

Use of SCN features: No
Max learning objects: 5000 objects/class
Strategy N° 2

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

Confusion Matrix - In percent of Actual Value

Actual Values

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|-----|-----|-----|-----|-----|------|------|-----|-----|
| Acartia spp. | 43% | | <1% | <1% | 29% | 5% | 5% | <1% | <1% | 3% | <1% | <1% | <1% | 1% | 2% | <1% | <1% | 3% | <1% | | <1% | <1% | <1% | <1% | | | <1% | | 7% | <1% | | <1% |
| Bivalvia (larvae) | | 93% | <1% | <1% | <1% | <1% | <1% | <1% | 4% | | <1% | <1% | | | <1% | <1% | <1% | | | | <1% | | | | | | | | | | | |
| Copepoda (nauplii) | | 1% | 92% | 1% | <1% | 1% | <1% | | <1% | | 1% | <1% | | | <1% | <1% | 1% | | | | <1% | | | | | | | | | | | |
| Podon/Pleopsis spp. | | 3% | 12% | 67% | <1% | <1% | <1% | 2% | 8% | <1% | 4% | <1% | | <1% | <1% | | 2% | 2% | | | <1% | <1% | | | | | | <1% | | | <1% | |
| Oithona spp. | <1% | | <1% | <1% | 82% | 7% | 4% | <1% | | <1% | <1% | | <1% | 3% | | <1% | 1% | <1% | | | 1% | | | | | | <1% | | | | | |
| Calanoida (ci-ciii) | <1% | | 3% | 2% | 16% | 41% | 13% | <1% | <1% | | 4% | <1% | | | 5% | <1% | | 11% | 2% | | | | | | | | <1% | | | | | |
| Pseudodiaptomus spp. | 1% | | 2% | <1% | 19% | 11% | 58% | | <1% | <1% | <1% | | | 2% | <1% | | | 3% | <1% | | <1% | | | | | | | 1% | | | | |
| Hydrozoa (medusa) | 1% | 2% | | 5% | 1% | | <1% | 73% | 7% | <1% | <1% | <1% | | | <1% | <1% | 2% | 6% | <1% | | | <1% | | | | | | <1% | | | | |
| Gastropoda (larvae/Limacina) | | 13% | 7% | 10% | <1% | <1% | <1% | 1% | 66% | | <1% | | | | | | | <1% | <1% | | | | | | | | | | | | | |
| Temora spp. | 2% | | 2% | 1% | 5% | 7% | 18% | | <1% | 33% | 2% | | | | 8% | <1% | | 12% | <1% | | <1% | <1% | | | | <1% | | <1% | | 6% | <1% | |
| Bryozoa (larvae) | | <1% | 20% | 16% | <1% | <1% | | | 9% | <1% | 50% | 1% | | <1% | | | | | <1% | | | <1% | | | | | | | | | | |
| Polychaeta (larvae) | <1% | | 18% | 5% | <1% | 5% | 3% | | 1% | | <1% | 47% | | | | <1% | <1% | 11% | 2% | | <1% | 2% | | <1% | <1% | | | | | | | |
| Ascidacea (larvae) | <1% | | | | 4% | | 1% | | | | | | 92% | | | | | | | | 1% | | | 2% | | | | | | | | |
| Harpacticoida- epibenthic | | | 3% | | 32% | 14% | 12% | | | 4% | 5% | | | 23% | | | | 2% | | | <1% | 3% | | | | | | 2% | | | | |
| Centropages spp. | 27% | | | | 32% | | 2% | | | 18% | | | | | 14% | | | | | | 2% | | | | | | | | 5% | | | |
| Echinodermata (larvae) | | | 5% | 5% | 3% | 22% | 3% | | | | | 3% | | | | 11% | | 30% | 14% | | | 3% | | | | | | | | | 3% | |
| Obelia spp. (medusa) | 5% | | | | 19% | | | 10% | | | | | | 5% | | | 29% | 33% | | | | | | | | | | | | | | |
| Evadne spp. | | | | | | | | | | | 12% | | | | | | | 75% | 6% | | | | | | | | | | 6% | | | |
| Cirripedia (larvae) | | | 44% | | | 6% | | | 6% | | | 6% | | | | 6% | | | 31% | | | | | | | | | | | | | |
| Chaetognatha | | | | | | | | | | | | 23% | | | | | 8% | | | 15% | | | 31% | | 8% | | 15% | | | | | |
| Pseudocalanus spp. | 29% | | | | | | 14% | | | 43% | | | | | 14% | | | | | | | | | | | | | | | | | |
| Cnidaria (larvae) | | | 29% | | | 29% | | | 14% | | | | | | | | | | 14% | | 14% | | | | | | | | | | | |
| Decapoda-non brachyura (larvae) | | | | | | | | | | | | | | | | | | | | | 50% | | | | 25% | | | | 25% | | | |
| Fritillaria spp. | | | | | | | | | | | | | | | | | | | | | | 100% | | | | | | | | | | |
| Oikopleura spp. | | | | | | | | | | | | | | | | | | | | | | | 100% | | | | | | | | | |
| Monstrillidae | | | | | | | | | | | | | | | 50% | | | | | | | | | 50% | | | | | | | | |
| Decapoda-brachyura (zoeae) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 100% | | | |
| Osteichthyes (larvae) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 100% | | |
| Ostracoda | | | | | | | | | | | 100% | | | | | | | | | | | | | | | | | | | | | |
| Paracalanus spp. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 100% | | | |
| Microsetella spp. | | | | | | 100% | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eurytemora spp. | | | | | | | | | | | 100% | | | | | | | | | | | | | | | | | | | | | |
| Acartia spp. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bivalvia (larvae) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Copepoda (nauplii) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Podon/Pleopsis spp. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Oithona spp. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Calanoida (ci-ciii) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pseudodiaptomus spp. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hydrozoa (medusa) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Gastropoda (larvae/Limacina) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Temora spp. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bryozoa (larvae) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Polychaeta (larvae) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ascidacea (larvae) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Harpacticoida- epibenthic | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Centropages spp. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Echinodermata (larvae) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Obelia spp. (medusa) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Evadne spp. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cirripedia (larvae) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Chaetognatha | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pseudocalanus spp. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cnidaria (larvae) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Decapoda-non brachyura (larvae) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fritillaria spp. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Oikopleura spp. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Monstrillidae | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Decapoda-brachyura (zoeae) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Osteichthyes (larvae) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ostracoda | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Paracalanus spp. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Microsetella spp. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eurytemora spp. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Calanus spp. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Labidocera spp. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tortanus spp. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Extra training classes

