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A CATALOG OF VIRAL DISEASES OF



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ABSTRACT

This comprehensive catalog of viral diseases of two large groups of arthropods updates the previous surveys of the world's literature published by Hughes in 1957 and by Martignoni and Langston in 1960. This computer-based catalog lists over 600 species of insects and mites, each reported to have one or more of 21 viral diseases or disease groups, for a total of over 900 host-virus records. The catalog consists of two lists. In the first one the hosts are listed in taxonomic sequence (order, family, genus, species). Species appear alphabetically within each genus, genera alphabetically within each family, and families alphabetically within each order. In the second list, the hosts are listed alphabetically by specific names, without consideration of the higher taxa. The host-virus records are stored on computer tape; additions and corrections to the master file can be made easily, and thus the catalog can be revised without much effort.

Keywords: Virus (-insecta, mites, computerized virus catalog.

INTRODUCTION

This comprehensive catalog of insects and mites reported to have viral diseases is an example of the kind of documentation one can generate from the computer-assisted information system established at the Forestry Sciences Laboratory in 1970 (Martignoni et al. 1973). The uniqueness of this Catalog lies in its coverage: this Catalog does not only add to, but it also includes viral diseases and species of arthropods previously cataloged in the "Annotated List" published by Hughes (1957) and in its "Supplement" published by Martignoni and Langston (1960). The present Catalog results from our analysis of the information content of 2,300 publications (as of this writing). Of these, 733 formed the basis for the lists published by Hughes (1957) and by Martignoni and Langston (1960). It should be emphasized that those two lists, as well as the present Catalog, are not the result of simple title scans, but rather they were generated from a thorough analysis of each article entered in our master file. The methods of input analysis and preparation have been described by Martignoni et al. (1973). The techniques of information storage and retrieval are those of the eight FAMULUS program subsystems described by Burton et al. (1969) and outlined, in greater detail, in the "FAMULUS User's Manual" (National Technical Information Service 1969).

After completion of the guidelines for the FAMULUS version of the Catalog of Viral Diseases (Martignoni et al. 1973), we decided to develop a cost-saving set of computer routines which would list in a condensed and easily readable format all host-virus records in our master files (which **also** include the records published by Hughes 1957 and by Martignoni and Langston 1960). This was achieved with the cooperation of the Biometrics Service

of our Experiment Station. This set of routines sorts and lists species of insects and mites, along with their viral diseases (as code numbers), in four separate printouts:

(1) The species are listed alphabetically, by specific names; if one species has one or more subspecies, these are listed, too, in alphabetical sequence. This list serves as a general host index by specific names, and it disregards arrangement of the species by higher taxonomic categories.

(2) The genera are listed in alphabetical sequence; species and subspecies are listed alphabetically within each genus.

(3) The families are listed in alphabetical sequence; the genera are listed alphabetically within each family, as well as the species and subspecies within each genus.

(4) The orders are listed in alphabetical sequence; the families and each subsequent lower-rank taxon are listed alphabetically.

Printouts 1 and 4 are reproduced here (appendixes).

Updating these lists requires a minimal effort only, once the appropriate information has been retrieved from specialized literature and entered into the FAMULUS master file. The processing cost for these four printouts is insignificant (less than \$3, as of this writing). Thus, updated printouts can be obtained whenever new host records or new disease records are added to the master tapes.

Our Catalog of Viral Diseases uses the currently accepted scientific names of host species. Recent monographs and several specialists were consulted to determine current and correct specific,

generic, and family designations. The disease names (see key) are those most commonly used in the English language. Their definitions can be found in the "Abridged Glossary" (Steinhaus and Martignoni 1970), with the exception of "crystalline-array virosis" and of "hairless-black syndrome," two terms only recently added to the list of viral diseases of insects and mites. The selection of a disease name reflects the information content of each publication. For instance, POLYHEDROSIS (code 16) indicates that the author of a report did not specify whether the disease was a NUCLEOPOLYHEDROSIS (code 12) or a CYTOPLASMIC POLYHEDROSIS (code 5). In the majority of cases, viral diseases have been reported as naturally occurring in their hosts ("natural hosts" or "typical hosts"). In a few cases, however, the reports indicate that the disease resulted from inoculation with a virus originally isolated from another host. Thus, some of the records in the following list represent "accidental hosts," i.e., hosts in which the pathogen is not commonly found, nevertheless hosts susceptible to infection with that pathogen. These few instances have not been marked in the present lists; thus it is not possible to identify accidental hosts. However, information on host specificity (or host range) of the pathogens is contained in the master file.

A rather disturbing situation has arisen in recent years (especially since ultramicrotomes and electron microscopes are no longer restricted to a few privileged laboratories), one that forced us to lump several records in the broad and ill-defined category PRESUMED VIROSIS (code 17). In our opinion, far too many manuscripts are rushed to the publisher before sufficient evidence has been obtained on the viral nature and pathogenicity of "virus-like" particles discovered in ultrathin sections. In several instances, the viral nature of these particles is only a conjecture. Faced with the dilemma of

ignoring such records, or of listing them, we decided for the latter option, with the hope that, eventually, the viral nature of the particles would be confirmed in further studies. In the meantime, the reader should consider each code 17 entry with moderate skepticism.

As the number of reports dealing with viral diseases of insects and mites has been increasing at an accelerated rate since about 1960, publication of a comprehensive list of literature citations in a conventional format is now beyond the scope of this Catalog. The printing cost alone, for such an extensive bibliography, would be prohibitive. Those interested in literature citations can find useful bibliographies in several publications, in addition to those prepared by Hughes (1957) and by Martignoni and Langston (1960). For instance, the literature relating to the nucleopolyhedrosis viruses was reviewed by Bergold (1963), the cytoplasmic polyhedrosis viruses by Smith (1963) and by Aruga and Tanada (1971), the granulosis viruses by Huger (1963), and the viruses pathogenic for the honey bee by Bailey (1963). There are also bibliographies covering the viral diseases of insects and mites in selected geographical areas (e.g., Gershenson 1960, Hukuhara et al. 1966, Smirnoff and Juneau 1973). Finally, for those interested in obtaining one or more virus isolates (from a list of 223 viruses), the catalog by van der Geest and van der Laan (1971) may prove very convenient, as it includes also a list of addresses of individuals or laboratories willing to supply the samples.

The data base for the present Catalog is preserved in a master file (on magnetic tape and on paper) at our Station. We emphasize that the data base consists only of published host records. Unpublished host records (material stored in virus collections, restricted laboratory reports, and personal correspondence) do not appear in the Catalog.

USE OF THE CATALOG

This Catalog of Viral Diseases consists of **two** lists, much in the same way as the two previous catalogs (Hughes 1957, Martignoni and Langston 1960). The first (app. 1) is a list of hosts, arranged alphabetically by orders, by families (alphabetically within each order), by genera (alphabetically within each family), and by species (alphabetically within each genus)--and subspecies where appropriate. Each host record is followed by one or more disease code numbers. A key to the codes is available (p. 35) and it can be unfolded to the right side of the pamphlet for convenience,

The second list (app. 2) is an index to hosts by their specific names (trivial names). These names are listed in alphabetical order, regardless of superspecific categories. Unlike indexes in the two previously published catalogs, this index also contains the names of the higher taxa (genus, family, and order) as well as the disease codes, printed on the same line as the specific name. Thus, in this catalog, the index is a guide to hosts listed alphabetically, by their specific names, and at the same time a complete catalog, containing information on taxonomy as well as on pathology.

Both lists (by taxonomic categories and by specific names) are generated simultaneously by the computer, from a single input. We can thus avoid discrepancies between the two lists.

A search for a particular host would not be considered complete unless the synonyms of the generic and specific names were also included in that search. Unfortunately, it would be a Sisyphean task, beyond the scope of our Catalog, to list all synonyms of each host species.

However, in table 1 we list some of the most common synonyms (those most frequently encountered in the literature dealing with viral diseases) along with the accepted scientific names of arthropods concerned. Additional synonyms can be found in specialized monographs. Table 1 and, if desirable, such specialized monographs should be consulted before a Catalog search for a given insect or mite species is abandoned.

ACKNOWLEDGMENTS – AND A PLEA FOR ASSISTANCE

The helpful and patient staff of the Biometrics Section of the Pacific Northwest Forest and Range Experiment Station contributed to the preparation of the sorting routines and to the updating of the master file through FAMULUS. We are much indebted to our dedicated colleagues.

We are also grateful to those authors who, for many years, have supplied us with reprints of their publications on viral diseases of insects and mites. We trust that their important contribution to the Catalog of Viral Diseases will continue. We ask those who are interested in the maintenance of this Catalog and who may have noticed errors and missing host records to assist us by completing and mailing to us one or more of the input sheets (inserted at the end of this pamphlet) or by writing us (in the case of corrections and suggestions).¹ If we missed host records, we would also appreciate receiving one reprint of each pertinent publication, for such reprints enable us to complete the necessary analysis of the information content of the publication.

¹/ Send forms to authors, Forestry Sciences Laboratory, 3200 Jefferson Way, Corvallis, Oregon 97331.

LITERATURE CITED

- Aruga, Hisao, and Yoshinori Tanada.
1971. List of insects reported to have cytoplasmic polyhedrosis. *In* Hisao Aruga and Yoshinori Tanada (eds.), *The cytoplasmic-polyhedrosis virus of the silkworm*, p. 209-224. Univ. Tokyo Press, Tokyo, Japan.
- Bailey, Leslie.
1963. *Infectious diseases of the honey-bee*. 176 p. Land **Books** Ltd., London.
- Bergold, Gernot H.
1963. The nature of nuclear-polyhedrosis viruses. *In* Edward A. Steinhaus (ed.), *Insect pathology, an advanced treatise*, vol. 1, p. 413-456. Acad. Press, New York and London.
- Burton, Hilary D., Robert M. Russell, and Theodor B. Yerke.
1969. FAMULUS: a computer-based system for augmenting personal documentation efforts. USDA For. Serv. Res. Note PSW-193, 6 p. Pac. Southwest For. and Range Exp. Stn., Berkeley, Calif.
- Gershenson, S. M.
1960. A bibliography of Soviet works on virus diseases of insects. *Entomol. Rev.* 39:334-340.
- Huger, Alois.
1963. Granuloses of insects. *In* Edward A. Steinhaus (ed.), *Insect pathology, an advanced treatise*, vol. 1, p. 531-575. Acad. Press, New York and London.
- Hughes, Kenneth M.
1957. An annotated list and bibliography of insects reported to have virus diseases. *Hilgardia* 26:597-629.
- Hukuhara, T., K. Akutsu, and H. Watanabe.
1966. On the virus diseases of insects of Japan. *Shokubutsu Boeki* 20:543-546.
- Martignoni, Mauro E., and Robert L. Langston.
1960. Supplement to an annotated list and bibliography of insects reported to have virus diseases. *Hilgardia* 30:1-40.
- Martignoni, Mauro E., Patricia Williams, and Dorothy E. Reineke.
1973. Computer-based catalog of viral diseases of insects: a FAMULUS application. *J. Invertebr. Pathol.* 22(1):100-107, illus.
- National Technical Information Service.
1969. FAMULUS user's manual. No. PB 303 534. Springfield, Va.
- Smirnoff, W. A., and A. Juneau.
1973. Quinze annees de recherches sur les micro-organismes des insectes forestiers de la province de Québec (1957-1972). *Ann. Soc. Entomol. Québec* 18:147-181.
- Smith, Kenneth M.
1963. The cytoplasmic virus diseases. *In* Edward A. Steinhaus (ed.), *Insect pathology, an advanced treatise*, vol. 1, p. 457-497. Acad. Press, New York and London.
- Steinhaus, Edward A., and Mauro E. Martignoni.
1970. An abridged glossary of terms used in invertebrate pathology, USDA For. Serv., Pac. Northwest For. and Range Exp. Stn., 2d ed., 38 p. Portland, Oreg.
- van der Geest, L. P. S., and P. A. van der Laan.
1971. Insect pathogens available for distribution. *In* H. D. Burges and N. W. Hussey (eds.), *Microbial control of insects and mites*, p. 733-739. Acad. Press, London and New York.

APPENDIX 1

List of Hosts by Taxonomic Categories

ORDER	FAMILY	GENUS	SPECIES	DISEASES		
ACARINA	TETRANYCHIDAE	PANONYCHUS	CITRI	13	17	
ACARINA	TETRANYCHIDAE	PANONYCHUS	ULMI	13		
ACARINA	TETRANYCHIDAE	TETRANYCHUS	CINNABARINUS	13	17	
ACARINA	TETRANYCHIDAE	TETRANYCHUS	MULTISETIS	17		
ACARINA	TETRANYCHIDAE	TETRANYCHUS	TELA91US	17		
COLEOPTERA	BUPRESTIDAE	AGRILUS	SUVOROV POPULNEUS	5		
COLEOPTERA	BUPRESTIDAE	IELANOPHILA	PICTA	5	16	
COLEOPTERA	CERAYBYCIOAE	BATOCERA	LINEOLATA	12		
COLEOPTERA	CURCULIONIDAE	ANTHONOMUS	GRANDIS	10	12	
COLEOPTERA	OERMESTIDAE	ANTHOMUS	MUSEORUM	12	16	
COLEOPTERA	DERMESTIDAE	DERPHESTES	LARDARIUS	12	16	
COLEOPTERA	GYRINIDAE	GYRINUS	NATATOR	13		
COLEOPTERA	LUCANIDAE	FICULUS	SURLAEVIS	19		
COLEOPTERA	SCARABAEIDAE	AYPHIYALLON	SOLSTITIALIS	19		
COLEOPTERA	SCARABAEIDAE	ANOPLOGNATHUS	POROSUS	19		
COLEOPTERA	SCARABAEIDAE	ANOXIA	VILLOSA	19		
COLEOPTERA	SCARABAEIDAE	APHODIUS	TASNANIAE	13	19	
COLEOPTERA	SCARABAEIDAE	COSTELYTRA	ZEALANDICA	10		
COLEOPTERA	SCARABAEIDAE	DASYGNATHUS	SP.	19		
COLEOPTERA	SCARABAEIDAE	DEMONEA	BORANENSIS	19		
COLEOPTERA	SCARABAEIDAE	DERMOLEPIDA	ALBOHIRTUM	19		
COLEOPTERA	SCARABAEIDAE	GEOTRUPES	SILVATICUS	19		
COLEOPTERA	SCARABAEIDAE	GEOTRUPES	STERCOROSUS	19		
COLEOPTERA	SCARABAEIDAE	HETERONYCHUS	ARATOR	13		
COLEOPTERA	SCARABAEIDAE	HELOLONTA	HIPPOCASTANI	20		
COLEOPTERA	SCARABAEIDAE	HELOLONTA	HELOLONTA	6	19	20
COLEOPTERA	SCARABAEIDAE	OPOGONIA	SP.	10		
COLEOPTERA	SCARABAEIDAE	ORYCTES	BOAS	20		
COLEOPTERA	SCARABAEIDAE	ORYCTES	MONOCEROS	20		
COLEOPTERA	SCARABAEIDAE	ORYCTES	NASICORNIS	11	20	
COLEOPTERA	SCARABAEIDAE	ORYCTES	QHINOCEQOS	11		
COLEOPTERA	SCARABAEIDAE	OTHNOMIUS	BATESI	19		
COLEOPTERA	SCARABAEIDAE	PERICPTUS	TRUNCATUS	13		
COLEOPTERA	SCARABAEIDAE	PHYLLIPERTHA	HORTICOLA	19		
COLEOPTERA	SCARABAEIDAE	PHYLOPHAGA	PLEEI	19		
COLEOPTERA	SCARABAEIDAE	RHOPEA	VERRAUXI	19		
COLEOPTERA	SCARABAEIDAE	SCAPANES	AUSTRALIS	11		
COLEOPTERA	SCARABAEIDAE	SERICESTHIS	PRUINOSA	10		
COLEOPTERA	TENEBRIONIDAE	TENEBRIO	MOLITOR	10	17	
DIPTERA	BIBIONIDAE	BIBIO	NARCI	10		
DIPTERA	CALLIPHORIDAE	CALLIPHORA	VOMITORIA	10	12	16
DIPTERA	CHAEORIDAE	CORETHRELLA	APPENICULATA	10		
DIPTERA	CHAEORIDAE	CORETHRELLA	BRACELEVI	10		
DIPTERA	CHIRONOMIDAE	CHIRONOMUS	ATTENUATUS	19		
DIPTERA	CHIRONOMIDAE	CHIRONOMUS	LURIDUS	19		
DIPTERA	CHIRONOMIDAE	CHIRONOMUS	PLUYOSUS	5	10	
DIPTERA	CHIRONOMIDAE	CHIRONOMUS	TENTANS	12	17	19
DIPTERA	CHIRONOMIDAE	GOELOCHIRONOMUS	HOLOPPASINUS	5	17	19
DIPTERA	COELOPIIDAE	COECOPA	FRIGIDA	17		
DIPTERA	CULICIDAE	AEDES	AEGYPTI	5	10	12
DIPTERA	CULICIDAE	AEDES	ANNULIPES	10		
DIPTERA	CULICIDAE	AEDES	CANTANS	10		
DIPTERA	CULICIDAE	AEDES	DETITUS	10		
DIPTERA	CULICIDAE	AEDES	DORSALIS	10		
DIPTERA	CULICIDAE	AEDES	FUCVUS PALLENS	10		
DIPTERA	CULICIDAE	AEDES	NIGROMACULIS	12		
DIPTERA	CULICIDAE	AEDES	SIERRENSIS	10	12	
DIPTERA	CULICIDAE	AEDES	SOLLICITANS	5	10	12
DIPTERA	CULICIDAE	AEDES	STICTICUS	10		
DIPTERA	CULICIDAE	AEDES	STIYULANS	10		
DIPTERA	CULICIDAE	AEDES	TAEINIORHYNCHUS	5	10	12
DIPTERA	CULICIDAE	AEDES	TORMENTOR	12		
DIPTERA	CULICIDAE	AEDES	TRISERIATUS	12	17	
DIPTERA	CULICIDAE	AEDES	VEXANS	10		
DIPTERA	CULICIDAE	ANOPHELES	ALBIMANUS	10	19	
DIPTERA	CULICIDAE	ANOPHELES	CRUCIANS	12		
DIPTERA	CULICIDAE	ANOPHELES	FREEBORN	12		
DIPTERA	CULICIDAE	ANOPHELES	QUADRIMACULATUS	10	14	
DIPTERA	CULICIDAE	ANOPHELES	STEPHENS	3	5	
DIPTERA	CULICIDAE	ANOPHELES	SUBPICIUS	17		
DIPTERA	CULICIDAE	CULEX	PECCATOR	10		
DIPTERA	CULICIDAE	CULEX	PIPIENS	3		
DIPTERA	CULICIDAE	CULEX	PIPIENS QUINQUEFASCIATUS	12		
DIPTERA	CULICIDAE	CULEX	RESTUANS	17		
DIPTERA	CULICIDAE	CULEX	SALINARIUS	5	10	12
DIPTERA	CULICIDAE	CULEX	TARSALIS	5	12	13
DIPTERA	CULICIDAE	CULEX	TERRITANS	5	10	17
DIPTERA	CULICIDAE	CULISETA	INORNATA	10		
DIPTERA	CULICIDAE	CULISETA	MELANURA	5	10	
DIPTERA	CULICIDAE	ORTHOPODOMYIA	SIGNIFERA	17		

