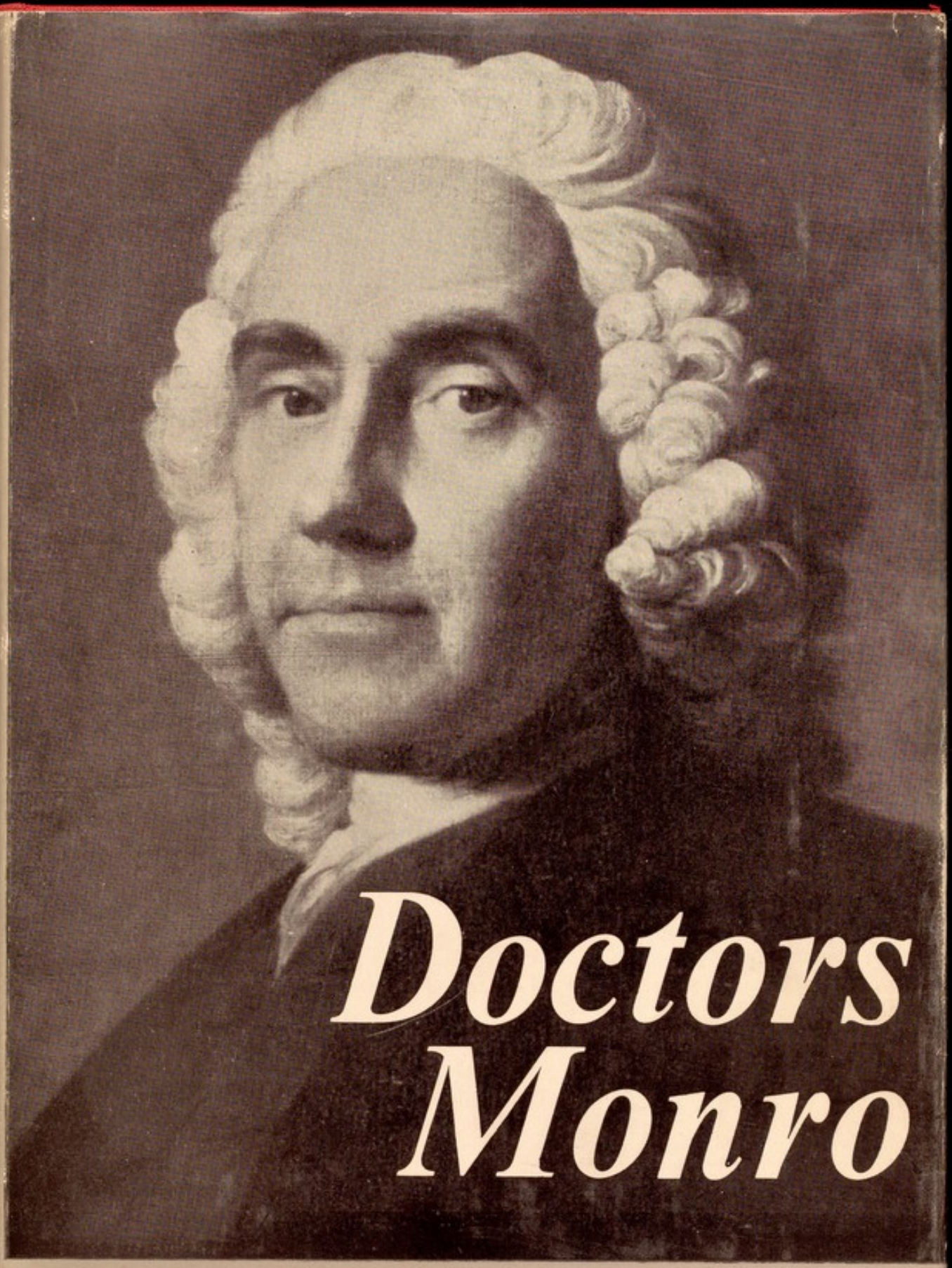
Doctors Monro : a medical saga / by Rex E. Wright-St. Clair.



Doctors Monro

R. E. WRIGHT-ST. CLAIR

DOCTORS MONRO

In 1694 John Monro, surgeon son of Sir Alexander Monro, returned to his native Scotland from Leyden inspired with the idea of establishing a great medical school and teaching hospital in Edinburgh on the Leyden pattern. Although he himself never attained public position he must be regarded as the real founder of the Edinburgh medical school, for much of the success of the whole scheme depended upon his planning and unceasing efforts. He lived to see his project a complete success when, with his son Alexander installed in 1725 as first Professor of Anatomy, Edinburgh was becoming recognised as one of the leading centres of medical teaching in the world.

Dr. Wright-St. Clair traces the record of Sir Alexander Monro's medical descendants who, besides John and the three Alexanders who reigned supreme for 126 years as Professors of Anatomy in the University of Edinburgh, include eleven doctors in the direct line. The fifth generation was represented by Dr. David Monro who emigrated to New Zealand and was knighted for his services as the first Speaker of the House of Assembly. Dr David's descendants continue to produce doctors down to the eighth generation.

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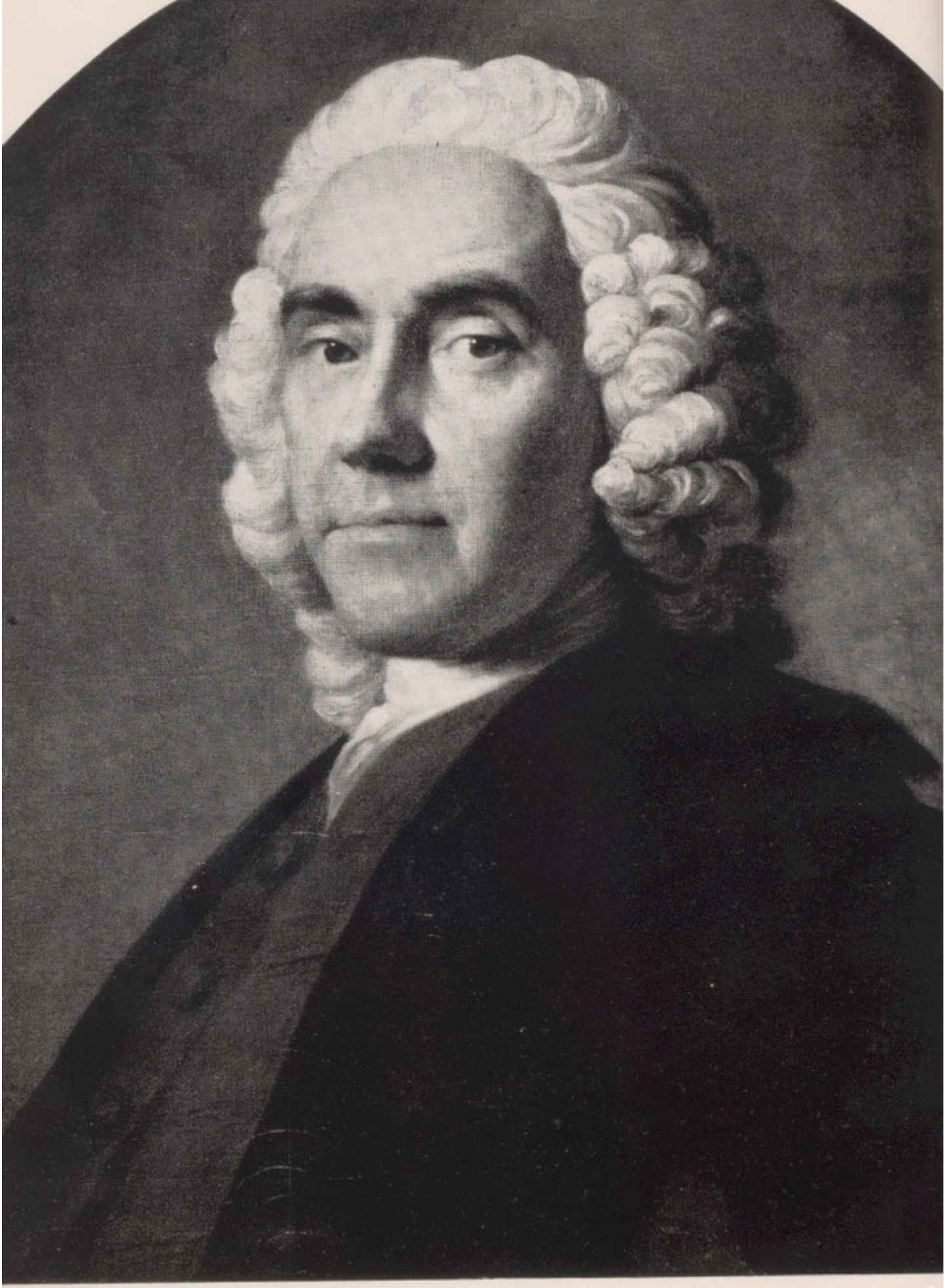
DOCTORS MONRO: A MEDICAL SAGA



1 Alexander Monro *primus*, 1697–1767

From the portrait by Allan Ramsay at Auchinbowie House

Doctors Monro

A MEDICAL SAGA

By
REX E. WRIGHT-ST CLAIR

LONDON

THE WELLCOME HISTORICAL MEDICAL LIBRARY

1964

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Dedicated to

SIR CHARLES HERCUS

D.S.O., O.B.E., M.D., B.D.S., D.P.H., F.R.A.C.P., F.R.A.C.S.

Dean Emeritus of the University of Otago Medical School

in appreciation of his helpful interest through
all stages of the preparation of this book.

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Contents

Illustrations

Introduction

AMONG the descendants of Sir Alexander Monro of Bearcrofts, who died in 1704, sixteen practitioners of medicine are known, most of them of considerable eminence in their profession: this book concerns their lives and their work; in particular, the influence that this remarkable family had on the establishment and development of the great Edinburgh Medical School. If there are other medical descendants I have missed, I apologise for the omission and will be most interested to hear of them.

It will perhaps obviate confusion if I mention that the famous London family of Monro, in which five successive generations in the direct line of descent held the qualifications of M.D. (Oxon.) and F.R.C.P. (Lond.) and were physicians to Bethlem Hospital, belonged to the Fyrish branch of the clan, tracing their descent from the fourteenth Baron of Foulis through Alexander Monro, M.A., D.D., Principal of St Andrews and Edinburgh Universities, a contemporary of his namesake of Bearcrofts: this branch is thus connected only in the most distant way with the Milntown family to which Monro of Bearcrofts belonged and which descended from the ninth Baron of Foulis. Another possible source of confusion is with Alexander Stewart Monro (1872–1932), M.D., C.M. (Manitoba), F.R.C.S. (C).), F.A.C.S., sometime President of the Canadian Medical Association. This Dr Monro was reputed to be related to the Edinburgh Monros but this proved to be a false trail: he was born at New Rattray, near Blairgowrie in Perthshire, and on tracing his ancestry back through several generations I found no connection with the other family.

I first became aware of the Monros when, as a student at the University of Otago, Dunedin, I was introduced to the Monro Collection of books and manuscripts housed there. Through the enthusiasm of the late Mr W. E. Linton, then Librarian to the Medical School, and his predecessor, the late Dr W. J. Mullin,

I realised the value and importance of this collection and became interested particularly in Sir David Monro, an important figure in the history of the colony, as well as the link through which the collection came to New Zealand. The present work was first suggested to me by the late Professor Charles Singer, of revered memory, in conversation at his hospitable Cornish home in April, 1959; and he continued to take great interest in its progress and to give me much practical help until the time of his death. The book was made possible by most generous grants from the Wellcome Trust which enabled me to undertake the basic research in the United Kingdom and in New Zealand: I am deeply grateful to the Trustees for this assistance.

This work could not have been carried through without the co-operation of many people, among whom I wish to make particular mention of the following: Dr F. H. K. Green and Dr Edwin Clarke of the Wellcome Trust; Dr Douglas Guthrie and Professor Sir Walter Mercer of Edinburgh; Miss H. Armet, Archivist, Edinburgh City Corporation; Mr H. D. Erlam, Otago Medical School Library; Mr G. R. Pendrill, Royal College of Physicians Library, Edinburgh; the late Miss F. S. Brown and her successor, Miss D. Wardle, Royal College of Surgeons Library, Edinburgh; Mr C. P. Finlayson, Keeper of Manuscripts, and other staff of Edinburgh University Library; Mr B. A. Stenhouse, Registrar, Edinburgh Academy; Mr W. R. Le Fanu, Royal College of Surgeons Library, England; Mr A. Taylor Milne, Institute of Historical Research, University of London; Mr M. M. Davies, Royal Army Medical College Library, London; Mr. C. R. H. Taylor, Alexander Turnbull Library, Wellington; the late Mrs Ruth Allan of Wellington; Mr Kingsley Adams, Director of the National Portrait Gallery, London; Mr R. E. Hutchison, Keeper of the Scottish National Portrait Gallery; and the staffs of H. M. General Register House, Edinburgh, the National Library of Scotland and the Manuscript Department, British Museum.

The following members of the Monro family have also given valued assistance: the late Maj.-Gen. D. C. Monro, a delightful host as well as a mine of information; Lieut.-Col. A. G. F. Monro of

Auchinbowie House; Mrs M. Dalmahoy of Auchindinny House; Dr P. A. G. Monro of Cambridge; and in New Zealand, the late Miss L. C. Monro and Drs J. S. and H. M. Monro. For permission to have access to, and to publish extracts from, the various manuscript sources in their possession, I am grateful to all the numerous persons and authorities cited herein. Finally, I must express my very great appreciation of the assistance with publication as well as with research rendered me by Dr F. N. L. Poynter of the Wellcome Library.

REX E. WRIGHT-ST CLAIR

Hamilton,
New Zealand

CHAPTER I

The Monros of Milntown and Bearcrofts

THE home of the Clan Munro is on the northern shore of Cromarty Firth in north-east Scotland, its chief seat being, from the beginning of the twelfth century to the present day, the Castle of Foulis. The founder of the clan was Donald Munro, who flourished in the reign of King Malcolm II and died about 1053.[1] His grandson, Hugh Munro (died about 1126), was the first to hold the title of Baron of Foulis. The branch of the family with which we are concerned are cadets of the clan being descended from Hugh Munro, the ninth baron (died 1425), through his second son, John Monro of Milntown, the first in the clan to use that spelling of the name.

Milntown, now New Tarbat, lies on the Bay of Nigg, Cromarty Firth. The first John of that place, who lost an arm in a clan fight against the Mackintoshes, was chamberlain for the earldom of Ross and died about 1475. His grandson, Andrew Beg Monro of Milntown and Dalcarty, chief maor of the earldom, was known, because of his cruelty, ferocious temper and vast estates, as "Black Andrew of the Seven Castles" (Anndra Dubh nan seachd Caisteal). Fortunately, this temperament was not perpetuated in the family, for in 1570, we find a grandson of Black Andrew entering the reformed ministry and becoming a prominent member of the General Assembly of the Church of Scotland.[2] This was George Monro, a cadet of the family, who was also chancellor of Ross; in due course he was succeeded in this position by his son, and then by his grandson, both also named George. The grandson, George Monro of Pitlundie, minister of Rosemarkie, had two younger brothers, David and Alexander, who both fought in the Royalist army against

[1] A. Mackenzie: *History of the Monros of Fowlis* (1898).

[2] J. A. Inglis: *The Monros of Auchinbowie and Cognate Families* (Edinburgh, 1911), pp. 3–6.

Cromwell at the battle of Worcester in 1651, and there David Monro was killed, "in desperately retarding the Pursuit after the King."[3]

Alexander (born 1629), the youngest brother of Monro of Pitlundie, was the ancestor of the Professors Monro. He survived the battle of Worcester, retiring from the army with the rank of major, bought the property of Bearcrofts, near Grangemouth, and began to study law. In 1660 he was appointed commissary of Stirlingshire and two years later was admitted to the Faculty of Advocates. He also served for several years as a clerk of session and parliament, but was displaced, wrongfully he believed, when the number of clerkships was reduced in 1676. Four years later he went to London, paying court to King Charles II in furtherance of a proposal to establish a Scottish colony in the Carolinas. However, the originators of this scheme, led by the Earl of Shaftesbury, also had other designs in view, and through his association with them Monro became involved in a Whig conspiracy for a nation-wide rebellion in order to secure the Protestant succession, the rebellion to be led by the Duke of Monmouth and the Earl of Argyle; at the same time the "Rye House plot" to assassinate Charles and his brother, the Duke of York and Albany (later King James II and VII), was being hatched by Shaftesbury, but Monro was apparently not a party to this.

The whole scheme was discovered; Monro and many others were arrested and several of the conspirators were eventually executed. Among the prisoners taken in England were twelve Scots, including Monro and the Rev. William Carstares, later confidant of King William III, principal of Edinburgh University and moderator of the General Assembly;[4] these Scottish offenders were all sent off to their own country for trial, arriving at Leith on 14 November

[3] H. D. Erlam: 'Alexander Monro, primus' (autobiograpy), *University of Edinburgh Journal*, 1954, p. 80.

[4] The others were Sir Hew Campbell of Cessnock; Sir George Campbell, his son; Sir William Muir of Rowallan; William Muir, his son; John Crawfurd of Crawfurdland; William Fairlie of Bruntsfield; William Spence; Robert Murray of Tippermuir; Rev. John Hepburn; and Robert Baillie of Jerviswood—the last-named was subsequently hanged at the Mercat Cross of Edinburgh.

1683, "by the Kings warrand in a yawcht from London."[5] In the Tolbooth of Edinburgh, Carstares and some of the others were put to torture, and under threat of the same treatment Monro consented to give evidence for the prosecution,[6] in return for which he was transferred to more wholesome quarters in "ye Castell of Stirling"[7] and a fortnight later received a remission of sentence and was released. Eventually he was granted a free pardon, signed by King Charles at Whitehall on 29 December 1684, a few weeks before the king's death. Professor Monro *primus* stated[8] that his grandfather, "alwaies declared to his Family that he never had the least Design against the King's Person."

After receiving this pardon, Monro of Bearcrofts was readmitted to the Scottish Bar, which Fountainhall said,[9] "gave a generall discontent to the Advocats . . . and the Lords should be more tender of the Facultie's reputation." Having necessarily remained in obscurity during the reign of James VII, on the accession to power of William of Orange in 1688, Monro, more in hope of preferment no doubt than through joy in the ascendancy of the Protestant religion, joined in the rush of like-minded Scotsmen (and Englishmen) to London to welcome the new sovereign. The recognition he received, however, was slight.

In 1689 he was appointed a commissioner of supply for Stirlingshire and the following year was elected one of the representatives of that county in the Scottish Parliament, serving in this capacity until 1701 and being appointed by parliament a member of the Commission for Plantation of Kirks and of the Committee for Security of the Kingdom. Monro appealed to parliament in July 1690 for an indemnity for his past sufferings, especially the loss of

[5] Edinburgh Town Council minutes, date cited. The yacht was *Kitchen* and on the 13-day journey they endured "much tempest and tossing" (Fountainhall: *Historical Observer*, p. 108).

[6] His evidence is printed in full in T. Thomson: *The Acts of the Parliaments of Scotland*, vol. VIII, App. 33, 34, and is reprinted in Inglis: op. cit., pp. 25–8.

[7] Tolbooth records, 16 September 1684, printed in *The Book of the Old Edinburgh Club*, vol. IX.

[8] Erlam: op. cit., p. 80.

[9] Sir John Lauder, Lord Fountainhall: *The Decisions of the Lords of Council and Session* (1759–61), vol. II, p. 681.

his post as clerk of session in 1676. In a letter dated 9 October 1690,[10] to Duncan Forbes, third laird of Culloden (father of Lord President Duncan Forbes and member of the Scottish parliament for Inverness-shire), he stated that he relied, "only in the clear Justice of my cause," and continued, "It is my fate to be hardly dealt wt by great men Bot I doubt not our gracious King is just and will performe his promise to me, if I could bot put him in mind of it, which I incline to doe though I should goe upon my hands & feet, for I will not ly downe under the feet of my enemies so long as any possible remedie can appear to me. And in the mean time I have accesse to the King of heaven . . . ." In the end Parliament recommended him to the Crown for favourable consideration on account of his alleged wrongs;[11] as a result he was knighted in 1695 and granted an annual pension of £150 sterling, payment of which was two and a half years in arrears at the time of his death. In 1695, he acted as clerk to a royal commission to enquire into the circumstances of the massacre of Glencoe.

Sir Alexander Monro died in Edinburgh in 1704 and was buried in Greyfriars churchyard. He had married Lillias Easton of Couston and was survived by two sons and three daughters, his second son having predeceased him.

George, the eldest son of Sir Alexander, while a captain in the Cameronian Regiment, commanded a most spirited defence of Dunkeld against the Jacobite forces supporting Graham of Claverhouse, Viscount of Dundee, in his revolt.[12] George Monro then served with Viscount Kenmure's Regiment: in the letter to Forbes of Culloden already quoted, Monro of Bearcrofts said: "Kenmuires Regiment hade broke long since if my sone hade not attended them close & keept them together when they hade not one groat to subsist by. He engaged all his owin credite & caused me to engage in me for considerable sommes of money to support them when the Colonel

[10] Culloden papers, National Library of Scotland, MS. 2963, f. 110. The letter is unsigned, but the handwriting is identical with that in other signed letters of Monro's and it bears his seal.

[11] Thomson: *Acts*, 14 June 1693.

[12] Inglis: op. cit., pp. 40–4.

(as he affirmed) could doe nothing for them. I fear my sone shall have no favour, except it come from the King immediately. Bot if they doe him the justice to give him his owin I shall care the lesse what they doe. Would be god I & mine were in some other part of the world wher we might meet wt equal dealing." Subsequently, George Monro served in Holland with Hamilton's Regiment of Foot, taking part in the siege of Namur; he retired with the rank of colonel in 1698.

George succeeded, on the death of his father, to Bearcrofts, which was sold in 1706. In 1702 he and his wife, Margaret Bruce, had purchased from her sister the property of Auchinbowie, in the parish of St Ninian's, near Stirling, which had been in the Bruce family since 1506. This property later came into the possession of George Monro's nephew, Professor Monro *primus*, and has remained in the Monro family ever since.[13] The house has the date 1566 carved in stone over the door lintel, but this stone belongs to an earlier house on the site, the present one dating from the late seventeeth century. Colonel George Monro died in 1720, leaving Auchinbowie to his eldest son, Alexander.

[13] The present owner is Lieut.-Col. Alexander G. F. Monro, a great-grandson of Professor Monro *tertius* through his third son, Henry.

CHAPTER II

John Monro, Surgeon

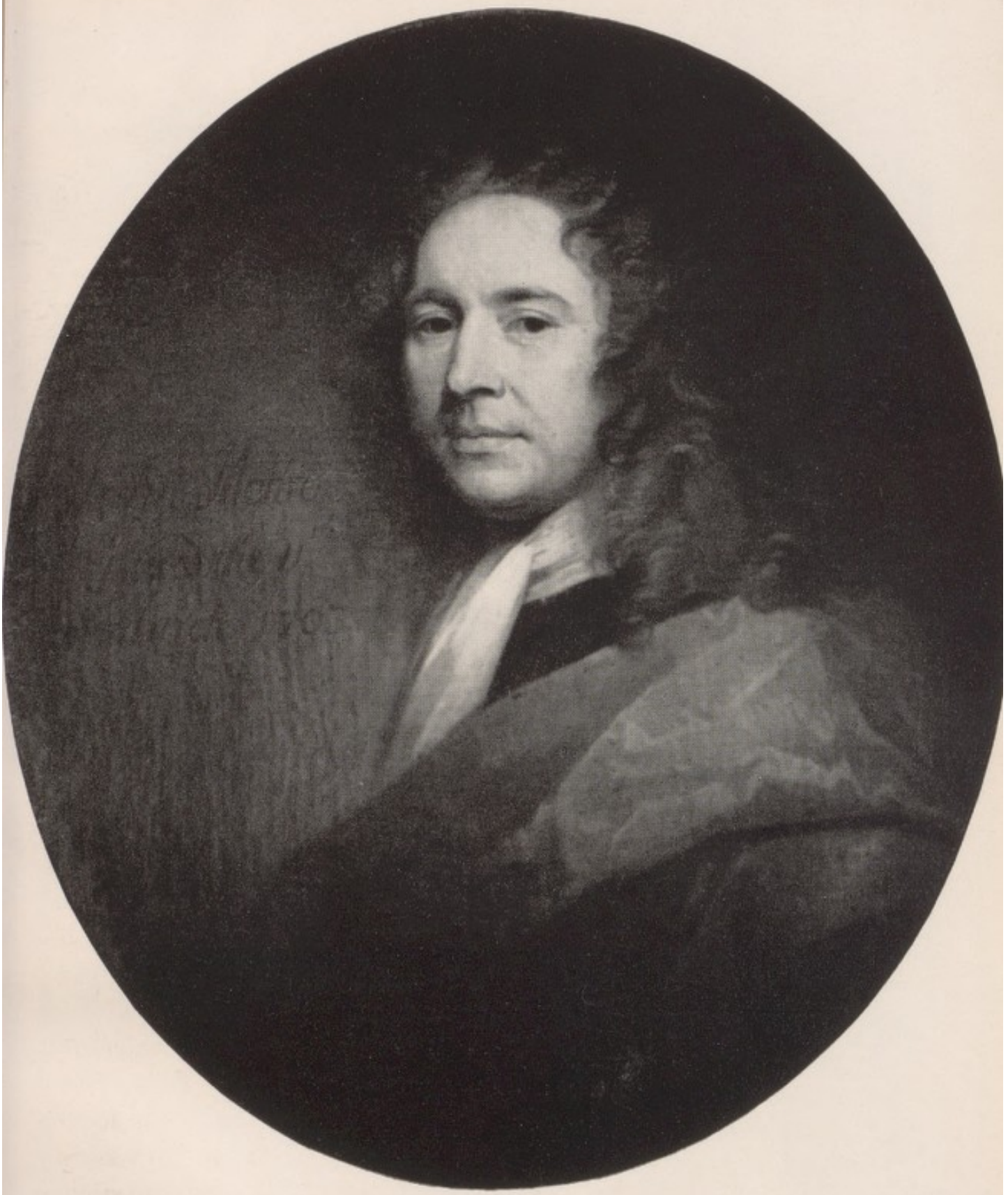
JOHN, youngest son of Sir Alexander Monro of Bearcrofts, was born in Edinburgh in 1670; the exact date is unknown, but he was baptised on 19 October that year.[1] We know nothing of his childhood and early education, but he was a boy of almost thirteen when his father was arrested for treason, and we can imagine that the succeeding months must have been very anxious and difficult ones for the family.

The minutes of the Incorporation of Surgeons of Edinburgh record that on 8 April 1687, at the age of sixteen, John Monro was "booked servant in order to be prentice to W^m^ borthwick for fyve years conform to Indentures And hes payed to the box three pounds with Clerk & officers fees & four shillings to the magdalen Chappell." This date, 8 April 1687, is of considerable importance, as it marks the first connection of the Monro family with medicine. The sums mentioned in the minute are in terms of Scots money which was only one-twelfth the value of sterling, so that three pounds Scots was worth five shillings in English currency. The Magdalen Chapel in the Cowgate was owned by the Guild of Hammermen and was used by all the crafts of the burgh, each member contributing to its upkeep. Before an apprenticeship would be approved by the Incorporation, candidates were required to have an adequate knowledge of Latin—to have "learnit ther foure pairteis of gramer"[2]—hence they were usually booked as servants in the first place while acquiring this learning. William Borthwick, whom John Monro was now bound to serve, had become a freeman surgeon in 1665, had studied at Padua and Leyden,[3] and had since served two terms as Deacon

[1] Inglis: op. cit., p. 54.

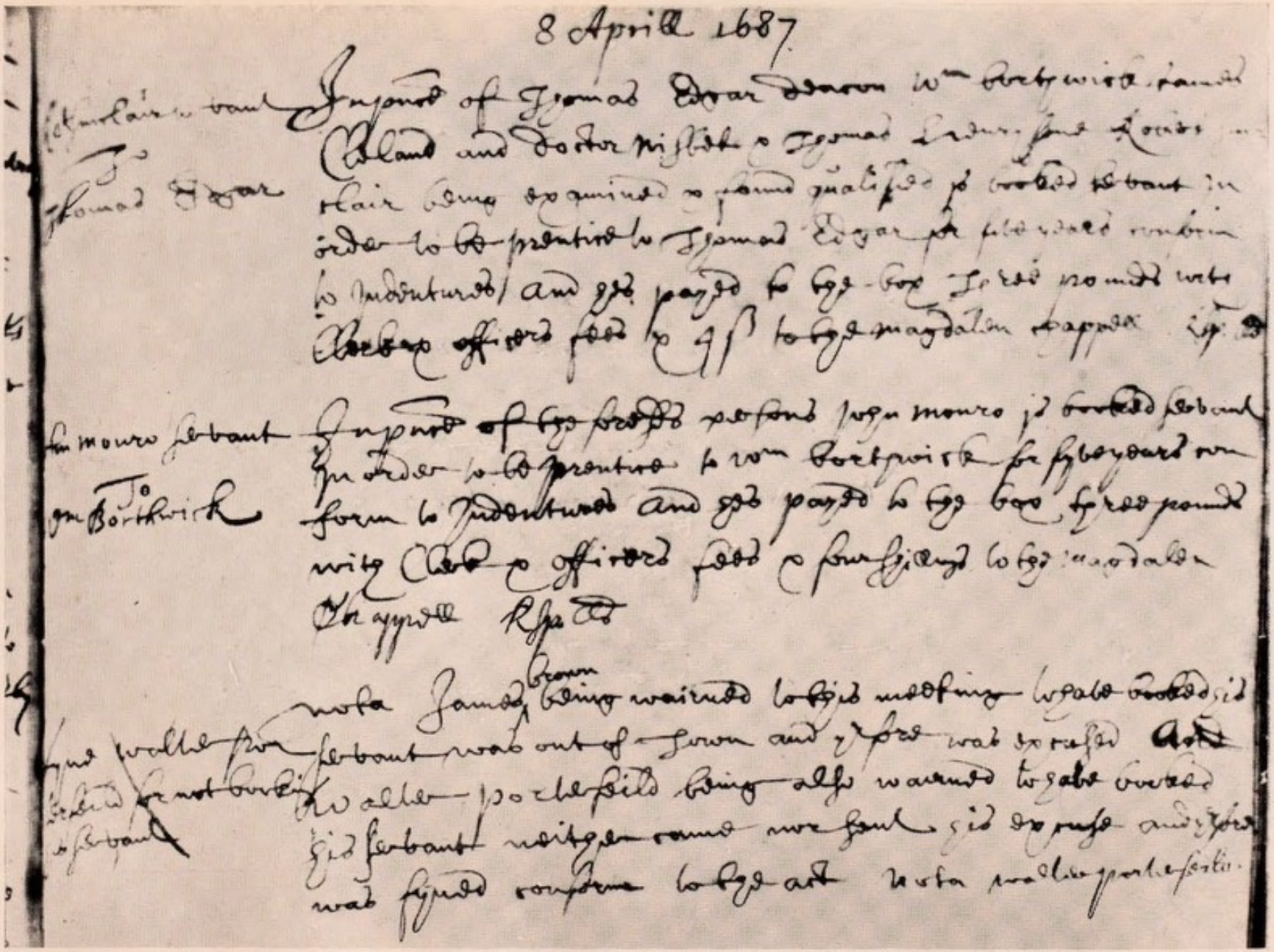
[2] Surgeons' minutes, 2 February 1643.

[3] R. W. Innes Smith: *English-Speaking Students of Medicine at the University of Leyden* (Edinburgh, 1932). Borthwick was entered at Padua in 1666, at Leyden in 1667.



2 John Monro, 1670–1740

From the portrait by William Aikman in the Royal College of Surgeons, Edinburgh



8 April 1687

3 Extracts from Minutes of the Incorporation of Surgeons of Edinburgh, 8 April, 1687
Recording John Monro's apprenticeship to Wm. Borthwick

(president) of the Incorporation, so he was a surgeon of some standing among his fellows.

John must have been an apt pupil, for he caused some difficulty by being ready for apprenticeship long before his master could accept him: the rules of the Incorporation permitted each surgeon to take one apprentice every three years and Borthwick had booked one, John Murray, in February 1687.[4] It is interesting to note that Murray had been booked as servant in June 1684:[5] such a period of nearly three years was about the customary time for a lad to act as servant—but John Monro reduced it to twenty months. In spite of the rules, some apprenticeship agreement must have been made, since Monro was entered in the burgh register of apprentices on 14 November 1688 as "prentice to W^m^ Borthwick, chirurgiane." Rules are rules, however, and some alternative arrangement had to be made; so, on 10 December 1688, while the politics of the country were in turmoil, Borthwick and his pupil took horse and rode over to Leith where a meeting of the surgeons was being held at the home of Thomas Edgar, "Deacon protempore"—Leith was part of the liberties of Edinburgh over which control was exercised by the Incorporation of Surgeons. The minutes of that date record that: "John Monro being examined & found qualified is booked prentice to Doctor Irvin for five years Conform to Indentures And hes payed to the box six pounds . . . and six shillings to the Magdalen chapell."

Christopher Irvine, to whom John was now officially apprenticed, had been a freeman surgeon since 1658 and also held the degree of M.D. (from one of the European universities), the first member of the Incorporation so qualified. His practice was, in fact, principally that of physician (he was first physician to the king in Scotland), although by a special act of the Scottish Parliament in 1685 he had, at his own request, been exempted from control by the Royal College of Physicians—from their "partial humours or affronts"[6] as his petition said. He was a well-known classical scholar and was appointed by James VII historiographer for Scotland. Dr Irvine's

[4] Surgeons' minutes, 28 February 1687.
[5] Surgeons' minutes, 12 June 1684.
[6] C. H. Creswell: *The Royal College of Surgeons of Edinburgh* (1926).

unique status rendered him unsuited to train a surgical apprentice, and it appears that the act of booking John Monro in his name was in reality little more than a subterfuge to avoid a difficulty in the regulations, so that, although Irvine's scholarly influence may have been beneficial, he was intended to take only a very minor part, if any, in the specialised training of his nominal apprentice.

This, and the fact that the Incorporation recognised the whole situation as irregular, is made abundantly clear in a resolution passed by the surgeons on 9 January 1689: "Eodem die . . . being conveened in the deacon John Baillie his house And taking to their consideration the good offices & services done & performed to them be Alexander Monro of Bearcrofts Comissar of Stirling And in hopes of and the farther to engage him to continue his Kindness to the Calling The deacon masters and Brethren of the said Incorporation of the Chirurgions of Edg^{r} has ratified & approven . . . y^{e} booking of John Monro sone to the said Comissar Monro (who was bound prentice to William Borthwick who was not as yet in a capacitie to book the sd John Monro as prentice in respect there was not as yet three years elapsed since the booking of his last prentice) as prentice to the said doctor Christopher Irvin One of y^{r} own members conform to Indentures And in respect the said doctor does not keep ane publick shop whereby the sd John Monro may get insight & knowlege in the art of Chirurgerie Therefore the deacon Masters & Brethren foresds does allow & approve of the said John Monro his staying & continuing still in service with the said William Borthwick his former master during the remainder of the time he was to have served him by his indentures." What service Monro of Bearcrofts may have done the surgeons is unknown, but the country was then in the midst of its "Glorious Revolution," James VII had fled to France and Alexander Monro was at that moment in London seeking the favour of the Prince of Orange—he was therefore not a man to be ignored when no one knew the outcome of these events.

The compromise thus made was not destined to last long. Monro of Bearcrofts, who seems to have taken a despondent view of the world, stated, in the letter written on 9 October 1690 to Duncan Forbes, quoted in the last chapter (see footnote 10): "My youngest

sone is Chyrurgeon to Kenmuires Regiment . . . . I have been at a vast expense to support my two sones in the service who have had no pay since oct[r] last, bot for two moneths out of which they have payed for ther Comissions, And now if they be shaken loose wtout pay all I have advanced is losst and I have them to provide for of new which will be hard for me. Never was ther more injustice then now . . . . Yet it pleased God to order all things wonderfully to the suppression of our enemies, who breaks themselves every wher, so as we have ground to hope that our warre is near ane end."

The Viscount of Kenmure's regiment was raised in April 1689,[7] at the beginning of the Jacobite rebellion led by Lord Dundee, and took part in the battle of Killiecrankie in July of that year. The regimental muster roll for 25 January 1690[8] does not include John Monro's name or mention any surgeon at all: it appears therefore that, if John was in the army by October 1689, as his father's letter implies in the reference to "October last," he must have served in some other regiment first—it is possible, however, that the date mentioned really refers only to the older brother. In the absence of later muster rolls, we cannot say when John Monro joined, or when he left, Kenmure's unit, but by the end of 1690 peace was virtually restored to the land, as Monro *senior* says in his letter, and regiments formed to meet the emergency were being reduced or disbanded. Whether or not John was "shaken loose without pay" as his father feared, he probably returned about that time to civilian life and became a humdrum apprentice again. His army service during this period is not mentioned in any of the later family annals, and his son does not seem to have known of it, for he refers to his uncle's service during the revolution, but not his father's.[9]

Monro's period of service with Borthwick, in terms of his original indentures, expired in April 1692[10] and later that year he travelled to Leyden, where the medical school was then one of the foremost in

[7] Thomson: *Acts*, 22 April 1689.
[8] H.M. General Register House, Edinburgh.
[9] Erlam: op. cit., p. 80.
[10] The contract with Irvine would not have expired until the following year, but this must have been waived.

the world. The practice of bedside clinical instruction had been transmitted a century before from Padua to the new secular university in Holland through Jan van Heurne, a Dutch graduate of Padua who became Professor of Medicine at Leyden. This made the medical school there a Mecca for students from all parts of the civilised world. On 11 October 1692 "Johannes Monro, Scotus," matriculated at the University of Leyden, his age being entered as 21 years.[11] As university lectures in all countries were then delivered in Latin, there was no language barrier and Monro stayed at Leyden for two academic sessions. During the first of these, his countryman, Archibald Pitcairne from Edinburgh, was Professor of Medicine there: Monro attended his lectures along with three fellow students who later achieved fame—Robert Eliot, first Professor of Anatomy at Edinburgh; Richard Mead, the famous London practitioner, physician to George II; and Hermann Boerhaave, later Professor of Medicine at Leyden, the greatest figure in medicine in the early eighteenth century.

In 1694 Monro returned home and, about this time or a little later,[12] married his first cousin, Jean Forbes, granddaughter of the first Duncan Forbes of Culloden: her father was Captain James Forbes, second son of the first laird, and her mother was Agnes, daughter of George Monro of Pitlundie, chancellor of Ross (see Chapter I). On 7 March 1695, John Monro was commissioned Surgeon in Lieut.-Gen. Sir Henry Belasyse's 22nd (Cheshire) Regiment of Foot,[13] with which he proceeded almost immediately to the Continent, serving in the Netherlands in the army commanded personally by King William III. They were encamped on the Bruges canal and later took part in the siege and capture of Namur in August

[11] Innes Smith: op. cit., p. 162. If this age is correct he must have been only a few days old when he was christened: this could well be so, but no reliance can be placed on age as recorded in the Leyden *Album Studiosorum*.

[12] Donald Monro (in the memoir prefixed to the *Works* of Monro *primus*) stated that his grandfather married before his army appointment. Monro *primus* (Erlam: op. cit., p. 80) said that he married, "while Surgeon to a Regiment."

[13] A. Peterkin: *List of Commissioned Medical Officers of the Army, 1660–1727* (under MUNRO).

1695. In March the following year the regiment returned to England, landing at Gravesend and being quartered at Windsor. In 1698 they were sent to Ireland where the regiment remained four years.[14]

During several successive winters of his military service Monro was given leave of absence and lived in London with his wife, no doubt making the most of the opportunity to see something of the surgical practice of the London hospitals. His son, Alexander, was born in London in 1697; apparently several other children were born of the marriage also, "but they all dyed in Nonage."[15] In 1700 John Monro quit the army. According to Innes Smith[16] he then went to the University of Padua, but this appears to be an error: certainly the records there contain the entry, "John Monro Scoto-Britannus," dated 14 June 1700,[17] but this probably refers to John Monro (or Munro), M.D. (Aberdeen, 1691), F.R.C.P.Ed. (1704) who practised in Edinburgh but was no relation to the family of Bearcrofts and Auchinbowie.

It was probably in the autumn of 1700 that John Monro was discharged from the army and he then settled with his family in Edinburgh, at that time a town of some 30,000 people. He had to borrow 1000 merks from his sisters[18] to establish an apothecary's shop, which was at first in Bailie Fyfe's Close and later on the north side of the High Street, between Halkerston's Wynd and Kinloch's Close.[19] He does not appear to have been in any hurry to regularise his position by entering the Incorporation of Surgeons, for it was not until 19 August 1702 that he became a burgess of the city, an essential preliminary qualification for freedom of the Incorporation. In the roll of burgesses[20] his name is entered on that date as, "chirurgeon, burgess and gildbrother, as prentice to William

[14] R. Cannon: *Historical Records of the British Army* (London, 1836).

[15] Erlam: op. cit., p. 80.

[16] Innes Smith: op. cit., p. 162. The author must have had some doubts on the matter, as he notes the existence of the other John Monro.

[17] Horatio F. Brown: *Inglesi e Scozzesi all'Università di Padova* (1922).

