

Proposal (29) to conserve the name *Omphalodo nitidae-Coryletum avellanae* Amigo, G. Azcárate et Romero 1994 with a conserved type

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Abstract

The association *Omphalodo nitidae-Coryletum avellanae* was defined by assembling relevés on (mainly) *Corylus avellana* woods on nutrient-rich substrates in the westernmost part of the Cantabrian Range (NW Spain). However, a mesophytic oak forest dominated by *Quercus robur* (with noteworthy amount of *Corylus avellana* in the undercanopy) was selected as its holotype. The most common interpretation of this association in the subsequent literature has been as seral *Corylus avellana* forests. For this reason, we propose the application of article 53 of the ICPN (4th ed.), which allows the name to be maintained with a new nomenclatural type based on the more recent interpretation of this syntaxon.

(29) *Omphalodo nitidae-Coryletum avellanae* Amigo, G. Azcárate et Romero 1994, typus cons. propos.

Typus: Amigo et al. (1994), table 2: rel. 4 (typus cons. propos.)

Taxonomic reference: Castroviejo et al. (1986–2020).

Syntaxonomic reference: Rivas-Martínez (2011).

Abbreviations: ICPN = International Code of Phytosociological Nomenclature.

Keywords

calicolous forest, conserved type, hazelnut-tree forest, nomenclature, NW Spain, seral forest, western Orocantabrian sector

Introduction

The phytosociological checklists used in the late 20th century for the NW quadrant of the Iberian Peninsula included deciduous forests with a mesophytic character growing on nutrient-rich soils within the alliance *Carpinion betuli* Issler 1931 (Fernández-Prieto 1981; Rivas-Martínez et al. 1984; Fernández-Prieto and Vázquez 1987; Díaz-González and Fernández-Prieto 1994). Leaving aside the Pyrenean subprovince, only three associations were recognised within this alliance at that time in Iberian territories with

an Atlantic influence (Cantabrian-Atlantic and Orocantabrian subprovinces): *Mercuriali perennis-Fraxinetum excelsioris* (currently denominated *Helleboro occidentalis-Tilietum cordatae* for reasons of homonymy), distributed throughout Orocantabrian territories; *Crataego laevigatae-Quercetum roboris*, exclusive to the high valleys of the tributaries of Ebro river in the Basque Country and Navarre; and *Polysticho setiferi-Fraxinetum excelsioris*, which is widely distributed at lower altitudes in the Cantabrian valleys from the Basque Country and Navarre towards Asturias. Over the years, several authors have

included examples of forests with a diverse floristic-structural physiognomy and characteristics under the name of this last association (which is the oldest of the three). These include relevés with a predominance of *Fagus sylvatica*, *Tilia platyphyllos*, *Ulmus glabra*, *Fraxinus excelsior*, *Quercus robur*, etc., often with a high cover of *Corylus avellana*. This decision was possibly conditioned by the original name proposed by Tüxen and Oberdorfer (1958) for this association (“*Corylo-Fraxinetum cantabricum*”).

The association *Omphalodo-Coryletum*

Against this background, Amigo et al. (1994) described the association *Omphalodo nitidae-Coryletum avellanae* with data from the westernmost part of the Orocantabrian subprovince and some Cantabrian-Atlantic localities in northern Galicia, according to the most detailed biogeographical delimitation available at the time (Rivas-Martínez 1987). The association was justified based on a table comprising 17 relevés from the east of the province of Lugo (Figure 1), which also included a synthetic column prepared with five relevés from Terra de Lemos (Cabe River basin, south of the province of Lugo) (Romeiro-Buján 1993). This new association was described as a type of low-growing forest (8–10 m), dominated by *Corylus avellana*, but with varying admixture of other tree

species in its upper stratum and a high richness in hemicryptophytes and nemoral geophytes. Although *Corylus avellana* was clearly the dominant species in the majority of relevés (Braun-Blanquet combined index 4 or 5), in the same table the authors included tree formations that were dissimilar from the physiognomic point of view due to the presence of emergent tree species (*Quercus robur*, *Acer pseudoplatanus*, *Fraxinus excelsior*, *Ilex aquifolium*, etc.), whose coverage was not greater than that of *Corylus avellana*, but which exceeded it in terms of height. The authors stressed that the *Omphalodo-Coryletum* appeared habitually with an immature structure as a result of logging operations over hundred years, and that it could develop towards a diverse type of forest as a consequence of vegetation succession, mainly “mixed oak forest” or even Pyrenean oak forest (forest dominated by *Quercus pyrenaica*). It was deduced from these findings that this was a community of seral character.

