

## Moths of a Small Island on the Coast of Georgia

(Lepidoptera, Heterocera)

by

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**Abstract:** The Atlantic coast of Georgia in the United States of America consists of a large number of islands partially or completely surrounded by salt marshes; the islands vary in size from less than one hectare to about 50 km<sup>2</sup> and lie in a region of subtropical climate. This paper gives the results of a faunal study of the moths of Kittles Island in McIntosh Co., GA undertaken between 1997 and 2004. No previous studies of the moth fauna of the GA coastal region appear to have been published. In this study 314 species were identified; this fauna was compared to the extensive collections made by DOMINICK at McClellanville on mainland coastal South Carolina, about 220 km north of Kittles Island. It was found that 45 species (14%) of the Kittles Island fauna are unrecorded at the South Carolina site.

### Introduction

In the United States of America, the coast of the state of Georgia (GA) stretches about 230 km from Savannah at the border with South Carolina, to Jacksonville, Florida on the south. This coastline consists of a series of eight barrier islands of 8 to 25 km in length, separated by wide ocean inlets and tidal rivers. Between these barrier islands and the continental mainland lies a 3–10 km wide zone of salt marshes and a complex network of tidal streams. The marshes are completely flooded at high tide. This tidal zone is littered with hundreds of islands ranging from tiny (ca. 0.2 hectare) "hammocks" to larger islands up to 200 hectares. The eight large barrier islands have undergone extensive development for the most part, but large parts of three (Wassaw, Sapelo, and Cumberland Islands) have been retained as nature preserves. In contrast to the larger barrier islands, the much smaller marsh islands are often difficultly accessible and many remain undeveloped. The barrier islands and most of the larger marsh islands were partially cleared for production of the valuable "Sea Island" cotton in the early 1800's, but after the American Civil War of 1861–1865 the region was depopulated and agriculture was largely abandoned until the present day. The geography and history of this island zone were studied by VANSTORY (1965) and by SULLIVAN (1990). The geological history and biology (excluding entomology) were reviewed by SCHOETTLE (1996).

This coastal zone of Georgia has a decidedly subtropical aspect that is not apparent even as little as 10–15 km inland, and the rigors of a saline and windy environment and sandy soil add to the warm and humid climate to produce an unusual biotope for this latitude. Furthermore, very little data on the Lepidoptera of this region has been published. HARRIS (1972) reported on the Rhopalocera of the region, but careful examination of his records indicates that the coastal zone records came almost entirely from the readily accessible, but much disturbed, developed barrier islands such as Tybee, St. Simons, and Jekyll Islands. OPLER's County Atlas of

North American Butterflies (1983) and the related Moths of North America website (FERGUSON et al., 1999) disclose the same situation: records heretofore came only from the developed barrier islands which are popular holiday destinations. It appears that no faunal study of the moths from any site on the Georgia coast has ever been published.

### Study Site

Kittles Island lies at 31° 27' 30" N, 81° 21' 20" W, in McIntosh County, Georgia, about 25 km north of the town of Brunswick and 90 km south of the city of Savannah. The island consists of approximately 10 hectares of land elevated 1–2 meters above sea level. It is connected to the mainland by a ca. 1 km causeway and is surrounded by salt marsh and a deep-water tidal river (col. pl. XXV, figs. 1, 2). The climate of this area is subtropical, average maximum and minimum temperatures being in July, 31.7 °C and 26.5 °C, and in January 20.6 °C and 7.2 °C. Light frosts occur several times each winter, but hard freezes are rare. Long-term average annual rainfall is about 130 cm, although a period of marked reduction in rainfall occurred in 2001–2004.

The vegetation of Kittles Island is typical of the coastal barrier and marsh islands (col. pl. XXV, figs. 3, 4). Palms (*Sabal palmetto* and *Serenoa repens*) form a prominent part of the landscape, while the larger trees include live oak (*Quercus virginiana*) and other oak species (*Quercus laurifolia* and *Q. nigra*), pines (*Pinus* spp. including *elliotti*, *taeda*, and *palustris*), bays (*Persea borbonia*), sweet gum (*Liquidambar styraciflua*), red cedar (*Juniperus virginiana*), persimmon (*Diospyros virginiana*) and magnolia (*Magnolia virginiana*). The moss-like bromeliad *Tillandsia usneoides* drapes many of the larger tree branches. The salt marsh is for the most part filled with *Spartina alterniflora* and *S. patens*, and such salt-tolerant plants as *Salicornia virginica*, *Batis maritima*, and *Borrichia frutescens* occur at the edge of the marsh. Introduced elements of the flora include *Citrus* spp., *Cycas revoluta*, *Nerium oleander*, *Lantana camara*, figs (*Ficus* spp.) and loquat (*Eriobotrya japonica*). Vegetation cover is quite heavy except in the several clearings occupied by houses, most of which are of recent construction.

