



David H. ...

MEMORIAL OF DAVIDSON BLACK

BY GEORGE B. BARBOUR

No one who met Davidson Black ever forgot him. His vivid personality, the interest in his guest shown by penetrating questions interjected into casual conversation, the surprising range of his knowledge, the meticulous precision of his working methods, his blend of enthusiasm and sane judgment, and his unassuming modesty left their mark on all with whom he came into contact.

He was born at Toronto on July 25, 1884, of distinguished ancestry. From his father, a Queen's Counsel, he got his critical power of analysis and slowly-formed balanced judgment. From his mother's side came the self-reliance and love of adventure. She was of Delamere stock which traced back in direct line to Rollo the Dane, husband of the King of France's daughter, whose descendants crossed with the Conqueror, joined the first Crusade, and went with Strongbow to the Ireland from which Margaret Delamere came.

Black graduated as a doctor in 1906, but felt the medical course had left serious gaps in his training. He therefore made a detour into anthropology, taking a B.A. while assistant in Histology at the University of Toronto. His alma mater later conferred on him also the degrees of M.A. (1924) and Honorary D.Sc. (1930) in recognition of his scientific achievements. Going as instructor in anatomy to Western Reserve in 1909, he became assistant professor under Dr. Wingate Todd four years later. In 1917 he joined the Canadian Army Medical Corps and was decorated with the Military Cross on his return from active service. After the war he went as professor of Neurology and Embryology to Peking Union Medical College and in 1921 succeeded to the chair of Anatomy.

Often it is the incidents that never find their way into "Who's Who" that are critical factors in the shaping of a man's life. While still at school, Black spent his summers carrying supplies for the Hudson Bay Company, covering thousands of miles by canoe, and developing the resource and self-reliance that became characteristic of the man. Once, caught in a forest fire, he only escaped alive by standing up to his shoulders in a lake for over 24 hours. To the Indian tribe whose language he

learned, he was Mushkemush Kemit, "the little white muskrat," on account of his quick, agile movements. His first introduction to geology came during a summer's field work with a party of the Geological Survey of Canada.

Shortly after his marriage in 1913, Black was granted six months leave of absence from Cleveland to work under Dr. Ariens Kappers at the Dutch Central Institute for Brain Research and under Sir Grafton Elliot Smith, then Professor of Anatomy at Manchester. This marked a turning point in his mental development, for it was the beginning of a close friendship that led to great results. Elliot Smith was engaged on the reconstruction of the Piltdown skull. The brains of the Dipnoi, on which Black was working, lost interest for him, and he threw his entire energy into a study of the array of comparative material in the laboratory. He went to the Manchester Art School and acquired amazing skill in the technique of cast-making. Having familiarized himself with every aspect of cranial research, he began a systematic study of the geological literature bearing on the field he had decided to enter. Black's father had died when the boy was only two years old, and the personal relationship with Elliot Smith developed into a deep affection between scientific father and son, which lasted until the death of the younger man.

The next year was another landmark, for a visit to the American Museum of Natural History brought him into contact with Dr. Henry Fairfield Osborn and Dr. W. D. Matthew. The latter, a countryman of Black's, had recently written a paper on *Climate and Evolution*, which was destined to have a profound influence on all Black's later thinking. In a monograph written in 1925 on *Asia and the Dispersal of Primates*, this debt to Matthew is explicitly acknowledged.

He made one excursion into speculative geology in an attempt to see how Polar Migration might have affected past climates and thus have influenced faunal distribution.

But these writings were avowedly only clearing the ground for more fundamental research on the problem of human origins, which was Black's real objective. In a letter, dated 1922, to the Director of the Peking Union Medical College, he outlines plans for research for the ensuing year and concludes: "All available evidence points to the conclusion that the dispersal area for mankind and his forerunners is to be sought somewhere in Central Asia. . . . The P. U. M. C. is in a singularly favorable position to promote the study of racial anatomy and to become the foremost Eastern pioneer in the realm of investigations calculated to throw light on man's origin. In the interests of this work it is proposed to make a brief visit to Siam, there to carry out a reconnaissance along the limestone river

valleys in the northwest highlands where in the light of the facts here produced, there is a field of peculiar interest awaiting investigation. As to the possible outcome of such a reconnaissance, it would not be wise at present to do more than state that the area in question appears to offer much greater chances for successful investigation than does the region further south where the classical discovery of *Pithecanthropus* was made." Undaunted by the paucity of results obtained from this expedition to the south, Black turned to the north, where better fortune awaited him.

In 1926, Dr. O. Zdansky was excavating the fossiliferous deposit noted by Dr. J. Gunnar Andersson some years previously at Choukoutien, 45 miles from Peking, and unearthed two teeth which became the subject of keen controversy. The discoverer was indignant at newspaper references to "the Peking Man" and disclaimed the significance of the find. But further excavations in 1927 by Dr. B. Bohlin brought to light another tooth, which Black unhesitatingly declared to be of human type. With characteristic generosity he insisted on the terminology *Sinanthropus pekinensis* Black and Zdansky.

