

“Understanding the Landscape” (by Christopher Newall); dedicated to *the memory of Robin Hodgkin (1916-2003), mountaineer and teacher*

Pre-Raphaelite representation of landscape - at least in the movement's primary phase - was concerned with the careful documentation of an actual physical world. In the 1850s, painters, draughtsmen and photographers inspected the face of the landscape in a spirit of scientific investigation, seeking to identify and differentiate botanical and geological types. These artists represented an age that believed in classification according to recognizable physical attributes and within encompassing systems. Pre-Raphaelite landscape is the product of a scientific culture; when artists sank to their hands and knees to look intently at the physical environment, they did so because they understood the vast diversity of nature and knew that each landscape form was unique in its aspect and substance. As Matthew Arnold prefaced his 1853 collection of poems: “a representation which is ... particular, precise, and firm”, Pre-Raphaelite landscape was likewise the outcome of a generation's inclination towards mimetic record-making that was factual and reliable.

By the middle of the nineteenth century there was a general acceptance on the part of thoughtful Britons that the Earth's history was enormously long, even on the part of Protestant churchmen who had come to understand the Creation as a metaphor rather than a factual account, and the texts of the Book of Genesis as produced by fallible human authors rather than handed down as the “word of God” (as argued, for example, by Bishop Colenso). The study of geology had made rapid advances since about 1820, and with this came an understanding of the landscape in terms of processes of uplift, erosion and deposition, as well as the establishment of an order for rock forms. Even before the turn of the nineteenth century, urgent debate in Britain, France and Germany had led to alternative theories to explain how the surface of the earth had been modeled, on the one hand, by a series of cataclysms separated by long periods of stasis, or, on the

other, by slow but unceasing mutation. The latter theory, which came to be known as uniformitarianism, was led by the Scottish geologist James Hutton, whose impenetrable text *Theories of the Earth* was published in 1795. Charles Lyell, who was a brilliant interpreter of other men's theories and an adept gatherer of data from researches other than his own, published *Principles of Geology* in 1830-3. This text became the defining creed of the belief in gradual change (as opposed to the catastrophist theory still adhered to by Europeans such as Georges Cuvier), and on its strength Lyell became the most famous and influential geologist of the age. The essence of his “attempt to explain the former changes of the Earth's surface, by references to causes now in operation” (as the first edition of the book was sub-titled), was that clues to the processes that had formed the landscape lay all around, and that the mechanisms of erosion, sedimentation, uplift and depression of the earth's surface by vulcanism, and suchlike, were ongoing. Charles Coulston Gillispie wrote of Lyell's ideas: “Such theoretical originality as uniformitarianism possessed lay ... in its rigorous, undeviating insistence that existing forces, given time enough, account for the observable state of man's habitat.”¹ Charles Darwin took Lyell's *Principles* with him on the *Beagle* in 1831, and the ideas that it contained anticipated and contributed to the theory of evolution.

By the 1850s, the mood of acrimony between different factions in the geological dispute had generally subsided. (Lyell's adversaries in Britain had been the so-called Oxford group led by William Buckland, who had attempted to reconcile geological evidence with Old Testament events such as Noah's flood, and the authors of the successive *Bridgewater Treatises*, published in the 1830s “to show the beneficent activity of the Creator in the ordering of the different parts of the natural world”).² A spate of more popular publications, such as Robert Chambers's *Vestiges of the Natural History of Creation* (1844), and John Phillips's *Manual of Geology* (1855), as well as successive reissues of Lyell's *Principles*, meant that a large body of men and women, if they had leisure to spare, joined the mania for geological

