

Culture Collection of Fungi (CCF) in Prague – original isolates accessed during 2003–05

ALENA KUBÁTOVÁ & MIROSLAV KOLAŘÍK

ABSTRACT

One hundred and sixty-five strains of saprotrophic filamentous microfungi are presented which were accessed by the Culture Collection of Fungi (CCF), Prague (Czech Republic) during 2003–05. They represent original isolates from natural habitats (e. g. bark beetles, soil), clinical substrates and foods, predominantly from the area of the Czech Republic. Very important are the strains of *Geosmithia*, fungus associated with bark beetles. Four *Geosmithia* strains are derived from type specimens. Seventeen strains of *Verticillium* were re-identified as species of genera *Lecanicillium*, *Simplicillium* or *Pochonia*.

Key words: CCF, culture collection, microscopic fungi, *Geosmithia*

INTRODUCTION

Culture Collection of Fungi (CCF), Department of Botany, Prague, Czech Republic, listed in its last 5th edition of catalogue of strains over 1500 strains of saprotrophic microfungi belonging to *Zygomycota* and *Ascomycota* including anamorphs (Kubátová & al., 2003).

Between January 2003 to August 2005, the CCF accessed a further one hundred and sixty-five original isolates of saprotrophic filamentous microscopic fungi. They were isolated predominantly in the Czech Republic, although several strains originated from other countries.

An important part of the new strains is represented by *Geosmithia* species. *Geosmithia* is a polyphyletic morphogenus with affinities to Eurotiales and Hypocreales (Ascomycota). Our strains were isolated during the study of diversity, ecology and taxonomy of microfungi and their associations with bark beetles (mainly Scolytidae). CCF harbours a representative collection of all hypocrealean *Geosmithia* species: *G. putterillii* (Thom) Pitt, *G. pallida* (G. Sm.) Kolařík & al. and *G. flava* Kolařík & al. (see Kolařík & al., 2004), *G. fassatae* Kubátová & al., *G. langdonii* Kolařík & al. and *G. obscura* Kolařík & al. (see Kolařík & al., 2005), and *G. lavendula* (Raper & Fennell) Pitt. Identities of all strains were revealed by morphological studies as well as RAPD analysis by comparing with ex-type cultures. The ITS1–5.8S–ITS2 region of rDNA of representative isolates were sequenced and their GenBank® accession numbers are here given. Our aim is to establish

a collection of reference isolates, which affect both genotypic and phenotypic intraspecific variability of these fungi.

Many fungal strains were isolated during a study of mycobiota of several hybrids of corn (*Zea mays*), including Bt-corn, by our students (Remešová, 2004; Slezáková, 2004). Representative strains were deposited in CCF as documentary material.

Another part of the new strains originates from clinical material. These strains were obtained from specialists working in the medical mycology, e.g. Dr. S. Dobiášová, Doc. V. Buchta, Dr. K. Mencl and Dr. I. Mášová. Some strains were the subject of diploma theses (Lysková, 2004; Ulmann, 2005).

Several strains were isolated in the course of the institutional project dealing with biodiversity of soil fungi in natural habitats in two of our national parks: Šumava Mts. and Krkonoše Mts.

Some cultures were isolated by Ph.D. students (Mgr. O. Koukol, Mgr. V. Řezáčová-Strnadová); several cultures were donated by our external co-workers (Dr. D. Novotný, Ing. M. Černý).

Among the new strains, several are of special importance. Four *Geosmithia* strains are derived from type specimens (CCF 3332, CCF 3333, CCF 3334 and CCF 3422). *Thermoascus aurantiacus* Miehe is somewhat rare fungus. This thermophilic fungus is able to grow even at 50 °C. Our strain (CCF 3457) is probably the second finding in the Czech Republic. The first was published by Marvanová (1999). *Acremonium pteridii* W. Gams & Frankland is another interesting species. Strain CCF 3387 is probably the third finding of the fungus in the Czech Republic. Two findings are cited in CCM Catalogue of Cultures (Páčová & al., 1999). Among rarely isolated fungi also belong *Botryosascus synnaedendrus* (D. B. Scott & Van der Walt) Arx (CCF 3520, 3521), *Diplodia mutila* (Fr.) Montagne (CCF 3445), *Chalara longipes* (Preuss) Cooke (CCF 3367), *Clonostachys compactiuscula* (Sacc.) D. Hawksw. & W. Gams (CCF 3382), *Cylindrocarpostylus gregarius* (Bres.) R. Kirschner & Oberw. (CCF 3393), *Gabarnaudia fimicola* Samson & W. Gams (CCF 3455), *Penicillium scabrosum* Frisvad & al. (CCF 3375), *Penicillium thymicola* Frisvad & Samson (CCF 3504), *Phialophora mustea* Neerg. (CCF 3410), *Pseudogymnoascus roseus* Riggio (CCF 3462), *Sagenomella diversispora* (J. F. H. Beyma) W. Gams (CCF 3458), *Quambalaria cyanescens* (de Hoog & G. A. de Vries) Z. W. de Beer, Begerow & R. Bauer (CCF 3526, 3527, 3528), *Sympodiella acicola* W. B. Kendr. (CCF 3440), *Talaromyces trachyspermus* (Shear) Stolck & Samson (CCF 3392), *Veronaea botryosa* Cif. & Montemart. (CCF 3453), and *Zalerion arboricola* Buczacki (CCF 3377). Representatives of *Gabarnaudia fimicola* and *Quambalaria cyanescens* were determined using their ITS and LSU rDNA sequences and their GenBank Accession numbers are given below.

Seventeen strains of *Verticillium* were re-identified according to new papers of Zare & Gams (2001) and Zare & al. (2001) as *Lecanicillium*, *Simplicillium* or *Pochonia* species.

NEW ACCESSIONS IN 2003–05

The species are arranged in alphabetical order. Each strain record contains CCF number and data on the origin of the fungus, i. e. the substrate, locality, year of isolation, name of isolator or determinator. The cultures are maintained in tubes on slope agar media in a refrigerator; the cultures with abbreviation “LYO” are maintained in lyophilized form, too.

