

Site Description

Study Name	Yukon Territory - DFO
Site	YPS-201
Sampling Date	Jul 27 2016
Know Your Watershed Basin	Headwaters Yukon
Province / Territory	Yukon Territories
Terrestrial Ecological Classification	Boreal Cordillera EcoZone Yukon Plateau -Central EcoRegion
Coordinates (decimal degrees)	62.50667 N, 136.99611 W
Altitude	1673
Local Basin Name	BIG CREEK
Stream Order	5



Figure 1. Location Map



Down Stream

Cabin Assessment Results

Reference Model Summary	
Model	Yukon 2013
Analysis Date	March 20, 2017
Taxonomic Level	Family

Cabin Assessment Results

Predictive Model Variables	Altitude Depth-Avg Longitude Natl-BroadLeafopen Natl-Bryoids Natl-MixedWoodOpen Natl-WetlandHerb Precip02_FEB Precip03_MAR Precip06_JUN Precip07_JUL RainFall06_JUN Temp04_APRmax Velocity-Avg
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Reference Groups	1	2	3	4	5
Number of Reference Sites	23	98	44	108	13
Group Error Rate	34.8%	49.0%	59.1%	53.7%	30.8%
Overall Model Error Rate	50.3%				
Probability of Group Membership	16.8%	17.1%	35.4%	30.0%	0.6%
CABIN Assessment of YPS-201 on Jul 27, 2016	Divergent				

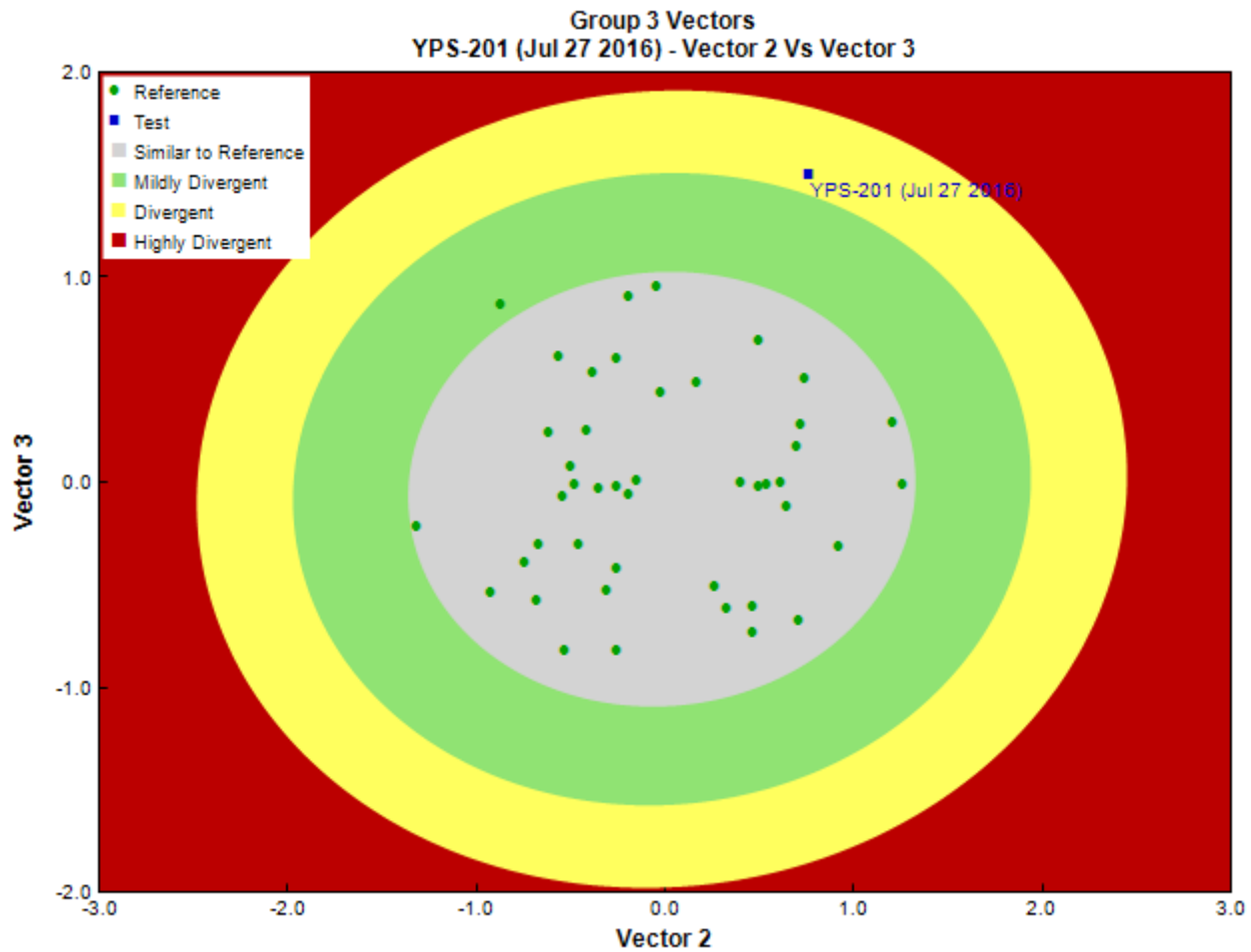


Figure 3. CABIN ordination assessment of the test site with the predicted group of reference sites. Each axis represents the relative abundance of the entire benthic invertebrate community with different organisms weighted differently on each axis.