investigation. The findings of these dedicated amateurs were transmitted into the central pool of scientific knowledge through published papers, correspondence, or direct contact with professionals working in the field. Empirical methods of observation were encouraged by the Geological Society (which had existed since 1807), while *The Geologist* served as a conduit of information and ideas. An article in this periodical by J.W. Salter, published in 1858, emphasized the importance of an “abundance of good facts ... collected by the industry of local observers who ... communicate these results in a tangible form.”³ Pre-Raphaelite artists, who in many cases shared with the amateur geologists an intense love of and close familiarity with the landscape and nature, were osmotically drawn into an analogous function of precise and factual documentation of the places they visited. Representing the physical world conscientiously and on the basis of an understanding of its geological character was thus assumed as a main purpose of the serious-minded landscape painter, at a time when informed opinion had come to understand “how completely dependent all the beauties of landscape are on great geological phenomena”,⁴ as the *Art Journal* explained in 1855.

If, therefore, Pre-Raphaelite landscape appears to represent an actuality, with the utmost attention to observable physical characteristics that the artist might summon, in many instances it is evident that the art is informed by knowledge that the physical world is the product of vastly long and gradual processes of mutation, and that the face of the actual landscape provides evidence of the processes by which it has been formed. People looked at landscape in a new and analytical way, fascinated and perhaps also alarmed by the realization that stupendous forces had been, and were still, at work, and artists were both part of that community and served it by documenting the physical world. Landscape painting assumed a new gravity and importance at a time when it was understood that the outside world was only incidentally the familiar setting of man's existence.

Not all the painters who are thought of as Pre-

Raphaelites were intellectually engaged with the issue of authentic documentation on the basis of an understanding of the nature and significance of what they were so carefully representing. When in the spring of 1854 John Everett Millais was seeking to finish the portrait of John Ruskin (no.79), set against a background of rocks and flowing water, that he had commenced in Scotland the previous season, George Price Boyce suggested that he might find similar rock formations from which to paint the background at Capel Curig in Wales. The idea seems momentarily to have appealed to Millais, as he wrote to William Holman Hunt: “I have finished Ruskin's portrait all but the bit of waterfall which was left, which I am going to do in Wales in a week or so as soon as I have done the trousers and boots.” Ruskin was not having this, however, “as the rocks are of quite a different Strata there”,⁵ and so Millais was forced to make the long journey north to complete the work. Thus Ruskin not only advised painters with whom he was in contact to be exacting and faithful in their transcriptions of nature, but also insisted that they should respect the fact that no two specimens duplicated one another in the multiplicity of nature. Ruskin's own drawing *Gneiss Rock, Glenfinlas* (no.80) seems to have been made to show Millais how the background of the portrait should be treated, and exemplifies single-mindedness of observation both of rock types and the denudation by which the surface of the rock has been exposed and worn by the action of water. Ruskin's writings give evidence of his fascination with the way in which the strata of the gneiss rock described a swirling pattern, shapes that recorded its igneous flow as it had cooled and hardened, seeing indications of the very processes by which the physical world was created and evidence of universal laws of nature. His differences between rock types led him to characterize them bio-morphically (for example, describing gneiss rocks that he studied in the Aosta valley in an 1865 article in the *Geological Magazine* as “coiled like knots of passionate snakes”).⁶ Ruskin found a seething vitality in the inorganic elements of nature, which seemed to be energized by the fission that had formed the

landscape, and which was fearsome as well as thrilling.

Many artists were well informed about geological theory, and could distinguish and describe technically different landscape types. Evidence for this is supplied by the careful attention shown in paintings, drawings and photographs of specific locations, as well as in letters and diaries describing places visited. Thomas Seddon's account of the landscape close to Marseilles through which he passed in 1853 - "the hills are formed of white calcareous rock, very broken, and almost bare",⁷ or William Dyce's comparison of the landscapes of eastern Scotland, "the granite mountains [of which], by the process of disintegration [have] become rounded and their asperities smoothed down", and north Wales, "[where] the materials being slate rock, it ... splits and tumbles down in huge flakes which leaves the peaks from which they have fallen as sharp and angular as if they had never been acted upon by the atmosphere at all"⁸ serve as examples of such awareness. Furthermore, it is clear that particular landscape formations - usually those in which the mechanisms of physical geography were distinctly seen - were especially valued; landscape types were characterized and grouped according to a loose hierarchy, and in terms of their appeal and suitability as subjects. Ruskin used a system of classification in his manual of instruction to amateur artists, *The Elements of Drawing*, published in 1857, while the series of articles that Professor D.T. Ansted prepared for the Art Journal in 1863 discuss landscape art according to categories of types, such as "mountains", "plains, table lands, & etc." and "water".⁹

