

each bed or stratum of rock is spread universally over the globe, and that a series of beds, in regular succession, environs our planet, like the coats of an onion. This position is, however, much too general, as many beds of rock which are common in one country, are entirely wanting in another: but, taken as an illustration of the structure of the crust of our globe over a certain extent, the successive coats of an onion, if they were of different colours, might not unaptly represent the different strata that cover certain districts.

It may here also be proper to observe, that the different strata which occur under each other, are not arranged in the order of their density or specific gravity. Coal strata, for instance, are often covered with strata of iron-stone, the specific gravity of which is more than twice that of coal.

I shall now proceed to enumerate the different classes of rocks generally admitted by geologists, and briefly describe the principal characters of each class; and, in order to direct the attention of the reader more forcibly to the subject, I shall trace on an outline map the principal situations in our own island, where rocks of each class occur, except the recent volcanic.

All the different rocks and strata that cover the earth's surface may be arranged under the following classes:—

1. Primary.
2. Intermediate, or Transition.
3. Secondary; comprising
  - a. The Lower Secondary Series, and
  - b. The Upper Secondary Series.\*
4. Tertiary.
5. Basaltic and Volcanic.
6. Diluvial and Alluvial Ground.

This arrangement is substantially followed by most geologists of the present day, though with some modification of the names. Several of the French geologists class the lower secondary, including the coal strata, with the intermediate or transition rocks: some urgent reasons may be advanced for this, which we shall subsequently notice. Objections have been made to the terms primary, secondary, &c., that they do not strictly conform to the present state of geology; but a change of names, which are in general use and well understood, would be attended with no adequate advantage, and would be ill suited to promote the knowledge of the science in an introductory work. It is greatly to be regretted, that a morbid desire to obtain celebrity by inventing new nomenclatures, should so much prevail among some of the cultivators of natural science. The author is of opinion, that a more simple arrangement of rocks might be made

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\* By some geologists these secondary strata are called "the older" and "the younger series," terms which are equally clear and intelligible.