The Country Tooth Drawer

The Country Tooth Drawer, (Fig. 1), Artist unknown. Early 19th Century hand coloured mezzotint. Printed for, and sold by Bowles & Carver, 69 St Paul’s Church Yard. Menzies Campbell catalogue number HC.J.16.X.53.

The print seems to be a copy, laterally reversed, of the woodcut (Fig. 2) (HC.J.16.X.21), one of a pair with The Town Tooth Drawer (Fig. 3) (HC.J.16.X.20), by William Davison of Alnwick (1781-1858) who worked as both a printer and a pharmacist in Alnwick, Northumberland. He copied the prints of Edward Dighton (c1752-1819) and published them in Some Alnwick Caricatures c.1812-1817.

The Menzies Campbell collection contains many representations of tooth extraction but this one has particular charm. While the facial expressions are comically exaggerated the detailing and background are quite sensitively depicted, and the view through the window of the forge is an elegant miniature landscape.

The scene and its contained elements of patient, blacksmith operator, supporters and spectators, are all typical of the genre but one can only speculate on the significance (if any) of the eye-bandage, the tankard on the window sill, the uplifted broom or the tears in the operator’s clothing.

Print from The Menzies Campbell Collection at the Surgeons’ Hall Museum Edinburgh, reproduced with permission of The Royal College of Surgeons of Edinburgh.
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Contributions on the History of Dentistry from any source are welcomed. Word and JPEG files by e-mail are preferred but other formats are acceptable.

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Spring Lecture 2010 by Dr G. Howard Moody

Our Spring Lecture was delivered by Dr G. Howard Moody on 13th April at The Royal College of Physicians and Surgeons of Glasgow. Dr Moody’s subject, The History of Forensic Odontology, proved to be an absorbing and sometimes harrowing account of his work as a forensic odontologist for Lothian and Borders Police. Forensic odontology is a speciality in which dental principles are applied to legal cases. The audience heard that it has two main applications: identification of the dead, either individually or in the aftermath of mass disasters, and bite mark analysis in criminal cases. Dr Moody recalled that in a career spanning twenty-eight years he had been involved in 119 cases of identification, 71 bite marks and 24 on other topics. He noted that forensic odontology is not a new discipline, and referred to an example of its use in Nero’s Rome (AD 37-68), followed by a reminder that it was a Scottish case, ‘His Majesty’s Advocate vs. Pattison et al’ [See DHM, 2:1, pp. 6-12] which made medico-legal history being the first in the United Kingdom to attempt the identification of a corpse from its dentition.

Although forensic odontologists are often called ‘experts’, Dr Moody explained that it was their function simply to give an opinion. There are no full time forensic practitioners in the United Kingdom; most are general dental practitioners. Dr Moody has assisted the police in several high profile cases, notably, the Lockerbie Disaster of 1988 and the terrorist bombing attacks at London’s King’s Cross in 2005. Using illustrations from police records, he detailed the process of identification and the problems which face the forensic odontologist before outlining the increasing sophistication of the technology available to practitioners. It became clear to the audience that this constantly developing branch of dentistry can be pivotal in bringing criminals to justice and occasionally in absolving the innocent. In mass disasters it is currently the principal means by which the remains of victims can be identified and returned to grieving relatives.

Sadly, some of the cases which Dr Moody presented invoked reflection on the quality of modern Scottish society. The retired teacher who died alone in her Edinburgh tenement flat, whose remains lay unnoticed by neighbours for years; or the necessity to age discarded human foetuses and neonates from the histological examination of their nascent dentition. Throughout the lecture Dr Moody used the term ‘tragic’. It is an apt word.

Autumn Lecture 2010

The autumn lecture will be combined with the Menzies Campbell Lecture. It will be delivered by Dr Judith Miller, Orthodontist, Research Affiliate at the Wellcome Trust for the History of Medicine, London. Dr Miller is also an Hon. Fellow in the KNH Centre for Biomedical Egyptology, University of Manchester. Her particular interest is in the history of dentistry in ancient Egypt. Title to be announced.

‘Speak Gently to Them’: A new approach to John of Gaddesden on dentistry

In this article Dr Jo Cummins rehearses her recent lecture to the HNHDRG at the Royal College of Physicians and Surgeons of Glasgow. Dr Cummins believes that the dental chapters of the medieval medical text known as the Rosa Anglica by the 14th century physician John of Gaddesden have suffered from a lack of serious study. There is currently no complete English translation of the dental chapters of the Rosa. Consequently the dental content of the book is more often talked about than actually read and John of Gaddesden’s advice on dentistry is scorned by modern commentators without reference to the original text. In order to alleviate some of this entrenched criticism of the dental material, Jo Cummins takes a fresh overview of the entire dental text which produces some thought-provoking results and contrary to the usual literary stereotype of medieval physicians, reveals the author of the Rosa Anglica as a humane and sometimes humorous man.
The Biggar Murder: Some personal recollections

On 6th August 1967, the strangled body of 15-year-old Linda Peacock was found in a Lanarkshire cemetery. The subsequent murder trial established Forensic Odontology as a criminal science. For the first time in Scottish Legal History a person accused of murder was convicted principally through the identification of bite marks on the victim’s body. In this article, Professor Ronnie Laird, who was personally involved in preparing the dental evidence for the Court, reflects on the facts and the impact of this historic case.

The Methusalen Denture: An old box with a story to tell

In this intriguing account, Paul Geissler reveals the contents of an old box which was found during a recent overhaul of the storage rooms at The Royal College of Surgeons of Edinburgh.

Word of Mouth: Prisoner of the Turnip Heads

Eugene Feldman returns as our Word of Mouth reviewer to consider the wartime memoir entitled Prisoner of the Turnip Heads by the young British police officer, George Wright-Nooth who was imprisoned by the Japanese at Camp Stanley, Hong Kong in 1941. At considerable personal risk, Wright-Nooth kept a diary during his years in the camp. His notes record the cruel treatment of the native Chinese by the occupying Japanese army and observe the daily routine of the POWs including the determination of one man to provide dental treatment for his fellow prisoners.

The Dental Dame

David McGowan reviews Open Wide the memoirs of Dame Margaret Seward.

Web News

Carol Parry, Library and Heritage Manager of the Royal College of Physicians and Surgeons of Glasgow continues to guide us around the World Wide Web. In this edition she highlights images relating to the history of dentistry which can be accessed via the Internet.
Obituary

Margaret Barr, better known to her colleagues in the dental profession as Margaret Stirling, died on 22nd December 2009 of incurable cancer, a disease she had been suffering from for many months, and which she faced with great courage and the unfailing support of her doctor husband, Andrew.

After attending Hutchesons Grammar School in Glasgow, Margaret entered the first dental course at the University of Glasgow, where she was an excellent student graduating BDS in 1952. After some early experience of dental practice in Glasgow and London, Margaret set up her own general dental practice in Barrhead, near Glasgow. It was unusual in those days – the 1950’s – for a young woman to be a Principal in general dental practice but Margaret achieved this most successfully, demonstrating her resolution and resourcefulness as well as her clinical and administrative skills.

A naturally bright, friendly and kind person, Margaret enjoyed meeting with her professional colleagues, socially, attending dental meetings of the British Dental Association, the Glasgow Odontological Society and working for improvements in dental practice and education.

