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## A CHECKLIST OF THE FOSSIL VERTEBRATES OF FLORIDA

RICHARD C. HULBERT, JR.

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Number 2. Stratigraphy, paleoecology, and vertebrate fauna of the Leisey Shell Pit Local Fauna, early Pleistocene (Irvingtonian) of southwestern Florida. July 1989, 19 pages. ....Richard C. Hulbert, Jr. and Gary S. Morgan

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Number 4. Tethyan molluscs of the middle and late Eocene of Florida, 6 pages. ....David Nicol

Number 5. Location of continents and oceans and the distribution of living oysters (Gryphaeidae and Ostreidae), 3 pages. ....David Nicol

Number 6. A checklist of the fossil vertebrates of Florida. May 1992, 35 pages. ....Richard C. Hulbert, Jr.

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## A CHECKLIST OF THE FOSSIL VERTEBRATES OF FLORIDA

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Clayton Ray (1957) published the last comprehensive listing of the fossil vertebrates of Florida. This invaluable work has long been out-of-print, and has become out-moded by many new discoveries and changes in taxonomy made in the subsequent 35 years. This study presents an up-dated checklist of the fossil vertebrates of Florida. It contains almost 2.3 times the number of species as Ray's list. The latter was used as a starting point to construct the checklist, and then species were added or subtracted based on a survey of all subsequently published papers. In general, only published records are included in the list, even though additional taxa (as yet not described) are housed in museum and private collections. I have not provided a citation for each entry in the list, as that would result in a far too lengthy bibliography of recent Florida vertebrate paleontology. However, the list is annotated to explain the more recent name changes and questionable records, and references are given for works cited in these notes (these follow the checklist on pp. 30-33).

The checklist does not follow a traditional classification, but instead one that is based on cladistic principles. These are now widely accepted by vertebrate paleontologists (and many other biologists). The change that will seem most radical to those not familiar with modern systematics is that the traditional vertebrate classes (Osteichthyes, Amphibia, etc.) are not given equivalent rank, nor do they include their usual components. Cladistic classification does not recognize paraphyletic groups, that is taxonomic assemblages that do not contain *all* of the descendants of the group's common ancestor. The traditional make-up of the Reptilia is a good example of a paraphyletic group. Both birds and mammals were traditionally excluded from the Reptilia and placed in their own classes (Aves and Mammalia), even though both had ancestors that were retained in the Reptilia. There are several ways to correct this particular situation. The classification used here recognizes two equally ranked groups, the Synapsida and Reptilia. The Synapsida contains the mammals and the "mammal-like reptiles." The Reptilia includes the turtles, lizards, snakes, crocodylians, dinosaurs, and birds. Within the Reptilia, the birds are most closely related to dinosaurs among these groups, and so they are classified together in the magnorder Dinosauria. I have avoided using paraphyletic groups wherever possible in the classification, although for some groups no modern analysis is available and traditional assemblages were retained. The orders of birds is a good example of this. The classification was constructed to give most orders and lower levels in the taxonomic hierarchy their usual rank. Most of the changes are limited to levels above the rank of order. For further information on cladistic methods and classification, consult Wiley (1981) and Schoch (1986).

The fossil vertebrate record from Florida, as described in the scientific literature, is heavily biased in terms of number of described genera and species in favor of tetrapods, as opposed to fish. This bias has resulted because: 1) no specialist in Cenozoic fossil fish has ever resided in the state or sustained a long-term research program here; and 2) most fossil fish from Florida consist of isolated teeth and skeletal elements whereas most paleoichthyologists prefer to work on more complete specimens. The checklist contains only 33 species of chondrichthyans and 48 actinopterygians, for a total of 81 fish species. The number of fish, both freshwater and nearshore marine, that live in or around Florida today far exceeds this number by more than a factor of ten. It is clear that we know only a fraction of the fossil history of fish from the state.

Representation is much better for tetrapods, and recently collected but undescribed fossils will increase the numbers in each group even more. The checklist is current up through the fall of 1991; the most recently published papers included are those of Morgan (1991) and Domning (1991). Forty-five species of amphibians, 407 species of reptiles (including 140 of "traditional" reptiles and 267 species of birds), and 420 species of mammals are listed. These numbers exclude very problematic species like the leptodactylid frog from Thomas Farm. They

represent 181%, 112%, and 164% increases in numbers from the same respective groups as listed by Ray (1957). Many of the species listed by Ray as valid have since been synonymized. This means that in the last 35 years, paleontologists have identified or described as new about twice the number of species that were known in 1957. The old values represented the results of about 80 years of research. The increased rate of new descriptions can be directly attributed to the emergence and growth of the Florida State Museum/Florida Museum of Natural History and its vertebrate paleontology program.

### FORMAT OF THE CHECKLIST

There are two kinds of lines in the list, those for taxonomic levels above the rank of genus, and those at the genus or species level. The former consist of the taxonomic rank (e.g., Class, Cohort, Family, etc.), the name of the taxon (capitalized), and, optionally and enclosed in brackets, the common name of the taxon. Common names are given for most families, and at other convenient places in the classification. Each rank in the classification is indented to a different degree; the more indented, the lower the rank. For any taxon, the taxa listed directly after it are included in that taxon until there appears a taxon of equal or higher rank. For example, the class Elasmobranchii contains all the species listed up to and including *Rhinoptera* sp. The line following *Rhinoptera* sp. lists the grandclass Osteichthyes, which is of higher rank than class, so the osteichthyans are not members of the Elasmobranchii.

The other kind of line in the list contains the name of a genus (usually with that of a species, both in italics), or either the designations "genus and sp. indet." or "new genus and sp." The former means that an author has identified fossil material to the family or subfamily level but not to genus, usually because of the incompleteness of the specimen(s). The latter means that an author has noted in print the existence of a new genus and species, but that they have not yet been formally named. A generic name followed only by the abbreviation "sp." (for species) means that the author identified the genus but not the species. The abbreviation "n. sp." after a generic name indicates that an author noted the presence of a new, undescribed species, but that it has not yet received a name. The combination of a generic and specific name indicates that an author has identified that particular species from fossil material found in Florida. The name of the species in this checklist may differ from that in the original description if the two have been synonymized, if the species has been transferred to a different genus, or if the material has been re-identified by a second worker. In general, the opinions expressed in the most recent publication have been followed in making up the checklist when there is a difference of opinion among authors.

To the right of the name of the genus and species is the chronologic range of the taxon in Florida, given as precisely as possible. A single designation, for example mMIO (abbreviation for middle Miocene, see Table 1), means that the species has only been reported from that time interval, in this case the middle Miocene. Two ages separated by a hyphen (e.g., lMIO-ePLEIST) mean that the species has been reported from both those ages, plus all intervening ones as well. In this case the species would have also been reported from the Pliocene. Two ages separated by a comma mean that the species has not been reported from the intervening ages, although this absence might be an artifact of an imperfect record. Question marks are used to indicate two different types of uncertainty. A question mark to the right side of an age (e.g., MIO?) means chronologic uncertainty. The age of the species in this case is doubtfully Miocene, but could be another age. The age given is the most likely one. A question mark to the left of an age indicates taxonomic uncertainty (e.g., ?eMIO). When combined with the name of a genus and species, this means that the author has provisionally identified that species from that age period, but was not completely sure. In the scientific literature the abbreviation "cf." is often used to indicate this uncertainty. If the question mark is used in conjunction with a generic name and the "sp." abbreviation, then it is the generic identification that is unsure. These can all be combined. For example, the range of the flying squirrel *Glaucomys volans* is listed as "?vPLIO, mPLEIST-IPLEIST." This means that this species of squirrel has been provisionally identified from the very late Pliocene and definitely from the middle to late Pleistocene. No records exist for the early Pleistocene (as defined in Table 1). Note that even though this species still lives in Florida, its fossil range is shown to terminate at the end of the Pleistocene. The list does not consider fossil records of Holocene age, nor whether or not a species still lives in the state. Table 1 also shows what numeric ages and Land Mammal Ages correspond to the standard subdivisions of the Cenozoic epochs. Correlations between the geologic time scale and North American Land Mammal Ages have markedly changed since the early 1970s, so the listed ages of some species are different than when they were first reported or as they were listed by Ray (1957). For example, fossils of Blancan age used to be placed in the early Pleistocene, but are now late Pliocene.

TABLE 1. Abbreviations and subdivisions of the Cenozoic epochs after Harland et al. (1990). The correlative North American Land Mammal Ages (NALMA) are shown on the right for each interval. Ma = millions of years ago (mega-anna).

ABBREVIATION	EPOCH	AGE IN MA	NALMA
EOC	Eocene	35.4-56.5 Ma	
eEOC	early Eocene	50.4-56.5 Ma	Wasatchian
mEOC	middle Eocene	38.6-50.4 Ma	Bridgerian, Uintan & Duchesnean
IEOC	late Eocene	35.4-38.6 Ma	early Chadronian
OLIG	Oligocene	23.3-35.4 Ma	
eOLIG	early Oligocene	29.3-35.4 Ma	Chadronian, Orellan & Whitneyan
lOLIG	late Oligocene	23.3-29.3 Ma	early Arikareean
MIO	Miocene	5.2-23.3 Ma	
eMIO	early Miocene	16.3-23.3 Ma	
veMIO	very early Miocene	21.5-23.3 Ma	early late Arikareean
leMIO	late early Miocene	16.3-21.5 Ma	very late Arikareean & Hemingfordian
mMIO	middle Miocene	10.4-16.3 Ma	
emMIO	early middle Miocene	14.2-16.3 Ma	early Barstovian
lmMIO	late middle Miocene	10.4-14.2 Ma	late Barstovian & early Clarendonian
lMIO	late Miocene	5.2-10.4 Ma	
eMIO	early late Miocene	6.7-10.4 Ma	late Clarendonian & early Hemphillian
vMIO	very late Miocene	5.2-6.7 Ma	late early Hemphillian
PLIO	Pliocene	1.64-5.2 Ma	
ePLIO	early Pliocene	3.4-5.2 Ma	
vePLIO	very early Pliocene	4.5-5.2 Ma	late Hemphillian
lePLIO	late early Pliocene	3.4-4.5 Ma	early Blancan
IPLIO	late Pliocene	1.64-3.4 Ma	
eIPLIO	early late Pliocene	1.9-3.4 Ma	late Blancan
vIPLIO	very late Pliocene	1.64-1.9 Ma	earliest Irvingtonian
PLEIST	Pleistocene	0.01-1.64 Ma	
ePLEIST	early Pleistocene	0.79-1.64 Ma	late early & early middle Irvingtonian
mPLEIST	middle Pleistocene	0.13-0.79 Ma	late middle Irvingtonian & early Rancholabrean
lPLEIST	late Pleistocene	0.01-0.13 Ma	late Rancholabrean

- Phylum CHORDATA  
 Subphylum VERTEBRATA  
 Superclass GNATHOSTOMATA  
 Grandclass CHONDRICHTHYES [sharks and rays]  
 Class ELASMOBRANCHII  
 Subclass GALEOMORPHA
- Order HEXANCHIFORMES  
 Family HEXANCHIDAE [cow sharks, sixgill sharks]  
*Notorynchus cepedianus* ..... MIO?
- Order ORECTOLOBIFORMES  
 Family GINGLYMOSTOMATIDAE [nurse sharks]  
*Ginglymostoma serra* ..... eMIO-vePLIO  
*Ginglymostoma cirratum* ..... PLIO-IPLEIST
- Order LAMNIFORMES  
 Family ODONTASPIDIDAE [sand tiger sharks]  
*Odontaspis macrota* ..... IEOC  
*Odontaspis cuspidata* ..... IOLIG-mMIO  
*Odontaspis taurus* ..... mMIO-IPLEIST
- Family LAMNIDAE [mackerel sharks]  
*Otodus obliquus* ..... IEOC  
*Isurus praecursor* ..... IEOC  
*Isurus desori* ..... IEOC-mMIO  
*Isurus hastalis* ..... eMIO-ePLEIST  
*Carcharodon auriculatus* ..... IEOC-IOLIG  
*Carcharodon megalodon* ..... mMIO-vePLIO  
*Carcharodon carcharias* .?MIO, ePLIO, ePLEIST-IPLEIST
- Order CARCHARHINIFORMES  
 Family CARCHARHINIDAE [requiem sharks]  
*Galeocerdo alabamensis* ..... IOLIG  
*Galeocerdo aduncus* ..... eMIO-vePLIO  
*Galeocerdo cuvier* ..... mMIO-IPLEIST  
*Carcharhinus* n. sp. .... IOLIG-veMIO  
*Carcharhinus leucas* ..... eMIO-IPLEIST  
*Carcharhinus egertoni* ..... eMIO-vePLIO  
*Carcharhinus plumbeus*<sup>1</sup> ..... MIO  
*Carcharhinus limbatus* ..... eMIO-IPLEIST  
*Carcharhinus acronotus* ..... mMIO-IPLEIST  
*Carcharhinus obscurus* ..... mMIO  
*Rhizoprionodon terraenovae* ..... IOLIG-IPLEIST  
*Negaprion brevirostris* ..... IOLIG-IPLEIST
- Family HEMIGALEIDAE [snaggletoothed sharks]  
*Hemipristis serra* ..... IOLIG-ePLEIST
- Subclass BATOIDEA  
 Order PRISTIFORMES  
 Family PRISTIDAE [sawfish]  
*Pristis* sp. .... mEOC-IPLEIST
- Order RAJIFORMES  
 Family RAJIDAE [skates]  
*Raja* sp. .... ?IOLIG, MIO-IPLEIST
- Order MYLIOBATIFORMES  
 Family DASYATIDAE [stingrays]  
*Dasyatis* sp. .... eMIO-IPLEIST
- Family MYLIOBATIDAE [eagle rays]  
*Myliobatis* sp. .... IOLIG-IPLEIST

