the student. Any sedimentary rock may possibly inclose the remains of plants or animals. All such rocks should therefore be searched for fossils. A little practice will teach the learner that some kinds of sedimentary rocks are much more likely than others to yield organic remains. Limestones, calcareous shales, and clays are often fossiliferous; coarse sandstones and conglomerates are seldom so. Yet it will not infrequently be found that rocks which might be expected to contain fossils are barren, while even coarse conglomerates may, in rare cases, yield the teeth and bones of vertebrates or other durable relics of once living things. The peculiarities of the rocks of each district must, in this respect, be discovered by actual careful scrutiny.

As organic remains usually differ more or less, both in chemical composition and in minute texture, from the matrix in which they are imbedded, they weather differently from the surrounding rock. In some instances, where they are more durable, they project in relief from a weathered surface; in others they decay, and leave, as cavities, the molds in which they have lain. One of the first requisities, therefore, in the examination of any rock for fossils is a careful search of its weathered parts. In the great majority of cases, its fossiliferous or non-fossiliferous character may thereby be ascertained.

When indications of fossils have been obtained, the particular lithological characters of the part of the rock in which they occur should be noted. It will often be found that the fossils are either confined to, or are more abundant and better preserved in, certain zones. These zones should be explored before the rest of the rock is examined in detail. Where fossils decay on exposure, the rock containing them must be broken open so as to reach its fresher portions. Where the rock is not disintegrated in weathering, it must likewise be split up in the usual way. But where it crumbles under the influence of the weather, and allows its fossils to become detached from their matrix, its débris should be examined. Shales and clays are particularly liable to this kind of disintegration, and are consequently