

FARM CARTS AND WAGGONS OF THE ORKNEY ISLANDS

THE INTRODUCTION AND DEVELOPMENT OF WHEELED
VEHICLES IN ORKNEY IN THE EIGHTEENTH AND
NINETEENTH CENTURIES

Eric J. Simpson

Earliest recorded vehicles

Lack of evidence prevents any firm conclusion as to how far back the history of wheeled vehicles in Orkney can be traced. The first Statistical Account indicates how few carts existed in early eighteenth century Scotland, let alone Orkney. The earliest written reference that I have located is for the year 1721. John Traill of Elsness in Sanday had in that year among his stock "6 oxen for carts" (Marwick 1939:22). Later references to the possession of a cart in the same island are to be found in the diaries written between 1766 and 1774 by Patrick Fea of Stove (Marwick 1930:6).

The most detailed early account is, however, in an inventory (dated 1747) of farm implements on the estate of Sir James Stewart of Burray (Marwick 1934: 47-54). Listed, along with various parts of other incomplete vehicles, were:— "a large pair of cart wheels Ironshod with the Coup of the Cart, ane ox waggon with all its furniture", "the Coup, beeam and Shilmers of ane oxen Wean", "trams and coup of a Horse Wain", and a "four wheel Tumbler". In various sections of the inventory wooden axles are listed totalling eight in all. Also included were a number of cart wheels, some ironshod, some new, some old. The large number of incomplete articles registered in the Stewart inventory leaves one with the impression that they must have been of little effective use. Sir James Stewart was undoubtedly an "improver", but perhaps his other rather violent activities prevented him from making full use of his collection of vehicles. (In 1725 he had to flee the country after being involved in a brawl in Broad Street, Kirkwall, where a Captain Moodie was murdered.

Pardoned for his part in Moodie's death, he was "out" in the Forty-Five and died the following year in Southwark gaol while awaiting trial.)

Apart from the Stewart estate inventory there is no evidence to suggest the widespread use of four-wheeled vehicles in the Orkney of the eighteenth and nineteenth centuries. In the North Isles and Mainland at any rate all written references would indicate the prevalence of carts with two wheels. The constant use of the term cart in the first and second Statistical Accounts and other records would seem to confirm this. Both Shirreff (1814:53) and Sinclair (1795:226) state that two-wheeled carts were in common use. Also it is stated in the first Statistical Account for Sanday and North Ronaldsay that "there are no waggons in these islands" (Clouston 1927:269).

The First Statistical Account (O.S.A.)

By the end of the eighteenth century, according to the first Statistical Account, there must have been several hundred carts in Orkney. Mention is made of the existence of such vehicles in eleven of the sixteen parish accounts. It is probable, too, that carts would have existed in at least some of the remaining five parishes. The evidence for the most part suggests that carts were of recent origin. For the then joint parish of Stromness and Sandwick it was stated that the number of carts was 23 but "that there were no carts here 50 years ago" (Clouston 1927:103). The minister of Holm also noted that a few carts "are beginning to be used" (Clouston 1927:22). Carts were most numerous in the North Isles of Orkney; and this was possibly due to the effect of the production of kelp which was greater in the North Isles than elsewhere in Orkney.

It is noticeable, too, that with regard to the Orkney Mainland carts were more numerous in some parishes than in others. Here, too, the influence of the kelp industry was probably decisive. The district of Harray with a population of 663 possessed 20 carts whereas the St. Andrews district with an approximately equal population (675) had 40 carts—double the number in Harray (Clouston 1927:166, 165, 12). It is significant that the kelp industry was widely pursued in St. Andrews, whereas Harray is an inland parish. As to the South Isles of Orkney, there is no mention in the various accounts of the presence or absence of carts, apart from South Ronaldsay where there were 23 (Clouston 1927:212).

It may be observed in passing that while carts were becoming fairly common in Orkney, they were still comparatively rare in Shetland (Sinclair 1795:251 and Shirreff 1814:36). Even by 1841 carts were still little used in Shetland (*N.S.A. Shetland* 1845:162).

