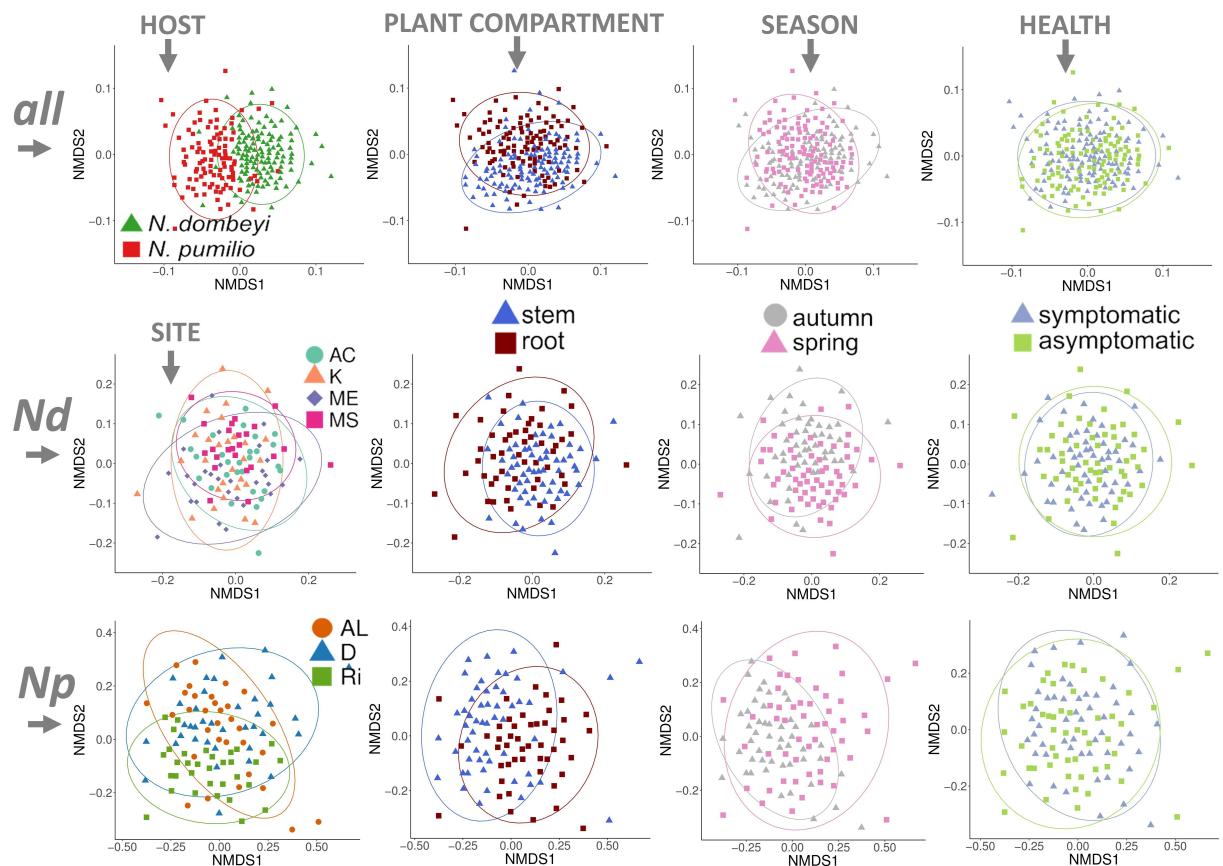


**Sapwood mycobiome vary across host, plant compartment and environments in
Nothofagus forests from Northern Patagonia**

Lucía Molina, Mario Rajchenberg, Andrés de Errasti, Braian Vogel, Martin P. A. Coetzee, Mary
Catherine Aime, María Belén Pildain

SUPPLEMENTARY MATERIAL



Supplementary Figure 1. Non-metric multi-dimensional scaling (NMDS) ordinal plots built from Hellinger transformed Bray-Curtis dissimilarity matrices. They show community differences in structure across host, plant compartment, season and health condition for the whole set of data (above) and for the site, the plant compartment, the season and the health condition for *N. dombeysi* (middle) and *N. pumilio* (below) separated datasets. Nd: *N. dombeysi*. Np: *N. pumilio*. AC: *N. dombeysi* site Alto el Petiso Mt. K: Lake Kruger. ME: Lake Menéndez. MS: Alerce River. AL: *N. pumilio* site Alto el Petiso Mt. D: site El Dedal Mt. Ri: site El Riscoso Mt.

