Use of SCN features: No Max learning objects: 5000 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 5000 learning objects per class

precision recall f1-score

									Cı	onfusio	on Ma	trix –	In percen	it of Act	tual V	alue										precision	earning obje recall	f1-score	,
Temora spp.	51%	9%	2%	17%		<1%			2%	<1%		<1%		<15	% <19	%	<1%	<1%	11%	2%	3%	<1%		<1%	Temora spp. (n=18103-train=5000)	•	0.51	0.59	
Acartia spp.	21%	53%	<1%	10%		<1%			2%		<1%	<1%		<15	% <19	%	<1%	<1%	9%	<1%	2%	<1%	<1%	<1%	Acartia spp. (n=13302-train=5000)	0.75	0.53	0.62	
Evadne spp.	<1%	<1%	88%	<1%		3%		<1%	<1%	<1%				<19	% <19	%	<1%	<1%	3%	2%	2%	<1%			Evadne spp. (n=5228-train=2845)	0.89	0.88	0.89	
																D .		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \						10	Pseudocalanus spp. (n=3053-train=4552)	0.24	0.47	0.32	
Pseudocalanus spp.	28%	15%	<1%	47%		<1%			<1%			<1%	<1%	<1%	б		<1%		8%	<1%	<1%	<1%		<1%	Centropages spp. (n=330-train=40)	1.00	0.05	0.09	1.0
Centropages spp.	24%	65%		5%	5%		<1%					<1%								<1%					Podon/Pleopsis spp. (n=253-train=201)	0.13	0.12	0.12	
Podon/Pleopsis spp.	19%		8%	5%		12%							<1%		1%		29%		4%	7%	13%	<1%			Eurytemora spp. (n=178-train=88)	0.00	0.00	0.00	
Eurytemora spp.	12%	8%	3%	4%					16%						<19	%			46%		9%			<1%	Gastropoda (larvae/Limacina) (n=112-train=110)	0.59	0.34	0.43	0.8
Gastropoda (larvae/Limacina)			5%			29%		34%		15%							12%		<1%		4%				Oithona spp. (n=98-train=1409)	0.11	0.85	0.19	
Oithona spp.		5%	2%						85%					2%	5 1%		1%		4%						Bivalvia (larvae) (n=92-train=71)	0.77	0.90	0.83	
								100/		00%															Oikopleura spp. (n=70-train=761)		0.71	0.81	
Bivalvia (larvae)								10%		90%															Harpacticoida- epibenthic (n=50-train=136)	0.11	0.34	0.16	0.6
Oikopleura spp.	1%	1%									71%		1% 1	1% 23%	5										Calanus spp. (n=25-train=213)	0.00	0.84	0.86	
Harpacticoida- epibenthic	10%	14%		24%					2%			34%					2%		10%		2%		2%		Chaetognatha (n=15-train=67)		0.80	0.86	
Calanus spp.				16%									84%												Fritillaria spp. (n=7-train=3447)	0.00	0.71	0.11	
Chaetognatha				7%							13%		8	0%											Echinodermata (larvae) (n=5-train=276)	0.00	0.00	0.00	0.4
Fritillaria spp.									14%					71%	6				14%						Obelia spp. (medusa) (n=1-train=43)	0.00	0.00	0.00	
Echinodermata (larvae)			20%			20%								20%	0,				40%						Polychaeta (larvae) (n=1-train=452)	0.00	0.00	0.00	
· · ·			20/0			20.0													10/0						Bryozoa (larvae) (n=0-train=119)		-	-	0.2
Obelia spp. (medusa)														100%	%										Calanoida (ci-ciii) (n=0-train=3713)		-	-	
Polychaeta (larvae)				100%																					Capanada (naunlii)	_	-	-	
	Temora	Acarria App.	Spr	no Sp.	idocalanus sp.	topages Spp.	in Curytell	Castropo	Pod Oithon	Birahi	Oikopi (lange)	Harpad Sp.	Calanus Sp.	Chactognatha	itillaria Sp.	Sinodern Obel	is Son	hacta (lande	Calano (lanae)	Cirripelo (ci.ciii)	Copepolica (lange)	Microcal (nauplii)	Suphaus,	Cuphausia.	Copepoda (nauplii) (n=0-train=1025)		-	-	
		λ,	<i>D</i> .	· <i>D</i> ,	anus St.	30. Spp.	DSis &	30. 30.	Oithone Opoda (larvae	olin	andel	, 20h	Calanus Sphoeni	· (h _a)	1/2	hinodermata (lia Polych (larvae)	(larva)	e) ande)	(ci.ciii)	(lande)	, nauplii,	'ILS SPD.	Euphausiac Gacea (Janae)	Copepoda (nauplii) (n=0-train=1025) Microcalanus spp. (n=0-train=80) Euphausiacea (larvae)	_	-	-	0.0
										nacina	/		. 4	Sic .			<i>9</i>								(n=0-train=75)	_	-	-	
												Predi	icted Valu	es									-	Extra trainii classe	ing (n=U-train=122) es		-	-	
																									macro avg (corr)		0.45	0.38	
																									weighted avg	0.70	0.55	0.61	

