

7. The coastal region between Sile and Tagliamento rivers in Roman times: route systems, settlements, economy

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Introduction

The complex communication network which characterised the coast of the Upper Adriatic Sea in the Roman age was based on an “exchange system” of land routes and waterways, as demonstrated by many scholars (Fig. 1).¹

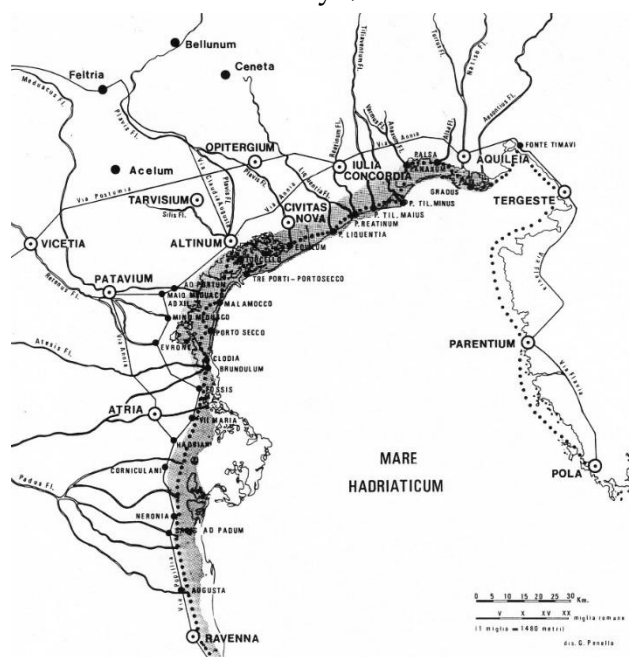


Fig. 1. Decima regio maritima: the “exchange system” of land routes and waterways (after G. Rosada, *La direttrice endolagunare*, 154).

¹ G. Uggeri, *Vie di terra e vie d’acqua tra Aquileia e Ravenna in età romana*, in *Aquileia e Ravenna, Antichità Altoadriatiche* XIII (Udine 1978) 45–79; G. Rosada, *I fiumi e i porti nella Venetia orientale: osservazioni intorno ad un famoso passo pliniano. Portus Liguentiae: i dati e i problemi*, *AquilNost* 50, 1979, 174–216; G. Rosada, *I fiumi e i porti nella Venetia orientale: osservazioni intorno ad un famoso passo pliniano. I fiumi e i porti da Concordia ad Aquileia*, *AquilNost* 50, 1979, 217–256; L. Bosio – G. Rosada, *Le presenze insediative nell’arco dell’Alto Adriatico dall’epoca romana alla nascita di Venezia*, in: *Da Aquileia a Venezia. da Aquileia a Venezia. Una mediazione tra l’Europa e l’Oriente dal II sec. a.C. al VI sec. d.C.* (Milano 1980) 509–567; G. Uggeri, *Aspetti archeologici della navigazione interna nella Cisalpina*, in *Aquileia e l’Arco Adriatico, Antichità Altoadriatiche* 26, 1990, 175–196; G. Rosada, *La direttrice endolagunare e per acque interne della decima regio maritima: tra risorsa naturale e organizzazione antropica*, in: *La Venetia nell’area padano-danubiana: le vie di comunicazione*, *Atti del Convegno internazionale, Venezia, 6–18 aprile 1988* (Padova 1990) 153–171.

Two parallel horizontal routes were fundamental parts of this system: one land-based (Via Popilia-Annia, from Rimini to Aquileia, which represents the main axis of “romanisation” of north-east Italy in the 2nd century BC)² and another navigating via inland waters (known as “rotta endolagunare”),³ which connected the ports at the mouths of the rivers mentioned by Pliny the Elder⁴; the latter was linked on one side to the sea route and on the other to the branches of the rivers which made up the main routes to reach the urban settlements and inland areas.

The junctions of this route system can be seen in the coastal urban settlements (such as Adria, Altino, Concordia, Aquileia) or further inland (such as Padova and Oderzo).

We have recently carried out an in-depth analysis of the Annia route in the area from Altino to Iulia Concordia, systematising significant geomorphological and archaeological data. The results of this study have given us not only a more complete picture of the route network around these two urban areas, but above all has allowed us to understand that the road junctions were not only urban. The research identified three territorial crossroads, which are separate from the urban settlements and maybe even from the waystations (*stationes*), which have not been identified to date (Fig. 2). (M.S.B., A.V.)

² This route has recently been the subject of an exhaustive study, to which we refer for all topographical and historical aspects, as well as bibliographical references: G. Rosada – M. Frassine – A.R. Ghiotto (eds.), *...viam Anniam influentibus palustribus aquis eververatam...: tradizione, mito, storia e katastrophé di una strada romana* (Treviso 2010).

³ The hypothesis of a succession of lagoons between Venice and Aquileia, crossed by an endolagunal route, has been discussed in the past on the basis of ancient and medieval sources and remote sensing data (see Rosada op.cit. 153–171, for a detailed discussion and preceding bibliography).

⁴ *Altinum...fluvijs Silis..., flumen Liguentia et portus eodem nomine, colonia Concordia, flumina et portus Reatinum, Tiliaventum Maius, Tiliaventum Minor...* (Plin. nat. 3, 18, 126).

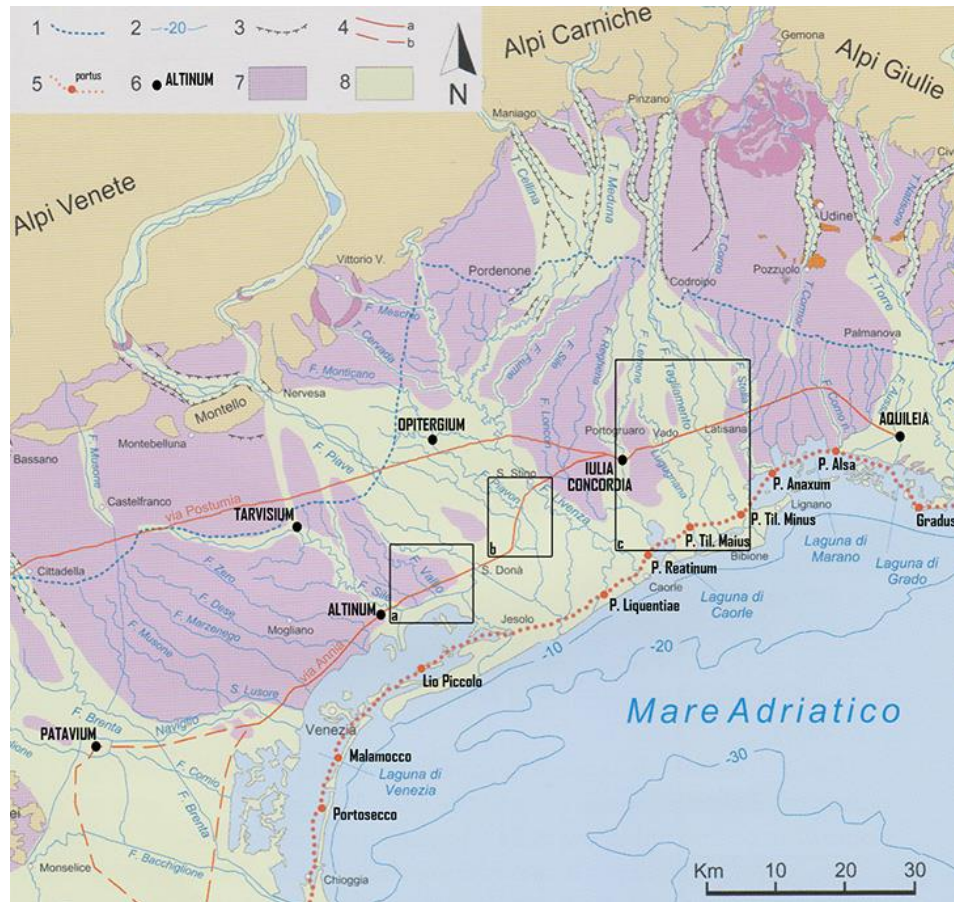


Fig. 2 – Map of the Veneto-Friuli plain showing the Roman centres, the main road system, the “rotta endolagunare” and the assumed port sites. The boxes highlight the areas of the three territorial road junction: a) the Marteggia-Bellesine road junction, between Sile and Piave; b) the Grassaga-Piavon/Canalat road junction, between Piave and Livenza; c) the Vado road junction, along the Tiliaventum Maius river. Legend: 1. resurgence belt; 2. isobaths; 3. terrace edge; 4a. roads; 4b. hypothesised roads; 5. presumed “rotta endolagunare” and hypothesised port sites; 6. Roman centres; 7. alluvial sediments of the LGM and pre-LGM; 8. alluvial and coastal sediments of the post-LGM (after P. Mozzi, A. Fontana, S. Piovan, T. Abbà, “Indagini geomorfologiche luogo il tracciato della via Annia”, in: Via Annia II. Adria, Padova, Altino, Concoria, Aquileia. Progetto di recupero e valorizzazione di un’antica strada romana. Atti della giornata di studio, Padova, Musei Civici, 17 giugno 2010, a cura di F. Veronese (Padova: Il Poligrafo 2011), 74, modified by the authors).

