*Supplementary Materials*

**Table S1.** Contribution of dominant diatom taxa from As Murteiras to the dissimilarities between periods per reach according to SIMPER analysis. Av. Abund. = average relative abundance; Contrib.% = contribution percentage of diatom taxa. Cum.% = cumulative contribution percentage. Only taxa with a contribution >2% are represented. Diatom taxa whose changes in abundance over time contributed to differentiate between control and impact are highlighted in bold.

| **Reach** | | **Control** | | | **Reach** | | **Impact** | | |
|---|---|---|---|---|---|---|---|---|---|
| Dissimilarity (%) | | 43.2 | | | Dissimilarity (%) | | 37.4 | | |
| Taxa | Before Av. abundance | After Av. abundance | Contrib. % | Cum.% | Taxa | Before Av. abundance | After Av. abundance | Contrib. % | Cum.% |
| *Encyonema minutum* | 1.9 | 0.6 | 4.6 | 4.6 | *Achnanthidium pyrenaicum* | 1.8 | 0.6 | 5.5 | 5.5 |
| *Achnanthidium pyrenaicum* | 1.2 | 1.6 | 4.3 | 8.9 | *Eunotia minor* | 2.1 | 1.5 | 5.1 | 10.6 |
| *Cocconeis lineata* | 1.7 | 1.1 | 4.0 | 12.9 | *Achnanthidium minutissimum* | 2.5 | 2.8 | 4.3 | 14.8 |
| *Eunotia minor* | 1.9 | 1.7 | 3.8 | 16.7 | *Cocconeis euglypta* | 1.5 | 0.4 | 4.2 | 19.0 |
| *Gomphonema gracile* | 2.0 | 3.4 | 3.8 | 20.5 | *Gomphonema gracile* | 2.3 | 2.2 | 4.0 | 23.0 |
| *Nitzschia palea* | 1.1 | 1.1 | 3.3 | 23.8 | *Navicula angusta* | 1.8 | 0.6 | 4.0 | 27.0 |
| *Cocconeis euglypta* | 1.4 | 1.4 | 3.1 | 26.9 | *Pinnularia subcapitata* | 0.4 | 1.3 | 3.9 | 30.9 |
| *Eunotia incisa* | 3.2 | 2.5 | 2.9 | 29.8 | *Eunotia incisa* | 2.8 | 2.7 | 3.3 | 34.2 |
| *Eunotia subarcuatoides* | 2.7 | 1.9 | 2.8 | 32.6 | *Humidophila schmassmannii* | 0.0 | 0.9 | 3.1 | 37.3 |
| *Nitzschia dissipata* | 1.1 | 0.2 | 2.6 | 35.2 | *Eunotia subarcuatoides* | 2.9 | 2.4 | 3.0 | 40.3 |
| *Melosira varians* | 1.1 | 0.0 | 2.6 | 37.8 | *Eunotia exigua* | 1.2 | 0.5 | 2.9 | 43.2 |
| *Achnanthidium minutissimum* | 2.9 | 2.8 | 2.5 | 40.3 | *Cocconeis lineata* | 1.0 | 0.6 | 2.9 | 46.1 |
| *Navicula angusta* | 0.4 | 1.1 | 2.5 | 42.8 | *Gomphonema parvulum* | 1.0 | 1.1 | 2.8 | 48.9 |
| *Amphora pediculus* | 0.4 | 1.0 | 2.4 | 45.2 | *Surirella roba* | 1.5 | 1.4 | 2.6 | 51.5 |
| *Psammothidium daonense* | 3.7 | 4.3 | 2.3 | 47.5 | *Achnanthidium atomoides* | 0.8 | 0.3 | 2.5 | 54.0 |
| *Pinnularia subcapitata* | 0.8 | 0.8 | 2.3 | 49.8 | *Encyonema minutum* | 0.8 | 0.6 | 2.5 | 56.4 |
| *Nitzschia fonticola* | 0.9 | 0.0 | 2.2 | 51.9 | *Encyonema ventricosum* | 0.7 | 0.2 | 2.3 | 58.7 |
| *Platessa oblongella* | 3.3 | 3.6 | 2.1 | 53.9 | *Nitzschia fonticola* | 0.0 | 0.7 | 2.2 | 61.0 |
| | | | | | *Psammothidium daonense* | 4.4 | 4.3 | 2.1 | 63.1 |
| | | | | | *Fragilaria virescens* | 0.4 | 0.6 | 2.1 | 65.1 |
| | | | | | *Platessa oblongella* | 3.2 | 3.0 | 2.0 | 67.1 |

