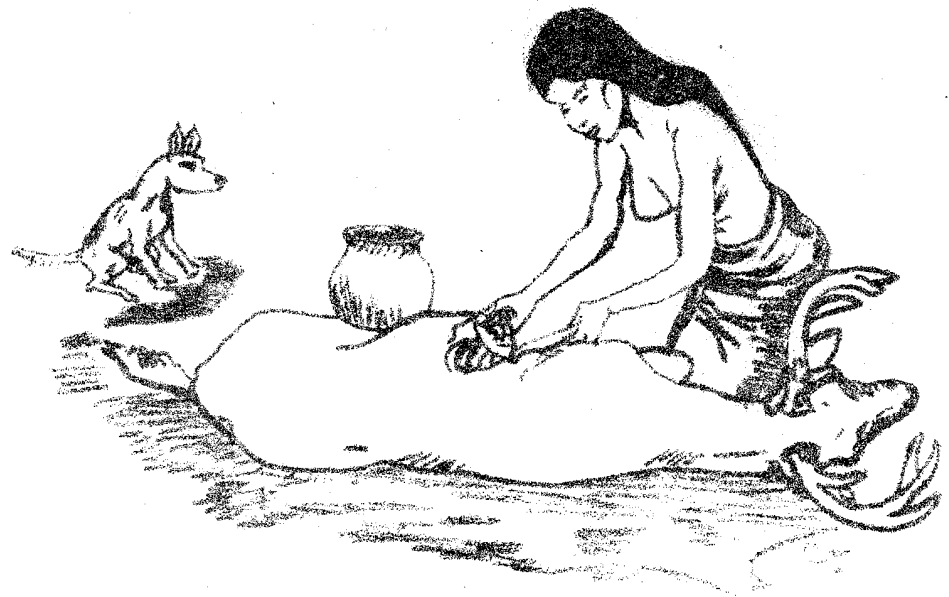


The PLASTER JACKET is a newsletter. Questions, announcements, and other communications are solicited from all readers. Information of general interest will be included in future issues.

It is our intent to produce this series at the rate of six issues per year. We hope to add as many genuinely interested paleontologists as possible to our mailing list. If you are interested, please send your name and address to the PLASTER JACKET. These issues are distributed free of charge to all interested people.

This public document was promulgated at an annual cost of \$2500 or \$0.17 per copy to circulate authoritative material on Florida paleontology and to foster communication among enthusiasts of this subject.

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# THE PLASTER JACKET

THE FLORIDA STATE MUSEUM

PREHISTORIC USE OF ANIMAL  
RESOURCES IN FLORIDA

BY Elizabeth S. Wing<sup>1</sup>

Before the use of fossil fuels, mass transportation networks, and other technical advances of modern society, man depended on the resources of his local environment. The plants and animals used for food were those that were abundant close to the home site, and those that the people had the desire and ability to catch or collect. Plant remains such as nutshells and seeds are less frequently preserved in archaeological sites than animal remains, and therefore our knowledge of the prehistoric use of animals is greater. The remains of animals provide clues about past hunting and fishing techniques, butchering and cooking techniques, the domestication of animals, and ecological changes in the environment.

Conclusions such as these can only be drawn when the animal remains have been excavated by modern, precise methods, and carefully identified, and the associated cultural materials (such as pottery and tools) are assessed. Identification of animal remains, such as bone fragments and teeth, is difficult without reference to a set of comparative skeletons (complete prepared skeletons of animals that have been identified.

<sup>1</sup> Dr. Elizabeth S. Wing is familiar to PJ readers as the author of the second PJ and co-author of the 7th issue. Dr. Wing is Associate Curator in Zooarchaeology at the Florida State Museum in Gainesville. She is author of numerous articles on the morphology, systematics and distribution of vertebrates. Her principal research concerns vertebrates from archaeological sites in the New World. As this issue goes to press, Dr. Wing has returned from a field season in Peru and Ecuador, where she is studying food utilization by pre-Incan and other early peoples at several sites.

Certain skeletal elements are sufficiently unique that illustrations chosen for this publication are both the most diagnostic parts of the skeleton of each species and those most frequently found. To place the bone sample in its proper context (i.e. when the animals were used and by what group of Indians), the cultural remains also have to be identified. For this aspect of such an interdisciplinary study, one must rely on the expertise of the anthropologist to determine the cultural association of the animal remains. The anthropologist in turn needs to know the identification of the faunal assemblage in order to understand the subsistence economy of prehistoric people.

