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History and (Re)discovery of the European and New Zealand Alps until 1900

The human histories of the European and Southern Alps are very different, with contrasts in respective length of time settled, population, and the types of records that the populations in each environment have left behind. This article explores these differences for the period 1000–1900 AD, tracing the specific trajectories of Alpine development in both places before analyzing the discovery of both regions as recreational playgrounds by lowland peoples in the late 19th century.

Keywords: *History; discovery; migrations; human use; population; tourism; European Alps; Southern Alps; New Zealand.*

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Introduction

A great part of the European Alps had been settled by the turn of the third to the second millennium BC. In contrast, New Zealand's Southern Alps were unknown to humankind until a few hundred years ago. This simple distinction has led to clear differences between the two regions. In one, the extent of 'humanization' of the landscape is considerable; in the other, it is often hard to discern. Paradoxically, these very differences make both regions difficult to read. The long-developed landscapes of the European Alps require careful interpretation, whereas the superficial absence of human impact in the Southern Alps should not disguise deeply rooted cultural meanings.

The purpose of this article is to explore these differences within a framework that is flexible enough to tell the stories of 2 places that are, in human terms, not readily comparable. The year 1000 has been chosen as the starting point—a time at which the European Alps had already long been occupied but which still predated the arrival of the first humans in the Southern Alps. This allows for the different histories of the 2 regions to be explored over the next 900 years—one being constructed from the material and written evidence of settled communities, the other based on the sketchier, oral histories of mobile, tribal peoples. By 1900, however, both Alpine regions were being 'discovered' by Europeans from outside as playgrounds and tourist destinations so that, for the first time, parallel processes of development became evident to a limited extent.

Given their central location, the European Alps have been closely studied by scientists since the 19th century. Apart from examination of physical origins and development, geographers were especially interested in the influence of the Alpine environment on people and whether a specific Alpine culture had developed (Mathieu 1996). Historians focused instead on the role of the Alps through time as a transit area. Neither considered the extent of differentiation between various parts of the Alps, which is now one of the goals of the International Society for Historic Research on the Alps, established in 1995 to encourage interdisciplinary work beyond national and cultural borders (Internationale Gesellschaft für historische Alpenforschung 1996). Study of the human use and meaning of the Southern Alps lacks the depth of scholarship evident in the case of the European Alps, but has been claiming increasing attention in recent years (Fitzharris and Kearsley 1987; Pawson 2002). This includes the examination of differences between the meanings of mountains to Maori and to Europeans. The present article therefore seeks to establish a baseline from which more detailed comparisons might proceed in the future.

The Alps 1000 years ago

By 1000 AD, the valleys of the European Alps were already quite densely populated. The pass routes were much traveled, and from the 6th century onward, Germanic ('Aleman') settlers, mostly from the Lake Constance area, had settled along them, joining long-established Romance peoples. The valley settlements were mostly built on the alluvial fans of small rivers or on south-facing terraces, where conditions were good for agriculture. Cereal farming and rearing of sheep and cattle predominated: The extent of Romance and pre-Romance vocabulary in Alpine terminology suggests that the latter is of prehistoric or at least very early origin (Meyer 1992). From the 8th century onward, summer pastures were established above the treeline (Meyer 1998). Previously, the high mountain regions, between 2000 and 3000 m, had only been used for hunting or working of minerals.

During the 10th century, the German emperors built a new center of power to the north of the Alps. After the Burgundian kingdom of the Rhone Valley was united with this center in 1032 and once connections with present-day Italy were improved, the pass routes through the Alps assumed great political importance (Pauli 1980). It was in the emperors' interests to maintain control of these routes so that no competition with the empire could develop. To this end, numerous towns were founded (eg, Bolzano, Berne, Freiburg), with those in the Alps dominated by centers in the Alpine foreland. Few of the former gained importance, however, and many were eventually abandoned, such as Arconciel and Montsalvens in the canton of Freiburg. Nonetheless, immigration and a surplus of births over deaths generated population growth and expansion of the settled area and mountain pastures (Meyer 1998).

