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Orchid mycorrhizal fungi including isolates shown to promote seed germination.

- UAMH 10807 *Armillaria sp.* Date Accessed: 3/21/2007
 Isolation Data: ex roots Florida terrestrial orchid *Eulophia alta* Highlands Co., FL S.L. Stewart & T.R. Johnson 16-Aug-05
 Sender: Stewart, S.L. FL-Ealt-396
 Strain Characters: pigment yellow. // Mycorrhizae symbiotic seed germination of *Eulophia alta* (Johnson TR, Stewart SL, Dutra D, Kane ME, Richardson L, Plant Cell Tiss Organ Cult Plant Cell Tiss Organ Cult 90:313-323, 2007); orchid endophyte *Eulophia alta*. // Culture conditions clamps.
- UAMH 5443 *Ceratobasidium obscurum* Date Accessed: 9/22/1986
 Isolation Data: ex orchid *Orchis rotundifolia* River Valley Rd., Edmonton, Alta. R. Currah (12a4) 7 Jun 1986
 Cross Ref. Nos.: ATCC 90460 = IMI 318092 = GenBank AY243526 (SSU)
 Strain Characters: mycorrhizae septum structure of orchid endophytes (Currah & Sherburne, Mycol. Res. 96:583-587, 1992). // Molecular systematics orchid mycorrhizal fungi (Taylor DL, McCormick MK, New Phytologist 177:1020-1033, 2008; Lievens B, van Kerckhove S, Justé A, Cammue BP, Honnay O, Jacquemyn H, J Microbiol Methods 80(1):76-85, 2010).
- UAMH 6440 *Ceratorhiza goodyerae-repentis* Date Accessed: 6/21/1989
 Isolation Data: endophyte of blunt-leaved orchid *Platanthera obtusata* Cypress Hills, Alta. R. Currah (192a) 6 May 1987
 Cross Ref. Nos.: ATCC 90459 = CBS 188.90 = GenBank AF345556 = GenBank AY243523 (SSU)
 Strain Characters: mycorrhizae with orchid *Platanthera obtusata*. // Molecular systematics orchid mycorrhizal fungi (Kristiansen KA, Taylor DL, Kjoller R, Rasmussen N, Rosendahl S, Molecular Ecology 10:2089-2093, 2001; Taylor DL, McCormick MK, New Phytologist 177:1020-1033, 2008).
- UAMH 6443 *Ceratorhiza goodyerae-repentis* Date Accessed: 6/21/1989
 Isolation Data: endophyte of blunt-leaved orchid *Platanthera obtusata* Bow-Crow Forest, Alta. R. Currah (219a) 25 May 1987
 Strain Characters: mycorrhizae with orchid *Platanthera obtusata*.
- UAMH 6446 *Ceratorhiza goodyerae-repentis* Date Accessed: 6/21/1989
 Isolation Data: endophyte of blunt -leaved orchid *Platanthera obtusata* Edson Forest, Alta. R. Currah (254b) 3 Jun 1987
 Cross Ref. Nos.: CBS 190.90
 Strain Characters: mycorrhizae with orchid *Platanthera obtusata*: assessed in hybridization assays (Gronberg H, Paulin L, Sen R, Mycol. Res. 107:428-438, 2003).
- UAMH 6452 *Ceratorhiza goodyerae-repentis* Date Accessed: 6/21/1989
 Isolation Data: endophyte of blunt-leaved orchid *Platanthera obtusata* Edson Forest, Alta. R. Currah (307b) 16 Jul 1987
 Cross Ref. Nos.: CBS 194.90
 Strain Characters: mycorrhizae with orchid *Platanthera obtusata*.

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- UAMH 6464 *Ceratorhiza goodyerae-repentis* Date Accessed: 7/19/1989
 Isolation Data: endophyte of long-bracted green orchid *Coeloglossum viride* Cadomin, Alta. R. Currah (290a)
 14 Jul 1987
 Strain Characters: mycorrhizae with orchid *Coeloglossum viride*.
- UAMH 6465 *Ceratorhiza goodyerae-repentis* Date Accessed: 7/19/1989
 Isolation Data: endophyte of orchid *Coeloglossum viride* Cadomin, Alta. R. Currah (299a) 14 Jul 1987
 Cross Ref. Nos.: CBS 196.90
 Strain Characters: mycorrhizae with *Coeloglossum viride* (Currah et al., Can. J. Bot. 68:1171-1181, 1990).
- UAMH 7150 *Ceratorhiza goodyerae-repentis* Date Accessed: 6/25/1992
 Isolation Data: ex aerial roots of epiphytic orchid *Campylocentrum micranthum* La Selva, Heredia Prov.,
 Costa Rica Richardson, K. 4 Nov 1991
 Sender: Currah, R.S. K460e
 Strain Characters: mycorrhizae with epiphytic orchid *Campylocentrum micranthum*.
- UAMH 8557 *Ceratorhiza goodyerae-repentis* Date Accessed: 7/9/1996[ID?]
 Isolation Data: ex roots of Northern slender ladies tresses orchid *Spiranthes lacera* Whiteshell Provincial
 Forest, Manitoba C. Zelmer 12 Aug 1991
 Sender: Currah, R.S. Z63-nr-1a(1)
 Strain Characters: mycorrhizae naturally occurring endophyte in true and tuberous roots of orchid *Spiranthes
 lacera*: symbiotic seed germination of orchid *Spiranthes lacera*. // Cellulolytic by tube test. //
 Culture conditions phenol oxidase (Zelmer & Currah, Lindleyana 12:142-148, 1997).
- UAMH 8558 *Ceratorhiza goodyerae-repentis* Date Accessed: 7/9/1996[ID?]
 Isolation Data: ex roots of Northern slender ladies tresses orchid *Spiranthes lacera* Whiteshell Provincial
 Forest, Manitoba C. Zelmer 12 Aug 1991
 Sender: Currah, R.S. Z63-nr-2a(1)
 Strain Characters: mycorrhizae naturally occurring endophyte in true and tuberous roots of orchid *Spiranthes
 lacera*. // Cellulolytic by tube test (Zelmer & Currah, Lindleyana 12:142-148, 1997). // Culture
 conditions polyphenol oxidase (Zelmer & Currah, Lindleyana 12:142-148, 1997).
- UAMH 8559 *Ceratorhiza goodyerae-repentis* Date Accessed: 7/9/1996[ID?]
 Isolation Data: ex roots of Northern slender ladies tresses orchid *Spiranthes lacera* Fort McMurray, Alta. C.
 Zelmer July 1994
 Sender: Currah, R.S. Z196-rh-a
 Strain Characters: mycorrhizae naturally occurring root endophyte of orchid *Spiranthes lacera*. // Cellulolytic by
 tube test (Zelmer & Currah, Lindleyana 12:142-148, 1997). // Culture conditions polyphenol
 oxidase (Zelmer & Currah, Lindleyana 12:142-148, 1997). // Crystals.
- UAMH 8560 *Ceratorhiza goodyerae-repentis* Date Accessed: 7/9/1996[ID?]
 Isolation Data: ex roots of Northern slender ladies tresses orchid *Spiranthes lacera* Fort McMurray, Alta. C.
 Zelmer July 1994
 Sender: Currah, R.S. Z196-rh-b
 Strain Characters: mycorrhizae naturally occurring root endophyte of orchid *Spiranthes lacera*.

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- UAMH 8561 *Ceratorhiza goodyerae-repentis* Date Accessed: 7/9/1996[ID?]
 Isolation Data: protocorms of Northern slender ladies tresses orchid *Spiranthes lacera* after incubation of seeds in packets in field Whiteshell Provincial Forest, Manitoba C. Zelmer 1991
 Sender: Currah, R.S. s16.04
 Strain Characters: mycorrhizae field-incubated seeds: symbiotic seed germination of orchid *Spiranthes lacera*. // Cellulolytic by tube test (Zelmer & Currah, *Lindleyana* 12:142-148, 1997). // Culture conditions polyphenol oxidase (Zelmer & Currah, *Lindleyana* 12:142-148, 1997).
- UAMH 10687 *Ceratorhiza goodyerae-repentis* Date Accessed: 5/8/2006
 Isolation Data: ex hyphal tip from peloton extracted from root of Eatons ladies tresses orchid *Spiranthes eatonii* Levy County, FL. W. Kutosky 26-Nov-2005
 Sender: Zettler, L. 338
 Strain Characters: mycorrhizae orchid endophyte *Spiranthes eatonii*.
- UAMH 7595 *Ceratorhiza pernacatena* Date Accessed: 5/30/1994
 Isolation Data: ex root cortical cells of Western prairie fringed orchid *Platanthera praeclara* growing in tall grass prairie Tolstoi, Man. C. Zelmer 10 Jul 1992
 Sender: Currah, R.S. Z131-or-a
 Strain Characters: mycorrhizae with orchid *Platanthera praeclara*. // Cellulolytic.
- UAMH 7786 *Ceratorhiza pernacatena* Date Accessed: 12/21/1994
 Isolation Data: ex roots of Western prairie ringed orchid *Platanthera praeclara* Tolstoi, Man. C. Zelmer 14 Aug 1991
 Sender: Currah, R.S. Z67-or-2a(1)
 Strain Characters: mycorrhizae with orchid *Platanthera praeclara*.
- UAMH 7787 *Ceratorhiza pernacatena* Date Accessed: 12/21/1994
 Isolation Data: ex roots of Western prairie fringed orchid *Platanthera praeclara* (Orchidaceae) Tolstoi, Man. C. Zelmer 10 Jul 1992
 Sender: Currah, R.S. Z134-or-a
 Strain Characters: mycorrhizae with orchid *Platanthera praeclara*. // Cellulolytic.
- UAMH 7788 *Ceratorhiza pernacatena* Date Accessed: 12/21/1994
 Isolation Data: ex roots of Western prairie fringed orchid *Platanthera praeclara* (Orchidaceae) Tolstoi, Man. C. Zelmer 10 Jul 1992
 Sender: Currah, R.S. Z135-or-a
 Strain Characters: mycorrhizae with orchid *Platanthera praeclara*. // Cellulolytic.
- UAMH 7789 *Ceratorhiza pernacatena* Date Accessed: 12/21/1994
 Isolation Data: ex roots of Western prairie ringed orchid *Platanthera praeclara* (Orchidaceae) Tolstoi, Man. C. Zelmer 10 Jul 1992
 Sender: Currah, R.S. Z136-or-a
 Strain Characters: mycorrhizae with orchid *Platanthera praeclara*.

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- UAMH 7790 *Ceratorhiza pernacatena* Date Accessed: 12/21/1994
 Type *Ceratorhiza pernacatena*
 Isolation Data: ex roots of Western prairie fringed orchid *Platanthera praeclara* (Orchidaceae) Tolstoi, Man. C. Zelmer 10 Jul 1992
 Sender: Currah, R.S. Z137-or-c
 Strain Characters: mycorrhizae with orchid *Platanthera praeclara*.
- UAMH 7791 *Ceratorhiza pernacatena* Date Accessed: 12/21/1994
 Isolation Data: ex roots of Western prairie fringed orchid *Platanthera praeclara* (Orchidaceae) Tolstoi, Man. C. Zelmer 10 Jul 1992
 Sender: Currah, R.S. Z140-or-c
 Strain Characters: mycorrhizae with orchid *Platanthera praeclara*.
- UAMH 7871 *Ceratorhiza pernacatena* Date Accessed: 3/10/1995
 Isolation Data: ex roots of Western prairie fringed orchid *Platanthera praeclara* (Orchidaceae) Tolstoi, Man. C. Zelmer 10 Jul 1992
 Sender: Currah, R.S. Z132-or-a
 Strain Characters: mycorrhizae with orchid *Platanthera praeclara*: effects of orchid mycorrhizal fungi on non-orchid hosts in dual culture (Zelmer et al., *Mycoscience* 37:439-448, 1996). // Cellulolytic produces cellulase but not phenol oxidase.
- UAMH 9610 *Ceratorhiza pernacatena* Date Accessed: 8/11/1999
 Isolation Data: ex peloton in lateral branch roots of Eastern prairie fringed orchid (*Platanthera leucophaea*) Lake Co., Illinois 24 Jun 1998
 Sender: Zettler, L. Pleu-257
 Strain Characters: mycorrhizae symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Stewart SL, Bowles ML, Jacobs KA, *Am. Midl. Nat.* 145:168-175, 2001; Zettler LW, Piskin KA, *Am Midl Nat* 166:29-39, 2011; Zettler LW, Piskin KA, Stewart SC, Hartsock JJ, Bowles ML, Bell TJ, *Studies in Mycology* 53:163-171, 2005): orchid endophyte *Platanthera leucophaea*.
- UAMH 9611 *Ceratorhiza pernacatena* Date Accessed: 8/11/1999
 Isolation Data: ex peloton in lateral branch roots of Eastern prairie fringed orchid (*Platanthera leucophaea*) Monroe Co., Michigan 4 Oct 1998
 Sender: Zettler, L. Pleu-264
 Strain Characters: mycorrhizae symbiotic germination of orchid seed (*Platanthera leucophaea*, a US federally threatened orchid): orchid endophyte *Platanthera leucophaea*.
- UAMH 6093 *Ceratorhiza sp.* Date Accessed: 5/11/1988
 Isolation Data: endophyte ex roots orchid *Dactylorhiza incarnata* Netherlands E. Dijk
 Sender: Dijk, E. DIN01
 Strain Characters: mycorrhizae orchid endophyte *Dactylorhiza incarnata*.
- UAMH 6094 *Ceratorhiza sp.* Date Accessed: 5/11/1988
 Isolation Data: orchid endophyte Netherlands E. Dijk
 Sender: Dijk, E. DMR20
 Strain Characters: mycorrhizae orchid endophyte.