Generally, the animal resources people used were those that could be caught and were available near the home site, but several factors modify this. Deer (*Odocoileus virginianus*) (Fig. 1) were universally used and, clearly, great efforts were made to obtain them. Their value lies in the fact that each animal provided so many commodities -- a large amount of meat, a large durable hide, and a number of long straight bones and antlers that were raw material for a variety of tools. Considering this as a multi-purpose animal, there is little wonder that they were much sought after and their remains are present, if not abundant, in all Indian sites. Stimulated by the fur trade, their use increased throughout the colonial period. In fact, the scale to which deer were hunted is hard to imagine, considering that during the 18th Century up to 200,000 hides were exported annually from Charlestown.

Another factor that profoundly influenced the resources used was the preference for home sites near a source of water. Turtles living in the water were therefore an important animal resource. The pond turtles (*Chrysemys* spp.; for illustration see *Plaster Jacket* #16, Figs. 2 and 30) were particularly often used.

Peoples living along the coast quite naturally depended heavily on the resources of the sea. Throughout prehistoric occupation along the Florida coast, the following



FIGURE 1a. White-tailed deer, side view of skull. Original length, 231 mm. (Reprinted with permission of the Missouri Archaeological Society from Gilbert, B. Miles *Mammalian Osteo-Archaeology: North America*, 1973, Columbia, Missouri.)

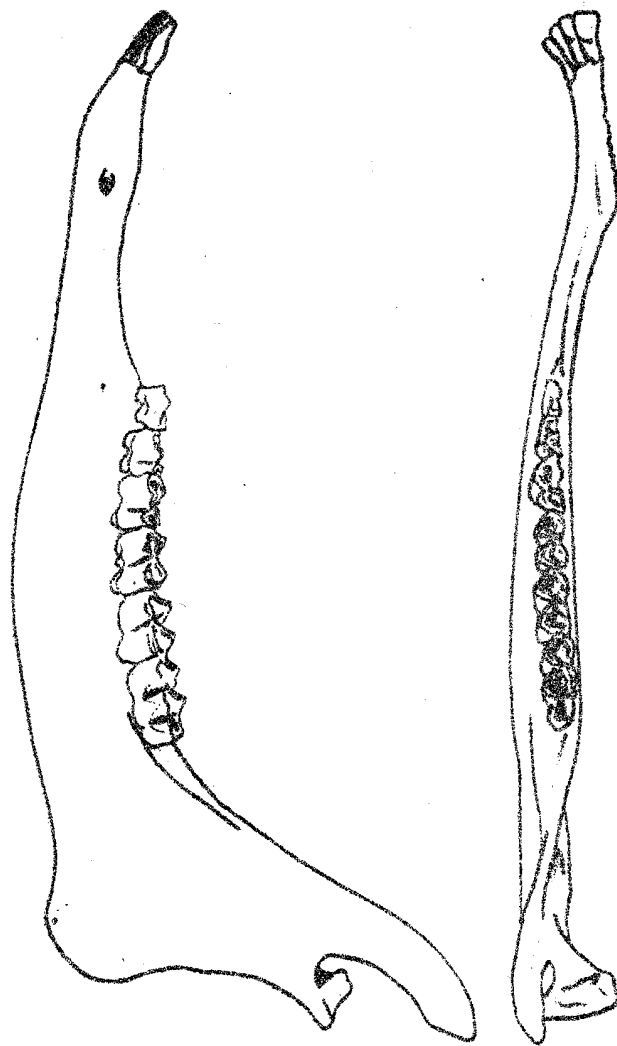


FIGURE 1b. White-tailed deer, side view (left) and top view (right) of lower jaw. (Reprinted with permission of the Missouri Archaeological Society from Gilbert, B. Miles *Mammalian Osteo-Archaeology: North America*, 1973, Columbia, Missouri.)

