CHewing Lice (Mallophaga)
FROM BIRDS IN FLORIDA:
A LISTING BY HOST

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ABSTRACT

A host list of chewing lice (Mallophaga) from birds in Florida is presented. This includes lice from 171 of the 446 native birds that occur in the state and represents information on 17 orders and 44 families of birds. Nothing is known for 3 orders and 14 families. Records on the domestic chicken, the Northern Jacana (an introduced exotic), and the Whooping Crane (captive-reared and subsequently released into Florida) are given also for comparative purposes.

RESUMEN

Se presenta una lista de huéspedes de piojos masticadores (Mallophaga) de aves de Florida. Esta lista incluye piojos de 171 de las 446 aves nativas que se encuentran en el estado, representando información de 17 órdenes y 44 familias de aves. Nada se sabe sobre 3 órdenes y 14 familias. Se presentan también, con propósitos comparativos, registros en el pollo doméstico, la Jacana del Norte (ave exótica introducida) y la Grulla Ausiliadora (criada en cautividad y posteriormente liberada en Florida).

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INTRODUCTION

Chewing lice (Mallophaga) are primarily parasites of birds although some species are found on mammals (Harwood and James 1979). They possess chewing type mandibles, have no wings, and are dorsoventrally flattened (Loomis 1978). Most bird-binders or others who work closely with wild or domestic birds are familiar with these arthropods and often observe them scurrying among the feathers of the bird being handled or crawling off of the bird onto their hands. These specialized insects are very host-specific especially at the host order level, and their distribution usually coincides with that of their host (Turner 1971). They spend their entire life on the host (Loomis 1978). Their eggs usually are laid on the flight feathers, although the exact location varies with the species of louse in question (Turner 1971). After hatching, the nymphs undergo three instars before becoming adults, the entire process taking from 3 to 4 weeks (Turner 1971, Loomis 1978). The normal life span of adults is several months on the avian host, but not over 5 or 6 days off of the host (Loomis 1978).

Transmission of chewing lice from bird to bird occurs through direct contact during mating and brooding and via various roosting and dusting activities (Turner 1971). In addition, an interesting process called phoresy has been documented in which chewing lice move from one host or locality to another by attaching to flying butterflies (Turner 1971). Some species of chewing lice feed on feathers or feather products (bars and barbules) while others utilize blood and serum (Turner 1971, Loomis 1978). Harmful effects have been reported for domestic poultry in which infestations of large numbers of lice cause extreme irritation that leads to restlessness, weight loss, and a decrease in egg production (Turner 1971, Harwood and James 1979). Such effects have not been recorded for wild birds; however, in a study of captive Rock Doves (Columba livia) it was concluded that "Louse-imposed feather damage may reduce the thermoregulatory ability of the host, which would presumably have a negative impact on host fitness." (Clayton 1991: 283). Sick or weakened birds often have larger numbers of lice than normal birds and this has been attributed to the inability of compromised birds to keep their lice in check by preening (Turner 1971). However, it is difficult to determine if a bird is in poor health because it has a large number of lice, or if the large number of lice resulted from poor health. Some species of chewing lice serve as biological vectors of filarial nematodes such as those found in swifts (Dutton 1905, Nelson 1962), geese and swans (Seggar et al. 1976), coots (Bartlett and Anderson 1989), and several shorebirds (Bartlett 1993).

In 1979, Harwood and James reported that there were about 3000 described species of chewing lice in the world. Allowing for work done since that estimate, this number is considerably higher now. Until recently very little has been known about the numbers and distribution of species of chewing lice that occur on birds in Florida. The oldest record of a chewing louse from a Florida bird is that of Timmermann (1971) in which Saemundssonia sagulata was described from specimens collected from a Florida Sandhill Crane (Grus canadensis pratensis) in 1882. Several lists have been published on the chewing lice of birds in North America including those by Kellogg (1899), Peters (1936), Malcomson (1960), and Emerson (1972). The publication by Peters (1936) is of particular interest because it contained records of lice from 53 species of birds in Florida, although he gave no specific data on localities and dates. Since 1936, only about a dozen or so publications on Florida bird lice have appeared, mostly in the 1980's and early 1990's. We have had the opportunity to collect and identify chewing lice from a large number and variety of birds throughout Florida during the past three decades. Inasmuch as most of the information is not available in published form, we felt that it would be useful to organize these data into a phylogenetic host list to provide a baseline and possible stimulus for further research on these interesting ectoparasites.

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METHODS

Lice were collected in various ways from living and dead birds by the authors and their colleagues during the past 30 years. Some were seen among the feathers of birds that had been captured alive for banding purposes or for various biological studies. Others were obtained from carcasses of birds that were killed by hunters or by collisions with vehicles on highways or found sick or dead in the field or washed up on beaches. Specimens usually were preserved in 70% alcohol (ethyl or isopropyl) and later mounted on slides for microscopic examination. In addition to our own collections, we obtained records from the Florida State Collection of Arthropods (FSCA, Division of Plant Industry, Florida Department of Agriculture and Consumer Services, Gainesville, Florida), the K. C. Emerson Entomological Museum (EEM, Oklahoma State University, Stillwater, Oklahoma), the U. S. National Museum of Natural History Entomological Collection (USNM, Smithsonian Institution, Washington, D. C.), and from the published literature. We attempted to ascertain the year and the county in Florida from which each collection was made and these are indicated on the following list. We indicate the source [publication or museum collection] in brackets after the year of collection, unless the data are our own, in which case nothing appears after the date. Representatives of specimens that we collected have been deposited in the FSCA and the EEM. Common and scientific names of birds and their respective families and orders and their sequence in the list follow the American Ornithologists' Union's Checklist of North American Birds published in 1983 and subsequent supplements (American Ornithologists' Union 1989, 1991, 1993).

RESULTS AND DISCUSSION

The list of verified birds in Florida totals 457 and includes 446 natives and 11 established exotics (Robertson and Woolfenden 1992). We were able to obtain records of one or more species of chewing lice from 171 of these avian species, representing 17 orders and 44 families that occur in the state. We have no data on 3 orders and 14 families of birds in Florida. This is not to suggest that these latter birds are free of chewing lice, but rather that they have not been studied within the state. Data were also available on domestic chickens, one introduced exotic species (the Northern Jacana), and the Whooping Crane (which had been hatched and reared in captivity and subsequently released into the wild in Osceola County), and these are included. In the list that follows the records are organized by orders and families of avian host. Genera and species of lice are treated alphabetically.
St. Lucie County - 1979
Naubates harrisoni Bedford 1930
Brevard County - 1972 [EEM]; 1993 [Foster et al. 1996]
Indian River County - 1978-79 [EEM]
Martin County - 1993 [Foster et al. 1996]
Sae mundssonia peust (Eichler 1949)
Brevard County - 1972 [EEM]; 1993 [Foster et al. 1996]
Martin County - 1978 [EEM]; 1993 [Foster et al. 1996]
Trabe cuclus hexagon (Waterston 1914)
Brevard County - 1972 [EEM]; 1993 [Foster et al. 1996]
Indian River County - 1978-79 [EEM]
Martin County - 1978 [EEM]; 1993 [Foster et al. 1996]
St. Lucie County - 1979 [EEM]
Audubon’s Shearwater, Puffinus herminieri Lesson
Austromonopon paululum (Kellogg and Chapman 1899)
Dade County - 1980 [EEM, USNM]
Halipeurus spadix Timmermann 1961
Brevard County - 1980 [EEM, FSCA, USNM]
Lee County - 1983 [FSCA]
Naubates harrisoni Bedford 1930
Dade County - 1980 [EEM]
Trabe cuclus mirabilis (Kellogg 1896)
Dade County - 1980 [EEM]
Hydrobatidae (Storm-Petrels)
Leach’s Storm-Petrel, Oceanodroma leucorhoa (Vieillot)
Halipeurus pelagicus (Denny 1842)
Martin County - 1993
PELECANIFORMES (TOTIPALMATE SWIMMERS)
Phaethontidae (Tropicbirds)
White-tailed Tropicbird, Phaethon lepturus Daudin
Sae mundssonia appalensis (Radow 1870)
Martin County - 1983 [FSCA]
Red-billed Tropicbird, Phaethon aethereus Linnaeus
Sae mundssonia phaetona (Osborn 1890)
Martin County - 1979 [EEM]
Sulidae (Boobies and Gannets)
Masked Booby, Sula dactylatra Lesson
Eid mamiella albescens (Piaget 1880)
Franklin County - 1983
Pectinopygus annulatus (Piaget 1880)
Franklin County - 1983
Brown Booby, Sula leucogaster (Boddart)