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- UAMH 7151 *Ceratorhiza sp.* Date Accessioned: 6/25/1992
 Isolation Data: ex roots of epiphytic orchid *Rodriguezia compacta* growing on *Socratea exorrhiza* La Selva, Heredia Prov., Costa Rica Richardson, K. 28 Mar 1991
 Sender: Currah, R.S. K172a
 Strain Characters: mycorrhizae with orchid *Rodriguezia compacta*.
- UAMH 7152 *Ceratorhiza sp.* Date Accessioned: 6/25/1992
 Isolation Data: ex roots of epiphytic orchid *Campylocentrum micranthum* growing on *Erythrina* in cacao plantation La Selva, Heredia Prov., Costa Rica Richardson, K. 29 Apr 1991
 Sender: Currah, R.S. K301b
 Strain Characters: mycorrhizae with epiphytic orchid *Campylocentrum micranthum*.
- UAMH 7153 *Ceratorhiza sp.* Date Accessioned: 6/25/1992
 Isolation Data: ex aerial roots of epiphytic orchid *Campylocentrum micranthum* growing on *Hamelia patens* La Selva, Heredia Prov., Costa Rica Richardson, K. 17 Oct 1991
 Sender: Currah, R.S. K366f
 Strain Characters: mycorrhizae with epiphytic orchid *Campylocentrum micranthum*.
- UAMH 7154 *Ceratorhiza sp.* Date Accessioned: 6/25/1992
 Isolation Data: ex aerial roots of epiphytic orchid *Campylocentrum micranthum* growing on *Hamelia patens* La Selva, Heredia Prov., Costa Rica Richardson, K. 4 Nov 1991
 Sender: Currah, R.S. K450e
 Strain Characters: mycorrhizae with epiphytic orchid *Campylocentrum micranthum*.
- UAMH 7155 *Ceratorhiza sp.* Date Accessioned: 6/25/1992
 Isolation Data: ex substrate roots of epiphytic orchid *Campylocentrum micranthum* growing on *Hamelia patens* La Selva, Heredia Prov., Costa Rica Richardson, K. 4 Nov 1991
 Sender: Currah, R.S. K451b
 Strain Characters: mycorrhizae with epiphytic orchid *Campylocentrum micranthum*.
- UAMH 7156 *Ceratorhiza sp.* Date Accessioned: 6/25/1992
 Isolation Data: ex roots of epiphytic orchid *Rodriguezia compacta* growing on *Citrus sp.* La Selva, Heredia Prov., Costa Rica Richardson, K. 4 Nov 1991
 Sender: Currah, R.S. K455a
 Strain Characters: mycorrhizae with orchid *Rodriguezia compacta*.
- UAMH 7157 *Ceratorhiza sp.* Date Accessioned: 6/25/1992
 Isolation Data: ex substrate roots of epiphytic orchid *Campylocentrum micranthum* La Selva, Heredia Prov., Costa Rica Richardson, K. 4 Nov 1991
 Sender: Currah, R.S. K461g
 Strain Characters: mycorrhizae with epiphytic orchid *Campylocentrum micranthum*.
- UAMH 7158 *Ceratorhiza sp.* Date Accessioned: 6/25/1992
 Isolation Data: ex aerial roots of epiphytic orchid *Campylocentrum micranthum* La Selva, Heredia Prov., Costa Rica Richardson, K. 25 Oct 1991
 Sender: Currah, R.S. K385g

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Strain Characters: mycorrhizae with orchid *Campylocentrum micranthum* (Richardson et al, Lindleyana 8:127-137, 1993).

- UAMH 9847 *Ceratorhiza sp.* Date Accessed: 8/25/2000
 Isolation Data: protocorm of one year old Western prairie fringed orchid *Platanthera praeclara* seedling Bicentennial Prairie, Clay County, Minnesota J. Sharma
 Sender: Sharma, J. Bic 70
 Strain Characters: mycorrhizae symbiotic seed germination in orchid *Platanthera praeclara*, initiated germination, higher stage protocorms and some leaf-bearing seedlings: survey of mycobionts of federally threatened orchid *Platanthera praeclara*.
- UAMH 9848 *Ceratorhiza sp.* Date Accessed: 8/25/2000
 Isolation Data: new lateral root, 1-2 year old Western prairie fringed orchid *Platanthera praeclara* seedling Blustem Prairie, Clay County, Minnesota J. Sharma
 Sender: Sharma, J. Blu 86
 Strain Characters: mycorrhizae symbiotic seed germination, successfully initiated germination in seeds of orchid *Platanthera praeclara*: survey of mycobionts of federally threatened orchid *Platanthera praeclara*.
- UAMH 9849 *Ceratorhiza sp.* Date Accessed: 8/25/2000
 Isolation Data: old lateral root, 1-2 year old Western prairie fringed orchid *Platanthera praeclara* seedling LeRoy, Mower County, Minnesota J. Sharma
 Sender: Sharma, J. Ler 94
 Strain Characters: mycorrhizae symbiotic seed germination, successfully initiated germination in seeds of orchid *Platanthera praeclara*.
- UAMH 9858 *Ceratorhiza sp.* Date Accessed: 9/25/2000
 Isolation Data: peloton ex root-like organs in seedling of Eastern prairie fringed orchid (*Platanthera leucophaea*) Wadsworth Prairie, Lake Co., IL L.W. Zettler 07 Jul 1999
 Sender: Zettler, L. Pleu-273
 Strain Characters: mycorrhizae study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011; Zettler LW, Piskin KA, Stewart SC, Hartsock JJ, Bowles ML, Bell TJ, Studies in Mycology 53:163-171, 2005): orchid endophyte *Platanthera leucophaea*.
- UAMH 9859 *Ceratorhiza sp.* Date Accessed: 9/25/2000
 Isolation Data: peloton ex root-like organs in seedling of Eastern prairie fringed orchid (*Platanthera leucophaea*) Wadsworth Prairie, Lake Co., IL L.W. Zettler 07 Jul 1999
 Sender: Zettler, L. Pleu-274
 Strain Characters: mycorrhizae orchid endophyte *Platanthera leucophaea*: study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011).

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- UAMH 10208 *Ceratorhiza sp.* Date Accessed: 8/13/2002
 Isolation Data: ex peloton in root of green-fringed orchid *Platanthera lacera* undisturbed Anderson Prairie, Christian Co. , central Illinois L. Zettler & K. Piskin 7-6-02
 Sender: Zettler, L. III-Plac 297
 Cross Ref. Nos.: Illinois College Herbarium LWZ 861
 Strain Characters: culture conditions grow on cornmeal agar. // Mycorrhizae orchid endophyte *Platanthera lacera*.
- UAMH 10209 *Ceratorhiza sp.* Date Accessed: 8/13/2002
 Isolation Data: ex peloton in root of green-fringed orchid *Platanthera lacera* undisturbed Anderson Prairie, Christian Co. , central Illinois L. Zettler & K. Piskin 7-6-02
 Sender: Zettler, L. III-Plac 298
 Cross Ref. Nos.: Illinois College Herbarium LWZ 861
 Strain Characters: mycorrhizae orchid endophyte *Platanthera leucophaea*.
- UAMH 10215 *Ceratorhiza sp.* Date Accessed: 10/7/2002
 Isolation Data: ex roots of adult green-fringed orchid (*Platanthera lacera*) Denby Prairie, Macoupin Co., IL L. Zettler & K. Piskin 16-6-02
 Sender: Zettler, L. III-Plac 299
 Cross Ref. Nos.: Illinois College Herbarium LWZ 864
 Strain Characters: pigment yellow on PDA. // Mycorrhizae orchid endophyte *Platanthera lacera*.
- UAMH 10216 *Ceratorhiza sp.* Date Accessed: 10/7/2002
 Isolation Data: ex roots of adult green-fringed orchid *Platanthera lacera* Denby Prairie, Macoupin Co., IL L. Zettler & K. Piskin 16-6-02
 Sender: Zettler, L. III-Plac 300
 Cross Ref. Nos.: Illinois College Herbarium LWZ 864
 Strain Characters: pigment yellow on PDA. // Mycorrhizae orchid endophyte *Platanthera lacera*.
- UAMH 10217 *Ceratorhiza sp.* Date Accessed: 10/7/2002
 Isolation Data: ex protocorm of eastern prairie fringed orchid *Platanthera leucophaea* Hildy Prairie, Grundy Co., IL L. Zettler & K. Piskin 1-8-02
 Sender: Zettler, L. III-Pleu 305
 Strain Characters: mycorrhizae orchid endophyte *Platanthera leucophaea*: study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011; Zettler LW, Piskin KA, Stewart SC, Hartsock JJ, Bowles ML, Bell TJ, Studies in Mycology 53:163-171, 2005).
- UAMH 10218 *Ceratorhiza sp.* Date Accessed: 10/7/2002
 Isolation Data: ex protocorm of eastern prairie fringed orchid *Platanthera leucophaea* Hildy Prairie, Grundy Co., IL L. Zettler & K. Piskin 1-8-02
 Sender: Zettler, L. III-Pleu 306
 Strain Characters: mycorrhizae orchid endophyte *Platanthera leucophaea*: study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011; Zettler LW, Piskin KA, Stewart SC, Hartsock JJ, Bowles ML, Bell TJ, Studies in Mycology 53:163-171, 2005).

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- UAMH 10457 *Ceratorhiza sp.* Date Accessed: 8/9/2004
 Isolation Data: peloton of orchid *Platanthera leucophaea* protocorm (Stage 4) recovered from seed bait packet Anderson Prairie, Christian County Illinois L.W. Zettler Jun22, 2004
 Sender: Zettler, L. ILL-Pleu-313
 Strain Characters: mycorrhizae orchid endophyte *Platanthera leucophaea*: study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011).
- UAMH 10498 *Ceratorhiza sp.* Date Accessed: 10/25/2004
 Isolation Data: hyphal tips ex peloton; protocorm of eastern prairie fringed orchid *Platanthera leucophaea* acquired via seed packets sowed Jul 2002 Denby Prairie (state owned), Macoupin Co., Illinois L. Zettler 21-7-04
 Sender: Zettler, L. 314
 Strain Characters: mycorrhizae isolate from lateral (branch) root of a Stage 5 seedling (shoot-bearing) of orchid *Platanthera leucophaea*: study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011): orchid endophyte.
- UAMH 10499 *Ceratorhiza sp.* Date Accessed: 10/25/2004
 Isolation Data: hyphal tips ex peloton in protocorm of eastern prairie fringed orchid *Platanthera leucophaea* acquired via seed packets sowed Jul 2002 Denby Prairie (state owned), Macoupin Co., Illinois L. Zettler 21-7-04
 Sender: Zettler, L. 315
 Strain Characters: mycorrhizae study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011): isolated from lateral (branch) root of a Stage 5 seedling (shoot-bearing) of *Platanthera leucophaea*: orchid endophyte *Platanthera leucophaea*.
- UAMH 10500 *Ceratorhiza sp.* Date Accessed: 10/25/2004
 Isolation Data: hyphal tips ex peloton; Stage 4 protocorm of eastern prairie fringed orchid *Platanthera leucophaea* acquired via seed packets sowed Jul 2002 Denby Prairie (state owned), Macoupin Co., Illinois L. Zettler 21-JUL-2004
 Sender: Zettler, L. 316
 Strain Characters: mycorrhizae orchid endophyte *Platanthera leucophaea*: study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011).
- UAMH 10755 *Ceratorhiza sp.* Date Accessed: 11/7/2006
 Isolation Data: ex hyphal tip from peloton in lateral root tip of Eatons ladyies tresses orchid *Spiranthes eatonii* Levy County, FL W. Kutosky & L.W. Zettler 26-Nov-2005
 Sender: Zettler, L. 335
 Strain Characters: mycorrhizae orchid endophyte *Spiranthes eatonii*.
- UAMH 10756 *Ceratorhiza sp.* Date Accessed: 11/7/2006
 Isolation Data: ex hyphal tip from peloton in lateral root tip of Eatons ladyies tresses orchid *Spiranthes eatonii* Site 22, Clay Co., FL W. Kutosky & L.W. Zettler 26-Nov-2005
 Sender: Zettler, L. 336

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Strain Characters: mycorrhizae orchid endophyte *Spiranthes eatonii*.

- UAMH 10757 *Ceratorhiza sp.* Date Accessed: 11/7/2006
 Isolation Data: ex hyphal tip from peloton in lateral root tip of Eatons ladies tresses orchid *Spiranthes eatonii*
 Levy County, FL W. Kutosky & L.W. Zettler 26-Nov-2005
 Sender: Zettler, L. 337
 Strain Characters: mycorrhizae orchid endophyte *Spiranthes eatonii*.
- UAMH 10791 *Ceratorhiza sp.* Date Accessed: 3/21/2007
 Isolation Data: ex roots Florida terrestrial orchid *Spiranthes floridana* (Florida ladies tresses) Bradford Co., FL
 S.L. Stewart 28-Apr-2003
 Sender: Stewart, S.L. FL-Sflo-305
 Strain Characters: mycorrhizae symbiotic seed germination of orchid *Spiranthes floridana*: orchid endophyte
Spiranthes floridana.
- UAMH 10792 *Ceratorhiza sp.* Date Accessed: 3/21/2007
 Isolation Data: ex roots Florida terrestrial orchid *Spiranthes floridana* (Florida ladies tresses) Bradford Co., FL
 S.L. Stewart 28/04/2003
 Sender: Stewart, S.L. FL-Sflo-306
 Strain Characters: mycorrhizae symbiotic seed germination of orchid *Spiranthes floridana*: orchid endophyte
Spiranthes floridana.
- UAMH 10793 *Ceratorhiza sp.* Date Accessed: 3/21/2007
 Isolation Data: ex roots Florida terrestrial orchid *Spiranthes floridana* (Florida ladies tresses) Bradford Co., FL
 S.L. Stewart 25-Apr-03
 Sender: Stewart, S.L. FL-Sflo-308
 Strain Characters: mycorrhizae symbiotic seed germination of orchid *Spiranthes floridana*: orchid endophyte
Spiranthes floridana.
- UAMH 10794 *Ceratorhiza sp.* Date Accessed: 3/21/2007
 Isolation Data: ex roots Florida terrestrial orchid *Habenaria macroceratitis* (Long-horned false rein orchid)
 Sumter Co., FL S.L. Stewart 02-Jul-04
 Sender: Stewart, S.L. FL-Hmac-315
 Strain Characters: pigment dark brown. // Mycorrhizae orchid endophyte *Habenaria macroceratitis*.
- UAMH 10795 *Ceratorhiza sp.* Date Accessed: 3/21/2007
 Isolation Data: ex roots Florida terrestrial orchid *Habenaria macroceratitis* (Long-horned false rein orchid)
 Sumter Co., FL S.L. Stewart 02-Jul-04
 Sender: Stewart, S.L. FL-Hmac-316
 Strain Characters: pigment dark brown. // Mycorrhizae orchid endophyte *Habenaria macroceratitis*.
- UAMH 10796 *Ceratorhiza sp.* Date Accessed: 3/21/2007
 Isolation Data: ex roots Florida terrestrial orchid *Habenaria macroceratitis* (Long-horned false rein orchid)
 Sumter Co., FL S.L. Stewart 02-Jul-04
 Sender: Stewart, S.L. FL-Hmac-317

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Strain Characters: pigment dark brown. // Mycorrhizae orchid endophyte *Habenaria macroceratitis*.

