Supplementary Material for:

Spatial distribution of Cladocera in a stratified Palaearctic lake

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Table S1: List of traits used in the archetypal analysis and categories by traits.

Trait	Modalities (trait categories)						
Biological zone	littoral zone		pelagic zone				
Macrophyte occurrence	yes		no				
Macrophyte type	emergent macrophytes			submerged macrophytes			
Habitat depth	0.7 m	1 m	3 m	5 m	6.5 m	15 m	35 m
PVI	0.07%		33%		85%		

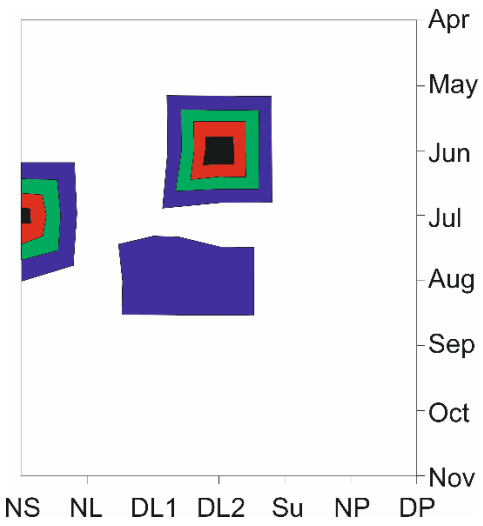
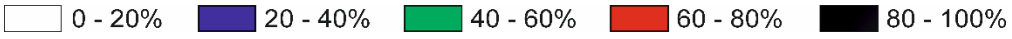


Figure S1. Spatial distribution of *Alona rectangula*



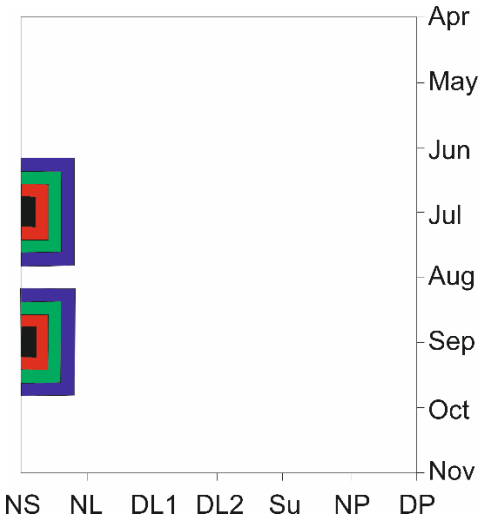


Figure S2. Spatial distribution of *Pleuroxus truncatus*

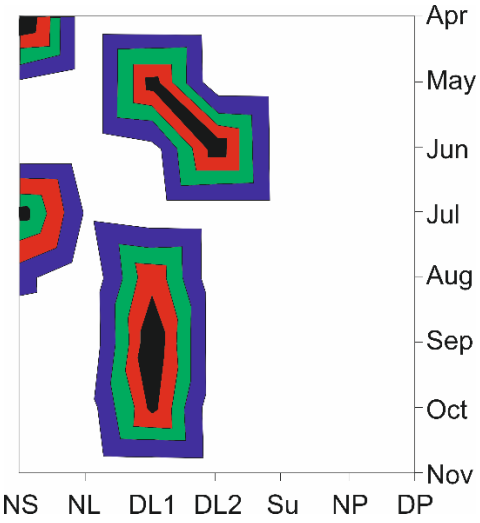
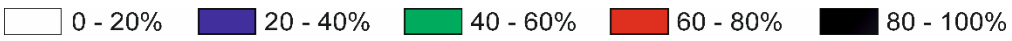


Figure S3. Spatial distribution of *Alonella excisa*



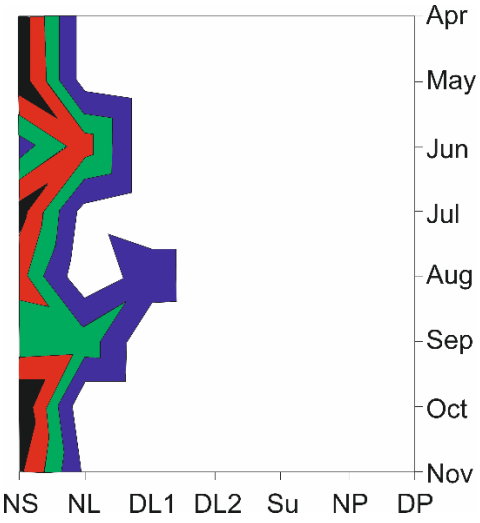


Figure S4. Spatial distribution of *Acroperus elongatus*

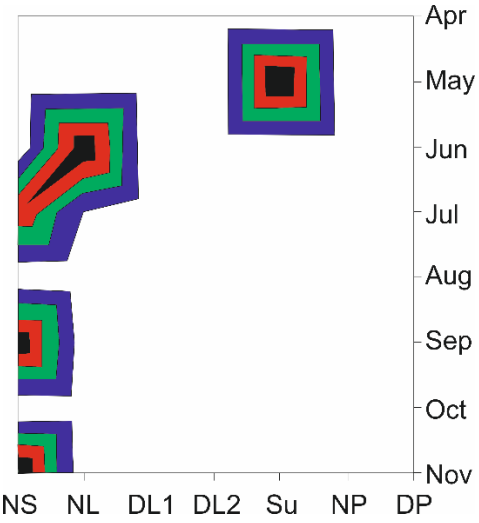
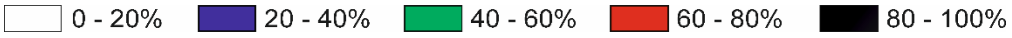


Figure S5. Spatial distribution of *Monospilus dispar*



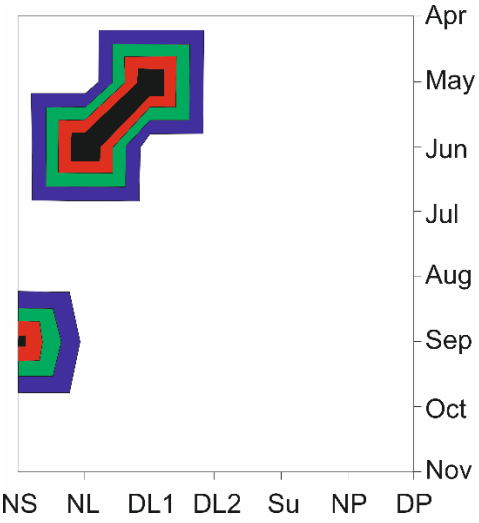


Figure S6. Spatial distribution of *Rhynhotalona falcata*

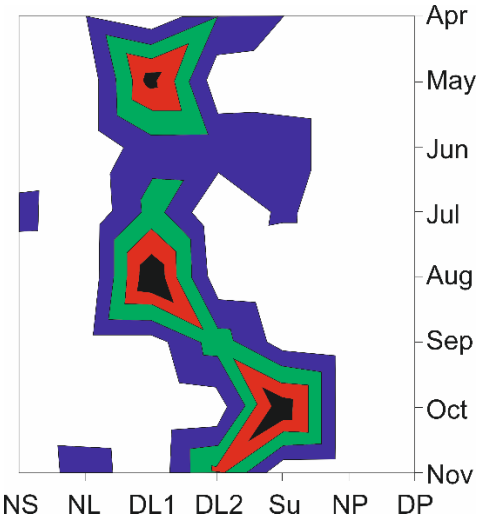
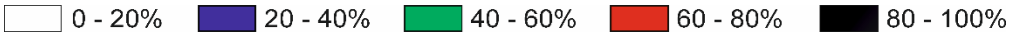


Figure S7. Spatial distribution of *Alonella nana*



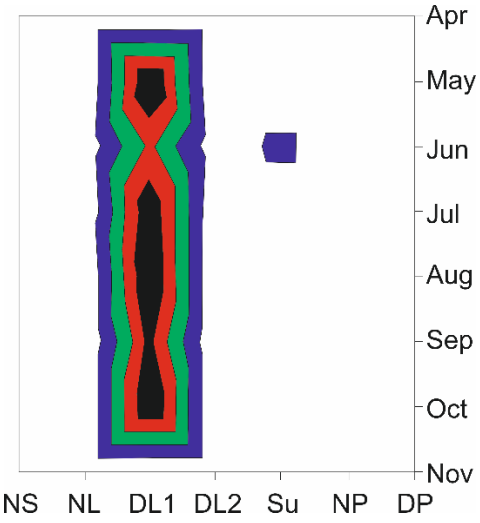


Figure S8. Spatial distribution of *Pseudochydorus globossus*

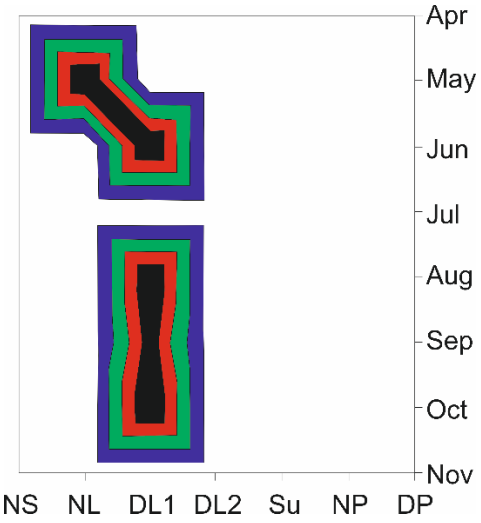
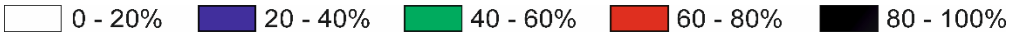