Pectinopygus garbei (Pessoa and Guimarães 1935)
St. Lucie County - 1981 [EEM, FSCA, USNM]
Northern Gannet, Morus bassanus (Linnaeus)
Eid mamiella puslulosa (Nitzsch 1866)
Dade County - 1957 [FSCA]
Lee County - 1981 [EEM, FSCA]
Martin County - 1978 [EEM]; 1993
Palm Beach County - 1988
Volusia County - 1927 [FSCA]
Pectinopygus bassani (O. Fabricius 1780)
Dade County - 1957 [FSCA]
Lee County - 1981 [EEM, FSCA]
Martin County - 1978 [EEM]; 1993
Palm Beach County - 1988, 1993
Volusia County - 1927 [FSCA, USNM]
Pelecanidae (Pelicans)
American White Pelican, Pelecanus erythrorhynchos Gmelin
Colpocephalum unci ferum Kellogg 1856
Clay County - 1982
Lee County - 1981 [EEM, FSCA]
Monroe County - 1957 [FSCA]
Orange County - 1972 [EEM]; 1990
Pectinopygus larddfi Elbel and Emerson 1956
Clay County - 1982
Lee County - 1981 [EEM]
Orange County - 1972 [EEM]; 1990
Piagetiella peralcls (Leidy 1878)
Lee County - 1993
Orange County - 1972, 1990
Brown Pelican, Pelecanus occidentalis Linnaeus
Colpocephalum occidentalis Price 1967
Brevard County - 1972
Indian River County - 1976 [EEM]
Lee County - 1980-82 and 1984-85 [EEM, FSCA]
Pinellas County - 1930 [Price 1967]; 1973
Pectinopygus occidentalis Thompson 1948
Brevard County - 1972 [EEM]
Indian River County - 1976 [EEM]; 1981 [EEM, FSCA]
Lee County - 1980 and 1985 [EEM]; 1981-82 [EEM, FSCA]; 1984 [FSCA]
Palm Beach County - 1973 [EEM]
Pinellas County - 1930 [USNM]; 1973
Piagetiella bursaeplecana (Perry 1876)
Pinellas County - 1930 [USNM]
Phalacrocoracidae (Cormorants)
Double-crested Cormorant, Phalacrocorax auritus (Lesson)
Eidmanniella pallidula (Rudow 1869)
Indian River County - 1974 [EEM]
Lee County - 1980 [EEM]; 1981 [EEM, FSCA]
Monroe County - 1992
"West coast" - 1973-76 [Threlfall 1982]
Pectinopygus farallonii (Kellogg 1896)
Brevard County - 1976 [Threlfall 1982]; 1977
Monroe County - 1989, 1992
Pinellas County - 1929, 1931 [USNM]; 1931 [EEM]
"West coast" - 1973-76 [Threlfall 1982]
Piagetiella incompuesta (Kellogg and Chapman 1899)
Lee County - 1984 [EEM, FSCA]
Monroe County - 1992
"West coast" - 1973-76 [Threlfall 1982]
No specific locality or date given [Price 1970]
Anhingidae (Darters)
Anhinga, Anhinga anhinga (Linnaeus)
Ciconiophilus decimfasciatus (Boisduval and Lacordaire 1835)
Indian River County - 1969 [EEM]
Pectinopygus anhingae (Peters 1935)
Indian River County - 1969 [EEM]
Lee County - 1982-83 [EEM]
Fregatidae (Frigatebirds)
Magnificus Frigatebird, Fregata magnificens Mathews
Colpocephalum spinum Kellogg 1899
Levy County - 1956 [EEM, FSCA]
Monroe County - 1977
Fregatiella aurifasciata (Kellogg 1899)
Levy County - 1956 [EEM, FSCA]
Pectinopygus fregatipogonus (Eichler 1943)
Levy County - 1956 [EEM, FSCA, USNM]
Monroe County - 1968 [EEM]

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CICONIIFORMES (HERONS, IBISES, STORKS, ALLIES)
Ardeidae (Herons, Egrets)
Great Blue Heron, Ardea herodias Linnaeus
Ardeicoa crassa Carriker 1960
Collier County - 1994
Glades County - 1976
Ciconiophilus decimfasciatus (Boisduval and Lacordaire 1835)
Alachua County - 1994
Brevard County - 1969
Collier County - 1993-94
Lee County - 1985 [EEM]
Monroe County - 1966 [EEM, USNM]; 1988-89, 1995
Okeechobee County - 1981
Osceola County - 1993
Great White Heron, Ardea herodias occidentalis (Audubon)
Ardeicoa crassa Carriker 1960
Collier County - 1994
Monroe County - 1995
Ardeidae sp.
Collier County - 1994
Dade County - 1988
Monroe County - 1988
Palm Beach County - 1988
Ciconiophilus decimfasciatus (Boisduval and Lacordaire 1835)
Collier County - 1998
Dade County - 1988
Monroe County - 1987-89, 1994-95
Wurdeman's Heron, Ardea herodias Linnaeus (a cross between the Great Blue Heron and the Great White Heron)
Ardeicoa crassa Carriker 1960
Monroe County - 1995
Great Egret, Casmerodius albus (Linnaeus)
Ardeicoa expalidii Blagoveshtchensky 1940
Collier County - 1994
Dade County - 1993-94
Monroe County - 1987-89, 1994
Okeechobee County - 1990
Ciconiophilus decimfasciatus (Boisduval and Lacordaire 1835)
Collier County - 1995
Monroe County - 1987-89, 1994
Okeechobee County - 1990
Palm Beach County - 1990
Snowy Egret, *Egretta thula* (Molina)
*Ardeicola expallidus* Blagoveshtchensky 1940
  Collier County - 1993
  Dade County - 1989
  Monroe County - 1987-88, 1990
  Okeechobee County - 1989-90
*Ciconiophilus decimfasciatus* (Boisduval and Lacordaire 1835)
  Collier County - 1993
  Glades County - 1990
  Indian River County - 1967; 1967-69, 1972 [EEM]
  Lee County - 1979 [EEM]
  Monroe County - 1987-88
  Okeechobee County - 1989-90
  St. Lucie County - 1966 [EEM]
Little Blue Heron, *Egretta caerulea* (Linnaeus)
*Ardeicola florida* Carriker 1960
  Lee County - 1983 [EEM, FSCA]
  Monroe County - 1987-89
  Palm Beach County - 1990
*Ardeophilus* sp.
  Indian River County - 1972 [EEM]
*Ciconiophilus decimfasciatus* (Boisduval and Lacordaire 1835)
  Collier County - 1992
  Dade County - 1994
  Indian River County - 1966 [EEM]; 1972, 1974
  Lee County - 1979 [EEM, FSCA]
  Monroe County - 1988
  St. Lucie County - 1966
Tricolored Heron, *Egretta tricolor* (Müller)
*Ardeicola nigra* Tuff 1967
  Dade County - 1989
  Glades County - 1990
  Indian River County - 1966
  Lee County - 1983 [EEM]
  Monroe County - 1987-90
*Ciconiophilus decimfasciatus* (Boisduval and Lacordaire 1835)
  Indian River County - 1968, 1972 [EEM]
  Lee County - 1982 [EEM, FSCA]; 1983 [EEM]
  Monroe County - 1970, 1987-90
  St. Lucie County - 1970 [EEM]
Reddish Egret, *Egretta rufescens* (Gmelin)
*Ardeicola nigra* Tuff 1967
  Monroe County - 1978 [Conti et al. 1986]; 1988

*Ciconiophilus decimfasciatus* (Boisduval and Lacordaire 1835)
  Monroe County - 1978 [Conti et al. 1986]
Cattle Egret, *Bubulcus ibis* (Linnaeus)
*Ardeicola expallidus* Blagoveshtchensky 1940
  Palm Beach County - 1989
*Ardeophilus* sp.
  Indian River County - 1972 [EEM]
*Ciconiophilus decimfasciatus* (Boisduval and Lacordaire 1835)
  Indian River County - 1969, 1972 [EEM]
  Palm Beach County - 1989
Green Heron, *Butorides virescens* (Linnaeus)
*Ciconiophilus butoridiphagus* Carriker 1964
  Indian River County - 1973
Black-crowned Night-Heron, *Nycticorax nycticorax* (Linnaeus)
*Ardeicola goisagi* Uchida 1953
  Lee County - 1989
*Ciconiophilus decimfasciatus* (Boisduval and Lacordaire 1835)
  St. Lucie County - 1966 [EEM]
Threskiornithidae (Ibises, Spoonbills)
  White Ibis, *Eudocimus albus* (Linnaeus)
*Ardeicola elongata* Carriker 1960
  Broward County - 1978
  Glades County - 1989
  Indian River County - 1972 [EEM]
  Lee County - 1981, 1983 [EEM]
  Levy County - 1988
  Monroe County - 1987
  Okeechobee County - 1990
*Ardeicola robusta* Tuff 1967
  Alachua County - 1971 [EEM, Forrester 1980]
  Broward County - 1978
  Glades County - 1989
  Indian River County - 1972 [EEM]
  Lee County - 1981 [EEM, FSCA], 1983 [EEM]
  Levy County - 1988
  Monroe County - 1987
  Okeechobee County - 1990
  Palm Beach County - 1989
*Colpocephalium fusconigrum* Giebel 1874
  Alachua County - 1971 [EEM]
  Broward County - 1978
  Glades County - 1989
  Indian River County - 1972 [EEM]
Lee County - 1981, 1983 [EEM]
Levy County - 1988
Monroe County - 1987, 1989
Okeechobee County - 1990
Palm Beach County - 1989