- UAMH 10797 *Ceratorhiza sp.* Date Accessioned: 3/21/2007
 Isolation Data: ex roots Florida terrestrial orchid *Spiranthes floridana* (Florida ladies tresses) Duval Co., FL
 S.L. Stewart 02-Apr-06
 Sender: Stewart, S.L. FL-Sflo-398
 Strain Characters: mycorrhizae orchid endophyte *Spiranthes floridana*.
- UAMH 10798 *Ceratorhiza sp.* Date Accessioned: 3/21/2007
 Isolation Data: ex roots Florida terrestrial orchid *Spiranthes floridana* (Florida ladies tresses) Duval Co., FL
 S.L. Stewart 02-Apr-06
 Sender: Stewart, S.L. FL-Sflo-399
 Strain Characters: mycorrhizae orchid endophyte *Spiranthes floridana*.
- UAMH 10799 *Ceratorhiza sp.* Date Accessioned: 3/21/2007
 Isolation Data: ex seedling Florida terrestrial orchid *Spiranthes floridana* (Florida ladies tresses) Duval Co.,
 FL S.L. Stewart 02-Apr-06
 Sender: Stewart, S.L. FL-Sflo-400
 Strain Characters: mycorrhizae orchid endophyte *Spiranthes floridana*.
- UAMH 10800 *Ceratorhiza sp.* Date Accessioned: 3/21/2007
 Isolation Data: ex roots Florida terrestrial orchid *Spiranthes floridana* (Florida ladies tresses) Duval Co., FL
 S.L. Stewart 02-Apr-06
 Sender: Stewart, S.L. FL-Sflo-401
 Strain Characters: mycorrhizae symbiotic seed germination of *Habenaria macroceratitis*: orchid endophyte
Spiranthes floridana.
- UAMH 10974 *Ceratorhiza sp.* Date Accessioned: 3/10/2009
 Isolation Data: ex hyphal tip of single peloton from root of mature Eastern prairie fringed orchid *Platanthera*
leucophaea Nachusa Grasslands, Ogle Co., IL K. Piskin 30-Jul-2007
 Sender: Zettler, L. NG-002
 Strain Characters: mycorrhizae orchid endophyte *Platanthera leucophaea*: study of symbiotic germination orchid
 seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am
 Midl Nat 166:29-39, 2011). // Culture conditions isolated from different pelotons from one
 mature *Platanthera leucophaea* orchid specimen (UAMH 10974 to 10978). // Biodiversity
 prairie grasslands (fide L.W. Zettler).
- UAMH 10975 *Ceratorhiza sp.* Date Accessioned: 3/10/2009
 Isolation Data: ex hyphal tip of single peloton from root of mature Eastern prairie fringed orchid *Platanthera*
leucophaea Nachusa Grasslands, Ogle Co., IL K. Piskin 30-Jul-2007
 Sender: Zettler, L. NG-003
 Strain Characters: mycorrhizae orchid endophyte *Platanthera leucophaea*: study of symbiotic germination orchid
 seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am
 Midl Nat 166:29-39, 2011). // Culture conditions isolated from different pelotons from one
 mature *Platanthera leucophaea* orchid specimen (UAMH 10974 to 10978). // Biodiversity
 prairie grasslands (fide L.W. Zettler).

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- UAMH 10976 *Ceratorhiza sp.* Date Accessed: 3/10/2009
 Isolation Data: ex hyphal tip of peloton from root of mature Eastern prairie fringed orchid *Platanthera leucophaea* Nachusa Grasslands, Ogle Co., IL K. Piskin 30-Jul-2007
 Sender: Zettler, L. NG-004
 Strain Characters: biodiversity prairie grasslands. // Culture conditions isolated from different pelotons from one mature *Platanthera leucophaea* orchid specimen (UAMH 10974 to 10978). // Mycorrhizae orchid endophyte *Platanthera leucophaea*: study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011).
- UAMH 10977 *Ceratorhiza sp.* Date Accessed: 3/10/2009
 Isolation Data: ex hyphal tip of peloton from root of mature Eastern prairie fringed orchid *Platanthera leucophaea* Nachusa Grasslands, Ogle Co., IL K. Piskin 30-Jul-2007
 Sender: Zettler, L. NG-005
 Strain Characters: biodiversity prairie grasslands. // Culture conditions isolated from different pelotons from one mature *Platanthera leucophaea* orchid specimen (UAMH 10974 to 10978). // Mycorrhizae orchid endophyte *Platanthera leucophaea* (fide L.W. Zettler): study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011).
- UAMH 10978 *Ceratorhiza sp.* Date Accessed: 3/10/2009
 Isolation Data: ex hyphal tip of peloton from root of mature Eastern prairie fringed orchid *Platanthera leucophaea* Nachusa Grasslands, Ogle Co., IL K. Piskin 26-Nov-2007
 Sender: Zettler, L. NG-006
 Strain Characters: biodiversity prairie grasslands. // Culture conditions isolated from different pelotons from one mature *Platanthera leucophaea* orchid specimen (UAMH 10974 to 10978). // Mycorrhizae orchid endophyte *Platanthera leucophaea*: study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011).
- UAMH 10979 *Ceratorhiza sp.* Date Accessed: 3/10/2009
 Isolation Data: ex hyphal tip of peloton from root of mature Eastern prairie fringed orchid *Platanthera leucophaea* in area dominated by sedges and cattails Grant Creek Prairie, Will Co., IL K. Piskin 26-Nov-2007
 Sender: Zettler, L. GC-007
 Strain Characters: biodiversity. // Culture conditions isolated from different pelotons from one mature *Platanthera leucophaea* orchid specimen (UAMH 10979 to 10980). // Mycorrhizae orchid endophyte *Platanthera leucophaea*: study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011).
- UAMH 10980 *Ceratorhiza sp.* Date Accessed: 3/10/2009
 Isolation Data: ex hyphal tip of peloton in root of mature Eastern prairie fringed orchid *Platanthera leucophaea* in area dominated by sedges and cattails Grant Creek Prairie, Will Co., IL K. Piskin 21-Aug-2007
 Sender: Zettler, L. GC-008

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Strain Characters: biodiversity prairie grasslands. // Culture conditions isolated from different pelotons from one mature *Platanthera leucophaea* orchid specimen (UAMH 10979 to 10980). // Mycorrhizae isolated from different pelotons from one mature *Platanthera leucophaea* orchid specimen (UAMH 10979 to 10980): study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011).

UAMH 10981 *Ceratorhiza sp.* Date Accessioned: 3/10/2009
 Isolation Data: ex hyphal tip of peloton from root of mature Eastern prairie fringed orchid *Platanthera leucophaea* Somme Prairie Grove, Cook Co., IL K. Piskin 26-Nov-2007
 Sender: Zettler, L. SG-009
 Strain Characters: biodiversity prairie grasslands. // Culture conditions isolated from different pelotons from one mature *Platanthera leucophaea* orchid specimen (UAMH 10981to 10990). // Mycorrhizae orchid endophyte *Platanthera leucophaea*: study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011).

UAMH 10982 *Ceratorhiza sp.* Date Accessioned: 3/10/2009
 Isolation Data: ex hyphal tip of peloton from root of mature Eastern prairie fringed orchid *Platanthera leucophaea* Somme Prairie Grove, Cook Co., IL K. Piskin 26-Nov-2007
 Sender: Zettler, L. SG-010
 Strain Characters: biodiversity prairie grasslands. // Culture conditions isolated from different pelotons from one mature *Platanthera leucophaea* orchid specimen (UAMH 10981to 10990). // Mycorrhizae orchid endophyte *Platanthera leucophaea*: study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011).

UAMH 10983 *Ceratorhiza sp.* Date Accessioned: 3/10/2009
 Isolation Data: ex hyphal tip of peloton from root of mature Eastern prairie fringed orchid *Platanthera leucophaea* Somme Prairie Grove, Cook Co., IL K. Piskin 19-Dec-2007
 Sender: Zettler, L. SG-011
 Strain Characters: culture conditions isolated from different pelotons from one mature *Platanthera leucophaea* orchid specimen (UAMH 10981to 10990). // Biodiversity prairie grasslands. // Mycorrhizae orchid endophyte *Platanthera leucophaea*: study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011).

UAMH 10984 *Ceratorhiza sp.* Date Accessioned: 3/10/2009
 Isolation Data: ex hyphal tip of peloton from root of mature Eastern prairie fringed orchid *Platanthera leucophaea* Somme Prairie Grove, Cook Co.,IL K. Piskin 19-Dec-2007
 Sender: Zettler, L. SG-012
 Strain Characters: biodiversity prairie grasslands. // Culture conditions isolated from different pelotons from one mature *Platanthera leucophaea* orchid specimen (UAMH 10981to 10990). // Mycorrhizae orchid endophyte *Platanthera leucophaea*: study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011).

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- UAMH 10985 *Ceratorhiza sp.* Date Accessed: 3/10/2009
 Isolation Data: ex hyphal tip of peloton from root of mature Eastern prairie fringed orchid *Platanthera leucophaea* Somme Prairie Grove, Cook Co., IL K. Piskin 26-Feb-2008
 Sender: Zettler, L. SG-013
 Strain Characters: biodiversity prairie grasslands. // Culture conditions isolated from different pelotons from one mature *Platanthera leucophaea* orchid specimen (UAMH 10981to 10990). // Mycorrhizae orchid endophyte *Platanthera leucophaea*: study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011).
- UAMH 10986 *Ceratorhiza sp.* Date Accessed: 3/10/2009
 Isolation Data: ex hyphal tip of peloton from root of mature Eastern prairie fringed orchid *Platanthera leucophaea* Somme Prairie Grove, Cook Co., IL K. Piskin 26-Feb-2008
 Sender: Zettler, L. SG-014
 Strain Characters: biodiversity prairie grasslands. // Culture conditions isolated from different pelotons from one mature *Platanthera leucophaea* orchid specimen (UAMH 10981to 10990). // Mycorrhizae orchid endophyte *Platanthera leucophaea*: study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011).
- UAMH 10987 *Ceratorhiza sp.* Date Accessed: 3/10/2009
 Isolation Data: ex hyphal tip of peloton from root of mature Eastern prairie fringed orchid *Platanthera leucophaea* Somme Prairie Grove, Cook Co., IL K. Piskin 26-Feb-2008
 Sender: Zettler, L. SG-015
 Strain Characters: biodiversity prairie grasslands (fide L.W. Zettler). // Culture conditions isolated from different pelotons from one mature *Platanthera leucophaea* orchid specimen (UAMH 10981to 10990). // Mycorrhizae orchid endophyte *Platanthera leucophaea*: study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011).
- UAMH 10988 *Ceratorhiza sp.* Date Accessed: 3/10/2009
 Isolation Data: ex hyphal tip of peloton from root of mature Eastern prairie fringed orchid *Platanthera leucophaea* Somme Prairie Grove, Cook Co., IL K. Piskin 27-Feb-2008
 Sender: Zettler, L. SG-016
 Strain Characters: biodiversity prairie grasslands. // Culture conditions isolated from different pelotons from one mature *Platanthera leucophaea* orchid specimen (UAMH 10981to 10990). // Mycorrhizae orchid endophyte *Platanthera leucophaea*: study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011).
- UAMH 10989 *Ceratorhiza sp.* Date Accessed: 3/10/2009
 Isolation Data: ex hyphal tip of peloton from root of mature Eastern prairie fringed orchid *Platanthera leucophaea* Somme Prairie Grove, Cook Co., IL K. Piskin 27-Feb-2008
 Sender: Zettler, L. SG-017

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Strain Characters: biodiversity prairie grasslands. // Culture conditions isolated from different pelotons from one mature *Platanthera leucophaea* orchid specimen (UAMH 10979 to 10980). // Mycorrhizae orchid endophyte *Platanthera leucophaea*: study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011).

UAMH 10990 *Ceratorhiza sp.* Date Accessed: 3/10/2009
 Isolation Data: ex root of mature Eastern prairie fringed orchid *Platanthera leucophaea* Somme Prairie Grove, Cook Co., IL K. Piskin 27-Feb-2008
 Sender: Zettler, L. SG-018
 Strain Characters: biodiversity prairie grasslands. // Culture conditions isolated from different pelotons from one mature *Platanthera leucophaea* orchid specimen (UAMH 10981 to 10990). // Mycorrhizae orchid endophyte *Platanthera leucophaea*: study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zetter LW, Piskin KA, Am Midl Nat 166:29-39, 2011).

UAMH 11011 *Ceratorhiza sp.* Date Accessed: 3/20/2009
 Isolation Data: ex hyphal tip of peloton from root of mature Eastern prairie fringed orchid *Platanthera leucophaea* Nachusa Grasslands, Ogle Co., IL K. Piskin 30-Jul-2007
 Sender: Zettler, L. NG-001
 Strain Characters: mycorrhizae orchid endophyte *Platanthera leucophaea*: study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011). // Culture conditions isolated from different pelotons from one mature *Platanthera leucophaea* orchid specimen (UAMH 10974 to 10978). // Biodiversity prairie grasslands (fide L.W. Zettler).

UAMH 11544 *Ceratorhiza sp.* Date Accessed: 9/13/2011
 Isolation Data: ex cortical region of root (not peloton) of mature Eastern prairie fringed orchid *Platanthera leucophaea* (specimen #5588) that had flowered Abbott Labs /Wrigley population of *P. leucophaea* (U.S. Federally listed as threatened), Lake Co., IL (C) L.W. Zettler with D. Spittlemeister 5-Aug-2011
 Sender: Zettler, L. 356
 Strain Characters: mycorrhizae orchid endophyte *Platanthera leucophaea*.