[18] A merk was worth 13s. 4d. Scots, so 1000 merks was approximately £55 sterling. His sisters were Lillias, Jean and Mary. The last-named died unmarried in 1706 leaving John £1100 Scots.

[19] Inglis: op. cit., p. 55.

[20] Edinburgh City Corporation archives.

Borthwick, burgess and gildbrother," this former apprenticeship (registered on the city rolls at the time)[21] being at that stage his only claim to burgess status.

He now proceeded to his examination by the surgeons and was finally admitted to the Incorporation on 11 March 1703:[22] "The which Day . . . John Monro late prentice to umquhill [deceased] Doctor Christopher Irvin . . . Having appeared for his tryall & examination for the Art & Calling of Chirurgerie this day and severall of the days & dyets of before[23] . . . is found to be sufficiently qualified *nemine contradicente* And yrfore . . . The Calling have Admitted & Received . . . the said John Monro to be a ffreeman Chirurgion in & amongst them and to enjoy all ffreedom & priviledge belonging to a ffreeman of the said incorporation Who Compearing made faith and gave his oath according to Order And has payed . . . Tuo hundred pounds [Scots = £stg 16: 13: 4] for his Upsett & Banquet formerly used to be given to the Brethren . . . ." In earlier days each entrant had been required to stand his new fellows to a banquet, but as the number of surgeons increased this became impossible and the requirement had been replaced by an additional cash payment.

The oath taken by Monro and other surgeons who entered at this time when they "made faith," is recorded in the minute book for the period as follows: "I shall continue in the professione of Christs blessed Evangell as the samine is publickly preached within this realme,[24] I shall be obedient to our Soveraigne the Queen [Anne] and her highnes authority, Obey the provost bailies and Magistrats of this burgh And als be obedient to the Deacon of this my vocation present and to come, Maintain the liberties of this my art And fulfill and observe the haill acts and statuts made and to be made by the Deacon and Masters thereof present and to come And shall no ways directly nor indirectly oppone my self

[21] Register of Edinburgh Apprentices, 14 November 1688.

[22] Surgeons' minutes, date cited.

[23] His previous trials are not recorded in the minutes.

[24] This excluded Roman Catholics, their religion not being "publicly preached" in Scotland.

thereto in any time hereafter Sua help me God and be God himself."

At the next meeting of the surgeons after his entry, Monro took his first apprentice, one William Cockburn.[25] Dr Andrew Duncan said of John Monro,[26] "Real knowledge, steady industry, and engaging manners soon introduced him into extensive practice;" but no doubt like any other practice it took time to build up, so that when Sir Alexander Monro made his will in July 1703, he recommended his daughter Jean, as executrix, to be helpful to her brother John, "until he attains to the benefit of his employment."[27] On 11 September 1708, John Monro was elected Treasurer to the Incorporation of Surgeons, "and made faith de fideli administratione in the said office And that he should make just compt and reckoning of what the callings money he should happen to Intromett with and of their wrytts as they should come to his hands . . . ." He was re-elected to this position the following year for a further twelve months. One of his duties as Treasurer was to collect fees for use of the surgeons' bagnio or bath-house, which was open, "to all Noblemen, Gentlemen, Ladies and others . . . for 4 sh. sterl. each time they shall be pleased to bath,"[28] or for £3 10s. a year or £2 a half-year.

On 13 September 1712, the Incorporation, "by plurality of votes Elected John Monroe to be their deacon for ye ensuing year who took his place and gave his oath de fideli administratione and that he should defend the rights liberties and priviledges of the Calling to his person to whom the Calling pronunsed obedience." As Deacon he had an ex officio seat on the Town Council; and he was also shortly afterwards elected Deacon Convener of the Trades of Edinburgh. The following year he again served in these offices.[29] The

[25] Surgeons' minutes, 2 April 1703. Cockburn had very probably been serving with Monro as servant before the latter entered the Incorporation.

[26] A. Duncan: *An Account of the Life and Writings of the late Alexander Monro Senior* (Harveian Oration, Edinburgh, 1780).

[27] Inglis: op. cit., p. 35.

[28] *The Edinburgh Courant*, 6 April 1709.

[29] Re-elected Deacon of Surgeons, 12 September 1713: his successor, John Lauder, elected 11 September 1714.

Town Council appointed him one of their representatives on the Convention of the Royal Burghs of Scotland and he attended meetings of that body in 1712 and 1713.[30] Shortly before the end of his second term as Deacon, Queen Anne died and Monro showed himself a strong supporter of the Hanoverian succession. He was one of the signatories of the proclamation of the new sovereign[31] and on 5 August 1714 he was present in his official robes along with other councillors, nobles and dignitaries, at the Mercat Cross, "where they heard His Majesty King George proclaim'd King of Great Britain, France, and Ireland; when the Castle fired a full Round, as did the City-Guard three Vollies of small Shot, the whole Company expressing their Joy by loud Huzza's . . . And the Night concluded with ringing of Bells, Illuminations, and all other Demonstrations of Joy, without the least Disorder or Disturbance."[32]

The Town Council also appointed Monro to be, from 1 January 1713, surgeon to the poor of Edinburgh,[33] "and for his pains and medicines to be furnished be him . . . to pay him three hundred merks Scots [£stg 16: 13: 4] yearly dureing the Councels pleasure . . ." He retained this position until 20 January 1720, when the Town Council minutes record that, "the Councel . . . upon severall Greate and Weighty Consideratns them moveing Rescined their act . . . Nominating and Electing John Monro Chirurgeon to be Chirurgeon to the poor of this Citie and Declaired the former voyd and null in all tyme comeing." As this was only a few days before the Council appointed Alexander Monro to be Professor of Anatomy, it would seem that whatever were the "great and weighty considerations" the Monro family was not entirely out of favour.

During the Jacobite rebellion of 1715, John Monro probably attended the wounded from the battle of Sheriffmuir on 13 November, for in describing a case in his surgical lectures,[34] Monro *primus*

[30] First recorded attendance, 29 December 1712; last, 26 November 1713 (*Extracts from the Records of the Convention of the Royal Burghs of Scotland*).

[31] *The Scots Courant*, 9 August 1714.

[32] *The Scots Courant*, 6 August 1714.

[33] Town Council minutes, 14 November 1712.

[34] Surgical Lectures by Monro *primus*, "Of Wounds," Duncan Collection, R.C.P.Ed.

says, "In the Year 1715: I remember to have seen at Sterling A Soldier of Montagues Regiment who was wounded in the foot . . . he had been stript and left in the fields all Night which was frosty and very cold . . . ." As Alexander was then an unqualified assistant to his father, this no doubt means that Monro *senior* was also in attendance.

Unfortunately we know little of John Monro's practice, but in another passage of his son's lectures,[35] referring to wounds of the trachea and oesophagus, we do have a glimpse of his skill and resourcefulness. "I remember to have seen an Instance of this in one Irvine who cut his own Throat with a pen-knife, so that no Air passed by the Mouth but all by the wound; the divided parts were brought together and stitched by my father & the wound Cured . . . . his Aliment before the Wound was stitched came out of it, and he in great hazard to be suffocated by its falling into the Trachea Arterea; as soon as it was dressed up that ceased . . . ." Surgical cure of such an injury, involving a wound of the oesophagus and complete severance of the trachea must have been very rare indeed at that time.

After being a widower for more than ten years, John Monro married, in August 1721, Margaret Crichton, widow of William Main, and she outlived him. In his later years he lived in retirement at Carrolside, a country estate bought for him by his son; it was situated beside the Lauder River, near Earlston in Berwickshire. His life's work as a surgeon-apothecary had not, apparently, brought John Monro a fortune, for his son recorded that, "soon after his Father retired from Business, his Affairs became unexpectedly embarassed."[36] In addition to giving him a country home, Monro *primus*, "in Concert with his Stepmother supplyed other necessary Funds for the comfortable Subsistence of the Father's family without the old Gentlemans Knowledge, to avoid giving Offence to his Delicacy." The father died at Carrolside in 1740, in his seventieth year.

Much of John Monro's work and influence in the wider sphere of

[35] Ibid.

[36] Erlam: op. cit., p. 92.

medicine will be dealt with in Chapters V and VI, but we may say here that to him belongs the credit of conceiving the establishment of a great medical school and teaching hospital in Edinburgh on the Leyden pattern which had impressed him so much in his youth; the credit furthermore of seeing his son as the instrument for carrying out this ambitious plan and of taking the necessary steps to enable it to be put into execution. In fact we must regard him as the real founder of the Edinburgh medical school, for much of the success of the whole scheme depended upon his planning and unceasing efforts behind the scenes without his ever appearing in the limelight of a public position. His son said [37] that John Monro, "well deserved the utmost Returns of Gratitude and filial piety" from him, and to that we must add the gratitude of his nation. He was fortunate in living long enough to see this wonderful project a complete success in all respects and Edinburgh becoming recognised as one of the leading centres of medical teaching in the world.

Before proceeding to see how Alexander Monro made his father's vision a reality, we must first briefly take stock of Edinburgh and medical teaching as it existed there prior to 1720.

[37] Erlam: op. cit., p. 92.

CHAPTER III

Edinburgh in the Early Eighteenth Century

"SCOTLAND at the end of the eighteenth century," says Brotherston,[1] "was by no means a land flowing with milk and honey; life then was hard, and there were many who suffered want if not actual starvation. Nevertheless, the contrast with the famine-stricken state of the country at the beginning of that century is striking." What was true of Scotland in general was no doubt true also of its metropolis.

With the departure in 1603 of King James VI for his new kingdom in the south had gone the sparkle and glory of a royal court which had formerly meant so much to Edinburgh and which the city would rarely see again until the reign of Queen Victoria, two and a half centuries later. In fact, from 1651, when Charles II (then the crowned King of Scotland though not of England) fled to the Continent after his defeat at Worcester, until the visit of George IV in 1822 which is commemorated by the statue in George Street, no reigning British sovereign had set foot in his northern kingdom at all.

After the Treaty of Union in 1707, Parliament also departed from Edinburgh. Graham, in his *Social Life of Scotland*,[2] said:

"The height of Edinburgh's glory was before the Union of 1707, in the days when meetings of the Scots Parliament drew to the capital nobles and persons of quality from every country, when periodically the city was full of the richest, most notable, and best-bred people in the land, and the dingy High Street and Canongate were brightened by gentlemen in their brave attire, by ladies rustling in their hoops, brocade dresses, and brilliant coloured plaids, by big coaches gorgeous in their gilding, and lackeys splendid in their

[1] J. H. F. Brotherston: *Observations on the Early Public Health Movement in Scotland* (London, 1952), p. 6.

[2] H. G. Graham: *The Social Life of Scotland in the Eighteenth Century* (London, 1899, 4th ed. 1937), pp. 81–2.

livery. For the capital of a miserably poor country, Edinburgh had then a wonderful display of wealth and fashion. After 1707 all this was sadly changed. . . .

"No wonder the Union was specially unpopular in Edinburgh, for it deprived the city of national dignity, carried from citizens their fashions, and spoiled their trade. A gloom fell over the Scots capital: society was dull, business was duller still, the lodgings once filled with persons of quality were left empty—many decayed for want of tenants, some fell almost into ruin. For many a year there was little social life, scanty intellectual culture, and few traces of business enterprise. Gaiety and amusement were indulged in only under the censure of the Church and the depressing air of that gloomy piety which held undisputed and fuller sway when the influence of rank and fashion no longer existed to counteract it."

The building of the beautiful New Town of Edinburgh across the North Loch (now the site of Princes Street Gardens) did not begin until the latter half of the eighteenth century, and in 1720 the city was still confined mainly within the limits of the old Flodden wall. The Old Town was small and dismal, consisting of the High Street and the Cowgate with the narrow, dark and steep closes and wynds going off from them. In 1723, this description was published:[3]

"The Houses in Edinburgh are of Stone, and are allowed by Law to be five Storeys high to the Street, but are generally higher backwards. They are built very close on each other; and one Stair often serves two Houses, each of which contains a Family in every Storey; the Height of the Houses, Narrowness of the Lanes, and Number of People entering by one Stair, may therefore in some measure apologize for neither Stairs nor Lanes being so clean as in some other Places where such Crowds are not confined to such a narrow Spot of Ground.

"No River or Rivulet runs through the Town, or nearer it than three-fourths of a Mile;[4] but the City is plentifully provided with fine Spring-water, conveyed about three Miles through Leaden

[3] In the first volume, *Medical Essays and Observations*. The description was almost certainly written by Professor Monro *primus*, the editor of the volume.

[4] The Water of Leith lay at this distance from the Old Town.

Pipes.[5] . . . The Number of Inhabitants of Edinburgh and Cannongate is reckoned to amount to some Hundreds more than Thirty two thousand . . . ."

The unclean state of the streets, somewhat apologetically mentioned in the above extract, is enlarged upon by Graham:[6] "By ten o'clock each night the filth collected in each household was poured from the high windows, and fell in malodorous plash upon the pavement, and not seldom on unwary passers-by . . . . On the ground all night the dirt and ordure lay awaiting the few and leisurely scavengers, who came nominally at seven o'clock next morning with wheel-barrows to remove it . . . . Worst of all was the Sunday when strict piety forbade all work, deeming that street-cleaning was neither an act of necessity nor one of mercy, and required the dirt to remain till Monday morning."

This crowded and noisome city was separated from London by a two-weeks' coach journey, expensive, wearisome, even dangerous, over narrow and muddy roads; its university was housed in an ancient and tumble-down range of buildings on the site of the old Kirk o' Field where Darnley was murdered. This seems scarcely a likely environment for a flourishing centre of medical learning, yet such it was to become.

[5] From the springs at Comiston, 3½ miles south of the city. The first pipe, of 3 inches bore, was laid from there in 1681.

[6] Graham: op. cit., pp. 83–4.

CHAPTER IV

Early Medical Instruction in Edinburgh

THE beginnings of organized medicine in Edinburgh were in 1505, when the Town Council granted the local surgeons and barbers a Seal of Cause[1] recognising them as one of the established crafts of the burgh. This restricted the right to practise either barbering or surgery within the burgh to freemen of the craft and laid down the following standards of qualification for a surgeon, "that he know anatomy, nature and complexion of every part of man's body And likewise know all the veins of the same that he may make phlebotomy in due time . . . for every man ought to know the nature and substance of every thing that he works or else he is negligent." It also gave them the right to have "once in the year a condemned man after he be dead to make anatomy of whereby we may have experience, each one to instruct others." No barber could practise surgery unless he had qualified as above, and "no masters of the said craft shall take an apprentice or fee'd man in time to come to use the surgeon craft without he can both write and read."

This grant established the Incorporation of Surgeons of Edinburgh, which became a Royal College in 1778. The most important points in the grant are the requirement for a surgeon of a reasonable standard of education and professional knowledge, the recognition of the necessity for dissection experience and the individual responsibility "to instruct others." Unfortunately there is no evidence that the guild made use of the privilege of an annual dissection thus granted them, and the next reference to anatomy does not appear for almost a century and a half. The minutes of the Incorporation for 20 March 1645 record the admission of James Borthwick, "who has

[1] Reproduced and transcribed in full in J. D. Comrie: *History of Scottish Medicine* (London, 1932), pp. 160–4. In all document extracts quoted in this chapter the calligraphy has been modernized for ease of reading.

given his oath of fidelity and that he shall observe, keep and fulfil all the points of their seal of cause . . . and especially that point thereof anent dissecting of anatomy for the further instruction of apprentices and servants." Borthwick, who was father-in-law and master of the William Borthwick to whom John Monro was later apprenticed, was thus the first officially authorised teacher of anatomy in the town.

It was very probably through the influence of James Borthwick that the Incorporation, in 1647, added practical anatomy to the subjects for entrance qualification, and "after mature & serious deliberation" laid down the following schedule for examination:[2] "The first day the entrant is to begin with the introduction to surgery and make a general discourse on the whole anatomy without demonstration, secondly he is to demonstrate by ocular inspection more particularly some parts of the anatomy which shall be appointed to him by the deacon & masters and to answer the demands of his examiner and masters thereupon. Thirdly he is to show some operations on the forsaid subjects as the deacon & masters shall think fit. . . ."

The University of Edinburgh was established by charter of King James VI in 1583 as a secular institution under control of the Town Council as university patrons: this power the Council retained until 1858. From the beginning the University had the right to grant degrees in medicine as well as in other subjects, but in the case of medicine this power remained unexercised until the early eighteenth century.

Apart from anatomy, which was essentially the province of the surgeons, the other basic science then considered necessary in medicine was botany with its related subject, materia medica, and this was adopted by the physicians. Drs Robert Sibbald and Andrew Balfour established physic gardens,[3] first in the grounds of Holyrood Abbey and later at Trinity Hospital at the head of North Loch, a site now covered by Waverley Station. They also persuaded the Town Council in 1676 to found a chair of botany and to appoint to

[2] Surgeons' minutes, 15 July 1647.
[3] *The Memoirs of Sir Robert Sibbald* (1832).

it James Sutherland whom they had placed in charge of the physic garden and who continued to hold the professorship for almost thirty years: he also became King's Botanist for Scotland and built up a fine botanical collection at Holyrood. This professorship of botany was the first chair allied to medicine to be established in Edinburgh.

From early in the seventeenth century several attempts were made to found a College of Physicians in the city, but, largely owing to the opposition of the Incorporation of Surgeons backed by the Town Council, these attempts were unsuccessful until 1681, when a royal charter, adequately safeguarding the surgeons' privileges, was at last granted, principally through the work of Sibbald and the influence of James, Duke of Albany and York. A sequel to this was the first attempt by the Town Council to form a faculty of medicine in the university which they controlled. On 24 March 1685, the Edinburgh Town Council nominated "Sir Robert Sibbald to be professor of physic in the said university And appoint Convenient rooms in the College to be provided for him wherein he is to teach the art of Medicine." Obviously the university patrons intended that this post should be more than just titular and within six months they formed a faculty, in name at least, by appointing James Halket and Archibald Pitcairne, "Professors of Medicine to be joined with Sir Robert Sibbald in the University."[4] Unfortunately for the Council's progressive plans, it does not appear that any of these three ever undertook teaching in the university.

A decade after these abortive appointments, in 1694, a freeman surgeon, Alexander Monteith, encouraged by Dr Pitcairne, petitioned the Town Council to grant him certain unclaimed bodies, for the teaching of anatomy, in return for which Montieth offered that he "would serve as Surgeon to the Town's poor gratis."[5] Pitcairne had evidently been stimulated by his recent period as professor at Leyden and his ambition was to establish a similar teaching centre in his home town, as is shown by a letter to his friend, Dr Robert Gray of

[4] Town Council minutes, 4 September 1685.
[5] Town Council minutes, 24 October 1694.

London,[6] in which he wrote, "I do propose, if it be granted, to make better improvements in anatomy than have been made at Leyden these thirty years, for I think most or all Anatomists have neglected or not known what was most useful for a physician."

Monteith's petition being granted by the Council, a counter-petition was immediately presented by the Incorporation of Surgeons which had not been exercising the privilege of dissection it had held for almost 190 years. The surgeons requested the rights to bodies outwith the categories allowed to Monteith and this was also granted "expressly upon condition that the petitioners shall before the term of Michaelmas 1697 build, repair and have in readiness an anatomical Theatre Where they shall once a year (a subject offering) have a public anatomical dissection as much as can be shown upon one body."[7] The Council thus ensured that the Incorporation would not again neglect its privileges; and perhaps because of this corporate activity Monteith did not take up the rights he had been granted.

The new Surgeons' Hall was built in 1697 in what later came to be called Surgeons' Square between the old High School Yards and the city wall skirting the Pleasance.[8] Whether regular annual dissections were instituted immediately we do not know, the first recorded being in November 1702: the demonstration then lasted seven days, one surgeon dissecting a different part or system each day and Dr Pitcairne giving the epilogue on the eighth day.[9] There was another similar public dissection in April 1704.[10] Among the surgeons taking part on the first occasion was Alexander Monteith, and on the second occasion Robert Eliot, who was shortly to play a more prominent role.

On 1 February 1705 the surgeons received a petition from Eliot offering to take over the duty of annual public dissections in return for the Incorporation's support of his private teaching of anatomy

[6] Sloane Collection, British Museum, MS. 3216, f. 159, dated 14 October 1694.

[7] Town Council minutes, 2 November 1694.

[8] The building still stands although considerably altered. It is now university property.

[9] Surgeons' minutes, 8 January 1703.

[10] Surgeons' minutes, 18 May 1704.

to apprentices. This was approved by the surgeons and was confirmed by the Town Council six months later, when they granted him an annual salary of £15 sterling on the grounds that, "it being the practice of the best regulated cities to give encouragement to the professing and teaching of liberal arts and sciences for the education of youth . . . . And the petitioner by an act of the incorporation of the Surgeon apothecaries of this city unanimously elected their public Dissector of Anatomy, the petitioner was of intention to make a public profession and teaching thereof . . . which he hoped by the blessing of God would be a means of saving much money to the nation expended in teaching Anatomy in foreign places . . . ."[11] Saving the nation's money must have been a reason that appealed to the Scots, for we find it occurring frequently also in later petitions.

It will be observed that the Council was merely granting a salary and conferred no title on Eliot: they called him the surgeons' "public dissector of anatomy," presumably the expression used in his petition, although the surgeons themselves had not mentioned this title. Nevertheless, as both bodies subsequently referred to Eliot as Professor of Anatomy, it would appear correct to consider him as having been appointed to that office, in fact if not in name, in 1705. Robert Eliot thus has the honour to be the first professor of this subject in Great Britain.[12] In 1708, at Eliot's request, Adam Drummond was conjoined with him by the Town Council and by the Incorporation, the two bodies making the appointment separately.[13] The only work of Eliot and Drummond recorded is some public dissections, not always regular or annual, but they were probably active in private teaching of apprentices, arousing sufficient interest to stimulate grave robbing, which for the first time became a problem in Edinburgh. This practice was condemned in the surgeons' minutes for 17 May 1711, which stated that, " . . . of late there has been a violation of the sepulchres in the Grayfriar church yard by some who Most unchristianly have been stealing or at least attemp-

[11] Town Council minutes, 29 August 1705.

[12] The first person in Britain to bear the title officially was George Rolfe at Cambridge, 1707.

[13] Town Council minutes, 28 July 1708; Surgeons' minutes, 5 August 1708.

ting to carry away the bodies of the dead out of their graves a practice to be abhorred by all good Christians .. . ." and threatening expulsion to any member or apprentice who so offended.

After Eliot's death in 1715, the Council and the Incorporation, again acting independently, appointed John M'Gill his successor[14] and he and Drummond carried on teaching. Meanwhile, James Sutherland had retired from the chair of botany and had been replaced in 1706 by Charles Preston, M.D. (Rheims): the latter died in 1711 and was then succeeded by his brother, George Preston, an apothecary. Sutherland remained King's Botanist at the Royal Garden of Holyrood until 1715. The following year this post was given to Charles Alston who subsequently graduated M.D. (Leyden and Glasgow).

In 1713, the Royal College of Physicians received a letter from Principal Carstares of the University, representing,[15] "That it might be of public advantage to have a Professor of Medicine established in their university: And that Dr James Crawford being mentioned to them as being peculiarly fitted for that post, The university thought it proper to acquaint the College of physicians with the affair, That they might be favoured with the Character of that Gentleman before they made application to their patrons about it . . .." The College having returned a favourable reply, two weeks later the Town Council,[16] "considering That through the want of professors of physic and Chemistry in this Kingdom the Youth who have applied themselves to that Study have been necessitated to travel & Remain abroad a Considerable time for their Education to the great prejudice of the Nation," appointed James Crawford, M.D. (Leyden and Aberdeen), to be Professor of Physic and Chemistry, but specified that, "he is not to Expect any Salary as professor." This may be regarded as the second, somewhat parsimonious, attempt by the Council to establish teaching in medicine, but Crawford confined himself to lecturing in chemistry. In 1719, he was appointed

[14] Town Council minutes, 24 October 1716; Surgeons' minutes, 28 March 1717.

[15] R. C. P. minutes, 23 November 1713.

[16] Town Council minutes, 9 December 1713.

Professor of Oriental Languages especially Hebrew, but he apparently continued to discharge at least some of the duties of his original chair.

The University had already had to face the situation regarding degrees in medicine, for although the subject was not being taught in Edinburgh, candidates for the degree, who presumably had received instruction elsewhere, were occasionally presenting themselves. In this situation, the University had recourse to the College of Physicians to examine the candidates on its behalf. In this way, David Cockburn was duly graduated on 14 May 1705, the first M.D. of Edinburgh. The examination by the physicians seems to have been similar to that for their own licence to practise: this was reasonable, since under their charter of foundation they were obliged to grant the licence without further examination to any medical graduate of a Scottish university. The above procedure was repeated on subsequent occasions, and after Crawford's appointment in 1713 the Royal College was several times asked to appoint examiners to join with him in testing candidates.

This then was the state of affairs at the end of 1719: Adam Drummond and John M'Gill were conjoint Professors of Anatomy; James Crawford was titular Professor of Medicine and Chemistry (teaching none of the former subject and little of the latter), and was also Professor of Hebrew; George Preston was Professor of Botany in the University; while Charles Alston was King's Botanist at Holyrood. Thus was the stage set for the entry of Alexander Monro.

CHAPTER V

The First Professor Monro

ALEXANDER, the only surviving child of John Monro, was born in London on 8 September 1697 while his father was on military service. He was three years old when his father left the army and settled in Edinburgh—"and here," we are told in his autobiography,[1] "Alex[r] was educated at Schools and Colleges in the Latin, Greek and French languages, Philosophy, Arithmetick, Mathematicks and Book keeping."[2] He went on to say of himself: "When he was thought sufficiently qualifyed in these Sciences he served an Apprenticeship to his Father[3] who by assisting Dissections, furnishing Books, and chemical Vessels; putting the sick Pensioners of the Town under his Care, and obtaining of the Physicians and his Brethren to let him attend their Patients in uncommon Cases gave him better opportunities of improving himself in Medicine than the other Students had." He also tells us that, "his Father put him under Masters to be instructed in Fencing, Dancing, Musick and Designing."[4]

Alexander's period of service with his father probably began about 1712–13 when Monro *senior* was Deacon of the Incorporation. His companion apprentices in his father's household were Thomas

[1] Erlam: op. cit., p. 80. The original manuscript of this autobiography is in the Monro Collection, Dunedin. It is written in the third person but is in Monro's own handwriting.

[2] The schools were apparently private institutions: there is no evidence that he ever attended the High School.

[3] This apprenticeship was evidently informal as it is not recorded in the minutes of the Incorporation—a surgeon's son was permitted to take his examination without serving a formal apprenticeship beforehand, as was required for other candidates.

[4] Erlam: op. cit., p. 92.

Durham (apprenticed 1711) and George Campbell (apprenticed 1714).[5] We know that he (and no doubt Campbell) assisted his father to attend the wounded after the battle of Sheriffmuir in 1715. Alexander also took such instruction in medicine as was then available in Edinburgh: "he attended the Demonstration of the pharmaceutical Plants exhibited every Summer by Mr George Preston; a Course of Chemistry which Dr James Crawfurd sometimes gave; and the dissection of a human Body which was shewed once in two or three Years by Mr Robert Elliot, and afterwards by Messrs Adam Drummond and John Macgill Surgeon-Apothecaries who had the Title of Professors of Anatomy."[6]

John Monro's ambition was for his son to be able to establish in Edinburgh a medical school on the Leyden pattern. He therefore ensured that Alexander had the best education for the purpose available anywhere at that time. The autobiography says:[7]

"In the beginning of 1717 A.M. went to London where he lodged in an unmarried Apothecaries house, in whose Absence and with whom he visited Patients; but his principal Employment was attending Messrs Whiston and Hawkbee's Courses of experimental Philosophy,[8] Mr Cheselden's anatomical Demonstrations and assiduously dissecting human Bodies.[9] . . . This he did without any Instructor, except Vesalius and Lyser.[10] . . .

[5] Surgeons' minutes, 3 September 1711 and 1 October 1714.

[6] Erlam: op. cit., pp. 80–1. There are notes from Crawford's lectures on chemistry (in English) in M 164, Monro Collection, Dunedin.

[7] Erlam: op. cit., p. 81. This subject was also dealt with by Douglas Guthrie: 'The Three Alexander Monros and the Foundation of the Edinburgh Medical School' (*Journal of the Royal College of Surgeons of Edinburgh*, 1956, vol. II, pp. 24–34).

[8] William Whiston and Francis Hauksbee taught physics and other sciences. The apothecary with whom Monro lived is unknown.

[9] William Cheselden (1688–1752) was one of the foremost English surgeons and anatomists of the eighteenth century, author of *Anatomy of the Human Body* (1713) and *Osteography, or Anatomy of the Bones* (1733). There are notes on eight cases dissected by Monro in London from August 1717 to January 1718 in M 165 (pp. 261–3), Monro Collection, Dunedin; also 13 pages of notes from Cheselden's lectures.

[10] Andreas Vesalius: *De humani corporis fabrica* (1543); and Michael Lyser: *Culter Anatomicus* (1665).

"Too much diligence in dissecting once brought the Operator into hazard of his life; for by examining too freely the suppurated Lungs of a phthisical Man, when his hands had been accidentally scratched, they soon became inflamed and the Swelling extended to his Shoulders, which made Dr James Douglas[11] think that he woud at least lose one of his Arms. . . ."

Monro was diligent also in writing out extracts and translations from various authorities: the number and extent of these writings which appear in his student's notebook[12] are a remarkable tribute to his industry. Cheselden encouraged his pupils to form a discussion society, and it was for this group that Monro first prepared a lecture on the bones, which formed the basis of his later book. He attended various London hospitals, and we know that Chelsea Hospital was one of these, for he referred to it later in his lectures.[13]

In Spring, 1718, after a year in London, Monro went on to Paris, but before leaving sent home to his father some dissected specimens. John Monro very shrewdly used these to demonstrate his son's ability by presenting some to the Royal College of Physicians and some to the Incorporation of Surgeons.[14] "Mr Adam Drummond was so well pleased with them that he desired old Mr Monro to write his Son to continue his Diligence in Anatomy, for as soon as the Son returned Home, he woud dimit his Share of the Profession of Anatomy in his Favour."[15] John Monro's plans were beginning to work out.

"At Paris A.M. attended the botanical Lectures and Demonstrations in the Jardin du Roy, was shewed the dispensatory Plants by Mr Chomel in his private Garden and had a little Course of Chemistry from him.[16] He attended the Discourse in the Ecole des

[11] James Douglas (1675–1742), Scottish anatomist in London, whose name is perpetuated in the "pouch of Douglas."

[12] M 165, Monro Collection, Dunedin. There are extracts in English or Latin, or translations, from at least thirty different works entered during his student period, many of the entries of considerable length.

[13] Lectures on Wounds, Duncan Collection, R. C. P. Library, Edinburgh.

[14] See R.C.P. minutes, 6 May 1718; and Surgeons' minutes, 13 September 1718.

[15] Erlam: op. cit., p. 81.

[16] Pierre-Jean-Baptiste Chomel (1671–1740).

Médecins and at the Visits of the Physicians and Surgeons in the Hospitals La Charité and L'Hôtel-Dieu in which last place he had a Course of Anatomy from Mr Bourquet, and performed all the operations of Surgery under the direction of Mr Thibaut and of some other Compagnons of that Hospital, who allowed him to examine the State of the urinary Organs of those who dyed after having undergone the operation of Lithotomy in Autumn.[17] He likewise was a pupil of Mr Grégoire for Accouchemens or Delivery of Women and of Mr Cesau for Bandages, but alwaies regretted that Mr Winslow, to whose Acquaintance he was introduced, gave no Course of Anatomy while he stayed in Paris.[18]

"Towards the End of Autumn he set out for Leyden[19] where he was Student under Boerhaave in Chemistry, the Theory and Practice of Medicine and clinical Lectures in the Hospital and afterwards attended his Prelections in Botany. Here he met with such another Misfortune as had befallen him at Paris. Professor Rau was in such a state of Health that he coud not teach Anatomy."[20]

At Leyden Monro was a fellow-student with John Rutherford, later his collaborator in Edinburgh, and with Gerhard van Swieten, founder of the Vienna medical school. Carrying "a strong recommendatory Letter of Dr Boerhaave," Monro visited Frederik Ruysch, Professor of Anatomy at Amsterdam, and examined his famous anatomical preparations.[21]

He returned home in autumn 1719 and on 10 September that year the Incorporation of Surgeons received, "a Petition presented by

[17] Notes, dated 4 October 1718, on one of these cases are in M 165 (p. 263), Monro Collection, Dunedin—"I opened a boy of 12 or 14 years who had been cut for the Stone. . . ."

[18] Jakob Benignus Winslow (1669–1760), Danish by birth, was Professor of Anatomy at Paris: his course would be given only in winter. M. Grégoire was Grégoire *père*: father and son were both famous teachers of midwifery.

[19] He was entered in the *Album Studiosorum Academiae Lugduno Batavorum* on 16 November 1718 and his age was given as 20 instead of 21.

[20] Johann Jacob Rau (1668–1719), Professor of Anatomy, was at the time confined to bed following a fall and died shortly afterwards.

[21] Ruysch, then aged 81, was "particularly famous for his Art of injecting the most subtle Vessels of the Body, and for preserving all the parts in their natural Colour and texture" (Monro *primus*, 'History of Anatomy', M 166, Monro Collection, Dunedin).

Alexander Monro son to John Monro a freeman of the said Incorporation Representing that he had thereby a title to Enter to the Society if after tryall found qualified and therefor craved dyets might be appointed for his Examination."[22] The examination was customarily in four stages, conducted at successive monthly meetings of the Incorporation by appointed examiners, the candidate being warned of his subjects in advance, but being liable to cross-examination by any member. Monro's tests were:[23] 2 October 1719, by Alexander Nisbett, on the sense of seeing and on respiration; 29 October, by George Cunninghame, on the thorax and on the structure of the human body; 20 November, by John Blair, on secretion and on "fistulas in generall with the operation of the fistula Lachrimalis"—after each of these tests the members approved of his passing, "nemine contradicente," but this process of examination was taking too long for Monro and his father, impetuous to press on with their scheme.

Therefore, when the third test was concluded on 20 November, "It being represented that Mr Monro was ready Instantly to be Examined on his said last lesson And yt [that] it was highly Inconvenient for him to be delayed because he was resolved suddenly to go abroad In respect thereof the Calling unanimously agreed that he should be presently examined Declaring that this should not be made a precedent of. . . ." He was therefore forthwith examined by James Robertson on the bandages of hand and face, and this test being approved, "they admitted and Received him a free Chirurgeon In and amongst them to Enjoy all the libertys and privileges belonging to a freeman of the said Incorporation who took the oath and afterwards his seat at the board."[24] There is no evidence that the story of his being "resolved suddenly to go abroad" was anything other than a convenient fabrication to justify a departure from the usual procedure—he had only just returned after two and a half years

[22] Surgeons' minutes, 10 September 1719. John Lauder was then Deacon.

[23] See Surgeons' minutes, dates cited.

[24] Only burgesses of the city could become guild freemen: he had prepared for this by registering as a burgess on 18 November (see Roll of Edinburgh Burgesses, City archives).

away and, when the chair of anatomy was in sight, was hardly likely to go away again—and probably most of the surgeons knew it too.

No time was wasted in taking the next step. On 21 January 1720, at the next meeting of the Incorporation after Monro's admission, "Adam Drummond and Mr John McGill two of their number and present Proffessors of Anatomy represented that the state of their health and business were such that they could not duely attend the said Proffessiorship But they and the haill Calling being perswaded of the sufficiency of Alexander Monro one of their number Did therfor unanimously recommend him to the Provost and Toun of Edinr to be Proffessor of Anatomy."[25] The following week, on 29 January, Deacon Lauder presented this recommendation to the Town Council together with Drummond's and M'Gill's resignations, whereupon the Council, "nominated and elected . . . Alexander Monro to be professor of Anatomy in this Citie and Colledge in place of the said Mr John Mc Gill and Adam Drumond dureing the Councels pleasure and allowed to him the yearlie sallarie of fyftein pounds sterling money."[26]

Notice that, in contradistinction to previous occasions, the surgeons made no appointment but merely gave a recommendation, and the Council's appointment was "in this City and College," making it for the first time a university chair.[27] The salary of £15 was additional to students' class fees of three guineas each per academic year which were retained by the Professor. Monro's lectures were very popular with students, partly because they departed from tradition by being delivered in the vernacular, not in Latin. In 1720 his income from teaching was £196 13s. 0d. and in 1749 it had risen to £540 11s. 0d.[28] In addition to these sums he had the income

[25] Surgeons' minutes, date cited.

[26] Town Council minutes, date cited.

[27] The distinction was apparently not realised at the time (was it the insidious hand of John Monro in the background?) as Drummond and M'Gill were referred to in the Council minute as "conjunct professors of Anatomy in this Citie and Colledge;" the minutes recording their appointments had not, however, used these terms. The Council did not always seem to distinguish clearly its dual role as local authority and controlling body of the University.

[28] Monro's roll of students (Edinburgh University Library, MS, DC. 5. 95), found in 1924 in a water-cistern room at Craiglockhart.

from his fairly extensive private practice: for instance, on the death of his second cousin, Lord President Duncan Forbes, in 1747, Monro rendered to the estate an account covering attendances on Forbes, his family and household from 1724, totalling £179 15s. 5½d., the last items being "a cerecloath for his Body" and "Embowelling."[29] Monro's travelling medicine chest, used in his private practice, is now in the possession of Dr P. A. G. Monro, Cambridge.

The autobiography tells us that:[30] "The young Professor wished to prepare Discourses befor he taught any but his Father obliged him to give publick Lectures soon after he received his Commission and without his Knowledge prevailed on the President and Fellows of the College of Physicians and the Deacon of the Surgeons with his Brethren to honour the first Days Demonstration with their Presence." The sight of such an august company caused Monro to forget his prepared lecture, so he spoke extempore and with such success, "that he never afterwards attempted to mandate the Words of any Discourse but having made himself as much Master of the Subject as he coud, and where method or order was necessary for rightly treating the subject, he marked the Heads of it by so many significant words. . . ." When this episode occurred is uncertain, but in August 1720 the College of Physicians received a petition from Professor Monro, "Craveing a Recommendation from them to the Magistrats of Edg[r] In his favors as a fitt persone Deserveing further Incouragement."[31] As a result the Town Council, having received representations from the College and also from the surgeons, agreed to "authorize and give power to the present magistrats to give such encouradgement to M[r] Alexander Monro . . . As they shall think convenient."[32] There is no obvious form such encouragement could take, unless it were attendance at the first lecture as mentioned above: if that is so, Monro's memory must

[29] Culloden papers, MS. 2971 (91), National Library of Scotland.
[30] Erlam: op. cit., pp. 82–3.
[31] R.C.P. minutes, 2 August 1720.
[32] Town Council, 24 August 1720. There is no record of this matter in the surgeons' minutes.

have been at fault when he stated that it was "without his Knowledge."[33]

Meanwhile, John Monro had not been idle: "Old Mr Monro used Dr Charles Alston his Son's Fellow Student and intimate Friend, who was Professor of Botany,[34] in nearly the same Manner as he had done to his own Son. He prompted him to make speedily a Collection of Plants ranged in order, then advertised publick lectures on them."[35] Courses of lectures were advertised[36] to begin on Monday, 7 November 1720, by Dr Crawford on chemistry, by Dr Alston on materia medica, and by Monro on "Anatomy in all it's parts, the Operations of Surgery and Bandages." This must be regarded as the real beginning of the Edinburgh medical school.

Although Monro's appointment was made as a university one, all his teaching in the first five years was given in the anatomy theatre in the basement of Surgeons' Hall and he did not at that stage have any direct contact with the university. He was, however, establishing himself as a leading figure among the surgeons, for on 17 September 1720 he was elected Library Keeper to the Incorporation, a post which he retained until 1727, when he was succeeded by Joseph Gibson, then Professor of Midwifery.

After beginning his teaching course, Monro's next move was intended to secure his own position. As recently as 1719 the Town Council had resolved that all professorships should be "at pleasure" and not be life appointments. In spite of this, however, Monro petitioned them for just such an appointment, probably with the backing of the family friend, George Drummond, then Dean of Guild and already a powerful figure in university affairs[37] although

[33] The autobiography was written late in life (he referred in it to giving his lectures for forty years).

[34] Alston was King's Botanist and did not become professor in the University until 1738.

[35] Erlam: op. cit. p. 83.

[36] *The Caledonian Mercury*, 22 September 1720.

[37] A. Bower: *The History of the University of Edinburgh* (1817–30), vol. II, p. 185 (fn.)—"nothing was done in regard to the college without his advice or direction." Bower also states that George Drummond was a close relative of Adam Drummond, the former professor of anatomy, but this is an error.

he had not by then become Lord Provost, a position which he would later occupy for six two-year terms.

On 14 March 1722, the Council received a petition from Monro:[38]

"That the Honourable Town Councill was pleas'd to constitute me their Professor of Anatomy, & 'tis hoped that by any thing that has pass'd hitherto, they have noe reason to believe their choice dishonour'd. This Study however of Anatomy, is so Extensive, that without constant Application to, & diligent Enquiry after it there is noe possibility of being thro'ly acquainted with it, far less of being capable to teach others. . . .