She joined the Paisley and District Section of the British Dental Association and as a young dentist became the first woman to be its chairman. This in turn led to her involvement in the West of Scotland Branch Council of the British Dental Association. There she was an excellent Council Member, well informed, articulate with a purposeful optimistic manner – a kind of polished ‘yes, we can’ approach always laced with good humour and accompanied by that lovely smile of her’s, her fellow councillors could only capitulate! In 1972, at the young age of 43, she was elected President of the West of Scotland Branch – the first woman to be honoured in this way.

Margaret married husband, Andrew, in 1978 and they were blessed with 31 years of happy marriage. Andrew had been a ship’s doctor and he introduced her to cruising. They became dedicated cruisers for 24 years and were booked to be on the last voyage of the QE2 to Dubai a few months ago, their 65th voyage, but had to cancel because of Margaret’s health.

Margaret especially enjoyed people and making friendships. She was a great supporter of charitable causes including the Benevolent Fund of the British Dental Association and on one occasion won a Volvo car in the Christmas Raffle. It could not have happened to a more deserving person, but she then had to explain to all her friends that she only sold tickets – and was not involved in the draw!

During her life and work, Margaret contributed greatly to her profession. Practically, modestly and graciously she achieved so much and paved the way for others to follow. Her shining example will remain with all of us who were privileged to know her.

David Mason
John of Gaddesden (1280-1361), is one of the medieval physicians who are mentioned in Chaucer’s Canterbury Tales. John was born in Little Gaddesden in Hertfordshire. It is likely that he came from a landed family but since there is no record that he inherited a family fief or estate, he was probably a younger son. In medieval England the law of primogeniture ensured that only the eldest son inherited the patrimonium. If a younger son remained at home to sit at his brother’s fireplace and feed at his table he risked invoking the disapproval of his relatives. He may well have earned the contemptuous nickname ‘hearth son’. In such circumstances a young man was wise to try to make his own fortune, perhaps in the mesnie, (military retinue) of some prominent baron or if he was academically inclined, in a vocation such as Medicine, Law or The Church.

In 1294, when John of Gaddesden was only fourteen years of age, the records begin to reveal the boy’s efforts to make his way in the world. In that year he appears in the Register of Oxford Grammar School which prepared pupils for entry into the colleges of The University of Oxford. Two years later, in 1296, John matriculated at Merton College, (the alma mater of St. Thomas Becket). He studied ‘The Seven Liberal Arts’, and received a Master of Arts in 1303.

At this point in an academic career, a medieval student was required to choose a postgraduate course. John chose Medicine and after six more years at Oxford, he became a Doctor of Medicine in 1309.

It passes belief, but on graduating as a Doctor of Medicine, John need not have treated or even examined any patients. He was expected only to be book-learned a living library of the classic medical writing of Hippocrates, Galen, Avicenna and other respected authors. The foundation of his knowledge was, ‘The Doctrine of Humours’ which underpinned all medical science in the Middle Ages including dentistry. Humoural doctrine described the human body as composed of four elements, that is: earth, air, fire and water, and the four humours: blood, phlegm, black bile and yellow bile. These four elements and humoural fluids were in turn associated with four qualities: hot, cold, moist and dry, with the four seasons of the year and with the four stages of life: adolescence, prime, decline and decay. Thus drawing together these elements, fluids and conditions, the adolescent body was characterized as hot, moist, airy and associated with the springtime of the year while the old man was cold, dry and prone to wintry melancholy.

In a healthy person the humours were in balance. All disease was considered to be the result of a gathering or a deficit of one or more of the humours. It was the physician’s job to identify the peccant humour, that is the humour which was responsible for the affliction and to restore the natural healthy balance by purging, medication and advice on diet and exercise. Surgery, of any kind, was regarded as a failure of the physician’s art and a last resort.

After leaving university John set up practice in Oxford and London. His reputation soon attracted the attention of The Royal Household and he was appointed Court Physician to Edward II. His medical textbook, which was known as the Rosa Anglica (The English Rose) was ‘published’ in this period, probably in 1314. Since graduation from The University of Oxford conferred clerical status John eventually became a Canon of St Paul’s Cathedral.
The Biggar Murder
Some Personal Recollections
by Ronnie Laird

The Biggar murder occurred over 40 years ago. At the time it generated considerable public, press, and professional interest as it was the first occasion in Scotland that an accused had been convicted primarily on the basis of the relatively new science of forensic odontology particularly with relevance to bite marks, although such evidence had been used to support convictions elsewhere in the United Kingdom. Virtually all of the major players involved in the investigations and the subsequent trial are now deceased, and although considerable effort was made to locate those who might still have been alive, this met with no success. Access to relevant publications was also difficult.

Accordingly much of this account is written from personal memories and involvement at the time. I must accept however that memory dims with the passage of time, and as a result some of this account may lack accuracy, although hopefully not veracity. To quote Shakespeare: ‘Old men forget’ and for any inaccuracies therefore I take full responsibility.

A quiet market town
Biggar is a relatively quiet market town of some 3000 people situated in the Scottish Borders equidistant between Glasgow and Edinburgh. It is a town with impressive historical roots, and may even be the site of Scotland’s oldest settlement. Today it is a farming community with a thriving tourist industry. Curiously enough, one of its main attractions is murder mystery breaks. However it was no fictitious mystery which occurred on the early morning of 6 August 1967, when the body of a 15 year old girl was found strangled and beaten in the cemetery adjoining a local church. The ensuing investigation and subsequent arrest and conviction of a young man for her murder was instrumental in giving full recognition to forensic odontology as a criminal science, and established an approach in using that science which still applies today.

The investigating team was led by Detective Chief Superintendent William Muncie of Lanarkshire Police, and later Assistant Chief Constable of Strathclyde. Muncie had an enviable record of solving murders. He was considered by colleagues and public alike to be Scotland’s finest detective. Regardless of his eminence however the main thrust of the investigations leading to a conviction was undertaken by Dr Warren Harvey of Glasgow Dental Hospital and School and Detective Inspector Osborne (Ossie) Butler of the Identification Bureau of the City of Glasgow Police.

Harvey was already a regional expert lecturer to the Scottish Detective Training School but his contribution to this case undoubtedly established him as the leading forensic odontologist in the United Kingdom. His success in the Biggar Case resulted in his regular involvement with further forensic work (albeit not quite so dramatic) together with the publication of the standard textbook on the subject.

Loaningdale Approved School
Although the Police interviewed almost 3000 townspeople in Biggar and the surrounding area it was for them perhaps a fortunate twist of fate that there was an Approved School (Loaningdale) in the vicinity of Biggar. Since it was situated within easy walking distance from the scene of the crime the Police focussed their enquiries on the school.

‘Career criminals of the future…’
One Scottish newspaper reported that Loaningdale housed ‘career criminals of the future’. But this was not strictly accurate. In fact Loaningdale Approved School held some 35 boys aged from 15 to 17 years, who had been convicted mainly of low level crime; misdemeanours such as theft, truancy, and road traffic offences. All with the expectation of rehabilitation.

Approved schools are residential establishments
which are aimed primarily at the rehabilitation and education of young people who have committed crimes rather than for their punishment. Unlike prisons they are not staffed by warders but by a headmaster, qualified teachers and often a housemother. Loaningdale Approved School which was opened in 1963 near Biggar was such a school, albeit somewhat different from others in its overall concept. It was not a locked or secure unit. It was an experimental institution with a permissive approach. There was no strict control of the boys. The emphasis was on the development of a culture of self discipline. Thus the inmates were allowed a considerable degree of freedom of movement to enable them to lead relatively normal lives and build up self confidence and trustworthiness prior to their return to society. The school was described as having more of a ‘boarding school’ atmosphere than an institution for offenders. The relaxed regime at the School was confirmed by the report that on the Saturday previous to the murder, the accused had been on unaccompanied leave in Edinburgh before to going to a cinema in Biggar and thereafter to a travelling showground - again unescorted.

