

Analysis of Airborne Fungal Communities on Pedestrian Bridges in Urban Environments

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Supplementary information

Supplementary Table S1. Details of the selected sampling sites.

Weijin road pedestrian bridge (WJR)		
Sampling site	GPS	
Top [center of the bridge (C)]	39°6'10"N	117°10'22"E
Down [under the bridge (U)]	39°6'10"N	117°10'22"E
Tianjin university old campus Northgate pedestrian bridge (NG)		
Sampling site	GPS	
Top [center of the bridge (C)]	39°6'35"N	117°10'7"E
Down [under the bridge (U)]	39°6'30"N	117°10'11"E
Binjiangdao pedestrian bridge (BJD)		
Sampling site	GPS	
Top [center of the bridge (C)]	39°7'30"N	117°11'14"E
Down [under the bridge (U)]	39°7'30"N	117°11'13"E
Nanmenwai avenue pedestrian bridge (NMWA)		
Sampling site	GPS	
Top [center of the bridge (C)]	39°7'35"N	117°10'26"E
Down [under the bridge (U)]	39°7'35"N	117°10'25"E
Wujiayao avenue pedestrian bridge (WJY)		
Sampling site	GPS	
Top [center of the bridge (C)]	39°5'58"N	117°10'56"E
Down [under the bridge (U)]	39°5'58"N	117°10'57"E

Supplementary Table S2: Airborne fungal diversity molecularly detected in the five studied pedestrian bridges, from DNA extracted from isolated strains.

Sample No.	Sampling week	Sampling site	GenBank	Best BLAST match(es)	Accession code	Overlap length	Query curve	Match %
1	1 st week	NMWA (UN)	ON705346	<i>Penicillium</i> sp.	MN634686.1	539	94%	99.63%
				<i>Penicillium thomii</i>	MG818940.1	551	95%	99.63%
2	1 st week	NMWA (UN)	ON705347	<i>Alternaria</i> sp.	MT735240.1	597	96%	100.00%
				<i>Alternaria alternata</i>	MN594810.1	598	93%	99.81%
3	1 st week	NMWA (UN)	ON705348	<i>Arthrinium</i> sp.	KJ361492.1	589	93%	100.00%
				<i>Arthrinium arundinis</i>	LT719147.1	1070	93%	99.62%
4	1 st week	NMWA (UN)	ON705349	<i>Alternaria alternata</i>	MW009041.1	542	94%	100.00%
5	1 st week	NMWA (UN)	ON705350	<i>Aspergillus sydowii</i>	MT582755.1	627	100%	99.07%
6	1 st week	NMWA (UN)	ON705351	<i>Sporobolomyces beijingsensis</i>	MK592821.1	560	94%	99.82%
7	1 st week	NG (UN)	ON705352	<i>Sporobolomyces beijingsensis</i>	ON705352.1	676	100%	100.00%
8	1 st week	NG (UN)	ON705353	<i>Sporidiobolus pararoseus</i>	MN956990.1	586	100%	100.00%
9	1 st week	WJR (C)	ON705354	<i>Keissleriella</i> sp.	ON705354.1	560	100%	100.00%
				<i>Keissleriella caraganae</i>	NR_164447.1	522	89%	98.81%
10	1 st week	WJR (C)	ON705355	<i>Lophiostoma corticola</i>	ON705355.1	568	100%	100.00%
11	1 st week	WJR (C)	ON705356	<i>Coprinellus radians</i>	MK087751.1	729	91%	99.84%
12	1 st week	WJR (C)	ON705360	<i>Bipolaris setariae</i>	HE792936.1	575	93%	99.82%
13	1 st week	WJR (C)	ON705361	Dothideomycetes sp.	JQ759885.1	1080	100%	100.00%
				<i>Periconia</i> sp.	MW391746.1	540	91%	99.60%
14	1 st week	NG (C)	ON705362	<i>Aspergillus versicolor</i>	KX349474.1	545	93%	99.81%
15	1 st week	NG (C)	ON705360	<i>Didymella glomerata</i>	MH791089.1	521	93%	99.03%
16	1 st week	NG (C)	ON705361	Ascomycota sp.	JN120374.1	1094	95%	93.39%
				<i>Paraphoma fimeti</i>	MW221097.1	574	87%	92.46%
17	1 st week	NG (C)	ON705362	<i>Aspergillus</i> sp.	KF964033.1	541	95%	99.62%
18	1 st week	NG (C)	ON705363	<i>Phoma fungicola</i>	KF293780.1	515	95%	99.81%
19	1 st week	NG (C)	ON705364	<i>Aspergillus sydowii</i>	MH712267.1	565	95%	99.44%
20	1 st week	NG (C)	ON705365	<i>Aspergillus sydowii</i>	JX518253.1	540	96%	99.08%
21	1 st week	WJY (UN)	ON705366	<i>Didymella</i> sp.	MG198901.1	534	100%	100.00%
				<i>Didymella glomerata</i>	ON705360.1	547	96%	99.22%
22	1 st week	WJY (UN)	ON705367	<i>Rhizopus oryzae</i>	MK246921.1	602	99%	99.66%
23	1 st week	WJY (UN)	ON705368	<i>Cladosporium halotolerans</i>	MT588810.1	575	93%	99.60%
24	1 st week	WJY (UN)	ON705369	<i>Scopulariopsis brevicaulis</i>	MF044048.1	580	96%	97.06%
25	1 st week	WJY (UN)	ON705370	<i>Cladosporium cladosporioides</i>	KU645993.1	561	95%	94.74%
26	1 st week	WJY (UN)	ON705371	<i>Penicillium brevicompactum</i>	KX067822.1	1046	95%	99.64%
27	1 st week	BJD (UN)	ON705372	<i>Cladosporium cladosporioides</i>	MW113324.1	523	96%	99.23%

