

The Feral Goats Of The Burren County Clare, Republic Of Ireland

An Historical Analysis, With Particular Reference To
The Origin, Type And History Of The Old Irish Goat



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Introduction

The research here presented is based upon a wide range of references to the Old Irish goat between the Eighteenth Century and the present day; general references to the goat in Ireland from the Neolithic period onwards; and the findings of the present writer regarding the likely origin of the Old Irish goat in relation to its inclusion in the Northern Breed Group of Europe. Of necessity, the majority of the references pertaining to the last 130 years or so have an English literary bias, which is, effectively, what English goat breeders thought of imported Irish stock that they believed to be inferior to their own improved animals! It is to be hoped that Irish sources will be made available in the near future to balance the account and add to the present writer's knowledge.

The issue of why the Irish goat was described in such a derogatory way is dealt with, along with a refutation of the widely held belief that Irish goats always and only had scimitar shaped horns.

The historical aspects skip neatly between a general overview in Ireland, a closer look at the Burren, and, considering the considerable number of Irish goats that were imported annually into England, an English perspective. Enmeshed in this is a consideration of the origin of the Irish goat.

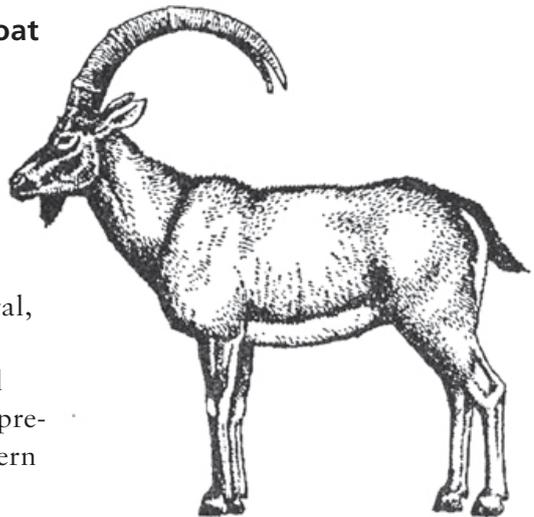
How the Old Irish goat has been described can only be understood with reference to the historical aspects of its reporting. It was firstly and rightly considered to have been no different from other goat stock in the British Isles; then different and in particular coarser and less attractive; then it was rehabilitated to something akin to its true state.

References to its yield and usefulness are also included.

Information pertaining specifically to the feral goats of The Burren includes comments on the goats in relation to geology and vegetation, climate, flora and fauna. The major emphasis of the initial field trip, a description and assessment of breed type, will be dealt with in a separate aspect of the report.

Megalithic domestic goats and the Old Irish Goat

The Cretan Wild Goat (right), a sub species of the Wild Goat proper, is widely held to be a little-altered early domestication that went feral. If this were the case, then its phenotype is typical of the earliest goat imports into Europe, including Ireland. In terms of breed type it has little in common with the Northern Breed Group in general, and the Old Irish Goat in particular. Explanations regarding the development of breeds such as the Old Irish therefore need to be sought in the context of a pre-agricultural phase of nomadic pastoralism in Northern Europe, explained largely by climate change.



Summary

Relating to the type, origin and history of the Old Irish Goat

Description

English descriptions of the Old Irish goat, based on the annual importations of Irish goats into England and Scotland during the Nineteenth and early Twentieth Centuries, almost universally described the Old Irish goat as being leggy, gaunt and flat-sided, with a head that was long and ugly. These descriptions are inaccurate and biased, however, the comparison being made between the Old Irish goat and the pedigree, so-called English goats, of the day. This improved English goat was in reality a cross between the Old English goat and imported stock of mainly Mediterranean and Middle Eastern type; so the comparison was between a unimproved utility goat and an improved dairy-goat ideal. In similar vein, the Exmoor pony has a unique style and beauty of its own, particularly when viewed in the context of its origin and “native” pony qualities. It would be possible, even so, to write an uncomplimentary report of its appearance if this were done by enthusiasts of the Arab breed, which has a very gracile head and conformation by comparison.

It is a popularly held belief, still quoted in the literature, that the Old Irish goat always had scimitar shaped horns, described as rising in parallel from the head and not turning outwards at the tips. This idea arose with an original description found in *The Book of The Goat* by Holmes Pegler (1875), and was reinforced by the fact that Irish imports were made up of nannies whose horns did not generally reflect the variation found in that of the males. In actuality, the horns of the Old Irish goat were quite variable, ranging from scimitar, through moderately twisted and curling, to a dorcas twist. Polled goats were known, but rare. So much so, in fact, that the polled condition in feral herds of old type is more likely to have originated from introgression with stock of Swiss type than a continuation of an original characteristic.

The earliest English descriptions of the Old Irish goat confirm that the breed was almost exactly like the Old Welsh goat, Old Scotch goat and Old English goat in both its general appearance and its essential breed characteristics.

The Old Irish goat, along with the other old varieties of the British Isles just mentioned, was in reality a small animal with a deep body that stood firmly on short legs. The coat was of medium length to long and shaggy; the ears small and pricked; the head long and dished. All the four basic colours found in the goat (tan, black, grey and brown) were represented. Tan varied between white (the extreme dilute of tan), through yellow, fawn, golden and red to chestnut/mahogany. Colour patterns included Bezoar or wild patterning, which may have been quite common; through lightbelly, darkbelly, mahogany (the pattern not the colour), no-pattern tan and no-pattern black or brown (three shades). The descriptions of rusty or reddish black probably refer to the mahogany pattern, which is basically a black-tan roan, or else chocolate in which the longer hair may fade or bleach to a lighter shade. The colour pattern lateral stripes may have occurred, but confirmation is at present lacking. “And white”, rarely “pied”, refers to white patching, which seems to have been typical of the Old Irish goat. Swiss patterning did not occur in the Old Irish breed, and its presence was, and is, a sure indication of introgression with stock of Modern Swiss derivation.

The type of the Old Irish goat, along with the other old varieties, conformed to a standard that might best be described as a “cold weather goat”. Thus, in its conformation, and especially in relation to both Bergmann’s and Allen’s rules, it has the characteristics of a frost-proof breed that needs to cope with extreme cold whilst fuelling itself on large quantities of rough herbage. Goats of very similar type, and almost certainly of the very same origin in time and space, have traditionally been found all around the periphery of Europe. These goats comprise a distinct group that has been designated **The Northern Breed Group**.

The Northern Breed Group - a definition

The Old British Goat - meaning the Old Scotch Goat, Old English Goat, Old Welsh Goat and Old Irish Goat - belongs to the Northern Breed Group.

This breed group was once the type of the landrace goat around the northern periphery of Europe, being the ‘breeds’ of the British Isles, Holland, Norway, Sweden, Denmark, Iceland, and possibly also of Finland, Belgium and European Russia. All these landrace breeds share the same characteristics, as exemplified by an Old Norwegian billy portrayed below.

They are small, square and robust, with small, pricked ears and a long dished face. Coat is variable, ranging from rough to long, although it has a harsh, oily feel, with a fine undercoat of cashmere. Invariably horned, horn type ranges from scimitar, through a moderate, to a dorcas twist. The angle of emergence is always high. Colour is variable, pied being frequent. Goats belonging to the Northern Breed Group are essentially a cold weather goat, capable of surviving in harsh conditions and on rough fare.



Print of an Old Norwegian billy - an example of the Northern Breed Group

Origin and history

If we accept the standard interpretation of the origin and worldwide dispersal of the Neolithic, which brought agriculture and animal husbandry in its train, the goat was introduced into Ireland by one of the sea-faring peoples that settled there. Ireland's earliest Neolithic colonizers, the Megalithic people, are generally cited; although The People Of The Leather Vessels, who brought metallurgy into Ireland, are also considered to have brought their stock. Incumbent on this interpretation of events is that these early colonizers came by sea from the eastern Mediterranean, it now being believed that the Cretan Wild Goat, with its short and close coat, gracile conformation, scimitar horn-shape and Bezoar colour and patterning, represents this earliest domesticant gone feral. If this were the case, then the earliest goat introductions had little in common with the breed type of the later Old Irish goat.

It is possible to make some form of argument in favour of the Neolithic goat developing into a cold-weather type after its arrival in Europe. The obvious place would be Scandinavia, the obvious people those associated with the Germanic migrations. Timing and a consideration of the movements of the Teutonic people, however, along with an understanding of the climatic conditions of the period, would tend to militate against such a theory.

There is some evidence to support the view that the domestic goat occurred in Europe during the Late Pleistocene; and considerable evidence that relates to its occurrence in Europe during the early Holocene. This is associated with the view that a pre-Neolithic proper phase of livestock pastoralism, centred on cattle, sheep and goats- was associated with the Mesolithic of northern Europe, or even earlier. If this were indeed the case, the boreal climatic conditions following the last deglaciation, coupled with a right understanding of conditions during the last glaciation, would lead inexorably to the conclusion that the generalized northern pastoralist goat developed rapidly into the All-weather type of the Northern Breed Group during the extremely cold phase associated with ice melt during the late Pleistocene. This would mean that the more gracile goats brought into Europe in general, and Ireland in particular, during the standard Neolithic would have been absorbed into what had rapidly become this distinct landrace type.

The view held by the present writer is that the Old Irish goat is a typical representative of The Northern Breed Group, an unimproved or primitive type that originated during a Late Pleistocene phase of pre-agricultural nomadic hunter-pastoralism in Northern Europe. It is therefore representative also of Europe's earliest landrace type, a breed that can be called "native" in the same way that we refer to "native" pony breeds, and namely for the reason that it is ideally suited to the climate, topography and style of husbandry that has traditionally been imposed upon it.

Status of the Northern Breed Group

Breeds belonging to the Northern breed Group are generally in decline throughout its traditional region of distribution. The Breed Group was formerly the only breed type of Ireland, Scotland, Wales, England, Iceland, The Netherlands, Norway, Sweden and Denmark. It was possibly also the landrace type of the Baltic and Belgium, although more research is required to confirm this.

In Wales, the total population, all feral, was around 300 in the middle of the last century. Although the overall number has increased since then, associated to some extent with an expansion of feral goat hefts onto abandoned low-lying sheep rearing areas, there has been an equal increase in introgression with stock of Modern origin. It is possible, therefore, that feral goats of the Old Welsh type are in decline.

The surviving population of England, nearly all feral in two populations with some brought into smallholdings, a zoo and grazing schemes, is between 200 and 250.

The total population of Scotland is generally cited as being around 4000. This information is outdated however, relating to figures published in 1993 that were, in some instances, quotes from figures relating to 1969. There may, therefore, be as few as 3000 or less; and a recent survey, carried-out by the British Feral Goat Research Group on selected populations, would suggest that the total number of purebred feral stock might be 1500 or less.

Iceland has a purebred, and inbred, population of the old type numbering around 300

In the Netherlands, the Old Dutch goat came close to extinction, with only 4 purebred animals left. A breeding programme that introduced goats of the 'right type', some having obvious Swiss breeding, has brought numbers up to around 2000.

There is one feral population representing the Old Norwegian type in Norway. Norway dabbled with goats of improved Swiss type for a while, but ultimately rejected this as unsuitable for the climate and style of husbandry. Since then, the Old Norwegian breed has been retained, but improved to a dairy standard by focussing on the, and limiting the number of, sires used. The Norwegian goat of today is therefore an 'improved primitive' breed with a decreasing gene base in relation to its genetically variable origins.

Sweden, too, has its own primitive version of landrace goat of the Northern Breed Group. Swedish goat breeders are following in the wake of Norwegian goat improvement, however, importing Norwegian sires in increasing numbers. There is a rare relic of the Old Swedish landrace type in Germany. This is the Jamtland variety that was formerly kept in the Thuringer zoo park, Erfurt.

The Old Danish goat is now extinct.

Preservation of the type of the Northern Breed Group

Ultimately, the best gene bank for goats of the relic Northern Breed Group may be considered to be feral populations where there is no pressure for improvement, populations are still large enough to retain genetic variability within the original type, and they are living in conditions best suited to their origins and former style of husbandry. Having stated this as the ideal, it needs to be pointed out that the world population of purebred goats belonging to the relic Northern Breed group still existing in a feral state may be as few as between 2000 and 2,500, added to which will be an as yet unknown number surviving in Ireland generally (both Eire and Northern Ireland).

Nearly all, say 95%, of all surviving feral goats of the type are located in the British Isles. The status of feral goats in the United Kingdom at least is ambiguous in the extreme, as they are classified as neither wild nor domesticated, and therefore are afforded no protection in law. Theoretically, they are the property of the landowner on which their heft is located or onto

whose land they wander, although such ownership needs to be proven. All too often, however, they are shot before the niceties of such legal considerations can be established.

Legislation is urgently needed to afford recognition and protection to the remaining feral populations of the old type, along with legislation that protects feral goat populations in general.

A strategy for preserving the Irish Feral Goat

- In the first instance, an urgent initial study of the breed type of all the surviving feral goat populations in Eire needs to be carried-out.
- This, initially, would concentrate on categorizing each population in relation to whether or not they are (1) purebred of the Old Irish type (2) basically of the Old Irish type phenotypically, but with some documented history of introgression with goat stock of Modern type (3) manifestly an admixture of the Old and Modern types (4) wholly of Modern goat stock origin.
- A determination not to move stock from one population to another whilst the origin of individual 'herds' remains unclear. This is vitally important, and reconisized as a basic principle in Scottish feral goat conservation as long ago as 1969.
- The setting up of local support groups/preservation societies for each surviving population. Their initial objective would be to change perceived opinion locally, publicise the value of the breed, and work towards protection and recognition at a local level. These local support groups could then be affiliated into an all-Eire preservation society that could work at a national level for the recognition and preservation of the Irish feral goat as a whole.
- An initial population dynamics study of each population that will give some idea of total numbers, sex and age ratios and fertility rates.
- Work to ascertain the 'place' of each feral goat population with regard to future management. This should take into account the style of management; perceived nuisance and how this can be negated; optimum and minimum numbers in relation to genetic diversity, inbreeding, group structure, carrying capacity; special interests, including woodland, vegetation type etc.; and ecological and tourism value.
- A specific plan to ensure that management in the future will be based upon the preservation and promotion of the Old Irish type of goat. This is not to advocate culling or removal for culling or removals sake, but to recognised two tiers of feral goat in which the Old Irish goat plays a part: the purebred and otherwise. When, and only when, reductions in numbers are necessary for any sound reason, the strategy for promoting the Old Irish goat would come into play.

Geology and physical landscape

The unique landscape of The Burren has been described in many ways:

A strange, at times unworldly looking place where it is difficult to imagine anyone could have eked out a living in the bare limestone rock (Sheehan and Levy, 2000)... An extraordinary, unique place (Lonely Planet, 2002)... One of Ireland's most fascinating landscapes, the sweeping limestone plateau known as The Burren (Dailey, 1999)... Ireland's unique, seductive attraction (Nelles, 1995)... The Burren landscape is like nowhere else in Ireland, with vivid green fields and pale grey limestone pavements and terraces on the hills along the Atlantic coast (Lonely Planet, 1999)... An extraordinary landscape of stark rock, fading into lower green fields, and above all the sky and the ocean. Bone white in sunshine, in the rain the rock becomes darkened and metallic, the cliffs and canyons darkened by mists (Everyman Guides, 1998)

The Burren itself is a huge plateau of limestone and shale that covers around 100 square miles (Everyman Guides, 1998), giving an outlook of mile after mile of polished limestone pavement stretching in every direction. There are deep fissures, cliffs and terraces; the soil being sparse along with the unique feature of Turlough. These 'dry lakes' appear in shallow hollows only after heavy rain, and when the water table rises sufficiently to allow water to spill out and quickly fill the hollows. The usual depth is around 2 inches.

An interesting aspect of the relationship between the feral goat and the wet, well-drained limestone plateau landscape of The Burren is the goat's need of iodine; and Mackenzie (1957) has made some interesting observations on goats existing on limestone.

The thyroid gland which controls the metabolic rate of goats needs a supply of iodine with which to manufacture its secretion- thyroxine. Iodine deficiency may visibly result in a goitre, although it can cause loss and ill health without any visible increase in the size of this gland. The characteristic symptoms of a deficiency are harsh and dry hair, a dead parchment-like skin, and stillborn and often hairless kids. The female has a bigger thyroid, and thus a bigger need for iodine, so that another telltale sign of a deficiency is the survival of male kids alongside either the dropping of dead female kids or the birth of female kids that die shortly afterwards.

Iodine differs from all the other minerals in that its presence in vegetation is very little related to the species of plant, but almost entirely to the amount of iodine available in the soil. It is highly soluble, so that we would expect it to be associated with the sea, areas windswept or gale-lashed by the sea, or in any soil that holds its moisture well. Conversely, it is easily washed out of thin soils and limestone. Allied to this, it goes more quickly in areas where there is a heavy rainfall to wash it away. Lime-rich areas are also a difficulty, as lime will block the uptake of iodine from the soil, due to the fact that it suppresses the effect of thyroxine in the blood. In lime-rich areas plants will have an iodine deficiency.

How this may or may not affect the feral goats of The Burren is as yet unknown to the present writer, although records relating to sheep husbandry on the lime-rich pastures of The Burren may offer some reassurances.

Climate

The climate of The Burren is described as being 'fickle', more technically oceanic, which is to say mild and windy with plenty of rain. Summer temperatures towards the coast rarely go above 16 degrees centigrade, July and August being the warmest months with an average temperature of 15 degrees centigrade. Frost is rare in the winter, the average temperature in January and February being around 6 degrees centigrade. Rain is frequent, The barren having around 200 wet days a year, which is by definition more than 1mm of rain. Mist, fog and steady drizzle are a feature of the climate, being termed 'soft days' that are most likely to occur between October and April. April and May are the driest months, December the wettest. May is also the sunniest. Prevailing winds are southwesterly. The climate is described as being rarely calm, and winter gales- described as ferocious- that can reach a destructive storm force are frequent in the winter. (Lonely Planet, 1999).

Relating climate to feral goats in a general way, it may be noted that kid mortality around birth varies between 50 and 100%, the single most probable cause of death being hypothermia associated with starvation. Extreme cold in association with driving rain are a combination that affects kid survival in the first few days. Unless a feral population is culled heavily, any population decline is associated with severe winters, which cause very high kid mortality along with a high, especially male, mortality. Population increases are generally associated with mild winters, allowing a high survival of kids. A high proportion of males die in the spring following wet winters. The nanny ratio in the summer is inversely related to the severity of the preceding winter's weather (Information supplied by Dr. David Bullock; information from a 27-year study on the Lynton feral goat group, supplied by the present writer). Pertinent to the fact that The Burren is an area of both high precipitation and good drainage is the fact that although the feral goat is hardy enough to endure the wettest and windiest rigours of the British climate, they tend to return to the same sheltered sites at night, including particular winter quarters. Mackenzie (1957) is of the opinion that in the climate of the Scottish Highlands, the feral goat population is very much limited to the number of dry beds available on a wet night, whilst the lack of dispersal from known population ranges is thought to be most probably related to the need for established sheltered sites (Bullock, 1982, and Pickering, 1983).

