# Insects of Hawaii, Johnston Island and Wake Island

## INTRODUCTION

By

E. H. Bryan, Jr.

### GENERAL RELATIONS

Although the insect fauna of the principal islands of Hawaii is as well known as that of any islands in the Pacific, hitherto little has been reported concerning the insects of the small islets and rocks lying west and northwest of Kauai. Previous to 1923 systematic collecting had been undertaken only on Laysan Island. This island was visited in 1896 by Schauinsland,[1] who reported on the plant and insect life. Insects were collected there also by G. P. Wilder[2] in 1905, by W. A. Bryan[3] in April, 1911, and by David T. Fullaway in December 1912. The species captured by these three collectors are listed by Fullaway.[4]

In 1923 the Tanager Expedition[5] made a scientific survey of the islands extending northwestward from Kauai and also of Johnston and Wake islands. (See fig. 1.) During April, with David T. Fullaway as entomologist, the expedition visited Laysan, Ocean, and Midway islands and Pearl and Hermes Reef. During May, Dr. Stanley C. Ball and Major C. Grant collected insects on Laysan and Lisiansky islands, Pearl and Hermes Reef and Gardner Rock. During June, July, and August E. H. Bryan, Jr., served as entomologist on the visits of the Expedition to Nihoa, Necker, Johnston, and Wake islands, and French Frigate Shoals.

Several degrees of insect life were met with on these expeditions. On each island the insect fauna seems to have developed up to the limit of its environment. The limiting factors seem to be: the variety and extent of

[1] Schauinsland, H., Drei Monate auf einer Koralleninsel; Bremen, 1899.

[2] Perkins, R. C. L., [List of Midway and Laysan Insects collected by G. P. Wilder]: Hawaiian Ent. Soc. Proc., Vol. 1, pp. 33-34, 1905.

[3] Dill, H. R. and Bryan, W. A., Report on an expedition to Laysan Island in 1911: U. S. Dept. Agric., Biol. Survey, Bull. 42, 1912.

[4] Fullaway, D. T., List of Laysan Island insects: Hawaiian Ent. Soc. Proc., Vol. 3, pp. 20-24, 1914.

[5] Gregory, H. E., Report of Director for 1923: B. P. Bishop Museum, Bull. 10, pp. 19-23, 1924.

the flora, the presence or absence of fresh or brackish water, and the number and character of other animals present.

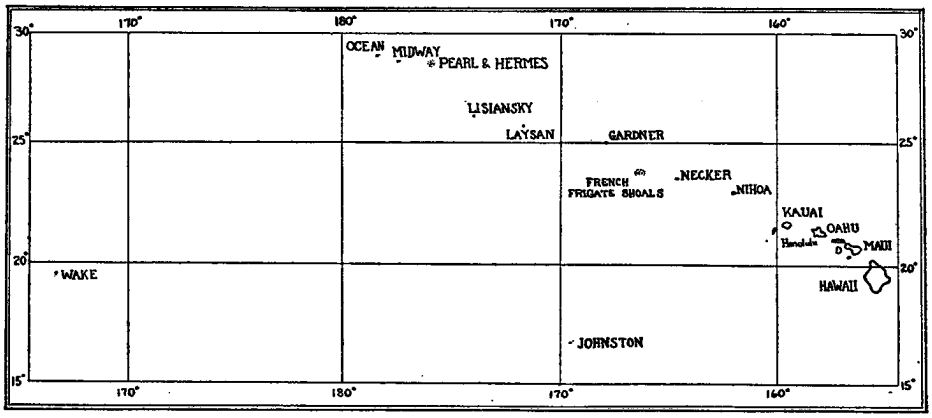


FIGURE 1. Map showing islands visited by the Tanager Expedition.

The poorest type of insect fauna, as might be expected, was that found on the low sand islets, with a strictly limited flora, and without fresh, or even brackish water. Johnston Island, Lisiansky Island, Pearl and Hermes Reef, two islets of Ocean Island, and the wandering sand spits of French Frigate Shoals are of this type. In this class also might be placed Gardner Rock and La Perouse Rock, which are almost bare of vegetation.

A more advanced type of insect life was found on the larger coral and sand islets, such as the two islets of Midway, the main islet of Ocean, and Laysan (as it was formerly). These possess a few shrubs in addition to the usual herbs and grass. Laysan, which at present is nearly bare of vegetation, at one time supported a much heavier flora, as is shown by the remains of sandalwood trees, and by records of former Pritchardia groves. In 1912, Mr. Fullaway caught a much greater variety of insects than in 1923, among them several endemic species. Brackish water was found on Laysan and Midway islands and possibly could have beeen obtained on Ocean Island.

