

FORENSIC ANTHROPOLOGY

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Case Studies from Europe

By

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FOREWORD

JANE E. BUIKSTRA

This volume develops from a long-standing heuristic tradition of presenting cases to illustrate and to teach. The European forensic anthropological case studies compiled here powerfully illustrate the significance of anthropology applied in medicolegal contexts.

Forensic publications that center upon osseous or dental structures have a long history in Europe, especially the U.K., where they have occasionally received book length treatment, as in the exquisitely detailed Ruxton Case (Glaister and Brash, 1937). Sir Sydney Smith's contributions (1939; 1959) also describe skeletonized materials, though neither Smith nor the Ruxton Case authors would have considered themselves forensic anthropologists. While the term apparently was first used in Europe in 1954 (Schwidetzky, 1954), it referred to paternity identification rather than today's more general reference to personal identification and medicolegal contexts (Stewart, 1984). As Brickley and Ferllini emphasizes in this volume, forensic anthropology, as we know it today, has developed and professionalized most extensively in North America.

This book thus traces its direct lineage to a volume that Ted Rathbun and I co-edited, entitled *Human Identification: Case Studies in Forensic Anthropology* (1984). One of our goals in creating that volume was to inform other forensic scientists, law enforcement personnel, and our colleagues in academic departments about forensic anthropology and to convince them of its special value. A parallel goal was to provide a series of examples that might be useful in teaching. We explicitly structured *Human Identification* to treat what we considered at that time to be the important subjects best suited for forensic anthropological investigation, including the unique role of the forensic anthropologist, crime scene investigation – especially excavation, distinguishing human from nonhuman bone, mass disasters, commingled remains, individuation, postmortem interval, burned bone, manner of death, biological attributes such as age-at-death, sex, and ancestry, and presenting testimony.

Fairgrieve (1999) and Steadman (2003) have edited subsequent case study collections designed to update and expand upon our volume, while Galloway (1999)

has extensively illustrated her book on blunt force trauma with case studies. Although the range of topics treated in these more recent works has not changed markedly, methods have been updated, especially those relating to DNA and computer technology, along with increased emphasis upon trauma, taphonomy, and global human rights issues. As noted in this volume, forensic anthropologists are increasingly engaged in casework involving living subjects. In the United States, the nature of expert testimony has recently been redefined by the 1993 Daubert ruling, which places increased emphasis upon scientific validity of forensic methods. While expert testimony by forensic anthropologists appears less important in Europe presently, enhanced courtroom visibility can be anticipated during coming years.

Forensic anthropology is rapidly professionalizing across the globe. As discussed here by Brickley and Ferllini, this process is now most advanced within North America, especially the U.S. Certainly, forensic anthropological consultations and research also have a long tradition within Europe, where practitioners are today found primarily within medicolegal institutions and academic departments from the social and natural sciences. It is the development of the field as a corporate entity – a profession, with its own standards in training and in practice that is relatively new. In the U.S., for example, the Forensic Anthropology Section of the American Academy of Forensic Sciences began in 1972, with an accreditation program developed by the American Board of Forensic Anthropology in 1977. As of April 1, 2006, membership in the Anthropology Section of the AAFS stood at 286, including 98 Student or Trainee Affiliates, 99 Associate Members and Members, 83 Fellows, and 6 Retired Members or Fellows. At the end of 2005, there were 61 forensic anthropologists listed as active within the American Board of Forensic Anthropology, including two retired members. For comparison, as of April 1, 2006, there were 47 members of the Forensic Anthropology Society of Europe, which was begun in 2004. Only three of the European members list anthropology units as their primary professional affiliation. As Brickley and Ferllini note in Chapter 1, the UK is the only country presently registering (accrediting) forensic anthropologists, within the Council for the Registration of Forensic Practitioners. Forensic anthropology, first listed in 2003, includes a total of nine registrants apportioned across the following categories: general forensic anthropology (8); osteology (1, individual also listed within general forensic anthropology); facial reconstruction (modeling) (1). Archaeology is considered a separate specialty and at the time of writing there were five individuals registered.