Figure S9. Spatial distribution of *Graptoleberis testudinaria*



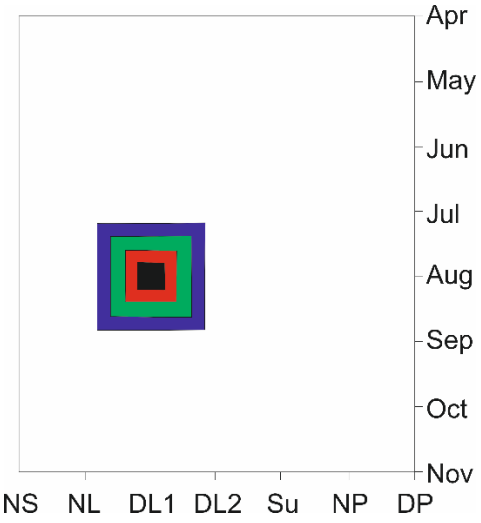


Figure S10. Spatial distribution of *Alona costata*

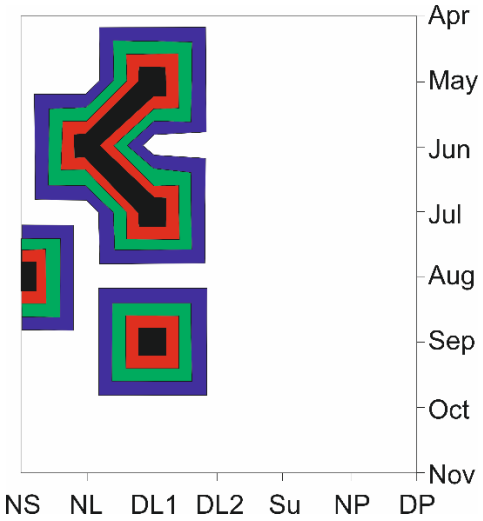
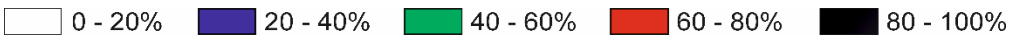


Figure S11. Spatial distribution of *Alona guttata*



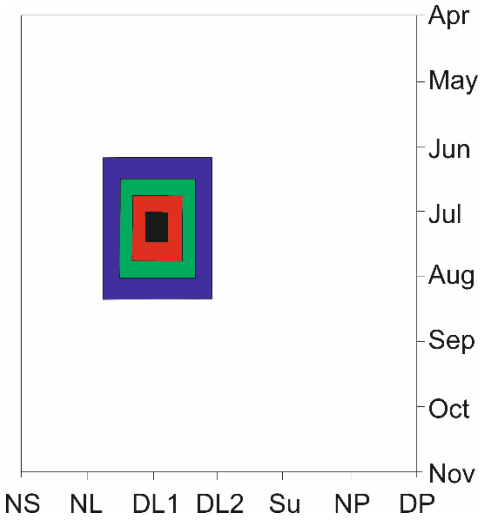


Figure S12. Spatial distribution of *Anchistropus emarginatus*

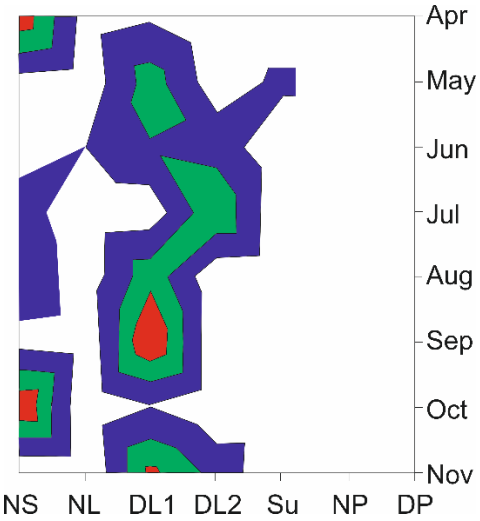
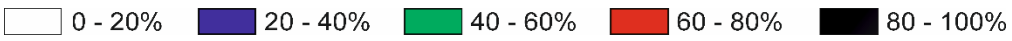


Figure S13. Spatial distribution of *Acroperus harpae*



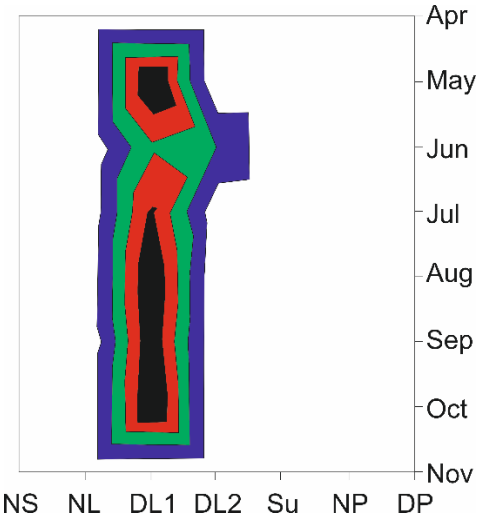


Figure S14. Spatial distribution of *Alonella exigua*

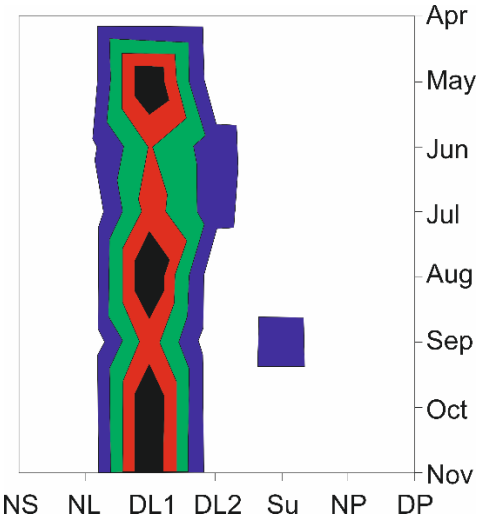
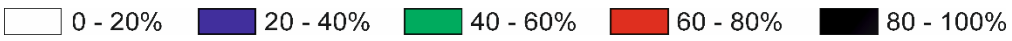


Figure S15. Spatial distribution of *Camptocercus rectirostris*



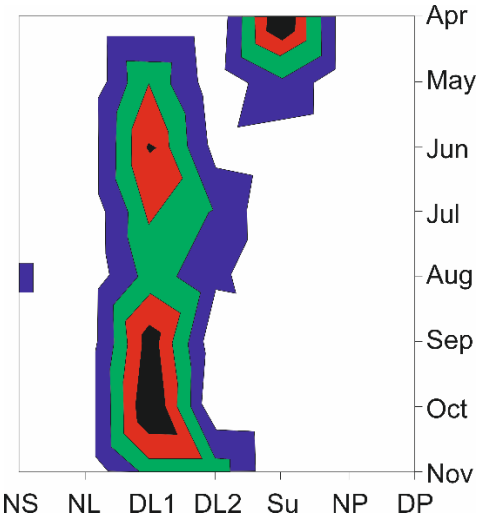


Figure S16. Spatial distribution of *Eurycercus lamellatus*

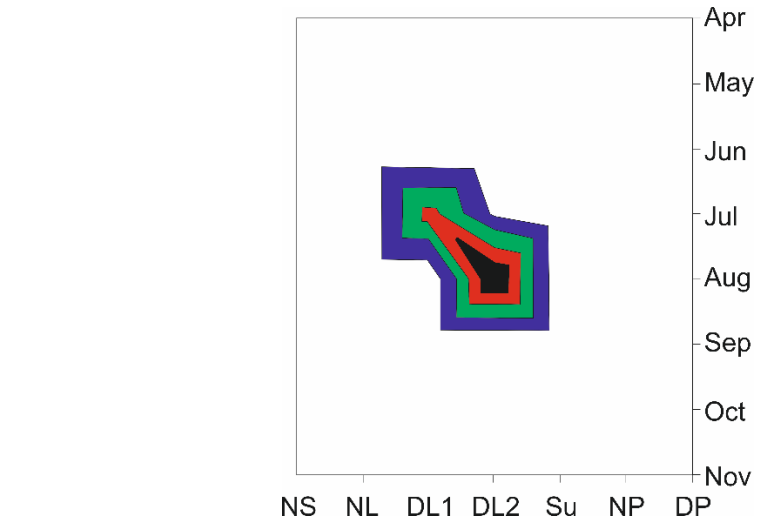
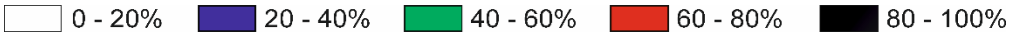


Figure S17. Spatial distribution of *Leydygia acanthocercoides*



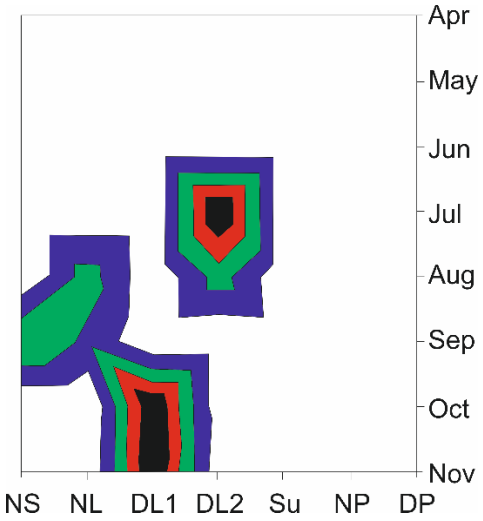


Figure S18. Spatial distribution of *Pleuroxus aduncus*

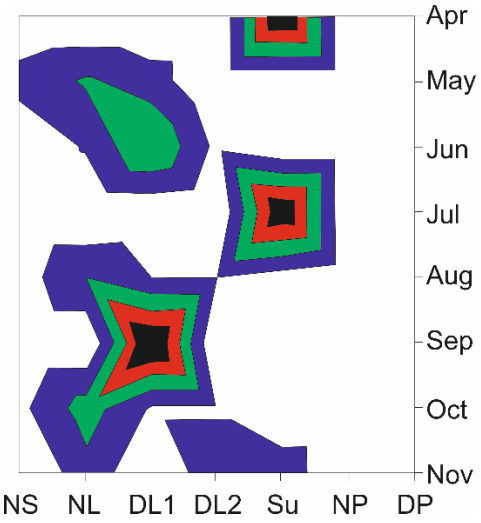
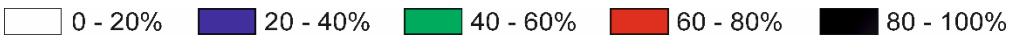