Acremonium berkeleyanum (P. Karsten) W. Gams

3487 ex scraping from the water piping, Bedřichov, Jizerské hory Mts., Czech Republic, 2004, A. Kubátová; LYO

Acremonium murorum (Corda) W. Gams var. *felina* (E. J. Marchal) S. Hughes

3503 ex nails of man, Havířov, Czech Republic, 2004, S. Dobiášová as No. 3865KVK

Acremonium ochraceum (Onions & G. L. Barron) W. Gams

3331 ex scraping from the bookshelf, archive, Neratovice, Czech Republic, 1997, A. Kubátová as No. 70/97; LYO

Acremonium persicinum (Nicot) W. Gams

3490 ex skin of woman (foot), Pardubice, Bohemia, Czech Republic, 2004, K. Mencl; LYO

Acremonium pteridii W. Gams & Frankland

3387 ex soil of Norway spruce forest, Dobronice near Bechyně, south Bohemia, Czech Republic, 1999, A. Kubátová as No. 192/99; LYO

Acremonium sclerotigenum (F. & V. Moreau ex Valenta) W. Gams

3385 ex sputum of 57-old woman, Hradec Králové, Czech Republic, 2001, V. Buchta as No. 26824/01, det. A. Kubátová; LYO

3386 ex nails of 52-old woman, Tatenice, Czech Republic, 2001, V. Buchta as No. 27046/01, det. A. Kubátová; LYO

Acremonium strictum W. Gams

3420 ex Bt-corn (*Zea mays*) before harvest, Praha-Ruzyně, Czech Republic, 2002, J. Remešová as No. 19/03; LYO

3463 ex stored wheat, Praha-Ruzyně, Czech Republic, 2004, J. Hubert, det. A. Kubátová

Acrostalagmus luteoalbus (Link) Zare, W. Gams & Schroers
3519 ex nail of woman, Rožnov pod Radhoštěm, Moravia, Czech Republic, 2005,
S. Dobiášová as No. 9585DMF

Alternaria alternata (Fr.: Fr.) Keissl.
3529 ex arable soil, experimental field of VÚRV, Praha-Ruzyně, Czech Republic,
2003, V. Řezáčová as No. Rf 208; LYO

Apiospora montagnei Sacc., anamorph *Arthrinium arundinis* (Corda) Dyko
& B. Sutton
3370 ex skin of 28-old woman (*pustulosis palmaris & plantaris*), Frýdek-Místek,
Czech Republic, 2002, S. Dobiášová as No. 2/706/02, det. A. Kubátová; LYO

Arthrobotrys superba Corda
3383 ex old bark of *Picea abies*, Načetín, Krušné hory Mts., Czech Republic,
2003, M. Černý as No. N36A; LYO

Aspergillus carbonarius (Bainier) Thom
3388 ex nails of 56-old woman (*tinea*), Ostrava, north-eastern Moravia, Czech
Republic, 2002, S. Dobiášová as No. 179/8868/02, det. P. Lysková; LYO

Aspergillus flavus Link
3432 ex corn (*Zea mays*) after harvest, Praha-Ruzyně, Czech Republic, 2003,
L. Slezáková as No. 257/02; LYO

Aspergillus fumigatus Fresen.
3430 ex corn (*Zea mays*) after harvest, Praha-Ruzyně, Czech Republic, 2002,
L. Slezáková as No. 291/02; LYO

Aspergillus niger Tiegh.
3433 ex corn (*Zea mays*) after harvest, Praha-Ruzyně, Czech Republic, 2003,
L. Slezáková as No. 128/03; LYO

Aspergillus ochraceus K. Wilh.
3431 ex corn (*Zea mays*) after harvest, Praha-Ruzyně, Czech Republic, 2003,
L. Slezáková as No. 136/03; LYO

Aspergillus restrictus G. Sm.
3364 ex sclerotium of *Corallocytostroma ornicopreoides* imported from Australia,
Praha, Czech Republic, 2003, A. Kubátová; LYO

- Aspergillus sclerotiorum* G. A. Huber
3434 ex corn (*Zea mays*) after harvest, Praha-Ruzyně, Czech Republic, 2003,
L. Slezáková as No. 255/02; LYO
- Aspergillus terreus* Thom
3389 ex *candidosis* of skin and nails of foot of 51-old woman, Dolní Benešov,
south Moravia, Czech Republic, 2002, S. Dobiášová as No. 130/7066; LYO
- Aspergillus versicolor* (Vuill.) Tirab.
3435 ex corn (*Zea mays*) after harvest, Praha-Ruzyně, Czech Republic, 2002,
L. Slezáková as No. 259/02; LYO
- Aspergillus viridinutans* Ducker & Thrower
3384 ex sputum of 57-old woman, Hradec Králové, Czech Republic, 2001,
V. Buchta as No. 26103/01, det. A. Kubátová; LYO
- Aspergillus wentii* Wehmer
3365 ex nails of 55-old man (tinea), Velké Losiny, Czech Republic, 2002, S. Do-
biášová as No. 67/1343/02, det. P. Lysková and A. Kubátová; LYO
- Bipolaris bicolor* (Mitra) Shoemaker, teleom. *Cochliobolus bicolor* A. R. Paul
& Parbery
3399 ex corn (*Zea mays*) before harvesting, experimental field, Praha-Ruzyně,
Czech Republic, 2003, J. Remešová as No. 36/03; LYO
- Botryosascus synnaedendrus* (D. B. Scott & Van der Walt) Arx
3520 ex *Hypoborus ficus* from *Ficus carica*, Amalfi, Italy, 2004, M. Kolařík as
No. 1082; LYO
3521 ex *Carphoborus* sp. from *Pistacia lentiscus*, Brač island, Croatia, 2004,
M. Kolařík as No. 902
- Botryosphaeria stevensii* Shoemaker, anamorph *Diplodia mutila* (Fr.) Mon-
tagne
3445 ex larva of *Scolytus intricatus*, branch of *Quercus petraea*, Kohoutov,
Křivoklátsko region, Czech Republic, 1997, D. Novotný
- Botrytis cinerea* Pers.: Fr.
3371 ex mouldy red grapes (*Vitis vinifera*), Praha, Czech Republic, 2003, A. Kubá-
tová; LYO

Cephalophora tropica Thaxt.

3534 ex dung of iguana (*Cyclura* sp.), zoological garden, Prague, Czech Republic, 2004, J. Wipler as No. 5

Chaetomium globosum Kunze

3429 ex corn (*Zea mays*) before harvest, Ivanovice na Hané, south Moravia, Czech Republic, 2003, L. Slezáková as No. 106/03; LYO

Chalara longipes (Preuss) Cooke

3367 ex needles of *Picea abies* in litter, forest near Novohuťské močály peat-bog, Šumava Mts. National Park, Czech Republic, 2002, O. Koukol; LYO

Chalaropsis thielavioides Peyronel

3486 ex stored carrot (*Daucus carota*), Praha, Czech Republic, 2004, A. Kubátová; LYO

Cladosporium cladosporioides (Fresen.) G. A. de Vries

3419 ex corn (*Zea mays*) before harvest, Praha-Ruzyně, Czech Republic, 2002, J. Remešová as No. 52/02

Clonostachys compactiuscula (Sacc.) D. Hawksw. & W. Gams

3382 ex dead twig of *Quercus* sp., Frahelž near Veselí nad Lužnicí, south Bohemia, Czech Republic, 2003, A. Kubátová as No. 64/03

Clonostachys rosea (Link: Fr.) Schroers, Samuels & Seifert f. *rosea*

3532 ex arable soil, experimental field of VÚRV, Praha-Ruzyně, Czech Republic, 2003, V. Řezáčová as Rf 177

Curvularia eragrostidis (Henn.) J. A. Mey.

