

Supplementary Table 1: Distribution of the different Amplicon Sequence Variants of *Phytophthora/Nothophytophthora* spp. and number of reads identified using the ITS marker across the 14 sites “disturbed” and “undisturbed” sites sampled in this study.

3	<i>Phytophthora</i> sp. uncultured 11a	ASV-25	1274	-	-	-	-	-	-	167	325	-	-	-	172	610	-
5	<i>Phytophthora castaneae</i>	ASV-33, 48	535	-	-	-	-	-	-	297	238	-	-	-	-	-	-
6	<i>Phytophthora lacustris</i>	ASV-73	60	-	-	-	-	-	-	-	-	-	-	-	-	60	-
6	<i>Phytophthora megasperma/crassamura</i>	ASV-55	258	-	78	-	-	-	-	-	-	-	-	-	58	122	-
6	<i>Phytophthora</i> sp. uncultured 8a	ASV-67	142	-	-	-	-	-	-	-	104	-	-	-	-	38	-
6	<i>Phytophthora</i> sp. uncultured 9a	ASV-68	103	-	-	-	-	-	-	-	-	-	-	-	-	103	-
6	<i>Phytophthora</i> sp. uncultured 15a	ASV-42, 62	602	-	-	-	-	-	-	-	-	423	152	-	27	-	-
7	<i>Phytophthora cinnamomi</i>	ASV-10, 14	10583	-	2	-	-	-	-	2358	-	634	-	-	-	7589	-
7	<i>Phytophthora rubi/fragariae</i>	ASV-26, 28, 41, 58, 76	7645	-	701	2637	-	-	-	391	432	1800	39	-	36	-	1569
7	<i>Phytophthora</i> sp. uncultured 1a	ASV-24, 30, 59	2221	-	-	447	-	-	-	1774	-	-	-	-	-	-	-
7	<i>Phytophthora</i> sp. uncultured 3a	ASV-27	2715	-	2715	-	-	-	-	-	-	-	-	-	-	-	-
7	<i>Phytophthora</i> sp. uncultured 4a	ASV-46	303	-	-	-	-	-	-	-	-	-	-	-	-	303	-
7	<i>Phytophthora</i> sp. uncultured 5a	ASV-57, 63, 80	344	-	176	-	-	-	-	-	12	-	-	-	150	6	-
7	<i>Phytophthora</i> sp. uncultured 6a	ASV-49	476	-	258	-	-	-	-	-	218	-	-	-	-	-	-

7	<i>Phytophthora</i> sp. uncultured 7a	ASV-61	208	-	-	-	-	-	-	-	208	-	-	-	-	-	-	-	
7	<i>Phytophthora</i> sp. uncultured 16a	ASV-47, 59	765	-	-	-	-	-	-	173	-	-	-	-	-	-	592	-	
7	<i>Phytophthora</i> sp. uncultured 21a	ASV-23, 32	5090	-	1683	-	-	-	-	-	-	-	-	-	3407	-	-	-	
7	<i>Phytophthora</i> sp. uncultured 2a	ASV-30	926	-	-	-	-	-	-	-	-	-	-	-	926	-	-	-	
7	<i>Phytophthora uniformis</i>	ASV-72	61	-	-	-	-	-	-	61	-	-	-	-	-	-	-	-	
8	<i>Phytophthora austrocedri</i>	ASV-5, 6, 79	26762	22815	-	-	89	-	-	6	-	3852	-	-	-	-	-	-	
8	<i>Phytophthora foliorum</i>	ASV-34, 45, 74	1540	-	-	-	-	-	-	278	123	391	-	-	197	-	551	-	
8	<i>Phytophthora obscura</i>	ASV- 19, 21, 51	4669	-	331	464	2722	-	-	216	144	-	792	-	-	-	-	-	
8	<i>Phytophthora primulae</i>	ASV-13	7117	-	-	1651	-	-	-	-	-	4048	-	-	1418	-	-		
8	<i>Phytophthora ramorum</i>	ASV-7, 9, 77	15194	-	49	-	3451	-	-	-	-	-	6739	-	782	-	4173		
8	<i>Phytophthora syringae</i>	ASV-1, 2, 8, 69	83642	-	7223	1357	-	3325	-	2349	7101	9857	9157	2583	29600	11090	-		
9	<i>Phytophthora fallax</i>	ASV-44, 54	401	-	-	-	-	-	-	179	5	126	49	-	42	-	-		
10	<i>Phytophthora kernoviae</i>	ASV-20, 31	2980	-	-	-	-	-	1944	-	-	-	-	-	1036	-	-		
11	<i>Phytophthora</i> sp. uncultured 18a	ASV-22	1494	-	-	555	-	-	-	525	-	414	-	-	-	-	-	-	
11	<i>Phytophthora</i> sp. uncultured 19a	ASV-11, 38	3915	-	-	1807	-	-	-	1095	-	464	-	549	-	-	-	-	

Supplementary Table 2: Distribution of the different Amplicon Sequence Variants of *Phytophthora/Nothophytophthora* spp. and number of reads identified using the COI marker across the 14 sites “disturbed” and “undisturbed” sites sampled in this study.