ORDER	FAMILY	GENUS	SPECIES	DISEASES							
OIPTERA	CULICIDAE	PSOROPYORA	CONFINNIS	10	12	17					
OIPTERA	CULICIDAE	PSOROPHORA	FEROX	5	10	12					
DIPTERA	CULICIDAE	PSOROPHORA	HORSIOA	10							
OIPTERA	CULICIDAE	PSOROPHORA	VARIPE	10	12						
OIPTERA	CULICIDAE	URANOAE	SAPPHIRINA	12	17						
OIPTERA	CULICIDAE	HYEOMIA	SMITHII	12							
DIPTERA	OROSOPHILIDAE	OROSOPHILA	AFFINIS	3							
DIPTERA	OROSOPHILIDAE	OROSOPHILA	ANANASSAE	13							
DIPTERA	OQOSOPHILIOAE	DROSOPHILA	BIFASCIATA	17							
DIPTERA	OROSOPHILIOAE	OROSOPHILA	IMMIGRANS	3	13						
DIPTERA	OSOSOPHILIDAE	DROSOPHILA	HELANOGASTER	3	13	17					
OIPTERA	OQOSOPHILIOAE	OROSOPHILA	MONTIUM	13							
DIPTERA	OSOSOPHILIOAE	OROSOPHILA	PAULISTORUY	17							
DIPTERA	OROSOPHILIDAE	DROSOPHILA	PSEUDOSCURA	17							
DIPTERA	OROSOPHILIDAE	DROSOPHILA	VIRILIS	17							
DIPTERA	OROSOPHILIDAE	DROSOPHILA	WILLISTONI	17							
DIPTERA	ITONIOIOAE	CONTARINIA	TRITICI	16							
DIPTERA	MONIDIOAE	SITOO PLOSIS	MOSELLANA	16							
DIPTERA	MUSCIDAE	GLOSSINA	FUSCIPES	17							
DIPTERA	MUSCIDAE	GLOSSINA	MORSITANS CENTRALIS	17							
OIPTERA	MUSCIDAE	MUSCA	DOHESTICA	3							
DIPTERA	SCIARIDAE	RHYNCHOSCIARA	ANGELAE	12	17						
OIPTERA	SCIARIDAE	SHYNCHOSCIARA	HOLLAENOERI	12							
DIPTERA	SCIARIDAE	RHYNCHOSCIARA	HXLLEQI	12							
DIPTERA	SIMULIOAE	CNEPHIA	MUTATA	5							
DIPTERA	SIMULIOAE	PROSYULIUY	MIXTUM	5							
OIPTERA	SIMULIOAE	SIMULIUM	ORNATUH	10							
OIPTERA	TACHINIOAE	UGYMYIA	SERICARIAE	12							
DIPTERA	TEPHRITIOAE	CERATITIS	CAPITATA	3							
OIPTERA	TIPULIDAE	TIPULA	LIVIDA	10							
OIPTERA	TIPULIDAE	TIPULA	OLERACEA	10							
DIPTERA	TIPULIDAE	TIPULA	PALUOOSA	10	12	16					
HEMIPTERA	APHIDIOAE	RHOPALOSIPHUM	MAIOIS	17							
HEMIPTERA	CICAOELCIDAE	COLLAONUS	MONTANUS	10							
HEMIPTERA	CICADELLIOAE	NEPHOTETTIX	CINCTICEPS	10							
HEMIPTERA	DELPHACIOAE	LAOOELPHAX	STQIATELLA	10							
HYMENOPTERA	APIIDAE	APIS	YELLIFESA	1	2	6	10	13	15	17	18 21
HYMENOPTERA	ARGIDAE	AQGE	PECTORALIS	12							
HYMENOPTERA	BOMBIDAE	BOMBUS	AGROQUY	1							
HYMENOPTERA	BOMBIDAE	BOMBUS	HDRTQUM	1							
HYMENOPTERA	BOMBIDAE	BOMBUS	LUCORUH	1							
HYMENOPTERA	BOMBIDAE	BOMBUS	RUDERARIS	1							
HYMENOPTERA	BOMBIDAE	BOMBUS	TERRESTRIS	1							
HYMENOPTERA	BRACONIOAE	CARDIOCHILES	NIGRICEPS	17							
HYMENOPTERA	DIPRIONIDAE	DIPRION	HERCYNIAE	12							
HYMENOPTERA	DIPRIONIDAE	DIPRION	NIPPONICA	12							
HYMENOPTERA	DIPRIONIDAE	DIPRION	PALCIDA	12							
HYMENOPTERA	DIPRIONIDAE	DIPRION	PINDROWI	12							
HYMENOPTERA	DIPRIONIDAE	DIPRION	PINI	12							
HYMENOPTERA	DIPRIONIDAE	PIPRION	POLYTOMA	12							
HYMENOPTERA	DIPRIONIDAE	NEODIPRION	ABIETIS	12	16						
HYMENOPTERA	DIPRIONIDAE	NEODIPRION	EXITANS	12							
HYMENOPTERA	DIPRIONIDAE	NEODIPRION	LECONTEI	12	16						
HYMENOPTERA	DIPRIONIDAE	NEODIPRION	MERKELI	5							
HYMENOPTERA	DIPRIONIDAE	NEODIPRION	HUNOUS	16							
HYMENOPTERA	DIPRIONIDAE	NEODIPRION	NANULUS	16							
HYMENOPTERA	DIPRIONIDAE	NEODIPRION	PRATTI BANKSIANA	12							
HYMENOPTERA	DIPRIONIDAE	NEODIPRION	PRATTI PRATTI	16							
HYMENOPTERA	DIPRIONIDAE	NEODIPRION	SERTIFER	12	16	17					
HYMENOPTERA	DIPRIONIDAE	NEODIPRION	SWAINEI	12							
HYMENOPTERA	DIPRIONIDAE	NEODIPRION	TAEDAE LINEARIS	12							
HYMENOPTERA	DIPRIONIDAE	NEODIPRION	TAEODAE TAEODAE	12	15						
HYMENOPTERA	DIPRIONIDAE	NEODIPRION	VIRGINIANA	12							
HYMENOPTERA	FORMICIDAE	FORMICA	CUGUBRIS	17							
HYMENOPTERA	HALICTIDAE	NOHIA	MELANDERI	17							
HYMENOPTERA	NEGACHILIOAE	MEGACHILE	ROTUNOATA	17							
HYMENOPTERA	PAMPHILIDAE	ACANTHOLYDA	NEMORALIS	16							
HYMENOPTERA	PAMPHILIDAE	CEPHALCIA	ASITIS	16							
HYMENOPTERA	PAMPHILIDAE	CEPHALCIA	ALPINA	16							
HYMENOPTERA	PAMPHILIDAE	CEPHALCIA	ISSTKI	12							
HYMENOPTERA	TENTHREDINIDAE	ANOPLONYX	OESTQUCTOR	5							
HYMENOPTERA	TENTHREDINIDAE	NEMATUS	OLFACIENS	12							
HYMENOPTERA	TENTHREDINIDAE	PRISTIPHORA	ERICHSONII	12	16						
HYMENOPTERA	TENTHREDINIDAE	PRISTIPHORA	GENTCULAJA	12							
HYMENOPTERA	TENTHREDINIDAE	TRICHOCAAMPUS	IQREGULARIS	12							
HYMENOPTERA	TENTHREDINIDAE	TRICHOCAAMPUS	VINALIS	12							
ISOPTERA	RHINOTERMITIDAE	COPTOTERMES	LACTEUS	17							
ISOPTERA	TERMITIDAE	NASUTITERMES	EXITIOSUS	17							
ISOPTERA	TERMITIDAE	POROTERMES	ADAMSONI	17							
LEPIDOPTERA	AEGERIIDAE	BEMBECIA	CONTRACTA	5	12						

OROER	FAMILY	GENUS	SPECIES	DISEASES
LEPIDOPTERA	ANTHELIDAE	ANTHELA	VARIA	12
LEPIDOPTERA	ANTHELIDAE	PTEROLCCESA	AHPLMORNIS	12
LEPIDOPTERA	ARCTIIDAE	ANSACTA	ALBISTQIGA	12
LEPIDOPTESA	ARCTIIDAE	ANSACTA	MOOREI	12 19
LEPIDOPTERA	ARCTIIDAE	APANTESIS	VIRGO	16
LEPIDOPTERA	ARCTIIDAE	ARCTIA	CAJA	5 12 16
LEPIDOPTESA	ARCTIIDAE	ARCTIA	VILLICA	5 12
LEPIDOPTERA	ARCTIIDAE	ARCTICES	GLATIGNYI	12
CEPIDOPTERA	ARCTIIDAE	CYCNI A	MENOICA	5 12
LEPIDOPTERA	ARCTIIDAE	DIACRISIA	OBLIQUA	9
LEPIDOPTESA	ARCTIIDAE	OIACRISIA	PURPURATA	5 12
LEPIDOPTERA	ARCTIIDAE	OIACRISIA	VIRGINICA	12
LEPIDOPTERA	ARCTIIDAE	OTONYCHOPUS	AYASIS	9 13
LEPIDOPTERA	ARCTIIDAE	ECPANTHERIA	ICASTA	9 12
LEPIDOPTERA	ARCTIIDAE	ESTIGMENE	ACREA	5 9 12 16 19
LEPIDOPTERA	ARCTIIDAE	EUPLAGIA	QUADRI PUNCTARIA	5
LEPIDOPTERA	AQCTIIDAE	HALISIOTA	ARGENTATA	12
LEPIDOPTESA	AQCTIIDAE	HALISIOTA	CARIAE	12
LEPIDOPTERA	ARCTIIDAE	HYPHANTRIA	CUNEA	5 9 12 16
LEPIDOPTERA	AQCTIIDAE	HYPOCRITA	JACOBAAE	5 12
LEPIDOPTERA	ARCTIIDAE	PANAXIA	DOMINULA	5 12
LEPIDOPTESA	AQCTIIDAE	PARASEMIA	PLANTAGINIS	5
LEPIDOPTERA	ARCTIIDAE	PERICALLI 4	RICINI	9 12
LEPIDOPTESA	ARCTIIDAE	PHRAGYAT031A	FULIGINOSA	5 9 16
LEPIDOPTERA	ARCTIIDAE	SPILAQCTIA	SUBCARNSA	5 12
LEPIDOPTESA	ARCTIIDAE	SPILOSOMA	CUEPICIOECA	5 12
LEPIDOPTERA	ARCTIIDAE	SPILOSOMA	LUTEA	5
LEPIDOPTERA	BOMBYCIDAE	BOMBIX	MORI	5 6 7 8 10 12 13 14 19
LEPIDOPTERA	BOMBYCIDAE	THEOPHILA	MANDARINA	5 12
LEPIDOPTERA	CARPOSINIDAE	CARPOSTINA	NTPONENSIS	12
LEPIDOPTERA	COLEOPHORIDAE	COLEOPHORA	LARICELLA	12
LEPIDOPTERA	COAMBIDAE	OMITRAEA	SACCHAQALLS	9
LEPIDOPTERA	OANAIOAE	OANAUS	PLEXIPPUS	5 16
LEPIDOPTERA	DIOPTIOAE	PHRYGANIDIA	CALIFORNICA	12
LEPIDOPTERA	DREPANIOAE	DREPANA	LACERTINARIA	5
LEPIDOPTERA	EPIPASCHIIDAE	TETRALOPHA	SCORTEALIS	12 16
LEPIDOPTERA	GALLERIIDAE	CORCYRA	CEPHALONICA	12
LEPIDOPTERA	GALLERIIDAE	GALLEQIA	MELONELLA	5 6 10 12 13 16 19
LEPIDOPTESA	GELTECHIDAE	COLEOTECHNITES	MILLERI	9
LEPIDOPTESA	GELTECHIDAE	PECTINOPHORA	GOSSYPIELLA	5 12
LEPIDOPTERA	GELTECHIDAE	PHTHORIMAEA	OPERCULELLA	9 12
LEPIDOPTERA	GEOHETRIDAE	ABRAXAS	GOSSULARIATA	5 12
LEPIDOPTERA	GEOYETRIDAE	ALSOPHTLA	POMETARIA	5 9 12
LEPIDOPTERA	GEOHETRIDAE	ANAITIS	PLAGIAJA	5 12
LEPIDOPTERA	GEOHETRIDAE	ANTHELIA	HYPERROGEA	12
LEPIDOPTERA	GEOHETRIDAE	BISTON	BETULARIA	5
LEPIDOPTERA	GEOHETRIDAE	BISTON	HIRTAQIA	12
LEPIDOPTESA	GEOYETRIDAE	BISTON	HISPIDARIA	12
LEPIDOPTERA	GEOHETRIDAE	BISTON	MARGNATA	16
LEPIDOPTERA	GEOHETRIDAE	BISTON	ROBUSTUM	12
LEPIDOPTESA	GEOHETRIDAE	BISTON	STRATARIA	12
LEPIDOPTESA	GEOHETRIDAE	BUPALUS	PINIARIUS	5 12 16
LEPIDOPTERA	GEOYETRIDAE	CARIPETA	QIVISATA	12
LEPIDOPTERA	GEOHETRIDAE	CLEORA	SECUNDARIA	17
LEPIDOPTERA	GEOHETRIDAE	GROCALCIS	ELINGUARIA	5
LEPIDOPTERA	GEOYETRIDAE	CCTROPIS	CREPUSCULARIA	16
LEPIDOPTESA	GEOHETRIDAE	ENNOHOS	QUERCARIA	12
LEPIDOPTERA	GEOHETRIDAE	ENNOHOS	QUERCINARIA	12
LEPIDOPTESA	GEOHETRIDAE	ENYPTA	VENATA	12
LEPIDOPTERA	GEOHETRIDAE	ERANNIS	TILIARIA	5 12
LEPIDOPTERA	GEOHETRIDAE	ERANNIS	VANCOUVERENSIS	12
LEPIDOPTERA	GEOHETRIDAE	EULYPE	HASTAJA	9
CEPIDOPTESA	GEOHETRIDAE	EUPITHECIA	LONCIPALPATA	12
LEPIDOPTESA	GEOHETRIDAE	HIBERNIA	DEFOLIARIA	12
LEPIDOPTERA	GEOHETRIDAE	LAHROINA	FISCELLARIA	12 16
LEPIDOPTERA	GEOHETRIDAE	LAMBOINA	FISCELLARTA LUGUBROSA	12 16
LEPIDOPTERA	GEOHETRIDAE	CAHRDIYA	FISCELLARIA SOMNIARIA	12 16
LEPIDOPTERA	GEOHETRIDAE	MELANOLOPH	IMITATA	12
LEPIDOPTERA	GEOHETRIDAE	NEPYTIA	CANOSAQIA	16
LEPIDOPTERA	GEOHETRIDAE	NEPYTIA	PHANTASMARIA	12
LEPIDOPTERA	GEOHETRIDAE	OPEROPTERA	BRUCEATA	5 12
LEPIDOPTERA	GEOHETRIDAE	OPEROPTERA	BRUMATA	5 12 16 17 19
LEPIDOPTERA	GEOHETRIDAE	OPEROPTERA	FAGATA	5
LEPIDOPTERA	GEOHETRIDAE	OPISTHUGRAPTIS	LUTEOLATA	12
LEPIDOPTERA	GEOHETRIDAE	OPORINIA	AUTUMNATA	5 12
LEPIDOPTERA	GEOHETRIDAE	OURAPTERYX	SAMBUCAI4	5
LEPIDOPTERA	GEOHETRIDAE	PALFACRITA	VERNATA	5 12
LEPIDOPTERA	GEOHETRIDAE	PERIDATODES	STYPLICARIA	12
LEPIDOPTESA	GEOHETRIDAE	PERO	DEHRENSARIUS	12
LEPIDOPTERA	GEOHETRIDAE	PHIGALIA	PEDARIA	12

