



**ARSEF INDEX:**

# ***Host-by-Fungus***

**Fungus**

**Host order**

**Host family**

**Host Genus**

**Host Species**

**ARSEF**

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IMPORTANT NOTE:  
**REVISED TAXONOMY FOR *VERTICILLIUM* SPP  
PATHOGENIC TO INVERTEBRATES**

The natural and appropriate course of fungal systematics is to move towards genera that are monophyletic rather than strictly morphologically based. The long-familiar taxonomy of *Verticillium* based on the monograph by Walter Gams (1971. *Cephalosporium*-artige Schimmelpilze (Hyphomycetes). Stuttgart: Gustav Fischer Verlag) divided *Verticillium* into two sections, Section *Verticillium* (containing the type species of the genus) comprised the major phytopathogenic species of *Verticillium*, and all included species bear their whorls of conidiogenous cells on erect, well differentiated conidiophores; the teleomorphs (sexual states) of none of the species in Sect. *Verticillium* belonged in the family Clavicipitaceae (Hypocreales). All species of *Verticillium* affecting insects, nematodes, or other invertebrates were referable to the other section, *Verticillium* Section *Prostrata*. The following papers present this expected and extensive taxonomic revision:

Zare R; Gams W; Culham A (2000). A revision of *Verticillium* sect. *Prostrata* I. Phylogenetic studies using ITS sequences. *Nova Hedwigia* 71: 465-480.

Sung GH; Spatafora JW; Zare R; Hodge KT; Gams W (2001). A revision of *Verticillium* sect. *Prostrata*. II. Phylogenetic analyses of SSU and LSU nuclear rDNA sequences from anamorphs and teleomorphs of the Clavicipitaceae. *Nova Hedwigia* 72: 311-328.

Gams W; Zare R (2001). A revision of *Verticillium* sect. *Prostrata*. III. Generic classification. *Nova Hedwigia* 72: 329-337.

Zare R; Gams W (2001). A revision of *Verticillium* section *Prostrata*. IV. The genera *Lecanicillium* and *Simplicillium*. *Nova Hedwigia* 73: 1-50.

Zare R; Gams W; Evans HC (2001). A revision of *Verticillium* section *Prostrata*. V. The genus *Pochonia*, with notes on *Rotiferophthora*. *Nova Hedwigia* 73: 51-86.

Zare R; Gams W (2001). A revision of *Verticillium* section *Prostrata*. VI. The genus *Haptocillium*. *Nova Hedwigia* 73: 271-292.

The classification in these publications reassigned ALL entomopathogenic species in *Verticillium* to a series of other genera, primarily *Lecanicillium* whose type species is *Lecanicillium lecanii* (Zimmerman) Zare & Gams [= *Verticillium lecanii* (Zimm.) Viégas]. Also note that *V. lecanii*, which Gams (1971) treated as a variable taxon, was split correctly among three species – *L. lecanii*, *L. longisporum* (Petch) Zare & Gams, and *L. muscarium* (Petch) Zare & Gams that can be separated using traditional diagnostic characters.

These taxonomic changes are being incorporated into the ARSEF database as affected isolates of *Verticillium* are being grown out for shipment or for regeneration of germplasm stocks. **Such taxonomic advances are appropriate, progressive, and are a positive step towards a more stable taxonomy. These changes should be accepted and adopted globally as quickly as possible. The ARSEF collection will reidentify its *Verticillium* isolates as soon as possible, and subsequent catalogs will continue to reflect these significant name changes as reidentifications are made.**

Richard A. Humber  
Insect Mycologist and Curator, ARSEF

**IMPORTANT NOTE:**

**TAXONOMIC REVISION FOR *PAECILOMYCES* SPP  
PATHOGENIC TO INVERTEBRATES  
IS NOW IN PROGRESS**

The long-familiar taxonomy of *Paecilomyces* ( RA Samson, 1974. *Paecilomyces* and some allied Hyphomycetes. *Studies in Mycology* 6: 1-119) recognized two sections in the genus, in which all entomopathogens were placed in *Paecilomyces* sect. *Isarioidea*. The type species of *Paecilomyces*, *P. variotii* Bainier, and all species in *Paecilomyces* sect. *Paecilomyces* are anamorphic (conidial) states of cleistothecial ascomycetes in the Eurotiomycetes. The entomopathogenic species in *P.* sect. *Isarioidea* uniformly seem to be anamorphic states of pyrenomycetous ascomycetes in the family Clavicipitaceae (order Hypocreales). Most of these species are conidial states of fungi currently treated as *Cordyceps* species. Just as the move towards monophyletic generic concepts prompted the reclassification all species of *Verticillium* sect. *Prostrata* among a series of genera including *Lecanicillium*, *Simplicillium*, *Haptocillium*, and *Pochonia*, all species of *Paecilomyces* sect. *Isarioidea* will have to be transferred out of that genus. The first installments in this revision have now been published:

**Hodge KT, Gams W, Samson RA, Korf RP, Seifert KA. 2005. Lectotypification and status of *Isaria* Pers. : Fr. Taxon 52(2): 485-489.**

**Gams W, Hodge KT, Samson RA, Korf RP, Seifert KA. 2005. (1684) Proposal to conserve the name *Isaria* (anamorphic fungi) with a conserved type. Taxon 52(12): 537.**

Please note that these papers **do not** include any general transfer of *Paecilomyces* species pathogenic for invertebrates but focus on *Isaria farinosa* (= *Paec. farinosus*), the type species of *Isaria*. Accordingly, no reidentifications of the affected ARSEF collection isolates are yet possible but these isolates will be updated in the ARSEF database and catalogs as the forthcoming taxonomic revisions are published.

There is some evidence that the fungi included in *P.* sect. *Isarioidea* by Samson (1974) and by subsequent authors may not be phylogenetically homogeneous. It is possible, therefore, that a some (but probably not many) of the entomogenous *Paecilomyces* species will be reclassified into genera other than *Isaria*.

**Such taxonomic advances are appropriate and progressive, and they allow a more stable taxonomy for fungal entomopathogens. They should be promptly accepted and universally adopted. These changes will be reflected in the ARSEF catalog and database as soon as they are formally published and any needed reidentifications are made.**

Richard A. Humber  
Insect Mycologist and Curator, ARSEF

# *ARS Collection of Entomopathogenic Fungi*

## **History and Purpose of the Collection**

The goal of the ARS Collection of Entomopathogenic Fungi (ARSEF) is to provide fundamental support for basic and applied research on the fungal pathogens of invertebrates. Since its establishment in the early 1970s, this collection has served as a general research resource for the isolation, collection, preservation, and distribution of fungal strains from insects, other arthropods, and nematodes. Emphasis has always been placed on acquiring and distributing strains under active study for use as potential biological control agents. Basic research associated with the collection includes fungal systematics, fungal cytology, pathobiology, and methodology for fungal cryopreservation. The culture collection and its associated collection of microscope slides and herbarium specimens provide invaluable support for taxonomic research on and the diagnoses of fungal pathogens of invertebrates. Identification services for specimens and cultures have always been available free of charge to any laboratories requesting them.

We strive to provide users with pure and accurately identified fungal cultures. Uncertainties about strain identifications not stated in this catalog will be communicated to culture recipients. The curator of the collection welcomes all correspondence about nomenclatural or taxonomic changes or possible misidentifications involving any ARSEF strains.

This culture collection began as Dr. Richard Soper's research collection at the ARS Plant, Soil, and Water Laboratory at the University of Maine at Orono (UMO). The original UMO prefix for these cultures was changed to the site-independent prefix RS for Richard Soper. In 1978, the ARS Insect Pathology Research Unit and its culture collection were relocated to be associated with the Insect Pathology Program of the Boyce Thompson Institute (BTI) in its new building on the Cornell University campus. The Insect Pathology Research Unit and some other small ARS units on the Cornell campus were united into the Plant Protection Research Unit (PPRU) in October 1985. After occupying transitional quarters, the PPRU insect pathology program and the culture collection moved in November 1990 into newly renovated laboratories in the U.S. Plant, Soil, and Nutrition Laboratory (across the street from the Boyce Thompson Institute).

The Plant Protection Research Unit owns and operates this culture collection; it is not now nor has it ever been owned or controlled by the Boyce Thompson Institute even though BTI administers the collection's sales account. This culture collection is one of the largest microbial germplasm collections in the USDA-ARS, and PPRU is widely recognized for its active support and encouragement of global research on fungal pathogens of arthropods. The culture collection and its associated herbarium are respectively registered under the ARSEF acronym with the World Federation of Culture Collections' World Data Center on Microorganisms and with the International Association of Plant Taxonomists' *Index Herbariorum*.

Since 1977, all strains in the collection have been stored by immersion in liquid nitrogen at  $-196^{\circ}\text{C}$ , but limited dewar space will require shifting many strains from cryogenic to lyophil storage within the near future. Requests for cultures are filled with either live cultures on appropriate solid or liquid media or lyophil tubes (plus instructions for fungal recovery), depending on how the requested strain is stored.

## **Identifying and Acknowledging ARSEF Strains in Publications**

We request that all publications using or referring to strains obtained from ARSEF acknowledge the U.S. Department of Agriculture, ARS Plant Protection Research Unit and state the ARSEF accession numbers of these strains. We would very greatly appreciate receiving reprints of all past, current, and future publications or even periodic notification about research in progress involving the use of ARSEF strains.

Accession numbers of strains from commercial culture collections such as the American Type Culture Collection (ATCC), Centraalbureau voor Schimmelcultures (CBS), CAB International Mycological Institute (IMI), and the University of Alberta Microfungus Collection (UAMH) are listed in this catalog only for sake of providing complete information only.

**Representation of cultures obtained from ARSEF as ATCC, CBS, IMI or UAMH cultures is a violation of trademark laws; persons doing so are subject to prosecution.** Cultures received from ARSEF should be referred to by their ARSEF numbers only.

## Depositing and Exchanging Cultures

The Plant Protection Research Unit encourages deposition of entomopathogenic fungal cultures with the ARSEF collection — particularly strains used in published studies — as well as of voucher and reference specimens to its herbarium.

Depositors may reserve the right to limit redistribution of any culture deposited with ARSEF for specified times upon consultation with the curator. Depositors can receive subcultures of their own depositions at any time; these cultures do not affect any allowances of free cultures.

Exchanges of cultures between ARSEF and other research or general collections of fungal cultures are encouraged and are not subject to numerical limits.

**Prior to shipping cultures from countries outside the United States** contact the Curator to obtain the appropriate needed importation permit from the U.S. Department of Agriculture, Animal and Plant Health Inspection Services, Plant Protection and Quarantine.

**When sending cultures and/or specimens to ARSEF, it is very important to include as much of the following information as possible:**

1. Scientific name (and taxonomic authority) of the fungus.
2. Common and scientific name (with taxonomic authority) of the host.
3. Order and family of the host. **(THIS IS ESPECIALLY CRITICAL INFORMATION.)**
4. Date and site of collection.
5. Name of collector.
6. Date and name of isolator.
7. Any collection, accession, or other identifier number(s) applied by the collector or sender.
8. Medium on which a culture is sent.
9. Any special requirements or conditions for growth (such as medium, temperature, pH).

## Diagnostic Services for Cultures and Specimens

Specimens and cultures of unidentified fungi from invertebrates can be submitted to ARSEF for diagnosis. This service is an important function of the ARS Collections of Entomopathogenic Fungi and is provided without charge. Identifications and information about the disposition of specimens will be mailed to the sender.

## Release of ARSEF Cultures from Containment or Quarantine

Neither the curator nor any employee of ARSEF or of the Plant Protection Research Unit is entitled to authorize the release of any culture it provides from laboratory containment or quarantine in the United States or elsewhere. Recipients of ARSEF cultures are responsible for obtaining appropriate and necessary permissions from or for providing official notifications to State and Federal regulatory agencies.

## Ordering Information

All requests for isolates should be sent directly to the curator, ARS Collection of Entomopathogenic Fungal Cultures, U.S. Plant, Soil, and Nutrition Laboratory, Tower Rd., Ithaca, NY 14853–2901; telephone: (607) 255–1276; fax: (607) 255–1132; or by email to the Curator ([rah3@cornell.edu](mailto:rah3@cornell.edu)).

### *Academic, Government, and Other Nonprofit Institutions*

<b>1–5 isolates</b> [up to 7 per calendar year]	<b>no charge</b>
<b>6 or more isolates per order</b> [8 or more per calendar year]	<b>US\$50 per strain</b>

Users from nonprofit institutions can receive up to five isolates without charge in any 6 month period, and up to seven cultures in any calendar year. Requests in excess of these limits will be charged at the rate of US\$40 per additional isolate requested. Requests from commercially sponsored research programs undertaken by nonprofit institutions are charged at the commercial rate and are not subject to numerical limits. **Prices are subject to change without notice.**

### *Commercial and Industrial Institutions*

**US\$75 per strain**

Nonprofit institutions working on commercially sponsored contractual projects (such as screening programs) are charged at the rate of US\$75 per strain requested. There are no limits on the numbers of cultures that can be requested or shipped. **Prices are subject to change without notice.**

Commercial or industrial firms supporting research at the ARS Plant Protection Research Unit are entitled to free access to cultures pertinent to contracted projects; all other requests are charged at the current rate.

## Terms of Shipment

Billings for isolates are issued through the Boyce Thompson Institute. We encourage prepayment for isolates. **Checks or money orders for strains must be made out to the Boyce Thompson Institute** but sent directly to the curator of the ARS Collections of Entomopathogenic Fungi. Consult the curator of the collections with questions about fees due for any particular shipment.

***All recipients of cultures are strongly encouraged to provide express shipper account numbers to allow shipping costs to be billed directly to recipients, thus assuring significant cost-savings to the ARSEF collection.***

We request confirmation of receipt and viability of cultures shipped. Strains that are inviable upon receipt will be replaced.

ARSEF reserves the right to refuse to ship isolates

- to recipients who cannot handle them using standard microbiological practices,
- to laboratories that cannot assure laboratory containment of isolates **except** after obtaining permissions from applicable State and Federal regulatory agencies, or
- if use of routine mailing or shipping procedures cannot assure the receipt of viable cultures.

Neither ARSEF, the ARS Plant Protection Research Unit, nor the Boyce Thompson Institute is liable for damages arising from the misidentification of strains.





**Acremonium** sp.

- [Hemiptera: Tingidae]  
*Leptopharsa heveae* 6636 6637 6642  
[Homoptera: Adelgidae]  
*Adelges tsugae* 5773  
[Homoptera: Aleyrodidae]  
*Bemisia tabaci* 4058 4059  
[Thysanoptera: Thripidae]  
*Thrips tabaci* 4063

**Acremonium alternatum**

- [Coleoptera: Scolytidae]  
*Hypothenemus hampei* 7282

**Acremonium berkeleyanum**

- [Lepidoptera: Lymantriidae]  
*Lymantria dispar* 2067

**Acremonium furcatum**

- [Coleoptera: Curculionidae]  
*Hypera postica* 1372

**Acremonium psammosporum**

- [Thysanoptera: Thripidae]  
*Thrips tabaci* 4062

**Acremonium roseum**

- [Lepidoptera: Noctuidae]  
*Pseudoplusia ni* 1964

**Acremonium(?)** sp.

- [Homoptera: Aleyrodidae]  
*Bemisia tabaci* 6584  
[Homoptera: Coccidae]  
Unknown species 7036  
[Thysanoptera: Thripidae]  
*Frankliniella occidentalis* 7031

**Acrodontium crateriforme**

- [Lepidoptera: Lymantriidae]  
*Lymantria dispar* 2070

**Akanthomyces clavatus**

- [Hymenoptera: Formicidae]  
*Solenopsis invicta* 7577

**Akanthomyces gracilis**

- [Hymenoptera: Formicidae]  
*Paltothyreus tarsatus* 2910 2919

**Aphanocladium album**

- [Coleoptera: Curculionidae]  
*Hypera postica* 1329  
[Hemiptera: Scutelleridae]  
*Eurygaster* 5756  
[Homoptera: Aleyrodidae]  
*Bemisia tabaci* 3680

**Aphanomyces** sp.

- [Dorylaimida: Longidoridae]  
*Xiphinema americanum* 2005

**Arthrobotrys oligospora**

- [Tylenchida: Heteroderidae]  
*Meloidogyne hapla* 4967

**Aschersonia** sp.

- [Homoptera]  
Unknown species 3015  
[Homoptera: Aleyrodidae]  
Unknown species 3014 4207 4208 4210  
4433 4435 4436 4437 4438 4439  
4440 4441 4442 4443 4444 4445  
4448 4449 5215 5216  
*Dialeurodes citri* 2351 2357 2358 2397  
2398 4424 4426 4428 4430 4431  
4432  
[Homoptera: spf. Coccoidea]  
Unknown species 7085

**Aschersonia aleyrodii**

- [Homoptera: Aleyrodidae]  
Unknown species 430 432 4209  
*Aglaia odoratissima* 2154  
*Dialeurodes ?citri* 341 342  
*Dialeurodes citri* 992  
*Trialeurodes vaporariorum* 2268

**Aschersonia goldiana**

- [Homoptera: Aleyrodidae]  
Unknown species 431  
*Dialeurodes ?citri* 343

**Aschersonia inasperata**

- [Homoptera: Aleyrodidae]  
*Dialeurodes citri* 2356 2396

**Aschersonia turbinata**

- [Homoptera]  
Unknown species 1030

**Ascopolyporus philodendrus**

- [Homoptera: Coccoidea]  
Unknown species 7354

**Ascopolyporus villosus**

- [Homoptera: Coccoidea]  
Unknown species 7355

**Ascospaera** sp.

- [Hymenoptera: Superfamily Apoidea]  
Unknown species 7368

**Ascospaera aggregata**

- [Hymenoptera: Megachilidae]  
*Megachile rotundata* 690

**Ascospaera apis**

- [Hymenoptera: Apidae]  
*Apis mellifera* 691 692 2683 6362 7405  
7406

**Ascospaera atra**

- [Hymenoptera: Apidae]  
*Apis mellifera* 5147  
[Hymenoptera: Megachilidae]  
*Megachile rotundata* 693

**Ascospaera duoformis**

- [Hymenoptera: Apidae]  
*Apis mellifera* 5141

**Ascospaera flava**

- [Hymenoptera: Megachilidae]  
*Megachile* 5144

**Ascospaera major**

- [Hymenoptera]  
Unknown species 694

**Ascospaera proliperda**

- [Hymenoptera: Megachilidae]  
*Megachile centuncularis* 695  
*Megachile rotundata* 696 6363