### Methods

Construction of a vacation cottage on Kittles Island by the author in 1995–1996 provided an opportunity to conduct a faunal study of the moths of this typical small marsh island. Moth sampling was conducted on 15–20 nights/year beginning in March 1997 and ending in July 2004. Although some limited collecting has been done in December and February, most of the data was obtained in the months of March through November. No sampling was done in January in any year.

Sampling methods included the use of mercury-vapor lamps and UV “black lights” at a vertical sheet, a black-light Robinson-type bucket trap, fermented sugar-fruit baits in tropical-type bait traps, and pheromone traps for sesiids. Macromoths (and a small portion of the micromoths) were spread and determined using both literature and reference to the collections of Prof. JAMES ADAMS (Dalton State University, Dalton, GA), Prof. C. V. COVELL, Jr. (University of Kentucky, Lexington, KY), the Dominick collection at the University of South Carolina (Columbia,

SC), and the Florida State Collection of Arthropods (Gainesville, FL). Sesiids were determined by the late Mr. JOHN HOLOYDA of Chicago, IL. The nomenclature used is that of HODGES et al. (1983). Material collected on Kittles Island resides in the collection of the author and in the Florida State Collection of Arthropods in Gainesville, FL.

## Results and Discussion

Approximately 360 species of moths were collected during the study period of this paper. Of these, 46 species (principally micros) still await determination. The remaining 314 species are listed below, together with their observed flight period and additional comments. The locality data for all species listed is: USA: Georgia, McIntosh County, vic. Meridian, Kittles Island, 1997–2004, leg. J. A. HYATT.

It is interesting to compare the moth fauna of Kittles Island with that collected by R. DOMINICK at the Wedge Plantation in McClellanville, Berkeley County, South Carolina (WALLACE & VOGT, 2003). This site, about 220 km northeast of Kittles Island, is within a few kilometers of the Atlantic coast. Wedge Plantation differs from Kittles Island in being a mainland location characterized by freshwater and brackish water marshes (abandoned rice fields and cypress swamps). The rice fields and freshwater cypress swamps are replaced by tidal saltwater marshes at Kittles Island. Whereas DOMINICK found about 1000 species of moths at McClellanville over 10 years' sampling, I have only found about 360 on Kittles Island. The comparatively depauperate fauna of the Georgia marsh island can be attributed to its smaller size (ca. 10 hectares vs. a 600 hectare area sampled by DOMINICK), lack of mainland continuity, and more limited plant diversity due to the saline, windy, and occasionally dry conditions. For instance, the salt marsh that surrounds Kittles is populated largely by two plant species (*Spartina alterniflora* and *S. patens*), whereas the old rice field marshes at McClellanville contain a myriad of grass, sedge, and broad-leaved plants.

Despite the limited diversity of moth species, I have found that about 14% of the identified species on Kittles Island are absent from the McClellanville fauna. This can be attributed in part to the more southerly location of Kittles Island, and perhaps in part to the presence of saline-adapted plants absent at McClellanville. *Doryodes bistrialis* (Gey., 1832) (col. pl. XXVI, fig. 13) is an example of a *Spartina* feeder absent from Dominick's site. Moths which apparently find their northern distribution limit somewhere between Kittles Island and McClellanville include the Arctiids *Utetheisa bella* (L., 1758) (col. pl. XXVI, fig. 7), *Syntomeida ipomoeae* (Harr., 1839) (col. pl. XXVI, fig. 9), and *Syntomeida epilais* (Wlk., 1854) (col. pl. XXV, fig. 5, col. pl. XXVI, fig. 10). Nevertheless, the scarcity of species in such strong-flying groups as the Sphingidae and Catocaline Noctuids on Kittles Island is surprising.

## List of Species

### Family Tineidae

*Acrolophus plumifrontella* (Clem., 1859). June–July.  
*Acrolophus popeanella* (Clem., 1859). May–August.

### Family Psychidae

*Cryptothela gloverii* (PACK., 1869). September.

*Oiketicus abbotii* GRT., 1880. July.

### Family Oecophoridae

*Eupragia hospita* HODGES, 1969. May-August.

*Antaeotricha vestalis* (ZELL., 1873). May.

