

## Orthostat walling in Brittany

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*Professor Meirion-Jones is Head of Geography in the Sir John Cass Faculty of Life and Environmental Sciences, City of London Polytechnic. He was stimulated to write this piece for us by seeing our Editorial note about vaccary walling (1982, 163), and our reproduction of Mr Geoffrey Wright's photograph, first published in 'Country Life' in February 1982 (our Pl. xviiib). Confident in the approval of our founder, we ourselves are still pleased when a little honest human geography comes our way and we publish Professor Meirion-Jones's article with pleasure.*

Attention has recently been drawn to the existence of 'vaccary' walling at Wycoller, Lancashire (*Antiquity*, lvi, 1982, 163, Pl. xviiib). Upright stones, or orthostats, occur in both field boundaries and the construction of buildings in Brittany where they are to be found in three widely-separated parts of the Province. Known areas of orthostat walling have recently been mapped in southern Finistère, between Concarneau and Pont-Aven; in southern Côtes-du-Nord between Rostrenen, Saint-Nicolas-du-Pélem and Mur-de-Bretagne; and in a large area stretching across northern Loire-Atlantique into eastern Morbihan as far as Rochefort-en-Terre, and also into south-western Ille-et-Vilaine (FIG. 1).

In southern Finistère, south of the RN 783, in the *communes* of Névez and Trégunc, large numbers of buildings with walling formed entirely of orthostats, large flat vertical slabs of stone with their lower ends embedded in the ground, survive. An intrusion of calco-alkaline biotite-granite is here sufficiently fissile to yield large slabs and an extensive survey produced 40 farms and hamlets containing at least one orthostat-walled building, all but two examples confined to the granite outcrop. The orthostats are normally cut to a length of *c.* 2.50 m and stand with the lower 0.50 m embedded in the ground leaving a full 2.00 m of free-standing wall. In the more regular examples the orthostats are *c.* 0.40 m wide and 0.25 to 0.30 m thick. Many houses have front, rear and lower gable walls of orthostats, only the upper (chimney) gable being of coursed stone-rubble walling, necessary to accommodate the heavy granite chimney-piece and flue which could never be supported on the thin, short, orthostats.

The limited height of the orthostats has resulted in the preservation of the hipped roof at the lower end of these houses, a feature now but rarely found elsewhere, and the houses are inevitably all of one storey as it is technically impossible to build on top of such thin and relatively unstable walling. Tie-beams, with exposed ends, generally rest on a wall-plate laid along the top of the orthostat wall, spaces between the beams being filled either with carefully cut stone, or with rubble. Many walls have finely cut orthostats fitting closely together, gaps being filled with *torchis*, or clay. Interior wall surfaces bear no trace of plaster, and finish is usually confined to painting with whitewash. Some houses are constructed with more irregularly cut stones and here a greater infill of *torchis* is necessary. A few buildings have walls of orthostats separated by short stretches of coursed walling and although both the latter technique, and that of continuous orthostat walling, are of high antiquity, with examples in many of the megalithic chambered tombs of Brittany, it does not follow that surviving rural buildings incorporating orthostat walling are necessarily of great age, or that there is a proven continuity of building tradition. Where stone with straight sides cannot be obtained there is need for rubble infill, and this form of walling is probably typologically earlier, although once again it does not follow that individual examples are themselves earlier in date than the technically superior examples. Chronology in this area is difficult to establish, for the few dated houses belong to the nineteenth century. Many of the most carefully-cut orthostats have drill holes showing that dynamite was used in their quarrying.

These houses appear to have been the homes of

those in the middle and lower levels of rural society. The *manoirs* in contrast, homes of the gentry, and the larger farmhouses, are invariably of two storeys, thus precluding the use of orthostats. Frequently the orthostat dwellings appear at, or close to, the roadsides, suggesting that they may originally have been constructed on land enclosed from the roadside waste, and the long narrow gardens which accompany them merely tend to confirm this impression. Not all, however, are in the 'squatter' category and some are certainly the dwelling houses of small farmers rather than the cottages of landless labourers. Two examples are illustrated (FIG. 2).