**Aspergillus** sp.

- [Acari: Ixodidae]  
*Ixodes scapularis* 6604 6898  
[Coleoptera: Chrysomelidae]  
*Leptinotarsa decemlineata* 6571  
[Coleoptera: Curculionidae]  
*Anthonomus grandis* 7048  
[Hemiptera: Pentatomidae]  
*Dolycorus* 6405 6406 6408  
[Hemiptera: Scutelleridae]  
*Eurygaster* 6399  
[Homoptera: Aleyrodidae]  
*Bemisia tabaci* 3698  
[Homoptera: Cercopidae]  
*Aeneolamia varia* 6369  
[Hymenoptera: Megachilidae]  
*Megachile rotundata* 6364  
[Lepidoptera: Noctuidae]  
*Rachiplusia nu* 5205  
[Lepidoptera: Plutellidae]  
*Plutella xylostella* 2765 2817 2820  
[Orthoptera: Acrididae]  
*Melanoplus* 1152

**Aspergillus ?ochraceus**

- [Hymenoptera: Formicidae]  
*Solenopsis invicta* 7027

**Aspergillus clavatus**

- [Homoptera: Aphididae]  
*Myzus persicae* 4359

**Aspergillus flavus**

- [Coleoptera: Cerambycidae]  
*Anoplophora glabripennis* 6469  
[Diptera: Bombyliidae]  
Unknown species 3430  
[Diptera: Sarcophagidae]  
*Neobullieria citellivora* 3144  
[Hymenoptera: Formicidae]  
*Anoplolepis longipes* 2157 2158 2159  
[Lepidoptera: Bombycidae]  
*Bombyx mori* 1003 1010  
[Lepidoptera: Gelechiidae]  
*Phthorimaea operculella* 4126  
[Lepidoptera: Plutellidae]  
*Plutella xylostella* 2818

**Aspergillus niger**

- [Hemiptera: Pentatomidae]  
*Dolycorus* 6407  
[Hemiptera: Scutelleridae]  
*Eurygaster* 5721  
[Hymenoptera: Megachilidae]  
*Osmia lignaria* 6365  
[Orthoptera]  
Unknown species 3143

Host by Fungus

**Aspergillus ochraceus**

- [Acari: Ixodidae]  
*Ixodes scapularis* 3325  
[Hemiptera: Scutelleridae]  
*Eurygaster* 5722  
[Lepidoptera: Lymantriidae]  
*Lymantria dispar* 2833

**Aspergillus parasiticus**

- [Coleoptera: Curculionidae]  
Unknown species 2173  
[Lepidoptera: Pyralidae]  
*Eoreuma loftini* 5470

**Aspergillus tamarii**

- [Lepidoptera: Gelechiidae]  
*Phthorimaea operculella* 4127

**Basidiobolus haptosporus**

- [Diptera: Brachycera]  
Unknown species 1347

**Basidiobolus ranarum**

- [Lepidoptera: Lasiocampidae]  
*Dendrolimus spectabilis* 1139

**Batkoa sp.**

- [Coleoptera: Cantharidae]  
Unknown species 5810  
[Lepidoptera: Lasiocampidae]  
*Malacosoma disstria* 7370  
[Lepidoptera: Noctuidae]  
*Panolis flammea* 6179

**Batkoa ?papillata**

- [Diptera: Simuliidae]  
Unknown species 7068

**Batkoa apiculata**

- [Diptera: Sciaridae]  
Unknown species 919 927 1660 1661  
*Bradysia paupera* 3224 3225 3226  
[Homoptera: Aphididae]  
*Acyrtosiphon kondoi* 839  
*Acyrtosiphon pisum* 2504 3130 3136  
3140  
*Brevicoryne brassicae* 1146  
*Macrosiphum euphorbiae* 174  
*Myzus ascalonicus* 67  
*Myzus persicae* 129  
*Rhopalosiphum maidis* 3088 3091  
*Rhopalosiphum padi* 3080 5994  
[Homoptera: Cicadellidae]  
Unknown species 5552  
[Hymenoptera]  
Unknown species 395

**Batkoa gigantea**

- [Diptera: Tipulidae]  
*Tipula paludosa* 214 215 403

**Batkoa major**

- [Homoptera: Aphididae]  
Unknown species 1427  
[Homoptera: Cicadellidae]  
*Empoasca fabae* 2936 3102 3103

**Beauveria sp.**

- [Araneida: Araneae]  
Unknown species 5174 5187  
[Coleoptera]  
Unknown species 5697 5831  
[Coleoptera: Chrysomelidae]  
*Pachybrachis pallicornis* 547  
[Coleoptera: Coccinellidae]  
Unknown species 5678 5833  
[Coleoptera: Curculionidae]  
*Anthonomus grandis* 1835  
*Hypera postica* 1327  
*Shirahoshizo insidiosus* 1681  
[Coleoptera: Lampyridae]  
Unknown species 5186  
[Coleoptera: Scarabaeidae]  
*Anomala cuprea* 1682  
*Lachnosterna morosa* 1685  
*Popillia japonica* 4390 4391 4392  
*Xyloryctes jamaicensis* 2412  
[Coleoptera: Scolytidae]  
*Tomiscus minor* 4933  
*Tomiscus pimperda* 4909 4910 4911  
4912 4913 4914 4915 4916 4917  
4918  
[Hemiptera: Miridae]  
*Adelphocoris* 1195 1196 1197 1198  
1199 1200 1201 1202 1203 1204  
1205 1206 1207 1208 1209 1210  
1211 1213 1214 1215 1216 1218  
1219 1220 1221 1222 1224  
[Hemiptera: Scutelleridae]  
*Eurygaster* 5686  
[Homoptera: Membracidae]  
Unknown species 2164  
[Hymenoptera: Formicidae]  
*Solenopsis invicta* 3859  
[Hymenoptera: Vespidae]  
*Vespa vulgaris* 2997  
[Lepidoptera]  
Unknown species 5832  
[Lepidoptera: Bombycidae]  
*Bombyx mori* 1040  
[Lepidoptera: Noctuidae]  
*Mocis* 590  
*Spodoptera frugiperda* 3289  
[Lepidoptera: Pyralidae]  
*Chilo infuscatellus* 1886  
*Galleria mellonella* 5078  
[Lepidoptera: Tortricidae]  
*Cydia pomonella* 6533 6534 6535 6536  
6537  
[Orthoptera: Acrididae]  
Unknown species 32 4197

**Beauveria ?bassiana**

- [Chelonia: Emydidae]  
*Trachemys scripta* 5990  
[Coleoptera: Chrysomelidae]  
Unknown species 6890 6891  
[Hemiptera: Scutelleridae]  
*Eurygaster* 5684  
[Homoptera: Adelgidae]  
*Adelges tsugae* 5815 5816 5817 5818  
[Homoptera: Aphididae]  
*Diuraphis noxia* 6608

- [Hymenoptera: Formicidae]  
*Solenopsis invicta* 5959  
[Lepidoptera: Pyralidae]  
*Eldana saccharina* 5644  
*Galleria mellonella* 6892

**Beauveria amorpha**

- [Coleoptera]  
Unknown species 2251  
[Coleoptera: Cerambycidae]  
*Psacotha hilaris* 1680  
[Coleoptera: Scarabaeidae]  
*Anomala costata* 1676  
*Popillia japonica* 4990  
[Homoptera: Cicadellidae]  
*Nephotettix bipunctata cincticeps* 656  
[Hymenoptera: Formicidae]  
*Solenopsis* 2641  
[Lepidoptera]  
Unknown species 6227  
[Orthoptera: ?Gryllacrididae]  
Unknown species 6376 6577  
[Orthoptera: Gryllacrididae]  
Unknown species 7117

**Beauveria bassiana**

- [Acari: Ixodidae]  
Unknown species 6967  
*Ixodes scapularis* 6897  
[Araneida: Araneae]  
Unknown species 5172 5173  
[Coleoptera]  
Unknown species 293 301 350 754 1980  
3197 3198 3199 4382 5668 5979  
6559 6560 7164  
[Coleoptera: Anthicidae]  
*Anthicus floralis* 157  
[Coleoptera: Anthribidae]  
*Araecerus fasciculatus* 413  
[Coleoptera: Bruchidae]  
*Caryedon serratus* 1186  
[Coleoptera: Carabidae]  
Unknown species 952 1975 3386 6059  
6099  
*Amara familiaris* 4034  
*Amara plebeja* 4031  
*Bembidion lampros* 4032  
[Coleoptera: Cerambycidae]  
Unknown species 318 319 785 2557  
5072  
*Anoplophora glabripennis* 6387 6390  
6391 6393 7152 7153 7154 7155  
7156 7157 7158 7159 7166 7167  
7168 7169 7170 7171 7172 7173  
7174 7175 7176 7177 7178 7179  
*Aromia moschata* 1559 1560 1561 1562  
1563  
*Dectes texanus* 6471  
*Enaphalodes rufulus* 7404  
*Moechotypa diphysis* 1678  
*Monochamus alternatus* 1679  
*Monochamus scutellatus* 7162 7163  
*Ortholeptura valida* 5997  
*Plectrodera scalator* 7160 7161 7165  
*Psacotha hilaris* 1041  
[Coleoptera: Chrysomelidae]  
Unknown species 504 751 1971

<i>Cerotoma</i> 951 1458 1467	<i>Chalcodermus aeneus</i> 336 337 733 734	[Coleoptera: Scolytidae]
<i>Cerotoma arcuata</i> 731 732 756 931 934 2075	735 736 738	Unknown species 1566 1567 3040
<i>Crimissa</i> 786 788 805	<i>Conotrachelus nenuphar</i> 1016	<i>Dendroctonus ponderosae</i> 1849 1853
<i>Crimissa cruralis</i> 4001	<i>Cosmopolites</i> 1833	<i>Dendroctonus rufipennis</i> 1017
<i>Diabrotica</i> 721 946 947 948 949 950 956 982 2512 2938 2942 3219 3287	<i>Cosmopolites sordidus</i> 1483 4798 4799	<i>Dryocoetes confusus</i> 1852
<i>Diabrotica balteata</i> 3309	<i>Curculio caryae</i> 2676	<i>Hypothenemus hampei</i> 1480 2685 2686
<i>Diabrotica barberi</i> 2579	<i>Cyrtopistomus castaneus</i> 2270 2271	2687 2688 2689 2690 2691 2692
<i>Diabrotica paranaensis</i> 739 752 758 809 937 938	<i>Diaprepes abbreviata</i> 412 416 433	2693 3440 3443 3445 3448 3453
<i>Diabrotica speciosa</i> 928 958 1060 1453 1454 1455 1456 1459 1460 1461 1462 1463 1464 1465 1466 1469 1470 1471 1472 1473 1475 1476 1954 1961 2511 2515 2520 2625 2626	<i>Geraeus senilis</i> 3310 3311	3818 3819 5436 5437 5438 5439
<i>Diabrotica undecimpunctata</i> 201	<i>Hypena postica</i> 1389 1398 1399 1515 4038 4049	5440 5441 5442 5443 5444 5445
<i>Diabrotica virgifera</i> 2330 3111	<i>Larinus</i> 2694	5446 5447 5448 5449 5450 5451
<i>Galerucella</i> sp. 5465	<i>Listronotus oregonensis</i> 2983 2984 2985 2986	5452 5453 5454 5455 5456 5457
<i>Galerucina</i> 2463	<i>Metamasius</i> 842	5458 5459 5460 5461 5477 5478
<i>Leptinotarsa decemlineata</i> 149 252 317 340 344 353 384 505 506 507 509 510 534 535 1039 1079 1081 1106 1619 1620 1621 1622 1623 1624 1704 1705 1706 1707 1708 1709 1710 1711 1712 1713 1721 1722 1723 1749 1750 1775 1776 1777 1778 1779 1780 1781 1982 2030 2031 2032 2695 2987 2988 2989 2990 2991 5286 5533 5534 5535 5536 5537 5807 5813 6986 6987 6988	<i>Metamasius callizona</i> 5986	5485 5486 5487 5488 5489 5490
<i>Lilioceris lili</i> 5195	<i>Metamasius hemipterus</i> 2642	6526 6527 6528 6529 6530 6531 6532
<i>Maecolaspis monrosi</i> 2509	<i>Oryzophagus oryzae</i> 3098	<i>Ips</i> 1855
<i>Notonata</i> 3437 3438 3439 3441 3442 3444 3446 3447 3450 3451 3452 3455	<i>Otiorynchus ligustici</i> 6884 6885	<i>Ips stenographus</i> 6900
<i>Odontota dorsalis</i> 5553	<i>Otiorynchus sulcatus</i> 813 814 815 1073 1074 1075 3065 6552	<i>Ips typographus</i> 7525 7526
<i>Paropsis charybdis</i> 3066	<i>Premnotrypes latithorax</i> 5983 5984	<i>Tomicus minor</i> 4980 5070 5071
<i>Pyrrhalta luteola</i> 1509 1510 1511 1518 1519	<i>Premnotrypes suturicallus</i> 1969	[Coleoptera: Scolytidae (Tribe Ipini)]
<i>Systema</i> 2079	<i>Premnotrypes vorax</i> 2248	Unknown species 6229
<i>Xanthogaleruca luteola</i> 5501	<i>Rhynchophorus ferrugineus</i> 6903	[Coleoptera: Staphylinidae]
[Coleoptera: Coccinellidae]	<i>Sitona</i> 1647 3063	Unknown species 3112 4055
Unknown species 6055 6061 6062 6063 6074 6075 6092 6095 6111 6112	<i>Sitona discoideus</i> 816 1153 1154 1155 1163 1164 1171 1172 1173 1174 1175 1176 1177 1178 1179 1180 1181 1183 1185 1188 1189 1190 1191 1309 1311 1312 1313 1811 1815 1816 1817 1818 1819 1820 1821	<i>Anotylus rugosus</i> 4051 4056
<i>Coccinella</i> 2033 2034	<i>Sitona humeralis</i> 1491	<i>Anotylus</i> sp. 4046
<i>Coccinella septempunctata</i> 2580 3534 4018 4027	<i>Sitona lineatus</i> 1156 1157 1158 1159 1160 1161 1162 1165 1167 1168 1169 1170 1182 1192 1193 1194 1306 4015 4016 4019 4021 4041	<i>Tachyporus</i> sp. 4028
<i>Coleomegilla maculata</i> 1956	<i>Sternechus subsignatus</i> 1450	[Coleoptera: Tenebrionidae]
<i>Cycloneda sanguinea</i> 2010	[Coleoptera: Curculionidae: Apioninae]	Unknown species 757 783 787 6057 6064 6077 6078 6096 6113
<i>Hippodamia convergens</i> 4973 4974 4975	<i>Cylas formicarius elegantulus</i> 5981 5982	<i>Alphitobius diaperinus</i> 5836 5838 5839 5840 5843
[Coleoptera: Cucujidae: Silvaninae]	[Coleoptera: Elateridae]	<i>Tenebrio molitor</i> 5623
<i>Ahasverus advena</i> 5857	Unknown species 150 784 804 5670	<i>Tribolium castaneum</i> 5622
[Coleoptera: Curculionidae]	[Coleoptera: Lagriidae]	[Coleoptera: Adepaga]
Unknown species 930 1061 2040 3667 4052 6213 6214 6215 6216 6217	<i>Lagria vilosa</i> 2961	Unknown species 5672
<i>Anthonomus grandis</i> 1966 2559 2638 2639 2945 2946	[Coleoptera: Languriidae]	[Collembola: Sminthuridae]
<i>Anthonomus musculus</i> 3037	Unknown species 3457	<i>Sminthurus viridis</i> 5853
<i>Apion</i> 4023	[Coleoptera: Nitidulidae]	[Crocodylia: Alligatoridae]
<i>Aracanthus</i> 753	Unknown species 325	<i>Alligator mississippiensis</i> 2455
<i>Ceutorhynchus litura</i> 3403	[Coleoptera: Pythidae]	[Dermaptera]
<i>Chalcodermus</i> 941 942 943 953	<i>Pytho</i> 1854	Unknown species 796 5495 5496 5991
	[Coleoptera: Rhizophagidae]	[Dermaptera: Forficulidae]
	<i>Rhizophagus grandis</i> 1848	<i>Forficula africana</i> 5650 5651 5652
	[Coleoptera: Scarabaeidae]	<i>Forficula auricularia</i> 3018
	Unknown species 5669 6058	[Diptera]
	<i>Adoryphorus couloni</i> 4135 4136 4149 4274 4721	Unknown species 1962 2454
	<i>Ancognatha scarabaeoides</i> 2249 2250	[Diptera: Anthomyiidae]
	<i>Anomala cuprea</i> 1683	<i>Delia antiqua</i> 1864 1865 1866
	<i>Aphodius tasmaniae</i> 3070	<i>Delia radicum</i> 1151 4012 6553 6555 6563 6564 6568
	<i>Costelytra zealandica</i> 3055	[Diptera: Calliphoridae]
	<i>Phyllophaga</i> 5740 5741 5742 5743 5744 5745	<i>Calliphora</i> 1630
	<i>Popillia japonica</i> 3716 3717 5148 5150	[Diptera: Ephydridae]
	<i>Rhopaea magnicornis</i> 4130	Unknown species 6567
		[Diptera: Muscidae]
		Unknown species 1955
		<i>Haematobia irritans</i> 5862 5864 5865 5866 5867
		<i>Musca autumnalis</i> 1514
		<i>Musca domestica</i> 2953 5339 5340 5341 5342 5343 5344 5345 5346 5347 5861 5863 7049
		[Diptera: Psychodidae]
		<i>Phlebotomus papatasi</i> 2972

