Humboldt, Granö and Geo-poetics of the Altai[1]

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Buttimer, Anne (2010). Humboldt, Granö and Geo-poetics of the Altai. *Fennia* 188: 1, pp. 11–36. ISSN 0015-0010.

The Altai region of Siberia has held magnetic appeal for explorers and scientists down the centuries. Two of these explorers, Alexander von Humboldt (1769–1859) and Johannes Gabriel Granö (1882–1956), were especially gifted in yielding both geo-scientific and geo-poetic accounts of their surveys, Granö especially evoking a "geo-poetics" of the Altai, possibly inspired by Humboldt's American journeys. Though their career trajectories spanned very different periods and circumstances, these two scholars have bequeathed legacies of enduring value – conceptually and substantively – in bridging the worlds of science and humanities and revealing innovative insight into interactions of society and environment. As Humboldt eventually based the principles of his Cosmos on travels made earlier in life, so too Granö would later build on the experiences in Altai to develop his major theoretical work, Reine Geographie (1929). This paper describes the journeys through Altai of Humboldt and Granö, and some discursive strategies used by both writers in yielding dynamic pictures of mountain landscapes and ways of life.

Keywords: Alexander von Humboldt, Johannes Gabriel Granö, Altai, Siberia, geo-poetics.

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TSAR:
My son, what so engrosses you? What's this?

FYODOR:
A map of Muskovy, our royal kingdom
From end to end. Look father
Moscow's here
Here Novgorod, there Astrakhan
the sea there
Here is the virgin forestland of Perm
And there Siberia

TSAR:
And what may this be
A winding pattern tracing?

FYODOR:
It's the Volga

TSAR:
How splendid! The delicious fruit of learning!
Thus at a glance as from a cloud to scan
Our whole domain: its foundations, towns, rivers.

Pushkin in *Boris Godunov*

Poēsis , literally, "invitation to discovery" is not the sole domain of poets[2]. It has distinct vocational meaning in many fields, not least in geography. Accounts from exploratory voyages, descriptive maps and images of landscapes and exotic ways of life rank among the most "delicious fruits of learning".

The Altai region of Siberia has surely held magnetic appeal for explorers and scientists down the centuries (Fig. 1). Located virtually at the centre of the earth's largest landmass, "equidistant from the Arctic Ocean and the Bay of Bengal, from the Yellow Sea to the Caspian, 3000 km as the crow flies from the ocean" (Granö 1919: 23), it has attracted visitors from north, south, east and west. Two of these explorers, Alexander von Humboldt (1769–1859) and Johannes Gabriel Granö (1882–1956), were especially gifted in yielding scientific results on their surveys as well as "geo-poetic" commentary on this place.

URN:NBN:fi:tsv-oa2838

Fig. 1. Altai: Centre of Euro-Asia. Like a high continent, Altai protrudes from the ocean of surrounding steppe. As a frosty moorland, it extends, surrounded by endless wooded hillsides, from Mongolia's sun-baked deserts to the Siberian plains (Granö 1919–1921: 23).

Introduction

Altai landscapes, as experienced by these two explorers, constitute the main focus of this paper. After a brief introduction to each of their career journeys and visits to the region, an attempt is made to discern some common denominators of discursive style which underlie the "geo-poetic" elements of their accounts. Space scarcely permits much commentary on their respective career histories and epistemological stances, but readers will recognise the significance of societal contexts in the shaping of their views.

Though their career trajectories spanned very different periods and circumstances, these two scholars have bequeathed legacies of enduring value – conceptually and substantively – spanning the worlds of science and humanities, unravelling the complexities of landscapes and lifeways, and yielding much insight into interactions of society and environment (Fig. 2, 3). Neither was regarded initially as a "founding father" of Geography as a discipline; indeed their ideas were perhaps better appreciated in other fields – Humboldt's in natural history and tropical vegetation, Granö's in landscape architecture, Finnish cultural identity and photography. Yet their work has evoked renewed interest in recent years. Century's turn marked the 200th anniversary of Humboldt's renowned voyages to the Tropics, while the late 20c rise of "landscape" interests in the Anglo-American world again stirred interest in Granö's work (Mead 1977). Both scholars also underwent major changes in their scholarly outlooks on nature and culture over the course of their careers, each initially attuned primarily to the bio-physical sciences, but deeply attracted to the prospects of geographical exploration: for Humboldt the tropical lands, for Granö Siberia and the Mongolian Steppes. And in the course of those explorations, both Humboldt and Granö revealed a remarkable openness to discovery, and ingenious ways of sharing these experiences in geo-poetic language. Both also returned, in their subsequent work, to more objectivist stances on landscape description, Humboldt in his *Cosmos*, Granö in his *Reine Geographie.*

Their visits to the Altai were quite different, of course. Several decades had elapsed between Humboldt's journeys in Asia (1829) and Granö's travels there in the early 1900s. Societal and academic contexts of sponsorship and audiences for travel accounts were vastly different. For Humboldt this journey was a short interlude in an otherwise officially invited exploration of mineral resources in the Urals. It was undertaken late in his career and he was surrounded with administrative and logistical support from Russian authorities. For Granö the Altai was a region traversed early in life with his father, a landscape imbued with memories, then later re-visited, on his own or with just a few companions. Sponsored by the Finno-Ugric Society, he no doubt had imbibed the general interests of his compatriots at the time in Finnish cultural identity and the geographical extent of the Finnish nation deep into the heart of Asia. In fact, the Altai had also become a favoured focus for Finnish science at the time[3].

The knowledge interests underlying their visits to the region were thus quite different. However their modes of relating to the environments traversed, and eventually the styles used in communicating their observations were remarkably similar. Such relationships to the places under observation – the observor's bodily and multi-sensory attunement to the environment itself – have again become important aspects of recent geographical reflection. So, for example, whereas Humboldt felt "at home" in the tropics despite all kinds of envi-

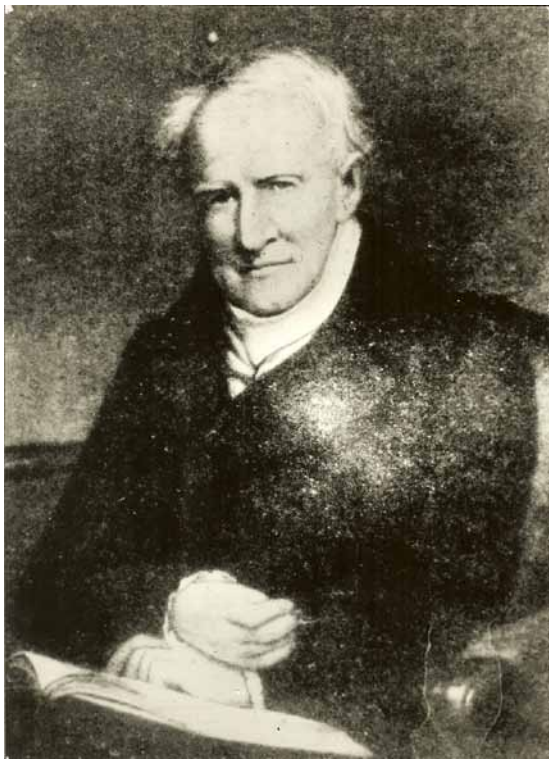

Fig. 2. Alexander von Humboldt 1769–1859.

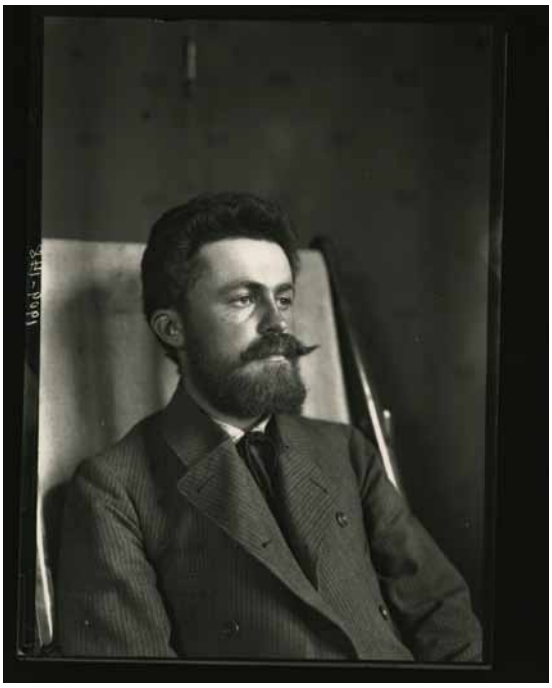

Fig. 3. Johannes Gabriel Granö (1882–1956) in 1909.

ronmental hazards, he was less tolerant of conditions in Siberia. Granö was apparently "at home" on all his voyages throughout the region. And there can be little doubt that Humboldt's trans-Atlantic journeys (1899–2004) afforded inspiration for Granö (Humboldt 1851). He graciously acknowledged Humboldt's visit to the area and had both his *Voyage aux régions equinoxiales* (1818–1825) and *Asie Centrale* (1843) in his library. His descriptions of the Altai landscapes and people echo much of the style used by Humboldt in his accounts of the South American Cordilleras.

Alexander von Humboldt's Asian Aspirations

Alexander von Humboldt (1769–1859, Table 1), polymath scholar and celebrated patriarch of European geography, has been hailed in many scientific fields for his voyages of discovery and inspiring publications (Kellner 1963; Botting 1973; Bierman 1989). Privately tutored and exposed to a diverse range of intellectual interests in childhood, three of these continued to evoke passion throughout his lifetime. First was natural history: "flowers, butterflies, beetles, shells and stones were his favourite playthings" (Botting 1973: 12); he often wandered alone in the woods, collected items and then mounted and classified in various lists and sequences. The germ of geographical exploration, his second major interest, should be ascribed to his meeting in Göttingen with George Forster, who at age 18, together with his father, Reinhold Foster, had accompanied Captain Cook on his second circumnavigation of the world. Humboldt accompanied Forster on an excursion to England, travelling by boat on the Rhine and returning via Paris where some aftermath's of the French Revolution were patently in evidence. And this was the third major influence during student years in Berlin, Frankfurt and Göttingen: the ethos underlying the French Revolution, the ideals of which struck a lasting chord. Throughout his life, too, Alexander enjoyed the affection and support of his brother Wilhelm

Table 1. Alexander von Humboldt: Curriculum Vitae.