Predictions of discarded taxa from training 0.0% 0.0% 9.4% (n=3) 0.0% 0.0% 10.4% (n=474) 0.0% 3.7% (n=41) Acartia spp. 0.0% 0.0% 1.6% (n=1) 0.0% Bivalvia (larvae) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% (n=1) 0.0% 0.0% 0.0% 0.0% 7.9% (n=89) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.1% (n=4) 0.0% 0.0% 0.0% 0.0% 1.5% (n=17) Bryozoa (larvae) Calanoida (ci-ciii) 0.0% 0.0% 0.0% 6.2% (n=2) 0.0% 0.0% 26.1% (n=1192) 0.0% 0.0% 0.0% 0.0% 6.5% (n=73) Calanus spp. 3.1% (n=2) 0.0% 0.0% 80 40.0% (n=4) 100.0% (n=1) 0.0% (n=3) 0.0% 28.6% (n=4) 0.0% 0.0% (n=2) 100.0% (n=2) 50.0% (n=1) 2.0% (n=22) 21.4% (n=3) 0.0% Cirripedia (larvae) 0.0% 0.0% 0.0% 0.0% 0.0% 2.9% (n=131) 0.0% 7.8% (n=5) 0.0% 0.0% 50.0% (n=1) 9.9% (n=450) 3.1% (n=2) 0.0% Copepoda (nauplii) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 5.0% (n=56) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.9% (n=10) Echinodermata (larvae) 0.0% 0.0% 0.1% (n=3) Euphausiacea (larvae) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% (n=1) 0.0% 0.0% 0.0% 0.0% 0.0% **Predicted Taxa** 60 0.1% (n=1) Euphausiacea (nauplii) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.5% (n=25) 0.0% 40.7% (n=457) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 9.4% (n=428) 0.0% 12.5% (n=8) 0.0% 0.0% Evadne spp. 0.0% 0.6% (n=7) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.3% (n=15) 0.0% 1.6% (n=1) 0.0% Fritillaria spp. 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% (n=1) 0.0% 0.0% 0.0% 0.0% 4.8% (n=54) Gastropoda (larvae/Limacina) 40 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.1% (n=1) Harpacticoida- epibenthic 0.0% 0.4% (n=17) Microcalanus spp. 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.7% (n=34) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 33.3% (n=2) 0.0% 31.2% (n=20) Obelia spp. (medusa) 60.0% (n=6) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 16.7% (n=1) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 100.0% (n=1) 0.4% (n=5) Oikopleura spp. 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 1.3% (n=15) Oithona spp. 3.1% (n=1) 8.0% (n=365) 20 Podon/Pleopsis spp. 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 1.0% (n=44) 15.0% (n=169) Polychaeta (larvae) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 2.5% (n=113) 0.0% 34.4% (n=22) 0.0% 0.0% 6.9% (n=78) 1.0% (n=11) 0.0% 0.0% 78.1% (n=25) 35.7% (n=5) 50.0% (n=1) Pseudocalanus spp. 0.0% 0.0% 13.3% (n=607) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 3.1% (n=1) 14.3% (n=2) 50.0% (n=1) 14.4% (n=655) 0.0% 4.7% (n=3) 1.5% (n=17) Temora spp. Decapoda-non brachyura (larvae) Anthoathecata (medusa) Zooplankton (unid) Calanoida (unid) Cnidaria (larvae) Chiridius spp. Copepoda "=< ... n=4562 (unid) Metridia spp. Tomopteris 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

