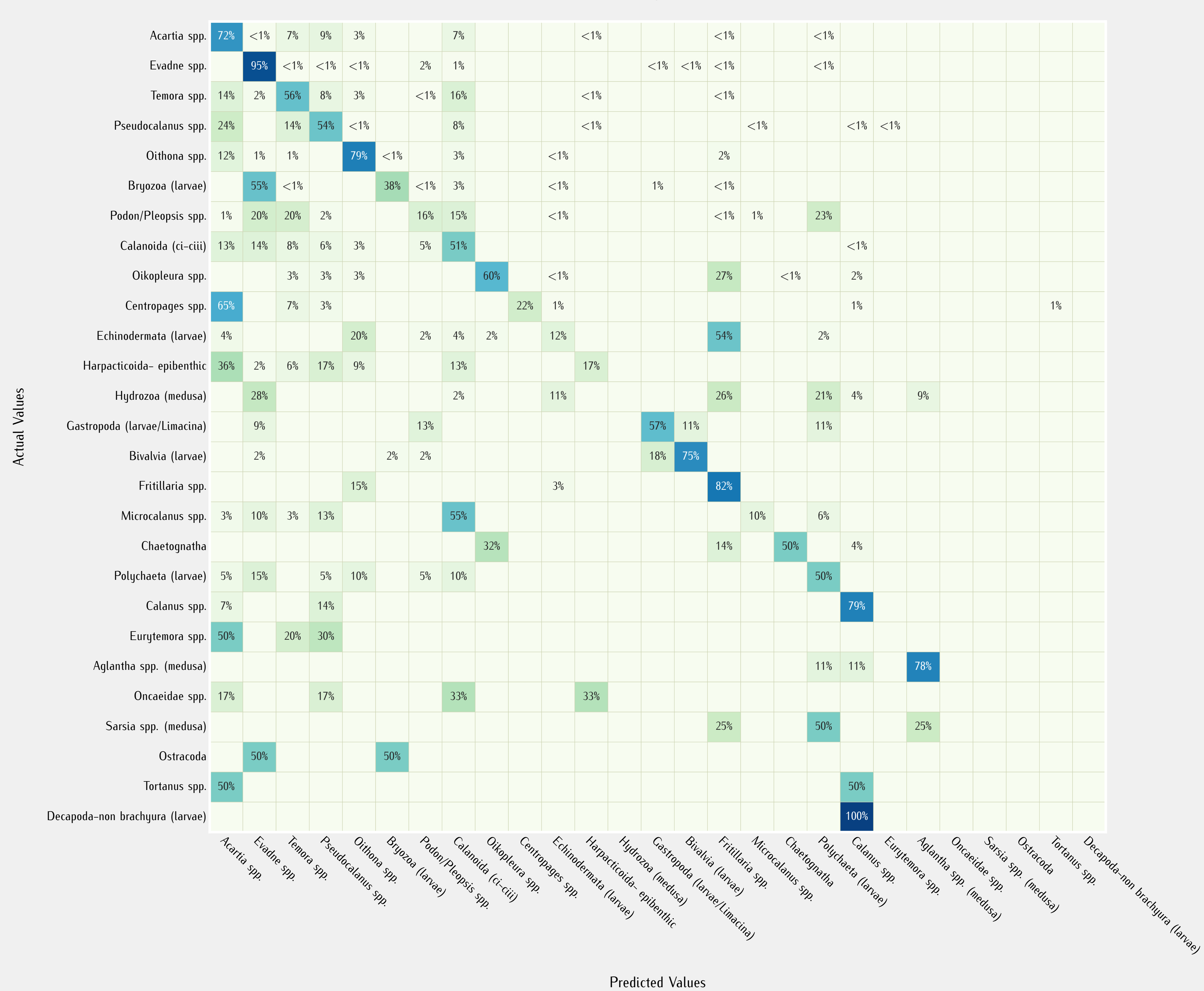Use of SCN features: Yes
Max learning objects: Maximum objects/class
Strategy N° 1

