

## JULIUS CAESAR AND THE LARCH: BURNING QUESTIONS AT VITRUVIUS' *DE ARCHITECTURA* 2.9.15–16\*

### ABSTRACT

*This article argues that Vitruvius' description of Julius Caesar's 'discovery' of the larch (larix, De arch. 2.9.15–16), previously read as a journalistic account of the author's first-hand experience in Caesar's military entourage, should instead be interpreted as a highly crafted morality tale illustrating human progress thwarted. In the passage, the use of larch wood to construct a defensive tower renders the Alpine fortress at Larignum impregnable to assault by fire; only the fear aroused by siege provokes the inhabitants to surrender to Caesar and his troops (2.9.15–16). Nevertheless, the outcome of this discovery is not a complete victory, because the logistics of importing this remarkable timber to Rome are as yet insurmountable (2.9.16). Once the siege of Larignum is recognized as a diptych to Vitruvius' narrative of the origins of civilization, in which fire and wood likewise play essential roles (2.1.1–7), and compared with similar aitia and source histories across the De architectura, it becomes clear that Larignum and its resources emblemize obstacles to a Vitruvian conception of imperial success, in which the city of Rome catalogues and indexes architectural knowledge amassed throughout the empire.*

**Keywords:** larch; Larignum; *larix*; Vitruvius; *De architectura*; Julius Caesar; *aition*; empire

Nestled within the second book of the *De architectura* lies an anecdote regularly invoked in studies of Julius Caesar's conquests in the Eastern Alps and Vitruvius' relationship to the famous general. Caesar, so Vitruvius tells us, laid siege on, and ultimately conquered, a fortified stronghold (*castellum*) made of larch wood at a place called Larignum (2.9.15–16). Vitruvius' narrative, the lone source for any such battle, has been presumed the product of first-hand knowledge, a page from the author's own war journal.<sup>1</sup> After all, the most prominent autobiographical details that Vitruvius puts forward in the *De architectura* are that he was 'known' (*notus*, likely a euphemism

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<sup>1</sup> Cf. B. Baldwin, 'The non-architectural side of Vitruvius', *Prudentia* 21 (1989), 4–12, at 9: '[Vitruvius] may have been at the siege of Alpine Larignum'; I.D. Rowland, T.N. Howe (edd.), *Vitruvius: Ten Books on Architecture* (Cambridge, 1999), 188: 'This is the only source for the siege of Larignum, either in the Gallic Wars or the Civil Wars; it is not mentioned by Caesar'; L. Callebat and P. Gros (edd.), *Vitruve, De l'architecture, Livre 2* (Paris, 2003), 172: 'Ce genre de notation est un indice quasi certain d'une observation personnelle'; M. Courrént, *De architecti scientia: Idée de nature et théorie de l'art dans le De architectura de Vitruve* (Caen, 2011), 169–70: 'il l'a personnellement vécu puisqu'il accompagnait César comme ingénieur militaire et participait avant tout aux sièges. Il a retenu les plus petits détails d'un événement qui l'a profondément marqué'; P. Fleury, 'Vitruve et le métier d'ingénieur', *CEA* 48 (2011), 7–34, at 28: 'il se pourrait que Vitruve ait assisté lui-même à l'événement'.

conveying the notion of service) to Julius Caesar and that, after the dictator's demise, he parlayed this connection into a further appointment overseeing *ballistae*, *scorpiones* and other machines of war.<sup>2</sup> The presumption that Vitruvius' description of Larignum reflects historical fact has had substantial repercussions: the 'Battle of Larignum' is frequently cited in discussions of Caesar's military career, dated to 59–58 B.C.E. and even pinpointed on maps of ancient Italy;<sup>3</sup> it likewise forms a key plot point in reconstructions of Vitruvius' life and *œuvre*.<sup>4</sup>

Nevertheless, obstructions to the interpretation of the siege of Larignum through a historical lens abound. A place called Larignum is otherwise unattested. Julius Caesar himself never mentions this location or event in his own writings. Larignum, as Vitruvius describes it, is clearly in the Eastern Alps, a place where Caesar rarely campaigned, rather than in the Western Alps, which the general dominated.<sup>5</sup> We may never know for certain whether or not a place called Larignum ever existed, whether a Roman siege of Larignum really happened, or whether Vitruvius was a witness or participant in these supposed events.

<sup>2</sup> In the preface to Book 1, Vitruvius boasts of having been known to his dedicatee Augustus' father (*parenti tuo ... fueram notus*): *itaque cum M. Aurelio et P. Minidio et Gn. Cornelio ad apparationem ballistarum et scorpionum reliquorumque tormentorum refectionem fui praesto et cum eis comoda accepi*, 'Therefore, along with M. Aurelius and P. Minidius and Gn. Cornelius, I was put in charge of the construction and repair of *ballistae* and *scorpiones* and other engines of war and, along with my colleagues, received advancement' (1 *praef.* 2). On the possibility that Vitruvius was a scribe with expertise in military engineering (*decurialis scriba armamentarius*), see N. Purcell, 'The *apparitores*: a study in social mobility', *PBSR* 51 (1983), 125–73, at 156; P. Gros, 'Vitruvio e il suo tempo', in P. Gros (ed.), *Vitruvio, De Architectura*, 2 vols., with translation and commentary by A. Corso and E. Romano (Turin, 1997), 1.ix–lxxvii, at x–xxvii; M.F. Nichols, 'Social status and the authorial personae of Horace and Vitruvius', in L. Houghton and M. Wyke (edd.), *Perceptions of Horace: A Roman Poet and his Readers* (Cambridge, 2009), 109–22. On Vitruvius' relationship to Julius Caesar, see P. Ruffell and J. Soubiran, 'Vitruve ou Mamurra?', *Pallas* 11 (1962), 123–79; A. König, 'From architect to imperator: Vitruvius and his addressee in the *De Architectura*', in L.C. Taub and A. Doody (edd.), *Authorial Voices in Greco-Roman Technical Writing* (Trier, 2009), 31–52; S. Cuomo, 'Skills and virtues in Vitruvius' Book 10', in M. Formisano and H. Böhme (edd.), *War in Words: Transformations of War from Antiquity to Clausewitz* (Berlin, 2011), 309–32; M.F. Nichols, *Author and Audience in Vitruvius' De architectura* (Cambridge, 2017), 180–94.

