

European smut fungi (Ustilaginomycetes p.p. and Microbotryales) according to recent nomenclature

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Abstract. The 470 smut fungi, published in the book *European smut fungi* by Vánky (1994), and a further fourteen species, missed or recorded after 1994, are listed according to their recent nomenclature. Extensive changes in the classification and nomenclature of the smut fungi has resulted in changed generic names of one third of the European smut fungi since 1994.

Key words: check-list, Europe, Microbotryales, recent nomenclature, smut fungi, Ustilaginomycetes p.p.

Introduction

Europe is the continent of which the smut fungus mycota is the best known of all continents. It was synthesized and published in the book *European Smut Fungi* (Vánky 1994; 570 pp., over 1000 illustrations). In it, the 400 recorded smut fungi, belonging to 28 genera, are presented. A further 70 species and 3 genera are also described. They represent smuts which were so far not collected in Europe but are expected to be present because their host plants occur there.

The application of ultrastructural and molecular biological methods during the past eleven years has brought radical changes to the classification and nomenclature of the smut fungi. The ca 1450 known “classical” smut fungi of the world (those possessing teliospores) are presently classified into two classes, three subclasses, 8 orders, 26 families, and 83 genera (cfr also Bauer *et al.* 1997, 1998, 2000; Begerow *et al.* 1998; Vánky 1999b, 2001b, 2002).

Of the larger genera no, or only little, change on generic level was made to the genera *Anthracoidea*, *Entorrhiza*, and *Urocystis*. However, in the genera *Cintractia*, *Tilletia*, the dark-spored *Entyloma-Melanotaenium* complex, and especially in the heterogeneous *Ustilago* a considerable number of changes were made. It was demonstrated that species of *Ustilago* are restricted to host plants in the Gramineae. Those on other host

families were transferred into already existing and also into several new genera. As a result of these complex investigations, the following new genera were published during the last eleven years: *Abmadiago* Vánky (Vánky 2004a: 102), *Aurantiosporium* M. Piepenbr., Vánky & Oberw. (Piepenbring *et al.* 1996: 62), *Bauerago* Vánky (Vánky 1999b: 44), *Doassinga* Vánky, R. Bauer & D. Begerow (Vánky *et al.* 1998: 965), *Eballistra* R. Bauer, Begerow, A. Nagler & Oberw. (Bauer *et al.* 2001: 423), *Erratomyces* M. Piepenbr. & R. Bauer (Piepenbring & Bauer 1997: 930), *Exoteliospora* R. Bauer, Oberw. & Vánky (Bauer *et al.* 1999a: 675), *Farysporium* Vánky (Vánky 1999c: 208), *Fulvisporium* Vánky (Vánky *et al.* 1997: 59), *Geminago* Vánky & R. Bauer (Vánky 1996: 182), *Gjaerumia* R. Bauer, M. Lutz & Oberw. (Bauer *et al.* 2006, in press), *Heterotolyposporium* Vánky (Vánky 1997a: 144), *Ingoldiomyces* Vánky (Vánky & Bauer 1996: 279), *Kochmania* Piatek (Piatek 2005: 34), *Leucocintractia* M. Piepenbr., Begerow & Oberw. (Piepenbring *et al.* 1999: 496), *Lundquistia* Vánky (Vánky 2001a: 371, = *Sporisorium* – cfr Cunningham *et al.* 2005), *Melaniella* R. Bauer, Vánky, Begerow & Oberw. (Bauer *et al.* 1999b: 482), *Melanustilospora* Denchev (Denchev 2003: 476), *Oberwinkleria* Vánky & R. Bauer (Vánky & Bauer 1995: 363), *Phragmotaeonium* R. Bauer, Begerow, A. Nagler & Oberw. (Bauer *et al.* 2001: 423), *Pilocintractia* Vánky (Vánky 2004b: 172), *Pseudodermatosorus* Vánky (Vánky 1999c: 213),

Pseudotracya Vánky (Vánky 1999c: 216), *Restiosporium* Vánky (Vánky 2000: 346), *Stegocintractia* M. Piepenbr., Begerow & Oberw. (Piepenbring *et al.* 1999: 496), *Tothiella* Vánky (Vánky 1999b: 39, = *Thecaphora*), *Trichocintractia* M. Piepenbr. (Piepenbring 1995: 1095), *Ustanciosporium* Vánky (Vánky 1999a: 31), *Vankya* Ershad (Ershad 2000: 66), *Websdanea* Vánky (Vánky 1997b: 184), and *Yelsemia* J. Walker (Walker 2001: 225). Most of these genera are not represented in Europe. Despite this, nearly one third (31 %) of the European smut fungus species have had their names changed.

To bring the nomenclature of the European smut fungi to the present level of knowledge, a list of the European smut fungi with authorship was completed. The valid names are in bold face. Species still not recorded in Europe but treated in the book are marked with an asterisk. Further fourteen species, missed in the book “European smut fungi”, or recorded after 1994, are also listed.