Supplementary Table 1. Indicator species for the different variable's levels.

Indicator species for host: <i>N. dombeyi</i>					
ASV ID	curated taxonomy	GUILD	ASV ID	curated taxonomy	GUILD
OTU325	*** Teratosphaeriaceae sp.	end ppg	OTU2134	* Dothideomycetes sp.	uss
OTU22	*** <i>Morenoina calamicola</i>	xyl	OTU2197	* Dothideomycetes sp.	uss
OTU242	*** Herpotrichiellaceae sp.	xyl	OTU2294	* Verrucariaceae sp.	lch
OTU122	*** <i>Pseudoramichloridium</i> sp.	ppg	OTU3488	* Pezizomycotina sp.	uss
OTU134	*** <i>Exophiala brunnea</i>	dse	OTU4931	* Pezizomycotina sp.	uss
OTU560	*** <i>Cladophialophora</i> sp.	xyl	OTU7036	* Chaetothyriales sp.	xyl
OTU1016	*** Teratosphaeriaceae sp.	end ppg	OTU89	* <i>Arthrinium phaeospermum</i>	ppg
OTU513	*** Orbiliaceae sp.	sph	OTU93	* Teratosphaeriaceae sp.	end ppg
OTU424	*** Ophiostomataceae sp.	xyl	OTU430	* Venturiaceae sp.	ppg
OTU10	** <i>Ascocoryne cylichnium</i>	xyl	OTU1123	* Pleosporales sp.	sph
OTU1117	** <i>Coprinellus</i> sp.	sph	OTU237	* <i>Phaeosphaeria phoenicicola</i>	ppg
OTU1	** <i>Cryptococcus</i> sp.	xyl	OTU380	* <i>Cyphelophora</i> sp.	sph
OTU206	** Teratosphaeriaceae sp.	end ppg	OTU521	* Teratosphaeriaceae sp.	end ppg
OTU386	** Nectriaceae sp.	xyl	OTU532	* <i>Cladophialophora</i> sp.	xyl
OTU635	** Herpotrichiellaceae sp.	xyl	OTU683	* <i>Tolypocladium</i> sp.	xyl
OTU82	** <i>Cenococcum</i> sp.	dse	OTU705	* <i>Conioscypha</i> sp.	xyl
OTU243	** Ophiostomataceae sp.	xyl	OTU708	* Teratosphaeriaceae sp.	end ppg
OTU305	** Nectriaceae sp.	xyl	OTU714	* Helotiales sp.	uss
OTU398	** Chaetothyriales sp.	xyl	OTU815	* Mollisiaceae	end
OTU429	** Pleosporales sp.	sph	OTU816	* <i>Harknessia</i> sp.	sph
OTU621	** <i>Tolypocladium</i> sp.	xyl	OTU825	* <i>Rhodotus palmatus</i>	sph
OTU769	** Sordariomycetes sp.	xyl	OTU857	* <i>Sebacinales</i> sp.	myz
OTU1680	** <i>Psathylooma</i> sp.	myz	OTU1088	* <i>Cytospora austromontana</i>	ppg
OTU1839	** <i>Serpula</i> sp.	wrf	OTU1106	* Pezizomycotina sp.	uss
OTU365	** <i>Cladophialophora</i> sp.	xyl	OTU1114	* Orbiliales sp.	sph
OTU410	** <i>Fusarium</i> sp.	end	OTU1460	* Dermataceae sp.	sph ppg
OTU421	** Saccharataceae sp.	end	OTU1556	* Helotiales sp.	uss
OTU500	** Sordariomycetes sp.	xyl	OTU1745	* <i>Aspergillus</i> sp.	sph
OTU719	** Cystobasidiaceae sp.	sph	OTU1897	* Chaetosphaeriaceae sp.	xyl
OTU1211	** Pucciniomycotina sp.	rst	OTU1965	* Dothideomycetes sp.	uss
OTU1230	** Amphisphaeriaceae sp.	sph	OTU1985	* <i>Cladophialophora chaetospira</i>	xyl
OTU1611	** Mycosphaerellales sp.	end ppg	OTU2153	* <i>Cytospora</i> sp.	ppg
OTU2840	** Agaricomycetes sp.	uss	OTU2243	* Cylindrosympodiaceae sp.	sph
OTU6406	** Ascomycota sp.	uss	OTU2415	* <i>Oidiodendron</i> sp.	dse
OTU161	** Chaetothyriales sp.	xyl	OTU2488	* Chaetothyriales sp.	xyl
OTU2350	** Orbiliaceae sp.	xyl	OTU2804	* Helotiales sp.	uss
OTU234	* Teratosphaeriaceae sp.	end ppg	OTU3106	* Pleosporales sp.	sph
OTU462	* Ascomycota sp.	uss	OTU3197	* <i>Devriesia</i> sp.	ppg
OTU688	* Chaetothyriales sp.	xyl	OTU3270	* Sarocladiaceae sp.	fif
OTU5161	* Hypocreales sp.	uss	OTU3558	* Auriculariales sp.	wrf
OTU384	* Bulleribasidiaceae	fif	OTU4231	* Herpotrichiellaceae sp.	xyl
OTU613	* Sarocladiaceae sp.	fif	OTU4455	* Phaeomoniellaceae sp.	xyl
OTU690	* Ascomycota sp.	uss	OTU65	* <i>Aotearoamyces</i> sp.	wrf
OTU850	* Sympoventuriaceae sp.	sph	OTU75	* <i>Arthrinium</i> sp.	xyl
OTU929	* Sebacinaceae sp.	myz	OTU622	* Pucciniomycotina sp.	rst
OTU973	* Orbiliales sp.	sph	OTU791	* Tremellales sp.	wrf
OTU1054	* <i>Cladophialophora</i> sp.	xyl	OTU1588	* <i>Oidiodendron</i> sp.	dse
OTU1359	* <i>Cyphelophora</i> sp.	sph	OTU2905	* Mycosphaerellales sp.	end ppg
OTU1458	* Chaetothyriales sp.	xyl	OTU862	* Agaricomycotina sp.	uss

