

tents were strongly alkaline, which would favor the development of bacteria, is it not exceedingly probable that this fowl had clogged her craw and set a great culture of bacteria developing there, till at length bacteria had gained admission to the oviduct through the blood and thus developed infected eggs?

This rather brief description in no wise pretends to explain this phenomenon. It has been given with a dual hope: First, that some bacteriologist whose experience has familiarized him with similar cases may give the desired explanation of how these bacteria, if they were bacteria, gained admission to these fresh eggs; second, that the attention of physicians and officers of boards of health may be attracted to this subject.

There is evidently as much necessity for caution in feeding hens as in feeding milk cows or in fattening beeves and swine. Chickens should not be fed all sorts of refuse matter and then be expected to return therefor good healthy eggs and meat. Yet we all know the universal practice in small cities and villages, where many of the market fowls and eggs are obtained, is to give over the office of scavenger to the feathered inhabitants. If the subject were properly regarded by physicians and the people were rightly educated, we might look for better things; till then the occurrence of such peculiar phenomena as the one related and even more unique, should not surprise scientific students.

A MALAY FIRE-SYRINGE.

BY F. W. RUDLER, MUSEUM OF GEOLOGY, LONDON, ENGLAND.

By the kindness of my friend Mr. Henry Louis, the well-known mining engineer, who has recently returned to England from Singapore, I have received a fire-syringe which he obtained towards the end of 1890 from a part of the Malay Peninsula never previously visited by a white man. So far as I can ascertain, the use of the fire-syringe has not been hitherto recorded from this locality. Mr. Walter Hough, in his admirable description of the fire-producing appliances in the United States National Museum, published in the Smithsonian Reports for 1888 and 1890, refers to the syringes of Borneo and Burma, but makes no reference to those of the Malay Peninsula. No syringe from this locality is to be found in the very extensive ethnographical collections in the British Museum. Moreover, Mr. A. R. Wallace does not know of its use by the Malays, nor is it known to Professor Terrien de Lacouperie, who has lately written on the production of fire by the Chinese in his *Babylonian and Oriental Record*.

Mr. Louis obtained the specimen in question from a Malay who stopped with a party of others at his camp on a small stream known as Ayer Katiah, one of the tributaries of the River Teluban, on the southeast coast of the Malay Peninsula, and about 100 miles from the mouth of the river. The district is sparsely inhabited by Malays, and the party from whom the syringe was obtained had come from some of the neighboring Kampongs. They squatted down and began smoking, one of the men lighting his cigarette in the most matter-of-fact way by means of his fire-syringe. There is no reason to suppose that he was singular or had imported his apparatus from a distance. If the rest of the party elicited sparks by means of quartz and iron it was, they admitted, simply because they preferred this method as being less troublesome and more trustworthy than that of compressing air.

The Malay syringe consists of a tube of hard wood 2½ inches long, closed at one end, towards which the tube slightly tapers. It is surrounded with neatly plaited strips of thin rattan which, while they ornament the object, serve also to strengthen it and prevent the wood from splitting longitudinally in the direction of the fibre. The piston is made of similar wood and is packed with string. The tinder was carried in the hollowed-out skin of a large bean, like the seed of *Entada*.

In order to use the instrument a small piece of dry tinder is placed in the slightly hollow end of the piston and pressed down to keep it well in place; the piston is then inserted in the cylinder, smitten sharply with the palm of the hand and very rapidly withdrawn, when the tinder becomes sufficiently heated to slightly smoulder, and by then gently blowing it a bright glow may be obtained. According to Mr. Louis, the native never

seemed to fail in his use of the syringe, but the knack is not easy to acquire, and those who have employed a similar apparatus for demonstration at physical lectures know that it is far from easy, even with a well-made instrument, to ensure success.

Contrary to what might have been expected, it was rather a young man who preferred this strange mode of producing fire to the more convenient flint-and-steel method. There can be no doubt that the use of the fire-syringe, never widely spread, is rapidly dying out, and hence every fact bearing on the geographical distribution of so curious a custom deserves to be put on record.

L'ORIGINE DES ARYENS.

PAR LE PROF. G. DE LAPOUGE, UNIVERSITÉ DE MONTPELLIER, FRANCE.

LES revues scientifiques et *Science* en particulier ont publié cette année une quantité d'articles qui avaient la prétention d'éclaircir la question aryenne, mais qui me paraissent avoir surtout produit le résultat inverse. Il me semble que l'obscurité vient surtout de ce qu'on ne s'entend pas sur la valeur de mots qui, détournés de leur signification primitive, sont maintenant bien près de n'en avoir aucune, tant elle devient vague. Partisan très actif de l'origine européenne et occidentale de la race blonde et de son identification avec les premiers auteurs de la culture aryenne, j'ai contribué sans le vouloir à créer cette équivoque. Je voudrais arriver à la dissiper.