In order to highlight what could be the most mature and optimal version of this association, the authors established the nomenclatural type for the association *Omphalodo-Coryletum* (table 2: rel. 12, *op. cit.*) in an oak forest relevé dominated by *Quercus robur* (Braun-Blanquet combined index: 4), although with a lesser presence (indexes between + and 2) of other deciduous tree species (*Acer pseudoplatanus*, *Fraxinus excelsior*, *Prunus avium*, *Castanea sativa*, *Betula pubescens* and *Ulmus glabra*), overshadowing an understory of *Corylus avellana* (Braun-Blanquet combined index: 4), *Crataegus monogyna* and *Ilex*

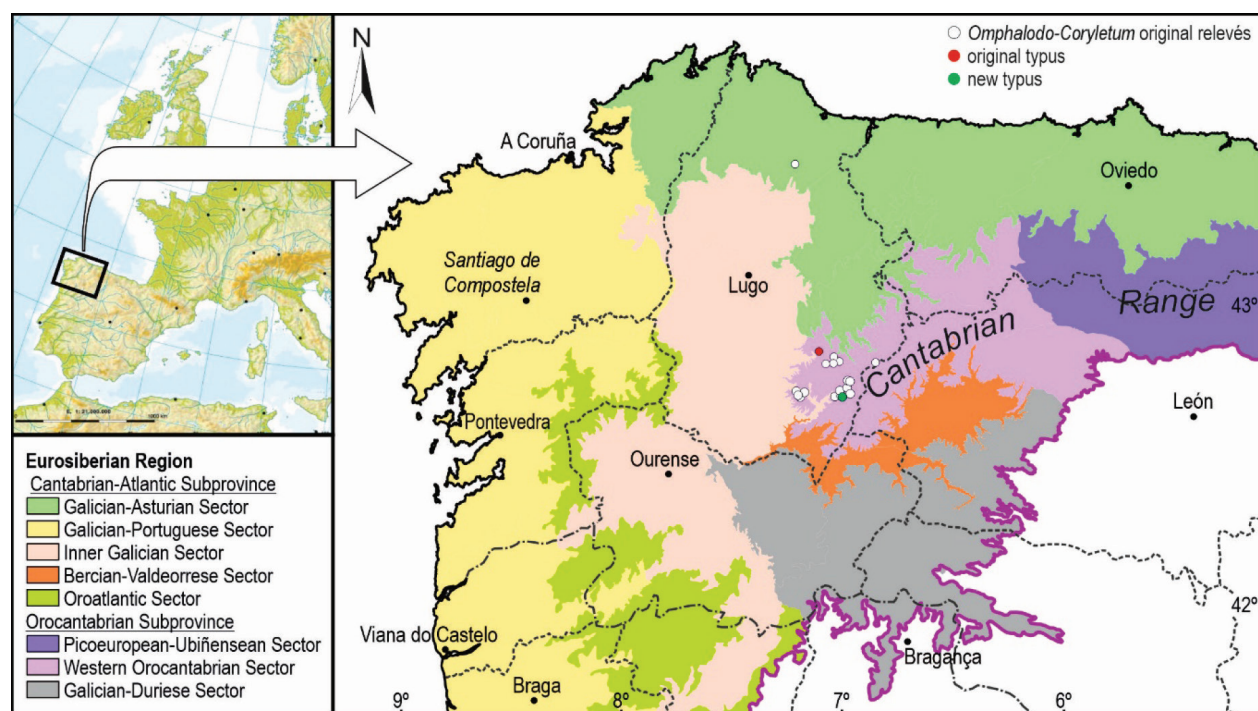


Figure 1. Location of the original relevés of the association *Omphalodo nitidae-Coryletum avellanae* published by Amigo et al. (1994) within the delimitation of biogeographic units (sectors) proposed by Fernández-Prieto et al. (2020). All the relevés except one are within the western Orocantabrian Sector. The original *holotypus* (red dot) and the new one proposed here (green dot) are highlighted.

aquifolium, and many nemoral herbaceous species in the lower level. Due to its floristic-structural characteristics, this type relevé can be said to constitute a clear exception within the dominant physiognomy in the forests included in this table. In conclusion, a plant community dominated by *Corylus avellana* was described and attributed a seral character (immature forest), although its type relevé was that of a mesophytic forest dominated by *Quercus robur*.