	<i>Plinthicus</i> sp. ....	eMIO
	<i>Aetobatus</i> sp. ....	eMIO-IPLEIST
	Family RHINOPTERIDAE [cownose rays]	
	<i>Rhinoptera</i> sp. ....	MIO-PLEIST
Grandclass	OSTEICHTHYES	
Class	ACTINOPTERYGII [ray-finned bony fish]	
Subclass	CHONDROSTEI	
	Order ACIPENSERIFORMES	
	Family ACIPENSERIDAE [sturgeon]	
	<i>Acipenser</i> sp. ....	IPLEIST
Subclass	NEOPTERYGII	
Infraclass	GINGLYMODI	
	Order LEPISOSTEIFORMES	
	Family LEPISOSTEIDAE [garfish]	
	<i>Lepisosteus</i> sp. ....	eMIO-IPLEIST
	<i>Atractosteus spatula</i> .....	IMIO-IPLEIST
Infraclass	HALECOMORPHI	
	Order AMIIFORMES	
	Family AMIIDAE [bowfin or mudfish]	
	<i>Amia calva</i> .....	MIO-IPLEIST
Infraclass	TELEOSTEI	
	Superorder ELOPOMORPHA	
	Order ELOPIFORMES	
	Family ELOPIDAE [tarpons]	
	<i>Megalops atlanticus</i> .....	mMIO-IPLEIST
	Order ANGUILLIFORMES	
	Family MURAENIDAE [moray eels]	
	genus and sp. indet. ....	PLIO
	Superorder CLUPEOMORPHA	
	Order CLUPEIFORMES	
	Family CLUPEIDAE [herrings and shad]	
	<i>Dorosoma petenense</i> .....	IPLEIST
	Superorder SALMONOMORPHA	
	Order SALMONIFORMES	
	Family ESOCIDAE [pikes]	
	<i>Esox</i> sp. ....	ePLEIST-IPLEIST
	Superorder OSTARIOPHYSI	
	Order SILURIFORMES	
	Family ICTALURIDAE [freshwater catfish]	
	<i>Ictalurus</i> sp. ....	MIO-IPLEIST
	<i>Pylodictus</i> sp. ....	IPLEIST
	Family ARIIDAE [sea catfish]	
	<i>Arius</i> sp. ....	MIO
	<i>Arius felis</i> .....	IPLEIST
	<i>Bagre</i> sp. ....	PLIO-IPLEIST
	Superorder ACANTHOPTERYGIA	
	Order ATHERINIFORMES	
	Family BELONIDAE [needlefishes]	
	<i>Strongylura marina</i> .....	PLEIST
	Order BERYCIFORMES	
	Family HOLOCENTRIDAE [squirrelfishes]	
	<i>Holocentrites ovalis</i> .....	IEOC-eOLIG

- Order SCORPAENIFORMES  
 Family TRIGLIDAE [searobins]  
*Prionotus* sp. .... PLIO-IPLEIST
- Order PERCIFORMES  
 Family CENTROPOMIDAE [snooks]  
*Centropomus* sp. .... MIO-IPLEIST  
 Family SERRANIDAE [sea basses, groupers]  
 genus and sp. indet. .... IEOC  
 Family CENTRARCHIDAE [sunfish, bream, bass]  
*Lepomis* sp. .... MIO-IPLEIST  
*Lepomis gulosus* .... IPLEIST  
*Pomoxis nigromaculatus* .... ?IPLEIST  
*Micropterus* sp. .... IPLEIST  
*Micropterus salmoides* .... ePLEIST  
 Family CARANGIDAE [jacks]  
*Caranx* sp. .... ?MIO, PLIO-IPLEIST  
 Family LUTJANIDAE [snappers]  
*Hypsocephalus atlanticus* .... IEOC  
*Lutjanus avus* .... eOLIG  
*Lutjanus* sp. .... MIO-IPLEIST  
 Family SPARIDAE [porgies, pinfishes]  
 genus and sp. indet. .... eMIO  
*Diplodus* sp. .... IMIO  
*Lagodon rhomboides* .... ?IMIO, PLIO-IPLEIST  
*Archosargus* sp. .... MIO-IPLEIST  
*Archosargus probatocephalus* .... ?mMIO  
 Family SCIAENIDAE [drums]  
 genus and sp. indet. .... OLIG-MIO  
*Pogonias* sp. .... MIO  
*Pogonias cromis* .... mMIO-IPLEIST  
 Family EPHIPPIDAE [spadefishes]  
*Chaetodipterus faber* .... IPLEIST  
 Family MUGILIDAE [mulletts]  
*Mugil* sp. .... ePLEIST-IPLEIST  
 Family SPHYRAENIDAE [barracudas]  
*Sphyraena* sp. .... IEOC-IPLEIST  
*Sphyraena barracuda* .... mMIO-IPLEIST  
 Family LABRIDAE [wrasses, hogfishes]  
 genus and sp. indet. .... MIO-IPLEIST  
 Family SCARIDAE [parrotfishes]  
*Sparisoma* sp. .... ?eMIO  
 Family SCOMBRIDAE [mackerels]  
 genus and sp. indet. .... PLIO-IPLEIST
- Order TETRAODONTIFORMES  
 Family BALISTIDAE [triggerfishes, filefishes]  
*Balistes* sp. .... ?eMIO, ePLEIST-IPLEIST  
 Family OSTRACIIDAE [boxfishes]  
*Lactophrys* sp. .... PLEIST  
 Family TETRAODONTIDAE [puffers]  
*Sphoeroides* sp. .... ?eMIO  
 Family DIODONTIDAE [porcupinefishes, burrfishes]  
*Diodon* sp. .... mEOC-IPLEIST  
*Diodon circumflexus* .... MIO  
*Chilomycterus* sp. .... MIO



## Class SARCOPTERYGII [lobe-finned fish and tetrapods]

## Subclass TETRAPODA

## Legion AMPHIBIA [amphibians]

## Infraclass LISSAMPHIBIA

## Cohort BATRACHIA

## Order CAUDATA (= URODELA) [salamanders]

## Suborder SIRENOIDEA

## Family SIRENIDAE [sirens]

*Siren* sp. ....?IOLIG, IMIO-ePLEIST*Siren hesterna* .....leMIO*Siren simpsoni* .....eIMIO*Siren lacertina* .....?IPLIO, IPLEIST*Pseudobranchius vetustus* .....eIMIO*Pseudobranchius robustus* .....IPLEIST

## Suborder SALAMANDROIDEA

## Family BATRACHOSAUROIDIDAE

[extinct large mudpuppies]

*Batrachosauroides dissimulans* .....leMIO

## Family PROTEIDAE [mudpuppies, waterdogs]

*Necturus* sp. ....IPLEIST

## Family AMPHIUMIDAE [amphiumas]

*Amphiuma* sp. ....IMIO*Amphiuma means* .....IPLEIST

## Family SALAMANDRIDAE [newts]

*Notophthalmus robustus* .....leMIO*Notophthalmus* sp. ....IMIO-IPLEIST

## Family AMBYSTOMATIDAE [common salamanders]

*Ambystoma* sp. ....ePLEIST-IPLEIST*Ambystoma tigrinum* .....IPLEIST

## Family PLETHODONTIDAE [lungless salamanders]

genus and sp. indet. ....IMIO

*Plethodon glutinosus* .....IPLEIST

## Order ANURA (= SALIENTIA) [frogs and toads]

## Family PELOBATIDAE [spadefoot toads]

*Scaphiopus* sp. ....IOLIG*Scaphiopus holbrooki* .....?eMIO, ePLEIST-IPLEIST

## Family LEPTODACTYLIDAE [Neotropical frogs]

*Eleutherodactylus* sp.<sup>2</sup> .....leMIO

## Family BUFONIDAE [toads]

*Bufo* sp. ....IOLIG-ePLEIST*Bufo praeivius* .....leMIO*Bufo tihenii* .....eIMIO*Bufo* n. sp. ....vIPLIO*Bufo terrestris* .....ePLEIST-IPLEIST*Bufo woodhousei* .....IPLEIST*Bufo quercicus* .....IPLEIST

## Family HYLIDAE [treefrogs]

*Proacris mintoni* .....leMIO*Acris barbouri* .....leMIO*Pseudacris ornata* .....IPLEIST*Hyla* sp. ....eMIO-IMIO*Hyla goini* .....leMIO*Hyla miofloridana* .....leMIO*Hyla cinerea* .....ePLEIST-IPLEIST

<i>Hyla baderi</i> .....	IPLEIST
<i>Hyla femoralis</i> .....	IPLEIST
<i>Hyla gratiosa</i> .....	IPLEIST
<i>Hyla squirella</i> .....	IPLEIST
Family MICROHYLIDAE [narrow-mouthed toads]	
<i>Gastrophryne carolinensis</i> .....	?leMIO, ePLEIST-IPLEIST
Family RANIDAE [common frogs]	
genus and sp. indet. ....	lOLIG
<i>Rana abava</i> <sup>3</sup> .....	leMIO
<i>Rana miocenica</i> .....	leMIO
<i>Rana bucella</i> .....	leMIO
<i>Rana sphencephala</i> <sup>4</sup> .....	?leMIO-lMIO, IPLEIST
<i>Rana catesbeiana</i> .....	?lMIO-lPLIO, ePLEIST-IPLEIST
<i>Rana areolata</i> .....	ePLEIST
<i>Rana grylio</i> .....	IPLEIST
Legion AMNIOTA [reptiles, birds, and mammals]	
Infraclass REPTILIA	
Supercohort ANAPSIDA	
Order TESTUDINES (=CHELONIA) <sup>5</sup> [turtles, tortoises]	
Family, genus, and sp. indet. ....	CRETACEOUS
Superfamily CHELYDROIDEA	
Family CHELYDRIDAE [snapping turtles]	
<i>Macroclemys auffenbergi</i> .....	eIMIO
<i>Macroclemys temmincki</i> .....	lPLIO-IPLEIST
<i>Chelydra</i> sp. ....	lPLIO
<i>Chelydra serpentina</i> .....	lPLIO-IPLEIST
Superfamily CHELONIOIDEA	
Family CHELONIIDAE [sea turtles]	
genus and sp. indet. ....	mEOC, mMIO-IPLEIST
<i>Chelonia mydas</i> .....	IPLEIST
<i>Caretta caretta</i> .....	IPLEIST
Superfamily TRIONYCHOIDEA	
Family TRIONYCHIDAE [softshelled turtles]	
<i>Apalone</i> sp. <sup>6</sup> .....	eMIO-IPLIO
<i>Apalone ferox</i> .....	?lMIO-vePLIO, ePLEIST-IPLEIST
Family KINOSTERNIDAE [mud and musk turtles]	
<i>Kinosternon</i> sp. ....	lMIO-ePLEIST
<i>Kinosternon bauri</i> .....	lPLIO-IPLEIST
<i>Kinosternon subrubrum</i> .....	IPLEIST
<i>Sternotherus minor</i> .....	lPLIO-IPLEIST
<i>Sternotherus odoratus</i> .....	IPLEIST
Superfamily TESTUDINOIDEA	
Family EMYDIDAE [cooters, sliders, box turtles]	
Subfamily EMYDINAE	
<i>Clemmys guttata</i> .....	?lMIO, IPLEIST
<i>Terrapene</i> sp. ....	eMIO-IPLIO
<i>Terrapene carolina</i> .....	lPLIO-IPLEIST
Subfamily DEIROCHELYINAE	
<i>Graptemys barbouri</i> .....	lPLIO-IPLEIST
<i>Malaclemys</i> sp. ....	?lPLIO
<i>Deirochelys</i> sp. ....	leMIO
<i>Deirochelys carri</i> .....	eIMIO
<i>Deirochelys reticularia</i> .....	lPLIO-IPLEIST
<i>Pseudemys</i> sp. <sup>7</sup> .....	lOLIG-eMIO

<i>Pseudemys caelata</i> .....	eIMIO
<i>Pseudemys williamsi</i> .....	eIMIO
<i>Pseudemys concinna</i> .....	lPLIO-IPLEIST
<i>Pseudemys nelsoni</i> .....	lPLIO-IPLEIST
<i>Pseudemys floridana</i> .....	IPLEIST
<i>Trachemys</i> sp. ....	vlMIO
<i>Trachemys inflata</i> .....	vlMIO-vePLIO
<i>Trachemys platymarginata</i> .....	lPLIO
<i>Trachemys scripta</i> .....	ePLEIST-IPLEIST
Family TESTUDINIDAE [tortoises]	
Subfamily XEROBATINAE	
<i>Floridemys nanus</i> .....	OLIG?, MIO?
<i>Gopherus</i> sp. ....	eMIO-vePLIO
<i>Gopherus polyphemus</i> .....	ePLEIST-IPLEIST
Subfamily TESTUDININAE	
genus and sp. indet. ....	eMIO
<i>Hesperotestudo</i> sp. <sup>8</sup> .....	mMIO, lPLIO-ePLEIST
<i>Hesperotestudo</i> ( <i>Hesperotestudo</i> ) <i>alleni</i> .....	lMIO-?vePLIO
<i>H.</i> ( <i>Hesperotestudo</i> ) <i>mylnarskii</i> .....	mPLEIST
<i>H.</i> ( <i>Hesperotestudo</i> ) <i>incisa</i> .....	IPLEIST
<i>Hesperotestudo</i> ( <i>Caudochelys</i> ) <i>tedwhitei</i> .....	leMIO
<i>H.</i> ( <i>Caudochelys</i> ) <i>hayi</i> .....	?mMIO, lMIO-vePLIO
<i>H.</i> ( <i>Caudochelys</i> ) <i>crassiscutata</i> .....	lPLIO-IPLEIST
Supercohort DIAPSIDA	
Cohort LEPIDOSAURIA	
Order SQUAMATA [snakes, lizards, worm "lizards"]	
Suborder IGUANIA	
Family IGUANIDAE [iguanas, anoles, and allies]	
genus and sp. indet. ....	eMIO
<i>Aciprion</i> sp. ....	lOLIG
<i>Anolis</i> sp. ....	?eMIO-lMIO
<i>Anolis carolinensis</i> .....	mPLEIST-IPLEIST
<i>Leiocephalus</i> sp. ....	eMIO
<i>Sceloporus undulatus</i> .....	vlIPLIO-IPLEIST
Suborder GEKKOTA	
Family GEKKONIDAE [gekkos]	
genus and sp. indet. ....	eMIO
Suborder SCINCOMORPHA	
Family SCINCIDAE [skinks]	
genus and sp. indet. ....	eMIO-lMIO
<i>Eumeces</i> sp. ....	eMIO-lMIO
<i>Eumeces carri</i> .....	vlIPLIO
<i>Eumeces inexpectatus</i> .....	mPLEIST-IPLEIST
<i>Eumeces fasciatus</i> .....	?lPLEIST
Family XANTUSIDAE [night lizards]	
<i>Paleoxantusia</i> sp. ....	lOLIG
Family TEIIDAE [whiptail and racerunner lizards]	
genus and sp. indet. ....	?lOLIG, eMIO
<i>Cnemidophorus</i> sp. ....	eMIO, ePLEIST
Suborder ANGUIMORPHA	
Family ANGUIDAE [glass and alligator lizards]	
<i>Peltosaurus</i> sp. ....	lOLIG-eMIO
genus and sp. indet. ....	eMIO
<i>Ophisaurus</i> sp. ....	eMIO-lMIO