Rapid Rate of Increase

The rate at which carts were being introduced to Orkney in this period must have been very rapid. The contributor of the account for St. Andrews and Deerness observed that "till within these seven years there were no carts in these parishes but what belonged to the minister, one heritor, and two farmers. Now there are about 40 in St. Andrews alone" (Clouston 1927:8). From the late eighteenth century onward there must have been a considerable increase in the number of vehicles in Orkney. From 1795-8 the number of carts in the island of Sanday increased from 37¹ to 150 in nearly thirty years (Traill 1823:28); and by the time of the second Statistical Account Lady parish in Sanday—with slightly under half of the island population—had 118 carts (*N.S.A. Orkney* 1845:147). A list of imports given by Shirreff (1814:53) includes for the period 1801-6 no fewer than 287 pairs of cart-wheels and also 13 complete carts. In addition oak spokes were imported in quantity—900 in the period 1801-2; and 144 in the period 1804-5. It is not unlikely that the carts imported were coup-carts of the famous "Scotch cart" type which were being exported from the Scottish Lowlands around that time even as far as Essex (Jenkins 1959:177, 174) and Ireland (Thompson 1958: section IV). It may be assumed, too, that the wheels were spoked—of the kind used for the Scotch cart.

Price of Cart Wheels

The cost of cart wheels is given in a list of imports to Stromness for the year 1792 (Clouston 1927:126). For six wheels the price was £2: 2/- each. At the time of the second Statistical Account the price of a cart was £4: 4/- (1842:60).

Size of Vehicles and Draught Animals

Reading the first Statistical Account it becomes clear that, on the whole, carts in Orkney were very small. The account for Holm mentions carts "in miniature" (Clouston 1927: 22 and 50) and for Kirkwall and St. Ola it is said that "Carts

are very small". Later references tend to confirm this. Both Shirreff (1814:53) and Sinclair (1795:226) refer to small two-wheeled box carts. It may be noted that the first Statistical Account indicates the prevalence on the Orkney Mainland of carts hauled by a single ox or bullock (Clouston 1927:8, 22, 165). A later reference confirms this (Pringle 1874: 54). On the other hand, the vehicles of the North Isles were probably larger in size, as the accounts for Stronsay, Eday and Westray refer to carts pulled by two oxen (Clouston 1927: 317 and 346). Incidentally, this practice did not survive the nineteenth century in Westray at any rate, judging by a letter (dated 25/4/61) sent to me by a Westray septuagenarian, Robert A. Marcus of Rapness, who stated that his grandmother, well over one hundred years ago, carted with a pair of oxen. He himself, however, never saw more than one ox (or milk-cow sometimes) harnessed to a cart. However, in Rousay there could still be seen in the 1920's carts with two small spoked wheels hauled by two oxen attached to a pole. My informant on this, F. Craigie who was born on Rousay, but now lives on Mainland, stated in addition that single oxen were used with similar vehicles fitted with shafts and also with coup-carts.

Oxen as a rule were kept only for the purpose of cart-haulage. The account for Sanday states—"oxen are used only for carts and few or none for ploughing" (Clouston 1927:268). Horses were only occasionally employed for drawing carts (Clouston 1927:103). The only contemporary references to the methods whereby the animals were attached to the carts are in the first Statistical Account. For Holm it was said that the carts were "drawn by an ox, yoked in the same way as a horse" (Clouston 1927:8); in St. Andrews and Deerness carts were "drawn by an ox in the shafts" (Clouston 1927:22). In the afore-mentioned letter from Robert A. Marcus of Rapness, the writer states that the oxen used for carting by his grandmother were attached to a pole by a wooden yoke.

Second Statistical Account (N.S.A.)

By the time of the second Statistical Account the presence of carts was evidently accepted as being part of the natural state of affairs, as there are far fewer references to them as compared with the first Account. Where reference is made, as in the Orphir account, the comment is to the effect that "carts are now in general use" (*N.S.A. Orkney* 1845:26).

Such carts were used for loads which formerly would have been carried on horse-back. For North Ronaldsay it was said—“And a still greater advantage is derived from the introduction of carts, with one or more of which every house is now supplied. Before everything had to be carried on horse-back either in sacks or in a sort of wooden creels . . .” (*N.S.A. Orkney* 1845: 110).

