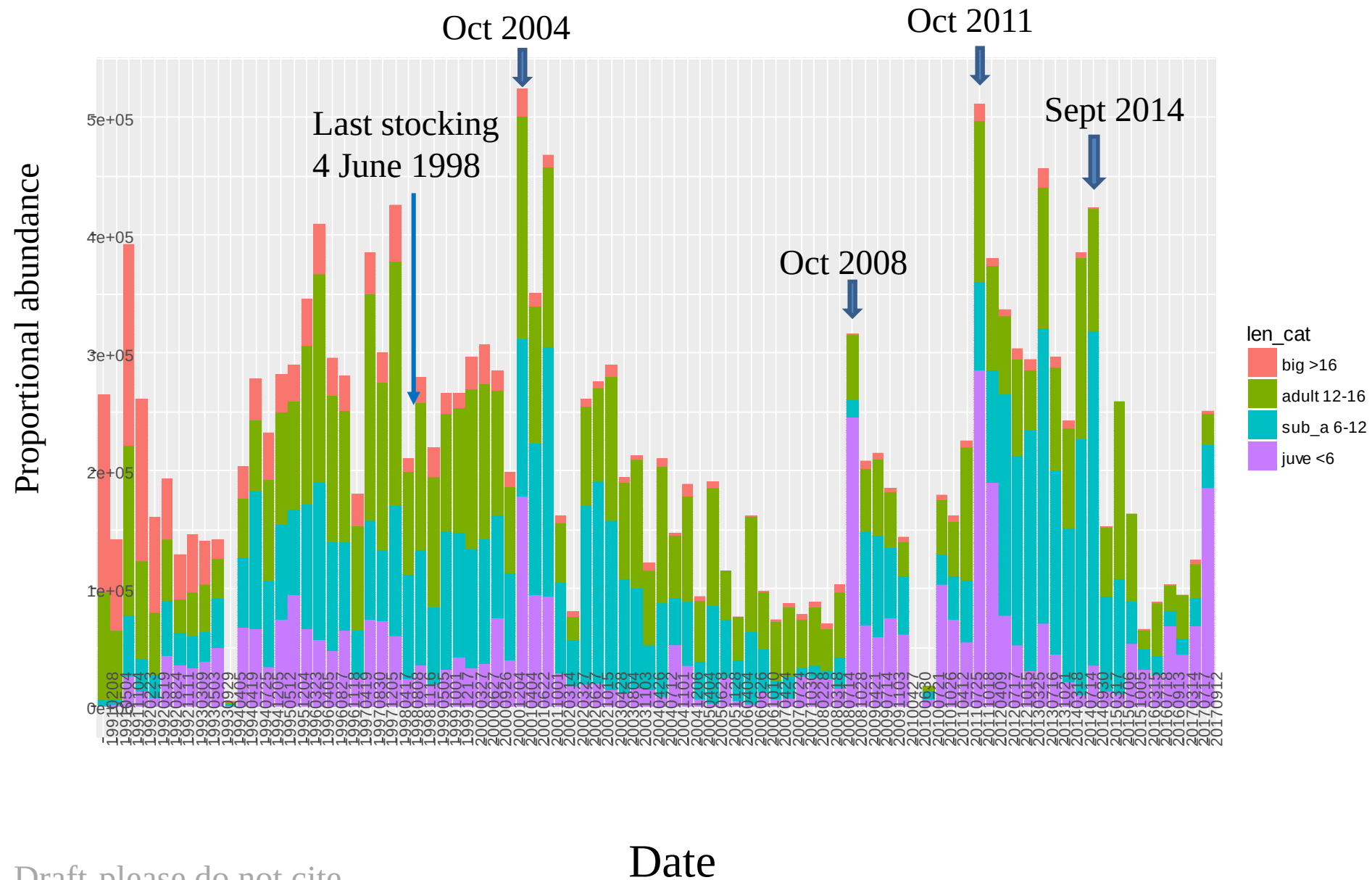


Rainbow Trout by size category

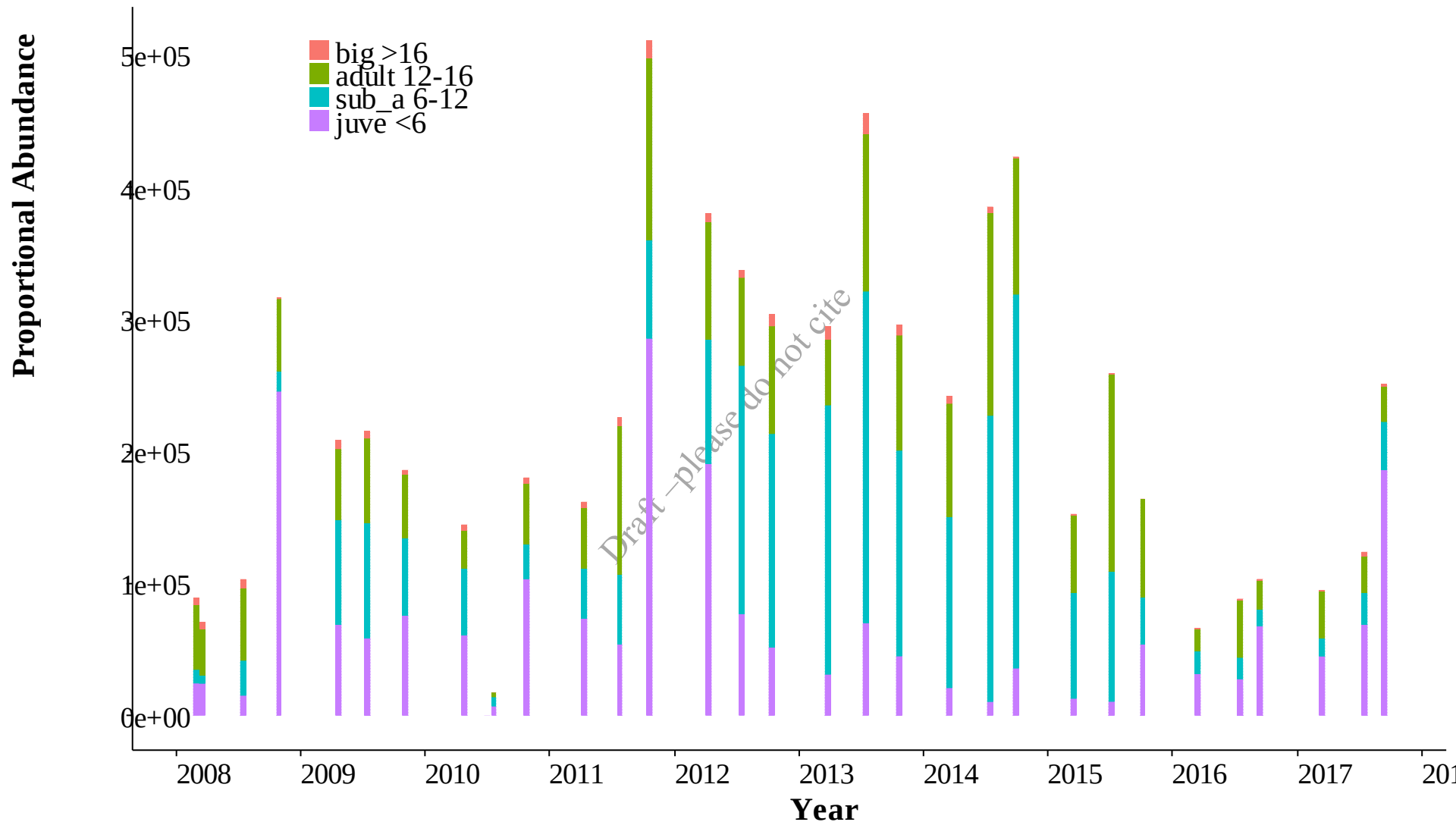




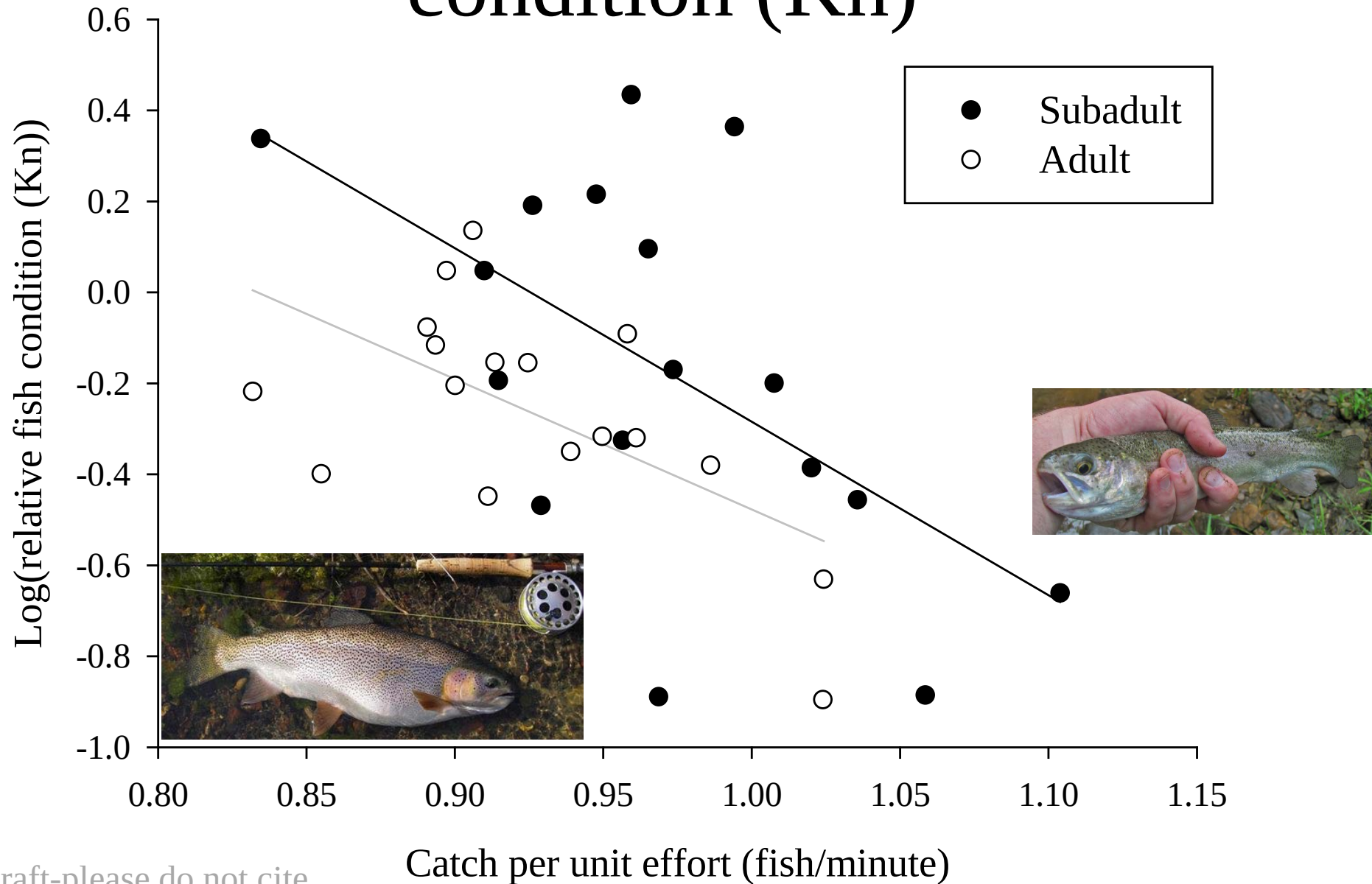
