

Use of SCN features: Yes
Max learning objects: 5000 objects/class
Strategy N° 4

PA Selected Samples prediction using PA training set,
Learning with selected samples classes with no low regional training instances, with extra training categories,
No Calanoida (ci-vi), Cyclopoida, Zooplankton classes in learning set

Confusion Matrix – In percent of Actual Value

Classification Report Matrix
max 5000 learning objects per class

Actual Values

Cirripedia (larvae)	75%	2%	<1%	15%	<1%	2%	<1%	<1%	<1%	<1%	<1%	<1%	<1%		1%	1%	1%		<1%				<1%	<1%		<1%
Acartia spp.	1%	80%	<1%	<1%	<1%	<1%	6%	<1%	9%				<1%	<1%	<1%	<1%		<1%		<1%	<1%					
Oikopleura spp.	2%	2%	82%	2%	2%	1%	<1%	<1%	<1%		<1%	<1%	<1%	<1%	2%	3%	<1%	<1%	<1%		<1%	<1%				1%
Podon/Pleopsis spp.	9%	2%	<1%	54%	<1%	11%	1%	2%	11%	<1%	<1%	2%	2%		<1%	1%						1%				<1%
Fritillaria spp.	<1%	6%	52%	<1%	33%	2%	<1%		<1%			<1%			4%	<1%			<1%							<1%
Evadne spp.	6%	1%	<1%	11%		68%	<1%	<1%	5%		<1%		5%		<1%	<1%					<1%					<1%
Corycaeidae	<1%	14%	2%	1%		<1%	71%	<1%	5%					<1%		2%	<1%	<1%			<1%					<1%
Calanoida (ci-ciui)	17%	18%	<1%	15%		5%	9%	9%	8%			3%			11%							3%				<1%
Paracalanus spp.	<1%	7%	<1%	1%		2%	<1%		83%					<1%		<1%	<1%				2%					
Gastropoda (larvae/Limacina)	6%	5%		48%		5%	<1%	2%	2%	22%	6%	2%	<1%		<1%							<1%				
Bivalvia (larvae)				12%			1%			1%	76%											1%				8%
Polychaeta (larvae)	25%	9%		15%		5%	3%		5%			25%	5%		2%	2%	3%	3%								
Hydrozoa (medusa)			2%	2%		4%			4%				84%			5%										
Centropages spp.		28%	4%				2%		2%			2%		16%			8%	18%	16%			4%				
Echinodermata (larvae)	2%			17%	2%	52%			2%				17%			7%										
Calycophorae (nectophore)													8%			78%	8%	5%								
Decapoda-brachyura (zoeae)		3%							3%				3%			6%	78%	3%	3%							
Decapoda-non brachyura (larvae)		4%				4%							12%				4%	77%								
Tortanus spp.	4%	4%												4%		29%	12%	17%	29%							
Ascidacea (larvae)			61%																	39%						
Oithona spp.		65%	6%		12%								12%					6%								
Pseudocalanus spp.									43%							14%		14%			29%					
Copepoda (nauplii)	25%			50%								25%														
Bryozoa (larvae)	100%																									

Predicted Values

Extra
training
classes

precision

recall

f1-score

Cirripedia (larvae) (n=3231-train=5000)	0.93	0.75	0.83
Acartia spp. (n=2290-train=4410)	0.88	0.80	0.83
Oikopleura spp. (n=1773-train=4507)	0.82	0.82	0.82
Podon/Pleopsis spp. (n=607-train=3605)	0.32	0.54	0.40
Fritillaria spp. (n=475-train=844)	0.81	0.33	0.47
Evadne spp. (n=358-train=981)	0.54	0.68	0.60
Corycaeidae (n=335-train=1760)	0.57	0.71	0.63
Calanoida (ci-ciui) (n=150-train=313)	0.26	0.09	0.14
Paracalanus spp. (n=141-train=1525)	0.24	0.83	0.38
Gastropoda (larvae/Limacina) (n=126-train=291)	0.78	0.22	0.35
Bivalvia (larvae) (n=96-train=119)	0.81	0.76	0.78
Polychaeta (larvae) (n=65-train=661)	0.28	0.25	0.26
Hydrozoa (medusa) (n=55-train=301)	0.39	0.84	0.53
Centropages spp. (n=50-train=119)	0.23	0.16	0.19
Echinodermata (larvae) (n=42-train=2649)	0.00	0.00	0.00
Calycophorae (nectophore) (n=37-train=966)	0.19	0.78	0.30
Decapoda-brachyura (zoeae) (n=32-train=343)	0.23	0.78	0.35
Decapoda-non brachyura (larvae) (n=26-train=219)	0.48	0.77	0.59
Tortanus spp. (n=24-train=88)	0.24	0.29	0.26
Ascidacea (larvae) (n=23-train=54)	0.90	0.39	0.55
Oithona spp. (n=17-train=44)	0.00	0.00	0.00
Pseudocalanus spp. (n=7-train=65)	0.11	0.29	0.16
Copepoda (nauplii) (n=4-train=233)	0.00	0.00	0.00
Bryozoa (larvae) (n=1-train=50)	0.00	0.00	0.00
Harpacticoida- epibenthic (n=0-train=47)	-	-	-
Platyhelminthes/Nemertea (larvae) (n=0-train=145)	-	-	-
macro avg (corr)	0.42	0.46	0.39
weighted avg	0.78	0.71	0.73

