

Fish in Rivers Factsheet

SWRBD

River Blackwater (Kerry) Catchment

Factsheet: 2021/10

The River Blackwater (Kerry) is located in the South Western River Basin District. It rises in the Macgillicuddy Reeks (Mullaghanattin Mountain) and enters the sea at Kenmare Bay on the southern side of the Iveragh Peninsula. The river has two main tributaries, the Kealduff and Dereendarragh Rivers and a number of lakes, including Lough Brin which is a designated Water Framework Directive surveillance monitoring lake. An important population of freshwater pearl mussels is present in the lower reaches of the main river and tributaries. The underlying geology of the catchment is Old Red Sandstone.

The catchment is a Special Area of Conservation (SAC) for a number of species including Atlantic salmon, freshwater pearl mussel and otter.

Inland Fisheries Ireland conducts annual nation-wide fish sampling surveys to assess and report stocks in Ireland's rivers. This factsheet presents the results of a catchment-wide survey undertaken on the River Blackwater (Kerry) catchment in 2021.

A total of five sites were surveyed by electro-fishing (CEN 2003) in the Blackwater catchment from the 7th to the 10th September, 2021 (Figure 1 and Table 1). The survey method used was 10-minute Timed Electro-Fishing (TEF₁₀). All fish count results were converted to minimum population estimates according to Matson *et al.* (2018).



River Blackwater (Kerry), upstream of Lough Brin (Site 1)

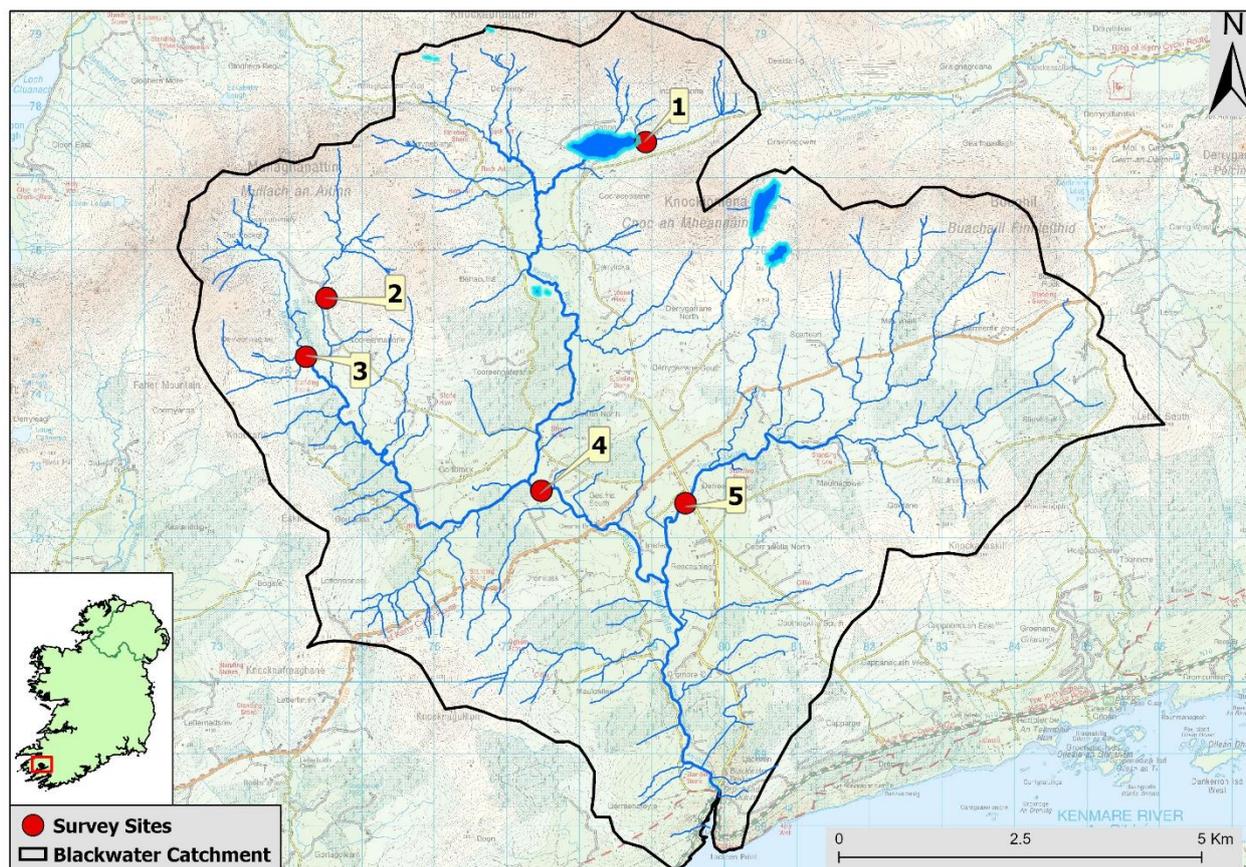


Figure 1. Location of electrofishing survey sites, River Blackwater (Kerry) catchment, September 2021

Table 1. Site survey details for the River Blackwater (Kerry) catchment, September 2021

