

**A CATALOGUE OF LATE QUATERNARY VERTEBRATES
FROM CALIFORNIA: PART ONE,
NONMARINE LOWER VERTEBRATE AND AVIAN TAXA**

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CONTENTS

Abstract	1
Introduction	1
Catalogue of Late Quaternary Taxa from California Localities	4
Alameda County	4
Butte County	5
Calaveras County	5
Contra Costa County	5
El Dorado County	7
Fresno County	7
Humboldt County	8
Imperial County	8
Inyo County	9
Kern County	9
King County	13
Los Angeles County	13
Orange County	24
Riverside County	27

Sacramento County	28
San Bernardino County	28
San Diego County	36
San Joaquin County	36
San Mateo County	36
Santa Babrara County	36
Shasta County	39
Siskiyou County	41
Sonoma County	41
Ventura County	41
Combined Taxonomic List of Late Quaternary Nonmarine Lower Vertebrate and Avian Taxa from California	43
Literature Cited	52

ABSTRACT

Part One of the catalogue of late Quaternary vertebrates from California systematically lists 1,085 records of fresh water fish, amphibian, reptilian and avian taxa. These have been recovered from 142 late Pleistocene (Rancholabrean) through earliest Holocene localities that represent a period of time from about 300 or 400 ka to 10 ka BP. Each entry includes institutional locality number(s), geologic formation, relative and absolute ages (if known), taxonomic lists, and sources of information. A systematic list of late Pleistocene taxa, representing 60 lower vertebrates and 217 birds, is provided for the state.

INTRODUCTION

This catalogue provides a data base that may be used in regional late Pleistocene paleogeographic and paleoenvironmental studies, or for the assessment of paleontologic resources, a critical element in current land use planning in California. With respect to terrestrial vertebrates, this period has been designated the Rancholabrean North American Land Mammal Age, succeeds the early Pleistocene Irvingtonian Land Mammal Age, and extends from about 300 or 400 ka to 10 ka BP (Savage 1951; Kurten and Anderson 1980; Lundelius *et al.* 1987). Part two of this catalogue will list the terrestrial and marine mammalian records for California.

The catalogue has been compiled from published records, technical reports, unpublished manuscripts, information from colleagues and inspection of paleontologic collections. Entries are arranged in the following sequence.

Locality Name (locality name synonyms), major geographic features (e.g. mountain ranges, city names etc.): collections, institutions and institutional locality number(s)
Geologic formation: formation name
Relative age: land mammal age, glacial/interglacial units, marine oxygen isotope stage/substage, epoch
Radiometric date(s): uranium series, radiocarbon
Taxon/Taxa: systematic taxonomic list
Source(s): publications and information sources

Localities are listed alphabetically by county, then by locality name. Where appropriate, city or other major place names are included. Alternative names for a site, either published or used by some institutions, are enclosed in parentheses. Private collections, institutional collections and institutional locality number(s), if known, follow. Acronyms are used for all institutional names.

These locality data are followed by geologic formation names when they are known (Swanson *et al.* 1975). Although the names of some marine units have been informally applied to terrestrial deposits (see the description of the Palos Verdes Sand in Shaw and Quinn 1986, p. 127) this practice is not followed.

Relative age assessments are based on published estimates or personal communications (cited for each locality entry), or the age of the listed geologic formation (Swanson *et al.* 1975). This information may include (in the following order) North American Land Mammal Ages (Irvingtonian or Rancholabrean), North American glacial/interglacial geologic-climate units (Illinoian, Sangamon or Wisconsinan stages), marine oxygen isotope stages or substages, and/or Epoch (early Holocene).

Assemblages that may be latest Irvingtonian (latest early Pleistocene) or earliest Rancholabrean (earliest late Pleistocene) (see discussion of problems in distinguishing these ages in Lundelius *et al.* 1987, p. 223) are so indicated. Rancholabrean assemblages that are in part Holocene or are suspected to fall within the earliest Holocene are indicated. An assemblage that is probably late Pleistocene but lacks age determinate taxa or definitive geologic context is labeled as "uncertain."

Approximate age ranges for glacial/interglacial stages and correlative late Pleistocene marine oxygen isotope stages (Hays *et al.* 1976) are as follows. The Illinoian glacial stage ranges in age from approximately 0.5 myr (Kurten and Anderson 1980) to the end of ^{18}O stage 6 about 130 ka BP. Only the upper Illinoian falls within Rancholabrean time. The Sangamonian interglacial stage correlates with ^{18}O stage 5 and ranges in age from about 130 to 70 ka BP, and the Wisconsinan glacial stage correlates with ^{18}O stages 4 through 2 and ranges in age from about 70 to 10 ka BP. Some near-shore marine deposits that have yielded nonmarine and/or avian fossils have been correlated with marine oxygen isotope substage 5a (80-85 ka BP), or substage 5e (120-130 ka BP). The Palos Verdes Sand, for example, was deposited during substage 5e (G. L. Kennedy pers. comm. 1989).

Selected uranium series and radiocarbon dates are listed after the relative age assessment. Where numerous radiometric determinations have been made, a range is given. If further information is required, such as complete date lists or laboratory numbers, refer to the cited literature that follows each locality entry. Latest Rancholabrean (earliest Holocene) dates as young as 8 ka BP are included.

Nomenclature and systematic order closely follow the Checklist of Vertebrates of the United States, the U. S. Territories, and Canada (Banks *et al.* 1987), the American Ornithologist's Union Check List (1983), and subsequent published revisions (cited with each locality entry). Localities for type specimens are noted.

Principal references (most inclusive and/or most recent), published and unpublished information sources, and communications with colleagues follow each locality entry. Sources include publications and reports that describe a

locality, provide an age, or discuss recovered and identified taxa. Where sources is not listed, taxonomic data were recovered from inspection of collections and institutional records.

Locality information and taxonomic lists for the University of California Museum of Paleontology (UCMP) collections were compiled from the Taxonomic Information Retrieval (TAXIR) computer data base. Locality and taxonomic data from the Vertebrate Paleontology Section collection at the Los Angeles County Museum of Natural History were recovered from TAXIR and revised following examination of the collection. The note "specimen(s) not listed in TAXIR" refers to described UCMP localities where specimens were not collected, or to localities for which specimens have not been catalogued and/or recorded into the TAXIR system.

Institutional names are abbreviated are as follows: ASU = Arizona State University, Tempe; BYU = Brigham Young University, Provo, Utah; CAS = California Academy of Sciences, San Francisco; CCSD = Claremont Colleges Joint Science Department, California; CIW = Carnegie Institute of Washington, Washington, D. C.; FMNH = Field Museum of Natural History, Chicago, Illinois; HSU = Humboldt State University, Arcata, California; IMNH = Idaho Museum of Natural History, Pocatello; LACM = Natural History Museum of Los Angeles County, California, Vertebrate Paleontology Section; LACM(CIT) = LACM California Institute of Technology; LACMIP = LACM Invertebrate Paleontology Section; MAUCB = Museum of Anthropology, University of California, Berkeley; RCIC LC = Ralph Clark Interpretive Center, Los Coyotes, Fullerton, California; SBCM = San Bernardino County Museum, Redlands, California; SBMNH = Santa Barbara Museum of Natural History, California; SDSNH = San Diego Society of Natural History, California; UALP = University of Arizona Laboratory of Paleontology, Tucson; UCMP = University of California Museum of Paleontology, Berkeley; UCRV = University of California, Earth Sciences Department, Riverside; UPM = University of Pennsylvania Museum; USGS = U. S. Geological Survey, Denver, Colorado; USNM = U. S. National Museum of Natural History, Washington, D. C.; YPM = Yale Peabody Museum, New Haven, Connecticut.

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CATALOGUE OF LATE QUATERNARY TAXA
FROM CALIFORNIA LOCALITIES

ALAMEDA COUNTY

Arroyo Las Positas, Livermore: FMNH; UCMP V69167

Relative age: Rancholabrean

Taxa: Clemmys sp.

Anatidae

Source: Harris (1985)

California Aqueduct number 3: UCMP V70123

Geologic formation: Tulare Formation

Relative age: uncertain

Taxon: Orthodon sp.

California Canal numbers 1-2: UCMP V70079-70080

Geologic formation: Tulare Formation

Relative age: uncertain

Taxa: Acipenser sp.

Orthodon sp.

Archoplites sp.

cf. Branta sp.

Mission San Jose, Fremont: YPM 905

Relative age: Rancholabrean

Taxa: Branta canadensis

Meleagris richmondi (type locality)

Sources: Miller and DeMay (1942), Lundelius et al. (1983)

Oak Knoll Hospital View, Oakland: UCMP V58034

Geologic formation: ?San Antonio Formation

Relative age: Rancholabrean

Taxa: Catostomidae

Orthodon microlepidotus

Archoplites interruptus

Salmonidae

Rana sp.

Taricha sp.

Colubridae

Aves

Positas, Livermore: UCMP V49001
Relative age: Rancholabrean
Taxa: Testudines
Anatidae
Source: Savage (1951)

Prune Avenue, Livermore: UCMP V53001
Relative age: Rancholabrean
Taxa: Rana sp.
Aneides lugubris
Colubridae
Aves

Rodeo Station, Rodeo number 2: UCMP V66042
Relative age: Rancholabrean, Sangamon
Taxon: Aechmophorus occidentalis
Sources: Miller and DeMay (1942), Lundelius et al. (1983), Harris (1985)

BUTTE COUNTY

Oroville: UCMP V37039
Relative age: Rancholabrean
Taxon: Aves

CALAVARAS COUNTY

Calavaras Cave: UCMP V40009
Relative age: Rancholabrean
Taxon: Taricha sp.