Roads

The scarcity of carts in the early eighteenth century can be attributed, in part at any rate, to the widespread use of boats for certain forms of transport. It is noteworthy though that in the wholly inland parish of Harray there were comparatively few carts. According to one of the contributors to the first Statistical Account a more significant factor was the absence of good roads. For South Ronaldsay and Burray it was said “. . . there was never a road made in either. Of consequence few carts are used” (Clouston 1927:207). A contrary view is, however, indicated by the contemporary account for Kirkwall and St. Ola which, after commenting on the “very indifferent” state of the roads affirmed that “since they began to use carts, however, which they have now done for some considerable time past, roads . . . afford them several signal advantages” (Clouston 1927:51, 52). It is probable therefore that the widespread use of carts in some areas—in the North Isles and in the vicinity of the two burghs of Kirkwall and Stromness, for instance—antedated the provision of well-made roads. Elsewhere the pattern of development would have been similar to that in Orphir where in 1841 the general use of carts was attributed to “the forming of the public road” within the previous twenty years (*N.S.A. Orkney* 1845:26). In the low-lying North Isles the availability of metalled roads was less essential than in a parish such as Orphir with considerably rougher terrain. For example, although there were 45 carts in Westray in the period 1795-8, some forty years later it was stated for that island that there are “as yet no highways” (*N.S.A. Orkney* 1845:130).

Distribution

As might be expected the distribution of carts within an area was decided by the size of the farm. The list of persons liable in Statute Labour Conversions in the parish of Stenness²

for the year 1854 is divided into three groups according to the annual rental for the farms or houses. In class *I* (rental of £2-4) 5 out of 17 had carts; in class *II* (rental of £4-8) 28 out of 29 had carts; and for class *III* (rental of over £8) there were 41 carts for 33 farms, with some possessing 2 or 3 vehicles.

Traffic Problems in the Burghs

Carts of course were widely used in the two towns of Kirkwall and Stromness. In both burghs the corners of older houses are often splayed for the easier passage of carts and pack-horses through the narrow winding lanes.

It is intriguing to note that even as far back as 1813 pedestrians had to complain about dangerous traffic. According to the records of the burgh of Kirkwall, a complaint was made against carters who rode upon their carts in the streets instead of walking by the sides of the horses. On the matter being raised again the following year a proclamation was issued forbidding the practice of riding on carts and horses in the public streets "so as not to endanger the lives of the inhabitants . . ." (Mackintosh 1887:241).

Probably the carts mentioned in the above passage were similar to the box-carts that were "in common use at the period when the single stilted plough was employed in tillage" (Gorrie 1868:300). The period referred to would have been in the 1830's and earlier. Some of the old box-carts survived to the 1860's and could still be noticed occasionally in the Kirkwall streets "creaking under a load of smoked fish and drawn by a sturdy steer".

Wooden Axles

As to the type of axle employed, the Statistical Accounts make no mention as to whether iron or wooden axles were utilised with the various kinds of cart. In the Stewart inventory



FIG. 1.—Wooden axle from National Museum of Antiquities of Scotland.

(Marwick 1934:47-54) both iron and wooden axles are listed with no fewer than eight of them wooden. The probability is therefore that many, and perhaps most, of the carts registered in the Statistical Accounts were built with wooden axles. It

is also probable that such axles were employed in Orkney until at least the close of the nineteenth century, as four rough hewn wooden axles have survived to my knowledge. One is in the National Museum of Antiquities of Scotland (fig. 1), one in Stromness Museum, one in Tankerness House, Kirkwall, and the last is being used as a lintel in a peat-shed at Netherskaill Farm, Marwick.³

In no case is anything known of their origin or of the vehicles to which they had presumably been fixed. Like the Netherskaill one, the axle now in Stromness Museum when found was also serving as a door-lintel on the house of Blackhall (now demolished) in Stenness.⁴ It will be obvious therefore that the age-old shortage of timber in Orkney would account for the preservation of the two latter wooden axles.

The Present Day

To conclude this section, it need only be said that carts were an essential feature of Orkney agriculture until recent times. At the present day, however, as elsewhere in Britain, carts have virtually vanished with the coming of the tractor. In Orkney the cart, with a horse in harness, is a sight now rarely to be seen.

THE ORKNEY SLED: AN INTERESTING TWENTIETH-CENTURY SURVIVAL OF PRIMITIVE METHODS OF WAGGON CONSTRUCTION

In the year 1960 photographs⁵ of a waggon with solid wheels were brought to my notice. By making enquiry through the local press I was eventually able to trace this unusual vehicle and to acquire sufficient information to embark on a study of such vehicles.

