

DISSOLVED NUTRIENTS IN NATURAL AND REWETTED PEATLANDS: A COMPARATIVE ANALYSIS

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OVERVIEW OF SAMPLING SITES

	Study site	Country	Peatland Type	Peat parent Material	Drainage Type	Rewetting Year	Monitoring Years	Peat decomposition
1	Ahlenmoor II	Germany	Bog		Natural		2012	less decomposed
2	Ahlenmoor I	Germany	Bog		Rewetted	2002	2012	moderately decomposed
3	Bramstedt I	Germany	Bog	Sphagnum	Natural		2018	less decomposed
4	Bramstedt II	Germany	Bog	Sphagnum	Natural		2018	less decomposed
5	Cross Lochs	Scotland	Bog	Sphagnum	Natural		2015	less decomposed
6	Esaekeste	Estonia	Bog	Sphagnum	Natural		2015	less decomposed
7	Ispani	Georgia	Bog	Sphagnum	Natural		2003	less decomposed
8	Koordi	Estonia	Bog	Sphagnum	Natural		2015	less decomposed
9	Likstermossen	Sweden	Bog	Sphagnum	Natural		2014	less decomposed
10	Lungsmossen	Sweden	Bog	Sphagnum	Natural		2004	less decomposed
11	Moksi	Estonia	Bog	Sphagnum	Natural		2015	less decomposed
12	Tellissaare	Estonia	Bog	Sphagnum	Natural		2015	less decomposed
13	Umbusi	Estonia	Bog	Sphagnum	Natural		2015	less decomposed
14	Vedelsoo	Estonia	Bog	Sphagnum	Natural		2015	less decomposed
15	Cross Lochs II	Scotland	Bog	Sphagnum	Rewetted	1998	2015	less decomposed
16	Munsary	Scotland	Bog	Sphagnum	Natural		2015	less decomposed
17	Bad Saarow, Seerosenteich	Germany	Poor fen	Sphagnum	Natural			less decomposed
18	Barssee Berlin	Germany	Poor fen	Sphagnum	Natural		2008	less decomposed
19	Fuchskuhle	Germany	Poor fen	Sphagnum	Natural -DryWet		2000	moderately decomposed
20	Halbe	Germany	Poor fen	Sphagnum	Natural		2010	less decomposed



	Study site	Country	Peatland Type	Peat parent Material	Drainage Type	Rewetting Year	Monitoring Years	Peat decomposition
23	Milasee	Germany	Poor fen	Sphagnum	Natural -DryWet		1999-2011	moderately decomposed
24	Mszar	Poland	Poor fen	Sphagnum	Natural		2003	less decomposed
25	Pastlingsee	Germany	Poor fen	Sphagnum	Natural		2011	less decomposed
26	Pelzlake	Germany	Poor fen	Sphagnum	Natural -DryWet		2008	moderately decomposed
27	Rosiczka	Poland	Poor fen	Sphagnum	Natural		2003	less decomposed
28	Teufelssee	Germany	Poor fen	Sphagnum	Natural -DryWet		2008	moderately decomposed
29	Zolwia Bloc	Poland	Poor fen	Sphagnum	Natural		2004	less decomposed
30	Anklam-Station I	Germany	Rich fen	Sedges-Phragmites	Rewetted	1995	2011	moderately to highly decomposed
31	Anklam-Station II	Germany	Rich fen	Sedges-Phragmites	Rewetted	1995	2011	moderately to highly decomposed
32	Beestland	Germany	Rich fen	Sedges-Phragmites	Rewetted	2003	2004-2006	moderately to highly decomposed
33	Demnitzer Muehlenfliess	Germany	Rich fen		Rewetted	2010	2012-2014	moderately to highly decomposed
34	Dollgen	Germany	Rich fen		Natural		1999- 2007	less decomposed
35	Glieningmoor	Germany	Rich fen		Rewetted	1977	2009	moderately to highly decomposed
36	Guetzkow	Germany	Rich fen	Brown mosses- Sedges	Natural		2003-2011	less decomposed
37	Hundekehlefenn	Germany	Rich fen		Natural -DryWet		2008	moderately decomposed
38	Jargelin Rand	Germany	Rich fen	Sedges-Phragmites	Rewetted	1995	2003-2017	moderately to highly decomposed
39	Jargelin Zentrum	Germany	Rich fen	Sedges-Phragmites	Rewetted	1993	2003-2008	moderately decomposed
40	Krumme Lake	Germany	Rich fen		Natural -DryWet		2008	moderately decomposed
41	Lehstsee	Germany	Rich fen		Rewetted	1999	2006-2007	moderately to highly decomposed
42	Loecknitz	Germany	Rich fen		Natural -DryWet		2007	moderately decomposed
43	Menzlin	Germany	Rich fen	Sedges-Phragmites	Rewetted	2001	2003-2017	moderately to highly decomposed