Mercer Cave, Murphy: UCMP V67108; USNM
Relative age: Rancholabrean, Wisconsinan, ?in part early Holocene
Taxon: Aves
Sources: L. Barryessa (pers. comm. 1984), Harris (1985)

CONTRA COSTA COUNTY

Central Channel, Vallejo: UCMP V71001
Geologic formation: ?Montezuma Formation

Relative age: Rancholabrean
Taxa: Gasterosteus aculeatus
Caudata
Clemmys marmorata
Serpentes
? Picidae

Charles Hill: UCMP V36009
Relative age: Rancholabrean
Taxon: Clemmys sp.
Source: Savage (1951)

Garretson: UCMP V63012
Geologic formation: ?Montezuma Formation
Relative age: Rancholabrean
Taxa: Orthodon sp.
Gasterosteus aculeatus
Anura
Caudata
Clemmys marmorata
Gerrhonotus coeruleus
Uta sp.
Crotalus sp.
? Anas sp.
? Strigiformes

Lawlers Boundary, Vallejo: UCMP V71002
Geologic formation: ?Montezuma Formation
Relative age: Rancholabrean
Taxa: Gasterosteus aculeatus
Amphibia
Clemmys marmorata
Serpentes
Aves

Northern Cove, Vallejo: UCMP V71003
Geologic formation: Montezuma Formation
Relative age: Rancholabrean
Taxa: Gasterosteus aculeatus
Clemmys marmorata

EL DORADO COUNTY

Cool Quarry, Auburn: UCMP V48005
Relative age: Rancholabrean
Taxa: Bufo sp.
Rana sp.
Gerrhonotus multicarinatus
Crotalus sp.

Hawver Cave, Auburn: UCMP 1069
Relative age: Rancholabrean, Wisconsinan, in part early Holocene
Taxa: Bufo sp.
Rana sp.
Clemmys sp. cf. C. marmorata
Gerrhonotus multicarinatus
Sceloporus graciosus
Crotalus viridis
Anas crecca
Cathartes aura
Catharista shastense (type locality)
? Coragyps occidentalis
Archaeobuteo ferrugineus
Buteo regalis
Hypomorphinus milleri
Buteogallus sp.
Callipepla californica
Oreortyx picta
Colaptes auratus
Cyanocitta stelleri
Corvus corax
? Euphagus cyanocephalus

Sources: Miller (1911b), Stock (1918), Miller and DeMay (1942), Brattstrom (1954), Kurten and Anderson (1980), Lundelius et al. (1983)

FRESNO COUNTY

Kings Canyon number 8a: UALP
Relative age: Rancholabrean, Wisconsinan
Radiometric dates: ¹⁴C >45,000, >30,000 yr BP
Taxa: Gerrhonotus sp. cf. G. multicarinatus
Sceloporus sp. cf. S. occidentalis
Thamnophis sp.
Source: Mead et al. (1985)

Tranquillity: MAUCB; UCMP V44001; UPM
Relative age: Rancholabrean, in part early Holocene
Taxa: Osteichthyes
Clemmys marmorata
Crotalus sp.
cf. Gavia sp.
Source: Hewes (1943)

HUMBOLDT COUNTY

Crannell Junction: HSU 197, 745
Relative age: early Rancholabrean
Taxa: Osteichthyes
Gavia immer
Podiceps grisegena
Phalacrocorax sp.
Anas crecca
Bucephala clangula
B. albeola
Mancalla diegense
Melanita perspicillata
Chendytes sp.
Synthliboramphus sp. cf. S. antiquus
Sources: Kohl (1974), Lundelius et al. (1983)

IMPERIAL COUNTY

Flowing Wells number 3, East Mesa: SBCM 11.10.7
Geologic formation: Brawley Formation
Relative age: Rancholabrean
Taxa: Xyrauchen texanus
? Clemmys marmorata

Flowing Wells number 10, East Mesa: SBCM 11.10.37
Geologic formation: Brawley Formation
Relative age: Rancholabrean
Taxon: Gila elegans

Frink's Mineral Springs number 3, Bat Cave Buttes: SBCM 5.12.10
Geologic formation: Brawley Formation
Relative age: Rancholabrean
Taxon: Teleostei

Siphon Eleven number 3, East Mesa: SBCM 11.10.28
Geologic formation: Brawley Formation
Relative age: Rancholabrean
Taxon: Iguanidae

INYO COUNTY

Panamint Crater: UALP 49
Relative age: Rancholabrean
Taxon: Gopherus agassizi
Source: Jefferson (1989)

Panamint Valley Sinkhole: (?= UALP 49, Panamint Crater)
Relative age: Rancholabrean
Taxon: Cathartidae or Teratornithidae
Sources: S. Winslow (pers. comm. 1988), Jefferson (1989)

KERN COUNTY

China Lake, Ridgecrest: LACM(CIT) 266, LACM 1543, 3659, 7013
Relative age: Rancholabrean, Wisconsinan
Radiometric dates: ^{14}C 18,600 \pm 450, 11,800 \pm 800 yr BP
Taxa: Gila bicolor mohavensis
Anura
Testudines
Aechmophorus sp.
Phalacrocorax sp.
Anas sp.
Aythya sp.
Branta sp.
Cygnus sp.
Oxyura sp.
Aquila sp. cf. A. chrysaetos
Haliaeetus sp.
Fulica sp.
Grus sp.

Sources: Fortsch (1978), Kurten and Anderson (1980), Davis (1982), Jefferson (1989)

Dove Springs Wash, Red Rock Canyon: LACM 4708-4709
Relative age: Rancholabrean, Wisconsinan
Radiometric date: ^{14}C 10,730 \pm 110 yr BP
Taxa: Anura
Sceloporus occidentalis

Phrynosoma sp.
Gerrhonotus sp.
Lampropeltis zonata
Pituophis melanoleucus catenifer
Passeriformes

Sources: Whistler and Stewart (1989), Jefferson (1989), Whistler (1990)

Maricopa (Pentland): BYU; IMNH 084002; LACM 6731, SBCM 8.8.1
Relative age: Rancholabrean, Wisconsinan, in part early Holocene
Radiometric date: ¹⁴C 13,860 yr BP (error limits not reported)

Taxa: Gopherus sp.
Gerrhonotus multicarinatus
Phrynosoma coronatum
Cnemidophorus tigris
Eumeces skiltonianus
Uta stansburiana
Nycticorax nycticorax
Anas platyrhynchos
A. strepera
A. crecca
Anas sp.
Ciconia maltha
Teratornis merriami
Gymnogyps amplus
Haliaeetus leucocephalus
Accipiter cooperii
Buteo jamaicensis
B. swainsoni
Buteogallus fragilis
Aquila chrysaetos
Spizaetus grinnelli
Neogyps errans
Falco sparverius
Polyborus plancus
Meleagris californicus
Fulica americana
Grus canadensis
Charadrius vociferus
Calidris alpina
Larus canus
Geococcyx californianus
Tyto alba
Otus kennicotti
Bubo virginianus
Athene cunicularia
Asio otus
Corvus corax
Turdus migratorius
Aphelocoma californica

Agelaius sp.
Sturnella neglecta
Toxostoma redivivum
Zonotrichia leucophrys
Cardinalis cardinalis
Bombycilla cedrorum
Pheucticus melanocephalus

Sources: Kurten and Anderson (1980), Muleady (1980), James (1983), Harris (1985)

McKittrick (McKittrick General, McKittrick West, Sternberg Pit): LACMIP 260, LACM(CIT) 138; UCMP 1370, 1386, 7139, V34001

Relative age: Rancholabrean, Wisconsinan

Radiometric date: ^{14}C 38,000 \pm 2,500 yr BP

Taxa:
Clemmys marmorata
Gopherus agassizii
Gambelia wislizenii
Sceloporus occidentalis
Eumeces gilberti
Lampropeltis getulus
Crotalus viridis
Crotalus sp.
Podilymbus podiceps
Ardea herodias
Butorides striatus
Nycticorax nycticorax
Casmerodius albus
Egretta caerulea
Ajaia ajaja
Cygnus columbianus
Branta canadensis
Anas platyrhynchos
A. strepera
A. crecca
A. cyanoptera
A. clpeata
A. americana
A. acuta
Aythya valisineria
A. sp. ? A. affinis
A. americana
Anabernicula gracilentia
Bucephala albeola
Oxyura jamaicensis
Ciconia maltha
Teratornis merriami
Coragyps occidentalis
Cathartes aura
Gymnogyps amplus

Haliaeetus leucocephalus
Circus cyaneus
Accipiter cooperii
Buteo jamaicensis
B. swainsoni
B. regalis
Buteogallus fragilis
Aquila chrysaetos
Amplibuteo woodwardi
Spizaetus grinnelli
Neogyps errans
Neophrontops americanus
Falco sparverius
F. columbarius
F. peregrinus
F. mexicanus
F. swarthi
Falco sp.
Polyborus plancus
Meleagrididae
Callipepla californica
Fulica americana
Rallus limicola
Gruidae
Charadrius vociferus
C. montanus
Numenius americanus
N. phaeopus
Recurvirostra americana
Tringa melanoleucus
Calidris alpina
Limnodromus griseus
Laridae
Zenaida macroura
Geococcyx californianus
Tyto alba
Otus kennicotti
Bubo virginianus
Athene cunicularia
Asio flammeus
Colaptes auratus
Tyrannidae
Alaudidae
Hirundinidae
Hirundo pyrrhonota
Corvus corax

