



CARL VOGT.

Although we said that the reform of criminals was not the chief objects of these clubs, nevertheless it is accomplished very frequently, and, what is even better, a higher and higher sense of honor and morality is developed in each boy every year of his club life. In most cases to have the intelligence to know what is right is to do right, and with growing perception, awakened by continually thinking, questioning, and reasoning, the most harmless act of one year appears to the boys a downright wrong-doing the next.

The success of the clubs in the public schools will depend very much on the help given by well-educated and sympathetic people of either sex. If three or four Junior Good Government Clubs could be established in the course of time in every school in New York, there would be less work for our political reformers to do twenty years hence. From the experience of several years it is safe to prophesy that boys who learn to run honestly and successfully their Junior Good Government Clubs are never going to try, in after years, to run *dishonestly* (but too successfully, in one sense) their city.

SKETCH OF CARL VOGT.

CARL CHRISTOPH VOGT, the eldest of a family of nine children, was born in Giessen, Hesse, July 5, 1817, the son of Dr. Wilhelm Vogt, professor of clinics in the university of that place, and Louise Follenius. Professor Vogt, the father, lived honored and beloved by the people of Giessen, but frowned upon in official circles on account of his independent democratic spirit. Of the family of Madame Vogt, the father was a judge highly esteemed for his probity and erudition, but mistrusted by the Government, while her three brothers went far to confirm that mistrust by being, besides jurists, soldiers, and poets, republicans who in time had to be expelled from the country. One of these brothers, Karl Theodor Christian Follenius, implicated in the assassination of Kotzebue, became known in this country as Prof. Charles Follen, of Harvard University, author of German text-books, poet, Unitarian minister, and one of the victims of the burning of the steamer Lexington on Long Island Sound in 1840.

Carl Vogt's boyhood exhibited no special features, but was much like that of other boys. He was fond of going with his younger brother Emil on pedestrian tours. Being rather fat, he was a little awkward in gymnastics, but attained great skill in sword combats, in which he usually came off victor.

The days of listless study and fencing came to an end, and Vogt

entered the laboratory of Liebig as a medical student. The system pursued there was a novel one in those days. The pupil was given a task to perform, and was left to himself to work out his own way and solve the problem as best he might. The next morning the students were called upon to describe what they had done and what they had discovered. A company of bright young men, who afterward became famous in science, was then collected around Liebig's tables, and Vogt formed strong friendships with some of them. During this period of study with Liebig the elder Vogt accepted a professorship in Bern, Switzerland, and removed thither.

Carl Vogt had completed his first memoir, on the Water of the Amnios at Different Periods of Foetal Life (published in 1837), and was still thinking of no other career than that of chemistry, when he gave shelter to a law student who had been implicated in a plot against the Government, and kept him in his room till the search for him became dangerous. The student was sent away in one direction and Vogt sought refuge with his uncle Bose, forester to the Grand Duke at Jugenheim. The Grand Duke himself was enjoying a holiday on the estate with a prince of Prussia. Vogt borrowed a forester's uniform and engaged in the chase along with their Highnesses' huntsmen, while the police were searching for him everywhere except within the private domain of the sovereign. The princes returned to their courts, and Vogt, skillfully eluding the guards of the Rhine, escaped to Strasburg and thence to Bern.

Vogt interested himself in Strasburg in visiting the hospitals, where he found many political refugees, and in studying at the libraries and museums zoölogy and fossil forms till his father called him to Bern to assist him. With his natural taste for surgery went a sensitive nature which could not bear to witness the pain attendant upon operations in those days before anæsthetic and other humane appliances were introduced. He took up other branches and became a pupil of Prof. G. Valentin, author of the present physiological theory of the nerves and organs of the senses. He received his degree with honor at twenty-one years of age, and locked his diploma in a trunk which was deposited in the garret. He was proud, however, when his two completed memoirs on the Nerves of Reptiles won the praises of Karl Ernst von Bauer and of Humboldt. They were based upon a collection of American reptiles which Humboldt had left at Valentin's institute.

