Eclipse and the London Veterinary College

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In the racing seasons of 1769 and 1770, the racecourses of England were dominated by one horse, Eclipse (Fig. 1), named for the solar event on the day of his birth, April 1, 1764. Eclipse died in 1789 and his death and skeleton are associated with the foundation of The Veterinary College in London in 1791, the New Veterinary College in Scotland, and the establishment of the veterinary profession in the United Kingdom.

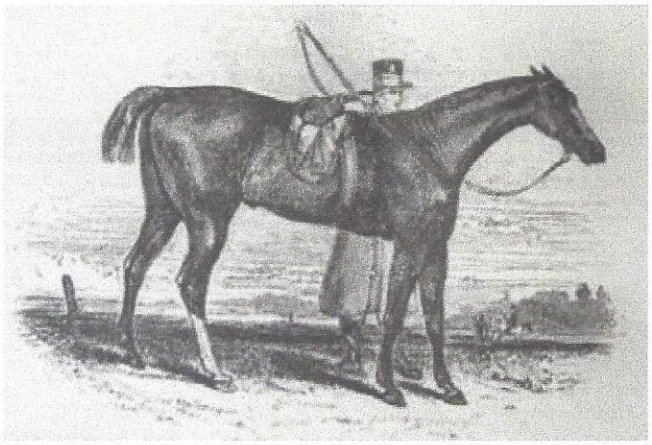

Figure 1. Illustration of Eclipse from William Youatt's *The Horse*. (1874), pg. 69.

Eclipse was an 18th-century British Thoroughbred racehorse, a descendant of the Darley Arabian, and a maternal grandson of Regulus, by the Godolphin Arabian. Eclipse was undefeated during his entire career.[1] His sire was Marske (born 1750) and his dam was Spiletta (foaled 1749). Eclipse was bred by William Augustus, Duke of Cumberland and third son of King George II, at Cranbourne Lodge in Berkshire. After the death of Prince William in 1765, the horse was sold at auction for 75 guineas to Mr. William Wildman, a sheep dealer from Smithfield. Colonel Dennis O'Kelly purchased a share of Eclipse from Wildman. In the spring of the following year, when the reputation of this wonderful animal was at its height, O'Kelly wished to become sole owner of him, and bought the remaining share for eleven hundred guineas.

During this period in racing history, Eclipse belonged to the last generation of race horses who were not expected to see competition until they were four or five years old. Clee notes during this period in racing history that, "the tests they faced demanded physical maturity. Races were over two, three or more commonly four miles, and many events involved [qualifying] heats. Horses might have to run, in a single afternoon, four races of four miles each, with only half-hour intervals in which to get their breath back. To emerge triumphant at the end of that, they had to call on great reserves of courage and stamina—what the Georgians admirably called 'bottom.'"[2] Unlike modern oval tracks, the racecourses of that day were uneven and might include uphill inclines and corners.

Horses including Eclipse "would be subject to an even harsher training regime. As contemporary manuals show, he spends his nights, and the portions of each day when he is not at exercise, in an enclosed, windowless [i.e., dark], heated stable. It is warm in winter and suffocating in summer, and he wears thick rugs. Sweating is good, believe the early trainers, who regularly turn up the heating and subject the horses, rugged and hooded, to saunas. As racing season approaches, Eclipse is given purgatives, consisting of aloes or mercury."[3] This training regime was brutal for the horses and lasted well into the nineteenth century, yet Eclipse thrived.[4] Training involved an easy half-mile gallop, another half mile, and a walk back with only moderate drinking water, which was then repeated, while Eclipse would have

been burdened by heavy rugs. "Every week or ten days, he wears his clothing on a 'sweat', a gallop of four miles or more."[5] Unlike today's training which allows gentle exercise after a race with gradual build-up toward the next event, Eclipse would have been back to the uphill gallops and 'sweats' right away.[6]

Moreover, getting to race meets was not easy either as there were no horse trailers at that time. A horse walked beside his groom. Clee notes that the trek would typically begin in the early hours of the morning, covering about twenty miles in a day. For example, "Eclipse and Oakley [his regular groom] probably made their journey from Mickleham to their next race, thirty miles away at Ascot, in two stages, with an overnight stop at an inn" to arrive about five days before the race.[7] Ironically, in Eclipse's last days, he was too disabled by "very much rounded and diminished" coffin bones under his hoofs to walk the fifty miles to a new stud at Dennis O'Kelly's Cannons estate. A prototype horsebox was made from a four-wheeled carriage pulled by two horses. Accompanied by his groom, Eclipse thus "became the first horse in Britain to travel by means of others' efforts."[8,9]

Eclipse was a thick-winded horse, and puffed and roared so as to be heard at a considerable distance. For this or some other cause, he was not brought on the turf until he was five years old. His jockey was John Oakley, supposedly the only jockey who could handle Eclipse's temperamental and unruly manner along with his running style of holding his nose very close to the ground.

