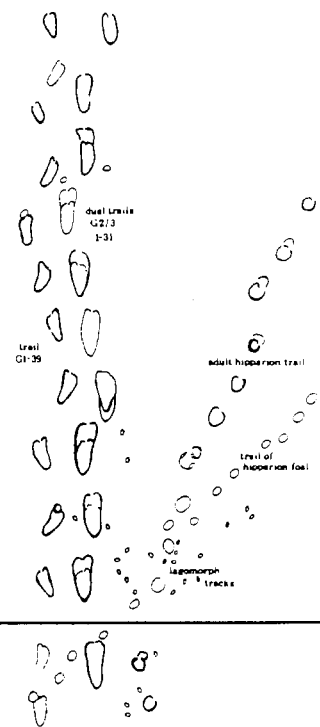
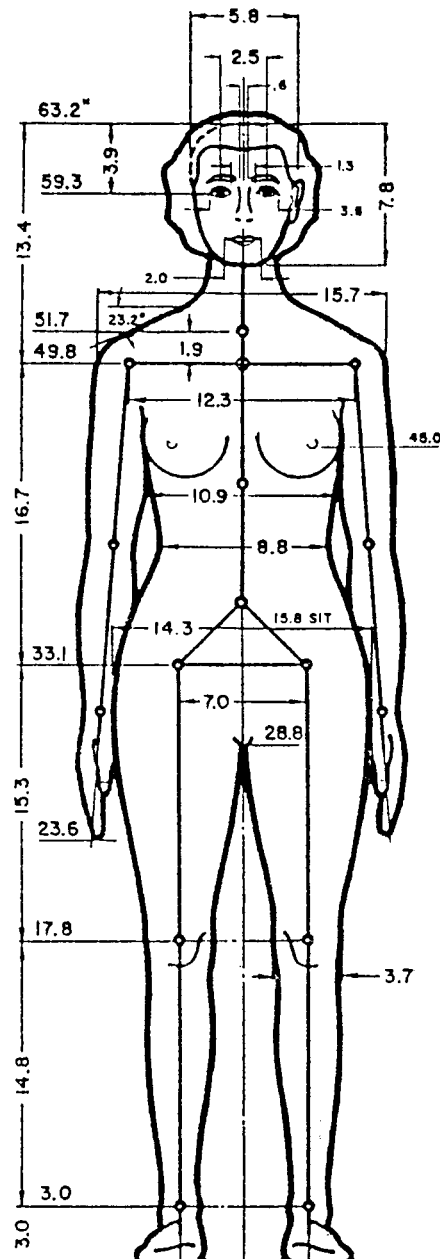


A detailed diagram of a DNA double helix. Two thick, light-colored ribbons represent the sugar-phosphate backbones, twisting around each other. A central vertical line represents the axis of the helix. Horizontal bars of varying lengths connect the two ribbons, representing the nitrogenous base pairs. Some bases are attached to the ribbons with small black dots, while others are attached with small white circles. Arrows on the ribbons indicate the direction of the helical twist.



ERRATA

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PRESIDENT'S MESSAGE

We in Edmonton now face the daunting task of a "follow-up" to the very successful meeting last October in Hamilton! Accompanying this Newsletter is a CALL for PAPERS for our 20th Annual Meeting, to be held in Edmonton November 5 - 8, 1992. We have aimed for convenience and reasonable prices and know you will enjoy historic Old Strathcona even if you don't get to West Edmonton Mall (which is, by the way, only a 10-15 minute cab ride from the hotel).

Please check the announcements carefully - we have changed the registration procedures in order to get the scientific program established early. Our banquet address will be given by Dr. Larry Wang, Dept. of Zoology at the U of A, who is a wonderfully entertaining speaker. His talk will be on his research in cold adaptation and the development of the "Canadian Cold Buster" candy bar as an aid to combatting hypothermia. PLEASE PLAN TO ATTEND!

I have spent a lot of time this term on the "reburial" issue. The Museums and First Peoples Task Force presented recommendations in February and we should expect some revisions given the current debates on Native self-government and the constitution. Rumour has it that federal archaeological legislation, which will govern aboriginal human and material remains, is being revised (legislation proposed in 1990 was summarily dismissed by Native peoples) and may be presented by the end of the year. As curator of the U of A's osteology collections I have been kept busy trying to draft a report and policy statement on repatriation, and since CAPA has never had its own official policy on this issue I plan to circulate a version of this document for your consideration prior to the next business meeting. Feel free to send me comments or suggestions in the meantime.

Best wishes for a happy and productive year.

Nancy Lovell.

And some personal research notes from our president:

I depart for Egypt on May 1st, accompanied by Graduate students Marnie Bartell, Ping Lai, and Tracy Prowse. This is the second season of my SSHRC-funded research on health and biological relationships in ancient Egypt, which combines excavations at the Delta site of Mendes (Tel el Rob'a) with data collection at a number of institutions. Last summer Tracy and Carolyn Prins assisted me at Cambridge University, and following our field season this summer Marnie and I will be examining Nubian skeletal material at the University of Copenhagen.

Nancy Lovell

A MESSAGE FROM THE EDITOR

It seems that this year, members were busier and more heavily overworked than ever - my request for news was not as readily heeded as the one last year. Unfortunately, there is little I can do to improve the situation except to ask my colleagues to, please, send me their news, ideas and thoughts so that I can communicate them to all of us. I do believe that the year was very successful with an outstanding meeting in Hamilton and the preceding symposium on Physical Anthropology in the (former) countries of the Eastern European Block. Both these meetings proved that we can be proud of our organization and of our members who so actively promote our common goal - the study of Human Biology, past and present.

It is my pleasure to thank all those who contributed to this newsletter, but I would also like to arouse many others to send me material to include in this, our only, commonly shared means of communication. Again, please, do never hesitate to report your achievements, concerns and ideas to all of us.

Hermann Helmuth

ANNOUNCEMENTS

Please be reminded that our next meeting will be in Edmonton (see attached). Fortunately, our new president equals the old one and is active and enjoys the support of others at the Department.

I should also remind many of you who have not yet paid for this year that our fees are as before:

full members: \$ 35.--
institutional members: \$ 25.--
student members: \$ 15.--

Maybe, this is the place to advertise some books which need to be advertised due to the fact that traditionally we here in North America do not learn what is published in other countries unless the books appear in the North American press:

Anyhow, here they are:

Janusz Piontek and Andrzej Wiercinski (eds.):
The Peculiarity of Man. pp. 184, Adam Mickiewicz University
Press 1991. US\$ 19.--. Account at Wielkopolski Bank
Kredytowy, VI O Poznan, No. 356224-4721.

The other publication is a journal:

Variability and Evolution. (ISSN 0860-7907), edited by Jerzy Szweykowski, and published by the Faculty of Biology, Adam Mickiewicz University, Fredry 10, 61-701 Poznan, Poland.

20th Annual CAPA Meetings

November 5 - 8, 1992
Edmonton, Alberta

FIRST AND ONLY

CALL FOR PAPERS

The 20th Annual CAPA meetings will be held at the Renford Inn on Whyte in Edmonton, November 5-8th, 1992. The Renford Inn on Whyte is a small hotel that offers comfortable, modern, and reasonably priced accommodation (about \$50 per night for a double room). It is located in the historic Old Strathcona district of Edmonton, with a variety of shops and restaurants located nearby. Enclosed with this mailing is a hotel brochure and reservation form - please make reservations directly with the hotel. Billetting for students may be possible; please write to the Conference Coordinator.

Registration for the meeting is \$30 for regular CAPA members, \$20 for student CAPA members, \$35 for nonmembers, and \$25 for nonmember students. A registration form is enclosed.

Please note: We have changed the registration procedures in order to establish the scientific program early: conference registration and paper/poster titles are due by July 1st. Only if you register your paper title will we send you an abstract form, for submission by September 1st.

Plans are underway for a welcoming reception and a student hospitality suite. Members should also plan to attend the annual business meeting on Thursday, November 5th.

The banquet will be held at the hotel on Friday, November 6th. The keynote speaker is Dr. Larry Wang of the Department of Zoology at the University of Alberta, who will speak on his research on cold adaptation and his development of the "Canadian Cold Buster" candy bar as a aid to combatting hypothermia. To assist our planning, please register in advance for the banquet.

CAPA offers prizes as well as limited travel support for students presenting papers or posters at the annual meeting. Please see the enclosed announcement for details.

All correspondence should be directed to:

CAPA Conference Coordinator
Department of Anthropology
13-15 Tory Building
University of Alberta
Edmonton, Alta.
T6G 2H4
phone: (403) 492-3879
fax: (403) 492-5273

In the introduction to Vol. I, No. 1, the journal is described as covering all aspects of variability which might be interesting from an evolutionary point of view in all organisms, including Man. Also, papers from the entire field of modern biology with interesting evolutionary aspects will be accepted; interdisciplinary approach will be favoured.

To these announcements I may add:

Anthropologie. Handbuch der vergleichenden Biologie des Menschen, Band I, Teil 1: Wesen und Methoden der Anthropologie. Teil 1: Wissenschaftstheorie, Geschichte, Morphologische Methoden. Hrsg. R. Knussmann. G. Fischer Verlag, Stuttgart, New York, 1988. ISBN 3-437-30505-0.

This book which is intended to replace the old R. Martin "Lehrbuch der Anthropologie" has several very useful chapters in Anthropometry (Osteometry, Somatometry), Sex and Age determination, Stature estimation, photogrammetry, morphognosis, paleopathology, dermatoglyphics, conservation and preparation, casting methods, soft tissue reconstruction, photography, microscopy (light and electronic) and more.

And more recently:

Prähistorische Anthropologie. Leitfaden der Feld- und Labormethoden. B. Herrmann, G. Grupe, S. Hummel, H. Piepenbrink, H. Schutkowski, 446 S. DM 78.-- Springer-Verlag Berlin, New York, 1990. ISBN 3-540-52541-6.

This book is uniquely suited for the osteologist, it covers all aspects of modern archaeological (as we here would call it) osteology including chemical and even DNA analysis, not to speak of age, sex, metric and non-metric traits, preparation and conservation techniques, etc. One aspects which is not covered due to the Germans being fortunate in not having to deal with this problem, is ethics of excavation and the repatriation issue. Otherwise, this is, as far as I know, the best book short of the second edition of Krogman's "The Human Skeleton in Forensic Medicine", but in several chapters, more up-to-date. And it is cheaper!

20ième congrès annuel de l'AAPC
 du 5 au 8 novembre 1992
 à Edmonton, Alberta

Premier et dernier appel pour les communications

Le 20ième congrès annuel de l'Association des Anthropologues Physiques du Canada (AAPC) se tiendra au *Renford Inn on Whyte* à Edmonton, en Alberta, du 5 au 8 novembre 1992. Le *Renford Inn on Whyte* est un petit hôtel qui offre des chambres confortables et modernes, à prix raisonnable (à peu près \$50 par nuit pour une chambre double). Il est situé dans le quartier historique du "Old Strathcona" d'Edmonton qui contient une variété de petits magasins et de restaurants. Vous trouverez inclus dans cette enveloppe, une brochure sur l'hôtel et un formulaire d'application pour les réservations. Veuillez faire vos réservations directement avec l'hôtel. D'autres arrangements pour étudiants seront possibles, veuillez écrire à la coordinatrice de la conférence pour plus d'information.

Les frais d'inscriptions sont de \$30 pour les membres réguliers de l'AAPC, \$20 pour les membres étudiants de l'AAPC, \$35 pour non membres et \$25 pour non membres étudiants. Un formulaire d'inscription est inclus dans cette enveloppe.

NOTA BENE: Nous avons changé les procédures d'inscription afin d'établir le programme scientifique plus tôt. Les inscriptions et les titres de communications orales et par affichage doivent être soumis avant le **1er juillet 1992**. Si vous soumettez votre titre à temps, nous vous enverrons une application pour les résumés qui devra être renvoyée avant le **1er septembre 1992**.