This volume provides ample evidence that forensic anthropology in Europe is a vital field, methodologically advanced and quickly developing its self-identity. Authors from across Europe have contributed case studies that illustrate their craft, as they also describe the history and current state of forensic methodology in their countries. These cases do indeed provide ample evidence that forensic anthropologists across Europe are methodologically sophisticated, well able to apply their

skills in wide-ranging contexts. This volume is thus a most welcome addition to the growing international literature in forensic anthropology, useful for students and practitioners, as well as others interested in this rapidly developing field.

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PREFACE

It was having been invited to contribute some case studies to a workshop on forensic anthropology organised by Tim Thompson, at a meeting of the Forensic Science Society in Britain, that we realised that there were no published books on British case studies, and there were, in fact, very few cases published. Not only are there a lack of published case studies from Britain, there are also very few from other European countries, and all of the edited collections of case studies currently published focus almost exclusively on the Americas.

Nowhere in Europe is forensic anthropology, as the term is used in the United States practiced, but in recent years there has been a considerable growth of interest amongst those working in Europe in the potential and possibilities that the techniques of forensic anthropology offer in assisting with human identification. Recent developments in interest in this subject area have led to a number of significant advances. For example, the area of forensic anthropology is now recognised by the Council of Forensic Practitioners in Britain, and the recent formation of the FASE (the Forensic Anthropology Society of Europe) signals the true establishment of modern forensic anthropology in Europe.

There are a wide variety of individuals within Europe who now undertake work that they would label as “forensic anthropology,” although none of them are “anthropologists” as would be defined in the Americas. Individuals in Europe come from a very wide range of backgrounds and these range from archaeology (in much of Europe this is not a sub-branch of anthropology) to medical practitioners and anatomists. In many European countries, training in medicine or anatomy is the only way that individuals can get any background that will allow them to study aspects of what in the United States might be termed biological or forensic anthropology.

The wide range of backgrounds of those within Europe who are undertaking aspects of forensic anthropology, provides an exciting base from which this field can develop. In recent years, a number of individuals who were trained in the Americas have taken up posts within Europe, and in the last couple of years a number of individuals who were educated within Europe have taken up appointments in North America. This globalization and movement of professionals across continents has led to an interaction of ideas, and a reduction in encapsulation of individuals from a particular tradition. There have also been significant interactions across continents

with many individuals becoming members of professional organisations based in different countries and increased international attendance at scientific meetings and collaboration on research and publication projects.

This book aims to bring together a range of cases that demonstrates the diversity of ideas on the practice of forensic anthropology within Europe, and also to demonstrate recent developments in this area that in many cases have arisen from an exchange of ideas between professionals from different backgrounds. We hope that this edited volume brings together the different approaches encapsulated within the chapters. Although the approach taken to forensic cases differs across Europe, and certainly between Europe and the Americas, the methodology applied in the various cases (as exhibited by the literature referred to in bibliographies) is the same. In all cases the end goal is identification, and it is hoped that the work on human identification presented within this volume will serve to illustrate current practice within Europe, and will lead to future developments both within Europe and at the international level, through increased interaction of practitioners.

Megan B. Brickley and Roxana Ferllini
2006

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This volume represents the first collection of forensic case studies assembled on European work. We are deeply indebted to all the authors who have contributed to this volume, all responded to the request to contribute with great enthusiasm and this is reflected in the range of cases and information on working in various parts of Europe that they have included in their chapters. In particular, all our authors helped with the compilation of information included in Chapter 1, and many gave us access to their unpublished work to help us write the chapter. All the chapters were sent out for external review and we are very grateful to all of the reviewers who worked on this volume with us. All our reviewers provided excellent advice and insightful comments that have greatly helped to improve the quality of the text of this book. The responsibility for any areas of this volume that could be further improved must lie with us.