Eclipse started racing on May 3, 1769 in Epsom. O'Kelly, aware of his horse's powers, had backed him freely on his first race. This excited curiosity, or, perhaps, roused suspicion, and some attempted to watch one of his trials. Mr. John Lawrence says, that, "they were a little too late; but they found an old woman who gave them all the information they wanted. On inquiring whether she had seen a race, she replied she could not tell whether it was a race or not, but that she had just seen a horse, with a white leg, running away at a monstrous rate, and another horse a great way behind, trying to run after him; but she was sure he would never catch the white-legged horse if he ran to the world's end."[10, 11]

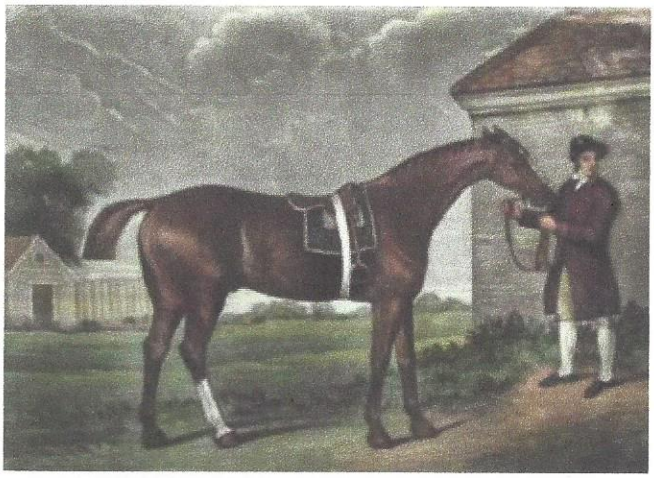

Figure 2. This illustration is similar to the original painting of "Eclipse at Newmarket with a Groom and Jockey" (1770), by George Stubbs (1724-1806), the famous 18th century English artist, best known for his paintings of horses and other animals. *Source: http://commons.wikimedia.org/wiki/File:Eclipse(horse).jpg*

The first heat was easily won, when O'Kelly, observing that the rider had been pulling at Eclipse during the whole race, offered a wager that he placed the horses in the next heat. This seemed a thing so highly improbable, that he immediately had bets to a large amount. Being called on to declare, he replied, "Eclipse first, and the rest nowhere!" At that time, a horse that was more than 240 yards behind the lead was said to be "nowhere." The event justified his prediction, for all the others were distanced by Eclipse with the greatest of ease, and thus, in the language of the turf, they had no place.

In the spring of the following year, he beat Mr. Wentworth's Bucephalus, who had never before met his equal. Two days afterwards, he distanced Mr. Strode's Pensioner, a very good horse; and in August of the same year, he won the great subscription purse of York. No horse daring to enter against him, he closed his career, of seventeen months, by walking over the Newmarket course for the King's plate, on October 18, 1770 (Fig. 2). He was never beaten, nor ever paid forfeit, and won for his owner more than twenty-five thousand pounds.

The profit brought to the owner of Eclipse by his services as a stallion must have been immense. It

Figure 3. Drawing of Charles Vial de Sainbel from his essay on the proportions of Eclipse.

is said that ten years after he was withdrawn from the turf, O'Kelly was asked at what price he would sell him. At first he peremptorily refused to sell him at any price, but after some reflection, he said that he would take 25,000 pounds, with an annuity of 500 pounds a year on his own life, and the annual privilege of sending six mares to him. The seeming extravagance of the sum excited considerable remark; but O'Kelly declared that he had already cleared more than 25,000 pounds by him, and that he was young enough still to earn double that sum. In fact, he did live nearly ten years afterwards, covering at 50 guineas a mare, for some part of the time; but his feet having been carelessly and cruelly neglected, he became foundered. His feet grew worse and worse until he was a very uncertain foal-getter; and the value of his progeny was viewed with suspicion. He died on February 27, 1789, at the age of nearly twenty-five years. Overall, Eclipse sired 344 foals (although the number varies with different reports, ranging from 325 to 400). The Royal Veterinary College (RVC) has determined that nearly 80% of modern Thoroughbred racehorses have Eclipse in their pedigree (other sources state 95%). Male line descendants include Secretariat, Barbaro, and "all but three of the Kentucky Derby winners of the past fifty years."[12]