<sup>3</sup> J. Šašel, 'Castellum Larignum (Vitr. 2.9,15)', *Historia* 30 (1981), 254–6, at 256 surmises that the anecdote most likely took place in 59–58 B.C.E., but certainly took place between 59 and 51 B.C.E., and suggests that we read Vitruvius' account as valuable testimony to Roman dominance in the Eastern Alps during this period; C. Ando, 'The army and the urban elite: a competition for power', in P. Erdkamp (ed.), *A Companion to the Roman Army* (Malden and Oxford, 2007), 359–78, at 359–60 presents the story as historical fact; F. Santangelo, 'Caesar's aims in northeast Italy', *PBSR* 84 (2016), 101–29, at 103 locates Larignum near the modern-day Italian/Slovenian border on a map of Northeast Italy and Dalmatia in the Late Republican period.

<sup>4</sup> As J.N. Adams, *An Anthology of Informal Latin, 200 BC to 900 AD* (Cambridge, 2016), 183–6 has demonstrated, Vitruvius' Larignum narrative faintly echoes the language and style of Julius Caesar's *commentarii*, raising the possibility that Vitruvius might have read the general's own report of this battle. M. Courrént, *Vitruvius auctor. L'œuvre littéraire de Vitruve et sa réception dans la littérature* (Bordeaux, 2019), 243–53, on the strength of such resonances, has proposed that certain technical passages in Caesar's *commentarii*, long attributed to an engineer on the general's staff, were in fact written by Vitruvius himself. The author of the *De architectura*, who dedicated the last book of his treatise (Book 10) to siege engines, was undoubtedly familiar with Roman military writing. On the tendentiousness of *commentarii*, despite their apparent objectivity, see C.S. Kraus, 'Caesar's account of the Battle of Massilia (BC 1.34–2.22): some historiographical and narratological approaches', in J. Marincola (ed.), *A Companion to Greek and Roman Historiography* (Malden and Oxford, 2007), 371–8.

<sup>5</sup> For full discussion, see Šašel (n. 3), including a possible identification with the *Larix* in the *Itinerarium Antonini*.

There is clear evidence, however, that Vitruvius crafted this story as a morality tale bearing out the vision of society and human progress first outlined in his account of the primitive hut and the dawn of civilization, told earlier in the same book (2.1.1–7). These two stories, one of the first creation of architecture, which Vitruvius portrays as set in motion by fire (2.1.1–7), and another of architecture's miraculous survival, despite fire being used to attack it (2.9.15–16), bookend the volume on materials.<sup>6</sup> This formal structure repeats in miniature the architecture of the ten-book treatise as a whole: the *De architectura* itself opens with a preface proclaiming the author's relationship to the divine Caesar (1 *praef.* 2) and closes with a description of Marseille under siege, recalling Caesar's recent victory there (10.16.11–12). The battle for Marseille, utterly unmoored to any historical events otherwise attested, ends the *De architectura* on a cliffhanger that serves Vitruvius' purpose of communicating the centrality of architectural knowledge to the expansion of empire.<sup>7</sup> Likewise, analysis of *De arch.* 2.1.1–7 and 2.9.15–16 side by side reveals that the battle for Larignum, so often read as off-hand reportage, is instead a symbolically loaded parable: Caesar's fumbling for control of Larignum and its resources reveals obstacles to the Roman imperial project as yet unresolved. If even the divine Julius Caesar, whose shade Vitruvius locates in 'the home of the immortal gods' (*in sedibus immortalitatis*, 1 *praef.* 2), was unequal to the task of bringing home the larch in triumph (2.9.16), then architectural knowledge and know-how remain areas of glaring deficiency for the Roman state, and the urgency of the *De architectura* is enhanced.

The story of Larignum forms part of Vitruvius' account of the physical characteristics and architectural applications of various types of wood, and specifically his entry on the larch (*larix*), the fire-resistant properties of which allow the Larignans temporarily to resist Rome (2.9.14–16). Native to the Alpine arc stretching from northern Italy into the Carpathian Mountains of central and eastern Europe, the larch is a deciduous conifer with a straight trunk that can reach 40 to 50 metres tall. Its dense, hard wood does not crack, resists attack by boring insects, is almost rot-proof and is more flame-resistant than many other types of wood. Both the selection and the articulation of the story of Larignum reflect the stated aim (*propositum*) of Vitruvius' second book: to reveal how the natural origins and properties of building materials set the terms for their use.<sup>8</sup> Vitruvius' remarks on trees betray a heavy debt to earlier botanical authors, particularly Theophrastus.<sup>9</sup> The larch, however, is absent from Greek scientific literature; the *De architectura* is the earliest text to mention this tree.<sup>10</sup>

Vitruvius underscores the novelty of larch timber construction by portraying Caesar as awestruck (*admirans*) at the sight of the tower unaltered by flames and by describing the battle of Larignum as the *inuentio* through which the larch is first discovered and understood (*quemadmodum sit inuenta*, 2.9.15). Through this language, larch wood

<sup>6</sup> The larch forms almost the last topic in *De architectura* Book 2, appended only by a very short discussion of highland and lowland fir (2.10).

<sup>7</sup> One may contrast Vitruvius' siege of Massilia with the sequence of events in 49 B.C.E. as narrated by Caes. *BCiv.* 2.1–16 or Luc. 3.298–762. Vitruvius does not name Caesar or the Romans as the invading force at 10.16.11–12, and so his reference point may not be this battle, or any historical battle, at all. See König (n. 2), 49–50 and Cuomo (n. 2) for a full discussion of Vitruvius' narrative of the siege of Massilia, as well as Kraus (n. 4) on Caesar's account.

<sup>8</sup> See *De arch.* 2.1.9 *quemadmodum et quid ita sint*, 'how and what they are'.

<sup>9</sup> Callebat and Gros (n. 1), 171–5; Courrént (n. 1), 169–71.

