

## 8 • Traditional Cartography in Arctic and Subarctic Eurasia

ELENA OKLADNIKOVA

Peoples with traditional cultural characteristics still live along the coast, on the tundra, around the bogs and mountains, and in the taiga to the south of the Arctic Ocean—an almost five-thousand-mile belt extending from northern Scandinavia to the Bering and Chukchi Seas, with an average width of more than five hundred miles. Between the Sami people in the west and the Asian Eskimos in the east there are dozens of ethnic groups, each continuing to practice much of its traditional culture (fig. 8.1).<sup>1</sup> There are fewer than 250,000 people, with an average density of well below one per square mile, but in reality they occupy riverine belts and scattered exclaves. These are separated by vast empty spaces, long unknown except to seasoned travelers and serving to preserve long-standing cultural differences. Nevertheless, these peoples share three important characteristics: environment, economy, and belief system.

Long, cold winters and generally harsh terrain present many hazards and offer relatively few economic resources. The traditional economies are a mix of fishing, hunting, and whaling on the Arctic coast and collecting, freshwater fishing, hunting, and reindeer herding inland. These tasks usually involve seasonal migrations, often over considerable distances and between contrasting environments. Hence the geographical knowledge of many individuals and the shared geographical knowledge of all groups is extensive. Likewise, an intimate knowledge of nature is normal. Indeed, the attitude of Arctic and Subarctic peoples to the world around them is deeply spiritual. “The practice of shamanism is so central all over the Arctic region . . . that it may well be one of the . . . original elements in the northern view of life.”<sup>2</sup>

Among other things, shamanism is concerned with the balance between the microcosm of an individual and the macrocosm of nature or the universe. The shaman is the authority on myths, including those telling how life began, how clans developed, and how peoples were given their lands, and detailing totemic links between peoples and animals. Not surprisingly, therefore, myth infuses ideas about nature, and together the two dominate world-views. Nevertheless, most maps can be placed in one of two classes: cosmographical or geographical. Most of the maps supposedly identified in rock art and many of those

incorporated in early modern artifacts are cosmographical or have strong cosmographical components. Conversely, most of those made for Europeans (mainly Russians) in the postcontact period and many made by nonshamans are essentially geographical.

Compared with North America, relatively little of northern Eurasia was covered by permanent ice during the last glaciation. But periglacial conditions were too harsh for humans in what is now the Arctic and much of the Subarctic. Not until approximately five thousand years ago did hunting, fishing, gathering, and somewhat later, reindeer-herding peoples begin to enter from the south. By about three thousand years ago, other peoples, with an Eskimo type of economy, were beginning to colonize favorable areas to the north, especially on the coast.<sup>3</sup> Some of these first Eurasian northerners carved and painted on rocks, or they soon began to do so. The

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1. Although connections exist throughout the entire circumpolar region, the Arctic and Subarctic regions of North America are discussed elsewhere in this volume (pp. 135–70). For an example of a work that examines the cosmographic significance of many early North American and Siberian artifacts, especially petroglyphs and masks, see Ye. A. [Elena] Okladnikova, *Model' vseleenny v sisteme obrazov naskal'nogo iskusstva Tikhookeanskogo poberezh'ya Severnoy Ameriki: Problema etnokul'turnykh kontaktov aborigenov Sibiri i koren'nogo naseleniya Severnoy Ameriki* (Model of the universe in the system of images of rock engravings of North America's Pacific shore: The problem of ethnocultural contacts of the populations of Siberia and North America) (St. Petersburg: MAE RAN, 1995). The diversity of and interrelation between Siberian and American culture is explored through artifacts in William W. Fitzhugh and Aron Crowell, eds., *Crossroads of Continents: Cultures of Siberia and Alaska* (Washington, D.C.: Smithsonian Institution Press, 1988), an exhibition catalog focusing on the remarkable collections of the American Museum of Natural History, New York, the Museum of Anthropology and Ethnography, St. Petersburg, and the National Museum of Natural History, Washington, D.C.

2. Juha Pentikäinen, “Northern Ethnography—Exploring the Fourth World,” *Universitas Helsingiensis: The Quarterly of the University of Helsinki*, no. 1 (1993): 20–29, esp. 26.

3. Geoffrey Barraclough, ed., *The Times Atlas of World History*, 4th ed., ed. Geoffrey Parker (Maplewood, N.J.: Hammond, 1993), 36–38, and Christopher Scarre, ed., *Past Worlds: The Times Atlas of Archaeology* (London: Times Books, 1988), 272–73, esp. pl. 1. See also Janusz Kozłowski and Hans-Georg Bandi, “The Paleohistory of Circumpolar Arctic Colonization,” in *Unveiling the Arctic*, ed. Louis Rey (Fairbanks: University of Alaska Press for the Arctic Institute of North America, 1984), 359–72.



FIG. 8.1. REFERENCE MAP OF THE EURASIAN ARCTIC AND SUBARCTIC.

surviving examples of this rock art provide the earliest indications that they had and could represent spatial understanding of things both mythical and nonmythical.

From the perspective of the civilizations of Europe, the eastern Mediterranean, the Middle East, and China, the Eurasian Arctic and Subarctic were essentially unknown until the fifteenth century.<sup>4</sup> In essence its peoples were still prehistoric. By the end of the fifteenth century, Russia controlled the relatively small part of the region to the west of the Urals. During the next two centuries Cossacks extended the control eastward to the shores of the north Pacific. They were traders rather than hunters, seeking contacts with the indigenous peoples in order to compel them to pay tribute to Russia in furs.<sup>5</sup> They established very few permanent posts, and their records of routes were almost always itineraries; lists of toponyms, with distances between them in travel time but with no indication of direction. They were thus of little use as data from which to compile maps. The Cossacks did, however, sometimes bring back maps made by native peoples.<sup>6</sup> Nicolaas Witsen, in the preface to the second edition (1705) of the book containing his map of north and east Tartary, acknowledged that he had “used a great many imperfect geographical designs of each country or river, particularly those, which, drawn without art, the inhabitants of the said regions themselves or their neighbours have made.”<sup>7</sup> Witsen also possessed wooden boards, made in Siberia, engraved with a “description of the country, and which were brought to me with great difficulty.”<sup>8</sup> During his brief visit to Moscow in 1665, he had met “Samoyeds, Tartars, Persians, etc.” who had laid the foundation for making his map and for writing the book in which it was to be included.<sup>9</sup> There must have been far more use of such cartographic borrowings than has generally been realized.

With the exception of artifacts and records relating to the Sami people of northern Scandinavia, most pertinent materials are held in Russian collections and are inadequately known elsewhere. Likewise, almost all the important secondary literature is in Russian. Even in Russia there has been little attempt to review and draw conclusions about indigenous maps and mapping from the several types of evidence: artifacts, rock art, folklore, shamanism, and printed and archival records.<sup>10</sup> A deeper understanding is still achievable, however, not least because the region’s geographical remoteness and the former Soviet Union’s constraints on Christian missions to the northern peoples have tended to preserve cultural traditions better than in other regions such as North America.<sup>11</sup> Several tasks still remain: collecting pertinent ethnographic material, recording folklore, visiting key sites, and searching museums, archives, and libraries. Meanwhile, the following is an attempt to review current

knowledge about northern peoples’ past and recent maps and mapping.

## EVIDENCE OF MAPPING IN PREHISTORY

Some prehistoric rock art resembles the Western idea of a map, though proofs of cartographic function and establishment of terrestrial or mythical referents are never beyond doubt. There are several reasons for uncertainty.

4. For reviews of myths, conjectures, and possible factual knowledge, see Edmond Pognon, “Cosmology and Cartography,” Raymond Chevallier, “The Greco-Roman Conception of the North from Pytheas to Tacitus,” O. A. W. Dilke, “Geographical Perceptions of the North in Pomponius Mela and Ptolemy,” and Piergiorgio Parroni, “Surviving Sources of the Classical Geographers through Late Antiquity and the Medieval Period,” all in *Unveiling the Arctic*, ed. Louis Rey (Fairbanks: University of Alaska Press for the Arctic Institute of North America, 1984), 334–40, 341–46, 347–51, and 352–58.

5. The Cossacks operated mainly from Tobolsk, and most of their routes followed major rivers or coastlines, so they probably experienced very little of the vast intervening areas of the West Siberian Plain, Central Siberian Plateau, and the mountainous regions to the east of the Lena River. Felipe Fernández-Armesto, ed., *The Times Atlas of World Exploration: 3,000 Years of Exploring, Explorers, and Mapmaking* (New York: HarperCollins, 1991), 158–59, esp. pl. 2.

6. In most cases it is not clear whether geographical intelligence received from the indigenous population was in graphic or narrative form. “Until well into the eighteenth century . . . Russian cartography [of Siberia] consisted only of manuscript maps, called *chertezhi* [drafts]. . . Distances were measured mainly in days of travel. The information on which they were based was provided by the reports of cossacks and *promyshlenniki* [traders] who roamed new areas of Siberia in search of sable pelts and the natives to supply them. Their reports contained their own observations as well as information obtained from natives. Often they were accompanied by *chertezhi* made by the informants.” Raymond H. Fisher, “The Early Cartography of the Bering Strait Region,” in *Unveiling the Arctic*, ed. Louis Rey (Fairbanks: University of Alaska Press for the Arctic Institute of North America, 1984), 574–89, esp. 574–75.

7. Johannes Keuning, “Nicolaas Witsen as a Cartographer,” *Imago Mundi* 11 (1954): 95–110, esp. 99.

8. Keuning, “Nicolaas Witsen,” 100 (quoted from Witsen, 2d ed. [1705], translated by Keuning). Sometime after 1601 the Dutch merchant Isaac Massa likewise based his engraved 1612 map of the Russian Arctic in part on maps obtained from Samoyeds, probably Nentsy. Leo Bagrow, *History of Cartography*, rev. and enl. R. A. Skelton, trans. D. L. Paisley (London: Watts, 1964; reprinted and enl., Chicago: Precedent, 1985), 172.

9. Keuning, “Nicolaas Witsen,” 95–96.

10. Though not exclusively concerned with the Eurasian Arctic and Subarctic, Bruno F. Adler’s “Karty pervobytnykh narodov” (Maps of primitive peoples), *Izvestiya Imperatorskago Obshchestva Lyubiteley Yestestvoznaniya, Antropologii i Etnografii: Trudy Geograficheskago Otdeleniya* (Proceedings of the Imperial Society of the Devotees of National Sciences, Anthropology and Ethnography: Transactions of the Division of Geography) 119, no. 2 (1910), is the one partial exception to this statement. Published almost ninety years ago, however, it is conceptually outmoded. Furthermore, there are no published translations of the Russian edition, and among historians of cartography the work is known by repute rather than content.

11. Pentikäinen, “Northern Ethnography,” 26 (note 2).

Physical and chemical techniques for dating glyphs and paintings are still in the developmental stage and have rarely been applied. Hence, even where the archaeological record is clear, linking rock art to the culture in which it originated always involves assumptions and speculations. Furthermore, some rock art is polygenetic; later content has been added, often by people possessing little or no knowledge of the earlier culture or cultures and manifesting different cognitive styles. In addition, much of this region's rock art was probably inscribed and painted by spiritual leaders with esoteric knowledge and mystical perspective, and there was certainly a dual meaning for many of their figurative representations.<sup>12</sup>

The most convincing examples of terrestrial cartography in Arctic and Subarctic Eurasian rock art are plans of hunting expeditions. Primary or natural subject matter is manifest, though the engravers may also have intended to convey secondary content, or even intrinsic meaning, to initiated contemporaries. Although topographic features may not be represented, routes or tracks typically provide a nexus, often linking humans and animals involved in an event. Although hunters and prey are represented in profile, their behavior toward each other is meaningful only when perceived in plan.

The Vyg River region in Karelia is rich in petroglyphs, supposedly dating from between 3000 and 1000 B.C.<sup>13</sup> Hunting and fishing scenes are characteristic of these rock drawings. One interesting example was discovered at Zalavruga II in 1963 in the course of excavations by Savvateev. It contained more than 120 depictions of animals and people. The left side of this very large petroglyph represents in plan three men on skis hunting three elk (fig. 8.2). The route the elk have taken is represented by directionally oriented prints of cloven hoofs, followed by the tracks of the hunters.<sup>14</sup>

Rock art of this kind has aspects in common with maps made in other media in postcontact times, some with exclusively mundane functions. But all the authorities on the Karelia petroglyphs—Ravdonikas, Laushkin, Bryusov, Linevskiy, and Savvateev—recognize their mystical character. There is, however, disagreement about what kind of mysticism it was.<sup>15</sup>

Even in as convincing an example of prehistoric cartography as figure 8.2, the artist(s) may have represented secondary content or intended implicit meaning that can rarely be retrieved with any reasonable certainty. The converse is equally problematic—rock art that apparently lacks primary or natural content and is not perceived retrospectively as a map may have embodied spatial representations at a secondary or conventional level. Such possibilities can only be anticipated through indirect evidence embodied in traditions that have persisted into postcontact times or that are found and have been con-

vincingly interpreted in adjacent regions, especially those with early written records. The labyrinth is an example of the latter.

Widely accepted in the Old World as having cosmological connotations, labyrinth signs are also among the most common motifs in Asian prehistoric art.<sup>16</sup> Such signs are generally believed to be associated with the passage of the human soul after death to an afterlife or otherworld. In the Eurasian Arctic and Subarctic, labyrinths occur both as constructions on the ground and as engraved patterns on tombstones or, more commonly, on small tiles found in graves (ca. 100–200 B.C.).<sup>17</sup> Among the most northerly examples is a labyrinth constructed on the ground in stones on the coast of the Kola Peninsula. Ritual structures like this one have been interpreted as models of the universe.<sup>18</sup>

12. The inherent danger in retrospective interpretation in rock art is discussed in the Introduction, p. 7. However, for an interesting cosmographic interpretation of Arctic and Subarctic rock art, see Okladnikova, *Model' vseleynoy v sisteme obrazov* (note 1).

13. N. N. Gurina, *Mir glazami drevnego khudozhnika Karelii* (The world through the eyes of an ancient Karelian artist) (Leningrad, 1967), 16 and 18.

14. Yu. A. Savvateev, *Zalavruga: Arkheologicheskie pamyatniki nizov'ya reki Vyg* (Zalavruga: Archaeological monuments of the lower Vyg River), 2 vols. (Leningrad: Nauka, 1970–77), 1:202–13.

