ALEXANDER VON HUMBOLDT.

Humboldt's Childhood and College Life. Alexander von Humboldt was born at Berlin, September 14, 1769. His father was Major Alexander George von Humboldt; his mother was of French extraction. He had but one brother, William, who was his elder by two years. The childhood of the two brothers was passed

at the Castle of Tegel, about three leagues from Berlin. It was in the midst of pleasant scenery; a dark pine-clad hill rose at the back, in from extended the lake, and beyond it lay the town and famous fortress of Spandan. No traditions of precoclous intelligence are recollected of Alexander-the man who outlives family and fellow-workers, and gains twenty years beyone the common lot, leaves no contemporaries of his boyhood to recount to a new generation the shadows of eminence forecast upon his youth. From such reminiscences, however, as can be collected, we perceive that in his early training lay the germs of his ultimate greate

His education began with his brother's in 1775. under Joachim Heinrich Campe, a teacher wh went by Rousseau's theory; combining the physical with the mental development of his pupils, and treating the study of the natural sciences of equal importance with that of the classics and metaphysics. Next to Klopstock, Campe was accounted the greatest of German critics and philologists; but the work of his in which his young scholars probably found most edification, was a translation of the famous adventures of "Robinson Crusoe." Alexander's taste for the natural sciences was already awakened, and the hero of that history filled him with a longing desire to visit strange lands upon his own account.

Campe remained but a year at Tegel, and was succeeded in his office by Christian Knutte, a young man, poor in purse, but rich in learning, who pursued the same system as his predeces-sor. Throughout the childhood of his pupils, and up to the period of their father's death, which happened in 1779, many distinguished visitors appeared at Tegel-princes, statesmen, old companions in arms, and famous scholars: amongst the last come Gothe and Dr. Ernst Ludwig Heine, the physician of the family, and a learned botanist, who instructed the boys in his favorite science on the system of Linnieus When they were sent to Berlin to pursue their education, Christian Knutte accompanied them: he also went with them when they were trans ferred to the University of Gottingen. At this famous seat of learning, the most distinguished teachers during the young Rumboldt's residence were Johann Friedrich Blumenbach, Professor of Physiology and Comparative Anatomy; Christian Gottleib Heync, a great classic; and Eichhorn, Professor of Arabic, and a profound Bibli cal scholar.

But the man who exercised the most permanent influence over the mind of Alexander was George Foster, son-in-law to Professor Heyne. He had seen what the University sages had but learnt from books. He had outdone the adventurous Robinson Crusoc. At eighteen he had salled round the world with Captain Cook, and had since written an account of his voyage. his company Alexander spent most of his leisure, and his example and conversation mainly determined the bent of the young student's fu-

In 1780 the university course of the two bro-thers ended. William proceeded to Paris with his old tutor Campe, and Alexander remained in Germany, prosecuting his studies. He applied himself to geology, then a new science, directed thereto by the works of Abraham Werner. Humboldt's first journey was a mineralogical tour with Foster up the Khine, and through Holland to England. He afterwards embodied his observations in a work which supported Werner's theory that all rocks are of aqueous formation It was his earliest published production.

He next went to a commercial academy at Hamburg, and thence to Freyburg, where he remained a year studying mining under Werner. In 1792 he gained his first appointment as inspector of mines in Franconia. Here his duties were very keavy; he had to remodel the mining system throughout, and to travel continually inspecting the working of the new operations. at the same time he lost no opportunity of pur-suing his scientific researches; he botauized, he descended into the mines to examine the fungi that grew in the shafts, and, if the district were mountainous, he studied the rock formations, and speculated on Werner's theory. His powers of continuous labor were marvellous; busy as he must have been at this period, he wrote largely for the scientific journals, and published a work on the local botany of the neighborhood of

In 1795 he resigned his office of inspector of mines, and proceeded to Vienna, where the magnificent collection of exotics gave him great facilities for the study of botany.

During the following year his mother died, and was buried at Tegel, and in the subsequent spring his brother, who was now married, met him at Berlin to divide their inheritance. liam's share was Tegel. Alexander's an estate in Nenmark, which he sold to the poet Franz von Klaist, to raise funds for the journey which was the object of his dreams. Until it should come to pass, he diverted his energies with numerous ns and many short excursions. He made a geological tour with Leopold von Buch through salzburg, Styria, and the Tyrolese Alps, and in 1798 he went to Paris, where his brother William resided, whose house was a rallying point for all the French savans and distinguished men who visited that gay capital. Of this period were two abortive plans for journeys to South America, the Archipelago of the Pacific, New Holland. Madagascar, and the Cape of Good Hope; they were set on foot by the National Museum of France, but fell to the ground for tack of funds to carry them out; and the only good Humboldt reaped from his disappointment was the friendship of Aime Bonpland, one of the naturalists who had been appointed to accompany the

voyage of exploration to South America. In 1798 he and Aime Bonpland spent the win-ter in Spain, and while in Madrid he was presented to the King, who promised him the sup-

port of his ministers if he undertook a Voyage to the New World.

Thus encouraged, he resolved not to risk further disappointment by delay. Furnished with passports and with extensive permission for researches throughout all Spanish America. Humboldt and Bonpland despatched farewell letters to their friends and relatives, embarked on board the Pizarro, and got safe out to sea on June 5, 1799. So the great journey was begun.