- Ophisaurus ventralis* .....IMIO, vIPLIO-IPLEIST  
*Ophisaurus compressus* .....IPLEIST  
*Gerrhonotus* sp. ....?vIPLIO  
 Family HELODERMATIDAE [beaded lizards, gila monster]  
*Heloderma* sp. ....eMIO  
 Suborder AMPHISBAENIA  
 Family AMPHISBAENIDAE [worm "lizards"]  
 genus and sp. indet. ....?IOLIG, eMIO  
*Rhineura floridana* ....?vIPLIO, IPLEIST  
 Suborder SERPENTES [snakes]  
 Superfamily SCOLECOPHILIA  
 Family TYPHLOPIDAE [blind snakes]  
*Typhlops* sp. ....?IOLIG, eMIO-IMIO  
 Superfamily ANILIOIDEA  
 Family ANILIIDAE  
 genus and sp. indet. ....?eMIO  
 Superfamily BOOIDEA  
 Family PALAEOPHIDAE [extinct sea boas]  
*Pterosphenus schucherti* .....IEOC  
 Family BOIDAE [boas, pythons]  
 Subfamily ERYCINAE  
 genera and spp. indet. (3-4 spp.) .....IOLIG  
*Anilioides minuatus* .....leMIO  
*Calamagras floridanus* .....leMIO  
*Ogmophis pauperrimus* .....leMIO  
 Subfamily BOINAE  
*Pseudoepicrates stanolseni* .....leMIO  
*Boa barbouri*<sup>9</sup> .....leMIO  
 Superfamily COLUBROIDEA  
 Family COLUBRIDAE [common constricting snakes]  
 Subfamily Indeterminate  
 genus and sp. indet. ....IOLIG  
*Tantilla* sp. ....vIPLIO  
*Tantilla coronata* .....IPLEIST  
 Subfamily COLUBRINAE  
*Paraoxybelis floridanus* .....leMIO  
*Coluber* sp. ....IMIO-IPLIO  
*Coluber constrictor* ....vIPLIO-IPLEIST  
*Drymarchon* sp. ....IPLIO  
*Drymarchon corais* ....vIPLIO-IPLEIST  
*Masticophis* sp. ....IPLIO  
*Masticophis flagellum* ....vIPLIO-IPLEIST  
*Opheodrys vernalis* ....vIPLIO  
*Opheodrys aestivus* .....IPLEIST  
 Subfamily LAMPROPELTINAE  
*Pseudocemophora antiqua* .....eMIO  
*Cemophora coccinea* ....vIPLIO-IPLEIST  
*Elaphe* sp. ....IMIO-ePLEIST  
*Elaphe guttata* .....IPLIO-IPLEIST  
*Elaphe obsoleta* ....vIPLIO-IPLEIST  
*Lampropeltis getulus* ....?IMIO, IPLIO-IPLEIST  
*Lampropeltis triangulum* ....vIPLIO-IPLEIST  
*Pituophis melanoleucas* ....vIPLIO-IPLEIST

## Subfamily NATRICINAE

<i>Nerodia</i> sp. <sup>10</sup> .....	IMIO, ePLEIST
<i>Nerodia fasciata</i> .....	IPLIO
<i>Nerodia cyclopion</i> .....	IPLIO-IPLEIST
<i>Nerodia erythrogaster</i> .....	IPLIO-IPLEIST
<i>Nerodia taxispilota</i> .....	IPLIO-IPLEIST
<i>Regina</i> sp. ....	IMIO-IPLIO
<i>Regina intermedia</i> .....	vIPLIO
<i>Regina alleni</i> .....	IPLEIST
<i>Thamnophis</i> sp. ....	IMIO
<i>Thamnophis sirtalis</i> .....	?vIPLIO, IPLEIST
<i>Virginia</i> sp. ....	vIPLIO
<i>Storeria dekayi</i> .....	IPLEIST

## Subfamily XENODONTINAE

<i>Diadophis elinorae</i> .....	IMIO-vIPLIO
<i>Diadophis punctatus</i> .....	IPLEIST
<i>Dryinoides</i> sp. ....	?IMIO, ?vIPLIO
<i>Heterodon</i> sp. ....	IMIO-IPLIO
<i>Heterodon brevis</i> .....	IMIO
<i>Heterodon nasicus</i> .....	vIPLIO
<i>Heterodon platyrhinos</i> .....	vIPLIO-IPLEIST
<i>Heterodon simus</i> .....	mPLEIST-IPLEIST
<i>Stilosoma vetustum</i> .....	IMIO
<i>Stilosoma extenuatum</i> .....	vIPLIO-IPLEIST
<i>Paleofarancia brevispinosus</i> .....	vePLIO
<i>Farancia</i> sp. ....	IPLIO
<i>Farancia abacura</i> .....	vIPLIO-IPLEIST
<i>Rhadinaea flavilata</i> .....	?vIPLIO, IPLEIST
<i>Carphophis amoenus</i> .....	mPLEIST-IPLEIST

## Family ELAPIDAE [cobras, coral snakes]

<i>Micrurus</i> sp. ....	IMIO, ePLEIST
<i>Micrurus fulvius</i> .....	?vIPLIO, IPLEIST

## Family VIPERIDAE [pit vipers, rattlesnakes]

<i>Agkistrodon</i> sp. ....	IPLIO
<i>Agkistrodon piscivorus</i> .....	ePLEIST-IPLEIST
<i>Crotalus</i> sp. ....	IMIO-IPLIO
<i>Crotalus adamanteus</i> .....	vIPLIO-IPLEIST
<i>Sistrurus</i> sp. ....	?IMIO
<i>Sistrurus miliarius</i> .....	vIPLIO-IPLEIST

## Cohort ARCHOSAURIA

## Magnorder CROCODYLOMORPHA

## Superorder CROCODYLIFORMES

## Order CROCODYLIA

## Suborder EUSUCHIA

## Family CROCODYLIDAE [crocodiles]

genus and sp. indet. ....	mEOC
<i>Charactosuchus</i> sp. ....	?vIMIO
<i>Gavialosuchus americanus</i> .....	?eMIO, mMIO-vIMIO

## Family ALLIGATORIDAE [alligators, caimans]

<i>Alligator olseni</i> .....	leMIO
<i>Alligator mississippiensis</i> .....	?mMIO, elMIO-IPLEIST

- Magnorder DINOSAURIA  
 Superorder AVES<sup>11</sup> [birds]  
 Grandorder NEORNITHES  
 Mirorder NEOGNATHAE  
 Order GAVIIFORMES  
 Family GAVIIDAE [loons]  
*Gavia palaeodytes* .....vePLIO  
*Gavia concinna* .....vePLIO  
*Gavia* sp. ....ePLEIST  
*Gavia arctica* .....ePLEIST  
*Gavia immer* .....IPLEIST
- Order PODICIPEDIFORMES  
 Family PODICIPEDIDAE [grebes]  
*Rollandia* sp. ....eMIO  
*Tachybaptus* sp. ....eMIO  
*Podiceps* sp. ....eMIO-vePLIO  
*Podiceps dominicus* .....ePLEIST  
*Podiceps dixi* .....ePLEIST-IPLEIST  
*Podiceps auritus* .....IPLEIST  
*Pliodytes lanquisti* .....vePLIO  
*Podilymbus podiceps* .....?vePLIO, IPLIO-IPLEIST  
*Podilymbus wetmorei* .....IPLEIST
- Order PROCELLARIIFORMES  
 Family DIOMEDEIDAE [albatrosses]  
*Diomedea anglica* .....vePLIO
- Family PROCELLARIIDAE [shearwaters, petrels]  
*Puffinus micraulax* .....eMIO?  
*Puffinus* sp. ....vePLIO  
*Puffinus puffinus* .....IPLEIST
- Order PELECANIFORMES  
 Family SULIDAE [boobies, gannets]  
 genus and sp. indet. ....eMIO  
*Sula universitatis* .....?eMIO?  
*Sula guano* .....vePLIO  
*Sula phosphata* .....vePLIO  
*Morus peninsularis* .....vePLIO
- Family PELECANIDAE [pelicans]  
*Pelecanus* sp. ....vePLIO
- Family PHALACROCORACIDAE [cormorants]  
*Phalacrocorax* sp. ....eMIO, IPLIO  
*Phalacrocorax wetmorei* .....?vlMIO, vePLIO  
*Phalacrocorax idahensis* .....vePLIO  
*Phalacrocorax auritus* .....?IPLIO, IPLEIST
- Family ANHINGIDAE [anhingas]  
*Anhinga subvolans*<sup>12</sup> .....leMIO  
*Anhinga grandis* .....eMIO, ?IPLEIST  
*Anhinga* sp. ....vePLIO-ePLEIST  
*Anhinga anhinga* .....IPLEIST
- Order ARDEIFORMES  
 Family ARDEIDAE [herons, egrets]  
*Ardea* sp. ....eMIO, IPLIO  
*Ardea polkensis* .....vePLIO  
*Ardea alba* .....IPLIO-IPLEIST  
*Ardea herodias* .....IPLEIST

<i>Ardeola</i> sp. ....	eIMIO
<i>Egretta</i> sp. ....	eIMIO-IPLIO
<i>Egretta subfluvia</i> .....	vlMIO
<i>Egretta caerulea</i> .....	IPLIST
<i>Egretta thula</i> .....	IPLIST
<i>Egretta tricolor</i> .....	IPLIST
<i>Nycticorax fidens</i> .....	eIMIO
<i>Nycticorax</i> sp. ....	IPLIO
<i>Nycticorax nycticorax</i> .....	IPLIST
<i>Butorides validipes</i> .....	IPLIO
<i>Butorides striatus</i> .....	IPLIST
<i>Botaurus</i> sp. ....	IPLIO
<i>Botaurus lentiginosus</i> .....	ePLEIST-IPLIST
<i>Ixobrychus</i> sp. ....	IPLIO-mPLEIST
<i>Nyctanassa violacea</i> .....	IPLIST
Order CICONIIFORMES	
Family CICONIIDAE [storks, wood storks]	
<i>Propelargus olseni</i> .....	leMIO
<i>Ciconia</i> sp. ....	eIMIO-vePLIO
<i>Ciconia maltha</i> .....	ePLEIST-IPLIST
<i>Mycteria</i> sp. ....	eIMIO
<i>Mycteria americana</i> .....	IPLIST
Family TERATORNITHIDAE [teratorns]	
<i>Teratornis merriami</i> .....	ePLEIST-IPLIST
Family VULTURIDAE [condors, New World "vultures"]	
<i>Pliogyps charon</i> .....	IMIO
<i>Gymnogyps</i> sp. ....	IPLIO
<i>Gymnogyps kofordi</i> .....	ePLEIST
<i>Gymnogyps californianus</i> .....	IPLIST
<i>Cathartes aura</i> .....	ePLEIST-IPLIST
<i>Coragyps atratus</i> .....	ePLEIST-IPLIST
<i>Coragyps occidentalis</i> .....	mPLEIST-IPLIST
Order ANSERIFORMES	
Family ANATIDAE [geese, swans, ducks]	
Subfamily, genus, and sp. indet. ....	eIMIO-vePLIO
Subfamily DENDROCYGNINAE	
<i>Dendrocygna</i> sp. ....	eIMIO, IPLIO
Subfamily ANSERINAE	
<i>Branta</i> sp. ....	eIMIO
<i>Branta dickeyi</i> .....	ePLEIST
<i>Branta canadensis</i> .....	mPLEIST-IPLIST
<i>Olor columbianus</i> .....	IPLIST
<i>Olor buccinator</i> .....	IPLIST
Subfamily TADORNINAE	
<i>Anabernicula</i> sp. ....	ePLEIST
<i>Anabernicula gracilentia</i> .....	ePLEIST
Subfamily ANATINAE	
new gen. and sp. ....	IPLIO
<i>Anas</i> sp. ....	eIMIO-ePLEIST
<i>Anas crecca</i> .....	IPLIO-IPLIST
<i>Anas platyrhynchos</i> .....	ePLEIST-IPLIST
<i>Anas discors</i> .....	ePLEIST-IPLIST
<i>Anas strepera</i> .....	ePLEIST-IPLIST
<i>Anas ichtucknee</i> <sup>13</sup> .....	IPLIST