NL 2021 Selected Samples prediction using NL 2021 training set, Learning with all classes present in the selected samples, no extra training categories, No Calanoida (civ–vi), Cyclopoida, Zooplankton classes in learning set
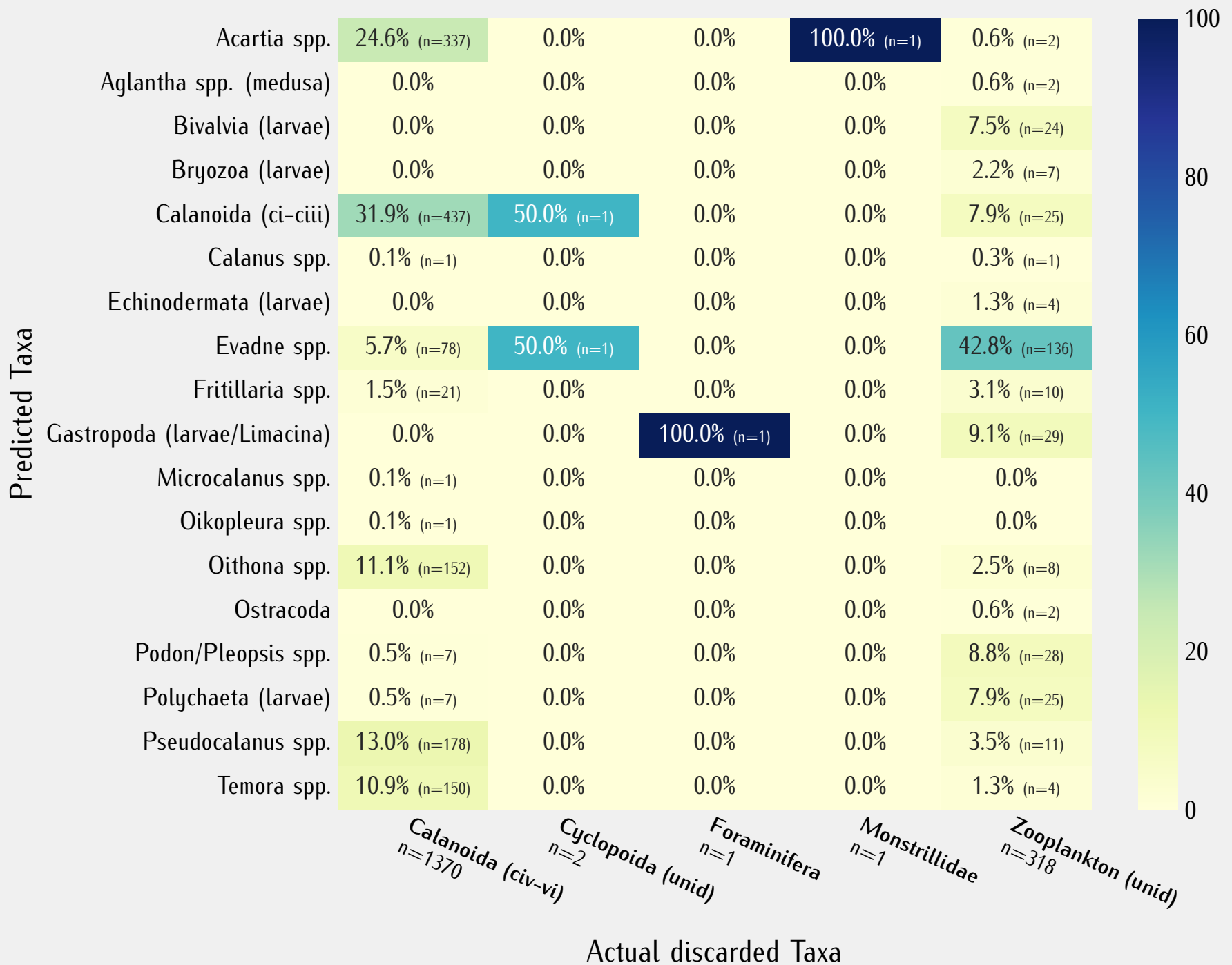
Confusion Matrix - In percent of Actual Value

