Use of SCN features: No

Max learning objects: 20000 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

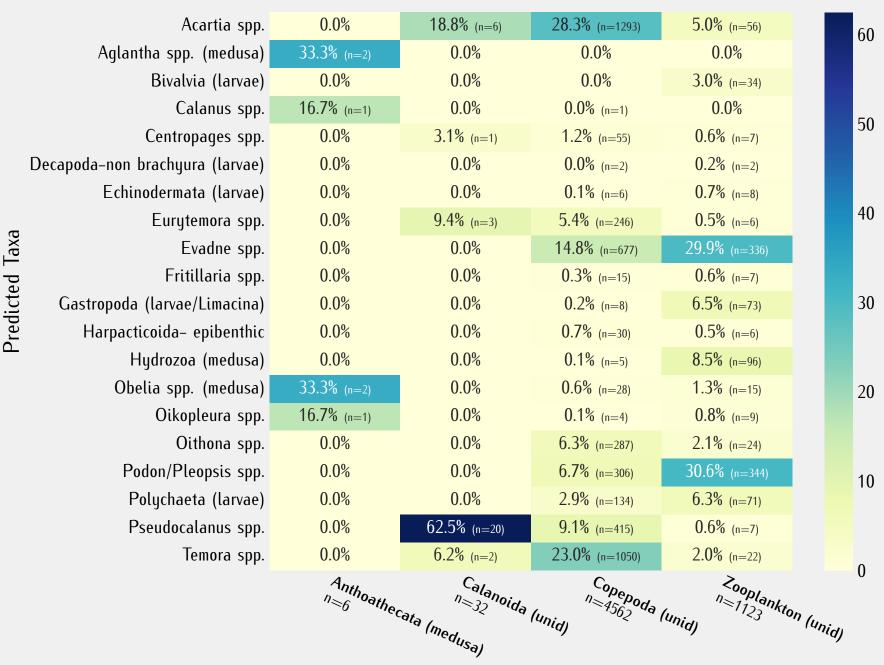
Confusion Matrix - In percent of Actual Value

										Contu	Ston N	latrix	– In <sub> </sub>	percen	11 01 /	Cludi	value						
Temora spp.	59%	17%	3%	13%	1%	1%	3%	<1%	<1%			<1%	<1%					<1%		<1%	<1%	1%	
Acartia spp.	23%	63%	2%	6%	2%	<1%	1%		1%		<1%		<1%					<1%			<1%	<1%	
Evadne spp.	1%	<1%	87%	<1%		6%	<1%	<1%	<1%	<1%		2%	<1%						<1%		<1%	<1%	
Pseudocalanus spp.	29%	21%	<1%	42%	3%	<1%	4%		<1%				<1%	<1%				<1%		<1%	<1%	<1%	
Centropages spp.	11%	4%		2%	83%								<1%							<1%	<1%		
Podon/Pleopsis spp.	28%	1%	7%	3%		24%	2%					<1%	<1%							7%	2%	27%	
Eurytemora spp.	10%	28%	5%	2%	<1%	1%	51%		3%														
Gastropoda (larvae/Limacina)			<1%			26%		56%		7%		3%										7%	
Oithona spp.		9%	1%						85%				1%					3%	1%				
Bivalvia (larvae)								5%		92%		2%											
Oikopleura spp.					1%						79%			1%	4%			6%		9%			
Hydrozoa (medusa)	5%		5%			2%						28%		2%			11%	2%			41%	6%	
Harpacticoida- epibenthic	6%	36%		22%	2%		2%						32%										
Calanus spp.				8%										84%						8%			
Chaetognatha				7%							7%				87%								
Chiridius spp.	7%			50%										7%						36%			
Aglantha spp. (medusa)														10%			50%				40%		
Fritillaria spp.		14%									14%							57%	14%				
Echinodermata (larvae)			20%			20%			20%									20%	20%				
Metridia spp.				50%										50%									
apoda-non brachyura (larvae)														50%						50%			
Cnidaria (larvae)	50%																					50%	
Obelia spp. (medusa)																					100%		
Polychaeta (larvae)				100%																			
Amphipoda														100%									
Tomopteris spp.											100%												
	Temore	Acarile Spp.	SPP.	PSellor SPD.	Centro, ocalanus St.	Podon Dodges Spp.	Pleopsis	Castrol Mora Spp.	Oithon Pools (lare	Bivally Spp. Delinacine	Oikopl ia (larvae)	Hydro Sp.	Harpal Medus	Caland Chicolda Caland Ca Caland Ca Caland Ca Ca Ca Ca Ca Ca Ca Ca Ca Ca Ca Ca Ca	Chaeto Spp. Dibenthic	Chiridle Ignatha	Aglann, Spp.	Fritillar, Spp. (mo	Chinodermate Spp.	Tridia SPD: (lange)	Chidaria (lando lando lando)	Solyon (Med	Amphipoda (lanae)
												Pı	redicte	d Valu	es								

Temora spp. (n=18103-train=7347)   0.72   0.59   0.05     Acartia spp. (n=13302-train=20000)   0.69   0.63   0.66     Evadne spp. (n=3053-train=4845)   0.28   0.42   0.33     Centropages spp. (n=330-train=3620)   0.31   0.83   0.45     Poddon/Pleopsis spp. (n=178-train=1818)   0.09   0.51   0.16     Castropoda (larvae/Limacina) (n=112-train=3272)   0.49   0.55   0.53     Gastropoda (larvae/Limacina) (n=12-train=5881)   0.19   0.85   0.31     Bivalvia (larvae) (n=92-train=3764)   0.90   0.92   0.91     Olkopleura spp. (n=092-train=3764)   0.90   0.92   0.91     Olkopleura spp. (n=04-train=505)   0.16   0.32   0.22     Harpacticoida - epibenthic (n=50-train=555)   0.16   0.32   0.22     Calanus spp. (n=25-train=359)   0.70   0.81   0.76     Chaetognatha (n=15-train=89)   0.81   0.87   0.84     Chiridius spp. (n=14-train=1)   0.00   0.00   0.00     Aglantha spp. (medusa) (n=0-train=590)   0.65   0.57   0.10     Echinodermata (larvae) (n=2-train=6902)   0.06   0.57   0.10     Metridia spp. (nedusa) (n=0-train=6902)   0.06   0.57   0.10     Chiridius spp. (nedusa) (n=0-train=16)   0.00   0.00   0.00     Condiaria (larvae) (n=2-train=16)   0.00   0.00   0.00     Decapoda-non brachyura (larvae) (n=2-train=16)   0.00   0.00   0.00     Obelia spp. (medusa) (n=1-train=16)   0.00   0.00   0.00     Chiridius spp. (nedusa) (n=1-train=1603)   0.01   1.00   0.02     Chiridius spp. (nedusa) (n=1-train=1603)   0.01   1.00   0.02     Chiridius spp. (nedusa) (n=1-train=1603)   0.01   1.00   0.02     Chiridius spp. (nedusa) (n=1-train=1603)   0.01   1.00   0.00     Chiridius spp. (nedusa) (n=1-train=1577)   0.00   0.00   0.00     Chiridius	ma		ation Reportant	rt Matrix ects per cla
(n=18103-train=7347) Acartia spp. (n=13302-train=20000) Evadne spp. (n=5228-train=11064) Pseudocalanus spp. (n=3303-train=3620) (n=3303-train=3620) (n=253-train=7347) Eurytemora spp. (n=178-train=3020) (n=178-train=31818) Castropoda (larvae/Limacina) (n=112-train=3072) Cithona spp. (n=98-train=5381) Cinegal-train=3740) Olikopleura spp. (n=99-train=3764) Olikopleura spp. (n=70-train=5305) Hydrozoa (medusa) (n=64-train=4052) Calanus spp. (n=25-train=3794) Chaetognatha (n=15-train=89) Chaetognatha (n=15-train=89) Chiridius spp. (n=70-train=22) Chiridius spp. (n=70-train=22) Chaetognatha (n=10-train=22) Echinodermata (larvae) (n=70-train=6992) Echinodermata (larvae) (n=70-train=6992) Chaetognatha (n=10-train=22) Chaetognatha (n=10-train=22) Chaetognatha (n=10-train=22) Chaetognatha (n=10-train=3043) Chetridius spp. (n=70-train=6992) Chaetognatha (n=10-train=22) Chaetognatha (n=10-train=3043) Chaetognatha (n=10-train=20) Chaetognatha (n=10-train=3043) Chaetognatha (n=10-train=3043) Chaetognatha (n=10-train=20) Chaetognat		precision	recall	f1-score
Canana   C		0.72	0.59	0.65
Centropages spp. (n=305-train=4845)   0.28   0.42   0.33   0.45		0.69	0.63	0.66
Centropages spp. (n=3)30-train=3620   0.31   0.83   0.45     Centropages spp. (n=3)30-train=3620   0.31   0.83   0.45     Podon/Pleopsis spp. (n=253-train=7347)   0.09   0.24   0.13     Eurytemora spp. (n=178-train=1818)   0.09   0.51   0.16     Gastropoda (larvae/Limacina) (n=112-train=3272)   0.49   0.56   0.53     Oithona spp. (n=98-train=5881)   0.19   0.85   0.31     Bivalvia (larvae)   0.90   0.92   0.91     Oikopleura spp. (n=70-train=5305)   0.81   0.79   0.80     Hydrozoa (medusa) (n=64-train=4052)   0.13   0.28   0.18     Harpacticoida-epibenthic (n=50-train=595)   0.70   0.84   0.76     Calanus spp. (n=25-train=393)   0.70   0.84   