At the time Loaningdale School was the first and only one of its type in Scotland. It was expected that boys who were sent there would, in time, become good citizens. It is notable however that prior to the murder, the headmaster of Loaningdale had decided that 17 year-old Gordon Hay (the accused) was unsuitable for this tolerant regime. He had already put arrangements in place to have him transferred to a more disciplined environment.

Questions in parliament

In spite of having a so-called illustrious Board of Management, the School was subject to considerable criticism. In a 1968 parliamentary debate, Lord Ferrier condemned Loaningdale on several counts. Ferrier said that the School was inappropriately located, there was a lack of local community involvement, he questioned the latitude allowed to the inmates and the parties taking place at the School. In addition it was relatively common for the boys to contact and meet local girls by means of various signals.3

The Investigation

There were various investigations prior to the arrest and trial of the accused but it was the dental evidence which made a dramatic impact at the trial. As it was the principal factor in securing a conviction for the murder it generated great public interest. The post-mortem on the young victim had revealed that there was evidence of trauma in the form of head wounds, a ligature mark on the neck, and an oval shaped bruise and laceration to her right breast which was suggestive of a bite. When photographs were produced DI Butler became aware of the situation and asked to see the bruising for himself. Butler was a detective with over 15 years experience of marks left by traumatic injuries to a body by tools or weapons. After his inspection of the body, he arranged for further photographs to be taken. He suspected that some of the trauma might have been caused by a bite. He was the first to suggest the need for a dental expert to further the case. Professional help came in the form of Warren Harvey who confirmed that the trauma was indicative of a bite mark which could not have been self inflicted because of its position. Furthermore based on personal observations of patterns made by a limited number of animal bites together with its circular shape he was of the opinion that it was most likely to be a human one.

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At this point suspicion increased about the proximity of Loaningdale School which was only some 500 yards from where the body was found. As a result arrangements were made to carry out a dental examination and obtain impressions from staff and inmates of the School. The intention was to determine whether there was anyone whose dentition might correspond to the marks on Linda’s breast. A total of 29 persons were asked to allow dental impressions to be taken. They were told the reasons for this and that they could refuse or have the services of a solicitor. All agreed to cooperate however and impressions were obtained of their mouth and identified only by number. The dental team therefore was not aware of the identity of anyone whose impressions were taken at this stage. However one unusual feature of the investigation was that the impressions were taken prior to the arrest of any suspect. As this was not the usual procedure it later became the subject of an unsuccessful legal challenge by the Defence at the trial.

Elimination by impression

Once the impressions had been recorded they were poured in dental stone and subjected to detailed examination. This allowed the elimination of all but five persons as the pattern of the dentition of the remainder was such that it could not have made the mark on the breast. At this stage it was consid-
ered most likely that the bite mark had been made by the person identified as Number 14 due to the pattern of tooth loss in the anterior region of the mouth. However in order to attempt to orientate the relationship of the jaws to the bite mark, further impressions were taken of the remaining five possibilities together with jaw registrations and facebow recordings, with the resultant casts being mounted on a moveable dental articulator in order to determine the pattern of occlusion. This helped to eliminate a further four individuals including (presumably to his relief) Number 14 leaving only the casts of Number 11 as a possibility. It transpired later that Number 11 was Gordon Hay.

The Crown was informed of the situation at this stage but was minded that the dental evidence was insufficiently robust to support a conviction. There did not appear to be acceptable detail or clear points of similarity between the marks on the body and the teeth of the suspect to demonstrate beyond reasonable doubt that the mark could only have been made by the teeth of Hay and no one else. Further analysis was therefore required. In this respect more detailed examination of the photographs of the area demonstrated two small circular marks about 1-2 mm in diameter on the contused tissue of the breast, each with a dark periphery and a pale centre. It was these marks which turned out to be crucial to the case for the prosecution. Harvey was of the opinion that these could have been made by pressure from an implement (in this case the teeth) part of which had a raised edge and a depressed centre. Taking this observation further he was able to demonstrate a similar situation in that occurring in the photograph by the simple expedient of pressing a small bore glass cylinder on to the nail bed of one of his fingers. The pattern on removal left a red peripheral depression with a raised pale centre, similar to the marks on Linda Peacock’s breast.

The investigating team now were much clearer about what was required of them which led to the re-examination of the casts already obtained. They were now able to demonstrate that both the upper and lower right canines from the casts of Hay’s mouth showed a pattern of cuspal maldevelopment with a raised circular edge which suggested their capability of making the mark seen on the breast post mortem. The mounted casts on the articulator also demonstrated that the cuspal tips of the upper and lower right canines could not be brought into contact unlike those of the left thus protecting their anatomical form from wear. It was also determined that Hay had suffered from an inflammatory illness in childhood at an age when it might affect the development of the cusps of the canine teeth. The evidence was mounting and appeared to be conclusive. The investigating team however was still not fully satisfied.

In spite of the increasing weight of the dental findings it was questioned whether this pattern of tooth malformation and the subsequent bite mark could have been made possibly by a person with a dentition similar to that of Hay. There appeared however to be little or no evidence on the prevalence of such anomalies in a population drawn from that age group. This encouraged Harvey to undertake a dental examination of several hundred young adults in a similar age and socio-economic background at an Army training camp. Over 1000 canine teeth were examined in respect of pitting and/or hypocalcification. The findings were essentially negative indicating to him that the situation was relatively unique. Consequently he could link the marks on the breast to the teeth of the suspect Gordon Hay with confidence.

Thus it was that by painstaking effort, original thought, and observation that both Warren Harvey and DI Ossie Butler were able to determine with a degree of certainty that the marks made on the right breast of Linda Peacock had been made by the teeth of Gordon Hay. In retrospect the only piece of evidence that was missing was a statistical analysis of probability of the findings from the examination of the Army recruits. This would have given a level of scientific backing to his findings. Unfortunately that form of analysis was not in common use at that time.

The Trial

The trial of Gordon Hay took place at the High Court of Justiciary in Edinburgh in February 1968.
before Lord Grant and a jury composed of nine men and six women with Mr Ewan Stewart Q.C. appearing for the Crown and Mr W.I. Stewart Q.C. for the Defence. It has been suggested that it was a unique case (primarily in relation to the dental evidence) but the conduct of the investigation also had important legal implications particularly in relation to gathering of evidence. In this respect the first two days of the trial were taken up by legal argument in the absence of the jury, regarding whether the police had exceeded their remit by obtaining impressions of the accused before he was formally charged and whether as a result these could be admitted in evidence. The argument from the Defence was not against the scientific evidence however, but rather that it had not met legal requirements in obtaining it. This was of crucial importance; if the bite marks could not be admitted in evidence the case would surely have fallen as they were the only proof of identity which could connect Hay directly with the crime and its locus. However Lord Grant ruled in favour of the prosecution and the bite marks were duly presented as evidence.