YEAR(S)	EVENTS
1769	14 September: born in Berlin
1777–89	Tutored by G. J. Chr. Kunth
1789–90	Studied in Göttingen
1790	*Mineralogische Beobachtungen über einige Basalte am Rhein*
1791–92	Studied at Bergakademie Freiberg
1792–96	Oberbergmeister in Oberfranken. Journeys to Alps and Brabant
1794	Visit to Goethe
1797	*Versuche über die gereizte Muskel- und Nervenfaser, nebst Vermutungen ber den chemischen Prozess des Lebens in der Tier- und Pflanzenwelt*
1798	Paris: meets Bonpland and travels with him to Marseilles
1799–04	Voyages to Central and South America
1805–34	*Voyage aux régions équinoxiales du Nouveau Continent, fait en 1799, 1800, 1801,1802, 1803 et 1804, par A.de Humboldt et A. Bonpland*
1808	*Ansichten der Natur* Stuttgart and Tübingen, Cotta
1829	Journeys to Russia – Moscow, Siberia to Chinese border, Caspian Sea
1843	*Central-Asien. Untersuchungen über die Gebirgsketten und die vergleichende Klimatologie*
1845–58	*Kosmos. Entwurf einer physischen Weltbeschreibung.* Band I–IV
1859	Died in Berlin

von Humboldt, celebrated founder of the Humboldtian University in Berlin. It was Wilhelm who also introduced him to Aimé Bonpland, his faithful companion on the trans-Atlantic voyages.

Ever since returning from his American voyages, Humboldt planned an excursion to Asia, to climb the Himalayas and make studies comparable to those he had conducted in the Andes. Already in 1811 he was invited to accompany the Russian minister Romanoff on a mission to Kashgar and Tibet, but Napoleon's invasion of Russia prevented this. Then in 1826, he was consulted by Count Cancrin, Russian finance minister, regarding the potential use of platinum – a metal then in abundant supply – for coinage, as Bolivar had done in Colombia. Humboldt advised against this idea, but in his reply he did indicate a wish to make a personal visit to the Czar and follow his childhood dream of seeing the Urals and Lake Baikal. Cancrin immediately invited him to inspect the Ural mines, all at governmental expense. Humboldt accepted eagerly. "I implore His Imperial Majesty for the permission to let me go to the Irtysh at least... Tobolsk is the dream of my youth...I have a childish aversion to the cold but know how to live for a higher purpose" (Humboldt to Cancrin, Berlin, 26 February 1828).

On April 12 1829, accompanied by Gustav Rose, professor of chemistry and mineralogy, and zoologist Christian Ehrenberg, Humboldt set out on the long journey across the continent of Asia (see Fig. 4). En route to St Petersburg the carriages, laden with their instruments, were ferried on rafts across the swollen rivers on 23 occasions. They were cordially entertained throughout the Baltic lands: "It would be wearying to speak of Tartu and the celebrations there", he wrote to his brother,

> *a university coach and four, professional visits from 8 o'clock in the morning to 9 o'clock at night, a magnificent banquet given by the whole university with obliggato toasts, side by side with interesting people and interesting sights (above all Struve with his 2000 double stars and the wonderful telescope)... Every where I go they offer me money like hay and anticipate every wish...We are continually the objects of attention of the police, government officials, cossacks and guards of honour. Unfortunately we are hardly left alone for a minute; we can't take a step without being led by the arm like invalids...*
>
> Humboldt 1829 (Narva, 29 April)

In St. Petersburg the reception was indeed cordial. He dined almost every day with Czar Nicolas I (Fig. 5). And on the long drive through the great

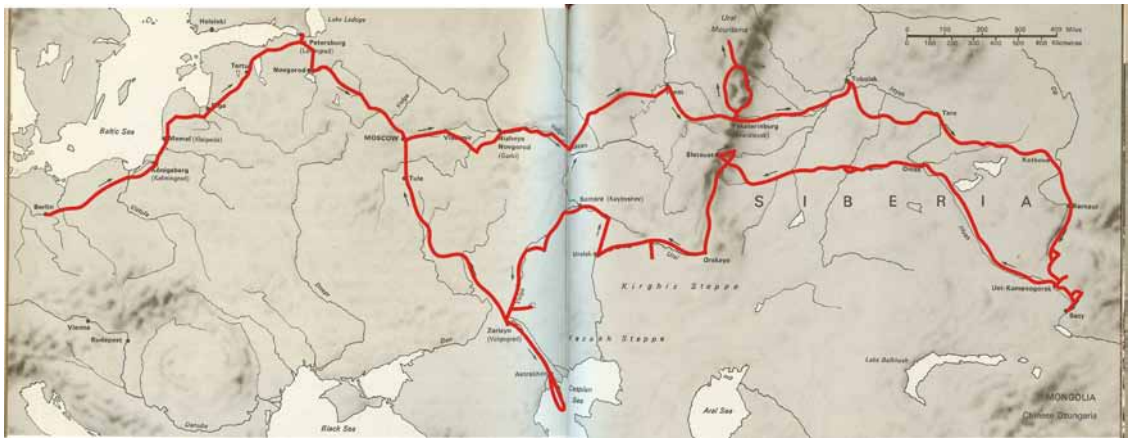

Fig. 4. Humboldt's Journeys in Asia.

Fig. 5. Czar Nicolas I. "Your sojourn in Russia has been the cause of immense progress in my country; wherever you go, you spread a life-giving influence".

Russian plains he was assisted by highly placed mining officials and dignitaries of the provincial administration. The entire cortege sometimes needed 30–40 horses at every stage. They sailed down the Volga from Gorkiy to Kazan in a large boat. Compared with the journey on the Orinoco, he observed, this was luxury indeed. When they reached Sverdlovsk the task of exploring the vast mineral resources of the Urals began. For a month Humboldt travelled in the mountains, often the whole day on foot. Already 60 years of age, he was still a nimble mountaineer (Kellner 1963: 134).

Towards the end of July they reached Siberia and Humboldt's childhood dream came true; they stayed some days in Tobolsk. Travelling continuously by day and night, in order to avoid contagion in the unhealthy villages along the way, they covered 1000 miles in nine days. "You will have seen from my letter from Tobolsk that we have taken the bold decision to visit the most important part of the Altay" he wrote to his brother,"an excursion of more than 1800 miles (the distance from Berlin to St Petersburg)".

> *From Tobolsk to Tara, we did not suffer much; but in Kainsk and the steppe of Barabinsk, we suffered a great deal from dust, heat and yellow midges... This plague is not much worse on the Orinoco, and although the thermometer is only 86 degrees in the shade, we suffer from the heat because of the contrast with the cold nights (43 degrees)...We found much illness in the villages where sometimes as many as 4–5 people died every day (typhus)... On the morning of August 1 we arrived at Barnaul of the Altay (as far to the east of Berlin as Caracas is to the west), on the banks of the Ob... The vegetation has at last become Siberian, now we have penetrated 2300 miles into Asia; how-*

> *ever, the banks of the Ob ressemble on the whole the Havel and the lake of Tegel since the trees alone determine the character of a country... Big tigers, striped just like the Bengal tiger, have been seen here. We have seen the pelts of two such animals and shall buy them for the zoological cabinet in Berlin. The existence of these beasts so far north is very, very strange*
>
> Humboldt 1829 (Barnaul, 4 August)

These journeys were apparently strenuous. Botting (1973: 249) describes this journey as follows:

> *The long road led south-eastwards through half the breadth of the Siberian steppes to Barnaul, the Altai and the border of Chinese Dzungaria. They travelled in Siberian long-carriages in which they had to lie stretched out on their backs, and on their heads they wore hot, suffocating leather masks with vizors made of horse-hair netting to keep out the voracious Siberian mosquitoes... They travelled so swiftly over those monotonous grasslands that in nine days they covered a thousand miles and on the morning of 1 August arrived on the banks of the Ob opposite the mountain town of Barnaul in the Altai. A south-south-west gale was blowing from the Kirghiz steppe and raged for seventeen hours. The Ob had waves like the sea and as it was impossible to cross they had to camp for the night. The light of the camp fires, rising high in the forest, reminded him vividly of his days on the Orinoco.*

Returning by boat on the Irtysh to Omsk, the Cossack college greeted them with speeches in Tartar, Mongol and Russian. Then Humboldt set out for the Caspian Sea to study the chemical composition of this inland ocean. There he took barometric readings to connect the level of Chkalov and Kazan to that of the Caspian basin which previous scientists had discovered to be below sea level (Kellner, *op.cit.*, 137). Throughout the entire Asian expedition, Humboldt was concerned primarily with climatological and magnetic measurements, while Rose and Ehrenberg made extensive observations of geological, zoological and botanical phenomena. When they returned to Moscow in early November they were invited to a special meeting of the Moscow scientific society. As in Tartu earlier, the hosts seemed keener on entertaining their guests than for any discussion of scientific matters. Alexander Herzen (1907: 68) reported:

> *On his return from the Urals, Humboldt was received at a solemn meeting of the scientific society, then in existence at the university of Moscow; to this society belonged several senators, governors, generals, etc., – people who had never occupied themselves with the sciences or any other branch of knowledge. The reputation of Humboldt, privy councillor of his majesty the king of Prussia, on whom the Czar had conferred the order of St. Anne, had penetrated even to them, and they decided to make their obeisance to the man who had climbed Chimborazo and who had stayed at Sanssouci. "Humboldt, Prometheus of our days!" was the first line of a poem read by Sergey Glinka in his honour. While Humboldt wished to discuss his observations of the magnetic declination, to put his meteorological measurements, made in the Urals, before the Moscow scientists. Instead, he was shown by the rector some braiding done with the illustrious hair of Peter the Great. Only with the greatest difficulty could his companions, Ehrenberg and Rose, find the moment to talk about their discoveries.*

Later in November they were back in St. Petersburg, having covered 12 000 miles in six months. A special meeting of the Russian Academy was convened and Humboldt delivered a discourse which was a really important one for the development of meteorology and geophysics. Given the vast extent of Russian territory, he argued, would it not be wise for the Academy to set up a network of stations stretching from St. Petersburg to Kyakhta, where recordings could be made of meteorological and magnetic observations? Such a network had already been established in North America, he informed them. And the benefits should surely be appreciated by both science and society. At these stations continuous observations could be made of magnetic inclination, declination and intensity; hourly meteorological measurements could be taken of barometric readings, atmospheric temperature, humidity and precipitation, all of these important for agriculture and communications. The proposal was successful and by 1835 a number of meteorological and magnetic stations, stretching from St. Petersburg to Peking, had begun to collect data. This was not the first time such an idea had been launched, Humboldt noted later. This idea had been proposed originally by Leibniz to Czar Peter the Great (Humboldt 1843: 469).

