



ORGANISATION NORD AMERICAINE POUR LA PROTECTION DES PLANTES
NORTH AMERICAN PLANT PROTECTION ORGANIZATION
ORGANIZACION NORTEAMERICANA DE PROTECCION A LAS PLANTAS
CANADA UNITED STATES MEXICO

NAPPO Regional Standards for Phytosanitary Measures (RSPM)

RSPM N°. 26

Guidelines for certification of commercial arthropod biological control agents moving into NAPPO member countries

The Secretariat of the North American Plant Protection Organization
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Review

NAPPO Standards for Phytosanitary Measures are subject to periodic review and amendment. The next review for this Standard is 2011. A review of any NAPPO Standard may be initiated at any time upon the request of a NAPPO member country.

Approval

This standard was approved by the North American Plant Protection Organization (NAPPO) Executive Committee on October 15, 2006 and is effective immediately.

Approved by: *(Original signed by)*

Greg Stubbings
Executive Committee Member
Canada

Paul R. Eggert
Executive Committee Member
United States

Jorge Hernandez Baeza
Executive Committee Member
Mexico

Implementation

See the attached Implementation Plans for implementation dates in each NAPPO country.

Amendment Record

Amendments to this Standard will be dated and filed with the NAPPO Secretariat. The most recent version will be posted on the NAPPO website at: www.nappo.org/stds_e.htm.

Distribution

This standard is distributed to NAPPO member countries including Sustaining Associate Members and Industry Advisory Groups, the Secretariat of the International Plant Protection Convention, and other Regional Plant Protection Organizations (RPPOs).

Background

Each NAPPO member country may have different processes for approving the importation and release of commercial arthropod biological control agents (CABCA) into the environment. The vast majority of trade in these organisms is of genera and species that have a long history of use in the NAPPO countries. In addition, they are produced under controlled conditions in a rearing facility with a protected environment, and they have a production history that can be easily traced. They are sealed in packaging, which reduces the risk of contamination during the handling and shipping processes and of unintentional release. Finally, commercially produced biological control agents can be readily tracked from production to release, by shipping documents, including commercial invoices. Such commercially produced biological control agents pose very little risk to agriculture and the natural environment. Biological control agents are generally highly perishable and delays in shipping may be detrimental to product quality.

Scope

This standard provides guidelines for a letter of certification to be used to facilitate the movement of CABCA into NAPPO member countries. It lists the related responsibilities of the National Plant Protection Organizations (NPPOs), producers, importers and exporters. This standard applies only to those CABCA that meet all the import requirements of the importing NPPO, and may include imports for research and environmental release.

References

Guidelines for Petition for Release of Exotic Phytophagous Agents for the Biological Control of Weeds, RSPM No. 7, NAPPO 2001

Glossary of Phytosanitary Terms, ISPM No. 5, FAO 2004

Glossary of Phytosanitary Terms, RSPM No. 5, NAPPO 2004

Guidelines for the Export, Shipment, Import and Release of Biological Control Agents and other Beneficial Organisms, ISPM No. 3, FAO 2005

NAPPO Guidelines for Petition for New Release of Entomophagous Biological Control Agents, RSPM No. 12, NAPPO 2006

Definitions, Abbreviations and Acronyms

commercial arthropod biological control agent (CABCA)	An arthropod natural enemy used for pest control, commercially produced in a rearing facility with a protected environment for at least one complete generation (NAPPO)
country of production (of a commercial arthropod biological control agent)	The country where the last complete lifecycle of a commercial arthropod biological control agent occurred prior to final packaging (NAPPO)
host material (for production of commercial arthropod biological control agents)	The prey, host, plant material and substrate that the commercial arthropod biological control agents was produced with, some or all of which may be included in the final product. (NAPPO)
reference specimens	Individual specimen(s) from a specific population conserved in a reference culture collection and, where possible, in publicly available collection(s) (FAO)

General Requirements

Commercial arthropod biological control agents should only be approved for environmental release based on historical use, and/or after passing through the NAPPO petition process for entomophagous or phytophagous biological control agents (RSPM No. 7 or RSPM No. 12) and risk assessment as appropriate. The IPPC standard on *Guidelines for the Export, Shipment, Import and Release of Biological Control Agents and other Beneficial Organisms* (ISPM No. 3) was recently revised and addresses risk analysis for biological control agents, phytosanitary import requirements, relevant documentation, use of quarantine facilities, and post-release monitoring. ISPM No. 3 provides for the use of a specific certification document to cover imports of biological control agents, as well as providing for the use of phytosanitary certificates. NAPPO has determined its requirements for this specific certification document, referred to in this standard as a 'letter of certification for commercial biological control agents'.