"The Honourable Town-Councill will therefore be pleased, with their usuall unbiased Reguard to the common advantage of the good Town, to take into their serious Consideration, the properest method of making this Place as famous a school of Anatomy as any of these to which our Youth is sent with so great expence for their Education, and therefore grant the Commission of Professor Ad Vitam aut Calpam, which by taking away the least umbrage of Uncertainty in the Office, will likewise remove all pretences for neglect of Duty in the exercise of it.

"If increasing the Seminaries of Learning might be reckon'd any merite, I may plead some as being the principall Instrument of setting on foot a compleat Systeme of Medicine in this place. Now by this 'tis Evident that a considerable summe of Money must be sav'd to the nation yearly, & this City particularly reap the benefitt of it. . . ."

After considering this request, the Council,[39] "being well and ryply advysed and satisfied how much this profession may tend to the advantage and honour of this Citie . . . hereby nominat elect make constitut appoint and ordain the said M^r^ Alexander Monro to be professor of Anatomy within this Citie and Colledge of Edinburgh and that *ad vitam aut culpam* notwithstanding of any act of Councel formerly made. . . ." It would not be long before Monro's claim to have established "a complete System of Medicine

[38] The original petition is in the City Corporation archives.

[39] Town Council minutes, 14 March 1722.

in this place" became true, but at this stage it was certainly premature.

On the recommendation of William Cheselden, Monro was elected a Fellow of the Royal Society on 27 June 1723, when he was 25 years of age, but as he did not visit London again he was never admitted a member.

The large numbers of students being attracted to Monro's lectures increased the shortage of cadavers for dissection and there were repeated discussions in the Incorporation of Surgeons about ways to control grave-robbing which was becoming so common as to cause public protests.[40] In 1725, by public advertisement,[41] Professor Monro announced, "my just Abhorrence of that vile, abominable, and most inhumane Crime of stealing human Bodies out of their Graves, and which must directly tend to the Ruin of my Profession: And do, for Encouragement to the Discoverers of such Violators of Sepulchres, and of other malicious Felons, who endeavour to bring a Reproach on my self, Brethren, or Apprentices, Promise, and hereby Oblige my self to pay a Reward of Three Pounds Sterling for every such Offence that shall be discovered to the Magistrats, so as the Offenders, one or more, may be convicted." This was supported by a similar offer from the Incorporation of £5 reward.

This disclaimer did not, however, prevent public riots of such severity as to endanger the Professor of Anatomy and his growing collection of anatomical and pathological specimens, housed in the unprotected Surgeons' Hall. It appeared to Monro that he would be much safer within the walls of the University. He therefore petitioned the Town Council,[42] "as patrons of the Universitie of Edinburgh to allow him as professor of Anatomy therein a theatre for public dissections for teaching the students under his inspection." Monro's friend and supporter, George Drummond, had only a fortnight previously been elected Lord Provost for the first time, and no doubt this move was made on his advice. Certainly the Council

[40] Surgeons' minutes, 24 January 1721, 17 January 1722 and 2 March 1725.
[41] *The Caledonian Mercury*, 20 April 1725.
[42] Town Council minutes, 20 October 1725.

readily agreed,[43] and so the chair of anatomy was removed from its connection with the Incorporation of Surgeons and came to be a proper part of the University. Monro had not up to this time been inaugurated as a university professor and this ceremony was duly performed on 3 November 1725, his inaugural dissertation being entitled *De Origine et Utilitate Anatomiae.*

[43] The Council's agreement must have been taken largely for granted as the Incorporation allowed the use of its theatre, which Monro had been using, to William Graeme for his lectures by a resolution passed on 18 October 1725—2 days before the Council meeting.

CHAPTER VI

The Edinburgh Medical School

THE Town Council of Edinburgh in 1724 appointed William Porterfield, M.D. (Rheims), to be Professor of Medicine in accordance with a recommendation of the Royal College of Physicians.[1] However, the new professor never taught and never resigned, his appointment seeming just to lapse into oblivion and that very rapidly, for the following year a candidate for the M.D. degree was examined by Crawford as before, without any reference to Porterfield's existence. As a physician, however, Porterfield remained prominent in the city, being President of the Royal College in 1748–52 and publishing an important treatise on the eye in 1759.

The next stages in the evolution of a medical faculty are recorded in the autobiography of Monro *primus*.[2]

"The old Gentleman [John Monro] seeing none undertaking to teach the other Branches of Medicine pushed his Son to teach the Theory and Practice of Medicine and Chemistry as well as Anatomy, and with a View to this made him in the Summer Time to comment on Boerhaave's Institutions and Aphorisms[3] to his Prentices and some few other young Gentlemen. He bought an Area where he intended to build a chemical Elaboratory, and the Son was about to take the Degree of Doctor, and to leave the Board of Surgeon Apothecaries that he might become a Member of the Royal Colledge of Physicians. But when this Plan was near the Time of its Execution, others offered their Service. D[r] George Martin undertook to teach

[1] R.C.P. minutes, 21 November 1723; Town Council minutes, 12 August 1724.

[2] Erlam: op. cit., p. 84.

[3] *Institutiones medicae in usus annuae exercitationis domesticos digestae* (1708) and *Aphorismi de cognoscendis et curandis morbis in usum doctrinae domesticae digesti* (1709).

the Theory and Dr William Graham the Practice of Medicine, and the same two Parts with the Chemistry were proposed to be taught by Drs Andrew Sinclair, John Rutherfoord, John Innes and Andrew Plummer.—Professor Monro alwaies esteem'd this a lucky Incident, for tho' he woud not disobey his Father, yet he thought the Task designed to be imposed was too great for him to bear. . . . The Rivalship of the Teachers of Medicine did not continue long, for the Patrons of the University appointed the last named Gentlemen to be Professors there, and then the other two desisted from Teaching."

William Graeme, M.D. (Rheims and St Andrews), and George Martine, M.D. (St Andrews and Leyden), began to teach medicine about the end of 1725, using the basement rooms at Surgeons' Hall[4] vacated by Monro when he moved into the University. Their lectures continued, however, for less than two years: they could not compete with the other four who were obviously working in collaboration with Monro and who had actually begun teaching in February 1725.[5] These four—John Rutherford, M.A. (Aberdeen), M.D. (Rheims); Andrew St Clair, M.D. (Angers); Andrew Plummer, M.D. (Leyden); and John Innes, M.D., D.Phil. (Padua)—had bought a house adjoining the university physic garden, "for a Chymical Elaboratory," and had obtained the use of the garden,[6] "for the better Carrying on their design of furnishing the Apothecary Shopes with Chymical medicines, And instructing the Students of medicine in that part of the Science."

After teaching for a year, these four doctors petitioned the Town Council to appoint them professors, and so, on 9 February 1726, Rutherford and St Clair became Professors of the Theory and Practice of Medicine, and Plummer and Innes Professors of Medicine and Chemistry, the appointments being *ad vitam aut culpam* but without salary. Thus was the Edinburgh faculty of medicine, after several false starts, finally established. On the same day, Joseph Gibson, a surgeon of Leith, was appointed Professor of

[4] Surgeons' minutes, 18 October 1725.
[5] *The Caledonian Mercury*, 29 September 1724 and 4 October 1725.
[6] Town Council minutes, 11 November 1724.

Midwifery in the city, the first such chair in the world: his function was to teach midwives, medical students not being expected to have any knowledge of that subject.

The newly-established faculty was not complete without a hospital for clinical teaching. "Whenever there was a Prospect of all the Branches of Medicine being taught," Professor Monro wrote,[7] "old Mr Monro to compleat his Plan proposed the Erection of an Infirmary or Hospital for the poor labouring under Diseases. At his Desire his Son wrote a Pamphlet or two setting forth the Benefits of such an Institution, which, being printed and dispersed, had the good Effect of exciting the Members of the College of Physicians, the Incorporation of Surgeons and several other Gentlemen to sieze the occasion of the dissolution of the North British Fishery Company in 1725 when the Remainder of the Stock was to be divided among the Adventurers, for obtaining Assignations to the Shares of that Company and voluntary Subscriptions for other Sums to be employed in founding an Infirmary. So soon as £2000 Sterl. was payed into the Treasurer . . . a general Meeting of all of them was advertised where a Committee was appointed to begin this Undertaking and to obtain more Funds, among these was Professor Monro who had a principal Part in framing the general Rules of Management which were afterwards followed."

The first of the pamphlets referred to had been published anonymously in 1721[8] and appealed to the sense of charity, "as it is warmly recommended and injoyned in the Gospel as one of the greatest Christian Duties." George Drummond was a director of the moribund Fishery Company and it was he who initiated the appeal for funds. The sum of £2000 was raised by 1728 and the general meeting of subscribers was held on 19 February that year. The managers appointed at that meeting, including Alexander Monro, rented a house in Robertson's Close, off the Cowgate, and this was opened as a hospital on 6 August 1729 with six beds for the reception of the sick poor. Originally the managers had accepted an offer

[7] Erlam: op. cit., pp. 84–5.

[8] A. Logan Turner: *Story of a Great Hospital: The Royal Infirmary of Edinburgh, 1729–1929* (1937), p. 39.

from Monro to be solely responsible, without fee, for attending surgical patients, but because of the jealousy of some of the other surgeons, this arrangement was revoked at Monro's suggestion and he and five others appointed "to serve each in his Turn a Month and to furnish while in attendance all Drugs necessary for the Patients Gratis."[9] This arrangement continued until 1738 when it was agreed that all members of the Incorporation should attend in turn.

From the start the Infirmary was popular with students and made much use of for teaching. "To shew what was expected to be performed by the Surgeons," Monro wrote,[10] "P.M.[11] was put on the first Month's Attendance, and while he remaind a Member of the Board of Surgeons, he alwaies attended in his Turn . . . and every Saturday of his Tour of Attendance he gave in the Operation Theatre an Account of each Case under his Care in the preceding Week, explaining the Nature of their Diseases, the Reasons of their Symptoms, the Views he had in treating them in the manner they saw marked in the Journals of the House, and how far what he had done answered or disappointed his Expectations.—The Effects of this Method were very observable by the regular Attendance of the Students while he was on Duty."

So successful was this hospital that it was incorporated as the Royal Infirmary of Edinburgh in 1736 by charter of King George II. A large new building, designed by William Adam, was erected, Monro and George Drummond being members of the building committee and taking the principal part in supervising construction: Monro himself designed the operating theatre. The foundation stone of the new building was laid in 1738 and the first patients were admitted to it in 1741, although the work was not completed until seven years later.

The faculty established in 1726 was diminished by the death of Dr Innes in 1733. St Clair gave up teaching about 1744,[12] leaving

[9] Erlam: op. cit., p. 85.
[10] Erlam: op. cit., p. 86.
[11] That is, Professor Monro.
[12] His last attendance at the Senatus was on 13 July 1744.

Plummer teaching chemistry and Rutherford alone teaching medicine. The Town Council remedied this deficiency in 1747 when they appointed Robert Whytt, M.D. (Rheims and St Andrews), to be Professor of the Institutes and Practice of Medicine.[13] Rutherford then withdrew from teaching theory and practice systematically and devoted his time to regular clinical lectures and bedside instruction in the Infirmary.

Monro's great textbook of osteology, *The Anatomy of the Human Bones*, had been published at the end of 1726 and was advertised at three shillings, "bound in Calf and tittled."[14] This work consisted of a minutely detailed description of the human skeleton without illustrations: to later editions was added *The Anatomy of the Human Nerves* with *An Account of the reciprocal Motions of the Heart* and *A description of the Human Lacteal Sac and Duct*. Thomson, in his *History of the Royal Society*[15] said of this book, "It may be considered as the completion of the subject, since it would be exceedingly difficult and perfectly unnecessary to introduce any improvement upon the descriptions which Dr Monro has given." It went through eight editions in Monro's lifetime[16] and three more after his death up to 1820: it was also translated into most European languages, one of the most noteworthy editions being the French one of 1759[17] with magnificent engravings by Jean-Joseph Sue *père*, Professor of Anatomy at the Royal Schools of Surgery and Royal Academy of Painting and Sculpture, Paris. In 1744, there was published in London *An Essay on Comparative Anatomy*, an unauthorised version of Monro's lectures on that subject: this was included in the posthumous collected *Works* and also appeared in a French edition in 1786, translated by Jean-

[13] Town Council minutes, 26 August 1747.

[14] *Caledonian Mercury*, 5 January 1727.

[15] T. Thomson: *History of the Royal Society, from its institution to the end of the eighteenth century* (1812).

[16] M 160, Monro Collection, Dunedin, is a copy of the 6th edition (1758) interleaved with additions and corrections by *Primus* and *Secundus*. The 8th edition was not published until 1768 but was in preparation before Monro's death the previous year.

[17] *Traité d'ostéologie* in two folio volumes, the first being a translation of the text and the second the illustrative engravings.

Joseph Sue *fils.*[18] It was "the first general treatise on comparative anatomy in which this term appears on the title-page."[19]

As a teacher, Monro, "that great anatomical oracle" as Dr Lettsom called him,[20] was superb. Oliver Goldsmith, who studied medicine in Edinburgh in 1752–54, wrote of him:[21] "this man has brought the science he teaches to as much perfection as it is capable of; and not content with barely teaching anatomy, he launches out into all the branches of physic, when all his remarks are new and useful. 'Tis he, I may venture to say, that draws hither such a number of students from most parts of the world, even from Russia. He is not only a skilful physician, but an able orator, and delivers things in their nature obscure in so easy a manner, that the most unlearned may understand him." A further tribute to his delivery came from Thomas Somerville, D.D., who, when a divinity student, attended Monro's closing lecture in 1757:[22] "His style was fluent, elegant, and perspicuous, and his pronunciation perhaps more correct than that of any public speaker in Scotland at this time . . . and I think I had never before been so much captivated with the power and beauty of eloquent discourse. The purpose of his address was to impress on his students the moral and religious improvement of the science of Anatomy, as it displayed evidence of the wisdom, power, and infinite goodness of the Creator. . . ."

Professor Monro himself recorded that his course of lectures consisted of the following parts:[23]

"1. Preliminary Discourses, among which was comprehended the History of Anatomy from its Rise to the then present Time. — 2. The demonstration of the human Bones according to the Account of them afterwards printed. —3. The Muscles and Bowels of a

[18] *Traité d'anatomie comparée.* Sue *fils* studied under Monro *secundus* and took his M.D. degree at Edinburgh: he became Professor of Anatomy at the School of Fine Arts, Paris, in 1819.

[19] F. J. Cole: *A History of Comparative Anatomy from Aristotle to the Eighteenth Century* (1944).

[20] J. C. Lettsom: *Some Account of the late John Fothergill, M.D.* (1783).

[21] Letter to his uncle, Rev. Thos. Contarine, 8 May 1753, quoted in J. Forster: *The Life and Adventure of Oliver Goldsmith* (1848).

[22] T. Somerville: *My Own Life and Times* (1861).

[23] Erlam: op. cit., p. 83.

human Subject. —4. The Bloodvessels and Nerves of another Subject,—After each Demonstration he endeavoured to explain the Uses and Functions of the Organs, so far as coud be deduced from the Fabrick immediately befor exhibited, and remarked what Diseases they were subject to, with some Account of their Symptoms and the method of Cure in each. —5. A Sketch of comparat^ve Anatomy, of the order of which some knowledge may be had by the very imperfect Essay on comparat^ve Anatomy published long ago from the Notes of some of his Scholars. This part was greatly subservient to the following one. —6. Physiological Discourses on the more abstruse Parts of the animal Oeconomy, These were accompanyed with the demonstration of the more subtile Structure of the Organs then talked of. —7. All the chirurgical Operations performed on a human Body, with an Account of the Diseases which made these Operations necessary[24] —8. The application of the Laques Bandages and other chirurgical Dressings.

"This Course continued from about the middle of October to the Middle of April, and was given annually by this Professor forty years."

The surgical portion of the course was then regarded as an essential concomitant of anatomy, so that when, in 1741, a proposal came before the Incorporation of Surgeons to recommend that Thomas Glenn, M.D. (Rheims and St Andrews), be appointed Professor of Lithotomy, Monro maintained that the subject was part of his work and the matter was dropped after some lengthy debates.

Monro *primus* was extremely well read in his subject, both in the classical and in the contemporary literature (in the lectures on wounds, for instance, there are references to at least 77 authorities); he had a scientific approach and a degree of scepticism unusual in his day; he was an accurate clinical observer and, above all, an intensely practical surgeon. It has often been said that Monro was not an operating surgeon, but this is manifestly wrong: at least in his earlier days he operated regularly both in the Infirmary and in

[24] His history of surgery and introduction to surgical lectures have been published by the present author in *Medical History* (1961), vol. V, pp. 286–90.

private cases.[25] He said himself:[26] "When obliged to perform Operations in Surgery, which for many Years he was often employed in, he suffered great Anxiety. This notwithstanding he was esteemd a cool deliberate Operator."

A few examples from his lectures will serve to illustrate his teaching.[27] Careful observation of cases is shown in these extracts:

On breast carcinoma: "Of near fifty, which I have been present at the extirpation of, only four patients remained free of the disease for two years. . . . The disease does not always return to the part where the former tumor was taken away; but more frequently in the neighbourhood and sometimes at a considerable distance. Upon a relapse, the disease in those I saw was more violent, and made quicker progress than it did in others on whom no operation had been performed."

On brain injuries: "I do not know of one patient being cured that was wounded in the Cerebellum; the Cerebrum itself has been frequently cured even then when considerable quantities of it have been thrown out."

The practical surgeon offered this sound advice: "There is one caution in all Dressings especially where Emplastick Medicines are to be applied, that if there is any hair it must be carefully shaven off; else would cause intollerable pains to the patient, and the Plaister don't stick so fast."

Knowledge of the physiology of the reproductive systems was very primitive and menstruation was a complete puzzle: "The different Opinions about the Cause of it were partly advanc'd by the

[25] Notes on some of his operation cases up to 1727 are recorded in M 165, Monro Collection, Dunedin, under the heading, "Chirurgicall Observations." They are mostly cases of excision of tumours and amputation of breasts, including a lady from Bristol who came to see him twice, and patients seen in Glasgow and Dalkeith.

[26] Erlam: op. cit., p. 97.

[27] The extracts quoted here have been taken from various sets of notes written by students: by Robert Haswell (R.C.S.Ed.); by Blagden (Wellcome Library); in the Duncan Collection (R.C.P.Ed.); and M 167 (Dunedin). In these students' notes abbreviations have been expanded and certain errors corrected to make them more easily readable.

Chymists and partly by those who accounted for it in a more mechanical way; The Chymists imagin'd there were Fermentations, Effervescences &c. in the Uterus, but all these are now putt out: It is now generally allow'd to proceed from an over fullness of the vessels, or a Plethora. . . . I need not mention to you the alleag'd influence of the moon, for that Opinion is demonstrably false. . . . As women generally live an unactive life, and as their Perspiration is less than that of Men, now when there is an over fulness of the vessels the blood must make way for itself wherever the most favourable place is . . . ." No doubt this argument was logical in an age when bleeding was considered a cure for so many ills. Like his contemporaries, he was also completely ignorant of the mechanism of conception; yet in this extract we see an extraordinary forecast of endocrinology:

"The Testicles of the Male serve for preparing that thick balmy and white Liquor, the Seed, in which when viewed with a Microscope we see a great number of small animalculae frisking about; if this Liquor is not separated there is a considerable change made in the whole body, as we see in all animals that have been castrated, perhaps this comes for the want of something that should be absorbed from the Testicles into the Blood."

The part of the ovum in conception was not known, however, the spermatozoa alone being believed to form the embryo which acquired *in utero* some of the characteristics of the mother.

A rational scepticism is frequently to be observed in Monro's lectures: "When a tooth grows carious it ought undoubtedly to be extracted. . . . But frequently the patient will not consent to the operation; and then our next endeavour is to palliate the symptoms. . . . the great efficacy of burning an adjoining part with a red-hot iron has been much extolled, and proposed as a singular instance of the effects of the sympathy of nerves, it being commonly performed at the tip of the ear, which is supplied by the same nerves as the teeth; but the terror and surprize of the patient is the great cause of its success, as proof of which we may observe that it seldom succeeds twice in the same person." Yet at times he betrayed a naive acceptance of contemporary fallacies, as when he said, "if

a lamb sucks a goat it'll change its soft wool to a rough, hairy skin."

Finally, there is a caution which is just as applicable today as ever it was: "People are too hasty in making conclusions, a single case or two has too often been the occasion of fixing a general rule for the cure of diseases."

In 1764, Monro published *An Account of the Inoculation of Small Pox in Scotland*. This was written in response to a request for information from the Paris Faculty of Medicine which was investigating the efficacy and dangers of this predecessor of vaccination. Inoculation carried an appreciable risk but it was less than the risk of the natural disease which then caused 10% of all deaths in Edinburgh. In this work Monro suggests the theory of chemotherapy: "If the seeds of this disease could be destroyed by medicines which would not hurt the human constitution, the inventor of them would be a most universal benefactor of the human race; but, unluckily, there is not yet any such known." He also showed a very modern approach to medical statistics when, in the preface, he invites practitioners to send him information in response to the following questions:

"How soon after birth have they known infants to suffer small pox?

"Whether are children most subject to convulsions and rash in the small pox, either natural or inoculated, before they are six months old, or from six months to two years, or from two to six years of age, or from this to puberty?—No single man's practice can determine this; the number of each is therefore requisite to be had.

"Is the bathing the extremities of children with warm water, when the eruption of the small pox is expected, a common or successful practice?

"What are the effects of immersing all the body into the warm bath when the pocky pimples subside unexpectedly, or when the patients are attacked by convulsions?

"How many have small pox after twenty-one years of age?

"What is the number of those who die in, or recover from, the natural small pox?"

On 1 January 1756, the University of Edinburgh conferred upon

its Professor of Anatomy the degree of M.D., "on the narrative of his past Services."[28] On 14 January, a barrier to his recognition as a physician was removed when the Incorporation of Surgeons received and accepted a letter of resignation from Monro,[29] "Bearing that he had lately engaged in a business which was thought incompetent with the exercise of Surgery and Pharmacy, both which he is to relinquish."[30] On 3 February 1756, he and William Cullen, Professor of Medicine and Chemistry, were given their licences to practise as physicians by the Royal College, and on 5 March both were admitted as Fellows. Alexander Monro *secundus* was by then associated with his father as conjoint professor and on 6 June 1757 Monro *primus* wrote to Lord Provost Robert Montgomerie asking that, as both of them then held degrees in medicine, they should receive a new commission as Professors of Medicine and Anatomy. This was approved by the Town Council on 22 June and the Monros were thereafter recognised by the Senatus Academicus of the University as being members of the medical faculty, recognition which they did not receive as professors of anatomy alone.

With this change of status, Monro *primus* was entitled to attend as a physician patients in the Royal Infirmary, and, in 1757, together with Professors Whytt and Cullen, he joined Professor Rutherford in giving clinical lectures. The following year Monro handed over all routine teaching in anatomy and surgery to his son and concentrated entirely on clinical instruction. Of this portion of his work, Andrew Duncan *senior*, later Professor of the Institutes of Medicine, said:[31] "There I had myself the happiness of being a pupil, who profited by the judicious conduct of his practice, and was improved by the wisdom and acuteness of his remarks. I have indeed to regret that I attended only the last course of his lectures in which he

[28] Erlam: op. cit., p. 91.

[29] The regulations of the Royal College of Physicians forbade the entry of any member of the Incorporation of Surgeons.

[30] Letter dated 13 January 1756, recorded in minutes of the following day. Monro had never kept a pharmaceutical shop as many of the surgeons did, but he supplied and compounded drugs for his patients.

[31] A. Duncan: *An Account of the Life and Writings of the late Alex^r Monro Sen^r, M.D., F.R.S.* (Harveian oration, R.C.P., Edinburgh, 1780).

had ever a share, and at a time when he was subjected to a disease which proved at length fatal. Still, however, from what I saw and from what I heard, I can venture to assert, that it is hardly possible to conceive a physician more attentive to practice, or a preceptor more anxious to communicate instructions."

CHAPTER VII

Monro Primus and his Family

A REGISTER of cases in the Infirmary was always kept and it soon occurred to some of the attending practitioners, especially Monro *primus*, that the results of their observations might profitably be published. As a result, in 1731 an organisation was formed, entitled the Society for the Improvement of Medical Knowledge, with Monro as secretary. In 1732, the Society published the first volume of *Medical Essays and Observations*, Monro being editor; thereafter members apparently became dilatory in their attendance, and the meetings finally lapsed altogether. Six volumes of essays were published as a result of Monro's persistence: they achieved considerable fame in their day and were translated into French, German and Dutch. Monro himself wrote a number of the papers, his most important contribution being *An Essay on the Nutrition of the Foetus*, published in three parts.[1]

In 1737, the society was revived with widened scope as the Society for Improving Philosophy and Natural Knowledge (or Philosophical Society) and was granted space in the University: the letter requesting this facility[2] stated that the society consisted of "a great many Gentlemen of Character and Learning, in which number are several of your Professors," and asked for the use of a room "presently possest by M^{r} Monro." After a further period of lethargy, the society underwent a revival again in 1752 with the secretaryship held jointly by Monro and the celebrated David Hume, philosopher and historian. In 1754 a volume of transactions appeared under the

[1] Monro had always been interested in this subject: the first entry in his student's notebook (M 165, Dunedin), made in 1717 while he was in London, was a full translation of Bellinger's *Tractatus de Foetus nutritu.*

[2] Signed by Monro and Alexander Lind of Gorgie, 11 January 1738 (City archives).

title, *Essays and Observations, Physical and Literary;* this was followed two years later by a second volume. These works contained a number of medical papers, including six by Monro. The Philosophical Society survived various vicissitudes and at length, in 1783, received a charter as the Royal Society of Edinburgh.

Monro was also a member of the Honourable Society of Improvers in the Knowledge of Agriculture in Scotland, which was founded in 1723 and perished in the confusion of the '45 rebellion.

In 1754, Allan Ramsay, the painter, formed the Select Society for Questions in Morality and Politics, Monro being one of about thirty foundation members. "The intention of these gentlemen was, by practice to improve themselves in reasoning and eloquence, and by the freedom of debate, to discover the most effectual methods of promoting the good of the country." [3] This society, which met weekly in the Advocates' Library, was very successful and increased its membership rapidly to include practically all the intelligentsia of Edinburgh. In 1755 a branch of the Select Society was formed, entitled the Edinburgh Society for encouraging Arts, Sciences, Manufactures, and Agriculture in Scotland: this was under a board of managers headed by the Duke of Hamilton and including Monro, George Drummond and Dr Whytt. The Edinburgh Society functioned actively, mainly by offering prizes for public competition in the various branches.

The autobiography of Monro *primus* records the existence also of a small exclusive circle, consisting of Monro, Duncan Forbes, Lord President of the Court of Session, John Clerk, President of the Royal College of Physicians, 1740–44, and Colin Maclaurin, Professor of Mathematics. Each week, in the Lord President's house in the Cowgate, they [4] "met to sup and pass the Evening, each Man having his particular Dish and Drink. . . . Dr Clerk had some Bread and Whey, P.M.'s Dish was boil'd Spinage with a little very small Beer, the President had a small Fish with a Glass of White Wine mixed with three or four times as much Water, and befor Mr MacLaurin a Stake or Chop was placed with Wine or Beer as

[3] *Scots Magazine*, March 1755.
[4] Erlam: op. cit., p. 103.

he chused. Most of the Sciences and parts of Literature were, sometime or other, Subjects of their Conversations."

As John Monro, with his son's assistance, had attended the wounded after the battle of Sheriffmuir during the '15 rebellion, so in the '45 Alexander Monro rushed to Prestonpans after the battle to succour the wounded, and although he was a staunch adherent of the house of Hanover he incurred some criticism by giving his services freely to those on both sides of the struggle. He also showed his impartiality and common humanity by his exertions to save the life of his former pupil, the Jacobite Dr Archibald Cameron, who was hanged at Tyburn in 1753 for his part in the rebellion.

On 3 January 1725, Monro had married Isabella (1694–1774), third daughter of the deceased Sir Donald Macdonald, fourth baronet of Sleat in the island of Skye. Sir Donald had been a prominent Jacobite, who had fought for the Stuarts at Killiecrankie and in the '15 rebellion, and who had received from Prince James, the Old Pretender, a patent of nobility as Lord Sleat. He was one of three claimants for the undecided chieftainship of the Clan Macdonald and Monro acknowledged him as "Macdonald of Macdonald."[5] Isabella Macdonald and Monro *primus* had three sons and five daughters, but four of the girls died in infancy.

John, the eldest son, was born on 5 November 1725. He was admitted an advocate in 1753 and five years later became Procurator Fiscal to the High Court of Admiralty. In 1757 he married Sophia, daughter of Archibald Inglis of Auchindinny and Langbyres. John inherited Auchinbowie from his father and died in 1789 leaving two daughters. Jane, the elder daughter, married George Home of Argaty, son of Dr George Home Stewart: their only child, Sophia, married, in 1803, her mother's first cousin, David Monro Binning of Softlaw.

Margaret, the surviving daughter of Monro *primus*, married in 1757, James Philp of Greenlaw, Judge of the High Court of Admiralty. She died without issue in 1802. To assist in Margaret's education, her father[6] "composed for her Use an Essay on female

[5] Erlam: op. cit., p. 93.
[6] Erlam: op. cit., p. 94.

Conduct, in which he treats of a Girls Education, her general Commerce in the World, a Woman's Conduct with Men, her Duty as a Wife, a Mistress of a Family and a Mother, to which is added a System of Religion consisting of the Laws of Nature, the Mosaical Institution and the Christian System, and that is followed by a short Dissertation on Government. To learn his Daughter Readyness and Correctness in Writing, he prevaild on her to transcribe this Performance twice." One of the daughter's copies of this treatise has survived[7] and contains over 300 quarto pages of manuscript.

An example of the advice offered in this treatise is the following: "Dancing considered only as an Exercise of the Body and a Relaxation to the Mind might be allowed young People, but since the Customs of the Times have made it to be thought a necessary Accomplishment to all who are any Degree above the meer vulgar, it wou'd be an injury to keep those who are to appear as Gentlemen or Gentlewomen ignorant of it. . . . I observe that you, with most other Girls, are fonder of this School than of any other, and therefore I must remark that tho' Dancing has the Advantages which I have allowed it, yet these are only the Toys of Life and make the superficial part of a Character. One who never has been taught Minuet Rigadoon or Country Dance may converse with more good Sense and may manage all their affairs with much more Discretion than the nimblest footed Monsieur among them."

The autobiography of Monro *primus*, edited by Erlam,[8] has been quoted from freely. It is a small manuscript volume presented to the University of Otago Medical School Library in 1938 by Mrs C. Saxby (*née* Hector), a granddaughter of Sir David Monro. It bears a binder's title on the spine, "M.S. Life on Monro by Himself," while on the fly-leaf is the inscription, "Life of D^{r} A^{r} Monro S^{r} in his own handwriting." There is no question about this latter statement: it is definitely written in Monro *primus*' own writing. There cannot be much doubt either that it was composed by him, although written in the third person throughout, or that it was in fact the

[7] In the possession of Dr P. A. G. Monro, Cambridge.

[8] *University of Edinburgh Journal*, Summer 1954, pp. 77–105.

volume which Bower examined when preparing his *History of the University*.[9] Erlam suggested that it "may have been copied from another source," but it contains a large number of corrections or improvements of wording and also extensive additions, which would surely only appear in an original. There are certainly a few statements in it such as, "It appears from Notes wrote by him," which would seem incongruous in autobiography, but these may have been inserted, either as more in keeping with the third-person style, or simply because, the account being written in old age (the last date mentioned in it is 1760[10]), Monro had to refer to such written evidence to refresh his memory—several gaps have been left in the text where the writer obviously intended to check a date or other fact but forgot to do so.

Mullin[11] was of opinion that it was "absolutely impossible" for this work to have been written by Monro himself because the language throughout is so extremely laudatory: Mullin was, however, wrong in attributing the handwriting to Monro *secundus*, and, in any case, the eighteenth century was not an era noted for its modesty. The whole tone of the work is certainly eulogistic, almost vainglorious—the man who could write of himself, "So little Doubt was made of this Gentleman's Veracity and Integrity that his Affirmation of any Fact from his own proper Knowledge never was suspected,"[12] would appear to be somewhat self-opinionated. Yet much of the intimate detail contained in this manuscript would scarcely have been known to anyone else, and it must be accepted that it is correctly labelled, "Life of Monro by Himself."

Monro *primus* was unusually industrious, conscientious in his teaching and constantly seeking self-improvement, particularly by

[9] A. Bower: *The History of the University of Edinburgh* (1817–30), vol. II, p. 168 (fn.)—"a manuscript life written by the Doctor himself, which through the politeness of his grandson, the present professor, I had an opportunity of examining."

[10] p. 103.

[11] W. J. Mullin: '*Primus*, *secundus*, *tertius*', *Digest* (annual publication of the Medical Students' Association, University of Otago, Dunedin), vol. I, No. 5 (1938), pp. 5–11.

[12] p. 97.

writing lengthy commentaries on authoritative published works;[13] he was sincere and appeared outwardly modest, but stern and unbending. In the autobiography he wrote:[14] "Tho', in Dr M. own Family and among his Acquaintances, every innocent Freedom or Amusement was frankly taken when he was present, yet among his Scholars he was universally believed to be a haughty austere Man, for in his School he alwaies behaved with ceremonious good Manners to each Gentleman, and woud not allow any youthfull Tricks to be played or any outward Marks of Inattention to be shewn."

William Smellie, the great obstetrician, wrote of his friend, Monro:[15] "As he felt strongly for distress, he was liberal to the poor, but as he hated ostentation, his charity was always privately bestowed. . . . He was a sincere and steady friend, and a most cheerful and agreeable companion, censure and detraction being almost the only subjects in which he could bear no part." Yet we have only to read his *Expostulatory Epistle*,[16] publicly addressed to William Hunter, his former pupil, to see that, when roused by controversy, he could be a formidable antagonist, vitriolic if not vindictive. One of Hunter's publications he demolishes as a work, "where, after a pompous Introduction, which raises high Expectation of Novelties, I found nothing that I had not seen in Books, except several Mistakes:" he also offered Hunter this double-edged advice, "In your publications do not pretend to perfection; for man must err,—Avoid serious Argumentation and a show of learning for, be assured of it, that an examination of either will redound little to your Honor." Such strong language was not unusual in the eighteenth century and if the Monros loved controversy, so also did many of their contemporaries.

[13] M 168, Monro Collection, Dunedin, is an example of this: it is entitled, "Remarks on the Actions of the Muscles of the human Body Being a Supplement to Albinus's Historia Musculorum," was written in 1753 and extends to 300 quarto pages of manuscript.

[14] p. 102.

[15] *Edinburgh Review and Magazine* (1773), vol. I, p. 343.

[16] *An Expostulatory Epistle to William Hunter* (1762). This followed the dispute between Hunter and Monro *secundus* over priority of discovery of the lymphatics (see Chapter X). Hunter had already made some extremely derogatory statements about the Monros.

For twenty years from 1730, Monro *primus* lived in a house of thirteen rooms on the second flat of a tenement on the south side of the Lawnmarket, where the carriageway of Melbourne Place now runs. Then from 1750 until his death he occupied a third-flat house on the west side of Covenant Close, off the High Street.[17] Although he never made Auchinbowie his home, by virtue of his possession of the estate he was a Commissioner of Supply and of High Roads and a Justice of the Peace for Stirlingshire. He was closely associated with the parish of St Ninian's, in which Auchinbowie is situated, in the erection of a new church to replace one destroyed in 1746.[18] In 1757 Monro was appointed an extraordinary director of the Bank of Scotland, and from the following year until his death he was an ordinary director. He was also a *membre étranger* of the Academy of Surgery in Paris.

Donald Monro wrote of his father:[19] "He was a man of strong muscular make, of a middle stature, and possessed of great strength and activity of body; but subject for many years to a spitting of blood on catching the least cold, and through his whole life to frequent inflammatory fevers; which he used to attribute to the too great care his parents took of him in his youth, and to their having had him regularly blooded twice a-year, which in those days was looked upon as a great preservative of health." In January 1732 he had acute tonsillitis and quinsy,[20] while he "was seized towards the end of 1735 with a Fever in which he was condemned by the Physicians to dye in half an hour, suffered two Relapses and was believed to be hectic for some time after it,"[21] In middle life he ruptured an Achilles' tendon, making a full recovery with six weeks' rest and the wearing of a caliper for five months.[22] At the

[17] Inglis: op. cit., p. 56 and pp. 83–4.

[18] Erlam: op. cit., p. 99.

[19] Memoir prefixed to *The Works of Alexander Monro* (1781).

[20] Described by himself in 'An Uncommon Angina' (*Works*, p. 600). The lecture notes taken by Robert Haswell (in R.C.S. Library, Edinburgh) indicate that Professor St Clair deputised for Monro during his illness.

[21] Erlam: op. cit., p. 88.

[22] Described by himself in 'The Cure of a fractured Tendo Achillis' (*Works*, p. 661).

beginning of 1757, "he was seized with a Fever, in which he lay almost without Sense or Motion two Weeks, had afterwards very little Remembrance of the Transactions of six Weeks. . . . In the Autumn of the same Year he was greatly weakned by a Dysentery, and in the following Spring he suffered a very irregular Ague."[23]

Monro had proposed to retire to Auchinbowie in his old age and had the house fitted up for this purpose. His extensive non-medical library was housed there in a room on the top floor which he aptly described as a "large handsom high roofd Room."[24] On the estate, "Two small houses were set apart for lodging sick poor," and in the garden were to be a greenhouse and a chemical laboratory where a "variety of Experiments were to be made." He was to assist with the education of any grandchildren and to supervise the training of young men in medicine and farriery. This elaborate scheme was never put into execution.

In May 1762, Monro had what he described as "the epidemic influenza," and this was followed by symptoms of his terminal illness, carcinoma of the rectum.[25] From May 1766 he had constant pain relieved only by opium; he eventually died at his house in Covenant Close on 10 July 1767 and was buried in Greyfriars Churchyard. Donald Monro wrote:[26] "This long and painful disorder he suffered with the fortitude of a man and the resignation of a Christian; never once repining at his fate; but conscious of having acted an upright part, and of having spent his life in the constant exercise of his duty, he viewed death without horror, and talked of his own dissolution with the same calmness and ease as if he were going to sleep."

This chapter may appropriately end with a quotation from Duncan's Harveian oration of 1780: "while his accuracy as an anatomist

[23] Erlam: op. cit., p. 91.

[24] Erlam: op. cit., p. 96. The books are still there.

[25] A full case history is given in a letter from Monro to Donald, 11 June 1766, published in *Works*.

[26] Memoir prefixed to *Works*. An account of the autopsy is also included: it showed, "a fungous ulcerous appearance, two fingers-breadth, occupying the whole circle of the rectum . . . and an opening, above an inch in diameter from the rectum into the top of the bladder."

and ingenuity as a physiologist were equally conspicuous, he neglected no opportunity of pointing out useful applications to the practice of physic and surgery. . . . He studied medicine, with a zeal and industry seldom paralleled, perhaps never exceeded. He taught it with an enthusiasm, and liberality of sentiment, proportioned to the importance of the art. And he neglected no opportunity of encouraging genius, of promoting and forwarding the efforts of industry."

CHAPTER VIII

Physician-General of Minorca

ALEXANDER MONRO of Auchinbowie, eldest son of Colonel George Monro (see Chapter I), married in 1719, Anne, daughter of Sir Robert Stewart of Tillicultry, Bart., a judge of the Court of Session. Their eldest son was named George after his grandfather: in 1736, at the age of fifteen, he was apprenticed as a surgeon for a term of five years to his father's first cousin, Professor Monro *primus*, and according to established custom lived during this period in the house of his master in the Lawnmarket of Edinburgh. George attended the Professor's lectures for four sessions from 1738 to 1742,[1] but as with many other students of the time he did not take a degree in medicine.

Along with John and Donald Monro, the two older sons of Monro *primus*, George was an active member of a Latin-speaking society which the professor formed and of which he said in his autobiography:[2] "To accustome the Boys to the speaking of Latin, which he thought was then too much neglected, he formed a Society, of his Sons, his Apprentices and some Friends Children, among whom he was Praeses, who met every night in his House to converse for an Hour in Latin, and each in his Turn read a Discourse in that Language one day of the Week, which after being corrected by a Committee was transcribed into a Book kept for the Purpose." The book referred to is now in the Monro Collection, Medical School Library, Dunedin.[3] The first meeting of the society was in

[1] Monro's register of students, 1720–49, Edinburgh University Library.

[2] Erlam: op. cit., pp. 93–4. Alexander Monro *secundus* was not a member as he was then too young.

[3] M. 100. The other members were William McDowall, Robert Fotheringham (later M.D. Rheims), Thomas Robertson, John and Patrick Ker, Alexander Macqueen (Mrs Monro's nephew), John Roebuck (later M.D. Leyden) and George Gordon.

December 1740 and the last recorded in the minute book in April 1741. During that period they met very frequently and some of the discourses have been written in in full, including one by George Monro, *De Ventriculi Structura et Actione*.