It is not surprising, therefore, to find certain types of landscape occurring frequently among the wider orbit of Pre-Raphaelite landscape artists. The eroded surfaces of stone, seen in the broken edges of rocky sea-cliffs, or forming the smooth pavements of riverbeds, or lying as boulders carried by the force of water or ice, became a familiar motif of the Pre-Raphaelite landscape. In 1853 John William Inchbold and George Price Boyce painted views of Anstey's Cove (nos.6, 7), which describe the abrasion of the

soft red sandstones of the Devon coastline by the action of the sea. In 1857 W.H. Millais's panorama at Lee Abbey (no.13) included a view of the famous Valley of Rocks. Joanna Wells, in her painting Shanklin (no. 117), dwells on a single vast block resting by the shore, while Charles Napier Henry's *Among the Shingle at Clovelly* (no. 117), of 1864, contrasts the textures of smooth seashore pebbles and the living stone of a sandstone bluff. Perhaps the most complex of all Pre-Raphaelite paintings of coastal landscape is William Dyce's *Pegwell Bay: A Recollection of October 5th, 1858* (no. 107), of 1860, which shows the Kentish cliffs, their chalk walls pierced by sea caves cut by the rise and fall of the tides and therefore almost visibly retreating to leave a flat foreground of more durable sedimentary rock. Figures occupy the landscape: members of the artist's family are seen gathering seashells. In the evening sky appears the trail of a comet. Marcia Pointon has analyzed references to the various timescales that operate within the painting - geological (as represented by the processes of erosion upon the chalk and embedded strata of flints); evolutionary (indicated by the finding of shells, and by association the fossil-record); astronomical (the comet); and diurnal (alluded to by the effect of sinking light and the ebb of the tide, suggesting that the figures may soon want to return to the comfort of their holiday boarding houses). As Pointon wrote, "Pegwell Bay is a painting about time, explored through an image of a particular moment in time."¹⁰

These artists represent a wide spectrum of Pre-Raphaelite landscape painting, but in each case the painter demonstrates knowledge and understanding of the landscape's geological character, giving careful identifications of rock types and a clear indication of how the landscape was formed. Their sense of the importance of scientifically informed looking derived from a wider culture in which such matters - and specifically geology - were much discussed and written about. Their works may be described as Pre-Raphaelite because, although none of the artists was a member of the Pre-Raphaelite Brotherhood, and some hardly in contact with

the movement's metropolitan centre, they were not only painted with a degree of detail which may be recognized as characteristic of Pre-Raphaelitism, but with conscientious attention to the significance of that detail. In this sense, they represent a reaction to the hackneyed approximations of the forms of nature given by an older generation of landscape artists who were members of the Royal Academy, and may be seen as discrete from the many contemporary painters who adopted bright color and close detail as a coming style but without understanding the critical implications of Pre-Raphaelite inspection of nature.

