

MR. VICTOR COLLINS has compiled a catalogue of the library of the late Prince Louis-Lucien Bonaparte, and it has just been published by Messrs. H. Sotheran and Co. Prince Bonaparte's collection of linguistic works is regarded by many authorities as the finest in the world. From his youth upwards, he devoted his best energies and talents to the formation of his library. His high social position and rare literary attainments allowed him to give full scope to his philological enthusiasm, and assisted largely in the attainment of his ambition. According to Mr. Collins, the primary object of the Prince was the acquisition of works on every language and dialect represented in Europe; but in the course of years his ambition went further, and he collected specimens of every known language which possessed even the most rudimentary literature. Though it must always be a matter of regret that Prince Bonaparte did not carry out his intention of compiling a catalogue of his library on a scientific basis, Mr. Collins' compilation will be of considerable assistance not only to the bibliophile, but also to the philologist. The books are classified into three divisions, dealing respectively with monosyllabic, agglutinative, and inflectual languages; and the list of them covers more than seven hundred pages. We have previously noted that these linguistic treasures are for sale *en bloc*. It is to be hoped that they will be acquired by some learned institution, where they may be studied at leisure by experts, for they afford a unique means of research on the relations of languages and dialectal connections.

DURING the year 1892, Mr. W. B. Evermann spent six months on board the U. S. Fish Commission steamer *Albatross*, and made some interesting observations on the Ptarmigan of the Aleutian Islands (*Proceedings* Indiana Acad. Sci. 1892, p. 78). Among the birds collected were Willow Ptarmigan (*Lagopus lagopus*) and Rock Ptarmigan (*L. rupestris*) from Kadiak Island. The former ranges near the bases of the mountains and among the sparse willow growth of the lower portions of the island. At the time of Mr. Evermann's visit, the snow had melted from considerable areas frequented by this species, while higher up the mountains, where the Rock Ptarmigan was found, and where there was little or no woody vegetation, the snow covered everything completely. The principle of adaptation to environment was clearly illustrated by these two species. The one which ranged in the region still covered entirely with snow had not begun to change from winter to summer plumage; not one of the sixty odd specimens collected showing a single brown feather; the plumage of every one was a solid white. This was not so, however, with the Willow Ptarmigans. Their plumage had begun to change with the slowly melting snow, and in most cases the head and neck had almost completely changed to the summer brown, while brown feathers were scattered here and there through the rest of the plumage. It is easy to see, Mr. Evermann points out, that it is greatly to the advantage of each of these species to change from winter to summer plumage synchronously with the melting snows; too rapid or premature change, as well as change too long delayed, would defeat the object of protective colouration.

DURING the last few days Mr. Rowland Ward has had on view, in his Piccadilly establishment, a remarkably fine specimen of the so-called white rhinoceros (*Rhinoceros simus*). The late Mr. Burchell described this rhinoceros many years ago, and reported it as very numerous at that time at Latakoo. It is the largest of the genus, and has now become nearly if not quite extinct. Some ten years since Mr. F. C. Selous shot a specimen in Mashonaland, which he gave to the Cape Town Museum, and beyond one other which was shot by the late Mr. J. S. Jameson whilst hunting with Mr. Selous, no authentic records of any specimen of this

rare animal have been published. Mr. R. T. Coryndon shot two specimens early in July 1893, both of which have been modelled by Mr. Ward. On account of the weight of the specimens the skins were cut up into several pieces, which has made the work of modelling them one of the greatest difficulty. The largest rhinoceros is to form part of the Hon. Walter Rothschild's collection at the Tring Museum; the remaining one, which is not yet completed, has been acquired by the trustees of the Natural History Museum. The specimens are adult males, and the two skeletons are being macerated. Mr. Coryndon is leaving England again in a few days, his object being to travel to the northern end of Lake Tanganyika, in Central Africa, and to station himself there, build a permanent station, and collect insects, moths, butterflies, birds and small mammals for several English collections and museums. He hopes to gain some definite information in regard to the supposed new species of rhinoceros, and to determine the exact geographical district of the square-mouthed rhinoceros, the animal exhibited by Mr. Rowland Ward.

DR. K. VON CHRUSTSCHOFF, of St. Petersburg, has recently succeeded in preparing artificially the cubic modification of silica, which was discovered some years ago by Von Rath, and called christobalite. The manner in which the substance has been formed is as follows: Dry crystals of boric acid are saturated with dry silicon-tetrafluoride gas, when it is found that the boric acid crystals swell up and give rise to a very voluminous white mass, which is a combination of boric acid and silicon-tetrafluoride. This substance being thrown into an excess of dilute ammonia, gives rise to borate of ammonia, which is easily dissolved, and a white residue, and must be repeatedly washed with ammonia, water and alcohol, till every trace of the ammonia and boric acid is removed. The snow-white granular mass, which is not in the least gelatinous, is soluble to such an extent in pure water that aqueous solutions containing from 5 to 7 per cent. of silica can be obtained. Once dried, however, the solubility of the silica is completely destroyed. The silica thus prepared, with water containing a slight trace of hydrofluoric and boric acids, is introduced into the platinum apparatus used by the author in his previous experiments in mineral synthesis, and is heated to 200° C. for two hours, under a pressure of from fifteen to twenty atmospheres; when clear and colourless crystals from 0.1 to 0.3 mm. in diameter make their appearance. These crystals were isolated by treating the mass with alkalis and dilute hydrochloric acid. The crystals are found to be various combinations of the octahedron, cube and rhombic dodecahedron; they are completely isotropic, and show no trace of the anomalous double refraction described by Mallard and others in the natural crystals. On analysis they yielded 99.78 per cent. of silica.

A NEW mode of demonstrating the electrolysis of hydrochloric acid upon the lecture table is described by Prof. Lothar Meyer in the latest issue of the *Berichte*. As the late Prof. von Hofmann himself pointed out, in describing the well-known apparatus for this purpose which bears his name, the electrolysis of hydrochloric acid is not a very satisfactory experiment, as it invariably happens, even when the acid has been previously saturated with chlorine gas, that the volumes of hydrogen and chlorine obtained are unequal, the hydrogen being considerably in excess. A somewhat nearer approximation to equality is obtained by employing, as recommended by von Hofmann, a concentrated solution of common salt mixed with ten per cent. of the strongest hydrochloric acid, but even in this case the volume of the chlorine is always less by some few cubic centimetres than that of the hydrogen. This discrepancy is due to the fact that after closing the taps of the collecting tubes, the liberated gases