CANADIAN SURGERY DURING THE FRENCH REGIME, 1608 TO 1763*

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The history of medicine in Canada, from the establishment of Quebec by Champlain in 1608 to the ceding of Canada to the British by the French at the Treaty of Paris in 1763, represents one of the most colourful periods in the history of Canadian surgery. Physicians were notable by their absence and what medicine was available in La Nouvelle France was provided almost exclusively by surgeons, or apothecaries, or individuals who posed as such. Sketches from the lives of five surgeons (Bonnerme, Giffard, Goupil, Bouchard and Sarrazin), an apothecary (Hébert) and a physician; (Gaultier), are presented to highlight various facets of medical care and the leadership role played by medical practitioners in the development of Canada during that period. In addition the study reveals the conflict between the philosophical approach of the physician and the pragmatic approach of the surgeon in 17th century France.

L'histoire de la médecine au Canada depuis l'établissement de Québec par Champlain en 1608 jusqu'au Traité de Paris en 1763, par lequel le Canada a été cédé des Français aux Anglais, représente une des époques les plus frappantes dans l'histoire de la chirurgie canadienne. Les médecins brillaient par leur absence et la médecine qui a été disponible à la Nouvelle France était fournie par des chirurgiens, ou des apothicaires, ou des individus qui se passaient pour tel. Des croquis des vies de cinq chirurgiens (Bonnerme, Giffard, Goupil, Bouchard et Sarrazin), un apothicaire (Hébert) et un médecin (Gaultier) sont présentés pour mettre en vedette des facettes diverses des soins médicaux et le rôle important qui a été joué par des praticiens médicaux dans le développement du Canada pendant cette époque. En plus, cette étude fait connaître la lutte entre l'approche philosophique des médecins et contre la mentalité pragmatique des chirurgiens en France au XVIIème siècle.

THE history of Canada, and with it the history of medicine and surgery in this country, can conveniently be divided into four broad periods, each approximately a century in duration. The first period may be referred to as the Age of Discovery. It extended from 1497, when Giovanni Caboto (John Cabot), under letters patent from Henry VII of England, first explored the Atlantic seaboard of Canada, through the period represented by the three remarkable voyages of discovery of Jacques Cartier to the Gulf of St. Lawrence and St. Lawrence River under the patronage of François I of France, to 1608, when the age of colonization began. Medically, this period involves the study of the tantalizing but fragmentary evidence that supports the contention that medical personnel were included in the ship's company during those early voyages and the conditions with which they were obliged to contend.

The second period is precise in its limits and incontestable in its documentation. It is commonly referred to as the Age of Settlement or as the Period of the French Regime. It began on July 3, 1608, when Samuel de Champlain established his Habitation at Quebec, and extended through a century and a half of hardship and conflict to 1763 when, at the First Treaty of Paris, Canada was ceded, for the last time, to Britain.

The third period is delimited more by what precedes and what follows it than by its own distinctive features. The term, the Age of Transition, or perhaps the Period of the Early British Regime, appears a reasonable designation for the century extending from 1763 to 1867. Medically, this period was highlighted by the initiation of "modern" medical education in this country when, in 1829, the Montreal Medical Institute of 1824 (an outgrowth of the Montreal General Hospital, which was built in 1822) was engrafted on McGill University (which had been founded in 1819) and Canada's first medical school was born.

The fourth, or modern period, is appropriately designated as the Age of Confederation and extends from 1867, when confederation of the Canadian provinces was achieved, up until the present.

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*Presented in part at the XXV International Congress for the History of Medicine, Quebec, PQ, Aug. 21-28, 1976.

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Although this presentation contributes no new or original material concerning Canadian surgery during the French regime, the history of the French regime is unknown to most anglophone Canadians. Much of the background material is published only in French, and often in ancient French, and a large share of the source material, both French and English, is held in special library collections and is not available on a loan basis.

Background

At the outset it is important to establish certain facts regarding the organization of the medical profession in France and certain features that characterized the physician, the surgeon and the apothecary of that era. This is not to suggest, as Nadeau[1] is careful to point out, that the organization of the medical services in New France simulated those in the mother country. Everything about life in the embryo colony demanded a new approach to the provision of medical care, as it did to virtually every other type of service. However, the men who fashioned the medical structure of New France were part of a medical hierarchy that had taken centuries to develop and from whose basic tenets they were unable totally to divorce themselves.

The Surgeon

Gelfand[2] has stated that the dichotomy between physician and surgeon had its origins in the Middle Ages and that by the dawning of the 17th century in France it had reached a point where the physician, a member of the Faculty of Medicine at Paris or one of the provincial university cities, was identified as a scholar and theoretician while the prototype of the lowly surgeon was an uneducated, apprentice-trained craftsman. Earlier, rare exceptions existed to this model of the surgeon in that a relatively small group of "educated" surgeons maintained a precarious existence as members of the College of St. Côme.*

*Côme or Cosme is the French equivalent of Cosmas, who, with his brother Damian, suffered martyrdom as a Christian under the Roman emperor Diocletian in about 295 AD. The brothers are usually considered to be the first Christian physicians. Both were canonized and Saint Cosmas is commonly considered the patron saint of surgeons.

