

# TOPONYMIC PERSISTENCE: THE PROTO-INDO-EUROPEAN \*KAR- ROOT IN THE PRE-LATIN LIGURIAN CONTEXT\*

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*Summary:* This paper provides a survey on the proto-Indo-European root \*kar-/ \*kal- ‘stone, rock’ and on the related European prehistoric toponymy following a new convergent approach. The stem \*kar- is considered as a presumably pre-Indo-European root transferred (after the possible arrival of the Indo-Europeans to the European territories) into the linguistic system of proto-Indo-European through a process of re-use and re-functionalization of roots and (loan-)words due to linguistic contact. Phonetically adapted to the (proto-)Indo-European standards, the root \*kar- shows, at least in the Ligurian area, a variant \*kal- (not an independent stem, but an alternative form) involved in the formation of a number of words and place names linked to the notions of ‘rock’ and ‘stone’ (in particular, ‘friable, calcareous rock eroded by water’). The paper tries, moreover, to highlight a particular morphologic phenomenon of reduplication of the root \*kar- (although the reduplication is not widely productive in Indo-European) in the Italian (Ligurian) place name *Carcare* (< *Carcaris*).

*To my «elder brother», Francesco C.*

## Introduction

This paper aimed at reconstructing the etymological origins of some prehistoric Ligurian place names derived from the (Proto-)Indo-European root \*kar- ‘stone’<sup>1</sup> and probably constituting a «toponymic system». In this specific onomastic context, it is possible to connect with the \*kar- root a form \*kal-<sup>2</sup>, a sort of its «pseudo-rhotacistic» variant (maybe produced by a process of «lenition»). Following this kind of etymological restitution, it could be also possible to link this branch of the Ligurian hinterland toponymy to names/ nouns from the proto-Indo-European (and Ligurian) general lexicon associated to really peculiar hydro-geo-morphological phenomena of that territory (the well-known *calanchi* ‘badlands, gullies, ravines’).

## Preliminary Information

Antonio Tovar<sup>3</sup>, discussing Hans Krahe’s work<sup>4</sup>, has drawn up a map of European prehistoric hydronyms derived from the well-known (proto-)Indo-

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<sup>1</sup> Cf. [Pokorny 1959-1969: 531-532, Perono Cacciafoco 2008: 13-24].

<sup>2</sup> Cf. [Pokorny 1959-1969, cit.: 523-524, Perono Cacciafoco 2008, cit.: 13-24].

<sup>3</sup> Cf. [Tovar 1977: *passim*, Tovar 1982: *passim*].

<sup>4</sup> Cf. [Krahe 1962: *passim*].

European root *\*kar-* (> *\*kar[r]a*)<sup>5</sup> ‘stone, rock’. This stem occurs in the original names of many European rivers and places. In the case of bodies of water, *\*kar-* would have the meaning of ‘stony river’ or ‘river flowing through a pebbly shore/ gravel bed’.

Francisco Villar<sup>6</sup>, completing the Tovar’s discourse, associates with the *\*kar-* root the Indo-European stems *\*mal-* ‘rock, stone’ and *\*lap-/ \*lep-* ‘rock, stone’ (Ancient Greek *λεπός*, Latin *lapis*). It could be possible to hypothesize, for these two roots, a pre-Indo-European origin with a subsequent adaptation of the same to the Indo-European phonetic system in the possible transition between pre-Indo-European and Indo-European, after linguistic contact. It seems that, sometimes, some of these roots can invert the order of the consonantal elements composing them, changing the articulation manner in the plosives. The mentioned *\*lap-*, therefore, can appear also, with the voiced labial plosive form, as *\*lab-* (Ancient Greek *λάβρος* ‘ax’, originally a ‘stone/ stony [ritual] ax’). If the order of the consonants is inverted, the root *\*lap-* originates the word *pal-a* > *pala* ‘tombstone, gravestone’ attested in the Lepontic inscriptions in Northern Italy.

According to Villar, in any case, the opinion on possible pre-Indo-European origins of these roots is questionable. The consonantal fluctuations seem to be not linked to intrinsic features of languages that presumably had their «births» before Indo-European (or before the possible arrival of Indo-Europeans in their European territories). They seem, conversely, connected with changes in the transmission or in the adoption of these forms by – *latu sensu* – Indo-European populations. These roots, possibly non-Indo-European, appear as integrated in a clearly Indo-European linguistic (and, therefore, phonetic) system and allow the scholars to think **a**) that they are, in reality, originally Indo-European or **b**) that, being pre-Indo-European in their origins, they have been transferred, integrated, re-used, re-functionalized, and assimilated as loan-words (or «loan-roots») by Indo-Europeans (and adapted to the Indo-European phonetic system) in/ into the common Indo-European and, then, perceived and used as the other Indo-European original roots. This process was realized probably in the *\*mal-* root and also with the *\*kar-* stem (and with the *\*kal-* form as a variant of *\*kar-*).

Tovar<sup>7</sup> finds traces of the existence of a pre-Indo-European hydronymy and toponymy connected with the root *\*kar-* in such names as *Harund* (Scandina-

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<sup>5</sup> It could be possible – at least at a logic level – to hypothesize for the *\*kar-* root a pre-Indo-European origin (remaining in the field of hermeneutic possibilities). In that case, the stem could be considered as the result of an «adaptation» to the phonetic system of Indo-European from a substratum. This work will take into account this possible non-immediately Indo-European (pre-)origin, considering also this analytical key of interpretation. However, it is necessary to highlight the fact that the *\*kar-* root in its (phonetic) form and also in its productivity in the «making» of place-names, hydronyms, and oronyms, is safely Indo-European, ascribable to the Proto-Indo-European stage, without a cogent epistemological need to attribute it to a hypothetical more ancient linguistic layer.

<sup>6</sup> Cf. [Villar 1997: 102-103].