ORDER	FAMILY	GENUS	SPECIES	DISEASES			
LEPIDOPTERA	GEOMETRIDAE	PHIGACIA	TITEA	12			
LEPIDOPTERA	GEOMETRIDAE	PROTHOARZIA	PORCELAGIA INOICATARIA	12			
LEPIDOPTERA	GEOHETRIOAE	PTYCHOPODA	SESIATA	12	16		
LEPIDOPTERA	GEOHETRIOAE	SABULONES	CABERATA	9	16		
LEPIDOPTERA	GEOMETRIDAE	SELENIA	LUYAQIA	5			
LEPIDOPTERA	GEOMETRIDAE	SELIDOSEMA	SUAVIS	12			
LEPIDOPTERA	GEOMETRIDAE	SEHIOTHISA	LITURATA	5			
LEPIDOPTERA	GEOMETRIDAE	SEMYOTHISA	SEXYACULATA	9			
LEPIDOPTERA	GEOMETRIDAE	SYNAXIS	PALLULATA	12			
LEPIDOPTERA	HEPIALIOAE	HEFIALUS	LUPULINUS	5			
LEPIDOPTERA	HEPTALIDAE	METAHEPTALUS	XENOCTENIS	13			
LEPIDOPTERA	HEPIALIOAE	ONCOPERA	ALBOGUTTATA	19			
LEPIDOPTERA	HEPIALIOAE	WISEANA	CERVINATA	9	10	12	19
LEPIDOPTERA	HEPIALIOAE	WISEANA	UMBRACULATA	9	12	19	
LEPIDOPTERA	HESPERIIDAE	EPARGYQEUS	CLARUS	12			
LEPIDOPTERA	HETEROGENEIDAE	PARASA	CONSOCIA	12			
LEPIDOPTERA	LASIOCAHPIOAE	COSMOTRICHE	POTATOR	12			
LEPIDOPTERA	LASIOCAHPIOAE	DENOROLIHUS	PINI	12	16		
LEPIDOPTERA	LASIOCAHPIOAE	OENOROLIMUS	STBIQICUS	9			
LEPIDOPTERA	LASIOCAHPIOAE	OENOROLIMUS	SPECTABILIS	5	12		
LEPIDOPTERA	LASIOCAHPIOAE	OENOROLIMUS	SUPERANS	5			
LEPIDOPTERA	LASIOCAHPIOAE	DENDROLIMUS	UNDANS	5	12		
LEPIDOPTERA	LASIOCAHPIOAE	DENDROLIMUS	UNOANS FLAVEOLA	12			
LEPIDOPTERA	LASIOCAHPIOAE	DENOROLIHUS	YAMADAI	5	12		
LEPIDOPTERA	LASIOCAHPIOAE	ERKOGASTIS	LANESTRIS	5			
LEPIDOPTERA	CASIOCAHPIOAE	GASTROPACHA	QUERCIFOLIA	5			
LEPIDOPTERA	LASIOCAHPIOAE	GASTROPACHA	QUERCIFOLIA CESQIDIFOLXA	5	12		
LEPIDOPTERA	LASIOCAHPIOAE	GONOMETA	PODOCARPI	13			
LEPIDOPTERA	LASIOCAHPIOAE	LASIOCAMPA	QUERCUS	5			
LEPIDOPTERA	LASIOCAHPIOAE	LASTOCAYPA	TRIFOLII	12			
LEPIDOPTERA	LASIOCAHPIOAE	MAGROTHYLACIA	QUBI	12			
LEPIDOPTERA	LASIOCAHPIOAE	HALACOSOMA	ALPICOLA	12			
LEPIDOPTERA	LASIOCAHPIOAE	YALACOSOMA	AMERICANUM	5	12	16	
LEPIDOPTERA	LASIOCAHPIOAE	YALACOSOMA	CALIFORNICUM	12			
LEPIDOPTERA	LASIOCAHPIOAE	HALACOSOMA	CONSTRUCTUH	12			
LEPIDOPTERA	LASIOCAHPIOAE	YALACOSOMA	OISSTRIA	5	12	16	
LEPIDOPTERA	LASIOCAHPIOAE	YALACOSOMA	FSAGILE	12			
LEPIDOPTERA	LASIOCAHPIOAE	YALACOSOMA	LUTESCENS	12			
LEPIDOPTERA	LASIOCAHPIOAE	YALACOSOMA	NEUSTRIA	5	12	16	
LEPIDOPTERA	LASIOCAHPIOAE	YALACOSOMA	NEUSTRIA TESTACEA	5	12	16	
LEPIDOPTERA	LASIOCAHPIOAE	YALACOSOMA	PLUVIALE	12			
LEPIDOPTERA	LIMACODIDAE	NIPHADOLEPIS	ALIANTA	17			
LEPIDOPTERA	LIMACODIDAE	OARNA	TRIMA	9	13		
LEPIDOPTERA	LIMACODIDAE	NAROSA	CONSPEQSA	17			
LEPIDOPTERA	LIMACODIDAE	NATADA	NARARIA	9			
LEPIDOPTERA	LIMACODIDAE	PARAS4	LEPIOA	17			
LEPIDOPTERA	LIMACODIDAE	SPATULIFINBRIA	CASTANEICEPS	17			
LEPIDOPTERA	LIMACODIDAE	THOSEA	JANA	17			
LEPIDOPTERA	LIMACODIDAE	THOSEA	CERVINA	17			
LEPIDOPTERA	LIMACODIDAE	THOSEA	RECTA	17			
LEPIDOPTERA	LYCAENIDAE	LYCAENA	PHLAEAS	5			
LEPIDOPTERA	LYMANTRIIDAE	DASYCHIRA	CUNFUSA	12			
LEPIDOPTERA	LYMANTRIIDAE	DASYCHIRA	MENOOSA	12			
LEPIDOPTERA	LYMANTRIIDAE	DASYCHIRA	PLACIATA	12			
LEPIDOPTERA	LYMANTRIIDAE	DASYCHIRA	PSEUDOGNETIS	12			
LEPIDOPTERA	LYMANTRIIDAE	DASYCHIRA	PUDBUNDA	5	12	16	
LEPIDOPTERA	LYMANTRIIDAE	DASYCHIRA	SELENITICA	16			
LEPIDOPTERA	LYMAYTRIIDAE	EUPROCTIS	CHRYSORRHCEA	5	12	16	
LEPIDOPTERA	LYMANTRIIDAE	EUPROCTIS	FLAVA	12			
LEPIDOPTERA	LYMANTRIIDAE	EUPROCTIS	PSEUDOCONSPEQSA	12			
LEPIDOPTERA	LYMANTRIIDAE	EUPROCTIS	SIMILIS	5	12		
LEPIDOPTERA	LYMANTRIIDAE	EUPROCTIS	SURFLAV4	12			
LEPIDOPTERA	LYMANTRIIDAE	EUPROCTIS	TERMINALIS	16			
LEPIDOPTERA	LYMANTRIIDAE	IVELA	AURIPES	12			
LEPIDOPTERA	LYMANTRIIDAE	LYMANTRIA	FUMIOA FUMIOA	5	12		
LEPIDOPTERA	LYMANTRIIDAE	LYMANTRIA	INCERTA	12			
LEPIDOPTERA	LYMANTRIIDAE	LYMANTRIA	MATHURA AURORA	5	12		
LEPIDOPTERA	LYMANTRIIDAE	LYMANTRIA	MOYACHA	5	12	16	
LEPIDOPTERA	LYMANTRIIDAE	NYGMIA	PHAEORRHOFIA	16			
LEPIDOPTERA	LYMANTRIIDAE	ORGYIA	ANARTOIDES	12			
LEPIDOPTERA	LYMANTRIIDAE	ORGYIA	ANTIQUA	5	12	16	
LEPIDOPTERA	LYMANTRIIDAE	ORGYIA	AUSTRALIS	12			
LEPIDOPTERA	LYMANTRIIDAE	ORGYIA	BADIA	12			
LEPIDOPTERA	LYMANTRIIDAE	ORGYIA	GONOSTIGMA	12			
LEPIDOPTERA	LYMANTRIIDAE	ORGYIA	LEUCOSTIGMA	5	12	16	
LEPIDOPTERA	LYMANTRIIDAE	ORGYIA	PSEUSOTSUGAIA	5	12	16	
LEPIDOPTERA	LYMANTRIIDAE	ORGYIA	TURGATA	12			
LEPIDOPTERA	LYMANTRIIDAE	ORGYIA	VETUSTA	12			
LEPIDOPTERA	LYMANTRIIDAE	PORTHETIA	XANTHOCAMPA	5			
LEPIDOPTERA	LYMANTRIIDAE	PORTHETRIA	OISPAR	5	5	10	12 16

ORDER	FAMILY	GENUS	SPECIES	DISEASES				
LEPIDOPTERA	LYMANTRIIDAE	PORTHETRIA	DISPAR JAPONICA	5	12			
LEPIDOPTERA	LYMANTRIIDAE	PORTHETRIA	DISPAR JAPONICA	12				
LEPIDOPTERA	LYMANTRIIDAE	STILPYOTIA	SALICIS	12	16			
LEPIDOPTERA	LYONETIIDAE	SUCCULATRIK	TYURBESIELLP	12				
LEPIDOPTERA	HEGALOPHVGIOAE	NEGALOPYGE	OPECCULAPIS	9				
LEPIDOPTERA	NOCTUIDAE	ACHAEA	JANATA	9				
LEPIDOPTERA	NOCTUIDAE	ACRONICTA	ACERIS	12				
LEPIDOPTERA	NOCTUIDAE	ACTEBIA	FENNICA	12				
LEPIDOPTERA	NOCTUIDAE	AORIS	TYRANNUS AMURENSIS	5				
LEPIDOPTERA	NOCTUIDAE	AEOIA	LEUCOYELAS	12				
LEPIDOPTERA	NOCTUIDAE	AGROCHOLA	LYCHNIDIS	5				
LEPIDOPTERA	NOCTUIDAE	AGROTIS	IPSILON	12				
LEPIDOPTERA	NOCTUIDAE	AGROTIS	SEGETUM	5	3	12		
LEPIDOPTERA	NOCTUIDAE	ALABAMA	ARGILLACEA	12	16			
LEPIDOPTERA	NOCTUIDAE	ALETIA	OXYGALA LUTEOPALLENS	12				
LEPIDOPTERA	NOCTUIDAE	AMATHES	C-NIGRUM	12				
LEPIDOPTERA	NOCTUIDAE	AMATHES	GLAREOSA	5				
LEPIDOPTERA	NOCTUIDAE	ANAGRAPHA	FALCITERA	12				
LEPIDOPTERA	NOCTUIDAE	ANCHOSCELI	HELVOLA	5				
LEPIDOPTERA	NOCTUIDAE	ANOHIS	FLAVA	12				
LEPIDOPTERA	NOCTUIDAE	ANOMOGYNA	ELIMATA	12				
LEPIDOPTERA	NOCTUIDAE	ANTICARSIP	GEMMATILIS	16				
LEPIDOPTERA	NOCTUIDAE	ANTITYPE	XANTHOMISTA	5				
LEPIDOPTERA	NOCTUIDAE	ARCTE	COEPULEA	5				
LEPIDOPTERA	NOCTUIDAE	AUTOGRAPHA	BILOBA	12	16			
LEPIDOPTERA	NOCTUIDAE	AUTOGRAPHA	CALIFORNICA	5	9	12		
LEPIDOPTERA	NOCTUIDAE	AUTOGRAPHA	GAMMA	5	12			
LEPIDOPTERA	NOCTUIDAE	AUTOGRAPHA	NIGRISIGNA	12				
LEPIDOPTERA	NOCTUIDAE	AUTOGRAPHA	PRECAUTIONIS	12				
LEPIDOPTERA	NOCTUIDAE	BELLURA	GORTYNOIDES	12				
LEPIDOPTERA	NOCTUIDAE	CALOPHASIA	LUNULA	5	12			
LEPIDOPTERA	NOCTUIDAE	CATABENA	ESULA	12	16			
LEPIDOPTERA	NOCTUIDAE	CATOCALA	CONJUNCTA	12				
LEPIDOPTERA	NOCTUIDAE	CATOCALA	NYMPHAEA	12				
LEPIDOPTERA	NOCTUIDAE	CATOCALA	NYMPHAGOGA	12				
LEPIDOPTERA	NOCTUIDAE	CEQAHICA	PICTA	5	12			
LEPIDOPTERA	NOCTUIDAE	CHRYSODEIXIS	CHALCITES	12				
LEPIDOPTERA	NOCTUIDAE	DIATARAXIA	OLERACEA	5	3			
LEPIDOPTERA	NOCTUIDAE	DICYCLA	OO	12				
LEPIDOPTERA	NOCTUIDAE	DIPAROPSIS	WATERSI	12				
LEPIDOPTERA	NOCTUIDAE	DRYOBOTA	FUSVA	9	12			
LEPIDOPTERA	NOCTUIDAE	DRYOBOTA	PROTEA	12				
LEPIDOPTERA	NOCTUIDAE	DRYOBOTODES	MONOCHROMA	12				
LEPIDOPTERA	NOCTUIDAE	EUPLEYIA	LUCTPARA	9				
LEPIDOPTERA	NOCTUIDAE	EUPSILIS	SATELIITA	9				
LEPIDOPTERA	NOCTUIDAE	EUXOA	AUXILIARIS	9	12	13	16	19
LEPIDOPTERA	NOCTUIDAE	EUXOA	MESSORIA	5	12			
LEPIDOPTERA	NOCTUIDAE	EUXOA	OCHROGASTER	5	3	12	16	
LEPIDOPTERA	NOCTUIDAE	FELTIA	SUBTERRANEA	9				
LEPIDOPTERA	NOCTUIDAE	HADA	NANA	5				
LEPIDOPTERA	NOCTUIDAE	HADENA	BASILINEA	9				
LEPIDOPTERA	NOCTUIDAE	HADENA	SERENA	5				
LEPIDOPTERA	NOCTUIDAE	HADENA	SOROTIA	9	12			
LEPIDOPTERA	NOCTUIDAE	YELIOPHOBUS	ALBICOLON	5				
LEPIDOPTERA	NOCTUIDAE	HELIOTHIS	ARMIGERA	5	3	12		
LEPIDOPTERA	NOCTUIDAE	HELIOTHIS	ASSULTA	12				
LEPIDOPTERA	NOCTUIDAE	HELIOTHIS	OGSOLETA	12				
LEPIDOPTERA	NOCTUIDAE	HELIOTHIS	ORTECTUS	12				
LEPIDOPTERA	NOCTUIDAE	HELIOTHIS	PALTIGERA	12				
LEPIDOPTERA	NOCTUIDAE	HELIOTHIS	PHLOXIPHAGA	12	16			
LEPIDOPTERA	NOCTUIDAE	HELIOTHIS	PUNCTIGERA	9	12			
LEPIDOPTERA	NOCTUIDAE	HELIOTHIS	RUBESCENS	9				
LEPIDOPTERA	NOCTUIDAE	HELIOTHIS	SUBFLEXA	12				
LEPIDOPTERA	NOCTUIDAE	HELIOTHIS	VIRESCENS	5	12	16		
LEPIDOPTERA	NOCTUIDAE	HELIOTHIS	ZEA	5	9	12	13	
LEPIDOPTERA	NOCTUIDAE	LAMPRA	FIMBRIATA	5				
LEPIDOPTERA	NOCTUIDAE	LITHOPHANE	LEAUTIERI	5				
LEPIDOPTERA	NOCTUIDAE	MAESTRA	BRASSICAE	5	6	12		
LEPIDOPTERA	NOCTUIDAE	MAESTRA	CONFIGURAXA	12				
LEPIDOPTERA	NOCTUIDAE	MANIA	MAURA	5				
LEPIDOPTERA	NOCTUIDAE	MELANCHRA	PERSICARIAE	9				
LEPIDOPTERA	NOCTUIDAE	MOCTIS	UNOATA	5				
LEPIDOPTERA	NOCTUIDAE	MOMA	CHAMPA	12				
LEPIDOPTERA	NOCTUIDAE	NEPHELODFS	EMMEDONTA	9	12	16		
LEPIDOPTERA	NOCTUIDAE	OPHIUSA	CORONATA	17				
LEPIDOPTERA	NOCTUIDAE	ORAESIA	EMARGINATA	5	12			
LEPIDOPTERA	NOCTUIDAE	ORAESIA	EXCAVATA	5				
LEPIDOPTERA	NOCTUIDAE	PANOLIS	FLAMMEA	12	16			
LEPIDOPTERA	NOCTUIDAE	PANTHEA	PORTLANDIA	12				
LEPIDOPTERA	NOCTUIDAE	PAFAPOMA	PURPURIASGIA	9				

