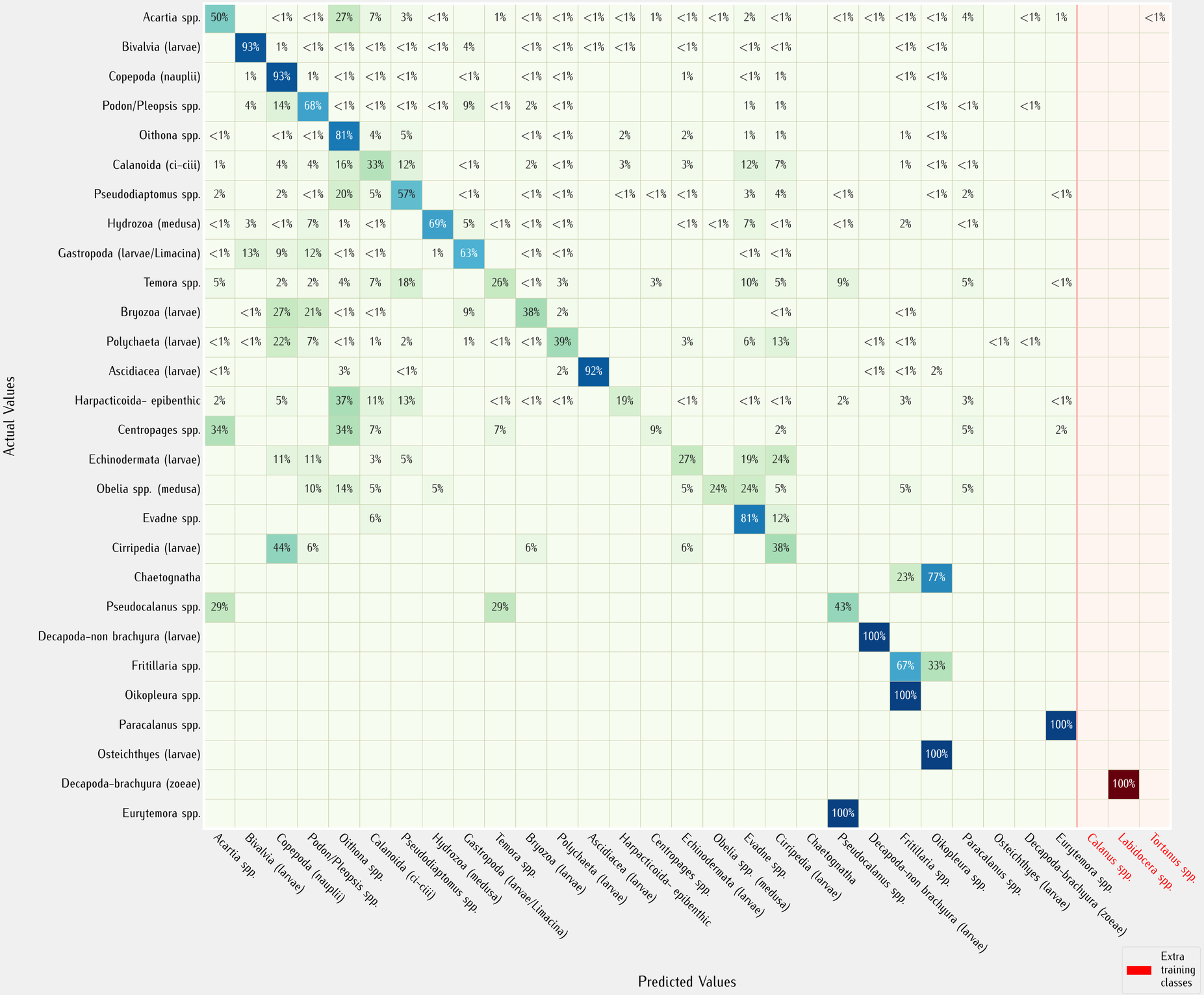
Use of SCN features: Yes
Max learning objects: 20000 objects/class
Strategy N° 8