<sup>7</sup> Cf. [Villar 1997, cit.: 126-127].

via), *Carron*, *Cart Water*, *Cary* (Great Britain), *Carad* (Ireland), *Harste* (Germany), *Chiers* (Belgium), *Charentonne*, *Cher*, *Charante* (France), *Carusa* (Italy), *Carranzo*, *Carranza*, *Carisa*, *Carantó* (Spain), all derived from the presumably non-Indo-European (at least in its origins) root/ proto-form *\*kar(r)a* (< *\*kar-*) ‘stone, rock’, probably preserved in Basque as (*h*)*arri* ‘rock, stone’<sup>8</sup>. F. Villar adds to the Tovar’s list the place name *Carrara* (Central Italy, Tuscany, in the province of Massa and Carrara), a town well-known for its celebrated marble stone<sup>9</sup>.

The suffixation of these names, even if based on non-Indo-European roots, coincides with the typical Old-European (Indo-European) suffixation.

### The *\*kar-* Root

The possibly pre-Indo-European root *\*kar-* could be also at the origin of the genesis of the Indo-European stem/ proto-form *\*kartu-* that was in its turn at the origin of the Ancient Greek adjective *κρατός* ‘strong’ and verb *κρατώνω* (epic form)/ *κρατύνω* ‘to strengthen’, and of the Gothic *hardus* ‘hard’ (Latin *ardūus*). The same root/ proto-form *\*kartu-* and the derived forms share the same basic/ original meaning ‘hard’. The ‘hardness’ (not necessarily ‘non-breakable hardness’) implied by this «semantic cluster» is understood as a physical property (for example, ‘the hardness of the stone’)<sup>10</sup>.

The *\*kar-* root, in its (Ligurian) «variant» *\*kal-*<sup>11</sup>, can be also recognized – among others – in the Italian word *calanco*, apparently uncertain in its etymology. Giacomo Devoto and Gian Carlo Oli define *calanco* as a «Narrow and deep erosion’s furrow with many ramifications, limited by thin ridges, generally devoid of vegetation; it is a phenomenon from predominantly clay soils, produced by runoff and/ or washing out waters. The *calanchi* are widespread in the *Emiliano-Romagnoli* Apennines (Northern-Central Italy)»<sup>12</sup>. It is necessary to specify that the *calanchi* are (hydro-)geo-morphological phenomena really common also in Liguria (North-Western Italy), especially in specific areas of the Ligurian hinterland. Devoto and Oli think that the word *calanco* derives from the term defined by them as «Mediterranean» (i.e. «pre-Indo-European»),

<sup>8</sup> Cf., for a map of place names presumably derived from *\*kar-* (according to A. Tovar) [Villar 1997, cit.: 101, map 13].

<sup>9</sup> Cf. [Villar 1997, cit.: 126].

<sup>10</sup> Cf. [Benveniste 2001b: 340-346].

<sup>11</sup> As mentioned, the stem *\*kal-* is interpreted in this work as a «variant» of *\*kar-* produced by a «pseudo-rhotacistic» phenomenon – dating back to remote stages in (proto-)Indo-European – that implies a «change» or a «lenition» of /r/ in /l/. In this context, *\*kal-* seems, therefore, connected with *\*kar-* and it could be defined as a variant from a common remote root (*\*kar-*) possibly at the origins of a family of place names associated among themselves not only through historical phonetics, but also through (diachronic) semantic affinity. Cf., e.g., [Perono Cacciafoco 2008, cit.: 13-24].

<sup>12</sup> Cf. [Devoto, Oli 1975: 406, s.v. *calanco*], «*Calanco*, solco d’erosione stretto e profondo, con molte ramificazioni, limitato da esili creste, genrl. privo di vegetazione; è prodotto in terreni prevalentemente argillosi dalle acque di dilavamento. I c. sono frequenti nell’Appennino emiliano-romagnolo».

*cala* (< \**kal-* ~ \**kar-*)<sup>13</sup>, merged with the «Mediterranean Ligurian» (using their terminology) suffix *-anco*.

Using the term «Mediterranean», Devoto and Oli clearly refer to a possible pre-Indo-European substrate. When scholars thought that the Indo-European came from Northern or Central Europe, it was hypothesized that the Indo-European populations settled in the Mediterranean area (essentially Ancient Greeks and Latins) found in the three Mediterranean peninsulas non-Indo-European (pre-Indo-European) communities. From their non-Indo-European language(s) the Indo-Europeans would have had their so-called linguistic substratum. In this context, the definition «Mediterranean substratum» had its origin and its foundation. Such a «pre-Indo-European substratum» was hypothesized, of course, also in India, in Iran, and in Anatolia. The notion of «Mediterranean substratum» was extended, therefore, to all those areas. Scholars postulated, subsequently, that also Central and Northern Europe was inhabited by non-Indo-European populations before the arrival of the Indo-Europeans. For that reason, the term «Mediterranean» applied to every Indo-European substratum seems to be meaningless, since almost nothing is known (with the exception of the hypothesis of their existence) about the languages possibly spoken in the whole Neolithic Europe (and also in more ancient and remote times, starting, at least, from the Upper Paleolithic) and about their mutual relationships.

On the other hand, the nature of the possible loan-words (or loan-roots and loan-proto-forms) transmitted by those languages to Indo-European is clearer. The root \**kar-*/ \**kal-* seems to be an example of this process. It could be maybe useful to specify that, in this context, the notion of «Mediterranean» defines a word (or a root and/ or proto-form) exclusively as «pre-Indo-European», and not necessarily as belonging to a possible «pre-Indo-European substratum in the Mediterranean»<sup>14</sup>.

