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Analysis of Six Vietnamese Trophy Skulls

REFERENCE: Sledzik, P. S. and Ousley, S., "Analysis of Six Vietnamese Trophy Skulls," *Journal of Forensic Sciences*, JFSCA, Vol. 36, No. 2, March 1991, pp. 520–530.

ABSTRACT: This report presents morphologic, metric, and contextual information on six documented trophy skull specimens confiscated from U.S. servicemen during the Vietnam War. Additional information on the history and occurrence of trophy skull collecting is provided. This sample, consisting mostly of young Vietnamese males, exhibits graffiti, painting, and other evidence of postmortem decorative modification. Identification of trophy skulls is important to medicolegal and anthropological researchers in distinguishing trophy remains from archaeological and forensic specimens.

KEYWORDS: physical anthropology, musculoskeletal system, human identification, trophy skull, Vietnam War

Recently, two case studies have reported on Japanese and Vietnamese trophy skulls, which appear from time to time in forensic science contexts. In a report by Bass [1], two crania were identified as Japanese military personnel killed in action during World War II by interviewing relatives or acquaintances of the collectors. In a case described by Taylor et al. [2], a skull was identified as Mongoloid through gross morphological analysis, comparison with the two Bass cases, and comparison with a related museum series. In both cases, the young age at death, postmortem damage to the styloid processes and eye orbits, and graffiti markings also led to identification of these remains as trophy specimens. For this report, the term "trophy" refers to a memento of achievement or victory and includes the opportunistic or passive collection of human remains, as well as the deliberate perimortem collection of skeletal material. This report is intended to aid the forensic science researcher in distinguishing trophy skulls from souvenir, archaeological, and forensic skulls.

The National Museum of Health and Medicine of the Armed Forces Institute of Pathology, Washington, DC, recently acquired a series of trophy specimens consisting of five complete human crania, one partial skull, five metacarpals, and one tooth. The chain of custody and other documentation accompanying these specimens establish their authenticity as trophy specimens. Nearly all were modified or decorated postmortem, usually with paint or graffiti. The skulls were confiscated from U.S. servicemen, who attempted to transport them to the United States from Vietnam during the early 1970s in violation of U.S. Army regulations [3].

The opinions or assertions contained herein are the private views of the authors and are not to be construed as official or as reflecting the views of the U.S. Department of Defense. Received for publication 2 April 1990; accepted for publication 24 April 1990.

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History and Occurrence of Trophy Remains

The practice of collecting skulls or other body parts for religious, cultural, or warfare reasons has been documented in many present and past cultures [4–6]. Heads collected by the New Zealand Maori tribes were prized by early 19th-century European collectors [7]. Of more recent vintage is a decorated cranium from Indonesia purchased in 1980 and curated in the collections of the Smithsonian Institution (SI No. 421295). Few cases of skeletal trophy specimens collected during the 20th century European wars have been documented.

Photographic evidence concerning the collection of human skulls or heads in various military situations exists. Among these situations are the Philippine Insurrection (1899–1901) and the Boxer Rebellion in China (1900) [8]. It has been reported that when the remains of Japanese soldiers from the Mariana Islands were repatriated in 1984, as many as 60% did not have crania.³

Several staff members of the Armed Forces Institute of Pathology (AFIP) and Smithsonian Institution have indicated involvement with or knowledge of the identification of trophy skulls from the Pacific theatre of World War II and Vietnam. Military forensic pathologists at the AFIP cited figures of one or two such cases per year. Two sources reported that ears were commonly taken as souvenirs of enemy dead because they were easily obtained and transported; they had no knowledge of the removal of heads from recently dead enemy soldiers.

Case Descriptions

For each case, a brief description of the cranial and dental morphology, postmortem modification, and additional documentary information is provided. (See Tables 1 and 2 for cranial measurements and indices; see Figs. 1 through 3 for frontal, lateral, and superior views of the specimens). A portion of this series was analyzed during the 1970s by AFIP forensic pathologists and the late J. Lawrence Angel of the Smithsonian Institution. Additional analyses were performed by the authors.

Case 1 (No. 1987.3017.02)

This cranium and the following cranium (1987.3017.03) were confiscated from U.S. servicemen at the Da Nang field office during the fall of 1971. The two American soldiers had contacted the customs inspectors at the Da Nang airfield to see what procedures they must follow to ship a skull to the United States. After being seized, the crania were transported to the AFIP for identification.