In 1742, on his father's death, George Monro succeeded him as commissary of Stirlingshire, an office which had remained in the family since the days of his great-grandfather, Sir Alexander Monro of Bearcrofts; he also succeeded to Auchinbowie and to his father's other estate, Riddoch, a small property adjoining Bearcrofts. Because of the heavy burden of debt on the estates when he inherited them, he sold Riddoch and disponed Auchinbowie, in 1744, to Monro *primus*, who was one of the principal creditors. We have no knowledge of where George Monro practised in the years following his apprenticeship, but in 1750 he was appointed surgeon to the Earl of Panmure's (25th) Regiment and saw active service in Germany and against the French in Canada. He retained his appointment as commissary of Stirling until 1765, when he resigned it, but during his lengthy absences abroad on service before that date he must have exercised his powers by deputy.

Monro was sent home on half pay in 1773, but eight years later he was appointed physician-general to the garrison of Minorca.[4] This island, one of the Balearic group, had long been a symbol of British naval supremacy in Europe. It had been captured from the Spanish in 1708 and had become, with Gibraltar, the principal Mediterranean base for the Royal Navy. In 1756, in the first year of the Seven Years' War, the island was lost to the French, a defeat which caused the resignation of the Duke of Newcastle's ministry and the execution of Admiral Byng for his failure to save the island. By the Treaty of Paris of 1763, Minorca was restored to Britain and when George Monro was posted there in 1781 it was defended by a strong garrison force under command of the Governor, General James Murray.

Shortly after Monro's arrival at Fort St Phillip, the army headquarters on Minorca, the island was besieged by French and Spanish

[4] W. Johnston: *Roll of Commissioned Officers in the Medical Service of the British Army* (1917).

forces. The garrison held out successfully for six months, but on 1 February 1782, Monro and the six surgeons serving under him sent a report to General Murray stating:[5] "From the extraordinary increase of the sick in the garrison, and the little progress we make in reducing that evil, we judge it necessary, both on account of the public service, as well as our own credit to inform your Excellency, that the prevailing disease, the scurvy, amongst the troops, is got to such an alarming height as seems to us to admit of no remedy in our present situation: every means has been tried to palliate this formidable malady, but the daily, and, we may say, the hourly falling down of the men baffles all our endeavours. . . ."

In reply, the Governor requested that the men still on duty be examined for illness and this produced the further report that, ". . . those men specified in the returns will, in all probability, be in a few days incapable of performing any duty, from the rapid progress the scurvy makes amongst them; neither is it in our power to check this prevailing malady; the constant duty the men are obliged to perform, the impossibility of procuring any kind of vegetables in the present situation of affairs, to which we may add, the damp foul air those men constantly breathe in the subterraneans, are causes sufficient to dread the consequences." General Murray's report to the Secretary of State for War stated that 415 men were required to be on guard duty at all times, but that by the evening of 4 February a total of only 660 were fit to bear arms and of those 560 "were actually tainted with the scurvy." The following day, the inevitable was recognised and Fort St Phillip surrendered. After some time as prisoners of war the defenders were repatriated.

Monro then retired in Edinburgh, being put on half pay in 1785, and he died at his house in Argyle Square on 24 February 1793, aged about 72. His wife, who survived him, was Jane M'Comish of Crieff, relict of Law Robertson. They had two sons, the younger of whom was Lieutenant-General Hector William Monro (died 1821), once Governor of Trinidad, and founder of the family of Monro of Edmondsham, Dorsetshire, a property which he acquired through his wife, Philadelphia Bower.[6]

[5] *The Edinburgh Advertiser*, 2 April 1782. [6] Burke: *Landed Gentry*.

CHAPTER IX

Dr Donald Monro, London Physician

DONALD, second son of Monro *primus*, was born at Edinburgh on 15 January 1728 and was educated at the exclusive private school conducted by James Mundell in the West Bow, Edinburgh. Professor Monro, who assisted at home with the education of all his children, wrote:[1] "Besides being the Sole Instructor of his Children in Arithmetick Geography and some other Parts of Education, A.M. was Assistant to every one of their Masters by examining their Performances and putting the Children to Trials of Skill at Home." Donald was a member of the Latin-speaking club which met in his father's house (see Chapter VIII) and the minutebook[2] contains two discourses given by him, *De Heroica Virtute* and *De Britannorum Republica*.

In 1746 Donald entered his father's anatomy class which he attended for four sessions. He did not join the Medical Society (later the Royal Medical Society) but instead was a member of a group organised by Monro *primus*, who wrote:[3] "He encouraged afterwards a medical Society of whom his Son Donald was one, to meet in his House, by allowing them the Use of his Anatomical Preparations and of his Library, and giving his Advice concerning their Studies, Books or Patients. This is the small Circle of Friends whom D[r] Donald, in the Preface to his Essay on the Dropsy says it was originally designed for. The Dissertations which were read in this Society were also transcribed, after undergoing the examination and correction of the Society, in several Volumes, which the Society, at their Dissolution, made a present of to D[r] Donald, who has them in his Possession."[4] Professor Monro also wrote, in 1747, for Donald's use *A Treatise on the Anatomical Encheireses or Manual Part of*

[1] Erlam: op. cit., p. 93.
[2] M 100, Monro Collection, Dunedin.
[3] Erlam: op. cit., p. 94.
[4] These books have not been located.

Anatomy wherein the Arts of dissecting, preparing, preserving &c. all the Organs of the human Body are described,[5] a work of 252 foolscap pages of manuscript.

Donald graduated M.D. on 8 June 1753 with an inaugural dissertation, *De Hydrope*, which was later enlarged and published in English as *An Essay on the Dropsy and its Different Species* (London, 1756): it was also translated into French. This work, dedicated to his father—"all a son can owe to the best of fathers, a pupil to his tutor, or a man to his friend, I owe to you"—recorded some interesting animal experiments Donald Monro had performed. "That I might judge whether this hydropick liquor was chyle, I made a ligature on the thoracick duct of a dog that had eaten heartily an hour before." He then collected the chyle and compared its properties with those of effusion fluid. "These experiments I repeated several times." Like his contemporaries he had no idea of the cause of effusions and under the heading "dropsy" includes such conditions as cysts and hydrocele.

Soon after graduation Donald settled in London and he was admitted a licentiate of the Royal College of Physicians there on 12 April 1756.[6] On 3 November 1758 he was elected physician to St. George's Hospital, Hyde Park Corner. The Seven Years' War was in progress and two years later, on 3 December 1760, he was commissioned as physician to the British military hospital in Germany, remaining abroad until March 1763. He developed distinctive ideas regarding the prevention and treatment of disease in the army and we are told that, "During his stay in Germany, and during his attendance at Coxheath [military camp in England], he had every encouragement to advance his views from the commanding officers",[7] the Duke of Brunswick and General the Marquis of Granby. He returned with the rank of physician-general and went on to half pay of ten shillings a day.

While Monro was on service, his hospital duties were carried out

[5] M 169, Monro Collection, Dunedin.

[6] W. Munk: *The Roll of the Royal College of Physicians of London* (London, 2nd edition, 1878), vol. II, pp. 293–4. Note that Munk gives the date of Monro's death as 1792 instead of 1802.

[7] *The European Magazine and London Review* (1782), vol. II, p. 357.

by the eccentric Richard Jebb, M.D. (Aberdeen), who was appointed by the governors on 11 December 1760 to deputise for him. Before Monro's return, Jebb had received a definitive appointment as physician to the hospital to fill a vacancy which had occurred: he remained on the staff until 1768, when he resigned. Sir Richard Jebb is thus described by Lettsom:[8] " There was an impetuosity in his manner, a wildness in his look, and sometimes a strange confusion in his head, which often made me tremble for his sensorium. He had a noble, generous heart, and a pleasing frankness among his friends; communicative of experience among the faculty, and earnest for the recovery of his patients, which he sometimes manifested by the most impetuous solicitude." Among Monro's surgical colleagues at St George's were Sir Caesar Hawkins, Sergeant-Surgeon to George II and George III, and, from 1768, the celebrated John Hunter—in view of the family enmity, relations between Hunter and Monro were no doubt strained, but that would not be unusual for Hunter.[9]

St George's Hospital had an organised school of medicine from 1752,[10] and as a physician to the hospital Monro took his due part in the teaching of students. From his appointment in 1758 until he went into the army in 1760, he gave systematic lectures on the theory and practice of medicine, including chemistry and materia medica, this section forming the basis of the textbook he wrote later on the subject. One volume of his lecture notes, *On Fevers*, has survived,[11] and gives a detailed review of that difficult and important subject, so little understood at that time. The volume has many corrections and additions to keep the lectures up to date with

[8] Munk: *Roll* (1878) vol. II, p. 293.

[9] Hunter lived close to Monro in Jermyn Street and also held rank as Surgeon-General to the army, so they probably had more frequent contact with each other than either desired.

[10] C. Singer and S. W. F. Holloway: 'Early Medical Education in England in Relation to the Pre-history of London University' (*Medical History*, 1960, vol. IV), p. 9.

[11] M 245, Monro Collection, Dunedin (wrongly ascribed in catalogue to Alexander Monro). There are almost 200 foolscap pages of manuscript: from internal evidence it appears to have been written originally about 1755, before Munro's appointment to St. George's.

the progress of knowledge and experience. In addition to his hospital work, Monro carried on a successful private practice at his home in Jermyn Street. In 1764 his *Account of the Diseases in the British Military Hospitals in Germany* was published, dedicated to the King, and was subsequently published in a French translation.

On 24 April 1766 Donald Monro was elected a Fellow of the Royal Society and he was admitted on 1 May (the day Sir Joseph Banks was elected a Fellow): to that Society Monro gave three papers including *An Account of a new species of the Bark-tree, found in the Island of St Lucia* (1784). He also wrote several papers for the *Essays, Physical and Literary* published in Edinburgh, and ultimately he became a Fellow of the Royal Society of Edinburgh after the incorporation of the Philosophical Society with that title. In 1770 Monro's two-volume *Treatise on Mineral Waters* was published: the various spas of Europe are classified according to their mineral content and under each class the detailed composition and supposed properties of each individual spring are discussed. To some, almost magical properties are attributed, showing a curious combination of the exact chemical science and the old empiricism. For instance, of the waters of Aix-la-Chapelle he wrote: "These waters have been found extremely serviceable in those diseases which proceed from indigestion, or from crudities or foulness of the stomach and bowels, and from a sluggish disposition of the humours; for they not only carry off any putrid saburra, or faeculent matter that may be lodged in the first passages, but they likewise give a proper stimulus to the nerves, increase the tone of the fibres, and promote digestion; and as they pervade the minutest vessels of the body, they assist in resolving any sluggish or viscid disposition of the fluids, in removing obstructions, and in restoring the natural mildness and fluidity to the blood; and at the same time determine what particles are unfit to circulate longer to the different excretory organs, to be discharged out of the body by stool, by urine, or by perspiration. . . ." It seems remarkable that any ill people were left in the face of such miraculous effects.[12]

[12] In his later work on chemistry he included a section on mineral waters and there said of the Aix-la-Chapelle spa simply that, "These waters are powerfully diaphoretic and diuretic, and, if taken in quantity, prove purgative."

Monro and Richard Jebb were both elected, on 30 September 1771, Fellows of the Royal College of Physicians, *speciali gratia*—the fellowship was normally restricted to graduates of Oxford or Cambridge. The following year and in 1781, 1785 and 1789, Monro was a Censor of the College, while from 10 July 1788 until his death he was an Elect. He played an important part in the preparation of the sixth *Pharmacopoeia Londonensis*, published in 1788, the same year as his *Treatise on Medical and Pharmaceutical Chymistry, and the Materia Medica*. In the preface to that work Monro recorded that: "In the year 1785, he having been elected at Michaelmas, Senior Censor of the College of Physicians, and having accidentally mentioned to Sir George Baker, the President,[13] that it would be right to revise the Pharmacopoeia, and publish a new edition of it, Sir George, at the next meeting of the Fellows, desired him to make a motion for that purpose, which he accordingly did, and it was agreed to. . . . The author having in this manner been the person pitched upon by the President to make the proposal, at a time when he was Senior Censor, thought himself particularly obligated to give every assistance in his power in forwarding the work. . . ."

Monro delivered the Croonian lecture to the College in Latin in 1774 and in 1775, and also the Harveian oration in the latter year: these were published in one octavo volume in 1776.[14] He wrote the important memoir of his father prefixed to the collected works of the latter edited by Monro *secundus* and published in 1781.

From 1763 Monro had been on half pay from the army, but after the outbreak of the American War of Independence he was recalled to service, reverting to full pay on 27 June 1778:[15] he was not called upon, however, to serve overseas and it appears that his service during the war was not continuous, but probably extended only through the summer months each year. In June 1780, the second, en-

[13] Sir George Baker, Bart., A.M., M.D. (Cantab.), F.R.S., President 1785–90, 1792–93 and 1795.

[14] *Praelectiones Medicae ex Croonii instituto Annis 1774 et 1775, et Oratio Anniversaria ex Harveii instituto, die Oct. 18, 1775, habita in Theatro Coll. Reg. Med. Lond.*

[15] W. Johnston: *Roll of Commissioned Officers in the Medical Service of the British Army* (1917).

larged edition of his book on military health was published in two volumes with the new title, *Observations on the Means of Preserving the Health of Soldiers:* it was again dedicated to the king.

On 15 September the same year, from Dartford Camp, he sent a memorial to the Secretary at War, the Rt. Hon. Charles Jenkinson (later first Earl of Liverpool), stating:[16]

"Having been informed by Mr Adair[17] that on account of his Health & the Multiplicity of Business in his Department, He intends to apply for an Assistant, I therefore take the Liberty of mentioning to you my situation in the Service, & of offering myself to be his Assistant, in case such an Appointment should take place. I am the oldest Physician at present on the Staff either in England or in America, & I have for these three years past attended the Camps without ever once asking leave of Absence on my own private business; & I am the only one of those who served last War who is on the Staff this, who has not had some addition to his pay on account of his services." Whether he received any increase in pay we do not know, but certainly no appointment was forthcoming and at the end of the war he reverted to half pay. He did go on to full pay again on 14 June 1793 but the nature of his service then is unknown.[18] At the time of his death he was senior physician to the Forces.

Donald Monro married, on 29 August 1772 at St James's Church, Piccadilly, Dorothea Maria Heineken, a German lady-in-waiting to Queen Charlotte. Their only child, Isabella Margaret, married Col. Hugh Scott and had three daughters, one of whom married Professor William Gregory of Edinburgh. In 1786 Monro resigned from St George's Hospital because of indifferent health: in the contest to fill the vacancy Matthew Baillie, nephew of John Hunter, was defeated, but he succeeded in gaining an appointment a few months later. Monro also gave up his private practice, retired to a house in Argyle Street and very largely withdrew himself from society. He died at his home on 9 June 1802 aged 74.

According to Munk, "Dr Monro was a man of varied attainments,

[16] Liverpool papers, 38, 214, f. 176, British Museum.
[17] Robert Adair, Inspector-General of Military Hospitals.
[18] Johnston: op. cit.

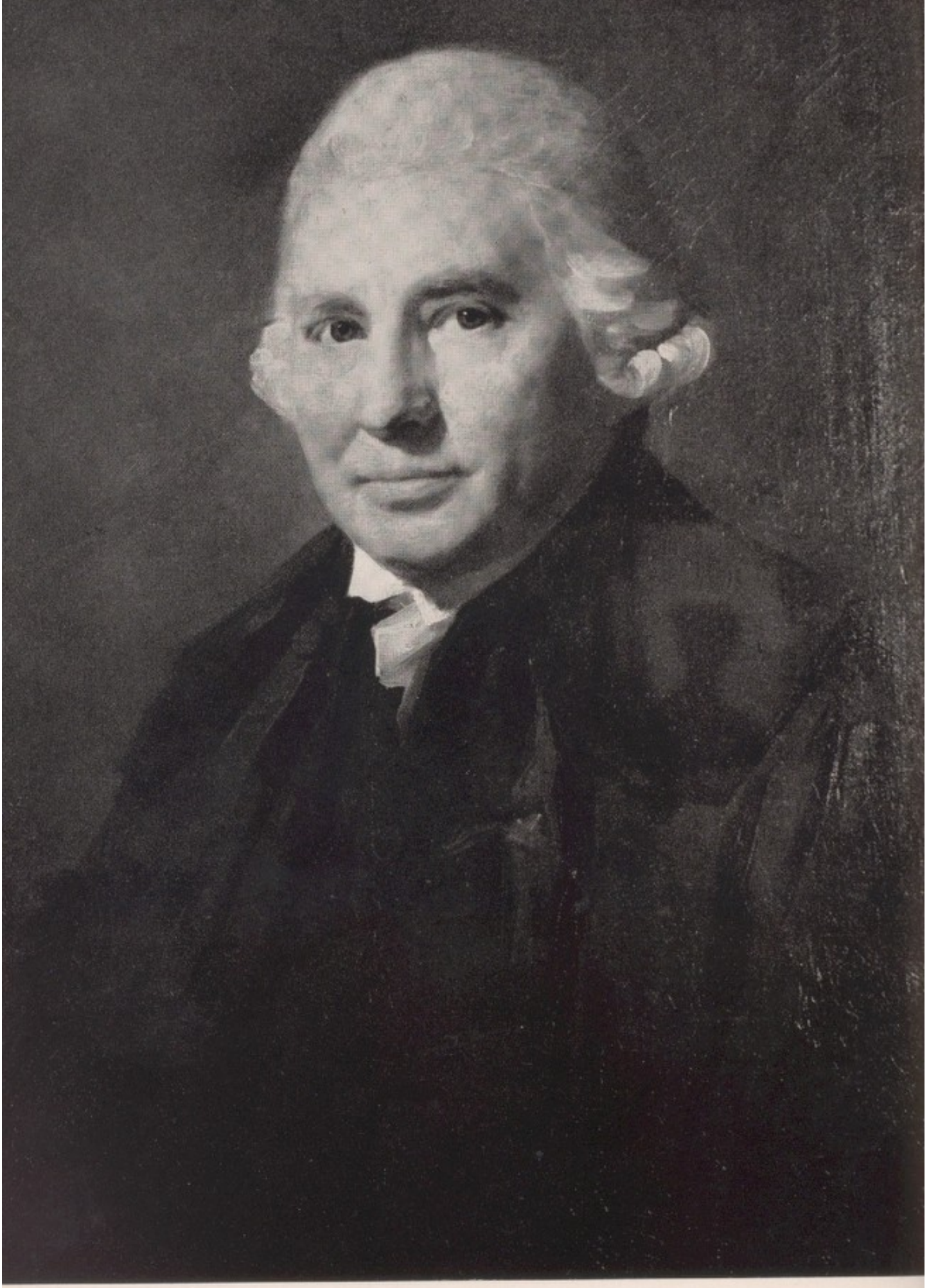
of considerable skill in his profession, and was highly esteemed by his contemporaries."[19] He was certainly extremely well versed in chemistry which was then bringing fresh light into medicine; yet he appears to have suffered somewhat from the family love of controversy,[20] not an uncommon failing in the eighteenth century, and he was rather conservative in accepting new discoveries—in volume IV of his *Treatise on Chemistry* he discussed the "new theory" of this science and the views of Lavoisier, Cavendish and Priestley, with whom he did not entirely agree.

Undoubtedly his principal memorial was the work on military health, a classic of preventive and social medicine in the particular environment of army service. We can aptly conclude this chapter with a short quotation from that work, concerning sanitation in a military encampment:

"The camp, and its environs, ought to be kept very neat and clean; the butcheries, if possible, to be at some little distance from the camp, and the butchers made to keep them extremely clean, and to bury all the offals and other things which may corrupt and foul the air;—and deep pits with seats above them ought to be dug for privies, and the excrements covered daily with earth till the pits are near full; and then they ought to be filled up with earth and new ones dug . . . the making the men wash themselves daily and change their linen often, and keep themselves otherwise clean, ought never to be omitted by the officers."

[19] Munk: *Roll* (1878), vol. II, p. 294.

[20] Vol. III of his *Treatise on Chemistry* has an appendix entitled, 'An Answer to the Remarks of the Critical Reviewers on the first Volume of Dr Monro's Treatise of Medical Chymistry &c, published in the Critical Review for October, 1788.'



4 Alexander Monro *secundus*, 1733–1817
From the portrait by Sir Henry Raeburn at Auchinbowie House

CHAPTER X

Alexander Monro, secundus

ALEXANDER MONRO *secundus* was the third and youngest son of Professor Monro *primus* and his wife, Isabella Macdonald. He was born in Edinburgh on 10 March 1733[1] and, like his brothers, was educated at James Mundell's private school, one of his schoolfellows being Ilay Campbell, afterwards Lord President of the Court of Session. At this school, according to his son,[2] "he imbibed his intimate knowledge of the Latin and Greek languages." Dr Rush stated of Monro[3] that, "he was 12 Years old before he could be prevailed upon to apply himself to study of any kind; by means of a stratagem his Father contrived to throw *Robinson Crusoe* into his Hands w^ch^ he read w^th^ great pleasure, & thus contracted a Taste for History—Travels etc w^ch^ his Father in a little time transferred to the more useful studies." Whatever was the origin of this story it is obviously completely false, for at the age of twelve Monro entered on an arts course at the University, his professors including Colin Maclaurin in mathematics and Dr Matthew Stewart in experimental philosophy.[4]

In 1750 he began his medical studies, attending his father's classes and those of Drs Plummer, Alston, Rutherford and Whytt. "He evinced, at an early period of life," his son stated in his memoir, "a

[1] This is the date given by his father in a certificate to the Town Council in 1754. Inglis (op. cit., p. 89) and most other authorities give 20 May 1733.

[2] Monro Tertius, memoir of his father prefixed to *Essays and Heads of Lectures*.

[3] Benjamin Rush, journal, 1766 (unpublished), Indiana University Library (microfilm and transcript in Edinburgh University Library).

[4] Inglis (op. cit., p. 89) and Robert Chambers (*A Biographical Dictionary of Eminent Scotsmen*) state that Monro studied ethics under Sir John Pringle, who was appointed Professor of Moral Philosophy in 1734, but as Pringle was physician-general to the army, 1742–48 (most of the time on the Continent) and then set up in practice in London, it appears that this must be an error.

predilection for anatomy. It was this department of science in which he was most anxious to excel, to which the whole force of his genius was directed. . . . He possessed an insatiable thirst for medical knowledge, an uncommon share of perserverance, and a very good memory (for the cultivation of which he had been very much indebted to the excellent discipline of his mother)." For his son's use, Professor Monro wrote a long and detailed commentary on his own book on the human bones.[5] While still a student, the son published, at the father's instigation, two anatomical papers in the *Essays, Physical and Literary* (1754). His father also "caused him to supply his place sometimes in teaching."[6] By the session of 1753–54, the anatomy class had become too large for the lecture-room: two classes had therefore to be held, one in the afternoon and one in the evening. The professor virtually handed over the second class to his son, who had been studying anatomy diligently for three years.

This somewhat risky experiment proved to be completely successful, and at the end of the session Monro *primus* petitioned the Town Council to regularise the situation by appointing Alexander *secundus* conjoint professor, although he still had no degree or qualification. The petition stated[7] that at least £10,000 was spent annually by the medical students, "of whom there have been more than two hundred for many years past at Edinburgh. The foundation on which the other branches of physick must be built is the anatomy which therefore ought to be taught diligently by a master equal to the task. . . . That a person fitt for this office ought to be otherwise a good scholar, to be fully master of his business by being early installed in it. . . . That the acquisition of so much knowledge of an extensive science as a Teacher ought to have, cannot be obtained without some neglect of the other branches, and therefore a prospect of suitable advantage from that one branch must be given to induce any person to bestow more time and pains on it than on others. . . .

[5] M 163, Monro Collection, Dunedin: a manuscript of 120 closely written foolscap pages with index, entitled "Commentary on Monro's Anatomy of the Bones by Alexander Monro Professor of Anatomy wrote for the use of his son Alexander Monro 1750."

[6] Erlam: op. cit., p. 90.

[7] Town Council minutes, 19 June 1754.

That the Professors youngest son has appeared to his father for some years past to have the qualifications necessary for a Teacher, and this winter he has given proof by not only dissecting all the course for his father but prolecting in most of it. . . . It was therefore hoped the Honorable Magistrates and Councill would appoint the young man his fathers colleague and successor in their University, as not only the surest way of having the labour of an old servant the longer continued, but likewise of having an absolutely necessary branch of physick well taught. . . ."[8]

The petition was accompanied by: a letter from the professor resigning into the hands of the Council his commission of appointment, "to be disposed of by them as they shall think fit;" a certificate from Monro *primus* attesting his son's date of birth and therefore his age to be 21; certificates of the son's proficiency from the professors of Latin, Greek, philosophy and mathematics, and from the professors of the medical faculty; and finally a certificate signed by 20 medical students declaring "that Alexander Monro, son to M^{r} Monro Professor of Anatomy, demonstrated a considerable part of his Fathers Course of Anatomy, and prolected in his Fathers place to us; and the other Students who attended that Course last Winter entirely to all our Satisfactions"—this certificate is in the handwriting of Joseph Black, afterwards Professor of Chemistry, who was the first signatory.[9]

Accordingly, on 19 June 1754, the Town Council appointed "the saids Alexander Munro [sic] elder and Alexander Munro younger his son conjunct professors of Anatomy in the College of Edinburgh *ad vitam aut culpam* of them or either of them, with the right of survivency to the longest liver of them two." On 10 July 1754 father and son "having appeared in Councill did accept of the said office and took the oath *de fideli administratione*." The new commission of appointment was read and signed at the Council

[8] The Chairman of the college committee of the Council, which considered this petition and reported favourably on it, was Baillie David Inglis, whose daughter subsequently married Monro *secundus*.

[9] City archives. The certificate is dated 8 June 1754: Black graduated M.D. three days later, announcing in his thesis his discovery of carbon dioxide.

meeting of 18 July, but apparently Monro *secundus* did not receive his commission for almost a year: the minutes of the Senatus Academicus of the University record that on 12 July 1755 Monro *secundus* received his commission from the college baillie and was admitted into the Senatus.

The new professor graduated M.D. on 25 October 1755 with a thesis entitled *De Testibus et Semine in variis animalibus*, dedicated to his father. Shortly afterwards he joined his brother in London for a short time and there attended the lectures of Dr William Hunter, anatomist and accoucheur, who had formerly studied under his father and with whom he was to have so much acrimonious dispute later. He then went on to Paris, but at the beginning of 1757 had to hasten back to Edinburgh to take his father's place during his illness. As soon as his father was well again, Alexander went to Berlin where he spent several months living in the home of Professor J. F. Meckel, the illustrious anatomist. While there he published a paper, *De Venis Lymphaticis Valvulosis*, describing the origin of the lymphatic vessels from tissue spaces—this was the subject of the subsequent controversy.

On 17 September 1757 Monro enrolled at the University of Leyden. While in Holland he became friendly with two leading anatomists: B. S. Albinus, who had been a student at Leyden with his father and held the chair of anatomy there for fifty years; and Pieter Camper, professor at Amsterdam. In January 1758 Monro returned home and finished the course of lectures for his father who was again in poor health. On 2 May the same year he became a Licentiate of the Royal College of Physicians of Edinburgh, and became a Fellow on 1 May 1759. Meanwhile, while his son was still overseas, Monro *primus* had petitioned the Town Council stating:[10] "When the hon^{ble} Town Councill gave the Commission of Professors of Anatomy to my son & me, neither of us had Degrees as Doctors of Medicine. Since that time both of us have taken these Degrees and therefore I beg that the hon^{ble} Council woud renew the Commission to Doctors Alexander Monro Elder and younger to be Professors of Medicine & of Anatomy." This petition was

[10] Petition dated 6 June 1757, City archives.

received by the Council at its meeting of 22 June 1757 when its request was approved and a new commission ordered to be made.

At the beginning of the university session of 1758–59, Monro *primus* delivered the opening lecture only, leaving the rest of the course to his son who began then the lectures which he was to continue for fifty years. Among the students present during that first course was James Carmichael Smyth whose daughter later married Monro *tertius*. Smyth subsequently wrote:[11] "The students could not help observing that he was complete master of his subject; and that he possessed in an eminent degree another talent no less necessary for a public teacher,—the proper mode of communicating his own knowledge to others."

Monro gave the following outline of his course of lectures:[12]

"After having gone through the History of anatomy and recommended the best authors, we shall then proceed to the study of the Bones. . . . After the Bones we shall treat of those substances which serve to unite the Bones together, to regulate their motions, and keep them soft, smooth and pliable; after this we shall discourse of the muscles which are small Threads all united to one another, and which receive their motion from the fluids. Then we shall treat of the different Vessels of the human body, of the Arteries and nervous System and of the Lymphatic and Absorbent Veins; after this we shall treat of physiology, its connection with anatomy, of the Dissection of Brute animals, of the morbid states of the Body, their difference from the natural state, and shall conclude our course with the operations of surgery."

His history of anatomy, as appears from his own notes written in 1759,[13] was extremely long and detailed. "I used to treat of this part minutely," he said in 1790,[14] "& endeavoured not only to point out the general scope of the several writers, but their chief dis-

[11] Memoir prefixed to *Essays and Heads of Lectures*, p. xiv.

[12] Introductory lecture, student's notes of 1770–71, 3 vols., in R.C.P. Library Edinburgh. The name of the student has been deliberately obliterated from these volumes but appears to be John Davison.

[13] M 185, Monro Collection, Dunedin.

[14] Notes taken by Sir James McGrigor, 27 October 1790 to 24 March 1791, R.A.M.C. Library, Millbank, London.

coveries. Of late years however I have considerable abridged this part, in order to make room for the practical part of the course."

In the main the lectures of Monro *secundus* followed a similar pattern to those of his father; he had of course kept well up to date with the advancement of learning, but in many subjects no progress had been made and in some cases changing theories seem to have been rather retrogressive. Cauterising an ear was still practised for toothache, but he said that many of his patients were "absolutely cured at the sight of the iron when red hot."[15]

The reproductive systems remained a complete mystery, as evidenced by his opening sentence on that subject: "Most animals have the power of generating their like, if we except bees. . . ." Of the menses he said:

"This flux was named by the Greeks from the moon because they thought it was regulated by the moon, which was also of late supposed to be the cause of it, and I must allow that the moon may have some small influence over bodies in such cases, since its effects are so remarkable, and Epileptic fits and Lunatic ones return at the full and new moon, therefore since the moon has such apparent effects on our Bodies, why may it not act as a secondary occasional cause in the return of the menses, altho' nothing at all as the chief cause. . . . It seems to be an Evacuation of superfluous matter from the body and consequently is a general Plethora."

Even more fantastic is his statement on the male system: ". . . if we examine the Semen of a male animal we find innumerable moving Bodies in it, properly enough called Animalculae. Buffon[16] supposes that these are so many Embryos of future Animals; but this Theory of his seems only to have existed in his own Head, & not

[15] This and the following quotations, unless otherwise specified, are taken from notes by Joshua Rigg about 1775 and by an unknown student in 1796 (Wellcome Library); by John Thorburn, 1776–78, with additional notes by James Curry, 1781–84 (R.C.S. Eng.); by an unknown student, 1775–76 (R.C.S. Edin.); and by T. C. Hope, later Professor of Chemistry, 1784 (Edin. Univ. Lib.): they have been corrected and repunctuated as necessary. Other portions of Monro's lectures have been published by the present author in the *New Zealand Medical Journal* (1961), vol. 60, pp. 240–1 and pp. 285–6: 'Dr Monro on Resuscitation' and 'Dr Monro's Case of Atresia of the Rectum.'

[16] Georges Leclerc, Comte de Buffon (1707–1788).

derived from Experiments: & perhaps these Animalculae are no more essential to Generation, than the Animals found in Vinegar are to its acidity."

This is in direct contrast to the views of his father who considered the spermatazoa alone to form the embryo.

On the other hand, Monro *secundus* was more active than his father as an experimenter, his physiological lectures describing pharmacological experiments on frogs to determine the effects of various drugs; and, although this would seem to us scarcely in place in lectures on anatomy and surgery, what could be more perfect than his clinical description of rickets:[17]

"This is but a modern disease, and was scarce known till about the year 1660 . . . the first Author we find make mention of this disease is D[r] Glisson;[18] its Common Subjects are Children from two to fourteen years of age, seldom beginning sooner or continuing later. Symptoms of the disease: at the first approach of this disease the child turns feeble & uneasie, scarcely able to attempt even standing or walking, but always desiring to loiter or sit, & if it shall attempt to walk its knees strike against one another. Sometime after, its teguments fall soft & flabbie, especially towards night they seem anasarcous; the joints grow large, the Belly tympanous, it breaths with difficulty, & its head becomes considerably larger than usual, but no ways affecting the child's genius which all this time becomes surprisingly sprightly. As the disease goes on Extremities become Crooked, the knees turn in, the feet out & the Shin Bones bend inward about its middle part; the arms are also considerably bended with their Convex side toward the extensors, & thus the bones seem to grow shorter; all this time the appetite continues very good, the stools are either very loose or very costive, & seldom have a foetid smell, but as the disease doth increase with the augmentation of all its Symptoms, digestion doth languish, so that the aliment passes thro' the anus in the same shape they were swallowed or in other

[17] From notes by John Goodsir *senior*, about 1769 (Edin. Univ. Lib.). Goodsir's son succeeded Monro *tertius* as professor.

[18] Glisson's *De Rachitide* was actually published in 1650 but the disease was first described by Daniel Whistler in his thesis of 1645.

words the patient labours under a lienteria, which is commonly a forerunner of approaching death. The disease is now turned into a stupidity, afterwards Convulsions, apoplexies & death."

One practical and interesting comment is the following: "At the end of my last Lecture Gentlemen I began the consideration of Amenorrhoea. I mentioned to you how cautious we should be in those Cases, as many young Women who wish to have themselves miscarry will come to us telling that their Menses were stopped, in hopes that the Medicine we would order for them would make them miscarry. I have met with many instances of this kind." Obviously life does not alter very much.

In his valedictory at the end of each course he told his students:[19]

"I have now finished all that I proposed in the beginning of this Course, and, throughout the whole, I have made it a rule, because I consider it as a duty, to explain myself fully on every subject, without the smallest regard to the mere opinion or authority of authors. I hope you will think I have endeavoured to do so without prejudice or partiality. . . . I wished to convince you of the necessity of thinking freely for yourselves on every subject. Unless you do so, you will neither detect the fallacy in reasoning, nor clearly perceive the force of truth."

These lectures were certainly highly successful and extremely popular. Benjamin Rush said of Monro:[20] "in Anatomy he is superior perhaps to most men in Europe, he speaks wth great propriety, & As he commits all his Lectures to Memory, he embellishes them when speaking wth all the Graces of Elocution. He is a Gentleman of great politeness & Humanity, & much admired by every One that knows him." The only derogatory comment came from Sir Astley Cooper, who studied in Edinburgh in 1787–88, but even he was forced to give grudging praise:[21] "Old Monro grunted

[19] M 241, Monro Collection, Dunedin.

[20] Rush, journal, 1766.

[21] Bransby B. Cooper: *The Life of Sir Astley Cooper, Bart.* (1843), vol. I, p. 171. Astley Cooper dedicated to Monro the second volume of his work on herniae, *The Anatomy and Surgical Treatment of Crural and Umbilical Hernia* (1807), but Monro subsequently disputed with him priority in recommending resection of gangrenous bowel in strangulated hernia.

like a pig. He was a tolerable lecturer, possessed a full knowledge of his subject, had much sagacity in practice, was laudably zealous, but was much given to self and to the abuse of others."

As to his style of lecturing, Monro *tertius* said:[22] "He never used notes, and indeed possessed for many years heads only of his lectures. . . . He was at length relieved from this embarrassment by purchasing from Mr John Thorburn, who became his pupil in 1775, a copy of his own lectures." Thorburn's notes were taken down in shorthand and later transcribed. The set which Monro bought is now in the Monro Collection, Dunedin:[23] it covers 123 lectures in 23 volumes (5 are missing) and there are numerous corrections and additions by Monro himself. His son also said:[24] "He was totally devoid of conceit, and unlike many professors who have lectured for nearly half a century, did not remain satisfied with the lectures he had written at the beginning of his career. On the contrary he was in the constant habit of altering and improving them." This comment is of considerable interest in view of the criticisms levelled at Monro *tertius*.[25]

Another comment concerning the lectures of Monro *secundus* occurs in a letter, quoted in the memoir, from Dr Robertson of Northampton, who was present at the last course of lectures he gave in 1806–7: "His eloquence was of an unusual sort; while apparently it aimed at no display, it told most effectively; lucid, impressive, and earnest, it had what might be called paternal simplicity and gravity, which chained the attention of his youthful audience."

The number of students attending Monro's classes steadily increased: he himself stated in 1807 that a total of 13,404 students had passed through his hands, 5,831 of them being from outside

[22] Memoir of his father, p. viii.

[23] M 223–240. These were wrongly catalogued as by Monro *tertius*, and this erroneous attribution was followed by D. Guthrie in 'The Three Alexander Monros and the Foundation of the Edinburgh Medical School' (*Journal of the R.C.S.Ed.*, 1956, vol. ii, pp. 24–34).

[24] Memoir, p. cli.

[25] Note particularly that this was published in 1840, towards the end of the career of Monro *tertius*, who was later charged with having lectured from his grandfather's notes completely unchanged.

Scotland. The annual average was, for the decade 1761–70, 194; for 1771–80, 287; for 1781–90, 342; for 1791–1800, 313. The peak figure was 436 in 1783. In 1798 the annual salary of the chair was raised from £15, which it had been since his father's appointment in 1720, to £50, while student fees remained fixed at three guineas until 1812 when they were raised to four guineas.

In 1764 a new lecture theatre was built to accommodate these growing classes. On 18 June that year, Monro *secundus* wrote a petition to the Town Council,[26] complaining: "That the present Teaching Room is not large enough to contain above Two Thirds of the Students of Anatomy, so that the Petitioner is under the necessity of dividing them into Two Classes, and of repeating each Lecture twice over. . . . The Teaching Room is dully lighted by its floor being sunk several feet underground, and by having the Principal's house near and directly opposite to its Windows. . . . And in fact your Petitioner has found this light so unfit and insufficient for his Demonstrations that for three fourths of his Course he has shut it out entirely and tried to make a shift with Candle light." He asked that a new theatre be built adjoining the old one, which would then serve for housing the anatomical museum, and stated, "that within these Forty years, the Town of Edinburgh has received from the Students of Anatomy alone, on the lowest Computation, above Three hundred thousand pound Sterling."

The petition was supported by the Principal and the medical faculty, but Dr James Russell, the new Professor of Natural Philosophy, also had a building scheme before Council and it was doubtful if the town could afford both; Monro *primus* therefore enlisted the support of George Drummond, then in his final term as Lord Provost,[27] while Monro *secundus* offered to advance the money required and also informed the Council that "it is his resolution to leave and bequeath to the Town and University of Edinburgh all the Anatomical Preparations which he and his Father have hitherto made, and likewise all other which he may hereafter make," reserving, however, the right to dispose otherwise

[26] City archives.

[27] The letter he wrote to Drummond is in the City archives.

by future deed if "unexpected and unforeseen disappointments, misfortunes & circumstances compell him to do it." His offer was accepted, the theatre was completed in December that year at a cost of £388 19s. 2d., and the money was repaid to Monro in three annual instalments. The new theatre was an octagon, 36 feet across, holding 300 students. In 1783 the number of students was so great that a gallery had hastily to be erected, the cost, £130, being defrayed by Monro; it was not until 1786 that he persuaded the Council to reimburse him, and then it was only to the extent of £97.

From 1755 Monro had employed John Innes as dissector, paying his salary himself; in 1764 he informed the Council that,[28] "the Students have of late years been admitted in the evening after the ordinary hours of Lecture, to examine many of the parts at their own leisure, and as he has obliged his Dissector to attend them, the complaint of scarcity of subjects, which was the chief thing thought defective in the study of Physic in this place, has been in a great measure removed." The Council agreed to assist with the dissector's salary. Innes' manual, *Short Description of the Human Muscles, Chiefly As They Appear on Dissection*, was published in 1776 and was used in Edinburgh dissecting rooms for fifty years. In 1777 Andrew Fyfe was appointed dissector conjointly with Innes, who died shortly afterwards: Fyfe remained in the post for over forty years. Sir Astley Cooper said:[29] "Fyfe I attended, and learned much from him. He was a horrid lecturer, but an industrious worthy man, and a good practical anatomist."

In addition to his university work, Monro had an extensive practice as a physician and also as a consultant in difficult surgical cases, although he was not at any time an operating surgeon. He was extremely methodical, keeping careful clinical records of all his patients and indexing them. The index[30] shows that from 1767 to 1811 inclusive he had 10,107 cases recorded in 33 volumes. One of his most famous patients was John Wesley, whom he was called

[28] Petition, 13 February 1764, City archives.
[29] B. B. Cooper: op. cit.
[30] M 183, Monro Collection, Dunedin.

to see in consultation in 1772 while Wesley was visiting Edinburgh.[31] He also attended Mrs Siddons, the actress, and was consulted by Boswell by letter, in 1784, about Dr Johnson, for whom he sent a prescription. Monro gave the following advice to a practitioner for whom he had seen a child showing early signs of what he called, "that dreadfull Distemper of Water in the Head":[32]

"1. That some Leeches shall immediately be applied to his Temples.

"2. I would, at the same time, give him a purgative, with Two or Three grains of Calomel, observing whether he passes any Worms.

"3. Shave the top of his head & apply to it a Blister, to be kept open as an Issue.

"4. Give him Morning & Evening Two Mercurial Pills, rubbing in also a Scruple of the Ointment each time till the gums become sore; and increase or diminish the Dose occasionally, so as to keep up a constant soreness of the gums.