The contrast with New Zealand's Alps could not be starker. No humans had yet trodden on the landmass of the South Island, let alone in the mountain valleys and

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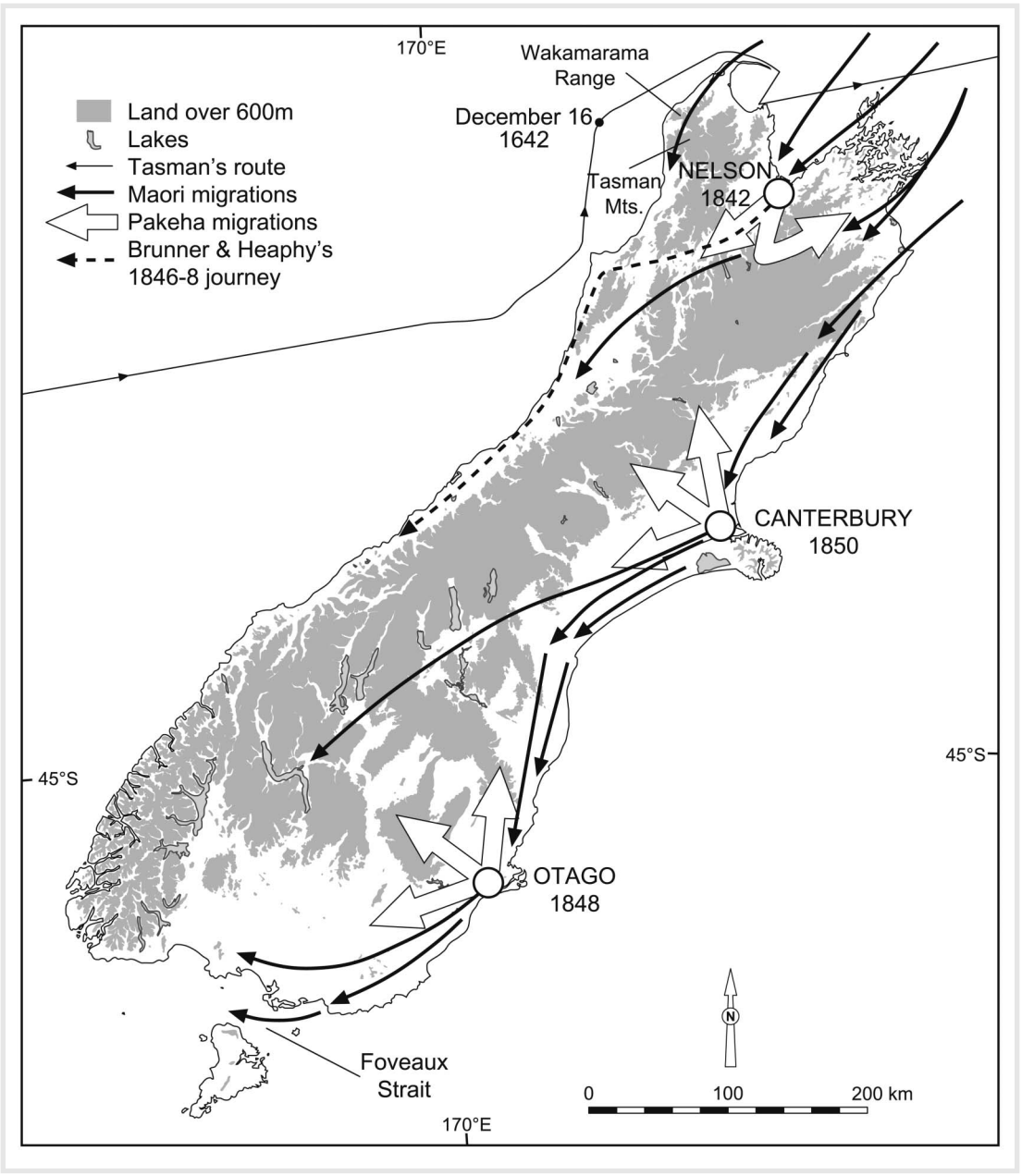