Puzzling and in some ways unique

Thus commenced a trial which in his later address to the Jury, Lord Grant described as grave, serious, difficult, puzzling and in some ways unique. Although the evidence was not restricted to the dental identification of the bite marks, they played a significant and perhaps principal part in the case for the prosecution. In arguing the case the jury had to be convinced on the allegations related to the dental evidence, and convinced to the criminal standard of proof namely beyond reasonable doubt. These allegations were firstly that the marks were indeed tooth marks and that they had been made by a human dentition. Secondly that the features recorded in the photographs of the traumatised tissue could be caused by teeth with an anatomical form seen in the casts of the right opposing canine teeth. Thirdly, that this pattern was replicated in the teeth of the accused. Fourthly that the jaw relationship of the accused was such that it was physically capable of producing the configuration of the bite, and finally that the dental anomalies present were so rare that it would be highly unlikely that the marks on the victim’s breast could have been made by anyone other than the accused.

With such a high requirement Harvey prepared his expert evidence meticulously, spending almost 400 hours in its preparation. Firstly he was able to demonstrate that the features seen in the bite mark were human as opposed to animals which might have attacked the body. An animal bite mark would have differed from that made by a human due to the form of their teeth which were often adapted for diet. This was explained by reference to the types of mutilation which would have resulted from a cat or dog bite. Besides having different anatomical form of teeth animals had different shaped upper and lower dental arches being less rounded than in a human which would have precluded their leaving the pattern of mutilation seen on Linda Peacock’s breast which corresponded only to that which could be made by the human oral anatomy. In addition the position of the bite mark indicated that it could not have been self inflicted.

In reference to the anomalies present in the right canine teeth there was little argument that these were present in the teeth of the accused. The fact that they could have been responsible for the occurrence of the circular marks present had been demonstrated by obtaining copper plated models of the teeth and pressing them into the breast tissue of a female volunteer which resulted in producing a similar pattern. Finally by virtue of conducting a detailed dental examination on a matched group of volunteers, it was established that the condition was sufficiently rare that it would have been most unlikely that the bite marks under investigation could have been made by anyone other than the accused as the teeth and jaws exhibit such a large variety of individual characteristics.

Apparent weakness in the dental evidence

Nevertheless in retrospect this appears to be a weakness in the dental evidence as no statistical analysis was undertaken to give an objective evaluation of probability. However it convinced the jury. Today it might be expected that such evidence would be superseded by DNA analysis which might appear more reliable.

Nevertheless, to give an idea of the crucial importance of the dental evidence it is of interest to note that it alone extended over two days of examination and cross examination and occupied around if the bite marks could not be admitted in evidence The case would surely have fallen...
400 pages of the 1100 pages of the Court transcript. As Expert Witness, Warren Harvey spent in excess of five hours in the witness box.

At the end of the trial following Lord Grant’s address to the Jury, Hay was convicted of the murder of Linda Peacock by a majority verdict. As he had been under 18 years of age at the time of the murder he was ordered to be detained during Her Majesty’s pleasure.

The appeal
An appeal was lodged in May 1968 against the conviction on the grounds of inadmissibility in relation to the dental evidence collected. The appeal judge, Lord Clyde, and his colleagues were unanimous however on the fact that the warrant for recording the impressions issued prior to any arrest being made was quite legal and accordingly dismissed the appeal and found the warrant and the resulting evidence admissible.

Comment
Establishing that the teeth of the accused made the bite mark was subject to argument. The marks for comparison for instance were limited in number and although it was suggested that four or five points of comparison were sound, unlike fingerprints there was no recommended minimum. However Simpson, who was an expert of international standing, had no doubt that the mark was a human bite mark and had been inflicted close to the time of death primarily because of the tissue reaction around the marks and the fact that they were still distinct when photographed. Although the marks were few he was of the opinion that it was the quality, rarity and highly characteristic appearance which was important. Detail was of more value than number.

The links and strands of Scots Law
The fact that the dental evidence was accepted and considered significant was not in itself sufficient to prove murder. For instance no one had seen Hay attack Linda Peacock and the only evidence connecting him with the crime was related to the bite marks. The marks therefore were circumstantial evidence lacking corroboration, which is a requirement in Scots Law. A person cannot be convicted by the testimony of a single witness. Circumstantial evidence is important however as it can be used to establish an allegation where there may be doubt, by linking and connecting it to other known facts.

Lord Grant explained it more succinctly in his address to the Jury where he likened it as being developed rather like links in a chain or preferably the strands of a rope. The more strands or links which can be proved and come together the more compelling is the evidence. Of particular importance in this case for example was proving, in addition to the dental evidence, that the bite was inflicted at or around the time of death. This would place the accused at the locus at the same time. That this was the case in regard to Hay’s whereabouts was accepted from the expert testimony of Professor Keith Simpson. It was also accepted that Hay was seen at the School around 10 pm. but was missing for the subsequent 30 minutes. This was important as Hay had lodged a special defence of alibi, claiming that he was in the dormitory of Loaningdale School at the time of the attack. In the case of alibi the onus of proof is on the defendant and if Hay’s alibi had been accepted or there had been any doubt about it, that would have been the end of the case. He was however unable to prove his alibi even to the lower standard of proof of balance of probabilities. Hay’s defence of alibi was destroyed by witnesses who testified that he had been absent from the School at the relevant time and by the dedicated police work of Constable Kinniburgh who although older and presumably less fit than the accused, was able to follow a route which showed that he would have had sufficient time to have left the School, reach the cemetery, murder the victim and return to the School within the suggested time scale. These pieces of evidence, together with the fact that Hay’s jeans were stained with earth on his return were suffi-
cient to allow the jury to convict to the criminal standard of proof of beyond reasonable doubt.

Counsel for the defence

Little has been mentioned regarding the evidence put forward by Counsel for the Defence, Mr W I Stewart. Apart from the special defence of alibi, which was not upheld, the Defence produced two expert witnesses in respect of the dental evidence. Although both were dentally qualified neither claimed to have any expertise in forensic odontology and one of them did state that it was beyond his field of knowledge. They were unable to match the teeth with the bite marks with any certainty although one did accept that the presence of developmental pits was a rarity. It is notable that compared to the time spent by Warren Harvey in his preparation for the trial the Defence dental witnesses spent only a total of some nine hours between them. It was perhaps not entirely surprising therefore that their evidence was not sufficiently convincing.

Gordon Hay

Outside of the Police or Forensic services it is quite rare for the average citizen to come into close contact with a murderer. Public Opinion is thus largely formed from stereotypical material garnered from the media. Unusually I came into contact with Gordon Hay on several occasions which allowed me to assess his personality. Although forming such an opinion is clearly subjective and based solely on my meetings with Hay for the purpose of the investigations and subsequent trial, I believe that it was a legitimate Exercise. Whether it sheds any light on his character or possible motivation for his crime is another matter.

The embodiment of evil?

Gordon Hay was from Aberdeenshire, the son of a farm labourer. He had been sent to Loaningdale Approved School for breaking and entering. He did not have any record of assault or violence, sexual or otherwise. There was no pattern in his previous behaviour that suggested he was a risk to anyone. The question must arise therefore whether this was an assignation which went tragically wrong or whether there was intending malice. He had only been at Loaningdale for a limited time. I was aware that as he was considered to be resistant to discipline and had a serious problem with authority, he was going to be transferred.