*Inga sparsiciliella* (CLEM., 1864). July.

### Family Coleophoridae

*Homaledra heptathalama* Bsk., 1900. September. Not reported by DOMINICK.

### Family Yponomeutidae

*Atteva punctella* (CRAM., 1781). April-December.

*Lactura pupula* (HBN., 1827-31). September. Not reported by DOMINICK.

*Urodus parvula* (H. EDW., 1881). April-August.

### Family Sesiidae

*Vitacea polistiformis* (HARR., 1854). September.

*Vitacea scepsiformis* (H. EDW., 1881). July.

*Synanthedon rubrifasciata* (H. EDW., 1881). July. Illustrated in col. pl. XXVI, fig. 1.

*Synanthedon decipiens* (H. EDW., 1881). July. Not reported by DOMINICK.

*Carmenta pyralidiformis* (WLK., 1856). August. Not reported by DOMINICK. Illustrated in col. pl. XXVI, fig. 2.

*Carmenta texana* (H. EDW., 1881). July. Not reported by DOMINICK. Illustrated in col. pl. XXVI, fig. 3.

### Family Cossidae

*Givira francesca* (DYAR, 1909). June-October.

*Prionoxystus robiniae* (PECK, 1818). May.

*Cossula magnifica* (STKR., 1876). May. Illustrated in col. pl. XXVI, fig. 4.

### Family Tortricidae

*Cydia ingens* (HEINR., 1926). June.

*Cydia anaranjada* (MILLER, 1959). June. Not reported by DOMINICK.

*Melissopus latiferreanus* (WLSTM., 1879). August.

*Choristoneura rosaceana* (HARR., 1841). May.

*Sparganothis sulfureana* (CLEM., 1860). July.

*Platynota exasperatana* (ZELL., 1875). July.

*Carolella sartana* (HBN., 1823). July.

### Family Zygaenidae

*Acoloithus falsarius* CLEM., 1860. August.

### Family Megalopygidae

*Megalopyge opercularis* (J. E. SMITH, 1797). May-July. Not reported by DOMINICK.

Family Limacodidae

- Lithacodes fasciola* (H.-S., 1854). July.  
*Apoda y-inversum* (PACK., 1864). April.  
*Apoda biguttata* (PACK., 1864). July.  
*Prolimacodes badia* (HBN., 1822). June.  
*Phobetron pitheciun* (J. E. SMITH, 1797). July.  
*Isa textula* (H.-S., 1854). April-August.  
*Euclea delphinii* (Bdv., 1832). September. Not reported by DOMINICK.

Family Pyralidae

- Synclita oblitalis* (Wlk., 1859). September.  
*Parapoynx maculalis* (CLEM., 1860). May  
*Parapoynx allionealis* Wlk., 1859. May--September.  
*Phlyctaenia coronata* (HUFN., 1767). May.  
*Achyra rantalis* (GN., 1854). September.  
*Pyrausta laticlavia* (G. & R., 1867). October.  
*Udea rubigalis* (GN., 1854). October-November.  
*Diacme elealis* (Wlk., 1859). October-November.  
*Samia ecclesialis* GN., 1854. September-December.  
*Nomophila nearctica* MUN., 1973. March.  
*Desmia funeralis* (HBN., 1796). March.  
*Hymenia perspectalis* (HBN., 1796). July.  
*Spoladea recurvalis* (F., 1794). September-October.  
*Apogeshna stenialis* (GN., 1854). September.  
*Blepharomastix ranalis* (GN., 1854). April, August.  
*Glyphodes sibillalis* Wlk., 1859. September-November.  
*Omiodes indicata* (F., 1775). December. Not reported by DOMINICK.  
*Palpita kimballi* MUN., 1959. July-November.  
*Palpita magniferalis* (Wlk., 1861). July.  
*Terastia meticulosalis* GN., 1854. August-October.  
*Agathodes designalis* GN., 1854. May-October.  
*Pleuroptya silicalis* (GN., 1854). September-October.  
*Herpetogramma bipunctalis* (F., 1794). June-September.  
*Herpetogramma thestealis* (Wlk., 1859). September.  
*Syngamia florella* (STOLL, 1781). October-December.  
*Crambus praefectellus* (ZINCK., 1821). October.  
*Crambus quinquareatus* ZELL., 1877. August.  
*Crambus satrapellus* (ZINCK., 1821). May.  
*Agriphila vulgivagella* (CLEM., 1860). April.  
*Pediasia trisecta* (Wlk., 1856). August.  
*Urola nivalis* (DRURY, 1773). July.  
*Herculia olinalis* (GN., 1854). June-August.  
*Clydonopteron tecomaee* RILEY, 1880. June. Not reported by DOMINICK.  
*Epipaschia zelleri* (GR., 1876). June. Not reported by DOMINICK.  
*Talulla atrifascialis* (HULST, 1886). May, October. Not reported by DOMINICK.  
*Tetralopha robustella* ZELL., 1848. June.