Anthropological analysis indicates that this specimen (1987.3017.02) probably is a 15 to 20-year-old Mongoloid male. No cause or method of death is apparent. All 14 maxillary teeth were lost postmortem and the 2 third molars never developed (agenesis). Morphologically, the skull is small and moderately robust, the face markedly prognathic, with mild parietal and frontal bossing.

Postmortem modification of this specimen consists largely of paint and crayon graffiti. The specimen obtained the name “Chu Lai Trip Skull” from graffiti visible above the orbits. Some of the markings include names of individuals, peace signs, a marijuana pipe, flowers, and a bearded man. Graffiti markings stating “TODAY’S PIGS ARE TOMORROW’S BACON,” “MY PRAYER DECK,” and “THIS IS WHAT HAPPENS TO YOU IF YOU DROP TOO MUCH, JUST A MATTER OF TIME!!,” are located on various parts of the skull. The base of the skull is painted with a shiny dark purple

³Wilcox. M., U.S. Navy, Bramerton Naval Hospital, Bramerton, WA, personal communication, 1989.

TABLE 1—Cranial measurements of six Vietnamese trophy skulls, in millimetres.

Measurement	Identification Number										Average
	1987.3017.02	1987.3017.03	1987.3017.05	1987.3017.08	1987.3017.09	1987.3017.23					
Basion-nasion	101.0	97.0	96.5	100.0	...	98.0					98.50
Basion-bregma	145.0	153.0	135.0	137.0	...	142.0					142.40
Maximum length	175.0	174.5	179.0	181.0	...	173.0					176.50
Maximum breadth	131.0	142.5	151.0	132.5	...	138.0					139.00
Upper facial	64.0	70.0	66.0	62.0	68.0	68.0					66.33
Basion-prosthion	98.0	99.0	99.0	91.0	...	89.0					95.20
Nasal height	47.0	63.0	46.5	50.0	50.0	52.0					51.42
Nasal breadth	26.0	24.5	25.0	25.0	26.0	25.0					25.25
Biorbital breadth	96.0	95.0	92.0	99.5	95.0	99.0					96.08
Interorbital breadth	29.5	26.0	24.0	27.0	23.0	28.0					26.25
Maximum orbital height	32.5	37.0	31.5	34.5	36.5	31.0					33.83
Maximum orbital breadth	37.0	39.0	34.5	40.0	37.5	39.0					37.83
Bizygomatic breadth	122.0	132.5	126.0	133.0	129.0	133.0					129.25
External palate length	51.5	57.0	54.0	50.0	55.0	46.0					52.25
External palate breadth	64.0	60.5	66.0	60.0	66.0	67.0					63.92
Foramen magnum length	37.0	32.5	29.0	36.0					33.92
Foramen magnum breadth	29.0	32.0	26.0	26.5					28.38
Mastoid length*	28.0	29.5	31.0	27.5	...	28.5					28.67

*Right plus left divided by 2.

TABLE 2.—Cranial indices of six Vietnamese trophy skulls.

Index	Identification Number						Average
	1987.3017.02	1987.3017.03	1987.3017.05	1987.3017.08	1987.3017.09	1987.3017.23	
Cranial	74.86	81.66	84.36	73.20	...	79.77	78.77
Length-height	82.86	87.68	75.42	75.69	...	82.08	80.75
Breadth-height	110.69	107.37	89.40	103.40	...	102.90	102.75
Upper facial	52.46	52.83	52.38	46.62	52.71	51.13	51.35
Nasal	55.32	38.89	53.76	50.00	52.00	48.08	49.67
Orbital	87.84	94.87	91.30	86.25	97.33	79.49	89.51
Maxilloalveolar	124.27	106.14	122.22	120.00	120.00	145.65	123.05