It should be noted that the locality of the type relevé (Cancelo, Triacastela, Lugo province, at an altitude of 820 m a.s.l.), combined with the great majority of the remaining relevés in the original table for this association, lies unequivocally within the biogeographical territory known as the Orocantabrian subprovince (Figure 1), whose delimitation in its westernmost part has not undergone any significant change since the publication of Amigo et al. (1994) (compare Rivas-Martínez 1987 with Rodríguez-Gutián and Ramil-Rego 2008; Rivas-Martínez et al. 2017; Fernández-Prieto et al. 2020).

Advances in the study of the arboreal vegetation in the Iberian-Atlantic territory around the turn of the century have been instrumental in differentiating pre-forest communities from mature forests. This also affected the interpretation of hazelnut-tree forests. In the past, they were regarded as juvenile aspects of certain types of “climatic” forests, with a modest size, relatively unstructured, with very little incorporation of any species larger than the hazelnut tree in the canopy. In terms of syntaxonomy, they were considered variants or sub-associations (Izco et al. 1986; Rodríguez-Gutián et al. 2001), while they are now considered autonomous pre-climatic or secondary communities and associations in their own right (Rivas-Martínez et al. 2002; Álvarez-Arbesú 2008; Carreras et al. 2016). In the first exhaustive checklist of Iberian vegetation (Rivas-Martínez et al. 2001), this concept was reaffirmed by differentiating a new alliance of pre-forests or “softwood forests” within the class *Querc-Fagetea sylvaticae*, which a little later (Rivas-Martínez and Costa 2002) received the name *Betulion fontqueri-celtibericae*. The *Omphalodo-Coryletum* was included in this alliance together with two other associations of Orocantabrian hazelnut-tree forests. Based on this synthesis, the general consensus was to consider *Omphalodo-Coryletum* as a seral hazelnut-tree forest in the westernmost part of the Orocantabrian territory, overlooking the atypical type relevé (a mesophytic oak forest) of the association. Examples of this interpretation can be found, in agreement with most of the relevés in the original table, in the works of Honrado et al. (2002), Honrado (2003), ALFA (2004), Mon-

teiro-Henriques (2010), and it was confirmed in the most recent vegetation checklists in Spain (Rivas-Martínez 2011) and Portugal (Costa et al. 2012).

In conclusion, the name *Omphalodo nitidae-Coryletum avellanae* has been generally interpreted in a floristic-structural and dynamic sense different from its *typus* relevé. We consider this to be a clear-cut case for the application of Art. 53 of the latest edition of the ICPN (Theurillat et al. 2021).

In application of this article, we propose the following conserved type for the name *Omphalodo nitidae-Coryletum avellanae* Amigo, G. Azcárate et Romero 1994, whose content we transcribe below: Amigo et al. (1994), table 2, relevé 4.

ES: Lugo, Folgoso do Courel, between Moreda and Devesa da Rogueira (Courelian district, western Orocantabrian sector); altitude: 720 m a.s.l.; slope: 40°; aspect: W; tree cover: 100%; relevé area: 250 m²; number of taxa: 41. Tree layer (> 3 m): *Corylus avellana* 5, *Acer pseudoplatanus* 1, *Castanea sativa* 1, *Crataegus monogyna* +, *Ilex aquifolium* +. Other species: *Polystichum setiferum* 4, *Hedera hibernica* (sub *H. helix*) 3, *Melica uniflora* 2, *Euphorbia dulcis* 1, *Lilium martagon* 1, *Lonicera periclymenum* 1, *Mercurialis perennis* 1, *Phyllitis scolopendrium* 1, *Poa nemoralis* 1, *Polygonatum verticillatum* 1, *Primula acaulis* 1, *Sanicula europaea* 1, *Stellaria holostea* 1, *Allium ursinum* +, *Daphne laureola* +, *Helleborus foetidus* +, *Cicerbita muralis* +, *Neottia nidus-avis* +, *Omphalodes nitida* +, *Potentilla sterilis* +, *Ornithogalum pyrenaicum* r, *Rubus* sp. 1, *Tamus communis* 1, *Circaea lutetiana* +, *Clematis vitalba* +, *Crepis lampsanoides* +, *Epilobium parviflorum* +, *Erica arborea* +, *Euphorbia amygdaloides* +, *Geranium robertianum* +, *Oxalis acetosella* +, *Saxifraga spathularis* +, *Teucrium scorodonia* +, *Viola riviniana* +, *Lamium maculatum* r, *Rumex acetosella* r.

Author contributions

Both authors have contributed to the discussion of the nomenclatural problem, to the analysis of the data and to the debate on the proposed solution.

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