Sample Information

Sampling Device	Kick Net
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Sample Information

Mesh Size	500
Sampling Time	3
Taxonomist	-
Date Taxonomy Completed	-
	-
Sub-Sample Proportion	100/100

Community Structure

Phylum	Class	Order	Family	Raw Count	Total Count
Annelida	Oligochaeta	Lumbriculida	Lumbriculidae	15	15.0
Arthropoda	Arachnida	Trombidiformes		2	2.0
			Hygrobatidae	1	1.0
			Lebertiidae	2	2.0
			Sperchontidae	1	1.0
	Insecta	Coleoptera	Hydrophilidae	2	2.0
		Diptera	Chironomidae	23	23.0
			Simuliidae	9	9.0
			Tipulidae	6	6.0
		Ephemeroptera	Baetidae	58	58.0
			Ephemerellidae	27	27.0
			Heptageniidae	4	4.0
		Plecoptera	Chloroperlidae	28	28.0
		Trichoptera	Rhyacophilidae	1	1.0
			Total	179	179.0

Metrics

Name	YPS-201	Predicted Group Reference Mean \pm SD
Bray-Curtis Distance	0.69	0.4 \pm 0.1
Number Of Individuals		
Total Abundance	179.0	567.0 \pm 737.1
Richness		
Total No. of Taxa	13.0	10.6 \pm 6.1

Frequency and Probability of Taxa Occurrence

Reference Model Taxa	Frequency of Occurrence in Reference Sites					Probability Of Occurrence at YPS-201
	Group 1	Group 2	Group 3	Group 4	Group 5	
Ameletidae	9%	37%	70%	39%	15%	0.44
Apataniidae	0%	1%	0%	3%	8%	0.01
Arrenuridae	0%	0%	2%	0%	0%	0.01
Athericidae	0%	1%	0%	0%	0%	0.00
Aturidae	0%	0%	5%	2%	8%	0.02
Baetidae	30%	85%	82%	94%	100%	0.77
Blephariceridae	0%	0%	5%	0%	0%	0.02
Brachycentridae	0%	15%	7%	23%	8%	0.12
Caenidae	0%	1%	0%	1%	0%	0.00
Capniidae	9%	23%	43%	50%	77%	0.36
Ceratopogonidae	22%	28%	30%	24%	0%	0.26
Chironomidae	91%	100%	100%	100%	100%	0.99
Chloroperlidae	22%	43%	77%	50%	38%	0.54
Corixidae	13%	8%	0%	0%	0%	0.04
Culicidae	9%	0%	0%	0%	0%	0.01
Curculionidae	0%	1%	0%	1%	0%	0.00
Deuterophlebiidae	0%	3%	14%	1%	0%	0.06
Dixidae	0%	5%	2%	1%	0%	0.02
Dolichopodidae	0%	0%	2%	1%	0%	0.01
Dytiscidae	4%	14%	0%	13%	0%	0.07
Elmidae	4%	3%	0%	2%	0%	0.02
Empididae	9%	49%	77%	59%	54%	0.55
Enchytraeidae	0%	0%	9%	2%	0%	0.04
Ephemerellidae	26%	37%	61%	37%	31%	0.44