AGFD long-term monitoring electrofishing



AGFD long-term monitoring electrofishing 2008-2017



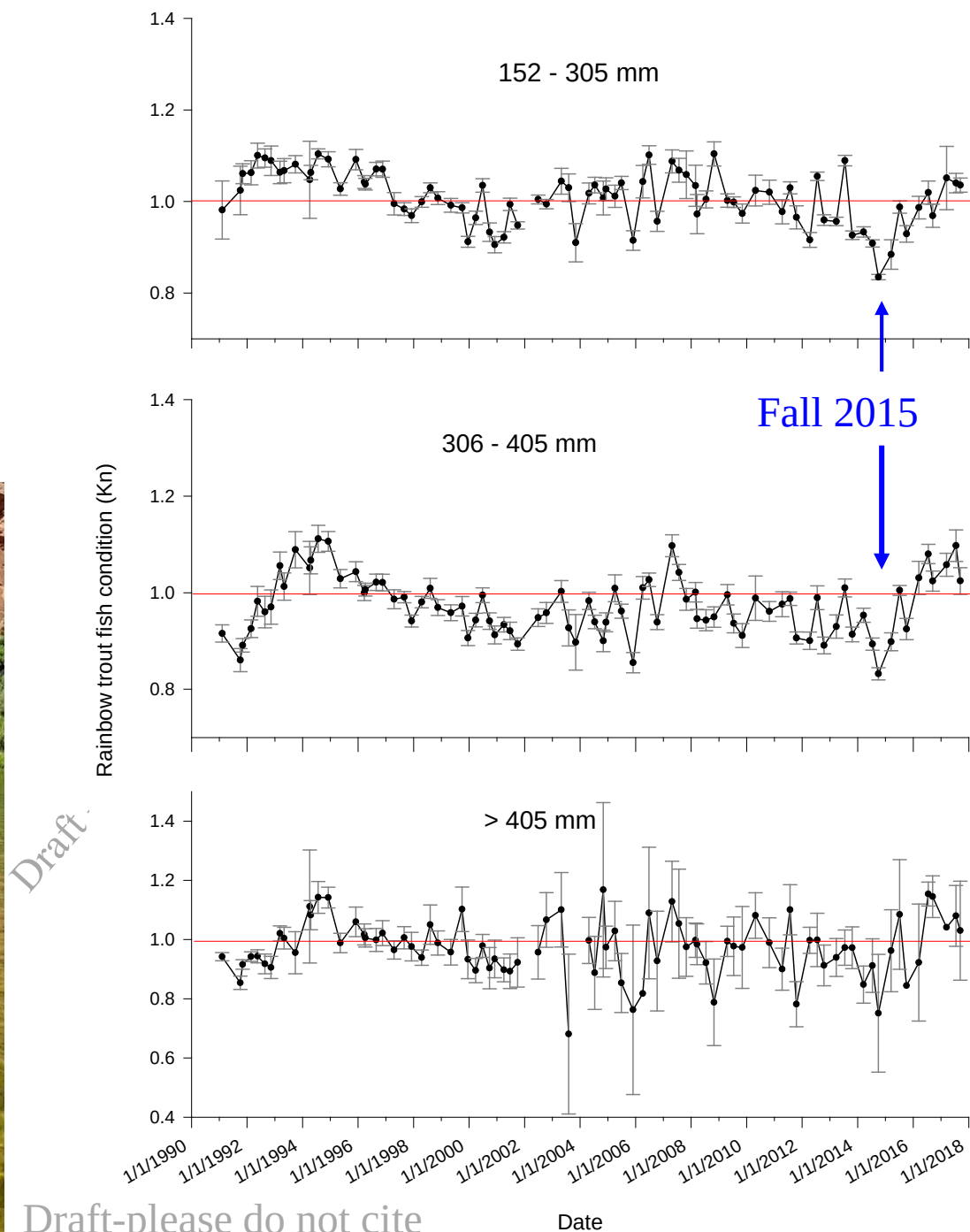
Rainbow trout abundance and relative condition (Kn)