Ibidocerus hibaculatus (Mjöberg 1910)
Alachua County - 1971 [EEM]
Broward County - 1978
Indian River County - 1969, 1972, 1976 [EEM]
Lee County - 1981, 1983 [EEM]
Levy County - 1988
Monroe County - 1987, 1989
Okeechobee County - 1990
Palm Beach County - 1989
Pinellas County - 1932 [EEM]

Plegadiphis eudocimus Tuff 1965
Alachua County - 1971-72 [EEM, Forrester 1980]
Glades County - 1989
Indian River County - 1972 [EEM]
Lee County - 1981 [EEM, FSCA]; 1983 [EEM]
Levy County - 1988
Monroe County - 1987-88
Okeechobee County - 1990
Palm Beach County - 1989

Glossy Ibis, Plegadis falcinellus (Linnaeus)
Ardecola raphidius (Nitzsch 1866)
Glades County - 1971
Colopocephalus leptopygos Nitzsch 1874
Glades County - 1971
Ibidocerus bisignatus (Nitzsch 1866)
Glades County - 1971
Plegadiphis plegadis (Dubinin 1938)
Glades County - 1971

Roseate Spoonbill, Ajaia ajaja (Linnaeus)
Ardecola ajaja Carriker 1961
Monroe County - 1918 [EEM]; 1987-92
No specific locality or date given [Hajela and Tandan 1970]

Colopocephalus ajaja Ewing 1930
Lee County - 1982 [EEM]
Monroe County - 1987-88, 1990

Eucolopocephalus femorale (Piaget 1880)
Dade County - 1990
Monroe County - 1989-92

Ibidocerus iberiamericanus Eichler 1943
Dade County - 1990
Glades County - 1971 [EEM]
Lee County - 1982-83 [EEM]
Monroe County - 1918 [USNM]; 1987-90

Ciconiidae (Storks)
Wood Stork, Mycteria americana Linnaeus
Ardecola locatula (Gielbe 1874)
Alachua County - 1982
Broward County - 1963 [USNM]
Collier County - 1993-94
Highlands County - 1960 [Tuff 1967]
Indian River County - 1971
Lafayette County - 1984
Lee County - 1984; 1985 [EEM]; 1989
Monroe County - 1993
Orange County - 1984, 1994
Pasco County - 1975
St. Lucie County - 1978
No specific locality or date given [Kumar and Tandan 1971]

Ciconiophorus quadripustulatus (Burmeister 1838)
Collier County - 1992-94
Dade County - 1979, 1992-93
Lee County - 1985 [EEM]
Liberty County - 1991
Orange County - 1984, 1994
Pasco County - 1975

Colopocephalus mysticetus Price and Beer 1965
Indian River County - 1971 [EEM]
Lee County - 1985 [EEM]

Colopocephalus scalariforme Rudow 1866
Bradford County - 1981 [EEM]
Broward County - 1963 [Price and Beer 1965]
Collier County - 1979, 1989, 1993-94
Highlands County - 1960 [Price and Beer 1965]
Lee County - 1984; 1985 [EEM]
Orange County - 1984, 1994
Pinellas County - 1929 [Price and Beer 1965]

Neophilioperus heteropygus (Nitzsch 1874)
Bradford County - 1981 [EEM]
Collier County - 1989, 1993-94
Dade County - 1979, 1992-93
Indian River County - 1971 [EEM]
PHOENICOPTERIFORMES (FLAMINGOS)
Phoenicopteridae (Flamingos)
Greater Flamingo, Phoenicopterus ruber Linnaeus
Anaticola candidus (Rudow 1869)
Dade County - 1956 [EEM]

Colpocephalum heterosoma Piaget 1880
No specific locality or date given [Price and Beer 1965]

ANATIFORMES (SCREAMERS, SWANS, GEESE, DUCKS)
Anatidae (Ducks, Geese)
Fulvous Whistling-Duck, Dendrocygna bicolor (Vieillot)
Acidopoeetes rostratus (Rudow 1866)
Palm Beach County - 1984-85 [Forrester et al. 1994]; 1985 [EEM]

Anatoucus interrodes (Nitzsch 1818)
Palm Beach County - 1984-85 [Forrester et al. 1994]

Holomenopon leucoxanthum (Burmeister 1838)
Palm Beach County - 1984-85 [Forrester et al. 1994]

Trinoton aculeatum Piaget 1885
Palm Beach County - 1984-85 [Forrester et al. 1994]

Wood Duck, Aix sponsa (Linnaeus)
Anaticola crassicornis (Scopoli 1763)

Alachua County - 1976-77 [Thul 1985]
Hernando County - 1976-77 [Thul 1985]
Leon County - 1976-77 [Thul 1985]
Levy County - 1976-77 [Thul 1985]

Anatoucus dentatus (Scopoli 1763)
Dade County - 1927 [EEM, USNM]
Gadsden County - 1976-77 [Thul 1985]
Glades County - 1976-77 [Thul 1985]
Hamilton County - 1976-77 [Thul 1985]
Hernando County - 1976-77 [Thul 1985]
Leon County - 1976-77 [Thul 1985]

Holomenopon clauseni Price 1971
Alachua County - 1976-77 [Thul 1985]

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Dade County - 1927 [EEM, Price 1971]
Gadsden County - 1976-77 [Thul 1985]
Hamilton County - 1976-77 [Thul 1985]
Hernando County - 1976-77 [Thul 1985]
Leon County - 1976-77 [Thul 1985]
Levy County - 1976-77 [Thul 1985]

Trinoton querguedalae (Linnaeus 1758)
Alachua County - 1976-77 [Thul 1985]
Gadsden County - 1976-77 [Thul 1985]
Hernando County - 1976-77 [Thul 1985]
Jefferson County - 1926 [USNM]
Leon County - 1976-77 [Thul 1985]

American Black Duck, Anas rubripes Brewster

Trinoton querguedalae (Linnaeus 1758)
Dade County - 1919 [EEM]

Mottled Duck, Anas fulvigula Ridgway

Anatoucus interrodes (Nitzsch 1818)
Glades County - 1971

Trinoton querguedalae (Linnaeus 1758)
Glades County - 1970 [EEM]

Mallard, Anas platyrhynchos Linnaeus

Anaticola crassicornis (Scopoli 1763)
Dade County - 1919 [EEM]

Northern Pintail, Anas acuta Linnaeus

Trinoton querguedalae (Linnaeus 1758)
Dade County - 1928 [USNM]

Northern Shoveler, Anas clypeata Linnaeus

Anticola crassicornis Eicher 1954
Hamilton County - 1995

Anatoucus dentatus (Giebel 1874)
Hamilton County - 1995

Trinoton querguedalae (Linnaeus 1758)
Hamilton County - 1995

Ring-necked Duck, Aythya collaris (Donovan)

Anticola crassicornis Eicher 1954
"Florida" - 1983

Holomenopon leucoxanthum (Burmeister 1838)
Leon County - 1936 [USNM]
"Florida" - 1983

Trinoton querguedalae (Linnaeus 1758)
"Florida" - 1983

Lesser Scaup, Aythya affinis (Eyeton)
Trinoton querquedulae (Linnæus 1758)
Indian River County - 1973 Black Scoter, Melanitta nigra (Linnæus)
Anatocetus icterodes (Nitzsch 1818)
Lee County - 1982 [EEM, FSCA]
Anaticola crassicornis (Scopoli 1763)
Lee County - 1982 [EEM, FSCA]
Holomeronopon leucoxanthum (Burmeister 1838)
Lee County - 1982 [EEM, FSCA]
Surf Scoter, Melanitta perspicillata (Linnæus)
Anatocetus sp.
Dade County - 1919 [EEM]
Bufflehead, Bucephala albeola (Linnæus)
Anaticola crassicornis (Scopoli 1763)
Dade County - 1919 [USNM]
Red-breasted Merganser, Mergus serrator Linnaeus
Anaticola crassicornis (Scopoli 1763)
Dade County - 1919 [EEM]
Lee County - 1982 [FSCA]; 1986 [EEM]
Anatocetus icterodes (Nitzsch 1818)
Lee County - 1986 [EEM]
Anatocetus sp.
Indian River County - 1973 Trinoton querquedulae (Linnaeus 1758)
Lee County - 1982 [EEM, FSCA]; 1986 [EEM]
Monroe County - 1953 [FSCA], 1974 [EEM]
No specific locality or date given [Peters 1936]
Ruddy Duck, Oxyura jamaicensis (Gmelin)
Anaticola crassicornis (Scopoli 1763)
Lee County - 1982 [EEM, FSCA]
Holomeronopon leucoxanthum (Burmeister 1838)
Lee County - 1982 [EEM, FSCA]