#### **The Root \**kar-* and Its Variant \**kal-***

Analyzing the word *calanco*, it seems evident that it shares the presumably pre-Indo-European and, then, Indo-European (proto-Indo-European) root \**kar-*/ \**kal-* with the place names and hydronyms listed by Tovar and Villar. The word, as highlighted, indicates a very particular and specific (hydro-)geomorphological phenomenon constituted by stone «washed away» and/ or carved by water. It is not the case that the geographic area called *Carso* in North-Eastern Italy (Eastern Alps) gets its name from this \**kar-* root expressed through a form \**carsa* ‘rock, stone’. The karstic rock, similar to the *calanco*’s stone, is involved in a solution process operated by water, determining particular and specific forms of surface and even subterranean erosion.

Tristano Bolelli has written about the possibly pre-Indo-European origins of the term *cala*<sup>15</sup> defining *calanco* as an «Originally pre-Indo-European Emilian lemma»<sup>16</sup>. *Calanco* could also be considered as a «Ligurian word» due to

<sup>13</sup> Cf. [Devoto, Oli 1975, cit.: 404, s.v. *cala*].

<sup>14</sup> Cf. [Villar 1997, cit.: 104].

<sup>15</sup> Cf. [Bolelli 1995: 74, s.v. *cala*].

<sup>16</sup> Cf. [Bolelli 1995, cit.: 75, s.v. *calanco*], «Calanco, voce emiliana di origine preindoeuropea».

linguistic (etymological) reasons and to the massive presence of this geological phenomenon especially in some valleys located in the Ligurian hinterland and in the areas of Southern-Piedmont bordering the Ligurian territory.

It is also possible to establish a relationship among the root *\*kal-* and the Latin forms *calx* (noun) ‘lime’ and *calcārius* (adjective derived from *calx*) ‘calcareous’, connected with Ancient Greek *χάλιξ* ‘pebble, stone dissolving in water, gravel, lime, limestone’ (in Italian *calcare*)<sup>17</sup>. The Italian word *calcare* ‘limestone’, in fact, in the definition provided by Giacomo Devoto and Gian Carlo Oli, means «Sedimentary rock consisting mainly of calcium carbonate (calcite); it is used as an ornamental and building stone, as well as for the manufacture of lime and in cement industry»<sup>18</sup>. The stone characterizing the *calanchi* is, in its geological nature, friable such as limestone (*calcare*).

### ***Carcare and Cairo Montenotte***

It could be possible to add to the toponymic list drafted by Antonio Tovar and completed by Francisco Villar at least other two place names belonging to two inhabited centers located in North-Western Italy, Liguria, in the Province of Savona: *Carcare* and *Cairo Montenotte*. The two villages are surrounded by the massive presence of *calanchi*, (hydro-)geological phenomena characterizing this area (Ligurian hinterland) from prehistory<sup>19</sup>.

*Carcare* and *Cairo Montenotte* are located in the Ligurian hinterland and belong to the so-called *Bormida* valley that gets its name from the *Bormida* river. The ancient name of the *Bormida* river was *Burmia*. This hydronym is attested, in this form during the Middle Ages starting from the year 1137. Subsequent documents show the form *Burmea*<sup>20</sup>. This river name derives from a presumably pre-Indo-European (with the voiced bilabial /b/) root *\*borm-* > *\*Bormo-/ \*Burm-*, then transferred, handed down, re-used, re-functionalized, and assimilated into the Indo-European «naming system» with Indo-European phonetics, meaning ‘warm waters’. It is possible to connect with the hydronym *Bormida*, among others, also the place name *Bormio*, North-Western Italy, Lombardy, in the province of Sondrio, a famous spa town characterized by «warm waters»<sup>21</sup>. The equivalent (to *\*borm-*) Indo-European root/ proto-form should be *\*g<sup>w</sup>hermó-/ \*g<sup>w</sup>hormo-* ‘warm’<sup>22</sup>. The *\*borm-* example is an evidence of the remote (prehistoric) origins of the place names and hydronyms in this area (Ligurian hinterland), surely inhabited during the Neolithic, but probably also previously, starting, at least, from the Upper Paleolithic<sup>23</sup>.

<sup>17</sup> Cf. [Devoto, Oli 1975, cit.: 408, s.v. *calce* (2), Bolelli 1995: 75, s.v. *calce* (2)].

<sup>18</sup> Cf. [Devoto, Oli 1975, cit.: 407, s.v. *calcare* (1)], «Roccia sedimentaria, costituita essenzialmente di carbonato di calcio (calcite); è impiegato come pietra ornamentale e da costruzione, oltre che per la fabbricazione della calce viva e nell’industria del cemento».

<sup>19</sup> Cf. [Guidi, Piperno 2005: *passim*].

<sup>20</sup> Cf. [DTI 1999: 92, s.v. *Bormida*].

<sup>21</sup> Cf. [Devoto 1999: 66, Villar 1997, cit.: 469].

<sup>22</sup> Cf. [Perono Cacciafoco 2009: 15-24].

<sup>23</sup> Cf. [Biagi 1980: 9-18].

In this geographic context, toponymy and hydronymy seem to be linked precisely to the so-called «pre-Indo-European substratum». Liguria, indeed, has been considered (with, in Italy, the current Southern Piedmont – in ancient times *Liguria* –, the Tyrrhenian area, the Rhaetia – North-Eastern Italy –, and the Eastern Sicily) as a territory characterized by the survival of remains (and linguistic relics/ relicts and/ or fossils) of pre-Indo-European populations<sup>24</sup>.

### ***Carcare***

*Carcare* (geographic coordinates 44°21'28.42"N 8°17'26.25"E) was an ancient feud of the Del Carretto Marquis family. The village is located on an important junction in the Ligurian hinterland along the road connecting (in the direction of Savona) the Southern Piedmont with the Ligurian sea-coast. Historical sources witness for *Carcare* the (Late Latin) place name *Carcaris*, plural ablative attested in a document of the year 1111 and in another document of the year 1179<sup>25</sup>. *Carcaris* was probably a widespread form of the village name. It lost the plural ablative function and obviously was systematically used in the plural nominative form *\*Carcarae*, fixed over time in *Carcare*. The place name could also derive from a possible plural accusative, *\*Carcaras*, with the fall of the final *-s* and a change of the second /a/ in /e/, as witnessed by the secondary variant *Carcheris*<sup>26</sup>. The plural genitive *Carcararum* is attested later, in 1424.