uss: unassigned; xyl: xylophilous; myz: mycorrhizal; ppg: plant pathogen; dse: dark septate endophyte; sph: saprophyte; fif: foliar fungus; end: endophyte; lch: lichen; rhf: rock inhabiting fungus; eph: entomopathogen; rst: rust; wrf: wood-rotting fungus; sm: sooty moulds

* significance at 0.01 level; ** significance at 0.001 level; *** significance at 0.0001 level

Supplementary Table 1. Indicator species for the different variable's levels.

Indicator species for host: <i>N. pumilio</i>			Indicator species for season		
ASV ID	curated taxonomy	GUILD	Autumn		
			ASV ID	curated taxonomy	GUILD
OTU4	*** Chaetothyriomycetidae sp.	uss	OTU10	** <i>Ascocoryne cylindrium</i>	xyl
OTU5	*** Dothideomycetidae sp.	uss	OTU1	** <i>Cryptococcus</i> sp.	xyl
OTU81	*** Saccotheciaeae sp.	xyl	OTU46	** <i>Tremella</i> sp.	wrf
OTU1118	*** Sporidiobolales sp.	sph	OTU81	** Saccotheciaeae sp.	xyl
OTU112	*** Teratosphaeriaceae sp.	end ppg	OTU622	** Pucciniomycotina sp.	rst
OTU280	*** Eurotiomycetes sp.	uss	OTU5161	** Hypocreales sp.	uss
OTU3491	*** Pezizomycotina sp.	uss	OTU386	** Nectriaceae sp.	xyl
OTU439	** <i>Candelariella aurella</i>	lch	OTU234	** Teratosphaeriaceae sp.	end ppg
OTU8	** Sordariomycetes sp.	xyl	OTU287	** Phaeosphaeriaceae sp.	sph
OTU16	** Dothideomycetes sp.	uss	OTU714	** Helotiales sp.	uss
OTU209	** Tremellales sp.	wrf	OTU1897	** Chaetosphaeriaceae sp.	xyl
OTU2167	** Herpotrichiellaceae sp.	xyl	OTU243	* Ophiostomataceae sp.	xyl
OTU2452	** Orbiliomycetes sp.	uss	OTU955	* Erythrobasidiaceae sp.	rst
OTU533	** <i>Oidiodendron</i> sp.	dse	OTU4	* Chaetothyriomycetidae sp.	uss
OTU9	** Pleosporales sp.	sph	OTU209	* Tremellales sp.	wrf
OTU991	** Helotiales sp.	uss	OTU355	* Sarocladiaceae sp.	flf
OTU1518	** Pezizomycotina sp.	uss	OTU719	* Cystobasidiaceae sp.	sph
OTU2157	** Pezizomycotina sp.	uss	OTU2205	* Pezizomycotina sp.	uss
OTU2296	** <i>Cladophialophora</i> sp.	xyl	OTU280	* Eurotiomycetes sp.	uss
OTU3514	** Chaetothyriales sp.	xyl	OTU655	* Tremellales sp.	wrf
OTU7808	** Chaetothyriomycetidae sp.	uss	OTU690	* Ascomycota sp.	uss
