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Letter from the Editor

escribing antique landscapes is akin to reading books backwards. We start with their current appearance and then move in reverse chronological order, searching for legibility in a palimpsest bearing the marks and erasures of time. Their stories are historical narratives of natural and human intervention: of transformation by geologic, botanic, and climatic forces on one hand and by population growth, war, technology, and iconoclasm on the other. In this issue of Site/Lines, our focus is rediscovered historic landscapes and the knowledge and emotion they elicit with regard to past lives and civilizations.

Often serendipity plays a role in the resurrection of an important piece of the past. In his essay "The Place We Learned We Were Not Alone," Frederic Rich tells how in early August 1856, three years before Darwin's publication of *On the Origin of Species*, two Italian workmen shoveling loam

and mud from the base of the small Feldhof Cave at a limestone mining site in the Neander Valley unearthed a cache of unusual bones that were not. as they originally thought, those of a bear. As it turned out, they had inadvertently brought to light evidence of humanity's nearest evolutionary relative. Unfortunately, this important event did not encourage a search for other cave-dwelling representatives of *Homo* neanderthalensis in the vicinity, although the valley, which had long attracted tourists in search of the Romantic Sublime, continued to lure visitors. By contrast, the chief draw today can be found in the on-site museum's focus on the fact that the first evidence for human evolution was found here.

In "Speaking Ruins,"
John Pinto elucidates how
"ruins are what make Rome
Rome; their ubiquity, scale,
and resonance combine to
give the city its identity."
Moldering over the centuries into Romantic picturesqueness, they have been
the subject of countless
paintings, a treasure trove
of inspiration for neoclassi-

cal architects, and a source of pleasurable melancholy for travelers contemplating the poetics of mortality and the beauty-laden ravages of time. But it wasn't only the architectural remains of classical Rome that stirred the imagination of the painters, writers, and Grand Tourists who flocked to the city from the seventeenth century onward. The pastoral landscape of the Roman Campagna was equally a locus of aesthetic inspiration and spiritual sensibility.

In his essay "Algerian Journal," Laurie Olin documents through recent travel notes and sketches one ancient city after another in that southern Mediterranean country – Timgad, Djemila, Tiddis, Tipasa, Madauros – and places in between. In the process, he is able to reanimate ancient streets, curbs, drains, fountains, basins, gates, stairs, and plazas, along with the remains of civic buildings such as libraries, theaters, and markets. With him, we can make out not only the sites of vanished monuments and statuary but also the stalls and counters of merchants, the drains and seats of the public toilets.

In "The Nature of Cul-

ture." Erin Addison takes us to Iordan, another Mediterranean outpost of imperial Rome. Thousands of tourists are familiar with Petra. the famous Nabataean-Roman metropolis that became a UNESCO World Heritage Site in 1985, but it is not the temple-tombs with their stunning Hellenistic architectural facades carved into cistern-pocked cliffs of red sandstone that she discusses. Rather, she wishes the reader to consider the surrounding desert landscape occupied by bedouins that is now under unrelenting pressure from unplanned development and the combined processes of overgrazing, vegetation and topsoil loss, and diminishing water resources.

Another ancient civilization in a desert landscape, this one in the American Southwest, is the subject of "Quarai: Notes on the Landscape of an Ancient Native American Pueblo," by Baker Morrow. This settlement of five or six hundred people, which was formed sometime in the eleventh century, was deserted around 1674 due

to persistent drought. The landscape remained too dry and inhospitable for subsequent development, which accounts for the fact that Quarai's agrarian past can still be discerned in a series of shrub-hollow gardens. Their exploration is an unusual and fascinating endeavor for archaeologists, going beyond their primary interest in a community's structural footprint as found in the remains of ancient Puebloan plazas.

Kathryn Gleason, a landscape architect and landscape historian, also has a background in archaeology. In "The Landscape as Ruin: The Resiliency of Design," she poses a question: "Might we expand the scope of archaeological investigations to include not only architectural ruins in a landscape but also the landscape itself as a ruin?" She then goes on to recount some of her experiences in the field, beginning with her discovery at the site of a Roman villa in Britain that a boundary line could become a path, hedgerow, road, and bikeway. More recently, she has made several trips to Caesarea Maritima on the eastern coast of the Mediterranean, the most important city of Roman Judea and Palestine. Here she found that the neat grid plan laid out by Herod the Great in 30 BCE remained visible in the city's streets and blocks, in spite of the later Byzantine, Muslim, Crusader, Bosnian, and Israeli layers that covered it.

In these times in which both the planet and the traces of previous civilizations are in jeopardy, I would like to stress the importance of the mission statement of the Foundation for Landscape Studies: "To promote an active understanding of the meaning of place in human life." Such is the hope our authors project in this issue of Site/Lines.

With gratitude and good green wishes,

Elizabeth Barlow Rogers
President

On the Cover:

Giovanni Battista Piranesi, *View of the Roman Forum*, etching, 1772.

Evoking the Past: The Landscapes of Ruins

Speaking Ruins: Travelers' Perceptions of Ancient Rome

he Italophile writer Vernon Lee (Violet Paget, 1856–1935) declared, "Poets really make places." The opposite is also true, however: places make poets and artists. For many visitors – and this was certainly the case for artists and writers in the period of Romanticism – ruins are what make Rome Rome; their ubiquity, scale, and resonance combine to give the city its identity. Majestic, they also give rise to melancholy. They are both evidence of astonishing human achievement and a reminder of the impermanence of our accomplishments.¹

For centuries, Rome had served as the preeminent cultural reservoir of classicism, the font of order and reason. From Petrarch on, the fact that the artistic and architectural heritage of classical antiquity survived only in bits and pieces prompted repeated laments over what had been lost. Many Renaissance artists, Raphael among them, considered the remains of ancient architecture to embody perfection and set about measuring and documenting them with a view towards extracting lost secrets – the keys to ideal harmony and beauty. When, for example, late in the seventeenth century, the French Academy sought to clarify and codify the rules governing classical architecture, they sent Antoine Desgodetz to Rome to measure – yet again, and with greater precision – its ruined monuments and buildings. But in the eighteenth century, certain artists and writers began to approach the past in more emotional terms. Indeed, in the work of artists such as Giovanni Battista Piranesi (1720–78), we see a highly personal response to the past, especially in its fragmented state.

In 1743, fresh from the experience of seeing Rome for the first time, this prolific graphic artist remarked, "Speaking ruins have filled my spirit with images that accurate drawings could never have succeeded in conveying." Piranesi's emphasis on the expressive nature of ruins is telling. So, too, is the distinction he makes between experiencing ancient architecture directly, through on-site examination, and studying it at several removes by means of measured drawings.

One of Piranesi's prints from the *Vedute di Roma* series, depicting the remains of the Temple of Divine Vespasian,

¹ Portions of this essay are drawn from the author's 2012 book, Speaking Ruins: Piranesi, Architects and Antiquity in Eighteenth-Century Rome (Ann Arbor, MI: University of Michigan Press) and the catalogue of the exhibition catalogue City of the Soul: Rome and the Romantics, forthcoming in June 2016 from University Press of New England.

illustrates his sensitivity to ruins. Mistakenly believed in Piranesi's day to have been dedicated to Jupiter Tonans, or Thundering Jove, this temple is situated on the slope of the Capitoline Hill, overlooking the remains of the ancient Roman forum. Edward Gibbon, standing near this site in 1764, found himself moved to begin writing *The Decline* and Fall of the Roman Empire. Piranesi, however, was interested in the manner in which the past was enfolded in the present and what could be created from that tension.

Over the course of centuries, the temple's three remaining standing col-

umns had been buried in accumulated debris. In Piranesi's print they seem to thrust up through the earth, the richly carved foliage of their Corinthian capitals juxtaposed with the boughs of living trees. The ruins are both sunken in time and enveloped in nature, which is depicted in the act of reclaiming them. Picturesque goatherds gesture at their grazing flocks to the right of the temple, and an ox reclines in the foreground. The presence of livestock reminds us that in the eighteenth century this slope was commonly referred to as the Monte Caprino, and the *Campo Vaccino* (cattle market) flourished below, on the site the Roman forum once occupied (front cover). These bucolic references underscore the transformation of what had once been the functional and symbolic center of the Roman Empire into a pastoral landscape.

Paradoxically, by capturing the passage of time in his etchings, Piranesi manages not only to portray present-day Rome but also to more vividly evoke its past. Robert Adam wrote that Piranesi seemed "to breathe the Antient air," and Piranesi's contemporary Giovanni Ludovico Bianconi referred to him as "the Rembrandt of the ancient ruins." Even as he portrays the disintegration of these classical sites, he brings them more intensely to life.

Piranesi's emphasis on the importance of on-site encounters stressed the fundamentally creative role played by the



Giovanni Battista Piranesi, View of the Temple of the Divine Vespasian, etching, 1753–54.

ruins in stimulating his own imagination and, by extension, those of others. In the course of his career, through his virtuoso use of the etching needle, Piranesi would translate the famous vistas of the Eternal City into well over a thousand plates. The cumulative result constituted nothing less than a virtual Rome on paper – one that was diffused throughout Europe and abroad, prompting a new wave of artistic pilgrimages.

Much as the direct experience of the ruins spoke to Piranesi in ways that their abstraction, in the form of measured drawings, did not, so visitors found that the academic study of the past paled before the impressions produced by fragments of antiquity. Madame de Staël, who first visited Italy in 1804, set her 1807 romance Corinne there. As her male protagonist, a Scottish aristocrat, looks out over the forum in the company of his Italian guide, a beautiful poet, the narrator muses: "The eyes are all powerful over the soul; after seeing the Roman ruins, we believe in the ancient Romans as if we had lived in their day. Intellectual memories are acquired by study. Memories of the imagination stem from a more immediate, more profound impression, which gives life to our thoughts and makes us, as it were, witnesses of what we have learned." Like Piranesi, de Staël is fascinated by the ruins' generative powers for the creative spirit: "But suddenly a broken column, a half-destroyed bas-relief...remind you that there is in man an eternal power, a divine spark, and that you must never weary of kindling it in yourself and of reviving it in others."

Romanticism found fertile ground in the Eternal City. The defining features of the Romantic movement – passion, imagination, individuality, transcendence, nonconformity – thrived in the city's artistic enclaves in the late-eighteenth

through mid-nineteenth centuries. Visiting writers and artists in this period found themselves liberated from one set of expectations (restraint, adherence to prescribed norms, strict logic), and thrown into another (emotionalism, revolution, flights of fancy). The city readily lent itself to fervid imaginings and visionary renderings of itself and its past.

Certainly for Lord Byron and his contemporaries, the ruins of the Colosseum were a "still exhaustless mine / of Contemplation." In the famous "moonlight stanza" of *Childe Harold*, Byron invests the structure with magic powers:

But when the rising moon begins to climb
Its topmost arch, and gently pauses there;
When the stars twinkle through the loops of time,
And the low night-breeze waves along the air,
The garland forest, which the gray walls wear,
Like laurels on the bald first Caesar's head;
When the light shines serene but doth not glare,
Then in this magic circle raise the dead:
Heroes have trod this spot – 'tis on their dust ye tread.

Through the medium of Byron's verse and the agency of moonlight, the Colosseum is transformed from a ruined edifice into a "magic circle" capable of raising the dead.

Of course, the dead abide everywhere in Rome; their animating presence affects everyone who walks its streets. Ancient heroes live on, as do the writers and artists who have flourished in Rome over the centuries. These ghosts all contribute to the soul of the city, making it a constantly renewed source of artistic inspiration.

If historical cycles of decline and fall, for which ruins provided tangible and eloquent testimony, were central to the Romantic experience, so, too, was the natural world. Prior to 1870, much of Rome within the circuit of the Aurelian Walls was given over to nature as formal gardens and vineyards, and many of its ancient monuments like the Colosseum – where, in Byron's words, "dead walls rear / their ivy mantles" were overgrown with brambles and wildflowers. The painter François-Marius Granet commented on the picturesque vegetation enveloping the ruins of the Colosseum: "You find growing on it yellow wallflowers, acanthus with its handsome stems and its leaves so beautifully edged, honeysuckle, violets – in short, such a quantity of flowers you could put together a guide to the plants from them." In fact, botanists compiled catalogues of the flora growing on the Colosseum, one listing over four hundred different species.

The organic cycle of growth and decay intensified the elegiac message encoded in the ancient architecture, prompt-

ing reflection on mortality and the transience of human accomplishments. At the same time, the allied arts of poetry, landscape painting, and garden design were all invigorated by a transcendental vision of nature that asserted the primacy of the spiritual over the empirical. Landscapes, whether artificial or natural, were viewed by the Romantics as sanctuaries offering the individual sensibility opportunities for inspiration, renewal, and self-discovery.

In Childe Harold, Byron captured the fusion of art and nature nowhere more perfectly than in his evocation of an ancient fountain grotto popularly associated with the nymph Egeria. In a passage known to Byron, the ancient poet Juvenal had criticized the way this grotto, sacred to the nymph, had been desecrated by the hand of man: "We go down to the Valley of Egeria, and into the caves so unlike to nature: how much more near to us would be the spirit of the fountain if its waters were fringed by a green border of grass, and there were no marble to outrage the native tufa!"

In his own verses in *Childe Harold* describing the grotto, Byron responds to Juvenal's complaint, pointing out that, with the passage of time, shrines originally fashioned from nature but subsequently profaned by the artifice of man eventually become ruins and revert to a state of nature:

The mosses of thy fountain still are sprinkled
With thine Elysian water-drops; the face
Of thy cave-guarded spring with years unwrinkled,
Reflects the meek-eyed genius of the place,
Whose green, wild margin now no more erase
Art's works; nor must the delicate waters sleep,
Prisoned in marble, bubbling from the base
Of the cleft statue, with a gentle leap
The rill runs o'er, and round, fern, flowers, and ivy creep,
Fantastically tangled . . .

The mythic associations of the Grotto of Egeria, together with its isolated and picturesque setting, appealed to the Romantic sensibility. Charlotte Anne Eaton's 1818 description is typical: "The sides of the grotto are overhung with the beautiful Capillaire plant, that loves to grow on rocks that drink the water drop. This spot . . . is now abandoned to a solitude as profound as when Numa first sought its enchanted glade."

The abundance of flora hanging from the damp, moss-covered walls and vault so impressed Hans Christian Andersen that he set a scene of his novel *The Improvisatore* (1835) in

the grotto. Andersen's youthful narrator stops here on his way to visit one of the numerous catacombs that occupy the surrounding subsoil. While enjoying a rustic breakfast, he observes that "the walls and vault of the whole grotto were inside covered over with the finest green, as of tapestry, woven of silks and velvet, and round about the great entrance hung the thickest ivy, fresh and luxuriant as the vine foliage in the valleys of Calabria."