It would be interesting to know more about what books the artists who formed the wider Pre-Raphaelite movement possessed and what periodicals they read, and therefore to what extent they were abreast of the scientific debate. Barbara Novak has speculated about the reading of American artists of the same generation, confidently stating that Lyell's *Principles* would have been a staple text." In England, the widely read and therefore influential *Art Journal* occasionally argued that painters should take account of scientific knowledge in representing landscape, notably in 1855 in an article entitled "Geology; Its Relation to the Picturesque", and then again in 1863 in a series of editorials which support a general principle which validates landscape art that "affords an insight into nature's ways."¹² It maybe assumed (and is demonstrated by anecdotal accounts), that most Pre-Raphaelite artists read the successive volumes of *Modern Painters* – the first of which, issued in 1843, was dedicated to "the landscape artists of England." In the fourth volume of *Modern Painters*, which appeared in April 1856, Ruskin sought to define certain laws of beauty on the basis of an observation of natural phenomena. In this, all forms of landscape were seen as integral and part of a whole, subject to stupendous forces and molded together into dense and complex patterns. Mountain subjects were to be treated by painters in color gradated in tone and intensity,* and with line that represented both the energy and the infinity of nature in the constant variety and unpredictability of its curvature. Ruskin's

impassioned text had the effect of making painters want to go to the Alps, to see the mountain ranges that he had described.

Mountain subjects had been painted by the Pre-Raphaelites from the start. Ford Madox Brown's *Windermere* (no.78), of 1848, shows the fells at the lake's northern end, although it is not especially concerned with processes of physical geography. In 1854, both Holman Hunt and Thomas Seddon painted eroded cliffs and mountain ranges in their Holy Land subjects, such as *The Scapegoat* and *Mountains of Moab* (nos.63, 62). The real mania for mountains, treated in their own right, however, seems to have commenced with Inchbold's *The Burn, November - The Cucullen Hills* (the painting now known as *Cuillin Ridge*; fig.25), painted in Scotland in the autumn of 1855. The foreground shows igneous rocks of different strata - granite of a burnt red color, and black crystalline gabbro - over which flows the Sligachan burn on the Isle of Skye, thus representing only the most recent agent of erosion to operate on the Hebridean landscape. The larger composition shows two of the line of ancient volcanic peaks of distinctive conical shape rising above expanses of moorland. Bleakly rugged and virtually without reference to human activity, the painting surely reveals a comprehension of how the landscape had been formed by long epochs of vulcanism in the early Tertiary age. Lyell does not describe the Cuillins in *Principles of Geology*, but devoted a chapter to what he called "the supposed former intensity of the igneous forces", in which he contradicted those who had represented "Nature as having been prodigal of violence and parsimonious of time",¹³ but instead emphasized a relentless but gradual process of change. Inchbold would almost certainly have read James David Forbes's "Notes on the Topography and Geology of the Cuchullin Hills in Skye, and on the Traces of Ancient Glaciers which they Present", delivered as a lecture in Edinburgh in 1845, but published as part of his *Guide to the Island of Skye* in 1854. Forbes recognized that the scouring action of glaciers had exposed the underlying igneous strata, so that, "in the neighborhood of Glen Sligachan, especially near the mouth of Hart-

Corry, the sharp unequivocal separation of the deep hypersthene, as it *overlies* the pale orange felspar rock, may be discerned for miles.”¹⁴ Forbes was aghast at the thought of such “an agent whose power [had been] sufficiently great and long continued, to produce such prodigious abrasions.”¹⁵

In June 1856 Inchbold and Ruskin met at Lauterbrunnen in Switzerland. From Inchbold's first Alpine painting season came *Jungfrau, from the Wengern Alps* (see no.85), presumably a work that represented his response both to Ruskin's published and personal recommendations of how artists should treat mountain subjects. Ruskin made only a passing reference to it in his 1857 *Academy Notes* (describing a foreground “covered with gentians and Alpine roses”),¹⁶ perhaps because he was already losing faith in Inchbold as a painter committed to imbuing his works with reliable geological information. In 1858 Ruskin considered that Inchbold had “quite failed in his Mont Blanc picture”¹⁷ (presumably the lost *A By-Path to Chamonix* of the previous season). In fact, Inchbold was moving forwards towards an aestheticized and ethereal representation of mountains (seen in his *Above Lucerne* (no.89), and presumably carried further still in a later Swiss subject *On the Lake of Thun* (untraced)).