We are very grateful to Stuart Laidlaw (Institute of Archaeology, University College London) and Graham Norrie (Institute of Archaeology and Antiquity, University of Birmingham) both of whom provided considerable technical help and advice regarding many of the illustrations published in this volume. Thanks are also owed to Martin Smith and Nick Haig who also provided assistance with constructing some of the illustrations.

A number of individuals generously gave their time and answered our questions, and provided feedback on the volume as we pulled it together. Particular thanks are given to Jane E. Buikstra (Arizona State University) and Wendy Birch (University College London).

Finally, considerable thanks are owed to the staff at Charles C Thomas for the enthusiasm and support they have shown throughout this project, for answering our many questions and their flexibility and professionalism.

Megan B. Brickley
Roxana Ferllini

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FORENSIC ANTHROPOLOGY

Chapter 1

FORENSIC ANTHROPOLOGY: DEVELOPMENTS IN TWO CONTINENTS

MEGAN B. BRICKLEY AND ROXANA FERLLINI

INTRODUCTION

Modern crime investigation has evolved into an intricate and sophisticated task. Specialized equipment and a multidisciplinary approach may be utilized, including analysis of questioned documents, DNA analysis, serology, ballistics, toxicology, toolmark analysis, fingerprinting, forensic entomology, odontology and anthropology among others.

Because forensic anthropologists are involved in criminal investigations, which may ultimately be dealt with in a court of law, the impact of their work can carry serious consequences with regard to the outcome of a case. Forensic anthropologists shoulder a considerable amount of responsibility, not only to the legal community, but also to the victim and the accused within the crime in question. The type of cases in which anthropologists might become involved varies considerably. However, in general terms, anthropologists often contribute to work at the scene of crime in order to help in the location and recovery of human remains. Crime scene work is frequently followed by analyses to determine whether remains recovered are human in nature or not. Ultimately within the mortuary, the analysis of human remains is geared to produce a biological profile: sex, age, biological affinity, stature, trauma, and individual characteristics are determined. A more recent development for forensic anthropologists is their being asked to assist in cases that involve living individuals (Cattaneo and Baccino, 2002), and this is illustrated by the discussion of forensic anthropology in Hungary (Chapter 13) and the case presented in the last chapter in this book.

It is the aim of this volume to introduce and exemplify the role of forensic anthropologists as a vital investigative tool within crime investigations. Cases included range from investigations involving a single individual brought forth by law enforcement agencies, to the large-scale investigations made necessary by human

rights abuses. Although the development of anthropological research has a very long history in many areas of Europe, over the last 60 years the development of specialist individuals working in forensic anthropology has been slower than the advances in forensic anthropology seen in other areas of the world, in particular North America. However, in the last decade, there have been some significant developments in the establishment of forensic anthropology in much of Europe and this volume demonstrates how forensic anthropology forms an integral part of multidisciplinary investigations in many European countries.

HISTORICAL BACKGROUND

Forensic Anthropology: The American Development

The development of forensic anthropology as we know it today has its roots in the United States of America, and it is from the point of view of the United States that the field is usually applied throughout the Americas. Those practicing in the field for the most part have attended a university in the United States, have been trained by forensic anthropologists from here in their own countries, or attended universities with a similar curriculum to those from the United States. The formal educational curriculum for those involved in this field at the university level can vary from one educational institution to the other. However, as a general rule, anthropology is taught in the United States under four general sub-disciplines: cultural anthropology (social anthropology as it might be referred in Latin America), archaeology, linguistics and physical anthropology, otherwise known as biological anthropology (Nafte, 2000; Galloway and Simmons, 1997), (Fig. 1-1). Physical anthropology concentrates on the study of the various aspects concerning the biological makeup in humans, whether in the present or the past. The discipline includes