	Study site	Country	Peatland Type	Peat parent Material	Drainage Type	Rewetting Year	Monitoring Years	Peat decomposition
44	Moor am Dagowsee	Germany	Rich fen		Natural -DryWet			moderately decomposed
45	Moor am Kleinen Gollinsee	Germany	Rich fen		Rewetted	2010	2012	less decomposed
46	Paetzer	Germany	Rich fen		Natural -DryWet		2010	moderately decomposed
47	Pechsee	Germany	Rich fen		Natural		2008	less decomposed
48	Pfefferfliess	Germany	Rich fen		Rewetted	1991	1999-2015	moderately to highly decomposed
49	Rambower Moor	Germany	Rich fen	Sedges-Phragmites	Rewetted	2002	2016	moderately to highly decomposed
50	Rospuda	Poland	Rich fen		Natural		2010	moderately decomposed
51	Rzecin	Poland	Rich fen		Natural		2004	less decomposed
52	Sernitzniederung-East	Germany	Rich fen	Sedges-Phragmites	Rewetted	2015	2015	moderately to highly decomposed
53	Sernitzniederung-South	Germany	Rich fen	Sedges-Phragmites	Rewetted	2015	2015	moderately to highly decomposed
54	Sernitzniederung-West	Germany	Rich fen	Sedges-Phragmites	Rewetted	2015	2015	moderately to highly decomposed
55	SkabyRBuch	Germany	Rich fen		Rewetted	1995	2002-2007	moderately to highly decomposed
56	Toepchin N	Germany	Rich fen		Rewetted	1990	2003-2007	moderately decomposed
57	Toepchin S	Germany	Rich fen		Rewetted	1990	2010	moderately decomposed
58	Tribsch -Sued	Germany	Rich fen		Natural		2003-2007	less decomposed
59	Tribschsee-Nord	Germany	Rich fen	Brown mosses-Sedges	Natural -DryWet		2017	moderately to highly decomposed
60	Wendewiese - Sued	Germany	Rich fen	Sedges-Phragmites	Rewetted	2002	2004-2008	moderately to highly decomposed
61	Wendewiese- Nord	Germany	Rich fen	Sedges-Phragmites	Rewetted	2002	2004-2017	moderately to highly decomposed
62	Ziethen-Ost	Germany	Rich fen	Sedges-Phragmites	Rewetted	1995	2007	moderately to highly decomposed
63	Ziethen-West	Germany	Rich fen	Sedges-Phragmites	Rewetted	1996	2007	moderately to highly decomposed
64	Zarnekow	Germany	Rich fen	Sedges-Phragmites	Rewetted	2004	2004-2017	moderately to highly decomposed

SAMPLE COLLECTION

- Dialysis sampler
 - Unbiased sampling of O₂ sensitive dissolved substances
 - Samples from defined depth range

- Porewater samples from water-saturated soil
 - 0 and 0.6 m depth
 - Three replicates within 5-10 meters
 - Sampling after 14 days (equilibrium with porewater concentration)
 - Monitored for changes over of 10-20 years