Fauna

Land mammals associated with The Burren include the Red Fox, Badger and Stoat, which are common, and the Pine Marten, which is one of Ireland's rarest mammals.

The shallow lakes known as turloughs attract wildfowl in the winter, but dry out during the summer. Included amongst the winter migrants are the Whooper Swan and White-Fronted goose, which fly into Ireland from their Icelandic home and over- winter, returning home to nest in the spring. There are, however, long-term turloughs on which it is common to see ducks such as Teals, Widgeons and various waders. Brent Geese are to be seen along the north coast estuaries during the winter.



More than 28 of Ireland's 33 species of butterfly, including the endemic Burren Green, occur.

Adult feral goats have no natural predators, although the main predators of kids are the Black-Backed Gulls, The Red Fox, the larger corvids, particularly the Raven, the Wild cat and Golden Eagle in Scotland, and feral or loose dogs. Feral goats in general are credited with killing adders, one reason why they were popular with shepherds, although this has no direct bearing on The Burren. Feral goats, and Jackdaws are symbiotic where the two occur together, the Jackdaw being seen to both collect hair off the goat's back for nesting material and hunt amongst the coat for external parasites.

Flora

The flora of The Burren is incredibly diverse, with plants associated with the Atlantic coast, Arctic, Mediterranean and Alpine Europe. It has been praised as being a 'botanical delight and enigma' (Everyman Guides, 1998); 'arguably the finest gathering of flowering plants in Ireland, if not in Europe', 'one of the finest botanical showpieces in Europe' and 'unbeatable for wild flowers- the richest concentration of species in Ireland, if not in Europe, can be found here' (Lonely Planet, 1999).

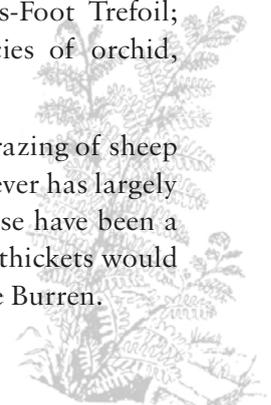
Ecologically, it is a mixture of bare rock, grassland, Hazel and Blackthorn scrub, marshy areas and turloughs. Even where soil is scarce, the minimal amounts that collect in the cracks are limey, well drained and rich in nutrients, thus supporting a surprising diversity of plants.

Many species thrive well away from their usual habitats, and 75% of Ireland's plant species are to be found here. The extraordinary mix of Mediterranean, Arctic and Alpine plant life is due to a combination of the soft Atlantic climate and the fact that the limey, well-drained soil is rich in nutrients. There is very effective drainage through the porous limestone, plant roots are able to penetrate deep into rock crags where organic materials have accumulated, and the bare rock absorbs the summer heat and stores it, thereby making The Burren appreciably warmer during the winters than regions with a different geology. Added to this, the moist warm air coming off the sea ensure a mild, frostless climate.

Overall, it is a land of no bogs and few trees and pastures; although the seasonal turloughs leave behind a lush grassland suitable for grazing which, left untouched, are havens for a variety of plants. These include the Shrubby Cinquefoil, the rare Turlough Violet, which is sky blue, various orchids and the Yellow-Flowering Silverweed.

Plants generally include the Squinancy Wort; Hart's Tongue Fern; Alpine Bearberry (on warm hillsides); Burren Rose; Spring Gentian, which was originally an Alpine flower; Mountain Avens, an Arctic plant; Blue gentians; Rock Roses; Milkwort; Yellow Birds-Foot Trefoil; Magenta Bloody Cranesbills; Blue Harebells; Irish Saxifrage, and 23 species of orchid, including the Fly Orchids, Frog Orchid, Pyramidal Orchid and the bee orchid.

The erosion of the soil on The Burren has generally been blamed on the over-grazing of sheep and goats in a largely historical context. The overall effect of this grazing however has largely been to reduce the dense scrubland, dominated by hazel, that would otherwise have been a feature of the landscape. Without grazing, therefore, the appearance of shady thickets would begin to create a habitat less suitable for the range of wild forbs found on The Burren.



History of the Old Irish Breed with particular reference to the Burren

The legacy of the Ice Age

During what is usually termed the Ice Age, the physical geography of The Burren was to some extent shaped by glacial movement, which scoured the hills, rounded and eroded the edges of rocks, and sometimes-polished rock faces to a shiny finish. These glaciers also deposited a thin layer of rock and soil in the region; hence huge boulders of granite may be seen, rising above the flat rock that were carried by the ice and deposited to form islands of a visibly different type. These are called 'glacial erratics'.

The Mesolithic Period

Following the retreat of the last ice cap, the chronology of the Mesolithic period has been determined to have begun with a Pre-Boreal phase, marking the appearance of true forests comprising birch, pine, willow, herbs and grasses; following which there was a Boreal period which was warm, dry and continental with the appearance of hazel scrub, pine, and birch/pine; and lastly an Atlantic period which was warmer, moist and Atlantic, featuring mixed oak forests with alder (Godwin, 1934). This is reflected in the plant succession of The Burren, which has been given as hills covered with hazel scrub, pine and yew, giving way to oak, ash and elm. During this Middle Stone Age period, Mesolithic peoples are considered to have existed primarily by hunting and gathering, although they had acquired the dog. This widely held interpretation of events will be discussed in greater detail later.

The Neolithic

The Neolithic, characterised by the Agricultural Revolution, was a Sub Boreal period that began with a warm, dry and Continental climate. Coon (1954) described the events of this period in the following way: 'the retreat of the ice and the shifting of belts of climate had precipitated other movements which may have taken the form of expansion, and the discovery of agriculture and animal husbandry, of course, gave rise to that expression which Childe called the Neolithic Revolution'. Carried along by the tide of this grindingly slow but inexorable expansion, Danubian immigrants were "slash-and-burning" their way into the heart of Europe, reaching Switzerland as the Swiss lake-dwellers and England as the Windmill Hill people. They did not, however, cross over to Ireland, the first Neolithic settlers there coming, along with the bulk of the Neolithic population of the British Isles, by sea.

It is generally agreed that the first seaborne Neolithic people to reach Ireland were the Atlanto-Mediterraneans who not only built megaliths but also most likely introduced the combination of brunet hair and blue eyes to the Irish population (Coon 1957). They belonged to a large variety of Mediterranean sub-race, the men standing around five feet six or seven, and had travelled directly from an unknown location somewhere in the Mediterranean. These people were the builders of the megaliths, of which around 70 remain still on The Burren, and were also the so-called Long Barrow people who not only settled on the Burren itself and other Atlantic areas of Ireland, but also passed on to settle in Denmark and Southern Sweden. Primarily, they were farmers who not only brought agriculture and animal husbandry to The Burren but set up trading stations. They lived happily alongside the older-established Mesolithic people, who continued their hunting and fishing way of life. As late as the middle

of the 1950's, only one Neolithic skull, belonging to the Long Barrow race, had been unearthed in Ireland (Coon, 1957); although in 1989 (Lonely Planet, 2002) the Poul nabrone Dolmen was excavated on The Burren itself and the remains of at least 25 people were found, along with pottery and jewellery. These remains were carbon dated to between 3,800 and 3,200B.C. The Megalithic people selected open, unforested country to settle in, indicating that The Burren was only lightly wooded during this period. Did these first Neolithic settlers bring the first domestic goats to both Ireland and The Burren? They have been credited with introducing the Moufflonoid sheep, of which the Soay breed is the best-known living example, to peripheral Northern Europe, although the situation is more complex than "first Neoliths, first livestock, first goats". What is certainly true is that the importers of sheep into the British isles during the Neolithic preferred the goat to a great extent- partly because it was a scrub clearer but also because it was a very hardy, multipurpose, low-maintenance animal- but whether or not they were the first people to do so will be discussed in some detail later. What these Neolithic goats looked like is open to question. It is now generally believed that the Cretan Wild Goat, which is essentially a true Wild Goat in appearance, is an early domesticant that went feral before there was time to significantly alter it from the wild type. This conclusion has been reached by a consideration of the lack of fossil remains in the region, although not all workers, including the present writer, are fully convinced by this argument. If it were found to be true, however, then the first goat stock to reach Ireland generally, and The Burren in particular, would have been small, shorthaired, scimitar-horned and gracile in conformation with the Bezoar colour patterning. This would be significant, as the type would have had little in common with the Old Irish goat of either today or the historical past, pointing to either fresh imports of a different type or natural or artificial selection (or a mixture of both) to fix a type more suitable to Northern European conditions.

Bronze Age settlers

The Bell Beaker People did not reach Ireland at all, the Bronze Age settlers of The Burren being the Food Vessel People who had originated in the Eastern Mediterranean and arrived in Ireland via Spain. These were a round-headed people (brachycephals) of either Dinaric or Armenoid race, whose movements from Northern Spain and the Pyrenees brought halberds into Ireland (Coon, 1957). This Pyrenean link is of particular interest as Irish documented tradition credits the first "colonizers" of Ireland with Basques who had recently been expelled from Spain (Thorpe, 1966; Mackie, 1985; Cusack, 1868).

These Food Vessel people, so-called from the food vessels they placed in the wedge-shaped tombs still to be seen on The Burren, were primarily cattle breeders, although they would have introduced more goats into the area. During the Bronze Age, with generally more favourable circumstances for agricultural practice, sheep began to supercede the hardier goat on account of the greater usefulness of its wool (Seebohm, 1927), it being thought that regular sheep-breeding was being attempted in some places such as the Dorset downs. (Rice Holmes, 1920). An added factor in the burgeoning ascendancy of the sheep was the fact that the goat, as the pioneering species, was opening up areas of light wood and scrub to pasture for more intensive sheep grazing. This duality of vegetation and livestock succession would have been a feature of The Burren, the early farmers clearing the woodlands of the upland region for grazing and the ascendancy of the sheep, leading eventually to the first phase of soil erosion (Lonely Planet, 2002).

The age of iron

The Iron Age began around 500 BC, the “invasion” of Celtic Nordics being the event that brought the largest single body of people into the British Isles (Coon, 1957). The Celtic migration, from their homeland in Southwest Germany, was explosive and rapid, taking their brilliant La Tene Iron Age Culture across Europe to the British Isles and thence into Ireland.

For the Burren, it resulted in a legacy of between 400 and 500 stone ring forts, including Cathercommaun and Carron, which were basically defensive dwellings (Everyman Guide, 1998; Nelles, 1995; Lonely Planet, 1999 and 2002). These round or oval enclosures were ringed by stone walls or a ditch-and-bank arrangement, and the Celtic farmer came into Ireland with a tribal system of agriculture and dairy farming, the quern and the potter’s wheel, poultry and improved livestock. Cattle, considering that the Celts had come from a primitive pastoral past, were of prime importance. Not only were they valued for their milk, flesh and hides, but also were their power for traction and the recognized standard of value. Swine were also much valued and plentiful, but sheep and goats were not highly valued at all. They were equally priced according to the Welsh Laws (Seebohm, 1927) at 4d a head. Both animals occurred in the list for the division of household goods on separation. The goat of the Celts is described as being ‘small and short-horned’.

The origin of the Northern Breed Group - a “cold weather” goat

We have seen, thus far, that the three main Holocene migrations of peoples into the west of Ireland would have brought goats, along with other livestock, with them. Also that the value of the goat diminished with each invasion; the goat being highly valued during the initial stages of colonization, when conditions were more harsh and the land largely forested, but less so as the land was cleared, pasture appeared, and the sheep was increasingly valued as a wool bearer as well as for the qualities found also in the goat- milk, tallow, hide and meat. The goat did, however, continue to have an importance as an additional producer of hair, as well as an all-round hardy animal that may have made the difference between starvation and survival in very difficult times. If the standard interpretation of historical events is adhered to, however, then it would be likely that the first goats to have arrived in the west of Ireland would have come with Neolithic sea-farers, animals that were little-altered from the original wild form, and thus resembling in large degree the contemporary Cretan Wild Goat. This, amongst other things, leaves us the puzzle of how the old breed of Ireland, in common with a number of other primitive goat breeds found around the periphery of Northern Europe, came to be of a distinct ‘cold-weather’ type. To consider this issue, we need to consider what has been termed (Werner, 1998) The Northern Breed Group.

Europe would seem to have three main breed groups of goat (Werner, 1998), these being the Scrubland Breed Group of the Mediterranean, with a Balkan sub-group to the east; the Mountain Breed Group of the central European belt, and the Northern Breed Group of the northern periphery of Europe. In comparison with the two more southerly groups, which have been improved for the quality and quantity of their milk along with a “milky” conformation, the Northern Breed Group remains a primitive or unimproved type (Werner, 1967; Greig, 1970). The terms “unimproved” or “primitive” do not in anyway imply that this breed group belongs to an undifferentiated, original type of goat, even so, for it is manifestly a highly specialized type. In fact, it should be seen as being a “native” goat in the same way that we have “native” pony stock in the British Isles: breeds that have become adapted

to the peculiar climate, topography, vegetational landscape and specialized husbandry of a particular region. In this, the Old British or British Primitive goat, of which the Old Irish goat is a typical representative, may truly be considered to be 'The Exmoor pony of the goat world' (Werner, 1998)

Breeds belonging to the Northern Breed Group were once distributed around the fringes of northern Europe, including the whole of the British Isles and the whole Of Scandinavia; the Netherlands, Iceland and possibly also Belgium and the Baltic States. Their status is now precarious. As feral animals, there are in all likelihood less than 200 in England; possibly 1500-2000 of pure type in Scotland; 300 in Iceland; one known feral herd in Norway, possibly more; one breeding group of the Old Swedish type in Germany, and as yet an unknown number of pure type in The Republic Of Ireland. In domestication, the type has survived as the main domestic goat of Norway and Sweden, although it is being improved in Norway and Swedish goat breeders are increasingly turning to Norway for stud males; whilst in Belgium there is a 'landrace' goat, now rare, that has yet to be investigated in detail. In The Netherlands, attempts were made to save the Dutch landrace goat when it was on the brink of extinction, with only 4 purebred animals known to be in existence. The Danish type is now extinct. Whether any goats of this type did, and still do, exist in Finland and other areas around the Baltic has yet to be investigated.

Wherever they occurred, goats belonging the Northern Breed Group were of one basic, easily identifiable, type. They were small, cobby and robust, standing firmly on short, sturdy legs. The head was long, and the facial profile dished. The neck was often short, being what earlier goat breeders called, in distain, "ewe-necked". The ears were small and pricked. The coat was variable in length, although it was thick and rough in texture with a dense under wool of cashmere. Horn type was variable- scimitar, moderate twist, dorcas twist and curling- although the angle of emergence was always high. Some were polled, although rarely (Sveinsdottir and Dyrmondsson, 1994; and Dyrmondsson, 2003) as testified by the fact that the Icelandic goat can be polled even although Icelandic livestock has remained as a closed breeding population for 1,100 years (Adalsteinsson, 1981). It should be pointed out, even so, that polled goats in a modern feral group are as likely, if not more so, to point in the direction of introgression with goat stock of modern type than reflect the diversity of the old type. Overall, the style and characteristics of goats of the Northern Breed Group fit the profile of an all-weather, basically cold-climate, frost-proof animal that could withstand harsh conditions and bulk feed on poor vegetation. In fact they follow the ecological rules governing size and shape very well, with reference to Bergmann's rule and Allen's rule in particular (Coon, 1954); so much so in fact that we probably need to look beyond the temperate climate of postglacial Europe to explain the marked characteristics of this breed group.

The first consideration, in keeping with the accepted time-scale for domestication, is the possibility that the Northern Breed Group originated in a particularly intemperate region of post-glacial Europe. Scandinavia springs immediately to mind, and whilst the hypothesis may be developed that the Northern Breed group spontaneously originated in a harsh and cold pocket of the more northerly parts of Scandinavia, and was from there distributed to the northern fringes of Europe by the Germanic migrations, such an hypothesis, attractive as it may seem at first glance, tends to hold up less well under closer scrutiny. Before their expansion, the Germanic peoples occupied Denmark, southern and central Sweden, Norway and the northern coastal strip of Germany, from the mouth of the Elbe to the Baltic Shore (Coon, 1957). However, the period of Teutonic expansions did not take palace until the late

second century BC, the thrust of their initial migrations being into the heart of Western Europe where the Mountain breed Group was firmly established. Even later Germanic movements in the form of the Viking period are not adequate to explain the present distribution of the Northern breed Group as this came too late in time. Fundamentally, the idea that the Northern Breed Group was taken to its present distribution in the wake of the Germanic expansion falls down because its original distribution, in connection with such a hypothesis, would have been very restricted in terms of geographical location, goat numbers and the proportion of Germanic people who kept it. This would lead us inevitably to the conclusion that such a movement of stock from only one part of the Germanic homeland would have had an insignificant influence on the development of goat type in the western part of Europe as a whole.

Were, then, conditions poor enough in northern Europe during the Sub-Boreal period to shape the goats of gracile type, brought by Neolithic seafaring peoples from the eastern Mediterranean, into the cold-weather goat we know today? The answer has to be no, as the climate then was warm, dry and Atlantic, and suitable for a more generalized, what has been termed “common” type, of goat.

In seeking an explanation for the origin of The Northern Breed group, we therefore need to look further back in time, and to both the Mesolithic and the late Pleistocene, in fact.

Frederick Zeuner was an expert on the climate, chronology and faunal successions of the Pleistocene period (Zeuner, 1959), and likewise an expert on the origin and history of domesticated animals (Zeuner, 1963, for example). He worked to establish the origin of the domestic goat in time, type and space (Zeuner, 1955) and, interestingly, he took seriously the idea of the Mesolithic domestication of the goat in the Middle East, along with the serious possibility that there was a pre-agricultural phase of pastoral sheep, goat and cattle keeping in Europe prior to the introduction of agriculture proper during what we call the Neolithic period (Zeuner, 1963). Allied to this, Zeuner has found it hard to refute the evidence for the presence of the domestic goat in Europe during the late Pleistocene.

