

THE DOMESTICATED DONKEY:II -TYPES AND BREEDS

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ABSTRACT

In this study many types and breeds were revised including wild donkeys and domestic breeds from various countries of the world. The donkey, or ass, is the smallest species in the family *Equidae*. It is known for its exceptionally long ears. The word 'donkey' refers to the domesticated *Equus asinus*. The wild ancestor of donkey is equally deemed to be *Equus asinus*, the African Wild Ass. They come in a variety of sizes and breeds, as do horses, and in many countries the donkey is called as "the horse of the poor".

Keywords: *Equus asinus*, African Wild Ass, wild donkeys, domestic breeds.

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INTRODUCTION

Domestic donkey is a member of equine family in which there are horse, mule and zebra. For centuries donkeys are used by human for various reasons such as for work, milking, breeding, and eating. Donkeys are very gentle, affectionate, intelligent, cautious and brave. Donkeys adapt a protective attitude to more vulnerable people of children or people of reduced mobility. They also can be used as a guardian animal for sheep, goat against to some predators. Different geographic and climatic conditions created different kinds of donkeys in different countries even in different regions. They have been adapted in a special region to survive. In this study some donkey types and breeds will be studied (Jones, 2005).

The purpose of this compilation was to provide information of types and breeds of donkey.

RESULTS

Types and Breeds

Wild donkeys

Within the natural range of the donkey, wild donkeys inhabit arid and rocky regions dotted with hillocks which they use as observation posts. Temperatures often exceed 50°C in the

daytime in summer. Donkeys will browse or graze on any available forage and can roam 4-6 km from a water source. In the wild, donkeys consume 61% browse, 30% forbs, 4% grass, and 5% other, which can be bark or twigs or even roots. Buffer strip vegetation, i.e. what grows on the border between woodland and grassland, is important forage for donkeys during the summer or dry season. In the wild, donkey social organization ranges from solitary individuals, small or large groups, to herds. One research undertaking found that 5% of the population was solitary, 28% occurred in groups of 2-6 individuals, 30% in groups of 7-20 individuals, and 36% in herds of 21-60 individuals. Small groups usually consist of a single male with a few females or are all male or all female adults. Large groups have 1 or more males and up to 10 females. Some large groups consist solely of females. Herds tend to consist of 25% males and the rest females and their young (Grinder *et al*,2006).



Figure 1.A donkey is nearly fainted because of hot weather (Photo by Dr. Orhan Yilmaz)



Figure 2.A foal suckling (Photo by Dr. Orhan Yilmaz)

In the world there are or were several types of wild donkey:

Kiang (*Equus asinus kiang*): Found in India and Nepal. There is a well-marked black dorsal stripe. The under-parts are pure white, and this colour extends in wedges almost to the dorsal stripe, separating the coloured areas into shoulder, flank and haunch blocks. The white also extends on to the legs, where it is infused with the red of the body colour; on to the throat and sides of the neck, restricting the body-colour to a narrow strip on either side of the mane; and on to the muzzle, the insides of the ears, and as rings round the eyes (Groves, 1974).

Onager (*Equus onager*): Found in Iran, Syria and North Saudi Arabia. Onagers were used in warfare in ancient Mesopotamia (Jones, 2008).

Kulan (*Equus hemionus*): They live in Central Asia (Yarkin, 1962).

There is also some feral donkey in some part of world such as the Mohave Desert, in the South-west USA.

Sahara Ass (*Equus asinus atlanticus*): It is already extinct. It is appears on frescoes and rock art in El Ghichaw, a small village south-east of Laghouat in Algeria (Grinder *et al*, 2006;www.googleearth.com 2011).



Figure 3.A shepherd dog and a donkey (Photo by Dr. Orhan Yilmaz)

Somali Ass (*Equus asinus somaliensis*): Somali asses may actually be the only surviving African Wild Ass, and seem to be closely related to domestic donkeys (Anon, 2011). They are found in Somalia, Ethiopia and parts of Kenya (Grinder *et al*, 2006).

Nubian Ass (*Equus asinus africanus*): These live or lived in Egypt, Sudan, Eritrea and part of Ethiopia. Their coat is slightly redder than that of the Somali ass (Grinder *et al*, 2006). They may have been equal contributors to gene pool of the domesticated donkey (Beja-Pereira *et al*, 2004).

