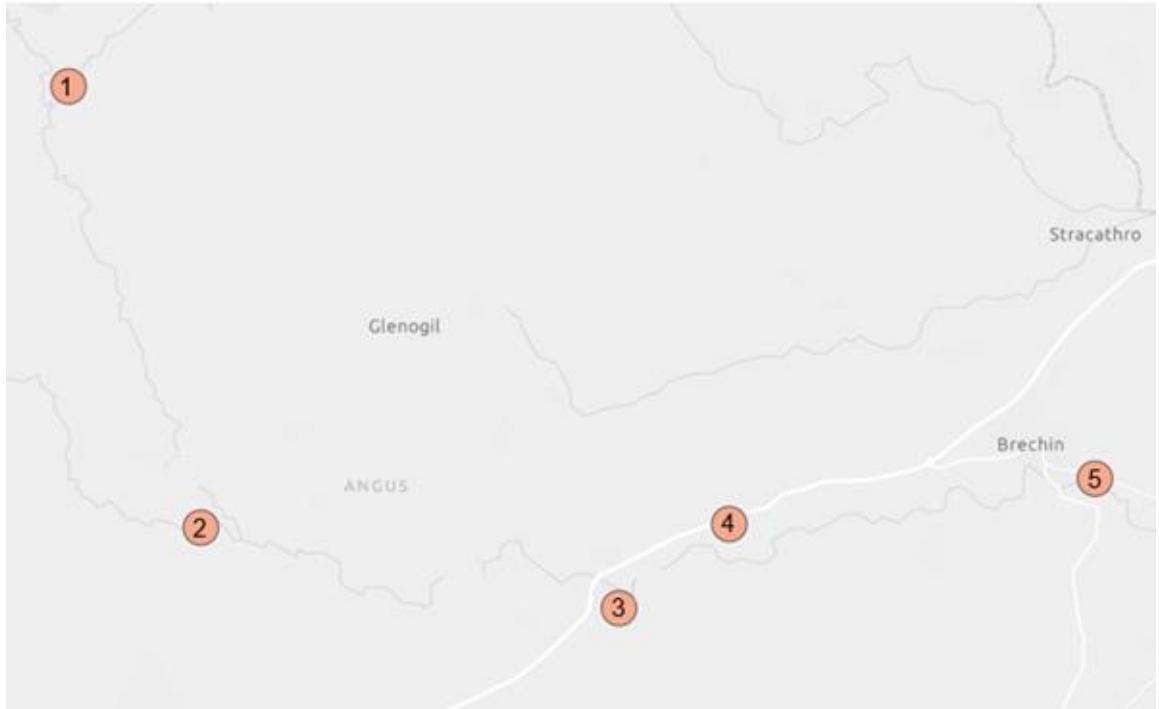


Esk Rivers & Fisheries Trust: Angus Esk Autumn Survey 2025



Sites

1: Rottal Burn

2: Prosen Water

3: Lemno Burn

4: Noran Water

5: Dalgety

Summary

Water Quality Scores:

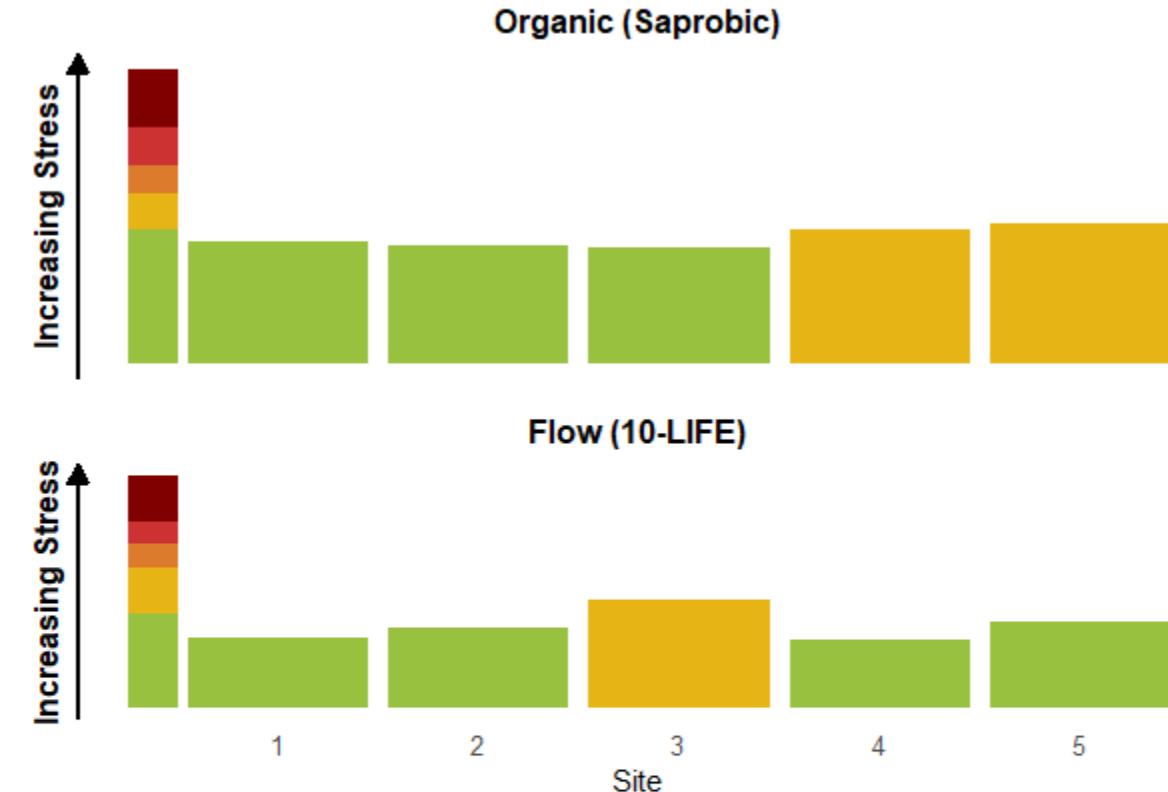
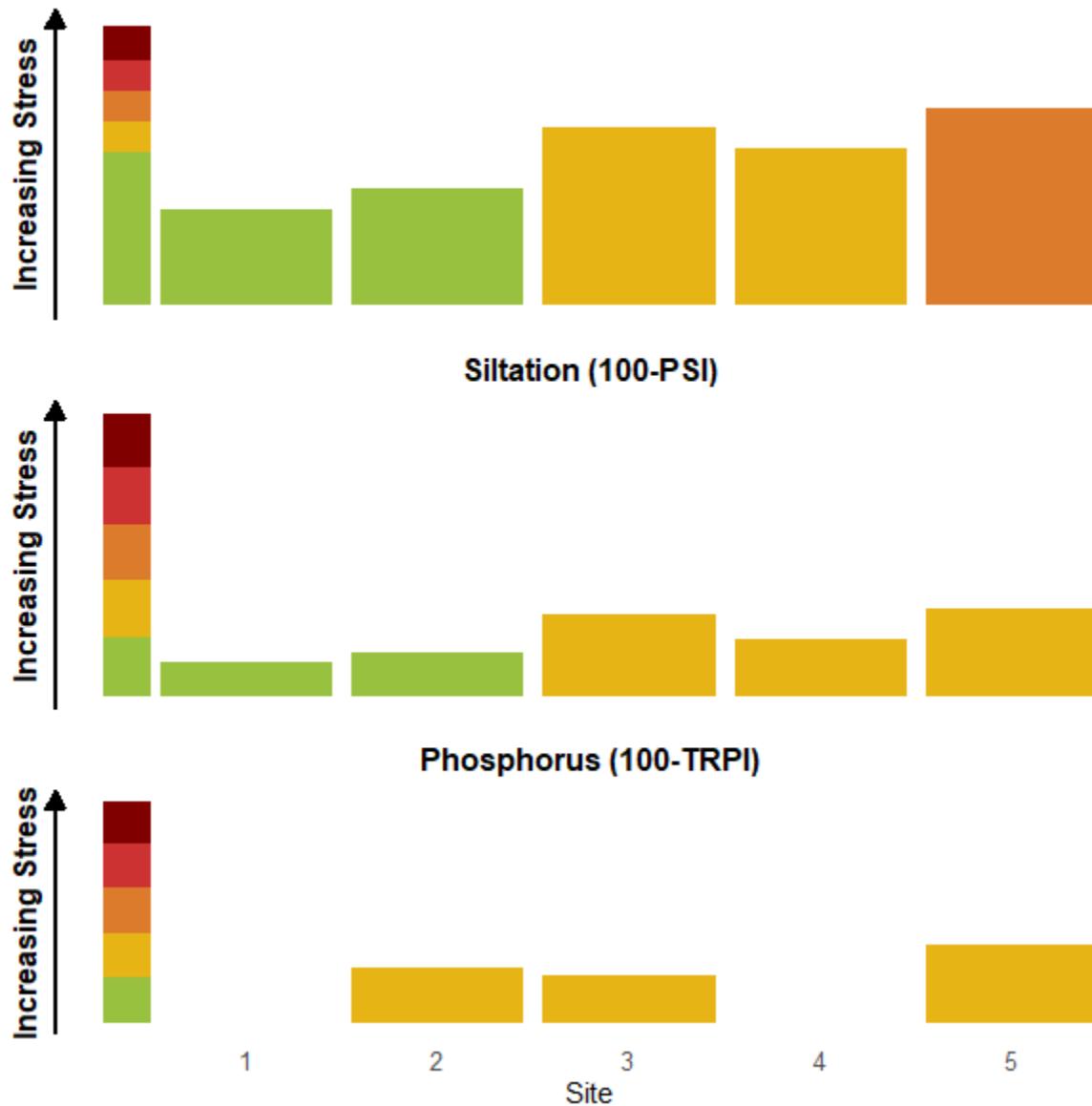
- Chemical Pressure: moderate impact at site 5, low impact at sites 3 and 4, very low impact at sites 1 and 2.
- Organic Pressure: low impact at sites 4 and 5, very low impact at the rest of the sites.
- Sediment Pressure: low impact at sites 3, 4 and 5, very low impact at sites 1 and 2.
- Flow Pressure: low impact at site 3, very low impact at the rest of the sites.
- Phosphorus Pressure: low impact at sites 2, 3 and 5, very low impact at the rest of the sites.



