

## SUPPLEMENTAL CONTENT

### "Diversity of spider families parasitized by fungal pathogens: a global review"

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2024. Journal of Arachnology Volume 52, Issue 2

**Table S1.**—List of spider taxa infected by fungi (based on literature and internet information). \*Highly likely a species in the family Cordycipitaceae due to the fact that temperate zone pholcids are infected almost exclusively by the fungi *Engyodontium araneorum* [= *Lecanicillium tenuipes*], *Parengyodontium album* [= *Beauveria alba* = *Engyodontium album*], and *Torrubiella pulvinata*, all of which belong to the Cordycipitaceae (see MycoBank 2023). F = Field observation, L = Laboratory observation.

\*\*Data used to create Fig. 1; the associated references are cited here but not in the Literature Cited section of the paper.

Spider family / species	Fungus species	Fungus family or higher taxon	Country	Reference
<b>ACTINOPODIDAE</b>				
Actinopus sp.	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	Argentina (F)	1
<b>AGELENIDAE</b>				
Agelenopsis sp.	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	USA (L)	2
Coelotes terrestris (Wider, 1834)	Gibellula leiopus	Cordycipitaceae	Poland (F)	3
Tegenaria sp. ?	Gibellula pulchra	Cordycipitaceae	Spain (F)	4
Urocoras longispina (Kulczyński, 1897)	Gibellula leiopus	Cordycipitaceae	Republic of Serbia (F)	5
<b>AMAUROBIIDAE</b>				
Amaurobius ferox (Walckenaer, 1830)	Gibellula sp. overgrown with a hyperparasite	Cordycipitaceae	England (F)	6
Amaurobius ferox (Walckenaer, 1830)	Cordyceps arachnophila [= Torrubiella arachnophila] ?	Cordycipitaceae	Austria (F)	7
Amaurobius sp.	N/A	N/A	Korea (F)	8
Amaurobius sp.	N/A	N/A	Korea (L)	9
<b>ANTRODIAETIDAE</b>				
Atypoides riversi O. Pickard-Cambridge, 1883	Beauveria brongniartii	Cordycipitaceae	N/A (L?)	10
Atypoides riversi O. Pickard-Cambridge, 1883	Beauveria bassiana	Cordycipitaceae	USA (L)	11
<b>ANYPHAENIDAE</b>				
Anyphaena sp.	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	USA (L)	12
Hibana [= Aysha] gracilis (Hentz, 1847)	Beauveria sp. ?	Cordycipitaceae ?	USA, FL (F)	13
Iguarima censoria (Keyserling, 1891)	Gibellula sp.	Cordycipitaceae	Brazil (F)	14

Iguarima censoria (Keyserling, 1891)	Gibellula sp.	Cordycipitaceae	Brazil (F)	15
Lupettiana mordax (O. Pickard-Cambridge, 1896)	Hevansia sp.	Cordycipitaceae	USA, Miss (F)	16
Macrophyes pacoti Brescovit, Oliveira, J. C. M. S. M. Sobczak & J. B. Sobczak, 2019	Gibellula aurea	Cordycipitaceae	Brazil (F)	17
Macrophyes pacoti Brescovit, Oliveira, J. C. M. S. M. Sobczak & J. B. Sobczak, 2019	Gibellula sp.	Cordycipitaceae	Brazil (F)	18
Macrophyes pacoti Brescovit, Oliveira, J. C. M. S. M. Sobczak & J. B. Sobczak, 2019	Gibellula sp.	Cordycipitaceae	Brazil (F)	19
Macrophyes pacoti Brescovit, Oliveira, J. C. M. S. M. Sobczak & J. B. Sobczak, 2019	Gibellula sp.	Cordycipitaceae	Brazil (F)	20
N/A	Gibellula leiopus	Cordycipitaceae	Brazil (F)	21
N/A	Gibellula sp.	Cordycipitaceae	Brazil (F)	22
N/A	N/A	N/A	USA (F)	23
<b>ARANEIDAE</b>				
Acanthepeira stellata (Walckenaer, 1805)	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	USA (L)	24
Araneus ventricosus (L. Koch, 1878)	Ophiocordyceps arachneicola	Ophiocordycipitaceae	Japan (F)	25
Araneus sp.	Akanthomyces araneogenus [= Akanthomyces araneogenum = Lecanicillium araneogenum]	Cordycipitaceae	China (F)	26
Araneus sp.	Akanthomyces araneogenus [= Akanthomyces araneogenum = Lecanicillium araneogenum]	Cordycipitaceae	China (F)	27
Argiope argentata (Fabricius, 1775)	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	Panama (F)	28
Argiope aurantia Lucas, 1833	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	USA (L)	29
Argiope aurantia Lucas, 1833	N/A	N/A	USA (F)	30
Argiope submaronica Strand, 1916 [= Argiope savignyi]	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	Panama (F)	31
Eriophora fuliginea (C. L. Koch, 1838)	Gibellula sp.	Cordycipitaceae	Panama (F)	32
Eustala sp.	Gibellula spp.	Cordycipitaceae	Brazil (F)	33
Micrathena sp.	N/A	Order Hypocreales	Brazil (F)	34
Neoscona sp.	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	USA (L)	35
N/A	Gibellula spp.	Cordycipitaceae	Brazil (F)	36
N/A	Gibellula or Torrubilla	Cordycipitaceae	USA, TN (F)	37
N/A	Purpureocillium	Ophiocordycipitaceae	Solomon Islands (F)	38

	atypicola [= Nomuraea atypicola]			
<b>ARKYIDAE</b>				
Arkus lancearius Walckenaer, 1837	Gibellula sp.	Cordycipitaceae	Australia (F)	39
<b>ATRACIDAE</b>				
Atrax robustus O. Pickard-Cambridge, 1877	Cordyceps sp.	Cordycipitaceae	Australia (F)	40
<b>ATYPIDAE</b>				
Atypus affinis Eichwald, 1830	Apiotrichum porosum	Trichosporonaceae	Czech Republic (F)	41
Atypus karschi Dönitz, 1887	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	Japan (F)	42
Atypus piceus (Sulzer, 1776)	Apiotrichum dulcitum	Trichosporonaceae	Czech Republic (F)	43
<b>BARYCHELIDAE</b>				
Idiophthalma sp.	Cordyceps sp.	Cordycipitaceae	Uruguay (F)	44
Strophaeus sp.	Cordyceps sp.	Cordycipitaceae	Uruguay (F)	45
<b>CHEIRACANTHIIDAE</b>				
Cheiracanthium furculatum Karsch, 1879	N/A	N/A	South Africa (F)	46
Cheiracanthium gracile L. Koch, 1873	Gibellula sp.	Cordycipitaceae	Australia (F)	47
<b>CLUBIONIDAE</b>				
Clubiona cycladata Simon, 1909	Lecanicillium sp.? [ = In the original paper mentioned as Verticillium sp.]	Cordycipitaceae	Australia (F)	48
Clubiona robusta L. Koch, 1873	Lecanicillium sp.? [ = In the original paper mentioned as Verticillium sp.]	Cordycipitaceae	Australia (F)	49
Clubiona terrestris Westring, 1851	Gibellula pulchra	Cordycipitaceae	Netherland (F)	50
Clubiona sp.	Akanthomyces araneorum	Cordycipitaceae	England (F)	51
Clubiona sp.	Gibellula araneorum	Cordycipitaceae	England (F)	52
Clubiona sp.	Gibellula leiopus	Cordycipitaceae	Peninsular Malaysia (F)	53
Clubiona sp.	Gibellula leiopus	Cordycipitaceae	Philippines (F)	54
Clubiona sp.	Gibellula pulchra	Cordycipitaceae	Belgium (F)	55
N/A	Gibellula leiopus	Cordycipitaceae	Philippines (F)	56
N/A	N/A	N/A	Germany (F)	57
<b>CORINNIDAE</b>				
N/A	Gibellula aurea	Cordycipitaceae	Brazil (F)	58
Protoorthobula Wunderlich, 2004	N/A	N/A	Baltic amber (F)	59
<b>CTENIDAE</b>				
N/A	Gibellula sp.	Cordycipitaceae	Ecuador (F)	60
N/A	N/A	Order Hypocreales	Costa Rica (F)	61
N/A	N/A	Order Hypocreales	Costa Rica (F)	62
N/A	N/A	N/A	Brazil (F)	63
<b>CTENIZIDAE</b>				
Cteniza sp.	N/A	N/A	Southern Europe (F)	64
Cyrtocarenum cunicularium (Olivier, 1811)	N/A	N/A	Greece (F)	65

<b>CYBAEIDAE</b>				
N/A	N/A	Cordycipitaceae	USA (F)	66
Cybaeus reticulatus Simon, 1886	N/A	N/A	Canada (F)	67
<b>CYCLOCTENIDAE</b>				
N/A	Beauveria sp.	Cordycipitaceae	New Zealand (F)	68
<b>DEINOPIIDAE</b>				
N/A	Gibellula fusiformispora	Cordycipitaceae	Thailand (F)	69
<b>DESIDAE</b>				
Cambridgea sp.	Hyperparasite of a Gibellula	Cordycipitaceae + N/A	New Zealand (F)	70
<b>DICTYNIDAE</b>				
Argyroneta aquatica (Clerck, 1757)	N/A	N/A	Germany (L)	71
<b>DIPLURIDAE</b>				
Linothela megatheloides Paz & Raven, 1990	N/A	Fungi imperfecti	Colombia (F)	72
<b>DYSDERIDAE</b>				
Dysdera sp.	N/A	Unidentified (Metarhizium or Penicillium)	USA? (F)	73
<b>ERESIDAE</b>				
Stegodyphus dumicola Pocock, 1898	N/A	N/A	Africa (F)	74
<b>EUCTENIZIDAE</b>				
Myrmekiaphila sp.	N/A	Probably a fungus hyperparasite overgrowing an unknown fungus	USA (F)	75
<b>GNAPHOSIDAE?</b>				
N/A	N/A	N/A	Baltic amber (F)	76
<b>HAHNIIDAE</b>				
Antistea elegans (Blackwall, 1841)	Torrubiella albolanata	Cordycipitaceae	England (F)	77
Antistea elegans (Blackwall, 1841)	Gibellula araneorum	Cordycipitaceae	England (F)	78
Cicurina sp.	N/A	Fungi Imperfecti / Class & Order unknown / Family unknown	USA (F)	79
Eocryphoeca ligula Wunderlich, 2004	N/A	N/A	Baltic amber (F)	80
<b>HALONOPROCTIDAE</b>				
Cyclocosmia truncata (Hentz, 1841)	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	USA (F)	81
Latouchia hyla Haupt & Shimojana, 2001	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	Japan (F)	82
Latouchia japonica Strand, 1910	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	Japan (F)	83
Latouchia typica (Kishida, 1913)	Purpureocillium atypicola [= Nomuraea	Ophiocordycipitaceae	Japan (F)	84

	atypicola]			
Latouchia typica (Kishida, 1913) [= Latouchia swinhoeitypica]	Cordyceps cylindrica	Cordycipitaceae	Japan (F)	85
Latouchia typica (Kishida, 1913) [= Latouchia swinhoeitypica]	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	Japan (F)	86
Latouchia sp.	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	Japan (F)	87
N/A	Cordyceps cylindrica	Cordycipitaceae	Caribic / Trinidad (F)	88
N/A	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	Japan (F)	89
<b>HEPTATHELIDAE</b>				
Heptathela kimurai (Kishida, 1920)	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	Japan (F)	90
<b>HERSILIIDAE</b>				
N/A	Gibellula cf. pulchra	Cordycipitaceae	Vietnam (F)	91
N/A	Gibellula sp.	Cordycipitaceae	Peru (F)	92
N/A	Gibellula sp.	Cordycipitaceae	Thailand (F)	93
<b>HYPOCHILIDAE</b>				
Hypochilus pococki Platnick, 1987	Hevansia cf. araneorum	Cordycipitaceae	USA (F)	94
<b>IDIOPIDAE</b>				
Arbanitis rapax (Karsch, 1878)	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	Australia (F)	95
Idiops sp.	Cordyceps sp.	Cordycipitaceae	Uruguay (F)	96
Prothemenops irineae Schwendinger & Hongpadharakiree, 2014	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	Thailand (L)	97
Prothemenops siamensis Schwendinger, 1991	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	Thailand (F)	98
N/A	Cordyceps nidus	Cordycipitaceae	Colombia (F)	99
N/A	Cordyceps nidus	Cordycipitaceae	Colombia (F)	100
<b>ISCHNOTHELIDAE</b>				
Ischnothele guianensis (Walckenaer, 1837)	Mucor hiemalis	Mucoraceae	Germany (L)	101
<b>LAMPONIDAE</b>				
Lampona sp.	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	New Zealand (F)	102
<b>LINYPHIIDAE</b>				
Agyneta nigripes (Simon, 1884)	Cordyceps sp.	Cordycipitaceae	Arctic Island, Norway (F)	103
Atypena formosana (Oi, 1977) [= Callitrichia formosana]	Gibellula leiopus	Cordycipitaceae	Philippines (F)	104
Atypena sp. [= Callitrichia sp.]	Gibellula leiopus	Cordycipitaceae	Philippines (F)	105
Centromerita concinna (Thorell, 1875)	N/A	Class Hyphomycetes / unknown family	Netherlands (F)	106
Centromerus prudens (O. Pickard-Cambridge, 1873)	N/A	Class Hyphomycetes / unknown family	Netherlands (F)	107
Centromerus sylvaticus	N/A	Class Hyphomycetes /	Netherlands (F)	108

(Blackwall, 1841)		unknown family		
Collinsia holmgreni (Thorell, 1871)	Cordyceps sp.	Cordycipitaceae	Arctic Island, Norway (F)	109
Erigone tirolensis L. Koch, 1872	Cordyceps sp.	Cordycipitaceae	Arctic Island, Norway (F)	110
Linyphiidae-Erigoninae	Torrubiella albolanata	Cordycipitaceae	Denmark (F) Jutland	111
Frontinella pyramitela (Walckenaer, 1841)	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	USA (L)	112
Gongylidium rufipes (Linnaeus, 1758)	Gibellula pulchra	Cordycipitaceae	England (F)	113
Gongylidium rufipes (Linnaeus, 1758)	Torrubiella albolanata	Cordycipitaceae	England (F)	114
Leptorhoptrum robustum (Westring, 1851)	Gibellula araneorum	Cordycipitaceae	England (F)	115
Leptorhoptrum robustum (Westring, 1851)	Torrubiella albolanata	Cordycipitaceae	England (F)	116
Palliduphantes pallidus (O. Pickard-Cambridge, 1871) [= Lepthyphantes pallidus]	N/A	Class Hyphomycetes / unknown family	Netherlands (F)	117
Linyphiidae-Linyphiinae	Gibellula or Torrubiella	Cordycipitaceae	USA, TN (F)	118
Linyphiidae-Erigoninae	Gibellula or Torrubiella	Cordycipitaceae	USA, TN (F)	119
Oreoneta frigida (Thorell, 1872)	Cordyceps sp.	Cordycipitaceae	Arctic Island, Norway (F)	120
Styloctetor romanus (O. Pickard-Cambridge, 1873) [= Ceratinopsis romana]	N/A	Class Hyphomycetes / unknown family	Netherlands (F)	121
Walckenaeria antica (Wider, 1834)	N/A	Class Hyphomycetes / unknown family	Netherlands (F)	122
Walckenaeria monoceros (Wider, 1834)	N/A	Class Hyphomycetes / unknown family	Netherlands (F)	123
N/A – study year 1	Beauveria bassiana	Cordycipitaceae	Denmark (F)	124
N/A	Gibellula araneorum	Cordycipitaceae	England (F)	125
N/A – record 1	Gibellula araneorum	Cordycipitaceae	England (F)	126
N/A – record 2	Gibellula araneorum	Cordycipitaceae	England (F)	127
N/A	Gibellula leiopus	Cordycipitaceae	Poland (F)	128
N/A	Gibellula nigelii	Cordycipitaceae	Thailand (F)	129
N/A	Gibellula pulchra	Cordycipitaceae	Belgium (F)	130
N/A – study year 1	Gibellula spp.	Cordycipitaceae	Denmark (F)	131
N/A – study year 2	Gibellula spp.	Cordycipitaceae	Denmark (F)	132
N/A	Gibellula spp.	Cordycipitaceae	Brazil (F)	133
N/A	Torrubiella albolanata	Cordycipitaceae	Denmark (F) Bog	134
N/A	Torrubiella albolanata	Cordycipitaceae	England (F)	135
<b>LIOCRANIDAE</b>				
Agraecina cristiani (Georgescu, 1989)	Aspergillus baeticus	Aspergillaceae	Romania (F)	136
<b>LYCOSIDAE</b>				
Rabidosa rabida (Walckenaer, 1837) [= Lycosa rabida]	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	USA (L)	137
Pardosa amentata (Clerck, 1757)	Conidiobolus sp.	Conidiobolaceae	Switzerland (F)	138
Pardosa lugubris (Walckenaer, 1802)	N/A	N/A	Scotland (F)	139
Trochosa terricola Thorell, 1856	N/A	Class Hyphomycetes / unknown family	Netherlands (F)	140