Figure S19. Spatial distribution of *Alona affinis*



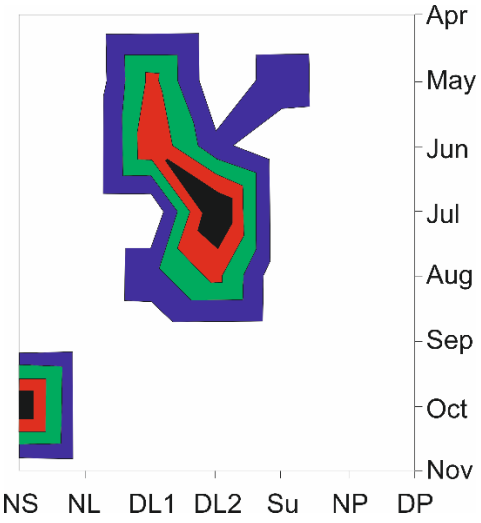


Figure S20. Spatial distribution of *Pleuroxus laevis*

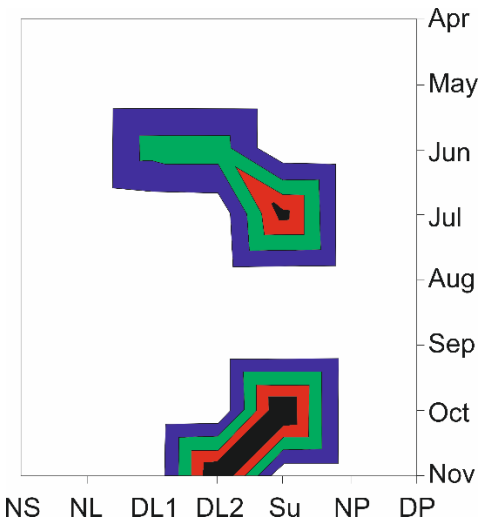
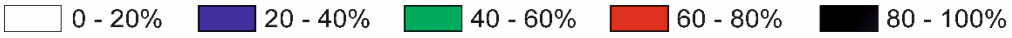


Figure S21. Spatial distribution of *Pleuroxus trigonellus*



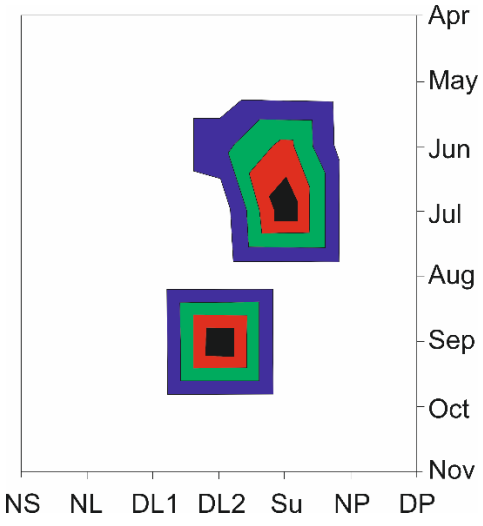


Figure S22. Spatial distribution of *Pleuroxus uncinatus*

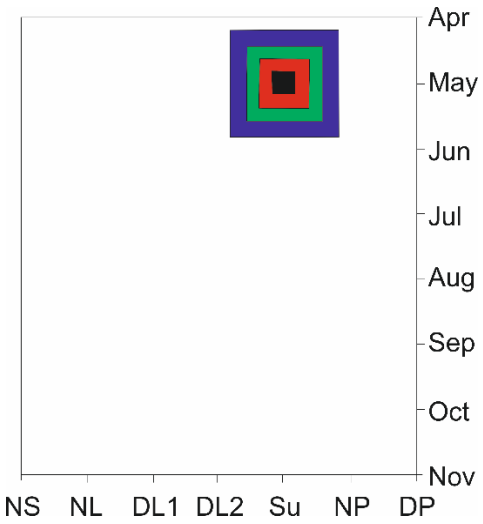
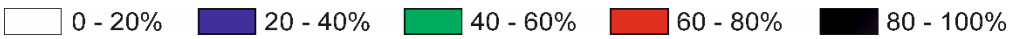


Figure S23. Spatial distribution of *Alona intermedia*



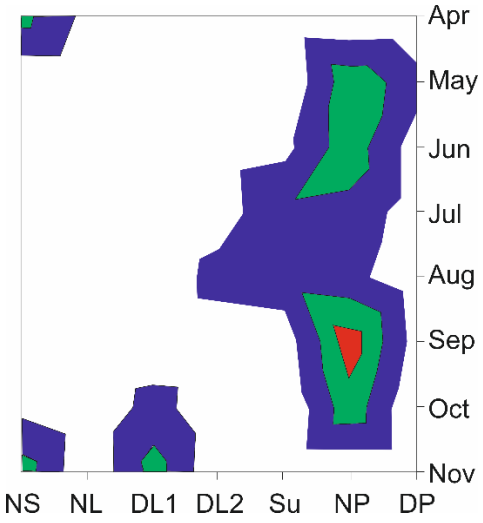


Figure S24. Spatial distribution of *Chydorus sphaericus*

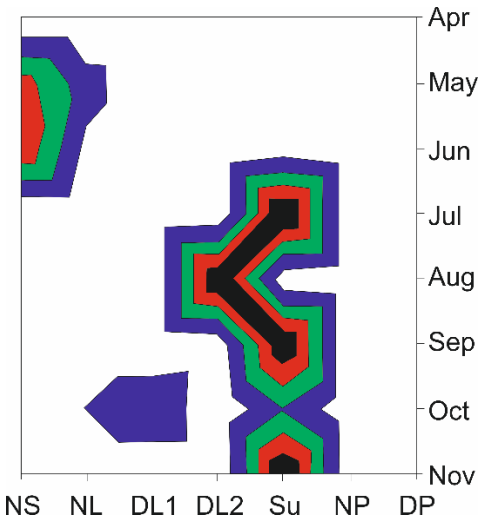


Figure S25. Spatial distribution of *Drepanothrix dentata*



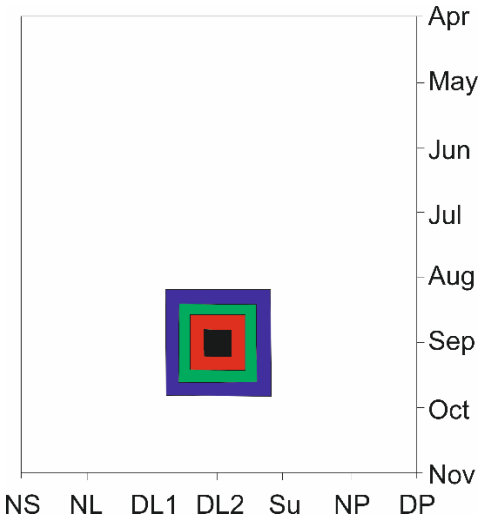


Figure S26. Spatial distribution of *Bunops serricaudata*

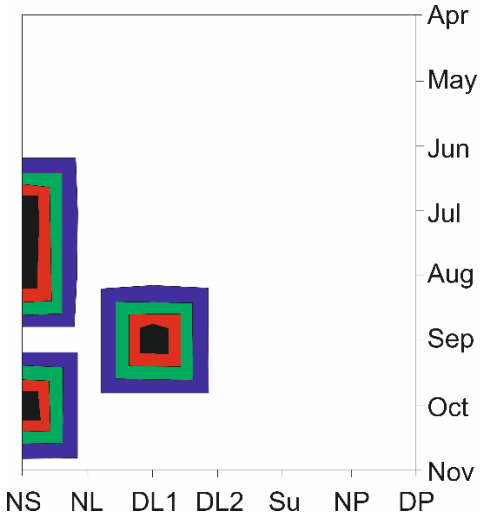
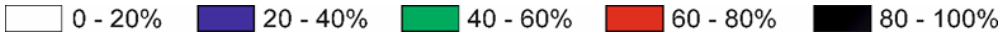