Nous préparons présentement une réception d'accueil et une chambre d'accueil pour les étudiants pour la durée du congrès. Les membres sont aussi priés de participer à l'assemblée générale annuelle qui aura lieu le jeudi 5 novembre 1992.

Le banquet se tiendra à l'hôtel le vendredi, 6 novembre 1992. Le conférencier invité sera Monsieur Larry Wang du département de zoologie de l'Université de l'Alberta, qui parlera de ses recherches sur l'adaptation au froid et sur le "Canadian Cold Buster", une friandise qui aide à combattre l'hypothermie. Afin de nous faciliter la planification du banquet, veuillez vous y inscrire à l'avance.

L'AAPC offre des prix ainsi qu'une aide financière limitée pour aider les étudiants qui présentent des communications orales ou par affichage durant le congrès annuel. Veuillez lire la documentation ci-incluse pour plus de détails.

Toute correspondance devrait être adressée directement à:

La coordinatrice du Congrès de l'AAPC
 Département d'anthropologie
 13-15 Tory Building
 Université de l'Alberta
 Edmonton (Alberta) T6G 2H4
 Téléphone: (403) 492-2233
 Télécopieur: (403) 492-5273

FORMULAIRE D'INSCRIPTION

20ième congrès annuel de l'AAPC
 du 5 au 8 novembre 1992
 à Edmonton, Alberta

Nom: _____

Affiliation: _____

Adresse: _____

Les frais d'inscriptions:

Membres réguliers de l'AAPC: \$30 _____

Membres étudiants de l'AAPC: \$20 _____

Non membres: \$35 _____

Non membres étudiants: \$25 _____

Banquet: Vendredi, le 6 novembre 1992

Banquet: \$30 _____

Total ci-inclus: _____

Si vous présentez une communication orale ou par affichage, vous devez soumettre ce formulaire, le formulaire du titre de votre communication et votre chèque avant le **1er juillet 1992** à:

La coordinatrice du Congrès de l'AAPC
 Département d'anthropologie
 13-15 Tory Building
 Université de l'Alberta
 Edmonton (Alberta) T6G 2H4

FORMULAIRE DES TITRES DES COMMUNICATIONS

Ce formulaire devra être soumis avec le formulaire d'inscription d'un des auteurs avant le **1er juillet 1992**, afin de préparer le programme scientifique.

Les formulaires des résumés ne seront envoyés qu'aux auteurs s'étant inscrits et les résumés devront être renvoyés avant le 1er septembre 1992.

1. Nom de(s) auteur(s) et affiliation:

Pour les communications avec co-auteurs, au moins un des auteurs doit s'inscrire au congrès. (Les co-auteurs qui ne participeront pas au congrès ne doivent pas s'inscrire.)

2. Titre de la communication orale ou par affichage:

3. S'agit-il d'une communication d'un étudiant ?

_____oui _____non

Notez bien: 1) Afin d'être éligible au concours des communications des étudiants, l'étudiant doit être le seul auteur de la communication.

2) Les étudiants qui présenteront des communications orales ou par affichage seront considérés automatiquement pour une aide financière couvrant les frais du voyage.

4. Choix de la présentation de la communication:

_____orale _____par affichage _____sans préférence

5. Suggestions pour les titres des sessions (par exemple: évolution des primates, paléopathologie etc.):

CAPA/AAPC Student Prizes

Davidson-Black Award (\$100.00) for Posters
Oschinsky-McKern Award (\$100.00) for Presented Papers

Guidelines

1. A student must be the sole author to be considered for the student prize, and only one paper by any one student can be considered.
2. Any student is eligible. Recently completed MAs and PhDs presenting their thesis research are eligible.
3. The judging criteria are 1) content, and 2) presentation (including the satisfactory handling of questions). Initiative and originality may also be considered.
4. Student papers must be so indicated on the Paper/Poster Title Registration Form, which is due **July 1st**. Late notification of student status will not be accepted, since the organization of the scientific program will be based on information provided on the title registration form.
5. The judging committee will be formed by the President, and will consist of three judges plus the President as ex-officio. The committee reserves the right not to award a prize.

CAPA/AAPC Student Travel Support

We have limited funds to support student travel to the annual meeting in 1992. Only students who are competing in the student paper/poster competitions are eligible, and they will be automatically considered for travel support provided that they have registered and submitted the Paper/Poster Title form, indicating their student status, by the **July 1st** due date.

The amount awarded will be a function of the distance travelled and the number of eligible students, to a maximum of \$100.00 per student.

The recipients and amounts will be determined by an ad hoc committee, and cheques will be distributed at the annual meeting.

Prix étudiants de l'AAPC
Le prix Davidson-Black (\$100) pour affiches
Le prix Oschinsky-McKern (\$100) pour exposés

Directives

1. L'étudiant doit être l'unique auteur de son exposé et un seul exposé par étudiant sera accepté.
2. Tout étudiant est admissible. Les personnes ayant récemment complété leur maîtrise ou leur doctorat et présentant les résultats de leur thèse sont admissibles.
3. Les critères de sélection sont: 1) le contenu et 2) la présentation (y compris la façon de répondre aux questions). L'initiative et l'originalité pourront également être évaluées.
4. Les communications des étudiants doivent être identifiées comme telles dans le formulaire d'inscription qui devra être envoyé avant le 1er juillet. Une notification en retard à propos du statut étudiant ne sera pas acceptée puisque la préparation du programme scientifique sera basée sur l'information incluse avec le titre.
5. Le président nommera un comité décisionnel qui comprendra trois juges ainsi que le président de par ses fonctions. Le comité se réserve le droit de ne pas décerner de prix.

Aide financière pour étudiant

L'AAPC détient un fonds limité pour venir en aide aux étudiants devant voyager pour se rendre au congrès annuel de 1992. Les étudiants qui participent à la compétition des communications orales et par affichage seront les seuls éligibles. Ils seront automatiquement considérés pour une aide financière s'ils se sont inscrits et s'ils ont soumis le formulaire des titres des communications en indiquant leur statut étudiant avant le 1er juillet .

Le montant alloué dépendra de la distance du voyage et du nombre d'étudiants qui auront fait une requête. Le maximum remis sera \$100 par étudiant. Les candidats et les montants seront déterminés par un comité spécial après la révision de chaque demande. Les chèques seront remis aux candidats lors du congrès annuel.

Re: C.A.P.A. Newsletter

January 1992

Dr. Hermann Helmuth,
Department of Anthropology,
Trent University,
Peterborough, Ontario,
Canada K9J 7B8

Dear Dr. Helmuth,

I am including a few details of the work going on here in the Calvin Wells Laboratory, Department of Archaeological Sciences at the University of Bradford, Bradford, West Yorkshire, England (U.K.). I am here as a Leverhulme Post-Doctoral Fellow for the academic year 1991-1992 after having successfully defended my dissertation, "Biomechanics of the Hominine Cranium with Special Reference to Homo erectus and the Archaic Homo sapiens" at Simon Fraser University in June of 1991. My present work involves the identification of occupational stress markers in human remains.

In August 1991 Drs. Charlotte Roberts and Christopher Knüsel of the Calvin Wells Laboratory, Department of Archaeological Sciences, University of Bradford, attended the "Human Anatomy for Anthropologists" course held at The United Medical and Dental Schools, Guy's Campus (University of London), London Bridge, London, SE1 9RT9, which was organised and taught by Drs. Sue MacLaughlin and Louise Scheuer. This very unique course offered the opportunity to see actual prosecutions of human musculature and drew participants from several countries, including the Netherlands, U.S.A., Canada, Belgium, Portugal, Spain, as well as from many parts of Britain. This course which ran for two weeks from Monday to Friday was centred around a mixed lecture and practical format with a morning and afternoon lecture followed by sessions in the dissecting room of the Anatomy Department at Guy's Hospital. Participants found this format quite conducive to understanding the functional anatomy of the human body, an understanding of fundamental importance to those working in physical anthropology, palaeopathology, human biology, sports medicine, or forensic anthropology. These participants would recommend the course

for anyone with a professional interest in any of these related fields. An added attraction of the course is the forum it provides for meeting others with similar interests and exchanging ideas, which was facilitated by the organisers, culminating in a buffet banquet held at St. Thomas' Hospital on the last evening, save one, of the course.

I'll take this opportunity to write a few words about the opportunities here in the Department of Archaeological Sciences at the University of Bradford. The Department is now headed by Professor Mark Pollard and includes roughly 20 permanent faculty and staff with an equal number of post-graduate research and course students (M.A.'s, M.Phil.'s, MSc.'s, and Ph.D.'s) and post-doctoral research fellows. It specialises in the application of the physical sciences to archaeology.

The Calvin Wells Laboratory, headed by Dr. Charlotte Roberts, Lecturer in Palaeopathology, and located within the Department of Archaeological Sciences, has recently entered into a consortium agreement with the Judson Chesterman Laboratory in the Department of Archaeology and Prehistory at the nearby University of Sheffield. The two laboratories offer an MSc. in osteology, palaeopathology, and funerary archaeology. The one-year degree includes taught components in physical anthropology, human osteology, palaeopathology, and funerary archaeology (mortuary behaviour), as well as in analytical techniques (statistics), conservation, and bone chemistry and requires the completion of a thesis in one of these areas. The course currently has 12 students enrolled with about half coming from outside the United Kingdom and from as far afield as the Americas (North and South) and Continental Europe.

In addition to Dr. Roberts, the personnel of the Calvin Wells Laboratory includes Dr. Keith Manchester, M.D., Permanent Visiting Lecturer, and Dr. Donald Ortner, Visiting Professor of Palaeopathology from the Smithsonian Institution in Washington, D.C., U.S.A. The laboratory facilities include the personal library of the late Dr. Calvin Wells, M.D., the first palaeopathologist in Britain, his slide collection of pathological specimens, an x-ray machine, a fine radiographic collection, journals, photocopies, and substantial skeletal collections ranging in age from the Iron Age to the Medieval Period, including the very large and important Raunds Anglo-Saxon collection and the Chichester medieval hospital collection. All of these collections are continuously added to by Drs. Roberts and Manchester, who was recently the recipient of an honorary Doctor of Science degree from the University of Bradford in recognition of his 20-year contribution to teaching and research at the University and for initiating the creation of the laboratory.

The Calvin Wells Laboratory is at the centre of skeletal analysis in the United Kingdom, receiving a considerable amount of contract work from archaeological units, and is host to the the British Section of the European Palaeopathology Association meetings, the next gathering of which will occur on May 22, 1992. The theme for this year's meeting is entitled "Occupational related skeletal change?" Dr. Roberts is the editor of the newsletter of the British Section, a copy of which I am enclosing, along with a copy of the Bradford/Sheffield Consortium document and a course brochure. I hope this letter finds you well and C.A.P.A. flourishing!

Yours sincerely,

Christopher Knüsel

Dr. Christopher Knüsel,
Calvin Wells Laboratory,
Department of Archaeological Sciences,
University of Bradford,
Bradford, West Yorkshire,
England BD7 1DP
Telephone: (0274) 733466
Ext. 3531/3532 (Departmental Office)
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THE BRADFORD/SHEFFIELD CONSORTIUM FOR THE STUDY OF HUMAN REMAINS

Calvin Wells Laboratory
Department of
Archaeological Sciences
University of Bradford
Bradford BD7 1DP
UK
Tel: 0274-383547
Fax: 0274-728497

Judson Chesterman Laboratory
Department of Archaeology
and Prehistory
University of Sheffield
Sheffield S10 2TN
UK
Tel: 0742-768555 ext.6079
Fax: 0742-739826

LABORATORY PROFILES

Introduction

The two Departments collaborating in this consortium have complementary strengths in archaeological sciences in general and in human skeletal studies and palaeopathology in particular. The Department of Archaeological Sciences at Bradford has excellent facilities for, and a strong reputation in, the application of the physical sciences to archaeology. The Department of Archaeology and Prehistory at Sheffield has well-founded laboratories and an international reputation in bio-archaeology.