Louis Agassiz, a frequent visitor at Wilhelm Vogt's, wanted Carl in 1838 to assist him at Neufchâtel, but was introduced to Edouard Desor, then seeking employment, and took him. Carl followed a few months afterward. Agassiz, interested in the study of fresh-water fishes and living and fossil echinoderms, had fitted up

a lodge on the shore of the lake, where Desor and Vogt were installed to carry on the investigations. Vogt composed here the anatomical part of Desor's work on Fossil Fishes, the Fishes of the Old Red Sandstone, and the German edition of Studies of Glaciers.

The controversy concerning glacial action was at its height. A theory had been proposed of an immense glacier having once occupied the Rhône Valley above Martigny, but Agassiz was still doubtful about it. He, with Desor, had visited the principal glacial fields of the Alps, and conceived a plan for studying a glacier continuously. In 1839 a party of about a dozen students, of whom Agassiz, Desor, Vogt, and Pourtales are best known to Americans, with guides and porters, established themselves by the lower glacier of the Aar, where they could watch its inner life. A suitable camping place was found by the side of an immense boulder, and a lodge was instituted and given the name of the Hôtel des Neuchatelois. The hôtel was much visited during the four years the students occupied it by guests, many of whom became illustrious in science. Vogt's first book, *Im Gebirg und auf den Gletschern*, embodying his experiences there, was published in 1842.

The new glacial theory was still bitterly opposed, and by no one with more vigor than Leopold von Buch. It fell to Vogt to defend it before the German scientific meeting at Erlangen in 1840, and then at Mayence, both times in von Buch's presence. His expositions were interrupted by frequent objections from von Buch, who replied with all his force. Vogt, paying no attention to invectives and sarcasms of his antagonist, simply exposed the insufficiency of his arguments, and concluded with a protest against the road to free inquiry being barred by the mischievous principle of authority in science. He won the day. Shortly after this Vogt and Agassiz differed on a question concerning the award of credit for discoveries and publications and separated.

Vogt spent three years in Paris, working busily and producing many zoölogical and biological memoirs; published his Text-book of Geology and Petrifications, and figured prominently in the formation of the Society of German Physicians, which has become a very important body. In the text-book he expressed doubts concerning the theory of a fluid nucleus within the earth, which everybody held then. Vogt's fame reached the general public through his *Physiologische Briefe*, a book which brought the science within the comprehension of the ordinary reader, while it was still welcome to the professional man. It treated the subject of generation with a plainness that had not been ventured upon in any other popular work; and it attacked the doctrine of the survival of the soul, affirming, in effect, that all the properties designated as mental activity

are simply functions of the cerebral substance. It was condemned by the ecclesiastics and was the subject of controversies in the German universities. On one of his journeys his attention was drawn, by witnessing the operation of the fishermen, to the Bay of Villafranca as a suitable station for zoölogical research. He fixed a laboratory there and set down to work. In a short time he was invited by Liebig to return to Giessen as professor of geology. The officials at Darmstadt, recollecting his revolutionary proclivities, opposed and delayed his confirmation, bringing all manner of objections against him, and among them that he had opposed von Buch and ridiculed his theories. Von Buch, however, attested to his fitness for the position; Humboldt recommended him, and he was appointed in December, 1846, and took his position in April, 1847. He delivered and published his inaugural address, *On the Present Condition of the Descriptive Sciences*; translated Desor's *Geological Excursions*; published his *Ocean and Mediterranean*; and had just completed the arrangement of his *Zoölogical Laboratory* when the revolutions of 1848 broke out. He was chosen to represent Giessen at the Congress of Deputies, or *Vor Parlament*, which met at Frankfort, March 31st, and again at the German Parliament of May 18th. He wrote vigorous articles for the liberal journals; and when the Parliament was driven to Stuttgart in May, 1849, he was named one of the five regents of the empire, to whom discretionary powers were given. When Stuttgart was placed under siege he retired to Bern, where, as a member of the Committee of Assistance, he succored political refugees of all countries. When the throng of refugees had thinned out, Professor Vogt made another sojourn at Villafranca and published studies of the siphonophores and tunicates or salpæ, issued two or three political satires under scientific disguises, translated the *Vestiges of Creation*, and published the *Zoologische Briefe*, a book which became a necessity to students.