<sup>10</sup> Callebat and Gros (n. 1), 171 comment that the originality of the passage demonstrates that it was beyond doubt the most important to Vitruvius within the sections on wood.

becomes a vehicle for rearticulating the notion, first outlined in the *De architectura*'s account of the primitive hut and the rise of civilization (2.1.1–7), that humans learn and progress through encounters with the natural world. Yet, while *De arch.* 2.1.1–7 sets up the expectation that the inability of fire to burn a specific type of wood at Larignum will be a discovery leading to an architectural advance, Vitruvius hastens to reveal that this has not been the case, because the larch cannot be shipped to Rome (2.9.16). This concluding detail, too often swept under the rug in deference to Caesar's military success at Larignum, is essential to the function of the story as a morality tale. For Vitruvius, the city of Rome is not just the centre of the world by virtue of geography (6.1.11), it is also, through his descriptions of its plundered objects and borrowed forms, a vivid illustration of the broader dynamics of Roman cultural appropriation.<sup>11</sup> Rome's architectural development (or lack thereof) reveals the empire's progress towards realizing the promise of conquest as an activity on the periphery that enriches the centre. Contextualizing the anecdote of the larch, introduced as if it were an *aition* (account of origins) or source history of a material now in common use, within the larger aims and conventions of the *De architectura* as a whole clarifies Vitruvius' understanding of the relationship between architecture and empire: as long as the former remains poorly understood, the latter can only be incomplete.

## I. THE EMERGENCE OF ARCHITECTURE AS AN INTERPRETATIVE FRAME

After its preface, *De architectura* Book 2 begins with an account of the origins of human culture, in which Vitruvius highlights the contributions of both wood and fire. Such narratives, varying in their structures and plot points, are a topos of Greek and Roman poetry and prose literature, wherein they both convey philosophical precepts and leanings and argue for the centrality of the author's subject matter to the advancement of humankind.<sup>12</sup> While in Cicero's *De inuentione* 1.2, for example, a voice (forecasting the creation of rhetoric) inspires humans to congregate, in the *De architectura* it is fire (forecasting the creation of architecture) that performs the defining role. With this intervention, Vitruvius intimates that his second book, dedicated to the materials of architecture, can also be read as a study of the four elements (earth, air, fire and water), the balances of which determine the properties and best uses of construction materials.<sup>13</sup>

The discovery of fire, mythologically attributed to Prometheus and central to ancient ideas of what it meant to be human, is a common theme in myths of origin.<sup>14</sup> Vitruvius portrays fire, that proverbial mortal enemy of architectural materials, as in fact crucial to

<sup>11</sup> See Nichols (n. 2 [2017]), 23–41.

<sup>12</sup> Cf. Diod. Sic. 1.8; Cic. *Inu. rhet.* 1.2; Lucr. 5.1011–47. See J. Rykwert, *On Adam's House in Paradise: The Idea of the Primitive Hut in Architectural History* (New York, 1972), 111–12; E. Romano, *La capanna e il tempio: Vitruvio o dell'architettura* (Palermo, 1987), 118–22; T. Habinek, 'Art and *oikeiosis* in Book 2 of Vitruvius *De architectura*', *Arethusa* 49 (2016), 299–316.

<sup>13</sup> Directly after his account of origins in 2.1, Vitruvius situates Heraclitus of Ephesus' claim that fire is the *principium* within broader philosophical debates regarding the principal element (2.2).

<sup>14</sup> See C. Dougherty, *Prometheus* (London, 2005), 18–21 and 46–64. On fire as an element distinguishing Vitruvius' account from Lucretius', see G. Hedreen, 'Introduction: the material world and its limits', in G. Hedreen (ed.), *Material World: The Intersection of Art, Science, and Nature in Ancient Literature and its Renaissance Reception* (Leiden, 2021), 1–18, at 5–7, with references.

the genesis of architecture itself.<sup>15</sup> More specifically, the trajectory Vitruvius sketches from the bestial to the cultivated centres on an interaction between fire and wood (2.1.1):

homines uetere more ut ferae in siluis et speluncis et nemoribus nascebantur ciboque agresti uescendo uitam exigebant. interea quodam in loco ab tempestatibus et uentis densae crebritatibus arbores agitatae et inter se terentes ramos ignem excitauerunt et, ea flamma uehementi perterriti, qui circa eum locum fuerunt sunt fugati. postea re quieta propius accedentes cum animaduertissent commoditatem esse magnam corporibus ad ignis teporem

Human beings, by ancient custom, were born wild in forests and caves and groves, and passed their life consuming rustic fodder. Meanwhile, somewhere, trees, densely crowded, tossed by storms and winds and rubbing their branches together kindled a fire and, terrified by the raging flame, those who were in the vicinity were chased away. Afterwards, when the conflagration quieted down, approaching more closely to the warmth of the fire, they perceived that there was a great advantage for their bodies.<sup>16</sup>

After conversing with one another, Vitruvius' early humans began to make all manner of shelters, some of leaves, some of wattle and daub (2.1.2). Thereafter, they acquired increasingly sophisticated building techniques, and 'then from the construction of buildings having advanced to other crafts and disciplines, they conveyed themselves from a wild and rustic life to a domesticated civilization' (*tunc uero ex fabricationibus aedificiorum gradatim progressi ad ceteras artes et disciplinas, e fera agrestique uita ad mansuetam perduxerunt humanitatem*, 2.1.6). The narrative ends on a note of optimism both for human civilization and for architecture, which is celebrated for its efficiency and geographic diversity (2.1.4–7).