The Calvin Wells Laboratory at Bradford has a specialist library of books, slides and X-rays, and a large study collection of archaeological skeletal material, the majority donated to the Department by Mrs. Freddie Wells from her late husband, Dr. Calvin Wells. This unique collection, built up during an enthusiastic and academically prolific life, is of immense value to palaeopathology at Bradford. In respect to Freddie and Calvin, the Palaeopathology Laboratory within the Department has been designated the Calvin Wells Laboratory for Burial Archaeology. Structured teaching of palaeopathology is part of the undergraduate curriculum in Archaeological Sciences and has been recently introduced into the curriculum of the MA Scientific Methods in Archaeology course. The laboratory now runs an M.Sc. in Osteology, Palaeopathology and Funerary Archaeology jointly with the Judson Chesterman Laboratory. In addition to the teaching and research proper, service contractual reporting in human osteoarchaeology is being undertaken within the Laboratory. The British Section News of the Palaeopathology Association is edited and published from Bradford.

The eminent surgeon, Judson Chesterman, began research on human skeletal material from archaeological sites at the University of Sheffield in 1972, based in the Department of Ancient History and Archaeology. In 1980, the newly independent Department of Archaeology and Prehistory (established in 1976) offered its first practicals and option course in the subject to undergraduates and in 1984 commenced its MA (now MSc) course in Osteology, Palaeopathology and Funerary Archaeology. Sixteen students had passed through the course when it was suspended in 1988

following the death of J.T. Chesterman. The Medical and Dental Schools at Sheffield have excellent library collections and their staff also collaborate in teaching and research with the Department of Archaeology and Prehistory. There are additional links between the Department and the recently strengthened Department of Forensic Pathology.

The primary research interests of the Bradford staff who teach the M.Sc. in Osteology, Palaeopathology and Funerary Archaeology course are in palaeopathology, whilst those of the Sheffield staff are in osteology and physical anthropology. Between them, the two centres provide a consortium of unique strength and depth, based on many years of teaching and research in physical anthropology, palaeopathology and funerary archaeology.

ARCHIVES OF THE CALVIN WELLS (CWL) AND JUDSON CHESTERMAN (JCL) LABORATORIES

Literature: CWL - houses the library of Dr. Calvin Wells comprising books, journals and a card index system of several thousand entries of research publications relevant to palaeopathology, anthropology and medical history. The J B Priestley Library of the University holds the major texts of palaeopathology.

JCL - the laboratory's main source of literature is in the library of the University Medical School (on the opposite side of the road to the Department) supplemented by the extensive textbook and reprint collections in the Department's own library of archaeology.

Photographic: CWL - the Laboratory collection comprises some 4,000 slides relative to palaeopathology, anthropology and medical history. There is, in addition, a substantial plate photographic collection which is archived in album form and a series of video recordings in palaeopathology by the late Dr. Calvin Wells.

JCL - the Laboratory has a collection of c. 250 colour slides of osteological and palaeopathological material, and ten volumes of reference photographs of pathology and osteology, classified on an identical system to that in the CWL.

X-ray:

CWL - all skeletal specimens exhibiting pathological lesions, which are part of the Laboratory collection or which have been dealt with by the Laboratory, have been X-rayed and the plates curated as part of the archive. In addition to this and to the collection of Dr. Calvin Wells, Dr. Johs Andersen has donated his personal collection of clinical X-rays of leprosy from Ethiopia and from India to the Laboratory. This valuable, and probably unique, British collection is a focus and basis for research on the osteoarchaeology of leprosy. The Laboratory also holds, a collection of 35 mm slide copies of 10,000 X-rays of tuberculous patients assembled from a period before the advent of effective anti-tuberculous drugs. This, likewise, will be a very valuable base for the osteoarchaeological study of tuberculosis.

JCL - the Laboratory has a small X-ray collection, mainly of trauma, but has access to the X-ray collection of the Department of Radiology, Royal Hallamshire Hospital.

Skeletal:

CWL - the total collections from the archaeological sites of Kingsholm, Baldock, Raunds, Eccles, Stonar and Chichester are curated within the Laboratory, on loan from archaeological units. The Palaeopathological Reference Collection contains significant skeletons from these and other archaeological sites. The skeletal, x-ray and plate photographic collections are, in part, cross-referenced. This system, which is based upon clinicopathological classification is ongoing and developing.

JCL - the Laboratory houses a study population of over 300 individuals, of Anglo-Saxon and later Medieval date, from Berinsfield (Oxon) and Exeter. Demographic details and all pathological conditions have been recorded on a computer database. There is also a small pathology reference collection and a collection of replicas of fossil hominids donated by Professor M.H. Day. The Laboratory also has access to modern skeletal collections in the Departments of Biomedical Sciences, Oral Pathology and Forensic Pathology.

DEPARTMENTAL FACILITIES

Physico-chemical:

CWL - neutron activation, X-ray fluorescence, X-ray diffraction and atomic absorption facilities are available within the Department. There is also a shared ICP facility with the Department of Environmental Sciences.

JCL - X-ray fluorescence and X-ray diffraction and ICP facilities are made available through the Earth Sciences Department.

Microscopy:

CWL - transmission light and electron microscopy and scanning electron microscope facilities are available within the University.

JCL - the Department of Archaeology and Prehistory part-owns an SEM and, in addition, has a wide range of microscopes available in its suite of Laboratories, including the powerful Metalux.

Computer:

CWL - the Laboratory has an Amstrad PCW 8512 for basic skeletal recording and word processing. There are also microcomputers and mainframe terminals within the Department.

JCL - the Departmental Computer Room, next to the Chesterman laboratory, has ten microcomputers and mainframe terminals.

X-ray:

CWL - by collaboration, there is an X-ray facility for skeletal remains and, within the Department, a Faxitron X-ray machine.

JCL - the Laboratory has its own X-ray facility (Faxitron) and access to specialist facilities in the Department of Radiology.

Photography:

CWL - a photographic service is available within the University's Photographic Department and there are Dark Room facilities within the Archaeology Department. A part-time photographic technician works within the department. Video and television facilities are available within the University.

JCL - the Department has Dark Room facilities and a fully-trained photographic technician.

CURRENT PERSONNEL

BRADFORD

Carl Heron BTech PhD
Lecturer

J Hunter BA PhD Dunelm., Dip Archaeology
Senior Lecturer in Archaeology

R Janaway BSc
Experimental Officer

R F J Jones BA PhD FSA MIFA
Senior Lecturer in Archaeology

K Manchester MB BS BSc FRAI FSA DSc
Visiting Lecturer in Palaeopathology

D J Ortner BA MA PhD
Visiting Professor of Palaeopathology, USA

A M Pollard BA DPhil CChem MRSC
Professor and Head of Department

C A Roberts BA MA PhD SRN
Lecturer in Palaeopathology

Previous Visiting Scholars

T Bruintjes MD
Visiting Research Fellow 1989, The Netherlands

D Hodges BS MA PhD
Leverhulme Post-doctoral Research Fellow 1988, USA

SHEFFIELD

Archaeology Department

K Branigan BA PhD FSA
Professor of Archaeology and Prehistory

A T Chamberlain BSc MSc PhD
Lecturer in Human Skeletal Studies

J R Collis BA MA PhD FSA MIFA
Professor in Archaeology and Prehistory

M Parker-Pearson BA PhD MIFA
Lecturer in Archaeology and Prehistory

A M Fleming BA MA FSA
Senior Lecturer in Archaeology and Prehistory

M Zvelebil BA PhD
Lecturer in Archaeology and Prehistory

Faculty of Medicine

N Barrington MB ChB FRCR DMRD
Honorary Clinical Lecturer in Radiodiagnosis

G Craig BDS PhD FDS RCS FRCPath
Senior Lecturer in Oral Pathology

A Warren PhD
Lecturer in Biomedical Sciences

D R Jarvis BA FILMS
Senior Medical Laboratory Scientific Officer, Forensic
Pathology

R Sokol MD PhD FRCPath
Honorary Clinical Lecturer in Haematology

Visiting Lecturers

D Miles BA
Director, Oxford Archaeological Unit

J K Lundy PhD
Fulbright Lecturer in Physical Anthropology

Previous Visiting Scholars

D Charles PhD
Leverhulme Postdoctoral Research Fellow

A Goodman PhD
Visiting Research Scholar

BRADFORD

CURRENT RESEARCH PROJECTS

Grace Ballance (PhD student)
Osteoporosis in palaeopathology: problems in diagnosis

Gwen Dalby (PhD Student)
Ear Disease in Antiquity

Keith Dobney (PhD Student)
A modern epidemiological study of enamel hypoplasia: its
relevance to the study of past human populations

Rob Janaway (Part-time Ph.D student)
The taphonomy of inhumation burials

Rick Jones
Cultural interpretation of burial archaeology

Frances Lee
Analysis of Chichester Medieval hospital skeletal remains

Beverley Margerison (Ph.D student)
A palaeodemographic study of Medieval catastrophic and attritional cemeteries

Mark Pollard
Chemical analysis of human bone

Charlotte Roberts
Trauma and treatment in British antiquity, and Osteoporosis in palaeopathology

Francis Thornton (MPhil student)
Dental pathological comparison of ancient Nile Valley populations

PAST RESEARCH PROJECTS

Keith Manchester and Charlotte Roberts
Palaeopathological evidence for leprosy and tuberculosis in Britain (1983-1986); and Palaeopathological diagnostic criteria for tuberculosis (1986-1989)

SHEFFIELD

CURRENT RESEARCH PROJECTS

Claire Adamson (PhD Student)
Trace element analysis of human bone: an experimental approach and case study

Keith Branigan
Funerary behaviour in EBA Crete

Helen Bush
Mortality and stress in a Civil War population

Cristina Cattaneo (MPhil student)
Extraction and identification of blood residues from ancient bone

Andrew Chamberlain
Systematics of early hominids

Richard Hillier (PhD student)
The evidence of teeth in determining the cause and age of death in infants: the applications of modern infant pathology to skeletal remains

Mary Ann Owoc (MPhil student)
Aspects of ceremonial burial in the Bronze Age of England and Wales

Mike Parker-Pearson
Megalithic tombs of Madagascar

Mark Simmons (MPhil student)
Factors affecting the present distribution of burial mounds
in Northern England

PAST RESEARCH PROJECTS

Helen Bush (PhD)
The study of disease and dietary stress in human skeletal
material (1984-1989)

John Collis
Funerary practices from the Bronze Age to the Anglo-Saxons
at Wigber Low, Derbyshire

John Dent (MPhil)
Wetwang Slack: an Iron Age cemetery on the Yorkshire Wolds
(1978-1984)

Valerie Higgins (PhD)
The study of monastic populations of the early Medieval
period from San Vincenzo, Italy (1983-1989)

P Ryder (MPhil)
The Cross Slab Grave cover in South Yorkshire (1977-1980)

Cliff Samson (PhD)
The determination of age at death by histological analysis
of human bone (1980-1983)

It is hoped that wider British and International,
interdisciplinary collaboration between the
Bradford/Sheffield consortium for the Study of Human Remains
and other centres will develop. Visitors are encouraged.
Both the Laboratories' facilities and personnel are
available for contractual reporting on any aspect of human
remains. Requests for visits and work, participation on the
MSc course or suggestions for collaboration in research or
archive should be addressed to the appropriate Laboratories
within the Consortium.

April 1991

NEWS from our COLLEAGUE ALAN MORRIS
 Dept. of Anatomy and Cell Biology,
 University of Cape Town, South Africa

My 1991 half year sabbatical to Canada is now over and although many pleasant memories exist, I can hardly believe it was over so quickly. From my September to December base in the Department of Archaeology at the University of Calgary, I managed to visit Edmonton, Chicago, Toronto, and Guelph, and of course attended the CAPA conference in Hamilton in November. I also had plenty of time for R & R in Banff, Jasper and Lake Louise.

Since returning to Cape Town in mid-January, I have been busy and in the last few weeks managing to get some research writing done as well. Graduate students are few and far between in Cape Town, but we do have some physical anthropology/gross anatomy projects going on in the Department. Jerome Reynard is working on the paleopathology of some early historic South African populations, Jonathan Kovacs is completing his project on the post-cranial osteology of *Papio ursinus*, and Christine Bell and Allon Goldberg are working on functional anatomy projects on the neck and temporo-mandibular joint, respectively.

