



## DENTAL ANTHROPOLOGY NEWSLETTER

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### PRESIDENTIAL ADDRESS

With increasing urgency over the past twenty years or so, representatives of American Indians - or Native Americans as many prefer to be called - have been objecting to the fact that quantities of Amerindian skeletons are preserved and housed in museum collections throughout Canada and the United States. There are two general aspects to such complaints, both of which have specific points that merit reflection and response in the form of discussion and ensuing action.

First, the most insistent general complaint is that these are the bones of their ancestors and should be returned immediately to their living relatives for reinterment with all proper religious observances. This charge strikes an immediate and powerful chord of public empathy. Many have asked, "What would be lost by acceding to their wishes?" Certainly there is every effort made to relocate burial grounds of Americans of European origin when airport runway extensions or other public works projects impinge upon them.

The often-lame-sounding temporizing by museum curators never speaks to the same level of basic emotion, and their attempts to appeal to the more intellectual realm of "science" often lead to the second aspect of the Amerindian complaint. This is the observation that the collections have existed for decades, extending in some cases to a century or more, and that surely this should have been enough time to accomplish all that can be done by scientific study. Another facet of this is the charge that such studies serve principally to advance the careers of the investigators, while society at large and the Amerindians in particular are no better off for them.

This puts those curators in a doubly difficult position, and I know this full well for I am one of them. In most cases, they gained their positions as a result of deeply held convictions concerning Amerindian rights in the first place. To be put in the position of opposing the demands of the very groups whose rights they are committed to uphold is more than faintly awkward. Then too, although many feel that their collections have not been studied to anywhere near the level that these deserve, their continuance in their positions - which amounts to their very subsistence, (i.e.) paycheck - depends on publishing something, however minor, on the collections in their care. In most

instances, it is pretty hard to show that these (pro forma) products are of any notable benefit to humankind in general or Amerindians in particular.

In defense of the beleaguered curators, one should note that it is a rare instance where the study of one particular group or collection can produce results that will be perceived as having general implications, but this in no way reduces the value of the individual collections. Conclusions which are of obvious scientific value and that contribute generally to human welfare only come as the result of comparative studies. In our business, this almost invariably means that collections from several different parts of the continent, and often from different time levels, have to be examined in systematic detail before a significant outcome can be achieved. Later I shall offer a particular example from the perspective of dental anthropology.

Before that, however, I want to consider briefly the matter of returning skeletal remains to relatives for reburial. The first problem that arises is in determining who these relatives are. The vast majority of the skeletons in museum collections cannot be tied by known or demonstrable kinship to anyone living, beyond the Biblical recognition that all human beings should be regarded as brothers, and that skeletons found in deposits that date to before European contact were probably Amerindian. For most of them, then, we have no idea what the appropriate funeral customs were. It might very well be the case that careful custody in museum collections might just be the most appropriate way of honoring them.

At this point, I want to tell about an experience I had almost exactly fifteen years ago. At the time, I was working my way through Australian museum collections measuring Australian aboriginal teeth. I was just one step ahead of a wave of protest by Australian Aboriginal groups inspired by the Amerindian example via the international news media - problems in America being savored as newsworthy throughout the rest of the world. Spokesmen for aboriginal groups were demanding the removal of aboriginal skeletons from museums for formal reburial. I had finished one collection in the national capital, Canberra, only days before a couple of aborigines held a member of Parliament hostage in his office at gunpoint to enforce their demands. One major collection was reburied before I could get there, but I managed to visit most of the others.

As I was finishing up in Perth (Western Australia), the last point in my survey, museum officials asked me if I would give a public talk on what I was doing. Of course I agreed. Among those who attended my lecture was the head of the Association of Aborigines for that part of Australia, an imposing man with the physique of a defensive end on an American football team. He was an unmixed aboriginal whose splendid supraorbital ridges gave him the appearance of wearing a perpetual scowl, but he proved to be a gentle, thoughtful, aware, and highly educated person, and I had a most enlightening talk with him after my lecture.