The agency afforded to trees in Vitruvius' origin narrative well accords with the prominence of timber among the natural resources surveyed in *De architectura* Book 2 and with the consistent argument across the treatise that architecture should be a logical extension of nature. Thus, in *De architectura* Book 5, when Vitruvius explains the proper tapering of tiers of columns in a forum, he suggests that (5.1.3):

columnae superiores quarta parte minores quam inferiores sunt constituendae, propterea quod, oneri ferendo, quae sunt inferiora firmiora debent esse quam superiora. non minus quod etiam nascentium oportet imitari naturam, ut in arboribus teretibus, abiete, cupresso, pinu, e quibus nulla non crassior est ab radicibus ... ergo si natura nascentium ita postulat, recte est constitutum et altitudinibus et crassitudinibus superiora inferiorum fieri contractiora

The upper columns are to be made less than the lower ones by a quarter, for the reason that the lower columns ought to be stronger than the upper ones for bearing the load. None the less, one also should imitate the nature of growing things, as in rounded trees, the silver fir, the cypress, the pine, all of which are thicker at the roots ... Therefore, since the nature of growing plants requires it thus, it is well organized if the upper are more abbreviated than the lower, both in height and in thickness.

If architecture, as Vitruvius so consistently argues, should be a logical extension of nature, then trees are our teachers. Trees inspire the forms of architecture as well as constitute their materiality.

<sup>15</sup> Fire has such prominence in the *De architectura* as the element associated with reason that the text can even be read as promoting fire as the principal element. See M. Courr nt, "'Non est mirandum": Vitruve et la r sistance   l' tonnement', in O. Bianchi, P. Mudry and O. Th venaz (edd.), *Mirabilia: Conceptions et repr sentations de l'extraordinaire dans le monde antique: actes du colloque international, Lausanne, 20–22 mars 2003* (Berlin, 2004), 265–78, at 270–1.

<sup>16</sup> The Bud  text of Vitruvius, Callebat and Gros (n. 1), and my own translations will appear throughout.

Trees and the timber they yield are essential to the origin myth at *De arch.* 2.1.1–7. For Vitruvius, the discovery of fire, configured as trees bursting into flame, is a first step towards primitive architecture, which begins with ‘stakes set upright and sticks inserted in between’ (*furcis erectis et uirgulis interpositis*, 2.1.3) and eventually takes the form of more complex dwellings combining tree products with an ever-increasing range of other materials (2.1.3–7). Nevertheless, as the ten books of the *De architectura* unfold, deviance from architectural rationality is consistently measured by lack of adherence to the principles specifically governing timber construction. Vitruvius cautions those building in the Doric order, for example, that mutules and dentils must be positioned within stone entablature according to the logic that would apply if the construction were wood (4.2.5–6).

With this in mind, it is clear that *De arch.* 2.1.1–7 defines terms for the engagement of humans with nature as they set about conceiving of, and implementing, architecture. The natural world offers models for human *ars*, and trees are chief among them. Reading *De arch.* 2.1 and 2.9.15–16 together allows us to see that the earlier narrative, of humankind’s first attempts at building, poses a normative model of human progress: natural events occur, and through both the chance involved in those events and humans’ ability to learn from them, arts and technology emerge and develop. It is against this background that a reader of the second volume of the *De architectura* could interpret the parable of Julius Caesar and the larch as a narrative of chance, learning and innovation that does not come to full fruition.

## II. THE LARCH AS OBJECT OF CONQUEST

The story of Larignum enhances Vitruvius’ claim to contemporary relevance by demonstrating the applicability of the broad moral lessons about humans and nature encapsulated at 2.1.1–7 to the narrower concept of empire. From the outset of his comments on the larch, Vitruvius configures this tree in relation to imperial conquest. While other types of wood are exemplified and explained by reference to geography—cedar, for example, is found in Crete, Africa and Syria (2.9.13)—only in his description of the larch does Vitruvius explicitly and repeatedly invoke the Roman empire as a geopolitical entity. The first thing Vitruvius mentions about the larch is that it is *notus* to the *municipia* on the banks of the Po River and the shores of the Adriatic Sea alone (2.9.14).<sup>17</sup> With this statement, Vitruvius introduces a complex power dynamic: though the inhabitants of these *municipia* are self-evidently Roman subjects by the time the *princeps* has risen to power and become the treatise’s dedicatee, their proprietary knowledge is incompletely absorbed (being *notus* only to themselves) and thus evades, in a very real sense, Roman control.

Resistance to Rome expands and becomes more complex in the subsequent narrative, through which Vitruvius, with some irony, presents the larch as a recent discovery, while also characterizing the tree as recognized and energetically exploited by a local population. Indeed, it is their very knowledge of what a resource they have in larch

<sup>17</sup> *De arch.* 2.9.14 *larix uero, qui non est notus nisi is municipalibus qui sunt circa ripam fluminis Padi et litora maris Hadriani*, ‘The larch, which is only known in the districts on the banks of the Po and the shores of the Adriatic’.

wood that emboldens this community, trusting in their natural fortification (*naturali munitione confisi*), to resist Caesar's demand for supplies (2.9.15):

ea autem materies quemadmodum sit inuenta, est causa cognoscere. diuus Caesar cum exercitum habuisset circa Alpes imperauissetque municipiis praestare commeatus, ibique esset castellum munitum, quod uocaretur Larignum, tunc, qui in eo fuerunt, naturali munitione confisi, noluerunt imperio parere. itaque imperator copias iussit admoueri.

Moreover, in what manner this timber [the larch] was discovered, it is possible to learn. After the divine Caesar had his army near the Alps, and had commanded the municipalities to furnish supplies, he found there a fortified stronghold which was called Larignum. But the occupants trusted in the natural fortification and refused obedience. The commander therefore ordered his forces to be brought up.

Already known (*notus*) in its native region (2.9.14), the larch must come to the attention of Rome itself, in the person of Caesar, in order to be 'discovered' (*inuenta*, 2.9.15).<sup>18</sup> Nevertheless, this encounter will not yield the projected result of full appropriation of the larch by the man who discovered it. Instead, the definitive ring of *quemadmodum sit inuenta* is only the first in a series of misdirections through which successful outcomes for the Roman state are forecasted, only to be foiled.

With an ephrastic gesture, Vitruvius elaborates upon the physical manifestation of the larch *castellum* (2.9.15):

erat autem ante eius castelli portam turris ex hac materia alternis trabibus transuersis uti pyra inter se composita alte, uti posset de summo sudibus et lapidibus accedentes repellere.

Now before the gate of the stronghold there was a tower of this wood with alternate cross-beams bound together like a funeral pyre, and built high, so that from the top it was possible to repel those approaching with stakes and stones.