Humboldt may have concluded his Asian journeys with a sense of accomplishment, but the experience was no match to those spent in the American Tropics (1799–1804). As a young man in his thirties, exploring the Orinoco, climbing the high Andes, visiting Cuba and Mexico, all amounted to an adventure, a voyage of discovery (Humboldt 1805, 1808, 1816). He mapped and measured, sketched and sampled everything in view, eager to

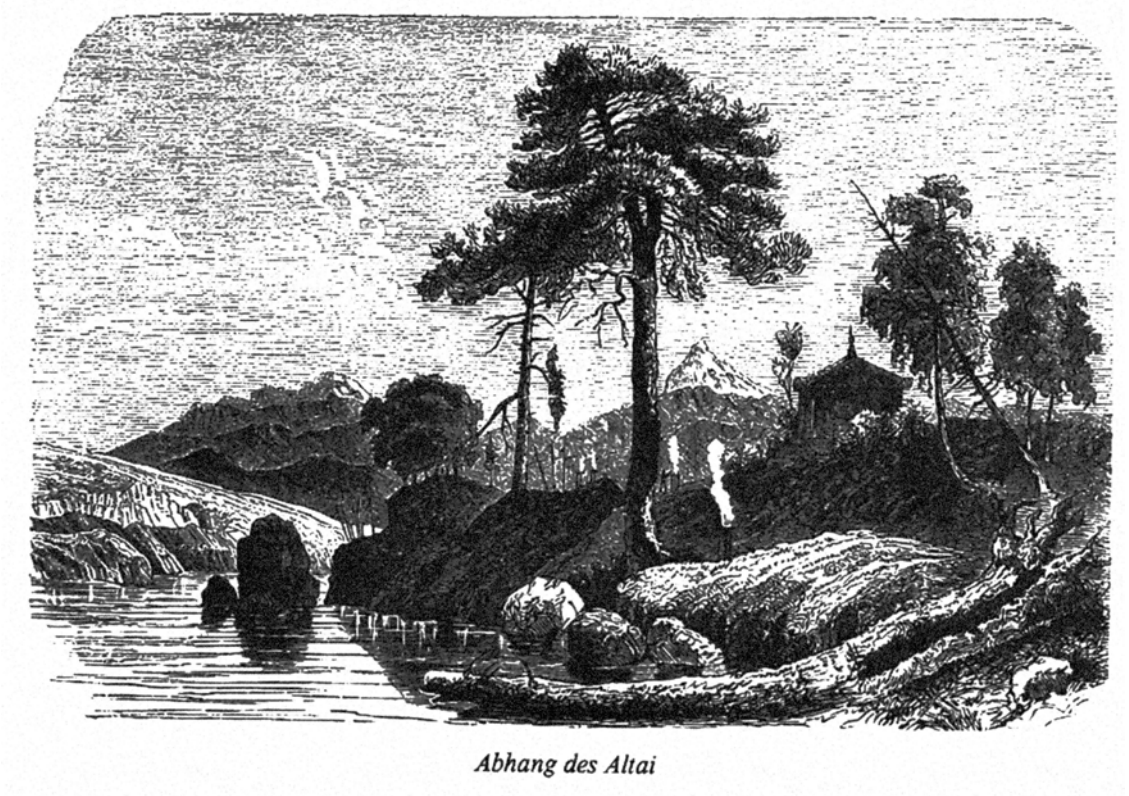

Fig. 6. Abhang des Altai (A. von Humboldt).

share these exotic images with folk back home. The Asian journey was different. Professionally manned, generously funded, and hailed ceremoniously wherever it went, this expedition had as its main goal to gather information and to make precise measurements – data which could eventually be harvested for global generalisations on mountains, climate and barometric conditions (see Ette 2009). These would also be invaluable in the eventual drafting of his monumental *Cosmos,* an opus which he began only in 1834. He did make sketches of Altai scenes which are quite evocative (Fig. 6, 7), but one could surmise that the macro data-collecting agenda held priority for him. Little of the freshness and enthusiasm which characterised his letters home from the American journeys are apparent in those sent home from Siberia. In both instances he often complained about virtually unbearable environmental conditions, but somehow these were not so serious in the tropics. Writing to Wildenow in early 1801 from Havana, he acknowledged:

> *After having "to sleep for four months in forests, surrounded by crocodiles, anacondas and jaguars who attack the canoes... Despite the incessant alternations between dampness, heat and mountain cold, my health and my mood have clearly improved since I left Spain. The tropical world is my element, I have never been so consistently healthy as during the last two years".*
>
> Biermann 1989: 175

Humboldt felt at home in the tropics. But there is little evidence that he felt this way in the Altai. For Granö, however, Siberia was indeed "home", playground for summer holidays in childhood years, adventurous travel with his father and fascinating subject of scientific research throughout seven extensive journeys (1906–1916) while still in his early thirties.

Fig. 7. Das Altai Gebirge (A. von Humboldt).

Johannes Gabriel Granö (1882–1956) and the Altai

Born in Lapua, Western Finland on 14 March 1882, Johannes Gabriel Granö moved with his family to Omsk, Siberia at the age of 3 (see Table 2). His father served as pastor to the exiled Finnish communities in Siberia for two terms (1885–1891 and 1902–1913). Returning to Finland, he enrolled as a student in the newly-established Department of Geography at Helsinki University in 1900. The department had been founded by Ragnar Hult, plant sociologist who had become Docent in Geography, and an admirer of the works of Alexander von Humboldt (O. Granö 1979: 74). Hult had died some years before Granö began his studies, but the traditional emphasis on bio-physical patterns which he initiated remained strong. His successor, J. E. Rosberg, was an inspiring teacher and he was the one who attracted Granö to choose geography, rather than botany, as his main subject. Rosberg supported this student and followed his career closely in later years, eventually translating his *Altai* book into Swedish (O. Granö 1979). No doubt the seeds of geographical interests were sown then, but it was probably on his return to Omsk in summers, accompanying his father on his pastoral visits to this highly dispersed population of Finnish communities across a domain the size of Europe, that Granö's geographical interests were stirred. On these trips he was fascinated by both the physiographic and cultural variety of the landscapes traversed. Like Humboldt and Hult, his initial studies were in botany, but having climbed the mountains and noting the remarkable variations observable at different elevations, his curiosities moved to climatic and geological questions (Eskola 2005).

In 1905 he published a monograph on *Finnish settlements in Siberia* (Granö 1905) and this at-

Table 2. Johannes Gabriel Granö: Curriculum Vitae.

YEAR (S)	EVENTS
1882	14 March: born in Lapua, Western Finland
1885–91	Moved with family to Omsk, Siberia
1900	Enrolled at Helsinki University
1902–13	All summers spent in Siberia
1905	Publications on Finnish settlers in Siberia
1906–09	Studies and Graduation from Helsinki University
1909	Archeological studies of north Mongolia for Finno-Ugric Society and glacial morphology of Mongolian Altai
1911	PhD. Docent in geography, Helsinki University
1913	Married geographer Hilma Ekholm (1882–1965)
1913–16	Granö couple living in Omsk. Geomorphology of Russian Altai
1919	Chair of Geography, University of Tartu, Estonia. *Altai Vol I. Förland och skogar*
1921	*Altai Vol II. Floddalar och fjällvidder*
1923	Professor of Geography, University of Helsinki. Editor *Atlas of Finland* Growing emphasis on "landscape studies" throughout Finland
1926	Professor of Geography, University of Turku
1928	*Atlas of Finland*
1929	*Reine Geographie*
1932–34	Rector, University of Turku
1945–50	Professor of Geography, University of Helsinki
1945–55	Chancellor, University of Turku
1956	Died in Helsinki

tracted the attention of the Finno-Ugric Society which issued him an invitation to undertake archeological studies in northern Mongolia during the summers of 1906, 1907 and 1908. At the same time he surveyed a vast area of northwestern Mongolia. Combining these results with some geomorphological analyses of the Mongolian mountains, he completed a doctoral thesis on the *Glacial Morphology of Northwest Mongolia* in 1910 (Granö 1910). Later funded by Helsinki University for glaciological and geomorphological studies in Siberia, he made four excursions to the Russian Altai between 1913 and 1916 (Fig. 8), sometimes accompanied by his wife Hilma Ekholm (1882–1965). The outcome, *Les formes du relief dans l'Altai russe et leur genèse* (Granö 1917) was presented within the generally accepted framework of Davisian peneplain theory. This was welcomed by Davis himself who wrote that "no more striking example of explanatory treatment of mountain forms has appeared in recent years than the above article by the Finnish geographer Granö" (Davis 1921)[4].