The high islands, Necker and Nihoa, possess an even more extensive flora, with its accompanying insect fauna. Nihoa has about twenty-two species of plants, including a few native Hawaiian forms and small groves of Pritchardia palms. Here in addition to the usual immigrant species of insects, were found what might be termed "native remnants."

The insect fauna of Wake Island was markedly different from that of the other islands visited. Both the fauna and the flora of this island are

South Pacific in character and closely resemble similar coral atolls to be found clear across the Pacific from the Carolines to the Tuamotus.

Not only are the insects closely associated with definite plants, or the presence or absence of certain types of vegetation; the presence of some species is dependent upon the presence or absence of certain other animals. Such species as *Dermestes cadaverinus,* various ants, diptera larvae, earwigs, and other scavangers, are found feeding on dead birds. Where the carcasses are cleaned up by hermit crabs, as on Wake Island these species are absent. The Mallophaga and Hippoboscidae are associated with different species of live birds.

Most of the insects found are forms widespread in the Pacific. Of the endemic insects, those on the outlying islands, except Wake Island, are related to species on the larger Hawaiian islands. Many of these native Hawaiian insects are quite distinct from forms found elsewhere, but they appear to have some affinity with the endemic species of the southwest Pacific islands.

## ECOLOGICAL FIELD NOTES

From the field notes made by D. T. Fullaway, the following comments have been taken:

> On Laysan Island there is an absence of grass, sedge or tall bushes of any kind, except two half dead hau bushes, some stunted ironwood trees, and two small coconut palms near the house, all of which are used by nesting birds. There are some patches of Sesuvium along the lake, and a few sprouting bushes of Scaevola, for the most part flattened and dead, and a large patch of wild tobacco. Grass clumps could be found by digging in the sand.
>
> It was apparent at once that a great change had come about on the island since 1912, or even 1916. Young Schlemmer said it was due to a severe sand storm. . . I believe the destruction of vegetation has been due to the rabbits.

Insects were collected from birds' nests, carcasses, under driftwood and rocks, about the dilapidated house, and on the Scaevola and tobacco. Mallophaga were found on the noddy tern, gray-back tern, sooty tern, and wedge-tailed shearwater. Hippoboscid flies were obtained from frigate bird nests.

Ocean Island is made up of three islets, the largest about 1300 yards long by 300 to 800 yards wide. It is low and sandy, with a barrier fringe of Scaevola surrounding a flat covered with low shrubs and herbs. The other two islets, at the southwest, are only sand spits.

Eastern islet of Midway Island is somewhat like Ocean, having a fringe of Scaevola enclosing a central open space. A grove of ironwood trees (*Casuarina equisitifolia*) had been planted at the eastern end, and a herd of donkeys live on the island.

Sand Island has been reclaimed and planted to trees and gardens with the help of soil imported from Honolulu. This fact and the presence of a small colony of persons at the cable station explain the presence of several species of insects undoubtedly introduced from Honolulu.

Pearl and Hermes Reef encloses three small islets. On the flat southeastern islet a number of rabbits and the remains of a camp were found. The vegetation includes two kinds of grass, patches of Sesuvium, some Tribulus vines, and three other species of small herbs. The two islets to the westward have patches of Scaevola and a slightly greater variety of plants, including Tribulus, Lepidium, Capparis, Sesuvium, two kinds of grass, and four or five other species of low plants.

On the islands of Laysan, Lisiansky, Pearl and Hermes Reef, and Gardner Rock, Dr. Ball and Major Grant obtained a few specimens, which indicated that the insect fauna of Lisiansky and Gardner is similar to that of other islets with scanty vegetation and no fresh water.

Lisiansky is a low, flat sand and coral island, similar to, but somewhat smaller than Laysan. In its center is a shallow depression, a dry lagoon. It is bare of vegetation except at the north end, where grows a small crescent-shaped patch of broad-leaved bunchgrass, in which were a few weeds. Rabbits, found on the island, were probably the cause of the denudation.

Gardner Rock consists of two nearly bare rocks, probably parts of a volcanic core. They rise in three small peaks, the highest of which is about 170 feet. The steep slopes are bare of vegetation except for small pockets of Sesuvium, and algae on the moist surfaces. Mites, spiders, centipedes and isopods were found among the rocks, and the cases of case-bearing moths were found attached to bare rock faces. Two small flies and an earwig were also procured.