FALCONIFORMES (DIURNAL BIRDS OF PREY)
Cathartidae (American Vultures)
Black Vulture, Coragyps atratus (Bechstein)
Colopocephalus fœtens (Eichler 1954)
Alachua County - 1953 [FSCA]
Leon County - 1936 [USNM]
Cuculphlus alternatus (Osborn 1902)
Alachua County - 1953 [FSCA]
Leon County - 1936 [USNM]
Pinellas County - 1929 [USNM]
Cuculphilus decoratus (Kellogg 1896)
Collier County - 1989
Dade County - 1988 [EEM]

Degeeriella guimardesi Clay 1958
Collier County - 1992
No specific locality or date given [EEM, Clay 1958]

Snail Kite, Rostrhamus sociabilis (Vieillot)

Colpocephalus turbinatus Denny 1842
Broward County - 1993
Indian River County - 1973 [Sykes and Forrester 1983]
Osceola County - 1995

Craspedorhynchus obscurus (Giebel 1874)
Broward County - 1993
Osceola County - 1995
Palm Beach County - 1993
No specific locality or date given [Malcomson 1960]

Falcoleipus quadrigrattatus (Giebel 1874)
Indian River County - 1973 [EEM, Sykes and Forrester 1983]; 1995

Mississippi Kite, Ictinia mississippiensis (Wilson)

Loemobothrium maximum (Scopoli 1763)
Leon County - 1926, 1960 [USNM]

Bald Eagle, Haliaeetus leucocephalus (Linnaeus)

Colpocephalus flavescens (deHaan 1829)
Alachua County - 1972 [EEM]
Leon County - 1938 [USNM]
Polk County - 1985 [B.N. Tuggle pers. comm.]

Colpocephalus turbinatus Denny 1842
Alachua County - 1994
Dade County - 1917 [EEM, USNM]
Lee County - 1980 [EEM]; 1985 [EEM, FSCA]

Craspedorhynchus haliei (Osborn 1896)
Alachua County - 1994
Dade County - 1917 [EEM]; 1973
Flagler County - 1978 [B.N. Tuggle pers. comm.]
Highlands County - 1981 [B.N. Tuggle pers. comm.]
Hillsborough County - 1948 [EEM, USNM]
Leon County - 1938 [USNM]
Orange County - 1979 [B.N. Tuggle pers. comm.]
Polk County - 1977; 1985 [B.N. Tuggle pers. comm.]
Seminole County - 1979 [B.N. Tuggle pers. comm.]
Volusia County - 1982 [B.N. Tuggle pers. comm.]
No specific locality or date given [Osborn 1896, Kellogg 1899]

Degeeriella discocephalus (Burmeister 1838)
Leon County - 1938 [USNM]

Kurodaia fulvofasciata (Piaget 1880)
Marion County - 1954 [FSCA]

Loemobothrium vulturis (J. C. Fabricius 1775)
Collier County - 1987
Dade County - 1917 [EEM]
Leon County - 1938 [USNM]

Craspedorhynchus sp.
Dade County - 1956 [FSCA]

Red-tailed Hawk, Buteo jamaicensis (Gmelin)

Colpocephalus napiforme Rudow 1869
Dade County - 1939 [USNM]
**Crax edwardsii** (Linnaeus 1758)
- Indian River County - 1977 [EEM]
- Levy County - 1988 [EEM]

**Chalcophaps indistincta** (Gmelin 1789)
- Okeechobee County - 1981 [EEM]; 1982 [EEM]
- Levy County - 1988 [EEM]
- Citrus County - 1988

**Corephotus xanthopterus** (Sclater and Wolf 1869)
- Levy County - 1978 [EEM]
- Citrus County - 1987

**Columba livia** (Linnaeus 1758)
- Levy County - 1988 [EEM]
- Manatee County - 1977

**Galliformes** (Gallinaceous Birds)

**Phasianidae** (Turkeys, Quail)

**Domestic Chicken** *Gallus gallus* (Linnaeus)
- Indian River County - 1977 [EEM]
- Levy County - 1978 [EEM]
- Citrus County - 1987

**Goniocotes pallescens** (DeGeer 1778)
- Indian River County - 1972 [EEM]

**Lophura nycthemera** (Linnaeus 1758)
- Indian River County - 1969

**Menocis splendidus** (Latham 1800)
- Indian River County - 1972 [EEM]
- Levy County - 1979

**Oxyderus potto** (Daudin 1802)
- Indian River County - 1968 [EEM]; 1972 [EEM]; 1974, 1977 [EEM]
- Levy County - 1978 [EEM]

**Oxyderus potto potto** (Cabanis 1849)
- Indian River County - 1973 [EEM]; 1977 [EEM]
- Levy County - 1978 [EEM]
- Citrus County - 1987

**Pavo cristatus** (Linnaeus 1758)
- Indian River County - 1977 [EEM]; 1978

**Penelope purpurascens** (Jonston 1721)
- Levy County - 1978 [EEM]
- Citrus County - 1987

**Perdix perdix** (Linnaeus 1758)

**Porphyrio martinica** (Linnaeus 1758)
- Levy County - 1978 [EEM]
- Citrus County - 1987

**Pousettus maximus** (Linnaeus 1758)
- Levy County - 1978 [EEM]; 1979 [EEM]; 1982 [EEM]; 1983 [EEM]; 1985 [EEM]

**Phasianus colchicus** (Linnaeus 1758)
- Levy County - 1978 [EEM]
- Citrus County - 1987

**Polioptila caerulea** (Linnaeus 1758)
- Levy County - 1977 [EEM]; 1978 [EEM]; 1982 [EEM]
- Citrus County - 1987

**Pouteria americana** (Linn. 1753)
- Levy County - 1978 [EEM]

**Quiscalus quiscula** (Linn. 1758)
- Levy County - 1978 [EEM]; 1982 [EEM]; 1983 [EEM]; 1984 [EEM]; 1985 [EEM]

**Tympanuchus cupido** (Linn. 1758)
- Levy County - 1978 [EEM]

**Tympanuchus cupido polymodeus** (Linn. 1758)
- Levy County - 1978 [EEM]; 1982 [EEM]; 1983 [EEM]; 1984 [EEM]; 1985 [EEM]
Escambia County - 1984
Gadsden County - 1982 [EEM]
Leon County - 1971 [USNM]
Levy County - 1977-78 [EEM]
Orange County - 1936 [EEM, USNM]
Sarasota County - 1970 [USNM]
No specific locality or date given [Emerson 1951]

Northern Bobwhite, Colinus virginianus (Linnaeus)

Colinicia numidiana (Denny 1842)
Charlotte County - 1974 [Doster et al. 1980]
Jefferson County - 1925 [Stoddard 1931]
Leon County - 1968 [USNM]; 1968-75 [Doster et al. 1980]
No specific locality or date given [Emerson 1951]

Goniodes ortygis Denny 1842
Charlotte County - 1974 [Doster et al. 1980]
Jefferson County - 1926 [USNM]
Leon County - 1927 [USNM]; 1968-75 [Doster et al. 1980]
Palm Beach County - 1969 [Doster et al. 1980]
No specific locality or date given [Emerson 1951]

Menacanthus pricei Wiseman 1968
Jefferson County - 1926 [EEM, Stoddard 1931]
Leon County - 1968 [USNM]; 1968-75 [Doster et al. 1980]

Oxypleurus clavatus (McGregor 1917)
Charlotte County - 1974 [Doster et al. 1980]
Jefferson County - 1926 [USNM]
Leon County - 1968 [USNM]; 1968-75 [Doster et al. 1980]; No date given [Stoddard 1931]
Palm Beach County - 1969 [Doster et al. 1980]

GRUIFORMES (CRANES, RAILS, ALLIES)

Rallidae (Rails, Gallinules, Coots)
Yellow Rail, Coturnicops noveboracensis (Gmelin)
Fulicoida sp.
Dade County - 1929 [EEM]
Clapper Rail, Rallus longirostris Boddart
Pseudomenopon scopulacorne (Denny 1842)
Lee County - 1982, 1984 [EEM]; 1982 [FSCA]
Volusia County - 1939 [USNM]

Rallicola californicus (Kellogg and Chapman 1899)
Lee County - 1982 [EEM, FSCA]
Volusia County - 1939 [USNM]
No specific locality or date given [EEM, Emerson 1955]