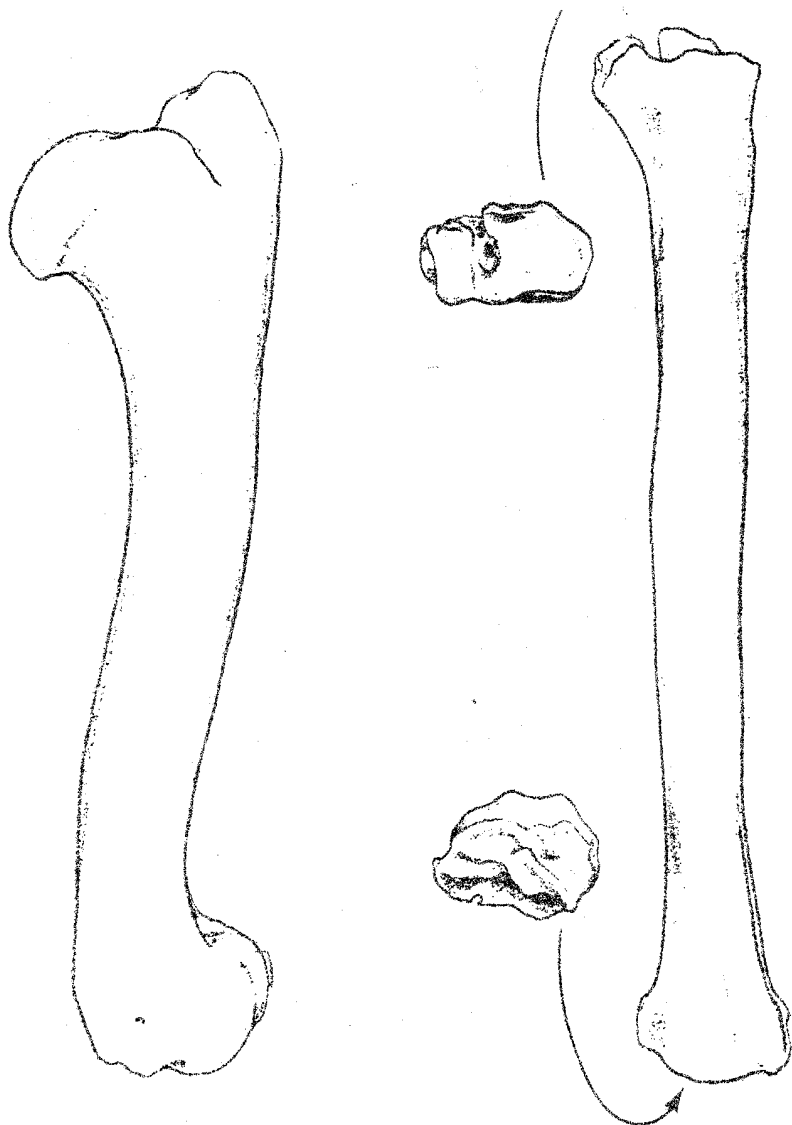


FIGURE 1c. White-tailed deer: left humerus (left), natural size 200 mm long; right radius (right), natural size 209 mm long.

(Reprinted with permission of the Missouri Archaeological Society from Gilbert, B. Miles *Mammalian Osteo-Archaeology: North America*, 1973, Columbia, Missouri.)

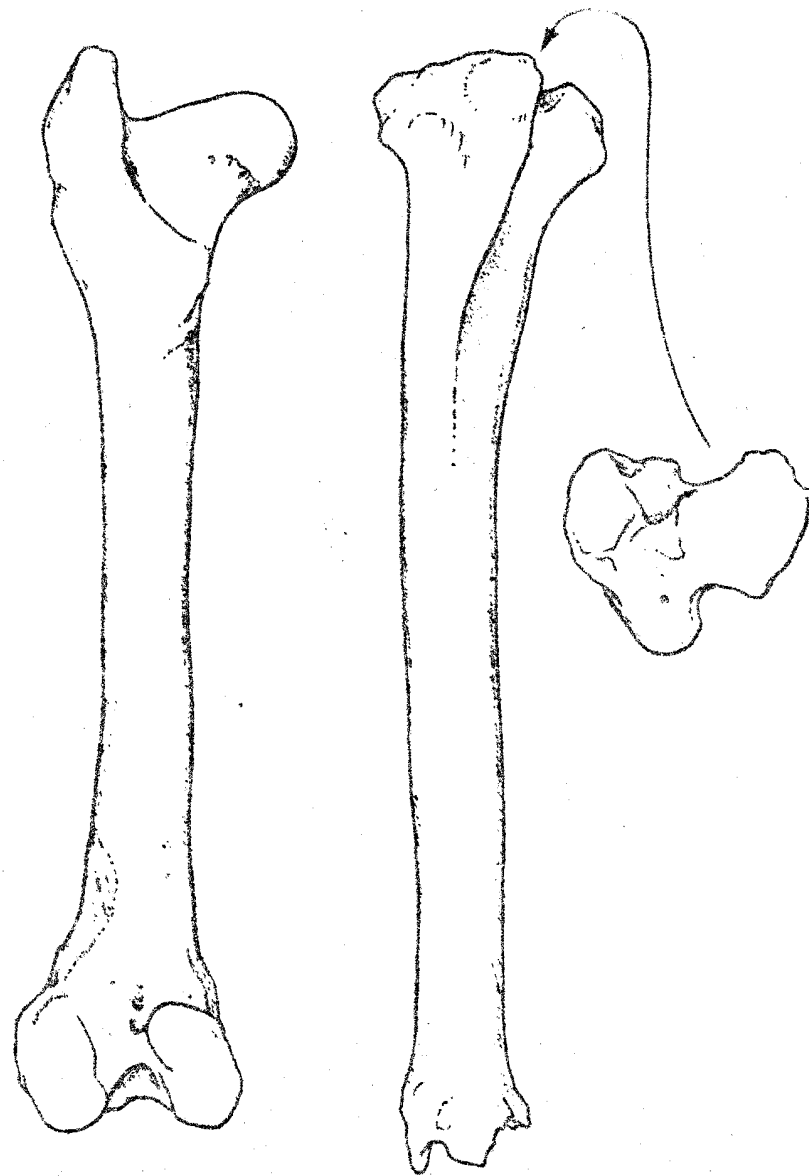


FIGURE 1d. White-tailed deer: left, left femur, natural size 240 mm long; right, left tibia, natural size 275 mm long.