I expressed to him my puzzlement that, on the one hand, aborigines were demanding their ancestors' skeletons back for reburial, and, on the other, some had actually donated remains of

friends and relatives to particular museum collections. I had found a series of painted skulls donated to the curator of one museum by the artist who had done the painting, and among them was the skull of his own mother!!

My tolerant informant smiled down at my bemusement and replied that, if I understood the Australian aboriginal situation a little better, it would make perfectly good sense. The painting of the skulls, he noted, was part of the funeral ceremony, and, when it had been accomplished, all vestiges of humanity had been removed from the tangible remains. The essence of what had been human had returned to the ancestral water hole and, at that point, as he noted, you could "play football" with the skulls or do anything else you wished with them because they had ceased to have any human significance.

As for the pair who had held the MP at gunpoint, he observed that, traditionally, they would not have been regarded as real men. Neither had gone through the formalities of initiation, they were unable to speak their aboriginal language, and they were ignorant of the traditions of their ancestors. And then he said to me, "You must realize that this demand for the reburial of the dead is not based on aboriginal traditions at all. What it is, is a sort of general non-denominational reflection of what at bottom are Christian assumptions." He further explained that those people represented the largely mixed survivors of aborigines whose indigenous traditions had been completely lost and who had been relegated to the bottom rungs of the Anglo-Australian social hierarchy.

As we contemplate the present renewed demands for reburial of museum collections by Amerindians, we might just consider the parallels with the Australian situation. There can be no quarrel with the demand that the tangible remains of departed relatives deserve to be treated with dignity and honor. But is reburying individuals of unknown degrees of relationship any more honorable than their preservation in properly housed collections where their remains can retain the potential to instruct our own and untold future generations? The legacy that this represents should constitute no less an honor than consignment to a grave in the earth. And it is not that far distant from the customs of some Amerindian groups who carried bundles of the bones of their ancestors with them as they changed places of residence, just to ensure their continuity with previous generations.

For my final point, I want to return to a topic that I had promised to discuss earlier in this message - namely, a matter that has particular relevance to dental anthropology. The most immediate and practical benefit that can derive from our field is the perspective it can give to practicing dentists, those entrusted with maintaining our chewing equipment in good functional condition. I have been struck by the differences in perspective shown by Australian dentists when they consider what is meant by normal dental function. This is particularly true for the senior generation of Australian dental practitioners who accept a far greater degree of tooth wear and a far wider range

of tooth relationships as being perfectly functional and "normal" than is the case for most practicing dentists in Europe and America.

The reason for this clearly derives from the knowledge they have gained from their experience with Australian aboriginal jaws and teeth. Some of this was achieved from dealing with living aborigines, but much was based on the fact that Australian aboriginal skeletal remains were part of the teaching collections in Australian dental schools in the past. These displayed extremes of wear and varieties of occlusion in otherwise splendidly healthy dentitions that simply are not encountered in the jaws and teeth of Australians of European ancestry. Now, with the fact that possession of aboriginal skeletal remains has become a sensitive social and political issue, it is no longer the case that Australian training in dentistry usually includes extensive familiarity with aboriginal material. The younger Australian dentists, as a result, tend to view things from the narrower perspective of their American and European counterparts.

As in aboriginal Australians, the range of variation in occlusal form and wear visible in pre-contact Amerindian dentitions is something that the average dentist not only never encounters but often would find difficult to imagine. In fact, the one thing that is almost universally absent in pre-contact individuals is an unworn dentition with a "normal" Angle Class-I occlusion. Even when one does find a complete unworn adult dentition and the first molars are in Class-I relationship, the incisors never display the degree of overbite and overjet generally assumed to be "normal." This, of course, changed completely with acculturation. Modern urban Australians and Amerindians show exactly the same kinds of occlusion and wear as do their European - derived counterparts, demonstrating the fact that the differences between the prehistoric and the modern condition is not genetic but strictly a product of differences in life-style. The full-scale documentation of this, however, has only barely been begun.