UAMH 11545 *Ceratorhiza sp.* Date Accessed: 9/13/2011
 Isolation Data: ex peloton in root from mature Eastern prairie fringed orchid *Platanthera leucophaea* (specimen #5509) that had flowered Abbott Labs /Wrigley population of *P. leucophaea* (U.S. Federally listed as threatened), Lake Co., IL (C) L.W. Zettler with D. Spittlemeister 5-Aug-2011
 Sender: Zettler, L. 357
 Strain Characters: mycorrhizae orchid endophyte *Platanthera leucophaea*.

UAMH 11546 *Ceratorhiza sp.* Date Accessed: 9/13/2011
 Isolation Data: ex peloton in root from mature Eastern prairie fringed orchid *Platanthera leucophaea* (specimen #5291) that had flowered Swift Prairie, DuPage Co., IL L.W. Zettler with C. Pollack (USFWS) 5-Aug-2011
 Sender: Zettler, L. 358
 Strain Characters: mycorrhizae orchid endophyte *Platanthera leucophaea*.

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- UAMH 11547 *Ceratorhiza sp.* Date Accessioned: 9/13/2011
 Isolation Data: ex different peloton in root of same mature Eastern prairie fringed orchid *Platanthera leucophaea* (specimen #5291) that had flowered Swift Prairie, DuPage Co., IL L.W. Zettler with C. Pollack (USFWS) 5-Aug-2011
 Sender: Zettler, L. 359
 Strain Characters: mycorrhizae orchid endophyte *Platanthera leucophaea*.
- UAMH 11548 *Ceratorhiza sp.* Date Accessioned: 9/13/2011
 Isolation Data: ex peloton in root of mature Eastern prairie fringed orchid *Platanthera leucophaea* (specimen #5568) that had flowered Abbott Labs /Wrigley population of *P. leucophaea* (U.S. Federally listed as threatened), Lake Co., IL (C) L.W. Zettler with D. Spittlemeister 5-Aug-2011
 Sender: Zettler, L. 360
 Strain Characters: mycorrhizae orchid endophyte *Platanthera leucophaea*.
- UAMH 11549 *Ceratorhiza sp.* Date Accessioned: 9/13/2011
 Isolation Data: ex peloton in root of mature Eastern prairie fringed orchid *Platanthera leucophaea* specimen (#5568) that had flowered Abbott Labs /Wrigley population of *P. leucophaea* (U.S. Federally listed as threatened), Lake Co., IL (C) L.W. Zettler with D. Spittlemeister 5-Aug-2011
 Sender: Zettler, L. 361
 Strain Characters: mycorrhizae orchid endophyte *Platanthera leucophaea*.
- UAMH 11572 *Ceratorhiza sp.* Date Accessioned: 10/11/2011
 Isolation Data: ex peloton in root of necrotic mature orchid *Platanthera leucophaea* Chiwaukee Prairie, Sign Site, Kenosha Co., WI (C) L.W. Zettler & L. Artiomow 21 Aug-2011
 Sender: Zettler, L. 362
 Strain Characters: mycorrhizae orchid endophyte *Platanthera leucophaea*.
- UAMH 11573 *Ceratorhiza sp.* Date Accessioned: 10/11/2011
 Isolation Data: ex peloton in root of necrotic mature orchid *Platanthera leucophaea* Chiwaukee Prairie, Sign Site, Kenosha Co., WI (C) L.W. Zettler & L. Artiomow 21 Aug-2011
 Sender: Zettler, L. 363
 Strain Characters: mycorrhizae orchid endophyte *Platanthera leucophaea*.
- UAMH 11574 *Ceratorhiza sp.* Date Accessioned: 10/11/2011
 Isolation Data: ex cortical region of root from orchid *Platanthera leucophaea* (specimen #11087) Lyons Woods, Lake Co., IL (C) L.W. Zettler, D. Maurer, N. Huber 22-Aug-2011
 Sender: Zettler, L. 364
 Strain Characters: mycorrhizae orchid endophyte *Platanthera leucophaea*.
- UAMH 11575 *Ceratorhiza sp.* Date Accessioned: 10/11/2011
 Isolation Data: ex cortical region of root from orchid *Platanthera leucophaea* (specimen #11087) Lyons Woods, Lake Co., IL (C) L.W. Zettler, D. Maurer, N. Huber 22-Aug-2011
 Sender: Zettler, L. 365
 Strain Characters: mycorrhizae orchid endophyte *Platanthera leucophaea*.

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- UAMH 11576 *Ceratorhiza sp.* Date Accessioned: 10/11/2011
 Isolation Data: ex cortical region of root from orchid *Platanthera leucophaea* (specimen #11126) Lyons Woods, Lake Co., IL (C) L.W. Zettler, D. Maurer, N. Huber 22-Aug-2011
 Sender: Zettler, L. 366
 Strain Characters: mycorrhizae orchid endophyte *Platanthera leucophaea*.
- UAMH 11577 *Ceratorhiza sp.* Date Accessioned: 10/11/2011
 Isolation Data: ex cortical region of root from orchid *Platanthera leucophaea* (specimen #11126) Lyons Woods, Lake Co., IL (C) L.W. Zettler, D. Maurer, N. Huber 22-Aug-2011
 Sender: Zettler, L. 367
 Strain Characters: mycorrhizae orchid endophyte *Platanthera leucophaea*.
- UAMH 11578 *Ceratorhiza sp.* Date Accessioned: 10/11/2011
 Isolation Data: ex peloton in root of orchid *Platanthera leucophaea* Unionville (USFWS area), Tuscola Co., MI (C) K.R. Kucher & Z.M. Gilna 29-Aug-2011
 Sender: Zettler, L. 370
 Strain Characters: mycorrhizae orchid endophyte *Platanthera leucophaea*.
- UAMH 11579 *Ceratorhiza sp.* Date Accessioned: 10/11/2011
 Isolation Data: ex peloton in root of orchid *Platanthera leucophaea* Unionville (USFWS area), Tuscola Co., MI (C) K.R. Kucher & Z.M. Gilna 29-Aug-2011
 Sender: Zettler, L. 371
 Strain Characters: mycorrhizae orchid endophyte *Platanthera leucophaea*.
- UAMH 6445 *Epulorhiza albertaensis* Date Accessioned: 6/21/1989
 Type *Epulorhiza albertaensis*
 Isolation Data: endophyte of round-leaved orchid *Platanthera orbiculata* Edson Forest, Alta. R. Currah (248b) 3 Jun 1987
 Cross Ref. Nos.: CBS 276.90
 Strain Characters: mycorrhizae with orchid *Platanthera orbiculata*.
- UAMH 5428 *Epulorhiza anaticula* Date Accessioned: 9/15/1986
 Isolation Data: ex fairy slipper orchid *Calypso bulbosa* Swan Hills, Alta. R. Currah (11e) 4 Jun 1985
 Cross Ref. Nos.: ATCC 64842 = IMI 318089 = GenBank AF345559 = GenBank AY243520 (SSU)
 Strain Characters: mycorrhizae septum structure of orchid endophytes (Currah & Sherburne, Mycol. Res. 96:583-587, 1992). // Molecular systematics orchid mycorrhizal fungi (Kristiansen KA, Taylor DL, Kjoller R, Rasmussen N, Rosendahl S, Molecular Ecology 10:2089-2093, 2001; Taylor DL, McCormick MK, New Phytologist 177:1020-1033, 2008): Tulasnella clade (Taylor DL, McCormick MK, New Phytologist 177:1020-1033, 2008).
- UAMH 5431 *Epulorhiza anaticula* Date Accessioned: 9/15/1986
 Isolation Data: ex white bog orchid *Platanthera dilatata* Castle River, Alta. R. Currah (56a) 20 Jun 1985
 Strain Characters: mycorrhizae orchid endophyte *Platanthera dilatata*.

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Strain Characters: mycorrhizae with orchid *Amerorchis rotundifolia*. // Molecular systematics orchid mycorrhizal fungi (Lievens B, van Kerckhove S, Justé A, Cammue BP, Honnay O, Jacquemyn H, J Microbiol Methods 80(1):76-85, 2010).

UAMH 7784 *Epulorhiza calendulina*

Date Accessed: 12/21/1994

Isolation Data: ex pelotons in root cortical cells of small round-leaf orchid *Amerorchis rotundifolia* (Orchidaceae) Calahoo, Alta. C. Zelmer 7 Jul 1991

Sender: Currah, R.S. Z25-orh-a

Strain Characters: mycorrhizae with orchid *Amerorchis rotundifolia*. // Cellulolytic. // Molecular systematics orchid mycorrhizal fungi (Lievens B, van Kerckhove S, Justé A, Cammue BP, Honnay O, Jacquemyn H, J Microbiol Methods 80(1):76-85, 2010).

UAMH 7785 *Epulorhiza calendulina*

Date Accessed: 12/21/1994

Isolation Data: ex pelotons in root cortical cells of orchid *Amerorchis rotundifolia* (Orchidaceae) Calahoo, Alta. C. Zelmer 7 Jul 1991

Sender: Currah, R.S. Z26-orh-2a

Strain Characters: mycorrhizae with orchid *Amerorchis rotundifolia* (Zelmer & Currah, Can. J. Bot. 73:1981-1985, 1995).

UAMH 7632 *Epulorhiza inquilina*

Date Accessed: 8/25/1994

Type *Epulorhiza inquilina*

Isolation Data: lateral roots (non-tuberous) of terrestrial monkey face orchid *Platanthera integrilabia*, part of small population (ca.50) on muck soil on shaded S-facing seepage slope Pinnacle Mountain, Greenville Co., South Carolina L. Zettler 29 Apr 1989

Sender: Zettler, L. Pi-70

Strain Characters: mycorrhizae orchid endophyte *Platanthera integrilabia*: very effective at promoting seed germination and propagation of orchid *Platanthera integrilabia*. // Benomyl sensitive. // Cycloheximide sensitive. // Culture conditions use of light & fungal inoculation to stimulate germination & growth of seedlings (Zettler & McInnis Plant Sci. 102:133-138, 1994).

UAMH 7807 *Epulorhiza inquilina*

Date Accessed: 1/16/1995

Isolation Data: lateral (non-tuberous) roots of monkey face orchid *Platanthera integrilabia* in a small population Savage Gulf State Natural Area, Grundy Co., Tennessee L. Zettler 20 May 1989

Sender: Zettler, L. Pi-89

Strain Characters: mycorrhizae very effective at promoting seed germination and soil establishment of orchid *Platanthera integrilabia*: orchid endophyte *Platanthera integrilabia*. // Culture conditions use of light & fungal inoculation to stimulate germination & growth of seedlings (Zettler & McInnis Plant Sci. 102:133-138, 1994).

UAMH 7808 *Epulorhiza inquilina*

Date Accessed: 1/16/1995

Isolation Data: lateral (non-tuberous) roots of monkey face orchid *Platanthera integrilabia* in a small population Savage Gulf State Natural Area, Grundy Co., Tennessee L. Zettler 20 May 1989

Sender: Zettler, L. Pi-93

Strain Characters: mycorrhizae very effective at promoting seed germination and soil establishment of orchid *Platanthera integrilabia*: orchid endophyte *Platanthera integrilabia*.

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- UAMH 5430 *Epulorhiza repens* Date Accessed: 11/24/1986
 Isolation Data: ex blunt-leaved orchid *Platanthera obtusata* Grassi L., Canmore, Alta. R. Currah (62a4) 19 Jun 1985
 Cross Ref. Nos.: ATCC 64844 = IMI 318090
 Strain Characters: mycorrhizae septum structure of orchid endophytes (Currah & Sherburne, Mycol. Res. 96:583-587, 1992). // Molecular systematics orchid mycorrhizal fungi (Taylor DL, McCormick MK, New Phytologist 177:1020-1033, 2008).
- UAMH 5746 *Epulorhiza repens* Date Accessed: 4/28/1987
 Isolation Data: ex green-winged orchid *Orchis morio* P. Vermeulen
 Sender: CBS CBS 297.32
 Cross Ref. Nos.: ATCC 24975
 Strain Characters: mycorrhizae orchid endophyte *Orchis morio*.
- UAMH 6095 *Epulorhiza repens* Date Accessed: 5/11/1988
 Isolation Data: endophyte ex orchid *Dactylorhiza maculata* Netherlands E. Dijk
 Sender: Dijk, E. DMC3
 Strain Characters: molecular systematics orchid mycorrhizal fungi (Lievens B, van Kerckhove S, Justé A, Cammue BP, Honnay O, Jacquemyn H, J Microbiol Methods 80(1):76-85, 2010). // Mycorrhizae orchid endophyte *Dactylorhiza maculata*.
- UAMH 6096 *Epulorhiza repens* Date Accessed: 5/11/1988
 Isolation Data: endophyte ex orchid *Dactylorhiza majalis* Netherlands E. Dijk
 Sender: Dijk, E. DMJ9
 Strain Characters: molecular systematics orchid mycorrhizal fungi (Lievens B, van Kerckhove S, Justé A, Cammue BP, Honnay O, Jacquemyn H, J Microbiol Methods 80(1):76-85, 2010). // Mycorrhizae orchid endophyte *Dactylorhiza majalis*.
- UAMH 6097 *Epulorhiza repens* Date Accessed: 5/11/1988
 Isolation Data: endophyte ex green-winged orchid *Orchis morio* Netherlands E. Dijk
 Sender: Dijk, E. OMR07
 Strain Characters: molecular systematics orchid mycorrhizal fungi (Lievens B, van Kerckhove S, Justé A, Cammue BP, Honnay O, Jacquemyn H, J Microbiol Methods 80(1):76-85, 2010). // Mycorrhizae orchid endophyte *Orchis morio*.
- UAMH 6564 *Epulorhiza repens* Date Accessed: 1/31/1990
 Isolation Data: endophyte ex Cases ladies tresses orchid *Spiranthes caseii* growing in sphagnum with *Scirpus hudsonianus*, *Pogonia oplioglossoides*, *Calopogon tuberosa* & *Sedum groenlandica* Mount Forest bog, Wellington Co., Minto Twp., Ont. A. Anderson 30 Aug 1989
 Sender: Anderson, A.
 Strain Characters: molecular systematics orchid mycorrhizal fungi (Lievens B, van Kerckhove S, Justé A, Cammue BP, Honnay O, Jacquemyn H, J Microbiol Methods 80(1):76-85, 2010). // Mycorrhizae orchid endophyte *Spiranthes caseii*.