<i>Anas fulvigula</i> .....	I	PLEIST		
<i>Anas acuta</i> .....	I	PLEIST		
<i>Anas americana</i> .....	I	PLEIST		
<i>Aythya</i> sp. ....	ve	PLIO, I	PLIO	
<i>Aythya americana</i> .....	e	PLEIST-I	PLEIST	
<i>Aythya affinis</i> .....	m	PLEIST-I	PLEIST	
<i>Aythya collaris</i> .....	I	PLEIST		
<i>Aythya valisineria</i> .....	I	PLEIST		
<i>Bucephala ossivallis</i> .....	ve	PLIO, ?	e	PLEIST
<i>Bucephala albeola</i> .....	I	PLEIST		
<i>Bucephala clangula</i> .....	I	PLEIST		
<i>Oxyura</i> sp. ....	I	PLIO		
<i>Oxyura dominica</i> .....	ve	PLIO		
<i>Oxyura jamaicensis</i> .....	I	PLEIST		
<i>Mergus merganser</i> .....	I	PLIO?, I	PLEIST	
<i>Mergus serrator</i> .....	I	PLEIST		
<i>Aix sponsa</i> .....	e	PLEIST-I	PLEIST	
<i>Clangula hyemalis</i> .....	I	PLEIST		
<i>Lophodytes cucullatus</i> .....	I	PLEIST		
<i>Spatula clypeata</i> .....	I	PLEIST		
Order ACCIPITRIFORMES (= FALCONIFORMES)				
Family ACCIPITRIDAE [kites, hawks, eagles, true vultures]				
<i>Promilio brodkorbi</i> .....	le	MIO		
<i>Promilio epileus</i> .....	le	MIO		
<i>Promilio floridanus</i> .....	le	MIO		
<i>Buteo</i> sp. ....	?le	MIO, I	MIO-e	PLEIST
<i>Buteo lagopus</i> .....	m	PLEIST		
<i>Buteo jamaicensis</i> .....	m	PLEIST-I	PLEIST	
<i>Buteo platypterus</i> .....	m	PLEIST-I	PLEIST	
<i>Buteo lineatus</i> .....	I	PLEIST		
genus and sp. indet. ....	e	I	MIO-ve	PLIO
<i>Aquila</i> sp. ....	ve	PLIO, e	PLEIST	
<i>Aquila chrysaetus</i> .....	m	PLEIST		
<i>Haliaeetus</i> sp. ....	?ve	PLIO		
<i>Haliaeetus leucocephalus</i> .....	I	PLEIST		
<i>Accipiter cooperi</i> .....	e	PLEIST-I	PLEIST	
<i>Accipiter striatus</i> .....	I	PLEIST		
<i>Buteogallus fragillus</i> .....	e	PLEIST		
<i>Neophrontops slaughteri</i> .....	e	PLEIST		
<i>Spizaetus</i> sp. ....	I	PLIO		
<i>Spizaetus grinnelli</i> .....	?I	PLEIST		
Family PANDIONIDAE [ospreys]				
<i>Pandion lovensis</i> .....	e	I	MIO	
<i>Pandion</i> sp. ....	ve	PLIO		
<i>Pandion haliaetus</i> .....	I	PLEIST		
Family FALCONIDAE [falcons, caracaras]				
<i>Falco columbarius</i> .....	e	PLEIST-m	PLEIST	
<i>Falco sparverius</i> .....	e	PLEIST-I	PLEIST	
<i>Falco peregrinus</i> .....	I	PLEIST		
<i>Milvago readi</i> <sup>14</sup> .....	I	PLEIST		
<i>Polyborus prelutosus</i> .....	I	PLEIST		
Order GALLIFORMES				
Family CRACIDAE [chachalacas]				
<i>Boreortalis laesslei</i> .....	le	MIO		



- Family PHASIANIDAE [pheasants, quail, turkeys]  
 Subfamily TETRAONINAE [grouse]  
*Bonasa umbellus* ..... IPLEIST  
*Tympanuchus cupido* ..... IPLEIST  
 Subfamily MELEAGRINAE [turkeys]  
*Rhegminornis calobatus*<sup>15</sup> ..... leMIO  
 genus and sp. indet. .... elMIO  
*Meleagris* sp. .... ?vePLIO, ePLIO  
*Meleagris leopoldi* or *M. anza* ..... IPLIO-ePLEIST  
*Meleagris gallopavo* ..... mPLEIST-IPELIST  
 Subfamily ODONTOPHORINAE [quail]  
*Colinus sullivanii* ..... ?IPLIO, ePLEIST-IPELIST  
*Colinus virginianus* ..... ePLEIST-IPELIST  
*Neortyx peninsularis* ..... IPELIST
- Order GRUIFORMES  
 Family RALLIDAE [rails, coots]  
 new genus and sp. .... elMIO  
*Rallus* sp. .... elMIO-IPLIO  
*Rallus longirostris* ..... ePLEIST  
*Rallus elegans* ..... ePLEIST-IPELIST  
*Rallus limicola*<sup>16</sup> ..... ?ePLEIST, IPELIST  
*Coturnicops noveboracensis* ..... mPLEIST-IPELIST  
*Gallinula* sp. .... IPLIO  
*Gallinula chloropus*<sup>17</sup> ..... mPLEIST-IPELIST  
*Fulica* sp. .... IPLIO  
*Fulica americana* ..... IPELIST  
*Laterallus* sp. .... IPLIO  
*Laterallus exilis*<sup>18</sup> ..... IPELIST  
*Porphyryla* sp. .... IPLIO  
*Porphyryla martinica* ..... IPELIST  
*Porzana carolina* ..... IPELIST
- Family ARAMIDAE [limpkin]  
*Aramus guarauna* ..... IPELIST
- Family GRUIDAE [cranes]  
*Probalearica crataegensis* ..... leMIO  
*Aramornis* sp. .... elMIO  
*Grus* sp. .... elMIO  
 genus and sp. indet. .... vePLIO  
*Grus americanus* ..... ePLEIST-IPELIST  
*Grus canadensis* ..... IPELIST
- Family PHORUSRHACIDAE [extinct flightless cranes]  
*Titanis walleri* ..... IPLIO-ePLEIST
- Order CHARADRIIFORMES  
 Family PLATALEIDAE [ibises, spoonbills]  
 genus and sp. indet. .... IMIO  
*Plegadis pharangites* ..... ?IMIO  
*Ajaia* sp. .... ePLEIST  
*Ajaia ajaia* ..... IPELIST  
*Eudocimus* sp. .... vePLIO-ePLEIST  
*Eudocimus albus* ..... ePLEIST-IPELIST
- Family JACANIDAE [lilly-trotters]  
*Jacana farrandi* ..... elMIO
- Family HAEMATOPODIDAE [oystercatchers]  
*Haematopus sulcatus* ..... vePLIO

- Family CHARADRIIDAE [plovers]  
*Charadrius vociferus* ..... IPLEIST  
*Dorypaltus prosphatus* ..... IPLEIST
- Family SCOLOPACIDAE [sandpipers]  
 genus and sp. indet. .... eMIO  
*Actitis* sp. .... ?eMIO, IPLIO  
*Actitis macularia* ..... IPLEIST  
*Arenaria* sp. .... ?eMIO  
*Calidris* 2 spp. .... eMIO  
*Calidris rayi* ..... eMIO  
*Calidris pacis* ..... vePLIO  
*Calidris penepusilla* ..... vePLIO  
*Limosa ossivallus* ..... vePLIO  
*Philomachus* sp. .... vePLIO  
*Limnodromus* sp. .... IPLIO-IPELIST  
*Limnodromus scolopaceus* ..... IPELIST  
*Gallinago* sp. .... IPLIO  
*Gallinago gallinago* ..... ePELIST-IPELIST  
*Scolopax minor* ..... ePELIST-IPELIST  
*Numenius americanus* ..... IPELIST  
*Totanus melanoleucas* ..... IPELIST  
*Totanus flavipes* ..... IPELIST  
*Tringa flacipes* ..... IPELIST  
*Tringa melanoleuca* ..... IPELIST  
*Tringa solitaria* ..... IPELIST
- Family RECURVIROSTRIDAE [avocets, stilts]  
*Recurvirostra* sp. .... ePELIST  
*Recurvirostra americana* ..... IPELIST
- Family PHOENICOPTERIDAE [flamingos]  
*Phoenicopterus* sp. .... eMIO, ePELIST  
*Phoenicopterus floridanus* ..... vePLIO
- Family LARIDAE [gulls]  
*Larus elmorei* ..... vePLIO  
*Larus* sp. .... IPELIST
- Family ALCIDAE [auks, mures, puffins]  
 genus and sp. indet. .... vePLIO  
*Australca grandis* ..... vePLIO  
*Pinguinus* sp. .... ?vePLIO
- Order COLUMBIFORMES  
 Family COLUMBIDAE [pigeons, doves]  
*Columbina* n. sp. .... eMIO  
*Zenaida macroura* ..... ePELIST-IPELIST  
*Ectopistes migratorius* ..... IPELIST
- Order CUCULIFORMES  
 Family CUCULIDAE [cuckoos]  
*Coccyzus americanus* ..... ePELIST-IPELIST
- Order STRIGIFORMES  
 Family TYTONIDAE [barn owls]  
 new genus and sp. .... eMIO  
*Tyto alba* ..... ePELIST-IPELIST
- Family STRIGIDAE [owls]  
*Bubo* sp. .... vePLIO  
*Bubo virginianus* ..... mPELIST-IPELIST  
*Asio priscus* ..... ePELIST

<i>Asio flammeus</i> .....	IPLEIST
<i>Glaucidium</i> sp. ....	ePLEIST
<i>Speotyto megalopeza</i> .....	ePLEIST
<i>Speotyto cunicularia</i> .....	IPLEIST
<i>Otus asio</i> .....	mPLEIST-IPLEIST
<i>Strix varia</i> .....	IPLEIST
Order CORACIIFORMES	
Family, genus and sp. indet. ....	leMIO
Family MOMOTIDAE [motmots]	
genus and sp. indet. ....	eMIO
Family ALCEDINIDAE [kingfishers]	
<i>Ceryle alcyon</i> .....	IPLEIST
Order PICIFORMES	
Family PICIDAE [woodpeckers]	
<i>Campephilus dalquesti</i> .....	ePLEIST
<i>Colaptes auratus</i> .....	ePLEIST-IPLEIST
<i>Sphyrapicus</i> sp. ....	ePLEIST
<i>Melanerpes erythrocephalus</i> .....	ePLEIST-IPLEIST
<i>Melanerpes carolinus</i> .....	IPLEIST
<i>Picoides borealis</i> .....	IPLEIST
Family CAPITONIDAE [barbets]	
genus and sp. indet. ....	leMIO
Order PASSERIFORMES [perching and song birds]	
Family, genus and sp. indet. ....	eMIO
Family HIRUNDINIDAE [swallows]	
<i>Progne subis</i> .....	mPLEIST-IPLEIST
<i>Tachycineta speleodytes</i> .....	IPLEIST
Family CORVIDAE [crows, jays]	
<i>Protocitta ajax</i> .....	mPLEIST
<i>Protocitta dixi</i> .....	IPLEIST
<i>Aphelocoma coerulescens</i> .....	IPLEIST
<i>Corvus brachyrhynchos</i> .....	IPLEIST
<i>Corvus ossifragus</i> .....	IPLEIST
<i>Cyanocitta cristata</i> .....	IPLEIST
<i>Henocitta brodkorbi</i> .....	IPLEIST
Family TROGLODYTIDAE [wrens]	
<i>Cistothorus brevis</i> .....	IPLEIST
<i>Cistothorus platensis</i> .....	IPLEIST
<i>Troglodytes aedon</i> .....	IPLEIST
Family MIMIDAE [mockingbirds, thrashers]	
<i>Mimus polyglottos</i> .....	IPLEIST
<i>Toxostoma rufum</i> .....	IPLEIST
Family LANIIDAE [shrikes]	
<i>Lanius ludovicianus</i> .....	IPLEIST
Family VIREONIDAE [vireos]	
<i>Vireo griseus</i> .....	IPLEIST
Family EMBERIZIDAE	
Subfamily PARULINAE [wood warblers]	
genus and sp. indet. ....	leMIO
<i>Dendroica</i> sp. ....	mPLEIST
<i>Geothlypis trichas</i> .....	IPLEIST
Subfamily CARDINALINAE [cardinals, grosbeaks]	
<i>Cardinalis cardinalis</i> .....	IPLEIST
<i>Pheucticus ludovicianus</i> .....	mPLEIST

## Subfamily EMBERIZINAE [towhees, American sparrows]

<i>"Palaeostruthus" eurius</i> <sup>19</sup> .....	eMIO
<i>Aimophila aestivalis</i> .....	mPLEIST
<i>Pooecetes gramineus</i> .....	mPLEIST
<i>Passerculus sandwichensis</i> .....	mPLEIST-IPLEIST
<i>Spizella pusilla</i> .....	mPLEIST-IPLEIST
<i>Pipilo erythrophthalmus</i> .....	mPLEIST-IPLEIST
<i>Ammodramus savannarum</i> .....	IPLEIST
<i>Ammodramus henslowi</i> .....	IPLEIST
<i>Spizella passerina</i> .....	IPLEIST

## Subfamily ICTERINAE [grackles, blackbirds, orioles]

<i>Agelaius</i> sp. ....	IPLIO
<i>Agelaius phoeniceus</i> .....	mPLEIST-IPLEIST
gen. & sp. indet. ....	ePLEIST
<i>Pandanaris floridana</i> .....	mPLEIST-IPLEIST
<i>Cremaster tyttus</i> .....	IPLEIST
<i>Molothrus ater</i> .....	IPLEIST
<i>Quiscalus quiscula</i> .....	IPLEIST
<i>Sturnella magna</i> .....	IPLEIST

