Table S1: Basic statistics on species number and abundance of microannelids per sampling point

	Humus Form	N	Mean	Median	Sd	Minimum	Maximum	Skewness	Kurtosis	Shapiro-Wilk	
										W	p
Species per sampling point	**Moist L Mull**	28	7.07	6.50	3.07	0.0	14	0.2678	0.3718	0.962	0.382
	Moist F Mull	17	8.12	8.00	2.37	4.0	13	0.4813	0.0697	0.956	0.557
	Moist Moder	19	4.89	5.00	2.88	0.0	10	0.0707	-1.0500	0.965	0.666
Individuals per sampling point	**Moist L Mull**	28	66.14	55.00	65.70	0.0	264	1.8175	3.5086	0.800	<.001
	Moist F Mull	17	110.71	95.00	79.91	11.0	341	1.5063	3.3701	0.886	0.040
	Moist Moder	19	127.58	93.00	128.39	0.0	543	2.0956	5.4378	0.795	<.001

Table S2: Basic statistics on dominance data of six frequent species

										Shapiro-Wilk	
	Humus form	N	Mittelwert	Median	Sd	Minimum	Maximum	Skewness	Kurtosis	W	p
Cognettia glandulosa s.l.	**Moist L Mull**	27	0.14407	0.1400	0.1234	0.00	0.4200	0.48640	-0.479	0.919	0.038
	Moist F Mull	17	0.11882	0.1000	0.1292	0.00	0.4600	119.544	1.475	0.855	0.013
	Moist Moder	18	0.02611	0.0000	0.0498	0.00	0.1700	216.847	3.978	0.605	<.001
Cognettia sphagnetorum s.l.	**Moist L Mull**	27	0.09630	0.0700	0.1291	0.00	0.5400	220.923	5.316	0.733	<.001
	Moist F Mull	17	0.29588	0.2500	0.2343	0.00	0.8200	0.55381	-0.192	0.947	0.415
	Moist Moder	18	0.56889	0.5250	0.2900	0.00	10.000	-0.00103	-0.782	0.942	0.310
Marionina argentea s.l.	**Moist L Mull**	27	0.10185	0.0400	0.1430	0.00	0.4700	146.687	1.009	0.744	<.001
	Moist F Mull	17	0.05941	0.0000	0.1256	0.00	0.3900	196.056	2.502	0.537	<.001
	Moist Moder	18	0.00000	0.0000	0.0000	0.00	0.0000	NaN	NaN	NaN	NaN
Cernosvitoviella atrata	**Moist L Mull**	27	0.00852	0.0000	0.0221	0.00	0.0900	282.109	7.558	0.454	<.001
	Moist F Mull	17	0.01529	0.0000	0.0316	0.00	0.1000	223.498	3.935	0.551	<.001
	Moist Moder	18	0.03000	0.0000	0.1029	0.00	0.4400	416.476	17.523	0.319	<.001
Marionina simillima	**Moist L Mull**	27	0.09370	0.0200	0.1318	0.00	0.4400	144.704	1.280	0.748	<.001
	Moist F Mull	17	0.08235	0.0600	0.0934	0.00	0.3900	243.843	7.348	0.739	<.001
	Moist Moder	18	0.03167	0.0000	0.0540	0.00	0.2100	238.008	6.591	0.656	<.001
Marionina filiformis	**Moist L Mull**	27	0.00630	0.0000	0.0176	0.00	0.0700	314.250	9.250	0.414	<.001
	Moist F Mull	17	0.00765	0.0000	0.0217	0.00	0.0900	385.656	15.394	0.389	<.001
	Moist Moder	18	0.05500	0.0200	0.0979	0.00	0.4000	290.051	9.528	0.613	<.001

