Use of SCN features: Yes

Max learning objects: 20000 objects/class Strategy N° 4

Actual Values

NL 2020 Selected Samples prediction using NL 2020 training set, Learning with selected samples classes with no low regional training instances, with extra training categories, No Anthoathecata, Calanoida, Copepoda, Zooplankton classes in learning set

Confusion Matrix – In percent of Actual Value

Classification Report Matrix max 20000 learning objects per class

precision recall f1-score

																	precision	n recall	f1-score									
Temora spp.	52%	9%	3%	17%		<1%		2%		<1%		4	<1%	<1%		<1%		12%	1%	2%	<1%		<1%	<b>Temora spp.</b> (n=18103-train=5148)	•	0.52	0.61	
Acartia spp.	18%	57%	1%	10%				2%		<1%	,	,	<1%	<1%		<1%		9%	<1%	1%	<1%		<1%	<b>Acartia spp.</b> (n=13302-train=5448)	0.76	0.57	0.65	
Evadne spp.	<1%	<1%	93%	<1%		7%	<1%	<1%	<1%					<1%		<1%	<1%	2%	1%	1%				<b>Evadne spp.</b> (n=5228-train=2845)	0.87	0.93	0.90	
						2.0																		Pseudocalanus spp. (n=3053-train=4552)		0.45	0.31	
Pseudocalanus spp.	29%	17%	<1%	45%				<1%		<1%	s <1%		<1%			<1%		7%	<1%	<1%	<1%		<1% 	Centropages spp. (n=330-train=40)	1.00	0.02	0.04	1.0
Centropages spp.	21%	73%		3%	2%						<1%								<1%	<1%				Podon/Pleopsis spp. (n=253-train=201)	0.15	0.09	0.11	
Podon/Pleopsis spp.	19%		12%	4%		9%					<1%					28%		5%	8%	15%				Eurytemora spp. (n=178-train=88)	0.00	0.00	0.00	
Eurytemora spp.	13%	10%	4%	2%				13%										52%		6%			Gastro	opoda (larvae/Limacina) (n=112-train=110)	0.51	0.32	0.40	0.8
Gastropoda (larvae/Limacina)			12%			27%	32%		12%							12%				4%				Oithona spp. (n=98-train=1409)	0.11	0.85	0.19	
Oithona spp.		5%	3%					85%					3%			1%		3%						Bivalvia (larvae) (n=92-train=71)	0.80	0.84	0.82	
													J'6			1.0		3.0						Oikopleura spp. (n=70-train=761)	0.95	0.74	0.83	
Bivalvia (larvae)							16%		84%														He	arpacticoida- epibenthic (n=50-train=136)	0.28	0.18	0.22	0.6
Oikopleura spp.	1%	1%							74	74%	1%	1% 2	20%											Calanus spp. (n=25-train=213)	0.84	0.84	0.84	
Harpacticoida- epibenthic	8%	16%		34%				2%		18%						2%		16%				2%	2%	<b>Chaetognatha</b> (n=15-train=67)	0.32	0.73	0.81	
Calanus spp.		4%		12%							84%													Fritillaria spp. (n=7-train=3447)	0.06	0.71	0.11	
Chaetognatha				7%					2	20%		73%												Echinodermata (larvae) (n=5-train=276)	0.00	0.00	0.00	0.4
Fritillaria spp.								14%					71%					14%						Obelia spp. (medusa) (n=1-train=43)	1.00	1.00	1.00	
			200.																					Polychaeta (larvae) (n=1-train=452)	0.00	0.00	0.00	
Echinodermata (larvae)			20%			20%		20%				2	20%					20%						Bryozoa (larvae) (n=0-train=119)		-	-	0.2
Obelia spp. (medusa)															100%									Calanoida (ci-ciii) (n=0-train=3713)	_	-	-	0.2
Polychaeta (larvae)				100%																				Cirripedia (larvae) (n=0-train=611)	_	-	-	
	Temore	Acartia Spp.	Evada	The Spp.	Yor Centrol	Podon Puryte	Temora Spp.	Oitho,	Bivalvia (land	Oikopleura Spp.	pacticolda Calanu	Nus Spp. Chaetognat.	Fritillaria	Echino.	Obelia's	Polycha	Bryozog Peta (lana	Calano	Cirripe.	Coper	Micro	Cuphous,	Suphauc.	Copepoda (nauplii) (n=0-train=1025)		-	-	
		500.	500	<i>SOD</i> .	Centropay	Podon/Pleopsis Spp.	Ord SPD.	oda lanc	SDD. (lar.	raes sp.	"Coida"	Spp. "Al	Ma a	<i>Spp.</i>	ermata (lan	D. (medus	Seta (larvae)	(lange)	Cirripedi (ci.ciii)	edia (larrae)	Microco (naupli)	ocalanus Spp.	Ex (large) (nauplii)	Microcalanus spp. (n=0-train=80)	-	-	-	0.0
	Tenor Startic Stating Sp.														Euphausiacea (larvae) (n=0-train=75)	_	-	-										
											dicted V	Values											training	Euphausiacea (nauplii) (n=0-train=122)	-	-	-	
																							classes	macro avg (corr)	0.51	0.49	0.44	
																								weighted avg	0.72	0.58	0.63	