Rainbow Trout relative condition (Kn) by size class

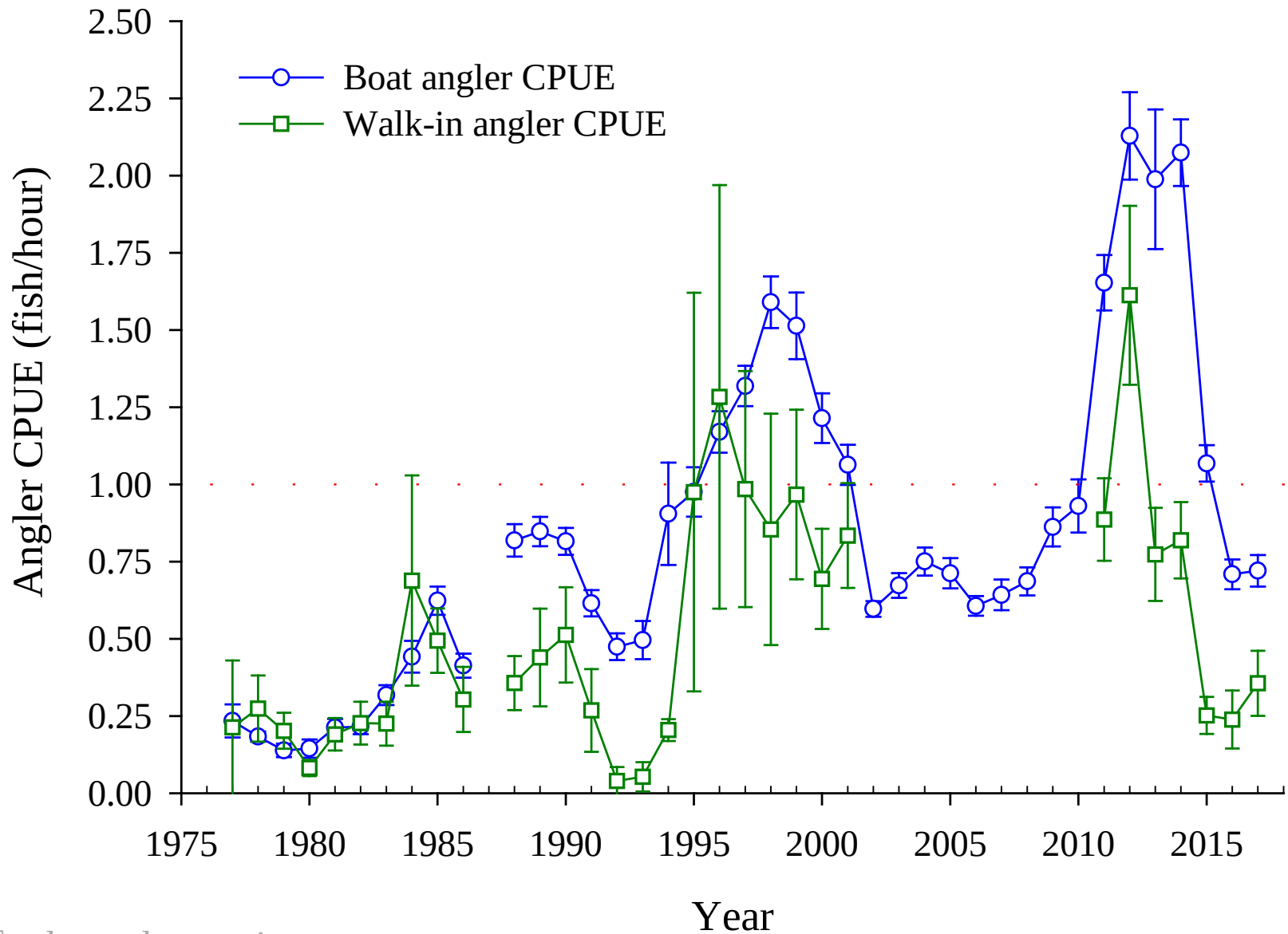


Photo by D. Gauthier, Lees Ferry
Anglers, 5 June 2017

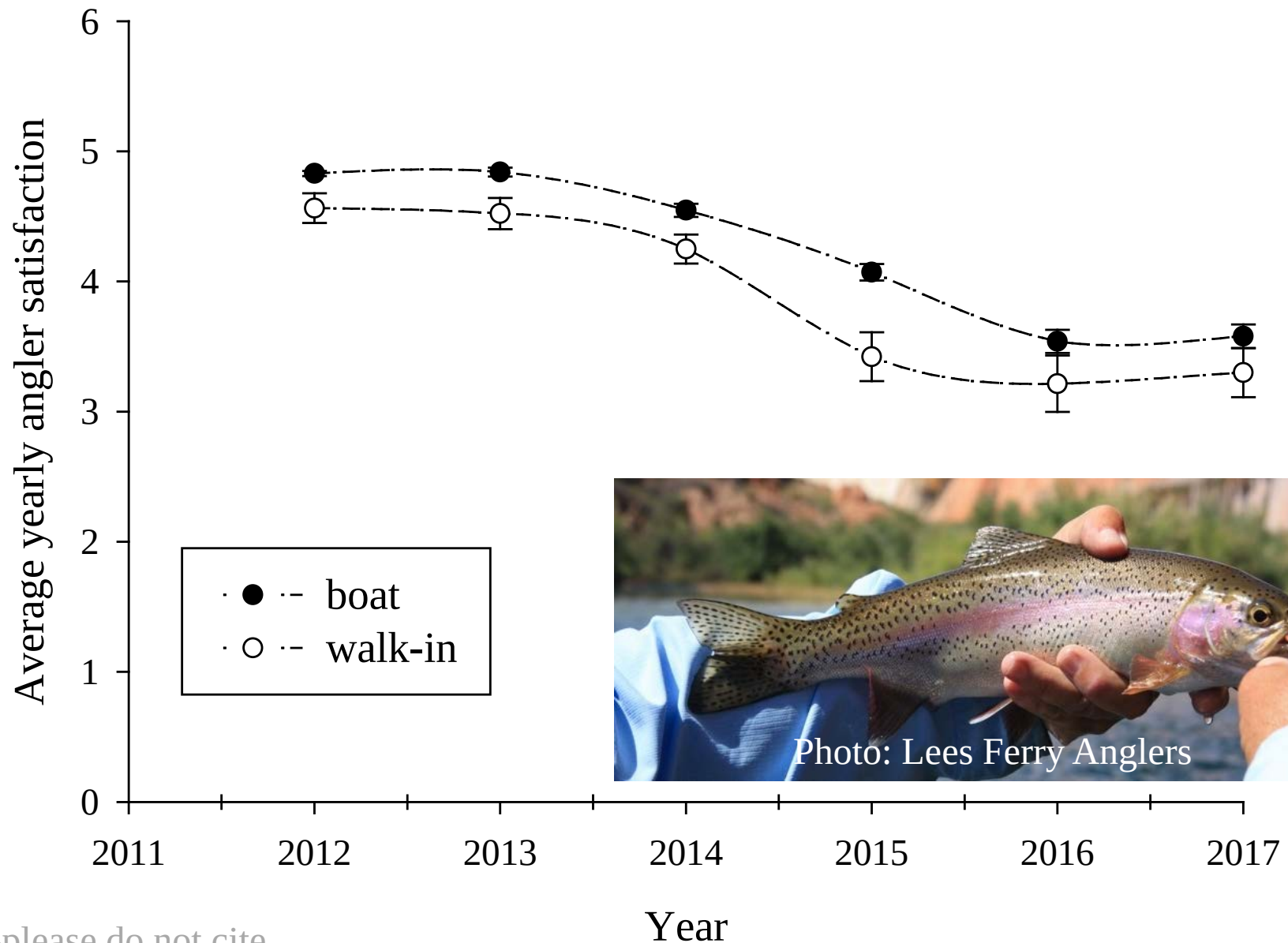




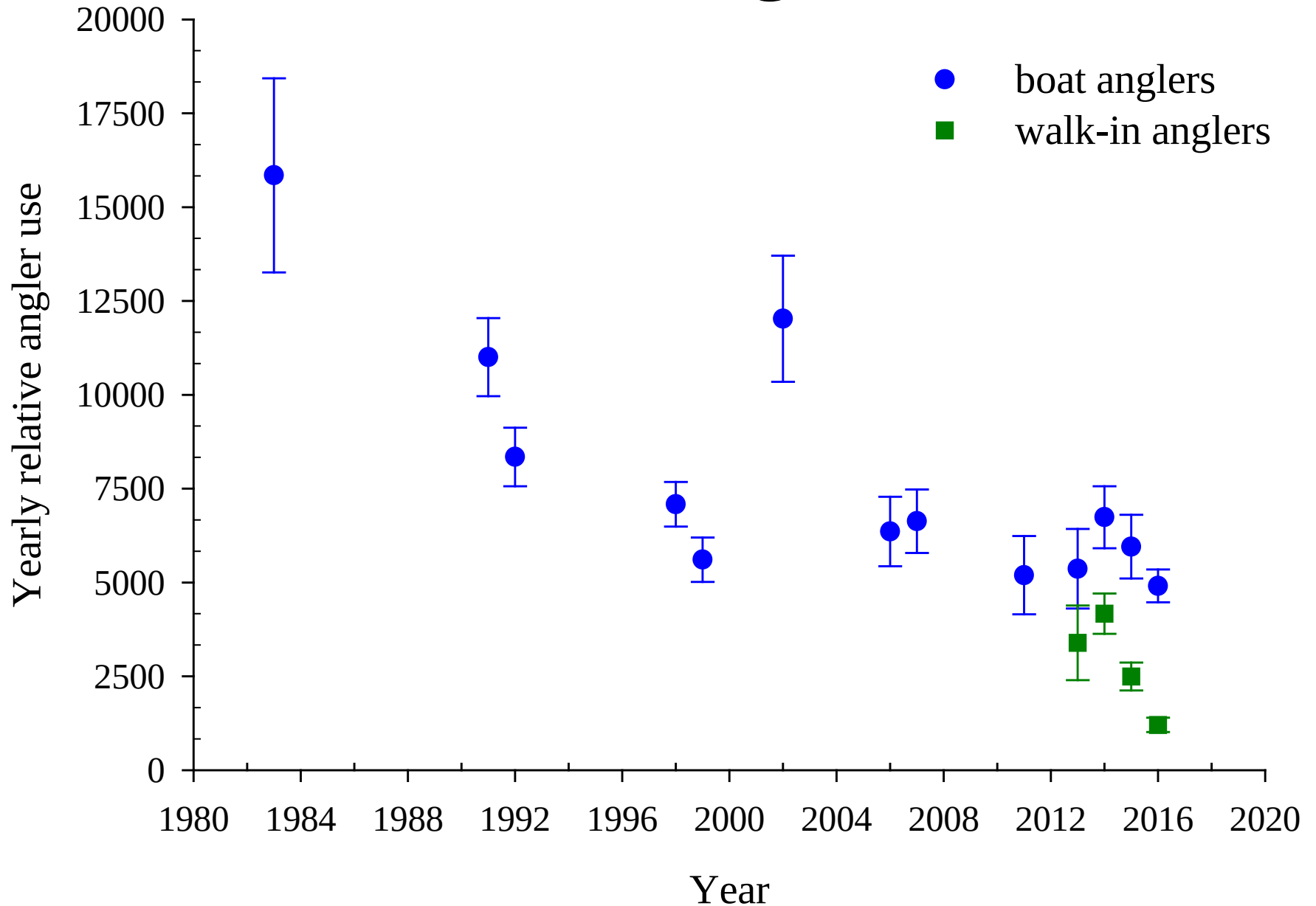
Angler CPUE (fish/hour)



Angler Satisfaction rating (1-5)



