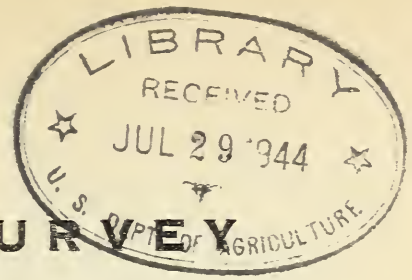


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# THE INSECT PEST SURVEY BULLETIN

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A periodical review of entomological conditions throughout the United States,  
issued monthly from March to October inclusive.

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Volume 2

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|  | 5          | 159, 182    |
|  | 6          | 199         |
| <u>Dichomeris marginellus</u> Fab. - - - - -     | 4          | 141         |
| <u>Dictyophorus reticulatus</u> Thunb. - - - - - | 1          | 13          |
| <u>Diprion simile</u> Hartig - - - - -           | 4          | 145         |
| <u>Drapanaphis acerifoliae</u> Thom. - - - - -   | 3          | 94          |

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|   | 7  | 257      |
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| <u>Empria fragariae</u> Rohwer - - - - -     | 3          | 88          |
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| <u>Epicauta lemniscata</u> Fab. - - - - -    | 3          | 87          |
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|  | 6          | 212         |
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| <u>Epilachna corrupta</u> Muls. - - - - -    | 1          | 20          |
|  | 2          | 53          |
|  | 3          | 90          |
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|  | 5          | 176         |
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|  | 7          | 245, 246    |
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| <u>Epitrix cucumeris</u> Harr. - - - - -     | 3          | 86          |
|  | 4          | 129, 130    |
|  | 5          | 173         |
| <u>Epitrix parvula</u> Fab. - - - - -        | 4          | 139         |
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| <u>Eriococcus azaleae</u> Comst. - - - - -   | 5          | 189         |
| <u>Eriophyes phloeocoptes</u> Nal. - - - - - | 1          | 16          |
| <u>Eriophyes pyri</u> Pgst. - - - - -        | 4          | 122         |
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| <u>Eriosoma americanum</u> Riley - - - - -   | 1          | 23          |
|  | 4          | 142         |
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| <u>Eriosoma lanigerum</u> Hauskn. - - - - -  | 1          | 14          |
|  | 2          | 43          |
| <u>Erythroneura comes</u> Say - - - - -      | 3          | 84          |
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| <u>Glycobius speciosus</u> Say - - - - -          | 4 | 144      |
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| <u>Hemerophila pariana</u> Clerck - - - - -  |          | 1          | 14                 |
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| <u>Neurotona inconspicua</u> Norton - - - - -            | 5          | 168         |
| <u>Nezara hilaris</u> Fitch - - - - -                    | 5          | 167, 177    |
| <u>Nezara viridula</u> L. - - - - -                      | 1          | 19          |
|  | 2          | 51          |
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|  | 6          | 226         |
| <u>Nysius angustatus</u> Uhler - - - - -                 | 5          | 171         |
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| <u>Papaipema nitela</u> Guen. - - - - -                               | 4          | 111, 138    |
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| <u>Papaipema purpurifascia</u> G. & R. - - - - -                      | 6          | 227         |
| <u>Papaipema</u> sp. - - - - -  | 8          | 277         |
| <u>Paraclemensia acerifoliella</u> Fitch - - - - -                    | 8          | 275         |
| <u>Parajulus coeruleocinctus</u> Wood - - - - -                       | 8          | 270         |
| <u>Paralechia pinifoliella</u> Chamb. - - - - -                       | 4          | 145         |
| <u>Paratetranychus pilosus</u> Can. & Fanz. - - - - -                 | 2          | 47          |
|   | 3          | 79          |
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| <u>Paratetranychus yothersi</u> McGregor - - - - -                    | 2          | 57          |
| <u>Paria canella</u> Fab. - - - - -                                   | 1          | 26          |
|   | 2          | 53          |
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| <u>Pemphigus betae</u> Doane - - - - -                                | 4          | 137         |
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| <u>Pentatoma ligata</u> Say - - - - -                                 | 6          | 222         |
| <u>Peranabrus scabricollis</u> Thom. - - - - -                        | 1          | 12          |
| <u>Peregrinus maidis</u> Ashm. - - - - -                              | 6          | 200         |
| <u>Periphyllus lyropicta</u> Kies. - - - - -                          | 4          | 144         |
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The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy verification of the data.

In the second section, the author outlines the various methods used to collect and analyze the data. This includes both primary and secondary sources, as well as the specific techniques employed for data processing and statistical analysis.

The third part of the report details the findings of the study. It presents a clear and concise summary of the results, highlighting the key trends and patterns observed in the data. The author also discusses the implications of these findings for the field of study.

Finally, the document concludes with a series of recommendations for future research. These suggestions are based on the limitations identified during the study and aim to guide other researchers in their work.

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|   | 2   | 60   |
| <u>Trichogramma minutum</u> - - - - -             | 4   | 111  |
|   | 6   | 204  |
| <u>Troxoderma tarsale</u> Mels. - - - - -         | 2   | 62   |
| <u>Trombidium</u> sp. - - - - -                   | 4   | 150  |
|   | 5   | 191  |
| <u>Tyloderma fragariae</u> Riley - - - - -        | 4   | 132  |
|   | 6   | 214  |
| <u>Typhlocyba rosae</u> L. - - - - -              | 4   | 121  |
|   | 5   | 165  |
| <u>Typhlocyba</u> spp. - - - - -                  | 5   | 165  |

U

|  |   |     |
|--|---|-----|
| <u>Ulus crassus</u> Lec. - - - - -       | 2 | 52  |
| <u>Uranotes melinus</u> Huebn. - - - - - | 6 | 221 |

X

|  |   |    |
|--|---|----|
| <u>Xylina antennata</u> Walk. - - - - -  | 3 | 74 |
| <u>Xylocrius asassizi</u> Lec. - - - - - | 3 | 83 |

