Jean-Baptiste Leblond

NATURALIST AND PLATINUM SMUGGLER

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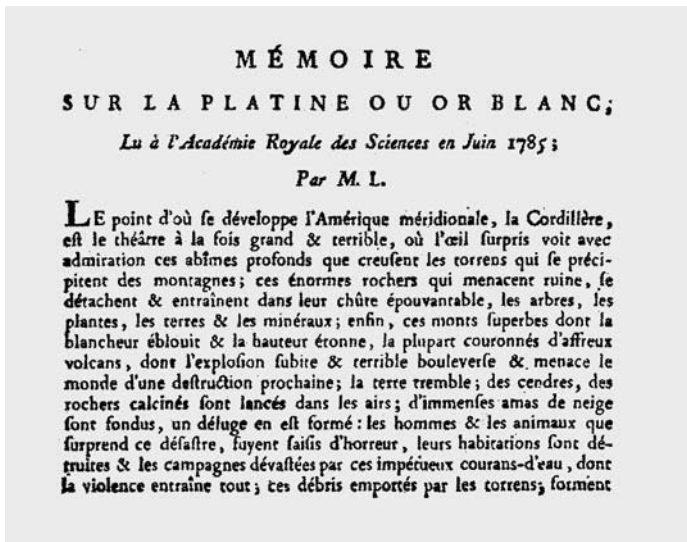
In June 1785 the Paris *Académie Royale des Sciences* heard a "Memoir on Platinum or White Gold", which has been described as the best contemporary account of the occurrence and extraction of South American platinum (1). It contained a detailed description of the terrain in which platinum was found in Peru, always associated with gold, and the author explained how the metals were separated from the accompanying earth by washing, and then from each other, grain by grain, by means of a knife blade. Any gold which remained with the platinum was removed by amalgamation with mercury, and most of the platinum was discarded, for its lack of malleability made it difficult to work, and it was regarded as a troublesome impurity.

When this memoir was printed a few months later in the scientific periodical *Observations sur la Physique*, the author was given only as "M. L." (2), and he has remained anonymous from that time on. A search in a collective index published the following year has now, however, identified him as *Monsieur* Leblond.

An account of the life of Jean-Baptiste Leblond, written by a nephew, appears in the preface of the posthumous second edition of his book on French Guiana (4). Born on December 2nd, 1747, near Autun in Burgundy, he emigrated at the age of 19 to the West Indies, where he supported himself by practising medicine, learnt from a French surgeon at Martinique and a British physician on the island of St Vincent (5). He travelled as far as Peru, then a Spanish colony, and in 1785, on his return to France, he read memoirs on various aspects of geography, natural history, anthropology and tropical medicine to the learned societies of Paris, and acquired a reputation as a careful and accurate observer. Some of his work was published, and he was elected to corresponding membership of the *Académie Royale des Sciences*, the *Société Royale de Médecine* and the *Société Royale d'Agriculture*.

At the end of 1786 Leblond again set off for South America, this time commissioned by Louis XVI to study the natural history of



MÉMOIRE

SUR LA PLATINE OU OR BLANC;

Lu à l'Académie Royale des Sciences en Juin 1785;

Par M. L.

LE point d'où ſe développe l'Amérique méridionale, la Cordillère, eſt le théâtre à la fois grand & terrible, où l'œil ſurpris voit avec admiration ces abîmes profonds que creuſent les torrens qui ſe précipitent des montagnes; ces énormes rochers qui menacent ruine, ſe détachent & entraînent dans leur chûte épouvantable, les arbres, les plantes, les terres & les minéraux; enfin, ces monts ſuperbes dont la blancheur éblouit & la hauteur étonne, la plupart couronnés d'affreux volcans, dont l'exploſion ſubite & terrible bouleverſe & menace le monde d'une deſtruction prochaine; la terre tremble; des cendres, des rochers calcinés ſont lancés dans les airs; d'immenſes amas de neige ſont fondus, un déluge en eſt formé: les hommes & les animaux que ſurprend ce déſaſtre, fuyent ſaiſis d'horreur, leurs habitations ſont détruites & les campagnes dévaſtées par ces impétueux courans-d'eau, dont la violence entraîne tout; ces débris emportés par les torrens, forment

The first page of the paper read by "M. L." to the Académie Royale des Sciences *in June 1785. The author has remained unknown for over 170 years but has now been identified as Leblond.*

French Guiana. He was especially asked to see whether the colony produced cinchona bark, which was used for treating fever long before quinine was isolated from it in 1820 by Pelletier and Caventou. But before leaving Paris, Leblond had an important piece of business to transact.