"5. If costive give him occasionally a Pill composed of Calomel & dried Scilla."

On 3 December 1772 Monro *secundus* was elected Secretary to the Royal College of Physicians of Edinburgh, and he retained that post until he was elected to the presidency on 3 December 1779: he remained President until 5 December 1782. During his term of office, on 7 August 1781, the College, which had for some years been meeting in the Royal Infirmary, occupied for the first time its new hall in George Street.

Among Monro's colleagues in the medical faculty were some of the most outstanding figures in British medicine. William Cullen, one of the greatest physicians in the world in the latter part of the eighteenth century, became Professor of Medicine and Chemistry in 1755 (the year that Monro graduated), became Professor of the Institutes of Medicine in 1766 and finally Professor of the Practice of Medicine in 1773, retaining that chair until 1789. Others in the

[31] Dr James Hamilton, the attending practitioner, summoned Dr James Gregory and Monro to see Wesley on 18 May 1772.

[32] Letter to Mr Cheyne, surgeon at Leith (undated), MS 584 (1033), National Library of Scotland.

faculty were Joseph Black, Daniel Rutherford (son of Professor John Rutherford and discoverer of nitrogen), John and James Gregory, John and Charles Hope, Andrew Duncan *senior*, Francis and James Home, Thomas Young (founder of the Lying-in Hospital) and Alexander and James Hamilton. Monro's contemporaries in other faculties included Adam Ferguson, Dugald Stewart (son of Matthew Stewart, his teacher), Hugh Blair, John Playfair and Principal Robertson. Indeed a select company. The list of his students is almost as impressive, including, besides several of the professors mentioned above, Andrew Duncan *junior*, Sir Charles Bell, William Withering and John Coakley Lettsom; Sir Gilbert Blane and Sir William Burnett of the Navy, as well as Sir James McGrigor of the Army; Abraham Colles and John Cheyne from Dublin; and William Shippen and John Morgan, as well as Benjamin Rush, from North America.

Comrie has said:[33] "Placed in easy circumstances from the outset, and provided with a class which came to him independently of any attractions he had to offer, Monro (*secundus*) might well have failed to reach the success as a teacher and as a citizen to which the first Monro had by his efforts attained. Yet the second Monro showed himself the greater man, both as a teacher and investigator, and, among more brilliant colleagues than those with whom his father had had to compete, he maintained an easy equality and was the acknowledged head of the developing medical school."

[33] J. D. Comrie: *History of Scottish Medicine* (London, 1932), vol. I, p. 320.

CHAPTER XI

Professor of Anatomy and Surgery

SURGERY had always been included in the anatomy course at Edinburgh, but Monro *secundus* was a physician with only a theoretical knowledge of surgery, and this soon caused dissatisfaction. The first to take active steps in the matter was James Rae, who had entered the Incorporation of Surgeons in 1747 and became Deacon in 1764. About 1766 Rae began to lecture privately on surgery at Surgeons' Hall and three years later, at the request of his pupils and with the consent of the Incorporation and the managers of the Royal Infirmary,[1] he commenced clinical lectures on surgical cases in the Infirmary. In 1772 the Incorporation publicly advertised its approval of these lectures, with an implied criticism of those of Monro:[2] "As this course is founded on the practice of the Hospital, & delivered by a person who has been in the habit of Constant Observation, they recommend it as useful and necessary to the Students of Physick and Surgery."

Rae's classes were so successful and so popular that four years later, in October 1776, he requested the Incorporation to apply to the Crown for the establishment of a regius chair of surgery in the University.[3] The committee which considered this request reported:[4] "That as the Professors of Anatomy and Midwifery[5] have of late connected themselves with the Royal College [of Physicians], the members should also have in their view by a proper direction of their Studies to qualify themselves for supplying future vacancies in these different professions which seem naturally to arise from the College

[1] Infirmary minutes, 2 October 1769.

[2] Surgeons' minutes, 27 August 1772.

[3] Surgeons' minutes, 23 October 1776.

[4] Surgeons' minutes, 30 October 1776.

[5] Thomas Young, Professor of Midwifery, who had been Deacon of the Incorporation in 1756, graduated M.D. in 1761 and became F.R.C.P. the following year.

of Surgeons. . . . it must be obvious to every unprejudiced person, that two such extensive and important Branches as Anatomy & Surgery must be more compleatly taught by two persons propertly qualified for each Branch, than that both should be taught by one. And we flatter ourselves a truth so clear and perspicuous fraught with a prospect of advancing so material a Branch of Physic will have full weight with D[r] Monro and the other professors as well as with every person of liberal sentiments as we dare not allow ourselves to think that private Interest would overbalance their known attention to public emolument."

The Incorporation examined Monro's commission of appointment, and being satisfied that a new chair would not transgress his prerogatives authorised a petition to the Crown to be drawn up.[6] The petition, approved on 1 May 1777, stated: "As the Institution of the Royal Academy of Surgery in France under Royal Patronage rescued Surgery from Ruin, so your Royal countenance will prove a high encouragement to the prosecution and improvement of this art. May it therefore please your Majesty to create a Professor of Surgery in this University . . . and if your Majesty shall be Graciously pleased to grant our request, permitt us humbly to Recommend M[r] James Rae to fill that Chair." A copy of this petition was sent to the influential Lord Advocate for Scotland, Henry Dundas (later Lord Melville), asking his support. Monro had already, however, in Rae's words, "taken some alarm"[7] and had acted swiftly so that the surgeons' petition met with the prompt response from the Lord Advocate,[8] "that it is not in his power to interfere in behalf of this application, as he had many months since received a letter from the Principal and medical Professors of the University requesting that, if an application should be made for the creation of a professorship of surgery in Edinburgh, he would represent to his Majesty's ministers that, in the opinion of the University, and particularly of the medical part, the creation of such a professorship was useless, and would be very improper."

[6] Surgeons' minutes, 16 December 1776.
[7] Letter received by the Incorporation, 23 October 1776.
[8] Surgeons' minutes, 21 May 1777.

So the petition failed, and Dr Monro proceeded to clinch his victory by asking the Town Council for a new commission. His petition[9] was endorsed with the signatures of Principal Robertson and Professors Black (Chemistry), Gregory (Institutes of Medicine), Hope (Botany), Young (Midwifery) and Ramsay (Natural History) —it is noticeable that Professors Cullen (Practice of Medicine) and Home (Materia Medica) did not sign it. It requested "a new commission fully expressive of the business of my office. . . . the Connexion of Surgery with Anatomy seems not only evident at first sight, but this connexion has appeared such to the best judges, on mature deliberation. . . . During the long Period of Fifty Seven Years, in which Anatomy and Surgery have been uninterruptedly taught together in this University, instead of complaint being brought of any defect in the Medical Education of this place, the number of the Students has been continually increasing." He estimated the total sum spent by students to have been half a million pounds, "If each Student is supposed to have expended yearly Sixty Pounds Sterling, which seems a low computation."

On 16 July 1777 the Council received this petition, and "being highly sensible of the great merit of D^r^ Munro, and the singular use he has been of to this University, They unanimously Elect D^r^ Alex^r^ Munro to be Professor of Medicine and particularly of Anatomy and Surgery in this University and that ad vitam aut Culpam . . . but reserve power to the Council . . . to separate the offices of Professor of Anatomy and Surgery at any time after the decease of the said D^r^ Alex^r^ Munro if they shall find it proper or for the Interest of the University to do so."[10]

The surgeons' protest came too late: at the next meeting of Council, the Deacon of the Incorporation, Alexander Hamilton, presented a counter-petition,[11] pointing out that according to their charter from William and Mary, "the magistrates of Edinburgh are . . . ordered to defend their priviledges. . . ." and continuing, "That Anatomy and Surgery are closely united is not denied, and much praise is due both to the late Professor Monro and the present

[9] Dated 14 July 1777, City archives.

[10] The new commission was signed in Council, 20 August, 1777.

[11] Dated 30 July 1777, received by Council, 6 August.

Professor for the ability and attention with which they have taught Anatomy." There follows what would seem to be a venting of personal spleen by Deacon Hamilton, who, although he did not become Professor of Midwifery until later, was already teaching that subject and had published *Elements of the Practice of Midwifery* (1775). "The Professor of Anatomy gives a course of Phisiology tho' the branch of another Professor,[12] and he gives also in his Course the principles of midwifery." The Council's attention was then drawn to the letter of 1756 from Monro *primus* resigning from the Incorporation because he was giving up surgery.

Nevertheless, the Council confirmed its previous decision, causing Hamilton to protest that,[13] "Whatever merit the Professor of Anatomy may assume to himself it is well known that he can only give the Rudiments of the Art. . . . The unconstitutional means which have been used by the Professor of Anatomy to prevent a practical Surgeon being named Professor of Surgery, and who had the art to combine the other Professors in support of his measure . . . are evident marks of a design to monopolise every Branch of Medical instruction." There can be little doubt that this complaint was in a large measure justified and that Monro's insistence on teaching surgery was unreasonable, although, as he himself pointed out,[14] the two subjects were combined at that time at Leyden, London, Oxford, Cambridge, Glasgow, Dublin, Philadelphia and New York. Rightly or wrongly, he had, however, succeeded, at least in theory, in making his position impregnable during his lifetime. Nevertheless the fortifications were soon being undermined by events.

Rae's lectures were taken over in 1786 by James Russell, son of the former Professor of Natural Philosophy. John Aitken was also conducting private classes covering apparently practically the whole curriculum. In 1790 John Bell established a successful private school of anatomy and surgery in Surgeons' Square and this was taken over later by his famous brother, Charles. Another very popular private school was set up in the same locality in 1797 by John Barclay (this was the school subsequently conducted by Robert

[12] James Gregory, Professor of the Institutes of Medicine.
[13] Town Council minutes, 6 August 1777. [14] Petition of 14 July 1777.

Knox). The most serious attack on the Monro fortress, however, came in 1802, by which time Monro *tertius* was conjoint professor with his father. In that year, James Russell petitioned the Town Council to appoint him Professor of Clinical Surgery. The Professors Monro and the other members of the Senatus Academicus finally withdrew their opposition to this move on condition that the right of the Professors of Anatomy to give clinical lectures was preserved (surely an impractical clause when neither was a practising surgeon), and that the new professor did not lecture on systematic surgery or lecture at the same time as the Professors of Anatomy. On these conditions, Russell was appointed professor, in 1803, with a Crown endowment of £50 a year as salary.

This first breach in the fortifications was soon widened when the Royal College of Surgeons (to which dignity the Incorporation had been raised in 1778), in September 1804, created its own chair of surgery and appointed John Thomson as incumbent. The Monros were supported by the whole faculty in raising violent objection and on the morning of his first lecture Thomson received a message from the Lord Provost, "expressing a hope that he would not persevere in his intention of lecturing . . . otherwise the Magistrates and Council would feel it to be their duty to interrupt him and dismiss his audience."[15] He did persevere, however, and no action was taken against him.

Thomson then quietly took steps to secure his position, and in November 1806, while the Senatus was still considering ways and means to have his extra-mural chair abolished, the feud was carried within its own walls by the unexpected arrival of a royal mandate appointing Thomson Professor of Military Surgery in the University with a salary of £100 a year. This, of course, produced a storm of unavailing protest: the Town Council avowed its own "Rights & Priviledges . . . as undoubted Patrons of the College;"[16] the Senatus delayed Thomson's induction as long as possible and stated that they "do not mean to resign or renounce their right to take all

[15] J. Thomson: *Additional Hints respecting the Improvement of the System of Medical Instruction followed in the University of Edinburgh* (1826).

[16] Minutes of Senatus, 15 November 1806.

lawful & competent measures which they may think desirable for preventing Mr Thomson from holding his present Lectureship in Surgery under the College of Surgeons;"[17] and the Professors Monro protested "because we do consider that this Establishment, truly and substantially, is an encroachment on our right & Franchise under our previous Commission."[18] The Lord Provost, Donald Smith, in writing to the Senatus over this matter, said:[19] "I cannot conclude this without signifying my own personal regret & sorrow for the distress this business seems to have occasioned to Dr Monro. I know it is also the feeling of those connected with me in the [College] Committee, but they would fain hope, and indeed they are almost persuaded, that after a little experience, no appointment of that kind can have the smallest impression on that degree of eminence & character Doctor Monro has acquired in his professional line. At any rate, they find the call & command of the sovereign so serious that it is impossible for them as Patrons to resist it or to admit of any further delay."

During his career as professor Monro *secundus* produced a number of published works, the most important being *Observations on the Structure and Functions of the Nervous System*, published at a price of two guineas in 1783 by the Edinburgh bookseller, William Creech, who claimed it to be the most splendid product of the Scottish press. It was dedicated to the then Lord Advocate, Robert Dundas, and contained 55 magnificent copperplate engravings. The book contains a description of the "foramen of Monro" between the lateral and third ventricles of the brain, but this structure had already been described by Monro in a paper published in 1764, having been first observed by him when greatly enlarged in a case of hydrocephalus attended with Dr Whytt. Monro, on the other hand, denied the existence of a communication between the fourth ventricle and the cavity of the spinal cord, quoting fifteen autopsies he had performed in children with hydrocephalus, none showing enlargement of the cavity of the cord.

[17] Minutes of Senatus, 13 November 1806.
[18] Minutes of Senatus, 15 November 1806.
[19] Minutes of Senatus, 13 November 1806.

Monro was by no means first in describing a communication between the lateral and third ventricles. He says himself, "These cavities have been described by Galen, and by many succeeding Authors of eminence, as all communicating with each other," and these other authors included Vesalius, Spigelius, Willis and Winslow: Monro's description was more detailed than former ones, but was not accurate in its detail—and when these details were questioned by other anatomists, Monro became disputatious as usual, seemingly more concerned with asserting that his views were correct in every minute particular than with discovering the truth. In his *Treatise on the Brain*,[20] published 33 years after his first account of the foramen, he repeated the original description and appended to it a *Declaration by the Professors of the Faculty of Physic in the University of Edinburgh* supporting his views.[21] This controversy tends to obscure the importance of Monro's work on the nervous system: at the meeting of the British Association in 1834, Sir Charles Bell acknowledged that his work in neurology was based on that of Monro *secundus* as published in 1783.

Monro's other principal published works were *The Structure and Physiology of Fishes Explained and compared with those of man and other animals* (1785) and *A Description of all the Bursae Mucosae of the Human Body* (1788), which delineates a total of 140 bursae, 33 in each arm and 37 in each leg. This book was dedicated "To the Members of the Royal Academy of Surgery at Paris . . . as a mark of the sense the Author entertains of the honour they have done him, by electing him one of their Fellows." He was also a member of the academies of Madrid, Berlin and Moscow.[22]

[20] In *Three Treatises, On the Brain, the Eye, and the Ear* (1797).

[21] J. A. Sharp has recently pointed out in a well-documented paper, 'Alexander Monro secundus and the Interventricular Foramen' (*Medical History*, 1961, vol. V, pp. 83–9), that there is really no reason why Monro's name should remain associated with the foramen as he did not have priority; but tradition is very strong and in any case it would seem unfortunate if this sole Monro eponym should disappear, in view of the importance of his work generally on the nervous system.

[22] At Auchindinny House there is a folio volume, *Flora Rossica* (1784), inscribed by Monro *tertius* in 1855, "This volume was sent to my father by desire of Katherine Empress of Russia."

His fame was such that in Scotland at least his name became synonymous with that of anatomy. Robert Burns recognised this when he lampooned literary critics in *The Poet's Progress* (1789):

> "Critics! appall'd I venture on the name,
> Those cut-throat bandits in the paths of fame,
> Bloody dissectors, worse than ten Monros;
> He hacks to teach, they mangle to expose."

By an Act of Parliament of 1752,[23] "for better preventing the horrid Crime of Murder," in order "that some further Terror and peculiar Mark of Infamy be added to the Punishment of Death," it was laid down that the bodies of all executed murderers were to be handed over to an appropriate surgeon to be "dissected and anatomized," and in Edinburgh and its environs that meant the Monros, each of them in turn carrying out that function of the law. It is very doubtful if the provision succeeded in preventing any murders, but it certainly did put anatomic dissection in a bad light as something associated with criminals, a "peculiar mark of infamy," and so helped to prevent its becoming publicly acceptable.

When the Philosophical Society was revived in 1760 after a period in recess, Monro became joint secretary with David Hume who had previously shared that office with Monro *primus*. From 1763, when Hume went to France, Monro *secundus* was sole secretary for twenty years and it was due to his work and enthusiasm that the society survived. He was editor of the third volume of *Essays and Observations* in 1771 and contributed three papers to it. In 1783 the society received a charter as the Royal Society of Edinburgh and Monro was elected to the first council.

The controversy with William Hunter over priority in discovering the origin of the lymphatic vessels began in 1758 and continued unabated for many years; in fact it is doubtful if either the Hunters or the Monros ever gave proper credit to the work of the others because of the personal antipathy that existed. It all started when Hunter claimed that Monro, in his paper published in Berlin in 1757, had plagiarised previous work of his, Hunter's, on the subject. This

[23] 25 Geo. II, cap. 37.

produced from Edinburgh, in 1758, a pamphlet entitled *Observations, Anatomical and Physiological, Wherein Dr Hunter's Claim to some Discoveries is examined*, in which the feud is carried on in such language as this: "Hitherto I have proved, that Dr Hunter has, like a spiteful, but impetuous and unskilful Swordsman, by endeavouring to make too deep a thrust, run himself headlong upon his adversary's weapon." Monro quoted a letter from Joseph Black, dated 24 March 1758, in which Black states that Monro had shown him a paper dealing with the origin of the lymphatics in 1755.

Hunter replied in 1762 with *Medical Commentaries, Part I*, which had the subtitle, *Containing a Plain and Direct Answer to Professor Monro jun., Interspersed with Remarks on the Structure, Functions, and Diseases of Several Parts of the Human Body*: in this Percival Pott had the dubious honour of being included with the Monros, father and son, as a subject of withering scorn. This diatribe was heartily approved of by William Hunter's famous brother, John, then on military service overseas, whence he wrote,[24] "it is just the thing that it should be. It would give me the greatest joy to see him read it." This "plain and direct answer" brought Monro *primus* into the field with his vituperative *Expostulatory Epistle*.

In 1767 William Hewson, formerly a pupil of Monro's and also a pupil and colleague of William Hunter, came into the fray. He advised the use of paracentesis thoracis in traumatic pneumothorax, and also announced the discovery of lacteals and lymphatic vessels in birds, reptiles and fish—a question of considerable importance in that age when the mechanism of absorption, through the blood vessels or the lymphatics, was in dispute. Monro claimed precedence in regard both to paracentesis and the lymphatics, and accused Hewson of cribbing his ideas. This he set forth in a pamphlet of 1772 with the lengthy title, *A Statement of Facts concerning the first proposal of performing the paracentesis of the thorax and the discovery of the lymphatic valvular absorbent system of oviparous animals. In answer to Mr Hewson.*

So far as it is possible at this distance of time to sort out right and wrong from this mass of verbiage, it appears that Monro had

[24] S. Roodhouse Gloyne: *John Hunter* (Edinburgh, 1950), p. 30.

priority in the paracentesis question (he had discussed it with Meckel in 1757),[25] but that Hewson should be allowed his claim with regard to the lymphatics of non-mammalian animals, for although it is quite definite that Monro had shown injections of the lymphatics in those animals to his classes long before Hewson's work, the latter's was the first publication of the discovery and his investigations were much fuller and more accurate than Monro's. Hewson was a brilliant physiologist whose death from a dissecting wound at the age of 35 (in 1774) was a tragedy. With regard to the Hunter controversy, it appears clear that Monro preceded Hunter, but it also seems that Friedrich Hoffman preceded both of them.

Monro *secundus* invented the stomach tube, his first tube being a spiral of iron wire covered with soft leather: it had a brass pipe two inches long and pierced with holes connected to its lower end. Monro's pupil, Philip Syng Physick, who graduated at Edinburgh in 1792, carried the knowledge of this instrument to his home country and made practical use of it in poisoning. As his father had supported inoculation for smallpox, in spite of its risk, so, after the work of Jenner had introduced the safer procedure of vaccination, Monro was in the van of its supporters and wrote in August 1801, in a report on behalf of the managers of the Public Dispensary:[26] "It is certainly little less than criminal to expose helpless children to the attack of so terrible and fatal a malady as the smallpox, when it may be readily avoided."

Monro had married, on 25 September 1762, Katharine, younger daughter of David Inglis, Treasurer of the Bank of Scotland, and his wife, Katharine Binning. Mrs Monro was first cousin to Sophia Inglis who married Monro's eldest brother, John. Dr Monro had three sons and two daughters, the eldest son dying in infancy. The youngest son, David (1776–1843), took the additional surname of Binning on acquiring Wester Softlaw, near Kelso, as a result of

[25] This claim is allowed by most authorities (see F. H. Garrison: *An Introduction to the History of Medicine*, p. 325), but Cecilia C. Mettler: *History of Medicine* (1947), p. 884, said: "Monro can be allowed nothing but unpleasantness in the incident."

[26] *Scots Magazine* (1801), p. 583.

an inheritance from his distant cousin, William Binning, grandson of Lord Provost Sir William Binning.[27] David Monro Binning married: first his cousin, Sophia Home of Argaty, great-granddaughter of Monro *primus* through his eldest son, John; and secondly, Isabella, daughter of Lord President Robert Blair of Avontoun. By his first marriage he had two sons, George Home Monro Binning Home of Argaty and Softlaw, and Alexander Binning Monro of Auchinbowie and Softlaw.

Monro *secundus* lived initially in a third-flat house in Carmichael's Land, next to Buchanan's Court on the south side of the Lawnmarket. This house consisted of eight fire-rooms and a kitchen. In 1766 he shifted to a house situated in open ground on the west side of Nicholson Street near the University. Lord Cockburn has given this description of it:[28] "The spaces now occupied by the various buildings pressing on the College were then covered with grass fields or gardens. How often did we stand to admire the blue and yellow beds of crocuses rising through the clean earth, in the first days of spring, in the garden of old Dr Monro (the second), whose house stood in a small field entering from Nicholson Street, within less than a hundred yards south of the College." In 1801 Monro shifted to St Andrew Square, living at No. 32 until 1810 and afterwards at No. 30. He was a great lover of gardening and in 1773 he bought Craiglockhart, a property of 271 acres on the eastern bank of the Water of Leith in Colinton parish near Slateford. Here he laid out a magnificent garden and hot-houses, but he had only a small cottage there with no bedroom, refusing to sleep away from his town house while he was in practice. He also bought as an investment, in 1783, the 1200-acre property of Cockburn, near Duns, and this was rented out for farming.

His chief social pleasure was the theatre; he was convivial in company and entertained frequently. In 1774 James Boswell recorded in his diary:[29] "I went to Dr Monro's. Colonel Campbell

[27] Inglis: op. cit., p. 122 and pp. 141–51.

[28] W. Cockburn: *Memorials of his Time* (Edinburgh, 1945), pp. 6–7.

[29] W. K. Wimsatt and F. A. Pottle: *Boswell for the Defence* (London, 1960), p. 310.

of Finab and his family and the Laird of MacLeod and some other company were there. I played awhile at loo and lost only 18d. We supped very genteely. I was in a very good frame, had taken a liking to claret and drank a bottle of it."

Monro was one of the commissioners appointed for the Nicholson Park district under the act of 1771[30] for "cleansing lighting, and watching" the streets; the commissioners were to have lamps erected, to appoint watchmen and "to dispose of the Street Dung, or Fulzie." He was a manager *ex officio* of the Royal Infirmary and played an active part in the affairs of that institution. In 1794, during the French invasion scare, he was a member of the committee of defence for Midlothian.

In 1798 Monro successfully petitioned the Town Council to have his elder son, Alexander Monro *tertius*, appointed conjoint professor with him. Monro *secundus* continued to be responsible for the work of the chair for another ten years but after 1802 left the greater part of the teaching to his son. In 1808, at the age of 75, fifty-four years after his appointment and fifty years after he took over the teaching from his father, he retired, first delivering the opening lecture of the session; he gave up his private practice also and lived quietly in his house in St Andrew Square.

In accordance with his promise made in 1764, he had bequeathed his extensive anatomical and pathological museum to the University by a deed executed on 16 July 1800:[31] "I . . . hereby Give and Bequeath to the said University for ever, my whole Collection of Anatomical preparations, with all the Vessels and Cabinets in which they are at present contained in the several rooms connected with the Anatomical Theatre; to be used by myself, and eldest son my Colleague, during our lives; and after our decease, by our future Successors in office, for the purpose of demonstrating and explaining to the Students of this University, the structure, physiology,

[30] 11 Geo. III, Cap. 36: *An Act for cleansing, lighting, and watching the several Streets and other Passages on the South Side of the City of Edinburgh, and for removing Nuisances and Annoyances therefrom, and preventing the same for the future.*

[31] Quoted in Town Council minutes, 5 March 1823.

and Diseases of the Human Body." This valuable gift was to cause much discussion and controversy during the incumbency of Monro *tertius*.

This description of his father was given by Monro *tertius*:[32] "Dr Monro was a kind husband and indulgent parent: and his good offices were not limited to his own family and relations. He was always ready to assist the poor with his purse and professional skill. . . . In person, Dr Monro *Secundus* was about the middle stature, and of vigorous and athletic form. His shoulders were high and his neck short; his head was large, and his forehead full. His features were strongly marked. He had a prominent nose, projecting eyebrows, light blue eyes, rather a large mouth, and a countenance expressive of much intelligence and study. . . .

"When my Father had reached his eightieth year, he used to become very drowsy after dinner. He had also occasional headaches and slight bleeding at the nose. These symptoms were the preludes to an apoplectic seizure, from which . . . he somewhat recovered. But the malady was not eradicated; his weakness gradually increased; and after the lapse of four years he died without suffering on the 2nd of October 1817 in the eighty-fifth year of his age."

During the last four years of his life, from the time he had the first stroke, he was severely mentally and physically incapacitated. His younger son, D. Monro Binning, wrote this account of his death:[33] "yesterday about twelve he was suddenly taken worse and by four oclock there was little doubt of the fatal consequences of the attack . . . exhausted nature sank, and he breathed his last about seven [in the morning] without a struggle and apparently without the smallest pain. . . . we have lost our brightest ornament which we should ever remember with love gratitude and veneration." Dr Monro was buried in Greyfriars churchyard alongside his wife who had died in 1803.

[32] Memoir, p. cliii.

[33] Letter to his sons at the Grammar School, Houghton-le-Spring, Durham, dated 2 October 1817 from St Andrew Square (the number is given as 33, but this appears to be an error): letter in the possession of Dr P. A. G. Monro, Cambridge.

Professor James Gregory, his former pupil, said of Monro *secundus*:[34] "As an able, active, and meritorious professor of anatomy and surgery, he was, for more than half a century, at the head of the great medical school of Edinburgh, and for the greater part of that time, as a practical physician, he was unquestionably at the head of his profession in Edinburgh, and in Scotland."

[34] Letter quoted in Memoir, p. ix.

CHAPTER XII

Alexander Monro, Tertius

ALEXANDER, the second son of Professor Monro *secundus* but the first to survive infancy, was born at his father's house in Nicholson Street, Edinburgh, on 5 November 1773. He was educated at the Royal High School, then occupying a new building (erected in 1777) at the foot of Infirmary Street,[1] and under the rectorship of the famous Alexander Adam, LL.D. Among those at the school at the same time were Sir Walter Scott, who was older, Lord Jeffrey, who was Monro's age, and Lords Brougham and Cockburn, who were younger. Cockburn said of the school at that period:[2]

"The hereditary evils of the system and of the place were too great for correction even by Adam; and the general tone of the school was vulgar and harsh. Among the boys, coarseness of language and manners was the only fashion."

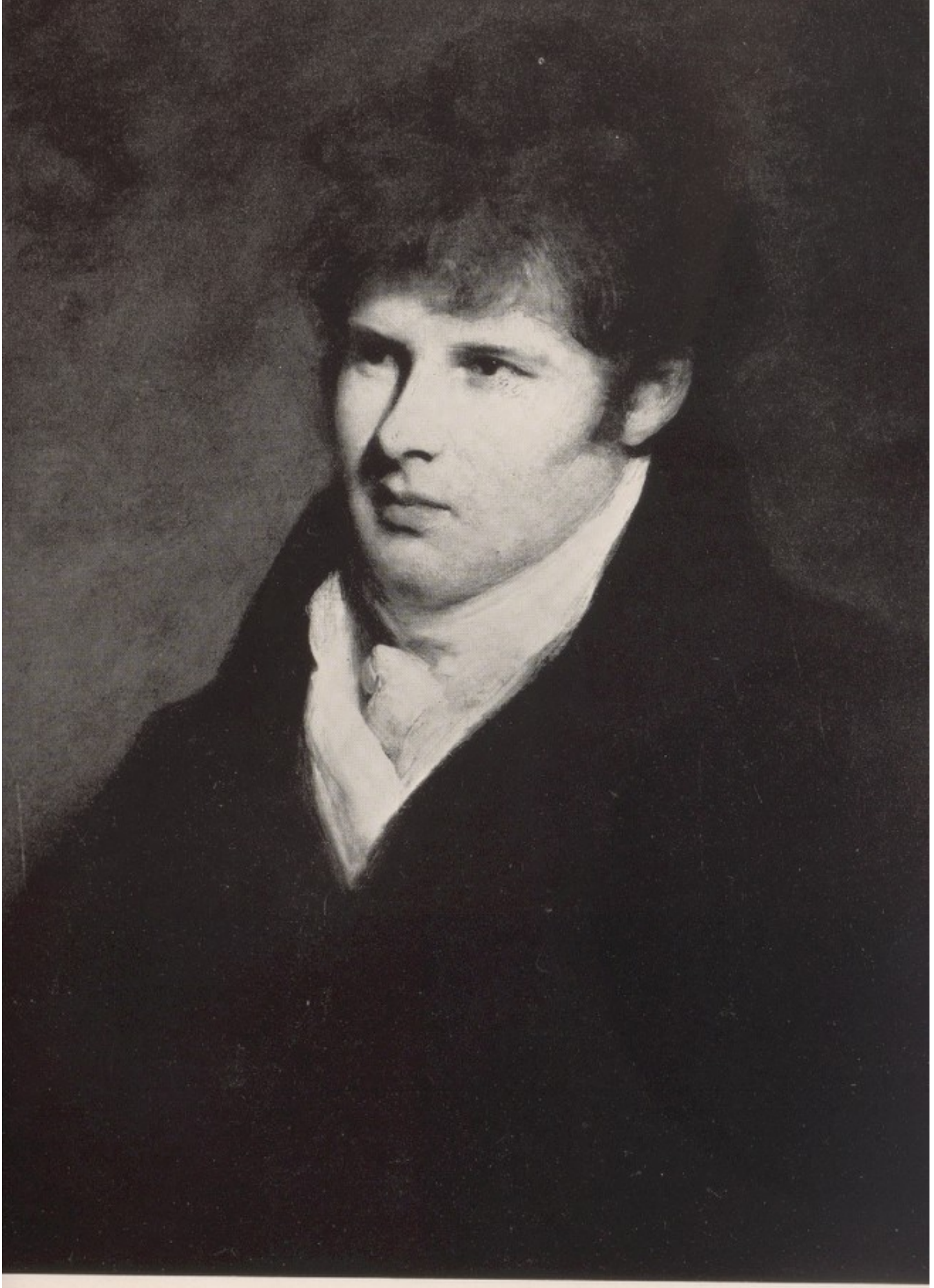
The customary dress of the High School pupils of the time was thus described by Cockburn:[3]

"It consisted of a round black hat; a shirt fastened at the neck by a black ribbon, and, except on dress days, unruffled; a cloth waistcoat, rather large, with two rows of buttons and of button-holes, so that it could be buttoned on either side, which, when one side got dirty was convenient; a single-breasted jacket, which in due time got a tail and became a coat; brown corduroy breeches, tied at the knees by a showy knot of brown cotton tape; worsted stockings in winter, blue cotton stockings in summer, and white cotton for dress; clumsy shoes made to be used on either foot . . . brass or copper buckles. The coat and waistcoat were always of glaring colours, such as bright blue, grass green, and scarlet."

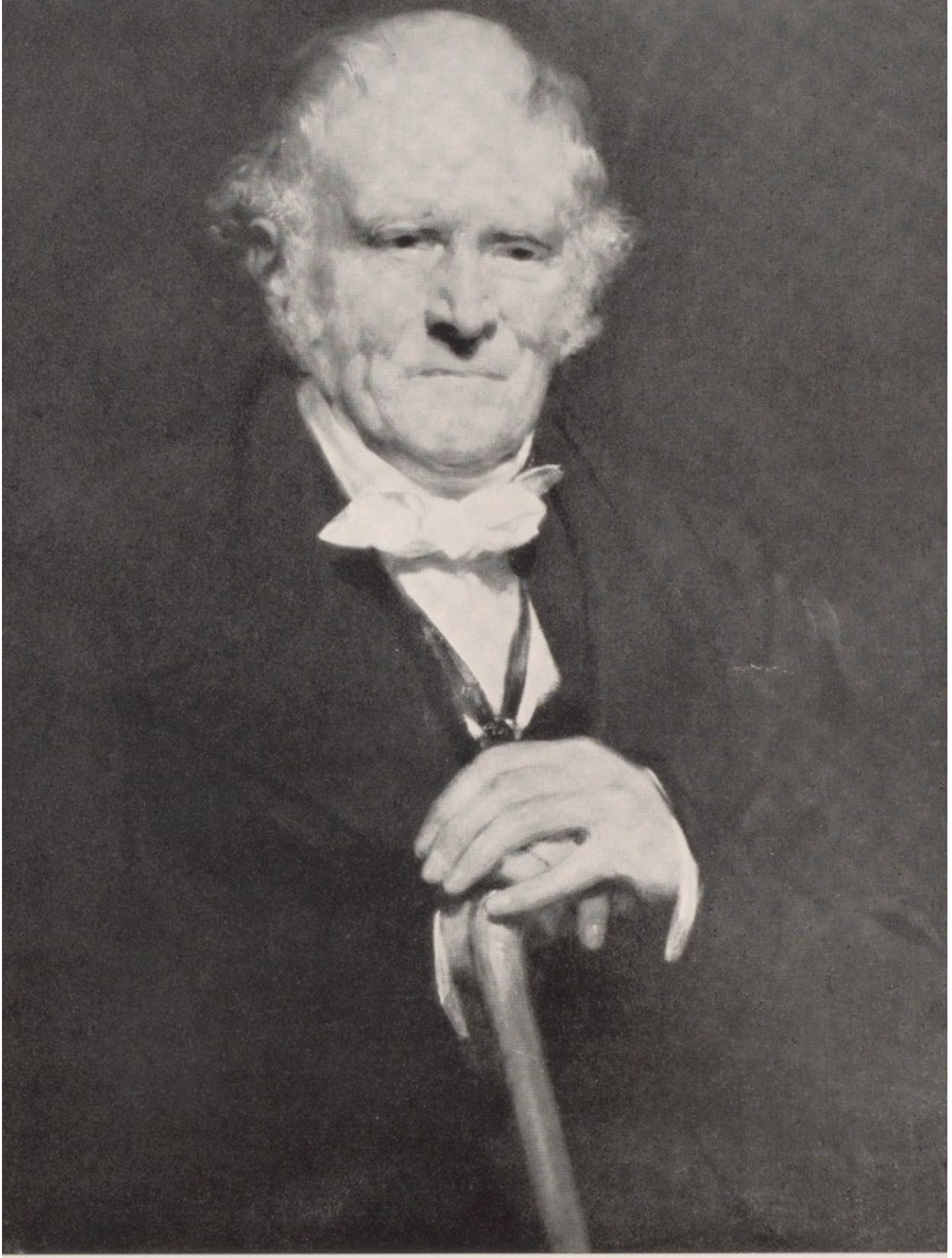
[1] This building was later used as the surgical department of the Royal Infirmary and is now university property.

[2] Cockburn: op. cit., p. 10.

[3] Cockburn; op. cit., pp. 11–12.



5 Alexander Monro *tertius*, 1773–1859
From the portrait (probably) by J. S. C. Syme at Auchinbowie House



6 Alexander Monro *tertius*

From the portrait by Sir John Watson Gordon in the Dean's office, Faculty of Medicine, Edinburgh University

In 1790 Monro *tertius* entered the University. Some of his notes, from the lectures of his father as well as those of Gregory, Black and other professors, have been preserved[4] and are untidy and unmethodical—an indication of things to come. There is also a volume begun in 1793,[5] titled, "A Set of Observations relative to Anatomy, Surgery, the Practice of Physic, Materia Medica with the different opinions of the different Professors, & most eminent Authors, Stated according to an Alphabetical order, with a copious Index"—like so many of his subsequent published works the promise of a pretentious title remains unfulfilled. Monro graduated M.D. on 12 September 1797. On 5 November that year, his 24th birthday, he became a Licentiate, and on 30 November a Fellow, of the Royal College of Physicians. He then travelled south for further study, "attending," as his father said,[6] "the Anatomical and other Medical classes in London, and the practice of the London Hospitals." He worked particularly under James Wilson, a famous teacher who shortly afterwards took over the Great Windmill Street school of anatomy which had been founded by William Hunter. Monro next went on to Paris where he studied for a short time before returning home in 1800.

During his absence he had been appointed conjoint professor. On 24 September 1798 his father had resigned his commission into the hands of the Town Council and petitioned them in these terms:

"As yet his Zeal for the Improvement of his Branch and his assiduity in Teaching it are unabated; But he daily becomes more and more sensible of the advantages the Students would derive from his having conjoined with him a Colleague more capable of undertaking the Laborious parts of his Course, and of Prosecuting Inquiries and Performing Experiments for the farther Improvement of the Science.

"He therefore humbly Petitions the Hon^{ble} Patrons of the University That they will be pleased to Nominate as Colleague and

[4] M 223 and M 242–247, Monro Collection, Dunedin.
[5] M 249, Monro Collection, Dunedin.
[6] Petition to Town Council, 24 September 1798.

Successor to Him, his Eldest Son Alexander, who is now nearly Twenty Five Years of Age."

To this petition was appended a recommendation from the medical faculty:

"We whose names are Subscribed, having fully considered the above Representation and Petition of Doctor Monro Senior to the Hon^{ble} Patrons of the University, are of opinion that the appointment of young Doctor Monro to be Colleague and successor to his father would be attended with much advantage to the Students and to the University."

This was signed by Professors J. Black, D. Rutherford, A. Duncan, T. C. Hope, J. Gregory and J. Home. It is interesting to note that the statement is in the handwriting of the first signatory, Joseph Black, who wrote and signed the students' recommendation in favour of Monro *secundus* at the time of his appointment in 1754. Monro quoted in his petition the appointment in 1795 of Thomas Charles Hope to be Conjoint Professor of Medicine and Chemistry with Black, as "a striking Proof of the propriety of such a measure." However, on 7 March 1798, the Council had adopted a resolution against electing any professor until an actual vacancy occurred, "as tending to get a better choice of candidates."[7] The system of conjoint professorships had been popular, even necessary, because of the complete lack of any pension scheme, so that the only way an ageing professor could maintain an income was to acquire a younger colleague, who would do the work and share the fees with him for the security of an assured position in future. Naturally the scheme had led to the nepotism which had been so characteristic of Edinburgh University, although in many cases such appointments were fully justified by the ability of the appointee, and of this Monro *secundus* himself was a good example.

After lengthy consideration of Monro's petition, the Council decided, on 14 November 1798, to rescind their previous act, "in so far only as respects the appointment of D^{r} Monro Junior," and they then proceeded to "Elect Nominate and appoint Doctor Alexander Monro Senior, and his Son Doctor Alexander Monro Junior, to be

[7] Town Council minutes, 14 November 1798.

joint Professors of Medicine, Anatomy and Surgery in the College of Edinburgh ad vitam aut culpam with the benefit of survivency to the longest liver." It will be noticed that the Council did not on this occasion insert the saving clause regarding future separation of the professorship of surgery which had been included in the commission given Monro *secundus* in 1777. This omission was of great importance in the future dispute over surgical teaching. The new commission was signed in Council on 28 November 1798 and was presented to the Senatus Academicus on 15 December, when Monro *tertius* was admitted into the University *in absentia*.

From 1802 he carried out the greater part of the teaching and from 1808 had sole charge of the class. It soon became apparent that he did not measure up to the standards set by his father and grandfather: yet he was not so completely incompetent as he is commonly regarded. His writings testify to his industry as well as to his deficiencies. His first publication was his inaugural dissertation, *De Dysphagia*, of 1797, that being also the year in which his father's last work, *Three Treatises*, appeared. Two works were published by Monro *tertius* on herniae, in 1803 and 1811. In the latter year also came *The Morbid Anatomy of the Human Gullet, Stomach and Intestines*, in the introduction to which he gave as one of his reasons for writing it, "As a Professor of this University, I am anxious to convince the Public, and especially those Friends and Patrons who placed me in that honourable situation, that I have not been inattentive to the obligations which it imposed on me"—an unusual confession. The book is a forerunner of his works to come: it consists of 567 pages, almost entirely a collection of the opinions of others. "I have," he said, "with a very few exceptions, aspired merely to be the faithful recorder of facts, being fully persuaded that in science, as in architecture, it is necessary to collect material before we proceed to combine them." Unfortunately, however, even the collecting of the materials, which must have required considerable labour, is inexpertly done. Yet it was praised by Monro's successor in the chair, John Goodsir, who said that it had become "a standard work in the literature of our profession."