I am rather hoping that 1992 and 1993 will be bumper years for my publication record. I have two books coming out in the next two months through the University of the Witwatersrand Press (The Skeletons of Contact and A Master Catalogue of Holocene Human Skeletons from South Africa), and I have already completed four papers on archaeological skeletons from South Africa, Malawi and Namibia, which will hopefully to the journals shortly. My research on the history of South Africa is going along slowly but steadily, and I have already collected a number of taped interviews with various researchers. I will be submitting a joint paper with Phillip Pobias later in the year to Frank Spencer's upcoming Encyclopedia of the History of Physical Anthropology. Tobias will concentrate on the fossil studies and I will examine the work on the sub-recent and modern populations.

The major change in South Africa while I was away in Canada has been the lifting of the academic boycott and renewed contact with workers from elsewhere in Africa. Cape Town hosted Richard Leakey in January (I just missed him), and I will be hosting Professor Sawano of the First department of Anatomy of the University of Tokyo at the end of July. Fred Grine of Stony Brook has been excavating at Die Kelders with the team from the South African Museum in the hope of finding some Middle Stone Age skeletons (line unreadable, I am sorry, H.H.) ...The Annual conference of the South African Association of Archaeologists will be in July, and I am co-organizer for a session on Biological Anthropology (Andy Sillen is on leave so I am once again the only Physical Anthropologist in Cape Town). Our session will be a local affair, with most of the papers concerning South African peoples - Stone Age through Iron Age - and including papers on mtDNA in

Namibian populations.

I would like to extend my warm welcome to any CAPA member who is heading down this way. Southern Africa has unlimited research potential and it also happens to an extremely beautiful part of the world. If you are planning a trip in this direction, please drop me a line and I will do what I can to show you around.

Alan Morris
Department of Anatomy and Cell Biology
University of Cape Town

To: **Dr. Hermann Helmuth**
Editor of the CAPA Newsletter
 Department of Anthropology
 Trent University
 Peterborough, Ontario, Canada K9J 7B8
 Tel: (705) 748-1325, Fax: (705) 748-1246

From: Jean-Marc Elie
 Cégep André-Laurendeau
 1111, LaPierre, LaSalle (Québec) H8N 2J4 Fax: (514) 364-7130

Dear Colleagues:

This has been an intense and frantic year for me. It started by a weekly lecture on human evolution to one adult class at the Cégep André-Laurendeau during the winter of 1991. The result seemed to have pleased the administration. So, by the end of June, I was invited to sign a contract for the fall semester. I had to teach an exotic and sensitive subject: Races and Racism. Christmas time brought a second contract for the winter semester of 1992.

Teaching was a nice experience for me particularly because of the pedagogical dimension. Let's call it the "P" dimension. To put it mildly it consists of breaking up your university knowledge into the most basic information you can extract or muster. Then you follow a precise map called "a course outline". Also never forget to relate the "primitive information" to the "Big Picture". If not the students are most likely to experience a "steep learning curve" and some of them will disappear into the Twilight Zone. It happen...sometimes. This semester 150 students were initiated or introduced to cultural anthropology and Amerindian ethnology.

To be a teacher is interesting. However, when you renew contact with colleagues in such an event like our last annual meeting in Hamilton, you feel the need at one point in time to continue your journeys in the realm of anthropological research. It can also mean that you must get ready for course work for the Ph.D. program. Hope to see everybody at our next annual meeting.

Jean-Marc Elie

NEWS from the UNIVERSITY of GUAM ...

GARY HEATHCOTE relates his exciting news from far away;

I recently presented a paper on the covariation of cranial thickness and neurodegenerative disorders. The details are as follows: "Cranial thickness in recent autopsy cases on Guam: Preliminary investigation of its variation according to sex age, ethnic background, and neurodegenerative status". - The presentation was co-authored with Arthur Loerzel (Chief Pathologist, Guam Memorial Hospital) and John Nasrallah (Medical student at the University of Connecticut). It was presented at the Neurodegenerative Disorders in the Western Pacific Conference, February 17-18, 1992, Tumon, Guam. We plan to publish our results in the near future.

I am also working on two papers with Bruce Rothschild; both of which are based on a collection of pre-Contact Chamorus (AD 1000-1500). One deals with gout and the other one with yaws. -

That's about it ... oh, lots of other stuff, actually. More political intrigues and related nonsense. But life here is very good of late. I think we should have a CAPA meeting on Guam soil! Think SSHRC would fund travel here? Cheers! Gary Heathcote.

(I love that invitation - do you? Perhaps for the 25th anniversary - if SSHRC still exists! H.H.)

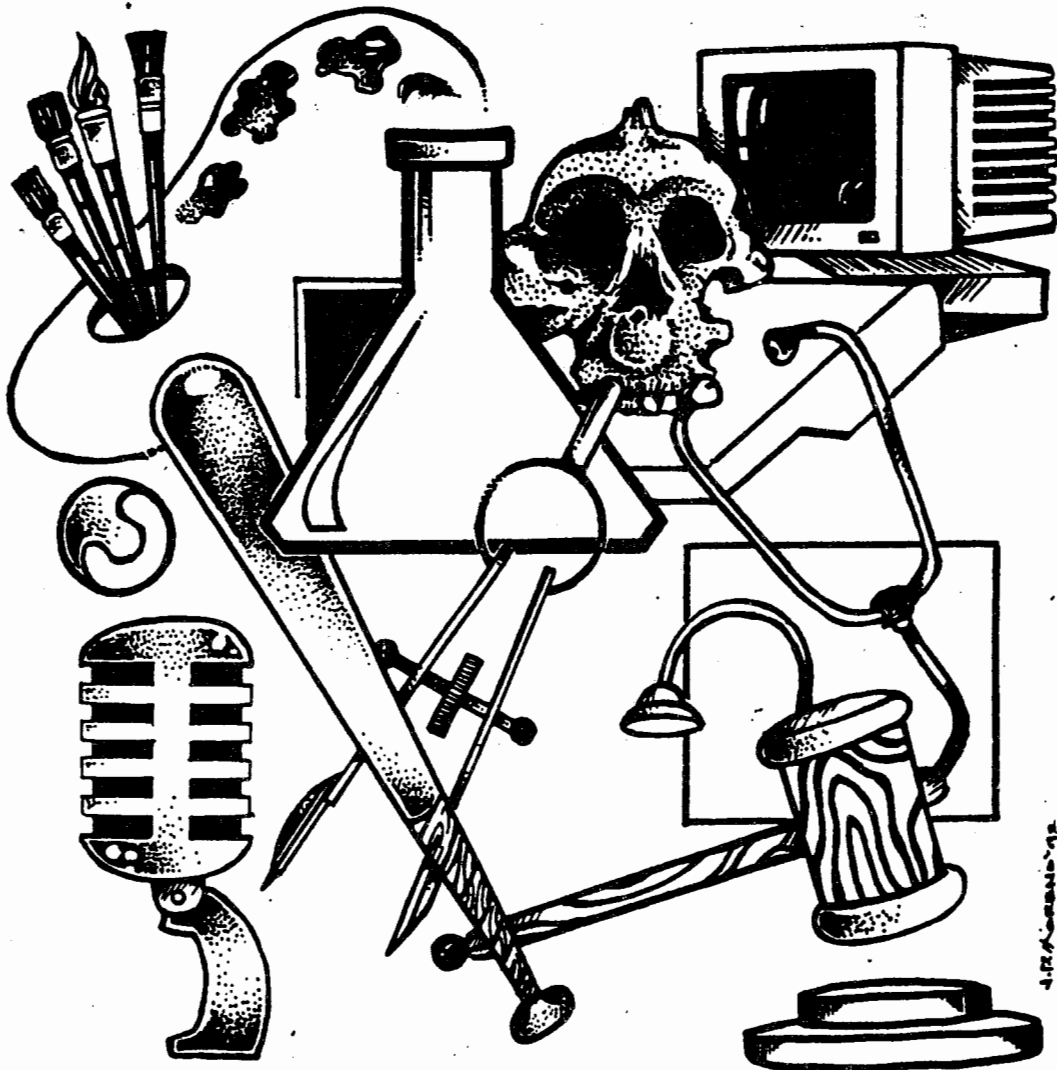
UNIVERSITY OF GUAM - UNIBETSEDAT GUAHAN
COLLEGE OF ARTS AND SCIENCES

13th Annual

CAS Research Conference

University of Guam

Friday, April 24 and Saturday, April 25, 1992



Program and Abstracts

1992 CAS Research Conference: Program

CAS Research Conference, 1992 PROGRAM

FRIDAY AFTERNOON

Plenary Session Fine Arts Theater, 1:00-1:45

- 1:00-1:10 WELCOME
Remington Rose-Crossley, Dean, College of Arts & Sciences
- 1:10-1:45 THE TEACHER AND HIS (HER) RESEARCH
Father James McDonough, S.J., Professor of Language and Literature, U. Guam

Session 1 Fine Arts Theater, 2:00-4:40 Chair: Harley Manner

- 2:00-2:40 AMELIA EARHART AT NIKUMARORO ISLAND: THE MYSTERY ENDS
Dirk Anthony Ballendorf, Micronesian Area Research Center
- 2:40-3:20 A LECTURE-RECITAL OF *SIX GUAM SKETCHES FOR PIANO* (1989)
Leonidas N. Sarakatsannis, Division of Communications and Fine Arts, College of Arts and Sciences.
- 3:20-4:00 REVOLUTIONARY POPULAR LITERATURE OF CAMBODIA'S POST-ANGKOR ERA
Abdulgaffar Peang-Meth, Division of Social/Behavioral Science/Social Work, College of Arts and Sciences
- 4:00-4:40 GUAM'S WATER SUPPLY IN THE NEXT GENERATION: POTABLE POLLUTION?
Ernie Matson, Division of Natural Sciences, College of Arts and Sciences

Session 2 Science Rm 101, 2:00-4:40 Chair: Tom Pinhey

- 2:00-2:40 STUDIES OF LICIT DRUG USE FOR PUBLIC HEALTH EDUCATION: CHEWING, DRINKING AND SMOKING
Thomas K. Pinhey, Secondary Analysis Research Center, Randall L. Workman, Community Development Institute, Joseph P. Borja, Planning and Evaluation Office, DPHSS
- 2:40-3:20 ELECTRONIC GOVERNMENT INFORMATION SOURCES: A DEMONSTRATION
Chih Wang and Catherine C. Ogo, Learning Resources
- 3:20-4:00 ANCIENT CHAMORU WORK ACTIVITIES: A PROGRESS REPORT ON AN ONGOING HUMANISTIC OSTEOLOGY RESEARCH PROJECT
Gary M. Heathcote, Division of Humanistic Studies, College of Arts and Sciences
- 4:00-4:40 LIBERATION, DEATH, AND THE AFTERLIFE: A COMPARATIVE STUDY OF VEDANTA SCHOOLS
Kim Skoog, Division of Humanistic Studies, College of Arts and Sciences

1992 CAS Research Conference: Abstracts

Program development, therefore, needs local research and sophisticated analyses that specify actual behavioral patterns and identify who is at risk on Guam. Current levels and patterns of health risk behaviors that contribute to these diseases on Guam were assessed in the 1991 Guam Behavioral Risk Factor Survey (BRFS). This paper reports the types of analyses conducted to date that have focused on licit drug use -- alcohol, tobacco and betel-nut. The analytical approaches, report references and findings are discussed in terms of the process necessary to link this or any research project to health education or other applied program efforts.

2:40-3:20

ELECTRONIC GOVERNMENT INFORMATION SOURCES: A DEMONSTRATION

Chih Wang and Catherine C. Ogo, Learning Resources

This session will present selected electronic information sources produced by US Federal government agencies. These sources will include CR (Congressional Record), DLG (Digital Line Graph), ESIC (Earth Science Information Centers), NCHS (National Center for Health Statistics), and NTDB (National Trade Data Bank), that are received and accessible in the Learning Resources at the University of Guam. A demonstration of the use of some of these sources will be given following the initial briefing. Hands-on experience will be provided. Those who are interested in obtaining government information for their research, studying, teaching and/or services on the related subject areas are encouraged to participate in this session.

