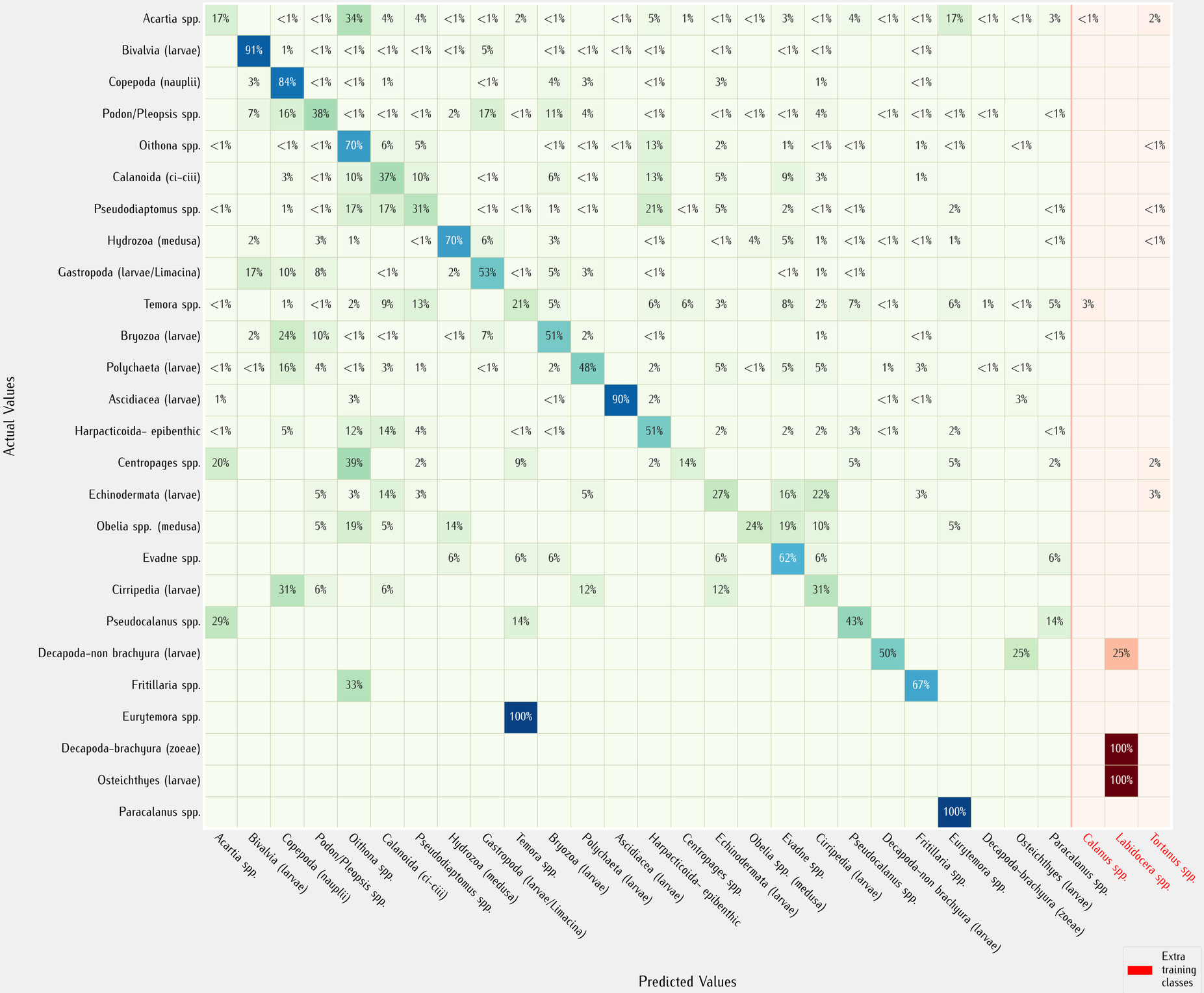
Use of SCN features: Yes
Max learning objects: 200 objects/class
Strategy N° 4