Nevertheless during our preliminary investigations he cooperated well with taking impressions of his mouth and other dental examinations and was quite talkative, although it was difficult to determine whether he fully appreciated the seriousness of his situation. He presented to me as a relatively pleasant, well turned out and easy-going individual. This however was not a view shared by Warren Harvey who regarded him as the embodiment of evil. This became more apparent to me however when after being found guilty and sentenced he was heard to say on leaving the dock ‘I thought I had got away with it.’ Since he was detained at ‘Her Majesty’s Pleasure’ many years ago in the 1960s it is likely that Hay will have been released after serving his sentence. It would have been interesting to learn whether he had continued to offend and become a ‘career criminal.’ I am reliably but anecdotally informed by those familiar with statistical matters that the majority of teenage criminals stop re-offending by their mid twenties. In spite of extensive efforts to access the Police Criminal Database I have been unable to determine whether or not this was the case with Hay. In the absence of any later press reports to the contrary this might have been so.

Conclusion

The Biggar Murder was unique in that it established forensic odontology as a recognised and respectable scientific procedure in the fight against crime. The case set an important precedent for the future. According to Lord Grant the Scottish record in adopting advances of science has not always been remarkable but Courts have a duty to follow scientific discovery as far as they can. In addition the evidence of an expert does not necessarily need to be accepted. Indeed experts often disagree in their interpretations. They are not witnesses of fact but rather of opinion, and must explain the rationale for their investigations and the basis for the inference and conclusions drawn. It is then up to the Jury to accept or reject their arguments. It is gratifying however that bite mark evidence was used again in Scotland without argument only some two years later to support a murder conviction. 7

Of the group of authors involved in the publication in the Journal of the Forensic Science
I am the sole survivor and although considerable effort was made to track down others of the investigating team it seems that I am in a similar situation there. Although closely involved with the early aspects of the investigation, and maintaining an interest throughout all the proceedings including the trial, as the most junior member of the team this was essentially in a minor capacity. As far as forensic odontology was concerned I could claim no particular skills other than those possessed by the average dentist. At the trial I appeared only as a witness of fact and most certainly not as an expert. I was essentially a ‘Gofer’ but considered myself fortunate to have had the opportunity to have been allowed to work with such a dedicated and skilled team involved in such a significant advance in criminal detection.

The main thrust and expertise behind the investigation was however undoubtedly Warren Harvey with enthusiastic support from Ossie Butler, and later input by John Furness. The conviction was significant in that it resulted in the first conviction in the United Kingdom based primarily on evidence developed from forensic odontology.

Protection of the Innocent
There does remain however one aspect of the case which is rarely mentioned but is important and deserves to be so.

Whilst it is true that the bite mark ensured the conviction of suspect Number 11, that is Gordon Hay, it must also be remembered that when the features recorded were subjected to detailed investigation it also ensured the innocence and allowed the elimination of suspect Number 14 (who had been the original first choice) from further enquiries.

References

Further reading

Acknowledgement
Researching this subject after a gap of over 40 years was challenging to say the least. I am therefore most grateful to Dr. Keith Eynon who gave considerable assistance in attempts to locate various Police Officers involved in the investigation, although his efforts were unfortunately confounded by the Grim Reaper.

Author: Ronnie Laird
Professor Emeritus, University of Birmingham.
When Pharoah Thutmose II died in 1479 B.C. after a short reign he left only one young son to succeed him, Thutmose III. However the latter was not the son of the ‘Great Royal Wife’, Hatshepsut. (The name means foremost of royal ladies.) Hatshepsut was the fifth queen-pharoah of the eighteenth dynasty of Ancient Egypt the late pharoah’s wife and half-sister. The new pharoah was the son of a lesser wife of Thutmose II. Queen Hatchepsut reacted to the succession by proclaiming herself the rightful ‘King’ of Egypt. She asserted that she was not only her father’s intended heir but also that he had made her the heir apparent of Egypt. She therefore became co-regent with Thutmose III and assumed the responsibilities of state as the ‘Great Royal Wife’, and the wife of the god Amun. But her decrees were made in the name of the reigning boy king, Thutmose III.

In the seventh year of the young king’s reign the queen assumed the double crown of upper and lower Egypt and the five royal symbols: the two scepters, the false beard, the short loin cloth (kilt) and the bull’s tail which signified power. She proclaimed herself to be the daughter of Amun-Ra, the king of the Egyptian gods who had chosen her to succeed him. Although she occupied the throne alongside Thutmose III, Hatshepsut did not attempt to usurp him. Indeed, even if two ‘kings’ reigned there was only one royal government. The queen trained the young king in the duties of royalty. Under her tutelage, Thutmose III became a notable war chief. But Hatshepsut herself is known for her peaceful, prosperous reign and as one of the most prolific builders in ancient Egypt. Manetho, the Egyptian priest and historian, (3rd century B.C.), recorded that Hatshepsut reigned for almost twenty two years. She was distinguished by her subtle intelligence and iron will. When she died, Thutmose III succeeded as sole ruler. As chief mourner he performed Hatshepsut’s funeral rites but later, in order to consolidate his power, the king erased all references to her name and removed all images of her from the temples.

Searching for Hatshepsut
Early in the 20th Century, the celebrated British Egyptologist, Howard Carter (1874-1939), explored Hatshepsut’s tomb in The Valley of the Kings near Thebes. The excavation was carried out in the same expedition in which he discovered the tomb of Tutankhamun. Hatshepsut’s royal tomb was given the identity number KV20. Alas, it was found to be empty. More recently the Egyptologist, Zahi Hawass, the Secretary General of Egypt’s Supreme Council of Antiquities, led a far reaching investigation aimed at finding the embalmed remains (mummy) of the queen. Hawass searched for exhumed mummies but it was a difficult task. The bodies of the royal dead had been dispersed and hidden by the ancient Egyptian priesthood to protect them from the grave robbers which they knew would be
attracted by the treasure buried in the tombs sometimes in the wrappings of the mummies themselves. Zahi Hawass founded ‘The Egyptian Mummy Project’ which studies mummies by CT Scanning which is an imaging technique that recreates the body in three dimensions. 6

The investigation begins

Accompanied by a team of researchers, Hawass began his investigation with a visit to a small tomb located in front of KV20, called KV60. This burial place, which was discovered by Carter in 1903, contained two mummies of the 17th Dynasty: a small one, identified as that of the royal wet-nurse Sitre-In, and an obese mummy which was found close by on the ground.

After clearing the entrance to the tomb, Hawass found a simple wooden box that contained the remains of the obese woman. On examining her he observed that she had been laid out in a regal pose with her left arm folded across her chest in the manner of the pharaohs. Hawass was therefore convinced that this mummy was of royal ancestry. He removed both mummies to The Museum of Cairo for further examination. 8

Eventually this remarkable burial site, which had originally been excavated during the 19th Century, yielded more than a dozen mummies of pharaohs from several dynasties, including Ahmose I, Thutmose I and III and Rameses II. 9 The two female bodies were named ‘Unknown Woman A’ and ‘Unknown Woman B.’ Intriguingly, Hawass found a sealed urn along with the bodies bearing the name, Hatshepsut.10

Dark Corridors

After the exhumations, the bodies were stored in The Museum of Cairo. Eventually the two unknown females were relegated to dark and dusty corridors and forgotten. It was to be a long time before the two women saw the light of day again.

However as new investigative techniques were developed, further examination of the Museum’s collection became possible and a comparison of the four mummies was undertaken. A 3D scan of each mummy was carried out by Doctor Ashraf Selim, a radiologist, and Doctor Hany Abdel Rahman Amer. Each scanned 3D Image was compared to the data scans on Thutmose I, II and III. The investigators soon came to a conclusion: the bodies of site DB320 were ruled out.11

Comparative study of a royal bloodline

To confirm the blood connection between the two
other mummies and the descendants of Thutmose, the experts carried out DNA examinations. Samples were taken from the hip and femur of the two female mummies and were compared to those of Hatshepsut’s grandmother, Queen Ahmes-Nefertari. It would be months before the results were known. The investigation could not go any further at this stage. Which of the two mummies would be Hatshepsut? The obese woman or the wet nurse?