John Brett “rushed off to Switzerland” (see no. 85) in June 1856, presumably having just read *Modern Painters IV*. He first met Inchbold “on the Wengern alp”,¹⁸ and immediately they entered upon a relationship of mutual support and intellectual exchange. Two finished works, a drawing and a painting, derived from Brett's stay at Rosenloui in 1856: *The Wetterhorn, Wellhorn and Eiger* and *The Glacier of Rosenloui* (nos.85, 86). The former is an absolutely literal account of the three peaks, which are loosely aligned and visible from the meadows in the valley below. The view was a famous one, recalled by Ruskin in *Praeterita* as second only to that of the *Jungfrau* as “the most beautiful in Switzerland”,¹⁹ but lending itself to passive observation. *Rosenloui* represents a resume of mid-century ideas about the function and impact of glaciers. There was at that time a new understanding of how crystalline

bodies of ice flowed as viscous masses, with the centre moving fastest and the outer parts slowed by friction with rock surfaces. The fieldwork researches of James David Forbes on the Glacier of the Aar and the Mer de Glace in 1840 and 1841 led to his book *Travels through the Alps of Savoy and Other Parts of the Pennine Chain, with Observations of the Phenomena of Glaciers* (1843). Here it was stated that “a glacier is an imperfect fluid, or a viscous body, which is urged down slopes of a certain inclination by the mutual pressure of its parts.”²⁰

Brett's *Rosenloui* painting shows the great tongue of ice flowing, as it were, around and over the Alpine strata, confined on the left side by a wall of rock. Careful observation is made of the transverse crevasses formed in the body of ice as it moves over a *col* or raised threshold of rock, and of an area of icefall above. The unbroken last section of the glacier, closest to the vantage point, is seen to be moving down a steeper gradient by flow of gravity rather than force of extrusion from above, with its snout concealed by a bed of horizontal rock in the foreground. A crust of windswept snow forms the glacier's uppermost surface. In addition, Brett alludes to the glacier's power as an agent of erosion. The exposed rock surfaces have been denuded by the flow of ice in earlier epochs, revealing successive strata of different types, while in the foreground are seen three erratic boulders - each of a different geological origin - transported and deposited by the glacier. All of this is deliberately introduced in a way that is both scientifically informed and didactic. Any suspicion, however, that the artist has manipulated the Alpine landscape to match received theories about the working of glaciers is confounded by a visit to the actual location, where the ground is found to be littered with just such a mix of aberrant rock specimens.

Clearly Brett understood the mechanisms of glaciation, as explained by European and British geologists. In addition to Forbes's *Travels through the Alps of Savoy*, he would almost certainly have been familiar with the seminal *Etudes sur les Glaciers* of Louis Agassiz, published in 1840. In this a succession of awestruck passages describe

both the function and the sheer physical beauty of glaciers, focusing on Rosenloui among other Alpine ice-flows. Agassiz found the colors of the glacial forms quite wonderful, from the “dazzling whiteness”²¹ of the upper surfaces of Rosenloui, to the “pale bluish or greenish shades, which contrast happily with the often very sombre colors of the surrounding crags.”²² Of the distinctively smoothed and rounded forms of the rock surfaces over which ice had previously flowed, Agassiz wrote in terms that Brett might have been seeking to illustrate: “The polishing action of the ice is seen particularly well at the Rosenloui glacier. The rock formations here consist of a black limestone ... both the hollowed bed and the raised sides are equally rounded and smoothed, and one sees no sharp edges in the area in front of the glacier. However, as the bedrock is not very hard, the surface is less highly polished than would be the case were it to consist of granite or serpentinite, and thus less enduring; also, it weathers quite easily, which is why one does not find polished surfaces far from the glacier. The most beautiful are those which are nearest the edge of the ice, that is to say those from which the ice had departed most recently.”²³