Sources: Miller (1942b), Miller and DeMay (1942), Brattstrom (1954), Kurten and Anderson (1980), Harris (1985)

McKittrick, Getty Oil Company: LACM 4428-4435
Relative age: Rancholabrean
Taxon: Aves

Rodgers Lake, Edwards Airforce Base: SBCM 1.155.8, 1.155.11,
1.155.24-1.155.25, 1.155.51, 1.155.151, 1.155.245-1.155.46, 1.155.251,
1.155.254, 1.155.258 (major localities only)
Relative age: Rancholabrean, ?in part early Holocene
Taxa: Osteichthys
Reptilia
Aves
Sources: Jefferson (1989), Reynolds (1989)

Thurber Cave, Piute Mountains: LACM 1276
Relative age: ?early Holocene
Taxa: Tyto alba
Tetraonidae
Passeriformes

KING COUNTY

Dudley Ridge, Tulare Lake:
Relative Age: Rancholabrean
Taxa: Osteichthys
Clemmys sp.
Aves
Source: G. Fenenga (pers. comm. 1990)

LOS ANGELES COUNTY

Alhambra and Workman Streets (Workman Storm Drain), Los Angeles: LACM 1023
Relative age: Rancholabrean
Taxon: Meleagris sp. ? M. californica
Sources: Miller and DeMay (1942), Lundelius et al. (1983)

Bixby Slough (Harbor Lake), Harbor City, Los Angeles: LACM 1055
Geologic formation: Palos Verdes Sand
Relative age: Rancholabrean, ¹⁸O substage 5e (130-120 ka BP)
Chendytes lawi
Source: Langenwalter (1975).

Century City, Los Angeles: LACM 5501

Relative age: Rancholabrean
Taxa: Taricha sp.
Bufo sp.
Clemmys marmorata
Sauria
Colubridae
Podiceps nigricollis
Anatidae
Charadriiformes
Source: J. D. Stewart (pers. comm. 1989)

Chandler Sand Pit, Rolling Hills Estates: LACM 1087
Geologic formation: Palos Verdes Sand
Relative age: Rancholabrean, ^{18}O substage 5e (130-120 ka BP)
Taxa: Gavia sp.
Aechmophorus occidentalis
Chendytes lawi
Sources: Miller (1971), Langenwalter (1975)

Channel Street between Gaffey Street and Harbor Freeway (I-110), San Pedro:
LACM 3175
Geologic formation: San Pedro Sand
Relative age: Rancholabrean
Taxa: Pelecanus sp. cf. P. erythrorhynchos
Brachyramphus sp.
Source: Langenwalter (1975)

Fourth and Mesa Streets, San Pedro: LACM 7138
Geologic formation: San Pedro Sand
Relative age: Rancholabrean
Taxa: Diomedea sp.
Chendytes sp.

Gaffey Street and Anaheim Avenue, Harbor City, Los Angeles: LACM 1809
Geologic formation: Palos Verdes Sand
Relative age: Rancholabrean, ^{18}O substage 5e (130-120 ka BP)
Taxon: Aves

Harbor Boulevard, Long Beach: UCMP V69206
Geologic formation: Palos Verdes Sand
Relative age: Rancholabrean, ^{18}O substage 5e (130-120 ka BP)
Taxon: Aves

Harbor Freeway (I-110) and 112-113th Streets, Los Angeles: LACM 1295
Relative age: Rancholabrean
Taxon: Clemmys sp.
Source: Miller (1971)

Hauser and 8th Streets, Los Angeles: LACM 1724
(see Rancho La Brea)

Hill 48, San Pedro Lumber Company, San Pedro: LACM 187; UCMP 2047
Geologic formation: Palos Verdes Sand
Relative age: Rancholabrean, ¹⁸O substage 5e (130-120 ka BP)
Taxa:

Gasterosteus aculeatus
Bufo sp.
cf. Rana sp.
Taricha sp.
Clemmys sp.
Pituophis melanoleucus catenifer
Lampropeltis getulus
Crotalus viridis
Gavia immer
G. pacifica
Podiceps sp. ? P. auritus
Podiceps nigricollis
Aechmophorus occidentalis
Diomedea nigripes
D. albatrus
Diomedea sp.
Puffinus griseus
P. opisthomelas
Fulmarus glacialis
Phalacrocorax auritus
P. penicillatus
Branta canadensis
B. sp. ? B. bernicla
Anser albifrons
Anas platyrhynchos
A. crecca
A. clypeata
A. americana
Bucephala albeola
Melanitta fuscua
M. perspicillata
Chendytes lawi
Cathartes aura
Coragyps sp.
Haliaeetus leucocephalus
Falco sparverius
Fulica americana

Limosa sp. ? L. fedoa
Tringa sp.
Larus glaucescens
Synthliboramphus antiquus
Ptychoramphus aleuticus
Callipepla californica
Sturnella neglecta

Sources: Miller (1971), Langenwalter (1975), Kurten and Anderson (1980)

La Brea Boulevard and Sycamore Avenue, Los Angeles: LACM 1814
(see Rancho La Brea)

La Mirada, Coyote Creek: LACM 6689
Geologic formation: La Habra Formation
Relative age: Rancho Labrean, Wisconsinan
Radiometric dates: ^{14}C 10,690 \pm 360, 8,550 \pm 100 yr BP
Taxa: cf. Rana sp.
Clemmys sp.
Squamata
Anatidae
Callipepla sp.
Meleagris californica

Sources: Miller (1971), Kurten and Anderson (1980)

Lincoln Avenue (Lincoln Boulevard) (Del Rey Hills), Playa Del Rey, Los Angeles:
LACMIP 59, LACM 1024

Geologic formation: Palos Verdes Sand
Relative age: Rancho Labrean, ^{18}O substage 5e (130-120 ka BP)
Taxa: Gavia aff. G. immer
Aechmophorus occidentalis
Diomedea albatrus
Puffinis griseus
P. opisthomelas
Sula reyana (type locality)
Chendytes lawi
Anatidae
Uria aalge
Corvus corax

Source: Miller and DeMay (1942)

Long Wharf Canyon (Rincon del Potrero, Santa Monica), Los Angeles: LACM 4247;
UCMP V25008

Geologic formation: Palos Verdes Sand "Upper San Pedro Sand"
Relative age: Rancho Labrean, ^{18}O substage 5e (130-120 ka BP)
Taxa: Phalacrocorax auritus
Chendytes lawi (type locality)

Source: Miller and DeMay (1942)

Los Angeles Brick Yard number 3, Mission Road and Daily Street, Los Angeles:
LACM 2032; UCMP 1377

Relative age: Rancholabrean

Taxon: Clemmys marmorata

Source: Miller (1971)

Los Angeles Police Station, Wilmington, Los Angeles: LACM 1602

Geologic formation: San Pedro Sand

Relative age: Rancholabrean

Taxa: Amphibia

Clemmys sp.

Sources: Miller (1971), Langenwalter (1975)

Melrose Avenue and La Cienega Boulevard, Los Angeles: LACM 2033

Relative age: Rancholabrean

Taxon: cf. Geochelone sp.

Source: Miller (1971)

Naval Fuel Reserve Quarry, Harbor City, Los Angeles: SDSNH 3246

Geologic formation: Palos Verdes Sand

Relative age: Rancholabrean, ^{18}O substage 5e (130-120 ka BP)

Taxa: Clemmys sp.

Colubridae

Anatidae

Phalacrocorax sp.

? Pelecanus sp.

Naval Housing Unit, Harbor City, Los Angeles: LACM 5587 (and field locality numbers)

Geologic formation: Palos Verdes Sand

Relative age: Rancholabrean, ^{18}O substage 5e (130-120 ka BP)

Taxa: Gila orcutti

Gasterosteus aculeatus

Leptocottus armatus

Taricha cf. T. torosa

Bufo sp.

Rana sp.

Hylidae

Gerrhonotus sp.

Colubridae

Clemmys marmorata

Bucephala albeola

Branta canadensis

Chen caerulescens

Galliformes

Passeriformes

Source: J. D. Stewart (pers. comm. 1989)

Orizaba and Second Streets (Beacon and Second Streets), San Pedro: LACM 1058

Relative age: Rancholabrean

Taxon: Aves

Palos Verdes: LACM 3258

Relative age: Rancholabrean, ?Wisconsinan

Taxon: Aves

Pacific Avenue and Oliver Street, San Pedro: LACM 186

Geologic formation: Palos Verdes Sand

Relative age: Rancholabrean, ¹⁸O substage 5e (130-120 ka BP)

Taxa: Clemmys sp.