Goëlan-Trégonal, Trégunc, is a well-constructed dwelling of 'long-house form' with lateral walls and the lower gable of granite orthostats. The upper gable, supporting the chimney-piece and flue, is of granite rubble with dressed quoins and coping. There are two 'cells': the hall, or common living-room, and a lower room, in this case a storeroom, containing a fixed wooden ladder giving access to the loft storage space. Each cell has separate access from outside and the wooden dividing partition contains a doorway giving internal communication between the two. The rooms are lighted by two small windows, that to the lower room being unglazed. In plan this dwelling is typical of large numbers of houses in Brittany in which families lived, cooked, ate and slept, entirely in a single room until recent times. In such dwellings where a second cell existed it either formed the byre, thus giving rise to the long-house, or, as in this case, a storeroom (hence 'long-house form'). A fuller description of the vernacular architecture of Brittany has recently been published elsewhere (Meirion-Jones, 1982). It is impossible to tell whether the lower end once housed cattle or not and indeed the function may, and often did, change with time. Several other dwellings in this area, identical in form, certainly once housed livestock in the lower end. Goëlan-Trégonal is 11.60 m long externally and 10.70 m internally; it is 5.00 m wide externally and 4.70 m internally. The hall measures 6.45 m by 4.70 m. Orthostats rise 2.10 m above ground-level, are 0.35 to 0.40 m wide and c. 0.15 m thick. Jointing is well-formed and the gaps are filled with *torchis*.

The second house, Botquelen, Névez, is smaller and until its recent destruction by fire was occupied as a single-cell dwelling. It measures c. 8.20 m externally and c. 7.10 m internally. External width varies from 5.30 m at the lower, to 5.10 m at the

upper, end. Corresponding internal widths are 4.50 m and 4.15 m. The lateral and lower gable walls vary in thickness from 0.30 to 0.40 m and construction of these is a mixture of roughly-hewn orthostats and granite rubble infill. The upper gable wall containing the chimney-piece and flue is 0.60 m thick and of stone rubble. This house is one of the few buildings in which the use of orthostats is combined with coursed stone rubble; it is also one of the few whose orthostats are not finely cut. Whether this bespeaks greater antiquity or not is difficult to say. The roadside location and the general fact that there are no dated examples of orthostat houses before the end of the eighteenth century would suggest not, and the lack of finish in this construction is probably to be explained by poverty rather than by age.

That some of the surviving orthostat houses may be of eighteenth-century date is intimated by Cambry (1799, 382) who was able to observe the '*grandes pierres de taille plates, longues de sept à huit pieds, comme à Trégunc*', but it would seem that there was a renaissance of this type of construction in the nineteenth century, following the acquisition of a technically more advanced quarrying skill and the use of explosives. Large numbers of farm buildings in this region, especially byres and stables, are also built of orthostats.

The Névez-Trégunc area is also characterized by the extensive use of smaller orthostats in field boundaries, some of which may well be of great antiquity, although this is not proven, and it is these that may provide a continuous link with the past (PL. VIA). The stones are closely set and rarely more than c. 1.00 m in height; frequently they rise to only 0.50 to 0.60 m above ground level. They occur also in small enclosures close to the farmyards. A small walled enclosure close to a bake-oven at Kermeun, in Névez, for example, illustrates the technique.

In southern Côtes-du-Nord orthostat walling extends in a belt from Rostrenen to Mur and northwards to Saint-Nicolas-du-Pélem (FIG. 1). Here orthostat-walled houses are largely confined to the region of Carboniferous Châteaulin schist. Several localities have orthostat houses, notably Laniscat, Plussulien and, in Plounévez-Quintin, a whole series of dwellings, and former dwellings, squatters' cabins built on the roadside waste. Orthostats are commonly wider and shorter than in Finistère, varying from 0.60 to 0.80 m in width, with a height from ground to eaves of 1.70 m. In some houses all four walls are of orthostats and the

