[1] *The Geography and Ecology of Inner Eurasia*

Inner Eurasia: Definitions

What are the borders between Inner and Outer Eurasia? In some areas it is easy to identify them. Elsewhere it is more difficult.

Along the southern rim of 'Inner Eurasia', mountain chains provide a natural border. A few natural gateways breach this border through the Balkans, the Caucasus, Persia, Afghanistan and northern China. To the east and west, ecology rather than topography defines the borders of 'Inner Eurasia'. However, it does so without much precision. Do Hungary, Romania and Poland belong within Inner Eurasia? Does Manchuria or the Ordos region in the great loop of the Yellow River? There is no need to attempt a definitive answer to such questions. We can simply describe such regions as borderlands. They belong sometimes to Outer Eurasia and sometimes to Inner Eurasia. However, for most purposes Manchuria will not be included within Inner Eurasia. Nor will Tibet or the Caucasus mountains, regions whose ecology is quite different from that of the Inner Eurasian plains. Nor will eastern Europe west of the Pripyat marshes. To the west of the Pripyat marshes there is great variety in relief, geology, vegetation, climate. To the east there is uniformity of landforms and also of climates. As a distinguished historical geographer has written:

> The climatic frontier between the maritime and continental climates, however imprecise it may be, must fall in this very same zone . . . . The great east–west trending vegetation and soil belts, themselves a product of physiographic and climatic uniformity, come to a halt in this zone to give way, westwards, to a fine-grained pattern in which, everywhere, local variations in bedrock, drift, aspect, slope and height are reflected in vegetation and soil.[1]

In the far north, the tundra and the Arctic ocean offer borders as clear as the mountain ranges to the south.

One advantage of using the terminology of 'Inner' and 'Outer' Eurasia is that it bypasses the ancient, but misleading and Eurocentric distinction between Europe and Asia. Geographers of the classical world first distinguished between Asia and Europe, placing the border at the Bosporus or, further north,

at the River Tanais, the modern Don.[2] Once geographers in the Mediterranean world began to understand that the Don was no barrier at all, the distinction between Europe and Asia was so deeply rooted that geographers simply looked for a new border. Eventually, most came to accept the proposal of an eighteenth-century Russian geographer and historian, V. N. Tatishchev, who placed the border at the Urals mountains.[3] Remarkably, this entirely artificial division has survived in historical writing to the present day.

Yet there have been dissenting voices. In Russian geographical thought there were many attempts to define a distinctive geographical region that was Russia's natural homeland. Most interesting for our purposes is the group of émigré Russian geographers and historians known as the 'Eurasianists'. The Eurasianists argued, on geographical and cultural grounds, for the unity and coherence of what they called 'Eurasia'.[4] By this, they meant a region similar to what I have called 'Inner Eurasia'. Here, I have rejected the term, 'Eurasia', because it belongs more logically to the entire Eurasian land mass.

Within the borders of Inner Eurasia, there has existed an immense variety of climates, landscapes, lifeways, languages and religions. Nevertheless, the entire region can usefully be treated as a single, coherent unit of historical analysis. The geography and ecology of the region have shaped its history from prehistory to the present. They have done so by posing distinctive problems that demanded distinctive solutions.

DOMINANT FEATURES OF THE GEOGRAPHY OF INNER EURASIA

PHYSICAL GEOGRAPHY

Inner Eurasia's geographical coherence appears most clearly on a physical map of the world. Its dominant geographical feature is a vast plain, the largest unified area of flatlands in the world. What the great Russian historian, Klyuchevskii, wrote of his homeland is true of most of Inner Eurasia: 'Monotony is the chief characteristic of [Russia's] surface: one form of relief dominates almost her whole extent.'[5] Though several mountain ranges exist within Inner Eurasia, particularly in Eastern Siberia, Mongolia and Sinkiang, and though much of Eastern Siberia, like Mongolia, is really a large, elevated, tableland, none of these regions present significant barriers to movement.

The Inner Eurasian flatlands assembled over vast epochs through the collision and fusing of different portions of continental crust. The most important event in the geological history of the plain was the joining of two large sheets of continental crust, or 'cratons', the Siberian and Russian 'platforms', during the 'Permian' epoch, about 250 million years ago. This process left the Urals mountains as still visible scars of what geologists call a 'suture'.

The flatness of the Inner Eurasian plains had immense political, cultural and military consequences. While land armies dominated warfare, natural features such as mountains or seas were the main barriers to military expansion. Just as the English Channel explains why Britain is a natural political

unit, so the absence of such barriers helps explain the size of the cultural, commercial and political units that eventually appeared in Inner Eurasia. Successful armies, such as the Mongol armies that drove through the steppes from the east, or the Muscovite forces that drove through seventeenth-century Siberia, met no serious physical barriers to their movement until they reached the western, southern or eastern borderlands of Inner Eurasia. Inner Eurasia is therefore a natural unit of military history. That is why it was also a natural unit of political history, and that is why, during the last two millennia, there have appeared in Inner Eurasia some of the largest land empires ever created. Flatness also explains why networks formed from trade, ideas, religions and tribal migrations have linked different regions of Inner Eurasia over huge distances since prehistoric times. The great Inner Eurasian empires formed from societies that already shared much with each other culturally, commercially and politically.