N/A	<i>Cordyceps thaxteri</i>	Cordycipitaceae	Republic of Serbia (F)	141
N/A	<i>Gibellula araneorum</i>	Cordycipitaceae	South Africa (F)	142
N/A	<i>Gibellula</i> sp.	Cordycipitaceae	South Africa (F)	143
N/A	<i>Gibellula</i> sp.	Cordycipitaceae	USA (F)	144
N/A	<i>Purpureocillium atypicola</i> [= <i>Nomuraea atypicola</i> ]	Ophiocordycipitaceae	Thailand (F)	145
N/A	N/A	Order Hypocreales / unknown family	Costa Rica (F)	146
<b>MYSMENIDAE</b>				
<i>Palaeomysmena hoffeinsorum</i> Wunderlich, 2004	N/A	N/A	Baltic amber (F)	147
<b>NEMESIIDAE</b>				
<i>Nemesia meridionalis</i> (Costa, 1835)	N/A	N/A	Italy (F)	148
<b>NEPHILIDAE</b>				
<i>Trichonephila clavipes</i> (Linnaeus, 1767)	<i>Beauveria bassiana</i>	Cordycipitaceae	USA (F)	149
<i>Trichonephila clavipes</i> (Linnaeus, 1767)	<i>Purpureocillium atypicola</i> [= <i>Nomuraea atypicola</i> ]	Ophiocordycipitaceae	Panama (F)	150
<i>Trichonephila clavipes</i> (Linnaeus, 1767)	<i>Purpureocillium atypicola</i> [= <i>Nomuraea atypicola</i> ]	Ophiocordycipitaceae	USA (F)	151
<i>Trichonephila clavipes</i> (Linnaeus, 1767)	<i>Sporodiniella umbellata</i>	Mucoraceae	USA (F)	152
<i>Trichonephila clavipes</i> (Linnaeus, 1767)	N/A	N/A	South America? (F)	153
<i>Trichonephila clavipes</i> (Linnaeus, 1767)	N/A	N/A	USA (F)	154
<b>OONOPIIDAE</b>				
N/A	<i>Basidiobolus</i> sp.	Basidiobolaceae	Tanzania (F)	155
<b>OXYOPIIDAE</b>				
<i>Hamataliwa</i> sp.	<i>Hevansia</i> sp.	Cordycipitaceae	Cambodia (F)	156
<i>Peucetia viridans</i> (Hentz, 1832)	<i>Purpureocillium atypicola</i> [= <i>Nomuraea atypicola</i> ]	Ophiocordycipitaceae	USA, FL (F)	157
N/A	Unidentified ( <i>Engyodontium</i> or <i>Lecanicillium</i> )	Cordycipitaceae	India (F)	158
N/A	<i>Gibellula trimorpha</i>	Cordycipitaceae	Thailand (F)	159
N/A	N/A	N/A	Singapore (F)	160
<b>PHILODROMIDAE</b>				
<i>Philodromus</i> sp.	possibly <i>Purpureocillium atypicola</i> [= <i>Nomuraea atypicola</i> ]	Ophiocordycipitaceae	USA (F)	161
<i>Thanatus</i> sp.	<i>Aspergillus</i> sp.	Aspergillaceae	South Africa (F)	162
<i>Thanatus</i> sp.	<i>Engyodontium</i> sp.	Cordycipitaceae	South Africa (F)	163
<b>PHOLCIDAE</b>				
<i>Metagonia taruma</i> Huber, 2000	<i>Gibellula</i> sp.	Cordycipitaceae	Brazil (F)	164
<i>Metagonia</i> sp.	<i>Gibellula pulchra</i>	Cordycipitaceae	Brazil (F)	165
<i>Modisimus</i> sp.	<i>Mucor</i> sp.	Mucoraceae	Cuba (F)	166

Pholcus phalangioides (Fuesslin, 1775)	Engyodontium araneorum [= Lecanicillium tenuipes]	Cordycipitaceae	USA (F)	167
Pholcus phalangioides (Fuesslin, 1775)	Engyodontium araneorum [= Lecanicillium tenuipes]	Cordycipitaceae	USA (L)	168
Pholcus phalangioides (Fuesslin, 1775)	N/A	Cordycipitaceae*	UK (F)	169
Pholcus phalangioides (Fuesslin, 1775)	N/A	Cordycipitaceae*	Italy (F)	170
Pholcus phalangioides (Fuesslin, 1775)	N/A	Cordycipitaceae*	Germany (F)	171
Pholcus reevesi Huber, 2011	N/A	Cordycipitaceae*	USA (F)	172
Pholcus sp.	Parengyodontium album [= Beauveria alba = Engyodontium album]	Cordycipitaceae	Ukraine (F)	173
Pholcus sp.	Engyodontium araneorum [= Lecanicillium tenuipes]	Cordycipitaceae	Netherlands (F)	174
Pholcus sp.	Engyodontium araneorum [= Lecanicillium tenuipes]	Cordycipitaceae	Poland (F)	175
Pholcus sp.	Torrubiella pulvinata	Cordycipitaceae	USA (F)	176
Pholcus sp.	N/A	Cordycipitaceae*	Poland (F)	177
Pholcus sp.	N/A	Cordycipitaceae*	Spain (F)	178
Pholcus sp.	N/A	Cordycipitaceae*	Island of Corse, France (F)	179
Pholcus sp.	N/A	Cordycipitaceae*	Denmark (F)	180
Pholcus sp.	N/A	Cordycipitaceae*	Italy (F)	181
Pholcus sp.	N/A	Cordycipitaceae*	Slovakia (F)	182
Pholcus sp.	N/A	Cordycipitaceae*	Ukraine / Europe (F)	183
Pholcus sp.	N/A	Cordycipitaceae*	Russia / Europe (F)	184
Pholcus sp.	N/A	Cordycipitaceae*	Denmark (F)	185
Pholcus sp.	N/A	Cordycipitaceae*	Portugal (F)	186
Pholcus sp.	N/A	Cordycipitaceae*	Russia / Europe (F)	187
Pholcus sp.	N/A	Cordycipitaceae*	Russia / Europe (F)	188
Pholcus sp.	N/A	Cordycipitaceae*	Russia / Europe (F)	189
Pholcus sp.	N/A	Cordycipitaceae*	Spain (F)	190
Pholcus sp.	N/A	Cordycipitaceae*	Belgium (F)	191
Pholcus sp.	N/A	Cordycipitaceae*	Denmark (F)	192
Pholcus sp.	N/A	Cordycipitaceae*	Slovenija (F)	193
Pholcus sp.	N/A	Cordycipitaceae*	Lithuania / Europe (F)	194
Pholcus sp.	N/A	Cordycipitaceae*	Italy (F)	195
Pholcus sp.	N/A	Cordycipitaceae*	Russia / Europe (F)	196
Pholcus sp.	N/A	Cordycipitaceae*	Latvia / Europe (F)	197
Pholcus sp.	N/A	Cordycipitaceae*	Lithuania / Europe (F)	198
Pholcus sp.	N/A	Cordycipitaceae*	USA (F)	199
Pholcus sp.	N/A	Cordycipitaceae*	USA (F)	200
Pholcus sp.	N/A	Cordycipitaceae*	USA (F)	201
Pholcus sp.	N/A	Cordycipitaceae*	Canada (F)	202
Pholcus sp.	N/A	Cordycipitaceae*	USA (F)	203
Pholcus sp.	N/A	Cordycipitaceae*	USA (F)	204
Pholcus sp.	N/A	Cordycipitaceae*	Canada (F)	205
Pholcus sp.	N/A	Cordycipitaceae*	Canada (F)	206
Pholcus sp.	N/A	Cordycipitaceae*	Canada (F)	207



Pholcus sp.	N/A	Cordycipitaceae*	USA (F)	208
Pholcus sp.	N/A	Cordycipitaceae*	Canada (F)	209
Pholcus sp.	N/A	Cordycipitaceae*	USA (F)	210
Pholcus sp.	N/A	Cordycipitaceae*	USA (F)	211
Pholcus sp.	N/A	Cordycipitaceae*	USA (F)	212
Pholcus sp.	N/A	Cordycipitaceae*	USA (F)	213
Pholcus sp.	N/A	Cordycipitaceae*	USA (F)	214
Pholcus sp.	N/A	Cordycipitaceae*	Hungary (F)	215
N/A	Parengyodontium album [= Beauveria alba = Engyodontium album]	Cordycipitaceae	Solomon Islands (F)	216
N/A	Gibellula unica	Cordycipitaceae	Thailand (F)	217
N/A	Engyodontium araneorum [= Lecanicillium tenuipes]	Cordycipitaceae	Hungary (F)	218
N/A	Engyodontium araneorum [= Lecanicillium tenuipes]	Cordycipitaceae	USA (F)	219
N/A	Engyodontium araneorum [= Lecanicillium tenuipes]	Cordycipitaceae	USA (F)	220
N/A	Torrubiella pulvinata	Cordycipitaceae	USA, Hawaii (F)	221
N/A	N/A	N/A	USA (F)	222
N/A	Engyodontium araneorum [= Lecanicillium tenuipes]	Cordycipitaceae	Czech Republik (F)	223
N/A	Engyodontium araneorum [= Lecanicillium tenuipes]	Cordycipitaceae	Denmark (F)	224
N/A	Engyodontium araneorum [= Lecanicillium tenuipes]	Cordycipitaceae	France (F)	225
N/A	Engyodontium araneorum [= Lecanicillium tenuipes]	Cordycipitaceae	Poland (F)	226
N/A	Engyodontium araneorum [= Lecanicillium tenuipes]	Cordycipitaceae	England (F)	227
<b>PISAURIDAE</b>				
N/A	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	Ecuador (F)	228
<b>PORRHOTHELIDAE</b>				
Porrhothele antipodiana (Walckenaer, 1837)	N/A	N/A	New Zealand (F)	229
<b>PYCNOTHELIDAE</b>				
Stenoterommata platensis Holmberg, 1881	Lecanicillium aphanocladii	Cordycipitaceae	Argentina (F)	230
Stenoterommata platensis Holmberg, 1881	Cordyceps caloceroides [= Ophiocordyceps caloceroides]	Ophiocordycipitaceae	Argentina (F)	231
Stenoterommata platensis Holmberg, 1881	Purpureocillium lilacinum	Ophiocordycipitaceae	Argentina (F)	232
<b>SALTICIDAE</b>				

Afraflacilla venustula (Wesołowska & Haddad, 2009)	N/A	N/A	South Africa (F)	233
Anasaitis banksi (Roewer, 1951) [= Prostheclina signata Banks, 1901]	Gibellula arachnophila	Cordycipitaceae	Puerto Rico (F)	234
Anasaitis canosa (Walckenaer, 1837)	Gibellula pulchra	Cordycipitaceae	USA, LA (F)	235
Colonus sylvanus (Hentz, 1846)	N/A	N/A	USA (F)	236
Colonus sp.	Gibellula pulchra	Cordycipitaceae	USA, LA (F)	237
Colonus sp.	Gibellula cf. leiopus	Cordycipitaceae	USA (F)	238
Corythalia sp.	Gibellula spp.	Cordycipitaceae	Brazil (F)	239
Euophrys sp.	Torrubiella ratticaudata	Cordycipitaceae	Solomon Islands (F)	240
Euophrys sp.	Gibellula clavulifera var. alba	Cordycipitaceae	Solomon Islands (F)	241
Heliophanus pistaciae Wesołowska, 2003	N/A	N/A	South Africa (F)	242
Hentzia palmarum (Hentz, 1832) [= Hentzia ambiguus]	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	USA (L)	243
Lyssomanes viridis (Walckenaer, 1837)	Gibellula sp.	Cordycipitaceae	USA (F)	244
Pelegrina galathea (Walckenaer, 1837) [= Metaphidippus galathea]	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	USA (L)	245
Pelegrina proterva (Walckenaer, 1837)	Gibellula cf. leiopus	Cordycipitaceae	USA (F)	246
Mopsus mormon Karsch, 1878	Cordyceps sp.	Cordycipitaceae	Australia (F)	247
Myrmaplata platealeoides (O. Pickard-Cambridge, 1869) [= Myrmarachne platealeoides]	N/A	N/A	India (F)	248
Myrmarachne sp.	Gibellula longispora	Cordycipitaceae	Thailand (F)	249
Neon nelli G. W. Peckham & E. G. Peckham, 1888	Gibellula pulchra	Cordycipitaceae	Canada (F)	250
Phidippus audax (Hentz, 1845)	Gibellula leiopus	Cordycipitaceae	USA (F)	251
Phidippus audax (Hentz, 1845)	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	USA (L)	252
Phidippus clarus Keyserling, 1885	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	USA (L)	253
Phidippus clarus Keyserling, 1885	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	USA (F)	254
Phidippus otiosus (Hentz, 1846)	Acrodontium crateriforme	Teratosphaeriaceae	USA (F)	255
Phidippus putnami (G. W. Peckham & E. G. Peckham, 1883)	Gibellula sp.	Cordycipitaceae	USA (F)	256
Phidippus regius C. L. Koch, 1846	Acrodontium crateriforme	Teratosphaeriaceae	USA (F)	257
Phidippus regius C. L. Koch, 1846	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	USA (F)	258
Phidippus sp.	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	USA (L)	259