FIGURE 1 Schematic representations of human migrations in New Zealand's South Island. Maori migration routes based on the discussion in Anderson (1998) and Waitangi Tribunal (1991); Tasman's route and European migrations based on material in Wards I, editor. 1976. *New Zealand Atlas.* Wellington: Government Printer. (Map by Tim Nolan)

passes that occupy much of its surface area. These awaited discovery by Polynesian migrants from the north, perhaps as late as 1300 or 1400 AD. A thousand years ago, the only living things in the Southern Alps were a myriad of birds, including the several species of flightless moa. These long-necked, feathered creatures that varied in size (one species reaching 4 m in height) were to become the main source of land-based protein for the hunter-gatherer peoples who subsequently arrived.

Alpine development: The Middle Ages to the 19th century

The Southern Alps

Just as the expansion of settlement and cultivation in the European Alps may have been favored by climatic amelioration from about 1100 (Wanner et al 2000), so the earliest Polynesian settlers were drawn to the South Island. The main lines of movement (Anderson 1998) were into the warmer regions now known by their later European names of Nelson and the Marlborough Sounds and down the east coast, where seafood was plentiful, eventually as far south as Foveaux Strait (Figure 1). The earliest settlers were subsumed by subsequent waves of migrants, Ngati Mamoe, from the late 16th century, who in turn were absorbed by later Ngai Tahu arrivals, from the late 17th century. Collectively, they are referred to as Maori. Latitudinally, the South Island was marginal for cultivation of foodstuffs, but at coastal sites and inland, the large birds provided ready sources of protein. They were hunted so systematically that moa had all but disappeared by the 17th century (Anderson 1989).

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Maori use of the Southern Alps, however, like all else prior to European colonization of New Zealand, has to be inferred from oral traditions and archeological evidence. To a limited extent, these sources can be augmented by the subsequent observations of early European explorers. By such means, a reasonably clear picture of the extent to which the mountains were used by Maori for material ends and the importance of mountain landscapes in the evolution of their sense of place can be pieced together.

Mountains occupied a particular role in the Maori mind (Yoon 1986). They inspired fear and awe, as the meeting places of the terrestrial and celestial worlds. In this, Maori views differed little from those of Europeans at the time (Schama 1995). But Maori, exploring a new land, had ways of claiming it that involved personifying prominent topographic features. Specific summits and ranges were seen as representations of ancestors and their journeys so that tribal members were linked through *whakapapa* (genealogy) with territory. Even today, it is the Maori convention, when making formal speeches on the *marae* (tribal meeting place), to identify oneself with one's mountain, river, and genealogy (Yoon 1986). A peak such as Mount Cook, or *Aoraki* to Ngai Tahu, thus had immense social significance. However, mountain regions were also not without material value. The peaks themselves would not be climbed, but convenient valleys, passes, and ridges were regularly used for travel.

European visitors, arriving in small but growing numbers from the early 19th century, were frequently surprised by the extent to which Maori had named mountain features. In 1848, Walter Mantell observed how his guide Te Wharekorari was able to recite the names of a long list of places up the Waitaki River valley into the alpine Mackenzie Basin. These names identified, and enabled oral transmission of, routeways and important food sources, such as wetlands. One of the



FIGURE 2 Maori archeological sites in New Zealand's South Island. In contrast with the equivalent time period in Europe, the archeological record is the only material evidence of the extent of Maori use of mountain areas. The data are reproduced by permission of the New Zealand Archaeological Association (NZAA) and the Department of Conservation, Wellington, from the NZAA Site Recording Scheme. (Map by Tim Nolan)

