

Use of SCN features: No
Max learning objects: Maximum objects/class
Strategy N° 8

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

Confusion Matrix – In percent of Actual Value

Classification Report Matrix
max available learning objects per class

Actual Values

	Confusion Matrix – In percent of Actual Value																									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Acartia spp.	94%	<1%	2%	<1%	<1%			<1%	<1%	<1%					<1%	<1%				<1%			<1%		<1%	
Evadne spp.	<1%	88%			<1%	<1%	4%	<1%			2%	<1%	4%	<1%		<1%				2%	<1%	4%	<1%			
Temora spp.	34%	2%	48%	5%	1%	<1%	<1%	3%		3%			<1%		<1%			<1%		2%	<1%	<1%			<1%	
Pseudocalanus spp.	46%		9%	40%				2%		2%						<1%	<1%	<1%		<1%		<1%				
Oithona spp.	25%	<1%	<1%		70%			<1%	<1%		<1%				2%					<1%						
Bryozoa (larvae)		23%			<1%	54%	2%	2%	<1%		<1%		<1%	9%		<1%			<1%		4%	2%	<1%			
Podon/Pleopsis spp.	7%	11%	20%	1%		<1%	28%	2%	<1%	<1%				<1%				10%			4%	12%	<1%	1%		
Calanoida (ci–cii)	28%	11%	14%	5%	3%		11%	15%		2%						<1%		2%	<1%			4%	3%			
Oikopleura spp.	2%		2%	2%	<1%				75%		<1%				9%		2%				6%			<1%	<1%	
Centropages spp.	20%		5%	1%						67%											5%	2%				
Echinodermata (larvae)	10%				8%		2%	2%	6%		14%				46%			4%				4%		2%		2%
Gastropoda (larvae/Limacina)		2%					2%				68%		4%	13%				11%								
Harpacticoida- epibenthic	77%	2%	2%		2%			2%				9%					4%						2%			
Hydrozoa (medusa)		2%				2%	6%						32%		4%					2%	13%		38%			
Bivalvia (larvae)						2%	5%				7%		5%	73%			2%						7%			
Fritillaria spp.	9%				3%				32%						56%											
Microcalanus spp.	19%	10%	10%	10%			10%	29%							6%		3%				3%					
Chaetognatha									29%							64%	4%				4%					
Polychaeta (larvae)				5%			5%				5%	5%				45%				5%	30%					
Calanus spp.				7%						7%						79%				7%						
Eurytemora spp.	70%		20%	10%																						
Tortanus spp.	50%																				50%					
Decapoda-non brachyura (larvae)																100%										
Acartia spp. Evadne spp. Temora spp. Pseudocalanus spp. Oithona spp. Bryozoa (larvae) Podon/Pleopsis spp. Calanoida (ci–cii) Oikopleura spp. Centropages spp. Echinodermata (larvae) Gastropoda (larvae/Limacina) Harpacticoida (larvae/Limacina) Hydrozoa (medusa) Bivalvia (larvae) Fritillaria spp. Microcalanus spp. Chaetognatha Polychaeta (larvae) Calanus spp. Eurytemora spp. Tortanus spp. Decapoda-non brachyura (larvae) Cirripedia (larvae) Copepoda (nauplii) Obelia spp. (medusa) Euphausiacea (larvae) Euphausiacea (nauplii)																										

