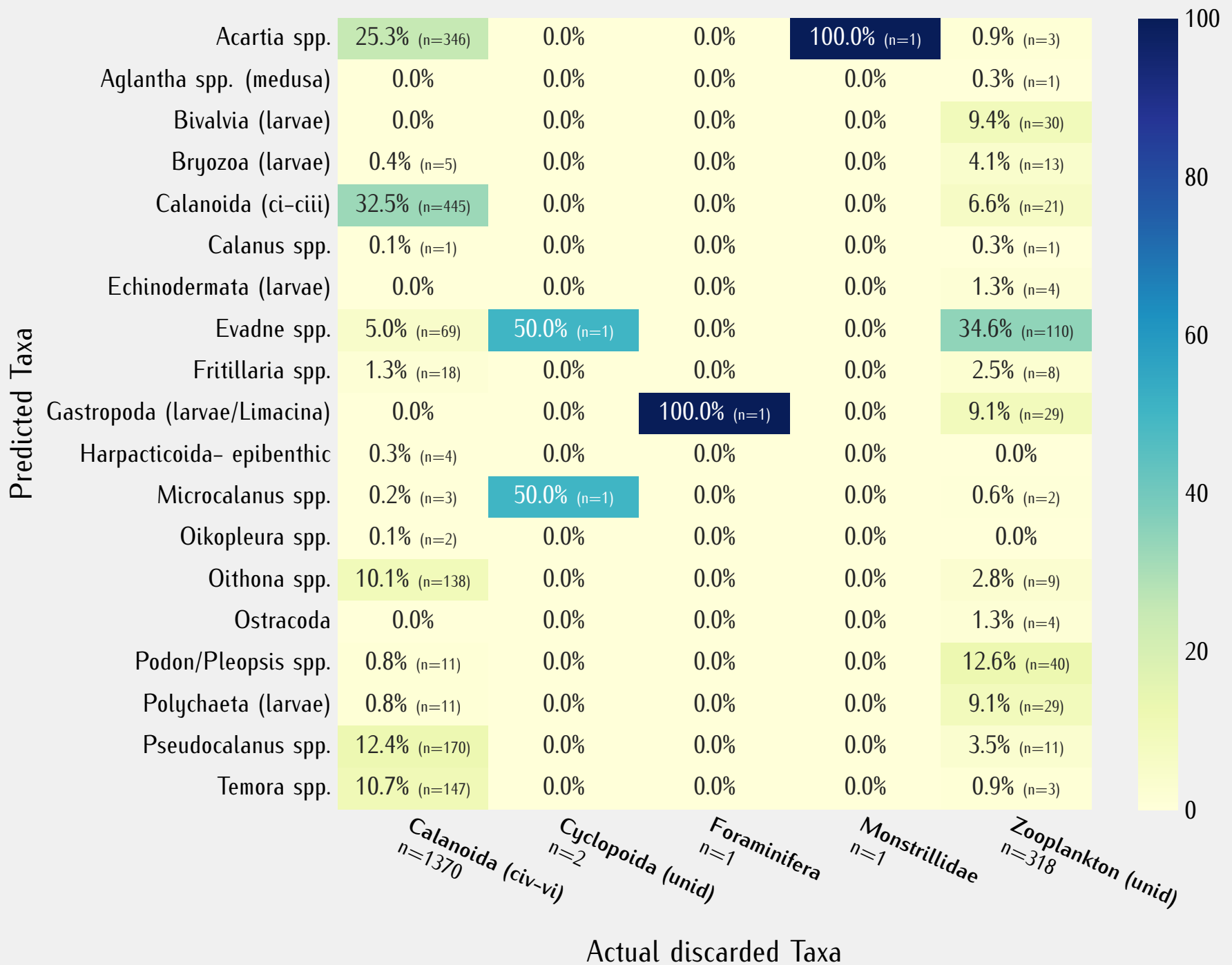NL 2021 Selected Samples prediction using NL 2021 training set,
Learning with all classes present in the selected samples, no extra training categories,
No Calanoida (civ–vi), Cyclopoida, Zooplankton classes in learning set