Y

|  |   |     |
|--|---|-----|
| <u>Ypsolophus marginellus</u> Fab. - - - - - | 3 | 96  |
|  | 8 | 274 |

Z

|  |   |    |
|--|---|----|
| <u>Zophodia grossulariae</u> Pack. - - - - - | 3 | 83 |
|--|---|----|





C o m m o n N a m e I n d e x

A

See

|  |   |
|--|---|
| Achemon sphinx - - - - -                     | <u>Pholus achemon</u> Drury                                     |
| Alder borer - - - - -                        | <u>Saperda obliqua</u> Say                                      |
| Alfalfa caterpillar (alfalfa worm) - - - - - | <u>Eurytus eurytheme</u> Boisd.                                 |
| Alfalfa weevil a.n.o. - - - - -              | <u>Phytonomus posticus</u> Gyll.                                |
| American-elm scale - - - - -                 | <u>Chionaspis americana</u> Johns.                              |
| American grasshopper - - - - -               | <u>Schistocerca americana</u> Drury                             |
| Anomala - - - - -                            | <u>Anomala orientalis</u> Waterh.                               |
| Ants - - - - -                               | Formicidae  |
| Apple and thorn skeletonizer - - - - -       | <u>Hemerophila pariana</u> Clerck                               |
| Apple aphid a.n.o. - - - - -                 | <u>Aphis pomi</u> DeG.  |
| Apple-grain aphid - - - - -                  | <u>Rhopalosiphum prunifoliae</u> Fitch                          |
| Apple leafhoppers - - - - -                  | <u>Typhlocyba</u> spp.  |
| Apple maggot a.n.o. - - - - -                | <u>Rhagoletis pomonella</u> Walsh                               |
| Apple red-bug - - - - -                      | <u>Heterocordylus malinus</u> Reut.                             |
| Apple twig-miner - - - - -                   | <u>Marmara elotella</u> Busck                                   |
| Arborvitae leaf-miner - - - - -              | <u>Argyresthia thuiella</u> Pack.                               |
| Argentine ant a.n.o. - - - - -               | <u>Iridomyrmex humilis</u> Mayr                                 |
| Armyworm a.n.o. - - - - -                    | <u>Cirphis unipuncta</u> Haw.                                   |
| Asparagus beetles - - - - -                  | <u>Crioceris asparagi</u> L.<br><u>Crioceris 12-punctata</u> L. |
| Australian tomato weevil - - - - -           | <u>Desiantha nociva</u> Lea                                     |
| Avocado Stenoma - - - - -                    | <u>Stenoma catenifer</u> Wals.                                  |
| Avocado weevil - - - - -                     | <u>Heilipus perseae</u> Barber                                  |
| Azalea lace-bug - - - - -                    | <u>Stephanitis pyrioides</u> Scott                              |
| Azalea scale - - - - -                       | <u>Eriococcus azaleae</u> Comst.                                |

B

|                                    |  |
|------------------------------------|--|
| Bagworm a.n.o. - - - - -           | <u>Thyridopteryx ephemeraeformis</u><br>Haw. |
| Banana root-borer a.n.o. - - - - - | <u>Cosmopolites sordidus</u> Germ.           |
| Banded flea-beetle - - - - -       | <u>Systema taeniata</u> Say                  |
| Barnacle scale - - - - -           | <u>Ceroplastes cirripediformis</u><br>Comst. |
| Bean leaf-beetle a.n.o. - - - - -  | <u>Cerotoma trifurcata</u> Foerst.           |
| Bean weevil a.n.o. - - - - -       | <u>Mylabris obtectus</u> Say                 |
| Beet-root aphid - - - - -          | <u>Pemphigus balsamiferae</u> Williams       |
| Beet webworm - - - - -             | <u>Loxostege sticticalis</u> L.              |
| Belted chion - - - - -             | <u>Chion cinctus</u> Drury                   |
| Belted cucumber-beetle - - - - -   | <u>Diabrotica balteata</u> Lec.              |
| Birch leaf-skeletonizer - - - - -  | <u>Bucculatrix canadensisella</u><br>Chamb.  |
| Biting lice of cattle - - - - -    | <u>Trichodectes scalaris</u> Nitzsch         |
| Black apple leafhopper - - - - -   | <u>Idiocerus flavidorsum</u> S. & A.         |
| Black blow-fly - - - - -           | <u>Phormia resina</u> Meig.                  |
| Black carpet beetle - - - - -      | <u>Attagenus piceus</u> Oliv.                |



See

|                                      |  |
|--------------------------------------|--|
| Black cutworm - - - - -              | <u>Agrotis ypsilon</u> Rott.   |
| Black-flies - - - - -                | <u>Simulium</u> spp.   |
| Black gooseberry borer - - - - -     | <u>Xylorhynchus agassizi</u> Lec.                                      |
| Black-gum case-bearer - - - - -      | <u>Antispila nyssaefoliella</u> Clem.                                  |
| Black-headed cranberry worm a.n.o.-  | <u>Eriopoda naevana</u> Huebn.   |
| Black peach aphid a.n.o. - - - - -   | <u>Anuraphis persicae-niger</u> Smith                                  |
| Black vine weevil - - - - -          | <u>Brachyrhinus sulcatus</u> Fab.                                      |
| Blister-beetles - - - - -            | Meloidae   |
| Blow-fly - - - - -                   | <u>Calliphora vomitoria</u> L.   |
| Boll weevil a.n.o. - - - - -         | <u>Anthonomus grandis</u> Boh.   |
| Bollworm a.n.o. - - - - -            | <u>Heliothis obsoleta</u> Fab.   |
| Booklouse a.n.o. - - - - -           | <u>Atropos divinatoria</u> Muell.                                      |
| Boxelder aphid a.n.o. - - - - -      | <u>Periphyllus negundinis</u> Thos.                                    |
| Boxelder plant-bug - - - - -         | <u>Leptocoris trivittatus</u> Say                                      |
| Boxelder twig-borer - - - - -        | <u>Proteocoryx willingana</u> Kearf.                                   |
| Box psylla - - - - -                 | <u>Psylla buxi</u> L.  |
| Boxwood leaf-miner - - - - -         | <u>Monarthronalbus buxi</u> Labou.                                     |
| Brassy flea-beetle - - - - -         | <u>Chaetocnema pulicaria</u> Melsh.                                    |
| Bronze birch borer - - - - -         | <u>Agilus anxius</u> Gory  |
| Brown dog tick - - - - -             | <u>Spinicerhalus sanguinus</u> Latr.                                   |
| Brown plum aphid (rusty plum aphid)- | <u>Hysterochneura securariae</u> Thos.                                 |
| Bud moth a.n.o. - - - - -            | <u>Tmetocera ocellana</u> D. & S.                                      |
| Budworm - - - - -                    | <u>Chloridea virescens</u> Fab. and<br><u>Heliothis virescens</u> Fab. |
| Buffalo treehopper a.n.o. - - - - -  | <u>Ceresa hubalus</u> Fab.   |
| Bumble flower-beetle - - - - -       | <u>Euphoria inda</u> L.  |

