on the first day of being attacked, to the hills, and all recovered. A fourth was greatly benefited by the change, and for a few days showed decided improvement; but, unfortunately, perforation of the intestines occurred, hemorrhage came on, and death took place from enteric fever after a prolonged illness and much suffering.

One case of yellow fever, and one of enteric fever, having occurred amongst the soldiers of the 2nd West India Regiment, careful investigation showed that the men had contracted the disease in the lower levels, and in the unhealthy quarters of the town. At once the troops were confined to barracks, at Tower Hill, standing on an elevation, and distant from the town where yellow fever was raging epidemically. No fresh cases occurred amongst the soldiers; and, although many were admitted into the military hospital suffering from a severe form of remittent fever, yet none died. Preparations were made for an immediate exodus to the open on the top of the Leicester range of mountains, at an elevation of 1,000 feet, where the troops were to have encamped. The wooden huts used as a sanatorium on Leicester Peak, 1,500 feet high, were at once placed in a habitable condition, and accommodation provided for twelve beds in the large hut, three in another, and two in the smallest. The "Hospice," a house the property of the Roman Catholic mission at Leicester Peak, was used by the sick during the epidemic, and here were treated some of the cases which recovered. The soldiers, after treatment for fever, were frequently sent, until convalescent, to the sanatorium, from which they returned in health to duty.

Communicability of Yellow Fever.—The most elementary laws of sanitation are almost unknown amongst the natives on the West Coast of Africa, and the inhabitants of Sierra Leone are alike uninformed on the elementary rules of hygiene, on the most important facts concerning food, on the dangers of defective drainage, the contamination of water and the atmosphere, and the ways and means to health. They are as primitive to-day as they have been since 1838-39, and yellow fever is still of frequent occurrence.

If it be true, as some experimenters have shown, that the earth taken from a cemetery of persons dead from yellow fever, and mixed with fluid, and inoculated into the blood, is capable of producing all the most fatal symptoms of yellow fever; and, again, if further evidence prove that, if the blood of a person dead from yellow fever be inoculated into that of a living person, yellow fever is transmissible through the circulation; then it will have been proved that yellow fever is a transmissible disease, and is capable of being communicated. From a health-officer's point of view, considering the effects of this disease upon the human race, it must ever be the prominent aim to prevent the spread of this most malignant disease. Allowing that yellow fever is capable of being transmitted, and admitting that there are laws governing the growth of the smallest living organisms as well as of trees, plants, and insects, and being aware of the presence of certain noxious and invisible microzymes, bacteria, vibrios, monads, and bacilli in the atmosphere, and that these organisms are the product of animal and vegetable life in the presence of heat, moisture, and certain atmospheric conditions in localities such as are existing in Sierra Leone, that yellow fever is a preventable disease there appears no doubt, and this may suggest at length some method of applying a destroying power so as to prevent and destroy the growth of the yellow fever bacillus by chemical agency or by inoculation.

Concluding Remarks.—There is no question that, in the matter of sanitation, we must decide between standing still and doing nothing, or in making a general improvement by directing attention to the defects which are most obvious and demanding their removal. Within the last half century sanitation has taken the first place, and land-drainage, ventilation, and town-sewerage have developed into a science. Town-sewering and the enforcement of other social regulations, vaccination, and sequestration, have contributed to prolong life from five to fifty per cent.

The improvement in a certain town in Wales, during the past thirty years, has reduced the death-rate from 332 per thousand to 232, while the average at death has been raised from 17½ to 27 years. If so much can be effected in a single generation, what may not be done when the bases of sanitation become better understood, and more scientific in character? There is ample room in Sierra Leone for sanitary improvement, and the most important requirements demanding the attention of the proper authorities are the disposal of sewage, ventilation, and a constant and unstinted supply of water. There can be no question that an immense amount of disease is due to perfectly removable causes; but there is little use in isolated studies of facts and possibilities. Scarcely anything short of a sweeping reform will suffice to bring about the desired improvement in the health of a community, where so many valuable lives have been lost by the most culpable negligence, and the grossest ignorance of the commonest laws of

cleanliness, such as existed during the prevalence of the yellow fever epidemic at Sierra Leone in 1884.¹

REMARKS ON THE BRITISH PHARMACOPEIA OF 1885.