Use of SCN features: No
Max learning objects: Maximum objects/class
Strategy N° 1

**Confusion Matrix - In percent of Actual Value**

Actual Values / Predicted Values

| Actual \ Predicted | Acartia spp. | Evadne spp. | Temora spp. | Pseudocalanus spp. | Oithona spp. | Bryozoa (larvae) | Podon/Pleopsis spp. | Calanoida (ci-ciii) | Oikopleura spp. | Centropages spp. | Echinodermata (larvae) | Harpacticoida- epibenthic | Hydrozoa (medusa) | Gastropoda (larvae/Limacina) | Bivalvia (larvae) | Fritillaria spp. | Microcalanus spp. | Chaetognatha | Polychaeta (larvae) | Calanus spp. | Eurytemora spp. | Aglantha spp. (medusa) | Oncaeidae spp. | Sarsia spp. (medusa) | Ostracoda | Tortanus spp. | Decapoda-non brachyura (larvae) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Acartia spp. | 73% | <1% | 7% | 8% | 3% | | 8% | | <1% | <1% | <1% | | | <1% | <1% | | <1% | | | | | | | | | | |
| Evadne spp. | | 94% | <1% | <1% | <1% | <1% | 2% | 1% | | <1% | | | <1% | <1% | <1% | | <1% | | | | | | | | | | |
| Temora spp. | 14% | 2% | 56% | 9% | 2% | | <1% | 17% | | | <1% | | | | <1% | | | | | | | | | | | | |
| Pseudocalanus spp. | 20% | | 13% | 58% | <1% | | | 8% | | | <1% | | | | <1% | | <1% | | | | | | | | | | |
| Oithona spp. | 11% | 1% | <1% | | 79% | <1% | | 4% | | <1% | | | 3% | | | | | | | | | | | | | | |
| Bryozoa (larvae) | | 39% | | | | 50% | <1% | 3% | | 2% | <1% | | 2% | | 1% | <1% | | <1% | | | | | | | | | |
| Podon/Pleopsis spp. | 1% | 15% | 19% | 2% | | <1% | 19% | 18% | | <1% | | | | | <1% | 1% | | 23% | | | | | | | | | |
| Calanoida (ci-ciii) | 11% | 11% | 11% | 7% | 4% | <1% | 6% | 43% | | | | | | 5% | | | <1% | 2% | | | | | | | | | |
| Oikopleura spp. | | | 3% | 3% | 2% | <1% | | <1% | 63% | | <1% | | | 24% | | <1% | | 2% | | | | | | | | | <1% |
| Centropages spp. | 64% | | 7% | 2% | | | | 2% | 23% | | | | | | | | 1% | | | | | | | | | 1% | |
| Echinodermata (larvae) | 4% | | | 18% | | 2% | 2% | 2% | | 22% | | | 48% | | | 2% | | | | | | | | | | | |
| Harpacticoida- epibenthic | 21% | | 6% | 9% | 9% | | | 15% | | | 40% | | | | | | | | | | | | | | | | |
| Hydrozoa (medusa) | | 23% | | | 2% | 4% | 4% | | 2% | | 2% | | 2% | 26% | | | | 17% | 4% | | 13% | | | | | | |
| Gastropoda (larvae/Limacina) | | 6% | | | | 13% | | | | | | | | 60% | 13% | | | 9% | | | | | | | | | |
| Bivalvia (larvae) | | | | | 5% | 5% | | | | | | | | 14% | 77% | | | | | | | | | | | | |
| Fritillaria spp. | 3% | | | 9% | | | | 3% | 3% | | 3% | | | | | 79% | | | | | | | | | | | |
| Microcalanus spp. | | 10% | 6% | 10% | | | | 55% | | | | | | | | | 13% | | 6% | | | | | | | | |
| Chaetognatha | | | | | | | | 29% | | | | | | 7% | | | | 61% | 4% | | | | | | | | |
| Polychaeta (larvae) | 5% | 15% | 5% | 5% | 5% | | | 15% | | | | | | | | | | | 45% | | | | | | 5% | | |
| Calanus spp. | 7% | | 14% | | | | | | | | | | | | | | | | | 79% | | | | | | | |
| Eurytemora spp. | 50% | | 20% | 30% | | | | | | | | | | | | | | | | | | | | | | | |
| Aglantha spp. (medusa) | | | | | | | | | 11% | | | | | | | | | | | | | 78% | | 11% | | | |
| Oncaeidae spp. | 17% | | | 17% | 17% | | | 17% | | | | 33% | | | | | | | | | | | | | | | |
| Sarsia spp. (medusa) | | | | | | | | | | | | | | | | 25% | | | 50% | | | | | 25% | | | |
| Ostracoda | | | | | 50% | | | 50% | | | | | | | | | | | | | | | | | | | |
| Tortanus spp. | 50% | | | | | | | | | | | | | | | | | | | | | | | | | 50% | |
| Decapoda-non brachyura (larvae) | | | | | | | | | | | | | | | | | | | | 100% | | | | | | | |