Percy Bysshe Shelley was not merely inspired by the marriage of ruins and nature in Rome but, like Piranesi, created from *within* it, writing parts of *Prometheus Unbound* while perched atop one of the piers of the Baths of Caracalla. One of his letters provides a richly detailed description of his bower amid the ruins:

In one place you wind along a narrow strip of weed-grown ruin; on one side is the immensity of earth & sky, on the other, a narrow chasm, which is bounded by an arch of enormous size, fringed by the many coloured foliage & blossoms, & supporting a lofty & irregular pyramid, overgrown like itself by the all-prevailing vegetation. Around rise other crags & other peaks all arrayed & the deformity of their vast desolation softened down by the undecaying investiture of nature. Come to Rome. It is a scene by which expression is overpowered: which words cannot convey.

Writing in this setting was a total sensory experience for Shelley, who observed that the wildflowers "scatter through the air the divinest odour, which, as you recline under the shade of the ruin, produces sensations of voluptuous faintness, like the combinations of sweet music."

In 1845 Shelley's retreat was immortalized by the painter Joseph Severn, who painted a posthumous portrait of his dead friend in this very setting, codifying some of the principles of the Romantic sensibility in his picture. It is instructive to compare it to Tishbein's portrait of Goethe, created more than half a century earlier. In the earlier painting, the subject – who is considered by many a precursor to the Romantics – is set against the expansive backdrop of the Roman campagna, with the ruins of the tomb of Cecilia Metella and the Claudian aqueduct in the distance. Goethe reclines on what appears to be the broken shaft of an Egyptian obelisk, while other fragments, including a capital and a bas-relief, occupy the right foreground of the composition. The figures composing the classical frieze may allude to Goethe's play *Iphigenia in Tauris*, which he was writing while in Rome. Nature is present, but relatively subdued; ivy tendrils curl over the bas-relief, and a tree is visible in the far-off distance. The unmistakable profile of Monte Cavo and the

Alban Hills close the horizon.

While Goethe's literary genius is clearly meant to be aggrandized by his classical setting, Severn's portrait takes such inspiration one step further and depicts Shelley in the very act of writing, pen in hand and notebook open on his thigh. The earlier writer dominates his surroundings, whereas Shelley's figure takes up less of the canvas; he is, instead, within the landscape. Nature, too, is more prominent in the later painting; flowers bloom at the base of the wall on which Shelley casually sits, while other blossoms appear behind him. A gnarled tree trunk rooted in the ancient masonry divides the composition in half, further enveloping the poet in a regenerative landscape. Shelley may be dead, but his genius, Severn suggests, will always be with us, inscribed in not only the classical arches behind him but also the page on his knee and the grass under his foot.

Rome had a long tradition of landscape painting – extending back to the seventeenth century and the works of Annibale Carracci, Nicolas Poussin, and Claude Lorrain – but in the nineteenth century artists brought new sensibilities and

Giovanni Battista Piranesi, View of the Arch of Constantine and the Colosseum, etching, 1746–48.

approaches to the depiction of nature. The plein-air oil sketch, the watercolor, and the novel medium of photography yielded fresh interpretations of familiar subjects. Early photographers creatively employed technology to represent the invisible passage of time, producing what John Stiligoe much later called "permanent evanescence."

The Romantics would have loved that characterization. Mutability, with a hint of melancholy, was at the heart of many Romantic works of imagination. Rome and her ruins answered the Romantic longing for the ambiguous, the mystical, the ineffable, the transcendent. It provided the mise-enscene for personal interpretation of what was simultaneously unceasing and fleeting. Rome, eternal and metamorphic, charged the imaginations of artists and writers exactly because it was both eternal and ephemeral.

The decision to lay bare the masonry of the Colosseum in 1870 marked the passage from a Romantic view of ruins to one driven by the stern imperatives of scientific archaeology; today this ancient monument presents a starker spectacle, shorn of its ivy mantle. Happily, Egeria's grotto has not suffered the same fate: still it appears to revert to a state of nature, with pendant vines suspended from the vault and a leafy crown of verdure silhouetted against the sky.

Nevertheless, concerns of preservation condition the way we interact with this and other ruins. Visitors are no lon-

> ger permitted to enter the Grotto of Egeria and experience its embrace as Piranesi and Byron once did, but are instead kept at a distance by barriers and restricted to a viewing platform. This has the unavoidable effect of muting the ruins' voice. Fortunately, that voice will always be audible in the works of those artists who came before us. As Nathaniel Hawthorne observed in his introduction to The Marble Faun (1860), "Romance and poetry, ivy, lichens, and wallflowers, need ruin to make them grow." – John A. Pinto



The Neander Valley: The Place We Learned We Were Not Alone

rchaeological and anthropological landscapes are those largely defined by traces of the human past. Sometimes those traces are visually prominent, as in places dominated by architectural ruins, and sometimes they are subtle, but in all cases, it is some element of the human story that, by association, creates a distinctive sense of place. There is a small valley just outside of Düsseldorf where the physical traces are mere shadows, but the story told is monumental. The valley is called Neanderthal (Neander Valley, *thal* meaning valley in German), and that story is about the origins of mankind. It begins with a distinguished theologian named Joachim Neander, who lived for only thirty years in the second half of the seventeenth century.

Neander's family name in the German vernacular was Neumann, meaning "new man." As a scholar and a bit of a pedant, the borrowed dignity of classical association led him, like his grandfather, to refer to himself by the Greek equivalent of his surname, Neander. His reputation now rests exclusively on his work as a hymnist, particularly his authorship of the lyrics to the popular hymn "Praise to the Lord, the Almighty, the King of Creation."

Although the story may be apocryphal, Düsseldorfers relate that shortly after Neander's arrival in their city in 1674, work began on a new church (now called the Neanderkirche) adjacent to his residence. This proved to be a mixed blessing. Construction, then as now, dragged on, and the cleric found the noise and commotion of a building site inconducive to his scholarly and spiritual pursuits. In search of peace and quiet, he adopted as his retreat a quiet valley outside of town, then known as the Gesteins. The frequent visitor became a familiar presence to the residents of two nearby villages, who began referring to the cave and river landscape as Neander's thal. The name stuck, leading to the incredible coincidence that the place where, two centuries later, we discovered for the first time another species of human was already referred to as "new man's valley."

During the two centuries following his death, Neander's valley became a major attraction for tourists and travellers due to its unique landscape: a dramatic gorge of cave-studded limestone walls rising vertically from the base of the Düssel River, all draped in extravagantly lush vegetation. Joachim Neander had regarded it as a quiet spot to contemplate the glories of God, but by the end of the eighteenth century the valley was imbued with a Romantic sensibility. Count Leopold of Stolberg's 1791 report of his visit to the valley reveals

clearly the Romantic infatuation with the sublime:

Crossing cornfields that had been harvested, we entered a beechwood and suddenly found ourselves facing a jagged, massive wall of rock. Through a broad opening, we then entered a winding corridor... Suddenly, a deep ravine yawned at our feet; opposite us, majestic rocks – like those in whose caves we were standing – were crowned with woods and covered with brushes and ivy on one side. Below us the Düssel rushed past.

Throughout the first half of the nineteenth century, artists and printmakers celebrated this unusual landscape, exaggerating its Romantic qualities and advertising it as a destination. The Neanderthal Museum has identified over 150 such images, including the 1803 engraving by Johannes Vergurgh reproduced here, *Three Hikers Overlook the Neander Cave*. These images succeeded in attracting visitors hungry for the thrill of the sublime. By 1843, a visitor writing in her diary noted that the rocks, "one the most fascinating places in our country," were "swarming with people."

Fame and tourism proved no defense against the imperatives of the industrial age, however, and the railway's 1841 penetration of the German countryside foreshadowed a dramatic change in the landscape. Just over a decade later, German industry's demand for limestone – as both a building material and a vital ingredient in iron smelting – led to the commencement of mining in Joachim Neander's valley.

In early August 1856 two Italian workmen were shoveling loam and mud from the base of the small Feldhof Cave; the laborious, manual process was necessary so that these impurities would not contaminate the limestone rock following blasting. The diggers were startled to unearth a cache of unusual bones and had the good sense to alert their foreman. The bones they found, initially thought to be those of a bear, were sent by the mine's owners to a teacher and fossil enthusiast in the nearby town of Elberfeld, Johann Carl Fuhlrott. It was Fuhlrott who eventually advanced the theory that the bones were evidence of an earlier species of human.

The timing of the discovery could not have been more fortuitous. Only three years later Darwin would publish *On the Origin of Species* by Means of Natural Selection. In short order the Neander Valley discoveries and others helped scientists prove that Darwin was right: modern man evolved in the same way as other animals and was not created in his contemporary form. The box of sixteen bones from a cave outside Düsseldorf sparked a clash between science and religion that continues to this day, but science has never looked back: in 2012 we finally sequenced the complete genome of *Homo neanderthalensis*. Thanks to a combination of archaeological and genetic evidence, we now have a clearer picture of the numerous human species and subspecies that preceded *Homo sapiens* – some our direct ancestors, and some, like the Neanderthals, kissing cousins who eventually suffered extinction.

Once Johann Fuhlrott understood what he was seeing, one might assume that the quarrying would have been stopped and the site properly investigated. This did not happen. Archaeologists now believe that at least eight other caves on the site contained Paleolithic remains, all of which were destroyed by continued mining. (Remarkably, no other archaeological work was carried out in the Neander Valley until the late twentieth century.) The eventual effect of the quarry operations was that Neander's Valley was not simply defaced but utterly obliterated. Mountain, cliff, and cave alike were cleanly excised with a cut just above water level, only the Düssel River itself stopping the miners from cutting deeper. With the exception of the last quarry cuts in the hill to the north and a single, stumpy fragment of the famous Raben-



stein rock, there remain no signs of the celebrated gorge, vertiginous views, lush vegetation, or damp cliffs. It is as if the entire ravine has been lifted out – plucked from the face of the planet.

In 1918 the damaged valley faced an additional threat: the commencement of large-scale forestry operations, which included a plan to clear-cut the surviving forests to the north and south of the original gorge. This would have had devastating consequences, both ecological and scenic. Happily, this new threat coincided with the early stirrings of ecological concern in Germany and a growing nature-preservation movement in this part of North Rhine-Westphalia. A local group, the Nature Protection Association Neander Valley, was organized to oppose the deforestation and succeeded shortly thereafter in having most of the area declared a nature reserve. Although the original Gesteins caves and gorge were lost forever, the twentieth-century story became one of a deeply valued pocket of nature in a fast-growing region saved and stewarded by concerned local citizens. Today approximately ten million Germans live within thirty kilometers of the park. The riverine landscape and limestone outcroppings host an impressive diversity of plant and animal life, including two endangered species of ferns, a rare dormouse, and a couple of woodpecker species in danger of extinction.

The concept of the nature reserve was gradually expanded to embrace its Paleolithic associations, beginning in 1935, when a large part of the site was dedicated to breeding and providing habitat for animals associated with Ice Age Europe, including bison, aurochs, reindeer, elks, and wild horses. The size of the reserve also has been expanded repeatedly and now includes 257 hectares along the Düssel River between Erkrath and Mettmann. Today, in addition to the Ice Age animals, a sculpture path through the reserve called *MenschenSpuren* (human traces) uses contemporary art to engage the viewer aesthetically and emotionally with the landscape and its meaning.

In 1996, an ambitious museum designed to interpret the discovery of *Homo neanderthalensis* and tell the story of human evolution opened adjacent to the site of the original find. The building's distinctive shape, echoing the spiral of DNA, and its surface of bluish-green Japanese glass are the creation of German architect Günter Zamp Kelp and his team. Between 1997 and 2000 excavations along the southern bank of the Düssel River resulted in the discovery of the original location of the Feldhof Cave (its floor was approximately twenty meters above the present grade). They also yielded additional

Engraving by Johannes Vergurgh, Three Hikers Overlook the Neander Cave, 1803. Neanderthal bone and tooth fragments and cultural artifacts contained in newly excavated debris from the mining works. These findings, together with the then-approaching 150th anniversary of the original discovery, led the foundation that operates the Neanderthal Museum to sponsor an international landscape-architecture competition for the design of a site plan that would integrate the museum building with the newly discovered location of the lost caves and interpret their significance for visitors. The competition was won by Cornelia Müller and Jan Wehburg from the Berlin-based landscape firm Lützow 7.

These designers were presented with the ambitious task of creating what the museum calls "a museographic-artistic landscape of remembrance," linking the museum building to the greater valley, interpreting the location of the 1856 find, putting Homo neanderthalensis and the history of the valley in perspective, and challenging the visitor to deep selfreflection. For the project they developed a symbolic language dealing with orientation in space and time. Stone crosses, set horizontally on the ground like remnants of a grid, signal north and south axes. Most contain images not easy to decipher, such as a concrete slab featuring naked human footprints contrasted with an unfamiliar pattern that I had to be told represented the impression made by Neil Armstrong's boots on the moon. The walkway through the site forms a time line illustrating the occurrence of events along a temporal axis.

In the large fields that occupy the location of the 1856 discovery, the visitor is soon distracted from the seemingly random scattering of stone crosses by a cluster of curvaceous but clunky concrete daybeds, meant to induce visitors to recline, look up, and contemplate the location of the original base of the Feldhof Cave twenty meters above them. Two patches of plantings evoke Stone Age plant life. An assemblage of redand-white-striped metal poles, no longer quite plumb, marks the location of the excavation area. One of the few literal visual cues is a void cut in a large steel plate in the shape of a full-size, standing Neanderthal figure. The negative space conveys the figure's profile and scale. Despite the obvious implications of a void, this object, confusingly, is placed along the path-cum-time line at the point when the *Homo neander-thalensis* appeared, not when they disappeared.

The 2002 design was a thoughtful and clever approach to interpreting a site with no physical remains, but in time it proved too clever. Few visitors understood what they were seeing. The foundation's current leaders admit that the original interpretative approach has failed or, as my host put it, "Our visitors are not satisfied." This kind of focus on the landscape visitor is commendable; it also serves as a useful reminder

that although symbols and allusions can give a landscape depth, they ultimately will frustrate those they are designed to inform if they are not intelligible to the average visitor.

The foundation plans to try again. In 2014 it launched a second competition and workshop that resulted in a new plan to modify the original design. This includes a tower at the height of the former Feldhof cave, where visitors can climb a four-hundred-meter ramp to experience the view of its original Neanderthal inhabitants. Three-dimensional animations are planned to illustrate different moments in the long history of the valley. As of this writing, the two million euro project has not been funded, and execution of the new plan is stalled. The Neanderthal Museum does a highly effective job presenting the story of the Neander Valley, the 1856 discovery, and the discovery's implications. It deserves an interpretative landscape plan of similar quality, worthy of the importance of the place.

The word "iconic" is overused, especially in the world of landscape history and design. Not everything symbolic is iconic. The things, events, and ideas represented by an icon must be truly important to be iconic in the more robust sense of the word. The Neander Valley meets that standard. The discovery of our nearest evolutionary relative and the resulting confirmation of the fact of human evolution was fundamentally disruptive to humanity's worldview. The Neander Valley is now inextricably associated with this cognitive revolution: it was there that modern humans first gazed down at the bones of another type of human, figured out what they were seeing, and gave the name of the place to our new-found relative.