Figure S27. Spatial distribution of *Macrothrix rosea*



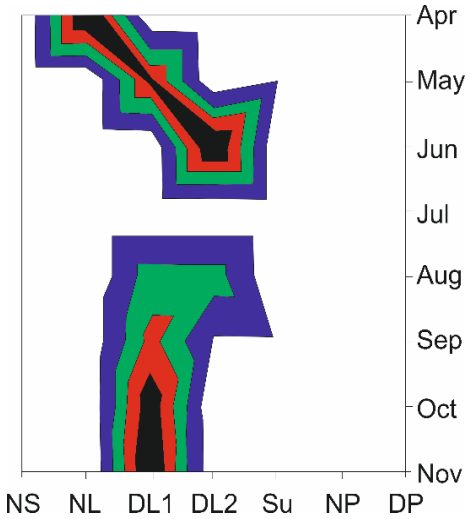


Figure S28. Spatial distribution of *Lathonura rectirostris*

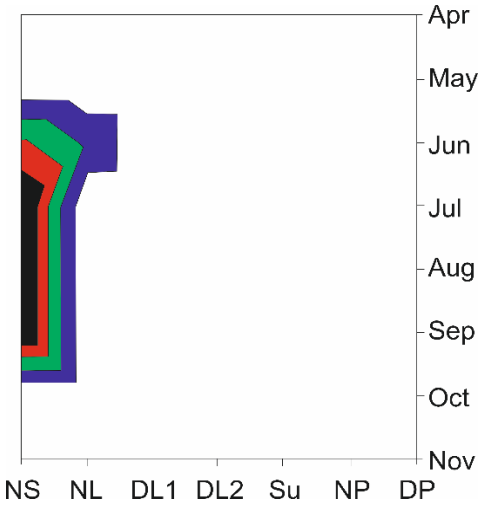
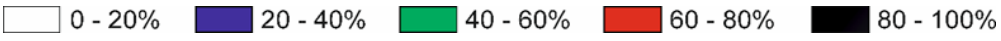


Figure S29. Spatial distribution of *Scapholeberis mucronata*



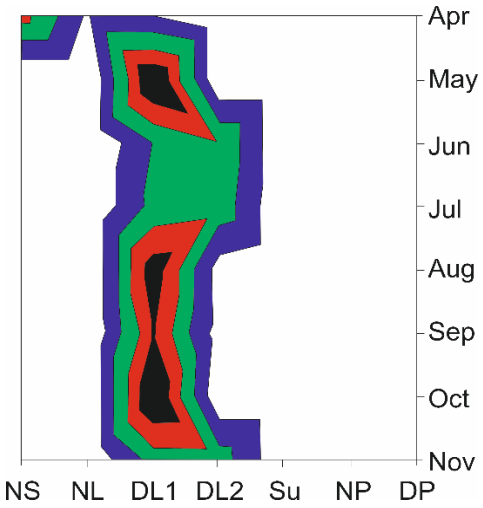


Figure S30. Spatial distribution of *Simocephalus vetulus*

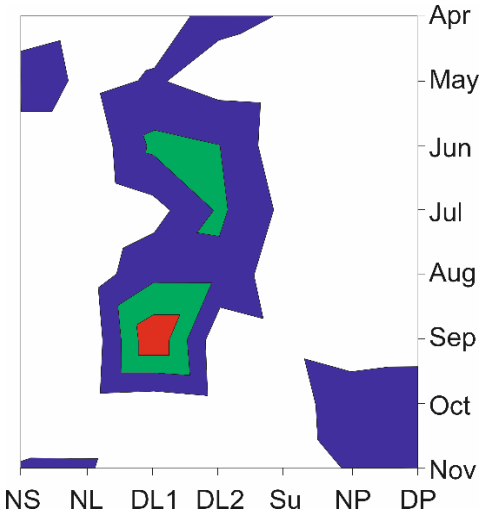
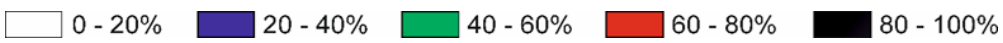


Figure S31. Spatial distribution of *Ceriodaphnia quadrangula*



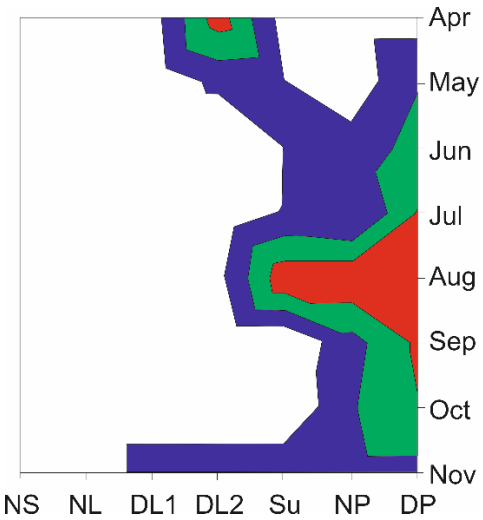


Figure S32. Spatial distribution of *Daphnia cucullata*

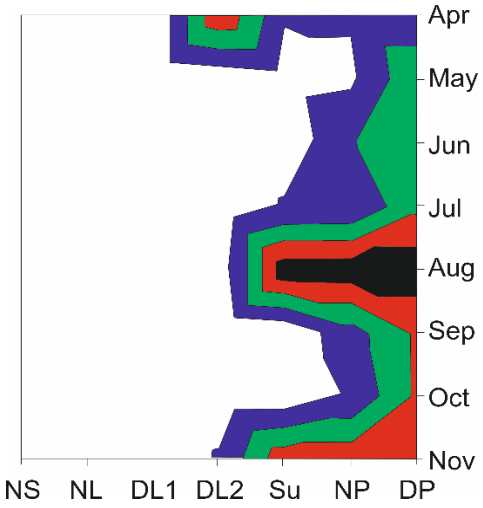
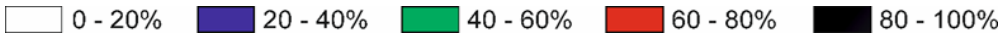


Figure S33. Spatial distribution of *Daphnia longispina*



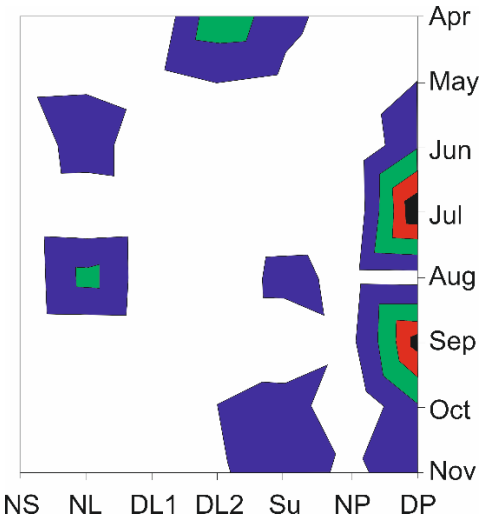


Figure S34. Spatial distribution of *Bosmina longirostris*

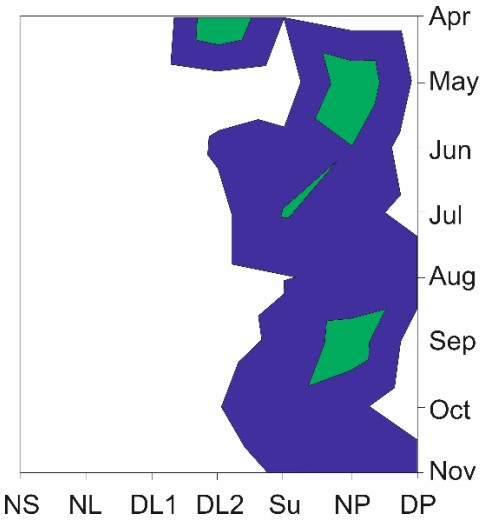
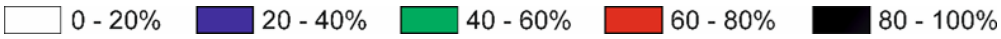


Figure S35. Spatial distribution of *Bosmina coregoni*



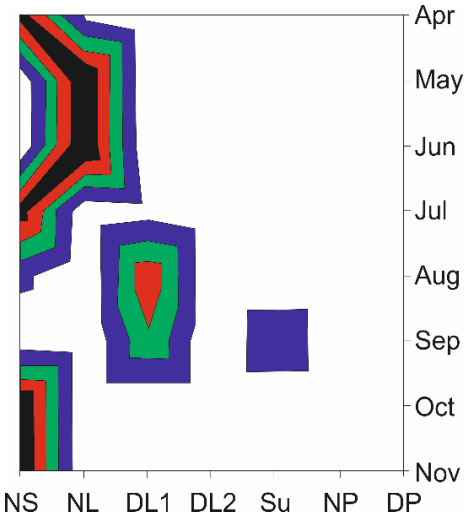


Figure S36. Spatial distribution of *Sida crystallina*

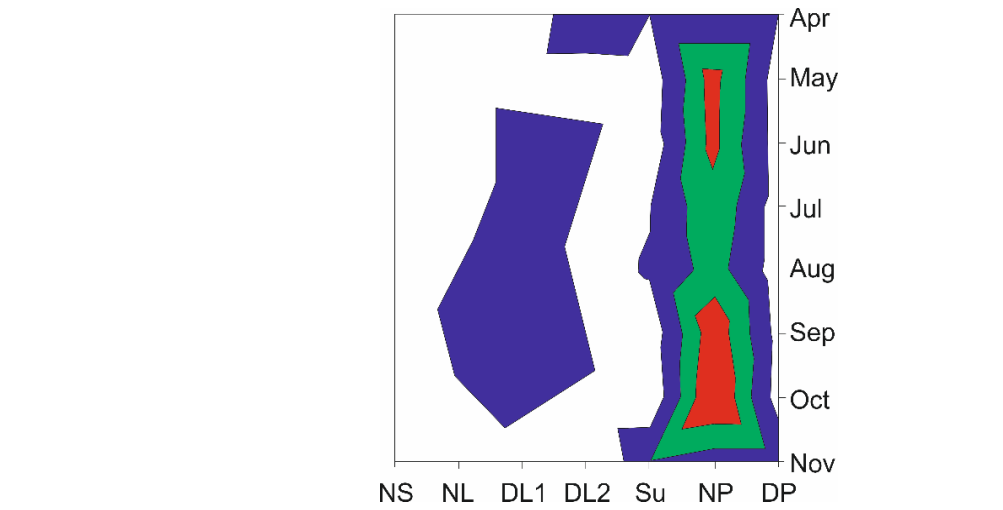
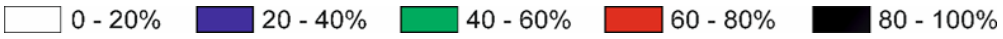


