

indicate particular points of the breed. In many of the two-page spreads, there is a close up of the head. Facts on height, origin and colour are provided. There is a short Mission Statement; for example, “from a mixed background, the Czech warmblood has emerged as a likable and reliable mount”. An account of the breed origins, features and use are given. A picture of the breed being used is also frequently provided with double-page photographs of horses working or just running around. These include the classic Camargue horses in the sea image. Some rarer breeds, such as the Peneia of southern Greece, get only a little box in the spread for a geographically associated breed: in this example, the Pindos.

This central section is preceded by two sections. The first is an introduction to horses. This includes an account of the horse family with some detail on evolution. There is also a section on crosses with donkeys and asses. A general overview of the biology of the horse is provided. This includes aspects of horse behaviour and the interaction of horses with each other and with humans. This is followed by an account of domestication and the use of horse in war and at work. The place of horses in legends and culture is also discussed.

The breed descriptions are followed by a section on the care and management of horses and ponies: diet, pasture management, stabling, grooming and health are all covered. There is a four-page glossary of technical terms. I recently read an autobiography of a canal boatman (Roberts, 2015) which contains a lot of information of the care and management of canal boat horses. It contained one bit of jargon that puzzled me – the half leg horse. The term is not included in this book but the autobiography explained it as a horse with short legs: useful given the low headroom at many canal bridges.

There was a period when I was interested in the concept of breeds and varieties and there are many books on horse breeds (and on cats and dogs but fewer on pigs and poultry). This book published by Dorling Kindersley is, like all books from this imprint, splendidly illustrated and clearly written. The inclusion of the three general sections adds some interesting and useful information. The advice on care and health is well given. The main library markets will be school and public libraries. It would be a good present for a young rider. If you are interested in horse breeds from a more academic or genetic approach, there is also much of use in this book.

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## Reference

Roberts, J. (2015), *Shropshire Fly-Boats: The Jack Roberts Story*, Canal Book Shop, Cheshire.

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## Mason's World Encyclopedia of Livestock Breeds and Breeding

Valerie Porter and others

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To understand this work, one needs to understand what is meant by a “breed”. Clearly, we are discussing animals and there has been much debate about the definition. Some claim that a breed, whether dogs, cats, sheep, goats or any other animal, can only be known as a breed if there is a breed society to define its standards or a published herd book. This requires some common and formal consent among its breeders. Some say that the definition is “a group of domesticated animals that, when bred to each other, will consistently produce offspring that are recognisably of that breed, in aptitude as well as morphologically”. Perhaps, surprisingly, the concept of a formal breed has a history of little more than two centuries, originating in Western Europe and based on phenotype and pedigree. Often the breed name has incorporated a locality of origin, or an indication of appearance, such as Berkshire, or Lincolnshire Curly Coat, or Texas Longhorn. In most parts of the world, a breed is simply what people recognise as a local type, often given the name of the region in which it is bred or a tribe that always bred it. Breeds may have evolved by natural selection to suit the local environment or be combined with meeting practical human requirements or the requirements of the animal and what it is used for. This can be emotional selective breeding in terms of appearance, such as a particular colour or coat pattern which people prefer. Science and the understanding of molecular genetics will not undermine the local concept of a “breed”.

So where does Mason come into all this? Ian Lauder Mason was born in Ashby De La Zouch in England in 1914. His father was a corn merchant and farmer, and his mother a maths teacher. Ian went to university, studied zoology and met his future wife, Elizabeth, who was a fellow zoologist. As part of the war effort, he

became a chemist making nitro-glycerine in a Royal Ordnance factory, but then, in 1942, was appointed as a scientific assistant at the Imperial Bureau of Animal Breeding and Genetics in Edinburgh, later becoming an assistant director. His special interest was in livestock breeds and breeding, and in 1951, the first edition of his scrupulously researched *A World History of Livestock Breeds, Types and Varieties* was published along with his book *A Classification of West African Livestock*. Over the years, he became widely respected for his encyclopedic and authoritative knowledge of livestock breeds and breeding, with an attention to detail that was legendary. Mason was extremely concerned for the conservation of indigenous breeds that were being threatened by the increasing dominance, as what were being seen as more productive, Western breeds in many parts of the world.

This work is not an annual publication, more a publication that appeared on occasions, notably 1969, 1988 and 1996. The fifth edition appeared in 2002. Mason was still occupied with editing, writing papers and maintaining correspondence with his worldwide contacts into his 90s; he died at the age of 93 in 2007, leaving Valerie Porter, an editor of this work, to continue in his footsteps.