Puffinus griseus

Source: Langenwalter (1975)

Pacific Avenue and Second Street, San Pedro: LACM 4537

Geologic formation: Palos Verdes Sand

Relative age: Rancholabrean, ¹⁸O substage 5e (130-120 ka BP)

Taxon: Chendytes lawi

Rancho La Brea, Los Angeles: LACM 1724 (Hauser and 8th Streets), 1814 (La Brea Boulevard and Sycamore Avenue), 1870 and 7247 (Wilshire Boulevard and Curson Avenue), 1933 and 6909 (Hancock Park), 4204 and 6910 (Wilshire Boulevard, Mutual Benefit Building), 4590 (Stanley and 8th Streets), 6911 and 7027 (Wilshire Boulevard, Prudential Building); UCMP 1058-1061, 2050-2053, 3874

Relative age: Rancholabrean, Wisconsinan, in part early Holocene

Radiometric dates: numerous determinations, uranium series and ¹⁴C >40 to 9 ka BP

Taxa: Onchorhynchus mykiss

Gila orcutti

Gasterosteus aculeatus

Aneides sp.

Bufo nestor (type locality)

B. boreas

B. microscaphus

Hyla sp.

Rana sp.

Clemmys marmorata

Gerrhonotus multicarinatus

Sceloporus magister

S. occidentalis

Uta stansburiana
Phrynosoma coronatum
Eumeces skiltonianus
Cnemidophorus tigris
Diadophis punctatus
Hypsiglena torquata
Tantilla sp.
Arizona elegans
Coluber constrictor
C. mormon
Masticophis lateralis
Pituophis melanoleucus catenifer
Lampropeltis getulus
Lampropeltis sp.
Rhinocheilus sp.
Thamnophis sp. cf. T. couchi
T. sirtalis
Thamnophis sp.
Crotalus viridis
Crotalus sp.
Podilymbus podiceps
Podiceps sp.
Phalacrocorax sp.
Botaurus lentiginosus
Ardea herodias
Casmerodius albus
Egretta thula
E. caerulea
Butorides striatus
Nycticorax nycticorax
Plegadis chihi
Ajaia ajaia
Cygnus columbianus
Anser albifrons
Chen caerulescens
C. sp. ? C. rossii
Branta canadensis
B. sp. cf. B. bernicla
Anas platyrhynchos
A. strepera
A. crecca
A. cyanoptera
A. clypeata
Aythya valisineria
Anabernicula gracilenta
Ciconia maltha (type locality)
Mycteria wetmorei (type locality)
Teratornis merriami (type locality)
Cathartornis gracilis (type locality)
Coragyps occidentalis

Cathartes aura
Gymnogyps amplus (type locality)
Breagyps clarki (type locality)
Elanus caeruleus
Haliaeetus leucocephalus
Circus cyaneus
Accipiter gentilis
A. striatus velox
A. cooperii
Buteogallus fragilis (type locality)
Buteo jamaicensis
B. swainsoni
B. lagopus
B. regalis
Buteo sp.
Aquila chrysaetos
Amplibuteo woodwardi
Wetmoregyps daggetti (type locality)
Spizaetus grinnelli (type locality)
Neogyps errans (type locality)
Neophrontops americanus (type locality)
Falco sparverius
F. columbarius
F. peregrinus
F. mexicanus
Falco sp.
Polyborus plancus (type locality)
Meleagris californica (type locality)
Callipepla californica
Fulica americana
Grus canadensis (type locality)
G. americana
Pluvialis squatarola
Charadrius vociferus
Recurvirostra americana
Tringa melanoleuca
Catoptrophorus semipalmatus
Numenius americanus
N. phaeopus
Limosa fedoa
Calidris alba
C. alpina
Limnodromus griseus
Gallinago gallinago delicata
Phalaropus fulicarius
Larus canus
Rissa tridactyla
Columba fasciata
Zenaida macroura
Ectopistes migratorius

Geococcyx californianus
Tyto alba
Otus kennicotti
Bubo virginianus
Glaucidium gnoma
Athene cunicularia
Strix brea (type locality)
Asio flammeus
Aegolius acadicus
Phalaenoptilus nuttallii
Melanerpes lewis
Sphyrapicus sp.
Picoides sp.
Colaptes auratus cafer
Dryocopus pileatus
Tyrannus sp. ? T. vociferans
Eremophila alpestris
Cyanocitta stelleri
Aphelocoma coerulescens
A. sp. cf. A. californica
Nucifraga columbiana
Pica nuttalli
Corvus corax
C. cryptoleucus
C. brachyrhynchus
C. caurinus
Sialia sp. cf. S. mexicana
Turdus migratorius
Parus sp. cf. P. gambeli
Oreoscoptes montanus
Toxostoma redivivum
Bombycilla cedrorum
Lanius ludovicianus
Parulinae gen. sp. indet.
Pheucticus melanocephalus
Pipilo erythrophthalmus
P. fuscus
P. angelensis (type locality)
Spizella passerina
Spizella sp.
Poocetes gramineus
Chondestes grammacus
Amphispiza bilineata
A. belli
Passerella iliaca
Melospiza melodia
Zonotrichia leucophrys
Agelaius sp. ? A. phoeniceus californicus
Sturnella neglecta
Xanthocephalus sp.

Euphagus magnirostris
Molothrus ater
Icterus spp.
Pandanaris convexa (type locality)
Carduelis pinus
C. tristis
Coccothraustes vespertina
Fringillidae, spp.

Sources: Miller (1909a, 1909b, 1910a, 1910b, 1910c, 1911a, 1915, 1916a, 1916b, 1916c, 1925, 1932), Camp (1917), Husband (1924), Howard (1927, 1928, 1929, 1930, 1932, 1933, 1935, 1936, 1937, 1938, 1942, 1949, 1962, 1974), Sushkin (1928), Miller (1929a, 1929b, 1947), Larson (1930), Compton (1934), Engles (1935), Miller and Howard (1938), Howard and Miller (1939), Sibley (1939a, 1939b), Miller and DeMay (1942), Fisher (1944, 1947), Dawson (1948), Brattstrom (1953), Swift (1979, 1989), Rea (1980), K. E. Campbell (pers. comm. 1982), LaDuke (1983), Marcus and Berger (1984)

San Pedro Lumber Yard: LACM 1026, 1057

Geologic formation: San Pedro Sand

Relative age: Rancholabrean

Taxa: Gavia sp. ? G. immer

Gavia sp.

Aechmophorus occidentalis

Diomedea sp.

Puffinus griseus

P. opisthomelas

Fulmarus glacialis

Phalacrocorax sp. ? P. penicillatus

Branta canadensis

Anser albifrons

Anas platyrhynchos

A. crecca

A. cyanoptera

Melanitta perspicillata

Chendytes lawi

Cathartes aura

Haliaeetus leucocephalus

Callipepla californica

Larus glaucescens

Synthliboramphus antiquus

Sturnella neglecta

Sources: Miller and DeMay (1942), Miller (1971), Kurten and Anderson (1980)

U. S. Veterans Hospital, Long Beach: LACM 3757

Geologic formation: Palos Verdes Sand

Relative age: Rancholabrean, ¹⁸O substage 5e (130-120 ka BP)

Taxa: cf. Clemmys sp.

Squamata

Gavia sp.
Chendytes lawi

Source: Langenwalter (1975)

Walteria, Ball Sand Pit: LACM 3265
Geologic formation: ?Palos Verdes Sand
Relative age: Rancholabrean
Taxon: Vertebrata

Wilmington Boulevard and San Pedro Road, Los Angeles: LACM 1012
Geologic formation: San Pedro Sand
Relative age: Rancholabrean
Taxa: Branta sp.
Fulica sp.
Source: Langenwalter (1975)

Wilshire Boulevard and Curson Avenue, Los Angeles: LACM 1870, 7247
(see Rancho La Brea)

Wilshire Boulevard, Mutual Benefit Building, Los Angeles: LACM 4204, 6910
(see Rancho La Brea)

Wilshire Boulevard, Prudential Building, Los Angeles: LACM 6911, 7027
(see Rancho La Brea)

York Valley, Avenue 45 and Lincoln Avenue, Highland Park, Los Angeles:
Relative age: Rancholabrean
Taxon: Meleagris californica
Source(s): Miller (1942a), Lundelius et al. (1983)

Zuma Creek, Point Dume: LACM 1754
Relative age: Rancholabrean, Wisconsinan
Taxa: Clemmys sp.
Chendytes sp.
Puffinus griseus
P. opisthomelas
Fulmarus glacialis
Alcidae
Sulidae
Gavia stellata
Podiceps caspius
Phalacrocorax pennicillatus

Aythya americana
A. marila
A. affinis
Oxyura jamaicensis
Fulica americana
Corvus corax
Larus occidentalis
L. canus
Bucephala albeola
Meleagris californica
Callipepla californica
Synthliboramphus antiquus
Melanitta perspicillata
Uria aalge

Sources: Kurten and Anderson (1980), Lundelius et al. (1983)

ORANGE COUNTY

Costeau Pit, Laguna Hills, El Toro: LACM 65129

Relative age: Rancholabrean, Wisconsinan

Radiometric date: ^{14}C >40,000 yr BP

Taxa: Bufo boreas
Rana aurora
Anedes lugubris
cf. Clemmys marmorata
Gopherus sp.
Squamata
Sceloporus sp.
Cnemidophorus sp.
Crotalus viridis
Pituophis melanoleucas
Anas sp.
Buteogallus sp.
Callipepla sp.
Fulica sp. cf. F. americana
Athene sp.
Passeriformes

Sources: Miller (1971), Brattstrom (1971), Kurten and Anderson (1980)

Emery Borrow Pit, Ralph Clark Regional Park, Fullerton: RCIC LC 47; LACM
3536-3537, 4178, 7053-7054, 7088-7089