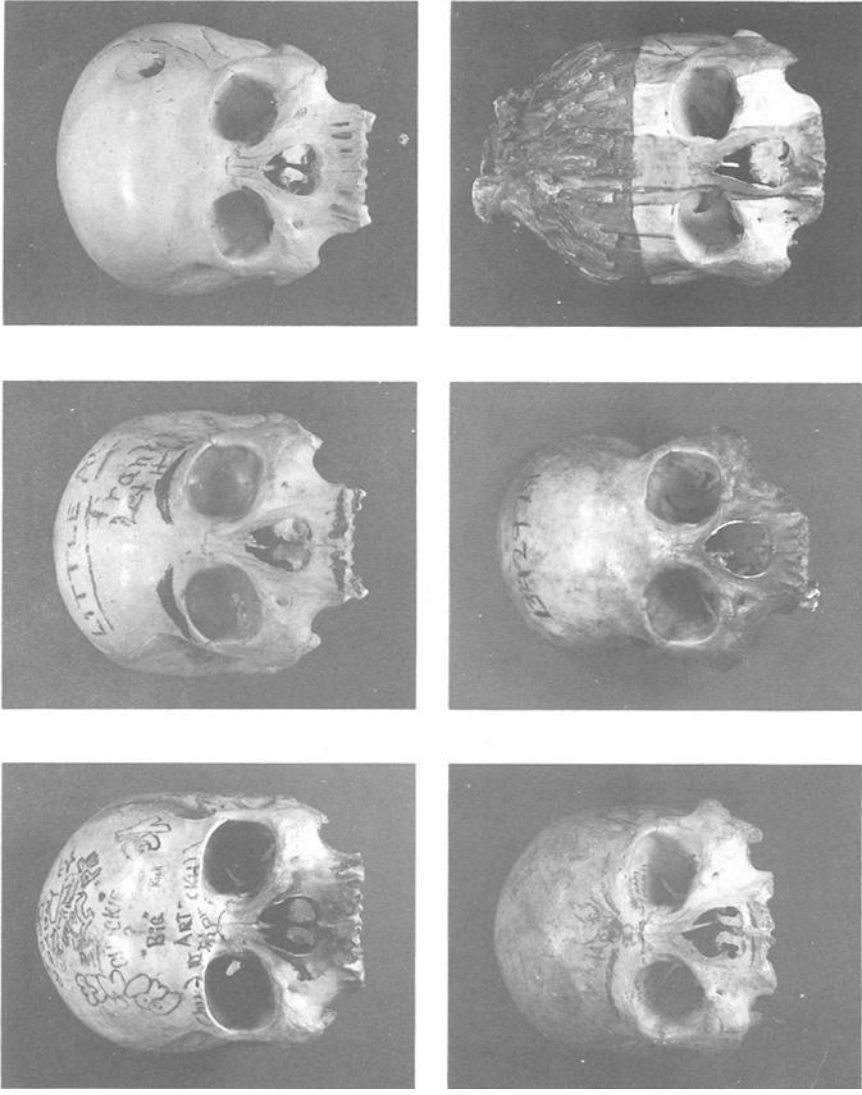


FIG. 1 Frontal view of the six trophy skull specimens: (top row) Nos. 1987.3017.02, 1987.3017.03, and 1987.3017.05; (bottom row) Nos. 1987.3017.08, 1987.3017.09, and 1987.3017.23.

