

## **The camel saddle: a study**

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### **Introduction**

The camel, synonymous with desert cultures in Africa and Asia, has served man for over four thousand years (Gauthier-Pilters *et al*, 115-116), but little study has been given to the technology necessary to harness the labor power of this hardy animal. In order to capitalise on the camel's abilities, early camel cultures had to carefully consider the camel's hump, or humps, in order to ride or carry anything and with over a dozen saddle styles in existence, along with equally localised adornment, the ingenuity of these cultures is evident. To be certain: human migration and commerce through the deserts of Africa and Asia, not to mention the spreading of culture, was made easier by saddling the camel.

Regardless of how resourceful these early people were, the Western preoccupation with scientific classification isn't shared by traditional camel cultures and many native camel folk interviewed for this paper, not surprisingly, echoed the same thing when asked about the history of their specific camel saddle technology: *We're too busy working with the camel to study why something is the way it is* or *Because my grandfather did it this way*. Additionally, a call for research assistance was made through the UN's Food and Agricultural Organisation yielding virtually no useful responses about region-specific saddlery. Richard Bulliet's 1975 book, *The Camel and the Wheel*, puts forth a basic classification system, but the author himself acknowledges there is more work to be done in this field and, indeed, a history of camel saddle technology was not the focus of his fine work chronicling the demise of wheeled vehicles in areas where camel caravans gained prominence (Bulliet, 6).

### **Brief history of camel domestication**

Before the first camel was saddled, however, the earliest interactions between man and camel were in the contexts of hunting and fiber acquisition, followed by milking (Bulliet, 38). Since the camel annually sheds its hair and doesn't require shearing, these preliminary relationships (meat, hair and milk) likely continued for a long time before anyone considered its use as an animal to be ridden or for carrying loads. The lack of predators, other than man, in inhospitable regions made domestication easier (Irwin, 44), the camel having less fear of predation than, say, a horse, which lived in verdant areas with greater predatory threat.

Anthropologists believe the earliest domestication of the camel occurred in the southern Arabian Peninsula roughly 4,500 years ago for purposes of milking (Bulliet, 49). Camel use then spread to the nearby Horn of Africa, to provide pack animals for the incense trade (Bulliet, 41-42). Domestication of the camel in what we now consider the Middle East follows this line of progression northward, also tied to inland incense trade borne by camel (Bulliet, 66-67). North Africa and Saharan camel culture developed in two separate waves, both emanating from Egypt which gained camel knowledge and stock from the Nabataeans: one along the Mediterranean, the other south to Sudan, then westward (Bulliet, 115 and 134). Use of Bactrian camels first appears in historical records in what are now Iran and Turkmenistan, also around 4,500 years ago (Bulliet, 148-149, 155). In either case the first camel saddle was likely a blanket or arrangement of mats, across which the weight of an equalized load on left and right could be placed (Bulliet, 68).

The Bactrian camel, quite logically, places the rider directly between the two humps, with loads distributed evenly, on either side. The equipment used with the Arabian camel, however, allows for placement in any of three locations across the back: in front of the hump, on top of the hump, or behind the hump (Bulliet, 119). In some cases, the equipment utilises a combination of these. Should it be surprising, then, to learn camel saddles come in all shapes and sizes, and are as varied as the cultures in which they are used? In all cases the type of work done with camels (riding vs. baggage or a combination of the two) dictated saddle design, as did available natural resources. In regions where wood is plentiful one finds larger, bulky contraptions. In less resource-rich areas, minimalist design prevails. In this study, we'll focus on five traditional saddle styles used with the Arabian camel and the two traditional saddle styles used with the Bactrian camel.

The Arabian camel historically lives and works in a wide swath of geography ranging from the Canary Islands and Morocco in the West, to India in the East and even in Australia. We begin our study in the Horn of Africa, likely the second locale to see the Arabian camel put to use (Bulliet, 42), an area which demonstrates the least advancement in camel utilisation (Bulliet, 38). Here, camels are kept primarily for milk production, but the primitive technology gives us a hint at the earliest beginnings of camel domestication and saddlery.

#### **Selection of saddle styles representing geographic diversity of camel cultures, design differences, utilisations, and evolution of individual saddlery**

The Somali camel saddle, interestingly, isn't made for riding (Bulliet, 40). Rather, a simple arrangement of four tree branches is used for bearing loads. The four poles, placed over a system of blankets, animal hides or grass mats (Grill, 81) cross over and rest upon the camel's hips and shoulders, and meet on either side, along the lower abdomen. Used primarily for packing, the odd toddler or elder might be placed above the cargo, but the camel's main function in the region is for meat, milk and burden, again, all of which are among the most primitive patterns of camel usage.

Camels in the Horn of Africa carry the entire household for their semi-nomadic owners and gear is attached at the front and rear junctures of this framework, the weight being borne upon the upper points at which the four poles meet. Little or no adornment is present in this, perhaps, the most "blue collar" of camel saddles. The rig is secured to the camel's body with a belly cinch and soft cotton ropes under the neck and tail and, when not employed on the back of a camel, can be set up on the ground, covered with a blanket, and serves as a small tent under which to sleep. (Grill, 2002) This saddle can be found in Somalia, Ethiopia, Djibouti, Eritrea, and now parts of Kenya.