Beside wild donkeys, feral donkeys are found in different parts of the world where donkeys were once intensively used but have now been replaced by machines. Donkeys survive very well in the wild, and stories are told in South Africa (Jones *pers. com.*) of donkeys being introduced on game farms to reduce the predation of carnivores on the antelopes, only for the donkeys to increase in numbers while the antelope continued to decrease. Large feral populations in Western Australia were estimated at 1.5 million in 1983. Another population is in Death Valley (California and Nevada, USA). In 10 western United States there are about 36,000 feral horses and burros (Beja-Pereira *et al*, 2004).



Figure 4.A suckling foal and its family (Photo by Dr. Orhan Yilmaz)

Table 2:Known donkey breeds of the world (A compilation from Camac, 1997a & b;Ebangi& Vall, 2004;Fielding & Krause, 1998;Groves, 1974; Hutchins *et al*, 1999;Kugleret al, 2009; Raziq *et al*, 2010;Squance, 1997; Yarkin, 1962).

Usual names	Accepted size (height at withers etc)	Accepted colour/s & markings	Other characteristics (supposedly physical)	Other characteristics (behavioural, incl. Use)
Africa and near east				
Anatolian§	85-115 cm	Mostly dun, some black, white muzzle, dorsal stripe & cross	Big heads	Pack and riding animal, fast-paced
Arabian white ass	Large		“refined, saddle type”	
Cameroon	110 cm Body length 108 cm Heart girth 135.8 cm 123.5 kg Trunk length: withers height: 1.08 %			
Cypriot/cyprus ass ^a	120-125 cm (female)	Dark brown to black; short haired; white at	Well proportioned conformation;	“Quiet and frugal character, adapted

	125-132 cm (male) 250kg (female) 300kg (male)	belly, nose, mouth and around eyes; different varieties of colouring possible dark brown to black; short haired; white at belly, nose, mouth and around eyes; different varieties of colouring possible	“Large head with convex forehead and straight profile. ...characterized by its strong feet and is suitable for mule production.” “long legged, strong and well developed” “considered the best donkey breed in the Middle East”	to heat and drought, probably originated from breeds in SW- France and brought to Greece (or Cyprus?) during the time of the crusades.”
Cyprus donkey; gaidouri§ (nb not clear how or why this differs from cypriot/cyprus ass)	“various sizes, some quite large”	Two main strains: Firstly a brown donkey with beige nose and stomach. This may have originated from breeds in western to south-western France, possibly during the time of the crusades. Secondly, a small grey donkey, almost certainly of African origin, which may have been in Cyprus for several millennia. The two strains have interbred: around 80% are of the brown type and 20% of the smaller grey type.		In the Turkish part there are feral animals in the Karpas peninsula
Damascus saddle ass	(see white Egyptian ass)	(see white Egyptian ass)	(see white Egyptian ass)	Known since Biblical times and carefully bred: “originally called the White Damascus Ass and was the mount of kings”. Now used for anything.
East african donkey	≤102 cm	Grey, brown or reddish	“poor confirmation, hardy”	
Israeli	102-142.25 cm	Grey, black, brown	“no careful breeding”	
Karakacan	[undescribed]			
Maasai	Small	Dun		“well known belongs to Maasai tribe, used for pack etc.”
Merzifon (between ankara and amasya regions of turkey)	120-125 cm	Brown or black, no dorsal stripe	Proportionally smaller heads	
Moroccan ass	91-122 cm	Light gray with “pronounced dark stripes and striping on legs”.		
Muscat riding donkey	122-142.25 cm	Silver grey “which tends to look white against the black skin of ageing animals”.		
Native ethiopian	Small	Dun to black	“heavy head, roman	Pack animals

