which were due largely to the company president's knowledge of Chemistry and his heritage of chemical and biological study and achievement.

Civic-minded, and with a sincere belief that interdependence and coöperative human progress is the answer to most of the world's problems, Lieutenant-Colonel Wetherill, who served in France as Major in the Motor Transport Corps during the World War, is an enthusiastic speaker, author and worker for community betterment. It is this unbounded enthusiasm and leadership, this desire for a higher plane of life that caused his election to the College trusteeship in 1921, and his election to chairmanship of the Board, to succeed the late Joseph W. England, in 1934.

Thus the influence of a scientific family, despite the fact that few of them remained long in pharmaceutical practice, is felt in Pharmacy, and especially through pharmaceutical education at the Philadelphia College, for the first chairman of the Board and the present chairman are as one in insisting that standards be kept high, that orderliness and honesty of purpose be foremost, and that professionalism be uppermost in the minds of those who go out into the world through education received at the institution of his administration.

AN ACCOUNT OF THE ATTEMPT OF THE SOCIETY OF APOTHECARIES TO ESTABLISH THE DRUG TRADE IN COLONIAL GEORGIA.*

BY JOSEPH KRAFKA, JR., M.D.[1]

While the Trustees for the establishment of the Colony of Georgia made plans to put the Colony on a self-supporting basis by introducing silk culture, a small group of men, headed by the King's physician, Dr. Hans Sloane, proposed to break the Spanish monopoly on American medicinal plants by introducing these plants locally.

The Spanish drug trade had developed as a result of the efforts of Phillip II, who had sent Hernandez to Mexico in 1570 (1). During his six years' stay he had studied the local flora and later wrote sixteen volumes describing some twelve hundred plants, including those in use by the Indians as medicines, such as: jalap, sarsaparilla, gum copaiba and liquid amber.

Sloane was a man of wide interests. In 1722, he presented the Botanic Gardens at Chelsea to the Apothecaries Company (2). As a young man in 1687 he had been personal physician to the Duke of Albemarle when the latter was Governor of Jamaica (3), and had written at length on the plants of the New World. He had sent some eight hundred plants to Rae in England (4). Being of a pecuniary nature, he was quick to recognize the profit to be made on medicinal herbs and had stocked up on Peruvian Bark before he returned home. As a shrewd manipulator, he enlisted the interests of the Apothecaries Company in his scheme, since the latter controlled by royal charter the sale of drugs in and around London, and had a monopoly of sales to the Army and to the East Indies Company (5).

Sloane, while not on the Board of Trustees for the Colony of Georgia, was commissioned to collect money for this worthy cause (6). His contributions, how-

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ever, were for a specific purpose, namely to pay the salary of the Trust botanist whose duty it was to search Spanish territory and secure and transplant to Georgia valuable medicinal herbs (7).

The first appointee to the position of botanist to the Trust was Dr. Wm. Houston of Edinborough. He began his tenure by sending vines from Madeira, but he died shortly after without accomplishing anything further. Dr. Sloane recommended "in his room" Robert Miller, a botanist of note and a recent member of the Royal Society of London. This appointment was approved by the Duke of Richmond, the Earl of Derby, Lord Petre and a Mr. Dubois, all of whom agreed to continue their subscriptions (8). Robert Miller was the brother of Joseph Miller, gardener and warden of the Chelsea Gardens (9).

Miller (or Millar) began his work with enthusiasm. En route to Jamaica he sent over two papers of Egyptian kali or potash seeds, one tub of white mulberry plants, one tub Burgundy vines, one olive tree from Venice, two gallons of Lucerne seeds (heart trefoil), fifty caper plants and one tub of madder root. From the West Indies he sent one paper of cotton seed. Additional importations, presents from the East Indies Company, were barillo seeds and one tub of bamboo shoots (10).

In 1735, Miller wrote from Kingston that he had ipecacuanna plants, balsam of papriva (evidently balsam of copaiba) and tolu trees (11). There is no record however that these plants ever reached Georgia. In another letter to the Trust, Miller promised that he would make every effort to secure jalap, sarsaparilla and contrayerva. The latter was an herbal of wide use as a diaphoretic in fevers, introduced by Francis Drake in 1581.

Miller's[1] first efforts seem to have been local. He made one trip to Florida but he wrote that the Spaniards would not let him search for herbs. In fact he met official opposition at every turn. This, of course, was to be expected since the British smugglers and buccaneers were making serious inroads on the general Spanish trade. The Assiento Treaty of Utrech allowed traders of the South Sea Company but one ship load of cargo each year from a Spanish port, but bribery and piracy undermined the regulations and led to much official ill will (12).

In desperation, Miller appealed to his patron, the Duke of Richmond, to obtain for him a license to search direct from the Court of Spain. It would be difficult to understand such a request, unless it be remembered that King Phillip held twenty-five per cent of the stock of the South Sea Company and was willing enough to help out his British friends if his private interests were furthered at the same time. At least, in 1737, the Duke of Richmond obtained a permit from the Spanish king, addressed as an order to Lord Don Joseph Vizarron, Bishop and Vice Governor of Mexico (13).

