

THE DOMESTIC LIVESTOCK RESOURCES OF TURKEY: CAMELS

Orhan Yilmaz¹, Mehmet Ertugrul² and R Trevor Wilson³

¹Department of Animal Science, Faculty of Agriculture, Igdir University, Igdir, Turkey

²Department of Animal Science, Faculty of Agriculture, Ankara University, Ankara, Turkey

³Bartridge Partners, UMBERLEIGH, Devon EX37 9AS, UK

ABSTRACT

Camels are first known to have been in Turkey some 2600 years ago when they were used as animals of war. There has been continued presence ever since and the country is unusual as it is home to both one-humped and bactrian types. During the nineteenth and as late as the early twentieth century there was an important exchange of breeding animals between Turkey and Syria. Numbers declined rapidly after the 1930s and at the end of the first decade of the twenty-first century the country's camel population was little more than 1000 animals. These are now mainly used for sport and as a tourist attraction with meat being a minor product. Camels are not included in Turkey's programme of conservation of its domestic livestock resources but as an ancient and important part of biodiversity and because of the location of both types at the extremes of their normal ranges they are worthy of further attention.

Key words: Animal products, animals in war, camels, conservation, farm animal diversity, hybrids

Turkey is not only a geographic bridge between the continents of Asia and Europe but is also a bridge between ages, nations and civilisations. This spatial and historical background means that Turkey is very rich in biodiversity including in the biodiversity of its domestic livestock (Soysal, 2010). The rich array of farm animal resources in Turkey includes cattle, water buffalo, sheep, goat, camel, pig, poultry and horses, donkeys and mules that derive from many and various locations and backgrounds. This situation is typified by the unusual presence of the two old world species of camel, the one-humped or dromedary (*Camelus dromedarius*) and the bactrian (*Camelus bactrianus*) although both species combined are similar in status to the domestic (water) buffalo (Yilmaz *et al*, 2011) and pig (Wilson and Yilmaz, 2011) in being very minor components of Turkey's domestic livestock resources. This paper describes the history, present numbers and distribution and uses of the two species of camel in Turkey.

Results

History

Camels were known in what is modern Turkey at least as early as the Sixth Century BC (that is, two thousand six hundred years ago). The conquests of the Achaemenid king Cyrus the Great (559-530) would have been impossible without the logistic support of one-humped camels. Cyrus fought against

king Croesus of Lydia (in western Turkey in what is now its Aegean Region) in about 547 BC and employed these animals in what was to become one of the most famous stratagems of Antiquity. Normally employed as baggage animals Cyrus gathered all such camels from his army train, unloaded their burdens and set cavalry men upon them. Thus furnished Cyrus ordered his unorthodox cavalry to the van of his armies to attack the horsemen of Croesus. He did this because horses are afraid of dromedaries and can not endure to see or smell them (Herodotus of Halicarnassus, Histories 1.80).

The soldiers of Alexander the Great and those of the Seleucid empire of which Anatolia was part (Tarn, 1940) employed dromedaries some two hundred years after the time of Cyrus. The Roman legions also used camels in the centuries before and after the life of Christ. In these times camels were most probably used in pack caravans on the Silk Road between Europe and Asia and undoubtedly passed through Anatolia as witnessed by the camel image on a Roman mural in Plovdiv in Bulgaria (Wilson, 1998), a location which is about 150 km west of the present Turkey-Bulgaria border. Later still camels passed through Turkey about 800 years ago at the time of the Crusades.

During the period of the Ottoman Empire (1299 AD to 1923 AD) camels were used extensively and

SEND REPRINT REQUEST TO R TREVOR WILSON [email: trevorbart@aol.com](mailto:trevorbart@aol.com)

were dubbed “Military Heavy Transport Vehicles”. Up to 60000 camels were used at one time by the Ottoman military. Following the establishment of the Turkish Republic camels continued to be a crucial form of transport in a land where roads were few (Yarkin, 1965 and Aydin, 2003).