Travelling on horseback he traversed over 10 000 km making detailed observations and documenting these photographically (Eskola 2002). This was the remarkable advantage he had over Humboldt. While the latter relied on sketches to evoke images of places and landscapes, Granö availed himself of a camera and his collection of thousands of photographs from the Altai region constitute a unique treasure[5]. He returned to Finland in 1916, laden with data, images and observations which would demand much analysis over the following years. There was never an opportunity to return to the field, however, because of political developments in Russia the following year. Initially Granö was welcomed back to a lecturing position in Helsinki, but soon thereafter and much to the chagrin of his students in Finland (Hildén 1956), he assumed a professorship at University of Tartu (Estonia) in 1919. By 1920, while building up this new Department of Geography there, he published articles on the nature of geography as a science in Estonian and Finnish. But his favoured activity during those years was the completion of

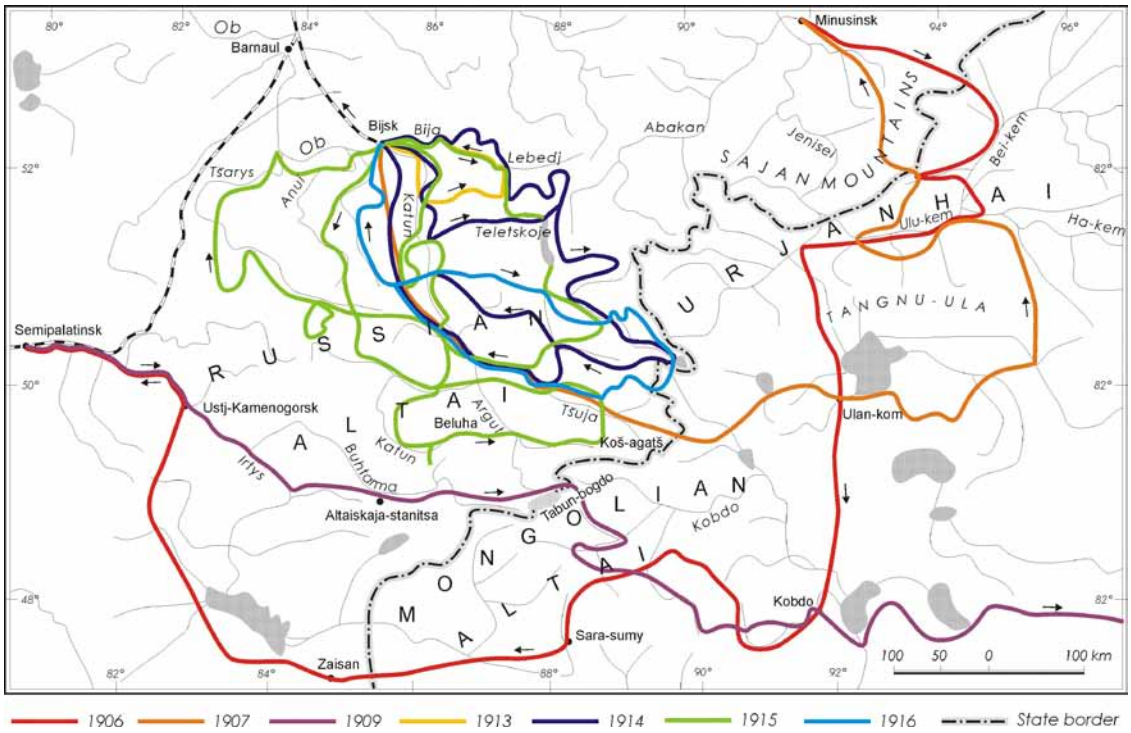

Fig. 8. Granö's travels in the Altai.

the two-volume work *Altai*, which was published simultaneously in Finnish and Swedish (Granö 1919, 1921).

While putting the final touches to the second part of his *Altai* book at Tartu in summer 1920 he wrote to his old friend J.K.V. Tuominen in Turku (O. Granö 2001: 7):

> *I have allowed my thoughts to soar to the distant lands of the Blue Altai. This work has given me an immense feeling of pleasure, for I know that I have never been so sealed off from outside influences and so reliant on the dictates of my own head as with this Altai book. The determining factors here are the everyday features of human life and the ordinary facts of nature, as it is from these that the whole scene gains its character.*

Granö's *Altai* is truly a geo-poetic work. Its artistic and literary qualities evoke above all the traveller's experience of Altai milieux. This intimacy with the natural and cultural features of the landscape is what the author seeks to evoke. For him the first visit to the Altai after the flatness of the steppes and the ascent of Mount Rahmanov in 1905 were uplifting experiences – both spiritually and physically – and ones which influenced him throughout his life (Fig. 9, Yleisradio OY 2004). Like Humboldt's various ascents, it was this multisensory experience of mountain environments that whetted the appetite for direct field experience of nature.

By the 1920s Granö was now deeply involved in promoting Geography as academic discipline at University of Helsinki. Emphasis would rest on the objectivity and "scientific" status of the field and "subjective" elements questionable (O. Granö & Paasi, 1997: xi–xxxi). But some of the photographic evidence from his Asian excursions could still be helpful in proposing his *Reine Geographie*:

* the close-up "proximate" environment is perceived through multi-sensory (visual, auditory, olfactory and kinetic) modes, while
* the distant environment – landscape – is perceived primarily through the visual sense

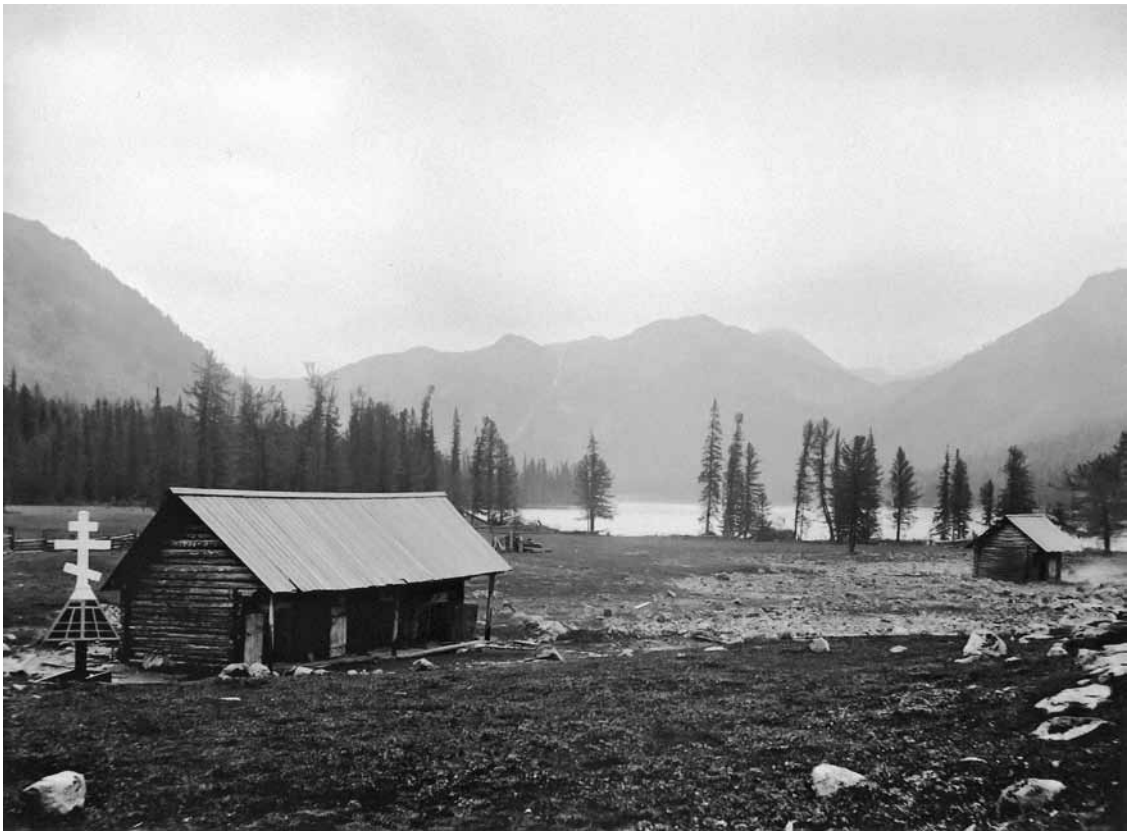

Fig. 9. Rahmanoff Hot Springs (1905: 69, *Boundary Crossings*).

* environmental phenonema include stable as well as moving forms, and
* altitudinal as well as horizontal variations in landscape forms are particularly apparent in mountain regions.

While J. G. Granö's thought and practice may have touched the lives of Baltic and other Finnish colleagues internationally, it was not always recognised in his home country for several decades. He presented papers at the International Geographical Union Congress of Warsaw (1930), Amsterdam (1934) and Lisbon (1949) and on each occassion his ideas about the definition (and delimitation) of regions (Granö 1952), as well as his proposals regarding the perceptual environment, always evoked lively discussion (Bertacchi 1930; Boerman 1931; Lautensach 1933, 1938; Bürger 1935; Broek 1938). Several decades, elapsed, however, before his ideas about the multi-sensory aspects of environmental experience would gain surface. This began about twenty years after his death in 1956, and consequently there have been more references to his work in the literature over the past few decades that during his entire lifetime (O. Granö 2005). This has been partly due to the exhibitions of his Altai photographs held in Helsinki, Tartu, St. Petersburg and Minneapolis, and to the publication of the English translation of *Reine Geographie* (O. Granö 2005, 2009; Golledge 1998). Along with the rise of phenomenological and other humanistic movements in the early 70's, interest was also re-ignited about sonic and other sensory aspects of lived environments and since then several geographers have become deeply interested in questions regarding the multi-sensory aspects of everyday life, some indeed acknowl-

edging the pioneering role of J. G. Granö (Ohlson 1976; Porteous & Mastin 1985; Porteous 1990; Rodaway 1994; Winkler 1995; Järviluoma 1998; Hedfors 2003; Hedfors & Berg 2003).

Geo-science and geo-poetics for Humboldt and Granö

Viewing the full career records of Humboldt and Granö, it becomes increasingly clear that for both of them "scientific" and "poetic" aims were in many ways complementary. Their eagerness to convey geographical information about the regions they traversed led to ingenious uses of language in "the making of place" (Tuan 1991). The enduring appeal of Granö's *Altai*, as indeed of Humboldt's *Cordillera*, still rests largely on the poetics and aesthetics in their clever renderings of landscape. For Humboldt, landscape evoked cosmic dimensions, embracing not only the geomorphology and geophysics of Planet Earth, but the entire history of its human occupance, traceable especially in the geography of plants (Godlewska 1999). The *Witz* (ingenuity/cleverness) of landscape in Humboldt's *oeuvre*, as Franco Farinelli has written, was its appeal as legitimate object of concern for both natural science and humanities in early nineteenth century scholarly circles (Farinelli 1999). For Granö, landscape may be initially experienced via multi-sensory modes, but as a scientific concept it should connote the distant horizon, accessible mainly via visual modes: hence the enormous value of the camera for him[6]. Granö's *Homo Geographicus* would describe landscapes objectively through a strict classificatory scheme (Paasi 1984: xxi).