ORDER	FAMILY	GENUS	SPECIES	DISEASES					
LEPIDOPTERA	NOCTUIDAE	PERIDROMA	SAUCIA	9	12	16			
LEPIDOPTERA	NOCTUIDAE	PERSECTANIA	EYLYGII	9					
LEPIDOPTERA	NOCTUIDAE	PHLOGOPHURA	METICULOSA	5	12				
LEPIDOPTERA	NOCTUIDAE	PLATHYPENA	SCABRA	9					
LEPIDOPTERA	NOCTUIDAE	PLUSIA	ARGENTIFERA	12					
LEPIDOPTERA	NOCTUIDAE	PLUSIA	ORICUALCEA	12					
LEPIDOPTERA	NOCTUIDAE	PODIOPLUSTA	PEPONIS	12					
LEPIDOPTERA	NOCTUIDAE	PROENIA	AYOQOGEEA	9					
LEPIDOPTERA	NOCTUIDAE	PRODENIA	LITOSIA	12					
LEPIDOPTERA	NOCTUIDAE	PRODENIA	OQNITHOGALLI	12	16				
LEPIDOPTERA	NOCTUIDAE	PRODENIA	PAEFICA	12					
LEPIDOPTERA	NOCTUIDAE	PRODENIA	TERRICOLA	12					
LEPIDOPTERA	NOCTUIDAE	PSEUDALETIA	CONVECTA	9	12				
LEPIDOPTERA	NOCTUIDAE	PSEUDALETIA	SEPARATA	9	12	13			
LEPIDOPTERA	NOCTUIDAE	PSEUDALETIA	UNIPUNCTA	5	9	10	12	13	16
LEPIDOPTERA	NOCTUIDAE	PSEUDOPUSIA	INCLUDENS	12					
LEPIDOPTERA	NOCTUIDAE	RACHIPUSIA	YU	12	16				
LEPIDOPTERA	NOCTUIDAE	QACHIPUSIA	OU	12					
LEPIDOPTERA	NOCTUIDAE	SCOLIPTERYX	LIBATRIX	5	12				
LEPIDOPTERA	NOCTUIDAE	SESAHIA	CRETICA	9					
LEPIDOPTERA	NOCTUIDAE	SESAHIA	NONAGRIOIDES	9					
LEPIDOPTERA	NOCTUIDAE	SPAELOTIS	CLAYQUEST	16					
LEPIDOPTERA	NOCTUIDAE	SPOOPTERA	EXEMPTA	12	17				
LEPIDOPTERA	NOCTUIDAE	SPOOPTERA	EXIGUA	5	9	12			
LEPIDOPTERA	NOCTUIDAE	SPOOPTERA	FRUGIPERDA	9	12	16			
LEPIDOPTERA	NOCTUIDAE	SPOOPTERA	LITTORALIS	5	3	12	16		
LEPIDOPTERA	NOCTUIDAE	SPOOPTERA	MAURITIA	12	16				
LEPIDOPTERA	NOCTUIDAE	SPOOPTERA	MAURITIA ACRONYCTOIDES	12					
LEPIDOPTERA	NOCTUIDAE	SYNOGRAPHIA	SELECTA	12					
LEPIDOPTERA	NOCTUIDAE	TRICHOPLUSIA	NI	5	9	10	12		
LEPIDOPTERA	NOCTUIDAE	TRIPHAENA	POGONUBA	5					
LEPIDOPTERA	NOCTUIDAE	XYLOMYGES	CONSPICILLARIS	5					
LEPIDOPTERA	NOTOONTOIDAE	CERURA	HERMELINA	12	16				
LEPIDOPTERA	NOTOONTOIDAE	CEQUOA	VINULA	5					
LEPIDOPTERA	NOTODONTIDAE	YETEROCAMPA	GUTTIVITA	16					
LEPIDOPTERA	NOTODONTIDAE	LOPHOPTERYX	CAPUCINA	5					
LEPIDOPTERA	NOTODONTIDAE	NADATA	GIBBOSA	12					
LEPIDOPTERA	NOTOONTOIDAE	PHALERA	BUCEPHALA	5	12				
LEPIDOPTERA	NOTODONTIDAE	PYGAERA	ANASTOYOSLS	5	3	12	17		
LEPIDOPTERA	NOTODONTIDAE	PYGAERA	AYASTOMOSIS ORIENTALIS	5	12				
LEPIDOPTERA	NOTODONTIDAE	PYGAERA	ANASTOMOSIS TRISTIS	5	12				
LEPIDOPTERA	NOTODONTIDAE	SCHIZURA	CONCINNA	5					
LEPIDOPTERA	NOTOONTOIDAE	STAUROPUS	ALTERNUS	16					
LEPIDOPTERA	NYMPHALIDAE	AGLAIS	URTICAE	5	5	12	16		
LEPIDOPTERA	NYMPHALIDAE	AGRAULIS	UAYILLAE	12					
LEPIDOPTERA	NYMPHALIDAE	ARGYNNIS	OTIA	5					
LEPIDOPTERA	NYMPHALIDAE	ARGYNNIS	LATHONIA	16					
LEPIDOPTERA	NYMPHALIDAE	ARGYNNIS	PAPHIA	12	15				
LEPIDOPTERA	NYMPHALIDAE	ASTEROCAMPA	CELTIS	12					
LEPIDOPTERA	NYMPHALIDAE	CHARAXES	JASIUS	16					
LEPIDOPTERA	NYMPHALIDAE	JUNONIA	COENIA	6	9	12	16		
LEPIDOPTERA	NYMPHALIDAE	NYMPHALIS	ANTTOPA	5	9	12	16		
LEPIDOPTERA	NYMPHALIDAE	NYMPHALIS	IC	5	12	16			
LEPIDOPTERA	NYMPHALIDAE	NYMPHALIS	POLYCHLOROS	16					
LEPIDOPTERA	NYMPHALIDAE	POLYGONIA	C-ALBUY	5	12				
LEPIDOPTERA	NYMPHALIDAE	POLYGONIA	SATYRUS	12					
LEPIDOPTERA	NYMPHALIDAE	VANESSA	ATALANTA	12	16				
LEPIDOPTERA	NYMPHALIDAE	VANESSA	CARDUI	5	12	16			
LEPIDOPTERA	NYMPHALIDAE	VANESSA	TAMMEAMEA	16					
LEPIDOPTERA	OECUPHOSIDAE	DIURNEA	FAGELLA	16					
LEPIDOPTERA	OLETHREUTIDAE	ARGYROPOUCE	LEUCOTRETA	5					
LEPIDOPTERA	OLETHREUTIDAE	EXARTEMA	APPENDICEUM	9					
LEPIDOPTERA	OLETHREUTIDAE	LASPEYRESIA	POMONELLA	9	15				
LEPIDOPTERA	OLETHREUTIDAE	RHYACIDONIA	DUPLANA	9	12				
LEPIDOPTERA	OLETHREUTIDAE	SPILONOTA	UCCELLANA	12					
LEPIDOPTERA	OLETHREUTIDAE	ZEIRAPHERA	DINIANA	9	12	16	19		
LEPIDOPTERA	PAMPHILIDAE	CEPHALCIA	FASCTPEYNIS	9					
LEPIDOPTERA	PAPILIONIDAE	LUEHDORFIA	JAPONICA	12					
LEPIDOPTERA	PAPILIONIDAE	PAPILIO	YACHAON	5					
LEPIDOPTERA	PAPILIONIDAE	PAPILIO	PODALIRIUS	17					
LEPIDOPTERA	PHALONIDAE	CLYSIANA	AMRIGUELLA	16					
LEPIDOPTERA	PHYCITIDAE	ANAGASTA	KUHNIELLA	12					
LEPIDOPTERA	PHYCITIDAE	CACTOBLASTIS	CACTOPUM	5					
LEPIDOPTERA	PIERIDAE	APORIA	CRATAEGT	5	12	16			
LEPIDOPTERA	PIERIDAE	COLIAS	CHRYSOTHEME CHRYSOTHEME	16					
LEPIDOPTERA	PIERIDAE	SOLIAS	ELECTO	12	15				
LEPIDOPTERA	PIERIDAE	COLIAS	EURYTHEME	5	12				
LEPIDOPTERA	PIERIDAE	COLIAS	LESBIA	12					
LEPIDOPTERA	PIERIDAE	COLIAS	PHILOICE	12	16				
LEPIDOPTERA	PIERIDAE	EUCHLOE	CARDANTINES	5					

ORJER	FAMILY	GENUS	SPECIES	DTSEASES
LEPIDOPTERA	PIESIOAE	GONEPTERYX	RHAHNI	5
LEPIDOPTERA	PIERIDAE	PIERIS	BQASSTCAE	5 3 10
LEPIDOPTERA	PIERIDAE	PIERIS	BRASSICAE CHEIRANTHI	9
LEPIDOPTERA	PIEQIOAE	PIERIS	NAPI	9
LEPIDOPTERA	PSEQIOAE	PIERIS	QAPAE	5 9 12 16
LEPIDOPTERA	PIEQIDAC	PIERIS	RAPAE CRUCIVORA	5 3 12
LEPIDOPTERA	PSVCHIOAE	CANEPYORA	ASIATICA	12
LEPIDOPTERA	PSVCHIOAE	CRYPTOTHELEA	JUNODI	12
LEPIDOPTERA	PSVCHIOAE	NAHASENA	NINUSCULA	12
LEPIDOPTERA	PSYCHIDAE	OKETYCUS	KIRBYI	5
LEPIDOPTERA	PSYCHIDAE	OQIOPSYCHE	ANGUSTELLA	19
LEPIDOPTERA	PSYCHIDAE	THYRIOPTERYX	EPHEMERAIFORMIS	17
LEPIDOPTERA	PYRALIOAE	ACROBASIS	ZELLEQI	19
LEPIDOPTERA	PVRALIOAE	CADRA	CAUTELLA	5 9 12
LEPIDOPTERA	PYRALIDAE	CADRA	FIGULILELLA	9
LEPIDOPTERA	PYRALIDAE	CHILO	SUPPRESSALIS	9 10 12
LEPIDOPTERA	PYRALIDAE	CNAPHALOCROCIS	MEDINALIS	9
LEPIDOPTERA	PYRALIOAE	CRYPTOBLABES	LARICIANA	12
LEPIDOPTERA	PYRALIDAE	OICHOCIOCTS	PUNCTIFEQUALIS	12
LEPIDOPTERA	PYRALIDAE	OTORYCTRIA	ABIETELLA	9
LEPIDOPTERA	PYRALIOAE	OTORYCTRIA	SPLENOTELLA	17
LEPIDOPTERA	PYRALIOAE	EPHESTIA	ELUTELLA	9 12
LEPIDOPTERA	PIRALIDAE	NACOLEIA	OIEMENALIS	9
LEPIDOPTERA	PIRALIOAE	NACOLEIA	OCTOSEMA	12
LEPIDOPTERA	PYRALIOAE	OSTRINIA	NURTALIS	17
LEPIDOPTERA	PVRALIDAE	PARAMYLOIS	TRANSITELLA	12
LEPIDOPTERA	PIRALIDAE	PLODIA	INTERPUNCTELLA	9 12
LEPIDOPTERA	PIRALIOAE	YITLESIA	SAQULOSELLA	10
LEPIDOPTERA	PYRAUSTIDAE	BLEPHAROMASTIX	ACUTANGULALIS	16
LEPIDOPTERA	PYRAUSTIDAE	OHIOOES	BLACKBURNI	17
LEPIDOPTERA	SATURNIIDAE	ACTIAS	LUNA	5
LEPIDOPTERA	SATURNIIDAE	ACTIAS	SELENE	5 13
LEPIDOPTERA	SATURNIIDAE	ANISOTA	SENATORIA	16
LEPIDOPTERA	SATURNIOAE	ANTHESAEA	EUCALYPTI	5 10 13 17
LEPIDOPTERA	SATURNIIDAE	ANTHERAEA	HELENA	13
LEPIDOPTERA	SATURNIOAE	ANTHERAEA	PAPHIA MYLITTA	5 12
LEPIDOPTERA	SATURNIOAE	ANTHERAEA	PERNYT	5 12 13 16
LEPIDOPTERA	SATURNIIDAE	ANTHERAEA	POLYPHEMUS	5 12 16
LEPIDOPTERA	SATURNIIDAE	AYTHERAEA	YAMAMAI	12 16
LEPIDOPTERA	SATURNIOAE	AUTOMERIS	AURANTIACA	5
LEPIDOPTERA	SATURNIOAE	AUTOMERIS	MEMUSAE	5
LEPIDOPTERA	SATURNIOAE	COLORADIA	PANDOSA	12 16
LEPIDOPTERA	SATURNIIDAE	DICTYOPLACA	JAPONICA	5 12
LEPIDOPTERA	SATURNIIDAE	HEMILEUCA	MAIA	16
LEPIDOPTERA	SATURNIIDAE	HEMILEUCA	OLIVIAE	16
LEPIDOPTERA	SATURNIIDAE	HEMILEUCA	TRICOLOR	12 16
LEPIDOPTERA	SATURNIIDAE	HYALOPHORA	CECROPIA	5 12 13
LEPIDOPTERA	SATURNIIDAE	HYLESIA	NIGRICANS	12
LEPIDOPTERA	SATURNIIDAE	NUDAURELIA	CYTHAREA CLARKI	13
LEPIDOPTERA	SATURNIOAE	NUDAURELIA	CYTHAREA CYTHAREA	13 16
LEPIDOPTERA	SATURNIIDAE	PSEUDOPUNAEEA	IRIUS	17
LEPIDOPTERA	SATURNIIDAE	PSEUDOPHAZIS	EGLANTERINA	16
LEPIDOPTERA	SATURNIIDAE	SANIA	CYNTHIA	5 12 13 16
LEPIDOPTERA	SATURNIIDAE	SAMIA	PRYERI	5 12
LEPIDOPTERA	SATURNIIDAE	SAMIA	RICINI	5 12 13 16
LEPIDOPTERA	SATURNIIDAE	SATURNIA	PTQI	5 12 16
LEPIDOPTERA	SATYRIDAE	OIRA	MEGERA	5
LEPIDOPTERA	SATYRIDAE	PARARGE	AEGERIA	5
LEPIDOPTERA	SPHINGIDAE	CELERIO	EUPHORBIAE	5 12 16
LEPIDOPTERA	SPHINGIDAE	CELERIO	GALII	12 16
LEPIDOPTERA	SPHINGIDAE	CELEQIO	HARMUTHI	16
LEPIDOPTERA	SPHINGIDAE	CELERIO	KINOERVA? ERI	16
LEPIDOPTERA	SPHINGIDAE	CELERIO	PHILEUPHORBIAE	16
LEPIDOPTERA	SPHINGIDAE	CELERIO	VESPERTILKO	16
LEPIDOPTERA	SPHINGIDAE	OEILECHILA	ELPENOR	5 12 16
LEPIDOPTERA	SPHINGIDAE	ILINA	ILIAE	5
LEPIDOPTERA	SPHINGIDAE	HERSE	CONVOLVULI	5
LEPIDOPTERA	SPHINGIDAE	LAOTHOE	POPULT	5 12
LEPIDOPTERA	SPHINGIDAE	HANDUCA	QUINQUEMACULATA	9
LEPIDOPTERA	SPHINGIDAE	HANDUCA	SEXTA	9 12
LEPIDOPTERA	SPHINGIDAE	PACHYSPHINX	MODESTA	5
LEPIDOPTERA	SPHINGIDAE	PROSERPINUS	PROSERPINA	16
LEPIDOPTERA	SPHINGIDAE	PSILOSAHNA	MENEPHRON	9
LEPIDOPTERA	SPHINGIDAE	SMERINTHUS	OCELLAXA	5 12 16
LEPIDOPTERA	SPHINGIDAE	SMERINTHUS	OCELLATA ATLANTICUS	12 16
LEPIDOPTERA	SPHINGIDAE	SPHINX	LIGUSTRI	5 12
LEPIDOPTERA	SPHINGIDAE	SPHINX	PINASTRI	5 12
LEPIDOPTERA	SPHINGIDAE	THERETRA	JAPONICA	12
LEPIDOPTERA	TENTHREDINIDAE	PIKONEMA	DIMYOCKII	12
LEPIDOPTERA	THAUMETOPOEIDAE	THAUMETOPOEA	PITYOCAWPA	5 9 12