3401 ex corn (*Zea mays*) before harvesting, experimental field, Praha-Ruzyně, Czech Republic, 2003, J. Remešová as No. 38/03; LYO

Cylindrocarpostylus gregarius (Bres.) R. Kirschner & Oberw.

3393 ex wood under bark of dead tree of *Picea abies*, Načetín, Krušné hory Mts., Czech Republic, 2003, M. Černý as No. N59A

Didymostilbe sp.

3376 ex needles of living tree of *Picea abies*, Klínovec, Krušné hory Mts., Czech Republic, 1999, M. Černý as No. 62/a; LYO

Drechslera nodulosa (Berk. & M. A. Curtis ex Sacc.) Subram. & B. L. Jain, teleom. *Cochliobolus nodulosus* Luttr.

3426 ex Bt-corn (*Zea mays*) after harvest, Ivanovice na Hané, Moravia, Czech Republic, 2003, J. Remešová as No. 81/03; det. J. Remešová and K. Prášil

Drechslera spicifera (Bainier) Arx, teleom. *Cochliobolus spicifer* R. Nelson

3400 ex corn (*Zea mays*) before harvesting, Ivanovice na Hané, south Moravia, Czech Republic, 2003, J. Remešová as No. 25/03

Emericella nidulans (Eidam) Vuill., anam. *Aspergillus nidulans* (Eidam) G. Winter

3379 ex swab of auditory canal of 21-old man, Hradec Králové, Czech Republic, 2002, V. Buchta as No. 6833/02, det. A. Kubátová; LYO

Engyodontium album (Limber) de Hoog

3378 ex harvested corn (*Zea mays*), Ivanovice na Hané, Moravia, Czech Republic, 2002, J. Remešová as No. 164/02, det. A. Kubátová; LYO

Engyodontium rectidentatum (Matsushima) W. Gams, de Hoog, Samson & H. C. Evans

3541 ex dead moth (*Scoliopteryx libatrix*), underground gallery Čepice, SW Bohemia, Czech Republic, 2002, A. Kubátová as No. 12/03

Eurotium herbariorum Link, anam. *Aspergillus glaucus* Link

3464 ex Coptish textile (Museum of Decorative Arts), Praha, Czech Republic, 1999, A. Kubátová as No. 187/99

Fusarium cf. *acuminatum* Ellis & Everh.

3467 ex corn (*Zea mays*) before harvest, Ivanovice na Hané, southern Bohemia, Czech Republic, L. Slezáková as No. 57/02

Fusarium avenaceum (Fr.) Sacc.

3466 ex freshly harvested corn (*Zea mays*), Praha-Ruzyně, Czech Republic, L. Slezáková as No. 312/02

Fusarium lateritium Nees: Fr.

3499 ex *Hypoborus ficus* from *Ficus carica*, Amalfi, Italy, 2004, A. Kubátová

Fusarium oxysporum Schltdl.

3428 ex corn (*Zea mays*) before harvest, Ivanovice na Hané, south Moravia, Czech Republic, 2002, L. Slezáková as No. 136/02; det. L. Slezáková and A. Kubátová; LYO

Fusarium proliferatum (Matsushima) Nirenberg ex Gerlach & Nirenberg
3372 ex contamination of barley malt, Praha, Czech Republic, 2003, I. Hollerová;
det. A. Kubátová as No. 31/03; LYO

3502 ex corn (*Zea mays*) before harvesting, experimental field VÚRV, Praha-
-Ruzyně, Czech Republic, 2003, L. Slezáková as No. 82/03

Fusarium solani (Mart.) Sacc.

3465 ex archive depository, Praha, Czech Republic, 1994, A. Kubátová as 206/94

Fusarium sporotrichioides Sherb.

3390 ex corn (*Zea mays*) before harvesting, experimental field VÚRV, Praha-
-Ruzyně, Czech Republic, 2002, L. Slezáková as No. 191/02

Fusarium tricinctum (Corda) Sacc.

3505 ex out-door air, Praha, Czech Republic, 1996, A. Kubátová as No. 171/96

Fusarium verticillioides (Sacc.) Nirenberg

3501 ex Bt-corn (*Zea mays*) after harvesting, experimental field VÚRV, Praha-
-Ruzyně, Czech Republic, 2003, L. Slezáková as No. 80/03

Fusarium subglutinans (Wollenw. & Reinking) P. E. Nelson, Toussoun & Marasas

3391 ex corn (*Zea mays*) before harvesting, Ivanovice na Hané, Moravia, Czech
Republic, 2002, L. Slezáková as No. 160/02

Gabarnaudia fimicola Samson & W. Gams, teleom. ***Sphaeronaemella fimicola***
E. Marchal (see Hausner & Reid, 2004)

3455 ex fig bark beetle *Hypoborus ficus* from *Ficus carica*, Wadi al Mujib, Jor-
dan, 2004, M. Kolařík; GenBank accession No. AJ833961

Geomyces pannorum (Link) Sigler & J. W. Carmich.

3488 ex wall of tunnel with water piping, Bedřichov, Jizerské hory Mts., Czech
Republic, 2004, A. Kubátová; LYO

Geosmithia fassatia Kubátová, Kolařík & Pažoutová (Kolařík & al. 2005)

3334 ex-type culture; wood of *Quercus pubescens*, Srbsko-Pláně, Bohemian
Karst, Czech Republic, 1993, A. Kubátová as No. 14/93; GenBank accessi-
on No. AJ578482; LYO

3346 ex gallery of *Scolytus intricatus* in branch of *Quercus robur*, near Hor-
ní Hrádky, Povydíř region, Šumava Mts. National Park, Czech Republic,
2001, M. Kolařík as No. 136; LYO

- 3351 ex larva of *Scolytus intricatus* from *Quercus dalechampii*, Šiance hill near Muráň castle, Muránska plain National Park, Slovakia, 2002, M. Kolařík as No. 143; LYO
- 3468 ex adult of *Scolytus intricatus* from branch of *Quercus polycarpa*, Libický luh Nature Reserve, near Velký Osek, Czech Republic, 1998, A. Kubátová as No. 73/98
- 3469 ex *Scolytus intricatus* from *Quercus cerris*, near Szűrel, Komló, Mecsek Mts., Hungary, 2003, M. Kolařík as No. 623

Geosmithia flava Kolařík, Kubátová & Pažoutová (see Kolařík & al., 2004)