Figure S37. Spatial distribution of *Diaphanosoma brachyurum*



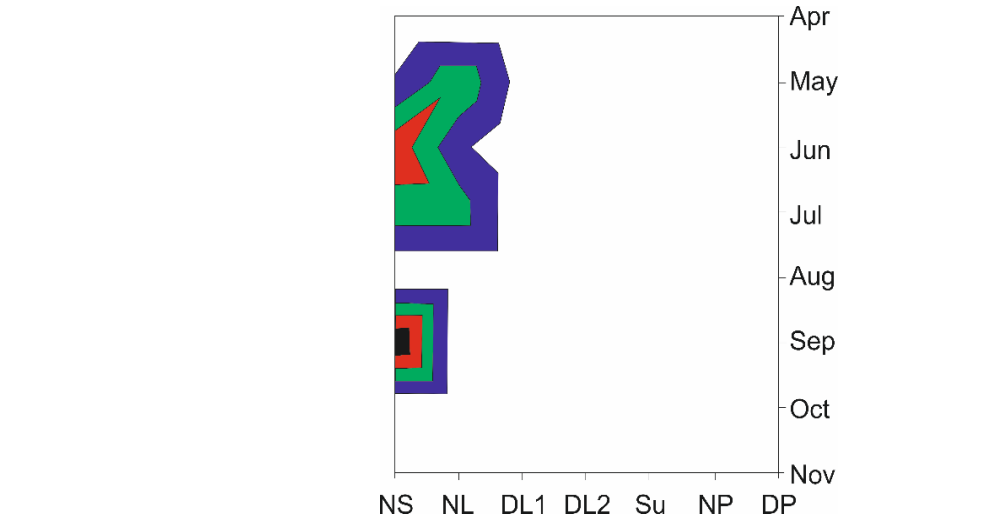


Figure S38. Spatial distribution of *Polyphemus pediculus*

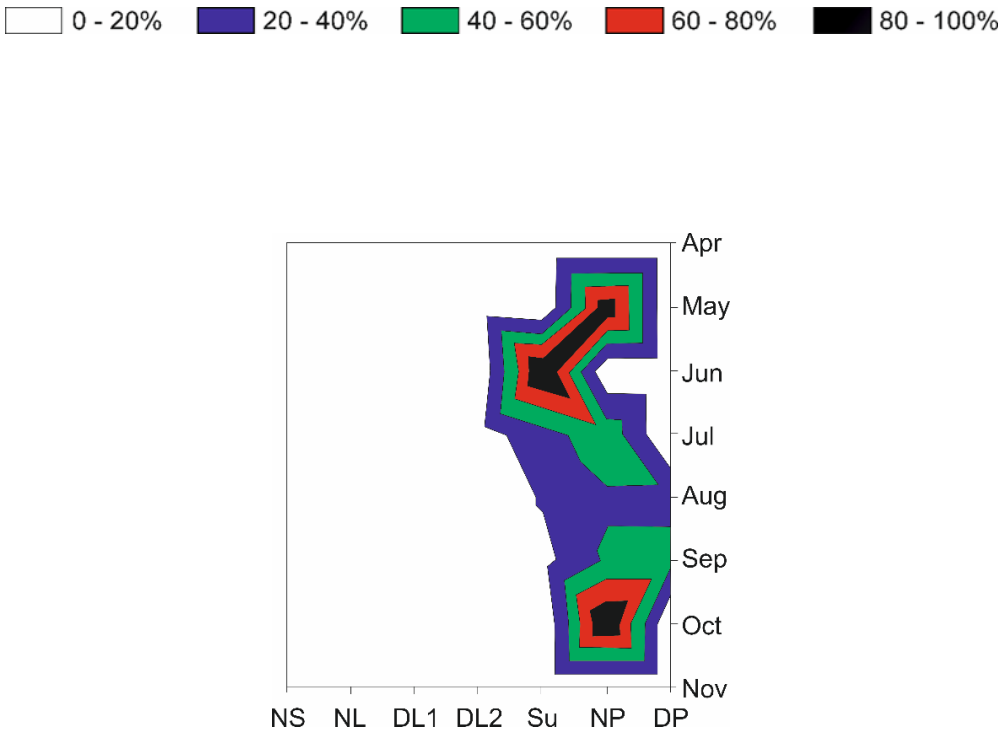


Figure S39. Spatial distribution of *Leptpdora kindtii*

Table S2: Table of the percentage that each species is characterized by each of the two archetypes. A1: Archetype 1, A2: Archetype 2.

Family/species	A1	A2		A1	A2
Chydoridae			Macrothricidae		
Acroperus elongatus (Sars, 1862)	0.007	0.000	*Bunops serricaudata* (Daday, 1888)	0.001	0.000
Acroperus harpae (Baird, 1834)	0.360	0.000	*Drepanothrix dentata* (Euren, 1861)	0.005	0.000
Alona costata Sars, 1862	0.991	0.000	*Lathonura rectirostris* (O. F. Müller, 1785)	0.625	0.003
Alonaguttata Sars, 1862	0.444	0.000	*Macrothrix rosea* (Jurine, 1820)	0.012	0.004
Alona rectangula Sars, 1862	0.354	0.049	Daphnidae		
Alonella exiqua (Lilljeborg, 1853)	0.859	0.001	*Ceriodaphnia quadrangula* (O.F. Müller, 1785)	0.335	0.019
Alonella excisa (Fischer, 1854)	0.327	0.000	*Daphnia cucullata* Sars, 1862	0.028	0.501
Alonella nana (Baird, 1850)	0.404	0.000	*Daphnia longispina* O. F. Müller, 1785	0.014	0.539
Anchistropus emarginatus Sars, 1862	0.889	0.000	*Scapholeberis mucronata* (O. F. Müller, 1785)	0.000	0.000
Alona affinis (Leydig, 1860)	0.264	0.000	*Simocephalus vetulus* (O. F. Müller, 1776)	0.687	0.000
Alona intermedia (Sars, 1862)	0.112	0.000	Bosminidae		
Camptocercus rectirostris Schoedler, 1862	0.739	0.000	*Bosminacoregoni* Baird, 1857	0.059	0.074
Chydorus sphaericus (O. F. Müller, 1785)	0.077	0.085	*Bosminalongirostris* (O. F. Müller, 1785)	0.042	0.295
Eurycercus lamellatus (O. F. Müller, 1783)	0.717	0.000	Sididae		
Graptoleberis testudinaria (Fischer, 1848)	0.920	0.000	*Diaphanosoma brachyurum* (Lièvin, 1848)	0.030	0.103
Leydygia acanthocercoides (Fischer, 1854)	0.489	0.000	*Sida crystallina* (O. F. Müller, 1776)	0.204	0.000
*Monospilus dispar*Sars, 1862	0.0002	0.000	Polyphemidae		
Pleuroxus aduncus (Jurine, 1820)	0,202	0,501	*Polyphemus pediculus* (Linnaeus, 1778)	0.000	0.000
Pleuroxus laevis Sars, 1862	0.062	0.000			
Pleuroxus trigonellus (O. F. Müller, 1785)	0.049	0.000			
Pleuroxus truncatus (O. F. Müller, 1785)	0.003	0.000			
Pleuroxus uncinatus Baird, 1850	0.007	0.000			
Pseudochydorus globossus (Baird, 1843)	0.807	0.000			
Rhynchotalona falcata (Sars, 1862)	0.010	0.000			

