Use of SCN features: Yes

Max learning objects: 200 objects/class Strategy N° 1

Actual Values

NL 2021 Selected Samples prediction using NL 2021 training set, Learning with all classes present in the selected samples, no extra training categories, No Calanoida (civ-vi), Cyclopoida, Zooplankton classes in learning set

Confusion Matrix - In percent of Actual Value

														·											
Acartia spp.	49%	<1%	8%	14%	5%	<1%		3%	<1%	<1%	<1%	14%				<1%	3%				1%		<1%		
Evadne spp.		80%	<1%	<1%	<1%	7%	7%	<1%			<1%		<1%	2%	<1%	<1%	1%		<1%					<1%	
Temora spp.	11%	1%	42%	10%	10%	<1%	<1%	12%		<1%	<1%	5%				<1%	4%		<1%		3%	<1%	<1%		
Pseudocalanus spp.	19%		12%	45%	<1%			6%		<1%	<1%	5%				<1%	5%		<1%	<1%	6%				
Oithona spp.	8%	<1%	<1%	<1%	83%	<1%		<1%			<1%	<1%				3%					<1%		<1%		
Bryozoa (larvae)		6%				88%	2%				<1%			2%		<1%	<1%						<1%		
Podon/Pleopsis spp.		7%	10%	<1%	<1%	5%	27%	3%	<1%	<1%		<1%	<1%				19%		24%		<1%	<1%			
Calanoida (ci-ciii)	9%	12%	4%	5%	9%	5%	8%	8%			3%	4%					25%		<1%	2%	4%		<1%		
Oikopleura spp.			3%	3%	3%	<1%		<1%	66%		<1%					10%		9%	<1%	3%	2%				
Centropages spp.	17%		3%	1%						69%										1%	7%				1%
Echinodermata (larvae)	8%				22%	2%	2%		2%		30%					30%			4%						
Harpacticoida- epibenthic			6%	2%	9%	2%		6%				72%											2%		
Hydrozoa (medusa)		6%				9%	6%				6%		21%	2%	2%	17%	4%		11%	4%		11%			
Gastropoda (larvae/Limacina)		4%					15%							64%	11%				4%					2%	
Bivalvia (larvae)						5%	2%							18%	75%										
Fritillaria spp.					15%				3%		9%					74%									
Microcalanus spp.		6%		6%	3%		6%	10%				6%					58%		3%						
Chaetognatha									14%									79%		4%			4%		
Polychaeta (larvae)	5%	15%			15%		20%							5%			10%		25%						5%
Calanus spp.										7%										86%	7%				
Eurytemora spp.	30%		20%	30%																	20%				
Aglantha spp. (medusa)																			11%	11%		78%			
Oncaeidae spp.				17%				17%				50%											17%		
Sarsia spp. (medusa)													25%						25%		25%	25%			
Ostracoda						100%																			
Tortanus spp.	50%																								50%
Decapoda–non brachyura (larvae)								Calane Pleopsis	Oikopl Oida (ci.cli	Centrol iii)	Schine Sp.	Harpa Odermata		Castro (medle		Pritille lange, Vae/linace	Microd		Polycha Po.	100%		Aglan Spor	Oncaeidae Spp. (medusa)		Portanus Spp.