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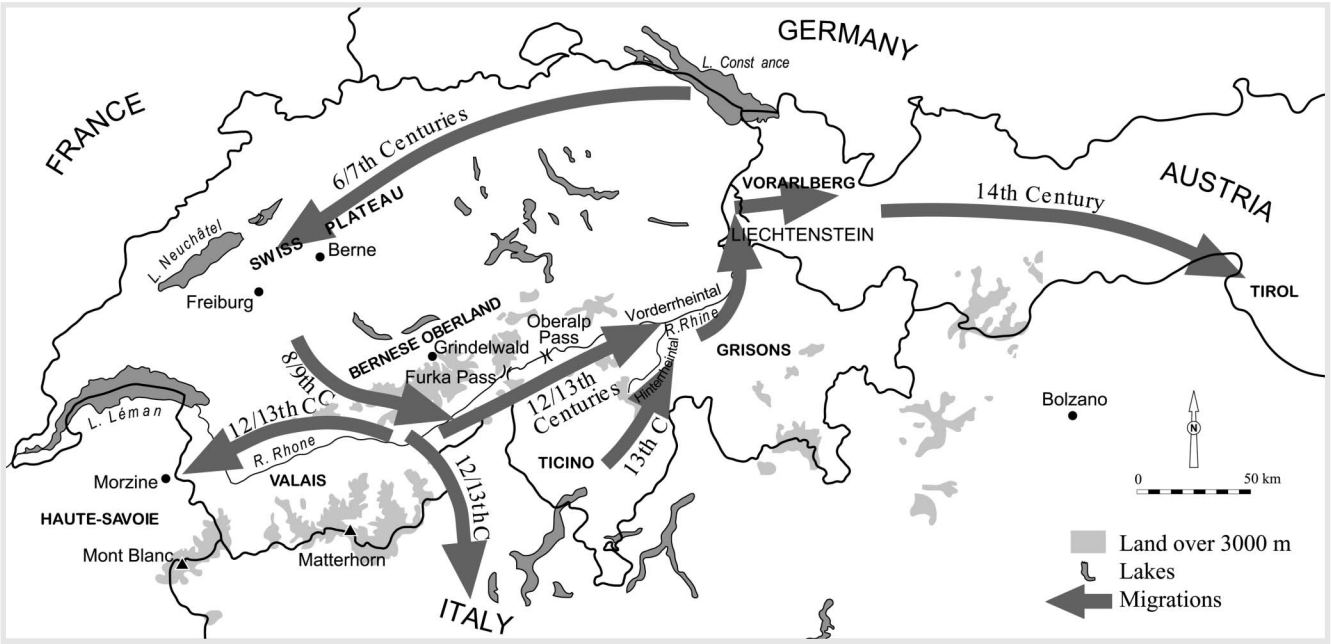


FIGURE 3 Locations in the European Alps identified in the article, overlain with the Walser migrations as an example of settler movement. Redrawn, with adaptations, from Zinsli (1991). (Map by Tim Nolan)

great epics of European exploration in 19th century New Zealand occurred in 1846–1848, when Thomas Brunner and Charles Heaphy traveled south through the mountain valleys from Nelson and on down the west coast under the peaks of the main divide. But all the way, they had a Maori guide and "recognised mountains, hills, rivers, streams, headlands and other natural features from Ekehu's prior description" (Brailsford 1996, p 43).

An archeological map (Figure 2) portrays a large number of South Island sites at which evidence of Maori occupation (permanent or intermittent) has been unearthed. Although emphasizing their reliance on coastal settlement, it is also indicative of the extent to which they were familiar with mountain routes. These were turned, by naming, into trails used for visiting kin on either side of the ranges or for seeking valuable greenstone from across the Alps on the west coast for trading, manufacturing, or ornamental purposes. Modern maps today carry European names for mountain passes and peaks. It was recently said that "European names [in the mountains] celebrate the deeds of the nineteenth century explorers ... [but] these nineteenth century adventurers were not the first, neither were the paths they took untrodden. Maori guides often accompanied such men, using trails with landmarks long familiar to them and places named after their ancestors" (Waitangi Tribunal 1991). Nonetheless, Maori were never numerous in the mountains, their maximum numbers in the South Island being a little over three thousand (Anderson 1998).