3:20-4:00

ANCIENT CHAMORU WORK ACTIVITIES: A PROGRESS REPORT ON AN ONGOING HUMANISTIC OSTEOLOGY RESEARCH PROJECT

Gary M. Heathcote, Division of Humanistic Studies, College of Arts and Sciences

This presentation provides an update on the research activities and findings of an international research team that the author has assembled. We are studying the distribution and meaning of occipital superstructures. These are sometimes-spectacular "overgrowths" of bone at sites of neck and shoulder muscle attachment on the backs of skulls. Micronesians, in general, and Mariana

Islanders, in particular, appear to be distinctive in having greater numbers and greater degrees of expression of these superstructures. Our task is to identify which of these traits, if any, may be useful for unraveling the population history of Micronesians vs. which may be "behavioral markers". Chronic work and recreational activities, if engaged in early enough during one's life history, and if involving strenuous muscular exertion, have the potential to produce the sorts of superstructures we are observing in Chamorus and other Micronesians. We hope to fine-tune our interpretation of these structures so that we may be able to make sound inferences about which specific motor behaviors produced such changes in the skulls of the original people of the Marianas.

4:00-4:40

LIBERATION, DEATH, AND THE AFTERLIFE: A COMPARATIVE STUDY OF VEDANTA SCHOOLS

Kim Skoog, Division of Humanistic Studies, College of Arts and Sciences

In recent years there has been increasing interests in creating an interfaith dialogue between Western religious and philosophical traditions and those that have developed in Asia and the Pacific. Non-western traditions that focus on spiritual salvation, devotion, and grace are particularly interesting due to the similarity in content with Western religions. In this presentation I will examine the Indian notion of liberation or salvation. In particular I will investigate a key dispute that has developed amongst exponents of a predominant school of Indian philosophy, Vedanta, regarding the nature of liberation and its effect on the afterlife. My paper will examine the polemical activity that pursued between the theistic and absolutist schools of Vedanta. Specifically, the theistic schools held that liberation could not be accomplished until after death when one ascended to heaven, whereas absolutist schools held that one could be enlightened and still maintain physical existence. Further, the nature of the afterlife is disputed in regards to whether heaven is the final outcome for a spiritually liberated person. The nature and role of God in this liberation process becomes central in the dispute over how best to strive toward liberation. Death functions as a transitional stage toward higher levels of existence, but its exact eschatological role is again in dispute amongst these schools. My paper attempts to

Secretary's week not just for women

— Page 40

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Tigers open GML playoffs with 5-0 win

— Page 68

Pacific Daily News

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VOL. 23 NO. 81 AGANA, GUAM, APRIL 22, 1992

Hafa Adai, it's Wednesday

50¢ on Guam

GovGuam may lose \$2.7M

By MARSHALL SANTOS
Daily News Staff

The government of Guam may lose \$2.7 million in federal money for the expansion of the Ordot landfill because it failed on three occasions to implement a solid waste management plan, according to an audit report from the inspector general.

In the report, Harold Bloom, assistant inspector general for audits, said the government in 1978 and 1981 failed to implement plans even after consultants were paid to do so. Had the government proceeded with the plans, it would have met the local and federal solid waste disposal requirements, thereby meeting the requirements for the federal grant.

In 1984, the Legislature did adopt the Territory of Guam Solid Waste Management Plan, which was based on the 1978 and 1981 reports. The plan would acquire the 52 acres of land adjacent to the landfill, estimated to cost \$631,000, and upgrading the landfill, estimated to cost \$551,000. This would expand the landfill's capacity and increase its life span at a total cost of about \$1.2 million.

The plan also would implement a charge for people using the dump, which was also a requirement for the federal grant.

But Bloom said the plan was never implemented because no specific governmental entity with responsibility and authority for the implementation was designed by the Legislature and also because of a lack of money.

"Consequently, the government of Guam continued to operate the landfill in violation of federal and local environmental laws and regulations," Bloom said.

If the government acted in 1984, it would have saved a significant amount of money. Land costs from 1984 to 1991 increased from \$600,000 to \$2.8 million, and estimated development costs increased from \$600,000 to \$15.9 million. This increased the total project cost by \$17.5 million, from \$1.2 million to \$18.7 million, Bloom said.

In 1982, the landfill was recognized as being one of 418 sites labeled as the nation's See GOVGUAM, Page 4

Smoke from fire concerns officials

By MARSHALL SANTOS
Daily News Staff

A fire fed by trash and debris left from Super Typhoon Yuri sent plumes of black smoke into the skies above Majolajol until late last night and forced some residents to flee their homes.

The single-alarm blaze was contained within a coral pit used as the Department of Public Works' solid waste transfer station and concentrated on an area where debris from Yuri, which swept over the island in November, was piled.

Rather than the fire posing an immediate danger, it was the black smoke that wafted over the houses just east of the transfer station that concerned officials.

According to David L.G. Aquiningoc, superintendent of solid waste management at Public Works, it would be safe to assume the columns of black smoke were produced by burning tires or some other oil-based product.

"The only care we have now is not from flame damage, but from the toxic vapors being caused by the smoke," said Aquiningoc, who oversees the operation of the transfer station. "This smoke can cause bad damage for a person who already has asthma."

Aquiningoc said the transfer station is only to be used as a dump site for large waste dumping, like appliances. But he said there are many people who throw in their other household trash along with the larger items.

Vincent Meno, 24, who lives directly across the coral pit, stood outside his home as the smoke slowly layered his house in black.

"I'm all choked up over this," said Meno facetiously. "I can't believe how much this fire has grown. It was just a small thing this afternoon when I called it in to 911. I'm surprised how big it got."

Authorities net 35 in Saipan raid

Immigration cracks down on Chinese nationals

By TIMOTHY SPENCE
Daily News Staff

SAIPAN — Authorities yesterday rounded up 35 Chinese nationals in one of the commonwealth's biggest operations against illegal aliens, immigration officers said.

Seven of the 35 people, all from the People's Republic of China, were carrying bogus Hong Kong passports, officials said. The seven men and women were immediately deported, while the remaining 28 did not have valid Chinese passports in their possession, according to Maj. Frank Villanueva of the Northern Marianas immigration service.

"This is some kind of a jackpot," Villanueva said. The 35 people all were found at the New Seoul Motel by immigration investigators, he said.

Villanueva said there was no evidence that the management of the hotel was harboring illegal

aliens, but he did say the case was under investigation. All 35 were rounded up around 7 a.m., carrying either business entry permits or tourist permits that had expired, Villanueva said.

Many illegal aliens use Saipan — which does not fall under U.S. immigration jurisdiction — as a stepping stone to the United States or other countries. They "live with their luggage," moving from one place to another to evade authorities, said immigration officer George F. Camacho recently.

While the Northern Marianas government controls its own immigration, Villanueva said federal assistance might be sought to curb another problem — travelers from the Philippines using forged U.S. passports.

Several incidents of Philippine citizens using fake or altered U.S. passports have been discovered in the last month, the most recent over the weekend.

Authorities say the bogus Hong Kong passports are a hot commodity for Chinese nationals because of the British colony's close ties to Canada, Australia and the United States. Bogus U.S. passports are being used mainly by Philippine nationals trying to get into Japan for jobs.



Cheryl Mitchell/Daily News Staff

STUDYING SKULLS — University of Guam anthropologist Gary Heathcote is on a quest to find out why ancient Chamorros developed large bone nodules at the base of their skulls. Scientists study clues of past/Page 5.

Judge rules for probable cause in Remeliik murder

KOROR, Palau (AP) — A judge ruled yesterday that there

■ Defense calls no witnesses. Page 4

U.S. District Judge Alex Munson, who presided at the two-day preliminary hearing

at which he was asked by Ngrakad to kill Remeliik. The 51-year-old president was shot

at which he was asked by Ngrakad to kill Remeliik. The 51-year-old president was shot

Ancient bones baffle scientists

By LINDA AUSTIN
Daily News staff

World anthropologists are abuzz about ancient Chamorros and why they — among all the world's people — developed sturdy bone nodules at the base of their skulls.

"The general response (from colleagues stateside who recently reviewed the research) is 'we ain't seen nothing like this,'" said Gary Heathcote, the University of Guam physical anthropologist leading the study of the ancient skulls. "This (exuberant bone growth) is almost unheard of outside of the Pacific islands ... and it's particularly concentrated in the Mariana Islands."

Heathcote will present a summary of his work Friday at 3:20 p.m. during the College of Arts and Science's annual research conference. The public is invited to enjoy the two-day event featuring research reports from dozens of UOG faculty and students.

In his "lab without bones," Heathcote studies plaster casts taken from skulls and other bones discovered at Gun Beach, Tumon Bay, Agana and the Camp Watkins area as well as research material from old discoveries in the Northern Marianas.

What he has noticed is that about 20 percent of the ancient Chamorros developed sizable bone tubercles in three areas at the base of the skull. These sites are where tendons from shoulder and neck muscles attach to the skull, Heathcote said. Constant overuse of such muscles and tendons early in life tends to pull at the bone, stretching it out into these nodular shapes, he added.

The mystery now perplexing scientists is what were the ancient Chamorros doing, either at work or at play, which flexed their neck and shoulder muscles to such extremes. Heathcote said he believes the tubercles were not caused by genetics, but by behavior.

Evidence indicates those with the condition spent a large part of their time rotating their shoulder and neck muscles, possibly in a confined space, and that they began this activity before they grew to adulthood and the bones lost their plasticity, Heathcote said. He added that those affected

Recent data sheds new light on past

By LINDA AUSTIN
Daily News staff

Ancient islanders set up housekeeping amid Guam's sweeping inland savannahs around 300 A.D., almost 1,200 years earlier than previously believed, archaeologists said new data indicates.

But the ability to really reveal how ancient Chamorros lived, loved and died is being hampered by the lack of a museum and growing pressures to permanently rebury ancient bones, thereby curtailing current and future research, scientists added.

After two years of shoveling and sifting through 100 sites on 1,300 acres of red dirt around the LeoPalace Resort, archaeologist Rosalind Hunter-Anderson and her colleagues at Micronesian Area Research Services have begun analyzing the artifacts found.

What they are learning, island experts say, is redefining what we know about the ancient islanders.

For example, the Chamorros settled into the back country almost 12 centuries before the Spanish arrival in the late 1500s, Hunter-Anderson said. Previously, scientists believed the Chamorros left their coastal villages to flee Spanish oppression.

Hunter-Anderson and her colleagues also discovered inconsistencies between burials and the location of latte stones and stone-filled post holes. Traditionally, scientists thought latte stones only occurred near burial sites. Hunter-Anderson said the burials, stones and holes occurred in all available mixes and matches at the studied sites.

The LeoPalace study is significant because

it is the largest archaeological survey done on Guam, yielding an exceptionally large data base on sites now largely destroyed, scientists said. A research paper, if not a small book, is expected to be available next year.

Hunter-Anderson noted that local archaeologists and anthropologists are hampered by small survey sizes, which can lead to incorrect interpretation of data, and by lack of a comprehensive data base, such as would be found in a territorial museum. Without that material, comparisons among various Chamorro groups around Guam and throughout the Marianas is nearly impossible, scientists said.

"The skeletal remains need to be accessible to future researchers ... because the questions (we ask) change," Hunter-Anderson said. "If they (the remains) are sealed or reburied, they're gone forever. That's the documents of the past and they're locked in the ground."

Others, such as Gary Heathcote, a University of Guam physical anthropologist, echoed Hunter-Anderson's concerns.

Heathcote said he was extremely frustrated when his landmark research on the extreme musculature of ancient Chamorros was cut short by the premature reburial of his data base.

"I don't know if there is a happy middle ground," Hunter-Anderson said about the debate over science, culture and the deceased.