By ROWLAND H. COOMBS, M.D.,

Physician to the Bedford General Infirmary and Fever Hospital.

THE new edition of the *British Pharmacopœia* may be pronounced to be a great improvement on its predecessor. It contains many new and valuable drugs; and, whilst omitting a very few that have for the most part fallen into disuse, it supplies us with fresh preparations of undoubted utility and convenience. The definitions of the various chemical substances seem to have been revised with great care, and, in the majority of instances, to have been amplified. The botanical terms and definitions have likewise been much extended. The materia medica teacher and student will not perhaps greet with unqualified approval the numerous instances in which the names of the plants, etc., of the vegetable materia medica have been changed. On taking twenty-seven infusions of the edition of 1867, and comparing them with the same twenty-seven infusions of the present *Pharmacopœia*, we find that the botanic name of the plant used has been entirely altered or varied in about one-third of the cases; the same proportional change will be found by comparing the botanical source of twenty-eight oils of the 1867 edition with the same substances in the present one.

The Latin terms appear to have been carefully revised, and a strict adhesion to a literal etymology has been secured when we find the fruit from which we derive elaterium, known as the squiring cucumber, described as "Ecballium elaterium" (ἐκβάλλω) and not "Ecbalium (officinatum)," as in the former edition. Here we rightly gain a letter, but under Elemi we lose one. Elemi, which used to be described as coming from Manilla, in the Philippine Islands, is now described as "Manila elemi." This is the Spanish spelling of the name. The "Emplastrum calefaciens," translated into English in the *Pharmacopœia* of 1867 as "warm plaster," is more correctly given as "warming plaster;" and an old friend, brown soap cerate plaster, formerly known as "Emplastrum cerati saponis," gets the name "Emplastrum saponis fuscum."

The use of a synonym for many of the substances in the *Pharmacopœia* shows unequal handling. We find "Epsom salt" as a synonym of "Magnesii sulphas," "Fowler's solution" for "Liquor arsenicalis," "Donovan's solution" for "Liquor arsenii et hydrargyri," yet we miss "Dover's powder," "Grey powder," "Laudanum," under the headings of the official names for these common drugs.

The doses are not satisfactorily given. The argument that the *Pharmacopœia* is not a treatise on therapeutics will be put forward, but, admitting this, the principle of authoritative direction in dose has been adopted; and to find "tartarated antimony" described as a diaphoretic in the dose of one-sixteenth to one-sixth of a grain, and as an emetic in the dose of one to two grains, and to turn to the salts of quinine, and to find a bald statement of a dose of one to ten grains, without any allusion to the highest value of the drug as an antipyretic, is disappointing. Why sulphate of copper, ipecacuanha, tincture of rhubarb, sulphate of zinc, should have their therapeutic use scantily indicated, and quinine, aconite, arsenic, and other drugs should be denied similar notice, is difficult to appreciate. In a book, too, of such authority, a table to calculate the dose of medicines for infants and children, or a statement of what such doses should be, is surely required. A curious want of method is shown in the doses of the three highly useful and important drugs (apomorphine, ergotine, and morphine) contained in the hypodermic injections. The dose of hydrochlorate of apomorphine is not given at all, and we are left to calculate what proportion of a grain we are administering when we employ the "Injectio apomorphinæ hypodermica" in a dose varying from two to eight minims. The dose of ergotine is stated at two to five grains; but under the "Injectio ergotini hypodermica" we are left to make an arithmetical calculation as to how much ergotine we are administering in the extremes between three and ten minims. In the hypodermic injection of morphine, the strength is clearly stated

¹ Since the above was written, news has come from Sierra Leone of the death of two distinguished medical officers in Freetown; Surgeon Nathaniel Cameron, Army Medical Staff, who died on July 9th, of typhoid fever, at Tower Hill Barracks; and Dr. Robert Smith, the Acting Colonial Surgeon of Sierra Leone, who died on July 4th, 1885, of pernicious remittent fever, after a short illness, at his residence, in Freetown. He was born in Freetown, in 1840, and was appointed assistant-colonial surgeon in 1866. There has been much sickness this year in Sierra Leone, and general unhealthiness still prevails in the colony.

in two lines as "a solution of acetate of morphine containing one grain of the acetate in ten minims of the injection." It is hard to see why the same definite statement of strength should not have been given for the other solutions.