OTU42	** Dothideomycetes sp.	uss	OTU811	* Dothideales sp.	xyl end ppg
OTU607	** Phaeococomycetaceae sp.	sph	OTU1903	* Orbiliaceae sp.	xyl
OTU624	** <i>Umbelopsis</i> sp.	sph xyl	Spring		
OTU679	** <i>Myriangium</i> sp.	xyl	ASV ID	curated taxonomy	GUILD
OTU812	** Chrysosyzmaceae sp.	sph	OTU161	** Chaetothyriales sp.	xyl
OTU873	** <i>Pleotrichocladium opacum</i>	sph	OTU75	** <i>Arthrinium</i> sp.	xyl
OTU1026	** <i>Helotium</i> sp.	sph	OTU2	** <i>Penicillium</i> sp.	sph
OTU1055	** Pezizomycotina sp.	uss	OTU546	** <i>Geminibasidium</i> sp.	sph
OTU1366	** <i>Cladophialophora</i> sp.	xyl	OTU582	** <i>Penicillium</i> sp.	sph
OTU1474	** Chaetothyriaceae sp.	xyl	OTU700	* <i>Pleurotus ostreatus</i>	wrf
OTU1507	** Chrysosyzmaceae sp.	sph	OTU706	* <i>Umbelopsis</i> sp.	sph xyl
OTU2790	** Pezizomycotina sp.	uss	OTU1517	* <i>Oidiodendron</i> sp.	dse
OTU3471	** <i>Exobasidium</i> sp.	ppg	OTU2581	* Basidiomycota sp.	uss
OTU4058	** Ascomycota sp.	uss	OTU89	* <i>Arthrinium phaeospermum</i>	ppg
OTU4064	** Peltigerales sp.	uss	OTU93	* Teratosphaeriaceae sp.	end ppg
OTU4136	** Atheliales sp.	uss	OTU21	* Pezizomycotina sp.	uss
OTU4284	** Pezizomycotina sp.	uss	OTU574	* Hyaloscyphaceae sp.	sph xyl
OTU5760	** <i>Aotearoamyces</i> sp.	wrf	OTU624	* <i>Umbelopsis</i> sp.	sph xyl
OTU6303	** Pezizomycotina sp.	uss	OTU675	* <i>Umbelopsis vinacea</i>	sph xyl
OTU955	* Erythrobasidiaceae sp.	rst	OTU857	* Sebacinales sp.	myz
OTU1157	* Hypocreales sp.	uss	OTU1333	* <i>Lentinula edodes</i>	wrf
OTU542	* Teratosphaeriaceae sp.	end ppg	OTU1465	* <i>Oidiodendron</i> sp.	dse
OTU2327	* Herpotrichiellaceae sp.	xyl	OTU1523	* Filobasidiaceae sp.	sph
OTU3741	* Pezizomycotina sp.	uss	OTU2426	* <i>Penicillium</i> sp.	sph
OTU5974	* Chaetothyriales sp.	xyl	OTU4292	* Chaetothyriales sp.	xyl
OTU368	* <i>Inocybe</i> sp.	myz	OTU4681	* Ascomycota sp.	uss
OTU818	* Helotiales sp.	uss	OTU82	* <i>Cenococcum</i> sp.	dse
OTU1913	* <i>Tomentellopsis</i> sp.	myz	OTU7545	* Dothideomycetes sp.	uss
OTU2634	* Ascomycota sp.	uss	OTU365	* <i>Cladophialophora</i> sp.	xyl
			OTU439	* <i>Candelariella aurella</i>	lch

