Use of SCN features: Yes

Max learning objects: 5000 objects/class Strategy N° 2

Actual Values

## NL 2021 Selected Samples prediction using NL 2021 training set, Learning with all classes present in the selected samples, with extra training categories, No Calanoida (civ-vi), Cyclopoida, Zooplankton classes in learning set

Confusion Matrix – In percent of Actual Value

												Confu	ısior	ı Ma	trix -	- In	perce	nt o	f Act	ual V	alue										
Acartia spp.	71%	<1%	7%	10%	3%			7%				<1%				<1%			<1%							<1%	<1%	j		<1%	
Evadne spp.		93%	<1%	<1%	<1%		2%	<1%						<1%	<1%	<1%			<1%							1%	1%				
Temora spp.	14%	2%	53%	9%	3%		<1%	14%									<1%									1%	2%			<1%	
Pseudocalanus spp.	24%		14%	54%	<1%			7%				<1%					<1%			<1%							<1%	Ś		<1%	
Oithona spp.	12%	1%	1%		80%	<1%		2%			<1%					2%										<1%	<1%	j			
Bryozoa (larvae)		49%				37%	<1%	3%			<1%	<1%		1%	<1%	<1%			<1%							1%	5%				
Podon/Pleopsis spp.	1%	12%	13%	2%			13%	2%								<1%	<1%		13%							13%	29%				
Calanoida (ci-ciii)	12%	13%	5%	7%	3%		4%	26%												<1%						2%	26%			<1%	
Oikopleura spp.			3%	3%	3%				60%		<1%					27%		<1%		2%											
Centropages spp.	59%		8%	2%						26%	1%									1%					1%				1%		
Echinodermata (larvae)	4%				24%				2%		18%					48%										2%	2%				
Harpacticoida- epibenthic	32%	2%	9%	11%	9%			9%				28%															2%				
Hydrozoa (medusa)		23%									4%		2%		2%	19%			4%	4%	9	%				17%	9%	6%			
Gastropoda (larvae/Limacina)		9%					11%							60%	11%				9%								2%				
Bivalvia (larvae)						5%	2%							16%	77%																
Fritillaria spp.					12%				3%		3%					82%															
Microcalanus spp.		6%	3%	10%				39%									10%		6%							3%	23%				
Chaetognatha									43%							14%		39%		4%											
Polychaeta (larvae)	5%	10%		5%	10%														45%							15%	10%				
Calanus spp.	7%			14%																79%											
Eurytemora spp.	50%		20%	30%																											
Aglantha spp. (medusa)																			11%	11%	78	3%									
Oncaeidae spp.				17%	17%			33%				33%																			
Sarsia spp. (medusa)																25%							25%			50%					
Ostracoda		50%				50%																									
Tortanus spp.	50%																			50%											
ecapoda-non brachyura (larvae)																				100%											
	Acart	\$ \tag{\chi_0}{\dag{\chi_0}}	remo.	PSelle PSELLE SPD.	Oitho docaland	Brylo Do SPD: SPD:	Podo Rane	Calar Calar	Oikop Toida (ci.	Centi Neura Sp.	Ching opages S	Harpe Podermare	Hydra (lande	Castle Colbert	Bival (dusa)	Sia land	Micro Spp. inacina)	Charles Calanus	Polytognatha Sp.	Calanti Macta (la)	Curytemo,	Aglantha Sp.	Redeidae Sp. (medil	OSTA SPD: (II)	Portanus Sp. Redusa)	acapoda no	oedia (le	Obella (nate)	Supho (1)	Suphali Rusiacea (Redusa)	Isiacea (nauplii)
																	% ∙d Val											, dr.	\bar{\bar{\bar{\bar{\bar{\bar{\bar{\bar		ra Ining sses