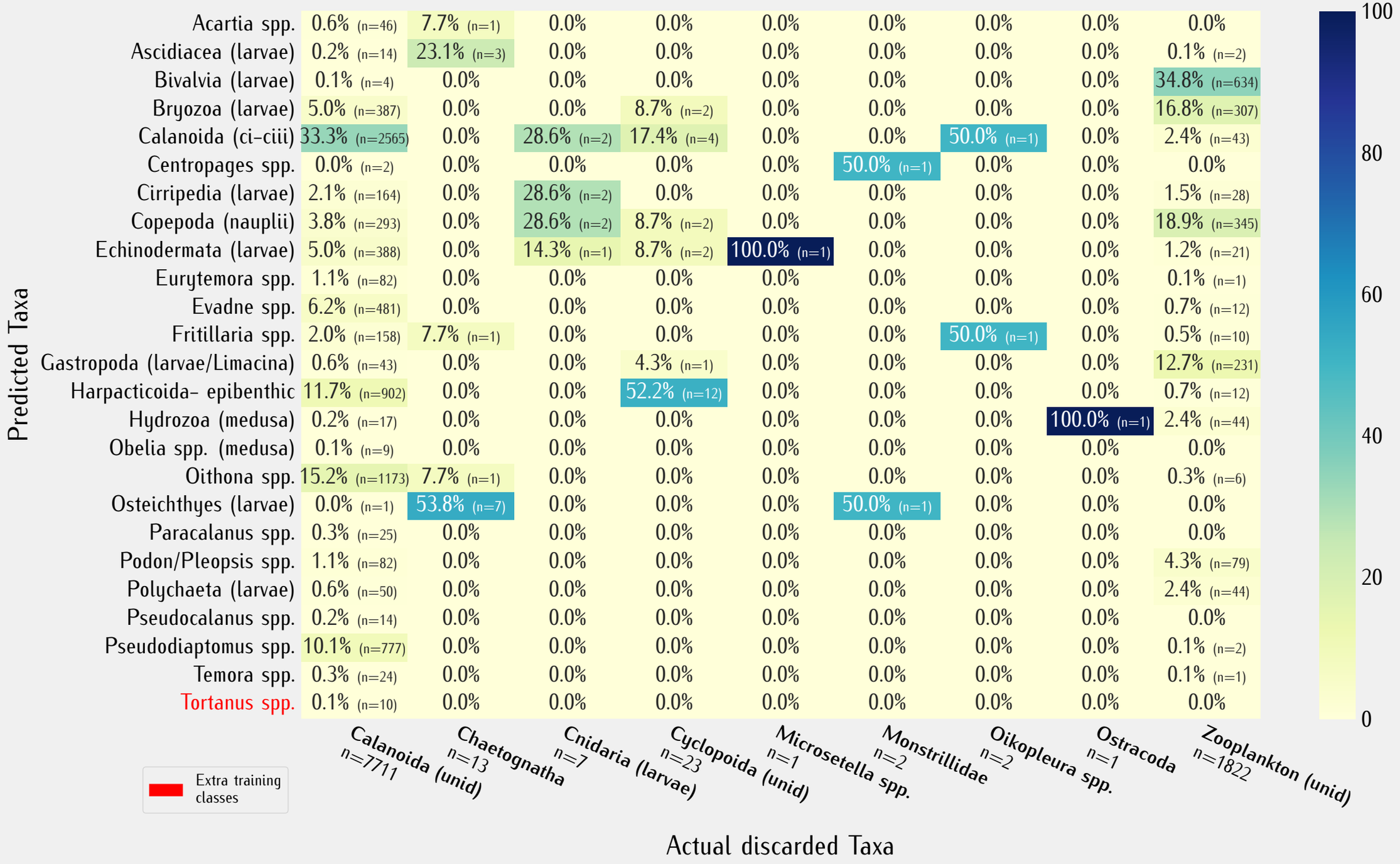
Gulf Selected Samples prediction using Gulf training set, Learning with selected samples classes with no low regional training instances, with extra training categories, No Calanoida, Cyclopoida, Zooplankton classes in learning set

Confusion Matrix – In percent of Actual Value



Classification Report Matrix
max 200 learning objects per class

	precision	recall	f1-score
Acartia spp. (n=18062-train=200)	0.99	0.17	0.29
Bivalvia (larvae) (n=7955-train=200)	0.95	0.91	0.93
Copepoda (nauplii) (n=2753-train=200)	0.74	0.84	0.79
Podon/Pleopsis spp. (n=2715-train=200)	0.88	0.38	0.53
Oithona spp. (n=2572-train=200)	0.22	0.70	0.33
Calanoida (ci-ciii) (n=1348-train=200)	0.28	0.37	0.32
Pseudodiaptomus spp. (n=1059-train=200)	0.23	0.31	0.26
Hydrozoa (medusa) (n=671-train=200)	0.74	0.70	0.72
Gastropoda (larvae/Limacina) (n=629-train=200)	0.26	0.53	0.35
Temora spp. (n=308-train=200)	0.17	0.21	0.19
Bryozoa (larvae) (n=247-train=200)	0.16	0.51	0.25
Polychaeta (larvae) (n=237-train=200)	0.35	0.48	0.41
Ascidiacea (larvae) (n=194-train=200)	0.68	0.90	0.78
Harpacticoida- epibenthic (n=108-train=200)	0.03	0.51	0.06
Centropages spp. (n=44-train=200)	0.02	0.14	0.04
Echinodermata (larvae) (n=37-train=118)	0.03	0.27	0.05
Obelia spp. (medusa) (n=21-train=200)	0.06	0.24	0.10
Evadne spp. (n=16-train=200)	0.01	0.62	0.03
Cirripedia (larvae) (n=16-train=200)	0.02	0.31	0.03
Pseudocalanus spp. (n=7-train=200)	0.00	0.43	0.01
Decapoda-non brachyura (larvae) (n=4-train=197)	0.04	0.50	0.07
Fritillaria spp. (n=3-train=200)	0.01	0.67	0.02
Eurytemora spp. (n=1-train=200)	0.00	0.00	0.00
Decapoda-brachyura (zoeae) (n=1-train=200)	0.00	0.00	0.00
Osteichthyes (larvae) (n=1-train=43)	0.00	0.00	0.00
Paracalanus spp. (n=1-train=82)	0.00	0.00	0.00
Calanus spp. (n=0-train=109)	–	–	–
Labidocera spp. (n=0-train=200)	–	–	–
Tortanus spp. (n=0-train=111)	–	–	–
macro avg (corr)	0.26	0.41	0.25
weighted avg	0.82	0.45	0.49
	precision	recall	f1-score