			nose”	
Nigerian	Small	Dun	“ordinary”	
Nubian	122 cm	Grey, summer coat reddish; cross short or thin, no leg stripes		Wild
Somali	142.25 cm	Grey, summer coat yellowish. No cross, but very prominent leg stripes		Wild
Sennar ^a		Pale grey		Good for riding
Somaliland domestic ass	102 cm		“coarse, common”	“ordinary work”
South african	small	Black, dun, brown, light gray	“common”	
Sudanese riding donkey – sub-breed atabai	102-112 cm “middle sized”	Grey, white, reddish or dark brown, often without cross.		
Sudanese riding donkey – sub-breed kassala	102-112 cm “larger”	Reddish, with cross		
Sudanese riding donkey – sub-breed massawa	102-112 cm	Almost white		Saddle asses
Syrian wild ass	<102 cm	No shoulder stripe		Wild – extinct [?]
Turkish ass	Small	Black or dun	“sturdy”	
White egyptian - baladi of lower egypt	122-142.25 cm	White or grey		Known since Biblical times and carefully bred: “originally called the White Damascus Ass and was the mount of kings”. Now used for anything.
White egyptian - hassawi	122-142.25 cm	White or grey		The common saddle animal
White egyptian - saidi of upper egypt	122-142.25 cm	White or grey		Known since Biblical times and carefully bred: “originally called the White Damascus Ass and was the mount of kings”. Now used for anything.
Asia				
Asian donkey	“Small, some so small to be of miniature status”	Dun	“common”	
Asian donkey	<91 cm		Thick woolly coats	“used for packing”
Central asian donkey	Small	Mostly dark colours	“ hardy, coarse”	
Kiang	142 cm	Dark red with black dorsal stripe, white areas extending quite far upwards	Shorter ears, rounder foot	Wild – extinct [?]

Kulan	127 cm	Dark, “very marked broad” back stripe	Thick winter coat	Wild – extinct [?]
Kwanchung	~142.25 cm, over 300 kg			
Mahratta	“Very small” (61-91.5 cm?)			
North china indigenous	132 cm	Dark brown and reddish chestnut		
Pakistan donkey	Small	Dun	“common”	
Piddie	(see SPERKIE)	(see SPERKIE)	(see SPERKIE)	(see SPERKIE)
Purgosh	122 cm	Reddish brown	“excessive amount of long hair”	“Some are used for sturdy saddle animals”
Saddle type donkey – larger	112-142.25 cm	White or grey, no cross	Finer hair but bushy mane and tail, smaller head	“saddle type”
Saddle type donkey – smaller	81.25-111.75 cm	Dark grey with cross	“small body, large wide head, long ears”	
Shantung ^a	132 cm	Almost black with light points		
Shinghari	138 cm	“Dominant and selective color is white”. Many colours	Browse as well as graze, sometimes surviving on bark and wood. Resists leeches by drinking with closed mouth.	Famous for draught, used for carts in cities and by nomads, and by chromate miners, carries backloads ≤240 kg on plains, ≤160 kg on mountains.
Sperkie	81 cm	Many colours but predominantly grey and black	Browse as well as graze, sometimes surviving on bark and wood.	Strong libido, difficult to handle. Carries backloads ≤160 kg on plains, ~60-80 kg on mountains. Used for agriculture and water transport, but also in cart racing.
Suimi	122-142.25 cm > 200 kg			
Europe				
Albanian	107 cm (102-120); Rump height: 105 cm (100 - 114); Body length 108 cm (102-117)	Grey, black, reddish or purple		“In Albania, the number of donkeys is increasing due to economic reasons, people need to use donkeys instead of vehicles, tractors and machines”
Amiata§ (asinoamiatina, asinoamiatino, asino dell amiata)	125-140 cm.	Mouse-grey with dark cross on back, “distinctive zebra stripes on the legs and ears with dark signs...belly, mouth and rings around the eyes are	Strong; “persistent and resistant against diseases. It survives in harsh conditions”	Lively, “markedly agile and, therefore, specially adapted to mountainous regions. They are