[Diptera: Sciaridae]	<i>Lygus sp.</i> 4053	<i>Solenopsis</i> 2722 2723
Unknown species 6566	[Homoptera: Adelgidae]	<i>Solenopsis invicta</i> 2401 2402 2403
[Diptera: Tachinidae]	<i>Adelges tsugae</i> 5170 5171 5767 5768	2404 5956 5957 5960 5961 5962
Unknown species 1150	5769 5770 5796 6027	5967 5973 5974
[Diptera: Tipulidae]	[Homoptera: Aleyrodidae]	<i>Solenopsis quinquecupis</i> 5966 5968
<i>Tipula paludosa</i> 6565	<i>Bemisia tabaci</i> 4981 4982 4983 4984	<i>Solenopsis saevissima</i> 5958 5963 5965
[Hemiptera]	5274 5275 5276 5277 5278 5279	5969
Unknown species 5978	5280 5281 5282 5283 5284 5285	<i>Solenopsis xyloni</i> 5970 5971 5972
[Hemiptera: Coreidae]	5287 5288 5289 5290 5291 5292	[Hymenoptera: Formicidae: Myrmicinae]
<i>Leptoglossus fulvicornis</i> 3086	5293 5294 5295 5296	Unknown species 1976 1977 1978 1979
[Hemiptera: Lygaeidae]	[Homoptera: Aphididae]	[Hymenoptera: Ichneumonidae]
<i>Blissus leucopterus</i> 792 2430	Unknown species 3120 3121 4523 4524	Unknown species 156
<i>Nysius vinitor</i> 300	<i>Aphis gossypii</i> 5493 5494	[Hymenoptera: Megachilidae]
[Hemiptera: Mesoveliidae]	<i>Diuraphis noxia</i> 2861 2864 2879 2882	Unknown species 7377 7378
<i>Mesovelia mulsanti</i> 320	3153 3154 3155 3156 3157 3158	[Hymenoptera: Pamphiliidae]
[Hemiptera: Miridae]	3166 3167 3168 3169 3215 3867	Unknown species 7518 7519 7520 7521
Unknown species 3449 3454 3456	3890 3891 3892 3905 3906 3907	<i>Pamphilus betulae</i> 152 154
<i>Adelphocoris</i> 1516 1517 1523 1524	3908 4099 4100 4101 4106 4107	[Hymenoptera: Sphecidae]
1525 1526 1527 1528 1529 1531	4108 4109 4110 4111 4112 4113	Unknown species 2545
1533 1534 1535 1536 1537 1538	4114 4115 4116 4117 4118 4119	[Hymenoptera: subord. Symphyta]
1539 1540 1635 1636 1637 1638	4120 4121 4462 4463 4464 4691	Unknown species 5985
1640 1643 1650 1789 1790 1791	4692 4693 4694 4695 4696 4697	[Hymenoptera: Vespidae]
1792 1793 1794 1795 1796 1797	4976 4977 4978 4979 5705 6968	Unknown species 730 1953 2943 2944
1798 1799 1800 1801	6969 6978 6979 6980	<i>Polistes</i> 6513
<i>Lygus</i> 886 1394 1395 1396 1397 1404	<i>Myzus persicae</i> 3385	[Hymenoptera: Superfamily Apoidea]
1405 1406 1407 1408 1409 1410	<i>Rhopalosiphum padi</i> 6970	Unknown species 1468
1411 1412 1413 1414 1520 1521	<i>Schizaphis graminum</i> 2336 2860 2880	[Isoptera: Rhinotermitidae]
1648 1649 1802 1803 1804 1805	2881 2883	<i>Coptotermes formosanus</i> 6906 6907
1806 1807 1808 1809 1810 1812	[Homoptera: Cercopidae]	6908
1813 1814 1822 2318 2319 2320	<i>Deois flavopicta</i> 806 3019	<i>Reticulitermes flavipes</i> 3041
2321 2322 2458 2462	<i>Zulia carbonaria</i> 6459	[Lepidoptera]
<i>Lygus ?lineolaris</i> 1317 1318 1319 1320	<i>Zulia entreriana</i> 477	Unknown species 2633 2637 2857 6109
1321 1322 1323 1324 1325	[Homoptera: Cicadellidae]	6557
<i>Lygus hesperus</i> 6660 6661	Unknown species 945	[Lepidoptera: Arctiidae]
<i>Lygus lineolaris</i> 3769 5808	<i>Molopopterus theae</i> 6982	<i>Hyphantria cunea</i> 1564 1565
<i>Lygus pratensis</i> 2461	<i>Nephotettix bipunctata cincticeps</i> 708	[Lepidoptera: Bombycidae]
[Hemiptera: Nabidae]	1553 1554 1555 1556	<i>Bombyx mori</i> 302 303 304 305 718
<i>Nabis</i> 1988	<i>Nephotettix cincticeps</i> 1098	1007 2737 5704
[Hemiptera: Pentatomidae]	[Homoptera: Cicadidae]	[Lepidoptera: Brassolidae]
Unknown species 737 944 1973 1974	Unknown species 2544	<i>Brassolis</i> 2297
1984	<i>Magiccada septendecim</i> 7376	<i>Brassolis sophorea</i> 2619 6514
<i>Aelia</i> 6093	[Homoptera: Delphacidae]	[Lepidoptera: Cossidae]
<i>Dolycorus</i> 6404 6426	Unknown species 7032	<i>Cossula cossus</i> 1103 1104 1558
<i>Euschistus heros</i> 1478	<i>Nilaparvata lugens</i> 654 679 709 714	<i>Zeuzera pyrina</i> 1105
<i>Nezara viridula</i> 1054 1474 2011 2457	717 719 2427	[Lepidoptera: Danaidae]
2516 4092 4093	[Homoptera: Membracidae]	<i>Danaus plexippus</i> 7093
<i>Oebalus poecilus</i> 2191	Unknown species 3312 3999	[Lepidoptera: Eupterotidae]
<i>Podisus</i> 1457 2519	[Homoptera: Pseudococcidae]	Unknown species 6984
<i>Tibraca limbativentres</i> 933 4091	<i>Rhizoecus</i> 2236	[Lepidoptera: Gelechiidae]
[Hemiptera: Rhopalidae]	[Hymenoptera: ?Megachilidae]	<i>Sitotroga cerealella</i> 5703
<i>Leptocoris</i> 560 566	Unknown species 957	[Lepidoptera: Geometridae]
<i>Leptocoris oratorius</i> 1269 1270	[Hymenoptera: Apidae]	<i>Isturgia exerrariae</i> 6972 6973
[Hemiptera: Scutelleridae]	<i>Apis mellifera</i> 5989	[Lepidoptera: Hepialidae]
<i>Eurygaster</i> 5665 5674 5724 5725 5753	[Hymenoptera: Cephidae]	<i>Oncopera</i> 4273
5762 6008 6009 6011 6013 6014	<i>Cephus</i> 6793 6794 6795	<i>Oncopera alboguttata</i> 4589 4607
6015 6016 6019 6022 6039 6040	[Hymenoptera: Diprionidae]	<i>Oncopera intricata</i> 4258 4672
6041 6042 6043 6056 6060 6065	<i>Diprion pini</i> 338	[Lepidoptera: Hyblaeidae]
6066 6067 6069 6070 6072 6073	[Hymenoptera: Eurytomidae]	<i>Hyblaea puer</i> 2597
6076 6079 6083 6086 6087 6088	<i>Bephratelloides cubensis</i> 2869	[Lepidoptera: Incurvariidae]
6089 6090 6091 6115 6149	[Hymenoptera: Formicidae]	<i>Paraclemensia acerifoliella</i> 5492
[Hemiptera: Tingidae]	Unknown species 1960 2487 5069	[Lepidoptera: Lasiocampidae]
<i>Corythucha ciliata</i> 812	<i>Atta</i> 1831 3285	<i>Dendrolimus spectabilis</i> 1677
[Heteroptera]	<i>Atta mexicana</i> 2484 2485 2486	<i>Malacosoma americanum</i> 1
Unknown species 4057	<i>Myrmica rubra</i> 7058 7533 7534	
[Heteroptera: Miridae]	<i>Pogonomyrmex occidentalis</i> 7540 7541	
Unknown species 4035	7542	

[Lepidoptera: Lymantriidae]	6181 6182 6184 6185 6186 6187	<b>Beauveria velata</b>
<i>Lymantria dispar</i> 155 299 2054 2267	6189 6191 6194 6195 6196 6201	[Lepidoptera]
2570 2571 2572 2573 2831 3404	6208 6209	Unknown species 2998
3405 3527 3528 3529 3530 6205	<i>Hedya nubiferana</i> 6199	
<i>Lymantria dissoluta</i> 6233	<i>Lobesia botrana</i> 1107 1110	<b>Beniowskia sp.</b>
[Lepidoptera: Lyonetiidae]	<i>Rhyacionia frustrana</i> 5573	[Lepidoptera: Plutellidae]
<i>Leucoptera coffeella</i> 6801 6802 6803	[Lepidoptera: Yponomeutidae]	<i>Plutella xylostella</i> 2751
6804 6805 6806 6807 6808 6809	<i>Yponomeutidae</i> 3965 3966 3967 3968	<b>Calcarisporium arbuscula</b>
<i>Leucoptera scitella</i> 1115 1117	3969 3970	[Agaricales: Tricholomataceae]
[Lepidoptera: Noctuidae]	[Neuroptera: Chrysopidae]	<i>Armillaria mellea</i> 6155
Unknown species 1627 1628 1629	<i>Chrysopa</i> 153	<b>Calcarisporium ovalisporum</b>
<i>Autographa gamma</i> 2253 2254	[Odonata: suborder Anisoptera]	[Homoptera: Delphacidae]
<i>Helicoverpa armigera</i> 1149 1166	Unknown species 4688	<i>Nilaparvata lugens</i> 1907
<i>Helicoverpa virescens</i> 1314 1315 1316	[Orthoptera]	
1788	Unknown species 3622 6231	<b>Candida sp.</b>
<i>Panolis flammea</i> 6100 6101 6177 6178	[Orthoptera: Acrididae]	[Coleoptera: Scolytidae]
<i>Sesamia calamistis</i> 5649 5654	Unknown species 356 357 1053 1326	<i>Hypothenemus hampei</i> 5729
<i>Sesamia cretica</i> 1118	1959 4580 4622 5737 5738 6230	[Dictyoptera: Blattellidae]
<i>Simyra henrici</i> 5988	6232 7030	<i>Blattella germanica</i> 1877 1924 1925
<i>Spodoptera frugiperda</i> 3288	<i>Melanoplus</i> 3866 3897 5273	1926
<i>Spodoptera littoralis</i> 1512 1513 3286	<i>Oxyops vitiosa</i> 5987	[Dictyoptera: Blattidae]
<i>Spodoptera litura</i> 6646 6647 6648 6650	<i>Phaulacridium vittatum</i> 4150	<i>Periplaneta americana</i> 1857
[Lepidoptera: Olethreutidae]	<i>Schistocerca gregaria</i> 5640 5641 5642	
<i>Carpocapsa pomonella</i> 503	5643	<b>Candida cf. pseudoglaebosa</b>
[Lepidoptera: Phycitinae]	[Orthoptera: Gryllotalpidae]	[Diptera: Culicidae]
<i>Emmalocera depressella</i> 2417	<i>Scapteriscus vicinus</i> 5977	<i>Wyeomyia smithii</i> 7146
[Lepidoptera: Plutellidae]	[Orthoptera: Tettigoniidae]	
<i>Plutella xylostella</i> 2727 2728 2729 4525	<i>Anabrus simplex</i> 7379 7380	<b>Catenaria anguillulae</b>
4526 4527 4528 4529 4530 4531	[Orthoptera: Tettigonioidea]	[Dorylaimida: Longidoridae]
4532 4533 4534 4535 4536 4538	Unknown species 6234	<i>Xiphinema</i> 2015
4539 4540 4543	[Thysanoptera: Phlaeothripidae]	
[Lepidoptera: Pyralidae]	<i>Haplothrips tritici</i> 4200	<b>Cladosporium sp.</b>
<i>Acigona sp.</i> 5647 5648	[Thysanoptera: Thripidae]	[Acari: Tetranychidae]
<i>Chilo plejadellus</i> 326	<i>Frankliniella occidentalis</i> 3995 3996	<i>Tetranychus urticae</i> 6442
<i>Cnaphalocrocis medinalis</i> 2041	<i>Thrips calcaratus</i> 3216	[Homoptera: Aleyrodidae]
<i>Coniesta sp.</i> 5646		Unknown species 3706
<i>Diatraea saccharalis</i> 1484 1832 1834	<b>Beauveria brongniartii</b>	[Homoptera: Aphididae]
2629 3020 3858 5500 5502	[Coleoptera]	<i>Brevicoryne brassicae</i> 4795
<i>Dioryctria sylvestrella</i> 1001	Unknown species 2660	[Homoptera: Cicadellidae]
<i>Eldana saccharina</i> 5645 5653 5655	[Coleoptera: Cerambycidae]	Unknown species 7039
<i>Galleria mellonella</i> 1113 1114 6147	<i>Anoplophora malasiaca</i> 6235 6412	[Homoptera: Coccidae]
6148 6894 6904 6905 6931 6932	<i>Niphonoclea</i> 1431	Unknown species 7035
6933 6934 6935 6936 6937 6938	[Coleoptera: Scarabaeidae]	[Lepidoptera: Lycaenidae: Polyommati-
6939 6940 6941 6943 6949 6950	Unknown species 4380 4381	nae]
6951 6952 6953 7356 7357 7358	<i>Anomala costata</i> 985	<i>Orachrysops ariadne</i> 6226
7359 7362 7364 7365 7552 7553	<i>Holotrichia parallela</i> 4384 4385 4386	
7554	4388 4465 4466 4467 4468 4469	<b>Cladosporium ?cladosporioides</b>
<i>Gymnancyla canella</i> 6796	4470 4471 4472 4473 4474 4475	[Homoptera: Aphididae]
<i>Ostrinia nubilalis</i> 501 502 533 652	4476 4477 4478	Unknown species 7033
1038 1121 2976	<i>Melolontha</i> 5355 5356 5357 5358 5359	
<i>Terastia meticulosalis</i> 1836	5360 5361 5362 5363 5364	<b>Cladosporium cladosporioides</b>
[Lepidoptera: Saturniidae]	<i>Melolontha melolontha</i> 617 979 1067	[Acari: Tetranychidae]
Unknown species 843	1068 1069 1070 1071 1072 1076	<i>Eotetranychus</i> 3085
<i>Schirius</i> 2962	1077 7528	[Homoptera: Aphididae]
[Lepidoptera: Sesiidae]	<i>Popillia japonica</i> 4389 4458 4992 4993	<i>Pemphigus betae</i> 3463
<i>Monopetalotaxis doleriformis</i> 6971	4994 4995	[Thysanoptera: Thripidae]
6974 6975 6976 6977 6981	[Coleoptera: Scolytidae]	<i>Thrips palmi</i> 3375
[Lepidoptera: Stenomatinae]	<i>Ips typographus</i> 4024	
<i>Stenoma decora</i> 1479	[Hemiptera: Scutelleridae]	<b>Cladosporium herbarum</b>
[Lepidoptera: Tortricidae]	<i>Eurygaster</i> 6023	[Homoptera: Aphididae]
Unknown species 5169	[Homoptera: Cicadellidae]	<i>Aphis gossypii</i> 4361
<i>Choristoneura</i> 1850	<i>Nephotettix bipunctata cincticeps</i> 678	
<i>Cydia pomonella</i> 151 1122 3220 3972	[Lepidoptera: Castniidae]	<b>Coelomycidium simulii</b>
3973 3974 3975 3977 3978 3979	<i>Castnia licus</i> 1829	[Diptera: Simuliidae]
5064 5066 5067 5229 5230 5231	[Lepidoptera: Pyralidae]	<i>Simulium venustum</i> 218
5233 5234 5235 5886 5887 5888	<i>Diatraea saccharalis</i> 1830	<b>Colletotrichum gloeosporoides</b>
	<i>Galleria mellonella</i> 7558 7559	[Homoptera: Ortheziidae]
		<i>Orthezia praelonga</i> 4360

- Conidiobolus sp.**  
[Coleoptera: Curculionidae]  
*Hypera variabilis* 80  
[Diptera: Anthomyiidae]  
Unknown species 2494  
*Delia radicum* 2672  
[Diptera: Ptychopteridae]  
*Ptychoptera contaminata* 2498  
[Diptera: Tipulidae]  
*Tipula paludosa* 6424  
[Homoptera: Aphididae]  
Unknown species 999 1426  
*Aphis fabae* 3383  
*Brevicoryne brassicae* 2130  
*Eriosoma lanigerum* 6659  
*Myzus persicae* 3384  
*Schizaphis graminum* 1967  
[Homoptera: Cercopidae]  
Unknown species 391  
*Deois* 2147  
*Deois flavopicta* 2148  
[Homoptera: Cicadellidae]  
*Nephotettix bipunctata cincticeps* 605  
606  
[Homoptera: Delphacidae]  
*Nilaparvata lugens* 211 517 522 564  
595 596  
*Sogatella furcifera* 604  
[Homoptera: Membracidae]  
*Gargara* 5404 5405 5406  
[Hymenoptera]  
Unknown species 2193  
[Hymenoptera: Formicidae]  
*Solenopsis invicta* 2819  
[Isopoda: Oniscoidea]  
*Porcellio* 1672  
[Lepidoptera: Plutellidae]  
*Plutella xylostella* 2771 2772 2815 2816  
3208  
[Lepidoptera: Tortricidae]  
*Choristoneura fumiferana* 92 93 94  
147 148  
[Orthoptera: Tettigoniidae]  
Unknown species 1477
- Conidiobolus ?osmodes**  
[Homoptera: Aphididae]  
*Rhopalosiphum padi* 5993
- Conidiobolus coronatus**  
[Agaricales]  
*Volvariella volvacea* 1147  
[Araneida]  
Unknown species 567 7010  
[Coleoptera: Curculionidae]  
*Ceutorhynchus napi* 1572 1573 1574  
1575  
[Dacrymycetales]  
Unknown species 3087  
[Diptera: Psychodidae]  
*Lutzomyia* 3379  
*Lutzomyia sordelli* 3414 3415  
[Homoptera: Aphididae]  
*Acyrtosiphon pisum* 1738  
*Metopolophium dirhodum* 2812 2813  
2814
- [Homoptera: Cicadellidae]  
Unknown species 419 421 422  
*Empoasca fabae* 3099 3109  
*Nephotettix bipunctata cincticeps* 520  
597  
[Homoptera: Delphacidae]  
*Nilaparvata lugens* 349 405 406 418  
511 512 514 523 524 525 528 563  
565 655 997 1876  
[Hymenoptera: Formicidae]  
Unknown species 7011  
[Lepidoptera: Plutellidae]  
*Plutella xylostella* 2730  
[Opiliones: Palpatores]  
Unknown species 7012 7013  
[Thysanoptera: Thripidae]  
Unknown species 6512  
*Frankliniella occidentalis* 3222
- Conidiobolus firmipilleus**  
[Lepidoptera: Plutellidae]  
*Plutella xylostella* 2731
- Conidiobolus lachnodes**  
[Homoptera: Delphacidae]  
*Nilaparvata lugens* 700
- Conidiobolus nr. coronatus**  
[Homoptera: Delphacidae]  
*Nilaparvata lugens* 598 599 600 1742  
1743  
*Sogatella furcifera* 602  
[Lepidoptera: Noctuidae]  
*Mocis latipes* 1884
- Conidiobolus obscurus**  
[Homoptera: ?Aphididae]  
Unknown species 243  
[Homoptera: Aphididae]  
Unknown species 434  
*Acyrtosiphon kondoi* 354 824  
*Acyrtosiphon pisum* 832 834 1741  
3131 3132 3133 3134 3135 3137  
3138 3139 3141  
*Aphis* 124  
*Aphis armata* 133 355  
*Macrosiphum euphorbiae* 182  
*Metopolophium dirhodum* 97 3092  
*Rhopalosiphum maidis* 3089 3090  
*Rhopalosiphum padi* 1131 5992  
*Therioaphis maculata* 74  
*Uroleucon* 121 122
- Conidiobolus osmodes**  
[Coleoptera: Curculionidae]  
*Hypera variabilis* 79
- Conidiobolus pseudapiculatus**  
[Diptera: Psilidae]  
*Psila rosae* 2493 2496 2497 2502
- Conidiobolus thromboides**  
[Diptera]  
Unknown species 86 87  
[Diptera: Culicidae]  
*Culex pipiens pipiens* 70  
[Diptera: Heliomyzidae]  
Unknown species 5  
[Homoptera: Aphididae]  
Unknown species 58 59 248 249 250  
1006  
*Acyrtosiphon pisum* 100  
*Aphis fabae* 42 242 244 245 246 247  
630 631 632 633 634 635 1735  
*Aphis glycines* 7209 7210 7211  
*Aphis gossypii* 83 194  
*Cavariella theobaldi* 101 102 363 1733  
1734  
*Diuraphis noxia* 4968  
*Diuraphis tritici* 2914  
*Macrosiphum euphorbiae* 40  
*Metopolophium dirhodum* 2828 2829  
2849 2850  
*Myzus persicae* 2 39 41 57 63 99 649  
*Rhopalosiphum insertum* 73  
*Schizaphis graminum* 2955  
*Sitobion avenae* 2830  
*Therioaphis maculata* 15 29 115 208  
*Uroleucon* 120  
[Homoptera: Cicadellidae]  
*Empoasca fabae* 3129  
[Orthoptera: Acrididae]  
Unknown species 22
- Cordycepioideus bisporus**  
[Isoptera: Termitidae]  
Unknown species 3888  
*Macrotermes* 4843
- Cordyceps sp.**  
[Coleoptera: Scarabaeidae]  
*Popillia japonica* 3718  
[Homoptera: Cercopidae]  
Unknown species 6349  
[Homoptera: Cicadellidae]  
Unknown species 6281
- Cordyceps aphodii**  
[Coleoptera: Scarabaeidae]  
*Aphodius howitti* 5498
- Cordyceps brongniartii**  
[Coleoptera: Scarabaeidae]  
*Anomala cuprea* 7516 7517
- Cordyceps cardinalis**  
[Lepidoptera: Tineidae: Archolophinae]  
Unknown species 7192 7193
- Cordyceps isarioides**  
[Lepidoptera]  
Unknown species 5688