15. V. I. Ravdonikas, "Elementy kosmicheskikh predstavleniy v obrazakh naskal'nykh izobrazheniy" (Elements of the notions of cosmos in the images of rock engravings), *Sovetskaya Arkheologiya* (Soviet archeology), no. 4 (1937): 11–32; K. D. Laushkin, "Onezhskoe svyatilishe" (The Onega sanctuary), *Skandinavskiy Sbornik* (Scandinavian collection) 4 (1959): 83–111; A. Ya. Bryusov, *Istoriya drevney Karelii* (The history of ancient Karelia) (Moscow, 1940); A. M. Linevskiy, *Petroglify Karelii* (The petroglyphs of Karelia) (Petrozavodsk, 1939); and Yu. A. Savvateev, *Risunki na skalakh* (Drawings on the rocks) (Petrozavodsk: Karelskoe Knizhnoe Izdatelstvo, 1967). Ravdonikas and Laushkin believe the petroglyphs represent a cosmogonic cult of a solar deity; Linevskiy, Bryusov, and Savvateev interpret them as representations of local hunting-fishing cults.

16. Catherine Delano Smith, "Cartography in the Prehistoric Period in the Old World: Europe, the Middle East, and North Africa," and "Prehistoric Cartography in Asia," both in *The History of Cartography*, ed. J. B. Harley and David Woodward (Chicago: University of Chicago Press, 1987–), 1:54–101, esp. 87–88, and 2.2 (1994): 1–22, esp. 13. According to Purce, the first spiral known in the history of art is a Paleolithic talisman from a ritual cave burial in the Lake Baikal region, just south of the focus of this chapter. See Jill Purce, *The Mystic Spiral: Journey of the Soul* (New York: Avon, 1974), 100–101, figs. 13–14.

17. D. G. Savinov, "Tesinskie 'labirinty'—K istorii povyleniya personifitsirovannogo shamanstva v yuzhnoy Sibiri" (The Tesinsk "labyrinths"—To the history of personalized shamanism in southern Siberia), *Kunstkamera: Etnograficheskie tetrady* (Kunstkamera: The ethnographic notebooks) 1 (1993): 35–48, esp. 36. Although they are thought to be part of magic rituals, the exact purpose of the small engraved tiles, often slabs of red stone, is not clear. Savinov hypothesizes that the tiles could be ideographic recordings of shamanistic performances and, specifically, of the ritual of shamans' travel.

18. N. Vinogradov, *Solovetskiye labirinty: Ikh proiskhozhdeniye i mesto v ryadu odnorodnykh doistoricheskikh pamyatnikov* (Labyrinths





FIG. 8.2. PETROGLYPH FROM KARELIA. The elk's routes are shown: one bold set (1) dividing into three (2, 3, 4), the last of which apparently leads beyond the edge of the glyph and was probably that of a third elk that escaped. The track of the elk is closely followed by that of the hunters—alternating stretches of continuous parallel lines and broken lines positioned in echelon formation. The former almost certainly represents downhill sections of the route, where the skis remained on the snow, while the latter shows level sections where ski trekking was necessary. The latter sections have more dots on each side, perhaps symbolizing the more frequent use of ski poles. The dots occur in groups of three, indicating the number of skiers who passed that way. This is

Labyrinth designs on tombstones and on tiles in graves have been interpreted as representing roads that the souls of the dead must travel to achieve reincarnation or portraying the theme of shamans' travel to the netherworld. They are said to reflect one common theme: the "search for a road, a quest for spiritual destination."<sup>19</sup> The labyrinths in figure 8.3 are from the sepulchre of Esino (Khakasiya), which has more than forty tombstones with labyrinth drawings. They have a spiral pattern that symbolizes the netherworld. Each entire composition could therefore serve the dead as a map for their travels in the lower world.<sup>20</sup>

### COSMOGRAPHICAL AND CELESTIAL MAPS

Many cosmographical maps are incorporated in tradi-

confirmed beyond the bifurcation of the route (at 5) where use by only one skier (6 and 7 respectively) is shown by single dots. One hunter (7), bow in hand, has reached the far end of the ski track; perhaps still pursuing a third elk that had followed track (4) to the edge of the glyph. Another hunter (6) appears to have successfully hit the larger of the two elk represented, but with a spearlike weapon rather than an arrow. Size of the original: ca. 1.5 × 2.5 m. Designated Zalavruga II (VI). Drawing after Yu. A. Savvateev, *Zalavruga: Arkheologicheskie pamyatniki nizov'ya reki Vyg* (Zalavruga: Archaeological monuments of the lower Vyg River), 2 vols. (Leningrad: Nauka, 1970–77), vol. 1, between 200 and 201.

tional artifacts associated with shamanism. Parts of the shaman's costume symbolized a three-part world—most often the upper and lower worlds were depicted (some-

of Solovki: Their origins and place among homogeneous prehistoric monuments) (Petrozavodsk, 1947); N. N. Gurina, "Kamennyye labirinty Belomor'ya" (Stone labyrinths of Belomor'ye), *Sovetskaya Arkheologiya* (Soviet archaeology) 10 (1948): 125–42; and A. A. Kuratov, "O kamennykh labirintakh Severnoy Yevropy (Opyt klassifikatsii)" (Stone labyrinths of northern Europe [classification experiment]), *Sovetskaya Arkheologiya* (Soviet archaeology), 1970, no. 1, 34–48.

19. Savinov, "Tesinskie 'labirinty,'" 39 (note 17).

20. Savinov, "Tesinskie 'labirinty,'" 37–40. Another example of similar labyrinth patterns is the sepulchre of Tustukh Kel'; see Yu. S. Khudyakov, "Raboty khakasskogo otryada v 1975 g." (Activities of the Khakass division in 1975), in *Istochniki po arkheologii severnoy Azii (1935–1976 gg.)* (Sources on archaeology of northern Asia, 1935–1976) (Novosibirsk, 1980).

times the middle world). Braids (*kosy*), for example, were attached to tall metallic headdresses, the shamanist crown, or to the suede hats of the Sel'kup shamans. The outer side of the headdress, facing the audience, was decorated with images of spirit helpers, and the braids or fringe symbolized the road by which the spirits rose from the lower world to the upper world (fig. 8.4).<sup>21</sup> Strips of fabric and plaits on a shaman's costume symbolized the same road from the lower world and the roads by which the shaman completed his mystical journey through the various parts of the cosmographical world. One Evenk shaman costume, now in the Yakutsk Museum, Eastern Siberia, provides specific topographic information about a shaman's travels. The costume has stripes of different colors sewn over its ribbons. The archival description of the costume indicates that red stripes mean places "with fire," green stripes represent lush greenery, and blue stripes mean burned-out or swampy areas. The sequence of stripes is also important: each stripe signifies one day of travel and a night stop; space between stripes denotes the length of a day's travel; and stripes made of twisted hair represent turns on the shaman's road where he has to go around obstacles.<sup>22</sup>

Whereas linear ribbons, strips of fabric, and plaits symbolized routes, other decorations symbolized the structure of the universe. Sewn-on depictions of trees with birds in their upper branches symbolized the axis of the universe, the *tura* (world tree), which occupied a central place in many mythologies (fig. 8.5). Horizontal beams connected separate trees or poles making up a *tura*, and thus the entire *tura* represented a "ladder to the heavens." A shaman ascended the ladder during the rituals, and the beams designated resting places. The top of the tree represented the heavenly sphere where spirits favorably disposed to humans lived.<sup>23</sup> According to Shirokogoroff, writing about the Evenks, the *tura* was always on the shaman's apron, the most important part of the Evenk shaman's dress. His description of the *tura* includes a larch tree above which is situated the upper world, *ugidunda*. The upper part contains anthropomorphic symbols representing great shamans (there may be two, four, or eight); the middle part of the design represents the earth, *jorko*; and the lower part represents the lower world.<sup>24</sup> A similar theme is used on sleigh boards and boat cabin doors throughout Siberia (fig. 8.6).

Another decoration of the shaman dress is called *tyngirin* (pendant). The example in figure 8.7 from the shaman costume of the Nerchinsk Evenks depicts the starry sky, with the firmament shown by small dots of stars around the edge. The sun is in the middle, with four stripes of stars radiating out from it. This divides the disk symmetrically into the "four parts of the world."<sup>25</sup>

In northeastern Siberia, the constellations and celestial bodies are important in shamanic tradition. In Chukchi

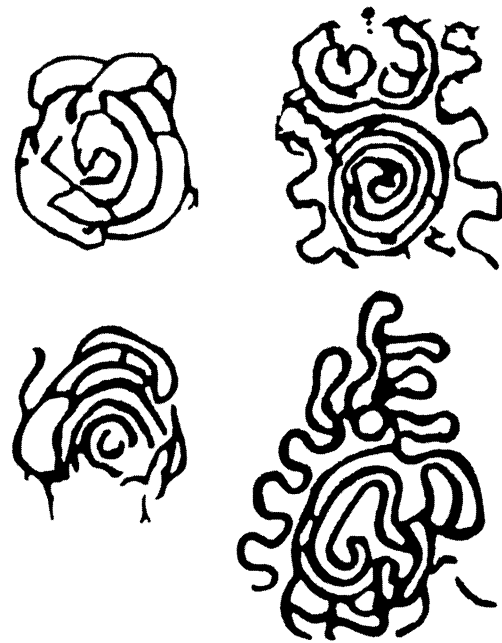


FIG. 8.3. LABYRINTH PATTERNS FROM THE SEPULCHER OF ESINO. The labyrinth spiral patterns represent the netherworld, and the spirals themselves could depict the mythic serpents—masters of the netherworld.

After D. G. Savinov, "Tesinsk 'labirinty'—K istorii povavleniya personifitsirovannogo shamanstva v yuzhnoy Sibiri" (The Tesinsk "labyrinths"—To the history of personalized shamanism in southern Siberia), *Kunstkamera: Etnograficheskie tetradi* (Kunstkamera: The ethnographic notebooks) 1 (1993): 35–48, esp. fig. 4.

cosmology, shamans going from one world to another have to pass through celestial holes under the Pole Star. Among the Yakuts, stars mark the ways to the upper worlds and are frequently depicted on shamans' clothing. The principal attribute of Koryak shamans was the ability to pass from one world to another. A Koryak shaman's coat collected almost one hundred years ago has recently been shown to incorporate a celestial map (plate 14).

21. S. V. Ivanov, *Materialy po izobrazitel'nomu iskusstvu narodov Sibiri XIX–nachala XX v.* (Materials on the fine arts of the Siberian people, nineteenth to early twentieth century) (Moscow: Izd-vo Akademii Nauk SSSR, 1954), 66–67; although S. Ia. Serov notes there was no headdress among the maritime shamans ("Guardians and Spirit-Masters of Siberia," in *Crossroads of Continents: Cultures of Siberia and Alaska*, ed. William W. Fitzhugh and Aron Crowell [Washington, D.C.: Smithsonian Institution Press, 1988], 241–55, esp. 246).

Ivanov's encyclopedic work is frequently cited in this chapter. It is a massive collection of sources and information, unparalleled in its comprehensive nature and extensively and accurately footnoted.

22. Ivanov, *Materialy po izobrazitel'nomu*, 134. The description of the costume was made by V. N. Vasiliev, an ethnographer who acquired it in 1926.

23. Ivanov, *Materialy po izobrazitel'nomu*, 141–42.

24. S. M. Shirokogoroff, *Psychomental Complex of the Tungus* (London: Kegan Paul, Trench, Trubner, 1935), 289.

25. Ivanov, *Materialy po izobrazitel'nomu*, 150.

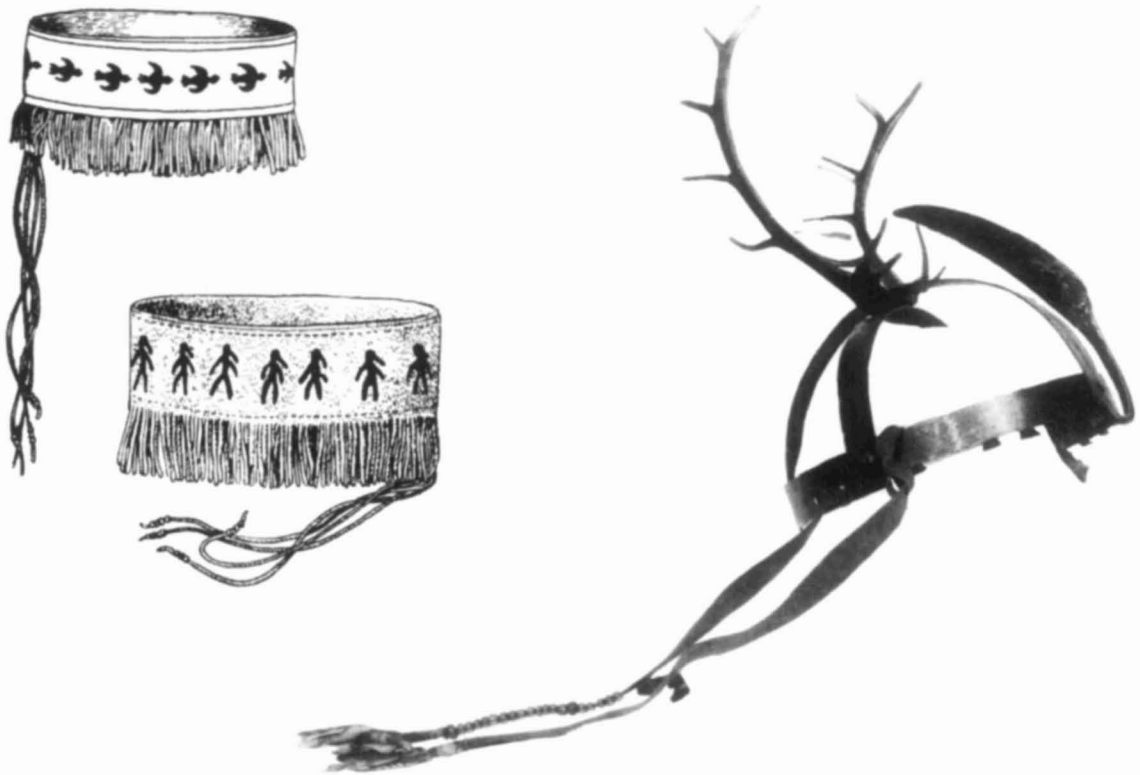


FIG. 8.4. SHAMAN HEADDRESSES. On the left are examples of suede headdresses or headbands with depictions of the spirit helpers on the outside, and on the right is a metal headdress. Braids and fringe represent the roads the spirits traveled to the upper world. The antlers found on some headdresses, especially those of Evens and Evenks, symbolize the protector spirit of the wild reindeer.

