Use of SCN features: Yes

Max learning objects: 200 objects/class Strategy N° 7

Actual Values

## NL 2020 Selected Samples prediction using all regions training set, Learning with selected samples classes with no low global training instances, no extra training categories, No Anthoathecata, Calanoida, Copepoda, Zooplankton classes in learning set

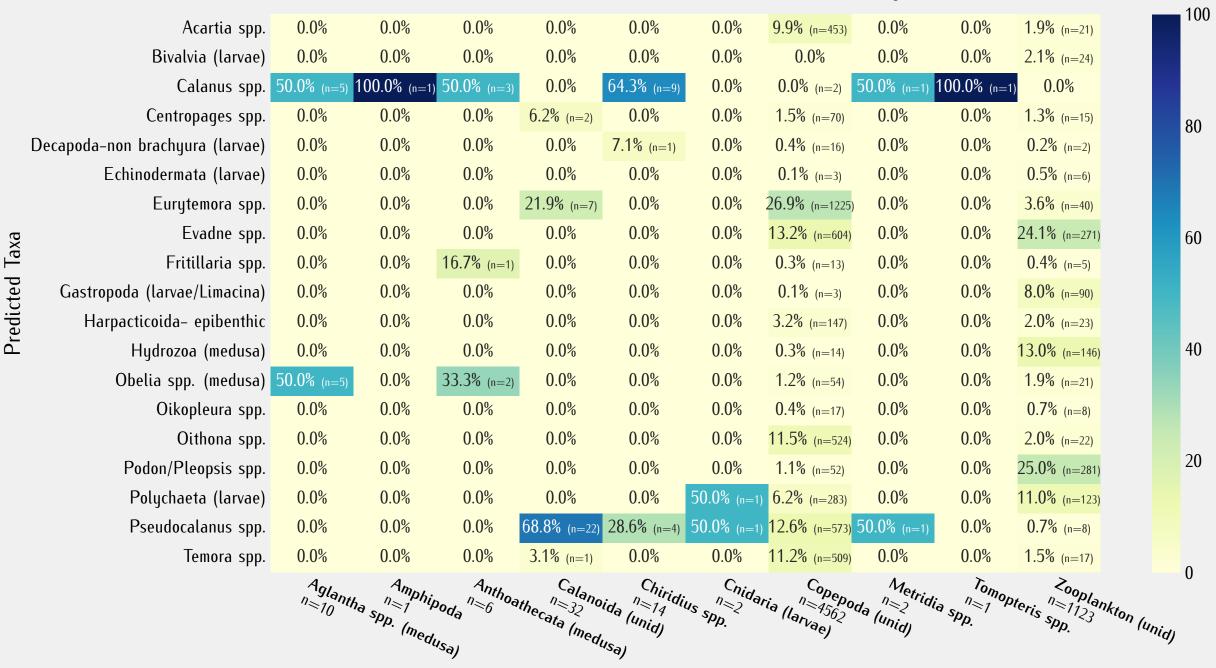
Confusion Matrix - In percent of Actual Value

| Class   | ification | Report 1 | Matrix    |
|---------|-----------|----------|-----------|
| max 200 | learning  | objects  | per class |

