

Remains of Animal Life From the Kingston Kitchen Midden Site Near Peoria, Illinois

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The kitchen midden pits in the Illinois Valley near Kingston, fifteen miles southwest of Peoria, have yielded a large number of species of animals, both vertebrate and invertebrate. Through the kindness of Mr. A. M. Simpson of Peoria quantities of this material have been submitted for study. Studies of this kind are of value not only to the archeologist but also to the zoologist for species now rare in the locality are found to have been common at the time the Indians made the kitchen middens. Also some species may be found to have had a wider distribution previously, as in the case of the rice rat herein recorded. Some material was reported from this site in a previous paper in the Transactions of the State Academy (Vol. 23, page 231, 1931).

The invertebrates consist only of Mollusca, principally the naiades or river mussels. Twenty-one different species and races of clams and two species of snails were found in the material. Nearly all of the species are now living in the Illinois River below Peoria. This is the largest number of species of mussels reported from any kitchen midden deposit yet recorded.

The vertebrates are divided among the fishes, reptiles, birds, and mammals. Of the fish at least six species are represented, all common in the Illinois River at the present time. Of the reptiles only turtles were represented, belonging to the genera *Chrysemys* or *Pseudemys*, and *Amyda*. Of the birds 31 species and races are recorded, a very large number for one locality and more than twice as many as previously recorded. Among the bird groups represented are 11 ducks and geese, three hawks, and two swan. Of special note are the trumpeter swan, wild turkey, sandhill crane, and long-billed curlew, now rare in Illinois. The bones most usually preserved are the wing and the leg bones.

Of the mammals, 13 species are represented. Of special interest in this group is the beaver, now extinct in Illinois. This mammal must have been a favorite animal with the Indians for its skull or other bones are not uncommon among kitchen midden material. The otter, also, is now rare in southern Illinois and practically absent from the rest of the state. The rice field mouse (*Oryzomys*) is at present known only from southern Illinois and the record from near Peoria carries the former dis-

tribution well up into the middle of the state. The mammal bones preserved in these deposits consist usually of parts of the skull, leg bones, pelvis, and vertebrae.

All of the species contained in the kitchen midden material is listed below. The vertebrate material was identified by specialists in the United States National Museum, and the thanks of the writer are due these specialists for their trouble in identifying such fragmentary material. The naming of the several groups should be credited to the following people:

Birds. Dr. A. Wetmore, Assistant Secretary of the Smithsonian Institution, in charge United States National Museum.

Mammals. Mr. Gerrit S. Miller, Curator of Mammals, United States National Museum.

Fishes. Dr. G. S. Myers, Assistant Curator of Fishes, United States National Museum and Mr. Earl D. Reid, Aide in the Division of Fishes of the same institution.

Turtles. Miss Doris M. Cocran, Assistant Curator of Reptiles and Batrachians, United States National Museum.

Mollusca. Frank C. Baker, University of Illinois.

The asterisk preceding a name indicates that it was listed in the previous paper published in the Transactions of the Illinois Academy of Science.

SYSTEMATIC LIST OF SPECIES REPRESENTED

MOLLUSCA (Clams and snails)

Fusconaia undata trigona (Lea). Three left valves, adult.

Fusconaia ebenus (Lea). One right valve, adult.

**Megaloniaia gigantea* (Barnes). One left valve, small specimen.

Amblema rariplicata (Lamarck). Two right valves, adult. One left valve, immature.

Quadrula pustulosa (Lea). One left, one right valve, adult.

Quadrula quadrula Rafinesque. One left valve, adult.

Cyclonaias tuberculata Rafinesque. One right valve, adult.

Pleurobema pyramdatum (Lea). One left valve, half grown shell.

Pleurobema coccineum mississippiense F. C. Baker. One left valve of an adult shell does not differ from this common variety of the Mississippi River. It has not been found alive in the Illinois River near Peoria.

Plethobasus cyphus (Rafinesque). One left valve, half grown.

**Elliptio crassidens* (Lamarck). One right valve.

Elliptio dilatatus (Rafinesque). Five right and four left valves, adult.

Alasmidonta marginata truncata (B. H. Wright). One left valve, adult.

Arcidens confragosus (Say). One left valve, adult but small.

Actinonaias carinata (Barnes). Three right and three left valves, adult.

Plagiola lineolata Rafinesque. One left valve, adult.

**Proptera alata megaptera* (Rafinesque). One right and one left valve, about half grown.

**Ligumia recta latissima* (Rafinesque). One left valve, adult but small.

Lampsilis fallaciosa (Smith) Simpson. One right valve, small.

Lampsilis siliquoidea (Barnes). Two left valves, small.

Lampsilis ventricosa occidentis (Lea). Two right valves, adult.

Cameloma rufum (Haldeman). One specimen, adult.

Pleurocera acuta lewisii (Lea). One specimen, adult.

PISCES (Fish)

**Amia calva* Linn. Dogfish. Dentary, clavicle, opercle, preopercle, suborbital.

Lepisosteus osseus (Linn.) Long-nosed gar. Dentary and interopercle.