Made of softened reindeer skin, the coat is decorated with what was long assumed to be a random scatter of bleached hide disks sewn onto its surface. Quite recently the pattern of disks on the front of the coat has been tentatively interpreted as representing the constellations of the Koryaks in the summer and winter skies, with the belt of the coat representing the summer Milky Way (fig. 8.8). Disk diameter is assumed to be proportional to star brightness. A less complicated pattern on the back of the garment is perhaps a winter depiction of the Milky Way and associated constellations. “Significantly, these constellations—if that is indeed what they are—are oriented toward the wearer rather than the viewer and may thus provide the shaman with a star map for his celestial travels.”<sup>26</sup>

Shaman drums offer one of the best visual representations of cosmogonic beliefs of the indigenous inhabitants of the Subarctic. The drums were in many cases conceived as cosmographic models. The vast majority that are decorated depict part or all of the universe (figs. 8.9 and 8.10), and despite variations in details, this is a remarkable continuity across the various ethnic groups inhabit-

ing the circumpolar regions.<sup>27</sup> The drums may have the world tree in the middle or other representations of the tripartite (upper, middle, and lower) or bipartite (upper and lower) world, and often the sun and moon are shown. The pictures served as symbolic maps illustrating the mystical shamanic travels in the upper and lower

26. Valérie Chaussonnet and Bernadette Driscoll, “The Bleeding Coat: The Art of North Pacific Ritual Clothing,” in *Anthropology of the North Pacific Rim*, ed. William W. Fitzhugh and Valérie Chaussonnet (Washington, D.C.: Smithsonian Institution Press, 1994), 109–31, esp. 117.

27. There is a vast literature on shaman drums in the Arctic and Subarctic. On drums of northern Eurasia, for example, see Ivanov, *Materialy po izobrazitel'nomu*, 70–74, 80–81, 92–96, 104–5, 163–81, 208, 212–13, 316, 368–75, 380–83, and 385 (note 21); M. Jankovics, “Cosmic Models and Siberian Shaman Drums,” in *Shamanism in Eurasia*, part 1, ed. Mihály Hoppál (Göttingen: Edition Herodot, 1984), 149–73; Shirokogoroff, *Psychomental Complex*, 297–99 (on Evenk drums) (note 24); and Ye. D. Prokof'eva, “Kostyum sel'kupskogo (ostyako-samoedskogo) shamana” (Costume of Sel'kup shaman), *Sbornik Muzeya Antropologii i Etnografii (Leningrad–St. Petersburg)* (Yearbook of the Museum of Anthropology and Ethnography, Leningrad–St. Petersburg) 11 (1949): 335–75, esp. 343–54 (on Sel'kup drums).



FIG. 8.5. WORLD TREE ON EVENK SHAMAN COSTUME. The world tree, or axis of the universe, is sometimes sewn onto the shaman costume. The upper, middle, and lower worlds are represented.

From S. V. Ivanov, *Materialy po izobrazitel'nomu iskusstvu narodov Sibiri XIX–nachala XX v.* (Materials on the fine arts of the Siberian people, nineteenth to early twentieth century) (Moscow: Izd-vo Akademii Nauk SSSR, 1954), 144 (fig. 41a).

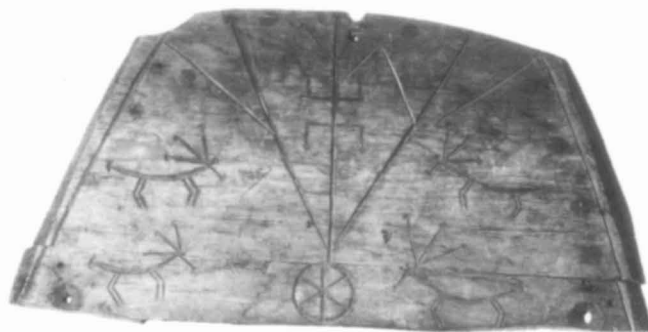


FIG. 8.6. TREE OF LIFE CARVED ON A SLEIGH BOARD. These images, which were attached to the seats of freight sleighs or to cabin doors of river boats used by the Ket people, represent the shamanic tree guarded by reindeer and connecting the three worlds of the universe, a key concept in the religion and mythology of the Siberian peoples. Photograph courtesy of Museum of Anthropology and Ethnography of Peter the Great, St. Petersburg (1048-127).

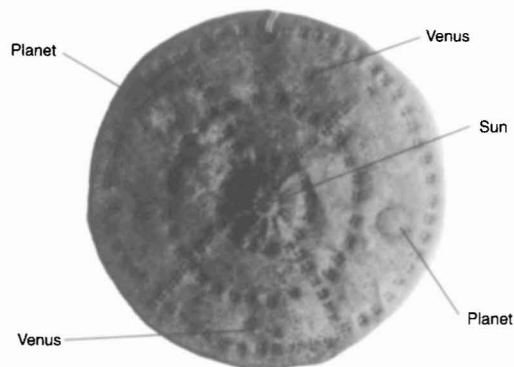


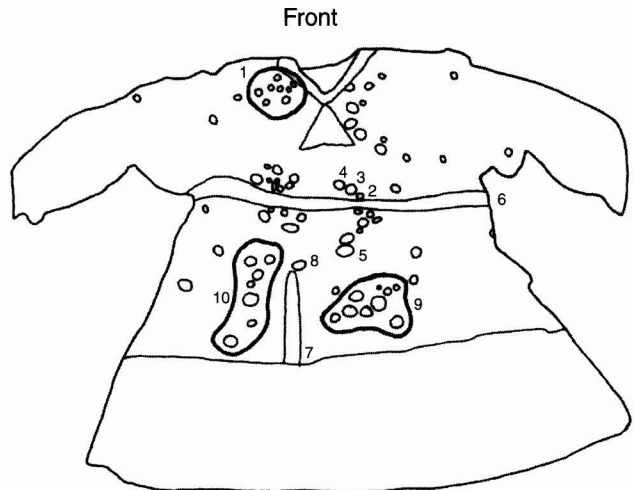
FIG. 8.7. NERCHINSK EVENK TYNGIRIN. The celestial components of this pendant worn by shamans are partly stamped and partly engraved. The sun is in the middle, and the disk is said to represent a typical Evenk's "map of the sky" (Ivanov, *Materialy po izobrazitel'nomu*, 150). Venus, in the form of two separate small open circles is shown, along with planets. The plate was acquired by the museum in 1911. Diameter of the original: 13 cm. Photograph courtesy of the Museum of Anthropology and Ethnography of Peter the Great, St. Petersburg (1859-8).

worlds. Sometimes the surface of the drum represents the earthly world, and other parts of the drum (the sides or back) represent the upper and lower worlds. There are some who believe that particular drums were used for practical topographic orientation during nonshamanic travels, but the evidence for this is strictly anecdotal.<sup>28</sup>

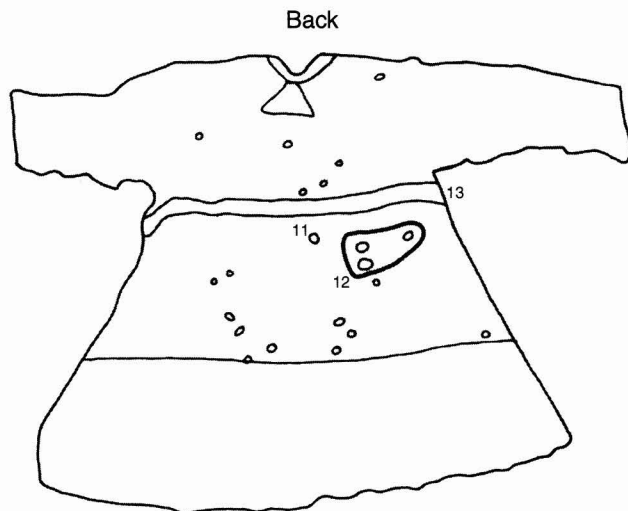
Lapp drums, like those of many other Arctic and Subarctic peoples, were used to call up and enter the spirit world (fig. 8.11). During the seventeenth and eighteenth centuries the Lapps were Christianized. Their "magic" drums, which were considered rare and valuable, were collected by missionaries, travelers, and collectors and were scattered in public and private institutions throughout Europe. Thomas von Westen, a Danish-Norwegian missionary, brought together over one hundred of the drums in 1723 and sent them to Copenhagen, where seventy were tragically destroyed by fire and many of the rest became further scattered. In the early twentieth century there was a concerted effort to inventory all the existing drums, and by the middle of the century, eighty-one had been identified, seventy-one of which were considered complete and authentic. This group of "magic" drums was studied in detail by Ernst Manker.<sup>29</sup>

28. Jankovics, "Cosmic Models," 152, believes that some drums could be used for practical orientation, for example, using small holes symbolizing the Pleiades.

29. Ernst Manker, *Die lappische Zaubertrommel*, 2 vols. (Stockholm, 1938–50); see also idem, *Samefolkets konst* (Stockholm: Askild and Karnekull, 1971). *Die lappische Zaubertrommel* provides extensive documentation on the drums' physical attributes and an in-depth study of the symbols on them.



- |                                |                                             |
|--------------------------------|---------------------------------------------|
| 1. Orion, the Hunter           | 6. Summer Milky Way                         |
| 2. Tarazed (Aquila, the Eagle) | 7. Winter Milky Way                         |
| 3. Altair (Aquila, the Eagle)  | 8. Sirius (Canis Major, the Big Dog)        |
| 4. Alshain (Aquila, the Eagle) | 9. Pleiades star cluster (Taurus, the Bull) |
| 5. Vega (Lyra, the Harp)       | 10. Cassiopeia, the Queen                   |



- |                          |
|--------------------------|
| 11. Polaris (Ursa Minor) |
| 12. Gemini, the Twins    |
| 13. Winter Milky Way     |

FIG. 8.8. INTERPRETATION OF KORYAK DANCING COAT (PLATE 14). Assuming the false belt is the summer Milky Way on the front, several stars and constellations are identified. On the back the belt represents the winter Milky Way.

Identification by Tom Callen, Air and Space Museum, Smithsonian Institution. After Valérie Chaussonnet and Bernadette Driscoll, "The Bleeding Coat: The Art of North Pacific Ritual Clothing," in *Anthropology of the North Pacific Rim*, ed. William W. Fitzhugh and Valérie Chaussonnet (Washington, D.C.: Smithsonian Institution Press, 1994), 109–31, fig. 7-7.



FIG. 8.9. DOLGAN SHAMAN DRUM. Dots and parallel lines surround this Dolgan drum and make a cross in the middle that divides the drum into four parts. Other drums have a cross in the middle with three short extensions at its ends, symbolizing the "seams of the sky" (Ivanov, *Materialy po izobrazitel'nomy*, 105), and many drums have circles and pictures of reindeer.

Photograph courtesy of the Museum of Anthropology and Ethnography of Peter the Great, St. Petersburg (5658-51).

Models of the universe were drawn at the request of ethnographers. One was made by an Oroch shaman Saveliy and a number of young helpers in 1929 at the request of ethnographers Avrorin and Koz'minskiy.<sup>30</sup> The late date of the map and the extensive dialogue between ethnographers and the Orochi who made it certainly heavily influenced the resulting complex map. Nevertheless, it is an interesting extant artifact that shows the en-

30. V. A. Avrorin and I. I. Koz'minskiy, "Predstavleniya Orochey o vseleynoy, o pereselenii dush i puteshestviyakh shamanov, izobrazheniye na 'karte'" (The Orochi's notions of universe, reincarnation of souls, and shamans' travels as depicted in "maps"), *Sbornik Muzeya Antropologii i Etnografii (Leningrad–St. Petersburg)* (Yearbook of the Museum of Anthropology and Ethnography, Leningrad–St. Petersburg) 11 (1949): 324–34.



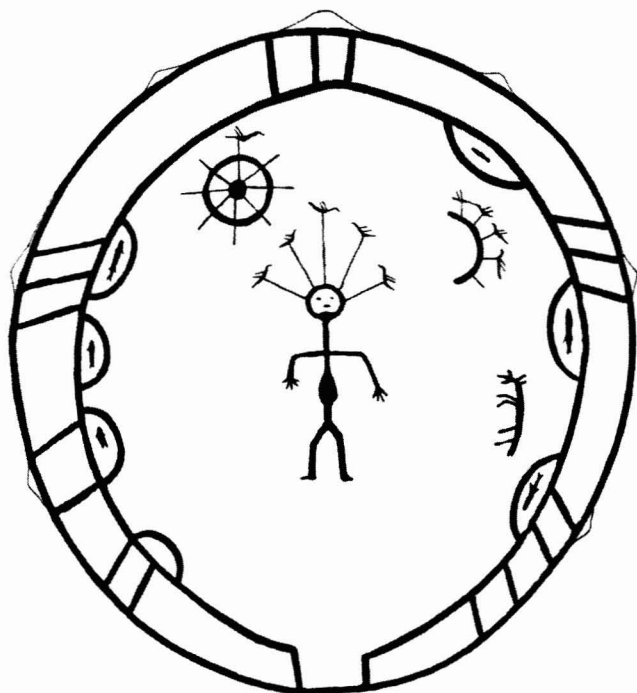


FIG. 8.10. DRAWING OF KET SHAMAN DRUM. In this model of the universe, the edge of the drum has two curved lines with short straight branches representing the supports of the world. The break in the border at the bottom indicates the entrance into the lower world. The seven half circles around the drum represent seven seas; six of them are full of fish, indicated by the depictions of fish inside the half circles (the seventh is a "bad," or empty sea). In the upper part of the drum the sun and moon are drawn. In the center is a large figure of a human with rays emanating from his head, which represent the shaman's thoughts. Along the rim of the drum (not shown here) are anthropomorphic figures, deer, the shaman's tent and staff, a nomad camp, and dogs—possibly scenes from the middle (earthly) world.

Description and drawing from V. I. Anuchin, "Ocherk shamanstva u eniseyskikh ostyakov" (An outline of the Yenisey Ostiaks' shamanism), *Sbornik Muzeya po Antropologii i Etnografii pri Imperatorskoy Akademii Nauk* (Publications of the Museum of Anthropology and Ethnography of the Imperial Academy of Science), 17, pt. 2, no. 2 (1914), esp. 50–51.

ture universe enclosed within an oval (figs. 8.12 and 8.13). The drawing took about fifteen to twenty hours over three or four days. All of the men in Saveliy's clan were present and participated in the drawing sessions, although Saveliy did most of the drawing. As they drew the map, the ethnographers recorded a detailed legend (which was destroyed during World War II but which they later restored). The map depicts the lower, middle, and upper worlds according to Oroch cosmography and describes various mystical journeys of shamans and souls of the dead.