		blond”		used as pack- and working animals, but also as a draught- and riding animal.’
Andalusian ¨§ (asnoandalucia, cordobesa, andaluz; gran razaasnalandaluza o cordobesa, cordobés, córdoba, campiziesa, campinesa, asnalandaluza, andaluza-córdoba, andaluza o cordobesa, andaluza, andalusischerriese n-esel, Cordobese, andalucian)	146-155 cm [?] 135-150 cm (female) 145-158 cm (male) 320-460 kg	White-grey or dapple-grey roan	Hair short and fine. Conformation “large and rangy ...large, firm bones and good quality bone in the legs... Head is impressive, with roman noses, very large ears, all on a muscular neck” and is “carried well forward, giving the impression of energy”.	“very graceful and fine movement and quiet disposition”.
Apulian	(See Martina Franca)	(see Martina Franca)	(see Martina Franca)	(see Martina Franca)
Arcadian	95-120 cm 90-120 kg			
Argentato di sologno§	[no information]	Silver or grey		
Asinara§ (asinoasinara, asinobiancho di asinara, asino albino dell'asinara, asino Dell'asinara, albinotischerzwer gesel)	80-105 cm 80-90 kg	Most are pure white, mouth pink, eyes pink or light blue “which may be an effect of incomplete albinism”		Less sure-footed than other breeds of donkey, although popular for circuses. Otherwise kept wild on their island.
Balkan§ (domacibalkanski magarac, domestic balkan ass)	~ 95 cm (female) ~100 cm (male) 200 kg (female) 250 kg (male)	Grey, brown, dark grey, and reddish brown		
Baroque	[not given]	Pale yellow “(=pale form of flavism)”; skin is not pigmented; eyes are blue.	Coat: a “soft, fine fur”. Hoofs waxy and sometimes striped.	“This special donkey was bred by rich estate owners of the Austro-Hungarian Empire in the Baroque, as an imitation of the white horses. They are of finer physique than pigmented donkeys and susceptible to diseases. Their reproduction rate is also low. These

				facts make breeding difficult.
Baudet	(See Poitou)	(See Poitou)	(See Poitou)	(See Poitou)
Bourbon§ (âne bourbonnais)	118-128 cm (female) 125-135 cm (male)	Brown (beige to chocolate) “Croix-de-Saint-André”; eyes light rimmed, grey muzzle. Legs with or without stripes.	Head: straight profile, Long, upright ears. Legs bony and sturdy; wide hooves	
Bulgarian	Generally mixed “and of small type like the donkeys in Africa. ..Also a bigger type like Martina Franca and Cyprus donkey occurs.”	Grey with a black eelstripe.		Used in Bulgaria especially in the wine growing areas, hitched to carts or wagons.
Catalan ^a § (asininacatalana, vich, catalana, catalán, ausetan, catalana, katalanischer Riesen-esel, anecatalan, catalonian donkey, catalonian)	~ 136 cm [?] 135-148 cm (female) 145-160 cm (male) ~350 kg	Glossy black to dark grape; silver white underbelly, tip of nose and around eyes, reddish or chestnut at edge of white, also sometimes on ears, & a short fringe of fine reddish hair around eyes.	Ears “very mobile, mostly upright. Large sized and elongated animals with a concave profile.” ...Conformation “gives it a graceful and long silhouette... a heavy head with a wide face and big, wide eyes ...back ... relatively long with strong muscular loins. The breast is wide and deep”. “This breed shows a good deal of refinement about the bone and head”.	The breed is known for its longevity and sexual prowess. Great style and action, “an admirable temperament”, during the 19 th century many animals were exported around the world to improve donkey breeds and produce mules.
Cordoban	(see andalusian)	(see andalusian)	(see andalusian)	(see andalusian)
Corsican§ (âne corse)	98 cm	Grey or black: “Two types. (the) original and smaller grey and the crossbred [with Catalan] black”		Already found on Corsica in Babylonian times. Used as water carriers by shepherds, as pack animals during the olive and grape harvests but also for meat and sausages. They are robust, resistant to disease and are easy to look after. Today donkeys in Corsica is most used as pack animals for tourists.

Cotentin§ (âne du cotentin)	115-130 cm (female), 120-135 cm (male)	Ash grey, blue grey or dove grey with white underbelly, defined cross (eelstripe; Cross of St André) and sometimes leg stripes.	Neck: Strong, with mane right-hand side. Reaches maturity at 4 years	
Danish	100-110 cm (85- 150 cm)			
Ellinikon (local greek ass)	~100 cm	Brown, with grey muzzle, belly and under parts; the predominant type is light coloured with an eelstripe.		
Encartaciones§ (asno de las encartaciones, las encartaciones)	~120 cm	Brown and black, sometimes dark stripes on the legs, white signs around mouth and eyes. Belly is also white.		“Still used as reminiscence of the traditional image of the Basque small villages. This donkey breed plays an important role in the traditional Basque agriculture and pasturing.”
Gascon or pyrenees donkey ^a	120 cm and above	Shiny black, shaded black, dark brown or chestnut. Almost white around eyes, base of nose, inside thigh and belly.	Coat fluffy up to 2 years. Compact body.	In 19 th cent. Used for milk production as well as draft, and described as trotting “just as quickly as a horse pulling two people in a two wheeled cart and which can work just as well as the heavy draught horses while costing a lot less to feed” and “credited as being the best adapted form of transport for rough terrain and an indispensable part of the agriculture of mountainous slopes”, but now only tourism.
Gomari	(see albanian)	(see albanian)		(see albanian)
Graciosa§ (burro de graciosa, burro anão da graciosa, dwarf donkey of graciosa)	≤ 120 cm	Greyish, “often dark on the extremities and all possess a black bar in the shoulder area and two black stripes in the front limes”		