1. Responsibilities of a producer of commercial arthropod biological control agents

- 1.1 The producer of the CABCA should apply to its NPPO for a letter of certification for each CABCA that is intended for export to a NAPPO country.
- 1.2 The producer of the CABCA should provide all necessary information to its NPPO and allow the NPPO unrestricted access to the production facilities for the purpose of inspection.
- 1.3 The producer of the CABCA should notify their NPPO if there is reason to suspect that the colony may have become contaminated by another organism(s), if the health of the colony declines, or if the host material for production of commercial arthropod

biological control agents and hosts/substrates accompanying packaged consignments changes.

- 1.4 The producer of the CABCA should keep a copy of each letter of certification that has been issued. The copy should be retained for two years.

2. Responsibilities of the Exporting NPPO

- 2.1 The exporting NPPO should inspect the facility prior to issuing a letter of certification to verify that the CABCA was commercially produced as described, and under conditions designed to preclude contamination by other organisms and to maintain colony health.
- 2.2 The exporting NPPO should issue an original letter of certification to the producer for each importing NPPO. A copy should also be retained by the exporting NPPO for two years after validity has expired.
- 2.3 The letter of certification should remain valid for a period of no more than three years from the time of issue. The exporting NPPO should revoke the letter of certification if the information it contains become invalid or inaccurate.

3. Purpose of the letter of certification for commercial arthropod biological control agents

- 3.1 The letter of certification is intended to be used in lieu of a phytosanitary or zoosanitary certificate. Each CABCA in a consignment should have a letter of certification in addition to any other documents required by the importing NPPO (e.g., permit to import).
- 3.2 Two copies of each letter of certification should accompany each consignment.
- 3.3 One copy of the letter of certification may be retained by the importing NPPO at the point of entry.
- 3.4 The importing NPPO should use the letter of certification to verify that the consignment of CABCA complies with their import requirements.
- 3.5 The importer should retain a copy of the letter of certification for two years, particularly if the consignment is to be re-exported.

Specific Requirements

4. Content of Letter of certification for Commercial Arthropod Biological Control Agents

- 4.1 A unique number should appear on the letter of certification to facilitate trace back.
- 4.2 The letter of certification should be specific to the producer and should include their name and address.
- 4.3 The letter of certification should be specific to the CABCA species if more than one species is included in a consignment, a separate letter of certification should be issued for each species.
- 4.4 The letter of certification should specify both the Country of Production and the original source of the culture.
- 4.5 A description of all host material for production of CABCA should be included.
- 4.6 Host material for production of CABCA that may be included in the final packaged consignment should be identified.
- 4.7 The letter of certification should confirm the genus and species of the CABCA and be identified by an individual that is considered by the exporting NPPO, to be an identification expert.
- 4.8 The letter of certification should indicate the specific location where the reference specimens are held.
- 4.9 A statement verifying the length of time that the CABCA has been in continuous culture should be included.
- 4.10 The exporting NPPO should verify that the CABCA are produced in a rearing facility with a protected environment, under conditions that preclude contamination by other organisms, including plant pests, and pathogens, parasites, parasitoids, and hyperparasitoids of the CABCA.
- 4.11 The letter of certification should be valid for a maximum of three years from the time it is signed by an official of the exporting NPPO.

Model Letter of certification for Commercial Arthropod Biological Control Agents (CABCA)

No. _____

FROM: the National Plant Protection Organization of _____

TO: the National Plant Protection Organization(s) of ---- _____

I. General Information:

Name and address of producer: _____

Country of production: _____

Host materials used in the production of the CABCA: _____

Host materials and substrates accompanying the CABCA: _____

II. Verification of the Taxonomic Identity of the Biological Control Agent

The submitted Biological Control Agent has been identified as: _____
_____ (*genus, species*)

Name of identification expert: _____

Affiliation of identification expert: _____

Date of identification: _____ Place of identification: _____

Location of reference specimens: _____

III. Description of Commercial Arthropod Biological Control Agent (CABCA) Culture:

The **Biological Control Agents** described herein have been under continuous culture at _____ (place) since _____ (date). The original culture was sourced from _____ (place) on _____ (date).

The **Biological Control Agents** described herein have been produced in a rearing facility with a protected environment, for at least one complete generation. They have been produced under conditions that preclude contamination with other organisms including plant pests, and pathogens, parasites, parasitoids, and hyperparasitoids of the CABCA.

