Use of SCN features: Yes

Max learning objects: 5000 objects/class Strategy N° 7

Actual Values

NL 2020 Selected Samples prediction using all regions training set, Learning with selected samples classes with no low global training instances, no 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	n objects per class

precision recall f1-score

	Confusion Matrix – In percent of Actual Value														m	ax 5000 le	arning obje	ning objects per class							
																						precision	recall	f1-score	
Temora spp.	59%	10%	3%	16%	2%	<1%	6%	<1%	1%			<1%	<1%			<1%		<1%	<1%	1%	<b>Temora spp.</b> (n=18103-train=5000)	0.73	0.59	0.65	
Acartia spp.	21%	54%	2%	10%	5%	<1%	4%		2%		<1%		<1%			<1%			<1%	<1%	Acartia spp. (n=13302-train=5000)	0.76	0.54	0.63	
Evadne spp.		<1%	86%	<1%		6%	<1%	1%	<1%	<1%		3%					<1%		<1%	<1%	<b>Evadne spp.</b> (n=5228-train=5000)	0.84	0.86	0.85	
Pseudocalanus spp.		14%	<1%	45%	6%	<1%	6%		<1%				<1%					<1%	<1%	<1%	Pseudocalanus spp. (n=3053-train=4845)	0.24	0.45	0.31	1
Centropages spp.		2%	00	1%	89%	400	40					40	40	<1%				<1%	<1%	220	Centropages spp. (n=330-train=3620)	0.18	0.89	0.30	
Podon/Pleopsis spp.		<1%	8%	3%		18%	4%		40.			<1%	<1%					9%	2%	22%	Podon/Pleopsis spp.	0.10	0.18	0.13	
Eurytemora spp.	b% 	17%	5%	1%		<1%	66%	C40.	4%	70.		Ε0.	<1%							20.	(n=253-train=5000)				
Gastropoda (larvae/Limacina)		E0.	2%			23%	10,	61%	000	7%		5%	10,			20/	10,		1%	2%	Eurytemora spp. (n=178-train=1818)	0.06	0.66	0.10	0
Oithona spp.		2%	1%				1%	00/	88%	89%		2%	1%			Ζ%	1%		170		Gastropoda (larvae/Limacina) (n=112-train=3272)	0.44	0.61	0.51	
Bivalvia (larvae) Oikopleura spp.					1%			9%		09%	80%	∠⁄0		3%	6%	6%		4%			Oithona spp. (n=98-train=5000)	0.14	0.88	0.25	
Hydrozoa (medusa)	3%		5%		2%	2%					00%	34%		3%	0/0	2%		3%	44%	3%	Bivalvia (larvae) (n=92-train=3764)	0.90	0.89	0.90	C
Harpacticoida- epibenthic		26%	3.0	34%	2%	2 0	6%					3110	24%	3.0		2.0		3.0	11.0	2%	Oikopleura spp. (n=70-train=5000)	0.69	0.80	0.74	
Calanus spp.				4%										64%				32%			Hydrozoa (medusa) (n=64-train=4052)	0.12	0.34	0.18	
Chaetognatha				7%							13%				80%						Harpacticoida- epibenthic	0.10	0.24	0.14	
Fritillaria spp.									14%		14%					71%					(n=50-train=555)  Calanus spp.	0.73	0.64	0.68	
Echinodermata (larvae)						20%			40%		20%					20%					(n=25-train=359)				
ecapoda–non brachyura (larvae)																		100%			Chaetognatha (n=15-train=89)		0.80	0.77	
Obelia spp. (medusa)																			100%		Fritillaria spp. (n=7-train=5000)	0.06	0.71	0.11	0
Polychaeta (larvae)				100%																	Echinodermata (larvae) (n=5-train=3043)	0.00	0.00	0.00	
	Temora	Acartico SDD	Sp.	Selldo	Centrol	Podon	Curyten	Castrol	Oithona	Biralvia Spp.	Oikoples	Hydrox	Harpac	Colonus Colonus	Chaetay SDD.	Pritiffall and the state of the	Chinon	Oecapo,	Obelia	Polych	Decapoda-non brachyura (larvae) (n=2-train=423)	0.04	1.00	0.09	
		<i>SP</i> 0.	<i>S</i> 00.	<i>SP</i> ,	Centrol Centrol	Podon,	Curytelli Oleopsis Spp.	Tota Spp.	Oithona Poda (larvae/Li	\$20,	(lange)	1/ <sub>0</sub>	Harpace (medusa)	ticoida epibel	<i>SP</i> p.	natha "	(9)/ <sub>0</sub> / <sub>0</sub>	Decapole Carac	Obelia Janon brachy	Dp. (medusa	Decapoda-non brachyura (larvae) (n=2-train=423)  Obelia spp. (medusa) (n=1-train=1003)	0.01	1.00	0.01	0
									\ <i>\\</i>	nacinal				Y,	thic			Y	Obelia Tarnon brachy	Ura (lange)	Polychaeta (larvae) (n=1-train=1577)	0.00	0.00	0.00	
										Predicted	d Values	6									macro avq	0.34	0.60	0.37	
																					weighted avg	0.70	0.60	0.63	