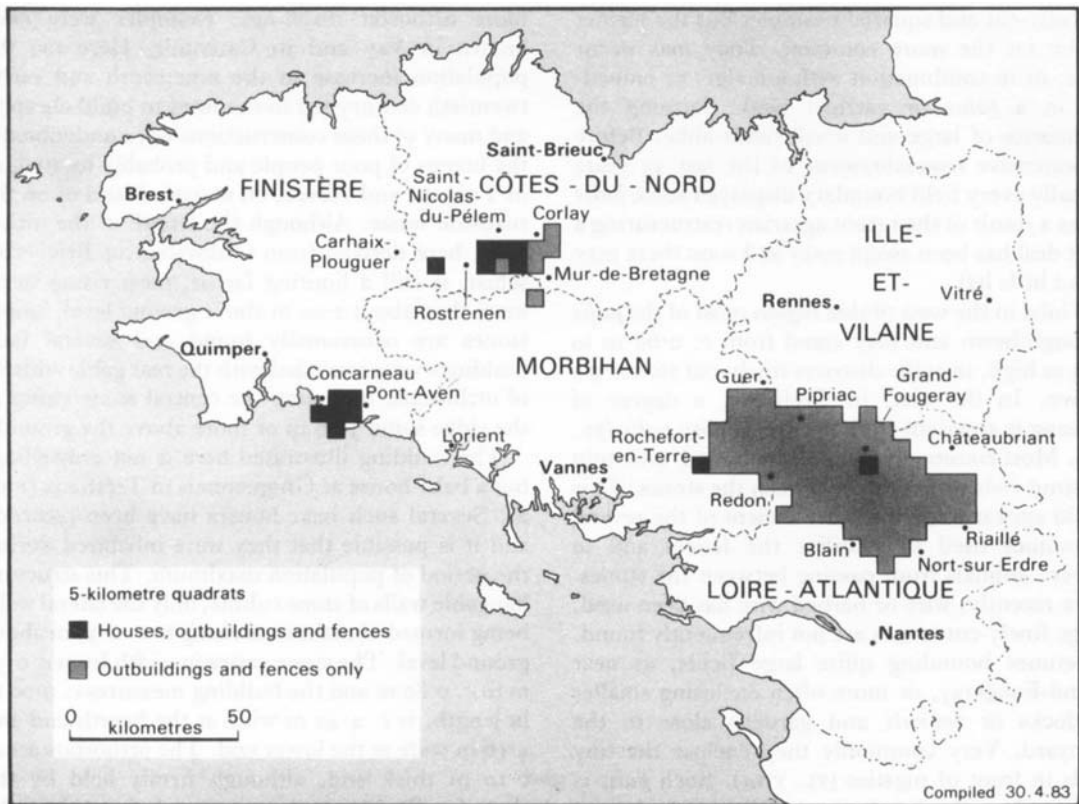


Fig. 1. The distribution of orthostat walling in Brittany

fully-hipped, and formerly thatched, roof rests on heavy wall-plates. A light chimney-hood, of wooden planking nailed to a frame, stands over the hearth placed against the end wall. This form of light flue construction either of wooden planking nailed to a frame, or of a clay-and-wattle cage, was usual in such dwellings.

An example of such construction is the house at Pont-Rot, Plounevez-Quintin, now abandoned. A tiny roadside squatter's cabin, one of a series, this house measures only 5.00 m in length and 3.50 m in width. The thickness of the orthostats used for all four walls (part of the lower gable has been repaired with concrete blocks) is no more than 0.10 m. Orthostats rise to c. 1.80 m above ground-level and are held in place by heavy grooved wall-plates at the top. The common beams rest directly on the lateral wall-plates, their ends exposed. Two houses at Plussulien, in the centre of the *bourg*, very good examples of a more substantial construction, are still inhabited (PL. viib).

Examples of slate orthostats set in wooden

frames, and used as dividing partitions inside buildings, occur at La Harmoye, in Côtes-du-Nord, where they divide two houses, and in Neuillac, Morbihan, where they are used to partition an outbuilding. A good example of a timber-frame building, with large schist orthostats used as an infill is also to be found in Neuillac. In both these localities the technique has been diffused from the larger region of southern Côtes-du-Nord on whose fringes they lie (FIG. 1).