Geologic formation: La Habra Formation

Relative age: ?late Irvingtonian through Rancholabrean

Taxa: Osteichthyes (3 unidentified taxa)
Gila orcuttii
Bufo nestor
B. boreas

Rana aurora
Hyla sp.
Tarichia sp.
Gerrhonotus liocephalus
Phrynosoma coronatum
Phrynosoma sp.
Sceloporus magister
S. occidentalis
Uta stansburiana
Gerrhonotus multicaudatus
Xantusia vigilis
Cnemidophorus sp.
Eumeces skiltonianus
Coluber sp.
Pituophis melanoleucus catenifer
Crotalus viridis
Lampropeltis getulus
Trimorphodon biscutatus
Hypsiglena torquata
Pseudemys scripta
Clemmys marmorata
Chendytes lawi
Podiceps sp.
Podylimbus sp.
Pelecanus erythrorhynchus
Phalacrocorax sp.
Branta canadensis
Chen sp.
Anas acuta
A. platyrhynchos
A. strepera
A. crecca
A. clypeata
Anas sp.
Aythya affinis
Bucephala sp.
Oxyura jamaicensis
Ardea herodias
Cathartes aura
Accipiter striatus
Buteo jamaicensis
Falco sp.
Polyborus plancus
Callipepla californicus
Grus sp.
Meleagris sp.
Fulica americana
Fulica sp.
Gallinula sp.
Rallus sp.

Charadrius vociferus

Columba fasciata

Tyto alba

Sources: Kurten and Anderson (1980), S. W. Conkling (pers. comm. 1989)

General MacArthur Boulevard, Newport Bay Mesa, Newport Beach: LACM 3407, 4254

Geologic formation: Palos Verdes Sand

Relative age: Rancholabrean, ¹⁸O substage 5e (130-120 ka BP)

Taxon: Chendytes sp.

General MacArthur Boulevard and Bison Avenue, Newport Beach: LACM 4426

Geologic formation: Palos Verdes Sand

Relative age: Rancholabrean, ¹⁸O substage 5e (130-120 ka BP)

Taxon: Aves

Imperial Highway, La Habra: LACM 1052

Geologic formation: La Habra Formation

Relative age: Rancholabrean, Wisconsinan

Taxon: Meleagris californica

Sources: Miller and DeMay (1942), Miller (1971)

Kelly Pits, Palisades Road, Newport Beach: LACM 6475

Geologic formation: Palos Verdes Sand

Relative age: Rancholabrean, ¹⁸O substage 5e (130-120 ka BP)

Taxa: Anura

Clemmys sp.

Reptilia

Aves

Newport Bay, Newport Beach: UCMP V79082

Geologic formation: ?Palos Verdes Sand

Relative age: Rancholabrean

Taxon: Aves

Newport Bay Mesa, Newport Beach: LACM 1066-1067, 1100, 1240, 3877

Geologic formation: Palos Verdes Sand

Relative age: Rancholabrean, ¹⁸O substage 5e (130-120 ka BP)

Taxa: Hyla regilla

Bufo boreas

Rana aurora

cf. Taricha sp.

Aneides lugubris

Chelonia mydas

Thamnophis sp.

Lampropeltis getulus
Masticophis flagellum
Crotalus viridis
Aythya sp. cf. A. affinis
Accipiter sp.
Callipepla sp.
Corvus sp.
Agelaius sp.

Sources: Miller (1971), Hudson and Brattstrom (1977), Kurten and Anderson (1980)

West Coyote Oil Field, Fullerton: LACM 3861
Geologic formation: San Pedro Sand
Relative age: Rancholabrean
Taxon: Chendytes sp.

RIVERSIDE COUNTY

Bedford Properties: SBCM 5.6.229-5.6.246, 5.6.250-5.6.258
Relative age: ?Rancholabrean
Taxa: Gasterosteus aculeatus
Gila sp.
Bufo sp.
Rana sp.
? Chelonia (small)
? Uta stansburiana
Eumeces sp.
? Lampropeltis sp.
Crotalidae
Aves (small)

Carr Ranch, Palm Springs: UCMP V70006
Relative age: ?Rancholabrean
Taxon: Gopherus sp.

Corona, Santa Ana River: UCRV 8601
Relative age: Rancholabrean
Taxa: Osteichthyes
Sauria
Source: M. O. Woodburne (pers. comm. 1986)

Lake View Hot Spring: SBCM
Relative age: Rancholabrean
Taxa: ? Clemmys sp.

Source: R. E. Reynolds (pers. comm. 1990)

SACRAMENTO COUNTY

Teichart Gravel Pit east 1-2, Sacramento: UCMP V69129, V75126

Geologic formation: Riverbank Formation

Relative age: Rancholabrean

Radiometric dates: uranium series, numerous determinations 112 to 67 ka BP

Taxa: Cyprinidae

Rana sp.

Colubridae

Clemmys marmorata

Anatidae

Sources: Hansen and Begg (1970), Harris (1985)

SAN BERNARDINO COUNTY

Antelope Cave, Ivanpah Mountains: SBCM 1.10.10

Relative age: Rancholabrean

Radiometric date: ¹⁴C 11,080 ± 160 yr BP

Taxa: Cyprinidae

Gopherus agassizi

Phrynosoma platyrhinos

Sceloporus sp.

Gymnogyps californicus

Buteo or Strigiformes

Passeriformes

Sources: Pitzer (1985), R. E. Reynolds (pers. comm. 1988)

Archer, Cadiz Dry Lake: SBCM 1.42.2-1.42.5

Relative age: Rancholabrean

Taxa: Amphibia

Reptilia

Phrynosoma sp.

Aves

Bitter Springs Playa, Rodgers Ridge, Fort Irwin: SBCM 1.72.10

Relative age: Rancholabrean

Taxon: Gopherus sp.

Sources: Reynolds and Woodburne (1989), Jefferson (1989)

Broadwell Lake West: SBCM 01.058.031-01.058.034, 01.058.036-01.058.037

Relative age: Rancholabrean

Taxon: Gopherus sp.

Calico Lakes Project, Daggett: SBCM 1.76.35, 1.76.35a-1.76.37
Relative age: Rancholabrean, Wisconsinan, in part early Holocene
Radiometric dates: ^{14}C 12,800 \pm 900, 9,050 \pm 350 yr BP
Taxa: Osteichthyes
Rana sp.
Xantusia sp. cf. X. vigilis
Colubridae
Crotalinae
Aves

Sources: Reynolds and Reynolds (1985), Jefferson (1989)

Calico Road, Calico Mountains: SBCM 1.76.18-1.76.28
Relative age: Rancholabrean
Taxon: Testudines
Source: Jefferson (1989)

Campbell Hill and Twentynine Palms Gravel Pit, Twentynine Palms: LACM
4281-4283; SBCM 1.86.4, 1.86.9
Relative age: Rancholabrean, ?Illinoian
Taxon: Gopherus sp.
Source: Jefferson (1986)

Cool Water Coal Gasification Site, Daggett: SBCM 1.76.31-1.76.32
Relative age: Rancholabrean, Wisconsinan
Taxon: Gopherus agassizi
Sources: Reynolds and Reynolds (1985), Jefferson (1989)

Cool Water Coal Gasification Solid Waste Site, Daggett: SBCM 1.76.33
Relative age: Rancholabrean, Wisconsinan
Radiometric date: ^{14}C 12,210 \pm 430 yr BP
Taxa: Gasterosteus aculeatus
Gila bicolor
Scaphiopus sp.
Anura
Gambelia wislizenii
Phrynosoma platyrhinos
Phrynosoma sp.
Sceloporus sp.
Xantusia sp. cf. X. vigilis
Cnemidophorus sp.
Gerrhonotus sp.
Colubridae
Crotalinae

Callipepla sp.
Geococcyx californianus
Carpimulgidae
Colaptes sp.
Eremophila alpestris
approx. Troglodytes
cf. Turdus sp.
cf. Mimus sp.
Vireonidae
Dendroica sp.
Emberizinae sp. (small)
Emberizinae sp. (large)
aff. Pheuticus
aff. Zonotrichia
aff. Junco
Icterus sp. aff. I. cucullatus
aff. Icterus
aff. Sturnella
Interinae sp. aff. "blackbirds"
Xanthocephalus sp. cf. X. xanthocephalus
Fringillidae
Carduelinae

Sources: Reynolds and Reynolds (1985), Jefferson (1989)

Coyote Lake IPP Electrodes, northeast of Yermo: SBCM 1.75.11

Geologic formation: Manix Formation

Relative age: Rancholabrean, Wisconsinan

Taxa: Gila bicolor

Gasterosteus aculeatus

Sources: Roeder (1985), Jefferson (1989)

El Evado Edison Road, Victorville: SBCM 1.114.29

Geologic formation: Old Alluvium of Noble or Shoemaker Gravels

Relative age: late Irvingtonian or early Rancholabrean

Taxon: Gopherus sp.