**Classification Report Matrix**
max available learning objects per class

| | precision | recall | f1-score |
|---|---|---|---|
| Acartia spp. (n=2490–train=5448) | 0.77 | 0.73 | 0.75 |
| Evadne spp. (n=1931–train=2845) | 0.90 | 0.94 | 0.92 |
| Temora spp. (n=1416–train=5148) | 0.67 | 0.56 | 0.61 |
| Pseudocalanus spp. (n=1044–train=4552) | 0.63 | 0.58 | 0.60 |
| Oithona spp. (n=345–train=1409) | 0.67 | 0.79 | 0.73 |
| Bryozoa (larvae) (n=248–train=119) | 0.90 | 0.50 | 0.64 |
| Podon/Pleopsis spp. (n=230–train=201) | 0.40 | 0.19 | 0.26 |
| Calanoida (ci-ciii) (n=130–train=3713) | 0.08 | 0.43 | 0.14 |
| Oikopleura spp. (n=115–train=761) | 0.85 | 0.63 | 0.72 |
| Centropages spp. (n=88–train=40) | 0.95 | 0.23 | 0.37 |
| Echinodermata (larvae) (n=50–train=276) | 0.46 | 0.22 | 0.30 |
| Harpacticoida- epibenthic (n=47–train=136) | 0.58 | 0.40 | 0.48 |
| Hydrozoa (medusa) (n=47–train=21) | 1.00 | 0.02 | 0.04 |
| Gastropoda (larvae/Limacina) (n=47–train=110) | 0.51 | 0.60 | 0.55 |
| Bivalvia (larvae) (n=44–train=71) | 0.72 | 0.77 | 0.75 |
| Fritillaria spp. (n=34–train=3447) | 0.22 | 0.79 | 0.34 |
| Microcalanus spp. (n=31–train=80) | 0.20 | 0.13 | 0.16 |
| Chaetognatha (n=28–train=67) | 0.94 | 0.61 | 0.74 |
| Polychaeta (larvae) (n=20–train=452) | 0.09 | 0.45 | 0.16 |
| Calanus spp. (n=14–train=213) | 0.50 | 0.79 | 0.61 |
| Eurytemora spp. (n=10–train=88) | 0.00 | 0.00 | 0.00 |
| Aglantha spp. (medusa) (n=9–train=21) | 0.54 | 0.78 | 0.64 |
| Oncaeidae spp. (n=6–train=16) | 0.00 | 0.00 | 0.00 |
| Sarsia spp. (medusa) (n=4–train=4) | 0.50 | 0.25 | 0.33 |
| Ostracoda (n=2–train=6) | 0.00 | 0.00 | 0.00 |
| Tortanus spp. (n=2–train=4) | 0.33 | 0.50 | 0.40 |
| Decapoda-non brachyura (larvae) (n=1–train=7) | 0.00 | 0.00 | 0.00 |
| macro avg | 0.50 | 0.44 | 0.42 |
| weighted avg | 0.74 | 0.69 | 0.70 |

Predictions of discarded taxa from training

Relative Abundance of Top Taxonomic Instances per Sample