

CURRENT LITERATURE

To take due notice of the current literature of leprosy is one of the most important objectives of the JOURNAL. For the benefit of readers to whom medical libraries are not readily accessible it is intended that, so far as possible, abstracts of the more important articles shall be sufficiently full and complete to afford a clear understanding of them, rather than merely of the nature of their content.

The Contributing Editors are depended upon primarily to provide these abstracts. However, since authors' abstracts are generally to be preferred to those prepared by others, readers are invited to submit abstracts of recent papers or reports written by them which have been published elsewhere.

MARCHOUX, E. Le rat et la lèpre. [The rat and leprosy.] *Rev. Colon. Med. Chir.* (1933) 69.

After a number of general remarks on the Stefansky bacillus, Marchoux gives the proportion of infected rats found in the murine population of the sewers of Paris: 5 per cent with the infection confined to the lymph nodes and 0.6 per cent with the general, musculo-cutaneous infection. As in human leprosy, the macrophages are involved. The cell seems not to suffer greatly on account of the presence of the parasite though it increases in volume and when it becomes too greatly distended by the bacilli it ruptures. The liberated bacilli are taken up by other migratory cells and the disease spreads.

—M. LEGER (TRANSLATED).

GUILLINY, R. AND MONTESTRUC, E. Etude sur la lèpre oculaire murine. [Ocular involvement in rat leprosy.] *Bull. Soc. Path. Exot.* 26 (1933) 901.

Numerous rats infected experimentally were examined after six months, and in two of them it was found that the infection had involved the eye. The facts support what Marchoux had already shown, that the dispersion of the bacillus is increased by a superadded infection. After injections of very small quantities of the Stefansky bacillus into the anterior chamber of the eye of new rats the authors found that the infection is concentrated at the base of the ciliary process, and the bacillus multiplies as quickly as the bacillus of Koch.

—M. LEGER (TRANSLATED).

TISSEUL, J. Nouvelle série de traitement de la lèpre du rat. [Further on the treatment of rat leprosy.] *Bull. Soc. Path. Exot.* 26 (1933) 579-584.

The acetone extract of lepromas injected into the leprous rat produces a marked activation during the first weeks, followed by a moderation of its evolution. The methyl extract accelerates greatly the evolution of the lesions. Creosoted ethyl esters of chaulmoogra has an unfavorable effect on the

original condition. Gold chaulmoograte with guaiacol seems to moderate the course of the malady in the first months, but without inhibiting its evolution; at the end of the observation it is more advanced than in the controls, though with this medicament the general condition remains good. Ammonium molybdate has a very clearly favorable effect. Under its influence the lepromas increase much less rapidly and ulcerate much later. —M. LEGER (TRANSLATED).

GIRARD, G. AND WOLTZ, H. La cholestérolémie chez les lépreux de Madagascar. [Cholesterolemia in leprosy in Madagascar.] *Bull. Soc. Path. Exot.* 26 (1933) 702-704.

One hundred cases have been studied; 70 nervous, 23 tuberculous, 7 mixed. In the first of these groups the cholesterol content varied between 0.87 and 1.50 gm. per liter of serum, with an average of 1.10 gm.; in the second group it was between 0.60 and 1.23, average 0.95; and in the third between 0.75 and 1.20 average 0.95. In a control hundred apparently healthy Malgaches living in Tananarive the cholesterol estimations varied between 0.80 and 1.80, the average being 1.10 gm. The authors conclude that in the Malgaches only the lepers with the tuberculous form of the disease have a hypocholesterolemia. [In the discussion of this paper Leger recalled that he had arrived at the same conclusions in his work with Boulay, in 1923, in which he had found a decrease in mixed and predominatingly tuberculous cases. He had also noted a certain retention of calcium in the blood of some lepers.] —M. LEGER (TRANSLATED).

GIRARD, G. Le sort des enfants de lépreux. [The fate of children of lepers.] *Sud. Méd. et Chir.* (1933) 502.