In March, 1852, M. A. Tourte, Superintendent of Public Instruction in Geneva, offered Professor Vogt the chair of botany in the academy there. The offer was declined, botany not being a specialty of Vogt's, and he was offered geology and paleontology with embryology. He made himself felt in the life and fortunes of the city, and rendered valuable service to Geneva and Switzerland. He was consulted as a geological expert in the building of the railroads of the country; was interested in the first conception of the St. Gothard Tunnel, which was pierced years afterward under the direction of another Genevan; he assisted in the foundation of the National Institute of Science, Letters, Fine Arts, and Agriculture, and was its president for a quarter of a century; he sat at different times, twenty-one years in all, in the Grand Council of the Canton

of Geneva, the Council of Swiss States, and the National Council; and he exerted a strong personal influence in political affairs.

Professor Vogt labored earnestly to promote the establishment of marine zoölogical laboratories, as well as of smaller stations, and sought to enlist the co-operation in the scheme of friends in high places in different countries. His efforts in behalf of this cause continued through forty years, his first letter on the subject having been written in 1855, and his last in 1894.

The theory suggested in Darwin's *Origin of Species* fell in well with Professor Vogt's views, as they may be found expressed in citations from his writings as far back as the *Embryology of the Salmon*, in 1842. Yet, as M. Quatrefages has shown in his *Emules de Darwin*, he did not agree with that author in all points. Divergences between the two are shown in Vogt's study of the *Archæopteryx* and in articles published in French and German reviews and issued afterward in separate form.

In May, 1861, Professor Vogt went, on the invitation of Dr. Berna, of Frankfort, upon a voyage to the northern seas in the brig *Joachim Heinrich*. Besides these two, Gressley, the erratic geologist, Hasselhorst, the painter, and Alexander Herzen, the younger, were of the party. Having visited the North Cape, they proceeded to Jan Mayen, an island whose ice-bound coasts had baffled many a sailor and explorers of high rank, and which was still nearly unknown. They effected a landing and examined the whole rock. They then went to Iceland, where the capital was decorated in their honor, and started for home on the 15th of September. Professor Vogt's book descriptive of this voyage was published in October, 1862.

The special characteristic of the *Vorlesungen über den Menschen*—Lectures on Man—1862-'63, which was translated into several languages, was its presentation for the first time in the concrete, and compactly, of the fundamental data of anthropology and its insistence upon the anatomical relations of man with the lower animals. It played a prominent part in the controversies of the next ten years over materialism. A less serious work was the translation of Brillat Savarin's *Physiology of Taste*, in recognition of which the translator was made honorary president of the Society of Cooks of Munich. The discoveries of the flint implements, the relics of man in caves, and the lake dwellings were the subject of several memoirs by Professor Vogt, and he projected a complete work upon them, but was never able to prepare it. His last paper on the subject was one respecting the bones of the *Pithecanthropus erectus*, which was published in a Frankfort journal two months previous to his death.

In 1864-'66 Professor Vogt published a collection of lectures on injurious and useful animals, embodying one of the earliest pleas for the birds, and for which he received a silver medal and a testimonial letter from the Paris Society for the Protection of Animals; and a memoir on those curiously deformed human beings (of which the "Aztec children" of the showmen were specimens) called "microcephales" or man-monkeys. He regarded the defects in structure of these creatures as phenomena of atavism, or reversion to the structure of simian ancestors—man in body, monkey in mind. The publication was the occasion of bitter controversies.