The third area in which orthostats are common, both in buildings and in field boundaries, extends across northern Loire-Atlantique into eastern Morbihan and south-western Ille-et-Vilaine. It is in this area, particularly in the *pays de Redon* in the west (FIG. 1) that the use of schist or slate orthostats as field boundaries is most common, especially in the *communes* of La Gacilly, Cournon, Renac, Les Fougerêts, La Chapelle-Gaceline, Sixt-sur-Aff, Saint-Just and Carentoir. Here the orthostats are known as *les palis* and are found in field boundaries both in the form of rough-hewn stones and as

carefully-cut and squared examples but the former are by far the more common. They may occur alone, or in combination with a hedge, or embedded in a *talus* or earthen bank, forming the boundaries of large and small fields alike. Before the extensive *remembrement* of the last 25 years virtually every field boundary displayed some *palis* but as a result of the recent agrarian restructuring a great deal has been swept away and soon there may be but little left.

Whilst in the west of this region most of the *palis* is rough-hewn and may stand from *c.* 0.60 m to 1.50 m high, in some districts finely-cut stones are known. In the east, in Tréffieux, a degree of dressing is apparent in the better quality *palis* (PL. vii b). Most commonly the *palis* is bound with split chestnut rods interwoven between the stones. This would appear to be the most ancient of the several techniques used to stabilize the fences and to prevent animals from passing between the stones. More recently, wire or barbed wire has been used. Large finely-cut stones are not infrequently found, sometimes bounding quite large fields, as near Grand-Fougeray, or more often enclosing smaller paddocks or *courtills* and gardens close to the farmyard. Very commonly they enclose the tiny yards in front of pigsties (PL. vii a). Such *palis* is held in place, not by chestnut rods or wire, but by wooden spars, one to each side, bolted through the top end of the *palis* with iron bolts. This technique would seem to be late in date, perhaps belonging to the late-nineteenth, or early-twentieth, century.

The great increase in rural population towards the end of the nineteenth century was accompanied in this region, and especially in the *pays de Redon*, by extreme sub-division of land, resulting in a pattern of tiny narrow fenced strip-fields, for the enclosure of which *palis* was extensively used. Thus much *palis*, in percentage terms, is very recent, dating only from the nineteenth century and later. As a technique, *palis* interlaced with split chestnut rods would seem to be earlier than other forms. It may also be that those *palis* associated with earthen *talus* are amongst the oldest, but it does not follow that, even if a field bank is of proven antiquity the *palis* is contemporary with it, for the latter could have been added at a later date.

Large numbers of orthostat buildings survive in this area, of all sizes from tiny pigsties to small barns and field buildings. Two houses have been recorded, several bake-houses exist and there is recent oral evidence for the former existence of

more orthostat dwellings: examples were once known in Vay and in Carentoir. Here too the population increase in the nineteenth and early-twentieth century led to the need to build cheaply, and many of these constructions were undoubtedly the homes of poor people and probably located, as in Trégunc and Névez, on marginal land or on the roadside waste. Although the length of the orthostats, here derived from Ordovician or Brioverian schist, is still a limiting factor, most rising to no more than about 2.00 m above ground level, longer stones are occasionally found and several field buildings were recorded with the rear gable entirely of orthostats, including the central stone rising to the ridge some 3.00 m or more above the ground.

The building illustrated here is not a dwelling, but a bake-house at Ginguennais in Tréffieux (FIG. 2). Several such bake-houses have been recorded and it is possible that they were inhabited during the period of population maximum. This structure has gable walls of stone rubble, only the lateral walls being formed of orthostats rising to *c.* 2.30 m above ground level. The stone varies in width from *c.* 0.50 m to *c.* 0.80 m and the building measures *c.* 6.00 m in length, is *c.* 4.40 m wide at the hearth end and 4.10 m wide at the lower end. The orthostats are *c.* 0.10 m thick and, although firmly held by the slotted wall-plates at the upper end, do not bear the weight of the loft floor which is carried on a pair of longitudinal beams.