In Madagascar mating of lepers, which it would be useless to attempt to prevent, produces on the whole as many children as in the average of the population. In the leprosarium of Manankavalez, with from 700 to 1,000 inmates, the average of births during thirty years has been about 30 per thousand. The same is true of the Mangarano leprosarium (Antsirabe). The explanation is that the lepers are well nourished. The separation of the new-born on the day of their birth indisputably protects them from contagion, while to keep them with their mothers for some months suffices for their infection. The mission of Antsirabe has had experience with this half-measure for thirty years; of 954 children who have survived 14 (1.5 per cent) have been returned with leprosy. But caring for the infants separately, with artificial feeding, is doomed to failure on account of the high mortality. Of 77 children of lepers thus cared for from 1920 to 1929, 59 (79 per cent) died before the age of two (gastro-enteritis, broncho-pneumonia). Of the 180 infants who remained with their mothers and were nursed without the least care for hygiene, only 61 (32 per cent) died. Artificial feeding is absolutely unsatisfactory. Girard adds that the children of lepers have never seemed to him weaker than the average of other children. —M. LEGER (TRANSLATED).

SOUCHARD AND ROTON. Observation d'un cas de lèpre traité par le savon total de "krébao." [A case treated with a total chaulmoogra soap.] *Bull. Soc. Path. Exot.* 26 (1933) 769-772.

A white woman who contracted leprosy in Saigon was treated by tablets of the chaulmoogra soap described by Boez, Guilherm and Marneffe. She took

progressively from 4 to 16 tablets, 0.25 gm. each, daily at meal times for three consecutive months. A distinct improvement had taken place at the end of that time. The medication was continued in two other periods of three months. At the end of ten months the patient no longer presented the appearance of a leper. The chaulmoogra oils have an undeniable effect in leprosy, but it is necessary to recognize that this is slow. The best preparation, therefore, will not necessarily be the most active, but that which can be used for the longest time without fatigue. Tablets of Krébao have a definite therapeutic effect. ["Krébao" is the Annamite term for *Hydnocarpus anthelmintica*, which seems to have been long used.]

—M. LEGER (TRANSLATED).

NICOLAS AND ROUSSET. Trois cas de lèpre. [Three cases.] *Lyon-Méd.* 151 (1933) 480.

From this communication and the discussion that followed it, it appears that seven cases of leprosy have been cared for in the services of Lyon in a year. The authors call the attention of the public authorities to the urgent necessity of taking rigorous measures against the disease, either at the frontiers or in the interior.

—M. LEGER (TRANSLATED).

GROS, H. Essai d'histoire de la pathologie des établissements française de l'Océanie. [History of diseases in the French colonies in Oceania.] *Rev. Colon. Méd. et Chir.* (1933) 182.

Leprosy, the author says, has made great progress in Tahiti for some years. As for the question whether it was introduced by the Europeans or existed before their arrival ("oovi" of the Tahitians), it is more than probable that it was already endemic. In any case, having disappeared entirely before 1890 it has reappeared since then and has necessitated the creation of the Orofara leprosarium.

—M. LEGER (TRANSLATED).

DE MARQUEISSAC, H. AND SOYER, H. Enquête sur le lèpre en pays Kabré (Nord-Togo). [Leprosy in the Kabré country, North Togoland.] *Bull. Soc. Path. Exot.* 26 (1933) 474-485.

Among 109,061 persons examined 653, or 5.9 per 1,000, were found to have leprosy. Of these 68 per cent were cutaneous, 5 per cent nervous, and 26 per cent mixed. Of 307 who had apparent lesions and who could be interrogated seriously, 156 gave histories of the occurrence of leprosy in their ancestry or had it among their collaterals. Children were comparatively little affected—83 out of 48,935, or 1.6 per 1,000. Pregnancy among the women with leprosy terminated prematurely in 18 per cent of cases.

—M. LEGER (TRANSLATED).

OTA, M. AND KONNO, E. Widerstandsfähigkeit des leprabazillus gegen sublimationsen und Wärme. [Resistance of the leprosy bacillus against sublimation solutions and heat.] *La Lepro* 3 (1932) No. 3. (In Japanese, with German summary.)

