

# Megalithism in Catalonia: A brief overview

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## ABSTRACT

The study of megalithism in Catalonia, especially southern Catalonia (south of the Pyrenees), has changed considerably in the past four decades (1980-2020) thanks to several extraordinarily important excavations. They include the dolmen in Els Reguers de Seró (Artesa de Segre) and the menhir in El Pla de les Pruneres (Mollet del Vallès), both of which yielded heretofore unseen engravings, and most importantly the long-term campaigns focused on specific regions, such as the Alt Empordà, Tavertet (Osona) and, more recently, Maresme-Baix Vallès. Also worth noting is the work done on the western dolmen region, such as in Odèn (Solsonès), and the new excavations and studies on underground Neolithic cists from the Solsonian (Solsonès), which have now been included in megalithism in Catalonia, a much more complex, long and varied period than we imagined back in the 1970s. Indeed, the timeline of Catalan megalithism currently stretches from the early middle Neolithic (4500 BC) to the onset of the Bronze Age (1800 BC), that is, more than 2500 years through Neolithic, Chalcolithic and Bronze-Age cultural groups which shared the custom of burying their dead in more or less monumental stone graves, their hallmark. Alongside the graves, these recent decades have also finally revealed some of the settlements where their builders lived, such as the one in Ca n'Isach (Palau-saverdera, Alt Empordà); new menhirs and sites or cromlechs consisting in menhirs or built around menhirs near the habitat areas have been discovered; and new megalithic statuary, such as the one from Ca l'Estrada (Canovelles, Granollers). These are similar to the megalithic world in southeast France, while also enriching the known megalithic art records here in Catalonia, which until now were primarily centred around schematic anthropomorphic and geometric engravings in some megalithic graves in the Alt Empordà/Roussillon/Conflent.

**KEYWORDS:** Southern Catalonia, middle Neolithic-old Bronze Age, dolmens, menhirs and megalithic art

## THE MEGALITHIC TERRITORIES AND CHRONOLOGICAL GROUPS

In this article, the territory studied will be southern Catalonia, which stretches from the Pyrenees to the Ebro River; northern Catalonia will not be included because the information on this region was published several years ago in the *Annals of the Institut d'Estudis Gironins*.<sup>1</sup> However, we will make constant references to the latter, given that the cultural differences between the prehistoric settlements on either side of the Catalan Pyrenees during this period were quite minor, as the variations ran more east-to-west than north-to-south.

Megalithic research in southern Catalonia began in the late 19th century with scholars like Lluís Marià Vidal, an engineer and geologist,<sup>2</sup> but it particularly took shape in the early 20th century with scholars and archaeologists like Agustí Casas,<sup>3</sup> Manuel Cazorro,<sup>4</sup> Pere Bosch-Gimpera<sup>5</sup> and Lluís Pericot<sup>6-7</sup> (the latter two professors at the Universitat de Barcelona), Joan Serra-Vilaró<sup>8</sup> and Is-

idre Macau.<sup>9</sup> After them came Joan Maluquer de Motes,<sup>10</sup> Lluís Esteva (a teacher in Sant Feliu de Guíxols),<sup>11-15</sup> Ricard Batista,<sup>16-18</sup> Miquel Cura,<sup>19-22</sup> Josep Castany,<sup>23-25</sup> Miquel Molist,<sup>26-27</sup> Joan B. López,<sup>28-30</sup> Josep Tarrús<sup>31-33</sup> and many others who continue the research today.<sup>34-35</sup>

However, we should note that the studies on the northern face of the Albera massif, which falls wholly within northern Catalonia,<sup>36 and 1</sup> and those in all of southeast France were always an inspiration in better understanding local megalithism and situating it within the western Mediterranean.<sup>37-38</sup>

The megalithic territories in southern Catalonia are quite diverse and do not cover the entire country. They are located from the Pyrenees to slightly beyond the Llobregat-Cardoner Rivers (the latter a tributary of the Llobregat),<sup>6-7</sup> as far as Gaià and El Corb (a tributary of the Segre).<sup>18 and 39</sup> The latter currently mark the southern boundary of Catalan megalithic graves, represented by the Catalan gallery in Mas Pla de Valldossera and the megalithic cist in Cabanyota de Bonany, both of them in the township of Querol in Alt Camp.<sup>40-41</sup> However, if we regard Pedra Fita de Botarell, with its cup-marks and