Invertebrates:

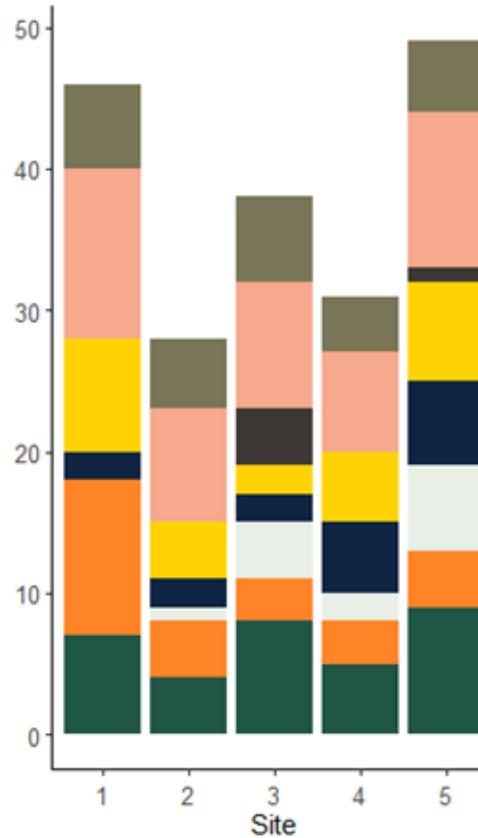
- Total species richness was highest at site 5 (49) and lowest at site 2 (28). At site 5, caddisflies had the highest number of species (10), followed by true flies (8).
- Total abundance was highest at site 5 (1419) and lowest at site 2 (172). At site 5, net-spinning caddisflies (*Hydropsychidae*) were the most abundant group (305 specimens), followed by New Zealand Mud Snails (255).
- Riverfly species richness was highest at site 1 (31) and lowest at site 3 (14). Site 1 had the highest diversity in all three riverfly orders, particularly for the stoneflies.
- Riverfly abundance was highest at site 5 (550) and lowest at site 2 (127). At site 5, the net-spinning caddisfly *Hydropsyche pellucidula* was the most abundant (295 specimens). Mayflies, particularly flat-bodied species (*Ecdyonurus* sp and *Rhithrogena semicolorata*), were in the highest abundance at site 1.
- at The invasive and widespread New Zealand Mud Snail (*Potamopyrgus antipodarum*) was found at sites 3 and 5. The invasive shrimp *Crangonyx pseudogracilis/floridanus* was found at site 5.
- Of interest is the alderfly *Sialis fuliginosa*, found at site 4, with only 497 records in the UK. Several under-recorded species of flies were also found, such as *Psychoda* (906 records), *Simulium argyreatum/variegatum* (714 records), *Hexatoma* (628 records) and *Pericoma* (380 records).
- Overall, site 1 had the best water quality scores, highest diversity of riverflies and highest abundance of stoneflies (the most sensitive within the EPT group).