**Cordyceps militaris**

[Lepidoptera]

Unknown species 4081 4082 4083 4084  
4085 4086 4087 4088 4089 4090  
4838 4839 4840 4841 4842 5002  
5003 5004 5005 5006 5007 5010  
5012 5013 5014 5015 5016 5017  
5018 5019 5020 5021 5022 5023  
5025 5026 5027 5028 5029 5030  
5031 5032 5033 5034 5035 5036  
5037 5038 5039 5040 5041 5042  
5043 5044 5045 5046 5047 5048  
5049 5050 5051 5052 5054 5055  
5056 5057 5058 5059 5060 5061  
5062

[Lepidoptera: Geometridae]

Unknown species 2416

**Cordyceps ophioglossoides**

[Elaphomycetales]

*Elaphomyces* 4826 4827 4828 4829  
4830 4831 4832 4833 4834 4835  
4836 4837

**Cordyceps scarabaeicola**

[Coleoptera: Scarabaeidae]

Unknown species 5689

**Cordyceps variabilis**

[Diptera: Xylophagidae]

*Xylophagus sp.* 5365 5366 5367 5414  
5415 5416 5417 5418 5419 5420  
5421 5422 5423 5424 5425 5426  
5427 5428 5429

**Crypticola clavulifera**

[Diptera: Ceratopogonidae]

*Forcipomyia marksae* 1940

**Culicinomyces bisporalis**

[Diptera: Culicidae]

*Aedes kochi* 1948

**Culicinomyces clavisporus**

[Diptera: Ceratopogonidae]

*Dasyhelea* 2478  
*Forcipomyia marksae* 2480 2481

[Diptera: Culicidae]

Unknown species 706 2622  
*Aedes rupestris* 2471 2472 2473 2474  
2475 2476 2477  
*Anopheles amictus hilli* 644 645  
*Anopheles quadrimaculatus* 372 582  
583 584 585  
*Culiseta inconspicua* 2479  
*Culiseta inornata* 964 1260 2482

**Curvularia sp.**

[Homoptera: Cercopidae]

*Zulia carbonaria* 6367

**Cylindrocarpon sp.**

[Hemiptera: Pentatomidae]

*Aelia* 5758

**Dactylella sp.**

[Homoptera: Cercopidae]

*Aeneolamia varia* 6372

**Drechlerella dactyloides**

[Tylenchida: Heteroderidae]

*Heterodera schachtii* 2934  
*Meloidogyne hapla* 4955

**Engyodontium album**

[Araneida: ?Pholcidae]

Unknown species 6002

**Engyodontium aranearum**

[Araneida: Pholcidae]

*Pholcus phalangoides* 2929 2935

**Entomophaga sp.**

[Homoptera: Cicadellidae]

*Empoasca kraemeri* 1230  
*Nephotettix bipunctata cincticeps* 1126

[Homoptera: Delphacidae]

*Nilaparvata lugens* 1881

[Lepidoptera]

Unknown species 393

**Entomophaga asiatica**

[Orthoptera: Acrididae]

Unknown species 1393

*Parapodisma* 1659

**Entomophaga aulicae**

[Lepidoptera]

Unknown species 1140 1656

[Lepidoptera: Arctiidae]

*Spilosoma niveum* 2372 2373 2374

[Lepidoptera: Geometridae]

*Nyphia griseata* 2000  
*Lambdina fiscellaria fiscellaria* 1991  
2900

*Lambdina fiscellaria lugubrosa* 1990

*Rheumaptera hastata* 2899

[Lepidoptera: Lasiocampidae]

*Dendrolimus spectabilis* 1655

*Malacosoma disstria* 3602

[Lepidoptera: Lymantriidae]

*Euproctis chrysoorrhoea* 7140 7141 7142  
7143 7144 7145

*Orygia vetusta* 4004 4006 4007 4008

[Lepidoptera: Noctuidae]

Unknown species 3016

?*Heliothis* 251

*Aedia leucomelas* 198 998

*Autographa gamma* 2363 2365

*Mamestra brassicae* 1657 1751 2362  
2367 2368 2369

*Pseudaletia* 1999

[Lepidoptera: Notodontidae]

*Ellida caniplaga* 2903

*Heterocampa* 2902

*Heterocampa biundata* 2905

*Heterocampa guttivitta* 2843 2904 3039  
3212

[Lepidoptera: Pieridae]

*Colias erate poliographus* 2366

[Lepidoptera: Saturniidae]

*Dryocampa rubicunda* 2897

[Lepidoptera: Sphingidae]

*Eumorpha fasciata* 4796

[Lepidoptera: Tortricidae]

*Choristoneura fumiferana* 51 164 165  
166 167 168 172 1992 1993 1994  
1995 1997 1998 2896 2898 2901

**Entomophaga australiensis**

[Homoptera: Cicadellidae]

Unknown species 743

*Cicadella* 328

*Empoasca kraemeri* 791

[Homoptera: Cicadidae]

*Cicadetta puer* 331 365

[Homoptera: Delphacidae]

*Nilaparvata lugens* 581

**Entomophaga calopteni**

[Orthoptera: Acrididae]

*Melanoplus bivittatus* 390 408 497 498

*Melanoplus cuneatus* 623 626 646

*Melanoplus differentialis* 2522

*Melanoplus flavidus* 383

*Melanoplus packardii* 625

**Entomophaga conglomerata**

[Diptera: Chironomidae]

Unknown species 2273

**Entomophaga macleodii**

[Orthoptera: Acrididae]

*Camnula pellucida* 496 618 619 620

621 624 628 629 765 767 768 769

773 774 777 778 779 4948 4949

4950 4952 4953

*Dissosteira carolina* 375 376 382 499

**Entomophaga maimaiga**

[Lepidoptera: Lasiocampidae]

*Malacosoma americanum* 6170 6173  
6174

[Lepidoptera: Lymantriidae]

*Lymantria dispar* 1390 1391 1392 1400

1658 2370 2371 2775 2779 2780

3052 3053 3828 3829 3830 3831

3832 3833 3834 3835 3913 4504

4505 4506 4507 4508 4509 4510

4549 4550 4551 4552 4553 4554

4555 5377 5378 5383 5384 5385

5386 5387 5389 5390 5391 5392

5393 5394 5395 5396 5397 5398

5399 5400 5401 5564 5568 5570

6004 6005 6168 6169 6171 6172

6212 6218 6224 6253 6254 6255

6256 6257 6258 6264 6265 6266

6267 6268 6269 6270 6271 6272

6523 6524 6625 6626 6627 6628

6629 6630 6652 6653 6654 6655

6656 6657 6663 6664 6665 6666

6667 6668 6724 6725 6726 6727

6728 6729 7101 7102 7103 7104

7105 7106 7107 7108 7109 7110

7111 7112 7113 7114 7115 7116

7120 7121 7122 7123 7124 7125

7126 7127 7131 7132 7133 7134

7135 7136 7137 7138 7139 7183

7184 7185 7186 7187 7188 7189

7190 7352 7353

**Host by Fungus**

**Entomophaga praxibuli**

[Homoptera: Cicadellidae]  
*Empoasca vitis* 3058  
[Orthoptera: Acrididae]  
*Praxibulus* 840

**Entomophthora chromaphidis**

[Homoptera: Aphididae]  
*Acyrtosiphon kondoi* 1860 1862 1863

**Entomophthora culicis**

[Diptera: Chironomidae]  
Unknown species 5811  
[Diptera: Nematocera]  
Unknown species 387

**Entomophthora muscae**

[Diptera]  
Unknown species 392 6701 7371  
[Diptera: Anthomyiidae]  
Unknown species 2087 2088 2678  
*Botanophila fugax* 6712  
*Delia* 2089 2263 2264 2265 2266 2317  
*Delia antiqua* 3074  
*Delia platura* 707  
*Delia radicum* 2665 2668 2670 2674  
2675 6274 6706 6707 6708 6709  
6710 6711 6717 6811 6814 6815  
6818 6821  
[Diptera: Calliphoridae]  
*Pollenia rudis* 651  
[Diptera: Muscidae]  
Unknown species 5954  
*Coenosia tigrina* 6918  
*Musca domestica* 454 556 557 803 2014  
2172 2542 5952 5953 6121 6122  
6123 6124 6125 6126 6127 6128  
6129 6130 6131 6132 6133 6134  
6135 6136 6140 6141 6164 6165  
6713 6714 6715 6716 6812 6813  
[Diptera: Syrphidae]  
Unknown species 826 2673

**Entomophthora planchoniana**

[Homoptera: Aphididae]  
*Ovatus crataegarius* 6251 6252

**Entomophthora scatophagae**

[Diptera: Scatophagidae]  
*Scatophaga stercoraria* 6704 6705

**Entomophthora schizophorae**

[Diptera: Calliphoridae]  
*Pollenia* 6703 6816 6817  
[Diptera: Muscidae]  
*Musca domestica* 6137 6138 6139 6142  
6143  
[Diptera: Psilidae]  
*Psila rosae* 2540 2541 2667

**Entomophthora syrphi**

[Diptera: Syrphidae]  
*Melanostoma scalare* 6819 6820  
*Platycheirus clypeatus* 6702  
*Triglyphus primus* 5955

**Entomophthora thripidum**

[Thysanoptera: Thripidae]  
*Thrips tabaci* 5868 6517 6518 6519  
6520 6521 6522 6525

**Erynia sp.**

[Coleoptera: Cantharidae]  
Unknown species 2664 5352  
*Rhagonycha fulva* 2525 2536 2537 2538  
2539 2553 2663  
[Diptera]  
Unknown species 876 880 884 2495  
[Diptera: Brachycera]  
Unknown species 1338  
[Diptera: Chironomidae]  
Unknown species 2507  
[Diptera: Ephydriidae]  
*?Hydrellia* 2097  
[Homoptera: Aphididae]  
Unknown species 2279  
*Brevicoryne brassicae* 2294  
*Macrosiphum euphorbiae* 2292  
*Therioaphis maculata* 1666  
[Lepidoptera]  
Unknown species 1241  
[Lepidoptera: Noctuidae]  
*Pseudoplusia includens* 2027  
[Lepidoptera: Plutellidae]  
*Plutella xylostella* 983  
[Lepidoptera: Tortricidae]  
*Eana argentana* 1143

**Erynia aquatica**

[Diptera: Culicidae]  
Unknown species 764  
*Aedes* 750

**Erynia conica**

[Diptera: Chironomidae]  
Unknown species 2274 2405  
[Diptera: Simuliidae]  
Unknown species 1752 1753 2275  
*Simulium* 1439

**Erynia curvispora**

[Diptera: Simuliidae]  
Unknown species 1754 3229  
[Trichoptera]  
Unknown species 3244

**Erynia ovispora**

[Diptera: Psychodidae]  
Unknown species 399 400

**Erynia rhizospora**

[Trichoptera]  
Unknown species 219 801 1440 1441  
1442 1443 2276  
[Trichoptera: Hydropsychidae]  
Unknown species 2407

**Erynia sciarae**

[Diptera: Mycetophilidae]  
Unknown species 1870

**Eryniopsis caroliniana**

[Diptera: Tipulidae]  
*Tipula paludosa* 640 641 642

**Eryniopsis ptychopterae**

[Diptera: Ptychopteridae]  
*Ptychoptera contaminata* 2535 2671

**Evlachovaea sp.**

[Coleoptera: Elateridae]  
*Agriotes* 7403  
[Coleoptera: Scarabaeidae]  
*Phyllophaga menetriesi* 7551  
[Diptera: Bibionidae]  
*Plecia* 7372  
[Diptera: Stratiomyidae]  
*Chiromyza* 6146  
[Hemiptera: Tingidae]  
*Leptopharsa heveae* 6635 6638 6639  
6640 6641  
[Hymenoptera: Formicidae]  
*Pogonomyrmex occidentalis* 7543  
[Lepidoptera: Brassolidae]  
*Brassolis sophorea* 2613 2620  
[Lepidoptera: Noctuidae]  
*Spodoptera frugiperda* 959  
[Lepidoptera: Oecophoridae]  
*Anteotricha* 2614 2615

**Evlachovaea kintrischica**

[Coleoptera: Chrysomelidae]  
*Agelastica alni* 7218

**Furia americana**

[Diptera]  
Unknown species 742 1240 1242 2192  
2194

**Furia gastropachae**

[Lepidoptera: Lasiocampidae]  
*Malacosoma disstria* 5541 5542 5543  
5544 5545 5546 5547 5869 5870  
5871 5872

**Furia ithacensis**

[Diptera: Empididae]  
Unknown species 1339 1340  
[Diptera: Rhagionidae]  
*Symphoromyia hirta* 663

**Furia neopyralidarum**

[Lepidoptera]  
Unknown species 1145

**Furia pieris**

[Lepidoptera: Pieridae]  
*Pieris rapae* 781

**Furia virescens**

[Hemiptera: Miridae]  
*Notosteira elongata* 394  
[Lepidoptera]  
Unknown species 427  
[Lepidoptera: Noctuidae]  
Unknown species 470 1129

**Fusarium sp.**

[Acari: Ixodidae]  
*Boophilus* 3296  
[Acari: Tetranychidae]  
*Tetranychus urticae* 6443 6572  
[Coleoptera: Chrysomelidae]  
*Lilioceris lili* 4011  
[Coleoptera: Curculionidae]  
*Anthonomus musculus* 3030 3031 3032  
*Chalcodermus aeneus* 2568 2569  
*Otiorynchus ligustici* 4825



*Sitona discoideus* 1310  
[Coleoptera: Scolytidae]  
*Hypothenemus hampei* 5875 5878 5879  
6602  
[Diptera]  
Unknown species 2414  
[Diptera: Bibionidae]  
Unknown species 2252  
[Diptera: Muscidae]  
*Musca domestica* 1522  
[Diptera: Psychodidae]  
*Lutzomyia* 3382  
[Hemiptera: Miridae]  
*Adelphocoris* 1307 1641  
[Hemiptera: Pentatomidae]  
*Dolycorus* 6411  
[Hemiptera: Scutelleridae]  
*Eurygaster* 5680 5755 5757 6394 6395  
6396 6397 6398 6400 6401 6402  
6403 6409 6410 6425 6428 6429  
[Homoptera: Adelgidae]  
*Adelges tsugae* 5803 5825  
[Homoptera: Aleyrodidae]  
Unknown species 4002  
*Bemisia tabaci* 3668 3669 3670 3671  
3672 3673 3674 3675 3676 3677  
3678 3679 5332  
[Homoptera: Aphididae]  
Unknown species 3704 3707  
*Aphis gossypii* 5726 5727 5728  
*Diuraphis noxia* 4969  
*Pemphigus betae* 3464  
*Rhopalosiphum padi* 2337  
*Sitobion avenae* 2333  
*Toxoptera aurantii* 6790  
[Homoptera: Cercopidae]  
*Aeneolamia postica* 3345  
*Mahanarva andigena* 6460 6461 6464  
*Prosapia nr. bicincta* 4713 4714 4715  
*Zulia carbonaria* 6465  
*Zulia colombiana* 6348 6351 6352 6353  
6354 6358  
*Zulia pubescens* 6320 6375 6576  
[Homoptera: Coccidae]  
Unknown species 1828  
*Coccus viridis* 2232  
[Homoptera: Delphacidae]  
*Nilaparvata lugens* 687  
[Homoptera: Diaspididae]  
*Lopholeucaspis japonica* 6225  
[Homoptera: Psyllidae]  
*Heteropsylla cubana* 2303  
[Lepidoptera: Gelechiidae]  
*Scrobipalpuloides absoluta* 5219  
[Lepidoptera: Hyblaeidae]  
*Hyblaea puer* 2595  
[Lepidoptera: Lycaenidae: Polyommati-  
nae]  
*Orachrysops subravus* 6102  
[Lepidoptera: Lymantriidae]  
*Lymantria dispar* 3532  
[Lepidoptera: Noctuidae]  
*Spodoptera* 2736  
*Spodoptera frugiperda* 3300  
*Spodoptera litura* 6649

[Lepidoptera: Phycitinae]  
*Emmalocera depressella* 2418  
[Lepidoptera: Plutellidae]  
*Plutella xylostella* 5881  
[Lepidoptera: Pyralidae]  
*Chilo sacchariphagus* 7045 7046  
[Lepidoptera: Tortricidae]  
*Cydia pomonella* 3976  
[Tylenchida: Heteroderidae]  
*Meloidogyne hapla* 4956 4962

**Fusarium ?oxysporum**  
[Homoptera: Cercopidae]  
*Zulia colombiana* 6355

**Fusarium acuminatum**  
[Orthoptera: Acrididae]  
Unknown species 3218

**Fusarium avenaceum**  
[Lepidoptera: Lymantriidae]  
*Lymantria dispar* 2060

**Fusarium coccophilum**  
[Homoptera: Diaspididae]  
*Lepidosaphes* 2098  
*Melanaspis obscura* 821

**Fusarium lateritium**  
[Homoptera: Psyllidae]  
*Heteropsylla cubana* 2304  
[Hymenoptera: Ichneumonidae]  
Unknown species 1331 1416