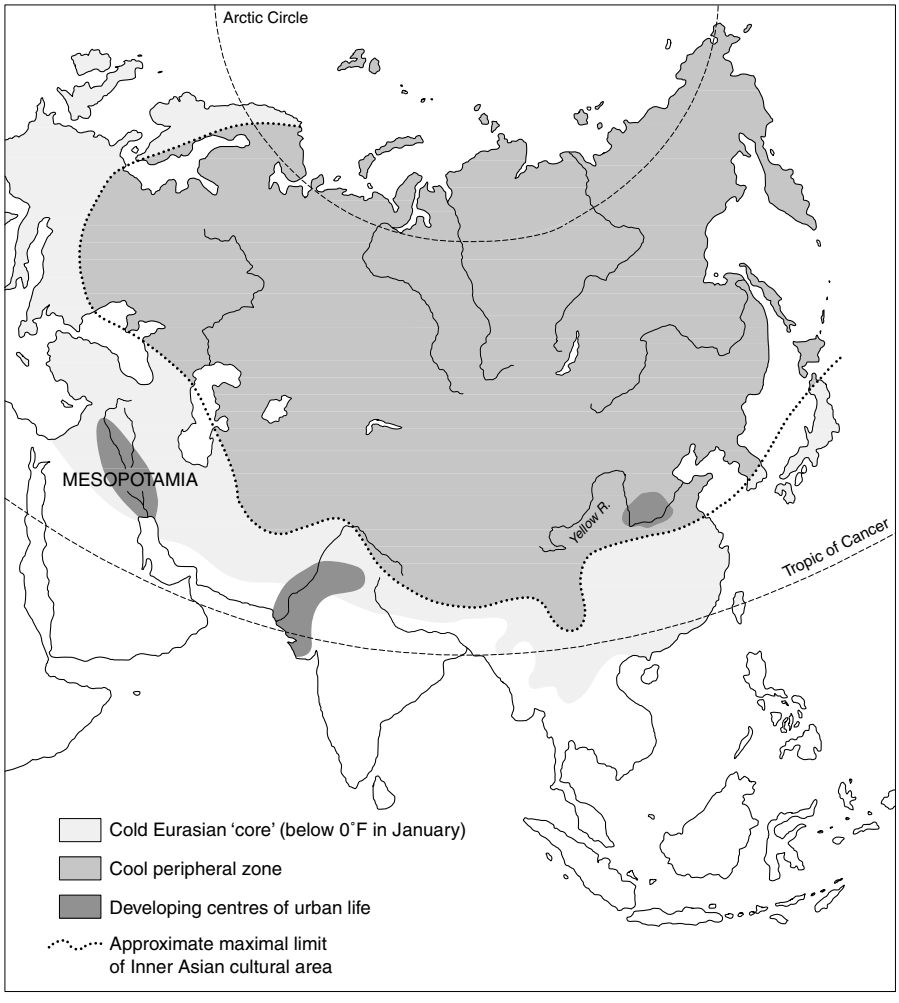
ECOLOGY

Three main features define Inner Eurasia ecologically. These are: (1) interiority; (2) northerliness; and (3) continentality.

First of all, Inner Eurasia is inner. It is remote from the sea to the west, south and east, and its long northern coastline is frozen for most of the year. So interiority has meant aridity. Even rain-bearing winds from the Atlantic lose much of their moisture before they enter western Inner Eurasia. South of the forest zone, average annual rainfall today is less than 250 mm, and in most of Central Asia, Chinese Sinkiang and Mongolia, average precipitation varies from 250–500 mm. This is too dry to support farming without irrigation. North of these regions and east of the Urals there are few regions that enjoy more than 500 mm a year, and these lie along the western edges of the Russian plain. In contrast, most of Europe, the northern Mediterranean, India, South-East Asia and China enjoy more than 500 mm of rainfall a year. The relative aridity of Inner Eurasia had profound ecological consequences, for the amount of rainfall (more strictly, the ratio of rainfall to evaporation, the 'effective moisture') is a crucial determinant of the amount of vegetation and therefore of potential food production. In the northern tundra and forest lands of Inner Eurasia, coldness compensates for lack of rainfall by reducing evaporation, so that here, aridity poses fewer problems than further south.[6]

Second, Inner Eurasia is northerly. St Petersburg lies close to the 60° parallel, along with Stockholm and Oslo. Anchorage, the capital of Alaska, lies only two degrees farther north than St Petersburg. The southern parts of Inner Eurasia, between 50° and 40°, lie in the same latitudes as the northern Mediterranean and Central Europe, but, with less rainfall, and more extreme climates, they are largely regions of steppe and cold desert. Though these were the first parts of Inner Eurasia to be settled in prehistoric times, even these lands lie north of the latitudes in which the first civilizations emerged in Egypt, Mesopotamia, Northern India, and China.

Northern latitudes mean colder average temperatures and less sunlight. Latitude affects average atmospheric temperature, which, all else being equal,



Map 1.1 The 'cold Eurasian core' (below 0 degrees in January).

decreases by about 0.5°C for every degree of increase in latitude. There is an important sense in which Inner Eurasia is *colder* than Outer Eurasia, so that, as one writer has said: 'Winter is the dominant season in Central Eurasia.' This is how Mackinder put it:

> There is one striking physical circumstance which knits [the Heartland] graphically together; the whole of it, even to the brink of the Persian Mountains overlooking torrid Mesopotamia, lies under snow in the winter-time. The line indicative of an *average* freezing temperature for the whole month of January passes from the North Cape of Norway southward, just within the "Guard" of islands along the Norwegian shore, past Denmark, across mid-Germany to the Alps, and from the Alps eastward along the Balkan range. The Bay of Odessa and the Sea of Azof are frozen over annually, and also the greater part of the

Baltic Sea. At mid-winter, as seen from the moon, a vast white shield would reveal the Heartland in its largest meaning.

To make things worse, in much of Inner Eurasia, aridity and cold conspire together, for limited cloud cover deprives the land of much needed insulation during the winter nights.[7]

Latitude also determines the total amount of light that falls on a given area. As sunlight is the main source of new energy in the biosphere, the amount of sunlight reaching any particular region is a fundamental measure of its capacity to sustain life. The energy of sunlight is captured through photosynthesis, which sustains the plants (the 'primary producers') which stand at the base of most food-chains. Primary producers account for about 99 per cent of all organic matter. All else being equal, the amount of sunlight determines the amount of vegetation which, in turn, limits the size of animal and human populations.