Platycriptus sp.	Gibellula pulchra	Cordycipitaceae	USA, LA (F)	260
Portia sp.	Gibellula scorpioides	Cordycipitaceae	Thailand (F)	261
N/A	Hymenostilbe sp.	Ophiocordycipitaceae	Brazil (F)	262
N/A	Akanthomyces araneorum	Cordycipitaceae	Thailand (F)	263
N/A	Akanthomyces araneorum	Cordycipitaceae	Thailand (F)	264
N/A	Akanthomyces koratensis	Cordycipitaceae	Thailand (F)	265
N/A	Cordyceps sp.	Cordycipitaceae	Ecuador (F)	266
N/A	Cordyceps sp.	Cordycipitaceae	Indonesia (F)	267
N/A	Cordyceps sp.	Cordycipitaceae	Singapore ? (F)	268
N/A	Cordyceps sp.	Cordycipitaceae	Unknown location (F)	269
N/A	Gibellula brunnea	Cordycipitaceae	Brazil (F)	270
N/A	Gibellula clavata	Cordycipitaceae	Ecuador (F)	271
N/A	Torrubiella clavata	Cordycipitaceae	Ecuador (F)	272
N/A	Gibellula leiopus	Cordycipitaceae	Philippines (F)	273
N/A	Gibellula leiopus	Cordycipitaceae	USA (F)	274
N/A	Gibellula mainsii	Cordycipitaceae	Brazil (F)	275
N/A	Gibellula mirabilis	Cordycipitaceae	Ecuador (F)	276
N/A	Gibellula pilosa	Cordycipitaceae	Thailand (F)	277
N/A	Gibellula pulchra	Cordycipitaceae	Thailand (F)	278
N/A	Gibellula pulchra	Cordycipitaceae	South Africa (F)	279
N/A	Gibellula pulchra	Cordycipitaceae	Taiwan (F)	280
N/A	Gibellula pulchra	Cordycipitaceae	Ghana (F)	281
N/A	Gibellula pulchra	Cordycipitaceae	South Africa (F)	282
N/A	Gibellula pulchra?	Cordycipitaceae	USA (F)	283
N/A	Gibellula pulchra?	Cordycipitaceae	Malaysia (F)	284
N/A	Gibellula trimorpha	Cordycipitaceae	Thailand (F)	285
N/A	Gibellula spp.	Cordycipitaceae	Brazil (F)	286
N/A	Gibellula spp.	Cordycipitaceae	Tropical region (F)	287
N/A	Gibellula sp.	Cordycipitaceae	Peru (F)	288
N/A	Gibellula sp.	Cordycipitaceae	Trinidad (F)	289
N/A	Gibellula cf. leiopus	Cordycipitaceae	USA (F)	290
N/A	Gibellula leiopus	Cordycipitaceae	Unknown location (F)	291
N/A	Gibellula cf. leiopus	Cordycipitaceae	USA (F)	292
N/A	Gibellula or Torrubiella	Cordycipitaceae	USA (F)	293
N/A	Granulomanus sp.	Cordycipitaceae	Peru (F)	294
N/A	Parahevansia koratensis [= Hevansia koratensis]	Cordycipitaceae	Thailand (F)	295
N/A	Pseudogibellula sp.	Cordycipitaceae	Peru (F)	296
N/A	Torrubiella sp.	Cordycipitaceae	Ecuador (F)	297
N/A	N/A	N/A	Australia (F)	298
N/A	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	USA (F)	299
N/A	Gibellula cf. leiopus	Cordycipitaceae	USA (F)	300
N/A	Gibellula sp.	Cordycipitaceae	USA (F)	301
N/A	Possibly Engyodontium araneorum [= Lecanicillium tenuipes]	Cordycipitaceae	Probably Singapore (F)	302
N/A	Gibellula cf. pulchra	Cordycipitaceae	Papua, Indonesia (F)	303
<b>SICARIIDAE</b>				
Loxosceles reclusa Gertsch &	Purpureocillium	Ophiocordycipitaceae	USA (L)	304

Mulaik, 1940	atypicola [= Nomuraea atypicola]			
Loxosceles sp.	Metarhizium anisopliae	Clavicipitaceae	Brazil (L)	305
Loxosceles sp.	N/A	N/A	Peru (F)	306
<b>SPARASSIDAE</b>				
Caayguara sp.	Gibellula spp.	Cordycipitaceae	Brazil (F)	307
Caayguara sp.	Gibellula sp.	Cordycipitaceae	Brazil (F)	308
Heteropoda jugulans (L. Koch, 1876)	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	Australia (F)	309
Palystes castaneus (Latreille, 1819)	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	South Africa (F)	310
N/A	Gibellula spp.	Cordycipitaceae	Brazil (F)	311
N/A	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	Australia (F)	312
N/A	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	Australia (F)	313
N/A	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	Australia (F)	314
N/A	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	Australia (F)	315
N/A	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	Papua New Guinea (F)	316
N/A	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	Peru (F)	317
N/A	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	Taiwan (F)	318
N/A	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	N/A (F)	319
<b>SYNOTAXIDAE</b>				
Acrometa Petrunkevitch, 1942	N/A	N/A	Baltic amber (F)	320
N/A	N/A	N/A	Baltic amber (F)	321
<b>TETRAGNATHIDAE</b>				
Leucauge granulata (Walckenaer, 1841)	N/A	N/A	Australia (F)	322
Meta menardi (Latreille, 1804)	Gibellula sp.	Cordycipitaceae	Scotland (F)	323
Meta menardi (Latreille, 1804)	Gibellula bang-bangus	Cordycipitaceae	Scotland (F)	324
Meta menardi (Latreille, 1804)	Engyodontium rectidentatum	Cordycipitaceae	Czech Republic (F)	325
Meta menardi (Latreille, 1804)	Penicillium vulpinum	Aspergillaceae	Slovakia (F)	326
Meta menardi (Latreille, 1804)	Torrubiella arachnophila var. leiopus [= Torrubiella leiopus]	Cordycipitaceae	Germany (F)	327
Meta ovalis (Gertsch, 1933)	Beauveria spp.	Cordycipitaceae	USA (F)	328
Meta ovalis (Gertsch, 1933)	A pathogen in the	Ascomycota –	USA (F)	329

	original publication termed as Paecilomyces	Incertae sedis		
Metellina merianae (Scopoli, 1763)	Gibellula cf. leiopus	Cordycipitaceae	Wales, UK (F)	330
Metellina merianae (Scopoli, 1763)	Torrubiella arachnophila var. leiopus [= Torrubiella leiopus]	Cordycipitaceae	Germany (F)	331
Meta sp.	Torrubiella arachnophila var. leiopus [= Torrubiella leiopus]	Cordycipitaceae	Germany (F)	332
Pachygnatha degeeri Sundevall, 1830	N/A	Class Hyphomycetes / unknown family	Netherlands (F)	333
Tetragnatha laboriosa Hentz, 1850	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	USA (L)	334
N/A	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	Thailand (F)	335
<b>THERAPHOSIDAE</b>				
Aphonopelma gabeli Smith, 1995	Unidentified (Lecanicillium or Engyodontium)	Cordycipitaceae	England (L)	336
Avicularia juruensis Mello-Leitão, 1923	Aspergillus niger	Aspergillaceae	Brazil (F)	337
Avicularia juruensis Mello-Leitão, 1923	Beauveria bassiana	Cordycipitaceae	Brazil (F)	338
Grammostola sp.	Cordyceps caloceroides [= Ophiocordyceps caloceroides]	Ophiocordycipitaceae	Brazil (F)	339
Pamphobeteus ferox (Ausserer, 1875)	Cordyceps sp.	Cordycipitaceae	Colombia (F)	340
Phormictopus auratus Ortiz & Bertani, 2005	N/A	N/A	Cuba (F)	341
Pterinopelma vitiosum (Keyserling, 1891)	Cordyceps caloceroides [= Ophiocordyceps caloceroides]	Ophiocordycipitaceae	Brazil (F)	342
N/A (subfamily Theraphosinae)	Cordyceps caloceroides [= Ophiocordyceps caloceroides]	Cordycipitaceae	Colombia (F)	343
N/A	Cordyceps ignota	Cordycipitaceae	Argentina (F)	344
N/A	Cordyceps nidus	Cordycipitaceae	Colombia (L)	345
N/A	N/A	N/A	Ecuador (F)	346
<b>THERIDIIDAE</b>				
Parasteatoda tepidariorum (C. L. Koch, 1841) [= Achaearanea tepidariorum]	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	USA (L)	347
Achaearanea sp.	Parengyodontium album [= Beauveria alba = Engyodontium album]	Cordycipitaceae	India (F)	348
Achaearanea sp.	Parengyodontium	Cordycipitaceae	Ukraine (F)	349

	album [= Beauveria alba = Engyodontium album]			
Neopisinus cognatus (O. Pickard-Cambridge, 1893) [= Episinus cognatus]	Gibellula sp.	Cordycipitaceae	Brazil (F)	350
Helvibis longicauda Keyserling, 1891	Gibellula pulchra	Cordycipitaceae	Brazil (F)	351
Hetschkia gracilis Keyserling, 1886	Gibellula sp.	Cordycipitaceae	Brazil (F)	352
Janula bicornigera (Simon, 1894)	Gibellula sp.	Cordycipitaceae	Brazil (F)	353
Latrodectus geometricus C. L. Koch, 1841	Mucor fragilis	Mucoraceae	USA (F)	354
Latrodectus geometricus C. L. Koch, 1841	Mucor fragilis	Mucoraceae	USA (L)	355
Meotipa sp.	Hevansia minuta	Cordycipitaceae	Thailand (F)	356
Nesticodes rufipes (Lucas, 1846)	Clathroconium sp.	Incertae sedis	Cuba (F)	357
Theridion evexum Keyserling, 1884	Gibellula sp.	Cordycipitaceae	Brazil (F)	358
N/A	Gibellula parvula	Cordycipitaceae	Thailand (F)	359
N/A	Gibellula solita	Cordycipitaceae	Thailand (F)	360
N/A	Hevansia novoguineensis	Cordycipitaceae	Thailand (F)	361
<b>THOMISIDAE</b>				
Amyciaea sp.	Jenniferia cinerea [= Hevansia cinerea]	Cordycipitaceae	Thailand (F)	362
Cebrennius cf. magnus Benjamin, 2016	Gibellula cebrennini	Cordycipitaceae	Thailand (F)	363
Diaea cf. dorsata (Fabricius, 1777)	Jenniferia griseocinerea	Cordycipitaceae	Thailand (F)	364
Diaea cf. dorsata (Fabricius, 1777)	Jenniferia thomisidarum	Cordycipitaceae	Thailand (F)	365
Indoxysticus sp.	Gibellula longicaudata	Cordycipitaceae	Thailand (F)	366
Misumenops sp.	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	USA (L)	367
Synema parvulum (Hentz, 1847)	Most likely Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	USA (F)	368
Tmarus sp.	Gibellula mainsii	Cordycipitaceae	Brazil (F)	369
Xysticus sp.	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	USA (L)	370
N/A	Cordyceps sp. ?	Cordycipitaceae	USA (F)	371
N/A	Gibellula brevistipitata	Cordycipitaceae	Thailand (F)	372
N/A	Gibellula pulchra	Cordycipitaceae	Poland (F)	373
N/A	Gibellula pulchra	Cordycipitaceae	Poland (F)	374
N/A	Gibellula sp.	Cordycipitaceae	Ecuador (F)	375
N/A	Gibellula or Torruibiella	Cordycipitaceae	USA, TN (F)	376
N/A ?	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	Indonesia (F)	377
N/A	Torruibiella albolanata	Cordycipitaceae	England (F)	378
N/A	Torruibiella	Cordycipitaceae	Japan (F)	379

	neofusiformis			
<b>TRACHELIDAE</b>				
Trachelas cf. robustus Keyserling, 1891	Gibellula leiopus	Cordycipitaceae	Brazil (F)	380
Trachelas tranquilus (Hentz, 1847)	Gibellula leiopus	Cordycipitaceae	USA, LA (F)	381
Trachelas sp.	Gibellula leiopus	Cordycipitaceae	USA, MA (F)	382
Trachelas sp.	Gibellula leiopus	Cordycipitaceae	USA, SC (F)	383
Trachelas sp.	Immature Gibellula	Cordycipitaceae	USA, Georgia (F)	384
Trachelas sp.	immature Gibellula or Hevansia	Cordycipitaceae	USA, NC (F)	385
Trachelas sp.	N/A	N/A	USA, Maryland (F)	386
<b>TRECHALEIDAE</b>				
Cupiennius salei (Keyserling, 1877)	Mucor hiemalis	Mucoraceae	Germany (L)	387
Cupiennius sp.	N/A	N/A	Ecuador (F)	388
Cupiennius sp.	Purpureocillium atypicola [= Nomuraea atypicola]	Ophiocordycipitaceae	Colombia (F)	389
<b>ULOBORIDAE</b>				
Miagrammopes sp.	Gibellula dimorpha	Cordycipitaceae	Thailand (F)	390
N/A	Unidentified [Engyodontium or Lecanicillium]	Cordycipitaceae	Colombia (F)	391
<b>ZODARIIDAE</b>				
Anniculus balticus Petrunkevitch 1942	N/A	N/A	Baltic amber (F)	392
Epicratinus sp.	Gibellula sp.	Cordycipitaceae	Brazil (F)	393
Stenomorpho sp.	Gibellula pigmentosinum	Cordycipitaceae	Thailand (F)	394
<b>UNKNOWN SPIDERS</b>				
N/A	Akanthomyces coccidioperitheciatius	Cordycipitaceae	Japan (F)	395
N/A	Akanthomyces kanyawimiae	Cordycipitaceae	Thailand (F)	396
N/A	Akanthomyces lecanii [= Lecanicillium lecanii = Verticillium lecanii]	Cordycipitaceae	Galapagos Islands, Ecuador, Brazil (F)	397
N/A	Akanthomyces ryukyuensis	Cordycipitaceae	Japan (F)	398
N/A	Akanthomyces sulphureus	Cordycipitaceae	Thailand (F)	399
N/A	Akanthomyces thailandicus	Cordycipitaceae	Thailand (F)	400
N/A	Akanthomyces waltergamsii	Cordycipitaceae	Thailand (F)	401
N/A	Beauveria araneola	Cordycipitaceae	China (F)	402
N/A	Clonostachys araneorum	Bionectriaceae	China (F)	403
N/A	Cordyceps arachnogenea	Cordycipitaceae	Papua New Guinea (F)	404
N/A	Cordyceps araneae	Cordycipitaceae	Thailand (F)	405
N/A	Cordyceps grenadensis	Cordycipitaceae	Grenada (F)	406
N/A	Cordyceps kuihuriensis	Cordycipitaceae	Thailand (F)	407
N/A	Cordyceps ogurasanensis	Cordycipitaceae	Japan (F)	408

N/A	<i>Cordyceps pseudonelumboides</i>	Cordycipitaceae	Japan (F)	409
N/A	<i>Cordyceps singeri</i>	Cordycipitaceae	Argentina (F)	410
N/A	<i>Gibellula alata</i>	Cordycipitaceae	Sri Lanka (F)	411
N/A	<i>Gibellula alata</i>	Cordycipitaceae	Ghana (F)	412
N/A	<i>Gibellula clavisporea</i>	Cordycipitaceae	China (F)	413
N/A	<i>Gibellula clavulifera</i>	Cordycipitaceae	Sri Lanka (F)	414
N/A	<i>Gibellula clavulifera</i>	Cordycipitaceae	Ghana (F)	415
N/A	<i>Gibellula clavulifera</i>	Cordycipitaceae	Thailand (F)	416
N/A	<i>Gibellula clavulifera</i>	Cordycipitaceae	China (F)	417
N/A	<i>Gibellula curvispora</i>	Cordycipitaceae	China (F)	418
N/A	<i>Gibellula dabieshanensis</i>	Cordycipitaceae	China (F)	419
N/A	<i>Gibellula gamsii</i>	Cordycipitaceae	Thailand (F)	420
N/A	<i>Gibellula penicillioides</i>	Cordycipitaceae	China (F)	421
N/A	<i>Gibellula shennongjiaensis</i>	Cordycipitaceae	China (F)	422
N/A	<i>Hevansia arachnophila</i>	Cordycipitaceae	Sri Lanka (F)	423
N/A	<i>Hevansia arachnophila</i>	Cordycipitaceae	Ghana (F)	424
N/A	<i>Hevansia arachnophila</i>	Cordycipitaceae	Thailand (F)	425
N/A	<i>Hevansia arachnophila</i>	Cordycipitaceae	Taiwan (F)	426
N/A	<i>Hevansia arachnophila</i>	Cordycipitaceae	Japan (F)	427
N/A	<i>Jenniferia cinerea</i> [= <i>Hevansia cinerea</i> ]	Cordycipitaceae	Thailand (F)	428
N/A	<i>Hevansia longisporea</i>	Cordycipitaceae	China (F)	429
N/A	<i>Hevansia nelumboides</i>	Cordycipitaceae	Japan (F)	430
N/A	<i>Hevansia nelumboides</i>	Cordycipitaceae	Taiwan (F)	431
N/A	<i>Hevansia nelumboides</i>	Cordycipitaceae	Thailand (F)	432
N/A	<i>Hevansia nelumboides</i>	Cordycipitaceae	China (F)	433
N/A	<i>Hevansia ovalongata</i>	Cordycipitaceae	Taiwan (F)	434
N/A	<i>Hevansia ovalongata</i>	Cordycipitaceae	Japan (F)	435
N/A	<i>Hevansia websteri</i>	Cordycipitaceae	Thailand (F)	436
N/A	<i>Cordyceps farinosa</i> [= <i>Isaria farinosa</i> = <i>Poecilomyces farinosus</i> ]	Cordycipitaceae	Ghana (F)	437
N/A	<i>Cordyceps farinosa</i> [= <i>Isaria farinosa</i> = <i>Poecilomyces farinosus</i> ]	Cordycipitaceae	Galapagos Islands (F)	438
N/A	<i>Cordyceps javanica</i> [= <i>Isaria javanica</i> ]	Cordycipitaceae	Vietnam (F)	439
N/A	<i>Lecanicillium araneorum</i>	Cordycipitaceae	Sri Lanka (F)	440
N/A	<i>Lecanicillium araneorum</i>	Cordycipitaceae	Ghana (F)	441
N/A	<i>Lecanicillium araneorum</i>	Cordycipitaceae	India (F)	442
N/A	<i>Lecanicillium araneicola</i>	Cordycipitaceae	Indonesia (F)	443
N/A	<i>Lecanicillium huhutii</i>	Cordycipitaceae	China (F)	444
N/A	<i>Akanthomyces lecanii</i> [= <i>Lecanicillium lecanii</i> = <i>Verticillium lecanii</i> ]	Cordycipitaceae	China (F)	445
N/A	<i>Neoaraneomyces araneicola</i>	Clavicipitaceae	China (F)	446