The Larignan fortress is similar in structure to Colchian huts described in *De arch.* 2.1.4. Vitruvius recounts that, 'because of the abundance of forests' (*propter siluarum abundantiam*, 2.1.4) in Pontus, the dimensions of these huts are determined by the heights of the trees themselves, which are laid out whole, end-to-end, to create a rectilinear footprint over which alternating beams are stacked. The phrase *alternis trabibus* ('with alternate cross-beams') unites the descriptions of the Colchian and the Larignan structures (2.1.4, 2.9.15),<sup>19</sup> encouraging the interpretation of these two passages as a diptych. Moreover, through the simile of the pyre at 2.9.15, Caesar's own destructive desires are projected onto the form of the fortification itself. Depictions of funeral pyres in the visual arts confirm this configuration of alternating cross-beams, which allows for better airflow and thus faster burning.<sup>20</sup> The resemblance of the defensive tower at Larignum to a funeral pyre, however, will prove ironic when

<sup>18</sup> See Courrént (n. 1), 170 for an account of how this anecdote conforms to Vitruvius' theory of *inuentio* as a two-stage process in which humans first randomly encounter new phenomena, and then theorize new understandings based on these phenomena through a process of reflection.

<sup>19</sup> Callebat and Gros (n. 1), 173.

<sup>20</sup> Cf. e.g. the funeral pyre depicted on a Meleager sarcophagus from the Capitoline Museums: C. Daremberg and E. Saglio, *Dictionnaire des Antiquités grecques et romaines* (Graz, 1963), fig. 3363. Though *pyra* is a Greek word, D. Noy, 'Building a Roman funeral pyre', *Antichthon* 34 (2000), 30–45, at 36 suggests that in some parts of Rome's growing empire 'it may have been thought of as a sign of allegiance to Rome'. Julius Caesar's own funeral pyre in the Forum went against the laws of the Twelve Tables.

the fort does not burn, a paradox that reflects Vitruvius' broader interest in the difference between being and seeming (often articulated through notions of what is *certus*).<sup>21</sup>

The remainder of the battle narrative outlines the process of trial and error through which Caesar finally succeeds in overwhelming the fortress (2.9.15–16):

tunc uero cum animaduersum est alia eos tela praeter sudes non habere neque posse longius a muro propter pondus iaculari, imperatum est fasciculos ex uirgis alligatos et faces ardentes ad eam munitionem accedentes mittere. itaque celeriter milites congegesserunt. posteaquam flamma circa illam materiam uirgas comprehendisset, ad caelum sublata effecit opinionem uti uideretur iam tota moles concidisse. cum autem ea per se extincta esset et re queta turris intacta apparuisset, admirans Caesar iussit extra telorum missionem eos circumuallari.

But when it was perceived that they [the Larignans] had no other weapons but stakes, and that because of their weight they could not be thrown far from the wall, the order was given to approach, and to throw bundles of twigs and burning torches against the fort. And the soldiers quickly heaped them up. After the flames had seized the twigs around that timber, they rose skyward and made them think that the whole mass had now collapsed. But when the flames had burnt themselves out and things were quiet, and the tower had appeared again intact, Caesar, awestruck, ordered the town to be surrounded by a rampart outside the range of their weapons.

Caesar's awestruck reaction calls to mind the sacredness of trees, and thus the recurrence of arboreal portents, in Roman religion and thought.<sup>22</sup> Larch, in particular, was a wood that would go on to have magical connotations in the Roman world,<sup>23</sup> and these ideas are prefigured in Vitruvius' description of the *castellum*: the tower that appears to burn but remains standing has a portentous quality, like the tongues of fire that play around the heads of Iulus in Virgil (*Aen.* 2.681–704) and Servius Tullius in Livy (1.39), or, in the Judaeo-Christian tradition, the burning bush. Nevertheless, this engagement with the numinous potential of inflammable wood is thoroughly buttressed by scientific explanation that extinguishes the potential for mysticism. Larch wood, as Vitruvius has already explained, has an abundance of water and earth and very little fire and air in its composition; lack of air results in fewer pores in the wood, so fire cannot penetrate it (2.9.14).

At Larignum, Caesar is compelled to a display of his famous *clementia* not by compassion for the people of the settlement, but rather by his own experience of wonder (*admirans*, 2.9.16) at the flame resistance of larch wood.<sup>24</sup> Across the *De architectura*,

<sup>21</sup> See *De arch.* 4.2.5–6 and 7.5.1–4, in which what is *certus* is grounded in reality rather than in appearance. Cf. also *De arch.* 6.2.2, in which Vitruvius considers the broken appearance of an oar half-submerged in water. Most recently, P. Guyer, *A Philosopher Looks at Architecture* (Cambridge, 2021), 36 contrasts Vitruvius' empiricism with the rationalism imposed on his text by subsequent interpreters, particularly Alberti.

<sup>22</sup> See especially A. Hunt, *Reviving Roman Religion: Sacred Trees in the Roman World* (Cambridge, 2016).

<sup>23</sup> In Lucan's catalogue of the snakes of Africa, burning larch wards off these venomous creatures (*Luc.* 9.920). R. Meiggs, *Trees and Timber in the Ancient Mediterranean World* (Oxford, 1982), 249, overlooking the literary texture of the passage, which exults in paradox and tortured erudition, chastises Lucan as 'doubly unfortunate in choosing a wood that could not possibly be found in Africa, and whose most endearing quality to the architect was its resistance to fire'. Pliny the Elder suggests that the enchantress Circe burns larch in Homer's *Odyssey* (*HN* 13.100; cf. *Hom. Od.* 5.60, where only cedar and citron wood are mentioned). Elsewhere, Pliny closely echoes Vitruvius in praising the larch for repelling fire, as well as damp and rot (*HN* 16.43–6). On the fire resistance of larch wood in Palladius and Isidore of Seville, see Šašel (n. 3), 255.