The original world dictionary (1951) was conceived to achieve consistency in terminology for use in animal breeding abstracts published by the Commonwealth Agricultural Bureau (CAB), later CAB International (CABI). Mason wanted to standardise breed names in their English spelling and translation, listing the often-numerous synonyms and recommending one form for English use. Descriptive names were translated into English wherever possible, for example, Schwarzbuntes Niederungsvieh became “Black Pied Lowland”. The name was also given in the original language. As Mason stated, “no attempt has been made to compile an encyclopedia containing a complete account of each breed. The work has remained at the stage of a dictionary”, nonetheless, the *Dictionary* was the inspiration for this encyclopedia which, effectively, is the sixth edition of the *Dictionary*, but expands on Mason’s original brief entries to give fuller descriptions of breeds and types, placing them in a practical agricultural context, along with a lot more information. For each of the main species there is information given about their wild ancestors, the history of their domestication and spread and the links between different breeds and groups. Cultural and social aspects of livestock farming are covered as well as the uses, productivity, markets and national and international influences. It should be noted that the encyclopedia concentrates on mammalian

livestock only and does not include poultry. Each chapter covers a specific species.

After the preface and introduction, the book begins with a terminology of breeding, genetics and conservation, which includes a fascinating account and history of artificial insemination (AI). It seems that the earliest history of AI can be found in old Arabian documents from the early fourteenth century. An Arab chieftain, who wished to mate his favourite mare with a stallion that was owned by another chieftain, placed a wad of cotton in a mare’s vagina before she was mated by the stallion. He then removed the wad, and was able to place the semen in his favourite mare, resulting in conception. However, much later on, Lazzaro Spallanzani (1729-1799) is usually considered the inventor of AI. His scientific work, reported in 1780, records successful use of AI in dogs. Even at the very beginning of this work, one can see that it is full of fascinating facts that the ordinary reader does not tend to chance upon in daily life. For example, remaining with the subject of AI, it seems that the AI of sheep was adopted more slowly than bovine AI, partly because of difficulty detecting oestrus and controlling the oestrous cycle of ewes and partly because of the inability, initially, to freeze ram semen. It seems there are further obstacles with sheep AI, one being that the anatomical structure of the ewe’s cervix renders penetration almost impossible and so semen could be placed only at the opening of the cervix or slightly inside.

The entries in the encyclopedia begin with asses. It should be noted straight away that the UK readership will simply understand the term ass, to refer to a donkey, sometimes described as the poor man’s horse, both being of the genus *Equus* which had been interbred to create mules. The US readership might just, initially, be having a little smile! In fact, the term “donkey” had been widely used from the twentieth century to differentiate between the domesticated and the wild ass and, indeed, the encyclopedia notes that it tends to be used because of the association of the word “ass” in American English with coarse expressions! It is believed that the initial spread of the donkey into Europe from Asia may have been from about 2000BCE, as evidence of domestic donkeys has been seen in rock paintings in Spain and Italy from that period. The Romans spread the donkey as far as Germany and Britain although it tended to disappear in the more distant regions after the fall of the Roman Empire. The donkey has always been valued as a working animal and, in particular, has been widely used as a pack horse, a baggage and riding animal. Another fascinating tidbit is that donkeys have an inherent dislike of dogs and will bray loudly, show their teeth and attempt to bite

and kick the dog. In Texas, donkeys are used to keep coyotes away from flocks of sheep and goats. In Nigeria, there is a rapidly growing market for donkey meat. Each entry contains (rather haphazardly as it happens, probably because of the use of different compilers) an introduction; ancestry and taxonomy; physiology; uses; populations; breeds; and all include references and further reading. The sections are Asses; Camelids (camels); Cattle to include humps, horns, heights and hair; Goats; Horses; and Pigs in Volume 1. In the shorter Volume 2 are Sheep; Water Buffalo; Yak; and other livestock. The “other livestock” includes Elephants; Reindeer and other deer; Antelope and the more mundane “Other Domesticants” including Rabbits and Rodents.

With elephants, it seems that Asian elephants require more access to shade than African elephants, but, for me, the most fascinating elephant fact, to which more than half a page is devoted, is that of “War Elephants”. It seems likely that the Asian Elephants were first captured and tamed in India, and they were being trained for war in the Indus Valley around 200 BCE. It seems that the use of the War Elephant extends right up to modern times with (and this is the really fascinating gem) the British using elephants in World War II to mobilise their resources against the Japanese in North Eastern India. From elephants to tiny

animals – the guinea pig has a section covering both its food value in South America and its interest as a show animal with its now numerous fancy breeds based mainly on coat colours, patterns and hair growth. Among the smaller fur-bearing species of domesticants, which receive a fairly brief mention, are mink, chinchilla, coypu (farm-bred for fur) and, indeed, rodents domesticated for laboratory species and pets (often with fancy colours and coat patterns) including House Mouse and the Norway Rat.

This two-volume work is laid out quite clearly in a two-column format. There are no pictures whatsoever, apart from some sheep on the front cover. Given the high cost of this book, it is a shame that it could not contain some illustrations.

This is a specialist work that places breeds of animals in their practical agricultural context. The work will be of great interest to agriculturalists, breeders, geneticists, biologists, ecologists, agricultural and animal historians and those interested in the great diversity of livestock breeds.

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