**A queen short of a full dentition**

At this point, Zahi Hawass remembered the funeral vase bearing the queen’s seal. The vase was scanned and as expected, it contained embalmed organs. Nothing extraordinary was noted except for the presence in the jar of a fragment of a molar tooth. It was already known that one of the two mummies had poor teeth.

**Dental Investigation**

Professor Galal el-Beheri, a professor of Orthodontics of The Dental Faculty, University of Cairo, was approached to examine the body’s teeth. The Professor carried out a study of the facial scanning, compared the teeth with the fragment found in the urn, and finally came to the conclusion that the piece found in the urn of Tomb DB320 belonged to a molar from the jaw of the obese woman of Tomb KV60. The report mentioned a fragment of 1.6 cm-large tooth for a space of 1.7 cm.

Hatshepsut had been found. It is estimated that she had died around fifty years of age. The discovery was officially announced on June 27, 2007.

*Dr Riaud wishes to thank Dr Zahi Hawass, whose help was invaluable in preparing this article.*

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7. Hawass, (a) and (b), 2007.
9. Hawass (a) and (b), 2007.
15. Hawass, (b) 2007.

**Author:** Xavier Riaud, DDS and historian, Nantes.
An Old Box with a Story to Tell

‘The Methuselan Denture’
by
Paul R. Geissler

During a recent rearrangement of the storage rooms within the Royal College of Surgeons of Edinburgh, an old box came to light which was found to contain an aged vulcanite full upper denture along with a series of letters which revealed its history. The denture had been donated to the Edinburgh Dental Hospital and School in 1982 at a time when there was correspondence in the *British Dental Journal* about ‘Methuselan Dentures’. After the closure of the Edinburgh Dental Hospital, the School’s historical collection, including the aged denture, was transferred to the Museum of the Royal College of Surgeons of Edinburgh. It was saved but never fully investigated. The recently discovered history of the item, with quotations from the original documents, is of some interest.

From *BDJ 1982, May 4, p. 302.*

A Methuselan denture

*Madam,*

I recently examined a patient who was wearing a partial upper acrylic denture, replacing his upper right central incisor. On questioning him, it transpired that the denture was made in Canada in 1947, following a traumatic rugby injury sustained while he was a young Royal Naval officer, serving in one of His Majesty’s ships.

The prosthesis was very clean, and the gingival condition underneath the acrylic was excellent. Surprisingly, very little wear had occurred to the incisal edge of the porcelain tooth and the acrylic has never needed repair.

I should be interested to hear whether any other practitioners have any patients with partial dentures of 35 years standing, or whether my patient should apply to the Guinness Book of Records for recognition!

*Peterborough,*

T.R. King

This was followed by a further letter:

From *BDJ 1982, June 15, p. 398.*

*Madam,*

Your correspondent, Mr T.R. King (*BDJ, May 4*) may like to know of a friend of mine, whose acquaintance I first made in 1947, who wore full upper and lower dentures made in vulcanite in 1916 when he was in the armed forces. By his death in 1960 he had not needed to have them renewed.

Should my friend's name go in the ‘Guinness Book of Records’, as 44 years of excellence of workmanship demand?

*Cambridge*

Subsequently the following letter was sent by J. Graham Stewart of Cluny Gardens, Edinburgh, to Professor Charlton, Dean of Edinburgh dental Hospital and School.

*June 20, 1982*

*Dear Professor Chalton,*

I invite your attention to the *BDJ* of June 15th, page 398, letter headed ‘A Methuselan Denture, in which a dentist asks whether his deceased denture wearing friend's name should go into the Guinness Book of Records.

Before 1962 I worked one session a week as a General Dental Practitioner in Southfield Hospital, Edinburgh. That had previously been a tuberculosis hospital but by the late forties was a geriatric assessment unit. One day I saw an old lady receiving walking exercise in an area outside the surgery in which I worked, and noticed the absence of a front tooth from the upper denture.

My invitation to enter my surgery was accepted, and the outcome was that I made a new upper denture for her (I cannot remember whether she had lower teeth) and induced her to give me her old upper denture. This was of vulcanite with platinum pin front teeth.

Various factors convinced me of its age. She said that her teeth had been extracted and the denture made before her marriage. She knew the date of her marriage. The fitting surfaces of the denture indicated that there had been recent extractions. She said that the extractions had been done and the denture made by a dentist in Princes Street, Perth. (I cannot now remember whether she remembered the dentist's name.) In last century and briefly in this century my grandfather, James Stewart (surgeon dentist 1878) practised in Princes Street, Perth. He was succeeded by one of his dentist sons, another James Stewart, LDSEd (my uncle Jim). Thinking that uncle Jim might have treated the lady, I asked her whether the dentist was a young man, and she said ‘Oh no, he was an old man.’

At that time my mother was still alive and I was able to ascertain from her the year of my paternal grandfather's death, which was before my birth in 1907. I presented the denture and the information which I had elicited at a meeting of the Odonto-Chirurgical Society, and subsequently gave the denture and notes about it to Professor Boyes. You, I presume, will have inherited the items which Professor Boyes had accumulated for the museum which he hoped to establish when space was available (including reconstruction of an early 20th century workshop, for which I gave him a rolling mill, and for which I could, if you wish, give a swaging hammer, an iron block, and a tree trunk to support it).
If you can find the information which I gave to Professor Boyes (alas, I did not retain a copy) you may care to report this case to the BDJ. The denture was given to Professor Boyes in a cardboard cubical box in which pots of tooth cleaning paste, pretentiously called by the suppliers ‘prophylaxis paste’ were then sold. The salient points and dates in this story were recorded on gummed white labels stuck on the box. It is probable that the denture is still in that box.

Yours sincerely
G. Graham Stewart

Enclosed in the box was the full upper vulcanite denture accompanied by the following notes:

**Denture Box with Full Upper Vulcanite Denture**

*Mrs Christina Macdonald
F/- worn until Feb 7th 1962
Born April 3, 1879*

Upper teeth extracted at age 19 (1898) and F/- fitted one week later by James Stewart, Princes Street, Perth. She went back once for adjustment, as denture was too tight. Had no further trouble and F/- has never been repaired.

Mrs Macdonald described James Stewart as an old man. He was therefore Graham Stewart’s grandfather, who had died in 1903. His son James Stewart was a young man at that time. The appearance of fitting surface supports the patient’s emphatic statement that this is the original full upper denture.

**Conclusion:**

After 62 years successful usage by Mrs Christine Macdonald, this full upper vulcanite denture must be the clear winner as a Methuselan denture.

*Guinness Book of Records please note!*

**Author’s Note:**

The shield-shaped recess on the fitting surface of Mrs Macdonald’s denture (Fig. 2 above) may be either a relief chamber (although these usually cover the incisal papilla) or a suction chamber. Readers suggestions on its purpose are welcome.

**Editor’s Note:**

The photograph above is of a 200 year old set of dentures which were on display at The Museum of London in 2006. They belonged to Arthur Richard Dillon (1721-1806), Archbishop of Narbonne, France. His coffin in St Pancras Graveyard London was opened by archaeologists during excavations preceding the opening of a new rail link. The dentures were still in the Archbishop’s mouth. They are made of porcelain with gold springs and may have been constructed for him by the Parisian dentist, Nicholas de Chemant before the Archbishop fled from France to England in order to escape the French Revolution.