Various workers have attempted to differentiate between living and dead leprosy bacilli by staining, but their methods apply only to the bacilli in the tissues. As yet the resistance of the leprosy bacillus outside of the tissues has been judged only by analogy with other acid-fast bacilli. Nojima tested his cultures against several reagents, but his so-called cultures were nothing but

cultures of tissue containing leprosy bacilli. The authors have used two strains of leprosy bacilli cultivated from lepers' bloods: (1) strain Bg, forming whitish colonies, and (2) strain Cd, forming orange colored colonies. The controls used were: (1) *Myco. phlei*, (2) *Myco. tuberculosis (typus gallinaceus)* and (3) *Myco. leprae murium*. For the last was used creamy-white strain E 1684, one of 12 strains cultivated by Asami. The present report deals only with the effects of sublimate solutions and moist heat. Tables in the Japanese text show details; the conclusions are: (1) The bactericidal action of sublimate on strain Cd is very weak in solutions more dilute than 1:2,000; in 1:1,000 the germ survives 30 minutes, though it is killed in 1 hour; in 1:500 it may be dead in 5 minutes. (2) Resistance to moist heat varies with the culture. Strain Bg resists heating in water at 60°C for 60 minutes, though after 120 minutes it no longer grows; at 65°C it still lives 30 minutes. Strain Cd is a little less resistant; 5 minutes at 55°C kills it, though it still lives after 60 minutes at 53°C, and is only completely killed after 120 minutes.

[FROM THE AUTHORS' ABSTRACT, TRANSLATED] *

OTA, M. AND ISHIBASHI, T. Komplementbindungsreaktion mit extrakt von leprabazillenkultur als antigen. [Complement fixation with extract of culture of lepra bacilli.] Abstract in German: *Japanese Jour. Dermatol. and Urol.* 33 (1933) No. 1.

In this preliminary report the authors record that: (1) Using an alcoholic extract of an orange-yellow culture (strain Cd) there is fixation of complement with the serum of rabbits immunized with the same strain. (2) The same is true of an antigen prepared from a white culture (strain Bg), tested with the serum of a rabbit immunized with that culture. This Bg antigen also reacts with the Cd serum, but the Cd antigen does not react with the Bg serum. (3) Fixation does not take place between the Wassermann-reaction antigen (Kolmer) and either serum. (4) Cd antigen gave no positive reactions with the sera of 5 lepers and 29 non lepers (of which 3 were Wassermann positive). Bg antigen gave a positive reaction only with the serum of one leper.

[FROM THE AUTHORS' ABSTRACT, TRANSLATED.] *

NISHIHARA, T. [Treatment by local injections of chaulmoogra oil or iodized ethyl esters.] *La Lepro* 5 (1934) 153.

In the Tokyo district leprosarium iodized ethyl esters as prepared by Cole and brought from Cullion by Ota were used in 16 cases. These patients all had recurrent nodules, which are not readily cleared up by intramuscular injections of the oil. The esters were injected into some of these nodules, 0.2 or 0.3 cc. each time, the total amount used at one time being 2 cc. By the third, fourth or at most the tenth injection they were undergoing absorption. Ulcers formed where nodules had been destroyed were cured by this method. The uninjected nodules usually stayed unchanged, and sometimes increased. One macular and three tuberculous cases were injected, not in nodules but subcutaneously in the upper arms or the thighs, the dose being 1 cc., 80 injections being made in seven

* From a translation from the German by Dr. Alfredo Santos.

months. The macules on the thighs disappeared but nodules were not affected. The author also tried intranodular injections of the whole oil, but they could not compare in effect with those of the iodized esters. The oil does not begin absorbing before injections are made over ten times. But when injections are made into tens of nodules at a time and the dose reaches to 10 or 15 cc., uninjected nodules near those injected also disappear. These facts show that the ethyl esters has little general effect but gives good results in local treatment. —M. OTA.

OGAWA, N. [Chaulmoogra ethyl esters mixed with apricot oil.] *La Lepro* 5 (1934) 147 (Japanese).

The value of 0.5 per cent iodized ethyl esters is generally acknowledged, but it has one defect in that it shows pigmentation after intracutaneous injection. Ogawa mixed apricot oil instead of iodine with the ethyl esters and found that, besides not causing any pigmentation, it gave very little undesirable side-effects.

—M. OTA.

KAMIKAWA, Y. [Some characteristics of leprosy in Formosa.] *La Lepro* 5 (1934) 114 (Japanese).