List of European smut fungi

Abmadiago

**A. euphorbiae* (Mundk.) Vánky (as *Ustilago euphorbiae*)

Anthracoidea

A. altera Nannf.

A. angulata (Syd.) Boidol & Poelt

A. arenaria (Syd.) Nannf.

A. aspera (Liro) Kukkonen

**A. atratae* (Savile) Kukkonen

A. baldensis Vánky

A. bigelowii Nannf.

A. buxbaumii Kukkonen

A. capillaris Kukkonen

A. caricis (Pers.) Bref.

A. caricis-albae (Syd.) Kukkonen

A. caricis-pauciflorae (Lehtola) Kukkonen

A. caryophylleae Kukkonen

A. curvulae Vánky & Kukkonen

A. echinospora (Lehtola) Kukkonen

A. eleocharidis Kukkonen

A. elyinae (Syd.) Kukkonen

A. fischeri (P. Karst.) Kukkonen

A. foetidae H. Zogg

A. globularis Kukkonen

A. heterospora (B. Lindb.) Kukkonen

A. hostianae B. Lindb. ex Nannf.

A. humilis Vánky

A. inclusa Bref.

A. intercedens Nannf.

A. irregularis (Liro) Boidol & Poelt

A. karii (Liro) Nannf.

**A. kukkonenii* Vánky

A. lasiocarpae B. Lindb. ex Kukkonen

A. laxae Kukkonen

A. limosa (Syd.) Kukkonen

A. lindebergiae (Kukkonen) Kukkonen

A. liroi (Lehtola) Nannf.

A. michelii Vánky

A. misandrae Kukkonen

A. nardinae (Kukkonen) Nannf.

A. paniceae Kukkonen

A. pilosae Vánky

A. pratensis (Syd.) Boidol & Poelt

A. pseudirregularis U. Braun

A. pulicaris Kukkonen

A. rupestris Kukkonen

A. scirpi (J.G. Kühn) Kukkonen

**A. scirpoideae* Kukkonen

A. sempervirentis Vánky

A. subinclusa (Körn.) Bref.

A. tomentosae Vánky

A. turfosa (Syd.) Kukkonen

A. vankyi Nannf.

**A. verrucosa* (Savile) Nannf.

Bauerago

B. abstrusa (Malençon) Vánky (as *Ustilago abstrusa*)

B. commelinae (Kom.) Denchev (as *Ustilago commelinae*)

B. vuyckii (Oudem. & Beij.) Vánky (as *Ustilago vuyckii*)

Doassansia

D. alismatis (Nees) Cornu

**D. callitrichis* H.S. Jacks. & Linder = *Heterodoassansia callitrichis*

D. epilobii Farl.

D. hottoniae (Rostr.) De Toni = *Heterodoassansia hottoniae*

D. limosellae (J. Kunze) J. Schröt.

D. morotiana Zundel = *Heterodoassansia morotiana*

D. niesslii De Toni

D. punctiformis G. Winter = *Heterodoassansia punctiformis*

D. putkonenii Liro = *Heterodoassansia putkonenii*

D. sagittariae (Fuckel) C. Fisch

D. sparganii Vánky

Doassansiopsis

D. hydrophila (A. Dietr.) Lavrov

D. occulta (H. Hoffm.) Dietel

Doassinga

D. callitrichis (Liro) Vánky, R. Bauer & Begerow (as *Entyloma callitrichis*)

Entorrhiza

E. aschersoniana (Magnus) Lagerh.

E. caricicola Ferd. & Winge

E. casparyana (Magnus) Lagerh.

E. cypericola (Magnus) C.A. Weber

**E. fineraniae* Vánky

E. parvula Vánky

E. raunkiaeriana Ferd. & Winge

E. scirpicola (Correns) Sacc. & P. Syd.

Entyloma

E. achilleae Magnus
 **E. ambrosiae-maritimae* Rayss
E. aposeridis Jaap
E. arctotheca Vánky
E. arnicale Ellis & Everh.
E. arnoseridis Syd. & P. Syd. ex Cif.
E. asteris-alpini Syd. & P. Syd. ex Cif.
E. asterisci-maritimi Vánky
E. atlanticum Massenot
 **E. australe* Speg.
E. bellidiastri Maire
E. bellidis K. Krieg.
E. brizae Unamuno & Cif. = *Jamesdicksonia brizae*
E. bupleuri Lindr.
E. calendulae (Oudem.) De Bary
E. callitrichis Liro = *Doassinga callitrichis*
E. catananchis Cif. ex Vánky
E. chelidonii Cif.
E. chrysosplenii J. Schröt.
E. cichorii Wróbl.
E. convolvuli Bres.
E. corydalis De Bary
E. corydalis-luteae Voglino
E. crepidicola Trotter
E. crepidis-rubrae (Jaap) Liro
E. dactylidis (Pass.) Cif. = *Jamesdicksonia dactylidis*
E. dabliae Syd. & P. Syd.
E. dietelianum Bubák
 **E. ellisii* Halst.
E. erigerontis Syd. & P. Syd. ex Cif.
 **E. erodii* Vánky
E. eryngii (Corda) De Bary
E. eryngii-plani Cif.
E. fergussonii (Berk. & Broome) Plowr.
E. feurichii K. Krieg.
E. ficariae Thüm. ex A.A. Fisch. Waldh.
E. fischeri Thüm.
E. fumariae J. Schröt.
E. fuscum J. Schröt.
E. gaillardianum Vánky
 **E. galinsogae* Syd. & P. Syd.
 **E. gratiolae* (Davis) Cif.
E. helosciadii Magnus
E. henningsianum Syd. & P. Syd.
E. hieracii Syd. & P. Syd. ex Cif.
E. irregulare Johanson = *Jamesdicksonia irregulare*
 **E. kundmanniae* Malençon & Massenot
E. lapponicum Liro
E. leontices T. Sävul.
E. leontodontis Syd. & P. Syd. ex Cif.
E. linariae J. Schröt.
E. lini Oudem.
E. magnusii (Ule) Woronin
E. magocsyanum Bubák
E. maireanum Cif.