28	1 st week	BJD (UN)	ON705373	<i>Alternaria compacta</i>	MW009019.1	553	98%	99.81%
29	1 st week	BJD (UN)	ON705374	<i>Aspergillus flocculosus</i>	MH101466.1	796	96%	99.13%
30	1 st week	BJD (UN)	ON705375	<i>Cladosporium tenuissimum</i>	MH270558.1	516	94%	100.00%
31	1 st week	BJD (C)	ON705376	<i>Trichoderma</i> sp.	MK870316.1	581	98%	99.65%
32	1 st week	BJD (C)	ON705377	<i>Trichoderma</i> sp.	MK871149.1	580	98%	99.48%
33	1 st week	BJD (C)	ON705378	<i>Alternaria tenuissima</i>	MZ160946.1	588	98%	99.45%
34	1 st week	BJD (C)	ON705379	<i>Alternaria tamaricis</i>	MW449616.1	539	97%	99.81%
35	1 st week	BJD (C)	ON705380	<i>Alternaria alternata</i>	MW009000.1	553	98%	99.45%
36	1 st week	BJD (C)	ON705381	<i>Alternaria tenuissima</i>	MZ160951.1	539	96%	99.81%
37	1 st week	BJD (C)	ON705382	<i>Chaetomium cruentum</i>	JN209871.1	1140	98%	98.57%
38	1 st week	BJD (C)	ON705383	<i>Trichoderma viride</i>	HM037928.1	581	97%	99.29%
39	1 st week	WJY (C)	ON705384	<i>Moesziomyces bullatus</i>	MK024203.1	755	99%	99.45%
40	1 st week	NMWA (C)	ON705385	<i>Choanephora infundibulifera</i>	MH856792.1	635	94%	99.33%
41	1 st week	WJR (UN)	ON705386	<i>Alternaria alternata</i>	MT487774.1	551	94%	99.81%
42	2 nd week	BJD (UN)	ON705387	Pleosporales sp.	MT974576.1	569	92%	99.10%
43	2 nd week	BJD (UN)	ON705388	<i>Filobasidium magnum</i>	MK592828.1	596	92%	99.66%
44	2 nd week	BJD(UN)	ON705389	<i>Sporidiobolus pararoseus</i>	MN956990.1	1156	88%	99.64%
45	2 nd week	BJD (UN)	ON705390	<i>Schizophyllum</i> sp.	MK732120.1	633	83%	98.32%
				<i>Schizophyllum commune</i>	MK680083.1	680	83%	98.31%
46	2 nd week	BJD (UN)	ON705391	<i>Sporidiobolus ruineniae</i>	HQ670680.1	609	90%	97.88%
47	2 nd week	BJD (UN)	ON705392	<i>Schizophyllum commune</i>	MF061788.1	606	100%	99.18%
48	2 nd week	BJD (UN)	ON705393	<i>Alternaria tenuissima</i>	MW723827.1	551	92%	93.20%
49	2 nd week	WJR (C)	ON705394	<i>Sporobolomyces beijngensis</i>	NR_137663.1	638	97%	99.64%
50	2 nd week	WJR (C)	ON705395	<i>Schizophyllum commune</i>	MF061788.1	606	99%	99.83%
51	2 nd week	WJR (C)	ON705396	<i>Keissleriella</i> sp.	MW764302.1	543	96%	99.44%
52	2 nd week	WJR (C)	ON705397	<i>Schizophyllum commune</i>	KU042974.1	614	93%	98.63%
53	2 nd week	BJD (C)	ON705398	<i>Hannaella oryzae</i>	KY103504.1	646	98%	99.13%
54	2 nd week	BJD (C)	ON705399	<i>Sporidiobolus pararoseus</i>	MN956990.1	1156	95%	99.82%
55	2 nd week	BJD (C)	ON705400	<i>Coprinellus radians</i>	MK732139.1	672	92%	98.83%
56	2 nd week	BJD (C)	ON705401	<i>Sporobolomyces carnicolor</i>	MT529926.1	608	93%	94.30%
57	2 nd week	BJD (C)	ON705402	<i>Hannaella oryzae</i>	KY103504.1	646	68%	92.58%
58	2 nd week	NG (C)	ON705403	<i>Alternaria tenuissima</i>	MW723827.1	551	89%	97.09%
59	2 nd week	NG (C)	ON705404	<i>Sporobolomyces carnicolor</i>	MK592826.1	571	97%	98.39%
60	2 nd week	NG (C)	ON705405	<i>Schizophyllum commune</i>	HQ331059.1	597	75%	98.93%
61	2 nd week	NG (C)	ON705406	<i>Irpex lacteus</i>	KX958063.1	1691	97%	99.06%
62	2 nd week	NG (C)	ON705407	<i>Coprinellus radians</i>	KP900252.1	658	99%	96.49%
63	2 nd week	NG (C)	ON705408	<i>Schizophyllum</i> sp.	MZ501801.1	600	95%	99.66%
				<i>Schizophyllum commune</i>	MN218205.1	639	95%	99.49%

64	2 nd week	WJY (C)	ON705409	<i>Hypocreales</i> sp.	MN856379.1	545	93%	95.59%
65	2 nd week	WJY (C)	ON705410	<i>Sporobolomyces beijingsensis</i>	MK592821.1	560	86%	93.36%
66	2 nd week	WJY (C)	ON705411	<i>Sporidiobolus pararoseus</i>	MN956990.1	1156	95%	99.64%
67	2 nd week	WJY (C)	ON705412	<i>Sporidiobolus pararoseus</i>	ON705412.1	622	100%	100.0%
68	2 nd week	WJY (C)	ON705413	<i>Typhula micans</i>	ON705413.1	129	100%	100.0%
69	2 nd week	WJY (C)	ON705414	Pleosporales sp.	MK595645.1	723	96%	99.60%
				<i>Parastagonospora nodorum</i>	KF512822.1	1034	96%	99.60%
70	2 nd week	WJY (C)	ON705415	<i>Botryosporium</i> sp.	MH428684.1	479	78%	89.94%
				<i>Botryosporium longibrachiatum</i>	KF372591.1	604	88%	91.96%
71	2 nd week	WJY (C)	ON705416	<i>Hannaella oryzae</i>	KY103504.1	646	96%	99.12%
72	2 nd week	WJY (C)	ON705417	<i>Sporobolomyces carnicolor</i>	MT529870.1	557	98%	99.64%
73	2 nd week	WJY (C)	ON705418	<i>Hannaella oryzae</i>	KY103504.1	646	96%	97.60%
74	2 nd week	WJY (C)	ON705419	Basidiomycota sp.	MF680430.1	628	95%	99.84%
				<i>Funalia trogii</i>	EF546236.1	646	95%	100.00%
75	2 nd week	WJY (C)	ON705420	<i>Cladosporium</i> sp.	MG554329.1	587	90%	99.04%
				<i>Cladosporium parahalotolerans</i>	MF473164.1	837	90%	99.04%
76	2 nd week	WJR (UN)	ON705421	<i>Sporobolomyces carnicolor</i>	KY962981.1	603	96%	99.30%
77	2 nd week	WJR (UN)	ON705422	<i>Penicillium oxalicum</i>	MH766384.1	564	98%	100.00%
78	2 nd week	WJR (UN)	ON705423	<i>Coprinellus radians</i>	MK087751.1	729	96%	99.69%
79	2 nd week	WJR (UN)	ON705424	Ascomycota sp.	JN120374.1	1094	89%	93.95%
80	2 nd week	WJR (UN)	ON705425	<i>Rhodospodiobolus odoratus</i>	MT340844.1	581	96%	99.65%
81	2 nd week	WJR (UN)	ON705426	<i>Coprinellus radians</i>	MK087751.1	729	96%	99.69%
82	2 nd week	WJR (UN)	ON705427	<i>Sporobolomyces carnicolor</i>	MK592826.1	571	96%	99.30%
83	2 nd week	WJR (UN)	ON705428	<i>Coprinellus radians</i>	MK087751.1	729	95%	99.39%
84	2 nd week	WJR (UN)	ON705429	<i>Hirsutella</i> sp.	MZ380071.1	587	94%	99.81%
85	2 nd week	WJR (UN)	ON705430	<i>Psathyrella bivelata</i>	MF325962.1	728	94%	99.85%
86	2 nd week	WJR (UN)	ON705431	<i>Colletotrichum gloeosporioides</i>	JQ356541.1	551	95%	99.62%
87	2 nd week	WJR (UN)	ON705432	<i>Aureobasidium pullulans</i>	MN922096.1	543	71%	98.77%
88	2 nd week	WJR (UN)	ON705433	Hypocreales sp.	MN856379.1	545	97%	99.07%
				<i>Clonostachys rosea</i>	MW113490.1	588	95%	99.81%
89	2 nd week	WJR (UN)	ON705434	<i>Keissleriella</i> sp.	MW764302.1	543	96%	99.07%
90	2 nd week	WJY (UN)	ON705435	<i>Coprinellus xanthothrix</i>	JN198387.1	700	97%	99.24%
91	2 nd week	WJY (UN)	ON705436	<i>Sporobolomyces carnicolor</i>	KY962981.1	603	94%	98.76%
92	2 nd week	WJY (UN)	ON705437	<i>Aureobasidium pullulans</i>	DQ680843.1	555	97%	98.20%
93	2 nd week	WJY (UN)	ON705438	<i>Sporidiobolus</i> sp.	KJ908838.1	577	97%	99.29%
				<i>Sporobolomyces carnicolor</i>	MT529870.1	557	95%	99.63%
94	2 nd week	WJY(UN)	ON705439	<i>Aureobasidium pullulans</i>	DQ680843.1	555	94%	98.20%
95	2 nd week	WJY(UN)	ON705440	<i>Schizophyllum commune</i>	MH392740.1	648	94%	99.50%