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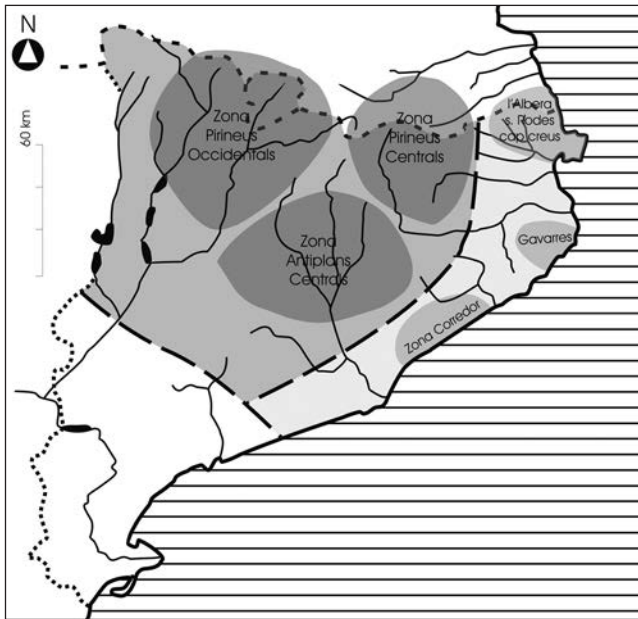


FIGURE 1: Map showing the distribution of megalithic monuments in Catalonia: cists with a mound from the early middle Neolithic and different dolmens (passage graves, Catalan galleries, simple dolmens with a variety of frontal entrances and enclosed megalithic cists from the full middle Neolithic, late Neolithic, Chalcolithic and old Bronze Age.

crosses from mediaeval Christianisation, as a possible prehistoric menhir, then the southern boundary of megalithism in Catalonia would stretch to Alforja stream in the Baix Camp region.<sup>42</sup>

Beyond that, an inexplicably empty area extends throughout the entire region of Valencia as far as Murcia, where different dolmens and menhirs have been identified, and, of course, eastern Andalusia, where megalithism is once again prominent. We still do not know the reason for this lack of dolmens in southern Tarragona and Valencia, given that the prehistoric groups from the late Neolithic to the early Bronze Age are quite similar to the ones we know in the rest of Catalonia and the megalithic Iberian Peninsula.

Currently, there are 423 clearly identified megalithic graves in southern Catalonia, including Neolithic cists with a mound and true dolmens (not counting the Solsonian Neolithic cists, as mentioned above). They perhaps account for two-thirds of those that originally existed, most likely more than 600 graves in an area with a megalithic presence measuring around 20,000 km<sup>2</sup>, that is, one dolmen per 35 km<sup>2</sup>. In terms of menhirs, statue menhirs and stelae, the figure rises to around 120, although in this case we can only consider a few dozen of them clearly prehistoric. They include those that have yielded archaeological materials around them, are associated with megalithic graves and are part of cromlechs or sites, or, in the rarer cases, when they are indisputably menhirs either because of their form or shape or because they bear clearly prehistoric engravings. We can only regard the others, the numerous upright stones or milestones in Catalonia

that are isolated and have no clear contexts, as potential prehistoric menhirs when we have information on them from mediaeval or older modern history, which seldom mentions anything earlier than the 9th-10th centuries in the Carolingian era and are often associated with an array of local legends, many of them to do with the devil.

In terms of northern Catalonia, around 116 megalithic graves have been clearly identified<sup>36</sup> and 1 (perhaps there were originally 150 if we add one-third more), and only 11 menhirs in an expanse five times larger than the megalithic area of southern Catalonia. If we solely focus on megalithic graves, then their density is quite similar, 1 dolmen per 30 km<sup>2</sup>.

These megalithic graves are divided into two distinct zones:

—The coastal region, with its old passage graves with subcircular and trapezoidal chambers (middle and late Neolithic, 4000-3200 BC), and more recent ones with rectangular chambers and Catalan galleries (late Neolithic-early Chalcolithic, 3200-2700 BC). Two very ancient-looking large mounds with graves (cists?) inside them were recently discovered in Vilanera (L'Escala, Alt Empordà), one of which yielded Montboló-style ceramics in 2016, a triangular flint microlith and several burials in a crouching position both inside and outside the funerary chamber.<sup>43</sup>

—The inland mountains and plateaus to the west, with their Neolithic cists with a mound (Tavertet, Osona, early middle Neolithic, 4500-3900 BC), underground Neolithic cists in Solsona (full middle Neolithic, 3900-3400 BC) and simple dolmens and megalithic cists (late Chalcolithic and early Bronze Age, 2700-1800 BC). Catalan galleries, the last evolution of local passage graves, started to be built in the inland regions, in both the foothills of the Pyrenees and the central plateaus, in the last part of the late Neolithic or early Chalcolithic (3000-2700 BC).