The South Arabian camel saddle, while belonging geographically to the area where camels were first domesticated, actually evolved later in response to the need for increased carrying capacity and thus the profitability of the overland incense trade (Bulliet, 66-68). This makes sense, since the camel culture there would have had the most time to develop new and different technology.

This saddle places the rider behind the hump, over the hips, and is the most natural place for riding bareback, which would characterise the first attempts at riding (Bulliet, 69), the hair of the hump giving the rider something to hang on to. Soon after the earliest attempts at riding bareback, not the most comfortable means of camel travel, human nature dictated some sort of padding be created. The form this takes is a "U-" or "V"-shaped pad, "*mahawi*" in Arabic, that not only provides cushion, but also helps to nestle the rider safely behind the hump, preventing one from sliding off to the rear of the camel. The *mahawi*, embroidered or beaded with geometric designs, is secured around the camel's flank with a narrow, tasseled woven strip

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made of goat hair, called “*kfal*”, and is also tied to a single or double-arched anchor, “*shadad*”, made from trees locally called “*sidr*” or “*salam*”. Placed in front of the hump, and resting upon a pad of palm fiber called “*bidad*”, the *shadad* is secured to the body of the camel by a belly cinch, or girth, called “*orda*” and may be carved with geometric designs (Richardson et al, 335 and Wahiba, 2005). For racing, popular in the Gulf region, this same saddle is used with a lighter weight *shadad* made of fabric, and a split *orda* passes both in front of, and behind, the camel’s sternal callosity to keep the saddle from slipping backward (Wahiba, 2002).

Used for both riding and packing, loads are carried on the South Arabian saddle in bags hanging below the rider on each side, the ropes between the loads resting over the *shadad* and the *mahawi* to keep from rubbing on the camel (Wahiba, 2005). The rider then sits above the load on a sheepskin or goat hide. The South Arabian saddle finds utilisation these days in all Arab areas around the Persian Gulf, as well as parts of North Africa and the Sahara (Bulliet, 139).

As the camel’s use spread, it inevitably came into contact with horse cultures and the horse’s superiority in warfare helped give rise to the North Arabian saddle between 500 and 100 BCE (Bulliet, 119), created in response to the need for a more stable mount from which to fight with spear and sword (Bulliet, 95-96).



*Fig. 1: North Arabian saddle*

The North Arabian saddle is a contraption that sits directly on the hump. Supported by a pair of rectangular wool or canvas pads (“*bidad*”, in Arabic), one on each side of the hump and stuffed with any natural fiber like grass, palm fiber or straw (Soliman, 2001-2013), this saddle is basically two upside-down “Ys” (each called “*ghozel*”), one placed in front of the hump, the other behind, joined together by two pieces on each side. These sidepieces are arranged in either a criss-crossed fashion, or straight and parallel to the ground. The weight is carried by the camel’s wide ribcage (Bulliet, 87), with the pads more or less transforming the rounded contours of the hump into a level plane upon which to place the saddle. All this added up to the camel being used more extensively in war. A rider was no longer in the precarious position behind the hump, gained somewhat more control over the animal being closer to the camel’s head, and, at over ten feet in the air, the warrior was better able to combat more efficient horse cavalry.

The two *ghozel* of the North Arabian saddle (front and back) extend fairly high up and in between these is where the rider sits, over layers of blankets or animal hides. Also, slung from these would be the rider's belongings, placed in beautifully dyed, woolen saddlebags, "*horj*", hand-woven by Bedouin women. Tassels from these bags hang below the belly of the camel and sway with the camel's gait, serving to keep flies from landing on the camel (Soliman, 2001). A fringed leather pad, "*meerika*", stuffed with camel hair or wool, hangs from the front *ghozel*. With the rider's legs crossed around the front of the saddle, the *meerika* serves as a leg rest to relieve fatigue set in by riding without stirrups.

Fully bedecked, a Bedouin camel and North Arabian saddle of the Sinai can be quite a sight. One encounter with a young Bedu, perhaps, sums up the attitude toward adornment, while at the same time exemplifying the generation gap between young and old, present in any culture: When trekking for a month in the Sinai in 2001, I came upon a twentyish-year old Bedouin. His camel was fitted with tassels hanging from every possible place. The halter had an ornate knot of goat hair over the bridge of the nose and the *meerika* was shiny and new. I asked my travel companion Saleh, a fifty-five year old Bedouin, why our camel didn't have any of the accoutrements seen on the other camel. Saleh replied, "I am old and married, he's still young and looking for a wife!"