Sources: Bowen (1954), Jefferson (1986)

Falling Arches Midden packrat, Whipple Mountains: UALP 7449

Relative age: Rancholabrean, Wisconsinan

Radiometric date: ^{14}C 11,650 \pm 190 yr BP

Taxa: Sauromalus obesus

Chionactis occipitalis

Sources: Lundelius et al. (1983), Mead et al. (1983)

Helendale Marl Quarry (Vitrlite Marl Quarry), Helendale: LACM 1184

Relative age: Rancholabrean

Taxa: Phrynosoma sp.
Zenaida macroura
Source: Jefferson (1989)

Kokoweef Cave, Kokoweef Peak, Ivanpah Mountains: LACM; SBCM 1.11.13
Relative age: Rancholabrean, late Wisconsinan, in part early Holocene
Radiometric date: ^{14}C 9,850 \pm 160 yr BP

Taxa: Cyprinidae
Bufo sp.
Gopherus agassizi
Phrynosoma platyrhinos
Sauromalus sp.
Crotaphytus collaris
Gambelia wislizenii
Sceloporus sp. A
Sceloporus sp. B
Eumeces sp. cf. E. gilberti
Cnemidophorus sp.
Coleonyx variegatus
Crotalus sp. A
Crotalus sp. B
Gymnorhinus cyanocephalus
Aechmophorus occidentalis
Podiceps sp. cf. P. nigricollis
Fulica americana
Centrocerus sp.
Meleagris sp. cf. M. crassidens
Buteo sp. cf. B. jamaicensis
Gymnogyps sp. cf. G. amplus
Falco sparverius
F. mexicanus
Otus sp. cf. O. asio
cf. Oporornis sp.

Sources: Lundelius et al. (1983), Kurten and Anderson (1980), Harris (1985),
Norell (1986)

Kramer, SEGS III-VII: SBCM 1.137.3-1.137.9
Relative age: Rancholabrean
Taxon: Gopherus sp.
Source: Jefferson (1989)

Lake Manix, east of Yermo: LACM(CIT) 540-542, 582, LACM 1093, 3496, 4032-4039,
4054-4061; SBCM 528, 1.59.2-1.59.23, 1.59.30; UCMP 676, 791; UCRV 6709-6764,
6767, 6769, 6852, 69100-69124, 7019-7024, 7049-7065, 7101-7115, 7129-7146;
USGS (no numbers)

Geologic formation: Manix Formation

Relative age: Rancholabrean, late Illinoian through Wisconsinan

Radiometric dates: numerous determinations, uranium series and ^{14}C >350 to 14

ka BP

Taxa: Gila bicolor mojavenis
Gasterosteus aculeatus
Clemmys marmorata
Gopherus agassizi
Gavia sp. cf. G. pacifica
Podiceps sp. cf. P. nigricollis
Aechmophorus occidentalis
Pelecanus sp. aff. P. erythrorhynchos
Phalacrocorax auritus
P. macropus
Ciconia maltha
Phoenicopterus minutus
P. copei
Cygnus sp. cf. C. columbianus
Branta canadensis
Anas sp. cf. A. platyrhynchos
A. sp. cf. A. crecca
Aythya sp.
Mergus sp. cf. M. merganser
Oxyura jamaicensis
Haliaeetus leucocephalus
Aquila chrysaetos
Fulica americana sp. cf. F. a. minor
Grus sp.
cf. Actitis sp.
Phalaropodinae
Larus sp. cf. L. oregonus
Larus sp.
Bubo virginianus

Sources: Brattstrom (1961), Kurten and Anderson (1980), Harris (1985),
Jefferson (1985a, 1985b, 1987, 1989)

Ludlow Cave, Ludlow: P. Reeves Collection, Ludlow, California

Relative age: Rancholabrean

Taxon: Gopherus agassizi

Sources: P. Reeves (pers. comm. 1988), Jefferson (1989)

Luz Solar Trough Site, Daggett: SBCM 1.76.34

Relative age: Rancholabrean, Wisconsinan, in part early Holocene

Radiometric date: ^{14}C 10,910 \pm 425 yr BP

Taxa: Osteichthyes
Dipsosaurus dorsalis
Sauromalus obesus
Phrynosoma platyrhinos
Sceloporus sp.
Cnemidophorus sp.
Lichanura trivirgata

Colubridae
Crotalinae
Fringillidae
Trogloditidae

Sources: Reynolds and Reynolds (1985), Jefferson (1989)

Luz Foundation, Daggett: SBCM 1.76.34

Relative age: Rancholabrean, Wisconsinan, in part early Holocene

Taxa: Osteichthyes
Anura
Sceloporus sp.
Xantusia sp. cf. X. vigilis
Colubridae
Crotalinae
Aves

Sources: Reynolds and Reynolds (1985), Jefferson (1989)

Mescal Cave, Mescal Range: SBCM 1.10.12, UCMP V38064

Relative age: Rancholabrean

Taxa: Gopherus agassizi
Sceloporus occidentalis
Cnemidophorus sp. cf. C. tigris
Crotaphytus sp.
Crotalus viridis

Sources: Brattstrom (1958), Lundelius et al. (1983), Harris (1985)

Mitchell Caverns (Mitchell's Caverns), Providence Mountains: LACM 3497; MAUCB;
SBCM 1.18.9; UCRV

Relative age: Rancholabrean, in part early Holocene

Taxa: Gopherus sp. cf. G. agassizi
Fulica sp.
Bubo virginianus
Geococcyx californianus
Corvus corax

Mojave River Bluffs, east of Yermo: SDSNH

Geologic formation: Manix Formation

Relative age: Rancholabrean, Wisconsinan

Taxon: Gila sp.
Source: Jefferson (1989)

Newberry Cave, Newberry Mountains: SBCM 102

Relative age: Rancholabrean, in part early Holocene

Taxa: Sauromalus obesus
Crotalus sp.

Gopherus agassizi
Gymnogyys californicus
Buteo jamaicensis
Fulica americana
Bubo virginianus

Sources: Davis and Smith (1981), Jefferson (1989)

Piute Valley Lacustrine Sediments numbers 1-6, Piute Valley: SBCM
1.28.1-1.28.6

Relative age: Rancholabrean

Taxon: Aves

Source: Jefferson (1971)

Red Tail Peak Midden (Redtail Peak Midden) packrat, Whipple Mountains: UALP
75114, 75116, 76148

Relative age: Rancholabrean, Wisconsinan

Radiometric dates: ^{14}C 13,810 \pm 270, 11,520 \pm 160, 10,030 \pm 160 yr BP

Taxa: Bufo punctatus
Hypsiglena torquata
Lampropeltis getulus

Sources: Lundelius et al. (1983), Mead et al. (1983)

Salt Springs, southern Death Valley: SBCM 1.67.1, 1.67.3

Geologic formation: Lake Dumont beds (informal)

Relative age: Rancholabrean, latest Wisconsinan

Taxa: Clemmys sp.
Phalacrocorax auritus
Anas platyrhynchos
Aythya valisineria
Fulica sp. cf. F. americana

Source: Ritter (1985), Jefferson (1990)

Schuiling Cave, Newberry Mountains: LACM 1123; SBCM 1.77.1

Relative age: Rancholabrean, Wisconsinan, in part early Holocene

Radiometric date: ^{14}C 12,500 \pm 150 yr BP

Taxa: Gopherus agassizi
Sauromalus obesus
Crotalus sp. cf. C. atrox
Anas sp. cf. A. platyrhynchos
A. sp. cf. A. crecca
A. americana
Aythya sp. cf. A. americana
Oxyura jamaicensis
Gymnogyys amplus
Aquila chrysaetos
Buteo jamaicensis

Fulica americana
Recurvirostra americana
Zenaida macroura
Otus sp. cf. O. asio
Bubo virginianus
Colaptes auratus
Corvus corax

Sources: Brattstrom (1958, 1961), Downs et al. (1959), Kurten and Anderson (1980), Jefferson (1983, 1989), Harris (1985), Jefferson et al. (1987)

Silver Lake, north of Baker: SBCM 1.65.1-1.65.5
Geologic formation: Lake Mojave beds (informal)
Relative age: Rancholabrean
Taxon: Gila bicolor
Sources: Reynolds (1986), Jefferson 1990

Solar One Generation Station, Daggett: SBCM 1.76.11-1.76.13
Relative age: Rancholabrean, Wisconsinan, in part early Holocene
Taxa:
Anura
Gopherus agassizi
Dipsosaurus dorsalis
Sauromalus obesus
Crotophytus sp.
Phrynosoma platyrhinos
Uta stansburiana
Cnemidophorus sp.
Gerrhonotus sp.
Colubridae
Crotalinae
Strigidae
Tyrannidae
Icteridae
Fringillidae

Sources: Reynolds and Reynolds (1985), Jefferson (1989)

Stevens Lake, east of Yermo: SBCM 830
Geologic formation: Manix Formation
Relative age: Rancholabrean, early Wisconsinan
Taxon: Clemmys marmorata
Source: Jefferson (1989)

Tunnel Ridge Midden packrat, Whipple Mountains: UALP 7343, 7525
Relative age: Rancholabrean, Wisconsinan
Radiometric dates: ^{14}C 12,670 \pm 260, 10,330 \pm 300 yr BP
Taxa:
Bufo punctatus
Cnemidophorus tigris

Cnemidophorus sp.
Chionactis occipitalis
Rhinocheilus lecontei
Crotalus atrox

Sources: Lundelius et al. (1983), Mead et al. (1983)

Whipple Mountains Midden packrat: UALP 7447, 75132
Radiometric dates: ^{14}C 10,430 \pm 170, 9,980 \pm 180 yr BP
Taxon: Hypsiglena torquata
Sources: Lundelius et al. (1983), Mead et al. (1983)