The teeth and leg bones of sheep have been found in several Mesolithic sites in Western Europe. More accurately, these remains are generally called ‘sheep or goat’, as it was not then possible to ascertain with any degree of certainty which of the two species was present. Within the remit of our discussion, however, this matters little as it can be asserted with some confidence that wherever early pastoralists took the sheep, the goat was not so much trailing behind as pioneering its way forward. These teeth were small, and generally agreed with those of the Soay sheep in size. Ram Soay sheep stand around 23 to 25 inches at the shoulder, and ewes around 21 inches. Males of the Old British breed of goat are around 24 to 28 inches and females 22 to 26 inches. Whether these teeth were of sheep or goat, Zeuner found it to be of ‘great interest’ that the presence of a small ruminant in Western Europe could be established in the Mesolithic context. Again, even although the Mesolithic sites in question were later than the pre-pottery period of the eastern Mediterranean, it still led to an understanding that the knowledge of sheep breeding had spread to the west prior to the arrival of the west European Neolithic in the proper sense. The sites in question included Teviec, where one molar was unearthed; Cuzoul de Gramat, several teeth and one astragalus; and Sauveterre, several molars. Apart from these three French sites, there is one Sauveterrian site in Britain, Three Holes Cave near to Torbryan in Devon. At this British site the remains were 3 cheek teeth, two fragments of vertebrae and a fragment of phalanx amongst the Mesolithic industry. Zeuner also made reference to a so-called “mouflon” skull described as

having been found on Jutland, 'but not found in a prehistoric context', whilst one Belgium site could well be worthy of evaluation in the light of the foregoing. This is Remouchamps, a Mesolithic site that Rahir (1921, in French, quoted by Zeuner, 1963) reported the findings of two specimens of goat without any further comment. Most certainly, the associated fauna comprised Reindeer, Red deer, horse, Bos, Arctic fox, Red fox, Ptarmigan and other remains as the food debris of a hunting community. Even so, there is nothing fundamentally unsound about the idea of a hunting/pastoralist society in the Mesolithic of Northern Europe. Also, although it was considered impossible to say what the goats were, it not being good enough to make an "obvious" interpretation of Ibex, for these reasons, the identification of this material should remain in some doubt until a re-evaluation is undertaken.

Zeuner (1963) was inclined to assume that these pastoral sheep breeders had arrived in Western Europe (England and France) from the west, and before both the Danubian Neolithic immigrants and the People Of The Leather Vessels had arrived. When dealing with this issue, he was largely trying to solve the conundrum of who had introduced Moufflonoid sheep into Northern Europe. The Danubians had brought with them sheep belonging to the Urial group, and the main theories as to who had introduced Moufflonoid sheep, of which the Soay breed is the most primitive surviving member of the group, came down to either the Megalithic builders or the People of The Leather Vessels. His conclusion was that the idea that the People Of the Leather Vessels introducing the Moufflonoid sheep to Western Europe was 'more feasible' than the idea of it being the Danubians; that Megalithic migration was to blame was 'conceivable', whilst a Mesolithic sheep rearing culture was to be taken 'seriously'. Zeuner left his argument at that, pointing out that which of these alternatives was right would have to be decided from the osteological evidence. This meant a re-identification of material resting in museums, and the collection of bones from well-investigated sites.

The discovery of sheep or goat remains, as well as those of domestic cattle, at Mesolithic sites is not the only evidence supportive of a pre-Neolithic pastoral economy in Europe, however. Although Zeuner did not make the link himself, he did discuss in some detail the possibility that the domestic goat occurred in Europe during the Pleistocene. This likelihood was grounded primarily in the claim that southeast Europe was occupied by wild goats in the Pleistocene. References to this are Adametz (1914) and Sickenberg (1930), and those who put forward this idea became known as the Viennese school. The first find was surrounded by controversy as, named *capra prisca* by Adametz, it has been reinterpreted by several workers as a domesticated goat wrongly assigned to the Pleistocene. The Viennese school continued to assert that the find was wild and genuine, even so, and the matter might have rested there but for a second find. This was the frontlet of a goat with twisted horns described by Sickenberg in 1930. What is interesting is that it was found in the loess of Schleinbach in Lower Austria. It was 5 metres below the surface. As Zeuner emphasised, the preservation was loessic, and only 3 metres away there was also found a molar from a Mammoth. Zeuner's comment on this was that 'one understands why he accepted this fossil as contemporary with the loess'. Zeuner was of the opinion, though, that the morphological characters of the Schleinbach goat made it difficult to accept it as a wild specimen. In this respect, the frontals are pronouncedly bulging, which is at variance with the fact that in all remains known to be wild, the profile is straight or even depressed. Furthermore, Zeuner felt that the small degree of divergence of the twisted horns was a domestic feature.

At the time that Zeuner was writing his comments, Thenius (1962) re-examined the Schleinbach goat remains by means of a fluorine test on roentgenographic basis and macroscopic re-

examination. From this he determined that it was not derived from the Pleistocene loess, and he re-assigned it to the Bronze Age. The present writer is not convinced, even so. The original dating was based on undisturbed loessic strata, whilst all forms of radiometric dating of rocks have been seriously criticized: see, for instance, Austin (1988) and Tifton (1988) for a criticism of Isochron dating; Gleadlow (1980) for a criticism of fission tracking dating; Aitkin (1990), De Young (1980) and Hall (1974) for a criticism of carbon 14 dating; Hanson (1940) for a criticism of tree- ring dating; Kerkut (1960) for a criticism of thermolumin science, and Knopf (1957) for a criticism of the geologic column.

What we have, then, is the probability that the goat existed in domestic form in Europe in the Pleistocene; the near certainty that the goat/sheep and cattle did in the Mesolithic, and a Northern Breed Group that seems to owe its origins to a time when conditions were much harsher than has been experienced in the Holocene. This brings us to the point when we can reasonably examine the climatic events of the last glaciation, leading on to conditions during deglaciation.

It is little understood that the climate during what is generally thought of as the last glacial period consisted of mild winters and cool summers, the temperature being warmer than at present (Newsom, 1973). The landscape was open and supported an abundance of grazing species. The warm North Atlantic and North Pacific would also have contributed to the warmth of the northern regions, and precipitation would have been higher. Ecologically, this environment was ideal for huge herds of grazing animals, with attendant predators, and suitable for nomadic hunter/herdsman.

During deglaciation, the summers would have been warm, but the winters became very cold, hence what is generally thought of as The Ice Age, e.g. people living in caves. These colder winters were due to the continued cooling of the atmosphere by the ice sheets. The cold climate would then have caused sea ice to develop on the Arctic Ocean. Cooler temperatures and the greater extent of sea ice would have combined to make the atmosphere drier than at present. This cold, dry climate would have stressed the abundant megafauna, causing the extinctions with which we are now familiar, and made life difficult for man and beast alike.

We can now place the domestic goat in the last glacial period when conditions were near perfect for a hunter-pastoralist people to have moved around with herds of cattle, sheep and goats, whilst taking advantage of the huge herds of grassland -dwelling ruminants that abounded during that period. During the period of ice-melt, with its very cold winters, conditions would have been right for this northern nomad goat to have developed into the Northern Breed Group as we now know it, the Old Irish goat being a prime example. This would have been the goat, possibly along with the Moufflonoid sheep, that formed a part of the pre-agricultural pastoral economy of Western Europe during the Mesolithic. "Pre-agricultural" may even be a misnomer in this context, as there is no reason to suppose that such a society did not have knowledge of agriculture. It was rather a chosen way of life within the conditions that then prevailed that favoured livestock husbandry; and it is possible that farming may have developed within Europe, as well as from without by way of immigration, as conditions changed favourably. If this is the case, then the Old Irish goat, along with the other Landrace types of The Northern breed Group, is a direct descendant of the late deglaciation period livestock of a pre-agricultural northern European pastoral economy.

The First Millennium AD to the Early Modern Period on The Burren

Forest clearance began to open up more of The Burren for grassland, meaning grazing, around 300 AD. It would be reasonable to assume that the goat was still playing a role during this period, as the sheep and the goat would have been encouraged to exploit different vegetational zones. Management along different lines is traditional, and locked into the belief that the two species have different ecological requirements, the goat being a browser preferring leafy food, with an added value in keeping down the growth of trees and shrubs, whilst the sheep feeds mainly on grasses where the woodland and scrub has been cleared. Time spent in closely studying feral goat behaviour and food preferences might query this view, however (Hellowell, 1992; Werner, 2004)

During the 8th and 9th centuries, and 3 kilometres south of Carron, there was a great stone fort at Cahercommaun (Lonely Planet, 2002). Perched on an inland cliff, it was the home of a people who hunted deer and grew a small amount of grain. These people were obviously agriculturalists as well as hunters, and one wonders why they didn't keep basic livestock, particularly the goat, if that were the case?

Late in the 12 Century, Cistercian monks settled on the southwestern side of Abbey Hill (Lonely Planet, 1999). Here they built Corcomroe Abbey, the substantial remains of which can still be seen today. The Cistercians have been described as the leading actor in the drama of British Mediaeval sheep husbandry- the people of supreme pastoralism (Trow-Smith, 1957). They were the first to develop sheep farming for the export wool market on a large scale (Knowles, 1948), putting their money into sheep just as a later generation put theirs into the enterprises of the merchant adventurers. In time, they covered a large part of the face of Britain with their flocks, it being estimated that Cistercian monasteries maintained a quarter of a million sheep. Quite where the Old Irish goat of The Burren stood when the pastures around Corcomroe were grazed by these monastic sheep remains unclear. Certainly, it was the custom to keep mixed flocks of sheep and goats, as attested to by Medieval illustrations amongst other things, and the famous Cheddar cheese industry of 11th century Somerset that was grounded in sizable herds of goats associated with large flocks of sheep. Here, the sheep fed on the short Mendip swards and abundant grasses, whilst the goats tackled the hillside scrub.

Sizeable fortified tower houses were built during Mediaeval times, some, like Doonagore and Newtown having survived intact. These buildings reflect the powerful families, major landowners in fact, that established strongholds in the area during this period. These homes have been called castles, and in Medieval England, the castle was the stronghold of the goat as well as men-at-arms. Many goat remains have been found in association with the excavation of castles (Armitage, no date; Museum of London, unpublished) the animal being particularly bred for kid meat to adorn the Lord's Table (Whitehead, 1972). They were also an animal that took well to the back-street-like conditions of the settlements within the castle grounds, which put them in good stead for a time when, in the Nineteenth Century, they would most likely have been more common in London and its suburbs than in deep rural areas.

It is recorded that an extensive area of woodland was still standing on The Burren as late as the Fifteenth Century; although in the 17th Century The Burren was described by Cromwell's surveyor Ludlow as being a savage land that yielded 'neither water enough to drown a man, nor a tree to hang him, nor soil enough to bury'. It was a harsh place, barely capable of sustaining human habitation, although wherever people were able to eke out a living in such conditions, the goat would have been a willing partner. Whatever Ludlow may have thought

of the insufficiency of the land to sustain a population, Cromwell himself is credited with driving the dispossessed Irish Catholics west of the Shannon (Everyman Guide, 1998). Here they formed a sparse population living in abject poverty. One wonders whether this period brought more goats, as well as people, into an area that was credited with devouring its settlers rather than nurturing them.

The Viking period

The first Norse attack on Ireland is dated to 795 AD, whereupon Dublin, Waterford and Limerick were founded as centres of Norse trade with the Continent. The Scandinavian influence remained chiefly around the ports (Langer, 1956), and whether or not this restricted settlement in Ireland brought in goats as well as took them away remains unclear. What is known, though, is that the breed back home in Norway and Denmark was essentially the same as the Old Irish goat, so the answer matters little in relation to any influence on Old Irish stock of the period. What is of particular interest, is that livestock was introduced into Iceland during the Settlement period of the Ninth Century (874-930) and that these original landrace breeds have survived without any significant introductions since then (Porter, 1996). Most of the colonists came from Norway, though some were from Ireland and the Scottish Isles, the Icelandic goat being of the same type as the Norwegian, old Scotch and Old Irish breeds.

The Eighteenth Century

The wholesale clearances of woodland came as the population increased and the demand for timber grew. Towns, such as Lisdoonvarna and Doolin, appeared in the Eighteenth Century, the lower slopes of the hills being crowded with the wood cabins thatched with mud that embraced a subsistence living that still willingly embraced the goat.

An essay in an old English encyclopaedia, published in 1796, mentions the Welsh goat in particular, along with foreign breeds such as the Angora, Mambrina (Syrian) and the goats of France and the Alps, but not the Irish. This is interesting in the light of the fact that the drinking of goat's whey was at one time as popular as 'taking the waters' at health spas, and Irish goats, being then famed for their milk, were frequently imported. Whitehead (1972) mentioned this minor health fad of the Eighteenth and early Nineteenth centuries in some detail, and specifically mentioned the whey-drinking centre that had been set up at Leswalt, Wigtownshire, and a goat-milk spa, at Blairlogie, near Stirling; adding that both these centres had been disbanded by the beginning of the Nineteenth Century. Other whey-drinking spas were situated in the Clackmannanshire foothills and on the isle of Aran; whilst in Wales, Abergavenny was a popular Eighteenth Century resort. Whitehead made the point that new intakes of goats would have had to travel long distances to reach these whey-drinking centres, especially if they had been shipped from Ireland. As these large droves were driven initially through Wales on their way to England, he believed that it was doubtless the case that some escaped to wander off into the hills to become feral herds. Similar stories abound for the origin or part origin of feral herds in other parts of the country, and in particular the Border Hills, southern Scotland and Kintyre (Gibson, 1972; Werner, 2001)

Rutty (1772) had quite a lot to write about whey drinking from an Irish perspective. He regarded the proper season to have been between March and May, the reason being that the nanny kidded in March. He added, however, that whey drinking was continued by many into June and July, but that even in June the milk thickened, for which reason a quart of milk,

before they turned it, was mixed with 4 ounces of water. More water was added in July, as the milk grew thicker as the season advanced, so that in August it could not be drunk. September was considered to have been 'a second spring' as the milk became thinner again. It was then used medicinally, although not with an equal advantage to the former season.

Rutty (1772) was also helpful in describing the uses of the goat in Eighteenth century Ireland. When castrated and fed, the meat of the male goat made good venison. He referred to a new custom ('lately'), in the mountainous part of the south of Dublin, of rearing kids for the delicacy of their flesh. This was said to have been preferable to that of lamb. For this purpose, the kids were taken into the house as soon as they were dropped, which is to say before they had first tasted of their mother's milk, and both suckled by ewes and fed with cow's milk spouted into their mouths.

The early Nineteenth Century

For The Burren, the earlier part of the Nineteenth Century was a period characterised by two elements: the vast reduction in the number of people living there through emigration, and both the development of Ballyvaughan as a fishing and trade port, and Lisdoonvarna as a spa town. This would have been a mixed period for the goat of The Burren, with likely both an overall reduction in their numbers as a domestic animal (with the proviso that their milk would have been required for the spa) and an equally likely possibility that goats would have been neglected to go feral at this time.

The place of the goat during the 1840's and the Irish Potato Famine

This is an intriguing period in terms of the history of the goat in Ireland, as only 35 years after the great famine there was 1 goat for every 19 people, and yet no mention is made of this animal during the period when it would have been at its most essential in terms of marking the differences between survival and starvation for the agricultural population. The story of the Irish Potato Famine has been well told (O'Brien, 1896; Michel, 1869; Morris, 1898; for instance) and Woodham-Smith (1953) has most probably best summarized the situation when she wrote that 'in 1844 Ireland presented the extraordinary spectacle of a country in which wages and employment, practically speaking, did not exist. There were no industries; there were very few towns; there were almost no farms large enough to employ labour. The country was a country of holdings so small as to be mere patches. The people inhabited huts of mud mingled with a few stones, huts 4 or 5 feet high, built on the bare earth, roofed with boughs and turf sods, without chimney or window and destitute of furniture, where animals and human beings slept together on the mud floor.... the people, in their desperate poverty, lacked land, implements, barns. Potatoes require only one-third of the acreage of wheat, flourish anywhere, need the minimum of cultivation, can be stored in the ground and shared with fowls and pigs...over great tracts of Irelands any form of cooking beyond boiling a potato in a pot became unknown-greens were unknown, bread was unknown, ovens were unknown.... the miserable cultivation of the Horse Potaoto occupied only a few weeks, and through the dark, wet winters the people, wrapped in rags and tatters, crouched over the turf fire'. Woodham-Smith has been quoted at some length to illustrate the point that under such conditions the goat would have been a vital part of the economy, and yet no mention has been made of it. If there had been proportionately to the general population as many goats in 1846 as there were in 1881, then Ireland would have had a total goat population on the eve

of the famine that numbered around 421 thousand. The potato had already proved to be a fickle sustainer of life, there being failures in the harvest in 1739 and 1741 (The year of the slaughter), and partial failures in 1806, 1822, 1831, 1835, 1836 and 1837. To concede that the general rural population of Ireland had given up the goat alongside almost everything else seems almost inconceivable, and a study along the lines of 'The place of the old Irish goat in the period of the Great and partial potato famines' would make for interesting research.

The mid-Victorian period: from 1859 to the founding of the British Goat Society in 1879

A mid-Victorian Goat Movement began in England during the 1860's, its purpose being to interest people of all classes to take an interest in goat keeping. The impetus, oddly enough, grew out of a promotion of the Breton Cow as a useful dairy animal for those clergymen and professions, in London and its suburbs, who 'had a small lawn or croft of 1 or 2 acres.' Very quickly there arose a championing of the then unpopular goat as a more economic and useful alternative to these 'Lilliputian cattle'. General correspondence and inquiries began to appear in *The Field*, *Bazaar*, *Exchange And Mart* and other sources on the subject of the usefulness of goat keeping, and this prompted a letter from someone in Crookstown County Cork. Warren (1861) pointed out that goats were very useful and could be turned to advantage in many ways. He particularly mentioned their usefulness on high mountains, where there were dangerous cliffs. Warren had a tenant who kept 80 to 100 goats, and referred also to a servant of Lord Kenmare, whose land was adjacent to his, who had 'that number and near double'. His view was that to the poor man, the goat was invaluable. It was easily fed, domestic and affectionate. It would also yield the poor man's family a valuable supply of the most nutritious milk, but would require a constant watch to keep it out of mischief.

The total goat population of Ireland in 1881 was 266,553, which was one goat for every 19.4 people. Records also show that during the first three weeks of July alone in 1880, as many as 900 Irish goats were exported to England, which highlights the fact that large numbers of Irish goats were exported annually from Ireland to England. In fact droves of Irish goats used to make their appearance annually throughout most of the market towns of England and Scotland (Pegler, 1886). These, for reasons that Pegler was never able to discover, were usually referred to as having been 'Welsh' goats. Mackenzie (1957) enlarged on the information supplied by Pegler, stating that these imports were distributed throughout the hill districts of Britain in nomadic droves from which the milkers were sold as they kidded. Mackenzie painted a graphic picture of how, up to the First World War, the Irish goatherd shouted a picturesque advertisement of his wares, squirting great jets of milk from his freshened nannies as he proceeded up the main street. This seasonal presence was viewed by the people of mountain villages as being the harbinger of spring to the community. One of the last droves to pass through South Wales consisted, according to Whitehead (1972), of 300 beasts, which were driven from Cardigan to Kent in the autumn of 1891. It apparently took 3 men, 3 boys and 5 dogs to control them.