In Japan proper are seen many instances of alopecia leprosa; it is said that it occurs in 45 to 60 per cent of cases. In Formosa, however, the incidence is comparatively low. In two leprosy hospitals the authors found 25 out of 119 (21 per cent) and 7 out of 54 (13 per cent) respectively. On the other hand, ulceration of the lower thighs is very common in Formosa, and was seen in 87 per cent of the cases while it was present in only 45 per cent in the First District leprosaria near Tokyo.

—M. OTA.

ROW, R., DALAL, W. P. AND GOLLERKERI, G. V. On some experimental studies in leprosy. *Indian Jour. Med. Res.* 21 (1934) 546.

The authors state that by repeated weekly intraperitoneal injections of human leprosy material they have succeeded in producing in white mice definite though minute seed-like bodies, usually in the gastro-hepatic omentum. These consisted of aggregations of cells packed with apparently vigorous acid-fast bacilli suggesting well-marked bacillary proliferation. Human leprosy material boiled and injected in a similar way did not produce similar lesions, and only a few acid-fast bacilli, sparingly distributed, were demonstrable in the mesenteric lymph glands; these showed distinct lymphocytic hyperplasia. A similar course of intraperitoneal injections in macacus monkeys produced after a few weeks a sensitization to subcutaneous injections, which was followed after 15 to 20 days by a "remarkable specific granulomatous tumour formation" with characteristic structure but with only few acid-fast bacilli, that lasted several weeks before absorption. The authors realize that even killed acid-fast bacilli can be found in experimental animals for some time after injection; but they state that there is no evidence that such organisms are associated with any definite cell reaction or cell accumulation characteristic of any attempt at pathogenesis. The article is illustrated by photomicrographs.

—J. LOWE.

MUIR, E. AND CHATTERJI, S. P. Trypan blue in the treatment of leprosy eye lesion. *Lep. in India* 6 (1934) 9.

Two methods of injection have been used, intravenous and subconjunctival. Intravenous injections were of limited value. Subconjunctivally, a 0.1 per cent solution in normal saline was used, sufficient being given to balloon the conjunctiva. Eleven cases are described, in all of whom this form of treatment produced partial or complete relief of pain and improvement of vision.

—J. LOWE.

PALDROCK, A. Specific treatment of leprosy. *Urolog. and Cutan. Rev.* 37 (1933) 859.

This article is simply a summary of the author's well-known views, which include the opinion that the retardation of all biological functions in leprosy patients is explainable by clogging of the lymph channels with the causative agent, and that this agent is not a bacillus but a filamentous organism, with nuclei, buddings and branchings. The author discusses his findings in microchemical reactions applied to the organism in smear preparations, which are quite different from the reactions given by the tubercle bacillus. He also expounds the basis of his carbon-dioxide-snow treatment which, he holds, by freezing the organisms breaks down their protective membranes and thus permits their destruction by enzymes; the process which is set up extends to lesions not so treated and so constitutes an autoimmunization and therefore a specific treatment. Other chemotherapeutic materials, especially certain organic gold preparations, are used only after the leprosy organisms have become resistant to the freezing treatment; these drugs restore to the organisms their lost sensitivity, wherefore the two methods are used in alternation.

—H. W. W.

JDAN-PUSHKIN, M. N. AND KUZNETZOV, V. N. Fatty vegetable oils in the treatment of leprosy. *Urolog. and Cutan. Rev.* 37 (1933) 852.

The authors, the one of the institute of vegetable oil extraction, the other of the Krasnodar (Kuban) Leprosarium, North Caucasus, U. S. S. R., introduce the subject of perilla oil by criticizing medical literature for errors concerning the oils in use in leprosy. Whereupon they proceed to deny the similarity of chaulmoogra and hydnocarpus oils because Moss, in 1879, reported hydnocarpus oil to contain 63 per cent palmitic acid, and show by findings reported in 1903 how chaulmoogra oil is adulterated! Seeds of *Perilla ocymides* of the family *Labiatae*, an oriental plant introduced experimentally into the North Caucasus, give a cold pressed oil of extremely light color, taste resembling linseed oil, specific gravity 0.9304, iodine number 203; it thickens markedly on heating but does not solidify in a salt-ice mixture. It is concluded that it contains the largest percentage of the highly unsaturated, easily oxidized linolic and linolenic acids of any known oil, for which reason the authors recommend it for leprosy. The ethyl esters ("perigrol") with camphor were administered intramuscularly to 45 and more patients for six months. They caused no ill effects, generally or on eyes or kidneys. Reactions occurred in "florescent" cases. The results did not differ from those obtained with moogrol, and it is concluded that their new drug successfully competes with the foreign one.