The largest work written by Monro *tertius* was *Outlines of the*

Anatomy of the Human Body, in its Sound and Diseased State, in four volumes, published by the firm of Constable early in 1813; it suffered from the author's usual faults of prolixity and unclear reasoning. The complete failure of the book is shown by a letter from the publishers to Monro, dated 10 September 1814:[8]

"As your Outlines of Anatomy have not sold by any means as we had reason to expect—and remaining in our hands without the most distant prospect of a demand in the regular course of business, It becomes necessary we should think how they may be turned into money. We are sorry to say that of 1250 Copies printed, fully more than 1000 Copies remain unsold. . . . The Cost of the Book including Copy right was fully 30/– p. Copy, if you will relieve us of the whole you shall have them so low as 10/– each in this way."

Monro's next work was *Observations on the Different Kinds of Smallpox*, strongly encouraging vaccination, but doing so at far too great a length to be really effective. In spite of the previous débâcle, Constable agreed to publish the work, "and to give you ten pounds and a Copy of the Supplement to the Encyclopaedia Britannica complete in boards for the Copy-right of the same."[9] *Elements of Anatomy of the Human Body in its Sound State*, in two volumes (1825), was not much more successful than the earlier *Outlines*, but that does not seem to have discouraged Monro from further writing. *The Morbid Anatomy of the Brain* (1827) quoted a very large number of cases but many of them are merely repetitive and redundant; his reasoning was tortuous and confused, the following being typical of his style: "It has not been determined whether or not the effusions of water into the ventricles of the brain [in hydrocephalus], be the original disease and cause of the symptoms, or is generally the consequence of a low degree of inflammation of the Brain itself, or of its bloodvessels, not far removed from inflammation."

He followed his father in believing there was no communication between the fourth ventricle and the spinal canal, but he disagreed with his father's opinion and agreed with that of John Hunter that the pia mater never shows inflammation. The one outstanding

[8] Constable letter book, MS 789 (p. 112), National Library of Scotland.
[9] Constable letter book, MS 790 (p. 200), National Library of Scotland.

section of the book is where he describes clearly the syndrome of cerebellar disease, the function of the cerebellum remaining unknown until much later in the nineteenth century. "The gait of the patient is peculiar;" said Monro, "he totters and cannot walk with his usual firmness, one side of the body being weaker than the other; he lifts his legs very high, and takes long steps of unequal length. This is a bad symptom and generally connected with disease at the base of the brain." In *The Anatomy of the Brain, with Some Observations on its Functions* (1831) Monro quoted over a hundred cases of disease and injury, but the book is full of unfounded and erroneous theories, particularly influenced by the pseudo-science of phrenology on which he had become enthusiastic. At the time of his death he was preparing a work on "Brainology and Idiotcy."

One of his better works was *Observations on Aneurism of the Abdominal Aorta* (1827), quite a good paper showing an interest in the advance of scientific surgery and giving considerable praise to the achievements of Sir Astley Cooper. Possibly the best of all his publications was the last, *The Anatomy of the Urinary Bladder and Perinaeum of the Male* (1842). He claimed that, "It is the result of much patient research," and it certainly gave an excellent anatomical description of the parts concerned. Of this book and the earlier work on hernia, Professor Goodsir stated that they "conduced in no small degree to develop the bold and successful operative surgery of the Edinburgh School."

In 1840 Monro *tertius* produced his edition of his father's works with the typical title, *Essays and Heads of Lectures on Anatomy, Physiology, Pathology and Surgery with a Memoir of his life and copious notes explanatory of modern anatomy, physiology, pathology and practice by his son and successor.* The memoir occupies 153 pages and the notes are certainly "copious"—so much so as almost to submerge the work of Monro *secundus*—but they are not always "explanatory," frequently leaving the matter in complete confusion; they are verbose but often irrelevant, and many reveal a totally inadequate reading and understanding of the current literature. "The efforts of the pen," the author wrote in the memoir, "like those of the pencil, are too often abortive, and do not present a

just picture of the character of the individual"—whether or not the efforts of his pen reveal truly the character of his father, one fears that all too often they do reveal the deficiencies of the son. In spite of these criticisms, *Essays and Heads of Lectures* was quite well received by the profession generally: "You have executed your task with great spirit & evidently con amore," wrote Sir Astley Cooper.[10]

In 1816, when Europe was looking forward to a period of peace after the Napoleonic wars, a proposal arose in Edinburgh to found a chair of comparative anatomy to be occupied by John Barclay, the popular extramural lecturer on anatomy. Comrie said of Barclay:[11] "He had a philosophic conception as well as an extensive knowledge of comparative anatomy." The proposal to form a chair for him met with violent opposition from Monro *tertius* and Robert Jameson, Professor of Natural History, backed up by the whole Senatus. That body reported to the Town Council:[12] "that the Establishment of the proposed Professorship will be attended with many evils, that it will completely disappoint the liberal views with which it is suggested, and that the University already possesses within itself more adequate means than the new chair would afford of accomplishing those parts of the object proposed which are fitted for Academic Instruction. . . .

"The Professors of Anatomy in this university for nearly a century have been in the practice not only of exhibiting the Science generally in Lectures appropriated to the subject, but also of comparing throughout their course of Lectures on anatomy, the structure and Functions of the various parts of the Human Body with those of the lower animals. The Father and Grandfather of the present Professor have justly acquired great reputation as discoverers in Comparative anatomy, and the present Professor has been prevented only by his conviction of the little demand for Instruction in this branch of his subject, from giving a separate

[10] Letter dated 16 November 1840, enclosed in M 204, Monro Collection, Dunedin, together with letters from John Abercrombie, Joseph Swan and Sir Charles Hastings. They are letters of thanks for complimentary copies of the book but the terms of praise are greater than would be required merely by the dictates of courtesy.

[11] Comrie: op. cit., p. 495. [12] Town Council minutes, 11 December 1816.

course of Lectures on comparative anatomy." Although a committee of Council reported very favourably on the proposal, the subject was eventually allowed to lapse.

John Thomson, who had been Professor of Surgery to the Royal College of Surgeons and also Professor of Military Surgery in the University, resigned both posts in 1821 as he was a candidate (unsuccessful) for the chair of the practice of medicine. He was succeeded in the University by George Ballingall and at the Royal College by J. W. Turner. The College would not recognise Monro's course of lectures on surgery as being sufficient qualification for examination candidates, and in 1827 the matter came to a head when a student who held a university bursary from the Town Council appealed to be permitted to continue to receive it although he was attending lectures at the Royal College.[13] The college committee of Council investigated the teaching of surgery and finally reported:[14]

"Your Committee feel justified in stating as their opinion,

"1st That Anatomy and Surgery each afford ample employment for a separate Professor, and that the conjunction of these two important branches must be injurious to the usefulness of the teacher, the interests of the Student, and to the advancement of Medical Science . . .

"2nd That different qualifications are necessary for the successful teaching of these respective branches, more especially of Surgery, the principles and practice of which can only be successfully taught by one engaged in it's exercise as a practitioner.

"From these considerations your Committee would have deemed it their duty to have recommended the immediate separation of the teaching of Surgery from that of Anatomy, and the erection of a separate Professorship of Surgery in the University, had there been no ambiguity in the import of the Commission granted to the present Professor of Anatomy; the clause appended to the Commission granted to Dr Monro, the Father, in 1777 . . . not having been repeated in the joint Commission granted to Drs Monro Senior and Junior in 1798.

[13] Town Council minutes, 7 February 1827.
[14] Town Council minutes, 5 September 1827

"But your Committee are decidedly of opinion that the Council as Patrons of the University, and deeply interested in it's welfare and public utility should now resolve that they will avail themselves of the first opportunity that offers itself to disjoin the class of Anatomy from that of Surgery, and to erect a Professorship of Surgery in the University."

The Council appointed a deputation, "to confer with Dr Monro . . . and to ascertain how far the Doctor was disposed to concur in the views of the Council."[15] The Doctor, however, did not concur at all, replying that "he considered the two branches of study to be so intimately connected that it would be improper to disjoin them,—moreover that his lectures were all formed upon the principle of combining the study of them."[16]

In 1826 a Royal Commission for visiting the Universities in Scotland had been set up and in its report, presented in October 1830, the commission said: "Upon the necessity of a separate professor of Surgery we believe that there is but one opinion entertained by all medical men, including the professors. The Professor of Anatomy in the University of Edinburgh entertains, it is true, different views upon this subject; but the opinions which we have formed upon the concurrent testimony of all the witnesses have not been shaken by the representations which he has made to us." A year later the Crown established two regius chairs in the University, both of which Monro considered to trespass on his territory: surgery, to be occupied by John Thomson; and pathology, to be occupied by J. W. Turner. Monro continued to teach surgery and to regard himself as the rightful teacher of it, but the Royal College of Surgeons had the last word by adopting a resolution in 1838 that they would not recognise any lecturer who taught more than one subject during the same session.

Whether he realised it or not, Monro had, of course, all along been fighting a losing battle. He gave one surgical lecture weekly for the first twenty weeks of each session, then discontinued anatomy altogether and gave eight lectures a week on surgery for the remaining

[15] Town Council minutes, 12 September 1827.
[16] Town Council minutes, 7 November 1827.

six weeks, thus greatly reducing the time available for his primary subject, anatomy. It was surely unrealistic to expect that state of affairs to be permitted to continue indefinitely. He did not even undertake any practical instruction in anatomy, although this was an optional degree subject from 1825 and a compulsory one from 1833. In 1844 there was a complaint about unsanctioned fees which had been charged for this part of the course by Monro's dissectors, Andrew Fyfe and later William McKenzie. The professor's own observations on this matter begin:[17] "Dr Monro has officially a general superintendance of the dissecting rooms in the University, but has not for a long time past given any demonstrations there, nor derived any emolument from them, the duty there having been performed by Mr McKenzie, as formerly by Mr Fyfe."

Like his father, Monro *tertius* was a practising physician, but he never had such a large practice as Monro *secundus*. He did, however, achieve considerable eminence among his fellows, being Secretary to the Royal College of Physicians for eleven years, from 1 December 1808 to 2 December 1819, and President from 1 December 1825 to 6 December 1827. He was elected a Fellow of the Royal Society of Edinburgh in 1798, and during his incumbency of the professorial chair he was an *ex officio* manager of the Royal Infirmary.

On 20 September 1800, at St George's church, Bloomsbury, Monro had married Maria Agnes, daughter of Dr James Carmichael Smyth. Their first home was at No. 15 Nicholson Square, but when Monro's mother died in 1803, he and his family went to live with his father in St Andrew Square. After his father's death, they moved to No. 121 George Street, and finally, in 1832, to Craiglockhart, where he had built a fine mansion house. In 1812 they visited Dr Carmichael Smyth at Sunbury, Middlesex,[18] probably Monro's only journey outside Scotland after 1800. Mrs Monro died in 1833, and on 15 July 1836 Dr Monro married Jessie Hunter, who had no children and outlived him.

One of the problems with which Monro had to contend through-

[17] Town Council minutes, 23 April 1844.

[18] Letter from Monro to John Flaxman, from Edinburgh, 5 November 1812: Flaxman papers, 39,781, f. 92, British Museum.

out his professional career was the supply of anatomical subjects, which he commonly imported from Ireland to augment those available locally.[19] In 1828 a select committee of the House of Commons enquired into this question which had become a public scandal. Although Monro did not travel to London to give evidence before the committee, he sent in a long memorial on behalf of the Royal College of Physicians, representing its views. When the Anatomy Bill of 1829 was published Monro wrote extensive comments on its provisions.[20] At the end of 1828 the notorious case of Burke and Hare further focused public attention on the problem. Burke was executed in the Lawnmarket on 27 January 1829, and in accordance with the law Monro publicly dissected his body before a large and clamorous crowd:[21] he subsequently lectured on his skull and brain from the phrenological point of view. The supply of dissection material did not become adequate until after the passing of the Anatomy Act of 1832.

In his later years especially, Monro's classes were notoriously unruly, but his classes were not the only ones so affected at that time.[22] There were discussions in the Senatus about disturbances in Monro's lectures, Principal Lee addressed the class in January 1845,[23] and "Dr Monro was directed to exercise his authority in repressing the insubordination in his class of which he complains."[24] Nevertheless the trouble continued[25] and it was probably this which forced Monro's resignation. On 17 January 1846 he wrote to the Principal:[26]

"Having now reached the 48th year of my incumbency and being in the 73d year of my age, tho' still, thro' the favour of divine Providence, in good health, I am moved by various considerations,

[19] Correspondence between Monro, Sir William Rae, Lord Advocate, and Sir Robert Peel, Home Secretary: Peel papers, British Museum.

[20] M 222, Monro Collection, Dunedin.

[21] Wright-St Clair: 'Murder for Anatomy' (*New Zealand Medical Journal*, 1961, vol. 60, pp. 64–9).

[22] Minutes of Senatus, 13 March 1845, refer to a snowball being thrown in Professor Gregory's chemistry class.

[23] Lee papers, MS 3445 (5) & (8), National Library of Scotland.

[24] Minutes of Senatus, 22 February 1845.

[25] Minutes of Senatus, 20 December 1845.

[26] Minutes of Senatus, 17 January 1846.

to conclude, that it will be expedient for me to retire at the close of the present session." On 17 February the Town Council received a letter from Monro to the Lord Provost informing him officially of his intention, in order "to give the best possible chance of securing the appointment of an able successor," and stating, "Anxious as I have always been for the advancement of an institution, with which I and the Members of my family have been connected during so many years, and which is endeared to me by so many associations, I need hardly assure your Lordship, that the step I then took, was the result of much reflection, coupled with the conviction, that my so doing might be for the benefit of the Medical department of the University."

It appears that, although the resignation was to take place at the end of the session, the Principal had persuaded Monro to withdraw from teaching immediately and leave John Goodsir, F.R.S., who had been appointed his assistant in 1844, to carry on. On 3 March 1846 the Council, on the recommendation of its college committee, accepted the resignation, "to take effect from and after the Close of the present Session of College." The Council also resolved that as Monro's salary had been given to him "ad vitam aut culpam" it should, "subject to the approbation of the Lords of the Treasury . . . be continued to D^r^ Monro during the term of his natural life; but that no Salary should be attached to the Chair in time coming, there being no reason why this particular Professorship should be so endowed while others not so valuable are not."[27] The Senatus meanwhile had resolved upon giving him a pension from the newly-established fund set up for that purpose from a generous bequest from General Reid. The fund was "calculated to yield annually £750, when interest is not lower than four per cent . . . and it has been resolved to assign to D^r^ Monro a third part of this Annual rent to be paid him yearly during the remainder of his life."[28]

There were nine candidates for the chair vacated by Monro but four withdrew. The final vote lay between Goodsir, Monro's

[27] The system of professors keeping their own class fees continued until the Scottish Universities Act of 1858 came into operation.

[28] Town Council minutes, 3 March 1846.

assistant, and Peter D. Handyside, an extramural lecturer, and the former succeeded.[29] John Goodsir was inducted as Professor of Medicine and Anatomy on 2 May 1846, thus ending a 126-year tenure of the chair by the Monro family.

Monro *tertius* lived quietly at Craiglockhart during his retirement and died there on 10 March 1859 at the age of eighty-five. He was buried in the Dean Cemetery.

[29] Town Council minutes, 14 April 1846.

CHAPTER XIII

Monro Tertius, the Man and the Enigma

COMRIE expressed the common view of the third Professor Monro when he said:[1] "The experiment of slipping a son in early life into the position of colleague, to become later sole professor, had been very successful as between Monro (*primus*) and Monro (*secundus*) but on the second occasion, as between Monro (*secundus*) and Monro (*tertius*), it proved a lamentable failure." On the other hand, Garrison said:[2] "The men of the Monro dynasty were, all of them, original characters of unusual attainments, authors of many remarkable works, morbid on the subject of controversy, it is true, but in every way worthy of the confidence placed in them by their fellow-townsmen." There is no doubt that as a teacher Monro *tertius* was a failure, if not a completely lamentable one; but there can also be little doubt that he was truly a man "of unusual attainments," even if these were not always apparent.

He was a keen gardener, a patron of the arts and a classical scholar: yet he was sometimes peculiarly secretive. Dr Amédée Pichot, biographer of Sir Charles Bell,[3] was in Edinburgh about 1822 and refers to "Monro, the owner of the fine museum of anatomical figures collected by his father, of which he was so jealous that a sight of it could only be obtained by a stratagem." The museum was the cause of a dispute which reveals the difficult side of Monro's character.

The museum had been given by Monro *secundus* to the University in 1800, but when the Town Council in 1813 appointed a committee

[1] Comrie: op. cit., pp. 492–3.

[2] Garrison: op. cit., p. 331. On p. 520, however, Garrison refers to the "incompetence" of Monro *tertius*.

[3] A. Pichot: *Sir Charles Bell: histoire de sa vie et de ses travaux* (Paris, 1859; English translation, 1860).

to investigate the state of the collection it was found that Monro *tertius* had allowed it to fall into disorder, had been removing specimens for his own purposes and was forming his own private museum in which he included all specimens sent to him as professor. He could not agree with the Council over the terms of control of the museum, nor could he agree with his own colleagues in the faculty or with Fyfe, his dissector, who acted as curator of the collection: he provoked a dispute between the Council and the Senatus over superintendence of the museum, and the controversy dragged on sporadically until 1839 when the college committee had to report that Dr Monro was "not disposed to coincide generally with his Brethren."[4] When Monro retired, his private collection, which the authorities considered he had no right to form at all in his capacity as professor, was left in the anatomy department, and after his death it was bequeathed to the University by his son, Sir David Monro, thus ending a long controversy which one can only feel would never have arisen if Monro had been a reasonable person.

Although it has been agreed that Monro failed as a teacher, a list of a few of his pupils is impressive: they included Professors W. P. Alison, T. S. Traill, J. Syme, R. Liston, J. Miller, E. Forbes and Sir Robert Christison; Sir Humphry Davy, Sir Henry Holland, Charles Darwin, and Drs James Hope, Richard Bright, Thomas Addison and Marshall Hall. Many of these admittedly attended extramural classes in anatomy as well, and some of them were probably as unimpressed by Monro's lectures as was Darwin, who studied medicine in Edinburgh from 1825 to 1827 and said that Monro "made his lectures on human anatomy as dull as he was himself."[5]

Sir Robert Christison, who began his medical course in 1815,

[4] Town Council minutes, 8 October 1839. Other references to the museum: 16 February, 7 September 1814; 27 January, 3 February 1819; 11 September, 4 December, 24 December 1822; 8 January, 15 January, 5 March 1823; 14 April, 30 June 1824; 19 April, 3 May, 28 June 1826; 10 January, 29 August 1827; 11 September 1838.

[5] *Life and Letters of Charles Darwin, Including an Autobiographical Chapter* (London, 1887–88), vol. I, p. 36.

gave what appears to be a balanced retrospective judgement (written sixty years later):

"Monro was far from being a popular lecturer. In all he did and said his manner betrayed an unimpassioned indifference, as if it were all one to him whether his teaching was acceptable and accepted or not. . . . Yet he lacked neither ability nor accomplishments. But apathy in a teacher cannot stir up enthusiasm in the student. A lecturer who seldom shows himself in his dissecting-room will scarcely be looked up to as an anatomist. A professor careless about dress must lay his account with being made the subject of many a student's joke. It is no wonder that, with such weaknesses, he lost command of his class, which in his latter years became the frequent scene of disturbance and uproar. Nevertheless Monro gave a very clear, precise, complete course of lectures on anatomy when I attended him; and certainly I learned anatomy well under him."[6]

It is frequently said that the various extramural schools in Edinburgh prospered because of the failure of Monro *tertius* to hold his students. We have seen, however, that these schools began to arise, and the number of university students to decline, during the time of Monro *secundus*; there is little doubt that the extramural schools would have flourished in any case, although Monro *tertius* certainly succeeded in driving more students their way. As early as 1764 Monro *secundus* was warning the Town Council:[7] "as of late years many more attempts than formerly have been made to teach the several branches of Physic, and particularly Anatomy, in London and other parts of his Majesties' Dominions, and even in America, it is at present highly necessary that the Patrons of this University should exert themselves, since, without their assistance the utmost diligence and activity of the Professors will not be able to maintain the reputation this University has acquired, nor prevent its falling into decline." At that time there were only three medical schools in London; by the time Monro *tertius* resigned in 1846 there were ten.[8]

[6] *The Life of Sir Robert Christison, Bart.* (Edinburgh, 1885), vol. I, p. 68.
[7] Petition *re* new theatre, 18 June 1764, City archives.
[8] Singer and Holloway: op. cit., p. 9.

In Edinburgh the extramural schools were staffed by some outstanding men: John Barclay, a noted comparative anatomist, John Gordon, David Craigie, William Cullen (grand-nephew of Professor Cullen), P. D. Handyside, William Sharpey; five men who subsequently occupied surgical chairs, Robert Liston, James Syme, William Fergusson, Thomas Wharton Jones and John Lizars; and finally, Robert Knox, who attracted the largest anatomical classes ever assembled in Britain over whom he exerted an almost hypnotic influence while he excited them with his exposition of the new cellular morphology. Any of these teachers would have drawn students anywhere, and against such local opposition as well as that of the increasing number of competing schools elsewhere, it was inevitable that the number of students at the University should fall no matter who occupied the chair there.

In 1826 a critical review of the University, in *Scots Magazine*, contained this statement:[9]

". . . the Professor follows the text-book of D^r^ Monro, his grandfather,—a work which, for clearness of expression and elegance of style, coupled with wonderful minuteness of accuracy of description, can be scarcely surpassed. . . . But it admits of some doubt, whether more recent publications might not now be substituted, even by the Professor himself, with safety and advantage.

"D^r^ Monro inherits a very considerable degree of the talent of his family, and acquits himself in the anatomical chair with some éclat. But it appears to be rather a disadvantage than otherwise to his pupils, that he yields with so much facility to the thought of the moment, and diverges from his subject upon somewhat slight occasions. His manner is interesting for a little from the interspersion of extraneous matter; but by-and-by it becomes tiresome, when he seems ever ready to fly off at a tangent."

Amid mounting criticism, a students' magazine called *The Cheilead, or University Coterie* was founded, one of its objectives being to defend the University against "the abuse of the press,

[9] 'Notices of the System of Education pursued in the University of Edinburgh, with Various Hints for its Improvement' (*Scots Magazine*, April 1826, p. 450).

vented with all the rancour of vituperation, and the dogmatism of ignorance." This paper lasted from October 1826 until February 1827. The month before its demise *Cheilead* published an apologia for Monro *tertius*:

"The third Doctor Monro having the fame of his grandfather and father to support—the chain of investigation, and discovery of their sciences to enlarge, was placed on their chair under a terrible load of responsibility. . . . He gives, within these last few years, a course of study of a more advanced kind than ever was delivered in the Edinburgh Theatre of Anatomy. . . . He lectures distinctly, in capital language, fluently, and with point; and now with a great deal more of confidence than formerly—the want of which was a fault . . . we have no hesitation in saying, that though the last, he is, the *first* and greatest of the Monro's."

By contrast with that fulsome praise, in 1828 criticism of Monro *tertius* reached a defamatory peak from the pen of "Scotus," although even he could not avoid some commendation. This long, almost scurrilous article appeared in *The Lancet* for 27 December 1828:[10]

"In person and manner, the Doctor looks his laziness to admiration. His magnitude confers a sort of corporeal dignity on sloth. Accurately measured, he stands about six feet; and is awkward in his movements in proportion to his bulk. . . . He might sit for a frontispiece to Boyer on dislocations; his person being a personification of a luxation, and his gait of a civil war of muscular motions. . . .

"The singularity of the Doctor's person is more than rivalled by the eccentricity of his costume . . . an old blue coat, with brass buttons, is, I think, his favourite for the lecture-room. . . . There is another part of man's apparel, which common consent has rendered anonymous in print. . . . Their original tint is also usually blue. . . . I have, more than once seen a remarkable, but indescribable part of their structure open during a whole lecture. . . . Yet he has his own ideas of neatness: in his demonstrations, he sports a pair of

[10] 'Sketches of the Medical Schools of Scotland, No. XXV, Dr Monro' (*The Lancet*, 1828–29, vol. I. pp. 391–4).

gloves through which his fingers appear. . . . A cotton checked apron, the string of which pretty well defines the clerical rotundity of his waist, completes his anatomical costume, arrayed in which, and wielding a rusty scalpel in one hand, and a bloody forceps in the other, he presents, if I may be allowed the use of an illustration entirely destitute of intentional offence, a tolerably accurate personification of the genius of the shambles.

"The Professor . . . invariably commences and concludes by a profound bow . . . Recovered from the effects of this deep obeisance, he proceeds, and, like most men who say what comes first, he is a fluent speaker. The current of his conversation is never for a moment interrupted by the qualms of sentence-making . . . he looks listlessness itself, and his voice sounds the very murmur of ennui. . . .

"Notwithstanding his habitual apathy to effect, he is capable of strong emotion, animating delivery, perspicuous phraseology, and lucid arrangement. On favourite subjects, and with his energies thoroughly roused to action, he commands and carries along with him the whole attention and feelings of his auditory. . . . The occasions, however, on which he happens to shake off the lethargy of indolence, and to show the strength of his mind, are of rare occurrence; and, with all the talent and information necessary for a first-rate lecturer, his discourses are desultory, inanimate, and imperfect. . . . With his pupils he is, however, a general favourite, to whom he is invariably affable and communicative, and lenient, I understand, as an examiner. I have repeatedly seen him, with a condescension which does him honour, go over a whole demonstration a second time, to the junior and more attentive part of the class, pointing out each object to their notice, and explaining away difficulties with the patience and affection of a parental instructor. . . .

"Though never an operator, he ranks high among the surgeons of Edinburgh in consultation, and is generally advised with in difficult cases. It is to be regretted that he is likely to be the last to represent the hereditary talent of his illustrious progenitors in the University of Edinburgh, to whose fame if he has not added a

professional contribution of splendour, he has certainly not diminished its lustre."

The most persistent story about Monro *tertius* is one originally published anonymously in 1884:[11]

"During their enforced attendance in Monro's class room, of course the students did not listen much to what he had to say, except on certain noted occasions. So lazy was he that he used to read his grandfather's lectures, written about a century before; and he did not take the trouble even to alter the dates. Accordingly, in 1825 or so, students used to be delighted to hear him drawl out, 'When I was in Leyden in 1719.' When such a passage was due the lecture room was crowded, and no sooner was it spoken than showers of peas fell on Monro's apathetic head, but he never took the trouble to remove the cause of these outbreaks."

It is a good story and has been repeated frequently by many respectable authorities, Inglis, Comrie, Castiglioni, Mettler and Guthrie;[12] but it is certainly apocryphal.

We know that such class-room disturbances occurred only in the last few years of Monro's incumbency and they would not have been tolerated indefinitely by the university authorities. Also, all the contemporary accounts suggest that he lectured extemporaneously, frequently flying "off at a tangent," rather than adhering to a written text; after the publication of his *Outlines of Anatomy* he seems to have used it as a basis for his lectures.[13] There is no evidence, either, that Monro *primus* ever said, "When I was in Leyden in 1719"—few of his lectures were written down and in those that were the expression does not appear.[14] In any case, if

[11] *Edinburgh University: A Sketch of its Life for Three Hundred Years.*

[12] Inglis: op. cit., p. 113; Comrie: op. cit., p. 493; A. Castiglioni: *A History of Medicine* (1947), p. 594; Mettler: op. cit., p. 82; D. Guthrie: *A History of Medicine* (1945), p. 229.

[13] In the Monro Collection, Dunedin (no catalogue number), is a copy of vol. III labelled on the fly-leaf in Monro's hand, "Corrected Copy for Lecturing from Feby 19th 1814."

[14] History of anatomy, M 166, and physiology notes, M 181–2, Monro Collection, Dunedin. I have not found the phrase, either, in any of the sets of students' notes I have examined. M 181 does contain a piece of newspaper of 1809, so it is likely Monro *tertius* consulted it.

Monro *tertius* had wished to crib lecture notes he had available a full set of his father's notes[15] which he would have been much more likely to use than those of his grandfather, especially as he had listened to those lectures himself as a student and had his own notes from them corrected by his father.[16] I hope that these facts will finally quash a story which does less than justice to its subject, especially as it seems to be the only thing that many people remember about the Monros.

We must accept that Monro had considerable ability, but that he was apathetic in his approach to his work. He was almost certainly discouraged by his failure to compete adequately with increasing opposition, and discouragement must have increased his apathy as years went on—compare the youthful vitality of the Syme portrait with the benign passivity of Watson Gordon's painting. He was careless and untidy in his dress, but whatever impression he gave his classes, he could scarcely be called lazy when account is taken of the industry required in the collecting of his extensive museum and in the preparation of his voluminous publications. His worst fault as a lecturer and as a writer was his persistent divergence from the subject into irrelevancies which confused the meaning.

Perhaps the best summing up of Monro *tertius* was that given by Sir Arthur Keith:[17]

"If we accept the verdict of his contemporaries, that he was an incompetent teacher, and that his dullness was the virtue which gave Edinburgh the great extra-mural school of Barclay and Knox, we shall show but a meagre understanding of either the man himself or of the events which were shaping then in anatomy. The truth is, he had outlived his period. He had ideals. From the numerous researches and books which he published we can see that he studied the anatomy of the human body with two objects: (1) in order that surgeons might operate on it with dexterity; (2) to note the disturbances caused in it by disease, so far as these could be brought

[15] M 223–240, Monro Collection, Dunedin.

[16] M 246, Monro Collection, Dunedin, surgical lectures.

[17] A. Keith: *Anatomy in Scotland during the Lifetime of Sir John Struthers (1823–1899)* (1911, first Struthers Anatomical Lecture, R.C.S. Edinburgh).

to light by knife and forceps. These were the ideals which Allan Burns of Glasgow and Matthew Baillie of London had made popular in Monro's more youthful days. It was not because of his ideals he failed, it was because he was content to play the local tunes of his younger days while Knox was setting the youth of Edinburgh agog with a music which was then thrilling Europe.[18] He failed in the first duty of a professor, the duty of bringing students in touch with the best movements of the time."

[18] The theory of cellular morphology of Cuvier and St-Hilaire. Goodsir, Monro's successor, who had been a pupil under Knox, carried on the latter's work and Virchow dedicated his book on cellular pathology to him.

CHAPTER XIV

The Carmichael Smyth Family

THOMAS CARMICHAEL, a descendant of the Carmichaels of Balmedie and thus related to the Earls of Hyndford, enrolled in the medical faculty at the University of Leyden on 24 September 1723, when his age is recorded as 21 years.[1] He graduated M.D. at the University of Rheims on 24 August 1725. Dr Carmichael married Margaret, eldest daughter and heiress of Dr James Smyth of Atherney in Fifeshire. Their only son, James, was born in Fife on 23 February 1742 and later adopted the surname and the arms of Smyth in accordance with provisions of his grandfather's will.[2]

James was an original pupil of Professor Monro *secundus* when the latter took over the teaching from his father in 1758. As a student he was active in the Medical Society (later Royal Medical Society), of which he was president in 1764–65. He graduated M.D. at Edinburgh on 29 October 1764 with a thesis, *De Paralysi*, which included a short history of medical electricity. After further experience on the Continent[3] he settled in London in 1768 and became a Licentiate of the Royal College of Physicians there on 25 June 1770.[4] In 1775 he was appointed physician to Middlesex Hospital, and he became a Fellow of the Royal Society on 13 May 1779.

In 1780, Dr Smyth was appointed by Government to take medical charge of the prison and hospital at Winchester where an epidemic of typhus was raging with extreme violence. He employed nitrous acid vapour as a disinfectant with great success in the control of this epidemic and later continued his experiments in a similar outbreak

[1] Innes Smith: op. cit., p. 41.

[2] Inglis: op. cit., p. 120.

[3] Inglis: op. cit., p. 120, and the D.N.B. both say that he visited France, Italy and Holland; he does not, however, appear on the Leyden roll according to Innes Smith, and that would be unusual if he studied in Holland.

[4] Munk: op. cit., vol. II, p. 383.

aboard a prison-ship at Sheerness. In 1781, Sir Herbert Mackworth moved, in the House of Commons, that the sum of £1200 be granted Smyth "for his trouble and expence in visiting various prisons for the purpose of preserving the health of the prisoners."[5] Sir Joseph Mawbey opposed the motion, saying that it was "a Scotch job, and supported by all the Scotch members in the house," a comment which was called by the next speaker, "a species of illiberality unbecoming his character." After a short debate, turning entirely on the subject of Scottish honour without further reference to the matter in question, the motion was carried by 66 votes to 26 and Dr Smyth received his grant. He was also appointed Physician-Extraordinary to the King.

The Royal College of Physicians of London admitted him to the fellowship, *speciali gratia*, on 25 June 1788, and he was a Censor that year and in 1793 and 1801; he was the College's Harveian orator in 1793 and became an Elect on 26 June 1802 in succession to Dr Donald Monro.

Smyth's book on typhus, *A Description of the Jail Distemper, as it appeared among the Spanish prisoners at Winchester in 1780* (London, 1795), gave an excellent account of the disease. Without knowing the actual vector, he had observed that infection passed particularly by means of clothing and was killed by boiling. He attached great importance to cleanliness as a preventive and to heat as an antiseptic. He had noticed also that Russian sailors, who wore sheepskin clothing with the hair inside, were particularly liable to infection with typhus and he insisted that this type of clothing be abandoned by those under his care. The book included a diagram of the lay-out of a hospital ship, showing sixteen cabins for female nurses and two for washerwomen. He mentioned that eleven nurses and three washerwomen died during the epidemic. Smyth also wrote *An Account of the Effects of Swinging employed as a remedy in Pulmonary Consumption* (London, 1787) and *The Effect of the Nitrous Vapour in preventing and destroying Contagion* (London, 1799).

The use of nitrous acid for this purpose was widely adopted and

[5] *The Edinburgh Advertiser*, 29 May 1781.

in 1802 Dr Smyth applied to Parliament for further recognition of this discovery, his petition being presented by William Wilberforce. This was strongly opposed, as credit for the discovery was disputed on behalf of Dr James Johnstone of Worcester and M. Guyton-Morveau of France. Parliament upheld Smyth's claim, however, and voted him the sum of £5000.

In 1775 he had contracted a runaway marriage with a fifteen-year-old heiress, Mary Holyland of Bromley, Kent. At the smithy of Gretna Green they were "lawfuly maried after the maner of the Church of England & agrable to the Kirk of Scotland."[6] There is a portrait of the young wife and her husband, painted by Romney in 1788 for 50 guineas. In 1806, at the age of forty-six, Mrs Carmichael Smyth died suddenly while dining out. Her husband retired from practice about 1803, but published *A Treatise on Hydrencephalus* in 1814. He died at his home at Sunbury, Middlesex, on 18 June 1821 in his 80th year.

Maria, Mrs Monro, was the eldest child of their family of eight sons and two daughters. The eldest son was General Sir James Carmichael Smyth, Bart. (1779–1838), a military engineer who served on the Duke of Wellington's staff at Quatre-Bras and Waterloo, and subsequently became governor of the Bahamas and then of British Guiana where he achieved considerable fame for his handling of the liberation of slaves and where he died. His son, by Royal licence, reverted to the original family name of Carmichael omitting the name Smyth, which was, however, retained and hyphenated by other branches of the family. The baronetcy became extinct on the death of Sir James Carmichael, third baronet, in 1902.

[6] Gretna Green marriage register, 24 December 1775.

CHAPTER XV

The Family of Monro Tertius

PROFESSOR MONRO *tertius* and his wife, Maria Carmichael Smyth, had twelve children, six boys and six girls, and all but one son survived to adult life.

ALEXANDER (1803–1867) was a Captain in the Rifle Brigade. He succeeded to Craiglockhart and Cockburn and died without issue.

HENRY (1810–1869), owner of Crawford sheep-station, Victoria, Australia, was twice married and had ten children, including:

George Nowlan Monro who bought Auchinbowie in 1910 from his cousin, Alexander William Monro. The former's son is the present owner of the estate.

General Sir Charles Carmichael Monro, Bart., who was Commander in the Dardanelles, 1915; Commander of the First Army in France, 1916; Commander-in-Chief in India, 1916–20; and Governor of Gibraltar, 1923–28.

MARIA (1801–1884) married, in 1828, her father's second cousin, John Inglis of Langbyres, Auchindinny and Redhall, advocate, son of Vice-Admiral John Inglis.[1]

CATHERINE (1804–1868) married, in 1835, Sir John Steuart of Allanbank, fifth baronet, and died without issue. She was a noted beauty and her bust in marble by Sir John Steele, R.S.A., is in the National Gallery of Scotland.

GEORGIANA (1808–1868) married, in 1831, George Skene of Rubislaw, Professor of Civil and Scots Law, Glasgow University. Her daughter, Jane Georgiana (1839–1871) married G. M. F. Tytler of Keith Marischal, Secretary to the Bank of Scotland.

HARRIET (1816–1898) married, in 1835, her first cousin, Alexander Binning Monro of Auchinbowie and Softlaw (1805–1891), second

[1] J. A. Inglis: *The Family of Inglis of Auchindinny and Redhall* (Edinburgh, 1914).

son of David Monro Binning (see Chapter XI). The eldest son of Harriet and Alexander, David Binning Monro (1836–1905), who succeeded to Auchinbowie and Softlaw and died unmarried, was a famous classical scholar at Oxford, provost of Oriel College from 1882 and Vice-Chancellor of the University, 1901–4. The second and third sons, Alexander Binning Monro (1838–1918) and George Home Monro (1840–1885), both emigrated to New Zealand where their father had bought land from the New Zealand Company. They farmed the Valleyfield and Langridge sheep-runs in Marlborough Province, and both were members of the Provincial Council. On the death of David Binning Monro, Alexander, his brother, succeeded to Softlaw, while Auchinbowie passed to Alexander William, eldest son of George Home Monro; he sold it to his cousin, George Nowlan Monro.

Dr James Monro, second son of Professor Monro *tertius*, was born in Edinburgh on 15 September 1806. He matriculated at the University in 1821, probably studying arts before beginning his medical course. From the matriculation registers it appears that he attended university until 1826 and was then absent for three years.[2] He registered again in 1829 and at the end of that session, on 12 July 1830, he graduated M.D., with a thesis, *De humero luxato.*

He made the army his career and was commissioned Assistant-Surgeon, Staff, on 2 November 1832, attached to the 7th Regiment of Foot in January 1833, transferred to the Second Dragoons in 1835 and finally to the Second Battalion, Coldstream Guards on 27 August 1841.[3] He served with that unit in Canada in 1841–42 and became Battalion-Surgeon in 1851. On 20 February 1853 he was promoted Surgeon-Major to the Regiment. During the Crimean campaign, Monro remained on service in Britain, and on 9 January 1863 he retired on half pay, living at No. 37 Gloucester Street, Pimlico, where he died of apoplexy on 3 November 1870 at the age of 64. His brother, Sir David Monro, wrote in his diary on hearing

[2] Private communication from the Keeper of Manuscripts, Edinburgh University Library (1961).

[3] Johnstone: op. cit.

of James's death,[4] "He was a kind and tender hearted man, reserved & absent: but generous & unselfish."

On 18 August 1857, Dr James Monro married Maria, daughter of Colonel Duffin, Bengal Army. She died in 1900: their two sons died unmarried, but their daughter had issue. Dr Monro succeeded to Craiglockhart House and Cockburn on the death of his elder brother, but both properties were subsequently sold by the trustees of his estate.

Dr Alexander Monro Inglis (1833–1897), son of Maria Monro and John Inglis of Langbyres, Auchindinny and Redhall, graduated M.D. at Edinburgh in 1854. In the same year he qualified L.R.C.P.Ed., and in 1858 M.R.C.S. (Eng.). After studying in Paris he went into partnership with Dr George Hyde in Worcester. There he met his first wife, Florence Feeney, and they were married in 1872. Practice was apparently quiet for a married man in Worcester, for Mrs Inglis wrote to her sister-in-law, Maria Inglis,[5] "Aleck finds this place quite worn out so far as practice is concerned, and thinks he might do better in a more thriving town. . . . Everyone says there is a capital opening for another doctor in Cheltenham." So to Cheltenham they moved, living first in Wolseley Terrace and then buying a large house called Montpellier Lawn. Dr Inglis became physician to the Cheltenham General Hospital and also built up an extensive private practice. He is described as a rather dour and reserved Scot, but very kind, especially to his poorer patients. When he resigned his hospital appointment, being then the senior physician, he was appointed to the consultant staff.

Dr Inglis' first wife died in 1875 at the age of 22, following the birth of her third child. He married Margaret Ryley in 1883, and, thirdly, in 1891, Ella Steevens. He died on 20 November 1897.[6] His son, John Alexander Inglis, K.C., M.A. (Oxon), LL.B. (Edin), was

[4] Entry dated 15 January 1871, written in the front of the diary for 1866 along with notes about the deaths of other siblings. (Nelson Historical Society, New Zealand.)

[5] Private communication from Mrs M. Dalmahoy, Auchindinny House (1961).

[6] See obituary, *Lancet*, 1897, vol. II, p. 1421.

the author of *The Monros of Auchinbowie* and *The Family of Inglis of Auchindinny and Redhall*. J. A. Inglis inherited Auchindinny House from his father and passed it to his daughter, Mrs M. Dalmahoy, the present owner.