Grand noir du berry§ (grand noir; âne du berry; berry black)	130 cm (female) 135-145 cm (male)	Single-colour bay to dark brown to black, except for grey/white muzzle and eye surround (each of which can be edged with red), belly, including the sides of the breast, groin and shoulders and inside thighs. No stripes or cross.	Hardy, with a strong neck, open chest, straight back, rounded inclined hind quarters and strong limbs adapted to a rough terrain. Head rectilinear, long open ears. Neck “strong ... back straight... In silhouette, the donkey is very well proportioned.”	Bred for barge-pulling. Working donkey for small everyday tasks on the farm; packsaddle donkey for hikers
Grigio siciliano§	[undescribed]	Presumably grey [picture shows no shoulder cross]	“Special characteristics of the milk were investigated recently”	
Herzegovinian§	“small size”	Varies from grey to brown. Eelstripe and shoulder cross mostly exist.		
Hungarian fallow donkey	“Medium and big”	Several colours, but most common a brown to brown-dark variant, no specification of stripes		
Hungarian scrub donkey	“Small and medium”	Different shades of grey with eelstripe and shoulder cross		
Île de ré (l'âne de l'île de ré)	(see poitou)	(see poitou)	(see poitou)	The donkeys are given ‘trousers’ to wear, a kind of long gait or made from plain or checked material. These trousers are to protect the donkey from mosquito bites. The donkeys were used for the salt harvest in the salt marshes and to gather kelp from the beaches. This kelp was then used as fertiliser on the fields of the island. These days the tradition is only used as a tourist attraction and as ancient custom.”
Irish piebald donkey	[undescribed]	Piebald [presumably: a mix of black and white		All Irish donkeys popular with

		distinct areas]		small farmers, particularly in harvesting turf. Currently also used in races at festivals.
Istrian *§ (istarskimagarac)	123.5 cm 220 kg	Black; snout light to white, muzzle dark to black; cross and stripes are not discernible	Larger frame, short, black and bristle mane, strong fibia	Used to “transport water and to take goods (like vegetables) to town market for selling”. Draught power, riding, driving, mule production, hobby animals and tourist attraction.
Majorca ass§	142.25-162.5 cm (males)	Usually black	“correspondingly large bodies and bone”. Coat “more harsh than silky or glossy”. Head large with very long ears.	Bred for draft but “with no real style or appearance in action but ... very powerful with a rather sluggish disposition”
Majorero§ (burro majorero, canary island, common spanish)	~110 cm 100-150 kg	Dark or light grey		“Particularly well adapted to the volcanic environment of the Canaries”
Mallorcan*§ (asemallorquí, asnomallorquin; burro mallorquin, malorqunia, balear)	125-135 cm (female) 145 cm-155 cm (male)	Usually black to dark grape, white/grey shading around nostrils, under mouth, around eyes and on underbelly.	Large head, broad hoof and smaller and finer boned than the CATALONIAN.	
Maltese ass§ (hmar malti)	~143 cm (female) ~150 cm (male)	Black or dark brown / dark bay with white muzzle; Coat short and glossy.	“slender with good bone with very large, hard hooves. But they have “style, well-balanced conformation and refinement”.	“fiery disposition”
Martina franca ³ § (pugliese; martinese; asino martina franca; puli; martina franca esel; ane de martina-franca; apulian)	145-150 cm [?] ~127 cm (female) ~135 cm (male)	“Dark brownish to black coat with reddish markings around the eyes and part of the muzzle, whitish-grey nostrils, grey abdomen and inner hind quarters and dark pigmentation of the mucous membrane.”	“Well formed bone structure, short straight back, short croup and strong joints, heavy head with large long ears”. “The head is large, but not too heavy, with well developed jaws and long straight ears. The neck is strong and muscular; no demarcations divide it from its continuation into the	Used for draught and back loading: “known for its exceptional hardiness and strength” living in Apulia in conditions which have led “the breed to withstand extremes of temperature and produce very hardy foals”.