Humboldt was then in his thirtieth year. Many portions of the story of Humboldt's great transatlantic journey with Aime Bonpland read like the wildest traveller's tales, but they are told on the authority of his own narra-

Their first stay was at the great Canaries, the Pizarro anchoring in the Bay of Santa Cruz. Their chief point of interest was Teneriffe; and as the captain could not promise them a delay of more than four or five days, they immediately set out for Orotava, on the western declivity of the volcano.

They started before sunrise; the French viceconsul volunteered himself as guide, and an English gardener joined their party. Proceed-ing along a lofty aqueduct, draped with ferns, they arrived at the famous dragon-tree which mentioned in many ancient documents, and said to have been as gigantic in the fifteenth century as when Humboldt and Bonpland saw it. Its circumference near the root was forty-five feet. and its height between fifty and sixty; it grew in branches candelabrum-wise, and each terminated in a cluster of leaves. Continuing to ascend through a forest of chestnut trees, they gained the rock of La Gayta and Portillo, and afterwards traversing a narrow pass between two basaltic hills, they entered on the great plain of Spartium. Here the landscape changed. Thus far they had seen only beautiful vegetation everywhere covering the ground, but this plain stretched before them like a sea of sand.

They passed the first night in a cavern, called the English Halt, and at three o'clock on the following morning started on again on their way. Two hours' walking brought them to Alta Vista the ice sellers' station, beyond which point the ground became utterly destitute of vegetable This tract in all volcanic regions is called Malpays. During the ascent many curlous phenomena were observed; the travellers be- however, knew by justinet the way to go; the

heid the clouds spreading below them like a vast plain of snow. The ascent was very fatiguing, and the water-carriers lightened their loads by throwing away the geological specimens that Humboldt and Bonpland had picked up. After a march of three hours across the Malpays they reached the foot of the Sugar-loaf, which was so steep that they were compelled to climb it by an old current of lava, and, on gaining the summit they could hardly stand for the violence of the The crater was surrounded by a west wind. The crater was surrounded by a parapet of lava, and through a breach in its wall the travellers were enabled to approach the funnel, which was about three hundred feet across in its widest part. The heat was perceptible only at a few crevices, which gave aqueous vapors and a buzzing sound. The view from this height was very fine, and the atmosphere had now grown so transparent that they could even distinguish the different shades of vegetation, and the vessels at anchor in the port of Orotava. On their return they saw flocks of

canaries of a brilliant green color. On June 25 the Pizarro left Santa Cruz and ailed for South America. North of the Cape de Verde Islands they saw masses of the trople grape, which grows on submarine rocks degrees north and south of the equator. From the twenty-second degree they found the sea alive with flying-ush, which threw themselves eighteen feet out of the water, and sometimes fell upon the deck. When the ship entered on the terrid zone, the voyagers began to study the strange beauties of a new firmament. On the night of July 4 they first saw the Southern Cross. The latter part of the passage was less fortunate than the commencement; a malignant fever broke out on board, and a young Austrian, whose mother was a widow, died of it, and was buried in the sea at sunrise. Humboldt and Boppland determined to leave the infected ship. and on the morning of July 15 they perceived low island with sandy hills, which appeared like an agitated sea from the effects of the mirage. On the following day the mountains of New Andalusia rose before them, and

(mmana

And its eastles were seen amidst groups of cocoa trees. The splenslor of the sky, the vivid coloring of the vegetation, all proclaimed the grand character of tropic regions

The travellers presented their credentials, and were cordially received by the Governor, who assigned them a house well situated for astronomical and meteorological observations.

Their first exentsion was to the peninsula of Araya, their object being to see the salt mines, and to make geological observations on the mountains that composed it. They started at two o'clock on a lovely cool morning, and sailed up the little river Manzapares, which was bordered with trees of gigantic growth-mimosas, ceibas, and crythrinas-whilst swarms of phosphorescent insects glistened in the air.

At the salt-mines they saw a barefooted shoemaker, of Castillan descent, who had collected the traditions of the country, and who told them some curious particulars of the pearls of Cabagua, specimens of which he gave to Hum-boldt. He was a grave and dignified person, who despised riches, and the limit of whose ambition was the possession of an ass strong

enough to carry a had of plantains. They then proceeded to the Castle of Araya, which stood on an arid mountain, and looked ess like the labor of man than like gigantic rocks of the primaval world. They passed a light in an Indian but, and in the morning they visited the ruins of St. Iago; the walls had been blown down, but blocks of freestone, seven and eight hundred feet square, still remained to at-

test their enormon-strength.

Expedition to San Fernando. Their next expedition was to the mountains of the Indian missions. The first they reached was that of San Fernando, where an aged but fat and jovial missionary received them kindly, and lodged them for the night. The village, and the extreme neatness of the Indian huts, reminded them of the establishments of the Moravian Brethren in Germany; the dwellings were built singly, but in long, wide streets, crossing each other at right angles. The square in the centre of the village contained the church, the mission house, and a cara anserai for travellers. In these regions, every German was considered a miner, and every Frenchman a physician; and both travellers had numerous calls upon their skill: wherever Humboldt went, specimens of ore were brought to him, and the inhabitants wished him to explore a wonderful crevice in their mountains, nine hundred feet wide, and filled with trees interwoven together, because they believed that it contained a gold mine. Humboldt consented, and, assisted by Indians and accompanied by dogs as a protection against the jaguars, he and Bonpland set forth on their expedition. Two caverns opened into this mountain, which emitted fiery exhalations, and the path by which they journeyed was a sort of narrow cornice above a precipice between two and three hundred teet deep. The farther they advanced, the more dense the vegetation became: they collected plants at every step, and the Indians made incisions in the trees, that they might observe the beautiful red and yellow woods that composed them. The supposed gold mine proved to be nothing but an excavation in a black stratum of marl, which contained abundance of pyrites. Humboldt, however, could not succeed in convincing the Indians of the fact; they were persuaded that the metallic grains washed down in the water must, from their bril-