FIG. 8.11. SAMI SHAMAN "MAGIC" DRUM. This pine drum is covered with hardened reindeer skin and painted with reddish brown color from alder bark. It was acquired in 1710; nothing is known of its early history, but it was probably collected by missionaries at the beginning of the eighteenth century. The drum is divided into upper and lower regions by the horizontal line. Above the line in the upper world (the top third of the drum) is a row of five gods often depicted (identified by the position of their arms and the objects they hold). Above the gods are three circles with dots in them, which may represent stars. The reindeer near the circles symbolizes an offering, and the three sets of double-bowed lines at the top of the drum are thought to represent the morning sun, evening sun, and midday or midnight sun. The central figure in the lower two-thirds of the drum is the sun, with one ray connecting the lower region to the upper region. Four human figures are shown on the other sun rays. The three figures in the upper right of this region have been interpreted as Christ and the apostles and as the Holy Trinity; the two figures just below them and standing on the rim of the drum have been seen as human figures, lower-level gods, or "ordinary mortals." The gridded figure decorated with crosses (lower right) signifies a church and churchyard—possibly *jabmeaimo*, the realm of the dead. The three figures at lower left have straight halos, as opposed to the curved halos on some of the other figures, and they represent three goddesses: Sarakka, Juksakka, and Saelgeaedne. The T form on the left is a holy region: it includes two gods, an animal for an offering, and three circles, probably representing stars. Interpretation after Ernst Manker, *Die lappische Zaubertrommel*, 2 vols. (Stockholm, 1938–50), 1: 732–37 and 2:387–89.

Size of the drum: 42.7 × 36.3 × 9.9 cm. Photograph by Kit Weiss. Courtesy of the National Museum of Denmark, Department of Ethnography, Copenhagen.

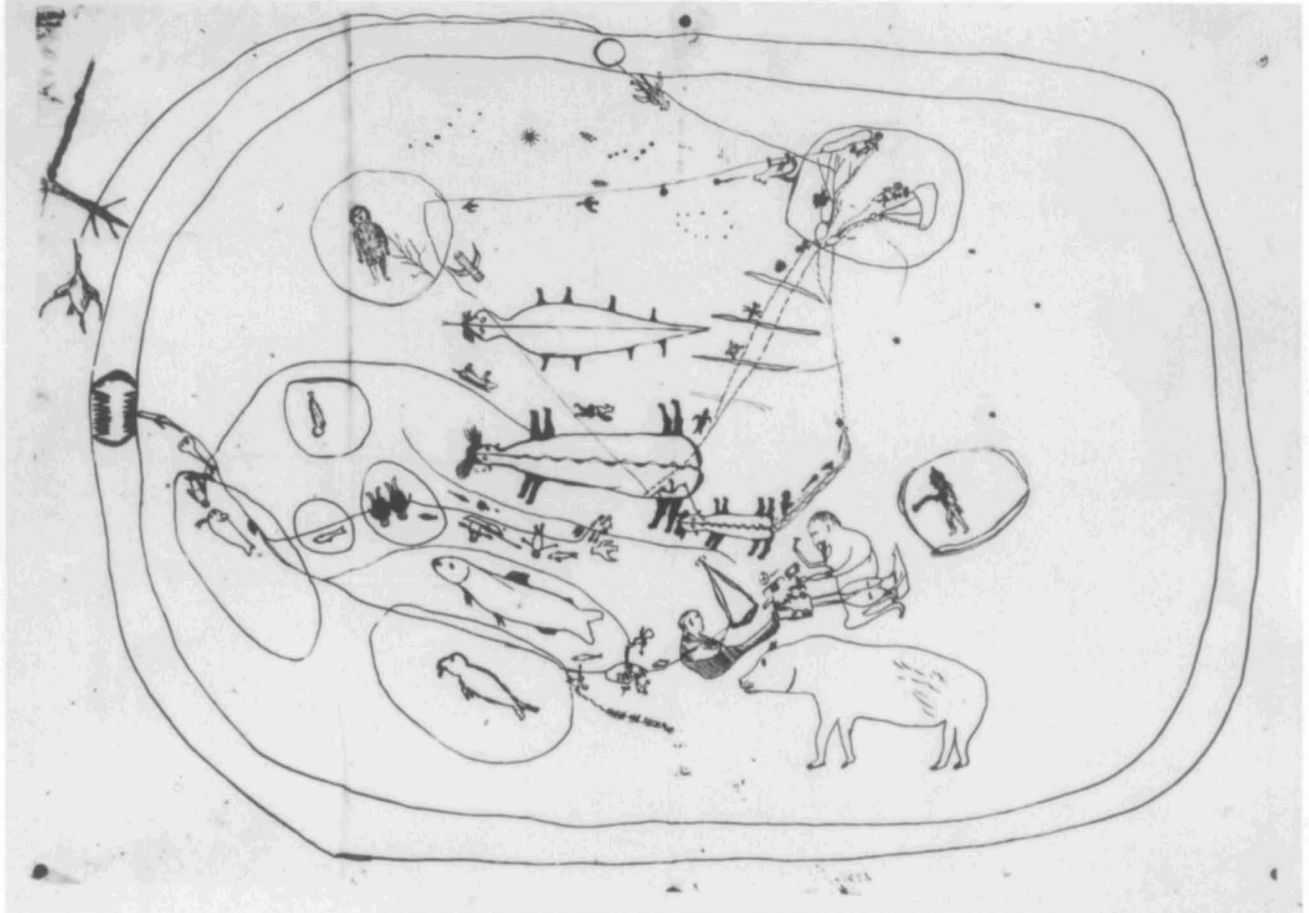


FIG. 8.12. THE UNIVERSE DRAWN FOR ETHNOGRAPHERS BY OROCHI, 1929. Pencil on paper.

Photograph courtesy of Museum of Anthropology and Ethnography of Peter the Great, St. Petersburg.

### TERRESTRIAL MAPMAKING AND MAPS HISTORICAL ACCOUNTS OF MAPMAKING With Boris Polevoy

We have several reports of terrestrial maps being made by Arctic and Subarctic peoples after contact. Some maps and accounts of mapping are described in the section on North American cartography above.<sup>31</sup> In the late eighteenth century, members of the La Pérouse expedition asked the inhabitants of Sakhalin

to outline the shape of their country and that of the Manchus; then one of the old men rose and with the end of his pike drew the coast of Tartary on the west, trending roughly north and south, on the east facing it and in approximately the same direction he drew his island and placing several times his hand on his chest he made us understand that he had just drawn his own country; he had left a strait between Tartary and his island and turning towards our ships which could be seen from the shore he showed by a line that it was passable. To the south of his island he had shown another place and left a strait between them, indicating

that it was a route for our vessels. His ability to guess all our questions was very great, but not as considerable as that of a second islander of about thirty years of age who, seeing that the outlines drawn on the sand were disappearing, took one of our pencils with some paper; he drew his island, which he called Tapschoka [a local name for the Kurils or Sakhalin] and, by means of a line, the small river on the banks of which we were standing, which he showed at two-thirds of its length from north to south [possibly the Ilinka River]. . . . All the other islanders were present during this conversation and endorsed their compatriot's comments by their gestures.<sup>32</sup>

A few years later in 1811, Golovnin was surprised at the ability of the local Ainus to interpret Russian maps of the middle Kuril Islands. "Upon seeing our maps of their islands, immediately recognized them . . . [and] told us their

31. For the North American examples, see pp. 135–70.

32. Jean-François de Galaup, comte de La Pérouse, *The Journal of Jean-François de Galaup de la Pérouse, 1785–1788*, 2 vols., ed. and trans. John Dunmore, Publications of the Hakluyt Society, 2d ser., nos. 179–80 (London: Hakluyt Society, 1994–95), 2:289–91.

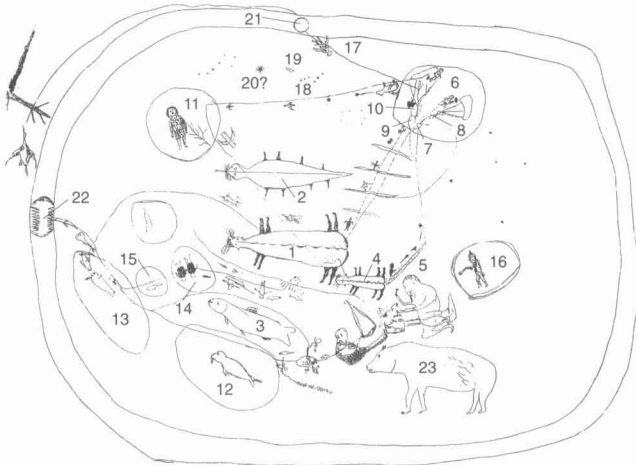


FIG. 8.13. INTERPRETATION OF THE OROCH MAP OF THE UNIVERSE (FIG. 8.12). Ethnographers Avrorin and Koz'minskiy recorded the legend to the map and identified 113 items. The big elk in the center represents the earth or, more specifically, "our [Eurasian] continent" (1). The elk's spine represents a ridge of nine mountains and divides the earth into two parts: the eastern part (populated by the Orochi and related people) and the western part (populated by Russians and the "others"). China is in the elk's head. America and the island of Sakhalin are drawn separately, as a dragon (2) and a fish (3). A smaller elk (4), below the large one, represents the lower world from which one can follow a river (5) to the upper "lunar" world (6). In the upper world are several unnamed lakes and rivers, a "Bear Sea" with a "Bear River" (7 and 8), and a "Tiger Sea" with a "Tiger River" (9 and 10). The image of the "solar world" (11) is to the left of the lunar world and is much less detailed. Around the earth are several seas: walrus sea (12); whale sea (13); sea of the "master of waters" (14); sea of the drowned (15); and cold iced sea (16). Above the earth is "a heaven of monkeys" (17). The monkeys are evil spirits symbolizing smallpox. Celestial phenomena are depicted (tentatively identified as Orion [18], Pleiades [19], and Venus [20?]). The entire universe is confined in a spherical shell: the inside is blue and hard—it is the sky we see. The outside is soft and like cotton wool. There are two openings in the shell: one is straight above the earth (the Pole Star, 21) and the other is underneath (22). The huge bear at 23 is the earthly master of all the animals, even though it was drawn outside the depiction of the earth (1). The other images on the map describe several Oroch legends about cosmogonic travels of souls of the dead and of famous shamans.

Based on V. A. Avrorin and I. I. Koz'minskiy, "Predstavleniya Orochey o vselennoy, o pereselenii dush i puteshestviyakh shamanov, izobrazhennye na 'karte'" (The Orochi's notions of universe, reincarnation of souls, and shamans' travels as depicted in "maps"), *Sbornik Muzeya Antropologii i Etnografii (Leningrad–St. Petersburg)* (Yearbook of the Museum of Anthropology and Ethnography, Leningrad–St. Petersburg) 11 (1949): 324–34.

real names, that is, the Ainu names of the islands."<sup>33</sup> In 1849 Nevel'skoy met with the Nivkhi on northwest Sakhalin. One drew for him in pencil on paper a map of

the Amur estuary with names of the regions, another indicated by signs the depth of its channel, and a third drew in sand the borders of the Gilyak (Nivkhi) kingdom.<sup>34</sup>

Very little is known about the procedures and processes involved in mapmaking by natives of the Arctic and Subarctic. German naturalist and traveler Jacob Georgi, who traveled in Siberia in the late eighteenth century, noted that ephemeral maps were drawn by Evenks: "When [Evenks] want to meet at the other places . . . they draw charts with their fingers on snow or on the ground and would meet where they wanted without fail."<sup>35</sup> In the mid-nineteenth century, Sverbeev was surprised by the cartographic speed of the Evenks, even though he had already been told of their cartographic skills. Somewhere near Udskeye, in the Uda Valley, he was visited by four Evenks and decided to test their ability to make maps. Having first named the regions for which he wanted maps drawn,

I gave each of them a pencil and a piece of paper. To my great amazement, all four did not even think, and not even saying a word they began their work: in an hour the maps were ready, and before me opened up the whole region of Ud up to the smallest details. In these drawings proportions were not observed, but the flow of the main rivers and the direction of mountain ranges coincided with the same meager geographical information that was given to us by Pozdnyakov's general map of Asiatic Russia but with one difference, that the Tungus [Evenks] introduced me to rivers and brooks that were not shown on that map.<sup>36</sup>

33. V. M. Golovnin, *Sokraschennye zapiski flota kapitana Golovnina o plavanii ego na shlyupe "Diana" dlya opisi Kuril'skikh ostrovov v 1811 g.* (Brief memoirs written by the fleet captain Golovnin about his sailing on the bark "Diana" for an inventory of the Kuril Islands, 1811) (St. Petersburg, 1819), 81–82.

34. B. P. Polevoy, "Podrobnyy otchet G. I. Nevel'skogo o yego istoricheskoy ekspeditsii 1849 g. k ostrovu Sakhalin i ust'yu Amura" (A detailed report by G. I. Nevel'skoy about his historic expedition of 1849 to the island of Sakhalin and the mouth of the Amur), *Strany i narody Vostoka* (Countries and peoples of the East), vol. 8, bk. 2 (1972): 114–49, esp. 134; the ethnographer L. Ia. Shternberg told Adler about the great cartographic abilities of the Nivkhi and delivered to St. Petersburg a "quite accurate" pencil on paper map of southern Sakhalin completed by one of the Nivkhi ("Gilyaki"); see Adler, "Karty pervobytnykh narodov," 154–55 (note 10). Adler provides many examples of "relatively accurate" maps drawn by natives for ethnographers and explorers.

35. Ivanov, *Materialy po izobrazitel'nomu*, 125 (note 21), quoting Georgi.

36. N. Sverbeev, "Proezd s Urchenskoy yarmarki do Udsckogo ostroga" (The road from the Urchen Fair to the Udsckii Fort), *Vestnik Russkago Geograficheskago Obschestva* (Herald of the Russian Geographic Society) 4 (1853): 95–109, esp. 108–9. Struve makes cursory mention of Evenk (Tungus) maps, in particular a map of the upper reaches of the Maya River and the system of rivers that flow into the Sea of Okhotsk (B. V. Struve, *Vospominaniya o Sibiri* [Memoirs about Siberia] [St. Petersburg, 1889], 146–47), and Pekarskiy and Tsvetkov



By the late nineteenth century, it was thought that Evenks were outstanding in their ability to express their geographical knowledge on paper, though according to what criteria and on what evidence is not clear,<sup>37</sup> and according to Siberian ethnographers, Evenks knew the complicated system of the taiga rivers well and were clearly able to show this graphically on a birchbark plan, outline, or map. Podgorbunskiy described mapmaking by Evenk Vasilii Antonov in 1919.