N/A	<i>Polystromomyces araneae</i>	Cordycipitaceae	Thailand (F)	447
N/A	<i>Pseudogibellula formicarum</i>	Cordycipitaceae	Ghana (F)	448
N/A	<i>Pseudometarhizium araneogenum</i>	Clavicipitaceae	China (F)	449
N/A	<i>Torrubiella alboglobosa</i>	Cordycipitaceae	Japan (F)	450
N/A	<i>Torrubiella aranicida</i>	Cordycipitaceae	France (F)	451
N/A	<i>Torrubiella aranicida</i>	Cordycipitaceae	Cuba (F)	452
N/A	<i>Torrubiella aranicida</i>	Cordycipitaceae	China (F)	453
N/A	<i>Torrubiella aranicida</i>	Cordycipitaceae	UK (F)	454
N/A	<i>Torrubiella aranicida</i>	Cordycipitaceae	Japan (F)	455
N/A	<i>Torrubiella aurantia</i>	Cordycipitaceae	Japan (F)	456
N/A	<i>Torrubiella aurantia</i>	Cordycipitaceae	Thailand (F)	457
N/A	<i>Torrubiella corniformis</i>	Cordycipitaceae	Japan (F)	458
N/A	<i>Torrubiella ellipsoidea</i>	Cordycipitaceae	Japan (F)	459
N/A	<i>Torrubiella falklandica</i>	Cordycipitaceae	Falkland Islands (F)	460
N/A	<i>Torrubiella farinacea</i>	Cordycipitaceae	Japan (F)	461
N/A	<i>Cordyceps flavoviridis</i> [= <i>Torrubiella flavoviridis</i> ]	Cordycipitaceae	Brazil (F)	462
N/A	<i>Cordyceps flavoviridis</i> [= <i>Torrubiella flavoviridis</i> ]	Cordycipitaceae	Guyana (F)	463
N/A	<i>Torrubiella formosana</i>	Cordycipitaceae	Taiwan (F)	464
N/A	<i>Torrubiella globosoides</i>	Cordycipitaceae	Japan (F)	465
N/A	<i>Cordyceps gonylepticida</i> [= <i>Torrubiella gonylepticida</i> ]	Cordycipitaceae	Brazil (F)	466
N/A	<i>Cordyceps gonylepticida</i> [= <i>Torrubiella gonylepticida</i> ]	Cordycipitaceae	Trinidad (F)	467
N/A	<i>Cordyceps gonylepticida</i> [= <i>Torrubiella gonylepticida</i> ]	Cordycipitaceae	Russian Caucasus (F)	468
N/A	<i>Cordyceps gonylepticida</i> [= <i>Torrubiella gonylepticida</i> ]	Cordycipitaceae	Taiwan (F)	469
N/A	<i>Torrubiella inegoensis</i>	Cordycipitaceae	Japan (F)	470
N/A	<i>Torrubiella longissima</i>	Cordycipitaceae	Japan (F)	471
N/A	<i>Torrubiella mammillata</i>	Cordycipitaceae	Japan (F)	472
N/A	<i>Torrubiella minuta</i>	Cordycipitaceae	Japan (F)	473
N/A	<i>Torrubiella miyagiana</i>	Cordycipitaceae	Japan (F)	474
N/A	<i>Torrubiella oblonga</i>	Cordycipitaceae	Japan (F)	475
N/A	<i>Torrubiella ooaniensis</i>	Cordycipitaceae	Japan (F)	476
N/A	<i>Torrubiella pallida</i>	Cordycipitaceae	Japan (F)	477
N/A	<i>Torrubiella plana</i>	Cordycipitaceae	Japan (F)	478
N/A	<i>Torrubiella plana</i>	Cordycipitaceae	Taiwan (F)	479
N/A	<i>Torrubiella rokkiana</i>	Cordycipitaceae	Taiwan (F)	480
N/A	<i>Torrubiella rosea</i>	Cordycipitaceae	Japan (F)	481

N/A	<i>Torrubiella ryogamimontana</i>	Cordycipitaceae	Japan (F)	482
N/A	<i>Aphanocladium album</i>	Nectriaceae	Khazakstan (F)	483
N/A	<i>Hirsutella darwinii</i>	Ophiocordycipitaceae	Galapagos Islands (F)	484
N/A	<i>Hymenostilbe kedrovensis</i>	Ophiocordycipitaceae	Russia (F)	485
N/A	<i>Ophiocordyceps araneorum</i>	Ophiocordycipitaceae	UK (F)	486
N/A	<i>Ophiocordyceps engleriana</i>	Ophiocordycipitaceae	Cameroon (F)	487
N/A	<i>Ophiocordyceps engleriana</i>	Ophiocordycipitaceae	Guyana (F)	488
N/A	<i>Ophiocordyceps ghanensis</i>	Ophiocordycipitaceae	Ghana (F)	489
N/A	<i>Ophiocordyceps mrciensis</i>	Ophiocordycipitaceae	Thailand (F)	490
N/A	<i>Ophiocordyceps spiculata</i>	Ophiocordycipitaceae	China (F)	491
N/A	<i>Ophiocordyceps verrucosa</i>	Ophiocordycipitaceae	USA (F)	492
N/A	<i>Ophiocordyceps verrucosa</i>	Ophiocordycipitaceae	UK (F)	493
N/A	<i>Ophiocordyceps verrucosa</i>	Ophiocordycipitaceae	China (F)	494
N/A	<i>Tolyptocladium cylindrosporum</i>	Ophiocordycipitaceae	Europe (F)	495
N/A	<i>Clathroconium arachnicola</i>	Incertae sedis	Ghana (F)	496
N/A	<i>Cryptococcus depauperatus</i> [= <i>Filobasidiella arachnophila</i> ]	Cryptococcaceae	Canada (F)	497
N/A	<i>Cladosporium cladosporioides</i>	Cladosporiaceae	Canada (F)	498
N/A	<i>Akanthomyces lecanii</i> [= <i>Lecanicillium lecanii</i> = <i>Verticillium lecanii</i> ]	Cordycipitaceae	Canada (F)	499
N/A	<i>Penicillium tealii</i>	Aspergillaceae	Australia (F)	500
N/A	<i>Conidiobolus coronatus</i>	Conidiobolaceae	Canada (F)	501
N/A	<i>Cladosporium zixishanense</i>	Cladosporiaceae	China (F)	502
N/A	<i>Cordyceps cateniannulata</i>	Cordycipitaceae	Thailand (F)	503
N/A	<i>Aspergillus creber</i> [= <i>Aspergillus tennesseensis</i> ]	Aspergillaceae	Romania (F)	504
N/A	<i>Clonostachys chuyangsinensis</i>	Bionectriaceae	Vietnam (F)	505
N/A	<i>Akanthomyces tiankengensis</i>	Cordycipitaceae	China (F)	506
N/A	<i>Akanthomyces bashanensis</i>	Cordycipitaceae	China (F)	507
N/A	<i>Akanthomyces beibeiensis</i>	Cordycipitaceae	China (F)	508
N/A	<i>Akanthomyces kunmingensis</i>	Cordycipitaceae	China (F)	509

N/A	Akanthomyces subaraneicola	Cordycipitaceae	China (F)	510
N/A egg sacs	Bhushaniella rubra	Cordycipitaceae	Thailand (F)	511

References:

001 Coyle FA, Goloboff PA, Samson RA. 1990. *Actinopus* trapdoor spiders (Araneae, Actinopodidae) killed by the fungus, *Nomuraea atypicola* (Deuteromycotina). *Acta Zoologica Fennica* 190: 89–93.

002 Greenstone MH, Ignoffo CM, Samson RA. 1987. Susceptibility of spider species to the fungus *Nomuraea atypicola*. *Journal of Arachnology* 15:266–268.

003 Dubiel G. 2015. Występowanie grzyba *Gibellula leiopus* (Vuil. ex Maubl.) Mains w Beskidzie Śląskim. *Przeegląd Przyrodniczy* 26:30–38.

004 Santamaria S, Girbal J. 1996. *Gibellula pulchra* (Saccardo) Cavara, un fong patogen d'aranyes, a Catalunya. *Orsis* 11:179–181.

005 Savić D, Grbić G, Bošković E, Hänggi A. 2016. First records of fungi pathogenic on spiders for the Republic of Serbia. *Arachnology Letters* 52:31–34.

006 <http://analternativenaturalhistoryofsussex.blogspot.com/2021/08/pretty-as-picta.html>

007 <https://www.bpww.at/de/artikel/mit-expertinnen-auf-artensuche>

008–009 Kim KW. 2009. Maternal influence on spiderlings' emergence from the cocoon: observations in a subsocial spider. *Journal of Ecology and Environment* 32:33–39.

010 Dubois T, Lund J, Bauer LS, Hajek AE. 2008. Virulence of entomopathogenic hypocrealean fungi infecting *Anoplophora glabripennis*. *BioControl* 53:517–528.

011a Vincent LS. 1986. Pathogens and parasitoids of the fossorial mygalomorph spider *Atypoides riversi* O.P.-Cambridge (Antrodiaetidae: Araneae) of various size classes. Pp. 291–294. *In* Proceedings of the Ninth International Congress of Arachnology, Panama 1983. (Eberhard WC, Lubin YD, Robinson BC, eds.). Smithsonian Institution Press, Washington D.C., USA.

011b Vincent LS. 1993. The natural history of the California turret spider *Atypoides riversi* (Araneae, Antrodiaetidae): demographics, growth rates, survivorship, and longevity. *Journal of Arachnology* 21:29–39.

012 Greenstone MH, Ignoffo CM, Samson RA. 1987. Susceptibility of spider species to the fungus *Nomuraea atypicola*. *Journal of Arachnology* 15:266–268.

013 Muma MH. 1975. Spiders in Florida citrus groves. *Florida Entomologist* 58:83–90.

014 Costa PP. 2014. *Gibellula* spp. associadas a aranhas da Mata do Paraíso, Viçosa-MG. MSc Thesis, Universidade Federal de Viçosa, Brazil.

015 Hughes DP, Araújo JPM, Loreto RG, Quevillon L, De Bekker C, Evans HC. 2016. From so simple a beginning: the evolution of behavioral manipulation by fungi. *Advances in Genetics* 94:437–469.

016

[https://www.reddit.com/r/Entomology/comments/o32x4f/can\\_anyone\\_help\\_id\\_this\\_spider\\_killed\\_by/](https://www.reddit.com/r/Entomology/comments/o32x4f/can_anyone_help_id_this_spider_killed_by/)

017 Mendes-Pereira T, De Araújo, JP, Mendes FC, Fonseca EO, Alves J, Sobczak JF et al. 2022. *Gibellula aurea* sp. nov. (Ascomycota, Cordycipitaceae): a new golden spider-devouring fungus from a Brazilian Atlantic Rainforest. *Phytotaxa* 573:85–102.

018 Arruda IDP. 2020. Manipulação comportamental da aranha *Macrophyes pacoti* (Araneae: Anyphaenidae) pelo fungo araneopatogênico *Gibellula* sp. (Hypocreales: Cordycipitaceae). Mestre Thesis, Universidade Federal do Ceará, Fortaleza, Brazil.

019 Arruda IDP, Villanueva-Bonilla GA, Faustino ML, Moura-Sobczak JCMS, Sobczak JF. 2021. Behavioral manipulation of the spider *Macrophyes pacoti* (Araneae: Anyphaenidae) by the araneopathogenic fungus *Gibellula* sp. (Hypocreales: Cordycipitaceae). *Canadian Journal of Zoology* 99:401–408.

020 Brescovit AD, Villanueva-Bonilla GA, Sobczak JCM, Nóbrega FADS, Oliveira LFMD, Arruda IDP et al. 2019. *Macrophyes pacoti* n. sp. (Araneae: Anyphaenidae) from Brazilian Atlantic Forest, with notes on an araneopathogenic fungus. *Zootaxa* 4629:294–300.

021 Costa PP. 2014. *Gibellula* spp. associadas a aranhas da Mata do Paraíso, Viçosa-MG. MSc Thesis, Universidade Federal de Viçosa, Brazil.

022 Hughes DP, Araújo JPM, Loreto RG, Quevillon L, De Bekker C, Evans HC. 2016. From so simple a beginning: the evolution of behavioral manipulation by fungi. *Advances in Genetics* 94:437–469.

023 Rose S. 2022. Spiders of North America. Princeton University Press, Princeton & Oxford.

024 Greenstone MH, Ignoffo CM, Samson RA. 1987. Susceptibility of spider species to the fungus *Nomuraea atypicola*. *Journal of Arachnology* 15:266–268.

025 Kobayasi Y. 1941. The genus *Cordyceps* and its allies. *Science Reports of the Tokyo Bunrika Daigaku, Section B* 84:53–260.

026 Chen WH, Liu C, Han YF, Liang JD, Liang ZQ. 2018. *Akanthomyces araneogenum*, a new Isaria-like araneogenous species. *Phytotaxa* 379:66–72.

027 Chen WH, Han YF, Liang ZQ, Jin DC. 2017. A new araneogenous fungus in the genus *Beauveria* from Guizhou, China. *Phytotaxa* 302:57–64.

028 Nentwig W. 1985a. Parasitic fungi as a mortality factor of spiders. *Journal of Arachnology* 13:272–274.

029 Greenstone MH, Ignoffo CM, Samson RA. 1987. Susceptibility of spider species to the fungus *Nomuraea atypicola*. *Journal of Arachnology* 15:266–268.

030 [https://www.discoverlife.org/mp/20p?see=I\\_JP157820&res=640&flags=glean](https://www.discoverlife.org/mp/20p?see=I_JP157820&res=640&flags=glean):

031–032 Nentwig W. 1985a. Parasitic fungi as a mortality factor of spiders. *Journal of Arachnology* 13:272–274.

033 Costa PP. 2014. *Gibellula* spp. associadas a aranhas da Mata do Paraíso, Viçosa-MG. MSc Thesis, Universidade Federal de Viçosa, Brazil.