C

|  |   |
|--|---|
| Cabbage aphid - - - - -                                    | <u>Brevicoryne brassicae</u> L.         |
| Cabbage looper a.n.o. - - - - -                            | <u>Autographa brassicae</u> Riley       |
| Cabbage maggot a.n.o. - - - - -                            | <u>Hylemyia brassicae</u> Bouche        |
| Cabbage webworm a.n.o. - - - - -                           | <u>Heliothis undalis</u> Fab.           |
| Cabbagesnake - - - - -                                     | <u>Mermis</u> sp.                       |
| Cabbageworm (imported cabbageworm<br>a.n.o.)- - - - -      | <u>Pontia rapae</u> L.                  |
| Caddicefly - - - - -                                       | <u>Macronema zebratum</u> Hag.          |
| Cadelle - - - - -  | <u>Tenebroides mauritanicus</u> L.      |
| California grape rootworm - - - - -                        | <u>Bromius obscurus</u> L.              |
| California pear sawfly - - - - -                           | <u>Gymnonychus californicus</u> Marlatt |
| Cane lacewing - - - - -                                    | <u>Leptodictya tabida</u> H. Schaef.    |
| Canna leaf-roller - - - - -                                | <u>Calpodex ethlius</u> Cram.           |
| Carrot beetle - - - - -                                    | <u>Ligyrus gibbosus</u> DeG.            |
| Catalpa midge - - - - -                                    | <u>Cecidomyia catalpae</u> Comst.       |
| Catalpa sphinx a.n.o. - - - - -                            | <u>Ceratonia catalpae</u> Boisd.        |
| Cattle scab (scab mite) - - - - -                          | <u>Pseroptes communis</u> Furst.        |
| Cattleyafly - - - - -                                      | Orchidfly                               |
| Cecropia moth a.n.o. - - - - -                             | <u>Samia cecropia</u> L.                |
| Cherry aphid a.n.o. - - - - -                              | <u>Myzus cerasi</u> Fab.                |
| Cherry fruit-maggot a.n.o. (cherry<br>fruit-fly) - - - - - | <u>Rhagoletis cingulata</u> Loew        |