Both scholars mused extensively on how best to relate the aims of science and human well-being. They mused also on the relationship between the scientific observor and the environments under observation. In his *Ansichten der Natur* (1808) Humboldt wrote:

> *The goals for which I strove were to depict nature in its prime traits, to find proof of the interworking of (natural) forces, and to achieve a sense of enjoyment which the immediate view gives to sensitive man... This aesthetic treatment of topics of natural science presents great difficulties of stylistic composition despite the splendid force and definitiveness of our mother tongue. The abundance of nature easily encourages the accumulation of metaphorical images. Such an accumulation, however, disturbs the peace and the total impression of nature. Touched by emotion and fantasy, writing easily degenerates to poetic prose.*
>
> Humboldt 1808 P.V–VIII: 12–13

> *The impression which is left on us by observation of nature is less determined by the character of the landscape, than by the illumination through which mountains and plains appear – now in the ethereal blue of the sky, now in the shadow of low floating clouds. Similarly, descriptions of nature impress us more or less according to the degree to which they agree with the needs of our feelings; for the physical world is mirrored vividly and truly in the inner feelings. Whatever is essential for the character of a landscape – the outlines of the mountains which limit the horizon in bluish, fragrant distance, the darkness of the fir forests, the forest-streams which rush between overhanging cliffs – all that is in old mysterious contact with the inner life of man.*
>
> *Idem.* 283

In a letter to Goethe (3 January 1810) he also wrote:

> *Nature must be experienced through feelings. Those who only observe and reach abstractions can spend a life-time classifying plants and animals in the hot tropics, and believe that they are describing nature but they will never get close to it. Success and failure are very closely associated in one's capacity to experience nature. If feelings are unfocussed the results will be only dreams of nature...*
>
> Cited in Geiger 1909: 305–306

Granö no doubt pondered on these words, clearly recognizing the need to evoke awareness of the multi-sensory nature of environmental experience and also to reveal fresh perspectives on relationships between diverse cultural groups and their environments. Both Humboldt and Granö succeeded remarkably in these endeavours. Their rhetorical achievements rested on clever choices of discursive strategy in championing the essential complementarity of geo-science and geo-poetics in the construction of geographical knowledges.

Among such strategies one could identify at least five. First, sensitivity to scale and ingenious uses of the comparative method; secondly, sensitivity to temporality, rhythmicity, dynamism and change in all aspects of physical and human worlds; thirdly, sensitivity to diverse social worlds and appreciation of cultural integrity; fourthly, awareness of reflexivity in the ways scholars have

described "nature" and "others" and fifthly, the spectacular use of visual language and succinct graphic representations of landscapes and lifeways as catalysts for understanding.

Scale and comparative method

In all of his enquiries into bio-physical features of South America, Humboldt constantly refers to comparisons and contrasts between "Old" and "New" Worlds, frequently demolishing previous theories regarding the age of the earth, the size and elevation of the continents, the lower limits of the snowline in different parts of the earth, and most especially the flora and fauna which carpet its surface. Granö's archeological explorations in northern Mongolia led him to question the conventional notion that this arid land was ever glaciated – hence his innovative doctoral thesis (Granö 1910). He often remarked on the vastness and physiographic diversity of Siberia compared with the flatlands of his home country. And in the Altai itself, he compared and contrasted people and places of mountain and steppe environments. The harvest of Humboldt's expeditions included global maps of geo-magnetic fields and magnetic declinations, as well as the firm establishment of vulcanism as one underlying cause of mountain chains. Certainly the most important demonstration of Humboldtian perspectives lay in the use of "isolines" – tracing points of equal intensity in given distributions – among which his global map of isotherms became the most famous (Rupke 2000)[7]. The harvest for Granö comprised very specific guidelines for regional inventory, landscape analyses which could be used as bases for establishing distinct regions of Estonia, Finland and NW Mongolia (Granö 1923, 1928, 1945).

Already in his *Altai* travels, however, while detailed observations and precise measurements were recorded along the way, Granö's accounts of those excursions were framed "poetically", i.e., designed to evoke the reader's sense of discovery. For example, a fresh approach was assumed in presenting the physical geography of the region. Noting that Asia's largest rivers – the Ob, Irtysh, and Yenisei – all originate in the Altai, he mapped them objectively, and explained their importance for natural balance in the world's largest continent. He also described them in ways that could evoke the sense of movement, sound, dynamics and trajectory:

> *...wide, navigable rivers flow through the land from south to north. They are born of the sky-scraping glaciers of the mountains, they travel on with thundering sounds and covered in white waves, and flow through deep gorges of the mountain range and continue with their murky waters through dry steppes, and finally calmly join the icy waters of the Arctic Ocean far away in the north.*
>
> Granö 1919: 47

Photographic and cartographic illustration is also provided for the locations and extent of other inland waters, together with anecdotes and myths about their origins (Granö 1919: 297). On Teletskoje, the Golden Lake, Altyn-keel, for example, there is an objective description of its location, size and shape: 90 km long but only 5–7 km wide, Teletskoje connecting Tschulyschman to Bija (Fig. 10) its depth reaching 200–300 m and the mountain walls reaching up to the snowline (Fig. 11). Then there are the local folk songs about Altyn-keel:

> Fair and lovely is Altyn-keel
> Mists hover on its surface
> Beautiful are its steep sides
> Shrouded by dark forests
>
> Granö 1919: 297, reproduced in *Hufvudstadsbladet*, 12 May 2002

And Granö's comments (1919: 297):

> *Traveller in Altai, have you ever seen a more beautiful lake than Teletskoje, the Golden Lake? More smiling perhaps, maybe even more attractive, but none more immense.*
>
> *Dark, ice-cold water fills its deep graves. On all sides it is guarded by gloomy, wild and monumental cliffs, all bereft of any signs of life. Only the damaged tree trunks and lakeshore dust stirs over the shiny surface.*
>
> *What an immense natural phenomenon!*
>
> *As you sit in a flimsy boat, watch out for the wrath of this golden lake! Hum some lullaby to the guardians of the deep, for the Golden Lake is frightful when angry storms upset its waters! But watch out when you move under the sharp shoreline sides that none of the mountain's ghosts may fling boulders at you! All around you is there evidence of death and devastation.*
>
> *Golden Lake full of secrets! On warm summer evenings when the sharp-sided cliffs hum and the whirring of bumble bees among the tall grasses of the lakeside woods is louder than usual, a white mist creeps over the water and settles there so quietly that the high moors – "mightier than the sun" prevents the clear afternoon sky to shine on the surface.*

Fig. 10. Lake Telétskoje: the Golden lake. During a severe famine a stranger offered a lump of gold – big as a horse's head – for a piece of bread, but nobody could give him this. So he went to the mountain top and dropped his gold into the lake (Granö 1919: 298).

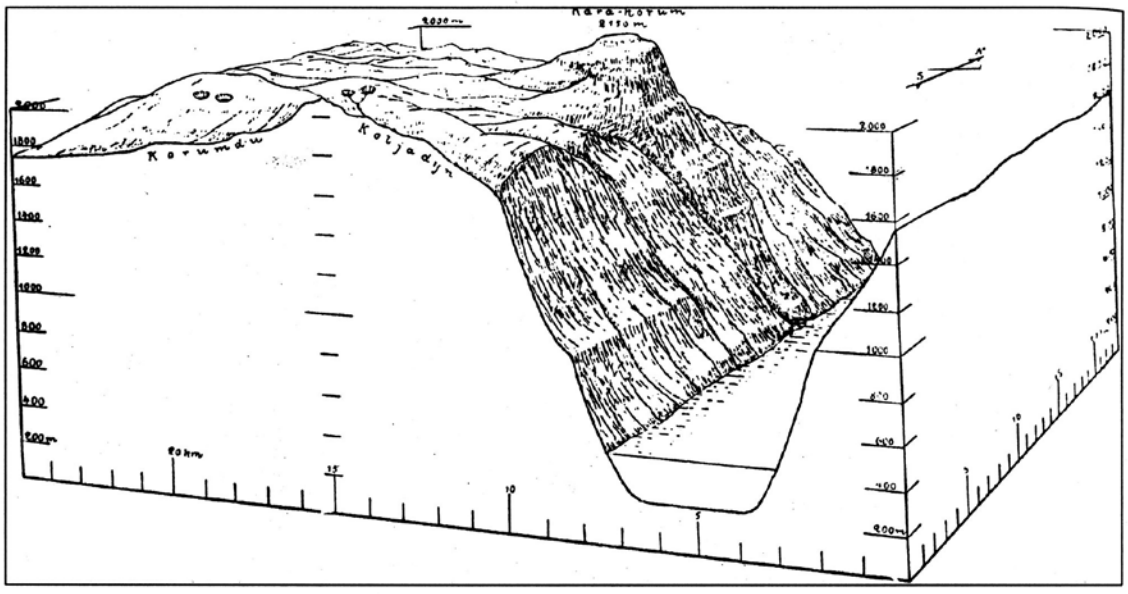

Fig. 11. Telétskoje: deepest lake in Siberia (after Baikal) reaching 325 m.

Both Humboldt and Granö were fascinated by the geography of mountains. Of course it was easy to document mountain landscapes in cartographic and photographic modes. But just as Humboldt wished to tell about his climbing of Chimborazo in 1800, so too, over a century later, Granö wished to communicate something of the actual experience of walking through the Altai hills:

> *Every hill in Altai has its back- and frontside. The backside faces the dark night. It is covered with trees, which become taller and taller as one climbs further toward the reach of night. On Altai's northern ends spruce, cedar, pine, ash and poplar vie with one another to shelter against the cold and frosty night winds. On the southern side there's not the same concern about shelter. Here groups of larch and beech hold sway. And in between one finds grassy glades... On the sunny side one finds the mountain's breast. Here there is radiant sunshine from dawn to dusk... On the night side wild animals roam in the forests, bears and wolves. The mountain owl, bird of darkness, finds here a shelter for its faint eyes. On the summer southern side the larks sing. Sun warms the mountain's tortuous breast; the wild strawberries ripen..*
>
> Granö 1919: 129

Such an account would only be possible by someone who had actually experienced this environment at different times of day and night, noting landscape changes in space and time.

Temporality

A second shared feature in the work of Humboldt and Granö is a vivid awareness of temporality in landscape phenomena. Neither regarded anything as static on planet earth: all phenomena were in process of evolution, however diverse were their temporal rhythms. Humboldt noticed that fossilised tropical plants had been discovered north of the Arctic Circle and asked whether this could possibly be explained by migrations? Or by climate change? He was more inclined toward the latter view (Humboldt 1805: 23–24). Granö's sense of temporality was even at a finer level, insisting on the need to view environments at different seasons, at different times of light and dark, daytime and evening, in order to appreciate the moving character of everyday life and milieux. In his exhortations about field work he advised:

> *It should be kept in mind when planning fieldwork that one would obtain a more complete picture of the site if one had the opportunity to make observations not only in as many parts of it as possible, but also as frequently as possible, at all seasons and in the course of a number of years.*
>
> Granö 1929 (trans. 1997): 22–23

The rationale was already clear from his work in Altai. "The daily interpretation of our environment...is tied to movement and – if we may say so – to the use of time", he also wrote,

> *We move from one place to another, making observations from various points, on various sides and at different times. Our field of vision is bounded by the horizon or by closer objects on the surface of the earth, but the celestial bodies in immeasureable space shine their light on our environment from huge distances. We hear different voices from varying distances, and olfactory and tactile perceptions often complement our concept of the environment in a significant manner.*
>
> Granö 1929: 34

A later harvest from these observations were the remarkable maps of soundscape, smellscape and other sense-based renderings of human environmental experience at different seasons of the year (Fig. 12, 13), all of which were published in his *Reine Geographie*.