The place name could have been fixed in the plural form. The local dialectal diction, *kòrkre* (with velarized /a/ and syncope of the penultimate vowel; the standard Ligurian dialectal form is *kànkre*), shows in its second syllable, *-kre*, an interesting consonantal exchange.

It seems plausible that the place name derives from the reduplication of the presumably (originally) pre-Indo-European root *\*kar-*. This reduplication, indeed, is a very interesting and relevant feature of the *Carcare* toponym because the reduplication phenomenon is not widely productive in Indo-European. For this reason, the phenomenon could also be attributable to the pre-Indo-European morphology. The derivation of the village name from the root *\*kar-* could be explained also on the basis of historical semantics (according to the evaluation of the history and prehistory of landscape and territory in relationship with the toponyms, as prescribed by the New Convergence Theory, NCT<sup>27</sup>), because *Carcare* was surrounded by hills characterized by the widespread and constant presence of *calanchi*. According to this reconstruction, it could be also possible to get a new evidence about the association of *\*kar-* and *\*kal-* (with the exchange of the liquid consonant from *\*kal-* to *\*kar-*, /l/ ↔ /r/, *\*kal-* being a «symmetric» and alternative variant of *\*kar-*, then reduplicated in the place-name *Carcare*).

### **Etymological Reconstruction**

The etymological restitutions proposed so far by scholars for the place name *Carcare* are a little bit simplistic.

<sup>24</sup> Cf. [Villar 1997, cit.: 109-110 (and map 15)].

<sup>25</sup> Cf. [DTI 1999, cit.: 141, s.v. *Carcare*, Ravera, Tasca, Rapetti 1997: 70].

<sup>26</sup> Cf. [DTI 1999, cit.: 141, s.v. *Carcare*].

<sup>27</sup> Cf. [Perono Cacciafoco 2014: 79-98].

A non-documented and highly questionable reconstruction is based on the secondary medieval variant of the toponym *Carcheris*, interpreted as derived from Latin *carcar*, that is in its turn possible variant of *carcēr* ‘jail, prison, barrier, enclosure’<sup>28</sup>. This explanation is surely erroneous at least for two clear reasons: **1)** *Carcheris* is a «distorted» form (probably due to mispronunciation) of the original place name *Carcaris*. Speakers (the inhabitants of the village), over time, lost the original meaning (etymology) of the toponym and were unable to reconstruct it and to explain its semantics. The association of *Carcaris* with the common (Latin and Late/ Vulgar/ Vernacular Latin) word *carcēr/ carcar* (Italian *carcere*), due to a partial homophony, was easy and immediate. This «assonance» could be at the origins of the «distorted» form *Carcheris*; **2)** the same form *Carcheris* shows *-ch-* (*/k/*) to be highly incompatible with the widespread late pronunciation of *-c-* (*/c/*) in *carcēr/ carcar*. This widespread pronunciation is highly compatible, instead, with the phonetics of a place name actually derived from the Latin word *carcēr*, i.e. *Càrceri*, a village located in North-Eastern Italy, Veneto, in the province of Padova (Padua), called (without changes in phonetics) already from the High Middle Ages (year 946) *Carcere* (even if, probably, the name was related not to the presence of prisons, but to the presence of small stables and horse barns, in Latin also *carceres*)<sup>29</sup>.

The process of toponymic resemantization is widespread in Europe. It shows how it is possible to lose and to re-interpret the original meaning of a place name through a natural phenomenon of paronymy by local speakers. Just in order to exemplify this topic, it could be useful to briefly analyze, among others, the case of the Italian place name *Borgomale* (*Borgo Male*)<sup>30</sup>. *Borgomale* (geographic coordinates 44°37'00"N 8°08'00"E) is a small village located in North-Western Italy, Southern Piedmont, in the Cuneo province. Its original name derives from Latin (Indo-European language) *Burgus Māli* and has been transmitted to Italian (neo-Latin Romance language) as *Borgomale* (*Borgo Male*). The original Latin meaning of the toponym was ‘village of the apple tree/ trees’ (Latin *burgus* – Italian *borgo* – means ‘village, hamlet’). However, over the centuries and in the transition among Latin, Vulgar Latin, Vernacular (Vulgar) Italian, and Italian, the name has changed in meaning (at least since the year 1276) to indicate ‘bad village’ and/ or ‘village of the evil’. Why? This shift can be explained as a typical semantic ‘misunderstanding’ (generating paronymy-

<sup>28</sup> Cf. [DTI 1999, cit.: 141, s.v. *Caricare*], for the erroneous interpretation of *Carcaris* as derived from *carcer*. For the variant *Carcheris*, without explanation, cf. [Ravera, Tasca, Rapetti 1997, cit.: 70].

<sup>29</sup> Cf. [DTI 1999, cit.: 141, s.v. *Càrceri*]. *Carceres* also indicates ‘small wells for water collection’ or ‘small cells in an abbey’, precisely ‘small rooms with one bed and *prie-dieu* (faldstool) facing the cloister’. From here, probably, the popular etymology providing a derivation of *Càrceri* from Latin *calcēus*, the footwear of the Camaldolese friars of the local Abbey of Saint Mary, has its origin. In the local dialect, in fact, *Càrceri* is called *Càlzare* (almost the Italian word for this kind of footwear = *calzàre* [singular], *calzàri* [plural], but with different – very indicative – stress). In addition, cf. [Maurisio 1986: 40-41, paragraphs 84-85], where *Leone da Carcere* (*Leone from Carcere*) is a historical figure from *Càrceri*. Cf. also [Rolandino da Padova 2004: *passim*].