The following year saw further discoveries at Choukoutien and the work began to assume such proportions that through the interest of Mr. Roger Greene the support of the Rockefeller Foundation was enlisted, thus making possible the organization of the Cenozoic Research Laboratory of the Geological Survey of China. This brought Black into close contact with Dr. V. K. Ting and Dr. Wong Wen-hao, the chief executives of the Survey, Dr. A. W. Grabau, the paleontologist, and Père Teilhard de Chardin, the French geologist and explorer. The stimulating interchange of ideas with these and other members of the Peking group of scientists was to have far-reaching results. The work of the Cenozoic Laboratory gradually extended into all fields of Tertiary and Quarternary geology, including stratigraphy, paleontology, physiography, and prehistoric archaeology, besides the anatomical work which was Black's peculiar interest.

In 1929 the finding by W. C. Pei of the first well preserved skull of *Sinanthropus* amply vindicated Black's fight for recognition of the new genus. It seemed as if his whole life hitherto had been training directed toward making him peculiarly fitted to be its champion. The preparation of the fossil material was carried out with meticulous care. The most delicate work was done alone at night, when the building was deserted, with doors locked against friends and intruders alike, and when, as he was wont to claim, his brain worked most clearly. At frequent intervals the skull was set up in the six cardinal positions and photographed with a telephoto lens from the other side of the laboratory to minimize distur-

tion. Prints from dated negatives were distributed in widely separated places to prevent risk of loss, and the skull went back to its safe. Motion pictures were taken of the work in progress, and the record was completed by plaster casts taken at various stages. From the master cast, others were at once struck off, and after being colored by a skilled artist these secondary casts were compared with the original skull before being "scattered" for safety. One of each type went to London for duplication by the expert whom Black regarded as doing the most perfect work of its kind in the world, thus ensuring that the material available to other scientists was as nearly like the original as possible.

The same meticulous attention to detail marked all Black's work. Many of his photographs bear a note of the precise minute they were taken. His correspondence and files were similarly treated, and marginal annotations justify his claim to be "of the nighthawk genus." A typical memorandum bears the following pencilled rubric, the hour being evidently the time when he stopped work on the section in question :

Final copy sent to XYZ with 3 carbon copies Jan. 29.

DB

Original draft pages 1-3, Jan. 9-12 (6 a. m.)

pages 3-5, Jan. 12-13 finished 3:30 a. m.

pages 8-11, Jan. 15 (5:30 a. m.)

First draft to XYZ Jan. 16.

Second draft to XYZ Jan. 22.

Final Jan. 29.

The precision which marked all his writing made him seem ill at ease and unimpressive as a lecturer. Each sentence must convey its own exact meaning, and be worded so that no misconstruction was possible. He never let words get the better of the truth for the sake of catching his audience. Fact and fancy were kept rigidly apart. But speaking informally to small groups he would let himself go and hold his listeners spell-bound.

For the recognition of himself or his work, Black cared little. Recognition of the truth seemed worth fighting for. In 1929 his name was proposed as first recipient of the newly created Grabau Gold Medal, awarded for conspicuous contribution to geological science in China. Black insisted it should go rather to Professor Grabau's former student, Pei, through whose painstaking work the famous skull had been brought to light. The Society met the request, not as Black asked, but by granting another medal to Mr. Pei.

A like modesty marked his attitude to the Fellowship of the Royal Society, awarded the year after he delivered the Croonian Lecture on

"The discovery, morphology and environment of *Sinanthropus pekinensis*." The posthumous publication of this, his last, work is a fitting memorial to the man. The previous year in anticipation of the International Congress he supervised the preparation of a memoir on *Fossil Man in China*, to which his colleagues contributed, bringing together in a single volume all the essential data on the discovery and meaning of the *Sinanthropus* material with which Black's name will always be associated.

Black's contact with his Chinese colleagues was marked by a consideration and appreciation that endeared him to them, and won their hearty cooperation and loyalty. In personal dealings with his subordinates there was an entire absence of superiority or officialism. In fact, a delightful atmosphere of casualness invested all business connected with the smoothly running work of the Cenozoic Laboratory. It was never a case of "Mr. X, will you come to my office at three today?" but rather "Say, old man, I haven't seen you for a coon's age! What about dropping in at the Lab for a chin sometime as you go past? . . . Oh, any time you like before midnight."

He was always the center of the group in which you found him, and was the life of any party for his children, which was, perhaps, the place where he most enjoyed himself.

Black had no chance to exercise his rights as Fellow of the Geological Society. His last visit to America was to attend the International Geological Congress at Washington. He came back to Peiping in September, but his friends noted that some of the old buoyancy was lacking. At their urgent insistence he spent several weeks under observation in the hospital, where a serious heart condition was diagnosed. With this ultimatum he was the more eager to push forward his work, and much of his time in bed was spent working over his files. The first day he was allowed to do so, he returned to his laboratory. There a few days later he was found dead beside his desk.

A remark once made to a friend in the same laboratory was typical of Davidson Black. "Why, man alive, just think of being paid to do the one job in the whole world you most want to do!"

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