E. matricariae Rostr.
E. meconopsidis Durrieu
E. mediterraneum Syd. & P. Syd. ex Cif.
 **E. meliloti* McAlpine
E. microsporum (Unger) J. Schröt.
E. muscari J. Schröt. (generic position uncertain)
E. myosuri Syd.
E. nigellae Cif.
E. oreochloae Durrieu = *Ustilentyloma oreochloae*
E. ossifragi Rostr. = *Gjaerumia ossifragi*
 **E. parietariae* Rayss
 **E. parvum* Davis (= ? *Jamesdicksonia parvum*)
E. pastinacae Jaap
E. picridis Rostr.
E. plantaginis A. Blytt
E. podospermi Unamuno & Cif.
E. polysporum (Peck) Farl.
 **E. primulae* Murashk.
E. ranunculi-repentis Sternon
E. rhagadioli Pass.
E. saccardianum Scalia ex Cif.
E. scalianum Cif.
E. serotinum J. Schröt.
E. sonchi Vánky
E. tanaceti Syd.
 **E. taraxaci* Vánky
E. terrieri Mayor
E. thalictri J. Schröt.
E. tolpidis Unamuno
E. tozziae Heinricher
E. tragopogonis Lagerh.
 **E. trigonellae* J.A. Stev.
 **E. uliginis* Speg.
E. urocystoides Bubák
E. veronicae (Halst.) Lagerh.
E. verruculosum Pass.
E. winteri Linh.
E. zacintha Vánky
 **E. zinniae* Syd.

Farysia

F. jaapii Syd. & P. Syd.
F. thuemenii (A.A. Fisch. Waldh.) Nannf.

Gjaerumia

G. ossifragi (Rostr.) R. Bauer, M. Lutz & Oberw. (as *Entyloma ossifragi*)

Glomosporium

G. amaranthi Hirschh. = *Thebaphora amaranthi*
G. leptideum (Syd.) Kochman

Heterodoassansia

H. callitrichis (H.S. Jacks. & Linder) Vánky (as *Doassansia callitrichis*)
H. hottoniae (Rostr.) Vánky (as *Doassansia hottoniae*)

- H. morotiana* (Zundel) Vánky (as *Doassansia morotiana*)
H. punctiformis (G. Winter) Vánky (as *Doassansia punctiformis*)
H. putkonenii (Liro) Vánky (as *Doassansia putkonenii*)

Jamesdicksonia

- J. brizae* (Unamuno & Cif.) Vánky (as *Entyloma brizae*)
J. dactylidis (Pass.) R. Bauer, Begerow, A. Nagler & Oberw. (as *Entyloma dactylidis*)
J. irregulare (Johanson) R. Bauer, Begerow, A. Nagler & Oberw. (as *Entyloma irregulare*)

Kochmania

- K. oxalidis* (Ellis & Tracy) Piatek (as *Ustilago oxalidis*)

Macalpinomyces

- M. neglectus* (Niessl) Vánky (as *Sporisorium neglectum*)
M. spermophorus (Berk. & M.A. Curtis ex De Toni) Vánky (as *Ustilago spermophora*)

Melaniella

- M. selaginellae* (Henn. & E. Nyman) R. Bauer, Vánky, Begerow & Oberw. (as *Melanotaenium selaginellae*)

Melanopsichium

- **M. austro-americanum* (Speg.) Beck
M. pennsylvanicum Hirschh.