<sup>30</sup> Cf. [DTI 1999, cit.: 89, s.v. *Borgomale*].

mology) that is proper to the natural evolution of languages and is linked to the transition between one language and another. In Latin, the vocalic «quantity» is very important for the metric in poetry and in order to distinguish words and their meanings. Italian, instead, has lost the vocalic «quantity» (also, the Italian poetry is not «quantitative»), and this linguistic fact («evolution») has been at the origins of some «misunderstandings».

In Latin, *mālum* ‘bad, evil’ shows the short vowel *ă*. The Italian corresponding forms are *male* (noun, ‘evil’), *malo* (adjective, ‘bad’). Latin *mālum*, conversely, with the long vowel *ā*, means ‘apple, apple tree’, in Italian *mela* ‘apple’, *melo* ‘apple tree’. Taking a look at the emblem and/ or coat of arms of the *Borgomale* municipality (dating back to the Middle Ages), it is possible to distinguish a row of apple trees on a hill. Also, apple orchards are proven in that area during the Middle Ages and in Modern Age.

The original Latin name of *Borgomale* was, therefore, *Burgus Māli* ‘village of the apple tree’ (extensive ‘village of the apple trees’), and the Italian reconstructed correct (of course, not attested) form could be *\*Borgo Melo* (or *\*Borgomelo*, exactly ‘the village of the apple tree’). However, the Italian «real» current and attested form derived from the «quantitative misunderstanding» of the Latin vowel /*ā*/ became widespread.

In order to explain this «bad» name, the speakers, having lost the original link of the toponym with Latin *mālum* ‘apple, apple tree’, re-interpreted its semantics and invented a legend about a horrible plague or pestilence that would have violently decimated in the Middle Ages the population of the village that, from that time, was called *Borgomale* (< Latin *Burgus Māli*) ‘bad village, village of evil’. This is a very incisive example of *bona fide* pareymology in historical toponymy.

A similar phenomenon should have involved the change of the toponymic form *Carcaris* in *Carcheris*. This ambiguity in the name of the village and in the explanation of its original meaning is also confirmed by another consideration. Already in the X century *Carcare* has been also called and identified through a parallel denomination, *Canalicum*<sup>31</sup>, maybe connected with a Roman *mansio* located along the *via Emilia Scauri*, near the village. This name, due to analogy and topographic proximity, was inappropriately extended to *Carcare*.

### ***Cairo Montenotte***

A similar reasoning could be also produced about the other above mentioned place name, *Cairo Montenotte*. The village (geographic coordinates 44°23'52.41"N 8°16'40.04"E) is located near *Carcare* in the same area of the Ligurian hinterland (in the province of Savona). During the Middle Ages, it was granted by Otto I to the Aleramic March, becoming, later, a feud belonging to the Del Carretto Marquis family. The inhabited center shows the medieval «settlement core» in the rectangular construction plan typical of the feudal planned

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<sup>31</sup> Another attested and «parallel» place name for *Carcare* – years 998-999 – has been *Bugile* (later variants *Bauzile* and *Boyle*) that is connected, in any case, not with the main inhabited center, but directly with two localities (historical settlements) of the village currently called *Bugile Soprano* (*Upper Bugile*) and *Bugile Sottano* (*Lower Bugile*).



villages. Archaeological finds from the Roman age suggest the presence of a more ancient built-up area, maybe a Roman *mansio* located on the *via Emilia Scauri*. Traces of a settlement dating back to the Neolithic allow the archaeologists to hypothesize, as for *Carcare*, that the place has been inhabited already from remote ages (probably from the Upper Paleolithic)<sup>32</sup>. The definite determinative of the toponym, *Montenotte*, is the name of a small hamlet of the municipality famous for the Napoleonic battle that took place there in the year 1796.

### Etymological Reconstruction

The place name is attested already in the year 967 as *Carium*<sup>33</sup> (and *Carius*<sup>34</sup>), deriving, therefore, not from *\*Cair-* but from *\*Car(i)-* < *\*kar-*. The toponym, in the form *Cario*, is attested later (May the 4<sup>th</sup> of the year 991) in the *Charta* of the founding and donation of the Saint Quentin's Abbey in Spigno Monferrato (place located not far from *Carcare* and *Cairo Montenotte*, in North-Western Italy, Southern Piedmont, in the Province of Alessandria on the main road for Savona)<sup>35</sup>.

According to a simplistic and wrong reconstruction<sup>36</sup>, the place name *Cairo/ Cario* would derive from the Roman gentilitial name *Carius*, rarely attested and not connectable with the village (in that case, the toponym would be an improbable praedial without suffix, quite inexplicable, lacking any historical reason for this possible denomination). The local Piedmontese dialect's form, *Kòiri*, shows the velarized /a/, while the local Ligurian dialect's form is *Kàiri*. Among different reconstructions, a derivation has been also proposed from Latin *quādrus*<sup>37</sup> 'square', an adjective used by the *Gromatici* writers as an attribute of *termīnus* 'boundary stone, border', a convention passed – hypothetically – to the Ligurian dialect in the form *kàiru* indicating a specific kind of building stone.

The notion of 'stone' is surely at the origins of the place name, being expressed by the root *\*kar-*. *Carius*, as well as *Carcaris*, should derive directly from the presumably pre-Indo-European (then transferred and re-used according to a re-functionalization process in the Indo-European – proto-Indo-European – linguistic system<sup>38</sup>) root *\*kar-* 'stone', a stem that in this case, unlike the case of *Carcare*, is not reduplicated.

The derivation of *Carius* from *\*kar-* seems to be confirmed also by the oronym of the *Monte Càiro* (the *Cairo Mountain*)<sup>39</sup>, a massif culminating in the pick having the same name (1669 meters above sea level, geographic coordinates 41°32'30.48"N 13°45'36"E). It is a calcareous mount (always involving the root *\*kar-* in the variant *\*kal-* of Latin *calcārius*) rising North of the town of

<sup>32</sup> Cf. [Biagi 1980, cit.: 9-18, Guidi, Piperno 2005, cit.: *passim*].