Signed by: _____

Date: _____

Title: _____

Issuing NPPO: _____

This letter of certification for commercial biological control agents is valid for _____ years from the date of issuance.

Lists of Biological Control Organisms of Plant Pests Approved for Commercial Importations within the NAPPO Region

United States

Predators

Adalia bipunctata (Linneaus) (COLEOPTERA: Coccinellidae)
Amblyseius swirskii Athias-Henriot (ACARI: Phytoseiidae)
Aphidoletes aphidimyza Rondani (DIPTERA: Cecidomyiidae)
Atheta coriaria (Kraatz) (COLEOPTERA: Staphylinidae)
Chrysoperla (= *Chrysopa*) *carnea* (Stephens) (NEUROPTERA: Chrysopidae)
Chrysoperla (= *Chrysopa*) *rufilabris* (Burmeister) (NEUROPTERA: Chrysopidae)
Coleomegilla maculata DeGeer (COLEOPTERA: Coccinellidae)
Cryptolaemus montrouzieri Mulsant (COLEOPTERA: Coccinellidae)
Delphastus pusillus (LeConte) (COLEOPTERA: Coccinellidae)
Deraeocoris brevis (Knight) (HEMIPTERA: Miridae)
Dicyphus hesperus Knight (HEMIPTERA: Miridae)
Galendromus (= *Metaseiulus*, = *Typhlodromus*) *occidentalis* (Nesbitt) (ACARI: Phytoseiidae)
Hypoaspis aculiefer (Canestrini) (ACARI: Laelapidae)
Hypoaspis miles (Berlese) (ACARI: Laelapidae)
Iphiseius (= *Amblyseius*) *degenerans* Berlese (ACARI: Phytoseiidae)
Leptomastix dactylopii (Howard) (HYMENOPTERA: Encyrtidae)
Metaseiulus (= *Phytoseiulus*) *longipes* Evans (ACARI: Phytoseiidae)
Neoseiulus (= *Amblyseius*) *barkeri* (= *mckenzei*) (Hughes) (ACARI: Phytoseiidae)
Neoseiulus californicus (McGregor) (ACARI: Phytoseiidae)
Neoseiulus (= *Amblyseius*) *cucumeris* (Oudemans) (ACARI: Phytoseiidae)
Neoseiulus (= *Amblyseius*) *fallacis* (Garman) (ACARI: Phytoseiidae)
Orius insidiosus Say (HEMIPTERA: Anthocoridae)
Orius tristicolor (White) (HEMIPTERA: Anthocoridae)
Phytoseiulus macropilis (Banks) (ACARI: Phytoseiidae)
Phytoseiulus persimilis Athias-Henriot (ACARI: Phytoseiidae)
Podisus maculiventris (Say) (HEMIPTERA: Pentatomidae)
Rhyzobius (= *Lindorus*) *lophanthae* Blaisdell (COLEOPTERA: Coccinellidae)
Stethorus punctillum Weise (COLEOPTERA: Coccinellidae)
Typhlodromus pyri Scheuten (ACARI: Phytoseiidae)
Xylocoris flavipes Reuter (HEMIPTERA: Anthocoridae)