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- UAMH 6565 *Epulorhiza repens* Date Accessed: 1/31/1990
 Isolation Data: endophyte ex Great Plains ladies tresses orchid *Spiranthes magnicamporum*, mixed *S. magnicamporum* (many) & *S. cernua* (few) in moist areas of dry stony field with grasses Muirkirk, Ont. A. Anderson 19 Sep 1989
 Sender: Anderson, A.
 Strain Characters: mycorrhizae orchid endophyte *Spiranthes magnicamporum*.
- UAMH 8562 *Epulorhiza repens* Date Accessed: 7/9/1996[ID?]
 Isolation Data: roots Northern slender ladies tresses orchid *Spiranthes lacera* (Orchidaceae) Whiteshell Provincial Forest, Manitoba C. Zelmer 12 Aug 1991
 Sender: Currah, R.S. Z63-nr-1b(1)
 Strain Characters: mycorrhizae naturally occurring endophyte in true and tuberous roots of orchid *Spiranthes lacera*. // Cellulolytic by tube test (Zelmer & Currah, Lindleyana 12:142-148, 1997).
- UAMH 8563 *Epulorhiza repens* Date Accessed: 7/9/1996[ID?]
 Isolation Data: roots Northern slender ladies tresses orchid *Spiranthes lacera* (Orchidaceae) Whiteshell Provincial Forest, Manitoba C. Zelmer 12 Aug 1991
 Sender: Currah, R.S. Z63-nr-2c(2)
 Strain Characters: mycorrhizae naturally occurring endophyte in true and tuberous roots of orchid *Spiranthes lacera*. // Cellulolytic by tube test (Zelmer & Currah, Lindleyana 12:142-148, 1997).
- UAMH 8564 *Epulorhiza repens* Date Accessed: 7/9/1996[ID?]
 Isolation Data: roots Northern slender ladies tresses orchid *Spiranthes lacera* (Orchidaceae) Whiteshell Provincial Forest, Manitoba C. Zelmer 12 Aug 1991
 Sender: Currah, R.S. Z63-nr-3a(1)
 Strain Characters: mycorrhizae naturally occurring endophyte in true and tuberous roots of orchid *Spiranthes lacera*. // Cellulolytic by tube test (Zelmer & Currah, Lindleyana 12:142-148, 1997).
- UAMH 8565 *Epulorhiza repens* Date Accessed: 7/9/1996[ID?]
 Isolation Data: roots Northern slender ladies tresses orchid *Spiranthes lacera* (Orchidaceae) Whiteshell Provincial Forest, Manitoba C. Zelmer 12 Aug 1991
 Sender: Currah, R.S. Z63-nr-3a(2)
 Strain Characters: mycorrhizae naturally occurring endophyte in true and tuberous roots of orchid *Spiranthes lacera*. // Cellulolytic by tube test (Zelmer & Currah, Lindleyana 12:142-148, 1997).
- UAMH 8566 *Epulorhiza repens* Date Accessed: 7/9/1996[ID?]
 Isolation Data: roots Northern slender ladies tresses orchid *Spiranthes lacera* (Orchidaceae) Whiteshell Provincial Forest, Manitoba C. Zelmer 12 Aug 1991
 Sender: Currah, R.S. Z65-NR-a(2)
 Strain Characters: mycorrhizae naturally occurring endophyte in true and tuberous roots of orchid *Spiranthes lacera*: by tube test (Zelmer & Currah, Lindleyana 12:142-148, 1997). // Cellulolytic.
- UAMH 5427 *Epulorhiza sp.* Date Accessed: 9/15/1986
 Isolation Data: ex fairy slipper orchid orchid *Calypso bulbosa* Swan Hills, Alta. R. Currah (11d) 4 Jun 1985
 Strain Characters: mycorrhizae orchid endophyte *Calypso bulbosa*.

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- UAMH 5429 *Epulorhiza sp.* Date Accessed: 9/15/1986
 Isolation Data: ex fairy slipper orchid *Calypso bulbosa* Castle River, Alta. R. Currah (33b) 19 Jun 1985
 Strain Characters: mycorrhizae orchid endophyte *Calypso bulbosa*.
- UAMH 5432 *Epulorhiza sp.* Date Accessed: 9/15/1986
 Isolation Data: ex fairy slipper orchid *Calypso bulbosa* Castle River., Alta. R. Currah (51d) 20 Jun 1985
 Strain Characters: mycorrhizae orchid endophyte *Calypso bulbosa*.
- UAMH 5436 *Epulorhiza sp.* Date Accessed: 9/15/1986
 Isolation Data: ex Western rattlesnake plantain orchid *Goodyera oblongifolia* Castle River, Alta. R. Currah (32a) 19 Jun 1985
 Strain Characters: mycorrhizae orchid endophyte *Goodyera oblongifolia*.
- UAMH 7633 *Epulorhiza sp.* Date Accessed: 8/25/1994
 Isolation Data: ex roots of terrestrial yellow fringed orchid *Platanthera ciliaris* from semi-dry clay soil in mowed field Van Buren Co., Tennessee L. Zettler 18 Aug 1989
 Sender: Zettler, L. TN29-Pcil-154
 Strain Characters: mycorrhizae orchid endophyte *Platanthera ciliaris*: effective at promoting seed germination and soil establishment of orchid *Platanthera integrilabia*: effect of light & fungal inoculation in germination & seedling development of orchid *Spiranthes odorata*: symbiotic germination of orchid seed, *Platanthera integra*, a species in decline or threatened (Zettler LW, Sunley JA, Delaney TW, *Castanea* 65:207-212, 2000). // Benomyl sensitive.
- UAMH 9203 *Epulorhiza sp.* Date Accessed: 3/5/1998
 Isolation Data: ex roots of epiphytic green fly orchid (*Epidendrum conopseum*) growing with Resurrection fern (*Polypodium polypodioides*) on horizontal limb of 200+ yr oak (*Quercus virginiana*) Gainsville, Alachua Co., Florida L. Zettler 7 Jun 1995
 Sender: Zettler, L. Econ-242
 Strain Characters: mycorrhizae *Encyclia tampensis* seed germination in presence of fungus isolated from *Epidendrum conopseum*. Evidence for non-specificity for mycorrhizal fungi. (Burkhead, Marshall & Zettler, *Association of Southeastern Biologists Bulletin* 45(2) :175 (abstract), 1998; Zettler, Wilson Delaney & Sunley, *Selbyana* 19:249-253, 1998): orchid endophyte epiphytic *Epidendrum conopseum*: seed germination and propagation of Green Fly orchid (*Epidendrum conopseum*) using mycorrhizal fungus (Zettler LW, Burkhead JC, Marshall JA, Lindleyana 14:102-105, 1999; Zettler LW, Wilson Delaney T, Sunley JA, *Selbyana* 19:249-253, 1999): symbiotic germination of orchid seeds (*Habenaria repens*, *H. quinquiseta*, *H. macroceratitis*) (Stewart, S.L. & L.W. Zettler, *Aquatic Botany* 72:25-35, 2002): water uptake of fungus infected orchid seeds (*Platanthera integrilabia*, *Epidendrum conopseum*): symbiotic seed germination (*Platanthera integrilabia*, a US federally-threatened terrestrial orchid species): symbiotic germination of semi-aquatic rein orchids: symbiotic seed germination of orchid *Spiranthes brevilabris*.
- UAMH 9824 *Epulorhiza sp.* Date Accessed: 7/7/2000
 Isolation Data: orange-tan region of primary lateral roots of Texas ladies tresses orchid *Spiranthes brevilabris* Levy Co., Florida H.A. Hudgens, (c) P.M. Brown Apr 1999
 Sender: Stewart, S.L. Flx-Sbrev-266

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Strain Characters: mycorrhizae symbiotic germination of orchid seeds (*Habenaria repens*, *H. quinquiseta*, *H. macroceratitis*) (Stewart, S.L. & L.W. Zettler, *Aquatic Botany* 72:25-35, 2002): symbiotic seed germination with *Spiranthes delitescens*, an endangered orchid species (US Endangered Species Act): symbiotic seed germination of orchid *Spiranthes brevilabris*: failed to promote germination in seeds of orchid *Eulophia alta* (Johnson TR, Stewart SL, Dutra D, Kane ME, Richardson L, *Plant Cell Tiss Organ Cult Plant Cell Tiss Organ Cult* 90:313-323, 2007).

UAMH 9826 *Epulorhiza* sp. Date Accessed: 7/31/2000

Isolation Data: orange-tan regions of the primary lateral roots of Florida terrestrial orchid *Habenaria macroceratitis* Indian Ledges site, Sumter Co., FL, USA S.L. Stewart, (c) S.L. Stewart & P.M. Brown 09 Oct 1999

Sender: Stewart, S.L. Flx - Hmac - 292

Strain Characters: mycorrhizae symbiotic germination of orchid seeds (*Habenaria repens*, *H. quinquiseta*, *H. macroceratitis*) (Stewart, S.L. & L.W. Zettler, *Aquatic Botany* 72:25-35, 2002).

UAMH 9844 *Epulorhiza* sp. Date Accessed: 8/25/2000

Isolation Data: protocorm of one year old Western prairie fringed orchid *Platanthera praeclara* seedling Bicentennial Prairie, Clay County, Minnesota J. Sharma 25 Jul 1999

Sender: Sharma, J. Bic 68

Strain Characters: mycorrhizae symbiotic seed germination, successfully initiated germination in seeds of orchid *Platanthera praeclara*.

UAMH 9845 *Epulorhiza* sp. Date Accessed: 8/25/2000

Isolation Data: young second lateral root of three year old Western prairie fringed orchid *Platanthera praeclara* seedling Blustem Prairie, Clay County, Minnesota J. Sharma

Sender: Sharma, J. Blu 61

Cross Ref. Nos.: GenBank DQ068773 ITS

Strain Characters: mycorrhizae symbiotic seed germination, successfully initiated germination in seeds of orchid *Platanthera praeclara*: survey of mycobionts of federally threatened orchid *Platanthera praeclara*.

UAMH 9846 *Epulorhiza* sp. Date Accessed: 8/25/2000

Isolation Data: new lateral root of flowering Western prairie fringed orchid *Platanthera praeclara* Helton Prairie, Harrison County, Missouri J. Sharma

Sender: Sharma, J. Hel-166

Cross Ref. Nos.: GenBank DQ068772 ITS

Strain Characters: mycorrhizae symbiotic seed germination, successfully initiated germination in seeds of orchid *Platanthera praeclara*: survey of mycobionts of federally threatened orchid *Platanthera praeclara*.

UAMH 9855 *Epulorhiza* sp. Date Accessed: 9/25/2000

Isolation Data: peloton ex root-like organs in mature plant of Eastern prairie fringed orchid (*Platanthera leucophaea*) Wadsworth Prairie, Lake Co., IL L.W. Zettler 07 Jul 1999

Sender: Zettler, L. Pleu-268

Cross Ref. Nos.: GenBank DQ068772 ITS

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Strain Characters: mycorrhizae orchid endophyte *Platanthera leucophaea*: study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011).

UAMH 9856 *Epulorhiza sp.* Date Accessioned: 9/25/2000

Isolation Data: peloton ex root-like organs in mature plant of Eastern prairie fringed orchid (*Platanthera leucophaea*) Wadsworth Prairie, Lake Co., IL L.W. Zettler 07 Jul 1999

Sender: Zettler, L. Pleu-272

Strain Characters: mycorrhizae orchid endophyte *Platanthera leucophaea*: study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011; Zettler LW, Piskin KA, Stewart SC, Hartsock JJ, Bowles ML, Bell TJ, Studies in Mycology 53:163-171, 2005).

UAMH 9857 *Epulorhiza sp.* Date Accessioned: 9/25/2000

Isolation Data: peleton ex root-like organs in mature plant of Eastern prairie fringed orchid (*Platanthera leucophaea*) Wadsworth Prairie, Lake Co., IL L.W. Zettler 07 Jul 1999

Sender: Zettler, L. Pleu-290

Strain Characters: mycorrhizae orchid endophyte *Platanthera leucophaea*: study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011; Zettler LW, Piskin KA, Stewart SC, Hartsock JJ, Bowles ML, Bell TJ, Studies in Mycology 53:163-171, 2005).

UAMH 10219 *Epulorhiza sp.* Date Accessioned: 10/7/2002

Isolation Data: ex roots of adult eastern prairie fringed orchid *Platanthera leucophaea* Hildy Prairie, Grundy Co., IL L. Zettler & K. Piskin 1-8-02

Sender: Zettler, L. III-Pleu 302

Cross Ref. Nos.: Illinois College Herb. LWZ 865 (voucher orchid)

Strain Characters: mycorrhizae orchid endophyte *Platanthera leucophaea*: study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011; Zettler LW, Piskin KA, Stewart SC, Hartsock JJ, Bowles ML, Bell TJ, Studies in Mycology 53:163-171, 2005).

UAMH 10220 *Epulorhiza sp.* Date Accessioned: 10/7/2002

Isolation Data: ex roots of adult eastern prairie fringed orchid *Platanthera leucophaea* Hildy Prairie, Grundy Co., IL L. Zettler & K. Piskin 1-8-02

Sender: Zettler, L. III-Pleu 304

Cross Ref. Nos.: Illinois College Herb. LWZ 865 (voucher orchid)

Strain Characters: mycorrhizae orchid endophyte *Platanthera leucophaea*: study of symbiotic germination orchid seed (*Platanthera leucophaea*, a US federally threatened orchid) (Zettler LW, Piskin KA, Am Midl Nat 166:29-39, 2011; Zettler LW, Piskin KA, Stewart SC, Hartsock JJ, Bowles ML, Bell TJ, Studies in Mycology 53:163-171, 2005).

