

The indigenous domestic livestock of the County of Devon, England

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Summary

Pastoral habitats in the County of Devon in southwest England range from lowland temporary pastures to upland rough grazing. These habitats have resulted in the development of locally adapted livestock types. In 2010, Devon is repository to two cattle, five sheep and two equine breeds: Historically there were sheep, equine and pig breeds now extinct or subsumed into existing types. Breed origins are discussed and physical descriptions and main production characteristics are provided. Information is given on organizations in England and overseas that promote the breeds and are responsible for maintaining pedigree records. Available numerical data are presented and conservation status discussed. All sheep and equine breeds are at risk because of low numbers or restricted geographical distribution. The government provides no direct assistance for conservation or preservation although there is limited support for native breeds from agrienvironmental schemes. Owner awareness of breed values, “designer” made for thriftiness under harsh conditions, supported by civil society organizations, will render them “fit for purpose” for new uses in conservation grazing in environmentally sensitive areas, maintenance of plant diversity and sustainable production, and assist in ensuring survival of these invaluable genetic resources.

Keywords: *native breeds, origins, breed description, breed societies, global distribution, conservation status*

Résumé

Le milieu pastoral du comté de Devon dans l'Angleterre du sud-ouest varie entre les pâturages temporaires des plaines et les pâturages grossiers des zones montagneuses. Ces milieux ont eu pour résultat la valorisation de types d'animaux d'élevage adaptés localement. En 2010, dans le Devon étaient conservées deux races de bovins, cinq races de moutons et deux races de chevaux: auparavant, il y avait des races de moutons, de chevaux et de porcs qui sont maintenant disparues ou englobées dans les types existants. Le document examine les origines des races et fournit les descriptions physiques et les principales caractéristiques de production, ainsi que des informations sur les organisations, présentes en Angleterre et dans les pays d'outre-mer, qui s'occupent de la promotion des races et qui sont responsables des livres généalogiques. Il présente également les données numériques disponibles et analyse l'état de la conservation. Toutes les races de moutons et de chevaux sont à risque en raison de la faible taille de leur population ou de la distribution géographique limitée. Le gouvernement ne fournit aucune assistance directe pour la conservation ou la préservation bien que le soutien des programmes agro-environnementaux en faveur des races indigènes soit limité. La sensibilisation des propriétaires, soutenue par les organisations de la société civile, sur les valeurs génétiques conçues pour que les animaux se développent normalement et produisent même dans des conditions difficiles, les rendra adéquates aux nouvelles utilisations relatives aux pâturages de conservation dans les zones écologiquement sensibles, au maintien de la diversité végétale et à la production durable, et contribuera à garantir la survie de ces ressources génétiques très précieuses.

Mots-clés: *Races indigènes, origines, description raciale, sociétés de sélection, distribution mondiale, état de la conservation*

Resumen

Los distintos hábitats pastorales en el Condado de Devon, en el suroeste de Inglaterra, se extienden desde los pastos temporales de las tierras bajas hasta las duras tierras altas de pastoreo. Estos hábitats han dado como resultado el desarrollo de diferente tipo de ganado adaptado localmente. En 2010 Devon se considera un depósito de dos razas de ganado bovino, cinco de ovino y dos de equino: históricamente existían razas de ganado ovino, equino y porcino que actualmente se han extinguido o han sido incluidas dentro de las existentes. Se analizan los orígenes de las razas y se proporcionan sus descripciones físicas y sus principales características productivas. Se informa acerca de las organizaciones que en Inglaterra y en el extranjero promueven las razas y son las encargadas del mantenimiento de los registros genealógicos. Se presentan los datos numéricos disponibles y se analiza su estado de conservación. Todas las razas ovinas y equinas se encuentran en peligro de extinción debido al bajo número de individuos existentes o a su limitada dispersión geográfica. El gobierno no proporciona ayudas directas para su conservación o preservación; aunque existe un limitado apoyo para las razas locales a partir de proyectos agroambientales. La sensibilización de los propietarios acerca de los valores de las razas, el “diseño” llevado a cabo por ahorro bajo duras condiciones y el apoyo de organizaciones de la sociedad civil las harán “aptas para el propósito” y su uso en el pastoreo para la conservación medioambiental en determinadas áreas, para el mantenimiento de la diversidad vegetal, la producción sostenible y para ayudar a asegurar la supervivencia de estos recursos genéticos de valor incalculable.

Palabras clave: Razas locales, orígenes, descripción racial, asociaciones de raza, distribución mundial, estado de conservación

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Introduction

The County of Devon in southwest England has always been a pastoral as opposed to an agricultural area. In 2006, permanent grassland occupied 50 percent of farms compared to 36 percent nationwide. The southwest region (of which Devon is part) also had a higher proportion of lowland livestock farms (21 percent) than the national average (17 percent) (DEFRA, 2006). Within the generic “grassland” there is a wide range of habitats from sea level marshes and meadows through mid-level short- and medium-term leys to upland moors of fine grasses and heather. Within this rich ecological region, there is a concomitant richness of domestic livestock species and types.

Devon is a major repository of farm animal diversity. It is home to two breeds of cattle (Devon and South Devon), five sheep breeds (Devon Closewool, Devon and Cornwall Longwool, Exmoor Horn, Greyface Dartmoor and White Face Dartmoor) and two pony breeds (Dartmoor and Exmoor): The general area of distribution of these species and breeds in Devon and its neighbouring counties is shown in Figure 1. Formerly, there were several earlier sheep breeds, one equine (Devon Pack Horse) and at least two pig breeds (Molland, Devon). One source considers all the sheep and both pony breeds at some degree of risk on numerical or restricted geographical area grounds (RBST, 2009). A second source lists the pony breeds alone as at risk (Scherf, 2000). The Plymouth Rock poultry breed carries a Devon name but was developed in the United States in the mid-nineteenth century (Oklahoma State University, 2009).

Devon’s native breeds, as those of other areas, are unique and must be conserved for future generations. In general, they do not demand high inputs and were developed to be kept economically in and adapted to their zones of origin. This paper describes the history, development and current use and status of these domestic livestock on which, and for sheep in particular, there have previously been very few publications.

Materials and methods

This paper results from several years of personal study of Devon’s native livestock. Formal and informal contacts were made with breed societies and livestock producers at a variety of venues including agricultural shows, breed events, demonstrations and farm visits. Conventional literature sources have been used where available. Much of the information presented has been extracted from the Web sites of the breeds under discussion: In order to avoid “overloading” the text with repeat citations, a list

of these Web sites is provided following the References section.

Cattle

British breeds of cattle were dominant in the United Kingdom until the second half of the twentieth century. During the 1960s, consumer demand was for more beef at lower prices with little thought for quality. The beef industry went through a revolution to satisfy these changes and supplied larger cattle that could be reared quickly to produce lean meat in bulk mainly from commercial concentrate feeds. These larger breeds were imported from continental Europe and rapidly displaced the old standard breeds. This scenario applied to both Devon cattle breeds. There were considerable reductions in numbers and, although neither came as near to extinction as some other county breeds, it was many years before they adapted to the new supply situation and populations began to recover. Historically, the native cattle breeds of Britain have been more influential in world animal husbandry than those from any other country, and in spite of problems at home they have largely retained their influence overseas.