- 3333 ex-type culture (→ CBS 115346); dead adult of *Xiphodrya* sp., sapwood of *Castanea sativa*, forest near village Seník near Přelouč, Czech Republic, 2000, M. Kolařík as No. 101; GenBank Accession No. AJ578483; LYO
- 3349 (→ IMI 392463); ex adult of *Scolytus rugulosus* from *Prunus* sp., Hostivařský les forest, Praha, Czech Republic, 2001, M. Kolařík as No. 123; LYO
- 3354 ex dead larva of *Hylesinus fraxini* from *Fraxinus excelsior*, Šiance hill near Muráň castle, Muránska plain National Park, Slovakia, 2002, M. Kolařík as No. 264; LYO
- 3356 ex adult of *Ernoporus tiliae* from *Tilia cordata*, Blšanský chlum hill near Louny, Czech Republic, 2002, M. Kolařík as No. 321; LYO
- 3357 ex *Hylesinus fraxini* from *Fraxinus excelsior*, Zeměchy village, Louny, Czech Republic, 2002, M. Kolařík as No. 300; LYO
- 3472 ex *Hypoborus ficus* from *Ficus carica*, Jonzac, Poitou Charentes, near Bordeaux, France, 2003, M. Kolařík as No. 587
- 3473 ex *Hylesinus orni* from *Fraxinus ornus*, Jonzac, Poitou Charentes, near Bordeaux, France, 2003, M. Kolařík as No. 603
- 3474 ex *Hypoborus ficus* from *Ficus carica*, Istanbul, Turkey, 2004, M. Kolařík as No. 750

Geosmithia langdonii Kolařík, Kubátová & Pažoutová (Kolařík & al., 2005)

- 3332 ex-type culture; ex dead female of *Scolytus intricatus*, branch of *Quercus robur*, Libický luh Nature Reserve, Velký Osek, Czech Republic, 1998, A. Kubátová as No. 142/98; GenBank accession No. AJ578481, LYO
- 3337 ex larva of *Scolytus ratzeburgi* from *Betula* sp., Libický luh Nature Reserve, Velký Osek, Czech Republic, 1999, M. Kolařík and P. Šrůtka as No. 70; LYO
- 3338 ex *Scolytus intricatus* from *Quercus robur* near Nová Ves, Louny, Czech Republic, 2000, M. Kolařík as No. 127; GenBank accession No. AJ578480; LYO

- 3339 ex gallery of dead female of *Scolytus intricatus*, branch of *Quercus robur*, Libický luh Nature Reserve, Velký Osek, Czech Republic, 1998, A. Kubátová as No. 141/98; LYO
- 3343 ex larva of *Scolytus intricatus* from *Quercus robur*, near Nová Ves, Louny, Czech Republic, 2000, M. Kolařík as No. 111; LYO
- 3345 ex dead female of *Scolytus intricatus*, branch of *Quercus robur*, Libický luh Nature Reserve, Velký Osek, Czech Republic, 1998, A. Kubátová as No. 119/98, LYO
- 3470 ex *Scolytus rugulosus* from *Malus domestica*, Opočno village, Louny, Czech Republic, 2001, M. Kolařík as No. 139
- 3471 ex *Scolytus intricatus* from *Quercus dalechampii*, near Muráň castle, Muránska plain National Park, Slovakia, 2002, M. Kolařík as No. 236

Geosmithia lavendula (Raper & Fennell) Pitt

- 3394 (→ CBS 115347); ex larva of *Hypoborus ficus*, declining branch of *Ficus carica*, Baška Voda, Croatia, 2003, M. Kolařík as No. 447; LYO
- 3395 ex living adult of *Hypoborus ficus*, declining branch of *Ficus carica*, Ondres, Aquitaine, France, 2003, M. Kolařík as No. 573; LYO
- 3396 ex living adult of *Hypoborus ficus*, declining branch of *Ficus carica*, Jonzac, Poitou Charentes, near Bordeaux, France, 2003, M. Kolařík as No. 583; LYO
- 3397 ex living adult of *Hypoborus ficus*, declining branch of *Ficus carica*, Le Verdon-sur Mer, Aquitaine, France, 2003, M. Kolařík as No. 589; LYO
- 3398 (→ IMI 392464); ex dead adult of *Hypoborus ficus*, dead branch of *Ficus carica*, San Bastiano saddle above Golf de Sagone, Corsica, France, 2003, M. Kolařík and A. Kubátová as No. 593; LYO
- 3475 ex *Hypoborus ficus* from *Ficus carica*, Wadi al Mujib, Jordan, 2004, M. Kolařík as No. 775
- 3476 ex larvae of *Hypoborus ficus* from *Ficus carica*, Krak des Chevaliers castle, Syria, 2004, M. Kolařík as No. 822

Geosmithia obscura Kolařík, Kubátová & Pažoutová (Kolařík & al., 2005)

- 3422 ex-type culture; ex larva of *Scolytus intricatus* from *Quercus robur*, near Břínkov, Louny, Czech Republic, 2000, M. Kolařík as No. 86; GenBank accession No. AJ784999; LYO
- 3423 ex adult of *Taphrorychus bicolor* associated with *Scolytus intricatus* galleries on *Fagus sylvatica*, near Hřivice, Louny, Czech Republic, 2003, M. Kolařík as No. 387; LYO
- 3424 ex adult of *Taphrorychus bicolor* associated with *Scolytus intricatus* galleries on *Fagus sylvatica*, near Hřivice, Louny, Czech Republic, 2003, M. Kolařík as No. 391; LYO

3425 ex adult of *Scolytus carpini* from *Carpinus betulus*, Hungary, forest near Vinye village, Bakony range, Hungary, M. Kolařík as No. 616; LYO

Geosmithia pallida (G. Sm.) Kolařík, Kubátová & Pažoutová (Kolařík & al., 2004)
3336 ex larva of *Scolytus rugulosus* from *Malus domestica*, Opočno, Louny, Czech Republic, 2001, M. Kolařík as No. 134; LYO

3340 ex larva of *Agrilus* sp. associated with *Scolytus intricatus* galleries on *Quercus* sp, forest near Nová Ves, Louny, Czech Republic, 2000, M. Kolařík as No. 115; GenBank Accession No. AJ578485; LYO

3341 ex dead female of *Scolytus intricatus*, branch of *Quercus petraea*, Mlynářův luh, Křivoklátsko region, Czech Republic, 1997, A. Kubátová as No. 108/97; GenBank Accession No. AJ578487; LYO

3344 ex larva of *Scolytus intricatus*, on *Quercus robur*, Břínkov near Louny, Czech Republic, M. Kolařík as No. 114; LYO

3353 ex dead larva of *Scolytus intricatus* on *Quercus dalechampii*, Šiance hill near Muráň castle, Muránska plain National Park, Slovakia, 2002, M. Kolařík as No. 194; LYO

