

THROUGH A MICROSCOPE

SOME MORAL REFLECTIONS

This dabbler person has recently disposed of his camera and obtained a microscope--a short, complacent-looking implement it is, of brass--and he goes about everywhere now with little glass bottles in his pocket, ready to jump upon any stray polly-woggle he may find, and hale it home and pry into its affairs. Within his study window are perhaps half a dozen jars and basins full of green scum and choice specimens of black mud in which his victims live. He persists in making me look through this instrument, though I would rather I did not. It seems to me a kind of impropriety even when I do it. He gets innumerable things in a drop of green water, and puts it on a glass slip under the object glass, and, of course, they know nothing of the change in their condition, and go on living just as they did before they were observed. It makes me feel at times like a public moralist, or Peeping Tom of Coventry, or some such creature.

Certainly there are odd things enough in the water. Among others, certain queer green things that are neither plants nor animals. Most of the time they are plants, quiet green threads matted together, but every now and then the inside comes out of one, so to speak, and starts off with a fine red eye and a long flickering tail, to see the world. The

dabbler says it's quite a usual thing among the lower plants--Algæ he calls them, for some reason--to disgorge themselves in this way and go swimming about; but it has quite upset my notions of things. If the lower plants, why not the higher? It may be my abominable imagination, but since he told me about these--swarm spores I think he called them--I don't feel nearly so safe with my geraniums as I did.

A particularly objectionable thing in these water drops, the dabbler insists upon my spying at is the furious activity of everything you see in them. You look down his wretched tube, and there, bright and yellow with the lamplight in the round field of the microscope, is a perfect riot of living things. Perhaps it's the water he got from Hampstead, and a dozen flat things the shape of shortbreads will be fussing about. They are all quite transparent and colourless, and move about like galleys by means of a lot of minute oars that stick out all over them. Never a moment's rest. And, presently, one sees that even the green plant threads are wriggling across the field. The dabbler tries to moralise on this in the vein of Charles Kingsley, and infer we have much to learn from these ridiculous creatures; but, so far as I can see, it's a direct incentive to sloth to think how low in the scale of creation these things are, in spite of all their fussing. If they had sat about more and thought, they might be fishing the dabbler out of ponds and examining him instead of his examining them. Your energetic people might do worse things than have a meditative half-hour at the microscope. Then there are green things with a red spot and a tail, that creep about like slugs, and are equally transparent. *Euglena viridis* the dabbler calls

them, which seems unnecessary information. In fact all the things he shows me are transparent. Even the little one-eyed Crustacea, the size of a needle-point, that discredit the name of Cyclops. You can see their digestion and muscle and nerve, and, in fact, everything. It's at least a blessing we are not the same. Fancy the audible comments of the temperance advocate when you get in the bus! No use pulling yourself together then. "Pretty full!" And "Look," people would say, "his wife gives him cold mutton."

Speaking of the name of Cyclops reminds me that these scientific people have been playing a scurvy trick upon the classics behind our backs. It reminds one of Epistemon's visit to Hades, when he saw Alexander a patcher of clouts and Xerxes a crier of mustard. Aphrodite, the dabbler tells me, is a kind of dirty mud-worm, and much dissected by spectacled pretenders to the London B.Sc.; every candidate, says the syllabus, must be able to dissect, to the examiner's satisfaction, and demonstrate upon Aphrodite, Nereis, Palæmon. Were the gods ever so insulted? Then the snaky Medusa and Pandora, our mother, are jelly-fish; Astræa is still to be found on coral reefs, a poor thing, and much browsed upon by parrot fish; and Doris and Tethys and Cydippe are sea slugs. It's worse than Heine's vision of the gods grown old. They can't be content with the departed gods merely. Evadne is a water flea--they'll make something out of Mrs. Sarah Grand next; and Autolycus, my Autolycus! is a polymorphic worm, whatever subtlety of insult "polymorphic worm" may convey.

However, I wander from the microscope. These shortbread things are

fussing about hither and thither across the field, and now and then an amoeba comes crawling into view. These are invertebrate jelly-like things of no particular shape, and they keep on thrusting out a part here, and withdrawing a part there, and changing and advancing just as though they were popular democratic premiers. Then diatoms keep gliding athwart the circle. These diatoms are, to me at least, the most perplexing things in the universe. Imagine a highly ornamental thing in white and brown, the shape of a spectacle case, without any limbs or other visible means of progression, and without any wriggling of the body, or indeed any apparent effort at all, gliding along at a smart pace. That's your diatom. The dabbler really knows nothing of how they do it. He mumbles something about Bütschli and Grenfell. Imagine the thing on a larger scale, Cleopatra's Needle, for instance, travelling on its side up the Thames Embankment, and all unchaperoned, at the rate of four or five miles an hour.

There's another odd thing about these microscope things which redeems, to some extent at least, their singular frankness. To use the decorous phrase of the text-book, "They multiply by fission." Your amoeba or vorticella, as the case may be, splits in two. Then there are two amoebæ or vorticellæ. In this way the necessity of the family, that middle-class institution so abhorrent to the artistic mind, is avoided. In my friend's drop of ditch-water, as in heaven, there is neither marrying nor giving in marriage. There are no waste parents, which should appeal to the scholastic mind, and the simple protozoon has none of that fitful fever of falling in love, that distressingly tender state

that so bothers your mortal man. They go about their business with an enviable singleness of purpose, and when they have eaten and drunk, and attained to the fulness of life, they divide and begin again with renewed zest the pastime of living.

In a sense they are immortal. For we may look at this matter in another light, and say our exuberant protozoon has shed a daughter, and remains. In that case the amoeba I look at may have crawled among the slime of the Silurian seas when the common ancestor of myself and the royal family was an unassuming mud-fish like those in the reptile house in the Zoo. His memoirs would be interesting. The thought gives a solemn tint to one's meditations. If the dabbler wash him off this slide into his tube of water again, this trivial creature may go on feeding and growing and dividing, and presently be thrown away to wider waters, and so escape to live ... after I am dead, after my masterpieces are forgotten, after our Empire has passed away, after the human animal has passed through I know not what vicissitudes. It may be he will still, with the utmost nonchalance, be pushing out his pseudopodia, and ingesting diatoms when the fretful transitory life of humanity has passed altogether from the earth. One may catch him in specimen tubes by the dozen; but still, when one thinks of this, it is impossible to deny him a certain envious, if qualified, respect.

And all the time these creatures are living their vigorous, fussy little lives; in this drop of water they are being watched by a creature of whose presence they do not dream, who can wipe them all out of existence

with a stroke of his thumb, and who is withal as finite, and sometimes as fussy and unreasonably energetic, as themselves. He sees them, and they do not see him, because he has senses they do not possess, because he is too incredibly vast and strange to come, save as an overwhelming catastrophe, into their lives. Even so, it may be, the dabbler himself is being curiously observed.... The dabbler is good enough to say that the suggestion is inconceivable. I can imagine a decent amoeba saying the same thing.