(Reprinted with permission of the Missouri Archaeological Society from Gilbert, B. Miles *Mammalian Osteo-Archaeology: North America*, 1973, Columbia, Missouri.)

fishes were used consistently: sea catfishes (*Bagre marinus* and *Arius felis* [for illustration see *Plaster Jacket* #7, Fig. 5 and Fig. 2 this issue]); sheephead (*Archosargus probatocephalus* [Fig. 3 this issue]); black drum (*Pogonias cromis* [*Plaster Jacket* #7, Fig. 6]); and jack (*Caranx hippos* [Fig. 4 this issue]). Along certain sections of the coast sea turtle (Cheloniidae [*Plaster Jacket* #16, Fig. 2]) and a variety of sharks, mostly nurse shark (*Ginglymostoma cirratum*) and a tiger shark (*Galeocerdo cuvieri* [*Plaster Jacket* #1, Fig. 1]), are also abundantly represented in faunal samples.

The faunal assemblage excavated from inland sites reflect a quite different use of animals. In the use of resources accompanying the shift, there is a change from a subsistence economy based on hunting-gathering to one based on agriculture and animal husbandry. A great variety of animals are associated with hunting-gathering sites, and the most common ones include fresh-water catfish (*Ictalurus* spp. [*Plaster Jacket* #7, Fig. 5]); garfish (*Lepisosteus* spp. [Fig. 5 this issue]); bowfin (*Amia calva* [Fig. 6 this issue]); alligator (*Alligator mississippiensis* [*Plaster Jacket* #5, Figs. 2 and 3b; Fig. 7 this issue]); softshell turtle (*Trionyx ferox* [*Plaster Jacket* #16, Fig. 22]); snapping turtle (*Chelydra serpentina*); box turtle (*Terrapene carolina* [*Plaster Jacket* #16, Fig. 4]); raccoon (*Procyon lotor*); opossum (*Didelphis virginiana*); and turkey (*Meleagris gallapavo* [Fig. 8 a, b this issue]).

The illustrations in this number of the *Plaster Jacket*, and those referred to in past numbers, are designed as a guide to identification to be followed, if possible, with a confirmation of the identification by direct comparison of the bone to a comparative skeleton (prepared skeleton with known identification). There is no completely satisfactory substitute for a comparative skeleton. A good comparative collection may be started by merely collecting animals that have been killed along the highways, providing they are not rare or endangered species. (If a list of

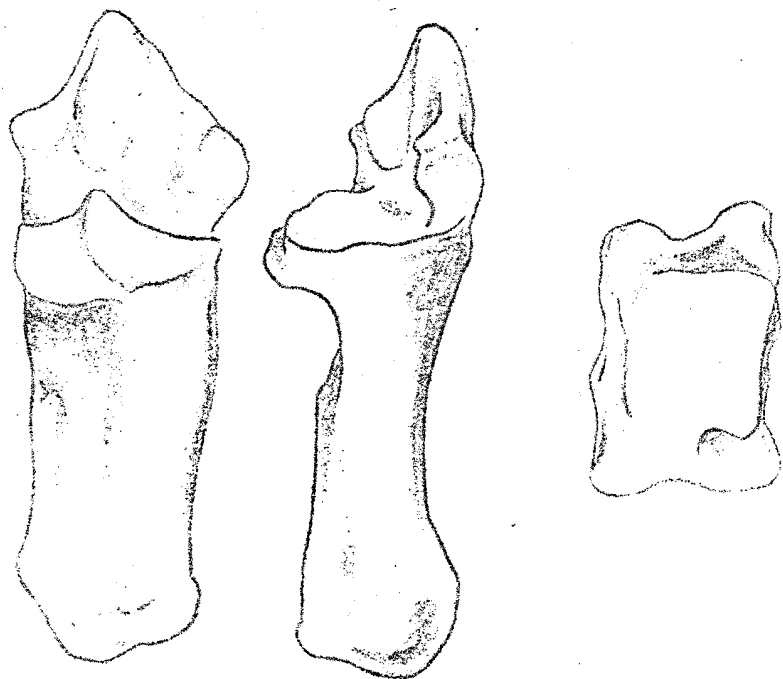


FIGURE 1e. White-tailed deer; right calcaneum side and top views, left, natural size 87 mm long; right astragalus, right, 40 mm long.

(Reprinted with permission of the Missouri Archaeological Society from Gilbert, B. Miles *Mammalian Osteo-Archaeology: North America*, 1973, Columbia, Missouri.)