ORJEQ	FAMILY	GENUS	SPECIES	DISEASES			
LEPIDOPTERA	THAUMETOPOEIDAE	THAUMETOPOEA	PROCESSIONEA	5	12		
LEPIDOPTERA	THAUMETOPOEIDAE	THAUMETOPOEA	WILKINSONI	5	12		
LEPIDOPTERA	TINEIDAE	TINEA	COLUMBARIELLA	16			
LEPIDOPTERA	TINEIDAE	TINEA	PELLIONELLA	5	12		
LEPIDOPTERA	TINEIDAE	TINEOLA	BISSELLIELLA	5	12	15	
LEPIDOPTERA	TORTRICIDAE	ACLERIS	GLOVEPANA	12			
LEPIDOPTERA	TORTRICIDAE	ACLERIS	VARIANA	12			
LEPIDOPTERA	TORTRICIDAE	ADOXOPHYES	FASCIATA	5	3		
LEPIDOPTERA	TORTRICIDAE	ADOXOPHYES	ORANA	9			
LEPIDOPTERA	TORTRICIDAE	ADOXOPHYES	RETICULANA	5	12		
LEPIDOPTERA	TORTRICIDAE	AMELIA	PALLORANA	9			
LEPIDOPTERA	TORTRICIDAE	ARCHIPPUS	ISSHIKII	19			
LEPIDOPTERA	TORTRICIDAE	ARCHIPS	AQGYROSPILUS	9			
LEPIDOPTERA	TORTRICIDAE	ARCHIPS	CERASIVORANUS	12			
LEPIDOPTERA	TORTRICIDAE	ARCHIPS	LONGICELLANA	9			
LEPIDOPTERA	TORTRICIDAE	ARGYROTAENIA	VELUTINANA	9			
LEPIDOPTERA	TORTRICIDAE	CACOEZIA	MURINANA	9	12	16	
LEPIDOPTERA	TORTRICIDAE	CHORISTONEURA	BIENNIS	19			
LEPIDOPTERA	TORTRICIDAE	CHORISTONEURA	CONFLICTANA	19			
LEPIDOPTERA	TORTRICIDAE	CHORISTONEURA	DIVERSANA	19			
LEPIDOPTERA	TORTRICIDAE	CHORISTONEURA	FUHRERANA	5	9	12	19
LEPIDOPTERA	TORTRICIDAE	CHORISTONEURA	OCCIDENTALIS	12			
LEPIDOPTERA	TORTRICIDAE	CHORISTONEURA	PTINUS	12			
LEPIDOPTERA	TORTRICIDAE	CHORISTONEURA	ROSACEANA	12			
LEPIDOPTERA	TORTRICIDAE	EPIPHYAS	POSTVITTANA	12			
LEPIDOPTERA	TORTRICIDAE	HOMONA	COFFEARIA	16			
LEPIDOPTERA	TORTRICIDAE	HOMONA	MAGNANIMA	5	12		
LEPIDOPTERA	TORTRICIDAE	LATHRONYMPHA	PHASEOLI	9			
LEPIDOPTERA	TORTRICIDAE	NEROPHYAS	OIVULSANA	12			
LEPIDOPTERA	TORTRICIDAE	PANDEMIS	LAMPROSANA	12			
LEPIDOPTERA	TORTRICIDAE	PTYCHOLOMOIDES	AERIFERANA	12			
LEPIDOPTERA	TORTRICIDAE	SPAQGNOTHIS	PETTITANA	12			
LEPIDOPTERA	TORTRICIDAE	TORTRIX	LOEFLINGIANA	12	16		
LEPIDOPTERA	TORTRICIDAE	TORTRIX	VIRIDANA	5	12	16	
LEPIDOPTERA	YPONOMEUTIDAE	ARGYRESTHIA	CUPRESSELLA	9			
LEPIDOPTERA	YPONOMEUTIDAE	PLUTELLA	XYLOSTECLA	9	12		
LEPIDOPTERA	YPONOMEUTIDAE	PRAYS	OLEELLUS	16			
LEPIDOPTERA	ZYGAEINIDAE	AGLOPE	INFUSTA	5			
LEPIDOPTERA	ZYGAEINIDAE	HARPIDISNA	BRILLIANS	9			
NEUROPTERA	CHRYSOPTERIDAE	CHRYSOPTER	PEOLA	5	12		
NEUROPTERA	HEMEROPTERIDAE	HEMEROPTER	STIGMA	5	12		
NEUROPTERA	MYRMELEONTIDAE	HAGENOMYIA	MIGANS	16			
ORTHOPTERA	ACRIDIDAE	AHHH MORNUS	COLORADUS	4			
ORTHOPTERA	ACRIDIDAE	AULOCARA	ELL MTTI	4			
ORTHOPTERA	AGRIOTIDAE	LOCUSTA	MIGRATORIA	17			
ORTHOPTERA	ACRIDIDAE	MELANOPLUS	STVITTARUS	4	12		
ORTHOPTERA	ACRIDIDAE	MELANOPLUS	OAWSONI	4			
ORTHOPTERA	ACRIDIDAE	MELANOPLUS	DIFFERENTIALIS	4	12		
ORTHOPTERA	ACRIDIDAE	MELANOPLUS	FEMURRUBRUM	4			
ORTHOPTERA	ACRIDIDAE	HELANOPLUS	SANGUINI PES	4	12	19	
ORTHOPTERA	ACRIDIDAE	SCHISTOCERCA	AYE?ICANA	4	12		
ORTHOPTERA	ACRIDIDAE	SCHISTOCERCA	VAGA	4			
ORTHOPTERA	GRYLLIDAE	ACHETA	OOHESTICUS	17			
ORTHOPTERA	GRYLLIDAE	GRYLLUS	BIMACULATUS	15			
ORTHOPTERA	GRYLLIDAE	TELEOGYPHUS	COMMODOUS	13			
ORTHOPTERA	GRYLLIDAE	TELEOGYPHUS	OCEANICUS	13			
TRICHOPTERA	LIMNephilidae	NEOPHYLAX	SP.	12			

APPENDIX 2

Alphabetical List of Hosts by Specific Names

ORDER	FAMILY	GENUS	SPECIES	DISEASES
LEPIDOPTERA	PIRALIDAE	DIORYCTRIA	AGROTIS	9
HIMENOPTERA	PAMPHILIDAE	CEPHALCIA	ABETIS	16
HIMENOPTERA	DIPRIONIDAE	NEODIPRION	ASITIS	12 16
LEPIDOPTERA	NOCTUIDAE	ACRONICTA	ACERIS	12
LEPIDOPTERA	ARCTIIDAE	ESTIGNE	ACREA	5 9 12 16 19
LEPIDOPTERA	PYRAUSTIDAE	BLEPHAROMASTIX	ACUTANGULALIS	16
ISOPTERA	TERMOPTIDAE	POROTERMES	ADARSON	17
LEPIDOPTERA	SATIRIDAE	PARARGE	AEGERIA	5
DIPTERA	CULICIDAE	AEDES	AEGYPT	5 10 12 17
LEPIDOPTERA	TORTRICIDAE	PTYCHOLOHODES	AERIFEPANA	12
OIPTERA	OROSOPHLLIDAE	DROSOPHILA	AFFINIS	3
HIMENOPTERA	BOMBIDAE	BOMBUS	AGRORUM	1
LEPIDOPTERA	NOCTUIDAE	HELIOPHOBUS	ALBICOLON	5
OIPTERA	CULICIDAE	ANOPHELES	ALBTMANUS	10 19
LEPIDOPTERA	ARCTIIDAE	AMACTA	ALBTSTRIGA	12
LEPIDOPTERA	HEPIALIDAE	ONCOPEA	ALBOGUTTATA	19
COLEOPTERA	SCARABAEIDAE	DERMOPHLOA	ALBOHIRTUM	19
LEPIDOPTERA	LIMACODIDAE	PHADOLEPIS	ALIANITA	11
LEPIDOPTERA	LASIOCAHPIDAE	MALACOSOMA	ALPICOLA	12
HIMENOPTERA	PAMPHILIDAE	CEPHALCIA	ALPINA	16
LEPIDOPTERA	NOTOONTIDAE	STAUROPUS	ALTERNUS	16
LEPIDOPTERA	ARCTIIDAE	DIONYCHOPUS	AYASIS	9 13
LEPIDOPTERA	PHALONIIDAE	CLYSTAYA	AMBIGUELLA	16
OQTHOPTERA	ACRIDIDAE	SCHISTOCERCA	AMERICANA	4 12
LEPIDOPTERA	LASIOCAHPIDAE	MALACOSOMA	AHEICANUM	5 12 16
LEPIDOPTERA	ANTHELIDAE	OTEROLOCERA	AMPLICOPNIS	12
OIPTERA	DROSOPHTLIDAE	DROSOPHILA	ANANASSAE	13
LEPIDOPTERA	LYMANTRIIDAE	ORGIA	ANARTIDES	12
LEPIDOPTERA	NOTOONTIDAE	PYGAEA	ANASTOMOSIS	5 3 12 17
LEPIDOPTERA	NOTOONTIDAE	PIGAEA	ANASTOMOSIS ORIENTALIS	5 12
LEPIDOPTERA	NOTOONTIDAE	PYGAEA	ANASTOMOSIS TQISTIS	5 12
LEPIDOPTERA	NOCTUIDAE	PRODENIA	ANDROSEA	9
OIPTERA	SCIARIDAE	RHYNCHOSCIARA	ANGELAE	12 1t
LEPIDOPTERA	PSYCHIDAE	ORIOPSYCHE	ANGUSTELLA	19
OIPTERA	CULICIDAE	AEDES	ANNULIPES	10
LEPIDOPTERA	NYMPHALIDAE	NYMPHALIS	ANTIOPA	5 9 12 16
LEPIDOPTERA	LVHANTRIIDAE	ORGIA	ANTIOUA	5 12 16
LEPIDOPTERA	OLETHQUEUTIDAE	EXARTEHA	APPENDICEUM	9
DIPTERA	CHAORIDAE	CORETHRELLA	APPENDICULATA	10
SOLEOPTERA	SCARABAEIDAE	HETERONYCHUS	ARATO?	13
LEPIDOPTERA	ARCTIIDAE	HALISTOOTA	ARGENTATA	12
LEPIDOPTERA	NOCTUIDAE	PLUSIA	ARGENTIFERA	12
LEPIDOPTERA	NOCTUIDAE	ALABAMA	ARGILLACEA	12 16
LEPIDOPTERA	TORTRICIDAE	ARCHIPS	ARGYROSPILUS	9
LEPIDOPTERA	NOCTUIDAE	HELIOTHIS	ARMIGERA	5 3 12
LEPIDOPTERA	PSYCHIDAE	CANEPHORA	ASIATICA	12
LEPIDOPTERA	NOCTUIDAE	HELIOTHIS	ASSULTA	12
LEPIDOPTERA	NYMPHALIDAE	VINESSA	ATALANTA	12 16
DIPTERA	CHIRONOMIDAE	CHIRONOMUS	ATTENUATUS	19
LEPIDOPTERA	SATURNIIDAE	AUTCMEPIS	AUQUANTIACA	5
LEPIDOPTERA	LYMANTRIIDAE	IVELA	AURIPES	12
LEPIDOPTERA	LYMANTRIIDAE	ORGIA	AUSTYALIS	12
COLEOPTERA	SCARABAEIDAE	SCAPANES	AUSTALIS GROSSEPUNCTATUS	11
LEPIDOPTERA	GEOMETRIDAE	OPORINIA	AUTUHNATA	5 12
LEPIDOPTERA	NOCTUIDAE	EUXOA	AUXILIARIS	9 12 13 16 19
LEPIDOPTERA	LYMANTRIIDAE	ORGIA	BANIA	12
LEPIDOPTERA	NOCTUIDAE	HADENA	BASTLINEA	9
COLEOPTERA	SCARABAEIDAE	OTHNONIUS	BATESI	19
LEPIDOPTERA	GEOMETRIDAE	PERO	BEHRENSARUS	12
LEPIDOPTERA	GEOMETRIDAE	BISTON	BETULARIA	5
LEPIDOPTERA	TORTRICIDAE	CHORISTONEURA	BIENNIS	19
OIPTERA	OROSOPHLLIDAE	DROSOPHILA	BIFASCIATA	17
LEPIDOPTERA	NOCTUIDAE	AUTOGRAPHA	BILORA	12 16
ORTHOPTERA	GRYLLIDAE	GRYLLUS	BINACULATUS	15
LEPIDOPTERA	TINEIDAE	TINEOLA	BISSELLIELLA	5 12 16
ORTHOPTERA	ACRIDIDAE	MELANOPUS	BIVITTATUS	4 12
LEPIDOPTERA	PYRAUSTIDAE	OMIOUES	BLACKBURNI	17
COLEOPTERA	SCARABAEIDAE	ORYCTES	BOAS	20
COLEOPTERA	SCARABAEIDAE	HEMONEA	BORANENSIS	19
DIPTERA	CHAORIDAE	CORETHRELLA	BRACELEYI	10
LEPIDOPTERA	NOCTUIDAE	MAMESTRA	BRASSICAE	5 6 12
LEPIDOPTERA	PIERIDAE	PIERIS	BRASSICAE	5 9 10
LEPIDOPTERA	PIERIDAE	PIERIS	BRASSICAE CHETQANTYI	9
LEPIDOPTERA	ZYGAEIDAE	HARRISTINA	BRILLIANS	9
LEPIDOPTERA	GEOMETRIDAE	OPEROPHTERA	BRUCEATA	5 12
LEPIDOPTERA	GEOMETRIDAE	OPEROPHTERA	BRUMATA	5 12 16 17 19
LEPIDOPTERA	NOTOONTIDAE	PHALERA	BUCEPHALA	5 12
LEPIDOPTERA	NYMPHALIDAE	POLYGONIA	C-ALBUM	5 12
LEPIDOPTERA	NOCTUIDAE	AYATHES	C-NIGRUM	12
LEPIDOPTERA	GEOMETRIDAE	SABULODES	CABERATA	9 16