THE MONRO COLLECTION, DUNEDIN. The will of Professor Monro *tertius*, executed on 18 February 1837, while David Monro was in Paris, contains this bequest:[7] "to Doctor David Monro my fourth son and failing him by decease to Doctor James Monro my second son . . . my Anatomical Museum and Anatomical Drawings and Copperplates and all my Medical Books and Manuscripts and copyrights of Medical Books." Why David should have been made the first beneficiary rather than his older brother, James, is not clear, unless the professor was looking to David as his potential successor, James being already in the army.

Monro *tertius* died on 10 March 1859: David received the news in New Zealand on 1 June and a copy of the will reached him on 30 June.[8] He then took immediate action with regard to the anatomical museum (which was still housed in the University although Monro *tertius* had been retired for thirteen years), for on 4 July 1859 he wrote to the Lord Provost and Magistrates of Edinburgh presenting the collection to the University.[9] The remainder of the bequest, the books and manuscripts which had been collected by the three Professors Monro, remained in Edinburgh until 1871, when Sir David arranged to have them sent out to him, the packing and despatch being supervised by his brothers-in-law, A. B. Monro and G. Skene. The collection arrived in Nelson in December 1871.[10]

On Sir David Monro's death in 1877, as neither of his surviving

[7] Copy of the will sent by Messrs Patrick, McEwen & Carment, W.S., to Sir David Monro; now in possession of Dr H. M. Monro, Fielding, New Zealand.

[8] David Monro's diary, 1859, dates cited.

[9] Draft of letter, also reply from Town Clerk of Edinburgh, among Monro papers in possession of Dr H. M. Monro. The present author was in error when he stated in 'David Monro's Lecture on the Expression of Passion' (*Bulletin of the History of Medicine*, 1956, vol. XXX, p. 451) that the anatomical museum was "probably sold in Edinburgh".

[10] Diary, 28 December 1871.

sons was qualified in medicine, the collection was bequeathed to his son-in-law, Sir James Hector, M.D., F.R.S., and, after Hector's death in 1907, his widow presented it to the General Assembly Library, Wellington. It lay there for some years until eventually, through the agency of Hector's son, Dr C. M. Hector, it found a permanent home in the Medical School Library, University of Otago, Dunedin. The collection consists of about 280 printed books and 60 manuscript volumes.

CHAPTER XVI

Dr David Monro, Emigrant

DAVID MONRO was born on 27 March 1813 at his grandfather's house, No. 30 St Andrew Square, Edinburgh. He was four and a half years old when his grandfather, Professor Monro *secundus*, died, and the family then moved to No. 121 George Street, also spending a good deal of time at the country estate, Craiglockhart. David's favourite boyhood haunt was the Queen Street Gardens and there he met William Aytoun from Abercrombie Place. Aytoun, later a famous Scottish poet and author, professor of belles lettres at Edinburgh and sheriff of the Orkneys, became Monro's closest friend.[1] Together these two went fishing and swimming in the Water of Leith, the Almond and "every stream & piece of water within reach of a boys legs from Edin^{r},"[2] and together they were enrolled as foundation pupils when Edinburgh Academy was opened in 1824 with the Rev. John Williams as rector. Neither was brilliant academically, Monro filling twelfth place among forty-nine pupils in the first year and sixth out of twenty in his final year.[3] "I don't recollect our ever getting into any very serious scrapes," Monro wrote later,[4] "but we were not unfrequently at fault with our lessons, and every now & then were had up for punishm^{t}."

In 1828 Monro and Aytoun left the Academy and matriculated at the University as students of what the former called the "more

[1] Correspondence of Monro with Aytoun and with his sister, Miss Isabella Aytoun, has been preserved: Aytoun letters in possession of Dr H. M. Monro; Monro letters in Blackwood Papers, National Library of Scotland (MS 4896 & 4934). Portion of one of Monro's letters (missing from the manuscript) was printed in T. Martin: *Memoir of W. Edmonstoune Aytoun* (1867). Aytoun's novel, *Autobiography of Norman Sinclair*, was largely based on his own youthful adventures, Monro being the original "Willie Menelaws."

[2] Letter from Monro to Miss Aytoun, 3 November 1866, MS. 4934, N.L.S.

[3] Academy records by courtesy of the Rector and the Registrar.

[4] Letter to Miss Aytoun, 3 November 1866.

humane letters". They studied chemistry under Professor T. C. Hope, botany under Professor R. Graham and natural history under Professor R. Jameson. In their vacations they went tramping, shooting and fishing in many parts of Scotland, including the Orkney Islands: in the winter they enjoyed music and amateur theatricals in the Aytoun drawing-room. After two sessions at the University, Monro went for a year to the home of a clergyman in the north of England, where he "underwent a finishing process in Greek and Latin, Algebra & the logic of Aristotle."

After his return home, Monro, in 1832, entered upon the study of medicine, but spent one summer, "upon a sick bed, prostrated by a typhoid fever the consequence of a puncture received in conducting an autopsy."[5] In three years he completed the course, and submitted an inaugural thesis, *On Aneurism of the Thoracic Aorta*, possibly stimulated by his father's previous study on aneurysm of the abdominal aorta. He graduated on 1 August 1835, when the minutes of the Senatus Academicus record that, "The Senatus then proceeded to D[r] Hope's Class Room, where after prayer by the Principal and in the presence of the Honorable Patrons they conferred the Degree of Doctor of Medicine upon One Hundred and sixteen Candidates with the usual solemnities."[6]

The following year the new graduate followed the current fashion by embarking on an extensive tour of the Continent, travelling first to Paris where he stayed from April 1836 until September 1837. Of this period he wrote:[7] "A daily journal had I kept one, would have consisted of little more than this: went to such & such an hospital in the morning, afterwards home & read, in the afternoon walked in the Tuileries or the Boulevards, dined in a restaurant good or bad, went home in the evening, or perchance to the theatre or to an evening party." On the sanitation of the city he commented, "really in Paris it is astonishing that a people in many respects so refined & neat, who boast themselves to be the first nation in the

[5] Letter to Sir William Hooker, 25 May 1852, Kew Gardens Collection.

[6] The minutes record the names of thirteen professors as being present at that meeting. Curiously enough Monro *tertius* was not one of them.

[7] Diary, July 1837 (Dr H. M. Monro).

world . . . should have so sadly neglected the worship of the most salubrious of goddesses Cloaca." From Paris, Monro went on by way of Göttingen, where he met the illustrious Professor J. F. Blumenbach ("but the poor old man is almost in his 2d childhood, a melancholy spectacle, when one thinks what he once was"), to Berlin, the whole journey occupying five weeks and being partly by coach, partly by steamboat along the Rhine and partly on foot over the Harz mountains. After working for a period in Berlin, he travelled to Vienna for further studies, then in the summer of 1838 returned to Edinburgh through the Tyrol and Switzerland[8] and was appointed by his father his assistant in anatomy.

The only record of David Monro's work at this time concerns some extramural teaching. In March 1839, the Board of Trustees for Manufactures wrote to the Lord Provost of Edinburgh,[9] acquainting him, "that there being no means afforded in this City to those studying the different branches of the Fine Arts for acquiring that knowledge of Anatomy which is indispensable for obtaining success in their profession, Dr David Monro has been appointed by them to give a course of Lectures, gratuitously on that subject. . . . The Lectures are to be delivered in the Hall of the Royal Institution, but it is extremely desirable that a few of them should have immediate reference to demonstrations upon the dead body of the human subject. . . ." The Town Council granted the use of the university anatomy theatre for this purpose and the course of lectures was given in May that year and repeated in 1840.[10]

In appointing his son his assistant, Monro *tertius* may have been looking to his eventual retirement and hoping to secure the Monro

[8] The only direct evidence of this is a statement by Monro that certain areas in the north of New Zealand "put me forcibly in mind of similar scenery in Switzerland or the Tyrol" (Journal, 1842).

[9] Letter dated 19 March 1839, Town Council minutes, 26 March. It was signed on behalf of the Board of Trustees by Alexander Maconochie, the second Lord Meadowbank, and Andrew Rutherfurd, Solicitor-General (later Lord Rutherfurd).

[10] The manuscript of the final lecture in the series is in the Medical School Library, Dunedin, and has been published—Wright-St Clair: 'David Monro's Lecture on the Expression of Passion' (*Bulletin of the History of Medicine*, 1956, vol. XXX, pp. 450–64).

succession, but the writing was on the wall and no doubt David could see it: after the difficulties with Monro *tertius* it is doubtful if any Monro, no matter how able, would have been successful in obtaining appointment to the chair. Whether for this reason, or simply animated by the spirit of adventure, David decided to emigrate to the Antipodes and paid £1200 to the New Zealand Company for four allotments of land in the proposed Nelson settlement.[11] His intention was apparently to stay only for what he called, "a 10 years' lagging,"[12] and as late as 1849, when he had been over seven years in the colony, he wrote,[13] "I have never entertained the idea of making this country my permanent home—God forbid: I loathe the place. . . . You can imagine nothing more dwarfish and contemptible than such a colony as this. The Littleness of everything about it, and the paltriness to which men's minds lower themselves in such a place is quite disgusting." Yet he did in fact stay for life and Nelson was his home for forty-five years.

The New Zealand Company, with the Earl of Durham as its Governor, had been formed to colonise those islands in accordance with the principles laid down by Edward Gibbon Wakefield. The company's first settlement had been established in 1840—the year in which New Zealand became a British possession—at the southern end of the North Island and was named "Wellington," after the great general. On 15 February the following year a prospectus was issued for a settlement in the South Island, to be named, appropriately, "Nelson:" the exact site was undetermined when the land was sold, but surveyors, under Captain Arthur Wakefield, R.N., were despatched to find, purchase from the Maoris and lay out a suitable area—and the first trusting settlers followed soon after to take up "the land for which like geese they had paid without ever

[11] This move must have been made with his father's blessing: there are pencilled notes in the handwriting of *Tertius*, about the New Zealand Company and emigration, on the inside front cover of a book in the Monro Collection, Dunedin (M 195); furthermore, *Tertius* loaned David £2000 to meet the expenses involved (this was deducted from the amount he later received under his father's will).

[12] Letter to Aytoun, 12 August 1849.

[13] Letter to Aytoun, 16 September 1849.

seeing it."[14] The site selected did not provide the amount of usable land promised and the company—"that conceited and rascally Joint Stock Company," Monro called it[15]—failed to fulfil all its obligations to the settlers, thus causing very great hardship to many people in the early years of Nelson.

On 2 May 1841, Captain Wakefield's survey party sailed from Gravesend to a salute of twenty-one guns. Nine days later Dr David Monro embarked at the same port as ship's surgeon on *Tasmania*, 502 tons, bound for Melbourne.[16] In London he had had two daguerreotypes taken and sent to his family—"They are of course as true as the Laws of light, but I do not consider them particularly flattering."[17] *Tasmania* was a good sailer and they were a merry company, as witness this entry in Monro's journal for 1 June: "We had a splendid breeze which took us along at 8 & even 9 miles an hour. . . . At dinner today the Captain gave us a toast, 'The British Navy, not forgetting the glorious 1st of June', enthusiastically drunk, & in the evening with an accompaniment of two violins we sang 'Rule Britannia' with great spirit if not perhaps equal execution." The Cape Verde Islands were the only port of call during the four months' voyage round the Cape of Good Hope, and the ship cast anchor in Port Phillip, Australia, on 14 September 1841.

After three months spent on his brother Henry's sheep station, Crawford, some 75 miles from Melbourne, David Monro sailed for New Zealand on the ship *Ariel*, arriving at Auckland in January 1842, when the then capital was just a year old—"Its appearance is not above its age," Monro observed.[18] *Ariel* then sailed down the east coast, spending some two months trading with the natives:

[14] Monro: Manuscript headed, "Self Government for New Zealand," in Monro papers (Dr H. M. Monro).

[15] Letter to J. S. F. Tytler, 6 January 1853, Bett Collection, Nelson Historical Society.

[16] One of his companions on board was E. W. Stafford from Edinburgh, later Sir Edward Stafford, three times Premier of New Zealand. Stafford subsequently said (New Zealand Parliamentary Debates, 29 Aug. 1870) that they had, "by preconcert, accompanied each other to the Australian colonies."

[17] Letter from Monro to his youngest sister, Charlotte, Monro papers (Dr H. M. Monro).

[18] Diary, 18 January 1842.

"we were every where very kindly received by the Maoris," he told his sister in a letter,[19] "and saw a great deal of their manners & mode of living. At first, I could not divest myself entirely of some ideas of having my brains knocked out & my earthly tabernacle served up as a native repast, but I soon saw that ideas of this sort were perfectly ridiculous. . . . At last I got to Nelson, and found there about 1500 of my countrymen encamped in the most pictureasque manner, waiting until the town allotments should be distributed: the Tytlers[20] I found living in a snug enough mud cottage, into which they were so kind as to admit me. The situation of the town is very pretty: it is built partly upon the undulating ground, partly upon a plain upon the edge of the sea. . . . the climate is excessively beautiful, calm & warm." Obviously Monro was greatly impressed from the start with the potentialities of Nelson as a settlement—according to Captain Wakefield he was "a hearty Nelsonite"[21]—"But," Monro wrote, "how desperate is the idea of the awful distance of the place."[22]

So the doctor became a leader of the primitive but progressive settlement. One of his fellow colonists described him[23] as "a very nice fellow. Just the last Man *you* would expect to find here—a Scotch Physician, full of all the learning of the modern Athens [Edinburgh]; a perfect Gentleman, very accomplished, and thoroughly a Man of the World." Within two months of his arrival Monro was appointed a Justice of the Peace and in this capacity he presided over some of the earliest court cases in the area; only a few more months elapsed before he returned from a visit to Australia with 300 sheep—unprocurable in New Zealand then—some cattle, and agricultural implements, prepared to settle on his allotments of

[19] Dated 28 September 1842, written from Melbourne during a return visit.

[20] James Stuart Fraser Tytler and George Michael Fraser Tytler from Edinburgh, grandsons of Lord Woodhouselee. James was later professor of conveyancing at Edinburgh and George became Secretary to the Bank of Scotland.

[21] Captain Wakefield to Colonel Wakefield, Wellington, 4 April 1842 (National Archives, NZC 104/7).

[22] Letter to his sister, 18 September 1845. In those days it took almost a year to send a letter home to Britain and receive a reply.

[23] Letter, W. Curling Young, immigration agent for the Company in Nelson, to his mother, 17 July 1842 (Library of Victoria University, Wellington).

land in the Waimea valley.[24] There, on a property of 200 acres, some eleven miles from the town, he created his home, Bearcroft (spelt without the terminal -s of the ancestral property), and surrounded it with trees and garden.

In March 1843, Captain Wakefield and many other leaders of Nelson were killed by Maoris in the Wairau dispute, the natives having denied the company's right of possession to land which they were attempting to survey. Monro was one of two men considered for appointment as resident agent for the company in succession to Wakefield;[25] then Monro and Alfred Domett (the poet, later Premier of the colony) were sent by the local people as a deputation to wait upon the Governor in Auckland, where they petitioned him unsuccessfully on the need of Nelson for adequate military protection. After this Wairau tragedy, Monro changed his views with regard to the Maoris: "All these fine pictures of amiable and interesting savages," he informed his sister,[26] "that well meaning people & tract society ladies gloat over so fondly at home, are take my word for it, mere rubbish. Golden ages & primitive simplicity are all in my eye."

For their own protection against company and government, the land-owning settlers, with Monro as a principal figure, formed what would today be called a pressure group—the Nelson Original Land Purchasers' Association, popularly called "The Supper Party," or, by their political opponents, "The Forty Thieves." Alfred Saunders (one of their opponents) said,[27] "This party was very ably led by Dr, afterwards Sir David Monro, and retained all political power in

[24] He returned on the brig *Union*, 155 tons, 12 January 1843. Travelling with him was E. W. Stafford. Monro had informed his sister from Australia (28 Sept. 1842): "Stafford has done nothing as yet: he is quite disgusted, and will probably leave I think before very long." It was presumably through Monro's influence that Stafford, instead of returning home, went on to the colony in which he was to become such an important political figure.

[25] National Archives, NZC 104/3, pp. 139–40. The other candidate, who was appointed, was William Fox (later four times Premier of New Zealand and Monro's political arch-enemy).

[26] Letter, 4 September 1843, from Wellington during return voyage from Auckland.

[27] A. Saunders: *History of New Zealand* (Christchurch, 1896), p. 181.

their own hands until some time after the introduction of representative government in the colony." As is necessary for a successful colonist, Monro was a man of many parts. In 1844 he became an explorer, accompanying Tuckett, chief surveyor to the New Zealand Company, on an expedition to the southern part of the South Island to explore the terrain and decide upon the best place for the proposed Scottish settlement to be called New Edinburgh (later changed to Dunedin). They fixed on the present site on the shores of Otago harbour which Monro described on his first sight of it as "a beautiful sheet of calm water surrounded by an amphitheatre of wooded hills."[28] During that expedition, Monro, with two companions, separated temporarily from Tuckett and explored the present site of Invercargill city: so far as is known they were the first white men to visit that flat and fertile area.[29]

The following year he filled yet another role, that of bridegroom, when, on 7 May 1845 in the little Anglican church of St Michael at Waimea West, he was married by the Rev. C. L. Reay to Dinah ("Ninna"), daughter of John Secker of Widford Manor, Oxfordshire. The bride had come to the colony as lady's maid with Monro's neighbours, the Hon. Constantine and Mrs Dillon. The witnesses who signed the marriage register were Mr and Mrs Dillon, James Tytler and Mrs Henry Redwood.[30] "There was a grand déjeuner à la fourchette," the bridegroom wrote,[31] "to which 30 guests sat down, and after which I drove my bride home in a gig." Five years later the young couple's happy home was visited by a friend, who wrote in a letter:[32] "I was much charmed by the Doctor's pretty cottage and garden, and kindly received by his gentle and amiable wife. . . . In the evening we had some nice music. The Dr has a very

[28] Notes of a Journey through a part of the Middle Island of New Zealand (*Nelson Examiner*, 20 July–5 October 1844; reprinted as Appendix C in T. M. Hocken: *Contributions to the Early History of New Zealand, Settlement of Otago*).

[29] 22–24 May 1844. Monro later bought 200 acres of land in that vicinity and in 1867 dedicated Kew Road through his property.

[30] Another neighbour: one of her sons, Francis, was Roman Catholic Archbishop of New Zealand for almost 50 years.

[31] Letter to his sister, 21 May 1845.

[32] Mrs Sarah Greenwood, wife of Dr J. D. Greenwood (letter of 1850, Greenwood papers, by courtesy of the late Miss M. E. Greenwood of Wellington).

fine voice, great taste, good knowledge of the guitar, and a pretty collection of German, French, Italian and English songs. Mrs M. sings duets with him pleasingly." Monro himself said, after thirteen years of marriage,[33] "I have a very excellent sensible and true hearted wife."

Just before his marriage, Monro had become Captain of No. 2 Company, Nelson Militia,[34] which had been called out in consequence of a native uprising in the north. To his sister he wrote,[35] "I daresay it wd surprise you to see me in uniform with a sword at my side, marching, countermarching, wheeling, charging, and performing all other military evolutions."

Monro's principal occupation was, of course, that of sheep-farmer and this he pursued with such success that less than twenty years after his emigration he was able to record a total land holding of 13,000 acres carrying 14,000 sheep.[36] He owned or had an interest in a number of sheep runs at different times, but the principal ones were Bankhouse, Craiglockhart (nowadays spelt without the -k-) and Summerlands in the Wairau (Marlborough), and Culverden and Montrose in the Amuri (now North Canterbury). For the 1875–76 season his wool clip was 171 bales from Bankhouse and 244 bales from Montrose.[37] His home remained for many years at Bearcroft in the Waimea, but after 1864 it was at Newstead, a large house in Manuka Street, Nelson.

A secondary occupation, but one which he greatly enjoyed, was that of gardener, and the garden at Bearcroft was apparently outstanding—although the homestead has long since disappeared many of the trees Monro planted still stand. As early as 1848 he was able to exhibit, "8 sorts of apples & peaches 2 sorts;"[38] while by 1854

[33] Letter to Aytoun, 23 December 1858, National Library of Scotland, MS. 4896.

[34] Warrant of appointment signed by Governor FitzRoy at Auckland, 12 April 1845. His lieutenant was Francis Dillon Bell, later Monro's successor as Speaker.

[35] Letter, 18 September 1845.

[36] Diary, 1861. The figures include half the area and half the sheep on the Montrose run of which he was at that time joint owner (he later bought out his partner).

[37] Diary, 1876.

[38] Diary, 22 February 1848.

his verandah was "covered with various sorts of roses, honeysuckle, jessamine, accrimocarpus and other creepers."[39] He was more than just a gardener: he was a botanist of considerable distinction, observing and describing flora and sending some 250 well-dried specimens to Sir William Hooker at Kew Gardens where they are still preserved. "He was the pioneer botanical explorer of the northern portion of the Southern Alps,"[40] and five species of plants perpetuate his name.[41]

Great distances and forbidding terrain imposed few limitations on such an assiduous traveller as Dr Monro. In a letter written to his sister in 1848 he described a droving journey: "I took my sheep in the month of March into the Wairau district distant from here about 100 miles by land. There is no road, only a track in places, along the ridges of the hills. A stupendous chain of rugged mountains intervenes. . . . I had about 1,000 sheep, and five men with me, and two horses with baggage. . . . The track in places is execrable, diving into deep glens, down which the mountain torrents foam and dash, and rising again, equally steep, upon the opposite bank. . . Through the surrounding trees you look down upon a deep blue glen, from which you trace upwards immense banks of forest, till the trees gradually disappear, unable to exist at such height, and bare precipices and cliffs succeed, their summits covered with snow at a height which almost makes you giddy to look up to. . . . We had next to cross two rapid and considerable rivers. This was a work of some difficulty: but when it was accomplished the remainder of the journey was attended with no difficulties, and I got my flock on to their new ground without any losses to speak of."

In 1855 Monro made a hazardous twenty-day journey on horseback from Nelson to Christchurch: the distance is only about 160 miles as the crow flies, but the two settlements are separated by several parallel mountain ranges, two of them 8,000 feet high—con-

[39] Letter to his brother-in-law, Rev. Henry Fletcher, Oxford.

[40] Rewa Glenn: *The Botanical Explorers of New Zealand* (Wellington, 1950), p. 106.

[41] *Celmisia monroi*, *Carmichaelia monroi*, *Euphrasia monroi* and *Senecio monroi* named by Sir Joseph Hooker; *Myosotis monroi* named by Cheeseman.

sequently the usual method of travel between them in those days was by sea, a usable overland route having been discovered only five years before.[42] A typical diary entry during this journey is the following:

"*March 29th*. . . . The track now wound up the steep side of a rocky gorge clothed with beautiful Alpine plants. . . . The path is very rugged & awkward in places, but the ascent on the whole is not very difficult . . . and at last we stood upon the bare shingle of the dividing ridge & looked down a steep slope of loose shingle lying at something like an angle of 45°. . . . Further south the view was circumscribed by the usual broken mountain masses of New Zealand, bare of vegetation on their summits & shewing here & there the remains of the last winter's wreaths of snow . . . camped for the night under circumstances on the whole as favourable as could be expected.

"*March 30th*. The morning dawned dark & misty, but before we started the curtains rolled up & burst asunder & one after another the mountains gleamed out from among the vanishing mists bright with the glorious rays of the sun. . . . The Glen of the 'Acheron' is about half a mile wide, hemmed in by steep & lofty mountains, & the river flows in a deep rocky channel. . . . We crossed it 5 or 6 times to avoid rocky projections coming sheer down into the water & in floods this must be rather a serious undertaking. . . ."

Another aspect of colonial life in which Monro played a prominent part was education. The New Zealand Company's Nelson prospectus had undertaken to put aside a certain proportion of the money received from land sales as a trust fund for the purpose of establishing religious and educational institutions. In the event, however, this money was not forthcoming without a long and bitter legal struggle by the colonists. In 1850, Monro was one of a Board of Trustees set up in Nelson to obtain and expend these trust funds, and J. S. F. Tytler, the former Nelson settler, then practising law in Edinburgh, was appointed their agent in Britain. In a letter to Tytler,[43] Monro wrote: "I have just been writing to you officially

[42] W. G. McClymont: *The Exploration of New Zealand* (London, 1959).

[43] Dated 13 May 1850, Bett Collection, Nelson Historical Society.

as one of the Trustees of the Nelson Trust Funds (dont laugh) there being no Funds to look after. The whole affair is as pretty a kettle of fish as ever was cooked, and the Nelson land purchasers have been as nicely done by the N.Z[d] Company as ever a set of gulls were." Eventually, however, the funds were received and part was used to establish Nelson College, Monro being a foundation member of the Council of Governors. He was also a member of the Provincial Central Board of Education, which controlled elementary schools.

His active and enthusiastic interest in education is shown by these entries in his diary for 1860:

"*17 December*. . . . To the College in the afternoon. Heard the boys do some French. . . .

"*18 December*. Went down at 10 a.m. to the College and examined the boys in Latin & chemistry. . . . In the afternoon went to the Town School & examined the boys there in History. . . .

"*22 December*. At the College in the forenoon, assisting to make out the prize list. The condition of the College is not at all satisfactory. The progress of the pupils is exceedingly small, and the general discipline very lax. . . ."

When the University of New Zealand was being established in 1870, Monro's work for education was recognised by an invitation to him from the Colonial Secretary, William Gisborne, to become a member of the first University Council.[44] This offer, however, he declined, possibly because the government did not then stand in good favour with him. In the field of adult education he had also been active, having been president of the Nelson Institute (then called the Literary and Scientific Institution) in 1843 and having on a number of occasions lectured to the Institute on such subjects as "The Atmosphere" and "The Eye."[45] He was a leading director of the Dun Mountain Company, an abortive copper and chrome

[44] See Appendices to the Journals of the House of Representatives, 1871, G No. 8A, pp. 7–8, items 24 & 28.

[45] C. B. Brereton: *History of the Nelson Institute* (Wellington, 1948). Draft manuscript of the lecture on the eye is among the Monro papers (Dr H. M. Monro).

mining enterprise,[46] and was also a keen amateur photographer when that art was in its infancy.

Although Monro did not at any time after his arrival in New Zealand regularly practise his profession of medicine, he did find time between his numerous other activities to attend his friends and neighbours and to see occasional cases in consultation at the request of other practitioners. His opinion was evidently well thought of, for his diaries show that as late as 1876, when he was thirty-five years removed from active practice, he was still being consulted by patients—an indication of how static medicine was in the nineteenth century. When a suspected murder was being investigated in Nelson in 1857,[47] Monro and Greenwood were the two practitioners asked to examine, on behalf of the Crown, the body tissues of the deceased woman for the presence of arsenic: they had to devise and construct their own apparatus for the Marsh test.

In the field of therapy, Monro followed the accepted practice of his time, particularly in purging his patients frequently and heroically. A typical example is this treatment of his own three-year-old child suffering from gastro-enteritis: "Gave her castor oil first & then 3 grs Calomel."[48] At the same time he had a wholesome scepticism towards his own profession—of one elderly friend he wrote: "I believe the poor old body will get better if the Doctors will let her alone."[49]

His attitude to quackery is clearly shown by his speech in the New Zealand Parliament in 1860 during the debate on a bill to introduce medical registration,[50] when he said that,[51] "The Bill did not aim at extinguishing quackery—it imposed no penalties on

[46] Some extracts from Monro's diary for 1859 dealing with Dun Mountain business and geological references were published in C. A. Fleming: 'Dr Hochstetter in Nelson' (*New Zealand Journal of Geology and Geophysics*, 1959, vol. II, pp. 954–63).

[47] The Pratt case: the accused was charged with murdering his wife, but was acquitted, no arsenic having been found in her body.

[48] Diary, 23 January 1857.

[49] Diary, 14 November 1866.

[50] Wright-St Clair: 'The Beginning of Medical Registration in New Zealand' (*New Zealand Medical Journal*, 1955, vol. 54, pp. 693–7).

[51] *New Zealand Parliamentary Debates*, 31 August 1860.

quacks. It merely warned the public; and if after that warning they trusted to persons who would cure an inflammation of the lungs with nux vomica or arsenic—if they placed any dependence on such miserable delusions—the responsibility rested with themselves. If after that the public pinned their faith to these gentlemen and took their wretched nostrums, in God's name let them do it." The popular and fashionable cult of homoeopathy he was not afraid to call, "that most absurd imposition on the face of the earth, perfectly incredible and monstrous."

CHAPTER XVII

Sir David Monro, Politician

In 1848, a constitution for New Zealand was proclaimed, dividing the country into two provinces, New Ulster and New Munster. In each province the Governor was to be advised by a Legislative Council consisting of members nominated by him together with senior government officials. This was much less than the representative government the settlers desired and caused considerable ill-feeling. The province of New Munster consisted of the South Island and the southern portion of the North Island. Among the three Nelson members appointed by the Governor, Sir George Grey, to the Legislative Council for this province were Dr David Monro and Dr John Danforth Greenwood.

They attended the first meeting of the Council in Wellington in May 1849, the journey across Cook Strait being "a very tedious voyage of 6 days,"[1] and they were "the principal debaters."[2] One outstanding achievement of this session of council was the introduction of medical registration in the province—eight years before the corresponding British act—and although not in active practice Monro registered under this ordinance. Popular feeling, particularly in Wellington, was so strongly against this nominated council that the nominee members were "the derision of the mob and a butt for the arrows of the better class."[3] They were even called, "such a scabby lot."[4]

Monro, however, believed that the settlers were not yet ready for self-government. "Upon this contemptible little dunghill of ours,"

[1] Letter, Mrs Greenwood to Mrs Field, May 1849, Greenwood papers.

[2] Letter, Greenwood to his wife, Greenwood papers.

[3] Letter, Weld to Stafford, 15 June 1849, Stafford papers, Alexander Turnbull Library, Wellington.

[4] Letter, Dr Featherston to Stafford, 4 March 1849, Stafford papers—this referred particularly to the Wellington members.

he wrote,[5] "we have had some wonderfully fierce political squabbles of late. . . . This Colony is not yet fitted for representative institutions. It cannot support itself. It is kept alive by John Bull, and my idea may be old-fashioned, but I fancy that if people insist on managing their own affairs, they ought to be prepared to pay for them. Another difficulty arises out of the native question. The natives are becoming civilized with wonderful rapidity. . . . But it w^d be impossible to admit them to a participation in the benefits of representative Gov^t while there w^d be considerable danger that if not represented their interests w^d be overlooked, and their jealousy w^d certainly be excited by knowing that they were governed by the mere handful of white men who have settled in the country. And it is no joke to have the Maories for enemies. They are uncommonly ugly customers I can assure you."

The following year Monro and Greenwood resigned from the Council because the Executive appropriated the revenue for a second year without convening the Council, and because the Governor had ruled that nominated members could not express independent views. In 1851, when the Legislative Council for New Zealand was to meet in Wellington, Governor Grey offered Monro a seat on that body[6] but the offer was declined—"I was not going to expose myself a second time to have dirt cast upon me."[7]

On 17 January 1853, a new constitution was proclaimed in accordance with an act passed by the Imperial Parliament the previous year.[8] This granted the long-awaited representative government through a General Assembly consisting of an elected House of Representatives and a nominated Legislative Council: the Colony was also divided into six provinces, each with an elected Superintendent and Provincial Council.

Again Grey wrote to Monro[9] inviting him to accept appointment to the new Legislative Council and enquiring whether, "from a

[5] Letter to Aytoun, 12 August 1849.

[6] Letter, Grey to Monro, 8 May 1851, Monro papers.

[7] Letter, Monro to Tytler, 13 September 1851, Bett Collection.

[8] 15 & 16 Vict. cap. 72: "An Act to grant a Representative Constitution to the Colony of New Zealand" (30 June 1852).

[9] Letter, 30 June 1853, Monro papers. Written while Grey was visiting Nelson.

desire of promoting the public service, and the interests of this your adopted country, you will enter upon the duties of an office which I am afraid may cause you some inconvenience." Monro wrote a long reply[10] stating his opinion, first, "that Parliament has made a mistake in deciding that that chamber should consist of Nominees of the Crown instead of being elective," secondly, "that the General Assembly should be convened at the earliest period practicable, and that when convened the upper chamber should be composed of a preponderating majority of independent men, unconnected with Gov^{t}," and thirdly, that the summoning of the Assembly to meet at Auckland rather than at "some central point" would "constitute a public grievance which will be severely felt and operate most injuriously upon the working of the Constitution."[11] He concluded, "For myself, I can only say, that with every disposition to contribute my humble services to the successful development of the new order of things under which we are to live, I nevertheless feel that, weighed against the position of a member of the upper chamber, the personal sacrifice involved . . . is more than I can in reason or prudence be expected to incur, and I therefore . . . must feel myself compelled reluctantly to decline the offer which you have done me the honor to make."

The clause, "weighed against the position of a member of the upper chamber," was inserted between lines in the draft and is an important operative clause, because, when he wrote the above letter, Monro must already have been considering accepting nomination for the House of Representatives. The first election for the thirty-seven members of that body was held on 25 July, less than a month after Grey's letter was written. There were four candidates for Waimea West and Monro was one of the two elected. Soon after, he was also elected representative for the same district in the fifteen-member Nelson Provincial Council.[12]

[10] Undated draft copy among Monro papers.

[11] This statement was fully substantiated by the fact that it took the Otago members over two months to reach Auckland by sea for the first session of Parliament.

[12] Monro's friend, E. W. Stafford, was elected first Superintendent of Nelson.

Dr Monro was now fairly launched on a political career. He attended the first meeting of the Provincial Council on 3 November 1853 and took an active part in its affairs during that important session which lasted almost four months. Soon after it ended came the first session of the General Assembly. Monro's diary records a near disaster when the members were leaving Nelson for Auckland:[13]

"*May 19th* [1854]. . . . Great difficulty in getting the steamer round in consequence of the violent Southerly wind blowing, & in going out, owing to the slowness of the crew, we went ashore on the Fifeshire Island. Got the ladies out and went back again. . . . Meeting of passengers in the evening to decide what was to be done, resolving itself afterwards into a harmonic & brandy & water." In spite of this set-back they managed to arrive in the capital in time to see the Acting-Governor, Col. Wynyard, open the Assembly with all solemnities: "Guard of honor presented arms & the band played 'God save the Queen.'"[14]

Although Parliament was now established, government was still not responsible, the executive being appointed by the Governor, not by Parliament. The new House of Representatives demanded full ministerial responsibility which Wynyard was unwilling to yield: the first session, therefore, resolved itself into a major struggle for power, reminiscent of the days of Hampden and Pym, between the Acting-Governor and Parliament. In this dispute Monro played an important part, being regarded as "the leading Centralist in the House,"[15] as opposed to the provincialists who wished to keep the provincial councils dominant. "Owing to the irregular manner in which the country had been colonized," Monro had said in his first major speech in the House,[16] "jealousies had arisen in different places, and separate and conflicting interests seemed to have arisen. These, however, he thought, were, after all, more imaginary than

[13] The ship was *Nelson*, 330 tons. All the South Island members and those from Wellington were aboard.

[14] Diary, 27 May 1854.

[15] A. Saunders: *History of New Zealand*, p. 303.

[16] Seconding the address-in-reply to the Governor, 1 June 1854 (*New Zealand Parliamentary Debates, 1854–55*, p. 24).

real. . . . No occasion could be more fitting than the present to be the starting-post of strength and unity."

When the issue of responsible government reached a climax, with Wynyard attempting a compromise and the House refusing to accept it, Parliament was prorogued against its wishes, provoking a "scene of disorder, confusion, and personal violence."[17] Two weeks later the members reassembled with tempers cooled and adopted, on Monro's motion, an address to His Excellency stating that the Executive Council as then constituted was "a form of government in which the House declares its absolute want of confidence."[18] The session ended a fortnight later, on 16 September, with little legislation produced but the important principle clearly established that the House of Representatives would not permit itself to be subservient to Crown officials. Monro, in common with most southern members, did not attend the 1855 session of Parliament, and when another general election was held he was not a candidate.

In 1856, however, he was a candidate for the office of Superintendent of Nelson; but, by a margin of sixteen votes, a working man, "an ignorant mechanic," defeated "the able, the respected, and the popular doctor who had long and ably headed the eager and successful land and privilege monopolists of Nelson."[19] This sudden accession to power of the working class was deeply resented by the land owners and much bitter feeling was aroused—"the unwashed" and "the dirty party on the Council," Monro called the new Superintendent's supporters.[20] The following year Monro received an offer from Stafford, then Premier, of a seat in the Legislative Council[21]—"If you cannot, or will not, take a seat in the upper chamber, I trust you will come forward for one of the two seats . . . which I hear are likely to become vacant in the House of Rep." Again Monro declined the Legislative Council, but he

[17] T. M. Hocken: *The Early History of New Zealand* (Wellington, 1914), p. 271.

[18] *New Zealand Parliamentary Debates*, 1 September 1854, p. 350.

[19] Saunders: op. cit., p. 331.

[20] Diary, 20 April and 3 May 1860.

[21] Official and accompanying private letters, 20 August 1857, Monro papers.

7 Sir David Monro, 1813–1871

acceded to the latter request and was re-elected to the House for Waimea, remaining a member for various constituencies until 1872;[22] he also remained a member of the Provincial Council until 1864.

During his first session back in Parliament he made an outstanding speech against a proposal to introduce the secret ballot in elections, instead of the open declaration of vote. "If secret voting were introduced," he declaimed,[23] "it would have the effect of producing political stagnation and divesting political questions of all that life and interest which characterized them under the present system. . . . It would lead to hypocrisy and dissimulation. As a public trust, the franchise should be exercised in public." It is hard for us today to appreciate this point of view, but it carried the support of the majority and the proposal was thrown out.

When Parliament met in 1860, the Maori war had just broken out in Taranaki and native affairs were consequently the principal concern of the legislators. Monro said, " . . . his impression was that the course hitherto pursued by the Government on Native matters was hesitating and vacillating, and he was prepared to give his support to any Government that would pursue a firmer and more decided course"—"The first thing to be done when a house was on fire was to put the fire out: the first thing to be done in this colony was to establish the Queen's authority."[24]

The third Parliament of the colony met for its first session on 3 June 1861, when Dr Monro was elected Speaker.[25] Rumours that this move was intended had reached Picton, the constituency he was contesting, during the election campaign and, as the electors feared losing their voice in the House if their member occupied the chair, Monro assured them in a campaign speech, "that though the

[22] The only break was in the latter part of the session of 1871. His constituencies were: Waimea 1854–55 and 1858–60; Picton 1861–65; Cheviot 1866–70; Motueka 1871; and Waikouaiti 1872.

[23] *New Zealand Parliamentary Debates*, 8 July 1858.

[24] *New Zealand Parliamentary Debates*, 9 August 1860.

[25] Sir Charles Clifford, the first Speaker, had retired. Stafford had apparently offered the post to Monro in January 1861 but he had declined (see Monro's speech in Picton, 18 Oct. 1861).

position was an honourable one, it would not suit his views."[26] However, when he arrived in Auckland for the session he found that the ministry had no other candidate available and he therefore accepted nomination, apparently without demur. "I went to see Stafford," he recorded in his diary.[27] "He tells me they have decided on making me Speaker. . . . I ordered a black coat & trousers . . . & 12 white neck cloths." He was accordingly elected unopposed to the chair on Mr Dillon Bell's motion, on 3 June 1861.

He immediately advised his constituents[28] that, "if a majority of the Picton electors should signify to me their wish that I should retire from the representation of the district, I shall so soon as this Session is over, tender my resignation." The local newspaper at once charged the electors[29] with "the immediate duty of repudiating their choice and of finding a member less ambitious, it may be, but a trifle more honest, if possible." However, in the event, when Monro addressed the citizens of the town on his return from Auckland, a motion was carried unanimously that, "this meeting feels fully satisfied with the course pursued, and now tenders to Dr Monro sincere thanks for his valuable services."[30] Even the newspaper felt constrained to say,[31] although with some reservations, that his speech, "proved to be a satisfactory vindication of his public conduct as far as a zealous and able discharge of his duties as our representative entitle him to that verdict."

When thanking the members of the House for electing him their Speaker, Monro told them that, "With your confidence and support I trust to be able to preserve for the House of Representatives that high character for tone of debate and general statesmanlike proceedings which I am happy to say has hitherto characterized it."[32] This he carried out through ten arduous sessions and his rulings as Speaker were highly thought of and quoted long after: yet he was a

[26] Speech of 29 January 1861, reported in *Marlborough Press*, 2 February 1861.
[27] 31 May 1861.
[28] Advertisement, *Marlborough Press*, 22 June 1861.
[29] Editorial, *Marlborough Press*, 22 June 1861.
[30] Meeting of 18 October 1861, reported in *Marlborough Press*, 25 October.
[31] Editorial, *Marlborough Press*, 25 October 1861.
[32] *New Zealand Parliamentary Debates*, 3 June 1861.

man of strong and unshakeable political convictions and, when the House was in committee and he was consequently out of the chair, he frequently voted and took an active part in debates—a practice not entirely unknown in New Zealand in recent years. That was an age of violence and turmoil in the politics of the Colony (the government changed six times in eight years) and the dignified figure in the chair seemed the only unchanging feature of the House —and no matter how violently partisan he might be in committee, when presiding in the chair Monro always was calm and dignified. His sense of duty was such that he many times stayed in the chair through long and wearisome sittings while in great pain from his old enemy, sciatica. During his term of office he also had serious personal worries, as two of his sons died after protracted illnesses.[33] How much work the position of Speaker involved is indicated by the fact that during the session of 1870, Monro's last in the chair, the House, which then had 77 members, sat for 482 hours on 57 days, 30 hours being after midnight; 133 bills and 105 petitions were dealt with.[34]

The session of 1862 was noteworthy in several respects. It was the first held in Wellington,[35] and the Governor and Auckland members were shipwrecked on their way south, arriving eventually a week late. Monro's political arch-enemy, William Fox, was then Premier, but on 28 July a government policy motion regarding native affairs met with an equal vote in the House and Mr Speaker Monro gave his casting vote against the Government, which promptly resigned. This is the only occasion in New Zealand history on which a ministry has been unseated on a Speaker's casting vote.