No.	River	Site	Method	WFD	Date
Blackwater Catchment					
1	Kealduff	u/s Lough Brin	TEF ₁₀	–	10/09/2021
2	Blackwater	Tooreennahone Ford	TEF ₁₀	–	07/09/2021
3	Blackwater	Derreenagreer	TEF ₁₀	–	07/09/2021
4	Blackwater	Gearha	TEF ₁₀	–	07/09/2021
5	Derreendarragh	Derreendarragh	TEF ₁₀	–	08/09/2021

Table 2. Minimum density estimates (no. fish/m²) for the River Blackwater (Kerry) catchment, September 2021

Site no.	1	2	3	4	5
Species	2021	2021	2021	2021	2021
Brown trout	0.549	0.134	0.223	0.032	0.045
0+ brown trout	0.502	0.041	0.178	0.014	0.021
1+ & older brown trout	0.047	0.093	0.045	0.018	0.024
Salmon	-	0.155	0.706	0.093	0.164
0+ salmon	-	0.062	0.513	0.066	0.109
1+ & older salmon	-	0.093	0.193	0.027	0.055
Minnow	0.280	-	-	0.007	0.018
All fish	0.829	0.289	0.929	0.132	0.227

Table 3. Salmonid % age class structure (where recorded) for the River Blackwater catchment, 2021

Site No.	Brown trout			Salmon		
	% of catch			Site No.	% of catch	
	0+	1+	2+		0+	1+
Blackwater (Kerry) Catchment						
1	89	11	-	1	-	-
2	25	75	-	2	40	60
3	75	6	19	3	71	29
4	38	13	50	4	68	32
5	44	56	-	5	67	33

Table 4. Fish ecological status table for the River Blackwater (Kerry) catchment, 2021 (H=High, G=Good, M=Moderate, P=Poor and B=Bad).

Site No.	2021
Blackwater (Kerry) Catchment	
1	G
2	G
3	H
4	G
5	M

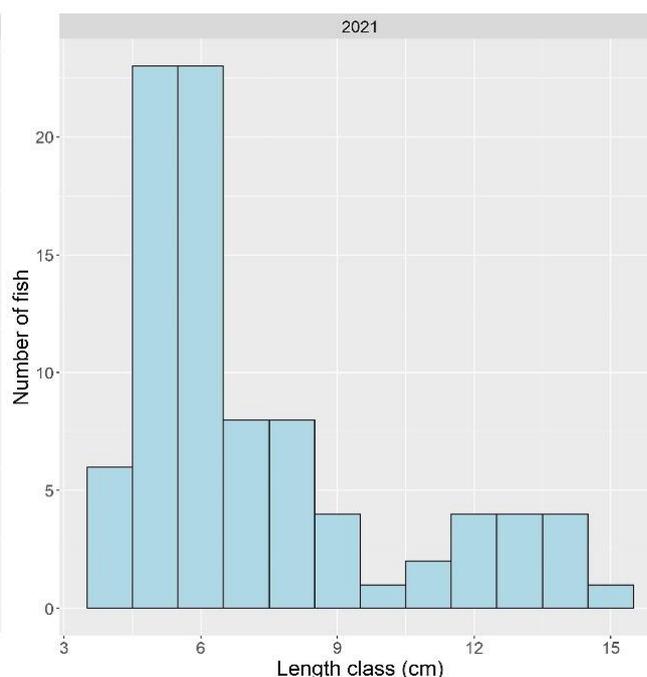
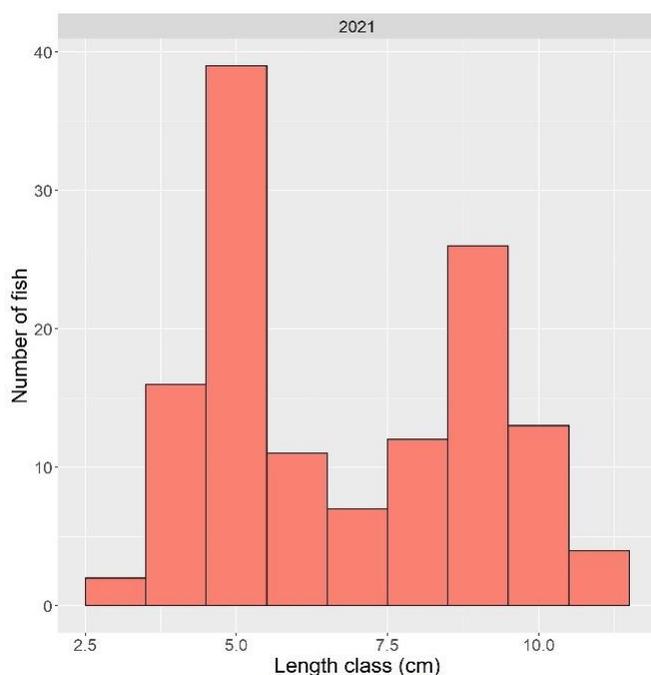


Figure 2. Length frequency distribution for salmon (left, n = 130) and brown trout (right, n = 88) for the River Blackwater (Kerry) catchment, 2021