This added to his fame, and when, in 1867, he started on a lecture tour in Germany, Austria, and Belgium, he met large audiences. The purpose of his lectures was to make a popular presentation of the Darwinian principles and to vindicate freedom of inquiry. The theory of the man-monkey was formally and earnestly discussed, at the Prehistoric Congress held at Copenhagen in 1869, between Professors Vogt and Quatrefages. Vogt, with Virchow, Fraas, Ecker, and others, at this time took the first steps toward the formation of the German Anthropological Society; and the first volume of the *Archiv für Anthropologie* contained an article by Vogt on the Primitive Times of the Human Race.

During the Franco-German War of 1870 Vogt's sympathies were with France, and he opposed the German annexation of Alsace-Lorraine. This caused a temporary estrangement between him and his German friends. The unpleasant feeling gradually passed away, and when, in 1871, the Congress of Prehistoric Archæology and Anthropology met at Bologna in connection with the celebration of the eight hundredth anniversary of the university, he was relied upon to temper the hostility between the French and German professors, who had carried their political animosities into their science.

One of the most curious incidents of Professor Vogt's life, considering what a freethinker he was, was his defense of the Roman Catholic schools in Geneva against a bill depriving them of privileges which were still left to the Protestants and Jews. The bishop asked his influence in the matter, saying in his letter that notwithstanding their differences on all common questions, he recognized Vogt as the impartial champion of the liberties of all. This act caused a separation of Vogt from the majority of his party on the question and aroused some animosity, culminating in an unsuccessful effort to disturb his position in the academy. Shortly afterward a faculty of medicine was created, and the academy was raised to the rank of a university. Professor Vogt was active in the efforts that were used toward making the institution worthy of its name and providing it with a suitable building. His lectures to his classes are described

as having been carefully prepared, with every detail of substance and illustration faithfully looked after, and as excelling in the quality of making arduous questions understandable to all. He translated into French Gegenbaur's Manual of Comparative Anatomy, published his Atlas of Zoölogy, and, studying life at the seaside in his vacations, wrote those charming articles, making his name familiar to readers of all classes, which appeared from time to time in various German popular periodicals. He was commissioned by the Genevan Government to investigate the phylloxera and report upon it. He defended vivisection and charged its opponents with committing the cruelties they denounced. Did they not patronize the stock raisers who mutilated their animals to make them fatter and more pleasant to the taste; and feast on fish which had been tortured in catching; and ride behind mutilated horses?

Professor Vogt's memoir on the Archæopteryx is one of the most important documents in the discussion which defined that fossil as marking a notable stage in the transition from the avian to the reptilian form. When, in 1880, Dr. Hahn speculated on the presence of organic growths in meteorites, Professor Vogt exposed the fallacies of his conclusions; and in a second memoir he and Dennis Monier, professor of chemistry, showed with proofs from their own experiments that all the essential features of Hahn's meteoric fossils could be artificially produced with inorganic substances. He protested against the extension and predominance of militarism; contended against overloading youth with school duties; advocated a rational system of school hygiene; and opposed the study of Greek and Latin.

Vogt's Mammals, published at Munich near the beginning of 1884, with numerous plates and illustrations, was written in a pleasant style, and made most prominent the habits and the geographical distribution of animals.

The Treatise on Practical Comparative Anatomy was published after eight years of preparation, with the names of Carl Vogt and Emil Yung as joint authors, and acknowledgments to Dr. Jacquet.

As infirmity began to grow upon him, Professor Vogt tried the injections of Brown-Séquard's elixir, from which he enjoyed a temporary invigoration, and described the experiment in the *Frankfurter Zeitung*.

The last work he contemplated was a Treatise on the Fishes of Central Europe, which, with the assistance of M. Grote, of Barmen, was to be magnificently illustrated. He did not live to finish it.

On May 4, 1895, after Professor Vogt had suffered long from insomnia, his doctor gave him an injection of morphine. He at once fell asleep, but never woke, and at five o'clock the next afternoon his heart ceased to beat.