Le titre d'Aryens est historiquement applicable aux Indo-Iraniens seuls. Ceux-ci étaient loin de former la partie la plus pure, au double point de vue morphologique et sociologique, de la race que nous appelons aryenne. C'est pourquoi je crois préférable de laisser le terme d'Aryen à l'histoire et à l'ethnographie, et de lui conserver son sens strict, plutôt que de continuer à l'étendre comme on l'a fait, d'abord en philologie d'un sous-groupe à un groupe entier de populations parlant des langues apparentées et pratiquant des coutumes analogues, et ensuite en anthropologie à la race qui paraît avoir joué chez ces peuples le rôle de ferment. En regardant comme démontré ce qui est encore discuté, à savoir que les langues et les idées aryennes sont nées dans une tribu ou dominait la race blonde et sous l'influence de son génie propre, faire remonter d'une partie des peuples conquis au premier noyau des conquérants un nom ethnique plus récent d'un nombre considérable de siècles, c'est à peu près comme si l'on voulait dans dix mille ans appeler les Français d'aujourd'hui Dahoméens, parce que l'Afrique serait en grande partie devenue, c'est une pure hypothèse, française de mœurs et d'institutions.

Il conviendrait de s'entendre pour adopter désormais dans le langage précis la terminologie suivante: Aryens, les Indo-Iraniens primitifs; langues aryennes, institutions aryennes, les langues et les institutions de ces peuples et de leurs descendants immédiats; Indo-Européens, les peuples, d'origine quelconque, qui ont fait usage de ces langues, et de ces institutions, mais à partir seulement du moment où cet usage a commencé chez eux. La terminologie ainsi rétablie, on arrive à s'apercevoir que le problème aryen n'existe pas et qu'il y avait simplement logomachie. On se trouve en face des questions suivantes, aux quelles il est plus facile de répondre dès que l'esprit n'est plus tirailé par les acceptions multiples et discordantes des termes.

Quel a été le berceau des langues et des institutions indo-européennes? Question d'histoire et de philologie, à laquelle on est actuellement porté à répondre: l'Europe.

Ces langues et ces institutions paraissent elles avoir été particulièrement propres à certains peuples caractérisés par la prédominance d'une race, et laquelle? Autre question d'histoire et de philologie à laquelle on est obligé de répondre: oui, la race dolichocéphale blonde. En effet il n'y a pas de peuple ou cette race domine qui fasse usage de langues ou d'institutions non-aryennes, tandis que les peuples ou cette race ne domine pas font en partie usage de langues ou d'institutions d'un autre groupe, en ont fait usage à une époque historique rapprochée (partie de la Russie et de l'Allemagne), ou paraissent en avoir fait usage dans l'antiquité (Gaule, Espagne).

L'évolution qui a produit ces langues et ces institutions a t'elle eu pour point de départ un peuple ou la race blonde avait la

supériorité soit numérique, soit sociale? et paraît-elle le fruit du génie de la race? Question délicate, car il faut juger d'après des probabilités seulement, mais à laquelle il est permis de répondre oui.

Quel a été le berceau de la race dolichocéphale blonde? Question d'archéologie préhistorique et de physiologie. Réponse: c'est la région où le type ostéologique le plus voisin du type dolichocéphale blond s'est trouvé soumis aux conditions météorologiques nécessaires pour le réduire à un état voisin de l'albinisme.

Où doit être localisé ce berceau? le type dolichocéphale blond se rattachant par le squelette aux races quaternaires et néolithiques de l'Europe occidentale son berceau ne peut être cherché qu'en Europe, les conditions nécessaires d'inactinisme et d'humidité permanente qui ont déterminé sa décoloration ne se sont trouvées réalisées que dans la région voisine de la Mer du Nord, à la fin du quaternaire, et mieux encore dans la partie de cette mer alors exondée.

On arrive ainsi aux propositions suivantes:—

Le type polichocéphale blond, *H. europæus*, Linné, abusivement appelé arien, s'est développé dans le N. O. de l'Europe, telle quelle était à la fin des temps quaternaires, par l'action des milieux sur les races dolichocéphales indigènes, ou sur une seule de ces races. Il s'est fixé par un long séjour dans ces régions. Il en est sorti par des émigrations successives à mesure que le sol s'engloutissait sous ses pieds.

Les langues et les institutions indo-européennes se sont formées quelque part en Europe sous l'action du génie de la race blonde. Cette formation est de date relativement récente, et si les blonds ont apporté de leur primitive patrie une langue proto-aryenne, elle était à un stade d'évolution qui ne permettrait probablement pas d'en reconnaître la nature. On sait la rapidité avec laquelle varient les langues non écrites. L'état des langues indo-européennes prouve d'autre part leur origine récente.

Les langues et les institutions indo-européennes ont été ensuite implantées dans les deux tiers de l'Europe et dans une petite partie de l'Asie, par les conquêtes des peuples qui en faisaient usage. Un peuple passé probablement d'Europe en Bactriane par la mer Caspienne, ou Asiatique mais conquis par des Européens a porté les langues et les institutions indo-européennes dans l'Inde. A ce rameau seul appartient le nom d'Aryen.