Devon

The first indication of a red animal – references to colour were then few – that was clearly a prototype Devon appears when a bull came into Tavistock Abbey in 1366 as a tenant’s ha’p’orth (Finberg, 1951). Before the end of the seventeenth century, the Devon’s progenitors were “as good as any in the Kingdom” (Trow-Smith, 1957). There is much evidence for concentrations of cattle in northwest Devon spanning the period Domesday to the end of the seventeenth century, giving an unbroken ancestry of 600 years and providing a lineage as ancient as any British bovine. Cattle were still small as this period closed, as naval purveyors fixed the minimum weight of a fat ox – aged 4–5 years – at 6 cwt (672 pounds, 305 kg) (Hamilton, 1878). The elite Devon herd of the late eighteenth century was that of the Quartly family who farmed on Exmoor’s southerly slopes. During wars with France and the United States in 1800–1815, many better animals were sold for beef to feed the armies resulting, in many cases, in degeneration of the stock. Quartly set about improving this situation by buying in animals, outbidding butchers, and – as one noted breeder remarked – taking the trump in every hand and retaining it for breeding (Hall and Clutton-Brock, 1989). Early-nineteenth-century Devons were bred for meat and draught, with milk production



Figure 1. General distribution of indigenous livestock in Devon and neighbouring counties.

being only a minor consideration (Tanner Davy, 1869). The Devon is also known as Beef Devon, North Devon, Red Devon and Red Ruby (Mason, 1996).

A medium-large middle-horned beast, the Devon is deep cherry red in colour. The breed is renowned for its thriftiness, ability to thrive under adverse conditions, docility, fertility and mothering ability (for much of the twentieth-century cows suckled two calves). Attempts were made to promote Devons as dairy animals during the 1920s and 1930s, and a special section was introduced in the *Herd Book*. Long noted for milk quality – butterfat and solids-not-fat – rather than quantity there was little support for this initiative and any impetus soon faltered. Since the early nineteenth century, however, and with less use of oxen for draught, the Devon has been developed as a specialist beef breed. During the first half of the twentieth century, it maintained its eminence in major show rings in interbreed competitions and at fatstock shows at Smithfield and elsewhere. In the early 1900s, Devon bullocks on grass weighed about 12 cwt (1 344 pounds, 611 kg). The champion Devon at Smithfield's Christmas Fatstock show in 1912 weighed 17 hundredweight and 2 pounds (1 906 pounds, 866 kg) at 33 months (Kidner, 1912). Average bulls at that time probably weighed about 800 kg and cows about 500 kg. Weights of both sexes have risen in response to competition from continental breeds, mainly from within-breed selection, although there has been limited cross-breeding by some breeders in attempts to improve size. Bull calves are now expected to gain in excess of 1 000 g/day and heifers more than 750 g/day from birth to 2 years, but these values are regularly exceeded. Today's bulls weigh 1 000–1 100 kg and cows 650–750 kg. The modern Devon has emerged from its own global recession, mainly through outcrossing but with some assistance from cross-breeding, and is a larger, longer and leaner beast than its ancestors (Figure 2).



Figure 2. A modern pure-bred Devon yearling bull (Bartridge China Boy 8th M08044, 18 month [556 days], weight 668 kg, average daily gain 1 125 g).

Pedigree records (Davy's *Devon Herd Book*, volume 1) were first published in 1851. These related to the lineage of 132 bulls and 483 cows. Volume 4 (1863) brought details of 768 bulls and 2 474 females on to the record (Tanner Davy, 1869). The Devon Cattle Breeders' Society was formed in 1884. The *Herd Book* has been published annually and has now reached volume 132. The society has almost 600 members in 2010. The transition from the nineteenth to the twentieth century was a golden age for the Devon. The breed spread throughout the country from its southwestern homeland. By 1908, it was the second most numerous breed in the United Kingdom. At 454 694 head it had, admittedly, only about 10 percent of Shorthorn numbers (4 413 040 heads) but was ahead of Herefords (384 877) by 70 000 heads and Aberdeen Angus (193 960) by more than a quarter of a million animals (BoA, 1908).

Cattle from Devon were taken to the British North American colonies in 1624 (Deane, 1851), to Cape Colony (South Africa) in 1800 (SASB, 1971), to Van Dieman's Land (Tasmania, Australia) in 1825 (DCBSA, 2009) and to New Zealand in 1836 (NZRDCBA, 2009). By the mid-1860s, Devon cattle had been exported to France, Mexico, Jamaica and Canada (Tanner Davy, 1869). Over succeeding years, Devons were exported to many countries (Figure 3). Brazil has been the main destination of UK exports, followed by South Africa and then Australia, United States and Rhodesia (Zimbabwe). Between 1901 and 1990, at least 1 751 Devons, comprising 722 bulls and 1 029 cows/heifers, were exported. Most animals were exported just prior to and immediately after the First World War when bulls seemed in greatest demand and then in the 20-year period following the Second World War when females were mainly sought. Devons overseas were kept pure, crossed on other beef or dairy animals, or used to create new breeds. Examples of the last include Tambov Red in Russia (Dmitriev and Ernst, 1989; Mason, 1996), Jamaica Red (Mason, 1996) to a limited extent, Australian Sahiwal (Mason, 1996) and a composite Zebu x British type for use in northern Australia (Kelley, 1959). In the early twenty-first century, there were Devon breeders' societies in Brazil (300 members), Australia (80+ members), New Zealand (50+ members) and the United States. In South Africa and Canada, Devons are registered in the respective national *Stud Books*.

Success of the Devon at home and overseas is associated with its ability to produce top-quality beef as a pure bred and as a cross under varying climatic conditions. In a period when other breeds were being modified irredeemably by cross-breeding in "improvement" programmes, the Devon made greater use of within-breed selection. This has been more the case abroad than at home, however, where it is often the proud boast of the breed societies that Devons retain the genetic purity that was developed over several centuries in their original homeland. This does not mean that the breed has not continued to develop. Progressive management and breeding techniques have seen Devons adapt well to the modern beef industry worldwide. Performance recording has identified superior animals and polled strains (developed by limited cross-breeding with polled breeds) are widely available. Today's consumers are demanding that the beef they eat is more natural, produced from grass, has not been tainted with growth promoters or truck loads of veterinary pharmaceuticals, tastes better and has generally caused little damage to the environment in its production. If farming is to be sustainable, it will be the hardy most efficient breeds that fulfil environmental and economic criteria and Devons are among those best placed to satisfy these demands.

