

Fortresses Roman, Muslim and Crusader

Si la Syrie est facile à attaquer, elle est difficile à conquérir. Son sol est si âpre et si montueux, qu'une petite armée pourrait s'y défendre longtemps contre une plus grande et y réduire la guerre à des affaires de postes. En Mésopotamie et en Egypte, une bataille gagnée donne tout le pays, au lieu qu'en Syrie une victoire ne peut donner d'autre avantage que d'occuper une position plus avancée, et d'aller d'une vallée dans une autre.^[1] [1829]

This chapter divides naturally into three sections according to the periods at which travellers came across and took an interest in fortifications. We have already reviewed a variety of port and harbour fortifications in Chapter Four, which travellers would meet as they arrived by ship in Syria, or travelled up or down the coast. Here we deal first with land castles both Muslim and Western of the Crusader centuries, between 1099 and 1291,¹ plus continuing forts such as Baalbek, but not with the history of the Crusades, for which there are plentiful sources.² It is pointless to try completely to divide Muslim from Christian fortresses, since the same structures (including the famous Krak des Chevaliers) were often occupied in succession by each side, and built improvements as required,³ probably with each side learning from the other,⁴ and even perhaps

1 Faucherre 2004 includes treatment of the main forts, plus papers on construction techniques and cultural exchange; Eydoux 1982 *passim*. Kennedy 1994, 1–10: Prologue to the study of Crusader castles, including a sketch of the history of their study, including De Vogüé and Rey. Nicolle 2004 & 2005, for authoritative guides, well-illustrated with photos, reconstructions and plans, to several of the best known fortresses, the first volume 1097–1192, the second 1192–1302. They include a short section on the fate of the fortifications, and another on “Visiting the fortifications today,” with long lists of the sites.

2 Cahen 1940, 1–32: the Latin sources of northern Syrian history for the Crusades; and *ibid.* 33–93 for the Arabic sources.

3 Kennedy 1994, 63: Many of the Crusader castles in Tripoli and Antioch were redevelopments of existing structures, whereas, with very few exceptions, the castles of the Kingdom of Jerusalem were new foundations.

4 France 2006, 294: “a simplification to suppose that [the First Crusade] pitted a sophisticated military architecture against a society capable only of producing crude work. The general cultural superiority of Islam did not mean that its political authorities had invested in military architecture for cities, and castles were relatively rare” – this changed by end of

using each others' masons. We then examine the faux-fortresses, which were often more like palaces, and traditionally called "desert castles," "which is rather a misnomer since many of these structures are neither castles nor located in the desert."⁵ Finally, we turn to actual Roman and Byzantine forts (in some cases models for the faux-fortresses) which most intrepid travellers came across later in the 19th century as they braved the Hauran south of Bosra, or crossed the Jordan to face once more the marauding Bedouin. Some fortresses survived with a complement of soldiers; many were treated as secure villages.

Western travellers might be interested in fortresses because they saw so many back home, but also because by the 19th century the positive and romantic vision of the Crusades in Walter Scott and Chateaubriand had overtaken earlier doubt, as had the scholarly editions of Jean-François Michaud's 1822 *Histoire des Croisades* and his 1829 *Bibliothèque des Croisades*. Already in 1806 the Académie Française had set a prize competition asking for a reassessment of the Crusades in light of French Revolution, so that "For the academicians, the Crusades were just another – yet very important – phase in the development of European culture."⁶ However, attention to these often magnificent relicts of the Crusades was disappointingly slight, the more so since the "Western" castles were ranged down the coastal towns or on the hills above, and were both massive and perfectly visible. Masyaf, girded with romance as the Assassins' headquarters in Syria, was only one of many neglected by Westerners, and Newbold charts similar disregard for Beaufort on the part of Buckingham, Robinson and Smith.^[2]

As we shall see, Rey was to devote attention to them, and Deschamps was to publish on several of them.⁷ But, famously, it was Lawrence of Greater Syria (in his earlier configuration) who first wrote about them at length in English, in an undergraduate thesis for his Oxford degree, and visiting many of them on foot, with only a Mauser for company.

By definition, most fortresses were built on prominent hills, and generally on the same site century after century because it offered the best strategic location. Most were built on top of rock outcrops on hills, and cut their blocks from the necessary fosse. This was the case at Kerak, where the fosse provided "a most convenient and inexhaustible quarry, thus doubly increasing the strength of the place."^[3] And at Saône (Qalaat Saladin) the northern fosse (which might

12thC. Michaudel 2006: development of Islamic military architecture during the Ayyubid and Mamluk reconquests of Syria.

5 Cobb 2010, 246.

6 Ellenblum 2007, 1–39: National discourse and the study of the Crusades. Quote: 12.

7 Deschamps 1934, 1939 & 1973.

have been part-Byzantine, part-Crusader) included a 28-metre-high needle to support a drawbridge, which was conceivably left by the masons to underline just how much material had been cut away for the building or refurbishment of the fortress. This was a common practice in ancient Rome, to be seen (for example) in the great protruding bosses on parts of the Aurelian Walls, which were decidedly not left there as lifting aids.

Because of the vast scale of any construction, materials for fortresses were necessarily local, but occasionally stone was imported for decorative features; and in 1286 c.72 tons came from Venice to Acre,⁸ conceivably for fortresses, and because such quantities were easier to move by sea than overland (and, in any case, ships needed ballast). In some cases, structures with a different use because fortresses, using the older materials on site. At Bethgibelin, for example (not to be confused with Ibelin), the refectory tables were fashioned from marble column shafts cut lengthways, and set on stone supports with the flat side up.⁹ The whole question of spolia, entitled “*Chasteaus abatus est demi refez*,” was the subject of a conference in 2008.¹⁰

Building and Rebuilding “Crusader” Fortresses

Prominent Crusader fortresses are Saone, which was a small Byzantine fort in 1119, and had the donjon added in 1132; Margat, largely 12thC and 13thC; Krak des Chevaliers, mostly 12C & 13C, much of it Muslim work from 1271ff when it fell to Baybars; Athlit, built 1217ff; and Caesarea Maritima, built in the mid-13thC. These were built or extended to protect territories they had won, and to assure sea access from the West.¹¹ Hence the Crusaders converted several seaboard towns for these purposes,¹² since all their fortresses were on the sea or within easy reach of it, except for Aleppo and Kerak; while Muslim forts built to oppose them were inland from Hama and Homs to Baalbek and Damascus. Saladin’s campaigns left only Krak des Chevaliers, Margat, Tortosa, Tripoli and

8 Boas 2010, 36.

9 Boas 2010, 131.

10 Bernard et al 2008, passim.

11 France 1999, 91: “they reflected the proprietary pattern of the kingdom and the way in which it developed piecemeal, rather than anything else. Some castles were established for strategic reasons.”