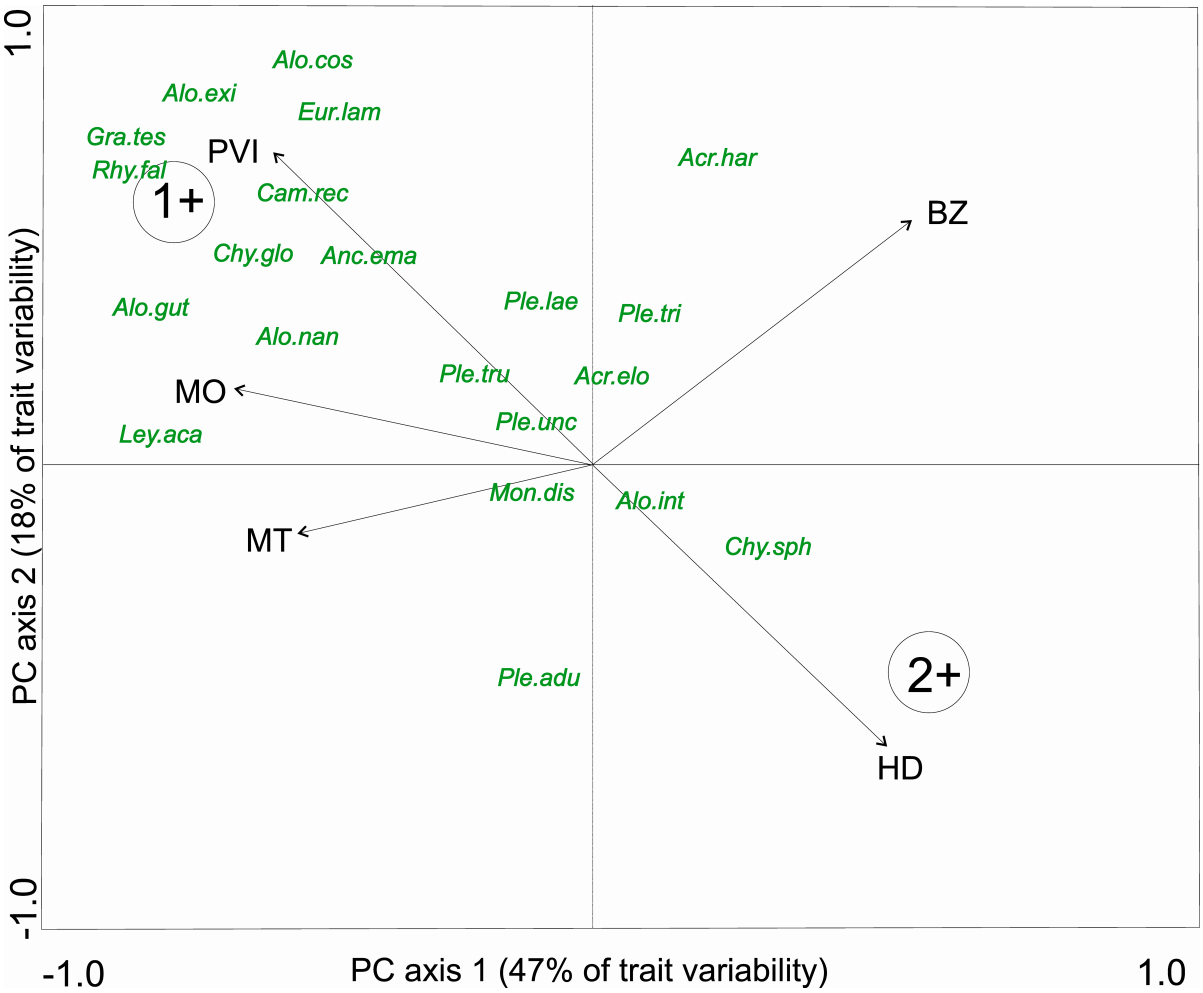


Figure S40. Biplot of the PCA presenting the distribution of Chydoridae in proportion to hypothetical archetypes. The resulting archetypes are visualized as 1+ (Archetype 1) and 2+ (Archetype 2). Species codes: *Acr.elo – Acroperus elongatus*, *Acr.har – Acroperus harpae*, *Alo.cos – Alona costata*, *Alo.gut – Alona guttata*, *Alo.rec – Alona rectangula*, *Alo.exi – Alonella exigua*, *Alo.exc – Alonella excisa*, *Alo.nan – Alonella nana*, *Anc.ema – Anchistropus emarginatus*, *Alo.aff – Alona affinis*, *Alo.int – Alona intermedia*, *Cam.rec – Camptocercus rectirostris*, *Chy.sph – Chydorus sphaericus*, *Eur.lam – Eurycercus lamellatus*, *Gra.tes – Graptoleberis testudinaria*, *Ley.aca – Leydygia acanthocercoides*, *Mon.dis – Monospilus dispar*, *Ple.adu – Pleuroxus aduncus*, *Ple.lae – Pleuroxus laevis*, *Ple.tri – Pleuroxus trigonellus*, *Ple.tru – Pleuroxus truncatus*, *Ple.unc – Pleuroxus uncinatus*, *Pse.glo – Pseudochydorus globossus*, *Rhy.fal – Rhynchotalona falcata*. Trait codes: PVI – plant volume infested, MO – macrophyte occurrence, MT – macrophyte type, BZ – biological zone, HD – habitat depth.

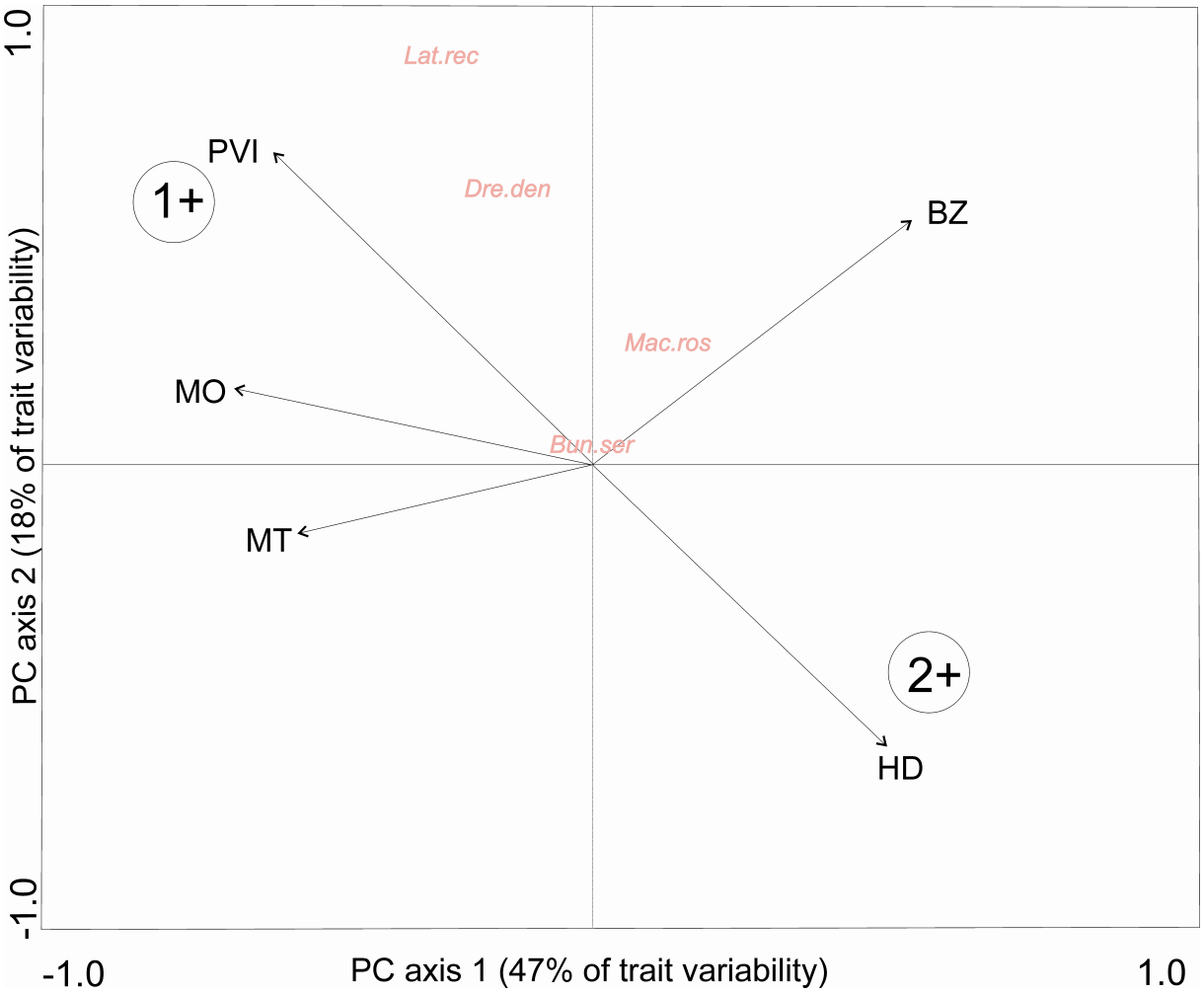


Figure S41. Biplot of the PCA presenting the distribution of Macrothricidae in proportion to hypothetical archetypes. The resulting archetypes are visualized as 1+ (Archetype 1) and 2+ (Archetype 2). Species codes: *Bun.ser* – *Bunops serricaudata*, *Dre.den* – *Drepanothrix dentata*, *Lat.rec* – *Lathonura rectirostris*, *Mac.ros* – *Macrothrix rosea*. Trait codes: PVI – plant volume infested, MO – macrophyte occurrence, MT – macrophyte type, BZ – biological zone, HD – habitat depth.