<sup>33</sup> Cf. [DTI 1999, cit.: 114, s.v. *Càiro Montenotte*].

<sup>34</sup> Cf. [Ravera, Tasca, Rapetti 1997, cit.: 70].

<sup>35</sup> Cf. [Bosio 1972: 140-142].

<sup>36</sup> Cf. [DTI 1999, cit.: 114, s.v. *Càiro Montenotte*, Ravera, Tasca, Rapetti 1997, cit.: 70].

<sup>37</sup> Cf. [DTI 1999, cit.: 114, s.v. *Càiro Montenotte*].

<sup>38</sup> Cf. [Perono Cacciafoco 2014, cit.: 79-98].

<sup>39</sup> Cf. [DTI 1999, cit.: 113-114, s.v. *Càiro, Monte*].

Cassino in the Latium region (Central Italy), among the valleys of the rivers Melfa, Sacco, and Ràpido. The widespread explanation for this oronym resides in a sort of popular pareymology and «semantic misunderstanding» recognizable in the supposed Latin name of the place, *Mons Clarius*. *Clarius*, actually, derives from \*kar- > \*Carius/ \*Cario > *Cairo*. Local speakers (having lost the original connection with \*kar-), instead, have analogically and improperly interpreted *Clarius* as connected with the celebrated and sacred Ionian place Claros (Ancient Greek: *Κλάρως*, Latin: *Clarus*), and – indirectly – with the Latin adjective *clārus* ≈ *Clarius*. This *Clarius/ Clarus*, according to that popular etymology, should hypothetically derive from a temple dedicated to *Apollo Clarius* (‘Apollo from the Claros’ – *Κλάρως* –, a sanctuary located on the Ionian Greek coast of Turkey, on the territory of Colophon). Speakers misunderstood the original derivation of the oronym from \*kar- and assimilated the mountain name \*Carius/ \*Cario > *Cairo* to *Clarius* (= from *Claros*, Latin *Clarus*), thus adding another pareymological connection with the common Latin adjective *clārus* and linking the place not only to *Apollo Clarius*, but also to the notion of ‘luminosity’. The temple would have been located where now the Monte Cassino Abbey rises. As mentioned, the pareymological denomination linked to the *Apollo Clarius* Ionian sanctuary was associated by speakers (already in the Middle Ages) with the other pareymological denomination linked to the Latin adjective *clārus*, expressing the notion of ‘bright landscape’ in an involuntary «semantic overlap». Moreover, starting already from the Middle Ages – and during the Modern Age –, the mountain was also called *Monti di Montecassino* (*Monte Cassino Mountains*)<sup>40</sup>, in a sort of redundant «re-naming process». As told, the oronym *Càiro* is, instead, originally derived from the pre-Latin (proto-)form \*carium ‘stone, cliff, rock’, directly derived, in its turn, from the presumably pre-Indo-European (subsequently proto-Indo-European) root \*kar-.

The stem \*kar- interpreted as the original root of the place name *Carius/ Cario* (> *Cairo* [*Montenotte*]) is, therefore, confirmed also by the oronym *Monte Càiro*. The hydro-geo-morphology of the territory of *Cairo Montenotte* (as mentioned, located near *Carcare*, in the Ligurian hinterland) gives another confirmation, being pervasively characterized by the presence of the *calanchi*. Moreover, the *Monte Càiro* (Latium) is mainly composed by limestone (Latin adjective *calcārius*, Italian noun *calcare*) dating back to the Jurassic and Cretaceous periods (the formation of the massif often experienced violent earthquakes and subsidence).

### **Carretto**

In the same area, it is also possible to link to the place names *Carcaris* and *Carius* the toponym *Carretto*, a hamlet of *Cairo Montenotte* (*Carius/ Cario*), land of origin of the Del Carretto Marquis family ruling for a long time over those territories. The ruins of the castle of that noble lineage are located on a calcareous rocky outcrop called *Carretto*, giving the name to the entire locality. The place name *Carretto* clearly derives from the root \*kar- and is associated

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<sup>40</sup> Cf. [DTI 1999, cit.: 114, s.v. *Càiro, Monte*].

with the notion of ‘stone’, ‘limestone’. However, over centuries, a parety-mology has become widespread. That parety-mology links the place name *Carretto* with the Italian word *carretto* ‘handcart, small cart; small chariot, trolley’. *Carretto*, instead, deriving from the root *\*kar-*, belongs to the «toponymic system» of *Carcaris* and *Carius* and to the «ononymic family» of *calcare* and *calanco*. Due to *bona fide* parety-mology, in the «making» of the *Carretto* place name, starting from the stem *\*kar-*, the toponym has been fixed – at least from the Middle Ages – in the current form (with the current widespread erroneous semantics) through a number of morphological changes and suffixation processes.

Some places in France are called *Charette*, as, for example, *Charette*, a small village situated in the Isère Department, in South-Eastern France (Rhône-Alpes Region, geographic coordinates 45°48'40"N 5°22'15"E), or *Charette-Varennes*, another small village located in the Saône-et-Loire Department, in Eastern France (Bourgogne/ Burgundy Region, geographic coordinates 46°54'45"N 5°12'00"E). The popular etymology wants these names derived by (or, at least, connected with) French *charrette* ‘cart, chariot’ (with the same parety-mology for the Italian place name *Carretto* with the Italian noun *carretto*), while the remote root at the origin of these place names is always *\*kar-*, linked to the notions of ‘stone’ and ‘rock’.