Table S3: Basic statistics on data of IMS

										Shapiro-Wilk	
	Month	**N**	**Mean**	**Median**	**Sd**	**Minimum**	**Maximum**	**Skewness**	**Kurtosis**	**W**	**p**
Individuals per sampling point	Oct 2022	8	38.00	34.50	17.90	14.00	67.00	0.3266	-0.770	0.969	0.889
	April 2023	8	15.25	14.00	12.00	0.00	33.00	0.0525	-1.084	0.944	0.648
	Oct 2023	8	76.25	75.50	54.13	7.00	156.00	0.1402	-1.712	0.912	0.372
Species per sampling point	Oct 2022	8	6.88	5.00	4.88	3.00	18.00	2.0743	4.587	0.749	0.008
	April 2023	8	3.88	4.00	3.04	0.00	8.00	-0.0854	-1.433	0.927	0.489
	Oct 2023	8	7.75	7.00	4.03	3.00	15.00	0.7155	-0.121	0.944	0.650

Table S4: pF-values and soil temperature (°C) at 10 cm depth at the IMS for the three sampling dates

Date	2022-10-25	2023-04-26	2023-10-23
pF_A1_10	3.09	0.00	0.29
pF_A2_10	2.59	0.00	0.00
pF_A3_10	3.27	0.00	0.95
pF_A4_10	1.89	0.00	0.00
pF_B5_10	3.81	0.00	0.00
pF_B6_10	3.11	0.00	0.00
pF_B7_10	3.95	0.00	1.58
pF_B8_10	3.04	0.00	0.00

Date °C	2022-10-25	2023-04-26	2023-10-23
Temp_A1_10	12.82	9.08	12.57
Temp_A2_10	12.52	9.15	12.55
Temp_A3_10	12.68	9.04	12.21
Temp_A4_10	13.12	8.98	12.88
Temp_B5_10	13.16	8.80	12.94
Temp_B6_10	13.22	9.10	13.06
Temp_B7_10	12.69	8.12	12.76
Temp_B8_10	12.97	8.66	12.74

Table S5: Abundance of microannelids per sampling point at the Intensive Measurement Stations (IMS) for three sampling dates.
Sample area 19.63 cm² , conversion factor to square metres: 509. Sampling depth was not exactly the same for all IMS in October 2022, thus no explicit depth in cm is given for that sampling.

Project BioFeuchtHumus (Kernmünsterland)										**Sampling date 25 October 2022**
	A1	A2	A3	A4	B5	B6	B7	B8	Sum	Ind./m²
Depth 1	1	1	0	30	5	21	12	6	76	4.838
Depth 2	7	37	11	17	12	3	31	18	136	8.658
Depth 3	4	7	2	12	3	4	7	0	39	2.483
Depth 4	16	9	0	4	0	1	0	8	38	2.419
Depth 5	9	0	1	4	0	1	0	0	15	955
	37	54	14	67	20	30	50	32	304	19.353

Project BioFeuchtHumus (Kernmünsterland)										**Sampling date 26/27 April 2023**
Depth	A1	A2	A3	A4	B5	B6	B7	B8	Sum	Ind./m²
0 - 3 cm	27	10	15	14	17	9	0	12	104	6.621
3 - 6 cm	0	1	1	4	6	0	0	4	16	1.019
6 - 9 cm	0	0	0	3	0	1	0	0	4	255
9 - 12 cm	0	0	0	3	0	1	0	0	4	255
12 - 15 cm	0	0	0	10	0	0	0	0	10	637
	27	11	16	34	23	11	0	16	138	8.785

Project BioFeuchtHumus (Kernmünsterland)										**Sampling date 23/24 October 2023**
Depth	A1	A2	A3	A4	B5	B6	B7	B8	Sum	Ind./m²
0 - 3 cm	56	21	19	91	40	34	134	7	402	25.592
3 - 6 cm	56	10	1	7	49	3	16	0	142	9.040
6 - 9 cm	5	3	4	6	19	2	5	0	44	2.801
9 - 12 cm	1	0	2	0	9	6	0	0	18	1.146
12 - 15 cm	0	0	1	1	0	1	1	0	4	255
	118	34	27	105	117	46	156	7	610	38.834