The use of orthostat walling in both field boundaries and in the construction of houses and farm buildings is thus attested from widely-separated parts of Brittany. Many of the boundaries and buildings are of a high quality of construction and there is often considerable precision in the cutting and setting of the stones. Some of the work is strongly suggestive of a late date and there is some evidence of well-organized production and the use of mechanical aids in quarrying and cutting. It is extremely difficult to date most of these orthostat structures and field boundaries. Much, however, must date from the nineteenth and twentieth centuries and is to be associated, along with so much of Breton vernacular building, with the great increase in the rural population, and the accompanying growth of settlement, together with the subdivision, sometimes to the point of extreme morcellation, of land holdings. Nevertheless, numerous dwellings and farm buildings in the *pays de Redon*, of undoubted seventeenth-century date, and of conventional stone rubble construction, have

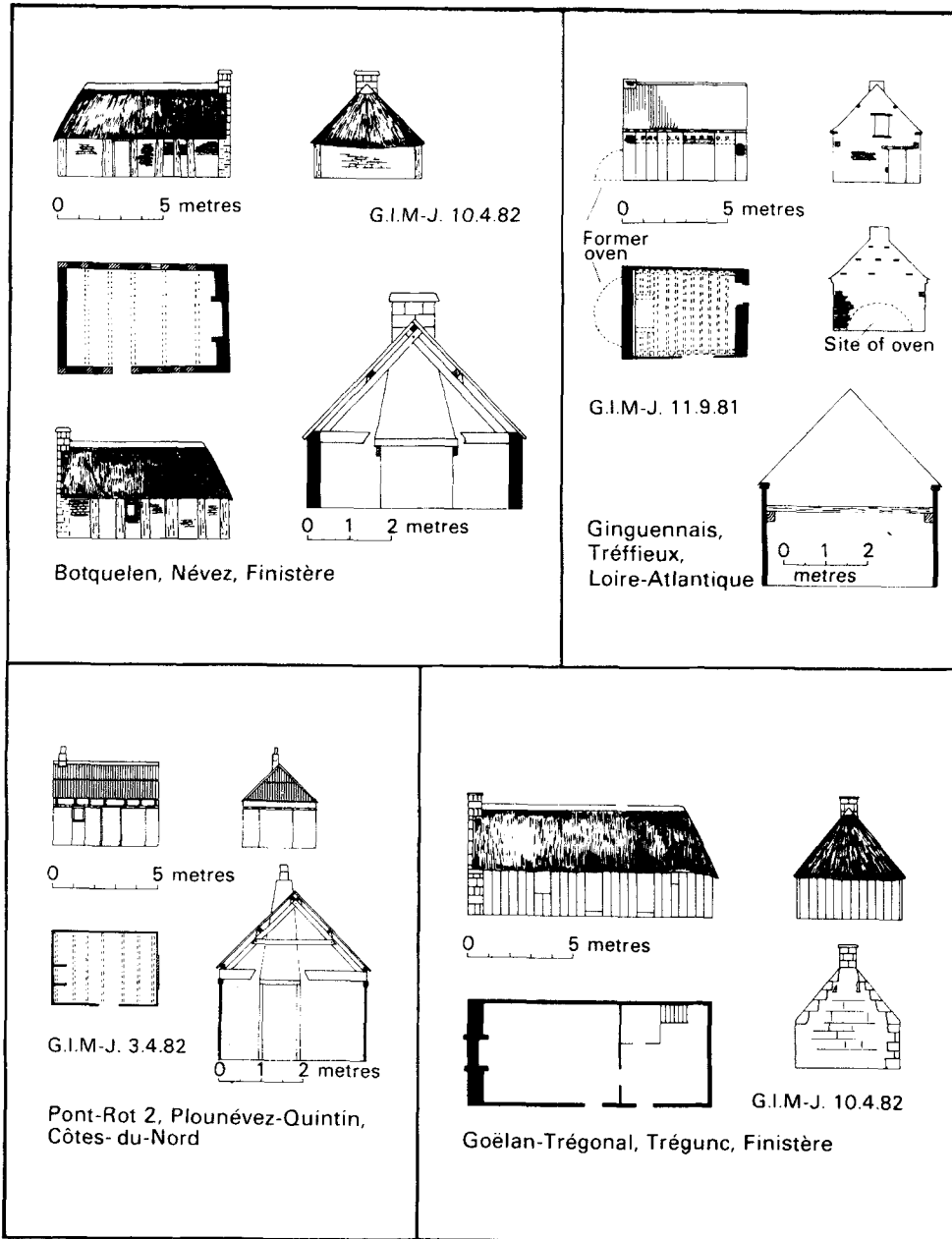


Fig. 2. Four orthostat-walled buildings in Brittany