In 1656 the College of St. Côme merged with the guild of barbers and in 1660 the Parliament of Paris declared that henceforth all surgeons were officially barber—surgeons and, as such, subordinate to the Faculty of Medicine. It took 83 years, an operation for anal fistula on Louis XIV, and the combined persuasion of a distinguished succession of "first surgeons to the king" (including Charles François Félix, Georges Mareschal and François de la Peyronie) before surgery emerged as a respectable and independent profession. The milestones along the route included the establishment of five endowed teaching chairs in surgery by Louis XV at St. Côme in 1724, the achievement of the right of censorship of surgical publications by surgeons in 1730 and the formation of the prestigious Académie Royale de Chirurgie in 1731. All these functions had previously been vested in the powerful Faculty of Medicine, to which all surgeons were subservient. The final triumph for the surgeons came in 1743 when Louis XV terminated the union of surgeons and barbers, defined the exclusive boundaries of the areas of activity for each group, and finally made surgery an *art savant* and a "true science" by requiring that prospective surgeons be taught Latin and philosophy and acquire a master of arts degree from the university prior to becoming a master surgeon.[2]

Although the emancipation of surgery in France corresponds with the final phases of the French regime in Canada, throughout the period under discussion the surgeon was classed as a labourer, not a professional. Nadeau[1] has described the surgeons' status well, although his words may suffer in translation.

> He was a man of the working class, he did not practise a profession but rather a trade. He was therefore identified as a member of the working class at the same social level as, for example, the armourers, carpenters, and shoemakers . . . The Physician was able to become a baron, count, or marquis since his profession was the product of the activity of the mind and not of the work of the hands, but it was forbidden that the surgeon aspire to nobility. His working class status excluded him even from the bourgeoisie. Surgeons were the servants of the physicians who scorned them and demanded respect and obedience from them, as well as a subordination that the physician almost came to believe was derived from God.

Surgeons in Canada under the French regime were referred to by the use of various qualifying words or phrases, a practice that has added immeasurably to the problems of the historian. Frequently, too, the same individual has been identified differently by different authors, or even the same author at different times. (Roland,[3] briefly, and Nadeau,[1] extensively, have discussed this point and should be consulted for further clarification with respect to it.) Although it is clearly an oversimplification, individuals who treat disease actively by manipulation or operation will all be referred to in this paper simply as surgeons. It is appreciated that most, if qualified at all, were doubtless barber–surgeons. A few may have been master surgeons. However, it is difficult to be precise on this point.

The Physician

What, then, of the French physician of this period? Did he justify this exalted position and was his opinion of himself shared by his contemporary nonmedical colleagues? Again, Nadeau's[1] impressive description is well worth translation.

> The doctor of medicine disdained menial tasks and, in assuming his noble role, shut himself off from the world around him. He taught anatomy but was careful not to touch the cadaver. While he spoke, seated in his elevated chair, a prosector, most often a surgeon, handled the scalpel. The physician considered that he demeaned himself by carrying out a surgical procedure. If he had been a surgeon before receiving "le bonnet"* he had to promise to never again soil his hands by engaging in that trade. Moreover, in Paris, he was required to renounce his membership in the surgeon's guild by means of an oath taken before a notary in order to preserve the dignity of the medical corporation pure and intact . . . While the surgeons improved their position through perfecting themselves in their art, the physicians refused to budge. Full of their own dignity, speaking Latin, proclaiming the preeminence of their profession, they extended their haughty despotism over all that which concerned the art of healing and obstinately maintained a fanatical respect for tradition and looked upon all progress with horror.

Physicians were the object of ridicule in the theatre and the literature of their day. Delaunay[4] quoted a popular jingle of that period of which, fortunately, an English translation is available.[5] It is said to be anonymous and goes as follows:

> First of the pedant you borrow the air,
> And with a long wig cover up all of your hair:
> Then trick out your habit with fur and with satin,
> And constantly babble in Greek and in Latin.
> In this combination, you'll readily see,
> You've most all that's neded to be an M.D.

When one appreciates the grandeur of the physician of the Paris Faculty of Medicine in full dress one can well understand his disinclination to soil his hands, for he was indeed an imposing spectacle. Delaunay[4] has written that he wore a purple cassock and over that a scarlet cloak with an ermine hood. At his neck he wore the usual bands and on his head the square cap *(le bonnet carré)* with a crimson tassel. He also describes the physician's costume at Reims, Montpellier and Poitiers and one forms the impression that they must surely be in competition to achieve the most striking combination of form and colour. Fig. 1 illustrates a Dutch, rather than a French physician, of the 17th century examining the pulse of his patient, as portrayed by Jan

Fig. 1.—Physician examining pulse of patient. Painting by Jan Steen (1626-79) in the Rijksmuseum, Amsterdam. (Reproduced from HUARD P, GRMEK MD: *La Chirurgie Moderne. Ses Débuts en Occident: XVIe, XVIIe, XVIIIe Siècles,* Paris, Dacosta, 1968.)

*The academic cap *(le bonnet)* is used figuratively as the badge that identifies the physician as holding a doctorate of medicine.

Steen. It is more striking in colour but makes its point even in black and white.

The Apothecary

The physician of 17th-century France presents such a ridiculous picture that one has difficulty resisting the temptation to spend more time describing his foibles than is justified by his medical importance, at least in the New World. The apothecary, on the other hand, was medically a far more useful citizen. Like the surgeon, he was classed as a tradesman and was equally the object of the scorn of the physician. Some insight into his training is given by Drolet[6] in his brief biography of Florent Bonnemere, a Jesuit lay brother and apothecary who served in Canada under the French regime. He states:

> In the 17th century [the apothecary's art in France was] controlled by a guild just as surgery was. The apothecaries had their own college, and after an apprenticeship of seven years they had to submit a master's thesis and a pharmaceutical "masterpiece". Their principal function was that of preparing medicines as prescribed by doctors; they were obliged to deliver them to the patient's home and to observe their effect.

