

Use of SCN features: Yes
Max learning objects: 5000 objects/class
Strategy N° 4

NL 2021 Selected Samples prediction using NL 2021 training set,
Learning with selected samples classes with no low regional training instances, with extra training categories,
No Calanoida (civ-vi), Cyclopoida, Zooplankton classes in learning set

Confusion Matrix - In percent of Actual Value

Classification Report Matrix
max 5000 learning objects per class

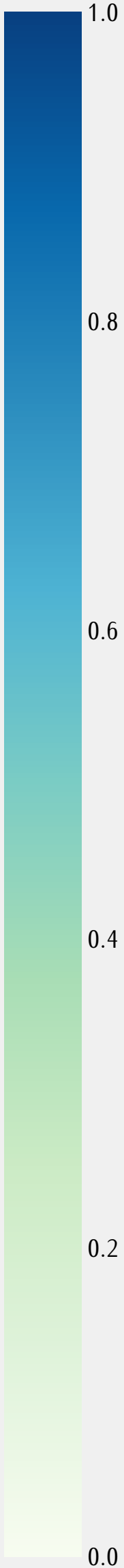
Actual Values

Acartia spp.	71%	<1%	7%	10%	3%			6%				<1%			<1%	<1%		<1%		<1%	1%		<1%	<1%
Evadne spp.		93%		<1%	<1%		2%	<1%				1%	<1%	<1%		<1%				1%	1%			<1%
Temora spp.	14%	1%	54%	8%	3%		<1%	15%				<1%			<1%					1%	2%			<1%
Pseudocalanus spp.	24%		14%	53%	<1%			8%				<1%			<1%		<1%				<1%			<1%
Oithona spp.	12%	1%	1%		80%	<1%		2%			<1%				2%					<1%	<1%			
Bryozoa (larvae)		45%				42%	<1%	2%			<1%		1%		1%					1%	6%			<1%
Podon/Pleopsis spp.	1%	12%	13%	2%			15%	3%			<1%				<1%	<1%		11%		13%	29%			
Calanoida (ci-ciii)	12%	12%	6%	6%	4%		4%	22%								<1%	<1%			2%	29%			<1%
Oikopleura spp.			3%	4%	3%				61%		<1%				26%		<1%	2%						
Centropages spp.	69%		7%	2%						18%	1%							1%					1%	
Echinodermata (larvae)	4%		2%		22%				2%		20%				46%					2%	2%			
Harpacticoida- epibenthic	32%	2%	4%	11%	9%			13%				28%									2%			
Gastropoda (larvae/Limacina)		11%					9%						60%	11%			9%				2%			
Bivalvia (larvae)						5%	5%						16%	75%										
Fritillaria spp.					12%				3%		3%				82%									
Microcalanus spp.		10%	6%	10%				32%								13%		3%		6%	19%			
Chaetognatha									46%						11%		39%		4%					
Polychaeta (larvae)	5%	5%		5%	10%												45%			15%	15%			
Calanus spp.	7%			21%													71%							
Eurytemora spp.	40%		30%	30%																				

Predicted Values



	precision	recall	f1-score
Acartia spp. (n=2490-train=5000)	0.75	0.71	0.73
Evadne spp. (n=1931-train=2845)	0.90	0.93	0.92
Temora spp. (n=1416-train=5000)	0.67	0.54	0.60
Pseudocalanus spp. (n=1044-train=4552)	0.58	0.53	0.56
Oithona spp. (n=345-train=1409)	0.65	0.80	0.72
Bryozoa (larvae) (n=248-train=119)	0.97	0.42	0.58
Podon/Pleopsis spp. (n=230-train=201)	0.39	0.15	0.22
Calanoida (ci-ciii) (n=130-train=3713)	0.05	0.22	0.09
Oikopleura spp. (n=115-train=761)	0.82	0.61	0.70
Centropages spp. (n=88-train=40)	1.00	0.18	0.31
Echinodermata (larvae) (n=50-train=276)	0.62	0.20	0.30
Harpacticoida- epibenthic (n=47-train=136)	0.76	0.28	0.41
Gastropoda (larvae/Limacina) (n=47-train=110)	0.47	0.60	0.53
Bivalvia (larvae) (n=44-train=71)	0.80	0.75	0.78
Fritillaria spp. (n=34-train=3447)	0.26	0.82	0.40
Microcalanus spp. (n=31-train=80)	0.33	0.13	0.19
Chaetognatha (n=28-train=67)	0.92	0.39	0.55
Polychaeta (larvae) (n=20-train=452)	0.19	0.45	0.27
Calanus spp. (n=14-train=213)	0.59	0.71	0.65
Eurytemora spp. (n=10-train=88)	0.00	0.00	0.00
Cirripedia (larvae) (n=0-train=611)	-	-	-
Copepoda (nauplii) (n=0-train=1025)	-	-	-
Obelia spp. (medusa) (n=0-train=43)	-	-	-
Euphausiacea (larvae) (n=0-train=75)	-	-	-
Euphausiacea (nauplii) (n=0-train=122)	-	-	-
macro avg (corr)	0.59	0.47	0.47
weighted avg	0.73	0.67	0.68
	precision	recall	f1-score