South Devon

Once known as Hammer and South Hams (Mason, 1996) from the district to the north of Plymouth where the breed

originated, the South Devon was in the course of developing in the late eighteenth century (Trow-Smith, 1959) although others claim they had "been in the south part of Devon from time immemorial" (Fraser, 1794). Even at that time the South Devon was a large beast (mature oxen weighed up to 12 hundredweight [1 344 pounds, 611 kg]) and produced a fairly high yield of extremely rich milk. There is little doubt that this light red curly coated animal was a result of a Channel Island or Normandy cross on the red middlehorn that was the Devon itself and the use of "Alderney" cattle in southern Devon at this time is well attested. South Devon breeders tend to deny the use of Channel Island or French animals but blood typing in the 1950s showed common haemoglobin properties in Jerseys, Guernseys and South Devons (Trow-Smith, 1959). In the mid-nineteenth century, the South Devon was still largely restricted to the South Hams as elsewhere, as a beef animal, its carcass was considered to have "more of the *fourpenny* and less of the *ninepenny* beef". In the following years, within-breed selection led to considerable improvement. Early in the twentieth century, the breed was dual purpose for beef and milk although milk was used both as liquid whole milk and, for its high fat content, for making butter.

The South Devon is much the largest of Britain's native breeds and is known for docility, mothering instinct, easy calving and longevity (SDHBS, 2010). Hardiness and adaptability, fast early growth from a plentiful supply of rich milk, an excellent ability to convert grass to flesh and early maturity are further breed characteristics. These traits are important for modern beef production, which is reliant on limited labour and minimum replacement costs. Rapid growth and early maturity mean a bull can begin to be used at 15–18 months of age and can often work 11–12 years. Females may calve at 2 years, although calving at 2½–3 years is still common, and produce calves annually for up to 15 years. In the 5 years 1907–1911, South Devons were always among the prize winners at the Royal Agricultural Society of England annual show. Cows at one show weighed 1 400–1 800 pounds (636–823 kg) and having been in milk for 50–140 days produced 24 h yields of 43 pounds 12 ounces (19.9 kg) to 72 pounds 6 ounces (32.9 kg). An animal that was "probably the heaviest beast yet bred" weighed 30 hundredweight (1 527 kg) when slaughtered at Plymouth in 1907 and yielded a carcass of 18 hundredweight and 7 pounds (919 kg) for a dressing percentage of 60.2 (Drennan, 1912).

The main expansion of the breed away from the southwest to the rest of the United Kingdom took place in the twentieth century. Exports helped support farm income at this time. Progression towards a specialized beef breed began in the 1960s when recording was introduced. Because of its size, length and width of carcass and its lean beef, the South Devon was better able to combat the onslaught of continental breeds in the 1960s/1970s than other native

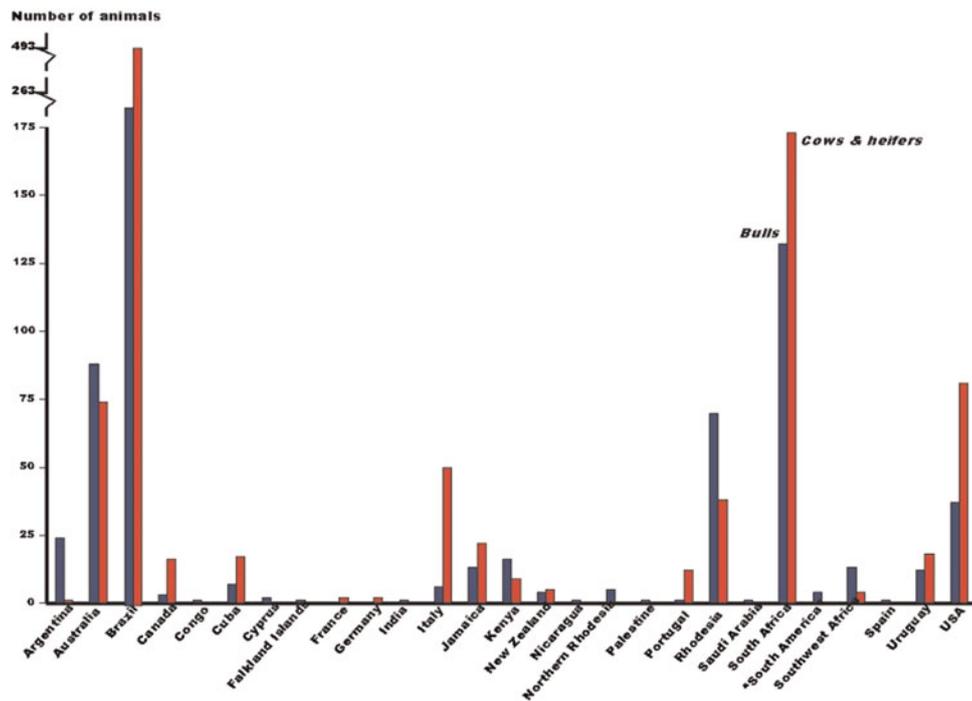


Figure 3. Numbers of Devon cattle exported to various countries from United Kingdom, 1901–1990.

breeds. This saw increased demand outside Devon and Cornwall and some 5 000 heads were sent each year to other parts of the country for finishing or as breeding stock. Exports also increased with 170 bulls going to Canada, 150 to the United States and 90 to South Africa.

The South Devon is well placed in both intensive and extensive modern suckler systems (Figure 4). For the pedigree breeder it produces excellent replacements. As a crossing sire the bull allows production of replacement females on the farm. Good beef conformation and good milking and mothering abilities enable the South Devon to assist in improving a suckler herd's base stock. The South Devon is also used in two- or three-sire breed systems for increased hybrid vigour at each generation



Figure 4. South Devon cow and calf in extensive suckler system (Grove Willow Herb 23rd and calf Grove Willow Herb 33rd, photo courtesy of Grove Farms Limited).

(SDHBS, 2010). As a terminal sire the South Devon reduces time to finishing and improves dressing percentage, carcass grades and meat quality.

The South Devon Herd Book Society was founded in 1891. At that time it was considered that the breed's "recognition has been tardy; it has no aristocratic backing; its breeders are chiefly – almost mainly – tenant farmers, and it has had to overcome many prejudices ...” (Drennan, 1912). By 1912, South Devons were present in South Africa, East Africa, Australia, New Zealand, United States, Brazil, China, Jamaica, Columbia and Japan (Drennan, 1912). The first overseas society was the South Devon Cattle Society of South Africa established in 1914. The North American South Devon Association was formed in 1974, as was the Canadian South Devon Association. Australia has two associations: the South Devon Cattle Society of Australia and the South Devon Cattle Breeders Australian Association. There is a South Devon Cattle Society of New Zealand and there are South Devons in Ireland and Zambia. The current popularity and versatility of the breed are attested to by the many other countries to which it has been exported.

Sheep

Britain probably has the largest range of native sheep breeds in the world. They are integral to national history and are descended from local types which successfully adapted to particular environmental and geographical conditions. The diversity of British sheep owes much to the versatility of the species itself but also derives from

generations of careful shepherding and selection based on acute observations that long pre-date the scientific manipulation that is now taken for granted.