*Tetralopha asperatella* (CLEM., 1860). June. Not reported by DOMINICK.

*Galleria mellonella* (L., 1758). August.

*Dioryctria pseudotsugella* MUN., 1959. April. Not reported by DOMINICK.

*Dioryctria amatella* (HULST, 1887). May-October.

*Elasmopalpus lignosellus* (ZELL., 1848). September.

#### Family Pterophoridae

*Oidaematophorus balanotes* (MERY., 1908). July. An extremely large plume-moth, illustrated in col. pl. XXVI, fig. 5.

#### Family Geometridae

*Itame varadaria* (WLK., 1860). July.

*Semiothisa transitaria* (WLK., 1861). April-October.

*Semiothisa bicolorata* (F., 1798). March-November.

*Semiothisa continuata* (WLK., 1862). April-December.

*Glenoides texanaria* (HULST, 1888). July.

*Glena cribrataria* (GN., 1857). March.

*Anacamptodes vellivolata* (HULST, 1881). March.

*Anacamptodes ephyraria* (WLK., 1860). May. Not reported by DOMINICK.

*Anacamptodes defectaria* (GN., 1857). May-July.

*Anavitrinelia pampinaria* (GN., 1857). March.

*Cleora sublunaria* (GN., 1857). July.

*Epimecis hortaria* (F., 1794). March.

*Melanolophia canadaria* (GN., 1857). July.

*Lycia ypsilon* (S. A. FORBES, 1885). February-March.

*Hypagyrtis unipunctata* (HAW., 1809). September.

*Hypagyrtis esther* (BARNES, 1928). September.

*Phigalia titea* (CRAM., 1782). April.

*Thysanopyga intracta* (WLK., 1863). March, August.

*Thysanopyga proditata* (WLK., 1861). March. Not reported by DOMINICK.

*Lytrosis unitaria* (H.-S., 1854). March.

*Euchlaena obtusaria* (HBN., 1809-13). September.

*Euchlaena amoenaria* (GN., 1857). April.

*Clymatophora approximaria* HBN., 1812. April, September-November.

*Pero zaliissaria* (WLK., 1860). February-March.

*Pero honestaria* (WLK., 1860). September.

*Pero hubneraria* (GN., 1857). February.

*Nacophora quernaria* (J. E. SMITH, 1797). March.

*Metarranthis homuraria* (G. & R., 1868). April.

*Metarranthis obfirmaria* (HBN., 1823). February.

*Lambdina fiscellaria* (GN., 1857). May.

*Tacparia zalissaria* WLK., 1860. March.

*Nepytia semiclusaria* (WLK., 1863). May.

*Eusarca fundaria* (GN., 1857). April.

*Eusarca confusaria* (HBN., 1813). May.

*Eutrapela clemataria* (J. E. SMITH, 1797). February-May.

*Patalene olyzonaria* (WLK., 1860). June, October. Not reported by DOMINICK.  
*Prochoerodes transversata* (DRURY, 1770). April. Not reported by DOMINICK.  
*Nemoria lixaria* (GN., 1857). April-June.  
*Dichorda iridaria* (GN., 1857). September.  
*Synchloa frondaria* GN., 1858. May-June, October.  
*Idaea fruciferata* (PACK., 1873). June. Not reported by DOMINICK.  
*Idaea demissaria* (HBN., 1831). May, September.  
*Idaea violacea* (WLK., 1861). July.  
*Idaea tacturata* (WLK., 1861). August.  
*Pleuroprucha insularia* (GN., 1857). September-October.  
*Scopula limboundata* (HAW., 1809). May-June.  
*Leptostales pannaria* (GN., 1857). September.  
*Lophosus labeculata* (HULST, 1887). September.  
*Eulithis diversilineata* (HBN., 1813). May.  
*Hydriomena transfigurata* SWETT, 1912. March. Not reported by DOMINICK.  
*Anticlea multifera* (WLK., 1863). March. Not reported by DOMINICK.  
*Orthonama centrostrigaria* (WOLL., 1858). October-November.  
*Eupithecia miserulata* GR., 1863. October. Not reported by DOMINICK.  
*Dyspteris arbotivarria* (H.-S., 1855). July.