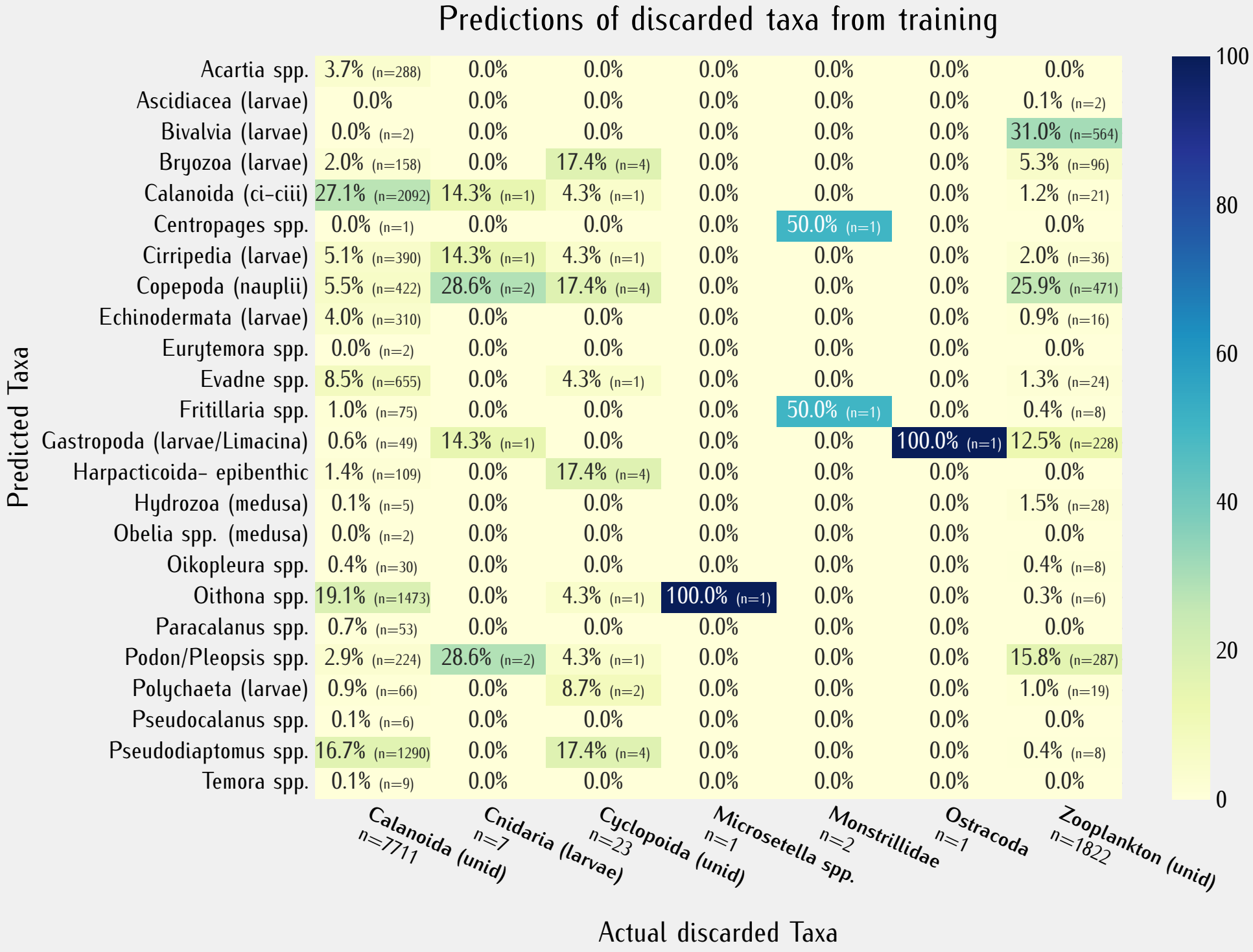
Gulf Selected Samples prediction using all regions training set, Learning with selected samples classes with no low global training instances, with extra regional training categories, No Calanoida, Cyclopoida, Zooplankton classes in learning set