However, it is clear that in New France the apothecaries functioned as independent practitioners, in no way dependent on the prescription of the physician. There were, in fact, virtually no physicians available to write prescriptions.

Again we can do no better than refer to Nadeau[1] in attempting to determine the relative importance of these widely divergent practitioners of the healing art. He advises us that:

> during the entire French Regime, only two physicians practised their art throughout the breadth of the colony — three if one counts Bonamour who made haste to return to France shortly after his arrival. In addition, of these two physicians Sarrazin, the best known, had been a surgeon and remained one until the end of his life in spite of the prejudice associated with this craft. The history of medicine in this country is then, above all, a history of surgery and of surgeons.

Although not included in this quotation Nadeau's view would be consistent with the inclusion of the apothecary as worthy of a place in the history of medicine of this epoch in New France. Boissonnault[7] expressed the same sentiments succinctly: he observed that during almost 150 years there had been no physicians in Canada and quoted the scoffers as noting that no one was apparently the worse off as a result.

Seven Practitioners of the French Regime

This, then, is the background of our overview of the activities, medical and otherwise, of surgeons and apothecaries in this country commencing with that memorable day, July 3, 1608, when Champlain established, at Quebec, the first Canadian colony that was to survive. No authentic portrait of Champlain exists but he was a prolific recorder of the events that he witnessed and the geographic features and the flora of the regions he visited. He has left us the drawing of his Habitation at Quebec, reproduced in Fig. 2.

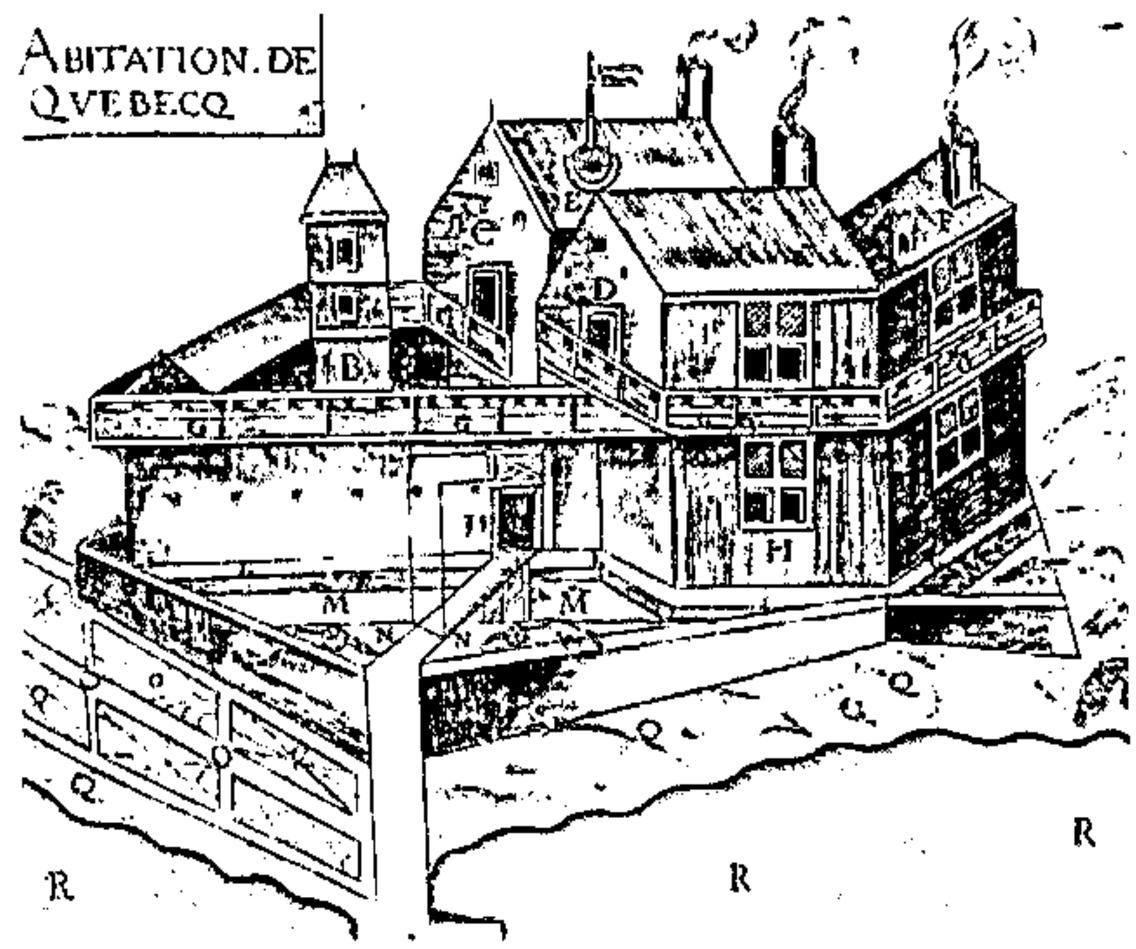

Fig. 2.—Champlain's Habitation at Quebec. (Reproduced from Champlain S de: *Oeuvres de Champlain*, vol 2 (1608-1613). Reprinted, translated and annotated by Biggar HP (editor), Toronto, Champlain Society Publications, new series, 1925.)