**Fusarium merismoides**  
[Lepidoptera: Lymantriidae]  
*Lymantria dispar* 2059

**Fusarium moniliforme**  
[Homoptera: Diaspididae]  
*Melanaspis glomerata* 2074

**Fusarium moniliforme var. inter-  
medium**  
[Homoptera: Delphacidae]  
*Nilaparvata lugens* 3223

**Fusarium nygamai**  
[Lepidoptera: Noctuidae]  
*Raghuva albipunctella* 2316

**Fusarium oxysporum**  
[Diptera: Anthomyiidae]  
*Delia radicum* 1371  
[Tylenchida: Heteroderidae]  
*Meloidogyne hapla* 4963 4964

**Fusarium polyphialidicum**  
[Lepidoptera: Lymantriidae]  
*Lymantria dispar* 3692 3693 3694 3695  
3696 3916

**Fusarium semitectum**  
[Homoptera: Delphacidae]  
*Nilaparvata lugens* 2053  
[Homoptera: Psyllidae]  
*Heteropsylla incisa* 2299 2300

**Fusarium solani**  
[Diptera: Anthomyiidae]  
*Delia radicum* 1148

**Fusarium subglutinans**  
[Hemiptera: Lophopidae]  
*Pyrilla perpusilla* 2143 2144  
[Homoptera: Coccidae]  
*Pulvinaria elongata* 2145  
[Homoptera: Psyllidae]  
*Heteropsylla incisa* 2301  
[Lepidoptera: Pyralidae]  
*Chilo sacchariphagus indicus* 2142  
*Scirpophaga excerptalis* 2141

**Fusarium torulosum**  
[Lepidoptera: Lymantriidae]  
*Lymantria dispar* 3483

**Geotrichum sp.**  
[Lepidoptera: Plutellidae]  
*Plutella xylostella* 2752

**Geotrichum (?) sp.**  
[Homoptera: Adelgidae]  
*Adelges tsugae* 5823

**Gibellula clavulifera var. alba**  
[Araneida: Salticidae]  
*Euophrys ?trivittata* 1909

**Gibellula pulchra**  
[Araneida]  
Unknown species 1732

**Gibellula sp.**  
[Araneida]  
Unknown species 569 570 1669

**Gliocladium sp.**  
[Lepidoptera: Sesiidae]  
Unknown species 6632

**Gliocladium(?) sp.**  
[Acari: Ixodidae]  
*Ixodes scapularis* 6896  
[Homoptera: Margarodidae]  
*Icerya purchasi* 6579 6580 6583

**Haptocillium balanoides**  
[Aphelenchida: Aphelenchoididae]  
*Aphelenchoides* 3173

**Harposporium anguillulae**  
[Tylenchida: Heteroderidae]  
*Meloidogyne hapla* 4954

**Harposporium janus**  
[Coleoptera: Cerambycidae]  
Unknown species 5601

**Hirsutella sp.**  
[Acari]  
Unknown species 2795 2796 2797 2798  
2801 2802 2803  
[Acari: Eriophyidae]  
*Abacarus hystrix* 970  
[Collembola]  
Unknown species 2799  
[Diptera: Sciomyzidae]  
*Sepedon sphegeus* 1551  
[Hemiptera: Miridae]  
*Cyrtorhinus lividipennis* 2208 2209

- [Homoptera: Cicadellidae]  
*Empoasca kraemeri* 1625 2644 2645  
2646 2647 2648 2649 2650 2651  
2652 2653 2654 2655 2656 2657  
2992
- [Homoptera: Delphacidae]  
*Nilaparvata lugens* 568 1096
- [Homoptera: Diaspididae]  
*Nuculaspis tsugae* 1668
- [Hymenoptera: Formicidae]  
*Solenopsis invicta* 7578
- [Lepidoptera]  
Unknown species 2581
- [Thysanoptera: Thripidae]  
*Taeniothrips inconsequens* 3266 3318  
3546 3548 3553  
*Thrips palmi* 4193
- Hirsutella brownorum**  
[Acari]  
Unknown species 3509
- Hirsutella citriformis**  
[Homoptera: Cixiidae]  
*Myndus crudus* 1035 1446
- [Homoptera: Delphacidae]  
Unknown species 2428  
*Nilaparvata lugens* 490 532 591 684  
1036 1062 1063 1064 1243 1244  
1245 1246 1247 1248 1249 1250  
1251 1252 1253 1254 1255 1256  
1257 1258 1259 1436 1549 1550  
1837 1913 1917 1918 1919 2099  
2100 2101 2102 2103 2346 2420  
2422 2423 2426
- [Homoptera: Psyllidae]  
*Heteropsylla cubana* 2347 2598
- Hirsutella fusiformis**  
[Coleoptera: Curculionidae]  
*Brachyderes incanus* 5474
- Hirsutella gigantea**  
[Hymenoptera: Pamphiliidae]  
Unknown species 30
- Hirsutella guyana**  
[Homoptera: Cicadellidae]  
Unknown species 2352 2387  
*Empoasca kraemeri* 878 879 881 882  
883 2993
- Hirsutella haptospora**  
[Acari: Uropodina]  
Unknown species 2226
- Hirsutella illustris**  
[Homoptera: Aphididae]  
*Eriosoma lanigerum* 5539
- Hirsutella kirchneri**  
[Acari]  
Unknown species 5550
- [Acari: Eriophyidae]  
*Abacarus hystrix* 5551
- Hirsutella longicolla var. cornuta**  
[Lepidoptera: Tortricidae]  
*Choristoneura fumiferana* 177 178
- Hirsutella necatrix**  
[Acari]  
Unknown species 5549
- Hirsutella nodulosa**  
[Lepidoptera: Pyralidae]  
*Dioryctria zimmermani* 5473
- Hirsutella nr. haptospora**  
[Diptera: Itonididae]  
Unknown species 2228
- Hirsutella radiata**  
[Diptera: ?Lauxaniidae]  
Unknown species 1369
- Hirsutella repens**  
[Homoptera: Delphacidae]  
*Nilaparvata lugens* 2348 2359 2394
- Hirsutella rhossiliensis**  
[Tylenchida: Criconematidae]  
*Criconemella curvata* 2007  
*Criconemella xenoplax* 2006 2008 3744  
3746 3747 3748 3750 3754
- [Tylenchida: Heteroderidae]  
*Heterodera humuli* 2894  
*Heterodera schachtii* 2788 2789 2790  
2791 2792 2794 2931 2932 2933  
3761
- Hirsutella satumaensis**  
[Lepidoptera: Pyralidae]  
*Dioryctria sylvestrella* 996
- Hirsutella sinensis**  
[Lepidoptera: Hepialidae]  
Unknown species 6282
- Hirsutella strigosa**  
[Homoptera: Cicadellidae]  
*Nephotettix virescens* 2197
- [Homoptera: Delphacidae]  
*Nilaparvata lugens* 2044
- Hirsutella subulata**  
[Lepidoptera: Microlepidoptea]  
Unknown species 2227
- Hirsutella thompsonii**  
[Acari]  
Unknown species 2800
- [Acari: Eriophyidae]  
*Calacarus heveae* 6633  
*Colomerus novaehbridensis* 258 414  
*Eriophyes guerreronis* 256 257  
*Eriophyes sheldoni* 255 2459  
*Phyllocoptura oleivora* 137 241 253  
259 2012 2464
- [Acari: Tarsonemidae]  
Unknown species 1947
- [Acari: Tenuipalpidae]  
*Dolichotetranychus floridanus* 3323
- Hirsutella thompsonii var. syn-nematosa**  
[Acari: Tetranychidae]  
*Mononychellus tanajoa* 5412
- Hirsutella thompsonii var. vinacea**  
[Acari: Eriophyidae]  
*Acalitus vaccinii* 254
- Hirsutella versicolor**  
[Homoptera: Membracidae]  
Unknown species 1034 1037
- Hirsutella verticillioides**  
[Homoptera: Cicadellidae]  
*Idioscopus clypealis* 2599
- Humicola sp.**  
[Lepidoptera: Lymantriidae]  
*Lymantria dispar* 2069
- Hymenostilbe sphecophila**  
[Hymenoptera]  
Unknown species 6292
- Hymenostilbe verrucosa**  
[Araneida]  
Unknown species 2002
- Isaria farinosa**  
[Lepidoptera]  
Unknown species 7118
- Lagenidium caudatum**  
[Dorylaimida: Longidoridae]  
*Xiphinema rivesi* 2003
- Lagenidium giganteum**  
[Diptera: Ceratopogonidae]  
*Forcipomyia marksae* 2529 2530 2531  
2532 2533
- [Diptera: Culicidae]  
Unknown species 748 3326  
*Aedes melanimon* 3327  
*Culex tarsalis* 1384  
*Culex territans* 749  
*Culiseta melanura* 373
- Lasiodiplodia theobromae**  
[Hymenoptera: Formicidae]  
*Anoplolepis longipes* 2170
- Lecanicillium ?lecanii**  
[Lepidoptera: Tortricidae]  
*Cydia pomonella* 1109
- Lecanicillium ?muscarium**  
[Lepidoptera: Tortricidae]  
*Cydia pomonella* 1032
- Lecanicillium lecanii**  
[Coleoptera: Cerambycidae]  
*Plectrodera scalator* 7181 7182
- [Coleoptera: Chrysomelidae]  
*Pyrrhalta luteola* 1505
- [Homoptera: Aphididae]  
Unknown species 6887  
*Aphis rumicis* 7530  
*Brevicoryne brassicae* 1877  
*Myzus persicae* 3387  
*Uroleucon ambrosiae* 6886
- [Homoptera: Coccidae]  
Unknown species 6888  
*Coccus viridis* 2149 2150
- [Homoptera: Coccoidea]  
Unknown species 7550

- [Homoptera: Lecaniidae]  
*Lecanium viridis* 555
- Lecanicillium longisporum**  
[Coleoptera: Staphylinidae]  
*Tachyporus hypnorum* 4050  
[Homoptera: Aphididae]  
Unknown species 974  
*Myzus persicae* 1026  
*Rhopalosiphum nymphaeae* 321  
*Toxoptera citricida* 2460
- Lecanicillium muscarium**  
[Coleoptera: Curculionidae]  
*Hypera postica* 1328 1401 1402 1403  
[Diptera: Culicidae]  
*Aedes triseriatus* 810  
[Diptera: Tipulidae]  
Unknown species 2329  
[Homoptera: Aleyrodidae]  
*Trialeurodes vaporariorum* 972  
[Homoptera: Aphididae]  
Unknown species 2659 7034  
*Diuraphis noxia* 2862 3861  
*Macrosiphum euphorbiae* 204 2858  
*Myzus persicae* 3324  
*Myzus* nr. *persicae* 2323 2325 2326  
*Sitobion avenae* 2334  
[Homoptera: Cicadellidae]  
Unknown species 7037  
[Homoptera: Coccidae]  
*Ceroplastes* 7375  
*Coccus viridis* 1774  
*Pulvinaria floccifera* 980  
*Saissetia oleae* 1029  
[Homoptera: Margarodidae]  
*Icerya purchasi* 1033  
[Hymenoptera: Ichneumonidae]  
Unknown species 1330  
[Lepidoptera: Cossidae]  
*Cossula cossus* 973 1102  
[Lepidoptera: Lymantriidae]  
*Lymantria dispar* 2065 2066  
[Lepidoptera: Pyralidae]  
*Galleria mellonella* 7568  
*Ostrinia nubilalis* 900  
[Lepidoptera: Tortricidae]  
*Adoxophyes orana* 994
- Lecanicillium psalliotae**  
[Diptera: Psychodidae]  
*Lutzomyia sordelli* 3416  
[Hemiptera: Scutelleridae]  
*Eurygaster* 5763 5835 6071  
[Homoptera: Aleyrodidae]  
*Bemisia tabaci* 5582 6436  
[Homoptera: Aphididae]  
*Sitobion avenae* 2332  
[Homoptera: Margarodidae]  
*Icerya aegyptica* 6581 6582  
[Homoptera: Pseudococcidae]  
*Rhizoecus* 2234 2235  
[Tylenchida: Heteroderidae]  
*Meloidogyne hapla* 4960 4965  
[Uredinales]  
*Olivea colebrookeae* 5249
- Lecanicillium sp.**  
[Acari]  
Unknown species 7373  
[Homoptera: Aphididae]  
*Toxoptera citricida* 2009  
[Hymenoptera: Formicidae]  
*Pogonomyrma occidentalis* 7544
- Leptolegnia sp.**  
[Dorylaimida: Longidoridae]  
*Xiphinema* 2004
- Leptolegnia chapmanii**  
[Diptera: Culicidae]  
*Aedes albifasciatus* 5499  
*Culex* 2682  
*Culex pipiens quinquefasciatus* 2681  
*Mansonia titillans* 2562 2680
- Macrobiotophthora vermicola**  
[Rhabditida: Rhabditidae]  
*Cruznema lambdiense* 650
- Mariannaea pruinosa**  
[Lepidoptera: Limacodidae]  
*Iragoides fasciata* 5413
- Mariannaea sp.**  
[Thysanoptera: Thripidae]  
*Taeniothrips inconsequens* 3252 3253  
3254 3255 3257 3258 3259 3260  
3261 3262 3263 3264 3265 3267  
3268 3269 3270 3315 3316 3317  
3549 3554 3555 3557 3558 3559  
3562 3563
- Massospora cicadina**  
[Homoptera: Cicadidae]  
*Magiccicada septendecim* 374
- Metarhizium sp.**  
[Coleoptera: Curculionidae]  
Unknown species 2210 2224  
[Coleoptera: Scarabaeidae]  
*Dermolepida albohirtum* 7493  
*Popillia japonica* 3864  
*Rhopaea magnicornis* 7495  
[Homoptera: Cicadellidae]  
Unknown species 2353  
[Lepidoptera: Pyralidae]  
*Galleria mellonella* 4998 5001 5076  
5077  
*Pyrausta machaeralis* 2596
- Metarhizium ?anisopliae var. anisopliae**  
[Homoptera: Cicadellidae]  
*Nephotettix virescens* 1942
- Metarhizium album**  
[Coleoptera: Elateridae]  
*Agriotes* 2107  
[Homoptera: Cicadellidae]  
Unknown species 2081  
*Cofana spectra* 2082  
*Nephotettix virescens* 1840 1941 1943  
2176 2178  
*Recilia dorsalis* 2179
- Metarhizium anisopliae**  
[Coleoptera]  
Unknown species 4340 4557 4572 4582  
4610  
[Coleoptera: Bruchidae]  
Unknown species 932 954  
[Coleoptera: Carabidae]  
Unknown species 939 1901  
[Coleoptera: Cerambycidae]  
*Agrianome spinicollis* 7498 7499 7500  
*Anoplophora glabripennis* 6388 6392  
7234  
[Coleoptera: Chrysomelidae]  
*Cerotoma arcuata* 760 2076 2077 2635  
2941  
*Diabrotica* 2513  
*Diabrotica speciosa* 1056  
[Coleoptera: Coccinellidae]  
*Coleomegilla maculata* 808  
[Coleoptera: Curculionidae]  
*Chalcodermus aeneus* 725 929  
*Curculio caryae* 3608  
*Diaprepes abbreviata* 5197  
*Listronotus oregonensis* 2981  
*Otiorhynchus sulcatus* 818 820 1910  
4228 5198  
*Sitona discoideus* 819  
*Sitona lineatus* 4020  
[Coleoptera: Elateridae]  
*Agriotes* 7494 7524  
*Agriotes sputator* 1377  
*Conoderus* 1897 1903 2518  
*Limonium canus* 7000 7001 7002 7003  
7004 7005 7006 7007 7008 7009  
[Coleoptera: Scarabaeidae]  
Unknown species 683 7527 7529  
*Adoryphorus couloni* 4137 4138 4141  
4142  
*Ancognatha scarabaeoides* 797  
*Anoplognathus* 4601  
*Antitrogus mussoni* 7417  
*Antitrogus parvulus* 7496  
*Aphodius tasmaniae* 346 4125 4131  
4133 4139  
*Costelytra zealandica* 3057  
*Dermolepida albohirtum* 7452 7492  
*Diloboderus abderus* 6120  
*Heteronyx* 7449  
*Lepidiota consobrina* 7411  
*Lepidiota noxia* 7504  
*Melolontha melolontha* 977 1066 7532  
*Popillia japonica* 1046 1280 1298 1878  
2548 3713 3720 3721 4907 4908  
5149  
*Rhizotrogus majalis* 4123  
*Scapanes australis* 3604  
*Sericesthis nigrolineata* 4780  
*Sericesthis* 4134  
[Coleoptera: Tenebrionidae]  
*Tribolium castaneum* 3388 3389 5625  
[Diptera: Stratiomyidae]  
Unknown species 7423 7429  
*Boreoides tasmaniensis* 4600 4620  
[Hemiptera: Pentatomidae]  
Unknown species 755  
*Nezara viridula* 1055