The ancient landscape

Geomorphological studies have shown that, in the Roman age, this region appeared to be a continuous sequence of lagoon lakes, interspersed between which were long ridges formed by the sedimentary action of the Piave and Taglia-

mento rivers, and the resurgent waterways which occupied abandoned riverbeds (Sile, Livenza and Lemene, ancient Reatinum).⁵ These lagoon lakes were demarcated towards the sea by ancient lidos which seem to have developed in a manner similar to their present-day form.⁶ Compared to today, the inner boundary of the lagoon was therefore much further back (Fig. 3). Historical

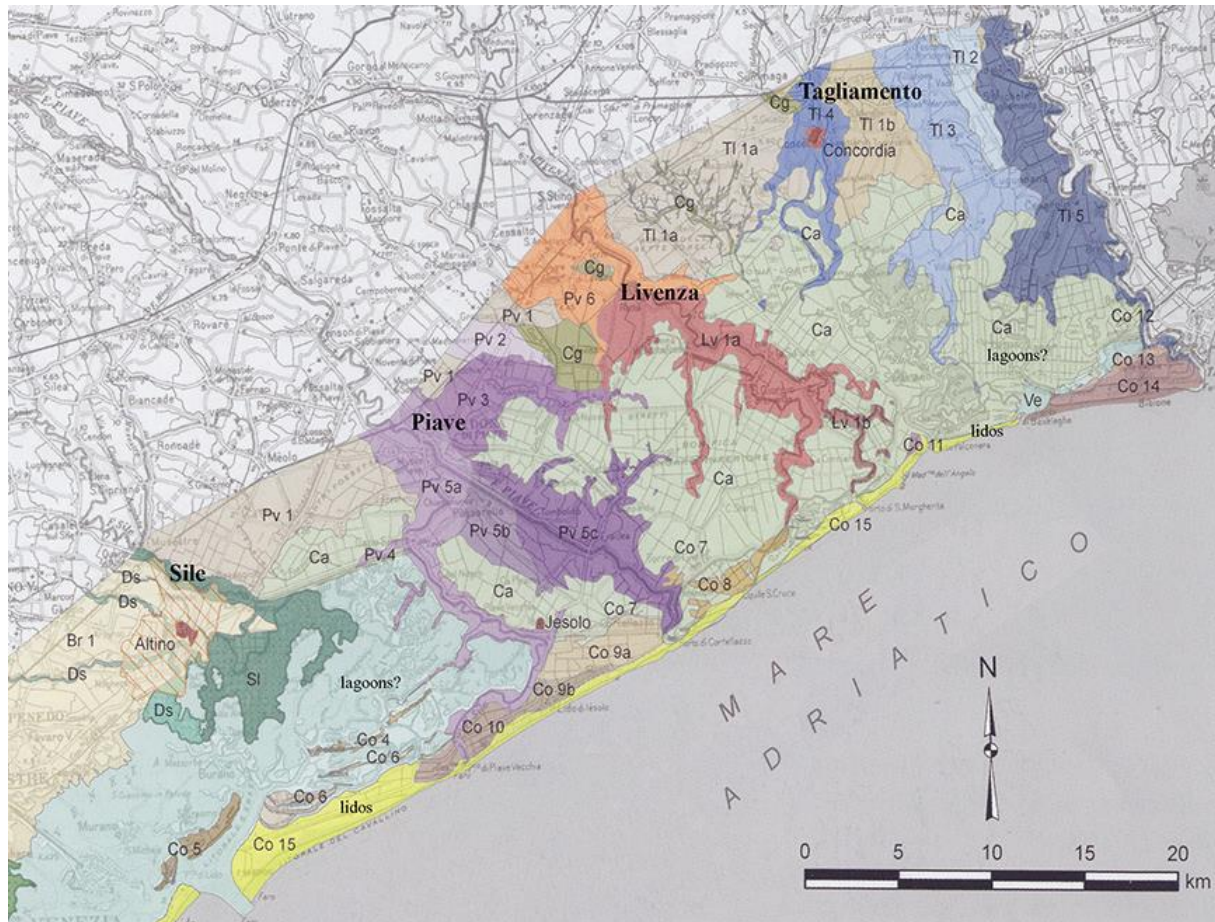


Fig. 3. Map of Veneto coastal plain landscape units, north-eastern region (after Regione Veneto (ed.), *Archeologia e paesaggio*, 21, modified by the authors).

maps of the 16th and 17th centuries may better show the ancient shape of this landscape, which has been deeply altered by hydraulic and land reclamation

⁵ For a synthesis of geomorphological research, refer to V. Bassan – M. Meneghel – A. Bondesan (eds.), *Geomorfologia della provincia di Venezia: note illustrative della carta geomorfologica della provincia di Venezia* (Padova 2004) and, more recently, Regione Veneto (ed.) *Archeologia e paesaggio nell'area costiera veneta: conoscenza, partecipazione e valorizzazione* (Cittadella PD 2013).

⁶ In the northern lagoon of Venice, the coastline was further inland than it is today (S. Erasmo – Lio Piccolo – Lio Grande) while in the eastern sector it was likely farther seaward: Regione Veneto (ed.), *Archeologia e paesaggio nell'area costiera veneta: conoscenza, partecipazione e valorizzazione* (Cittadella PD 2013) 52–56.

projects of modern times, progressively reclaiming from the lagoon the extensive area that is now cultivated.⁷ (A.V.)

The urban road junctions: Altinum and Iulia Concordia

The city-harbour of Altino, of which the Roman town-planning was documented by an extraordinary aerial photo in 2007⁸ (Fig. 4) and geophysical prospection,⁹ was built on the ridges around the mouth of the Sile River. The city was an important trade road junction. It was connected with the larger Danube region and Central and Eastern Europe, as well as the nearby Roman cities, by the major long roads (via Annia and via Claudia Augusta)¹⁰ as well as other, more local roads (such as the one to Opitergium - Oderzo) (Fig. 5).¹¹ Moreover, it was a base for the routes into the lagoon and the Upper Adriatic Sea. An integrated network of interlinking roads and water canals offered convenient connections between the main roads and rivers. This “secondary” network allowed direct access to the harbour area in the south-east of the urban centre and was equipped with a series of landings and warehouses.¹² From the great harbour

⁷ F. Vallerani (ed.), *Dalle praterie vallive alla bonifica: cartografia storica ed evoluzione del paesaggio nel Veneto orientale dal '500 ad oggi* (Portogruaro 2008).

⁸ A. Ninfo – A. Fontana – P. Mozzi – F. Ferrarese, *The map of Altinum, ancestor of Venice*, *Science* 325, 2009, 577; G. Cresci Marrone – M. Tirelli (eds.), *Altino dal cielo: la città telerivelata. Lineamenti di Forma Urbis*, *Atti del Convegno*, Venezia 3 dicembre 2009 (Venezia 2011).

⁹ P. Mozzi – A. Fontana – F. Ferrarese – A. Ninfo – S. Campana – R. Francese, *The Roman City of Altinum, Venice Lagoon, from Remote Sensing and Geophysical Prospection*, *Archaeological Prospection* 23, 2016, 27–44.

¹⁰ G. Rosada, *...viam Claudiam Augustam quam Drusus pater...derexserat*, in: *Via Claudia Augusta. Un'arteria alle origini dell'Europa: ipotesi, problemi, prospettive*, *Atti del Convegno Internazionale*, Feltre 24–25 settembre 1999, V. Galliazzo (ed.), (Treviso 2002) 37–68; G. Rosada – M. Frassine – A.R. Ghiotto (eds.), *...Viam Anniam influentibus palustribus aquis eververatam...: tradizione, mito, storia e katastrophé di una strada romana* (Treviso 2010).

¹¹ Concerning the road to *Opitergium*, see B.M. Scarfi, *Storia di Altino*, in: *Altino preromana e romana*, B.M. Scarfi – M. Tombolani (eds.), (Musile di Piave 1987) 27; M. Tirelli, *Altino: rinvenimenti di recinti funerari lungo i lati della via per Oderzo*, *QuadAven* 4, 1988, 106–112; regarding the road to *Tarvisium*, see G. Rosada, *...viam Claudiam Augustam quam Drusus pater...derexserat*, in: *Via Claudia Augusta. Un'arteria alle origini dell'Europa: ipotesi, problemi, prospettive*, *Atti del Convegno Internazionale*, Feltre 24–25 settembre 1999, V. Galliazzo (ed.), (Treviso 2002) 55.

¹² About linking roads, see A. De Bon, *Rilievi di campagna*, in: *La via Claudia Augusta Altinate* (Venezia: Officine grafiche C. Ferrari 1938) 15–19; Scarfi, loc. cit. 27; M. Tombolani, *Altino*, in: *Il Veneto nell'età romana, II, Note di urbanistica e di archeologia del territorio*, G. Cavalieri Manasse (ed.), (Verona 1987) 320–321; M. Tirelli, *Il porto di Altinum*, in *Strutture portuali e rotte marittime nell'Adriatico di età romana*, *Antichità Altoadriatiche* 46, 2001, 295–316; M. Tirelli, *L'immagine della città dalla ricerca tra terra e cielo*, in: *Altino dal*

on the edge of the lagoon, various navigable canals allowed the crossing of the lagoons towards the ancient lidos of Sant'Erasmus and Lio Piccolo.

cielo: la città telerilevata. Lineamenti di *Forma Urbis*, Atti del Convegno, Venezia, 3 dicembre 2009, G. Cresci Marrone – M. Tirelli (eds.), (Venezia 2011) 62. 65; C. Beltrame – C. Negrelli – P. Mozzi, The urban harbour of Altinum on the lagoon of Venice, in: *Entre Mares. Emplazamiento, infraestructuras y organización de los puertos romanos II*, M. Autega – A. Pizzo (eds.), (Roma-Bristol 2023) 669–679; M.S. Busana – A. Vacilotto, Il sistema itinerario nella periferia dei centri urbani della fascia costiera adriatica: i casi di Aquileia, Altino e Concordia, *Atlante Tematico di Topografia Antica* 32, 2022, 214–218.