The travellers next proceeded onwards to the Convent of Caribe, the principal station of the missions. They were received by the monks with great hospitality, and found a numerous society in the convent. Humboldt was lodged in the cell of the Superior, which contained a good

selection of books The Great Cavern of Gunchedo

was three league from the convent, and the travellers set out to see it, accompanied by a party of monks and the Indian magistrate. Their way lay chiefly through the bed of a torrent, and they came suddenly upon the cavern, plerced in the vertical face of the rock, and forming an arch eighty feet wide and upwards A river issued from it, the of seventy feet high rock was covered with gigantic trees, and wild vines waved in testoons before the mouth of the cavern. It was inhabited by nocturnal birds, whose fat was a chief article of food and commerce amongst the Indians. The explorers entered the arch, and following the course of the river within it, they saw heliconias, palm trees, and arums growing on its banks; vegetation did not disappear until forty paces from the mouth of the cavern. They advanced four hundred and fifty feet without torches, and where the light began to fall they heard the hideous hoarse cries of the nocturnal birds, repeated again and again by the subterranean echoes. Their nests were funnel-shaped, and the roof of the cavern was riddled with them like a sieve. The Indians fixed torches upon long poles to show them to the travellers, and scared by the light, the birds redoubled their eries, and answered each other from the re-motest parts of the cavern. The river was from twenty-eight to thirty feet wide, but it was shallow, and in many places the stalactifes com-pelled the explorers to descend into its bed to continue their route; at one point it formed a subterranean cascade, and here vegetation recommenced. The torrent deposited layers of black mould, and the birds dropped seeds, which germinated and grew up into blanched stalks, two and three teet high; but they were so much changed by the absence of light that it was impossible for travellers to determine their species. Farther than this point the Indians refused to go: they connected mystical ideas with the cavern, and neither the authority of the monks nor the expostulations of Humboldt and Bon-pland could prevail on them to pass the cascade. The whole party were, therefore, obliged to retrace their steps.

When the travellers took their leave of the hospitable missionaries, they crossed a ridge of mountains and a vast savannah, to a steep and slippery slope, to which the monks had given

the name of "The Descent to Purgatory."

It was a descent which it took them seven hours to accomplish. The road was a series of rocky steps, over which, in the rainy season, the tor-rents dashed with impetuous haste. The mules,

guides rode, but Humboldt and Bonpland preferred to walk, to gather plants. It was oppressively hot, and they heard thunder in the distance. Their object was to have gone farther eastward, but as they proceeded they found the routes becoming quite impracticable on account of the heavy rains that had recently fallen; they therefore went to Cariaco, and, embarking in a cance with the botanical and geological speci-mens which they had collected on their journey, they returned to Cumana by sea.

Across the Country. They remained at Cumana some time making preparations for a journey to the Oronoco and Rio Negro. They had before them a ten months route across a country without any communica tion with the coast; and, having furnished them selves with intelligent guides, on November 10 they left Camana once more, and sailed down the Manzauares to Caraças. It was the dry sea son, and while there they saw the savanuahs on fire, kindled to improve the vegetation. February they set out for the Oronoco; and the first marked object they saw on their journe; was a famous tree, known throughout the vince by the name of the Zamang del Guayre It was a species of mimosa, its trunk sixty feet high and nine inches thick. Its beauty and peculiarity were in its hemispheric head, five hundred and seventy-six feet in circumference, with the branches bent downward in the form of an ambrella. The early conquerors of the province saw this tree in the same state as Humboldt dld; he considered it at least as old as the dragon-tree of Orotavo.

The travellers journeyed by night, on account of the excessive heat. They visited the hot spring of Trinchera, which they found of a temperature sufficiently high to boil eggs; and while passing through the valleys of Aragon they saw trees, the tranks of which yielded from jucisions abundance of glutinous milk, devoid of acridity and of balmy smell. They both drank of it and were told that it formed a very nourishing part of the native diet. These valleys were inxuriantly fertile, producing everywhere plan-tains, watermelons and calabashes. Here also they saw numerous bands of howling monkeys going slowly in procession from tree to tree, through the forests. The uniformity of their movements was very remarkable. When the rees did not touch each other the male who led the party suspended himself by his tail, and, dropping from the branches, swung himself to and fro until his oscillations brought him within each of a neighboring bough. The whole file performed the same movement on the same

When the travellers entered upon the llanos they found the plains level for thirty square miles. In these vast and profound solitudes vegetation was scant and rare, and no dwellings were to be seen upon the dreary wastes. It was not until they had journeyed two days and two nights that they reached a lonely farm, where they rested, and the following morning resumed their way on horseback, at two o'clock, to avoid the heat of the day. Arrived at Calabozo they found a Spaniard, who had constructed an electrical machine. But what Humboldt had the greatest curiosity to see here were the