Eclipse was a sufficiently important horse to make it necessary to know not only the cause of his death, but also the secret of his successful life.[13] A veterinary opinion was needed, but there was no veterinary school and no qualified veterinarian in the country except the Frenchman Charles Benoît Vial de Sainbel (1753-1793) (Fig. 3) who had studied at the veterinary school at Lyon, France under Claude Bourgelat. Sainbel attended the corpse of the famous racehorse

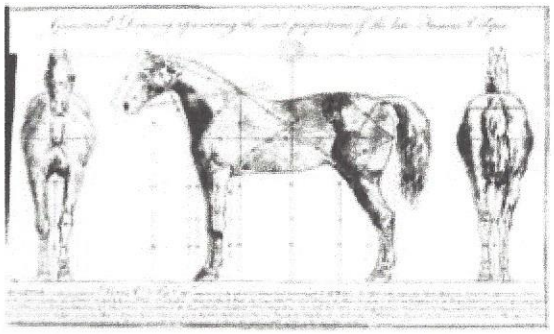

Figure 4a. "Geometrical drawing representing the exact proportions of the late famous Eclipse" from Sainbel's essay.

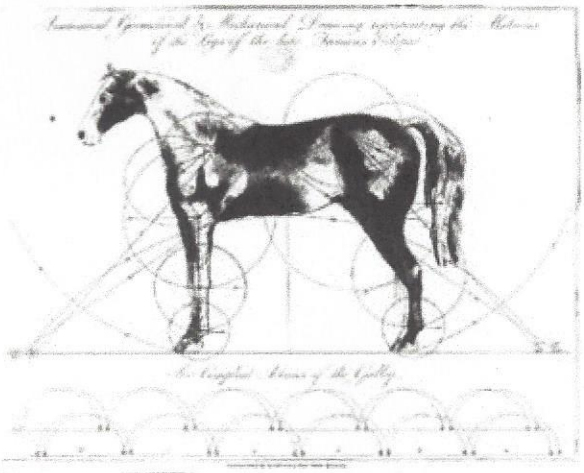

Figure 4b. "Anatomical geometrical and mechanical drawing representing the motions of the legs of the late famous Eclipse" from Sainbel's essay.

and subsequently published his post-mortem findings (Fig. 4a,b).[14] A little before the death of Eclipse, Sainbel, the founder of the Veterinary College in St. Pancras, London, had arrived from France. In teaching pupils the general conformation of the horse, and the just proportions of his various parts, it had been necessary that reference should be made to a horse of acknowledged excellence. It occurred to Sainbel that this extraordinary and unbeaten horse would be the proper standard to which the English student might be referred for a similar purpose, and, with considerable trouble, he formed an accurate scale of the proportions of this noble animal. It is documented in his essay entitled, An Essay on the Proportions of the Celebrated Eclipse.[15] In addition to limb proportions, Sainbel's very thoroughly documented necropsy described the size of the heart of Eclipse as being some 25% larger than most

Thoroughbred horses. Sainbel's chief purpose for being in England was not to attend dead racehorses but to gain support for his plan to establish a veterinary school. He was assisted in this quest by the Odiham Agricultural Society, which consisted of a number of enlightened gentry. These men recognized the need for a better understanding of animal husbandry and disease and had, for some years, been considering how to introduce the veterinary art into this country. The London Veterinary College was established in 1791 with Sainbel as principal, but he died in 1793.

After the death of Eclipse, parts of his anatomy found their way in different places and sometimes other parts of the world.[16, 17] The royal family took possession of two of the hooves. In 1832, William IV, at a grand dinner, presented one of hooves to the Jockey Club. It was mounted on a salver with an inscription carved in gold. The Jockey Club gave this as a trophy for an annual race at Ascot, named the Eclipse Foot. This hoof is still in the Jockey Club at Newmarket, along with the Newmarket Challenge Whip which contains woven hairs from Eclipse's mane and tail and Stubb's copy of his painting of Eclipse at the Newmarket Beacon Course rubbing-house. An inquiry in 1906 about the second royal hoof, indicated no record on the data base unless it was the unmarked hoof inscribed "Xmas 1902." A third hoof was converted into a snuff box and was last recorded in Jamaica. The fourth hoof was located in Leicestershire. William Worley, who had ridden Eclipse at exercise, was said to have owned a tie-pin made in the shape of a horse's head from material from one of the hooves. In 1910, the Jockey Club hoof may have travelled to Vienna, so the Emperor of Austria could take snuff from it at a lunch to mark the opening of a field sports exhibition. Eclipse's hide also went hither and thither too. There was a piece of the hide in Epsom that produced an extraordinary iridescent effect when the light shone on it, which makes a true chestnut the loveliest color in the world. There is another story about a young child playing with Eclipse's hide in a loft.