The adoption of a magistral formula as an imitation of the well known and widely used patent medicine chlorodyne in the "Tinctura chloroformi et morphiae" will doubtless give rise to much criticism; it will be favourably viewed by those who would see in the *Pharmacopœia* a large extension of formulae for drugs in combination; whilst, on the other hand, many will hold that the introduction is unscientific and undesirable. This new compound tincture contains all the ingredients usually assigned to it (*Squire's Companion to the British Pharmacopœia*), but omits one at least (Indian hemp), which has been stated to enter into its composition. Probably Dr. J. S. Bristowe would describe it as "a kind of blunderbuss which scatters its shot and hits other objects beside that at which it is aimed." (*BRITISH MEDICAL JOURNAL*, August 22nd, 1885, p. 333.) This combination of fractional doses of many drugs may possibly afford grounds of experimental inquiry to the therapist; but it may not be amiss to quote an eloquent passage in one of Dr. Peter Mere Latham's articles contributed to this JOURNAL, where, after reasoning that no sound experience is obtainable but by experiments with the simplest medicines, he says: "With all the credit due to pharmaceutical chemistry, and all our obligations to it, I doubt whether, in one chief respect, it has not done some harm. To bring many important remedies together, and unite them by a lucky combination, and compress them within a small compass, and so place them within the common reach, all this gives a facility of prescribing which is hurtful to the advance of medical experience. The facility of prescribing is a temptation to prescribe; and, under this temptation, there is a lavish expenditure continually going on of important remedies in the mass, of which the prescribers have made no sufficient experiment in detail. A simple implement or two, which a man has well proved for himself, is worth a whole armoury of famous compounds taken upon the general credit. A few thousand years ago, a whole people was in fear and trembling. Their enemy was at the gate; their hope was turned to a single champion; all weapons of war were at his service; the king's own armour was offered him—his helmet, his coat of mail, his sword. He did not (how could he?) resist the vanity of putting them on; but soon he put them off again; for 'he had not proved them'; and 'he chose him five smooth stones out of the brook,' and with one of these he did the deed which saved his country" (*Latham's Clinical Medicine*, vol. ii, p. 514; Sydenham Society).

THERAPEUTIC MEMORANDA.

TREATMENT OF RHEUMATISM.

Now that most of us have come to look upon salicin and salicylic acid as a very close approach to specifics in the treatment of acute articular rheumatism, the following notes of an exceptional case may not be without interest.

On July 21st I was called to see a young man, whom I found suffering from this troublesome ailment. About two weeks before, when attending another member of the same family, I was informed that Mr. J. had come home for a time, in consequence of recurrent relapses of rheumatic fever, which followed a wetting. I ascertained that he was taking forty-grain doses of salicin, thrice daily; but he had instructions to take the dose every two hours, if the pain and swelling of any of the joints recurred. At this time he had been taking it about six weeks, and was better. As I have considerable faith in salicin, I advised him to continue it.

I did not hear of him again until July 21st, I then found him very restless after two sleepless nights. Temperature, 101°; pulse, small, soft, and frequent. One knee-joint was acutely affected; the pain was subsiding from the ankle, and other joints were becoming involved. The conjunctivæ were yellow tinted, and the skin of a pallid yellow colour. From his great restlessness and sense of extreme illness, I feared the approach of hyperpyrexia.

I gave him 5 grains of quinine and 25 grains of bicarbonate of potash, four times daily, ordered a blister to the affected knee, and a purgative dose of calomel every second night. After this, he had a good night. On July 23rd the knee was not painful, but the vertebral and one sterno-clavicular joints were involved. I continued the same treatment, blistering each joint successively attacked, in addition to putting a blister over the heart, the beat of which became thumping and much diffused, and in marked contrast to the small and

feeble pulse; after two days, a systolic murmur became audible at the apex.