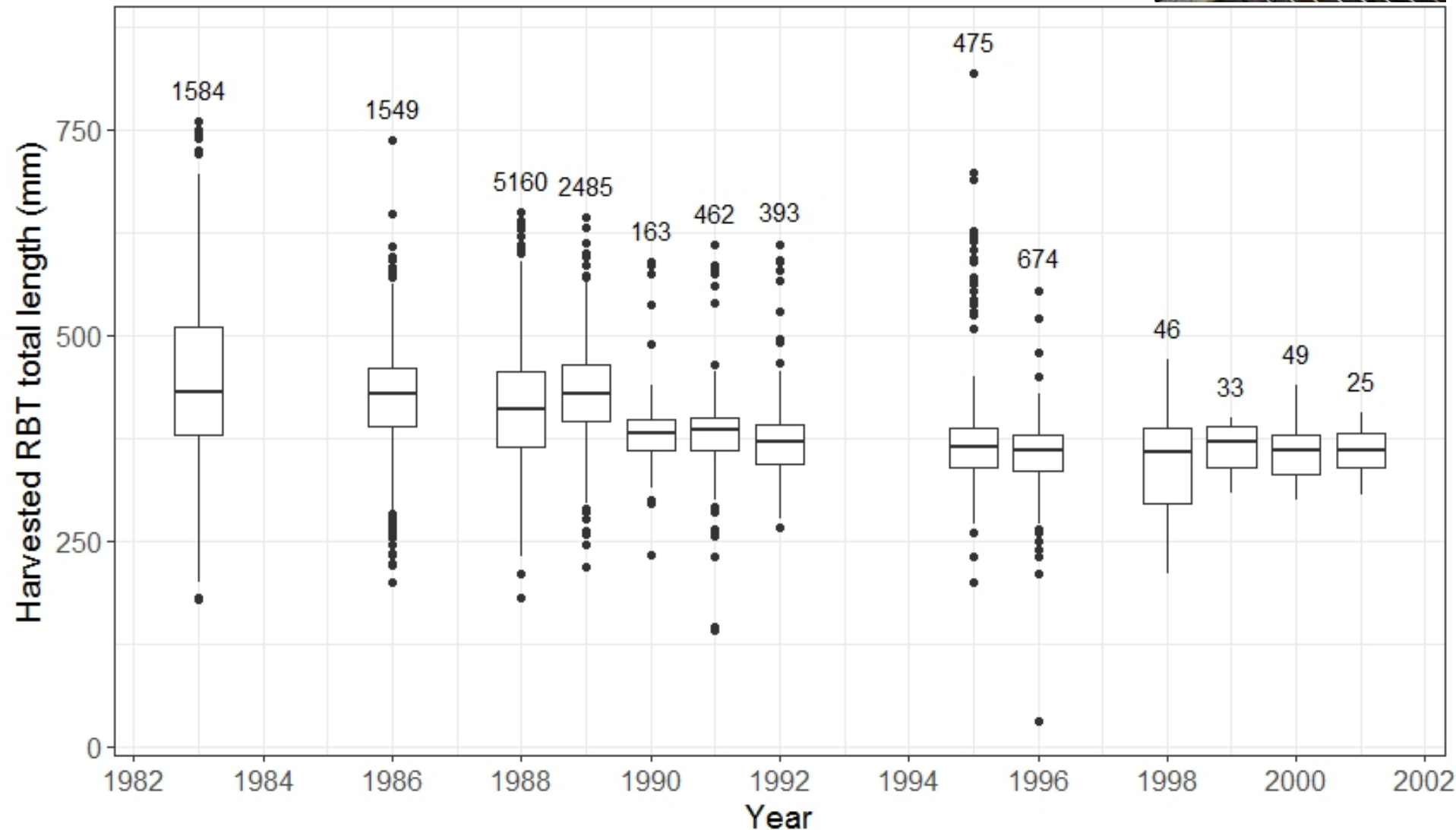
Relative angler use





Rainbow Trout harvested

(n = number of fish)



Brown Trout

- Concern?