## Predictions of discarded taxa from training 3.1% (n=2) 0.0% 3.1% (n=1) 0.0% 0.0% 10.9% (n=495) 0.0% 0.0% 3.0% (n=34) Acartia spp. 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 6.9% (n=77) Bivalvia (larvae) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.4% (n=5) Bryozoa (larvae) Calanoida (ci-ciii) 0.0% 0.0% 0.0% 9.4% (n=3) 0.0% 0.0% 26.4% (n=1205) 0.0% 0.0% 0.0% 0.0% 6.4% (n=72) 28.6% (n=4) 0.0% 0.0% 80 Calanus spp. 50.0% ( 100.0% (n=1) 0.0% (n=3) 0.0% 0.0% 0.0% (n=2) 100.0% (n=2) 6.2% (n=4) 50.0% (n=1) 1.5% (n=17) 0.0% 1.9% (n=88) 0.0% Cirripedia (larvae) 0.0% 0.0% 0.0% 0.0% 0.0% 17.2% (n=11) 0.0% 21.4% (n=3) 0.0% 1.6% (n=1) Copepoda (nauplii) 0.0% 0.0% 0.0% 0.0% 50.0% (n=1) 8.5% (n=388) 0.0% 0.0% 0.0% 4.5% (n=50) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% Echinodermata (larvae) 0.0% 0.0% 0.0% 0.5% (n=6) 0.1% (n=4) Euphausiacea (larvae) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.1% (n=1) **Predicted Taxa** 60 Euphausiacea (nauplii) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.5% (n=25) 0.0% 20.3% (n=13) 0.0% 48.7% (n=547) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 11.9% (n=545) 0.0% 0.0% Evadne spp. 0.4% (n=20) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 1.6% (n=1) 1.0% (n=11) Fritillaria spp. 0.0% (n=1) 6.2% (n=70) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% Gastropoda (larvae/Limacina) 40 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% Harpacticoida- epibenthic 0.0% 0.1% (n=3) Microcalanus spp. 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.3% (n=13) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 33.3% (n=2) 0.0% Obelia spp. (medusa) 50.0% (n=5) 0.0% 0.0% 0.0% 0.0% 23.4% (n=15) 0.0% 0.0% 16.7% (n=1) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 100.0% (n=1) 0.3% (n=3) Oikopleura spp. 0.0% 0.0% 1.2% (n=13) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% Oithona spp. 8.1% (n=368) 20 Podon/Pleopsis spp. 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.8% (n=35) 11.4% (n=128) Polychaeta (larvae) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 1.8% (n=82) 0.0% 25.0% (n=16) 0.0% 0.0% 5.5% (n=62) 0.0% 0.0% 42.9% (n=6) 50.0% (n=1) 0.7% (n=8) Pseudocalanus spp. 0.0% 78.1% (n=25) 0.0% 13.6% (n=621) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 9.4% (n=3) 7.1% (n=1) $\overline{50.0\%}$ (n=1) 14.6% (n=667) 0.0% 1.6% (n=1) 1.7% (n=19) Temora spp. Decapoda-non brachyura (larvae) Anthoathecata (medusa) Zooplankton (unid) Calanoida (unid) Cnidaria (larvae) Tomopteris spp. Chiridius spp. Copepoda "=< ... n=4562 (unid) Metridia spp. n=2 Extra training classes

Relative Abundance of Top Taxonomic Instances per Sample Val Pred 1.0 -0.8 -Relative Abundance 0.4 0.2 0.0 S25 S21 S22 S23 S24 S26 S27 S28 S29 S30

Sample Short ID