Melanotaenium

- M. adoxae* (Bref.) S. Ito
M. antirrhini Vienn.-Bourg. ex Vánky
M. ari (Cooke) Lagerh. = *Melanustilospora ari*
M. arisari (Peglion) Cif. = *Melanustilospora arisari*
M. arnaudianum Cif.
M. cingens (Beck) Magnus
M. endogenum (Unger) De Bary
 **M. euphorbiae* (L.W. Lenz) M.D. Whitehead & Thirum.
M. hypogaeum (Tul. & C. Tul.) Schellenb.
M. jaapii Magnus
M. ruppiae Feldm.-Maz. (generic position unknown)
 **M. selaginellae* Henn. & E. Nyman = *Melaniella selaginellae*

Melanustilospora

- M. ari* (Cooke) Denchev (as *Melanotaenium ari*)
M. arisari (Peglion) Denchev (as *Melanotaenium arisari*)

Microbotryum

- M. anomalum* (J. Kunze ex G. Winter) Vánky (as *Ustilago anomala*)
M. aviculare (Liro) Vánky (as *Ustilago avicularis*)
M. betonicae (Beck) R. Bauer & Oberw. (as *Ustilago betonicae*)
M. bistortarum (DC.) Vánky (as *Ustilago bistortarum*)
M. bosniacum (Beck) Vánky (as *Ustilago bosniaca*)
M. cardui (A.A. Fisch. Waldh.) Vánky (as *Ustilago cardui*)
M. cephalariae (Vánky) Vánky (as *Ustilago cephalariae*)

- M. cichorii* (Syd.) Vánky (as *Ustilago cichorii*)
M. cordae (Liro) G. Deml & Prillinger (as *Ustilago cordae*)
M. dianthorum (Liro) H. Scholz & I. Scholz = *M. violaceum*
M. duriaeaeum (Tul. & C. Tul.) Vánky (as *Ustilago duriaeaeum*)
M. floscolorum (DC.) Vánky (as *Ustilago floscolorum*)
M. goeppertianum (J. Schröt.) Vánky (as *Ustilago goeppertiana*)
M. himalense (Kakish. & Y. Ono) Vánky (as *Ustilago himalense*)
M. holostei (De Bary) Vánky (as *Ustilago holostei*)
M. intermedium (J. Schröt.) Vánky (as *Ustilago intermedia*)
M. koenigiae (Rostr.) Vánky (as *Ustilago koenigiae*)
M. kuehneanum (R. Wolff) Vánky (as *Ustilago kuehneana*)
M. lychnidis-dioicae (DC. ex Liro) G. Deml & Oberw.
M. majus (J. Schröt.) G. Deml & Oberw.
M. marginale (DC.) Vánky (as *Ustilago marginalis*)
M. moenchiae-manticae (Lindtner) Vánky (as *Ustilago moenchiae-manticae*)
M. nannfeldtii (Liro) Vánky (as *Ustilago nannfeldtii*)
M. nelsonianum (Savile) Vánky (as *Ustilago nelsoniana*)
M. nivale (Liro) Vánky (as *Ustilago nivalis*)
M. onopordi (Vánky) Vánky (as *Ustilago onopordi*)
M. parlatorei (A.A. Fisch. Waldh.) Vánky (as *Ustilago parlatorei*)
M. picaceum (Lagerh. & Liro) Vánky (as *Ustilago picacea*)
M. pinguiculae (Rostr.) Vánky (as *Ustilago pinguiculae*)
M. piperi (G.P. Clinton) Vánky (as *Ustilago piperi*)
M. primulae (Wettst.) Vánky (as *Ustilago primulae*)
M. pustulatum (DC.) R. Bauer & Oberw. (as *Ustilago pustulata*)
M. reticulatum (Liro) R. Bauer & Oberw. (as *Ustilago reticulata*)
M. rhei (Zundel) Vánky (as *Ustilago rhei*)
M. scabiosae Vánky (as *Ustilago scabiosae*)
M. scolymi (Roum. & Trab. ex Juel) Vánky (as *Ustilago scolymi*)
M. scorzonerae (Alb. & Schwein.) G. Deml & Prillinger (as *Ustilago scorzonerae*)
M. silenes-inflatae (DC. ex Liro) G. Deml & Oberw.
M. stellariae (Sowerby) G. Deml & Oberw.
M. stygium (Liro) Vánky (as *Ustilago stygia*)
M. succisae (Magnus) R. Bauer & Oberw. (as *Ustilago succisae*)
M. tragopogonis-pratensis (Pers.) R. Bauer & Oberw. (as *Ustilago tragopogonis-pratensis*)
M. vinosum (Tul. & C. Tul.) Denchev (as *Ustilago vinosum*)
M. violaceo-irregulare (Brandenb. & Schwinn) G. Deml & Oberw.
M. violaceo-verrucosum (Brandenb. & Schwinn) Vánky
M. violaceum (Pers. : Pers.) G. Deml & Oberw. (p.p. as *M. dianthorum*)
M. warmingii (Rostr.) Vánky (as *Ustilago warmingii*)

Moesziomyces

- M. bullatus* (J. Schröt.) Vánky
 **M. eriocauli* (G.P. Clinton) Vánky

Moreaua

- M. aterrima* (Tul. & C. Tul.) Vánky (as *Tolyposporium aterrimum*)
M. kochiana (Gäum.) Vánky (as *Tolyposporium kochianum*)

Nannfeldtiomyces

- N. anomalus* (Crowell) Vánky
N. sparganii (Lagerh.) Vánky

Neovossia

- N. molinia* (Thüm.) Körn.

Orphanomyces

- O. arcticus* (Rostr.) Savile
O. hungaricus Vánky & J. Gönczöl
O. vankyi Savile

Planetella

- **P. lironis* Savile

Pseudodoassansia

- **P. obscura* (Setch.) Vánky

Rhamphospora

- R. nymphaeae* D.D. Cunn.