Irish goats and the first experimental goat farm in England

An experiment was begun in the early 1880's to find out whether or not goat farming would pay in England (Agricola, 1882, and Pegler 1882). The place chosen was Hill-Top Farm, 212 acres 500 feet above sea level on the wooded heights of Surrey, its purpose to provide a

supply of pure goat's milk to the inhabitants of London using the Express Dairy Company as its outlet. Initially, 120 goats, 'mainly of the longhaired Irish type,' were pastured under the watchful eye of a goatherd, and the initial returns were 2 to 3 pints per day with the expectation that this would increase as soon as the owners had time to select, from the best aggregate, the milkers to rear stock from. There was even an intention to farm the hair and to use skins. This could have easily been a means by which the potential for improvement in the Irish goat could have been realised, although the company quickly introduced a 'remarkably fine, handsome, fierce' English billy, and a 'beautiful Abyssinian' to stand at stud, thus quickly negating any possibility that the Irish goat could have been in the vanguard of goat improvement in a herding system in England.

The dawn of an era of goat improvement in Ireland

It was generally recognised that Ireland had been left largely untouched by the early period of goat improvement that centred on the southeast of England from the 1870's onwards. Goats of mainly Indian, African and Mediterranean origin had been trickling into England since the Eighteenth Century, affecting the local goat populations contiguous with seaports and wherever a returning exile from the Empire brought a goat to his stately home. With the Victorian Goat Revival, however, came a new determination to deliberately import goats of improved type to establish a dairy breed par excellence. Regulations against the importation of live animals at this time did hamper this endeavour to some extent, although canny ways were found to get around these. Initial improvement followed a line that led inexorably towards the founding of the Anglo-Nubian breed, although there were Swiss goats in England as early as the 1870's. Then, in 1884, the first batch of Toggenburgs arrived. These were followed, in the 1890's, by more Toggenburgs in company with Appenzels and Schwarzals. The Saanen was tried towards the end of the Century, but did not initially gain in popularity, although a now-famous Alpine goat arrived in 1903, and the stage was being set for a Swiss takeover of all things goat and goat keeping in England. By the end of the Nineteenth Century, Irish goat keeping on the grand scale inevitably succumbed to what was happening on the English side of the Irish Sea, with foreign-based goats arriving from England. By the turn of the Century, an improved, foreign-based goat was gradually seeping out of its more fashionable bases and into the country districts. This took sometime, however, and the Old Irish goat, as we shall see, held its own in the remoter parts of Ireland until well into the 1920's and possibly even later in the west of Ireland.

The Edwardian period

The Dublin Board kept a record of the numbers of goats in Ireland ("Home Counties", 1910) the returns for 1908 giving the figure of 299,000.

Notwithstanding the number of goats still to be found in Ireland during the Edwardian period, Bird (1910) was of the opinion that the Irish goat was not much favoured in England during this time. This was due in part to its temperament and yield. He was favourably disposed towards an improvement and promotion of the breed, even so, it being his feeling that sooner or later the breed would have been taken in hand by enthusiasts who bred it along the same lines as those who had brought the English goat in favour. For Bird, the result would have been a useful and profitable animal. The difficulties were considered to have been the pooriness of the milk produced, which handicapped the Irish goat from a profit-making point

of view. He concluded his thoughts by speculating that even as some breeds of cattle had been turned from poor to good milkers, so might the Irish goat might have been improved.

Not much favoured or not, the Irish goat still appeared annually in England, to be sold off by drovers, during the Edwardian period. John G. Buchanan, of Clun in Shropshire, a goat keeper for many years when he contributed to 'The Case for The Goat', published in 1910, had a rather satisfactory experience of the breed. This will be quoted in full:

I started with purchasing nannies out of travelling Irish herds which occasionally came through the village, and although I have often heard the breed derided, I must say my experience of them was on the whole a fairly satisfactory one. Being blest by nature with something for an eye for livestock, I nearly always picked out animals which proved to be good milkers, giving 2 quarts daily in full milk. The drawback to these goats, from my point of view, was that sometimes the goat I wanted was horned, and I preferred hornless, and their long hair which gave much trouble in combing and dressing. So I drifted to and remained faithful to Toggenburgs until I had to relinquish my "gotery".

Buchanan began goat keeping by tethering, but soon gave this up in favour of a stall-feeding system. His reason for preferring hornless goats was twofold. Firstly, they were less likely to have harmed children or each other. The second reason had to do with tethering, and namely that a horned tethered goat anywhere near a public thoroughfare was a sure and certain allurements for the average village schoolboy, whereas a hornless one would very often have gone unnoticed and left in piece. His view was that it was the horns rather than the goat that seemed to have been the attraction, and Buchanan's insight into this aspect of tethering is a further insight into what the average tethered Irish goat had to put up with once it had been sold off in England.

Pegler (1910) defined two types of goat- the mountain goat and the goat of the plains- placing the Irish goat in the former category. With regard to its status, he believed that the opportunities for mixing breeds by foreign importations had been 'less favourable' in Ireland, so that doubtlessly, in the more remote parts of the country the type met with there at the time he was writing was the same as that which had existed there for centuries. Thus, for Pegler in the early years of the Twentieth Century, the Old Irish goat was very much alive in an unadulterated form. He also gave as his opinion that the goat in Ireland, in common with that on the Continent but in contrast to the goat in England, was very well recognised for its virtues and merits: and namely the virtues of its milk. He recorded that large numbers were bred annually, and that although they led a rough life, they contributed materially both by their milk and their flesh to the welfare of the 'Irish peasant.' In 1908, there were a total of 246,254 goats in Ireland, the most (88,393) being in Munster, the least (41,558) being in Connaught, whilst Ulster had 64,997, and Leinster 51,306.

The Irish goat in the period following the Great War, and a plea to save the breed

Importations of goats from Ireland still continued after the First World War; and although Whitehead (1972) wrote that as late as 1926 the total number of goats exported from Leinster, Munster, Connaught and Ulster into England was 241,427, and that this figure was a decrease of less than 10% of the 1881 figure, he had become confused with the total number of goats in Ireland rather than export numbers. The total figure for the entire goat population of Ireland in 1881 was, in fact, 266,553, meaning that Whitehead has nevertheless recorded for

us the total number of goats in Ireland for 1926, which is his figure of 241,427. This means that the goat population of Ireland had dropped by less than 10% in 45 years.

Referring to life in Ireland, Walter Paget, the inspiration behind the English Goat Movement of 1918, which became the English Goat Revival in 1920, commented (Paget, 1920) that the Irish goat still, as a rule, ran loose with the cattle on the hills, knowing nothing of artificial shelter in either the summer or the winter. He believed that their breeding had been neglected, and their milking qualities needed to have been taken in hand by selecting males used from the best milkers without destroying the type. This type, he believed, was the result of nature's adjustment to the environment, nature being infinitely wiser than the goat enthusiasts who were doing their best to "improve" on 'her age-long patience by indiscriminate mongrelization.' Paget 'begged' the Irish societies to breed up but keep the breed. He then quoted from a letter received from a visitor to the Dublin show, a section of which he quoted as being: 'if anyone wanted a concrete example of the awful results of crossing every variety of goat procurable, they would have found it here'. Paget then went on to state that the Irish societies would have done as much mischief as good if they did not keep their foreign blood in the proper channels and develop their own native breeds on its own distinct lines. He felt that it was not at all necessary to have introduced Swiss or any other foreign blood to improve the milking qualities. He felt that there were plenty of good individual milkers in any breed of goats from which they could have kept males for stud purposes, and for Paget it was only a question of selection and patience. Paget himself hoped that there would be an Irish section in the British Goat Society's Herd Book, each section competing for the greatest proportion of animals in the milking section, and each having their own spheres of usefulness. Paget's thoughts remain as a fascinating insight into the way in which the Irish goat was still acknowledged to be a hardy, outdoor breed during the aftermath of the First World War, but one that was rapidly being mongrelized into extinction by the use of 'improved' types and breeds of largely foreign origin.

This notwithstanding, there must have been a considerable number of domestic goats of the Old Irish type surviving in Ireland during the 1920's. Blakeney Scott (1927) wrote of her 'recent' visit to Ireland in the British Goat Society's Yearbook for 1927, stating that she was struck forcibly by the fact that Ireland in general appeared to be ideal goat country. For those in England who had not seen the beautiful hills, valleys and glens of Wicklow and the bold mountain scenery of Mayo and Galway, could not have realised what a 'true goat's paradise is the Emerald Isle'. She contrasted the general methods of goat husbandry in the two countries; the goat in England being much tethered and enclosed, whereas the goat in Ireland was given complete freedom to roam in a very undomesticated way. She pointed out that goats were to be found everywhere in Ireland, not only in the rural areas, but in the back slums of Dublin also, along with the fashionable suburbs of Bray and Greystones. Going through Wicklow, Blakeney Scott encountered small herds of between 10 and 15 animals. These she called "native" goats, then meaning the original breed of the country, describing the Wicklow goat as being horned and longhaired. Mostly nannies, she was impressed by the way that these goats knew no obstacles as they gaily pranced over walls and banks, and came down to the roadside to inspect passing motorists. Mostly, these goats did not seem to have obvious owners, being left mainly to their own devices, and Blakeney Scott made a particular note of a pair that seemed to have an owner, and that seemed tame and polite as they trotted to the side of the road to inspect passing tourists. Otherwise, they roamed the hills and valleys, unimpeded by any annoying restrictions such as collars and tethers; ramblers and nomads that seemed to find that all weather conditions suited them very well. Overall, the

scattered cottagers appeared not to object to them, although Blakeney Scott was quick to point out that their gardens usually held potatoes only, a crop that goats did not care for. Many goats also were seen in County Mayo, and Blakeney Scott believed that some of these were descended from the small native, blue-grey goats with magnificent horns that were once a feature of Achill Island and the mainland.

We know, also, that goats of the Old Irish type were still familiar in England during the late 1930's as, firstly, it was believed that 5% of the non-pedigree goats of the land were 'English, or possibly Irish or Welsh'; and, secondly, the view was expressed (Gibbon, 1937) that it might have been possible to establish an improved breed from them. Gibbon wrote an article on 'The Various Breeds' for the BGS Year Book in which she firstly lamented that the English Goat breeder's Association's attempts to promote the Old English goat was still 'uphill work', and secondly moved on to the Irish goat as a more likely candidate for establishing an excellent and very suitable breed for the cottager and smallholder. In her opinion, the 'native Irish goat' would have been easier to work on with greater possibilities. She had been encouraging about its yield, and thought that the Irish might have helped considerably in establishing a breed of golden-fawn goats, as the colour was right and there was a good foundation to work on.

The Burren feral goat around the period of the Second World War

Whitehead (1972) listed only one feral goat population in County Clare, which was located on The Burren. He noted that prior to the Second World War (1939-1945), which is to say the 1930's, there were probably hundreds of goats ranging over some 20 square miles of limestone crags and scrub, but that during and after the Second World War great numbers of these were either killed or rounded up and exported for food. This was a period when kids were fetching around two shillings each, and goat meat was being served in England as 'game ragout', a more palatable name than 'goat meat'. Whitehead elsewhere noted that the killing of feral goats was general at this time as the animals were used in Phoenix Park Zoo, Dublin, to feed the carnivores, or else exported to England for human consumption. Ultimately, however, the killing or exporting of such large numbers of feral goats was seen to have been a mistake, Whitehead asserting that it was not long before the local people began to regret the shortage of goats, as the scrub soon started to spread and 'became well-nigh impenetrable in parts where their cattle used to graze'.

Whitehead believed that only a few remained at the time he was writing in 1972.

Survival of the breed in Ireland as a domestic animal in recent times

The present writer was privileged to know a goat-breeder who worked in the 1920's with goats belonging to the English Goat Revival. She knew both Old English and Old Irish goats very well, and believed that the former had got mixed up in the end with Irish goats that came over with the drovers (Edgerton, 1981). When on holiday in the Irish Republic in 1978, she had seen a goat of the Old Irish type tethered in a field in County Clare, and this had encouraged her to believe that there might still have been domestic goats of the old type surviving in remote parts of the country. She also believed that 'Gypsies' in Eire still had them.

About this time, say the 1980's, some interest was shown in Ireland in reviving the old domestic Irish goat. This attempted revival was centred on Hollywood, County Wicklow. Unfortunately, the enthusiasts were hampered by the fact that they were not quite clear

on what the old type should be. What they were sure of, however, was that both the feral and farm goat of Ireland was being crossed with Saanens and other Swiss types, and the original type increasingly being lost. Originally, any feral or farm goat was acceptable, and these were recorded in a 'Native Irish Goat Register'. Some encouraging results were recorded during the brief existence of this attempted revival, not least of all the discovery of a near perfect herd of Bagot type goats running with cattle on a farm only a few miles from their centre. The Bagot goat is the archetypal type of the old English variety of the Old British goat. All entries in the register were required to include a photograph, and these show many goats that were tan or fawn with a black eel stripe, which is the Bezoar colour patterning found also in Irish feral herds. Some goats, unfortunately, had Swiss patterning. The enthusiasm for this work lasted for but a short while, and then began to wane. In hindsight, it was thought that a distinct and separate society was needed for the Irish goat, along with showing to keep up the momentum. An additional difficulty was that people seemed to overly rely on Pegler's description of the Irish goat, which tended to discourage them from thinking in terms of an Irish goat revival. As late as 1990, interest in the possibility of breeding to an Old Irish standard was being rekindled, and there were still reports of goats of Old Irish type being seen, i.e. a shaggy type of goat with a black eel stripe and leg markings, and goats of Bagot type.

'Milked from the rear'

The oft times slow lapse of the Burren domestic goat into a feral animal

Small farmers generally kept domestic goat stock on The Burren in small herds of, say, 10 to 20 animals. It was generally acknowledged that they could be left on the mountains, as it could be relied upon for the dogs to bring them down again for milking. Kids were also kept in little rock built shelters, which encouraged their dams to come back for suckling. Keeping kids in shelters was also practiced to prevent them from eating grass, it being believed that kid meat was sweeter if the animal was fed only on milk. Basically, the goats were free ranging on the uplands that comprised the less productive parts of the farms, so that they were cost effective in terms of their return as well as having a good reputation for keeping the higher ground clear of scrub. Colin Johnson (April, 2004) one of the founder members of the Burren Feral Goat Preservation Society, came to live in the area of The Burren in 1979, and he remembers that it was still acknowledged then that domestic goats 'could be left out', and that nobody worried about the peregrinations of goat herds so long as they kept to the marginal land. Even then, domestic stock was considered to be 'half-wild' and would wander into the mountains. Johnson's own herd wandered, and had to be found to be brought back. They also appeared to prefer feral males, and would 'head off' during the rut, then becoming difficult to find. It would seem, therefore, that there was something of a blurred overlap between domesticity and a truly feral state. At one end of the gradual move towards ferality were goats like those belonging to a neighbour of Colin Johnson that were half-wild, looked more to be of the Old Irish type than a refined milker, and which, although brought in to fill the milk pail, were difficult to control and likely to jump around or run about rather than stand to be milked. This highlights a tradition that such goats were likely to be milked from the rear as their unpredictable behaviour could possibly result in injury if they were milked from the side. Traditionally, also, and continuing until recently, the small herds of wandering milkers were often left to be served by the truly feral billies, although some goat keepers did keep males of a 'better type'.

With regard to when goats of the modern type first came onto The Burren, Johnson believes that the general goat stock was basically of what has been termed the 'old scrub' type until the close of the Second World War, say the late 1940's and early 1950's. A neighbour of his has spoken of acquiring a group of around 10 British Saanens around this time, goats exceptional enough to have been both her pride and joy and to have been stolen. Yet another anecdote relays the story of how a half-bred Anglo-Nubian was entered in the goat show at the Corofin village show during the mid-1980's, prompting a local woman to protest that it wasn't an Irish goat but a 'foreign goat'. In England, the foreign breeds and their derivatives were so long-established by that time that the original breed had been forgotten or relegated to mythology whilst the foreign breeds had elbowed their way into becoming accepted as the only goat of the land. Improvement of goat stock may not have been without its difficulties, however. The experience of one Burren goat keeper may or may not be typical, but it is not without a resonating echo in the experiences of goat keepers in England. The Burren goat keeper in question gave up keeping a large herd of half wild goats of the old type in favour of a small herd of pedigree animals. The smaller number of Modern goats may have given more milk overall, but their owner 'was always calling out the vet'. The parallel in England is that in the 1980's minds changed about the assets of Swiss goats (Urquhart, 1983) In the opinion of many, they had become too specialized and over-bred, requiring specialized housing, selective feeding and those vet's bills! In other words, they were becoming expensive in terms of producing their full capacity of milk. To remedy this, some breeders turned to the Old British feral goat to infuse the old qualities of a general hardiness.

Goats seen on The Burren in April of 2004 still seemed to reflect the late incoming of Modern goat stock in comparison with England, and the rather gradual lapse into ferality of the present populations. In keeping with the older traditions, part of a herd of around 100 free-ranging and fully domesticated goats was seen that has a wide feeding circuit covering a number of farms. No one seems to mind their incursions, which takes them over walls and through fields. Two feral populations were seen in which a nanny had a rough collar of baling string, and kids were seen with ear tags in a group that behaved in a genuinely feral way. In fact this group was on the land of one farmer, it being said that his neighbour was a farmer who claimed ownership of some of the goats and had tagged the animals concerned.

It is likely, therefore, that truly feral groups have frequented The Burren for some considerable time, but that the traditional method of goat keeping has meant that these groups have constantly been replenished from domestic stock because the milked herds have been left to wander in a free range way. Thus, the mix has been of feral stock, half-wild domestic stock, and the flow backwards and forwards of genes from both types.

The origin of The Burren feral goat is therefore most likely complex and occurred repeatedly over a period of time. There are several reasons why feral goats came into existence in Ireland generally. Farmers liked to have goats running wild over land used for sheep pasture as goats have a predilection for brambles and graze them down to the stumps. This was beneficial to farmers who repeatedly experienced sheep being entangled in the briars and either deflecing themselves trying to get free or dying a slow death if not found and released in time by the shepherd. (Walker, 1967). Also, during the period when stock was taken up to mountain pastures during the summer, some stock would stray or be left behind during the reverse movement at the end of the season.

On The Burren itself, the lapse into ferality has been monitored as a gradual process from small herds kept for milk and kid meat that were allowed to free-range on the higher and less productive parts of farms; their lapse into a 'half wild' state whilst still being milked, and their gradual abandonment to become wild. Alongside this is the extended period of overlap, when truly feral groups were established and free-ranging domestic groups were also feeding over the higher ground. In the specific case of The Burren, the fact that domestic groups of goats were a familiar sight on the mountains, with their free-ranging behaviour probably crossing boundaries of land ownership was most probably a preparation for accepting completely wild groups. Also, the accepted necessity of domestic goats as scrub clearers allowed the feral stock to fit neatly into this role as the one kind declined and the other began its ascendancy.