<sup>24</sup> Ando (n. 3), 360, in an analysis of this passage as revelatory of the behaviour of Roman army, notes that 'it was the power granted by knowledge and natural resources—a power not military, but



as Mireille Courrént has shown, such wonderment or admiration often forms the prelude to an attainment of deeper knowledge.<sup>25</sup> The Larignans, in turn, are persuaded to surrender not by physical force; instead, they are emotionally moved to fear (*timore coacti*) by the sight of their own encirclement by a rampart (2.9.16). Just as Caesar's trajectory towards military victory is assured by his calm admiration for novelty, so the Larignans' defeat is set in motion by their panic (2.9.16):

itaque timore coacti oppidani cum se dedidissent, quaesitum unde essent ea ligna quae ab igni non laederentur. tunc ei demonstauerunt eas arbores quarum in his locis maximae sunt copiae.

And so when the townspeople were compelled by fear to surrender, the enquiry was made where the timbers came from which were not harmed by the fire. Then they showed him the trees, of which there is an abundant supply in these places.

As this précis of the conflict's conclusion makes clear, the end result of the siege of Larignum is the acquisition of knowledge: the *castellum* is presumably left intact, traded for a tour of the larch forest.

This battle narrative, which begins with the image of the pyre, is utterly devoid of imagery beyond two essential components: wood (*materies/materia, trabes, sudes, fasciculi, uirgae, faces*) and fire (*flamma, incendii, ardentes*). While the possibility that the inhabitants of Larignum may wield stone projectiles (*lapides*) colours our first impression of the fortress, in the very next sentence, Vitruvius hastens to specify that the locals had no stones, but only stakes (*sudes*, 2.9.15). The people of Larignum, moreover, not only protect themselves with wooden stakes, huddled in a wooden fort, but they also are attacked by further wooden weaponry. Considered as a whole, this narrative, set in a place named for its wood, of a people trapped in a wooden construction, embroiled in a battle of twigs and torches against stakes, seems less a record of a real location and conflict than a parable crafted to foster contemplation of the properties and uses of timber in a section of the *De architectura* dedicated to that very topic.

The story of Larignum becomes more self-consciously Vitruvius' own transfer of information about the larch from author to audience when the encounter between Caesar and Larignum dovetails into an explanation of the place name as a toponym from *larix*: *et ideo id castellum Larignum, item materies 'larigna' est appellata* ('And for that reason the fort is called Larignum, and likewise the timber is called *larigna*', 2.9.16).<sup>26</sup> Daniel Millette notes that 'the town's name thus becomes a mnemonic for the tree just as the battle is for its fire-resistance quality.'<sup>27</sup> In fact, the

strategic and economic ... which even at the outset enabled Larignum to negotiate its fate with Caesar and cheat his army of itself as spoil'.

<sup>25</sup> On *admirans* as conveying a learned (as opposed to ignorant) wonderment at the natural world in the *De architectura*, see Courrént (n. 15), 266–8. J. Oksanish, *Vitruvian Man: Rome under Construction* (Oxford, 2019), 162 n. 60 expands upon the parallel between Caesar's astonishment at the larch and Alexander's wonder at Dinocrates' arrival earlier in the same book (*De arch.* 2 *praef.* 2). As early as Herodotus, we find historiographical precedent for the idea that experiences of the wondrous could act as intellectual stimuli and mnemonic aids. See M. Gerolemou, 'Wonderful memories in Herodotus' *Histories*', in M. Gerolemou (ed.), *Recognizing Miracles in Antiquity and Beyond* (Berlin and Boston, 2018), 133–51.

<sup>26</sup> Cf. *TLL* 7.2.977.24–55. *larix* is often presumed to be a Gallic loanword.

<sup>27</sup> D. Millette, 'On illustrating the oldest architectural book: sketches and mnemonics in Vitruvius' *De architectura libri decem*', *Journal of the Society for the Study of Architecture in Canada* 24.4 (1999), 18–27, at 23.

memory of fire (*ignis*) and its surprising relationship to larch wood is illustrated by the etymologizing place name of Larignum as well, which comingles larch and fire.<sup>28</sup>

Left unanswered is the question: called (*appellata*, 2.9.16) by whom? Was this place given its name after the surrender, the mechanics of which are left utterly to the reader's imagination, or had it already been called Larignum before Caesar ever arrived? The sequence of thought seems almost to imply the former: that its very subjugation was the beginning of 'Larignum'. By thus constructing the story of Larignum as an *aition*, Vitruvius sets in motion an interpretative mode of reading, in which the descriptions of the place, the material and the event coalesce around unifying concepts in order to impart symbolic meaning.

### III. CAESAR'S LARCHES AS *AITION* AND SOURCE HISTORY

A reader's impression of the failure of the siege of Larignum to generate true progress is heightened by numerous features marking Vitruvius' account of the larch as disjunctive with the text surrounding it, in a manner characteristic of aetiological anecdotes across the ten books. First, there is the throat-clearing that inaugurates the tale: 'moreover, in what manner this timber was discovered, it is possible to learn' (*quemadmodum sit inuenta, est causa cognoscere*, 2.9.15). We may compare this exordium to another anecdote from *De architectura* Book 10, in which the shepherd Pixodarus stumbles upon a hitherto-unknown source of marble near Ephesus: 'how [these stones] were discovered, I will tell' (*quemadmodum sint inuentae exponam*, 10.2.15). Such phrasing, as Elisa Romano has emphasized, echoes the language with which historiographical authors introduce *aitia*, and indeed the Ephesian story fits this mould: while the citizens of Ephesus are investigating stone quarries, Pixodarus, pasturing his flocks nearby, observes a ram's horn chip a glimmering white flake off a rock (*crusta candidissimo colore*).<sup>29</sup> In haste, the shepherd races down the hillside to convey the news, thereby saving the Ephesians the trouble of importing it. For this feat, Pixodarus is awarded the honorific title 'Evangelus'.