See

|  |  |
|--|--|
| Cherry-fruit sawfly - - - - -            | <u>Hoplocampa cookei</u> Clarke        |
| Cherry scale a.n.o. - - - - -            | <u>Aspidiotus forbesi</u> Johns.       |
| Chiggers - - - - -                       | <u>Trombidium</u> sp.                  |
| Chinch bug a.n.o. - - - - -              | <u>Blissus leucopterus</u> Say         |
| Chrysanthemum gall-midge - - - - -       | <u>Diarthronomyia hypogaea</u> F.Loew. |
| Cigar case-bearer a.n.o. - - - - -       | <u>Coleophora fletcherella</u> Fern.   |
| Cigarette beetle a.n.o. - - - - -        | <u>Lasioderma serricornis</u> Fab.     |
| Cirrus blackfly a.n.o. - - - - -         | <u>Aleurocanthus woglumi</u> Ashby     |
| Citrus mealybug a.n.o.(common mealybug)  | <u>Pseudococcus citri</u> Risso        |
| Citrus thrips (orange thrips a.n.o.) - - | <u>Scirtothrips citri</u> Moulton      |
| Citrus whitefly a.n.o. - - - - -         | <u>Dialeurodes citri</u> Ashm.         |
| Clavate tortoise-beetle - - - - -        | <u>Deiovala clavata</u> Fab.           |
| Clay-backed cutworm - - - - -            | <u>Feltia gladiaria</u> Morr.          |
| Clear-winged grasshopper - - - - -       | <u>Carnula pellucida</u> Scudd.        |
| Clover-leaf weevil - - - - -             | <u>Hypera punctata</u> Fab.            |
| Clover mite a.n.o. - - - - -             | <u>Bryobia practica</u> Koch.          |
| Clover root-borer a.n.o. - - - - -       | <u>Hylastinus obscurus</u> Marsh.      |
| Clover-root curculio - - - - -           | <u>Sitona hispidulus</u> Fab.          |
| Clover-seed midge - - - - -              | <u>Desmourea leguminicola</u> Lintn.   |
| Cockscomb elm gall - - - - -             | <u>Colopha ulmicola</u> Fitch          |
| Coconut scale - - - - -                  | <u>Aspidiotus destructor</u> Sign.     |
| Codling moth a.n.o. - - - - -            | <u>Carpocapsa pomonella</u> L.         |
| Colorado potato beetle a.n.o. - - - - -  | <u>Lentiniotarsa decemlineata</u> Say  |
| Columbine borer - - - - -                | <u>Papaipema purpurifascia</u> G.& R.  |
| Conchuela - - - - -                      | <u>Pentatoma ligata</u> Say            |
| Confused flour beetle - - - - -          | <u>Tribolium confusum</u> Duv.         |
| Corn earworm (bollworm a.n.o.) - - - - - | <u>Heliothis obsoleta</u> Fab.         |
| Corn lanternfly - - - - -                | <u>Peregrinus maidis</u> Ashm.         |
| Corn-leaf aphid - - - - -                | <u>Aphis maidis</u> Fitch              |
| Corn-leaf blotch-miner - - - - -         | <u>Agromyza parvicornis</u> Loew.      |
| Corn-root aphid a.n.o. - - - - -         | <u>Aphis maidi-radici</u> Forbes       |
| Corn-root webworm - - - - -              | <u>Crambus caliginosellus</u> Clem.    |
| Corn-silk beetle - - - - -               | <u>Luperodes varicornis</u> Lec.       |
| Cosmos weevil - - - - -                  | <u>Baris confinis</u> Lec.             |
| Cotton aphid a.n.o. - - - - -            | <u>Aphis gossypii</u> Glov.            |
| Cotton cutworm - - - - -                 | <u>Prodenia ornithogalli</u> Guen.     |
| Cotton red-spider - - - - -              | <u>Tetranychus telarius</u> L.         |
| Cotton square-borer - - - - -            | <u>Uranctes melinus</u> Huebn.         |
| Cottonworm - - - - -                     | <u>Alabama argillacea</u> Huebn.       |
| Cottony-cushion scale a.n.o. - - - - -   | <u>Koerua purchasi</u> Mask.           |
| Cottony-maple scale a.n.o. - - - - -     | <u>Pulvinaria vitis</u> L.             |
| Cowpea curculio - - - - -                | <u>Chalcomermus aeneus</u> Boh.        |
| Cranberry-tip maggot - - - - -           | <u>Desmourea vaccinii</u> Smith        |
| Currant aphid a.n.o. - - - - -           | <u>Myzus ribis</u> L.                  |
| Currant borer a.n.o. - - - - -           | <u>Aegeria tinuliformis</u> Clerck     |
| Cutworms - - - - -                       | Noctuidae                              |
| Cyclamen mite - - - - -                  | <u>Tarsonemus pallidus</u> Banks       |
| Cyclamen weevil - - - - -                | Black vine weevil                      |



D

See

Death watch - - - - - Anobium striatum Oliv.  
Dingy cutworm a.n.o. - - - - - Feltia subgothica Haw.  
Douglas-fir tent-caterpillar - - - - - Euschausia argentata Pack.

E

Early strawberry slug - - - - - Empria fragariae Rohwer  
Ear mite - - - - - Otodectes cynotis Hering  
Elm borer a.n.o. - - - - - Saperda tridentata Oliv.  
Elm case-bearer a.n.o. - - - - - Coleophora limosipennella Dup.  
Elm leaf-beetle - - - - - Galerucella luteola Muell.  
Elm spanworm a.n.o. - - - - - Ennomos subsignarius Huebn.  
Euonymus scale a.n.o. - - - - - Chionaspis euonymi Comst.  
European corn borer a.n.o. - - - - - Pyrausta nubilalis Huebn.  
European-elm scale a.n.o. - - - - - Gossyparia spuria Modeer  
European grain moth - - - - - Tinea granella L.  
European pine sawfly (imported pine  
sawfly) - - - - - Diprion simile Hartig  
European pine-shoot moth - - - - - Evetria buoliana Schiff.  
European red-spider - - - - - Paratetranychus pilosus C. & F.  
European web-spinning red-spider - - - - - Paratetranychus uniunguis Jacob  
European wheat sawfly - - - - - Cephus pygmaeus L.  
European willow beetle - - - - - Plagioderia versicolora Laich.

F

Fall armyworm a.n.o. - - - - - Laphygma frugiperda S. & A.  
Fall cankerworm a.n.o. - - - - - Alsophila pometaria Harr.  
Fall webworm a.n.o. - - - - - Hyoantria cunea Drury  
False apple red-bug - - - - - Lygidea mendax Reut.  
False chinch-bug - - - - - Nyzius ericae Schill.  
Nyzius angustatus Uhler  
False wireworm - - - - - Eleodes spp.  
Fern caterpillar - - - - - Calloistria floridensis Guen.  
Fire ant - - - - - Solenopsis geminata Fab.  
Flat-headed apple-tree borer a.n.o. - - - - - Chrysobothris femorata Oliv.  
Flea-beetles - - - - - Halticinae  
Fleas - - - - - Siphonaptera  
Florida flower thrips - - - - - Frankliniella bispinosus projectus  
Watson  
Flower-beetle, A - - - - - Euphoria sepulchralis Fab.  
Flower thrips a.n.o. - - - - - Euthrips tritici Fitch





See

Foreign grain beetle - - - - - Cathartus advena Waltl.  
Forest tent-caterpillar a.n.o. - - - - - Malacosoma disstria Huebn.  
Four-lined plant-bug - - - - - Poecilocusus lineatus Fab.  
Fowl tick - - - - - Argas miniatus Koch  
Frit-flies - - - - - Oscinis spp.  
Fruit-tree leaf-roller - - - - - Cacoecia argyrospila Walk.  
Fruit-tree leaf syneta - - - - - Syneta albida Lec.