#### Family Mimallonidae

*Lacosoma chiridota* GR. 1864. April.  
*Cincinnus melsheimeri* (HARR., 1841). October.

#### Family Lasiocampidae

*Tolype minta* DYAR, 1906. July-November.  
*Artace cibraria* (LUNGH., 1825). May-July.  
*Phyllodesma occidentalis* (WLK., 1855). February.  
*Malacosoma americanum* (F., 1793). April-May.

#### Family Saturniidae

*Eacles imperialis* (DRURY, 1773). March-May. Illustrated in col. pl. XXVI, fig. 6.  
*Citheronia sepulcralis* G. & R., 1865. September.  
*Dryocampa rubicunda* (F., 1793). March.  
*Anisota virginiensis* (DRURY, 1773). July-August.  
*Automeris io* (F., 1775). April-July.  
*Antherea polyphemus* (CRAM., 1776). March-April.  
*Actias luna* (L., 1758). March-April, July.

#### Family Sphingidae

*Lapara coniferarum* (J. E. SMITH, 1797). October.  
*Enyo lugubris* (L., 1771). July-November.  
*Eumorpha pandorus* (HBN., 1821). July.  
*Sphecodina abbotti* (SWAINSON, 1821). May-July.  
*Amphion floridensis* B. P. CLARK, 1829. May-July.  
*Darapsa myron* (CRAM., 1780). April-September.

*Darapsa pholus* (CRAM., 1776). April-June.

*Xylophanes terfa* (L., 1771). September-October.

#### Family Notodontidae

*Datana contracta* WLK., 1855. August.

*Datana perspicua* G. & R., 1865. August-September.

*Nadata gibbosa* (J. E. SMITH, 1797). April.

*Peridea angulosa* (J. E. SMITH, 1797). October.

*Symmerista albifrons* (J. E. SMITH, 1797). September-October.

*Dasylophia anguinea* (J. E. SMITH, 1797). March.

*Macrurocampa marthesia* (CRAM., 1780). April, July, October.

*Heterocampa astarte* DOUBLEDAY, 1841. April-August.

*Heterocampa obliqua* PACK., 1864. June.

*Heterocampa umbrata* WLK., 1855. March.

*Heterocampa guttivitta* (WLK., 1855). March, October-December.

*Heterocampa biundata* WLK., 1855. July.

*Lochmaeus manteo* DOUBLEDAY, 1841. September.

*Schizura ipomoeae* DOUBLEDAY, 1841. August.

#### Family Arctiidae

*Crambidia pallida* PACK., 1864. July.

*Cisthene plumbea* STRETCH, 1885. July-August. Not reported by DOMINICK.

*Cisthene subjecta* WLK., 1854. September.

*Cisthene packardii* (GRT., 1863). September.

*Hypoprepia miniata* (KBY., 1837). September. Not reported by DOMINICK.

*Hypoprepia fucosa* HBN., 1827-31. April-June, October.

*Comachara cadburyi* FRANC., 1939. March.

*Utetheisa bella* (L., 1758). May, October-December. Not reported by DOMINICK. Illustrated in col. pl. XXVI, Fig. 7.

*Holmelina aurantiaca* (HBN., 1827-31). April-May, October.

*Estigmene acrea* (DRURY, 1773). February.

*Spilosoma virginica* (F., 1798). April.

*Hyphantria cunea* (DRURY, 1773). March.

*Epantheria scribonia* (STOLL, 1790). April-May.

*Apantesis vittata* (F., 1787). February, June.

*Halyssidota tessellaris* (J. E. SMITH, 1797). March-April, August.

*Dahana atripennis* GRT., 1875. July. A surprisingly rare moth, given the abundance of its bromeliad food plant, *Tillandsia usneoides*. Illustrated in col. pl. XXVI, fig. 8.

*Cisseps fulvicollis* (HBN., 1818). October-December.

*Cosmosoma myrandora* DYAR, 1907. September.

*Syntomeida ipomoeae* (HARR., 1839). October. Not reported by DOMINICK. Illustrated in col. pl. XXVI, fig. 9.

*Syntomeida epilais* (WLK., 1854). October. Not reported by DOMINICK. Larvae on introduced *Nerium oleander* (col. pl. XXV, fig. 5, col. pl. XXVI, fig. 10).

Family Lymantriidae

*Dasychira tephra* HBN., 1809. May.

Family Noctuidae

*Idia americalis* (GN., 1854). May-July, November.