Nihoa is a rocky, volcanic island, rising about 900 feet in a fairly steep slope on the south side, falling abruptly in a sheer cliff on the north side. It is about 1500 yards long (east and west), and from 300 to 1000 yards wide. The south slope has been eroded into a series of seven valleys, which lead into three small bays. This south slope is well covered with low vegetation: Chenopodium below, Sporobolus (bunch grass) above, with scattered areas of scrubby Euphorbia, Tribulus, Sida, and other shrubs and herbs, about twenty-two in all. Some of the valleys contain small groves of Pritchardia palms. Small terraces, house sites, and the remains of walls, suggest former occupancy by man.

Lying about 120 miles W. N. W. of Kauai, Nihoa Island possesses the greatest number of endemic species found on any island visited by the Tanager Expedition. The close relationship of these species to forms on

Kauai is suggestive. The bulk of the specimens were obtained from the bunch grass, Euphorbia and Sida, although the palms yielded a few species and some collecting was done on all the plants, on dead birds, under stones and in the dirt. The cases of numerous Microlepidoptera (genus Hyposmocoma) were found on rock faces, but the prevailing high wind made night collecting with a light fruitless, the few specimens captured being much rubbed.

Necker Island, which lies 150 miles W. by N. of Nihoa, is about 1300 yards long and 200 yards wide, and reaches a height of 275 feet in a series of undulations. Like Nihoa, Necker Island is rocky and of volcanic origin. Its sides are steep, with terraces, some of them artificial with rows of stones set up by man. The surface is partly bare rock, and partly covered with sparse vegetation including bunch grass, Chenopodium, Tribulus, and Sesuvium. Insect life is abundant, but of very few species. Spiders, centipedes, and a native Elaterid beetle were found under stones. Several species of moths are present. And the Chenopodium is badly infested with a Nysius bug. The Rhyncogonus weevil is abundant about the roots of bunch grass, a situation similar to that in which another species is found on Nihoa Island.

French Frigate Shoals consists of a single steep rock, La Perouse Rock, bare of vegetation, covered with bird guano, about 120 feet high; and thirteen small sand spits, enclosed in a crescent-shaped reef. Most of the sand spits have one or more species of plants on them, although one or two of them are bare. The vegetation consists of Lepturus (bunch grass), Boerhaavia (creeper), Portulaca (pig weed), Tribulus, Chenopodium (low shrub), and Ipomoea (morning glory vine). The usual insects were found associated with the plants and dead birds. Crickets, spiders, and centipedes were found in a pile of rotting boards. The sand islets have the appearance of being washed from place to place within the reef, and most of them could easily be washed over by heavy seas at time of storm. These islets lie 80 miles W. by N. of Necker.

Johnston Island is a low sand and coral island, 717 miles W. S. W. from Honolulu. It is 800 yards long, about 200 yards wide, and reaches a height of 48 feet at one end. A mile and a half to the N. E. lies a small sand island, 200 yards in diameter. Both islets are enclosed by a semicircular reef, nearly continuous on the north, but open to the south. The vegetation consists of dry, brown bunch grass (Lepturus), with patches of Tribulus and a few plants of Boerhaavia.

Wake Island is an atoll, made up of three islets, which lie in a horseshoe curve, the two ends connected by a reef. The whole atoll measures about

two and a half miles by five miles. Behind a broad beach of sand and broken coral, with numerous coral boulders, rises a dense stand of low trees and shrubs. Among these are *Tournefortia argentata* Linn., *Pemphis acidula* Forst., *Cordia subcordata* Lam. (the Hawaiian kou), *Scaevola frutescens* (Mill.) Krause, *Pisonia grandis* (?) (the "Buka" tree of the south Pacific), and several shrubs and herbs. Most of these plants, and the accompanying insects, are to be met with on a typical South Pacific atoll. The islands are overrun by hermit crabs, which accounts for the scarcity of scavenger insects. The remains of wooden huts may help to explain the presence of certain flies and other insects associated with man. A few new species of insects were found on Wake Island, but the bulk of the insect fauna was of a widespread, South Pacific character.