Remnants of these vehicles, or sleds as they were most commonly termed, were traced in the islands of Flotta, Graemsay and Hoy. Considerable information was elicited by means of a questionnaire which was sent to likely informants and also by personal visits to Graemsay and Hoy. No complete specimen was discovered, but various parts including a number of solid wheels (fig. 2) were transferred either to Stromness Museum or to the National Museum of Antiquities of Scotland, Edinburgh. The latter Museum has now restored a sled from the island of Graemsay (Pl. III).

What is interesting about this type of waggon is that it seems to have been concentrated in one particular area—namely the group of islands known as the Orkney South Isles, principally Graemsay, Hoy and Flotta. In modern times, as far as I can ascertain, no similar vehicle was used in the Orkney Mainland or in the North Isles. It should be pointed out, though, that the sled was not the only vehicle used in the South Isles, as the usual type of Scottish “coup” cart was also in common use, drawn by either horses or bullocks.

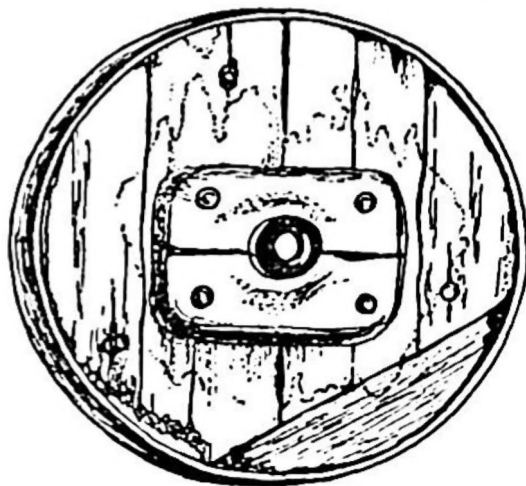


FIG. 2.—Solid wheel of Orkney sled (National Museum of Antiquities of Scotland).

Sleds were still being employed till fairly recent times. In Graemsay a number were in use till about the start of the Second World War; in Flotta the last one ceased to be used about 1950 (with the last ox on the island); and it wasn't till 1954 that the sled from Burgar farm, Hoy, fell into disuse. The end of the sled came fairly rapidly with the introduction of the tractor and trailer. Nevertheless, in Graemsay at least one sled was converted into a trailer—being fitted with two modern wheels and a pole.

Terminology

A wide variety of names was used for the waggons. In Graemsay three terms were used—coach, sled and hurley. According to Hugh Ritch, Graemsay, the most common were coach and hurley. In Hoy the term used most often was sled, but one Rackwick man I met frequently referred to them as sledges. In Flotta, on the other hand, the only name used was lorry. In this article I am employing the term sled as it seems to have been the most common over all.

No special names were employed for the different parts of the sled, except for “shellwing” and “backdoor” in Graemsay

and in Hoy. The shellwings (presumably the same as shelvings—a Mainland Scottish term) were extensions which could be fitted to the four sides to give extra carrying capacity. They were used in Graemsay, but not in Flotta. The backdoor was the tail-board and was always removable.

Variations

All the sleds were four-wheeled, with the one exception described below. With the Graemsay sled and the Flotta lorry, the front wheels were generally fixed and this made them difficult to turn. One solution to this was found by J. Wilson, Windbreke, Graemsay. He made a vehicle with three wheels—two at the back and the third, which protruded from the front of the sled, was able to swivel in an iron device which worked like the front forks of a bicycle. (Incidentally, the front wheel was home-made and was of the wheel-barrow type, but the rear wheels, which were spoked, were made by a wheelwright.) This problem of manoeuvrability was solved in another fashion by Robert Thomson, Burgar, Hoy, who had purchased the waggon at a sale in Graemsay about 1920. As he had found the sled to be difficult to control going down steep inclines, a friend who had farmed in the U.S.A. fitted the front wheels on a turn-table with a pole to guide it, thus copying a feature from the waggons used on the prairies.

Harness

For harnessing the animals, where there was a pole fixed to the sled, as with the Burgar sled and another at the neighbouring farm of Dale, a cross-pole was used with leather straps attached to the collars of the animals. But a very different method was used in Graemsay, Flotta and the Rackwick district of Hoy. In those areas there were neither poles nor shafts. Instead the animals were connected to the sleds by chains attached to swingle-trees or "ammles". My informants in Flotta⁶ stated that when one ox was in harness, only one swingle-tree was employed; with two oxen, three trees were used, the largest being termed the "twa-baist" tree ("twa-picce" tree in Graemsay). The sled was attached to the trees by chains fixed to the axles, then hauling chains went from the trees to the leather or canvas back-bands to be fastened to end-links on the "haims" of the collar. This method of harnessing was the same as used when ploughing with an ox. The

ox-collar, it may be observed, differed from the horse-collar in that the former fastened under the head instead of over.