*Idia aemula* HBN., 1813. November.

*Idia rotundalis* (WLK., 1866). May, August.

*Idia lubricalis* (GEY., 1832). June.

*Macrochilo orciferalis* (WLK., 1859). March.

*Macrochilo hypocrita* FERGUSON, 1982. May. Not reported by DOMINICK.

*Bleptina cardinalis* GN., 1854. April.

*Hypenula cacuminalis* (WLK., 1859). May. Not reported by DOMINICK.

*Renia adspersillus* (BOSC, 1800). March-April, November.

*Palthis angulalis* (HBN., 1796). May, October.

*Redectis vitrea* (GRT., 1878). April, September.

*Schrunkia macula* (DRUCE, 1891). October.

*Nigetia formosalis* WLK., 1866. May.

*Plathypena scabra* (F., 1798). September-November.

*Hemeroplanis scapulepes* (HAW., 1809). July-September.

*Hemeroplanis habitalis* (WLK., 1859). March.

*Pangrapta decoralis* HBN., 1818. March.

*Metalectra richardsi* BROWER, 1941. July.

*Arugisa latiorella* (WLK., 1863). September.

*Arugisa watsoni* RICHARDS, 1941. September. Not reported by DOMINICK.

*Scolecocampa liburna* (GEY., 1837). May.

*Hypsoropha monilis* (F., 1777). May.

*Phyprosopus callitrichoides* GR., 1872. September-November. Not reported by DOMINICK.

*Plusiodonta compressipalpis* GN., 1852. July-August.

*Anomis erosa* HBN., 1821. November. Not reported by DOMINICK.

*Anomis flava* (F., 1775). June.

*Litoprosopus futilis* (G. & R., 1868). June-July. Larvae are borers in *Sabal palmetto* palms. Illustrated in col. pl. XXVI, fig. 11.

*Diphthera festiva* (F., 1775). July-October. Illustrated in col. pl. XXVI, fig. 12.

*Metallata absumens* (WLK., 1862). September.

*Anticarsia gemmatalis* HBN. 1818. September-November. Not reported by DOMINICK.

*Panopoda rufimargo* (HBN., 1818). April, July.

*Panopoda repanda* (WLK., 1858). April-October.

*Phoberia atomaris* HBN., 1818. February.

*Cissusa spadix* (CRAM., 1780). February.

*Melipotis jucunda* HBN., 1818. July.

*Lesmone detrahens* (WLK., 1858). March-May, September.

*Selenisa sueroides* (GN., 1852). October-November.

*Metria amella* (GN., 1852). May-June.

*Pseudanthracia coracias* (GN., 1854). April.

*Zale lunata* (DRURY, 1773). April-July.

*Zale aeruginosa* (GN., 1852). July.

- Zale undularis* (DRURY, 1773). May. Not reported by DOMINICK.  
*Zale obliqua* (GN., 1852). April.  
*Zale helata* (SM., 1908). April. Not reported by DOMINICK.  
*Zale bethunei* (SM., 1908). July. Not reported by DOMINICK.  
*Allotria elonympha* (HBN., 1818). April-June.  
*Dysgonia smithii* (GN., 1852). December.  
*Parallelia bistriaris* HBN., 1818. March.  
*Euclidea cuspidea* (HBN., 1818). March.  
*Caenurgia chloropha* (HBN., 1818). February-April, July-August.  
*Mocis latipes* (GN., 1852). October-November.  
*Mocis marcida* (GN., 1852). November.  
*Mocis disseverans* (WLK., 1858). November.  
*Celiptera frustulum* GN., 1852. July.  
*Ptichodis vinculum* (GN., 1852). April-November.  
*Argyrostratis deleta* (GN., 1852). July.  
*Doryodes bistrialis* (GEY., 1832). March-December. Not reported by DOMINICK. Illustrated in col. pl. XXVI, fig. 13.  
*Catocala epione* (DRURY, 1773). June.  
*Catocala muliercula* GN., 1852. June. Illustrated in col. pl. XXVI, fig. 14.  
*Catocala maestosa* HULST, 1884. September.  
*Catocala lacrymosa* GN., 1852. June.  
*Catocala ilia* (CRAM., 1776). May-June.  
*Catocala amestris* STKR., 1874. June. A rare species, only one other Georgia record known.  
*Catocala coccinata* GR., 1872. June. Not reported by DOMINICK.  
*Catocala ultronia* (HBN., 1823). May-June.  
*Catocala similis* EDW. 1864. May.  
*Catocala micronympha* GN., 1852. May-June.  
*Catocala amica* (HBN., 1818). June-July.  
*Argyrogramma verruca* F., 1794). September. Illustrated in col. pl. XXVI, fig. 15.  
*Pseudoplusia includens* (WLK., 1858). September.  
*Marathyssa inficita* (WLK., 1865). May-June.  
*Paectes oculatrix* (GN., 1852). March.  
*Paectes abrostoloides* (GN., 1852). May.  
*Paectes nubifera* HAMP., 1912. November.  
*Meganola minuscula* (ZELL., 1872). March, July.  
*Nola sorghiella* RILEY, 1882. July.  
*Thioptera nigrofimbria* (GN., 1852). April-July.  
*Homophoberia apicosa* (HAW., 1809). March.  
*Tarachidia semiflava* (GN., 1852). August.  
*Tarachidia candefacta* (HBN., 1831). April.  
*Spragueia onagrus* (GN., 1852). August.  
*Bagisara repanda* (F., 1793). September. Not reported by DOMINICK.  
*Bagisara rectifascia* (GR., 1874). June.  
*Panthea furcilla* (PACK., 1964). October-December.  
*Acronicta americana* (HARR., 1841). October.  
*Acronicta afflcta* GR., 1864. March-April.