The task of synthesis is not easy, for the period under review is lengthy and includes between 150 and 200 surgeons and apothecaries. The seven individuals chosen for inclusion have been selected to emphasize a particular point and are not necessarily representative of the entire group. As it turns out, all seven appear to have been accepted as highly competent and reputable practitioners of their art. This alone would perhaps make them unique. Leblond[8] reminds us that:

> the laws at the time forbade a ship to leave France on a voyage to the colonies without a

surgeon or an assistant surgeon on its staff. This man often remained in the colony and established a practice, something he could not have done in France. These newcomers were far from being fully qualified. Many had no training whatsoever.

Maude Abbott[9] would encourage us to approach the 17th century as two distinct and unique half-centuries. She refers us to Ornstein's thesis that the first half-century was characterized by individual experiment and discovery and the formulation of the elemental laws governing science, while the second half was characterized as a period of correlation when scientists joined together in groups to form the great scientific societies of the day for the discussion, consolidation and diffusion of this new knowledge. Abbott then identified a parallel in the pattern of activity of medical personnel in Canada of the same era. The foundations of this country were laid in the first half of the 17th century by a few dedicated individuals and individualists, among them surgeons and apothecaries. While these same persons served the modest colony medically, often with great devotion and distinction, their main claim to a place in the annals of history was their nonmedical activities. In putting this period in perspective it should be remembered that it was indeed a modest band that clung tenaciously to life in this harsh land. Twenty-five souls passed that first winter in Quebec with Champlain of whom 15 died before spring. Forty years later in 1648, at mid-century, the entire population of New France was only 241 persons.[9]

New France in the second half of the 17th century and early 18th century was completely different; in 1663 New France became a royal colony and as a result of the stimulus this gave to immigration, its population exceeded 15 000 by 1698.[9] This made possible a medical organization capable of sustaining the type of surgeon–scientist who represented the colonial arm of those great scientific societies that characterized the mother country of that era. Two among this small but illustrious band will be chosen to exemplify this aspect of colonial medical life. Since there were an additional 94 documented medical practitioners in the colony in the latter half of the 17th century, our sample is in no sense representative of the total colonial medical service of that day, but it does highlight the reawakening of scientific thought, even in a remote colonial setting.

Bonnerme

Among the hardy band that landed at Quebec with Champlain in 1608 was a surgeon, identified only as Bonnerme. He might have gone completely unidentified were it not for his implication, in error, in a plot on Champlain's life shortly after their arrival. Biggar[10] has translated Champlain's own account of the incident in these words: "The same day I had six pairs of handcuffs made for the authors of the plot, one for our surgeon, named Bonnerme, one for another man named La Taille, whom the four conspirators had accused, which charge however turned out to be false and this was the justification for giving them their liberty." Justice in those days was carried out with speed and vigour. Jean Duval, the instigator of the plot, was hung and his head displayed on a pike from the highest roof of the Habitation, and his three accomplices spent the remainder of their lives in the galleys.[11, 12] Although Bonnerme was totally exonerated his life was not long spared, as Champlain[10] records:

The scurvy began very late, that is in February, and lasted until the middle of April. Eighteen were struck down with it and of these ten died; and five others died of dysentery. I had some of them opened to see if they were affected like those I had seen in the other settlements. The same conditions were found. Some time after our surgeon died. All this gave us much trouble, on account of the difficulty we had in nursing the sick.

The first harsh winter in the New World had claimed its first surgeon. He would not be the last.

Louis Hébert

More fortunate was the apothecary Louis Hébert.[9, 13, 14] He arrived at Quebec with his family in 1617 at age 40 and in the 10 years of life remaining to him established the agricultural base for the colony which was to assure its survival. As the first settler he is remembered as *Le Père de la Nouvelle-France,* and the artist C. W. Jefferys presents him in his traditional role

Fig. 3.—Louis Hébert (courtesy of the Public Archives of Canada).

as an apothecary (Fig. 3). Hébert was not a stranger to the New World. He spent the winter of 1604-5 on Ile St. Croix and that of 1606-7 at Port Royal in Acadia with Champlain and returned to the latter site, accompanied by his wife, with the little band that Poutrincourt hoped to establish there in 1610. They might well have succeeded had Port Royal not been destroyed by the English under Argall, in 1613, and the colonists forced to return to France.

There is ample evidence from contemporary records,[9, 13] referring both to Hébert's sojourn in Acadia and his later life in Quebec, to confirm that he practised his apothecary's craft with skill. Moreover, he must have been a kindly man for he "enjoyed the confidence also of the Indians, whom he, in contrast to many of his contemporaries, considered as intelligent human beings lacking only in education. Many instances bear witness to their respect and affection for him."[13] He was equally respected by the other colonists and it is recorded of the Héberts and their daughter and son-in-law that they "had the respect and affection of the entire community, and their homes were long a centre of hospitality and of refuge from the common dangers".[9] One would have thought that his life would have been a tranquil one, complicated only by the physical hardships of the country itself. However, this was not the case. The very attribute that made him pre-eminent among those early settlers, his love of the land and his ability to wrest a bountiful harvest from it by dint of knowledge and hard labour, brought him into conflict with the powerful trading companies who could see no further than the immediate and rich returns available from exploiting the fur trade. They looked upon colonization as a threat and did everything in their power to oppose and obstruct his attempts at farming and the disposal of his produce. However, right triumphed and Hébert's industry, courage and integrity eventually won the day and secured the colony.