Predictions of discarded taxa from training
Predicted Taxa
Actual discarded Taxa
Acartia spp.
Ascidiacea (larvae)
Bivalvia (larvae)
Bryozoa (larvae)
Calanoida (ci-ciii)
Centropages spp.
Cirripedia (larvae)
Copepoda (nauplii)
Echinodermata (larvae)
Eurytemora spp.
Evadne spp.
Fritillaria spp.
Gastropoda (larvae/Limacina)
Harpacticoida- epibenthic
Hydrozoa (medusa)
Obelia spp. (medusa)
Oithona spp.
Osteichthyes (larvae)
Paracalanus spp.
Podon/Pleopsis spp.
Polychaeta (larvae)
Pseudocalanus spp.
Pseudodiaptomus spp.
Temora spp.
Tortanus spp.
0.6% (n=46) 7.7% (n=1) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%
0.2% (n=14) 23.1% (n=3) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.1% (n=2)
0.1% (n=4) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 34.8% (n=634)
5.0% (n=387) 0.0% 0.0% 8.7% (n=2) 0.0% 0.0% 0.0% 0.0% 16.8% (n=307)
33.3% (n=2565) 0.0% 28.6% (n=2) 17.4% (n=4) 0.0% 0.0% 50.0% (n=1) 0.0% 2.4% (n=43)
0.0% (n=2) 0.0% 0.0% 0.0% 0.0% 50.0% (n=1) 0.0% 0.0% 0.0%
2.1% (n=164) 0.0% 28.6% (n=2) 0.0% 0.0% 0.0% 0.0% 0.0% 1.5% (n=28)
3.8% (n=293) 0.0% 28.6% (n=2) 8.7% (n=2) 0.0% 0.0% 0.0% 0.0% 18.9% (n=345)
5.0% (n=388) 0.0% 14.3% (n=1) 8.7% (n=2) 100.0% (n=1) 0.0% 0.0% 0.0% 1.2% (n=21)
1.1% (n=82) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.1% (n=1)
6.2% (n=481) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.7% (n=12)
2.0% (n=158) 7.7% (n=1) 0.0% 0.0% 0.0% 0.0% 50.0% (n=1) 0.0% 0.5% (n=10)
0.6% (n=43) 0.0% 0.0% 4.3% (n=1) 0.0% 0.0% 0.0% 0.0% 12.7% (n=231)
11.7% (n=902) 0.0% 0.0% 52.2% (n=12) 0.0% 0.0% 0.0% 0.0% 0.7% (n=12)
0.2% (n=17) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 100.0% (n=1) 2.4% (n=44)
0.1% (n=9) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%
15.2% (n=1173) 7.7% (n=1) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.3% (n=6)
0.0% (n=1) 53.8% (n=7) 0.0% 0.0% 0.0% 50.0% (n=1) 0.0% 0.0% 0.0%
0.3% (n=25) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%
1.1% (n=82) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 4.3% (n=79)
0.6% (n=50) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 2.4% (n=44)
0.2% (n=14) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%
10.1% (n=777) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.1% (n=2)
0.3% (n=24) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.1% (n=1)
0.1% (n=10) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%
Calanoida (unid) n=7711
Chaetognatha n=13
Cnidaria (larvae) n=7
Cyclopoida (unid) n=23
Microsetella spp. n=1
Monstrillidae n=2
Oikopleura spp. n=2
Ostracoda n=1
Zooplankton (unid) n=1822
Extra training classes
100
80
60
40
20
0

Relative Abundance of Top Taxonomic Instances per Sample

Val Pred Val Pred Val Pred Val Pred Val Pred Val Pred Val Pred Val Pred Val Pred Val Pred

1.0
0.8
0.6
0.4
0.2
0.0

Relative Abundance

S01 S02 S03 S04 S05 S06 S07 S08 S09 S10

Sample Short ID

Most abundant classes (In Val or Pred)
- Acartia spp.
- Bivalvia (larvae)
- Calanoida (ci–ciii)
- Calanoida (unid)
- Copepoda (nauplii)
- Gastropoda (larvae/Limacina)
- Hydrozoa (medusa)
- Oithona spp.
- Podon/Pleopsis spp.
- Pseudodiaptomus spp.
- Zooplankton (unid)
- Others