96	2 nd week	WJY (UN)	ON705441	<i>Sporidiobolus</i> sp.	KJ908838.1	577	98%	99.47%
				<i>Sporobolomyces carnicolor</i>	MT529870.1	557	96%	99.64%
97	2 nd week	WJY (UN)	ON705442	<i>Phaeosphaeria</i> sp.	MH884074.1	521	93%	99.42%
				<i>Phaeosphaeria fuckelii</i>	MZ396933.1	563	95%	98.86%
98	2 nd week	WJY (UN)	ON705443	<i>Bullera</i> sp.	HQ631046.1	514	95%	99.10%
				<i>Hannaella sinensis</i>	NR_111075.1	474	95%	99.10%
99	2 nd week	WJY (UN)	ON705444	<i>Papiliotrema fuscus</i>	KY962979.1	572	95%	98.87%
100	2 nd week	NMWA (UN)	ON705445	<i>Coprinellus radians</i>	KP900252.1	658	98%	99.54%
101	2 nd week	NMWA (UN)	ON705446	<i>Schizophyllum commune</i>	MH483677.1	614	99%	99.33%
102	2 nd week	WJR (UN)	ON705447	<i>Irpex lacteus</i>	MT085750.1	643	99%	99.68%
103	2 nd week	NMWA (UN)	ON705448	<i>Sporidiobolus pararoseus</i>	MN340037.1	571	95%	99.28%
104	2 nd week	NMWA (UN)	ON705449	<i>Schizophyllum commune</i>	MN523303.1	592	97%	97.30%
105	2 nd week	NMWA (UN)	ON705450	<i>Sporobolomyces carnicolor</i>	MK592826.1	571	94%	99.64%
106	2 nd week	NMWA (UN)	ON705451	<i>Cochliobolus sativus</i>	JQ754031.1	580	96%	99.82%
107	2 nd week	NMWA (C)	ON705452	<i>Cyphellaceae</i> sp.	MG269994.1	702	95%	99.85%
108	2 nd week	NMWA (C)	ON705453	<i>Sporidiobolus pararoseus</i>	MN340037.1	571	95%	99.11%
109	2 nd week	NMWA (C)	ON705454	<i>Coprinopsis atramentaria</i>	MG132086.1	681	96%	98.96%
110	2 nd week	NMWA (C)	ON705455	<i>Fusarium graminearum</i>	MF800908.1	517	79%	99.29%
111	2 nd week	NMWA (C)	ON705456	<i>Irpex lacteus</i>	MT085750.1	643	96%	99.38%
112	2 nd week	NMWA (C)	ON705457	<i>Irpex lacteus</i>	ON705457.1	1241	100%	100.0%
113	2 nd week	NMWA (C)	ON705458	<i>Sporobolomyces carnicolor</i>	KY962981.1	603	98%	99.46%
114	2 nd week	NMWA (C)	ON705459	<i>Papiliotrema fuscus</i>	KY962979.1	572	95%	98.68%
115	2 nd week	NMWA (C)	ON705460	<i>Colletotrichum gloeosporioides</i>	JQ356541.1	551	98%	98.91%
116	2 nd week	NMWA (C)	ON705461	<i>Sporobolomyces carnicolor</i>	MK592826.1	571	97%	99.47%
117	2 nd week	NMWA (C)	ON705462	<i>Schizophyllum commune</i>	MF326432.1	647	76%	98.95%
118	2 nd week	NMWA (C)	ON705463	<i>Schizophyllum commune</i>	MF061788.1	606	99%	99.66%
119	2 nd week	NMWA (C)	ON705464	<i>Fusarium graminearum</i>	MK762537.1	503	68%	98.44%
120	2 nd week	NMWA (C)	ON705465	<i>Sporidiobolus pararoseus</i>	MN340037.1	571	95%	99.28%
121	2 nd week	NMWA (C)	ON705466	<i>Fusarium graminearum</i>	MZ648312.1	517	96%	99.61%
122	2 nd week	NMWA (C)	ON705467	<i>Schizophyllum commune</i>	MF061788.1	606	98%	99.01%
123	2 nd week	NG (UN)	ON705468	<i>Pyricularia urashimae</i>	MT586118.1	510	94%	99.80%
124	2 nd week	NG (UN)	ON705469	<i>Clonostachys rosea</i>	MW113490.1	588	95%	99.62%
125	2 nd week	NG (UN)	ON705470	<i>Cladosporium</i> sp.	MZ452398.1	546	97%	99.61%
				<i>Cladosporium cladosporioides</i>	MT878604.1	538	97%	99.42%
126	2 nd week	NG (UN)	ON705471	<i>Cyphellaceae</i> sp.	MG269994.1	702	93%	99.54%
127	2 nd week	NG (UN)	ON705472	<i>Sporobolomyces carnicolor</i>	KY962981.1	603	94%	99.64%
128	2 nd week	NG (UN)	ON705473	<i>Schizophyllum commune</i>	MF061788.1	606	98%	99.01%
129	2 nd week	NG (UN)	ON705474	Pleosporales sp.	HQ631015.1	588	79%	98.58%