In pre-contact America, there was a range of variation in subsistence techniques and life-styles that greatly exceeded what was present in pre-contact Australia. Concomitantly, there was also a range of variation in the manifestations of tooth wear and occlusion that also transcended the Australian examples. None of these observed conditions were genetically determined. Together they can give us a fascinating picture of the spectrum of what is perfectly normal for the human species.

This is intellectually satisfying to the scientist and layman alike, and I would argue that it has major significance for the education of those entrusted with the maintenance of our dental health, namely professional dentists. From the broad perspective of Dental Anthropology - both theoretical and applied - it would be a great loss to all humankind if Amerindian as well as other skeletons were to be removed from the collections where they are curated only to be consigned to the anonymity and oblivion of an earthly grave.

C. Loring Brace

## A NOTE FROM THE EDITOR

We should all be very proud of January's American Journal of Physical Anthropology because it represents the first special issue devoted entirely to dental anthropology. All of the contributors deserve a lot of credit. However, this issue would not have come about without the leadership and perseverance of DAA founder and first president Dr. M. Yasar Iscan. Further evidence of the growing interest this field can be seen in the quantity and quality of the papers listed in this "meeting" edition of the Dental Anthropology Newsletter.

For some time now, I have been thinking of ways to improve and expand the DAN. One approach I think would be very effective is to elect or appoint 6 to 12 dental anthropologists with a wide range of interests to an "Editorial Board." Each would have the responsibility of preparing a 1 - 3 page article for at least two issues per year on such broad topics as an overview of current research, a historical perspective, or brewing controversies, as well as a more in-depth treatment of specialties within hominid evolution, growth, dental paleopathology, or primate dentition. I'd also like to see a knowledgeable individual contributing biographical sketches of prominent members of the profession (past and present) for each issue. Ideally, the Board should include a contributor from each continent, or better yet, each country represented by our truly international membership. All of these activities (and hopefully more) would be coordinated by an "Editor-In-Chief" who would put each issue together for publication. Please think about these suggestions and try to formulate some of your own so that we can discuss their implementation at the DAA business meeting on April 6th.

In the last issue of DAN I asked for feedback on changing the name of this organization. I did receive some response - and everyone suggested a change (e.g., the comments of Dr. RMS Taylor in the "Comments and Correspondence" section). Personally, I would like to see a change to the "International Association of Dental Anthropologists" since our ever growing membership list reflects the participation of our colleagues from around the world.

I look forward to seeing you at the meeting in San Diego.

Susan R. Loth

## 1989 AAPA AND DAA ANNUAL MEETING

As I hope you know by now, the next meeting of the Dental Anthropological Association will take place at the Omni - San Diego Hotel. The annual DAA business meeting will be held from 5:00-6:00 PM April 6th following the DAA sponsored afternoon session. For those of you who are interested, the Paleopathology Association (April 4-5) and the Human Biology Council (April 5) meet immediately prior to the start of the AAPA meeting. This year's DAA meeting facilitator, Mark Skinner, will be able to provide any information you might need.

If a non-AAPA or foreign member wishes to attend the Dental Anthropology meetings, you may contact either of the Local Arrangements Chairs: Dr. Lois K. Lippold, Dept. of Anthropology, San Diego State University, San Diego, CA 92182, tel. (619) 265-5452 and Ms. Rose A. Tyson, San Diego Museum of Man, 1350 El Prado, San Diego, CA 92101, tel (619) 239 239-2001.