ACKNOWLEDGMENTS

It is a pleasure to recognize the generous helpfulness of specialists who have shared in the task of identifying the extensive collections made on the Tanager Expedition. Among those to whom thanks are due are:

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## DISTRIBUTION OF INSECTS

### KEY TO COLLECTORS

R. Recorded by Hon. W. Rothschild.....1894
S. Collected by H. Schauinsland.....1896
W. Collected by G. P. Wilder.....1905
B. Collected by W. A. Bryan.....1911
F. Collected by D. T. Fullaway.....1912
K. Collected by Dr. Wm. Kerr.....1914
T. Collected by Tanager Expedition.....1923

| | Nihoa | Necker | French Frigate | Laysan | Lisianasky | Gardner | Pearl & Hermes | Midway | Ocean | Johnston | Wake |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HYMENOPTERA | | | | | | | | | | | |
| FORMICIDAE | | | | | | | | | | | |
| Ponera kalakauae Forel | | T | T | T | | | | | | | |
| Monomorium minutum Mayr | | T | | F | | | | T | | | |
| Monomorium floricola (Jerdon) | T | | | | | | | | | | T |
| Monomorium pharaonis (Linn.) | | | T | | | | | | | T | T |
| Monomorium destructor (Jerdon) | | | | T | | | | | | | |
| Monomorium gracillimum (Sm.) | | | | F | | | | | | | |
| Pheidole megacephala (Fabr.) | | | | | | | | T | | | |
| Cardiocondyla nuda var. minutior Forel | | T | T | | | | | T | | | |
| Tetramorium guineense (Fabr.) | T | T | | T | | | T | T | T | | |
| Tapinoma melanocephalum (Fabr.) | T | | | F | | | | T | T | | |
| Prenolepis longicornis (Fabr.) | T | | | | | | | | | | |
| Prenolepis bourbonica hawaiiensis Forel | | | | | | | | T | | | T |
| BETHYLIDAE | | | | | | | | | | | |
| *[6]Sclerodermus nihoaensis Timberlake | T | | | | | | | | | | |
| HYLAEIDAE | | | | | | | | | | | |
| *Nesoprosopis perkinsiana Timberlake | T | | | | | | | | | | |
| ICHNEUMONIDAE | | | | | | | | | | | |
| Angitia blackburni (Cameron) | T | | | | | | | | | | |
| BRACONIDAE | | | | | | | | | | | |
| Ischiogonus pallidiceps Perk | T | | | | | | | | | | |
| Chelonus blackburni Cameron | | | | F | | | T | T | | | |
| Chelonus sp. | | | | | | | | | | | T |
| ENCYRTIDAE | | | | | | | | | | | |
| Pauridia peregrina Timberlake | | | | | | | | T | | | |
| Anagyrus swezeyi Timberlake | | | | | | | | T | | | |
| EUPELMIDAE | | | | | | | | | | | |
| *Eupelmus nihoaensis Timberlake | T | | | | | | | | | | |
| *Eupelmus pacificus Timberlake | | | | | | | | | | | T |
| Eupelmus sp. | | | | F | | | | | | | |
| *Lepideupelmus robustus Timberlake | T | T | | | | | | | | | |
| *Lepideupelmus bryani Timberlake | T | | | | | | | | | | |
| Ectroma sp. | | | | F | | | | | | | |

[6] *Indicates species described in this Bulletin.

| | Nihoa | Necker | French Frigate | Laysan | Lisianshy | Gardner | Pearl & Hermes | Midway | Ocean | Johnston | Wake |
|---|---|---|---|---|---|---|---|---|---|---|---|
| EULOPHIDAE | | | | | | | | | | | |
| Secodella metallica (Ashmead) | T | | | | | | | | | | |
| *Elachertus advena Timberlake | | | | | | | | T | | | |
| *Pseudopheliminus vagans Timberlake | T | | | | | | | | | | |
| TRICHOGRAMMATIDAE | | | | | | | | | | | |
| *Aphelinoidea oceanica Timberlake | | | | | | | | | | | T |
| MYMARIDAE | | | | | | | | | | | |
| Polynema reduvioli Perkins | | | | | | | | T | T | | |
| Mymarid | | | | F | | | | | | | |
| Doubtful Identification | | | | | | | | | | | |
| Phaenopria sp. | | | | F | | | | | | | |
| Tropidopria sp. | | | | F | | | | | | | |
| COLEOPTERA | | | | | | | | | | | |
| CARABIDAE | | | | | | | | | | | |
| Undetermined species | | | | T | | | | | | | |
| STAPHYLINIDAE | | | | | | | | | | | |
| Medon debilicornis Wollaston | | | | | | | | | T | | |
| Atheta coriaria Kraatz | T | | | | | | | | | | |
| Undetermined species | | | | | | | | T | | | |
| Undetermined species | | | | T | | | | | | | |
| COCCINELLIDAE | | | | | | | | | | | |
| Coelophora inaequalis (Fab.) | T | | | | | | | | | | |
| Pullus kinbergi (Boh.) | T | T | T | F | | | T | | T | | |
| Nephus sp. near bipunctatis (Kug.) | T | | | | | | | | | | |
| Scymnus debilis Lec. | | | | F | | | | | | | |
| CUCUJIDAE | | | | | | | | | | | |
| Cryptamorpha desjardinsi Guen. | T | | | S | | | T | | T | | |
| Silvanus surinamensis Linn. | | | | T | | | | | | | |
| DERMESTIDAE | | | | | | | | | | | |
| Dermestes cadaverinus Fab. | T | T | T | SBTF | T | | T | T | | T | |
| Dermestes vulpinus Fab. | T | T | | | | | | | | | |
| Attagenus plebius Sharp | | | | B | | | | | | | |
| Labrocerus sp. | T | T | | | | | | | | | |
| HISTERIDAE | | | | | | | | | | | |
| Carcinops 14-striata Steph. | | | | | | | | | | T | |
| ELATERIDAE | | | | | | | | | | | |
| *Itodacnus novicornis Van Zwaluwenburg | | T | | | | | | | | | |
| Monocrepidius exsul Sharp | | | | | | | | T | | | |
| CLERIDAE | | | | | | | | | | | |
| Necrobia rufipes De Geer | T | | | | | | | | | | |
| ANOBIIDAE | | | | | | | | | | | |
| Lasioderma serricorne (Fab.) | | | | | | | | | | T | |