—H. W. W.

AOKI, Y. Die säurefesten Wasserbakterien und ihre Bedeutung als Fehler-quelle für die Reinkultivierung der Leprobazillen. [Acid-fast water bacteria and their importance as a source of error regarding the cultivation of the leprosy bacillus.] *La Lepro* 3 (1932) No. 4. (In Japanese, with author's summary in German).

Attention is called to the importance of non-pathogenic, acid-fast water bacteria as a possible source of error in attempts to cultivate the leprosy bacillus. To determine the frequency of their occurrence in Nagasaki, the author studied 36 samples of water taken from the faucets in the University and found such organisms in 6 of them, sometimes in considerable numbers. They were easily isolated by the Schmidz antiformin method, growing well on the Löwenstein egg medium as smooth, moist colonies, pin-head or larger in size, of orange yellow color. They gave no evidence of pathogenicity in mice, rats, guinea-pigs or rabbits. They were strongly resistant to sulphuric acid, withstanding a 5 per cent solution at 37°C. for 90 minutes, though they failed to grow after 60 minutes treatment with a 10 per cent solution or 20 minutes with 15 per cent. From this it follows that any such organisms that may be on the instruments or in the vessels or solutions used in leprosy cultivation work will not be killed by the sulphuric acid treatment used by Shiga, Ota and others, and may therefore be cultivated and erroneously taken to be the leprosy bacillus itself. —H. W. W.

NISHIKAWA, T. [The blood content of calcium and inorganic phosphorus, and a radiographic investigation of the ossification of costal cartilage in lepers.] *La Lepro* 3 (1932) No. 2. (In Japanese, with summary in English by Y. Satami.)

From tests on 38 cases of leprosy the author concluded that there was a slight diminution in calcium in comparison with healthy persons. No difference was seen in the content of phosphoric acid, which was quite uniform among persons who lived in similar conditions. A disturbance of the ossification of costal cartilage was seen in cases of nodular leprosy, and this seemed to be due to disturbed calcium metabolism. [ABSTRACT OF SUMMARY. H. W. W.]

ARCOS, G. [Leprosy in Ecuador.] *Medicina* 4 (1932) 63.

Leprosy, which was first brought to South America after the conquest, chiefly by negro slaves, at present affects about five hundred persons out of a total population of about two and a half millions in Ecuador. There are homes in Quito and Cuenca where the patients are completely cut off from the world and have no opportunity of occupying themselves with agriculture or gardening. Men and women are strictly separated. Marriage is forbidden; on the other hand, divorce is legally facilitated if one of a couple is affected with leprosy. The author, who made his observations on about 300 cases, is pessimistic about the curability of leprosy. Only the ethyl esters of the true chaulmoogra varieties (8 species are listed) are regarded as of value, and they give results only when employed early; under these circumstances the clinical manifestations and the bacilli disappear in about 30 per cent of the cases. Of these a third relapse within 2 or 3 years, and whether the others are actually cured is doubtful. In Ecuador leprosy is primarily a disease of poverty, affecting the country people. The campaign against it, then, has prospect of success

only when various unsatisfactory conditions under which the peasants live are improved.—[TRANSLATION OF ABSTRACT in *Deutsche. Med. Wochenschr.* 59 (1933) 1413.]

[HONG KONG.] Leprosy, in Medical and Sanitary Report, 1932, p. 36, by A. R. Wellington, Director of Medical and Sanitary Services, Hong Kong.

Though leprosy is a notifiable disease in Hong Kong very few cases are ever reported. Assuming the rate of incidence in the neighbouring country to be at least one per mille population, the number of cases in Hong Kong and the New Territories cannot be less than 500. There is no asylum in the Colony. Lepers who are not British subjects are prohibited from entering the Colony and may be deported. Those who are Chinese subjects are sent to Canton whence they go to Shek Lung, where there is an official asylum of the Kwang Tung Government, under the direction of a Catholic mission. During the year the Hong Kong government paid to the mission a donation of \$2,500 (Hong Kong currency). —H. W. W.