It is more than likely that hybrids of bactrian and one humped camels were produced in Anatolia before the Islamic period as a direct result of the Turkish conquest of Syria. In the early stages some bactrian males were taken to Syria but later large numbers of one-humped females were transferred in the opposite direction (Bulliet, 1975). This system of crossbreeding continued for well over one thousand years as in the nineteenth century as many as 8000-10000 one-humped females per year were imported into Turkey. At the beginning of World War I (1914) the number of female *C. dromedarius* imported annually into Turkey was still in the region of 7000-8000 head (Bulliet, 1975).

The genetic resource

In view of the general distribution of bactrian camels to the north and east of Turkey and of one-humped camels mainly to the south, and coupled with the history and geographic location of the country's crossroads of east and west, it is not surprising that there are both bactrian and one-humped camels as well as their crosses in modern Turkey. In spite of the small overall numbers in the country today it is necessary to maintain both types for the production of hybrids as *inter se* crossing of the F1 generation often produces animals that are inferior to this level of cross. The crossbred camels have a characteristic elongated hump (Fig 1) and stand between 165 and 215 cm at the withers. Mature females weigh 350-450 kg at maturity and males 450-550 kg. The hump alone weighs 50-130 kg depending on the general body state of the beast. They can tolerate up to 25 per cent of water loss (Aydin, 2003).

Numbers and distribution

In 1937 there were 118211 camels in Turkey. Their numbers were reduced to about 15000 by the

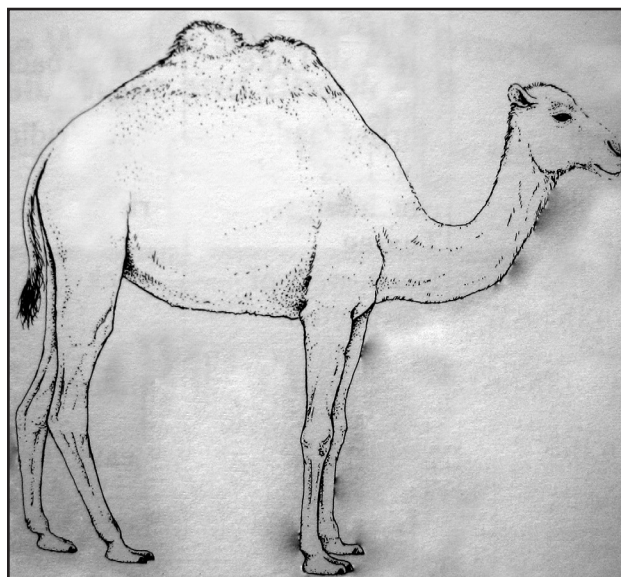


Fig 1. A hybrid camel showing typical conformation of hump.

mid 1970s (FAO, 1978) when they were equivalent to less than one tenth of one per cent of the total biomass of domestic animals. At the beginning of the twenty-first century there were only about 2000 camels left in Turkey and by 2009 numbers had been further reduced to just over one thousand head (Table 1). They are now mainly raised as a hobby animal and for camel wrestling which is a very popular tradition in Turkey (Aydin, 2003).

The few camels remaining in Turkey are mainly distributed in the Southeast, Mediterranean, Marmara and Aegean Regions of the country.

Products

Formerly used for a variety of functions Turkish camels are now mainly kept as a hobby and for sport. Camel wrestling (Fig 2) is a popular local and tourist activity in the provinces of Aydin, Balikesir, Denizli, Izmir and Mugla in western Turkey. Only crossbred male camels ('tulu deve'), the product of a bactrian male ('buhur deve') on a one-humped female ('yoz deve') are used for wrestling. Camels are first put to fight at 5-6 years of age and may continue to wrestle up to 20 years of age. Although the weight of the

Table 1. Camel numbers and camel meat production in Turkey 1928-2009.

| Item | Year | | | | | | | | | Change (per cent) 1960-2009 |
|---------------------|--------|---------|---------|--------|--------|--------|-------|-------|------|--------------------------------|
| | 1928 | 1937 | 1950 | 1960 | 1970 | 1980 | 1990 | 2000 | 2009 | |
| Animal numbers | 74 437 | 118 211 | 110 000 | 65 390 | 39 000 | 12 000 | 2 000 | 1 350 | 970 | -98.5 |
| Animals slaughtered | - | - | - | 1 600 | 3 140 | 400 | 320 | 29 | 55 | -96.5 |
| Tonnes meat | - | 232 | 160 | 208 | 531 | 60 | 75 | 8 | 18 | -91.3 |

Source: Yarkin 1965, TurkStat 2010, FAO 2010



Fig 2. Fighting camels.