12 Piana 2008: accounts of the Crusader towns of Acre (242–251), Ascalon (263–273, with column-ties in the towers), Sidon (367–383, with column-ties also in the sea fort), Tiberias (384–395) and Tripoli (422–437). Butzer & Butzer 2008 for Crusader building techniques from east to west – Palermo, Monreale, Castel del Monte, Cyprus.

Tyre in Crusader hands, which is why “Crusader” appears in quotes in the subtitle above. The fortresses were strongly built because of developing military technologies,¹³ including the trebuchets which flung large projectiles (often of marble or hard limestone) still to be seen in several of them.

The Crusaders may well have studied Roman fortresses in Syria, and they knew plenty about them from back home.¹⁴ French scholars such as Rey attempted to classify Crusader fortresses by style and sources.^[4] These, whether built by Christians or Muslims, frequently made use of earlier structures on the same site for their materials. This was evidently a well known technique, as we learn from William, Archbishop of Tyre (c.1130–c.1190). He wrote his *History of the deeds done beyond the sea*, dealing with the Latin Kingdom of Jerusalem from 1127 to 1184. This detailed and well-rounded book was rapidly translated from Latin into French, and offers much information on topography, archaeology and politics as well as building. To the north of Ascalon, the Crusaders built Ibelin in 1143, using large quantities of blocks found at and near the site from previous constructions, and William comments that “pierres troverent assez en cel leu des forteresses qui jadis i avoient esté; car, si com l'en dist: Chasteaus abatuz est demi refez.”^[5] Jacques de Vitri, Bishop of Acre from 1217, confirms this with his comment that the stones came from Gath, the Philistine city.^[6] Such convenient finds might also have occurred at Montfort, in Western Galilee, which was but a heap of stone when Mariti visited the site in 1791; but there he saw large blocks: “ce qui m'étonna beaucoup, ce fut de voir sur cette montagne des matériaux immenses & prodigieux, que la route, étroite & impraticable, n'a pas dû permettre d'y transporter, ou bien il faut que l'outrage des tems l'ait rompue & détruite.”^[7]

While the Crusaders might have picked up a taste for marble-rich luxury on their way out east (for example at Venice), their eyes were probably opened at Constantinople and Cairo. The same William of Tyre described a palace at Constantinople with a flight of steps “fez mout richement à tables de marbre, et si i a lions et colombes hautes de marbre de maintes couleurs,”^[8] while in the Cairo citadel “En pluseurs leus de celé cort avoit fontaines qui sordoient par tuiaus d'or et d'argent, et fesoient unes noes en fosses trop beles que l'en leur

13 DeVries 2002. DeVries & Smith 2012 chap. 4 for non-gunpowder artillery; chap. 9 includes Crusader Castles.

14 Kennedy 1994, 11: “The legacy of Roman military architecture in the west was much more obvious to eleventh-century men than it is to us today and they did not have to look to North Africa or the Middle East to see examples of the classical tradition; they only had to look at the walls of Senlis, Le Mans or Pevensey to see high stone walls with projecting towers ranged at intervals along them.”

avoit fêtes, et pavées de marbre.”^[9] The rich marble and porphyry were still attracting visitors’ comments there in the 16th century.^[10]

Saphet

Saphet (Safad, Safed) near Acre was one Crusader fortress built with walls of very large stone blocks, the only section not brought down by earthquake,^[11] and we might wonder whether any of the materials for the superstructure came from nearby Kefr Bir'im where, in 1852, was still visible a large building “with a portico of columns in front, of no Greek order. Behind the columns is a large portal in the middle, with a smaller door on each side.”^[12] Egmont & Heyman were told by a local in 1759 that Saphet contained “the ruins of a very stately palace, and many of the stones with which it is built, equal to those we viewed with such astonishment in Balbec castle.”^[13] The Europeans did not visit the site, and the description suggests either that the locals could not recognise a fortress (which seems unlikely) or, rather, that it was lavishly decorated Ibelin-style, as at Beirut (see below). Dimashqi had certainly visited the site when the castle was in operation, and offered a 390-word description of the machinery for raising water from a cistern;^[14] so perhaps this fortress was indeed super-sophisticated.

Shaizar

Shaizar, north of Hama, guarded an important crossing over the Orontes. It was another fortress built in part with antiquities (of which there are plenty still in evidence), and on the site of an ancient town. Destroyed by an earthquake in 1157, it was rebuilt, and was part of the Muslim defences against the Crusaders. It has recently been intensively studied.¹⁵ Burckhardt in 1810 identified its date as “of the time of the latter Califes,” but also noted that

from the many remains of Grecian architecture found in the castle, that a Greek town formerly stood here. Fragments of columns and elegant Corinthian and Doric capitals lie dispersed about it: amongst them is a coffin of fine marble, nine feet long, but I could find no remains of any ancient building.^[15]

15 Tonghini 2012.

But then he went on the plain to the south and south-west, and found remains “which indicate the site of a town; several fragments of columns, wrought stones, and a great deal of rubbish, are lying about. We dug up an altar.”^[16] Sachau in 1883 correctly identified this ancient site as Larissa (as had Baedeker in 1876, mentioning the village outside the walls^[17]), and noted column fragments and other antiquities at the base of the fortress’ hill.^[18]

Baalbek

Because of its location close to Beirut, and near to an important road, the fortress most travellers would have known was Baalbek, with Pococke observing correctly in 1745 that some sections seemed designed to resist cannon,^[19] and that the town was fortified with mediaeval walls.^[20] In the 13th century Dimashqi noted that Baalbek was indeed a fortress, dating the complex back beyond Abraham, and noting the trilithon as part of the defences.^[21] Of Baalbek, Abulfeda [d.1331] reported “une muraille et une forte citadelle de grande dimension.”^[22] In 1714 Lucas saw what he called meurtrières in the ramparts,^[23] but does not mention soldiers, so the fort was presumably unoccupied, as it was in 1735, when Arvieux says the complex consisted of a round temple and a château, but writes of munitions storage in the past tense.^[24] Egmont & Heyman described in 1759 how the Turks had fitted parts of the complex “to defend themselves against an enemy,” but that “at present the Turks make no use of this castle, which is utterly going to ruin.”^[25] Dimashqi had a good eye for such buildings, writing that Marqab “a été bâtie par Râshid sur d’anciens monuments, puis rebâtie par les chrétiens,” and in his day was a Muslim stronghold,^[26] judged by Abulfeda that “elle surpasse Palmyre pour la hauteur de ses colonnes et ses grands blocs de pierre.”^[27] It is impossible today to see what might have happened to the re-used monuments, unless they ended up as the band of white marble in the south tower.