## Infraclass SYNAPSIDA

## Supercohort MAMMALIA [mammals]

## Cohort THERIA

## Magnorder MARSUPIALIA (= METATHERIA)

## Order AMERIDELPHIA [New World marsupials]

## Family DIDELPHIDAE [opossums]

genus and sp. indet. ....	IOLIG
<i>Peratherium</i> sp. ....	eMIO-emMIO
<i>Didelphis virginiana</i> .....	mPLEIST-IPLEIST

## Magnorder EUTHERIA

## Superorder EDENTATA

## Grandorder XENARTHRA

## Order CINGULATA

## Superfamily DASYPODOIDEA

## Family DASYPODIDAE [armadillos]

<i>Dasypus bellus</i> .....	eIPLIO-IPLEIST
new genus and sp. ....	ePLEIST

## Superfamily GLYPTODONTOIDEA

## Family PAMPATHERIIDAE [pampatheres, giant armadillos]

<i>Holmesina floridanus</i> .....	eIPLIO-ePLEIST
<i>Holmesina septentrionalis</i> .....	mPLEIST-IPLEIST

## Family GLYPTODONTIDAE [glyptodonts]

<i>Glyptotherium arizonae</i> .....	eIPLIO-ePLEIST
<i>Glyptotherium floridanum</i> .....	IPLEIST

## Order PILOSA

## Suborder PHYLLOPHAGA [sloths]

## Family MYLODONTIDAE

<i>Thinobadistes segnis</i> .....	eMIO
<i>Thinobadistes wetzeli</i> .....	vMIO
<i>Glossotherium chapadmalense</i> .....	IPLIO
<i>Paramylodon harlani</i> .....	ePLEIST-IPLEIST

## Family MEGALONYCHIDAE

<i>Pliometanastes protistus</i> .....	eMIO-vMIO
<i>Megalonyx curvidens</i> .....	vePLIO
<i>Megalonyx leptostomus</i> .....	IPLIO

	<i>Megalonyx wheatleyi</i> .....	ePLEIST
	<i>Megalonyx jeffersonii</i> .....	IPLEIST
	Family MEGATHERIIDAE	
	Subfamily MEGATHERIINAE	
	<i>Eremotherium</i> n. sp. ....	IPLIO-ePLEIST
	<i>Eremotherium mirabile</i> <sup>20</sup> .....	IPLEIST
	Subfamily NOTHROTHERIINAE	
	<i>Nothrotheriops texanus</i> .....	ePLEIST
Superorder	EPITHERIA	
Grandorder	INSECTIVORA	
Order	ERINACEOMORPHA	
Superfamily	ERINACEOIDEA	
Family	ERINACEIDAE [hedgehogs]	
	<i>Amphechinus</i> sp. ....	eMIO
Order	SORICOMORPHA	
Superfamily	SORICOIDEA	
Family, genus, and sp. indet.	.....	IOLIG
Family	SORICIDAE [shrews]	
	genus and sp. indet. ....	eMIO-IMIO
	<i>Limnoecus</i> n. sp. ....	leMIO
	<i>Cryptotis parva</i> .....	IPLIO-IPLEIST
	<i>Blarina carolinensis</i> <sup>21</sup> .....	ePLEIST-IPLEIST
	<i>Sorex longirostris</i> .....	IPLEIST
Family	TALPIDAE [moles]	
	genus and sp. indet. ....	leMIO-IMIO
	<i>Scalopoides</i> sp. ....	?leMIO
	<i>Scalopus aquaticus</i> .....	IPLIO-IPLEIST
Grandorder	ARCHONTA	
Order	CHIROPTERA [bats]	
Suborder	MICROCHIROPTERA	
Superfamily	EMBALLONUROIDEA	
Family	EMBALLONURIDAE [sac-winged bats]	
	2 new genera and spp. ....	IOLIG
	new genus and sp. ....	eMIO
Superfamily	VESPERTILIONOIDEA	
Family	NATALIDAE [funnel-eared bats]	
	genus and sp. indet. ....	IOLIG
	new genus and sp. ....	eMIO
Family	VESPERTILIONIDAE [common bats]	
	new genus and sp. ....	IOLIG
	genus and sp. indet. ....	eMIO-IMIO
	<i>Miomotis floridanus</i> .....	leMIO
	<i>Suaptenos whitei</i> .....	leMIO
	<i>Antrozous</i> sp. ....	vIPLIO
	<i>Pipistrellus subflavus</i> .....	ePLEIST-mPLEIST
	<i>Plecotus rafinesquii</i> .....	mPLEIST
	<i>Myotis</i> sp. ....	ePLEIST
	<i>Myotis austroriparius</i> .....	mPLEIST-IPLEIST
	<i>Myotis grisescens</i> .....	IPLEIST
	<i>Eptesicus fuscus</i> .....	IPLEIST
	<i>Lasiurus intermedius</i> .....	IPLEIST
	<i>Lasiurus borealis</i> .....	IPLEIST
	<i>Lasiurus seminolus</i> <sup>22</sup> .....	?IPLEIST

Family MOLOSSIDAE [free-tailed bats]	
<i>Tadarida</i> sp. ....	IPLIO
<i>Tadarida brasiliensis</i> .....	IPLEIST
<i>Eumops glaucinus</i> <sup>23</sup> .....	IPLEIST
<i>Eumops underwoodi</i> .....	IPLEIST
Superfamily PHYLLOSTOMOIDEA	
Family PHYLLOSTOMIDAE [American leaf-nosed bats]	
Subfamily DESMODONTINAE [vampire bats]	
<i>Desmodus archaeodaptes</i> .....	vIPLIO-ePLEIST
<i>Desmodus stocki</i> <sup>24</sup> .....	IPLEIST
Family MORMOOPIDAE [ghost-faced bats]	
new genus and sp. ....	lOLIG
<i>Mormoops megalophylla</i> .....	IPLEIST
<i>Pteronotus pristinus</i> .....	?IPLEIST
Order PRIMATES [lemurs, monkeys, apes]	
Superfamily ANTHROPOIDEA	
Family HOMINIDAE [humans]	
<i>Homo sapiens</i> .....	vIPLEIST
Grandorder FERAЕ	
Order CARNIVORA [carnivorans]	
Suborder and family indeterminant	
<i>Palaeogale</i> sp. ....	?lOLIG
Suborder CANIFORMIA	
Infraorder CYNOIDEA	
Family CANIDAE [dogs, wolves, foxes]	
Subfamily HESPEROCYONINAE	
<i>Bassariscops achoros</i> .....	veMIO
<i>Cynarctoides</i> sp. ....	veMIO
<i>Mesocyon</i> sp. ....	?veMIO
<i>Phlaocyon</i> sp. ....	veMIO
Subfamily BOROPHAGINAE	
<i>Euoplocyon spissidens</i> .....	leMIO
<i>Tomarctus canavus</i> <sup>25</sup> .....	leMIO
<i>Epiocyon</i> or <i>Aelurodon</i> sp. ....	lmMIO
<i>Epiocyon haydeni</i> .....	?elMIO
<i>Epiocyon saevus</i> .....	elMIO
<i>Epiocyon validus</i> .....	elMIO
<i>Carpocyon limosus</i> .....	vMIO
<i>Osteoborus galushai</i> .....	elMIO
<i>Osteoborus orc</i> .....	vMIO
<i>Osteoborus dudleyi</i> <sup>26</sup> .....	vePLIO
<i>Borophagus diversidens</i> .....	IPLIO
Subfamily CANINAE	
<i>Cynodesmus iamonsensis</i> <sup>27</sup> .....	eMIO
<i>Leptocyon</i> sp. ....	?IMIO
<i>Vulpes</i> sp. ....	IMIO-vePLIO, IPLEIST
new genus and sp. of fox .....	vMIO
<i>Urocyon</i> sp. ....	ePLEIST
<i>Urocyon minicephalus</i> .....	mPLEIST
<i>Urocyon cinereoargenteus</i> .....	IPLEIST
<i>Canis davisi</i> .....	?vePLIO
<i>Canis lepophagus</i> .....	elPLIO
<i>Canis edwardii</i> .....	ePLEIST
<i>Canis armbrusteri</i> .....	ePLEIST-mPLEIST

<i>Canis rufus</i> .....	IPLEIST
<i>Canis latrans</i> <sup>28</sup> .....	IPLEIST
<i>Canis dirus</i> .....	IPLEIST
<i>Canis familiaris</i> .....	IPLEIST
Infraorder ARCTOIDEA	
Superfamily AMPHICYONOIDEA	
Family AMPHICYONIDAE [bear-dogs]	
<i>Daphoenus</i> sp. ....	?IOLIG
<i>Daphoenodon notionastes</i> .....	veMIO
<i>Mammacyon obtusidens</i> .....	?veMIO
<i>Temnocyon</i> sp. ....	veMIO
<i>Amphicyon longiramus</i> <sup>29</sup> .....	leMIO
<i>Amphicyon pontoni</i> .....	leMIO
<i>Cynelos caroniavorus</i> <sup>30</sup> .....	leMIO
<i>Pliocyon robustus</i> .....	lmMIO
<i>Ischyrocyon</i> sp. ....	elMIO
Superfamily URSOIDEA	
Family URSIDAE [bears]	
Subfamily HEMICYONINAE	
<i>Hemicyon johnhenryi</i> .....	leMIO
Subfamily URSINAE	
Tribe TREMARCTINI	
<i>Indarctos</i> sp. ....	vIMIO
<i>Agriotherium schneideri</i> .....	vePLIO
<i>Plionarctos</i> sp. ....	vePLIO
<i>Arctodus pristinus</i> .....	?elPLIO, vIPLIO-ePLEIST
<i>Tremarctos floridanus</i> .....	IPLEIST
Tribe URSINI	
<i>Ursus americanus</i> .....	IPLEIST
<i>Ursus arctos</i> .....	?IPLEIST
Family PHOCIDAE [true or earless seals]	
undescribed genera and spp. ....	vePLIO, IPLIO
<i>Monachus</i> sp. ....	ePLEIST
<i>Monachus tropicalis</i> .....	IPLEIST
Family ODOBENIDAE [walruses]	
<i>Trichecodon huxleyi</i> .....	vePLIO
genus and sp. indet. ....	ePLEIST
Superfamily MUSTELOIDEA	
Family PROCYONIDAE [racoons]	
<i>Arctonasua floridana</i> .....	elMIO
<i>Arctonasua eurybates</i> .....	vePLIO
<i>Paranasua biradica</i> .....	elMIO
<i>Nasua</i> sp. ....	?vePLIO
<i>Procyon</i> sp. ....	IPLIO-ePLEIST
<i>Procyon lotor</i> .....	mPLEIST-IPLEIST
Family MUSTELIDAE [weasels, skunks, otters, etc.]	
Subfamily MUSTELINAE [weasels, wolverines, minks]	
genus and sp. indet. <sup>31</sup> .....	leMIO
<i>Paroligobunis frazieri</i> .....	veMIO
<i>Oligobunis floridanus</i> .....	veMIO
<i>Ischyrictis</i> sp. ....	lMIO
<i>Plionictis</i> sp. ....	lMIO
<i>Plesiogulo marshalli</i> .....	vePLIO
<i>Mustela frenata</i> .....	ePLEIST-IPLEIST

- Mustela vison* ..... IPLEIST
- Subfamily LEPTARCTINAE
- Leptarctus ancipidens* ..... leMIO
- Leptarctus progressus* ..... mMIO?
- Leptarctus* n. sp. .... eIMIO
- Subfamily GALICTINAE
- Trigonictis macrodon* ..... eIPLIO
- Trigonictis* sp. .... vIPLIO
- Trigonictis cookii* ..... ePLEIST
- Subfamily LUTRINAE [otters]
- Sthenictis lacota* ..... ?eIMIO
- Enhydritherium terraenovae* ..... vIMIO-vePLIO
- Satherium piscinarium* ..... ?IPLIO
- Lutra* sp. .... ePLEIST
- Lutra canadensis* ..... IPLEIST
- Subfamily MEPHITINAE [skunks]
- genus and sp. indet. .... vePLIO
- Spilogale putorius* ..... ePLEIST-IPLEIST
- Conepatus* sp. .... mPLEIST
- Conepatus leuconotus* ..... IPLEIST
- Conepatus robustus* ..... IPLEIST
- Mephitis mephitis* ..... IPLEIST
- Suborder FELIFORMIA
- Infraorder AELUROIDEA
- Family NIMRAVIDAE [false sabercats or paleofelids]
- genus and sp. indet. .... veMIO
- Barbourofelis whitfordi* ..... lmMIO
- Barbourofelis loveorum*<sup>32</sup> ..... eIMIO
- Family FELIDAE [true cats]
- Subfamily MACHAIRODONTINAE [sabertoothed cats]
- Nimravides galiani* ..... eIMIO
- Machairodus* sp. .... vIMIO-vePLIO
- Megantereon hesperus* ..... vePLIO
- Smilodon gracilis* ..... eIPLIO-ePLEIST
- Smilodon populator* or *S. fatalis* ..... IPLEIST
- Homotherium* sp. .... IPLIO-ePLEIST
- Dinobastis serus* ..... IPLEIST
- Subfamily FELINAE [conical-toothed cats]
- Lynx rexroadensis* ..... vePLIO-IPLIO
- Lynx rufus* ..... ePLEIST-IPLEIST
- Panthera onca* ..... ePLEIST-IPLEIST
- Panthera atrox* ..... IPLEIST
- Miracinonyx inexpectata* ..... vIPLIO-ePLEIST
- Puma concolor* ..... IPLEIST
- Leopardus pardalis* ..... IPLEIST
- Leopardus amnicola*<sup>33</sup> ..... IPLEIST
- Family HYAENIDAE [hyenas]
- Chasmaporthetes ossifragus* ..... IPLIO
- Grandorder GLIRES
- Order RODENTIA [rodents]
- Suborder PROTROGOMORPHA
- Superfamily APLODONTOIDEA
- Family MYLAGAULIDAE [extinct burrowing rodents]
- Mesogaulus* sp. .... leMIO