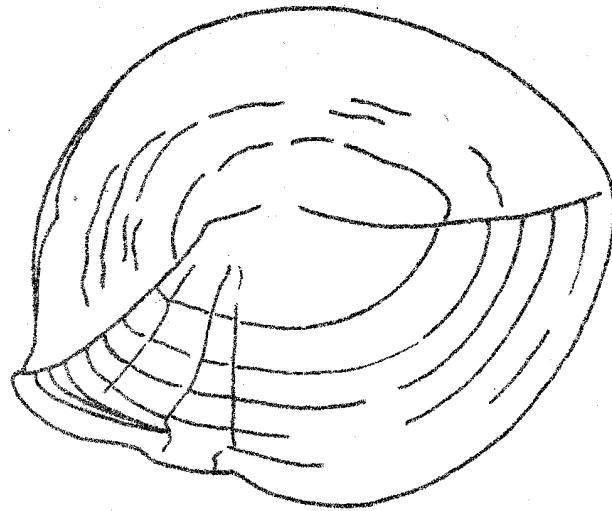


FIGURE 2. Catifsh otolith or earbone. (By Donna Drake)

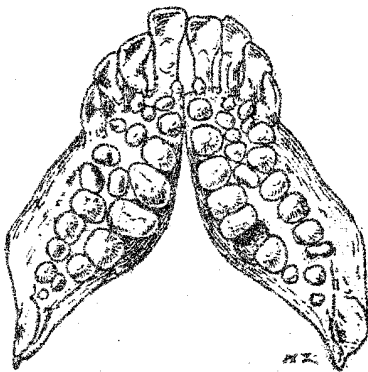


FIGURE 3. Sheephead lower jaw with pebble-like teeth.  
(Reprinted with permission from Gregory, Wm. K.  
*Fish Skulls*, TRANSACTIONS of the American  
Philosophical Society, Vol. 23 Pt. 2 (1932))

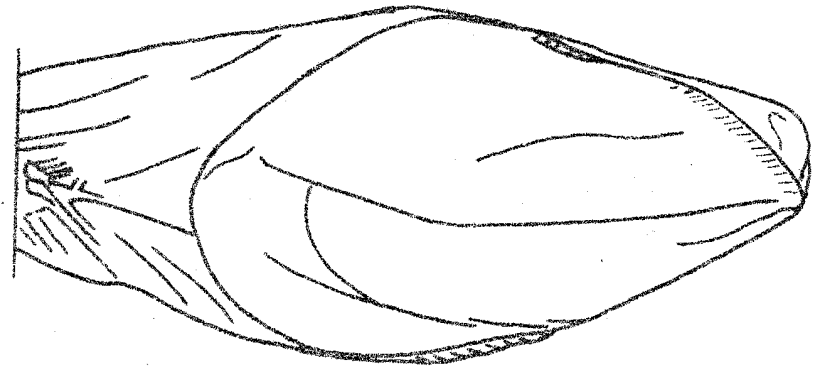


FIGURE 4. Inflated portion of a jack cleithrum which is the structure comparable to the shoulder girdle in land mammals. (By Donna Drake)

rare and endangered species is needed, contact your local Fish and Game Commission office.) If animals are caught, they must of course be taken only in strict accordance with hunting and fishing regulations.

The procedure for preparing skeleton specimens is as follows:

- 1) Record date, identification of the animal, weight, length, location in which it was found, date of death, sex, age, etc.;
- 2) Flesh out specimen as much as possible;

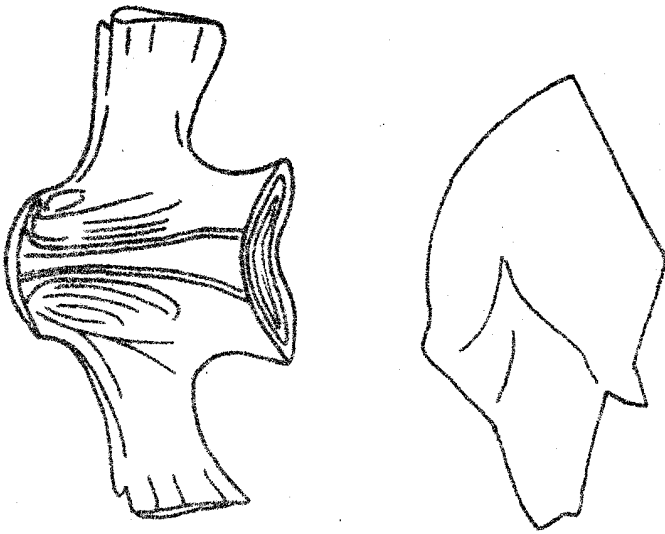


FIGURE 5. Vertebra with the centrum concave at one end and convex at the other (left) and scale with its shiny enamel surface (right) are characteristic of garfish. (By Donna Drake)