JC.

**Author:** Paul R. Geissler
Curator, Menzies Campbell Collection
In January 1940 George Wright-Nooth, aged 23, arrived in Hong Kong to begin his assignment as a Probationary Assistant Superintendent of Police. Young Wright-Nooth was fresh from a year’s training course at the Metropolitan Police College in Hendon, England. At this time in 1940, the war in Western Europe appeared to be at a standstill yet only a few months later the Germans had occupied France and forced a British retreat onto the beach at Dunkirk.

In Hong Kong the Japanese Army swiftly over-powered the British troops and police force who were stationed on the island. Afterwards, in April 1942, both military and civilian personnel were imprisoned at Camp Stanley, which was named after an area of the island. George Wright-Nooth was detained in Camp Stanley for three years and eight months. At considerable personal risk he kept a diary of his experiences in the camp from 1942-1945, using whatever scraps of paper came to hand. In the end he had more than 1,000 assorted diary pages. Forty years later, his daughter persuaded him to use his diary as the basis for a book. The result was *Prisoner of the Turnip Heads* which he published with the help of Mark Adkin in 1994.

Although the book mainly concerns the experiences of British prisoners, there were other nationalities incarcerated in Camp-Stanley. Out of the 3,000 interned, 2,500 were British, 390 were American and 60 Dutch.

After the occupation, more than a million people, mostly Chinese, came under Japanese control. Food became dangerously scarce everywhere. The camp population was plagued with hunger and everyone became pre-occupied with securing enough rice, the staple diet, for their next meal. But despite this starvation, Wright-Nooth concedes that in retrospect, the living conditions in Camp Stanley were better in comparison with the brutality which was endured by prisoners in other Japanese POW camps. Nevertheless Stanley had its own horrors. The camp had women and children inmates who were mainly the dependents of military families and British civilians who had been employed by the local government.

In order to conserve food, the Japanese set about reducing the civilian population from approximately one million to around half that number. They pressed the Chinese to flee north to the mainland or starve to death. In some cases the Japanese towed boats laden with desperate Chinese out to sea. Once they were in open water these unfortunate people were shot and the boats burned under them. Diseases related to malnutrition conveniently carried off many more. In these conditions Chinese families became homeless. The Japanese subsequently imposed a curfew and used dog patrols, to attack and kill people who had no option but to remain on the streets after the curfew. In a short time the civilian population fell to around 650,000. Life was a desperate trial for everyone.

The camps were bursting at the seams, there was no sanitation, and only a meagre diet of rice and
water. Japan was not a signatory to The Geneva Convention which stated that prisoners should receive at least 2,400 calories a day. Wright-Nooth calculated that his intake was no more than about 850 calories.

Yet Camp Stanley was lucky in one major respect. There were no epidemics of cholera or dysentery. Conditions were far worse in camps in Manchuria and Japan. Wright-Nooth felt that this was due to the presence of a number of prisoners who had medical qualifications: there were forty physicians, six pharmacists, two dentists, and almost a hundred trained nurses.

Nevertheless, tuberculosis and malaria were a constant threat. Beriberi and pellagra were only contained by medicines sent into the camp by a doctor before he too was imprisoned. Homemade yeast was produced in an old ambulance van used as a laboratory and bran was purchased from the town. In starving people, cuts and scratches are apt to fester. Personal hygiene became very difficult. Wright-Nooth vividly remembers the hardships with washing, shaving, and keeping his teeth clean. Dried bones were used to treat carious teeth.

Dentistry in the prison camp

The first significant dental reference in Prisoner of the Turnip Heads are these extracts from his diary:

9 April, 1944

"One is now reduced to cleaning one’s teeth with ashes. Better than nothing but not as good as toothpaste, and one missed the fresh antiseptic feeling in one’s mouth after a good brush. Four razor blades have now lasted me for four months and will have to go on lasting for many more. Razor blades are a fantastic price, and it’s either blades or food….”

10 June, 1944.

“In desperation I have found a substitute for soap, which I have now used for over a month. It is wood ash, and today I scrubbed my whole body with it. I found it quite effective. Little did I think when I left England that one day I would be reduced to eating two bowls of rice a day, cleaning my teeth with lye and rubbing my body with wood ash. It is really funny.”

Although Wright-Nooth recalls that there were two dentists in the camp, only one was qualified. The unqualified practitioner was a dental technician named Sammy Shields who performed treatments which were much appreciated by the POWs. One of Sammy’s patients survived having eleven teeth out at one session. Another had twenty-five extractions. But in the latter case, the patient subsequently developed a severe infection. The author remarks that the qualified dentist had been a government employee but he seemed uninterested in his work and had fewer patients than Shields. However Wright-Nooth found treatment by Sammy Shields a painful experience:

“He used an old foot-driven drill which seemed to be linked in some mysterious way with a dilapidated Singer sewing machine, the handle of which was turned vigorously by Sergeant Phil (his assistant).”

By the end of the war, Shields had acquired considerable experience. His skills were formally recognized and he was awarded an honorary university degree in dentistry which permitted him to practise in Hong Kong. Eventually he became a deservedly wealthy man.

At the end of the war Wright-Nooth made another reference to an oral condition:

24 August, 1945

“I am suffering from beriberi. My legs have swollen and if I press the skin around my ankles the impression remains behind. This is one of the symptoms. Of all the damn silly times to get this nutritional complaint is now when I have more to eat…My face has also swollen up and I have sores in my mouth. A few days’ good eating will soon put me to right…”

After his release and recovery, George Wright Nooth returned to his former occupation. He became a Deputy Commissioner of The Royal Hong Kong Police. He received The Queen’s Police Medal, The Colonial Police Medal for Gallantry and The Governor’s Letter of Appreciation for his work in Stanley Prison Camp. He died on 12th June 2002. He married Frances Gregory in 1949. She predeceased him. They had one daughter.
David McGowan
reviews
‘OPEN WIDE’

**Memoir of the Dental Dame**

by
Margaret Seward,
The Memoir Club, Durham, 2009
£19.95, pp. 336.
ISBN: 978-1-84104-107-0

The autobiography of our first (and only) dental Dame is a characteristically frank and open account of a life of professional achievement combined with family care. The expression ‘work/life balance’ could have been invented for Margaret Seward. Despite having known her as a friend and colleague for over 40 years, I still found fresh reminders in this book of the scope of her contribution to the recent history of dentistry in the UK, and learnt of many aspects of which I had previously been unaware.

Margaret had a happy childhood in a home which also housed the dental practice of her adoptive father, John H. Mitchell, a Glasgow trained LDS. She relates that the smell of oil of cloves was familiar to her from an early age.

She enrolled at the Latymer School in Edmonton, in September 1947 (arriving 24 hours early in an excess of zeal!) and so began an association which culminated in her becoming Chairman of the School Governors. This rise from keen beginner to the leadership is a pattern which was to be repeated throughout her life. Seeing where she thought change was needed and where progress could be made, she pursed opportunities with single-minded determination. As this book reveals, a ‘networker extraordinaire’, Margaret acquired the respect, affection and admiration of those who knew her, and used all her powers of persuasion to enlist their support in her successful campaigns. She championed the cause of women dentists and saw their professional standing steadily increase to such an extent that many female practitioners today do not appreciate that there was ever a problem.