Early types

In the mid-eighteenth century, introduction of (old) Leicester blood converted some local Devon types from coarse middlewools on the one hand into a polled medium-longwool that became the Devonshire Nott (“Nott” in Devon dialect means polled) and on the other hand to a horned medium-longwool that became the Exmoor (Fraser, 1794; Trow-Smith, 1957). Sometime later, Devonshire gentry formed an improvement society to import New Leicester rams to improve local Devon or Bampton stock. Initial results were not promising, in part because rams brought in prior to 1794 were “by no means the best of the Leicestershire” (Fraser, 1794). In the early nineteenth century, the Notts were infused with further Leicester blood and became Bamptons, which, in the 1830s/1840s, weighed 120–150 pounds (54–68 kg) at 2 years of age and produced 7 pounds (3.2 kg) of wool valued rather highly at 12½–13 pence per pound. These in turn gave rise to the Devon Longwool and (Greyface) Dartmoor such that by the middle of the nineteenth century remnants of the original mountain types remained only in the remotest localities (Trow-Smith, 1959).

Devon and Cornwall Longwool

Two long-established native breeds – South Devon and Devon Longwoolled – were amalgamated in 1977 to form the Devon and Cornwall Longwool with its own Flockbook Association (Mason, 1996). The breed is also recognized in the Netherlands where it is registered with the Vereniging van Speciale Schapenrassen (VSS, 2009). Both original breeds emerged from transformation of the earlier local middlewools – Southam Nott and Bampton Nott – developed through the use of the New Leicester (Trow-Smith, 1957, 1959). The South Devon was a long wool and meat type very similar to the Devon Longwoolled but larger. In the mid-nineteenth century, it weighed 100–120 pounds (45–54 kg) and produced a fleece of 9 pounds (4.1 kg) of a mediocre value of 9 pence per pound. The Devon Longwoolled, a north Devon mutton and long wool type, became a recognized breed in the 1870s, a breed society existed from 1898 to 1977 and a *Flock Book* was established in 1900 (Mason, 1996). Their wool was very strong and used mainly for rugs and carpets.

The modern Devon and Cornwall Longwool is dual purpose and produces a good carcass lamb and a heavy fleece (Figure 5). Mature rams weigh up to 136 kg and ewes up to 100 kg. Both sexes are polled. Prolificacy off grass is about 160 percent. Head and body are covered in long curly, white wool. Average fleece weight of rams is around 12 kg (but up to 20 kg is known) and of ewes 7 kg.



Figure 5. Devon and Cornwall Longwool 2-shear ram in full fleece.

The staple length is 20–25 cm. The hard wearing coarse wool – Bradford wool count 32–40 (40–36 µm) – is best for carpet manufacture. Unusually, Devon and Cornwalls are shorn as lambs when they produce a particularly warm, resilient and valuable fleece. The breed is suitable for producing lean heavy lambs of 18–21 kg carcass weight finished on fodder crops for the winter market. When crossed with British Milkshoop, Border Leicester, Cheviot or Suffolk a prolific halfbred ewe is produced, which is ideal for early lamb production.

In spite of the amalgamation of two different breeds 30 years ago, the new breed remains rare. On the Rare Breeds Survival Trust (RBST) Watchlist it is placed in Category 3, Vulnerable (RBST, 2009).

Greyface Dartmoor

The Greyface Dartmoor, also known as the “Dartmoor” or “Improved Dartmoor”, was developed between 1820 and 1909 by selection from the original Dartmoor and by judicious crossing with the New Leicester (Mason, 1996). Descended from original types that grazed the lower ground in and around Dartmoor it has a strong constitution developed by exposure to the prevailing severe winters and harsh conditions.

The hornless breed is of medium–large size (ewes 64 kg, rams 102 kg), deep bodied and short legged with a well-woolled head and legs (Figure 6). The white face is mottled or spotted with black or grey with matching feet. Ewes are docile, easily handled, good milkers and capable of rearing twins although they are not very prolific with a lamb crop of about 140 percent. The breed is of lustre longwool type (others in this group are the Wensleydale and Leicester Longwool). Ewes clip 7–9 kg and mature rams yield up to 15 kg. The long, curly, white wool of 25–30 cm staple length and a Bradford wool count of



Figure 6. Greyface Dartmoor ewe in its natural habitat (Photo courtesy of Dartmoor Sheep Breeders' Association).

36–40 (38–36 μm) are used for serge, blankets, carpets and a variety of artisanal applications (Figure 7).

The Dartmoor Sheep Breeders' Association was established in 1909 to standardize, promote and develop the breed that was then well established in its local areas. A *Flock Book* was produced in 1911 (Mason, 1996). In the early 1960s, the national flock comprised 7 000 breeding ewes, 3 000 ewe lambs and 300 rams in 140 individual flocks. The nadir of the breed was in 1985 when there were only 650 breeding ewes, 250 ewe lambs and 50 rams in 30 registered flocks but with only 15 “active” units. Considerable recovery has taken place such that in 2008 there were 1 500 breeding ewes, 700 ewe lambs and 70 rams in 200 flocks. Thus, individual flocks have become smaller and the breed is now kept throughout England, Wales and southern Scotland, and breeding stock has been exported overseas.

Considered rare in the 1990s (Mason, 1996), the Greyface Dartmoor was among those breeds that had the highest proportion of their population “culled” in the UK 2001



Figure 7. Fleece, shorn skin, rug and knitting wool of Greyface Dartmoor sheep.

FMD outbreak (Alderson, 2001). In 2009, however, and in part owing to many smaller flocks and their geographic dispersal, the Greyface is nonetheless not so seriously threatened as other Devon sheep and is on the RBST Watchlist as Category 5, Minority (RBST, 2009).

White Face Dartmoor

The White Face Dartmoor is sometimes known as the Widecombe after the village of that name. Its descent is from native heath sheep that grazed Dartmoor in the seventeenth and eighteenth centuries. The modern White Face developed, however, from crossing Leicester Longwool on the original Dartmoor around 1900 (Mason, 1996). The breed was revived in 1950 when the White Face Dartmoor Sheep Association was set up after changing market demands had resulted in a marked decline in numbers during the 1940s. A *Flock Book* was established in 1951. Found over a wider area in the past, enclosure of open fields and commons resulted in the breed retreating to Dartmoor where it became firmly rooted but very localized (WFCSBA, 2009).

The breed is very hardy. It grazes heather in the summer and descends to the grassy valleys in the autumn and winter. Mature rams weigh 74 kg and ewes 54 kg. The White Face has a broad white head, although there is occasionally some speckling on the face. Previously, both sexes were horned, but most ewes are now polled (Figure 8). The coarse wool has a fairly strong crimp and is moderately greasy. Average ewe fleece weight is 5.0–7.0 kg although 9 kg is not unusual. Ewes have a strong mothering instinct and a naturally high milking ability. Lambing percentage is up to 150. Carcass value is high with good conformation, meat with little fat and a good flavour and texture and dressed weights of 14–18 kg (WFDSBA, 2009).



Figure 8. White Face Dartmoor ram and ewes at Devon County Show.