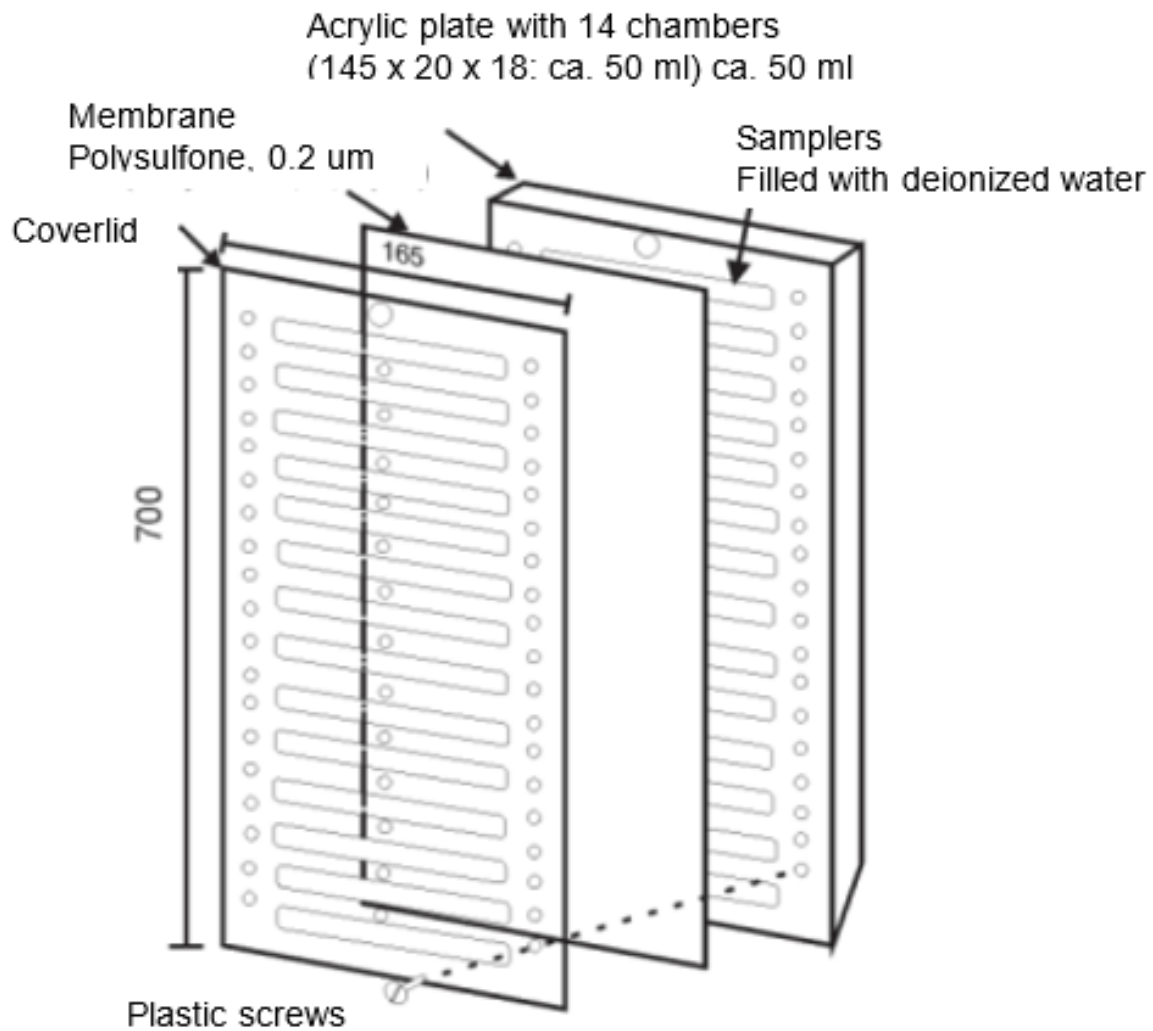


Figure 3: Structure and dimensions (in mm) of dialysis samplers - Samplers for free-flow investigations (total volume of the 14 chambers) (left); dialysis sampler installed (right)