	<i>Mylagaulus elassos</i> .....	eMIO
	<i>Mylagaulus kinseyi</i> .....	mMIO
Suborder	SCIUROMORPHA	
	Superfamily SCIUROIDEA	
	Family SCIURIDAE [squirrels]	
	Subfamily SCIURINAE [tree and ground squirrels]	
	genus and sp. indet. ....	veMIO
	<i>Protosciurus</i> sp. ....	veMIO
	<i>Miospermophilus</i> sp. ....	?leMIO
	<i>Spermophilus</i> sp. ....	lPLEIST
	<i>Nototamias hulberti</i> .....	leMIO
	<i>Tamias</i> sp. ....	?eMIO
	<i>Tamias aristus</i> .....	lPLEIST
	<i>Sciurus</i> sp. ....	ePLEIST
	<i>Sciurus carolinensis</i> .....	mPLEIST-IPLEIST
	<i>Sciurus niger</i> .....	lPLEIST
	Subfamily PETAURISTINAE [flying squirrels]	
	<i>Petauristodon pattersoni</i> .....	leMIO
	<i>Cryptopterus webbi</i> .....	eIPLIO
	<i>Glaucomys volans</i> .....	?vIPLIO, mPLEIST-IPLEIST
Suborder	CASTORIMORPHA	
	Superfamily CASTOROIDEA	
	Family CASTORIDAE [beavers]	
	genus and sp. indet. ....	veMIO
	<i>Anchitheriomys</i> sp. ....	lmMIO
	<i>Eucastor</i> sp. ....	lmMIO
	<i>Eucastor planus</i> .....	?lMIO
	<i>Castor canadensis</i> .....	lPLIO, lPLEIST
	<i>Castoroides ohioensis</i> .....	ePLEIST-IPLEIST
	Family EUTYPOMYIDAE	
	genus and sp. indet. ....	lOLIG
Suborder	MYOMORPHA	
	Superfamily GEOMYOIDEA	
	Family GEOMYIDAE [pocket gophers]	
	<i>Jimomys</i> sp. ....	?eMIO
	<i>Geomys propinetus</i> .....	lPLIO
	<i>Geomys pinetis</i> .....	ePLEIST-IPLEIST
	<i>Thomomys orientalis</i> .....	mPLEIST-IPLEIST
	Family HETEROMYIDAE [pocket mice, kangaroo rats]	
	genus and sp. indet. ....	lOLIG
	<i>Proheteromys</i> several new spp. ....	eMIO
	<i>Proheteromys floridanus</i> .....	leMIO
	<i>Proheteromys magnus</i> .....	leMIO
	Family EOMYIDAE	
	genus and sp. indet. ....	lOLIG
	new genus and sp. A .....	vIOLIG-veMIO
	new genus and sp. B .....	eMIO
	Superfamily MUROIDEA	
	Family MURIDAE <sup>34</sup> [mice, voles]	
	Subfamily EUMYINAE	
	genus and sp. indet. ....	lOLIG-eMIO
	<i>Leidyms</i> sp. ....	?veMIO
	Subfamily SIGMODONTINAE [New World mice]	
	<i>Copemys</i> sp. ....	mMIO-lMIO

new genus and sp. ....	eLMIO
<i>Abelmoschomys simpsoni</i> .....	eLMIO
<i>Sigmodon medius</i> .....	lPLIO
<i>Sigmodon curtisi</i> .....	vPLIO
<i>Sigmodon libitinus</i> .....	ePLEIST
<i>Sigmodon bakeri</i> .....	mPLEIST
<i>Sigmodon hispidus</i> .....	lPLEIST
<i>Neotoma</i> sp. ....	vPLIO
<i>Neotoma floridana</i> .....	lPLEIST
<i>Reithrodontomys humulis</i> .....	ePLEIST-lPLEIST
<i>Ochrotomys nuttalli</i> .....	mPLEIST-lPLEIST
<i>Podomys floridanus</i> <sup>35</sup> .....	mPLEIST-lPLEIST
<i>Peromyscus gossypinus</i> .....	lPLEIST
<i>Peromyscus polionotus</i> .....	lPLEIST
<i>Oryzomys palustris</i> .....	lPLEIST
Subfamily ARVICOLINAE <sup>36</sup> [voles, lemmings]	
<i>Synaptomys</i> sp. ....	ePLEIST
<i>Synaptomys australis</i> .....	lPLEIST
<i>Ondatra idahoensis</i> .....	?vPLIO
<i>Ondatra annectens</i> .....	ePLEIST
<i>Ondatra zibethicus</i> .....	lPLEIST
<i>Neofiber leonardi</i> .....	ePLEIST
<i>Neofiber alleni</i> .....	mPLEIST-lPLEIST
<i>Atopomys salvelinus</i> .....	ePLEIST
<i>Pitymys</i> sp. ....	ePLEIST
<i>Pitymys llanensis</i> .....	ePLEIST
<i>Pitymys aratai</i> .....	mPLEIST
<i>Pitymys hibbardi</i> .....	lPLEIST
<i>Pitymys pinetorum</i> .....	lPLEIST
<i>Microtus pennsylvanicus</i> .....	lPLEIST
Suborder CAVIOMORPHA [Neotropical rodents]	
Superfamily ERETHIZONTOIDEA	
Family ERETHIZONTIDAE [porcupines]	
<i>Erethizon</i> sp. ....	lPLIO
<i>Erethizon kleini</i> .....	vPLIO
<i>Erethizon dorsatum</i> .....	ePLEIST-lPLEIST
Superfamily CAVIOIDEA	
Family HYDROCHAERIDAE [capybaras]	
<i>Neochoerus dichroplax</i> .....	lPLIO
<i>Neochoerus pinckneyi</i> .....	lPLEIST
<i>Hydrochaeris holmesi</i> .....	ePLEIST-lPLEIST
Order LAGOMORPHA [rabbits, pikas]	
Family LEPORIDAE [rabbits, hares]	
Subfamily PALAEOLAGINAE	
genus and sp. indet. ....	lOLIG
<i>Palaeolagus</i> sp. ....	veMIO
Subfamily ARCHAEOLAGINAE	
<i>Hypolagus tedfordi</i> .....	lmMIO
<i>Hypolagus</i> sp. ....	eLMIO
<i>Hypolagus ringoldensis</i> .....	vePLIO
Subfamily LEPORINAE	
<i>Sylvilagus webbi</i> .....	lPLIO-ePLEIST
<i>Sylvilagus floridanus</i> .....	ePLEIST-lPLEIST
<i>Sylvilagus palustris</i> .....	lPLEIST

	<i>Sylvilagus palustrellus</i> .....	vI	PLEIST
	<i>Lepus</i> sp. ....	e	PLEIST-m
Grandorder	UNGULATA		
Order	ARTIODACTYLA [artiodactyls]		
Suborder	BUNODONTIA (=SUINA)		
Superfamily	SUOIDEA		
Family	ENTELODONTIDAE [extinct giant "hogs"]		
	<i>Dinohyus</i> sp. ....	e	MIO
Family	TAYASSUIDAE [peccaries]		
	genus and sp. indet. ....	l	OLIG
	" <i>Cynorca</i> " sp. <sup>37</sup> .....	ve	MIO
	<i>Floridachoerus olseni</i> .....	le	MIO
	" <i>Prosthennops</i> " sp. ....	e	MIO
	new genus and sp. ....	e	MIO
	<i>Catagonus brachyodontus</i> .....	ve	PLIO
	<i>Mylohyus elmoresi</i> <sup>38</sup> .....	ve	PLIO
	<i>Mylohyus floridanus</i> .....	l	PLIO
	<i>Mylohyus nasutus</i> <sup>39</sup> .....	e	PLEIST-IPLEIST
	<i>Platygonus bicalcaratus</i> .....	l	PLIO
	<i>Platygonus vetus</i> .....	e	PLEIST
	<i>Platygonus cumberlandensis</i> .....	m	PLEIST
	<i>Platygonus compressus</i> .....	l	PLEIST
	<i>Tayassu</i> sp. <sup>40</sup> .....	?	IPLEIST
Suborder	SELENODONTIA		
Infraorder	TYLOPODA		
Superfamily	MERYCOIDODONTOIDEA		
Family	MERYCOIDODONTIDAE [oreodonts]		
	2 genera and spp. indet. ....	l	OLIG
	genus and sp. indet. ....	ve	MIO
	<i>Phenacocoelus tuskensis</i> .....	ve	MIO
	<i>Merychius</i> sp. ....	?	le
Superfamily	CAMELOIDEA		
Family	PROTOCERATIDAE [protoceratids]		
	genus and sp. indet. ....	l	OLIG
	<i>Prosynthetoceras texanus</i> <sup>41</sup> .....	e	MIO
	<i>Synthetoceras tricornatus</i> .....	l	MIO
	<i>Kyptoceras amatorum</i> .....	ve	PLIO
Family	CAMELIDAE [camels, llamas]		
Subfamily	AEPYCAMELINAE [giraffe camels]		
	genus and sp. indet. ....	ve	MIO
	very small new genus and sp. ....	ve	MIO
	<i>Oxydactylus</i> sp. ....	ve	MIO
	<i>Nothokemas waldropi</i> .....	ve	MIO
	<i>Nothokemas floridanus</i> <sup>42</sup> .....	le	MIO
	<i>Floridatragulus dolichanthereus</i> <sup>43</sup> .....	le	MIO
	<i>Floridatragulus barbouri</i> .....	le	MIO
	<i>Aepycamelus major</i> .....	e	MIO
Subfamily	CAMELINAE		
Unnamed tribe			
	<i>Procamelus</i> sp. ....	l	m
	<i>Procamelus grandis</i> .....	e	MIO
Tribe	LAMINI [llamas]		
	" <i>Hemiauchenia</i> " <i>minima</i> .....	e	MIO
	" <i>Hemiauchenia</i> " n. sp. ....	ve	PLIO

- Hemiauchenia blancoensis* .....ePLIO  
*Hemiauchenia macrocephala* .....IPLIO-IPLEIST  
*Palaeolama mirifica* .....ePLEIST-IPLEIST  
 Tribe CAMELINI [camels]  
*Megatylopus* sp. ....vePLIO  
 Infraorder RUMINANTIA  
 Superfamily TRAGULOIDEA [chevrotains, mouse deer]  
 Family HYPERTRAGULIDAE  
*Nanotragulus* sp. ....IOLIG  
*Nanotragulus loomisi* .....veMIO  
 Family LEPTOMERYCIDAE  
 genus and sp. indet. ....IOLIG-eMIO  
 Superfamily GELOCOIDEA  
 Family GELOCIDAE [extinct hornless ruminants]  
 genus and sp. indet. ....mMIO  
*Pseudoceras* sp. ....eLMIO  
 new genus and sp. ....vLMIO  
 Superfamily CERVOIDEA  
 Family MOSCHIDAE [musk deer]  
*Parablastomeryx floridanus* .....leMIO  
*Machaeromeryx gilchristensis* .....leMIO  
 Family ANTILOCAPRIDAE [pronghorns]  
 Subfamily MERYCODONTINAE  
 genus and sp. indet. ....?mMIO  
 Subfamily ANTILOCAPRINAE  
 genus and sp. indet. ....eLMIO  
*Hexobelomeryx simpsoni*<sup>44</sup> .....vePLIO  
*Subantilocapra garciae* .....vePLIO  
*Capromeryx arizonensis* .....IPLIO-vIPLIO  
 Family PALAEOMERYCIDAE  
 Subfamily DROMOMERYCINAE [dromomerycines]  
 genus and sp. indet. ....eMIO  
*Bouromeryx* sp. ....emMIO  
*Cranioceras* sp. ....lmMIO  
*Pediomeryx hamiltoni* .....eLMIO  
*Pediomeryx* sp. ....vLMIO  
 Family CERVIDAE [deer, elk, moose]  
 Subfamily ODOCOILINAE  
 new genus and sp. ....vePLIO  
*Odocoileus virginianus* .....IPLIO-IPLEIST  
*Blastocerus extraneus*<sup>45</sup> .....IPLEIST  
 Superfamily BOVOIDEA  
 Family BOVIDAE [cattle, goats, antelope]  
 Subfamily BOVINAE [cattle, bison]  
 genus and sp. indet. ....vIPLIO  
*Bison latifrons* .....mPLEIST  
*Bison antiquus* .....IPLEIST  
 Order PERISSODACTYLA [perissodactyls]  
 Suborder HIPPOMORPHA  
 Superfamily EQUOIDEA  
 Family EQUIDAE [horses]  
 Unnamed subfamily  
*Miohippus* sp. ....IOLIG

## Subfamily ANCHITHERIINAE

<i>Anchitherium clarencei</i> .....	leMIO-emMIO
<i>Hypohippus chico</i> .....	emMIO
<i>Hypohippus affinis</i> .....	?mMIO

## Subfamily EQUINAE

## Unnamed tribes

<i>Archaeohippus blackbergi</i> .....	leMIO-emMIO
<i>Parahippus</i> sp. ....	eMIO-mMIO
" <i>Parahippus</i> " <i>leonensis</i> .....	leMIO
" <i>Merychippus</i> " <i>gunteri</i> .....	leMIO-emMIO
" <i>Merychippus</i> " <i>primus</i> .....	?emMIO