In addition, the story of the valley illuminates man's evolving relationship with the natural world. The landscape in which our anonymous Neanderthal cousins were laid to rest survived for thirty thousand years. In the nineteenth century it became a vessel for modern man's notions of transcendence through nature - perhaps not so different from the sensibilities of the Neanderthals who chose the gorge as their burial place. But then, in an evolutionary instant, that landscape vanished. The industrial activity that destroyed it has proved equally ephemeral. And now the ecological sensibility that saved the place from further destruction is being displaced by a conviction that the place's highest value lies in its associations with our discovery that we once were not the only type of humans on the earth. In turn retreat, romantic idyll, quarry, and nature reserve, the Neander Valley now has found meaning as a truly iconic landscape that belongs to all of humanity. - Frederic C. Rich

Algerian Journal: Among the Ruins of Provincial Rome

rying to ignore my Kalashnikov-bearing escort, who is peering over my shoulder to see the sketch I'm making, I focus upon a clump of flowers growing from a ledge in front of me. They are asphodels. The location is Tiddis in Algeria, the site of a once-thriving Roman city that now consists of a constellation of red blocks and stumps of stone scattered down a mountainside; far below I can see the pale glint of a river winding its long way north to the Mediterranean. The sun, refracted through the clouds that have settled over the valley, picks out countless flowers on the hillside – a profusion of red, yellow, and white – but at present it is the spectral green of the asphodels that preoccupies me. For the ancients, asphodels were the flowers of Pluto, representing the souls of the dead. The group I have come with has disappeared over a hill, and the ruins about me are quiet. I concentrate on my sketch, although it will fail to contain the cool breeze that is moving the stalks of the wild grasses, or the swallows that are wheeling above the ruins.

This was the Roman city of Castellum Tidditanorum, one of many in the region that existed as a military outpost to defend villagers and their plentiful harvests of grain, which were destined for the hungry city of Rome. A handsome Trajanic arch still stands over the main street, which leads from the valley below into what remains of the town. Like many former Roman cities in what we today call Algeria, this particular set of ruins doesn't resemble those one encounters in Italy or Spain, or found in treatises on Roman town planning. The rational grid planning derived from the Greek mathematician and planner Hippodamus, which was codified in the typology of Roman military camps, is hard to detect here. Instead, as at a number of evocative Greek sites, the layout is adapted to the uneven topography. Streets wander off at angles along slopes; for aand piazze are truncated and wedged into hillsides. What should be the cardo - normally an all-defining north-south axis of the *urbs* – enters somewhat cockeyed and then dribbles away down a steep slope. A tiered set of still-crisp stone arcs form an intimate hillside theater, tucked into a hill with its back to the city.

After wresting the region from the Carthaginians, the Romans managed to build more than five hundred towns and cities in what is now Algeria. For several centuries the combined territory comprising modern Algeria, Tunisia, Morocco, and Libya supplied 60 percent of Rome's grain supply. The borders separating these countries today have little to do with their topography, ecology, or history. Several ranges of mountains rise abruptly in a series of bands along

the southern coast of the Medi- A view today down the valley from terranean Sea. Between them are hills, valleys, and upland plateaus. A partially discon-

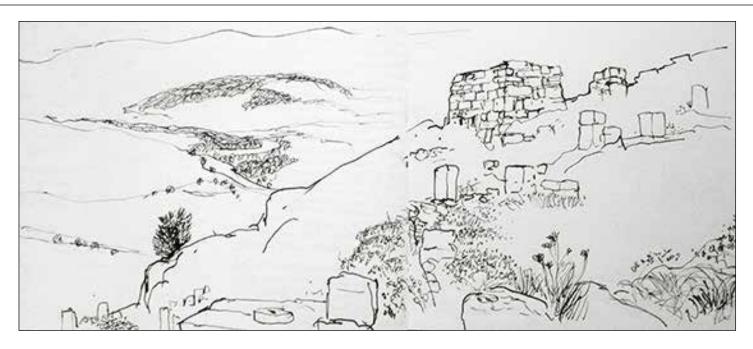
Tiddis, the site of the Roman city Castellum Tidditanorum.

tinuous group of peaks of the southernmost range, generally known as the Atlas Mountains, divides this northern strip of Africa from the Sahara desert. It is possible to grow citrus and palms along the ocean, but only a few miles inland the winters can be cold, even harsh. It is an ideal region for growing wheat, however, which, like most grasses, prefers warm days and cool nights, especially for germination.

As is true throughout the Middle East, the countries in this region, carved from nineteenth-century European colonies, are plagued with violent political and ideological upheaval. At best, this makes visiting many of the region's historic sites deeply problematic. Although our group was grateful for a friendly escort of national and local police, which accompanied us everywhere, it was impossible to slip into a site unnoticed. Yet there was something strangely appropriate about arriving at each site in a caravan of jeeps and vans, with a well-armed escort. Nearly all of the Roman sites in the uplands and mountain valleys of eastern Algeria began as military posts intended to protect farmers and crops from raiding bands of Berbers, Tuareg, and others living in the mountains or the desert beyond.

A considerable number of the largest Roman towns lie east of Algiers in the region of Kabylie and the Aurès mountains. Some are located on open plateaus, while others are perched upon elevated sites, with gorges and forested mountains nearby. A few settlements have disappeared almost entirely beneath their modern counterparts, as at Constantine and Batna, but in most cases the ruins are extensive, sixteen hundred years of plundering notwithstanding. Topography permitting, the settlements often exhibit the prototypical plan used throughout the empire and its colonies – that of a north-south and east-west, solar-oriented, rectangular grid with two principal streets crossing in the center: the *cardo* and the decumanus. Both falling down and piling up in varying states of erosion and deposition, such ruined cities often seem more melted than broken, forming a unique topography of shapes and suggestions.

The ruins in Algeria and Tunisia have an undeniably picturesque quality. This is in large part because the French archaeologists who worked on the sites between 1900 and 1920 were imbued with an aesthetic derived from nineteenthcentury Romantic painting, and they reerected nearly all the



columns and arches that still stand on these ancient sites today. They would carefully reposition some, but not all – often for evocative effect. For example, a few tumbled columns might be set up at a corner to suggest a missing structure, shaping a space while standing in equipoise against the horizon; or a group of fragments would be assembled off to the side, leaving other architectural elements strewn artfully about. (The visual trope behind this imagery, of course, is the elevated group of three columns that stand at a corner of the Forum in Rome, which has been endlessly drawn, painted, and photographed.) At several sites, enough of a theater has been cleared and rebuilt to indicate its shape and offer a dramatic view.

Visiting Roman sites in former French colonies is, therefore, to experience archaeology filtered through a painterly aesthetic. This is not necessarily a negative thing; it is simply one form of curatorial management. Scholars of our era, however, are often critical of this approach, feeling that such arrangements produce a misleading fiction: a manipulation of what the remains truly represent.

To a degree, the Western aesthetic appreciation of ruins is related to an embrace of partial remains of artworks; our museums are replete with armless, headless torsos; heads without bodies; and fragments such as the giant foot of Constantine at the Capitoline Museum in Rome. And visits to ruined landscapes have inspired artists and architects since the Renaissance. (Some, like the architect Sir John Soane, even went so far as to envision and depict their own works as

an impressive set of ruins of the future.) Imbalance, asymmetry, and collage - hallmarks of the arts in recent centuries are attended by both a yearning for an imagined grandeur and a rejection of perceived authority and restrictive, classical precedents. And yet there are few European records of ancient remains in this part North Africa. The artists, principally French, who visited Morocco, Algeria, and Tunisia were mesmerized by the pulsing color and energy of Islamic culture and architecture; dusty stones and partially buried columns of Roman cities weren't engaging to them. It was for late-nineteenth-century French and German archaeologists to notice and represent the visual power and strength of Algeria's classical era.

One of the most engaging sites in all of Algeria is Tipasa, located a few miles west of Algiers. There on a curving bay, with a dramatic, conical peak for a backdrop, are the remains of a harbor with villas, streets, temples, and plazas that have attracted artists and visitors since antiquity. Today the entire site has become a public pleasure ground. Locals and tourists climb among the fallen columns, taking photos of one another, and lovers camp out behind fragments of walls, among invading olives and pines. Forest groves frame stone rooms and mosaic carpets, set upon a terraced hillside as if arranged for picnicking families. The forum, once surrounded by commercial, civic, and residential buildings, is now reached via a path through a wood. The walls of atria and dining rooms of seaside villas have been reduced to ledges and stumps, like so many benches and seats.

There is a decidedly scenographic air to it all. Four connected arches pose together for visitors on an escarpment at the edge of a plaza, framing views to the sea and a mountain. An ancient olive tree recorded by visiting Allied military personnel during World War II still stands behind the first arch, where young Arabic couples lounge with their children. Half a dozen boats filled with weekend fishermen and teenagers in swimsuits bob about below, where the town tumbles into the bay. More walls, pavements, and what appear to be pieces of columns can be seen beneath the clear water. The omnipresent, brilliant blue expanse of the sea and sky; the scent of eucalyptus and pine; the shimmer of leaves on ancient olive trees; the glitter of blades and spines of palms, agaves, yuccas; the faint lapping of the sea below; and the soft buzzing of bees combine to stimulate and nurture a visitor's senses as they have for centuries.

Strolling along one of the streets, I came to an intersection with the remains of a fountain. At one ruined city after another across Algeria, the buildings themselves may be missing but the elements that held the city together and provided its connective tissue – streets, curbs, drains, fountains, basins, gates, stairs, and plazas – are largely still in place and intact, forming a structured landscape. Without difficulty one can distinguish the important civic buildings, such as

At Timgad, an arch honoring Trajan and a group of columns glow in the sun as a late afternoon storm builds in the East over the Aures mountains.

libraries, theaters, and markets; the stalls and counters of the merchants; and the drains and seats of the public toilets; even the former location of monuments and statuary long ago carted off to Paris and Berlin. It is a bewitching demonstration of metamorphosis: an entire world of streets, squares, columns, pavements, doors, and windows appears to be emerging from the earth and subsiding into it at the same time.

In contrast to Tipasa and the coast around Algiers, the Roman sites inland are harsher on first encounter. Tiddis and Djemila were built in key locations on low mountain ridges along what was once a contested frontier in the first and second century CE and has become so again in the years following the Arab Spring, which began nearby in Tunisia. They, along with Timgad and Tébessa, were garrison towns that grew into sizable centers of trade. Laid out on grids, their orderliness and obvious efficiency is evident as one wanders about in what seems to be a vast sea of square and rectangular stone pens and corrals – all that remains of the barracks, apartments, warehouses, mills, and workshops that were toppled by earthquakes and quarried by successive waves of invaders and settlers over the past fifteen hundred years.

Strangely, the last things standing are often gates — whether once civic and ceremonial or part of a defensive perimeter. Visitors are inevitably drawn to these features. In Lambaesis, another town where legions were quartered, an enormous quadrilateral arch, referred to as the Praetorium for the guards who apparently lived within it, has become the winter home for dozens of storks that have built their nests on top of it. Made of large blocks of honey-colored sandstone, like many of the Roman structures that survive in Algeria, the monument stands alone on a level plain in a sea of wildflowers, grasses, and scattered stone fragments.

As we observed the big birds landing and taking off in the early morning sun, and peered at the small image of Diana

the Huntress (apparently the protector of the troops once stationed there) that was carved into the keystone of one of the monument's arches, a shepherd arrived with a flock of dirty sheep mixed with black and white goats. Soon his sheep and goats had fanned out ahead of him among stones of virtually the same size and bulk and become visually confused with them. Suddenly a flock of swallows appeared, darting about and swooping over the ruins, feasting on insects rising from the patchy turf as the day began to warm up. In a few weeks they would be headed north, to their summer home. The soldiers, traders, farmers, and their convoys of goods are long gone, but the birds still return – not the same birds, of course, but their descendants.

As one travels through the fields and forests and ragged villages of northeastern Algeria, military posts, too, become a familiar feature of the landscape. They are simple, boxlike structures located at regular intervals on hills and peaks, often within sight of one another. As in ancient times, they are there to keep track of trouble, which today means Islamist revolutionaries or terrorists, who move about in the mountains nearby and are a constant threat. The agriculture, too, evokes an earlier era. Small flocks of sheep and goats appear and disappear; occasionally one sees a donkey with a cart or a stray cow; rarely a horse. Tractors are unusual; instead men and women work the fields with hand tools. Agribusiness, with its large-scale use of pesticides, fertilizers, and motorized equipment, has not yet arrived. As a result the spring brings great drifts of wildflowers, vast sweeps of poppies and marguerites, daisies and campanulas – not only in fields among the crops, but also along the roads and in the woods.

When first glimpsed from a distance, the ruins of Timgad are extensive and spectacular. There is something stunning about a city reduced to rubble and yet with all of its streets open and traversable. The vista is punctuated by arches and a handful of gigantic columns gleaming in the late-afternoon sun, as a storm builds on the horizon. To the east are forested foothills, and behind them the snowcapped massif of the Aurès Mountains.

I enter the city through a gate and up a slight incline, between a textbook allée of Italian cypress. It's a bit of cheap theater but effective, decanting the visitor into the *cardo* and headed straight for the forum. The city spreads out sym-

¹ In "Jihadists Widen Their Networks in North Africa" (*New York Times*, January 2, 2016), eight recent episodes of political violence or terrorism by Al Qaeda in the Islamic Magreb were shown on a map of the region of northeastern Algeria visited on this trip.



metrically to the left and right across a level plateau, offering a sense of completeness similar to that of Pompeii or Ostia Antica near Rome. Walls, doors, and columns of hundreds of rooms in innumerable houses stretch away into the distance. Passing a set of public baths and a library, I arrive at the forum to ascend a broad set of shallow steps into a paved piazza. Straight ahead is a hillside theater that has been cleared and partially restored. Like other stone theaters around the Mediterranean, it is remarkably handsome, more irresistible standing empty than it would be filled with people. Those who climb the steep stairs are rewarded with a superb panoramic view – including a forest of columns set up in atria across the city - because the frons scenae, or multitiered back stage, and side walls that originally enclosed the seats have not been reerected – itself a theatrical choice on the part of archaeologists. A carpet of green and flowers fills virtually every cubicle of the theater's partially restored and stabilized walls. An air of curated neglect permeates the scene.

Founded in the first century during the reign of Trajan, Timgad was the largest city in the region and thrived until the fifth century when Berbers sacked it. Despite the complete lack of any labels or maps, it is one of the most visited historic sites in Algeria. A public market with a unique set of shops is arranged in an inventive set of radiating arcs around a central court, with a major fountain in an exedra opposite the entrance. There are at least a dozen neighborhood baths, as well as several larger thermae. The most notable edifice is a handsome Trajanic arch. Tall and broad, with two side arches for pedestrians and a taller center opening for vehicles and horses, the warm sandstone with its fine carving and detail glows a warm amber in late afternoon light. The lowering light also dramatically picks out the deep grooves and ruts worn into the pavement by centuries of iron-shod wheels passing through the archway, leaving one to imagine the noise they must have made as one walks through the silence back downhill to the city gate. Who today knows who lived, worked, wrote, loved, and died in ancient Timgad? And yet here it still is, sort of, with hundreds of columns and dozens of avenues overlooking its broad valley and distant range, which is now turning deep purple under a gathering storm.

