

deserving of the fossil-collector's closest attention, since from their decaying surfaces he may often gather the organisms of past times, as easily as he can pick up shells on the present sea-shore.

But the task of the collector does not end when he has broken open several tons, perhaps, of fresh rock, and has searched among the weathered debris until he can no longer meet with any forms he has not already found. In recent years, methods have been devised for enabling him to extract the minuter organisms from rocks. Some of these methods are described in the following pages.<sup>39</sup> They show that a deposit, otherwise supposed to be unfossiliferous, may be rich in foraminifera, entomostraca, etc., so that, besides the abundant fossils readily detected by the naked eye in a rock, there may be added a not less abundant and varied collection of microzoa.

As each variety of rock has its own peculiarities of structure, which may vary from district to district, the appliances of the fossil collector must likewise be varied to suit local requirements. The following list comprises his most generally useful accoutrements; but his own judgment will enable him to modify or supplement them according to his needs:

*List of Appliances useful in Fossil-collecting*

1. Several hammers, varying in size according to the nature of the rocks to be examined. Where these are tough and hard, a hammer weighing 2 lbs. may be needed. A small trimming hammer (6 oz.) for reducing the size of specimens is essential.
2. Several chisels of different sizes and shapes.
3. A small pick weighing 1 lb., useful for loosening blocks of rocks from their bed.
4. A small trowel, used for scooping up weathered debris of shale, etc.
5. A gardener's spade with circular cutting edge; of use in lifting slabs of shale.
6. Pair of strong pincers, like those used for cutting wire, for reducing specimens which might go to pieces under a blow of a hammer.

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<sup>39</sup> The following descriptions of methods of searching for fossil microzoa have been drawn up from notes for which I am indebted to Mr. James Benuie, Fossil Collector of the Geological Survey of Scotland, who has been singularly successful in increasing our knowledge of the minuter forms of animal life in the Carboniferous system.