a foot and a half high, which is pulled up and burned, and the ashes leached with boiling water. On this an abundant scum arises, which is removed and dried. This is the salt which, white at first, afterward becomes grayish. It is a little bitter, but replaces ordinary salt for all purposes. It is curious that such uncivilized people should have discovered such a process.

The newly discovered affluent of the Kongo. — The river traversed by Lieutenant Wissmann, to which reference was made in a late number of *Science* (vii., 160), proves, as we suspected, to be one long indicated on the charts, partly under the name of Ikelemba. It is called by Wissmann the Kassai, and at different points is named the Zaïre, the Maneme, and the Kwa. It receives near its mouth the waters of the Kwango and the drainage of Lake Leopold II. It has a navigable length of about four hundred miles through a rich region with many probably navigable branches. Hippopotami were very abundant, in some places obstructing canoe navigation; eighty-two were counted in one herd. The mouth of the Kassai does not indicate the importance of the stream, which is probably the reason why it has not sooner been explored. According to Lieutenant Wissmann, the commercial future of the whole Kongo state depends upon the construction of a railway from Vivi to the upper Kongo valley.

PARIS LETTER.

Since my preceding letter, some very interesting facts have been made known in different sittings of the Academy of sciences or other learned societies. But I must begin by repairing an omission in my last letter, and mention Professor Verneuil's paper concerning phthisis. As it is generally conceded at present that phthisis is a parasitical disease, M. Verneuil proposes that a fund be especially raised for the purpose of studying the Bacillus tuberculosis, to try and find out some scientific and methodical way of fighting this microbe. M. Verneuil's letter has been published in the *Gazette hebdomadaire* and in many other papers; but I do not think that much money has been yet raised. M. Verneuil is no micrographer, and has never studied any bacillus or bacterium. His idea is a very good one, but he is not the man, nor does his name carry the weight necessary to make the idea work a long way in the world.

At the last meeting of the Société de psychologie physiologique, I listened to an interesting note by MM. Richet, Ferrari, and Hericourt, concerning the way in which the handwriting varies according to the suggested mental states of hypnotized persons. For instance, if such a person is told that he is Napoleon, and asked to write a letter, he writes one, in a handwriting entirely different from his own, in which a graphologist easily recognizes the signs of a certain mental state which is generally supposed to have been that of Napoleon; when told that he is a miser, he writes in a close, short, economical handwriting, in the way misers write, according to graphologists; as a peasant, he writes in a drawling, ugly hand. The conclusion drawn by these gentlemen is, that graphology is a real science, and that its main features are correct, generally speaking. After all, there is nothing wonderful in the fact that handwriting can be and is influenced by the mental state, as is the case in physiognomy, attitude, and movements. The papers of MM. Richet, Ferrari, and Hericourt, will be published in the *Revue philosophique*, and their experiments are being continued.

A fortnight ago, the Société geologique began a series of conferences, to be held now and then at the ordinary meetings of the society. The opening address was made by M. A. de Lapparent, the well-known author of a very good book on geology, a text-book for French students. The subject was 'The form of the earth,' and M. de Lapparent communicated very interesting facts on the question. The most important, which is also the one that contributes the most to give to the earth a very irregular form, is the attraction which continents and even islands exert on water, as they do on the pendulum, resulting, as has been proved and measured, in an accumulation of sea-waters around continents. Thus the continents are all situated at the tops of hills of water; and to go from Europe to America, the ship has first to go down hill, then to cross a valley, and finally to climb another hill. Of course, this is an exaggerated figure; but, if the world were flat instead of round, the case would be exactly such as I have just said, for it has been calculated by some that between two continents the sea-level, in the middle, may be a thousand metres below the level the sea ought to have, and would have if there were no continents to attract it. As a curious and interesting confirmation of this attraction of seas by continents, it has been noticed that when Vesuvius is in eruption, and consequently when the mountain itself is denser on account of ascending and issuing lavas, the sea-level of Naples rises in a sufficiently well-marked manner.