These canals connected Altino with both the infrastructure and the lagoon's sites of production (fisheries, salt pans, secondary ports, villas), and with coastal ports and therefore the sea, via the ancient mouth of Treporti.¹³

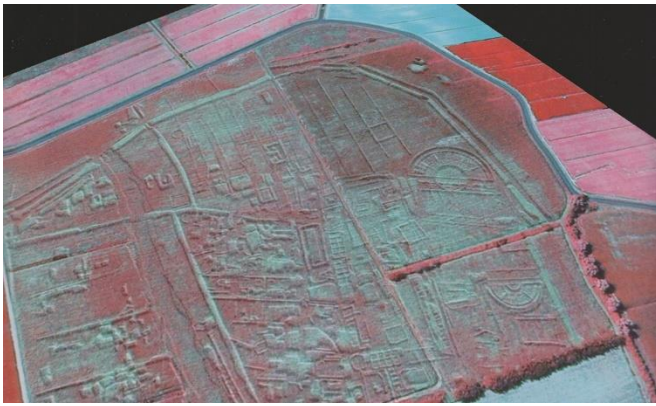


Fig. 4. The Roman city of Altinum in a 2007 digital visible and near-infrared aerial photograph. (after P. Mozzi – A. Fontana – A. Ninfo – F. Ferrarese – S. Primon, "Nuove tecnologie per la ricostruzione della pianta della città: il telerilevamento di Altino", in: *Altino Antica: dai Veneti a Venezia*, a cura di M. Tirelli (Venezia: Marsilio 2011), 201).

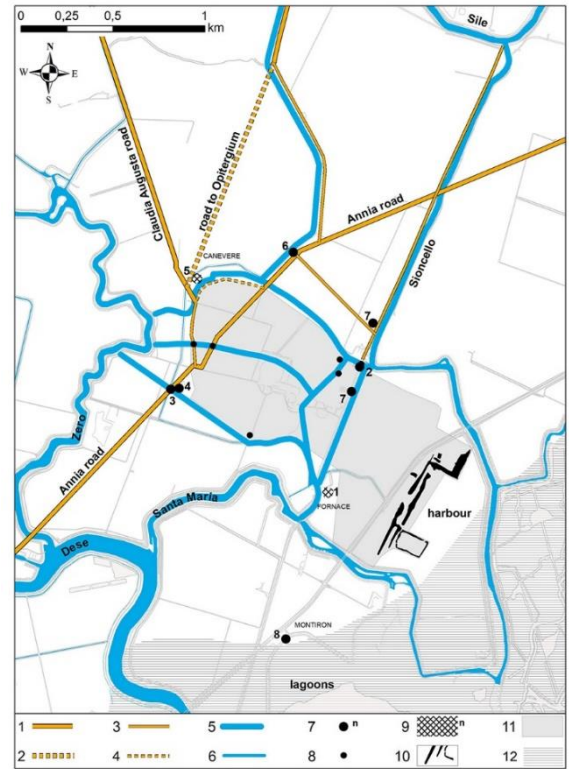


Fig. 5. Quarto d'Altino (VE): integrated route system on the suburbs of Altinum. 1) road system, main roads; 2) road system, hypothetical traits; 3) linking roads; 4) linking roads, hypothetical traits; 5) main watercourses; 6) linking canals; 7) structures/infrastructures in relation to the roads system, some are mentioned in the text; 8) other structures /infrastructures in relation to the road system; 9) shrines; 10) evidence of the urban port deduced from remote sensing; 11) roman urban centre; 12) lagoons (after M.S. Busana – A. Vacilotto, *Il sistema itinerario nella periferia dei centri urbani 215*, modified by the authors).

¹³ M. Tirelli, *Il porto di Altinum*, *Antichità Altoadriatiche* 46, 2001, 298; E. Canal, *Archeologia della laguna di Venezia* (Sommacampagna (VR): Cierre Edizioni, 2013) 55; D. Calaon, *Le forme della laguna nell'antichità*, in: *Vivere d'acqua. Archeologie tra Lio Piccolo e Altino* (Crocetta del Montello 2019) 29–30.



Fig. 06. The landscape around Iulia Concordia in Roman age, after A. Fontana, "Il contesto ambientale", in: *Le necropoli della media e tarda età imperiale (III-IV secolo d.C.) a Iulia Concordia e nell'arco altoadriatico*. Atti del convegno di studio, Concordia Sagittaria 5-6 giugno 2014, eds. F. Rinaldi – A. Vigoni, (Rubano 2015) 23.

Iulia Concordia was a Roman colonia from 42-40 BC. It developed on a sort of "island" located between two deep valleys with resurgent rivers that flowed in marshy environments (Fig. 6).¹⁴ The city was reached by the via Annia and the via Postumia and connected to the road network towards the Noricum by the

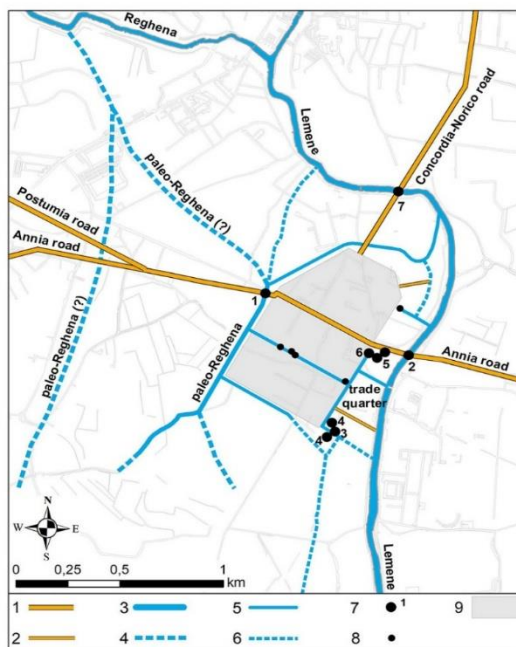


Fig. 7. Concordia Sagittaria (VE): integrated route system on the suburbs of Iulia Concordia. 1) road system, main roads; 2) linking roads; 3) watercourses; 4) watercourses, hypothetical traits; 5) linking canals; 6) linking canals, hypothetical traits; 7) structures/infrastructures in relation to the roads system, some are mentioned in the text; 8) other structures/infrastructures in relation to the roads system; 9) roman urban centre (after M.S. Busana – A. Vacilotto, *Il sistema itinerario nella periferia dei centri urbani 219*, modified by the

¹⁴ A. Fontana, *Il contesto paleoambientale*, in: *Le necropoli della media età imperiale (III-IV sec. d.C.) a Iulia Concordia e nell'arco altoadriatico*. Organizzazione spaziale, aspetti monumentali e strutture sociali, Atti del Convegno, Concordia, 5-6 giugno 2014 (Padova 2015) 24.

via Concordia-Noricum, establishing a crossroads for direct routes towards Aquileia and north-east Europe (Fig. 7).¹⁵ Although not lying directly on the lagoon lakes, Concordia was connected with the river and the sea via the Lemene river and its sea harbour.¹⁶ At the head of this waterway was both the canal system crossing and surrounding the urban space, and the trade quarter quipped with warehouses and docks, discovered on the east border of the city.¹⁷

Concordia also had an integrated route network consisting of roads and waterways, used to control the traffic and goods, although it is not a complete system of connections, as in the case of Altino. Based on the current knowledge, this junction seems to have played a strategic role, given its location as an almost unavoidable crossing point.¹⁸ However, its commercial role is less clear, maybe due to its proximity to the traffic route of the Tagliamento river (see *infra*). (A.V.)

¹⁵ L. Bosio, *Le strade romane della Venetia e dell'Histria* (Padova: Esedra 1991) 43–57; G. Rosada, *Le vie per il Norico*, in: *Tesori della Postumia. Archeologia e storia intorno a una grande strada romana alle radici dell'Europa*, Catalogo della mostra Cremona 1998 (Milano 1998) 242–247 and 265–266; G. Rosada – M. Frassinetti – A.R. Ghiotto (eds.) ...*viam Anniam influentibus palustribus aquis eververatam...*: tradizione, mito, storia e katastrophé di una strada romana (Treviso 2010).- On the route traces and findings proving the existence of the Concordia-Norico road, see V. Gobbo, *Le strade romane nel territorio di Tegliolo e Cintoello*, in: *Tra l'aquila e il leone. Uomini, luoghi ed eventi delle comunità di Tegliolo e Cintoello* (Latisana 1997) 124–129; V. Gobbo, *Ricerche di topografia archeologica nel Veneto Orientale*, in: *Mappa Archeologica. Ricerche di Topografia Archeologica nel Veneto Orientale*, a cura di Gruppo Archeologico del Veneto Orientale (Gruaro and Bergamo 2002) 37–40; M. Annibaleto, *Il paesaggio suburbano di Iulia Concordia* (Rubano 2010) 111–116; M. Bressan – G. De Angeli, *L'agro di Concordia Sagittaria in età romana. Nuovi dati sulle strade per il Norico, la via Annia e la centuriazione*, in: *Percorsi nel passato. Miscellanea di studi per i 35 anni del G.R.A.V.O. e i 25 anni della Fondazione Colluto*, A. Vigoni (ed.) (Portogruaro 2018) 98–100.