The breed is excellent for crossing in both sexes. White Face rams on the Welsh Mountain, for example, increase offspring carcass weight and quality and wool output while maintaining the vigour and hardiness of the dam line. The use of terminal sires such as the Suffolk on either pure or cross-bred White Face ewes produces a very attractive finished lamb that is lean and well muscled and ideal for the modern market.

The decline in wool prices during the 1980s and 1990s has contributed to a fall in numbers of breeding flocks. White Face Dartmoors are classed in Category 4, At Risk of the RBST, in terms of numbers but are Category 1, Critical, in terms of geographical concentration with more than 75 percent of their numbers being found within a radius of less than 12.5 km (RBST, 2010). Maintaining adequate blood lines is a problem and increased numbers of sheep and flocks would give more breeding options through increases in the gene pool. Breed characteristics meet, however, the “new” farming and environmental management needs being imposed on agriculture on Dartmoor through Environmental Sensitive Area legislation and EU Common Agriculture Policy reforms.

Devon Closewool

The Devon Closewool has existed for over 100 years and descends from the Devon Longwooled and Exmoor Horn although it is a medium-wool polled breed (Mason, 1996). This very hardy breed is well adapted to the exposed uplands of its native heath partly as a result of its dense fleece, which does not part easily and keeps the skin dry even in heavy rain. Its heartland is Exmoor’s southern slopes and around Barnstaple in North Devon, which gives rise to its alternative name of the Barnstaple (Figure 9). This is essentially an upland sheep that lives on grass and long fodder year round and thrives where many breeds would die. There are a very few in Cornwall, Somerset and parts of Wales.



Figure 9. Devon Closewool flock on marginal land on the slopes of Exmoor (photo courtesy of Devon Closewool Sheep Breeders’ Society).

The Devon Closewool Sheep Breeders Society was founded in 1923 and a *Flock Book* was established at the same time (Mason, 1996). The first registered flocks, however, date back to 1894. A dual-purpose meat and wool type, the Closewool, is a medium-sized (ewes 121–132 pounds [55–60 kg], rams 198 pounds [90 kg]) white-faced polled sheep, has good bone and stands on stout legs set apart giving it a very symmetrical appearance (Figure 10). The neck is short and thick and well set into the shoulders, and the ribs are well sprung with good depth. The back is well set up, big and wide and the leg of mutton is well let down. The dense white fleece is of medium length and staple and should contain no black fibres. Fleece weights of yearling ewes average 4 kg and those of yearling rams 6 kg with a staple length of 8–10 cm. The Bradford wool count is 48–53 (31–28 μ m). The wool is popular with artisanal spinners and has a range of uses in modern manufacturing processes including hosiery, tweeds and fabrics.

The breed is ideal for crossing in both sexes. The Devon Closewool Halfbred section was formed in the early 1980s with the most popular cross being the Bluefaced Leicester to produce the Closewool mule. Continental and Down breeds are also used on the Closewool. Cross-bred ewes and lambs thrive in variable climates and terrain and produce first-rate easily finished prime lambs. These achieve carcasses of good conformation weighing about 18 kg at 12 weeks off grass. Closewool rams lend hardiness and “substance” to other white-faced breeds. As with the pure bred, halfbreds are popular for their ability to thrive in varied climates and farming systems as they are durable, prolific (160–200 percent lambing) and excellent mothers with good milking ability, which is reflected in early offtake.

The Devon Closewool is on the RBST Watchlist, in Category 4, At Risk (RBST, 2009, 2010), mainly because



Figure 10. Devon Closewool mature ram Champion at Devon County Show 2009.

75 percent of the population is within a radius of 17.5–20.0 km. Provided epidemic disease can be avoided, the breed has a solid future as an easy care commercial sheep for harsh environments.

Exmoor Horn

Sometimes known as the Porlock, Exmoor Horns have been on Exmoor since time immemorial and have always been valued for their hardiness, ability to thrive and fleece and meat quality. This is a true dual-purpose hill breed that lives outside all year round. It has always been kept pure on the higher moorland and used for crossing on lower ground (Figure 11).

The Exmoor is a white-faced animal, with large horns in the male and smaller ones in the female, with cherry-coloured skin and a white fleece of medium length (Figure 12). In the 1850s, the Exmoor was small, weighing 60–75 pounds (27–34 kg) at 4–5 years of age and produced a long fleece of 4–5 pounds (1.8–2.3 kg) of good-quality wool valued, then, at 12–12½ pence per pound. The modern Exmoor is a much bigger animal with adult rams standing 77 cm at the withers and weighing 73 kg: Ewes are 65 cm at the shoulder and weigh 50 kg. The breed is prized for both lamb and mutton and continues to produce a fine quality fleece of excellent colour and good staple length with a Bradford wool count of about 40 (36–37 µm). Exmoors are among the most prolific of hill breeds (draft ewes on better ground produce even higher lambing percentages), are excellent mothers, very good milkers and produce a quality upland lamb. In performance relative to the standard Scottish Blackface, the Exmoor is superior in daily gain and equal in milk yield, percent fat, percent protein, muscularity, carcass leanness, litter size, length of mating season, lambing interval, age at sexual maturity, wool yield and wool quality.

The Exmoor Horn Sheep Breeders' Society was formed in 1906 and a *Flock Book* was established in 1907 (Mason, 1996). At the first registered sale and show in 1907, 1 200 ewes were sold by auction at an average price of



Figure 11. Exmoor Horn ewes with Mule lamb on lower slopes of the native heath (pedigree registered Barton Town flock of Mr Philip Huxtable, Challacombe).



Figure 12. Exmoor Horn mature ram on culm grassland (pedigree registered Barton Town flock of Mr Phillip Huxtable, Challacombe).

42 shillings. The 1908 *Flock Book* records 132 members and 25 000 pure Exmoors inspected and branded. The 2007 *Flock Book* includes 80 flocks with some 19 000 registered ewes.

In the mid-nineteenth century the Exmoor Horn, with the Devon Longwooled, was the progenitor of the Devon Closewool. The breed is still excellent for crossing. The Bluefaced Leicester cross produces the Exmoor Mule, which is docile and prolific in lowland areas and recognized as one of Britain's finest mules (a mule is a cross between a lowland Bluefaced Leicester ram and a pure-bred upland or hill ewe). Mules retain many Exmoor Horn qualities while exhibiting the hybrid vigour of the cross-bred. Ewes are prolific, lambing at 160–200 percent, are very good and milky mothers, suffer very little from foot problems and are long lived and cheaply maintained. The Bluefaced Leicester influence produces a long animal of good conformation and excellent fat-to-weight ratio. Lambs achieve good weight gains from grass and finish easily at 18–22 kg deadweight of 2–3 litre fatness and U/R+ conformation. Exmoor rams are excellent terminal sires on a variety of crosses as they pass on their attributes of docility and the ability to produce finished lambs from low-input systems.