0.76     Chaetognatha (n=15-train=89)   0.81   0.87   0.84     Chiridius spp. (n=14-train=1)   0.00   0.00   0.00     Aglantha spp. (medusa) (n=10-train=22)   0.42   0.50   0.45     Fritillaria spp. (n=7-train=6992)   0.06   0.57   0.10     Echinodermata (larvae) (n=5-train=3043)   0.06   0.20   0.10     Metridia spp. (n=2-train=16)   0.00   0.00   0.00     Poecapoda-non brachyura (larvae) (n=2-train=123)   0.01   0.02     Cnidaria (larvae) (n=2-train=123)   0.01   1.00   0.02     Polychaeta (larvae) (n=1-train=103)   0.01   1.00   0.02     Polychaeta (larvae) (n=1-train=1077)   0.00   0.00   0.00     Maphipoda (n=1-train=1577)   0.00   0.00   0.00     Macro avg   0.30   0.47   0.33	• • • • • • • • • • • • • • • • • • •	0.84	0.87	0.86
Podon/Pleopsis spp. (n=253-train=7347)   0.09   0.24   0.13     Eurytemora spp. (n=178-train=1818)   0.09   0.51   0.16     Castropoda (larvae/Limacina) (n=112-train=3272)   0.49   0.56   0.53     Oithona spp. (n=98-train=5881)   0.19   0.85   0.31     Bivalvia (larvae) (n=92-train=3764)   0.90   0.92   0.91     Oikopleura spp. (n=70-train=5305)   0.81   0.79   0.80     Hydrozoa (medusa) (n=64-train=4052)   0.13   0.28   0.18     Harpacticoida- epibenthic (n=50-train=555)   0.16   0.32   0.22     Calanus spp. (n=25-train=359)   0.70   0.84   0.76     Chaetognatha (n=15-train=89)   0.81   0.87   0.84     Chiridius spp. (n=14-train=1)   0.00   0.00   0.00     Aglantha spp. (medusa) (n=10-train=22)   0.42   0.50   0.45     Fritillaria spp. (n=2-train=3043)   0.06   0.20   0.10     Metridia spp. (n=2-train=3043)   0.06   0.20   0.10     Coidaria (larvae) (n=2-train=3043)   0.01   0.00   0.00     Coidaria (larvae) (n=2-train=423)   0.01   0.00   0.00     Polychaeta (larvae) (n=1-train=1003)   0.01   1.00   0.02     Polychaeta (larvae) (n=1-train=1577)   0.00   0.00   0.00     Maphipoda (n=1-train=1577)   0.00   0.00   0.00     macro avg   0.30   0.47   0.33	• •	0.28	0.42	0.33
Castropoda (larvae/Limacina)   Cithon spp. (n=178-train=1818)   Continues of the property of		0.31	0.83	0.45
Castropoda (larvae/Limacina)		0.09	0.24	0.13
Cithona spp. (n=98-train=5881)   0.19   0.85   0.31     Bivalvia (larvae) (n=92-train=3764)   0.90   0.92   0.91     Oikopleura spp. (n=70-train=5305)   0.81   0.79   0.80     Hydrozoa (medusa) (n=64-train=4052)   0.13   0.28   0.18     Harpacticoida- epibenthic (n=50-train=555)   0.16   0.32   0.22     Calanus spp. (n=25-train=359)   0.70   0.84   0.76     Chaetognatha (n=15-train=89)   0.81   0.87   0.84     Chiridius spp. (n=14-train=1)   0.00   0.00   0.00     Aglantha spp. (medusa) (n=10-train=22)   0.42   0.50   0.45     Fritillaria spp. (n=7-train=6992)   0.06   0.57   0.10     Echinodermata (larvae) (n=5-train=3043)   0.06   0.20   0.10     Metridia spp. (n=2-train=16)   0.00   0.00   0.00     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)   0.01   1.00   0.02     Polychaeta (larvae) (n=1-train=1577)   0.00   0.00   0.00     Amphipoda (n=1-train=27)   0.00   0.00   0.00     macro avg   0.30   0.47   0.33		0.09	0.51	0.16