130	2 nd week	NG (UN)	ON705475	<i>Neosetophoma</i> sp.	KU751879.1	569	96%	99.82%
131	3 rd week	NG (C)	ON705476	<i>Cladosporium tenuissimum</i>	JN624886.1	518	98%	99.81%
132	3 rd week	NG (C)	ON705477	<i>Moesziomyces aphidis</i>	MN038047.1	812	98%	99.60%
133	3 rd week	NG (C)	ON705478	<i>Trichothecium roseum</i>	MH470248.1	603	97%	99.14%
134	3 rd week	NG (C)	ON705479	<i>Magnaporthe</i> sp.	MK595550.1	731	97%	98.84%
				<i>Pyricularia grisea</i>	OK093407.1	577	95%	99.41%
135	3 rd week	NG (C)	ON705480	<i>Cladosporium halotolerans</i>	MT588810.1	575	98%	95.80%
136	3 rd week	NG (C)	ON705480	<i>Cercospora brassicola</i>	MN209930.1	547	97%	99.41%
137	3 rd week	NG (C)	ON705482	<i>Cladosporium cladosporioides</i>	MW113635.1	669	98%	99.07%
138	3 rd week	NG (C)	ON705483	<i>Alternaria brassicae</i>	MW008888.1	545	98%	99.63%
139	3 rd week	NG (C)	ON705484	<i>Cladosporium tenuissimum</i>	KP689183.1	522	98%	99.61%
140	3 rd week	NG (C)	ON705485	<i>Alternaria</i> sp.	MT487763.1	545	96%	99.81%
				<i>Alternaria tenuissima</i>	KR709056.1	545	96%	100.00%
141	3 rd week	NG (C)	ON705486	<i>Penicillium oxalicum</i>	MT597864.1	601	77%	99.31%
142	3 rd week	NG (C)	ON705487	<i>Cercospora canescens</i>	MN400244.1	547	99%	99.02%
143	3 rd week	NG (UN)	ON705488	<i>Curvularia plantarum</i>	MW581905.1	606	98%	99.47%
144	3 rd week	NG (UN)	ON705489	<i>Rhodotorula mucilaginosa</i>	MN427959.1	1140	98%	98.82%
145	3 rd week	NG (UN)	ON705490	<i>Rhodotorula</i> sp.	MW008901.1	543	97%	99.81%
				<i>Alternaria compacta</i>	MW008904.1	542	97%	99.63%
146	3 rd week	NG (UN)	ON705491	<i>Penicillium oxalicum</i>	KY400080.1	574	98%	99.29%
147	3 rd week	NG (UN)	ON705492	<i>Cladosporium oxysporum</i>	MT079170.1	526	99%	99.42%
148	3 rd week	NG (UN)	ON705493	<i>Magnaporthe oryzae</i>	FN555113.1	560	97%	98.65%
149	3 rd week	NG (UN)	ON705494	<i>Cladosporium tenuissimum</i>	KP689183.1	522	96%	99.61%
150	3 rd week	NG (UN)	ON705495	<i>Pseudopithomyces palmicola</i>	MN788110.1	848	97%	98.98%
151	3 rd week	NG (UN)	ON705496	<i>Cladosporium cladosporioides</i>	MW453186.1	525	97%	99.42%
152	3 rd week	NG (UN)	ON705497	<i>Aspergillus niger</i>	MW958037.1	586	96%	99.82%
153	3 rd week	WJR (C)	ON705498	<i>Alternaria alternata</i>	MF099863.1	982	99%	99.27%
154	3 rd week	WJR (C)	ON705499	<i>Cladosporium cladosporioides</i>	MW113635.1	669	98%	98.52%
155	3 rd week	WJR (C)	ON705500	<i>Alternaria alternata</i>	MW008971.1	542	98%	99.63%
156	3 rd week	WJR (C)	ON705501	<i>Alternaria compacta</i>	MW008978.1	537	97%	100.00%
157	3 rd week	WJR (C)	ON705502	<i>Nigrospora</i> sp.	MN341508.1	555	84%	99.34%
				<i>Nigrospora oryzae</i>	MF356577.1	532	96%	99.34%
158	3 rd week	WJR (C)	ON705503	<i>Cladosporium oxysporum</i>	MT079170.1	526	96%	99.41%
159	3 rd week	WJR (C)	ON705504	<i>Alternaria alternata</i>	MT093259.1	546	97%	99.44%
160	3 rd week	WJR (C)	ON705505	<i>Penicillium oxalicum</i>	MN856268.1	594	87%	100.00%
161	3 rd week	WJR (C)	ON705506	<i>Moesziomyces aphidis</i>	MH777069.1	793	33%	93.44%
162	3 rd week	WJR (UN)	ON705507	<i>Cladosporium tenuissimum</i>	MT072081.1	525	98%	99.42%