Though ancient in origin, the Exmoor Horn is well adapted to modern requirements. The breed's traditional values are as relevant as ever at the beginning of the twenty-first century. Renaissance in the market for mutton is a very positive step for the breed. Recent changes to farming policy have ensured a place for Exmoor Horns in the future plans of many farming businesses. An ability to fit into environmentally sensitive and conservation landscapes and the commercial value to produce pure-bred or cross-bred lamb with added-value and market potential means that Exmoor Horns continue to deliver good value to farmers.

In spite of its undoubted popularity in its home tract and its relatively large numbers, the Exmoor Horn is at serious risk and is listed by RBST as Category 1, Critical (RBST, 2009, 2010), because 75 percent of the breed falls within a radius of less than 12.5 km.

Equines

Most native equine breeds were traditionally used as working animals. Heavy breeds ploughed the rich lowlands, whereas ponies provided agricultural power on upland farms, and were used as transport (pack) animals and for shepherding, hunting and carrying the farmer to market. Ponies also worked in deep mines underground (Wilson, 2009).

Devon Pack Horse

Before the end of the seventeenth century, Britain had few roads and few wheeled vehicles. Roads began to be constructed in populated parts of the country, but in remoter areas and especially in hillier regions there was little development even by the end of the eighteenth century. It was noted “in Devon and Cornwall they have few wheel carriages by reason of the steep hills, but everything is carried either on hooks on each side of the horses, which are long or short according to the nature of the burden; they have drags for drawing up the side of steep fields, ...” (Cartwright, 1889). The Devon Pack Horse was one of a group of similar regional equines (including the Norfolk Trotter or Roadster) developed to perform these functions. The characteristics of this literal “workhorse” were medium size (15 hands [60 inches, 152 cm] or slightly more at the withers), load-carrying capacity, an ability to walk and trot well, surefootedness, staying power, thriftiness and longevity (Staveley, 1910). A typical animal carried three sacks of corn, each of 220 pounds (100 kg), at a steady 5 mph (8 kph) for long periods. A string of six animals, carrying 1 800 kg in total, was controlled by one person. The person rode the horses turn about such that at some times a further 50–60 kg was added to the load of each animal (Staveley, 1910).

As roads became more widespread, two breeds of horse developed from Pack Horse stock. These were a heavy breed for slow goods traffic and a lighter faster type for carriages and coaches that included the Cleveland Bay and the Hackney. By the end of the nineteenth century, very few Devon Pack Horses remained. In 1910, there were but few aged mares in their original area and one 14-year-old stallion that had been exported to Australia (Staveley, 1910). The true breed is extinct (Mason, 1996).

Dartmoor

An early reference to ponies on Dartmoor is in the will of the Bishop of Crediton (in central Devon close to Dartmoor) who died in 1012. During the reign of Henry I (1100–1135) a stallion was taken from Dartmoor (which like Exmoor was a royal forest) to serve royal mares. Ponies have thus lived on the moor for a very long time and developed the metabolism to prosper in that tough and uncompromising environment. The Dartmoor “breed” began to emerge from the non-descript stock on and around the moor about 1800 (Palmer, 1912). It was to be another 100 years, however, before the modern

type was established at the end of the nineteenth century and this following injections of Exmoor blood around 1860 (Palmer, 1912).

The Dartmoor pony is sturdily built – but perhaps not so much as the Exmoor – and has maintained much of its adaptation to its moorland environment (Figure 13). Its strength and ability to survive harsh conditions means it is suitable for both farm work and riding. Bay, brown and black are the commonest colours but there are some greys (piebald and skewbald animals are not recognized by the breed society). Males average 225 kg and females 212 kg with withers heights of 12.2 hands (50 inches, 127 cm) in both sexes. Despite their small frame, they are strong enough to carry a full-grown human all day. The potential as children’s ponies has long been recognized as they make wonderful companions, give endless fun, and compete and succeed in all spheres of competition.

The Dartmoor Pony Society (DPS) was established in 1925 and in 2009 has about 700 members. Pedigrees were recorded in the *Polo Pony Stud Book* as early as 1899 but were later transferred to the National Pony Society. It was not until 1977 that DPS took over pedigree recording. This is now a primary role of the society. The Dartmoor Society Supporters Group acts mainly as a fund-raising body for the benefit of the society.

Registration by inspection of non-pedigree (but possibly pure-bred) animals was terminated in 1957, but an upgrading scheme has been reintroduced. Approved non-registered mares run with a registered licensed pure-bred stallion to achieve Supplementary Register 1 (SR1) status. Approved progeny become Supplementary Register 2 (SR2). Approved progeny of SR2 mares that foal to a licensed pure-bred stallion become fully registered and may be entered in the main *Stud Book*. Some unregistered true-to-type ponies have Heritage Trust List (HTL) status. These remain unregistered unless they enter the upgrading scheme. HTL status has been given to The Dartmoor Heritage Trust (not connected with DPS) to allow farmers



Figure 13. Dartmoor pony and foal on typical moorland ground.

on Dartmoor to obtain payments to assist them retain unregistered but true-to-type herds on the moor.

In the early twentieth century, the market for Dartmoors extended to Cornwall where about 300 animals went every year for use in mines, on farms and by hawkers; others went to northern England as pit ponies (Palmer, 1912). Dartmoor ponies have been exported to all parts of the world. Local groups formed as numbers of ponies increased and established their own *Stud Books*. In some countries, however, ponies are registered through central government or state agencies. In most cases, the DPS in the United Kingdom is regarded as the “Mother” society. “Daughter” societies – in Australia, Belgium, Germany, Holland, Norway and Sweden – ensure that all animals, wherever bred, conform to the requirements and criteria of the Mother society. Both the United States (The American Dartmoor Pony Association) and France (Association Francaise du Poney Dartmoor with a *Herd Book* established in 1969) are fully independent unities. In France, the Dartmoor is mainly found in the north but there are some on the island of Corsica.

Threats to survival of Dartmoor ponies go back several centuries. In 1535, Henry VIII passed legislation to eliminate “nags of small stature” as these were assumed incapable of carrying the weight of a knight and his armour. Fines were imposed on anyone using a stallion under 14 hands (56 inches, 142 cm). There have also been high points, however, as King Edward VII (1901–1910) valued Dartmoors for his polo teams and there was a huge comeback. In 1912, the outlook for the Dartmoor was “distinctly good” (Palmer, 1912). This ceased with the advent of First World War (1914–1918) and the breed was again severely threatened during the Second World War (1939–1945) when the moor was used – as was Exmoor – by the armed forces as a training area. Continuing mechanization throughout the later twentieth century forced the breed into another decline. In 2002, there were only 330 breeding females in the United Kingdom and 864 elsewhere in the world (Alderson, 2003). The breed is considered “endangered” in the Food and Agriculture Organization of the United Nations (FAO) World Watchlist with only 330 females and 61 males in the United Kingdom in 1999 (Scherf, 2000). On the RBST scale it is on Watchlist Category 3, Vulnerable (RBST, 2009).