Predicted Values

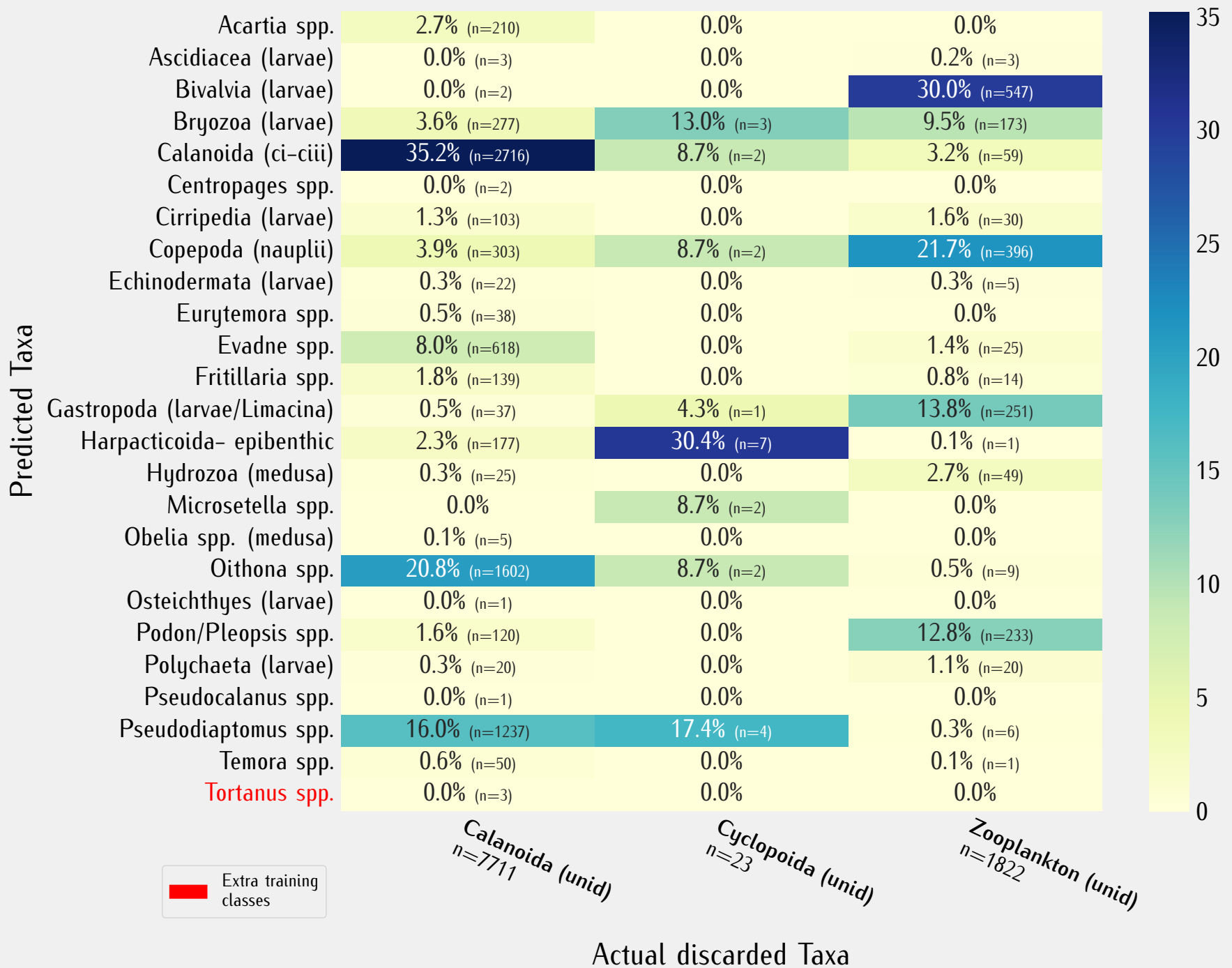
Predicted Values

Extra
training
classes

Classification Report Matrix
max 5000 learning objects per class

| | precision | recall | f1-score |
|--|-----------|--------|----------|
| Acartia spp. (n=18062-train=5000) | 0.99 | 0.43 | 0.60 |
| Bivalvia (larvae) (n=7955-train=3574) | 0.97 | 0.93 | 0.95 |
| Copepoda (nauplii) (n=2753-train=5000) | 0.80 | 0.92 | 0.85 |
| Podon/Pleopsis spp. (n=2715-train=3541) | 0.87 | 0.67 | 0.76 |
| Oithona spp. (n=2572-train=4428) | 0.27 | 0.82 | 0.40 |
| Calanoida (ci-ciii) (n=1348-train=1531) | 0.31 | 0.41 | 0.35 |
| Pseudodiaptomus spp. (n=1059-train=2113) | 0.32 | 0.58 | 0.41 |
| Hydrozoa (medusa) (n=671-train=3730) | 0.77 | 0.73 | 0.75 |
| Gastropoda (larvae/Limacina) (n=629-train=2871) | 0.39 | 0.66 | 0.49 |
| Temora spp. (n=308-train=2199) | 0.16 | 0.33 | 0.22 |
| Bryozoa (larvae) (n=247-train=973) | 0.33 | 0.50 | 0.40 |
| Polychaeta (larvae) (n=237-train=464) | 0.74 | 0.47 | 0.58 |
| Ascidacea (larvae) (n=194-train=805) | 0.93 | 0.92 | 0.93 |
| Harpacticoida- epibenthic (n=108-train=372) | 0.06 | 0.23 | 0.10 |
| Centropages spp. (n=44-train=3461) | 0.02 | 0.14 | 0.03 |