The European Alps

The causes and consequences of population growth here are more readily traced in documentary sources. In some regions, such growth reflected active manorial settlement and expansion, as suggested by distribution of household goods throughout the valleys of Grindelwald (Aegerter 1983). Some temporary settlements became permanent and new ones were established. In consequence, there were disagreements and disputes about pastures and housing areas and, due to insufficient food, greater mobility of populations. The 'Walser' migrations are one example of this, being driven in part by the shortage of settlement space within the Oberwallis or Upper Valais (Figure 3).

The German-speaking 'Alemans' had already settled in the Bernese Oberland in the 8th century and had moved over the passes into the upper Rhone Valley by 1000 AD. From the 12th century, groups of settlers started to spread out in a number of different directions, a movement that can be traced by the spread of the German language. No later than the 13th century, they reached the valleys of northern Italy. New permanent settlements were located at heights of 1150–1650 m. Some former seasonal settlements became permanent, such as the one at Macugnaga in the Anzasca at 1327 m. Their most westerly outpost was near Morzine in the Savoys. Some groups moved on to the north or eastward over the Furka and Oberalp passes into the Vorderrheintal (Figure 3). From the mid-13th century, Walser settlers advanced from the south, from Italy and the Ticino valleys, into the Hinterrhein-

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tal and from there into the principality of Liechtenstein, to the Vorarlberg, and down to the Tirol. By the end of the 14th century, a region with an east–west distance of 300 km was settled by the Walser people, usually above zones already settled (Zinsli 1991).

After 1200, a series of innovational pushes in the Alpine region occurred. The first, strongest in the 14th century, resulted in more intensive use of Alpine pastures for sheep and goats, perhaps due to urbanization in the Alpine foreland, increasing the demand for meat and milk products. Another, in the 15th century, saw sheep and goats replaced by cattle (Bitterli-Waldvogel 1998) as the demand for both cows and cheese grew from the densely populated Po plains, with their barn farming of beasts. As a consequence, the Alpine region became more integrated with economic development in north Italy and in the Swiss plateau. And with the introduction of domestic industry (eg, spinning and weaving) in the 17th century, another source of income opened up, especially for people within the trading areas of the foreland towns. Another innovational push was introduced in the 18th century by growing potatoes, which contributed considerably to improved nutrition for the people (Egli and Koller 1993).

Populations compared

These trends in economic development were reflected in substantial increases in population (Figure 4), which rose from about 2.9 to 7.9 million in the Alpine region between 1500 and 1900. The rate of growth was highest in the 16th and in the 19th centuries, but there were substantial differences between inner and outer Alpine zones. Nineteenth century Switzerland, for example, underwent a growth rate three times as great in the foreland regions as in the inner Alpine areas (Mattmüller 1987). In contrast, the low numbers of Maori in and around the Southern Alps do not register against the scale of this graph. Toward 1900, however, European colonization of the South Island was proceeding apace such that, by 1901, the population of the South Island had reached 385,000, a 14-fold growth in 40 years (Figures 1, 4). Although few of these people lived in the Southern Alps, it is due to their arrival that, in the last quarter of the 19th century, the very different historical trajectories of the two Alpine regions begin, in limited ways, to converge for the first time.