[QUEENSLAND]. Annual report of the Commissioner of Public Health to 30th June, 1933. Brisbane, (1933) pp. 24 and 25.

During the year 1932 admissions to the Peel Island lazaret totalled 16 (4 whites and 12 colored). There were 12 releases (5 by discharge and 7 by death), leaving 60 inmates (31 white and 29 colored). Among the admissions was an aboriginal family of five members from North Queensland. In the laboratory of microbiology at Brisbane 25,322 rats were examined for evidence of plague and rat leprosy, and of these 14 showed the presence of numerous acid-fast bacilli —a ratio of about 1 to 1,800. —H. W. W.

[COLOMBIA]. (Leprosy in the Republic of Colombia.) Informe de las Labores del Departamento Nacional de Higiene, 1931-1932. Bogota. Summary in: *Bull. Off. Internat. d'Hyg. Publ.* 25 (1933) 317.

From the four statistical tables republished in the *Bulletin* referred to, it is seen that on April 30, 1932, a total of 7,347 cases were hospitalized in three lazarets, namely, Agua de Dios (3,782), Contratación (3,193) and Caño de Loro (372). The tabulation of sources of these cases according to territorial divisions shows on reference to a map a marked concentration of the disease in the central region. From Santander del Norte (463), Santander del Sur (2,174), Bayacá (2,023) and Cundinamarca (1,367) came a total of 6,027 cases, 82 per cent of all. There were comparatively few from the coastal regions and none from the vast, unsettled area to the east and south. The table of institution population shows a continual increase, from 4,677 in 1919 to 7,554 in 1931. Since 1919 the deaths (average annual rate about 5 per cent), have been fewer than the admissions. Approximately 4,500, about 60 per cent, were listed as under treatment in 1932. The "official" treatment was being given to 3,528, that of Benchetriet to 859 and that of Delgado Palacios to 56. From February 1, 1930, to July 7, 1932, a total of 321 cases had been released as not dangerous from the social viewpoint. —H. W. W.

STEWART, A. D. Leprosy as a public health problem. *Lep. in India* 5 (1933) 183.

Stewart considers that all infectious diseases are essentially epidemics, varying in duration from a few weeks to hundreds of years. The tuberculosis epidemic in England has lasted about two hundred years and is now on the down grade. The leprosy epidemic in Europe apparently lasted about a thousand years. In other countries it has apparently been much longer. He thinks that India may be on the down grade of the leprosy epidemic, for the average case is fairly mild. The subsidence of the tuberculosis epidemic in England started long before the modern anti-tuberculosis campaign. The principal factor to help the decline has been social hygiene in its true sense; special anti-tuberculous measures are an important part of social hygiene. Considering leprosy in India from this point of view, Stewart stresses the importance of social hygiene, special anti-leprosy work being one agency through which social hygiene can operate, not in originating a decline in leprosy but in aiding the natural decline of the epidemic.

—J. LOWE.

[ANONYMOUS]. Organization of a campaign against leprosy in a rural area. *Lep. in India* 5 (1933) 219.

This is a memorandum as suggested by the Calcutta conference for the guidance of local authorities wishing to inaugurate anti-leprosy measures in India. It suggests the formation of local leprosy committees, the starting of clinics which shall be made centers of preventive work and treatment, the formation of village anti-leprosy committees which should attempt to get all infectious cases isolated outside the village or under favorable circumstances in their own homes, and the keeping of accurate records of leprosy in villages. This should as far as possible be on a voluntary and self-supporting basis.

—J. LOWE.

LEGER, M. La séro-floculation au péréthynol chez les lépreux. [The perethynol flocculation reaction in leprosy.] *Bull. Soc. Path. Exot.* 25 (1932) 128.

Observations made show that one does not find, by the sero-floculation reaction of Vernes, a high photometric degree as among lepers who are at the same time syphilitics. This is frequent, especially in a hospital milieu, and can explain the results reported by D. and M. Sanjurjo, of Paraguay.

—[AUTHOR'S ABSTRACT, TRANSLATED.]

JAME, JACOB ET JUDE. Lèpre mixte à évolution aiguë. [Mixed leprosy of acute evolution.] *Soc. Médecine et Hygiène Tropicales* (1932).