**Table S2.** Contribution of dominant diatom taxa from Ventín to the dissimilarities between periods per reach according to SIMPER analysis. Av. Abund. = average relative abundance; Contrib.% = contribution percentage of diatom taxa. Cum.% = cumulative contribution percentage. Only taxa with a contribution >2% are represented. Diatom taxa whose changes in abundance over time contributed to differentiate between control and impact are highlighted in bold.

| **Reach** | | **Control** | | | **Reach** | | **Impact** | | |
|---|---|---|---|---|---|---|---|---|---|
| Dissimilarity (%) | | 40.7 | | | Dissimilarity (%) | | 35.7 | | |
| Taxa | Before Av. abundance | After Av. abundance | Contrib. % | Cum.% | Taxa | Before Av. abundance | After Av. abundance | Contrib. % | Cum.% |
| *Achnanthidium minutissimum* | 2.5 | 1.1 | 7.0 | 7.0 | *Eunotia minor* | 2.6 | 1.4 | 6.5 | 6.5 |
| *Achnanthidium pyrenaicum* | 1.4 | 1.1 | 5.4 | 12.4 | *Achnanthidium minutissimum* | 2.7 | 1.5 | 5.6 | 12.1 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| *Pinnularia subcapitata* | 1.3 | 2.0 | 5.0 | 17.4 | *Achnanthidium pyrenaicum* | 1.4 | 0.5 | 5.3 | 17.4 |
| *Humidophila schmassmannii* | 1.5 | 2.2 | 4.9 | 22.3 | *Platessa oblongella* | 0.9 | 1.2 | 4.9 | 22.4 |
| *Gomphonema gracile* | 1.3 | 0.0 | 4.0 | 26.4 | *Navicula angusta* | 1.2 | 1.1 | 4.6 | 26.9 |
| *Eunotia intermedia* | 4.7 | 3.5 | 4.0 | 30.4 | *Iconella linearis* | 0.6 | 1.3 | 4.6 | 31.5 |
| *Platessa oblongella* | 1.5 | 0.6 | 4.0 | 34.4 | *Humidophila schmassmannii* | 2.7 | 3.8 | 4.3 | 35.8 |
| *Cocconeis euglypta* | 1.5 | 0.8 | 4.0 | 38.4 | *Psammothidium daonense* | 4.0 | 4.9 | 3.6 | 39.5 |
| *Amphora pediculus* | 1.2 | 0.0 | 3.9 | 42.3 | *Cocconeis lineata* | 1.0 | 0.0 | 3.6 | 43.1 |
| *Eunotia minor* | 2.8 | 2.1 | 3.8 | 46.1 | *Eunotia subarcuatoides* | 3.2 | 2.3 | 3.4 | 46.5 |
| *Cocconeis lineata* | 0.8 | 0.7 | 3.4 | 49.5 | *Surirella roba* | 3.6 | 3.6 | 3.1 | 49.6 |
| *Surirella roba* | 2.6 | 2.5 | 3.3 | 52.8 | *Eunotia intermedia* | 4.9 | 4.3 | 3.0 | 52.6 |
| *Psammothidium daonense* | 4.7 | 5.6 | 2.7 | 55.5 | *Pinnularia subcapitata* | 1.9 | 2.2 | 3.0 | 55.6 |
| *Eunotia incisa* | 2.0 | 2.4 | 2.7 | 58.2 | *Eunotia tenella* | 1.0 | 0.2 | 2.9 | 58.5 |
| *Encyonema minutum* | 0.7 | 0.5 | 2.6 | 60.8 | *Luticola goeppertiana* | 0.8 | 0.0 | 2.8 | 61.3 |
| *Eunotia subarcuatoides* | 3.4 | 2.7 | 2.6 | 63.4 | *Brachysira brebissonii* | 0.0 | 0.7 | 2.4 | 63.7 |
| *Planothidium lanceolatum* | 0.9 | 0.0 | 2.5 | 65.9 | *Gomphonema parvulum* | 0.6 | 0.5 | 2.3 | 66.0 |
| *Eunotia exigua* | 0.8 | 0.4 | 2.5 | 68.4 | *Gomphonema pumilum* | 0.7 | 0.0 | 2.3 | 68.3 |
| *Cocconeis pseudolineata* | 0.6 | 0.4 | 2.0 | 70.5 | | | | | |