¹⁶ G. Rosada, *Dati e problemi topografici della fascia costiera fra Sile/Piave e Tagliamento*, in: *Aquileia e l'arco adriatico*, *Antichità Altoadriatiche* 36, 1990, 94–95.

¹⁷ P. Croce Da Villa, *Scali ed infrastrutture commerciali dell'entroterra nel Veneto Orientale*, in *Strutture Portuali e rotte marittime nell'Adriatico di età romana*, *Antichità Altoadriatiche* 46, 2001, 282–285; M. Annibaleto, *Il paesaggio suburbano di Iulia Concordia* (Rubano 2010) 40–56; M.S. Busana – A. Vacilotto, *Il sistema itinerario*, 218–222.

¹⁸ G. Cresci Marrone, *Nascita e sviluppo di Concordia colonia civium romanorum*, in: *Concordia. Tremila anni di storia*, P. Croce Da Villa – E. De Filippo Balestrazzi (eds.), (Padova 2001) 122–123; P. Croce Da Villa, *Evoluzione dell'impianto urbano dell'antica colonia. La forma urbis dal I sec. a.C. al VII sec. d.C.*, in *Concordia Sagittaria. Tremila anni di storia*, P. Croce Da Villa – E. De Filippo Balestrazzi (eds.), (Padova 2001) 135; P. Croce Da Villa, *Una strada per l'oltralpe prima della Claudia Augusta: la via da Concordia al Norico*, in: *Via Claudia Augusta. Un'arteria alle origini dell'Europa: ipotesi, problemi, prospettive*, Atti del Convegno Internazionale, Feltre, 24–25 settembre 1999, V. Galliazzo (ed.), (Treviso 2002) 368–372.

The territorial road junctions

In the coastal area between the Sile and Tagliamento there is evidence of three important route junctions along the path of the *via Annia*, which was the pivotal point of an articulated system of sea and water connections, from inland areas to the sea. These can be found in the territory of Altinum, Opitergium and Iulia Concordia respectively.

The Marteggia-Bellesine road junction (Altinum ager)

The first road junction in the area along the *via Annia* can be found between the Sile and the Piave, specifically in the area between Marteggia, Bellesine and Cascinelle (Fig. 8).¹⁹ The area was characterised by an ancient ridge of the Piave followed by a resurgent river (the paleo-Meolo) in Roman times, which the *via Annia* crossed at a one-arched bridge (Fig. 8.1).²⁰ At its mouth into the lagoon, other waterways²¹ and a wide artificial trench (known as “Millepertiche trench”)²² (Fig. 9) connected to the Piave converged in the paleo-Meolo: the area can therefore be seen as the pivotal point of a system of navigable waterways, centred around a settlement equipped with warehouses and docks (Fig. 8.3)²³

¹⁹ M.S. Busana – A. Vacilotto, *Il sistema itinerario nella fascia costiera tra Sile e Tagliamento in età romana. Punti di snodo per la ricostruzione della viabilità secondaria in un'area tra terra e acque*, *Atlante Tematico di Topografia Antica* 31, 2021, 84–88.

²⁰ P. Croce da Villa – V. Favero – V. Gobbo – E. Pezzetta, *Musile di Piave. Ponte romano lungo la via Annia*, *QuadAven* 4, 1990, 165–188.

²¹ The palaeoalveo della Canna and the palaeo-Vallio, crossed by the *Annia* with a one-arch bridge, were investigated at Ca' Tron: P. Basso – J. Bonetto – M.S. Busana – P. Michelini, *La via Annia nella Tenuta di Ca' Tron*, in: *La via Annia e le sue infrastrutture*, *Atti delle giornate di studio*, Roncade (TV) 6–7 novembre 2003, a cura di F. Ghedini e M.S. Busana (Cornuda 2004) 68–80 and at Marteggia: E. Pettenò – P. Croce Da Villa – V. Gobbo, *Indagini e scoperte lungo la via Annia tra Altino e Iulia Concordia*, in: *La via Annia e le sue infrastrutture*, *Atti delle giornate di studio*, Roncade (TV) 6–7 novembre 2003, F. Ghedini – M.S. Busana (eds.), (Cornuda 2004) 200–206.

²² Regarding the Millepertiche navigable trench, see P. Basso – J. Bonetto – M. Davanzo – D. Davanzo, *La via Annia tra Altino e Piave*, in: *La tenuta di Ca' Tron. Ambiente e storia nella terra dei dogi*, F. Ghedini – M.S. Busana – A. Bondesan (eds.), (Verona 2002) 139–144; Commissione della Reale Deputazione Veneta di Storia Patria, *Dal Livenza al Tagliamento*, in: *Archivio Veneto* 27, 1884, 481–490; P. Basso, *I miliari della Venetia romana*, *Archeologia Veneta* 9, 1986, 192–193.

²³ *Carta Archeologica del Veneto*, IV, a cura di L. Capuis, G. Leonardi, S.P. Mattioli, G. Rosada (Modena 1994) 83 n. 6; P. Croce Da Villa, *La Pianura tra Sile e Piave nell'antichità*, *Provincia di Venezia* 15, 4/6, 1991, 14, n. 12; P. Croce Da Villa, *Scali ed infrastrutture commerciali dell'entroterra nel Veneto Orientale*, in: *Strutture Portuali e rotte marittime nell'Adriatico di età romana*, *Antichità Altoadriatiche* 46, 2001, 277–278. Documents in the archives of Venice and Treviso attest to the strategic role of this navigation junction between the lagoon and the hinterland from the 12th to the 16th centuries, before the diversion of the river Sile into the bed of the Piave Vecchia, carried out by the Venetians in the mid-

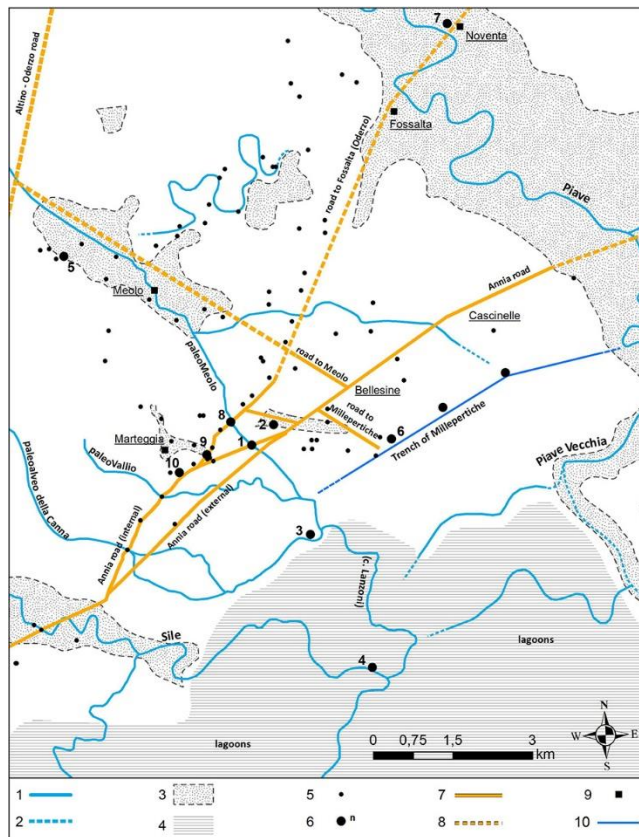


Fig. 08. Quarto D'Altino/Musile di Piave (VE): the Marteggia-Bellesine road junction in roman age. 1) hydrography, certain branches; 2) hydrography, presumed branches; 3) river ridges; 4) lagoons; 5) finds from the Roman era; 6) sites of interest, some of which are mentioned in the text; 7) certain viability; 8) assumed viability; 9) modern locations; 10) artificial trench of Millepertiche (after M.S. Busana – A. Vacilotto, *Il sistema itinerario nella fascia costiera tra Sile e Tagliamento in età romana* 84, modified by the authors).

In this context, numerous secondary routes have been identified along the Annia, which are visible both from aerial photos and on the surface. Some of these have been investigated archaeologically:

- a road which branched off the consular road around Bellesine going north-west, towards the road that connected Altino and Oderzo, resulting in a connector road;²⁴

17th century, radically changed the relationship of this territory with the lagoon: G. Liberali, *Gli statuti del Comune di Treviso* (Venezia 1950–1955).

²⁴ Commissione della Reale Deputazione Veneta di Storia Patria, *Dal Livenza al Tagliamento*, in: *Archivio Veneto* 27, 1884, 272. The term 'vicinale' refers to the division of viae into three categories (*privatae*, *vicinales* e *publicae*) as proposed by legal sources (D 43.8.2.22) (Ulp. 68 ad ed.): *vicinales sunt viae, quae in vicis sunt vel in vicos ducunt*. On the general topic, see V. Ponte, *Régimen jurídico de las vías públicas en Derecho Romano* (Phd Dissertation, Universidad de Córdoba 2002) with previous bibliography; on *viae vicinales*, see G. Impallomeni, *Scritti di diritto romano e tradizione romanistica* (Padova 1996) 554–560.