There was a widely held opinion among the scientific community that a new ice age was coming on. A year or two after Brett's first visit to the Alps Charles Darwin meditated on the annihilation of life on Earth as a consequence of a relentless reduction in temperature caused by a cooling Sun, the “pet horror” that Darwin described in letters to his friend J.D. Hooker.²⁴ The popular scientist William Thomson had prompted this alarming theme, in articles such as “On the Age of the Sun's Heat” (appearing in *Macmillan's Magazine* in 1862).²⁵

Evidence was being gathered of how in earlier epochs the Earth's surface temperature had been distinctly higher, with organic remains such as tree trunks and roots being found embedded in ice caps and flows. In the 1850s London suffered a succession of phenomenally cold winters, much commented on by diarists such as G.P. Boyce. Furthermore, it happened that the mid-nineteenth century saw a period of glacial advance, “perhaps the most marked in historic times.”²⁶ In fact, these

forebodings proved to be unfounded: gradually rising temperatures have caused the Rosenloui glacier to retreat since 1856 by about a kilometer, a withdrawal that records show has happened at a fairly steady rate, although with three periods of partial recovery.²⁷ Brett, who painted the glacier with such deliberate attention to its ongoing physical mechanisms, and who was himself a respected observer of scientific phenomena, would be proud to know that his painting *The Glacier* of Rosenloui is today regarded as an invaluable source of documentary information about the glacier as it existed 147 years ago.²⁷

Two years later, in the summer of 1858, Brett returned to the Alps - on this occasion to the valley of the Dora Baltea in Italy. There he painted what is probably the most remarkable of all Pre-Raphaelite landscapes of mountain subjects, *Val d'Aosta* (fig.27). Verdant and richly fertile though the scenery may appear - the valley is famous for the cultivation of rennet apples and vines - in the actual location one is struck how the rock formations on Mont-Torretta (the artist's vantage-point, a hill to the north-east of the village of Saint-Pierre, where Brett was lodging), and all the surrounding landscape, bear hallmarks of epochs of glaciation. There are, in the painting's left foreground, once again as in Rosenloui, three ... conspicuous erratic boulders, reflecting again the knowledge that glaciers transport enormously heavy blocks of stone and deposit them as moraines far from their point of geological origin. Furthermore, the bedrock in the painting has a classic *roche moutonnee* shape (a geological term to describe rock smoothed by glacial action on one side and jaggedly undercut by glacial “plucking” during periods of freeze-thaw on the other). The remains of the glacier which had once engulfed the Aosta valley - the Ruitor - is visible on the left-hand horizon, and although it represents just a small part of the overall composition, it serves as an ominous reminder of nature's power.

The Ruitor, along with all Alpine glaciers, attracted much interest in the nineteenth century. It was realized that the ice was disgorging ancient botanical specimens, and that this offered clues as to how long the ice had remained impacted. There

were traditional folk fears of the ice flow, with priests being taken to the glacier's snout to pray that the ice should not endanger populations or habitations. Brett, likewise, had a perception of glaciers as living bodies, and as potentially threatening. His understanding of the way in which they had formed the existing landscape, heightened a sense of their dormant power. In Val d'Aosta, we are shown an inhabited landscape, with a sleeping figure and a waking goat, and myriad human activities stretched out over the entire valley. All of this appears to be concerned with the present, and seems to imply that we are safe to be indifferent to or unaware of larger geological forces. Nonetheless, to the person who understood how the landscape had been formed (Brett himself of course, plus a Europe-wide intelligentsia), it was certainly amazing and perhaps also alarming. The placing of the girl, who rests her head upon one of the very boulders that were evidence to the informed eye of stupendous past events, and whose figure seems to meld with and to echo the patterns of the stone's grain and shape, is surely intended as a foil to a representation of the landscape on the basis of scientific understanding. In her slumber she is insensible to her surroundings, as in her daily existence she may similarly have taken for granted, rather than attempted to comprehend, the geographical mechanisms of her habitual environment. The silver cross at her breast may signify that she is intended to represent the devout – but to Brett's Protestant perception, simple-minded adherence of the Catholic peasantry of the Italian to an unquestioning and uncritical biblical explanation of the landscape's formation.