| | Nihoa | Necker | French Frigate | Laysan | Lisianasky | Gardner | Pearl & Hermes | Midway | Ocean | Johnston | Wake |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SCARABAEIDAE | | | | | | | | | | | |
| Saprosites pygmaeus Har. | | | | | | | | | T | | |
| Psammodius nanus De Geer | | | | T | | | | | T | | |
| CHRYSOMELIDAE | | | | | | | | | | | |
| Epitrix parvula (Fab.) | T | | | | | | | | | | |
| CERAMBYCIDAE | | | | | | | | | | | |
| Clytus crinicornis Chevr. | | | | S | | | | | | | |
| TENEBRIONIDAE | | | | | | | | | | | |
| Alphitobius piceus (Olivier) ? | | | | T | | | T | | | T | |
| Alphitobius diaperinus Panz. | | | | F | | | | | | | |
| Undetermined species | T | T | | | | | | | T | | |
| Tribolium ferrugineum (Fab.) | | | | SFT | | | | | | | |
| ANTHRIBIDAE | | | | | | | | | | | |
| Araeocerus fasciculatus (De Geer) | T | T | | | | | | | T | | |
| Undetermined species | | | | | | | | | | | T |
| CURCULIONIDAE | | | | | | | | | | | |
| Dryophthorus distinguendus Perk. | | | | T | | | | | | | |
| Dryotribus mimeticus Horn | | | T | T | | | | | | T | T |
| Dryotribus wilderi Perkins | | | T | T | | | T | W | T | | |
| *Dryotribus solitarius Perkins | | | | | | | T | | | | |
| *Pentarthrum halodorum Perkins | | | | | | | | T | T | | |
| Pentarthrum blackburni Sharp | | | | T | | | | | | | |
| *Pentarthrum pritchardiae Perkins | T | | | | | | | | | | |
| Macrancylus immigrans Perkins | | | | T | | | | | | T | |
| *Oodemas neckeri Perkins | | T | | | | | | | | | |
| *Oodemas breviscapum Perkins | T | | | | | | | | | | |
| Oodemas laysanensis Fullaway | T | T | | F | | | | T | | | |
| *Oodemas erro Perkins | T | | | | | | | | | | |
| *Rhyncogonus exsul Perkins | T | | | | | | | | | | |
| *Rhyncogonus biformis Perkins | | T | | | | | | | | | |
| Rhyncogonus bryani Perkins[1] | | | | B | | | | | | | |
| *Rhyncogonus fallax Perkins | | | | | | | | | | | T |
| *Sphaerorhinus pallescens Perkins | | | | | | | | | | | T |
| *Sphaerorhinus sordidus Perkins | | | | | | | | | | | T |
| *Acalles wilkesii Perkins | | | | | | | | | | | T |
| Calandra oryzae Linn. | | | | F | | | | | | | |
| PROTERHINIDAE | | | | | | | | | | | |
| *Proterhinus bryani Perkins | T | | | | | | | | | | |
| *Proterhinus abundans Perkins | T | | | | | | | | | | |
| DIPTERA | | | | | | | | | | | |
| CHIRONOMIDAE | | | | | | | | | | | |
| Undetermined species | | | | T | | | | | | | T |
| MYCETOPHILIDAE | | | | | | | | | | | |
| Neosciara molokaiensis (Grimshaw) | | | | | | | | T | T | | |