Faced with awkward or difficult topography, the Romans proved as skillful and deeply artistic in their adjustments and adaptations as the best of the Greek planners and designers. A particularly striking example is that of Djemila, originally named Cuicul when it was founded in the first century.

Built in mountainous terrain, it thrived as a regional agricultural center until the fifth century, when it was sacked by the Vandals; later it was plundered by Arabs. The main spine of the city, its cardo, follows a long sloping ridge that is oriented north-south. Its *decumanus* climbs steeply up from the western valley. After crossing the cardo, it passes through a handsome caramel-colored arch (attributed to the reign of Caracalla) that opens directly into a forum, which is cranked almost forty-five degrees from the main street - an alteration that was almost inevitable if such an architectural space space were to fit on the mountainside. This innovation has the remarkable effect of placing its two principal structures into opposing, dynamic views as one approaches from any direction. From the east and north, a long set of steps of the now-vanished basilica, running the length of the forum, is seen receding diagonally from the foreground into the distance; approaching the forum from the south or west, one is presented with a set of tall, monumental stairs leading to the imposing mass, walls, and columns of a temple to the Severan family.

Below the forum one encounters the remains of the Capitolium. As one passes through a sequence of open cubicular rooms and heavy elegant arches, it is startling to come across the headless, limbless, giant torso of a god or emperor – it's difficult to tell which, as their bodies were presented in much the same way by the second century – propped up into a standing position against the wall. Adjacent to the Capitolium is a public bath; a second bath lies north of the forum. Larger and built later, it is a disorienting architectural exercise in geometry, with baroque diagonals and unexpected views among the principal spaces. The rooms for hot and cold water, steam, massage, etc. are assembled in a series of

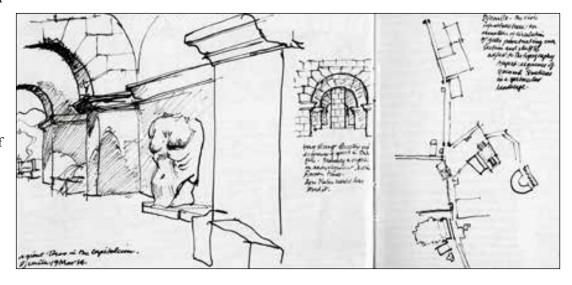
triangular relationships and softened with curves and apses. Once decorated with polychrome marbles and mosaics – scraps of which still litter the ground and cling in bits to the stone structures like shedding bark – this building, with its mazelike juxtaposition of

Sketches from Djemila: a heroic torso in the Capitolium south of the forum; the plan to the right illustrates the radical adjustments the Romans made to fit their civic structures onto this mountainous site.

curves, cubes, and diagonals, once embodied qualities that we still use Latin vocabulary to describe today: voluptuousness and luxury. Djemila has to have been one of the most beautiful and ingenious of all the Roman sites in North Africa.

In contrast, cold and windy Madauros doesn't seem like much at first, despite its handsome mountain site, but the town becomes interesting on exploration. An industrial quarter houses the remains of extensive olive oil factories. Dozens of heavy, grey, stone presses, with their matronly waists and square holes for the handles used to turn them, are intact in their original places in the work yards. A Byzantine fortress, cobbled together of scavenged bits, sits in the Roman forum. Downhill is a charming theater; extremely intimate, it is the smallest in all of Africa. Prowling about, one discovers a pair of well-proportioned baths side by side. One for men and one for women? A separation of classes? Who knows? This was the city where the young Saint Augustine was sent to study Latin, and where he got into some of the youthful scrapes – like stealing fruit from an orchard with his companions – that he later described in his Confessions.

As one draws near the coast in the eastern region of Algeria, there are frequent references to Augustine. Hippo Regius is the city most identified with him; he became its bishop in 395. Unlike many inland ruins with attractive hilltop situations, the remains of Hippo are somewhat morbid. The site of this once grand city – sinking, largely flooded, and overtaken by rank terrestrial and aquatic vegetation – is difficult to visit or understand. A Punic seaport before it became a major harbor for grain shipment in the reign of Augustus, Hippo has been overtaken in the twenty-first century by the large industrial port city of Annaba. A gargantuan basilica dominates the scene from above – the hideous offspring of French



nineteenth-century, Roman Catholic architecture – as one drives through an industrial expanse analogous to Hoboken and Perth Amboy but grimmer. The remains of the Roman city are bafflingly hard to find – possibly because the government intends to discourage visitors from seeing their shocking state. Although they were well excavated and studied between 1900 and 1920, not much is available for viewing today; the Muslim population of the city appears to have little interest in Saint Augustine. Puzzling one's way past suburban walls and portions of pavement glimpsed between reeds under the water, one can hardly fathom the former grandeur of this famous ruin. The drowning monument grounds and tangles of vegetation are clearly as much an embarrassment as a challenge for the local authorities; visitors are forbidden from taking photos. Some of us did anyway, but of what I couldn't imagine. After a desultory walk and a scramble through the bushes in hopes of seeing something other than refuse, we gave up and left.

Goethe, while staying in Rome near the end of the year in 1788, wrote in his journal:

The observation that all greatness is transitory should not make us despair; on the contrary. The realization that the past was great should stimulate us to create something of consequence ourselves, which even, when in its turn, it has fallen in ruins, may continue to inspire our descendants to a noble activity such as our ancestors never lacked.

Closing my eyes and thinking about the Roman sites of Algeria and their state verging on wildness, I recall a palette of fresh crisp green, with a foam of white and yellow blossom, of earthen-colored architectural forms and sharp shadows beneath a sky of bright blue and white, occasionally overtaken by fast-moving masses of grey cloud and light mist or rain, only to return once more to bright sun and color. Always there are mountains, whether near or far, and birds.

Finally, how is one to think about the gods – the gods of the inhabitants of these distant communities who hauled masses of stone up mountainsides from the valleys below, and of the people who fashioned them into such imposing structures, positioning them so superbly? It was their time, not ours. And they thundered for over a thousand years, these gods; they schemed, meddled, and directed the work and troubles of men. Occasionally at night in the remote hotels of Kabylie, I would hear distant thunder and think of the Olympians, only to remember that they have left the stage and gone away now, never to return. – Laurie Olin

Quarai and Its Gardens: Notes on the Ancient Pueblo Landscape of the American Southwest

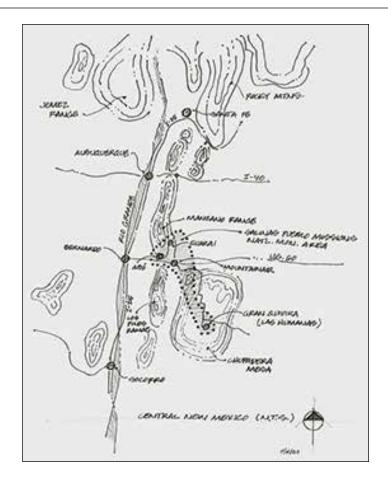
he old Tiwa town of Quarai, which lies in a picturesque, spring-fed valley at the southeast end of the Manzano Mountains, an hour's drive from Albuquerque, has a remarkable history of planned gardens. This small settlement of five or six hundred people, which flourished from the eleventh century until drought closed in about 1674, developed a series of shrubhollow gardens and related landscapes that a keen-eyed visitor can appreciate even today.

In American terms, Quarai is an ancient place. Its original buildings are eight or nine centuries old. Today they form only a grassy mound under the cottonwood trees next to Zapato Creek. The settlement was populated by perhaps one hundred or so Tiwa-speaking Pueblo people in its early years, but expanded slowly over the centuries. When the Spaniards under Coronado arrived in the 1540s, several hundred inhabitants were living on the hills north of the creek in two- or three-story apartment blocks made of local sandstone and arranged around plazas. The Spaniards noted that the Pueblo people traded with their neighbors, dealing in salt from the bed of an evaporating Ice Age lake (Lake Estancia) to the east and delicious piñon nuts from the surrounding forests. But the Tiwas were also excellent gardeners.

Tending the small-scale plots they favored took a great deal of work. Modern archaeologists such as Kurt Anschuetz and Michael Marshall say that in early Southwestern Pueblo settlements, such as Quarai or its neighbor Abo (some fourteen miles to the south), two to three acres of gardens per person may have been necessary to support village life. This means that Quarai, a town of perhaps three to five acres in size, was surrounded by pocket and check-dam gardens spread over a thousand or fifteen hundred acres. That's an extraordinary picture.

A pocket garden is an irregular oval of about ten by fifteen feet set in a clearing in the local piñon-juniper woodlands typical of the region; a check-dam garden, also irregular in width but some fifteen or twenty feet long, is often built on a modest hillside swale, with a line of boulders or stones above and below it to intercept snowmelt or runoff from rains and direct it to the cultivated area. The people of Quarai constructed these gardens by the dozens, and eventually hundreds, in the hills and gullies of their valley.

We speak of the Spaniards having built the town's remarkable church and rectory in the 1620s, along with the Spanish commissioner's house and courtyard, at the east end of the pueblo of Quarai. In fact, it was the excellent Pueblo craftspeople, with men as the hod, stone, and timber carriers and

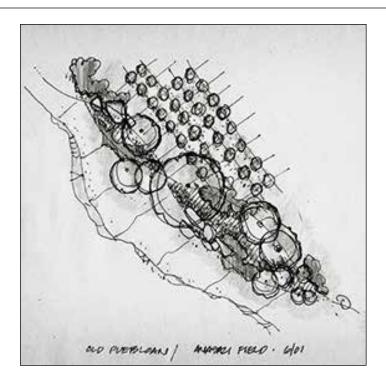


Sketch map of the Tiwa and Tompiro country in central New Mexico.

women as the masons, who created these fine buildings under European coercion to

serve a Franciscan missionary plan. The primary material was a tight-grained, rust-colored sandstone, quarried from outcrops a quarter mile southeast of the town and mortared with the sticky red clay of the valley. The stone walls of the church towered some five stories over the landscape, and trimmed ponderosa pine trunks roughly forty or fifty feet long supported the roof. These pines grew abundantly in the forests of the Manzano Range ten miles to the west, where they were logged with great difficulty and wrestled back to the town.

The Tiwas also built an ambulatory, complete with a sunken kiva or ceremonial chamber, for the padres, and they set out terrace gardens for the production of European herbs



and kitchen vegetables at the eastern edge of the rectory complex. Beyond the terraces, the Franciscans and Pueblo people laid out an orchard, likely planted in apple and peach trees; channeled the water of a good spring into a pond (or *estanque*) to be used for irrigation; and cleared stretches of ground above the creek for the production of wheat on a scale the Tiwas would have thought quite large. Beginning with Fray Juan Gutiérrez de la Chica in about 1628, the Franciscans assumed the responsibility of collecting, storing, and distributing most if not all of the agricultural production of the town for trade and local use.

It is true that the Spaniards introduced dozens, if not hundreds, of Old World plant species to long-established Pueblo towns such as Quarai. But by the sixteenth century, before the Spaniards knew anything about the land that would become New Mexico, the Pueblos had already brought perhaps 250 or more regional plant species into active or passive cultivation. They liked to string together large quantities of small plots, and nowhere is this more apparent than in the berry and fruit gardens of Quarai. There the Tiwas used native fruit- and berry-producing species such as sand plums, currants, chokecherries, and roses in their shrub-hollow gardens to surround and fill out their plantings of essential exotic species such as corn, beans, squash, and cotton, all of which had come earlier to the Southwest from Mexico. Their garden

Small early Puebloan streamside garden.

tools (the stone tips of digging sticks and hoes or shovels used to work these gardens) are still

found in the nearby woodlands, and the living descendants of the original native plants grow in and around the old plots even today.

Quarai was an ecclesiastical hacienda from the 1620s until about 1674, when a great drought drove Spaniards and Indians alike from the place. The padres and *encomenderos* (the Spanish commissioners appointed by the governor in Santa Fe) used the local Quarai people to tend sheep, horses, and cattle; construct buildings; produce trade goods; serve as church attendants; and labor in orchards, rectory gardens, and fields. The garden plots north of Zapato Creek disappeared, largely replaced by Spanish farm fields and orchards (and perhaps pastures). But this happened only on the north side of the tiny stream; the older, smaller Tiwa gardens remained on the south side of the valley, where they can still be traced. Both modern and earlier Pueblo people are famous for their egalitarian ways, and it is probable that these landscape-gardening patterns – large numbers of small gardens scattered in the woodlands around towns – were the result of cooperative social enterprise. The European-scale agricultural production that partially replaced them appears to have worked for a time, but the tiny garden plots in the woodlands and along the edges of the stream suffered from neglect.

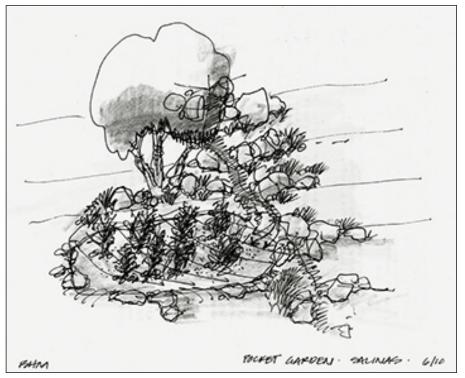
By the late 1600s, other towns near Quarai with similar development patterns and a Spanish presence were also in decline after centuries of modest prosperity. This was true, for example, at Gran Quivira (later called Las Humanas), a large Tompirospeaking pueblo about forty miles south of Quarai on Chupadera Mesa. Like Quarai, it had pocket, check-dam, and even terrace gardens, built in the distinctive regional pattern, but only shallow wells and cisterns for a water supply. The Pueblo gardeners here had improved the alkaline soil by planting beans and mixing in dry juniper needles (duff). As was the case in many Pueblo towns, the large, rectangular plaza of Las Humanas, laid out early in the settlement's history, was

oriented north-south (the Pueblos then as now favor cardinal directions), with a view of its sister settlement, Pueblo Pardo, across the dry valley to the south. It also framed the view of the distant, 12,000-foot summit of Sierra Blanca, approximately one hundred miles to the south. These traditional landscape design and gardening practices were interrupted at Las Humanas in the 1620s, when the Franciscans began to build the first of two churches and utilize local residents for labor, just as they had at Quarai.

At Abo, too, historic landscaping patterns changed with the arrival of the Spanish. A Tompiro pueblo only a few miles south of Quarai, Abo is a sprawling place, perhaps eleven hundred years old, with a permanent water supply (Espinoso Creek) and a large town plaza, oriented north-south like Quarai's. Small shrines, petroglyphs, and pictographs are associated with many of the town's garden plots, which are not as neatly defined as their Tiwa counterparts. Here the connection of ritual life to gardening practices is stronger and more apparent than at Quarai. A pocket garden in a woodland clearing, for example, may lie just above a rocky bluff pecked with a circle of small holes – signs of the gardener's religious observance. As was the case with Las Humanas (Gran Quivira) and Ouarai, the Pueblo settlers

had taken care to place their town neither too high in the

A pocket garden in the Salinas country.



hills for corn to mature (in a short growing season of about 105 frost-free days), nor too far into the lowlands to lack water for gardening or domestic use.