Cymnoti, or Electrical Ecis. He and Boupland went, therefore, in company with several Indians, to make the in the open air; for so great and dread the natives had of the shocks they caused that, though Humboldt offered two plastres for a strong and vigorous fish, if brought to his house he failed in obtaining what he desired. They were conducted by their guides to a stream which had shrunk into a muddy basin during the drought, and which was surrounded by fine trees. To eatch the gymnoti in nets was extremely difficult, and the Indians fished for them with horses in the following manner:-They secured the plain until they had collected about thirty wild horses and mules, which they drove into the pool. The tunualt brought the cels out of the mud and excited them to butle. These aquatic serpents—of a vellowish, livid hue—swam on the surface of the water, and crowded under the animals, which the Indians pre vented from escaping with their long has poons. Stunned by the noise, the cels defended themselves by repeated discharges of their electric batteries, and several horses sank beneath the violence of the invisible strokes which assailed them on every side, while others, with eyes expressing the atmost auguish, and manes erect, endeavored to fly from the contest. Two horses were soon drowned: stunned by the shock, they sank, and were unable to rise again in the long struggle between lers anticipated that all the animals would thus destroyed; but, after a time, the eels were wearied out and dispersed; they would require ong rest and much nournishment to repair the galvanic force they had lost. Some now approached the edge of the pool, and the Indians took them with their harpoons, experiencing no shock as they raised them into the ir, when the cords to which the harpoons were

astened became dry. The Rio Apure. The travellers left Calabozo well satisfied with their stay, and towards the end of March arrived at the mission of San Fernando, from which place, two days later, they set sail up the Rio Apure in a large canoe, managed by a pilot and four Indians, for the Oronoco. They soon entered a region inhabited only by jaguars, tapirs, and crocodiles. In some parts the river was nine hundred feet wide, and straight as canal, with magnificent forest trees on its banks. In others, where the shore was open, they saw as many as eight or ten crocodiles lying on the Bonpland went ashore to measure a dead one, and found it twenty-two feet three inches in length. The travellers heard of a girl who aved her life, when seized by one of these terrible creatures, by thrusting her fingers into its eyes; it quitted its hold, but bit off her left arm. The crocodile is an excellent swimmer, even against the strongest currents, but it turns slowly, and so occasionally loses its prey.

While going up the river the whole party commonly slept ashore in hammocks, slung between the trees, and were terribly disturbed eries and howling of the beasts by night. Joval they saw a jaguar as large as a Bengal tiger; and one day when Humboldt had landed, ne suddenly found himself within eighty paces of a jaguar lying under a ceiba tree; but he made swift, silent detour, and escaped safe to the boat. Thus far they had been sailing on the Rio Apure, but now they came to

The Oronoco, with lovely hills and majestic granite mountains in the distance. A vast plain of water spread around them like a lake, and the shores, parched by the heat, were bare as the sea-beach. water the river was six thousand feet wide: in the rainy season it increased to thirty-two Proceeding southwards the mounthousand. tains of Encaramada appeared to rise from the water, as if seen on the horizon of the sea. The natives of the district have a tradition of great floods that once prevailed there where the waves of the sea beat against the lofty granite rocks which the travellers saw sculptured at an immense height with hieroglyphic figures. the time of the great waters," said the Indiaus,

'our fathers went to that height in boats. At the port of Encaramada they met with some Caribs going up the river for the famous fishing for turtles eggs, and they landed at an island celebrated for its abundant supply, where they found a swarm of three hundred Indians encamped to make their

Harvest of Eggs. Humboldt and Bonpland made a tour of the Island, accompanied by a missionary and a trader. The beach was a plain of smooth sand, and they were shown by the missionary, with his long pole, where the eggs lay. By thrusting it straight into the ground, the sudden want of resistance betrayed the layer of soft earth where they were deposited. It was like a mining ountry, divided into lots and worked with the utmost regularity. The eggs were broken into remained exposed to the sun until the oily part collected on the surface, when it was skimmed off and boiled, to make turtle butter. It was used for burning in lamps, and also in

cookerv. They had an accident when they left the island. The boat was nearly upset by a sudden squall, and Humboldt with difficulty saved his journal, while books, papers, and dried plants

the other things were recovered; and their In-dian pilot, who was to blame for the accident, told them, with the utmost coolness, that they would have sun enough soon to dry their papers. On arriving at Paramura, this man could take them no farther; but Bernardo Zea, a missionary near the great cataracts, volun-cered to accompany them in his stead. Here

lumboldt saw an Indian Lady Undergoing a State Toilet. She was being painted by her two daughters in black lattice-work on a red ground, with a dot in the centre of each diamond. It was a tedious ceremonial, for Humboldt spent some hours out herborizing, and on his return found

Tour of Five Hundred Lengues. As they ascended the river they found it crossed from north to south by a chain of gigantic mountains, and the waters, confined in their course for five miles by innumerable dikes of rocks which form natural dams, broken into a thousand foaming torrents. In this region the travellers were terribly tormented by the mosquitoes. In the missions on the Oronoco they furnish endless talk, and one old monk told Humboldt that he had enjoyed twenty years of their intimate acquaintance

From the mission of San Fernando to that of Javita, the travellers sailed through the flooded forests in their canoe, and after a tedious and dangerous journey they gained the Rio Negro. They had already travelled one hundred and eighty leagues in their boat, and to reach the ronoco by the Cassiquiare they would have to sail three hundred and twenty leagues more. Some of the travellers would have preferred a shorter route, but Humboldt and Bonpland persisted in the route they had originally laid down for themselves, and accomplished it. They then sailed down the Orinoco to Atarnipe, where there existed a cavern which was the sepulchre of an extinct Indian tribe. In this place they counted more than six hundred skeletons, all regularly arranged. Amongst them were funeral urns of oval form, the handies turned like serpents or crocodiles, and the edges adorned with designs similar to those of ancient Greece. The travellers carried away some skulls and bones, and the Indians, who approached their mules, instantly detected their resence amongst the baggage by the smell of the rosin that had preserved them. At the mission of Aturee, Father Bernardo Zea left them, after having shared all their difficulties and

dangers during two months.