Extra
training
classes

	Classification Report Matrix max available learning objects per class		
	precision	recall	f1-score
Acartia spp. (n=2490–train=111319)	0.66	0.94	0.78
Evadne spp. (n=1931–train=11064)	0.92	0.88	0.90
Temora spp. (n=1416–train=7347)	0.75	0.48	0.59
Pseudocalanus spp. (n=1044–train=4845)	0.80	0.40	0.53
Oithona spp. (n=345–train=5881)	0.84	0.70	0.76
Bryozoa (larvae) (n=248–train=1142)	0.93	0.54	0.68
Podon/Pleopsis spp. (n=230–train=7347)	0.38	0.28	0.32
Calanoida (ci–cii) (n=130–train=5557)	0.16	0.15	0.16
Oikopleura spp. (n=115–train=5305)	0.76	0.75	0.75
Centropages spp. (n=88–train=3620)	0.43	0.67	0.53
Echinodermata (larvae) (n=50–train=3043)	0.64	0.14	0.23
Gastropoda (larvae/Limacina) (n=47–train=3272)	0.46	0.68	0.55
Harpacticoida- epibenthic (n=47–train=555)	0.50	0.09	0.15
Hydrozoa (medusa) (n=47–train=4052)	0.13	0.32	0.18
Bivalvia (larvae) (n=44–train=3764)	0.80	0.73	0.76
Fritillaria spp. (n=34–train=6992)	0.28	0.56	0.37
Microcalanus spp. (n=31–train=80)	0.40	0.06	0.11
Chaetognatha (n=28–train=89)	0.90	0.64	0.75
Polychaeta (larvae) (n=20–train=1577)	0.18	0.45	0.26
Calanus spp. (n=14–train=359)	0.73	0.79	0.76
Eurytemora spp. (n=10–train=1818)	0.00	0.00	0.00
Tortanus spp. (n=2–train=203)	0.20	0.50	0.29
Decapoda-non brachyura (larvae) (n=1–train=423)	0.00	0.00	0.00
Cirripedia (larvae) (n=0–train=7685)	–	–	–
Copepoda (nauplii) (n=0–train=11555)	–	–	–
Obelia spp. (medusa) (n=0–train=1003)	–	–	–
Euphausiacea (larvae) (n=0–train=87)	–	–	–
Euphausiacea (nauplii) (n=0–train=145)	–	–	–
macro avg (corr)	0.52	0.47	0.45
weighted avg	0.74	0.70	0.70
precision recall f1-score			



	Acartia spp.	Bivalvia (larvae)	Bryozoa (larvae)	Calanoida (ci–ciii)	Calanus spp.	Centropages spp.	Cirripedia (larvae)	Copepoda (nauplii)	Decapoda (larvae)	Eurytemora spp.	Evadne spp.	Fritillaria spp.	Gammaridea (larvae/Limacina)	Harpacticoida– epibenthic	Hydrozoa (medusa)	Microcalanus spp.	Mesocyclops spp. (medusa)	Oikopleura spp.	Oithona spp.	Polydora/Pleopsis spp.	Polychaeta (larvae)	Pseudocalanus spp.	Temora spp.
	0.0%	64.5% (n=884)	0.0%	0.0%	100.0% (n=1)	100.0% (n=6)	0.0%	0.0%	2.8% (n=9)														
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.4% (n=14)														
	0.0%	0.2% (n=3)	0.0%	0.0%	0.0%	0.0%	50.0% (n=1)	0.0%	6.3% (n=20)														
	0.0%	3.9% (n=53)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6% (n=5)														
	0.0%	0.1% (n=1)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%														
	0.0%	0.8% (n=11)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%														
	0.0%	2.8% (n=38)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.8% (n=12)														
	0.0%	0.6% (n=8)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.5% (n=11)														
	0.0%	0.1% (n=1)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6% (n=5)														
	0.0%	0.1% (n=1)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%														
	0.0%	0.6% (n=8)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%														
	0.0%	5.0% (n=69)	50.0% (n=1)	0.0%	0.0%	0.0%	0.0%	0.0%	19.8% (n=63)														
	0.0%	0.4% (n=6)	0.0%	0.0%	0.0%	0.0%	0.0%	25.0% (n=1)	2.8% (n=9)														
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.7% (n=34)														
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6% (n=2)														
	55.6% (n=5)	0.1% (n=2)	0.0%	0.0%	0.0%	0.0%	0.0%	25.0% (n=1)	11.3% (n=36)														
	0.0%	0.1% (n=2)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%														
	33.3% (n=3)	0.1% (n=1)	0.0%	0.0%	0.0%	0.0%	0.0%	50.0% (n=2)	0.6% (n=2)														
	11.1% (n=1)	0.7% (n=9)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6% (n=2)														
	0.0%	5.2% (n=71)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.5% (n=8)														
	0.0%	1.7% (n=23)	50.0% (n=1)	100.0% (n=1)	0.0%	0.0%	0.0%	0.0%	14.8% (n=47)														
	0.0%	0.3% (n=4)	0.0%	0.0%	0.0%	0.0%	50.0% (n=1)	0.0%	6.9% (n=22)														
	0.0%	4.9% (n=67)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.8% (n=12)														
	0.0%	7.9% (n=108)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6% (n=5)														

Extra training classes

Aglantha spp. (medusa) n=9
Calanoida (civ-vi) n=1370
Cyclopoida (unid) n=2
Foraminifera n=1
Monstrillidae n=1
Oncaeidae spp. n=6
Ostracoda n=2
Sarsia spp. (medusa) n=4
Zooplankton (unid) n=318

Extra training classes

Relative Abundance of Top Taxonomic Instances per Sample