G

Garden slug - - - - - Agriolimax agrestis L.  
Garden springtail - - - - - Sminthurus hortensis Fitch  
Garden webworm a.n.o. - - - - - Loxostege similalis Guen.  
Gipsy moth - - - - - Porthetria dispar L.  
Gooseberry fruitworm a.n.o. - - - - - Zophodia grossulariae Pack.  
Granary weevil a.n.o. - - - - - Calendra granaria L.  
Grape-berry moth a.n.o. - - - - - Polychrosis viteana Clem.  
Grape blossom midge - - - - - Contarinia johnsoni Sling.  
Grape-cane gall-maker - - - - - Ampelogypter sesostris Lec.  
Grape colaspis a.n.o. - - - - - Colaspis brunnea Fab.  
Grape curculio a.n.o. - - - - - Craonius inaequalis Say  
Grape flea-beetle a.n.o. - - - - - Haltica chalybea Ill.  
Grape leaf-folder a.n.o. - - - - - Desmia funeralis Huebn.  
Grape leafhopper - - - - - Erythroneura comes Say  
Grape phylloxera - - - - - Phylloxera vitifoliae Fitch  
Grape plume moth a.n.o. - - - - - Oxyptilus periscelidactylus Fitch  
Grape rootworm a.n.o. - - - - - Fidia viticida Walsh  
Grape tip-girdler - - - - - Ampelogypter ater Lec.  
Grapevine epimenis - - - - - Psychomorpha epimenis Drury  
Grapevine tomato-gall - - - - - Lasioptera vitis O.S.  
Grasshoppers - - - - - Acridiidae  
Grass maggot - - - - - Sciara sciophila Loew  
Greasy cutworm - - - - - Agrotis ypsilon Rott.  
Great-plains false wireworm - - - - - Eleodes opaca Say  
Greater wheat-stem maggot - - - - - Meromyza americana Fitch  
Green apple aphid (apple aphid a.n.o.) - Aphis pomi DeG.  
Green bug - - - - - Toxoptera graminum Rond.  
Green cloverworm - - - - - Plathypena scabra Fab.  
Green fruitworm a.n.o. - - - - - Xylina antennata Walk.  
Green peach aphid a.n.o. - - - - - Myzus persicae Sulz.  
Green soldier-bug - - - - - Nezara hiliaris Fitch  
Greenhouse thrips a.n.o. - - - - - Heliethrips haemorrhoidalis Bouche  
Greenhouse whitefly a.n.o. - - - - - Trialeurodes vaporariorum Westw.

H

Hag moth a.n.o. - - - - - Phobetron pithecium S. & A.



See

|  |                                       |
|--|---------------------------------------|
| Harlequin cabbage bug a.n.o. - - - - - | <u>Murgantia histrionica</u> Hahn     |
| Hemispherical scale a.n.o. - - - - -   | <u>Saissetia hemisphaerica</u> Targ.  |
| Hessian fly a.n.o. - - - - -           | <u>Phytophaga destructor</u> Say      |
| Hickory aphid - - - - -                | <u>Longistigma carvae</u> Harr.       |
| Hickory bark-beetle a.n.o. - - - - -   | <u>Scolytus quadrispinosus</u> Say    |
| Horse bot-fly - - - - -                | <u>Gastrophilus intestinalis</u> DeG. |
| Horse-flies - - - - -                  | - <u>Tabanidae</u>                    |
| Horseradish flea-beetle - - - - -      | - <u>Phyllotreta armoraciae</u> Koch  |
| Horn fly - - - - -                     | - <u>Haematobia irritans</u> L.       |
| Hornworms - - - - -                    | - <u>Protoparce</u> spp.              |
| House fly a.n.o. - - - - -             | - <u>Musca domestica</u> L.           |

I

|  |  |
|--|--|
| Imported cabbageworm a.n.o. - - - - -        | - <u>Pontia rapae</u> L.               |
| Imported currant borer - - - - -             | - <u>Aegeria tipuliformis</u> Clerck   |
| Imported currantworm a.n.o. - - - - -        | - <u>Pteronidea ribesi</u> Scop.       |
| Imported poplar and willow beetle - - - - -  | - <u>Plagiodera versicolora</u> Laich. |
| Indian-meal moth a.n.o. - - - - -            | - <u>Plodia interpunctella</u> Huebn.  |
| Interrupted cottonwood leaf-beetle - - - - - | - <u>Lina lapponica</u> L.             |
| Iris borer - - - - -                         | - <u>Macronoctua onusta</u> Grote      |
| Ivy scale - - - - -                          | - <u>Aspidictus hederarum</u> Vallot   |

J

|                           |                                      |
|---------------------------|--------------------------------------|
| Japanese beetle - - - - - | - <u>Popillia japonica</u> Newm.     |
| Jointworm - - - - -       | - <u>Harmolita tritici</u> Fitch     |
| Juniper webworm - - - - - | - <u>Ypsolophus marginellus</u> Fab. |

L

|  |   |
|--|---|
| Larch case-bearer a.n.o. - - - - -     | - <u>Coleophora laricella</u> Huebn.    |
| Larch sawfly - - - - -                 | - <u>Nematus crichsonii</u> Hartig      |
| Larder beetle a.n.o. - - - - -         | - <u>Dermestes lardarius</u> L.         |
| Leaf crumpler a.n.o. - - - - -         | - <u>Mineola indigenella</u> Zell.      |
| Leaf-footed plant-bug - - - - -        | - <u>Leptoglossus phyllopus</u> L.      |
| Lesser bud-moth - - - - -              | - <u>Recurvaria nanella</u> Huebn.      |
| Lesser canna leaf-roller - - - - -     | - <u>Nymphula cannalis</u> Quaint.      |
| Lesser clover-leaf weevil - - - - -    | - <u>Phytonomus nigrirostris</u> Fab.   |
| Lesser corn stalk-borer - - - - -      | - <u>Elasmopalpus lignosellus</u> Zell. |
| Lesser migratory grasshopper - - - - - | - <u>Melanoplus atlantis</u> Riley      |
| Lesser peach-tree borer - - - - -      | - <u>Aegeria pictipes</u> G. & R.       |
| Lilac borer a.n.o. - - - - -           | - <u>Podosesia syringae</u> Harr.       |
| Locust borer a.n.o. - - - - -          | - <u>Cyllene robiniae</u> Forst.        |

The first part of the document discusses the general principles of the proposed system. It outlines the objectives and the scope of the project, which is aimed at improving the efficiency and reliability of the existing infrastructure. The document is divided into several sections, each addressing a specific aspect of the system's design and implementation.