Parasitoids

Anagyrus fusciventris (Girault) (HYMENOPTERA: Encyrtidae)
Anaphes flavipes (Forster) (HYMENOPTERA: Mymaridae)
Anaphes iole Girault (HYMENOPTERA: Mymaridae)
Anisopteromalus calandrae (Howard) (HYMENOPTERA: Pteromalidae)
Aphelinus abdominalis Dalman (HYMENOPTERA: Eulophidae)
Aphidius colemani Viereck (HYMENOPTERA: Aphidiidae)
Aphidius ervi Haliday (HYMENOPTERA: Aphidiidae)
Aphidius matricariae Haliday (HYMENOPTERA: Aphidiidae)
Bracon hebetor Say (HYMENOPTERA: Braconidae)
Cotesia flavipes Cameron (HYMENOPTERA: Braconidae)
Cotesia marginiventris (Cresson) (HYMENOPTERA: Braconidae)
Cotesia melanoscelus (Ratzeburg) (HYMENOPTERA: Braconidae)
Cotesia plutellae (Kurdjumov) (HYMENOPTERA: Braconidae)
Dacnusa sibirica Telenga (HYMENOPTERA: Braconidae)
Diaeretiella rapae (McIntosh) (HYMENOPTERA: Aphidiidae)
Diglyphus isaea (Walker) (HYMENOPTERA: Eulophidae)
Encarsia formosa Gahan (HYMENOPTERA: Eulophidae)
Eretmocerus californicus Howard (HYMENOPTERA: Aphelinidae)
Eretmocerus eremicus Rose and Zolnerowich (HYMENOPTERA: Aphelinidae)
Eretmocerus mundus Mercet (HYMENOPTERA: Aphelinidae)
Feltiella acarisuga (= *Therodiplosis persicae*) (Vallot) (DIPTERA: Cecidomyiidae)
Leptomastix (= *Leptomastidea*) *abnormis* (Girault) (HYMENOPTERA: Encyrtidae)
Leptomastix dactylopii Howard (HYMENOPTERA: Encyrtidae)
Metaphycus helvolus Compere (HYMENOPTERA: Encyrtidae)
Thripobius semiluteus Boucek (HYMENOPTERA: Pteromalidae)
Trichogramma brassicae Bezdenko (HYMENOPTERA: Trichogrammatidae)
Trichogramma evanescens Westwood (HYMENOPTERA: Trichogrammatidae)
Trichogramma minutum Riley (HYMENOPTERA: Trichogrammatidae)
Trichogramma platneri Nagarkatti (HYMENOPTERA: Trichogrammatidae)
Trichogramma pretiosum Riley (HYMENOPTERA: Trichogrammatidae)

(PPQ does not regulate the importation or movement of organisms used for the biological control of medical or veterinary pests, such as house flies. Veterinary Services with USDA APHIS may regulate these organisms.)

List prepared by R. V. Flanders 4/30/2008

Canada

Predatory Mites*

Amblyseius swirskii Athias-Henriot (ACARI: Phytoseiidae)
Amblyseius andersoni (Chant) (ACARI: Phytoseiidae)
Galendromus (= *Metaseiulus*, = *Typhlodromus*) *occidentalis* (Nesbitt) (ACARI: Phytoseiidae)
Hypoaspis aculeifer (Canestrini) (ACARI: Laelapidae)
Hypoaspis miles (Berlese) (ACARI: Laelapidae)
Iphiseius (= *Amblyseius*) *degenerans* Berlese (ACARI: Phytoseiidae)
Mesoseiulus (= *Phytoseiulus*) *longipes* Evans (ACARI: Phytoseiidae)
Neoseiulus (= *Amblyseius*) *barkeri* (= *mckenziei*) (Hughes) (ACARI: Phytoseiidae)
Neoseiulus californicus (McGregor) (ACARI: Phytoseiidae)
Neoseiulus (= *Amblyseius*) *cucumeris* (Oudemans) (ACARI: Phytoseiidae)
Neoseiulus (= *Amblyseius*) *fallacis* (Garman) (ACARI: Phytoseiidae)
Phytoseiulus macropilis (Banks) (ACARI: Phytoseiidae)
Phytoseiulus persimilis Athias-Henriot (ACARI: Phytoseiidae)
Typhlodromus pyri Scheuten (ACARI: Phytoseiidae)

Parasitoids and Predators*

Anagyrus fusciventris (Girault) (HYMENOPTERA: Encyrtidae)
Anaphes flavipes (Forster) (HYMENOPTERA: Mymaridae)
Anaphes iole Girault (HYMENOPTERA: Mymaridae)
Anisopteromalus calandrae (Howard) (HYMENOPTERA: Pteromalidae)
Aphelinus abdominalis Dalman (HYMENOPTERA: Eulophidae)
Aphidius colemani Viereck (HYMENOPTERA: Aphidiidae)
Aphidius ervi Haliday (HYMENOPTERA: Aphidiidae)
Aphidius matricariae Haliday (HYMENOPTERA: Aphidiidae)
Aphidoletes aphidimyza Rondani (DIPTERA: Cecidomyiidae)
Aphytis melinus DeBach (HYMENOPTERA: Aphelinidae)
Atheta coriaria (Kraatz) (COLEOPTERA: Staphylinidae)
Bracon hebetor Say (HYMENOPTERA: Braconidae)
Carcinops pumilio (Erichson) (COLEOPTERA: Histeridae)
Chrysoperla (= *Chrysopa*) *carnea* (Stephens) (NEUROPTERA: Chrysopidae)
Chrysoperla (= *Chrysopa*) *rufilabris* (Burmeister) (NEUROPTERA: Chrysopidae)
Coleomegilla maculata DeGeer (COLEOPTERA: Coccinellidae)
Cotesia flavipes Cameron (HYMENOPTERA: Braconidae)
Cotesia marginiventris (Cresson) (HYMENOPTERA: Braconidae)
Cotesia melanoscelus (Ratzeburg) (HYMENOPTERA: Braconidae)
Cotesia plutellae (Kurdjumov) (HYMENOPTERA: Braconidae)
Cryptolaemus montrouzieri Mulsant (COLEOPTERA: Coccinellidae)
Dacnusa sibirica Telenga (HYMENOPTERA: Braconidae)
Delphastus catalinae (Horn) (COLEOPTERA: Coccinellidae)
Delphastus pusillus (LeConte) (COLEOPTERA: Coccinellidae)
Deraeocoris brevis (Knight) (HEMIPTERA: Miridae)
Diaeretiella rapae (McIntosh) (HYMENOPTERA: Aphidiidae)
Dicyphus hesperus Knight (HEMIPTERA: Miridae)