Fig. 09. Musile di Piave (VE): the ancient trench of Millepertiche (after P. Basso – J. Bonetto – M. Davanzo – D. Davanzo, *La via Annia tra Altino e Piave*, 142).

- a route which came off the via Annia going south-east²⁵, in the direction of the Millepertiche trench near a site with docks (Fig. 8.6);²⁶
- a *via glareata* which came off the inland route of the Annia at Marteggia going north-east, in the direction of the western territory of Oderzo.²⁷

²⁵ P. Croce Da Villa, *La Pianura tra Sile e Piave*, Provincia di Venezia 15, 4/6, 1991, 10 fig. 4. When the road was discovered, the assumption was that it continued to the north-west, towards Meolo, based on the alignment of the sites.

²⁶ P. Basso – J. Bonetto – M. Davanzo – D. Davanzo, *La via Annia tra Altino e Piave*, in: *La tenuta di Ca' Tron. Ambiente e storia nella terra dei dogi*, F. Ghedini – M.S. Busana – A. Bondesan (eds.), (Verona 2002) 139-144.- The three sites, located along the northern bank of the navigable ditch, at a constant distance of approximately 1.5 km (= 1 m.p.) yielded bricks, mosaic tesserae, amphora fragments and black-glazed pottery. These materials suggest a chronology that does not exceed the Early Imperial Age.

²⁷ P. Croce Da Villa, *La Pianura tra Sile e Piave*, Provincia di Venezia 15, 4/6, 1991, 10; P. Basso – J. Bonetto – M.S. Busana – P. Michellini, *La via Annia tra Altino e Piave*, in: *La tenuta di Ca' Tron. Ambiente e storia nella terra dei dogi*, F. Ghedini – M.S. Busana – A. Bondesan (eds.), (Verona 2002) 68-80; M.S. Busana – N. Martinelli, *Indagini lungo la via Annia nella Tenuta di Ca' Tron*, in *Via Annia. Adria, Padova, Altino, Concordia, Aquileia. Progetto di recupero e valorizzazione di un'antica strada romana*, Atti della Study Day (Padova 2008) F. Veronese (ed.), (Padova 2009) 203-222.

Two emergency excavations were conducted near the junction of the via Annia in 2001 and in 2009-2011, intercepting the roadway (Fig. 8.8). They documented the technical, dimensional and chronological features: a *via glareata* on a sandy subsurface around 11-12 m wide, flanked by two ditches (width 5-6 m), the northern one reinforced with wooden embankments, and used between the 1st and 4th-5th century AD, when it silted up and was abandoned.²⁸

This portion of the via Annia produced abundant archaeological evidence (infrastructural, settlements, sanctuary, funerary) dating from the 4th – 3rd century BC,²⁹ as well as three out of the five milestones from the late imperial age found along the road between the Sile and the Piave.³⁰ Intense occupation has also

²⁸ The first excavation at La Fossetta, conducted along the Colatore Meolo, interpreted the road as a variant of the route [of the via Annia] moved further north, to the shelter of some bumps that could protect it from the lagoon waters: L. Fozzati – R. Cester – I. Bettinardi, *Ricerche di archeologia subacquea tra Sile e Meolo*, in: *La via Annia e le sue infrastrutture*, Atti delle giornate di studio, Roncade (TV) 6-7 novembre 2003, F. Ghedini – M.S. Busana (ed.), (Cornuda 2004) 68-80) 186-193).- The second excavation, conducted at Marteggia, in via Terranuova, was instead able to reveal an orthogonal network of ditches and a rural settlement in the area between the two roads, both coeval with the minor road: E. Pujatti, *Nuovi dati a conferma dei tracciati della via Annia in località Marteggia di Meolo* (Venezia), *Archeologia Veneta* 32, 2009, 121-129; E. Pujatti – F. Rinaldi, *Meolo-Marteggia. La campagna di scavo 2011*, *QuadAVen* 28, 2012, 63-68.- The relevance of this crossroads until Late Antiquity is moreover confirmed by the discovery of a milestone dedicated to Valentinian II, Theodosius and Arcadius probably by some local magistracies: *Carta Archeologica del Veneto*, IV, a cura di L. Capuis – G. Leonardi – S.P. Mattioli – G. Rosada (Modena 1994) 83-84 n. 52.10; P. Basso – J. Bonetto – M. Davanzo – D. Davanzo, *La via Annia tra Altino e Piave*, in: *La tenuta di Ca' Tron. Ambiente e storia nella terra dei dogi*, F. Ghedini – M.S. Busana – A. Bondesan (eds.), (Verona 2002) 137.

²⁹ P. Croce da Villa, *La romanizzazione lungo il tracciato della via Annia tra Altino e Concordia*, in: *Vigilia di romanizzazione. Altino e il Veneto orientale tra II e I sec. a.C.*, Atti del Convegno (Venezia 1997) G. Cresci Marrone – M. Tirelli (eds.), (Roma 1999) 212; L. D'Isep – E. Pettenò, *Di alcuni materiali ceramici da Meolo e Musile di Piave*, *QuadAVen* 21, 2005, 175 (wooden basin in Marteggia, associated with numerous grey ceramic bowls with Venetian inscriptions and Megarean pottery, 3rd to 2nd century BC); *Carta Archeologica del Veneto*, IV, 86, n. 35.1 (possible burials along the Gorgazzo ditch – corresponding to one of the ditches that lined the via Annia – between Bellesine and Cascinelle, late 3rd to 2nd century BC); P. Croce Da Villa, *Musile di Piave. Il santuario*, in: *La protostoria tra Sile e Tagliamento: antiche genti tra Veneto e Friuli*, Mostra archeologica Concordia Sagittaria, Basilica paleocristiana, 14 settembre-10 novembre 1996 – Pordenone, ex Convento di S. Francesco, 23 novembre 1996-98, G. Fogolari (ed.), (Padova 1996) 81-96 (material attributed a votive function comes from a well of a later villa rustica built in the area immediately north of the Via Annia, near the left bank of the Palaeo-Meolo, 4th-1st century BC).

³⁰ These are a *miliare* of Maxentius (AD 306-312) one of Jovian (AD 363-364) and one of Valentinian II, Theodosius and Arcadius (AD 383-392): P. Basso, *I miliari della Venetia romana*, *Archeologia Veneta* 9, 1986, 172-175 nn. 78-79; P. Basso, *Nuovi miliari dalla via Annia*, *QuadAVen* 12, 1996, 153-154).

been documented for the area upstream of the Annia, above all in the 1st and 2nd century AD, when the settlements appear to prefer the ridge and the major river and land routes. As far as the economy is concerned, evidence points to agriculture, viticulture, and the production of bricks.³¹ In this sector, settlements also spread south of the via Annia, up to the Millepertiche trench³².

The data show that after the 2nd century AD the area was almost completely uninhabited, although the road routes, both main and secondary, continued to be a main reference point for a few settlements still frequented, and definitely abandoned in the 4th–5th century AD.³³ (M.S.B.)

The Grassaga-Piavon/Canalat road junction (Opitergium ager)

A second junction along the via Annia can be found in the southern part of Opitergium ager, halfway between Piave and Livenza (Fig. 10).³⁴ Here, the road ran along the edge of the lagoon, at the point in which two ancient branches of the Piave converged, which are now the Piavon-Canalat (coming from Oderzo) and the Grassaga; the consular road crossed the two waterways at two three-arched

³¹ From the preliminary publication of the survey we know that almost all of them were rustic buildings (68) with the co-presence of farmhouses, more numerous (42) and villae (26): P. Croce Da Villa, *La Pianura tra Sile e Piave*, Provincia di Venezia 15, 4/6, 1991, 10 s. An update of the sites can be found in: L. D'Isep – E. Pettenò, *Di alcuni materiali ceramici da Meolo e Musile di Piave*, QuadAven 21, 2005, 172–182. In recent years, evidence has emerged in favor of an intervention of agrarian division set according to an axis N26 E, already proposed in the past but then excluded for a long time: P. Furlanetto, *Il popolamento e le direttrici fluviali nell'area tra Piave e Sile in epoca antica*, in: V. Bassan – M. Meneghel – A. Bondesan (eds.), *Geomorfologia della provincia di Venezia: note illustrative della carta geomorfologica della provincia di Venezia* (Padova 2004) 251–254.

³² *Carta Archeologica del Veneto* IV 83 n. 6; P. Croce Da Villa, *La Pianura tra Sile e Piave*, Provincia di Venezia 15, 4/6, 1991, 14 n. 12; P. Croce Da Villa, *Scali ed infrastrutture commerciali dell'entroterra nel Veneto Orientale*, in: *Strutture Portuali e rotte marittime nell'Adriatico di età romana*, *Antichità Altoadriatiche* 46, 2001, 277–288; P. Furlanetto, *Appendice 2. I siti archeologici della provincia di Venezia*, in: V. Bassan – M. Meneghel – A. Bondesan, *Geomorfologia della provincia di Venezia: note illustrative della carta geomorfologica della provincia di Venezia* (Padova 2004) 449 n. 725.