internal partition walls of massive schist orthostats, sometimes set in a timber frame in such a way as to suggest that they are contemporary with the building rather than a later insertion. If this interpretation be correct then the use of orthostats in buildings may date from the first 'permanent' housing of the sixteenth or seventeenth centuries,

after the end of the Middle Ages, and accompanying the period of peace and increasing prosperity following the Union of Brittany with France. Of the use of orthostats before that time there is at present no clear proof. The age of many of the field boundaries must be a matter of uncertainty although there is a possibility that some, at least, of



the orthostats may be associated with field boundaries that date to the early-medieval period, or

even to prehistoric periods. That, however, remains a matter of speculation.

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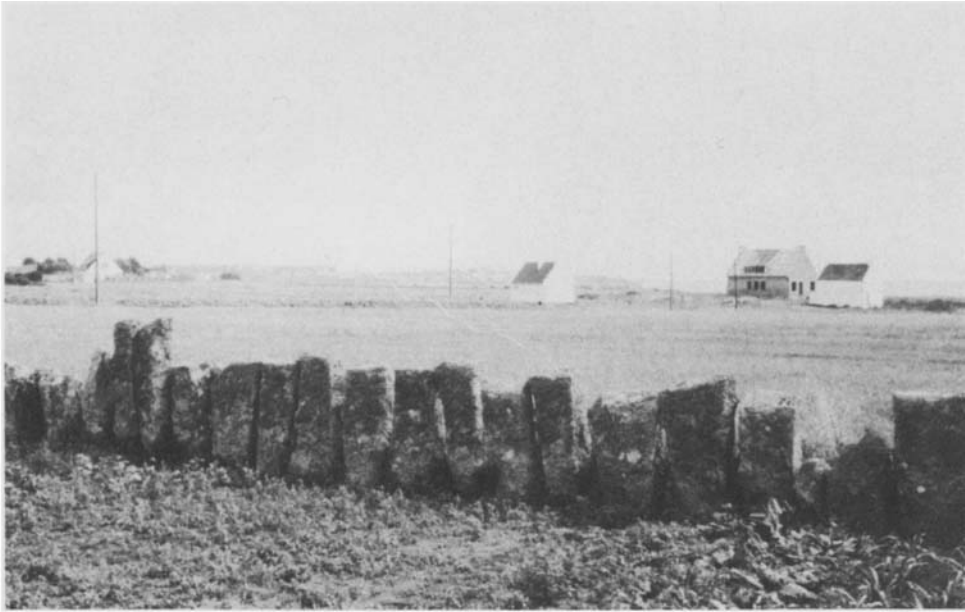
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a



b

PLATE VI: ORTHOSTAT WALLING IN BRITTANY  
(a) Trévignon, Trégunc, Finistère. (b) Tréffieux, Loire-Atlantique

See pp. 39–44

Photos: G. I. Meirion-Jones



*a*



*b*

PLATE VII: ORTHOSTAT WALLING IN BRITTANY

(*a*) *Le Maire, Nozay, Loire-Atlantique.* (*b*) *Plussulien, Côtes-du-Nord*

*See pp. 39-44*

*Photos: G. I. Meirion-Jones*