A staunch advocate of ‘the dental team’ she overcame the fears of dilution, and was the GDC President to preside over the decision to introduce registration for all those involved in the provision of dental care.

All the journalistic training and experience acquired at the BDJ and the IDJ have been brought to bear on her book, which reads enjoyably despite the enormous amount of detailed information it contains. She juxtaposes the personal and the public in an entertaining way and the story marches on from training at the London Hospital, (and marriage to Gordon) to Highlands General, the birth of two children, the teething project, the survey of women dentists, the BDJ, the BDA Presidency, the GDC Presidency, the IDJ and finally, to the Chief Dental Officer appointment and retirement - with a job on the side as Secretary of her local Church – Will there be even more appointments? Who knows!

Several internet websites provide images relating to the history of dentistry. Google ‘images’ will produce thousands of related items. A quick way of searching for dental images is by using the ‘Images from the History of Medicine (IHM)’ website. This website, from the United States National Library of Medicine, has published portraits, photographs, caricatures and graphic art illustrating the social and historical aspects of medicine dating from the 15th to the 21st century. Searches on ‘dentistry’ reveals a wealth of relevant illustrations from all round the world including Dr Twister’s device (1894) for retaining timorous would-be patients and various scenes of tooth extraction including a French caricature entitled ‘Dentiste Occasionel Au Moyen-Age’ which depicts a knight sitting on a cannon with one end of a string attached to a tooth and the other end attached to a cannon ball; the dentist stands by ready to fire. Dentistry pictures can be accessed from Wellcome Images which has historical images from the Wellcome Library collections as well as contemporary clinical and biomedical sciences. Of particular interest is a doctor’s signboard from China. From the wooden top hang 20 cords (54 cm long) on each of which are strung 25 human teeth, some of which show signs of cavities. I’m not convinced that this would encourage new patients!

Google images: http://images.google.co.uk/
Wellcome Images: http://images.wellcome.ac.uk/
Dear Ms Tomlin,

It is surprising that you interpret the article by Professors Kaufman and MacLennan as supporting the view that Robert I (1274-1329) suffered from leprosy. The authors sought only to review and make fair comment about the history of the anatomical analysis of the skull as the facts stood in 2001.

Furthermore the paucity of primary written sources on the subject and the shortcoming of the Lanercost Chronicle, which you mention in your letter, are fully acknowledged. The article continues to draw attention to the unlikely diagnosis of leprosy by quoting the viewpoint of the eminent medical historian Dr Carol Rawcliffe, University of East Anglia. They write: “Dr Rawcliffe believes that the leprosy label was probably an English canard and points out that Robert I was not the only king to be wrongly described as leprous—another was Henry IV, [of England] who is now known to have died of heart disease.”

Your second objection refers to the apparent absurdity of the authors’ remarks on interpreting personality from the facial reconstruction of Bruce’s skull. To answer this point it is useful to quote the actual words which the authors used. They write that the reconstruction, ‘gave the impression of a fearsome, ruthless and cunning warlord...’ The vital words here are, ‘gave the impression’. Clearly the authors are describing a subjective response to the reconstructed face of one of Scotland’s most revered medieval rulers. They are in no way suggesting that the reconstruction provides scientific evidence of his personality; indeed one has only to refer to Professor Kaufman’s recent article for Dental History Magazine (3:2 pp. 7-11) to appreciate his disdain for the pseudo-science of phrenology.

Your last objection rehearses the same opening paragraph of the article which reads: ‘This gave the impression of a fearsome warlord...the type of individual required to defeat opposition in Scotland, keep Edward I at bay, and hammer his pleasant but less effective son into the ground.’

Evidently you have misunderstood the ‘son’ to whom the authors were referring. The individual in view is Edward II (1284-1327) son of Edward I of England, and not as you suppose, Robert I’s son David II (1324-1371). [The Robert II to whom you refer was the Bruce’s grandson who succeeded to the crown in 1371.]

A reader who is acquainted with Scottish history of this period would ascertain that since Edward I was known as, ‘The hammer of the Scots’, the authors were making a playful aside on the irony that his heir was ‘hammered’ by the Scots at Bannockburn. It is however acknowledged that there is no evidence to suggest that Edward II was ‘pleasant’.

Jeanne Tomlin of Oregon USA has written commenting on the article, ‘Robert the Bruce and Leprosy’ by M. H. Kaufman and W.J. MacLennan. in the ‘HNHDRG Newsletter’ of April 2001:

Dear Sir,

I wanted to comment on a couple of issues with an article (admittedly a rather old one). You must be aware that original sources provide little or no evidence that Robert Bruce suffered from leprosy. There is only one contemporaneous slightest evidence that his Scottish contemporaries thought he was ill and that was inaccurate in other details saying he was ill when he was in Ireland leading an invasion. Nor is there the slightest evidence that his Scottish contemporaries thought that he suffered from leprosy. Therefore, stating that he probably suffered from a ‘leprosy-like’ illness such as syphilis or leprosy is rather a stretch. This seems to indicate a substantial ignorance of the current understanding of the reign of King Robert I.

However, even more so I was struck by the inaccuracy of the comment in the article that a facial reconstruction shows he was ‘a fearsome ruthless cunning warlord: the type of individual required to... hammer his pleasant but less effective son into the ground.’

Other than the absurdity of the idea that a facial reconstruction or facial features would indicate someone’s personality, this leaves the impression that the writer of the article was remarkably ignorant of Scottish history. I’m not quite sure where the impression comes from that Robert II [sic] was a particularly pleasant person (although one could contend with reason that he was substantially less effective than his father). But how, pray tell, would Robert I ‘hammer his son into the ground’ when he died when the boy was Five Years Old?

Again, I admit that this is an old article but it is the kind of thing that people doing a search are likely to use for research and it’s rather slanted and inaccurate information is disturbing. It is possible, one supposes, that King Robert died of leprosy, but the evidence of what he died of is very lacking and I have yet to see even slight evidence that Scots at the time believed that he had leprosy. Perhaps an addendum to or update to this article would be a good idea.

Sincerely, Jeanne Tomlin

Unfortunately, Professor W. J. MacLennan, one of the authors of the article to which Ms Tomlin refers, is now deceased. However the editors are obliged for the response of his co-author, M.H. Kaufman, Emeritus Professor of Anatomy, in preparing the following reply:
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Apology:
In the previous edition of Dental History Magazine 3:2, p. 30, technical difficulties prevented the proper reproduction of qualification certificates which belonged to dentist, William Patrick, the grandfather of Mrs Susan Forrest. We have therefore reprinted improved versions of these below.

Fig. 1. Glasgow Dental Hospital and School
Early Class Certificate.

Fig. 2. Registration Certificate
as a dental student with Robert Austin, 1909.
**BEINN EIGHE**

*Oil* on canvas, 56 x 36 cms, signed P Barton 1992, by Peter Barton MA, MDS, MB, BS, MRCS, LRCP, (1921-), in the collection of Khursheed and Kate Moos. After wartime military service Peter attended the Sir John Cass School of Art in London. He subsequently qualified in dentistry (1952) and medicine (1954), and became a consultant oral and maxillofacial surgeon in Oxford. He gave up his appointment to paint full time in 1983, and had his studio in Sheildaig, Wester Ross till, in 2002, the onset of Parkinson’s disease put an end to his hill walking. Peter has exhibited widely in Scotland and England and a large number of his works are held in public and private collections.