Latitude also affects rainfall. Warm equatorial winds carry moisture upwards, which they shed as they travel north and south away from the equator. Eventually, having shed most of their rain, they descend at around the 30° parallel, creating most of the world's desert lands. In Inner Eurasia, the mountain rim to the south exacerbates this effect, for the mountains push rain-bearing clouds high and squeeze out any moisture they still contain. As a result, along the southernmost parts of Inner Eurasia there lies a chain of interconnected deserts and arid steppelands.

The flatness and size of Inner Eurasia explain a third main feature: the continentality of its climates. In coastal regions, seas moderate temperature changes, for the sea warms and cools more slowly than the land. On the other hand, large land masses allow more extreme fluctuations of temperature and more severe climates; and Inner Eurasia lies at the heart of the largest land mass in the world. In Inner Eurasia, the prevailing westerlies have lost their moderating influence by the time they reach the Urals. So, the further east one travels, the more severe the contrast between summer and winter climates. Dryness and extremes of temperature both increase towards the east, so the diagonal line from north-west to south-east, which delimits the region where growing seasons are less than 90 days long, also marks off a good half of Inner Eurasia whose climate is either Arctic or sub-Arctic.[8] Where the growing season is less than 90 days, serious agriculture is hardly possible. (Coastal regions on the Pacific constitute a partial exception.)

The most favourable climates in Inner Eurasia can be found south of the western part of this line. Moving east, the pasturelands become more arid, and farming more difficult, which creates an important climatic and ecological gradient from west to east. To the south of the eastern half of this line, climates are semi-arid or arid, with limited rainfall, warm summers and very cold winters. Mongolia has particularly harsh winters, with temperatures dropping below freezing for as much as six months each year. The extreme cold of this region is exacerbated by a relatively stable winter high pressure zone over Mongolia. In fact, the climates of the eastern half of Inner Eurasia are the most continental of all the earth's climates.

Continentality means that temperatures move through huge arcs from summer to winter, and sometimes within a single day. The Franciscan Monk, John of Plano Carpini, described the weather he saw in travelling through Kazakhstan and Mongolia in the middle of the thirteenth century:

> The weather there is astonishingly irregular, for in the middle of summer, . . . there is fierce thunder and lightning which cause the death of many men, and at the same time there are very heavy falls of snow. There are also hurricanes of bitterly cold winds, so violent that at times men can ride on horseback only with great effort. When we were before the [camp of the emperor and his chief men] we lay prostrate on account of the force of the wind and we could scarcely see owing to the great clouds of dust. There it never rains in the winter, but often in the summer, though it is so little that sometimes the dust and the roots of the grass are hardly moistened. Very heavy hail also often falls there. . . . Then also in summer there is suddenly great heat, and suddenly extreme cold. In winter in some parts there are heavy falls of snow, in others however but slight.[9]

THE IMPACT OF GEOGRAPHY

Aridity, northerly latitudes and continental climates combined to create a harsh environment for human settlement. 'Primary productivity', or the amount of solar energy stored in plants, was highest in the forest lands that dominated the cold, northern half of Inner Eurasia.[10] It was much lower in the steppelands and desertlands of the southern half, where most of the populations of Inner Eurasia lived from *c.*4000 BCE to the time of Chinggis Khan. As a result, the more densely settled regions of Inner Eurasia were characterized by low ecological productivity and a shortage of easily accessible food energy. Even in the south, there are exceptions – ecological 'hot spots', in which moderate climates, good soils and good supplies of rain or river water make for productive agriculture. The most important large area of this kind lay west of the Urals. With this important exception, none of these 'hot spots' falsify the generalization that the most accessible parts of Inner Eurasia are more impoverished ecologically than most parts of Outer Eurasia.

The differential in average natural productivity between Inner and Outer Eurasia has been of immense and enduring significance. As this volume will show, it has shaped the history of Inner Eurasia in profound ways and over long periods.

The most obvious consequence of Inner Eurasia's harsh ecology was low population density. Until recently, most of Inner Eurasia lacked the dense populations that underpinned the urban civilizations of Outer Eurasia. In the early 1980s, the population density of the entire Soviet Union was no more than about 12 people/k^2. In the most populated regions, west of the Urals, it was *c.*50 people/k^2, in contrast with 229 for the UK and 182 for modern India.[11] Along the northern borders of China, the demographic contrast is particularly striking. In 1940, Owen Lattimore estimated that China within the Great Wall had a population of 400–500 million living in an area of approximately one and a half million square miles, while the Inner

Eurasian borderlands of China beyond the Great Wall (including Tibet) had a population of only 1/10th as much, in an area twice the size of China.[12] Much of the history of Inner Eurasia turned on the contrasting population densities within and beyond its borders.

Low population densities might simply have ensured that Inner Eurasia remained marginal to the dominant regions of world history, a sort of Eurasian equivalent of the North American plains. However, Inner Eurasia's centrality in the Eurasian landmass ensured it a more prominent historical role. What happened in Inner Eurasia affected Outer Eurasia because most of the land routes connecting the various civilizations of Outer Eurasia passed through Inner Eurasia. As a result, the history of this region had a considerable impact on the rhythms of Outer Eurasian history. The trade routes that passed through the Inner Eurasian borderlands flourished best when controlled by large Inner Eurasian empires, though trade also boomed when Outer Eurasian empires from Persia or China controlled large stretches of the trade routes. The emergence of the first extensive steppe empires coincided with the first appearance of a flourishing trade route across Inner Eurasia, dominated by the power of Han China and the pastoral nomadic Hsiung-nu. As McNeill has shown, these links also laid the foundations for a unified Eurasian epidemiological system.[13] The Türk empire of the sixth century CE created political links across Eurasia for a second time, while the Mongol empire of the thirteenth century created a third economic, cultural and epidemiological system embracing much of the Eurasian land mass.[14] The exchanges made possible by the creation of the Mongol empire stimulated economic and cultural development throughout Eurasia, and may have contributed significantly to the rise of European capitalism.