3477 ex *Scolytus multistriatus* from *Ulmus carpiniifolia*, Louny, Czech Republic, 2003, M. Kolařík as No. 439

3478 ex *Hylesinus orni* from *Fraxinus ornus*, Jonzac, Poitou Charentes, near Bordeaux, France, 2003, M. Kolařík as No. 601

3479 ex *Ernoporus tiliae* from *Tilia platyphyllos*, near Komló, Hungary, 2003, Czech Republic, M. Kolařík as No. 512

3480 ex *Scolytus intricatus* from *Quercus pubescens*, Vokány village, Villányi Mts., Hungary, 2003, M. Kolařík as No. 550

3481 ex *Scolytus carpini* from *Carpinus betulus*, forest near Vinye village, Bakony range, Hungary, 2003, M. Kolařík as No. 612

3482 ex *Scolytus amygdali* from *Amygdalus communis*, Al Marquab castle, Baniyas, Syria, 2004, M. Kolařík as No. 754

3483 ex *Scolytus rugulosus* from *Malus domestica*, Demircili, Içel Province, Turkey, 2004, M. Kolařík as No. 762

Geosmithia putterillii (Thom) Pitt (Kolařík & al., 2004)

3342 ex gallery of *Scolytus rugulosus* from *Prunus* sp., Velemín, České středohoří Mts., Czech Republic, 2000, M. Kolařík as No. 103; LYO

3442 ex *Liparthrum colchicum* from *Laurus nobilis*, Ondres, Aquitaine, France, 2003, M. Kolařík as No. 596; GenBank accession No. AJ628350; LYO

Graphium fimbriisporum K. Jacobs, T. Kirisits & M. J. Wingf.

3535 ex bark of Norway spruce (*Picea abies*), Mumlavská hora Mt. near Harrachov, Krkonoše Mts., Czech Republic, 2004, M. Černý as MM111D

Heterobasidion annosus (Fr.) Bref., anamorph ***Spiniger meineckellus*** (A. J. Olsen) Stalpers

3368 ex indoor air in laboratory, Praha, Czech Republic, 2003, A. Kubátová; LYO

Hypomyces aurantius (Pers.: Fr.) Tul., anamorph ***Cladobotryum varium*** Nees: Fr.

3451 ex granite wall of underground tunnel, Bedřichov, NE Bohemia, Czech Republic, 2004, A. Kubátová as No. 62/04

Isaria farinosa (Holmsk.) Fr.

3542 ex dead moth (*Scoliopteryx libatrix*), underground gallery in Nature Reserve Borek near Velhartice, SW Bohemia, Czech Republic, 2002, A. Kubátová as No. 28/02

Leptographium sp.

3359 ex wood of *Pinus nigra*, Zdice near Nižbor, western Bohemia, Czech Republic, 1992, A. Kubátová as No. 126/92; LYO

Metarhizium anisopliae (Metschn.) Sorokin

3414 ex soil of moor, Soos Nature Reserve near Františkovy Lázně, western Bohemia, Czech Republic, 2003, M. Hujslová, det. A. Kubátová; LYO

Microsporum canis E. Bodin ex Guég.

3443 ex clinical substrate, Ostrava, north-eastern Moravia, Czech Republic, 2003, S. Dobiášová as No. 8959

Neosartorya fischeri (Wehmer) Malloch & Cain

3544 ex pasteurized apple must, Staňkovice u Litoměřic, Czech Republic, 2005, D. Savická

Neurospora sitophila Shear & B. O. Dodge, anamorph ***Chrysonilia sitophila*** (Mont.) Arx

3452 ex wood of *Ficus carica*, Turkey, 2004, M. Kolařík as No. 836

3485 ex plate contaminant in laboratory, Brno, Czech Republic, I. Kocmanová; LYO

Oidiodendron cerealis (Thüm.) G. L. Barron

3441 ex Bt-corn (*Zea mays*) after harvest, Praha-Ruzyně, Czech Republic, 2003, J. Remešová as No. 82/03; det. A. Kubátová; LYO

3491 ex granite wall of tunnel with water piping, Bedřichov, Jizerské hory Mts., Czech Republic, 2004, A. Kubátová as No. 124/04; LYO

Paecilomyces carneus (Duché & R. Heim) A. H. S. Br. & G. Sm.

3330 ex soil under *Cladonia* spp. and *Vaccinium* spp., Plešné jezero lake, Šumava Mts. National Park, Czech Republic, 2002, A. Kubátová as No. 194/02; LYO

Paecilomyces lilacinus (Thom) Samson

3531 ex arable soil, experimental field of VÚRV, Praha-Ruzyně, Czech Republic, 2003, V. Řezáčová as No. Rf 134; LYO

Penicillium citreonigrum Dierckx

3380 ex nails of 41-old woman, Jilemnice, Czech Republic, 2001, V. Buchta as No. 27053/01; LYO

Penicillium crustosum Thom

3437 ex stored corn (*Zea mays*), Ivanovice na Hané, south Bohemia, Czech Republic, 2003, L. Slezáková as No. 321/02; LYO

Penicillium hordei Stolk

3439 ex corn (*Zea mays*) before harvest, Praha-Ruzyně, Czech Republic, 2002, L. Slezáková as No. 181/02; det. L. Slezáková and A. Kubátová; LYO

Penicillium islandicum Sopp

3416 ex corn (*Zea mays*) before harvest, Ivanovice na Hané, south Moravia, Czech Republic, 2003, L. Slezáková as No. 52/03; LYO

Penicillium janthinellum Biourge

3406 ex bare anthropogenic soil with ash sediments, Chvaletice, eastern Bohemia, Czech Republic, 1994, A. Kubátová as No 168/94; LYO

3407 ex bare anthropogenic soil with ash sediments, Chvaletice, eastern Bohemia, Czech Republic, 1995, A. Kubátová as No 58/95; LYO

Penicillium oxalicum Currie & Thom

3405 ex acid bare soil with diatoms, Soos Nature Reserve, western Bohemia, Czech Republic, 2003, M. Hujslová; det. A. Kubátová; LYO

3438 ex corn (*Zea mays*) after harvest, Praha-Ruzyně, Czech Republic, 2003, L. Slezáková as No. 88/03; det. L. Slezáková and A. Kubátová; LYO

Penicillium pulvillorum Turfitt

3408 ex anthropogenic soil with ash sediments, Chvaletice, eastern Bohemia, Czech Republic, 1995, A. Kubátová as No. 57/95; LYO

3409 ex anthropogenic soil with ash sediments, Chvaletice, eastern Bohemia, Czech Republic, 1995, A. Kubátová as No. 15/96; LYO

Penicillium purpurogenum var. ***rubrisclerotium*** Thom

3363 ex harvested corn (*Zea mays*), experimental field, Praha-Ruzyně, Czech Republic, 2002, L. Slezáková as No. 276/02, det. A. Kubátová; LYO

