Medical Matters.

THE EXTINCTION OF YELLOW FEVER AT RIO DE JANEIRO.

The triumph of science over disease is nowhere more strikingly demonstrated than in the results of the campaigns against malarial and yellow fever. The *Lancet* publishes an interesting article on the history of yellow fever in Rio de Janeiro, showing that by the adoption of sanitary measures this scourge has now been banished from the city. It says in part:

For many years Rio de Janeiro has had an unhealthy reputation, more particularly as regards yellow fever. In some degree this bad name was due to the fact that a very large proportion of the deaths from this disease occurred among the newly arrived foreigners or immigrants, no less than 83 per cent. of the yellow fever deaths, increasing to 90 per cent. in epidemic years, being referred to them. With varying conditions the number of deaths fluctuated from year to year. In the 13 years period ended December, 1902, the yellow fever deaths amounted to 22,506, or an annual average of 1,731, and during that time the disease was regarded as highly infectious. Much attention was therefore devoted to thorough disinfection of clothing, bedding, and other effects of the sick, but with little result. Some time back the Brazilian authorities had their sanitary conscience awakened, and thereafter strove to find means for reducing the deaths from yellow fever in Rio de Janeiro. Acting on the motto that prevention is better than cure,, and being profoundly impressed by the results obtained against yellow fever in Havana, the Government passed a law making the notification of the disease compulsory under heavy penalty. Protection of the sick by isolation against the bites of stegomyiæ in specially prepared hospital wards was then enforced and war was waged against mosquitoes. For this purpose the city, which has now a population of over 800,000, was divided up into sections in which house-to-house visits were undertaken by a staff of 72 medical men assisted by some senior students; the sick were examined where necessary, the sanitary condition of each house was investigated, and advice given for its im-provement. A "mosquito brigade" of 1,500 men. was formed to seek out the breedingplaces of the mosquitoes and to remove any conditions likely to favour the multiplication of these insects. All premises were visited once in six days, receptacles liable to harbour larvæ were carted away, cisterns were screened, pools and puddles were treated with petroleum, houses in which yellow fever had

occurred or which were infested by mosquitoes were fumigated to destroy these insects. At the same time great attention was given to the general sanitation of the city. New, wide, and open streets were run through the most congested quarters; embankments were con-structed along the foreshores; and to some extent a new city arose on the débris of the old. As already said, these measures wereone. begun about the middle of 1903, and in that year 584 deaths from yellow fever were re-corded. Most of them, however, occurred in: the hot season, the first three months of the year, before the new measures had come intooperation. In 1904, during which 19,914 immigrants arrived at Rio de Janeiro, the deaths. from yellow fever numbered only 48. In 1905, 23,017 immigrants arrived, when the deaths from \mathbf{this} disease rose to 283, and of these 251, or 88.7 per cent., were foreigners, most of whom on arrival had found. shelter in the worst quarters of the city. Some of the cases, indeed, had not been diagnosed as yellow fever at all and had not been protected in the early stage of the malady from the bites of stegomyiæ, so that it is not surprising that fresh crops of cases developed. In 1906 the efforts were redoubled, and although 27,147 immigrants arrived to swell the susceptible portion of the population, there were only 42 yellow fever deaths certified, 35 of them being foreigners. In this year, 1906, as showing the extent of the anti-mosquito measures carried out, it may be mentioned that 153,670 "foyers " of mosquito larvæ were destroyed. 2,546 cartloads of old boots and disused cans capable of holding water were removed from the vicinity of houses, 97,461 litres of petroleum and 26,858 of creolin, 1,242 kilogrammes. of pyrethrum, and 28,603 of sulphur were used in the work. In 1907 there were only 39 yellow fever deaths, notwithstanding that 31,156 immigrants arrived. During 1908 only four deaths from this cause were reported, although no fewer than 46,216 immigrants reached Rio de Janeiro, and in spite of the fact that the season was a very hot one. In the first quarter of 1909, these three months forming the yellow fever season, not a single death was ascribed to this disease. Notwithstanding this " extinction" of yellow fever at Rio de Janeiro, the sanitary authorities of the city continue to persevere in their efforts. From its geographical position the town is very liable to have the disease imported by shipping from the north or from the south, where areas exist in which yellow fever is constantly appearing. If the efforts were abated it is more than probable that the malady would regain its footing in the lower quarters of the city.