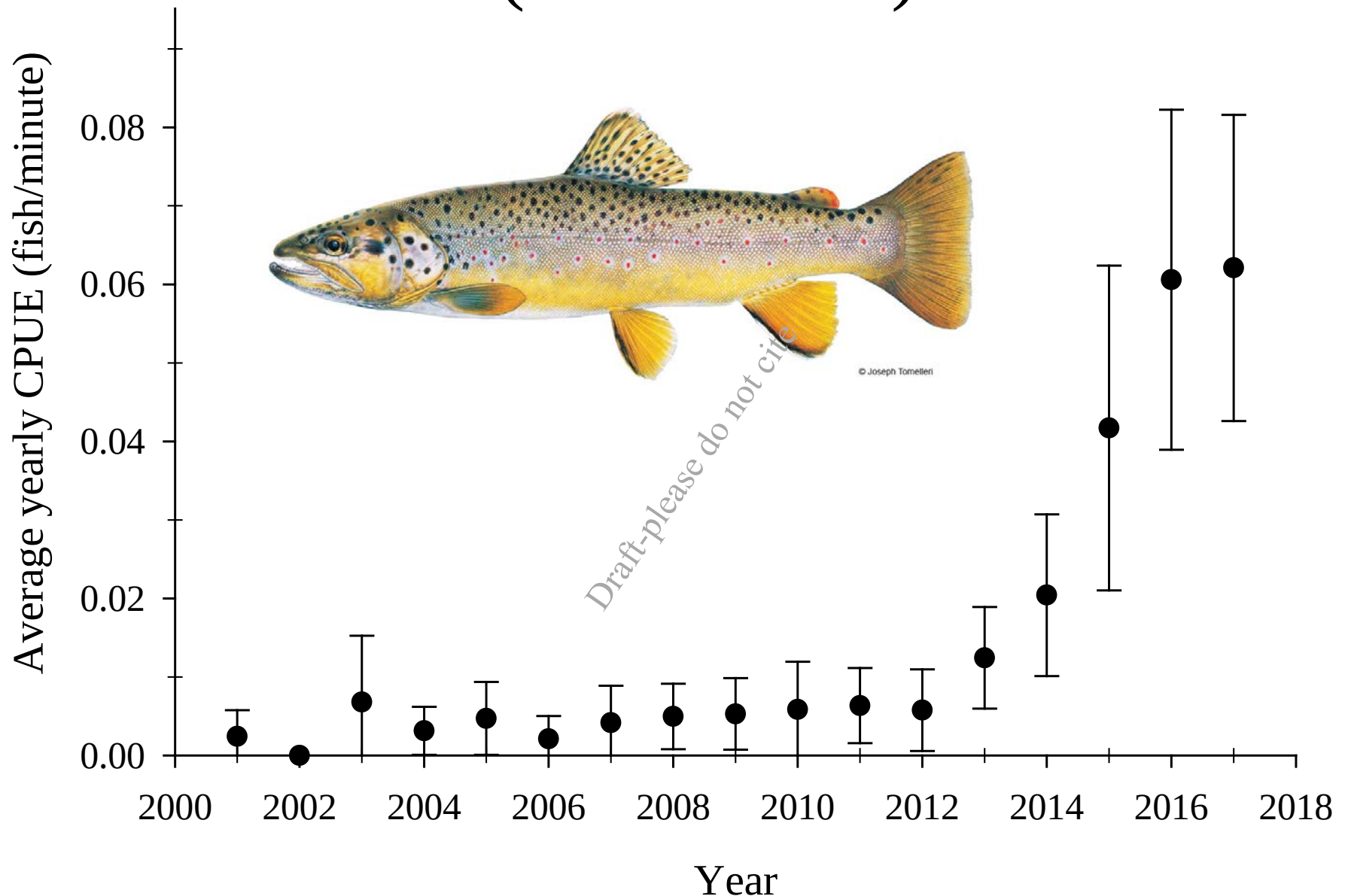


Kevin Campbell 4 Sept 2015



<https://www.pinterest.com/pin/542683823824430236/> Lees Ferry Anglers

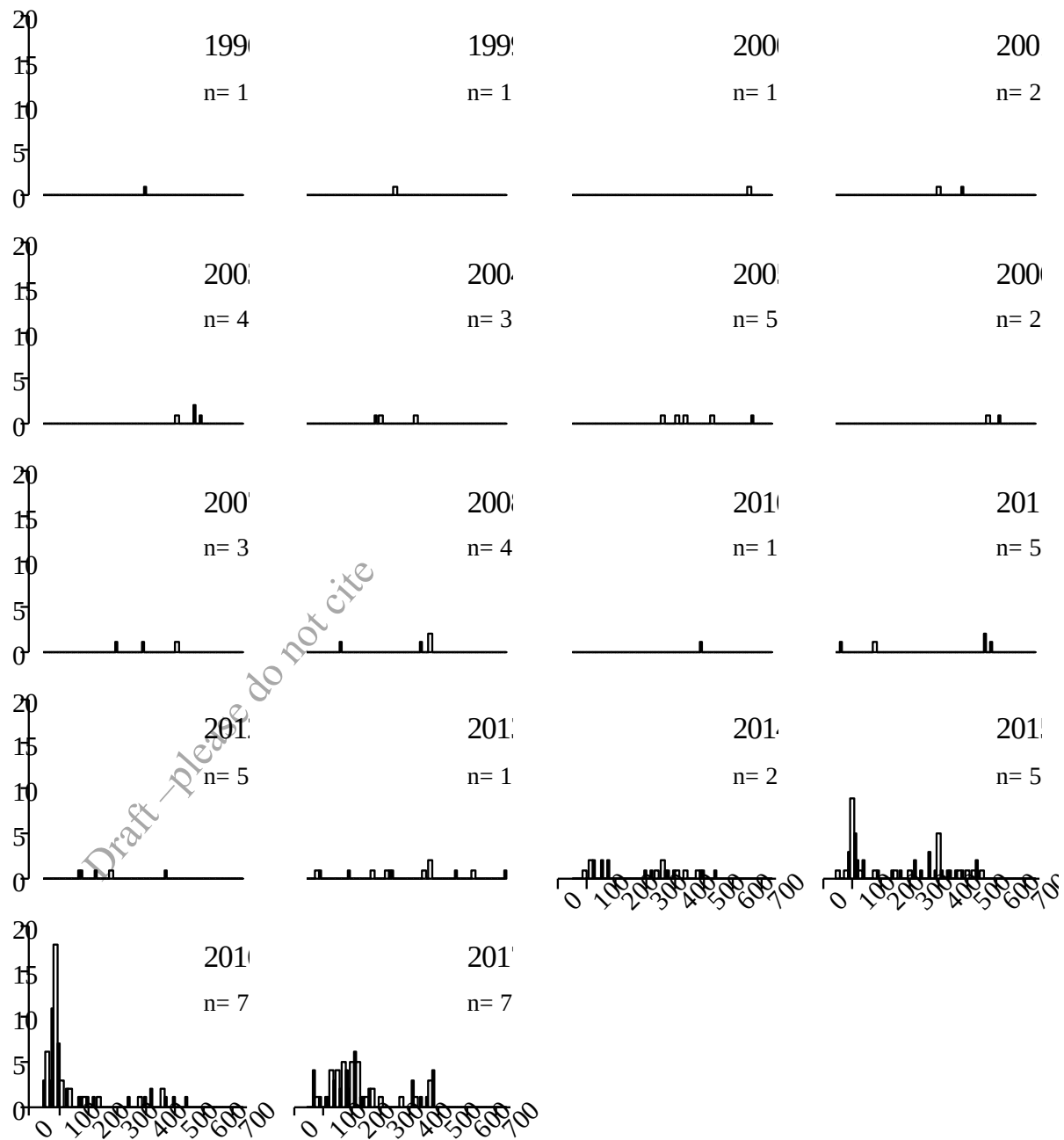
Brown Trout average electrofishing CPUE (fish/minute)