Water Quality Scores

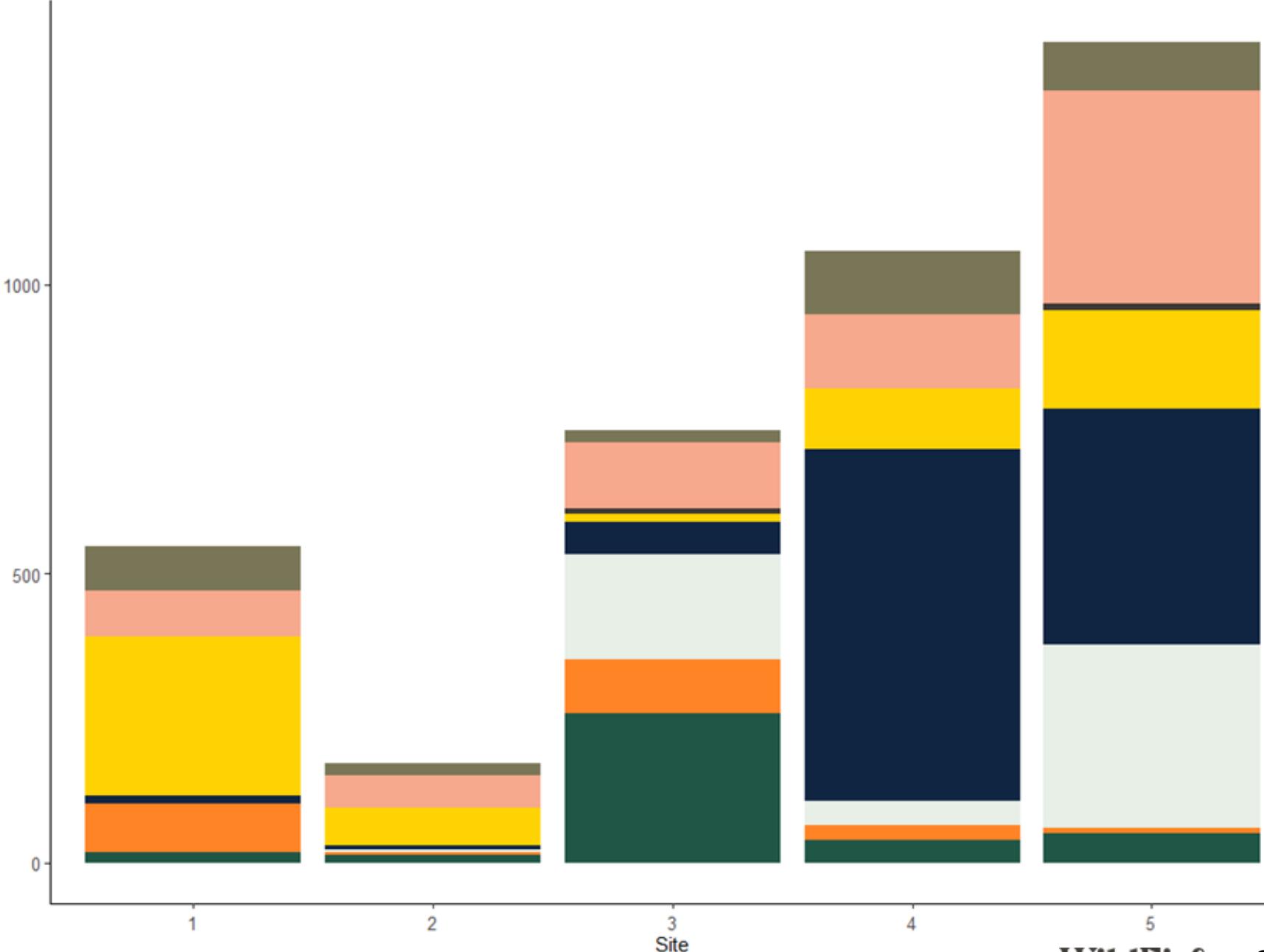


Water Quality Metric	Water Quality Scores By Site				
	Site 1	Site 2	Site 3	Site 4	Site 5
SPEAR	66.05	58.86	36.49	44.08	29.64
Saprobic	1.66	1.60	1.58	1.81	1.91
PSI	88.31	84.44	70.97	80.00	68.75
LIFE	8.51	8.27	7.68	8.54	8.17
TRPI	100.00	75.00	77.78	100.00	64.29
BMW	168.00	115.00	134.00	132.00	164.00
WHPT	203.90	145.80	148.50	142.60	212.50
WHPT NTAXA	26.00	20.00	26.00	22.00	34.00
WHPT ASPT	7.84	7.29	5.71	6.48	6.25
CCI	17.37	13.00	7.14	10.26	16.00

