Compared with the tropical malaria (where, as already remarked, gametocytes persist a long time after the last attacks of fever) the state of things here related will assist to a high degree the success of the measures that must be taken against the spreading of the disease. Supposing that man is the only or principal intermediary host for the described parasites, jealously protecting him only during the periods of fever and one or two days afterwards against the bites of mosquitos, will diminish greatly the number of infected insects, and in consequence reduce the fever-rate to a minimum. With the aid of the other measures advised by the members of the Malaria Expedition of the Liverpool School, consisting in precautions to be taken by the inhabitants against the bites of the gnats, and in measures for reducing the numbers of the latter, we believe that it will be possible to make the disease disappear in our country altogether.

As to the latter measure (measures for reducing the numbers of mosquitos), here also it must be divided in two parts: First, destruction of adults or larvæ, and, secondly, measures to prevent the insects breeding. A large quantity of adults may be killed in the stables where hundreds of them are found together. To apply the necessary measures for destroying larvæ of course it is required to find the breeding pools. It took a long time before we succeeded in this. At last, however, one breeding place was detected in the shape of a drinking well of a surface of about 160 square metres, and situated at a distance of 100 metres from a stable with a large colony of *Anopheles*.

Further investigations will be required to learn more about the bionomics of adults and larvæ in our northern country. A full knowledge of the subject will show the best way to arrange measures by which we may finally rid ourselves of these dangerous carriers of disease.

REFERENCES.

¹ Vide Report of the Malarial Expedition of the Liverpool School of Tropical Medicine. ² Vide *La Malaria e le Zanzare*, 26 Oct., 1899. Roma.

PRELIMINARY NOTE ON AN UNCLASSIFIED
TYPE OF WEST AFRICAN FEVER.

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In differentiating the fevers of the West Coast of Africa it is important to exclude the great malarial class from others, by defining malaria as that form of fever in which definite parasites are found in the red blood corpuscles and pigment occurs within leucocytes and in the substance of certain organs. Of such fevers, which through the absence of parasites and pigment may be excluded from the malaria group, is the fever we are about to describe. For reasons which will appear in our paper we propose to provisionally call this disease "hyperpyrexial fever."

CLINICAL FEATURES OF HYPERPYREXIAL FEVER.

This fever is generally ushered in by a slight rise of temperature followed by profuse perspiration and a fall in the temperature to about 99° F. After a period of apyrexia of perhaps twenty-four hours' duration the temperature begins again to rise, slowly at first, but when 105° is passed with alarming rapidity, one degree in 10 minutes having been frequently observed, and it may reach 107° on the second day. For 14 or even for 30 days subsequently there is absolutely no tendency for it to fall. The skin acts either very slightly or not at all, and all antipyretic drugs fail.

The tongue is at first furred on the dorsum and red at the edges and tip; late in the disease it becomes dry and shrivelled. There is no enlargement of the liver or spleen. The urine is of normal character and abundant; the bowels are regular or inclined to looseness. The conjunctivæ are injected and the pupils contracted. The mind remains remarkably clear in most cases, except when the temperature

is at its highest, but constant symptoms in the early days are great anxiety and restlessness.

With regard to the examination of the blood, no plasmodia or pigmented leucocytes have ever been discovered, but in two of the later cases it was noticed that the blood tended to coagulate the moment it was exposed to the air, so that it was only with great difficulty that satisfactory films could be obtained.

TYPICAL EXAMPLES OF THE DISEASE.

CASE I.—This patient had been on the coast for about five months, and had had no fever until the present attack. During the last month he had lived in a tent at a quarry some twenty miles up the Akwayafe river, and, feeling ill four days before admission, got into a canoe and found his way down to the mouth of the river, where he was picked up by a launch and brought to the hospital. On admission, his temperature was only 99.6° F., and he was apparently going on satisfactorily when, as in previous cases, his temperature began slowly to creep up—the beginning of a constant tendency towards hyperpyrexia. He was treated by baths, as will be subsequently described. After his fourth bath he was put into a cold pack, which was changed every hour for four days. The temperature then steadied, and eventually he left for home practically well.