This reading of *Val d'Aosta* as a painting essentially concerned with glaciation, and therefore suggestive of elemental force within the landscape, is corroborated by a comparison with Brett's 1870 *Etna from the Heights of Taormina* (no. 101). On this later occasion, there can be no doubt at all that Brett had carried out careful and scientifically based study of the landscape in terms of physical geography. After all, he was in Sicily in company with a group of scientists, and on his return to England he wrote up his notes

describing the volcano and the eruptions it was undergoing for the journal *Nature*. With *Etna*, Brett again shows a panorama of peaceful orchards, which likewise are presided over by elemental geological forces. The impact of volcanoes on surrounding regions, which might seem cataclysmic rather than gradual – certainly would be so understood by the inhabitants of the towns and villages of the volcano's flanks that have periodically been engulfed by lava flow – was nonetheless seen by geologists as something relentless and continuous, if considered on a sufficiently long timescale. In this sense, vulcanicity and glaciation were posited as comparable geological forces, a duality discussed by James D. Forbes in his “Sixth Letter on Glaciers” of 5 February 1844, which explores the Analogies of glaciers to Lava Streams²⁹ and expressed pictorially in Tyrwhitt's twinned mural paintings in the Oxford University Museum of lava flows on the flanks of Vesuvius and the Mer de Glace at Chamonix (see no. 95).

Even during this golden age of geological investigation, most people continued to believe in God. Geologists such as Lyell and his Swiss counterpart Agassiz – although on opposing sides of the argument between the theories of catastrophe and uniformitarianism – retained faith, and believed that a closer familiarity with nature would explain and confirm how He had made the world. Atheism made small headway; rationalist skepticism was regarded with disapproval for its association with French revolutionary fanaticism. Only in the 1850s did the Victorian crisis of faith gather momentum. In the poem “Dover Beach” (written in 1851) Matthew Arnold described the “melancholy, long, withdrawing roar” of the “Sea of faith.” *On The Origin of Species*, published in 1859, and the frenzied debate about Darwin's theory of evolution that followed, served to undermine the compromise position between religion and science, although, as A. N. Wilson has explained, “the religious reactions against Darwinism. . . can perhaps now be seen as horror at the notion of a natural world which is always changing, never still, never the same, rather than a ... philosophical consideration of

God's creative power" 3° Outright rejection of faith, even among the intelligentsia of the 1860s, was a rare and extreme stand to take.

Nature and the landscape remained for many a source of wonder that demonstrated the beneficence of God's creation. John Ruskin's own faith may have been shaken by the imagined clink of the geologists' hammers "at the end of every cadence of the Bible verses",³¹ as he wrote in 1851 to his friend Henry Acland, but most of the Pre-Raphaelite landscapists seem to have retained a broad faith. For them, knowledge of the physical world in scientific terms, was compatible with, even perhaps intensified, a belief in divine ordination. Holman Hunt was a man of intense religiosity, as was Thomas Seddon; Inchbold was, according to Swinburne (admittedly a curious source), "a very religious man and a strong Churchman";³² A.W. Hunt resisted taking holy orders while a fellow at Corpus Christi, but not it seems because of a dramatic failure of faith; J.S. Raven loved nature in a simple Protestant way; while the Revd. Richard Tyrwhitt, when painting his murals illustrating the plasticities of glacial ice and volcanic magma, was Pre-Raphaelite Vision presumably carried forward both by a desire to give instruction and a spirit of faithfulness. Brett seems to be the exception to prove the rule that most Pre-Raphaelite landscape painters observed nature to confirm what they held to be divine laws and the immanence of God, thus finding in the beauty of landscape exultation and epiphany. Perhaps early in the 1860s, but certainly by 1870 when he joined Lockyer's expedition to Sicily to view the solar eclipse, Brett had lost his faith. The inanimate character of his later paintings, in for example *The British Channel Seen from the Dorsetshire Cliffs* (no.-145), no longer intended to provide information about the mechanisms of the physical world, reflects a bleaker and less caring perception of nature.