Growing season

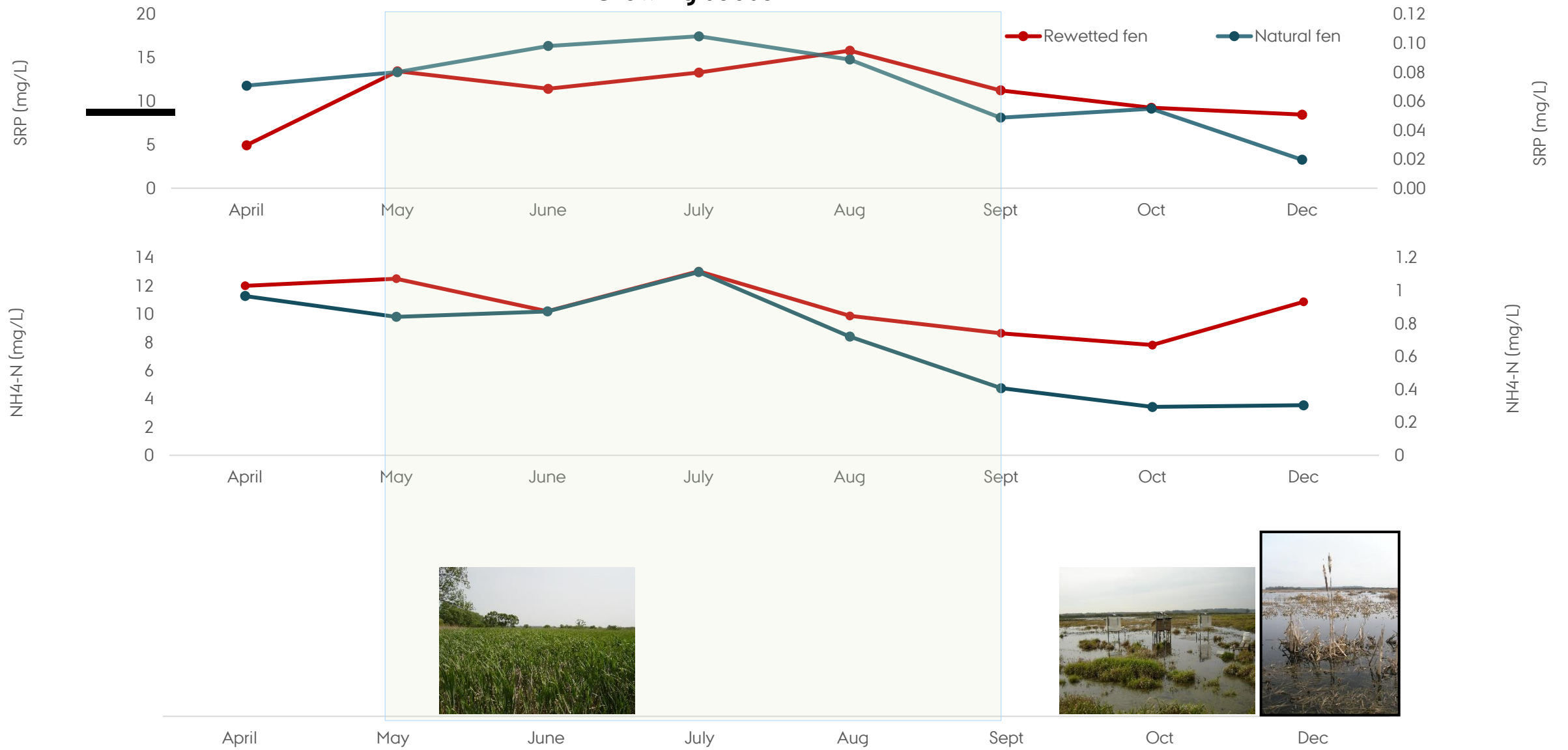


Figure 5. Seasonal variation of nutrients (Natural fen – Gutzkow, Rewetted fen – Menzlin)





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