OROER	FAMILY	GENUS	SPECIES	DISEASES			
LEPIDOPTERA	PHYCITIDAE	CACTOBLASTIS	CACTOQUH	5			
LEPIDOPTERA	ARCTIIDAE	ARCTIA	CAJA	5	12	16	
LEPIDOPTERA	NOCTUIDAE	AUTOGIAPHA	CALIFORNICA	5	9	12	
LEPIDOPTERA	DIOPTIDAE	PHRYGANIDIA	CALIFORNICA	12			
LEPIDOPTERA	LASIDCAHPIDAE	MRLACOSOMA	CALIFORNICUM	12			
LEPIDOPTERA	LIMACODIDAE	THOSEA	CANA	17			
LEPIDOPTERA	GEOMETRIDAE	NEPYTIA	CANOSASIA	16			
DIPTERA	CULICIDAE	AEDES	CANTANS	10			
DIPTERA	TEPHRITIDAE	GERATITIS	CAPITATA	3			
LEPIDOPTERA	NOTODONTIDAE	LOFHOPTERYX	CAPUCINA	5			
LEPIDOPTERA	PIERIDAE	EUCHLOE	CARDAMINES	5			
LEPIDOPTERA	NYMPHALIDAE	ANESSA	CARDUI	5	12	16	
LEPIDOPTERA	ARCTIIDAE	HALISIDOTA	CARYAE	12			
LEPIDOPTERA	LIHACODIDAE	SPATULIFIMBR	CASTAYEICEPS	17			
LEPIDOPTERA	PYRALIDAE	CADRA	CAUTELLA	5	9	12	
LEPIDOPTERA	SATURNIIDAE	HYALOPHOSA	CECROPIA	5	12	13	
LEPIDOPTERA	NYMPHALIDAE	ASTEROCAMPA	CELTIS	12			
LEPIDOPTERA	GALCERIIDAE	CORCYA	CEPHALONICA	12			
LEPIDOPTERA	TORTRICIDAE	ARCHIPS	CERASIVORANUS	12			
LEPIDOPTERA	LIHACODIDAE	THDSEA	CERVINA	17			
LEPIDOPTERA	HEPIALIDAE	YISEANA	CERVINATA	9	10	12	19
LEPIDOPTERA	NOCTUIDAE	CHRYSOEIXIS	CHALCITES	12			
LEPIDOPTERA	NOCTUIDAE	MONA	CHAYPA	12			
LEPIDOPTERA	LYMANTRIIDAE	EUPPOCTIS	CHRYSORHODEA	5	12	16	
LEPIDOPTERA	PIERIDAE	COLIAS	CHRYSOHEME CHRYSOHEME	16			
HEMIPTERA	CICADELLIDAE	NEPHOTETIX	CINCTICEPS	10			
ACARINA	TETRANYCHIDAE	TETRANYCHUS	CINNABARINUS	13	17		
ACARINA	TETRANYCHIDAE	PANONYCHUS	CITRI	13	17		
LEPIDOPTERA	NOCTUIDAE	SPAELOTIS	CLANDESTINA	16			
LEPIDOPTERA	HESPERIIDAE	EPARGYREUS	CLARUS	12			
LEPIDOPTERA	NYMPHALIDAE	JUNONIA	COENIA	6	9	12	16
LEPIDOPTERA	NOCTUIDAE	ARCTE	COERULEA	5			
LEPIDOPTERA	TORTRICIDAE	HOMONA	COFFEASIA	16			
ORTHOPTERA	ACRIDIDAE	AMPHITERNUS	COLOQUOUS	4			
LEPIDOPTERA	TINEIDAE	TINEA	COLUMBIA QIELLA	16			
ORTHOPTERA	GRYLLIDAE	TELEOGRYLLUS	COMMONUS	13			
LEPIDOPTERA	NOTODONTIDAE	SCHIZUPA	CONCTNNA	5			
LEPIDOPTERA	NOCTUIDAE	AMESTRA	CONFIGURATA	12			
DIPTERA	CULICIDAE	PSOROPYORA	CONFENNIS	10	12	17	
LEPIDOPTERA	TORTRICIDAE	CHORISTONEURA	CONFLICTANA	19			
LEPIDOPTERA	LYMANTRIIDAE	PSYCHIRA	CONFUSA	12			
LEPIDOPTERA	NOCTUIDAE	CATOCALA	CONJUNCTA	12			
LEPIDOPTERA	HETEROGENEIDAE	PARASA	CONSOCI4	12			
LEPIDOPTERA	LIMACODIDAE	NAROSA	CONSEQSA	17			
LEPIDOPTERA	NOCTUIDAE	XYLOMYGES	CONSPICILLARIS	5			
LEPIDOPTERA	LASIOCAMPIDAE	MALACOSOMA	CONSTRUCTUH	12			
LEPIDOPTERA	AEGERIIDAE	HEMPECIA	CDNTRAGCA	5	12		
LEPIDOPTERA	NOCTUIDAE	PSEUDOLETIA	CONVECTA	9	12		
LEPIDOPTERA	SPHINGIDAE	PERSE	CONVOLVULI	5			
LEPIDOPTERA	NOCTUIDAE	OPHIUSA	COONATA	17			
LEPIDOPTERA	PIESIDAE	APORIA	CRATAEGI	5	12	16	
LEPIDOPTERA	GEOMETRIDAE	ECTOPIPS	CREPUSCULAR	16			
LEPIDOPTERA	NOCTUIDAE	SESAMIA	CRETICA	9			
DIPTERA	CULICIDAE	ANOPHELES	CRUCTANS	12			
LEPIDOPTERA	ARCTIIDAE	HYPHANTRIA	CUNEA	5	9	12	16
LEPIDOPTERA	IPONOMEUTIDAE	ARGYRESTHIA	CUPRESSELLA	9			
LEPIDOPTERA	SATURNIIDAE	SAMIA	CYNTHIA	5	12	13	16
LEPIDOPTERA	SATURNIIDAE	MUDAURELIA	CYTHAREA CLARKI	13			
LEPIDOPTERA	SATURNIIDAE	MUDAURELIA	CYTHAREA4 CYTHAREA	13	16		
ORTHOPTERA	ACRIDIDAE	YELANOPUS	DAMSONI	4			
LEPIDOPTERA	GEOHETRIDAE	HIBEQYIA	DEFOLIARIA	12			
HYMENOPTERA	TENTHREDINIDAE	ANOPLONYX	DESTRUCTOR	5			
DIPTERA	CULICIDAE	AEDFS	DETITUS	10			
LEPIDOPTERA	NYMPHALIDAE	ARGYNNIS	DIA	5			
LEPIDOPTERA	PYRALIDAE	NACOLEIA	DIFEMENALIS	9			
ORTHOPTERA	ACRIDIDAE	MELANOPUS	DIFFERENTIALIS	4	12		
LEPIDOPTERA	TENTHREDINIDAE	PIKONEMA	DIMOCKI	12			
LEPIDOPTERA	OLETHREUTIDAE	ZEPHAPHERA	DINIANA	9	12	16	19
LEPIDOPTERA	LYMANTRIIDAE	PORTHETRIA	DISPAR	5	5	10	12
LEPIDOPTERA	LYMANTRIIDAE	PORTHETRIA	DISPAR JAPONICA	5	12		16
LEPIDOPTERA	LASIOCAMPIDAE	MALACOSOMA	DISSTRIA	5	12	16	
LEPIDOPTERA	TORTRICIDAE	SHORTISTONEURA	DIWERSANA	19			
LEPIDOPTERA	GEOMETRIDAE	GARIPETA	DIVISATA	12			
LEPIDOPTERA	TORTRICIDAE	MEROPHYAS	DIVULSINA	12			
ORTHOPTERA	MUSCIDAE	MUSCA	DOMESTICA	3			
ORTHOPTERA	ACHETA	ACHETA	DOMESTICUS	17			
LEPIDOPTERA	ACRIDIDAE	PANAXIA	DOMINULA	5	12		
DIPTERA	CULICIDAE	AEDES	DORSALIS	10			
LEPIDOPTERA	OLETHREUTIDAE	RHYACIONIA	OUPLANA	9	12		
LEPIDOPTERA	SATURNIIDAE	PSEUDOPYAZIS	EGLANTERINA	16			

ORDER	FAMILY	GENUS	SPECIES	OFFSEAS			
LEPIDOPTERA	PIERIDAE	COLIAS	ELECTO	12	16		
LEPIDOPTERA	NOCTUIDAE	ANOWOGYNA	ELIMATA	12			
LEPIDOPTERA	GEOMETRIDAE	CROCALLIS	ELINGUARIA	5			
ORTHOPTERA	ACRIDIDAE	AULOCARA	ELLIOTTI	4			
LEPIDOPTERA	SPHINGIDAE	DEILEPHILA	ELPENOR	5	12	16	
LEPIDOPTERA	PYRALIDAE	EPHESTIA	ELUTELLA	9	12		
LEPIDOPTERA	NOCTUIDAE	ORAESIA	EHAGINATA	5	12		
LEPIDOPTERA	NOCTUIDAE	NEPHELOSES	EMMEDON	9	12	16	
LEPIDOPTERA	PSYCHIDAE	THYRIDOPTERYX	EPHEMERAEFORMIS	17			
HYMENOPTERA	TENTHREDINIDAE	PRISTIPHORA	ERICHSONI	12	16		
LEPIDOPTERA	NOCTUIDAE	CATABENA	ESULA	12	15		
LEPIDOPTERA	SATURNIIDAE	ANTHRAEA	EUCALYPTI	5	13	13	17
LEPIDOPTERA	SPHINGIDAE	CELERIO	EUPHORBIAE	5	12	16	
LEPIDOPTERA	PIERIDAE	COLIAS	EURYTHEME	5	12		
LEPIDOPTERA	NOCTUIDAE	PERSECTANIA	EWINGII	9			
LEPIDOPTERA	NOCTUIDAE	ORAESIA	EXCAVATA	5			
LEPIDOPTERA	NOCTUIDAE	SPODOPTERA	EXEMPTA	12	17		
LEPIDOPTERA	NOCTUIDAE	SPODOPTERA	EXIGUA	5	9	12	
HYMENOPTERA	DIPRIONIDAE	NEODIPRION	EXITANS	12			
ISOPTERA	TERMITIDAE	NASUTITERMES	EXITIOSUS	17			
LEPIDOPTERA	GEOHETRIDAE	OPEROPHTEQA	FAGATA	5			
LEPIDOPTERA	OECOPHORIDAE	OIURNEA	FAGELLA	16			
LEPIDOPTERA	NOCTUIDAE	ANAGRAPHA	FALCIPERA	12			
LEPIDOPTERA	TORTRICIDAE	ADOXOPHIES	FASCIATA	5	9		
LEPIDOPTERA	PAHPHILIIDAE	CEPHALCIA	FASCIPENNIS	9			
ORTHOPTERA	ACRIDIDAE	HELANORUS	FEMURRUGRUM	4			
LEPIDOPTERA	NOCTUIDAE	ACTEBIA	FENNICA	12			
DIPTERA	CULICIDAE	PSOQOPYORA	FEROX	5	10	12	
LEPIDOPTERA	PYRALIDAE	CADRA	FIGULXLELLA	9			
LEPIDOPTERA	NOCTUIDAE	LAMPRA	FIMBRIATA	5			
LEPIDOPTERA	GEOMETRIDAE	LAMBDA	FISCELLARIA	12	16		
LEPIDOPTERA	GEOMETRIDAE	LAMBDA	FISCELLARIA LUGUBROSA	12	16		
LEPIDOPTERA	GEOMETRIDAE	LAMBDA	FISCELLARIA SONNATA	12	16		
LEPIDOPTERA	NOCTUIDAE	PANOLIS	FLAMMEA	12	16		
LEPIDOPTERA	NOCTUIDAE	ANOHIS	FLAVA	12			
LEPIDOPTERA	LYMANTRIIDAE	EUPROCTIS	FLAVA	12			
LEPIDOPTERA	LASICAMPIDAE	MALACOSOMA	FRAGILE	12			
DIPTERA	CULICIDAE	ANOPHELES	FREEBORNI	12			
DIPTERA	COELOPOIDAE	COELOPA	FRIGIDA	17			
LEPIDOPTERA	NOCTUIDAE	SPODOPTERA	FRUGIPERDA	9	12	16	
LEPIDOPTERA	ARCTIIDAE	PHRAGMATOBIA	FULIGINOSA	5	9	16	
OIPTERA	CULICIDAE	AEDES	FULVUS PALLENS	10			
LEPIDOPTERA	LYMANTRIIDAE	LYMANTRIA	FUHTDA FUMIDA	5	12		
LEPIDOPTERA	TORORICIDAE	CHORISTONEURA	FUMIFERANA	5	3	12	19
LEPIDOPTERA	NOCTUIDAE	DRYOBOTA	FURVA	9	12		
DIPTERA	HUSCIDA	GLOSSINA	FUSCIPES FUSCIPES	17			
LEPIDOPTERA	SPHINGIDAE	CELERIO	GALII	12	16		
LEPIDOPTERA	NOCTUIDAE	AUTOGQAPHA	GAMMA	5	12		
LEPIDOPTERA	NOCTUIDAE	ANTICARS	GEMMATILIS	16			
HIMENOPTERA	TENTHREDINIDAE	PRISTIPHORA	GENTULATA	12			
LEPIDOPTERA	NOTODONTIDAE	NADATA	GIBBOSA	12			
LEPIDOPTERA	NOCTUIDAE	AMATHES	GLAQEOSA	5			
LEPIDOPTERA	ARCTIIDAE	ARDICES	GLATIGNYI	12			
LEPIDOPTERA	TORTRICIDAE	ACLERIS	GLOVERANA	12			
LEPIDOPTERA	LYMANTRIIDAE	ORGIA	GONOSTIGMA	12			
LEPIDOPTERA	NOCTUIDAE	CELLURA	GORTINOIOES	12			
LEPIDOPTERA	GELECHIDAE	PECTINOPHORA	GOSSYCIELLA	5	12		
COLEOPTERA	CURCULIONIDAE	ANTHONOMUS	GRANOIS	10	12		
LEPIDOPTERA	GEOHETRIDAE	ABRAXAS	GROSSULARIATA	5	12		
LEPIDOPTERA	NOTODONTIDAE	HETEROCAMPA	GUTTIVITA	16			
LEPIDOPTERA	SPHINGIDAE	CELERIO	HARHUTHI	16			
LEPIDOPTERA	GEOHETRIDAE	EULYPE	HASTATA	9			
LEPIDOPTERA	SATURNIIDAE	ANTHRAEA	HELENA	13			
LEPIDOPTERA	NOCTUIDAE	ANCHOSCELI	HELVOLA	5			
HIMENOPTERA	DIPRIONIDAE	DIPRION	HERCYNIAE	12			
LEPIDOPTERA	NOTODONTIDAE	CERURA	HEQUELMA	12	16		
COLEOPTERA	SCABAEIDAE	HELOLONTHA	HIPPOCASTANI	20			
LEPIDOPTERA	GEOMETRIDAE	BISTON	HIRTARIA	12			
LEPIDOPTERA	GEOMETRIDAE	BISTON	HISPIDARIA	12			
DIPTERA	SCIARIDAE	RHYNCHOSCIARA	HOLLANDERT	12			
DIPTERA	CHIRONOMIDAE	GOELOCHIRONOMUS	HOLOPPASINUS	5	17	19	
DIPTERA	CULICIDAE	PSOROPHORA	HORRIDA	10			
COLEOPTERA	SCABAEIDAE	PHYLLOPERTHA	HORTICOLA	19			
HIMENOPTERA	BOMBIDAE	OMEUS	HORTORUM	1			
LEPIDOPTERA	GEOHETRIDAE	ANTHELIA	HYPEQBOREA	12			
CEPIOPTERA	ARCTIIDAE	ECPANTHEKIA	ICASIA	9	11		
LEPIDOPTERA	GEOHETRIDAE	HELANOLOPHIA	IMITATA	12			
DIPTERA	DROSOPHILIDAE	DROSOPHILA	MIGRANS	3	13		
LEPIDOPTERA	LYMANTRIIDAE	LYMANTRIA	INCEQTA	12			
LEPIDOPTERA	NOCTUIDAE	PSEUDOPUSIA	INCLUOEYS	12			