The travellers reached Angostura in June, having made a journey of five hundred leagues in seventy-five days. After their privations and hardships, everything appeared to them luxurious, and for a short time Humboldt and Bonpland, in perfect health, applied themselves to drying such plants as they had been able to preserve in the damp regions through which they had come; but on the same day they were attacked with a disorder, which, in Boupland, took the character of a low fever. Humboldt soon recovered by taking bark and honey, but Bonpland remained for several weeks in an alarming condition. In July, however, he was sufficiently strong to continue his trayels, and proceeding to Nueva Barcelona, they were embarked in an open boat, with all their collections,

Returned to Cumana

by sea. Their friends came out to meet them with joyful congratulations, for a report that they had perished on the Oronoco had been carrent for several months.

Cubn and Bogota. At Cumana they were detained some time, but

In December they made a voyage to Cuba, and returning to South America in March, landed at Carthagena. Here they divided their collections into three portions, sending one to Germany, one to France, and the third to Hayana, taking every precaution to have them remitted to the ums of Natural History at Paris, or to Sir Joseph Banks in London, in case the vessels by which they were despatched were captured by French or English ships. This anxious business accomplished, they ascended the Rio Magdalena, Bonpland botanizing as usual, and Humboldt making a chart of the river district. In five-andthirty days they reached Honda, and thence travelled on mules to Bogota, which place they reached in June, pursuing their rescarches.
Thence they went to the Lake of Guatavite, a

collitary spot in the mountains of Zipaguira, 8500 feet above the level of the sea. The old Indians held it in great veneration, and there was a channel by which the Spanish conquerors had atd to drain it O PREDVER I treasures said to have been hidden in its depths at their approach.

Towards the end of September they left Bogota and set out for Quito, taking the least frequented road. Early in their journey they rossed two natural bridges of rock, one of them 312 feet above the torrent which it spanned. After passing these bridges they reached the mountains of Quindrio, the most difficult

Pass of the Cordilleras. It lay through a dense forest, which it took them twelve days to traverse. There was no hut by the way, and no means of subsistence, so that travellers always carried a month's provisions, lest they should be delayed by the torrents which, on the melting of the snow in the higher regions, frequently became impassable. The road was 1450 feet above the sea-level, and in many places the pathway was barely a foot wide; in others, the rock, being covered with a stratum of clay, was channelled into deep gulleys of mud, which made the journey excessively arduous, both to the explorers and their oxen of Humboldt and Bonpland went on foot, burden. and twelve oxen carried their collections, instruments, and provisions, through an incessant deluge of rain. When the travellers' shoes were worn out, they went barefoot; for the road, though wearisome and difficult, was

In January 1802, the travellers reached Quito, which place was their headquarters for nine While here they attempted the ascent of

Cotopaxi and Chimborazo,

the two grandest parks of the Cordilleras: but they were deteated by the difficulties of the enterprise. In the eruption of 1739, Cotopaxi vomited red-hot stones 3004 feet above the crater. and its roaring was heard at a distance of two bundred miles. It is the most terrible volcano in the whole range; its form is a perfect cone, crowned with snow, and its appearance is emi-nently grand and beautiful. In the attempted ascent of Chimborazo, the explorers were accompanied by a young Spaniard. They started from the southwest side, traversing great plains, which rose one above the other, like terraces, until they reached that of Sisgun, 12,400 feet above the level of the sea. They continued to ascend until they reached Yava-Cocha, a circular lake, the highest spot yet reached by other travellers. Here they left their mules, and crossing a plain of tawny grass, they came to a region where the rocks rose in columns, like an enchanted forest of stone. Passing over this district, they arrived at a place where the path became too steep and the snow too danger-ous to venture on. All the guides except one refused to proceed any further, and he led then by a route which he called a "knife-blade, sometimes on hand and knees, and always with their poles testing the way before them. For another hour, through increasing mist, they persevered; the barometer showed them an altitude of 18,380 feet; and here they began to suffer from the rarefaction of the air. They breathed with difficulty, their heads swam, and their eyes became suffused with blood. Condors came sweeping down the terrible pass. Once the mist parted, and they beheld the vast dome so near to them that they believed they should cer-tainly reach the summit. They hurried on, but all at once their farther progress was stopped by a vast chasm 400 feet deep and 60 wide. They had attained a height of 19,200 feet. They descended the mountain in a storm of hall and

In another excursion they crossed a bridge one hundred and twenty feet long, formed of ropes, manufactured from the fibrons roots of the Aguava Americana, three or four inches diameter. It was by a bridge of this kind that a permanent communication was kept open be-tween Lima and Quito. On their way to Coto-paxi they saw the house of the Inca Huayna-Capac. It formed a square of one hundred feet

were instantly affoat. One book they lost, but I every way, with walls of burnt perphyry, three feet thick, and the stones as regularly wrought as in Roman buildings. The doors were similar to those of the ancient Egyptian temples. They

saw, also, the remains of the Great Roads of the Incas. which were as fine as any of the old Roman roads. They all met in Cuzco, the centre of the Government, and extended to the limits of the kingdom, but the Spanish conquerors permitted them to fall into disrepair, even where they did not wilfully destroy them.

