

under the auspices of the University of Pennsylvania. One is planned for the far West, and one is just now opening its doors at Nanking for the East Central portion of the Empire. The day of man's inhumanity to

man is fast drawing to its close, and it is the hope of the writer of these lines that the medical profession of our dear Southland will take a real part in extending to this poor land of China some of the benefits of our abundant Western life.

PRESENT STATUS OF THE HOOKWORM CAMPAIGN IN ALABAMA.*

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The title of this paper comprehends a much larger subject than can be elaborated in the time allotted. Only the more important features of the work, therefore, have been considered, leaving many very interesting facts and figures to be set out in a future paper.

Under the auspices of the Rockefeller Sanitary Commission and the State Board of Health of Alabama, this important work was begun in October of last year. The State Director, State Health Officer and three field men, Drs. H. G. Perry, J. Fraser Orr and W. W. Perdue, constitute the force at present actively engaged in carrying on the work. It will be of interest to note here, the personnel of the Rockefeller Sanitary Commission, surely an inspiring body of public spirited men who are identified with various scientific educational interests. The Chairman is Mr. F. T. Gates of New York, also Chairman of the General Educational Board; J. Y. Joyner of North Carolina. and Starr J. Murphy of New York, likewise members of the same board; Edward A. Alderman, President of the University of Virginia; D. F. Houston, Chancellor of Washington University of St. Louis; P. P. Claxton, of University of Tennessee and H. B. Frissell, of Hampton Institute, Hampton, Virginia; Walter Page, Editor of *World's Work*; John D. Rockefeller, Jr.; William H. Welch, of Johns Hopkins University; Simon Flexner, of the Rockefeller Institute for Medical Research, New York; Ch. Wardell Stiles, of United States Public Health and Marine Hos-

pital Service, and Wickliffe Rose, of Washington, formerly of Peabody University of Nashville. All these men are continuously lending their help and influence in the furtherance of our work, and indeed, without them, it would be an impossible task.

In the discussion following these remarks, the field men will likely relate more of the details of field operations and tell something of the problems they have encountered and it is my purpose merely to outline as briefly as possible, the organization of the work and to deal in a general way with the *modus operandi* governing the steps which we have taken thus far in our efforts to bring this great educational question properly before the laity, also the medical profession, upon whom rests a large responsibility for ultimate success.

Obviously, to wage a campaign in Sanitary and Preventive Medicine, such as this one is, which is to become State-wide in its scope and has for its chief object, the eradication of a malady which exists and spreads because of *Soil Pollution* by hundreds of thousands of sufferers infected with an intestinal parasite, would seem to be a tremendous undertaking. So it is. It is a reform movement and means that our people must revolutionize some of their habits of unsanitary living. They must be educated. They must be taught how to construct and properly care for a modern sanitary privy. They must, in some respects at least, learn to take lessons from the customs of the feline family.

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Those of us directly engaged in the work feel that success is already assured, for the results already obtained in so short a time, fully justify great expectations for the future.

The general scheme of operation has been to develop three definite lines of work. First, to determine the geographical distribution of Hookworm Disease in Alabama; secondly, to devise ways and means of bringing the sufferers to treatment, and thirdly, to outline plans for a permanent sanitary survey.

Several months before our organized work was begun, a preliminary canvass of the State had already been made by Dr. Perry under the direction of the State Board of Health. This earlier work demonstrated the wide distribution of the disease and a summary of his report coupled with the findings of Cole and Winthrop of Mobile, McCafferty of Mt. Vernon Hospital and Lanford of Tuscaloosa, showed that the infection existed in 63 of the 67 counties. It had been further determined by Stiles, also by the above named observers, that the disease was more prevalent in the southern counties than elsewhere. It was decided, therefore, to inaugurate the campaign in this section of the State, as on account of the heavy infection that existed here, it would afford a rich field to show early results of our methods of attacking the problem to be worked out. Having pursued this plan, the campaign has been carried into the five counties of Houston, Geneva, Coffee, Dale and Covington. Without going into detail regarding the proposed plan which underlies our method to eventually reach the entire State, suffice it to say that as the work progresses, so-called sanitary districts will be mapped out, designated by number, each district to comprise from four to eight counties, depending upon the degree of infection found, therefore, the volume of work to be done in a given district. One field man is to be assigned to each sanitary district and will make a thorough campaign through every important point in the counties under his supervision.

Realizing, that in order to make this work of value and to accomplish its real purpose in

a given community, we have exerted every effort to put the campaign upon a permanent working basis. The county, therefore, was adopted as the unit of organization and of work. The already existing agencies in a county, the established institutions of the community were naturally selected as the proper media through which to approach the problems to be solved. We have therefore, everywhere, enlisted the co-operation of these four fundamental agencies, namely, each county's own system of public health, its own system of organized medicine, its own organized public press and its own system of public schools. In addition to these we have received invaluable aid from other important sources, such as County Courts of Commissioners, municipal officers, various charity organizations, and in numerous other instances, public spirited citizens have given valued service to our field men.

Our first step everywhere in carrying the campaign into a given county, is, invariably, to lay the whole plan before the medical profession of that county. It is quite obvious, that it is imperative for us to have the hearty endorsement and co-operation of the local physicians. Without this, it would be a serious matter of course for us to enter their territory with appeals to their patients, who, in the very nature of things, feel responsible, first of all, to their own family physician. In this connection, it is very gratifying indeed to be able to say that in every instance, our county medical societies as a whole, have always extended their help and assistance, and as organized bodies, have gone on record as heartily endorsing this educational work. With but very few exceptions, the doctors as individuals, have done even more in that many of them have taken an active lead in the work. The exceptions of course are to be regretted. In one or two instances we have encountered physicians who opposed this humanitarian cause, seemingly regarding such work as a trespass on their individual rights—an outside interference which would deprive them of revenue. Time does not permit an argument

on this point, though it may be safely stated that such is not true.