The Spaniards built a church and a convent at Abo in the 1620s, developed large fields of winter wheat (possibly the first in North America) and Spanish-style mission gardens, and used the local Tompiros as a labor force. It was the third ecclesiastical hacienda in the area. But drought ended everything around 1674, as at Las Humanas and Quarai, although the Pueblos' form of settlement planning had worked well for centuries before the arrival of the Spanish. Subsequently, these high-altitude (above 6,000 feet) towns fell into decay until the 1820s, when late-colonial-era Spanish settlers returned to Abo and Quarai. The Lucero brothers, Miguel and Juan, set up a hacienda system again in the ruins of the church at Quarai, staffed with workers from the Rio Grande valley. But only European-style farming returned with them. The old Tiwa style of small-scale gardening was never resumed.

The towns of Quarai, Abo, and Gran Quivira, all part of the Salinas Pueblo Missions National Monument, give a sense of the complexity and sophistication of landscape development, site planning, and garden design in early New Mexico. Because of the dryness of the climate, which preserves landscape constructs so visibly, and because they developed little or not at all after 1675, these towns can teach us much today. But carefully thought-out landscapes are more common in the Southwest than many people imagine. In the foothills of the Jemez range north of Albuquerque, for instance, the Tewa, Keres, and Jemez people created a famous series of grid gardens (rock-bordered plots much like chessboards in appearance), as well as terrace gardens. And the Tano people along Galisteo Creek south of Santa Fe developed refined reservoir systems to catch the rainwater and snowmelt coursing down their hillsides and direct it to the stony, clay-laden soil of their garden plots in this long valley.

We might say, then, that a measured look at Quarai can help us to understand the importance of careful landscape planning and design in the ancient Pueblo world. And at Quarai there is a particular bonus, the complex of Spanish colonial buildings at the east end of the town: the residence of an *encomendero*, or commissioner, with its courtyard; a rectory with planting terraces; a pond with waterworks and an orchard; and perhaps the most beautiful ancient sandstone church in the region, built by the Indians themselves. The contrast of Spanish gardening and landscape constructs next to those of the early Pueblo people – all of them seeming to stand still in time – is one of the most wonderful in the Southwest. – Baker H. Morrow

The Nature of Culture: In Search of the "Real" Landscape of Petra

t is all too often written that John Lewis Burckhardt "discovered" the ancient city of Petra in 1812. Of course, the site's very existence indicates that the area was well known long before that. The ruins of this Nabataean-Roman metropolis are nestled along a wadi, or seasonal watercourse, deep in the Jibal al-Sharah, the Sharah Mountains of southern Jordan. Today, they constitute the Petra Archaeological Park, which covers 26,171 square hectares (roughly one hundred square miles) and is dotted with the remains of Neolithic, Bronze Age, Nabataean, Roman, Byzantine, Mameluke, and Ottoman civilizations – and much in between and since. In recent decades, the region has hosted dozens of international archaeological research and conservation projects. Since being designated a UNESCO World Heritage Site (WHS) in 1985, Petra has become a popular tourist destination as well. In 2007 Petra was voted one of the "New Seven Wonders of the World."

This wealth of cultural heritage is nestled into an unearthly landscape where three continental plates collide, elevation drops fifteen hundred meters within five kilometers, and biotic zones tumble from arid Mediterranean and Irano-Turanian steppe to Sudanian savannah within a single kilometer. The dreamlike landscape of sandstone geological formations, rugged purple granite mountains, and steep, narrow canyons opens out to sweeping views over Wadi 'Araba and the mountains of the Negev beyond. Petra's landscape has been the object of human preoccupations and projects for more than ten millennia: the cliffs are scored and tunneled with prehistoric copper mines, riddled with tomb complexes and god-niches, pocked with cisterns, and runneled with aqueducts. Deforestation began thousands of years ago when fuel was needed for copper-smelting and bronze-making. It is impossible to walk fifty meters without touching some trace of human lives and passions and ingenuities.

UNESCO employs ten criteria for selection as a World Heritage Site. The first six criteria are for cultural significance, the remaining four for natural significance, including:

(vii) to contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance;

(viii) to be outstanding examples representing major stages of earth's history, including the record of life, significant on-going geological processes in the development of landforms, or significant geomorphic or physiographic features.

Petra, however, was designated a WHS for its cultural significance; its cultural remains are protected under UNESCO rules, but not the landscape context critical to its magnificence. Just as the city is literally carved from the mountains and wadis, this tumble of mountains shapes the civilization: in different landscape Petra would be a different city. It is inscribed into the cliffs and gorges, fashioned of that austere desert stone so ingeniously managed as human habitat by the Nabataeans.

Unfortunately, Petra's natural landscape is under pressure from every direction: by encroaching unplanned development, inappropriate agricultural practices, and the bundled processes of overgrazing, devegetation, topsoil loss, and diminishing water resources which together constitute desertification. But UNESCO has taken action in response to these issues only occasionally, instead inclining to protect the existing landscape context from "intervention." In part, this is because the theoretical framework in which such actions are being considered is deeply inappropriate to the site.

The Petra Archaeological Park Operating Plan (PAPOP), which includes a section on Natural Resource Management, was developed by the United States Park Service in 2000 and adopted as Petra's regulatory and policy document by UNESCO in the Brasilia session of the World Heritage Committee in summer 2010. PAPOP proposes to manage Petra as "wilderness," in the sense that the word is employed by the U.S. Parks service, to be protected from "intervention." The section on natural resource management opens with the following statement:

The natural resource management policies of Petra Archaeological Park are aimed at providing present and future generations with the opportunity to enjoy and benefit from natural environments evolving through biological and physical processes that are minimally influenced by human actions.... The primary management objective for all natural systems in Petra Archaeological Park will be the protection of natural resources and values for appropriate types of public enjoyment while ensuring their availability to future generations. These values include "naturalness." As used herein, the term "natural" denotes minimal human influence.

The same language pertains throughout the document. The discussion is premised on the notion that Petra is wilderness, and thus that a *laissez-faire* approach, discouraging "intervention," is desirable. PAPOP proposes to manage Petra as virgin wilderness with intact "natural systems"; and yet this is a landscape which fails nearly every criterion to qualify

as the kind of wilderness such a management approach is intended to protect.

The United States' National Wilderness Preservation System (NWPS) defines "wilderness" and ways of assessing its integrity. "Surveying a century of wilderness literature," write the authors,

'wildness' is the essence of wilderness, and it is composed of two essential qualities – naturalness and freedom from human control. . . . The essential attributes that determine naturalness are the degree to which the land retains its primeval composition, the degree to which land remains free of artificial structures, and the degree of its purity or lack of pollution.

These attributes are further elaborated as "natural composition," "unaltered structure," "purity," "the capacity to provide opportunities for solitude," "remoteness," and "uncontrolled processes."

Admittedly, by many standards Petra is wild: empty, undeveloped, uncrossable by road, mostly inaccessible even on camel- or horseback. There is no settled community within the park, which has a population of less than half a person per square mile. Yet in other ways this is the antithesis of virgin wilderness; humans have exerted some kind of control here – forestry, agriculture, grazing, and the construction of buildings – for ten thousand years. Petra Region is home not only to the famous Nabataean, Roman, and Byzantine remains of Petra and its extensive outlying communities, but also to more than ten thousand years of settlement by pastoralists and agriculturalists. Founded over twelve thousand years ago, the Neolithic settlement at Beidha, also protected under the WHS enlistment, is one of the earliest organized communities in the world. Archaeological evidence dates the cultivation of grain at Beidha to the earliest Neolithic – as much as ten thousand years ago – and the domestication of goats to Pre-pottery Neolithic B – over eight thousand years before the present. The structures are still visible and coherent today, and Beidha is only one of a string of such early sites within Petra.

In terms of "naturalness" as it is defined by the NWPS scholars, Petra again fails to qualify. What is "primeval" in a land that has been home to humans for more than twelve millennia? Artificial structures are obviously an important element of the landscape: the fabulous city of Petra itself, the outlying caravan station of Siq al-Barid, Neolithic Beidha, Byzantine settlements, Nabataean farms and presses, a couple of Mameluke castle-forts – the inventory continues literally for pages. It is difficult to construe what "purity" might

actually mean in such a context (although, outside the central tourism area, Petra is relatively free of pollution). But there is probably no single foothold in Petra Region that has not been trod again and again by humans and their livestock over the past twelve millennia.

At the same time, what will it mean not to intervene in this fragile and threatened landscape? The web of natural systems is presently spiraling downward, no longer able to sustain itself under the pressure of desertification. Groundwater resources are threatened throughout Jordan due to overextraction. Throughout the Petra Region springs have successively gone dry or receded drastically over the past two decades. Unplanned development is producing urban sprawl, especially around the principal community of Wadi Musa. In Ma'an District, which includes Petra, 39 percent of the population is under the age of fifteen. Fertility rates in Jordan as a whole average 3.8 children per woman, but in rural and lower-income areas, and especially the south, where the Petra Region is located, the average edges up toward 4.9 per woman. These statistics suggest that before 2030 the demand for housing in the Petra Region will double and the population will more than double.

Perhaps most profound is the devastation of vegetation cover throughout the region and, indeed, throughout Jordan. Clearing for agriculture, grazing, and fuel consumption have combined to denude much of the region. As noted, the grazing of small ruminants in Petra dates back eight thousand years: goats – and the tents of their keepers – are an inescapable feature of Petra's landscape. Since the 1970s, however, the construction of new roads has enabled livestock owners to truck water and supplemental feed into ever-remoter areas, increasing grazing pressure regionwide. Along with the increasing settlement of most bedouin, the phenomenon of truck herding facilitates keeping herds on the same range throughout the year, allowing the vegetation no chance for recovery.

An enormous additional strain has been placed on Jordan's rangelands since the Gulf War, with the addition of some 1.5 million head of livestock owned by refugee bedouin. It is now common to see large herds of camels and bedouin tents of eastern tribes camped in the Petra region throughout the summer; they only return to their native ranges with the onset of the rainy season.

The Jibal al-Sharah, like much of Jordan, has been largely stripped of its forests in little more than a century. The

famous travel writer Charles M. Doughty, whose books were fodder for T. E. Lawrence, wrote in the 1880s of what is today northern Petra Region:

This limestone moorland, of so great altitude, resembles Europe, and there are hollow park-like grounds with evergreen oak timber. . . . We began to descend over a cragged lime-rock, beset with juniper.

Of his 1902 journey from the Jordan Valley floor up Namala pass through Beidha (sik al-Beda) and on into Hisheh, the Czech geographer Alois Musil wrote, "The butmtrees (Pistacia atlantica), which begin at an elevation of about 400m, diminished by 600m further on and the dark luzzab, or `ar`ar, (Juniperus phoenicia) appeared." Musil also provided a striking photograph looking up the Namala siq from the south – the siq is crowded with mature trees.

Then the area was significantly deforested between 1904 and 1908 for the construction of the Hejaz Railway from Damascus to Medina. During its construction a giant Ottoman encampment moved slowly south, accompanying the extension of the line. As many as 7,500 people inhabited the construction camps, bringing with them a village-sized demand for fuelwood. The subsequent demand for firewood to fuel steam engines was pressing enough that in 1915 a thirty-six kilometer spur line was laid from the `Unaizah station north of Ma`an into the Hisheh forest, now within the Petra Region.

The blame for the region's deforestation cannot be assigned solely to the Ottomans, however. Within living memory, there was enough forest to hide in during shootouts sparked by Ottoman and tribal feuds. The forest was an important economic resource as well. It was not uncommon for a head of household to cut down a pistachio tree and load it onto two donkeys; cross Wadi 'Araba to the West Bank to sell it in exchange for dry goods such as tea, coffee, sugar, and soap; work wage labor for some cash; and then "hunt his way back" to Wadi Musa to provision his family for several months. Local timber was used for both firewood and construction until the 1960s, when concrete became the preferred building medium in the region.

The need for firewood for subsistence cooking and heating is still a reality for Petra's fully nomadic bedouin. Winters in the upper reaches of Petra Region are bitterly cold – it usually snows at least once each winter, and often more. The needs of these tent families must be addressed if devegetation is to be halted. In a study of deforestation conducted from 2003 to 2006 in an area of 10.69 hectares (26.4 acres) within the Petra Region, it was concluded that there had been a 58 percent decline in forest from 1924 to 2002. Between 2003 and 2006



The Neolithic settlement of Ba'aja, near the northwestern border of Petra Archaeological Park.

alone, the documented decline was 4.23 percent.

Without its forests, the land grows ever drier. Today the

sprawling town of Wadi Musa is creeping up the steep slopes, precipitous roads snake over stony, treeless hillsides, and massive retaining walls hold the mountainsides in place. In the surrounding country the hills are cleared of shrubs yearly for winter firewood, and the denuded soil can no longer bank rainwater. Climate change has shifted weather patterns. The gentle, widespread rainfall once characteristic of gentler Mediterranean winters has been replaced by more isolated and violent storms; now the water runs straight off the bare stone, carrying the topsoil and seedbank with it. Wadi Musa was traditionally an agricultural village, but crops once rainfed are no longer sustainable. Throughout the region dead orchards patch the slopes. Shepherds still tend their flocks on the diminishing range, but there are many wry jokes, such as "organic, stone-fed lamb." Each tree hosts a tiny microclimate, including its understory vegetation. As trees and shrubs disappear, soil is impoverished and swept away, rainwater runs off into Wadi 'Araba down the sheer rock faces, livestock graze deeper and deeper into what vegetation remains. Not to intervene in these processes is a decision to lock the ecosystem into decline.

Ironically, in light of Petra's UNESCO designation, the greatest threat to the region may be the impact of tourism – both local and international. Local weekend recreation revolves around grill picnicking, called hash ou nash. Typical hash ou nash involves one or more households loaded into several vehicles, ideally accompanied by several square meters of plastic hasira mats, upholstered foam pads for lounging, plastic chairs and tables, ten-gallon water jugs, towels, tubs, dish soap, marinated meats and salads, prepared qahwah saadah (Bedouin coffee), tea paraphernalia, soft drinks, and often toys, bicycles, balls, and goalposts for football. Hash ou nash generally occupies the part of the day between dhuhur prayer (around noon), when the men come home from mosque, and sundown. In its most extreme form it includes livestock and butchering implements, with trailer rigs and buses full of people and equipment, and

even tractors dragging water tanks.