In his memoir on platinum, he stated that a certain amount was sent to Spain from the mines in South America, but that the Spanish Government generally forbade its export to other countries because of the fear that it would be used to adulterate gold. However, it seems that Leblond himself had brought to France no less than 200 lb of platinum, almost certainly illegally, since he did not advertise its existence, and tried to dispose of it commercially and not for the scientific purposes for which a limited export was permitted.

By 1786 the Spanish chemist P. F. Chabaneau had brought ingots of malleable platinum to Paris, and had encouraged the goldsmith Janety to work the metal into jewellery. Lavoisier had succeeded in melting small quantities of platinum at the temperature produced by charcoal burning in a blast of oxygen, and the Abbé Rochon was using it for the mirrors of reflecting telescopes and navigational instruments. Leblond was anxious to supply an obviously growing market, but he could not find anyone in Paris prepared to buy his entire stock. Probably at the suggestion of P. M. A. Broussonnet, a naturalist who had lived in London and was well known in British scientific circles, he wrote to Sir Joseph Banks, the President of the Royal Society (6). His letter, dated July 2nd, 1786, can be translated as follows:

Sir,

Circumstances too tedious to describe in detail have made me come from Peru to France with 200 pounds of platinum, which I wish to sell in bulk and which no one here can buy from me. New experiments of Mr Lavoisier and others point to processes for rendering the metal malleable and using it in the arts that are far less costly than those of Baron von Sickingen. I have seen many mirrors for octants which have a better polish than the finest steel and cannot be tarnished or damaged by rust. It is claimed that similar mirrors are to be supplied to the entire Navy, and it is suggested that a telescope mirror requiring several hundredweight of platinum could be made. The stock that is being used in Paris just now comes from 60 or 80 pounds, a quarter of which belonged to me, that Mr Dombey brought from Peru. The King and some noblemen have platinum snuff-boxes which they value highly; watches are being made with platinum movements, and they are expected to be very accurate and durable.

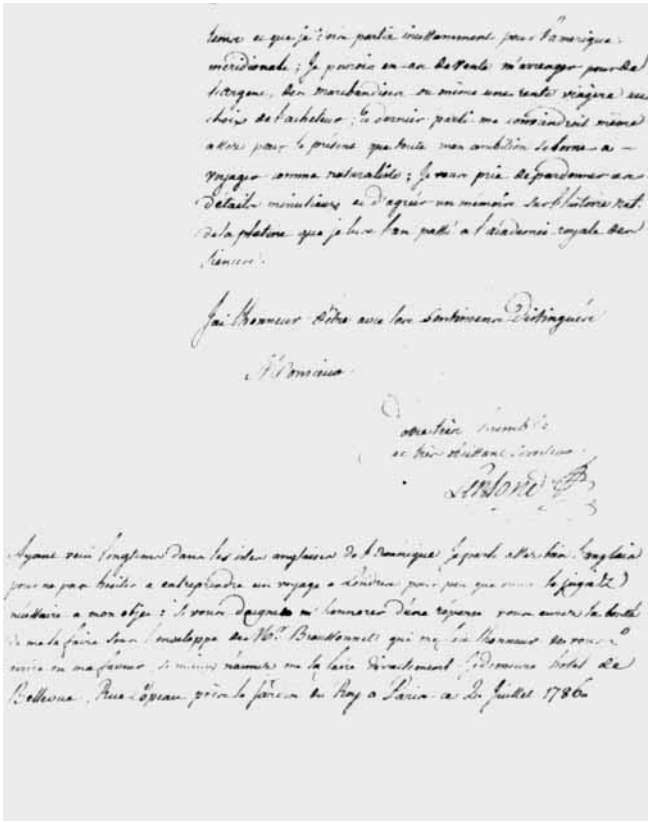
These, Sir, are some of the advantages of the new metal that are already apparent. I have no doubt that England, with its well-deserved reputation for working steel superlatively well, can give platinum its rightful applications in the arts better than any other nation. This would be a new advantage to add to its flourishing industry, and it is from this point of view that I dare ask you to bring it to the attention of the craftsmen of London.