3436 ex corn (*Zea mays*) after harvest, Praha-Ruzyně, Czech Republic, 2003, L. Slezáková as No. 114/03; det. L. Slezáková and A. Kubátová; LYO

Penicillium scabrosum Frisvad, Samson & Stolk

3375 ex walnuts imported from Slovakia, Brno, Czech Republic, 2003, V. Ostrý and I. Procházková as No. 369B, det. A. Kubátová; LYO

Penicillium soppii K. M. Zalessky

3360 ex germinated acorn of *Quercus* sp., mixed forest near Karlík ruin, Karlík valley, central Bohemia, Czech Republic, 2002, A. Kubátová as No. 38/02; LYO

Penicillium thymicola Frisvad & Samson

3504 (→ IBT 21560 = CBS 111226), ex air of book depository, Skrbeň, Moravia, Czech Republic, 1997, A. Kubátová as No. 146/97

Penicillium verrucosum Dierckx

3456 ex nails of woman, Šumperk, Moravia, Czech Republic, 2002, S. Dobiášová as No. 33/275, det. P. Lysková

Penicillium viridicatum Westling

3415 ex freshly harvested corn (*Zea mays*), Praha-Ruzyně, Czech Republic, 2003, L. Slezáková as No. 108/03; LYO

Penicillium vulpinum (Cooke & Masee) Seifert & Samson

3454 ex excrement, forest near Ostrava-Poruba, north-eastern Moravia, Czech Republic, 2004, A. Kubátová as No. 100/04

Phialophora mustea Neerg.

3410 ex pasteurized apple juice, Lažany u Turnova, Czech Republic, 2003, M. Čerovský, det. A. Kubátová; LYO

Phialophora verrucosa Medlar

3498 ex nail of woman, Ostrava, Czech Republic, 2003, V. Ulmann as No. 14

3533 ex skin of man, Ostrava, Czech Republic, 2004, S. Dobiášová as No. 8163; det. V. Ulmann

Pseudogymnoascus roseus Raillo

3462 ex soil of mixed forest, Povydrí region, Šumava Mts. National Park, Czech Republic, 2003, A. Kubátová as No. 46/03

Quambalaria cyanescens (de Hoog & G. A. de Vries) Z.W. de Beer, Begerow & R. Bauer (syn. ***Fugomyces cyanescens*** (de Hoog & G. A. de Vries) Sigler, ***Sporothrix cyanescens*** de Hoog & G. A. de Vries, ***Cerinosterus cyanescens*** (de Hoog & G. A. de Vries) R. T. Moore, see De Beer & al., 2006)

3526 ex *Phleotribus scarabeoides* from *Olea europea*, Silifke, Içel Province, Turkey, 2004, M. Kolařík as No. 84; GenBank Accession No. DQ119134, DQ119136; LYO

3527 ex *Scolytus carpini* from *Carpinus betulus*, Vinye, Bakony range, Hungary, 2003, M. Kolařík as No. 617.

3528 ex fig bark beetle *Hypoborus ficus* from *Ficus carica*, Sumartin, Brač island, Croatia, 2004, M. Kolařík, as No. 936

Rhinocladiella atrovirens Nannf.

3523 ex nail of woman, Ostrava, Czech Republic, 2004, S. Dobiášová as No. 6732; det. V. Ulmann

Sagenomella diversispora (J. F. H. Beyma) W. Gams

3458 ex tineal of nails of man, Karviná, Czech Republic, 2003, S. Dobiášová as No. 190/2268/03, det. P. Lysková and A. Kubátová

Scedosporium sp.

3402 ex eye of man, Kladno, Czech Republic, 2003, I. Mášová as No. 1489, det. A. Kubátová; LYO

Simplicillium cf. ***lamellicola*** (F. E. W. Smith) Zare & W. Gams

3524 ex dead moth (*Triphosa dubitata*), cellars of the castle Bečov nad Teplou, Slavkovský les, Czech Republic, 2003, A. Kubátová as No. 36/03

3525 ex dead moth (*Triphosa dubitata*), cellars of the castle Valeč, west Bohemia, Czech Republic, 2003, A. Kubátová as No. 50/03

Sordaria fimicola (Roberge ex Desm.) Ces. & de Not.

3369 ex needles of *Picea abies*, Mumlavská hora Mt., Krkonoše Mts. National Park, Czech Republic, 1999, M. Černý as No. MH37; LYO

3381 ex root of *Quercus robur*, near Moravské Budějovice, southern Moravia, Czech Republic, 1996, D. Novotný as No. IIR3SU1; LYO

Sporendocladia bactrospora (W. B. Kendr.) M. J. Wingf.

3417 ex larva of *Scolytus mali* from branch of *Malus domestica*, Kácov, Posázaví region, central Bohemia, Czech Republic, 2003, M. Kolařík as No. 697; LYO

Stachybotrys chartarum (Ehrenb.) S. Hughes

3366 ex mouldy wall in working room, Praha, Czech Republic, 2003, A. Kubátová; LYO

3496 ex nails of man, Ostrava, Czech Republic, 2003, V. Ulmann as No. 72

Stachybotrys cylindrospora C. N. Jensen

3536 ex carrot (*Daucus carota*), Most, Czech Republic, 2005, M. Černý as No. XX10A

Sympodiella acicola W. B. Kendr.

3440 ex needle litter of *Pinus sylvestris*, Babylon, Bohemian Switzerland National Park, Czech Republic, 2002, O. Koukol; LYO

Talaromyces trachyspermus (Shear) Stolk & Samson

3392 ex corn of *Zea mays* after harvesting, Ivanovice na Hané, Moravia, Czech Republic, 2003, L. Slezáková as No. 358/02

Thermoascus aurantiacus Miehe

3457 ex bat dung, garret of building, Český Dub, northern Bohemia, Czech Republic, 2004, A. Kubátová as No. 3/04

Trichoderma polysporum (Link) Rifai

3404 ex soil of Norway spruce forest under *Dryopteris dilatata*, Trojmezí Mt., Šumava Mts. National Park, Czech Republic, 1994, A. Kubátová as No. 166/94; LYO

***Trichothecium roseum* (Pers.) Link**

3403 ex bark of *Ulmus glabra*, Vokány, Villányi hegy, Hungary, 2003, M. Kolařík; LYO

3500 ex undetermined bark beetle on *Spartium junceum*, Brač island, Croatia, 2003, M. Kolařík; LYO

3539 ex larva of *Kissophagus hederæ* from *Hedera helix*, Stansted, United Kingdom, 2005, M. Kolařík as No. HH3; LYO