Swingle-trees were sometimes dispensed with altogether, in Rackwick at any rate, as can be seen in Plate IV, fig. 1. Here the ox is harnessed direct to the sled.

Brakes

With regard to brakes, there were many and varied systems. One method employed in Graemsay was to have a chain fixed to the body which, when braking was necessary, could then be hooked on to a bolt on the rear wheels. Latterly, an iron shoe fixed in the same way was utilised: it could be slipped under the back wheels to act as a drag. Some of the Flotta lorries had a fixed bearer at the back end with a moving bar and a shoe to impinge on the rear wheel-rims. In some cases it was operated by a screw, in others by a lever. However, one very elementary method of braking was also employed in that island. This simply involved the users of the waggon hanging on to trailing ropes which were attached to the rear of vehicle.

In Rackwick, Harry Mowat of North House informed me that his sled had been fitted with a shoe-brake applied by lever. In addition, when going downhill he sometimes put the "ox ahint the cairt". Another Rackwick crofter, the late Hugh Ritch, Ootroo, told me that usually he just shoved a piece of wood under the wheel when he wanted to brake.

Axles

In every case that I know of the axles were of iron, though I was told that in Flotta mild steel was used occasionally. Very frequently old horse-cart axles—reduced in size—were utilised. According to my Flotta informants, the axles were bolted to the fore and aft bearers or fixed with U-bolts known as garrow-nails. The wheels were retained on the axles by the usual type of metal clip.

Wheels

The semi-solid wheels, embodying what is probably one of the oldest methods of wheel construction known to man, are the most interesting features of the Orkney sleds. Most of the sleds had semi-solid tripartite wheels, constructed of three pieces of wood held together by nails and by transverse struts

on one or both sides. In every instance the wheels were girt with iron shods or tyres, usually put on by a blacksmith. No example of a completely solid wheel has come to light.

Wheels were also often made in the form of a cross as shown in Plate IV. Examples of this kind have been found on Graemsay, Flotta and Hoy.

All the wheels found had iron bushes—some straight, some tapering. The diameter of the sled wheels varied from 24 to 27 inches for the tripartite type; and 22 to 24 inches for the cross type.

The wheels like the rest of the vehicle were usually locally made from whatever materials were available. An account of how one particular tripartite wheel (now in Stromness Museum) was constructed was sent to me following the

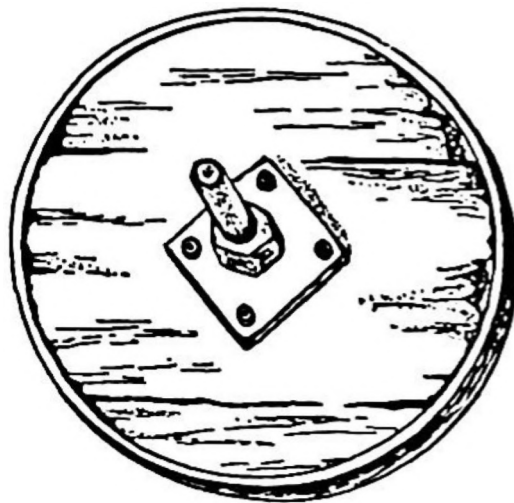


FIG. 3.—Solid wheel from Ootroo, Rackwick, Hoy

printing of a photograph in "The Orcadian". The writer, James Sinclair, Portree, stated that this particular wheel was one of a set of four made by his father—the late J. Sinclair, Dean, Graemsay. The wood used was teak taken from block ships sunk in Hoy sound; the outside hub was made from the rollers from the bottom of a trawl net, which had been washed ashore. The iron tyre was put on by the late J. Park, blacksmith, Stromness.

Another wheel (Fig. 3) came from a sled with an unusual method of construction. This particular waggon, owned by the late Hugh Ritch, Ootroo, Rackwick, did not have axles in the usual sense of the term. Each of the four wheels had its own short iron axle as a part of the wheel (in the same form as the single-wheeled barrow). Each wheel was held in a wooden frame, the inner side of which was joined to the box of the sled. Apparently there were no metal bushes for the short axle rods, which just revolved in apertures



Sled, restored, from the island of Graemsay (National Museum of Antiquities of Scotland).