In the stories told of both Ephesus and Larignum, a discovery yields a natural resource of enormous potential value for architecture: in Ephesus, marble had already been sorely needed for a temple to Diana (10.2.15); the wood discovered at Larignum is swiftly identified as maximally useful in building (*maximae haberentur in aedificiis utilitates*, 2.9.16). Yet Vitruvius concludes his account of the larch, unlike the story of Ephesian marble, on a sour note, with an addendum that begins: 'and if there were capacity for bringing this timber to the City [of Rome], there would be great advantage in building' (*cuius materies si esset facultas adportationibus ad urbem, maximae haberentur in aedificiis utilitates*, 2.9.16). The Romans, in other words, have failed to import this special timber to their capital, where it would have a profound effect. With this statement, Vitruvius stops short the narrative momentum through which the *aition* of the larch seemed poised to become a source history of the wood that saved Rome.

<sup>28</sup> Callebat and Gros (n. 1), 173. On etymological wordplay in the *De architectura*, see E. Romano, 'Vitruvio fra storia e antiquaria', *CEA* 48 (2011), 177–99, as well as Oksanish (n. 25), 77–85 on Vitruvius' Caryatids (1.1.5). This etymologizing impulse develops from the materialist bent of the *De architectura*, on which see J. Weiner, 'Transcending Lucretius: Vitruvius, atomism and the rhetoric of monumental permanence', *Helios* 43 (2016), 133–61.

<sup>29</sup> Romano (n. 28), 183–4. See also Romano (n. 12), 94–5.

In the context of the *De architectura*, this is a stunning move. Across the ten books, accounts of the origins of architectural materials or forms, often set in far-flung places, commonly conclude with their eventual motion towards, and integration into, the city of Rome, as if by centripetal force. So, for example, in Book 7 Vitruvius traces the movement of the luxurious pigment vermilion from mines in Ephesus and Spain to workshops on the Quirinal hill (7.9.4):

quae autem in Ephesiorum metallis fuerunt officinae, nunc traiectae sunt ideo Romam, quod id genus uenae postea est inuentum Hispaniae regionibus, <e> quibus metallis glebae portantur et per publicanos Romae curantur. eae autem officinae sunt inter aedem Florae et Quirini.

The workshops which were in the Ephesian mines have now been transferred to Rome, because this kind of vein has been discovered in parts of Spain, from which mines ore is transported to Rome and dealt with by the contractors for public works. The workshops are between the temples of Flora and Quirinus.

And, in Book 5, Vitruvius claims that the general Mummius seized acoustic vessels (*echea*) from the theatre at Corinth and dedicated them in the Temple of Luna at Rome (5.5.8):

etiamque auctorem habemus Lucium Mummius, qui, diruto theatro Corinthiorum, ea aenea Romam deportauit et de manubiis ad aedem Lunae dedicauit.

We have as our originator Lucius Mummius who, when the Corinthians' theatre was destroyed, transported these resonators to Rome and dedicated them, from the general's share of the plunder, at the Temple of Luna.

While the vessels did not have an acoustic purpose in the temple, and indeed acknowledgement of the lack of *echea* in theatres at Rome provides the very occasion for their mention, Mummius was nevertheless, for Vitruvius, their *auctor*, since he at least brought them to the City (5.5.8). Vitruvius even extends the narrative of the marble discovered at Ephesus into the reader's own time (*hodie*), and into the body of the Roman empire, by noting that [Roman] magistrates continue to visit the site monthly to make sacrifices to Evangelus' memory (10.2.15).

Just so, after Caesar 'discovers' a tree that was already known and used to great effect by a local community, Vitruvius describes the conveyance of its timber down the Po River to Ravenna, which allows the bounty of one subjugated territory to furnish other *coloniae* and *municipia*, including Fano, Pisaurum and Ancona (2.9.16):

haec autem per Padum Rauennam deportatur; in colonia Fanestri, Pisauri, Anconae reliquisque quae sunt in ea regione municipiis praebetur.

This is transported down the Po to Ravenna. It is supplied at the colonies of Fano, at Pisaurum, Ancona and the other municipalities that are in that region.

However, this time there is a catch: the transportation network required to bring this treasure from the periphery to enrich the centre is absent—as yet. Vitruvius explains (2.9.16):

cuius materies si esset facultas adportationibus ad urbem, maximae haberentur in aedificiis utilitates, et si non in omne, certe tabulae in subgrundiis circum insulas si essent ex ea conlocatae, ab traiectionibus incendiorum aedificia periculo liberarentur, quod eae neque flammam nec carbonem possunt recipere nec facere per se.

And if there were capacity for bringing this timber to the City [of Rome], there would be great advantage in building; and if such wood were used, not perhaps generally but if the boards in the eaves round the apartment blocks were made of it, these buildings would be freed from the dangers of fires spreading, since these [planks] can neither catch fire nor char nor ignite on their own.

We may note in passing that, a century later, Pliny the Elder would celebrate Tiberius' importation of a massive beam of larch for use on a bridge over the Naumachia, without mentioning any previous issues with sourcing this wood for projects in Rome.<sup>30</sup> In the *De architectura*, Vitruvius twists a historical reality (larch is, arguably, underused in the City) into a statement of questionable validity (Rome does not yet have the *facultas* to import larch as it should) that serves as a vehicle for criticism of Rome and for the encouragement of course correction. Judging by Vitruvius' comment that the wood has made its way to Fano, some readers have seized upon the idea that the basilica at Fano, which Vitruvius claims to have constructed in *De architectura* Book 5, might have been fortified with larch wood.<sup>31</sup> But Vitruvius says nothing of this.

Larch, for Vitruvius, is an index of the unfinished statues of the city of Rome and thus, Vitruvius implies, of the project of empire.<sup>32</sup> The *utilitas* of Roman architecture, we learn, is compromised by the vulnerability to fire of the timber commonly available. Rome, however, lacks not the desire for fire-resistant larch wood but the ability or skill to transport it. With this ending to the tale, the larch is specifically identified as incompletely conquered, a work in progress. This resolution is all the more marked when considered in the context of the representation of generals and other military heroes in the *De architectura*, who are celebrated for their ability to complete the transfer of the cultural, intellectual and financial riches of the periphery back to the city.<sup>33</sup> Meanwhile, larch wood is not merely underexploited in the city of Rome (like Mummius' bronze sounding vessels lying unused in a temple), it cannot even get there.