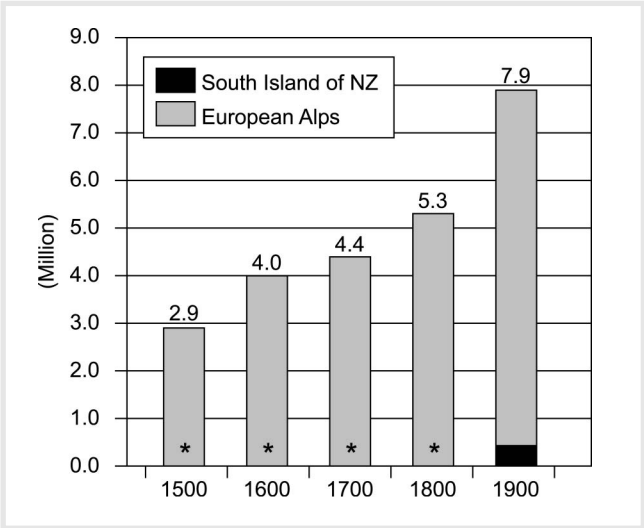


FIGURE 4 Growth of population in the European Alps and in and around the Southern Alps, 1500–1900. European data adapted from Mathieu (1998); New Zealand data for 1900 from Department of Statistics (1991). * Earlier Maori levels of population are too small to register on the graph (see text).

(Re)discovery of the Alps

The first known Europeans to see the Southern Alps were sailors aboard the Dutchman Abel Tasman's ships in 1642. From their position off the west coast of the South Island, they saw "a large land, uplifted high," and a little further north, "a very high double land but, owing to the thick clouds, could not see the summits of the mountains" (Vigeveno 1942, pp 45–46). Their artist's sketch of the range is rarely reproduced (Figure 5). Tasman did not make landfall on this coast, and it was over 200 years later, with the journeys of Brunner, before Europeans set foot on it and began to explore its Alpine valleys and observe the high peaks. Mountain climbing as a sport also developed here later than in Europe and then partly as a result of the desire by climbers from Europe to widen their field of endeavor.

In Europe

In the European Alps, it was the Italian Francesco Petrarca who first gave accounts of his mountain experiences after he had climbed Mount Ventoux (1912 m) in

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FIGURE 5 Tasman's views of the coastline and mountains as he caught sight of the northwestern coast of the South Island on 16 December 1642. Left: Tasman Mountains; right: Wakamarama Range (see also Figure 1). Profiles redrawn from Heeres (1898).

Provence in 1336. To most lowland Europeans, however, the peaks remained landscapes of fear: It was over 300 years before they were discovered for recreational purposes. By then, the mountains were being written about in public, for instance, in the *Topographica Helvetiae* by Merian and in travelogues such as those of Friedrich Albert von Brandenburg (1690). In the 18th century, Albrecht von Haller's poem "The Alps," first published in 1732, became famous throughout Europe and was translated into several languages. It became emblematic of the Alpine region, epitomizing human longing for liberation from the chains of society and its conventions. The so-called Kleinmeister also played an important part in the rediscovery of the Alps, producing watercolors and aquatints as well as copperplate engravings and lithographs, all of which became very popular.

The perception of the Alps therefore began to change, and by the 19th century, lowland Europeans were being attracted by Alpine magnificence. Writers, such as the Englishman John Ruskin, encouraged 'mountain glory' instead of 'mountain gloom' (Figure 6). The accessibility of the Alpine valleys helped; the advance of glaciers—reaching Grindelwald at 975 m (Holzhauser and Zumbühl 1999)—meant that these features also could be appreciated at close range. Climbing in the mountains had been initially motivated by scientific reasons. De Saussure climbed Mont Blanc, at 4807 m the highest peak in the European Alps, in 1787. Between 1850 and 1865, however, the English discovered mountaineering as a high performance sport and achieved many first ascents, turning the region into what they called 'the playground of Europe' (Stephen 1946). In such ways, the Alps grew in popularity for tourism, although there being no cable cars, most visitors stayed in the valleys. Only occasionally did they travel up-mountain by horse or mule or with hired guides, to see views from higher elevations.