CASE II.—This patient was sent from an out-station on the fourteenth day of his illness, and was still under treatment when the record was made. So marked was the tendency to hyperpyrexia that on two occasions no fewer than two cold baths were necessary in the twenty-four hours, and it was not until the twenty-second day of the disease that it was possible to substitute the continuous pack for the cold bath. From that time until now the temperature has averaged 102°. The patient lies helpless in bed, occasionally showing some glimmering of intelligence, but for the most part remaining unconscious of his surroundings, taking nourishment well, but passing urine and feces under him. This condition, as far as we could tell, may continue indefinitely. The temperature shows no tendency to assume alarming proportions, and the heart and lungs are acting well. (See Chart, p. 203.)

Treatment of the Condition.

This may be summed up in one word—baths. The patient is put into a cold bath, and his temperature brought down to 100° or 99°. He sleeps for about an hour, and then feels fairly comfortable, but the temperature at once begins to creep up again, and in eighteen or twenty-four hours it is back at 106°, or at the point at which it is considered advisable to check it. Quinine and other drugs have been systematically tried without influencing the course of the disease; the coal-tar antipyretics are absolutely useless. Cold sponging and packs are incapable by themselves of reducing the temperature, although in a recent case which recovered it was found that by reducing the temperature by means of the cold bath to 101° or 102° it was possible to keep it there by means of cold packs renewed at hourly intervals.

Progress of the Cases.

It has been observed that, if the patient is to recover at all, some change for the better is to be looked for about the end of the third week. The temperature, which up to this time would constantly rise at once after the bath, might remain at 102° or 103° for several hours, and perhaps in the course of the next week two or more days might pass without the necessity for a bath. Convalescence is gradual, and it may be six weeks after the onset of the fever before the temperature finally assumes its normal course. On the other hand, in 50 per cent. of the cases which have come under observation a fatal issue has occurred.

ADDENDUM BY DR. H. E. ANNETT.

Dr. Annett, who watched cases in the Calabar Hospital, has been good enough to write the following notes on the disease, with the results of his investigation of the blood condition of each case.

The microscopical examinations of the blood in these cases made by means of stained and fresh specimens, revealed neither parasites nor pigmented leucocytes. In the second case, about the end of the second week, an estimation of the number of blood corpuscles gave 4,384,000 red corpuscles, and 15,000 white, while the hæmoglobinometer showed 90 per cent. hæmoglobin. Attempts to cultivate micro-organisms from the blood failed. It was noted that the blood coagulated almost immediately after exuding from the punctures.

The following points in these and in similar cases differentiate this type of fever from others occurring on the West African Coast, and further negative its connection with true malarial fever:

1. These cases occur during the dry season, at a time when the number of typical cases of malarial fever is smallest.
2. The onset, symptoms, and course of the disease are quite

atypical of malarial fever; for example, the absence of rigors or shivering, of the hot and cold stages, of vomiting, of enlarged spleen, etc.

3. The continued tendency to hyperpyrexia, only checked by cold baths, the temperature being easily brought to normal, and then creeping up again directly the cold applications are stopped.

4. After the hyperpyrexial stage the very long period during which the temperature is continually above the normal, varying during the day not more than one degree, and falling by very prolonged lysis.

5. No drugs, including qui-

nine and phenacetin, appear to produce any effect on the course of the disease.

6. Absence of hæmorrhage and of pigmented leucocytes.

7. The peculiar tendency of the blood to rapid coagulation and its comparative richness in red corpuscles and hæmoglobin.

THE DANGERS OF ABSINTHE.—Medical opinion in France has long been unanimous in holding that absinthe and certain other fabricated articles of drink used under the general name of "apéritifs" or digestives are dangerous poisons when taken habitually. A law has recently been passed which permits the Government to forbid the manufacture and sale of any such article recognised and declared to be dangerous by the Academy of Medicine, and in order that this shall not become a dead letter the Chamber, with only two dissentient voices, has recently passed a resolution inviting the Government to request the Academy to indicate those drinks which contain substances dangerous to the public health, so that their manufacture and sale may be prohibited.