³³ P. Croce Da Villa, *La Pianura tra Sile e Piave*, Provincia di Venezia 15, 4/6, 1991, 11; M.S. Busana, *Indagini nell'agro orientale di Altino: il popolamento in età romana tra Sile e Piave*, *Atlante Tematico di Topografia Antica* 18, 2008, 27–47. In the territory of Meolo only four settlements survived until Late Antiquity: three along the road to Fossalza, one between the Annia and the Millepertiche ditch, on the bank of the paleo-Meolo. See P. Croce Da Villa, *La Pianura tra Sile e Piave*, Provincia di Venezia 15, 4/6, 1991, 11; L. D'Isep – E. Pettenò, *Di alcuni materiali ceramici da Meolo e Musile di Piave*, QuadAven 21, 2005, 179.

³⁴ M.S. Busana – A. Vacilotto, *Il sistema itinerario nella fascia costiera tra Sile e Tagliamento in età romana. Punti di snodo per la ricostruzione della viabilità secondaria in un'area tra terra e acque*, *Atlante Tematico di Topografia Antica* 31, 2021, 88–91.

bridges, built at Ceggia³⁵ (Fig. 10.2) and Fiumicinetto³⁶ (Fig. 10.1). The investigations carried out between the latter bridge and the convergence produced evidence of bank reinforcements and brick structures, which may be indicative of a landing, confirming the role of the river as waterway.³⁷ The function of this part of the Annia as a “route junction” in a system of both horizontal and vertical connections can also be seen in a series of clear traces of roads visible in the aerial photos and those found in archaeological investigations:

- a *via glareata* coming off the *via Annia*, which ran along the eastern branch of the Piave river towards Oderzo³⁸(Fig. 10.4): a funerary stele dating to the beginning of the 1st century AD has been discovered along this road near Ceggia;³⁹ other settlement and funerary finds, discovered along the ancient branch of the Piavon river, attest the importance of a route to Oderzo at least until the 4th century AD;⁴⁰

³⁵ The Roman bridge over the Piavon, discovered south-east of Ceggia in 1948, had three segmental arches, made of sandstone blocks, which rested on two double-beamed pillars on poles: V. Galliazzo, *I ponti romani. II. Catalogo generale* (Treviso 1995) 222–223.

³⁶ The three-arched Roman bridge was found in the Fiumicinetto area in 1883, but was excavated and surveyed only in 1922: V. Galliazzo, *I ponti romani. II. Catalogo generale* (Treviso 1995) 222–223.

³⁷ *Carta Archeologica del Veneto*, IV, 92 n. 52. 93; P. Croce da Villa, *La romanizzazione lungo il tracciato della via Annia tra Altino e Concordia*, in: *Vigilia di romanizzazione. Altino e il Veneto orientale tra II e I sec. a.C.*, Atti del Convegno (Venezia 1997) G. Cresci Marrone – M. Tirelli (eds.), (Roma 1999) 213.- Pre-Roman ceramics come from the area, although in a backfill context, as well as a particular group of finds pertaining to clay ovens for metallurgical processing, datable to the 3rd to 2nd century BC, connected to a nearby production settlement or perhaps to the construction of the consular road: E. Pettenò – P. Croce Da Villa – V. Gobbo, *Indagini e scoperte lungo la via Annia tra Altino e Iulia Concordia*, in: *La via Annia e le sue infrastrutture*, Atti delle giornate di studio, Roncade (TV) 6–7 novembre 2003, F. Ghedini – M.S. Busana (eds.), (Cornuda 2004) 216–219.

³⁸ E. Bellis, *Strade romane nell’opitergino* (Oderzo 1962) 12 n. 9: medieval documents mention a road as “Alzaia del Piave. The author hypothesizes the existence of two other routes towards the south, one directed to S. Anastasio, at the crossing of the Livenza, although there is no archaeological evidence to date: M.S. Busana, *Oderzo. Forma urbis* (Roma 1996) 95.

³⁹ P. Croce Da Villa, *Stele funeraria romana da Ceggia (VE)*, in: *Studi di archeologia della X Regio in ricordo di Michele Tombolani*, B.M. Scarfi (ed.) (Roma 1994) 339–343. The scholar also leaves open the hypothesis that it is a variant of the *Via Annia*. The inscription recalls the name of the deceased, *Publius Turillius*, *nomen* documented in Altino (CIL V2 8825).

⁴⁰ Among the most significant, the rustic villa investigated in Chiarano, 1st–4th century AD: M.S. Busana, *Architetture rurali nella Venetia romana* (Roma 2002) 280–282 and the two burials discovered in Cessalto (Fondo Buso): a box urn with a funerary stele of the *Silii* (early 1st century AD due to the absence of the *cognomen*) and an inhumation datable to the 4th century AD: M. Tirelli, *Cessalto. Il monumento funerario dei Silii*, *QuadA Ven* 7, 1991, 58–64.- Recent extensive surface survey conducted confirms the presence of sites along the course of the Piavon between the 1st and 4th–5th centuries AD: A. Vacilotto, *Capire i segni antichi della terra per governarla. Il caso incognito dell’agro meridionale di Opitergium*, in:

- an anomaly, shown in the aerial photos, that starts from the bridge in Grassaga and joints a route running parallel to the via Annia, 2.5 km south of the latter (Fig. 11). This route was first identified by Giulio Schmiedt and is still clearly visible, although the chronology and origin of this anomaly remain uncertain⁴¹ (a variant of the via Annia or a section of the consular road abandoned due to environmental problems?);
- a second anomaly coming off the road described above going south, probably towards Cittanova/Heraclia, a site used from the Late Bronze Age (13th – 11th century BC) up until the Byzantine period (7th – 8th century AD), when it was an important trade port (Fig. 11).⁴²

Roma ed il mondo adriatico. Dalla ricerca archeologica alla pianificazione del territorio, Atti del Convegno Internazionale, Macerata 18-20 maggio 2017, R. Perna – R. Carmenati – M. Giuliadori – J. Piccinini (eds.) (Roma 2022) 37-39.

⁴¹ G. Schmidt, *Atlante aerofotografico delle sedi umane in Italia* (Firenze 1963) 23-24, where the scholar attributed the track to a Roman coastal road, along a dune cordon that bordered a marshy area to the south. Other scholars who believe it to be a Roman-era route: E. Pettenò – P. Croce Da Villa – V. Gobbo, *Indagini e scoperte lungo la via Annia tra Altino e Iulia Concordia*, in: *La via Annia e le sue infrastrutture*, Atti delle giornate di studio, Roncade (TV) 6-7 novembre 2003, F. Ghedini – M.S. Busana (eds.), (Cornuda 2004) 200; C. Papisca, *Tra fiumi e paludi. Dal Livenza ad Altino*, in: G. Rosada – M. Frassine – A.R. Ghiotto (eds.) *...viam Anniam influentibus palustribus aquis eververatam...: tradizione, mito, storia e katastrophé di una strada romana* (Treviso: Canova 2010) 62.- According to other scholars, it would have been a road laid in the 7th century AD, at the time of the Byzantine military reorganisation of the area: see W. Dorigo, *Venezie sepolte nella terra del Piave. Duemila anni fa il dolce e il salso* (Roma 1994) 107-112.

⁴² G. Schmidt, *Atlante aerofotografico delle sedi umane in Italia* (Firenze 1963) 23-24.- For the site, see cfr. H. Blake – A. Bondesan – V. Favero – E. Finzi – S. Savatori, *Cittanova-Heraclia* 1987: risultati preliminari delle indagini geomorfologiche e paleogeografiche, *QuadAVen* 4, 1988, 116-117; S. Salvatori (ed.) *Ricerche archeologiche a Cittanova (Eraclia)* 1987-1988, *QuadAVen* 5, 1989, 112-113.- Recent investigations have confirmed the human presence only on the dosive area in an alternating lagoon and marsh environment: F. Rinaldi – S. Gardin – P. Marcassa – N. Martinelli – O. Pignatelli, *Cittanova-Heraclia*. Notizie preliminari sulle indagini archeologiche 2013, *Notizie di Archeologia del Veneto* 2013, 91-98.- In the past, numerous funerary monuments and architectural elements have been found in the Cittanova area, traditionally considered to be of Opitergine origin (*Carta Archeologia del Veneto* 1994, 93-95 nn. 99-101) and two milestones, respectively of Valentinian I, Valens and Gratian (AD 364-375) and of Valentinian II, Theodosius and Arcadius (AD 383-392) originally placed along the Annia: P. Basso, *I miliari della Venetia romana*, *Archeologia Veneta* 9, 1986, 175-178 nn.80. 81.