The authors present a (malgache) laborer, 22 years of age, whose parents and seven brothers and sisters are in good health. The evolution of the disease was acute, almost fulminating, and marked by serious cutaneous and neurotrophic symptoms. Radiography shows notably a spontaneous fracture of a phalanx. Chaulmoogra treatment, in the form of injections of "chaulmorhuate," was giving excellent results.

—M. LEGER (TRANSLATED).

DIXEY, M. B. D. Leprosy on the Gold Coast. *Lep. Rev.* 3 (1932) 94.

Details of local interest are recorded regarding the number of cases of leprosy found during three years' work on the Gold Coast, where the largest number of cases were seen around Kimasi in Ashanti, and in the dry northern

territories. In Togoland many cases were attracted to the Ho settlement. The natives can recognize even the early stages, and the value of treatment is being slowly accepted. Alepol and moogrol are used in the treatment. About two-thirds of the cases were of the nerve type.

—L. ROGERS.

FIDANZA, E. P. Leprosy in Argentina *Lep. Rev* 3 (1932) 107.

The occurrence of leprosy in Argentina is being increasingly recognized. It is supposed to have been brought by Negro slaves. In 1891 the number of cases was calculated at 300, but now as the result of a questionnaire to the doctors there are believed to be more like 3,000, or double that number if early cases are included. The disease is most prevalent in the hottest and dampest areas in the north, the drier provinces bordering on the Andes showing only 2 per cent of the total cases. The majority are mild nerve cases. Very little has yet been done in prophylaxis, but a few cases are treated with chaulmoogra preparations, with "highly satisfactory results."

—L. ROGERS.

LAMPE, P. H. J. The organization of anti-leprosy measures in Surinam. *Lep. Rev.* 3 (1932) 147.

In 1929 the earlier compulsory segregation laws of Surinam (Dutch Guiana) were replaced by a new ordinance in which emphasis is placed on medical treatment of non-segregated patients. All cases are examined by a board of five medical men. All school children are examined at least every four years, which plan has proved effective for detecting early cases; among 8,000 children 123 were found infected, and 44 others so suspicious as to be excluded from school. Cases are treated at dispensaries, or at their homes, with about 85 per cent of attendance. A dispensary-school is described and illustrated. A Surinam Leprosy Relief Association has raised considerable sums for the work, and free food is supplied to the infected school children to increase their powers of resistance. There are rules regarding the employment of bacteriologically positive cases. The number of isolated cases increased from 407 in 1929 to 482 in 1931. The article concludes by stating that "the tracing of early cases must be the main object of the organization; that segregation in an asylum must not be ordered unless absolutely necessary and in accordance with a defined indication."

—L. ROGERS.

WALLACE, C. A. Leprosy in Ukuguru district, Tanganyika. *Lep. Rev.* 3 (1932) 159.

"Leprosy has been endemic in this district for many years, and the general consensus of opinion is that it is rapidly increasing." The numbers are estimated at 25 per mille, and the majority are advanced cutaneous cases, nerve ones being comparatively rare. Treatment centers are being established, and also colonies when funds permit. A map shows a number of places where leprosy work is being carried on by the Church Missionary Society.

—L. ROGERS.

KELLERSBERGER, E. R. Some facts about leprosy in the Katanga, Belgian Congo. *Lep. Rev.* 3 (1932) 162.

In January, 1931, the first known organized leprosy colony in the Belgian Congo was opened in Katanga, as previously lepers have been cared for only

by protestant missionary societies. The new colony is nearly self supporting as regards food, as the soil is good. Already there were 216 admissions and almost 500 attending a dispensary, but no one knows how many thousands of lepers there are in the country, the majority of whom are cutaneous ones.

—L. ROGERS.

ROSE, F. G. Five years' work in British Guiana. A report to the Medical and Sanitary Committee of the Colonial Office. *Lep. Rev.* 4 (1933) 4.

This is a most instructive account of the successful application of modern prophylactic measures in a British Colony, reviewing the first five years of a campaign on new lines in 1928. The law was altered to enforce the segregation only of open cases, out-patient clinics were established to treat closed cases and examine suspects, and surveys were made. A leprosy board confirms diagnoses and recommends admissions and discharges, while the compulsory removal of children newly born to leper parents is provided for. Special attention is paid the examination of families of infected persons. Out-patient dispensaries have been built at the cost of the British Empire Relief Association. A graph shows an increase in the notified cases as expected, but a decrease of those treated in the leprosy hospital, partly due to old, crippled nerve cases being separately accommodated. At the end of 1931 the known cases numbered 477 or about 1.5 per mille.