After succeeding in enlisting the help of our own profession, such an influence spreads rapidly, and it is an easy matter then to appeal to the other agencies mentioned, particularly, the public schools and the public press.

Having begun our work in the early Fall, it was obvious from the outset that the public schools, at this season, just opening up throughout the counties, would prove an invaluable asset in our work, inasmuch as they were of easy access, and through such a medium we could reach directly the largest number of individuals of school age—the very ones so vitally concerned in a campaign which proposed to eradicate hookworm disease. It was determined therefore that each field man working in a given county should reach every single school in that county, making a thorough inspection to determine the sanitary conditions and then diagnose every case of hookworm disease among the pupils present and so report such cases found to both the parents of the child and the family physician. By doing this, it has been our object to urge the family physician and the infected child to seek each other and thus bring such a case to treatment. We have not sufficient data as yet to determine what degree of success this particular feature of our work has had, but it would seem to be one effective way to encourage treatment in many cases that have gone undiagnosed and untreated through neglect or indifference. Another feature of the school work has been a series of lectures on sanitation and hygiene, given by the field men to every school wherever visited. Unquestionably, these "health talks" to rural schools have been productive of great good, for they have been made so simple and so effective that even the children in such schools have been able to grasp the sanitary problems underlying the work. The field men who have so faithfully conducted these lectures are to be highly commended for rendering a very efficient service to our rural schools, so badly in need of help in dealing with such questions. It is indeed an

urgent need of the educational system of our State which in some measure is being met by Alabama's State Board of Health.

The real tangible results of this school canvass have been very striking indeed and I regret that I have not time to go into the details of this feature of the work. Briefly stated however, in all, 111 schools have been inspected, and lectures have been given to over 4,500 school children. In addition to these lectures to schools many addresses have been given to public audiences. The number of lectures, including those to schools, totals over 200. It is estimated that over 25,000 individuals have heard these lectures and many more have been reached through the distribution of more than 100,000 leaflets on Hookworm Disease, the sanitary privy, and soil pollution.

Perhaps the most striking feature of the campaign in Alabama, as compared with that in the other southern states is the success we have had in the establishing and maintaining of Free Dispensaries for the treatment of indigent cases. The methods by which we have accomplished this form an interesting chapter in our field work, but I can do more here than merely state briefly some of the results. These so-called dispensaries are located in three or four important points of a county and are to be found in some special room provided for the purpose, or in many instances, in the drug stores of the town. On given days such a public place constitutes the headquarters of the field man in charge of the work. The dispensary is thoroughly advertised and the sufferers are urged to come for diagnosis and treatment. This move was adopted as an experiment and many of us were doubtful of its success, but the results so far have been so encouraging that we are proposing to adopt this as one of our methods in every county. At many places, much to our real astonishment, patients have actually flocked to these dispensaries. In five counties we have operated 14 dispensaries with a total number of cases treated to date of over 7,500. In this connection, it is interesting to note that

several physicians have stated that in their private practice they have been called upon to treat more cases of Hookworm Disease, since the free dispensaries have been in operation in their respective counties, than before they were opened.

The third line of work to be developed, namely the permanent sanitary survey, is quite naturally our most difficult problem. Its very nature makes it a slow process, and it is too early yet to see any very striking results of

our work along this line. Here we have to deal with the all important question of *Soil Pollution* and the Sanitary Privy. Herein lies our real problem in education and reform and little could be expected along these lines in the few months we have been engaged in the campaign. In a future paper, I hope to be able to deal more fully with this feature of the work, after we have had more time to gain permanent results.

"MUNICIPAL SANITATION, ESPECIALLY OF SEAPORTS."*

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At the Fourth International Conference of the American Republics, held in San Jose, Costa Rica, December, 1909, resolutions adopted with regard to sanitation of seaports were as follows:

II. (a) "To recommend especially to the various governments that they employ all possible means at their disposal to secure the effective sanitation of seaports, to the end that the introduction of plague, cholera and yellow fever may be prevented, and in the event that a case of either of these diseases reaches a port that it be promptly isolated and measures taken to prevent its spread.

(b) "To recommend special ordinances for the proper construction of rat-proof buildings, especially those designed for the storage of foodstuffs, such as markets, granaries, abattoirs, stables, etc.

(c) "To make obligatory the use of galvanized iron garbage cans, with tight-fitting covers, for the reception of refuse from houses, and to arrange for the daily disposal of such refuse.

(d) "That properly equipped laboratories be provided at all seaports, where the periodical examination of rats may be made, so that

plague can be apprehended before its appearance in human beings.

(e) "That the crusade against the mosquitoes, 'Stegomyia Calopus' and 'Anopheles,' be carried on vigorously along lines which have been shown to bring the best results.

III. (a) "That careful statistics on population, morbidity and mortality be kept at every port, such data to be compiled at regular intervals of not more than one month, and also annually.

(b) "Every port should be provided with a proper system of sewerage, an adequate supply of pure water and paved streets.

(c) "That all habitations be constructed with a view to furnishing fresh air and sunlight sufficient to maintain health and vigor of the inmates, and that the character of the construction shall conform to local conditions.

(d) "That in every port there shall be a sanitary authority, clothed with ample power to vigorously enforce sanitary ordinances.

(e) "That it be made obligatory in schools to furnish instruction in the elementary principles of hygiene and sanitation. This instruction should be objective, or by means of publication of simple rules, or both."

It seems extremely important that the sea-

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