Later that session came one of the most contentious episodes in Monro's career: the alteration of the clock in the House of Representatives. Domett, the new Premier, had introduced an important

[33] Harry James Carmichael, the youngest son, died of hydrocephalus at the age of 5, in 1866; David, the second son, died of pulmonary tuberculosis at the age of 21, in 1869.

[34] *New Zealand Parliamentary Debates*, 13 September 1870.

[35] The seat of government was not shifted from Auckland until 1865, but this session was held in Wellington to placate southern members.

bill[36] which met much opposition. When the bill reached its third reading on 5 September 1862 the session was nearing its end and it was known that unless the bill reached the Legislative Council the same evening it would be unlikely to be passed that year. Fox and his fellows in opposition naturally adopted delaying tactics, including, after the third reading had been carried, a debate on the title of the bill which they forced to a division. This division was in progress when the hands of the House clock reached 5.30 p.m., the hour at which, by standing orders, the Speaker must leave the chair for the tea adjournment: Monro sent a messenger clandestinely to put the clock back while the division was completed and the motion to transmit the bill to the upper chamber put and carried. When Fox later moved for an enquiry into the incident, Monro explained,[37] "The clock really was three minutes too fast, and the time actually occupied beyond the half-hour by the House was not above three or four minutes. He quite agreed . . . that the proceeding was not regular, if not quite unjustifiable, and begged the House to accept his apology for it." This explanation was accepted by Fox and his motion withdrawn.[38] A recent Speaker has stated,[39] "It has always been competent for the House, when a division is in progress at the time for the conclusion of its business, to complete that division and to take whatever other formal steps are necessary to complete the business which was the subject of the division." It thus appears that Monro was in the right, but he must have been unsure of his ground and unfortunately resorted to subterfuge to achieve his purpose.

On 10 February 1866 the *London Gazette* announced that the Queen had created David Monro "a Knight of the United Kingdom

[36] The Native Lands Bill, 1862.

[37] *New Zealand Parliamentary Debates*, 9 September, 1862.

[38] In spite of this, in 1871 Fox swore an affidavit in the case of Monro *v.* Luckie & Collins in which he trenchantly criticised Monro's actions in the clock episode.

[39] Sir Matthew Oram, private communication (1954). There are also interesting comments by Hugh Carleton, Chairman of Committees of the House at the time, among the Monro papers: Carleton condoned Monro's action, although they were not on friendly terms.

and Ireland."[40] At the general election that year,[41] Monro was elected member for Cheviot and when the House assembled on 30 June he was re-elected Speaker, again on the motion of Dillon Bell.[42]

Towards the end of the session of 1870, Monro announced to the House, "that it is not my intention to seek to occupy the chair after this session."[43] Several members immediately expressed regret, including Julius Vogel, a subsequent Premier, a hot-headed political opponent of Monro who had frequent acrimonious clashes with the chair. Vogel said, "it is impossible to be blind to the fact that however much one may at the time feel fretted at the discipline which you think necessary to enforce, that discipline has exercised a most beneficial and salutary effect on the proceedings of this House, and that we owe to you very much of the high character this Legislature enjoys." Unfortunately, Fox, the Premier, allowed the session to end without his making any reference to the Speaker's retirement or proposing a vote of thanks. Monro was deeply hurt by this and decided to return to Parliament to continue his opposition to the Government which had treated him so badly.

He was therefore a candidate the next year for the district of Motueka, his opponent being Charles Parker, a supporter of Fox's Government. At the election, the voting was equal and the returning officer exercised his casting vote in favour of Monro.[44] Parker lodged a petition alleging bribery and also disputing some of the votes: according to the procedure then followed[45] this petition had to be decided by a select committee of the House. Monro therefore took his seat when Parliament opened[46] and had the pleasure of nominat-

[40] The notice was republished in the *New Zealand Gazette*, 28 June 1866, p. 261. The rank was equivalent to the present-day Knight Bachelor.

[41] On 19 February 1866.

[42] On both occasions the motion was seconded by Hugh Carleton, Chairman of Committees.

[43] *New Zealand Parlimentary Debates*, 29 August 1870.

[44] Each candidate received 193 votes. The Returning Officer was Alexander le Grand Campbell.

[45] In accordance with the Electoral Petitions Act, 1858. This was the first petition brought to the House under the Act.

[46] On 14 August 1871.

ing as Speaker Mr F. Dillon Bell, who had twice performed the same office for him. Parker's petition then became a party issue, the Government being determined to unseat its opponent if it could. Fox claimed[47] that, on the hustings, Monro had made personal attacks on members of the ministry and consequently, "of all men in the Colony, had the least claim to consideration and forbearance from the Government in reference to his election. . . . It would be a singular state of things if they were in the habit of playing into the hands of their opponents, and not standing by those who had given them their cordial support"—an extraordinary admission of partiality on the part of a head of government.

The select committee unanimously rejected the charges of bribery and treating. With regard to votes, they quite rightly disallowed one vote for Monro[48] but allowed a disputed vote for Parker although the voter had entered the polling booth after the hour for closing the poll—surely an unjustifiable decision. Sir David Monro was therefore unseated from the House after serving for five weeks of the session.[49] The Government having thus scored a victory, Fox was constrained to move a belated motion of thanks to Monro for his services as Speaker,[50] and this being carried unanimously he further moved an address to the Governor, "requesting that Her Majesty may be moved to confer . . . some mark of Her Majesty's approbation" on Monro. As in the United Kingdom a retiring Speaker is rewarded with a peerage, so the House understood that this motion

[47] *New Zealand Parliamentary Debates*, 18 August 1871, in debate on Election Petitions Bill which proposed to permit an electoral petition committee to indemnify witnesses whose evidence might incriminate them and specifically provided that it should apply to the petition already received. Because of strong opposition the bill was allowed to lapse.

[48] The voter was not on the roll but voted in the name of his deceased father. See Proceedings of the Select Committee on the Motueka Election Petition, Appendix to the Journals of the House of Representatives, 1871.

[49] Report of the Select Committee presented 20 September 1871; electoral writ amended the following day.

[50] *New Zealand Parliamentary Debates*, 3 October 1871. The motion stated, "that this House appreciates the zeal and ability with which he discharged the laborious duties of that position, the firmness and dignity with which he maintained its privileges, the care with which he observed the forms of the House, and the urbanity and kindness which marked his conduct in the chair."

would lead to Monro's immediate appointment by the Governor to the upper chamber of the Legislature; but Fox did not want such a bitter political opponent in Parliament at all and by his careful wording of the motion had the matter referred to the Queen, thus ensuring that nothing could be done at least for the remainder of that session. Members protested but Fox had been too wily.

Monro would not accept an appointment to the Legislative Council made in such an unorthodox way, saying:[51] "I must decline in any manner whatever to give my countenance to the doctrine that the treatment of a retiring Speaker is to depend upon the pleasure of the party leader of the day. I can imagine few things more calculated to impair the dignity and efficiency of the office." Government then offered to comply with Monro's wish, "if you should prefer that the Governor should summon you in the usual manner to that Body."[52] Monro, however, on principle, declined to express "any wish or preference in the matter,"[53] and there the question rested, no further action being taken on either side.

Such cavalier treatment by Fox and his party[54] so nettled Monro that he decided to re-enter the Parliamentary lists, and on 12 June 1872 was successful in a by-election for the Waikouaiti seat. During the session that year he had the satisfaction of assisting to vote the Government out of office[55] and seeing his friend Stafford re-established on the Treasury benches. That accomplished, Monro finally resigned from Parliament at the end of the session of 1872.[56]

[51] Memorial to the Earl of Kimberley, Secretary of State for the Colonies, from a draft copy, Monro Papers.

[52] W. Gisborne, Colonial Secretary, to Monro, 71/3365, 25 November 1871, Monro Papers.

[53] Monro to Colonial Secretary, 1 December 1871, from a draft copy, Monro Papers.

[54] I feel it necessary in fairness to state that apart from his extraordinary antipathy to Monro (entirely mutual) Sir William Fox was a noteworthy Premier, and a well-educated and widely travelled man.

[55] No-confidence motion moved by Stafford and carried 40–37, 5 September 1872.

[56] Only two men then remained in the House who had been members with Monro in the first session of 1854, James Macandrew and Jerningham Wakefield. Dillon Bell had been a Legislative Councillor in 1854.

After a period of gradually failing health, Sir David Monro died at his home, "Newstead," on 15 February 1877, aged 63.[57] He was buried two days later in Nelson cemetery.

[57] The causes of death were certified by William W. Squires, M.D., as "Fatty degeneration of heart, Necrencephalus."

CHAPTER XVIII

The Family in New Zealand

SIR DAVID MONRO and his wife, Dinah Secker, had seven children of whom two boys died in childhood. Lady Monro survived her husband by five years, dying at the age of 63 on 18 June 1882, of "intracranial tumour and asthenia," at her elder daughter's home in Wellington.

ALEXANDER (1846–1905), their eldest son, inherited from his father the Bankhouse property in Marlborough which is still farmed by his descendants.

DAVID (1847–1869) was, with his elder brother, a foundation pupil of Nelson College at the age of eight. In 1866 he went to Britain and began studying classics at Oxford, where his cousin, David Binning Monro, was a fellow of Oriel. He became ill with pulmonary tuberculosis, returned home in 1868 and died the following year.

CHARLES JOHN (1851–1933) attended Nelson College, went to Britain in 1867 and there became a boarder at Christ's College, Finchley. At that school he learned the Rugby football code, and on his return home in 1870 arranged the first interprovincial Rugby match, virtually establishing the code in New Zealand.[1] He later took up land in the Fitzherbert West area of Manawatu, where he established his home, Craiglockhart. This property is now part of Massey College. C. J. Monro married, in 1885, Helena Beatrice Macdonald, a great-granddaughter of George Macdonald, the Scottish writer and poet.

MARIA GEORGIANA (1848–1930) married, in 1868, Dr James Hector (vide infra).

[1] A. C. Swan: *History of New Zealand Rugby Football* (Wellington, 1948). See also *The Centenary Book of Christ's College, Finchley* (1957), p. 112, and *The Finchleian*, January 1957, pp. 44–8.

CONSTANCE CHARLOTTE (1853–1910) married, in 1876, Philip Gerald, son of the Hon. Constantine Dillon.

SIR JAMES HECTOR, K.C.M.G., M.D. (Edin.), F.R.S., was born in Edinburgh on 16 March 1834, a son of Alexander Hector, a lawyer. He was a pupil at Edinburgh Academy and the Royal High School, and qualified M.D. at the University in 1856, intending to use this degree as the entry to a scientific career. In 1857 he was appointed surgeon and geologist to the Palliser expedition which was to explore central Canada with the particular objective of finding a practical pass through the Rocky Mountains. He spent over three years on this work and Haast says,[2] "His record in Canada was one of thrilling adventure, of hardship and starvation, of courage and grit, of forethought and determined leadership, and of a devotion to science under most adverse circumstances." He discovered and named the Kicking Horse Pass, where he almost lost his life when kicked by his own horse.

In 1862 Hector went to New Zealand as Provincial Geologist, Otago, and three years later became first Director of the Geological Survey in the Colony. He became President of the Colonial Medical Board (later Medical Council) on its establishment in 1867; he was also first Chancellor of the University of New Zealand and served three terms as President of the Australasian Association for the Advancement of Science. He was a member of the German Order of the Golden Cross and a Fellow of the following learned societies: Royal Society of Edinburgh and Royal Photographic Society (1857); Geological Societies of Edinburgh and London and Royal Geographic Society (1860); the Royal Society and Linnean, Zoological, Royal Statistical and Royal Microscopical Societies (1866). He was knighted, K.C.M.G., in 1886 and died on 6 November 1907.

DR CHARLES MONRO HECTOR (1871–1935), a son of Sir James Hector and his wife, Georgiana Monro, was born in Wellington. His grandfather, Sir David Monro, wrote in his diary after the christening on 25 August 1871, "The poor little child looks very thin &

[2] H. F. von Haast: *The Life and Times of Sir Julius von Haast* (Wellington, 1948), p. 252.

fragile & makes a strong demand upon the feelings of pity." Hector was educated in Wellington and Wanganui; he took the first part of his medical course at the then newly-established school in Dunedin and the final years at Edinburgh where he graduated M.D. and B.Sc. (Public Health). After lecturing for some time in bacteriology at the University of Sheffield, he returned to New Zealand in 1902 and began practice at Lower Hutt, later taking into partnership Dr Philip Macdonald, brother-in-law of C. J. Monro. Although a popular and very busy general practitioner, he was always particularly interested in the scientific side of medicine, and in later life he moved to Wellington, where he practised as a consulting physician and pathologist.[3] A skilful microscopist and photographer, his talents were in frequent demand as an expert investigator and witness in medico-legal problems. He was also a keen botanist and astronomer, having a telescope mounted in concrete outside his home.

Dr George Home Monro-Home (1865–1935) was the eldest son of Elizabeth Cotterell and her husband, A. B. Monro of Valleyfield and Langridge, Marlborough, and Softlaw, Roxburghshire. He was born in New Zealand, at Valleyfield, and his great-uncle, Sir David Monro, wrote of him when he visited the run in 1867:[4] "The boy is a fine healthy little fellow just beginning to walk." George was sent to King William's College, Isle of Man, for his education and thence proceeded, first to St Andrews University, and then to the University of Edinburgh where he graduated M.B., C.M. in 1890 and M.D. in 1901. He was a prominent athlete in student days. In 1895 he adopted the surname, Monro-Home, on succeeding to the house and estate of Argaty in Perthshire on the death of the widow of his great-uncle, G. H. Monro Binning Home (see Chapter XI). He did not, however, take up residence at Argaty and in 1917 sold the estate; he also, in 1920, sold the Softlaw estate which he had inherited from his father.

[3] Obituary, *New Zealand Medical Journal* (1935), vol. 34, p. 189.

[4] Letter to G. H. Monro Binning Home of Argaty and Softlaw, written from Valleyfield, 9 January 1867: in possession of Dr P. A. G. Monro, Cambridge.

He practised at Hartlepool, Nottingham and Liverpool before going out to China at the instance of his younger brother, Alexander Edward Monro, who held an appointment at the Naval College, Nanking. Dr Monro-Home obtained an appointment with the China Mutual Assurance Company, necessitating extensive travelling through various Chinese provinces.[5] On the outbreak of war in 1914, he became Port Health Officer at Shanghai, and at the end of the war retired after fourteen years' service in China. He then settled at Great Barton, Bury St Edmunds, where he was well known as a dog-fancier and breeder of Labradors, as well as an enthusiastic game shooter. He died unmarried on 11 March 1935.[6]

MAJOR-GENERAL DAVID CARMICHAEL MONRO (1886–1960), the eldest son of C. J. Monro of Craiglockhart, Manawatu, was born at Lucerne, Switzerland, on 19 May 1886. He was educated at Wellington College, New Zealand, and in 1905 went to Edinburgh to study medicine. In the anatomy class, the professor enthusiastically announced the arrival of a descendant of the Professors Monro, to the acute embarrassment of the new student. Monro gained a university blue as rowing coxswain, and graduated M.B., Ch.B. in 1911. After a journey home to New Zealand, on the outbreak of war he joined the R.A.M.C. and served in France including Armentières and Ypres. In 1918 he was posted to India where he served for two tours, a total period of ten years. In 1934 he qualified F.R.C.S., Edinburgh, and later commanded the military hospital at Imtarfa, Malta.

In 1938, Monro became assistant professor of surgery, Royal Army Medical College, Millbank, with charge of surgical cases at Queen Alexandra Hospital. Two years later, after the outbreak of the Second World War, he was appointed consulting surgeon to the army and honorary surgeon to the King. In 1941–42, at his own request, he was on active service in the Middle East: there he was twice mentioned in despatches and promoted Major-General. He was appointed C.B.E. in 1943 and represented the British Army on

[5] A diary of this period is in the possession of Dr P. A. G. Monro, Cambridge.
[6] Obituary, *Lancet* 1935, vol. i. p. 775.

8 Major-General David Carmichael Monro (1886–1960)

a combined surgical mission to Moscow. He was awarded the King Haakon VII Liberty Cross and was made a Commander of the Legion of Merit for "extraordinary fidelity and exceptionally meritorious conduct with performance of outstanding service:" these awards were a recognition of his leading part in introducing the highly successful advance mobile Field Surgical Units. In 1946 he was appointed C.B. and was retired, having served four years as Major-General (the maximum permitted in that rank). At his own request, however, he was immediately re-employed in the rank of brigadier and posted back to the Middle East; he was finally retired in 1948, but even then took charge of an outpatient department at Queen Alexandra Hospital, Millbank.[7]

A colleague[8] said of "Jock" Monro, as he was always called, "The stories told of him—his zest for life, his wit, and the pranks he played—were almost as many as the stories he had to tell, and they were beyond number. He was in demand for every party, always the centre of the party and the perfect host." Monro married Kathleen Noon in Alexandria in 1942 and they had one adopted daughter. In his later years he had several major attacks of myocardial infarction, but never lost his spirit and enthusiasm for life. General Monro died at his home at Roehampton, London, on 6 December 1960 at the age of 74.

Dr John Stuart Monro, second son of C. J. Monro, was born in Palmerston North, New Zealand, on 5 March 1888. He attended Wellington College, New Zealand, and in 1906 joined his brother, David, in Edinburgh. He qualified M.B., Ch.B. there in 1912 and gained a rowing blue as coxswain. Because of ill-health, he returned to New Zealand and after a long period of convalescence was taken into partnership in the Hutt Valley by his uncle, Dr P. Macdonald, and his cousin, Dr C. M. Hector. In 1920, Monro returned to London to specialise in diseases of the eye, ear, nose and throat. Two years later he took the D.O.M.S. (R.C.S.) and began a private and hospital practice in Ipswich. In 1928, however, he returned once

[7] Obituary, *British Medical Journal* 1960, vol. ii. pp. 1810–11 and p. 1893.
[8] Major-General J. M. Macfie: *British Medical Journal* 1960, vol. ii, p. 1811.

more to New Zealand and established a specialist practice in his home town of Palmerston North, being honorary surgeon in his specialty to the public hospital there until reaching the retiring age. In 1958 he retired also from private practice.

Dr Monro was President of the Ophthalmological Society of New Zealand in 1956. He is an accomplished caricature artist. In 1927 he married Dorothy Bisshopp of Ipswich and they have one son and one daughter.

Dr Hector Macdonald Monro (known as "Peter"), third son of C. J. Monro, was born at Craiglockhart, his father's home in Manawatu, on 9 July 1895. He was educated at Wanganui Collegiate School and in 1915 entered the University of Otago Medical School, Dunedin. He graduated M.B., Ch.B. (New Zealand) in 1920 and after two years' house surgeoncy at Napier Hospital went to Britain where he qualified F.R.C.S. (Edinburgh) in 1924. In 1927 he married Lilia Caterina Crameri, who was of Swiss birth. From 1928 until 1937 he was engaged in general practice in Ramsgate, Kent, but then returned to New Zealand and settled in Fielding, where he is still engaged in general practice with a bent towards surgery, being recognised by his fellow practitioners as a skilful operator. He has three sons and two daughters. He has in his possession the letters and personal papers of his grandfather, Sir David Monro.

CHAPTER XIX

The Eighth Generation

WE have traced the history of the medical members of the Monro family through seven generations from Sir Alexander Monro of Bearcrofts. Now we come to the eighth generation in which doctors are still being produced. In the branch of the family which has settled in New Zealand there have been doctors in every generation in the direct male line of descent, with the single exception of the sixth generation, that of C. J. Monro, Sir David's son. Although this leaves a deficiency in the direct line, the family tree does show one doctor on the distaff side in the sixth generation, Dr A. M. Inglis, a grandson of Monro *tertius* (see Chapter XV). The eighth generation is represented in the profession at the present time by two practitioners.

DR PAUL ALEXANDER MONRO, eldest son of Dr H. M. Monro, of Feilding, was born in Ramsgate, England, on 28 July 1928. He was educated at Wanganui Collegiate School, New Zealand, and at the University of Otago, Dunedin. He holds the degrees of B.Sc. and M.B., Ch.B. (N.Z.) and is engaged in general practice in Fielding. In 1958 he married Jean Petersen and they have three children.

DR PETER ALEXANDER GEORGE MONRO is a son of Alexander Edward,[1] second son of A. B. Monro of Valleyfield and Softlaw. Alexander Edward Monro was born in New Zealand in 1867, but at the age of seven went to Britain with his elder brother to be brought up at Argaty by his granduncle, G. H. Monro Binning Home. He became an Instructor Captain in the Royal Navy and died in 1956. His wife was Sylvia, only daughter of Walter Dew of Whitney-on-Wye.

Their son, P. A. G. Monro, was born on 11 February 1919 and spent his childhood in Devonshire: he was educated at Kelly

[1] See Inglis: op. cit., p. 124.

College, Tavistock, Exeter University College and St John's College, Cambridge, where he read Natural Sciences. He qualified M.R.C.S., L.R.C.P. in 1943 and also holds the degrees of M.A. (Cantab. 1950), M.Sc. (Lond. 1953) and M.D. (Cantab. 1954). After qualification he served as a ship's surgeon for two years, mainly in the Indian Ocean. In 1954 he gained the Raymond Horton-Smith prize for the best M.D. thesis and in 1955–56 held a Medical Research Council Travelling Scholarship, studying microcirculation in the United States.

Dr Monro is lecturer in anatomy at Cambridge University and clinical assistant in the neurosurgery unit at the London Hospital; he has published *Sympathectomy: An Anatomical and Physiological Study with Clinical Applications* (1959). In 1952 he married Helen Booth and has two children.

Appendix A

A Monro Chronology

1670	John born, Edinburgh.
1687	John booked servant to William Borthwick.
1688	John apprenticed to Dr Irvine.
1692–94	John studying in Leyden.
1694?	John married Jean Forbes.
1695	John commissioned surgeon in the army.
1695	Alexander of Bearcrofts knighted.
1697	Alexander *primus* born, London.
1700	John settled in Edinburgh.
1703	John entered Incorporation of Surgeons.
1704	Sir Alexander of Bearcrofts died.
1705	Robert Eliot, first professor of anatomy in Edinburgh, appointed.
1712–14	John served as Deacon of Surgeons.
1717–19	*Primus* studying in London, Paris and Leyden.
1719	*Primus* entered Incorporation of Surgeons.
1720	*Primus* appointed professor of anatomy.
1721	George born, Auchinbowie.
1722	*Primus*' appointment made *ad vitam aut culpam*.
1723	*Primus* elected F.R.S.
1725	*Primus* married Isabella Macdonald.
1725	*Primus* shifted teaching from Surgeons' Hall to the University.
1726	Edinburgh Faculty of Medicine established.
1726	*Anatomy of the Human Bones* published.
1728	Donald born.
1729	Infirmary established.
1733	Alexander *secundus* born.
1736	George apprenticed to *Primus*.

1740	John died.
1744	*Primus* acquired Auchinbowie from George.
1753	Donald graduated.
1754	*Secundus* appointed conjoint professor.
1755	*Secundus* graduated.
1756	*Primus* became M.D., F.R.C.P.(Ed.).
1756	Donald became L.R.C.P. (Lond.).
1757	Title of chair altered to Medicine and Anatomy.
1757	*Primus* began clinical lectures.
1758	*Secundus* took over anatomy teaching.
1758	Donald appointed physician to St George's Hospital, London.
1762	*Secundus* married Katharine Inglis.
1764	New anatomy theatre built.
1766	Donald elected F.R.S.
1767	*Primus* died.
1771	Donald elected F.R.C.P. (Lond.).
1772	Donald married Dorothea Heineken.
1773	Alexander *tertius* born.
1776	Proposal to establish chair of surgery brought forward.
1777	*Secundus* made professor of medicine, anatomy and surgery.
1781–82	George serving as Physician-General of Minorca.
1783	*Observations on the Nervous System* published.
1786	Donald resigned from St George's Hospital.
1788	Donald became an Elect of R.C.P. (Lond.).
1797	*Tertius* graduated.
1798	*Tertius* appointed conjoint professor.
1800	*Secundus* bequeathed his museum to the university.
1800	*Tertius* married Maria Carmichael Smyth.
1800	*Tertius* began teaching.
1802	Donald died, London.
1803	Chair of clinical surgery instituted in the university.
1804	Royal College of Surgeons established chair of surgery.
1806	James born.
1806	Chair of military surgery instituted in the university.

1808	*Tertius* took over all teaching.
1813	David born.
1816	Chair of comparative anatomy successfully resisted.
1817	*Secundus* died.
1830	James graduated.
1831	Regius chairs of surgery and pathology established.
1832	*Tertius* settled at Craiglockhart.
1835	David graduated.
1836–38	David studying on the Continent.
1838	David appointed assistant in anatomy, Edinburgh.
1842	David arrived in New Zealand.
1844	John Goodsir appointed assistant to *Tertius*.
1845	David married Dinah Secker.
1846	*Tertius* resigned.
1853	James became Surgeon-Major, Coldstream Guards.
1854	David a member of the first New Zealand Parliament.
1857	James married Maria Duffin.
1859	*Tertius* died.
1861	David elected Speaker of the New Zealand House of Representatives.
1866	David knighted.
1870	Sir David retired from the Speakership.
1870	James died, London.
1877	Sir David died, Nelson, New Zealand.

Appendix B

Monro Publications

ALEXANDER MONRO *Primus*

1. The Anatomy of the Human Bones (1726): An anatomical treatise of the nerves, lacteal sac and duct, added to second edition (1732).
2. An Essay on Comparative Anatomy (1744): unauthorised.
3. An Expostulatory Epistle to William Hunter (1762).
4. An Account of the Inoculation of Small-pox in Scotland (1765).
5. The works of Alexander Monro (1781): edited by Monro *secundus* with a memoir by Donald Monro.

ALEXANDER MONRO *Secundus*

1. De Testibus et de Semine in variis Animalibus (1755): graduation thesis.
2. De Venis Lymphaticis Valvulosis (1757).
3. Observations Anatomical and Physiological, Wherein Dr Hunter's Claim to some Discoveries is examined (1758).
4. Observations on the Structure and Functions of the Nervous System (1783).
5. The Structure and Physiology of Fishes Explained, and compared with those of man and other animals (1785).
6. A Description of All the *Bursae Mucosae* of the Human Body (1788).
7. Experiments on the Nervous System (1793).
8. Observations on the Muscles, and particularly on the effects of their oblique fibres (1794).
9. Three Treatises, On the Brain, the Eye, and the Ear (1797).
10. Essays and Heads of Lectures on Anatomy, Physiology, Pathology and Surgery with a Memoir of his life and copious

notes explanatory of modern anatomy, physiology, pathology and practice by his son and successor (1840).

DONALD MONRO

1. De Hydrope (1753): graduation thesis.
2. An Essay on the Dropsy and its Different Species (1756).
3. An Account of the Diseases which were most frequent in the British Military Hospitals in Germany, from January 1761, till the return of the Troops to England in March, 1763: to which is added, An Essay on the Means of Preserving the Health of Soldiers, and Conducting Military Hospitals (1764).
4. A Treatise on Mineral Waters (1770): 2 volumes.
5. Observations on the Means of Preserving the Health of Soldiers, and of Conducting Military Hospitals; on the Diseases incident to Soldiers in the time of Service; and of the same Diseases, as they have appeared in London (1780): 2 volumes.
6. A Treatise on Medical and Pharmaceutical Chymistry, and the Materia Medica (1788): 4 volumes.

ALEXANDER MONRO *Tertius*

1. De Dysphagia (1797): graduation thesis.
2. Observations on Crural Hernia (1803).
3. An Essay upon Herniae (1811).
4. The Morbid Anatomy of the Human Gullet, Stomach and Intestines (1811).
5. A Dissertation on the varied direction of the fibres of the muscles (1812).
6. Outlines of the Anatomy of the Human Body, in its Sound and Diseased State (1813): 4 volumes.
7. Engravings of the Thoracic and Abdominal Viscera, and the Canals connected with them (1814).
8. Observations on the Different Kinds of Smallpox, and Especially on That Which Sometimes Follows Vaccination (1818).
9. Elements of the Anatomy of the Human Body in its Sound State (1825): 2 volumes.
10. Observations on Spasm of the Canals for the Food, Bile, and Urine (1826).

11. The Morbid Anatomy of the Brain (1827).
12. Illustrations of the Anatomy of the Pelvis (1827).
13. Observations on Aneurism of the Abdominal Aorta (1827).
14. The Anatomy of the Brain, with Some Observations on its Functions (1831).
15. The Anatomy of the Urinary Bladder and Perinaeum of the Male (1842).

Appendix C

Monro Portraits

JOHN MONRO

1. Portrait by William Aikman (1682–1731), in the Royal College of Surgeons, Edinburgh (reproduced in Comrie, *History of Scottish Medicine*, p. 292), possibly painted during Monro's term as Deacon of Surgeons, 1712–14 (Aikman began painting in Edinburgh in 1712 and shifted to London in 1723).

2. A good early copy of the above portrait, in the possession of Lieutenant-Colonel Alexander G. F. Monro, Auchinbowie House, Stirling (reproduced in Inglis, *Monros of Auchinbowie*, facing p. 54).

ALEXANDER MONRO *Primus*

1. Portrait by Allan Ramsay (1713–84), at Auchinbowie House.

2. A very good early copy of the above portrait, in the possession of Dr P. A. G. Monro, Argaty, Cambridge (thought by the owner to be possibly a copy by Ramsay).

3. A rather poor nineteenth-century copy of the Ramsay portrait, in the Royal College of Surgeons, Edinburgh (reproduced in Comrie, p. 292).

4. Engraving from the Ramsay portrait, by James Basire (1730–1802), for frontispiece of *Works of Alexander Monro* (1781):[1] published the same year as a separate engraving by C. Elliot, Edinburgh.

5. Engraving from the Ramsay portrait, by P. Thomson, published by J. Murray, T. Holloway and others (1793)—(reproduced in Inglis, facing p. 57).

6. Engraving from the Ramsay portrait, by Thomas Cook (?1744–1818).

[1] William Blake was apprenticed to Basire at the time that this engraving was executed.

7. Posthumous marble bust (1812) by John Flaxman (1755–1826), in Edinburgh University Library.

8. Plaster bust, in the Royal College of Physicians, Edinburgh, origin uncertain. This is probably Flaxman's model for the above bust—Monro *tertius* (who was then Secretary to the R.C.P.), in a letter to Flaxman dated 5 November 1812,[2] mentioned, "my grandfathers Bust, with the model of which (I write without flattery) I was so much pleased."

DONALD MONRO

No portrait is known to exist.[3]

ALEXANDER MONRO *Secundus*

1. Portrait by J. T. Seton (active 1761–1806), at Auchinbowie House, mentioned by Monro *tertius* (Memoir prefixed to *Essays and Heads of Lectures*, p. cliii).

2. Portrait by Sir Henry Raeburn (1756–1823), at Auchinbowie House, called by Monro *tertius*, "a strong likeness" (Memoir, p. cliii).

3. A good copy of the above portrait, at Argaty, Cambridge.

4. Engraving from the Raeburn portrait, by James Heath (1757–1834), published in *Essays and Heads of Lectures* (1840)—(reproduced in Inglis, facing p. 89).

5. A modern portrait by Mrs Margaret Hunter, U.S.A., presented to the Royal College of Surgeons, Edinburgh, by the artist in 1955. This appears to have been based on the Heath engraving from Raeburn.

6. Etching (1790) by John Kay (1742–1826), published in his *Portraits* (reproduced in Comrie, p. 320)—"conveys a very distinct impression of his face and figure," Monro *tertius* said (Memoir, p. cliii).

[2] Flaxman Papers, British Museum, 39, 781, f. 92.

[3] A portrait labelled "Dr Monro," by Lemuel F. Abbott, exhibited at the Royal Academy in 1800, and another with the same caption, by R. W. Satchwell, exhibited in 1802, were both probably portraits of Thomas Monro, physician to Bethlem Hospital and a well-known patron of the arts.

7. Portrait by Edward Calvert (1799–1883), at Edinburgh University (painted posthumously).

8. Plaster bust by an unknown sculptor, in the Scottish National Portrait Gallery. This may be the bust by W. Scoular exhibited at the Royal Academy in 1821.

9. Plaster bust, in the Royal College of Physicians, Edinburgh, origin unknown.

10. Bust in the Anatomy Museum, Edinburgh University. This and the one above may be copies of the Scoular bust, or one of them may be the original.[4]

MRS MONRO *Secundus* (Catharine Inglis)

Portrait by Raeburn, at Auchinbowie House (reproduced in Inglis, facing p. 107).

ALEXANDER MONRO *Tertius*

1. Portrait formerly attributed to Raeburn, at Auchinbowie House. This is probably the portrait by John S. C. Syme (1795–1861) exhibited at the Royal Academy in 1820 (Syme was a pupil of Raeburn and their portraiture technique was very similar in Syme's younger period).

2. Portrait by Andrew Geddes (1783–1844), at Auchinbowie House (formerly in the Skene-Tytler collection).

3. Portrait by Kenneth Macleay (1802–1878), in the Royal College of Surgeons, Edinburgh (reproduced in Comrie, p. 293).

4. Water-colour portrait by Macleay, at Auchinbowie House (reproduced in Inglis, facing p. 111).

5. Engraving drawn from life by W. Stewart, published by F. Schenk, Edinburgh.

6. Engraving in Crombie's *Modern Athenians* (reproduced in Comrie, p. 493.)

7. Silhouette by A. Edouard, in the Scottish National Portrait Gallery.

8. Portrait (unfinished) by Thomas Duncan (1807–1845), in the

[4] It has not been possible to have accurate comparisons made of busts housed in different places.

possession of Mrs M. Dalmahoy, Auchindinny House, Milton Bridge, Midlothian.

9. Portrait by Sir John Watson Gordon (1790–1864), in the Faculty of Medicine, Edinburgh University (exhibited at the Royal Academy in 1858).

10. Two callotype photographs by David Octavius Hill (1802–1870), prints in the Scottish National Portrait Gallery; one was published as Plate 9 in Heinrich Schwarz: *David Octavius Hill, Master of Photography* (London, 1932).

11. Photograph, print in the Royal College of Physicians Library, Edinburgh.

12. A different photograph, print in the Medical School Library, Dunedin.

MRS MONRO *Tertius* (Maria Carmichael Smyth)

Portrait by Raeburn, at Auchinbowie House (reproduced in Inglis, facing p. 119).

SIR DAVID MONRO

1. Portrait, commissioned by C. J. Monro and now in the possession of Dr H. M. Monro, Denbigh Square, Fielding, New Zealand. This was posthumously painted in Italy in 1881 by Mrs Amy Cameron from the photograph reproduced herein.

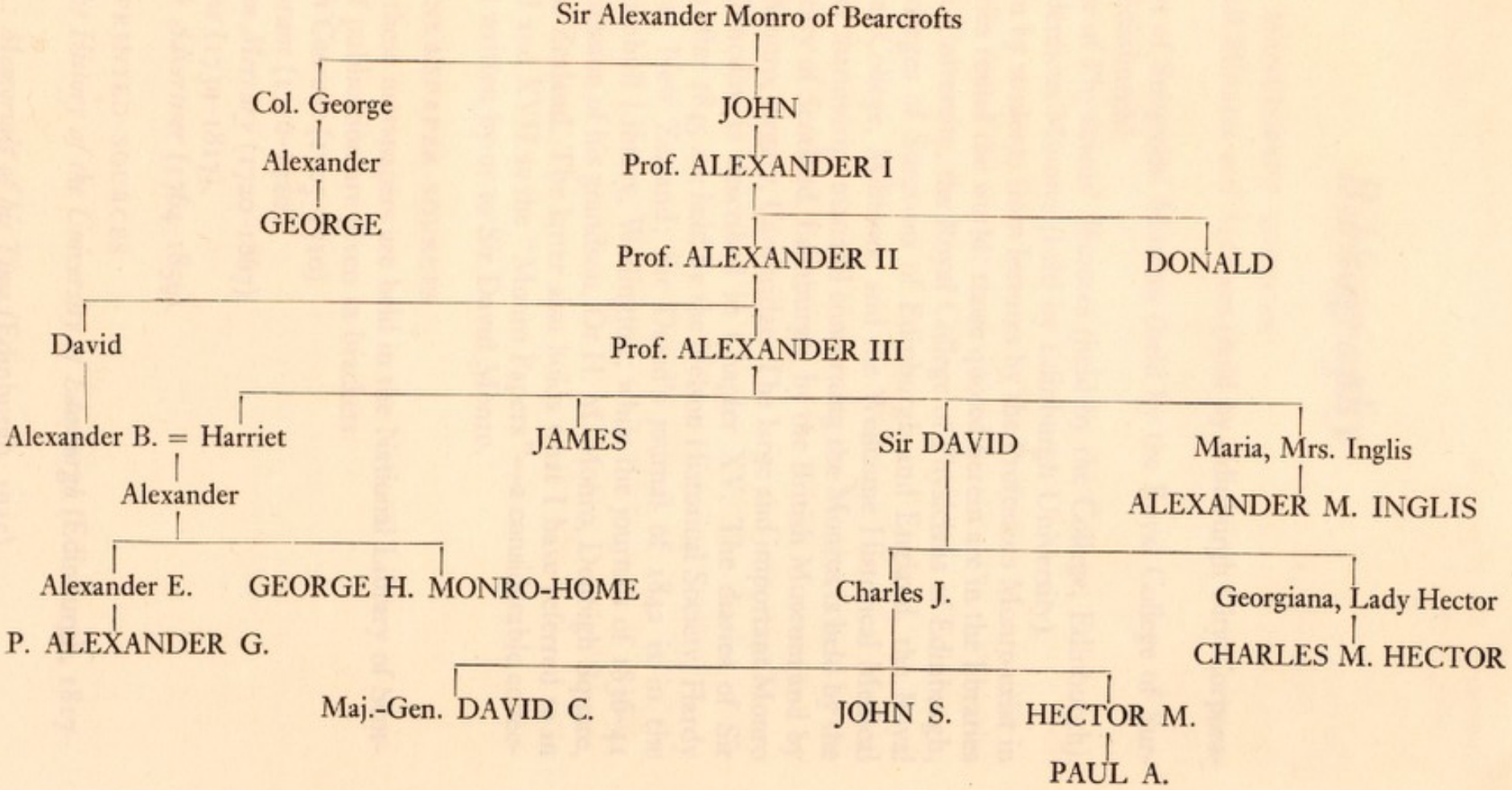
2. No trace has been found of daguerreotypes taken in London in 1841 (see text, Chapter XVI).

3. Various photographs taken in Auckland and Nelson between 1860 and 1870, including one in Speaker's robes (1861), in the possession of Dr H. M. Monro.

APPENDIX D

Monro Family Tree

(Doctors in capital letters)



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Incorporation of Surgeons' Minutes (held by the Royal College of Surgeons, Edinburgh).

Royal College of Physicians' Minutes (held by the College, Edinburgh).

Senatus Academicus Minutes (held by Edinburgh University).

Notes taken by students from lectures by the Professors Monro exist in various libraries round the world: those quoted herein are in the libraries of Edinburgh University, the Royal College of Physicians of Edinburgh, the Royal Colleges of Surgeons of Edinburgh and England, the Royal Army Medical College, Millbank, and the Wellcome Historical Medical Library. Other manuscript material concerning the Monros is held by the National Library of Scotland, Edinburgh, by the British Museum and by Dr P. A. G. Monro, Argaty, Cambridge. The large and important Monro Collection, Dunedin, is described in Chapter XV. The diaries of Sir David Monro after 1845 are held by the Nelson Historical Society, Hardy Street, Nelson, New Zealand; Sir David's journal of 1842 is in the Alexander Turnbull Library, Wellington; while the journals of 1836–41 are in the possession of his grandson, Dr H. M. Monro, Denbigh Square, Feilding, New Zealand. The latter also holds what I have referred to in Chapters XVI and XVII as the "Monro Papers"—a considerable collection of letters written by or to Sir David Monro.

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Files of all these newspapers are held in the National Library of Scotland. Dates of publication are given in brackets.

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Index

The story is based on unpublished material from the main Monro collections of documents in Edinburgh, Dunedin (where they were deposited by Sir David's descendants) and in private hands. In addition, Dr. Wright-St. Clair has used extracts from the minutes of the Royal Colleges of Surgeons and Physicians of Edinburgh, and of the Edinburgh Town Council to illuminate the devious political machinations and bitter personal rivalries which inevitably centred around so powerful a family monopoly.

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