**Ameiurus* species. Bullhead. Dentary, pectoral spine, clavicle.

Micropterus species. Black bass. Interhaemal spine.

Ictiobus bubalus (Rafinesque). Small-mouth buffalo. Hypural, shoulder girdle, opercle, pelvic girdle, ribs, pectoral finrays, preopercle, interopercle, subopercle, supraclavicle, postclavicle, branchial arch, neural spine, interhaemal spine.

**Aplodinotus grunniens* Rafinesque. Fresh-water drum. Interneural spine, anal spine, hypural.

Stizostedion species. Pike perch. Dentary.

REPTILIA (Turtles)

Chrysemys or *Pseudemys* species. Scapula, coracoid, humerus, lower jaw. *Amyda* species. Humerus.

AVES (Birds)

Nycticorax hoactli (Gmelin). Black-crowned night heron. Humerus and ulna.

Botaurus lentiginosus (Montagu). American bittern. Ulna.

**Cygnus buccinator* Richardson. Trumpeter swan. Humerus and ulna.

**Cygnus columbianus* (Ord) Whistling swan. Metacarpus and femur.

**Eranta canadensis* (Linn.). Canada goose. Metacarpus and coracoid.

**Anas platyrhynchos* Linn. Mallard duck. Humerus, metacarpus, tibiotarsus.

Dafila acuta tzitzihua (Vieillot). Pintail duck. Metacarpus.

**Nettion carolinense* (Gmelin). Green-winged teal. Ulna.

**Querquedula discors* (Linn.) Blue-winged teal. Coracoid, humerus, metacarpus.

Aix sponsa (Linn.) Wood duck. Humerus.

Nyroca valisineria (Wilson). Canvas-back duck. Metatarsus and metacarpus.

Nyroca affinis (Eyton). Lesser scaup duck. Metacarpus.

Nyroca affinis or *collaris* Don.) Caracoid and femur.

Charitonetta albeola (Linn.) Bufflehead. Metatarsus and tibiotarsus.

Lophodytes cucullatus (Linn.) Hooded merganser. Humerus (2).

Buteo lineatus (Gmelin). Red-tailed hawk. Metacarpus.

Buteo borealis (Gmelin). Red-shouldered hawk. Metacarpus.

Buteo platypterus (Vieillot). Broad-winged hawk. Metacarpus.

Haliaeetus leucocephalus (Linn.) Bald eagle. Humerus and ulna.

**Tympanuchus cupido americanus* (Reich.) Prairie chicken. Tibiotarsus, scapula, metacarpus, ulna.

Colinus virginianus (Linn.) Bobwhite. Humerus and femur.

**Meleagris gallopavo silvestris* (Vieillot). Wild turkey. Humerus, femur, metacarpus, coracoid, tarso-metatarsus, ulna, and tibiotarsus.

Grus canadensis (Linn.) Sandhill crane. Part of ulna.

Porzana carolina (Linn.) Carolina rail. Tibiotarsus and furcula.

Fulica americana Gmelin. Coot. Metacarpus and tibiotarsus.

Numenius americanus Bechstein. Long-billed curlew. Ulna.

Philohela minor (Gmelin). Woodcock. Tibiotarsus.

Limnodromus griseus (Gmelin). Dowitcher. Humerus.

Colaptes auratus luteus Bangs. Flicker. Ulna.

Agelaius phoeniceus (Linn.) Red-winged blackbird. Humerus.

Quiscalus quiscula (Linn.) Grackle. Ulna.

MAMMALIA (Mammals)

**Odocoileus virginianus* (Bodd.). Virginia deer. Teeth, part of skull, part of lower jaw, heel and toe bones, vertebrae.

Sciurus niger rufiventer (Geoffroy). Fox squirrel. Humerus, radius, tibia, ramus of lower jaw.

**Sciurus carolinensis* Gmelin. Gray squirrel. Humerus.

**Castor canadensis* Kuhl. Beaver. Pelvis, humerus, radius, tibia, fibula, ulna, rib, vertebrae.

**Ondatra zibethica* (Linn.) Muskrat. Part of skull and lower jaw, pelvis, sternum, humerus, femur, tibia-fibula.

**Mustela vison luteocephalus* (Harlan). Mink. Skull and lower jaw, femur, humerus, ulna, foot bones.

Lutra canadensis (Schreber). Otter. Skull.

Procyon lotor (Linn.) Raccoon. Left ramus of jaw, radius.

Lynx rufus (Guldenstaedt). Wild cat. Bob cat. Humerus.

**Canis familiaris* Linn. Skull and jaws, scapula, part of pelvis, femur, humerus, ulna, radius, tibia, rib, toe, bones, atlas.

Scalopus aquaticus cf machrinus (Raf.) Prairie mole. Jaw, tibia.

Sylvilagus floridanus mearnsii (Allen). Mearn's cotton-tail rabbit. Lower jaw, scapula.

Oryzomys palustris (Harlan). Rice field mouse. Femur, tibia-fibula, skull.