8	<i>Phytophthora primulae</i>	ASV-40, 43, 54	533	-	-	186	-	-	-	-	-	135	-	-	-	212	-	-
8	<i>Phytophthora ramorum</i>	ASV-22	489	-	-	-	-	-	-	-	-	-	489	-	-	-	-	-
8	<i>Phytophthora</i> sp. uncultured 5	ASV-33	237	237	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	<i>Phytophthora syringae</i>	ASV-1, 21, 69, 73, 98, 99, 103, 118	4363	-	-	-	261	-	-	95	663	-	83	-	2046	1215	-	-
11	<i>Phytophthora quercina</i>	ASV-62	104	-	-	-	-	-	-	104	-	-	-	-	-	-	-	-
New	<i>Phytophthora</i> sp. uncultured 11	ASV-19	549	-	549	-	-	-	-	-	-	-	-	-	-	-	-	-
New	<i>Phytophthora</i> sp. uncultured 12	ASV-3, 30, 48	2159	573	619	-	212	-	-	-	-	393	-	362	-	-	-	-
New	<i>Phytophthora</i> sp. uncultured 13	ASV-55, 89	176	-	-	-	-	-	-	-	130	-	-	-	-	46	-	-
New	<i>Phytophthora</i> sp. uncultured 14	ASV-10, 79	496	-	-	-	-	-	-	428	-	-	-	-	68	-	-	-
New	<i>Phytophthora</i> sp. uncultured 15	ASV-6	493	-	-	-	-	-	-	-	-	493	-	-	-	-	-	-
New	<i>Phytophthora</i> sp. uncultured 16	ASV-12, 13, 31, 37	2324	-	-	-	408	-	-	630	-	1041	-	245	-	-	-	-
New	<i>Phytophthora</i> sp. uncultured 17	ASV-27, 42	805	-	-	-	-	-	-	-	-	805	-	-	-	-	-	-
-	<i>Nothophytophthora</i> sp. 1	ASV-26	480	-	-	-	-	-	-	-	-	-	-	-	-	480	-	-
-	<i>Nothophytophthora</i> sp. 2	ASV-35	427	-	-	-	-	-	-	-	427	-	-	-	-	-	-	-
-	<i>Nothophytophthora</i> sp. 3	ASV-36	227	-	-	-	-	-	-	-	-	-	-	-	-	227	-	-
-	<i>Nothophytophthora</i> sp. 4	ASV-61	108	-	-	-	-	-	-	108	-	-	-	-	-	-	-	-
-	<i>Nothophytophthora</i> sp. 5	ASV-77	69	-	-	-	-	-	-	-	69	-	-	-	-	-	-	-
-	<i>Nothophytophthora</i> sp. 6	ASV-81	59	-	-	-	-	-	-	-	-	-	-	-	59	-	-	-
-	<i>Nothophytophthora</i> sp. 7	ASV-83	54	-	-	-	-	-	-	-	-	54	-	-	-	-	-	-
-	<i>Nothophytophthora</i> sp. 8	ASV-94	43	-	-	-	-	-	-	-	-	-	-	-	-	43	-	-

Supplementary Table 3. Permutational multivariate analysis of variance (PERMANOVA) and permutational analysis of multivariate dispersion (Betadisper) results based on Bray-Curtis and Jaccard distances using Hellinger data transformation, for *Phytophthora/Nothophytophthora* spp. community composition data using ITS and COI marker genes

Marker	Distance-based matrix	Statistical Test	Statistical parameter	Significance level
ITS	Bray-Curtis	PERMANOVA	$F_{1,79} = 3.4729$	$Pr(>F) = 0.002^{**}$
	Bray-Curtis	Betadisper	$F_{1,79} = 6.8149$	$Pr(>F) = 0.011^*$
	Jaccard	PERMANOVA	$F_{1,79} = 2.9819$	$Pr(>F) = 0.003^{**}$
	Jaccard	Betadisper	$F_{1,79} = 3.4272$	$Pr(>F) = 0.08$.
COI	Bray-Curtis	PERMANOVA	$F_{1,40} = 2.6866$	$Pr(>F) = 0.009^{**}$
	Bray-Curtis	Betadisper	$F_{1,40} = 4.4969$	$Pr(>F) = 0.045^*$
	Jaccard	PERMANOVA	$F_{1,40} = 2.2232$	$Pr(>F) = 0.002^{**}$
	Jaccard	Betadisper	$F_{1,40} = 1.4843$	$Pr(>F) = 0.217$