Frequency and Probability of Taxa Occurrence

Reference Model Taxa	Frequency of Occurrence in Reference Sites					Probability Of Occurrence at YPS-201
	Group 1	Group 2	Group 3	Group 4	Group 5	
Ephydriidae	0%	0%	2%	0%	0%	0.01
Feltriidae	0%	0%	2%	6%	8%	0.03
Gammaridae	9%	2%	0%	13%	23%	0.06
Glossiphoniidae	0%	1%	0%	0%	0%	0.00
Glossosomatidae	0%	14%	23%	17%	0%	0.15
Helophoridae	0%	0%	2%	0%	0%	0.01
Heptageniidae	17%	63%	95%	76%	85%	0.71
Hirudinidae	0%	1%	0%	1%	0%	0.00
Hyalellidae	4%	5%	0%	6%	0%	0.03
Hydraenidae	0%	2%	0%	1%	0%	0.01
Hydrobiidae	9%	3%	2%	1%	0%	0.03
Hydropsychidae	4%	13%	36%	8%	0%	0.18
Hydroptilidae	4%	7%	0%	6%	0%	0.04
Hydrozetidae	4%	3%	20%	28%	31%	0.17
Hydryphantidae	4%	0%	9%	6%	0%	0.06
Hygrobatidae	0%	9%	25%	28%	0%	0.19
Isotomidae	9%	5%	2%	1%	0%	0.03
Lebertiidae	13%	20%	52%	54%	23%	0.40
Lepidostomatidae	0%	1%	5%	4%	8%	0.03
Leptoceridae	0%	1%	0%	2%	0%	0.01
Leptophlebiidae	4%	7%	0%	7%	8%	0.04
Leuctridae	4%	14%	32%	10%	0%	0.18
Limnephilidae	13%	48%	43%	46%	23%	0.40
Limnesiidae	0%	1%	2%	6%	8%	0.03
Limnocharidae	0%	0%	0%	1%	0%	0.00
Lumbriculidae	26%	22%	34%	42%	23%	0.33
Lymnaeidae	13%	9%	0%	3%	0%	0.05
Metretopodidae	0%	1%	0%	1%	0%	0.00
Mideopsidae	0%	0%	2%	0%	0%	0.01
Muscidae	0%	4%	7%	7%	0%	0.05
Naididae	35%	43%	9%	22%	31%	0.23
Nemouridae	39%	74%	100%	81%	100%	0.80
Noctuidae	0%	0%	0%	1%	0%	0.00
Oreoleptidae	0%	0%	0%	1%	0%	0.00
Oxidae	0%	0%	0%	1%	0%	0.00
Peltoperlidae	0%	2%	0%	0%	0%	0.00
Perlidae	0%	2%	2%	1%	0%	0.01
Perlodidae	17%	31%	70%	49%	62%	0.48
Phryganeidae	0%	1%	0%	0%	0%	0.00
Physidae	4%	1%	2%	4%	0%	0.03
Pionidae	0%	0%	2%	2%	0%	0.01
Pisidiidae	17%	9%	2%	7%	8%	0.08
Planariidae	0%	2%	2%	3%	0%	0.02
Planorbidae	13%	4%	2%	2%	8%	0.04
Poduridae	0%	1%	0%	1%	0%	0.00
Psychodidae	22%	15%	11%	25%	8%	0.18
Rhyacophilidae	4%	34%	68%	25%	15%	0.38
Scathophagidae	0%	2%	0%	0%	0%	0.00
Simuliidae	39%	78%	86%	87%	77%	0.77
Sperchontidae	22%	49%	68%	68%	31%	0.57
Staphylinidae	4%	0%	0%	1%	0%	0.01
Stratiomyidae	0%	0%	0%	2%	0%	0.01
Tabanidae	4%	0%	0%	0%	0%	0.01
Taeniopterygidae	0%	1%	5%	2%	15%	0.02
Tipulidae	35%	47%	55%	62%	46%	0.52
Torrenticolidae	0%	0%	0%	5%	8%	0.01
Tubificidae	4%	1%	9%	13%	0%	0.08
Uenoidae	0%	8%	30%	1%	0%	0.12
Valvatidae	4%	9%	5%	11%	8%	0.07

RIVPACS Ratios

RIVPACS : Expected taxa P>0.50	6.21
RIVPACS : Observed taxa P>0.50	7.00
RIVPACS : O:E (p > 0.5)	1.13
RIVPACS : Expected taxa P>0.70	4.04
RIVPACS : Observed taxa P>0.70	4.00
RIVPACS : O:E (p > 0.7)	0.99

Habitat Description

Variable	YPS-201	Predicted Group Reference Mean \pmSD
Bedrock Geology		
Channel		
Depth-Avg (cm)	121.0	32.1 \pm 15.8
Velocity-Avg (m/s)	1.40	0.58 \pm 0.29
Climate		
Precip02_FEB (mm)	39.26537	36.13728 \pm 23.92832
Precip03_MAR (mm)	39.04955	33.12839 \pm 21.04203
Precip06_JUN (mm)	71.61791	64.67097 \pm 18.68912
Precip07_JUL (mm)	89.81119	78.30006 \pm 20.80864
Rainfall06_JUN (mm)	64.29746	52.72477 \pm 13.45837
Temp04_APRmax (Degrees Celsius)	-2.13149	1.37555 \pm 3.73745
Hydrology		
Landcover		
Natl-BroadleafOpen (%)	0.40304	0.67948 \pm 1.61907
Natl-Bryoids (%)	0.00000	0.36641 \pm 0.83769
Natl-MixedwoodOpen (%)	0.00062	0.96002 \pm 1.72070
Natl-WetlandHerb (%)	0.06576	0.03164 \pm 0.10034
Substrate Data		
Water Chemistry		