- 034 Durkin ES, Cassidy ST, Gilbert R, Richardson EA, Roth AM, Shablin S et al. 2021. Parasites of spiders: Their impacts on host behavior and ecology. *Journal of Arachnology* 49:281–298.
- 035 Greenstone MH, Ignoffo CM, Samson RA. 1987. Susceptibility of spider species to the fungus *Nomuraea atypicola*. *Journal of Arachnology* 15:266–268.
- 036 Costa PP. 2014. *Gibellula* spp. associadas a aranhas da Mata do Paraíso, Viçosa-MG. MSc Thesis, Universidade Federal de Viçosa, Brazil.
- 037 Bishop L. 1990a. Entomophagous fungi as mortality agents of ballooning spiderlings. *Journal of Arachnology* 18:237–238
- 038 Humber RA, Hansen KS, Wheeler MM. 2014. USDA-ARS Collection of Entomopathogenic Fungal Cultures – Indexes to available isolates. Robert W. Holley Center for Agriculture and Health, Ithaca, New York.  
<https://www.ars.usda.gov/ARSUserFiles/80620520/ALL%20AVAIL%20indices%2016Jan014.pdf>  
Accessed 8 March 2023
- 039 <https://whyevolutionistrue.com/2020/05/12/readers-wildlife-photos-1013/>
- 040 <https://aszk.org.au/wp-content/uploads/2020/03/Invertebrates.-Funnel-web-Spider-2009VB.pdf>
- 041 Heneberg P, Řezáč M. 2013. Two *Trichosporon* species isolated from central-European mygalomorph spiders (Araneae: Mygalomorphae). *Antonie van Leeuwenhoek* 103:713–721.
- 042 Yasuda A. 1915. Purseweb spider parasitized by an *Isaria* fungus. *Botanical Magazine-Tokyo* 29:117.
- 043 Heneberg P, Řezáč M. 2013. Two *Trichosporon* species isolated from central-European mygalomorph spiders (Araneae: Mygalomorphae). *Antonie van Leeuwenhoek* 103:713–721.
- 044a–045a Pérez-Miles F., Perafán C. 2017. Behavior and biology of Mygalomorphae. Pp. 29–54. *In* Behaviour and Ecology of Spiders. (Viera C, Gonzaga MO, eds.). Springer, Cham.
- 044b–045b Fernando Pérez-Miles, pers. comm.
- 046 Charles Haddad, pers. comm.
- 047 Steven Axford (photo) [ID Robert Raven]
- 048–049 Austin AD. 1984. Life history of *Clubiona robusta* L. Koch and related species (Araneae, Clubionidae) in South Australia. *Journal of Arachnology* 12:87–104.
- 050 van Helsdingen PJ. 2007. Sluipend gevaar. *Nieuwsbrief Spined* 23:35–35
- 051 Leatherdale D. 1970. The arthropod hosts of entomogenous fungi in Britain. *Entomophaga* 15:419–435.
- 052 McLean 1993 McLean IFG. 1993. A *Clubiona* spider infected with a parasitic fungus. *British Journal of Entomology and Natural History* 6:88.

- 053 van Vreden G, Ahmadzabidi AL. 1986. Pests of Rice and Their Natural Enemies in Peninsular Malaysia. Centre for Agricultural Publishing and Documentation (Pudoc), Wageningen, Netherlands.
- 054 Heinrichs EA. 1994. Biology and Management of Rice Insects. Wiley Eastern Limited, Delhi, India.
- 055 \*\*Mari S. 2017. 7. Observation particulière: Le champignon tueur d'araignées. Pp. 28–28. In Compte rendu des prospections «Araignées» 2016.  
<https://oiseauxmaraisdharchies.be/onewebmedia/Rapport%20Inventaire%20arane%CC%81ologique%20Harchies%202016%20-finalized.pdf>
- 056 Barrion AT. 2001. Spiders: natural biological control agents against insect pests in Philippine rice fields. *Transactions of the National Academy of Science and Technology, Philippines* 23:121–130.
- 057 Bellmann H. 1997. Kosmos-Atlas Spinnentiere Europas. Franckh-Kosmos-Verlag, Stuttgart.
- 058 Mendes-Pereira T, De Araújo, JP, Mendes FC, Fonseca EO, Alves J, Sobczak JF et al. 2022. *Gibellula aurea* sp. nov. (Ascomycota, Cordycipitaceae): a new golden spider-devouring fungus from a Brazilian Atlantic Rainforest. *Phytotaxa* 573:85–102.
- 059 Wunderlich J. 2004. Fossil spiders in amber and copal: Conclusions, revisions, new taxa, family diagnoses of fossil and extant taxa. *Beiträge zur Araneologie* 3:1–1908.
- 060 <https://www.alexanderwild.com/Insects/InsectKilling-Fungi/i-MhDvdgb/A>
- 061–062 Sandler M. 2016. Zombie fungi: Occurrence of arthropod endoparasitic fungi at different altitudes in the Monteverde Region. Tropical Ecology Collection (Monteverde Institute). 641.  
[https://digitalcommons.usf.edu/tropical\\_ecology/641](https://digitalcommons.usf.edu/tropical_ecology/641)
- 063 Hubert Höfer, pers. comm.
- 064–065 Arthur Decae, pers. comm.
- 066 <https://www.inaturalist.org/observations/89047072>
- 067 Robb Bennett, pers. comm.
- 068 <https://www.alamy.com/scuttling-spider-infected-with-icing-sugar-fungus-image514844477.html>
- 069 Kuephadungphan W, Tasanathai K, Petcharad B, Khonsanit A, Stadler M, Luangsa-ard JJ. 2020. Phylogeny- and morphology-based recognition of new species in the spider-parasitic genus *Gibellula* (Hypocreales, Cordycipitaceae) from Thailand. *Mycology* 72:17–42.
- 070 <https://twitter.com/erincpow/status/1138628730803200002?lang=fr>
- 071 Noordam AP, Samson RA, Sudhaus W. 1998. Fungi and Nematoda on *Centromerus sylvaticus* (Araneae, Linyphiidae). Pp. 343–347. In Proceedings of the 17th European Colloquium of Arachnology. (Selden PA, ed.). Edinburgh 1997.
- 072 Paz SN. 1993 Aspectos de la biología reproductiva de *Linothele megatheloides* (Araneae: Dipluridae). *Journal of Arachnology* 21:40–49.

073

[https://www.reddit.com/r/spiders/comments/ouo312/i\\_found\\_this\\_woodlouse\\_spider\\_overtaken\\_by\\_mold/](https://www.reddit.com/r/spiders/comments/ouo312/i_found_this_woodlouse_spider_overtaken_by_mold/)

074 Henschel JR. 1998. Predation on social and solitary individuals of the spider *Stegodyphus dumicola* (Araneae, Eresidae). *Journal of Arachnology* 26:61–69.

075 <https://bugguide.net/node/view/1209666>

076 Wunderlich J. 2004. Fossil spiders in amber and copal: Conclusions, revisions, new taxa, family diagnoses of fossil and extant taxa. *Beiträge zur Araneologie* 3:1–1908.

077–078 Bristowe WL. 1958. *The World of Spiders*. Collins, London.

079 Cokendolpher JC. 2004. *Cicurina* spiders from caves in Bexar County, Texas (Araneae: Dictynidae). *Texas Memorial Museum Speleological Monographs* 6:13–58.

080 Wunderlich J. 2004. Fossil spiders in amber and copal: Conclusions, revisions, new taxa, family diagnoses of fossil and extant taxa. *Beiträge zur Araneologie* 3:1–1908.

081 <https://www.inaturalist.org/observations/173218441>

082 Kobayasi Y, Shimizu D. 1977. Some species of *Cordyceps* and its allies on spiders. *Kew Bulletin* 31:557–566.

083 Kobayasi Y. 1941. The genus *Cordyceps* and its allies. *Science Reports of the Tokyo Bunrika Daigaku, Section B* 84:53–260.

084 Petch T. 1939. Notes on entomogenous fungi. *Transactions of the British Mycological Society* 23:127–148.

085–086

<https://www.naro.affrc.go.jp/org/fruit/epfdb/Ascomy/Cordyc/abcde/speci/OF0105.jpg>

087 Haupt J. 2002. Fungal and rickettsial infections of some East Asian trapdoor spiders. Pp. 45–49. *In European Arachnology 2000*. (Toft S, Scharff N, eds.). Aarhus University Press, Aarhus.

088 Mains EB. 1954. Species of *Cordyceps* on spiders. *Bulletin of the Torrey Botanical Club* 81:492–500.

089 Kawamura S. 1929. On some new Japanese fungi. *Japanese Journal of Botany* 4: 291–302.

090a Yokoyama K, Ichikawa Y. 1984. Ecology of spider mushrooms at Omi Shrine in Otsu City. *Fuyu*

*Kusa* 4:3–6. [in Japanese] Cited in:

<https://www.wikieasy.wiki/de/%E3%82%AF%E3%83%A2%E3%82%BF%E3%82%B1> accessed on February 11, 2023, no longer available.

090b Yokoyama K, Hashiya M. 1994. Distribution survey of spider mushrooms. *Fuyu Kusa* 14:6–10.

[in Japanese]. Cited in:

- <https://www.wikieasy.wiki/de/%E3%82%AF%E3%83%A2%E3%82%BF%E3%82%B1> accessed on February 11, 2023, no longer available
- 091 <https://rainforests.smugmug.com/Orders/Invertebrates/Orders/Cordyceps/i-FDVX5Kp/A>
- 092 <https://www.flickr.com/photos/rainforests/40151443503>
- 093 Nigel Hywel-Jones (unpubl. data)
- 094 <https://bugguide.net/node/view/1208519/bgimage>
- 095 Orchard AE. 1996. Fungi of Australia. Australian Biological Resources Study, Canberra.
- 096a Pérez-Miles F., Perafán C. 2017. Behavior and biology of Mygalomorphae. Pp. 29–54. *In* Behaviour and Ecology of Spiders. (Viera C, Gonzaga MO, eds.). Springer, Cham.
- 096b Fernando Pérez-Miles, pers. comm.
- 097 Schwendinger PJ, Hongpadharakiree K. 2014. Three new *Prothemopsis* species (Araneae: Idiopidae) from central Thailand. *Zootaxa* 3893:530-550.
- 098 Schwendinger PJ. 1996. The fauna of orthognathous spiders (Araneae: Mesothelae, Mygalomorphae) in Thailand. *Revue Suisse de Zoologie (Special Edition)* 2:577–584.
- 099 Castillo L, Sanjuan T, Restrepo S, Realpe E. 2015. Efecto del hongo aracnopatógeno *Cordyceps nidus* sp. nov. en tarántulas de la familia Theraphosidae en condiciones de laboratorio. Online at: <https://repositorio.uniandes.edu.co/bitstream/handle/1992/17215/u703688.pdf?sequence=1&isAllo wed=y> Accessed 23 Sept 2022
- 100 Chirivi J, Danies G., Sierra R., Schauer N, Trenkamp S, Restrepo S et al. 2017. Metabolomic profile and nucleoside composition of *Cordyceps nidus* sp. nov. (Cordycipitaceae): a new source of active compounds. *PLoS One* 12:e0179428.
- 101 Nentwig W, Prillinger H. 1990. A zygomycetous fungus as a mortality factor in a laboratory stock of spiders. *Journal of Arachnology* 18:118–121.
- 102 <https://www.stuff.co.nz/environment/17344/Fungus-to-kill-white-tail-spiders-discovered>
- 103a Bristowe WS. 1948. Spiders from the arctic island of Jan Mayen. *Proceedings of the Zoological Society of London* 118:223–225.
- 103b Bristowe WL. 1958. The World of Spiders. Collins, London.
- 104 Barrion AT. 2001. Spiders: natural biological control agents against insect pests in Philippine rice fields. *Transactions of the National Academy of Science and Technology, Philippines* 23:121–130.
- 105 Heinrichs EA. 1994. Biology and Management of Rice Insects. Wiley Eastern Limited, Delhi, India.
- 106–108 Noordam AP, Samson RA, Sudhaus W. 1998. Fungi and Nematoda on *Centromerus sylvaticus* (Araneae, Linyphiidae). Pp. 343–347. *In* Proceedings of the 17th European Colloquium of Arachnology. (Selden PA, ed.). Edinburgh 1997.



- 109a-110a Bristowe WS. 1948. Spiders from the arctic island of Jan Mayen. *Proceedings of the Zoological Society of London* 118:223–225.
- 109b-110b Bristowe WL. 1958. *The World of Spiders*. Collins, London.
- 111 Læssøe T. 2015. Edderknoppe – Snyltekölle (*Torrubiella albolanata*) – en overraskelse fra de jyske sumpe. *Svampe* 71:23–27, 37.
- 112 Greenstone MH, Ignoffo CM, Samson RA. 1987. Susceptibility of spider species to the fungus *Nomuraea atypicola*. *Journal of Arachnology* 15:266–268.
- 113 Petch T. 1948. A revised list of British entomogenous fungi. *Transactions of the British Mycological Society* 31:286–304.
- 114 Petch T. 1944. Notes on entomogenous fungi. *Transactions of the British Mycological Society* 27:81–93.
- 115–116 Duffey E. 1997. Spider adaptation to artificial biotopes: the fauna of percolating filter beds in a sewage treatment works. *Journal of Applied Ecology* 34:1190–1202.
- 117 Noordam AP, Samson RA, Sudhaus W. 1998. Fungi and Nematoda on *Centromerus sylvaticus* (Araneae, Linyphiidae). Pp. 343–347. In *Proceedings of the 17th European Colloquium of Arachnology*. (Selden PA, ed.). Edinburgh 1997.
- 118–119 Bishop L. 1990a. Entomophagous fungi as mortality agents of ballooning spiderlings. *Journal of Arachnology* 18:237–238
- 120a Bristowe WS. 1948. Spiders from the arctic island of Jan Mayen. *Proceedings of the Zoological Society of London* 118:223–225.
- 120b Bristowe WL. 1958. *The World of Spiders*. Collins, London.
- 121–123 Noordam AP, Samson RA, Sudhaus W. 1998. Fungi and Nematoda on *Centromerus sylvaticus* (Araneae, Linyphiidae). Pp. 343–347. In *Proceedings of the 17th European Colloquium of Arachnology*. (Selden PA, ed.). Edinburgh 1997.
- 124 Meyling NV, Thorup-Kristensen K, Eilenberg J. 2011. Below-and aboveground abundance and distribution of fungal entomopathogens in experimental conventional and organic cropping systems. *Biological Control* 59:180–186.
- 125a Bristowe WS. 1948. Spiders from the arctic island of Jan Mayen. *Proceedings of the Zoological Society of London* 118:223–225.
- 125b Bristowe WL. 1958. *The World of Spiders*. Collins, London.
- 126–127 Leatherdale D. 1970. The arthropod hosts of entomogenous fungi in Britain. *Entomophaga* 15:419–435.
- 128 Ruszkiewicz-Michalska M, Tkaczuk C, Dynowska M, Sucharzewska E, Szkodzik J, Wrzosek M. 2012. Preliminary studies of fungi in the Biebrza National Park (NE Poland). I. Micromycetes. *Acta Mycologica* 47:213–234.