Exmoor

The Exmoor pony is native to the hill country of the eponymous moor in northeast Devon and western Somerset. The breed is believed to be directly descended (as indeed are other species and breeds) from ponies that migrated from North America across the prehistoric land bridge between Alaska and Asia. Possible ancestors have been studied in fossilized remains in Alaska and these share a unique jaw type with the Exmoor together with seven molar teeth. Exmoors are the most primitive of northern European horse breeds, and their antiquity and genetic distance from other breeds have been well demonstrated

(Baker, 2008). It is claimed that there has been very little cross-breeding, which makes the Exmoor probably the purest of all native pony breeds. Its natural environment and isolation have shaped its size, characteristic hardiness, independent spirit and native intelligence. Most Exmoor ponies are now bred in studs off the moor, but the herds of semiferal free-ranging ponies that survive on low-quality moorland grazing and stay out year round are essential to maintain the breed’s true qualities. When Exmoor Royal Forest was sold by the Crown in 1818, Sir Richard Acland, the last royal warden, took 30 ponies and established the famous Anchor herd, which is still in existence. Local farmers also bought ponies and were able to keep the bloodlines pure.

The winter coat of the Exmoor has two layers: One is an insulating undercoat and the other an outer coat of greasy coarse hair that is almost waterproof. This insulation is so effective that snow collects on the coats – sometimes referred to as “snow thatching” – because not enough heat is being lost to melt it (Figure 14). The body hair grows in unique patterns that facilitate shedding of water and the plentiful mane, tail and forelock protect delicate parts of the body. The Exmoor has a very large nasal cavity that provides space to warm cold air and a raised rim around the eye protects it against water and debris. The deep girth and chest allow a large digestive capacity that is important for using a large amount of rough forage in the diet.

The Exmoor is extremely hardy and resistant to many equine diseases and has great powers of endurance. The small sturdy animal has ample bone and can carry heavy burdens in relation to its size. It is sure footed and has strong clean legs and feet with a smooth stride. The head is large with small ears. A “toad-eye” appearance is due to fleshy rims that serve to divert water. Bay or brown are the preferred colours although there are also duns. There are mealy patches around the eyes, on the muzzle,



Figure 14. A pure-bred Exmoor pony in her winter coat showing typical “snow thatching” (Bartridge Serenade, Registration Number 277/2).

on the belly and insides of the thighs. Because similar markings occur in equines other than horses they are considered to be a primitive trait. White hairs in the mane or tail are not accepted in the breed standard. Adult males and females weigh 227 kg. Withers height ranges from 11.0 hands (44 inches, 112 cm) to 13.1 hands (53 inches, 135 cm), but the commonest and preferred size is 11.3–12.2 hands (47–50 inches, 119–127 cm) (Figure 15). In spite of small numbers and little morphological differentiation two types of Exmoor are recognized. The first is the Acland (the family that acquired part of the Exmoor herd at the Crown Estate disposal in 1818), which is considered to bear the closest resemblance to the original type. The second is the Withypool, which is slightly larger and generally darker and has a straighter profile.

At the time of the *Domesday Book* in 1085 some 800 ponies roamed Exmoor. Estimates of moorland numbers over the next 900 years varied from 290 in 1819 to 970 in 1746. In 1921, there were an estimated 500 animals. The Second World War was disastrous as the moor became a training ground and ponies were shot and used for meat. By the end of the war only 50 ponies survived. Local people re-established herds but recovery was slow. A 1976 census showed only 99 ponies on the moor; there were 138 in 1990 and then 320 in 2006. Estimates of total numbers worldwide vary. By 1992, there were thought to be 800, all in the United Kingdom except for 35 in Europe (mainly Germany but also Sweden and Denmark) and 15 combined in the Falklands and Canada/United States. Of these, 270 were mares in “breeding situations” but only 100 foals were born and there were 170 geldings (EPS, 1992). In 1999, the World Watch List provided numbers of 390 breeding females and 63 males and put the Exmoor in the Endangered category (Scherf, 2000). The RBST has the breed in Category 2, Endangered (RBST, 2009). Canadian numbers increased from 3 in 1994 to 36 in 2004, and bloodlines of these were being shared with the United States (EPS, 2004) and total Exmoors overseas were estimated at 230. In the early twenty-first century, the

Exmoor has – perhaps unfortunately – to some extent become a “lifestyle” breed. It is bred throughout Britain in small herds and as units of one or two animals. Numbers are now about 2 200 with about 160 foals born each year. Low foal numbers from the 1 000 or so mares are because less than 500 of these have foaled in the last 4 years and only about 100 have had more than two foals. Because of low numbers of stallions, a further concern is reduction in genetic diversity. The Exmoor is a truly “rare breed” with less than a third of the numbers of Scottish wildcats and only about one-seventh of the numbers of otters in the United Kingdom. Simple numbers do not, however, tell the whole story as the wild species do not have some 60 percent of their numbers as non-breeders (EPS, 2000).

The Exmoor Pony Society (EPS) was formed in 1921 to preserve and improve the traditional moorland type but a *Herd Book* was not established until 1961. EPS continues to be the leading proponent of the breed, and maintains information on the status of bloodlines and on overall numbers. All pedigree animals, after passing an inspection, are registered with the society and branded with the society’s brand and a herd and an individual number. This applies equally to animals born off the moor and those living on it. The latter are rounded up in October of every year and the foals inspected. Colts classed as below standard are gelded.

In North America, the breed is registered in Canada by the Exmoor pony enthusiasts under the aegis of the American Livestock Breeds Conservancy. For effective global conservation, however, the North American registries must align their processes with the EPS so that animals and their genetic material may readily be exchanged. The status of Exmoors in North America is considered critical (ALBC, 2009). Exmoors were exported to Australia in the mid-nineteenth century where two sires, in particular Sir Thomas and Dennington Court, were instrumental in the formation of the Australian pony (APSB, 2009).

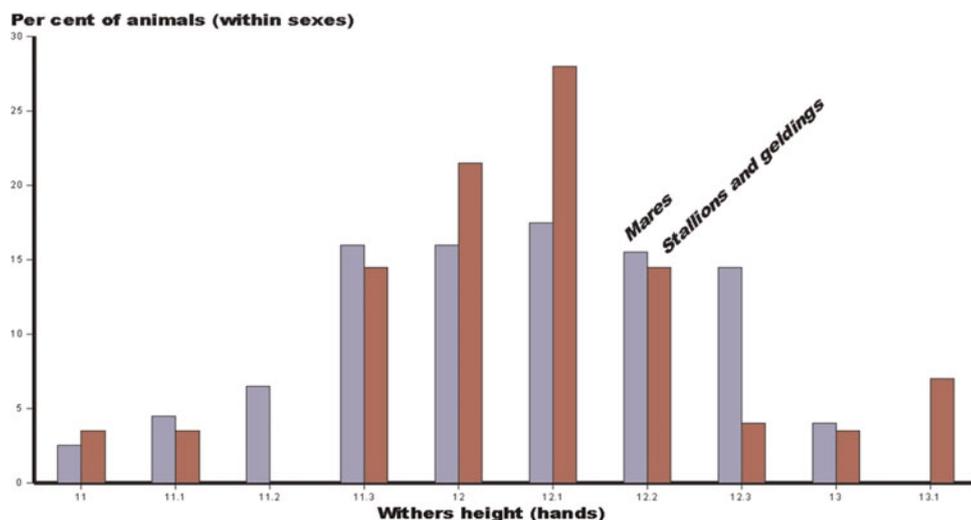


Figure 15. Frequency distribution of withers heights of female and male Exmoor ponies (Source: data from Baker, 2008).