<i>Scotinophara coarctata</i> 1432 1545 1548 2342 2343	[Orthoptera: Acrididae] <i>Austracris guttulosa</i> 4605 <i>Phaulacridium vittatum</i> 7415 <i>Pseudosphingonotus savignyi</i> 3611	<i>Heteronychus arator</i> 7424 <i>Heteronyx piceus</i> 7450 7451 <i>Oryctes</i> 2156 2165 2166 2167 <i>Oryctes rhinoceros</i> 538 <i>Phyllopertha horticola</i> 6477 6901 <i>Phyllophaga ?anxia</i> 2134 2135 2136 2137 2138 2139 <i>Phyllophaga cuyabana</i> 3924 <i>Popillia japonica</i> 3329 3330 3331 3332 3333 3334 3335 3336 3337 3338 3339 3340 <i>Rhizotrogus majalis</i> 3108 3211 <i>Sericesthis micans</i> 4568 4777 4778 <i>Sericesthis</i> 4236 <i>Strigoderma arboricola</i> 1968
[Homoptera] Unknown species 4901 4902	[Orthoptera: Gryllidae] <i>Ornebius kanetataki</i> 1009 <i>Teleogryllus commodus</i> 435 436 437 438 439 440 441 442 443 445 446 7489 7490	[Coleoptera: Tenebrionidae] <i>Alphitobius diaperinus</i> 5837 5841 5842 5848 5850 <i>Tenebrio molitor</i> 5626 <i>Tribolium castaneum</i> 5624
[Homoptera: Aphididae] <i>Diuraphis noxia</i> 3822	[Orthoptera: Gryllotalpidae] Unknown species 2786	[Diptera: Culicidae] <i>Aedes crinifer</i> 2974 <i>Aedes triseriatus</i> 3826 3827
[Homoptera: Cercopidae] Unknown species 1045 1282 1299 1379 1382 1890 1891 1895 1899 1902 1911 1912	[Orthoptera: Tettigoniidae] Unknown species 727	[Diptera: Ephydriidae] <i>?Hydrellia</i> 2105
<i>Aeneolamia varia</i> 798 3621 <i>Deois</i> 2521 <i>Deois flavopicta</i> 729 759 782 955 1044 1900 2517	[Phasmatodea: Phasmatidae] Unknown species 6236	[Diptera: Stratiomyidae] Unknown species 7414 7418 7419 7420 7421 7422 7425 7426 7427 7428
<i>Mahanarva posticata</i> 1896 1898 2627	<b>Metarhizium anisopliae var. acridum</b>	[Diptera: Syrphidae] <i>Eumerus strigatus</i> 6550
[Homoptera: Cicadellidae] <i>Nephotettix cincticeps</i> 2043 <i>Nephotettix virescens</i> 2153 <i>Recilia dorsalis</i> 543	[Orthoptera: Acrididae] Unknown species 5734 5735 <i>Austracris guttulosa</i> 324 <i>Locusta migratoria capito</i> 5736 <i>Ornithacris cavroisi</i> 7486	[Hemiptera: Cydnidae] <i>?Cirtonemus</i> 1952 <i>Scaptocoris castanea</i> 1448
[Homoptera: Cicadidae] Unknown species 3925 4095	[Orthoptera: Acrididae: Cyrtacanthacridinae] <i>Kraussaria angulifera</i> 3612 6421	[Hemiptera: Pentatomidae] <i>Scotinophara coarctata</i> 2341 <i>Tibraca limbativentres</i> 1882 1883 2213
[Homoptera: Delphacidae] <i>Nilaparvata lugens</i> 455 456 457 485 486 487 488 489 576 1284 1285 1286 1290 1300 1304 1724 1725 1726 1727 1728 1729 1744 1745 1823 2039 2421	[Orthoptera: Pyrgomorphidae] <i>Zonocerus elegans</i> 3391	[Homoptera: Aphididae] <i>Pemphigus trehernei</i> 6569 6570
[Hymenoptera: Formicidae] <i>Atta</i> 2510 <i>Atta sexdens rubropilosa</i> 2560 <i>Solenopsis</i> 2561	<b>Metarhizium anisopliae var. anisopliae</b>	[Homoptera: Cercopidae] Unknown species 3307 <i>Aeneolamia varia</i> 6319 6342 6343 6345 6346 6347 <i>Deois flavopicta</i> 925 1970 <i>Deois incompleta</i> 1449 <i>Mahanarva posticata</i> 1894 <i>Mahanarva sp.</i> 6321 6322 <i>Zulia carbonaria</i> 6457 6468 <i>Zulia colombiana</i> 6356 <i>Zulia pubescens</i> 6317 6318 6323
[Isoptera] Unknown species 2949 2951	[Acari: Ixodidae] <i>Boophilus</i> 3297 4556	[Homoptera: Cicadellidae] <i>Nephotettix virescens</i> 2106
[Isoptera: Kalotermitidae] <i>Kalotermes</i> 7413	[Araneida] Unknown species 5851	[Homoptera: Delphacidae] <i>Nilaparvata lugens</i> 2038 2080
[Isoptera: Mastotermitidae] <i>Mastotermes</i> 7506	[Coleoptera] Unknown species 3210 4290 4333 4334 4335 4336 4337 4338 4339 4341 4342 4558	[Hymenoptera: Formicidae] <i>Myrmica rubra</i> 7059 7535 7537 7538 <i>Myrmica scabrinodis</i> 7536 <i>Solenopsis invicta</i> 3738
[Isoptera: Rhinotermitidae] <i>Coptotermes formosanus</i> 3045 <i>Coptotermes lacteus</i> 7443 7444 7445 7446 7447 7448	[Coleoptera: Carabidae] Unknown species 2469	[Isoptera: Mastotermitidae] <i>Mastotermes darwiniensis</i> 7430
[Lepidoptera] Unknown species 1094 <i>Galactica</i> 552	[Coleoptera: Cerambycidae] <i>Anoplophora glabripennis</i> 7180 <i>Dectes texanus</i> 6472	[Isoptera: Rhinotermitidae] <i>Coptotermes formosanus</i> 6909 6910 6911 <i>Coptotermes lacteus</i> 7431 7432
[Lepidoptera: Bombycidae] <i>Bombyx mori</i> 703	[Coleoptera: Chrysomelidae] <i>Cerotoma arcuata</i> 724 <i>Diabrotica</i> 1885 2514 <i>Diabrotica speciosa</i> 1958 <i>Zygogramma bicolorata</i> 2231	[Lepidoptera] Unknown species 2424
[Lepidoptera: Crambidae] Unknown species 3064	[Coleoptera: Curculionidae] <i>Curculio caryae</i> 2575 <i>Geraeus senilis</i> 3305 3306 3308 <i>Otiorhynchus ligustici</i> 4819 4820 4821 4822 4823 4824 <i>Otiorhynchus sulcatus</i> 817 6546 6549 <i>Sternechus subsignatus</i> 1989	
[Lepidoptera: Hepialidae] <i>Oncopera intrucata</i> 4234	[Coleoptera: Elateridae] <i>Agriotes</i> 6551 <i>Conoderus</i> 23	
[Lepidoptera: Lyonetiidae] <i>Leucoptera scitella</i> 1116	[Coleoptera: Scarabaeidae] Unknown species 472 2162 2163 3479 <i>Adoryphorus</i> 4124 <i>Adoryphorus couloni</i> 4239 4346 4677 4716 4722 <i>Anoplognathus hirsutus</i> 4574 4779 <i>Antitrogus parvulus</i> 7410 <i>Aphodius tasmaniae</i> 4132 <i>Costelytra zealandica</i> 3056 7435	
[Lepidoptera: Noctuidae] <i>Helicoverpa zea</i> 1080 <i>Mocis</i> 587		
[Lepidoptera: Nymphalidae] <i>Chlosyne lacinia saundersii</i> 1057 1059		
[Lepidoptera: Plutellidae] <i>Plutella xylostella</i> 4522		
[Lepidoptera: Pyralidae] <i>Galleria mellonella</i> 4903 4904 4905 4906 7570 7571 7572 7573 <i>Ostrinia nubilalis</i> 1489		
[Orthoptera] Unknown species 728 6237		

- [Lepidoptera: Hepialidae]  
*Orycanus* 1187  
*Wiseana* sp. 4681
- [Lepidoptera: Lasiocampidae]  
*Malacosoma disstria* 6167
- [Lepidoptera: Noctuidae]  
Unknown species 2140  
*Anticarsia gemmatalis* 3295  
*Spodoptera* 2735  
*Spodoptera frugiperda* 3293 3294
- [Lepidoptera: Olethreutidae]  
*Carpocapsa pomonella* 1095
- [Lepidoptera: Plutellidae]  
*Plutella xylostella* 5873
- [Lepidoptera: Pyralidae]  
*Diatraea saccharalis* 3290 3291 3292  
*Eoreuma loftini* 5469 5471  
*Galleria mellonella* 6474 6475 6476  
6558 7014 7015 7016 7017 7018  
7019 7020 7021 7022 7023 7024  
7025 7026
- [Lepidoptera: Tortricidae]  
*Lobesia botrana* 1112
- [Orthoptera: Acrididae]  
*Patanga succincta* 3609  
*Phaulacridium vittatum* 7416  
*Pseudosphingonotus savignyi* 3610  
*Schistocerca gregaria* 5628 7487  
*Schistocerca piceifrons* 5746 5749 5752
- [Orthoptera: Gryllidae]  
*Teleogryllus commodus* 444
- Metarhizium anisopliae** var. **lepidiotum**  
[Coleoptera: Scarabaeidae]  
*Dermolepida albohirtum* 7453 7488
- Metarhizium anisopliae** var. **majus**  
[Coleoptera: Scarabaeidae]  
Unknown species 1858 1859  
*Anoplognathus* 4566 7505  
*Oryctes* 1914  
*Oryctes rhinoceros* 978 1946 2151  
*Xyloryctes jamaicensis* 297 298
- [Lepidoptera: Bombycidae]  
*Bombyx mori* 988 1015
- Metarhizium flavoviride**  
[Coleoptera: Curculionidae]  
*Ceutorhynchus macula-alba* 2133  
*Otiorhynchus sulcatus* 1184 2024
- Metarhizium flavoviride** var. **flavoviride**  
[Coleoptera: Scarabaeidae]  
*Adoryphorus couloni* 4719 4720
- [Isoptera: Rhinotermitidae]  
*Coptotermes lacteus* 7436 7437 7438  
7439 7440 7441 7442
- Metarhizium flavoviride** var. **minus**  
[Homoptera: Cicadellidae]  
Unknown species 2339 2948  
*Nephotettix virescens* 1945  
*Recilia dorsalis* 1546 1547
- [Homoptera: Delphacidae]  
*Nilaparvata lugens* 1099 1271 1272  
1273 1274 1275 1276 1277 1279  
1283 1287 1288 1289 1291 1292  
1293 1294 1295 1296 1297 1301  
1302 1303 1305 1763 1764 1765  
1766 1767 1768 1769 1770 1771  
1772 1773 2037
- [Orthoptera: Acrididae]  
Unknown species 2023  
*Ornithacris cavroisi* 3341  
*Schistocerca piceifrons* 5747 5748 5750  
5751
- Metarhizium flavoviride** var. **pemphigus**  
[Homoptera: Aphididae]  
*Pemphigus* 7491
- Metarhizium flavoviride** 'Type E'  
[Coleoptera: Scarabaeidae]  
*Lepidiota consobrina* 7412
- Metarhizium taii**  
[Lepidoptera]  
Unknown species 6238
- Microhilum oncooperae**  
[Lepidoptera: Hepialidae]  
*Oncopera intricata* 4358 4771  
*Oncopera intrucata* 4770
- Mixed Culture** sp.  
[Coleoptera: Chrysomelidae]  
*Pyrhaltia fuscipennis* 1043
- [Coleoptera: Lampyridae]  
Unknown species 5188
- [Coleoptera: Scarabaeidae]  
*Holotrichia parallela* 4387
- [Homoptera: Aleyrodidae]  
*Bemisia tabaci* 4066  
*Trialeurodes vaporariorum* 4403
- [Lepidoptera: Pyralidae]  
*Corecya cephalonica* 2738
- Monacrosporium cionopagum**  
[Tylenchida: Heteroderidae]  
*Meloidogyne hapla* 4966
- Monacrosporium ellipsosporum**  
[Tylenchida: Heteroderidae]  
*Meloidogyne hapla* 4957 4959
- Mortierella clausenii**  
[Lepidoptera: Lymantriidae]  
*Lymantria dispar* 2062
- Mortierella histoplasmatoides**  
[Lepidoptera: Lymantriidae]  
*Lymantria dispar* 2063
- Mortierella hyalina**  
[Lepidoptera: Lymantriidae]  
*Lymantria dispar* 2061
- Mucor circinelloides**  
[Coleoptera: Cerambycidae]  
*Anoplophora glabripennis* 6470
- Mucor** sp.  
[Homoptera: Cercopidae]  
*Zulia vilior costarricensis* 3535
- Myriodontium keratinophilum**  
[Isopoda: Oniscoidea]  
*Porcellio* 368 386
- Nematoctonus** sp.  
[Rhabditida: Rhabditidae]  
*Bunonema* 5663
- Neobarya parasitica**  
[Sordariales: Nitschkiaceae]  
*Bertia moriformis* 6156
- Neozygites** sp.  
[Acari: Tetranychidae]  
*Tetranychus urticae* 662
- Neozygites cf floridana**  
[Acari: Tetranychidae]  
*Tetranychus urticae* 5201 5202 5376
- Neozygites parvispora**  
[Thysanoptera: Thripidae]  
*Thrips tabaci* 5620
- Neozygites tetranychii**  
[Acari: Tetranychidae]  
*Tetranychus althaeae* 2677
- Nomuraea** sp.  
[Lepidoptera: Noctuidae]  
*Helicoverpa armigera* 2413
- Nomuraea atypicola**  
[Araneida: ?Argiopidae]  
Unknown species 1904  
[Araneida: Tetragnathidae]  
*Nephila clavipes* 7231
- Nomuraea cylindrospora**  
[Homoptera: Cicadidae]  
*Pomponia linearis* 6926
- Nomuraea rileyi**  
[Homoptera: Delphacidae]  
*Sogatella furcifera* 558
- [Lepidoptera]  
Unknown species 936 1879 1893
- [Lepidoptera: Bombycidae]  
*Bombyx mori* 711
- [Lepidoptera: Lymantriidae]  
*Lymantria* 481 482 483
- [Lepidoptera: Noctuidae]  
Unknown species 135 6875  
*Anticarsia gemmatalis* 1950 2013 2201  
2202 2203 2204 2205 2207 2465  
2466 2492 3940 5208 5209 5210  
5212 6732 6734 6736 6743 6868  
6869 6870 6872 6873 6874 6876  
6877 6878 7052 7053 7054 7055  
7056  
*Helicoverpa armigera* 6239  
*Mocis frugalis* 1762  
*Naranga* 2345

## Host by Fungus

- Plathypena scabra* 762 6871 6881  
*Plusia* 1047  
*Plusiinae* 6879  
*Prodenia litura* 1014  
*Pseudoplusia includens* 6866 6882  
*Rachiplusia nu* 2206  
*Rivula atimeta* 1756 1757 1758 1759  
 1760 2395  
*Spodoptera* 323 358 380 935 6867  
*Spodoptera exigua* 539  
*Spodoptera frugiperda* 1972 3301 4094  
 6735  
*Spodoptera litura* 6645  
 [Lepidoptera: Pyralidae]  
*Cnaphalocrocis medinalis* 1761 2174
- Nomuraea viridulus**  
 [Homoptera: Cicadidae]  
*Cryptotympana facialis* 6927
- Ostracoderma sp.**  
 [Taxales: Taxaceae]  
*Taxus sp.* 5163
- Paecilomyces sp.**  
 [Araneida]  
 Unknown species 2354  
 [Araneida: Araneae]  
 Unknown species 5181 5183 5190  
 [Coleoptera: Curculionidae]  
 Unknown species 5184 5193  
 [Diptera]  
 Unknown species 2350 2378 7078  
 [Diptera: Drosophilidae]  
 Unknown species 3768  
 [Hemiptera: Pentatomidae]  
 Unknown species 7075  
*Nezara viridula* 3101  
 [Homoptera: Adelgidae]  
*Adelges tsugae* 5179 5180  
 [Homoptera: Aleyrodidae]  
*Bemisia tabaci* 3772 3774 3775 3776  
 3777 3778 3780 3781 3782 3783  
 3784 3785 3786 3787 3788 3870  
 3871 3872 3873 3874 3875 3877  
 4985 4986 4987 4988 4989 5091  
 5092 5094 5095 5096 5097 5098  
 5099 5100 5101 5102 5103 5104  
 5105 5106 5108 5109 5110 5111  
 5112 5114  
 [Homoptera: Cicadellidae]  
*Recilia dorsalis* 680  
 [Hymenoptera: Tenthredinoidea]  
 Unknown species 6883  
 [Lepidoptera: Limacodidae]  
*Natada michonta* 2616 2617 2618  
 [Lepidoptera: Noctuidae]  
*Sesamia inferens* 1008  
 [Lepidoptera: Tortricidae]  
*Cydia pomonella* 6193 6198  
*Epiphyas postvittana* 309  
 [Opiliones]  
 Unknown species 5192
- Paecilomyces ?crustaceus**  
 [Homoptera: Cercopidae]  
*Zulia carbonaria* 6462 6467
- Paecilomyces ?lilacinus**  
 [Homoptera: Cercopidae]  
*Zulia carbonaria* 6458
- Paecilomyces amoenoroseus**  
 [Coleoptera: Lagriidae]  
*Lagria vilosa* 741 744 2220 2958 2959  
 2960 4097
- Paecilomyces andoi**  
 [Diptera: Cecidomyiidae]  
*Resseliella odai* 1684
- Paecilomyces canadensis**  
 [Coleoptera: Scarabaeidae]  
*Heptophylla picea* 984  
 [Lepidoptera: Lasiocampidae]  
*Gastropacha orientalis* 990
- Paecilomyces cateniannulatus**  
 [Coleoptera: Curculionidae]  
 Unknown species 6241  
*Brachyderes incanus* 6243  
 [Lepidoptera]  
 Unknown species 6240  
 [Lepidoptera: Lymantriidae]  
*Lymantria dissoluta* 6242
- Paecilomyces cateniobliquus**  
 [Coleoptera]  
 Unknown species 6244  
 [Orthoptera: Acridoidea]  
 Unknown species 6283
- Paecilomyces farinosus**  
 [Araneida]  
 Unknown species 2376  
 [Araneida: Araneae]  
 Unknown species 5191  
 [Coleoptera]  
 Unknown species 2355  
 [Coleoptera: Carabidae]  
*Agonum dorsale* 4029  
*Bembidion lampros* 4043  
*Hapalus sp.* 4045  
 [Coleoptera: Cerambycidae]  
 Unknown species 5073 5074 5075 5080  
 [Coleoptera: Chrysomelidae]  
*Pyrrhalta luteola* 1507 1508  
 [Coleoptera: Coccinellidae]  
 Unknown species 5754 5834  
 [Coleoptera: Curculionidae]  
*Otiiorhynchus sulcatus* 2937  
*Premnotrypes vorax* 799  
*Sitona lineatus* 4039  
 [Coleoptera: Lagriidae]  
*Lagria vilosa* 1957  
 [Coleoptera: Staphylinidae]  
*Staphylinus olens* 4040  
 [Coleoptera: Tenebrionidae]  
 Unknown species 5699  
*Alphitobius diaperinus* 5858  
 [Diptera: Culicidae]  
*Aedes albifasciatus* 2971  
*Aedes sierrensis* 1939  
 [Diptera: Tachinidae]  
 Unknown species 1348 1349
- [Hemiptera: Miridae]  
 Unknown species 6607  
 [Hemiptera: Pentatomidae]  
*Aelia* 6097 6098  
 [Hemiptera: Scutelleridae]  
*Eurygaster* 5675 5676 5679 6012 6017  
 6020 6044  
*Eurygaster integriceps* 6288  
 [Homoptera: Adelgidae]  
*Adelges tsugae* 5178 5760 5761 5774  
 5775 5776 5784 5788 5790 5792  
 5797 5799 5800 5801 5802 5826  
 5827 5830 6028 6029 6030 6031  
 6032 6033 6034 6036 6037 6038  
 6048 6049  
 [Homoptera: Aleyrodidae]  
*Aleurocanthus woglumi* 2954  
*Bemisia tabaci* 3572 3573 3574 3575  
 3576 3578 3579 3580 3582 3583  
 3584 3585 3586 3587 3588 3589  
 3591 3592 3593 3658 3659 3661  
 5081 5082 5083 5084 5306  
*Trialeurodes vaporariorum* 4412  
 [Homoptera: Aphididae]  
*Diuraphis noxia* 6222 6609 6983  
 [Hymenoptera: Pamphiliidae]  
*Acantholyda erythrocephala* 5548  
 [Hymenoptera: Tenthredinidae]  
*Pristiphora erichsonii* 1851  
 [Lepidoptera]  
 Unknown species 2822 3152 5996 6245  
 [Lepidoptera: Arctiidae]  
*Pyrrharctia isabella* 3017  
 [Lepidoptera: Cossidae]  
*Prionoxystus robiniae* 2269  
 [Lepidoptera: Geometridae]  
*Alosophila pometaria* 5368  
*Lambdina athasaria* 3537 3538  
 [Lepidoptera: Lasiocampidae]  
*Malacosoma americanum* 3  
 [Lepidoptera: Lymantriidae]  
*Leucoma sabicis* 38  
*Lymantria dispar* 20 648 697 2057  
 2131 2564 2835 3221 3490 3491  
 3492 3493 3494 3495 3496 3497  
 3498 3499 3500 3501 3502 3503  
 3504 3505 3506 3507 3508 3517  
 3518 3519 3520 3521 3522 3523  
 3524 3525 3526 3533 3595 3596  
 3597 3598 3599 3664 3665 3666  
 [Lepidoptera: Noctuidae]  
*Agrotis segetum* 4010  
*Rivula atimeta* 2344  
*Spodoptera* 2546  
 [Lepidoptera: Notodontidae]  
*Quadicalcarifera punctatella* 1042  
 [Lepidoptera: Nymphalidae]  
 Unknown species 981  
*Chlosyne lacinia saundersii* 1065  
 [Lepidoptera: Pyralidae]  
*Galleria mellonella* 7531  
*Ostrinia nubilalis* 3983  
 [Lepidoptera: Sesiidae]  
*Conopia myopaeformis* 1108

