Use of SCN features: Yes

Max learning objects: Maximum objects/class Strategy N° 5

Actual Values

## NL 2020 Selected Samples prediction using all regions training set, Learning with all classes present in the selected samples, no extra training categories, No Anthoathecata, Calanoida, Copepoda, Zooplankton classes in learning set

Confusion Matrix – In percent of Actual Value

Mathematic Region   Math													ιατιτχ								
Learne spg	Temora spp.	47%	43%	3%	5%	<1%	<1%	<1%	<1%	<1%			<1%					<1%	<1%	<1%	<1%
Poseulariantense proper   26	Acartia spp.	5%	92%	1%	<1%	<1%	<1%	<1%		<1%		<1%						<1%		<1%	<1%
Centragogies apply 50 218	Evadne spp.	<1%	1%	89%	<1%		6%		<1%	<1%	<1%		2%	<1%				<1%		<1%	<1%
PotanyPleopis spp. 30	Pseudocalanus spp.	20%	54%	<1%	25%	1%	<1%	<1%							<1%				<1%		<1%
Funtymenta spn. 24 78 85 85 85 87 10 10 10 10 10 10 10 10 10 10 10 10 10	Centropages spp.	9%	21%		<1%	69%													<1%	<1%	
Castropode (larvac/tinacina)   Castropode (larvac/tinacina)	Podon/Pleopsis spp.	30%	7%	9%	4%		23%	<1%	<1%										7%	2%	17%
Olimna spp.    1	Eurytemora spp.	2%	75%	5%			1%	16%		1%											
Bivalvia (larvee)	Gastropoda (larvae/Limacina)			<1%			27%		59%		7%		4%								2%
Dikaplesura spr.   1%   1%   1%   1%   1%   1%   1%   1	Oithona spp.		21%	3%						74%								1%			
Hydrozoa (medusa) 3%	Bivalvia (larvae)								10%		88%		2%								
Harpacticoide- epiberthic 4% 88% 6% 2% 10 10 10 10 10 10 10 10 10 10 10 10 10	Oikopleura spp.	1%	1%									77%			1%	4%		10%	4%		
Calanus spp.  Chaetognatha  Chiridius spp.  7%  13%  13%  13%  13%  14%  13%  13%  13	Hydrozoa (medusa)	3%	2%	5%			2%						30%		5%		5%	2%	3%	44%	2%
Chactognatha Chactognatha Chirdius spp. 7%	Harpacticoida- epibenthic	4%	88%		6%	2%															
Chiridius spp. 7%	Calanus spp.					4%									68%				28%		
Aglantha spp. (medusa)  Fritillaria spp.  29%  29%  29%  20%  20%  20%  20%  20%	Chaetognatha				7%							13%				80%					
Fritillaria spp. 29%	Chiridius spp.	7%			43%										43%				7%		
Echinodermata (larvae) 20% 20% 20% 20% 20% 20% 20% 20% 20% 20%	Aglantha spp. (medusa)												20%				40%			40%	
Metridia spp.  Cnidaria (larvae)  Obelia spp. (medusa)  Polychaeta (larvae)  Amphipoda  Tomopteris spp.	Fritillaria spp.		29%									14%						43% 14%			
ecapoda-non brachyura (larvae)  Cnidaria (larvae)  Obelia spp. (medusa)  Polychaeta (larvae)  Amphipoda  Tomopteris spp.	Echinodermata (larvae)			20%			20%			20%		20%						20%			
Cnidaria (larvae) 50%	Metridia spp.				50%										50%						
Obelia spp. (medusa) Polychaeta (larvae) Amphipoda Tomopteris spp.	ecapoda-non brachyura (larvae)														50%				50%		
Polychaeta (larvae)  Amphipoda  Tomopteris spp.	Cnidaria (larvae)	50%					50%														
Amphipoda Tomopteris spp.	Obelia spp. (medusa)																			100%	
Tomopteris spp.	Polychaeta (larvae)				100%																
	Amphipoda														100%						
Tenora Acarria Statue Selidoc Antropages Podon/Placenora Podon/Placenora Sp.																					