***Ulocladium chartarum* (Preuss) E. G. Simmons**

3421 ex Bt-corn (*Zea mays*) before harvest, Ivanovice na Hané, Czech Republic, 2003, J. Remešová as No. 22/03, det. J. Remešová and K. Prášil; LYO

***Varicosporium elodeæ* W. Kegel**

3374 ex soil under *Eriophorum vaginatum*, Labská louka peat-bog, Krkonoše Mts. National Park, Czech Republic, 2002, A. Kubátová as No. 47/02

***Veronaea botryosa* Cif. & Montemart.**

3453 ex indoor air of underground tunnel in granite, Bedřichov, north-eastern Bohemia, Czech Republic, 2004, A. Kubátová as No. 92/04

***Zalerion arboricola* Buczacki**

3377 ex dead needles of *Picea abies*, Medvědí, Krkonoše Mts. National Park, Czech Republic, 1999, M. Černý as No. KRK9C

Revision of *Verticillium* strains

Seventeen strains of *Verticillium* were revised according to new studies of Zare & Gams (2001a, b) and Zare & al. (2001):

CCF 481 *Lecanicillium psalliotæ* (former name *Verticillium psalliotæ*)

CCF 498 *Lecanicillium psalliotæ* (former name *Verticillium psalliotæ*)

CCF 1124 *Pochonia chlamydosporia* var. *chlamydosporia* (former name *Verticillium chlamydosporium* var. *chlamydosporium*)

CCF 1165 *Lecanicillium psalliotæ* (former name *Verticillium psalliotæ*)

CCF 1488 *Pochonia chlamydosporia* var. *chlamydosporia* (former name *Verticillium chlamydosporium* var. *chlamydosporium*)

CCF 1527 *Pochonia chlamydosporia* var. *chlamydosporia* (former name *Verticillium chlamydosporium* var. *chlamydosporium*)

CCF 1612 *Pochonia chlamydosporia* var. *chlamydosporia* (former name *Verticillium chlamydosporium* var. *chlamydosporium*)

CCF 1674 *Lecanicillium muscarium* (former name *Verticillium lecanii*)

- CCF 1882 *Pochonia suchlasporia* var. *suchlasporia* (former name *Verticillium cephalosporum*)
 CCF 1888 *Lecanicillium muscarium* (former name *Verticillium lecanii*)
 CCF 2501 *Pochonia bulbilosa* (former name *Verticillium psalliotae*)
 CCF 2872 *Lecanicillium* cf. *psalliotae* [some macroconidia are longer than 10 µm] (former name *Verticillium psalliotae*)
 CCF 2966 *Pochonia bulbilosa* (former name *Verticillium bulbilosum*)
 CCF 3107 *Simplicillium lamellicola* (former name *Verticillium lamellicola*)
 CCF 3111 *Simplicillium lamellicola* (former name *Verticillium lamellicola*)
 CCF 3142 *Pochonia bulbilosa* (former name *Verticillium bulbilosum*)
 CCF 3297 *Lecanicillium muscarium* (former name *Verticillium lecanii*)

Numerical index of new accessions

- | | |
|---|---|
| 3330 <i>Paecilomyces carneus</i> | 3365 <i>Aspergillus wentii</i> |
| 3331 <i>Acremonium ochraceum</i> | 3366 <i>Stachybotrys chartarum</i> |
| 3332 <i>Geosmithia langdonii</i> | 3367 <i>Chalara longipes</i> |
| 3333 <i>Geosmithia flava</i> | 3368 <i>Heterobasidion annosus</i> , anam.
<i>Spiniger meineckella</i> |
| 3334 <i>Geosmithia fassatae</i> | 3369 <i>Sordaria fimicola</i> |
| 3336 <i>Geosmithia pallida</i> | 3370 <i>Apiospora montagnei</i> , anam.
<i>Arthrimum arundinis</i> |
| 3337 <i>Geosmithia langdonii</i> | 3371 <i>Botrytis cinerea</i> |
| 3338 <i>Geosmithia langdonii</i> | 3372 <i>Fusarium proliferatum</i> |
| 3339 <i>Geosmithia langdonii</i> | 3374 <i>Varicosporium elodeae</i> |
| 3340 <i>Geosmithia pallida</i> | 3375 <i>Penicillium scabrosum</i> |
| 3341 <i>Geosmithia pallida</i> | 3376 <i>Didymostilbe</i> sp. |
| 3342 <i>Geosmithia puterillii</i> | 3377 <i>Zalerion arboricola</i> |
| 3343 <i>Geosmithia langdonii</i> | 3378 <i>Engyodontium album</i> |
| 3344 <i>Geosmithia pallida</i> | 3379 <i>Emericella nidulans</i> |
| 3345 <i>Geosmithia langdonii</i> | 3380 <i>Penicillium citreonigrum</i> |
| 3346 <i>Geosmithia fassatae</i> | 3381 <i>Sordaria fimicola</i> |
| 3349 <i>Geosmithia flava</i> | 3382 <i>Clonostachys compactiuscula</i> |
| 3351 <i>Geosmithia fassatae</i> | 3383 <i>Arthrobotrys superba</i> |
| 3353 <i>Geosmithia pallida</i> | 3384 <i>Aspergillus viridinutans</i> |
| 3354 <i>Geosmithia flava</i> | 3385 <i>Acremonium sclerotigenum</i> |
| 3356 <i>Geosmithia flava</i> | 3386 <i>Acremonium sclerotigenum</i> |
| 3357 <i>Geosmithia flava</i> | 3387 <i>Acremonium pteridii</i> |
| 3359 <i>Leptographium</i> sp. | 3388 <i>Aspergillus carbonarius</i> |
| 3360 <i>Penicillium soppii</i> | 3389 <i>Aspergillus terreus</i> |
| 3363 <i>Penicillium purpurogenum</i> var.
<i>rubrisclerotium</i> | 3390 <i>Fusarium sporotrichioides</i> |
| 3364 <i>Aspergillus restrictus</i> | |