			back, large long and muscular croup, muscular legs with thick dry joints and hard hoofs.”	
Miranda (burro de miranda, burro do planaltomirandes, raçaasinina de miranda, mirandes, transmontano)	120-135 cm	Brown chestnut; base pigment brown, and “possesses black extension”.		Draught animals in agriculture and pack animals in tourism
Normandy§ (âne normand)	110-125 cm 150 kg.	“Descended from the common ass by recent selections.” Brown to mouse grey with dorsal stripe, underbelly grey/white, and no leg stripes.		Originally for farm transport and seaside resorts.
Pantelleria§ (asino di pantelleria, asinopantesco, pantesca, pantesco)	125-130 cm	Blackish or dark bay to brown, with white belly, muzzle and eye rings.	Coat short and shiny “with an oily touch”. Head “small and thin”, legs muscular and strong.	Exceptionally sure-footed as a pack animals. On its island, preferred to horses: “considered to have much stamina, to be fast and temperamental. Races take place in which the donkeys reach speeds of 25 km/h. Typically they can move in the ‘Tölt-gait’, a form of movement which Icelandic horses are well known for, this is both fast and comfortable for the rider.” “very graceful action and is ... lively but nervous”. Widely sought after for circus use, they “had extraordinary stamina enabling them to maintain a speed of 14½ km per hour,

				pulling light loads for several hours. “
Poitou ^a (baudet de poitou, âne de poitevin ; âne du poitou; poitou-esel)	≥137-152.5 cm 135-156 cm (males) 350-420 kg (males)	Black or dark brown. Brown-bay coat, sometimes yellowish, silver-grey bordered by a reddish ring around mouth, nose and eyes ; very light colour underneath the belly and inside the thighs No back stripe or cross.	Extremely long silky coat, long mane and well-haired tail. Very large ears “full of hair, the head was coarse and Roman nosed with a drooping lower lip ...huge feet, very heavy large bone and good muscling”. “large head, long open ears; strong neck, long, straight back, short croup, long muscular thighs, straight shoulders, prominent breast-bone, rounded rib cage ; powerful limbs with very broad joints ; wide, open hooves covered with hair”	Origin North West Africa and appeared in France in the 10th century. Mule production and mule exportation were very famous. The Poitou donkey was exported to numerous countries before the market collapsed after 1950.
Primorsko dinarski magarac § (littoral dinaric donkey)	96.3 cm 90 kg	Grey to dark grey with a light to white belly, expressive and clearly discernible cross and stripes	Small, compact frame, straight profiled head line, short bristly mane. By its size, demands and resistance adapted to the conditions of the Croatian Karst coast. Small and horny hooves are adapted to movement on rocky terrain.	Draught power, riding, driving, and tourist attraction
Provence donkey § (arles, crau, migration, savoie, âned'arles; âne de berger, âne de la crau, âne de savoie, âne de transhumance, ânegris de provence, provence, savoy- esel)	117-130 cm (female) 120-133 cm (male)	Pinkish to turtle-dove grey, varying from light to dark with often a hint of red or brown, white around the eyes and muzzle. Dark, well- defined cross, forehead, ears and edge of eyes and muzzle “almost always have a brown/red tint”. Limbs may be marked with black zebra stripes “and there is often at least one diagonal stripe on the front hocks”.	Hardy, with solid bone structure. Large straight head well attached to a strong thick neck. Straight back, wide loins, strong hindquarters and powerful strong limbs. ”The feet, with rather wide hooves for those of a donkey, are perfectly adapted for trekking and heavy weights.” “Docile temperament, good limbs in order to travel the mountain tracks”	Originally bred by shepherds for seasonal movement with flocks, “well able to carry heavy loads, with a docile temperament and good legs to cover the migratory routes ... calm, patient, easy to saddle, to put to harness or to ride. He is very sure footed even on rough ground.”
Pugliese/puli	(see martina franca)	(see martina franca)	(see martina ranca)	(see martina franca)
Pyrenean § (âne des pyrénées; pyrénéen)	120 to over 135 cm	Black to dark red or brown. Rims of eyes, oxters, belly, and inside	Thin and straight body with an average head size, profile is straight	Cosmetics made with asses' milk. Originally used