Schizonella

- S. cocconii* (Morini) Liro
S. elyinae (A. Blytt) Liro
S. melanogramma (DC.) J. Schröt.

Sorosporium

- S. saponariae* F. Rudolphi = *Thecaphora saponariae*

Sphacelotheca

- **S. fagopyri* Syd. & P. Syd. & E.J. Butler
S. hydropiperis (Schumach.) De Bary
 **S. polygoni-serrulati* Maire
S. serrulati-magna Vánky & Oberw.

Sporisorium

- **S. aegypticum* (A.A. Fisch. Waldh.) Vánky
S. andropogonis (Opiz) Vánky
S. barcinonense (Riofrio) Vánky
 **S. caledonicum* (Pat.) Vánky
 **S. catharticum* (Maire) Vánky
S. cenchri (Lagerh.) Vánky
S. contortum (Griffiths) Vánky
S. cruentum (J.G. Kühn) Vánky
S. destruens (Schltdl.) Vánky
 **S. ehrenbergii* (J.G. Kühn) Vánky
S. formosanum (Sawada) Vánky
 **S. lepturi* (Thüm.) Vánky
S. montaniense (Ellis & Holw.) Vánky
S. neglectum (Niessl) Vánky = *Macalpinomyces neglectus*
S. polliniae (Magnus) Vánky

- S. puellare* (Syd.) G. Deml = *S. vanderystii*
S. pulverulentum (Cooke & Masee) Vánky
S. reilianum (J.G. Kühn) Langdon & Full.
 **S. saharianum* (Trotter) Karatygin
S. schweinfurthianum (Thüm.) Vánky
S. sorgi Ehrenb. ex Link
 **S. transissum* (Tul. & C. Tul.) G. Deml
 **S. tricholaenae* (Henn.) Vánky
S. vanderystii (Henn.) Langdon & Full. (as *Sporisorium puellare*)

Stegocintractia

- S. hyperborea* (A. Blytt) M. Piepenbr. (as *Ustilago hyperborea*)
S. junci (Schwein.) M. Piepenbr. (as *Ustilago junci*)
S. lidii (Liro) M. Piepenbr. (as *Ustilago lidii*)
S. luzulae (Sacc.) M. Piepenbr., Begerow & Oberw. (as *Ustilago luzulae*)
S. spadicea (Liro) M. Piepenbr. & Begerow (as *Ustilago spadicea*)

Thecaphora

- T. affinis* W.G. Schneid. ex A.A. Fisch. Waldh.
T. amaranthi (Hirschh.) Vánky (as *Glomosporium amaranthi*)
T. androsacina Vánky
T. deformans Durieu & Mont. ex Tul. & C. Tul.
 **T. frezzii* J. Carranza & Lindq.
 **T. hedysari* Vánky
T. lathyri J.G. Kühn
 **T. lithospermi* Vánky & Nannf.
 **T. loti* Mayor
 **T. lupini* Mayor
T. molluginis T. Sävil.
T. pimpinellae Juel
 **T. pustulata* G.P. Clinton
T. saponariae (F. Rudolphi) Vánky (as *Sorosporium saponariae*)
 **T. schwarzmaniana* Byzova
T. seminis-convolvuli (Desm.) S. Ito
 **T. solani* (Thirum. & M.J. O'Brien) Mordue
T. thlaspeos (Beck) Vánky (as *Ustilago thlaspeos*)
T. trailii Cooke
 **T. trigonellae* Schwarzman
 **T. viciae* Bubák

Tilletia

- **T. alopecuri* (Sawada) L. Ling
T. anthoxanthi A. Blytt
T. bolayi H. Zogg
T. bornmuelleri Magnus
T. brachypodii-ramosi H. Zogg
T. bromi (Brockm.) Brockm.
T. caries (DC.) Tul. & C. Tul.
T. cerebrina Ellis & Everh.
T. contraversa J.G. Kühn
 **T. festiva* Syd. & P. Syd.
T. flectens Lagerh.
T. holci (Westend.) J. Schröt.