A description of the Old Irish Goat

The early Nineteenth Century

That the Irish goat was sometimes white is attested to from information gleaned from two sources (McKerral, no date; Campbell, 1924). Both refer to the island of Sanda, off Kintyre, there being a reference to Sir William Cunningham obtaining the sole possession of Sanda on the 27th October, either 1803 or 1813, and then stocking the island with fallow deer, stags and roes, together with a large breed of white goats from Ireland.

The Mid-Victorian period, and a comparison with the Scotch goat

According to Pegler (1875), the author of the first book in the English language that was devoted entirely to the subject of the goat, Scotch and Irish goats closely resembled each other, the only difference being in point of size, the Scotch being rather smaller. He offered no description of the Scotch goat at this time, but remarked that the Irish were mostly large animals with long shaggy coats. They were generally of a mixed black and white colour, with rather short ears and horns that pointed upwards. Overall, their appearance was said to have been by no means prepossessing. Pegler's observations were a reprint of a series of articles that had appeared in the Bazaar, Exchange And Mart in 1873, the time when, according to him, 'large numbers are imported from Ireland annually into this country'. Although Pegler wrote that in Great Britain each country seemed to have its own variety of goat- as in Irish, Scotch, welsh and English- he made it clear that not only did the Irish and Scotch resemble each other closely, but also that the English resembled these two in similar measure. As he put it: 'I have seen many goats that were called English but which as much resembled the Irish and Scotch as these animals themselves'.

As Pegler was clear in his mind that the only difference between the Scotch and the Irish goat was in point of size, it might be useful to consider the descriptions being offered in relation to the Scotch goat during the period from the mid-Victorian era to the First World War; which is to say before imports of foreign goat stock had begun to radically alter its breed points.

Pegler again, but in the third (1886) edition of his Book Of the Goat, described the Scotch goat as being small, long-haired and with large horns that grew back in a graceful curve

towards the rear like those of the Ibex or Wild Goat. He considered the ears to be sharply “pricked”, and there was a tuft of hair over the forehead like that found in Highland cattle.

Bird (1910) offered a fairly detailed description of the Scotch goat, along with one for the Irish, which will be considered later. His ‘pure-bred Scotch goat’ had a shaggy coat, and was a small and extremely active animal. The coat was longer than that found in the Welsh, and the horns larger and curving gracefully backwards. The forehead was fringed or tufted, and the ears were said to have been more like those found upon the Scotch sheep than of ‘the heavier type usually seen in the goat’. Bird compared the Scotch goat with the Highland breed of cattle, stating that it ‘admirably matched’ the Highland, the resemblance probably being due in a measure to the similar conditions of locality and climate that these two classes of animals had to face. Indeed, he speculated that if the breed had been persistently bred in England, it would probably have lost in a great measure its characteristic coat.

Although Pegler made it clear that the difference between the Irish and the Scotch goat was in point of size only (the descriptions in print relating to the Scotch goat of the period being essentially the same for the Irish) it might be wondered why, even so, we cannot make do with descriptions that relate specifically to the Irish goat. The reason is quite simple, but little understood, and namely that all descriptions of the Irish goat in English print between 1886 and the 1920’s are biased, even prejudicial, because a point of comparison is made between the Old, unimproved Irish goat and the improved, pedigreed English goat of the British Goat Society. Thus, in reality, the earlier descriptions of the Old Scotch goat are the only unbiased description of the Old Irish goat, hence their inclusion.

A change of emphasis:

The Irish goat as seen in comparison with the Improved English goat

It is necessary, at this point, to digress into an outline of goat improvement in England so that the right interpretation of Irish goat descriptions can properly be appreciated.

The importation of foreign goat stock into England began in the Eighteenth Century, the main countries of origin being in western and southern Africa, the Mediterranean, Middle East and Indian sub-continent (Werner, 1998). By the Victorian period, the goat stock of those areas that were contiguous with the major ports- London, Portsmouth, Bristol, Liverpool etc- had been thoroughly mongrelized. The goat was by then generally rare in England, despised by cottager and labourer alike, in other words by the very people who would most have benefited from it, and more likely to be seen in towns than in the countryside. All this was changed by the Victorian Goat Movement of the 1860’s, which blossomed into the Victorian Goat Revival of the early 1870’s. The catalyst was the philanthropist Lady Burdett-Coutts, the inspiration behind her campaign being that a whole generation of children was being brought up without benefit of milk, and due entirely to the milk trains that denuded whole areas of cow’s milk to flood industrial towns with the very same on a daily basis. With her simple plea: ‘why not keep goats’, the formation of the British Goat Society in 1879 was inevitable. From the very beginning of organized goat improvement, which began at the Crystal Palace Goat Show of 1875, the intention had been to breed to a standard that specifically excluded the ‘native’ breed of the land. The Old English goat, like the Old Irish, was small, horned and hairy. What was wanted was a large, very close-haired and hornless animal with a magnificent udder. Various schemes were suggested to achieve this, although it was finally achieved in two ways. In the first

instance, crosses of English on mainly Middle Eastern and Indian goat stock produced an animal that was called 'English' but was on the first steps to becoming the Anglo-Nubian. Then, following the introduction of the first Toggenburgs in 1883, an instant attack of 'Swiss mania' ensured that the future of improved goat breeding in England was firmly rooted in the already improved Swiss breeds. In relation to our consideration of the Old Irish goat, the consequences of this were threefold: the Old English goat, which resembled the Old Irish goat closely, continued to exist but went unrecognised; the new mongrelized breed of improved pedigree show goat was called 'The' English goat; and whenever the Old Irish goat was described, it was generally compared unfavourably with this newly-crafted improved breed. Inevitably, therefore, the Old Irish goat had to endure a half century or so of being compared unfavourably with an improved breed of largely foreign origin, hence terms like 'course', 'slab sided', 'Ugly' and 'heavy'. We have to read into these descriptions, therefore, the context of a comparison with refined pedigree stock, bred for the milk pale and show-ring rather than for the cottage door or windswept hillside.

This change of view with regard to the Old Irish goat is graphically portrayed in Pegler (1886). Here he describes the Irish goat as being 'quite different to the English', which it most certainly was when comparing it to the new improved English goat rather than to its close relative, the Old, unimproved English. The hair was long and shaggy, generally a reddish black and white, or yellowish grey and white. The head, instead of being short and tapering, was long and ugly, the muzzle being course and heavy. There was a considerable amount of beard, even in the females. The horns were large and pointed, situated close together, and these rose perpendicularly whilst inclining to the rear. The horns of the males were said to have been very large, to open out more than those of the females, and sometimes to attain an immense length. Pegler himself described a pair he had in his possession as measuring 30 inches. The Irish goat was also described as being rather taller than the English, although its gaunt, flat-sided appearance rendered it anything but prepossessing.

'Reddish black and white' is an interesting description, and could apply to more than one goat pattern in the agouti series that has additional white patching (white spotting at the spotting locus). Uniformly black goats may be black by reason of being no-pattern black, which is a pure black. Longer-haired animals may have fading towards the tips, giving a brownish appearance, even so. Whether this could in anyway be described as 'reddish', however, is debateable. An alternative explanation is chocolate. If a no pattern black goat has the dominant allele for dark brown (chocolate) at the Brown locus, then anything that is black will become chocolate, i.e. a uniformly chocolate coat. Such goats may just possibly look reddish due to the fading of the longer chocolate hairs. Reddish, however, tends to imply a shade of tan. The colour pattern called in goats 'mahogany' is actually black with tan roaning, the goat being, in effect, and a red-black roan. This colour pattern does look rather 'mahogany' or deep red in certain lights, and would probably best describe a reddish black colour.

Yellowish grey is very difficult to comment on, as yellowish is a dilute of tan. The colour pattern 'blue darkbelly' is basically a tan roan in which the tan has been diluted to white, giving a grey pelage. Less diluted, it could appear yellowish, although this is largely guesswork.

Reference to a long and ugly head refers to the way in which the head shape and length, along with muzzle, had been 'refined' considerably in the process of 'improving' the new English goat. The Old Irish goat had retained the long head that typified the old British

breed, be it Welsh, English, Irish or Scotch, and any reference to ugliness was from the standpoint of a perceived perfection in a show-ring milch goat. Likewise, comment on there being a considerable amount of beard, even in the females, highlighted the way in which improved goat breeding was going in respect of an ideal of short glossy coats and the fact that foreign goat stock of exotic origin was often beardless.

There was nothing particularly noteworthy about the size and shape of the horns. Those of the improved English goat tended to be set far apart and twist outwards, which made the different horn setting and shape of those of the Old Irish goat worthy of some comment. What is actually comment worthy, however, is that the horns of the Irish goats described by Pegler had horns with a high angle of emergence from the forehead, which is typical of the Old British goat in general. At the time that Pegler was writing, the improved English goat tended to have horns that 'grew backwards rather than upwards', a strong indication of the Mediterranean, Middle-Eastern and Indian component of their pedigree that resulted in a low angle of emergence. Horn size is of some interest, as Pegler thought the horns of females were large, and those of males very large. The latter comment is in keeping with the fact that he obviously considered a male horn length of 30 inches worthy of note. An analysis of the horn length of 50 Old British feral goats from Ireland, Wales, Scotland and England, carried out by the present writer, found that three-quarters (74%) had horns over 30 inches in length, whilst a quarter (24%) had horns over 35 inches, and 3 (6%) horns over 40 inches in length. Of the Irish goats, 7 in all, 3 (43%) had horns over 30 inches in length, one of these heads coming from the Burren Hills (Whitehead, 1972). This billy had been found dead around 1953, the dimensions of the horns being 39.75 inches in length, 36 inches tip to tip, and 9 inches in circumference at the base. A horn length of 30 inches is therefore by no means remarkable.

It is interesting that comment had previously been made on the 'large horns of an Irish goat' some years before (Tegetmeier, 1869) Following the publishing of an engraving of the horns of Welsh goats in *The Field* of February 20th, 1869, a Mr. J. Cooper of Limerick forwarded the horns of an Irish goat to Tegetmeier that were 35 inches in length, and 7.75 inches in circumference at the base. Cooper commented of this goat that it had been white, large and with hair that was 5 inches long at least. He had purchased it at Ban try about 5 years previously, kept it for 2 years, and let it run out on the farm. Later, it was killed as being of no use. These horns had been separated from the skull, much to the chagrin of Tegetmeier who thought they would have made a magnificent trophy, because he did not think these horns to be uncommon, else wise he would have had the head preserved. These horns curved outwards in a moderate twist rather than backwards in what was thought to have been the only horn form in the Irish goat at this time. This correspondence would certainly indicate that horns around 35 inches long in the domestic goat of Limerick during the 1860's were by no means something worthy of remark. It is interesting, also, that this goat was white, as Pegler made first mention of the Irish goat being this colour, but only occasionally, not less than 6 years later.

Short-legged and well-fed goats with robust, well-rounded bodies were in vogue during the 1880's, and it is hardly surprising that the Irish goat, basically a drovers' animal inasmuch as it had walked from Ireland wherever there was dry land betwixt and between, would appear to be gaunt and flat-sided by comparison.

At some time around the period when Pegler was enlarging his *The Book Of The Goat* in 1885, he described the Irish goat in his contribution to the 7th edition of the *Encyclopaedia Britannica* (1875-1889?). In this he described the breed as having a shaggy coat that was generally of a reddish-black hue, though sometimes grey or pied and occasionally white. The head was long and ugly, the nose coarse and prominent. The horns were situated close together, and often-continued parallel almost to the extremities. They were also large, corrugated and pointed. The legs were said to have been long, the sides of the body flat, and the general appearance gaunt and thin. He believed it to be a breed peculiar to Ireland. The first mention of white is interesting, as is a reemphasis on how coarse and ugly the head was. By this time, however, and under foreign influence, the head of the improved English goat was short and tapering, the forehead flat and wide, and the nose small. Pegler also raised, for the first time, the issue of tassels in both the English and the Irish goat. It was his view that both British breeds were frequently ornamented with two peculiar tassel-like appendages that hung together under the throat. He commented that although it was supposed by many that these ornaments were traceable to some foreign origin, he felt that they as much pertained to the English native breeds as to those of distance countries. He reinforced his argument by stating that the peculiarity mentioned was alluded to in very old works describing the goats of the British Isles. Later research, (Greig, 1970, for instance) has shown that tassels were not a feature of the Old British goat, and the books that Pegler referred to that mentioned tassels were in fact translations into English of foreign works.

Hook (1896) painted a rather bleak picture of the type and life of the Irish goat in England when he wrote that by far the larger number of the goats to be seen passing a 'generally useless and unhappy existence upon any piece of waste land in our country are of Irish origin'. Ironically, Hook wrote at a time when the type and appearance of the genuine Old English goat had been completely forgotten, and as the Old Irish and Old English goats were essentially of the same type and appearance, it was quite likely that many of these so-called useless and unhappy animals were in fact Old English rather than Irish. To Hook, the Irish goat was the antithesis of what the goat fancier desired. Being of small size, with long shaggy coats and large horns, it had little but its low price to recommend it.

That some, at least, of the Irish goats coming into England during the late Nineteenth Century were hornless is attested to by the contribution made by Buchanan to 'The Case For The Goat' (quoted in "Home Counties, 1910). Buchanan had then been a goat keeper of then many years, and one who had begun his goat keeping with Irish goats purchased from travelling herds. The drawback he encountered was that although he was able to pick out good milkers, the goat he wanted was sometimes horned. He also confirmed that they had long hair, which gave too much trouble in combing and dressing.

A French view of the Irish goat

Hook's idea of an unhappy, little, horned and hairy Irish goat contrasted quite markedly with the French view of a decade later. Crepin (1906) described the breed in confusing detail by comparison with other breeds, worldwide. In fact, he locked into the 'variety of characteristics exhibited by the goats of Ireland, which, to him, seemed to have been drawn from breeds all over the world'. Firstly, there were the horns. These were described as helicoidal and recalled the goats of China and Laos. Horn shape in the breeds of China and the Far East are extremely variable, covering most known forms; but helicoidal means having the shape or form of a helix, a spiral illustrated by, say, a spiral staircase. This is basically descriptive of a corkscrew horn.

Crepin went on to assert that the ears of the Irish goat were like those of the Sudanese goat. There are three main types of goat in the Sudan: the Sudanese Nubian, with ears reminiscent of the Anglo-Nubian; the Sudanese desert, whose ears are somewhat variable, especially in their carriage and size; and the southern Sudan, the ears of which range from short and erect to medium-sized and horizontal. Quite what Crepin was focussing on is therefore open to doubt. He then went on to describe conformation, stating that the sturdy conformation of the body and its short legs recalled the small goat of Senegal. Senegal, in West Africa, is the heartland of the West African Dwarf goat, which is genetically an achondroplastic dwarf. Lastly, its forehead and characters of the face caused Crepin to think that the Murcian goat must have been amongst its ancestors. Crepin pictured the Murcian as having a fine head with a straight forehead, and a gentle but vivacious expression! The overall picture of the Irish goat on the French side of the Channel in the early years of the Twentieth Century would therefore appear to have been one of a dwarf goat with horns resembling those of a Markhor and a head like a well-known Spanish milch breed. Of the ears, nothing useful can be determined. Crepin also looked to the Iberian Peninsula when he considered the milking proficiency of the breed, but that will be dealt with in the appropriate section. Perhaps the most useful point of Crepin's largely cryptic description is the reference to conformation. Although a comparison with dwarf goats is nonsense, it does at least indicate that the Irish goat was thought of as being sturdy with short legs.

The Irish goat in Edwardian England

Mee (1908) pointed out that the Irish goat had a long-haired and somewhat shaggy coat, the colours being white or pied, sometimes running into a red. Both sexes were said to have possessed horns, which were large in size, corrugated and pointed. 'Red' is, of course, a shade of tan found in no pattern white/tan, and found prominently today in the Golden Guernsey breed.

Two years after Mee had described the Irish goat, "Home Counties" (1910) revealed that such a point of confusion had been reached with regard to our 'native' goats that what passed for an English goat was often a mongrel with Welsh breeding, the Welsh actually being Irish!

Gibbon (1937) wrote an article for the BGS Year Book in which she remembered her first goat, given to her when she was seven year old. She described it as being a member of the Irish group, having a short, bright brown coat and large slanting black horns. Reference to a bright brown coat is interesting as this would more accurately describe tan, and Gibbon elsewhere in the article suggested that it might have been possible to establish a breed of golden-fawn Irish goats, 'as the colour is right'.

The Great War period

Sadly, the U-boat campaign of the First World War (1914-18) was a wasted opportunity in respect of promoting the goat, and would have curtailed the annual droves of Irish goats into England. The Irish goat remained a familiar animal to goat breeders in England, even so.

Dorothy Galloway (Galloway, 1980a, and 1980b)) remembered the Irish goat around the time of the Great War and even before. She thought of it as being a somewhat taller, even much taller, animal than the English, with sometimes a rather courser head. It was of a quite different type to the 'improved' English, being rather gaunt with rough longish hair/

rather rough longish hair. The ones she knew personally were mostly of a dark brown colour, brindled with black, or either dark brown or very rusty black. Some were hornless and some horned, the latter with long narrow horns that ran parallel and hardly turned outwards at all. To date the writer knows of no colour pattern in goats that can best be described as 'brindle', and with regard to the Irish goat being taller, the 'English' goats that Galloway was familiar with in Surrey stock around two feet tall. Such goats may have weighed between 120-140 lbs, which would likely have made any Irish goat seem 'gaunt'! Galloway held to the belief that horn shape was diagnostic, the 'English' goat having horns that grew upwards and outwards, whilst those of the Irish ran parallel. Mention of a 'dark brown colour, brindled with black' is interesting as a goat cannot be brown, dark or otherwise, and black. Tan at the end of the cline that is rich and deep (usually called chestnut and mahogany in goat circles) is often confused with brown, and the present writer has seen goats, usually of the Anglo-Nubian type, that is a deep, dark tan, the individual hairs of which are an agouti with the base being black and the tips dark tan. It is just possible therefore that the overall impression can be of a brindling.

Country Life (1917) published an account of 'Goat Keeping In Wartime' towards the end of hostilities. In keeping with the views of Galloway, the Irish goat was described as being longhaired with a course head and horns.

Powell-Owen (1918) happily reported that in many parts of Ireland the Irish goat remained of a pure type, not having been crossed with foreign breeds. He described it as being a long animal, with a head shape that was long and course. The beard was large in both the sexes. The horns were described as being long and extending almost perpendicularly, inclining to the rear. It was shaggy haired, the colours usually met with being reddish-black and white, or yellowish-grey and white.