Predictions of discarded taxa from training

Predicted Taxa

Acartia spp.	0.0%	24.4% (n=334)	0.0%	0.0%	0.0%	0.0%	100.0% (n=1)	16.7% (n=1)	0.0%	0.0%	50.0% (n=1)	0.6% (n=2)
Bivalvia (larvae)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9.4% (n=30)
Bryozoa (larvae)	0.0%	0.1% (n=1)	0.0%	0.0%	0.0%	2.1% (n=1)	0.0%	0.0%	50.0% (n=1)	0.0%	0.0%	2.5% (n=8)
Calanoida (ci-ciii)	0.0%	25.8% (n=353)	50.0% (n=1)	0.0%	0.0%	0.0%	0.0%	16.7% (n=1)	0.0%	0.0%	0.0%	4.1% (n=13)
Calanus spp.	0.0%	0.1% (n=1)	0.0%	100.0% (n=1)	0.0%	4.3% (n=2)	0.0%	0.0%	0.0%	25.0% (n=1)	50.0% (n=1)	0.6% (n=2)
Cirripedia (larvae)	0.0%	1.7% (n=23)	0.0%	0.0%	0.0%	17.0% (n=8)	0.0%	0.0%	0.0%	25.0% (n=1)	0.0%	1.3% (n=4)
Copepoda (nauplii)	0.0%	5.5% (n=76)	0.0%	0.0%	0.0%	2.1% (n=1)	0.0%	0.0%	0.0%	0.0%	0.0%	7.2% (n=23)
Echinodermata (larvae)	0.0%	0.0%	0.0%	0.0%	0.0%	4.3% (n=2)	0.0%	0.0%	0.0%	0.0%	0.0%	1.3% (n=4)
Euphausiacea (nauplii)	0.0%	0.7% (n=9)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Evadne spp.	0.0%	4.1% (n=56)	50.0% (n=1)	0.0%	0.0%	27.7% (n=13)	0.0%	0.0%	50.0% (n=1)	0.0%	0.0%	39.0% (n=124)
Fritillaria spp.	0.0%	1.7% (n=23)	0.0%	0.0%	0.0%	19.1% (n=9)	0.0%	0.0%	0.0%	25.0% (n=1)	0.0%	3.1% (n=10)
Gastropoda (larvae/Limacina)	0.0%	0.0%	0.0%	0.0%	100.0% (n=1)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.5% (n=27)
Harpacticoida- epibenthic	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	33.3% (n=2)	0.0%	0.0%	0.0%	0.0%
Microcalanus spp.	0.0%	0.1% (n=2)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Obelia spp. (medusa)	77.8% (n=7)	0.0%	0.0%	0.0%	0.0%	10.6% (n=5)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Oikopleura spp.	11.1% (n=1)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Oithona spp.	0.0%	11.9% (n=163)	0.0%	0.0%	0.0%	0.0%	0.0%	16.7% (n=1)	0.0%	0.0%	0.0%	2.2% (n=7)
Podon/Pleopsis spp.	0.0%	0.3% (n=4)	0.0%	0.0%	0.0%	4.3% (n=2)	0.0%	0.0%	0.0%	0.0%	0.0%	9.4% (n=30)
Polychaeta (larvae)	11.1% (n=1)	0.2% (n=3)	0.0%	0.0%	0.0%	6.4% (n=3)	0.0%	0.0%	0.0%	25.0% (n=1)	0.0%	6.9% (n=22)
Pseudocalanus spp.	0.0%	13.4% (n=183)	0.0%	0.0%	0.0%	0.0%	0.0%	16.7% (n=1)	0.0%	0.0%	0.0%	3.1% (n=10)
Temora spp.	0.0%	10.1% (n=139)	0.0%	0.0%	0.0%	2.1% (n=1)	0.0%	0.0%	0.0%	0.0%	0.0%	0.6% (n=2)



Extra training classes

Aglantha spp. (medusa)
n=9

Calanoida (civ-vi)
n=1370

Cyclopoida (unid)
n=2

Decapoda (unid)
n=1

Foraminifera
n=1

Hydrozoa (medusa)
n=47

Monstrillidae
n=1

Oncaeidae
n=6

Ostracoda
n=2

Sarsia spp. (medusa)
n=4

Tortanus spp. (medusa)
n=2

Zooplankton (unid)
n=318

Actual discarded Taxa

Relative Abundance of Top Taxonomic Instances per Sample