PLATE IV



FIG. 1—Ox harness and sled, Rackwick, Hoy, Orkney.

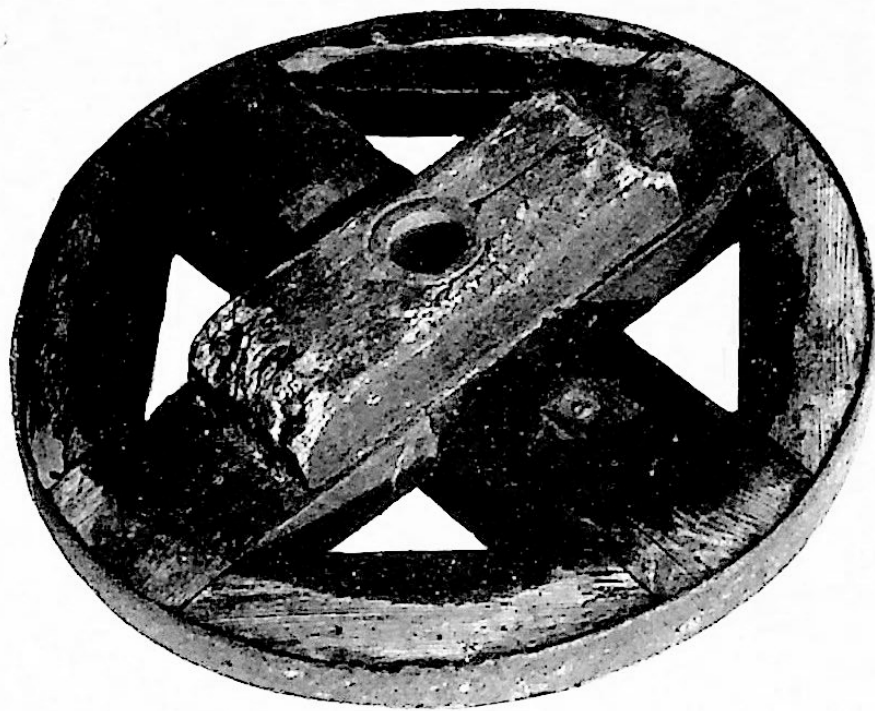


FIG. 2—Sled wheel from Graemsay, Orkney (National Museum of Antiquities of Scotland).

in the wooden frame. When the apertures were worn too wide to hold the axle-rods firmly, leather washers were inserted to tighten them up.

Draught Animals

The draught animals employed with the sled were usually oxen, sometimes one, but usually two. A mixed draught was not uncommon—with a horse paired with an ox or, sometimes, a cow. Horses in pair were also used, but my Flotta informants considered that they tended to be rather fast for the purpose. On the other hand, the Burgar sled was latterly used only with horses, and it was the owner's opinion that the horses liked it better than the ordinary cart, as there was no weight to hold up on their backs.

Antiquity

The question of the antiquity of the Orkney sled is not one that can be answered with any certainty. As has been seen, it was not till about the end of the eighteenth century that the use of wheeled vehicles became common in Orkney; and there is no definite evidence to prove that solid or semi-solid wheels were in use in Orkney during that period or indeed before. Whereas, as far as I can find, there is no record of the existence of such wheels in Orkney until recent times, it may be observed that similar wheels, a feature of the *kellach* type of cart of Northern Scotland—especially Ross and Moray—were frequently noted by travellers and “improvers” in that area (Burt 1754:74-78; Donaldson 1794:22; *O.S.A.* 1:277 and 14:90; Sinclair 1795:23, 101). Since, as has been noted earlier, there were considerable imports of cart-wheels and spokes into Orkney in the early years of the nineteenth century, there must have been at that time an ever increasing number of carts with spoked wheels in different parts of the county. On the other hand, the existence of a number of vehicles of a more primitive kind may reasonably be deduced from the survival of at least four wooden axles. It is probably a fair deduction that the kind of wheel attached to a wooden axle was of an equally primitive type—quite possibly a solid or semi-solid wheel.