UAMH 10545 *Epulorhiza sp.* Date Accessioned: 4/14/2005

Isolation Data: ex peloton, protocorm "B", from endangered endemic Hawaiian orchid, *Platanthera holochila* Molokai, Hawaii L. Zettler 27-Jul-2004

Sender: Zettler, L. 328

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Strain Characters: mycorrhizae orchid endophyte, endangered Hawaiian orchid. // Culture conditions poor growth on CMA: slow growth on PDA pH5 at 18C. // Biodiversity acquired by means of a fungus baiting technique using seeds of orchid *Platanthera holochila* as bait. // Mesophilic grow at 18 to 22C.

UAMH 10546 *Epulorhiza sp.* Date Accessed: 4/14/2005
 Isolation Data: ex peloton, protocorm "A", from endangered endemic Hawaiian orchid, *Platanthera holochila* Molokai, Hawaii L. Zettler 27-Jul-2004
 Sender: Zettler, L. 330
 Strain Characters: mycorrhizae orchid, from endangered Hawaiian orchid *Platanthera holochila*. // Culture conditions poor growth on CMA: slow growth on PDA pH5 at 18C. // Mesophilic grow at 18 to 22C. // Biodiversity acquired using a fungus baiting technique using seeds of orchid *Platanthera holochila* as bait.

UAMH 10547 *Epulorhiza sp.* Date Accessed: 4/14/2005
 Isolation Data: ex peloton, protocorm "Z", from endangered endemic Hawaiian orchid, *Platanthera holochila* Molokai, Hawaii L. Zettler 27-Jul-2004
 Sender: Zettler, L. 331
 Strain Characters: mycorrhizae orchid endophyte, endangered Hawaiian orchid *Platanthera holochila*. // Culture conditions poor growth on CMA: slow growth on PDA pH5 at 18C. // Mesophilic grow at 18 to 22C. // Biodiversity acquired using a fungus baiting technique using seeds of orchid *Platanthera holochila* as bait.

UAMH 10548 *Epulorhiza sp.* Date Accessed: 4/14/2005
 Isolation Data: ex peloton, protocorm "Z", from endangered endemic orchid Hawaiian orchid, *Platanthera holochila* Molokai, Hawaii L. Zettler 27-Jul-2004
 Sender: Zettler, L. 332
 Strain Characters: mycorrhizae orchid endophyte, endangered Hawaiian orchid *Platanthera holochila*. // Culture conditions poor growth on CMA: slow growth on PDA pH5 at 18C. // Mesophilic grow at 18 to 22C. // Biodiversity acquired using a fungus baiting technique using seeds of orchid *Platanthera holochila* as bait.

UAMH 10688 *Epulorhiza sp.* Date Accessed: 5/8/2006
 Isolation Data: ex hyphal tip from peloton in root of little ladies tresses orchid *Spiranthes tuberosum* Marion County, FL. W. Kutosky 25-Nov-2005
 Sender: Zettler, L. 340
 Strain Characters: mycorrhizae orchid *Spiranthes tuberosum*.

UAMH 10689 *Epulorhiza sp.* Date Accessed: 5/8/2006
 Isolation Data: ex hyphal tip from peloton in stage 4 protocorm of Florida terrestrial orchid *Habenaria repens* (protocorm resulted from seed bait sown in-situ 5 mo previously) Cumberland County, NC B. Keel 13-Oct-2005
 Sender: Zettler, L. 343
 Strain Characters: mycorrhizae orchid endophyte *Habenaria repens*.

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- UAMH 10748 *Epulorhiza sp.* Date Accessed: 11/7/2006
 Isolation Data: ex hyphal tip from peloton in small root of little ladies tresses orchid *Spiranthes tuberosum* Marion Co., FL (C) W. Kutosky 25-Nov-2006
 Sender: Zettler, L. 339
 Strain Characters: mycorrhizae orchid endophyte *Spiranthes tuberosum*.
- UAMH 10749 *Epulorhiza sp.* Date Accessed: 11/7/2006
 Isolation Data: ex hyphal tip of peloton from stage 3 or 4 protocorm of Florida terrestrial orchid *Habenaria repens* via seed bait (WF-10) E of Fayetteville, Cumberland Co., NC B. Keel (Fungus #1) 13-Oct-2005
 Sender: Zettler, L. 341
 Strain Characters: mycorrhizae orchid endophyte *Habenaria repens*: symbiotic seed germination of orchid *Habenaria repens* using mycorrhizal fungus.
- UAMH 10750 *Epulorhiza sp.* Date Accessed: 11/7/2006
 Isolation Data: ex hyphal tip of peloton from stage 3 or 4 protocorm of Florida terrestrial orchid *Habenaria repens* via seed bait (WF-10) E of Fayetteville, Cumberland Co., NC B. Keel (Fungus #2) 13-Oct-2005
 Sender: Zettler, L. 342
 Strain Characters: mycorrhizae orchid endophyte *Habenaria repens*: symbiotic seed germination of orchid *Habenaria repens* using mycorrhizal fungus.
- UAMH 10751 *Epulorhiza sp.* Date Accessed: 11/7/2006
 Isolation Data: ex hyphal tip of peloton from stage 3 or 4 protocorm of Florida terrestrial orchid *Habenaria repens* via seed bait (WF-7-b) E of Fayetteville, Cumberland Co., NC B. Keel (Fungus #4) 13-Oct-2005
 Sender: Zettler, L. 345
 Strain Characters: mycorrhizae symbiotic seed germination of orchid *Habenaria repens* using mycorrhizal fungus: orchid endophyte *Habenaria repens*.
- UAMH 10752 *Epulorhiza sp.* Date Accessed: 11/7/2006
 Isolation Data: ex hyphal tip of peloton from stage 3 or 4 protocorm of Florida terrestrial orchid *Habenaria repens* via seed bait (WF-7-b) E of Fayetteville, Cumberland Co., NC B. Keel (Fungus #5) 13-Oct-2005
 Sender: Zettler, L. 346
 Strain Characters: mycorrhizae orchid endophyte *Habenaria repens*: seed germination of orchid *H. repens* using mycorrhizal fungus (fide B. Keel, Doctoral thesis; Keel BG, Zettler LW, Kaplin BA. *Castanea* 76:43-54, 2011).
- UAMH 10753 *Epulorhiza sp.* Date Accessed: 11/7/2006
 Isolation Data: ex hyphal tip of peloton from stage 3 or 4 protocorm of Florida terrestrial orchid *Habenaria repens* via seed bait (NH-3) Nags Head Ecological Preserve, Dare Co., NC B. Keel (Fungus #6) 13-Oct-2005
 Sender: Zettler, L. 347
 Strain Characters: mycorrhizae orchid endophyte *Habenaria repens*: symbiotic seed germination of orchid *Habenaria repens* using mycorrhizal fungus.

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- UAMH 10754 *Epulorhiza sp.* Date Accessed: 11/7/2006
 Isolation Data: ex hyphal tip of peloton from stage 3 or 4 protocorm of Florida terrestrial orchid *Habenaria repens* via seed bait (NH-3) Nags Head Ecological Preserve, Dare Co., NC B. Keel (Fungus #7) 13-Oct-2005
 Sender: Zettler, L. 348
 Strain Characters: mycorrhizae orchid endophyte *Habenaria repens*: symbiotic seed germination of orchid *Habenaria repens* using mycorrhizal fungus.
- UAMH 10801 *Epulorhiza sp.* Date Accessed: 3/21/2007
 Isolation Data: ex roots Florida terrestrial orchid *Habenaria macroceratitis* (Long-horned false rein orchid) Hernando Co., FL S.L. Stewart 27-Sep-03
 Sender: Stewart, S.L. FL-Hmac-309
 Strain Characters: mycorrhizae symbiotic seed germination of *Habenaria macroceratitis* (Stewart SL, Kane ME, Plant Cell, Tissue and Organ Culture 86:159-167, 2006): orchid endophyte *Habenaria macroceratitis*.
- UAMH 10802 *Epulorhiza sp.* Date Accessed: 3/21/2007
 Isolation Data: ex roots Florida terrestrial orchid *Habenaria macroceratitis* (Long-horned false rein orchid) Sumter Co., FL S.L. Stewart 30-Sep-03
 Sender: Stewart, S.L. FL-Hmac-313
 Strain Characters: mycorrhizae symbiotic seed germination of *Habenaria macroceratitis* (Stewart SL, Kane ME, Plant Cell, Tissue and Organ Culture 86:159-167, 2006): orchid endophyte *Habenaria macroceratitis*.
- UAMH 10803 *Epulorhiza sp.* Date Accessed: 3/21/2007
 Isolation Data: ex roots Florida terrestrial orchid *Habenaria macroceratitis* (Long-horned false rein orchid) Sumter Co., FL S.L. Stewart 02-Jul-04
 Sender: Stewart, S.L. FL-Hmac-319
 Strain Characters: mycorrhizae orchid endophyte *Habenaria macroceratitis*.
- UAMH 10804 *Epulorhiza sp.* Date Accessed: 3/21/2007
 Isolation Data: ex roots Florida terrestrial orchid *Habenaria macroceratitis* (Long-horned false rein orchid) Sumter Co., FL S.L. Stewart 02-Jul-04
 Sender: Stewart, S.L. FL-Hmac-321
 Strain Characters: mycorrhizae symbiotic seed germination of *Habenaria macroceratitis* (Stewart SL, Kane ME, Plant Cell, Tissue and Organ Culture 86:159-167, 2006): orchid endophyte *Habenaria macroceratitis*.
- UAMH 10805 *Epulorhiza sp.* Date Accessed: 3/21/2007
 Isolation Data: ex roots Florida terrestrial marsh ladies tresses orchid *Spiranthes odorata* Levy Co., FL S.L. Stewart 20-Nov-04
 Sender: Stewart, S.L. FL-Sodo-330
 Strain Characters: mycorrhizae symbiotic seed germination of orchid *Spiranthes odorata*: orchid endophyte *Spiranthes odorata*.

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- UAMH 10806 *Epulorhiza sp.* Date Accessed: 3/21/2007
 Isolation Data: ex roots Florida terrestrial orchid *Spiranthes odorata* Levy Co., FL S.L. Stewart 20-Nov-04
 Sender: Stewart, S.L. FL-Sodo-333
 Strain Characters: mycorrhizae symbiotic seed germination of orchid *Spiranthes odorata*: orchid endophyte *Spiranthes odorata*.
- UAMH 10962 *Epulorhiza sp.* Date Accessed: 1/6/2009
 Isolation Data: ex pelotons of mature flowering purple fringed orchid *Platanthera grandiflora* Blue Ridge Parkway, Buncombe Co., NC L.W. Zettler 24-Jun-1991
 Sender: Zettler, L. 189
 Strain Characters: mycorrhizae orchid endophyte *Platanthera grandiflora*: symbiotic germination studies not done (fide L.W. Zettler).
- UAMH 10963 *Epulorhiza sp.* Date Accessed: 1/6/2009
 Isolation Data: ex pelotons of mature flowering purple fringed orchid *Platanthera grandiflora* Blue Ridge Parkway, Buncombe Co., NC L.W. Zettler 24-Jun-1991
 Sender: Zettler, L. 191
 Strain Characters: mycorrhizae orchid endophyte *Platanthera grandiflora*: symbiotic germination studies not done (fide L.W. Zettler).
- UAMH 11541 *Epulorhiza sp.* Date Accessed: 9/13/2011
 Isolation Data: single peloton ex mature flowering epiphytic Florida butterfly orchid, *Encyclia tampensis*, growing on live oak Florida Panther National Wildlife Refuge, lime rock road leading to McBrides Pond, Collier Co., FL (C) L.W. Zettler, with H. Ray, J. McCormick 29-Jun-2011
 Sender: Zettler, L. 353
 Strain Characters: mycorrhizae orchid endophyte epiphytic *Encyclia tampensis*.
- UAMH 11542 *Epulorhiza sp.* Date Accessed: 9/13/2011
 Isolation Data: single peloton ex mature flowering epiphytic Florida butterfly orchid, *Encyclia tampensis*, growing on live oak Florida Panther National Wildlife Refuge, lime rock road leading to McBrides Pond, Collier Co., FL (C) L.W. Zettler, with H. Ray, J. McCormick 29-Jun-2011
 Sender: Zettler, L. 355
 Strain Characters: mycorrhizae orchid endophyte epiphytic *Encyclia tampensis*.
- UAMH 11543 *Epulorhiza sp.* Date Accessed: 9/13/2011
 Isolation Data: ex small seedling that grew immediately beneath mature epiphytic Florida butterfly orchid, *Encyclia tampensis*, growing on live oak Florida Panther National Wildlife Refuge, lime rock road leading to McBrides Pond, Collier Co., FL (C) L.W. Zettler, with H. Ray, J. McCormick 29-Jun-2011
 Sender: Zettler, L. 354
 Strain Characters: mycorrhizae orchid endophyte epiphytic *Encyclia tampensis*: symbiotic germination in vitro (fide L.W. Zettler 2011).