Predicted Values

Classification Report Matrix max 200 learning objects per class

Precision Prec
Evadne spp. (n=1931-train=200) 0.95 0.80 0.87
Temora spp. (n=1416-train=200) 0.62 0.42 0.50 Pseudocalanus spp. (n=1044-train=200) 0.48 0.45 0.47 Oithona spp. (n=345-train=200) 0.47 0.83 0.60 Bryozoa (larvae) (n=248-train=119) 0.56 0.88 0.69 Podon/Pleopsis spp. (n=230-train=200) 0.25 0.27 0.26 Calanoida (ci-ciii) (n=130-train=200) 0.90 0.66 0.76 Centropages spp. (n=88-train=40) 0.90 0.69 0.78 Echinodermata (larvae) (n=50-train=200) 0.30 0.30 0.30 Harpacticoida- epibenthic (n=47-train=136) 0.07 0.72 0.12 Hydrozoa (medusa) (n=47-train=110) 0.41 0.64 0.50 Bivalvia (larvae) (n=47-train=110) 0.73 0.75 0.74 Fritillaria spp. (n=34-train=200) 0.26 0.74 0.39 Microcalanus spp. (n=31-train=80) 0.06 0.58 0.11 Chaetognatha (n=28-train=67) 0.69 0.79 0.73 Polychaeta (larvae) (n=20-train=200) 0.06 0.25 0.10
Calanoida (ci-ciii)
(n=1044-train=200) 0.48 0.43 0.47 Oithona spp. (n=345-train=200) 0.47 0.83 0.60 Bryozoa (larvae) (n=248-train=119) 0.56 0.88 0.69 Podon/Pleopsis spp. (n=230-train=200) 0.25 0.27 0.26 Calanoida (ci-ciii) (n=130-train=200) 0.03 0.08 0.04 Oikopleura spp. (n=115-train=200) 0.90 0.66 0.76 Centropages spp. (n=88-train=40) 0.90 0.69 0.78 Echinodermata (larvae) (n=50-train=200) 0.30 0.30 0.30 Harpacticoida- epibenthic (n=47-train=136) 0.07 0.72 0.12 Hydrozoa (medusa) (n=47-train=21) 0.77 0.21 0.33 Gastropoda (larvae/Limacina) (n=47-train=110) 0.41 0.64 0.50 Bivalvia (larvae) (n=34-train=200) 0.26 0.74 0.39 Microcalanus spp. (n=31-train=80) 0.06 0.58 0.11 Chaetognatha (n=28-train=67) 0.69 0.79 0.73 Polychaeta (larvae) (n=20-train=200) 0.06 0.25 0.10
Castropoda (larvae)
Podon/Pleopsis spp. (n=230-train=200) 0.25 0.27 0.26 Calanoida (ci-ciii) (n=130-train=200) 0.03 0.08 0.04 Oikopleura spp. (n=115-train=200) 0.90 0.66 0.76 Centropages spp. (n=88-train=40) 0.90 0.69 0.78 Echinodermata (larvae) (n=50-train=200) 0.07 0.30 0.30 Harpacticoida- epibenthic (n=47-train=136) 0.07 0.72 0.12 Hydrozoa (medusa) (n=47-train=21) 0.77 0.21 0.33 Gastropoda (larvae/Limacina) (n=47-train=110) 0.41 0.64 0.50 Bivalvia (larvae) (n=44-train=71) 0.73 0.75 0.74 Fritillaria spp. (n=34-train=200) 0.26 0.74 0.39 Microcalanus spp. (n=31-train=80) 0.06 0.58 0.11 Chaetognatha (n=28-train=67) 0.69 0.79 0.73 Polychaeta (larvae) (n=20-train=200) 0.06 0.25 0.10
Calanoida (ci-ciii) (n=130-train=200) 0.03 0.08 0.04 Oikopleura spp. (n=115-train=200) 0.90 0.66 0.76 Centropages spp. (n=88-train=40) 0.90 0.69 0.78 Echinodermata (larvae) (n=50-train=200) 0.07 0.72 0.12 Harpacticoida- epibenthic (n=47-train=136) 0.07 0.72 0.12 Hydrozoa (medusa) (n=47-train=21) 0.77 0.21 0.33 Gastropoda (larvae/Limacina) 0.41 0.64 0.50 Bivalvia (larvae) (n=44-train=71) 0.73 0.75 0.74 Fritillaria spp. (n=34-train=200) 0.26 0.74 0.39 Microcalanus spp. (n=31-train=80) 0.69 0.79 0.73 Polychaeta (larvae) (n=20-train=200) 0.06 0.25 0.10
(n=130-train=200) 0.03 0.04 Oikopleura spp. (n=115-train=200) 0.90 0.66 0.76 Centropages spp. (n=88-train=40) 0.90 0.69 0.78 Echinodermata (larvae) (n=50-train=200) 0.30 0.30 0.30 Harpacticoida- epibenthic (n=47-train=136) 0.07 0.72 0.12 Hydrozoa (medusa) (n=47-train=21) 0.77 0.21 0.33 Gastropoda (larvae/Limacina) (n=47-train=110) 0.41 0.64 0.50 Bivalvia (larvae) (n=44-train=71) 0.73 0.75 0.74 Fritillaria spp. (n=34-train=200) 0.26 0.74 0.39 Microcalanus spp. (n=31-train=80) 0.06 0.58 0.11 Chaetognatha (n=28-train=67) 0.69 0.79 0.73 Polychaeta (larvae) (n=20-train=200) 0.06 0.25 0.10
(n=115-train=200) 0.90 0.69 0.78 Centropages spp. (n=88-train=40) 0.90 0.69 0.78 Echinodermata (larvae) (n=50-train=200) 0.30 0.30 0.30 Harpacticoida- epibenthic (n=47-train=136) 0.07 0.72 0.12 Hydrozoa (medusa) (n=47-train=21) 0.77 0.21 0.33 Gastropoda (larvae/Limacina) (n=47-train=110) 0.41 0.64 0.50 Bivalvia (larvae) (n=44-train=71) 0.73 0.75 0.74 Fritillaria spp. (n=34-train=200) 0.26 0.74 0.39 Microcalanus spp. (n=31-train=80) 0.06 0.58 0.11 Chaetognatha (n=28-train=67) 0.69 0.79 0.73 Polychaeta (larvae) (n=20-train=200) 0.06 0.25 0.10
Chaetognatha (larvae) (n=88-train=40) 0.30 0.
Harpacticoida- epibenthic (n=47-train=136) 0.07 0.72 0.12 Hydrozoa (medusa) (n=47-train=21) 0.77 0.21 0.33 Gastropoda (larvae/Limacina) (n=47-train=110) 0.41 0.64 0.50 Bivalvia (larvae) (n=44-train=71) 0.73 0.75 0.74 Fritillaria spp. (n=34-train=200) 0.26 0.74 0.39 Microcalanus spp. (n=31-train=80) 0.06 0.58 0.11 Chaetognatha (n=28-train=67) 0.69 0.79 0.73 Polychaeta (larvae) (n=20-train=200) 0.06 0.25 0.10
Hydrozoa (medusa)
Gastropoda (larvae/Limacina) (n=47-train=21) 0.77 0.21 0.33 Gastropoda (larvae/Limacina) (n=47-train=110) 0.41 0.64 0.50 Bivalvia (larvae) (n=44-train=71) 0.73 0.75 0.74 Fritillaria spp. (n=34-train=200) 0.26 0.74 0.39 Microcalanus spp. (n=31-train=80) 0.06 0.58 0.11 Chaetognatha (n=28-train=67) 0.69 0.79 0.73 Polychaeta (larvae) (n=20-train=200) 0.06 0.25 0.10
(n=47-train=110) 0.41 0.04 0.30 Bivalvia (larvae)
(n=44-train=71) 0.73 0.74 Fritillaria spp. (n=34-train=200) 0.26 0.74 0.39 Microcalanus spp. (n=31-train=80) 0.06 0.58 0.11 Chaetognatha (n=28-train=67) 0.69 0.79 0.73 Polychaeta (larvae) (n=20-train=200) 0.06 0.25 0.10
(n=34-train=200) 0.20 0.74 0.39 Microcalanus spp. (n=31-train=80) 0.06 0.58 0.11 Chaetognatha (n=28-train=67) 0.69 0.79 0.73 Polychaeta (larvae) (n=20-train=200) 0.06 0.25 0.10
(n=31-train=80) Chaetognatha (n=28-train=67) Polychaeta (larvae) (n=20-train=200) 0.00 0.38 0.11 0.00 0.38 0.11
(n=28-train=67) Polychaeta (larvae) (n=20-train=200) 0.09 0.79 0.73 0.73
(n=20-train=200)
Calanus spp. (n=14-train=200) 0.44 0.86 0.59
Eurytemora spp. (n=10-train=88) 0.01 0.20 0.02
Aglantha spp. (medusa) (n=9-train=21) 0.41 0.78 0.54
Oncaeidae spp. (n=6-train=16) 0.10 0.17 0.12
Sarsia spp. (medusa) (n=4-train=4) 0.00 0.00 0.00
Ostracoda (n=2-train=6) 0.00 0.00 0.00
Tortanus spp. (n=2-train=4) 0.33 0.50 0.40
ecapoda-non brachyura (larvae) (n=1-train=7) 0.00 0.00
macro avg 0.39 0.48 0.39
weighted avg