*Polygrammate hebraicum* HBN., 1818. March-July.  
*Eudryas unio* (HBN., 1827-31). April.  
*Meropleon cosmion* DYAR, 1924. April.  
*Chortodes enervata* (GN., 1852). May. Not reported by DOMINICK.  
*Phosphila miselioides* (GN., 1852). June-August.  
*Callopistria floridensis* (GN., 1852). June, September.  
*Callopistria granitosa* (GN., 1852). April.  
*Amphiptyra pyramidoides* GN., 1852. August.  
*Spodoptera frugiperda* (J. E. SMITH, 1797). August.  
*Spodoptera ornithogalli* (GN., 1852). August.  
*Elaphria fuscimacula* (GRT., 1881). November.  
*Elaphria chalcedonia* (HBN., 1803-8). May, September.  
*Elaphria festivoides* (GN., 1852). August.  
*Elaphria exesa* (GN., 1852). June. Not reported by DOMINICK.  
*Galgula partita* GN., 1852. October-November.  
*Platysenta videns* (GN., 1852). Spetember.  
*Platysenta mobilis* (WLK., 1857). November.  
*Platysenta sutor* (GN., 1852). May-September.  
*Emarginia percara* (MORR., 1875). September.  
*Stiriodes obtusa* (H.-S., 1854). July.  
*Amolita fessa* GRT., 1874. September-October.  
*Metaxaglaea viatica* (GRT., 1874). November. Not reported by DOMINICK.  
*Chaetaglaea tremula* (HARV., 1875). October-December.  
*Lacinipolia implicata* McD., 1937. November. Not reported by DOMINICK.  
*Pseudaletia unipuncta* (Haw., 1809). October.  
*Leucania linita* GN., 1852. February-October.  
*Leucania scirpicola* GN., 1852. November.  
*Morrisonia mucens* (HBN., 1827-31). March.  
*Agrotis ipsilon* (HUFN., 1766). July.  
*Agrotis subterranea* (F., 1794). March, October-December.  
*Anicla infecta* (OCHS., 1816). October-November.  
*Anomogyna elimata* (GN., 1852). November-December.  
*Abagrotis alternata* (GRT., 1864). December. Not reported by DOMINICK.  
*Heliothis zea* (BODDIE, 1850). July-October.  
*Schinia tuberculum* (HBN., 1827-31). September.  
*Schinia lynx* (GN., 1852). July, October. Not reported by DOMINICK.  
*Schinia rivulosa* (GN., 1852). September.  
*Schinia saturata* (GRT., 1874). October.  
*Schinia trifascia* HBN., 1818. October.

#### Acknowledgment

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## Explanation of colour plate XXV (p. 495):

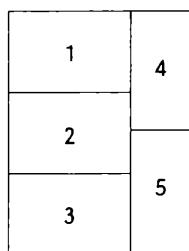
Fig. 1: Salt marsh seen from Kittles Island, McIntosh County, GA, USA.

Fig. 2: Marsh islands, McIntosh Co., GA, USA.

Fig. 3: Typical habitat, Kittles Island, McIntosh Co., GA, USA.

Fig. 4: Bait trap in *Quercus virginiana*; *Tillandsia usneoides* on branches. Kittles Island, McIntosh Co., GA, USA.