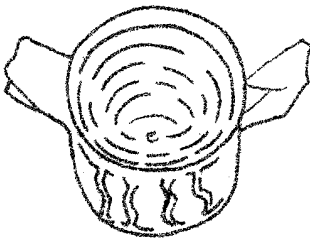


FIGURE 6. Bowfin vertebra. (By Donna Drake)

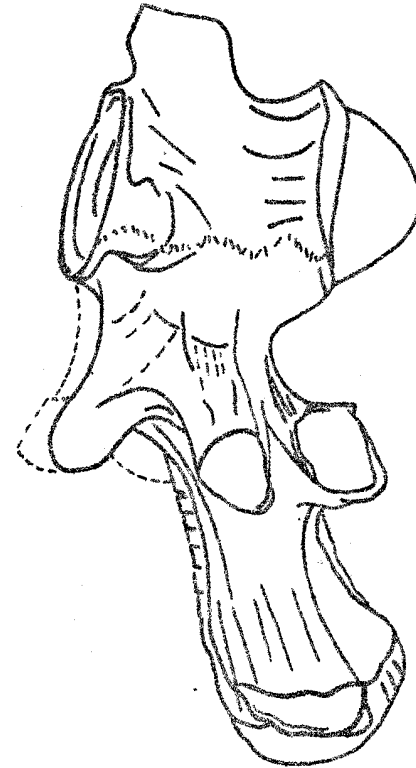


FIGURE 7. Alligator vertebra. (by Donna Drake)

- 3) Put carcass in jar with enough water to cover (do not fill over 3/4 full) and add about 1 tablespoon BIZ detergent per gallon water;
- 4) Rinse and add fresh water and BIZ every day for 3 to 4 days, then let macerate until clean (you may have to rinse several times at the end before it is completely clean);
- 5) Dry and label.

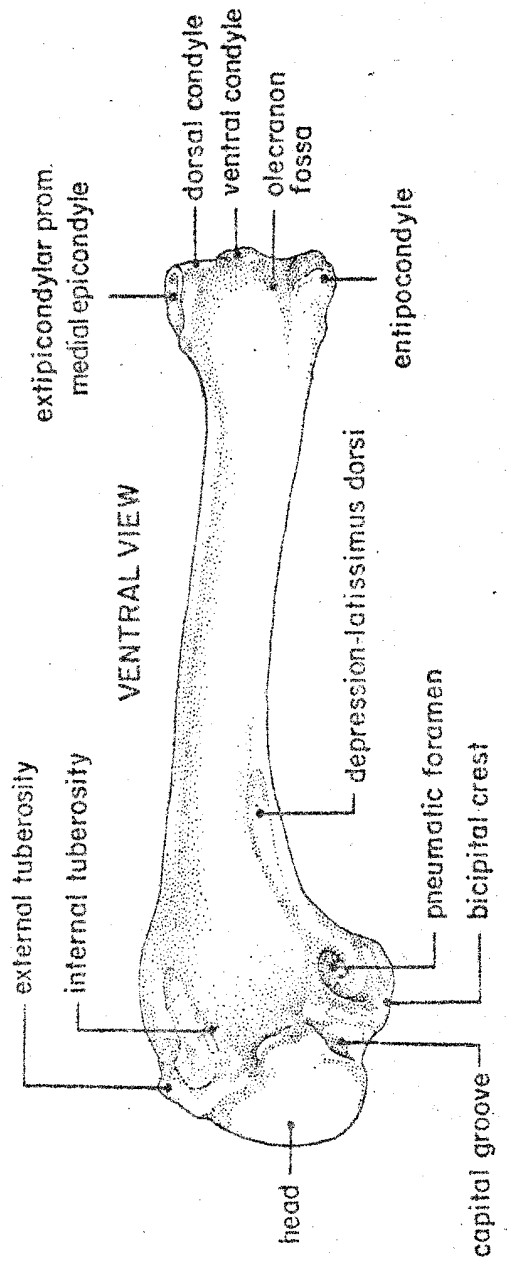
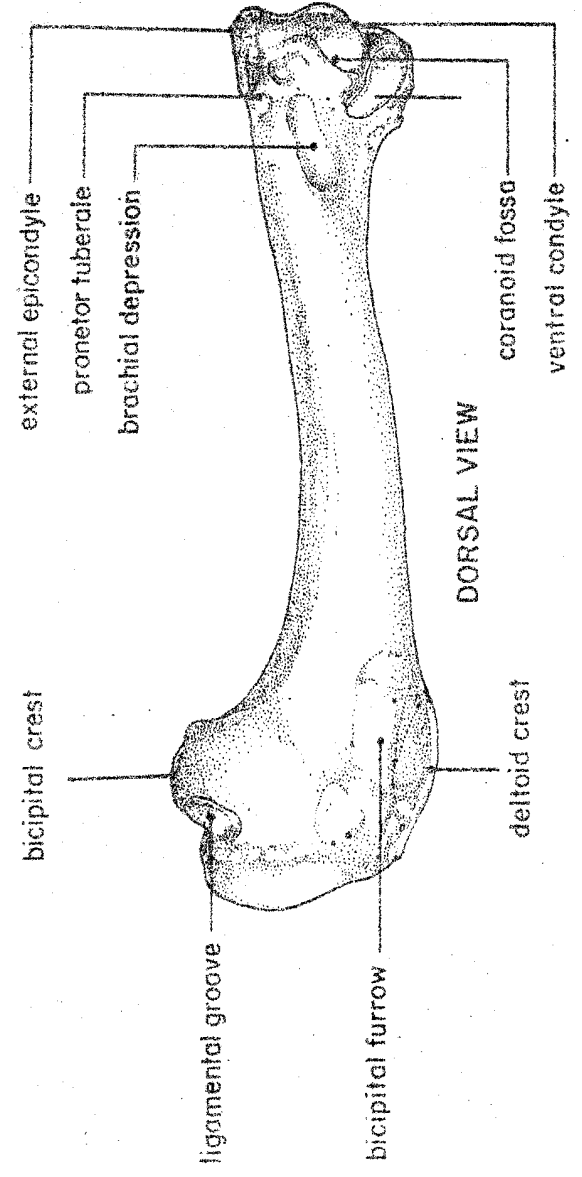