The origin of megalithism in Catalonia has always been the subject of debate. Was it a local emergence based on cists with a mound in the early middle Neolithic or Solsonian underground cists during the full middle Neolithic in the inland highlands? Or did it come with Atlantic influences (passage graves) via the Garonne corridor up to the far eastern part of the Pyrenees? Or perhaps did the rich megalithic world in the western part of the Iberian Peninsula (Portugal, Galicia, Cantabria), which also has ancient passage graves, reach Catalonia via the Pyrenees in the Basque Country and Aragon, despite the absence of this kind of ancient grave in either Aragon or western Catalonia? We do not yet have the definitive answers to these questions, which were first asked by Pere Bosch-Gimpera and Lluís Pericot more than 100 years ago.

In any case, we should recall that in the concentration of megaliths in the Alt Empordà-Roussillon and the Albera massif, the Rodes mountains and Cap de Creus, the most important ones in Catalonia, there are a great many ancient passage graves that cannot be found either further north (Conflent-Vallespir) or further south (Baix Em-



pordà), with just a handful of exceptions (Puig ses Forques, Calonge), much less in the Maresme and Alt Camp regions.

The topographical distribution of dolmens in this borderland between the Alt Empordà and Roussillon, which was recently studied, reveals that they are primarily located on the peaks (30.39%) and slopes (54.9%) of mountains, as well as in valleys (1.96%) and on plains (12.75%), those in the latter being the most damaged because of crop farming. In this same region, the ancient passage graves are oriented equally southeast and southwest, while the more elaborate Catalan galleries tend to be centred southeast at around 100-150°. <sup>31-32 and 44</sup>

## MEGALITHIC GRAVES: PHASES AND DIFFERENT TYPES

### Phase I

The oldest megalithic graves in southern Catalonia are the Neolithic cists with a mound (4500-4000 BC, Montboló group from the early middle Neolithic), such as those in Tavertet-Vilanera-Caramany, which have been accurately dated using C-14 and were found with grave goods of Montboló-style ceramic (26, 43 and 45). This Phase I and the ensuing inland Phase II with buried cists from the Solsonian (full middle Neolithic) have been considered proto-megalithism, but the appearance of passage graves with a subcircular chamber in the first half of the 4th millennium BC, if not earlier, should be considered true megalithism (33)

### Phase II

This is the period of underground cists without a mound (or semi-underground with simple mounds) in the Solsonès (4000-3400 BC, Solsonian group from the full middle Neolithic) and its neighbouring regions (Andorra, Alt Urgell, Segarra, Berguedà, Bages, Moianès) in the central highlands and Pyrenees mountains (8 and 46). All these graves have been clearly C-14 dated (Costa dels Garrics



FIGURE 3: Neolithic cist from the Solsonian in La Costa des Garrics del Caballol-II (Pinell del Solsonès).

del Caballol I-II, Pinell) (24-25) from the expected chronological period of the full middle Neolithic (4000-3400 BC), bearing in mind their grave goods

In this period, ancient passage graves (with subcircular chambers) situated in the first half of the 4th millennium (Chassey group from the full middle Neolithic, 4000-3400 BC) first appeared in the Alt Empordà. The sites include Font del Roure in Espolla, Gutina and Tires Llargues in Sant Climent Sescebes, Estanys-II in La Jonquera, Barraca d'en Rabert and Mas Bofill in Palau-saverdera and Llit de la Generala in Roses. We are also aware of several in the Baix Empordà (Puig ses Forques in Calonge), as mentioned above (32)

These ancient passage graves coexist with Neolithic cists with a mound in the Alt Empordà (Vinya d'en Berta, Pau; Tomba del General, Roses), whose dates are uncertain because they do not have indisputable grave goods, nor have they been C-14 dated; however, judging from their architecture, we have situated them between the full middle Neolithic and the late Neolithic (32). We should recall that there is another group of Neolithic cists with a



FIGURE 2: Neolithic cist with a mound in La Font de la Vena (Tavertet, Osona). Photograph by J. Castells/W. Cruells/M. Molist, 1986.