Brown Trout length frequency histograms



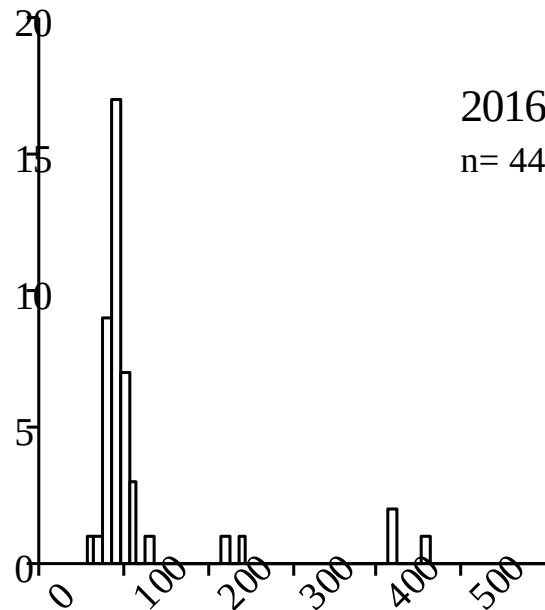
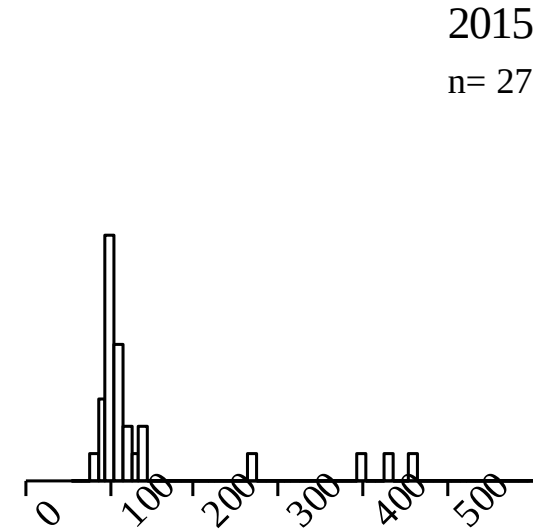
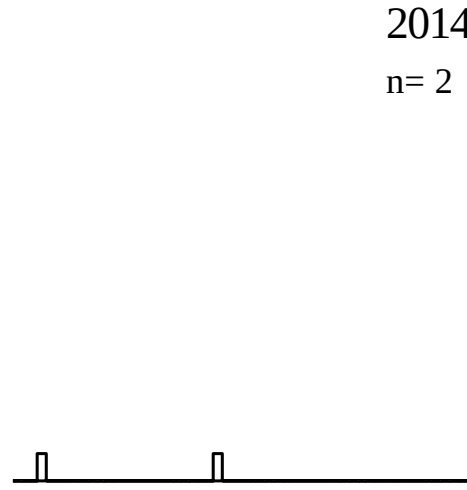
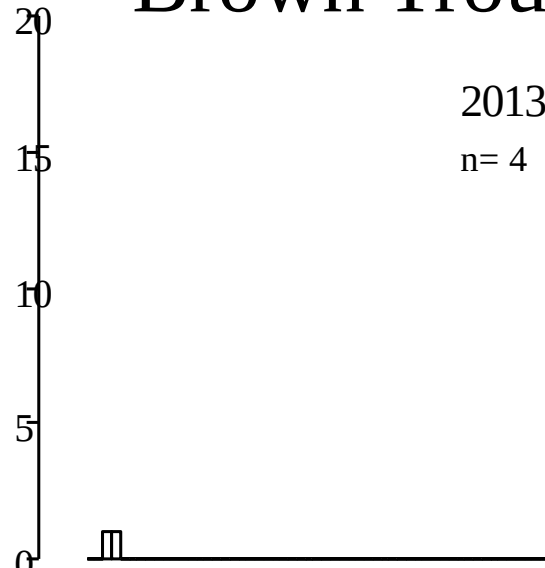
Number of Fish