[1] Perkins, R. C. L., A new species of Otiorhynchine beetle of the genus Rhyncogonus Sharp from Laysan Island; Ent. Mo. Mag. p. 4, 1919.

| | Nihoa | Necker | French Frigate | Laysan | Lisianasky | Gardner | Pearl & Hermes | Midway | Ocean | Johnston | Wake |
|---|---|---|---|---|---|---|---|---|---|---|---|
| STRATIOMYIDAE | | | | | | | | | | | |
| Undetermined species | | | | T | | | | | | | |
| PHORIDAE | | | | | | | | | | | |
| Aphiochaeta scalaris Loew | | | | F | T | | T | | | | |
| ASILIDAE | | | | | | | | | | | |
| Undetermined species | | | | | | | | | | | T |
| DOLICHOPODIDAE | | | | | | | | | | | |
| Psilopus patellifer Thomson | | | | | | | | T | T | | |
| Hydrophorus praecox Lehm | | | | TF | | | | | | | |
| Paraphrosylus sp. | T | T | T | | T | | | | | | T |
| Undetermined species | | | | | | | | T | T | | |
| SYRPHIDAE | | | | | | | | | | | |
| Simosyrphus grandicornis (Macq.) | | | | | | | | | | T | |
| TACHINIDAE | | | | | | | | | | | |
| Frontina archippivora Williston | T | | | | | | | | | | |
| SARCOPHAGIDAE | | | | | | | | | | | |
| Undetermined species | T | T | T | T | | | T | T | | T | |
| MUSCIDAE | | | | | | | | | | | |
| Synthesiomyia nudiseta Van der Wulp | | | | | | | | | | | T |
| Musca vicina Macquart | | | | TF | | | T | T | | T | |
| CALLIPHORIDAE | | | | | | | | | | | |
| Lucilia sericata Meigen | T | | | | | | | | | | T |
| *Lucilia graphita Shannon | | | | TF | | | T | T | T | | |
| ANTHOMYIDAE | | | | | | | | | | | |
| Fannia canicularis Linn. | | | | | | | | | T | | |
| Ophyra chalcogaster Wiedemann | | | | | | | | T | | | |
| Lispe sp.[?] | | | | F | | | | | | | |
| EPHYDRIDAE | | | | | | | | | | | |
| Canace nudata Cresson | | | | | T | | | | | | T |
| Hecamede sp. | | | | | | | | | | | T |
| Scatella sexnotata Cresson | T | T | | FT | | | | | | | |
| BORBORIDAE | | | | | | | | | | | |
| Limosina venalicia Osten-Sacken | | | | T | | | | | | | |
| Leptocera spp. | | | | T | T | | | T | | | |
| DROSOPHILIDAE | | | | | | | | | | | |
| Undetermined Asteinae | T | | | | | | | | | | |
| AGROMYZIDAE | | | | | | | | | | | |
| Milichiella lacteipennis (Loew) | | | | | | | T | T | | | |
| Agromyza pusilla Meigen | T | | | | | | | | | T | |
| Undetermined Milichiinae | | | | | | | T | | | | T |
| Undetermined Milichiinae | T | | | | | T | | | | | |
| SAPROMYZIDAE | | | | | | | | | | | |
| Sapromyza sp. | | | | | | | | | | | T |