precision recall f1-score

|                                      | Confusion Matrix - in percent of Actual value |                |          |             |                     |             |                        |                       |                        |                |                     |          |                  | precision       | recall          | f1-score   |             |                   |                         |                |   |      |      |      |     |
|--------------------------------------|---|----------------|----------|-------------|---------------------|-------------|------------------------|-----------------------|------------------------|----------------|---------------------|----------|------------------|-----------------|-----------------|------------|-------------|-------------------|-------------------------|----------------|---|------|------|------|-----|
| Temora spp.                          | 43%   | 6%             | 2%       | 18%         | 4%                  | <1%         | 20%                    | <1%                   | 3%                     |                | <1%                 | <1%      | 1%               |                 |                 | <1%        |             | <1%               | <1%                     | 2%             | <b>Temora spp.</b> (n=18103-train=200)  | 0.74 | 0.43 | 0.54 |     |
| Acartia spp.                         | 17%   | 33%            | <1%      | 17%         | 8%                  | <1%         | 17%                    |                       | 3%                     |                | <1%                 | <1%      | 2%               | <1%             |                 | <1%        |             | <1%               | 1%                      | <1%            | Acartia spp.<br>(n=13302-train=200)   | 0.74 | 0.33 | 0.46 |     |
| Evadne spp.                          | <1%   | <1%            | 77%      | <1%         |                     | 6%          | 3%                     | <1%                   | 1%                     |                |                     | 6%       | 2%               |                 |                 |            | <1%         |                   | <1%                     | 2%             | <b>Evadne spp.</b> (n=5228-train=200)   | 0.88 | 0.77 | 0.82 |     |
| Pseudocalanus spp.                   |   | 12%            | <1%      | 43%         | 9%                  |             | 16%                    |                       | <1%                    |                |                     |          | <1%              | <1%             |                 |            |             | 2%                | <1%                     | <1%            | Pseudocalanus spp.<br>(n=3053-train=200)  | 0.19 | 0.43 | 0.26 | 1.0 |
| Centropages spp.                     |   | 2%             | Γ0.      | 2%          | 87%                 | .40.        | 4 50.                  |                       |                        |                |                     | -40.     | <1%              |                 |                 |            |             | 6%                | 004                     | 240.           | Centropages spp. (n=330-train=200)  | 0.13 | 0.87 | 0.22 |     |
| Podon/Pleopsis spp.  Eurytemora spp. |   | 8%             | 5%<br>3% | 2%<br><1%   |                     | <1%         | 15%<br>72%             |                       | 8%                     |                |                     | <1%      | <1%<br>4%        |                 |                 |            |             | 15%               | 8%                      | 31%<br><1%     | Podon/Pleopsis spp.   | 0.00 | 0.00 | 0.00 |     |
| Gastropoda (larvae/Limacina)         | 3/0   | 0/0            | 3%       | 170         |                     | 27%         | / 2/0                  | 46%                   | 0/0                    | 6%             |                     | 8%       | 7/0              |                 |                 |            |             |                   |                         | 11%            | (n=253-train=200)  Eurytemora spp.  | 0.03 | 0.72 | 0.04 | 0.0 |
| Oithona spp.                         |   | 5%             | 2%       |             |                     | _, ,        | 1%                     |                       | 85%                    |                | 1%                  |          | 3%               |                 |                 | 1%         |             |                   | 1%                      | 1%             | (n=178-train=200)   | 0.02 |      |      | 0.8 |
| Bivalvia (larvae)                    |   |                |          |             |                     |             |                        | 15%                   |                        | 80%            |                     | 4%       |                  |                 |                 |            |             |                   |                         |                | Gastropoda (larvae/Limacina)<br>(n=112-train=200)                                     |      | 0.46 | 0.50 |     |
| Oikopleura spp.                      |   |                |          |             | 1%                  |             |                        |                       |                        |                | 26%                 |          |                  | 6%              | 56%             | 7%         |             | 4%                |                         |                | Oithona spp.<br>(n=98-train=200)  | 0.00 | 0.85 | 0.15 |     |
| Hydrozoa (medusa)                    |   |                | 3%       |             | 2%                  |             |                        |                       |                        |                |                     | 14%      |                  | 8%              |                 | 2%         |             | 8%                | 55%                     | 9%             | Bivalvia (larvae)<br>(n=92-train=200)   | 0.91 | 0.80 | 0.86 | 0.6 |