The second part of the document provides a detailed description of the system's architecture. It includes a block diagram showing the interconnections between the various components. The architecture is designed to be modular and scalable, allowing for future expansion and upgrades. The document also discusses the data flow and the control mechanisms that govern the system's operation.

The third part of the document describes the implementation details. It covers the hardware and software requirements, the installation process, and the testing procedures. The document also includes a list of the equipment and materials needed for the project, along with a timeline for the completion of the work.

The final part of the document provides a summary of the project and a conclusion. It highlights the key findings and the benefits of the proposed system. The document also includes a list of references and a glossary of terms. The overall goal of the document is to provide a clear and concise overview of the project, from its inception to its completion.

See

- Locust leaf-miner - - - - - Chalepus dorsalis Thunb.
- Long rose gall - - - - - Rhodites dichlocerus Harr.
- Hubber grasshopper - - - - - Dictyophorus reticulatus Thunb.

M

- Magnolia scale a.n.o. - - - - - Neolecanium cornuparvum Thos.
- Maple borer - - - - - Glycobius speciosus Say
- Maple chaitophorus - - - - - Periphyllus lyropicta Kies.
- Maple sesian - - - - - Sesia acerni Clem.
- March flies - - - - - Bibio spp.
- Marguerite fly - - - - - Agromyza maculosa Mall.
- Marguerite leaf-miner - - - - - Phytomyza chrysanthemi Kowarz
- Meal snout-moth - - - - - Pyralis farinalis L.
- Mealybug - - - - - Pseudococcus sp.  
P. comstocki Kuwana
- Mediterranean flour moth a.n.o. - - - - - Ephestia kuehniella Zell.
- Melon aphid - - - - - Aphis gossypii Glov.
- Mexican bean beetle - - - - - Epilachna corrupta Muls.
- Mexican fruit-fly - - - - - Anastrepha ludens Loew
- Mites - - - - - Rhizoglyphus spp.
- Mormon cricket - - - - - Anabrus simplex Hald.
- Mosquitoes - - - - - Culicidae
- Mottled malarial mosquito - - - - - Anopheles punctipennis Say
- Mountain-pine beetle a.n.o. - - - - - Dendroctonus monticolae Hopk.
- Myriapods - - - - - Geophilidae  
Julus sp.

N

- Nose bot-fly - - - - - Gastrophilus nasalis L.

O

- Oak lace-bug - - - - - Corvthucha arcuata Say
- Oak pruner - - - - - Elaeohidion villosum Fab.
- Oblique-banded leaf-roller - - - - - Cacoecia rosaceana Harr.
- Obscure scale - - - - - Chrysomphalus obscurus Comst.
- Onion maggot a.n.o. - - - - - Hylemyia antiqua Meig.
- Onion thrips a.n.o. - - - - - Thrips tabaci Lind.
- Orange-striped oakworm - - - - - Anisota senatoria A. & S.
- Orchid fly (orchid chalcid) - - - - - Eurvtoma (Isosoma) orchidearum  
Westw.
- Oriental peach moth a.n.o. - - - - - Laspeyresia molesta Busck



See

- Oriental roach - - - - - Blatta orientalis L.
- Ox warble - - - - - Hypoderma lineatum DeVill.  
H. bovis DeG.
- Oyster-shell scale a.n.o. - - - - - Lepidosaphes ulmi L.

P

- Pale western cutworm - - - - - Porosagrotis orthogonia Morr.
- Pales weevil - - - - - Hylaeus pales Herbst
- Papaya fruit-fly a.n.o. - - - - - Toxotrypana curvicauda Gerst.
- Pea aphid - - - - - Illinoia pisi Kalt.
- Peach borer a.n.o. - - - - - Aegeria exiliosa Say
- Peach-twig moth a.n.o. - - - - - Anarsia lineatella Zell.
- Pear and cherry slug - - - - - Caliroa cerasi L.
- Pear borer - - - - - Aegeria pyri Harr.
- Pear-leaf blister-mite a.n.o. - - - - - Eriophyes pyri Pgst.
- Pear midge - - - - - Contarinia pyrivora Riley
- Pear psylla a.n.o. - - - - - Psylla pyricola Foerst.
- Pear slug a.n.o. - - - - - Caliroa cerasi L.
- Pear thrips a.n.o. - - - - - Taeniothrips inconsequens Uzel.
- Pecan-nut case-bearer - - - - - Acrobasis hebescella Hulst.
- Pecan phylloxera - - - - - Phylloxera devastatrix Perg.
- Pecan shuckworm - - - - - Laspeyresia caryana Fitch
- Periodical cicada a.n.o. - - - - - Tibicen septendecim L.
- Pine bark louse - - - - - Chermes pinicorticis Fitch
- Pine butterfly - - - - - Neophania menapia Feld.
- Pine leaf-miner - - - - - Paralochia unifoliella Chamb.
- Pine-leaf scale - - - - - Chionaspis pinifoliae Fitch
- Pine tube-moth - - - - - Eulia pinatubana Kear.
- Plum aphid - - - - - Hysteronemata setariae Thos.
- Plum curculio a.n.o. - - - - - Conotrachelus nemoralis Hbst.
- Plum gall-mite - - - - - Eriophyes phloerocarpus Nal.
- Plum web-spinning sawfly - - - - - Neurotoma incensaria Nort.
- Poplar borer a.n.o. - - - - - Saperda calcarata Say
- Poplar sawfly - - - - - Trichocampus viminalis Fallen
- Post-oak locust - - - - - Dendrotettix quercus Pack.
- Potato aphid - - - - - Macrosiphum solanifolii Ashm.
- Potato flea-beetle a.n.o. - - - - - Eutrix cucumeris Harr.
- Potato leafhopper - - - - - Empoasca mali LeB.
- Potato-tuber moth a.n.o. - - - - - Phthorimaea operculella Zell.
- Poultry-feather mite - - - - - Liponyssus silviarum C. & F.
- Powder-post beetle - - - - - Lyctus linearis Goeze and  
L. planicollis Lec.
- Prionus grubs - - - - - Prionus fissicornis Hald.
- Ptinid beetles - - - - - Hadrobregmus carinatus Say  
Anobium sp.





