composer of some merit, but a learned thinker and writer whose numerous works are largely consulted in France, and which have rendered great service to the art, history, and literature of music.

THE Report of the Chief Inspector of Mines (Mr. Couchman) to the Minister of Mines for the Colony of Victoria, for the year 1881 is both an interesting and instructive document. It appears that there were altogether 38,436 miners employed in the colony, and, of these, part were engaged in alluvial mining, and part in quartz mining. The total number of accidents was 157, by which 72 men were killed and 108 injured. Forty of the deaths and 43 of the cases of injury were caused by falls of earth or rock at the surface and underground. More than 50 per cent. of the whole were thus due to a class of accidents which claim a similar proportion of the victims in our mines at home. The remaining accidents arose from: falling down shafts, winzes, and shoots; falls of material down shafts; cage accidents; machinery in motion; explosion of lithofracteur, gunpowder, dynamite, &c.; and miscellaneous causes. After describing the nature of the principal accidents Mr. Couchman discusses at considerable length the dangers due to the use of nitro-glycerine compounds, and he quotes the remarks of Lieut.-Col. Majendie upon an accident that occurred with dynamite and blasting gelatine in the Minera lead mine near Wrexham, on March 23, 1881. He also shows that the Miners' Accident Relief Funds are in a fairly healthy condition, and he says that the balance sheets which were submitted to him "afford clear proof of the great good effected by judicious combination for the relief of distress and of the large amount of benefit distributed by these praiseworthy associations since their establishment. The whole of the details of each accident, both fatal and non-fatal, are set forth in tabulated form; and five appendices show: (A) the number of accidents that occurred in the several divisions of each district; (B) the names of persons killed, whether married or single, and the number of children left by them; (C) the prosecutions under the Regulation of Mines Statute, 1877; (D) a schedule of the amounts paid to persons injured and to the relatives of persons killed; (E) the causes of the mining accidents which occurred in the several mining districts. The Report is thus very complete in every imaginable kind of detail.

THE additions to the Zoological Society's Gardens during the past week include five Wild Boars (*Sus scrofa*), European, presented by the Count de Paris; an Egyptian Cat (*Felis chaus*) from North Africa, presented by Lieutenants Fisher and Farquhar and Mr. Basset, H.M.S. *Bacchante;* a Black Rat (*Mus rattus*), British, presented by Mr. W. E. Bryant; a Thicknee (*Œdicnemus crepitans*), Britisb, presented by Mr. C. W. Harding; an Indian Python (*Python molurus*) from India, presented by Capt. Laws; two Blue-faced Lorikeets (*Trichoglossus hæmatodes*) from Timor, received on approval.

SOCIETIES AND ACADEMIES

PARIS

Academy of Sciences, August 14.—M. Blanchard in the chair.—The following papers were read:—Note on Dr. Andries' theory of cyclones, by M. Faye. This German observer takes a similar view to M. Faye's. Cyclones, tornadoes, and *trombes* are one and the same mechanical phenomenon, and their powerful action is due to the force in upper currents. Dr. Andries furnishes experimental evidence from liquids.—On the appearance of manganese on the surface of rocks, by M. Boussingault. He found on quartz pebbles carried down by Venezuelan streams, a thin dark pellicle of bioxide of manganese. A similar coloration of granite on the Orinoco, Nile, and Congo, has been observed. The natives of the Andes say that it is only the white (colourless) rivers that produce the dark banks; they regard the black granite rocks as unhealthy (and with reason). In the Andes M. Boussingault found a spring containing a good deal of manganese, and forming deposits like those just referred to; the dark pellicle is probably due to suroxidation, in air, of the protoxide of manganesic carbonate.—Experimental researches on the mode of formation of craters of the moon, by M. Bergeron. He sends hot air through a brass tube into a melted but gradually cooling mass of Wood's Alloy. The bubbling forces the forming pellicle aside in a circular space, giving the aspect of a circus, then of a crater; ere long, the mass becoming pasty, the gas no longer clears the pellicle, but forms a cone in the middle. Some slightly different effects are had with other alloys; the sides of the cone may have a more broken-up appearance. An interruption of the current gave two concentric craters, the inner the higher (compare the lunar Copernicus, &c.).—Terms of short period in the earth's motion of rotation, by M. Rozé.—On the cure of saccharine diabetes, by M. Félizet. Bernard showed that irritation of a part of the *medulla oblongata* causes glycosuria. M. Félizet seeks to suppress irritation in the same quarter (the cause of diabetes), by the sedative action of bromide of potassium, and in fifteen cases he has thus effected a cure.—On a new process of insulation of electric wires, by M. Geoffroy. He wraps them in asbestos fibres and encloses in a lead tube. The wire may be quite volatilised without a spark being emitted. The lead shows no trace of fusion.—Discovery of a small planet at Paris Observatory, by M. Paul Henry.—Description of the Manger Præsepe in the Crab, and micrometric measures of relative positions of the principal stars composing it, by M. Wolf.—On the theory of uniform functions of a variable, by M. Mittag-Leffler.—General method for solution of problems relative to principal axes and moments of inertia; oscillation balance for estimation of moments of inertia, by M. Brassinne.—On the longitudinal vibrations of elastic bars, &c. (continued), by MM. Sébert and Hugoniot.—Hydrodynamic experiments; imitation by liquid or gaseous currents, of magnetic figures obtained with electric currents or with magnets (sixth note), by M. Decharme. *Inter alia*, water or air is forced through a tapered glass tube against a plate covered with a thin layer of minium diluted with water.—On the surface tension of some liquids in contact with carbonic acid, by M. Wroblewski. The decrease of the superficial tension of the liquids depends solely on the fact that the superficial tension of the carbonic acid with which they are compressed is extremely small.—On some arseniates neutral to litmus, by MM. Filhol and Senderens.—Fermentation of starch; presence of a vibrion in the germinating grain of maize and in the stem of this plant, by M. Marcano. This inquiry relates to *chicha*, a strongly alcoholic drink prepared by American Indians from maize. The vibrion's presence is regarded as clearing up several points hitherto obscure.—On five new parasitic protozoa, by M. Künstler. These were found in the larva of *Melolonthus* and of *Oryctes*, and in tadpoles.—Researches on the organs of flight in insects of the order of Hemiptera, by M. Moleyre. The apparatus connecting the anterior and posterior wings is here studied; M. Moleyre considers that in the sub-order Heteroptera, whose hemelytra (or anterior wings) fulfil best the *rôle* of protective sheaths, the connecting apparatus appears, with a remarkable fixity, in its most perfect form.—Pierre Breton and the binary nomenclature, by M. Crié.—On a disease of beet, by M. Prillieux. This disease, unknown in France before, and due to a *Peronospora*, has appeared at Joinville-le-Pont (Seine).—On the coal of Muaraze, in Zambesia, by M. Guyot. "Exploitation" seems impossible.

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