Heathcote mentioned a working compromise struck between Canadian scientists and natives where remains are interred in a sanctified secret crypt. Tribal elders allow limited research on the remains by approved scientists, Heathcote said.

were usually male and very robustly built — they were moderately tall and broad with thick healthy bones. This might lend credence to historical tales of amazing strength among the ancient Chamorros, Heathcote said. Interestingly, the skull with the most pronounced tubercles belonged to a middle-aged woman from Achugao area of western Saipan.

"The picture is only beginning to reveal itself," Heathcote said about the many theories surrounding the tubercles.

Perhaps the condition was brought on by mining activity, an interesting theory since the bone growths become more prevalent — and the latte stone architecture more elaborate — the farther north one travels in the Mariana Islands, Heathcote said.

The condition still might be present in today's Chamorros, Heathcote suggested, but he noted medical records often are incomplete.

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GOLDEN M: Photo Towel Golden Motel St. Anthony Church

In The Bible
Pastor Lewis
A thinking person will at some time in his life consider life after death. Do you have a hope of eternal life, or do you face eternity with fear and uncertainty? Those saved by faith in Jesus Christ have this certain hope as recorded in Hebrews, Hebrews 6:18-19 "That by two immutable things, in which it was impossible for God to lie, we might

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**OCCIPITAL SUPERSTRUCTURES IN
PACIFIC ISLANDERS: OCCUPATIONAL
MARKERS?**

**Gary Heathcote
Bruce Anderson
Timothy Bromage
Sara Collins
David Dean
Douglas Hanson
Christopher Knüsel**

**Presented at the 19th Annual Meeting
of the Paleopathology Association,
March 31 - April 1, 1992
Las Vegas, Nevada**

ABSTRACT

Preliminary findings, interpretations, musings and directions for future research are presented concerning the expression, distribution and meaning of exuberant developments of three sets of occipital superstructures in anatomically modern human skeletal collections. These superstructures are (1) veritable tubercle developments at the trapezius and/or semispinalis capitis site(s) on the occipital, (2) retromastoid processes at the superior oblique insertion site, and (3) periasterionic (posterior supramastoid) tubercles occurring near the superior and medial end of the sternocleidomastoid insertion. The range of morphological expression of these traits is presented, along with a protocol for systematic categorical scoring.

Present evidence suggests that there is a virtual geographic circumscription to the more extreme manifestations (scores of "3" or "4") of these traits, viz. that they seldom occur in populations other than Pacific Islanders. Beyond that, Micronesians in particular appear to be distinguished by the highest frequencies and, among this grouping, the indigenous inhabitants of the Mariana Islands (Chamorus) possess both the highest frequencies and the most extreme developments of these traits.

What does the geographic patterning suggest about the etiology of these traits? Given that an "acquired" genesis is strongly suggested for two of these traits (posterior supramastoid tubercles being more problematic as to causation), we are attempting to gain an understanding of what specific work/recreational activity patterns - also geographically circumscribed (by degree, if not in kind) - induced the superstructural developments at muscle insertion (enthesis) sites. Attention is drawn to an ontogenetic factor, viz. age at onset of adult activity patterns/motor behaviors, as a likely key ingredient to understanding the morphological distinctiveness of such Micronesian crania.

Various occupational activities are advanced as having potential to contribute to the development of such structures, e.g. mining (and/or working in a confined space in chronically flexed positions), climbing coconut palm trees, carrying heavy weights in the hands with the arms held down, engaging in heavy construction work (building megalithic structures), and throwing activities (throwing slingstones?).

Future work, including the creation of a videotape library of traditional work activities, is described. Other work planned includes histomorphometric, CT and SEM analysis of the superstructures. Through such multiple avenues of inquiry we hope to explore the limits of motor behavioral interpretation from these most unusual changes at or near neck and shoulder muscle attachment sites on the skull.

News from The University of Guelph

Biological anthropology is alive and well in the School of Human Biology, here at the U of G. Within the past year program restructuring has produced a B.Sc. honours specialization in Human Biology which has a decidedly anthropological bent. In addition to the general B.Sc. Biological Science core courses, this revamped specialization includes a package of three core courses (i.e., Human Evolution, Growth & Development, and Human Variability), restricted bio-anthropological electives (e.g., Human Ecology, Human Oral Biology, and Paleoanthropology), required and restricted elective courses in cultural anthropology and sociology, plus an increased mathematics and statistics requirement. The B.Sc. honours specialization in Human Biology rounds out the School's available programs which also include Human Kinetics and Biomedical Science.

On the faculty activities front, we begin with our fearless leader, **Dr. Susan Pfeiffer**, who has been active indeed on all academic fronts. Last Spring, Susan plunged into her NSERC funded study of the "interaction of robusticity and age changes in bone remodeling" plus continued her analyses of historic and prehistoric skeletal remains. In 1991, Susan organized and chaired the Human Biology Council's scientific program on "Physical Activity in Human Biology" and coordinated the CAPA program and chaired one its symposia, "Dialogue on Research: A Discussion of Mutual Interests between Aboriginal People and Physical Anthropologists." That symposium attracted the attention of both *The Globe and Mail* and CBC television's *The Journal*. Her co-edited book, *Snake Hill: An Investigation of a Military Cemetery from the War of 1812*, was published by Dundurn Press. In December '91, Susan was named Associate Dean of Graduate Studies at the U of G. Susan's early Spring '92 plans include being one of the faculty for the Armed Forces Institute of Pathology (Washington, D.C.) short course in paleopathology and preparing a AAPA symposium paper on the effect of European contact on ossuary populations with Scott Fairgrieve (Laurentian).

Dr. William R. Leonard, the youngest and tallest bio-anthropologist here, took his interest in human ecology on the road to Siberia late last Summer. There, in collaboration with Michael Crawford (University of Kansas) and Rem Sukernik (Soviet Academy of Science, Novosibirsk), he initiated a study of the population biology of the *Evenki*, nomadic pastoralists of the *Taiga* (NSERC and Man And the Biosphere [MAB] funded). While in the field, Bill and company were witness to both Siberian mosquitos and the failed *coup d'etat* which heralded the disintegration of the Union of Soviet Socialist Republics. Bill directed his ecological eye towards several other international projects in 1991. These include a collaboration with A.T. Steegman (SUNY-Buffalo) in a study of physiological variation in the Peoples' Republic of China; a planned return to Ecuador where he will continue his collaboration with Kathleen DeWalt (University of Kentucky) in study of the effects

of changing economic practices on growth and health among the residents of ecologically different regions; and a Summer 1992 return to the *Taiga*. On one of his North American lay-overs this Spring, Bill will be presenting a paper at the AAPA symposium honouring Stanley Garn.

The third, and shortest, of our bio-anthropology faculty, **Dr. Michael C. Mahaney**, is -- despite publication evidence to the contrary -- still alive. Last Summer, Michael took his voracious appetite for data with which to test hypotheses about the relationships between genomic and phenomic variation to exotic locales in Kansas and Texas (hey, low-budget, okay?). His Lawrence, Kansas visit was spent measuring dental casts for residents of three Tlaxcaltecan villages which were genetically characterized in the 1960s and '70s by Michael Crawford (University of Kansas) and co-workers. A month at the Southwest Foundation for Biomedical Research (SFBR) in San Antonio was devoted to collecting organ weights from the necropsy records for collaborative quantitative genetics studies of organ growth in captive baboons with Sarah Williams-Blangero and John Blangero of the SFBR. Some of this work will be reported at a AAPA symposium on genetic epidemiological methods in physical anthropology (look for the first cross-sectional organ growth standards for this biomedically important species soon!). On the home front, Michael was granted tenure at the U of G in November '91 and in January '92 he accepted an adjunct faculty appointment in the Department of Genetics at the SFBR.

Additionally, our undergraduate program has benefitted from the contributions of sessional lecturer, **Richard Lazenby**, who, many of you know, is an ABD in biological anthropology in the McMaster University program. When not wowing Guelph undergrads, Richard was also contributing to Susan Pfeiffer's biomechanically oriented work and putting the finishing touches on his Ph.D. dissertation.

Although their numbers have been increasing at a pace commensurate with phyletic gradualism these past few years, our graduate student contingent's degree progress is somewhat akin to punctuated equilibrium. Even as we type, three of them can clearly see the light at the end of the M.Sc. tunnel. **J. Christopher (Chris) Dudar** (advisor, S. Pfeiffer) is responding to committee comments and revising his M.Sc. thesis, "Evaluation of Morphological and Histological Adult Skeletal Age at Death Estimation Techniques Involving Ribs," prior to late Winter/early Spring defence. Looking towards a similar defense date, **Peter R. Berti** (adv., M. Mahaney) is furiously writing the thesis based on his M.Sc. research into the epidemiology of linear enamel hypoplasias and their relationship to maternal factors (e.g., age, parity, birth interval, etc.) in a human genetic isolate. Both Chris and Peter have presented portions of their work to at national and international meetings within the past year. The M.Sc. Thesis of **Ainsley Moore** (adv., W. Leonard), "A Comparison of Two Methods for Dietary Assessment in among Highland Ecuadorans," is also taking form. New students to our M.Sc. program include **Audrey Choh** (adv., M. Mahaney), who is developing a thesis project comparing

patterns of developmental stability in deciduous and permanent teeth; **Allen Ross** (adv., W. Leonard), whose interests lie in biomedically relevant variation associated with international development initiatives; and **Tamara Varney** (adv. S. Pfeiffer), who is beginning a study of the applications of stable isotopes and amino acids for dietary reconstruction in archeologically derived skeletal materials.

Physical Anthropology News from the
Department of Anthropology, McMaster University

Faculty

Edward Glanville continues his interest in medical anthropology and healing practices, particularly within the practice of Sufism. He has been teaching two undergraduate courses in the department on the topic of medical anthropology. Edward has also just accepted the job of chairman of the department for a three year term beginning July 1, 1992. Congratulations, Edward!

Ann Herring is continuing her research on disease experience, epidemics and historical demography among northern Manitoba native communities with plans to travel to Norway House this summer. She is also working on the St. Thomas, Belleville research project with Shelley Saunders and others involved with this work. Just to make sure she's busy enough, Ann is also associated with a group of researchers at McMaster who are proposing a major research project in northern Ontario under the Federal Government's Green Plan for environmental research. In the area of teaching, Ann continues to offer an extremely popular course on campus titled, Plagues and Peoples as well as courses in adaptability and primate behaviour.

Shelley Saunders is presently working on two SSHRC research grants which relate to studies on the St. Thomas' Church Anglican Cemetery Project, Belleville. The first of these, with Anne Katzenberg as senior investigator, involves isotopic, trace element and histological research on bone tissue samples from the St. Thomas sample of skeletons. The second grant, with Ann Herring, Larry Sawchuk and Gerry Boyce involves continued study of skeletal data from the excavated cemetery as well as an extensive historical demography study of nineteenth century Belleville. Shelley also continues her work in southwest France with Eric Crubézy of the Université de Bordeaux.

Graduate Students

Richard Lazenby is in the E.B.D. stage (Everything But Defense!) of his Ph.D. thesis work on continued periosteal bone apposition in aging adults. At the time of writing, we only await the final results from the external examiners and the scheduling of "the day". This past academic year Richard has been teaching part time here at McMaster and at Guelph University. He has also been working on bone biomechanics research with Susan Pfeiffer.

Anne Keenleyside is in the final stages of completing her Ph.D. thesis project on the effects of Russian and European contact on Alaskan Eskimo populations. Anne spent two summers at the Smithsonian Natural History Museum in Washington, D.C. and has managed to produce several publications and give several paper presentations over that time on her observations of Alaskan Eskimo skeletal samples.

Beth Wilson is presently working on her Ph.D. thesis. She is completing the collection and analysis of data from several historic period skeletal samples on the subject of tendon and ligament insertion sites on bone, the production of enthesopathies (that lovely word!), and their relationship to age and osteoarthritic changes.

