

COCKROACHES.

By MISS F. MACKENZIE.

WE have become so familiar with the domestic cockroaches that it has bred the inevitable contempt, and few of us realise what a real danger they may be. The following extract from an article on cockroaches by Dr. A. E. Shipley in the *British Medical Journal*, may enlighten us, and perhaps inspire us to pursue the cockroach to its destruction as relentlessly as we do those other dangerous pests, the fly or the bug. Dr. Shipley says: "Cockroaches do a very considerable amount of damage by consuming food supplies", but all is grist that comes to their mill, "and woollen clothing, newspapers, blacking, ink, leather and even emery paper are all to their taste; being of an economical frame of mind they devour their own cast skins and the dead bodies of their relatives". The following is an account by Professor Moseley of his experiences of cockroaches in his cabin on board H. M. S. *Challenger* during a tour:— "One huge winged cockroach baffled me in my attempts to get rid of him for a long time. I could not discover his retreat. At night he came out and rested on my bookshelf at the foot of my bed, swaying his antennæ to and fro and watching me closely. If I reached out my hand from bed to get a stick, or raised my book to throw it at him, he dropped at once on the deck, and was forthwith out of harm's way. He bothered me much, because, when my light was out, he had a familiar habit of coming to sip the moisture from my face and lips, which was decidedly unpleasant, and awoke me often from a doze. I believe it was with this object that he watched me before I went to sleep. I often had a shot at him with a book or other missile as he sat on the bookshelf, but he always dodged and escaped. His quickness and agility astonished me. At last I triumphed by adopting the advice of Captain Maclear and shooting him with a pellet of paper from my air gun, a mode of attack for which he was evidently unprepared". It is on record that cargoes of cheeses have been destroyed by cockroaches on ships. Not only do they devour great quantities of cheese, but also defile them with a very tenacious fluid of a most disgusting smell, which the cockroaches pour out from their stink glands. When a cockroach casts its skin, a median longitudinal slit appears on the back of the thorax, and through this slit the insect gradually emerges. With much labour and difficulty it squeezes its body through and pulls one limb after another from its old integument, until at last even the long whiplike antennæ are completely withdrawn. Certain portions of its inner anatomy, such as the lining of parts of the breathing tubes, a trachea, are also left behind. Should the discarded skin not be eaten by the emergent insect, it remains on the floor and might easily be mistaken for a sedentary cockroach but for the fact that live cockroaches are never sedentary. There is no doubt that whether a primitive insect or not, the cockroach is a very successful one . . . and is extremely difficult to eradicate from a house when once it is well established.

Two years ago Dr. Conyers Monell undertook some investigations as to what part, if any, cockroaches played in the dissemination of pathogenic microbes, his object being, as he says, "first to ascertain what bacilli belonging to the colon group are likely to be conveyed to food and milk by this insect, and secondly, to find whether known bacteria and moulds can be transmitted by the faeces". His experiments were conducted on one of the Union Castle liners sailing to South Africa, an almost new ship of exceptional cleanliness. He ascertained among other interesting facts, that cockroaches feed with avidity on human sputum, and after feeding cockroaches on tuberculous sputum, the tubercle bacilli are found in the faeces within twenty-four hours, and Dr. Monell was of opinion that there was little danger from cockroaches except by contamination from their faeces. The following facts seem fairly proved:—"The common cockroach is able by contamination with its faeces, (1) to bring about the souring of milk, (2) to inject food and milk with intestinal bacilli, (3) to transmit the tubercle bacillus, (4) to disseminate pathogenic staphylococci, (5) to transmit from place to place destructive moulds The distribution and numbers of the cockroach are rapidly increasing, and unless preventive measures are adopted the insect is likely in the course of time to become a very troublesome and possibly a very dangerous domestic pest."

POEM. WOMAN.

When the Lord of the Creation gave the Woman to the Man,
In that blest but brief existence ere the rule of ill began,
Then He willed it that, if sharing in man's fault and in his fate,
She should therefore be his equal and the partner of his state.

Not to govern or cajole him, not to court or speak him smooth;
Not to snare or to enslave him, but to cheer, inspire, and soothe;
Not his temptress, not his slave-mate, not his subject, nor his squaw,
But his helpmeet and his angel by the right of God's own law.

If He cursed the Man with labour as the human lot's alloy,
He provided that for Woman his work should be his joy,
If He dowered the Man with passions which the grosser instincts move,
He reserved it to the Woman to uplift his lust to love.

If He ordered that the mother for the children of her womb
Should dare her death by travail and fight till crack of doom,
He ordained that by that impulse, still the purest and the best,
She should gather all that suffer in her pity to her breast.

Nurturing, nursing, guarding, giving strength with heart and hand,
Paying tolls in pangs to Nature, which no man can understand,
Dauntless from the God who made her without fear to draw her breath,
Saviour of the weak and helpless, first at birth and last at death.