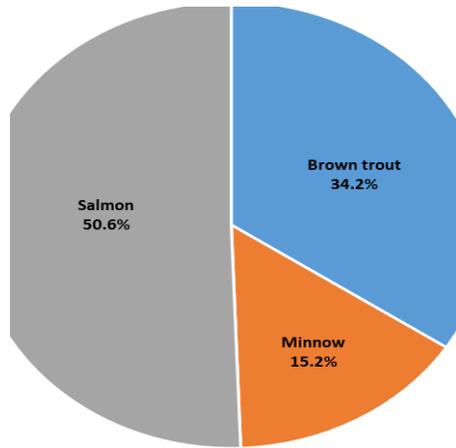


Figure 3. Fish species composition (%), River Blackwater (Kerry) catchment, 2021



River Blackwater at Dereenagreer (Site 3)

Summary

A total of three fish species were recorded during the River Blackwater (Kerry) survey in September 2021 (Table 2 and Figure 3). Salmon was the most abundant species captured with lengths ranging from 3.8 to 11.5cm. Two age classes (0+ and 1+) were present with 0+ the most abundant age class (Table 3).

Brown trout were recorded at five sites with lengths ranging from 4.3 to 15.7cm. Three age classes (0+, 1+ and 2+), were present with 0+ the most abundant cohort. The highest density of brown trout (0.549 fish/m²) was recorded at Site 1 (Kealduff River at u/s Lough Brin), with the highest density of 0+ brown trout (0.502 fish/m²) also observed at this site. The highest density of 1+ and older brown trout (0.093 fish/m²) was recorded at Site 2 (River Blackwater at Tooreennahone Ford).

The highest density of salmon (0.706 fish/m²) was recorded at Site 3 (Dereenagreer), with the same site also recording the highest density of 0+ (0.513 fish/m²) and 1+ and older (0.193 fish/m²) salmon.

Minnow were also recorded at three sites (n=39).

A Water Framework Directive fish classification tool (FCS2) was developed for Irish rivers in 2011 (SNIFFER 2011). The tool works by comparing various fish community metric values within a site to those predicted for a site under un-impacted conditions. In general, a site will achieve High status if indicator species (e.g. both salmonid cohorts 0+ and 1+ and older) are present and in expected numbers. Status will decline if such cohorts are missing, are in poor abundance, or if more tolerant species proliferate.

Fish ecological status was assigned to five sites surveyed on the River Blackwater (Kerry) Catchment during 2021 (Table 4 and Figure 4). One site achieved High status (Site 3), three achieved Good status (Sites 1, 2 and 4) and one only Moderate status (Site 5).

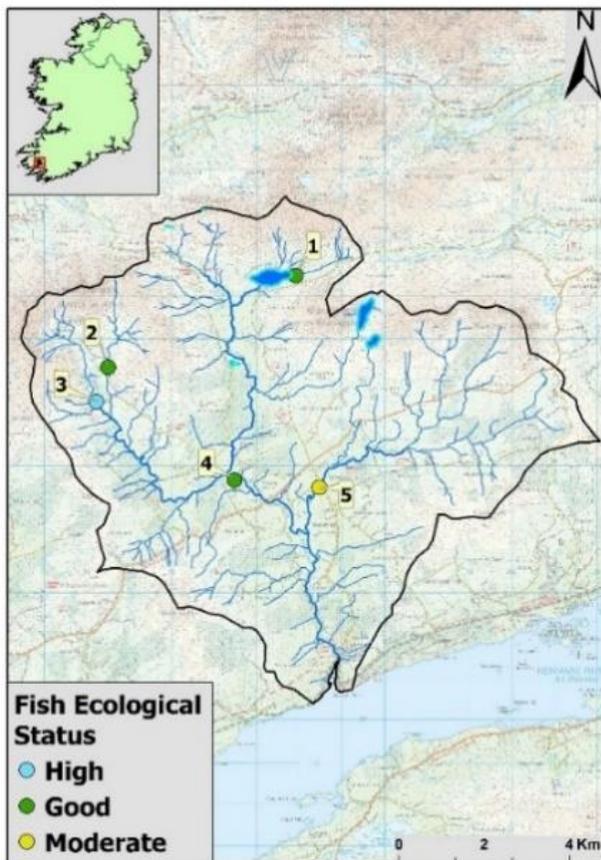


Figure 4. Fish ecological status map for the River Blackwater (Kerry) catchment, 2021

References

- CEN 2003 Water Quality Sampling of Fish with Electricity. CEN EN 14011:2000. Brussels. European Committee for Standardization.
- Matson, R., Delanty, K., Shephard, S., Coghlan, B. and Kelly, F. (2018). *Moving from multiple pass depletion to single pass timed electrofishing for fish community assessment in wadeable streams*. Fisheries Research, 198, 99-108.
- SNIFFER River Fish Classification Tool: Science Work. WFD68c, Phase 2. Final Report. Version 6. Edinburgh. Scotland and Northern Ireland Forum for Environmental Research.

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