



Physical Anthropology Section – 2009

H86 Anthropology for Breakfast: A Semi-Cautionary Tale

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After attending this presentation, attendees will have an understanding of the triage and decision making process that forensic anthropologists experience when confronted with an atypical item.

This presentation will impact the forensic community by demonstrating why forensic specialists should be consulted, no matter how mundane the case may appear.

Forensic anthropologists routinely are asked to identify non-human bone, and sometimes items that are not bone at all.

A graduate student at a southeastern university made, what to her was, a disturbing discovery in her breakfast cereal. A store brand box of raisin bran contained an item that at initial observation appeared to be a piece of bone with dried, attached flesh and connective tissue. For reasons never stated the student approached the biology department of the university and asked for an identification of the unknown object. (It is surmised that legal action would be taken should the item be identified as animal in origin.) The biologist she contacted is a microbiologist with no hard or soft tissue anatomical background. Despite this, he confirmed that the item was some form of animal anatomy. Fortunately, the biology professor suggested that the student get a second opinion from a forensic anthropologist.

The errant breakfast food item was brought to a forensic anthropologist at the university. After relaying the story of the discovery, the forensic anthropologist made a gross macroscopic examination of the item. The item was small (18.5 mm x 7.8 mm x 5.0 mm) and slightly L- shaped. The exterior texture was soft but not sticky. The visual appearance did strongly resemble a piece of dried flesh, not unlike jerky. The item, however, failed the first basic test, the "sniff test." It did not smell like flesh, if anything the smell was neutral. This led to the conclusion that the item was not likely animal in origin.

To confirm this initial conclusion, permission was obtained to examine the item in more depth. Only limited dissection was granted by the student, however. Using a Keyence digital microscope the item was examined thoroughly at various levels of magnification. Using a scalpel, a small area was dissected. All in all, the item had the appearance of dried or semi-dried flesh complete with dried blood. Digital x-rays were taken using a Faxitron unit to examine the internal structure. The radiographs indicated that the central core of the item had a different density than the outer surface. This inner core, however, was uniform in density and did not display the compact-cancellous bone contrast expected of bone. To confirm this, a rodent femur and a tree stem of similar size were also radiographed. The rodent femur had the radiographic signature of bone. The tree branch, like the unidentified item, displayed a uniform density with little distinction between the outer and inner surfaces.

With this information it was concluded that the item was a piece of vegetative matter. It is likely a piece of grape vine with crushed red raisins adhering to the outer surface. No doubt "quality control" at the cereal factory was not at peak performance. The student was assured that there was no biological hazard created by the presence of this item in the cereal.

Despite the knowledge of a forensic anthropologist on campus the biologist with no anatomical background made a determination as to the origin of this item. This is a dilemma forensic anthropologists continue to face; non-anthropologists (and in some cases anthropologists) stepping beyond their training and expertise. Fortunately for all involved, the correct origin of the item was ascertained, avoiding no doubt, later embarrassment. It is not known whether a new box of cereal was provided as a result of this discovery.

Triage, Identification, Non-Human