Inner Eurasian societies impinged on the civilizations of Outer Eurasia in other ways. Though they usually lacked the resources to conquer the civilizations of Outer Eurasia, Inner Eurasian armies could be very powerful, and they often probed for weak spots in the sedentary lands. Sometimes they found them. When they did, they exacted tributes, and sometimes supplanted Outer Eurasian ruling classes.

For several millennia, then, the centrality of Inner Eurasia ensured it a strategic role in the history of the Old World, and helped shape the history of the emerging Eurasian world-system. So, despite its small populations, Inner Eurasia has not been a region 'without history', in Eric Wolf's phrase.[15]

Relations with Outer Eurasia also had a profound impact on the societies of Inner Eurasia. Outer Eurasian trade goods, technologies, lifeways, migrants, religions and armies all shaped the societies of Inner Eurasia. Given the limited natural and demographic resources of Inner Eurasia, responding to the challenges of Outer Eurasia usually required an intensified mobilizational effort, whether for war or trade. Whether they wished it or not, the peoples of the southern half of Inner Eurasia were fated not to live in a historical backwater, despite their limited natural resources.

It is this combination of ecological poverty and engagement with more powerful neighbours in Outer Eurasia that has done most to shape Inner

Eurasian history. This conclusion suggests an abstract way of defining what is distinctive about the history of Inner Eurasia. *The societies that did most to shape the history of Inner Eurasia did so because they evolved successful ways of concentrating or mobilizing the scarce human and material resources of a region of relatively low natural productivity.*

Pressure to mobilize the scarce resources of a difficult environment stimulated the evolution of distinctive ecological adaptations, around each of which there emerged distinctive lifeways and distinctive social structures. In the era covered by this volume, two adaptations have been dominant: hunting in the palaeolithic era, and pastoralism in the neolithic era. In the modern era, Inner Eurasian societies adopted the agrarian and then the industrial lifeways of Outer Eurasia. However, even these evolved in distinctive forms that reflected the particular ecological features of Inner Eurasia.

REGIONS WITHIN INNER EURASIA

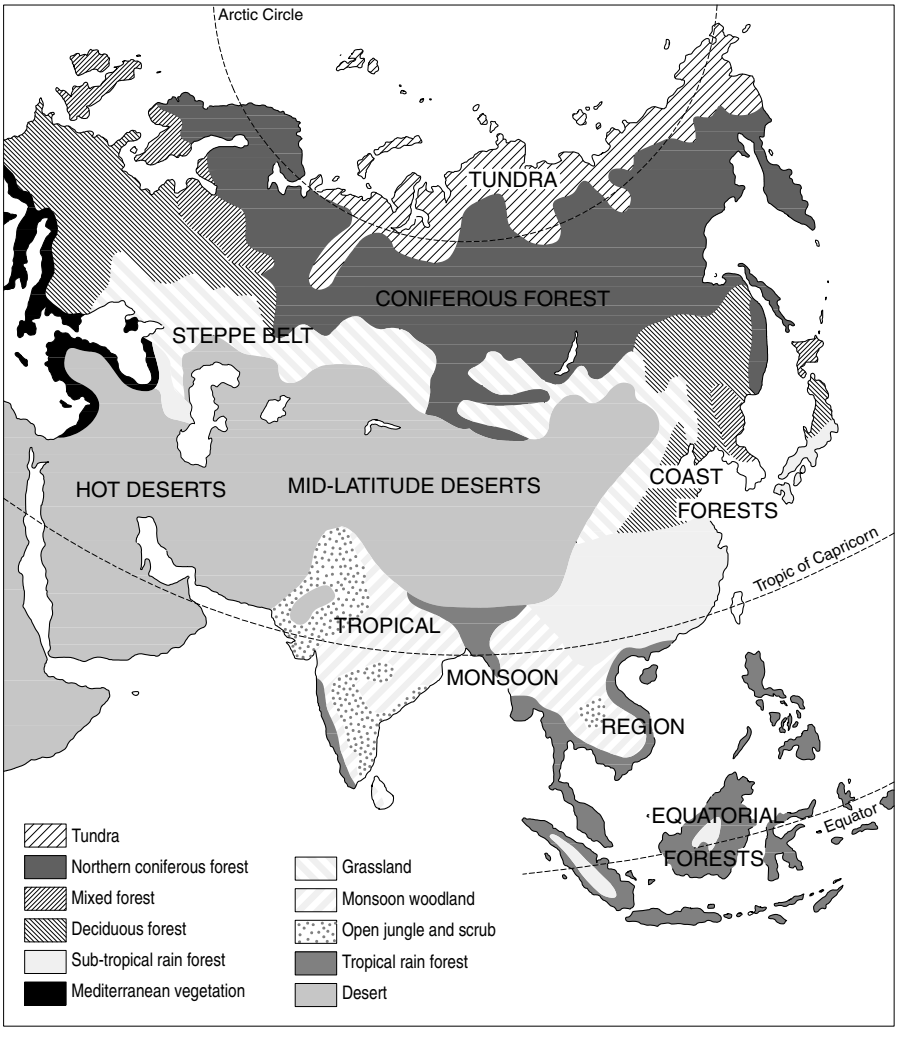
Though there is a larger unity to the lands of Inner Eurasia, they are also very diverse in their ecologies, their lifeways and their cultures. Inner Eurasia forms a huge rectangle, whose major axis runs east and west. Its grain runs roughly horizontally, along lines of latitude, though for some geographical features, such as average temperatures, the grain is skewed, dropping south as you move east. If you travel along the major axis of Inner Eurasia (which is the experience of those travelling on the trans-Siberian railway), you encounter similar types of vegetation and climate. To see different ecological zones, you must travel north and south.

Vegetation lies at the base of the food-chain. Four main ecological belts are worth noting in Inner Eurasia. Moving from north to south, these are: the tundra, the northern forests, the steppelands, and the deserts.