Beirut

Willibrand of Oldenburg, Canon of Hildesheim, nephew of Willibrand, Count of Harlemunt, and a pilgrim to the Holy Land in 1211, visited the castle of John of Ibelin, the powerful lord of Beirut, and saw in one of its towers “recently built, an apartment had been constructed of such beauty that he deplores his inability to do it justice in description.” Originally in Latin,^[28] his account told of a marble mosaic floor, marble veneer walls, a zodiac on the ceiling, and a

fountain feeding a marble cistern in the centre of the room.^[29] Since this was “a luxury which the worthy Canon concludes by telling us he went there to indulge in every day he sojourned at Beyrout,” we might wonder whether this was some kind of bath-house. This passage was well known, being cited by for example Rey, who first visited Syria in 1857. He is the author of the 1871 *Etudes sur les monuments de l'architecture militaire des Croisés en Syrie et dans l'île de Chypre*, who in 1883 speculated about palaces on the Syrian coast:

Ces habitations renfermaient des divans et de vastes salles où l'art syro-arabe avait épuisé toutes les richesses de l'ornementation. Les murs en étaient revêtus de placages de marbres, ou décorés de fresques et de mosaïques.^[30]

William says he got these details from contemporary travel accounts but, disappointingly, does not cite them, although he does refer briefly to his own finds.^[31] For Kennedy, “the whole passage gives an idea of the luxury which could be found in some Crusader castles, an aspect of their architecture whose physical traces have almost entirely disappeared.”¹⁶ There are three possibilities for the source of this room decoration: (1) it is a Romano-Byzantine ensemble taken over in place by the Crusaders, perhaps from the surviving Roman baths at Beirut; (2) it is Romano-Byzantine and assembled by the Crusaders from elements found elsewhere; (3) it is a new creation made from re-cut spolia marble. If it was indeed a bath house, then it could well have been inspired by local hammams, and even put together by local craftsmen.

There is evidence that both Muslims and Christians prized marble and mosaic, the former since at least the refurbishment of the Umayyad Mosque in Damascus, when one account suggests troops were enjoined “enjoined to bring back from the land of Rum a measure of mosaic cubes and a sheet of veined marble.”¹⁷ The Westerners acquired similar tastes, evidently hoarding such materials at Jerusalem, so that in 1187 when Saladin reconquered the city, “What they could not sell, beds and boxes and casks, the Franks left behind; even superb columns of marble and slabs of marble and mosaics in large quantities.”^[32] For Saladin's restoration of the al-Aqsa, “marble of an unrivalled quality was brought, and golden tesserae from Constantinople and other necessary materials that had been kept in store for years.”^[33] And supposedly the Muslims “threw down the marble framework that enclosed the Sepulchre of

16 Kennedy 1994, 120.

17 Greenhalgh 2009, 148–149.

Our Lord [the Holy Sepulchre] and took the carved columns that stood in front of it and sent them to Muhammad at Mecca as a sign of victory.”¹⁸

Athlit

One famous Crusader fortress of which little survives today, but which was much visited by our travellers because it was on the coast, was Athlit (Château Pélerin).¹⁹ Built in 1218, this was another fortress that re-used local materials, some perhaps from the fine city which Ritter in 1866 was convinced had once stood here.^[34] Just south of Acre (and now opposite Haifa, across the bay), the site once had gardens, but by 1819 these “sont devenus des marais infects et impraticables.”^[35] Four years later Brocchi was impressed by the fortress’ size and its “grandi massi quadrati, assai più voluminosi di quelli di Cesarea.”^[36] The blocks here evidently impressed the masons rebuilding the fortifications at Acre, for in 1838 (perhaps because of damage caused by the 1837 earthquake) it was part-blown up to provide materials for rebuilding there. Since it was next to the sea, transport was easy by ship. Materials were still going to Acre in 1864, when Guérin fretted that the locals “qui ont élu domicile au milieu de ces magnifiques ruines s’acharnent avec une ardeur déplorable à les détruire de plus en plus, et je n’ai plus retrouvé certains édifices dont j’avais admiré les débris il y une dizaine d’années.”^[37] Yet enough was left for Berners travelling in 1875 to aver that “of all the ruins that I saw during my journey through Syria it ranks second only to Baalbec in the grandeur of its masonry, and the extent of ground which it occupies.”^[38] Indeed, the masonry was very impressive.^[39]

The site of Athlit was huge,²⁰ and by 1873 this “prosperous well-built fortress, situate in a pleasant fertile district” was “disfigured by the mud hovels of the fellahin, built over it like the mud nests of the wall bees over Egyptian temples.”^[40] The complex perhaps included a palace, as Mislin suggested in 1876, for he saw that “des fûts de colonnes en granit gris, des rosaces, des chapiteaux, gisaient çà et là.” He also saw under the water that “la mer a englouti ses plus beaux ornements: on les voit au fond des eaux parmi les algues et le sable,”^[41] so either the sea level had changed, or what he saw were the spolia accidentally dropped in the ship-loading process. De Hass, a Doctor of Divinity, and misled by reading about biblical times, sees “deep ruts worn by the

18 Boas 2001, 108.

19 Kennedy 1994 fig. 16: plan and section.

20 Gates 2011 fig. 11.5 for a plan.

war-chariots” in the road up to the fortress,^[42] so that we might wonder both about his knowledge of history, and his study of the physical remains of the past. As coastal population picked up from the 1850s, Athlit’s convenient location right on the sea made it ripe for plundering. The town itself had almost disappeared apart from traces of the walls, and the remaining village was within the fortress:

Malheureusement, les habitants qui ont été domicilié au milieu de ces magnifiques ruines s’acharnent avec une ardeur déplorable à les détruire de plus en plus, et je n’ai plus retrouvé certains édifices dont j’avais admiré les débris il y a une dizaine d’années. C’est pour Saint-Jean-d’Acre principalement qu’ils débitent les belles pierres de taille diamantées, arrachées à leurs murs écroulés.^[43]

Guérin agreed that Acre was the destination, pointing to that town’s double walls were “construite avec les débris de ses anciens monuments ou avec les énormes blocs à bossage provenant des ruines d’Athlit, le Castellum Peregrinorum de l’époque des croisades.”^[44] Indeed, the enormous blocks of Athlit (which most travellers would have passed on their way down the coast) were a useful comparison with other sites, such as Qasr er-Rabad in the Ajlun, 22km W of Jerash, which Le Strange admired in 1884:

Its vaults and halls are certainly some of the finest existing in Palestine, the masonry equalling that to be seen at ‘Athlit, on the sea-coast above Caesarea, which is always quoted as one of the most remarkable of Crusading ruins. Kusr-er-Rabad amply deserves a more extended examination than any that has as yet been accorded to it.^[45]

Digging foundations could sometimes be profitable as well as necessary. At Athlit, for example, Jacques de Vitri records the finding of springs as foundations were dug, but also “beaucoup de colonnes et des trésors qui avaient appartenu à des temps tout-à-fait ignorés.” God had come to their aid, wrote Godfrey the Monk, for as well as “un grand vase de terre rempli d’une monnaie d’argent inconnue aux modernes... Le Seigneur leur fournit là une grande quantité de pierres et de ciment.”^[46] As late as the 1830s much survived:

plusieurs tours de plus de cent pieds de hauteur y sont encore debout; les murailles qui subsistent ont en plusieurs endroits plus de douze pieds d’épaisseur. Nous avons distingué parmi les ruines, des colonnes de granit, des fenêtres, des créneaux, des dômes, les restes d’une église et d’un

palais du grand-maître; une espèce de havre qui s'avance jusque sous les murs, peut recevoir de petits bateaux.^[47]

This was not to last, for less than two decades later “Le château est détruit, le bourg s'en va pierre à pierre.”^[48]

Kerak

Kerak (or Karak, or Crac), now in Jordan, and not to be confused with Krac des Chevaliers, was described in 1873 as “by far the grandest monument of crusading energy now existing.”^[49] It was built by King Baldwin I of Jerusalem in 1132, and fell to Saladin in 1188, after Jerusalem. Bombarded by Ibrahim Pasha without result in 1840 (he was trying to conquer all of Syria), it is one of the best preserved of fortresses, and was suggested for serious examination in 1882.^[50] Burckhardt visited in 1812, but found no antiquities except for a few fragments of granite columns in the town.^[51] The chapel walls also had column shafts built into them, presumably against earthquakes.^[52] Irby & Mangles found more in 1818, noting some bas-reliefs and column shafts, but seemed dejected by the experience: “Évidemment, il y aurait à découvrir à Karak beaucoup de restes d'antiquités, appartenant même à l'époque moabitique, mais j'avoue, en toute humilité, que je ne me chargerai pas d'en aller faire la recherche.”^[53] The Duc de Luynes visited in 1864, and found the plan of fortress and town easily readable,^[54] although he reckoned extensive digging was necessary to establish the details of internal buildings. Destruction was already under way: “On remarque encore debout, cependant, l'ancienne chapelle chrétienne, dont les ornements peints qui ont été signalés par quelques voyageurs ont été détruits par ordre du scheikh Midjaly.”^[55] In the town, he was shown one bath, and then a room with a mosaic floor and columns which he was told was also a bath.^[56] In the previous year Tristram probably visited the same room, and was then given

other proofs of Roman occupation . . . several imperial coins of gold and silver, besides a gold medal of Helena. The gold coins were all sold to me for rather less than their value as old gold . . . We also obtained a few cameos, to which the finders did not attach much value, and which were all chipped.^[57]

However, here the locals were surly, demanding payment for entering the fortress,^[58] and living conditions were restrained: “A Kerak house is entered by

a low door-way four feet high, generally arched, of dry stones, but often with a massive lintel, taken from some more ancient building.”^[59] Their surliness could have been fear, since in 1816 it was reported that they even threshed their crops in the safety of the fortress, for “the inhabitants dare not perform this process in the fields, lest they should be attacked by some of the wandering hordes.”^[60]

Krak des Chevaliers

Krak, today Qalaat al-Husn, was first fortified by the Kurds in 1030, and destroyed by earthquake in 1170, eventually to fall to the Muslims after the siege of 1271. Burckhardt could identify it in 1810 (when there were a few defenders) as “one of the finest buildings of the middle age I ever saw. It is evidently of European construction . . . commands the communication from the eastern plains to the sea shore”^[61] Its “Europeanness” helped its popularity and, with their conviction that to French Crusaders went the glories of fortress architecture in Syria, the French took it to their bosom as their own.²¹ Since it escaped both tourists and archaeologists in the 19th century,^[62] several of whom passed by but did not visit,^[63] was it perhaps then off-limits as a military installation? The French under the mandate cleared out the village inside it in 1927, and restored it. As Burns notes, “the castle was ceded to Syria in compensation for the damage inflicted by the French bombardment of Damascus in 1945.”²²

Desert Castles

If the collectively named Desert Castles were once in perhaps strenuously cultivated areas, a glance at the map will show that now, centuries after their abandonment, they are firmly in the desert. Some were evidently located in frontier regions probably dangerous since at least Roman times, so it is no surprise that they were to be late discoveries by travellers. If fortresses further north towered over highways and passes (see and be seen), the desert castles were usually on flat land in areas without highways.

21 Biller 2006, 31–40, Krak: Die Forschungsstand und das Werk von Deschamps/Anus.

22 Burns 2009, 184.

Since debate is ongoing about just what these structures served, not to mention their origins,²³ as is research about their layout and dependencies,²⁴ it is sensible to retain their traditional appellation to underline this fact. There are various suggestions for the purpose of these castles. Regularly spaced, these are in “temporary use as resting places and not for permanent habitation;”²⁵ they were part of grand estates, broken by the 747 earthquakes and the fall of the Umayyads in 750 so that in the 9thC the balance shifts again in favour of pastoralism;²⁶ on the margin of the cultivated land (not in the desert), some were to watch over nomads, but most were large agricultural latifundia.²⁷ Cobb suggested a range of possibilities, including “hunting lodges, defensive strongholds, urban cores, spas, palaces and . . . country estates: these are sites of the farmer’s life as much as they are of *la dolce vita*,”²⁸ the last epithet being a reference to Hillenbrand’s 1982 paper, which calls them palaces.

The French term “château” is suitable here, since in that language such a structure can be a fortress, or a pretend-fortress such as any of the Châteaux de la Loire, often with splendid gardens, which some of the Syrian châteaux certainly had. For Oppenheim, although he does not provide any extensive evidence, so intense was some of the occupation on Jebel Druze that he called the settlements around such castles “Desert Cities.”^[64] Everyone was clear that Syria had no fixed boundaries and, indeed, that any frontier shifted with the movements of tribes.^[65] Such estates went hand-in-hand with the development of irrigated agriculture²⁹ and, although there were some small structures, “others were clearly sites dedicated to elite distraction and self representation.”³⁰ Thus a variety of uses is suggested by their very location. As well as survivals in

23 Fowden 2004, 315–316, footnote: “A major question that awaits an answer is the extent to which the Umayyads were inspired by the residences of the late Roman military elite in Syria.” Milwright 2010, 38: “there can be little doubt that the landscape of early Islamic Greater Syria was populated by many standing Roman fortresses and legionary camps.”