The method of drawing, used by Antonov, was as follows: first he always indicated the main artery of a region—the River Maya, which was drawn according to direction of flow from upstream to downstream. Then lateral tributaries were drawn from the source of the main river to its estuary, together with other features located along its course. While drawing the maps, which was done with quick and sure movements, as if the draftsman saw the whole complex picture of the hydrographic system right before his eyes, Vasilii Antonov indicated separate titles [place-names, toponyms] and explained the conventional symbols that he marked on the map.<sup>38</sup>

Rectangles indicated houses because Yakut and Russian houses had four corners (Evenks lived in tipis). Zigzags indicated mountains, but not all mountains were drawn because to do so would leave no room on the map for the rivers. Areas of haymaking were indicated by short parallel lines.<sup>39</sup>

In another example involving the Yukagirs, astronomer E. F. Skvortsov, a participant in I. P. Tolmachev's Arctic expedition of 1908, described how the Yukagir Nicolai Enkachan responded to a request from the expedition's topographer to sketch a geographical outline of the area of the Indigirka and Alazeya. "We simply gasped . . . so outstanding had he drawn everything: rivers, mountains, the directions of all the ranges, supported by the cardinal points, the North was even at the top of his map. We were surprised at such a completely clear presentation of a large region of hundreds of square versts . . . moreover, he had probably never seen a geographic map, and likewise had no understanding of reading."<sup>40</sup>

There is evidence that at least some of these peoples used celestial orientation when making and using maps. Arsen'ev describes, with some amazement, how well Evenks could orient in taiga and tundra, primarily by the stars and the sun.<sup>41</sup> Such celestial orientation in conjunction with mapmaking and map use is exceptional in traditional cultures. How it functioned when the maps were structured topologically is not clear.

It is apparent that well into the twentieth century, European (mainly Russian) explorers and field scientists were surprised and impressed by the facility with which Arctic and Subarctic peoples made maps in the course of contact with Europeans—almost certainly stemming from

a vernacular tradition of terrestrial mapmaking.<sup>42</sup> Examples of terrestrial mapmaking survive in several forms and contexts: on bark and wood as a means of communicating spatial information, especially to persons not present; as decorations on vernacular artifacts, where they may or may not have functioned as symbols; and after contact with Europeans and North Americans, perhaps as trade items.

#### MAPS ON WOOD AND BARK

The wooden boards made in Siberia that Nicolaas Witsen wrote about in 1705 were engraved with a "description of the country," and the "descriptions" were

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brought maps drawn by Evenks (Tungus) of the seacoast of Okhotsk (E. K. Pekarskiy and V. P. Tsvetkov, "Ocherki byta priyanskikh Tungusov" [An outline of daily life of the Tungus in the Ayan area], *Sbornik Muzeia po Antropologii i Etnografii pri Imperatorskoy Akademii Nauk* [Publications of the Museum of Anthropology and Ethnography of the Imperial Academy of Sciences], vol. 2, no. 1 [1913], esp. 126). "F. I. Pozdnyakov's Map of Asiatic Russia (1825)" is mentioned in *A Short History of Geographical Science in the Soviet Union*, ed. Innokenty Gerasimov, trans. John Williams (Moscow: Progress, 1976), 90.

37. P. Ye. Ostrovskikh, *Poyezdka na Ozero Yesei* (Journey to Yesei Lake), *Izvestiya Krasnoyarskogo podotdela Vostochno-Sibirskogo otdela Imperatorskogo Geograficheskogo Obshchestva* (Annals of Krasnoyarsk subdivision of the east Siberian division of the department of the Imperial Geographical Society) 1, no. 6 (1904): 21–32, esp. 23.

38. V. I. Podgorbunskiy, "Dve karty Tungusa s reki Mai" (Two maps belonging to a Tungus from the Maia River), *Izvestiya Vostochno-Sibirskogo otdeleniya Russkogo Geograficheskogo Obshchestva* (Annals of the Eastern Siberian chapter of the Russian Geographic Society), 1924, 138–48.

39. Podgorbunskiy, "Dve karty Tungusa s reki Mai."

40. D. A. Shirina, *Ekspeditsionnaya deyatel'nost' Akademii Nauk na Severovostoke Azii, 1861–1917 gg.* (Expeditionary activity of the Academy of Science in Northeast Asia, 1861–1917) (Novosibirsk: Nauka, 1993), 136–37.

41. V. K. Arsen'ev, "V tundre: Iz vospominaniy o pyteshestvii po Vostochnoy Sibiri" (In the tundra: From recollections of the travel in Eastern Siberia), *Novyy Mir* (New world) 11 (1928): 258–66, esp. 264–65.

42. There are also examples of an ability to comprehend in vertical perspective the shapes and patterns of large topographic features. For example, in the middle of the seventeenth century, the Chukchi and Eskimos called the thirty-thousand-square-mile Chukchi Peninsula "the big stone nose" (*bolshey kamenny nos*); see B. P. Polevoy, "O tochnom tekste dvukh otpisok Semena Dezhneva 1655 g." (On the accurate text of two of Semyen Dezhnev's reports dated by 1655), *Izvestiya Akademii Nauk SSSR: Seriya geograficheskaya* (Annals of the USSR Academy of Sciences: Geography series) 6 (1965): 101–11.

Although not central to our focus here, there are some well-known examples of Europeans' using native cartographic images for compiling their maps. See, for example, G. M. Vasilevich, "Drevniye geograficheskiye predstavleniya evenkov i risunki kart" (Ancient geographical ideas and map sketches of the Evenk people), *Izvestiya Vsesoyuznogo Geograficheskogo Obshchestva* (Annals of the All-Union Geographical Society) 95, no. 4 (1963): 306–19, and A. V. Postnikov, "Kartografiya v tvorchestve P. A. Kropotkina" (Cartography in P. A. Kropotkin's studies), in *P. A. Kropotkin i sovremennost'* (P. A. Kropotkin and modernity) (Moscow, 1993), 80–92.

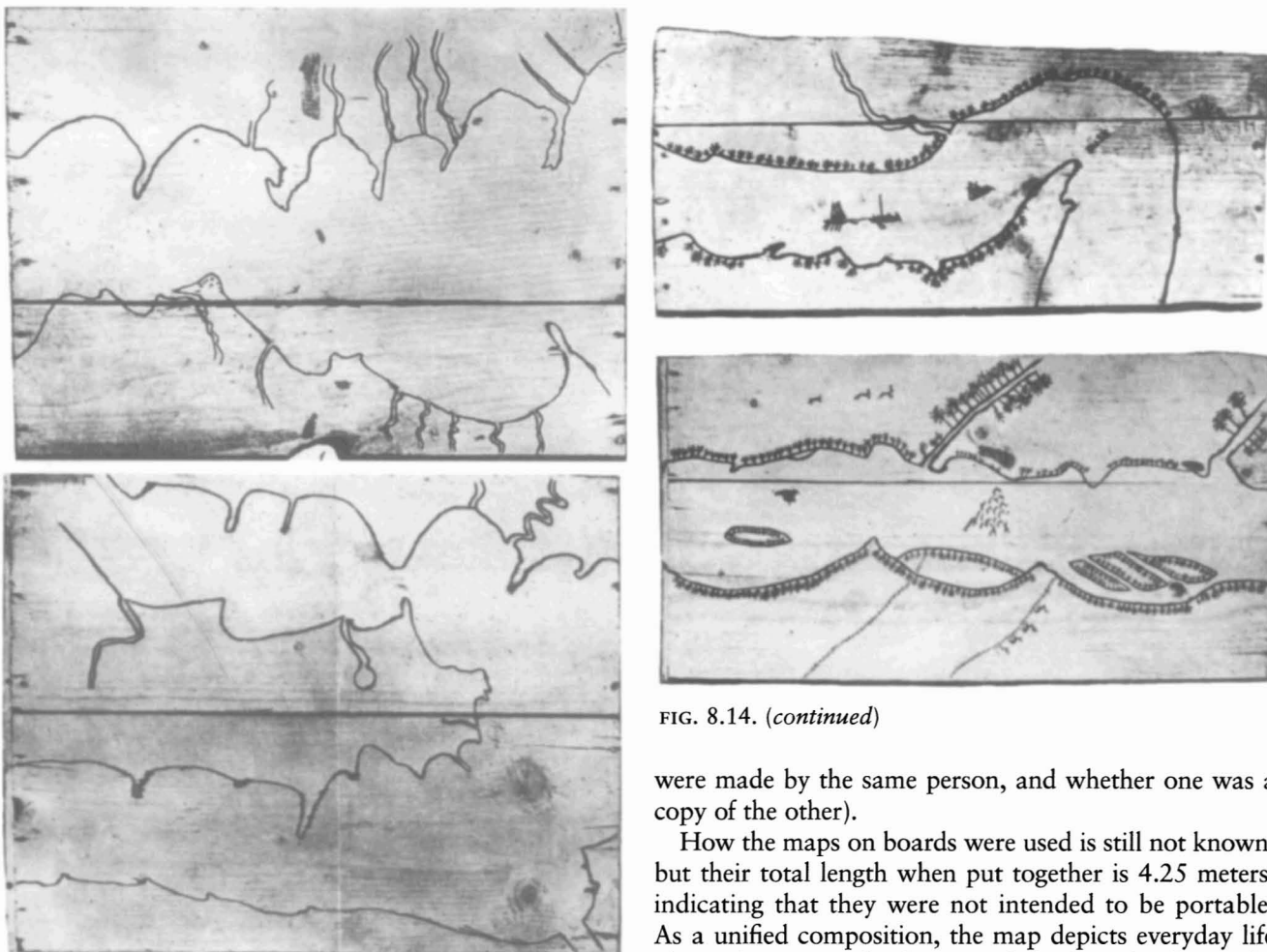


FIG. 8.14. (continued)

FIG. 8.14. SET OF CHUKCHI MAP BOARDS. Shown here are the nine boards that, when laid together, depict a river course. The boards are painted in deer or reindeer blood. Size of the original: 4.25 m long when laid end to end. Photographs courtesy of the Museum of Anthropology and Ethnography of Peter the Great, St. Petersburg.

certainly more than mere scenes, since Witsen valued them as source materials for his own map.<sup>43</sup> The Chukchi made maps on large wooden boards (*derevyannye plan-shety*), and two nearly identical sets, with nine boards in each set, are extant. Each of the boards contains a detailed section of a river. One set, at the Museum of Anthropology and Ethnography of Peter the Great, was brought to St. Petersburg in 1898 by the Russian ethnographer N. L. Gondatti (fig. 8.14).<sup>44</sup> The second set was brought to the Anthropological Museum of Moscow State University. The boards depict the flow of a river, and when they are laid end to end they fit together in a large double curve (see fig. 8.15).<sup>45</sup> Gondatti did not provide any description or discussion of them, and we do not know in what circumstances any of them were made or the exact relation between the two sets (whether they

were made by the same person, and whether one was a copy of the other).

How the maps on boards were used is still not known, but their total length when put together is 4.25 meters, indicating that they were not intended to be portable. As a unified composition, the map depicts everyday life along the river. The largest of the boards shows the mouth of the river with an irregular shoreline and smallish coves with tributaries entering them. Upstream the river makes a tight turn and narrows. Shrubs are shown along the bank, and farther upriver there are bushes and trees, islands and sandbars, deer paths and deer approaching the banks from all directions. In the river itself are boats, deer, and deer hunters. Four hunters' cabins are depicted along the shoreline on the last board.<sup>46</sup>

The Chukchi maps on boards, acquired in the late nineteenth century, appear remarkably sophisticated. After more than one hundred years of Russian activity in the

43. See above, p. 330.

44. Briefly mentioned by V. G. Bogoraz, "Ocherk material'nago byta olennykh Chukchey" (An outline of daily life of the reindeer Chukchi), *Sbornik Muzeya po Antropologii i Etnografii pri Imperatorskoy Akademii Nauk* (Publications of the Museum of Anthropology and Ethnography of the Imperial Academy of Sciences) 2 (1901), esp. 55. The most detailed discussion of this set of maps is provided by Adler, "Karty pervobytnykh narodov," 61–62 (note 10).

45. Adler, "Karty pervobytnykh narodov," 62–63, identifies the river as the Anadyr and provides a comparison of the boards to a modern map of the region; Ivanov, *Materialy po izobrazitel'nomu* (note 21), does not specify what river is depicted.

46. Ivanov, *Materialy po izobrazitel'nomu*, 454–56.

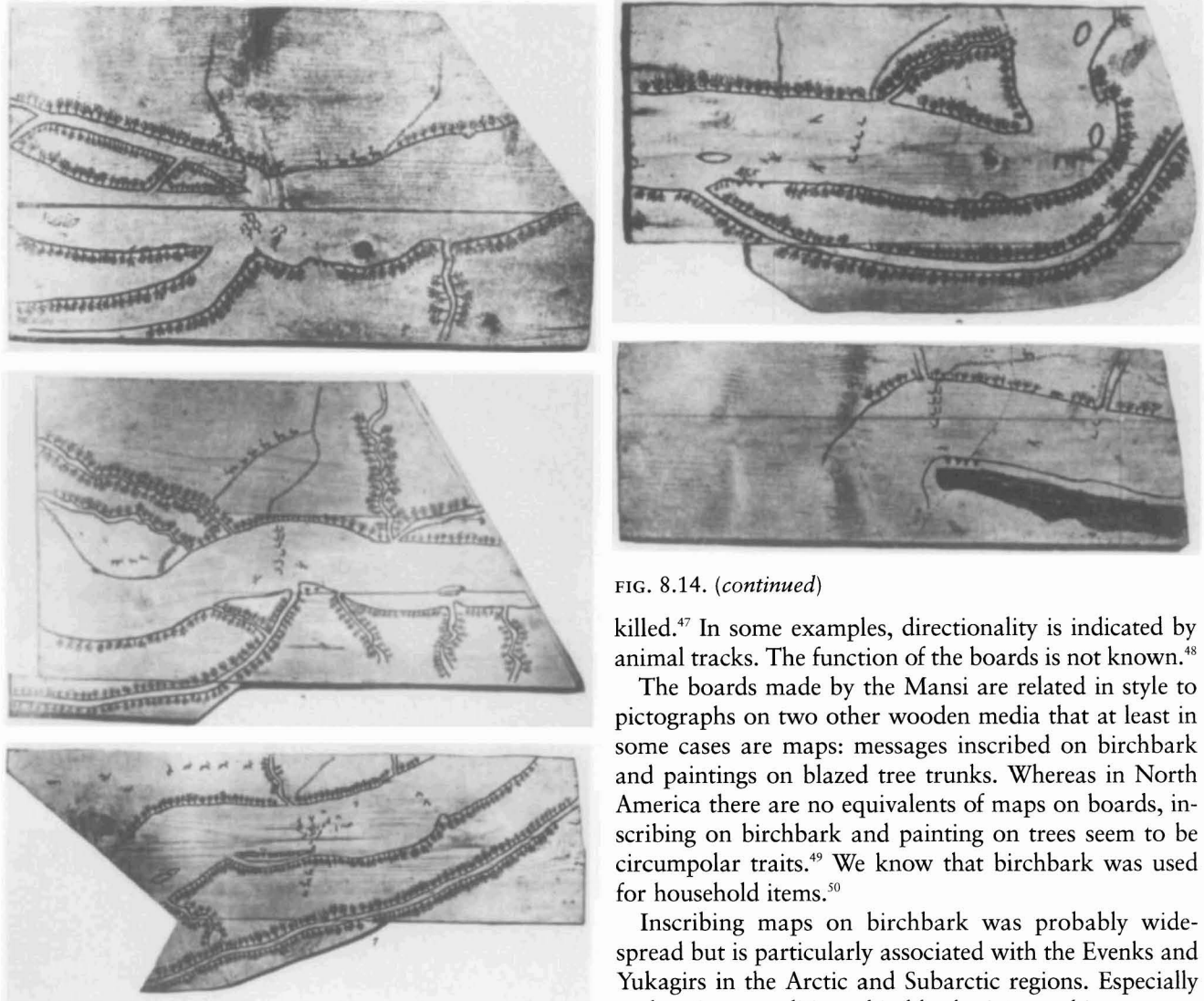


FIG. 8.14. (continued)

region, some recent acculturation is a distinct possibility, but the tradition of making maps on wooden boards is probably much older; Witsen's reference was made nearly two hundred years earlier.