Since 1931 nearly all notified cases have been admitted voluntarily. Treatment consists of alepol intravenously and hydnocarpus oil or esters intramuscularly. A table covering five years experience shows 491 cases treated, with 128 arrested, 132 quiescent, 101 subsiding, making 361 (or 73 per cent) improved, 18 stationary, 17 worse; 95 (19 per cent) died. Among early cases 87 per cent improved against 65 per cent of advanced cases and 34 per cent of untreated ones. Among 255 treated bacteriologically positive cases 105 (41 per cent) became negative, but no such case was noted to become negative without treatment, and these figures include these who had only been admitted in time to have a few months treatment. Still more important is the fact that the paroled patients have been examined monthly and only 6 relapses out of 128, or 4.7 per cent have occurred. There are already some indications of a decline in the number of new cases.

—L. ROGERS.

MOISER, B. A description of the work at the leprosy hospital at Ngomaharu, Southern Rhodesia. *Lep. Rev.* 4 (1933) 13.

A leper colony for over 400 patients, mostly voluntary, with 8,400 acres of land is described. Exercise on paid work is provided. Treatment is mainly with alepol on account of its cheapness, although antileprol intradermally is preferred, and local applications of trichloroacetic acid to destroy nodules and infiltration of the ears.

—L. ROGERS.

MACDONALD, J. A. Itu leprosy colony, Nigeria. *Lep. Rev.* 4 (1933) 19.

This report for the year ending April 1st, 1932, relates to 1012 patients with 182 admissions, including 50 crippled and debilitated; 25 were discharged symptom-free and 21 died. Hydnocarpus oil and esters made locally were used subdermally and intradermally twice weekly, and the results are described as

reasonably satisfactory. Very few come in the really early stages; many come too late to be benefited, but of the remainder the great majority are distinctly improved. With patience, it is stated, some 40 or 50 per cent will go out symptom-free. An increasing amount of cultivation is being done by the patients, which about pays for the labor.

—L. ROGERS.

[CEYLON.] Leprosy in Ceylon based on a report of the Hendala Leprosy Asylum. *Lep. Rev.* 4 (1933) 63.

The number of patients in the Hendala asylum has increased from 528 in 1925 to 610 in 1930, and increased accommodation is required. In Ceylon there are about 1,000 known and probably 2,000 unrecognized cases. Compulsory segregation, with insufficient accommodation, has not prevented a steady increase. The rates per mille of known cases in the Eastern, Western, and Southern provinces are 6.2, 2.4 and 1.6 respectively; they are much lower in the remaining ones. The writer advocates modification of compulsory segregation by establishment of leprosy clinics for out-patients at hospitals and dispensaries, with control of immigration.

—L. ROGERS.

COCHRANE, R. G. The modern treatment of leprosy. *Lep. Rev.* 4 (1923) 69.

This is a short paper read before the British Medical Association describing the usual methods of modern treatment.

—L. ROGERS.

MOISER, B. Leprosy survey of Gutu Province, S. Rhodesia. *Lep. Rev.* 4 (1933) 75.

This area has a Bantu population of about 50,000. Only 9 cases of leprosy were found among 9,698 persons examined, or 0.92 per mille.

—L. ROGERS.

CANAAN, T. Ridding Palestine of leprosy. *Lep. Rev.* 4 (1933) 94.

There is a leper home in Jerusalem founded in 1867 and supported by the Moravians, the admissions to which indicate a marked decrease of leprosy in Palestine during the last fifty years. There are approximately eighty cases at present, while the Trans-Jordan and Syria have about another hundred. There are now 21 lepers in the home—with four non-leper patients who have lived with them for 14 to 48 years and remain well—though as many as 80 to 100 cases could be accommodated in the present home, the buildings of which are shown in illustrations. The people dread leprosy and as a rule keep the patients in separate rooms. In such a small country with few cases compulsory segregation is considered the best method for stamping out the disease, with examination of the relatives and other contacts every six months for at least two years to discover early cases, and the removal of children from the infectious area.

—L. ROGERS.

—L. ROGERS.