Diglyphus isaea (Walker) (HYMENOPTERA: Eulophidae)
Encarsia formosa Gahan (HYMENOPTERA: Eulophidae)
Eretmocerus californicus Howard (HYMENOPTERA: Aphelinidae)
Eretmocerus eremicus Rose and Zolnerowich (HYMENOPTERA: Aphelinidae)
Eretmocerus mundus Mercet (HYMENOPTERA: Aphelinidae)
Feltiella acarisuga (= *Therodiplosis persicae*) (Vallot) (DIPTERA: Cecidomyiidae)
Hippodamia convergens Guérin-Méneville (COLEOPTERA: Coccinellidae)
Leptomastidea abnormis (Girault) (HYMENOPTERA: Encyrtidae)
Leptomastix dactylopii Howard (HYMENOPTERA: Encyrtidae)
Lindorus - see *Rhyzobius*
Mantis religiosa L. (ORTHOPTERA: Mantidae)
Metaphycus helvolus Compere (HYMENOPTERA: Encyrtidae)
Muscidifurax raptor Girault & Saunders (HYMENOPTERA: Pteromalidae)
Muscidifurax raptorellus Kogan & Legner (HYMENOPTERA: Pteromalidae)
Muscidifurax zaraptor Kogan & Legner (HYMENOPTERA: Pteromalidae)
Nasonia vitripennis (Walker) (HYMENOPTERA: Pteromalidae)
Orius insidiosus Say (HEMIPTERA: Anthocoridae)
Orius tristicolor (White) (HEMIPTERA: Anthocoridae)
Podisus maculiventris (Say) (HEMIPTERA: Pentatomidae)
Rhyzobius (= *Lindorus*) *lophanthae* Blaisdell (COLEOPTERA: Coccinellidae)
Spalangia cameroni Perkins (HYMENOPTERA: Pteromalidae)
Spalangia endius Walker (HYMENOPTERA: Pteromalidae)
Spalangia nigroaenea Curtis (HYMENOPTERA: Pteromalidae)
Stethorus punctillum Weise (COLEOPTERA: Coccinellidae)
Tenodera aridifolia sinensis Saussure (ORTHOPTERA; Mantidae)
Tetrastichus (= *Tamaraxia*) *triozae* Burks (HYMENOPTERA: Eulophidae)
Thripobius semiluteus Boucek (HYMENOPTERA: Pteromalidae)
Trichogramma brassicae Bezdenko (HYMENOPTERA: Trichogrammatidae)
Trichogramma evanescens Westwood (HYMENOPTERA: Trichogrammatidae)
Trichogramma minutum Riley (HYMENOPTERA: Trichogrammatidae)
Trichogramma platneri Nagarkatti (HYMENOPTERA: Trichogrammatidae)
Trichogramma pretiosum Riley (HYMENOPTERA: Trichogrammatidae)
Trichogramma ostrinae Pang and Chen (HYMENOPTERA: Trichogrammatidae)
Xylocoris flavipes Reuter (HEMIPTERA: Anthocoridae)