precision recall f1-score

0.0

Predictions of discarded taxa from training 100 100.0% (n=1) 0.0% 0.0% 0.0% 14.2% (n=195) Acartia spp. Aglantha spp. (medusa) 0.0% 0.0% 0.0% 0.0% 1.3% (n=4) Bivalvia (larvae) 0.0% 0.0% 0.0% 0.0% 8.8% (n=28) Bryozoa (larvae) 2.0% (n=27) 0.0% 0.0% 0.0% 14.5% (n=46) 80 0.0% 1.6% (n=5) Calanoida (ci-ciii) 11.9% (n=163) 0.0% 0.0% Calanus spp. 0.1% (n=1) 0.0% 0.0% 0.0% 0.3% (n=1) Centropages spp. 0.1% (n=2) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% Echinodermata (larvae) 1.2% (n=16) 0.0% 2.8% (n=9) 1.3% (n=18) 0.0% 0.0% 0.0% 0.0% Eurytemora spp. 60 50.0% (n=1) 17.0% (n=54) Evadne spp. 0.0% 0.0% 3.4% (n=47) Fritillaria spp. 1.3% (n=18) 0.0% 0.0% 0.0% 0.6% (n=2) 100.0% (n=1) Gastropoda (larvae/Limacina) 0.0% 0.0% 0.0% 12.3% (n=39) Harpacticoida- epibenthic 0.0% 1.3% (n=4) 11.3% (n=155) 0.0% 0.0% 40 50.0% (n=1) 0.0% 0.0% Microcalanus spp. 8.2% (n=112) 6.0% (n=19) 0.0% 0.0% 0.0% 0.0% Oikopleura spp. 0.2% (n=3) Oithona spp. 21.9% (n=300) 0.0% 0.0% 0.0% 2.2% (n=7) Oncaeidae spp. 0.8% (n=11) 0.0% 0.0% 0.0% 1.3% (n=4) 0.0% 0.0% 0.0% 1.6% (n=5) Ostracoda 0.0% 20 Podon/Pleopsis spp. 1.2% (n=16) 0.0% 0.0% 0.0% 19.5% (n=62) Polychaeta (larvae) 0.2% (n=3) 0.0% 0.0% 0.0% 7.2% (n=23) Pseudocalanus spp. 11.0% (n=151) 0.0% 0.0% 0.0% 0.9% (n=3) Temora spp. 9.6% (n=132) 0.0% 0.0% 0.0% 0.9% (n=3) 0 Zooplankton (unid) Calanoida (civ-vi) Foraminifera $M_{onstrillidae}$ $C_{yclopoida}(u_{nid})$

Predicted Taxa

Actual discarded Taxa