Jordanian society outside of Amman is still very rural, conservative Sunni Muslim, and recreation tends to be intensely family-focused. Outdoor picnics are inexpensive, and they offer an opportunity for the women to get out of the kitchen, especially on a hot day, and to socialize with other families and groups from outside their own neighborhoods. Perhaps most importantly, hash ou nash offers easy, safe entertainment for the squadrons of children. It is a common occurrence to count over one hundred vehicles along a fivekilometer stretch of road in the most popular areas. Although weekends, especially Fridays (the day of congregational prayer service at the mosques), are by far the most popular days for hash ou nash, groups can be found picnicking any day of the week, throughout the year. Although rain keeps people indoors, a sunny snow day will bring people out in droves. Part of the fun of hash ou nash is the full-scale production it involves, and part of that project is firewood gathering. The cumulative devastation is immense.

Hash ou nash is also good business: increasingly tourist camps, camping excursions, and special events claim quantities of locally harvested firewood for international tourism. These quantities are hard to calculate, because tour operators are understandably not forthcoming about the sources of their firewood. Whereas local picnickers typically tear down branches and strip trees of their bark, tour operators chainsaw trees accessible to roads. On the first sunny weekend of

2006, for example, two-thousand-year-old *Juniperus phoenicia* were cut down along the Namala Pass.

These are not "natural environments evolving through biological and physical processes minimally influenced by humans," as the management plan puts it. They are instead environments declining rapidly as a result of human influence. In 2004 the site was estimated to account for as much as 10 percent of Jordan's GDP; in 2007, inundated with tourists following the "New Seven Wonders" hype, Petra was drawing some 77,000 visitors a month. Accommodating these visitors has required constructing new buildings, overextracting water from aquifers, camping in riparian habitats and at the edges of Nabataean reservoirs, and escorting them through ancient and modern gardens, fields, and terraces. Petra's existing natural context is profoundly stressed and degraded, and to freeze this landscape as it was in 1985 – much less as it is in 2015 – would be catastrophic.

Cultural-heritage conservation professionals would not dream of advocating such an approach to the built environment. Untold millions, advanced technologies, and admirable human resources have been spent researching and conserving the famous facades of the city, the frescoes of Siq al-Barid, and the Neolithic and Byzantine sites of Petra. Are these not interventions in the landscape? There is an imposing edifice of theory and methodology undergirding the conservation of the cultural past, but the scaffolding which supports their natural contexts is dismayingly flimsy. Landscape interventions require the same rigor of thought that archaeological conservation entails.

At the same time, non-intervention is a fantasy – a passive construction of an unintentional landscape. In fact, the listing as a World Heritage Site – that very "protection" – has changed the landscape dramatically. Tourism has constructed a landscape of hotels, restaurants, and souvenir shops; widened roads to accommodate tour buses; and built a wastewater treatment plant and subsequent 10-hectare agricultural project inside the park's boundary so that visitors can be hosted inside the "protected area."

And what of the people who live here? Petra Region, like Jordan as a whole, is dotted with bedouin encampments. What defines bedouin in the early twenty-first century is a matter of some debate, but I refer to families who occupy tents full-time, move seasonally, and live primarily from the proceeds of their livestock (goats, sheep and camels). While it is inaccurate to romanticize the bedouin as "one with nature" (if anything they are pitted ruthlessly against the harsh envi-

ronment), they are dependent on environmental balance for water and pasture. A century ago, before southwest Asia was carved into nations with borders, the bedouin moved through pasturing circuits contingent on pasture and water, spending the winters in regions with perennial water supplies and seasonal pasture, and moving toward the cultivated, wetter highlands in the summers, grazing harvest stubble and taking advantage of cooler altitudes. National borders have complicated these circuits, for example cutting Jordanian bedouin off from the perennial watering grounds of Wadi Sirhan, now in Saudi Arabia. The advent of motorized transportation has allowed water and supplemental feed to be trucked into remote areas, meaning that herds stay too long in one place, overgrazing already sparse vegetation. An environment out of balance has unbalanced an ancient set of lifeways. Petra and Wadi 'Araba were in some ways a classic context for seasonal migration – the farmed, watered highlands offering cooler pasture in the summer, Wadi 'Araba a warmer and ephemeral winter home. The deforestation and urbanization of Petra has had a massive impact on the bedouin.

In 2005 UNESCO designated the "cultural space" of three bedouin tribes of the Petra Region – the Sa'idiyyin, the Bidoul, and the 'Amaariin – as treasures of Intangible Cultural Heritage. But what of their tangible natural space? The inscription recognizes that "the bedu of Petra . . . have preserved specific knowledge related to the flora and fauna of the area, traditional medicine, camel husbandry, tent-making craftsmanship, and tracking and climbing skills." All of this knowledge is ineluctably contingent on the natural landscape. Additionally, bedouin culture is defined by pastoralism, so it would seem that at least one branch of UNESCO by implication expects grazing and habitation (prohibited by PAPOP) of the Petra Archaeological Park. Nonintervention, allowing the natural systems to decline further, damages the habitat of the human treasure they have moved to protect. Defining the wilderness of Petra in terms of human absence has not made sense for several thousand years and still doesn't.

And yet this recognition of the importance of bedou heritage points the way to a broader conception of management intervention in Petra. Conservation of habitat for the bedouin would by implication entail conservation of the natural resources that their traditional way of life depends on. For example, working to restore the biomass that underpins pastoralism and the species diversity that supports traditional medicine would require range management, habitat restoration, and afforestation "interventions." Successful projects implemented in other parts of Jordan demonstrate

that biomass, biodiversity, and livestock productivity can be enhanced through community-based rangeland initiatives.

Such programs are, undeniably, interventions; steppe vegetation must be re-seeded and trees must be planted. Moreover, it would be neither practical nor desirable to attempt to restore the landscape to the way it looked when Petra was inscribed as a World Heritage Site in 1985. Some "historic species," such as Juniperus phoenicia, may no longer be able to survive the changed hydrological regime. Climate change has resulted in different rainfall patterns – so the forest will also look different than it did in the deeper past. Petra has been changing for thousands of years, and changing exponentially in the past century. It is impossible to freeze its life in the year it was recognized as "world heritage." The challenge is whether to decide to manage change or just to let it happen.

What of intervention, then - how do we implement intentional design interventions in such a momentous historical landscape? The ideal, even romantic, conception of pristine wilderness that undergirds NWPS and PAPOP does not provide a charter for managing a landscape such as Petra's. Whereas cultural heritage management almost universally ascribes to the 1964 Venice Charter for the Conservation and Restoration of Monuments and Sites, what is the landscape architect's Venice Charter for the conservation and restoration of historic natural landscapes? As soon as we call a landscape historic, we place it within cultural memory and narrative. How we think about the landscape - how we idealize and imagine it - designs and constructs it. The Petra even of 1985 has vanished. The landscape has changed continually over millennia. If we are to intervene, to design, which Petra will we imagine, construct?

Perhaps our Petra problem can be located in the initial distinction between cultural and natural heritage. The notion that the natural is by definition "minimally influenced by human actions" immediately establishes a kind of subject/object, human/environment dichotomy that may simply be inappropriate to any place on the planet these days and certainly to most of the Old World. In the Petra Region, a methodology that recognizes a continuum of human presence as part of the ecosystem could, if properly implemented and assertively managed, ensure both the enhancement of biodiversity and the sustainability of traditional human lifeways. Petra would remain magnificent, stark – even bizarre. But the humans who live here, grappling with the austerity of the high desert, might hang on. – Erin Addison

The Landscape as Ruin: The Resiliency of Design

The meaning of the word "ruin" has its origins in the idea of fallen stones. When we frame an object as a ruin, we reclaim it from a fall into decay and oblivion and often for a form of cultural attention and care that elevates the value of that object. – Michael S. Roth

s an archaeologist of landscape architecture, I am drawn to the ways in which acts of design - making one's sign or mark on the land – endure or are erased over time. Although we think of gardens and parks as ephemeral, due to the lifespan of their vegetation, the underlying designs can endure with surprising resiliency. Might we expand our understanding of ruins from architectural ruins in a landscape to the landscape itself as a ruin? This essay explores the decay and persistence of landscape architecture, from small courtyard gardens to urban parks, field systems, and planned cities. While the original materiality of the design is lost, sometimes the design endures - no longer expressing its original purpose but nonetheless recording the original conceptual plans of the designer. Can these lines in the landscape prompt the kind of contemplation of imagined pasts and future trajectories that ruins inspire?

To the viewer on the ground, the vigorous nature of vegetation tends to disguise the subtle remains of past designed landscapes. So while we readily appreciate the drama of a ruined abbey or temple, the bounds of former gardens, parks, and fields leave little to contemplate. The advent of aerial photography, however, particularly after the First World War, revealed ruined landscape features that had hitherto remained undetected. John Bradfield, in his book Ancient Landscapes (1957), gathered these images and introduced the landscape as a relict, a palimpsest of prior designs visible from a height. In Britain, for example, one might see the circular huts of Iron Age villages expressed as crop marks – the field's plants growing at different rates due to the structures and ditches buried below. The Roman practice of centuriation – redrawing boundaries for the purpose of colonizing new territories – is also clearly visible in Europe, the Near East, and North Africa.

Christopher Taylor went on to refine the analysis of these landscapes, particularly in Britain, by bringing the viewer back to the ground and explaining how to interpret the details of fields, boundaries, and woodlands: how to "read" the landscape. In his book *The Archaeology of Gardens* (1983), he demonstrates the way in which the buried terraces and geometries of seventeenth-century formal gardens, turfed over when what became known as the "landscape garden" emerged in the eighteenth century, sometimes reveal themselves when

viewed from elevated positions in the raking light of the late afternoon (the most famous instance being the Knot Garden visible from Stirling Castle). Taylor's method of reading the British landscape, documented with aerial photographs, has been a model for geographers, planners, and designers internationally for decades. Today, satellite imagery allows archaeologists to view designed landscapes on a vast range of scales. Even details hidden beneath the densest tree canopies can be studied, thanks to the remarkable new technique of laser scanning (LIDAR) from the air. Aerial equipment is no longer required, however. With Google Maps, everyone can explore the ruins of landscape (see box).

During my doctoral studies in Roman landscape archaeology at Oxford University, I had the opportunity to work on the Roman villa at Castle Copse, in Great Bedwyn, Wiltshire. A large American and British team was excavating the main residential building in the clearing of a private wood called Bedwyn Brail (Google Maps: 51.365230, -1.593549). The building was hardly a ruin by any romantic standard: all of its walls had been long since plundered, and our team carefully dug and recorded the meager remains of the surfaces on which people had lived. My role was to understand the larger landscape by examining the remains of plants and animals left behind on these floors, hearths, and other surfaces. Sampling each layer of earth removed by the archaeologists, I carefully washed the bucketfuls of dirt in a large oil drum, breaking up the clods of heavy clay and dissolving chalk in the cold springwater of the site, encouraging carbonized bits of plant remains to break away and float to the top of the tank, and rinsing fine silts from the rest so that bits of bone, mollusk shells, and other environmental remains became visible. From this evidence, we were able to glean traces of the cultivation practices at the villa, matching our findings with

Instructions for viewing sites with Google Maps coordinates

In this essay, you are invited to investigate the ruins of landscape design using this tool. Longitude and latitude coordinates are provided throughout the discussion, which can simply be entered into the search box of Google Maps. Use the satellite feature to find the site under discussion. To warm up, try finding the Knot Garden at Stirling Castle at 56.120125, -3.949496. The Roman *centuriation* that John Bradford documented northwest of Cesena, in the Po Valley of Italy, is still clearly visible at 44.153859, 12.294142. The many small fields are organized within larger, square blocks – these are the boundaries surveyed by the Romans.

soil and water conditions in the area that would be best suited to the barley, wheat, flax, and other crops the Romans had grown there. Charcoal fragments provided evidence that wood, probably available on the estate, had been burned for fuel. Slowly, then, the fragmentary remains of this villa in its landscape took shape as a ruin to be contemplated from the many perspectives of the archaeologist. But what other clues could be found in the villa's landscape?

Investigating a theory current at the time that modern parish boundaries preserved ancient Roman villa property lines, I learned to "field walk": plodding through the heavy clays of the fields, recording the location of Roman artifacts; documenting the relative age of field boundaries by counting the number of species of shrubs in the hedgerows; mapping the location of earthworks and indicator species such as bluebells in thick woodlands that had once been carefully managed and coppiced. In the process, I discovered the value of a well-waxed Barbour coat as I shredded my American outerwear on the spiny hawthorns of the "haws" around the Brail – the boundaries, banks, and ditches that were the progenitors of the "ha-ha" wall. The lines of former boundaries of the Brail's woods can be observed in the aerial photographs.

Despite the beautifully expressed presence of a straight, well-built, Roman road, I found no sign that the Romans had made their most distinctive mark on this landscape: "centuriation," the resurveying of the land into a gridded system to resettle veterans of the Roman army. Nor could I find any proof of the villa's estate continuing as a parish boundary (in fact, later landscape archaeologists would refute this theory). Nonetheless, I learned to read the shape of the land and the beautiful ways in which the English language once precisely described the topography and characteristics of this place. "Comb" was a short, rounded valley; "vale" was a broad, open one; places with names ending in "hamme" were well watered; those ending in "ham" were near a Roman camp;



Knot Garden at Stirling Castle, Stirling, Scotland. Courtesy of Google Maps.

and many other names referred to ancient burial grounds, landmarks of prior cultures, or the agricultural properties of the land itself. I learned what it meant to "perambulate" the boundaries, to recognize "assarting" (the expansion of fields into the properties of towns or royal forests), and myriad other practices of making landscape. In this process, I could see how lines that began as a thought – a plan

for a Roman road or camp, royal forest, or medieval infield/ outfield system – were then surveyed on the ground, made legal, perambulated, and built. Over centuries, a boundary line became a path, a hedgerow, a road, and then a bikeway: the materiality changed but the line endured. Landscape architecture was less ephemeral than I had thought.

The urban version of this phenomenon is no less impressive, and my introduction to it was in Rome. A fellowship at the American Academy gave me two years to study the Forma Urbis, a plan inscribed on fine marble slabs about 210 CE and displayed to the public in the Templum Pacis, one of the city's imperial forums. Eight complexes on the plan featured enigmatic linear features that were thought to be gardens or groves; one of these, the porticus (portico) of the Theater of Pompey, is now widely considered to be the first public park of Rome (Google Maps: 41.895292, 12.475121). This elegantly adorned public space, which was largely forgotten until the twentieth century, lies between the Campo dei Fiori and Largo Argentina beneath centuries of medieval and later construction. According to ancient sources, the park featured a long avenue for strolling between two groves of plane trees, with fountains and displays of sculpture. As I laid the Roman plan over those of the medieval buildings, it became clear that the postclassical structures followed the lines of the garden's walks and colonnades. The medieval neighborhood preserves the orthogonal layout of the park and its walks with only slight deviations. Today, strolling from Campo dei Fiori to Largo Argentina, the tourist walks part of the way along the central axis of the ancient public garden, from the great

Theater of Pompey at one end to the Senate Hall at the other, where Julius Caesar was assassinated; the back wall of the latter building is still partially visible in the sunken archaeological park at Largo Argentina (Google Maps: 41.895258, 12.476588). Everyone has a favorite place in Rome where one building has been incorporated into another, but to discover how a plan of a designed landscape evolved into a special part of this ancient city was a particular thrill.

