## PROTAMŒBA: A STUDY IN EVIDENCE.

are suggested by the highest and most complex. If, in the humblest forms known to science, forms that have no predecessor in time and that are without equal in simplicity of structure, we find complete faculties already developed, it is obvious that the laws of evolution must be ruled out. This follows from the mere statement of the case, for if the organism be without structure, so that we cannot suppose it simpler, and if it have definite powers, no laws of evolution can have operated upon it. Whence, then, are these powers? Only two answers are possible—God, and Spontaneous Generation.

To test the answers to this question let us take an example. Such a form as I have described is found in *Protamæba primitiva.*\* Let us study it somewhat closely. As the first part of its name denotes (Greck, protos=first), it is one of the first of living beings. It is found in the water of ponds and pools, and, so far as observation with the most powerful microscopes can disclose, is without organs or parts of any kind. It is simply a structureless speck of a living, granular, jelly-like substance, known to scientists as Protoplasm. So lowly is it in the scale of life that it is hardly possible to say whether it is plant or animal, and for this reason, Professor Haeckel, of Jena, one of the greatest biological authoritics, has classified in one group, *Protista*, Protamœba and all such forms as may with equal reason be claimed either by botanist or zoologist.

But if Protamœba is without parts it is not without powers. Though under the microscope no limbs are visible, it has the power of moving through the water, and it does so by changing its shape, hence the latter part of its name (Greek, ameibo=to change). It pushes out one portion of its soft jelly-like body and after the protrusion has reached a certain size the rest of the body flows into it. *Contractility* is thus one of its properties. It is *sensitive*, too, for on coming into contact with small particles of decayed organic matter, microscopic plants, etc., it wraps its whole body round them, and thus takes them into its interior Now in all animal tissues, wherever we find these two properties contractility and sensibility, we also find in necessary connection with them a nervous system. We must suppose then that in this little organism there is a nervous power able to control the

\* Haeckel, History of Creation, Vol. i., page 186.

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