

parasites and their progeny infect the soil around coolie habitations from the habit the coolies have of defecating anywhere around their dwellings. The mode of infection has hitherto been solely ascribed to coolies with unwashed, earth dirtied hands injecting the parasites with their food; a possible and probable mode of infection. Dr. Bentley now shows that the soil around coolie quarters, and known to be infected with ankylostoma, when maintained in contact with the human skin for some time, causes a disease exactly resembling "ground itch." On the other hand, earth from the same source, when sterilised by being baked for a time and held against the skin, gave negative results. This not only proved that the presence of the ankylostoma was necessary to provoke the disease but also negatives the suggestion made by Dr. Scheult, of Trinidad, that the disease is due to some chemical irritant in the soil. These investigations by Looss and Bentley open up a new and a wide field of scientific inquiry. We have been so accustomed to consider that intestinal parasites *must* enter by the mouth, or perhaps anus, that all other modes of ingress have been neglected; at the same time, it has not been *proved* by these investigations that the penetration of the larva of ankylostoma beneath the skin is correlated to the presence of the mature parasite in the intestine. The embryo may have entered the skin accidentally; it may give rise to "ground itch," but may have no relation to the intestinal infection; or, on the other hand, the skin may be *the* medium by which the parasite gains access to the intestine. The further investigation of the subject will prove of great interest, as not only is the nature of ankylostomal infection to be unravelled, but a clue may be found to many other parasitic affections.

#### THE ALLEGED CURE OF PLAGUE.

Dr. R. Walker, of Bangalore, informs the *Indian Medical Record* that he has cogent reasons for believing he has found a curative treatment for plague. For bubonic variety uric acid, zinc, and calcium chloride. For pneumonic variety, lithia, piperazine, calcium chloride. For septic variety, the two former combined. With regard to the calcium chloride treatment, he recommends 15 to 20 grains of calcium chloride (fused in sticks) as the initial treatment, repeated every two or three hours for the first twelve hours, and then the introduction of zinc sulphate, in 1 to 4 grain pills.

## Nursing of Diseases of the Eye.

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### THE PHYSIOLOGY OF THE EYE AND THE EXAMINATION OF VISION.

The test usually employed to investigate the colour sense is that known as Holmgren's wool-test. There are a large number of skeins of wool of various shades and colours thrown in a heap on the table, in a good light. A pale, pure green—that is, a pure green mixed with much white—is chosen as the first test, and the patient to be examined is told to pick out any skeins that seem to him to be of the same colour, but not necessarily the same shade. There are among the skeins four other pure greens of varying saturation which should be chosen. A colour-blind person will commonly not choose the darker of these tints but will pick up and compare some shades of drab, brown, or grey.

The next test is a pale purple. This is confused by the patient in many instances with blue because the red is not seen. It is easy for oneself to see how this confusion occurs. If the purple skein be held at the periphery of the field of vision it will then appear blue, even to the normal sighted, because the perception of red is limited to the central portion of the retina.

The iris is a muscular curtain which seems to regulate the amount of lens exposed to the entering rays. If light falls on the retina the pupil will contract reflexly so long as there be no interference in any part of the course of nerve impulse. This reflex arc is made up of fibres which run with the optic nerve to the mid-brain and thence by relays to the centres, which govern the pupil in the floor of the third ventricle. Hence the nerve impulse passes by the fibres of the third cranial nerve to the ciliary ganglion and through the ciliary nerve to the iris.

It is clear, therefore, that the higher centres of vision are not connected with the reflex arc, and that though we usually regard an active pupil as a sign of light perception, this is by no means necessarily true. Blindness of cortical origin is found accompanied with perfect retention of light reflex.

Light falling on either retina causes contraction of both pupils; we have, therefore, a direct and a consensual action of the pupil. An iris may be totally inactive when light is cast on to its own retina, but may act vigorously when light is admitted to the other eye. For this reason we must, when testing the pupil reflex, cover the eye that we are not examining to prevent consensual action.

When light falls on a normal eye that has

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