FIGURE 8a. Turkey humerus: above, ventral view; below, dorsal view. (Reprinted from Harvey, Elmer B. *Atlas of the Domestic Turkey* (Meleagris gallapavo): *Myology and Osteology*. U.S. Atomic Energy Comm., Division of Biology and Medicine, Wash. 1123, TID UC 48.





(Reprinted from Harvey, Elmer B. [see Fig. 8a]).

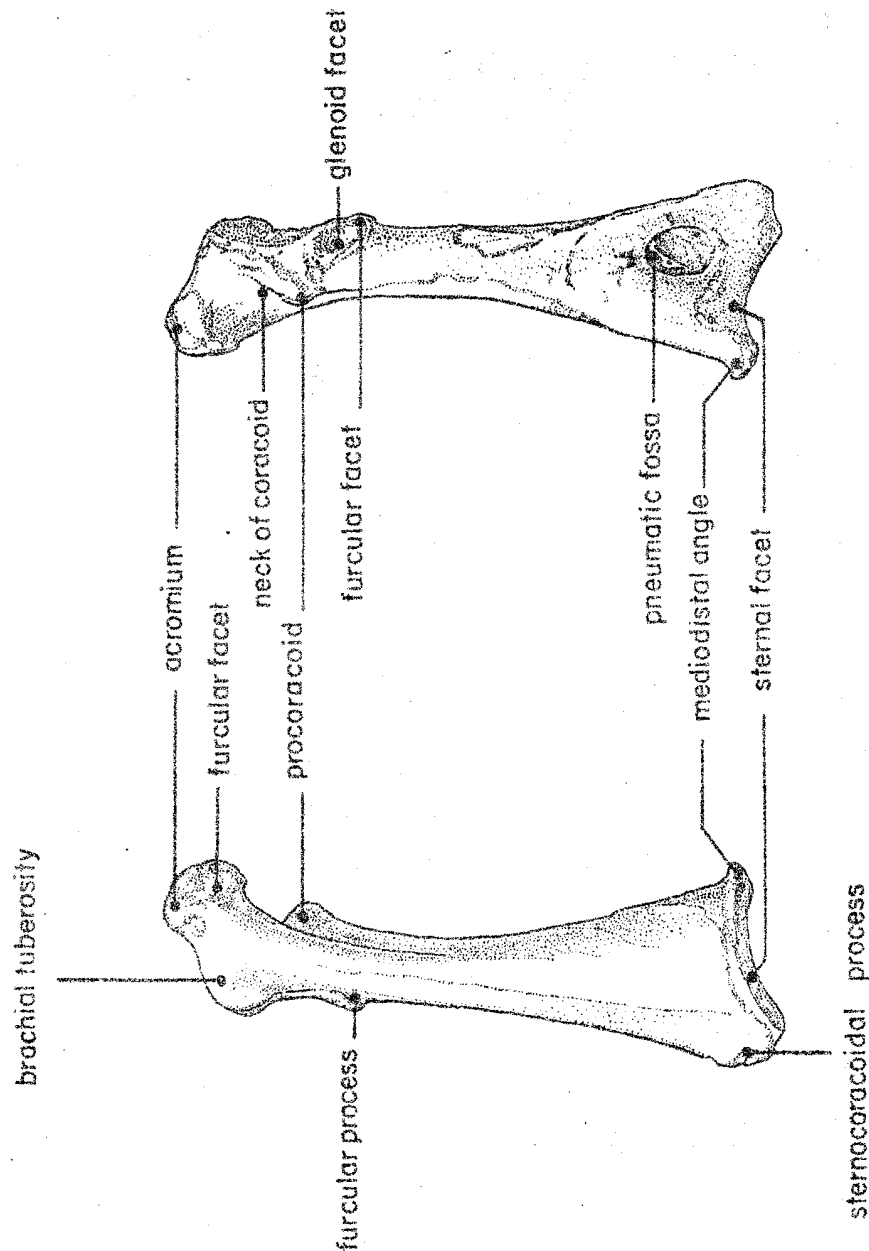


FIGURE 8b. Turkey coracoid; left, ventral view; right, dorsal view.

#### REFERENCES

Harvey, E.B., H.E. Kaiser, and L.E. Rosenberg

1968.- An atlas of the domestic turkey (*Meleagris gallapavo*): Myology and Osteology. U.S. Atomic Energy Comm., Wash 1123, p. 247.

Gilbert, B. Miles

1973.- Mammalian osteo-archaeology: North America. Missouri Archaeological Society, 15 Switzer Hall, University of Missouri, Columbia, Missouri 65201. 337 p.

Gregory, William K.

1959.- Fish skulls. reprint Eric Lundberg. Original publication, 1933. Trans. Amer. Philos. Soc., Vol. 23, pt. 2, p. 481.

#### NEWS NOTES

#### NEW SPECIMENS

The following unusual fossils have been donated recently to the Florida State Museum vertebrate paleontology collection:

An unusual upper jaw of a large carnivore, possibly a hyaenid, from the Santa Fe River, by Frank Garcia.

Several fine specimens including two kinds of beavers and four of carnivores from the Waccasassa River, by William Wallace.

A nearly complete shell, about four feet in diameter, from near Bradenton, by Craig Whitehead.

An extraordinarily large camel metapodial, presumably

of *Megatylopus*, from the Bone Valley District, by Larry Rotolo.

A large spectacular collection of Pliocene vertebrates from near Archer, by Ron and Pat Love.

A section of glyptodont carapace from the Peace River, by Wesley Stark.

And another series of fine specimens from the Waccasassa River, by Bob Armistead.

#### *BOOKS---IN PRINT*

The following papers or books are still in print and are recommended for your private or public library?