### **Calizzano**

*Calizzano* (geographic coordinates 44°14'06.99"N 8°06'55.45"E) is an ancient village developed in the Middle Ages around a castle founded by Henry I, Marquis Del Carretto. The center is located in the Ligurian hinterland, in the Province of Savona, not far from *Carcare* and *Cairo Montenotte*. The territory of *Calizzano* was inhabited probably already in the Upper Paleolithic, surely in the Middle Paleolithic<sup>41</sup>. A pre-Roman *castellaro* (a primitive fortification plausibly built by the population of the *Ligures Montani*) located between *Calizzano* and the nearby village of Bardineto should date back at least to the Iron Age, but the original settlement could have been attested, as told, already in the Middle Paleolithic. The Roman place name was *Caliciana*, while the toponym in the Middle Ages (High Middle Ages) was *Caliciano*, attested (at least) from 1077, in a notarial deed about the assignment of the village’s lands and church to the Ferrania Abbey (located in the territory of *Cairo Montenotte*; Ferrania is one of the hamlets of *Cairo Montenotte*) from the Saint Peter’s in Varatella Abbey located in the Toirano’s area (Toirano is a nearby village in the province of Savona)<sup>42</sup>. The place name in XIV century is attested as *Carizano* and *Calizano*.

The toponym derives from the presumably pre-Indo-European *\*kar-/ \*kal-* root, with the addition of a widespread and common suffix *\*-ano* (< Latin *\*-anum*). The two dialectal forms (local diction and standard Ligurian diction), *Karitsàn* and *Calissan*, witness this derivation and the alternation of the two variants in /r/ and /l/.

<sup>41</sup> Cf. [Biagi 1980, cit.: 9-18, Guidi, Piperno 2005, cit.: *passim*].

<sup>42</sup> Cf. [DTI 1999, cit.: 117, s.v. *Calizzano*].

An imaginative and undocumented etymological reconstruction would suppose, for the place name, a derivation from a non-clearly attested and related Roman gentilitial *Canitius*, *Calizzano* being – according to this highly speculative hypothesis and proposal – a praedial in *\*-ano* (< Latin *\*-anum*) with shift /n/ - /l/ - /r/ from the late Latin speech. This is evidently a paretymology, as almost all the etymologies trying to connect place names with Roman gentilitials.

### Some Other Toponymic Evidences

The name of the small village of *Carezzano* (geographic coordinates 44°48'29"N 8°54'06"E) located in North-Western Italy, Southern Piedmont (in the province of Alessandria), phonetically cognate with the toponym *Calizzano*, is derived from the *\*kar-/ \*kal-* root.

The place can be found on the right bank of the Scrivia stream and is divided into two different centers: *Carezzano Superiore* (*Upper Carezzano*) and *Carezzano Inferiore* (*Lower Carezzano*). The upper village, *Carezzano Superiore*, is located on a hill and is the older one, while the lower inhabited center, *Carezzano Inferiore*, is quite recent. *Carezzano Superiore* is an ancient settlement, plausibly dating back to the Upper Paleolithic<sup>43</sup> and increasingly developed in Ligurian age (at least starting from the Iron Age). The local dialectal (Piedmontese) diction is *Carzòu*, derived from the agglutination of the pre-Indo-European (the proto-Indo-European) root *\*kar-* ‘stone, rock’ (> Ancient [archaic] Ligurian *car* ‘height, hill’) with the Ancient (archaic) Ligurian word *san* ‘place’. *Carzòu/ Carezzano* could be interpreted, therefore, as ‘place on the stony hill’.

In the Middle Ages, the place name is attested as *Careçanus* (year 1256), *Carezzanus* (year 1261), and *Carenzanus*, with epenthesis of /n/ (year 1341)<sup>44</sup>. The analogy and similarity among the different forms of the place name *Carezzano* and those of the toponym *Calizzano* are remarkable.

A place name corresponding to *Carezzano* is *Caranzano* (geographic coordinates 44°43'11"N 8°30'59"E), a hamlet of the municipality of Cassine, located in North-Western Italy, Southern Piedmont, in the province of Alessandria. The origin of the toponym is the same, from the root *\*kar-/ \*kal-*, and the place is located on a hill characterized by the presence of friable rock, tufaceous and calcareous (*\*kal-* = ‘friable rock, limestone’).

The toponym *Calasca*, belonging to the village of *Calasca-Castiglione* (geographic coordinates 46°04'00"N 8°07'00"E), a double mountain settlement consisting of two inhabited centers, *Calasca* and *Castiglione*, located in North-Western Italy, Northern Piedmont, in the province of Verbania, allows the strengthening of the etymological links among the place names analyzed so far in this paper and the word *calanco*<sup>45</sup>. *Calasca* derives from a pre-Roman (pre-Latin) stem *\*cal-* ‘stone, rock’ derived, in its turn, from the pre-Indo-European (then proto-Indo-European) root *\*kar-* in its variant *\*kal-*. The «Alpine» word

<sup>43</sup> Cf. [Biagi 1980, cit.: 9-18, Guidi, Piperno 2005, cit.: *passim*].

<sup>44</sup> Cf. [DTI 1999, cit.: 143, s.v. *Carezzano*, Vaccari 2007: *passim*].

<sup>45</sup> Cf. [DTI 1999, cit.: 114, s.v. *Calasca - Castiglione*].

*kalanco/ kalanca* ‘steep stony descent that serves as a channel for avalanches’<sup>46</sup>, equivalent to the Ligurian (and Italian) form *calanco*, derives from that pre-Roman (pre-Latin) stem *\*cal-* (see above), at the origins of the place name *Calasca*.

The toponym’s suffix *-asco/ -asca* is originally Ligurian and could be an evidence of a plausible «binary tradition» of presumably pre-Indo-European roots combined with Ligurian suffixes. The municipality of *Calasca-Castiglione* is located in the *Anzasca* valley (a mountain valley spreading along the Anza stream), a place name where the Ligurian suffix *-asco/ -asca* appears again.