24 Genequant 2012: Deals with composition of sites (chap. 10), their economics (chap. 11, including aqueducts, reservoirs, agriculture) and their function (chap. 12). Excellent survey, well illustrated, wide ranging, and well referenced.

25 Bisheh 1992, 41.

26 Kennedy 1992.

27 Piccirillo 2002; Villeneuve 2001 for Diyatheh: The easternmost ruins of importance in S. Syria, with c.100 ancient houses, a Roman fort, cemetery, water-mills, disused irrigation system. Author suggests village was attempt to extend the settled population of the Hauran toward the steppe, in 2ndC and 3rdC, but stagnation from 4thC.

28 Cobb 2010, 245–246. See note 40 for the literature.

29 Geyer 2006: irrigation and qanats in the arid margins.

30 Cobb 2010, 245–246, 250.

present-day Syria, there are ten Desert Castles within boundary of present-day Jordan, and eight more which were once a castle or Umayyad occupation of a Roman fort.³¹

Qasr El-Hallabat

In the case of Qasr (or Khan) El-Hallabat there was no single use. This was originally an early 3rdC Roman fort (and, like Umm al-Jimal, on the Via Nova Traiana), then a monastery, and finally a desert castle. Situated 31km SE of Palmyra, the site is off the road due west, in the desert.

Butler visited the site in the early 20th century, and to the south “could be made out the low walls which marked out the fields, cultivated when this was a Roman stronghold.”^[66] The area is still farmed today, and “despite looting of stone in modern times, the surviving fort remains impressive and excavation and clearance of mounds of collapsed masonry has brought it into sharper focus.”³² The same was the case with Qasr al-Heir West, a monastery (originally a fort?) before it became a “hunting lodge.” When Baedeker directed his readers there in 1876, “maltese crosses are said to have been detected on the walls. In the vicinity lie many hewn stones, some of them of marble.”^[67] East of Amman Qasr el-Ezraq/Azraq, to be used as a meeting point and refuge by Lawrence of Arabia, was once a Roman fort, with a surviving dedicatory inscription, a basalt door which still works, and a Roman road nearby.^[68]

Mschatta^[69] and Nearby Antiquities

Situated on the open plain, with higher ground about it, surrounded by a flat, arid desert, entirely destitute of water, with no human habitation in sight for many a weary mile, far from any highway; what could have been the motive that led to its construction? and from whence came the building material?^[70] [1886]

In the above quote Thomson expresses his astonishment at finding such a structure out in the desert: a mighty enterprise, with limestone, bricks and

31 Northedge 1992, 50. Hamarneth 2003, 45–94: I villaggi [in Jordan] sorti presso i castra romani.

32 Kennedy 2004, 96.

workmen all imported from a great distance. How could anyone start such a structure, and then abandon it? For “it is very evident that the façade, and indeed the entire structure, at Mushatta was not only never finished, but it can be said that it was not even fairly commenced.”^[71] Even in 1890, depending on the season of the year, travellers to this site needed to take care: “It is situated in the country of the Beni Sokr, and to be quite safe one should take an escort of that tribe from Madeba.” The escorts limited the time at the site, and few Westerners had in fact made the journey: “The Adwan Sheikh told us that, except an American gentleman whom they conducted at the time of the American exploration of the Dead Sea, we were the only people whom his tribe had escorted to the place.”^[72]

However, Thomson should have paid more attention to the surrounding area: there is surely no mystery about materials or workmen, since the site is only about ten kilometres from Ziza, and under thirty from both Madaba and Amman. Near Ziza is Al-Qastal, another desert castle, and both these are very near the railway, the successor to an English project. In 1905 Goodrich-Freer camped within the walls of Mschatta, “where, amid kind and hospitable friends, and in comfortable tents, bearing the familiar initials T.I.W. (Thames Iron Works), relics of the abandoned English railway, we found leisure to rest and to dream.”^[73] Ziza was a Roman town which could have supplied materials to Mschatta: Tristram saw there re-used materials from Byzantine churches and, before the destruction wreaked by Ibrahim Pasha in his struggle to secure the area, “the large buildings inside the town had their roofs entire, and were often used as places of shelter. The other castle, to the east of this, is apparently of the Roman age.”^[74]

At Al-Qastal (El-Kastal), very near Ziza and not far from Mschatta, Tristram thought the site showed earlier constructions:

two capitals of pure white marble . . . the many fragments of fine white marble, certainly not indigenous, and which must have been brought, at great cost, from beyond sea, belonged to these earlier Castles, which are probably either Herodian, or the work of some of the Syrian successors of Alexander.^[75]

But it is more likely that the materials came directly from Ziza or Madaba. Indeed, Ziza was garrisoned by Ibrahim Pasha's Egyptian troops, “who did much damage to the ruins of Ziza, and wantonly destroyed a very perfect building in the town, and several perfect Christian churches. Zadarn assured us that, before the Egyptian invasion, the large buildings inside the town had their roofs entire, and were often used as places of shelter.”^[76]

Mschatta is an example of a large château, unexcavated, the façade of which was gifted to Berlin because of the intervention of the Kaiser, who sent the Sultan in return a team of thoroughbred horses. As Goode writes, “Although the sultan thought he had gotten the better of the exchange, Ottoman officials were furious, none more than Hamdi Bey. He began tightening restrictions on the Germans, denying them new excavation permits, sometimes refusing to allow them a share of antiquities from some of their sites in Iraq.” As Goode commented, “These worsening relations emphasized the danger of trying to outmaneuver officials, who could frustrate foreign archaeologists in spite of apparent agreement at the top.”³³ The lack of thorough excavation here is a pity, for Chauvet & Isambert indicated interesting clues in what they call the palace proper: “trois arcades semi-circulaires, reposant sur des pillars surmontés de chapiteaux corinthiens. Les assises inférieures construites en marbre blanc, sont couvertes d’inscriptions.”^[77] Even today, and more urgently because so many structures have been destroyed, we need to know much more about Islamic structures; whereas any scholar could navigate most Roman forts blindfold just as easily as any chain-hotel bedroom.