Robert Giffard

If Hébert was the pioneer colonist—apothecary, the surgeon Robert Giffard[9, 15] achieved the distinction of becoming the first colonizing seigneur. He first came to Quebec in 1627, the year of Hébert's death, as surgeon to a vessel involved in the fur trade. He liked what he saw that summer in the wooded country around Beauport, built himself a log cabin for future use, and determined to return. His attempt to return the following year proved disastrous. War had broken out between France and England and the ship on which he sailed was intercepted by an English flotilla in the St. Lawrence with the loss of all of the equipment he had brought with him to start a colony. In recognition of his loss and as a means of assisting themselves in meeting their commitments with respect to immigration, the Compagnie de la Nouvelle France granted Giffard the first seigneury in Canada, that at Beauport, in 1634. "This was the first time that a title of nobility was conferred upon a Canadian settler, and nobly did Giffard fulfil his obligations, for he immediately took the important step of arranging to bring out, with his wife and five children, a number of artisans and labourers from Perche in Normandy."[9] At

the census of 1666 the Seigneury of Beauport consisted of at least 29 households and 184 persons.[15] Giffard certainly more than fulfilled his obligation as a colonizer.

Nor should Robert Giffard be discounted as a surgeon. He was the first to bear the title, King's Physician, in the New World. The fact that in the colony a surgeon, or even an apothecary if need be, could hold the title of (King's) Physician was an anomaly that could not have occurred in France, and it is a practice that has apparently led to confusion by historians. Nadeau[1] goes to great pains to clarify this situation. By royal brevet a surgeon could be given the title and the administrative rights and privileges of King's Physician in Canada. In essence this made him the senior medical official in the colony. However, royal authority could not create a physician in the sense of an individual holding the doctorate of medicine *(le bonnet)*. The term is therefore an unfortunate one and much confusion could have been avoided had some other title been used to identify this prestigious administrative position.

One of the functions of the King's Physician was that he was physician to the king's hospital: that is, l'Hôtel-Dieu de Québec. Giffard was appointed to both offices in 1640. L'Hôtel-Dieu de Québec was Canada's first hospital and is the fifth oldest hospital in the British Commonwealth.[16] The amazing story of its origin in 1639 under the patronage of the Duchesse d'Aiguillon, niece of Cardinal Richelieu, is briefly outlined by Abbott[9] and in the biography of its first superior, Sister Saint-Ignace, in the "Dictionary of Canadian Biography".[17] It is completely recorded in French in Casgrain's book[18] but the emphasis here is a religious rather than a medical one.

While many references indicate Giffard's humanity and value to the colony as a surgeon, he will be remembered primarily as Canada's first colonizing seigneur. His manor house was completed in 1636 and forms the focus of the drawing of Orson Lowell depicting Jean Guiou (Guyon) du Buisson, one of Giffard's principal tenants, carrying out the formal act of homage before Giffard's representative following settlement of some litigation (Fig. 4). It provides an interesting insight into the practices of French feudal law.

René Goupil

A prime role was thus played by two of the early apothecaries and surgeons in relation to the colonization of New France in an era when havoc was wrought upon the settlers by those cruel and bitterly cold winters. However, the climate was not their only antagonist in their struggle for survival. The Indian, or *peau-rouge* as he was called, proved to be a formidable foe. The tragic story of René Goupil is only one of many that could be used to illustrate this point. Goupil[9, 19] was already a Paris surgeon when he entered the Jesuit order as a noviciate in 1639. Subsequently, because of deafness, he was forced to discontinue his noviciate but he continued his association with the order as a *donné*. In 1640 he was

Fig. 4.—Formal act of homage before seigneurial manor of Robert Giffard at Quebec. (Reproduced by permission from ABBOTT ME: *History of Medicine in Province of Quebec*, Toronto, Macmillan, 1931.)

living in Quebec. At the Jesuit mission there his surgical skills were much appreciated. In the summer of 1642 he set out for Huron country in the company of one of the Jesuit fathers, Isaac Jogues, another *donné,* and a band of friendly Indians, intent on making his surgical skills available in that isolated area. On Aug. 22 they were attacked by the Iroquois and Goupil was taken prisoner. After 6 weeks of the most horrifying torture he was killed by a blow on the head from a tomahawk. His martyrdom was witnessed and reported by Father Jogues. He is venerated as the first Jesuit martyr in Canada and was canonized by Pope Pius XI in 1930. The practice of medicine was indeed hazardous in New France in the 17th century.

Etienne Bouchard

Etienne Bouchard, a surgeon from Paris, demands inclusion in our narrative for yet another reason. In 1655 he introduced the first prepaid medical program in Canada.[9, 16, 20] Bouchard came to Montreal in 1653 under agreement to La Société Notre-Dame de Montréal. Two other surgeons arrived in Montreal at the same time, which may have contributed to Bouchard's decision to initiate negotiations that led to the termination of his contract. He then completed an agreement with 26 heads of families in that city "to treat and supply with medicines themselves, their wives and families, both born and to be born" in return for 100 sous for each person so treated.[9] Nadeau[20] provides us with a somewhat different version of the method of payment. He suggests that Bouchard received "100 sous paid annually in two instalments by each settler". Unfortunately Ahern[11] is completely silent in respect to this aspect of Bouchard's practice. In any case the contract, complete with exclusions, is amazingly similar in general terms to many available today. The only real difference is the modest price.

