weapons, by W. Prinz. An examination of these crystals and of their physical properties, now for the first time detected on some ancient Frankish arms, shows that they are formed of specular iron, and their presence is compared with that of anhydrous ferric oxide in sedimentary deposits of all ages, produced, as on the arms in question, by the moist process at a low temperature.—On the origin of the curative effects of hypnotism, by J. Delbœuf. The author, who is one of the founders of the new branch of the medical art, based on the application of hypnotism to the cure of numerous maladies, here treats the subject as throwing light on the reciprocal action of mind on the body. He believes that there is a great future for hypnotism in the field of therapeutics, and describes in detail some of his own remarkable experiences and successful treatment of hypnotized patients.

SOCIETIES AND ACADEMIES.

PARIS.

Academy of Sciences, September 12.—M. Hervé Mangon in the chair.—Experimental researches on the morphology of the muscles, by M. Marey. By comparing the form of the gastrocnemian muscles in the white race with those of the Negro, the author has discovered a fresh example of the harmony that exists between the form and functions of the muscles. His conclusions were confirmed by experiments made on rabbits at the Physiological Station, and a fresh proof is thus afforded of the evolutionist doctrine that the organs tend to adapt themselves to the varying conditions under which their functions are performed. To complete these researches nothing now remains except to bring about variations in the muscular form by changing the outer conditions of locomotion without modifying the anatomical relations of the organs by the direct intervention of surgery, and then ascertain to what extent the modifications thus obtained become fixed by heredity.—Invasions, varying aspects, and intensity of the pestilence in the Caucasus, Persia, Russia, and Turkey, since 1835, by M. J. D. Tholozan. From a careful study of all the circumstances attending the various visitations of the plague in this region since the great epidemic of 1830–35, the author concludes that in the great majority of cases the outbreaks have been of a purely local character, appearing in one or two houses, spreading thence by secondary contagion to others in the village, occasionally also to one or two neighbouring villages, but scarcely ever advancing beyond the district and never sweeping over extensive regions, like the cholera and pest in former times. A remarkable instance was that of Resht in Northern Persia, where it carried off 2000 of the 24,000 inhabitants, lasting altogether over a twelvemonth, during which period the people emigrated freely to the neighbouring towns, which nevertheless remained unaffected despite the absence of prophylactic measures and quarantine regulations. He therefore considers that, without denying the possibility of future widespread diffusions like those of the past, the contagion has now entered a new phase of purely local or isolated development, without any tendency to spread further. The special conditions of its appearance in such places should therefore be studied, just as those, for instance, of typhoid fever are sought and found in the districts where this disorder happens to make its appearance. In Turkey the plague has from time to time acquired a certain intensity, but without ever assuming the deadly character of certain previous outbreaks, except in Mesopotamia in 1873. But in Persia it has often been attended by an excessive mortality, and a very great local development relatively to the actual number of the inhabitants. Its range has been mainly confined to an area stretching for 1700 kilometres from Merv to Bagdad, and for 1760 from Bassora to Astrakan, but within these limits mainly confined to isolated points and never radiating from them to any great distance.—Observations of Olbers' comet (1815 I.) on its return in 1887, made at the Observatory of Bordeaux with the 0·38 m. equatorial by MM. G. Rayet and Courty. The observations cover the time from September 8–10 inclusive, and comprise the mean position of three stars taken as points of comparison.—Observations of Brooks's new comet (August 24, 1887) made at the Observatory of Nice with the 0·38 m. Gautier equatorial, by M. Charlois. The apparent positions are given for the period from August 25 to September 2 inclusive. On the former date the comet had a nucleus of the tenth magnitude surrounded by an elongated nebulosity at the angle of position of 304°.—On the variations of the telluric currents, by M. J. J. Landerer. During the last nine years, the number of days when the current flowed north-east and south-west being indicated by 1, those on which it flowed in the opposite direction will be represented by 6·7. Several changes of direction very seldom occurred on the same day, and they were nearly always connected with violent atmospheric disturbances. From 8 a.m. to 9 p.m. the intensity of the current going north-eastwards attained a maximum towards 10 o'clock and two minima about 4 and 9 o'clock, the mean intensity of the maximum being 0·000124 ampere, that of the minima 0·000073 and 0·000074. For the opposite current this maximum and these minima become respectively one minimum and two maxima at about the same hours, with mean intensities 0·00064, 0·000122 and 0·000138 ampere.—Formation and elimination of ferruginous pigment in poisoning by toluylendiamine, by MM. Engel and Kiener. Having in a previous communication studied the ferruginous residuums of hæmoglobin, which accumulate in certain organs of animals poisoned with the sulphuret of carbon, the authors here submit the results of similar researches in the case of another substance, toluylendiamine.—Experimental researches in connexion with the physiological action of *Cytisus laburnum*, by MM. J. L. Prevost and Paul Binet. The experiments here described were made on frogs and on warm-blooded animals, such as cats, dogs, rats, guinea-pigs, rabbits, and pigeons, with the general results that Cytisus must be regarded as a good emetic with central action, acting rapidly and better by hypodermic injection than by ingestion.—Note on *Greeneria juliginea*, by MM. L. Scribner and Pierre Viala. This is a new species of microscopic fungus which has lately made its appearance in North Carolina, where in very hot and moist districts it attacks and destroys in a few days vines that had been spared by the black rot. Its true characters not being yet determined, the fungus must be provisionally included in the numerous class grouped by M. Saccardo under the general name of Sphæropsideæ.

BOOKS, PAMPHLETS, and SERIALS RECEIVED.

A Text-Book of Algebra: W. S. Aldis (Clarendon Press).—Longman's Shilling Geography (Longmans).—Die Bildung des Natronsalpeters: Dr. C. Ochsenius (Stuttgart).—Die Crustaceen der Böhmischen Kreideformation: Dr. Ant. Fritsch und Jas. Kafka (Prag).—Fauna der Gaskohle und der Kalksteine der Permformation Böhmens, Band ii. Heft 1: Dr. Ant. Fritsch (Prag).—Astronomical Revelations (E. Dexter).—Manual of Mineralogy and Petrography, 4th edition: J. D. Dana (Trübner).—Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie, Neunter Band, 1 Heft: A. Engler (Engelmann, Leipzig).

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