FIGURE 4: Passage grave with subcircular chamber in La Font del Roure (Espolla, Alt Empordà).

mound in the Baix Empordà-Gironès-Selva, similar to those in the Alt Empordà, which has been dated from the late Neolithic, as demonstrated by Xavier Niell's 2013 excavations in La Roca d'Ivet (Llagostera, Gironès), which yielded abundant grave goods (pottery, schist plaques, flint knives and discoidal beads made of variscite) from the late 4th millennium BC.<sup>47</sup>

There are very few grave goods in these ancient passage graves in the Alt Empordà that can be associated with the full middle Neolithic (a ceramic vessel with a neck in Barranc d'Espolla and a cup with a hollow base in Tires Llargues; beads in Estanys-II; geometric flint microliths, one trapezoidal and another the segment of a circle in Gutina and Estanys-II; cylindrical or barrel-shaped variscite beads in Tires Llargues, Font del Roure and Comes Llobes de Pils). Fortunately, however, there are two C-14 dates of the two dolmens of this kind, namely the passage graves with a subcircular chamber in Arreganyats (Espolla) and Tires Llargues (St. Climent Sescebes), which place them clearly within this timeframe in the early 4th millennium BC.<sup>32</sup>

### Phase III

This includes the ancient passage graves with short or long trapezoidal chambers documented in the Alt Empordà-Roussillon at least in the second half of the 4th millennium BC (groups from the late Neolithic, Veraza and others, 3400-3000 BC). They are the most frequent dolmens in the Alt Empordà, found in Coll de Farella in Portbou, Banya de Saus in La Jonquera, Barranc in Espolla, Comes Llobes de Pils and Solar d'en Gibert in Rabós d'Empordà, Vinya del Rei in Vilajuïga, Vinyes Mortes-I in Pau, Sureda-I in Palau-saverdera and Creu d'en Coberella in Roses. There are also a few in the northern part of the Albera massif in Roussillon, such as Coma Estepera and Coll des Portes in Cervera, Coll de Brau and Coll de la

Creu in Banyuls and Cova de l'Alarb de Valmy in Argelers; as well as Llobinar in Fitor (Forallac) in the Baix Empordà.<sup>32-33</sup>

### Phase IV

Recent or evolved passage graves appeared in southern Catalonia during this phase; they had a rectangular chamber and a wide corridor which is usually called a Catalan gallery. They are documented in the Alt Empordà from the late 4th millennium BC to the start of the 3rd millennium BC (groups from the late Neolithic, Veraza and others, 3400-2700 BC). Their evolution in the Alt Empordà can be traced from the phase of the passage graves with trapezoidal chambers, which gave rise first to intermediate types with a rectangular chamber and narrow passage with slabs that are still overlapping (Talaia and Ruïnes in Vilajuïga; Mas de la Mata in Port de la Selva) and then to the classic Catalan galleries, now with wide corridors and slabs laid edge-to-edge (Rocalba and Barraca del Lladre in Agullana, Coll de Madàs-I in Cantallops).<sup>32-33</sup>

These Catalan galleries, with V- or U-shaped layouts, are the great megaliths characteristic of the Baix Empordà and the entire Catalan coastline, as well as the central highlands and foothills of the Pyrenees in western Catalonia. They include Cova d'en Daina in Romanyà de la Selva and Cementiri dels Moros in Torrent, Baix Empordà; Puig ses Lloses in Folgaroles, Osona; Tomba del Moro de Llanera in Torà, Segarra; and Mas Pla de Valldossera in Querol, Alt Camp. They are found in northern Catalonia as well, where they are the large megalithic monuments of those regions, including Na Cristiana in Sant Joan d'Albera, La Balma del Moro in La Roca de l'Albera and Serrat d'en Jacques-II in Sant Miquel de Llores in Roussillon; Serramitjana a Catllà and Mas Llusanès in Tarerac in El Conflent; and Molí de Vent in Bellestar de la Frontera, in La Fenolleda.<sup>36 and 1</sup>



FIGURE 5: Evolved passage grave or Catalan gallery in La Cova d'en Daina (Romanyà de la Selva, Baix Empordà).



The presence there of funerary grave goods from the late Neolithic is well documented, both in the ancient passage graves and in the Catalan galleries: numerous schist plaques, large flint sheets, perforating flint arrowheads and a bowl decorated with engraved triangles (Treilles style). There are also vessels from the Veraza group in the Catalan gallery of Cementiri dels Moros (Torrent, Baix Empordà), in addition to another bowl with buttons and engraved triangles in the Catalan gallery of Tomba del Moro de Llanera (Torà, Segarra).<sup>48</sup>

The absence of C-14 dates in megalithic graves which could help us chronologically situate these funerary grave goods from the late Neolithic is unfortunate, but we are aware of other graves in Veraza-style megalithic settings or similar which have been dated. They include the cave-dolmen with a megalithic passage in Tossal Gros (Torroella de Montgrí, Baix Empordà), with grave goods that also include a vessel decorated with engraved triangles, and the grave shelter in Cau d'en Calvet (Torroella de Montgrí, Baix Empordà), with funerary grave goods comprised of Veraza vessels. The C-14 dates of these sites, based on human bones, situate this kind of funerary grave goods between 3400 and 2700 BC.<sup>50 and 49</sup>