Actual Values / Predicted Values

Actual \ Predicted	Acartia spp.	Evadne spp.	Temora spp.	Pseudocalanus spp.	Oithona spp.	Bryozoa (larvae)	Podon/Pleopsis spp.	Calanoida (ci-ciii)	Oikopleura spp.	Centropages spp.	Echinodermata (larvae)	Harpacticoida- epibenthic	Hydrozoa (medusa)	Gastropoda (larvae/Limacina)	Bivalvia (larvae)	Fritillaria spp.	Microcalanus spp.	Chaetognatha	Polychaeta (larvae)	Calanus spp.	Eurytemora spp.	Aglantha spp. (medusa)	Oncaeidae spp.	Sarsia spp. (medusa)	Ostracoda	Tortanus spp.	Decapoda-non brachyura (larvae)
Acartia spp.	72%	<1%	7%	9%	3%		7%			<1%			<1%			<1%											
Evadne spp.		95%	<1%	<1%	<1%		2%	1%			<1%	<1%	<1%			<1%											
Temora spp.	14%	2%	56%	8%	3%		<1%	16%			<1%			<1%													
Pseudocalanus spp.	24%		14%	54%	<1%			8%			<1%			<1%			<1%	<1%									
Oithona spp.	12%	1%	1%		79%	<1%		3%			<1%			2%													
Bryozoa (larvae)		55%	<1%			38%	<1%	3%			<1%		1%			<1%											
Podon/Pleopsis spp.	1%	20%	20%	2%			16%	15%			<1%	1%								23%							
Calanoida (ci-ciii)	13%	14%	8%	6%	3%		5%	51%												<1%							
Oikopleura spp.			3%	3%	3%				60%		<1%					27%	<1%		2%								
Centropages spp.	65%		7%	3%						22%	1%								1%							1%	
Echinodermata (larvae)	4%				20%		2%	4%	2%		12%					54%			2%								
Harpacticoida- epibenthic	36%	2%	6%	17%	9%			13%			17%																
Hydrozoa (medusa)		28%					2%			11%				26%			21%	4%		9%							
Gastropoda (larvae/Limacina)		9%				13%								57%	11%		11%										
Bivalvia (larvae)		2%			2%	2%								18%	75%												
Fritillaria spp.					15%				3%							82%											
Microcalanus spp.	3%	10%	3%	13%			55%										10%		6%								
Chaetognatha							32%									14%		50%	4%								
Polychaeta (larvae)	5%	15%		5%	10%		5%	10%											50%								
Calanus spp.	7%		14%																	79%							
Eurytemora spp.	50%		20%	30%																							
Aglantha spp. (medusa)																			11%	11%		78%					
Oncaeidae spp.	17%			17%				33%			33%																
Sarsia spp. (medusa)																25%			50%			25%					
Ostracoda		50%			50%																						
Tortanus spp.	50%																			50%							
Decapoda-non brachyura (larvae)																				100%							