Sora, Porzana carolina (Linnaeus)
Fulicoida distincta Emerson 1960
Dade County - 1919 [USNM, USNM]; 1930 [EEM, Emerson 1960b]
Pseudomenopon scopulacorne (Denny 1842)
Dade County - 1919 [EEM, USNM]; 1925 [EEM]
Purple Gallinule, Porphyria martinica (Linnaeus)
Pseudomenopon pilosum (Scopoli 1763)
Lee County - 1982 [EEM, FSCA]
Rallicola elliotti Emerson 1955
Lee County - 1979 [EEM]; 1982 [EEM, FSCA]
Common Moorhen, Gallinula chloropus (Linnaeus)
Laemobothrion chloropelis (Schránk 1803)
Alachua County - 1971 [EEM]
Lee County - 1983 [EEM]
Pseudomenopon pilosum (Scopoli 1763)
Alachua County - 1971 [EEM]
Dade County - 1929 [EEM]
Lee County - 1983 [EEM, FSCA]
Rallicola minutus (Nitzsch 1866)
Dade County - 1929 [EEM]
Lee County - 1982 [FSCA]
American Coot, Fulica americana Gmelin
Fulicoida longipila (Kellogg 1896)
Lee County - 1979 [EEM]
Incilifrons transpositus (Kellogg 1896)
Alachua County - 1972
Lee County - 1979 [EEM]; 1981 [EEM, FSCA]
Laemobothrion atrum (Nitzsch 1818)
Alachua County - 1971
Pseudomenopon pilosum (Scopoli 1763)
Alachua County - 1971 [EEM]; 1972
Indian River County - 1973 [EEM]
Lee County - 1979, 1981 [EEM]
Rallicola advenus (Kellogg 1896)
Alachua County - 1972
Indian River County - 1973 [EEM]
Lee County - 1979, 1981 [EEM]; 1981-82 [FSCA]
Aramidae (Limpkins)
Limpkin, Aramus guarauna (Linnaeus)
Ibiseus scolopaceus Carriker 1947
Hernando County - 1929 [USNM]
Indian River County - 1971
Laemobothrium cubense Kellogg and Ferris 1915
Hernando County - 1929 [USNM]
Indian River County - 1971
Lake County - 1980 [Conti et al. 1985]
Marion County - 1975 [EEM, Conti et al. 1985]; 1976 [Conti et al. 1985]
Monroe County - 1929 [EEM]
"Florida" - 1921
No specific locality or date given [Peters 1936]
Rallincola funebris (Nitzsch 1866)
Indian River County - 1971 [EEM]
Lake County - 1980 [Conti et al. 1985]
Marion County - 1975 [EEM, Conti et al. 1985]; 1976 [Conti et al. 1985]
Monroe County - 1929 [EEM]
Gruidae (Cranes)
Sandhill Crane, Grus canadensis (Linnaeus)
Esthiopotherum brevicephalum (McGregor 1917)
Alachua County - 1973 [EEM]; 1974, 1976-77
Glades County - 1970 [EEM]
Osceola County - 1986, 1993-94
Sarasota County - 1972 [EEM]
Taylor County - 1986
Gruimenopon canadense Edwards 1949
Glades County - 1970 [EEM]
Osceola County - 1992-94
Taylor County - 1986
Volusia County - 1993
Heleonomus assimilis (Piaget 1880)
Alachua County - 1974, 1977
Glades County - 1970 [EEM]
Highlands County - 1979 [EEM, FSCA]
Osceola County - 1986, 1992-94
Saemundsonia sogulata Timmermann 1971
Alachua County - 1973 [EEM]; 1976-77
Osceola County - 1994
Sarasota County - 1972

FORRESTER ET AL.: CHEWING LICE FROM FLORIDA BIRDS

"Florida" - 1882 [Timmermann 1971]
Whooping Crane, Grus americana (Linnaeus)
Heleonomus assimilis (Piaget 1880)
Osceola County - 1994
(Host had been hatched and reared in captivity and was introduced into Osceola County in November of 1993; found dead and examined in September of 1994 at which time these lice were found.)

CHARADRIIFORMES (SHOREBIRDS, GULLS, ALLIES)
Charadriidae (Plovers)
Snowy Plover, Charadrius alexandrinus Linnaeus
Quadraiceps macrocephalus (Waterston 1914)
Hillsborough County - 1932 [USNM]
Saemundssonia platygaster pastoris Timmermann 1969
Hillsborough County - 1932 [EEM, USNM]
Wilson's Plover, Charadrius wilsonia Ord
Quadraiceps macrocephalus (Waterston 1914)
Pinellas County - 1934 [USNM]
Saemundssonia platygaster platygaster (Denny 1842)
Monroe County - 1939 [EEM]
Piping Plover, Charadrius melodus Ord
Quadraiceps macrocephalus (Waterston 1914)
Indian River County - 1967
Killdeer, Charadrius vociferus Linnaeus
Actornithophilus hoplopteri (Mjoberg 1910)
Brevard County - 1957 [FSCA]
Glades County - 1977, 1983
Austromepon aegialitis (Durrant 1906)
Dade County - 1930 [USNM]
Lee County - 1937 [USNM]
Quadraiceps hoepilus (Kellogg 1896)
Glades County - 1977, 1983
Dade County - 1930 [USNM]
Lee County - 1937 [USNM]
Saemundssonia conica conica (Denny 1842)
Dade County - 1930 [EEM]

Haematopodidae (Oystercatchers)
American Oystercatcher, Haematopus palliatus Temminck
Actornithophilus grandiceps (Piaget 1880)
Dade County - 1919 [EEM, USNM]
Quadraiceps auratus (delHaa 1829)
Dade County - 1919 [EEM, USNM]
**Saemundssonia haematopi** (Linnaeus 1758)
Dade County - 1919 [EEM, USNM]; 1929 [EEM]

Recurvirostridae (Stilts, Avocets)

Black-necked Stilt, **Himantopus mexicanus** (Müller)
**Quadracris hemichrous** (Nitzsch 1866)
Dade County - 1924 [EEM]
**Quadracris semissius** (Nitzsch 1866)
Dade County - 1924 [EEM]

American Avocet, **Recurvirostra americana** Gmelin

**Cirrhiphthirus testudinarius** (Children 1836)
Dade County - 1956 [FSCA]
**Quadracris zephyra** (Timmermann 1954)
Dade County - 1956 [FSCA]

Jacanidae (Jacanas)

Northern Jacana, **Jacana spinosa** (Linnaeus)

**Rallicolata exiguiformis** (Carriker 1944)
Dade County - 1930 [EEM, USNM]

Scolopacidae (Sandpipers, Phalaropes)

Willet, **Catoptrophorus semipalmatus** (Gmelin)

**Actornithophilus lacustris** Clay 1962
Lee County - 1981-82, 1985 [EEM]
Levy County - 1957 [FSCA]

**Austromenopon schlegeli** Timmermann 1954
Lee County - 1982, 1985 [EEM]
Levy County - 1957 [FSCA]

**Quadracris carrikeri** Hopkins and Timmermann 1954
Lee County - 1981-82, 1985 [EEM]
Pinellas County - 1930 [USNM]

Spotted Sandpiper, **Actitis macularia** (Linnaeus)

**Quadracris ratus** (Kellogg 1899)
Dade County - 1917 [EEM]
Whimbrel, **Numenius phaeopus** (Linnaeus)

**Saemundssonia s. scolopacisphaeopodis** (Schrank 1803)
No specific locality or date given [Peters 1936]

Ruddy Turnstone, ** Arenaria interpresp** (Linnaeus)

**Actornithophilus** sp.
No specific locality or date given [Peters 1936]

**Quadracris strepsilis** (Denny 1842)
Brevard County - 1957 [FSCA]

Red Knot, **Calidris canutus** (Linnaeus)

**Actornithophilus umbrinus** (Burmeister 1838)
Lee County - 1985-86 [EEM]
Pinellas County - 1973

Volusia County - 1938 [USNM]
No specific locality or date given [Peters 1936]

**Actornithophilus canutus** Price and Leibovitz 1969
Dade County - 1924 [EEM]

**Austromenopon lutescens** (Burmeister 1838)
Dade County - 1924 [EEM]
Pinellas County - 1973

**Cardiceps zonarius** (Nitzsch 1866)
Brevard County - 1957 [FSCA]
Lee County - 1983 [EEM]
Pinellas County - 1975-76
Volusia County - 1930, 1938 [USNM]
No specific locality or date given [Peters 1936]

**Luniceps doxi** Timmermann 1954
Brevard County - 1957 [FSCA]
Dade County - 1924 [EEM]
Lee County - 1983 [EEM]
Pinellas County - 1973, 1975-76

**Saemundssonia platygaster islandica** Timmermann 1951
Pinellas County - 1930 [USNM]

**Saemundssonia tringae** (O. Fabricius 1780)
Pinellas County - 1931 [USNM]

Sanderling, **Calidris alba** (Pallas)

**Actornithophilus umbrinus** (Burmeister 1838)
Indian River County - 1967, 1975
Lee County - 1985 [EEM]

**Cardiceps zonarius** (Nitzsch 1866)
Indian River County - 1975
Lee County - 1982 [EEM, FSCA]
No specific locality or date given [Peters 1936]

**Luniceps actophilus** (Kellogg and Chapman 1899)
Indian River County - 1975
Lee County - 1982 [EEM, FSCA]

Semipalmated Sandpiper, **Calidris pusilla** (Linnaeus)