| Harpacticoida- epibenthic            | 4%  | 2%             |          | 28%         | 4%                  |             | 22%                    |                       |                        |                |                     |          | 36%              |                 |                 |            |             |                   | 2%                      | 2%             | Oikopleura spp.<br>(n=70-train=200)   | 0.27 | 0.26 | 0.26 |     |
| Calanus spp.                         |   |                |          |             | 4%                  |             |                        |                       |                        |                |                     |          |                  | 64%             |                 |            |             | 32%               |                         |                | Hydrozoa (medusa)<br>(n=64-train=200)   | 0.02 | 0.14 | 0.04 |     |
| Chaetognatha                         |   |                |          | 7%          |                     |             |                        |                       |                        |                |                     |          |                  |                 | 93%             |            |             |                   |                         |                | Harpacticoida- epibenthic<br>(n=50-train=200)   | 0.03 | 0.36 | 0.05 | 0.4 |
| Fritillaria spp.                     |   | 14%            |          |             |                     |             |                        |                       | 14%                    |                | 14%                 |          |                  |                 |                 | 43%        | 14%         |                   |                         |                | Calanus spp.<br>(n=25-train=200)  | 0.44 | 0.64 | 0.52 |     |
| Echinodermata (larvae)               |   |                |          |             |                     | 20%         |                        |                       | 20%                    |                | 20%                 |          | 20%              |                 |                 | 20%        |             |                   |                         |                | Chaetognatha<br>(n=15-train=89)   | 0.26 | 0.93 | 0.41 |     |
| Decapoda-non brachyura (larvae)      |   |                |          |             |                     |             |                        |                       |                        |                |                     |          |                  | 50%             |                 |            |             | 50%               |                         |                | Fritillaria spp.<br>(n=7-train=200)   | 0.06 | 0.43 | 0.11 | 0.2 |
| Obelia spp. (medusa)                 |   |                |          |             |                     |             |                        |                       |                        |                |                     |          |                  |                 |                 |            |             |                   | 100%                    |                | Echinodermata (larvae)  | 0.00 | 0.00 | 0.00 |     |
| Polychaeta (larvae)                  | Ž.  | 4              | Ć.       | 100%        | Co.                 | Ø.          | Ŝ <sub>u</sub> .       | Ç                     | Q;                     | S <sub>i</sub> | 0;,                 | 4,       | <b>½</b>         | Ca,             | C <sub>3</sub>  | Ŝ.         | Ć.          | O <sub>R</sub>    | 0,                      | P <sub>O</sub> | (n=5-train=200)  Decapoda-non brachyura (larvae) (n=2-train=200)                      |      | 0.50 | 0.01 |     |
|                                      | iemora s                                      | Acarria<br>Op. | Epp.     | Spp. Studon | Centrope danus Spp. | Podon/      | Curytell Oleopsis Spp. | Castropo<br>Nora Spp. | Thong !                | Bivalvia Spp.  | Oikopleh<br>(lande) | Ita SOD  | Harpace (medusa) | Calanus (Coida) | Chaetoy<br>SDD. | Pritillari | Spp. ninode | Decapoole (lange) | Obelia St. Non brachyl  | Do. (mo        | Decapoda-non brachyura (larvae) (n=2-train=200)  Obelia spp. (medusa) (n=1-train=200) |      |      |      |     |
|                                      |   |                |          |             | \$1/10.             | <b>~</b> 0. | 3/1/2                  | λ,                    | Oithona Oda (lanae/lin | Pacins .       | 9                   | <b>,</b> | 1450)            | ticoida epibel  | Whice           |            |             | (lande)           | Obelia St. non brachyli | (ta (li        | (n=1-train=200)   | 0.00 | 1.00 | 0.01 | 0.0 |
|                                      |   |                |          |             |                     |             |                        |                       |                        |                |                     |          |                  |                 |                 |            |             |                   |                         | draej          | Polychaeta (larvae)<br>(n=1-train=200)  | 0.00 | 0.00 | 0.00 |     |
|                                      |   |                |          |             |                     |             |                        |                       | F                      | Predicted      | d Values            |          |                  |                 |                 |            |             |                   |                         |                | macro avg   | 0.27 | 0.50 | 0.26 |     |
|                                      |   |                |          |             |                     |             |                        |                       |                        |                |                     |          |                  |                 |                 |            |             |                   |                         |                | weighted avg  | 0.70 | 0.45 | 0.52 |     |

## Predictions of discarded taxa from training



Actual discarded Taxa

Relative Abundance of Top Taxonomic Instances per Sample Val Pred 1.0 -