In 1887 several wooden boards engraved with pictographs were sent to the Imperial Russian Geographical Society. Made by Mansi hunters from the taiga of the West Siberian Plain, who called them beast signs (*zverinye znaki*), they are small boards (approximately 8 × 11 cm), usually carved on both sides, and abstract in content (to the extent of being virtually unintelligible to the uninitiated) (fig. 8.16). The boards were probably made relatively close to the time they were obtained in the late nineteenth century. They have been interpreted as showing squirrels, dogs, people, boats, wolverines, otters, and hunters and hunting scenes—including Mansi hunters telling who went where and what kind of beasts they

FIG. 8.14. (continued)

killed.<sup>47</sup> In some examples, directionality is indicated by animal tracks. The function of the boards is not known.<sup>48</sup>

The boards made by the Mansi are related in style to pictographs on two other wooden media that at least in some cases are maps: messages inscribed on birchbark and paintings on blazed tree trunks. Whereas in North America there are no equivalents of maps on boards, inscribing on birchbark and painting on trees seem to be circumpolar traits.<sup>49</sup> We know that birchbark was used for household items.<sup>50</sup>

Inscribing maps on birchbark was probably widespread but is particularly associated with the Evenks and Yukagirs in the Arctic and Subarctic regions. Especially on hunting expeditions, birchbark pictographic messages would be inserted in conspicuously placed cleft sticks that were intended to be seen by persons coming along later. Important information included modes and directions of travel, routes already followed and those proposed, topographic and hydrographic features, and events associated with the hunt. Hence they tended to be maps in both form and function. Placing birchbark messages in this way is almost identical to the widespread practice of Indians in northeast North America.<sup>51</sup>

47. K. Nosilov, *U vogulov* (Among the Voguls) (St. Petersburg, 1904), 231.

48. Ivanov, *Materialy po izobrazitel'nomu*, 18–19 (note 21).

49. See above, pp. 135–36, 142–43, for example.

50. Ye. N. Orlova, "Naselenye po r.r. Ket'i i Tymu, yego sostav, khozyaystvo i byt" (The population of the river basins of Ket' and Tym, its composition, economy, and daily life), *Raboty Nauchno-Promyslovoy Ekspeditsii po Izucheniyu Reki Obi i Yeye Basseyna* (Transactions of the scientific and economic expedition for exploration of the river Ob' and its basin) (Krasnoyarsk) 1, no. 4 (1928).

51. In the Arctic and Subarctic, there were both men's and women's

Birchbark messages were collected from the Yukagirs by the ethnographers S. Shargorodskiy and V. I. Iokhel'son. The originals, which are not known to exist, were carved with a knife tip on birchbark; however, those shown here (figs. 8.17–8.19) were drawn and published by Iokhel'son.<sup>52</sup> One example, figure 8.17, is akin in many respects to the Vyg River petroglyph described above (fig. 8.2). Another birchbark message collected at the same time is much less ambiguous concerning the nature of the routes being followed (fig. 8.18). Its map quality derives from its representing a complex part of a river system, one tributary of which has a weir or rapid on it. Anyone who knew the region's drainage system could have identified these locations with considerable precision. In this respect it has much in common with the map inscribed on birchbark that was found in 1841 on the watershed between the Ottawa River and Lake Huron (see above, pp. 84–85 and fig. 4.24). In both cases the representation of the hydrology is realistic, tents mark settlements or temporary camps, and the orientation and occupants of boats and canoes may indicate direction of movement. One final example, collected at the same time, is perhaps the most clearly cartographic depiction of a river system (fig. 8.19).

Painting and drawing maps on blazed tree trunks was a more conspicuous way of leaving messages for persons expected to pass by. The archaeologist E. D. Strel'ov reported that in following Evenk paths between the upper reaches of the Lena and Aldan Rivers, he frequently found blazed trees bearing drawings filled in with coal.<sup>53</sup> In 1903 A. A. Makarenko found drawings on hewn portions of pine trees in the valley of the Podkamen Tunguska, near the southwest edge of the Central Siberian Plateau.<sup>54</sup> At least some of these were topographic (fig. 8.20).

Khant signs were found between 1934 and 1938 in the upper reaches of the Amnya River and in the area of Num Lake (fig. 8.21).<sup>55</sup> The original signs were carved on birch trees with hunting knives; their size is unknown. The drawings reproduced here were made by ethnographer I. S. Gudkova. Gudkova left no written account of her work, and therefore the descriptions of these drawings, published after her death, are sparse.<sup>56</sup> Common depictions in the birch tree carvings include animals, hunting scenes, human figures, and water arteries. In this swampy region near the northern edge of the taiga, where freshwater fish are an important part of the diet, many of the signs depict fishing in plan view. Such plans are evidently part of a wider regional tradition.

Though done in pencil on paper—not painted or engraved on a blazed tree—a very similar plan of a fishing

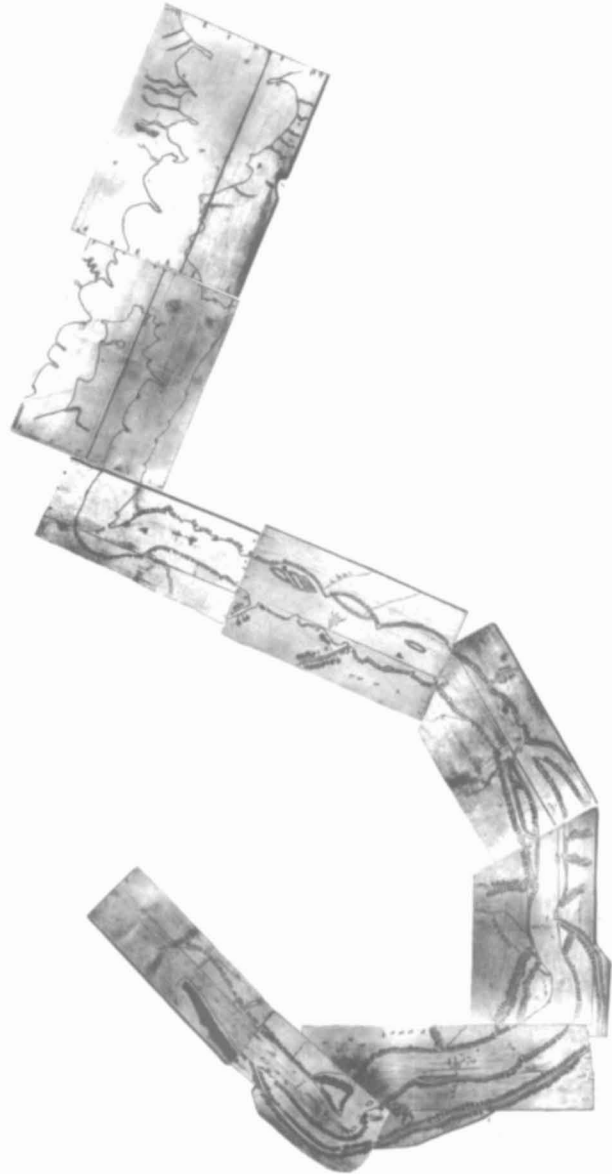


FIG. 8.15. CHUKCHI MAP BOARDS JOINED TOGETHER. The nine boards fit together to show a river course.

52. V. I. Iokhel'son, "Po rekam Yasachnoy i Korkodonu" (Along the rivers Yasachnia and Korkodon), *Izvestiya Imperatorskago Russago Geograficheskago Obshchestva* (Proceedings of the Russian Geographical Society) 34, no. 3 (1898): 255–90.

53. Strel'ov's letter is cited by N. N. Gribanovskiy, "Svedeniya o pisanitsakh Yakutii" (Information about Yakut petroglyphs), *Sovetskaya Arkheologiya* (Soviet archaeology) 8 (1946): 281–84.

54. Ivanov, *Materialy po izobrazitel'nomu*, 124–25 (note 21) (no reference to Makarenko is provided).

55. Ivanov, *Materialy po izobrazitel'nomu*, 21–22.

56. The drawings were published by V. V. Senkevich-Gudkova, "K voprosu o piktograficheskom pis'me u kazymskikh khantov" (To the question of a picture language of the Kazym Khanty), *Sbornik Muzeya Antropologii i Etnografii (Leningrad–St. Petersburg)* (Yearbook of the Museum of Anthropology and Ethnography, Leningrad–St. Petersburg) 11 (1949): 171–74.

birchbark messages; see Ivanov, *Materialy po izobrazitel'nomu*, 519–20 (note 21).



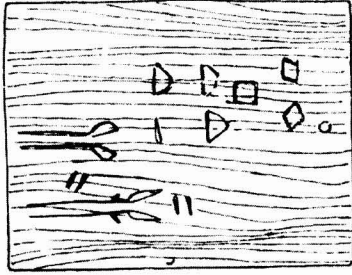


FIG. 8.16. MANSI PICTOGRAPHS ON BOARD, PROBABLY LATE NINETEENTH CENTURY. On this side of the board are carved the legs of two elk, the paw marks of a bear, and two pairs of short strokes indicating two hunters and, probably, two dogs.

Size of the original: ca. 8 × 11 cm. From S. V. Ivanov, *Materialy po izobrazitel'nomu iskusstvu narodov Sibiri XIX–nachala XX v.* (Materials on the fine arts of the Siberian people, nineteenth to early twentieth century) (Moscow: Izdvo Akademii Nauk SSSR, 1954), 19 (fig. 1, no. 1).

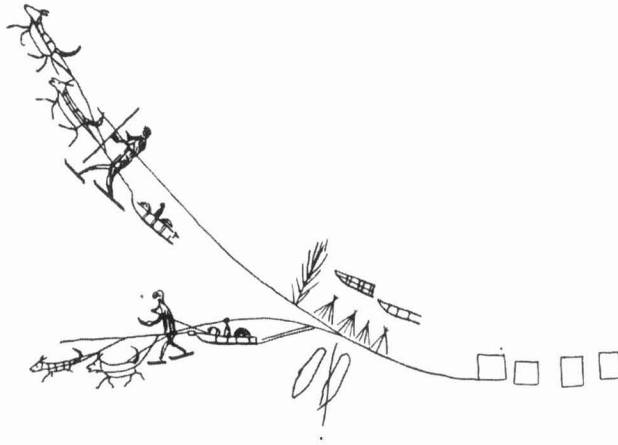


FIG. 8.17. YUKAGIR MESSAGE ON BIRCHBARK. This redrawing by the ethnographer V. I. Iokhel'son, who collected the original message, shows four tents and two loaded dog-drawn sleds, each accompanied by one man on skis. Whether the continuous lines might have been intended to mark routes or a bifurcating river system up whose two branches the men were traveling is not known.

From S. V. Ivanov, *Materialy po izobrazitel'nomu iskusstvu narodov Sibiri XIX–nachala XX v.* (Materials on the fine arts of the Siberian people, nineteenth to early twentieth century) (Moscow: Izd-vo Akademii Nauk SSSR, 1954), 522 (fig. 83, no. 1).

scene was drawn in 1901 by a Sel'kup from the region immediately to the east (fig. 8.22). The drawing was made with several other drawings at an ethnographer's request and shows in plan a stream and a fish trap and scoop.<sup>57</sup> In the 1930s the originals were in P. Ye. Ostrovskikh's private collection.

Whether engraved on bark or drawn on blazed tree trunks, these spatial messages of northern peoples almost always represent small areas and as such are comparable

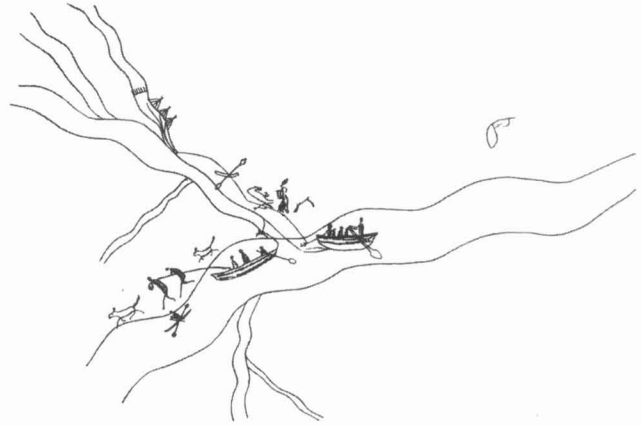


FIG. 8.18. YUKAGIR BIRCHBARK MESSAGE MAP OF GROUP TRAVELING ON RIVER. This redrawing by the ethnographer V. I. Iokhel'son, who collected the original message, shows a large boat, a smaller boat pulled by two people, and a canoe. The larger boat and the boat being pulled appear to be going in opposite directions.

From S. V. Ivanov, *Materialy po izobrazitel'nomu iskusstvu narodov Sibiri XIX–nachala XX v.* (Materials on the fine arts of the Siberian people, nineteenth to early twentieth century) (Moscow: Izd-vo Akademii Nauk SSSR, 1954), 523 (fig. 83, no. 3).

to plans or large-scale maps. Furthermore, because they were intended to inform persons not present, they emphasize distinctive locative characteristics, such as shapes of lakes, and unique patterns, such as drainage networks. Because they represent small areas, it is now difficult to relate them to their ground referents unless they were carefully documented when collected.