Becky Southern has just successfully completed her Ph.D. comprehensive exams. She is now preparing to conduct her thesis research on variations in bone mass and density and its relation to fracture incidence and morbidity among Japanese-Canadians.

Rob Hoppa has just completed his first year of the Ph.D. programme here at McMaster and now prepares for his Ph.D. comprehensive exams and thesis proposal. Rob is interested in growth related studies of archaeological skeletal samples and the problem of biological mortality bias in skeletal samples.

Tina Moffat has almost completed her Master's thesis project on infant mortality in the native Cree community of Fisher River, Manitoba. She will be presenting a paper on her thesis research to the fall meetings of the American Anthropological Association.

Miriam Bensabat will be travelling to Morocco this summer to conduct her Master's thesis research on the demography and political and religious continuity of a Jewish community. This is an exciting prospect. We all wish her well.

Other News From Ontario

The Cemeteries Act of Ontario (REVISED) was proclaimed on April 1, 1992 in the Ontario Legislature. As the Minister for Consumer and Commercial Relations, Marilyn Churley, states in a letter, the process of review and consultation before proclamation of the act was a lengthy one. And for those of us in physical anthropology who were involved in the process it was also often frustrating and confusing. Nevertheless, the Act now exists, along with a lengthy set of regulations. Those wishing to obtain a copy of the Act might try phoning the Ministry of Consumer and Commercial Relations at 416-326-8500 or 416-326-8400. On the other hand, you may be directed to the provincial government's bookstore, located on Bay St. in Toronto where copies of all provincial statutes can be purchased for a nominal fee.

A Comment About the Cemeteries Act of Ontario (REVISED)

April, 1992

by Shelley Saunders, McMaster University

As information in this newsletter makes clear, the revised Cemeteries Act for the Province of Ontario was proclaimed on April 1, 1992. Those of us in the lobbying group of the Ontario Council of Professional Osteologists remember our long series of efforts at making our voices heard and our attempts to present

the concerns and goals of skeletal biology to legislators, bureaucrats, and other interest groups. Since I was one of those who spent a great deal of time making phone calls, sending letters and drafting statements I feel it is my responsibility to present some of the highlights of this new act to members of CAPA and to make a few comments about the implications of clauses in the act and its regulations.

Some Relevant Facts from the New Act:

THE CEMETERY OWNER MUST ADVISE THE FOLLOWING HERITAGE INTERESTS IF THERE IS AN INTENT TO CLOSE A CEMETERY: THE LOCAL ARCHITECTURAL CONSERVATION ADVISORY COMMITTEE, THE ARCHIVES OF ONTARIO, THE ONTARIO HISTORICAL SOCIETY, THE ONTARIO ARCHAEOLOGICAL SOCIETY, THE ONTARIO GENEALOGICAL SOCIETY, THE MINISTRY OF CULTURE AND COMMUNICATIONS

INTERESTED PERSONS HAVE 45 DAYS TO SUBMIT AN INTENT TO OBJECT TO A CLOSING

AN ADDITIONAL 180 DAYS ARE ALLOWED (THROUGH POLICY, NOT REGULATION) TO MAKE A SUBMISSION

IF A CEMETERY OR ANY PART THEREOF HAS A HERITAGE DESIGNATION, IT MUST BE NOTED ON THE CEMETERY'S "APPLICATION FOR LICENSE"

THE REGISTRAR WILL APPOINT AN EXPERT TO INVESTIGATE A BURIAL SITE, WHICH, IN MOST CASES, WILL BE A LICENSED ARCHAEOLOGIST

UNMARKED BURIAL SITES REGULATIONS

ALL DISCOVERIES MUST BE REPORTED TO THE CORONER AND THE REGISTRAR

UNAUTHORIZED DISTURBANCES OR ARTIFACTS OR SACRED OBJECTS OR HUMAN REMAINS ARE PROHIBITED

UNAPPROVED CEMETERIES AND UNAPPROVED ABORIGINAL PEOPLE'S CEMETERIES REMAIN DEFINED AS THEY WERE UNDER EARLIER DRAFTS OF THE ACT

IF AN INVESTIGATION OF A BURIAL SITE IS ORDERED THE PERSON CONDUCTING THE INVESTIGATION WILL ADVISE THE REGISTRAR OF THE POSSIBLE CULTURAL ORIGINS OF THE HUMAN REMAINS WITHIN FIVE DAYS

A WRITTEN REPORT BY THE INVESTIGATOR OR EXPERT WILL INCLUDE INFORMATION RELEVANT TO THE PREPARATION OF A SITE DISPOSITION AGREEMENT (note: this statement is not detailed in the regulations)

PUBLISHED NOTICE OF ANY UNAPPROVED BURIAL SITE SHALL INVITE ANY REPRESENTATIVE OF THE PERSONS WHOSE REMAINS ARE INTERRED TO COME FORWARD

REGULATION 8

UNLESS CONSENT IS GIVEN BY A REPRESENTATIVE OF A PERSON WHOSE REMAINS ARE INTERRED IN AN UNAPPROVED CEMETERY OR AN UNAPPROVED ABORIGINAL PEOPLE'S CEMETERY, NO PERSON SHALL,

A) REMOVE THE REMAINS OR ASSOCIATED ARTIFACTS FROM THE CEMETERY; OR

B) CONDUCT SCIENTIFIC ANALYSIS OF THE REMAINS OR ASSOCIATED ARTIFACTS

SITE DISPOSITION AGREEMENT

SHALL CONTAIN THE FOLLOWING:

LEGAL DESCRIPTION OF LOCATION AND IF APPROPRIATE, A STATEMENT THAT THE REMAINS WILL BE LEFT WHERE THEY ARE INTERRED STYLE AND MANNER OF DISINTERMENT AND REINTERRED, IF APPLICABLE

TIMING OF DISINTERMENT AND REINTERMENT

PROVISIONS FOR FUTURE MAINTENANCE

ALLOCATION OF COSTS FOR CARRYING OUT AGREEMENT

SUCH OTHER MATTERS AS THE PARTIES TO THE AGREEMENT AGREE UPON.

ARBITRATION OCCURS IF A SITE DISPOSITION AGREEMENT CANNOT BE REACHED.

ARBITRATION BOARD SHALL BE COMPOSED OF REPRESENTATIVES OF THE LANDOWNER, REPRESENTATIVES OF THE DECEASED (IE. RELATIVES) AND A CHAIR APPOINTED BY THE ABOVE.

ARBITRATION BOARD SHALL NOT ORDER THE REMOVAL OF HUMAN REMAINS AND ASSOCIATED ARTIFACTS FROM THE BURIAL SITE FOR SCIENTIFIC STUDY.

Please note that I have been selective in what I have included here. I specifically chose items that I thought were directly relevant to any physical anthropologist who might become involved in a site disposition agreement or arbitration of such. It should be clear to you that heritage interests will be informed at the discovery of unmarked burial sites; the relevant heritage groups are listed above. Notice of cemetery closures and discoveries of sites will also be placed in the Ontario Gazette and local newspapers but I imagine that some will wonder if this is still a sufficient process for disseminating information.

You will also note that scientific analysis is (specifically) not entrenched in the terms of a site disposition agreement. Such activities must be negotiated when a site disposition agreement is negotiated between the landowner, representatives of the deceased and heritage interests. The question arises, who will be presenting and/or attempting to protect any scientific interests? Arrangements will be made on a case by case basis, something which our groups have supported, but will there be anyone arguing the case for scientific analysis? I don't know if all representatives of the Ontario

Archaeology Society, for example, are fully convinced of the need for skeletal biological analysis and what their opinions might be when a site disposition agreement is being negotiated.

You will also note that the last statement under the arbitration process (which occurs if no site disposition agreement can be reached) specifically prevents an arbitration board from ordering removal of remains and scientific analysis. After speaking to Mr. Clement Lefebvre, Deputy Registrar at the Cemeteries Regulations Branch, I understand that this statement was included because it is recognized that only a Medical Officer of Health and those legal representatives of the deceased can decide if disinterment (safe if decided by Medical Officer of Health) and scientific analysis is warranted, not an arbitration board. In the case of native bands and unapproved aboriginal peoples cemeteries, I also understand that native representatives did not want to see arbitration boards order disinterment and analysis without their express approval as representatives of the deceased. Since we have known these were their concerns for quite sometime, then I suppose this statement should not surprise us.

One other issue that concerns me is the responsibility of those of us trained as osteologists. We need to think about how we will respond if cases of disinterment of marked and unmarked burial sites come to our attention. Do we need to communicate more widely with our archaeology colleagues? How will the information about site discoveries be disseminated? Who should become involved in effecting site disposition agreements? Can we become more involved? And, who are the qualified people who can carry out investigations and analyses? What problems arise with the identification of cultural origins of human remains?

The true test of the new act will be the application of it. We should start to see evidence of this very shortly. Spring is here (hard for me to believe as I write this on a cold, but at least rainy and not snowy April 16, but it is) and the yearly sampling of burial site cases should start to appear soon. I hope that we will keep each other informed of activities during the summer of '92 so that at least, we can all learn from each other.

If anyone has any comments or questions on the new Cemeteries Act and on my own comments here you can contact me at McMaster University 416-525-9140 x3903 or e-mail SAUNDERS@MCMASTER or, if you wish to talk to government representatives about the new Act I suggest you call Mr. Lefebvre at 416-326-8400.

NEWS FROM THE UNIVERSITY OF TORONTO:

The University of Toronto started a new/old programme by evolving from an M.A. Programme to a

MASTERS OF SCIENCE PROGRAMME:

Programme Requirements:

1. The Master of Science (M.Sc.) programme normally extends over a sixteen month period lasting from September to December of the following year, formal instruction being offered from September to April.
2. The M.Sc. programme may also be taken on a part-time basis.
3. Candidates are required to complete the equivalent of five full courses, one of which is a major research paper (ANT2000L). (See below)

All M.Sc. students are required to take ANT1000Y Anthropology: Theoretical Paradigms and Case Studies, and ANT2000L M.Sc. Research Paper.

In addition to ANT1000Y and ANT2000L, M.Sc. students are required to take the following courses in their respective subdisciplines:

Physical: ANT3001Y Human Biology
 ANT3002Y Primatology, Paleoanthropology &
 Osteology and the equivalent of 1 other graduate
 course chosen in consultation with their Advisor.

Patty Stuart-Macadam reports on her activities:

Conference papers:

- 1) 1991: Chacmool conference, University of Calgary. Humans versus pathogens: Iron metabolism in evolutionary perspective.
- 2) 1991: Canadian Association of Physical Anthropology. Ongoing Research at Morodvice, Macedonia.
- 3) 1992: Melbye, J. and P. Stuart-Macadam: A preliminary analysis of two Northwest Coast mummies. First World Congress on Mummy Studies. Santa Cruz de Tenerife, Canary Islands.
- 4) 1992: Paleopathology Association Meetings, Las Vegas: Preliminary Research at Morodvice, Macedonia.

Papers Published:

- 1) 1991: Porotic hyperostosis: A New perspective. AJPA 87(1):39-47.
- 2) 1991: Porotic hyperostosis: Changing interpretations. In D. Ortner and A. Aufderheide (eds), Human Palaeopathology: Current Synthesis and Future Options. Smithsonian Institution Press pp. 36-39.
- 3) 1992: Cranial thickening: A New perspective. AJPA 88:109-110

David Begun reports:

Three graduate students under my supervision are currently working on theses in paleoanthropology. Myriam Zylstra is working on a project to digitize Miocene Hominoid dental occlusal surfaces using video input and a computer-based image analysis system. Isobel Pegg is currently analyzing fossil recovered from a series of localities in the Albanian Paleolithic. Mindy Black is combining dissections and comparative osteology to analyze aspects of the functional anatomy of the hominoid forelimb. Myriam will be continuing her work here in the Ph.D. programme starting in the fall, and Isobel and Mindy will be entering the second year of their MSc. programmes.