The heyday of the English Goat Revival, 1920-1935

The English Goat Movement, an attempt to locate, register and promote, in other words 'save', what was left of the Old English type of old British goat in England began in 1918. By 1920, it had burgeoned into the English Goat Revival promoted by the newly formed English Goat Breeders' Association. These enthusiasts, mostly members of the British Goat Society swimming against the tide of improved Swiss goat mania, were interested also in the Old Irish goat. Its inspiration, Walter Paget, wrote (Paget, 1919) an article on what the 'English' goat really was. In doing so, he described the characteristics of the Irish goat by way of comparison. He pointed out, firstly, that the Irish goat was an indigenous variety with 'a strongly marked individuality.' It was his view that horns were a very tell-tale feature by which to judge if a goat had any Irish blood in it, as the Irish breed carried its horns more erect, and instead of curving outwards they turned sharply back towards the extremities. They were also said to have been not so flat in shape at the base. He also commented that an Irish-English-cross resulted in thin upright horns and a coat with patches of very long hair on the ridge of the back and about the thighs and underparts.

Paget elaborated on this description in the following year. In an article entitled 'British Breeds Of Goats' (Paget, 1920), he published a photograph of what he called 'a little Irish goat' and gave a description of this animal. She was considered to be an excellent representation of the type for identification. The horns were said to have been flat and almost upright; the head large with a rather course muzzle, and the colour almost invariably white and rusty black.

The hair was long and straight, and acted as a natural thatch for shedding off the rains of 'the Emerald Isle. The fact that an illustration clarified the description was very helpful, as it became clear what a 'course muzzle' actually meant at this time.

References to the Irish goat were still being made in books on goat keeping during this period, although they tended to draw on Pegler's *The Book of The Goat* for their inspiration. Thus, Davies wrote in 1920 that the Irish goat was long-haired, usually some shade of yellow or greyish-yellow and white in colour; and with horns that were large, and often set close together at the base with an almost perpendicular rise. Where he added something that was new lay in his description of the ears and reference to 'yellow'. With regard to the former, these were said to have been carried horizontally and sometimes they drooped at the tips. This is in complete contrast to the usual references to small and pricked ears, and may be the first indications of 'other breeding' in the Irish stock that was arriving in England. It should be remembered that descriptions of the breed were sourced either from previous references (quotes from earlier writers, in fact) or a personal knowledge of stock seen by a particular writer in a particular part of the country. It is possible therefore that following the First World War, 'herds' imported from different parts of Ireland may have been subjected to varying degrees of mongrelisation, allowing for a greater variation in the descriptions, as we shall see. The particular reference to 'yellow' is of interest in that yellow is a dilute of tan, at the end of the tan range that includes descriptions like sandy and beige. It lies between fawn, which is described usually as 'yellowish-brown' although tan and brown are completely different, and cream and white. It is therefore another colour to add to the list given for the Irish goat.

Crossland and Parish (no date, but typically 1920's and based on earlier material) described the Irish goat as being long-haired and light in colour- yellow, white or grey.

A fairly typical description of an Irish goat offered for sale in the For Sale notices of the BGS Monthly Journal appeared in January, 1921, reappearing in the April edition. The owner was Ada Carlos Cartwright, a prominent member of the English Goat Breeder's Association, the goat Lennox Bidy, aged 2.5 years. She was described as being dark brown with white marks on the body and face. She was pretty, with a medium coat and small horns. She had kidded for the first time in June, 1920; had been mated for the second time on December 9th; was still milking a little in the January, and due her second kid on May 3rd. Overall, she was described as being very quiet and an easy milker, also very hardy. It was thought that she would suit a cottager or novice, and was offered for 2 pounds and carriage in the January, but 3 pounds and carriage in the April. What is of particular interest is that Lennox Bidy was considered to have been Irish in the January, but only believed Irish three months later. This again highlights the dilemma of what was an Irish goat on the English side of the Irish Sea. Irish goats were either designated so by point of origin, i.e. purchased from a travelling herd, or by description. i.e. a perceived type of horn, head and coat. As it was hardly understood that Old English and Old Irish goats were of the same basic type, and the so-called English goat of the period was a foreign-based mongrel, any goat found on a piece of waste ground during this period that answered to the general description of an Irish goat, was designated Irish, be it Old English or not.

Six years later, Blakeney Scott (1927) wrote of her Irish experiences of goats over the years, including the small 'native', blue-grey goats of Mayo, with their magnificent horns, and the longhaired and horned 'native' goats of Wicklow.

The Second World War

Shields (1977) described how Irish goats were coming into the West Country by the truckload, presumably because wartime demand exceeded supply. Shields knew the typical Old British type of goat quite well, having knowledge of the College Valley feral goat of Northumberland. She described these Irish goats as being quite different, being short-coated, lighter in build, and with horns that were erect until the last few inches, after which they turned straight back in a hook. They also gave more milk. The colour was described as being chestnut. Without exception they had black eel stripes and the black marking on the legs of highland and Norwegian ponies. The description relating to coat and build would suggest that these goats were not strictly of the Old Irish type, whilst the colour and markings describes very well the Bezoar or wild patterning pattern found in the Agouti series. Chestnut is usually described as a deep radish-brown, and is genetically a dark tan. The black leg markings refer to stripes.



Analysis of the descriptions

Size

The Old Irish goat was first described as being mostly large or bigger than the Old Scotch goat. Then, as the improved English goat came to dominate the standard for goat breeding in England, it was described as being taller than the English. By the end of the Nineteenth century, it was small; becoming much taller than the English at the end of the Great War, then little in its aftermath. Overall, the Old Irish goat was a small variety by any standards, any discrepancy in descriptions relating to size being due to the comparisons being made.

Coat

The Old Irish Goat has universally been described as having been longhaired until the period of the Second World War. Terms varied between rough and longish, somewhat shaggy, medium and long and shaggy. The coat was once described as being straight, and rough was also mentioned. Any description referring to short hair should be viewed with suspicion unless qualified by terms like thick or dense.

Colour

Colouring varied between reddish black, yellowish-grey, grey, white, white running into red, bright brown, golden fawn, dark brown brindled with black, dark brown, rusty black, yellow and chestnut. 'And white' is frequently mentioned, meaning white patching, as is also 'pied' to the same effect. Golden fawn means a shade of tan, as does bright brown. Therefore we have a wide range of tan in the Old Irish goat, a cline from white (the extreme dilute of tan), through yellow and golden fawn (a golden yellowish tan) to red and chestnut. Grey is represented, and black is usually referenced in conjunction with reddish or rusty. This could be chocolate, or more likely tan-black roaning of the kind seen in the Mahogany colour pattern. Writers have generally been limited in their description of colouring, and Pegler in particular seemingly 'changed his mind' as time went on. We have to remember. However, that writers were generally only able to describe the goats they had seen, in some cases drover's herds from a particular place in Ireland or a herd of largely related animals. Thus, the Irish goat of Pegler in 1875 was generally mixed black and white in colour, but might also have been yellowish grey and white as well by 1886.

Ears

Ears in the Old Irish goat were rather short and sharply pricked until after the First World War, after which time they could have been carried horizontally with sometimes a drooped tip. Here we clearly see an influence of Modern goat stock breeding on the Irish goat following the introduction of goats of pedigree foreign type into Ireland. The earlier descriptions are entirely in keeping the Old British goat in general, and one of the first signs of introgression is a change in the size and carriage of the ears.

Forehead tuft

A tuft of hair over the forehead is a characteristic of males in the Old British breed. Although not mentioned specifically in the old Irish goat, this variety was originally described as being essentially no different to the Old Scotch and Old English varieties, in which this characteristic occurred.

Head

Originally, the head of the Irish goat was of the same type as the other varieties of the Old British breed- long and dished. With the advent of goat improvement in England, however, with its ideal pedigree, showring dairy type, the head of the Old Irish goat underwent a transformation to become long and ugly with a heavy, coarse and prominent muzzle. Photographic evidence, such as it is, does not bear this out.

Beard

A long beard or a considerable amount of beard in both sexes has been emphasised.

Conformation

As with the head, the conformation of the Old Irish goat was consistently compared unfavourably with that of the Improved, pedigree dairy goat of the showring. Gaunt, flat-sided, unprepossessing, thin, lighter of build were mentioned. We should remember, however, that Irish goats were walked to the port, taken across the Irish Sea, than walked the length and breadth of England in kid, before kidding and then being sold off to subsist on a piece of waste ground. By comparison, the improved English goat, with its well-rounded barrel and short, firm legs, was hardly tall enough to look over the stable door of its warm barn with its ever-filled hay-wrack. The Irish goat was also generally described as being longer-legged than the improved English goat, although it had the same proportions as the other Old British varieties.

Horn type

The horns of the Old Irish goat were described as being situated close together, corrugated, coarse, flat, and large. They were universally described as being scimitar in shape, which is to say rising perpendicularly and curving backwards and a little downwards. It was universally inadmissible that any other type of horn could have existed in the variety. Why was this? Basically there were two reasons. Firstly, as pointed out by Greig (1970), who interviewed many goatkeepers whose experiences went back to the early Twentieth Century, Irish billies were hardly ever to be seen in England, and the horns of a nanny of the Old British breed will generally tend to run in parallel irrespective of whether those of the males are twisted or scimitar. Therefore, the annual influxes of basically scimitar-horned Irish nannies offered no clue as to which way the horns of the billies back home were turning or twisting. Secondly, the improved English goat, based as it was on goats stock of eastern and Mediterranean origin, tended to have horns that were quite markedly twisted, even in the females, thus compounding the imagery. This idea of being able to distinguish the breeds by horn shape was so well entrenched that it led to some confusion as to which horn type represented which breed in the early 1920's, and is still being quoted in print at the present time

Writing in the British Goat Society's Monthly Circular in 1921, Walter Paget, editor, remarked on a photograph that had been submitted by Lady Helen Graham. This showed the heads of two feral goats shot on Mull, Inner Hebrides, in 1906. In one head the horns were twisted, dorcas fashion, whilst in the other, the horns grew backwards in parallel, thus approaching a scimitar. It was the opinion of the stalker on Mull that the 'wide type' of horn originated from goats that had descended from caprine shipwrecked survivors of the Spanish Armada, whilst the 'narrow type' represented the 'British type', or the descendants of the old crofters' goats. Paget emphatically refuted this, and in keeping with the prejudice of the time, ascribed the Dorcas horn to the old British type of goat and the narrow type to the 'typical upright horns of the Irish breed of which so many have been spread through Scotland by importations'. The thinking was, therefore, that the Old British goat of Scotland and England always and only had horns that twisted outwards widely, whilst the Irish goat only and always had parallel, scimitar-shaped horns. Distinguishing the 'breeds' would therefore have been comparatively easy from this feature alone, and the extent of any Irish admixture in Scottish feral herds could have been readily discerned by horn shape. This idea has tended to persist. Mackenzie (1957) reproduced the two heads mentioned in the form of line drawings (Figure 3. Feral goat heads), along with the legend that 'The old billy on the left is of the type commonly found on the small islands off the Scottish coast and on the border hills; the type is probably native or Scandinavian in origin, but local traditions describe them as survivors of the Spanish Armada. The head on the right is that of a typical Irish billy such as the Irish goatherds used to import annually into the hill districts'.

In reality, the Old Irish goat had horns with a similar range of shape and form as found elsewhere in the British Isles- scimitar, a quite variable moderate twist, curling and dorcas.



▲ Some examples of horn type in the Old Irish Goat

Milk yield, qualities and usefulness in the Old Irish Goat

Milk yield

Whitehead (1972) commented that the Irish goat was famed for its milk in the Eighteenth Century, being imported frequently to provide new intakes of stock for the whey-drinking centres in Wales, Scotland and Northern England.

Pegler (1875) remarked that the Irish goat had the character of being good milkers, although their appearance was by no means prepossessing. He elaborated on this in 1886, stating that the Irish goat was a good milker, although the yield was comparatively poor in quality. He described the udder as being generally long and narrow, with big teats. Interestingly, Pegler changed his view of the milking qualities of the Irish goat, writing in the seventh edition of his *The Book Of The Goat* (1935)

that the breed was occasionally a good milker, though its period of lactation was usually limited to 6 or 7 months, and the yield comparatively poor in quality. The udder remained long and narrow with big teats, even so.

Warren (1861), writing from Crookstown in County Cork, mentioned a tenant of his that had between 80 and 100 goats, each producing between half to three-quarters of a gallon of nutritious and rich milk when summoned to be milked twice a day. This was boiled and mixed with water to be given to the young calves and pigs, whilst the people were very fond of it boiled. The curd was also said to have been delicious. Warren himself stated that he delighted in a good basin of it, as it was easy to digest and sat lightly on his stomach. How the yield of these goats compared with the generality of goats in England at the time may be judged from the comment the a good goat would have given half a gallon a day (Tegetmeier, 1861a) and a good long-haired Welsh goat upwards of half a gallon daily for months (Tegetmeier, 1861b). Other writers were of the opinion that a goat would average one and a half to two pints daily ("T. L", 1872) and a quarter to half a gallon a day (Pan, 1874). There was therefore nothing inferior about the yield of Irish goats in County Cork at this time.

Irish goats did find their way into the early goat shows in England, being placed in the 'horned, longhaired' or 'British longhaired' classes. There were some notable successes in terms of both overall judging and the milking competitions. One such goat was Betsy, belonging to Holmes Pegler (*The Field*, 1883). Entered in the 'Horned, longhaired females class' at the Crystal Palace Goat Show of June, 1883, Betsy was described as being a Horned, longhaired Irish goat. She gained a second prize, the first going to a Pyrenean, and it was commented of her that she showed abundant proof of being a rare milker. The show catalogue described her as giving three and three-quarter pints a day. Entered into the milking competition, she came second to the Pyrenean again, her yield being 3lbs 12 oz. By 1886, Betsy had changed hands, being entered at the Royal Aquarium Show of June of that year as the property of Mr. H. Appleby (*The Field*, 1886) She came second in the 'British and crossbred horned, she-goat class', it being stated that her udder was little inferior in size to that of a Kerry cow, which showed off her milking powers to great advantage. Unfortunately, her milk in the pale as a part of the milking competition did not additionally show off her milking powers as, having kids at her side, she violently resented all attempts to milk her! Whilst remaining on the subject of udders, an Irish goat by the name of Duchess, owned by a Mr. Sainty, was entered in the 'horned, she-goat class' of the Windsor Show of July 1889 (*The Field*, 1889). The comment

made of her was that she had the largest and best udder in the whole show. A discussion on the “Irishness” of these show goats will be found in appendix one (Werner, 1995).

Hook (1896) did allow that he had seen some very useful animals that had been purchased from itinerant herds, but he balanced this with the comment that he had seen many more that were aged, and whose heavy bags of milk must have been the accumulation of days. For this reason, he had suggested that those who went ahead with a purchase should have done so with caution, and with some knowledge of the goat’s age, as indicated by the teeth. Adding to the general gloom, he additionally pointed out that those rare examples that were found to yield a large quantity of milk were likely to have ultimately disappointed, as this only persisted for a few months after kidding, along with the additional blow that as it proved impossible to induce these animals to breed, ‘except as their half wild nature prompts, the production of milk in the winter was entirely out of their power’. Hook then thought it unfortunate that it had been from such inferior animals that an estimate of the whole species was generally formed, any goat owner that was over-sanguine becoming disappointed by the wild nature, mischievous habits and scanty produce of the goat they had purchased from a travelling Irish herd with the assurance that it would give two quarts of milk a day and live anywhere and anyhow.

It would have seemed, even so, that the discerning purchaser could most certainly have acquired an Irish goat that gave two quarts a day, as Buchanan (quoted in “Home Counties”, 1910) was probably referring to the late Nineteenth Century when he recounted his experiences of the breed. He believed himself to have had a good eye for livestock, and was nearly always able to pick out good milkers from the travelling Irish herds that occasionally came through his Shropshire Village. A good milker, in Buchanan’s estimation, gave him 2 quarts a day when in full milk. He offered, also, an interesting insight into hornlessness and yield, stating that the goat he wanted was sometimes horned. This would suggest that the goat he wanted was more often hornless, indicating a link between productivity and being devoid of horns.

Having looked at the yield of the itinerant Irish herds, what of the value and yield of the goat in Ireland itself. “Home Counties” (1910) quoted two sources from Wicklow County, both relating to the March to November yields of goats. The first informant was quoted as saying that ‘an exceptionally good goat’ would have given between 135 and 200 gallons, according to pasture, whilst a ‘fairly good goat would have given between 45 and 66.5 gallons. Exceptionally good goats were worth, a month before kidding, from seventeen shillings and sixpence to twenty-two shillings and sixpence. Fairly good goats were worth twelve shillings and sixpence. The second informant believed that an exceptionally good goat gave 135 gallons, whilst a ‘fairly good goat’ gave 67.5 gallons. The former was worth between eighteen shillings and twenty-one shillings, the latter eight shillings to thirteen shillings. Compared to this, well-known English goat breeders of the day were asked what they thought a profitable goat would give. The answers varied between two quarts a day over 3 months, or 45.6 gallons, through 2-3 quarts a day over 4 months or 143 gallons, 60 gallons, and between 82.5 and 87.5 gallons over 10 months to 159.5 gallons. With regard to prices, anything between two pounds and twenty pounds was quoted, with prices up to sixty pounds having been paid. One contributor, the well-known Sam Woodiwiss, believed that a quality goat was a good buy at three pounds, and a ‘course, horned, long-haired Irish goat’ was worth around twenty-five shillings. One major issue was that it was believed that even if an Irish goat gave a gallon a day, it would not have necessarily been a superior animal to a foreign or first cross goat which gave less, the reason but that it was not milk only that was the criteria but milk at the right

time. Ordinarily, what “Home Counties” called our ‘home and half-wild goats’ only bred from September to March, which meant that by the time that the winter came on, the ‘home strains’ like the Irish were likely to have been short on milk- the dilemma of goats in the outhouse but no milk.

Writing in the same year as “Home Counties”, Bird (1910) compared the milking ability of the Irish goat with those of the other ‘native’ breeds. The Irish was said not to have been a good milking breed. Although many were considered to have been deep milkers, the milk given was said to have been of poor quality. The teats were said to have afforded excellent grip for the hand even so. The Welsh was also considered to have been a poor milker, the milk being deficient in both quality and quantity, the majority having had poor udders and teats. On balance, therefore, the Irish was more highly rated than the Welsh for its udder and milking qualities. Highland Scotch goats were not heavy milkers, although it was said that some of them had a yield that was of excellent quality. The English, needless to say, was the star pupil, being a good milking breed, in fact one of the best of milking breeds, which not only milked well, but also gave a product of good quality. A vital point for Bird was that it then had the reputation for remaining in profit longer than goats of other breeds. The English breed referred to by Bird was, of course, the improved type that had been bred to a show and pedigree standard for the previous 35 years, and which had a foreign as well as ‘indigenous’ base to its breeding. A raw comparison between the amount and quality of milk in the Irish and improved English breeds was therefore unrealistic.