max	Classification Report Matrix available learning objects per class							
	precision	recall	f1-score					
<b>Temora spp.</b> (n=18103-train=7347)	0.85	0.47	0.61					
Acartia spp. (n=13302-train=111319)	0.56	0.92	0.69					
<b>Evadne spp.</b> (n=5228-train=11064)	0.84	0.89	0.87					
Pseudocalanus spp. (n=3053-train=4845)	0.46	0.25	0.32					
Centropages spp. (n=330-train=3620)	0.69	0.69	0.69	1.0				
Podon/Pleopsis spp. (n=253-train=7347)	0.12	0.23	0.16					
Eurytemora spp. (n=178-train=1818)	0.30	0.16	0.21					
Gastropoda (larvae/Limacina) (n=112-train=3272)	0.49	0.59	0.53					
Oithona spp. (n=98-train=5881)	0.36	0.74	0.48	0.8				
Bivalvia (larvae) (n=92-train=3764)	0.90	0.88	0.89					
Oikopleura spp. (n=70-train=5305)	0.89	0.77	0.82					
Hydrozoa (medusa) (n=64-train=4052)	0.15	0.30	0.20					
Harpacticoida- epibenthic (n=50-train=555)	0.00	0.00	0.00	0.6				
Calanus spp. (n=25-train=359)	0.53	0.68	0.60					
Chaetognatha (n=15-train=89)	0.80	0.80	0.80					
Chiridius spp. (n=14-train=1)	0.00	0.00	0.00	0.4				
Aglantha spp. (medusa) (n=10-train=22)	0.57	0.40	0.47					
Fritillaria spp. (n=7-train=6992)	0.09	0.43	0.15					
Echinodermata (larvae) (n=5-train=3043)	0.00	0.00	0.00					
Metridia spp. (n=2-train=16)	0.00	0.00	0.00	0.2				
Decapoda-non brachyura (larvae) (n=2-train=423)	0.03	0.50	0.05					
Cnidaria (larvae) (n=2-train=25)	0.00	0.00	0.00					
Obelia spp. (medusa) (n=1-train=1003)	0.02	1.00	0.03					
Polychaeta (larvae) (n=1-train=1577)	0.00	0.00	0.00	0.0				
Amphipoda (n=1-train=27)	0.00	0.00	0.00					
Tomopteris spp. (n=1-train=1)	0.00	0.00	0.00					
macro avg	0.33	0.41	0.33					
weighted avg	0.71	0.65	0.64					

precision recall f1-score

Predictions of discarded taxa from training

	Acartia spp.	0.0%	50.0% (n=16)	58.5% (n=2667)	9.1% (n=102)		
	Aglantha spp. (medusa)	33.3% (n=2)	0.0%	0.0%	0.0%		
	Bivalvia (larvae)	0.0%	0.0%	0.0%	3.1% (n=35)		50
	Calanus spp.	$16.7\% \ (n=1)$	0.0%	0.0% (n=2)	0.0%		30
	Centropages spp.	0.0%	0.0%	$0.5\%~\textrm{\tiny (n=21)}$	0.2% (n=2)		
	Decapoda-non brachyura (larvae)	0.0%	0.0%	0.1% (n=3)	0.1% (n=1)		
	Echinodermata (larvae)	0.0%	0.0%	0.1% (n=3)	0.6% (n=7)		40
<b>~</b>	Eurytemora spp.	0.0%	0.0%	0.5% (n=24)	0.1% (n=1)		
Predicted Taxa	Evadne spp.	0.0%	0.0%	15.1% (n=688)	32. <b>7%</b> (n=367)		
_ pa	Fritillaria spp.	$16.7\% \ (n=1)$	0.0%	0.2% (n=7)	0.3% (n=3)		30
licte	Gastropoda (larvae/Limacina)	0.0%	0.0%	0.5% (n=22)	6.6% (n=74)		
rec	Harpacticoida- epibenthic	0.0%	0.0%	0.0%	0.1% (n=1)		
ш	Hydrozoa (medusa)	0.0%	0.0%	0.2% (n=10)	7.7% (n=86)		
	Obelia spp. (medusa)	33.3% (n=2)	0.0%	0.1% (n=5)	0.8% (n=9)		20
	Oikopleura spp.	0.0%	0.0%	0.1% (n=3)	0.6% (n=7)		
	Oithona spp.	0.0%	0.0%	2.5% (n=116)	1.7% (n=19)		
	Podon/Pleopsis spp.	0.0%	0.0%	5.3% (n=242)	30.3% (n=340)		10
	Polychaeta (larvae)	0.0%	0.0%	1.6% (n=73)	3.9% (n=44)		
	Pseudocalanus spp.	0.0%	40.6% (n=13)	3.0% (n=137)	0.4% (n=4)		
	Temora spp.	0.0%	9.4% (n=3)	11.8% (n=539)	1.9% (n=21)		0
		$A_{nthoatheo}$	Calanoida n≥32 Cata (medusa)	Copepoda n≤4562 (unid)	≥ooplankto n≈1123 (unid)	<sup>In</sup> (unid)	0

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 S21 S22 S23 S24 S25 S26 S27 S28 S29 S30

Sample Short ID