Since platinum began to be worked in Paris, its price has suddenly risen from 5 or 6 francs per ounce to 12 or 15, and now none is for sale. I have not yet decided to sell mine in small quantities, for this would take too much of my time and I have to leave at once for South America. If I sell the whole quantity I could accept cash, merchandise or even an annuity, at the choice of the purchaser. The annuity would suit me for the time being, when my ambition is merely to travel as a naturalist. I ask you to excuse these minute details and to accept a memoir on the natural history of platinum which I read last year at the *Académie des Sciences*. . . .

Leblond

Having lived for a long time in the English islands of America, I speak English sufficiently well to undertake a journey to London if you judge it necessary for my purpose. If you condescend to honour me with a reply, it can be sent to me either directly, or addressed to Mr Broussonnet, who does me the honour of writing to you in support of me. I live at the Hotel de Bellevue, Rue Copeau, near the Jardin du Roi.

Banks's endorsement on the back of the letter shows that he received it on July 20th, 1786, and that his reply, which has not been found, was written on July 25th. Before hearing from Leblond he had received a letter from Broussonnet (7), and on July 17th he wrote to Birmingham to ask Matthew Boulton – a Fellow of the Royal Society as well as a leading industrialist – whether



The last page of Leblond's letter of July 30th, 1786, to Sir Joseph Banks in which he seeks to dispose of 200 pounds of platinum that he had brought to France from Peru.

English manufacturers were likely to be interested in buying the platinum (8). Boulton's reply must have been a negative one, for the metal stayed in France and Leblond did not visit London. A mathematician called Auguste Savinien Leblond (1760–1811) did, however, meet Banks in England in 1786, and this has caused some confusion, leading one historian to ascribe to J.-B. Leblond a letter written on July 30th, 1786, by A. S. Leblond (9).

The platinum was eventually acquired by the Government and deposited in the royal collection of minerals at the Jardin du Roi, the teaching and research institution which became the Muséum National d'Histoire Naturelle during the French Revolution. All the royal scientific collections became public property at that time, and it is possible that some of the platinum was used in the preparation of standard weights and measures of the metric system.

In exchange for his platinum, Leblond was granted a pension of 3,000 francs (about £120) per annum by Louis XVI, but along with all other royal pensions it was suppressed by the Revolutionary Government. Leblond was in Guiana when this happened, but he obtained an official appointment there as a botanist, and did much to encourage the production of pepper, cloves, cinnamon, and some natural dyes in the colony. He paid a short visit to France in 1790–91 and finally returned in 1802 at the age of 55. He subsequently published a book on tropical diseases, the first (and only) volume of an account of his travels, and a description of French Guiana and its natural resources. He hoped that his pension would be returned to him on the restoration of the Bourbons, but he died on August 14th, 1815, less than three months after Waterloo.

References

1 D. McDonald, A History of Platinum, London, 1960, 17
2 *Obs. Physique*, 1785, **27**, 362–373
3 *Obs. Physique*, 1786, **29**, 463
4 J.-B. Leblond, Description de la Guyane Française, 2nd ed., Paris, 1824, v–xvi
5 J.-B. Leblond, Voyage aux Antilles et à l'Amérique Méridionale, Paris, 1813
6 British Museum, Add. MS.8096, ff. 222–223
7 British Museum, Add. MS.8096, ff. 246–248
8 D. McDonald, op. cit., 83
9 W. R. Dawson, The Banks Letters, London, 1958, 525