uss: unassigned; xyl: xylophilous; myz: mycorrhizal; ppg: plant pathogen; dse: dark septate endophyte; sph: saprophyte; flf: foliar fungus; end: endophyte; lch: lichen; rhf: rock inhabiting fungus; eph: entomopathogen; rst: rust; wrf: wood-rotting fungus; stm: sooty moulds

* significance at 0.01 level; ** significance at 0.001 level; *** significance at 0.0001 level

Supplementary Table 1. Indicator species for the different variable's levels.

Indicator species in *N. dombeyi*

Symptomatic trees					
ASV ID	curated taxonomy	GUILD	Roots		
OTU1054 *	<i>Cladophialophora</i> sp.	xyl	OTU261	** <i>Dothideomycetes</i> sp.	uss
OTU688 *	<i>Chaetothyriales</i> sp.	xyl	OTU1985	** <i>Cladophialophora chaetospira</i>	xyl
OTU976 *	<i>Helotiales</i> sp.	uss	OTU117	* <i>Cenococcum geophilum</i>	myz
Stems					
ASV ID	curated taxonomy	GUILD	ASV ID	curated taxonomy	GUILD
OTU22 ***	<i>Morenoina calamicola</i>	xyl	OTU261	** <i>Dothideomycetes</i> sp.	uss
OTU2739 *	<i>Psathyrella</i> sp.	xyl	OTU1985	** <i>Cladophialophora chaetospira</i>	xyl
OTU462 *	<i>Ascomycota</i> sp.	uss	OTU117	* <i>Cenococcum geophilum</i>	myz
OTU688 *	<i>Chaetothyriales</i> sp.	xyl	OTU516	* <i>Russula tawai</i>	myz
OTU486 *	<i>Microbotryomycetes</i> sp.	rst	OTU546	* <i>Geminibasidium</i> sp.	sph
OTU815 *	<i>Mollisiaceae</i> sp.	end	OTU76	* <i>Helotiales</i> sp.	uss
OTU1106 *	<i>Pezizomycotina</i> sp.	uss			
OTU3270 *	<i>Sarocladiaceae</i> sp.	fif			
OTU4455 *	<i>Phaeomoniellaceae</i> sp.	xyl			
OTU161 *	<i>Chaetothyriales</i> sp.	xyl			
OTU621 *	<i>Tolyphocladium</i> sp.	xyl			
Autumn					
ASV ID	curated taxonomy	GUILD	ASV ID	curated taxonomy	GUILD
OTU10 ***	<i>Ascocoryne cylichnum</i>	xyl	OTU161	** <i>Chaetothyriales</i> sp.	xyl
OTU1 ***	<i>Cryptococcus</i> sp.	xyl	OTU75	** <i>Arthrinium</i> sp.	xyl
OTU46 **	<i>Tremella</i> sp.	wrf	OTU365	* <i>Cladophialophora</i> sp.	xyl
OTU622 **	<i>Pucciniomycotina</i> sp.	rst	OTU857	* <i>Sebacinales</i> sp.	myz
OTU386 **	<i>Nectriaceae</i> sp.	xyl	OTU82	* <i>Cenococcum</i> sp.	dse
OTU5161 **	<i>Hypocreales</i> sp.	uss	OTU89	* <i>Arthrinium phaeospermum</i>	ppg
OTU714 **	<i>Helotiales</i> sp.	uss	OTU93	* <i>Teratosphaeriaceae</i> sp.	end ppg
OTU1897 **	<i>Chaetosphaeriaceae</i> sp.	xyl			
OTU243 *	<i>Ophiostomataceae</i> sp.	xyl			
OTU719 *	<i>Cystobasidiaceae</i> sp.	sph			
OTU882 *	<i>Talaromyces</i> sp.	sph			
OTU287 *	<i>Phaeosphaeriaceae</i> sp.	sph			
OTU234 *	<i>Teratosphaeriaceae</i> sp.	end ppg			
OTU355 *	<i>Sarocladiaceae</i> sp.	fif			
OTU613 *	<i>Sarocladiaceae</i> sp.	fif			
OTU690 *	<i>Ascomycota</i> sp.	uss			
OTU3488 *	<i>Pezizomycotina</i> sp.	uss			