#### DECORATIVE AND TRADE MAPS

Maps were sometimes used to decorate ceremonial items. Among the Nivkhi, an Amur River culture, bear hunting was very prestigious and was accompanied by elaborate ritual.<sup>58</sup> Handles of ritual vessels used during the annual winter bear festival were carved with map elements depicting events in the hunters' chronicle: the bear, the lair from which the bear was chased, footprints, pawprints, and paths. Ritual spoons were decorated with bears, sun, and moon, linked by spiral bands.<sup>59</sup> Each vessel belonged to a certain Nivkh clan, and they were preserved between holidays in a special shed with bear skulls and other objects associated with the bear hunting holidays.

57. Ostrovskikh, *Poezdka na Yenisey* (note 37), and Ivanov, *Materialy po izobrazitel'nomu*, 63–64 (note 21).

58. Lydia T. Black, "Peoples of the Amur and Maritime Regions," in *Crossroads of Continents: Cultures of Siberia and Alaska*, ed. William W. Fitzhugh and Aron Crowell (Washington, D.C.: Smithsonian Institution Press, 1988), 24–31, esp. 27 and 29–30.

59. Ivanov, *Materialy po izobrazitel'nomu*, 393–96 (note 21), and Black, "Amur and Maritime Regions," 29 (figs. 26 and 27).

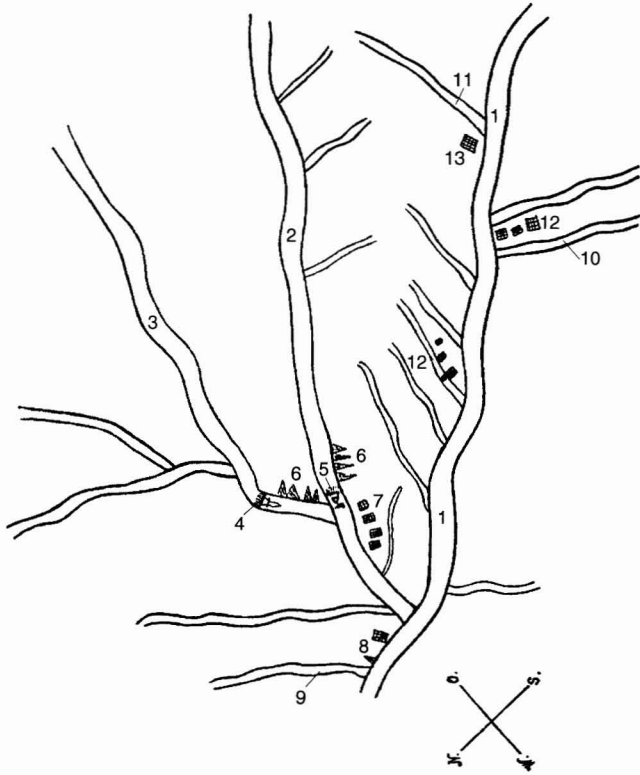


FIG. 8.19. YUKAGIR BIRCHBARK MAP SHOWING RIVERS AND LODGINGS. This redrawing by V. I. Iokhel'son shows the following features: (1) Kolyma River; (2) Korkodon River; (3) Razsokha River; (4, 5) fish traps; (6) summer camps of the Korkodon Yukagir; (7) winter camp of Korkodon Yukagir; (8) summer and winter residences of Mr. Shadrin; (9) Stolbovaia River; (10) Balygychen River; (11) Buynda River; (12) Yakut yurts; and (13) house of an agent of the Amur trading company.

After V. I. Iokhel'son, "Po rekam Yasachnoy i Korkodonu" (Along the rivers Yasachnia and Korkodon), *Izvestiya Imperatorskago Russago Geograficheskago Obshchestva* (Proceedings of the Russian Geographical Society) 34, no. 3 (1898): 255–90, esp. pl. IV.

Ritual vessels held either the hearts or, by other accounts, the meat, fat, or heads of killed animals. They were carved from birch or aspen and vary in size, the largest being up to 1.5 meters long. The vessels comprised three distinct parts: the handle, an elongated cup, and a long, flat front tip. Each vessel was carved as a chronicle of a specific hunt, which was narrated in the series of carvings on its handle and tip. The progress of the hunt was portrayed in the bear's and the hunter's tracks, and local topographic features that could serve as points of orientation, such as forests, rivers, and clumps of trees, were also portrayed (fig. 8.23).

Chukchi and Eskimos had a tradition of decorating the blades of paddles for ceremonial occasions, such as catching a whale. In 1945 a Chukchi named Ranautagin drew on paper with red paint several of the scenes that decorated the blades (the decorated paddles no longer exist).



FIG. 8.20. TOPOGRAPHIC DRAWING ON HEWN WOOD. The drawing is in coal on a hewn area of a pine tree. This sample of the Evenks' pictographic writings shows four triangles depicting tents on the upper part of the composition; below, a river is represented by a wide stripe. Above it are images of boats and three anthropomorphic figures (Ivanov, *Materialy po izobrazitel'nomu*, 124–25).

Size of the original: 28 × 22 cm. From S. V. Ivanov, *Materialy po izobrazitel'nomu iskusstvu narodov Sibiri XIX–nachala XX v.* (Materials on the fine arts of the Siberian people, nineteenth to early twentieth century) (Moscow: Izd-vo Akademii Nauk SSSR, 1954), 124 (fig. 26).

Typically a coastline was depicted with land activities on one side juxtaposed to sea activities on the other. Humans, dwellings, terrestrial and marine animals, and various boats were represented in profile, and informants claim that the scenes are from dreams. The drawing shown here, figure 8.24, is a copy of one of the paintings on paper by Ranautagin. The line extending out to sea is said to be a sandbar, with sea hunting associated with it.<sup>60</sup>

60. Ivanov, *Materialy po izobrazitel'nomu*, 423–26. In the Alaskan Eskimos' tradition of oar painting, the themes were more general than the depictions of hunting scenes such as figure 8.24. See, for example, the simple cross inside two concentric circles with a thunderbird and sea otter depicted just beyond the circles on the Alaskan Eskimo oar illustrated in William W. Fitzhugh, "Eskimos: Hunters of the Frozen Coasts," in *Crossroads of Continents: Cultures of Siberia and Alaska*, ed. William W. Fitzhugh and Aron Crowell (Washington, D.C.: Smithsonian Institution Press, 1988), 42–51, esp. fig. 51.

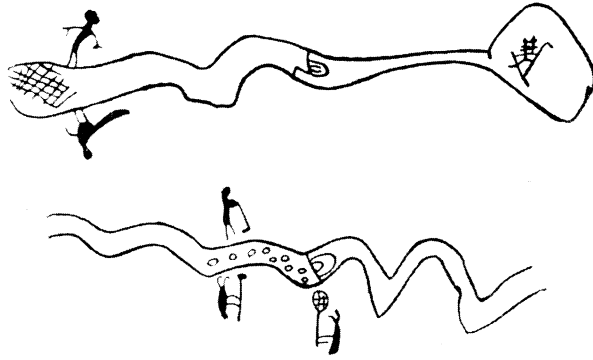


FIG. 8.21. COPIES OF KHANT DRAWINGS CARVED ON BIRCH TREES. The top scene depicts catching fish in the summer. In the center of the river is the fish trap, and to the left are a net and two fishermen on the shore. The bottom scene shows people ice fishing. On the ice is a row of ice holes through which fishermen, armed with hooks, pull a seine. From S. V. Ivanov, *Materialy po izobrazitel'nomu iskusstvu narodov Sibiri XIX–nachala XX v.* (Materials on the fine arts of the Siberian people, nineteenth to early twentieth century) (Moscow: Izd-vo Akademii Nauk SSSR, 1954), 23 (fig. 3, nos. 1–2).

The Chukchi and Eskimos also decorated canoe or umiak benches with a similar design. Done at the time of annual ritual celebration, the design incorporates fairly obvious pictures of people and animals, but there is almost certainly secondary content and probably intrinsic meaning for the initiated. Ivanov suggests they were picture chronicles of symbolic hunting rituals performed during the holidays. The goals of the celebration were to make a sacrifice to the spirit masters, to attract good souls, to propitiate those animals killed on the hunt, and to ensure prosperity through a successful hunt in the future.<sup>61</sup> Figure 8.25 is a drawing on paper of a canoe bench made at Ivanov's request by Kasyga during Ivanov's expedition in Siberia in 1940. Ivanov, however, was informed that drawings on benches do not represent any real hunting stories.<sup>62</sup>

The trapezoidal bench is divided by a horizontal line representing the coastline separating the terrestrial and maritime worlds. At a primary level of interpretation, much of the pictographic content is transparent. On land are dwellings, hunters, and mammals. Along the coast are depicted scenes related to sea hunting. Offshore are a variety of sea mammals and canoes pulling a whale.<sup>63</sup>

A similar pictographic tradition, but sometimes with a stronger cartographic component, appears to have developed in the second half of the nineteenth century in the course of trade contacts with North American and European whalers in the Arctic Ocean.<sup>64</sup> A pictograph drawn on a bleached sealskin (*mandarka*) and covered with depictions of people, animals, and scenes of whale hunting was seen by Hooper in 1848–49 at Urel'.<sup>65</sup> An extant example, now in Oxford, was obtained from the Chukchi

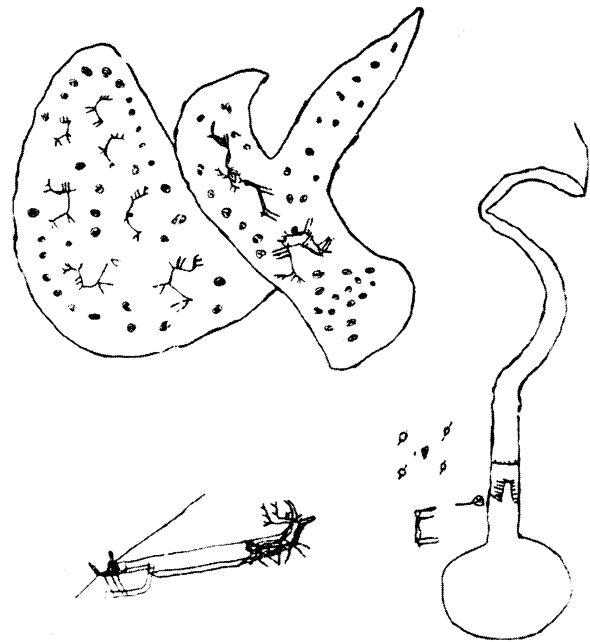


FIG. 8.22. SEL'KUP DRAWING OF RIVER AND FISH TRAP, 1901. The original was made at the request of ethnographer P. Ye. Ostrovskikh in pencil on paper. This copy depicts a stream flowing into a small enclosure or lake with a fish trap or scoop, a warehouse or storage shed, and though much less obvious, four fox traps placed around a pile of fish. On the same drawing, but unrelated, are two enclosures apparently separating domesticated stags, two of which appear to be fighting. Both enclosures contain many small marks, supposedly representing holes in the snow dug by the deer to obtain moss. Below the two enclosures is a profile drawing of a man approaching the fish trap in a reindeer-drawn sleigh. From S. V. Ivanov, *Materialy po izobrazitel'nomu iskusstvu narodov Sibiri XIX–nachala XX v.* (Materials on the fine arts of the Siberian people, nineteenth to early twentieth century) (Moscow: Izd-vo Akademii Nauk SSSR, 1954), 63 (fig. 45, no. 2).

by the crew of an American whaler in the late 1860s or 1870s (fig. 8.26). The skin has been studied by several scholars, one of whom considers it to be a calendar of the events of one year on the Chukchi Peninsula coast, while others see it as a simple collection of scenes from Chukchi everyday life.<sup>66</sup> In addition to the terrestrial and maritime

61. Ivanov, *Materialy po izobrazitel'nomu*, 427–43.

62. Ivanov, *Materialy po izobrazitel'nomu*, 431. Ivanov presumes that the drawings are somehow related to hunting magic, especially to the belief in reincarnation of the hunted animals.

63. Ivanov, *Materialy po izobrazitel'nomu*, 428.

64. Ivanov, *Materialy po izobrazitel'nomu*, 448.

65. W. Hooper, *The Month among the Tents of Chukchi* (London, 1853), 65.

66. Hoffman based his opinion of the skin as an annual calendar on Carlos Bovallius, who believed that the record on the skin "refers to the avocations and hunts of an entire year." See Walter James Hoffman, "The Graphic Art of the Eskimos," in *Annual Report of the Board of Regents of the Smithsonian Institution . . . for the Year Ending June 30,*

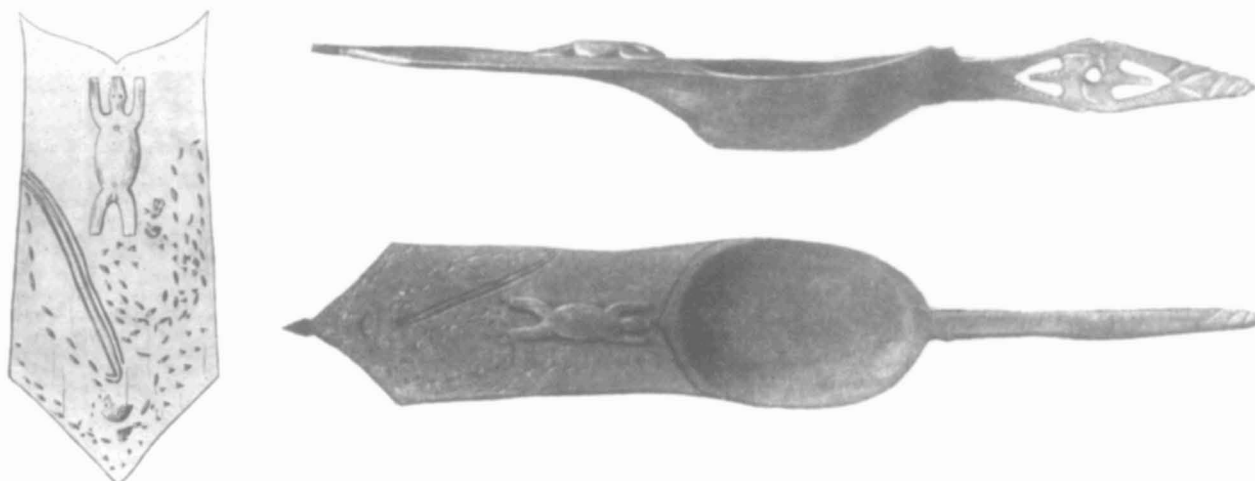


FIG. 8.23. BEAR FESTIVAL RITUAL VESSEL. On the right is the vessel, and on the left is a drawing of the decoration. In the center at the bottom the small depression is the bear's den. Around it are carved the pawprints of the bear, the footprints of the hunter, and small circles depicting the traces of ski poles. Next to the paw prints, human footprints surround the bear's den. When reading the pictograph, the condition of the hunt, engraved on the board, becomes clear. One or two hunters ap-

proached the den, surrounded it, and flushed the bear; then they began to follow the beast.