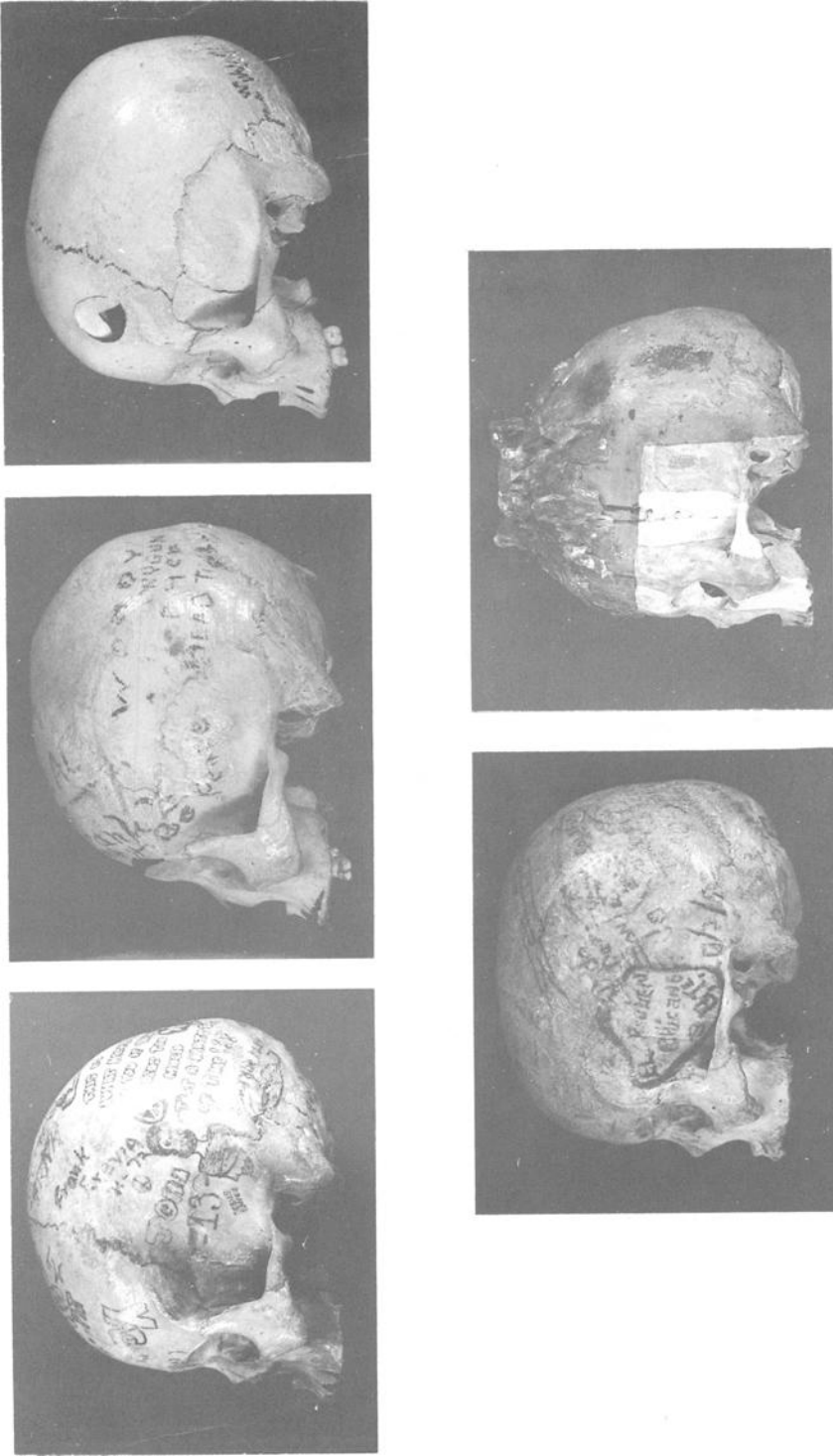


FIG. 2.—Lateral view of five trophy skull specimens (note: No. 1987.3017.09 is absent): (top row) Nos. 1987.3017.02, 1987.3017.03, and 1987.3017.05; (bottom row) Nos. 1987.3017.08 and 1987.3017.23.