| | Nihoa | Necker | French Frigate | Laysan | Lisianisky | Gardner | Pearl & Hermes | Midway | Ocean | Johnston | Wake |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OSCINIDAE | | | | | | | | | | | |
| Hippelatus nigricornis var. flavus Thomson | | | | | T | | | T | T | | T |
| CHLOROPIDAE | | | | | | | | | | | |
| Microneurum signatum Wollaston | T | T | T | | T | | | | | | |
| HIPPOBOSCIDAE | | | | | | | | | | | |
| Olfersia spinifera Leach | T | T | T | T | T | | | | | T | T |
| LEPIDOPTERA | | | | | | | | | | | |
| NYMPHALIDAE | | | | | | | | | | | |
| Hypolimnas bolina Linn. | | | | | | | | | | | T |
| LYCAENIDAE | | | | | | | | | | | |
| Lycaena boetica (Linn.) | | T | | | | | | | | | |
| SPHINGIDAE | | | | | | | | | | | |
| Herse convolvuli (Linn.) | | | | | | | | | | | T |
| ARCTIIDAE | | | | | | | | | | | |
| Utetheisa pulchelloides Hampson | | | | | | | | | | | T |
| NOCTUIDAE | | | | | | | | | | | |
| Chloridea obsoleta (Fab.) | T | T | | | | | | | | | |
| Agrotis saucia (Hübner) | | | | W | | | | | | | |
| Euxoa kerri Swezey | | | KT | | | | | | | | |
| *Euxoa bryani Swezey | T | | | | | | | | | | |
| Euxoa eremioides (Meyrick) | | | | SW? | | | | | | | |
| | | | | BF | | | | | | | |
| Euxoa procellaris (Meyrick) | | | | SW? | | | | | | | |
| | | | | F | | | | | | | |
| Feltia dislocata (Walker) | | | | FT | | | | | | | |
| Peridroma fasciata Roths. | | | | R | | | | R | | | |
| Peridroma evanescens Roths. | | | | R | | | | | | | |
| Cirphis unipuncta (Haw.) | | | | R | T | | | | | | |
| Prodenia laysanensis Roths. | | | | R | | | | | | | |
| Prodenia litura (Fab.)? | | | | | | | T | W? | | | |
| Spodoptera mauritia (Boisduval) | | | FT | | | | T | | | | |
| Nesamiptis laysanensis Swezey | | | | F | | | | | | | |
| Plusia chalcites Esp. (verticillata Guen.) | | | | | | | | W | T | | |
| Achaea melicerta (Drury) | | | | | | | | | | | T |
| PHYCITIDAE | | | | | | | | | | | |
| Ephestia elutella Hüb. | | | | T | | | | | | | |
| CRAMBIDAE | | | | | | | | | | | |
| Talis hyacinthina Meyrick | T | | | | | | | | | | |
| PYRAUSTIDAE | | | | | | | | | | | |
| Hymenia recurvalis Fab. | T | T | T | SWF | | | | | | | |
| Omiodes laysanensis Swezey | | | | F | | | | | | | |
| Pyrausta dryadopa Meyrick | | | | F | | | | | | | |

| | Nihoa | Necker | French Frigate | Laysan | Lisiansky | Gardner | Pearl & Hermes | Midway | Ocean | Johnston | Wake |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PTEROPHORIDAE | | | | | | | | | | | |
| Trichoptilus oxydactylus (Walker) | T | | FT | W? | | | | | | T | |
| GELECHIIDAE | | | | | | | | | | | |
| Stoeberhinus testaceus Butler | | | | | | | | T | | | |
| TORTRICIDAE | | | | | | | | | | | |
| Crocidosema plebiana Z. | | T | T | F | | | | | | | |
| PLUTELLIDAE | | | | | | | | | | | |
| Plutella maculipennis Curtis | | | | | | | T | T | T | | T |
| HYPONOMEUTIDAE | | | | | | | | | | | |
| Hyposmocoma arenella Walsm. | T | | | | | | | | | | |
| " mimica Walsm. | | T | | | | | | | | | |
| " quinquemaculata Walsm. | T | T | | | | | | | | | |
| " notabilis Walsm. | | | | F | | | | | | | |
| " sp. | T | T | | | | | | | | | |
| " spp. | | | | | | T | | | | | |
| TINEIDAE | | | | | | | | | | | |
| Tineola uterella Walsm. | | | T | T | | | | | | T | |
| Monopis meliorella (Walker) | | T | | | | T | | | | | |
| *Ereunetis kerri Swezey | | | FKT | F | | | | | | | |
| *Ereunetis incerta Swezey | | | | T | | | T | | | T | |
| *Comodica fullawayi Swezey | | | | | | | | | T | | |
| Gracilaria marginestrigata Walsm. | T | | | | | | | | | | |
| CYGNODIIDAE | | | | | | | | | | | |
| Petrochroa dimorpha Busck | T | T | | F | | | | T | T | | T |
| *Petrochroa neckerensis Swezey | | T | | | | | | | | | |
| HEMIPTERA | | | | | | | | | | | |
| GERRIDAE | | | | | | | | | | | |
| Halobates sericeus Esch | | | | | | | | | | T | |
| ANTHOCORIDAE | | | | | | | | | | | |
| Triphleps persequens White | T | | | F | | | | T | T | | |
| MIRIDAE | | | | | | | | | | | |
| Opuna hawaiiensis Kirkaldy | | | | | | | | | | | T |
| Oromiris hawaiiensis Kirkaldy | | | | F | | | | | | | |
| Unidentified species | T | | | | | | | | | | |
| NABIDAE | | | | | | | | | | | |
| Reduviolus capsiformis (Germ.) | T | | T | | T | | | T | T | T | |
| " kahavalu Kirkaldy | T | | | | | | | | | | T |
| " blackburni (White) | | | | F | | | | | | | |
| LYGAEIDAE | | | | | | | | | | | |
| Nysius delectus White | | T | | | | | | | | | |
| Nysius spp. | T | | T | F | T | | T | T | | | |
| Nysius sp. | | | | | | | | | | | T |