Time and movement were fundamental, he discovered, in the world views of tribal peoples in Altai. The concluding paragraph of his *Altai* cites one anonymous interlocuteur:

> *I have watched these years passing by like a single day. Whatever bitterness I have suffered, whatever sweetness tasted, whatever received with either tears or joy – all this has flowed away as if carried on by a current of water and is now all lost from my sight. Only a memory, like an impression in wax, is left in my heart.*
>
> Granö 1921: 357

Sociality and cultural integrity

Sensitivity to social aspects of lived situations is a third shared feature in the works of Humboldt and Granö. For Humboldt, sociality was an essential characteristic of all living beings – of plants, animals and humans. All living forms, in Humboldt's world view, belonged to one of two broad types: social or individual (Humboldt 1805: 15–16). He uncovered many treasures of indigenous South American civilizations, their languages, art, ways

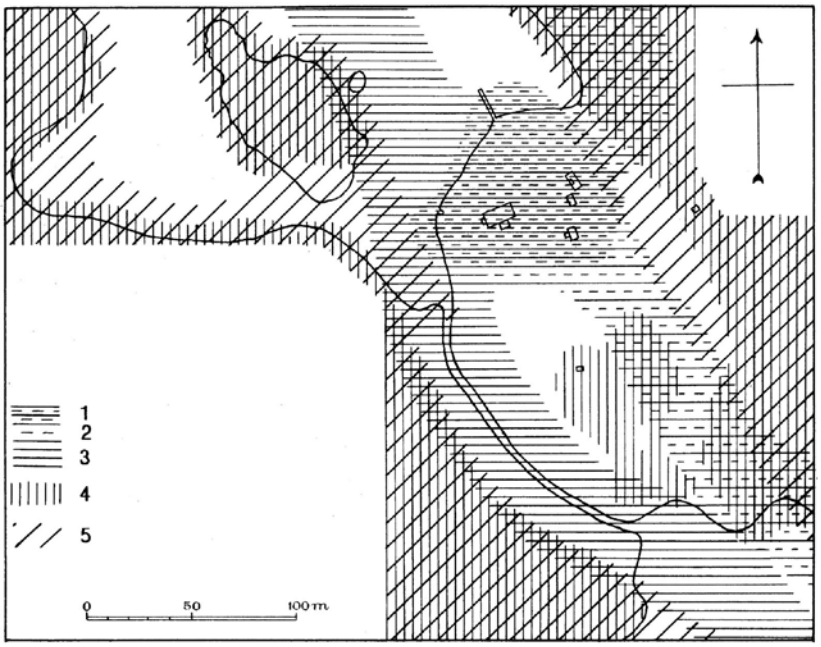

Fig. 12. Auditory phenomena of the Valosaari medium (Fig. 4.14, *Pure Geogr* 127).

Fig. 13. Olfactory phenomena of the Valosaari medium (Fig. 4.15, *Pure Geogr* 128).

of life, belief systems and political structures. Granö immersed himself in the Altai, seeking to understand tribal ways of life, sometimes quite critical also of ways in which Russian and Chinese authorities had failed to understand them. He offered graphic accounts of people and places, recording their stories and myths and taking photographs of them. He mapped the different ethnic groups living in Russian Altai and described each in great detail, noting how herders, hunters and

settlers differed in their perceptions of mountain environments (Granö 1919: 40).

Like Humboldt, Granö noted contrasts in appearance and behaviour among various groups. "The Kirghiz people are more craving for activity, more energetic and lively than the Altai tribes", he noted, "but they lack their sensitivity, humble disposition, versatility and mental serenity which was developed in the stillness of the big forests" (Granö 1919: 49). In his photographs one can also detect his understanding of body language. Take Peké, for instance (Fig. 14) who promised to act as guide…"swallowed a couple of bowls of tea with barley, put his gun over his shoulder, lit his long pipe and mounted the horse" (Granö 1919: 209). For his appreciation of cultural diversity and even individual personalities, Granö's writing really pioneered new pathways for geography and cultural study.

Just as Humboldt, too, Granö learned the native languages and became familiar with local customs and cultural values along the way[8]. Just as Humboldt had dared to harangue about slavery and social injustice in situations he encountered in the Americas, Granö addressed the people of Altai:

> *Dwellers of this country, watch out for this land! Death and ruin have been the lot of those who invaded here.*
>
> *How was it in former times for Ombos and the eleven zaiserna people? When the Chinese invaded their land, the steppe folk begged the nobles for help, dragging their herds and seeking protection in the Tgschary valley. But their language was not understood there. The district officer thought the were Mongols and sent them, under a large escort, to the other end of the Kirkestan, to the shores of Edil – Volga – where Kalmucks live. Two and a half thousand Altai people were thus exiled into a foreign land.*
>
> *And now, the white Tsar is asking for your help. Your best manhood strength has gone to war, travelling over the steppes to the land of the evening sun. How many will return from that journey?*
>
> Granö 1919: 92

Consistent enthusiast about the great promises of French and American Revolutions, Humboldt also found slavery to be intolerable. He spared no irony on white plantation owners and their treatment of servants; the livelihood of *cargueros* an enigma (Humboldt 1811: 65). Enlightenment convictions are also evident in his visions for the future – including the prospect of political emancipation from colonial powers.

Fig. 14. Peké.

> *Nothing is more difficult than a comparison between nations, who have followed different roads in their progress towards social perfection. The Mexicans and Peruvians must not be judged according to the principles laid down in the history of those nations which are the unceasing objects of our studies.*
>
> *While we maintain the unity of the human species, we at the same time repel the depressing assumption of superior and inferior races of men... deeply rooted in the innermost nature of man, and even enjoined upon him by his highest tendencies – the recognition of the bond of humanity becomes one of the noblest leading principles in the history of mankind (Humboldt 1845–1862, Otté trans. 1848: 368–369).*

For Granö, deeply steeped in the history and archaeology of Siberia, it seemed appropriate to encourage them to treasure their heritage.

Fig. 15. Matai. There are guides who know all the way in Altai. Such a guide is Matai (Granö 1919: 84). In everytghing he did one could see his outstanding natural ability and his capacity to adapt to situations. He is already old, well, he is not much older than sixty (Granö 1919: 57, 62).

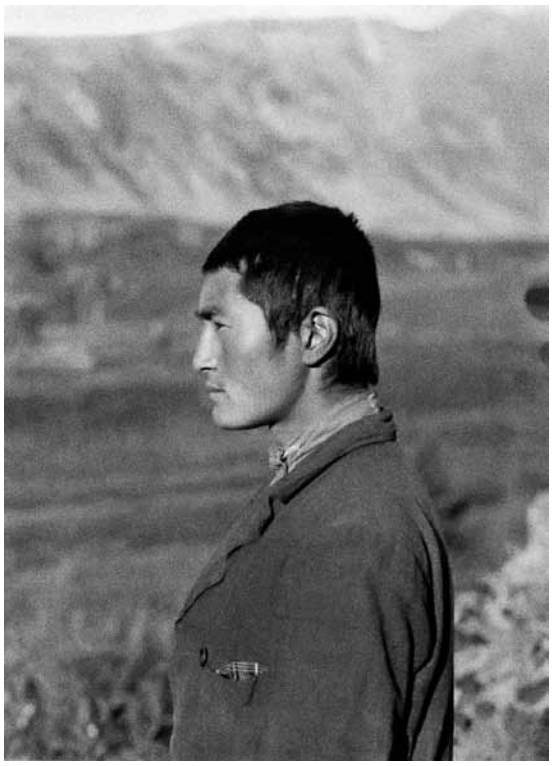

Fig. 16. Tungerék. Even on our first journey together I could see that here was a man with a genuine guide's blood and he would not need much coaching. He accompanied me on several other journeys even through places he had never visited before (Granö 1919: 66).

> *Children of Altai! Don't abandon your fatherland! If you do this and move down to the shoreless plain you will lose your soul. The spirits of the steppe will banish it and will return to the mountain to haunt these homeland woods. You'll be like a soulless animal to your dying day. Soulless, homeless, you will wander around the townscapes of the plain...*
>
> Granö 1919: 92

But perhaps the most memorable of Granö's reflections, already presented in Chapter 2 of the *Altai* are his acknowledgements for the help he received from his assistants and co-linguists in the Siberian settlements. He pays special tribute to his five local guides:

> *Everyone has a light side and a shadow side, like the cedars on Altai's heights'*
>
> *Matai, Tungerék, Subbotin, Kyngrák, Tömen (Fig. 15, 16, 17, 18, 19)! My travel guides in Altai:*
>
> *How vividly your profiles stand out among the hidden corners of my memory! How well I recall our strenuous journeys, you following my star, and doing such valuable work in my service.*
>
> *I gladly acknowledge that whatever scientific harvest has emerged from our journeys together is mostly thanks to your contributions – no matter how little you added by way of insight on general geomorphology or glacial geology.*
>
> Granö 1919: 55

Reflexivity

Both Humboldt and Granö were aware of what is now called reflexivity in science. In his very first publication *Flora subterranea Freibergiensis* Humboldt referred to Spinoza's famous warning:

Fig. 17. Subbotin. 73 years old and still confessing to the old religion. His parents were persecuted by the High Church and the authorities so they fled to the deepest corners of the Altai. His looks remind one of Tolstoy (Granö 1919: 78).