- 129 Kuephadungphan W, Petcharad B, Tasanathai K, Thanakitpipattana D, Kobmoo N, Khonsanit A. et al. 2022. Multi-locus phylogeny unmasks hidden species within the specialised spider-parasitic fungus, *Gibellula* (Hypocreales, Cordycipitaceae) in Thailand. *Studies in Mycology* 101:245–286.
- 130 Bosselaers JP. 1984. *Gibellula pulchra* (Sacc.) Cavara in het gebied van de Slangebeekbron te Zonhoven (België). *Natuurhistorisch Maandblad* 73:166–168.
- 131–132 Meyling NV, Thorup-Kristensen K, Eilenberg J. 2011. Below-and aboveground abundance and distribution of fungal entomopathogens in experimental conventional and organic cropping systems. *Biological Control* 59:180–186.
- 133 Costa PP. 2014. *Gibellula* spp. associadas a aranhas da Mata do Paraíso, Viçosa-MG. MSc Thesis, Universidade Federal de Viçosa, Brazil.
- 134 Thomas Laessoe (pers. comm./ photo)
- 135a Bristowe WS. 1948. Spiders from the arctic island of Jan Mayen. *Proceedings of the Zoological Society of London* 118:223–225.
- 135b Bristowe WL. 1958. *The World of Spiders*. Collins, London.
- 136a Nováková A, Kubátová A, Sklenář F, Hubka V. 2018a. Microscopic fungi on cadavers and skeletons from cave and mine environments. *Czech Mycology* 70:101–121.
- 136b Nováková A, Hubka V, Valinová Š, Kolařík M, Hillebrand-Voiculescu AM. 2018b. Cultivable microscopic fungi from an underground chemosynthesis-based ecosystem: a preliminary study. *Folia Microbiologica* 63:43–55.
- 137 Greenstone MH, Ignoffo CM, Samson RA. 1987. Susceptibility of spider species to the fungus *Nomuraea atypicola*. *Journal of Arachnology* 15:266–268.
- 138 Keller S, Wegensteiner R. 2010. A species of the fungus genus *Conidiobolus* as a pathogen of a lycosid spider. *Mitteilungen der Schweizerischen Entomologischen Gesellschaft* 83:227–231.
- 139 Edgar WD. 1969. Prey and predators of the wolf spider *Lycosa lugubris*. *Journal of Zoology* 159:405–411.
- 140 Noordam AP, Samson RA, Sudhaus W. 1998. Fungi and Nematoda on *Centromerus sylvaticus* (Araneae, Linyphiidae). Pp. 343–347. *In* Proceedings of the 17th European Colloquium of Arachnology. (Selden PA, ed.). Edinburgh 1997.
- 141 Savić D, Grbić G, Bošković E, Hänggi A. 2016. First records of fungi pathogenic on spiders for the Republic of Serbia. *Arachnology Letters* 52:31–34.
- 142 Doidge EM. 1950. Fungi on hosts other than vascular plants. *Bothalia* 5:58–63.
- 143 van der Bijl PA. 1922. A fungus - *Gibellula haygarthii*, sp. N. - on a spider of the family Lycosidae. *Transactions of the Royal Society of South Africa* 10:149–150.
- 144 <https://bugguide.net/node/view/1707125>
- 145 Hywel-Jones NL, Sivichai S. 1995. *Cordyceps cylindrica* and its association with *Nomuraea atypicola* in Thailand. *Mycological Research* 7:809–812.

- 146 Sandler M. 2016. Zombie fungi: Occurrence of arthropod endoparasitic fungi at different altitudes in the Monteverde Region. Tropical Ecology Collection (Monteverde Institute). 641. [https://digitalcommons.usf.edu/tropical\\_ecology/641](https://digitalcommons.usf.edu/tropical_ecology/641)
- 147 Wunderlich J. 2004. Fossil spiders in amber and copal: Conclusions, revisions, new taxa, family diagnoses of fossil and extant taxa. *Beiträge zur Araneologie* 3:1–1908.
- 148 Isaia M, Decae A. 2012. Revalidation of *Nemesia meridionalis* Costa, 1835 (Araneae, Mygalomorphae, Nemesiidae), and first description of the male. *Arachnology* 15:280–284.
- 149 [https://www.wikiwand.com/en/Beauveria\\_bassiana](https://www.wikiwand.com/en/Beauveria_bassiana)
- 150 Nentwig W. 1985a. Parasitic fungi as a mortality factor of spiders. *Journal of Arachnology* 13:272–274.
- 151 Humber RA, Hansen KS, Wheeler MM. 2014. USDA-ARS Collection of Entomopathogenic Fungal Cultures – Indexes to available isolates. Robert W. Holley Center for Agriculture and Health, Ithaca, New York. <https://www.ars.usda.gov/ARSUserFiles/80620520/ALL%20AVAIL%20indices%2016Jan014.pdf> Accessed 8 March 2023
- 152 <https://mycocosm.jgi.doe.gov/Spoumb1/Spoumb1.home.html>
- 153 [https://twitter.com/phil\\_torres](https://twitter.com/phil_torres)
- 154 <https://bugguide.net/node/view/1573368/bgimage>
- 155 Henriksen CB, Reboleira ASP, Scharff N, Enghoff H. 2018. First record of a Basidiobolus/Amphoromorpha fungus from a spider. *African Journal of Ecology* 56:153–156.
- 156 <https://www.flickr.com/photos/rainforests/11307005053>
- 157 <https://bugguide.net/node/view/36643>
- 158 <https://jlorexplore.com/gallery/photostories/the-killer-fung>
- 159 Kuephadungphan W, Petcharad B, Tasanathai K, Thanakitpipattana D, Kobmoo N, Khonsanit A. et al. 2022. Multi-locus phylogeny unmasks hidden species within the specialised spider-parasitic fungus, *Gibellula* (Hypocreales, Cordycipitaceae) in Thailand. *Studies in Mycology* 101:245–286.
- 160 <https://www.flickr.com/photos/budak/41614482464/>
- 161 Seth Ausubel, pers. comm.
- 162–163 Rong IH, Grobbelaar E. 1998. South African records of associations between fungi and arthropods. *African Plant Protection* 4:43–63.
- 164 <https://www.flickr.com/photos/aracnologo/33172017034/>
- 165 Costa PP. 2014. *Gibellula* spp. associadas a aranhas da Mata do Paraíso, Viçosa-MG. MSc Thesis, Universidade Federal de Viçosa, Brazil.

- 166 Mercado Sierra A, Alayo Soto R, Mena Portales J, de Armas LF. 1988. Hongos entomógenos de Cuba. Nueva especie de *Clathroconium* sobre arañas. *Acta Botánica Cubana* 56:1–5.
- 167–168 Jent D. 2013. Pathogenic Fungi Affecting Cellar Spiders, *Pholcus phalangioides*. Student project, Murray State University (Abstract). Online at: <https://digitalcommons.murraystate.edu/postersatthecapitol/2013/Murray/6/> Accessed 27 September 2022.
- 169 Ian Redding – <https://www.alamy.com/stock-photo-daddy-longlegs-spider-pholcus-phalangioides-dead-and-covered-in-fungus-92890630.html>
- 170 <https://www.alamy.com/daddy-longlegs-spider-pholcus-phalangoides-infected-with-a-fungal-pathogen-possibly-gibellula-pulchra-in-a-cave-near-podere-montecucco-orvieto-umbria-italy-image262966101.html>
- 171 <https://www.youtube.com/watch?v=T9aw56z6jTg>
- 172 [https://www.flickr.com/photos/alan\\_cressler/22082836645](https://www.flickr.com/photos/alan_cressler/22082836645)
- 173 Martynenko SV, Kondratyukn TO, Sukhomlin MM. 2012. A hyphomycete, *Engyodontium album* (Limber) de Hoog, attacking spiders in underground headings of Kyiv-City. *Ukrainian Botanical Journal* 69:423–432.
- 174 Cokendolpher JC. 1993. Pathogens and parasites of opiliones (arthropoda: arachnida). *Journal of Arachnology* 21:120–146.
- 175 Dubiel G. 2015. Występowanie grzyba *Gibellula leiopus* (Vuil. ex Maubl.) Mains w Beskidzie Śląskim. *Przegląd Przyrodniczy* 26:30–38.
- 176 Eiseman C, Charney N, Carlson J. 2010. Tracks & Sign of Insects & Other Invertebrates: A Guide to North American Species. Stackpole Books, Mechanicsburg.
- 177 <https://www.inaturalist.org/observations/124885254>
- 178 <https://www.inaturalist.org/observations/140295751>
- 179 <https://www.inaturalist.org/observations/130995484>
- 180 <https://www.inaturalist.org/observations/126673855>
- 181 <https://www.inaturalist.org/observations/124879856>
- 182 <https://www.inaturalist.org/observations/111079446>
- 183 <https://www.inaturalist.org/observations/110955846>
- 184 <https://www.inaturalist.org/observations/109295151>
- 185 <https://www.inaturalist.org/observations/106805425>
- 186 <https://www.inaturalist.org/observations/105038206>

187 <https://www.inaturalist.org/observations/102510550>  
188 <https://www.inaturalist.org/observations/94084524>  
189 <https://www.inaturalist.org/observations/82581919>  
190 <https://www.inaturalist.org/observations/73504730>  
191 <https://www.inaturalist.org/observations/71357780>  
192 <https://www.inaturalist.org/observations/71017453>  
193 <https://www.inaturalist.org/observations/66159361>  
194 <https://www.inaturalist.org/observations/6492719538485>  
195 <https://www.inaturalist.org/observations/64667449>  
196 <https://www.inaturalist.org/observations/58144497>  
197 <https://www.inaturalist.org/observations/47423815>  
198 <https://www.inaturalist.org/observations/21948048>  
199 <https://www.inaturalist.org/observations/141405381>  
200 <https://www.inaturalist.org/observations/138848464>  
201 <https://www.inaturalist.org/observations/138783675>  
202 <https://www.inaturalist.org/observations/129578129>  
203 <https://www.inaturalist.org/observations/114440448>  
204 <https://www.inaturalist.org/observations/103106269>  
205 <https://www.inaturalist.org/observations/101988244>  
206 <https://www.inaturalist.org/observations/100592061>  
207 <https://www.inaturalist.org/observations/97905071>  
208 <https://www.inaturalist.org/observations/97615190>  
209 <https://www.inaturalist.org/observations/96648400>  
210 <https://www.inaturalist.org/observations/92354925>  
211 <https://www.inaturalist.org/observations/65501463>  
212 <https://www.inaturalist.org/observations/37388680>

- 213 <https://www.inaturalist.org/observations/36498174>
- 214 <https://www.inaturalist.org/observations/17493159>
- 215 <https://www.flickr.com/photos/nagysandor/29821742974>
- 216 Humber RA, Hansen KS, Wheeler MM. 2014. USDA-ARS Collection of Entomopathogenic Fungal Cultures – Indexes to available isolates. Robert W. Holley Center for Agriculture and Health, Ithaca, New York.  
<https://www.ars.usda.gov/ARSUserFiles/80620520/ALL%20AVAIL%20indices%2016Jan014.pdf>  
Accessed 8 March 2023
- 217 Kuephadungphan W, Petcharad B, Tasanathai K, Thanakitpipattana D, Kobmoo N, Khonsanit A. et al. 2022. Multi-locus phylogeny unmasks hidden species within the specialised spider-parasitic fungus, *Gibellula* (Hypocreales, Cordycipitaceae) in Thailand. *Studies in Mycology* 101:245–286.
- 218 <http://naturephoto-walter.blogspot.com/2017/02/miskolc-hungary-misk>
- 219  
[https://www.reddit.com/r/ThatsInsane/comments/j4292e/this\\_is\\_the\\_fungus\\_engyodontium\\_araneorum\\_which/](https://www.reddit.com/r/ThatsInsane/comments/j4292e/this_is_the_fungus_engyodontium_araneorum_which/)
- 220a <https://blog.mycology.cornell.edu/2006/11/09/a-spiders-nightmare/>
- 220b Kathie T. Hodge (pers. comm.)
- 221 Cokendolpher JC. 1993. Pathogens and parasites of opiliones (arthropoda: arachnida). *Journal of Arachnology* 21:120–146.
- 222 Rose S. 2022. Spiders of North America. Princeton University Press, Princeton & Oxford.
- 223 <https://www.inaturalist.org/observations/166795631>
- 224 <https://www.inaturalist.org/observations/106805412>
- 225 <https://www.gbif.org/occurrence/4076204454>
- 226 <https://www.gbif.org/occurrence/4080930548>
- 227 <https://www.gbif.org/occurrence/4034771775>
- 228a <https://www.flickr.com/photos/gillesarbour/24503554811> no longer accessible June 2023
- 228b Gilles Arbour, pers. comm. (Fig. 5B, this paper)
- 229 <https://www.inaturalist.org/observations/138327035>
- 230–232 Manfrino RG, González A, Barneche J, Galván JT, Hywell-Jones N, Lastra CCL. 2017. Contribution to the knowledge of pathogenic fungi of spiders in Argentina. Southernmost record in the world. *Revista Argentina de Microbiología* 49:197–200.
- 233 Charles Haddad, pers. comm.

- 234 Wolcott GN. 1948. The insects of Puerto Rico. *Journal of Agriculture of the University of Puerto Rico* 32:1–224.
- 235 Saltamachia SJ. 2022. Theoretical and empirical evidence for extended phenotypes in a specialized parasite of spiders. *Authorea Preprint Repository* DOI: 10.22541/au.164604858.89088094/v1.
- 236 Rose S. 2022. *Spiders of North America*. Princeton University Press, Princeton & Oxford.
- 237 Saltamachia SJ. 2022. Theoretical and empirical evidence for extended phenotypes in a specialized parasite of spiders. *Authorea Preprint Repository* DOI: 10.22541/au.164604858.89088094/v1.
- 238 Carmen Champagne, pers. comm. (Fig. 4C, this paper).
- 239 Costa PP. 2014. *Gibellula* spp. associadas a aranhas da Mata do Paraíso, Viçosa-MG. MSc Thesis, Universidade Federal de Viçosa, Brazil.
- 240–241 Humber RA, Rombach MC. 1987. *Torrubiella ratticaudata* sp. nov. (Pyrenomycetes: Clavicipitales) and other fungi from spiders on the Solomon Islands. *Mycologia* 79:375–382.
- 242 Charles Haddad, pers. comm.
- 243 Greenstone MH, Ignoffo CM, Samson RA. 1987. Susceptibility of spider species to the fungus *Nomuraea atypicola*. *Journal of Arachnology* 15:266–268.
- 244 Durkin ES, Cassidy ST, Gilbert R, Richardson EA, Roth AM, Shablin S et al. 2021. Parasites of spiders: Their impacts on host behavior and ecology. *Journal of Arachnology* 49:281–298.
- 245 Greenstone MH, Ignoffo CM, Samson RA. 1987. Susceptibility of spider species to the fungus *Nomuraea atypicola*. *Journal of Arachnology* 15:266–268.
- 246 Mary Jane Hatfield, pers. comm. (Fig. 4A, this paper)
- 247 <https://www.flickr.com/photos/72842252@N04/12691569924>
- 248 Abhijith APC, Hill DE, Ramachandra P. 2002. Notes on biology of the ant-mimicking jumping spider *Myrmarachne platalaeoides* (Araneae: Salticidae: Astioida) in south Asia. *Peckhamia* 287.1:1–12.
- 249 Kuephadungphan W, Petcharad B, Tasanathai K, Thanakitpipattana D, Kobmoo N, Khonsanit A. et al. 2022. Multi-locus phylogeny unmasks hidden species within the specialised spider-parasitic fungus, *Gibellula* (Hypocreales, Cordycipitaceae) in Thailand. *Studies in Mycology* 101:245–286.
- 250 Strongman DB. 1991. *Gibellula pulchra* from a spider (Salticidae) in Nova Scotia, Canada. *Mycologia* 83:816–817.
- 251 Edwards GB. 1980. Taxonomy, ethology, and ecology of *Phidippus* (Araneae: Salticidae) in eastern North America. PhD Dissertation, University of Florida, Gainesville, USA.
- 252–253 Greenstone MH, Ignoffo CM, Samson RA. 1987. Susceptibility of spider species to the fungus *Nomuraea atypicola*. *Journal of Arachnology* 15:266–268.