ECOLOGICAL ZONES

1 THE TUNDRA

Along much of the northern coast of Inner Eurasia, tundra extends up to 200 miles south of the Arctic shore, though in the east it extends much further south. Average daytime temperatures in this region rise above -10°C for only half the year. Frost-free days last only during the short summers of about two and a half months, and snow covers the ground for almost 250 days in the year. The tundra is so cold that the sub-soil itself is frozen all year around in 'permafrost', which sometimes reaches to a great depth. With so much moisture locked up in permafrost or snow, little is available to support plant life, so the tundra is a sort of frozen desert. Its vegetation consists of hardy mosses, lichens, sedges and low-growing trees and shrubs. These ancient forms of vegetation support small populations of rodents, foxes, a few species of birds, and some larger animals such as wolves and reindeer. On the coasts, there are whales, walrus and seals. Though occupied by



Map 1.2 Ecological zones of Inner Eurasia.

human populations for at least 20,000 years, the tundra's limited resources have never supported dense populations of animals or of humans, and this zone has played a secondary role in the history of Inner Eurasia until very recent times.

The following account, written by a missionary, who lived in Nizhnekolymsk on the Kolyma river, just south of 70°, in about 1850, gives some idea of living conditions in the Siberian far north. Cold was by no means the only hazard in this region. Permafrost meant that when the top few inches of the soil melted in the short summers, it could not drain away. This created ideal conditions for the breeding of insects.

> Winter, with all its blizzards, accompanied by unrelieved dampness, and at the same time unrelieved deep cold (a most unfavourable combination), lasts nine months. Then come two and a half months of just dampness, like a bath, with thick marshy emanations; in the air there is a ubiquitous fog of minute blood-thirsty insects, for such are midges and gnats there. From these insects the native has no peace, inside or out, day or night. Furthermore, in summer the sun does not set, which is very picturesque to see described, but is extremely tedious to experience in fact. Average temperature for the year is −10°C, and it is below −37°C in December and January. In winter it is cold, damp and gloomy, and the sun does not rise. Vegetation is poor. You do not even find fir and pine; birch has become a dwarf, alder a low-growing shrub, the majestic Siberian cedar has also turned into a dwarf.[16]

2 THE FOREST

Below the tundra lie the woodlands. The most northerly part of the woodlands consists of a huge conifer forest, the so-called *taiga*, that stretches from Scandinavia to the Bering Sea. Below the coniferous forest, in the west, there lies a zone of mixed deciduous and conferous forests. Below that, in the far west, there lies a wedge of temperate deciduous forest that reaches into the western parts of the plain from Europe and extends, narrowing to a point towards the east, until it vanishes near the suture line of the Urals. Taken together, these zones make up the largest area of tree cover in the world.

The great forests of Inner Eurasia appeared at the end of the last ice age, from *c.*10,000 years ago. Since then, the forests, and the rivers that track through them, have provided resources of many different kinds, including fish and flesh, furs and materials. However, their soils are usually thin and acidic podzols, as forest cover prevents evaporation, so that rainfall drains through the soil, leaching away nutrients. This explains in part why farming developed late in the forest zones, and often used the trees themselves as fertilizer. Swidden farmers cleared areas in the forests and burnt down the trees, then planted seed in the ash. Once they had exhausted its fertility, they moved on. East of the Urals, most post-glacial communities of the woodlands survived without any form of farming or gardening, exploiting the region's animal and plant resources. They herded and hunted reindeer, as well as deer and bear and even tigers in Manchuria and the Far East. They also hunted the region's sable, fox, ermine, marten and squirrels for their valuable furs, which could be worn, or traded to the lands south of the forests. The vast river systems of Siberia provided the main form of communication through the *taiga*. Though most of the major rivers headed north, their tributaries, joined by short portages, provided the routes from the Urals to the Pacific along which Muscovite traders and soldiers travelled as they took control of Siberia in the seventeenth century.

The German traveller, Baron Haxthausen, who travelled in European Russia in the 1840s, offers a vivid description of the wooded north as he travelled to the north of Vologda through the *taiga*:

> At the river Sukhona commence those forests which stretch out hence into immeasurable regions. Throughout the whole district as far as Veliki Ustiug,

> the immense forests come down close to the river, on both sides of the Sukhona; but wherever the bank is not too deep and the soil is fertile there lie on either side of the river villages, generally four to six close together. The forest is partially cleared in these places and the land is excellently cultivated.[17]

As the historian, Klyuchevskii, wrote in the late nineteenth century, the woodlands, both coniferous and deciduous, were the historic heartland for the cultures of Muscovy and Russia:

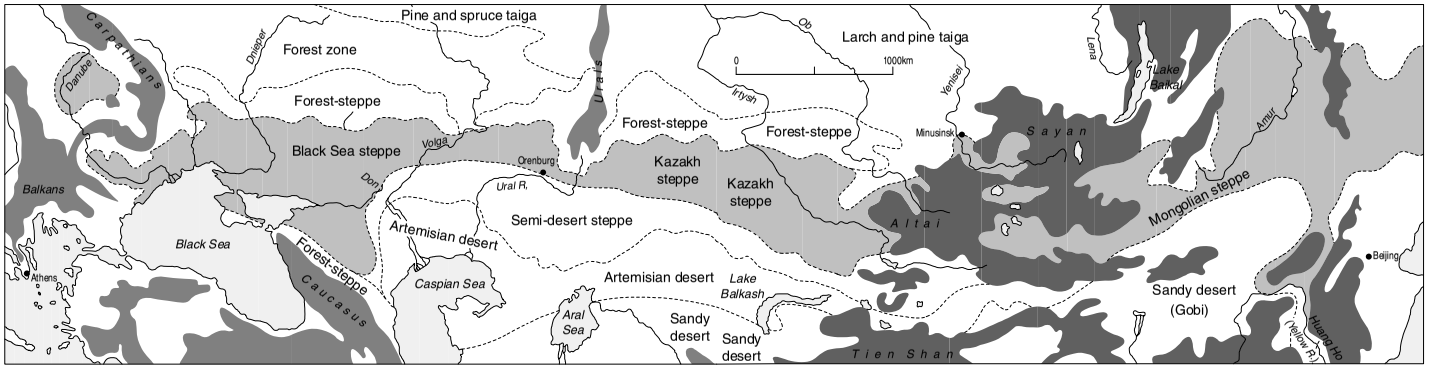
> Even in the seventeenth century, for a Western European travelling from Smolensk to Moscow, Muscovy appeared an endless forest, in which towns and hamlets were simply larger or smaller clearings. Even today [the late nineteenth century] a broad horizon fringed by a bluish band of forest, is the most familiar landscape of central Russia. The woods offered much to the Russian people, economically, politically and even morally. They built their houses of pine and oak; they heated them with birch and aspen wood, and lit them with birch tapers; they wore boots (*lapti*) made from the bark of lime trees; and they made their domestic utensils of wood or bark. The forests provided a safe refuge from external enemies, taking the place of mountains and fortresses. The state itself, whose predecessor [Rus'] had failed because it was too close to the steppes, could flourish only . . . under the protection of the forests.[18]