		legs pale to white. Short-haired.	or concave; long, thin upright ears and fine limbs	for mule breeding and bred as working animal. It has a lively, hot temper and alert character.
Ragusa ^{a§} (ragusian, sicilian, asinoragusana, ragusano, ragusan, ragusana)	130-150 cm 135-138 cm (female) 140-145 cm (male), around 350 kg	Dark bay with light points, lighter brown underside	Head “strong and compact ... well set on neck, good barrel and straight back, well proportioned legs with small, neat and supple joints,, small feet with strong, high hoofs for mountain travel.”	“Strong, vigorous character”. Good for draught, but “mostly mountain pack asses”. Used to breed war mules “fondly remembered for their patience and good temperament” and this breed noted for “its sure-footedness on any terrain ...still used for riding”
Romagnolo ^{a§}	132-140 cm (female) 135-145 cm (male)	Grey, dark bay (bay and morello). Short and smooth hair, with eelstipe, zebrature to the front, less obvious on limbs or absent on the posterior limbs. Snout and abdomen white with ventral line of dark hairs from the tip of sternum to the genitals. Inner face of the limbs until 2/3 of the thigh and the forearm white, Tail with dark hairs in the inner part of the stalk and the ribbon, mammelle and scrota dark. Dark hoofs.		
Romanian	[height not mentioned] “large variation of body length, probably because of the change of confirmation from youth to maturity”	“mainly grey, but also silver, black and sometimes white” [picture shows dark brown]		“Used as a saddle animal and by peasants from some plain regions in the SE and NW of Romania.” Important in transhumance: “usually 1-2 donkeys are with a flock of 300-500 sheep. It is also used as a light draught and small cart animal.”

Sardinian§ (asinosardo, sarda, ainu, Burriku, molente, molingianu, pegus de mola, poleddu, sardo, sardinian dwarf)	80-100/115 cm 90-130 kg	Grey with white around eyes, muzzle and underbelly, and distinct cross on back, and zebra stripes on legs	Strong hoofs, has “solid legs and is very robust”.	Used by shepherds for carrying goods, produce and firewood and “known for its patience and gentle manner”, “frugal & agile”, although in some parts of Sardinia “donkey meat was considered to be a particular delicacy”. Life expectancy 30-35 years.
Thüringer waldesel (forest donkey)	95-110 cm (female) 100-110 cm (male) 133-210 kg (male); 156-185 kg (female)	Stone-grey coat with white belly and black eelstripe and shoulder cross. Also found as black or dark brown/brown with lighter markings around eyes and on muzzle. Zebra stripes often found on the lower legs.		Known earlier as the ‘Miller’s Donkey’ or ‘Stone Donkey’ (Mülleresel or Steinesel), donkeys with this name were collected in West Thuringia, Saxony and Saxony-Anhalt. Probably used for turning grindstones.
Waalse ezel; wallon donkey	At 4 years: 100-115 cm (female) 105-120 cm (male)	Uncoloured black, bay or grey with or without eelstripe	Head straight	Quiet, friendly character, suitable as pet, pack donkey or in harness: “kept as pets”
Sjeverno-jadranski magarac § (north adriatic donkey)	115.5 cm weight: 175 kg	Varies from brown to black, cross and stripes are not always expressive and clearly discernible	Medium size frame, fine head with a straight profile, strong and short mane, firm legs and strong tibia. Body size is suitable for the climate of Kvaerner islands; resistance, endurance and longevity	Draught power, riding, driving, mule production, hobby animals and tourist attraction.
Zamarano-leonesª§	140-155 cm ~141 cm (female) 151-157 cm (male) 350 kg	Usually black or brown	“Balanced conformation, corpulent and with a powerful body. The large head is characteristic as is the very rough, dark brown coat. Also characteristic is the mass of hair on the forehead. The well developed capillary wool lends [them]a	Used in tourism, leisure and trekking