- 254–255 Edwards GB. 1980. Taxonomy, ethology, and ecology of *Phidippus* (Araneae: Salticidae) in eastern North America. PhD Dissertation, University of Florida, Gainesville, USA.
- 256 <https://bugguide.net/node/view/828984>
- 257–258 Edwards GB. 1980. Taxonomy, ethology, and ecology of *Phidippus* (Araneae: Salticidae) in eastern North America. PhD Dissertation, University of Florida, Gainesville, USA.
- 259 Greenstone MH, Ignoffo CM, Samson RA. 1987. Susceptibility of spider species to the fungus *Nomuraea atypicola*. *Journal of Arachnology* 15:266–268.
- 260 Saltamachia SJ. 2022. Theoretical and empirical evidence for extended phenotypes in a specialized parasite of spiders. *Authorea Preprint Repository* DOI: 10.22541/au.164604858.89088094/v1.
- 261 Kuephadungphan W, Tasanathai K, Petcharad B, Khonsanit A, Stadler M, Luangsa-Ard JJ. 2020. Phylogeny- and morphology-based recognition of new species in the spider-parasitic genus *Gibellula* (Hypocreales, Cordycipitaceae) from Thailand. *Mycologia* 72:17–42.
- 262 Evans HC, Samson RA. 1987. Fungal pathogens of spiders. *Mycologist* 1:152–159.
- 263 Luangsa-Ard JJ, Tasanathai K, Mongkolsamrit S, Hywel-Jones N. 2008. Atlas of Invertebrate-Pathogenic Fungi of Thailand, Volume 2. National Center for Genetic Engineering and Biotechnology, National Science and Technology Development Agency, Pathumthani, Thailand.
- 264 <http://www.thai2bio.net/museum/item.php?keyword=Akanthomyces%20araneorum>
- 265 Hywel-Jones N. 1996. *Akanthomyces* on spiders in Thailand. *Mycological Research* 9:1065–1070.
- 266 <https://www.alamy.de/fotos-bilder/spider-parasitized-cordyceps-fungus-in.html>
- 267 <https://rainforests.smugmug.com/Orders/Invertebrates/Orders/Cordyceps>
- 268 <https://www.deviantart.com/melvinyeo/art/Killer-Fungus-279883330>
- 269 <https://twitter.com/stephenmarek2/status/647981177056309248>
- 270–272 Samson RA, Evans HC. 1992. New species of *Gibellula* on spiders (Araneida) from South America. *Mycologia* 84:300–314.
- 273 Barrion AT. 2001. Spiders: natural biological control agents against insect pests in Philippine rice fields. *Transactions of the National Academy of Science and Technology, Philippines* 23:121–130.
- 274 <https://bugguide.net/node/view/236694>
- 275–276 Samson RA, Evans HC. 1992. New species of *Gibellula* on spiders (Araneida) from South America. *Mycologia* 84:300–314.
- 277–278 Kuephadungphan W, Petcharad B, Tasanathai K, Thanakitpipattana D, Kobmoo N, Khonsanit A. et al. 2022. Multi-locus phylogeny unmasks hidden species within the specialised spider-parasitic fungus, *Gibellula* (Hypocreales, Cordycipitaceae) in Thailand. *Studies in Mycology* 101:245–286.



- 279 Rong IH, Grobbelaar E. 1998. South African records of associations between fungi and arthropods. *African Plant Protection* 4:43–63.
- 280 <https://taieol.tw/pages/142073>
- 281 Samson RA, Evans HC. 1973. Notes on entomogenous fungi from Ghana: I. The genera *Gibellula* and *Pseudogibellula*. *Acta Botanica Neerlandica* 22:522–528.
- 282 Rong IH, Botha A. 1993. New and interesting records of South African fungi XII. Synnematosus Hyphomycetes. *South African Journal of Botany* 59:514–518.
- 283 <https://www.marylandbiodiversity.com/view/15240>
- 284 <https://bugkeeping.tumblr.com/post/634138914125496321/a-jumping-spider-parasitized-by-a-cordyceps>
- 285 Kuephadungphan W, Petcharad B, Tasanathai K, Thanakitpipattana D, Kobmoo N, Khonsanit A. et al. 2022. Multi-locus phylogeny unmasks hidden species within the specialised spider-parasitic fungus, *Gibellula* (Hypocreales, Cordycipitaceae) in Thailand. *Studies in Mycology* 101:245–286.
- 286 Costa PP. 2014. *Gibellula* spp. asociadas a aranhas da Mata do Paraíso, Viçosa-MG. MSc Thesis, Universidade Federal de Viçosa, Brazil.
- 287 Evans HC, Samson RA. 1987. Fungal pathogens of spiders. *Mycologist* 1:152–159.
- 288 Pérez Meza P. 2004. Hongos entomopatógenos asociados a diferentes cultivos tropicales. Tesis para optar el título de Ingeniero Agrónomo, Universidad Nacional Agraria de la Selva, Peru.
- 289 Williams CB. 1921. Report on the froghopper-blight of sugar-cane in Trinidad. *Trinidad and Tobago Department of Agriculture Memoirs* 1:1–170.
- 290 <https://ozarkbill.com/2021/11/01/zombie-spider-bastards/>
- 291 [https://www.reddit.com/r/Parasitology/comments/q5lhbq/parasitic\\_gibellula\\_sp\\_fungus\\_in\\_a\\_jumping\\_spider/](https://www.reddit.com/r/Parasitology/comments/q5lhbq/parasitic_gibellula_sp_fungus_in_a_jumping_spider/)
- 292 [https://www.reddit.com/r/natureismetal/comments/owcygc/spider\\_infected\\_with\\_gibellula\\_fungus/](https://www.reddit.com/r/natureismetal/comments/owcygc/spider_infected_with_gibellula_fungus/)
- 293 Bishop L. 1990a. Entomophagous fungi as mortality agents of ballooning spiderlings. *Journal of Arachnology* 18:237–238.
- 294 Pérez Meza P. 2004. Hongos entomopatógenos asociados a diferentes cultivos tropicales. Tesis para optar el título de Ingeniero Agrónomo, Universidad Nacional Agraria de la Selva, Peru.
- 295 Hywel-Jones N. 1996. *Akanthomyces* on spiders in Thailand. *Mycological Research* 9:1065–1070.
- 296 Pérez Meza P. 2004. Hongos entomopatógenos asociados a diferentes cultivos tropicales. Tesis para optar el título de Ingeniero Agrónomo, Universidad Nacional Agraria de la Selva, Peru.
- 297 Evans HC, Samson RA. 1987. Fungal pathogens of spiders. *Mycologist* 1:152–159.

- 298 <https://www.projectnoah.org/spottings/6423106>
- 299 <http://www.plantpath.cornell.edu/PhotoLab/PicOfMonth/POM3.htm>
- 300 <https://www.whatsthatbug.com/spider-with-fungus-infection/>
- 301 <https://www.marylandbiodiversity.com/view/15240>
- 302 <https://www.deviantart.com/melvynyeo/art/Killer-Fungus-279883330>
- 303 <https://www.projectnoah.org/spottings/7104616>
- 304 Greenstone MH, Ignoffo CM, Samson RA. 1987. Susceptibility of spider species to the fungus *Nomuraea atypicola*. *Journal of Arachnology* 15:266–268.
- 305 Beys-da-Silva WO, Santi L, Berger M, Guimaraes JA, Schrank A, Vainstein MH. 2013. Susceptibility of *Loxosceles* sp. to the arthropod pathogenic fungus *Metarhizium anisopliae*: potential biocontrol of the brown spider. *Transactions of the Royal Society of Tropical Medicine and Hygiene* 107:59–61.
- 306 <https://www.inaturalist.org/observations/34934503>
- 307 Costa PP. 2014. *Gibellula* spp. associadas a aranhas da Mata do Paraíso, Viçosa-MG. MSc Thesis, Universidade Federal de Viçosa, Brazil.
- 308 Hughes DP, Araújo JPM, Loreto RG, Quevillon L, De Bekker C, Evans HC. 2016. From so simple a beginning: the evolution of behavioral manipulation by fungi. *Advances in Genetics* 94:437–469.
- 309 <https://minibeastwildlife.blogspot.com/2011/03/killer-fungus.html>
- 310 Rong IH, Grobbelaar E. 1998. South African records of associations between fungi and arthropods. *African Plant Protection* 4:43–63.
- 311 Costa PP. 2014. *Gibellula* spp. associadas a aranhas da Mata do Paraíso, Viçosa-MG. MSc Thesis, Universidade Federal de Viçosa, Brazil.
- 312 <http://davidavid.blogspot.com/2008/>
- 313 <https://www.foxeslair.org/foxypress/archives/07-2020>
- 314 <https://twitter.com/gotleghmacro/status/1472827370843168772?lang=ar>
- 315 <https://www.flickr.com/photos/72842252@N04/13997658232>
- 316 <https://www.whatsthatbug.com/2009/04/26/giant-crab-spider-riddled-with-fungus-we-believe/>
- 317 <https://www.flickr.com/photos/rainforests/51674043090/>
- 318 [https://www.123rf.com/photo\\_145569651\\_close-up-shot-of-a-huntsman-spiders-at-yilan-taiwan.html](https://www.123rf.com/photo_145569651_close-up-shot-of-a-huntsman-spiders-at-yilan-taiwan.html)

- 319 <https://www.shutterstock.com/image-photo/close-dead-huntsman-spider-fungus-on-1894778263>
- 320–321 Wunderlich J. 2004. Fossil spiders in amber and copal: Conclusions, revisions, new taxa, family diagnoses of fossil and extant taxa. *Beiträge zur Araneologie* 3:1–1908.
- 322 <https://www.flickr.com/photos/40132175@N06/4680651904>
- 323 Harry Evans, pers. comm.
- 324 CABI 2022. Confirmed new fungus has mysterious origins. <https://phys.org/news/2022-06-fungus-mysterious.html> Accessed 3 August 2022.
- 325 Kubátová A. 2017. Entomopatogenní houby – nerovný souboj. *Ziva* 5:250–254.
- 326 Nováková A, Kubátová A, Sklenář F, Hubka V. 2018a. Microscopic fungi on cadavers and skeletons from cave and mine environments. *Czech Mycology* 70:101–121.
- 327 <https://das-neue-naturforum.de/forum/index.php?thread/19258-die-spinnenkernkeule-torrubiella-leiopus-nebenfruchtform/>
- 328–329 Yoder JA, Benoit JB, Christensen BS, Croxall TJ, Hobbs HH. 2009. Entomopathogenic fungi carried by the cave orb weaver spider, *Meta ovalis* (Araneae, Tetragnathidae), with implications for mycoflora transfer to cave crickets. *Journal of Cave and Karst Studies*, 71:116–120.
- 330 McNeil D. 2012. Entomogenous fungi. *Shropshire Entomology* 5:5–6.
- 331-332 <https://das-neue-naturforum.de/forum/index.php?thread/19258-die-spinnenkernkeule-torrubiella-leiopus-nebenfruchtform/>
- 333 Noordam AP, Samson RA, Sudhaus W. 1998. Fungi and Nematoda on *Centromerus sylvaticus* (Araneae, Linyphiidae). Pp. 343–347. In Proceedings of the 17th European Colloquium of Arachnology. (Selden PA, ed.). Edinburgh 1997.
- 334 Greenstone MH, Ignoffo CM, Samson RA. 1987. Susceptibility of spider species to the fungus *Nomuraea atypicola*. *Journal of Arachnology* 15:266–268.
- 335 Hywel-Jones NL, Sivichai S. 1995. *Cordyceps cylindrica* and its association with *Nomuraea atypicola* in Thailand. *Mycological Research* 7:809–812.
- 336 Sherwood D. 2021. Notes on a case of fungal pathogenesis on a juvenile of the theraphosid spider *Aphonopelma gabeli* Smith, 1995 in captivity (Araneae: Theraphosidae). *Serket* 18:27–30.
- 337–338 Ayroza G, Ferreira IL, Sayegh RS, Tashima AK, da Silva Jr, PI. 2012. Juruin: an antifungal peptide from the venom of the Amazonian Pink Toe spider, *Avicularia juruensis*, which contains the inhibitory cystine knot motif. *Frontiers in Microbiology* 3:324.
- 339 Barbosa BC, Maciel TT, Abegg AD, Borges LM, Rosa CD, Vargas-Peixoto D. 2016. Arachnids infected by arthropod-pathogenic fungi in an urban fragment of Atlantic Forest in southern Brazil. *Natureza Online* 14:11–14.

- 340 Ávila Guerrero C. 2019. Caracterización del microhábitat y distribución espacial de *Pamphobeteus ferox* Araneae. Theraphosidae en parches de bosque andino de San Antonio del Tequendama. Thesis por el título de Biólogo, Universidad de La Salle, Bogotá, Colombia.
- 341 Ortiz D, Bertani R. 2005. A new species in the spider genus *Phormictopus* (Theraphosidae: Theraphosinae) from Cuba. *Revista Ibérica de Aracnología* 11:29–36.
- 342 Barbosa BC, Maciel TT, Abegg AD, Borges LM, Rosa CD, Vargas-Peixoto D. 2016. Arachnids infected by arthropod-pathogenic fungi in an urban fragment of Atlantic Forest in southern Brazil. *Natureza Online* 14:11–14.
- 343 Daniel Winkler, pers. comm.
- 344 Mains EB. 1954. Species of *Cordyceps* on spiders. *Bulletin of the Torrey Botanical Club* 81:492–500.
- 345 Castillo L, Sanjuan T, Restrepo S, Realpe E. 2015. Efecto del hongo aracnopatógeno *Cordyceps nidus* sp. nov. en tarántulas de la familia Theraphosidae en condiciones de laboratorio. Online at:
- 346 James Christensen (Minden Pictures)  
<https://www.flickr.com/photos/primevalnature/3192921025> accessed September 2, 2024.
- 347 Greenstone MH, Ignoffo CM, Samson RA. 1987. Susceptibility of spider species to the fungus *Nomuraea atypicola*. *Journal of Arachnology* 15:266–268.
- 348 Chandrashekhar S., Suryanarayanan TS, Narasimham CL. 1981. Occurrence of *Beauveria alba* on a spider. *Current Science* 50:248.
- 349 Martynenko SV, Kondratyukn TO, Sukhomlin MM. 2012. A hyphomycete, *Engyodontium album* (Limber) de Hoog, attacking spiders in underground headings of Kyiv-City. *Ukrainian Botanical Journal* 69:423–432.
- 350 Costa PP. 2014. *Gibellula* spp. asociadas a aranhas da Mata do Paraíso, Viçosa-MG. MSc Thesis, Universidade Federal de Viçosa, Brazil.
- 351 Gonzaga MO, Leiner NO, Santos AJ. 2006. On the sticky cobwebs of two theridiid spiders (Araneae: Theridiidae). *Journal of Natural History* 40:293–306.
- 352–353 Costa PP. 2014. *Gibellula* spp. asociadas a aranhas da Mata do Paraíso, Viçosa-MG. MSc Thesis, Universidade Federal de Viçosa, Brazil.
- 354–355 Bibbs CS, Vitoreli AM, Benny G, Harmon CL, Baldwin RW. 2013. Susceptibility of *Latrodectus geometricus* (Araneae: Theridiidae) to a *Mucor* strain discovered in north central Florida, USA. *Florida Entomologist* 96:1052–1061.
- 356 Mongkolsamrit S, Noisripoom W, Tasanathai K, Kobmoo N, Thanakitpipattana D, Khonsanit A. et al. 2022. Comprehensive treatise of *Hevansia* and three new genera *Jenniferia*, *Parahevansia* and *Polystromomyces* on spiders in Cordycipitaceae from Thailand. *MycKeys* 91:113–149.
- 357 Mercado Sierra A, Alayo Soto R, Mena Portales J, de Armas LF. 1988. Hongos entomógenos de Cuba. Nueva especie de *Clathroconium* sobre arañas. *Acta Botánica Cubana* 56:1–5.