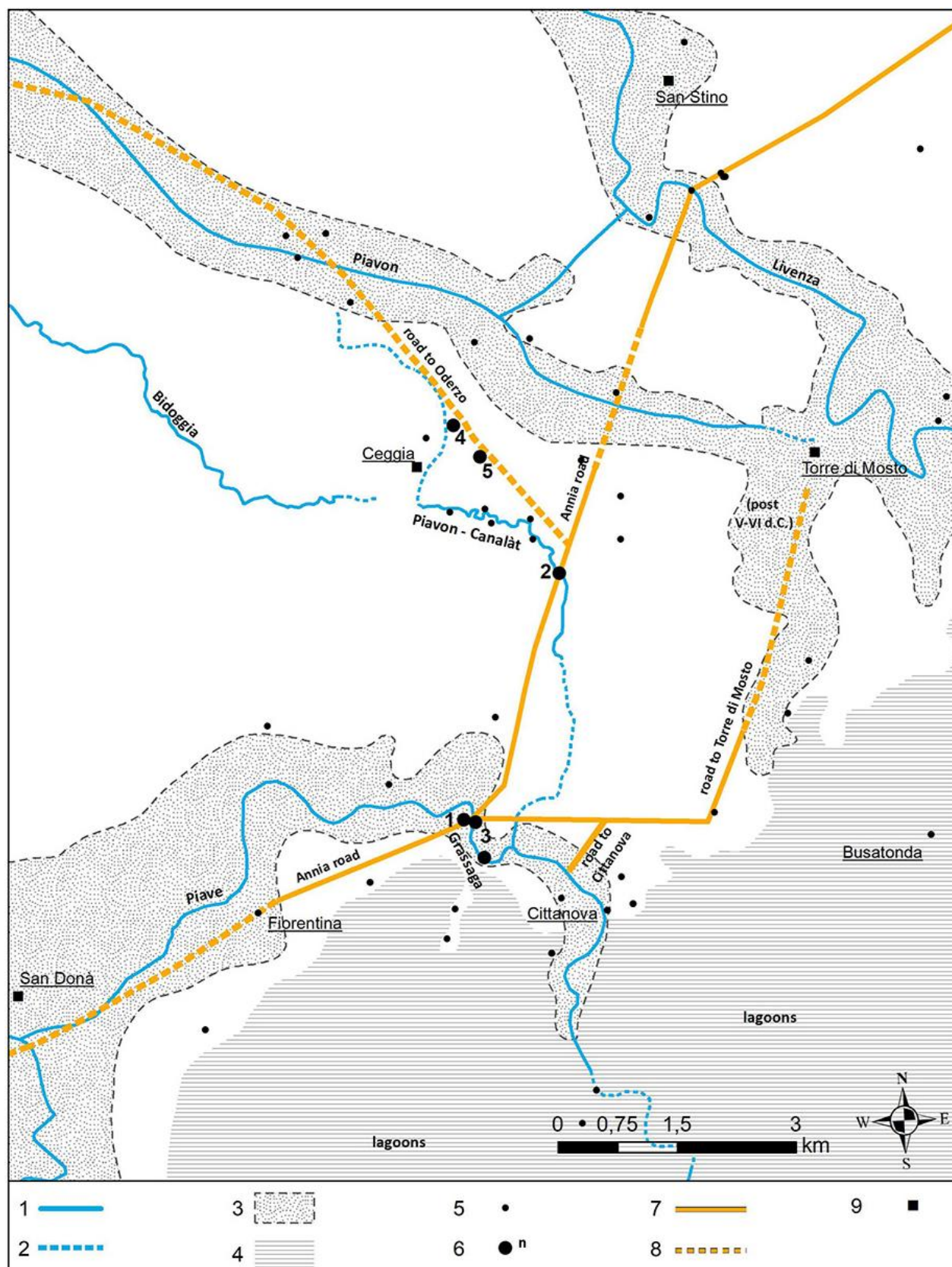


Fig. 10. San Donà di Piave/Ceggia/Torre di Mosto (VE): the Grassaga-Piavon/Canalat road junction in roman age. 1) hydrography, certain branches; 2) hydrography, presumed branches; 3) river ridges; 4) lagoons; 5) finds from the Roman era; 6) sites of interest, some of which are mentioned in the text; 7) certain viability; 8) assumed viability; 9) modern locations (after M.S. Busana – A. Vacilotto, *Il sistema itinerario nella fascia costiera tra Sile e Tagliamento in età romana* 88, modified by the authors).



Fig. 11. San Donà di Piave, Torre di Mosto (VE): aerial photo from 1983 (Regione Veneto 1983 ve-tv, str. 9, ftg. 3780) with clear traces of the Via Annia, near the bridge over the Grassaga (ancient branch of the Piave), and the roads to Torre di Mosto and Cittanova, marked by white arrows (after M.S. Busana – A. Vacilotto, *Il sistema itinerario nella fascia costiera tra Sile e Tagliamento in età romana*, 90).

The junction between Grassaga and Piavon-Canálat shows the unquestionable logistic importance to the convergence of various land-based and river routes, serving not only the settlements in the area, which were placed along the land and river routes, but also the centre of Oderzo, to which these roads guaranteed a quick and direct access to the lagoon and the sea, with its port of *Portus Lipientiae*, as mentioned by Pliny the Elder. (M.S.B.)

The Vado road junction (*Iulia Concordia ager*)

A third important road junction can be found a few kilometres east of *Iulia Concordia*, at Vado (Fig. 12).⁴³ Its name is significant as it indicates the presence of a *vadum* = ford: here, in Roman times, the *via Annia* crossed the main branch of the *Tagliamento*, the *Tiliaventum Maius*, as mentioned by Pliny the Elder alongside the harbour of the same name. The river continued its course southwards, towards *Lugugnana* and *Marina*, reaching the lagoon at *Valle Vecchia*.⁴⁴ The importance of the river, probably from the Augustan age if not earlier, is

⁴³ M.S. Busana – A. Vacilotto, *Il sistema itinerario nella fascia costiera tra Sile e Tagliamento in età romana. Punti di snodo per la ricostruzione della viabilità secondaria in un'area tra terra e acque*, *Atlante Tematico di Topografia Antica* 31, 2021, 91–93.

⁴⁴ Sul percorso del *Tiliaventum Maius*, see A. Fontana, *Tra Tagliamento e Livenza*, in: V. Bassan – M. Meneghel – A. Bondesan (eds.), *Geomorfologia della provincia di Venezia: note illustrative della carta geomorfologica della provincia di Venezia* (Padova 2004) 206.

attested by the discovery of numerous productive settlements dating from the 1st-2nd century AD between Tomba di Fossalta, just north of Vado, and the mouth of Valle Vecchia, including the villa excavated at Marina di Lugugnana, with warehouses overlooking the river (Fig. 12.2), and the Roman villa at Brussa, with a “docking jetty and foundations of navalia” (Fig. 12.1).⁴⁵ The secondary branch of the Tiliaventum Minus, also mentioned by Pliny, is more uncertain, but its mouth has been assumed at Bevazzana, close to another Roman villa currently being excavated in Bibione by the Universities of Regensburg and Padova (Fig. 12.7).⁴⁶

It is unsurprising that near to Vado, where the presence of a port station has been assumed,⁴⁷ a northbound road came away from the via Annia, which ran along the left bank of the Tiliaventum Maius, to then deviate from the river. Although already known in the 19th century, the road has been investigated on several occasions in recent times, defining its path, function and technical characteristics (Figg. 12.3-5 e 13).⁴⁸ This was a via glareata, 4.5 m to 6 m wide, with lateral ditches; where there were lowlands, like around Morsano, the route was

⁴⁵ For an overview of the numerous sites brought to light, see Mappa Archeologica. Gli insediamenti d'epoca romana nell'agro Concordiese, a cura di Soprintendenza Archeologica per il Veneto e Gruppo Archeologico del Veneto Orientale (Torre di Mosto 1985); P. Croce Da Villa (ed.), La villa romana di Marina di Lugugnana (Padova 1987) 11–16. 23–68; Mappa Archeologica. Ricerche di Topografia Archeologia nel Veneto Orientale, a cura di Gruppo Archeologico del Veneto Orientale (Gruaro 2002).

⁴⁶ On the possible routes of *Tiliaventum Minus* in Roman times, see A. Fontana, Tra Tagliamento e Livenza, in: V. Bassan, M. Meneghel – A. Bondesan (eds.), Geomorfologia della provincia di Venezia: note illustrative della carta geomorfologica della provincia di Venezia (Padova 2004) 206–207. For the Roman Villa of Bibione, see D. Steuernagel – A. Vacilotto – L. Cigaina – F. Pandolfo – V. Gobbo, Il progetto multidisciplinare La villa romana di Mutteron dei Frati e il suo contesto. Primi risultati dalle indagini di scavo, Archeologia Veneta 47, 2024, 80–97; D. Steuernagel – A. Vacilotto – L. Cigaina – F. Pandolfo – V. Gobbo, Bibione (Veneto) Mutteron dei Frati: Excavations of the roman villa 2022–2024 (in press) with preceding bibliography.

⁴⁷ M. Annibaleto, Il paesaggio suburbano di *Iulia Concordia* (Rubano 2010) 148.

⁴⁸ In Teglio Veneto, Portelle area, the roadbed is composed of at least three levels: an underlying one of gravel and brick fragments, overlaid by a layer of pebbles and a final one of fine gravel: V. Gobbo, Le strade romane nel territorio di Teglio e Cintello, in: Tra l'aquila e il leone. Uomini, luoghi ed eventi delle comunità di Teglio e Cintello (Latisana 1997) 129–131. – Based on the excavations carried out in Morsano, the gravel road rests on an embankment flanked by ditches: M. Frassine, A. Fontana – A. Bezzi, Viabilità romana nel territorio di Morsano al Tagliamento (PN): la direttrice Concordia-Norico dal telerilevamento allo scavo archeologico, Journal of Ancient Topography 23, 2013, 113–125). The investigation carried out in Alvisopoli also revealed a road made up of different levels of gravel and small pebbles: M. Bressan – G. De Angelis, L'agro di Concordia Sagittaria in età romana. Nuovi dati sulle strade per il Norico, la via Annia e la centuriazione, in: Percorsi nel passato. Miscellanea di studi per i 35 anni del G.R.A.V.O. e i 25 anni della Fondazione Colluto, A. Vigoni (ed.) (Portogruaro 2018) 100–102.

built on an embankment 12 m wide and 40 cm thick, flanked by wider ditches. At Morsano, the road joined the route towards the metal-bearing regions of Noricum coming from Concordia: many milestones were found along the road.