To the lands further south, the resources of the forest lands were of great commercial importance. However, with this exception, the forest lands were almost as marginal to the history of Inner Eurasia as the tundra, until the emergence of Rus' and the exploitation of Siberia's vast mineral and timber resources in recent centuries. Though we will try not to neglect the indigenous societies of the Inner Eurasian forest belt, their history will not loom as large in this volume as that of the southern, non-forested, half of Inner Eurasia.

3 THE STEPPES

The third belt consists of the arid steppelands. Though connected, the steppes divide into three main zones. The western steppes extend from Hungary through southern Ukraine, north of the Black Sea, and to the gap between the Urals and the Caspian Sea. The central steppes include northern Kazakhstan, and extend southwards into southern Central Asia, where they merge into desert. The Zungar gap, between the Altai and T'ien Shan mountain ranges, leads into the eastern steppes of northern Sinkiang and Mongolia. These reach along the northern fringes of the Gobi desert to the Khingan mountains on the western borders of Manchuria.

The Inner Eurasian steppes are part of a vast belt of desert and steppe that reaches from north-west Africa right across the centre of the Old World to Manchuria in the east. In Central Asia, fingers of steppe reach deep into Afghanistan and Iran, so that along this border, the ecological frontier with Outer Eurasia is less precise than along the north Chinese or Eastern European borders. Grasslands often lie in transitional regions between temperate forests and desert lands, where there is enough rainfall to support



Map 1.3 Steppelands of Inner Eurasia

grasses, but not enough to support trees and forests. Average precipitation in the steppelands varies from 250–500 mm. Rainfall is higher near the coasts, in the far west and in Manchuria; and it is lowest in Mongolia and Sinkiang.[19]

Grasslands offer little direct nourishment to humans, who are incapable of digesting cellulose. Nor could they be farmed on a large-scale before the nineteenth century, even though their soils were often rich chernozems, formed from the composting of steppeland grasses over thousands of years. Farming was difficult in the steppes because the turf was thick and tough, and rainfall was erratic. As a result, until very recently, the steppes have been exploited indirectly, by communities that hunted or herded herbivores that could convert the steppe grasses into meat, blood, sinews, hide, and traction energy. For communities of hunters or pastoralists, the steppes allowed great freedom of movement, almost as much as the sea did to seagoing societies.

Nineteenth-century travellers south of a line from Kiev through Tula, Riazan', Kazan' and Ufa, found themselves in a transitional region of wooded steppes. This extended south to Kishinev, Saratov and the southern tip of the Urals. Haxthausen first saw the wooded steppes from the Kremlin of Nizhnii Novgorod on the high left bank of the Volga.

> There is a splendid view of the two rivers [the Oka and the Volga] at their points of junction, the town, and several villages lying on the rivers' banks. But behind this beautiful foreground an immense, flat, wooded plain shuts in the horizon. This is the general character of the scenery in Russia: in the foreground are pretty, often picturesque and even idyllic views, but the background is boundless, flat and wild, the cultivated country forming a mere oasis.[20]

As he travelled through this transitional region, Haxthausen found that:

> the steppe becomes gradually perceptible by the forests appearing more and more in isolated patches and the grass plains growing larger in extent. All at once the wood ceases, not a bush is anywhere to be seen and the steppe stretches out in immensity before us.[21]

For European travellers heading further south, the steppelands appeared either exotic or monotonous. Here is an idyllic description of the steppelands south of Voronezh from the memoirs of an Englishman, Edward Clarke, who travelled there in 1800:

> The whole of the immense plains were enamelled with the greatest variety of flowers imaginable . . . the earth seemed covered with the richest and most beautiful blossoms, fragrant, aromatic and, in many instances, entirely new to the eye of a British traveller. Even during the heat of the day, refreshing breezes wafted a thousand odours and all the air was perfumed. The skylark was in full song and various insects with painted wings either filled the air or were seen crouching in the blossoms. Advancing nearer to the Don, turtle doves as tame as domestic pigeons flew about our carriage.[22]

Haxthausen was less impressed by the steppes:

> On the evening of the 21st of July we took our departure from Kharkov (towards Ekaterinoslaf), and on awakening in the morning found ourselves in a genuine steppe country, extending as far as the horizon on every side, and for many hours nothing but steppe – at that time of the year anything but beautiful! The soil was dry, and of a blackish-grey colour, the grass parched, with here and there gigantic weeds, generally in the form of bushes, thistles, and *burian* (the best material for firewood in the Steppe), likewise completely dried up. Of trees or forest no trace was to be seen: here and there in the hollows were tall green reeds and willow-bushes. The small rivers glided slowly down between sandy banks. The Steppes I saw were everywhere undulating, like the waves of a sea suddenly arrested in their motion.[23]

4 THE DESERTS

South of the steppes, in Central Asia and Sinkiang, the steppelands give way to arid lands and eventually to desert. In the west are the Ust Urt, Karakum and Kyzylkum deserts of Turkmenistan and Uzbekistan. Divided from them by the Pamirs is the terrible Taklamakan desert of southern Sinkiang. In the seventh century CE, the Chinese pilgrim, Hsüan-tsang, gave a description of the desert east of Khotan, which the twentieth-century traveller, Sven Hedin found to be remarkably accurate even today. East of Khotan, Hsüan-tsang entered the 'Great Flowing Sand'.