## Tribe HIPPARIONINI

" <i>Merychippus</i> " <i>isonesus</i> .....	?emMIO
<i>Pseudhipparion</i> n. sp. ....	emMIO
<i>Pseudhipparion curtivallum</i> .....	lmMIO
<i>Pseudhipparion skinneri</i> .....	eIMIO-vIMIO
<i>Pseudhipparion simpsoni</i> .....	vePLIO
<i>Neohipparion trampasense</i> .....	eIMIO
<i>Neohipparion eurystyle</i> <sup>46</sup> .....	vIMIO-vePLIO
<i>Hipparion tehonense</i> .....	lmMIO-eIMIO
<i>Merychippus brevidontus</i> .....	?emMIO
<i>Merychippus californicus</i> .....	?mMIO
" <i>Merychippus</i> " <i>goorisi</i> .....	emMIO
<i>Nannippus</i> n. sp. A .....	mMIO
<i>Nannippus westoni</i> .....	eIMIO
<i>Nannippus</i> n. sp. B .....	vIMIO
<i>Nannippus aztecus</i> <sup>47</sup> .....	vIMIO-vePLIO
<i>Nannippus peninsulatus</i> <sup>48</sup> .....	IPLIO
<i>Cormohipparion sphenodus</i> .....	?emMIO
<i>Cormohipparion occidentale</i> .....	lmMIO
<i>Cormohipparion ingenuum</i> .....	lmMIO-lMIO
<i>Cormohipparion plicatile</i> .....	lMIO
<i>Cormohipparion emsliei</i> .....	vIMIO-IPLIO

## Tribe EQUINI

<i>Protohippus perditus</i> .....	emMIO
<i>Protohippus supremus</i> .....	lmMIO
<i>Protohippus gidleyi</i> .....	eIMIO-vIMIO
<i>Calippus</i> n. spp. ....	mMIO
<i>Calippus proplacidus</i> .....	emMIO
<i>Calippus regulus</i> .....	?lmMIO
<i>Calippus elachistus</i> .....	eIMIO
<i>Calippus martini</i> .....	lmMIO
<i>Calippus cerasinus</i> .....	eIMIO
<i>Calippus hondurensis</i> .....	eIMIO
<i>Calippus maccartyi</i> .....	vIMIO
<i>Pliohippus mirabilis</i> .....	emMIO
<i>Pliohippus pernix</i> .....	lmMIO
<i>Astrohippus stockii</i> .....	vePLIO
" <i>Dinohippus</i> " sp. ....	vIMIO
" <i>Dinohippus</i> " <i>mexicanus</i> .....	vePLIO
<i>Equus</i> ( <i>Dolichohippus</i> ) sp. <sup>49</sup> .....	IPLIO
<i>Equus</i> ( <i>Hemionus</i> ) n. sp. (?) .....	ePLEIST
<i>Equus</i> " <i>leidy</i> " .....	ePLEIST-mPLEIST, ?IPLIST
<i>Equus</i> (? <i>Amerhippus</i> ) <i>fraternus</i> .....	ePLEIST, ?IPLIST

- Equus* spp.<sup>50</sup> ..... IPLEIST
- Suborder MOROPOMORPHA  
 Infraorder ANCYLOPODA  
 Superfamily CHALICOTHERIOIDEA  
 Family CHALICOTHERIIDAE [chalicotheres]  
*Moropus* sp. .... veMIO
- Infraorder CERATOMORPHA  
 Superfamily TAPIROIDEA  
 Family TAPIRIDAE [tapirs]  
*Miotapirus* sp. .... ?eMIO  
*Tapiravus polkensis*<sup>51</sup> ..... MIO?  
*Tapirus simpsoni* ..... lMIO  
*Tapirus* n. sp. .... vePLIO, lPLIO  
*Tapirus haysii*<sup>52</sup> ..... ePLEIST-emPLEIST  
*Tapirus veroensis* ..... lmPLEIST-IPLEIST
- Superfamily RHINOCEROTOIDEA  
 Family RHINOCEROTIDAE [rhinoceroses]  
 Subfamily, genus, and sp. indet.<sup>53</sup> ..... veMIO  
 Subfamily MENCERATINAE  
*Menoceras arikareense* ..... veMIO  
*Menoceras barbouri* ..... leMIO  
 Subfamily ACERATHERIINAE  
*Floridaceras whitei* ..... leMIO  
*Aphelops* and/or *Peraceras* sp. .... leMIO-mMIO  
*Aphelops malacorhinus* ..... elMIO  
*Aphelops mutilus* ..... vlMIO  
 Subfamily RHINOCEROTINAE  
*Teleoceras proterum* ..... elMIO  
*Teleoceras hicksi* or *T. ocotense* ..... vePLIO
- Mirorder TETHYTHERIA  
 Order PROBOSCIDEA [proboscideans]  
 Superfamily ELEPHANTOIDEA  
 Family MAMMUTIDAE [mastodonts]  
*Zygodon tapiroides* ..... lmMIO  
*Pliomastodon sellardsi* ..... vePLIO  
*Mammut americanum* ..... lPLIO-IPLEIST  
 Family AMEBELODONTIDAE [shovel-tuskers]  
 ?*Amebelodon barbourensis* ..... ?elMIO  
*Amebelodon floridanus* ..... elMIO  
*Amebelodon britti* ..... vlMIO  
*Platybelodon* or *Torynabelodon* sp. .... vlMIO  
 Family "GOMPHOTHERIIDAE"<sup>54</sup> [gomphotheres]  
*Gomphotherium* spp. .... mMIO-lMIO, ?vePLIO  
*Rhynchotherium simpsoni* ..... ?vlMIO, vePLIO  
*Rhynchotherium* sp. .... vlMIO, lPLIO  
*Cuvieronius tropicus* ..... lPLIO-IPLEIST  
 Family ELEPHANTIDAE [elephants, mammoths]  
*Mammuthus imperator*<sup>55</sup> ..... ePLEIST  
*Mammuthus columbi*<sup>56</sup> ..... mPLEIST-IPLEIST
- Order SIRENIA [sea cows, manatees, dugongs]  
 Family PROTOSIRENIDAE  
*Protosiren* sp. .... mEOC

- Family DUGONIDAE [dugongs]  
 Subfamily RYTIODONTINAE  
*Crenatosiren olseni*<sup>57</sup> ..... vIOLIG or veMIO  
*Dioplotherium manigaulti* ..... eMIO-mMIO  
*Corystosiren varguezii* ..... vIMIO-ePLIO?  
 Subfamily HALITHERIINAE  
*"Hesperosiren" crataegensis* ..... leMIO  
*Metaxytherium calvertense* ..... ?mMIO  
*Metaxytherium floridanum* ..... lmMIO-elMIO  
 Family TRICHECHIDAE [manatees]  
*Trichechus* sp. .... IPLIO-IPELIST  
*Trichechus manatus* ..... IPELIST  
 Order DESMOSTYLIA  
 Family, genus, and sp. indet.<sup>58</sup> ..... ?MIO  
 Mirorder CETI  
 Order CETACEA [whales, dolphins, porpoises]  
 Suborder ARCHAEOCETI [archaic toothed whales]  
 Family BASILOSAURIDAE  
*Zygorhiza kochii*<sup>59</sup> ..... IEOC  
*Basilosaurus cetoides* ..... IEOC  
 Suborder ODONTOCETI [toothed whales, dolphins]  
 Superfamily PLATANISTOIDEA  
 Family ACRODELPHIDAE [long-beaked dolphins]  
 large genus and sp. indet.<sup>60</sup> ..... lmMIO  
*Pomatodelphis* sp. .... ?emMIO  
*Pomatodelphis inaequalis* ..... lmMIO  
*Schizodelphis bobengi* ..... lmMIO  
*Schizodelphis depressus* ..... lmMIO  
 Family INIIDAE [river dolphins]  
*Goniodelphis hudsoni* ..... vePLIO  
 Superfamily DELPHINOIDEA  
 Family DELPHINIDAE [dolphins]  
*Globicephala baereckeii* ..... PLEIST?  
*Stenella* sp. .... ?ePLEIST  
 Superfamily PHYSETEROIDEA  
 Family PHYSETERIDAE [sperm whales]  
*Scaldicetus* sp. .... lmMIO?  
*Hoplocetus* sp. .... ?vePLIO?  
*Physeter catodon* ..... PLEIST  
 Family KOGIIDAE [pygmy sperm whales]  
*Kogiopsis floridana* ..... vePLIO?  
 Superfamily ZIPHIOIDEA  
 Family ZIPHIIDAE [beaked whales]  
*Mesoplodon longirostris* ..... emMIO  
*Ziphius cavirostris* ..... PLEIST  
 Order MYSTICETI [baleen whales]  
 Family CETOTHERIIDAE [extinct small whales]  
*Isocetus* sp. .... mMIO?  
*Mesocetus* sp. .... mMIO?  
 Family ESCHRICHTIIDAE [gray whales]  
*Eschrichtius robustus* ..... PLEIST?  
 Family BALAENIDAE [right whales]  
*Eubalaena glacialis* ..... PLEIST

## Family BALAENOPTERIDAE [rorquals, humpbacks]

<i>Megaptera novaeangliae</i> .....	PLIO?
<i>Balaenoptera physalus</i> .....	PLIO?
<i>Balaenoptera floridana</i> .....	vePLIO
<i>Balaenoptera</i> sp. ....	vePLIO, PLEIST

## FOOTNOTES

1. *Carcharhinus plumbeus* is used instead of *C. milberti* as in Tessman (1969).
2. According to Dr. A. E. Pratt (personal commun.), this record is based solely on a nondiagnostic specimen and therefore the family Leptodactylidae is probably not found in Florida.
3. This species was transferred from *Leptodactylus* to *Rana* by Lynch (1971).
4. This also includes published reports of *Rana pipiens*; Dr. A. E. Pratt (personal commun.) considers the early Miocene records of this species unjustifiable.
5. During the 1910s and 1920s, O. P. Hay named many new species of late Pleistocene turtles. Subsequent revisions have failed to substantiate most of these, and they are instead synonymized with living species.
6. Meylan (1987) concluded that North American soft-shelled turtles warranted distinct generic status from the European *Trionyx*, and revived the old name *Apalone* for them.
7. At various times during this century, herpetologists have recognized one, two, or three genera for the *Pseudemys*-group of emydid turtles. The recent opinion of Seidel and Smith (1986) that all three, *Chrysemys*, *Pseudemys*, and *Trachemys* are distinct genera is followed here.
8. Gaffney and Meylan (1988) and Meylan (in press) have recently accorded *Hesperotestudo* full generic rank. Previously it was usually considered a subgenus of *Geochelone*. Under this scheme, the two lineages of tortoises from Florida are the subgenera *Hesperotestudo* and *Caudochelys*, both regarded as members of the genus *Hesperotestudo*.
9. Kluge (1988) revived this species from its synonymy with *Pseudoepicrates stanolseni*, and referred it to the extant genus *Boa*. He furthermore stated that it was very close, if not conspecific with the living *B. constrictor*.
10. In some older publications, the species here referred to *Nerodia* and *Regina* were placed in *Natrix*, which is now limited to Old World water snakes.
11. The sequence of avian "orders" used here is traditional and not phylogenetically accurate. See Olsen (1985) and Cracraft (1988) for two highly divergent opinions on the higher relationships of bird families and orders.
12. This species was transferred from *Phalacrocorax* to *Anhinga* by Becker (1986). It is the oldest known record of the family.
13. This fossil species of duck is known only from a single specimen, and Campbell (1980) was equivocal regarding its validity.
14. This species was transferred from *Falco* to *Milvago* by Campbell (1980).
15. This extinct genus and species was originally placed in its own family, and later in the Jacanidae. Olsen and



Farrand (1974) referred it to the subfamily Meleagridinae in the Phasianidae. Later, Steadman (1980) concurred with this familial referral, but was equivocal regarding its subfamilial affinities. More specimens representing additional bones are needed to resolve this issue.

16. Includes records of *Porzana auffenbergi*, based on Olson (1974).
17. Includes records of *Gallinula brodkorbi*, based on Olson (1974), although Campbell (1980) suggested that both might be valid.
18. Includes records of *Laterallus guti*, based on Olson (1974).
19. Steadman (1981) did not consider this fossil species to be valid because the type and only known specimen is not diagnostic. He also stated that it was not referable to the genus *Palaeostruthus*, which he synonymized with the living genus *Ammodramus*.
20. Includes records of *Megatherium hudsoni*, which is a nomen dubium.
21. Includes records of *Blarina brevicauda*, see Jones et al. (1984).
22. According to Morgan (1985), *Lasiurus seminolus* and *L. borealis* are difficult to separate osteologically, and this record (from Vero) is based on geographic grounds.
23. Includes published records of *Molossides floridanus*, now considered a subspecies of *Eumops glaucinus* (Morgan, 1985; 1991).
24. Includes records of *Desmodus magnus* Gut, now considered a junior synonym (Morgan, 1991).
25. Includes records of *Tomarctus thomasi* and *Nothocyon insularis*.
26. Includes records of *Osteoborus crassapineatus* (see Webb, 1969). Both may be junior synonyms of *Borophagus direptor*; further study of Bone Valley borophagines is warranted.
27. Includes records of *Cynodesmus nobilis* and *Paradaphoenus tropicalis*.
28. Includes records of *Canis riviveronis*, following Ray (1958).
29. Includes records of *Amphicyon intermedius*.
30. Includes records of *Parictis* or *Absonodaphoenus bathygenus*.
31. The equivalent of *Miomustela* (?) of Olsen, see Tedford and Frailey (1976).
32. Original spelling of species name (*lovei*) amended to follow the code of zoological nomenclature.
33. Regarded as an extinct subspecies of "*Felis*" *wiedii* by Werdelin (1985).
34. The family Cricetidae, traditionally used for these North American muroids, has been limited to the Old World hamsters and reduced in rank to a subfamily within an expanded concept of the Muridae (Carleton and Musser, 1984). The oldest valid family group name for modern New World "cricetids" is Sigmodontinae Wagner, 1843.
35. The Florida mouse has traditionally been allocated to the genus *Peromyscus* in the monotypic subgenus *Podomys*. Recent mammalogists have now raised *Podomys* to the level of genus, so this assignment is followed here. The skeletal and dental morphology of the two is very similar.