Whether or not the sled type of vehicle was derived from the wains and waggons of Sir James Stewart's estate (see page 154), it is really impossible to say. On the one hand, it

may be significant that the Stewart estate was on Burray and South Ronaldsay—part of the South Isles group and not too distant from the islands where sleds were employed in more recent times. On the other hand, the names given to the sleds and the parts thereof bear no relation to the terminology of the inventory. Again, as has already been indicated, the incomplete nature of all but one of the Stewart estate vehicles would hardly indicate great use. It is interesting to note that nearly 50 years later the minister of the parish wrote that: “few carts are used. It is no uncommon thing to see six persons with six horses carrying to the mill three bolls of bear” (Clouston 1927:207).

From the evidence available it would appear impossible to reach any firm conclusion as to the age and antiquity of the sled type of waggon. What, however, is incontrovertible is that all the sleds whose history is known were built not so very long ago. According to the owner, the sled at the Dale was built about 1931. The sleds at North House and Ootroo were also built around that time (in the 20's or early 30's); and, as with the Dale sled, were built—in part at any rate—by the late James Moar, Hoy. Recently a Mainland joiner, A. Tait, Dounby, informed me that around 1923 he had taken an ox-waggon from Quoyness, Hoy, to his shop for extensive repair. Instead, however, he built a new one and kept the old one in his yard till it fell to pieces.

When I inquired as to when this type of vehicle was first used, no one in Hoy or Flotta would hazard an answer; but J. Wilson, Windbreke, told me that the first sled in Graemsay was made about sixty years ago and that the idea came from Rackwick, Hoy.

Origin

As to the question of origin, again there can be no conclusive answer. It is always possible that there is a connection between the Orkney sled and waggon-type vehicles in other countries. A Scandinavian influence is feasible, though if so it would have been a recent influence and almost certainly not of the Viking period. Berg (1935:146) has pointed out a certain similarity of construction between the Orkney sled and waggons of a cruder type found in parts of Sweden and Norway and other European countries as well. However, with our existing knowledge, no final verdict can be reached on this point.

Again there may have been a connection (either way)

between primitive types of Orkney vehicles and the famous Red River carts of Canada, since there were a considerable number of Orcadians in the Red River settlement, some of whom maintained close ties with Orkney (Marwick 1953:9-28). However, though the Red River vehicles had solid wheels and wooden axles, they were carts with two wheels; and, of course, the sleds had four.

Perhaps the real answer to the question of origin is that the sled was evolved in a limited area of Orkney for particular functions for which it was eminently suited. One point stressed by several of the sled owners was the handiness and convenience of a low vehicle especially for loading. Its capacity was also appreciated. Robert Thomson, Burgar, stated that his would take a ton of anything he liked to load into it. Also where oxen were widely used, then the utility of the sled can be understood. Both L. Sinclair, and the late Hugh Ritch, Rackwick, informed me that the sled was handier for oxen than the cart. Indeed the survival of the sled until recent times may well have been closely linked with the continued use of oxen. In connection with this, it is intriguing to note that on Graemsay, where sleds were once very common, most farmers went back to oxen many years ago after having been using horses. My informant on this point, J. Wilson, Windbreke, stated that the main reason for this change was the difficulty of transporting horses to and from the island at a time when there was no pier. (Incidentally, the Graemsay farmers went back to horses again before 1939, but there was only a short period before the horses gave way again—this time to the tractors.)

The question may be asked why were solid wheels preferred at a time when it would not have been difficult to provide spoked wheels. Apart from the economic advantage of using drift-wood which came readily to hand, another reason is suggested by Berg (1935:118) when he refers to the advantages of the solid-wheeled cart compared with the more usual type: "it answered excellently when driven on soft, loose ground into which the wheels could easily sink". It is significant that in the period when the sled was common, artificial roads were virtually non-existent in the areas where its occurrence was general.

My personal opinion about the origin of the sled is that it was evolved from the runner-sledges which were, and still are, used for farm work in all parts of Orkney. Even to-day

it is quite common to see, especially at harvest time, simple runner-sledges being hauled by tractors. Sometimes, instead of a runner-sledge, a platform with two small wheels at the rear is used for carrying sheaves. It would not have been surprising if in the South Isles a similar practice had been followed, only fitting four wheels instead of two, thus making a simple waggon. Indeed one type of runner-sledge used in Graemsay strongly resembles the sled—having only runners instead of wheels.

If the sled was evolved from the runner-sledge, it may be worth observing that similar conclusions have been reached about a comparable development—the evolution of wheeled vehicles from the slide-car type of sledge:—namely, in Wales (Fox 1931:185-199), in Ulster (Thompson 1958: Section 1), and in Norway and Sweden (Berg 1935:144-146).