Total Diversity



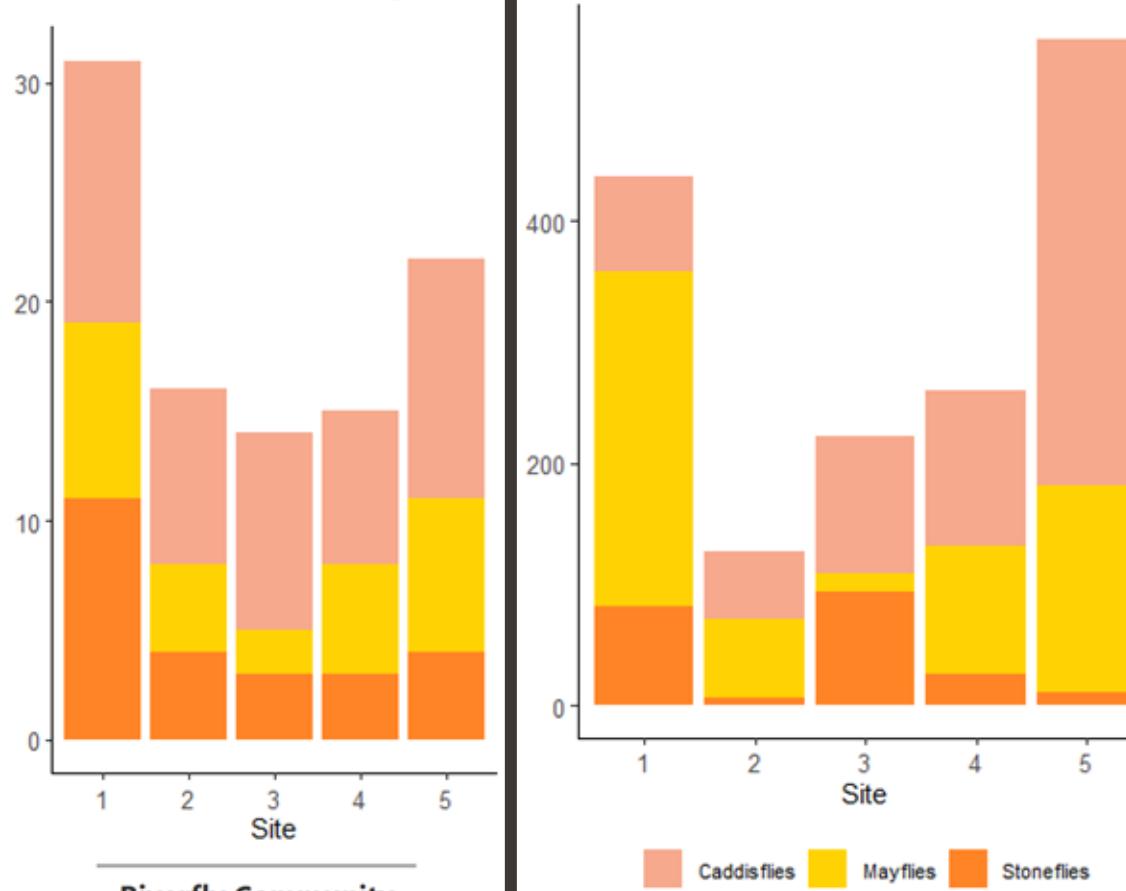
Total Abundance



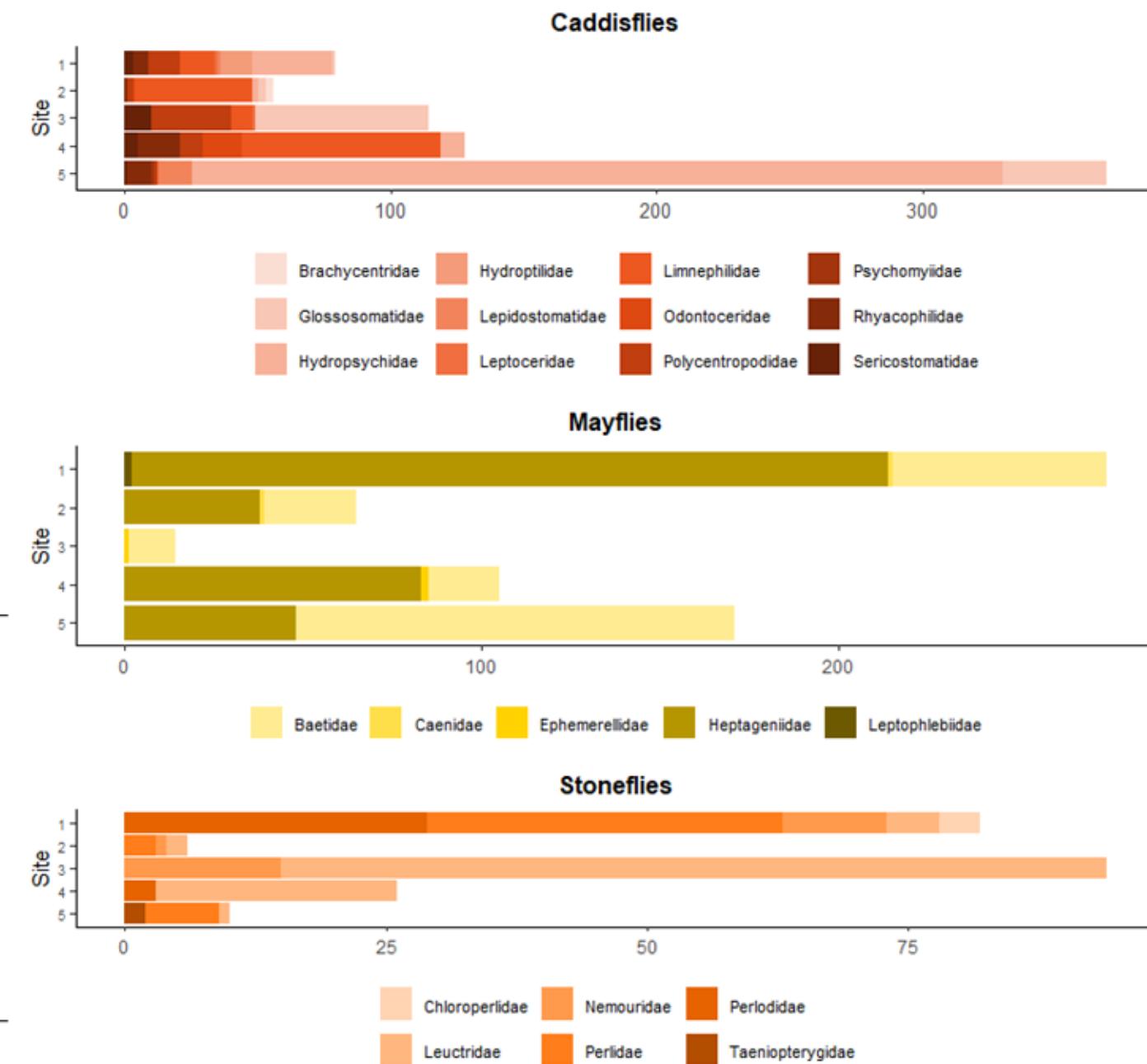
Total Community

Site	Diversity	Abundance
1	46 (5)	546
2	28 (2)	172
3	38 (6)	748
4	31 (4)	1058
5	49 (3)	1419