Moreover, the toponym *Charance*, indicating the *Charance* domain, an Alpine locality (geographic coordinates 44° 34' 34"N 6° 03' 12"E) situated in France, in the municipality of Gap, capital and largest settlement of the Hautes-Alpes department (South-Eastern France, region of Provence-Alpes-Côte d'Azur, geographic coordinates 44°33'34"N 6°04'43"E), derives from the root *\*kar-/ \*kal-*. Specifically, the original stem for *Charance* is the mentioned «Alpine» root *\*cal-* (< *\*kar-/ \*kal-*) ‘stone, rock’, at the origins of the above observed word *kalanco/ kalanca* ‘steep stony descent that serves as a channel for avalanches’. The meaning of *Charance* can be ‘site of the avalanche of stones, place of the stony landslide’.

Another interesting example of a toponym derived from the root *\*kar-/ \*kal-* is represented by *Calci*, name of a village (geographic coordinates 43°43'28"N 10°31'09"E) located in Central Italy, Tuscany, in the province of Pisa. *Calci* is an ancient place in the geological basin called Valgraziosa, surrounded by olive groves. The local dialectal (Tuscan) form for the place name is *Càrci*. The name *Calci* is attested already in the year 780 (April the 30<sup>th</sup>) in the *Strumento di fondazione della Badia di San Savino presso Calci (Foundation Act of the Saint Savin's Abbey in Calci)*. The widespread etymological reconstruction postulates a derivation of the place name from Latin *calx* (*calcis*, Italian *calce*) ‘lime’<sup>47</sup>. An ancient furnace (oven) for lime is located in the territory of *Calci*, near the neighboring village of Caprona. Limestone is widely present in the stone quarries and mines located along the slopes of the mountains surrounding the village. However, the geological structure of the landscape of the *Calci* municipality is older and mainly siliceous. In some documents from the X and XI centuries, *Calci* is called *locus Calcis*, with a plausible derivation from Latin *calcĕum*, intended as ‘the foot and/ or the heel of the mountain’ (the altitude of *Calci* is around 50 meters above sea level). *Calx* (with *calcārius*) and *calcĕum* are, in any case, strictly related as the semantic referents from the place name. They can be linked, in respect to the meaning, also to the Ancient Greek *χάλιξ* ‘pebble, stone dissolving in water, gravel, lime, limestone’. The final /i/ of the toponym has been interpreted as a morpheme of feminine plural<sup>48</sup>. The connection of the place name with the notion of ‘stone’ is self-evident. It is possible, moreover, to appreciate the presence of the root *\*kar-* and of its variant *\*kal-* (definable also as the double root *\*kar-/ \*kal-*) in the local dialect (Tuscan) name of this village, *Càrci*, and in its standard Italian name, *Calci*. The

<sup>46</sup> Cf. [Olivieri 1965: 107, s.v. *Calasca*, and 125, s.v. *Charance*].

<sup>47</sup> Cf. [DTI 1999, cit.: 115, s.v. *Calci*].

<sup>48</sup> Cf. [Bianchi 1886: 386].

ancient Ligurians settled originally on the Mediterranean coast from the Rhone river to the Arno river<sup>49</sup>. *Calci*, therefore, is a linguistic (onomastic) witness of the «continuity» and «uniformity» in the remote (prehistoric and proto-historic) naming process of place names linked to the semantics of the ‘stone’.

### Conclusion

Through the analysis of the presence of the *\*kar-/ \*kal-* root in the toponomastics of Europe (as outlined by A.Tovar and F.Villar<sup>50</sup>) and especially Italy it is possible to highlight a toponymic system generated, starting from the original (prehistoric) naming process, by this root. This «family» of place names and oronyms dates back surely to the Neolithic, but it is possible to infer a really ancient and more remote origin, ascribable to the Upper Paleolithic.

The *\*kar-/ \*kal-* root, in fact, could be reconstructed as a pre-Indo-European stem productive not only in the field of European toponymy, but also in the linguistic area of the general lexicon of Indo-European languages, being the original component of a number of words linked to the notions of ‘stone’ and ‘rock’. That root is widespread on a large territory and is connected with landscapes showing the presence of friable, calcareous rock/ stone (generating hydro-geo-morphological phenomena as the *calanchi* – widespread, for example, in the Ligurian hinterland – or materials useful for the production of the lime, in Latin *calx*, Italian *calce*).

The plausibly pre-Indo-European root *\*kar-/ \*kal-* could have been assimilated, over time, by Indo-European speakers (after the possible arrival of Indo-Europeans in their European territories) in their linguistic system (and adapted to their phonetics), becoming a proto-Indo-European root, according to a convergent process of re-use and re-functionalization of stems and words among different linguistic families due to linguistic contact.

In the Central Celtic and Ligurian areas, the root *\*kal-* seems to be not independent, but a productive variant of the stem *\*kar-*, generated by a change and/ or passage */r/ ~ /l/* definable as a consonantal exchange («lenition») or «pseudo-rhotacism». The root *\*kar-/ \*kal-* seems to be, therefore, a single root expressed by two equivalent and homologous variants.

In the Indo-European linguistic system (and, *a fortiori*, in the Indo-European toponymy) the *\*kar-* root shows in the place name *Carcare* an interesting reduplication process that has a significant value, being, as mentioned, the reduplication process not widely productive in Indo-European. This morphologic phenomenon can be, therefore, a linguistic «fossil» (or relic, relict) witnessing very remote stages in the proto-Indo-European naming process (at least in the field of toponymy). It can provide some valuable indications about the passage between pre-Indo-European and (proto-)Indo-European in Europe.

The root *\*kar-/ \*kal-*, widespread in the Indo-European toponymy and general lexicon, could be a significant example of the persistence, over time, of words and roots, persistence unveiled by place names and by morphological and

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<sup>49</sup> Cf. [Villar 1997, cit.: 465, 469, Perono Cacciafoco 2013a: 82, n. 14, 2013b: 21, n. 46, Pallottino 1981: *passim*].

<sup>50</sup> Cf. also [Alessio 1935: 133-151, Alessio 1936: 165-189].

phonetic phenomena occurring especially during the passage from one linguistic system (the pre-Indo-European, in this context) to another one (the Indo-European).

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