The distribution of settlements shows the role played by the ridge of

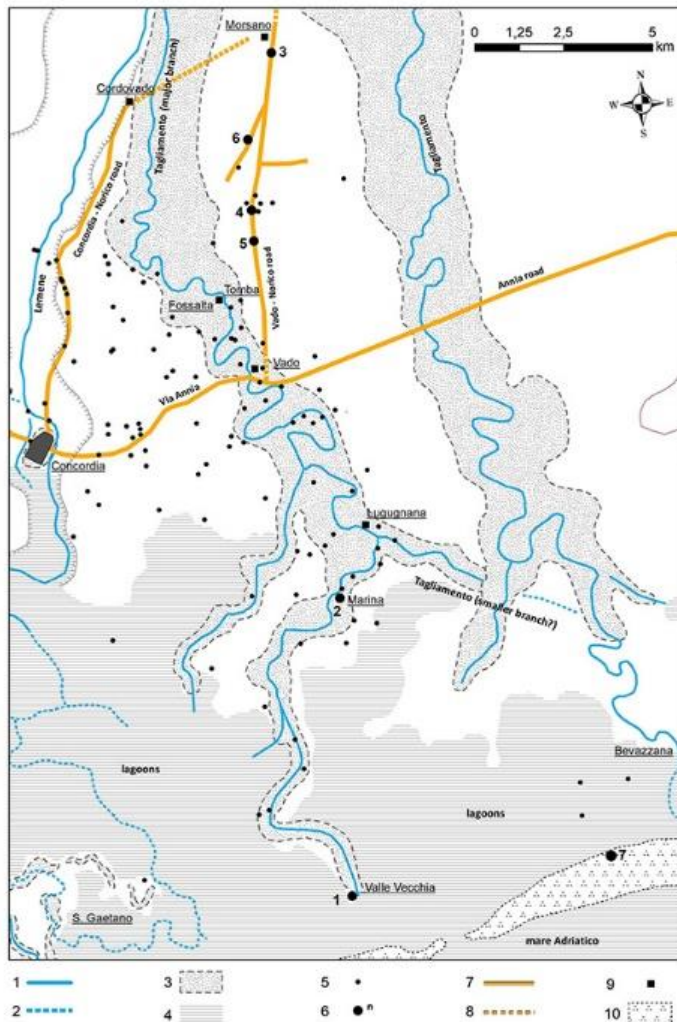


Fig. 12. Fossalta di Portogruaro (VE): the Vado road junction. 1) hydrography, certain branches; 2) hydrography, presumed branches; 3) river ridges; 4) lagoons; 5) finds from the Roman era; 6) sites of interest, some of which are mentioned in the text; 7) certain viability; 8) assumed viability; 9) modern locations; 10) lidos (after M.S. Busana – A. Vacilotto, *Il Sistema itinerario nella fascia costiera tra Sile e Tagliamento in età romana*, 91, modified by the authors).



Fig. 13. Aerial photo of Vado-Norico road (by Gruppo Archeologico del Veneto Orientale).

Tiliaventum Maius between the lagoons and Vado, while further north the sites gravitate on the Vado-Noricum road, and not on the nearby Tiliaventum Maius:

for example, the villa in the locality of I Pars (Fig. 12.6).⁴⁹ This could suggest a preference for the land-based route rather than the river starting at the road junction of Vado. (A.V.)

Economic activities in a sample area

The recent systematic re-examination of materials collected from the sites by the East Veneto Archeological Group (ager of *Iulia Concordia*) allowed us to identify the economic activities they were engaged in:⁵⁰ agriculture, indicated by mill-stones and sickles, but also by the remains of a *torcularium*;⁵¹ sheep farming and wool production, indicated by the widespread presence of loom weights;⁵² fishing, indicated by hooks and net weights.⁵³ One particularly interesting aspect, especially analysing the issue of road system, is the presence of numerous stone and lead weights for scales. A significant number of sites, as many as 11, produced at least 20 *pondera* and *aequipondia*, compatible with the use of beam balance and small-medium sized scales, and with measurements of products in small quantities, suggesting that the settlements had a commercial role. Almost all the contexts, interpreted mainly as large villas, are located at the road junction of Vado and along the branches of the Tiliaventum Maius river to the south of the via Annia. It is therefore probable that commercial transactions were carried out at landing places connected to the settlements themselves, where small boats could stop to go up the river after having unloaded their cargoes at the coastal ports. The study of materials carried out in villas and farms revealed an

⁴⁹ For the villa in the locality I Pars, see Mappa Archeologica. Gli insediamenti d'epoca romana nell'agro Concordiese (Torre di Mosto 1985) 48 n. 7.- For other sites gravitating on the road from Vado to Norico, see: Mappa Archeologica. Ricerche di Topografia Archeologia nel Veneto Orientale, a cura di Gruppo Archeologico del Veneto Orientale (Gruaro 2002) 74-76 nn. 42-46; p. 115 nn. 159-160.

⁵⁰ M.S. Busana – F. Pandolfo – A. Vacilotto, Vivere tra terra e acque: i paesaggi lungo la via Annia (agro di Iulia Concordia) *Atlante di Topografia Antica* 35, 2025, 237-260.

⁵¹ For the cultivation of vines and the consequent wine production, the most significant context is certainly the aforementioned villa of Marina di Lugugnana: here the investigations have brought to light a *torcularium* and a *lacus*, inside which grape seeds were found: P. Croce Da Villa (ed.), *La villa romana di Marina di Lugugnana* (Padova 1987) 26. 62).

⁵² The loom weights confirm that the textile activity was carried out in a domestic context, but also suggest the possibility that sheep farming was practiced within the estates, to satisfy the dairy needs as well as the wool needs: see M.S. Busana, Textile economy in the Veneto Region (North-Eastern Italy): A Textile Tools Oriented Spatial Approach, in *Reframing the Roman Economy. New Perspectives on Habitual Economic Practices*, eds. D. Van Limbergen – A. Hoffelinck – D. Taelman, *Palgrave Studies in Ancient Economies* (Cham 2022) 25-54.

⁵³ The distribution of fishing tools indicates that even the agro-pastoral economy of settlements not directly connected to the wetlands was integrated with fishing, suggesting targeted forms of occasional mobility.

intense occupation in the early imperial age and a long continuity of use (until the 5th – 6th century AD) for many settlements along the Tiliaventum to the south of the via Annia.⁵⁴ There is no evidence from Vado to the north after the 2nd century AD, indicating that this road lost its importance compared to the road towards Noricum ending at Concordia: this could be due to the strategic role in weapons production (in particular, the *sagittae*) of Concordia in the late antiquity.⁵⁵

The importance of the road junction of Vado, in which primary routes (via Annia) and secondary ones (the road from Vado towards Noricum) met a large river course (Tiliaventum Maius) connecting to the lagoons and the sea routes, is evident. (F.P.)

Conclusions

In conclusion, the systematic analysis of the land-based and waterway route systems centred on the via Annia between Altino and Concordia show articulated planning, which was attentive to both the nature of the places and to the effective management of traffic flows.

With respect to the urban network, the road system around Altinum was necessary to control and direct the circulation of goods and raw materials towards production sites and periurban logistic junctions, some of which also had documented structures for docks and storage. At Iulia Concordia, instead, no network of land-based routes used for traffic distribution has been found around the urban centre, maybe due to the proximity of the Tiliaventum Maius; however, the city was surrounded and crossed by canals connected to a suburban trade area related to the Lemene/Reatinum river and the sea ports, and had a strategic role in the main road system.

When it comes to the three route junctions identified in the territory along the via Annia, the integrated route systems (land-based and waterway routes) seem to address specific and differentiated needs. The Altinum system was independent, serving the rural settlements, and was linked, directly and indirectly,

⁵⁴ M.S. Busana – F. Pandolfo – A. Vacilotto, *Vivere tra terra e acque: i paesaggi lungo la via Annia (agro di Iulia Concordia)* Atlante di Topografia Antica 35, 2025, 237–260.

⁵⁵ G. Cresci Marrone, *Nascita e sviluppo di Concordia colonia civium romanorum*, in: *Concordia. Tremila anni di storia*, P. Croce Da Villa – E. De Filippo Balestrazzi (eds.), (Padova 2001) 121–123; G. Cresci Marrone, *Lo stanziamento militare, la fabbrica di frecce e la comunità di commercianti orientali nella Concordia tardoantica*, in: *Concordia. Tremila anni di storia*, P. Croce Da Villa e E. De Filippo Balestrazzi (eds.), (Padova 2001) 245–249.

to the nearby urban centers (Altino and Oderzo) and the main route system. The Opitergium system gave the centre of Oderzo a direct connection to the sea and lagoon, entirely within the ager pertinent to the *municipium*. The Iulia Concordia system constituted a truly international trading traffic road, between the sea and trans-Alpine regions, completely independent of nearby city of *Iulia Concordia*.

The framework presented, although entirely provisional and limited by documentary gaps, calls for the initiation of targeted topographical research in the future. This research must necessarily adopt an interdisciplinary approach, taking into account the environmental changes that the territory has undergone since ancient times, as well as historical and legal studies, in order to better shed light on the nature and hierarchy of the road networks. (M.S.B., A.V.)

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