uss: unassigned; xyl: xylophilous; myz: mycorrhizal; ppg: plant pathogen; dse: dark septate endophyte; sph: saprophyte; fif: foliar fungus; end: endophyte; lch: lichen; rhf: rock inhabiting fungus; eph: entomopathogen; rst: rust; wrf: wood-rotting fungus; stm: sooty moulds

* significance at 0.01 level; ** significance at 0.001 level; *** significance at 0.0001 level

Supplementary Table 1. Indicator species for the different variable's levels.

Indicator species in <i>N. dombeyi</i>					
Alto el Petiso site			Alerce River site		
ASV ID	curated taxonomy	GUILD	ASV ID	curated taxonomy	GUILD
OTU1114	*** <i>Oribiliales</i> sp.	sph	OTU10	** <i>Ascocoryne cylindrium</i>	xyl
OTU1965	*** <i>Dothideomycetes</i> sp.	uss	OTU305	** <i>Nectriaceae</i> sp.	xyl
OTU206	*** <i>Teratosphaeriaceae</i> sp.	end ppg	OTU429	** <i>Pleosporales</i> sp.	sph
OTU61	** <i>Chaetothyriales</i> sp.	xyl	OTU500	** <i>Sordariomycetes</i> sp.	xyl
OTU438	** <i>Descolea antarctica</i>	myz	OTU1230	** <i>Amphisphaeriaceae</i> sp.	sph
OTU510	** <i>Exophiala</i> sp.	dse	OTU1016	** <i>Teratosphaeriaceae</i> sp.	end ppg
OTU3883	** <i>Chaetothyriales</i> sp.	xyl	OTU635	** <i>Herpotrichiellaceae</i> sp.	xyl
OTU5161	** <i>Hypocreales</i> sp.	uss	OTU1359	** <i>Cyphellophora</i> sp.	sph
OTU380	** <i>Cyphellophora</i> sp.	sph	OTU1897	** <i>Chaetosphaeriaceae</i> sp.	xyl
OTU903	** <i>Septobasidium</i> sp.	eph	OTU5619	** <i>Herpotrichiellaceae</i> sp.	xyl
OTU4455	** <i>Phaeomoniellaceae</i> sp.	xyl	OTU462	** <i>Ascomycota</i> sp.	uss
OTU622	** <i>Pucciniomycotina</i> sp.	rst	OTU1611	** <i>Mycosphaerellales</i> sp.	end ppg
OTU122	* <i>Pseudoramichloridium</i> sp.	ppg	OTU621	** <i>Tolypocladium</i> sp.	xyl
OTU821	* <i>Mortierella</i> sp.	sph	OTU1339	** <i>Pezizomycotina</i> sp.	uss
OTU613	* <i>Sarocladiaceae</i> sp.	flf	OTU4292	** <i>Chaetothyriales</i> sp.	xyl
OTU862	* <i>Agaricomycotina</i> sp.	uss	OTU1054	** <i>Cladophialophora</i> sp.	xyl
Lake Kruger site			OTU850	** <i>Sympoventuriaceae</i> sp.	sph
			OTU410	** <i>Fusarium</i> sp.	end
ASV ID	curated taxonomy	GUILD	OTU1106	** <i>Pezizomycotina</i> sp.	uss
OTU387	*** <i>Oidiodendron periconioides</i>	dse	OTU2804	** <i>Helotiales</i> sp.	uss
OTU75	** <i>Arthrinium</i> sp.	xyl	OTU1680	** <i>Psathyromyces</i> sp.	myz
OTU173	** <i>Helotiales</i> sp.	uss	OTU769	** <i>Sordariomycetes</i> sp.	xyl
OTU1088	** <i>Cytospora austromontana</i>	ppg	OTU976	** <i>Helotiales</i> sp.	uss
OTU287	* <i>Phaeosphaeriaceae</i> sp.	sph	OTU1579	** <i>Mycosphaerellales</i> sp.	end ppg
OTU7221	* <i>Leotiomycetes</i> sp.	uss	OTU148	** <i>Mycosphaerellaceae</i> sp.	end ppg
Lake Menéndez site			OTU2739	** <i>Psathyrella</i> sp.	xyl
ASV ID	curated taxonomy	GUILD	OTU714	* <i>Helotiales</i> sp.	uss
OTU1	** <i>Cryptococcus</i> sp.	xyl	OTU708	* <i>Teratosphaeriaceae</i> sp.	end ppg
OTU705	* <i>Conioscypha</i> sp.	xyl	OTU3270	* <i>Sarocladiaceae</i> sp.	flf
OTU398	* <i>Chaetothyriales</i> sp.	xyl	OTU683	* <i>Tolypocladium</i> sp.	xyl
OTU93	* <i>Teratosphaeriaceae</i> sp.	end ppg			