This hypothesis that the Orkney sled evolved from the runner-sledge is supported by the very use of the term sled, which elsewhere simply means a sledge. Indeed with several of my informants the term sled was often used indiscriminately—sometimes meaning a waggon, sometimes a runner-sledge.

NOTES

- ¹ In the second Statistical Account it is stated (p. 47) that at the date of the old Statistical Account the whole island of Sanday contained 36 carts; but this seems to have been an error for reference to the earlier account shows the actual number to have been 37.
- ² I am indebted to Peter Leith, Appiehouse, Stenness, for showing me this list transcribed from the records in the Sheriff Clerk's office, Kirkwall.
- ³ It was Alexander Fenton of the National Museum of Antiquities of Scotland who drew my attention to this particular axle. This was only one of the many occasions when Mr. Fenton aided me with his advice; and I wish to express my thanks for the great assistance I received from him in preparing this study.
- ⁴ This particular axle was donated to Stromness Museum by Peter Leith, Appiehouse; and it was from him that I obtained the information on its history.
- ⁵ These photographs, as I found later, were taken by Mrs. N. F. McMillan, City of Liverpool Museums.
For the photograph of Pl. IV, fig. 1, I am indebted to Mr. H. Mowat, Simmary, Melsetter, Orkney.
- ⁶ My information on Flotta was procured for me by J. I. H. Fleming, M.A., who in April 1960 questioned on my behalf Malcolm Ross and Thomas Rosic then aged 77 and 72 respectively. I am grateful to Mr. Fleming for the careful way in which he assembled the necessary information. My gratitude is due also to all the informants mentioned in the text, who, in many cases, went to a great deal of trouble in their efforts to assist me with this study.

REFERENCES

- BERG, GÖSTA
1935 *Sledges and Wheeled Vehicles; ethnological studies from the viewpoint of Sweden.* Stockholm.
- BURT, EDWARD
1754 (1876) *Letters from a Gentleman in the North of Scotland.* Vol. 1. London.
- CLOUSTON, J. STORER
1927 *The Orkney Parishes; containing the Statistical Account of Orkney, 1795-8 . . .* Kirkwall.
- DONALDSON, JAMES
1794 *General View of the Agriculture of Elgin.* London.
- FOX, CYRIL
1931 "Sledges, Carts and Waggon". *Antiquity* 5: 185-99.
- GORRIE, DANIEL
1868 *Summers and Winters in the Orkneys.* London.
- JENKINS, J. GERAINT
1959 "Two-Wheeled Carts". *Gwerin* 2: 162-75.
- MACKINTOSH, W. R.
1887 *Glimpses of Kirkwall and its People in the Olden Time.* Kirkwall.
- MARWICK, ERNEST
1953 "The Orkneymen of Red River". *Orkney Miscellany* 1: 9-28. Kirkwall.
- MARWICK, HUGH
1930 "An Orkney Jacobite Farmer". *The Journal of the Orkney Agricultural Discussion Society* 5: 64-75. Kirkwall.
1934 "Two Orkney 18th Century Inventories" *Proceedings of the Orkney Antiquarian Society* 12:47-54. Kirkwall.
1939 *Merchant Lairds of Long Ago*, Vol. II. Kirkwall.
- N.S.A. Orkney
1845 *The New Statistical Account of Scotland*, Vol. 15 (Orkney). Edinburgh.
- N.S.A. Shetland
1845 *The New Statistical Account of Scotland*, Vol. 15 (Shetland). Edinburgh.
- O.S.A.
1791-9 *The Statistical Account of Scotland.* Edinburgh.
- PRINGLE, ROBERT OLIPHANT
1874 "On the Agriculture of the Islands of Orkney". *Transactions of the Highland and Agricultural Society of Scotland*, Fourth Series 6:1-68. Edinburgh.
- SHIRREFF, JOHN
1814 *General View of the Agriculture of the Orkney Islands.* Edinburgh.
- SINCLAIR, SIR JOHN
1795 *General View of the Agriculture of the Northern Counties and Islands of Scotland.* London.
- THOMPSON, G. B.
1958 *Primitive Land Transport of Ulster.* Belfast.
- TRAILL, WALTER
1823 *Vindication of Orkney.* Edinburgh.