Classification Report Matrix

ma		arning obje	ects per clas	SS
	precision	recall	f1-score	
Acartia spp. (n=2490-train=5000)	0.75	0.71	0.73	
<b>Evadne spp.</b> (n=1931-train=2845)	0.89	0.93	0.91	
<b>Temora spp.</b> (n=1416-train=5000)	0.66	0.53	0.59	
Pseudocalanus spp. (n=1044-train=4552)	0.58	0.54	0.56	
<b>Oithona spp.</b> (n=345-train=1409)	0.65	0.80	0.72	
Bryozoa (larvae) (n=248-train=119)	0.96	0.37	0.53	1.
Podon/Pleopsis spp. (n=230-train=201)	0.36	0.13	0.19	
Calanoida (ci-ciii) (n=130-train=3713)	0.06	0.26	0.10	
Oikopleura spp. (n=115-train=761)	0.83	0.60	0.70	
Centropages spp. (n=88-train=40)	1.00	0.26	0.41	
Echinodermata (larvae) (n=50-train=276)	0.56	0.18	0.27	0.
Harpacticoida- epibenthic (n=47-train=136)	0.65	0.28	0.39	
Hydrozoa (medusa) (n=47-train=21)	1.00	0.02	0.04	
Gastropoda (larvae/Limacina) (n=47-train=110)	0.49	0.60	0.54	
Bivalvia (larvae) (n=44-train=71)	0.76	0.77	0.76	0.
Fritillaria spp. (n=34-train=3447)	0.23	0.82	0.36	
Microcalanus spp. (n=31-train=80)	0.27	0.10	0.14	
Chaetognatha (n=28-train=67)	0.92	0.39	0.55	
Polychaeta (larvae) (n=20-train=452)	0.16	0.45	0.24	
Calanus spp. (n=14-train=213)	0.48	0.79	0.59	0.
Eurytemora spp. (n=10-train=88)	0.00	0.00	0.00	
Aglantha spp. (medusa) (n=9-train=21)	0.64	0.78	0.70	
Oncaeidae spp. (n=6-train=16)	0.00	0.00	0.00	
Sarsia spp. (medusa) (n=4-train=4)	1.00	0.25	0.40	0.
Ostracoda (n=2-train=6)	0.00	0.00	0.00	
<b>Tortanus spp.</b> (n=2-train=4)	0.00	0.00	0.00	
Decapoda-non brachyura (larvae) (n=1-train=7)	0.00	0.00	0.00	
Cirripedia (larvae) (n=0-train=611)	-	-	-	
Copepoda (nauplii) (n=0-train=1025)	-	-	-	0.
Obelia spp. (medusa) (n=0-train=43)	-	_	-	
Euphausiacea (larvae) (n=0-train=75)	-	_	-	
Euphausiacea (nauplii) (n=0-train=122)	_	_	-	
macro avg (corr)	0.52	0.39	0.39	
weighted avg	0.72	0.66	0.67	
	precision	recall	f1-score	

## Predictions of discarded taxa from training 100 0.0% 0.0% 100.0% (n=1) Acartia spp. 24.0% (n=329) 0.6% (n=2) 0.0% 0.3% (n=1) Aglantha spp. (medusa) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% Bivalvia (larvae) 0.0% 8.8% (n=28) 0.0% 0.0% 0.0% 0.0% Bryozoa (larvae) 2.2% (n=7) 80 0.0% Calanoida (ci-ciii) 26.0% (n=356) 50.0% (n=1) 0.0% 3.5% (n=11) Calanus spp. 0.1% (n=1) 0.0% 0.0% 0.0% 0.3% (n=1) 0.0% 0.0% 0.0% 1.9% (n=6) Cirripedia (larvae) 1.8% (n=25) Copepoda (nauplii) 5.8% (n=79) 0.0% 0.0% 0.0% 8.5% (n=27) 0.0% 60 Echinodermata (larvae) 0.0% 0.0% 0.0% 1.3% (n=4) **Predicted Taxa** Euphausiacea (nauplii) 0.5% (n=7) 0.0% 0.0% 0.0% 0.0% 50.0% (n=1) 0.0% 36.2% (n=115) Evadne spp. 0.0% 4.4% (n=60) 0.0% Fritillaria spp. 1.5% (n=21) 0.0% 0.0% 3.5% (n=11) 0.0% 100.0% (n=1) 0.0% Gastropoda (larvae/Limacina) 0.0% 9.1% (n=29) 40 Harpacticoida- epibenthic 0.1% (n=1) 0.0% 0.0% 0.0% 0.0% 0.0% Microcalanus spp. 0.1% (n=1) 0.0% 0.0% 0.0% 0.0% Oithona spp. 12.1% (n=166) 0.0% 0.0% 2.8% (n=9) Ostracoda 0.0% 0.0% 0.0% 0.0% 0.9% (n=3) 20 Podon/Pleopsis spp. 10.4% (n=33) 0.3% (n=4) 0.0% 0.0% 0.0% Polychaeta (larvae) 0.3% (n=4) 0.0% 0.0% 0.0% 6.3% (n=20) 3.5% (n=11) Pseudocalanus spp. 0.0% 0.0% 0.0% 13.3% (n=182) Temora spp. 9.8% (n=134) 0.0% 0.0% 0.0% 0.0% 0 Calanoida (civ-vi) Foraminifera $M_{onstrillidae}$ Zooplankton (unid) $C_{yclopoida}$ (unid)Extra training

classes

Actual discarded Taxa

Relative Abundance of Top Taxonomic Instances per Sample