uss: unassigned; xyl: xylophilous; myz: mycorrhizal; ppg: plant pathogen; dse: dark septate endophyte; sph: saprophyte; flf: foliar fungus; end: endophyte; Ich: lichen; rhf: rock inhabiting fungus; eph: entomopathogen; rst: rust; wrf: wood-rotting fungus; stm: sooty moulds

* significance at 0.01 level; ** significance at 0.001 level; *** significance at 0.0001 level

Supplementary Table 1. Indicator species for the different variable's levels.

Indicator species in <i>N. pumilio</i>					
Symptomatic trees			Asymptomatic trees		
ASV ID	curated taxonomy	GUILD	ASV ID	curated taxonomy	GUILD
OTU292	* <i>Austropaxillus macnabbi</i>	myz	OTU1026	* <i>Helotium sp.</i>	sph
OTU582	* <i>Penicillium</i> sp.	sph	OTU1068	* <i>Pseudeurotium sp.</i>	sph
			OTU1157	* <i>Hypocreales</i> sp.	uss
			OTU2452	* <i>Orbiliomycetes</i> sp.	uss
Stems			Roots		
ASV ID	curated taxonomy	GUILD	ASV ID	curated taxonomy	GUILD
OTU5	*** <i>Dothideomycetidae</i> sp.	uss	OTU1118	** <i>Sporidiobolales</i> sp.	sph
OTU4	*** <i>Chaetothyriomycetidae</i> sp.	uss	OTU42	** <i>Dothideomycetes</i> sp.	uss
OTU16	** <i>Dothideomycetes</i> sp.	uss	OTU624	** <i>Umbelopsis</i> sp.	sph xyl
OTU2157	* <i>Pezizomycotina</i> sp.	uss	OTU2083	** <i>Crocicreas</i> sp.	sph xyl
OTU3741	* <i>Pezizomycotina</i> sp.	uss	OTU439	* <i>Candelariella aurella</i>	lch
OTU7545	* <i>Dothideomycetes</i> sp.	uss	OTU117	* <i>Cenococcum geophilum</i>	myz
OTU3491	* <i>Pezizomycotina</i> sp.	uss	OTU4278	* <i>Basidiomycota</i> sp.	uss
OTU607	* <i>Phaeocomycetaceae</i> sp.	sph	OTU280	* <i>Eurotiomycetes</i> sp.	uss
OTU4757	* <i>Eurotiomycetes</i> sp.	uss	OTU661	* <i>Inocybe subretipes</i>	myz
			OTU1465	* <i>Oidiodendron</i> sp.	dse
			OTU6841	* <i>Umbelopsis</i> sp.	sph xyl
			OTU1330	* <i>Lentinula edodes</i>	wrf
Autumn			Spring		
ASV ID	curated taxonomy	GUILD	ASV ID	curated taxonomy	GUILD
OTU81	*** <i>Saccotheciaeae</i> sp.	xyl	OTU2	** <i>Penicillium</i> sp.	sph
OTU898	* <i>Sympodiella</i> sp.	sph	OTU439	* <i>Candelariella aurella</i>	lch