163	3 rd week	WJR (UN)	ON705508	Ascomycota sp.	MH430722.1	551	98%	99.63%
164	3 rd week	WJR (UN)	ON705509	<i>Aspergillus aculeatus</i>	MK450627.1	851	82%%	99.12%
165	3 rd week	WJR (UN)	ON705510	<i>Alternaria</i> sp.	MK649975.1	544	98%	99.81%
				<i>Alternaria brassicae</i>	MW008950.1	553	98%	100.00%
166	3 rd week	WJR (UN)	ON705511	<i>Epicoccum nigrum</i>	MH645206.1	586	97%	99.23%
167	3 rd week	WJY (C)	ON705512	<i>Alternaria alternata</i>	KF293886.1	545	100%	99.26%
168	3 rd week	WJY (C)	ON705513	<i>Penicillium oxalicum</i>	MT597864.1	601	90%	100.00%
169	3 rd week	WJY (C)	ON705514	<i>Alternaria alternata</i>	MW008892.1	542	97%	99.63%
170	3 rd week	WJY (C)	ON705515	<i>Septoriella oudemansii</i>	KR873250.1	1142	93%	100.00%
171	3 rd week	WJY (C)	ON705516	<i>Trichoderma harzianum</i>	KJ767088.1	622	99%	92.39%
172	3 rd week	WJY (C)	ON705517	<i>Trichoderma harzianum</i>	MW454982.1	584	96%	99.66%
173	3 rd week	WJY (UN)	ON705518	<i>Amphobotrys ricini</i>	MT223777.1	489	83%	99.74%
174	3 rd week	WJY (UN)	ON705519	<i>Pyricularia urashimae</i>	MT586118.1	510	95%	99.21%
175	3 rd week	WJY (UN)	ON705520	<i>Pleosporales</i> sp.	KX379244.1	525	95%	99.81%
				<i>Cladosporium cladosporioides</i>	KX258800.1	526	96%	99.43%
176	3 rd week	WJY (UN)	ON705521	<i>Cladosporium cladosporioides</i>	KF876823.1	522	97%	99.42%
177	3 rd week	WJY (UN)	ON705522	<i>Alternaria angustiovoidea</i>	MW009022.1	551	97%	100.00%
178	3 rd week	WJY (UN)	ON705523	<i>Alternaria compacta</i>	MW008933.1	540	97%	99.44%
179	3 rd week	WJY (UN)	ON705524	<i>Cladosporium cladosporioides</i>	KF876823.1	522	97%	99.42%
180	3 rd week	WJY (UN)	ON705525	<i>Cladosporium oryzae</i>	KY400092.1	532	97%	99.43%
181	3 rd week	WJY (UN)	ON705526	<i>Alternaria solani</i>	MW009039.1	551	98%	99.64%
182	3 rd week	WJY (UN)	ON705527	<i>Alternaria</i> sp.	MK649973.1	543	98%	99.63%
				<i>Alternaria tamaricis</i>	MW009013.1	542	97%	99.81%
183	3 rd week	WJY (UN)	ON705528	<i>Alternaria solani</i>	MW009039.1	551	97%	99.82%
184	3 rd week	WJY (UN)	ON705529	<i>Alternaria alternata</i>	MW008996.1	548	98%	99.45%
185	3 rd week	NMWA (C)	ON705530	<i>Alternaria</i> sp.	KX064983.1	544	97%	99.63%
				<i>Alternaria tenuissima</i>	KM513592.1	547	97%	99.45%
186	3 rd week	NMWA (C)	ON705531	<i>Alternaria brassicae</i>	MW009012.1	552	97%	99.81%
187	3 rd week	NMWA (C)	ON705532	<i>Cladosporium cladosporioides</i>	KC880082.1	525	97%	99.81%
188	3 rd week	NMWA (C)	ON705533	<i>Alternaria alternata</i>	MN173818.1	542	97%	99.63%
189	3 rd week	NMWA (C)	ON705534	<i>Alternaria alternata</i>	MK281551.1	546	97%	99.45%
190	3 rd week	NMWA (C)	ON705535	<i>Alternaria solani</i>	MW009039.1	551	97%	100.00%
191	3 rd week	NMWA (C)	ON705536	<i>Deniquelata</i> sp.	MH316153.1	686	93%	98.25%
				<i>Deniquelata quercina</i>	MT820404.1	675	90%	98.79%
192	3 rd week	NMWA (C)	ON705537	<i>Alternaria</i> sp.	MK649974.1	545	97%	100.00%
193	3 rd week	NMWA (C)	ON705538	<i>Alternaria angustiovoidea</i>	MW009022.1	551	96%	99.81%
194	3 rd week	NMWA (C)	ON705539	<i>Cladosporium cucumerinum</i>	KR912311.1	516	94%	100.00%
195	3 rd week	NMWA (C)	ON705540	<i>Moesziomyces bullatus</i>	MK024203.1	755	96%	90.96%

196	3 rd week	NMWA (C)	ON705541	<i>Cladosporium tenuissimum</i>	JN624886.1	518	96%	99.61%
197	3 rd week	NMWA (UN)	ON705542	<i>Fusarium incarnatum</i>	MT565585.1	505	70%	98.63%
198	3 rd week	NMWA (UN)	ON705543	<i>Pyricularia urashimae</i>	MT586118.1	510	79%	98.58%
199	3 rd week	NMWA (UN)	ON705544	<i>Pyricularia urashimae</i>	ON705544.1	567	100.00%	99.46%
200	3 rd week	NMWA (UN)	ON705545	<i>Aspergillus flavus</i>	MF685316.1	555	96%	98.19%
201	3 rd week	NMWA (UN)	ON705546	<i>Ascomycota</i> sp.	MH430722.1	551	90%	99.19%
				<i>Aspergillus aculeatus</i>	MH389050.1	552	90%	99.19%
202	3 rd week	BJD (C)	ON705547	<i>Alternaria</i> sp.	MK649963.1	548	96%	99.81%
				<i>Alternaria compacta</i>	MW009019.1	553	96%	99.81%
203	3 rd week	BJD (C)	ON705548	<i>Torula</i> sp.	KC427082.1	567	95%	99.62%
204	3 rd week	BJD (C)	ON705549	<i>Alternaria solani</i>	MW009039.1	551	99%	99.63%
205	3 rd week	BJD (C)	ON705550	<i>Alternaria</i> sp.	ON705550.1	558	100%	100.00%
				<i>Alternaria compacta</i>	ON790467.1	678	97%	99.82%
206	3 rd week	BJD (C)	ON705551	<i>Alternaria</i> sp.	ON705551.1	555	100%	100.00%
				<i>Alternaria compacta</i>	OP364483.1	554	96%	100.00%
207	3 rd week	BJD (C)	ON705552	<i>Cladosporium</i> sp.	ON705552.1	535	100%	100.00%
				<i>Cladosporium tenuissimum</i>	OM237117.1	533	96%	99.81%
208	3 rd week	BJD (C)	ON705553	<i>Phoma multirostrata</i>	KR709058.1	530	96%	99.62%
209	3 rd week	BJD (C)	ON705554	<i>Penicillium oxalicum</i>	MH367526.1	564	100%	99.29%
210	3 rd week	BJD (C)	ON705555	<i>Alternaria angustiovoidea</i>	MW009022.1	551	97%	99.45%
211	3 rd week	BJD (C)	ON705556	<i>Cladosporium cladosporioides</i>	MT367262.1	556	87%	99.33%
212	3 rd week	BJD (C)	ON705557	<i>Alternaria solani</i>	MN871616.1	541	88%	99.38%
213	3 rd week	BJD (UN)	ON705558	<i>Alternaria alternata</i>	KX783402.1	545	99%	99.81%
214	3 rd week	BJD (UN)	ON705559	<i>Cladosporium oxysporum</i>	MK226241.1	522	82%	98.84%
215	3 rd week	BJD (UN)	ON705560	<i>Cladosporium sphaerospermum</i>	MT582795.1	1369	72%	98.96%
216	3 rd week	BJD (UN)	ON705561	<i>Pseudozyma</i> sp.	MN515019.1	780	97%	100.00%
				<i>Moesziomyces antarcticus</i>	MK027038.1	747	97%	100.00%
217	3 rd week	BJD (UN)	ON705562	<i>Penicillium oxalicum</i>	MH766384.1	564	98%	100.00%
218	3 rd week	BJD (UN)	ON705563	<i>Alternaria alternata</i>	MW009036.1	552	98%	99.81%
219	3 rd week	BJD (UN)	ON705564	<i>Alternaria alternata</i>	MW008882.1	543	98%	99.07%
220	3 rd week	BJD (UN)	ON705565	<i>Alternaria tenuissima</i>	MK534905.1	528	72%	99.24%
221	3 rd week	BJD (UN)	ON705566	<i>Cercospora chrysanthemi</i>	KR709060.1	515	99%	99.80%
222	3 rd week	BJD (UN)	ON705567	<i>Alternaria</i> sp.	MK649972.1	547	99%	99.44%
				<i>Alternaria tenuissima</i>	KX783378.1	543	100%	99.44%
223	3 rd week	BJD (UN)	ON705568	<i>Cercospora capsici</i>	HQ700354.1	513	98%	99.60%
224	3 rd week	BJD (UN)	ON705569	<i>Alternaria alternata</i>	MT635274.1	566	96%	100.00%
225	3 rd week	BJD (UN)	ON705570	<i>Bipolaris setariae</i>	MN215638.1	722	97%	99.45%