Confusion Matrix - In percent of Actual Value



Classification Report Matrix
max 20000 learning objects per class

	precision	recall	f1-score
Acartia spp. (n=18062-train=20000)	0.99	0.50	0.66
Bivalvia (larvae) (n=7955-train=3764)	0.97	0.93	0.95
Copepoda (nauplii) (n=2753-train=11555)	0.76	0.93	0.84
Podon/Pleopsis spp. (n=2715-train=7347)	0.82	0.68	0.74
Oithona spp. (n=2572-train=5881)	0.28	0.81	0.42
Calanoida (ci-ciii) (n=1348-train=5557)	0.22	0.33	0.27
Pseudodiaptomus spp. (n=1059-train=2113)	0.38	0.57	0.46
Hydrozoa (medusa) (n=671-train=4052)	0.88	0.69	0.77
Gastropoda (larvae/Limacina) (n=629-train=3272)	0.40	0.63	0.49
Temora spp. (n=308-train=7347)	0.29	0.26	0.27
Bryozoa (larvae) (n=247-train=1142)	0.42	0.38	0.40
Polychaeta (larvae) (n=237-train=1577)	0.57	0.39	0.46
Ascidiacea (larvae) (n=194-train=861)	0.97	0.92	0.94
Harpacticoida- epibenthic (n=108-train=555)	0.10	0.19	0.13
Centropages spp. (n=44-train=3620)	0.02	0.09	0.03
Echinodermata (larvae) (n=37-train=3043)	0.04	0.27	0.07
Obelia spp. (medusa) (n=21-train=1003)	0.31	0.24	0.27
Evadne spp. (n=16-train=11064)	0.02	0.81	0.03
Cirripedia (larvae) (n=16-train=7685)	0.01	0.38	0.02
Chaetognatha (n=13-train=89)	0.00	0.00	0.00
Pseudocalanus spp. (n=7-train=4845)	0.03	0.43	0.05
Decapoda-non brachyura (larvae) (n=4-train=423)	0.57	1.00	0.73
Fritillaria spp. (n=3-train=6992)	0.02	0.67	0.03
Oikopleura spp. (n=2-train=5305)	0.00	0.00	0.00
Paracalanus spp. (n=1-train=1619)	0.00	0.00	0.00
Osteichthyes (larvae) (n=1-train=45)	0.00	0.00	0.00
Decapoda-brachyura (zoeae) (n=1-train=628)	0.00	0.00	0.00
Eurytemora spp. (n=1-train=1818)	0.00	0.00	0.00
Calanus spp. (n=0-train=359)	-	-	-
Labidocera spp. (n=0-train=493)	-	-	-
Tortanus spp. (n=0-train=203)	-	-	-
macro avg (corr)	0.32	0.43	0.32
weighted avg	0.84	0.65	0.70
	precision	recall	f1-score


Predictions of discarded taxa from training
Predicted Taxa
Acartia spp. 3.7% (n=288) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%
Ascidiacea (larvae) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.1% (n=2)
Bivalvia (larvae) 0.0% (n=2) 0.0% 0.0% 0.0% 0.0% 0.0% 31.0% (n=564)
Bryozoa (larvae) 2.0% (n=158) 0.0% 17.4% (n=4) 0.0% 0.0% 0.0% 5.3% (n=96)
Calanoida (ci-ciii) 27.1% (n=2092) 14.3% (n=1) 4.3% (n=1) 0.0% 0.0% 0.0% 1.2% (n=21)
Centropages spp. 0.0% (n=1) 0.0% 0.0% 0.0% 50.0% (n=1) 0.0% 0.0%
Cirripedia (larvae) 5.1% (n=390) 14.3% (n=1) 4.3% (n=1) 0.0% 0.0% 0.0% 2.0% (n=36)
Copepoda (nauplii) 5.5% (n=422) 28.6% (n=2) 17.4% (n=4) 0.0% 0.0% 0.0% 25.9% (n=471)
Echinodermata (larvae) 4.0% (n=310) 0.0% 0.0% 0.0% 0.0% 0.0% 0.9% (n=16)
Eurytemora spp. 0.0% (n=2) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%
Evadne spp. 8.5% (n=655) 0.0% 4.3% (n=1) 0.0% 0.0% 0.0% 1.3% (n=24)
Fritillaria spp. 1.0% (n=75) 0.0% 0.0% 0.0% 50.0% (n=1) 0.0% 0.4% (n=8)
Gastropoda (larvae/Limacina) 0.6% (n=49) 14.3% (n=1) 0.0% 0.0% 0.0% 100.0% (n=1) 12.5% (n=228)
Harpacticoida- epibenthic 1.4% (n=109) 0.0% 17.4% (n=4) 0.0% 0.0% 0.0% 0.0%
Hydrozoa (medusa) 0.1% (n=5) 0.0% 0.0% 0.0% 0.0% 0.0% 1.5% (n=28)
Obelia spp. (medusa) 0.0% (n=2) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%
Oikopleura spp. 0.4% (n=30) 0.0% 0.0% 0.0% 0.0% 0.0% 0.4% (n=8)
Oithona spp. 19.1% (n=1473) 0.0% 4.3% (n=1) 100.0% (n=1) 0.0% 0.0% 0.3% (n=6)
Paracalanus spp. 0.7% (n=53) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%
Podon/Pleopsis spp. 2.9% (n=224) 28.6% (n=2) 4.3% (n=1) 0.0% 0.0% 0.0% 15.8% (n=287)
Polychaeta (larvae) 0.9% (n=66) 0.0% 8.7% (n=2) 0.0% 0.0% 0.0% 1.0% (n=19)
Pseudocalanus spp. 0.1% (n=6) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%
Pseudodiaptomus spp. 16.7% (n=1290) 0.0% 17.4% (n=4) 0.0% 0.0% 0.0% 0.4% (n=8)
Temora spp. 0.1% (n=9) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%
Calanoida (unid) n=7711
Cnidaria (larvae) n=7
Cyclopoida (unid) n=23
Microsetella spp. n=1
Monstrillidae n=2
Ostracoda n=1
Zooplankton (unid) n=1822
Actual discarded Taxa
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