| Echinodermata (larvae) (n=37-train=118) | 0.10 | 0.11 | 0.10 |
| Obelia spp. (medusa) (n=21-train=952) | 0.09 | 0.29 | 0.14 |
| Evadne spp. (n=16-train=5000) | 0.01 | 0.75 | 0.03 |
| Cirripedia (larvae) (n=16-train=716) | 0.03 | 0.31 | 0.06 |
| Chaetognatha (n=13-train=18) | 1.00 | 0.15 | 0.27 |
| Pseudocalanus spp. (n=7-train=228) | 0.00 | 0.00 | 0.00 |
| Cnidaria (larvae) (n=7-train=20) | 0.50 | 0.14 | 0.22 |
| Decapoda-non brachyura (larvae) (n=4-train=197) | 0.18 | 0.50 | 0.27 |
| Fritillaria spp. (n=3-train=2701) | 0.02 | 1.00 | 0.03 |
| Oikopleura spp. (n=2-train=37) | 0.00 | 0.00 | 0.00 |
| Monstrillidae (n=2-train=27) | 0.33 | 0.50 | 0.40 |
| Decapoda-brachyura (zoeae) (n=1-train=277) | 0.00 | 0.00 | 0.00 |
| Osteichthyes (larvae) (n=1-train=43) | 0.00 | 0.00 | 0.00 |
| Ostracoda (n=1-train=1) | 0.00 | 0.00 | 0.00 |
| Paracalanus spp. (n=1-train=82) | 0.00 | 0.00 | 0.00 |
| Microsetella spp. (n=1-train=4) | 0.00 | 0.00 | 0.00 |
| Eurytemora spp. (n=1-train=1730) | 0.00 | 0.00 | 0.00 |
| Calanus spp. (n=0-train=109) | - | - | - |

Predictions of discarded taxa from training



Relative Abundance of Top Taxonomic Instances per Sample