- 358 Costa PP. 2014. *Gibellula* spp. associadas a aranhas da Mata do Paraíso, Viçosa-MG. MSc Thesis, Universidade Federal de Viçosa, Brazil.
- 359–360 Kuephadungphan W, Petcharad B, Tسانathai K, Thanakitpipattana D, Kobmoo N, Khonsanit A. et al. 2022. Multi-locus phylogeny unmasks hidden species within the specialised spider-parasitic fungus, *Gibellula* (Hypocreales, Cordycipitaceae) in Thailand. *Studies in Mycology* 101:245–286.
- 361 Mongkolsamrit S, Noisriboom W, Tسانathai K, Kobmoo N, Thanakitpipattana D, Khonsanit A. et al. 2022. Comprehensive treatise of *Hevansia* and three new genera *Jenniferia*, *Parahevansia* and *Polystromomyces* on spiders in Cordycipitaceae from Thailand. *MycKeys* 91:113–149.
- 362 Kuephadungphan W, Macabeo APG, Luangsa-Ard JJ, Tسانathai K, Thanakitpipattana D, Phongpaichit S. et al. 2019. Studies on the biologically active secondary metabolites of the new spider parasitic fungus *Gibellula gamsii*. *Mycological Progress* 18:135–146.
- 363 Kuephadungphan W, Tسانathai K, Petcharad B, Khonsanit A, Stadler M, Luangsa-ard JJ. 2020. Phylogeny- and morphology-based recognition of new species in the spider-parasitic genus *Gibellula* (Hypocreales, Cordycipitaceae) from Thailand. *MycKeys* 72:17–42.
- 364–365 Mongkolsamrit S, Noisriboom W, Tسانathai K, Kobmoo N, Thanakitpipattana D, Khonsanit A. et al. 2022. Comprehensive treatise of *Hevansia* and three new genera *Jenniferia*, *Parahevansia* and *Polystromomyces* on spiders in Cordycipitaceae from Thailand. *MycKeys* 91:113–149.
- 366 Kuephadungphan W, Petcharad B, Tسانathai K, Thanakitpipattana D, Kobmoo N, Khonsanit A. et al. 2022. Multi-locus phylogeny unmasks hidden species within the specialised spider-parasitic fungus, *Gibellula* (Hypocreales, Cordycipitaceae) in Thailand. *Studies in Mycology* 101:245–286.
- 367 Greenstone MH, Ignoffo CM, Samson RA. 1987. Susceptibility of spider species to the fungus *Nomuraea atypicola*. *Journal of Arachnology* 15:266–268.
- 368 Tony DeSantis, pers. comm. (Fig. 4E, this paper).
- 369 Costa PP. 2014. *Gibellula* spp. associadas a aranhas da Mata do Paraíso, Viçosa-MG. MSc Thesis, Universidade Federal de Viçosa, Brazil.
- 370 Greenstone MH, Ignoffo CM, Samson RA. 1987. Susceptibility of spider species to the fungus *Nomuraea atypicola*. *Journal of Arachnology* 15:266–268.
- 371 <https://www.flickr.com/photos/128810613@N02/50070178022>
- 372 Kuephadungphan W, Petcharad B, Tسانathai K, Thanakitpipattana D, Kobmoo N, Khonsanit A. et al. 2022. Multi-locus phylogeny unmasks hidden species within the specialised spider-parasitic fungus, *Gibellula* (Hypocreales, Cordycipitaceae) in Thailand. *Studies in Mycology* 101:245–286.
- 373 Ruskiewicz-Michalska M, Tkaczuk C, Dynowska M, Sucharzewska E, Szkodzik J, Wrzosek M. 2012. Preliminary studies of fungi in the Biebrza National Park (NE Poland). I. Micromycetes. *Acta Mycologica* 47:213–234.
- 374 Ruskiewicz-Michalska M, Balazy S, Chelkowski J, Dynowska M, Pawlowska J, Sucharzewska E et al. 2015. Preliminary studies of fungi in the Biebrza National Park (NE Poland). Part III. Micromycetes-new data. *Acta Mycologica* 50:1–28. <http://dx.doi.org/10.5586/am.1067>

- 375 \*\*Serrano Añazco YDL. 2016. Diversidad de hongos entomopatógenos del género *Cordyceps* sl (Hypocreales: Clavicipitaceae) en el Ecuador. Bachelor's Thesis, Pontificia Universidad Católica del Ecuador, Quito.
- 376 Bishop L. 1990a. Entomophagous fungi as mortality agents of ballooning spiderlings. *Journal of Arachnology* 18:237–238
- 377 <https://www.alamy.com/fungus-torrubiella-sp-on-dead-spider-aranea-order-on-crane-flower-strelitzia-reginae-klungkung-bali-indonesia-image432872997.html>
- 378 Petch T. 1944. Notes on entomogenous fungi. *Transactions of the British Mycological Society* 27:81–93.
- 379 Kobayasi Y, Shimizu D. 1982. Monograph of the genus *Torrubiella*. *Bulletin of National Science Museum Tokyo, Series B* 8:43–78.
- 380 Costa PP. 2014. *Gibellula* spp. asociadas a aranhas da Mata do Paraíso, Viçosa-MG. MSc Thesis, Universidade Federal de Viçosa, Brazil.
- 381 Saltamachia SJ. 2022. Theoretical and empirical evidence for extended phenotypes in a specialized parasite of spiders. *Authorea Preprint Repository* DOI: 10.22541/au.164604858.89088094/v1.
- 382 <https://www.whatsthatbug.com/2008/10/26/fungus-riddled-spider/>
- 383 <https://www.flickr.com/photos/myriorama/14996980578>
- 384 <https://bugguide.net/node/view/500724>
- 385 <https://bugguide.net/node/view/1723599>
- 386 <https://bugguide.net/node/view/1001126>
- 387 Nentwig W, Prillinger H. 1990. A zygomycetous fungus as a mortality factor in a laboratory stock of spiders. *Journal of Arachnology* 18:118–121.
- 388 <https://www.inaturalist.org/observations/89466583>
- 389 <https://www.inaturalist.org/observations/93148799>
- 390 Kuephadungphan W, Petcharad B, Tسانathai K, Thanakitpipattana D, Kobmoo N, Khonsanit A. et al. 2022. Multi-locus phylogeny unmasks hidden species within the specialised spider-parasitic fungus, *Gibellula* (Hypocreales, Cordycipitaceae) in Thailand. *Studies in Mycology* 101:245–286.
- 391 Daniel Winkler, pers. comm. (Fig. 5F, this paper).
- 392 Wunderlich J. 2004. Fossil spiders in amber and copal: Conclusions, revisions, new taxa, family diagnoses of fossil and extant taxa. *Beiträge zur Araneologie* 3:1–1908.
- 393 Costa PP. 2014. *Gibellula* spp. asociadas a aranhas da Mata do Paraíso, Viçosa-MG. MSc Thesis, Universidade Federal de Viçosa, Brazil.

- 394 Kuephadungphan W, Tasanathai K, Petcharad B, Khonsanit A, Stadler M, Luangsa-ard JJ. 2020. Phylogeny- and morphology-based recognition of new species in the spider-parasitic genus *Gibellula* (Hypocreales, Cordycipitaceae) from Thailand. *MycKeys* 72:17–42.
- 395–401 Shrestha B, Kubátová A, Tanaka E, Oh J, Yoon DH, Sung JM et al. 2019. Spider-pathogenic fungi within Hypocreales (Ascomycota): their current nomenclature, diversity, and distribution. *Mycological Progress* 18:983–1003.
- 402 Chen WH, Han YF, Liang ZQ, Jin DC. 2017. A new araneogenous fungus in the genus *Beauveria* from Guizhou, China. *Phytotaxa* 302:57–64.
- 403 Wang Y, Tang DX, Luo R, Wang YB, Thanarut C, Dao VM, et al. 2023a. Phylogeny and systematics of the genus *Clonostachys*. *Frontiers in Microbiology* 14:1117753
- 404 Shrestha B, Kubátová A, Tanaka E, Oh J, Yoon DH, Sung JM et al. 2019. Spider-pathogenic fungi within Hypocreales (Ascomycota): their current nomenclature, diversity, and distribution. *Mycological Progress* 18:983–1003.
- 405 Mongkolsamrit S, Noisripoom W, Tasanathai K, Khonsanit A, Thanakitpipattana D, Himaman W et al. 2020. Molecular phylogeny and morphology reveal cryptic species in *Blackwellomyces* and *Cordyceps* (Cordycipitaceae) from Thailand. *Mycological Progress* 19:957–983.
- 406 Shrestha B, Kubátová A, Tanaka E, Oh J, Yoon DH, Sung JM et al. 2019. Spider-pathogenic fungi within Hypocreales (Ascomycota): their current nomenclature, diversity, and distribution. *Mycological Progress* 18:983–1003.
- 407 \*\*Mongkolsamrit S, Noisripoom W, Luangsa-Ard JJ, Himaman W. 2019. *Cordyceps kuiburiensis*. *Persoonia* 43:358–359.
- 408–420 Shrestha B, Kubátová A, Tanaka E, Oh J, Yoon DH, Sung JM et al. 2019. Spider-pathogenic fungi within Hypocreales (Ascomycota): their current nomenclature, diversity, and distribution. *Mycological Progress* 18:983–1003.
- 421–422 Chen M, Wang T, Lin Y, Huang B. 2022b. Morphological and molecular analyses reveal two new species of *Gibellula* (Cordycipitaceae, Hypocreales) from China. *MycKeys* 90:53–69.
- 423–436 Shrestha B, Kubátová A, Tanaka E, Oh J, Yoon DH, Sung JM et al. 2019. Spider-pathogenic fungi within Hypocreales (Ascomycota): their current nomenclature, diversity, and distribution. *Mycological Progress* 18:983–1003.
- 437 Evans HC. 2013. Fungal pathogens of spiders. Pp. 107–121. In *Spider Ecophysiology*. (Nentwig W, ed.). Springer, Berlin, Heidelberg.
- 438 Evans HC, Samson RA. 1982. Entomogenous fungi from the Galápagos Islands. *Canadian Journal of Botany* 60:2325–2333.
- 439 Thúy NT, Tùng NV, Lân TN, Lam TTN. 2015. Some biological characteristics of *Isaria javanica* (Frider. & Bally) Samsom & Hywel-Jones distributing at Pu Mat National Park, Nghe An. *Journal of Science & Developpement* 1:687–693 [in Vietnamese]

- 440–443 Shrestha B, Kubátová A, Tanaka E, Oh J, Yoon DH, Sung JM et al. 2019. Spider-pathogenic fungi within Hypocreales (Ascomycota): their current nomenclature, diversity, and distribution. *Mycological Progress* 18:983–1003.
- 444–445 Zhou YM, Zhi JR, Qu JJ, Zou X. 2022. Estimated divergence times of *Lecanicillium* in the Family Cordycipitaceae provide insights into the attribution of *Lecanicillium*. *Frontiers in Microbiology*:1379.
- 446 Chen WH, Liang JD, Ren XX, Zhao JH, Han YF, Liang ZQ. 2022a. Phylogenetic, ecological and morphological characteristics reveal two new spider-associated genera in Clavicipitaceae. *MycKeys* 91:49–66.
- 447 Mongkolsamrit S, Noisripoom W, Tasanathai K, Kobmoo N, Thanakitpipattana D, Khonsanit A. et al. 2022. Comprehensive treatise of *Hevansia* and three new genera *Jenniferia*, *Parahevansia* and *Polystromomyces* on spiders in Cordycipitaceae from Thailand. *MycKeys* 91:113–149.
- 448 Samson RA, Evans HC. 1973. Notes on entomogenous fungi from Ghana: I. The genera *Gibellula* and *Pseudogibellula*. *Acta Botanica Neerlandica* 22:522–528.
- 449 Chen WH, Liang JD, Ren XX, Zhao JH, Han YF, Liang ZQ. 2022a. Phylogenetic, ecological and morphological characteristics reveal two new spider-associated genera in Clavicipitaceae. *MycKeys* 91:49–66.
- 450 Shrestha B, Kubátová A, Tanaka E, Oh J, Yoon DH, Sung JM et al. 2019. Spider-pathogenic fungi within Hypocreales (Ascomycota): their current nomenclature, diversity, and distribution. *Mycological Progress* 18:983–1003.
- 451 \*\*Johnson D, Sung GH, Hywel-Jones NL, Luangsa-Ard JJ, Bischoff JF et al. 2009. Systematics and evolution of the genus *Torrubiella* (Hypocreales, Ascomycota). *Mycological Research* 113:279–289.
- 452–482 Shrestha B, Kubátová A, Tanaka E, Oh J, Yoon DH, Sung JM et al. 2019. Spider-pathogenic fungi within Hypocreales (Ascomycota): their current nomenclature, diversity, and distribution. *Mycological Progress* 18:983–1003.
- 483 Humber RA, Hansen KS, Wheeler MM. 2014. USDA-ARS Collection of Entomopathogenic Fungal Cultures – Indexes to available isolates. Robert W. Holley Center for Agriculture and Health, Ithaca, New York.  
<https://www.ars.usda.gov/ARSUserFiles/80620520/ALL%20AVAIL%20indices%2016Jan014.pdf>  
Accessed 8 March 2023
- 484 Evans & Samson 1982 Evans HC, Samson RA. 1982. Entomogenous fungi from the Galápagos Islands. *Canadian Journal of Botany* 60:2325–2333.
- 485–494 Shrestha B, Kubátová A, Tanaka E, Oh J, Yoon DH, Sung JM et al. 2019. Spider-pathogenic fungi within Hypocreales (Ascomycota): their current nomenclature, diversity, and distribution. *Mycological Progress* 18:983–1003.
- 495 \*\*Montalva C, Silva JJ, Rocha LFN, Luz C, Humber RA. 2019. Characterization of *Tolypocladium cylindrosporium* (Hypocreales, Ophiocordycipitaceae) isolates from Brazil and their efficacy against *Aedes aegypti* (Diptera, Culicidae). *Journal of Applied Microbiology* 126:266–276.
- 496 Samson RA, Evans HC. 1982. *Clathroconium*, a new helicosporous hyphomycete genus from spiders. *Canadian Journal of Botany* 60:1577–1580.



- 497 Malloch D, Kane J, Lahaie DG. 1978. *Filobasidiella arachnophila* sp. nov. *Canadian Journal of Botany* 56:1823–1826.
- 498–499 Greif MD, Currah RS. 2007. Patterns in the occurrence of saprophytic fungi carried by arthropods caught in traps baited with rotted wood and dung. *Mycologia* 99:7–19.
- 500 Tan YP, Bishop-Hurley SL, Shivas RG, Cowan DA, Maggs-Kölling G, Maharachchikumbura SSN et al. 2022. Fungal Planet description sheets: 1436–1477. *Persoonia* 49:261–350.
- 501 Greif MD, Currah RS. 2007. Patterns in the occurrence of saprophytic fungi carried by arthropods caught in traps baited with rotted wood and dung. *Mycologia* 99:7–19.
- 502 \*\*Wang Y, Liu Y, Zhang G, Zhang M, Zhu K, Wang Y. et al. 2020. Complete mitochondrial genome of *Cladosporium zixishanense* sp. nov. YFCC 8620 isolated from the spider in Yunnan, southwestern China. *Mitochondrial DNA Part B* 5:210–211.
- 503 \*\*Aini AN, Mongkolsamrit S, Wijanarka W, Thanakitpipattana D, Luangsa-Ard JJ, Budiharjo A. 2020. Diversity of *Akanthomyces* on moths (Lepidoptera) in Thailand. *MycoKeys* 71, 1.ni et al. 2020
- 504 Nováková A, Kubátová A, Sklenář F, Hubka V. 2018a. Microscopic fungi on cadavers and skeletons from cave and mine environments. *Czech Mycology* 70:101–121.
- 505 Wang Y, Tang DX, Luo R, Wang YB, Thanarut C, Dao VM et al. 2023. Phylogeny and systematics of the genus *Clonostachys*. *Frontiers in Microbiology* 14:1117753.
- 506-508 Chen WH, Liang JD, Ren XX, Zhao JH, Han YF. 2023. Study on species diversity of *Akanthomyces* (Cordycipitaceae, Hypocreales) in the Jinyun Mountains, Chongqing, China. *MycoKeys* 98:299.
- 509-510 Wang Y, Wang ZQ, Luo R, Souvanhnachit S, Thanarut C, Dao VM, et al. 2023. Species diversity and major host–substrate associations of the genus *Akanthomyces*. *Research Square* <https://doi.org/10.21203/rs.3.rs-2907259/v1>
- 511 Mongkolsamrit S, Sandargo B, Ebada SS, Noisripoom W, Jaiyen S, Luangsa-ard JJ, et al. 2023. *Bhushaniella* gen. nov. (Cordycipitaceae) on spider eggs sac: a new genus from Thailand and its bioactive secondary metabolites. *Mycological Progress* 22:1–16.

6 September 2023