**Actornithophilus umbrinus** (Burmeister 1838)
Volusia County - 1957 [FSCA]

**Luniceps cabanisi** Timmermann 1954
Volusia County - 1957 [FSCA]

Western Sandpiper, **Calidris mauri** (Cabanis)

**Actornithophilus umbrinus** (Burmeister 1838)
Indian River County - 1967, 1975 [EEM]

**Cardiceps zonarius** (Nitzsch 1866)
Lee County - 1982 [EEM]
Actornithophilus piceus lari (Packard 1870)
Lee County - 1980 [EEM]
Pinellas County - 1965
Austromenopon transversum (Denny 1842)
Lee County - 1980-81 [EEM, FSCA]
Quadraecps punctatus punctatus (Burmeister 1838)
Lee County - 1929 [EEM]
Lee County - 1980-81 [EEM]; 1980 [EEM, FSCA]; 1982 [FSCA]
Saanundssonia lari (O. Fabricius 1780)
Lee County - 1980 [EEM]; 1981 [EEM, FSCA]
Pinellas County - 1965
St. Lucie County - 1976-77 [EEM]
No specific locality or date given [Peters 1936]
Bonaparte’s Gull, Larus philadelphia (Ord)
Saanundssonia lari (O. Fabricius 1780)
St. Lucie County - 1973
Ring-billed Gull, Larus delawarensis Ord
Austromenopon transversum (Denny 1842)
Lee County - 1982 [FSCA]
Quadraecps punctatus sublingulatus Timmermann 1952
Lee County - 1980 [EEM]; 1982 [EEM, FSCA]
Saanundssonia lari (O. Fabricius 1780)
Indian River County - 1968, 1976 [EEM]
Lee County - 1980-81 [EEM]; 1982-83 [EEM, FSCA]
Levy County - 1957 [FSCA]
Herring Gull, Larus argentatus Pontoppidan
Actornithophilus piceus lari (Packard 1870)
Lee County - 1981 [EEM]
Volusia County - 1940 [EEM]
No specific locality or date given [Peters 1936]
Austromenopon transversum (Denny 1842)
Franklin County - 1937 [USNM]
Lee County - 1982 [FSCA]
Volusia County - 1940 [EEM]
Quadraecps ornatus striolatus (Nitzsch 1866)
Lee County - 1984 [FSCA]
No specific locality or date given [Peters 1936]
Quadraecps punctatus regresus Timmermann 1952
Lee County - 1984 [FSCA]
Volusia County - 1940 [EEM]
Saanundssonia lari (O. Fabricius 1780)
Brevard County - 1977 [EEM]
Franklin County - 1937 [USNM]
Lee County - 1981 [EEM]; 1984 [EEM, FSCA]
Orange County - 1978 [EEM]
Volusia County - 1940 [EEM]
No specific locality or date given [Peters 1936]
Great Black-backed Gull, Larus marinus Linnaeus
Saemundssonia lari (O. Fabricius 1780)
St. Lucie County - 1979 [EEM]
Caspian Tern, Sterna caspia Pallas
Quadriceps caspius (Giebel 1874)
Indian River County - 1975, 1978
Saemundssonia sp.
Indian River County - 1975 [EEM]; 1978
Royal Tern, Sterna maxima Boddart
Actornithophilus piceus piceus (Denny 1842)
Pinellas County - 1929 [USNM]
No specific locality or date given [Peters 1936]
Austromenopon atrofulvum (Piaget 1880)
Lee County - 1980-81 [EEM]
Quadriceps praestans (Kellogg 1896)
Brevard County - 1972 [EEM]
Lee County - 1978 [EEM]; 1980-82 [EEM, FSCA]
Nassau County - 1974 [EEM]
Saemundssonia laticaudata (Rudow 1869)
Brevard County - 1972
Indian River County - 1968, 1979 [EEM]
Lee County - 1980 [FSCA]; 1981-82, 1984 [EEM, FSCA]
Nassau County - 1974 [EEM]
Pinellas County - 1930 [FSCA, USNM]; No date given [Ward 1955]
St. Lucie County - 1972 [EEM]
Sandwich Tern, Sterna sandvicensis Latham
Austromenopon atrofulvum (Piaget 1880)
Lee County - 1980 [EEM]; 1981 [EEM, FSCA]
Quadriceps longirostris (Rudow 1869)
Lee County - 1981 [EEM, FSCA]
Saemundssonia laticaudata (Rudow 1869)
Lee County - 1982 [FSCA]
Common Tern, Sterna hirundo Linnaeus
Austromenopon atrofulvum (Piaget 1880)
Martin County - 1974 [EEM]
Quadriceps sellatus (Burmeister 1838)
Indian River County - 1967, 1981 [EEM, FSCA, USNM]
Martin County - 1974 [EEM]

Saemundssonia sternae (Linnaeus 1758)
Indian River County - 1967 [EEM]; 1981 [EEM, FSCA, USNM]
Martin County - 1974 [EEM]
Arctic Tern, Sterna paradisaea Pontoppidan
Saemundssonia lockeyi Clay 1949
Volusia County - 1977
Forster's Tern, Sterna forsteri Nuttall
Actornithophilus piceus piceus (Denny 1842)
Pinellas County - 1931 [USNM]
No specific locality or date given [Peters 1936]
Saemundssonia parvigenitalis Ward 1955
Pinellas County - 1931 [EEM]; No date given [EEM, Ward 1955]
Least Tern, Sterna antillarum (Lesson)
Actornithophilus piceus piceus (Denny 1842)
Pinellas County - 1976
Quadriceps nycthemerus (Burmeister 1838)
Indian River County - 1966 [EEM]
Pinellas County - 1976
Saemundssonia melanocephala (Burmeister 1838)
Collier County - 1955 [FSCA]
Indian River County - 1966 [EEM]
No specific locality or date given [Peters 1936]
Bridled Tern, Sterna anaethetus Scopoli
Saemundssonia meridiana Timmermann 1950
St. Lucie County - 1976
Sooty Tern, Sterna fuscata Linnaeus
Austromenopon atrofulvum (Piaget 1880)
Monroe County - 1977, 1978 [EEM]
Quadriceps bicostris (Giebel 1874)
Indian River County - 1970 [EEM]; 1974
Lee County - 1982 [EEM, FSCA]
Monroe County - 1963 [FSCA]; 1968, 1976-78 [EEM]
No specific locality or date given [Peters 1936]
Saemundssonia albeamarlensis (Kellogg and Kuwana 1902)
Indian River County - 1970 [EEM]
Lee County - 1982 [EEM, FSCA]
Monroe County - 1963 [FSCA]; 1968, 1976-77 [EEM]
Black Tern, Chlidonias niger (Linnaeus)
Quadriceps phaenoitus (Nitzsch 1866)
Dade County - 1919 [EEM]
Saemundssonia lobaticeps (Giebel 1874)
Dade County - 1919 [EEM]; 1955 [FSCA]
Brown Noddy, Anous stolichus (Linnaeus)
Actornithophilus incisus (Piaget 1880)
Lee County - 1985 [EEM, FSCA]
Quadraecps separatus (Kellogg and Kuwana 1902)
Lee County - 1983 [EEM]
Monroe County - 1977
Saemundsonia remotia Timmermann 1951
Monroe County - 1976 [EEM]
Black Skimmer, Rynchops nigra Linnaeus
Quadraecps elongatus (Piaget 1885)
Dade County - 1929 [USNM]
Indian River County - 1968, 1978 [EEM]
Nassau County - 1974 [EEM]
Orange County - 1983
Seminole County - 1983
St. John's County - 1964 [EEM, FSCA]
St. Lucie County - 1981 [FSCA]
Saemundsonia anisorhamphos Timmermann 1951
Lee County - 1983 [EEM]
Alcidae (Auks, Murres, Puffins)
Dovekie, Alle alle (Linnaeus)
Austromenopon mergui Timmermann 1954
St. Lucie County - 1966 [EEM]
Quadraecps klattii Timmermann 1954
St. Lucie County - 1966 [EEM]
Saemundsonia merguii (Denny 1842)
St. Lucie County - 1966 [EEM]

COLUMBIFORMES (PIGEONS, DOVES)

Columbidae (Pigeons, Doves)
Rock Dove, Columba livia Gmelin
Campanulotes compar (Burmester 1838)
Indian River County - 1972 [EEM]
Columbicola columbae (Linnaeus 1758)
Indian River County - 1972 [EEM]
Scaly-naped Pigeon, Columba squamosa Bonnaterre
Columbicola macrourae (Wilson 1941)
Dade County - 1930 [EEM]
Hohorstiella sp.
Dade County - 1930 [EEM]
White-crowned Pigeon, Columba leucocephala Linnaeus
Columbicola macrourae (Wilson 1941)
Monroe County - 1988