Among Sinai's Bedouin population, the North Arabian saddle uses a belly cinch, along with a rope under the tail, designed to keep loads from shifting forward. Another version of this saddle, longer from front to back and used by the *fellahin*, or farming class of Egypt, additionally employs a rope under the neck to stabilize larger loads (Hamza, 2003-2013). The North Arabian saddle is also used in parts of Sudan, Libya, Israel/Palestine, Lebanon, Syria, Jordan and Iraq.

The Tuareg *tirik* (Tamasheq dialect of Tamazight) saddle is one of only a handful of camel saddle styles that utilise the camel's shoulder for riding, with each of these styles found only in the Sahara. Not used for packing, its origins are almost certainly in response to the need for maximum control, the rider being seated nearer to the camel's head, and technologically was inspired by the North Arabian saddle (Bulliet, 124).

Descent from the North Arabian saddle is evident in the front and rear pieces of the *tirik*, connected with two cross pieces on each side, but placed nearer to one another taking maximum advantage of the space in front of the camel's hump. An intermediate step between the North Arabian saddle and the *tirik* exists in the *terke* saddle used in the Tibesti region in modern Chad, Libya and Niger (Bulliet, 127). The *tirik* is made of wood, locally called *aboragh*, and specialized craftsmen take three to four months combining the wood and leather to create each saddle. Sometimes small bells of copper are hung from the saddle and individual artistic expression gives clues to which region and which tribe the saddle comes from. Additional adornment includes geometric patterns of brightly colored leather along with copper, brass and silver inlay on the back, and the *tirik* is held fast to the camel's body with a single cinch, "*tatolte*", around the camel's torso (Taoua, 2005-2013).



*Fig. 2: Tuareg saddle*

Moving east, resources are comparatively plentiful in India's desert country, so the appearance the camel saddle takes on, "*pakra*", "*kathi*" and "*palaan*" in local dialects (Gahlot, 2013), is quite different from earlier examples, but in fact owes its existence to the North Arabian saddle (Bulliet, 189). Underneath this ornate wood and brass apparatus are three grass-filled leather and wool pads, one on each side of the shoulders and one behind the hump, over the hips, upon which the saddle rests. These are essentially the same as the pads used for the North Arabian saddle, but are separate, where the North Arabian saddle's pads are combined into one arrangement.

Two wooden "runners" sit on either side of the camel's body, placed up high along the upper ribcage and are connected by three wooden arches that cross over the camel's back, roughly front, middle and rear. At the meeting points of all pieces are brass fittings and the wood can be studded with silver or stainless steel decoration (Gahlot, 2013). The rider then sits upon blankets laid across the camel's back. Silk, satin or cotton fabric is oftentimes laid over the entire saddle, fastened with a rope, and is embroidered with floral or animal motifs. This saddle can actually accommodate two passengers: one in front of the hump, over the shoulders, and the other behind the hump, over the hips. This saddle is secured to the camel with a belly cinch and ropes under tail and neck, but frequently a flank cinch is also used. This saddle also sees use in Pakistan.

The domesticated Bactrian camel accepts a rider directly between the two humps. Camel cultures in Kazakhstan and Mongolia use a saddle that looks somewhat like a bareback pad for riding horses. A piece of fabric sits between the humps, over a pad or blanket, two connected "fenders" hang down on either side, complete with stirrups (noticeably absent from Arabian camel cultures), and a separate piece of fabric, tied to the seat, circles around the front hump to keep the conflagration from shifting left or right. Ornamentation for this type of saddle is mostly embroidery in traditional Central Asian motifs, but brass buttons can also figure into the décor (Almos et al, 2002). A single belly cinch is used to keep the saddle on securely.

For packing on Bactrians, two wooden poles are placed high on the camel's sides and are connected, left and right, with a short length of rope or rawhide at the front and back of the parallel pieces to keep the poles from separating and moving down. For the camel's comfort these poles rest upon a pair of burlap pads, left and right, placed against the camel's body and are stuffed with grass or straw. These pads are rarely decorated, but occasionally heavy woolen pads, quilted thickly together like those used in yurt-making, can be used as well and may carry familiar Central Asian motifs. (Almos and Baltabey, 2002). One or sometimes two ropes of horse or goat hair secure the rig to the camel's body and all the gear is tied to the two poles with ropes made of camel or horse hair (Michaud, 8; Almos and Baltabey, 2002).

In conclusion, as exhaustive as this study is, it is far from complete. Bulliet, whose pioneering research has yet to be built upon, issues a challenge when he says, "...no competent specialist has compared the relative chronology of saddle designs appearing in the art of one area with that of other areas." (Bulliet, 130). Fortunately, the Bactrian camel's realm is comparatively small, therefore making a comprehensive study less daunting than that of the Arabian camel. With perhaps as many as fifteen different saddles used with the Arabian camel on multiple continents, the amount of geography to cover is significant. Additionally the adornment of each, representing not only individual artistic expression, but also social customs and cultural traditions, requires local social scientists be engaged for their insights. The challenges ahead are many, but initiatives are being undertaken to document the craft traditions and heritage associated with camel cultures, initiatives usually tied to larger, more comprehensive cultural studies.

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