[Lepidoptera: Tortricidae]	5311 5312 5313 5314 5315 5316	<b>Paecilomyces lilacinus</b>
<i>Cydia pomonella</i> 975 5883 5884 5885	5317 5318 5319 5320 5321 5322	[Coleoptera: Chrysomelidae]
6200 6202 6207	5323 5324 5325 5326 5327 5328	<i>Cerotoma</i> 1951
<i>Laspeyresia medicaginis</i> 1225	5329 5330 5331 5475 5476 6434	[Coleoptera: Curculionidae]
<i>Lobesia botrana</i> 1111	6435 6562	<i>Diaprepes abbreviata</i> 410
[Opiliones]	<i>Trialeurodes vaporariorum</i> 2658 4205	[Coleoptera: Lagriidae]
Unknown species 5194	4401 4404 4406 4407 4408 4409	<i>Lagria vilosa</i> 723 2952
[Thysanoptera: Thripidae]	4410 4411 4413 4414 4415 6916	[Coleoptera: Scarabaeidae]
<i>Taeniothrips inconsequens</i> 3564	7051	Unknown species 6110
<b>Paecilomyces flavovirescens</b>	[Homoptera: Aphididae]	[Coleoptera: Scolytidae]
[Diptera: Cecidomyiidae]	Unknown species 3682 4400 6789	<i>Hypothenemus hampei</i> 5876 5877 5880
<i>Resseliella odai</i> 1686	<i>Diuraphis noxia</i> 3824 4383 4459 4460	5882 6188 6190
<b>Paecilomyces fumosoroseus</b>	4461 4698 4699 4700 4701 4702	[Hemiptera: Pentatomidae]
[Acari]	4703 4704 4705 4706 4707 4708	Unknown species 531
Unknown species 6610	4709 4710 4711	<i>Scotinophara coarctata</i> 763
[Acari: Ixodidae]	[Homoptera: Delphacidae]	<i>Tibraca limbativentres</i> 2215
<i>Ixodes ricinus</i> 7069	<i>Nilaparvata lugens</i> 2198	[Hemiptera: Scutelleridae]
[Coleoptera]	[Homoptera: Pseudococcidae]	<i>Eurygaster</i> 6018 6021 6024 6026 6080
Unknown species 5694	<i>Phenacoccus solani</i> 2247	6117
[Coleoptera: Chrysomelidae]	[Homoptera: Psyllidae]	[Homoptera: Aleyrodidae]
<i>Pyrrhalta luteola</i> 1506	<i>Heteropsylla incisa</i> 2175	<i>Trialeurodes vaporariorum</i> 3846
<i>Spaethiella</i> 2956	[Homoptera: spf. Fulgoroidea]	[Homoptera: Aphididae]
[Coleoptera: Lagriidae]	Unknown species 7050	<i>Diuraphis noxia</i> 6985
<i>Lagria vilosa</i> 722 2216 2217 2219 2221	[Hymenoptera: Aphelinidae]	[Homoptera: Cercopidae]
[Coleoptera: Scarabaeidae]	<i>Eretmocerus californicus</i> 5253 5254	<i>Deois flavopicta</i> 2078 3481
<i>Popillia japonica</i> 2679	5255 5256 5257 5258	<i>Zulia pubescens</i> 6340
[Coleoptera: Scolytidae]	[Hymenoptera: Tenthredinidae]	[Homoptera: Cicadidae]
<i>Hypothenemus hampei</i> 6730 7063 7284	<i>Monophadnus elongatulus</i> 1576	Unknown species 6247
[Coleoptera: Tenebrionidae]	[Lepidoptera]	[Hymenoptera: Formicidae]
<i>Alphitobius diaperinus</i> 5844 5845 5846	Unknown species 5251 5252	<i>Anoplolepis longipes</i> 2155
5847	[Lepidoptera: Arctiidae]	<i>Pogonomyrax occidentalis</i> 7545 7546
<i>Tenebrio molitor</i> 5627	<i>Hyphantria cunea</i> 1568 1569 1577	7547 7548
[Dictyoptera: Blattellidae]	1578 1579	[Lepidoptera: Bombycidae]
<i>Blattella germanica</i> 5855	[Lepidoptera: Bombycidae]	<i>Bombyx mori</i> 986
[Diptera]	<i>Bombyx mori</i> 720 989 1005	[Lepidoptera: Nymphalidae]
Unknown species 887	[Lepidoptera: Lymantriidae]	<i>Chlosyne lacinia saundersii</i> 1058
[Diptera: ?Stratiomyidae]	<i>Lymantria dispar</i> 6206	<i>Opsiphanes cassinae</i> 5805
Unknown species 2425	[Lepidoptera: Noctuidae]	[Lepidoptera: Plutellidae]
[Diptera: Calliphoridae]	<i>Spodoptera</i> 2734	<i>Plutella xylostella</i> 6183 6197
<i>Calliphora</i> 1646	[Lepidoptera: Plutellidae]	[Tylenchida: Heteroderidae]
[Diptera: Muscidae]	<i>Plutella xylostella</i> 2749 5874 6799 6800	<i>Meloidogyne</i> 2181 2182 2183 2184 2185
<i>Musca autumnalis</i> 1626	[Lepidoptera: Pyralidae]	2186 2233
<i>Musca domestica</i> 1644 1645 1867 1868	<i>Diaphania hyalinata</i> 3302	<b>Paecilomyces militaris</b>
5860	<i>Galleria mellonella</i> 6893	[Lepidoptera]
[Hemiptera: Miridae]	[Lepidoptera: Tortricidae]	Unknown species 6248
<i>Adelphocoris</i> 1530 1532	<i>Cydia pomonella</i> 6192 6203 6204	<b>Paecilomyces reniformis</b>
[Hemiptera: Pentatomidae]	<b>Paecilomyces guansis</b>	[Orthoptera: Tettigoniidae]
Unknown species 3429	[Orthoptera: Gryllidae]	Unknown species 429 484 577 7040
[Homoptera: Aleyrodidae]	Unknown species 2152	7041
<i>Bemisia</i> 3313 3800 6797 6798	<b>Paecilomyces javanicus</b>	<b>Paecilomyces sinensis</b>
<i>Bemisia argentifolii</i> 5154 5155 5156	[Coleoptera]	[Lepidoptera: Hepialidae]
5157 5158 5159 5462 5463 5464	Unknown species 7119	Unknown species 6284 6285
<i>Bemisia tabaci</i> 3076 3083 3322 3408	[Coleoptera: Curculionidae]	<b>Paecilomyces tenuipes</b>
3577 3581 3590 3594 3660 3662	<i>Litodactylus leucogaster</i> 322	[Lepidoptera]
3663 3699 3700 3843 3851 3878	[Homoptera: Aleyrodidae]	Unknown species 5134 5135 6249
3889 4482 4483 4484 4485 4486	<i>Bemisia</i> 3303	[Lepidoptera: Noctuidae]
4490 4491 4492 4493 4494 4495	[Lepidoptera: Noctuidae]	Unknown species 3938 3939 4096
4496 4497 4498 4499 4501 4502	<i>Mamestra brassicae</i> 3981	<i>Mocis latipes</i> 6889
4503 5085 5086 5087 5088 5089		<i>Spodoptera frugiperda</i> 2488 2489 2490
5090 5107 5113 5115 5116 5118		2491
5119 5121 5122 5259 5260 5261		[Lepidoptera: Noctuidae: Plusiinae]
5262 5263 5264 5265 5266 5267		Unknown species 3937
5268 5269 5270 5271 5272 5297		
5298 5299 5300 5301 5302 5303		
5304 5305 5307 5308 5309 5310		

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[Lepidoptera: Nymphalidae] <i>Agraulis vanillae</i> 6788	<b>Pandora neoaphidis</b> [Hemiptera: Miridae] <i>Lygus</i> 1570 [Homoptera: Aphididae] Unknown species 78 381 1695 1696 2016 2298 6902 <i>Acyrtosiphon pisum</i> 827 830 838 1598 1603 1605 1609 2017 2018 2583 2584 2585 2587 2588 2589 2591 2592 2593 2594 2754 2755 2756 2757 2758 2760 2761 2762 2763 2766 2767 2768 2769 2773 2781 2782 2783 2784 2837 2838 2839 2840 2842 2844 2845 2846 2847 2851 2852 2853 2854 2855 2856 2865 2866 2867 2868 2870 2872 2873 3234 3237 3240 4934 6631 <i>Aphidula</i> 1610 1615 <i>Aphis</i> 128 3410 <i>Aphis fabae</i> 608 609 610 611 612 613 614 636 637 638 639 1606 1611 1981 1985 2019 2020 3238 3241 5995 <i>Aphis glycines</i> 7212 7213 7214 7226 <i>Brevicoryne brassicae</i> 1613 1616 1617 1784 1785 1786 1824 1825 1826 1827 2108 2109 2110 2112 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2128 2280 2293 5371 5372 5373 5374 <i>Dactynotus formosanus</i> 1137 <i>Diuraphis noxia</i> 3081 3082 3126 3174 3175 <i>Hyalopterus pruni</i> 1596 <i>Hyperomyzus lactucae</i> 829 833 835 <i>Macrosiphum</i> 1607 1612 <i>Macrosiphum akebiae</i> 1134 <i>Macrosiphum euphorbiae</i> 181 <i>Macrosiphum rosae</i> 1986 1987 <i>Metopolophium dirhodum</i> 2874 2875 2876 3365 3367 5707 5708 <i>Myzus</i> 1601 1602 <i>Myzus nicotinae</i> 3411 3412 3459 <i>Myzus persicae</i> 1600 2085 2086 3249 3250 3251 <i>Schizaphis graminum</i> 3366 <i>Sitobion</i> 1597 1604 <i>Sitobion avenae</i> 5403 6166 <i>Uroleucon formosanus</i> 993	<b>Paraisaria dubia</b> [Coleoptera: Scarabaeidae: Melolonthinae] <i>Antitrogus rugulosus</i> 5764
<b>Pandora sp.</b> [Diptera] Unknown species 5812	<b>Penicillium sp.</b> [Acari: Ixodidae] <i>Ixodes scapularis</i> 5733 6603 [Coleoptera: Curculionidae] <i>Anthonomus musculus</i> 3036 <i>Chalcodermus bimaculatus</i> 2950 [Homoptera: Cercopidae] <i>Zulia colombiana</i> 6357 6359 [Homoptera: Ortheziiidae] <i>Orthezia praelonga</i> 2643 [Hymenoptera: Vespidae] <i>Vespula germanica</i> 4148 [Lepidoptera: Hepialidae] <i>Oncopera alboguttata</i> 4263 [Lepidoptera: Lymantriidae] <i>Lymantria dispar</i> 2834 2836 [Orthoptera: Acrididae] <i>Hieroglyphus banian</i> 5335	
<b>Pandora blunckii</b> [Coleoptera: Elateridae] <i>Athalia rosae</i> 915 917 920 1715 1716 1717 1718 [Lepidoptera: Plutellidae] <i>Plutella</i> 3075 <i>Plutella maculipennis</i> 217 <i>Plutella xylostella</i> 1000 2824 3200 3201 3202 6293 6294 6295 6296 6297 6298 6299 6300 6301 6302 6304 6305 6306 6307 6308 6309 6310 6311 6312 6316	<b>Pandora bullata</b> [Diptera: Calliphoridae] <i>Phaenicia sericata</i> 116	
<b>Pandora delphacis</b> [Hemiptera: Miridae] Unknown species 3062 [Homoptera: Cicadellidae] Unknown species 1238 1936 <i>Empoasca fabae</i> 3072 3093 3094 3095 3096 3106 3107 <i>Nephotettix cincticeps</i> 458 459 460 461 478 <i>Recilia dorsalis</i> 659 660 [Homoptera: Delphacidae] <i>Nilaparvata lugens</i> 134 575 579 580 657 664 665 666 667 668 669 670 672 673 674 676 682 686 698 713 716 1124 1132 1133 1264 1268 1730 1731 2091 <i>Sogatella furcifera</i> 593 603 2092 2093 2095 2096 2409 <i>Sogatodes pusanus</i> 2094 [Homoptera: Membracidae] <i>Spissistilus festinus</i> 2028 3484 [Lepidoptera: Noctuidae] <i>Mamestra brassicae</i> 1265	<b>Penicillium thomii</b> [Lepidoptera: Lymantriidae] <i>Lymantria dispar</i> 2056	
<b>Pandora dipterigena</b> [Diptera] Unknown species 131 1720 1921 1923 [Diptera: ?Sciaridae] Unknown species 1887 [Diptera: Brachycera] Unknown species 1422 [Diptera: Nematocera] Unknown species 397 [Trichoptera] Unknown species 2406	<b>Phialophora malorum</b> [Lepidoptera: Lymantriidae] <i>Lymantria dispar</i> 2072	<b>Phoma cava</b> [Lepidoptera: Lymantriidae] <i>Lymantria dispar</i> 2071
<b>Pandora kondoiensis</b> [Homoptera: Aphididae] <i>Acyrtosiphon kondoi</i> 369 825 828 836 837	<b>Pandora nouryi</b> [Homoptera: Aphididae] Unknown species 199 <i>Acyrtosiphon kondoi</i> 362 <i>Therioaphis maculata</i> 366	<b>Pochonia suchlasporia var. catenulata</b> [Lepidoptera: Lymantriidae] <i>Lymantria dispar</i> 2064
	<b>Pandora nr. delphacis</b> [Hemiptera: Miridae] Unknown species 2132 [Homoptera: Delphacidae] <i>Nilaparvata lugens</i> 2146	<b>Polycephalomycetes ramosus</b> [Lepidoptera] Unknown species 7095
	<b>Pandora nr. echinospora</b> [Diptera] Unknown species 138	<b>Polycephalomycetes tomentosus</b> [Trichiales: Trichiaceae] <i>Hemitrichia serpula</i> 5353
		<b>Pseudogibellula formicarum</b> [Homoptera: Cercopidae] Unknown species 2913 [Homoptera: Flatidae ?] Unknown species 5765 5766
		<b>Saprolegnia sp.</b> [Diptera: Chironomidae] Unknown species 6427 [Diptera: Simuliidae] Unknown species 179 180
		<b>Schizangiella sp.</b> [Squamata: Colubridae] <i>Elaphe</i> 2237 2239
		<b>Schizangiella serpentis</b> [Squamata: Viperidae] <i>Crotalus horridus</i> 203



**Scopulariopsis** sp.

- [Coleoptera: Chrysomelidae]  
*Leptinotarsa decemlineata* 2327  
[Coleoptera: Curculionidae]  
Unknown species 2169  
[Diptera: Calliphoridae]  
*Lucilia illustris* 2328  
[Homoptera: Adelgidae]  
*Adelges tsugae* 5164  
[Lepidoptera: Lymantriidae]  
*Lymantria dispar* 2255  
[Lepidoptera: Plutellidae]  
*Plutella xylostella* 3203

**Septobasidium** carestianum

- [Homoptera: spf. Coccoidea]  
Unknown species 6473

**Simplicillium** lamellicola

- [Acari: Oribatidae]  
Unknown species 1367

**Smittium** culicis

- [Diptera: Culicidae]  
*Aedes albifasciatus* 5432  
*Culex renatoi* 5431

**Smittium** culisetae

- [Diptera: Culicidae]  
*Culex dolosus* 5430  
[Diptera: Simuliidae]  
*Simulium vittatum* 6810

**Smittium** megazygosporum

- [Diptera: Simuliidae]  
*Simulium vittatum* 6275

**Sorospora** sp.

- [Orthoptera: Acrididae]  
*?Melanoplus* 377

**Sorospora** uvella

- [Orthoptera: Gryllotalpidae]  
*Scapteriscus vicinus* 1856

**Sporodiniella** umbellata

- [Homoptera: Jassidae]  
Unknown species 5222

**Sporothrix** sp.

- [Homoptera: Cicadellidae]  
Unknown species 7038  
[Homoptera: Delphacidae]  
Unknown species 7042  
*Nilaparvata lugens* 1908  
[Thysanoptera: Thripidae]  
*Thrips tabaci* 3142

**Sporothrix** insectorum

- [Hymenoptera: Formicidae]  
*Paltothyreus tarsatus* 2909 2918  
[Lepidoptera]  
Unknown species 6286

**Stachybotrys** sp.

- [Homoptera: Aphididae]  
*Sitobion avenae* 2863

**Sterile** mycelium

- [Aphelenchida: Aphelenchoididae]  
*Aphelenchoides* 3735  
[Coleoptera: Cerambycidae]  
Unknown species 4009  
[Coleoptera: Scarabaeidae]  
*Adoryphorus couloni* 4243  
[Hemiptera: Pentatomidae]  
*Scotinophara coarctata* 1435  
[Homoptera: Adelgidae]  
*Adelges tsugae* 5819  
[Homoptera: Aleyrodidae]  
Unknown species 3710 3711  
*Bemisia tabaci* 3868  
[Homoptera: Aphididae]  
Unknown species 3703 3705 3712  
*Brevicoryne brassicae* 4376  
[Homoptera: Cercopidae]  
*Prosapia plagiata* 4712  
[Homoptera: Cicadellidae]  
Unknown species 3702  
[Lepidoptera: Lymantriidae]  
*Lymantria dispar* 2073