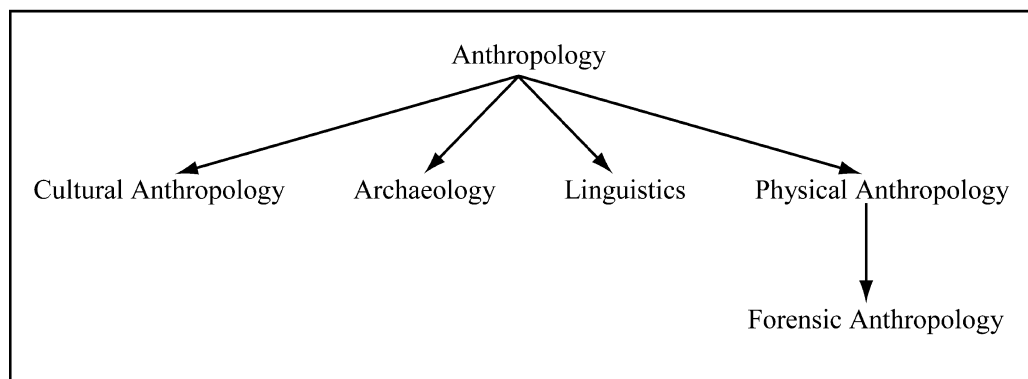


Figure 1-1. The genesis of forensic anthropology and subdisciplines as taught in many universities in the United States.

human evolution, paleopathology (the study of bone diseases in antiquity), physiological and morphological adaptation to the various environmental conditions and osteology (the study of bone anatomy). Because of a variety of specializations with regard to the study and analysis of human remains, physical anthropologists must gain an in-depth knowledge of the human skeleton. As a result of their specialist knowledge, many physical anthropologists have become involved in forensic cases, and are resultantly known as forensic anthropologists.

The genesis of forensic anthropology within the United States occurred in the late nineteenth century at the University of Harvard, Massachusetts, where anatomist Dr. Thomas Dwight (1843–1914) conducted various studies concerning the human skeleton. Some of his main areas of study included the estimation of stature, age determination from cranial sutures, sex determination and skeletal variability (Stewart, 1979; Joyce and Stover, 1992).

Some of Dwight's work was carried on, and refined by a student of anthropology at Harvard. His name was Dr. George Dorsey (1869–1931), and he contributed greatly to the ongoing interest of the use of the human skeleton for the purposes of identification. One of his main areas of interest, determination of sex by the measurement of the humeral or femoral head, was achieved by using skeletons available at the Field Columbian Museum in Chicago where he was a Curator (Stewart, 1979). In 1897, he became involved as an expert witness during the Luetgert case in Chicago. This case involved a Polish immigrant who was accused of killing his wife and disposing of her body in a large steam vat located on the premises of his business, the A.L. Sausage & Packing Company. For the first time, forensic anthropology was used within a court of law, and during the proceedings Dorsey contradicted some of the findings put forward by renowned anatomists of the time; this in itself was unheard of. By today's standards, his testimony and findings might seem lacking in rigor, but nonetheless, this step was a crucial one on the road of development for forensic anthropology (Joyce and Stover, 1992; Ubelaker and Schammell, 1992).

Another important figure in the development of the discipline in the United States was Dr. Aleš Hrdlička (1869–1943). Although best known as founder of physical anthropology in the United States, his participation within various legal cases involving human remains gave the discipline a start on the legal front. His participation with the Federal Bureau of Investigation (F.B.I.) came about in the early twentieth century while working at the Smithsonian Institution's National Museum of Natural History, a link that continues today between both organizations (Ubelaker, 1999; Ubelaker, 2000a). After Hrdlička, during the 1930s and 1940s, forensic anthropology played a more integral part in the analysis and identification of human remains, and its application to cases being pursued by the F.B.I. One important contributor during this period was Dr. W. M. Krogman (1903–1988) from the Western Reserve University Medical School in Cleveland, Ohio, who published an article in 1939 entitled *Guide to Identification of Human Skeletal Remains* in the F.B.I. Law Enforcement Bulletin. This publication served the physical anthropolo-