Pure in itself, the Exmoor has been used to improve (or alter) both the Dartmoor (Mardon, 1912; Palmer, 1912) and the New Forest Pony (Mardon, 1912). In the early twenty-first century, the breed is used for a variety of activities including showing, jumping, long-distance riding and driving. Exmoors make good family ponies capable of carrying an adult but amenable enough to be handled by a child. Exmoor ponies are increasingly being used as native grazers in environmentally sensitive areas to maintain or increase plant diversity (Baker, 2008). The current roles of the Exmoor differ from its original ones but are sufficiently diverse to ensure its probable survival and its continued future use in both foreseen and unforeseen situations.

Pigs

One authority noted that it “was all so easy, and so cheap, compared with the expensive and lifelong task of merely improving a breed of cattle, to make a new breed of pigs”. There thus appeared at royal shows in some years in the mid-nineteenth century the Molland and the Devon pig (Trow-Smith, 1959). These breeds apparently quickly disappeared into the obscurity whence they had arisen but they may have current relationships with the British Lop and Large Black (Mason, 1996).

Discussion

Extinction is forever – endangered means there is still time.

The wide variety of pastoral habitats of Devon’s green and pleasant – if usually rather wet – land has led, over many centuries, to a concomitant variety in domestic livestock species and breeds. As was said of Robert Bakewell, the objective in animal breeding was to “find the best ‘machine’ for turning the products of the Land into products of higher money value as food for man” (Young, 1786).

Commonplace in eighteenth-century Britain was the inextricable mixture of genetic resources that developed in local environments with little exchange of material between one locality and another (Trow-Smith, 1959). In sheep especially, however, the dominance of the New or Dishley Leicester towards the end of the eighteenth century gradually reduced the number of local races by absorption or replacement. The peculiarly close relation of the sheep to its environment ensured, nonetheless, that many local breeds did survive and indeed developed through judicious within-breed selection into more productive stock. In remote Devon and its diverse environments, it was not the deep-pocketed and wide-landed gentry that developed these genetic resources, as they were more likely to use a fancy breed to grace their parks and lawns. It was, indeed, small tenant farmers

who needed an animal that would help to pay the rent of the land they hired by producing those added-value products.

Developed for narrow ecological niches and a predominantly local market all Devon’s breeds – bovine, ovine, equine and porcine – regressed as farming systems intensified and in the face of changing consumer demand. Devon cattle were overtaken by larger and leaner (but less thrifty and greedier feeding) continental breeds. Replacement of wool by human-induced fibres and the supply of frozen mutton and lamb from overseas made sheep farming a much less profitable enterprise. Four-wheel-drive vehicles and quad bikes made the small hardy pony breeds almost redundant and their slaughter in two world wars almost eliminated them altogether. Devon’s nascent pig breeds were used as foundation stock and absorbed into modern breeds. All the cattle, sheep and pony breeds were able, however, to survive in limited numbers and usually in very circumscribed areas.

In recent years and especially since the mid-1990s and up to mid-2010, the British Government neglected and, was even disdainful of, agriculture. This is typified in the 2001 decision to abolish the Ministry of Agriculture and subsume it in the Department of the Environment, Food and Rural Affairs (DEFRA). Even this title is a misnomer: Ministers appointed were from the ruling political party and were conspicuous for their lack of experience or knowledge of any of the sectors in the department’s title. The government clearly lacked concern for food security and frequently stated that the global economy and the market would ensure the availability of food. With especial regard to livestock, the government was even more negligent (or deliberately destructive) as witnessed by the 2001 foot and mouth disease outbreak: “The reduction in numbers of livestock coincided with government policy and may be permanent, and the damage to animal genetic resources has been significant” (Alderson, 2001). The government provided little moral or financial support for livestock, and there were no provisions of any kind for rare breed and the conservation of domestic animal genetic resources. A EU proposal to provide match funding (50/50 EU/government) for these rare breeds was rejected by the British Government.

The UK Biodiversity Action Plan (UKBAP; DEFRA, 2007) has no express provision for domestic livestock although they are expected to assist in conservation of some natural habitats. Even the action plan for an area such as Exmoor – which is hugely dependent on sheep and cattle grazing for its ability to act as a carbon sink and is home to three of Devon’s native breeds – mentions domestic livestock, in passing, only three times (Exmoor National Park, 2005). Purple moor grass (*Molinia caerulea*) and Rush pastures are a priority habitat in the UKBAP: There are 400 sites of this Culm Grassland, as it is known in Devon, on Dartmoor covering 1 000 ha

(UKBAP, 2008) and these have depended for generations on sensitive grazing by Devon's locally adapted livestock, but again no special provision is made for conservation and use of this irreplaceable animal resource. Similarly, Moorland and Upland Heath with heather *Calluna vulgaris* and bell heather *Erica cinerea* are priority habitats in UKBAP. Concerted pressure from interest groups (they cannot be dignified as environmentalists or conservationists as they clearly know as little about the one as about the other) resulted in the government imposing restrictions on grazing by sheep, which led quickly to invasion by bracken and other weedy shrubs and concomitantly a reduction in quality habitat for birds, insects and other wildlife (Davies, 2008). The *status quo ante* was restored only when sheep grazing, as a crucial function of upland farming and of habitat conservation, was reinstated.

Conservation management is central to the reforms to the EU Common Agricultural Policy that encourages sustainable and environment-friendly farming. Participation in environmental and conservation schemes, and not production quota, is now the basis for public support (little as it may be) for agriculture. Devon's native breeds are well situated in this new "landscape" and are recognized by many organizations as preferred livestock for grazing areas of conservation value. These gentle and docile animals cause minimal damage to grassland and graze and thrive on marginal land and unimproved permanent pastures. Traditional breeds are recognized by Natural England and can attract some extra area payment as part of higher-level stewardship schemes. This support, together with that of other civic organizations such as the RBST, the individual breed societies and their charitable ancillaries together with that of interested commercial and hobby farmers, will probably ensure survival of Devon's ancient breeds, in the absence of devastating disease, for the foreseeable future.

Devon's ancient indigenous breeds are not historic curiosities. They are, as they have always been, practical weather-proof stock that require the minimum of husbandry and are capable of finding sustenance in distinctly inhospitable surroundings. These breeds have a proud and productive past that, it is to be hoped, will carry them over the next horizon.

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 Whiteface Dartmoor Sheep Association www.whitefacedartmoorsheep.co.uk/