226	3 rd week	BJD (UN)	ON705571	<i>Cladosporium delicatulum</i>	MN644691.1	1071	90%	99.58%
227	3 rd week	BJD (UN)	ON705572	<i>Alternaria porri</i>	MW009048.1	552	98%	100.00%
228	3 rd week	BJD (UN)	ON705573	<i>Alternaria tenuissima</i>	MH824253.1	570	94%	99.42

Supplementary Table S3: Distribution of the most abundant fungal genera. Genera with very low relative abundances (<1%) were merged as “others”.

	BJD		NG		WJY		WJR		NMWA		Total	%
	C	U	C	U	C	U	C	U	C	U		
<i>Alternaria</i>	8	12	3	1	2	6	4	2	6	3	47	20.61
<i>Ascomycota</i>	0	0	0	0	0	0	0	2	0	1	3	1.32
<i>Aspergillus</i>	0	1	4	1	0	0	0	1	0	2	9	3.95
<i>Aureobasidium</i>	0	0	0	0	0	2	0	1	0	1	4	1.75
<i>Cercospora</i>	0	2	2	0	0	0	0	0	0	0	4	1.75
<i>Cladosporium</i>	1	6	5	3	1	5	2	1	3	0	27	11.84
<i>Coprinellus</i>	1	0	1	0	0	4	1	0	0	1	8	3.51
<i>Fusarium</i>	0	0	0	0	0	0	0	0	3	1	4	1.75
<i>Hannaella</i>	1	0	1	0	2	0	0	0	0	0	4	1.75
<i>Irpex</i>	0	0	1	0	0	0	0	1	1	0	3	1.32
<i>Keissleriella</i>	0	0	0	0	0	0	2	1	0	0	3	1.32
<i>Moesziomyces</i>	0	0	1	0	1	0	1	0	1	0	4	1.75
<i>Penicillium</i>	1	1	1	1	1	1	1	1	0	1	9	3.95
<i>Pyricularia</i>	0	0	0	1	0	1	0	0	0	1	3	1.32
<i>Schizophyllum</i>	0	2	2	2	1	1	2	0	2	2	14	6.14
<i>Sporidiobolus</i>	1	3	0	1	1	2	0	0	2	1	11	4.82
<i>Sporobolomyces</i>	1	0	1	2	2	1	1	2	2	1	13	5.70
<i>Trichoderma</i>	3	0	0	0	2	0	0	0	0	0	5	2.19
Others (<1%)	3	3	4	6	6	6	4	6	6	2	46	20.18

Supplementary Table S4: Airborne fungal concentration at each sampling location.

Sampling sites		First week (CFU/m ³)	Second week (CFU/m ³)	Third week (CFU/m ³)
BJD	C	80	40	90
	U	40	90	180
NG	C	70	80	120
	U	30	60	100
WJY	C	10	120	60
	U	60	130	120
WJR	C	50	40	90
	U	10	120	50
NMWA	C	10	150	110
	U	50	60	60

Supplementary Table S5. Fungal genera distribution at U and C sites.

Fungal genera	Total Strains count At C sites	Total Strains count At U sites
<i>Alternaria</i>	23	24
<i>Amphobotrys</i>	0	1
<i>Arthrinium</i>	0	1
<i>Aspergillus</i>	4	5
<i>Aureobasidium</i>	0	4
<i>Bipolaris</i>	1	1
<i>Botryosporium</i>	1	0
<i>Bullera</i>	0	1
<i>Cercospora</i>	2	2
<i>Chaetomium</i>	1	0
<i>Choanephora</i>	1	0
<i>Cladosporium</i>	13	14
<i>Clonostachys</i>	0	1
<i>Cochliobolus</i>	0	1
<i>Colletotrichum</i>	1	1
<i>Coprinellus</i>	3	5
<i>Coprinopsis</i>	1	0
<i>Curvularia</i>	0	1
<i>Deniquelata</i>	1	0
<i>Didymella</i>	1	1
<i>Epicoccum</i>	0	1
<i>Fusarium</i>	3	1
<i>Hirsutella</i>	0	1
<i>Hannaella</i>	4	1
<i>Irpex</i>	2	1
<i>Keissleriella</i>	2	1
<i>Lophiostoma</i>	1	0
<i>Magnaporthe</i>	1	1
<i>Moesziomyces</i>	4	0
<i>Neosetophoma</i>	1	1
<i>Nigrospora</i>	1	0
<i>Papillotrema</i>	1	1
<i>Penicillium</i>	4	5
<i>Phaeosphaeria</i>	0	1
<i>Phoma</i>	2	0
<i>Psathyrella</i>	0	1
<i>Pseudopithomyces</i>	0	1
<i>Pseudozyma</i>	0	1
<i>Pyricularia</i>	0	3

<i>Rhizopus</i>	0	1
<i>Rhodosporiobolus</i>	0	1
<i>Rhodotorula</i>	0	1
<i>Schizophyllum</i>	7	7
<i>Scopulariopsis</i>	0	1
<i>Septoriella</i>	1	0
<i>Setomelanomma</i>	1	0
<i>Sporidiobolus</i>	4	7
<i>Sporobolomyces</i>	7	6
<i>Torula</i>	1	0
<i>Trichoderma</i>	5	0
<i>Trichothecium</i>	1	0
<i>Typhula</i>	1	0
58 genera in total	112	116

Supplementary Table S6: Environmental factors recorded in each sampling site at the time of sampling (C = center of the bridge; U = under the bridge).