Approaching the basin of the Amazon the travellers were refreshed by the sight of a luxuriance such as they had nowhere seen surpassed. They afterwards visited the Baths of Pultamarca, and the palace and prison of the Inca Atahuallpa. The treasures collected by the Spanish conquerors, from the temples and palaces of this prince, were estimated at fifteen millions of dollars. Humboldt was shown the slab on which tradition said he was beheaded, still marked with stains of blood.

While travelling through these districts the explorers felt a keen longing once more to be hold the sea, and on reaching the Alto de Guan-zamarca, the great Pacific Ocean, for the first time, lay beneath their eyes. At the end of the year they

Sailed for Mexico. Touching at Acapulco, on the voyage, they heard Cotopaxi, one hundred and fifty mile

away, discharging its terrible artillery.

Arriving in Mexico during the following March, they proceeded to the capital, where they found a school of mines, a botanic garden, and an academy of painting and sculpture. The city of Mexico is founded on the ruins of an ancient capital, and Humboldt saw certain Aztecidols which had been unberied there some years before; besides these, the stone of sacrifice was exhibited to him, and he examined some Azter manuscripts, written on stag skin, some of them seventy feet in length. But uncouth idols, and manuscripts of hieroglyphics which he could not read, were much less attractive to him than the book of nature; and in the beginning of May he set out for the mines of Moran, where he remained for months, inspecting the operations thence he proceeded to the mines of Guadaxuato, the richest in the kingdom. The quantity of silver at this period extracted from the Mexican mines was greater than that furnished by all the mines in Europe, and there was scarcely a silver mine that did not contain also gold; in some were found, as well, opals of the rarest beauty, and murlated silver abounded in the veins of Catorce and Cerro San Pedro.

But the wonder of Mexico was the Volcano of Jorullo.

which rose from the earth by one of the most remarkable physical convulsions on record. In June, 1759, frequent earthquakes and horrible subterraneous noises commenced and continued for fifty days; they then subsided, to break forth towards the end of September more terribly than before. The Indians fled to the mountains, while a level tract, which they had abandoned, for more than three miles square, swelled up in the shape of a bladder, which in the centre rose to an elevation of five hundred and twenty feet, Those who witnessed this convulsion from the mountains, asserted that flames burst from the ground, and that through the cloud of ashes and volcanic fire, the surface of the earth rose and fell like a stormy sea. Thousands of small cones, called by the Indians the ovens of Jorullo, issued from the Malpays, and six large masses, from 1300 to 1700 feet each, sprang from a great chasm; the most elevated is the volcano of Jorullo, which was constantly burning and throwing out immense masses of lava, containing fragments of rock. The plains in its neighborhood had been abandoned on account of the excessive heat. Two rivers, whose course was interrupted by the great convulsion in which the volcano was formed, reappeared 6000 feet farther west, bursting through the vaults of the ovens The Indians attributed these great natural phe nomena to the monks.

After this excursion the travellers returned to the capital, where they remained until January, 1804, arranging their botanical and geological collections. They afterwards visited Vera Cruz, where there are remarkable rains of the ancient Mexican pyramids, and in March they sailed to Havana. They afterwards went to Washington and Philadelphia, and on June 9 they quitted the New World to return to Europe.

The great journey of five years, so long planned and so often delayed, was accomplished. The Evening of His Lite. There is at Tegel a portrait of Alexander von Humboldt at this date. It represents him as of

ess than middle stature, firmly and symmetrically built, with an ardent countenance, lips, keen blue eyes, square brow, and thick chesnut hair. When he returned to Paris he was warmly wel-

comed by all the French savans, His collections were the natural history of accontinent, more extensive than any in Europe.

With his great journey, his active life ceased for almost twenty years; he did, indeed, make a tour through Central Asia, in 1829, but after his return from America he migrated chiefly be-tween Paris and Berlin, and the history of his books is the history of his life. During these twenty years he wrote all his great works, except his "Kosmos," and amongst his friends he counted Cavier, Laplace, Arago, and Berthollet. His companion in his translantic explorations, Aime Bonpland, returned to America in 1815, and, after suffering many vicissitudes, died there at

the age of eighty. In 1827 Humboldt settled permanently at Ber-lin. Here he designed his "Kosmos," which was only begun in 1843, though the conception of it had been in his mind for fifty years. volume was finished in 1858, and he worked at the proof sometimes sixteen hours a day; he completed the work on his eighty-ninth birth day, and during the following spring he closed a life eminently successful, yet of which, writing to Froebel, he says:-"I live joyless, because of all I have striven for from my youth I have ac complished so little.

Nevertheless it was a life of great and famous abor; and in these times of hungry striving for material wealth and power, it is a lesson worth studying. He was born to rank and fortune. and he sacrificed all to the pursuit of knowledge for its own sake; seeking neither place nor re-ward, until, in his latter years, the greatest ionors were heaped upon him unsolicited. Probably no man ever lived who gave more help to worthy and aspiring youth; he rejected no rational appeal, and his influence was always exerted in behalf of science and its votaries. He expended his fortune in his travels and the publication of his works, and during the closing years of his life depended upon his pension and on the money derived from the sale of his books.

He was buried at Tegel, where his mother and brother rest, after a public cere-monial in the Dom Church of Berlin, which was attended by the court and all persons of distinction in the capital.

EDUCATIONAL.