Publications

- Begun, D.R. and Walker, A. The endocast of WT-15000, a *Homo erectus* skeleton from West Turkana. In Walker, A. and Leakey, R. (eds.) *WT-15000, a Homo erectus skeleton from West Trukana* (Title tentative). Cambridge, Belknap Press. (due out in the fall).
- Begun, D.R. 1991 European Miocene catarrhine diversity. *Journal of Human Evolution*. 20: 521-526.
- Begun, D.R. 1992 *Dryopithecus crusafonti* sp. nov., a new Miocene hominoid species from Can Ponsic (Northeastern Spain). *American Journal of Physical Anthropology* 87: 291-309.
- Begun, D.R. 1992 Phyletic diversity and locomotor affinities of European late Miocene hominids. *American Journal of Physical Anthropology* 87: 311-340.
- Begun, D.R. and Moya-Sola, S. 1992 A new partial cranium of *Dryopithecus laietanus* from Can Llobateres (Catalonia, Spain). *American Journal of Physical Anthropology* Supplement 14: 47.

Conferences:

- Begun, D.R. A new cranium of *Dryopithecus laietanus*: Implications for hominid evolution. Annual meeting of the Canadian Association of Physical Anthropology, Hamilton, Ontario, October 29-31, 1991.
- Begun, D.R. Current perspectives on *Dryopithecus*. Apes or Ancestors. Workshop on Middle Miocene hominids, American Museum of Natural History, New York, N.Y., March 29, 1992.
- Begun, D.R. Moya-Sola, S., and Gibert, J. (in press) New discoveries of *Dryopithecus laietanus* from Can Llobateres and their relevance to interpretations of hominid origins. Third International Congress on Human Paleontology, Jerusalem, August 23-28, 1992.
- Begun, D.R. and Moya-Sola, S. (in press) New specimens of *Dryopithecus laietanus* from the Valles Penedes, Catalonia, Spain. 24th Congress of

the International Primatological Society, Strasbourg, France, August 16-21.

Research

In the department, I'm glad to report that we are expanding into a new building, the South Borden Building, on the St. George campus. I have a new lab with equipment for dissection and computerized morphometrics, and plenty of space for graduate students..

In the field, I will be returning to Spain this summer to continue the analysis of the partial cranium of *Dryopithecus* recovered during last year's excavations. I will also be working at the Miocene hominoid locality of Rudabánya, in Hungary, with Dr. Laslo Kordos of the Hungarian Geological Institute, and will be beginning a new field project in Turkey with Dr. Erksin Gulec of the MTA (Ankara). My current lab research is focussed on the functional anatomy of Miocene hominoid postcrania from East Africa and Hungary and on species diversity in the Miocene and its implications for understanding great ape and human phylogeny.

NEWS from TRENT UNIVERSITY

Currently on half-sabbatical, Joseph So recently returned from a trip to Hong Kong and China, where he was conducting fieldwork at the psychiatric outpatient clinic of the Suzhou Medical College Number One Hospital. This is his third visit, and he was able to update the data he collected on previous trips. It was interesting to note that while little has changed on the surface, at least compared to four years ago, doing fieldwork has become even more bogged down in red tape. While in China, he held two seminars on migration, ethnicity and mental health, based on the preliminary data from the Ontario Health Survey. This July, he is going to give an invited paper on migration and health of Ontario immigrants in the symposium on Chinese Societies in Brussels, as part of the International Congress of Psychology. He is also on the organizing committee of a conference on refugee and mental health, with Dr. Norman Sartorius of WHO as the keynote speaker, to take place in OISE on September 25, 1992 in Toronto.

Our Anthropology graduate Michelle Linekin has received a Commonwealth Scholarship to study at the London School of Hygiene and Tropical Medicine. A major in Biological Anthropology, Michelle is particularly interested in epidemiology and medical anthropology, and has participated in the WUSC seminars in Botswana, researching the status of AIDS education in that African country.

Former Trent Master of Arts student Jennifer L. Thompson, who was continuing her education at the University of Durham (England) under A. Bilborough, has successfully defended her thesis: "The Significance of Early Hominid Cranial Variability". She was subsequently offered a junior position at the Department of Anthropology at Scarborough College, University of Toronto, which she was keen to accept. Welcome back to Canada, Jennifer!

Hermann Helmuth has by now published a paper on the body height and proportions of "Lucy" in the *Zschr. f. Morphologie und Anthropologie* and has submitted another paper on the danger of Creationism to the journal "Anthropologie" in Brno. He attended Professor B. Sigmon's symposium on Physical Anthropology in the countries of Eastern European countries and, of course, our CAPA meeting in Hamilton. He also attended the Ottawa symposium on First nations and Museums. Currently, he is working on a large scale analysis of non-metric traits in the crania from the Bavarian row-grave cemetery from the site of Altenerding.

His Graduate student, Marion Maar, is working on the metric and non-metric dental traits from this same cemetery and analyzing the correlation and asymmetry patterns of the dentition and the facial measures.

Under his guidance as well as that from a colleague in the Department of Biology at Trent, fourth-year Honours student S. Edward analyzed the "Fluctuating Odontometric Asymmetry" at the Ancient Mayan site of Lamanai. Unfortunately, it turned out that the sample size was too small to arrive at reliable results.

NEWS FROM THE UNIVERSITY OF WESTERN ONTARIO

In spite of the funding situation we are currently facing in our universities, in the last year, we have still managed to improve our physical anthropology teaching resources here at Western. Interest in the field appears to be strong and growing.

Christine White and Mike Spence will both be going to Mexico this summer to work on separately funded projects on Teotihuacan. Christine will investigate the usefulness of using oxygen, sulfur and strontium isotopes in determining 1) geographic origins of and membership in the ethnic barrios of this metropolitan city state, 2) ethnic identification of the sacrifices placed around the Ciudadela. Mike will focus on a dental analysis of health indicators and genetically-based traits of the Oaxaca barrio as a means of investigating the origins of its inhabitants, their degree of intermixture with the larger Teotihuacan population and their social structure.

Mike is also involved in analysis of archaeological material from Ontario: the Charity Site, a Huron refugee site on Christian Island; and the Libby Site, a Western Basin Tradition site.

Christine is also currently working on several other research projects including investigations into: the relationship between amino acid profiles and isotopic values in Nubian bone (with Brenda Baker, U. of Massachusetts), inter-tissue isotopic differences and short-term diet, the relationship between intensive agriculture, social status and diet in the Maya from Pacbitun (with Paul Healy, Trent University, and Henry Schwarcz, McMaster University), gender as indicated by diet and animal use in the Lowland Maya (with Mary Pohl, University of Florida and Henry Schwarcz), associations between environmental zones and differential food consumption in the Maya (with Henry Schwarcz), the use of llamas and their products to indicate transhumant behaviour in the Andes (with Teresa and John Topic, Trent University), isotopes and paleopathology (with George Armelagos, University of Florida).

The highlight of Christine's year was undoubtedly her participation in the First International Congress of Mummy Studies held in the Canary Is. (yes, and the paella was good too!). It was a wonderful idea to gather together people from many disciplines and many countries who study mummies. How fortunate for us that the Canaries themselves just happened to be a major repository of mummies! For those of you who are interested, the next meeting will be in Cartagena in 1995.

And following is some information on the

ICE-MAN

ÖTZI

THE MAN FROM THE HAUSLABJOCH IN ... ITALY! NOT AUSTRIA
THIS IS HOW HE LOOKED LIKE... (IF YOU BELIEVE A GERMAN
TABLOID).

AND A JOKE:
(that lady must
have been oooold!

Swiss woman says 'iceman' was her father

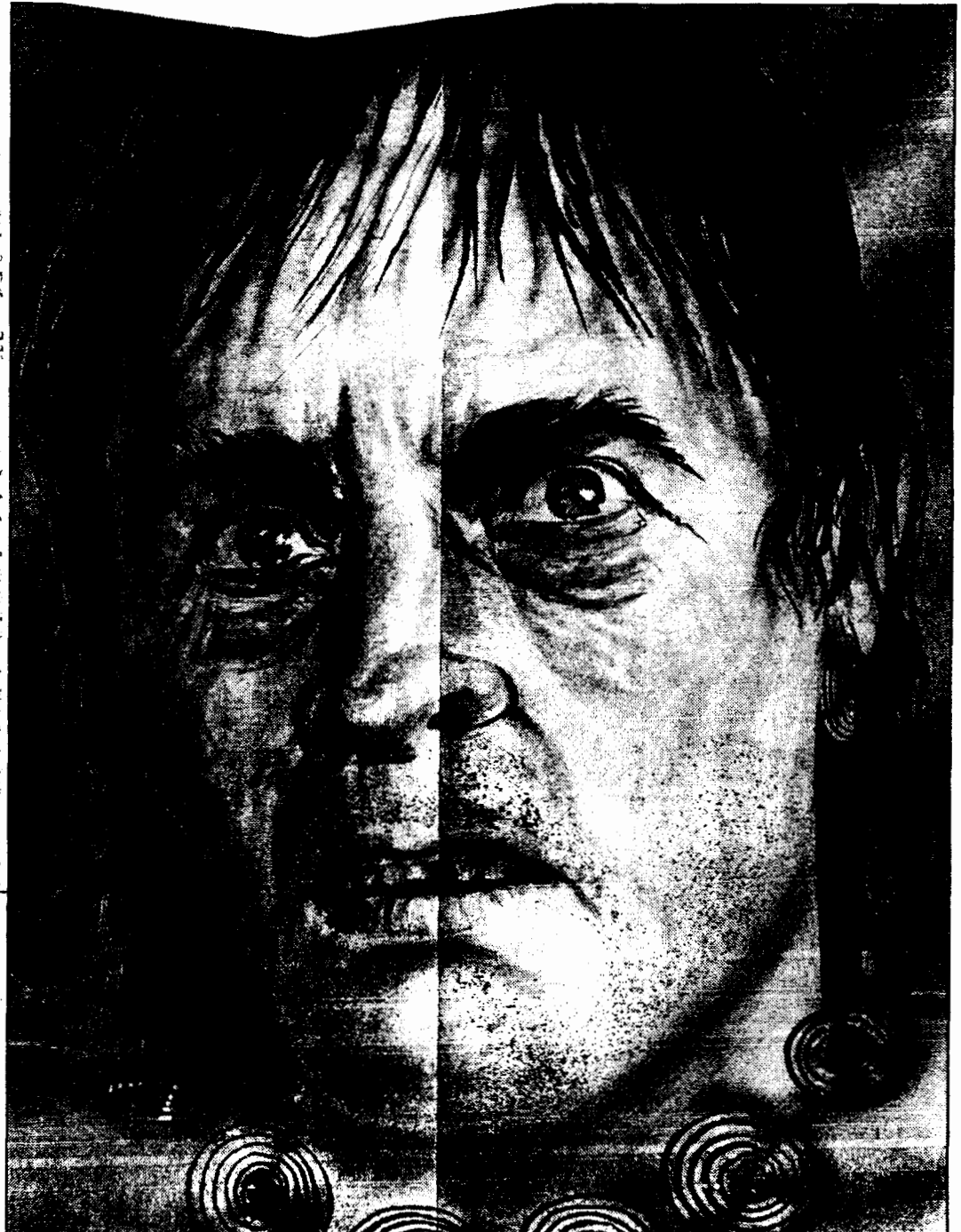
BERN, Switzerland (Reuters) — A Swiss woman claims the mummified corpse of a man found in the Italian Alps and said by scientists to date from the Bronze Age is in fact the body of her father.

The body was discovered by German hikers in an Alpine glacier last September.

A bronze axe and quiver of arrows were among weapons found beside the body.

Scientists said their initial assessment after examining the weapons and scraps of clothing was that the tattooed body was of a 4,000-year-old elite warrior.

The woman wrote to the foreign ministry saying she saw newspaper photographs of the body and identified it as that of her father, who disappeared during the 1970s on the same glacier.



Das Gesicht aus der Urzeit BamS-Zeichner Jörg Schulz trug alle Details über den Toten aus dem Öztaler Gletscher zusammen und zeichnete danach den Mann im Eis. Ohring und Halskette in Bronze sind typisch für die Zeit um 2000 vor Christi.