Q

See

Quince curculio a.n.o. - - - - - - - - - - Conotrachelus crataegi Walsh

R

Raspberry cane-borer a.n.o. - - - - - - - - - - Oberea bimaculata Oliv.  
Raspberry fruitworm - - - - - - - - - - Byturus unicolor Say  
Raspberry maggot - - - - - - - - - - Phorbia rubivora Coq.  
Raspberry sawfly a.n.o. - - - - - - - - - - Monophadnoides rubi Harr.  
Red-banded leaf-roller - - - - - - - - - - Eulia velutinana Walk.  
Red-necked cane-borer - - - - - - - - - - Agrilus ruficollis Fab.  
Rhododendron borer - - - - - - - - - - Sesia rhododendri Beut.  
Rhododendron lace-bug (rhododendron  
tingis) - - - - - - - - - - Stephanitis rhododendri Horv.  
Rice weevil a.n.o. - - - - - - - - - - Calendra oryza L.  
Roaches - - - - - - - - - - Periplaneta americana L.  
Blattella germanica L. and  
Blatta orientalis L.  
Rose aphid - - - - - - - - - - Macrosiphum rosae L.  
Rose chafer a.n.o. - - - - - - - - - - Macrodactylus subspinosus Fab.  
Rose curculio - - - - - - - - - - Rhynchites bicolor Fab.  
Rose leaf-beetle - - - - - - - - - - Nodonota puncticollis Say  
Rose leafhopper - - - - - - - - - - Typhlocyba rosae L.  
Rose leaf-tyer - - - - - - - - - - Caccecia rosaceana Harr.  
Rose midge - - - - - - - - - - Dasynura rhodophaga Coq.  
Rose sawfly (rose slug)- - - - - - - - - - Caliroa aethiops Fab.  
Rose scale a.n.o. - - - - - - - - - - Aulacaspis rosae Bouche  
Rosy apple aphid - - - - - - - - - - Anuraphis roseus Baker  
Roundheaded apple-tree borer a.n.o. - - Saperda candida Fab.

S

Saddle-back caterpillar a.n.o. - - - - - Sibine stimulea Clem.  
Salt-marsh caterpillar a.n.o. - - - - - Estigmene acraea Drury  
San Jose scale a.n.o.- - - - - - - - - - Aspidiotus perniciosus Comst.  
Satin moth - - - - - - - - - - Stilponotia salicis L.  
Sawfly - - - - - - - - - - Neodiprion sp.  
Saw-toothed grain beetle - - - - - - - - Oryzaephilus (Silvanus)  
surinamensis L.  
Say's blister-beetle - - - - - - - - - - Pomphocoea sayi Lec.  
Scarabaeid - - - - - - - - - - Serica anthracina Lec.  
Scarabaeid beetle - - - - - - - - - - Serica trocifformis Burm.  
Screwworm a.n.o. - - - - - - - - - - Chrysomya macellaria Fab.  
Scurfy scale a.n.o.- - - - - - - - - - Chionaspis furfura Fitch  
Seed-corn maggot - - - - - - - - - - Hylemyia cilicrura Rond.  
Sheep scab - - - - - - - - - - Psoroptes communis Furst.  
Shot-hole borer a.n.o. - - - - - - - - - Scolytus rugulosus Ratz.



|  | See   |
|--|---|
| Silverfish - - - - -                     | <u>Lepisma saccharina</u> L.                              |
| Smartweed borer - - - - -                | <u>Pyrausta ainsliei</u> Heinr.                           |
| Snowball aphid - - - - -                 | <u>Anuraphis viburnicola</u> Gill.                        |
| Snowy tree-cricket a.n.o. - - - - -      | <u>Oecanthus niveus</u> DeG.                              |
| Sorghum webworm - - - - -                | <u>Celama sorghiella</u> Riley                            |
| Southern fern cutworm - - - - -          | <u>Callopietria floridensis</u> Guen.                     |
| Southern green plant-bug - - - - -       | <u>Nezara viridula</u> L.                                 |
| Soy-bean root curculio - - - - -         | <u>Sitona crinita</u> Hbst.                               |
| Spinose ear tick - - - - -               | <u>Ornithodoros megnini</u> Duges                         |
| Spittle insects - - - - -                | <u>Cercopidae</u><br><u>Aphrophora</u> spp.               |
| Spotted blister-beetle - - - - -         | <u>Epicauta maculata</u> Say                              |
| Spotted cutworm - - - - -                | <u>Agrotis c.-nigrum</u> L.                               |
| Spring cankerworm a.n.o. - - - - -       | <u>Paleacrita vernata</u> Peck                            |
| Spruce budworm - - - - -                 | <u>Harmoloba fumiferana</u> Clem.                         |
| Squash borer a.n.o. - - - - -            | <u>Melittia satvriniformis</u> Huebn.                     |
| Squash bug a.n.o. - - - - -              | <u>Anasa tristis</u> DeG.                                 |
| Stable fly a.n.o. - - - - -              | <u>Stomoxys calcitrans</u> L.                             |
| Stalk borer a.n.o. - - - - -             | <u>Papaipema nebris</u> Guen. var.<br><u>nitela</u> Guen. |
| Sticktight flea - - - - -                | <u>Echidnophaga gallinaceus</u> Westw.                    |
| Strawberry crown-borer a.n.o. - - - - -  | <u>Tyloclerma fragariae</u> Riley                         |
| Strawberry flea-beetle - - - - -         | <u>Haltica ignita</u> Illig.                              |
| Strawberry leaf-beetle - - - - -         | <u>Paria canella</u> Fab.                                 |
| Strawberry leaf-roller a.n.o. - - - - -  | <u>Ancylis comptana</u> Froehl.                           |
| Strawberry-root weevil - - - - -         | <u>Otiorhynchus rugifrons</u> Gyll.                       |
| Strawberry weevil a.n.o. - - - - -       | <u>Anthonomus signatus</u> Say                            |
| Striped cucumber-beetle a.n.o. - - - - - | <u>Diabrotica vittata</u> Fab.                            |
| Striped flea-beetle a.n.o. - - - - -     | <u>Phyllotreta vittata</u> Fab.                           |
| Striped tree-cricket - - - - -           | <u>Oecanthus nigricornis</u> Walk.                        |
| Sugar-beet webworm - - - - -             | <u>Loxostege sticticalis</u> L.                           |
| Sugar-cane beetle a.n.o. - - - - -       | <u>Euethela rugiceps</u> Lec.                             |
| Sugar-cane borer a.n.o. - - - - -        | <u>Diatraea saccharalis</u> Fab.                          |
| Sunflower peacock fly - - - - -          | <u>Straussia longipennis</u> Wied.                        |
| Sunflower weevil - - - - -               | <u>Rhodoaenus 13-punctatus</u> Ill.                       |
| Sweet-potato whitefly - - - - -          | <u>Bemisia inconspicua</u> Quaint.                        |