- T. laevis* J.G. Kühn
T. lepturi Sigr. ex Vánky
T. lolii Auersw. ex G. Winter
T. menieri Har. & Pat.
T. olida (Riess) J. Schröt.
T. paradoxa Jacz.
T. poae Nagorny
 **T. salzmännii* Maire
T. secalis (Corda) Körn.
T. separata J. Kunze ex G. Winter
T. serbica Ranoj.
T. sesleriae Juel
T. sphaerococca (Wallr.) A.A. Fisch. Waldh.
 **T. sphenopodis* Rayss
T. sterilis Ule
T. triticina Ranoj.
 **T. youngii* G.P. Clinton & Zundel
- Tolyposporium*
T. aterrimum (Tul. & C. Tul.) P. Dietel = *Moreaua aterrima*
T. junci (J. Schröt.) Woronin ex J. Schröt.
T. kochianum Gäum. = *Moreaua kochiana*
- Tracya*
T. hydrocharidis Lagerh.
T. lemnae (Setch.) Syd. & P. Syd.
- Franzscheliella*
T. halophila (Speg.) Vánky (as *Ustilago halophila*)
T. hypodytes (Speg.) Vánky & McKenzie (as *Ustilago hypodytes*)
T. minima (Arthur) Vánky (as *Ustilago minima*)
T. sparti (Massenot) Vánky (as *Ustilago sparti*)
T. williamsii (Griffiths) Dingley & Versluys (as *Ustilago williamsii*)
- Urocystis*
Ur. agropyri (C. G. Preuss) A.A. Fisch. Waldh.
Ur. agropyri-campestris (Massenot) H. Zogg
Ur. agrostidis (Lavrov) Zundel
Ur. alopecuri A.B. Frank
Ur. anemones (Pers. : Pers.) G. Winter
Ur. antipolitana Magnus
Ur. aquilegiae (Cif.) Schwarzman
 **Ur. asphodeli* (Massenot) Vánky
Ur. avenae-elatioris (Kochman) Zundel
Ur. avenaetri (Massenot) Nannf.
Ur. beckmanniae I.E. Brezhnev
Ur. bolivari Bubák & Gonz. Frag.
 **Ur. bornmuelleri* Magnus
 **Ur. brassicae* Mundk.
Ur. bromi (Lavrov) Zundel
Ur. bulbocodii Vánky
Ur. calamagrostidis (Lavrov) Zundel
Ur. callianthemii Domashova
Ur. carcinodes (Berk. & M.A. Curtis) A.A. Fisch. Waldh.
 **Ur. ceratocephali* Zambett. ex Vánky
Ur. colchici (Schltld.) Rabenh.
Ur. coralloides Rostr.
Ur. corsica (Mayor & Terrier) Vánky
Ur. cortusae (Liro) Schwarzman
Ur. dactylidina (Lavrov) Zundel
Ur. delphinii Golovin
Ur. eranthidis (Pass.) Ainsw. & Sampson
Ur. ficariae (Liro) Moesz
Ur. filipendulae (Tul.) J. Schröt.
Ur. fischeri Körn. ex G. Winter
Ur. floccosa (Wallr.) D.M. Hend.
Ur. galanthi H. Pape
Ur. gladiolicola Ainsw.
Ur. hierochloae (Murashk.) Vánky
Ur. hispanica (Syd.) Zundel
Ur. irregularis (G. Winter) T. Sävil.
Ur. jaapiana Sacc.
Ur. johansonii (Lagerh.) Magnus
Ur. junci Lagerh.
Ur. kmetiana Magnus
Ur. lagerheimii Bubák
Ur. leimbachii Oertel
Ur. leucoji Bubák
Ur. littoralis (Lagerh.) Zundel
Ur. luzulae (J. Schröt.) G. Winter
Ur. magica Pass.
Ur. mayori (Cif.) Uljan.
Ur. melicae (Lagerh. & Liro) Zundel
Ur. miyabeana Togashi & Onuma
Ur. muscaridis (Niessl) Moesz
Ur. narcissi (Gonz. Frag.) Vánky
Ur. nivalis (Liro) Zundel
Ur. occulta (Wallr.) Rabenh. ex Fuckel
Ur. ornithogali Körn.
Ur. orobanches (Mérat) A.A. Fisch. Waldh.
Ur. paridis (Unger) Thüm.
Ur. phlei-alpini Terrier
Ur. picbaueri Součk.-Tomk.
Ur. poae (Liro) Padwick & A. Khan
Ur. poae-palustris Vánky
Ur. primulae (Rostr.) Vánky
Ur. primulicola Magnus
Ur. pulsatillae (Bubák) Moesz
Ur. radicola H. Scholz & I. Scholz
Ur. ranunculi (Lib.) Moesz
Ur. ranunculi-auricomi (Liro) Zundel
Ur. ranunculi-bullati (Cif.) Zundel
Ur. roivainenii (Liro) Zundel
Ur. schizocaulon (Ces.) Zundel
Ur. scillae (Cif.) Zundel
Ur. secalis-silvestris (Uljan.) Schwarzman
Ur. sorosporioides Körn. ex A.A. Fisch. Waldh.
Ur. sternbergiae Moesz
Ur. syncocca (L.A. Kirchn.) B. Lindeb.
Ur. tessellata (Liro) Zundel
Ur. tothii Vánky

Ur. trientalis (Berk. & Broome) B. Lindeb.
Ur. triseti (Cif.) Zundel
Ur. tritici Körn.
Ur. trollii Nannf.
Ur. ulei Magnus
Ur. ulmariae (Liro) Vánky
Ur. violae (Sowerby) A.A. Fisch. Waldh.