Location	1st week		2nd week		3rd week	
	Temperature (°C)	RH (%)	Temperature (°C)	RH (%)	Temperature (°C)	RH (%)
Northgate (C)	25.3	79.9	22.9	93.1	29.6	77.2
Northgate (U)	24.2	79.0	23.0	93.2	29.6	77.2
Nanmenwai avenue (C)	23.2	63.4	27.9	93.2	28.6	77.2
Nanmenwai avenue (U)	23.6	63.2	27.5	93.2	28.6	77.2
Wujiayao avenue (C)	29.9	81.6	26.9	93.2	22.4	75.2
Wujiayao avenue (U)	30.0	81.6	25.9	93.2	21.8	74.3
Binjiangdao (C)	25.9	70.6	28.7	93.3	25.5	77.2
Binjiangdao (U)	26.1	70.6	28.0	93.3	24.2	77.2
Weijin road (C)	27.2	79.9	25.7	93.2	23.2	63.9
Weijin road (U)	27.0	79.9	23.3	93.2	23.1	74.1

a



b



c



d



Supplementary Figure S1: Sampling sites. NG (a), NMWA (b), and WJR pedestrian bridges; top central area of BJD pedestrian bridge (d).

a



b



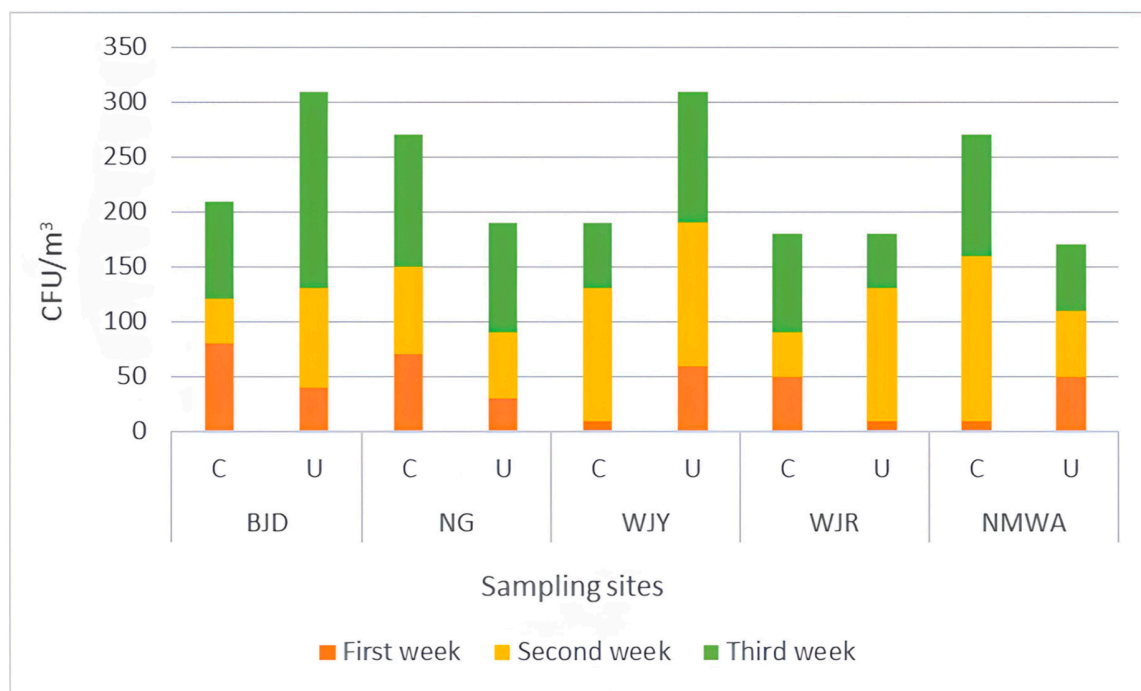
c



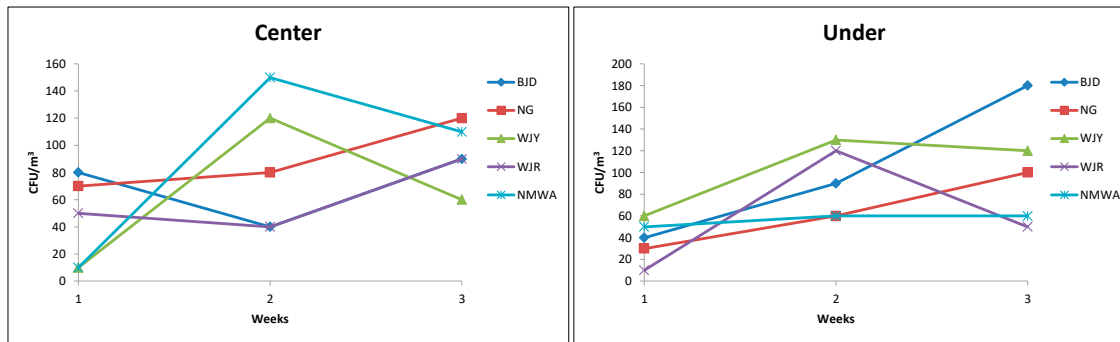
d



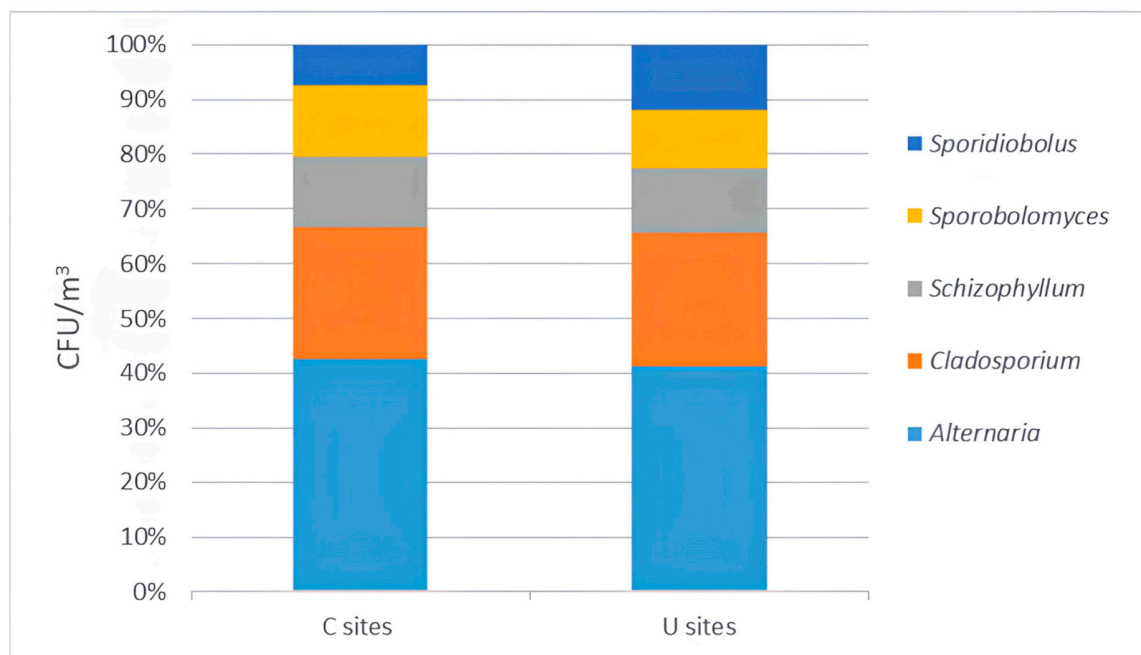
Supplementary Figure S2: Collection of air samples (a, b) and examples of airborne fungal strains isolated from the analyzed pedestrian bridges (c, d).