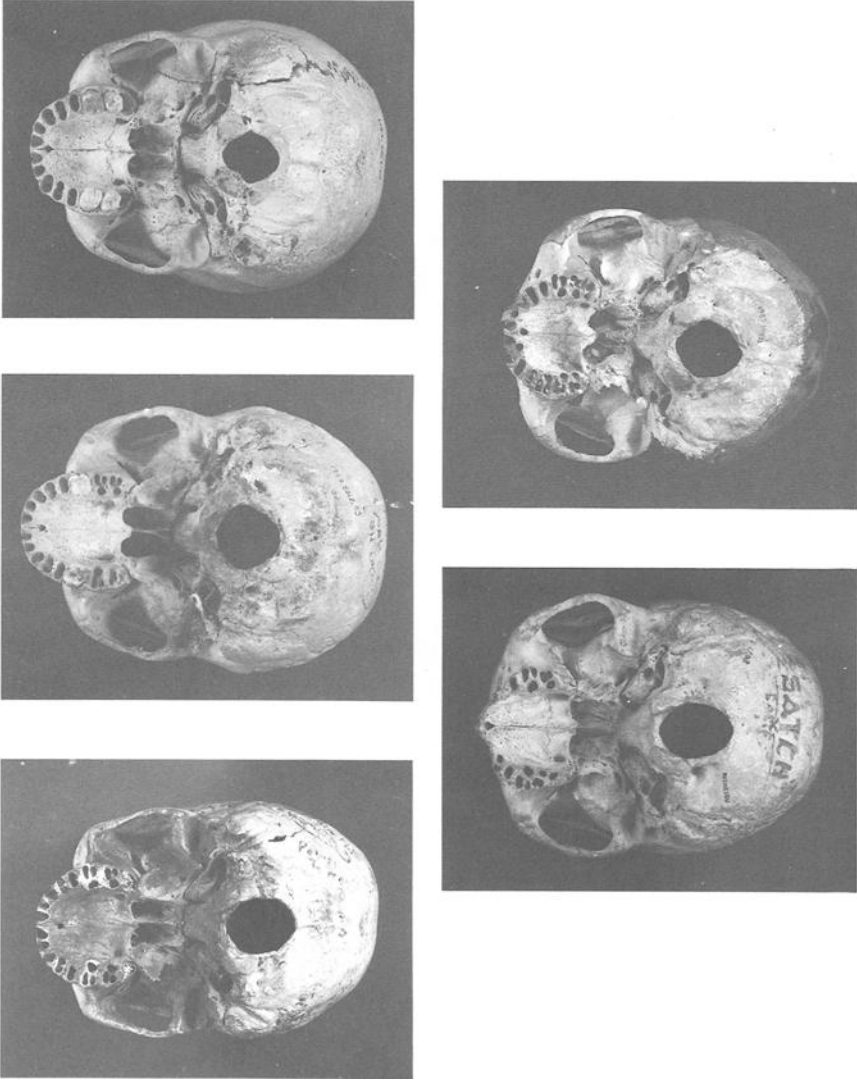


FIG. 3—Superior view of five trophy skull specimens (note: No. 1987.3017.09 is absent); (top row) Nos. 1987.3017.02, 1987.3017.03, and 1987.3017.05; (bottom row) Nos. 1987.3017.08 and 1987.3017.23.

substance; the eye orbits are colored with orange crayon; and the alveolar area, sutures, and temporal lines are colored with green, orange, blue, and yellow crayon. The skull displays a patina but no evidence of cut marks.

Case 2 (No. 1987.3017.03)

Examination of the cranial morphology and metrics indicates that the specimen is probably a 22 to 25-year-old male. There is a large bony spur at the attachment of the nuchal ligaments on the occipital bone. Both maxillary first molars are present, but the other 14 teeth were lost postmortem. Dental analysis of the first molars revealed minimal attrition and no caries or dental disease. Both orbits are filled with red candle wax, and black paint has been applied to create eyebrows and a moustache. The words "LITTLE AL" are written across the forehead, and other graffiti have been applied with crayon and felt to the cranial vault. Carbon discoloration from a flame is visible on the posterior region of the palate.

Case 3 (No. 1987.3017.05)

This very clean skull was confiscated from a U.S. serviceman who was apprehended for possession of heroin and marijuana during the winter of 1972. Inspection of the cranium reveals a 15 to 20-year-old Mongoloid male, although a female cannot be ruled out. A circular depressed fracture is present on the left side of the frontal bone, just above the temporal line posterior to the orbit. The fracture measures 25 mm in diameter. A wedge-shaped piece of bone, one third of the area of the fracture, has been lost (see Figs. 1 and 2). The size and shape of this fracture is consistent with the flash suppressor (attachment affixed to the barrel tip) of the M16-A1 rifle, based on measurements conducted by the authors. Marked frontal and parietal eminences and supramastoid ridges extending beyond the auditory canals are present. All the teeth except the right and left first and second molars were lost postmortem. The four teeth present exhibit slight to moderate calculus and slight attrition of the cusps. One small carious lesion is present on the occlusal surface of the left first molar. No postmortem markings, graffiti, or cut marks are evident on this specimen.

Case 4 (No. 1987.3017.08)

This cranium was found in a footlocker stored at Fort Campbell, Kentucky, in 1971 during a routine customs inspection of military belongings returning from Vietnam. Analysis indicates that this cranium is a 22 to 28-year-old Mongoloid male. Eight teeth were lost postmortem, and there was antemortem loss of the left third molar, left first premolar, right canine, and all four incisors.

A substantial amount of graffiti is present on this skull, including the following names and phrases: "JIMI DENVER COLORADO," "EL REUBEN CHICANO," "CASTRO," "THINGS GO BETTER WITH CASTRO COKE," and "STAY HIGH STAY ALIVE." The words "JIMI VIVAR, 70 71. QUE LOCO!" have been written in the orbits.

Case 5 (No. 1987.3017.09)

This specimen (partial skull) was seized by customs agents inspecting packages bound for the United States at the Da Nang field offices. Documentation indicates that an American soldier had packaged the skull and attempted to mail it to his wife. Examination of the anterior one third of the cranium reveals a 30 to 40-year-old male Mongoloid. All

teeth were lost postmortem except for the left second and third molars, which were lost antemortem, and the right second premolar and first molar, which are present.

The dark brown color of this specimen and the presence of soil on the internal surface of the frontal bone may be evidence of burial or ground contact. There is postmortem damage to the left orbit, and the lacrimal bones show evidence of carbon burning. No graffiti is evident although the palate and teeth have been painted black. Candle wax drippings and carbon deposits are present in the nasal areas.