Ustacystis

U. waldsteiniae (Peck) Zundel

Ustanciosporium

U. gigantosporum (Liro) M. Piepenbr. & Begerow (as *Ustilago rhyngosporae*)
U. majus (Desm.) M. Piepenbr. (as *Ustilago intercedens*)
U. montagnei (Tul. & C. Tul.) M. Piepenbr., Begerow & Oberw. (as *Ustilago montagnei*)

Ustilago

U. abstrusa Malençon = *Bauerago abstrusa*
U. aeluropodis (Trotter) Vánky
U. anomala J. Kunze ex G. Winter = *Microbotryum anomalum*
 **U. aschersoniana* A.A. Fisch. Waldh.
U. avenae (Pers. : Pers.) Rostr.
U. avicularis Liro = *Microbotryum aviculare*
U. betonicae Beck = *Microbotryum betonicae*
U. bistortarum (DC.) Körn. = *Microbotryum bistortarum*
U. bosniaca Beck = *Microbotryum bosniacum*
U. bulgarica Bubák
U. bullata Berk. (the European specimens represent *U. bromivora* (Tul. & C. Tul.) A.A. Fisch. Waldh.)
U. calamagrostidis (Fuckel) G.P. Clinton
U. cardui A.A. Fisch. Waldh. = *Microbotryum cardui*
U. ceparum Glow. = *Thanatephorus* sp. (Ceratobasidiaceae)
 **U. cephalariae* Vánky = *Microbotryum cephalariae*
U. cichorii Syd. = *Microbotryum cichorii*
 **U. commelinae* (Kom.) Zundel = *Bauerago commelinae*
U. constantineanui (T. Sävul.) Vánky
U. cordae Liro = *Microbotryum cordae*
U. crameri Körn.
U. cynodontis (Henn.) Henn. (p.p. as *Ustilago nebrodensis*)
U. davisii Liro
U. duriaeana Tul. & C. Tul. = *Microbotryum duriaeana*
U. echinata J. Schröt.
 **U. euphorbiae* Munk. = *Abmadiago euphorbiae*
U. filiformis (Schr.) Rostr.
U. flosculorum (DC.) Fr. = *Microbotryum flosculorum*
U. goeppertiana J. Schröt. = *Microbotryum goeppertianum*
U. grandis Fr.
 **U. halophila* Speg. = *Franzscheliella halophila*
U. heufleri Fuckel = *Vánkya heufleri*
 **U. himalensis* (Kakish. & Y. Ono) Vánky & Oberw. = *Microbotryum himalense*
U. holostei De Bary = *Microbotryum holostei*
U. hordei (Pers. : Pers.) Lagerh.

U. hyperborea A. Blytt = *Stegocintractia hyperborea*
U. hypodytes (Schltdl.) Fr. = *Franzscheliella hypodytes*
U. intercedens Lehtola = *Ustanciosporium majus*
U. intermedia J. Schröt. = *Microbotryum intermedium*
U. isoetis Rostr. (generic position uncertain)
 **U. junci* (Schwein.) Schwein. = *Stegocintractia junci*
U. koenigiae Rostr. = *Microbotryum koenigiae*
U. kuehneana R. Wolff = *Microbotryum kuehneanum*
U. lidii (Liro) Nannf. = *Stegocintractia lidii*
U. lolii Magnus
U. luzulae Sacc. = *Stegocintractia luzulae*
 **U. macrochloae* Pat. = *Franzscheliella macrochloae*
U. marginalis (DC.) Lév. = *Microbotryum marginale*
U. marina Durieu (generic position uncertain)
U. maydis (DC.) Corda
U. minima Arthur = *Franzscheliella minima*
U. moenchiae-manticae Lindtner = *Microbotryum moenchiae-manticae*
 **U. monermae* Maire
U. montagnei Tul. & C. Tul. = *Ustanciosporium montagnei*
U. nannfeldtii Liro = *Microbotryum nannfeldtii*
U. nebrodensis Gonz. Frag. = *Ustilago cynodontis*
 **U. nelsoniana* Savile = *Microbotryum nelsonianum*
U. nivalis Liro = *Microbotryum nivale*
U. nuda (J.L. Jensen) Kellerm. & Swingle
U. onopordi Vánky = *Microbotryum onopordi*
U. ornithogali (J.C. Schmidt & Kunze) Magnus = *Vánkya ornithogali*
U. oxalidis Ellis & Tracy = *Kochmania oxalidis*
U. parlatorei A.A. Fisch. Waldh. = *Microbotryum parlatorei*
U. perrara H. Scholz & I. Scholz
U. phrygica Magnus
U. picacea Lagerh. & Liro = *Microbotryum picaceum*
U. pinguiculae Rostr. = *Microbotryum pinguiculae*
U. piperi G.P. Clinton = *Microbotryum piperi*
U. primulae Wettst. = *Microbotryum primulae*
U. pustulata (DC.) G. Winter = *Microbotryum pustulatum*
U. reticulata Liro = *Microbotryum reticulatum*
 **U. rhei* (Zundel) Vánky & Oberw. = *Microbotryum rhei*
U. rhyngosporae Saut. = *Ustanciosporium gigantosporum*
U. scabiosae (Sowerby) G. Winter = *Microbotryum scabiosae*
U. scitaminea Syd. (it belongs to *Sporisorium*, but is retained in *Ustilago*)
U. scolymi Roum. & Trab. ex Juel = *Microbotryum scolymi*
U. scorzonerae (Alb. & Schwein.) J. Schröt. = *Microbotryum scorzonerae*
U. scrobiculata Liro
U. serpens (P. Karst.) B. Lindeb.
U. spadicea (Liro) Vánky = *Stegocintractia spadicea*
 **U. sparti* Massenot = *Franzscheliella sparti*
U. spermophora Berk. & M.A. Curtis ex De Toni = *Macalpinomyces spermophorus*
U. striiformis (Westend.) Niessl
U. stygia Liro = *Microbotryum stygium*
U. succisae Magnus = *Microbotryum succisae*
U. syntherismae (Schwein.) Peck