Because geology had entered the national consciousness, Pre-Raphaelite landscapes were judged and valued in terms of their accuracy as documentary accounts of places in their actual form according to criteria handed down by scientists. The need to provide precise and factual

information had profound consequences in the way Pre-Raphaelite landscape art looked, with foreground motifs the object of intense and focused inspection, and the abandonment of traditional compositional devices, such as repoussoirs to lead the eye into the composition or alternating bands of light and dark to emphasize distance. Landscape artists followed botanical and geological illustrators in moving closer to their subjects, to fulfill the exacting requirements of scientific observation, so that the scale of distance or sense of space within a composition became less important than the surfaces of the forms. However, Pre-Raphaelite landscape remained distinct from the illustration of scientific phenomena. The painters, draughtsmen and photographers of the 1850s and 1860s who are grouped within the wider Pre-Raphaelite movement knew that the actual landscape was the outcome of eons of gradual change. They recorded landscapes as they found them, in recognition of the fragility of the physical world, and in the knowledge that those same forces would continue to transform the very places they loved.

Notes

- 1 Gillispie 1959, pp. 126-7.
- 2 Greene 1982, p.104.
- 3 Quoted Van Riper 1993, p. (his italics).
- 4 "Geology: Its Relation to the Picturesque", *Art Journal*, 1855, pp. 275-6.
- 5 Quoted Tate 1984, p. 117.
- 6 Works, XXVI, p. 30.
- 7 Seddon 1858, p. 26.
- 8 Quoted Pointon 1978, p. 102.
- 9 The series of editorial articles by Ansted in the *Art Journal* of 1863 were: "The Representation of Water", pp. 13-15; "Plains, Table Lands, Hills, and Valleys", pp. 65-7; "Mountains", pp. 149-52; "Clouds, Air, and Atmospheric Meteors, in their Relation to the Picturesque", pp. 193-6 and "On the General Relation of Physical Geography and Geology to the Progress of Landscape Art in Various Countries", pp.233-5.
- 10 Pointon 1979a, p. 100.

- 11 See Novak 1980, p. 54.
 - 12 Ansted, 1863, p. 235.
 - 13 Lyell 1847, p. 157.
 - 14 Forbes 1854, p. 58.
 - 15 *Ibid.*, p. 68.
 - 16 *Works*, XIV, p. 96.
 - 17 Hayman 1982, p. 38.
 - 18 Brett 2002, p. 64.
 - 19 *Works*, XXXV, p. 509.
 - 20 Forbes, 1843, p. 365.
 - 21 Agassiz 1840, p. 50 (my translation from the French).
 - 22 *Ibid.*, p. 57 (my translation from the French).
 - 23 *Ibid.*, p. 192 (my translation from the French).
 - 24 See Desmond and Moore 1991, p. 529.
 - 25 Reprinted in *Popular Lecture and Addresses*, 3 vols., London 1889-94, pp. 356-75.
 - 26 Monkhouse 1954, p. 236.
 - 27 See BLT AL 1998, p. 2.
 - 28 *Ibid.*, pp. 2-3, where Rosenlauri is reproduced as the second in a chronological sequence of visual records of the glacier.
 - 29 Published as *Occasional Papers on the Theory of Glaciers*, Edinburgh 1859, pp. 43-56.
 - 30 Wilson 2002, p. 232.
 - 31 *Works*, XXXVI, p. 115.
 - 32 Lang 1959-62, V. p. 258.
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