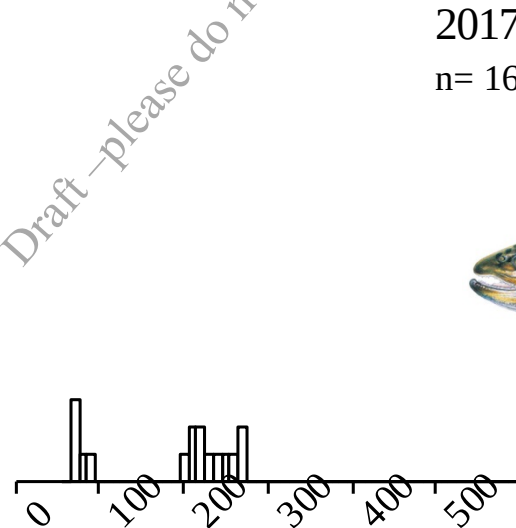
Total Length (mm)

Brown Trout fall length frequency histograms

Number of Fish

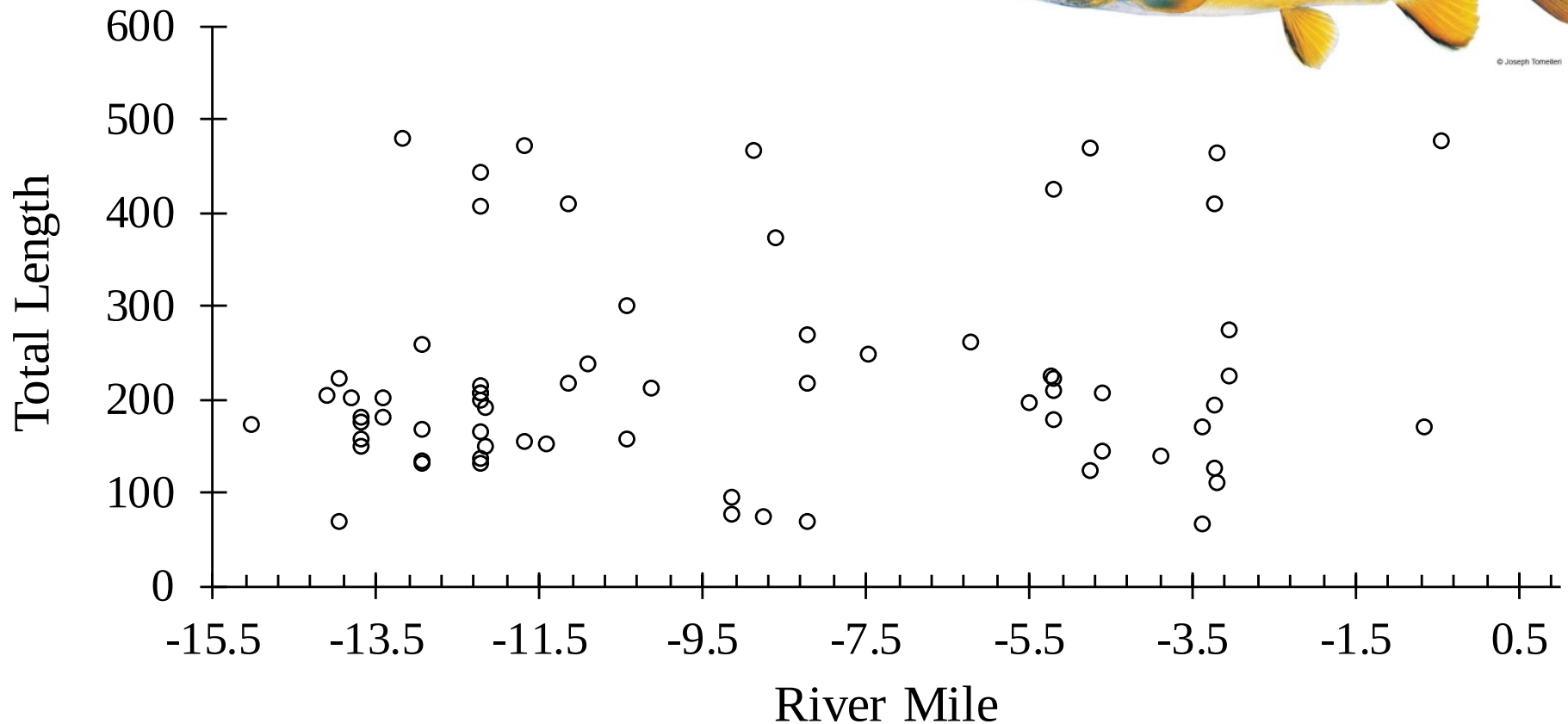


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Total Length (mm)

Total length of Brown Trout by river mile 2017



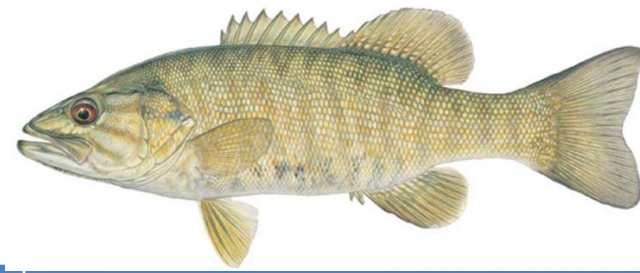


Brown Trout captured by anglers



Year	Anglers interviewed		BNT captured		BNT harvested
	boat	walk-in	boat	walk-in	
2011	1075	358	0	0	0
2012	676	239	0	1	0
2013	883	262	11	0	0
2014	1275	375	9	1	2
2015	1545	433	22	1	4
2016	1056	164	6	0	1
2017	940	269	21	3	8