#### 1989 DENTAL ANTHROPOLOGY SESSIONS AND SYMPOSIA

As usual, the DAA meeting and symposia will be held in conjunction with the American Association of Physical Anthropologists (AAPA) meeting on April 5-8, 1989. The annual DAA business meeting will be held from 5:00-6:00 PM April 6th following the DAA sponsored afternoon session. As you can see from the schedule of dental anthropological symposia listed below, our very conscientious, hard-working program chair, Gloria y'Edynak, has managed to put together a very impressive program that will definitely be of interest to the DAA membership. On April 6, 1989 the DAA will sponsor a full day consisting of two symposia. The morning session presents 12 speakers on "Primate Tooth Formation" and the afternoon session offers 8 papers and a distinguished panel of discussants who will deal with "The Genetic and Environmental Components of Tooth size and Morphology. Gloria's efforts also led to the scheduling of a contributed session containing 15 papers in Dental Anthropology on the afternoon of Friday, April 12th.

#### 1989 DENTAL SYMPOSIA SESSION 1 [April 6th - AM]

##### SYMPOSIUM: PRIMATE TOOTH FORMATION (A Joint AAPA-Dental Anthropology Symposium)

Organizers D.R. Swindler, University of Washington and  
and Chairs: L.A. Winkler, University of Pittsburgh-Titusville.

Discussant: S.M. Garn, University of Michigan.

- 8:30 Experimental confirmation of enamel incremental periodicity in the pigtailed macaque. T.G. Bromage, University College, London, England.
- 8:45 Development of enamel thickness in hominoid primates. L.B. Martin, State University of New York, Stony Brook.
- 9:00 Histological estimates of crown formation times in great apes. A.D. Beynon, University of Newcastle upon Tyne, England and M.C. Dean, University College, London, England.
- 9:15 Aspects of dental development in the orangutan (*Pongo pygmies*). L.A. Winkler, University of Pittsburgh, and D.R. Swindler, University of Washington.
- 9:30 Perinatal dental development in the chimpanzee (*Pan troglodytes*). J.R. Siebert, COHMC-Seattle and

- D.R. Swindler, University of Washington.
- 9:45 Dental dilemma: Human, ape, intermediate? A. Mann, J. Monge, and M. Lampl, University of Pennsylvania.
- 10:15 Rate and pattern in hominoid dental maturation. S.W. Simpson, C.O. Lovejoy, and R.S. Meindl, Kent State University.
- 10:30 Dental development as a measure of life history in primates and in hominids. B.H. Smith, University of Michigan.
- 10:45 Dental development in South African australopithecines. G.C. Conroy and M.W. Vannier, Washington University Medical School.
- 11:00 Estimates of age at death using histological techniques in a modern human population of known age and death and some comparisons with great ape and fossil hominid developing dentitions. M.C. Dean, University College, London, England and A.D. Beynon, University of Newcastle upon Tyne, England.
- 11:15 Applicability of tooth formation data toward resolution of phylogenetic relationships. J.H. Schwartz, University of Pittsburgh.
- 11:30 DISCUSSION

#### SESSION 6

APRIL 6  
(afternoon)

#### SYMPOSIUM: GENETIC AND ENVIRONMENTAL COMPONENTS OF TOOTH SIZE AND MORPHOLOGY: IMPLICATIONS FOR POPULATION STUDIES (A Joint AAPA-Dental Anthropology Association Symposium)

- Organizers G. Y'Edynak, Medical Museum of the Armed Forces  
and Chairs: Institute of Pathology and  
M. Mahaney, University of Guelph, Canada.
- Discussants: C.L. Brace, S.M. Garn, University of Michigan and  
E.E. Hunt, Jr., Pennsylvania State University.
- 2:00 Sex chromosomes and human tooth crown structure.  
L. Alvesalo, University of Oulu, Finland.
- 2:15 Maxillar molar cusp volume and linear measurements  
in 45,X females. J.T. Mayhall, University of  
Toronto, Canada, L. Alvesalo, University of Oulu,  
Finland, and E. Kanazawa, Nihon University, Japan.
- 2:30 Tooth size apportionment: Factors of dimension,  
position and timing. E.F. Harris, University of  
Tennessee.
- 2:45 Dental evidence for disturbed developmental  
homeostasis in a North American genetic isolate?  
M.C. Mahaney, H.J. Stalker, and M. Maar, University  
of Guelph, Canada.
- 3:00 Genetic and environmental influences on tooth crown