#### General

- Colbert, Edwin H. 1951. *The Dinosaur Book*. McGraw-Hill, New York.
- Colbert, Edwin H. 1962. *Dinosaurs: Their Discovery and Their World*. E.P. Dutton & Co., Inc., New York.
- Cornwall, I.W. 1956. *Bones for the Archaeologist*. MacMillan Co., New York.
- Epstein, Sam & Beryl. 1956. *Prehistoric Animals*. Franklin Watts, Inc., New York.
- Fenton, Carroll Lane and Mildred Adams Fenton. 1958. *The Fossil: A Record of Prehistoric Life*. Doubleday & Co., Inc., Garden City, New York.
- Hotton, Nicholas. 1963. *Dinosaurs. The World of Science*. Pyramid Publ., New York.
- Ranson, Jay Ellis. 1964. *Fossils in America*. Harper and Row, Publishers, Inc., 49 E. 33rd St., New York, NY 10016.

Romer, A.S. 1966. *Vertebrate Paleontology*. 3rd Edition. Univ. Chicago Press, Chicago and London.

Scott, William B. 1962. *A History of Land Mammals in the Western Hemisphere*. Hafner Publ., New York.

Stirton, R.A. 1959. *Time, Life and Man*. John Wiley & Sons, Inc., New York.

#### Florida

Olsen, Stanley J. 1965. *Vertebrate Fossil Localities in Florida*. State Board of Conservation, Division of Geology, Tallahassee, FL 32304.

Webb, S. David, et al. 1974. *Pleistocene Mammals of Florida*. Univ. Florida Press, 15 NW 15th St., Gainesville FL 32611. (Available to PJ subscribers at a 20% discount [that is, \$9.80] through the "Collectors Shop," Florida State Museum, Museum Road, Gainesville FL 32611.)

#### *BOOKS---COMING SOON*

The following books will become available in the next few months. They may be obtained by sending your request to the Managing Editor of the Bulletin, Florida State Museum, Museum Road, Gainesville, FL 32611.

Reinhart, Roy H. 1976. *Fossil Sirenians and Desmostylids from Florida and Elsewhere*. Bull. Florida State Mus., Biol. Sci.

Robertson, Jesse S., Jr. 1976. *Early Pleistocene Mammals from Halle XVA, Alachua County, Florida*. Bull. Florida State Mus., Biol. Sci.