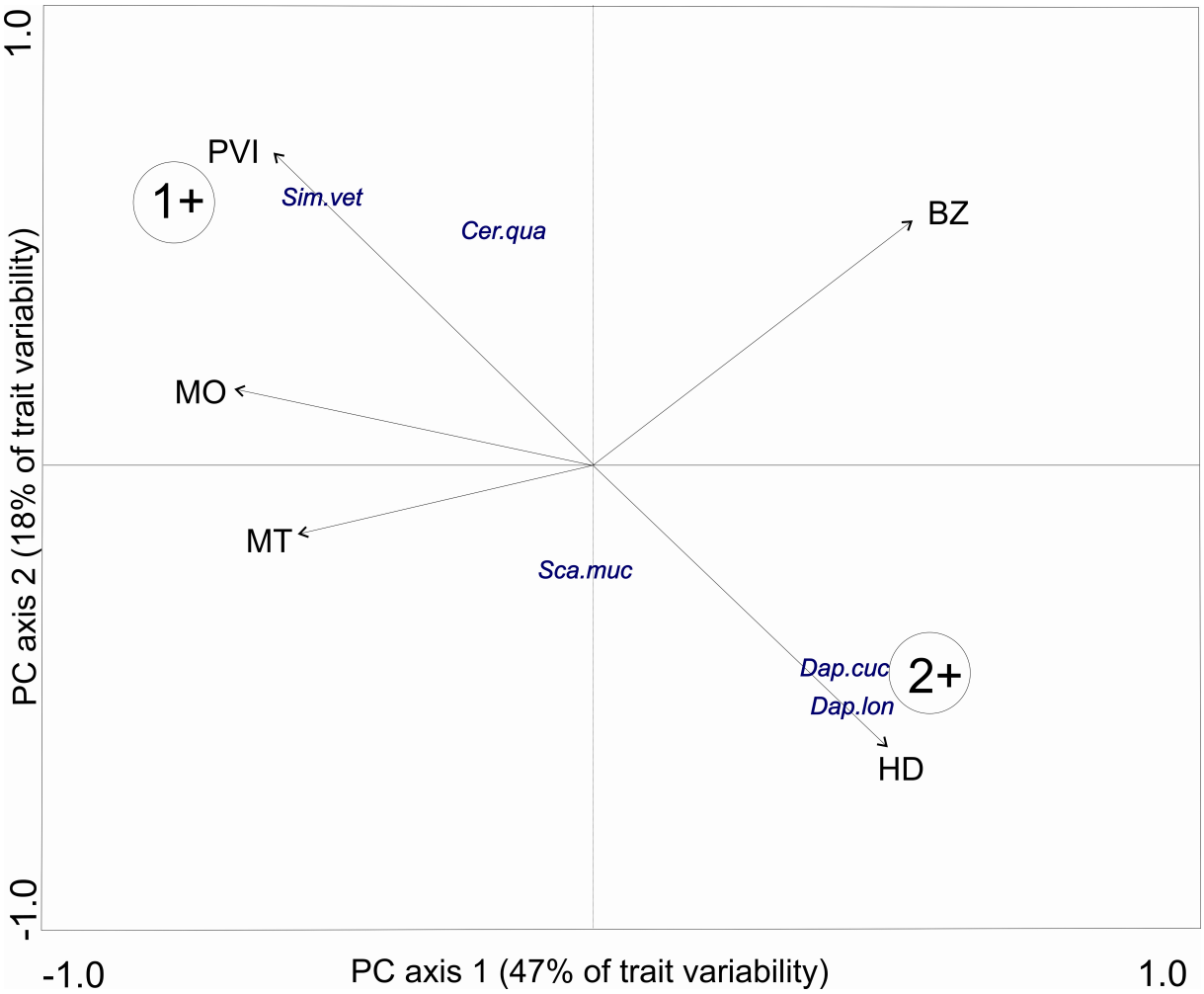


Figure S42. Biplot of the PCA presenting the distribution of Daphnidae in proportion to hypothetical archetypes. The resulting archetypes are visualized as 1+ (Archetype 1) and 2+ (Archetype 2). Species codes: *Cer.qua – Ceriodaphnia quadrangula*, *Dap.cuc – Daphnia cucullata*, *Dap.lon – Daphnia longispina*, *Sca.muc – Scapholeberis mucronata*, *Sim.vet – Simocephalus vetulus*. Trait codes: PVI – plant volume infested, MO – macrophyte occurrence, MT – macrophyte type, BZ – biological zone, HD – habitat depth.

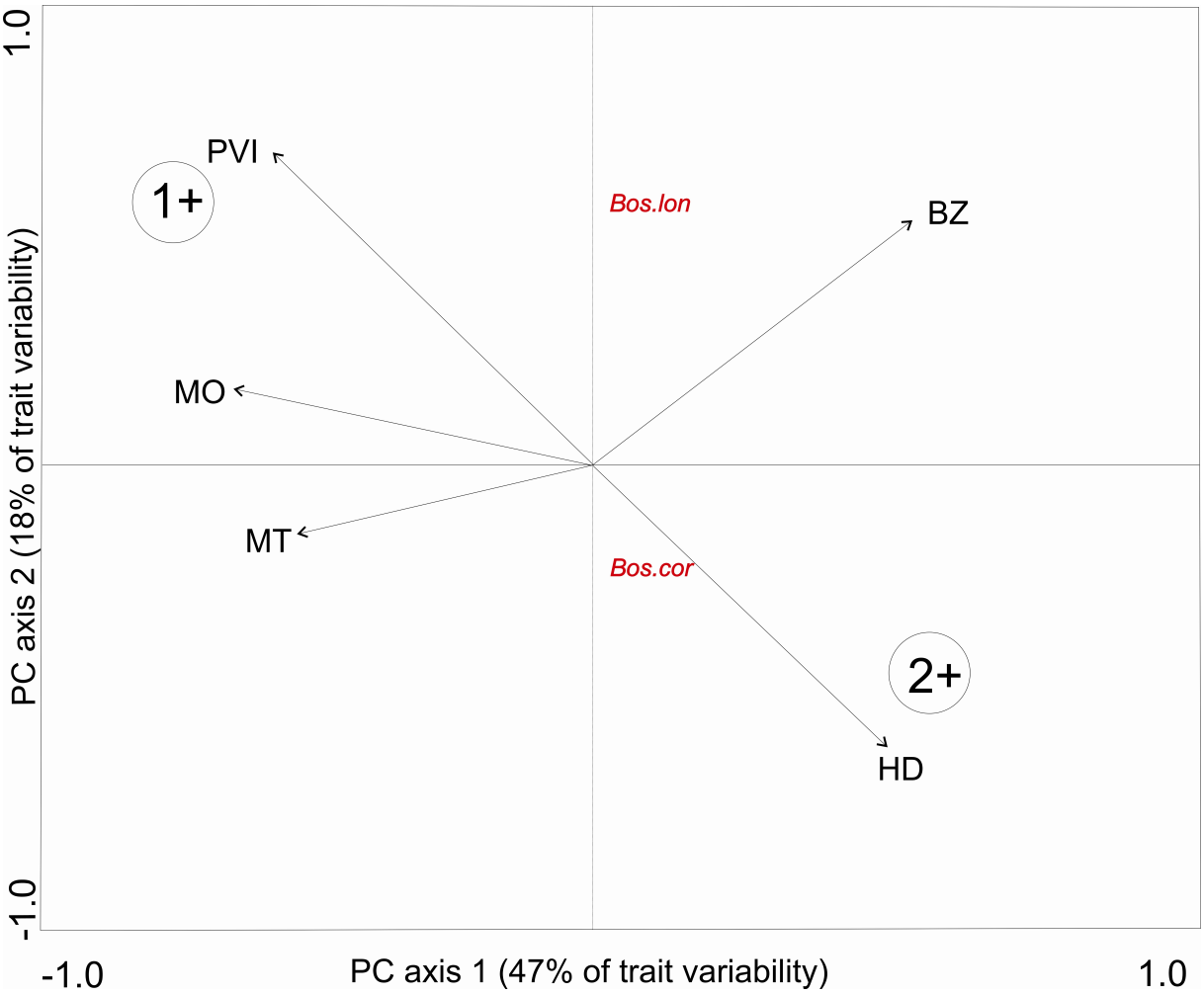


Figure S43. Biplot of the PCA presenting the distribution of Bosminidae in proportion to hypothetical archetypes. The resulting archetypes are visualized as 1+ (Archetype 1) and 2+ (Archetype 2). Species codes: *Bos.cor* – *Bosmina coregoni*, *Bos.lon* – *Bosmina longirostris*. Trait codes: PVI – plant volume infested, MO – macrophyte occurrence, MT – macrophyte type, BZ – biological zone, HD – habitat depth.

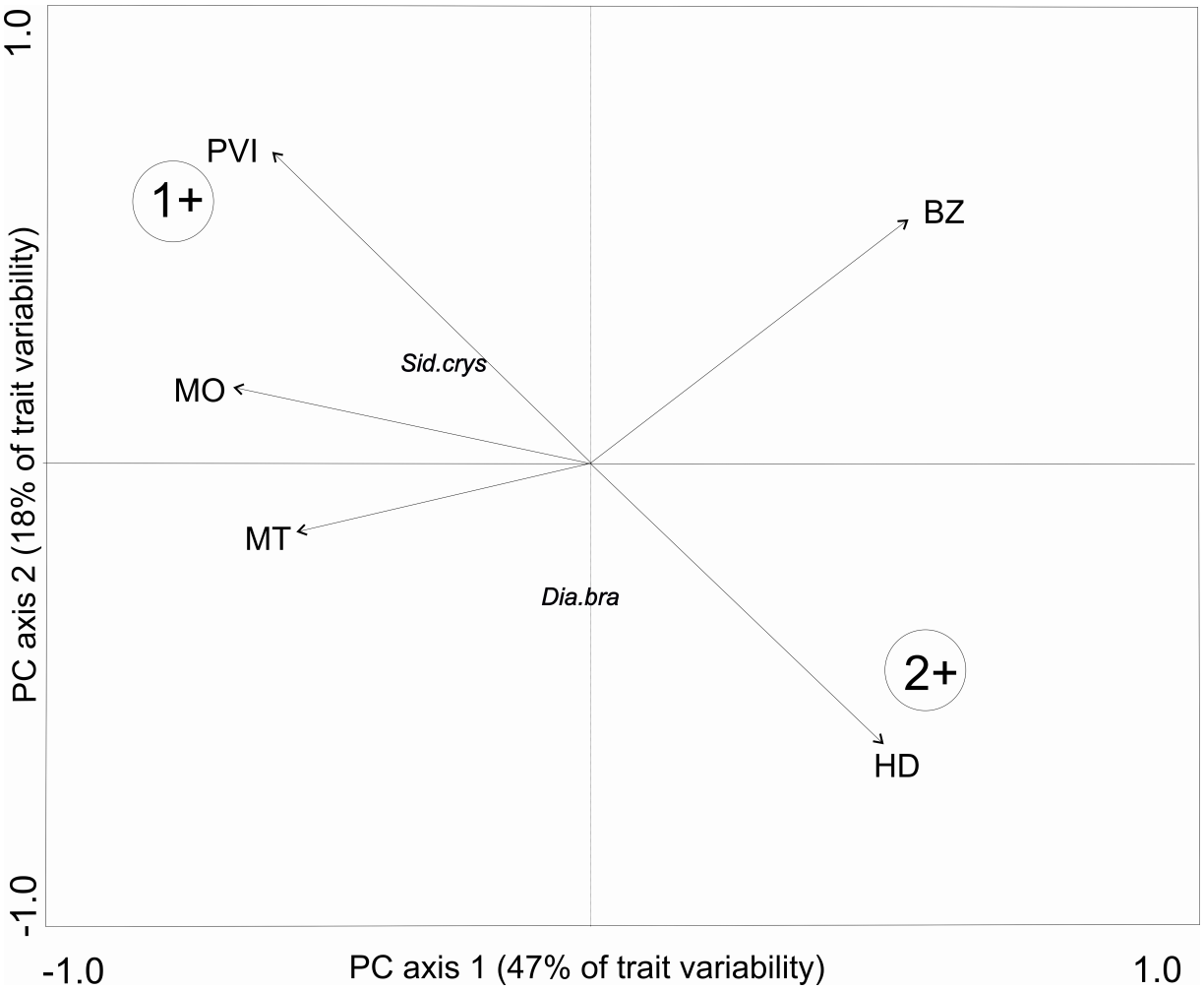


Figure S44. Biplot of the PCA presenting the distribution of Sididae in proportion to hypothetical archetypes. The resulting archetypes are visualized as 1+ (Archetype 1) and 2+ (Archetype 2). Species codes: *Dia.bra – Diaphanosoma brachyurum*, *Sid.cry – Sida crystallina*. Trait codes: PVI – plant volume infested, MO – macrophyte occurrence, MT – macrophyte type, BZ – biological zone, HD – habitat depth.