### Phase V

Thereafter, simple dolmens with different systems of frontal access to the funerary chamber appear in Catalonia throughout the 3rd millennium BC, including access via a vestibule/well, as in Salt d'en Peió in Sant Climent Sescebes; via a window, as in La Sureda in Morellàs, Vallespir<sup>51</sup> and La Cabana d'en Lluís in Noves de Segre, Alt Urgell<sup>52</sup>; via an enclosure with a wall, as in Estanys-III in Sant Climent Sescebes, Alt Empordà;<sup>53</sup> and even via a

vestibule-corridor, as in La Cabana de la Llosa de Bescaran in Valls de Valira, Alt Urgell, excavated by Gerard Remolins in 2015-2016.

Likewise, this is when megalithic cists entered from above by walking on the roof first appear (Serrat dels Quadrats, Montan de Tost, Alt Urgell). They were initially related to the Bell Beaker cultural groups from the late Chalcolithic, 2700-2200 BC, and later with groups from the old Bronze Age (2200-1800 BC).<sup>54-60, 33 and 52</sup>

In these latter phases, many kinds of alternative graves were also used for inhumation: pits with large, finely wrought covers (which used to be erroneously known as hemidolmens); tholoi like the one in Serra de Clarena, Castellfollit del Boix, Bages;<sup>61</sup> hypogea or artificial caves as in Costa de Can Martorell, Dosrius, Maresme;<sup>62</sup> dolmen-caves, paradolmens and grave shelters; and natural cavities.<sup>63-65</sup>

The Bell Beaker grave goods (vessels in the International Maritime and Regional Pyrenean styles, tubular or cylindrical-spherical gold beads, archers' wrist guards made of schist, triangular flint tips with square fins) are found in both ancient passage graves and the more evolved ones (Catalan galleries), as well as in simple dolmens and megalithic cists and alternative graves. In fact, these are the first ceramic materials which were determined and used to assert the antiquity of the dolmens in the early 20th century.

There are not many C-14 datings in relation to these materials from the Bell Beaker culture taken from dolmens or hypogea, but in the past decade three reliable examples were furnished based on human bones: the simple dolmen with frontal access via a window or lowered slab in Reguers de Seró (La Noguera), with exclusively Bell



FIGURE 6: Simple dolmen with a window-door entrance in La Cabana d'en Lluís (Noves de Segre, Alt Urgell).

Beaker funerary grave goods in the Epi-Maritime style<sup>28</sup> and a C-14 dating of around 2700 BC; the hypogeum with megalithic access in Costa de Can Martorell (Dosrius, Maresme), with exclusively Pyrenean Bell Beaker funerary grave goods<sup>62</sup> and three C-14 dates between 2400 and 2200 BC; and the hypogeum on Carrer París (Cerdanyola del Vallès, Vallès Occidental), with Maritime and Pyrenean Bell Beaker funerary grave goods<sup>66</sup> and two C-14 dates between 2700-2400 BC.

Furthermore, we have two more C-14 datings of graves which contain funerary goods situated in the recent Bell Beaker Chalcolithic: the megalithic cist in Lo Pou in Eina (Eyne) in the French Cerdagne, with a C-14 date of around 2700 BC from the charcoal in the chamber,<sup>36</sup> and the paradolmen in Cau de la Guineu de Sant Mateu de Bages, with another C-14 date of around 2600 BC from human bones.<sup>23</sup>

Funerary grave goods from the old, middle and late Bronze Age are common in all kinds of Catalan dolmens and alternative graves. We have some C-14 datings from human bones in these late phases of Catalan megalithism, such as the tholoi in Serra Clarena-I (Castellfollit del Boix, Bages), with funerary grave goods characteristic of the old Bronze Age, Epi-Bell Beaker style,<sup>61</sup> and a C-14 dating of around 2100 BC; from the probable simple dolmen with frontal access by a corridor-vestibule in Les Maioles (Rubí, Anoia), with funerary grave goods characteristic of the old Bronze Age<sup>34</sup> and three C-14 dates of around 1800 BC; and from the paradolmen with megalithic access in Tafania (Ventalló, Alt Empordà), with funerary grave goods from the old Bronze Age and a C-14 date of around 1600 BC.<sup>64</sup>