Physconellides sp.
Monroe County - 1988
White-winged Dove, Zenaida asiatica (Linnaeus)
Bonomiella sp.
Dade County - 1977-78 [EEM, Conti and Forrester 1981]
Columbicola macrourae (Wilson 1941)
Dade County - 1977-78 [Conti and Forrester 1981]
Hohorstiella paladinella Hill and Tuff 1978
Dade County - 1977-78 [EEM, Conti and Forrester 1981]
Hohorstiella sp.
Dade County - 1977-78 [Conti and Forrester 1981]
Physconellides wisemanii Emerson 1966
Dade County - 1977-78 [EEM, Conti and Forrester 1981]
Mourning Dove, Zenaida macroura (Linnaeus)
Bonomiella columbae Emerson 1957
Alachua County - 1977-78 [EEM, Conti and Forrester 1981]
Dade County - 1977-78 [EEM, Conti and Forrester 1981]
Columbicola macrourae (Wilson 1941)
Alachua County - 1977-78 [EEM, Conti and Forrester 1981]
Dade County - 1977-78 [EEM, Conti and Forrester 1981]
Hohorstiella paladinella Hill and Tuff 1978
Dade County - 1977-78 [Conti and Forrester 1981]
Hohorstiella sp.
Dade County - 1977-78 [Conti and Forrester 1981]
Physconellides zenaidaeae (McGregor 1917)
Alachua County - 1977-78 [EEM, Conti and Forrester 1981]
Dade County - 1919 [USNM]; 1928, 1978 [EEM]; 1977-78 [EEM, Conti and Forrester 1981]
No specific locality or date given [Hill and Tuff 1978]
Common Ground-Dove, Columbina passerina (Linnaeus)
Columbicola passerinae (Wilson 1941)
No specific locality or date given [Peters 1936]
Physconellides passerinae Emerson 1957
Dade County - 1939 [EEM]; No date given [USNM]
Lee County - 1936 [USNM]
No specific locality or date given [Hill and Tuff 1978]

PSITTACIFORMES (PARROTS, ALLIES)
Psittacidae (Lories, Parakeets, Macaws, Parrots) - No information available.

CUCULIFORMES (CUCKOOS, ALLIES)
Cuculidae (Cuckoos, Anis)
Black-billed Cuckoo, Coccyzus erythropthalmus (Wilson)
Cuculocola erythropthalmus Emerson 1964
Dade County - 1928 [EEM, Emerson 1964]
St. Lucie County - 1967

Yellow-billed Cuckoo, Coccyzus americanus (Linnaeus)
Cuculius sordidus (Kellogg and Kuhava 1902)
Indian River County - 1970, 1972, 1973

Cuculoecus coccygi (Osborn 1896)
Dade County - 1917 [EEM, USNM]
Lee County - 1986 [EEM]
St. Lucie County - 1973 [EEM]

STRIGIFORMES (OWLS)
Tytonidae (Barn Owls)
Barn Owl, Tyto alba (Scopoli)
Kurodaia subpachytraster (Piaget 1880)
Alachua County - 1983-84
Lee County - 1986 [EEM]

Strigidae (Typical Owls)
Great Horned Owl, Bubo virginianus (Gmelin)
Colpocephalum brachyosum Kellogg and Chapman 1902
Lee County - 1981 [EEM, FSCA]; 1983 [EEM]
Marion County - 1956 [EEM, Emerson 1961]
Kurodaia magna Emerson 1960
Dade County - 1917 [USNM]
Strigophilus oculatus (Budow 1870)
Marion County - 1956 [FSCA]

Strigophilus syrni (Packard 1873)
Alachua County - 1973
Jefferson County - 1981

Burrowing Owl, Speotyto cunicularia (Molina)
Colpocephalum pectinatum Osborn 1902
Hendry County - 1933 [USNM]
Sarasota County - 1918 [USNM]
No specific locality or date given [Peters 1936]

Strigophilus speotyi (Osborn 1896)
Collier County - 1933 [USNM, FSCA]
Hendry County - 1933 [USNM]
Lee County - 1989
Monroe County - 1988

Barred Owl, Strix varia Barton
Kurodaia magna Emerson 1960
Alachua County - 1976, 1985

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Hernando County - 1975
Hillsborough County - 1975
Marion County - 1982
Monroe County - 1980 [EEM]
Orange County - 1936 [USNM]
Taylor County - 1976

Strigophilus syrni (Packard 1873)
Alachua County - 1976-78, 1985
Dade County - 1917 [USNM]
Hendry County - 1984 [EEM, FSCA]
Hillsborough County - 1975-76
Leon County - 1960 [USNM]
Marion County - 1982
Monroe County - 1980 [EEM]
Orange County - 1936 [USNM]
Taylor County - 1976
No specific locality or date given [Clayton and Price 1984]

Short-eared Owl, Asio flammeus (Ponoppidan)
Strigophilus cursor (Burmester 1838)
Dade County - 1916 [USNM]

CAPRIMULGIFORMES (GOATSUCKERS, ALLIES)
Caprimulgidae (Goatsuckers) - No information available.

APODIFORMES (SWIFTS, HUMMINGBIRDS)
Apodidae (Swifts)
Chimney Swift, Chaetura pelagica (Linnaeus)
Dennys dubius (Kellogg 1896)
Dade County - 1926 [EEM]
Lee County - 1984 [EEM]
Leon County - 1936 [USNM]

Trochilidae (Hummingbirds) - No information available

CORACIFORMES (KINGFISHERS)
Alcedinidae (Kingfishers) - No information available

PICIFORMES (WOODPECKERS, ALLIES)
Piciidae (Woodpeckers, Allies)
Red-bellied Woodpecker, Melanerpes carolinus (Linnaeus)
Pycnonurus auritus (Scopoli 1763)
Alachua County - 1953 [FSCA]
"Shell Point" - 1936 [USNM]
Yellow-bellied Sapsucker, Sphyrapicus varius (Linnaeus)
Penenirmus auritus (Scopoli 1763)  
Dade County - 1917 [EEM, USNM]; 1918, 1926 [EEM]  
Pinellas County - 1930 [USNM]; 1964 [EEM]  
No specific locality or date given [Peters 1936]  

Hairy Woodpecker, Picoidees villosus (Linnaeus)  
Brueelia straminea (Denny 1842)  
Dade County - 1918 [EEM]  
Menacanthus picti (Denny 1842)  
Dade County - 1918 [EEM]  
Penenirmus auritus (Scopoli 1763)  
Dade County - 1926  
Red-cockaded Woodpecker, Picoidees borealis (Vieillot)  
Brueelia straminea (Denny 1842)  
Collier County - 1937 [USNM]  
Polk County - 1994  

Northern Flicker, Colanisus auratus (Linnaeus)  
Picicola porpina Dalglish 1699  
Dade County - 1916 [EEM, USNM]; 1917 [EEM]  
Indian River County - 1977  
Penenirmus jungeri (Kellogg 1896)  
Dade County - 1916 [EEM]; 1917 [USNM]  
Pileated Woodpecker, Dryocopus pileatus (Linnaeus)  
Menacanthus picti (Denny 1842)  
Indian River County - 1919 [USNM]  
Picicola marginata (Harrison 1916)  
Alachua County - 1994  

PASSERIFORMES (PASSERINE BIRDS)  
Tyrannidae (Tyrant Flycatchers)  
Great Crested Flycatcher, Myiarchus crinitus (Linnaeus)  
Philopterus sp.  
No specific locality or date given [Peters 1936]  

Alaudidae (Larks) - No information available.  

Hirundinidae (Swallows)  
Purple Martin, Progne subis (Linnaeus)  
Brueelia subis (Carriker 1963)  
Lee County - 1981 [EEM]  
Myrsidea dissimilis (Kellogg 1896)  
Duval County - 1982 [EEM, FSCA]  
Franklin County - 1980 [EEM, USNM]  
Indian River County - 1973  
Lee County - 1981 [EEM, FSCA]; 1986 [EEM]  
Wakulla County - 1981 [FSCA]  

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Tree Swallow, Tachycineta bicolor (Vieillot)  
Philopterus major (Kellogg 1896)  
Broward County - 1957 [FSCA]  
Dade County - 1917, 1928 [EEM]  
Seminole County - 1929 [FSCA]  
No specific locality or date given [Peters 1936]  

Bank Swallow, Riparia riparia (Linnaeus)  
Myrsidea latifrons (Carriker and Shull 1910)  
Dade County - 1926 [EEM]  
Philopterus sp.  
Dade County - 1928 [EEM]  

Barn Swallow, Hirundo rustica Linnaeus  
Myrsidea rustica (Giebel 1874)  
Dade County - 1926 [EEM]  
Philopterus microsomus (Tandar 1955)  
Dade County - 1926 [EEM]  

Corvidae (Jays, Crows)  
Blue Jay, Cyanocitta cristata (Linnaeus)  
Menacanthus eurytremus (Burmeister 1838)  
Highlands County - 1992  
Philopterus cristatus Malcolmson 1929  
Highlands County - 1992-94  
Myrsidea sp.  
Glades County - 1983  
Highlands County - 1994  