> As the sand is in constant motion it is collected and dispersed by the wind. As there are no tracks for travellers many go astray; on every side is a great vast space with nothing to go by, so travellers pile up bones left behind to be marks; there is neither water nor vegetation and there is much hot wind; when the wind blows men and animals lose their senses and become unwell. One constantly hears singing and whistling, and sometimes wailing; while looking and listening one becomes stupified, and consequently there is frequent loss of life, and so these phenomena are caused by demons and sprites.[24]

North and East of the T'ien Shan and Ch'i-lien Shan mountains is the Gobi, which extends from north-eastern Sinkiang into southern Mongolia and Chinese Inner Mongolia. Despite its fearsome reputation, there is grassland in much of the Gobi, so it has always supported small populations of pastoralists. The same is true of much of the Karakum desert in modern Turkmenistan. A modern archaeologist describes this as:

> a mosaic of moving barchan dunes, stable dunes, scattered *takyri* [clay pans formed by standing water], salt flats, and isolated wells stretching out from the foothill plains of the Kopet Dag and Paropamisus mountains. White saxaul (*Halaxyon pesicum*), ephedra (*Ephedra strobilacea*), and *Eremosparton* are shrubby tree species found in the desert. Traditionally, the desert saxaul is collected for firewood .... The desert, except for the barchan dunes, is covered by spring vegetation following the slightest precipitation. The thin growth of annual vegetation provides fodder for herders and nomads but forces a high degree of mobility. In spring, areas of the Kara Kum may appear carpeted with

red with blossoms of the annual poppy (*Papaveaceae*), which has been collected for its medicinal properties.[25]

A common feature of most of the Inner Eurasian desert lands is that rivers drain into them from the mountains on their borders, creating fertile oases. As a result, the many oases of Central Asia and Sinkiang supported small pockets of dense settlement sustained by irrigation agriculture and trade. Here, there emerged societies quite different from those of the steppelands. Their cultures reflected a complex symbiosis between the strict demands of irrigation agriculture, and the cultural, commercial and military pressures of pastoral nomads to their north, and agrarian empires to their south and east. They were the main stopping points along the Silk Roads, and the foundation for the many small trading city-states that flourished from Kansu to the Black Sea from the second millennium BCE.

THE BORDERLANDS

The southern borderlands of 'Inner Eurasia' included not just the narrow strip of oasis city-states, but also the deserts and steppes that surrounded them. It was in this larger borderland region that relations between the agrarian civilizations of Outer Eurasia and the very different societies of Inner Eurasia were at their most intense. The two worlds probed each other's strengths and weaknesses along this historical, ecological and geological fault line.

As a result, the southern edge of Inner Eurasia provided most of the dynamism of Inner Eurasian history from prehistory to the present. Shocks from the frontier zone were transmitted with diminishing intensity to the zones of the interior, which were less influenced by Outer Eurasia, and whose lifeways were more distinctly 'Inner Eurasian'. So, for some purposes, it is helpful to think of Inner Eurasia as a series of concentric arcs, each shaped by the nearness of Outer Eurasian influences. The zones of densest population and of most intense historical change were those closest to the borders with Outer Eurasia. Moving away from the frontier, populations and communities become smaller and more dispersed, lifeways more distinctively Inner Eurasian, the level of mobilization and of involvement in the broader currents of Inner Eurasian history less intense. Communities in the remote inner arcs were human reservoirs, supplying slaves or material tributes for those closer to Inner Eurasia. In this way, there emerged a geographically distributed hierarchy in the history of Inner Eurasia which explains why so much of the history that follows will focus on the arcs closest to Outer Eurasia.

Seen in this light, the oddity of Inner Eurasian history is that a very unstable frontier of ecological and political conflict dominated its history for several millennia. In the recent history of North America, or Australia, such ecological and cultural frontier zones were so unstable that they lasted only for a century or two. In Inner Eurasia, the complexity of inter-ecological frontier conflicts shaped the entire history of the region, not just one brief phase of its history. The paradoxical question arises: why was the instability of the frontier so stable a feature of the borderlands? And the answer, surely, is that

the ecological divide between Inner and Outer Eurasia was so fundamental that it allowed no one type of society a decisive military, demographic or cultural advantage until the modern era.

CULTURAL ZONES

However, the pressure of Outer Eurasian civilization was constant and inescapable, and in recent millennia it led to the appearance of distinctive cultural zones within Inner Eurasia.

In ancient times, the most important gateways into Inner Eurasia were through the northern and north western borders of China; across the Central Asian borders with Iran and Afghanistan, and through the passes of the Caucasus (the Darial pass, and the coastal route through Darband); and through the passage between the Black Sea and the Carpathians that leads from the Balkans. These points of entry shaped the cultural geography of Inner Eurasia by channelling particular Outer Eurasian influences to particular regions of Inner Eurasia. There was a neat symmetry about the impact of cultural influences from Outer Eurasia. This is worth noting early on, as it persisted throughout the period of human settlement of Inner Eurasia. There emerged four main 'cultural' zones within Inner Eurasia, distinguished by the nature and direction of the main cultural influences that acted on them. Three were dominated by the major 'gateways' onto the plain, while the fourth, which included the northern arcs of Inner Eurasia, was distinguished by the absence of strong influences from Outer Eurasia. Conveniently, we can label these zones the western, southern, eastern and northern cultural zones. They took the form of segments slicing across the arcs of Inner Eurasia's ecology.