After the first blistering, none of the joints became so severely inflamed, and at the end of four days the arthritis had ceased to recur to any marked extent; but the fever continued four days longer; the temperature varying on my visits between 101° and 102°. The icteric tint gradually disappeared. I kept him on the potash and quinine, and milk-diet, until the *bruit* had disappeared, and ultimately put him on large doses of perchloride of iron.

The peculiarities of the case are these. 1. Articular rheumatism recurred in an acute form, involving also the heart, when he must have been saturated with salicin, which he had been taking for eight weeks, in forty-grain doses. 2. The vitality of the nervous system was profoundly depressed, as the blisters did not rise well in fifteen hours at first, though they subsequently rose after only seven hours' application of the same vesicating material (this I have observed in other cases). 3. The affection of the joints had quite ceased for some days before the fever, which was not markedly influenced by sulphate of quinine, in small doses, daily. 4. He has had no further relapse, though often recurring during the previous eight weeks; and I may add he felt such rapid relief from the blisters, that he was only anxious to have them applied on any slight indication of returning pain.

I, in common with many others, am in search of some indication to guide us in the administration of salicin or salicylic acid, and feel sure that the experience of most medical men will corroborate mine, that there are cases in which salicylic acid and salicin fail to cure, and therefore it becomes of importance to recognise, as early as possible, those in which it is indicated, or the reverse.

I have had another case of acute migratory articular rheumatism, in which I had to lay aside the treatment with salicylate of soda for other remedies; and these two cases suggest to me the question—Is the migratory form less amenable to salicylic acid than the stationary, or can we derive any guidance from the degree of febrile temperature? My patient had a prolonged attack of rheumatic fever thirteen years ago, when a boy.

WM. J. MACKIE, M.D., Turvey, Bedford.

ARSENIC IN LYMPHADENOMA.

DURING the first week of March, 1885, James G., aged 57, married, a gentleman's servant, of sober and healthy antecedents, presented himself to me as an out-patient at the West Kent General Hospital. As I had known him before, it could be seen at once that he was thin and sickly. At first, no definite complaint on his part could be elicited, but mention was made of a swelling in the armpit. This led to his being completely stripped, when a considerable bunch of enlarged glands was seen at once above each collar-bone, in each armpit, and in each groin. He did not think they could have existed more than six or eight weeks, but this was doubtful. Our district meeting was to come off at the hospital on March 27th. I persuaded him to come for exhibition, and he was willing enough to do so; on that occasion, being again stripped, he was examined by twenty or thirty medical friends. The gland-bunches stood out even bigger; in average bulk, they may be spoken of as a large handful each.

At the same meeting, our attention was called to a new form of pill-preparation carried out at Hamburg, the principle being to invest the drug in keratin, or horn-gelatin, in such a way as to render the pill insoluble in the acid fluids of the stomach, while it becomes readily dissolved in the alkaline contents of the upper bowel. It occurred to me that the delayed solution ought to be advantageous when applied in the case of arsenic, and also that arsenic was the most hopeful remedy for the patient with lymphadenoma. I procured a supply of the pills through the firm of Bell and Co., Oxford Street, each pill being stated to contain one-thirteenth of a grain of arsenious acid. The pills were commenced about the 4th or 5th of April, and continued, one thrice daily, till June 4th. No disturbance of any sort resulted; he came once a week to the hospital, declared that he was being cured, and, to my eyes, and to those of a colleague and the house-surgeon, it was certain that every bunch of glands steadily and considerably diminished.

On June 4th, he came, a stricken and altered man, having been seized forty-eight hours before with pleuropneumonia, then fatally rife. He was sent back to the care of his country medical man, and died within a fortnight. That gentleman remarks that, at the last, the bunches of glands had almost disappeared.

Whether the fatal attack was an accidental episode, or whether it was based on intrathoracic glandular mischief, cannot be known. Whether, if he had escaped the pulmonary attack, the original dis-