			special physiognomy.” “not much style but heavy boned and strong bodied” with “a large head and powerful neck with ears that tend to fall to the front or side”.	
South, central, north America and Australia				
Ausetano ^a	Medium sized		“... from Catalanian blood”	
Australian	See US STANDARD LARGE DONKEY	See US STANDARD LARGE DONKEY	See US STANDARD LARGE DONKEY	See US STANDARD LARGE DONKEY
Brazilian ass	122 cm	Many colours	“good conformation”	
Class b (oversized) miniature	91.5-96.5 cm	(otherwise as US MINIATURE MEDITERRANEAN)	(otherwise as US MINIATURE MEDITERRANEAN)	(otherwise as US MINIATURE MEDITERRANEAN)
Mammoth jackstock ^a	137 cm (female), 142.25 cm (male, which must also measure 19 cm around cannon bone (below knee)) Heart girth at least 147 cm (female) 152.5 cm (male)	Mostly black, but many shades of red	Coat fine and glossy, “head should be well shaped, carried alertly and well balanced. The ears should be long, well set and carried erect. The eye should be large and open and face straight with only a slight roman nose. The animal should have alertness and style in its manner and gaits”. Also: “The top line should be straight and strong. They should be short-coupled and smooth over the hips, carrying a long, well-muscled croup. The shoulders should be well sloped, chest wide and deep and the ribs deep and well-sprung to give depth and capacity to the middle. Heavy muscling should be evidenced ... also through the chest, forearm and gaskin. The set and quality of the legs is important and should be as nearly correct as possible. The bone and joints should be large but clean and flat. The feet should be deep, round	

			and large and show considerable evidence of good wearing qualities.”	
Northeastern ass ^a §	[undescribed]			
Pega ass		White or light grey, some cream	Body fine and muscular, limbs long, strong bones, sloping pasterns,	“Graceful ... a gaited Ass”.
Spotted ass		‘Pinto’ pattern, including blaze and sock, overlaying any of the base colours, and “looks to the eye as if the donkey were a white animal with dark spots” but can also be ‘tiger-spotted’ with light spots on dark.		
Us miniature mediterranean (developed in us from sicilian and sardinian stock)	≤91.44 cm	Full range of donkey colours, with back stripe and cross	Conformation as for draft: “leg bones large in relation to size, ribs well sprung chest wide, heart girth deep”.	Life expectancy 30-35 years.
Us standard	101.6-122 cm	“a rainbow of colours”	“a variety of conformation”	
Us standard large	122-137 cm (female) 142.25 cm (male)	Any colour	Any body type, “from the lighter saddle-type to the heavier Mammoth”	
Us standard small	91.5-101.5 cm			

§ Endangered or nearly extinct as a breed

^a Used solely or mostly for mule breeding

Linear measurements represent height at withers, unless otherwise specified; where necessary these have been converted into cm from US inches or ‘hands’ (1 hand = 4 inches; 1” (inch) = 2.54 cm, thus 1 hand = 10.16 cm)

Domestic Breeds

As with the breeding of all animals, donkey breeding tended to be with a purpose: to develop an animal suited to its particular work and environment. This naturally resulted in much variation. With changing times, the work of donkeys has changed, and even often the environment, as donkeys are used now in environments where they had not been used earlier (Blench, 2004). Many of the earlier breeds are therefore disappearing, especially in Europe where they were well recorded (see Table 2 below). This does not mean that donkeys themselves are disappearing; in many parts of the world, there is much evidence for the increase in demand for donkeys (Jones, 2004). If new breeds emerge, it will be because new characteristics have become important in donkeys.

DISCUSSION

Different types and breeds of donkeys in different countries serve people. On the other hand earth is a pressure of under desertification. On the surface of earth each year green areas decrease and non-cultivable areas increase. If ecology is considered donkey’s habitat is arid, stony regions within normal range. It tolerates hot, dry conditions often in areas with low-

quality forage (Grinder *et al*, 2006). The world countries, at least some countries should mind well formulated policies and conservation programmes for donkeys in order not to disappear present types and breeds. In lots of countries governments, universities, and NGO's apply conservation programmes but donkeys are generally not included in those activities. Faced with neglect donkey breeds will unfortunately disappear in the future. Donkey has a potential of world's livestock heritage. They were – and are and will – an important actor of the world's domestic livestock genetic resources and biodiversity. All of those reasons donkey will have a significant role in the future. All breeds should be conserved as a genetic material in donkey genetic pool.

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