Classification Report Matrix
max available learning objects per class

	precision	recall	f1-score
Acartia spp. (n=2490–train=5448)	0.75	0.72	0.74
Evadne spp. (n=1931–train=2845)	0.87	0.95	0.91
Temora spp. (n=1416–train=5148)	0.66	0.56	0.61
Pseudocalanus spp. (n=1044–train=4552)	0.59	0.54	0.56
Oithona spp. (n=345–train=1409)	0.66	0.79	0.72
Bryozoa (larvae) (n=248–train=119)	0.97	0.38	0.54
Podon/Pleopsis spp. (n=230–train=201)	0.40	0.16	0.23
Calanoida (ci-ciii) (n=130–train=3713)	0.10	0.51	0.17
Oikopleura spp. (n=115–train=761)	0.87	0.60	0.71
Centropages spp. (n=88–train=40)	1.00	0.22	0.36
Echinodermata (larvae) (n=50–train=276)	0.35	0.12	0.18
Harpacticoida- epibenthic (n=47–train=136)	0.62	0.17	0.27
Hydrozoa (medusa) (n=47–train=21)	0.00	0.00	0.00
Gastropoda (larvae/Limacina) (n=47–train=110)	0.50	0.57	0.53
Bivalvia (larvae) (n=44–train=71)	0.79	0.75	0.77
Fritillaria spp. (n=34–train=3447)	0.22	0.82	0.35
Microcalanus spp. (n=31–train=80)	0.43	0.10	0.16
Chaetognatha (n=28–train=67)	0.93	0.50	0.65
Polychaeta (larvae) (n=20–train=452)	0.11	0.50	0.18
Calanus spp. (n=14–train=213)	0.48	0.79	0.59
Eurytemora spp. (n=10–train=88)	0.00	0.00	0.00
Aglantha spp. (medusa) (n=9–train=21)	0.58	0.78	0.67
Oncaeidae spp. (n=6–train=16)	0.00	0.00	0.00
Sarsia spp. (medusa) (n=4–train=4)	0.00	0.00	0.00
Ostracoda (n=2–train=6)	0.00	0.00	0.00
Tortanus spp. (n=2–train=4)	0.00	0.00	0.00
Decapoda-non brachyura (larvae) (n=1–train=7)	0.00	0.00	0.00
macro avg	0.44	0.39	0.37
weighted avg	0.71	0.68	0.68

Predictions of discarded taxa from training

Predicted Taxa	Calanoida (civ-vi) n=1370	Cyclopoida (unid) n=2	Foraminifera n=1	Monstrillidae n=1	Zooplankton (unid) n=318
Acartia spp.	24.6% (n=337)	0.0%	0.0%	100.0% (n=1)	0.6% (n=2)
Aglantha spp. (medusa)	0.0%	0.0%	0.0%	0.0%	0.6% (n=2)
Bivalvia (larvae)	0.0%	0.0%	0.0%	0.0%	7.5% (n=24)
Bryozoa (larvae)	0.0%	0.0%	0.0%	0.0%	2.2% (n=7)
Calanoida (ci-ciii)	31.9% (n=437)	50.0% (n=1)	0.0%	0.0%	7.9% (n=25)
Calanus spp.	0.1% (n=1)	0.0%	0.0%	0.0%	0.3% (n=1)
Echinodermata (larvae)	0.0%	0.0%	0.0%	0.0%	1.3% (n=4)
Evadne spp.	5.7% (n=78)	50.0% (n=1)	0.0%	0.0%	42.8% (n=136)
Fritillaria spp.	1.5% (n=21)	0.0%	0.0%	0.0%	3.1% (n=10)
Gastropoda (larvae/Limacina)	0.0%	0.0%	100.0% (n=1)	0.0%	9.1% (n=29)
Microcalanus spp.	0.1% (n=1)	0.0%	0.0%	0.0%	0.0%
Oikopleura spp.	0.1% (n=1)	0.0%	0.0%	0.0%	0.0%
Oithona spp.	11.1% (n=152)	0.0%	0.0%	0.0%	2.5% (n=8)
Ostracoda	0.0%	0.0%	0.0%	0.0%	0.6% (n=2)
Podon/Pleopsis spp.	0.5% (n=7)	0.0%	0.0%	0.0%	8.8% (n=28)
Polychaeta (larvae)	0.5% (n=7)	0.0%	0.0%	0.0%	7.9% (n=25)
Pseudocalanus spp.	13.0% (n=178)	0.0%	0.0%	0.0%	3.5% (n=11)
Temora spp.	10.9% (n=150)	0.0%	0.0%	0.0%	1.3% (n=4)

Actual discarded Taxa

Relative Abundance of Top Taxonomic Instances per Sample