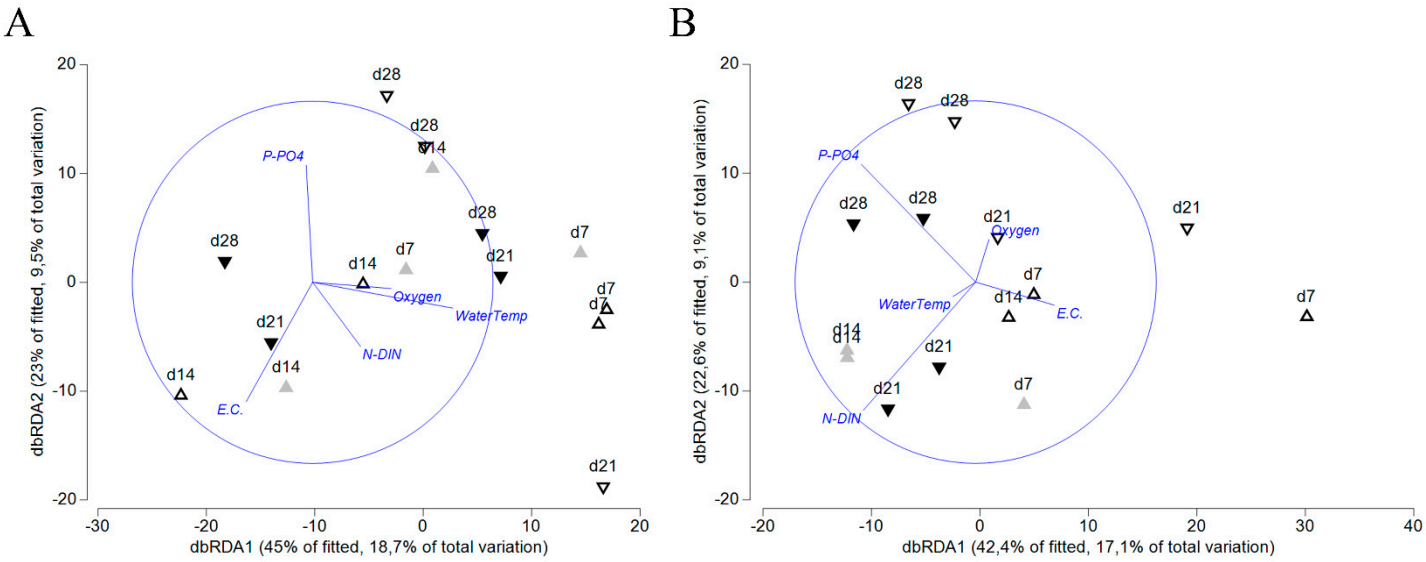


**Figure S1.** Distance-based redundancy analysis on diatom assemblages in (A) As Murteiras and (B) Ventín streams. Numbers representing collection date (d7, d14 before collections and d21, d28 after collections). Samples were differentiated by symbol and colour: Control before (open up-triangle), control after (open down-triangle), impact before (grey up-triangle), and impact after (black down-triangle).