- 3391 *Fusarium subglutinans*
 3392 *Talaromyces trachyspermus*
 3393 *Cylindrocarpostylus gregarius*
 3394 *Geosmithia lavendula*
 3395 *Geosmithia lavendula*
 3396 *Geosmithia lavendula*
 3397 *Geosmithia lavendula*
 3398 *Geosmithia lavendula*
 3399 *Bipolaris bicolor*
 3400 *Drechslera spicifera*
 3401 *Curvularia eragrostidis*
 3402 *Scedosporium* sp.
 3403 *Trichothecium roseum*
 3404 *Trichoderma polysporum*
 3405 *Penicillium oxalicum*
 3406 *Penicillium janthinellum*
 3407 *Penicillium janthinellum*
 3408 *Penicillium pulvillorum*
 3409 *Penicillium pulvillorum*
 3410 *Phialophora mustea*
 3414 *Merarhizium anisopliae*
 3478 *Geosmithia pallida*
 3479 *Geosmithia pallida*
 3480 *Geosmithia pallida*
 3481 *Geosmithia pallida*
 3482 *Geosmithia pallida*
 3483 *Geosmithia pallida*
 3485 *Neurospora sitophila*, anam.
 Chrysonilia sitophila
 3486 *Chalaropsis thielavioides*
 3487 *Acremonium berkeleyanum*
 3488 *Geomyces pannorum*
 3490 *Acremonium persicinum*
 3491 *Oidiodendron cerealis*
 3496 *Stachybotrys chartarum*
 3498 *Phialophora verrucosa*
 3499 *Fusarium lateritium*
 3500 *Trichothecium roseum*
 3501 *Fusarium verticillioides*
 3502 *Fusarium proliferatum*
 3503 *Acremonium murorum* var. *felina*
 3504 *Penicillium thymicola*
 3505 *Fusarium tricinctum*
 3519 *Acrostalagmus luteoalbus*
 3520 *Botryoascus synnaedendrus*
 3521 *Botryoascus synnaedendrus*
 3523 *Rhinocladiella atrovirens*
 3524 *Simplicillium* cf. *lamellicola*
 3525 *Simplicillium* cf. *lamellicola*
 3526 *Quambalaria cyanescens*
 3527 *Quambalaria cyanescens*
 3528 *Quambalaria cyanescens*
 3529 *Alternaria alternata*
 3531 *Paecilomyces lilacinus*
 3532 *Clonostachys rosea* f. *rosea*
 3533 *Phialophora verrucosa*
 3534 *Cephalophora tropica*
 3535 *Graphium fimbriisporum*
 3536 *Stachybotrys cylindrospora*
 3539 *Trichothecium roseum*
 3541 *Engyodontium rectidentatum*
 3542 *Isaria farinosa*
 3544 *Neosartorya fischeri*

ACKNOWLEDGEMENTS

Special thanks go out to the people who supplied fungal strains. Dr. V. Buchta, Dr. S. Dobiášová, Dr. K. Mencl and Dr. I. Mášová are thanked for clinical isolates; Dr. V. Ostrý, I. Hollerová and V. Řezáčová-Strnadová for isolates from foods; Ing. M. Černý for isolates from natural habitats. Thanks are due also to our postgradual students D. Novotný and O. Koukol and our students J. Remešová, L. Slezáková, P. Lysková, V. Ulmann and M. Hujšlová for their original isolates.

This work was partly supported by the Grant Agency of the Czech Republic (Project No. 522/02/1206) and the Ministry of Education of the Czech Republic (MSM 113100004, MSM 0021620828, FRVŠ 1884).

REFERENCES

- De Beer Z. W., Begerow D., Bauer R., Pegg G. S., Crous P. W. & Wingfield M. J. (2006): Phylogeny of the Quambalariaeaceae fam. nov., including important *Eucalyptus* pathogens in South Africa and Australia. – *Stud. Mycol.* 55: 289–298.
- GenBank (2004): <http://www.ncbi.nlm.nih.gov/>
- Hausner G. & Reid J. (2004): The nuclear small subunit ribosomal genes of *Sphaeronaemella helvellae*, *Sphaeronaemella fimicola*, *Gabaurnaudia betae*, and *Cornuvesica falcata*: phylogeny implications. – *Can. J. Bot.* 82: 752–762.
- Kolařík M., Kubátová A., Čepička I., Pažoutová S. & Šrůtka P. (2005): A complex of three new white-spored, sympatric, and host range limited *Geosmithia* species. – *Mycol. Res.* 109(12): 1323–1336.
- Kolařík M., Kubátová A., Pažoutová S. & Šrůtka P. (2004): Morphological and molecular characterisation of *Geosmithia putterillii*, *G. pallida* comb. nov. and *G. flava* sp. nov., associated with subcorticolous insects. – *Mycol. Res.* 108: 1053–1069.
- Kubátová A., Váňová M. & Prášil K. (2003): CCF catalogue of filamentous fungi. 5th ed. – *Novit. Bot. Univ. Carol.* 16/2002: 5–137.
- Lysková P. (2004): Dermatofyty a saprotrofní mikroskopické houby odprovázející onemocnění kůže, nehtů a vlasů u pacientů Moravskoslezského kraje [Microscopic dermatophytes and saprophytic fungi infections of the skin, nails and hair of patients of the Moravskoslezský region]. – 119 p. [Dipl. thes., depon. in: Library Dep. Bot., Charles Univ., Prague]
- Marvanová L. (1999): Biodiverzita půdních mikromycet z lučních porostů v okolí lokalit Lanžhot – soutok a Lednice – Nejdek [Soil micromycete biodiversity from meadows covele of regions near Lanžhot – watersmeet and Lednice – Nejdek]. – In: Ďugová O. and Vizárová G. (eds.), *Život v půdě II.*, p. 102–104, Bratislava.
- Pačová Z., Marvanová L., Benda P., Sedláček I., Novotný D., Štegnerová H., Štětina H. & Švec P. (eds.) (1999): CCM Catalogue of cultures. Bacteria. Fungi. 6th ed. – CCM, Brno.
- Remešová J. (2004): Mikroskopické houby na transgenní a netransgenní kukuřici ve vztahu k poškození zavíječem kukuřičným [The microfungi species infecting of transgenic and nontransgenic maize hybrids in relation to damage caused by *Ostrinia nubilalis* (Lepidoptera)]. – 110 p. [Dipl. thes., depon. in: Library Dep. Bot., Charles Univ., Prague]
- Slezáková J. (2004): Toxinogenní mikromycety na transgenních a na netransgenních hybridech kukuřice [Toxinogenic micromycetes associated with transgenic and nontransgenic hybrids of maize]. – 133 p. [Dipl. thes., depon. in: Library Dep. Bot., Charles Univ., Prague]

- Ulmann V. (2005): Mikroskopické houby čeledi *Dematiaceae* z klinického materiálu [Microscopic fungi of family *Dematiaceae* isolated from clinical material]. – 90 p. [Dipl. thes., depon. in: Library Dep. Bot., Charles Univ., Prague]
- Zare R. & Gams W. (2001): A revision of *Verticillium* section *Prostrata*. IV. The genera *Lecanicillium* and *Simplicillium* gen. nov. – *Nova Hedwigia* 73: 1–50.
- Zare R., Gams W. & Evans H. C. (2001): A revision of *Verticillium* section *Prostrata*. V. The genus *Pochonia*, with notes on *Rotiferophthora*. – *Nova Hedwigia* 73: 51–86.

RNDr. Alena Kubátová, CSc., Mgr. Miroslav Kolařík
Department of Botany
Faculty of Science
Charles University in Prague
Benátská 2
CZ-128 01 Prague 2
Czech Republic