#### IV. CONCLUSION

In the sixteenth century, François Rabelais, turning to Vitruvius as a font of literary inspiration, well recognized the symbolic meaning of the larch and accordingly concluded the third book (*Tiers Livre*) in his series of comic novels centred on Gargantua and Pantagruel with a digest of this passage from the *De architectura*. This third book ends in a send-up of ancient Roman compendia of *arcana*, including

<sup>30</sup> Pliny the Elder claims that this tree was larger than any previously seen in Rome (*HN* 16.190). Meiggs (n. 23), 248–9 notes that its slowness to burn and its durability to the elements would have made the larch useful in the staging of mock naval battles. The poor survival of ancient organic materials in Italy and the difficulty in distinguishing larch from spruce (*picea*) under the microscope are two factors that impede our understanding of how widely larch wood was used in the city of Rome, but see R. Veal, 'The politics and economics of ancient forests: timber and fuel as levers of Greco-Roman control', in P. Deron (ed.), *Économie et inégalité: ressources, échanges et pouvoir dans l'Antiquité classique* (Geneva, 2017), 317–57 for an overview of the evidence for the diffusion of various species of timber, including larch.

<sup>31</sup> Courrént (n. 1), 171 argues that Vitruvius mentions Fano for the purpose of intimating that the author himself used larch at that location: 'Son implication personnelle dans la diffusion du mélèze comme matériau de construction ne fait pas de doute.'

<sup>32</sup> On the trees on Trajan's Column as signifiers of Rome's triumph over the Dacians, see A. Fox, 'Trajanic trees: the Dacian forest on Trajan's Column', *PBSR* 87 (2019), 47–69.

<sup>33</sup> In addition to Mummius' *echea* at *De arch.* 5.5.8, see also Varro and Murena's importation of painted panels from Sparta at *De arch.* 2.8.9, with Nichols (n. 2 [2017]), 36–40.

Vitruvius' *De architectura* and Pliny the Elder's *Naturalis historia*, with an encomium to a fantastical plant, Pantagruelion. As François Rigolot has shown, Pantagruelion is roughly analogous in its symbolic and magical significance to the laurel in ancient Greek and Roman thought.<sup>34</sup> Rabelais, however, concludes his gushing praise for Pantagruelion with the larch instead of the laurel. After a narrative of Caesar's conquest of Larignum that tracks Vitruvius' Latin closely, Rabelais concludes:<sup>35</sup>

the Larignans surrendered on terms. And from their account Caesar learned of the admirable nature of this wood, which of itself makes neither fire, flame, or charcoal. And in this respect, it would deserve to be set on the same level as real Pantagruelion—and the more so because Pantagrueu would that of this be made all the doors, gates, windows, gutters, coping and wainscoting of Thélème; likewise he covered with it the sterns, prows, galleys, hatches, gangways and forecastles of his great carracks, ships, galleys, brigantines, light galleys and other vessels of his arsenal at Thalasse—were it not that larix, in a great furnace of fire coming from other kinds of wood, is finally marred and destroyed, as are stones in a lime kiln: asbestine Pantagrueu is renewed and cleaned by this rather than marred or altered. Therefore,

Sabaeans, Arabs, Indians, refrain  
 From praising incense, myrrh and ebony so.  
 Come see the goodly things of this domain,  
 And from our herb take seed back when you go;  
 Then, if within your lands this gift can grow,  
 Give thanks to heaven by the million,  
 Rejoicing that this reign in France can show  
 The coming of Pantagrueu.

End of the Third Book of the heroic  
 deeds and sayings of the  
 good Pantagrueu.

For Rabelais, the larch, as Caesar's failure, offers a compelling index of Pantagrueu's success. Passing over in silence Vitruvius' anticlimactic conclusion to the tale (and correcting Vitruvius' erroneous claim that larch is not just fire-resistant but also unable to be burned), Rabelais instead asserts Pantagrueu's victory in harvesting so much larch that it covers just about every surface imaginable. Analysing the story of Caesar and the larch at last as a parable rather than a dry accounting of facts, it becomes clear that Rabelais was a knowing reader of Vitruvius, who understood the story of Larignum as a cautionary tale of progress thwarted, and thus an ideal foil for the configuration of Pantagrueu as a successful (if parodic) hero.

During the past two centuries, scholars have cast increasingly jaundiced eyes over the 'factual' information conveyed by Vitruvius, including both his statements on architectural norms and the (pseudo-)historical narratives, often set in the Hellenistic East, that litter his text.<sup>36</sup> Vitruvius' aggressive literary shaping of the siege of Larignum, if it has any seed of historical basis whatsoever, reveals that the author did not need the imposition of geographic or temporal distance in order to privilege his

<sup>34</sup> F. Rigolot, 'Rabelais' laurel for glory: a further study of the "Pantagrueuion"', *RenQ* 42 (1989), 60–77.

<sup>35</sup> The English translation is D.M. Frame, *The Complete Works of Rabelais* (Berkeley and Los Angeles, 1991), 411–12.

<sup>36</sup> On Vitruvius' perversion of facts in more remote historical narratives, see, for example, R.M. Berthold, 'A historical fiction in Vitruvius', *CPh* 73 (1978), 129–34 on Artemisia at *De arch.* 2.8.14–15, and Romano (n. 28), on various examples.

own narrative concerns over adherence to historical accuracy. Just as larch does indeed burn and Larignum probably never existed, so too it seems implausible that the Romans, as adept as they were at transporting onerous materials over very great distances, could not import larch timber from Northern Italy to Latium in bulk, if they so wished.

Vitruvius' account of Julius Caesar's 'discovery' of the nonflammability of larch wood, previously read as a journalistic account of Vitruvius' first-hand experience in Caesar's military entourage, should instead be interpreted as a morality tale revealing the unfinished development of the Roman empire. The narrative of the origins of building told earlier in the same book creates an internal frame for interpreting the siege of Larignum and its consequences. A reader of *De architectura* Book 2 is thereby prompted to measure the progress of the Roman empire against the promise imputed by that evolutionary model. Through a close reading of Vitruvius' prose, a seemingly straightforward description of building materials and techniques develops into a symbolically rich parable about conquest, imperialism and the limits of the Roman world.

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