It is also not certain what happened to the skeleton after the death of Eclipse, but it was likely given to Edmund Bond by the family of the late Dennis O'Kelly.[18] Bond had helped with the necropsy of Eclipse, was awarded the first certificate from the London Veterinary College in April 1794, became England's first practicing veterinary surgeon in Lower Brook Street, London, and was the veterinary surgeon for the O'Kellys.[19] Bracy Clark, another early graduate of the London Veterinary College (July 1794) and a student of Sainbel, acquired the skeleton when Bond died.[20] Bracy Clark's daughter, at the age of 91, recalled seeing the bones in her father's study in 1825, but the skeleton was not mounted at that time. John Gamgee purchased the skeleton for 100 guineas in 1860. The bones were moved to the Edinburgh New Veterinary College where they were mounted for display as a complete skeleton in 1860. John's father, Joseph Gamgee collected the bones from Bracy Clark in London and moved them to the New Veterinary College in Edinburgh that

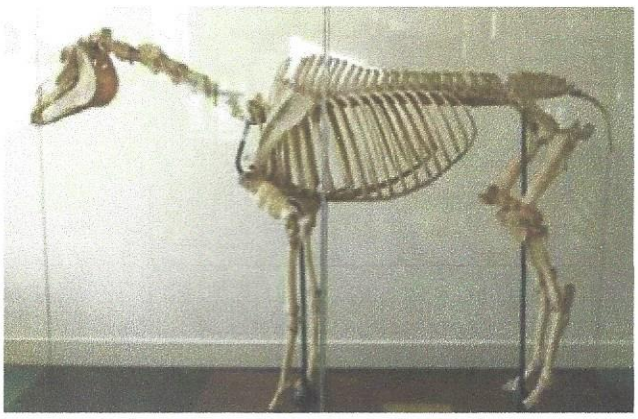

Figure 5. Skeleton of Eclipse currently on display at the Royal Veterinary College at the Hawkshead campus.

John Gamgee established in 1857. The Gamgees mounted the bones for display as a complete skeleton for the first time and re-examined the measurements for the first time since Sainbel's necropsy. In 1861, there was an account noting some errors in Sainbel's essay. In 1865, John Gamgee moved his veterinary school from Edinburgh to London and it became known as the Albert Veterinary College. The school soon failed, there was no use for the skeleton, so the Gamgees presented it to the Royal College of Veterinary Surgeons (RCVS) in January 1871. For many years the skeleton mouldered in the museum of the Royal College. The British Museum asked for the skeleton in 1902. The Royal College needed space for the library and loaned the skeleton to the

Natural History Museum in 1920. The skeleton was moved to the National Horseracing Museum in Newmarket when it was opened by Queen Elizabeth in April, 1983. The skeleton is currently housed at the Royal Veterinary College, Hertsfordshire, in the Learning Resource Centre, named after Eclipse (Fig. 5).

But, after all of those moves over the years, was it the real skeleton of Eclipse? After Bend Or had won the 1880 Epsom Derby, the owners were accused of swapping the skeleton with another horse. One of the great controversies in racing history was finally solved in 2011 through mitochondrial DNA analysis of several discrete anatomical structures.[21] This multidisciplinary study verified the authenticity of the bones at the RVC as belonging to Eclipse alone. With additional pedigree analysis, the scientists also determined that the skeleton housed in London's Natural History Museum believed to be Bend Or is most probably another horse called Tadcaster. The morphometrics of Eclipse's skeleton were also compared with measurements made by Sainbel at necropsy. Interestingly, the ancient DNA analysis also verified the chestnut color phenotype of Eclipse's hair shown so vividly in George Stubbs' paintings.

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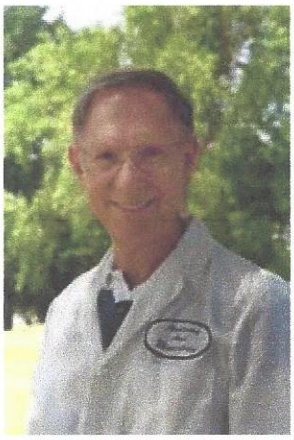
ABOUT THE AUTHOR



Howard H. Erickson earned his DVM degree from Kansas State University in 1959 and PhD degree from Iowa State University in veterinary physiology in 1966. He was engaged in private practice in Wahoo, Nebraska from 1959-60, called to active duty in the United States Air Force in 1960, serving from 1960-81, and retiring at the rank of Colonel. He joined the faculty of the College of Veterinary Medicine at Kansas State University in 1981 a Professor of Physiology and retired in 2011 as Emeritus Professor of Physiology and History of Veterinary Medicine. Dr. Erickson continues to teach a course on the history of veterinary medicine at the College.