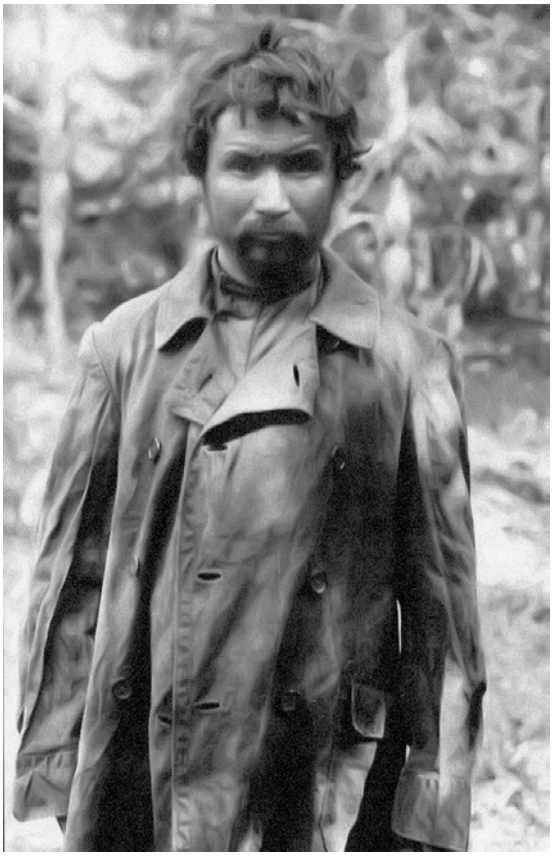

Fig. 18. Kyngrák. There are guides who know only a few ways, but their accurate instinct leads them even in places where they have not been before. Such a guide is Kyngrák. He is in some ways an audacious man. He has no more fear of difficult pathways, turbulent river-crossings or precipitous hills than the wild animals of the forest (Granö 1919: 76).

> *Thus we see that all theories, destined to explain natural phenomena, are only modes of the imagination, not indicators of natural causes but of the constitution of that imagination*
>
> Kellner 1963: 93–94

Granö, too, was keenly aware of the reflexivity issue. "We are bound to our sensations" he wrote,

> *...even though we may place all manner of instruments that magnify or specify between our research object and our senses*
>
> Granö 1924: 102 (trans. Mead 1993: 54)

and citing Neeff (1925: 289):

> *no matter how mathematically accurate may be the methods of or instruments we use in our work, and that "nature" is nothing but the variegated, ever changing play of our perceptions*
>
> Granö 1929 (trans. 1997): 33

For J. G. Granö, "All regional information is relative, bound in some way or other to the human agent who observes, experiences and records it" (O. Granö & Paasi 1997: xii).

> "*Of the whole picture presented to us by physics" Humboldt wrote to M. A. Pictet on 24 January 1796, "only the facts are stable and certain. The theories, children of our opinions, are variable like them. They are the meteors of the intellectual*

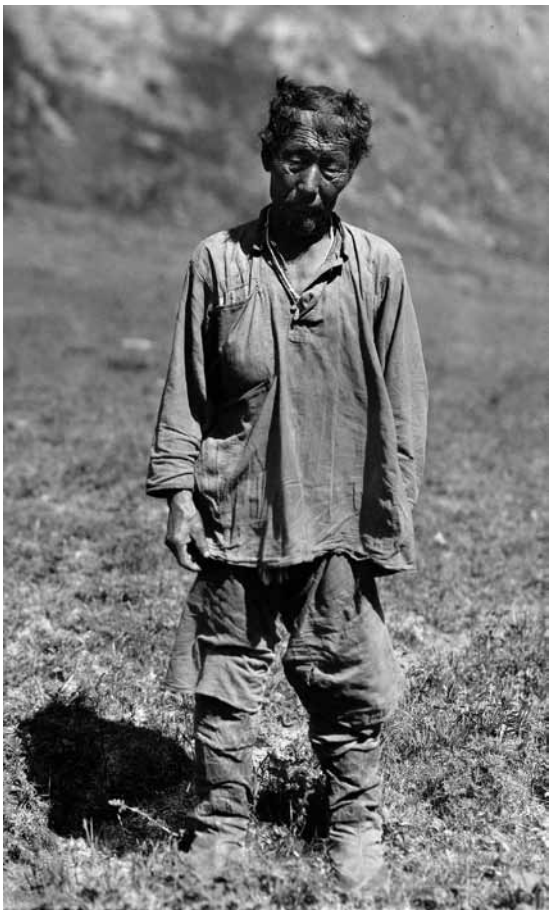

Fig. 19. Tömen. If he claims to be a guide who knows the way, then this lie is due to the utmost poverty and hunger. Imagine how bread and meat would taste in the mouth of someone who had nothing like that in half a year. Then make your judgement (Granö 1919: 85).

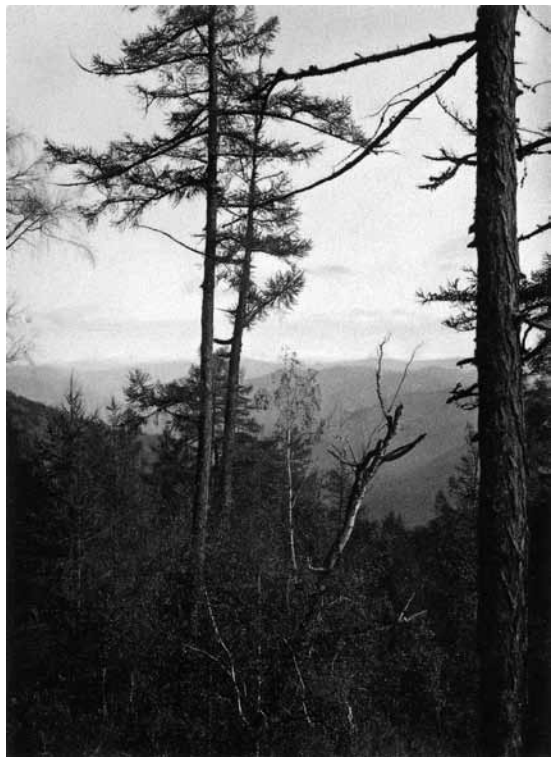

Fig. 20. The Black Altai. The Black Altai is near and it is real. It follows us, envelops us, rising before us. It does not leave us over the leagues ahead (Granö 1919: 103).

> *world, seldom beneficial and more often harmful for the intellectual progress of mankind"*
>
> Kellner 1963: 94

Visual language

Perhaps the most striking common denominator in the poetics of Humboldt and Granö is their ingenious use of graphics in communicating images of people and places. Humboldt's sketches taken in the field, and later polished by European artists, are truly evocative – and have actually inspired landscape artists especially the late 19th century (Bunksé 1981; Carr 2000; Debarbieux 2008). "Granö's observations are rich and penetrating" Edgar Kant wrote, "the spread of topics masterly, the method of treatment, the landscape dominants clearly emphasized" (Kant 1956: 163–172). The camera provided, of course, one powerful technology in this endeavour.

Colour, light and shade, stillness and movement, place and horizon are highlighted in the oft-cited paragraphs on the Black, Blue and White Altai:

> *The heart of the Altai has varied colours: black, blue and white.*
>
> *The Black Altai is forest and leafy clumps. Dark is the forest, dim its arched vaults. Dark brown are the waters of its bogs and marshes (Fig.*

Fig. 21. The Blue Altai. Its distant glistening waters have the colour of the sky. Wanderer, the truth be told! To the Blue Altai, which so often appeared before you as you roamed the black forest and rowed the golden lake, you will never reach. You will glimpse it sometimes in one direction, sometimes in another, but it flees before you, it vanishes behind you. The Black Altai will never let you go there (Granö 1921: 103).

Fig. 22. The White Altai. The White Altai stands unwavering in its place, even though rock piles rumble and waters surge from its snow-coated brims. As a marble temple to peace and immutability, it rises behind the straying clouds on the constantly changing ground of transience (Granö 1921: 105).

20). For the traveller, the Black Altai means hard everyday existence, work and toil.

Granö 1921: 103

Beyond can be seen the Blue Altai. Its hazy veiled ridges rise on the other side of the black reality; it presents itself as the land of memories against the backdrop of our experiences (Fig. 21). The Blue Altai is the unreal goal of your endeavour; it is your past, embellished beyond recognition by the passing years.

idem.

The White Altai, whose peaks shine on the horizon, never disappears from your sight, no matter where you wander in the heart of the mountain

> *country (Fig. 22). The White Altai is the eternal striving for the heights from the swampy shadows and from the land of "dark-grey" desires.*
>
> Granö 1921: 103

Granö's account of the White Altai resonates with those of Humboldt on Cotopaxi:

> *The form of Cotopaxi is the most beautiful and regular of the colossal summits of the high Andes. It is a perfect cone, which, covered with an enormous layer of snow, shines with dazzling splendor at the setting sun, and detaches itself in the most picturesque manner from the azure vault of Heaven. This covering of snow conceals even the smallest inequalities of the soil from the observer's eye; no point of rock, no stony mass, penetrates this coating of ice, or breaks the regularity of the figure of the cone.*
>
> Humboldt 1814, Williams trans. 120

It has been suggested that the Black and White Altai could be seen as metaphors for what he later termed "proximity" and "landscape" in his *Reine Geographie* and that the Blue Altai represents time past, impossible to recall with the same accuracy as perception of the present (Jones 2005). It was also noted that the White Altai, seen from the vantage point of science, might represent Granö's fundamental research on the region's glacial morphology. The Black, Blue and White Altai could also be seen as metaphors for work, memory and longing, and for present, past and future (Humboldt 1814).

Visual language as in landscape paintings could, in Humboldt's view, become catalysts for global understandings among people from different parts of the world:

> *It is thus that the lights of civilisation can bring the greatest pleasure to us as individuals: they enable us to live in past and present; they assemble around us all that nature has produced in its different climates, and places us in communication with all the people of the earth. Supported by discoveries already made, we can launch ourselves into the future and, anticipating the outcomes of natural processes, establish forever the laws to which nature subjects itself. It is in such research that we find the intellectual delight and moral freedom which fortifies us against the blows of destiny, and which no external power could quench....*
>
> Humboldt 1805: 35

Humboldt's sketches of altitudinal zonation of vegetation remain classics of visual language (Fig. 23, 24). Even his sketches of the Altai are remarkably evocative (Fig. 6, 7). Granö's photographs, often developed personally on site, even more effectly evoke the sense of direct encounters with people and places. His collection of photographs remain perhaps the greatest source of insight into the landscapes and peoples of the Altai.