## Predictions of discarded taxa from training 100 0.0% 0.0% 0.0% 9.4% (n=3) 0.0% 0.0% 19.1% (n=872) 0.0% 0.0% 3.6% (n=40) Acartia spp. 0.0% 0.0% 0.0% Bivalvia (larvae) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 3.2% (n=36) Calanus spp. 30.0% (n=3) 100.0% (n=1) 50.0% (n=3) 0.0% 42.9% (n=6) 0.0% 0.0% (n=2) 0.0% 0.0% 50.0% (n=1) 0.0% 0.0% 0.0% 6.2% (n=2) 0.0% 0.0% 1.8% (n=80) 0.0% 0.0% 1.1% (n=12) Centropages spp. 80 0.1% (n=1) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% Decapoda-non brachyura (larvae) 7.1% (n=1) 0.1% (n=3) Echinodermata (larvae) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.1% (n=4) 0.0% 0.0% 0.7% (n=8) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 1.0% (n=11) Eurytemora spp. 9.4% (n=3) 10.3% (n=469) 0.0% Evadne spp. 0.0% 0.0% 0.0% 0.0% 0.0% 14.9% (n=682) 0.0% 0.0% 29.4% (n=330) Taxa 60 Fritillaria spp. 0.0% 0.0% 16.7% (n=1) 0.0% 0.0% 0.0% 0.3% (n=15) 0.0% 0.0% 0.6% (n=7) Predicted Gastropoda (larvae/Limacina) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.5% (n=25) 0.0% 0.0% 7.7% (n=86) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.6% (n=7) Harpacticoida- epibenthic 0.0% 0.8% (n=36) 0.0% 40 0.0% Hydrozoa (medusa) 20.0% (n=2) 0.0% 0.0% 0.0% 0.0% 0.3% (n=13) 0.0% 0.0% 9.2% (n=103) 0.0% 33.3% (n=2) 0.0% 0.0% 0.0% 0.4% (n=20) 0.0% 1.3% (n=15) Obelia spp. (medusa) 50.0% (n=5) 0.0% 0.0% 100.0% (n=1) Oikopleura spp. 0.0% 0.0% 0.0% 0.0% 0.0% 0.1% (n=6) 0.0% 0.8% (n=9) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 2.1% (n=24) Oithona spp. 8.7% (n=396) 20 Podon/Pleopsis spp. 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 28.8% (n=323) 4.4% (n=201) 0.0% 0.0% 0.0% 0.0% 0.0% 50.0% (n=1) 3.6% (n=162) 0.0% 0.0% 6.6% (n=74) Polychaeta (larvae) 0.0% Pseudocalanus spp. 0.0% 0.0% 68.8% (n=22) 42.9% (n=6) 0.0% 12.1% (n=550) 50.0% (n=1) 0.0% 1.1% (n=12) 0.0% 0.0% 0.0% 50.0% (n=1) 22.5% (n=1026) 0.0% Temora spp. 6.2% (n=2) 7.1% (n=1) 0.0% 2.2% (n=25) 0 Anthoathecata (medusa) $Agl_{anth_{a}} \int_{spp.}^{n=1} (m_{edusa})$ Calanoida (unid) Cnidaria (larvae) Metridia spp. Zooplankton (unid) Chiridius spp. Tomopteris spp. Copepode nearld lend 1000 (unid)n=1123 n=2

Actual discarded Taxa

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

Sample Short ID