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One might, with some justification, be critical of the foregoing as medical history and consider it rather as contributions to general history by practitioners of medicine in the broadest sense. However, this complaint could hardly be levelled at two distinguished medical scientists who exemplify the corporate reawakening of scientific thought in the latter part of the 17th and early 18th centuries — Michel Sarrazin and Jean-François Gaultier.

Michel Sarrazin

The life of Michel Sarrazin has been briefly summarized in a previous issue of this journal by Caron,[14] while Abbott,[9] Ahern,[11] and Rousseau[21] have provided us with fairly extensive accounts of his contributions to medicine and science. In addition a small book written by Vallée,[22] devoted entirely to this Canadian pioneer, is available. However, he emerges as the first real scientist in New France and, as such, it is appropriate to review briefly his career and accomplishments.

Sarrazin was born in 1659 at Nuits-sous-Baune in Burgundy and first came to New France in 1685 as a surgeon to the marine corps. During his initial stay of 9 years he achieved an enviable reputation for surgical skill, but there was no suggestion, during this period, of the major contribution that he was to make in a variety of spheres in later life. Apparently towards the end of this period he became ill and went through a period of depression, during which he attempted to enter the priesthood. Fortunately for the history of medicine in this country the superior general of the Sulpicians reported, "The more we have examined both his present and past state of mind, the more we have been convinced that there was no indication of a divine vocation to justify this change."[21] He was therefore advised to resume his former occupation. At this point, in 1694, he returned to France and enrolled in the medical faculty at Reims. During his studies he manifested a particular interest in botany and this was to provide him with an avocation at which he achieved distinction equal to that which he achieved as a surgeon. He received his *bonnet* in 1697 and returned to Canada the same year.

Sarrazin's preparatory studies were carried out at l'Ecole de Médecine de Paris and the associated Hôpital de l'Hôtel-Dieu. Abbott[9] gives us some insight into the impact of such an experience.

To understand the tremendous intellectual impetus which a University training in Paris at that time must have brought to this mature student, whose mind had been sharpened by hard-won experience, one must recall the immense changes that were taking place in medical thought at that time. The cognate sciences of physiology and pathology had been founded through the labours of Harvey and others, while the English clinician Sydenham, who died in 1689, had, by his power of observation and method of delineation of disease entities, brought these new found principles to a focus in the great science of clinical medicine. L'École de Médecine itself was full of eager disputation of the new ideas that were trembling in the air; and two great scientific institutions allied to medicine and ministering to its advancement, both of which became to Sarrazin an avenue and source of inspiration for his future activities, were being actively fostered under the paternal government of Louis XIV. These were: the Jardin Royal des Plantes . . . and the Académie Royale des Sciences, founded by Colbert in 1666 and reorganized in 1699.

As a result of his activities in the field of botany and zoology Sarrazin was named a corresponding member of the académie in 1699, the same year that Sir Isaac Newton was similarly honoured.

In addition to making an enormous contribution as a naturalist, Sarrazin continued to give devoted service to the practice of medicine. Also, although now a physician, he continued to combine this with the practice of surgery in spite of the prejudice against such activity, at least in France itself. On his return to the colony in 1697, he was immediately appointed to the staff of l'Hôtel-Dieu, and his devoted service during the recurrent devastation that accompanied a series of serious epidemics — typhus, influenza, smallpox and yellow fever — has been recorded. He also appears to have achieved a degree of success in their treatment that was unusual for that period. In 1700 he was officially appointed King's Physician and became the senior medical representative in the entire colony.

Sarrazin enjoyed equal success, and achieved much distinction, as a surgeon. In 1700, long before the birth of either Pasteur or Lister, or the introduction of anesthesia, he successfully performed a breast amputation on Sister Marie Barbier de l'Assomption.[23] Although we are told that the lesion was a cancer she lived, in excellent health, for 19 years after her surgery. The records of l'Hôtel-Dieu de Québec report that he performed this operation on at least two other occasions as well as numerous other procedures that, at the time, would be considered major surgical undertakings.