California   Cal		0.49	0.56	0.53
(n=92-train=3764)   0.90   0.92   0.91     Oikopleura spp. (n=70-train=5305)   0.81   0.79   0.80     Hydrozoa (medusa) (n=64-train=4052)   0.13   0.28   0.18     Harpacticoida- epibenthic (n=50-train=555)   0.16   0.32   0.22     Calanus spp. (n=25-train=359)   0.70   0.84   0.76     Chaetognatha (n=15-train=89)   0.81   0.87   0.84     Chiridius spp. (n=14-train=1)   0.00   0.00   0.00     Aglantha spp. (medusa) (n=10-train=22)   0.42   0.50   0.45     Fritillaria spp. (n=7-train=6992)   0.06   0.57   0.10     Echinodermata (larvae) (n=5-train=3043)   0.06   0.20   0.10     Metridia spp. (n=2-train=16)   0.00   0.00   0.00     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)   0.01   1.00   0.02     Polychaeta (larvae) (n=1-train=1577)   0.00   0.00   0.00     Amphipoda (n=1-train=177)   0.00   0.00   0.00     Macro avg   0.30   0.47   0.33		0.19	0.85	0.31
(n=70-train=5305)   0.81   0.79   0.80     Hydrozoa (medusa) (n=64-train=4052)   0.13   0.28   0.18     Harpacticoida- epibenthic (n=50-train=555)   0.16   0.32   0.22     Calanus spp. (n=25-train=359)   0.70   0.84   0.76     Chaetognatha (n=15-train=89)   0.81   0.87   0.84     Chiridius spp. (n=14-train=1)   0.00   0.00   0.00     Aglantha spp. (medusa) (n=10-train=22)   0.42   0.50   0.45     Fritillaria spp. (n=7-train=6992)   0.06   0.57   0.10     Echinodermata (larvae) (n=5-train=3043)   0.06   0.20   0.10     Metridia spp. (n=2-train=423)   0.03   0.50   0.05     Cnidaria (larvae) (n=2-train=423)   0.03   0.50   0.05     Cnidaria (larvae) (n=1-train=1003)   0.01   1.00   0.02     Polychaeta (larvae) (n=1-train=1577)   0.00   0.00   0.00     Amphipoda (n=1-train=1577)   0.00   0.00   0.00     Tomopteris spp. (n=1-train=1)   0.00   0.00   0.00     macro avg   0.30   0.47   0.33	·	0.90	0.92	0.91
Calanus spp. (n=2-train=4052)   0.15   0.26   0.18		0.81	0.79	0.80
Calanus spp. (n=25-train=359) 0.70 0.84 0.76  Chaetognatha (n=15-train=89) 0.81 0.87 0.84  Chiridius spp. (n=14-train=1) 0.00 0.00 0.00  Aglantha spp. (medusa) (n=7-train=6992) 0.06 0.57 0.10  Echinodermata (larvae) (n=5-train=3043) 0.06 0.20 0.10  Metridia spp. (n=2-train=16) 0.00 0.00 0.00  Metridia spp. (n=2-train=16) 0.00 0.00 0.00  Coecapoda-non brachyura (larvae) (n=2-train=25) 0.00 0.00 0.00  Coecapoda-non brachyura (larvae) (n=1-train=1003) 0.01 1.00 0.02  Chidaria (larvae) 0.00 0.00 0.00  Chidaria (lar	• • • • • • • • • • • • • • • • • • • •	0.13	0.28	0.18