ORDER	FAMILY	GENUS	SPECIES	DISEASES
LEPIDOPTERA	ZYGAEINIDAE	AGL AOPE	INFAUSTA	5
OIPTESA	CULICIDAE	CULISETA	INORNATA	10
LEPIDOPTERA	PVRALIDAE	PLODIA	INTERPUNCTELLA	9
LEPIDOPTERA	NYMPHALIOAE	NYMPHALIS	IC	5
LEPIDOPTERA	NOCTUIDAE	AGROTIS	IPSILON	12
LEPIDOPTESA	SATURNIOAE	PSLEUDOBUNAEA	XQXUS	17
HYMENOPTERA	TENTHREDINIDAE	TRICHIOCAPUS	IPREGULAQIS	12
LEPIDOPTERA	TORTRICIDAE	ARCHIPPUS	ISSHIKI	19
HYMENOPTERA	PAHPHILIDAE	CEPHALCIA	ISSIKI	12
LEPIDOPTERA	ARCTIIDAE	HYPOCRITA	JACOBABAE	5
LEPIDOPTERA	NOCTUIDAE	ACHAEA	JAYATA	9
LEPIDOPTERA	SATURNIOAE	DICTYOPLOCA	JAPONICA	5
LEPIDOPTERA	PAPILIONIDAE	LUENHOOF	JAPONICA	12
LEPIDOPTERA	SPHINGIDAE	THERETPA	JAPONICA	12
CEPIOOPTERA	NYMPHALIOAE	CHARAXES	JASTUS	16
LEPIDOPTERA	PSYCHIOAE	CRYPTOTHELEA	JUNOOF	12
LEPIDOPTERA	SPHINGIDAE	CELEQIO	KINDERVATERI	16
LEPIDOPTERA	PSYCHIOAE	OXKETYCUS	KIRBYI	5
LEPIDOPTERA	PHYCITIDAE	ANAGASTA	KUHNIELLA	12
LEPIDOPTERA	DREPANIDAE	DREPANA	LACERTINARIA	5
ISOPTERA	RHINOTERMITIDAE	COPTOTERMES	LACTEUS	17
LEPIDOPTERA	TORTRICIDAE	PANDEMIS	LAMPROSANA	12
LEPIDOPTERA	LASIOCAMPIDAE	ERIOGASTER	LANESTRIS	5
COLEOPTERA	OERMESTIOAE	OERMESTES	LARDARIUS	17
LEPIDOPTERA	COLEOPHORIDAE	COLEOPHORA	LARICELLA	12
LEPIDOPTERA	PYRALIDAE	CRYPTOBLABES	LACTICIANA	12
LEPIDOPTERA	NYMPHALIDAE	AQGYNNIS	LATHONIA	16
LEPIDOPTESA	NOCTUIDAE	LIMOPHANE	LEAUTIERI	5
HYMENOPTERA	OIPKIONIOAE	NEODIPRION	LECOYTEI	12
LEPIDOPTERA	LIMACODIDAE	PARASA	LEPTDA	17
LEPIDOPTERA	PIERIDAE	COLIAS	LESRIA	12
LEPIDOPTERA	NOCTUIDAE	AEDIA	LEUCOMELAS	12
LEPIDOPTERA	LYMANTRIDAE	ARGYIA	LEUCOSTIGYA	5
LEPIDOPTERA	OLETHREUTIDAE	ARGYROPOLOE	LEUCOTRETA	5
LEPIDOPTERA	NOCTUIDAE	SCOLIOPTERYX	LIBATOIX	5
LEPIDOPTERA	SPHINGIDAE	SPHINX	LIGUSTRI	5
COLEOPTERA	CERAMBYCIDAE	RATOCERA	LINFOLATA	12
LEPIDOPTERA	NOCTUIDAE	PROENIA	LITOSIA	12
LEPIDOPTERA	NOCTUIDAE	SPOOPTERA	LITTORALIS	5
LEPIDOPTERA	GEOMETRIDAE	SEMOTHTISA	LITURATA	5
DIPTERA	FIPULIDAE	TIPULA	LIVIDA	10
LEPIDOPTERA	TORTRICIDAE	TORTRIX	LOEFLINGIANA	12
LEPIDOPTERA	TORTRICIDAE	ARCHIPS	LONGICELLAYA	9
LEPIDOPTERA	GEOMETRIDAE	EUPHECIA	LONGIPALPATA	12
LEPIDOPTERA	ARCTIIDAE	SPILIOSOHA	LUBRICIPECA	5
LEPIDOPTERA	NOCTUIDAE	EUPLEXIA	LUCIPARA	9
HYMENOPTERA	BOMBIDAE	BOMBUS	LUCORUH	1
HYMENOPTERA	FORMICIDAE	FORHICA	LUGUBQIS	17
LEPIDOPTERA	SATURNIIDAE	ACTIAS	LUNA	5
LEPIDOPTERA	GEOMETRIDAE	SELENIA	LUNARIA	5
LEPIDOPTERA	NOCTUIDAE	CALOPHASIA	LUNULA	5
LEPIDOPTERA	HEPIALIDAE	HEPIALUS	LUPULINUS	5
DIPTERA	CHIRONOMIDAE	CHIRONOMUS	LURTIOUS	19
LEPIDOPTERA	ARCTIIDAE	SPILOSOHA	LUTEA	5
LEPIDOPTERA	GEOMETRIDAE	OPISTHOCRAPTIS	LUTEOLATA	12
LEPIDOPTERA	LASIOCAMPIDAE	MALACOSHA	LUTESCENS	12
LEPIDOPTERA	NOCTUIDAE	AGROCYOLA	LYCHNIDIS	5
LEPIDOPTERA	PAPILIONIDAE	PAPILIO	NACHAON	5
LEPIDOPTERA	TORTRICIDAE	HOMONA	MAGNANIMA	5
LEPIDOPTERA	SATURNIIDAE	HEMILEUCA	YALIA	16
HEMIPTERA	APHIDIDAE	RHOPALOSIPHUM	MAIDIS	17
LEPIDOPTERA	BOMBICIDAE	TYEOPHILA	MANDARIYA	5
OIPTERA	BIBIONIDAE	BIBIO	MARCI	10
LEPIDOPTERA	GEOMETRIDAE	BISTON	MARGINATA	16
LEPIDOPTERA	LYMANTRIDAE	LYMANTRIA	MATHUPA AUROPA	5
LEPIDOPTERA	NOCTUIDAE	HANIA	MAURA	5
LEPIDOPTERA	NOCTUIDAE	SPOOPTERA	MAURICIA	12
LEPIDOPTERA	NOCTUIDAE	SCOOOPTERA	MAURITIA ACRONYCTOIDES	12
LEPIDOPTERA	PYRALIDAE	CNAPHALOCROCIS	MEDTALIS	9
LEPIDOPTERA	SATYRIDAE	OTRA	YEGERA	5
HYMENOPTERA	HALICTIDAE	NOMIA	MELANDERI	17
DIPTERA	OROSPHILIDAE	DROSOPHILA	HELANOGASTE	3
DIPTERA	CULICIDAE	CULISETA	HELANURA	5
HYMENOPTERA	APIIDAE	APIS	HELLERA	1
LEPIDOPTERA	GACLERIIDAE	GALLERIA	HELLONELLA	5
COLEOPTERA	SCAQBABEIDAE	YELOLONTHA	MELOLONTHA	6
LEPIDOPTERA	SATURNIIDAE	AUTOMERIS	MEMUSAE	5
LEPIDOPTERA	AQCTIIDAE	CYCINIA	NEYOICA	5
LEPIDOPTERA	LYMANTRIDAE	OASYCYIRA	HENOOSA	12
LEPIDOPTERA	SPHINGIDAE	PSILOGRAMMA	MENEPHRON	9

[illegible]

ORDER	FAMILY	GENUS	SPECIES	DISEASES
HYMENOPTERA	ARGIDAE	ARGE	PECTORALIS	12
LEPIDOPTERA	GEOMETRIDAE	PHIGALIA	PEDARIA	12
LEPIDOPTERA	TINEIDAE	TINEA	PELLIONELLA	5 12
LEPIDOPTERA	NOCTUIDAE	HELIOTYIS	PELTIGEA	12
LEPIDOPTERA	NOCTUIDAE	POIOPUSIA	PEPONIS	12
NEUROPTERA	CHRYSOIIDAE	CHRYSOIA	PERLA	5 12
LEPIDOPTERA	SATURNIIDAE	ANTHERAEA	PERNYI	5 12 13 16
LEPIDOPTERA	NOCTUIDAE	MELANCHRA	PERSICARIAE	9
LEPIDOPTERA	TORTRICIDAE	SPARGANOTHS	PETTITANA	12
LEPIDOPTERA	LYMANTRIIDAE	NYGMIA	PHAEORRHOEA	16
LEPIDOPTERA	GEOMETRIDAE	NEPYTIA	PYANTASHAQA	12
LEPIDOPTERA	TORTRICIDAE	LATHQONYMPHA	PHASEOLI	9
LEPIDOPTERA	SPHINGIDAE	CELEQIO	PHILEUPHORBI AE	16
LEPIDOPTERA	PIESIOAE	COLIAS	PHILODICE	12 16
LEPIDOPTERA	LYCAENIDAE	LYCAENA	PHLAEAS	5
LEPIDOPTERA	NOCTUIDAE	HELIOTHS	PHLOXIPHAC4	12 16
LEPIDOPTERA	NOCTUIDAE	CERAMICA	PICTA	5 12
COLEOPTERA	BUPRESTIOAE	MELANOPHILA	PICTA	5 16
LEPIDOPTERA	SPHINGIDAE	SPHINX	PINASTRI	5 12
HYMENOPTERA	DIPRIONIDAE	DIPRION	PINDROWI	12
LEPIDOPTERA	LASIOCAMPIDAE	DENDROLIMUS	PINI	12 16
HYMENOPTERA	DIPRIONIDAE	DIPRION	PINI	12
LEPIDOPTERA	GEOMETRIDAE	BUPALUS	PINIARIUS	5 12 16
LEPIDOPTERA	TORTRICIDAE	CHORLSTONEURA	PTNUS	12
DIPTERA	CULICIDAE	CULEX	PIPIENS	3
DIPTERA	CULICIDAE	CULEX	PIPIENS QUINQUEFASCIATUS	12
LEPIDOPTERA	THAUMETOPOEIDAE	THAUMETOPOEA	PITYOCAYPA	5 9 12
LEPIDOPTERA	GEOMETRIDAE	ANATIS	PLAGIATA	5 12
LEPIDOPTERA	LYMANTRIIDAE	OASVCHIRA	PLAGIATA	12
LEPIDOPTERA	ARCTIIDAE	PARASEMIA	PLANTAGINIS	5
COLEOPTERA	SCARABAEIDAE	PHILLOPHAGA	PLEEI	19
LEPIDOPTERA	JANAIIDAE	JANAUS	PLEXIPPUS	5 16
DIPTERA	CHIRONOMIDAE	CHIRONOMUS	PLUMOSUS	5 10
LEPIDOPTERA	LASIOCAMPIDAE	MALACOSOMA	PLUVIALE	12
LEPIDOPTERA	PAPILIONIDAE	PAPILIO	POALIIQIUS	12
LEPIDOPTERA	LASIOCAMPIDAE	GONOMETA	PODOPARPI	13
LEPIDOPTERA	NYMPHALIDAE	NYMPHALIS	POLYCHLOROS	16
LEPIDOPTERA	SATURNIIDAE	ANTHERAEA	POLYPHEMUS	5 12 16
HYMENOPTERA	DIPRIONIDAE	DIPRION	POLYTOYA	12
LEPIDOPTERA	GEOMETRIDAE	AL SOPHILA	POMETARIA	5 9 12
LEPIDOPTERA	OLETHREUTIDAE	LASPEYRESIA	POMONELLA	9 16
LEPIDOPTERA	SPHINGIDAE	LAOTHOE	POPULI	5 12
LEPIDOPTERA	GEOYETRIDAE	PROTODORMIA	POPCULARIA INDICATARIA	12
COLEOPTERA	SCARABAEIDAE	ANGLOGNATHUS	POROSUS	19
LEPIDOPTERA	NOCTUIDAE	PANTHEA	PORTLANDIA	12
LEPIDOPTERA	TORTRICIDAE	EPIPHYAS	POSTVITTANA	12
LEPIDOPTERA	LASIOCAMPIDAE	COSMOTRIGHE	POTATORIA	12
LEPIDOPTERA	NOCTUIDAE	PRODENIA	PRAEFICA	12
HYMENOPTERA	DIPRIONIDAE	NEODIPRION	PSATTI BANKSIANAE	12
HYMENOPTERA	DIPRIONIDAE	NEODIPRION	PRATTI PRATTI	16
LEPIDOPTERA	NOCTUIDAE	AUTOGRAPHA	PRECATIONIS	12
LEPIDOPTERA	THAUMETOPOEIDAE	THAUMETOPOEA	PROCESSIONEA	5 12
LEPIDOPTERA	NOCTUIDAE	TSIPHAENA	PRONUBA	5
LEPIDOPTERA	SPHINGIDAE	PROSERPINUS	PROSESPINA	16
LEPIDOPTERA	NOCTUIDAE	DYOBOTA	PROTEA	12
COLEOPTERA	SCARABAEIDAE	SERICESTHIS	PRUINOSA	10
LEPIDOPTERA	SATURNIIDAE	SAMIA	PRYER	5 12
LEPIDOPTERA	LYMANTRIIDAE	DASYCHIRA	PSEUDABIETIS	12
LEPIDOPTERA	LYMANTRIIDAE	EUPROCTIS	PSEUDOCOSPERSA	12
DIPTERA	DROSOPHILIDAE	DROSOPHILA	PSEUDOSCURA	17
LEPIDOPTERA	LYMANTRIIDAE	OQGYIA	PSEUDOTUGATA	5 12 16
LEPIDOPTERA	LYMANTRIIDAE	DASYCHIRA	PUDIBUNDA	5 12 16
LEPIDOPTERA	PYRALIDAE	OICHOQCOCIS	PUNCTIFEQUALIS	12
LEPIDOPTERA	NOCTUIDAE	HELIOTHS	PUNCTIGERA	9 12
LEPIDOPTERA	ARCTIIDAE	DIACRISIA	PURPURATA	5 12
LEPIDOPTERA	NOCTUIDAE	PAPAIPEMA	PURPURIFASCI 4	9
LEPIDOPTERA	SATURNIIDAE	SATURNIA	PYRI	5 12 16
DIPTERA	CULICIDAE	ANOPHELES	QUADRIMACULATUS	10 14
LEPIDOPTERA	ARCTIIDAE	EUPLAGIA	QUADRIPUNCTARIA	5
LEPIDOPTERA	GEOMETRIDAE	ENOMOS	QUERCARIA	12
LEPIDOPTERA	LASIOCAMPIDAE	GASTROPACHA	QUEPCTFOLIA	5
LEPIDOPTERA	LASIOCAMPIDAE	GASTROPACHA	QUERCIFOLIA CERRIFOLIA	5 12
LEPIDOPTERA	GEOMETRIDAE	ENOMOS	QUERCINARTA	12
LEPIDOPTERA	LASIOCAMPIDAE	LASIOCAMPA	QUEQCUS	5
LEPIDOPTERA	SPHINGIDAE	MANDUCA	QUINQUEMACULATA	9
LEPIDOPTERA	PIETIDAE	PIEPIS	RAPAE	5 9 12 16
LEPIDOPTERA	PIETIDAE	PIEPIS	RAPAE CRUCIVORA	5 9 12
LEPIDOPTERA	LIMACODIDAE	THOSEA	RECTA	17
DIPTERA	CULICIDAE	CULEX	RESTUANS	17
LEPIDOPTERA	TORTRICIDAE	ADOXOPHYES	RETICULANA	5 12

ORDER	FAMILY	GENUS	SPECIES	DISEASES
LEPIDOPTERA	PIERIDAE	GONOPTERYX	RHYNCHUS	5
COLEOPTERA	SCARABAEIDAE	ORYCTES	RHINOCEROS	11
LEPIDOPTERA	ARCTIIDAE	PERICALLIA	RICINI	9 12
LEPIDOPTERA	SATURNIIDAE	SAMIA	YICINI	5 12 13 16
LEPIDOPTERA	GEOMETRIDAE	BISTON	ROBUSTUM	12
LEPIDOPTERA	TORTRICIDAE	CHORISTONEURA	ROSACEAYA	12
HYMENOPTERA	MEGACHILIDAE	HEGACHILE	ROTUNDATA	17
LEPIDOPTERA	LASIOCAMPIDAE	HACROTHYLACIA	RUBI	12
LEPIDOPTERA	NOCTUIDAE	HELIOTHIS	RUBRESCENS	9
HYMENOPTERA	BOMBIIDAE	BOMBUS	RUDERARS	1
LEPIDOPTERA	PYRALIDAE	YITLESIA	SABULOSELLA	10
LEPIDOPTERA	CRAMBIDAE	DIATRAEA	SACCHARALIS	9
LEPIDOPTERA	LYMANTRIIDAE	STILPNOTIA	SALTICIS	12 16
OIPTERA	CULICIDAE	CULEX	SALINAPLUS	5 10 12
LEPIDOPTERA	GEOMETRIDAE	OURAPTERYX	SAHRUCAQIA	5
ORTHOPTERA	ACRIDIDAE	HELANOPLUS	SANGUINIPES	4 12 19
OIPTERA	CULICIDAE	URANOAEINIA	SAPPHIRINA	12 17
LEPIDOPTERA	NOCTUIDAE	EUPHILIS	SATELITIA	9
LEPIDOPTERA	NYMPHALIDAE	POLYGONIA	SATYRUS	12
LEPIDOPTERA	NOCTUIDAE	PERIDROMA	SAUCIA	9 12 16
LEPIDOPTERA	NOCTUIDAE	PLATHYPENA	SCABRA	9
LEPIDOPTERA	EPIASCHIDAE	TETRALOPHA	SCORTEALIS	12 16
LEPIDOPTERA	GEOMETRIDAE	CLEORA	SECUNOARIA	17
LEPIDOPTERA	NOCTUIDAE	AGROTIS	SEGETUY	5 9 12
LEPIDOPTERA	NOCTUIDAE	SYNOGRAPHIA	SELECTA	12
LEPIDOPTERA	SATURNIIDAE	ACTIAS	SELENE	5 13
LEPIDOPTERA	LYMANTRIIDAE	DASYCHIRA	SELENITICA	16
LEPIDOPTERA	SATURNIIDAE	ANISOTA	SENATORIA	16
LEPIDOPTERA	NOCTUIDAE	PSEUDALETTIA	SEPPAPATA	9 12 13
LEPIDOPTERA	NOCTUIDAE	HADENA	SERENA	5
LEPIDOPTERA	GEOMETRIDAE	PTYCHOPODA	SERIATA	12 16
DIPTERA	TACHINIDAE	UGYMYIA	SERICARIAE	12
HYMENOPTERA	OIPRIONIDAE	NEOIPRION	SERTIFER	12 16 17
LEPIDOPTERA	GEOMETRIDAE	SEMIOTHISA	SEXMACULATA	9
LEPIDOPTERA	SPHINGIDAE	HANDUCA	SEXTA	9 12
LEPIDOPTERA	LASIOCAMPIDAE	DENDROLIMUS	SIBIRICUS	9
OIPTERA	CULICIDAE	AEDES	SILVERENSIS	10 12
OIPTERA	CULICIDAE	ORTHOPODOMYIA	SIGNIFERA	17
COLEOPTERA	SCARABAEIDAE	GEOTRUPES	SILVATICUS	19
LEPIDOPTERA	LYMANTRIIDAE	EUPROCTIS	SIMILIS	5 12
LEPIDOPTERA	GEOMETRIDAE	PERIBATOES	SIMPPLICIARIA	12
OIPTERA	CULICIDAE	MYEOMYIA	SMITHII	12
DIPTERA	CULICIDAE	AEDES	SOLLICITANS	5 10 12
COLEOPTERA	SCARABAEIDAE	AMPHIMALLON	SOLSTITIALIS	19
LEPIDOPTERA	NOCTUIDAE	HADENA	SORIDA	9 12
COLEOPTERA	SCARABAEIDAE	DASYGNATHUS	SP.	19
TRICHOPTERA	LIMNephilidae	NEOPHYLAX	SP.	12
COLEOPTERA	SCARABAEIDAE	OPOGOYIA	SP.	10
LEPIDOPTERA	LASIOCAMPIDAE	DENDROLIMUS	SPECTABILIS	5 12
LEPIDOPTERA	PIRALIDAE	DIORYCTRIA	SPLENDIDELLA	17
OIPTERA	CULICIDAE	ANOPHELES	STEPHENS1	3 5
COLEOPTERA	SCARABAEIDAE	GEOTRUPES	STERCOROSUS	19
OIPTERA	CULICIDAE	AEDES	STICTICUS	10
NEUROPTERA	HEMEROBIDAE	HEMEROBIUS	STIGMA	5 12
OIPTERA	CULICIDAE	AEDES	STIMULANS	10
LEPIDOPTERA	GEOMETRIDAE	BISTON	STRATARIA	12
HENIPTERA	DELPHACIDAE	LAODELPHAX	STRIATELLA	10
LEPIDOPTERA	GEOMETRIDAE	SELIOSEMA	SUAVIS	12
LEPIDOPTERA	ARCTIIDAE	SPILARCTIA	SUBCASNEA	5 12
LEPIDOPTERA	LYMANTRIIDAE	EUPROCTIS	SUBFLAVA	12
COLEOPTERA	NOCTUIDAE	HELIOTHIS	SUBFLEXA	12
COLEOPTERA	LUCANIDAE	FIGULUS	SURLAEVIS	19
DIPTERA	CULICIDAE	ANOPHELES	SUBPICIUS	17
LEPIDOPTERA	NOCTUIDAE	FELTIA	SUBTERRANEA	9
LEPIDOPTERA	LASIOCAMPIDAE	DENDROLIMUS	SUPERANS	5
LEPIDOPTERA	PYRALIDAE	CHILO	SUPPRESSALIS	9 10 12
COLEOPTERA	BUPRESTIDAE	AGRILUS	SUVOROV1 POPULNFUS	5
HYMENOPTERA	OIPRIONIDAE	NEOIPRION	SWAINEI	12
HYMENOPTERA	JIPRIONIDAE	NEOIPRION	TAEDAE LINEARIS	12
HIMENOPTERA	OIPRIONIDAE	NEOIPRION	TAEDAE TAEAE	12 15
OIPTERA	CULICIDAE	AEDES	TAENIORHYNCHUS	5 10 12 13
LEPIDOPTERA	NYMPHALIDAE	VANESSA	TAMMEAMEA	16
OIPTERA	CULICIDAE	CULEX	TARSALIS	5 12 13
COLEOPTERA	SCARABAEIDAE	APHODIUS	TASMANIAE	13 19
ACARINA	TETRANYCHIDAE	TETRANYCHUS	TELARIUS	17
DIPTERA	CHIRONOMIDAE	CHIRONOMUS	TENTANS	12 17 19
LEPIDOPTERA	LYMANTRIIDAE	EUPROCTIS	TERMINALIS	16
HIMENOPTERA	BOMBIIDAE	BOMBUS	TERRESTRIS	1
LEPIDOPTERA	NOCTUIDAE	PRODENIA	TERRICOLA	12
OIPTERA	CULICIDAE	CULEX	TERQIANS	5 10 17