M ISS CLEVELAND DESIRES TO AN-M nounce that she will open on MONDAY, September 20th, at No 2023 DE LANCEY Place, a School for the education of a lin ited number of Young Ladies.

Circulars may be had on application at No. 243 S. EICHTH Street, between the hours of 9 and 2. 9 267 RUFUS ADAMS,

KLOCUTIONIST, No. 11 GIRARD Street, between Eleventh and Twelfth and Chesnut and Market.

M ISS EL17A W. SMITH, HAVING RE-moved from No. 1324 to No. 1212 SPRUCE Street, will reopen her Hoarding and Day School for Young La-dies on WEDNERDAY, Sept. 15. Circulars may be obtained from Lee & Walker, James W. Queen & Co., and after August 25, AT THE SCHOOL 727 3m

FEMALE COLLEGE, BORDENTOWN, N. J.—This institution, so long and so favorably known, continues to jurnish the best educational advantages, in connection with a pleasant Coristian home. Ostalogues, with terms, etc., furnished on application. College opens September 16.

JOHN H. BRAKELEY, President.

HAMILTON INSTITUTE, DAY AND Boarding School for young ladies, No. 3810 CHES. NUT Street, will re-open MONDAY, September 6. For circulars, containing terms, etc., apply at the school, which is accessible to all parts of the city by the horse cars. P. A. CREGARAA. M., Principal.

EDUCATIONAL. RUGBY ACADEMY for BOYS. EDWARD CLARENCE SMITH, A. M., Principal. Young men prepared for business or high standing in Colege. Circulars at No. 1236 CHESNUT Street.

Next session begins September 18th. 717 km.

7 17 fkm \$150 A YEAR, BOARD AND TUITION, SP St. T. M. REILLY. THE MISSES ROGERS, NO. 1914 PINE STREET, have reopened their School for Young La ios and Children.

THE PHILADELPHIA SCHOOL OF DE.
SIGN FOR WOMEN, NORTHWEST PENN
QUARE, will Recpen on MONDAY, Soptember 20,
T. W. BRAIDWOOD, Principal. MISS BURNHAM'S SCHOOL FOR YOUNG A Ladies opens Seytember 20. Personal interview cas be had, after September 6, at No. 1616 Filbert street. For circulare, address F. E. GOURLAY, Esq., No. 60 WALNUT Street.

H. D. GREGORY, A. M., WILL REOPEN HIS CLASSICAL AND ENGLISH SON SOL, No. 110 MARKET Street, on MONDAY, Sept. 6 825 in* MR. G. F. BISHOP, TEACHER OF SING-ing and Piano, No. 28 S. NINETEENTH St. [82] in THE MISSES GREGORY WILL REOPEN their SCHOOL FOR YOUNG LADIES, No. 291 LOCUST Street, on MONDAY, September 13. 8 30 lm

reopen their BOARDING and DAY SCHOOL twentieth year), Sept. 15, at No. 1815 CHESNUT Street articulars from Circulars. 8167w ANDALUSIA COLLEGE PRIMARY AND ADADEMIC DEPARTMENTS.

A HOME BOARDING SCHOOL FOR BOYS.

M 188 BONNEY AND MISS DILLAYE WILL

Charges S250 to man per year.
Address Rev. Dr. WELLS, Andalusia, Pa. 812 Im STEVENSDALE INSTITUTE, SOUTH AMBOY, N. J. A Family Boarding School for Boys-will commence on September 6, 1889. Location unsur-passed in everything desirable for a school. The instruc-tion will be thorough and practical, embracing a careful preparation for college. Greenberg sent on request. preparation for college. Circulars sent on request.

J. H. WITHINGTON, A. M., Principal,
SIS Im SOUTH AMBOY, N. J.

THE EDGEHILL SCHOOL a Boarding and Day School for Boys, will begin its next sion in the new Academy Building at MERCHANTVILLE, NEW JERSEY,

MONDAY, September 6, 1868. For circulars apply to Rev. T. W. CATTELL, MISS JENNIE T. BECK, TEACHER OF Piano, will resume her duties September 6, at No

46 FLORIDA Street, between Eleventh a d Twelfth DHILADELPHIA UNIVERSITY, NINTH

Street, south of Locust, Medical Department, Session 1869-70 commences October 6, at 7% o'clock, with a General introductory by JOHN O'BYRNE, Esq. Free to the public. Students desirons of attending Collego will call upon the Dean, W. PAINE, M. D., at the University, from 9 to 4.

W EST PENN SQUARE SEMINARY FOR Young Ladies, No. 5 S. MERRICK Street (late Mrs. M. S. Mitchell's). The Fall Term of this School will begin on WEDNESDAY, September 22. Miss AGNES IRWIN, Frincipal. ASELL FEMALE SEMINARY (AT AU-ASELL FEMALE SEMINARY (AT AU-BURNDALE, Mass., ten miles from Boston, on Boston and Albany Railroad). For seventeen years a load-ing New England Seminary. Not excelled in thoroagh English or artificial fraining, nor in highest accomplish-ments in Modern Languages, Painting, and alusic. Loca-tion for health beauty, and rofining influences, unsur-passed. Next year begins Sept. 30. Address 727 6w CHARLES W. CUSHING.

RECTORYSCONN.

Rev. C. W. EVEREST, Rector, aided by five resident assistants. The school is closing its twenty-sixth year, and refers to its old pupils, found in all the professions, and every department of business. Therough physical education, including military drill, boating, and swimming in their season. Age of admission, from nine to fourteen. Terms, \$750 per annum.