Concluding notes

Granö and Humboldt both exemplify the poetic power of geography, accessible especially via landscape explorations. There were important differences, of course, in their general concerns, reflecting the differences in scholarly institutions between the early 19th and early 20th centuries. Humboldt was working in a pre-disciplinary era, as it were. He showed little pre-occupation about the identity of geography as a discipline and never established a "School" of devoted pupils (Acta Geographica 1965). His general concerns were about human understanding of nature and its role in human life. Granö wrote extensively on the nature of geography as a school subject and as a university discipline. Fully versed in German precedents, he established strong methodological guidelines of "landscape science", "regional science" and eventually for objective explorations of environmental perception (O. Granö 1992, 2003; Golledge 1998).

Their common denominators are far more easily discernable in the poetics of their field accounts. Ultimately Humboldt's poetics may best address global humanity while Granö's may appeal primarily to the individual who is interested in particular landscapes and environments. Humboldt's *oevre* seeks to transcend the scholarly worlds of Enlightenment and Romanticism; Granö's serves to challenge the separation of physical and human geography in the early years of the twentieth century. At the heart of both, however, was a central goal, still central to geography: to understand life unfolding on Planet Earth. This involves more than scientific mastery of various geophysical and biological processes; it involves poetics, aesthetics, emotion and reason in the quest for wiser ways of dwelling.

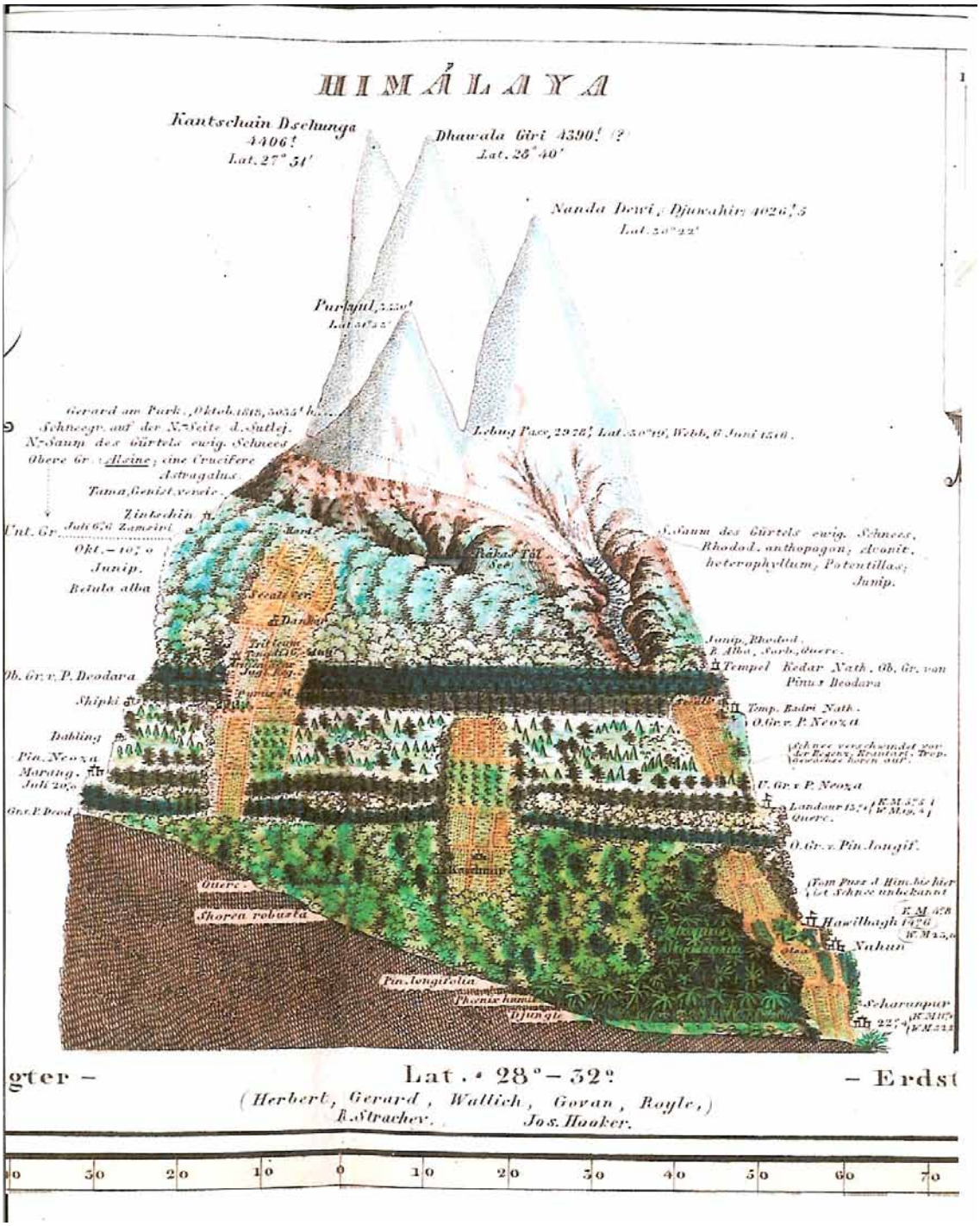

Fig. 23. Humboldt's altitudinal sketch of vegetation in Himalaya (Berghaus 1949).

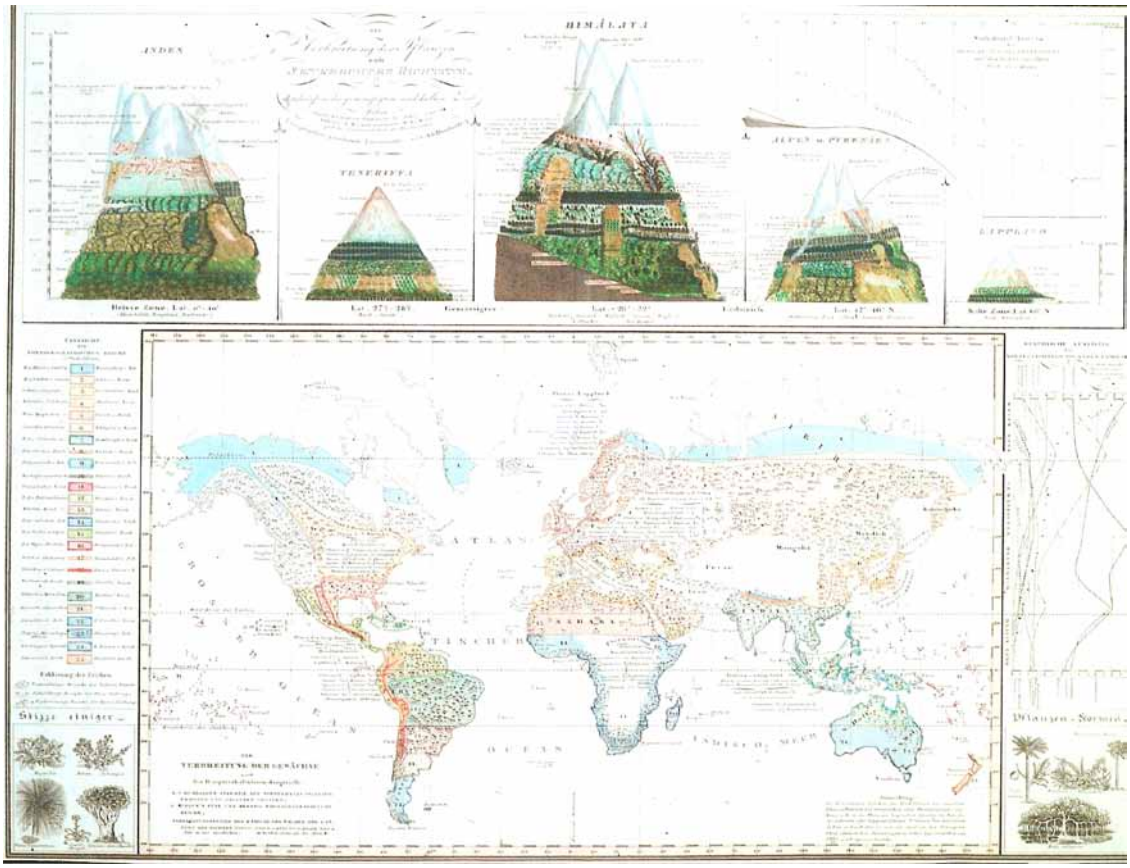

Fig. 24. Umrisse der pflanzen geographie (Berghaus 1951).

NOTES

[1] This paper was originally presented at the Opening Plenary Session of an IGU Regional Conference on "Society and environment interactions under global and regional changes", held in Barnaul, Siberia, July 2003. The aim was to highlight the importance of the Altai itself as catalyst for place-based research by two important visitors who combined insights from human as well as bio-physical science in their accounts of society and environment. A revised version was presented at the meeting of Nordic geographers in Turku 2009. I gratefully acknowledge the generous help of Professor Olavi Granö for not only valuable commentary on the text, but also for providing most of the illustrations which are included here. Unless otherwise indicated, all translations from Humboldt and Granö are mine.

[2] The term "poetics" (from Latin term poēsis and Greek po(i)ēsis, "a making", "creation") is understood here in the sense used by Heidegger as evocative of discovery (Heidegger 1975). This resonates to the post-modern emphasis on aesthetics and language in geographical writing (See Porteous 1990; Tuan 1991; Buttimer 2003).

[3] I acknowledge the comments of an anonymous reviewer for this insight.

[4] Later, however, Granö abandoned the Davis model in his *Das Formengebäude des nordöstlichen Altai* (Granö 1945).

[5] Granö's itineraries, published in 1938, contained detailed landscape analyses. They were based on observations by eye, compass, clock, aneroid barometer, theodolite and telescopic alidade. He also had chemicals along so he could develop negatives. The photographic images, comprising more than a thousand negatives and almost as many prints, are archived at the Finnish Literature Society in Helsinki, while his diaries are at the National Archives (Jones, citing Eskola 2002, in-*op.cit.* 2005).

[6] Visual modes of representation continued to dominate in geographical texts (Cosgrove 2008).

[7] The global map of isotherms later became the background frame within which a range of other distributions were displayed in the *Berghauser Physikalicher Atlas* (1849/1851), especially the geographies of plants and animals, agriculture and other livelihoods, as well as patterns of health and disease.

[8] "He had a good command of seven languages", Jones wrote, "and his artistic powers were well in evidence in his ability to convey complex landscape perceptions equally well through eitherverbal descriptions or pictures" (Jones 2005, citing Eskola 2002: 140).

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