ORDER	FAMILY	GENUS	SPECIES	DISEASES					
LEPIDOPTERA	LYONETIDAE	BUCCULATRIX	THURBERIELLA	12					
LEPIDOPTERA	SPHINGIDAE	OTILINA	TILIAE	5					
LEPIDOPTERA	CEONETRIDAE	ERANNIS	TILIAIA	5	12				
LEPIDOPTERA	GEOMETRIDAE	PHIGALIA	TITEA	12					
DIPTERA	CULICIDAE	AEDES	TORMENTOR	12					
LEPIDOPTERA	PYRALIDAE	PARAMYELOIS	FRANSTTELLA	12					
LEPIDOPTERA	SATURNIIDAE	HEMILEUCA	TRICOLOR	12	16				
LEPIDOPTERA	LASIOCAMPIIDAE	LASIOCAMPA	TRIFOLII	12					
LEPIDOPTERA	LIMACODIDAE	OARNA	TRIMA	9	13				
DIPTERA	CULICIDAE	AEDES	TQISERIATUS	12	17				
DIPTERA	ITONIDIDAE	CONTARINIA	TRITICI	16					
COLEOPTERA	SCARABAEIDAE	PERICOPTUS	TSUNCATUS	17					
LEPIDOPTERA	LYMANTRIIDAE	OOGYIA	TURBATA	12					
LEPIDOPTERA	NOCTUIDAE	AORIS	TYRANNUS AMURENSIS	5					
ACARINA	TETRANYCHIDAE	PANONYCHUS	ULMI	13					
LEPIDOPTERA	HEPIALIDAE	WISEANA	UMBRACULATA	9	12	19			
LEPIDOPTERA	LASIOCAMPIDAE	DENOROLIMUS	UNDANS	5	12				
LEPIDOPTERA	LASIOCAMPIIDAE	DENOROLIMUS	UNDANS FLAVEOLA	12					
LEPIDOPTERA	NOCTUIDAE	MOCS	UNOATA	5					
LEPIDOPTERA	NOCTUIDAE	PSEUDOLETIA	UNIPUNCTA	5	9	10	12	13	16
LEPIDOPTERA	NYMPHALIDAE	AGLAIS	URTI CAE	5	6	12	16		
ORTHOPTERA	ACRIDIDAE	SCHISTOCEQCA	VAGA	4					
LEPIDOPTERA	GEOMETRIDAE	ERANNIS	VANCOUYERENSIS	12					
LEPIDOPTERA	NVHPHALIDAE	AGRAULIS	VANILLAE	12					
LEPIDOPTERA	ANTHELOIDAE	ANTHELA	VARIA	12					
LEPIDOPTERA	TORTRICIDAE	ACLERIS	VAPIANA	12					
DIPTERA	CULICIDAE	PSOROPHORA	VARIPE	10	12				
LEPIDOPTERA	TORTRICIDAE	ARGYROTAENIA	VELUTINANA	9					
LEPIDOPTERA	GEOMETRIDAE	ENYPIA	VENATA	12					
LEPIDOPTERA	CEONETRIDAE	PALEACRITA	VERNATA	5	12				
COLEOPTERA	SCARABAEIDAE	RHOPEA	VERRAUX	19					
LEPIDOPTERA	SPHINGIDAE	CELERIO	VESPERTILIO	16					
LEPIDOPTERA	LYMANTRIIDAE	ORGYIA	VETUSTA	12					
DIPTERA	CULICIDAE	AEDES	VEXANS	10					
LEPIDOPTERA	ARCTIIDAE	ARCTIA	VILLICA	5	12				
COLEOPTERA	SCARABAEIDAE	ANOXIA	VILLOSA	19					
HYMENOPTERA	TENTHREDINIDAE	TRICHOCAMPUS	VIMINALIS	12					
LEPIDOPTERA	NOTODONTIDAE	CERURA	VINULA	5					
LEPIDOPTERA	NOCTUIDAE	HELIOTHIS	VXRESCENS	5	12	16			
HYMENOPTERA	DIPRIONIDAE	NEOIPSION	VIRGINIANA	12					
LEPIDOPTERA	ARCTIIDAE	OIACRISIA	VIRGINICA	12					
LEPIDOPTERA	ARCTIIDAE	APANTESIS	VIRGO	16					
LEPIDOPTERA	TORTRICIDAE	TORTRIX	VIRIDANA	5	12	16			
DIPTERA	OSOSOPHILIDAE	OROSOPHILA	VIRILIS	17					
DIPTERA	CALLIPHORIDAE	CALLIPHORA	VOMITORIA	10	12	16			
LEPIDOPTERA	NOCTUIDAE	DIPAROPSIS	WATERSI	12					
LEPIDOPTERA	THAUMETOPOEIDAE	THAUMETOPOEA	WILKINSONI	5	12				
DIPTERA	OROSOPHILIDAE	OROSOPHILA	WILLISTONI	17					
LEPIDOPTERA	LYMANTRIIDAE	PORTHESIA	XANTHOCAMPA	5					
LEPIDOPTERA	NOCTUIDAE	ANTIPE	XANTHOMISTA	5					
LEPIDOPTERA	HEPIALIDAE	METAHEPIALUS	XENOCTENIS	13					
LEPIDOPTERA	YPONOMEUTIDAE	PLUTELLA	XYLOSTELLA	9	12				
LEPIDOPTERA	LASIOCAMPIIDAE	DENOROLIMUS	YAHADAI	5	12				
LEPIDOPTERA	SATURNIIDAE	ANJHESAEA	YAHAMAI	12	16				
LEPIDOPTERA	NOCTUIDAE	HELIOTHIS	ZEALANDICP	5	3	12	13		
COLEOPTERA	SCARABAEIDAE	COSTELYTRA	ZELLERI	10					
LEPIDOPTERA	PYRALIDAE	ACROBASIS		19					

TABLE I--ALPHABETICAL LIST (BY SPECIFIC NAMES) OF

SYNONYMS	NAMES ACCEPTED IN HOST LIST
AMERICANUM (NEODIPRION)	TAEDAE TAEDAE (NEODIPRION)
ANASTOMOSIS (CLOSTERA)	ANASTOMOSIS (PYGAERA)
ANASTOMOSIS (MELALOPHA)	ANASTOMOSIS (PYGAERA)
AUXILIARIS (CHORIZAGROTIS)	AUXILIARIS (EUXOA)
BIFIDA (CERURA)	HERMELINA (CERURA)
BRASSICAE (AUTOGRAPHA)	NI (TRICHOPLUSIA)
BRASSICAE (BARATHRA)	BRASSICAE (MAMESTRA)
BRASSICAE (PLUSIA)	NI (TRICHOPLUSIA)
CAMPESTRIS (LYDA)	ABIETIS (CEPHALCIA)
CAUTELLA (EPHESTIA)	CAUTELLA (CADRA)
CECROPUS (PLATYSAMIA)	CECROPA (HYALOPHORA)
CHALCYTES (PLUSIA)	CHALCITES (CHRYSOIDEIXIS)
CHAMPA (TRICHOSEA)	CHAMPA (MOMA)
CONTRACTA (SCOPELODES)	CONTRACTA (BEMBEZIA)
CYNTHIA (PHILOSAMIA)	CYNTHIA (SAMIA)
CYNTHIA PRYERII (PHILOSAMIA)	PRYERII (SAMIA)
CYTHAREA CAPENSIS (NUDAURELIA)	CYTHAREA CYTHAREA (NUDAURELIA)
DISPAR (LYMANTRIA)	DISPAR (PORTHETRIA)
EXIGUA (LAPHYGMA)	EXIGUA (SPODOPTERA)
FAGELLA (CHIMBACE)	FAGELLA (DIURNEA)
FASCIATA (DROSOPHILA)	MELANOGASTER (DROSOPHILA)
FRUGIPERDA (LAPHYGMA)	FRUGIPERDA (SPODOPTERA)
GAMMA (PLUSIA)	GAMMA (AUTOGRAPHA)
GRISEANA (EUCOSMA)	DINIANA (ZEIRAPHERA)
HYPOTROPHICA (LYDA)	ABIETIS (CEPHALCIA)
IMPARILIS (SPILARCTIA)	LUBRICIPEDA (SPILOSOMA)
JUNODI (ACANTHOPSYCHE)	JUNODI (CRYPTOTHELEA)
LARICIPHILA (CEPHALEIA)	ALPINA (CEPHALCIA)

SOME OF THE MOST COMMON SYNONYMS OF HOST SPECIES

SYNONYMS	NAMES ACCEPTED IN HOST LIST
LITTURA (PRODENIA)	LITTORALIS (SPODOPTERA)
MARGARITOSA (PERIDROMA)	SAUCIA (PERIDROMA)
MENTHASTRI (SPILOSOMA)	LUBRICIPEDA (SPILOSOMA)
MILLERI (RECURVARIA)	MILLERI (COLEOTECHNITES)
MURINANA (CHORISTONEURA)	MURINANA (CACOECIA)
NARARIA (SUSICA)	NARARIA (NATADA)
OLERACEA (MAMESTRA)	OLERACEA (DIATARAXIA)
OPERCULELLA (GNORIMOSCHEMA)	OPERCULELLA (PHTHORIMAEA)
PAVONIA MAJOR (SATURNIA)	PYRI (SATURNIA)
PHASEOLI (CYDIA)	PHASEOLI (LATHRONYMPHA)
PIPIENS FATIGANS (CULEX)	PIPIENS QUINQUEFASCIATUS (CULEX)
POMONELLA (CARPOCAPSA)	POMONELLA (LASPEYRESIA)
PRATENSIS (TENTHREDO)	NEMORALIS (ACANTHOLYDA)
PSEUDOTSUGATA (HEMEROCAMPA)	PSEUDOTSUGATA (ORGYIA)
QUINQUEMACULATA (PROTOPARCE)	QUINQUEMACULATA (MANDUCA)
RUFUS (LOPHYRUS)	SERTIFER (NEODIPRION)
SEPARATA (LEUCANIA)	SEPARATA (PSEUDALETIA)
SERIATA (STERRHA)	SERIATA (PTYCHOPODA)
SERTIFERA (TENTHREDO)	SERTIFER (NEODIPRION)
SEXTA (PROTOPARCE)	SEXTA (MANDUCA)
STELLATA (LYDA)	NEMORALIS (ACANTHOLYDA)
UNDANS (METANASTRIA)	UNDANS (DENDROLIMUS)
YAMADAI (KUNUGIA)	YAMADAI (DENDROLIMUS)
YPSILON (AGROTIS)	YPSILON (AGROTIS)

MART-FAM

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Insect Virus Catalogue

INITIALS		
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SHEETS	
REPRINT	
ABSTRACT ONLY	
AUTHOR LIST CHECK	
SPECIES LIST CHECK	
NEW HOST RECORD	
NEW DISEASE RECORD	

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Key. --Alphabetical list of diseases and disease groups, with their respective code numbers

<u>DISEASE NAME</u>	<u>CODE</u>
ACUTE PARALYSIS	1
CHRONIC PARALYSIS	2
C02 SENSITIVITY	3
CRYSTALLINE-ARRAY VIROSIS	4
CYTOPLASMIC POLYHEDROSIS	5
DENSONUCLEOSIS	6
FLACHERIE	7
GATTINE	8
GRANULOSIS	9
HAIRLESS-BLACK SYNDROME	21
IRIDESCENT VIROSIS	10
MALAYA DISEASE	11
NUCLEOPOLYHEDROSIS	12
OTHER NONOCCLUDED-VIRUS DISEASE	13
OTHER OCCLUDED-VIRUS DISEASE	14
PARALYSIS	15
POLYHEDROSIS	16
PRESUMED VIROSIS	17
SACBROOD	18
SPHEROIDOSIS	19
WATERY DISINTEGRATION	20

The mission of the PACIFIC NORTHWEST FOREST AND RANGE EXPERIMENT STATION is to provide the knowledge, technology, and alternatives for present and future protection, management, and use of forest, range, and related environments.

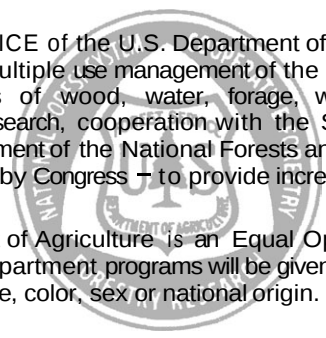
Within this overall mission, the Station conducts and stimulates research to facilitate and to accelerate progress toward the following goals:

1. Providing safe and efficient technology for inventory, protection, and use of resources.
2. Developing and evaluating alternative methods and levels of resource management.
3. Achieving optimum sustained resource productivity consistent with maintaining a high quality forest environment.

The area of research encompasses Oregon, Washington, Alaska, and, in some cases, California, Hawaii, the Western States, and the Nation. Results of the research are made available promptly. Project headquarters are at:

Fairbanks, Alaska	Portland, Oregon
Juneau, Alaska	Olympia, Washington
Bend, Oregon	Seattle, Washington
Corvallis, Oregon	Wenatchee, Washington
La Grande, Oregon	

***Mailing address: Pacific Northwest Forest and Range
Experiment Station
P.O. Box 3141
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The FOREST SERVICE of the U.S. Department of Agriculture is dedicated to the principle of multiple use management of the Nation's forest resources for sustained yields of wood, water, forage, wildlife, and recreation. Through forestry research, cooperation with the States and private forest owners, and management of the National Forests and National Grasslands, it strives — as directed by Congress — to provide increasingly greater service to a growing Nation.

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