- dimensions: A path analysis. C.R. Nichol, Arizona State University.
- 3:15 The effect of nutritional supplementation on permanent tooth development and morphology. A.H. Goodman, D.L. Martin, A. Perry, Hampshire College, K. Dobney, University of Bradford, England, C. Martinez, and A. Chavez, Instituto Nacional de la Nutricion, Mexico.
- 3:45 Tooth size reduction as a consequence of environmental stress. M.I. Siegel, M.P. Mooney, and A. Taylor, University of Pittsburgh.
- 4:00 Dental morphological variants and kinship among the prehistoric Caddo. J. Barnes and J.C. Rose, University of Arkansas.
- 4:15 PANEL DISCUSSION
- 5:00-6:00 DAA BUSINESS MEETING

SESSION 17

APRIL 7  
(afternoon)

CONTRIBUTED PAPERS: DENTAL ANTHROPOLOGY

- Chair: J.R. Lukacs, University of Oregon.
- 1:30 A comparison of dental defects in Christian and Meroitic populations at Geili, Central Sudan, M.L. Blakey, Howard University, A. Coppa, Universita "La Sapienza," Italy, S. Damadio, Smithsonian Institution, and R. Vargiu, Universita "La Sapienza," Italy.
- 1:45 Tooth enamel structure and its correlation on tooth wear and caries. A. Czarnetzki, University of Freiburg, West Germany and G. Frank, Oberstdorf, West Germany.
- 2:00 Enamel microdefect formation in deciduous teeth. M.E. Danforth, University of Southern Mississippi.
- 2:15 Dental caries and enamel hypoplasia in a rural population of the Ancient Greek colony Metaponto in Italy (6th-3rd c B.C.). R.J. Henneberg and M. Henneberg, University of Cape Town Medical School, South Africa.
- 2:30 Intraobserver technical error and reliability of mesiodistal tooth diameters. P.H. Buschang, Baylor College of Dentistry, A. Demirjian, and L. Cadotte, University of Montreal, Canada.
- 2:45 Digital processing of dental radiographs for alveolar-bone-loss evaluation. C.F. Hildebolt, M.W. Vannier and M.K. Shrout, Washington University.
- 3:00 The co-occurrence of dental pathologies and infectious lesions in a skeletal sample from Middle



- Tennessee. S.M.T. Myster, University of Tennessee.
- 3:15 Interproximal dental grooves in a Florida Archaic population. D.N. Dickel, Florida State University.
- 3:45 Activity induced dental pathologies in the Fletcher Site skeletal sample. J.C. Seidel, Michigan State University.
- 4:00 Caries prevalence in the prehistoric Chamorro of the Mariana Islands: The possible anticariogenic role of betel-chewing. D.B. Hanson, Forsyth Dental Center and M. Pietrusewski, University of Hawaii, Honolulu.
- 4:15 Dental pathology and tooth size at prehistoric Harappa, Pakistan. J.R. Lukacs, University of Oregon.
- 4:30 Dental affinity of late Pleistocene Nubians and historic West Africans. J.D. Irish and C.G. Turner, II, Arizona State University.
- 4:45 Comparison of dental morphology of New World, northeast Siberia, and Soviet Central Asia peoples. A.M. Haeussler and C.G. Turner, II, Arizona State University.
- 5:00 The major features of Sundadonty and Sinodonty, including suggestions about east Asian microevolution, population history, and late Pleistocene relationships with Australian Aboriginals. C.G. Turner, II, Arizona State University.
- 5:15 The "increasing population densities effect": A new, but once again improbable, mechanism of human dental reduction. J.M. Calcagno, Loyola University of Chicago and K.R. Gibson, University of Texas Health Center.