precision

recall

f1-score

0.8

0.6

0.4

0.2

0.0

	Calanoida <i>n</i> =603	Calanus spp. <i>n</i> =6	Ctenophora <i>n</i> =31	Cyclopoida (larvae) <i>n</i> =3	Euphyra (unid) <i>n</i> =3	Ostracoda <i>n</i> =25	Zooplankton (unid) <i>n</i> =335
Acartia spp.	45.8% (<i>n</i> =276)	0.0%	0.0%	33.3% (<i>n</i> =1)	0.0%	0.0%	1.2% (<i>n</i> =4)
Bivalvia (larvae)	0.0%	0.0%	0.0%	0.0%	0.0%	20.0% (<i>n</i> =5)	32.2% (<i>n</i> =108)
Bryozoa (larvae)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6% (<i>n</i> =2)
Calanoida (ci–cii)	1.3% (<i>n</i> =8)	0.0%	0.0%	0.0%	0.0%	0.0%	0.3% (<i>n</i> =1)
Copepoda (nectophore)	0.8% (<i>n</i> =5)	33.3% (<i>n</i> =2)	3.2% (<i>n</i> =1)	0.0%	100.0% (<i>n</i> =3)	0.0%	0.3% (<i>n</i> =1)
Centropages spp.	0.8% (<i>n</i> =5)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cirripedia (larvae)	2.8% (<i>n</i> =17)	0.0%	3.2% (<i>n</i> =1)	0.0%	0.0%	0.0%	3.0% (<i>n</i> =10)
Copepoda (nauplii)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2% (<i>n</i> =4)
Corycaeidae	10.1% (<i>n</i> =61)	0.0%	0.0%	33.3% (<i>n</i> =1)	0.0%	4.0% (<i>n</i> =1)	2.4% (<i>n</i> =8)
Isopoda (amphichela)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Isopoda (amphichela) (larvae)	0.2% (<i>n</i> =1)	33.3% (<i>n</i> =2)	0.0%	0.0%	0.0%	0.0%	0.3% (<i>n</i> =1)
Isopoda (amphichela) (larvae)	0.2% (<i>n</i> =1)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Evadne spp.	7.8% (<i>n</i> =47)	0.0%	16.1% (<i>n</i> =5)	33.3% (<i>n</i> =1)	0.0%	48.0% (<i>n</i> =12)	5.7% (<i>n</i> =19)
Fritillaria spp.	0.5% (<i>n</i> =3)	0.0%	0.0%	0.0%	0.0%	0.0%	0.3% (<i>n</i> =1)
Gastropoda (limacina)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.6% (<i>n</i> =12)
Hydrozoa (medusa)	0.2% (<i>n</i> =1)	0.0%	51.6% (<i>n</i> =16)	0.0%	0.0%	0.0%	1.2% (<i>n</i> =4)
Oikopleura spp.	1.5% (<i>n</i> =9)	0.0%	0.0%	0.0%	0.0%	0.0%	0.6% (<i>n</i> =2)
Paracalanus spp.	24.4% (<i>n</i> =147)	0.0%	0.0%	0.0%	0.0%	0.0%	2.4% (<i>n</i> =8)
Nemertea (larvae)	0.0%	0.0%	3.2% (<i>n</i> =1)	0.0%	0.0%	28.0% (<i>n</i> =7)	6.3% (<i>n</i> =21)
Polydora/Pleopsis spp.	0.8% (<i>n</i> =5)	0.0%	19.4% (<i>n</i> =6)	0.0%	0.0%	0.0%	35.8% (<i>n</i> =120)
Polychaeta (larvae)	0.3% (<i>n</i> =2)	0.0%	3.2% (<i>n</i> =1)	0.0%	0.0%	0.0%	2.7% (<i>n</i> =9)
Pseudocalanus spp.	0.8% (<i>n</i> =5)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Tortanus spp.	0.5% (<i>n</i> =3)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Actual discarded Taxa

Relative Abundance of Top Taxonomic Instances per Sample