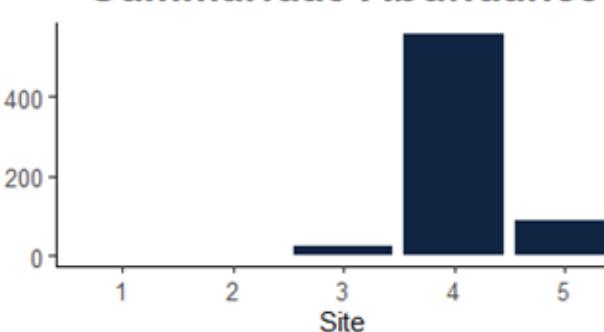
EPT Diversity



EPT Abundance



Gammaridae Abundance



Esk Rivers & Fisheries Trust: Angus Esk Autumn 2025



SmartRivers Invertebrate Counts

Beetles							
Order*	Family*	Taxon	Site 1	Site 2	Site 3	Site 4	Site 5
Coleoptera	Dytiscidae	Oreodytes sanmarkii	5	1	9	6	0
		Platambus maculatus	0	1	0	0	0
Elmidae	Elmis aenea	14	2	2	4	24	
		Esolus parallelepipedus	3	0	0	0	14
		Limnius volckmari	31	16	2	79	34
		Oulimnius	20	2	4	21	0
Gyrinidae	Orectochilus villosus	0	0	1	0	9	
Hydraenidae	Hydraena gracilis	3	0	0	0	0	3
Scirtidae	Elodes	0	0	4	0	0	
Total Diversity			6	5	6	4	5
Total Abundance			76	22	22	110	84

Mayflies							
Order*	Family*	Taxon	Site 1	Site 2	Site 3	Site 4	Site 5
Ephemeroptera	Baetidae	Baetis muticus	1	0	0	0	1
		Baetis rhodani/atlanticus	59	26	13	19	120
		Baetis scambus	0	0	0	1	2
Caenidae	Caenis rivulorum	1	1	0	0	0	
Ephemerellidae	Serratella ignita	0	0	1	2	0	
Heptageniidae	Ecdyonurus	120	6	0	80	20	
		Ecdyonurus torrentis	8	0	0	3	15
		Heptagenia sulphurea	0	0	0	0	1
		Rhithrogena semicolorata	84	32	0	0	12
Leptophlebiidae	Paraleptophlebia	1	0	0	0	0	
		Paraleptophlebia submarginata	1	0	0	0	0
Total Diversity			8	4	2	5	7
Total Abundance			275	65	14	105	171

* Some 'Order' and 'Family' groupings relate to higher classifications. Database is undergoing updates.

Caddisflies

Order*	Family*	Taxon	Site 1	Site 2	Site 3	Site 4	Site 5
Trichoptera	Brachycentridae	Brachycentrus subnubilus	0	3	0	0	0
	Glossosomatidae	Agapetus	1	3	60	0	38
		Agapetus fuscipes	0	0	5	0	0
		Glossosoma boltoni	0	0	0	0	1
	Hydropsychidae	Hydropsyche	0	0	0	5	0
		Hydropsyche angustipennis	0	0	0	4	0
		Hydropsyche pellucidula	1	0	0	0	295
		Hydropsyche siltalai	29	2	0	0	10
	Hydroptilidae	Hydroptila	12	0	0	0	0
	Lepidostomatidae	Lepidostoma hirtum	1	0	0	0	12
	Leptoceridae	Atrhripsodes	0	0	1	0	0
		Atrhripsodes albifrons	0	0	0	0	1
		Atrhripsodes bilineatus	1	0	0	0	0
	Limnephilidae	Drusus annulatus	0	0	2	0	0
		Ecclisopteryx dalecarlica	12	13	0	75	0
		Limnephilidae	0	31	0	0	0
		Potamophylax	1	0	1	0	0
		Potamophylax latipennis	0	0	5	0	0
	Odontoceridae	Odontocerum albicorne	0	1	0	15	0
	Polycentropodidae	Polycentropus	0	0	20	0	0
		Polycentropus flavomaculatus	12	2	10	8	1
	Psychomyiidae	Psychomyia pusilla	0	0	0	0	1
	Rhyacophilidae	Rhyacophila	1	0	0	0	1
		Rhyacophila dorsalis	5	1	0	16	8
	Sericostomatidae	Sericostoma personatum	3	0	10	5	1
		Total Diversity	12	8	9	7	11
		Total Abundance	79	56	114	128	369

Leeches

Order*	Family*	Taxon	Site 1	Site 2	Site 3	Site 4	Site 5
Arhynchobdellida	Erpobdellidae	Erpobdella	0	0	2	0	0
		Erpobdella octoculata	0	0	3	0	10
Rhynchobdellida	Glossiphoniidae	Glossiphonia complanata	0	0	2	0	0
		Helobdella stagnalis	0	0	1	0	0
		Total Diversity	0	0	4	0	1
		Total Abundance	0	0	8	0	10

