we cannot but regret the absence of any attempt to formulate a theory of them. The work is divided into three parts; in the first the effects of white light are studied, in the second the different parts of the spectrum are taken separately, and the third contains experiments on the increase of sensibility due to colouring matters. Plates of copper coated thinly with oxide, sulphide, fluoride, bromide and iodide, of tin coated with oxide and sulphide, and of silver coated with sulphide, are examined in solutions of some thirteen different salts.

The electromotive force developed depends on many circumstances, such as the thickness and nature of the coating, the concentration and nature of the electrolyte and the temperature, so that it is difficult to prepare two identical cells. The electromotive force of a given cell is, however, proportional to the intensity of the light when this is not too large. All the elements had a maximum sensibility in some part of the spectrum, the position of the maximum depending on the nature of the coating on the plates, but, for a given instrument, being independent of the nature of the electrolyte. With dyed plates the position of the maximum was independent of the compound of copper employed, but was determined by the nature of the dye, and was always found at a wave-length greater than that for which the colouring matter had a maximum absorption. The sensibility is largely increased by the employment of colouring matters. The actinometers may be employed for photometric purposes, since it is possible to prepare one with a maximum sensibility for almost any wave-length. Since the development of the electromotive force is accurately synchronous with the action of the light, they may also be used as radiophones.

Neudrucke von Schriften und Karten über Meteorologie und Erdmagnetismus. Edited by Prof. Dr. G. Hellmann. No. 10, Rara Magnetica, 1269-1599; No. 11, Ueber Luftelektricität, 1746-1753. (Berlin: A. Asher and Co., 1898.)

DR. HELLMANN is so well known by his laborious researches in matters relating to the history of early scientific documents and instruments, and by the very valuable bibliographical knowledge which he brings to bear upon the various publications of this nature, that it is unnecessary to say more than that the present volumes exhibit the same painstaking labour as those which have preceded them. The first contains fac-simile copies of some of the earliest papers on terrestrial magnetism and the mariner's compass; each document is very scarce, and only accessible with difficulty, and must be considered as a literary rarity. Among them is a letter from Pierre de Maricourt, dated August 12, 1269, which is the earliest known treatise on magnetism in Europe. The principal point in the paper is the distinction of the two poles of the magnet, and of their opposite attraction. A paper by F. Falero (Sevilla, 1535) contains the first published instructions for determining the magnetic declination, although its existence was discovered by Columbus in 1492. A letter by G. Hartmann, dated March 4, 1544, gives an account of his discovery of the magnetic dip and the first determination of the declination on the mainland. This document was buried in the archives at Königsberg until 1831, so that the discovery of the magnetic dip is generally attributed to R. Norman, who determined it for London in 1576. In a letter from G. Mercator to the Bishop of Arras, which was discovered during the present century in the library at Göttingen, the first mention is made of the earth possessing a magnetic pole. There are various other papers which we cannot refer to here, all of which are of great interest and value in throwing light upon the earliest development of the subject. The second volume contains a reproduction of the first fundamental papers relating to atmospheric electricity. The electrical nature of thunderstorms was suspected early in the eighteenth century by Hauksbee and other Englishmen, but Prof. J. H. Winkler, of Leipzig, first clearly demonstrated the analogy between them and the electric spark in 1746; the experimental proof was proposed by B. Franklin in 1749, and first carried out, near Paris, by Dalibard on May 10, 1752.

LETTERS TO THE EDITOR

The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts intended for this or any other part of NATURE. *No notice is taken of anonymous communications.*]

Does a Phosphorescent South American Liana exist?

IN collecting the literature regarding phosphorescent plants, I chanced on an article, by Mr. C. F. Holder, on "Living Lamps," in No. 392, vol. lxvi. (January 1883) of *Harper's Magazine*. In this article, at page 191, it is said: "In South America, a vine known as the Cipo, when injured, seems to bleed streams of living fire. Large animals have been noticed standing among its crushed and broken tendrils, dripping with the gleaming fluid, and surrounded by a seeming network of fire."

Could any reader of NATURE confirm the existence of this Cipo with a phosphorescent sap? Cipo, I believe, is a name for liana, not for vines. If true, the existence of a phosphorescent sap in a superior plant would be of great physiological interest. But no mention of this or a similar case is to be found in the standard works on vegetable physiology. I fear the statement may have as much foundation as the assertion, made in the same article, that among the peasantry of Italy girls complete their gala toilet with diadems of fireflies. ITALO GIGLIOLI.

Portici, near Naples, February 18.

Insusceptibility of Insects to Poisons.

YOUR reviewer's observation that one insect's food is another insect's poison, is applicable to a single insect at different stages of development. The scarlet fungus, *Agaricus muscarius*, derived its name from use in an old-fashioned decoction for fly-papers; nevertheless, it is eaten freely by maggots. Other poisonous fungi, such as *A. ceruginosus*, *A. phalloides*, *Russula emetica*, &c., are evidently innoxious to maggots and slugs. With regard to the effect upon more highly organised animals, it may be noted that *Boletus luridus* is eaten by mice and rabbits, and that squirrels are very partial to several species of *Tricholoma* and *Boletus*. I have some doubt as to whether squirrels are not occasionally poisoned by eating fungi, but I have not noticed any suspicious mortality in the case of the rabbits or mice.

February 19. H. B. POTTER.

The Mandrake.

IN a foot-note to my letter under this heading (NATURE, vol. liv. p. 343, August 13, 1896), I quoted from a Chinese work the names of the nine plants reputed to assume frequently the human or animal figures; and I remarked thereon that most of the alleged figures in these plants were recognised in their subterraneous members. Lately, however, I have found this remark not quite correct, inasmuch as it concerns some of them, viz. mustard and turnip: the alleged figures in these two appear to have suggested themselves to the Chinese imagination by the deformities in their floral parts caused by some parasitic infestations. This is evident from the following passage that occurs in "Mung-ki-pih-tan," written by Chin Kwoh (1031-94 A.D.): "When such vegetables as the turnips and mustard are injured by draught, their inflorescences mostly form the blossoms resembling the lotus-flower, or like the dragon and serpent. These are of common occurrence, and anything but wonderful. Once in the period of Hi-ning (1068-77 A.D.), when Mr. Li Kih-chi was the governor of Jun-chau, all blossoms of the vegetables in his garden happened to have the form of the lotus-flower, each having one Buddha sitting in it. They were innumerable, and looked as if engraved, and well preserved the figures after desiccation. Some one used to ascribe this ominous event to the great zeal with which all members of Mr. Li's family devoted themselves to the worship of Buddha."

February 21. KUMAGUSU MINAKATA.