In common with the Irish breeders themselves, Crepin (1906) did not seem to share Hook’s low view of the Irish goat as a milker. For him the regular and ample form of the udder caused him to think that the Murcian goat must have been among its ancestors. Crepin believed that as a milch goat the Murcian was remarkable. He had, in fact, Murcian goats of his own that, although standing only 26 to 28 inches in height, gave 130 gallons in one lactation period.

Gibbon (1937) described the milking capabilities of her first goat, an animal that was a member of the Irish group, given to her when she was seven. She remembered it as having a good square udder, giving 7 pints daily in full milk, and would milk well for 2 years. This goat was still giving 3 pints daily two and a half years after her last kidding at the age of 12.

Goat breeders around the time of the First World War remained very familiar with the Irish breed, as has already been pointed out. Dorothy Galloway (Galloway, 1980a and 1980b) who remembered goats during the period of the Great War wrote that the Irish goat seemed to have a very ugly and pendulous udder. It was bigger, with more room for milk, than the udder of a well-bred improved English goat, even so. Galloway had the impression that the English goat of her period used her food intake to keep herself in good condition- generally managing to look quite plump- whereas the Irish simply went on milking. She reflected that this comment might have been in some ways unfair, as the Irish goat was always considered to have been the better milker, a sentiment she herself shared, stating that the Irish were ‘much better milkers’. Country Life largely agreed with this sentiment when it published a guide to goat keeping in wartime in 1917 (Country Life, 1917). There was a sting in the tail, however, for the breed was described as being ‘often good milkers for a limited period, but do not possess a reputation for remaining in milk for any length of time’. According to Powell-Owen (1918) the udder was long and narrow, with large teats. As a milker it did not remain in profit more than 6 or 7 months, although he noted that there were exceptions in both the yield and profit.

Davies (1920) believed that the Irish goat was often a good milker, although the product was not very high in quality. He stated that it was reputed that Irish goats did not stay in milk for more than about 6 or 7 months, although he repudiated this by stating that he had known goats, purchased from travelling herds, to give a fair yield when not mated for more than 18 months.

Interestingly, the results of the milk records for 1920 (BGS Monthly Journal, March, 1920) demonstrated that there was little difference between the pedigreed, unpedigreed and 'unimproved' types, of goat at that time. In terms of averages, 23 unpedigreed crossbreds gave 1,013 lbs; 5 English goats gave 993 lbs; 1 Anglo-Nubian gave 1112 lbs; 15 pedigreed Anglo-Nubians gave 1114 lbs; 1 Toggenburg gave 947 lbs, and 4 Irish and Irish crossbreds gave 1216 lbs. The Highest yield of the last was 1562 lbs, the lowest 760. The Irish and Irish crosses were top of the league for the average, the Toggenburg producing only 60% of the yield of the best goat in the Irish category.



Above: Milking from the rear!

This old print shows Maltese goats being milked from the rear. Goats in the British Isles were typically milked from the side, although the temperament of the free-ranging nannies on The Burren was such that they were often milked from the rear for safety's sake.

Temperament

In terms of temperament, Pegler (1886) considered the Irish goat to have been 'pugnacious'. It was his view that the size and shape of their horns rendered both male and female formidable antagonists when they were pugnaciously inclined, which, according to Pegler, they not infrequently were. This temperament extended not only to each other, but also to persons who were strangers. This, in his opinion, meant that they were not altogether safe to be with children.

In contrast to the graphic accounts of half wild and pugnacious Irish goats in England, Warren (1861), writing from County Cork, described the 80 to 100 goats kept by a tenant of his as being docile. A horn was sounded twice a day, and the animals came down from their mountain grazing to be milked. He also described these animals as being, easily fed, domestic and docile.

Despite the placid nature of the breed in its home country, however, English goat keepers' retained an image of the Irish goat as an aggressive animal well into the Edwardian period. Bird (1910) referred to its aggressive habits, and inclination to be pugnacious. He continued by pointing out that one drawback in keeping an Irish goat was its aggressiveness and impatience of control. They were not only inclined to dispute with each other, but many were inclined at times to spa with their attendant. This rendered them anything but safe as children' pets. His optimistic comment, however, for there was one, was that a few generations of good treatment and careful selection would probably have much modified this trait of character.

It should be emphasised that this was a period when whole breeds were ascribed characters with regard to their tractability. The Irish was universally aggressive; the Welsh not so pugnaciously inclined as the Irish; the Highland Scotch not aggressive but somewhat nervous of temperament; the Lowland Scotch of a quiet nature. Also, the differing general treatment of goats by classes of people who were most likely to have kept them was not considered. This was a period when tethered goats needed horns to afford some protection against dogs and endured stone-throwing from urchins (Paget, 1919) and Paget (1918a) described a visit to a country district only some 30 miles from London where extensive commons were the feature of the neighbourhood, but where no advantage was taken of these to vary the diet of or exercise the large number of goats kept by cottagers. Without either mentioning the name of Irish or linking them with the genuine Old English goat, Pegler described how these animals, 'all of the roughest type', the kids being diminutive in size and all skin and bone', the billies universally of a 'rough, undersized, hairy type, all beard and bones', were kept. They were tethered, day after day, on the same piece of ground, at a convenient distance from the front gate, the kids having no liberty to play and hardly being able to carry the weight of their collar. Some were so inextricably bound up in their ropes that they were unable to move at all, and had to be released from briar and bush by Paget and his companions. He posed the question: 'what chance have these pitiful little specimens to grow and develop into good milking and breeding stock?', the kids being taken away from their mothers far too soon. He had a compliment for their hardiness and usefulness, even so, adding that it spoke volumes in these respects that they somehow or other struggled through these conditions and attained a rough and lean maturity which their owners exploited for whatever could be extracted from them. Goats of this kind were the last of the Old British stock, Irish or not, that were rapidly being crossed out of existence, along with their hardy characteristics, in favour of Modern goat stock. Abused, neglected, even on occasions ill-treated; subject to the vagaries of the climate with often not even a hedge to shelter under; tethered perpetually on the same

piece of land which became fouled and parasitical; attempting to keep itself in condition and expected to give a return to its owners, it still came as a surprise to the British Goat Society member who kept his stock in a warm stable close to the hayrack that goats such as this, often Irish, were not of the same sleek and placid temperament as pedigreed stock.

Longevity

With regard to longevity and breeding, a correspondent to *The Field* (1901), writing from Tarrthoole, Ballytone, was pleased to inform its readers that a goat of his had recently died of old age, being 21 years, and that she had kidded when 18.

Hardiness

With regard to hardiness, the virtues of the Irish goat were recognised in England at the same time that it was realised that the old type of English goat, with similar virtues, was being crossed out of existence by means of a Stud goat Scheme that sought to improve the 'cottager goat'.

Towards the end of the Edwardian period, the Irish goat wasn't so much admired for its temperament or product as for its hardiness. Bird (1910) described it as having been a good hardy breed that had, to its advantage, the fact that it would thrive upon coarse fare. Even more to its credit, it then did even better when generously treated. Its shaggy coat was a good protection against the weather, and although it did not like the rain, it could stand wet weather better than any of the shorter coated breeds. It also had a reputation for heeding the cold but little, and was therefore a breed that would have suited a cold, bleak district.

The recognition that the Irish goat had admirable qualities with regard to hardiness continued into the post-Great War period. In 1918, a small group of British Goat Society enthusiasts, inspired by Walter Paget, the editor of the BGS Monthly Journal, was instrumental in founding an English Goat Movement that blossomed into a full-scale revival with the founding of the English Goat Breeder's Association in 1920. The Association had rather definite ideas about the type and description of the Old English goat, and also of the Irish goat in comparison with their ideal. Overall, their literature proved to be a useful source of information on the type of the Irish breed in general, and of its continuing value in particular. It was Page's belief that the Irish goat had, in the process of time, developed a coat that acted as a natural thatch in the moist and humid atmosphere of its native districts, and to graft Nubian or Swiss blood into this breed did not either add to its beauty or improve its usefulness. It was Paget's belief that an improved type of Irish goat, by which he meant an improvement brought about by selection of the best individuals of the breed, would have been far better suited to localities such as the Scottish highlands for the use of crofters in those districts than any class of goat that had been bred from Anglo-Swiss or Anglo-Nubian sires. He generally viewed with great misgiving the introduction of these latter breeds to the far North, for their progeny would have been utterly unsuited to the climate and the general struggle for existence. He made the interesting point that no one would have dreamt of crossing Highland cattle with Jerseys, or highland or Herdwick sheep with the Southdown, the idea being to "improve" them. Why then, he thought aloud, should stud goats of a delicate, thin-skinned, and thin-coated variety, whose hardiness would have been lower than the resisting power of all the goats that had been bred from them, be introduced to the rigours of the Scottish winters? He ended by maintaining that the Irish goat was the best

breed they had for the purpose, and for this reason should have been kept pure in type and relegated to those localities for which it was best suited.

Davies (1920) agreed with Paget inasmuch as he believed that the long coat of the Irish goat protected it from the cold, there being little doubt that when given reasonable care and attention, the breed had often proved to be highly satisfactory investments to the poorer members of the community than the short-coated goats of a more fashionable type.

Meat and tallow

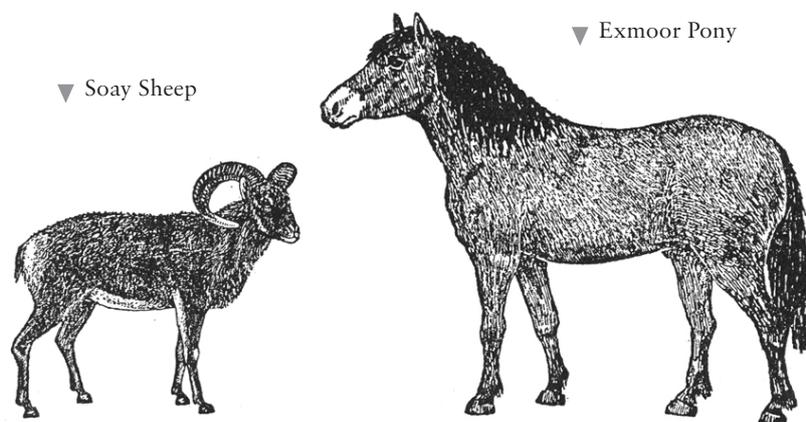
Warren (1861) believed that the males (hevers or weders) had great quantities of tallow of excellent quality; little inferior in fact to wax candles. With regard to its meat, he mentioned also that the gigot and loin were the best parts, the haunches not so good, but that the pastry of any part of it was better than venison.

References to population dynamics and general behaviour

Warren (1861) mentioned that the goat came into season as the deer in County Cork, the hevers or weders from July to November, the does not until Christmas.

The Exmoor pony of the goat world

Research would indicate (see main text) that the Northern Breed Group is representative of a glacial goat that developed during a period of ice melt following the last glaciation. The first Neolithic settlers in Ireland, the Megalithic peoples who brought their livestock from the Eastern Mediterranean via Spain, were not the first colonizers of the British Isles. Prior to that, hunter-pastoralists took advantage of the equable climate of the late Pleistocene to move around Northern Europe with sheep (the Soay), cattle and goats, taking advantage also of the abundant game on the extensive grasslands. With deglaciation, however, and a downturn in the climate bringing both cool summers and cool winters, the Northern Breed Group quickly developed as a cold weather glacial goat. The Old Irish Goat, as represented by around 10% still of the feral stock of the Burren, is therefore a contemporary of the Exmoor pony and Soay sheep that were shaped by the same rigours of climate and topography.



Appendix one: the known feral goat populations of Eire, past and present

(All references below are to be found in Whitehead, 1972, unless otherwise acknowledged)

County Clare

The Burren. see main text.

County Donegal

Gweedore and Derryveagh Mountains. Feral goats occurred in the Nineteenth century.

Glenveagh district. In 1972, a few frequented this district, especially being found around Greenarg.

Slieve Snacht. Whitehead (1972) mentioned that a male shot here by D. J. E. Edwardes had horns measuring 27 inches in length. No other details are given of the horns, nor the year in which the animal was shot.

County Dublin

Howth and Baily. Goats on the headland opposite the Howth and Bailey Lighthouse in 1972 were said to have been not truly feral.

Scalp. Located on the Dublin-Wicklow boundary. Some goats here in the 1940's.

County Galway

Costelloe. 'In recent years' (1972) about 100 goats lived on the lakeshores between Leam and Costello. They were said to often swim out to the islands when disturbed.

Aran Island, Galway Bay. Goat herd 'apparently now extinct' in 1972.

Joyce's Country. Pertains to the mountainous region of northern Connemara. Small herds were said to occur here in 1972. Said also to have occurred along the coast and on some islands, but no details given.

Lough Lettercraffroe. Thought that a few might still remain around here in 1972.

Moycullen district. East of the above. This district was afforested, and the goats there exterminated.

Twelve Pins Mountains. A herd of about 50 near Kylemore Lake in 1972.

County Kerry.

Innisteeraght Island. About 1880, a pair of goats was introduced onto this island. They bred prolifically, and within 15 years (1895) had become a nuisance. Many were then killed and about 20 taken Innisvickillane Island.

Innisvickillane Island. Originated with the introduction of about 20 goats from Innisteeraght

Island in 1895. Had increased to some 180 by 1911. Then went into a decline, and might have become extinct by 1972.

Skellig Rocks, off St. Finans bay. A few said to exist on these barren rocks in 1972.

Mount Eagle and Brandon, Dingle Peninsula. Said that wild goats had frequented the Dingle Peninsula for over 90 years in 1972 (c. 1882); and a herd of 150, mostly brown, goats had become established during the past 60 years (c. 1912).

Dingle Peninsula, exact location not given. A herd of white goats reported as being on the Dingle Peninsula in 1950.

Torc and Mangerton Mountains. Reported that a small herd, with its headquarters on the Torc Mountains, ranged over the adjoining area in 1972.

County Mayo

Achill Island. Feral goats reportedly have lived on Achill Island for over 200 years (1972; therefore c. 1772). One suggested origin is that they were descended from animals that took to the hills during the period when the old custom of summer migrations for grazing on the mountain slopes was in operation. Earliest known strain was blue-grey and with immense sweeping horns in males. These survived from the Eighteenth Century to early in the Twentieth Century. Details of the horn measurements of one of these original goats is given in Whitehead (1972). This male was trophy shot by E. G. Weldon in circa 1880, the horns measuring 21 inches in length, with a tip-to-tip measurement of 15 inches, and a circumference at the base of 7.5 inches.

Blakeney Scott (1927) recalled that some years previously to her writing, the small, blue-grey 'native' goats, with magnificent horns, still frequented the cliffs and mountains of Achill Island and the mainland. She described how it had been possible to see them by lying very quietly in the heather and looking down the sheer precipice of Achill cliffs. The little goats would then come trotting up on the tiny paths that were known only to 'their clever feet'. From above, according to Blakeney Scott, it seemed that there was not even a foothold for a bird, and a straight drop of close to 1000 feet. Blakeney Scott also made reference to W. Percy French, an Irish artist, songwriter and musician, who made reference to these goats in one of his songs:

*Down by the Lough I shall wander once more,
Where the wavelets lap lap round the stones on the shore;
And the mountain goats are wagging their chins
As they pull at the bracken among the Twelve Pins.*

The horn measurements of two Achill Island feral males shot in the mid-Twentieth Century are given in Whitehead (1972). The first, shot by H. G. M. McDowell in 1948, measured 33 inches in length, 13 inches tip-to-tip, with no measurement for the circumference at the base. The second, shot by Whitehead himself in 1957, measured 24.5 inches in length, with a tip-to-tip measurement of 22.5 inches, and a circumference at the base of 7.5 inches.

Corrymore and Croaghaun. A herd of white, longhaired goats frequented this area at the end of the Nineteenth Century. But the 'present' stock in 1972 was of recent origin, deriving from animals introduced around 1900. There were about 100 in 1950, but less in 1972.

Curraun Peninsula, on the mainland opposite Achill Island. Said to have existed for over a century in 1972. Fifteen seen in 1957.

County Sligo

In general, Couser (1963) reported seeing a herd of wild goats in the mountains of County Sligo. He stated that they resembled, by description, the feral goats of the Rhinogs, Snowdonia, in Wales, an indication that the Irish goats were of Old British type. He had seen them on many occasions, and his dogs had chased them, even getting close enough for the old males to turn and face the dogs. The goats would eventually make off into the crags where no dogs could reach them, and there they gazed down with what Couser interpreted to have been contempt!

Mountains of Sligo. A few reported 'recently' in 1972.

County Tipperary

Slieve-na-Mon. About 6 reported here 'recently' in 1972.

County Waterford

Comeragh Mountains. A few still frequented these mountains in 1972.

County Wicklow

Bray Head, on the coast. A large herd of what is described as not truly feral goats. Found principally about the railway cuttings (1972).

Great Sugar Loaf Mountain. About 2-miles inland from Bray Head. Used to be a herd in 1972. R. F. Scharff presented a pair of horns from what he supposed was the 'leader' of this herd to the Dublin museum.

Hollywood Glen. A large herd existed on the cliffs here, near Donard, but following the forestation of the area it was believed in 1972 that the goats had probably been eliminated.

Glenmalur. Goats on the mountains south of here prior to the Second World War, but none there in 1972.

Luggala. About 20 in the vicinity of Luggala lake in 1972.

Glencree. A few remained at Glencree in 1972. A male was shot here in circa 1950 by L. F. O'Carroll. The horns measured 33.5 inches in length, 34.5 inches tip to tip, with a circumference at the base of 7.75 inches.

Glendalough. About 60 on the cliffs overlooking Glendalough lake in 1972.

Appendix two: the known feral goat populations of Northern Ireland, past and present

Whitehead (1972) pointed out that feral goats occurred in all the counties with the possible exceptions of Londonderry and Tyrone.

Walker (1967) mentioned the type and colour of feral goats in Ulster without, sadly, defining the population.

She mentioned a small herd of feral goats 'headed' by a very large black horned male, several of the does being hornless; some with very small ears, broad heads, and black silky coats with wide white bands. Their udders were long and pendulous, almost reaching the ground. When domesticated, they became good milkers.

She noted, also, that quite a few feral goats were Channel island colour, presumably meaning a uniform tan, and dark around the muzzles like Jersey and Guernsey cattle. They were said to have been horned, large rangy goats with well-sprung ribs. These were very timid and appeared to be bad tempered.