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Misc. Taxa							
Order*	Family*	Taxon	Site 1	Site 2	Site 3	Site 4	Site 5
Amphipoda	Crangonyctidae	<i>Crangonyx pseudogracilis/floridanus</i>	0	0	0	0	1
	Gammaridae	<i>Gammarus pulex</i>	0	0	24	560	88
Isopoda	Asellidae	<i>Asellus aquaticus</i>	0	0	34	0	51
Megaloptera	Sialidae	<i>Sialis fuliginosa</i>	0	0	0	1	0
Oligochaeta	Oligochaeta	<i>Eiseniella tetraeda</i>	5	2	0	3	61
		Oligochaeta	10	5	0	36	205
Tricladida	Planariidae	<i>Polycelis felina</i>	0	0	0	9	1
		Total Diversity	2	2	2	5	6
		Total Abundance	15	7	58	609	407
Molluscs							
Order*	Family*	Taxon	Site 1	Site 2	Site 3	Site 4	Site 5
Ph. Mollusca	Ancylidae	<i>Ancylus fluviatilis</i>	0	0	67	6	5
	Hydrobiidae	<i>Potamopyrgus antipodarum</i>	0	0	76	0	255
	Lymnaeidae	<i>Ampullaceana balthica</i>	0	3	24	35	29
	Physidae	<i>Physella</i>	0	0	0	0	19
	Planorbidae	<i>Bathyomphalus contortus</i>	0	0	0	0	9
		<i>Planorbis carinatus</i>	0	0	0	0	1
Veneroida	Sphaeriidae	<i>Pisidium</i>	0	0	13	0	0
		Total Diversity	0	1	4	2	6
		Total Abundance	0	3	180	41	318
Stoneflies							
Order*	Family*	Taxon	Site 1	Site 2	Site 3	Site 4	Site 5
Plecoptera	Chloroperlidae	<i>Chloroperla tripunctata</i>	2	0	0	0	0
		<i>Siphonoperla torrentium</i>	2	0	0	0	0
	Leuctridae	<i>Leuctra</i>	5	2	74	11	0
		<i>Leuctra fusca</i>	0	0	5	12	1
Nemouridae		<i>Amphinemura</i>	2	0	0	0	0
		<i>Amphinemura sulcicollis</i>	4	0	15	0	0
		<i>Nemoura</i>	0	1	0	0	0
		<i>Protonemura</i>	1	0	0	0	0
		<i>Protonemura meyeri</i>	3	0	0	0	0
Perlidae		<i>Dinocras cephalotes</i>	28	2	0	0	1
		<i>Perla carlukiana</i>	6	1	0	0	6
Perlodidae		<i>Isoperla grammatica</i>	1	0	0	0	0
		<i>Perlodes mortoni</i>	28	0	0	3	0
Taeniopterygidae		<i>Taeniopteryx nebulosa</i>	0	0	0	0	2
		Total Diversity	11	4	3	3	4
		Total Abundance	82	6	94	26	10

* Some 'Order' and 'Family' groupings relate to higher classifications. Database is undergoing updates.

True Flies							
Order*	Family*	Taxon	Site 1	Site 2	Site 3	Site 4	Site 5
Diptera	Athericidae	<i>Atherix ibis</i>	1	0	0	0	1
		<i>Ibisia marginata</i>	0	3	0	0	0
Ceratopogonidae	Ceratopogonidae		0	0	3	0	1
	Chironomidae	Chironomidae	1	0	226	29	17
Chironomidae		Chironominae	0	5	0	0	0
		Tanypodinae	1	0	0	1	0
		Tanytarsini	0	0	0	1	0
	Empididae	Hemerodromia	0	0	0	0	2
Limoniiidae	Hexatoma		0	2	0	0	0
		Idioptera	1	0	5	0	0
Muscidae	Limnophora		0	0	0	0	1
Pediciidae	Dicranota		7	3	2	7	3
Psychodidae	Pericoma		0	0	3	0	0
		Psychoda	0	0	0	1	0
Simuliidae	Simulium		1	0	2	0	6
		<i>Simulium argyreatum/variegatum</i>	0	0	1	0	13
Tipulidae	Tipula		7	0	16	0	6
Total Diversity			7	4	8	5	9
Total Abundance			19	13	258	39	50

* Some 'Order' and 'Family' groupings relate to higher classifications. Database is undergoing updates.