*For agents in/with approved hosts/prey from approved sources
 DJP 03/10/08

Mexico

Parasitoids

Anaphes iole Girault (HYMENOPTERA: Mymaridae)
Anisopteromalus calandrae (Howard) (HYMENOPTERA: Pteromalidae)
Aphelinus abdominalis (Dalman) (HYMENOPTERA: Aphelinidae)
Aphidius colemani (HYMENOPTERA: Aphidiidae)
Aphidius ervi Haliday (HYMENOPTERA: Aphidiidae)
Aphidius matricariae Haliday, 1834 (HYMENOPTERA: Braconidae)
Aphytis lingnanensis Compere (HYMENOPTERA: Aphelinidae)
Aphytis melinus DeBach 1959 (HYMENOPTERA: Aphelinidae)
Cotesia flavipes Cameron (HYMENOPTERA: Braconidae)
Cotesia plutellae (Kurdjumov) (HYMENOPTERA: Braconidae)
Dacnusa sibirica Telenga (HYMENOPTERA: Braconidae)
Diadegma insulare (Cresson) (HYMENOPTERA: Ichneumonidae)
Diglyphus isaea (Walker) (HYMENOPTERA: Eulophidae)
Encarsia formosa Gahan (HYMENOPTERA: Aphelinidae)
Eretmocerus californicus Howard (HYMENOPTERA: Aphelinidae)
Eretmocerus eremicus Rose and Zolnerowich (HYMENOPTERA: Aphelinidae)
Eretmocerus mundus Mercet (HYMENOPTERA: Aphelinidae)
Muscidifurax raptor Girault & Sanders (HYMENOPTERA: Pteromalidae)
Muscidifurax raptorellus Kogan & Legner (HYMENOPTERA: Pteromalidae)
Muscidifurax zaraptor Kogan & Legner (HYMENOPTERA: Pteromalidae)
Nasonia vitripennis (Walker, 1836) (HYMENOPTERA: Pteromalidae)
Spalangia cameroni Perkins, 1910 (HYMENOPTERA: Pteromalidae)
Spalangia endius Walker, 1839 (HYMENOPTERA: Pteromalidae)
Spalangia nigroaenea Curtis, 1839 (HYMENOPTERA: Pteromalidae)
Tamarixia triozae Burks 1943, (HYMENOPTERA: Eulophidae)
Telenomus remus (HYMENOPTERA: Scelionidae)
Trichogrammatoidea bactrae Nagaraja, 1979 (HYMENOPTERA: Trichogrammatidae)
Trichogramma brassicae Bezdenko, 1968 (HYMENOPTERA: Trichogrammatidae)
Trichogramma evanescens Westwood, 1833 (HYMENOPTERA: Trichogrammatidae)
Trichogramma minutum Riley, 1871 (HYMENOPTERA: Trichogrammatidae)
Trichogramma platneri Nagarkatti (HYMENOPTERA: Trichogrammatidae)
Trichogramma pretiosum Riley, 1879 (HYMENOPTERA: Trichogrammatidae)

Predators

Iphiseius (Amblyseius) degenerans Berlese (ACARI: Phytoseiidae)
Aphidoletes aphidimyza (Rondani, 1847) (DIPTERA: Cecidomyiidae)
Atheta coriaria Kraatz (COLEOPTERA: Staphylinidae)
Chrysoperla carnea (Stephens) (NEUROPTERA: Chrysopidae)
Chrysoperla rufilabris (Burmeister 1838) (NEUROPTERA: Chrysopidae)
Cryptolaemus montrouzieri Mulsant (COLEOPTERA: Coccinellidae)
Cybocephalus nipponicus Endrödy-Younga (COLEOPTERA: Cybocephalidae)
Delphastus pusillus (LeConte) (COLEOPTERA: Coccinellidae)
Feltiella acarisuga (Vallot) (DIPTERA: Cecidomyiidae)

Galendromus (= *Metaseiulus*) *occidentalis* (ACARI: Phytoseiidae)
Galendromus helveolus (Chant) (ACARI: Phytoseiidae)
Neoseiulus (= *Amblyseius*) *barkeri* Hughes (ACARI: Phytoseiidae)
Neoseiulus (= *Amblyseius*) *californicus* (McGregor) (ACARI: Phytoseiidae)
Neoseiulus (= *Amblyseius*) *cucumeris* (Oudemans) (ACARI: Phytoseiidae)
Orius insidiosus (Say) (HEMIPTERA: Anthocoridae)
Orius laevigatus (Fieber) (HEMIPTERA: Anthocoridae)
Orius tristicolor (White, 1879) (HEMIPTERA: Anthocoridae)
Phytoseiulus persimilis Athias-Henriot (ACARI: Phytoseiidae)
Podisus maculiventris (Say) (HEMIPTERA: Pentatomidae)
Stethorus punctillum (Weise) (COLEOPTERA: Coccinellidae)
Xylocoris flavipes (Reuter) (HEMIPTERA: Anthocoridae)