**Stilbella** buquetti

- [Coleoptera: Curculionidae]  
*Artipes* 2915

**Strongwellsea** castrans

- [Diptera: Anthomyiidae]  
*Delia radicum* 3282 3485

**Syngliocladium** sp.

- [Diptera: Ulidiidae]  
*Tetanops myopaeformis* 5217

**Syngliocladium** tetanopsis

- [Diptera: Ulidiidae]  
*Tetanops myopaeformis* 4972

**Synnematium** jonesii

- [Coleoptera: Hispinae]  
*Promecotheca papuana* 5664

**Tetrarhiza** sinensis

- [Tylenchida: Heteroderidae]  
*Heterodera glycines* 6175 6176

**Tilachlidium** sp.

- [Coleoptera: Elateridae]  
Unknown species 2415

**Tilletiopsis** sp.

- [Homoptera: Delphacidae]  
*Nilaparvata lugens* 527 572 573

**Tolypocladium** sp.

- [Hemiptera: Tingidae]  
*Leptopharsa heveae* 6634

**Tolypocladium** cylindrosporum

- [Coleoptera: Elateridae]  
Unknown species 7456  
[Diptera: Bibionidae]  
*Plecia nearctica* 2912  
[Diptera: Culicidae]  
Unknown species 961 976 1027 1028  
2911  
*Aedes australis* 841  
*Aedes sierrensis* 705 1580  
[Hymenoptera: Formicidae]  
*Myrmica rubra* 7539  
[Hymenoptera: Siridae]  
*Sirex noctilo* 5538  
[Lepidoptera: Noctuidae]  
Unknown species 2777 2778

**Tolypocladium** extinguens

- [Diptera: Mycetophilidae]  
*Arachnocampa luminosa* 2921

**Tolypocladium** inflatum

- [Acari: Oribatidae]  
*Mycobates* 3278  
[Coleoptera: Scarabaeidae: Aphodiinae]  
Unknown species 4877 4878 4879 4880  
4881 4882 4883 4884 4885 4886  
4887 4888 4889 4890 4891 4892  
4893 4894 4895 4896 4897 4898  
[Diptera: Tachinidae]  
Unknown species 3281  
[Lepidoptera: Tortricidae]  
*Choristoneura fumiferana* 3321

**Torrubiella** homopterorum

- [Homoptera: Delphacidae]  
*Nilaparvata lugens* 2045

**Torrubiella** piperis

- [Homoptera: Coccoidea]  
Unknown species 7232

**Torrubiella** ratticaudata

- [Araneida: Salticidae]  
*Euophrys ?trivittata* 1915 1916

**Trichoderma** sp.

- [Homoptera: Cicadellidae]  
*Empoasca kraemeri* 807  
[Homoptera: Diaspididae]  
*Unaspis citri* 3084  
[Hymenoptera: Formicidae]  
*Anoptolepsis longipes* 2160 2161  
[Lepidoptera: Pyralidae]  
*Elasmopalpus lignosellus* 5730

**Trichoderma** ?viride

- [Homoptera: Cercopidae]  
*Aeneolamia varia* 6344

**Trichoderma** lignorum

- [Homoptera: Adelgidae]  
*Adelges tsugae* 5176

**Trichothecium** sp.

- [Hemiptera: Miridae]  
*Adelphocoris* 1217 1223  
[Homoptera: Cicadellidae]  
*Nephotettix bipunctata cincticeps* 653

Host by Fungus

**Trichothecium roseum**

- [Hemiptera: Miridae]  
*Adelphocoris* 1212 1226 1308 1639  
1642  
[Homoptera: Aleyrodidae]  
Unknown species 3708  
[Lepidoptera: Lymantriidae]  
*Lymantria dispar* 2055

**Verticillium sp.**

- [Hemiptera: Scutelleridae]  
*Eurygaster* 5681 5682 5683  
[Homoptera: Aleyrodidae]  
*Trialeurodes vaporariorum* 4402  
[Homoptera: Aphididae]  
Unknown species 4194 4195 4203 4398  
4399  
*Myzus persicae* 4074  
*Myzus* nr. *persicae* 2324  
[Lepidoptera: Lymantriidae]  
*Lymantria dispar* 3531  
[Thysanoptera: Thripidae]  
*Taeniothrips inconsequens* 3547 3550  
3551 3552 3556 3561

**Verticillium ?cephalosporum**

- [Coleoptera: Curculionidae]  
*Anthonomus musculus* 3035

**Verticillium chlamyosporium**

- [Coleoptera: Lagriidae]  
*Lagria vilosa* 2218  
[Coleoptera: Scarabaeidae]  
Unknown species 3314

**Verticillium epiphytum**

- [Uredinales]  
*Hemileia vastatrix* 5250

**Verticillium fungicola var. flavidum**

- [Agaricales: Entolomataceae]  
*Entoloma* 4519

**Verticillium fusisporum**

- [Homoptera: Aleyrodidae]  
*Trialeurodes vaporariorum* 923  
[Homoptera: Aphididae]  
*Myzus persicae* 4078 5583

**Verticillium insectorum**

- [Coleoptera: Curculionidae]  
*Otiorhynchus sulcatus* 3715

**Verticillium lecanii**

- [Araneida: Araneae]  
Unknown species 5167  
[Coleoptera: Chrysomelidae]  
*Agelastica alni* 4022  
[Coleoptera: Curculionidae]  
*Otiorhynchus sulcatus* 6545  
*Sitona lineatus* 4033  
[Coleoptera: Histeridae]  
*Carcinops pumilio* 5856  
[Coleoptera: Melyridae]  
*Malachius bipustulatus* 1335  
[Coleoptera: Scolytidae]  
*Dendroctonus micans* 4036  
[Coleoptera: Tenebrionidae]  
*Alphitobius diaperinus* 5849

- [Collembola: Sminthuridae]  
*Sminthurus viridis* 5852  
[Diptera: Anthomyiidae]  
*Delia radicum* 5132 6554  
[Diptera: Ephydriidae]  
*Scatella stagnalis* 6561  
[Diptera: Muscidae]  
*Musca domestica* 5859  
[Diptera: Psychodidae]  
*Lutzomyia saulensis* 3418  
[Hemiptera: Scutelleridae]  
*Eurygaster* 5666 6010 6025 6068 6085  
6118  
[Hemiptera: Tingidae]  
*Leptopharsa heveae* 6430 6431 6432  
6651  
[Homoptera]  
Unknown species 6290  
[Homoptera: Adelgidae]  
*Adelges tsugae* 5165 5759 5771 5772  
5777 5778 5779 5780 5781 5782  
5783 5785 5786 5787 5789 5791  
5793 5794 5795 5798 5820 5821  
5822 5824 5828 5829 6035 6045  
6046 6047 6050  
*Dreyfusia normanniana* 5854  
[Homoptera: Aleyrodidae]  
Unknown species 3709  
*Bemisia tabaci* 4064 4065 4067 4069  
4070 4071 4072  
*Trialeurodes vaporariorum* 5128 6544  
6547  
[Homoptera: Aphididae]  
Unknown species 4416 4417 4418 4419  
4420 4421 4422 4423 4453 4454  
4455 4456 4457 5166 5809  
*Aphis gossypii* 6541  
*Brachycaudus helichrysi* 6540  
*Brevicoryne brassicae* 5131  
*Diuraphis noxia* 2877 2878 3000 3862  
3881 3902 3903 3904 3909 5706  
6606  
*Macrosiphoniella sanborni* 5126 6542  
*Myzus cerasi* 6914 6915  
*Myzus persicae* 4075 4076 4077 4079  
5130 6543  
*Sitobion avenae* 2859  
*Toxoptera citricida* 6144 6145  
[Homoptera: Coccidae]  
Unknown species 2916  
*Ceroplastes* 6791  
*Coccus hesperidum* 6289  
*Coccus viridis* 5153 6792  
*Phytokermes hemichryphus* 4025  
*Pulvinaria aurantii* 6287 6291  
[Homoptera: Eriococcidae]  
*Cryptococcus fagisuga* 3740 3741 3742  
3743  
[Hymenoptera: Formicidae]  
*Formica* sp. 5168  
[Lepidoptera]  
Unknown species 5685  
[Lepidoptera: Bombycidae]  
*Bombyx mori* 991  
[Lepidoptera: Lymantriidae]  
*Lymantria dispar* 3600 3601

- [Lepidoptera: Tortricidae]  
*Cydia pomonella* 6591  
[Thysanoptera: Thripidae]  
Unknown species 2923 3701 6548  
*Frankliniella occidentalis* 3683 3684  
3685 3686 3687 3688 3689 3690  
3691  
*Thrips tabaci* 5709  
[Uredinales: Pucciniaceae]  
*Puccinia striiformis* 5221

**Verticillium nr. aranearum**

- [Araneida]  
Unknown species 1905  
[Coleoptera]  
Unknown species 2832

**Verticillium pseudohemipterigenum**

- [Homoptera: Coccoidea: Asterolecani-  
idae]  
*Bambusaspis* sp. 5687

**Zoophthora sp.**

- [Dermaptera: Forficulidae]  
*Forficula auricularia* 3486 3487 3488

**Zoophthora anglica**

- [Coleoptera: Carabidae]  
*Trechus quadristriatus* 1739  
[Coleoptera: Elateridae]  
*Agriotes sputator* 396 2505  
[Hemiptera: Miridae]  
*Notosteira elongata* 916 926

**Zoophthora aphidis**

- [Homoptera: Aphididae]  
*Anoecia corni* 425

**Zoophthora lanceolata**

- [Diptera: Brachycera]  
Unknown species 468  
[Diptera: Nematocera]  
Unknown species 426 469

**Zoophthora occidentalis**

- [Homoptera: Aphididae]  
*Acyrtosiphon pisum* 2841 3027 3028  
3029 3071 3073  
*Macrosiphum euphorbiae* 207

**Zoophthora phalloides**

- [Homoptera: Aphididae]  
*Brevicoryne brassicae* 2281  
*Myzus rannaculinum* 352

**Zoophthora phytonomi**

- [Coleoptera: Curculionidae]  
*Hypera postica* 3342 3343 3344  
*Hypera punctata* 202 2188  
*Hypera variabilis* 113 191 192

**Zoophthora radicans**

[Coleoptera: Curculionidae]  
*Hypera variabilis* 81  
 [Diptera]  
 Unknown species 388 1337 2499 2500  
 2501 2503 2506 2523 2554  
 [Diptera: Anthomyiidae]  
*Delia radicum* 2666  
 [Diptera: Nematocera]  
 Unknown species 1336 1428  
 [Hemiptera: Miridae]  
*Dicyphus pallidus* 389  
 [Homoptera: Aphididae]  
*Brachycaudus amygdalinus* 75  
*Capitophorus* 822  
*Diuraphis noxia* 3163  
*Drepanosiphum aceris* 914 1130  
*Metopolophium dirhodum* 2811  
*Therioaphis maculata* 103 104 105 106  
 107 108 109 110 111 112 114 139  
 237 238 239 359 370 379 823  
*Therioaphis trifolii f. maculata* 3737  
 [Homoptera: Cercopidae]  
 Unknown species 800  
 [Homoptera: Cicadellidae]  
 Unknown species 1239 1263 1495 1587  
 1591 2196 2549 2551 2552  
*Empoasca* 2241 2242 2243 2244 2245  
 2246 2282 2283 2284 2285 2286  
 2287 2288 2289 3623  
*Empoasca fabae* 1018 1019 1020 1021  
 1261 1262 1938 2400 2550 2716  
 2717 2718 2719 2720 2977 2978  
 2979 2980 3104 3105 3283 3284  
 3355 3376 3377 3390 3697 4520  
 4548  
*Empoasca kraemeri* 789 790 1227 1228  
 1229 1231 1232 1233 1234 1236  
 1237 1492 1493 1494 1496 1497  
 1498 1499 1500 1501 1502 1503  
 1504 1541 1542 1543 1544 1581  
 1582 1583 1584 1585 1586 1588  
 1589 1590 1593 1594 1595 1928  
 1929 1930 1931 1932 1933 1934  
 1935 1937 2994 2995 2996 3002  
 3003 3004 3005 3006 3007 3008  
 3009 3010 3011 3012 3013 3026  
*Empoasca vitis* 2696 2700 2701 2702  
 2703 2706 2708 2709 2712 2713  
 3114 3116 3119 3149 3150 3151  
 3159 3160 3162 3164 3165 3172  
*Hauptida distinguenda* 2256 2257 2258  
 2259 2260 2261 2262  
*Typhlocyba* 3115 3170 3171  
 [Homoptera: Delphacidae]  
*Delphacodes striatella* 1050  
*Nilaparvata lugens* 685 1125 1136  
 [Homoptera: Psyllidae]  
*Psyllida etrioza* 126  
*Trioza urticae* 1719  
 [Hymenoptera: Diprionidae]  
*Neodiprion tsugae* 13  
 [Lepidoptera]  
 Unknown species 404  
 [Lepidoptera: Gelechiidae]  
*Tuta absoluta* 6917

[Lepidoptera: Gelechiidae]  
*Anacampsis lumbilis* 4783  
 [Lepidoptera: Geometridae]  
*Lambdina fiscellaria fiscellaria* 72  
 [Lepidoptera: Noctuidae]  
*Sesamia inferens* 2411  
*Trichoplusia ni* 6003  
 [Lepidoptera: Pieridae]  
*Pieris brassicae* 1341 1342 1343 1344  
 1345 1346  
 [Lepidoptera: Plutellidae]  
*Plutella xylostella* 1048 1100 2732 2893  
 3204 3205 3206 6303 6313 6314  
 6315  
 [Lepidoptera: Pyralidae]  
*Cnaphalocrocis medinalis* 1699 2410  
 [Lepidoptera: Tortricidae]  
*Choristoneura fumiferana* 21 44 45 50  
 52 88 141 142 143 144 145 146  
 163 221 223 224 225 226 227 228  
 229 230 231 232 233 234 235 407  
*Epinotia aporema* 4781 4782 4784 4785  
 5814  
*Merophyas divulsana* 1082  
*Ptycholoma aeriferana* 1674 1675  
*Tortrix viridiana* 68

**Unidentified / Hyphomycetes**

[Acari]  
 Unknown species 7374  
 [Coleoptera: Coccinellidae]  
 Unknown species 5677  
 [Coleoptera: Curculionidae]  
 Unknown species 2225 5695  
 [Coleoptera: Scarabaeidae]  
*Popillia japonica* 5223 5224 5225 5226  
 5227  
*Rhizotrogus majalis* 2999  
 [Hemiptera: Miridae]  
*Lygus lineolaris* 6504  
 [Hemiptera: Pentatomidae]  
*Acanthosoma labiduroides* 5698  
 [Homoptera: Aphididae]  
 Unknown species 6503  
*Diuraphis noxia* 4689 4690  
 [Homoptera: Cicadellidae]  
*Recilia dorsalis* 2177  
 [Homoptera: Diaspididae]  
*Fiorinia externa* 7067  
 [Homoptera: spf. Coccoidea]  
 Unknown species 7076 7081 7086  
 [Lepidoptera: Lymantriidae]  
*Lymantria dispar* 4899 4900  
 [Lepidoptera: Pyralidae]  
*Galleria mellonella* 5199  
 [Tylenchida: Heteroderidae]  
*Heterodera glycines* 5237 5238 5239  
 5240 5241 5242 5243 5244 5245  
 5246 5247 5248

**Unidentified / Zygomycetes**

[Homoptera: Aphididae]  
 Unknown species 6157 6158 6159 6507  
 6509  
*Acyrtosiphon pisum* 6119 6160  
*Aphis fabae* 2022  
*Diuraphis noxia* 4970 4971

**Unidentified Entomophthorales sp.**

[Diptera: Tipulidae]  
 Unknown species 7227 7228 7229 7230

**Unidentified sp.**

[Acari: Ixodidae]  
*Ixodes scapularis* 6895 6899  
 [Araneida]  
 Unknown species 1419 3209  
 [Coleoptera]  
 Unknown species 1634  
 [Coleoptera: Chrysomelidae]  
*Leptinotarsa decemlineata* 3724  
*Oulema melanopus* 3980  
*Phyllotreta nigripes* 4037  
 [Coleoptera: Coccinellidae]  
*Hippodamia convergens* 3821  
 [Coleoptera: Curculionidae]  
*Aracanthus* 3478  
*Sternechus subsignatus* 3471  
 [Coleoptera: Scarabaeidae]  
*Aphodius tasmaniae* 4140  
*Popillia japonica* 3714 3719 3722 3841  
 [Diptera]  
 Unknown species 1922  
 [Diptera: Culicidae]  
*Anopheles* 2563  
*Anopheles gambiae* 3380 3381  
 [Diptera: Psychodidae]  
*Lutzomyia* 3123 3124 3378 3420 3421  
 3423 3424 3425 3427 3428  
*Lutzomyia longipalpis* 3422  
*Lutzomyia saulensis* 3413 3417 3419  
*Lutzomyia trapidoi* 3426  
 [Diptera: Simuliidae]  
 Unknown species 3227 3228 3230 3231  
 3232 3233 3235 3236 3245 3246  
 3247  
 [Hemiptera]  
 Unknown species 1423  
 [Homoptera: Aleyrodidae]  
 Unknown species 4003 7070  
*Bemisia* 3798 3799 3801 3802 3805  
 3806 3807  
*Bemisia tabaci* 3773 3779 3842 3844  
 3845 3847 3849 3850 3869 3876  
*Dialeurodes citri* 3304  
 [Homoptera: Aphididae]  
 Unknown species 1693 1694 3122 3125  
 3894 4204 4213 4214 4215  
*Diuraphis noxia* 4211  
*Metopolophium dirhodum* 3368  
*Myzus nicotinae* 3239  
*Rhopalosiphum padi* 3374  
 [Homoptera: Cercopidae]  
*Aeneolamia varia* 6370  
*Prosapia simulans* 3536  
*Zulia carbonaria* 6463 6466  
 [Homoptera: Cicadellidae]  
*Empoasca fabae* 3128  
 [Homoptera: Membracidae]  
 Unknown species 4000  
 [Hymenoptera: Formicidae]  
*Solenopsis invicta* 2640 3860  
 [Hymenoptera: Ichneumonidae]  
*Cratichneumon lanius* 1421

- [Lepidoptera: Geometridae]  
*Hibernia defoliaria* 1415 1417  
*Lambdina athasaria* 3567 3568 3569
- [Lepidoptera: Incurvariidae]  
*Paraclemensia acericaulis* 3794 3796  
3797
- [Lepidoptera: Plutellidae]  
*Plutella xylostella* 2821 4216
- [Lepidoptera: Pyralidae]  
*Cnaphalocrocis medinalis* 1703  
*Diatraea saccharalis* 3298 3299 3804
- [Lepidoptera: Riodinidae]  
*Euselasia* 3467 3468
- [Lepidoptera: Yponomeutidae]  
*Yponomeuta* 3998
- [Thysanoptera: Phlaeothripidae]  
*Haplothrips tritici* 3990 3991 3992  
4201
- [Thysanoptera: Thripidae]  
*Frankliniella occidentalis* 3570 3993  
3994 3997  
*Taeniothrips inconsequens* 3319 3560
- [Trichoptera]  
Unknown species 3242 3243