SAN DIEGO COUNTY

Glen Abbey, Bonita: SDSNH 3131
Relative age: RanchoLabrean
Taxa: Reptilia
Podicipedidae
Melanitta sp.
Accipitridae
Callipepla sp.
Ectopistes migratorius
Strigiformes
Source: Majors (1985)

SAN JOAQUIN COUNTY

Wagner's Aqueduct: UCMP V70122
Relative age: RanchoLabrean
Taxon: Osteichtheys

SAN MATEO COUNTY

Mussel Rock number 2, South San Francisco: UCMP V40018
Relative age: RanchoLabrean, Sangamon
Taxon: Uria aalge
Sources: Savage (1951), Lundelius et al. (1983)

SANTA BARBARA COUNTY

Arlington Canyon, Santa Rosa Island: CAS; LACM(CIT) 106, LACM 1757, 1763-1764,
4252, 4317; SBMNH

Geologic formation: Santa Rosa Island Formation
Relative age: Rancholabrean, Wisconsinan
Radiometric dates: ^{14}C >37,000, 29,650 \pm 2,500, 16,700 \pm 1,500, 15,820 \pm 280
yr BP
Taxon: Asio priscus (type locality)
Source: Howard (1964)

Carpinteria (Higgen's Tar Beds, Higgen's Tar Ranch): LACMIP 5102, LACM(CIT)
139, LACM 1017, 4249; SBMNH 132-136; UCMP V32013

Geologic formation: Carpinteria Formation
Relative age: Rancholabrean, ?Wisconsinan
Taxa:

Clemmys marmorata
Gambelia wislizenii
Sceloporus occidentalis
Pelecanus occidentalis
Ciconia maltha
Teratornis merriami
Chen sp.
Anas platyrhynchos
Coragyps occidentalis
Cathartes aura
Gymnogyps amplus
Haliaeetus leucocephalus
Circus cyaneus
Accipiter gentilis
A. cooperii
Buteo jamaicensis
B. regalis
B. lineatus
Buettogallus fragilis
Aquila chrysaetos
Wetmoregyps daggetti
Spizaetus grinnelli
Neogyps errans
Neophrontops americanus
Falco sparverius
Polyborus plancus
Meleagris californica
Callipepla californica
Columba fasciata
Zenaida macroura
Geococcyx californianus
Tyto alba
Otus kennicotti
Bubo virginianus
Glaucidium gnoma
Melanerpes sp.
Picoides sp.
Colaptes auratus cafer

Sayornis sp.
Empidonax sp.
Cyanocitta stelleri
Aphelocoma coerulescens californica
Pica nuttalli
Corvus corax
C. caurinus
Sialia mexicana
Sitta canadensis
S. pygmaea
Turdus migratorius
Parus sp.
Bombycilla cedrorum
Pipilo erythrophthalmus
Pipilo fuscus
Carduelis pinus
Loxia curvirostra
Passerella iliaca
Sturnella neglecta

Sources: Miller and DeMay (1942), Kurten and Anderson (1980)

Cuyler Harbor, San Miguel Island: LACM 3500, 4491
Relative age: Rancholabrean
Taxon: Chendytes sp.

Graveyard Canyon, Santa Barbara Island: LACM 4251
Relative age: Rancholabrean
Taxon: Mancalla sp. cf. M. californiensis

Isla Vista: LACM 5018
Relative age: Rancholabrean
Taxon: Teleostei

San Miguel Island: CCSD SMI-V-1 through SMI-V-12
Relative age: Rancholabrean
Radiometric dates: ¹⁴C numerous determinations 32,143 ± 787 to 11,890 ± 95 yr
BP

Taxa: Gerrhonotus multicarinatus
Crotalus viridis
Gavia pacifica
Podiceps nigricollis
Aechmophorus occidentalis
Diomedea albatrus
Fulmarus glacialis
Puffinus griseus
P. opisthomelas

Oceanodroma homochroa
Pelicanus occidentalis
Phalacrocorax penicillatus
P. pelagicus
Ardea herodias
Plegadis chihi
Chen caerulescens
Branta canadensis
Melanitta perspicillata
M. fusca
cf. Mergus serrator
Chendytes lawi
Gymnogyps californianus
Haliaeetus leucocephalus
Buteo jamaicensis
Polyborus plancus
Falco sparverius
Calidris mauri
Larus delawarensis
L. californicus
cf. L. occidentalis
Uria aalge
Cephus sp. cf. C. columba
Synthliboramphus hypoleucus
S. antiquus
Ptychoramphus aleuticus
Cerorhinca n. sp. (type locality)
Tyto alba
Asio sp. cf. A. priscus
Corvus corax
Zonotrichia leucophrys
Melospiza melodia
Passeriformes

Source: Guthrie (1990, in press)

San Miguel Island Northwest:

Relative age: Rancholabrean

Taxon: Aves

Source: R. S. Gray (pers. comm. 1988)

SHASTA COUNTY

Holden Cave, McCloud River: UCMP V4001 (= UCMP 0401)

Relative age: Rancholabrean

Taxon: Crotalus sp.

Potter Creek Cave, Baird: LACM 5357; UCMP 1055

Relative age: Rancholabrean, Wisconsinan

Taxa: Acipenser transmontanus
Mylopharodon conocephalus
Ptychocheilus sp.
Oncorhynchus tschawytscha
Dicamptodon ensatus
Bufo boreas
Clemmys sp.
Crotalus potterensis (type locality)
C. viridis
Coragyps occidentalis
Cathartes aura
Catharista shastensis
? Gymnopyps amplus
Buteo jamaicensis
Falco peregrinus
F. sparverius
Bubo sinclairi (type locality)
Otus kennicotti
Branta canadensis
Bonasa umbellus
Dendragapus obscurus
? Meleagris sp.
Oreortyx picta
Colaptes auratus
Corvus brachyrhynchos

Sources: Sinclair (1904), Miller (1911b), Stock (1918), Brattstrom (1954, 1958), Miller and DeMay (1942), Kurten and Anderson (1980), Lundelius et al. (1983), Harris (1985)

Samwell Cave numbers 1-3, McCloud River: UCMP 1008-1009, 1057, V65217

Relative age: Rancholabrean, late Wisconsinan

Taxa: Anserinae spp.
Coragyps occidentalis
Cathartes aura
Catharista shastense (type locality)
Gymnopyps amplus
? Buteo swainsoni
Accipiter striatus velox
Falco sparverius
Dendragapus obscurus
Meleagris sp.
Oreortyx picta
Otus flammeolus
Bubo virginianus
B. sinclairi
Asio otus

Glaucidium gnoma
Colaptes auratus
Cyanocitta stelleri

Sources: Miller (1911b), Stock (1918), Miller and DeMay (1942), Kurten and Anderson (1980), Lundelius et al. (1983), Harris (1985)

Stone Man Cave, McCloud River: LACM(CIT) 414; UCMP 1010

Relative age: Rancholabrean

Taxa: Gymnogyps amplus
Dendragapus fuliginosus
Columba fasciata

Sources: Furlong (1941), Lundelius et al. (1983)

SISKIYOU COUNTY

Top of Lava, Penoyar: UCMP V66134

Relative age: Rancholabrean

Taxon: Cyprinidae

SONOMA COUNTY

Agua Rico Ranch, Sonoma: UCMP 1380

Relative age: Rancholabrean

Taxon: Clemmys sp.

VENTURA COUNTY

Anacapa Island: LACM 1642, 1928

Relative age: Rancholabrean

Taxon: Chendytes lawi

Source: Miller et al. (1961)

San Nicolas Island number 1: UCMP V57056

Relative age: Rancholabrean

Taxon: Chendytes milleri

San Nicolas Island, Cormorant Point: LACMIP 12005

Geologic formation: first marine terrace (informal)

Relative age: Rancholabrean, ¹⁸O substage 5a (85-80 ka BP)

Taxon: Aves

Source: G. L. Kennedy (pers. comm. 1989)

San Nicolas Island, Viscaino Point: LACMIP 12003

Geologic formation: unnamed eolianite (informal)

Relative age: Rancholabrean, Wisconsinan

Taxa: Synthliboramphus caverii

Ptychoramphus aleuticus

Source: G. L. Kennedy (pers. comm. 1989)

San Nicolas Island East End: LACMIP 11753

Geologic formation: third marine terrace (informal)

Relative age: Rancholabrean, ^{18}O stage 9 (350-300 ka BP)

Taxa: Aves

Source: G. L. Kennedy (pers. comm. 1989)

San Nicolas Island Kitchen Middens: UCMP V78030

Relative age: ?early Holocene

Taxon: Chendytes lawi

San Nicolas Island West End: LACMIP 10623; LACM 5541

Geologic formation: unnamed eolianite (informal)

Relative age: Rancholabrean, Wisconsinan, ^{18}O stage 3 (50-30 ka BP)

Taxa: Fratercula n. sp.