Museum of Anthropology and Ethnography of Peter the Great, St. Petersburg. From S. V. Ivanov, *Materialy po izobrazitel'nomu iskusstvu narodov Sibiri XIX–nachala XX v.* (Materials on the fine arts of the Siberian people, nineteenth to early twentieth century) (Moscow: Izd-vo Akademii Nauk SSSR, 1954), 393 (fig. 245) and 397 (fig. 247, no. 1).

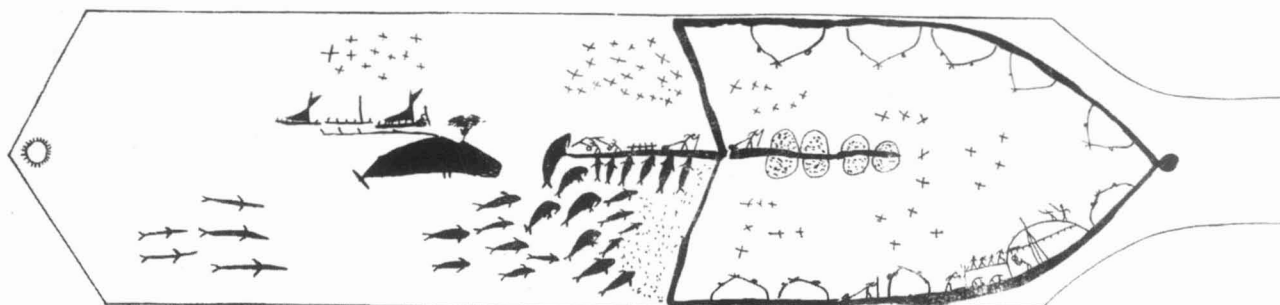


FIG. 8.24. PAINTING ON PAPER OF A DECORATED PADDLE BLADE, 1945. This was painted by Ranautagin from the village of Nunligran. On the left are two flocks of birds, a large harpooned whale, and two umiaks with sails, carrying hunters; below are sea animals including seals, walrus, and grampuses or killer whales, with dots representing smaller fish. At the end of the sandbar a large walrus has been pulled in; across the top of the sandbar, hunters cast harpoons at the walrus and a third hunter, supported by a stick, drags a piece of meat behind him toward shore. On shore, another hunter drags a piece of meat, and a line inland leads to sev-

eral pits filled with meat. Along the outside edge of land are depicted yarangas (portable framed dwellings covered with reindeer hides). At the lower right a celebration is shown, organized for the successful hunt, with one man holding a tambourine (drum). At the far end of the blade is a radiant sun. From S. V. Ivanov, *Materialy po izobrazitel'nomu iskusstvu narodov Sibiri XIX–nachala XX v.* (Materials on the fine arts of the Siberian people, nineteenth to early twentieth century) (Moscow: Izd-vo Akademii Nauk SSSR, 1954), 424 (fig. 9, no. 1).

1895, including the Report of the U.S. National Museum (Washington, D.C.: United States Government Printing Office, 1897), 739–968, esp. 938–44 (however, no reference for Bovallius is provided). The skin is also discussed and illustrated by Hans Hildebrand, “De lägre naturfolkens knost,” in *Studier och forskningar föranledda af mina resor i höga Norden*, by A. E. Nordenskiöld (Stockholm: F. och G. Beijer, 1883), translated as “Beiträge zur Kenntniss der Kunst der niedern Naturvölker,” in *Studien und Forschungen*, ed. A. E. Nordenskiöld

(Leipzig: F. A. Brockhaus, 1885), 289–386, esp. 316–22; Bogoraz, “Ocherk material'nago byta olennykh Chukchey” (note 44); J. G. Noppen, “A Unique Chukhi Drawing,” *Burlington Magazine for Connoisseurs* 70 (1937): 34; Ivanov, *Materialy po izobrazitel'nomu*, 449–54 (note 21); and William W. Fitzhugh, “Comparative Art of the North Pacific Rim,” in *Crossroads of Continents: Cultures of Siberia and Alaska*, ed. William W. Fitzhugh and Aron Crowell (Washington, D.C.: Smithsonian Institution Press, 1988), 294–312, esp. 308–9, fig. 443.



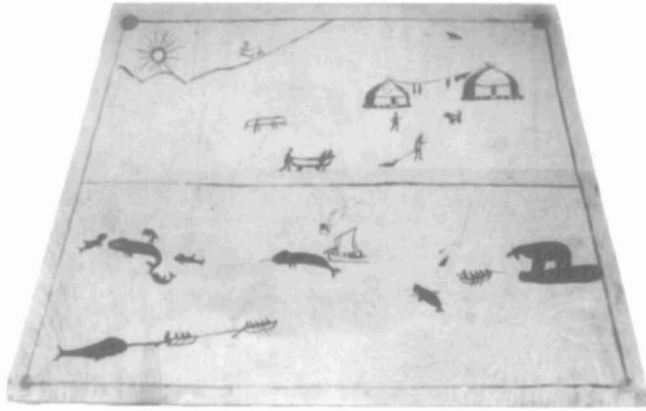


FIG. 8.25. DRAWING OF RITUAL CANOE BENCH DESIGN. Wooden canoe seat painted by the Eskimo Kasyga. The painting represents various hunting activities on land (the upper part) and on sea (lower). The holes in each corner were used to attach the seat to the canoe. The origin and meaning of the Eskimo canoe seat paintings is unclear, but they appear to have been used in association with hunting rites. One Eskimo reported that it was not proper to produce them more than once a year, that is, during the holidays, when they were apparently used in incantations along with other magical artifacts such as oars.

Photograph courtesy of the Museum of Anthropology and Ethnography of Peter the Great, St. Petersburg (70-24-1).

scenes depicted, some geographic locations on the Chukchi Peninsula have also been identified, including Plover Bay, Chaplino, Michigme, and St. Lawrence Bay.<sup>67</sup> Both Hoffman and Ivanov consider the skin unusual in its size, the number of individual pictures, and the overall sophistication of the composition. There are no parallels to this skin in Chukchi art, which is much less sophisticated and never contains the large number of characters found on the extant skin, and Ivanov suggests that the skin could have been designed expressly to be sold to European or American traders.<sup>68</sup>

## CONCLUSION

The environment, economy, and belief system of peoples living in the five-thousand-mile belt in Eurasia south of the Arctic Ocean have given rise to distinctive traditional cartographies. The seasonal migrations associated with fishing, hunting, whaling, and reindeer herding have required extensive geographical knowledge that has been expressed using a wide variety of graphic media.

This geographical knowledge is inseparable from the spiritual knowledge of shamanism, so central to the northern view of the lifeworld. The sources for the shamanistic models of the world originated in the Stone Age culture of Eurasia. Together, the myths of the shaman relating to the origin of peoples and lands and ideas about nature dominate worldviews. Nevertheless, we have dis-

cussed two major categories of maps—cosmographical and geographical. Maps in the former group are largely precontact and supposedly can be identified in rock art and early modern artifacts. Most of the geographical examples were made after contact with Europeans (mainly Russians).

Except for those of the Sami people of northern Scandinavia, most of the artifacts discussed here are held in Russian collections, and much work still remains in discovering, recording, and analyzing ethnographical material of cartographic significance. This work will need to proceed with caution, particularly when it comes to dating, interpreting, and unraveling the mystical and mundane elements in prehistoric rock art. Likewise with cosmographical and celestial maps associated with shamanism, such as those seen on shamans' coats or drums, which often portray the three-level world so characteristic of some of the cultures described in this book.

Historical accounts of mapmaking provide another window on indigenous practices. There is the characteristic surprise at the speed and skill with which native informants were able to sketch ephemeral maps of large areas, particularly among the Evenk people of Siberia.

Examples of terrestrial mapmaking survive in several media: from our limited examples, maps on wood are found particularly among the Chukchi, while maps on birchbark tend to be associated with the Evenks and Yukagirs. Painting and drawing maps on blazed tree trunks to leave messages was a circumpolar trait. Maps decorate ritual vessels used during the annual winter bear festivals and stored with other ritual elements between holidays. Paddle blades, canoes, and canoe benches were also decorated with maps for ceremonial occasions.

The variety of materials used in making maps may speak of their ancient use. Certainly as trade ties progressed among representatives of the indigenous population of Eurasia and Russian and European traders, manufacturers, and travelers, expressions in map form

67. Redrawings of this skin are reproduced with items numbered and identified in Hoffman, "Graphic Art of the Eskimos," pl. 81 (fifty-two items), and Ivanov, *Materialy po izobrazitel'nomu*, fig. 28 (eighty-one items).

68. Hoffman, "Graphic Art of the Eskimos," and Ivanov, *Materialy po izobrazitel'nomu*, 448. Whether the chart is Eskimo or Chukchi has been debated. When received by the Pitt Rivers Museum, it was mounted and labeled "A CHUKCH Drawing on sealskin brought by the Captain of an Arctic Whaler from the BEHRINGS STRAITS, given by him to the late Edward Goodlake, by Mr Goodlake to Thomas Lord Walsingham and by Lord Walsingham to me Alfred Denison, 1882," signed Beatrice Mary Blackwood. The museum documentation notes an undated pencil note: "Not ESKIMO as described in Reports" (referring to Hoffman, "Graphic Art of the Eskimos"). Most recently, Fitzhugh has stated that "although alleged to be of Chukchi origin, it may be Asian Eskimo, whose style and cultural activities it more closely resembles" (Fitzhugh, "Comparative Art," 308, caption to fig. 443 [note 66]).

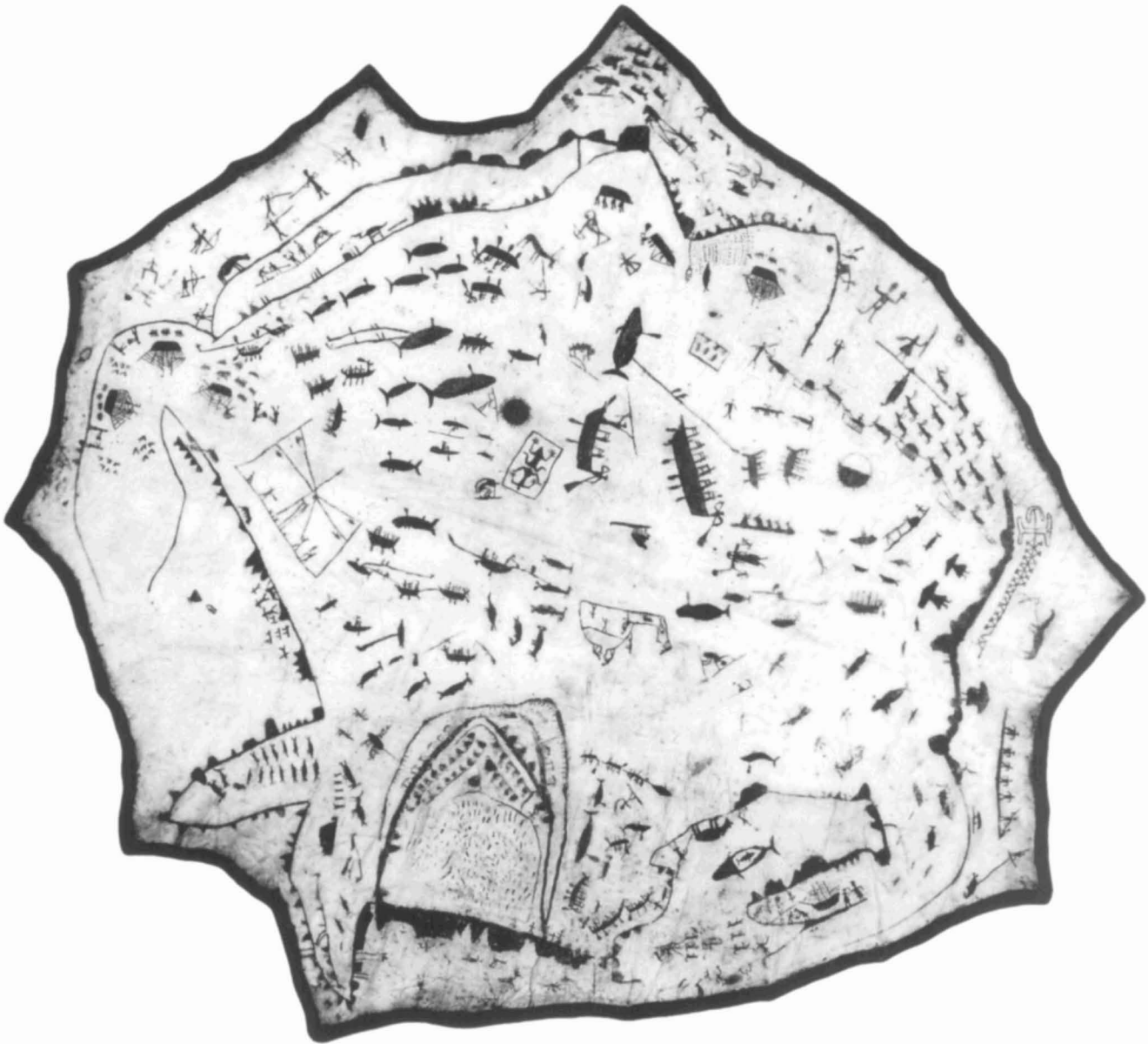


FIG. 8.26. SEALSKIN MAP? Among the things shown are whale, walrus, bear, and seal hunting scenes, deer herds, people, Russians and Europeans, scenes from the daily life of the Chukchi, shamans, villages, dwellings, fighting scenes, whaling schooners, and kayaks. In the shoreline around the edge,

Plover Bay, Chaplino, Michigme, and St. Lawrence Bay have been identified.

Size of the original: 114.3 × 119.3 cm. Photograph courtesy of Pitt Rivers Museum, University of Oxford, Oxford, England (1966-19-1).

were adapted and modified. Nevertheless it is still possible to describe—as we have attempted to do here—a distinctive body of artifacts that can shed light on the tradi-

tional mystical and geographical worldviews of the hunters and fishers of Arctic and Subarctic Eurasia.