- U. thlaspeos* (Beck) Lagerh. = *Thecaphora thlaspeos*
U. tragica Vánky
U. tragopogonis-pratensis (Pers.) Roussel = *Microbotryum tragopogonis-pratensis*
U. trebouxii Syd. & P. Syd.
U. trichophora (Link) Körn.
U. tritici (Pers. : Pers.) Rostr.
U. turcomanica Tranzschel ex Vánky
U. vaillantii Tul. & C. Tul. = *Vankya vaillantii*
U. vinosa Tul. & C. Tul. = *Microbotryum vinosa*
U. vuyckii Oudem. & Beij. = *Bauerago vuyckii*
U. warmingii Rostr. = *Microbotryum warmingii*
U. williamsii (Griffiths) Lavrov = *Tranzscheliella williamsii*

Ustilentyloma

- U. brefeldii* (K. Krieg.) Vánky
U. fluitans (Liro) Vánky
U. oreochloae (Durrieu) Vánky (as *Entyloma oreochloae*)

Vankya

- V. heufleri* (Fuckel) Ershad (as *Ustilago heufleri*)
V. ornithogali (J.C. Schmidt & Kunze) Ershad (as *Ustilago ornithogali*)
V. vaillantii (Tul. & C. Tul.) Ershad (as *Ustilago vaillantii*)

Zundeliomyces

- **Z. polygoni* Vánky

Additions to the European smut fungi (missed or recorded after 1994)

- Eballistra oryzae* (Syd. & P. Syd.) R. Bauer, Begerow, A. Nagler & Oberwinkler (2001: 423). — *Entyloma oryzae* Syd. & P. Syd. (1914: 197). — Type on *Oryza sativa* L., Philippine Islands, Laguna Prov., Los Banos, 20 Dec 1913, M.B. Raimundo (C.F. Barker, no. 2203). It was reported by Uljanishchev (1968: 104) from the European part of Russia, Krasnodar.
Entyloma bergeniae Vánky & Döbbeler on *Bergenia ?crassifolia* (L.) Fritsch., Germany (in Vánky 2005: 252).
Entyloma chaenorrhini Sousa da Camara & Vasconcelos (1953: 185). — Type on *Chaenorrhinum origanifolium* (L.) Fourr. (Scrophulariaceae), Portugal, near Sacave, National Agronomical Research Fields, Feb 1953, B. de Oliveira, P. & M. da Silva.
Entyloma holwayi Syd. & P. Syd. on *Cosmos bipinnatus* Cav., Germany (Vánky *et al.* 2005).
Microbotryum jehudanum (Zundel) Vánky on *Silene colorata* Poirlet, Spain (Vánky *et al.* 2005).
Microbotryum silybum Vánky & Berner on *Silybum marianum* (L.) Gaertner, Greece (Vánky & Berner 2003: 308).
Moreaua apicis (Savile) Vánky on *Carex pyrenaica* Wahlenb., Mt. Pyrénées (Vánky 2003: 57).

- Schizonella intercedens* Vánky & A. Nagler, in Vánky (1998: 105). — Type on *Carex michelii* Host. In various European countries.
Sporisorium erianthi (Syd. & P. Syd.) Vánky on *Tripidium ravennae* (L.) H. Scholz, Greece (Vánky *et al.* 2005).
Sporisorium consanguineum (Ellis & Everh.) Vánky on *Aristida caerulescens* Desf., Greece (Herb. B).
Tilletia catapodii H. Scholz & Vánky, in Vánky & Scholz (2001: 392). — Type on *Catapodium rigidum* (L.) C.E. Hubb., Greece, Halkidiki, 22 May 1991, J. Diamantopoulos.
Tilletia laguri G.M. Zhang, G.X. Lin & J.R. Deng on *Lagurus ovatus* L., Italy, Spain (Herb. Ustilag. Vánky).
Tranzscheliella sparti (Massenot) Vánky on *Lygeum spartum* L., Italy, Spain (Almaraz & Telleria 1998, as *Ustilago sparti*).
Ustilago sleumeri Petrak (1947: 206). — Type on *Alopecurus gerardii* Vill., Andorra, East Pyrenean Mts, between Port d'Embalire and Pic Negre, above the creek Ariège, 2200-2500 m, July (1944), coll. H. Sleumer. Material not seen. It may represent a foliicolous *Tilletia* species.

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