**Table S3.** Average values of the Shannon Diversity Index.

| Stream | Reach | Before | After |
|---|---|---|---|
| As Murteiras | Control | 1.8 | 2.7 |
| | Impact | 1.9 | 3.2 |
| Ventín | Control | 2.2 | 2.5 |
| | Impact | 2.5 | 2.9 |

**Table S4.** Contribution of dominant invertebrate taxa from As Murteiras to the dissimilarities between periods per reach according to SIMPER analysis. Av. Abund. = average relative abundance; Contrib.% = contribution percentage of diatom taxa. Cum.% = cumulative contribution percentage.

Only taxa with a contribution >2% are represented. Invertebrate taxa decreasing at the impact and increasing or keeping stable at control are highlighted in bold.

| **Reach** | | **Control** | | | **Reach** | | **Impact** | | |
|---|---|---|---|---|---|---|---|---|---|
| Dissimilarity (%) | | 61.8 | | | Dissimilarity (%) | | 68.2 | | |
| Taxa | Before Av. abundance | After Av. abundance | Contrib.% | Cum.% | Taxa | Before Av. abundance | After Av. abundance | Contrib.% | Cum.% |
| *Habrophlebia* sp | 1.8 | 1.4 | 14.9 | 14.9 | *Habrophlebia* sp | 1.5 | 0.6 | 16.1 | 16.1 |
| *Leuctra* sp | 1.1 | 0.7 | 9.9 | 24.8 | *Leuctra* sp | 1.0 | 0.8 | 9.7 | 25.7 |
| *Baetis* sp | 0.7 | 0.5 | 8.2 | 32.9 | *Ecdyonurus* sp | 0.4 | 0.5 | 7.9 | 33.6 |
| *Ecdyonurus* sp | 0.6 | 0.6 | 7.2 | 40.2 | Tanypodinae | 0.4 | 0.4 | 7.8 | 41.4 |
| *Athripsodes* sp | 0.4 | 0.4 | 6.4 | 46.5 | *Baetis* sp | 0.4 | 0.5 | 7.7 | 49.1 |
| Tanypodinae | 0.4 | 0.2 | 5.4 | 51.9 | Polycentropodidae | 0.4 | 0.1 | 6.0 | 55.1 |
| Limnephilidae | 0.4 | 0.1 | 5.1 | 57.0 | *Protonemura* sp | 0.3 | 0.3 | 6.0 | 61.1 |
| *Hydracarina* sp | 0.3 | 0.2 | 4.9 | 61.9 | *Hydracarina* sp | 0.2 | 0.3 | 5.8 | 66.9 |
| Elmidae | 0.4 | 0.1 | 4.4 | 66.3 | Dytiscidae | 0.3 | 0.1 | 4.8 | 71.7 |
| Dytiscidae | 0.2 | 0.2 | 4.0 | 70.3 | *Athripsodes* sp | 0.2 | 0.1 | 4.1 | 75.8 |
| *Protonemura* sp | 0.1 | 0.1 | 2.7 | 73.0 | *Thremma* sp | 0.2 | 0.1 | 3.8 | 79.6 |
| Polycentropodidae | 0.2 | 0.1 | 2.7 | 75.7 | Elmidae | 0.1 | 0.2 | 3.0 | 82.6 |
| *Lepidostoma hirtum* | 0.1 | 0.1 | 2.3 | 78.0 | Dixidae | 0.0 | 0.2 | 2.3 | 84.9 |
| Sericostomatidae | 0.1 | 0.0 | 2.1 | 80.2 | *Micrasema* sp | 0.1 | 0.0 | 2.2 | 87.1 |
| Athericidae | | | | | Limnephilidae | 0.1 | 0.1 | 2.0 | 89.1 |
| | | | | | Hydraenidae | 0.1 | 0.0 | 1.6 | 90.6 |