Fig. 5: Larva of *Syntomeida epilais* on *Nerium oleander*, USA: GA, McIntosh Co., Kittles Isl. 22-XI-03.



## Explanation of colour plate XXVI (p. 497):

Fig. 1: *Synanthedon rubrofasciata*, USA: GA, McIntosh Co., Kittles Isl., 2-VII-01, leg. J. HYATT.

Fig. 2: *Carmenta pyralidiformis*, USA: GA, McIntosh Co., Kittles Isl., 15-VIII-01, leg. J. HYATT.

- Fig. 3: *Carmenta texana*, USA: GA, McIntosh Co., Kittles Isl., 7-VII-01, leg. J. HYATT.
- Fig. 4: *Cossula magnifica*, USA: GA, McIntosh Co., Kittles Isl., 10-V-98, leg. J. HYATT.
- Fig. 5: *Oidaematophorus balanotes*, USA: GA, McIntosh Co., Kittles Isl., 8-IX-03, leg. J. HYATT.
- Fig. 6: *Eacles imperialis*, an unusually dark form. USA: GA, McIntosh Co., Kittles Isl., 20-V-01, leg. J. HYATT.
- Fig. 7: *Utethesia bella*, USA: GA, McIntosh Co., Kittles Isl., 9-V-99, leg. J. HYATT.
- Fig. 8: *Dahana atripennis*, USA: GA, McIntosh Co., Kittles Isl., 20-IX-01, leg. J. HYATT.
- Fig. 9: *Syntomeida ipomoeae*, USA: GA, McIntosh Co., Kittles Isl., 4-X-99, leg. J. HYATT.
- Fig. 10: *Syntomeida epilaus*, USA: GA, McIntosh Co., Kittles Isl., 21-X-00, leg. J. HYATT.
- Fig. 11: *Litoprosopus futilis*, USA: GA, McIntosh Co., Kittles Isl., 18-VII-02, leg. J. HYATT.
- Fig. 12: *Diphthera festiva*, USA: GA, McIntosh Co., Kittles Isl., 19-VII-02 leg. J. HYATT.
- Fig. 13: *Doryodes bistrialis*, USA: GA, McIntosh Co., Kittles Isl., 6-X-03, leg. J. HYATT.
- Fig. 14: *Catocala muliercula*, USA: GA, McIntosh Co., Kittles Isl., 15-V-04 leg. J. HYATT.
- Fig. 15: *Argyrogramma verruca*, USA: GA, McIntosh Co., Kittles Isl., 17-IX-01, leg. J. HYATT.

1	2	3
4	5	6
7	8	9
10	11	12
13	14	15

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HYATT, J. A.: Moths of a Small Island on the Coast of Georgia (Lepidoptera, Heterocera).  
Atalanta 35 (3/4): 453-465.

Fig. 1: Salt marsh seen from Kittles Island, McIntosh County, GA, USA.

Fig. 2: Marsh islands, McIntosh Co., GA, USA.

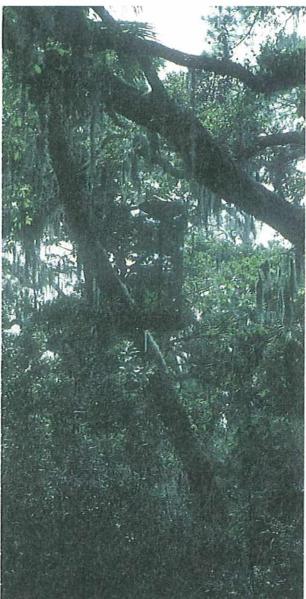
Fig. 3: Typical habitat, Kittles Island, McIntosh Co., GA, USA.

Fig. 4: Bait trap in *Quercus virginiana*; *Tillandsia usenoides* on branches. Kittles Island, McIntosh Co., GA, USA.

Fig. 5: Larva of *Syntomeida epilacus* on *Nerium oleander*, USA: GA, McIntosh Co., Kittles Isl. 22-XI-03.

1	4
2	5
3	

Colour plate XXV



HYATT, J. A.: Moths of a Small Island on the Coast of Georgia (Lepidoptera, Heterocera).  
Atalanta 35 (3/4): 453–465.

- Fig. 1: *Synanthedon rubrofasciata*, USA: GA, McIntosh Co., Kitchens Isl., 2-VII-01, leg. J. HYATT.  
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Fig. 15: *Argyrogramma verruca*, USA: GA, McIntosh Co., Kitchens Isl., 17-IX-01, leg. J. HYATT.

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Colour plate XXVI



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