

actual composition of other heavenly bodies than our own earth was furnished by the *meteorites*, or fallen stars, which from time to time have entered our atmosphere from planetary space, and have descended upon the surface of the globe.⁴ Subjected to chemical analysis, these foreign bodies show considerable diversities of composition; but in no case have they yet revealed the existence of any element not already recognized among terrestrial materials. They have been classified in three groups: *Siderites*, composed chiefly of iron; *Siderolites*, consisting partly of iron and partly of various stony materials; and *Aerolites*, formed almost entirely of such stony minerals. Twenty-four of our elements have been detected in meteorites. Those most commonly found are iron, nickel, phosphorus, sulphur, carbon, oxygen, silicon, magnesium, calcium and aluminium. Less frequent or occurring in smaller quantities are hydrogen, nitrogen, chlorine, lithium, sodium, potassium, titanium, chromium, manganese, cobalt, arsenic, antimony, tin and copper. These various elements occur for the most part in a state of combination. The iron exists as an alloy with nickel, the phosphorus is combined with nickel and iron, the silicon is combined with oxygen and various bases. A few of the elements occur in a free state. Thus hydrogen and nitrogen are found as occluded gases and carbon as

⁴ On meteorites consult Partsch, "Die Meteoriten," Vienna, 1843. Rose, *Abhand. königl. Akad. Berlin*, 1863. Rammelsberg, "Die Chemische Natur der Meteoriten," 1870-9. Tschermak, *Sitzb. Akad. Wissen. Vienna* (1875), lxxi.; "Die Mikroskopische Beschaffenheit der Meteoriten," Stuttgart, 1885. Daubrée, "Etudes Synthétiques de Géologie Expérimentale," 1879; *Compt. rend. cvi.* (1888), 1671-1682 (compare *Amer. Journ. Sci.* xlii. [1891], p. 413). S. Meunier, "Le Ciel Géologique," 1871; "Météorites," 1884. Brezina und Cohen, "Die Structur und Zusammensetzung der Meteoreisen," Stuttgart, 1886. W. Flight, *Geol. Mag.* 1875, *Pop. Sci. Rev. new ser.* i. p. 390. *Proc. Roy. Soc.* xxxiii. p. 343. A. W. Wright, *Amer. Journ. ser. 3*, xi. p. 253; xii. p. 165. L. Fletcher, "An Introduction to the Study of Meteorites," *British Museum Catalogue*, 1886.