Chaetognatha (n=15-train=359)   0.70   0.64   0.70     Chaetognatha (n=15-train=89)   0.81   0.87   0.84     Chiridius spp. (n=14-train=1)   0.00   0.00   0.00     Aglantha spp. (medusa) (n=10-train=22)   0.42   0.50   0.45     Fritillaria spp. (n=7-train=6992)   0.06   0.57   0.10     Echinodermata (larvae) (n=5-train=3043)   0.06   0.20   0.10     Metridia spp. (n=2-train=16)   0.00   0.00   0.00     Metridia spp. (n=2-train=423)   0.03   0.50   0.05     Cnidaria (larvae) (n=2-train=25)   0.00   0.00   0.00     Cnidaria (larvae) (n=1-train=1003)   0.01   1.00   0.02     Polychaeta (larvae) (n=1-train=1577)   0.00   0.00   0.00     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   0.30   0.47   0.33	•	0.16	0.32	0.22
Chiridius spp. (n=14-train=1)   0.00   0.00   0.00   0.00     Aglantha spp. (medusa) (n=10-train=22)   0.42   0.50   0.45     Fritillaria spp. (n=7-train=6992)   0.06   0.57   0.10     Echinodermata (larvae) (n=5-train=3043)   0.06   0.20   0.10     Metridia spp. (n=2-train=16)   0.00   0.00   0.00     Oecapoda-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)   0.01   1.00   0.02     Polychaeta (larvae) (n=1-train=1577)   0.00   0.00   0.00     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   0.30   0.47   0.33		0.70	0.84	0.76
Aglantha spp. (medusa)		0.81	0.87	0.84
Coldaria		0.00	0.00	0.00
Chidaria (larvae)		0.42	0.50	0.45
Metridia spp. (n=2-train=16)   0.00   0.00   0.00   0.00     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)   0.01   1.00   0.02     Polychaeta (larvae) (n=1-train=1577)   0.00   0.00   0.00     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   0.30   0.47   0.33		0.06	0.57	0.10
(n=2-train=16) 0.00 0.00 0.00  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) 0.01 1.00 0.02  Polychaeta (larvae) (n=1-train=1577) 0.00 0.00 0.00  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 0.30 0.47 0.33		0.06	0.20	0.10
Cnidaria (larvae) (n=2-train=423)  Cnidaria (larvae) (n=2-train=25)  Obelia spp. (medusa) (n=1-train=1003)  Polychaeta (larvae) (n=1-train=1577)  Amphipoda (n=1-train=27)  Tomopteris spp. (n=1-train=1)  macro avg  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00		0.00	0.00	0.00
(n=2-train=25)       0.00       0.00       0.00         Obelia spp. (medusa) (n=1-train=1003)       0.01       1.00       0.02         Polychaeta (larvae) (n=1-train=1577)       0.00       0.00       0.00         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       0.30       0.47       0.33	• • • • • • • • • • • • • • • • • • • •	0.03	0.50	0.05
Polychaeta (larvae)	•	0.00	0.00	0.00
Amphipoda (n=1-train=27)		0.01	1.00	0.02
(n=1-train=27)  Tomopteris spp. (n=1-train=1)  macro avg  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00	, ,	0.00	0.00	0.00
(n=1-train=1) 0.00 0.00 0.00 0.00 0.00 0.00		0.00	0.00	0.00
		0.00	0.00	0.00
weighted avg	macro avg	0.30	0.47	0.33
	weighted avg	0.68	0.62	0.64

precision recall f1-score

## Predictions of discarded taxa from training



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 S25 S22 S23 S24 S26 S27 S28 S29 S30 Sample Short ID