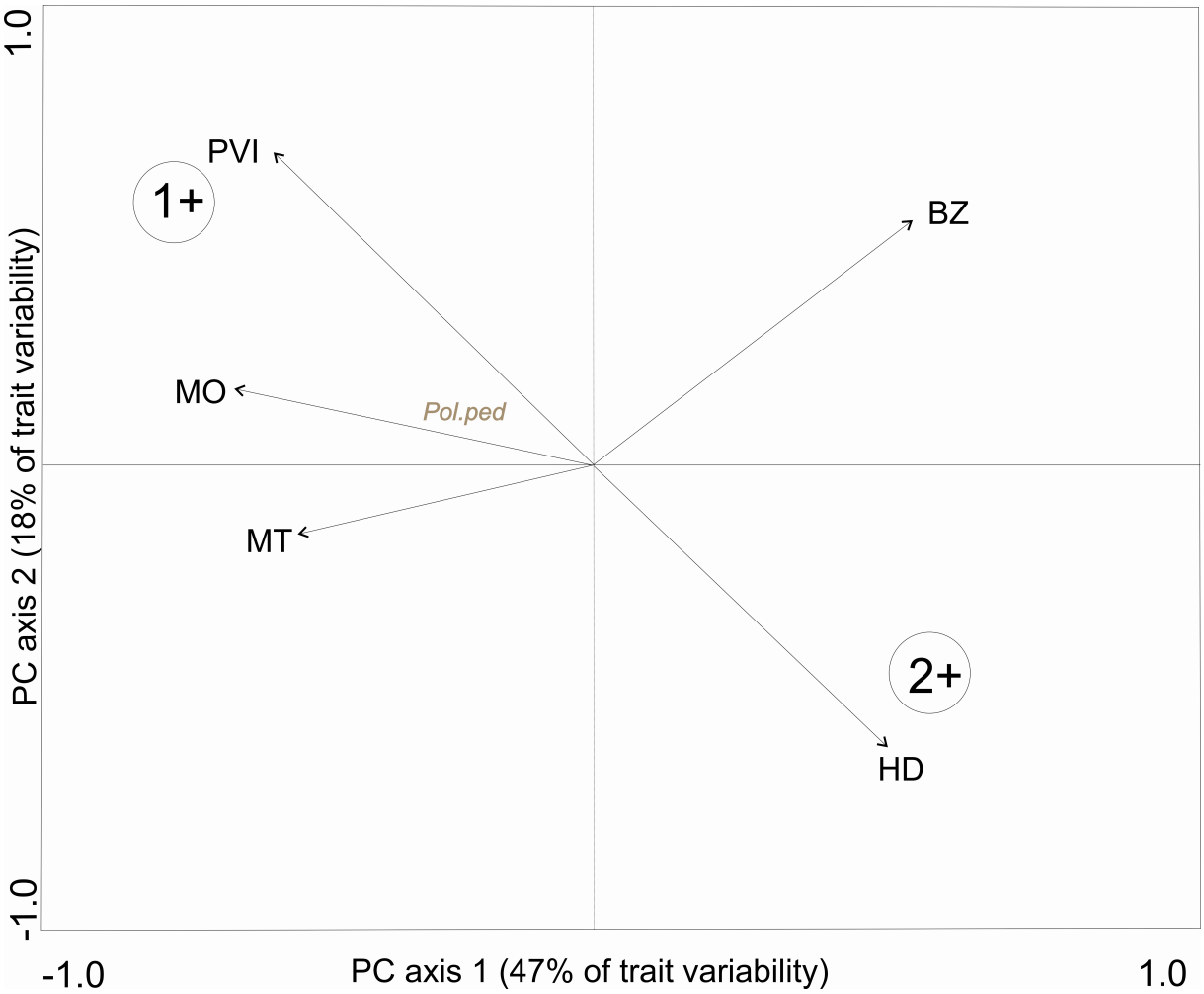


Figure S45. Biplot of the PCA presenting the distribution of Polyphemidae in proportion to hypothetical archetypes. The resulting archetypes are visualized as 1+ (Archetype 1) and 2+ (Archetype 2). Species code: *Pol.ped – Polyphemus pediculus*. Trait codes: PVI – plant volume infested, MO – macrophyte occurrence, MT – macrophyte type, BZ – biological zone, HD – habitat depth.

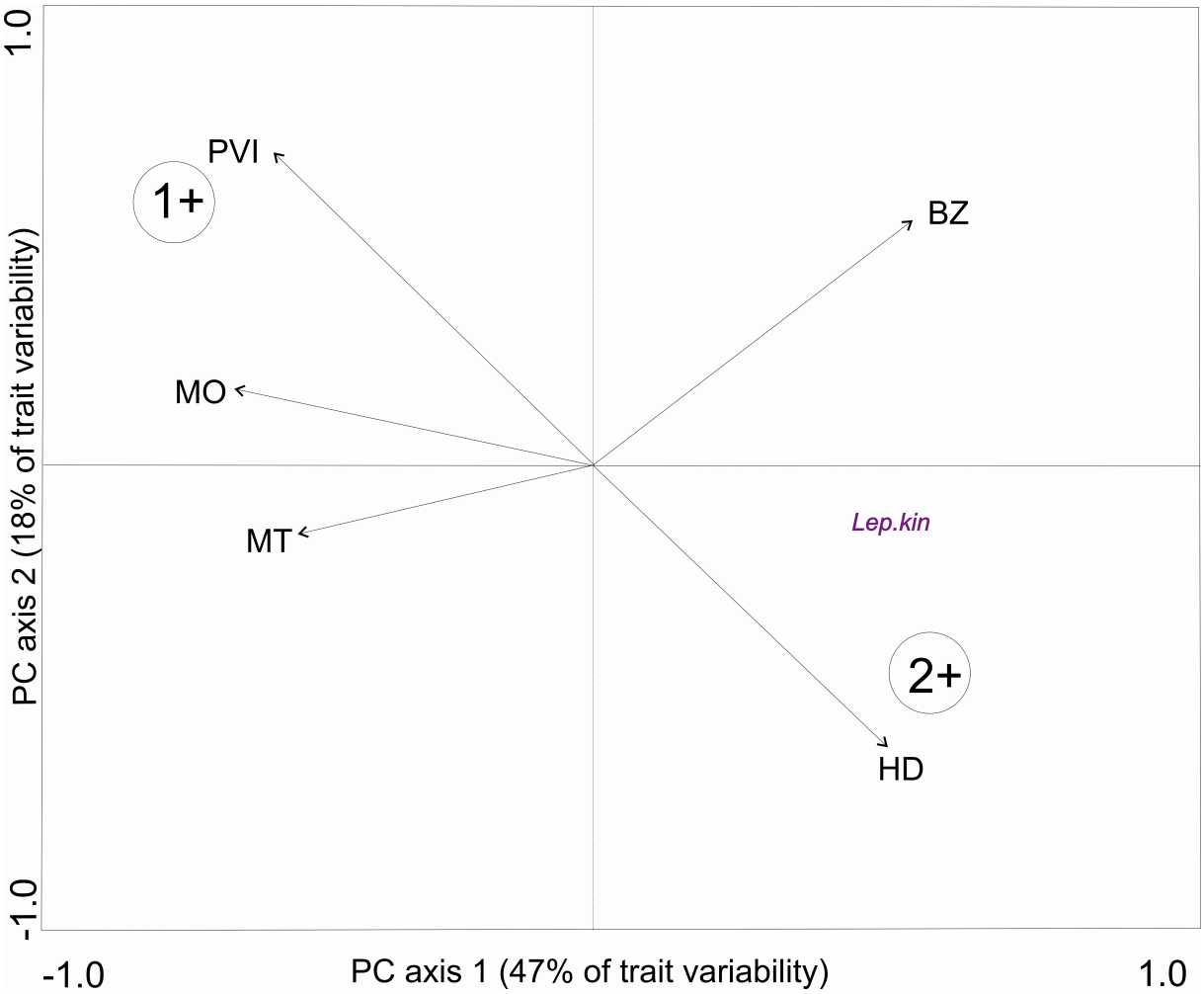


Figure S46. Biplot of the PCA presenting the distribution of Leptodoridae in proportion to hypothetical archetypes. The resulting archetypes are visualized as 1+ (Archetype 1) and 2+ (Archetype 2). Species code: Lep.kin – *Leptodora kindtii*. Trait codes: PVI – plant volume infested, MO – macrophyte occurrence, MT – macrophyte type, BZ – biological zone, HD – habitat depth.