Fig 3. Camels used as transport animals by the Yoruk people.

common camel is about 400-500 kg fighting camels weigh up to 1200 kg. Camel wrestling matches are arranged in about 30 locations and take place from December to March. They do not wrestle without a special saddle ('havut') which each camel uses to provide leverage against its opponent. Camel wrestling is not as bloody as bull fighting and animals are rarely severely injured. Some camels are used in the Bodrum area and also in the tourist area of western Turkey for riding experiences.

Camels are still used by the nomadic Yoruk people as beasts of burden when they move from their

winter quarters to summer camps and on the reverse journey (Fig 3).

A very few camels are slaughtered for meat. Over a 50-year period the number dropped from as much as 1600 per year to figures in the early 2000s that varied from 23 to 67 head (Table 1) with corresponding meat production of 8-24 tonnes. Based on the data in Turkey's Statistical Yearbooks on numbers slaughtered and meat produced carcass weights were in the range 350-400 kg; these animals were clearly mature males and probably ex-fighting bulls.

Discussion

Camels have been known in Turkey for more than 2500 years when they were first used in warfare. The first references to camels in the country were among the earliest of all literature citations to this animal (or these animals). The Turkish camel population is unusual if not unique as it includes (and has long included) both the one-humped and bactrian types and hybrids of the two being maintained together in one area. There has been continuous presence of camels in the country since these early times and they remained important components of the domestic livestock mix until well into the twentieth century. Since the 1930s camels have declined drastically in numbers for reasons which are not entirely clear. There

remains only a rump population of camels in Turkey in the twenty-first century which is used mainly as a hobby animal and for sport and tourism with meat production being a very minor output.

The Turkish Government has a well defined and active programme of conservation and use of its domestic livestock resources. Camels are not included in this programme but as an ancient contributor to the country's biodiversity and because of the location of both the one-humped and Bactrian types at the limits of their range they are worthy of further consideration and conservation.

Acknowledgements

The authors thank Muhammet Karakoyun for providing the photographs for this paper.

References

- Aydin G (2003). Camel Husbandry (Unpublished PhD seminar). Veterinary Faculty, Selçuk University: Konya, Turkey.
- Bulliet RW (1975). The Camel and The Wheel. Harvard University Press: Cambridge, Mass.
- FAO (1978). Production Yearbook, Volume 32. Food and Agriculture Organization: Rome.
- FAO (2010). Livestock data base. <http://faostat.fao.org/site/573/default.aspx#ancor>
- Soysal MI (2010). Native farm animal genetic resources of Turkey. Namik Kemal University: Tekirdag, Turkey.
- Tarn WW (1940). Two notes on Seleucid history: 1. Seleucus' 500 Elephants, 2. Tarmita. *Journal of Hellenic Studies* 60:84-94. doi:10.2307/626263.
- TurkStat (2010). Statistical Year Book 2010. Turkish Statistical Institute, Prime Ministry: Ankara.
- Wilson RT (1998). Camels. CTA/Macmillan Education Ltd: London.
- Wilson RT and Yilmaz O (2011). The Domestic Livestock Resources of Turkey: Pig. *Pig Journal* in press.
- Yarkin I (1965). Keci-Deve-Domuz Yetistiriciligi (Goat-Camel-Pig Husbandry) (in Turkish). Publication No 243 Ankara University Publishing: Ankara University Print House, Ankara.
- Yilmaz O, Ertugrul M and Wilson RT (2011). The Domestic Livestock Resources of Turkey: Water Buffalo. *Tropical Animal Health and Production* "in press".