From the mid-19th century onward, the construction of the railways further opened up the Alps. The 5 most important transit routes were completed before the First World War. Of those, only the Brenner line, which had opened in 1867, was without a tunnel. The St Gotthard line was opened in 1882 (tunnel length, 15 km), the Mount Cenis line in 1871 (12.2 km), the Lötschberg-Simplon line in 1913 (14.6 km and 19.8 km), and the Tauern line in 1908 (8.5 km). At the same time, many summits were made accessible by cable car and funicular railway—45 in Switzerland alone between 1871 and 1913 (Bosshart and Rüttimann-Schneuwly 1991).

Simultaneously with the development of the traffic network, the demand for accommodation grew, with visitors now wishing to spend several days or even several weeks in the Alpine region. Instead of solitary and self-sufficient wanderers, comfort-seeking tourists from the 'finance aristocracy' and educated middle classes had to be accommodated: industrialists, civil servants, regular officers, merchants, and professors. From 1890, many palatial hotels were built, their locations combining accessibility and comfort. They tended to be in lakeside situations or elevated positions, preferably with a mountain view (either in small villages or in total seclusion), or near natural features. These 'grand hotels' offered everything demanding tourists could wish for. Parks, private promenades, and pleasure grounds were constructed; these, however, were only in use during a few months in summer.

In New Zealand

All this was again in sharp contrast with the situation in New Zealand. Tourist development in the Southern Alps was slight by comparison, but it was the prospect of novel alpine scenery that was beginning to draw tourists from Europe to the Southern Hemisphere by the end of the 19th century. The mountains and fiords of the southern tip of the South Island were the first attraction, as they could be reached by sea without the need for expensive access routes. Summer steamer voyages from Melbourne in Australia were visiting Milford Sound by the 1870s, and in 1877, the Union Steam Ship Company of Dunedin began its own excursions. Guidebooks of the time enthused about the 'Lake Country' around the mining, soon to be resort, town of Queenstown as well as the experience of the Arthurs Pass–Otira Gorge mountain road from Christchurch to the West Coast (Pawson 2002).

Transport and tourist infrastructure in the Southern Alps by 1900 was on a trivial scale compared with Europe, however. The Arthurs Pass road, first cut as a packhorse track in 1865, was the only route through the mountains from east to west that could be used by

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stagecoaches. It was slowly upgraded to a motor road but was to remain single-lane through the gorge itself for another hundred years. Other tourist roads, such as that over the Lewis Pass from Canterbury to the West Coast, the route into Milford Sound, and the Haast Pass from Wanaka to the west coast glaciers, were not opened to motor traffic until the 1930s, the 1950s, and the 1960s, respectively.

The Arthurs Pass road was matched by a rail line (taken through the main divide in an 8.6-km tunnel opened in 1923). It is still the only rail route through this barrier, but long before it was completed, it provided a ready means by which young mountaineers could access the Southern Alps to practice climbing skills. In 1891, those climbing at Arthurs Pass and further south at Mount Cook founded the New Zealand Alpine Club, modeled on the rules of the Alpine Club of London. A private lodge—the Hermitage—had been opened at Mount Cook 6 years earlier. It was taken over by the government not long after to enable it to remain open, but visitors still numbered only 539 in the last season before the First World War.

The Hermitage occupied an honored place in the development of the Southern Alps, however, as it was to Mount Cook (3754 m) that overseas climbers came to discover these mountains. An Irish clergyman and his 2 Swiss guides almost reached the summit in 1882, but the feat was first accomplished in 1894 by a small team of New Zealanders—Tom Fyfe, George Graham, and Jack Clarke—who had determined to head off Edward Fitzgerald, an English climber, and his Swiss guide, Mattias Zurbriggen. By 1900, therefore, the remote New Zealand Alps were becoming known among the more adventurous tourists and climbers from Europe, and to this limited extent, human experience of the 2 regions was becoming part of a shared network.