## THE DEAD: FUNERARY PRACTICES AND ANTHROPOLOGY

It is difficult to discuss the funerary practices associated with the Catalan dolmens south of the Pyrenees because human remains are rare, especially in the real dolmens built on top of the ground, from ancient passage graves to megalithic cists. Their visibility has prompted frequent pillaging and vandalism, alongside natural erosion, which are the leading causes of destruction. In contrast, it is quite common to find human remains in the majority of Neolithic cists, especially in the buried graves (Solsonian, full middle Neolithic), as well as in the aerial ones (built on the ground) under large mounds, such as the ones in the Tavertet area from the early middle Neolithic. In these latter monuments, we chiefly find individual or double burials in crouching position, most likely enshrouded, within a hollow grave space.<sup>26-27 and 24-25</sup>

One ancient passage grave (Pardals in Darnius, Alt Empordà) excavated in 2003-2004,<sup>67</sup> only contained the remains of one adult and two children, buried in primary position (the only ones conserved?). We should recall that some of the ancient passage graves in the Alt Empordà

had an entrance leading to a blind corridor (Barranc d'Espolla, Comes Llobes de Pils, Solar de Gibert), as confirmed during their excavation in the early 1980s. This leads us to believe that originally there must have been a strict selection of the dead who could be admitted into the funerary chambers in this kind of dolmen, common to the full and late middle Neolithic, even though architecturally they had a corridor so they could be reused.<sup>32-33 and 68</sup>

Different Catalan galleries, which are larger and more recent megalithic monuments than the earlier ones from the late Neolithic/early Chalcolithic, have yielded more numerous human remains, such as Cementiri dels Moros in Torrent, Baix Empordà, with 100-130 individuals; and Turó de Sant Dalmau in Palol de Revardit, Pla de l'Estany, with 30-40 individuals. Furthermore, all ages and both genders are represented at both.<sup>69</sup> At Cementiri dels Moros, the human remains were concentrated in the back of the funerary chamber, and when it was excavated by Lluís Pericot between 1940-1942<sup>70</sup> and by Lluís Esteva between 1945-1948,<sup>13</sup> a selection of bones was found, especially crania, piled up to the backstone of the monument.

The best example of more recent burials in simple dolmens entered via a window or lowered frontal slab is in Reguers de Seró (Artesa de Segre, La Noguera), in an exclusively Bell Beaker setting, that is, from the late Chalcolithic. There, only the remains of two individuals have been found (the only ones conserved?) which, as mentioned above, were C-14 dated from around 2700 BC.<sup>28</sup> Conversely, in the simple dolmen of the same type in Collet de Su (Ardèvol de Pinós, Solsonès), where Bell Beaker culture is not present, and therefore perhaps dating from the early Bronze Age, there were 18 crania in the back of the funerary chamber, two of which had been trepanned, while another had a copper/bronze arrowhead nestled in a parietal bone.<sup>71-72</sup>

Human remains have also been found in the contemporary alternative graves from the late 4th and 3rd millennia, especially in the hypogeum from the late Neolithic/early Chalcolithic in the Sagrera high-speed railway station, where 357 individuals were buried;<sup>73</sup> in the Bell Beaker hypogea (late Chalcolithic) in La Costa de Can Martorell (Dosrius, Maresme), with 200 individuals, most of whom correspond to an episode of war;<sup>62</sup> and on Carrer París (Cerdanyola, Vallès Occidental), with 40 individuals.<sup>66</sup> In some cases, the individuals are tall (1.80 m) with brachycephalic and planoccipital crania, as in the paradolmen in Tafania (Ventalló, Alt Empordà), which dates from the old Bronze Age. This brings up the old hypothesis of new northern Pyrenean peoples reaching Catalonia in the late 3rd or early 2nd millennium BC.<sup>64 and 74</sup>

## COEVAL HABITATS, MENHIRS AND MEGALITHIC AREAS

Among the outdoor settlements coeval with the megalithic necropolises in southern Catalonia, the most notewor-



thy one is in Ca n'Isach (Palau-saverdera, Alt Empordà), which was excavated in two stages, 1987-1994 and 2000-2003. Three architectural and chronological phases have been distinguished there: one from the early middle Neolithic (Montboló group), which includes a rectangular hut with stake holes in a trench located underneath another U-shaped hut from the full middle Neolithic; another from the full middle Neolithic (Chassey group), which includes four U-shaped huts adjoined to each other two by two and different hearths, stake holes and silos dug into the subsoil; and a last one from the late Neolithic (Veraza group), which includes the final version of a large oval-shaped hut and different hearths, an orifice to hold a large jug and stake holes. This Neolithic settlement in Ca n'Isach is surrounded by passage graves built in different periods from the middle to late Neolithic. The C-14 dates of the different archaeological levels in this long-term settlement are as follows:<sup>75-78</sup>

- Early middle Neolithic level, based on fire ash E-22: UBAR-318 = 5,770+/-170 BP = 4331-4096 BC at 1 sigma.
- Full middle Neolithic level, based on fire ash E-2: UBAR-164 = 5,060+/-100 BP = 3956-3745 BC at 1 sigma.
- Late Neolithic level, based on fire ash E-19: UBAR-316 = 4,490+/-90 BP = 3323-2540 BC at 1 sigma.