**Table S5.** Contribution of dominant invertebrate taxa from Ventín to the dissimilarities between periods per reach according to SIMPER analysis. Av. Abund. = average relative abundance; Contrib.% = contribution percentage of diatom taxa. Cum.% = cumulative contribution percentage. Only taxa with a contribution >2% are represented. Invertebrate taxa whose changes in abundance over time contributed to differentiate between control and impact are highlighted in bold.

| **Reach** | | **Control** | | | **Reach** | | **Impact** | | |
|---|---|---|---|---|---|---|---|---|---|
| Dissimilarity (%) | | 71.9 | | | Dissimilarity (%) | | 72.7 | | |
| Taxa | Before Av. abundance | After Av. abundance | Contrib.% | Cum.% | Taxa | Before Av. abundance | After Av. abundance | Contrib.% | Cum.% |
| *Habrophlebia* sp | 1.1 | 1.6 | 13.0 | 13.0 | *Habrophlebia* sp | 1.1 | 1.3 | 15.2 | 15.2 |
| *Leuctra* sp | 1.0 | 0.5 | 8.5 | 21.5 | *Hydracarina* sp | 0.1 | 0.6 | 8.2 | 23.4 |
| *Hydracarina* sp | 0.6 | 0.6 | 7.3 | 28.8 | *Leuctra* sp | 0.6 | 0.4 | 7.8 | 31.1 |
| *Baetis* sp | 0.5 | 0.2 | 5.7 | 34.4 | Tanytarsini | 0.2 | 0.5 | 7.0 | 38.2 |
| Elmidae | 0.1 | 0.6 | 5.2 | 39.6 | Tanypodinae | 0.4 | 0.4 | 6.7 | 44.9 |
| Tanypodinae | 0.3 | 0.4 | 4.9 | 44.4 | Polycentropodidae | 0.4 | 0.3 | 6.3 | 51.1 |
| Orthocladiinae | 0.1 | 0.5 | 4.8 | 49.2 | Elmidae | 0.2 | 0.3 | 5.0 | 56.1 |
| *Lepidostoma hirtum* | 0.3 | 0.3 | 4.5 | 53.7 | *Ecdyonurus* sp | 0.2 | 0.2 | 4.2 | 60.4 |
| *Ecdyonurus* sp | 0.3 | 0.2 | 4.4 | 58.1 | *Polycelis* sp | 0.2 | 0.2 | 4.2 | 64.5 |
| *Protonemura* sp | 0.2 | 0.3 | 4.3 | 62.5 | Orthocladiinae | 0.0 | 0.3 | 3.8 | 68.4 |
| Polycentropodidae | 0.3 | 0.3 | 4.0 | 66.5 | *Lepidostoma hirtum* | 0.0 | 0.2 | 3.7 | 72.1 |
| Tanytarsini | 0.1 | 0.4 | 3.4 | 69.9 | *Protonemura* sp | 0.1 | 0.2 | 3.5 | 75.6 |
| Hydraenidae | 0.0 | 0.3 | 3.2 | 73.1 | *Baetis* sp | 0.1 | 0.2 | 3.5 | 79.1 |
| *Thremma* sp | 0.3 | 0.0 | 3.0 | 76.1 | *Cordulegaster* sp | 0.2 | 0.0 | 2.7 | 81.8 |
| Chironomini | 0.1 | 0.3 | 2.7 | 78.7 | *Calopteryx* sp | 0.1 | 0.1 | 2.2 | 84.0 |
| *Athripsodes* sp | 0.1 | 0.1 | 2.6 | 81.3 | Limnephilidae | 0.1 | 0.1 | 2.0 | 86.1 |
| *Polycelis* sp | 0.2 | 0.1 | 2.1 | 83.4 | | | | | |