The Alps by 1900

The present article has attempted to draw out the key themes of development of the European and Southern Alps between the years 1000 and 1900. In the main, the comparison is one of stark contrast, with differences attributable to much greater length of human habitation and far greater numbers of settled peoples in the European Alps. Human impact has always brushed the Southern Alps more lightly, with Maori settlers leaving little permanent material imprint, while later European colonization ignored their cultural frames of reference. Increasingly, however, parallels between the 2 Alpine

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FIGURE 6 Ruskin's Matterhorn. "… the Matterhorn, or Mount Cervin, stands, on the whole, unrivalled among the Alps, being terminated, on two of its sides, by precipices which produce on the imagination nearly the effect of verticality." (John Ruskin. 1873 edition. Of mountain beauty. *In: Modern Painters*. Volume 4, part 5. London: Smith, Elder, p 238.)

regions were emerging by the late 19th century due to the impact of processes driven largely from outside.

The political and territorial situation in the European Alps had been stable for centuries, until the time of Napoleon, although after his fall in 1815, the situation reverted almost to what it had been before. It was only in midcentury, when the nation-state of Italy was founded, Switzerland was consolidated (in 1848), Piedmont was divided (1859–61), and Venice and Istria were unified into Italy, that political reorganization came about. Mountain ridges and watersheds became the new national borders, with the consequence that speech and culture areas that had developed along both sides of pass routes were cut and separated. Real political power lay more and more outside the Alpine area, with new borders within it drawn to reflect changing geopolitical interpretations.

The dominant processes of the 19th century, industrialism and urbanization, took place outside the European Alps. In this sense, the Alps were marginalized. Likewise, Alpine agriculture profited little from modernization. Few inhabitants gained from Alpine tourism either, with the age of mass tourism only just beginning. Rather, to the outside world, the Alps were a region of pleasure and consumption for a wealthy bourgeoisie and were admired in this sense while their inhabitants were simultaneously pitied. Viewed from this perspective, the many intra-Alpine cultural differences were submerged and the idea of a unified inner-Alpine culture gained ground.

Similarly, in New Zealand, the processes of 19th century colonization took place mainly outside the Alpine region. But the new grid of colonial government routes and boundaries likewise cut through the established cultural geography of the Maori. Their web of place names and familiarity with routeways through the main divide consequently became lost to European settlers. That Maori had ever known such places or that the mountains were an important part of their cultural stories was erased beneath a new network of European-imposed names. Thus, although outwardly, colonial transformations was confined largely to the lowlands and there were few permanent settlements in the Southern Alps, with those in turn having few permanent residents, the mountains were not untouched by the forces of colonization. Furthermore, observers such as 'Mr Explorer' Douglas, who spent 40 years surveying in the remote valleys of the west coast, frequently remarked on the demise of the previously prolific bird life toward 1900, as exotic mammals such as stoats and wild cats, liberated in the lowlands, made their way into the hills. Even the introduced rabbit had penetrated far into these places (Langton 2000).

Most of the important 19th century scientific work on mountains was carried out in the European Alps. Interestingly, however, it was from lessons learned in the vicinity of the Southern Alps, which are far more seismically active than their northern counterparts, that geologists in Europe came to know more about how mountain landscapes form. This is perhaps the only broader contribution to knowledge that flowed from the newer to the older settled Alpine region within the time frame of the present article.

In 1855, the largest earthquake experienced in historical times in New Zealand occurred on one of the fault lines that splinter the mountain ranges. Its seismic force exceeded 8 on the Richter scale. It was centered below Cook Strait, generating considerable uplift around the port town of Wellington and its harbor. Details about the event and its impact were sent by local observers to the famous geologist Sir Charles Lyell in London. It was on these reports that Lyell (1856a,b) based the lectures that were the first to connect earthquake shocks, fault lines, and the tectonic uplift of land over large areas (Grapes 2000). Thus, a well-observed event in New Zealand provided much clearer insight into how the European Alps and mountain regions the world over have been built up over periods of time long exceeding their human occupation.

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