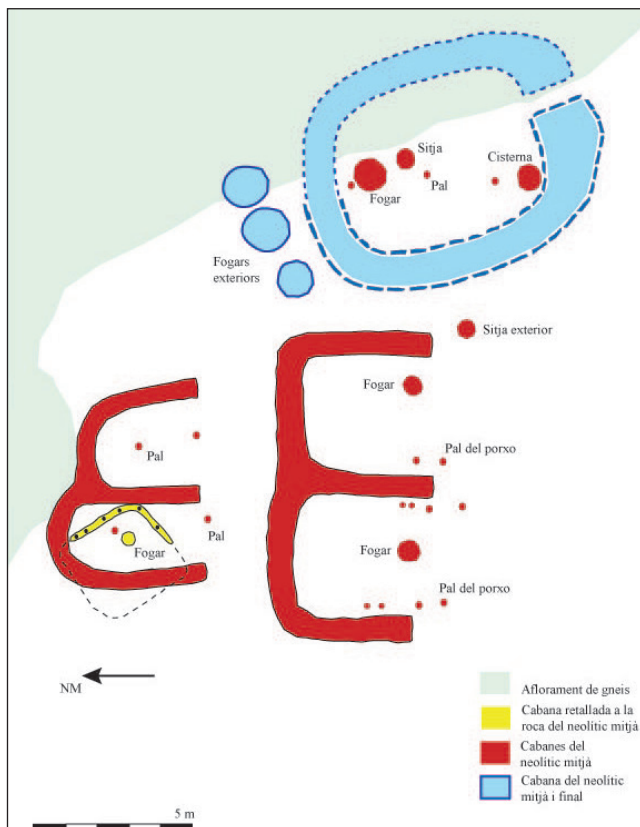


FIGURE 7: Map of the outdoor Neolithic settlement surrounded by dolmens in Ca n'Isach (Palau-saverdera, Alt Empordà).

Other outdoor settlements in the Alt Empordà near the megalithic necropolises also show phases from the full middle Neolithic (Chassey) and the late Neolithic (Veraza), with hearths, stake holes and silos yet no well-defined huts. We are aware of those in El Camí dels Banys de la Mercè (Capmany), which were excavated in 2005, and the one in Serra del Mas Bonet (Vilafant), which was excavated in 2008.<sup>79</sup> The settlement in Riera Masarac (Pont de Molins), which was excavated in 1981, dates solely from the Late Neolithic (Veraza)<sup>80</sup> and contributed structures like stake holes, silos refilled with blocks with large jugs and a hearth within view of these habitats, which were coeval with megalithism in the Alt Empordà.

There are certainly other possible outdoor settlements in Catalonia which are more or less coeval and close to the megalithic zones, but for the time being we cannot determine a relationship between them and the megalithic graves in their immediate environs. We should recall that in megalithic Catalonia, mostly above the Llobregat-Cardener Rivers, we are aware of oval-shaped semi-underground clay huts, silos and hearths from the late Neolithic (Veraza) in La Bòbila Madurell (St. Quirze del Vallès), Can Roqueta (Sabadell), Ca l'Estrada (Canovelles, Granollers) and Can Vinyalets (Santa Perpetua de la Mogoda) in the Vallès region and El Camp del Rector (Jorba) in Anoia, as well as similar oval-shape huts from the late Chalcolithic (Pyrenean Bell-Beaker culture), such as the one in El Bosc del Quer (Sant Julià de Vilatorrada) in Osona.<sup>81-82</sup>

The menhirs and megalithic sites in the Alt Empordà are usually near Neolithic settlements, that is, next to the settlements of the peoples who built the dolmens. The most noteworthy ones in Catalonia are the two megalithic sites in Mas Baleta-III (La Jonquera) excavated between 2005-2006, which are made up of rows of menhirs. The main site is rectangular in shape (7 m by 4.5 m) with an entrance corridor (4 m by 1.75 m) accompanied by a semicircular site on the southwest side. It used to be comprised of a total of 99 small menhirs with a taller anthropomorphic menhir in the centre, and the passage was oriented 220° southwest. The presence of a level from the Pyrenean Bell-Beaker culture at the base of the menhirs enables us to situate their construction in the late Chalcolithic, within the second half of the 3rd millennium BC. All that remains in the oldest site, located northeast of the main structure, is 18 small menhirs arranged in an angle, which leads us to believe that they also used to be rectangular, but it is smaller and dates from the late Neolithic/early Chalcolithic or the late Chalcolithic.<sup>83</sup>