Case 6 (No. 1987.3017.23)

Obtained from a U.S. serviceman at Pleiku during the summer of 1972, this cranium is an unusual example of postmortem cultural modification. Age criteria suggest that the individual was 25 to 35 years old at death. The presence of a robust nuchal crest, large mastoid processes, and large, rugged zygoma indicate the sex is male. All teeth were lost postmortem, and there is no evidence of trauma.

The postmortem cultural modification of this skull is elaborate. The calvaria and parts of the occipital and temporal bones are coated with a heavy layer of blue paint. The anterior portion of the skull is painted in vertical stripes with alternating Day-Glo reddish pink and yellow, simulating the American flag. Both orbits and the nasal cavity are painted Day-Glo orange. A large black candle, placed at the top of the skull, has been burned, and wax drippings cover nearly the entire calvaria. Traces of a multicolored five-pointed star can be seen beneath the wax. Endocranial examination revealed a drilled hole at the bregma, which may have been used for suspending the skull. The nasal conchae, the ethmoid, and parts of the orbits are missing.

Discussion

In general, the crania in this series are small and gracile in comparison with those of American whites, blacks, and Native Americans. The crania exhibit broad, short dental arcades, and large, rugged mastoid processes. In addition, the face and nasal bones are markedly flat in contrast to the prognathic alveolus (see Fig. 2). The malar (cheek) bones are markedly robust at the attachment of the masseter muscles, and they flare laterally and anteriorly. This pattern usually indicates extensive use of the teeth as tools to cut, tear, and process both foods and raw materials such as thread or cloth [9]. Many of the teeth from these specimens have been lost postmortem. The molars exhibit a moderate amount of attrition. No signs of nutritional deficiency are evident. Traumatic injury is exhibited in only one skull.

Several traits distinguish these Vietnamese crania from those observed on "Mongoloid" (that is, Asian and Native American) crania described by Krogman and Iscan [10]. In general, the skulls are smaller and less robust than Mongoloid skulls. The nasal morphology exhibits medium width and no nasal overgrowth. The dental arcades of these specimens are remarkably broad and ellipsoid in shape when compared with Mongoloid arcades. This arcade shape has been noted in Polynesians and Native Americans [11].

The authors suggest that researchers use caution when assessing the sex of Southeast Asian trophy crania. In this series, all the complete crania appear fairly small and gracile, in addition to having other morphological traits, such as frontal and parietal bossing, sharp upper eye orbits, small brow ridges, and high foreheads, which are indicative female traits in Caucasoid specimens [10]. The presence of female remains must be considered, given the nature of the war in Vietnam. However, the lack of appropriate comparative samples makes observations regarding the characteristics of Southeast Asian remains untestable.

Table 3 presents the various characteristics that may be used to identify Vietnamese

TABLE 3—*Vietnamese trophy skull characteristics.***Biological Characteristics**

Sex: Usually male, although female cannot be ruled out
 Age: Young to middle-aged, revealing the age of enemy soldiers and noncombatants
 Race: Oriental/Southeast Asian/Vietnamese

Preservation/Context

Patina from frequent handling
 Postmortem breakage or loss of fragile skull parts, e.g., styloid processes, orbits, base of cranium
 Anterior teeth missing
 Association with drugs or drug paraphernalia
 Overall "clean" appearance, suggesting above-ground decomposition

Postmortem Modification

Graffiti: Paint, marker, crayon
 Names/initials
 Markings in areas of soft tissue and bony prominences (e.g., moustache, eyebrows, orbits)
 Evidence of candle wax, e.g., candle wax drippings, wax in orbits, carbon burns on or inside the skull
 Possible attempt to repair broken pieces

trophy skulls. The biological cranial characteristics generally reflect those found in the Vietnamese military population, although the presence of noncombatants has been mentioned. These specimens also show characteristics of having been frequently mishandled. Postmortem modification may be present and, if so, is usually exhibited by the presence of graffiti or wax or both.

Conclusions

This report has provided morphologic, metric, and other related information on six documented Vietnamese trophy skulls. A brief discussion of some historical and cultural aspects related to the collection of human skeletal remains has also been provided. The conclusions reached in this report can aid forensic science researchers in differentiating trophy skulls from skulls recovered in archaeological, forensic science, and souvenir contexts.

Acknowledgments

The authors wish to thank the Department of Forensic Pathology, AFIP, for their information on the occurrence of trophy specimens. Robert Mann, and Jack Jacobs, Smithsonian Institution, Dr. Leslie Eisenberg, New York University, and Dr. Glenn Wagner, AFIP, are acknowledged for their editorial suggestions.

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