T-

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|--------------------------------------|---|
| Tarnished plant-bug a.n.o. - - - - - | <u>Lygus pratensis</u> L.                                       |
| Tea scale - - - - -                  | <u>Fiorinia theae</u> Green                                     |
| Tent caterpillar a.n.o. - - - - -    | <u>Malacosoma americana</u> Fab.                                |
| Termites - - - - -                   | <u>Reticulitermes flavipes</u> Kol.<br><u>R. tibialis</u> Banks |
| Three-lined potato beetle - - - - -  | <u>Lema trilineata</u> Oliv.                                    |
| Tobacco flea-beetle a.n.o. - - - - - | <u>Epitrix parvula</u> Fab.                                     |
| Tomatoworm a.n.o. - - - - -          | <u>Protoparce sexta</u> Johan.                                  |
| Tulip scale - - - - -                | <u>Toumevella liriodendri</u> Gmel.                             |
| Turkey gnat a.n.o. - - - - -         | <u>Simulium meridionale</u> Riley                               |

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2100

See

- Turnip aphid - - - - - Rhopalosiphum pseudobrassicae  
Davis  
Tussock moth - - - - - Hemerocampa leucostigma S. & A.  
Twelve-spotted cucumber-beetle - - - - - Diabrotica duodecimpunctata L.  
Two-lined chestnut borer a.n.o. - - - - - Agrilus bilineatus Weber  
Two-lined prominent - - - - - Seriodonta bilineata Comst.  
Two-striped grasshopper - - - - - Melanoplus bivittatus Say

U

- Ugly nest caterpillar - - - - - Archips cerasivorana Fitch  
Umbrella ant - - - - - Atta texana Buck.  
Unicorn caterpillar - - - - - Schizura unicornis S. & A.  
Upland corn wireworm - - - - - Melanotus pilosus Blatch.

V

- Variegated cutworm - - - - - Lydophotia marzaritosa Haw.  
Velvet-bean caterpillar - - - - - Anticarsia gemmatilis Huebn.

W

- Walnut caterpillar - - - - - Datana integerrima G. & R.  
Webworms - - - - - Crambidae  
Western army cutworm - - - - - Chorizagrotis auxiliaris Grote  
Western flea-beetle - - - - - Phyllotreta pusilla Horn  
Western-pine beetle a.n.o. - - - - - Dendroctonus brevicomis Lec.  
Western 12-spotted cucumber-beetle - - - - - Diabrotica soror Lec.  
Western wheat-stem maggot - - - - - Pegomya cerealis Gill.  
Wheat-head armyworm a.n.o. - - - - - Heliophila albilinea Huebn.  
Neleucania albilinea Huebn.  
Wheat midge a.n.o. - - - - - Contarinia tritici Kirby  
Wheat-sheath gall jointworm - - - - - Harmolita vaginicla Doane  
Wheat strawworm - - - - - Harmolita grandis minuta How.  
Wheat wireworm - - - - - Agriotes mancus Say  
White ant - - - - - Reticulitermes flavipes Kol.  
R. virginicus Banks  
White grubs - - - - - Phyllophaga spp.  
White-lined sphinx - - - - - Celerio lineata Fab.  
White-marked spider-beetle - - - - - Ptinus fur L.  
White-marked tussock caterpillar - - - - - Hemerocampa leucostigma S. & A.  
White-pine weevil - - - - - Pissodes strobi Peck  
Wingless May-beetle - - - - - Phyllophaga cribrosa Lec.  
Wireworms - - - - - Elateridae  
Woolly apple aphid a.n.o. - - - - - Eriosoma lanigerum Hausm.  
Woolly beech aphid - - - - - Prociphilus imbricator Fitch  
Woolly elm aphid - - - - - Eriosoma americanum Riley .



See

Woolly maple-leaf scale - - - - - Phenacoccus acericola King

Y

Yellow-fever mosquito - - - - - Aedes aegypti L.  
Yellow mealworm a.n.o. - - - - - Tenebrio molitor L.  
Yellow-necked caterpillar - - - - - Datana ministra Drury  
Yellow-striped armyworm - - - - - Prodenia ornithogalli var.  
praefica Grote

Z

Zebra caterpillar a.n.o. - - - - - Mamestra picta Harr.