Qasr al-Heir West

West of Khan al-Hallabat, and 80km sw of Palmyra near the modern Damascus road, is Qasr al-Heir-West (al Gharbi), in what Burns describes as a “bleak spot.” The eastern fortress, Qasr al-Heir-East (al Sharqi) is NE of Palmyra, and near the road from Palmyra to Deir al Zor, and 100km from Resafa. Established on the site of a monastery, Qasr al-Heir West was built by Hisham in 727, as we learn from the inscription over the entrance, not carved into the (re-used) marble lintel, but cast in bronze and attached to the stone with pegs, a device “unique in early Islam . . . extremely elegant piece of work.”³⁴ Naturally, the bronze has been robbed out. The whole gateway with its stucco decoration has been translated to Damascus and is preserved as the entrance to the National Museum. The structure (including a bath) and its gardens were fed by the Harbaka Dam, 17km distant. The site was abandoned following the 14th-century Mongol invasions. Such structures could not have been viable

33 Goode 2007, 28; Shaw 2003, 121–122 for a blow-by-blow account of what happened.

34 Fowden 2004, 165. *Ebla to Damascus* 1985: summaries of both sites; 484–7 for Qasr Al-Heir East; 488–493 for Qasr Al-Heir West.

without the dams routed along the Roman Strata Diocletiana,³⁵ which was an important and long-standing artery. Qasr al-Heir East, with immense gardens, was also built by Hisham, and was fed by a 5.7km canal. Its entrance gate is now in Deir al-Zor Museum. As with other sites, access to water was the key. The dearth of wells was sometimes pressing even for travellers from Aleppo to Damascus,^[78] and the promotion of agriculture perhaps the aim of the whole enterprise.³⁶ For Schlumberger, the fall of the Umayyads in 750 led to abandonment, and then to occupation by fellahs.³⁷

Qasr al-Heir East³⁸

This site consists of two enclosures, perhaps a palace and a khan, on a standard caravan route from Aleppo to Basra in present-day Iraq.^[79] Englishmen passed by but did not stay long. In 1745 Beawes gave a one-sentence description, “but within there appears no remains.”^[80] Carmichael in 1751 was more interested in the aqueduct, and does not say he visited the site.^[81] James Capper visited here in 1778, calling it Gussur-Ul-Bain, or the walled castle with aqueduct, and the columns he mentions were probably part of the mosque, now restored:

L'enceinte, divisée en deux quarrés, est coupée par un passage d'environ cinquante pas de large. La façade de l'un des quarrés est de près de deux cent cinquante pieds de long et de trente de hauteur. De quarante pieds en quarante pieds s'élèvent des tours, dont les deux plus petites accompagnent la porte qu'on remarque au centre de la partie occidentale. Dans l'intérieur on découvre les ruines d'un bâtiment, et tout auprès un passage sous terre, qui conduit à une espèce de cave ou de cellier. A l'angle sud-est de la place existait un portique d'ordre corinthien; les fûts des colonnes sont encore épars sur la terre, mais nous ne pûmes en trouver ni les bases, ni les chapiteaux.^[82]

35 Calvet 1992, 79–92 for the structures; *ibid.*, 93–105 Les barrages des forts de la Strata Diocletiana, with photos, and a reconstruction (fig. 55) of Khan Al-Manqoura, with barrage and vegetable gardens.

36 Milwright 2010, 37: “the distribution of the qusur in Jordan and eastern Syria suggests an attempt to create an infrastructure to support the key routes running north from the Hijaz.” *Ibid.* 38: “it is becoming increasingly clear that the hydraulic projects associated with some of the Umayyad qusur of Jordan and Syria were designed with the ambitious goal of promoting agriculture in otherwise marginal lands.”

37 Schlumberger 1986, 26; Schlumberger 2010, 23–76.

38 Grabar 1978; Genequant 2012, 95–159: Qasr al-Hayr al-Sharqi: une ville neuve.

Coote visited the site in 1780, counted the towers of both structures (the larger has 28 towers, not 24), and described the larger building's interior with "a number of arches supported by pillars of white marble finely polished." These were evidently disappearing in his day:

several broken pillars of marble were scattered about the area, in one part of which, where the Arabs appeared to have been digging, we found large vaults double arched, and it is probable the whole of the area was vaulted in the same manner.^[83]

He had no time to make a plan, but noted "the ruin of an aqueduct that came from the mountains on the right to this palace, and from thence across the plain into the other building."^[84]

The nearest town was Taiba / al-Taybe, in ruins when Capper (in fear of Bedouin) camped nearby,^[85] but perhaps inhabited earlier in the century. And it was "a place of refreshment for the caravans; the grounds around still exhibited the signs of cultivation, for they were ditched and crossed in many parts by small aqueducts that conveyed water from the fountains."^[86] When the site was dug in 1964–72, fourteen columns were found, most of limestone, some of marble or granite: "all of them must have been imported from some other building."³⁹ Conceivably, some of the spolia in Qasr al-Heir East (such as the granite columns and Corinthian capitals) could have come from here, described as follows by two East India Company captains in 1750:

Il y a vu des chapiteaux de l'ordre corinthien admirablement exécutés, mais sans désigner la place où il les a vus; je ne pus jamais les retrouver . . . on n'y voit plus que les vestiges d'une place forte, et qui pouvait être autrefois fort peuplée et très-florissante; mais aujourd'hui elle est ruinée . . . La porte d'entrée, faite en arc, conserve encore quelques restes d'une ancienne beauté; il y a dessus quelques inscriptions en caractères palmyriens, qui annoncent qu'elle fut autrefois la splendeur de cette ville.^[87]

Why was this site, evidently once rich in antiquities, not better known to travelers heading for Palmyra? The answer might come from Chauvet & Isambert's 1882 guidebook, when their only two sentences on the site are that "On rencontre (8 h.) une tour en ruines, Qasr el-Haïr, avec une porte sculptée. Tout auprès se trouvent les débris d'un aqueduc et un réservoir."^[88] This remarkable site was not even accorded a description, but perhaps the difficulty revolved

39 Grabar et al. 1978, 149: 25–29 for columns; 26 for quote.

around access to water. They had travelled eight hours from their start that day, at Al-Qaryatein, and they camped by water at two hours distance from the château; but they were still five hours away from Palmyra, with no springs intervening. In 1907 Cook's guidebook has travellers camp at Qasr al-Heir East, but "As Kasr el Herr is unprovided with springs we must the next day traverse for five hours a waterless region to reach the spring Ail el-Beida, where we spend our last night en route."^[89] Butler during his 1909 expedition encountered the same problem when he wished to examine in detail Qasr al-Hallabat: "the camp could not be moved to that place because it had no water."^[90]