While the villa design at Castle Copse was difficult to discern, a city's design can be well preserved in a rural landscape. For a time, Caesarea Maritima, north of Tel Aviv on the eastern coast of the Mediterranean, rivaled Jerusalem as the most important city of Roman Judea and Palestine. The neat grid plan laid out by Herod the Great in 30 BCE and constructed by 12 BCE is still clearly visible in its ancient streets and city blocks. The outer harbor, which sunk in an earthquake in the second century CE, can be made out from the air as a dark shadow in the azure Mediterranean Sea. Despite decades of excavation, only a small percentage of the city has been exposed archaeologically, and yet traces of the Herodian metropolis and its later Byzantine expansion can be found everywhere - as hedgerows, modern roads, and tracks, and in the cultivation patterns of agricultural land at the Kibbutz Sdot Yam.

Caesarea is the rural equivalent of Rome; its modern life is intertwined with the ancient remains, if not the actual fabric, of Herod the Great's city and the Byzantine, Muslim,

Crusader, Bosnian, and Israeli layers that overlaid it in the successive centuries. Today recreational divers explore the sunken Herodian harbor, occasionally finding treasure. Muslim couples pose for wedding photographs in front of an abandoned minaret, built for Bosnian refugees in the nineteenth century. The lush lawn beneath their feet covers the ruins of early Islamic Caesarea, which in turn was built on the silted remains of the Roman inner harbor. Tourists enjoy restaurants and ice cream tucked into the ruins of Byzantine shops.

Christian pilgrims visit the archaeological remains of an octagonal church built over the pagan Temple to Augustus and Rome (Google Maps: 32.501316, 34.892134). The church was destroyed so that a mosque could be built; then ever-larger buildings were erected, churches and mosques alternating

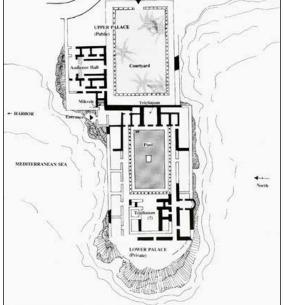
in accordance with regime changes during the Crusades. Ultimately the Roman substructures collapsed beneath their weight and the area was left to supply building materials for Cairo and Akko. From the temple area, it is still possible to travel the course of the Roman decumanus out of Caesarea, but the modern street is meters above the ancient one. Today you drive right over the old city wall, and banana groves rather than shops and houses flank the way (Google Maps: 32.501422, 34.90017).

The late Roman hippodrome west of the harbor was long approached from the road through an orchard of mangoes, from which the visitor would break out into a vast field as if springing from the starting gates onto the track (Google Maps: 32.498582, 34.898569). Today the spectators are a thick hedgerow of eucalyptus trees. A monumental granite obelisk once lay collapsed in the center, forcing the farmers to plow around it like old chariots around the spina. Recently, the obelisk was re-erected, creating an oddly specific focal point in the middle of the wheat field. The nearby amphitheater, remaining as an earthwork, is invisible unless farmers choose to plow its interior; the arena then beckons us to enter.

Palimpsests both reveal and withhold the past. Nowhere is this more evident than in the siting of Herod's seaside palace to the south of the harbor. Working on behalf of the Hebrew University of Jerusalem and the University of Pennsylvania Museum of Archaeology and Anthropology, I co-directed the excavations of this building, which had been systematically

> quarried for fine marbles and building materials after the fifth century CE. Part of the palace, constructed around a pool cut into the promontory at sea level, has been pounded by the sea for thousands of years, and its surviving ruins, known locally as "Cleopatra's Pool," have long been a landmark along the coast (Google Maps: 32.497124, 34.889227). My co-director, the late architect and archaeologist Ehud Netzer, had identified the locale as Herod's palace in the 1970s, and we planned a small project to excavate the little remaining earth

Herod the Great's palace at



Caesarea Maritima.

along the beach and the upper area of the promontory. To our surprise, an upper wing of the palace emerged. An Israeli archaeologist working nearby found a large stadium running along the coastline. The aerial photographs that display so much of the ancient city offered no hint of these two monumental complexes, and yet excavation revealed sufficient architectural remains of both buildings to enable clear reconstructions.

Yet how did the lower palace survive, remaining visible in the surf for two millennia? Why didn't the whole lower complex erode into the sea, built, as it was, on soft, calcareous, local stone? Initially we believed that it was due to the waterproof cement made of pozzolana, imported from the area of Pompeii. Recently, however, I began to explore the flat, rocky apron around the lower palace ruins, whose surface has been covered by a green marine plant. This apron turned out to be a living reef, quite visible on the Google Earth views, created when vermetid snails colonized a sandstone platform leveled by the surf. These small creatures build up a protective rim as they die and calcify into the reef. Marine zoologist Uriel Safriel believes that the Romans may have known of the value of these naturally formed structures in breaking the force of the waves. Because the momentum of the water was broken by the reef rather than the building, the palace could be constructed at surf level. The reef accounts for the remarkable preservation not only of the architectural ruin of the building but also of the pool, with its rock-cut planters. Sadly the reefitself is in danger of ruination, as changing sea levels and water temperatures in the Mediterranean are killing the vermetids. Once-green reefs have become increasingly grey, and the erosion of the promontory threatens to send the lower wing of this ancient palace to the sea floor, where it will be visible only as a shadow from the air.

If the garden pool and planters of Herod's palace were preserved by the sea, those of his palace at Jericho were preserved by the desert. Ancient gardens have rarely been explored by classical archaeologists because it is almost unimaginable that anything could be left of a garden after two millennia. Of course, it is true that no living plants can endure for two millennia. Still, as we have seen, cultivation leaves behind signs of boundaries, water management and display, fertilization, infrastructure, art, architecture, and the idea of ordering nature within bounds. The original lines of the design can be preserved over long periods of time simply through the practices that created and sustained the garden. Herod the Great's

palace at Jericho on the West Bank is a well-preserved – albeit seriously endangered – example (Google Maps: 31.852022, 35.435885). It was here that Herod, according to the ancient historian Josephus, drowned his young brother-in-law in one of the swimming pools of this desert oasis.

With water brought by aqueducts and channels from the distant hills, Herod and his predecessors, the Hasmoneans, constructed a *paradeisos* – well-watered groves of palms and balsam, elegant pavilions, pools, and outdoor dining areas. American teams in the 1950s, directed by James Kelso, Dimitri Baramki, and James Pritchard, and an Israeli team directed by Ehud Netzer of the Hebrew University of Jerusalem, revealed a series of garden areas. The largest was so monumental that the excavators assumed they were unearthing part of a town, not a palace.

Excavations in the gardens revealed rows of flowerpots buried in the ground, delineating paths for strolling beside the great swimming pool. Larger plants were brought in from nurseries and planted in pits filled with soil more fertile than what was available locally, enabling its later identification by archaeologists. These clues to the layout of the plantings, along with water channels, the compacted earth of the walks, and other details, bring the intentions of the designer to life, despite the fact that we have yet to securely identify any of the plants of these gardens.

Our opportunity to reflect on the ruins of our ancient designed landscapes is emerging at a time when they are in danger of being destroyed by development and the chaos of war. The tools for observing these extraordinary features from the air and for sharing them through social media are the same tools ISIL uses, seeking to shock and erase. And where designed landscapes do not include readily visible objects for terrorists to target, this very absence creates the impression that the open space is available for construction. The area of the famed balsam and palm groves of the winter palace complex at Jericho is facing this kind of obliteration, as is the site's far more architecturally defined sunken garden. This extraordinary complex of integrated landscape and architecture is endangered by lack of funding and international antipathy toward the preservation of ancient sites in disputed territories. Development pressures everywhere are making the ancient landscapes seen from the air a phenomenon of the past, just as we gain the tools to better explore them. With the ready availability of rich aerial imagery, designers must begin to defend this legacy, finding creative ways to preserve and integrate these old site lines into new landscape design, adding a new layer to the palimpsest. – Kathryn Gleason

Place Maker:

John Fairey of Peckerwood Garden

n the early 1970s John Fairey established Peckerwood Garden on property he owned in Hempstead, Texas, about fifty miles from downtown Houston. Open to the public since 1998 under the auspices of the Peckerwood Garden Conservation Foundation, this is no ordinary garden. Here Fairey has combined his experience as a plant hunter, former nurseryman, and artist to create a place that is unique in its ability to instruct and inspire visitors. Few can make a similar claim, for only a small number of other gardens, such as Dan Hinckley's Windcliff on Bainbridge Island in Puget Sound, can be said to rival Peckerwood as a plant hunter's self-created paradise.

When I asked Fairey to tell me how he discovered his destiny as a plant huntercum-nurseryman-cum-garden designer, he replied that in 1988 he had accompanied Lynn Lowrey, a legendary Texas plants-

man, on a trip to the Sierra Madre Mountains in northern Mexico – an adventure that proved to have a profound impact on him. As the two men collected seeds and cuttings from rare and endangered plants, Fairey became obsessed with plant hunting. In the years that followed, he made almost a hundred more collecting expeditions. The experience of discovering plants in the wild and then cultivating them domestically helped shape his approach to garden design. His imaginative style can best be characterized as one based on contrasts of light and shade, foliage and bark, rock and water, and innovative combinations of floral color, leaf shape, and surface texture.

Because Peckerwood is located at the convergence of three climatic zones, Fairey has been able to integrate more than three thousand rare specimen plants from Mexico, Asia,



and the United States into a relaxed, 39-acre landscape composition. From the outset he was committed not only to making a beautiful garden full of rare specimens but also to sharing seeds, plants, and knowledge with nurseries and research institutions. Harvard University's Arnold Arboretum; the University of California, Berkeley; the University of California, Santa Cruz; the Royal Botanic Gardens at Kew; North Carolina State University; and Chollipo Arboretum Foundation in Korea are among those that have benefited through collaboration with Peckerwood.

In addition, because of its location in southeast Texas,

Peckerwood Garden forms a botanical bridge between Mexico and the United States, raising awareness on both sides of the border about the importance of biodiversity and threat of plant losses due to overgrazing, overdevelopment, and climate change. Moreover, by serving as both a plant showcase and a tour de force of landscape design that is open to the public, it has influenced gardeners and horticulturists from across the country and around the world.

It is for his botanical passion, intrepidity in gathering exotic plants from remote corners of the world, horticultural skill in propagating and bringing them into cultivation, and generosity in converting the landscape around his Hempstead home into a garden of learning and delight that the Foundation for Landscape Studies will honor John Fairey at its annual Place Maker / Place Keeper Luncheon on May 11, 2016. For information on purchasing tickets for this event, please visit: www.foundationforlandscapestudies.org/news. — Elizabeth Barlow Rogers

Book Review

Olmsted: Writings on Landscape, Culture, and Society ed. Charles E. Beveridge Olmsted Papers Project/ Library of Congress

Today Frederick Law Olmsted enjoys a reputation akin to that of André Le Nôtre, Louis XIV's eminent seventeenthcentury gardener, and eighteenthcentury England's Lancelot "Capability" Brown – who,

along with his successor Humphry Repton, altered the appearance of that country's landscape with the transformation of the estates of Whig aristocrats into pastoral and picturesque pleasure grounds. However, while Le Nôtre, Brown, and Repton's names never fell into obscurity, it was not until the 1922 publication of Frederick Law Olmsted: Landscape Architect, 1822–1903, an abbreviated collection of Olmsted's writings edited by his son Frederick Law Olmsted Jr. and Theodora Kimball, that the reputation of this nineteenth-century

man of genius began to be recognized.

In the mid-1960s, a nascent interest in historic preservation provided a counterweight to doctrinaire architectural modern-



York's Central Park and Brooklyn's Prospect Park, Olmsted's badly deteriorated masterpieces of Romantic design. But as yet only a few antebellum and Civil War historians were familiar with the fact that he was an author who had published important books on the institution of slavery.

Fortunately, at approximately the same that time that landscape preservation proponents had started to reverse Central Park's near destruction, Olmsted's voluminous papers were discovered and deposited in the Library of Congress. To catalogue them was an immense challenge. Headed

by American history professor Charles C. McLaughin, the even grander task of publishing them was launched with funding from the Andrew Mellon Foundation in 1972. The next year McLaughin asked Charles Beveridge, a social history professor at the University of Maryland, and independent scholar Victoria Post Ranney to join the staff of what was now officially known as the Olmsted Papers Project. Volume 1, The Formative Years, for which Beveridge served as associate editor, was published in 1977. He served as co-editor for volume 2, Slavery and the South, which appeared in 1981, and became lead editor of the project with volume 3, Creating Central Park, edited in collaboration with David Schuyler. Only now has this massive endeavor peared conclusion with the publication of volume 9, The Last Great Projects.

It was a foregone conclusion that the Library of America would invite Beveridge to cement his reputation as doyen of Olmstediana by enlisting him to edit Frederick Law Olmsted: Writings on Landscape, Culture, and Society.

The title is an apt one. As great as he was as the founder of the profession

of landscape architecture in America, Olmsted was equally eminent as an active force in driving public policy with humanitarian zeal before, during, and after the Civil War. Perusing the book's eight hundred pages, it is hard to imagine how he had time to keep up such a vigorous personal correspondence on a broad range of subjects while also writing lengthy and cogent topical essays and newspaper dispatches that are distinguished for their resolute candor, moral perspective, and narrative detail.

The scion of an old New England family and son of a successful Hartford merchant, Olmsted enjoyed a happy and secure middleclass childhood. Unwittingly, his appreciation of nature and scenery helped prepare him for his later career. In the first selection of Beveridge's anthology, an autobiographical fragment, Olmsted recounts that as a boy he loved to ramble in the woods and fields surrounding his Connecticut home and that it was of no concern to him or his family when, still in the woods after sunset, he would seek overnight shelter in the homes of friends. Recalling the youthful carriage rides on which he accompanied his father and step-mother, he later wrote, "It was my fortune also at this period to be

taken on numerous journeys in company with people neither literary, scientific, nor artistic, but more than ordinarily susceptible to beauty of scenery and who with little talking about it, and none for my instruction, plainly shaped their courses and their customs with reference to the enjoyment of it."

At the age of fourteen

Olmsted suffered an acute case of sumac poisoning, resulting in an eye disorder that caused doctors to advise him against pursuing formal study. For this reason, he tells us, "It followed that at the time my schoolmates were entering college I was nominally the pupil of a topographical engineer but really for the most part given over to a decently restrained vagabond life, generally pursued under the guise of an angler, a fowler or a dabbler on the shallowest shores of the deep sea of the natural sciences." He did manage to read on his own, however, and the books that most interested him were, significantly in light of later events, those of Uvedale Price, William Gilpin, and other eighteenth-century English theorists of the Picturesque as applied to landscape scenery.