The fall session begins September 7.

Reference—Rt. Rev. J. Williams, D. D.

Hamden, July 15, 1869. INIVERSITY OF PENNSYLVANIA.

NIVERSITY OF PENNSYLVANIA.

FACULTY OF ARTS.

The first term of the College year will begin on WED.
NESDAY, September 15, at 10 o'clock, Applicants for admission will apply for examination at 10% o'clock. Students may pursue either the course of studies for the DEGREE OF BACHELOR OF ARTS or the DEGREE OF BACHELOR OF ARTS or the DEGREE OF BACHELOR OF SCIENCE, in which the Ancient Languages are not studied, but additional time is given to the Mathematics and the Modern Languages, or they may pursue such separate studies as they desire, and which the Faculty may approve.

Fees for either of the full courses, THIRTY-FINE DOLLARS a term, payable in advance,

963t

FRANCIS A. JACKSON, Secretary.

A CADEMY OF THE PROTESTANT EPISGOPAL CHURCH,
(FOUNDED A. D. 1785.)
S. W. Cor. LOCUST and JUNIPER Streets.
The Rev. JAMES W. ROBINS, A. M., Head Master,
With Ten Assistant Teachers.
From September 1, 1884, the price of Tuition will be
NINETY DOLLARS per annum, for all Classes: payable
half yearly in advance.
French, German, Drawing, and [Natural Philosophy are
tsught without extra charge.
By order of the Trustees.

GEORGE W. HUNTER, Treasurer.

The Session will open on MONDAY, September 6. Applications for admission may be made during the preceding week, between 10 and 12 o'clock in the morning.

JAMES W. ROBINS, 8 16 mwf 6w

LAFAYETTE COLLEGE.

Owing to the work of remodelling the main building, the opening of the Fall Term is deferred to THURSDAY, September 16, 1869. Examination for admission on the preceding day at 8 o'clock A. M. Classical Course, Technical Courses in Civil Engineer-

ing, Chemistry, and Mining and Metallurgy, and a Post Graduate Course. Requirements for admission may be known by addressing President CATTELL. WEST PENN SQUARE ACADEMY,"

S. W. corner of MARKET Street and WEST PENN SOUARE. T. BRANTLY LANGTON having leased the upper part

the Third National Bank Building, will reopen has School on MONDAY, tember 12. The facilities of this building for school purposes will be apparent upon inspection. The Gymnasium will be under the immediat ervisi of Dr. Janson, and is being abundantly supplied with apparatus for the practice of either light or heavy gymnastics. The course of instruction embraces all that is needed o fit boys for College, Polytechnic Schools, or Commercial

Circulars containing full information respecting Primary Department, College Classes, the study of Vocal Music, Art, etc., may be obtained by addressing the Principal as above. The rooms will be open for inspection after August 21.

T H E H I L L."
SELECT FAMILY BOARDING SCHOOL,
An English, Classical, Mathematical, Scientific An English, Classical, Mathematical, Scientific and Artistic Institution,
FOR YOUNG MEN AND BOYS!
At Pottstown, Montgomery County, Pa.
The First Term of the Nineteenth Annual Session will commence on WEDNESDAY, the 8th day of Soptember next. Pupils received at any time. For Circulars address REV. GEORGE F. MILLER, A. M.
Principal.

REV. DRS.—Meigs, Schaeffer, Mann, Krauth, Seiss, Muhlenberg, Stover, Hutter, Stork, Conrad, Bomberger, Wylie, Nierret, Murphy, Cruikshanks, etc. HONS.—Judge Hudlow, Leonard Myers. M. Russell Thayer, Benj. M. Boyer, Jacob S. Yost, Hiester Clymer, John Kilinger, etc. ESQS.—James E. Caldwell, James L. Claghorn, C. S. Grore, T. C. Wood, Harrey Bancroft, Theodore G. Boggs, C. F. Norton, L. L. Hougt, S. Gross Fry, Miller & Derr, Charles Wannemacher, James, Kent, Santee & Co., etc.

Y. LAUDERBACH'S CLASSICAL, SCIENTIFIC, AND COMMERCIAL FOR BOYS AND YOUNG MEN, ASSEMBLY BUILDINGS.

Entrance No. 108 S. TENTH Street. This school presents the following advantages:
Finely ventilated class-rooms, with ceilings thirty feet in
beight, giving each pupil more than double the usual beight, giving each pupil more than double the usual breathing space.

Wide, massive stairways, rendering accidents in assem bling and dismissing almost impossible.

A corps of teachers every one of whom has had years of experience in the art of imparting knowledge and making study interesting, and consequently, profitable.

A mode of teaching and discipline calculated to make school attractive, instead of burdensome, to the pupil—an indispensable requisite for complete success.

Applications received at the Academy from 10 A. M. to b.P. M., daily, on and after August 23.

Catalogues containing full particulars and the names of many of our leading citizens, patrons of the institution, may be obtained at Mr. W. F. Warburton's, No. 439 Chesnut street, or by addressing the Principal, as above H. Y. LAUDERBACH,

Late Principal of the Northwest Public Grammar School.

8 17 1m

EMPIRE SLATE MANTEL WORKS.—J. B. EKIMES, No. 2126CHESNUT Street. 112wfm5 DR. KINKELIN CAN BE CONSULTED ON 8. No. 33 S. ELEVENTH Street. Office hours, 8 t