We might add the local fauna, which kept nervous travellers away from some monuments, to the list of problems: Carmichael avoided the ruins at Hiqla, near Aleppo, because "the Arabs report that there are many black scorpions among these ruins; for which reason we encamped at a distance."^[91] That same Arab was nervous at Ukhaidir, refusing to enter; so Carmichael entered alone, a pistol in each hand, "creeping thro' a hole in the gate-way, which was nearly filled up with rubbish."^[92] The previous year Plaisted had camped near Ukhaidir, but apparently did not visit the site.^[93]

Roman Fortresses

Roman fortresses are to be distinguished from the Desert Castles discussed above, and appear last in the chapter because they were the last to be visited and described by travellers. What is more, they either flanked or were well inside sometimes-dangerous deserts. They marked the fortified limit (the *limes*) or boundary of the Roman Empire, but even this changed as conquest and withdrawal led to several lines of forts. Given the monastic taste for desert living of many early Christians, their desert (and deserted) sites were popular for conversion into monasteries.^[94] No visibly Roman fortresses were identified anywhere near the Crusader forts Muslim and Christian placed at the start of this chapter, because only forts in desert areas which were later abandoned could survive intact. However, it is certain that several in crusading areas further north were buried in such foundations, because siting a fortress is not rocket science, and the requirements (height, view, quarry, access to water) never changed. Nor did parts did the *limes* change radically, and there are instances of Muslim forts built directly on top of Roman ones.^[95] Crusader fortresses such as Shobak (now in Jordan) were also close to a Roman network: "passing by two volcanic craters on our left, and one on our right, observed a Roman road formed of lava, upon which we continued for some distance, when we lost sight of it, and arrived at Shubac at six o'clock in the evening."^[96]

Père Poidebard's magnificent *La trace de Rome dans le désert de Syrie: le limes de Trajan à la conquête Arabe, Recherches aériennes (1925–1932)*, Paris 1934, was one product of the French Mandate for Syria, to be discussed in Chapter Eleven. He solved the perennial travel and sight-line problem by flying, and the necessary documentation by photography to augment or even replace his sketches.⁴⁰ It was the French Mandate which facilitated Poidebard's work over Syria. Similarly, the British Mandate ensured that "in 1939 his imitator, the Hungarian-British orientalist, Sir Aurel Stein, spent several weeks being flown over Transjordan by the RAF explicitly to record the extension from Syria of the Roman Limes."⁴¹ There were also strictly military aerial reconnaissances as well, such as over the Euphrates in 1922.⁴²

Poidebard landed when he saw something interesting, and if his explanations for the purpose of the forts complex are not wholly accepted today,⁴³ his and Stein's surveys remain, for archaeology, the most substantial and far-reaching results of the two Mandates, just as the aerial photos taken by Western airforces in the region were invaluable until satellites came along. He thought the limes was not in fact a limit to Roman rule, but rather

un ensemble de routes fortifiées formant une zone défendue, en lisière du territoire d'empire: routes parallèles à la limite du territoire, souvent même un peu en retrait, puis routes s'enfonçant perpendiculairement aux précédentes dans le territoire barbare, allié ou soumis, qui formait un glacis avancé.⁴⁴

The limes was however an important line of defence, carefully designed,^[97] as well as a customs zone, and provided with roads, water, pasturage and agriculture, and Poidebard believed the stone bergeries he found were of nomad origin, and built for defence, because the nomads participated in that defence.⁴⁵

40 MacAdam 1986, 231–369: catalogues of photo collections of Archaeological Expeditions to the Near East on file at Princeton. 233: accidental discovery of 28,000 prints in the attic of the Harvard Semitic Museum in 1970.

41 Kennedy 2004, 21–22.

42 Institut français de Damas 1995.

43 Bauzou 2004: critique of some of Poidebard's interpretations.

44 Poidebard 1937, 8.

45 Poidebard 1934, 191–196, 199. Cf. Cumont's Preface for explanation of the setup, with forts and water provided at camel-caravan halts. These Poidebard followed and photographed from his plane. He then landed and measured them. There were plenty of milestones on the road network, often grouped (49) in three or four at each mile.

Qasr el-Abyad

One example of a (late?) Roman fort with intriguing links for desert castles⁴⁶ was the Qasr el-Abyad, south east of Damascus, in the Safa.^[98] This was no less than 60m square, and included a lot of spolia:

A large building of white stone. This building, whatever it may have been intended for, was unfinished; but so fresh did it appear, that the workmen might have left it yesterday. That it was more modern than the rest of the town, not only does its architecture testify, but in the tower I saw many stones which had evidently been employed in some former building: amongst others some curious ornamental carvings.^[99]

Graham refers here to some of the wall decorations, including a profuse collection of animals and birds. He asked the locals

if they had any traditions about when and by whom this place had been inhabited. All they could tell me was that it had been inhabited up to the time of Tamerlenk, but that this warrior had driven all the inhabitants away and destroyed their city.^[100]

De Vogüé had underlined the exotic nature of such decorations in 1865, noted their connection with Byzantine styles, and suggested that

Rien n'est plus naturel que d'attribuer la construction de ce château à l'une des familles venues de l'Arabie méridionale, peut-être à l'un des rois Ghassanides qui regnèrent dans ces régions entre le cinquième et le septième siècles, et qui laissèrent dans le Haouran des traces écrites de leur passage.^[101]

Dussaud & Macler in 1901 believed that this or a similar structure could be an inspiration for Mschatta, further to the south: "L'artiste orne une pierre, un linteau par exemple, en couvrant toute sa surface de dessins très géométriques dans leur apparente complication et, bien qu'il s'y mêle quelques emprunts

46 Gaube 1974, 137: this highly decorated monument has a "plan which makes the monument an important link between Roman-Byzantine limes castles and Umayyad desert palaces." 138: "some kind of country residence used only for a few months in the year. Climatic and hydrological conditions make it impossible to live in the area except from March to May."

gréco-romains, la technique est purement orientale. Certain linteau avec sa décoration en rosaces entourées d'entrelacs rappelle telle dalle assyrienne."^[102]

Qasr el-Bai'j

On his 1904–5 Princeton Expedition, Butler visited another “large and interesting” Roman fortress, called Qasr el-Bai'j. From this site were visible both Umm al-Jimal (wherein there were “about twenty tents in the ruins; for Bedawin were tending the Druse flocks”) and, to the west, the railway.^[103] This was to change, for by the late 20th century “Although the aerial view reveals the core of the site quite clearly, the modern village has destroyed much of what was standing when the Princeton Expedition recorded the site in 1904 and obscured much of what survives.”⁴⁷