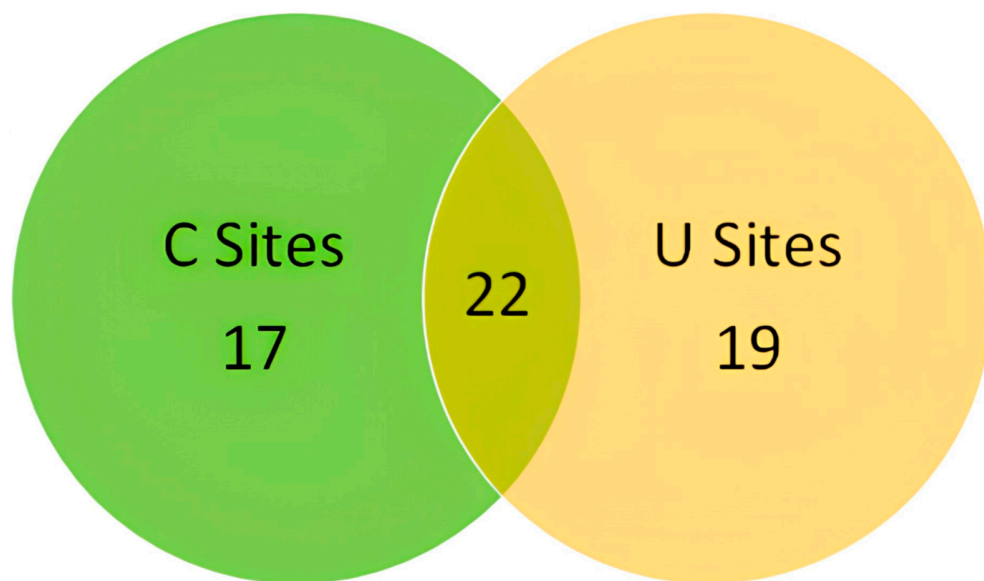
Supplementary Figure S3: Fungal concentration at each experimental location (C = the top central area of the bridges; U = under the bridges along the side walk).



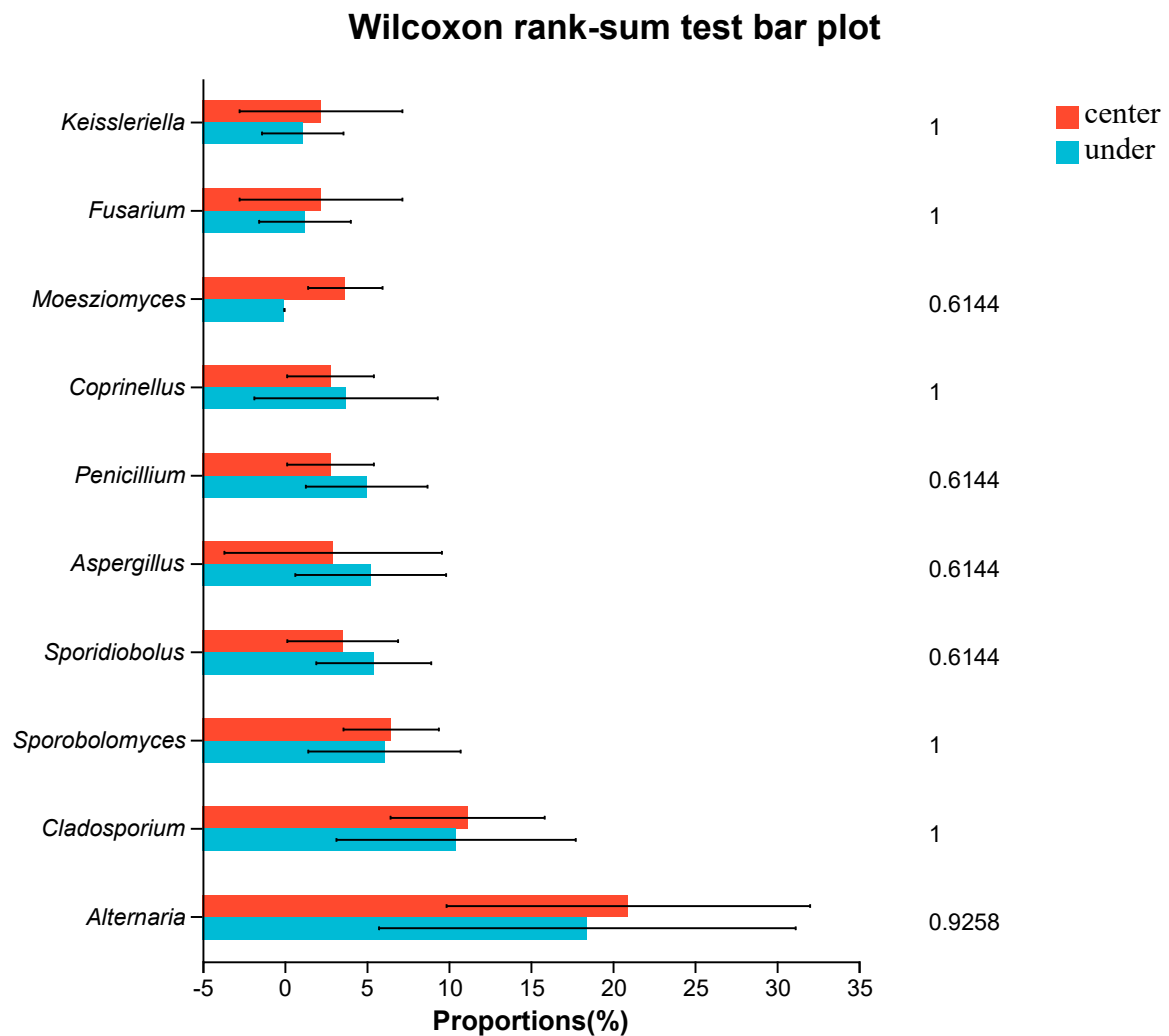
Supplementary Figure S4: Concentration of airborne fungi at the center and under the 5 bridges during the 3 weeks sampling period (CFU/m³).



Supplementary Figure S5: Concentration of the five most abundant fungal genera collected from the two analyzed sites (C = the top central area of the bridges; U = under the bridges along the side walk) at each pedestrian bridge.



Supplementary Figure S6: Total number of fungal genera shared by both sites (C = the top central area of the bridges; U = under the bridges along the side walk) selected for each bridge.



Supplementary Figure S7: Variation of ten most abundant fungal genera in the two sites at the center and under the investigated bridges, based on Wilcoxon rank-sum test. Error bars represent SEM.