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- UAMH 11580 *Epulorhiza sp.* Date Accessed: 10/11/2011
 Isolation Data: ex cortical region (not distinct peloton) from roots of necrotic mature orchid *Platanthera leucophaea* Sundrop Prairie, Cook Co., IL (C) L.W. Zettler & S. Goldman (TNC) 23-Aug-2011
 Sender: Zettler, L. 368
 Strain Characters: mycorrhizae orchid endophyte *Platanthera leucophaea*.
- UAMH 11581 *Epulorhiza sp.* Date Accessed: 10/11/2011
 Isolation Data: ex cortical region (not distinct peloton) from roots of necrotic mature orchid *Platanthera leucophaea* Sundrop Prairie, Cook Co., IL (C) L.W. Zettler & S. Goldman (TNC) 23-Aug-2011
 Sender: Zettler, L. 369
 Strain Characters: mycorrhizae orchid endophyte *Platanthera leucophaea*.
- UAMH 6451 *Moniliopsis anomala* Date Accessed: 6/21/1989
 Type *Moniliopsis anomala*
 Isolation Data: endophyte of long-bracted green orchid *Coeloglossum viride* Cadomin, Alta. R. Currah (289c) 14 Jul 1987
 Cross Ref. Nos.: ATCC 90390 = CBS 193.90 = GenBank AF345557
 Strain Characters: mycorrhizae endophyte with orchid *Coeloglossum viride*. // Molecular systematics orchid mycorrhizal fungi (Kristiansen KA, Taylor DL, Kjoller R, Rasmussen N, Rosendahl S, Molecular Ecology 10:2089-2093, 2001).
- UAMH 6098 *Moniliopsis solani* Date Accessed: 5/11/1988
 Isolation Data: endophyte ex orchid *Orchis morio* Netherlands E. Dijk
 Sender: Dijk, E. OMR11
 Strain Characters: molecular systematics orchid mycorrhizal fungi (Lievens B, van Kerckhove S, Justé A, Cammue BP, Honnay O, Jacquemyn H, J Microbiol Methods 80(1):76-85, 2010). // Mycorrhizae orchid endophyte *Orchis morio*.
- UAMH 7160 *Moniliopsis solani* Date Accessed: 6/25/1992[ID?]
 Isolation Data: ex roots of epiphytic orchid *Oncidium stenotis* growing on *Pterocarpus officinalis* La Selva, Heredia Prov., Costa Rica Richardson, K. 9 Oct 1991
 Sender: Currah, R.S. K353a
 Strain Characters: pigment brown. // Mycorrhizae orchid endophyte *Oncidium stenotis* (Richardson et al, Lindleyana 8:127-137, 1993).
- UAMH 5744 *Rhizoctonia lanuginosa* Date Accessed: 4/28/1987
 Type *Rhizoctonia lanuginosa*
 Isolation Data: ex orchid *Odontoglossum sp.* France N. Bernard 1908
 Sender: CBS CBS 125.08
 Cross Ref. Nos.: ATCC 11875
 Strain Characters: odor musty. // Mycorrhizae endophyte orchid *Odontoglossum sp.*

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- UAMH 5657 *Rhizoctonia sp.* Date Accessioned: 2/16/1987
 Isolation Data: endophyte of fairy slipper orchid *Calypso bulbosa* Castle River, Alta. R. Currah (RC23a) 19 Jun 1985
 Strain Characters: mycorrhizae endophyte of orchid *Calypso bulbosa*.
- UAMH 5658 *Rhizoctonia sp.* Date Accessioned: 2/16/1987
 Isolation Data: endophyte of orchid *Goodyera oblongifolia* Castle River, Alta. R. Currah (RC30b4) 19 Jun 1985
 Strain Characters: mycorrhizae endophyte of orchid *Goodyera oblongifolia*.
- UAMH 5659 *Rhizoctonia sp.* Date Accessioned: 2/16/1987
 Isolation Data: endophyte of orchid *Goodyera oblongifolia* Castle River, Alta. R. Currah (RC44a) 20 Jun 1985
 Strain Characters: mycorrhizae endophyte of orchid *Goodyera oblongifolia*.
- UAMH 5660 *Rhizoctonia sp.* Date Accessioned: 2/16/1987
 Isolation Data: endophyte of orchid *Orchis rotundifolia* Wagner Bog, Alta. R. Currah (RC77a) 10 Jul 1985
 Strain Characters: mycorrhizae endophyte of orchid *Orchis rotundifolia*.
- UAMH 5661 *Rhizoctonia sp.* Date Accessioned: 2/16/1987
 Isolation Data: endophyte of orchid *Orchis rotundifolia* Wagner Bog, Alta. R. Currah (RC80ra) 10 Jul 1985
 Strain Characters: pigment gold. // Mycorrhizae endophyte of orchid *Orchis rotundifolia*.
- UAMH 5679 *Rhizoctonia sp.* Date Accessioned: 3/6/1987
 Isolation Data: endophyte of long-bracted green orchid *Coeloglossum viride* UADBG, Alta. R. Currah (RC16a) 10 Jun 1985
 Strain Characters: mycorrhizae endophyte of orchid *Coeloglossum viride*.
- UAMH 5680 *Rhizoctonia sp.* Date Accessioned: 3/6/1987
 Isolation Data: endophyte of orchid *Goodyera oblongifolia* Castle River, Alta. R. Currah (RC34a4) 19 Jun 1985
 Strain Characters: mycorrhizae endophyte of orchid *Goodyera oblongifolia*.
- UAMH 5681 *Rhizoctonia sp.* Date Accessioned: 3/6/1987
 Isolation Data: endophyte of orchid *Goodyera oblongifolia* Castle River, Alta. R. Currah (RC39b4) 19 Jun 1985
 Strain Characters: mycorrhizae endophyte of orchid *Goodyera oblongifolia*.
- UAMH 5682 *Rhizoctonia sp.* Date Accessioned: 3/6/1987
 Isolation Data: endophyte of fairy slipper orchid *Calypso bulbosa* Castle River, Alta. R. Currah (RC49a4) 20 Jun 1985
 Strain Characters: mycorrhizae endophyte of orchid *Calypso bulbosa*.
- UAMH 5683 *Rhizoctonia sp.* Date Accessioned: 3/6/1987
 Isolation Data: endophyte of white bog orchid *Platanthera dilatata* Castle River, Alta. R. Currah (RC57a) 20 Jun 1985
 Strain Characters: mycorrhizae endophyte of orchid *Platanthera dilatata*.

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- UAMH 5684 *Rhizoctonia sp.* Date Accessed: 3/6/1987
 Isolation Data: endophyte of northern green orchid *Platanthera hyperborea* UADBG, Alta. R. Currah (RC58a4) 25 Jun 1985
 Strain Characters: mycorrhizae endophyte of orchid *Platanthera hyperborea*.
- UAMH 5685 *Rhizoctonia sp.* Date Accessed: 3/6/1987
 Isolation Data: endophyte of round-leaved orchid *Platanthera orbiculata* Edson Forest, Alta. R. Currah (RC94rRb) 24 Jul 1985
 Strain Characters: mycorrhizae endophyte of orchid *Platanthera orbiculata*.
- UAMH 5686 *Rhizoctonia sp.* Date Accessed: 3/6/1987
 Isolation Data: endophyte of round-leaved orchid *Platanthera orbiculata* Edson Forest, Alta. R. Currah (RC95a) 24 Jul 1985
 Strain Characters: mycorrhizae endophyte of orchid *Platanthera orbiculata*.
- UAMH 5687 *Rhizoctonia sp.* Date Accessed: 3/6/1987
 Isolation Data: endophyte of blunt-leaved orchid *Platanthera obtusata* Edson Forest, Alta. R. Currah (RC97a) 24 Jul 1985
 Strain Characters: mycorrhizae endophyte of orchid *Platanthera obtusata*.
- UAMH 5688 *Rhizoctonia sp.* Date Accessed: 3/6/1987
 Isolation Data: ex root of small round-leaf orchid *Amerorchis rotundifolia* Edson Forest, Alta. R. Currah (RC99ra) 24 Jul 1985
 Strain Characters: mycorrhizae endophyte of orchid *Amerorchis rotundifolia*.
- UAMH 5437 *Sistotrema sp.* Date Accessed: 9/15/1986
 Isolation Data: ex orchid *Piperia unalascensis* Castle River, Alta. R. Currah (35a) 19 Jun 1985
 Cross Ref. Nos.: GenBank AF345558
 Strain Characters: mycorrhizae endophyte with *Piperia unalascensis* (Currah & Sherburne, Mycol. Res. 96:583-587, 1992; Currah et al., Can. J. Bot. 68:1171-1181, 1990). // Molecular systematics orchid mycorrhizal fungi (Kristiansen KA, Taylor DL, Kjoller R, Rasmussen N, Rosendahl S, Molecular Ecology 10:2089-2093, 2001; Taylor DL, McCormick MK, New Phytologist 177:1020-1033, 2008): appears to be a divergent member of the Ceratobasidiaceae (Taylor DL, McCormick MK, New Phytologist 177:1020-1033, 2008). // Culture conditions clamp connections.
- UAMH 6090 *Sistotrema sp.* Date Accessed: 5/21/1988
 Isolation Data: ex blunt-leaved orchid *Platanthera obtusata* mycorrhizae Deer Creek Flats, Alta. S. Hambleton (RC 227a) 25 May 1987
 Strain Characters: mycorrhizae orchid endophyte *Platanthera obtusata*.
- UAMH 6091 *Sistotrema sp.* Date Accessed: 5/21/1988
 Isolation Data: ex blunt-leaved orchid *Platanthera obtusata* mycorrhizae Deer Creek Flats, Alta. S. Hambleton (RC 228a) 25 May 1987
 Strain Characters: mycorrhizae orchid endophyte *Platanthera obtusata*.

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- UAMH 6092 *Sistotrema* sp. Date Accessioned: 5/21/1988
 Isolation Data: ex blunt-leaved orchid *Platanthera obtusata* mycorrhizae Deer Creek Flats, Alta. S. Hambleton (RC 231a) 25 May 1987
 Strain Characters: mycorrhizae orchid endophyte *Platanthera obtusata*.
- UAMH 7572 *Thanatephorus cucumeris* Date Accessioned: 5/30/1994
 Isolation Data: ex cortical cells of orchid *Goodyera oblongifolia* Castle River, Alta. C. Zelmer 20 Jun 1992
 Sender: Currah, R.S. Z123-or-2c
 Strain Characters: mycorrhizae effects of orchid mycorrhizal fungi on non-orchid hosts in dual culture (Zelmer et al., *Mycoscience* 37:439-448, 1996): orchid endophyte *Goodyera oblongifolia*.
- UAMH 5404 *Thanatephorus ochraceus* Date Accessioned: 8/25/1986
 Isolation Data: ex roots fairy slipper orchid *Calypso bulbosa* Obed, Alta. R. Currah (RC111a) 24 Jul 1985
 Cross Ref. Nos.: ATCC 64537
 Strain Characters: mycorrhizae septum structure of orchid endophytes (Currah & Sherburne, *Mycol. Res.* 96:583-587, 1992). // Molecular systematics orchid mycorrhizal fungi (Taylor DL, McCormick MK, *New Phytologist* 177:1020-1033, 2008).
- UAMH 5405 *Thanatephorus ochraceus* Date Accessioned: 8/25/1986
 Type *Thanatephorus pennatus*
 Isolation Data: ex roots fairy slipper orchid *Calypso bulbosa* Obed, Alta. R. Currah 112b 24 Jul 1985
 Cross Ref. Nos.: ATCC 64683
 Strain Characters: mycorrhizae orchid endophyte *Calypso bulbosa*.
- UAMH 5724 *Thanatephorus ochraceus* Date Accessioned: 3/16/1987[ID?]
 Isolation Data: ex orchid *Orchis mascula*
 Sender: Anderson, A. 34
 Strain Characters: mycorrhizae orchid endophyte *Orchis mascula*.

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- UAMH 7197 *Chaetomium subspirale* Date Accessioned: 9/18/1992
 Isolation Data: ex roots of epiphytic orchid *Maxillaria neglecta* on *Pentaclethra macroloba* La Selva, Heredia Prov., Costa Rica Richardson, K. 2 Apr 1991
 Sender: Currah, R.S. K190c
 Strain Characters: mycorrhizae root endophyte epiphytic orchid *Maxillaria neglecta*.
- UAMH 7198 *Chaetomium subspirale* Date Accessioned: 9/18/1992
 Isolation Data: ex roots of epiphytic orchid *Oncidium stenotis* growing on *Pentaclethra macroloba* La Selva, Heredia Prov., Costa Rica Richardson, K. 2 Apr 1991
 Sender: Currah, R.S. K191c
 Strain Characters: mycorrhizae root endophyte epiphytic orchid *Oncidium stenotis*.
- UAMH 7199 *Chaetomium subspirale* Date Accessioned: 9/18/1992
 Isolation Data: ex roots of epiphytic orchid *Pleurothallis periodica* La Selva, Heredia Prov., Costa Rica Richardson, K. 24 Apr 1991
 Sender: Currah, R.S. K293b
- UAMH 7279 *Chloridium virescens* var. *chlamydosporum* Date Accessioned: 2/3/1993
 Isolation Data: ex roots of epiphytic orchid *Stelis* sp. La Selva, Heredia Prov., Costa Rica Richardson, K. 22 Oct 1991
 Sender: Currah, R.S. K383e
 Strain Characters: mycorrhizae root endophyte epiphytic orchid *Stelis* sp..
- UAMH 7280 *Codinaea parva* Date Accessioned: 2/3/1993
 Isolation Data: ex roots of epiphytic orchid *Catasetum maculatum* La Selva, Heredia Prov., Costa Rica Richardson, K. 31 Oct 1991
 Sender: Currah, R.S. K440Pb
 Strain Characters: mycorrhizae root endophyte epiphytic orchid *Catasetum maculatum*.
- UAMH 8125 *Colletotrichum acutatum* Date Accessioned: 8/14/1995
 Isolation Data: ex roots of *Trigonidium riopalenquense* (Orchidaceae) La Selva Biological Station, Heredia Province, Costa Rica K. Richardson 15 May 1991
 Sender: Currah, R.S. K129c
 Strain Characters: mycorrhizae root endophyte orchid *Trigonidium riopalenquense*. // Mesophilic NG @ 35C.
- UAMH 4756 *Colletotrichum gloeosporioides* Date Accessioned: 3/28/1983
 Isolation Data: root rot & leaf blight *Laeliocattleya* hybrid (Orchid) Edmonton, Alta. L. Sigler Mar 1983
 Sender: Marien, G.
- UAMH 7277 *Epicoccum andropogonis* Date Accessioned: 2/3/1993[ID?]
 Isolation Data: ex roots of epiphytic orchid *Epidendrum* sp. La Selva, Heredia Prov., Costa Rica Richardson, K. 2 Apr 1991
 Sender: Currah, R.S. K204e
 Strain Characters: pigment black. // Mycorrhizae root endophyte epiphytic orchid *Epidendrum* sp..