Another interesting monument of this kind is the one in Estany-II (La Jonquera), which was excavated in 1988. This site is made up of a semicircular dry-stone wall which had a menhir embedded in its centre, and in front of it was a semicircular trench with stake holes inside it, which completed the site. The excavation yielded shards of smooth vessels which can be dated between the middle and late Neolithic, in addition to several flint flakes.<sup>84</sup>



FIGURE 8: The megalithic sites in El Mas Baleta-III (La Jonquera, Alt Empordà).

Finally, we should mention the cromlech in El Pla Marsell or Pins Rosers (Llinars del Vallès, Vallès Oriental), which was discovered in 1879 by Joaquim Mercader i de Belloch and was made up of a small circle (9 m in diameter) of menhirs, most likely 12 of them originally, only 6 of which remain, with a taller menhir in the centre. This would be the first cromlech documented in Catalonia, even though it was not recognised as such until the 1990s.<sup>85</sup>

#### MEGALITHIC ART: IN HABITATS, GRAVES, MENHIRS, SHELTERS AND EXPOSED ROCKS

Until the 21st century, megalithic art in Catalonia was known for the decorated roofs and slabs (cup-marks and grooves, cruciform or phi-shaped anthropomorphs, simple or pointed circles, stars and serpents) of some ancient dolmens (Neolithic cists with a mound and passage graves), as well as more recent ones (simple dolmens), especially in the Alt Empordà-Roussillon, although they were also present in the older phases (Solsonian) of megalithism in the western highlands and mountains.<sup>86</sup>

This type of engraving has been found in outdoor settlements (Ca n'Isach, Palau-saverdera), Neolithic cists with a mound (Vinya d'en Berta, Pau), passage graves (Barranc d'Espolla, Mores Altes-I in El Port de la Selva, Taula dels Lladres in La Selva de Mar), simple dolmens (Les Closes, Sant Climent Sesebes), menhirs (Els Palaus, Agullana) and exposed rocks (Pedra des Sacrificis, Capmany) in the Alt and Baix Empordà.<sup>87-90</sup> and <sup>32</sup> This kind of engraving is also known in northern Catalonia, especially in Roussillon and El Conflent at the foot of El Canigó.<sup>91</sup>

However, research in the first decade of the 21st century has unearthed new figurative elements in western and eastern Catalonia which have revealed a totally different

scene, one that is much richer and more advanced.<sup>92-94</sup> The first was the statue menhir in Ca l'Estrada (Canovelles, Granollers, Vallès Oriental) discovered in 2004 and associated with the Rouergue group (late Neolithic and early Chalcolithic) in the departments of Tarn and Aveyron in southeast France.<sup>95</sup> Then came the three large stelae decorated in bas-relief (chevrons and squares) which were part of the chamber in the simple dolmen in Reguers de Seró (Artesa de Segre, La Noguera) discovered in 2007.<sup>28-30</sup> This was followed by the six stelae with horns found in 2008 within several structures from the Veraza phase of the Neolithic settlement in La Serra du Mas Bonet (Vilafant, Alt Empordà),<sup>96</sup> and finally by the large anthropomorphic menhir in El Pla de les Pruneres (Mollet del Vallès) discovered in 2009, which bears a facial T with sunken eyes sculpted in bas-relief on the front with different schematic signs engraved on the rear (double



FIGURE 9: Roof with engravings (cup-marks and grooves, cross-shaped anthropomorphs) in the passage grave with a trapezoidal chamber in Mores Altes-I (Port de la Selva, Alt Empordà).





FIGURE 10: Anthropomorphic engraving on the roof of the passage grave with a trapezoidal chamber in El Barranc d'Espolla (Alt Empordà).

oval, circles, serpents), like the ones already known in the Alt Empordà-Roussillon.<sup>97-98</sup>

On the other hand, we believe that megalithic art in Catalonia should begin to be associated with the coeval cave paintings from the Neolithic and Chalcolithic,<sup>99</sup> some of which are located right beside the megalithic necropolises, such as the rocky shelter in La Roca des Orenetes de Céllecs (La Roca del Vallès, Vallès Oriental),<sup>100</sup> while others are located in non-megalithic zones of Catalonia.

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