OTU4	* <i>Chaetothyriomycetidae</i> sp.	uss	OTU292	* <i>Austropaxillus macnabbi</i>	myz
OTU382	* <i>Pezizomycotina</i> sp.	uss	OTU582	* <i>Penicillium</i> sp.	sph
OTU6677	* <i>Pezizomycotina</i> sp.	uss	OTU624	* <i>Umbelopsis</i> sp.	sph xyl
OTU209	* <i>Tremellales</i> sp.	wrf	OTU2581	* <i>Basidiomycota</i> sp.	uss
OTU955	* <i>Erythrobasiidiaceae</i> sp.	rst			
OTU280	* <i>Eurotiomycetes</i> sp.	uss			
OTU165	* <i>Cylindrosympodiaceae</i> sp.	sph			
OTU655	* <i>Tremellales</i> sp.	wrf			
Alto el Petiso site			El Riscoso site		
ASV ID	curated taxonomy	GUILD	ASV ID	curated taxonomy	GUILD
OTU588	** <i>Oleoguttula</i> sp.	rhf	OTU679	** <i>Myriangium</i> sp.	xyl
OTU6303	** <i>Pezizomycotina</i> sp.	uss	OTU2634	** <i>Ascomycota</i> sp.	uss
OTU280	* <i>Eurotiomycetes</i> sp.	uss	OTU5760	** <i>Aotearoamyces</i> sp.	wrf
OTU944	* <i>Mortierellaceae</i> sp.	sph	OTU2269	* <i>Eurotiomycetes</i> sp.	uss
OTU3514	* <i>Chaetothyriales</i> sp.	xyl	OTU655	* <i>Tremellales</i> sp.	wrf
OTU700	* <i>Pleurotus ostreatus</i>	wrf	OTU1092	* <i>Microbotryomycetes</i> sp.	rst
OTU1872	* <i>Hyphodiscus</i> sp.	xyl	OTU52	* <i>Sympodiella</i> sp.	sph
			OTU4757	* <i>Eurotiomycetes</i> sp.	uss
			OTU5974	* <i>Chaetothyriales</i> sp.	xyl
El Dedal site					
ASV ID	curated taxonomy	GUILD			
OTU292	** <i>Austropaxillus macnabbi</i>	myz			
OTU582	** <i>Penicillium</i> sp.	sph			
OTU112	** <i>Teratosphaeriaceae</i> sp.	end ppg			
OTU3491	** <i>Pezizomycotina</i> sp.	uss			
OTU882	* <i>Talaromyces</i> sp.	sph			
OTU2	* <i>Penicillium</i> sp.	sph			
OTU607	* <i>Phaeocomycetaceae</i> sp.	sph			

uss: unassigned; xyl: xylophilous; myz: mycorrhizal; ppg: plant pathogen; dse: dark septate endophyte; sph: saprophyte; flf: foliar fungus; end: endophyte; lch: lichen; rhf: rock inhabiting fungus; eph: entomopathogen; rst: rust; wrf: wood-rotting fungus; stm: sooty moulds

* significance at 0.01 level; ** significance at 0.001 level; *** significance at 0.0001 level