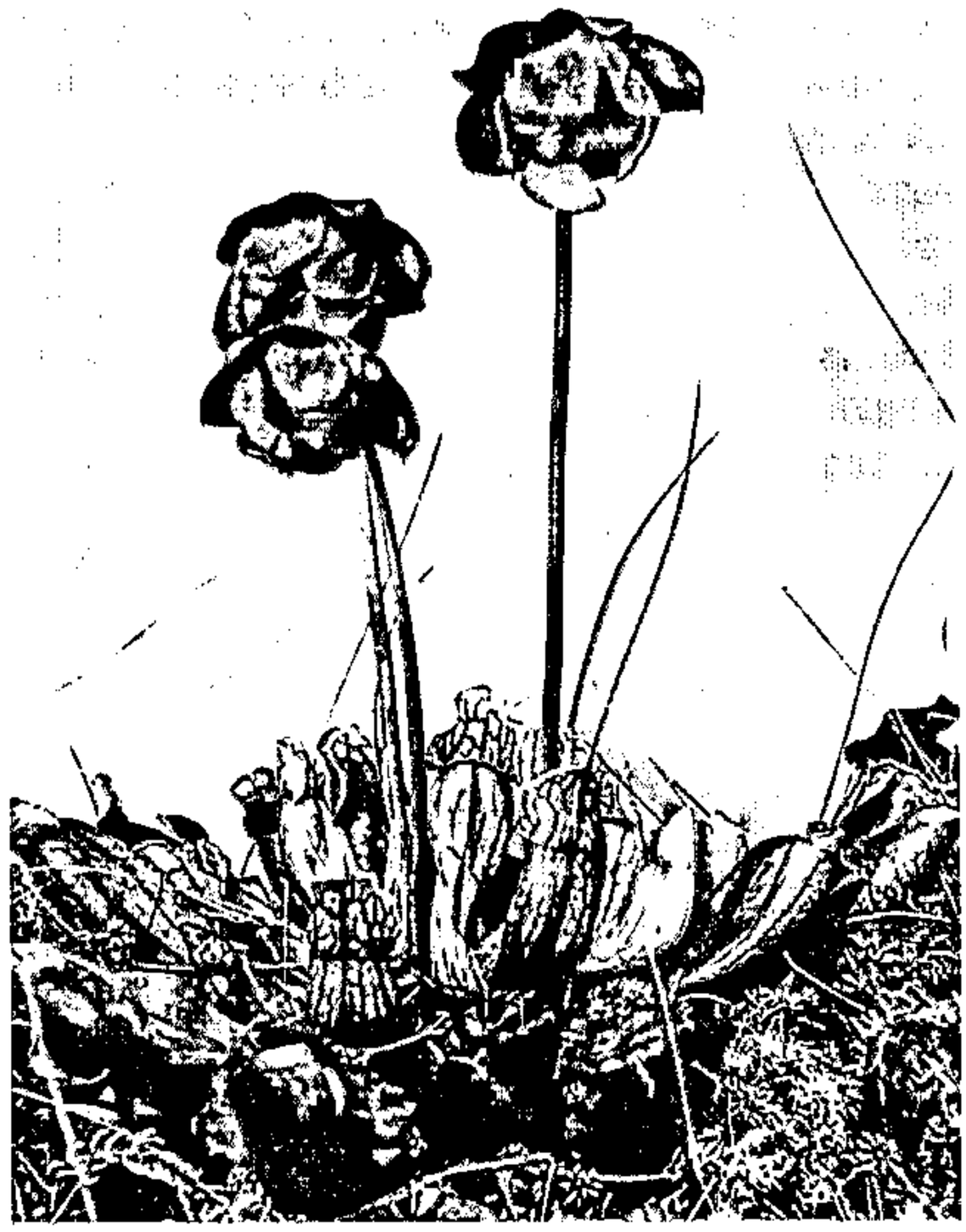

Fig. 5.—Pitcher plant *(Sarracena purpurea)*, floral emblem of Newfoundland (courtesy of the Department of tourism, Government of Newfoundland and Labrador).

As a botanist Sarrazin submitted innumerable specimens (over 200 in 1704 alone) of the flora of Canada to the Jardin Royal des Plantes through Tournefort, and later Réaumur, through whom he "corresponded" with the académie. These were accompanied by meticulous notes as to their care and the natural conditions of their growth. His detailed description of the "pitcher plant" (Fig. 5), the floral emblem of Newfoundland, led Tournefort to name it *Sarracena purpurea* after him. He also was responsible for the industrialization, if not the discovery, of maple syrup, the recognition and popularization of the blueberry as an edible fruit, and, in addition, has his name associated with Indian corn or maize, which is commonly referred to as Sarracen corn.

As a zoologist he dissected, and prepared detailed descriptions of the anatomy of, many of Canada's native animals, including the muskrat, the beaver, the porcupine and

even the bear and the caribou. One record is, however, incomplete — that of his dissection of a skunk. Of his experience he wrote, "It had a dreadful smell, capable of making a whole canton desert."[9] The accuracy of his minute description of the features of the organs of these animals is all the more amazing when one realizes that his instruments included only a surgical dissecting set and a hand lens. Many of his submissions were published in the reports of the académie and have been preserved.

Sarrazin died in 1734 at the age of 75. His major administrative achievement, apart from his appointment as King's Physician, was his appointment to the Conseil Supérieur de Québec in 1707. However, it is as an outstanding physician and surgeon and as a distinguished botanist and zoologist that he deserves our study. One should remember, too, that major difficulties attended the pursuit of these objectives in Canada between 1685 and 1734. These difficulties can hardly be expressed more effectively than in Sarrazin's own words:* "I do not know whether it is believed that one botanizes in Canada under the same conditions as in France. I could more easily traverse the whole of Europe, and with less danger, than I could cover 100 leagues in Canada, a much riskier undertaking."[21]

Although Caron[14] has provided us with a picture of Sarrazin, Rousseau[21] is of the opinion that no authentic likeness is known to exist and believes the often displayed photograph to be rather that of a French doctor of about the same period.

Jean-François Gaultier

Although of different temperament and personality we find a worthy successor to Sarrazin in Jean-François Gaultier.[9, 24] There is also a remarkable parallelism in their careers. Gaultier was, however, a physician and a doctor of medicine and had never been a surgeon. Like Sarrazin, he was named King's Physician in Canada (1741), and was appointed to the Conseil Supérieur of the colony in 1744. In addition he was named a corresponding member of the Académie Royale des Sciences of Paris in 1745, reporting through Duhamel du Monceau.

Gaultier arrived at Quebec in 1742. He immediately profited as a result of the pioneering botanical efforts of Sarrazin and the interest of the temporary governor Galissonière and was able to achieve an effective organization for the collection of specimens throughout the colony. Kalm, whom Gaultier assisted with his botanical studies in Canada, recognized the latter's indispensable assistance by dedicating the genus *Gaultheria* to him. Although the genus includes some 150 species of wide geographic distribution, the best known medically is certainly *Gaultheria procumbens,* from which oil of wintergreen is obtained. Gaultier continued to send shipments of plants, accompanied by voluminous notes, to the French académie. However, even today, the significance of his personal contribution to botany remains to be assessed since only a small portion of his manuscripts have been published and the remainder, many of them only recently rediscovered, have never been critically assessed.