36. The voles, lemmings, and relatives have traditionally been placed in the subfamily Microtinae (or family Microtidae) by many North American systematists, and the group was commonly called the microtines. However the family group name Arvicolinae has priority and is now in general use.
37. According to Wright and Eshelman (1987), the type species of the genus *Cynorca* is based on an indeterminate type specimen (a canine) and the genus is thus not valid. It is not clear whether this very early Miocene record of a peccary from the Buda Site (Frailey, 1979) can be identified to genus.
38. Transferred from the genus *Prosthennops* to *Mylohyus* by Wright and Webb (1984), it is now the oldest known member of that genus.
39. Other named Pleistocene species of *Mylohyus*, including *M. fossilis*, *M. gidleyi*, *M. browni*, *M. pennsylvanicus*, *M. lenis*, *M. tetragonus*, and *M. exortivus* have been identified from Florida. I follow Kurtén and Anderson (1980), who recognize only a single valid Pleistocene species, *M. nasutus*.
40. Most early references of Florida fossil material to the living genus *Tayassu* are in error, and instead apply to *Mylohyus*. *Tayassu* is retained in this list based on the record from Melbourne (Gazin, 1950), that has not been specifically refuted in the literature.
41. Includes records of *Syndyoceras australis* and *Synthetoceras douglasi* from Thomas Farm and *Miolabis* cf. *tenuis* from Midway (Patton, 1967).
42. Includes records of *Paratylopus grandis*, based on Patton (1967).
43. Includes records of *Hypermekops olseni*, based on Patton (1967). He recognized two species of *Floridatragulus* at Thomas Farm, while Maglio (1966) considered *F. barbouri* as another junior synonym of *F. dolichanthereus*. No subsequent authority has examined this problem, so I conservatively retain both species in the list.
44. *Hexobelomeryx* is regarded as the senior synonym of *Hexameryx* following Simpson (1945) and Ahearn (1988).
45. *Blastocerus* is a genus of deer otherwise known only from South America. This Florida species is based on a single jaw. Most workers prefer to regard this specimen as an aberrant individual of *Odocoileus* that happens to look like *Blastocerus*, since no additional specimens have turned up in the last half century.
46. Includes records of *Neohipparion phosphorum*, based on MacFadden (1984).
47. Includes records of *Nannippus minor*, an invalid species name (Hulbert, 1990).
48. Includes records of *Nannippus phlegon*, based on MacFadden (1984).
49. Late Pliocene (Blancan) *Equus* from Florida has often been referred to the species *E. simplicidens*, but the specimens are significantly smaller than typical western material of that species and more critical comparisons are needed.
50. Various late Pleistocene species of *Equus* have been identified from Florida, mostly on the basis of inadequate material. Until thoroughly studied, the number of valid species from this period is uncertain.
51. In the original description of this species, and in other general papers, Olsen implied that it was a member of one of the older (i.e., middle Miocene) Bone Valley faunas, and not the typical Upper Bone Valley or Palmetto Fauna. Accordingly, Savage and Russell (1983) listed it as Barstovian and possibly Clarendonian. The type specimens lack any stratigraphic information, and it is not known from any of the recently collected *in situ* Miocene faunas.
52. Includes records of *Tapirus copei*, based on Ray and Saunders (1984). Note that all late Pleistocene records of

*T. haysii* are now regarded as invalid and considered to represent instead large individuals of *T. veroensis*.

53. This is the record listed by Simpson (1929) as "*Caenopus* cf. *platycephalus*" from the Franklin Phosphate Pit No. 2. This species is now placed in the genus *Amphicaenopus*, and regarded as limited to the Whitneyan land mammal age. Since the Florida site is otherwise regarded as late Arikareean, some 9 myr younger, it is unlikely that this species is present in the fauna. Frailey (1979) listed this record as "Rhinocerotidae gen. et sp. indet.", a course followed here.

54. The gomphotheres of Florida are in dire need of revision, and no present listing can adequately express their real diversity. Certainly both long-jawed (such as *Gomphotherium*) and short-jawed (such as *Rhynchotherium*) genera were present through much of the late Neogene, but exactly how many species is unknown.

55. Most specialists agree that the proper generic designation for American mammoths is *Mammuthus*. In the older literature, the names *Archidiskodon* and *Parelephas* are frequently encountered. Species-level systematics of mammoths is controversial, and a conservative, three taxon approach is followed here. *M. imperator*, as used here, includes previous records from Florida of *M. meridionalis* and *M. haroldcooki*, and is the equivalent of *M. columbi* as used by Kurtén and Anderson (1980).

56. Includes records of *Mammuthus floridanus* of Osborn, and is the equivalent of *M. jeffersonii* as used by Kurtén and Anderson (1980).

57. According to Domning (1991), *Halitherium olseni* Reinhart, 1976 does not belong in the Old World genus *Halitherium*, but instead to the new genus *Crenatosiren*.

58. The entire record of this extinct mammalian order from Florida is based on a few fragments of teeth described and illustrated by Reinhart (1976). As this group is otherwise known only from the northern Pacific rim, this record is somewhat anomalous. Until unambiguously identifiable fossil material of these large, amphibious mammals is recovered, their presence in Florida must be considered extremely doubtful.

59. Many records of Eocene archaeocete whales from Florida have been uncritically referred to the genus *Basilosaurus*. Examination of diagnostic elements shows that most instead belong to the smaller *Zygorhiza*, which lacks the very elongated vertebrae of its larger relative.

60. Morgan (1986) demonstrated that the holotype of *Megalodelphis magnidens* was actually a crocodile, so that genus and species can no longer be applied to the giant long-beaked dolphin of the middle Bone Valley. Not enough material is known for it to be described or accurately assigned to family.

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## LITERATURE CITED

- Ahearn, M. E. 1988. Systematics and evolution of the Antilocapridae. *Journal of Vertebrate Paleontology*, 8:8A.
- Becker, J. J. 1986. Reidentification of "*Phalacrocorax*" *subvolans* Brodkorb as the earliest record of the Anhingidae. *The Auk*, 103:804-808.
- Campbell, K. E. 1980. A review of the Rancholabrean avifauna of the Itchtucknee River, Florida. *Natural History Museum of Los Angeles County Contributions in Science*, 330:119-129.
- Carleton, M. D., and G. G. Musser. 1984. Muroid rodents. Pp. 289-379 in S. Anderson and J. K. Jones, eds., *Orders and Families of Mammals of Recent Mammals of the World*. J. Wiley & Sons, New York.
- Cracraft, J. 1988. The major clades of birds. Pp. 339-361 in M. S. Benton, ed., *The Phylogeny and Classification of the Tetrapods, Volume 1: Amphibians, Reptiles, Birds*. Clarendon Press, Oxford, England.
- Domning, D. P. 1991. A new genus for *Halitherium olsenii* Reinhart, 1976 (Mammalia: Sirenia). *Journal of Vertebrate Paleontology*, 11:398.
- Frailey, D. 1979. The large mammals of the Buda local fauna (Arikarean: Alachua County, Florida). *Bulletin of the Florida State Museum*, 24:123-173.
- Gaffney, E. S., and P. A. Meylan. 1988. A phylogeny of the turtles. Pp. 157-219 in M. S. Benton, ed., *The Phylogeny and Classification of the Tetrapods, Volume 1: Amphibians, Reptiles, Birds*. Clarendon Press, Oxford, England.
- Gazin, C. L. 1950. Annotated list of fossil Mammalia associated with human remains at Melbourne, Fla. *Journal of the Washington Academy of Science*, 40:397-404.
- Harland, W. B., R. L. Armstrong, A. V. Cox, L. E. Craig, A. G. Smith, and D. G. Smith. 1990. *A Geologic Timescale 1989*. Cambridge University Press, Cambridge, 263 p.
- Hulbert, R. C. 1990. The taxonomic status of *Hipparion minus* Sellards, 1916 (Mammalia, Equidae). *Journal of Paleontology*, 64:855-856.
- Jones, C. A., J. R. Choate, and H. H. Genoways. 1984. Phylogeny and paleobiogeography of short-tailed shrews (genus *Blarina*). Pp. 56-148 in H. H. Genoways and M. R. Dawson, eds., *Contributions in Quaternary Vertebrate Paleontology: A Volume in Memorial to John E. Guilday*. Carnegie Museum of Natural History, Pittsburgh.
- Kluge, A. G. 1988. Relationships of the Cenozoic boine snakes *Paraepicrates* and *Pseudoepicrates*. *Journal of Vertebrate Paleontology*, 8:229-230.
- Kurtén, B. and E. Anderson. 1980. *Pleistocene Mammals of North America*. Columbia University Press, New York, 442 p.
- Lynch, J. D. 1971. Evolutionary relationships, osteology, and zoogeography of leptodactyloid frogs. *Miscellaneous Publications of the Museum of Natural History, University of Kansas*, 53:1-238.
- MacFadden, B. J. 1984. Systematics and phylogeny of *Hipparion*, *Neohipparion*, *Nannippus*, and *Cormohipparion* (Mammalia, Equidae) from the Miocene and Pliocene of the New World. *Bulletin of the American Museum of Natural History*, 179:1-196.
- Maglio, V. J. 1966. A revision of the fossil selenodont artiodactyls from the middle Miocene Thomas Farm, Gilchrist County, Florida. *Breviora*, 255:1-27.
- Meylan, P. A. 1987. The phylogenetic relationships of soft-shelled turtles (Family Trionychidae). *Bulletin of the American Museum of Natural History*, 186:1-101.
- Meylan, P. A. in press. Pleistocene amphibians and reptiles from the Leisey Shell Pit, Hillsborough County, Florida. *Bulletin of the Florida Museum of Natural History*.
- Morgan, G. S. 1985. Fossil bats (Mammalia: Chiroptera) from the late Pleistocene and Holocene Vero Fauna, Indian River County, Florida. *Brimleyana*, 11:97-117.
- Morgan, G. S. 1986. The so-called giant Miocene dolphin *Megalodelphis magnidens* Kellogg (Mammalia: Cetacea) is actually a crocodile (Reptilia: Crocodylia). *Journal of Paleontology*, 60:411-417.
- Morgan, G. S. 1991. Neotropical Chiroptera from the Pliocene and Pleistocene of Florida. *Bulletin of the American Museum of Natural History*, 206:176-213.
- Olson, S. L. 1974. The Pleistocene rails of North America. *The Condor*, 76:169-175.
- Olson, S. L. 1985. The fossil record of birds. Pp. 79-238 in D. S. Farner, J. R. King, and K. C. Palmer, eds., *Avian Biology, Volume VIII*. Academic Press, Orlando, Florida.
- Olson, S. L., and J. Farrand. 1974. *Rhegminornis* restudied: a tiny Miocene turkey. *Wilson Bulletin*, 86:114-120.

- Patton, T. H. 1967. Revision of the selenodont artiodactyls from Thomas Farm. *Quarterly Journal of the Florida Academy of Sciences*, 29:179-190.
- Ray, C. E. 1957. A list, bibliography, and index of the fossil vertebrates of Florida. Florida Geological Survey, Special Publication, 3:1-175.
- Ray, C. E. 1958. Additions to the Pleistocene mammalian fauna of Melbourne, Florida. *Bulletin of the Museum of Comparative Zoology*, 119:421-449.
- Ray, C. E., and A. E. Saunders. 1984. Pleistocene tapirs in the eastern United States. Pp. 283-315 in H. H. Genoways and M. R. Dawson, eds., *Contributions in Quaternary Vertebrate Paleontology: A Volume in Memorial to John E. Guilday*. Carnegie Museum of Natural History, Pittsburgh.
- Reinhart, R. H. 1976. Fossil sirenians and desmostylians from Florida and elsewhere. *Bulletin of the Florida State Museum*, 20:187-300.
- Savage, D. E., and D. E. Russell. 1983. *Mammalian Paleofaunas of the World*. Addison-Wesley, Reading, Massachusetts, 432 p.
- Schoch, R. M. 1986. *Phylogeny Reconstruction in Paleontology*. Van Nostrand Reinhold Co., New York, 353 p.
- Seidel, M. E., and H. M. Smith. 1986. *Chrysemys, Pseudemys, Trachemys* (Testudines: Emydidae): did Agassiz have it right? *Herpetologica*, 42:242-248.
- Simpson, G. G. 1929. The extinct land mammals of Florida. Florida Geological Survey, Annual Report, 20:229-279.
- Simpson, G. G. 1945. The principles of classification and a classification of mammals. *Bulletin of the American Museum of Natural History*, 85:1-350.
- Steadman, D. W. 1980. A review of the osteology and paleontology of turkeys (Aves: Meleagrinae). *Natural History Museum of Los Angeles County Contributions in Science*, 330:131-207.
- Steadman, D. W. 1981. A re-examination of *Palaeostruthus hatcheri* (Shufeldt), a late Miocene sparrow from Kansas. *Journal of Vertebrate Paleontology*, 1:171-173.
- Tedford, R. H., and D. Frailey. 1976. Review of some Carnivora (Mammalia) from the Thomas Farm local fauna (Hemingfordian: Gilchrist County, Florida). *American Museum Novitates*, 2610:1-9.
- Tessman, N. 1969. The fossil sharks of Florida. M.S. Thesis, University of Florida, Gainesville, 132 p.
- Webb, S. D. 1969. The Pliocene Canidae of Florida. *Bulletin of the Florida State Museum*, 14:273-308.
- Werdelin, L. 1985. Small Pleistocene felines of North America. *Journal of Vertebrate Paleontology*, 5:194-210.
- Wiley, E. O. 1981. *Phylogenetics: the Theory and Practice of Phylogenetic Systematics*. Wiley-Liss, New York, 439 p.
- Wright, D. B., and R. E. Eshelman. 1987. Miocene Tayassuidae (Mammalia) from the Chesapeake Group of the Mid-Atlantic coast and their bearing on marine-nonmarine correlation. *Journal of Paleontology*, 61:604-618.
- Wright, D. B., and S. D. Webb. 1984. Primitive *Mylohyus* (Artiodactyla: Tayassuidae) from the late Hemphillian Bone Valley of Florida. *Journal of Vertebrate Paleontology*, 3:152-159.