Scrub Jay, Aphelocoma coerulescens (Bosc)  
Myrsidea sp.  
Highlands County - 1982 [EEM]; 1992-93  
Martin County - 1963 [EEM]  
Philopterus sp.  
Highlands County - 1994  

American Crow, Corvus brachyrhynchos Brehm  
Myrsidea interrupta (Osborn 1886)  
Highlands County - 1982 [EEM, FSCA]  
Osceola County - 1933 [USNM]  
Pinellas County - 1929 [USNM]  
No specific locality or date given [Peters 1936]  
Philopterus ocellatus (Scopoli 1763)  
Pinellas County - 1929 [FSCA]  
Fish Crow, Corvus ossipagus Wilson  
Colpocephalum fregil Denny 1842  
Dade County - 1937 [EEM, USNM]
Myrsidea timmermanni timmermanni Klockenhoff 1974
Dade County - 1937 [EEM, USNM]
Indian River County - 1971
Lee County - 1981 [EEM, FSCA]
Pinellas County - 1929-30 [USNM]

Philopterus sp.
No specific locality or date given [Peters 1936]

Paridae (Titmice) - No information available.
Sittidae (Nuthatches) - No information available.
Certhiidae (Creepers) - No information available.
Pycnonotidae (Bulbuls) - No information available.
Trogloidyidae (Wrens)
Carolina Wren, Thryothorus ludovicianus (Latham)

Philopterus sp.
No specific locality or date given [Peters 1936]

Musciicapidae (Musciicapids)
Eastern Bluebird, Sialia sialis (Linnaeus)

Philopterus sialis (Osborn 1896)
No specific locality or date given [Peters 1936]

Ricinus sp.
No specific locality or date given [Peters 1936]

Swainson's Thrush, Catharus ustulatus (Nuttall)

Myrsidea incerta (Kellogg 1896)
Indian River County - 1966

Hermit Thrush, Catharus guttatus (Pallas)

Brueelia antiqua Ansari 1956
Alachua County - 1994

American Robin, Turdus migratorius Linnaeus

Brueelia iliaci (Denny 1842)
Pinellas County - 1935 [USNM]

Philopterus sp.
No specific locality or date given [Peters 1936]

Sturnidoecus simplex (Kellogg 1896)
Indian River County - 1972
Pinellas County - 1935 [Peters 1935, USNM, FSCA]

Mimidae (Mockingbirds, Thrashers, Allies)
Gray Catbird, Dumetella carolinensis (Linnaeus)

Brueelia bruneimucha Cicchino 1983
Lee County - 1986 [EEM]

Myrsidea sp.
Indian River County - 1967 [EEM]; 1973-74
Northern Mockingbird, Mimus polyglottos (Linnaeus)

Brueelia brunneimucha Cicchino 1983
Alachua County - 1954 [EEM, FSCA]; No date given [Williams 1983]

Menascahthos eurystrumns (Burmeister 1838)
Indian River County - 1965; 1968 [EEM]

Myrsidea sp.
Alachua County - 1954 [FSCA]
Indian River County - 1965 [EEM]; 1971
Lee County - 1984 [EEM]

Philopterus sp.
Alachua County - 1954 [FSCA]

Brown Thrasher, Toxostoma rufum (Linnaeus)

Brueelia dorsale Williams 1983
Lee County - 1984 [EEM]

Myrsidea sp.
Lee County - 1981 [EEM]

Motacillidae (Pipits) - No information available.

Bombycillidae (Waxwings) - No information available.

Laniidae (Shrikes)

Loggerhead Shrike, Lanius ludovicianus Linnaeus

Menascahthos camelinus (Nitzsch 1874)
No specific locality or date given [Peters 1936]

Philopterus coarctatus (Scopoli 1763)
No specific locality or date given [Peters 1936]

Sturnidae (Starlings)

European Starling, Sturnus vulgaris Linnaeus

Menascahthos eurystrumns (Burmeister 1838)
Lee County - 1979 [EEM]

Vireonidae (Vireos)

White-eyed Vireo, Vireo griseus (Boddart)

Menascahthos curvaccus (Schrack 1776)
Leon County - 1962 [EEM]

Philopterus sp.
Leon County - 1959, 1962 [EEM]

Ricinus vireonsis Nelson 1972
Indian River County - 1966 [EEM]
Leon County - 1962 [EEM, FSCA]

Black-whiskered Vireo, Vireo atilisquus (Vieillot)

Philopterus sp.
Collier County - 1955 [FSCA]

 Emberizidae (Emberizids)

Blue-winged Warbler, Vermivora pinus (Linnaeus)

Ricinus picturatus (Carricker 1902)
Dade County - 1918 [USNM]
Nashville Warbler, *Vermivora ruficapilla* (Wilson)
*Ricinus picturatus* (Carriker 1902)
Dade County - 1926 [USNM]
Yellow Warbler, *Dendroica petechia* (Linnaeus)
*Ricinus dendroicae* Nelson 1972
Dade County - 1917 [USNM]
Yellow-rumped Warbler, *Dendroica coronata* (Linnaeus)
*Maeharaeum sp.*
Indian River County - 1972
Prairie Warbler, *Dendroica discolor* (Vieillot)
*Ricinus dendroicae* Nelson 1972
Leon County - 1958, 1961-62 [EEM]
Canada Warbler, *Wilsonia canadensis* (Linnaeus)
*Ricinus emersoni* Nelson 1972
Dade County - 1928 [EEM]
Northern Cardinal, *Cardinalis cardinalis* (Linnaeus)
*Myrsidea sp.*
Alachua County - 1954 [FSCA]
Indian River County - 1973
*Philopterus sp.*
No specific locality or date given [Peters 1936]
Rufous-sided Towhee, *Pipilo erythrophthalmus* (Linnaeus)
*Myrsidea melanorum* (Kellogg 1896)
No specific locality or date given [Peters 1936]
Bachman's Sparrow, *Aimophila aestivalis* (Lichtenstein)
*Ricinus xolfi* Nelson 1972
No specific locality or date given [Peters 1936]
Chipping Sparrow, *Spizella passerina* (Bechstein)
*Brueelia sp.*
Alachua County - 1954 [FSCA]
Vesper Sparrow, *Poecetes gramineus* (Gmelin)
*Ricinus fringillae de Geer 1778*
Dade County - 1926 [USNM]
Savannah Sparrow, *Passerculus sandwichensis* (Gmelin)
*Maeharaeum maestus* (Kellogg and Chapman 1899)
Indian River County - 1969
*Ricinus diffusus* (Kellogg 1896)
Dade County - 1924, 1929 [USNM]
Sharp-tailed Sparrow, *Ammodramus caudacutus* (Gmelin)
*Philopterus sp.*
No specific locality or date given [Peters 1936]
Seaside Sparrow, *Ammodramus maritimus* (Wilson)

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*Philopterus sp.*
Dixie County - 1980 [EEM, USNM]
Taylor County - 1980 [USNM]
Walton County - 1980 [USNM]
No specific locality or date given [Peters 1936]
*Ricinus diffusus* (Kellogg 1896)
Dade County - 1929 [USNM]
Song Sparrow, *Melospiza melodia* (Wilson)
*Ricinus diffusus* (Kellogg 1896)
Dade County - 1930 [USNM]
Red-winged Blackbird, *Agelaius phoeniceus* (Linnaeus)
*Brueelia ornatissima* (Giebel 1874)
No specific locality or date given [Peters 1936]
*Myrsidea fuscomarginata* (Osborn 1896)
Indian River County - 1972-73 [EEM]
*Philopterus agelaii* (Osborn 1896)
No specific locality or date given [Peters 1936]
Eastern Meadowlark, *Sturnella magna* (Linnaeus)
*Brueelia picturata* (Osborn 1896)
Alachua County - 1954 [FSCA]
Indian River County - 1970
*Menacanthus sturnellae* Price 1977
Alachua County - 1954 [EEM, FSCA, Price 1977]
*Philopterus sp.*
No specific locality or date given [Peters 1936]
Boat-tailed Grackle, *Quiscalus major* Vieillot
*Menacanthus quiscale* Price 1977
No specific locality or date given [Peters 1936]
*Myrsidea balteri* Clay 1968
Alachua County - 1976 [FSCA]
Duval County - 1975 [EEM]
Indian River County - 1968 [EEM]; 1971
Pinellas County - 1929 [Clay 1968, USNM]
*Philopterus sp.*
Alachua County - 1976 [FSCA]
Common Grackle, *Quiscalus quiscula* (Linnaeus)
*Myrsidea fuscomarginata* (Osborn 1896)
Alachua County - 1954 [Clay 1968, FSCA]
Highlands County - 1993
Indian River County - 1973
Pinellas County - 1929 [Clay 1968]
*Philopterus quiscale* (Osborn 1896)
No specific locality or date given [Peters 1936]
Fringillidae (Cardueline Finches) - No information available. Passeridae (Old-World Sparrows) - No information available.

LITERATURE CITED