As he approached manhood, Olmsted's best

friends included a small coterie of his brother John's classmates at Yale, serious young men such as Charles Loring Brace, whose letter confiding his struggle to square his own deeply religious quest for salvation with Calvin's stern doctrine of predestination is answered by Olmsted thus: "What in the world do you want? Pure Religion, don't you - to save you - and that is 'to visit & relieve the widows and fatherless.' It 'is before God.' Now can you not do that without believing in – 'what you do not understand,' as your ridiculous conscience tells you you ought to, and makes you half miserable for not doing."

Today Brace is remembered for his efforts to ameliorate the lives of orphans and newsboys with the formation of the Children's Aid Society and other charities serving New York's impoverished, mid-nineteenth-century immigrants. Olmsted's own contribution in this regard was nothing less than the creation of America's first purposebuilt people's park.

As we turn the pages of Frederick Law Olmsted: Writings on Landscape, Culture, and Society, we see Olmsted growing toward his destiny both as a landscape designer and a social commentator. Before this could transpire, based on his random selfeducation in landscape matters, he decided to become

a farmer. With financial aid from his father, he purchased a seventy-acre farm at Sachem's Head in Guilford, Connecticut, on the rocky edge of Long Island Sound. When it proved unprofitable, he sold it and bought another on Staten Island, where he could pursue new agricultural methods with greater success. However, restlessness and curiosity got the better of him, and he persuaded his father to allow him to accompany his brother John on an extended trip to England for the professed purpose of improving his education in what was then called scientific agriculture, meaning innovative farming methods using such technologies as subsurface clay tiles to drain standing water. Publication upon his return of his first book. Walks and Talks of an American Farmer in England (1852), a diaristic account of customs and scenery, led to a commission from the New-York Daily Times to travel in the South to gather firsthand impressions and data showing the comparative diseconomy of the Southern slave system over agriculture employing free labor.

Written under the appropriately chosen nom de plume "Yeoman," a selec-

tion of these "Letters on the Productions, Industry and Resources of the Southern States" bear witness to Olmsted's growing realization that slavery was not only unprofitable but abhorrent. As a proponent of the short-lived Free Soil political party, he extolled the prosperous rural communities formed in the Texas Hill Country by German immigrants who arrived in the wake of the 1848 revolutions in Europe. There he interviewed a well-educated farmer and was happy to report that this man, with his two sons and no hired labor, had cultivated 2,500 bushels of corn plus some wheat, cotton, and tobacco on sixty acres of land during the previous year.

With the publication of his Yeoman articles in three volumes – *Journey in* the Seaboard Slave States, Journey Through Texas, and Journey in the Back Country he abandoned farming and began to pursue a career in publishing. After affiliating himself with the firm of Dix, Edwards, & Company and becoming managing editor of Putnam's Monthly Magazine, he enjoyed a new identity as a man of letters and member of the "literary republic of New York." Although pleased with the opportunity this gave him to solicit books and articles from the likes of Emerson. Irving, Longfellow, Stowe,

Melville, and Thoreau, the uncertainty forced on the publishing industry as well as the economy at large by the financial panic of 1857 did not bode well for his future. Opportunely, a commission had been recently formed to oversee a huge civic enterprise: the construction of a large public park in New York City. The commissioners were seeking a man to work under the direction of the chief engineer as superintendent of the preliminary clearing operations; Olmsted said that he was interested in applying for the job. Although some did not consider him a "practical man" since he refused to engage in patronage politics, and others saw him as nothing but a gentleman, inexperienced in this line of work, he nevertheless obtained the position. Soon he was transforming an army of ward heelers into an efficient workforce.

It was at this juncture that, in response to the commissioners' decision to hold a competition in order to select a design for the new park, architect Calvert Vaux approached Olmsted with the suggestion of collaborating on what turned out to be the winning entry, a plan they labeled "Greensward." Olmsted's detailed descrip-

tion of its components in the commissioners' 1858 report allows the reader to tour the park section by section. In doing so it becomes obvious that the park's design is holistic rather than simply a "to-do" list of unrelated projects: a brilliant, Romantic symphony in which the visitor moves through passages of turf, woods, and water by means of curvilinear carriage drives, pedestrian paths, and bridle trails. As a bonus, Writings on Landscape, Culture, and Society contains a beautiful set of illustrations of this scenic and engineering vision. Other images show the park under construction and its appearance when first opened to the public.

Another welcome selection in the volume, "Parks: An Encyclopedic View: 1861," shows Olmsted as a well-informed student of landscape history. But even as he was writing this essay, with its descriptions of pleasure grounds from remote antiquity to the present, war had erupted. Like many other Union patriots, Olmsted was ready to answer the call. He accepted the charge of managing the Sanitary Commission, forerunner of the American Red Cross. Once established in Washington D.C., the newly appointed director struggled with insufficient medical staff and supplies and the realization that reinforcements were badly needed

if Union troops were to succeed in winning the war. Appalled at the ineptitude of the Union military, he wrote a critical "Report on the Demoralization of the Volunteers" as he himself teetered on the brink of nervous exhaustion, which was thus described by diarist George Templeton Strong: "[Olmsted] works like a dog all day and sits up nearly all night, doesn't go home to his family . . . for five days and nights altogether, works with a steady, feverish intensity till four in the morning, sleeps on a sofa in his clothes, and breakfasts on strong coffee and pickles!!!"

Remarkably, as the war was drawing to a close in 1863, Olmsted was engaged in drafting a prospectus for a new periodical, The Nation. He envisioned what is today the oldest continuously published weekly magazine in the United States as a liberal journal in which "there would be time for the deliberate preparation of . . . articles" and which would offer "the matured views of competent authorities, instead of the first impression of writers not always possessing special qualifications for their task."

Ultimately, however, he did not return to New York to work with his friend Edwin L. Godkin, the magazine's first editor. Rather, seeking a surer way to support his wife Mary, the widow of his brother John, and their children and stepchildren, Olmsted who, based on previous experience constructing Central Park and directing the Sanitary Commission, considered himself to be first and foremost an able administrator accepted an offer to take charge of a gold-mining operation on the Mariposa Estate in California.

But even in the process of transplanting himself and his family to the opposite side of the continent, his energetic mind was filled with visions for the completion of Central Park. In an animated letter written en route to California, describing to Ignatz Anton Pilát, foreman of the gardeners in the park, the tropical vegetation he had seen while crossing the isthmus of Panama, his aesthetic sensibility and adherence to the design principles underlying the Picturesque came to the fore: "The scenery excited a wholly different emotion from that produced by any of our temperate-zone scenery, or rather it excited an emotion of a kind which our scenery sometimes produces as a quiet suggestion to reflection, excited it

instantly, instinctively, and directly." He then went on at length discussing how, although it was impossible to plant palm trees and other tropical vegetation in Central Park, something of the same impression could be achieved by substituting species of comparable appearance. He suggested, for instance, "the Ailanthus that at no great distance (as a landscape painter would depict them) you would not know them apart, at least an average observer would not."

Not surprisingly, once in California, in addition to managing the Mariposa mining operations, Olmsted wrote discerning descriptions of the novel-to-him scenery of the arid West, which if not Picturesque in familiar terms, nevertheless in some places partook of the sublime. His reputation as a park maker had followed him, and he was soon asked to write reports with guidelines for proposed landscape developments. These included Mountain View Cemetery in Oakland, pleasure grounds for the city of San Francisco, and the University of California's Berkeley campus. His most important contribution during this period was his 1865 "Preliminary Report upon the Yosemite and Big Tree Grove." The description of Yosemite Valley and the Merced River that flows

through it, embraced by the towering granite cliffs of the Sierras, is as vivid as a painting by Thomas Hill or a photograph by Carleton Watkins:

Banks of heartsease and beds of cowslips and daisies are frequent, and thickets of alder, dogwood and willow often fringe the shores. At several points streams of water flow into the chasm, descending at one leap from five hundred to fourteen hundred feet. One small stream falls, in three closely consecutive pitches, a distance of two thousand six hundred feet, which is more than fifteen times the height of the falls of Niagara. In the spray of these falls superb rainbows are seen.

Olmsted went on at length to champion the act of Congress that guaranteed "that this scenery shall never be private property but that like certain defensive points upon our coast it shall be held solely for public purposes." Envisioning the popularity of Yosemite as a tourist destination, he argued for "the prevention of all constructions markedly inharmonious with the scenery or which would unnecessarily obscure, distort, or detract from the dignity of the scenery."

During the period when he was writing these words, the owners of the Mariposa mining operation

found themselves facing bankruptcy. Providentially for both Olmsted and the nation, he received a letter at this time in which Calvert Vaux attempted to persuade him to return to New York and pursue what Vaux perceived to be his former colleague's true destiny as a landscape architect. The two men reestablished their association in 1865 with the formation of Olmsted, Vaux & Co. in order to collaborate on the design of Brooklyn's Prospect Park. In the 1868 "Report of the Landscape Architects and Superintendents," in which the concept of the "parkway" and the term itself is proposed, we have a glimpse of Olmsted's visionary creativity at work. Drawing on examples in Paris and Berlin, he describes in word and plan a scheme in which "a central mall is divided into two parts to make room for a central road-way, prepared with express reference to pleasure-riding and driving, the ordinary paved, traffic road-ways, with their flagged sidewalks remaining still on the outside of the public mall for pedestrians."

By now the joint reputation of Olmsted and Vaux as the country's preeminent park designers brought them planning commissions in other cities. Thus Riverside, outside of Chicago, became an artfully planned garden suburb. Olmsted urged its developers

to obtain possession, if possible, of a strip of ground from two hundred to six hundred feet wide, extending from the city to the nearest border of your property, to secure its thorough drainage, to plant it with trees, and to carry through it a series of separate, but adjoining ways, especially adapted in construction first for walking, second for riding, third for pleasuredriving, and fourth to give convenient access to houses to be built on the route and accommodate heavy freighting, without inconvenience to the through pleasure travel.

He also proposed the construction of a parkway between the new development and downtown Chicago.

Now as much urban planners as park designers, Olmsted and Vaux accepted commissions to design parks in Hartford, Buffalo, Tarrytown, and elsewhere. In 1872 they began a heroic attempt to reverse political depredations and disastrous horticultural policies implemented in Central Park during the reign of Boss Tweed. In the same Picturesque terms in which Olmsted had instructed Pilát to plant certain botanical species in

order to achieve a "tropical effect" near the Lake in Central Park, he now instructed Robert Demcker, Pilát's successor as chieflandscape gardener, to trim and prune mutilated trees and thin stands in such a way that desired scenic impressions could be reestablished. In a memorandum containing instructions to the park's gardeners, he tried to counter the trend toward manicured horticultural displays by reminding them of the purpose of the financial outlay for the park:

> It is not simply to give the people of the city an opportunity for getting fresh air and exercise . . . It is not simply to make a place of amusement or for the gratification of curiosity or for gaining knowledge. The main object and justification is simply to produce a certain influence on the minds of people and through this to make life in the city healthier and happier. The character of this influence is a poetic one and it is to be produced by means of scenes through observation of which the mind may be more or less lifted out of moods and habits into which it is, under the ordinary conditions of life in the city, likely to fall.

A lengthy essay titled "Landscape Gardening," written in 1877, expounds on the theme of eschewing horticultural embellishment and small effects in favor of broader naturalistic views and vistas.

In 1872 Olmsted's association with Central Park came to an end with the abolition of the original board of commissioners and the installation of the Department of Public Parks as an agency of municipal government. At the same time for reasons of mutual convenience, he and Vaux dissolved their partnership. Vaux continued his career as an architect and Olmsted continued to accept landscape-design commissions, including the design of the grounds of the United States Capitol; a design for a park at Mount Royal in Montreal; recommendations for the alignment of Riverside Drive and the development of Riverside Park in Manhattan; a new street plan for the Riverdale section of the Bronx, which would follow the "highly picturesque" local topography rather than a grid plat; and a plan for Boston's Emerald Necklace, a perimeter circuit of parks linked by parkways.

In 1883, with the "Emerald Necklace" park system under way, Olmsted decided to take up residence in the Boston suburb of Brookline. There he built Fairstead, a combination home and office in which he began

a landscape-architectural practice in association with his sons John and Frederick Law Olmsted Ir. With their participation, he continued a demanding career until nearly the end of his life. Continually crisscrossing the country by train, he designed park systems, college campuses, the grounds of the 1893 World's Columbian Exposition in Chicago, and private estates, including Biltmore, George Washington Vanderbilt's 8,000-acre Gilded Age demesne in Ashville, North Carolina, with its French château-style mansion by Richard Morris Hunt.

Thanks to the Library of America's publication of Frederick Law Olmsted: Writings on Landscape, Culture, and Society, the reader who does not have space to shelve or time to read the ninevolume series of Olmsted's complete papers can grasp the range of his work. Here he appears in the round, not just as an unparalleled exponent of nineteenthcentury Romanticism in landscape design but also as a chronicler of the tumultuous historic events to which he was an eyewitness and an articulate voice for the moral salvation of the nation, at a time as critical to its future well-being as that of the present.

– Elizabeth Barlow Rogers

This review is also published in the March 2016 issue of *The New Criterion*.

Awards

2015 John Brinckerhoff Jackson Book Prize Winners

Anthony Acciavatti Ganges Water Machine: Designing New India's Ancient River Applied Research + Design Publishing, 2015

Charles E. Beveridge, Lauren Meier, and Irene Mills Frederick Law Olmsted: Plans and Views of Public Parks Johns Hopkins University Press, 2015

Pierrette Hondagneu-Sotelo Paradise Transplanted: Migration and the Making of California Gardens University of California Press, 2014

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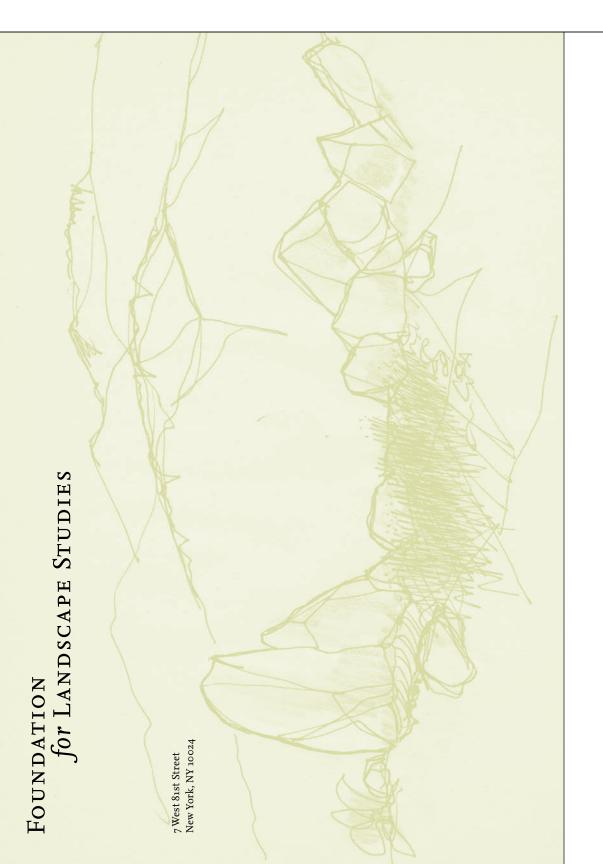
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