In addition, several dental anthropology papers will be presented in the Paleopathology session on Saturday morning, April 8th. Others will appear in the Poster Sessions on skeletal biology, primate biology, and craniofacial growth. Furthermore, dental topics will be an integral part of the Paleontology sessions, which Mike Little indicates will dominate the AAPA program this year.

We all extend our thanks to Gloria y'Edynak for this exceptional program!

#### COMMENTS AND CORRESPONDENCE

The extraordinary Dr. Richard M.S. Taylor (University of Auckland, New Zealand) is still actively publishing at age 85! He also continues to receive many well deserved honors and awards. Therefore, I was particularly grateful that Dr. Taylor took the time to share his thoughts on the name change issue. He writes "To me the official "Dental Anthropological Association" has a connotation of dentists interested in anthropology, and that applies to such persons as myself, but many others are not dentists. "Dental Anthropology Association" sounds like people who are interested in Dental Anthropology and that sounds

comprehensive, including any scientist interested in Dental Anthropology. Therefore, if a vote were taken, I would vote for this change."

The 100th Congress left a major health legacy, with many bills passed relating to dentistry. The Health and Human Services appropriation includes \$131 million for the National Institute of Dental Research for the current 1989 fiscal year, a 3.5 percent increase over FY 1988. This includes \$3.5 million for AIDS research and almost \$2 million for the Dentist Scientist Program to encourage research careers.

Karl-Johan Soderholm at UCF has been compiling an international list of individuals with access to BITNET who are interested in discussing topics related to dentistry. For example, he would like to know what the present opinion about the mercury issue in your area now. He encourages your participation either through DENTALMA AT UCF1VM or to him personally at SODERHOL AT UFEESC.

#### DAA BUSINESS

At the upcoming DAA business meeting in San Diego we will be electing a new member to the Executive Board and hopefully a Board of Editors. So please think about who you might like to see in these positions. Also, we will be addressing the question of officially changing the name of the organization.

We encourage the membership to contribute not only to DAN, but also to contact the appropriate executive Board member with any suggestions or questions you might have. They can be reached as follows:

President - C. Loring Brace, Ph.D.  
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Tel. (313) 764-0485  
TELENET Node: C.\_LORING\_BRACE@UM.CC.UMICH.EDU  
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University of Michigan, Ann Arbor, MI 48109  
Tel. (313) 764-0485

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#### 1988 MEMBERSHIP DUES

The 1988 dues should be submitted now if you haven't already done so, especially since it is already time to submit your 1989 renewal. Rates will remain at \$10.00 for regular members and \$5.00 for students. Also, we would like to continue our policy of sponsoring foreign members. Our Secretary/Treasurer, Holly Smith, suggests that even a partial contribution will be appreciated since even \$5 or \$10 is a great hardship in some parts of the world. We salute those of you have generously given financial support in the past and encourage every member who can to do so. There is a sponsorship section on the membership form listed below, please fill it out and return it with your own dues. Finally, since a number of you are still sending dues to me at Florida Atlantic University, I'd like to remind you that they should go to Holly Smith at the address listed on the renewal form.

#### DENTAL ANTHROPOLOGICAL ASSOCIATION MEMBERSHIP APPLICATION OR 1989 RENEWAL

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_  
\_\_\_\_\_

SPECIALTY: \_\_\_\_\_

TELEPHONE: \_\_\_\_\_ BITNET NODE: \_\_\_\_\_

Membership includes a year's subscription to the Dental Anthropology Newsletter (3 issues). Please send a check for \$10.00 for regular members or \$5.00 for students payable to "Dental Anthropological Association" to B. Holly Smith, Ph.D. Secretary/Treasurer, Museum of Anthropology, University of Michigan, Ann Arbor, MI 48109. If you wish to sponsor one or more foreign members (of either your choosing or ours) please specify below:

SPONSORSHIP: Name \_\_\_\_\_

Regular \_\_\_\_\_ Student \_\_\_\_\_