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- UAMH 7278 *Epicoccum andropogonis* Date Accessioned: 2/3/1993[ID?]
 Isolation Data: ex roots of epiphytic orchid *Stelis* sp. La Selva, Heredia Prov., Costa Rica Richardson, K. 22 Oct 1991
 Sender: Currah, R.S. K382e
 Strain Characters: pigment black. // Mycorrhizae root endophyte epiphytic orchid *Stelis* sp..
- UAMH 7276 *Epicoccum nigrum* Date Accessioned: 2/3/1993
 Isolation Data: ex roots of orchid *Sobralia* sp. La Selva, Heredia Prov., Costa Rica Richardson, K. 28 Mar 1991
 Sender: Currah, R.S. K168a
 Strain Characters: pigment black. // Mycorrhizae root endophyte orchid *Sobralia* sp..
- UAMH 7200 *Glomerella cingulata* Date Accessioned: 9/18/1992
 Isolation Data: ex roots of epiphytic orchid *Maxillaria neglecta* growing on *Pentaclethra macroloba* (Leguminosae) La Selva, Heredia Prov., Costa Rica Richardson, K. 26 Oct 1991
 Sender: Currah, R.S. K393e
 Strain Characters: mycorrhizae root endophyte epiphytic orchid *Maxillaria neglecta*.
- UAMH 7201 *Glomerella cingulata* Date Accessioned: 9/18/1992
 Isolation Data: ex roots of epiphytic orchid *Catasetum maculatum* growing on *Bactris gasipaes* La Selva, Heredia Prov., Costa Rica Richardson, K. 31 Oct 1991
 Sender: Currah, R.S. K442e
 Strain Characters: mycorrhizae root endophyte epiphytic orchid *Catasetum maculatum*.
- UAMH 7241 *Glomerella cingulata* Date Accessioned: 11/10/1992
 Isolation Data: ex roots of epiphytic orchid *Sobralia* sp. on fallen moss-covered log La Selva, Heredia Prov., Costa Rica Richardson, K. 28 Mar 1991
 Sender: Currah, R.S. K168c
 Strain Characters: mycorrhizae root endophyte epiphytic orchid *Sobralia* sp..
- UAMH 7275 *Glomerella cingulata* Date Accessioned: 2/3/1993
 Isolation Data: ex roots of epiphytic orchid *Encyclia fragrans* La Selva, Heredia Prov., Costa Rica Richardson, K. 2 Apr 1991
 Sender: Currah, R.S. K193e
 Strain Characters: mycorrhizae root endophyte epiphytic orchid *Encyclia fragrans*.
- UAMH 7204 *Haematonectria haematococca* Date Accessioned: 9/18/1992
 Isolation Data: ex roots of epiphytic orchid *Scaphyglottis gracilis* La Selva, Heredia Prov., Costa Rica Richardson, K. 18 Mar 1991
 Sender: Currah, R.S. K105b
 Strain Characters: mycorrhizae root endophyte epiphytic orchid *Scaphyglottis gracilis*.
- UAMH 7205 *Haematonectria haematococca* Date Accessioned: 9/18/1992
 Isolation Data: ex roots of epiphytic orchid *Stelis endresii* La Selva, Heredia Prov., Costa Rica Richardson, K. 19 Mar 1991
 Sender: Currah, R.S. K121b
 Strain Characters: mycorrhizae root endophyte epiphytic orchid *Stelis endresii*.

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- UAMH 7206 *Haematonectria haematococca* Date Accessioned: 9/18/1992
 Isolation Data: ex roots of epiphytic orchid *Sobralia* sp. La Selva, Heredia Prov., Costa Rica Richardson, K. 16 Apr 1991
 Sender: Currah, R.S. K239Bb
- UAMH 7207 *Haematonectria haematococca* Date Accessioned: 9/18/1992
 Isolation Data: ex roots of epiphytic orchid *Pleurothallis phyllocardioides* La Selva, Heredia Prov., Costa Rica Richardson, K. 16 Apr 1991
 Sender: Currah, R.S. K255a
 Strain Characters: mycorrhizae root endophyte epiphytic orchid *Pleurothallis phyllocardioides*.
- UAMH 7227 *Hydropisphaera peziza* Date Accessioned: 10/27/1992
 Isolation Data: ex roots of epiphytic orchid *Pleurothallis pantasmi* La Selva, Heredia Prov., Costa Rica Richardson, K. 12 Oct 1991
 Sender: Currah, R.S. K364f
 Strain Characters: mycorrhizae root endophyte epiphytic orchid *Pleurothallis pantasmi*.
- UAMH 8123 *Lasmeniella* sp. Date Accessioned: 8/14/1995[ID?]
 Isolation Data: ex roots of epiphytic orchid *Gongora unicolor* (Orchidaceae) La Selva Biological Station, Heredia Province, Costa Rica K. Richardson 10 Apr 1991
 Sender: Currah, R.S. K28a
 Strain Characters: mycorrhizae root endophyte epiphytic orchid *Gongora unicolor*.
- UAMH 8124 *Lasmeniella* sp. Date Accessioned: 8/14/1995[ID?]
 Isolation Data: ex roots of tropical epiphytic Orchidaceae La Selva Biological Station, Heredia Province, Costa Rica K. Richardson 10 Apr 1991
 Sender: Currah, R.S. K19a
 Strain Characters: mycorrhizae root endophyte epiphytic orchid.
- UAMH 6048 *Lecytophora mutabilis* Date Accessioned: 3/31/1988
 Isolation Data: endophyte ex roots fairy slipper orchid *Calypso bulbosa* Nichol Springs, Cypress Hills Alta. S. Hambleton (199Aa) 7 May 1987
 Strain Characters: mycorrhizae endophyte orchid *Calypso bulbosa*.
- UAMH 5420 *Leptodontidium orchidicola* Date Accessioned: 9/15/1986
 Isolation Data: ex long-bracted green orchid *Coeloglossum viride* Devonian Bot. Garden, Alta. R. Currah (16a4) 10 Jun 1985
 Cross Ref. Nos.: ATCC 64849 = IMI 318093
 Strain Characters: mycorrhizae septum structure of orchid endophytes (Currah & Sherburne, Mycol. Res. 96:583-587, 1992): root colonization without stimulation or pathogenicity (Fernando & Currah, Mycotaxon 54:287-294, 1995): endophyte orchid *Coeloglossum viride*. // Culture conditions phenol oxidase production (Fernando & Currah, Mycotaxon 54:287-294, 1995).
- UAMH 5421 *Leptodontidium orchidicola* Date Accessioned: 9/15/1986
 Isolation Data: ex orchid *Corallorhiza maculata* Castle River., Alta. R. Currah (50b) 20 Jun 1985
 Strain Characters: mycorrhizae endophyte orchid *Corallorhiza maculata*.

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- UAMH 8150 *Leptodontidium orchidicola* Date Accessioned: 7/28/1995
 Isolation Data: root of Northern slender ladies tresses orchid *Spiranthes lacera* Whiteshell Prov. Forest, Man. C. Zelmer Aug 1991
 Sender: Currah, R.S. Z63.NR.2a
 Strain Characters: mycorrhizae resynthesis experiments (Fernando & Currah, Can. J. Bot. 7:1071-1078, 1996): endophyte orchid *Spiranthes lacera*, root colonization without stimulation or pathogenicity (Fernando & Currah, Mycotaxon 54:287-294, 1995). // Culture conditions phenol oxidase production (Fernando & Currah, Mycotaxon 54:287-294, 1995).
- UAMH 7202 *Leptosphaerulina australis* Date Accessioned: 9/18/1992
 Isolation Data: ex roots of epiphytic orchid *Nidema boothii* La Selva, Heredia Prov., Costa Rica Richardson, K. 8 Apr 1991
 Sender: Currah, R.S. K209b
 Strain Characters: mycorrhizae root endophyte epiphytic orchid *Nidema boothii*.
- UAMH 7203 *Leptosphaerulina australis* Date Accessioned: 9/18/1992
 Isolation Data: ex roots of epiphytic orchid *Rodriguezia compacta* on log 9-10 cm diam La Selva, Heredia Prov., Costa Rica Richardson, K. 8 Apr 1991
 Sender: Currah, R.S. K212a
 Strain Characters: mycorrhizae root endophyte epiphytic orchid *Rodriguezia compacta*.
- UAMH 7274 *Malbranchea pulchella* Date Accessioned: 2/3/1993
 Isolation Data: ex roots of epiphytic orchid *Maxillaria confusa* La Selva, Heredia Prov., Costa Rica Richardson, K. 1 Mar 1991
 Sender: Currah, R.S. K26a
 Strain Characters: mycorrhizae root endophyte epiphytic orchid *Maxillaria confusa*.
- UAMH 7159 *Melanotus alpiniae* Date Accessioned: 6/25/1992
 Isolation Data: ex roots of epiphytic orchid *Octomeria* sp. on fallen branch 5 cm diam La Selva, Heredia Prov., Costa Rica Richardson, K. 29 Mar 1991
 Sender: Currah, R.S. K178b
 Strain Characters: mycorrhizae status undetermined ? saprobe ? (Richardson et al, Lindleyana 8:127-137, 1993): root endophyte epiphytic orchid *Octomeria* sp..
- UAMH 7226 *Neonectria radicolica* Date Accessioned: 10/27/1992
 Isolation Data: ex roots of epiphytic orchid *Stelis* sp. La Selva, Heredia Prov., Costa Rica Richardson, K. 5 Apr 1991
 Sender: Currah, R.S. K208e
 Strain Characters: pigment brown. // Mycorrhizae root endophyte epiphytic orchid *Stelis* sp.. // Culture conditions produced ascomata.
- UAMH 6084 *Oidiodendron periconioides* Date Accessioned: 5/21/1988
 Isolation Data: endophyte ex roots fairy slipper orchid *Calypso bulbosa* Nichol Springs, Cypress Hills, Alta. S. Hambleton (RC 201Aa) 7 May 1987
 Strain Characters: pigment dark brown.

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- UAMH 5424 *Phialocephala fortinii* Date Accessioned: 1/15/1986
 Isolation Data: endophyte fairy slipper orchid *Calypso bulbosa* Grassi Lakes, Alta. R. Currah 3 Jul 1985
 Cross Ref. Nos.: ATCC 64845
 Strain Characters: molecular systematics dark root endophytes (Harney et al., Mycol. Res. 101:1397-1404, 1997).
- UAMH 6089 *Phialocephala fortinii* Date Accessioned: 5/21/1988
 Isolation Data: endophyte ex roots fairy slipper orchid *Calypso bulbosa* Edson, Alta. S. Hambleton (RC 259b) 3 Jun 1987
 Sender: Currah, R.S. RC 259b
- UAMH 7272 *Pseudallescheria boydii* Date Accessioned: 2/3/1993
 Isolation Data: ex roots of epiphytic orchid *Encyclia fragrans* growing on *Naucleopsis naga* (Moraceae) La Selva, Heredia Prov., Costa Rica Richardson, K. 1 Mar 1991
 Sender: Currah, R.S. K8b
 Strain Characters: mycorrhizae root endophyte epiphytic orchid *Encyclia fragrans*. // Culture conditions produced ascomata, *Scedosporium* and *Graphium* states.
- UAMH 7273 *Pseudallescheria boydii* Date Accessioned: 2/3/1993
 Isolation Data: ex roots of orchid *Sobralia mucronata* La Selva, Heredia Prov., Costa Rica Richardson, K. 6 Mar 1991
 Sender: Currah, R.S. K59b
 Strain Characters: mycorrhizae root endophyte orchid *Sobralia mucronata*. // Culture conditions produced ascomata.
- UAMH 8121 *Ramichloridium* sp. Date Accessioned: 8/14/1995[ID?]
 Isolation Data: ex roots of *Pleurothallis* sp. (Orchidaceae) La Selva Biological Station, Heredia Province, Costa Rica K. Richardson 21 Nov 1991
 Sender: Currah, R.S. K410f
- UAMH 5442 *Root associated fungus* Date Accessioned: 9/22/1986
 Isolation Data: ex fairy slipper orchid *Calypso bulbosa* Castle River, Alta. R. Currah (24a4) 19 Jun 1986
 Strain Characters: mycorrhizae orchid endophyte.
- UAMH 6819 *Sclerotium rolfsii* Date Accessioned: 4/29/1991
 Isolation Data: orchid roots
 Sender: Congly, H. 500M-90
 Strain Characters: culture conditions produces sclerotia.
- UAMH 7777 *Sphaerodes fimicola* Date Accessioned: 12/21/1994
 Isolation Data: ex roots of northern green orchid *Platanthera hyperborea* (Orchidaceae) Alberta C. Zelmer 1994
 Sender: Currah, R.S. Z13-orf-4a
 Strain Characters: pigment brown.
- UAMH 7875 *Sphaerospora brunnea* Date Accessioned: 3/10/1995
 Isolation Data: single ascospore isolate from contaminated pot cultures with *Leptodontidium orchidicola* Edmonton, Alta. A.A. Fernando 1 Jun 1995

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Sender: Currah, R.S.
Strain Characters: mycorrhizae contaminant in mycorrhizal experimental pot culture.

UAMH 5426 *Trichocladium opacum* Date Accessioned: 9/15/1986
Isolation Data: ex northern green orchid *Platanthera hyperborea* Wagner Bog, Edmonton, Alta. R. Currah (79ra) 10 Jul 1985
Cross Ref. Nos.: ATCC 64848 = IMI 318088

UAMH 8122 *Troposporella* sp. Date Accessioned: 8/14/1995[ID?]
Isolation Data: ex roots of *Catasetum maculatum* (Orchidaceae) La Selva Biological Station, Heredia Province, Costa Rica K. Richardson 28 May 1991
Sender: Currah, R.S. K224b
Strain Characters: mycorrhizae root endophyte epiphytic orchid *Catasetum maculatum*.

UAMH 7282 *Umbelopsis isabellina* Date Accessioned: 2/3/1993
Isolation Data: ex substrate roots of epiphytic orchid *Campylocentrum micranthum* La Selva, Heredia Prov., Costa Rica Richardson, K. 17 Oct 1991
Sender: Currah, R.S. K369g

UAMH 7281 *Viridispora alata* Date Accessioned: 2/3/1993
Isolation Data: ex roots of epiphytic orchid *Dichaea standleyi* La Selva, Heredia Prov., Costa Rica Richardson, K. 8 Oct 1991
Sender: Currah, R.S. K333e
Strain Characters: pigment brown. // Mycorrhizae root endophyte epiphytic orchid *Dichaea standleyi*.

UAMH 9467 *Xylaria* sp. Date Accessioned: 2/23/1999
Isolation Data: seed of orchid (*Paphiopedilum concolor*) Chiang Mai, Thailand S.P. Abbott (SA-M222) 30 Jan 1998