M. de Lapparent, who does not think that there is any great motion in continents, and does not much believe in the sinking of some and the emersion of others, tries to explain the fact frequently met with, of sea-level and sea-beaches standing many hundreds of feet above the actual sea-level, in the following manner. Suppose a

large country without any ice at all, — no glaciers nor icebergs: the sea will take a given level around such a country. But suppose that for some reason or another this country gets covered with snow and ice, as is the case in polar regions: the sea-level will rise, because the continent will be denser, and will attract the sea with more force. But if half of the ice melt, the sea-level will be lower: if it melt entirely, the waters will re-assume their first level. We should then find on the seacoast three levels, — the actual one; one very high up, say a hundred yards; and another one halfway down. This explanation may perhaps be accepted for some countries, but it seems doubtful that it applies to all cases; and the theory of slow emersion and immersion of continents and islands — some of them, at least — cannot yet be overthrown. The conference of M. de Lapparent will be published in the Bulletin of the geological society, and a review of it is to come out shortly in *Nature*.

The principal event of the last month has been Pasteur's paper, read at the Academy of sciences the 1st of March, concerning the cure of rabies. The meeting was a very fine one. Some persons had heard it rumored that Pasteur was to speak, and to communicate very interesting facts, so the room was quite full. M. Gosselin, who had been sick for some time, came; and nearly everybody was there, except M. Chevreul, who was yet obliged to stay at home on account of the bad weather and a slight illness. M. Pasteur's note was a very long one, but it was listened to with great attention; and at the conclusion enthusiastic applause went up from every hand. M. Vulpian rose immediately after, and proposed that a vaccinal dispensary be erected for the purpose of admitting all persons bitten by rabid dogs, and having them cured by M. Pasteur and his assistants. The fact is, that it is necessary to be able to receive all persons, French or strangers, who desire Pasteur's assistance, and to have some sort of hospital. M. Vulpian's proposal was greeted with many cheers, and M. Pasteur quite approved it. The results of Pasteur's 350 first experiments on the cure of rabies in mankind are certainly very encouraging, and the subscribers are sending a good deal of money. Pasteur is sure to have all the money that is necessary, and will certainly use it well. He wishes to investigate now the question of diphtheria, and to try and find out the way of preventing or fighting it. It is to be hoped also that tuberculosis may catch his attention. Tuberculosis is far deadlier than cholera, diphtheria, and rabies put together.

Apropos of cholera, M. Rochefontaine, who was director of Professor Vulpian's laboratory, died a few days ago. It will be remembered that Dr. Rochefontaine tried last year an experiment on the etiology of cholera, swallowing a pill in which choleraic dejections and bacilli formed the prominent feature. He recovered, and some months ago he began again, in another manner, inoculating bacilli under the skin. It is, however, believed here that these experiments were very detrimental to his health, and that his sudden death, in the course of a very mild illness, may have been the consequence of them. Professor Vulpian made a very heartfelt and appropriate speech at the burial. Rochefontaine has been during seventeen years the *préparateur* and the assistant of M. Vulpian: he was, in fact, his only pupil, as concerns experimental physiology, and his death is a very serious blow to Vulpian, who will certainly not find so experienced an assistant to help him.

M. A. Gautier, the professor of organic chemistry in the faculté de médecine, pupil and successor of Würtz, has recently published a very interesting paper, read before the Academy of medicine, concerning ptomaines and leucomaines. Leucomaines are alkaloids very similar to ptomaines, but they are formed in the living body and during life, instead of developing after death. They are very poisonous. In the next letter, I shall perhaps be able to give more information on this point.

The Concours d'agrégation at the Medical school was finished yesterday evening at half-past six, after some two months' duration. The candidates who have been admitted are MM. Brissand and Ballet, two of Charcot's pupils, neither of the best nor of the worst; M. Dejérine, Vulpian's pupil, very well known by quite a number of papers and contributions on nervous pathology and physiology — he certainly is the best man of the four in the estimation of all, and is a very good recruit for the faculty; M. Chauffard, son of the well-known spiritualist professor, who died some years ago — he has no works to speak for him, being yet very young, but his *concours* was a very brilliant one. V.

Paris, March 17.

NOTES AND NEWS.

ON the 25th of March, 1826, Alvan Clark, the senior member of the famous firm of telescope-makers, was united in marriage to Miss Maria Pease, and the venerable couple are still living, the former at the age of eighty-two, and the latter seventy-eight. A reception was given in honor of the sixtieth anniversary of their marriage. During the past year Mr. Clark has painted three