| | Nihoa | Necker | French Frigate | Laysan | Lisianasky | Gardner | Pearl & Hermes | Midway | Ocean | Johnston | Wake |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HOMOPTERA | | | | | | | | | | | |
| CICADELLIDAE | | | | | | | | | | | |
| Nesosteles spp. | T | T | | | | | | | | | |
| Jassid | | | | | | | | | | | T |
| Jassid | | | | | | | | | | | T |
| DELPHACIDAE | | | | | | | | | | | |
| Kelisia paludum Kirkaldy | | | | | | | T | T | T | | |
| ALEYRODIDAE | | | | | | | | | | | |
| Aleyrodid | | | | | | | | | | | T |
| APHIDAE | | | | | | | | | | | |
| Aphis medicaginis Kock. | | | T | F? | T | | | | | T | T |
| ORTHOPTERA | | | | | | | | | | | |
| TETTIGONIIDAE | | | | | | | | | | | |
| Conocephalus saltator (Sauss.) | | | | | | | | T | | | |
| *Banza nihoa Hebard | T | | | | | | | | | | |
| GRYLLIDAE | | | | | | | | | | | |
| Gryllus oceanicus Le Guillou | | | T | | | | | | | | |
| Litogryllus flavipes (Sauss.) | | | | | | | | | | | T |
| BLATTIDAE | | | | | | | | | | | |
| Eoblatta notulata (Stal) | | | | | | | | | T | | |
| Blatella germanica (Linn.) | | | | T | | | | | | | |
| Cutilia soror (Brunner) | T | | | F | | | | | T | T | T |
| Periplaneta americana (Linn.) | T | T | T | F | | | | T | | T | |
| Periplaneta australasiae (Fab.) | T | | | | | | | | T | | |
| Pycnoscelus surinamensis (Linn.) | T | | T | F | | | T | | T | T | T |
| DERMAPTERA | | | | | | | | | | | |
| Euborellia annulipes (Lucas) | T | T | T | F | | | T | T | | T | |
| Anisolabis maritima (Gene) | | | T | TF | T | T | T | | T | T | T |
| THYSANURA | | | | | | | | | | | |
| Undetermined species | T | T | | T | | | | T | | | T |
| COLLEMBOLA | | | | | | | | | | | |
| Undetermined species | | | | | | | | T | | | |
| ISOPTERA | | | | | | | | | | | |
| Cryptotermes sp.? | | | | T | | | | | | | |
| Unidentified species | | | | | | | | | | | T |
| NEUROPTERA | | | | | | | | | | | |
| Chrysopa sp. | | | | | | | T | T | T | | |
| CORRODENTIA | | | | | | | | | | | |
| Psocids | T | T | | | | | | T | T | | T |

| | Nihoa | Necker | French Frigate | Laysan | Lisianasky | Gardner | Pearl & Hermes | Midway | Ocean | Johnston | Wake |
|---|---|---|---|---|---|---|---|---|---|---|---|
| THYSANOPTERA | | | | | | | | | | | |
| Thrip | | | | | | | | | T | | |
| EMBIIDINA | | | | | | | | | | | |
| Oligotoma insularis McLach.? | T | T | | T | | | | | | | |
| CHILOPODA | | | | | | | | | | | |
| LITHOBIIDAE | | | | | | | | | | | |
| *Onebius moananus Chamberlin | | | | | | | | | T | | |
| SCHENDYLIDAE | | | | | | | | | | | |
| *Nyctungius bryanus Chamberlin | | T | | | | | | | | | |
| ORYIDAE | | | | | | | | | | | |
| Orphnaeus brevilabiatus (Newport) | | | | | | | | | | | T |
| GEOPHILIDAE | | | | | | | | | | | |
| *Honuaphilus alohanus Chamberlin | | | | T | | | T | | T | T | |
| MECISTOCEPHALIDAE | | | | | | | | | | | |
| Mecistocephalus spissus Wood | | T | | | | | | | | | |