Source: G. L. Kennedy (pers. comm. 1989)

COMBINED TAXONOMIC LIST OF LATE QUATERNARY
NONMARINE LOWER VERTEBRATE AND AVIAN TAXA
FROM CALIFORNIA

E = extinct

H = early Holocene record only

CLASS OSTEICHTHYES

- Order: Acipenseriformes
Family: Acipenseridae
Acipenser transmontanus
- Order: Salmoniformes
Family: Salmonidae
Oncorhynchus mykiss
O. tschawytscha
- Order: Cypriniformes
Family: Catostomidae
Family: Cyprinidae
Gila bicolor mohavensis
G. orcutti
Mylopharodon conocephalus
Orthodon microleptodus
Ptychocheilus sp.
- Order: Gasterosteiformes
Family: Gasterosteidae
Gasterosteus aculeatus
- Order: Perciformes
Family: Centrarchidae
Archoplites interruptus

CLASS AMPHIBIA

- Order: Caudata
Family: Salamandridae
Taricha sp. cf. T. torosa
Family: Dicamptodontidae
Dicamptodon ensatus
Family: Plethodontidae
Aneides lugubris
- Order: Anura
Family: Pelobatidae

Scaphiopus sp.
Family: Bufonidae
Bufo nestor - E
B. boreas
B. microscaphus
B. punctatus
Family: Hylidae
Hyla regilla
Family: Ranidae
Rana aurora

CLASS REPTILIA

Order: Testudines
Family: Emydidae
Clemmys marmorata
Family: Testudinidae
cf. Geochelone sp.
Gopherus agassizi
Family: Cheloniidae
Chelonia mydas
Order: Squamata
Family: Iguanidae
Crotaphytus collaris
Dipsosaurus dorsalis
Gambelia wislizeni
Phrynosoma coronatum
P. platyrhinos
Sauromalus obesus
Sceloporus graciosus
S. magister
S. occidentalis
Uta stansburiana
Family: Gekkonidae
Coleonyx variegatus
Family: Xantusiidae
Xantusia vigilis
Family: Teiidae
Cnemidophorus tigris
Family: Scincidae
Eumeces gilberti
E. skiltonianus
Family: Anguidae
Gerrhonotus multicarinatus
G. coeruleus
Family: Boidae
Lichanura trivirgata
Family: Colubridae

Chionactis occipitalis
Diadophis punctatus
Hypsiglena torquata
Tantilla sp.
Arizona elegans
Coluber constrictor
C. mormon
Masticophis lateralis
M. flagellum
Pituophis melanoleucus catenifer
Lampropeltis getulus
L. zonata
Rhinocheilus lecontei
Thamnophis sp. cf. T. couchi
T. sirtalis
Family: Viperidae
Crotalus atrox
C. potterensis
C. viridis

CLASS AVES

Order: Gaviformes
Family: Gaviidae
Gavia pacifica
G. immer
Order: Podicipediformes
Family: Podicipedidae
Aechmophorus occidentalis
Podilymbus podiceps
Podiceps sp. ?P. auritus
P. griseogen
P. nigricollis
Order: Procellariiformes
Family: Diomedidae
Diomedea albatrus
D. nigripes
Family: Procellariidae
Fulmarus glacialis
Puffinus griseus
P. opisthomelas
Family: Hydrobatidae
Oceanodroma homochroa
Order: Pelecaniformes
Family: Sulidae
Sula reykana - E
Family: Pelecanidae
Pelecanus erythrorhynchos
P. occidentalis

Family: Phalacrocoracidae

Phalacrocorax auritus

P. pelagicus

P. penicillatus

P. macropus - E

Order: Ciconiiformes

Family: Ciconiidae

Ciconia maltha - E

Mycteria wetmorei - E

Family: Teratornithidae

Teratornis merriami - E

Cathartornis gracilis - E

Family: Ardeidae

Botaurus lentiginosus

Ardea herodias

Casmerodius albus

Egretta thula

E. caerulea

Butorides striatus

Nycticorax nycticorax

Family: Threskiornithidae

Plegadis chihi

Ajaia ajaja

Order: Phoenicopteriformes

Family: Phoenicopteridae

Phoenicopus minutus - E

P. copei - E

Order: Anseriformes

Family: Anatidae

Cygnus columbianus

Chen caerulescens

C. sp. ?C. rossii

Anas platyrhynchos

A. strepera

A. crecca

A. sp. ?A. cyanoptera

A. clypeata

A. americana

A. acuta

Anser albifrons

Branta canadensis

B. sp. cf. B. bernicla

Bucephala clangula

B. albeola

Aythya valisineria

A. affinis

A. americanus

A. marila

Mergus sp. cf. M. merganser

cf. M. serrator

Oxyura jamaicensis
Anabernicula gracilenta - E
Melanitta fusca
M. perspicillata
Chendytes lawi - E

Order: Accipitriformes

Family: Vulturidae

Coragyps occidentalis - E
Cathartes aura
Catharista shastense - E
Gymnogyps amplus - E
G. californianus
Breagyps clarki - E

Family: Accipitridae

Elanus caeruleus
Circus cyaneus
Accipiter gentilis
A. striatus velox
A. cooperii
Archaeobuteo ferrugineus - E
Buteogallus fragilis - E
Buteo jamaicensis
B. swainsoni
B. lagopus
B. lineatus
B. regalis
Aquila chrysaetos
Haliaeetus leucocephalus
Amplibuteo woodwardi - E
Hyomorphinus milleri - E
Wetmoregyps daggetti - E
Spizaetus grinnelli - E
Neogyps errans - E
Neophrontops americanus - E

Family: Falconidae

Falco sparverius
F. columbarius
F. peregrinus
F. mexicanus
F. swarthi
Polyborus plancus

Order: Galliformes

Family: Phasianidae

Bonasa umbellus
Centrocercus sp.
Dendragapus obscurus
Meleagris californica - E
M. richmondi - E
Callipepla californica
Oreortyx picta

Order: Gruiformes

Family: Rallidae

Fulica americana

F. a. minor - E

Gallinula sp.

Rallus limicola

Family: Gruidae

Grus canadensis

G. americana

Order: Charadriiformes

Family: Charadriidae

Pluvialis squatarola

Charadrius vociferus

C. montanus

Family: Recurvirostridae

Recurvirostra americana

Family: Scolopacidae

Tringa melanoleuca

cf. Actitis sp.

Catoptrophorus semipalmatus

Numenius americanus

N. phaeopus

Limosa fedoa

Calidris alba

C. alpina

C. mauri

Limnodromus griseus

Gallinago gallinago delicata

Phalaropus fulicarius

Family: Laridae

Larus californicus

L. canus - H

L. delewarensis

L. glaucescens

L. occidentalis

L. oregonus - E

Rissa tridactyla - H

Family: Alcidae

Uria aalge

Brachyramphus sp.

Ceppus sp. cf. C. columba

Cerorhinca n. sp.

Fratercula n. sp. - E

Synthliboramphus antiquus

S. hypoleucus

Ptychoramphus aleuticus

Mancalla diegensis - E

Order: Columbiformes

Family: Columbidae

Columba fasciata

Zenaida macroura
Ectopistes migratorius - E
 Order: Cuculiformes
 Family: Cuculidae
 Geococcyx californianus
 Order: Strigiformes
 Family: Tytonidae
 Tyto alba
 Family: Strigidae
 Otus kennicotti
 O. flammeolus
 Bubo virginianus
 Bubo sinclari - E
 Glaucidium gnoma
 Athene cucularia
 Strix brea - E
 Asio flammeus
 A. priscus - E
 A. wilsonianus
 Aegolius acadicus
 Order: Caprimulgiformes
 Family: Caprimulgidae
 Phalaenoptilus nuttallii
 Order: Piciformes
 Family: Picidae
 Melanerpes lewis
 Sphyrapicus sp.
 Picoides sp.
 Colaptes auratus
 Dryocopus pileatus
 Order: Passeriformes
 Family: Tyrannidae
 Sayornis sp. - E
 Empidonax sp. - E
 Tyrannus sp. ?T. vociferans
 Family: Alaudidae
 Eremophila alpestris
 Family: Hirundinidae
 Hirundo pyrrhonota
 Family: Corvidae
 Cyanocitta stelleri
 Aphelocoma coerulescens
 A. c. californica
 Nucifraga columbiana
 Pica nuttalli
 Corvus corax
 C. cryptoleucus
 C. brachyrhynchos
 C. caurinus
 Family: Troglodytidae

aff. Troglodytes sp.
 Family: Muscicapidae
Sialia mexicana
 Family: Sittidae
Sitta canadensis
S. pygmaea
Turdus migratorius
 Family: Paridae
Parus sp. cf. P. gambeli
 Family: Mimidae
 cf. Mimus sp.
Oreoscoptes montanus
Toxostoma redivivum
 Family: Bombycillidae
Bombycilla cedrorum
 Family: Vireonidae
 Family: Laniidae
Lanius ludovicianus
 Family: Emberizidae
Dendroica sp.
 cf. Oporornis sp.
 Emberizinae sp. (small)
 Emberizinae sp. (large)
Cardinalis cardinalis
Pheucticus melanocephalus
 aff. Junco sp.
Passerella iliaca
Pipilo erythrophthalmus
P. fuscus
P. angelensis - E
Spizella passerina
Spizella sp.
Poocetes gramineus
Chondestes grammacus
Amphispiza bilineata
A. belli
Melospiza melodia
Zonotrichia leucophrys
Agelaius sp. ?A. phoeniceus californicus
Icterus aff. cucullatus
Icterus sp. aff. "blackbirds"
Sturnella neglecta
Xanthocephalus sp. cf. X. xanthocephalus
Euphagus magnirostris - E
 ?E. cyanocephalus
Molothrus ater
Pandanaris convexa - E
 Family: Fringillidae
Carduelis pinus
C. tristis

Loxia curvirostra
Coccothraustes vespertina

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