Rather than zoology it was meteorology that was Gaultier's second, or perhaps it should be considered his prime, nonmedical scientific avocation. In 1742 he set up Canada's first meteorologic station. His log runs from that date to 1756 and was, in part, published by Duhamel du Monceau in the mémoires of the académie. Unfortunately Gaultier's observations in this regard, like his botanical reports, have never been critically analyzed and their true significance is therefore a matter of conjecture. In his meteorologic reports he did, however, include much valuable comment about life in the colony.

Since the archives of l'Hôtel-Dieu de Québec were destroyed in a fire in 1755 we know little directly of Gaultier's medical practice. However, his meteorologic reports contained a monthly bulletin on the state of the health of the colony including the frequency of various diseases and the remedies prescribed in their treatment. A partial list of some of the medicines used was given by Boivin.[24] He encouraged the use of wintergreen tea and tested the antiscorbutic

*Included in a letter to Réaumur in 1726 and published as an appendix in Vallée's book;[22] also included, in translation, by Rousseau.[21]

properties of the spruce tree, recommending spruce beer in treatment of scurvy.

Gaultier has been characterized as an encyclopedist and as a scientist who effectively performed the responsibilities assigned to him but who lacked the aggressive self-motivating scientific spirit of Sarrazin. It is, however, perhaps too early to pronounce this verdict since the evidence is far from completely evaluated. In any case he was apparently respected and beloved by his patients and compatriots. Like so many of his fellow practitioners who succumbed to one or other of the epidemics of those days he died at a young age (48 years) of typhus, which was brought to the colony in 1756 by the ship *Leopard,* a part of the squadron that brought Montcalm to Canada.

* * *

Seven medical practitioners, five of them surgeons, have been selected to highlight various facets of Canadian medical practice during the French regime. Each had an avocation apart from medicine and it is this that has dictated their inclusion. However, all, according to the standards of their day, appear to have enjoyed and amply justified the respect and confidence of the other colonists in their role, be it as surgeon, apothecary or physician. One should therefore perhaps close by re-emphasizing that not all those who bore such designation in New France were of the calibre of this group and, in fact, many were downright charlatans and quacks. At a somewhat later date (1784) James Fisher speaking of Quebec wrote:

> I cannot help thinking, but that medicine, as it is now practised in Canada, is materially injurious to Population and, I do aver, that although many Individuals are indebted to it for their lives and the health they enjoy yet if we take the Province at large, it would contribute to the increase of His Majesty's subjects were there not one of the Oesculapian tribe in this part of British America.[25]

Fisher may well have overstated his indictment intentionally to achieve greater emphasis, but there is little doubt that the individuals who practised medicine in Canada during the French regime represented the complete spectrum of medical ability and ethical standards from the very best to the very worst. About all they had in common were the harsh realities of the bitter winter climate and the ever-present danger of sudden death from some plague or at the hand of their indomitable foe, the Iroquois. Whatever their strengths and weaknesses they are part of our heritage and we would do well to come to know them.

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DAVIS & GECK SURGICAL ESSAY AWARD FOR RESIDENTS

Davis & Geck annually awards $1000.00 to the surgical resident submitting the best paper on a surgical topic to the *Canadian Journal of Surgery*. This award is intended to promote scientific and literary excellence among Canadian surgeons in training.

The conditions of entry for the 1977 award are the following: —

1. Candidates shall be currently engaged in a recognized surgical residency program leading to eligibility for the Fellowship of the Royal College of Physicians and Surgeons of Canada in one of the surgical specialties (cardiovascular and thoracic surgery, general surgery, neurosurgery, obstetrics and gynecology, ophthalmology, otolaryngology, orthopedic surgery, plastic surgery and urology).

2. The material to be submitted shall be in the form of a manuscript relating to work in which a surgical resident is or has been the prime or major investigator. Prior oral presentation at a Royal College meeting or a Surgical Forum meeting will not be a disqualification, but prior publication as a formal paper in a journal will. The paper should relate to any field of surgical interest. The manuscript must conform to the style requirements of the Journal and must not exceed 3000 words of text and six tables and/or six figures. Coauthors are permitted on the understanding that the candidate shall be the first author and that only the first author shall be eligible for the award.

3. Entries must be received in the office of the Journal no later than June 30, 1977. Each entry must be submitted to E. M. Cooperman, MD, FRCP[C], at the office of the *Canadian Journal of Surgery*, PO Box 8650, Ottawa, Ont. K1G 0G8, with a letter stating that the paper is being submitted as an entry for the Davis & Geck Surgical Essay Award.

4. All papers submitted shall be the property of the *Canadian Journal of Surgery* unless returned to the author without publication.

All papers submitted will be judged by an independent committee comprising at least one member of the editorial board of the Journal, one fellow of the Royal College of Physicians and Surgeons of Canada, and one representative of The Canadian Medical Association, together with other fellows invited to serve at the discretion of the three permanent members of the committee. For the purpose of judging, the candidates will be anonymous. The judges' decision shall be final.

The name of the successful candidate and the title of the paper will be announced in the November 1977 issue of the Journal.