

degenerate bones and those muscles belonging to them are partially preserved, without their being able in any way to perform any function. The instrument is still there, but it can no longer play.

Moreover, we can, almost as generally, find rudimentary organs in the blossoms of plants, inasmuch as one part or another of the male organs of propagation—the stamen and anther, or of the female organs of propagation—the style, germ, etc.—is more or less imperfect or abortive. Among these we can trace, in various closely connected species of plants, the organ in all stages of degeneration. Thus, for example, the great natural family of lip-blossomed plants (Labiatae), to which the balm, peppermint, marjoram, ground-ivy, thyme, etc., belong, are distinguished by the fact that their mouth-like, two-lipped flower contains two long and two short stamens. But in many individual plants of this family, *e.g.* in different species of sage, and in the rosemary, only one pair of stamens is developed; the other pair is more or less imperfect, or has quite disappeared. Sometimes stamens exist, but without the anthers, so that they are utterly useless. Less frequently the rudiment or imperfect remnant of a fifth stamen is found, physiologically (for the functions of life) quite useless, but morphologically (for the knowledge of the form and of the natural relationship) a most valuable organ. In my “General Morphology of Organisms,”⁴ in the chapter on “Purposelessness, or Dysteleology,” I have given a great number of other examples (“Gen. Morph.,” ii. 226).

No biological phenomenon has perhaps ever placed zoologists or botanists in greater embarrassment than these rudimentary or abortive organs. They are instruments