Tout s'éclaircit donc dès qu'on n'embrasse plus ensemble la question d'origine des langues aryennes et celle de la race blonde, dès qu'on ne confond plus les peuples indo-européens avec les blonds, conquérants d'abord, puis absorbés et devenus classe dirigeante chez des peuples de race différente.

THE SCIENTIFIC ALLIANCE OF NEW YORK.

BY JOSEPH F. JAMES, M. SC., WASHINGTON, D. C.

THE "Scientific Alliance of New York" is composed of the following societies: New York Academy of Science, Torrey Botanical Club, New York Microscopical Society, Linnæan Society of New York, New York Mineralogical Club, New York Mathematical Society, New York Section of American Chemical Society.

Two meetings have been held, of which the proceedings have been published, and as the scheme seems to mark an era in scientific matters, especially in New York City, and as it is one that is likely to result in permanent benefits to science, a notice of it does not seem out of place.

The council of the Alliance is composed of the president and two members of each of the component societies. Its president is Charles F. Cox, and its secretary and treasurer N. L. Britton. The first meeting was held on November 15, 1892, and at it addresses were made by various prominent men. Hon. Seth Low, President of Columbia College, spoke upon the advantages to the city of New York of the Alliance, and he was followed by Mr. C. F. Cox with an address on the advantages of the alliance to the scientific societies. Mr. Cox pointed out the necessity of co-operation by the various organizations if the best results are to follow. He referred to the fact that the real materialists of the world are the so-called practical men, who measure scientific knowledge by commercial standards and in whose eyes science

"is worth only what it will bring when offered in the form of dynamos, telephones, electric lights, dye stuffs, mining machinery and other merchantable wares." The object of the Alliance he held to be to furnish a sort of common ground (may we call it a clearing house?) where knowledge of what is being done in one society is conveyed to all the rest, and in this way all are kept posted in regard to what is going on and duplication of work is thereby avoided.

The third address was by Hon. Addison Brown on the need of endowment for research and publication. He referred to the example set by Professor Tyndall, who established three scholarships with \$30,000 received by him from a series of lectures delivered in this country. He has been followed by others with equally munificent gifts. He pointed out the necessity to the practical man of work in the region of pure science, but as the workmen in this region are generally those who have neither the time nor the means for original research, the necessity for an endowment to enable them to continue their work is evident. Reference was made to the difference between the German universities, where the professors are expected to do original work, leaving the teaching for instructors, and the American so-called universities and colleges where the professors seldom have the time to devote to anything outside of mere routine work. He mentioned the humiliating fact that at the Zoölogical Station at Naples, where Germany and Italy each maintain eight tables, Russia, Spain, Austria, and England three each, and Switzerland, Belgium and Holland one each at a cost of \$500 per annum, the United States had none, and has been dependent heretofore upon the generosity of foreign nations for the occasional use of a table. This loss is not compensated for by the fact that there are several small laboratories along the Atlantic coast of this country. The endowment of research through fellowships in colleges was also considered, and lastly a detailed reference to scientific societies in this country and England. The comparison is not flattering to our pride. In England the property, funds and equipment of the societies is nearly ten-fold greater than in America. The publications are double. No laboratories and no professors are maintained here for original research. "The English societies," he said, "distribute yearly from \$25,000 to \$35,000 for from sixty to seventy-five different scientific purposes, while ours make no such appropriations simply because there are no funds."

Dr. H. Carrington Bolton, in his plea for a library of science in New York, gave many interesting facts relative to libraries of New York and its sister cities, arguing in favor of bringing together under one roof all the libraries of the societies in the Alliance. These libraries aggregate 13,700 volumes and would form an excellent nucleus for a scientific library. Reports received from sixty libraries of New York and its vicinity show that there are 1,916,000 volumes in them, the scientific books varying from 5 to 100 per cent. Fifteen of the libraries have over 40,000 volumes each. To house the libraries Professor Bolton outlined a plan. He advised having a building 100 x 120 feet square, four stories high in front, with a lecture room, in the rear, large enough to seat 1,000 persons. The library room should have shelves to accommodate 300,000 volumes. There should be an office for general business, several small rooms for ordinary meetings of the separate societies, photographic and microscopic laboratories and a general reception room. The plan is extensive, but let us hope that some wealthy New Yorker may make it feasible.

The second joint meeting of the Alliance was held on March 27, 1893, in memory of Dr. J. S. Newberry. The important business transacted after the reading of a memoir by Professor H. L. Fairchild, was a report of a committee recommending the establishment of an endowment fund of \$25,000 for the purpose of encouraging original research. The fund is to be known as the John Strong Newberry Fund, and is to be administered under the direction of the Council of the Scientific Alliance. Blank forms for subscriptions of any amount will be cheerfully furnished by Dr. N. L. Britton, Columbia College, New York. The money will be used for furthering researches in geology, paleontology, botany and zoölogy, in all of which subjects Dr. Newberry was interested. About \$600 in sums varying from \$5 to \$100, had been subscribed about a month ago.