The blue feral goats were usually horned, some with tall and very sharp spiral horns 'like a Chamois'. Their beautiful long coats in winter were described as being slate blue tipped with black.

Walker also stated that some of the males were large and lived to a great age. She quoted one male, reared from a kid by a farmer to run with his cattle. He was then still alive, and reckoned to have been over 20 years old. His horns were also said to have been over 60 inches long and 4 feet from tip-to-tip. Horn length in feral goat males usually ranges between 18.5 and 30 inches, although horns have been known to reach 44-45 inches. With regard to longevity, the maximum ages recorded for feral goats are 13 in a billy and 11 for a nanny. Although records of feral goats living for 20 years are unsubstantiated (Bullock, 1982) it has been rarely known in domestic stock (Twamley, 1901).

Couper (1976) wrote that there were several feral herds in Ulster, mainly in Fermanagh, Armagh and Antrim. They were generally descended from goats that were turned loose in the early 1800's by émigrés to the United States.

He believed that these herds generally started out very variable in colour with black, white, brown and reds predominating, but that after a while the colour reverted to the original black with white markings on the flanks and belly. He also believed that the coat became shaggier than that of the true domestic animals, with billies producing quite large horns: 2 specimens with horns over 32 inches long having been recorded in County Fermanagh. Some polled goats were seen, but these were soon bred out. The average weight of Fermanagh billies was said to be 150-185 lbs; Armagh goats being similar. Couper's description sounds very much like the 'reversion to a wild type theory' that dominated scientific thought on the origin of feral goats in the first half of the Twentieth Century. This theory was refuted as long ago as the late 1960's (Werner, 1967, and Greig, 1970), and is discussed in full in Appendix Five.

One kid was the norm, although twins occurred. Kidding took place in the early spring or late winter. The Ulster goats were then being used as a sporting attraction for shooting. The justification for this form of 'culling' was those goats that destroyed the forestry plantations were managed, ensuring the survival of a reasonable number for sport.

County Antrim

Fair head. A few seen in 1966. Still lived on Fair Head in 1972. One billy and 5 nannies had been seen on 1959. A dead billy was found on Ballycastle beach in 1954. This was believed to have come from Fair head.

Garron point. A herd of about 10 in 1972.

Glenarm. 21 goats were reported near Dunemencock in 1959.

Knockagh. Present during the Nineteenth Century. Extinct.

Rathlin Island. Seen in 1966. Described as quite a large herd of wild goats in 1967. About 20 on the cliffs in 1972. Usually near the West Light. Possibly derived from goats liberated by the owner of the island about 1760.

County Armagh

Camlough Mountains, southern Armagh. About 20 said to frequent the mountain in 1972.

Slieve Gullion. Herd of 9 in 1959.

Killeavy and Ballintemple. Herd of 16 in 1959.

Shanroe, Co Loughside. Herd of 23 in 1959.

Carrickbraod, Co Loughside. Herd of 20 in 1959.

County Down

Mourne Mountain. Famous for goats in the Eighteenth Century. A few recent (1972) reports of goats remained unsubstantiated. A 1967 report on an incident in the Mournes (Walker, 1967) is here quoted in full: *'Recently on the Northern Island news a lady was interviewed about an animal (vowed by several motorists to have been a puma) which had attacked cars crossing the Mournes, charging out of the mountain mist. As cars could only move slowly, visibility being very bad, this so-called puma had a gay old time bashing radiators, doors, and even running behind and letting fly at rear bumpers. After investigation, it turned out it was a large black male goat, an outcast from a mountain herd. A young male in all probability had failed to kill the old warrior. He, not being the type to die of a broken heart due to his enforced celibacy, was determined to end his days fighting, flinging himself at everything he came across that motivated'*. Newry lies on the other side of the same range of mountains, and it is reported (1967) that wild goats come down into the town in very cold winters where people feed them. They were said to have been a great danger to the traffic, as they lie in the middle of the snow-bound streets.

County Fermanagh

Lough Erne. Small numbers of goats reported on some uninhabited islands in the lough.

Lough Navar. A few goats on the higher cliffs in the Lough Navar forest region.

Kinnansy Island. Bryans (1964) wrote of Kinnansy Island being covered with domestic goats gone back to nature.

Appendix three: illustrative and photographic evidence relating to the Old Irish Goat.

One: A typical male Old English goat, Old British breed.

Two: Feral goats in the Wicklow Mountains in 1955. The four-year-old male facing the camera is rather typical of the Old Irish goat. Compare his overall appearance, and in particular his conformation, head and ears, with the Old English male (one).

Three: Galloway feral female with a male kid, Southern Uplands, Scotland. Galloway feral goats are traditionally said to have originated from travelling Irish herds. It is more likely, however, that they owe their origins to local goat stock augmented by Irish escapes. Whatever the truth of the matter, this female is typical of both the Old Irish and Old Scotch 'varieties' of the Old British goat.

Four: College Valley feral female, Cheviot Hills, Northumberland. An example of the Old English type of the Border Hills that merged almost imperceptibly into the goat stock of the Southern Uplands of Scotland.

Five: Skull and horns of a male feral goat from the Burren hills, County Clare. This animal was found dead around 1953. The horn measurements are 39.75 inches in length, 36 inches tip-to-tip, and 9 inches in circumference at the base.

Six: Feral male from the mountains of Kerry, population unknown, date unknown, but from a newspaper article published around the late 1960's to early 1970s'. This animal was captured in the mountains, brought to London for an Irish carnival, and then refused repatriation to his homeland by the Irish Government due to the foot and mouth regulations. From what can be seen of this male in the photograph, he is typical of the Old Irish type. Note the extremely small, pricked ears.

Seven: Old photograph, poor quality, of a Galloway feral male in the (believed) 1950's. Included for a comparison with the Kerry feral male.

Eight: Photograph of an Irish goat that was depicted in an article on the British breeds of goat in 1920. She demonstrates what the English Goat breeder's Association meant by a 'course and ugly head'. She has the appearance of being quite a large goat, but note the size of the pail alongside her, whilst the text described her as being small. Her face striping owes absolutely nothing to the Swiss patterning that is universally seen in modern goat stock. Rather it is a feature, along with her leg-striping, white belly, throat and rump patch, of the light belly patterning so commonly found in the Old British goat. Note her small, pricked ears.

Nine and ten: Welsh goats, 1920, from the same article as the Irish goat (Eight). These goats may be considered to have been typical of the old British breed.

Eleven: Engraving of a goat, 1829. This shows the very typical style of the Old British goat, some 200 years ago, whatever the 'variety'. Certainly, she fits the image of the goats imported annually into England from Ireland. Compare her with the following pictures of Galloway feral goats taken nearly 150 years later.

Twelve to seventeen: Female heft, Galloway feral goat, Southern Uplands of Scotland, 1970's. Twelve and thirteen show two very typical Galloway feral females of the old type. Thirteen would pass by description as an Old Irish goat.

Eighteen and nineteen: A comparison between the Old British goat and a pedigree 'British' goat of Modern Swiss type. The Swiss goat is Swiss patterning, a colour pattern not found in the Old British goat at all. Swiss patterning is dominant to all other patterns in goats.

Twenty and twenty-one: A comparison between an Old British goat and a British Toggenburg. Swiss goats belong to the Mountain Breed Group of central Europe, and were improved into the classic dairy wedge-shape by Swiss breeders from the 1840's onwards.

Twenty-two and twenty-three: The unique overall look of the Old British goat as compared to that of a champion British Saanen. These pictures were chosen for the similarity of stance between the British Saanen and the central female in the Galloway picture.

Twenty-four: Illustrations of the heads of feral goats shot on the Mull in the early Twentieth Century. After McKenzie, 1957. It is still widely being published that the horn type of the goat on the left represents the Old English type, Old British type, the Spanish Armada type or the Viking type; whereas the horns on the right are representative of the variation found in the Old British type.

Appendix four

Frazer Darling's theory that domestic goats of any type will, when released to go feral, revert to a "wild type" in a very short space of time

(Werner, 2002; based on Werner, 1967)

There are four main issues relating to Darling's theory of a reversion to a wild type when domestic goats go feral. These are:

- What did Darling mean by his term "reversion to wild type"?
- What did he consider to be the mechanism for such a reversion?
- What evidence did he offer to support his theory?
- How has Darling's theory been interpreted subsequently by researchers?, leading on to a consideration of the way in which the origin and status of the British feral goat has been viewed in the light of this.

Darling's theory on reversion to wild type in domestic goats newly gone feral was published in his supplementary paper to Hugh Boyd Watt's article entitled "On the Wild Goats in Scotland", published in 1937. Entitled "Habits of Wild Goats in Scotland"; the relevant section is worth quoting in full:

The goat is an able fellow and can go feral with no difficulty and in a very short time. The reversion to wild type is rapid, and ten years can make a big difference in the general appearance of a herd. What, it might be asked, is the influence on nitrogen metabolism

which makes feral goats run increasingly to hair and horns until the standard of the wild goat is reached? Natural selection must be a potent factor in levelling the type of goats newly gone feral. The breeding season is early and kids appear frequently in late January and February, which is no time for young things to appear in the West Highlands. This early breeding season serves as an extremely fine mesh in preserving those which suit the conditions. I have no figures on actual kid-rearing percentage in "wild" goats, but it must be small. This tends towards a stable population and it is worth remarking that the goats are distinctly local in their distribution, and there is little if any evidence of spread or extensive migration.

So, what did Darling actually mean by the term "reversion to wild type"? It is clear that he believed that all established feral herds were characterised by long hair and long horns, and that hair-length and horn-length was consistently longer than that found in the domestic goat under domestic conditions, hence his use of the term "standard of the wild goat". Reversion to the wild type therefore meant the consistent way in which domestic goats going feral underwent an increase in hair and horn length, and that there was a standard, in terms of length, that was consistently reached. Does this imply, therefore, that Darling considered longhaired and long-horned feral goats to have originated from shorthaired and smaller-horned domestic stock? The answer to this question is clearly no, and for reasons found elsewhere in the article and its supplement.

Darling's views on a reversion to wild type were based largely on what he called the "fine herd of pure white goats, which lives on An Teallach, the precipitous mountain near my home". He called this group a modern example of goats going wild, and stated that they were very wild indeed, even although the foundation stock of this herd had been owned by a crofter on the shores of Little Loch Broom as recently as ten years previously (hence his comment that "the reversion to wild type is rapid and ten years can make a big difference to the general appearance of the herd"). Watt mentioned that the crofter on the north shore of Little Loch Broom kept goats "of the wild type", and Darling himself stated that the crofter "who keeps goats of the wild type" on the north shore of Little Loch Broom had begun recently to catch up the bucks at the beginning of August and to keep them penned until November in order to overcome the early kidding problems. Relevant to this is Watt's further comment that at Kildonan (Badrallach) there was a flock of about forty goats owned by a shepherd, and that these were "indistinguishable from wild goats." All this would suggest that both Darling and Watt were perfectly well aware that domestic stock in Wester Ross as late as the 1930's was of the same type, including general hair-length and horn-length, as the feral goat or "wild type." Also, when Darling commented on the way in which the An Teallach goats had run to hair and horn until the standard of the wild goat was reached, he was perfectly aware again that the foundation stock for this exemplary group of the wild type had originated from a flock that itself was of the so-called wild type. What, we may then ask, was reversion to wild type all about in the An Teallach group? Watt described the An Teallach goats as the most magnificent of their kind that Dr. Darling had ever seen. They had strong horns of a wide spread, very long thick coats and exceeded in size any other wild goats in the west. There were, even so, only ten to a dozen of them, and this after they had been feral for a decade. The herd composition, according to Darling, was one mature buck, yearling bucks and half a dozen nannies and their kids of the year. How a herd composition of this type came about in ten years is open to question, although given the possibility that the foundation stock comprised, say, one male and two females, all two years old; that the fertility rate was a consistent 0.5 and the ratio of male to female kids was consistently 1:1;

that females bred firstly in their second year and until their eighth year; that the foundation stock was all dead by 1937, and that no major accidents or disasters befell the group, the likely population structure of the An Teallach goats after their first ten years of existence would have been five mature males aged two, four, five, six and seven, plus one yearling male; six females, aged two, four, five, six and eight, plus a yearling female, and three kids. The actual population dynamics of the group, as quoted by Darling, fits this model quite well with regard to females and kids, although one wonders what had been happening to the bucks over the years. Given this model, in conjunction with the actual make-up of the group, it is possible to assume that the one mature buck was likely to have been the son of the original male, and that there were up to five generations of mature females, mother to daughter. Given the foregoing, the sample of two males and up to five females is very small in terms of assessing an overall increase in hair and horn-length over a restricted period of time of a decade, and although the goats had taken themselves above the peat line and to the highest reaches of the mountain at over one-thousand-seven-hundred-feet, implying more severe weather conditions than the balmier shores of the loch, it could equally be argued that the foundation stock and restricted bloodlines may have had equal bearings on the way in which the herd was developing over the period. What Darling was implying by his term “reversion to wild type” in relation to an increase in hair and horn length to a wild standard must therefore be viewed in the light of Darling’s knowledge that domestic goats in the West Highlands were indistinguishable from the feral type, and the group in particular that he used for his limited study originated from domestic stock that was well-known to him and already of the “wild Type” before they went feral.

When considering Darling’s mechanism for reversion to wild type, it should be noted that he made two separate comments on this. He noted, firstly, that goats will go feral very quickly and with no difficulty, and that it was an “influence” on the nitrate metabolism that triggered increased hair and horn growth, once they had. Darling therefore ascribed the changes in hair and horn growth to a chemical process within the organism, and one that would have affected the synthesis of the proteins, carbohydrates and fats that form tissue and store energy. But what conclusion did he reach with regard to “the influence” itself? His immediate answer was “natural selection”. Natural selection was the potent factor that levelled the type in goats newly gone feral, meaning that survival of the fittest meant that only the fittest survived, the ultimate criteria for which was the fittest having longer hair and horn length. Did he then mean that levelling out targeted the pre-existing stock over a period of time (adult mortality) or subsequent generations (passing on the best suited characteristics)? The latter, it would seem (although he viewed the process as rapid) for he immediately went on to discuss the early breeding season of the feral goat. The early breeding season was a “fine mesh Sieve” that preserved only those kids that were most suited to the (weather) conditions. What we have, therefore, is the assumption that when goat stock goes feral, the adverse weather conditions during early kidding result in only those kids best suited to live in such conditions surviving; and that such kids are presupposed to have a metabolism that runs to longer hair and longer horns than is the usual standard for both those kids that tend to survive to weaning and those that don’t. Darling did not, of course, discuss the issues around the heritability of all this, which is to say why characteristics that develop only in later life have such an impact on survival at the kid stage of development. His case would appear to rest on whether or not the An Teallach group had been in existence for long enough for natural selection to have weeded out those adults that were less suited to life on the bleak and exposed mountain top, i.e. those with thinner coats and less cashmere, allowing those most suited to the conditions

to pass on their more suited coats to subsequent generations. Unfortunately, Darling himself never made this case, and made no attempt to explain how or why the inherited potential to develop longer hair and horns would have such a marked effect on whether or not a goat survived the first few days of its life. Most certainly it is the case that a shorthaired goat may well develop a six-inch coat in adverse weather conditions, but the foundation stock of the An Teallach group were already long-haired at the time of their liberation, and even had they not been, the increase in hair-length would have been of a noticeably different type and texture to the coat of a genetically long-haired animal. Lastly, it should be noted that the crofter's domestic goat stock at nearby Loch Broom, had a similar early breeding season to the An Teallach group, this causing early kidding problems that needed to be overcome. This being the case, there should have been nothing unique about the early kidding in the feral goats, and any natural selection being exerted on the ferals would have equally been exerted on the nearby domesticants, another way of making the point that had Darling's mechanism for a reversion to a wild type existed in the way in which he defined it, it would have been operative before the goats went feral, thus denying any link to the process of "going wild".

The actual reference to "reversion" is an interesting one, as the obvious question is reversion to what? The genuine wild goat is shorthaired, and it has been pointed out already that Darling meant the Scottish feral goat when he alluded to a "wild standard". The best explanation of what Darling meant when he used the term is therefore the idea that goats going feral begin to look more and more like goats that are already feral until they look exactly like them, and that it is the conditions under which they are feral that makes them ultimately all look alike. Although this is the only reasonable interpretation of the meaning behind Darling's concept of a "wild type", he actually denied its validity when he made it clear that he understood that the standard of the wild type existed in domestic stock even before it had the opportunity to go feral.

Despite the fact that Darling had observed the development of a feral herd over ten years, he maintained that he had no actual figures for kid-rearing percentages in wild goats, and also made comments on the behaviour of feral goats, based on the An Teallach group, that were inaccurate (herds are patriarchally led; males remain with the females throughout the year; yearling bucks remain on the outskirts of the group; herd composition is one buck and half a dozen nannies).

Summarizing Darling's theory on reversion to wild type, it is clear that it was based on limited observation, and that at best its interpretation is that already long-haired and long-horned domestic goats, of what he called the wild type but in domestication, might develop coats and horns that are longer still if they are allowed to go feral.

Moving on to the way in which Darling's theory has been interpreted, it has mostly been taken to mean that if goats of any breed or type, or a mixture of any breeds or types, are allowed to go feral, then they will rapidly revert to a uniform and recognisable type which is long-coated and longer-horned. Often this is stated in derogatory terms, for example "little, course-horned and hairy", and pedigree goat breeders have tended to interpret the term reversion, in this context, as their fine pedigree stock reverting to a useless and non-pedigree scrub type of goat almost as soon as the refinements and blessings of Herd Book status and regular supplements are denied them. Indeed, it was reported recently that feral goats "are just mongrels...that are kidding at a year old and, no doubt, carrying a worm burden and often fluke as well" (Whiteside, 1998). Obviously, if Darling's theory had been demonstrable

from the evidence he offered, and a mechanism for its working convincingly presented, then a case would have been made for believing that “reversion to wild type” adequately explained why feral goats tended to have a predictable phenotype, and there would be no need to look beyond a pot pourri of domestic escapes of modern type to explain their origins. As it stands, Darling was unable to do this, and his theory was refuted as long ago as the late 1960’s (Werner, 1967; Greig, 1969), although this has not stopped innumerable writers and researchers alluding to it as an assumed fact in the intervening thirty-odd years.

Lastly, little thought seems to have been given to the fact that feral goats are not universally longhaired, the standard varying between rough and thick-coated to long hair in the females and long hair in the males. What marks a feral goat of the Old British type out from the modern breeds, be they the ferals of today or the now extinct domesticants of yesteryear, is the type and texture of the coat. Not only does it appear different visually, but also is notably different when handled. Therefore, had Darling’s hypothesis been viable, feral goat populations would have universally comprised longhaired animals.

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