The western segment includes the lands west of the Urals and the Caspian sea. The most powerful external influences came from the Mediterranean and Mesopotamian lands to the south-west and, more recently, from the European lands to the west. The southern region includes Central Asia and Kazakhstan. These are regions in which the main outside influences, from palaeolithic times to the present day, came from the south or south-east, from Iran, Afghanistan and India. For most purposes, the Tarim basin, now the southern part of Sinkiang, can also be included in this zone, though Sinkiang was also subject to powerful influences from China. It therefore belongs partially to the third zone, the eastern segment. Moving east, the influence of China rose steadily. The Chinese sphere of influence included Zungaria, Kansu and Mongolia, and occasionally parts of southern and eastern Siberia.

The northern zone includes the northern tundra and much of the woodland zone, from Scandinavia in the west to the Bering Straits in the north-east. Here, the impact of Outer Eurasia was limited until recent centuries. Though colonized late in palaeolithic times, the highly specialized adaptations required to settle it insulated the far north from developments further south until the present day. The great historical importance of this region derives from the fact that the Americas were settled from here, by peoples who took with them the ecological, and cultural adaptations of north-east Siberia, and perhaps, also, its languages.

NOTES

1 Parker, *Historical Geography*, p. 28.
2 As Sinor points out, even Herodotus realized how artificial this division was, and wondered 'why three names . . . should ever have been given to a tract of land which is in reality one'; *CHEIA*, p. 2, citing Herodotus, *Histories*, IV, 45.
3 Bassin, 'Russia between Europe and Asia', pp. 2–3, 6.
4 Attempts to see Inner Eurasia whole are surveyed in Hauner, *What is Asia to Us?*; for an introduction to the ideas of the 'Eurasianists', see Bassin, 'Russia between Europe and Asia', pp. 13–17; there is a translated collection of Trubetzkoy's writings in N. S. Trubetzkoy, *The Legacy of Genghis Khan*.
5 Klyuchevskii, *Sochineniya v 9-ti tomakh*, 1:64–5.
6 R. N. Taaffe, 'The geographical setting', in *CHEIA* (pp. 19–40), pp. 28, 35; and see Sinor, *Inner Asia: History, Civilization, Languages* p. 8.
7 Mackinder, *Democratic Ideals*, p. 110; Sinor, *Inner Asia*, p. 9.
8 *Macquarie Atlas*, 69; sub-arctic climates are characterized by 'light precipitation; short cool summers, long very cold winters', ibid., p. 68; north-east Siberia is one of the coldest regions on the planet; mean January temperatures in Verkhoyansk are -59°, and can drop to -100°; Taaffe, 'The geographical setting', in *CHEIA*, pp. 25–6.
9 Dawson, *Mission to Asia*, pp. 5–6.
10 Coniferous forests generate *c.*300,000 kg/km^2 per annum of plant production, and mixed or broad-leaf forests generate between 500,000 and 560,000; while dry steppe lands generate as little as 50,000; Dolukhanov, *Ecology and Economy*, p. 6.
11 Dolukhanov, *Early Slavs*, p. 18.
12 Lattimore, *Inner Asian Frontiers of China*, p. 12.
13 See Frank and Gills, *The World System: From Five Hundred Years to Five Thousand*; and see McNeill, *Plagues and Peoples*.
14 On the second unification, see Beckwith, *The Tibetan Empire*; on the Mongol 'world system', see Abu-Lughod, *Before European Hegemony*.
15 An allusion to Eric Wolf's superb, *Europe and the People Without History*.
16 Cited in Armstrong, *Russian Settlement in the North*, p. 8.
17 Haxthausen, *The Russian Empire*, 1:190–1.
18 Klyuchevskii, *Sochineniya v 9-ti tomakh*, 1:83.
19 Taaffe, 'The Geographic Setting', in *CHEIA*, p. 35.
20 Haxthausen, *The Russian Empire*, 2:223.
21 Haxthausen, *The Russian Empire*, 2:70.
22 Clarke, *Travels in Russia*, p. 47; these lands are also described very beautifully in the novels of Mikhail Sholokhov, such as *Quiet Flows the Don*, and *The Don Flows Down to the Sea*.
23 Haxthausen, *The Russian Empire*, 1:415.
24 Watters, *On Yuan Chwang's Travels*, 2:303–4; Marco Polo's description is similar.
25 Hiebert, *Origins of the Bronze Age Civilization*, p. 8.

FURTHER READING

Taafe, 'The geographical setting', in Sinor, ed., *Cambridge History of Early Inner Asia*, is a good introduction to the geography of Inner Eurasia. Christian, 'Inner Eurasia', argues for the geographical and historical unity of the entire region. Good surveys of the geography of parts of Inner Eurasia can be found in Parker, *Historical Geography*, Forsyth, *History of the Peoples of*

Siberia, Dolukhanov, *Early Slavs*, Hambly, *Central Asia*, Introduction, and in essays by Lattimore. Hauner, *What is Asia to Us*?, discusses early attempts to define a coherent region at the heart of the Eurasian landmass, while Trubetzkoy, *The Legacy of Genghis Khan*, offers a sample of the thinking of the 'Eurasianists'.

For the literate societies of Outer Eurasia, the lands of Inner Eurasia were an exotic 'other' world. This unbalanced relationship generated a huge travel literature dating back to the first millennium. This literature begins with accounts of the campaigns of Cyrus, Darius and Alexander, and continues with the writings of Herodotus, Chang Ch'ien, Hsüan-tsang, Zemarkhos, the great Islamic geographers, the many Outer Eurasians who travelled in the Mongol Empire, from Juvaini to Friar William of Rubruck and Marco Polo, and modern writers such as Haxthausen or Pallas or Aurel Stein.