their soft part consists of a jelly-like substance. This the animal has the power of extending in threads or finger-like processes, which are used as organs of locomotion and prehension, often branching. From the appearance of their temporary organs, resembling roots, the class of animals has received its name of Rhizopoda, meaning literally root-footed.

In compensation for the smallness of these creatures, they make up in numbers, and it is questionable whether any other class of animals exceeds them in importance in the economy of nature. Geological evidence shows that they were the starting-point of animal life in time, and their agency in rock-making has not been exceeded by later higher and more visible forms.

With the marine kind, known as Foraminifera, we have been longest familiar. Their beautiful many-chambered shells—for the most part just visible to the naked eye—form a large portion of the ocean-mud and the sands of the ocean-shore. Shells of Foraminifera likewise form the basis of miles of strata of limestone, such as the chalk of England and the limestones of which Paris and the pyramids of Egypt are built.

Fresh-water Rhizopods, though not so abundant as marine forms, are nevertheless very numerous They mainly inhabit our lakes, ponds, and standing waters, but they also swarm in sphagnous swamps and even live in moist earth. Professor Leidy has devoted several years of study to the Fresh-water Rhizopods of the eastern portion of our country, and his especial object in his western expeditions was to investigate those which are to be found in the elevated regions of the Rocky Mountains.

The beautiful plates which illustrate this volume were engraved by Messrs Sinclair & Son, Philadelphia, and to this firm the thanks of the Survey are due for their care and skill.

Very respectfully,

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To the SECRETARY OF THE INTERIOR.