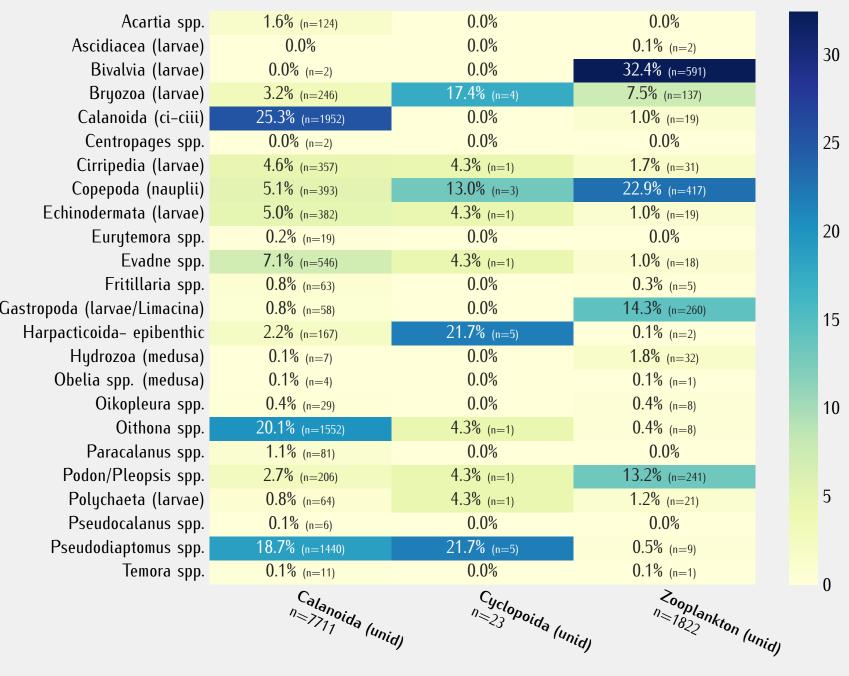# Gulf Selected Samples prediction using all regions training set,
Learning with all classes present in the selected samples, no extra training categories,
No Calanoida, Cyclopoida, Zooplankton classes in learning set

Use of SCN features: Yes
Max learning objects: 5000 objects/class
Strategy N° 5

Confusion Matrix - In percent of Actual Value

Classification Report Matrix
max 5000 learning objects per class

Class	precision	recall	f1-score
Acartia spp. (n=18062-train=5000)	0.99	0.36	0.53
Bivalvia (larvae) (n=7955-train=3764)	0.97	0.93	0.95
Copepoda (nauplii) (n=2753-train=5000)	0.77	0.92	0.84
Podon/Pleopsis spp. (n=2715-train=5000)	0.84	0.63	0.72
Oithona spp. (n=2572-train=5000)	0.25	0.81	0.38
Calanoida (ci-ciii) (n=1348-train=5000)	0.22	0.31	0.26
Pseudodiaptomus spp. (n=1059-train=2113)	0.35	0.60	0.44
Hydrozoa (medusa) (n=671-train=4052)	0.88	0.70	0.78
Gastropoda (larvae/Limacina) (n=629-train=3272)	0.39	0.67	0.49
Temora spp. (n=308-train=5000)	0.26	0.23	0.24
Bryozoa (larvae) (n=247-train=1142)	0.33	0.43	0.37
Polychaeta (larvae) (n=237-train=1577)	0.53	0.40	0.46
Ascidiacea (larvae) (n=194-train=861)	0.96	0.91	0.93
Harpacticoida- epibenthic (n=108-train=555)	0.06	0.18	0.09
Centropages spp. (n=44-train=3620)	0.02	0.14	0.03
Echinodermata (larvae) (n=37-train=3043)	0.04	0.32	0.07
Obelia spp. (medusa) (n=21-train=1003)	0.22	0.29	0.25
Evadne spp. (n=16-train=5000)	0.02	0.75	0.03
Cirripedia (larvae) (n=16-train=5000)	0.01	0.38	0.02
Chaetognatha (n=13-train=89)	0.00	0.00	0.00
Pseudocalanus spp. (n=7-train=4845)	0.01	0.29	0.02
Cnidaria (larvae) (n=7-train=25)	1.00	0.14	0.25
Decapoda-non brachyura (larvae) (n=4-train=423)	0.36	1.00	0.53
Fritillaria spp. (n=3-train=5000)	0.02	0.67	0.03
Oikopleura spp. (n=2-train=5000)	0.00	0.00	0.00
Monstrillidae (n=2-train=27)	0.00	0.00	0.00
Decapoda-brachyura (zoeae) (n=1-train=628)	0.00	0.00	0.00
Osteichthyes (larvae) (n=1-train=45)	0.00	0.00	0.00
Ostracoda (n=1-train=25)	0.00	0.00	0.00
Paracalanus spp. (n=1-train=1619)	0.00	0.00	0.00
Microsetella spp. (n=1-train=4)	0.00	0.00	0.00
Eurytemora spp. (n=1-train=1818)	0.00	0.00	0.00
macro avg	0.30	0.38	0.27
weighted avg	0.84	0.58	0.63

Actual Values

Predicted Values

Predictions of discarded taxa from training

Predicted Taxa	Calanoida (unid) n=7711	Cyclopoida (unid) n=23	Zooplankton (unid) n=1822
Acartia spp.	1.6% (n=124)	0.0%	0.0%
Ascidiacea (larvae)	0.0%	0.0%	0.1% (n=2)
Bivalvia (larvae)	0.0% (n=2)	0.0%	32.4% (n=591)
Bryozoa (larvae)	3.2% (n=246)	17.4% (n=4)	7.5% (n=137)
Calanoida (ci–ciii)	25.3% (n=1952)	0.0%	1.0% (n=19)
Centropages spp.	0.0% (n=2)	0.0%	0.0%
Cirripedia (larvae)	4.6% (n=357)	4.3% (n=1)	1.7% (n=31)
Copepoda (nauplii)	5.1% (n=393)	13.0% (n=3)	22.9% (n=417)
Echinodermata (larvae)	5.0% (n=382)	4.3% (n=1)	1.0% (n=19)
Eurytemora spp.	0.2% (n=19)	0.0%	0.0%
Evadne spp.	7.1% (n=546)	4.3% (n=1)	1.0% (n=18)
Fritillaria spp.	0.8% (n=63)	0.0%	0.3% (n=5)
Gastropoda (larvae/Limacina)	0.8% (n=58)	0.0%	14.3% (n=260)
Harpacticoida- epibenthic	2.2% (n=167)	21.7% (n=5)	0.1% (n=2)
Hydrozoa (medusa)	0.1% (n=7)	0.0%	1.8% (n=32)
Obelia spp. (medusa)	0.1% (n=4)	0.0%	0.1% (n=1)
Oikopleura spp.	0.4% (n=29)	0.0%	0.4% (n=8)
Oithona spp.	20.1% (n=1552)	4.3% (n=1)	0.4% (n=8)
Paracalanus spp.	1.1% (n=81)	0.0%	0.0%
Podon/Pleopsis spp.	2.7% (n=206)	4.3% (n=1)	13.2% (n=241)
Polychaeta (larvae)	0.8% (n=64)	4.3% (n=1)	1.2% (n=21)
Pseudocalanus spp.	0.1% (n=6)	0.0%	0.0%
Pseudodiaptomus spp.	18.7% (n=1440)	21.7% (n=5)	0.5% (n=9)
Temora spp.	0.1% (n=11)	0.0%	0.1% (n=1)

Actual discarded Taxa

Relative Abundance of Top Taxonomic Instances per Sample

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