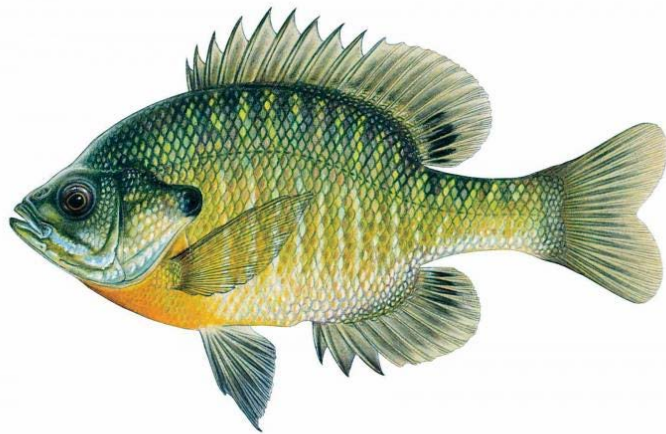
Rare-nonnatives 2017



Species	Number	Location	Program
Smallmouth Bass	1	-15.73 L	Non-native hunt
Walleye	1	-12.2 R	Non-native hunt
Brown Trout	2	-15.07R, -10.85L	Non-native hunt
Common Carp	32	-12 Slough	Non-native hunt
Brown Trout	68	Reach wide	Monitoring
Bluegill Sunfish	1	-12.81 L	Monitoring
Green Sunfish	2	-5.19 R, -12.35L	Monitoring

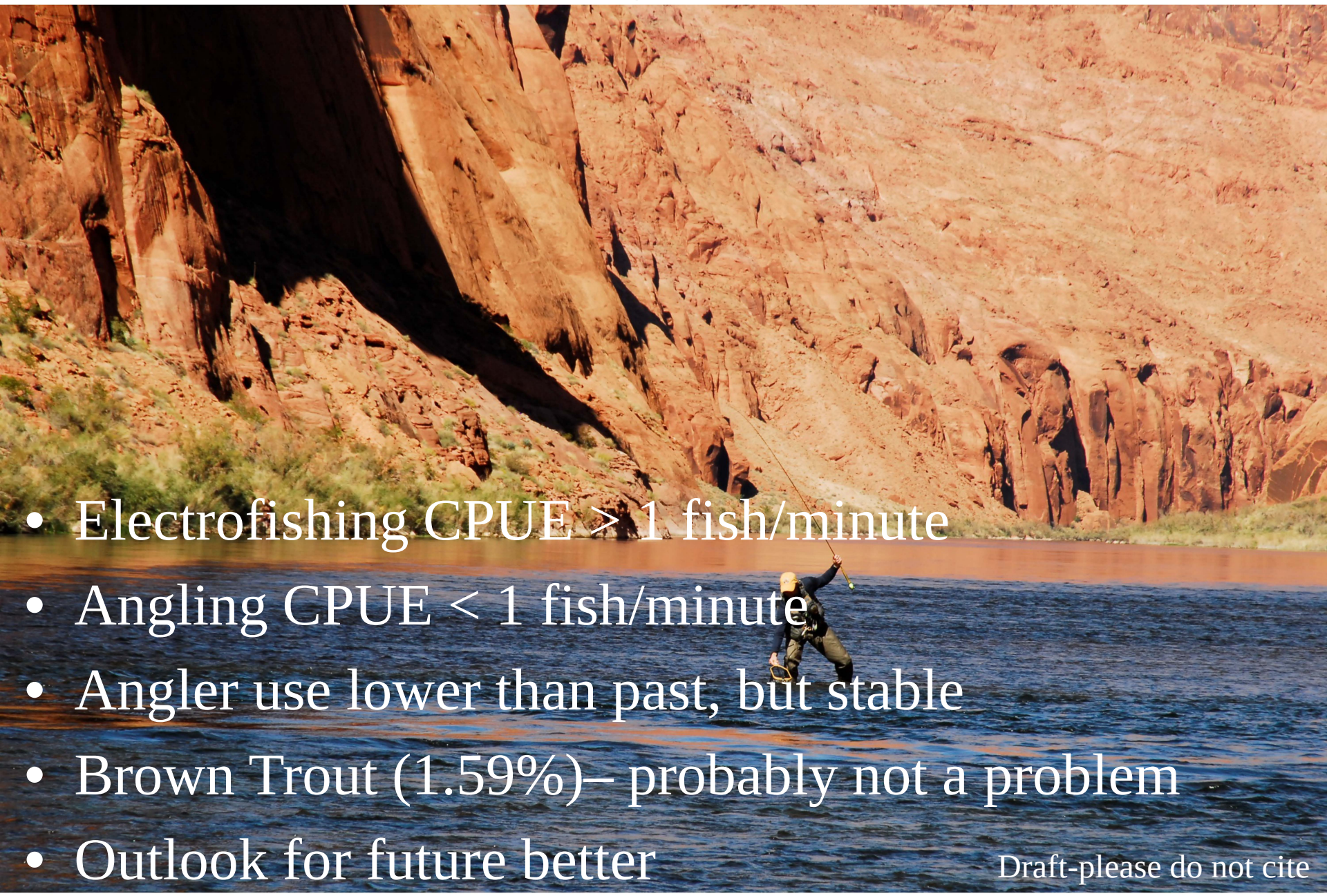


AGFD monitoring non-natives excluding RBT



Year	BKT	BNT	CRP	BGS	CCF	GSF	RSS	SMB	STB	WAL
1992	9		6		2					
1993	1		1						1	
1994	1		6							
1995	1		2				1			
1996		1	9			1			1	
1997			2		1					
1998			1							
1999		1								
2000		1	3							
2001		4	5		1					
2002			7							
2003		4	19					1		
2004		4	15							
2005		5	5		1					
2006		2	8		1					1
2007		3	4							2
2008		7	15			1				2
2009		5	6			1				
2010		3	216	1		3		1		2
2011		8	70					1		7
2012		7	52							4
2013		18	78			1		2		3
2014		23	82							6
2015		53	210			3553				8
2016		70	44			1				5
2017		70	39	1		2		1		1

Lees Ferry Summary

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- A person wearing a yellow cap and dark clothing is standing in a river, holding a fishing rod. The river is blue with some ripples. In the background, there is a large, steep, reddish-brown rock canyon with some green vegetation at the base. The sky is not visible.
- Electrofishing CPUE > 1 fish/minute
 - Angling CPUE < 1 fish/minute
 - Angler use lower than past, but stable
 - Brown Trout (1.59%)– probably not a problem
 - Outlook for future better

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Acknowledgements



AGFD: Pilar Wolters, Kristy Manuell, Daniel Pasminski
Humphrey Summit & Saint Judes Ltd. - boatmen
All of the volunteers
Past & present agency personnel
Steve Harding
Lees Ferry Anglers



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