quent in peat-mosses where animal matter has decayed, and is sometimes to be observed coating fossil fishes as a fine layer like the bloom of a plum.

9. FLUORIDES. The element fluorine, though widely diffused in nature, occurs as an important constituent of comparatively few minerals. Its most abundant compound is with Calcium as the common mineral Fluorite. It occurs also with sodium and aluminium in the mineral Cryolite.

Fluorite (Fluor-spar, CaF_2) occurs generally in veins, especially in association with metallic ores.

10. CHLORIDES. There is only one chloride of importance as a constituent of rocks—sodium-chloride or common salt (NaCl), which, occurring chiefly in beds, is described among the rocks at p. 259. Carnallite ($KClMgCl_26H_2O$), a hydrated chloride of potassium and magnesium, occurs in beds associated with rock-salt, gypsum, etc., in some salt districts (p. 260).

11. SULPHIDES. Sulphur is found united with metals in the form of sulphides, many of which form common minerals. The sulphides of lead, silver, copper, zinc, antimony, etc., are of great commercial importance. Iron-disulphide, however, is the only one which merits consideration here as a rock-forming substance. It is formed at the present day by some thermal springs, and has been developed in many rocks as a result of the action of infiltrating water in presence of decomposing organic matter and iron salts. It occurs in two forms, Pyrite and Marcasite.

Pyrite (Eisenkies, Schwefelkies, FeS_2) occurs disseminated through almost all kinds of rocks, often in great abundance, as among diabases and clay-slates; also frequent in veins or in beds. In microscopic sections of rocks, pyrite appears in small cubical, perfectly opaque crystals, which with reflected light show the characteristic brassy lustre of the mineral, and cannot thus be mistaken for the isometric magnetite, of which the square sections exhibit a characteristic blue-black color. Pyrite when free from marcasite yields but slowly to weathering. Hence its cubical crystals may be seen projecting still fresh from slates which have been exposed to the atmosphere for several generations.[33]

Marcasite (Hepatic pyrites) occurs abundantly among sedimentary formations, sometimes abundantly diffused in minute particles which impart a blue-gray tint, and speedily

[33] For an elaborate paper on the decomposition of Pyrites, see A. A. Julien, Annals New York Acad. Sci. vols. iii. and iv.