Masada and Its Siege Camps

Masada, 97m above the desert floor, was a palace built by Herod the Great and, because of its location, a fortress, the story of its capture by the Romans in 70AD told by Josephus in his *Jewish Wars*. Masada is therefore not a Roman fortress, but the siege works and massive ramp put in place by the legate Flavius Silva are extensive,^[104] their only competitor for extent and survivability being Alesia in Gaul. Because of its important place in history, the site had been visited since 1842 (Wolcott was the first^[105]), and Lynch saw in what he believed was “perhaps the court-yard or quadrangle of the castle, now filled with rubbish, fragments of marble, mosaic and pottery.”^[106] In 1865 Tristram viewed the siege works from the summit:

In the plain to the east beneath us, and on the opposite slopes to the west, were the Roman camps, with their outlines and walls as distinct as on the day when they were left, one large and two smaller square camps on the plain eastwards, and a long series of encampments on the slopes facing us westward. Apparently not a stone had been removed. Built without mortar, they had fallen from walls to sharp ridges, but all in gentle, though desolate decay.^[107]

47 Kennedy 2004, 91.

He is one of few visitors to describe the siege camps, and he illustrates one of them. On the summit itself, there was little left to admire, especially after De Saulcy visited in 1854, and concentrated on what his Bedouins said was the palace – namely Herod’s northern ship-prow-like palace, not the rectangular western palace. Here he found some cubes of red, white and black stone:

I therefore tempt my Bedouins with the promise of a bakhshish, and whilst I am drawing the plans of the different apartments, and Belly is engaged in taking a sketch of this extraordinary ruin, the rubbish is cleared from the floor, and a handsome mosaic pavement, disposed in circular knots, is brought once more to light. Unfortunately all is broken in pieces; I feel, therefore, no scruple in carrying away some specimens. We also take designs of several fragments of moulding in white marble, and pick up samples of the pieces of red pottery and glass with which the ground is covered.^[108]

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| [1] Beaujour_1829_375 | [20] Pococke_II.1_1745_106–107 | [42] De_Hass_1887_234 |
| [2] Newbold_1850_356 | [21] Dimashki_1874_268 | [43] AMS_I_1864_414–415 |
| [3] Tristram_1873_89 | [22] Aboulfedaa_II_1848_32 | [44] AMS_VII_1872_418 |
| [4] Rey_1867_356 | [23] Lucas_I_1714_177 | [45] Le_Strange_1889_287 |
| [5] Guillaume_de_Tyr_1880_83 | [24] Arvieux_II_1735_436–442 | [46] Michaud_1829_III_21–22 |
| [6] Vitri_1896_XLI | [25] Egmont_&_Heyman_1759_II_272 | [47] Michaud_&_Poujoulat_IV_1834_149–150 |
| [7] Mariti_1791_II_148 | [26] Dimashki_1874_284 | [48] Yanoski_&_David_1848_37 |
| [8] Guillaume_de_Tyr_II_1880_346 | [27] Michaud_1829_550 | [49] Tristram_1873_92 |
| [9] Guillaume_de_Tyr_1880_277 | [28] Laurent_1873_166–167 | [50] PEFQS_1881_73–74 |
| [10] Affagart_1902_175 | [29] Lindsay_II_1838_372–373 | [51] Burckhardt_1822_15071812 |
| [11] Darboy_1852_371 | [30] Rey_1883_7 | [52] Tristram_1873_91 |
| [12] Robinson_1852_5 | [31] Rey_1883_8 | [53] Saulcy_1853_I_55 |
| [13] Egmont_&_Heyman_1759_II_292 | [32] Gabrieli_2010_87 | [54] Luynes_1874_II_108 |
| [14] Le_Strange_1890_524–525 | [33] Gabrieli_2010_86–87 | [55] Luynes_1874_II_109 |
| [15] Burckhardt_1822_22021810 | [34] Ritter_1866_285 | [56] Luynes_1874_II_110 |
| [16] Burckhardt_1822_22021810B | [35] Forbin_1819_76–77 | [57] Tristram_1873_97 |
| [17] Baedeker_1876_559–560 | [36] Brocchi_1842_45 | [58] Tristram_1873_95 |
| [18] Sachau_1883_69 | [37] Guérin_1864_414–415 | [59] Tristram_1873_96 |
| [19] Pococke_II.1_1745_11 | [38] Berners_1876_64–65 | [60] MacMichael_1819_236 |
| | [39] PEFQS_1873_102–103 | [61] Burckhardt_1822_01031810 |
| | [40] PEFQS_1873_102 | [62] Van_Berchem_1895_13–14 |
| | [41] Mislin_1876_II_86 | |

- [63] Robinson_1856_565
- [64] Oppenheim_1899_91
- [65] Dussaud_1902_76-77
- [66] Butler_1930_37
- [67] Baedeker_1876_521
- [68] Dussaud_1902_31
- [69] Goodrich-
Freer_1905_79-88
- [70] Thomson_1886_633-634
- [71] Thomson_1886_632
- [72] PEFQS_1890_174
- [73] Goodrich-Freer_1905_88
- [74] Tristram_1873_202-203
- [75] Brünnow_&_
Domaszewski_
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- [76] Tristram_1873_188
- [77] Chauvet_&_
Isambert_1882_506-507
- [78] Lithgow_1632_204
- [79] Carmichael_1929_
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- [80] Beawes_1929_15
- [81] Carmichael_1929_140
- [82] Capper_1796_273
- [83] Coote_1780_207
- [84] Coote_1780_207B
- [85] Capper_1796_271
- [86] Coote_1780_208
- [87] Capper_1796_353
- [88] Chauvet_&_
Isambert_1882_650
- [89] Cook_1907_356
- [90] Butler_1930_36
- [91] Carmichael_1929_136
- [92] Carmichael_1929_161
- [93] Plaisted_1929_77
- [94] Dussaud_1902_77
- [95] Dussaud_1902_438-439
- [96] MacMichael_1819_216
- [97] Bouchier_1916_48
- [98] Brünnow_&_
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- [99] Graham_1858_238
- [100] Graham_1858_237
- [101] Vogüé_1865-1877_70
- [102] Dussaud_&_
Macler_1901_43-44
- [103] Butler_1930_34B
- [104] Brünnow_&_
Domaszewski_
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- [105] Rey_1861_288-300
- [106] Lynch_1849_332
- [107] Tristram_1865_313-314
- [108] Saulcy_1854_I_221