Armed with this document, Miller set out from Jamaica on the snow, St. Thomas, a South Sea Company ship. He put in at Porto Bello and went overland to Panama. The local factor "promised him everything" but like other agents he was unable to obtain anything but a few seeds which Miller sent at once to his brother in Chelsea (14).

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[1] An argument prevailed in 1820 between Barton and Nuttall as to whether or not the root of a plant indigenous to Georgia and Florida was true jalap, *Ipomœa macrorhiza*. It seems that the form sent to Kew Gardens by Houston was not the proper species. (American Dispensatory, page 226.)

Miller next made a trip to Carthagena and Mompom in search of more ipecacuanna and gum copaiba. But again he returned empty-handed. His third major trip took him to Campeche for contrayerva. On board he heard that he might get lac cochineal at Vera Cruz. When he arrived at the latter port, he presented his letter from the Court of Spain. But the local authorities became suspicious and ordered him "restrained on board." He complained to the local factor but for all of his protests he was sent back to Havana a virtual prisoner. The captain of the Spanish ship took pity on him and put him aboard an English vessel enroute to Jamaica. In 1738 he wrote to the Trust for orders inquiring whether he should return direct to England or take the few plants which he had to Georgia. In 1740 he died in England from a lingering fever contracted while in Spanish territory. In his last letters from Mexico he wrote that he had suffered from the severest sickness, including all forms of the fever, Quotidian, Tertian and Quartan. He ended his dismal reports by saying "there is no getting the Jesuit's bark" (15).

Subsequent history has shown that he was right. No one succeeded in breaking the Spanish monopoly on Peruvian Bark as long as Spain remained a dominant power. Grown in the Loja district in Ecuador, used locally by the Indians, introduced into Spain between 1632–1640, it became the principal remedy for practically all fevers. In 1852, Ledger, after offering his stock of plants to an indifferent English government, sold out to the Dutch and a profitable trade in quinine became a practical monopoly in Java (16).

Nor did the Spaniards lose control of the trade in cochineal. In 1735 it was the principal red dye. Eight hundred thousand pounds of dry insect scale was scraped from the prickly pear in Mexico and sold in Europe for fifteen million francs. The Spaniards maintained their monopoly by the death penalty. In 1776, Thiery de Menonville, after surreptitiously studying the culture in Mexico, succeeded in smuggling a stock which he established in the public gardens of Port au Prince. Both the plants and insects grew slowly, and Thiery, impoverished by his enterprise, died of a broken heart. Twenty years later, following the revolution of the negro emperor, Toussaint l' Ouverture, the surviving cacti and cocci increased to such numbers as to become a public pest. But by this time cochineal and Turkey red (madder root) had lost their importance in dyeing and in Pharmacy (17), (18).

In this connection it is of interest to examine the Colonial Records regarding a report of a local species of cochineal. Captain Dymond, shipmaster, trading in Georgia during the early days of settlement, was interrogated by members of the Trust and claimed to have seen the insect on cacti growing locally (19). He stated that when they were crushed they gave a permanent red color to the fingers. In a report to Parliament the Trustees wrote "there is sufficient evidence to show the reasonable expectations of future benefits to Great Britain for the natural fitness of the soil and climate of Georgia to produce silk, wine, indigo and cochineal." They further considered a proposition by the two Jews, Nunez and Belanger, who asked for a grant of two thousand pounds sterling to develop the trade in Georgia (20).

The United States Department of Agriculture,[1] however, has no record that

[1] A second successful attempt to transplant coccinella was made by Capt. Nelson in 1795 who introduced the plant and insect into East Indies. It is also interesting to note that Ralph Peale claims to have seen native cochineal at Little St. Simons, an island off the coast of Georgia. (American Dispensatory. Second Edition, 1822, page 204.)

either the coccus or the cactus is indigenous to Georgia. Nopalia coccinelifera, the Mexican cactus, is an Opuntia, some species of which grow wild in Georgia (21).

But to conclude our account, with the death of Miller and the war with Spain in 1740, the Apothecaries Company lost interest and withdrew further subscriptions to "promote agriculture in Georgia." The legal question even arose as to whether the Trustees were responsible for the last payments on the salary of the botanist, and with this further importations were abandoned. Limited consignments of native drugs, however, were sent to England, including snake root, sea-rod, china root, sassafras and sumac. All of these had local reputations as curative agents. Snake root was widely used in pleurisy after a report by Dr. Tennet, 1736, of Virginia. China root, a probable substitute for sarsaparilla, was found in and around Savannah by Dr. Twiffler, apothecary surgeon at Ebenezer (22). Pink-root (Spigelia) was used widely as an anthelmintic. Advertisements for quantities occur in the *Georgia Gazette* for the years 1763 to 1770; and as late as 1797 the firm of Montgomery and Bird, of Augusta, offered to purchase unlimited amounts (23). Five comparatively late introductions seem to have been lost to the local drug trade; namely sesamum introduced by the negroes as benne; castor bean; arrow root (Campbell Wylly of Sapello claims to have raised 1480 pounds to the acre); Camphor, growing luxuriantly in Savannah and as far north as Augusta; and lastly *Melia azedarach*, or Pride of India, an ornamental tree whose bark was used as a vermifuge and febrifuge by Kollock of Savannah. (American Dispensatory.)

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