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JOURNAL



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Journal of the International Map Collectors' Society

WINTER 1995 ISSUE No. 63

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Cover map: 'Nouveau Mexique et Californie' from the 1686 German edition of Alain Manesson Mallet's Description de l'Univers (Courtesy Jonathan Potter).

Copy and other material for our next issue (Spring) should be submitted by 1 Feb 1996. All items for editorial use should be sent to The Editor, Susan Gole, 14 Oakford Rd, London NW5 1AH. Tel: 0171-267 4346. Fax: 0171-267 4356.
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From the Chairman's Desk

The symposium at San Francisco, so eagerly looked forward to by many of us, is past. It certainly lived up to all expectations, as can be seen in the account by one of our members, and in the abstracts of the eight papers that were presented. In many ways it was a model of how our International Symposia might be organised, with its three years in the planning and the resultant great attention to detail. Yet, as past Chairman Malcolm Young continually reminds me, each symposium is different, and if they were all the same as that of 1995, with only the maps changing, IMCoS might soon become stale. So we can look forward to meeting again in Latvia next October, knowing that it will be a complete contrast to San Francisco, and surely just as enjoyable and informative.

While more than half the participants in California were from the Americas, there is less local interest in the Baltic countries, as well as less knowledge among outsiders, so it will be a good opportunity for all of us to learn something new, and to encourage the enjoyment we find in early maps among people who have not, in recent decades, had the chance to travel abroad or even acquire early examples of the mapping of their own country, let alone other parts of the world.

The international side of IMCoS continues to grow apace. For sometime now we have had more members outside UK than within, and this is reflected in the larger numbers of participants at our international meetings. In London we have the advantage now of a number of gatherings devoted to maps, notably the monthly Warburg lectures, the occasional meeting in Oxford, and so on.

In part, I think IMCoS can claim some credit for this growing interest in the academic side of map collecting and the study of early cartography. When the founders of IMCoS began holding regular meetings and visits to map collections, they were pioneers. Though there were already publications devoted to maps, there had previously been little effort to bring people together so that they could discuss common areas of interest. Even when more lectures began, most of the maps to be seen were on the screen, only at IMCoS meetings was it possible to actually touch them, and see more than the single page of an atlas opened for display by a careful curator.

Our London meeting next June at the Royal Geographical Society will be another rare opportunity to see the original maps discussed by the speakers. It has been a hard task for Francis Herbert to decide among the vast treasures preserved there what he should put on display, and whom he should request to talk about them. Since its foundation in the middle of the last century the RGS has been collecting and preserving maps from most parts of the world, as well as making them available for the large number of expeditions that have gone out under its aegis. Though it is particularly rich in examples from these periods, there have also been many bequests from past members of maps from before its establishment. So it is truly a treasure trove, and whatever

small part of it we will have time to examine next June, there will be much to interest all our members.

Our Map Fair too grows larger and more international every year. The new location should prove popular with dealers as well as visitors, as access will be easier, and all the stands will be within a single room. There have been requests that we should expand it to a two-day occasion, and this is under active consideration. It would of course increase the costs, and put additional burden on the IMCoS members who volunteer to set it up and work for it throughout the day. But as we are now the largest regular map fair in the world, we may perhaps have to adopt a larger outlook, and remind ourselves that though we are a small non-profit-making society, we now have a reputation to maintain in the yearly map calendar. This brings with it added responsibilities.

We will again be manning our 'Bargain Counter' at the Map Fair, in an attempt to attract more young members and novice collectors. Last year the repsonse to our request for donations of maps for this counter was excellent, and while we have some maps held over, we would welcome more donations so that there is a wider range of material on offer next year. Any money collected from this stand goes to increase the advertising budget for the fair, so that we can bring in more visitors.

Our International Representatives are becoming more active too. Taking the opportunity to meet both in the summer and at the international symposia, there is more exchange of ideas about IMCoS and what its role might be in the future. One of the results is a change in our membership form, so that we provide a better view of the Society and what it does. The new forms will be ready soon, and three copies will be sent out to all members with the Spring Journal. Please pass them around.

If you feel you are able to bring the Society to the attention of a wider public if you had forms available, please do get in touch with Secretary Harry Pearce. They may usefully be placed in departments of geography, museums, libraries, and anywhere else that people gather who might not already know about IMCoS. Many map dealers do not display them prominently, but in order to be cost-effective, we need to know who would like to receive them regularly. So please help us to help the Society, by spreading the word wherever you can.

Another new step will be the publication of the first IMCoS Occasional Paper, on how to choose, store and conserve maps in your collection. This is under preparation, and should be ready some time next year.

If you have any other ideas of what you think IMCoS might become actively involved in, do let us know. One member has written in this issue about the modern colouring of maps. His opinion is very relevant, but then there may be others who think differently. A letter to the Editor is a good way of getting your idea across, and it might bring new aspects that had not occurred to you. So give it a try.

Another way you can be actively involved in IMCoS is to send in articles about your chosen area of collection. They need not be scholarly treatises; in fact, the majority of our members are not scholars, but map lovers, and if a map interests you, it will surely be of interest to others.

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Maps of the Pacific Coast of North America until 1800

Norman J.W. Thrower

Two early carto-bibliographers of the western part of the continent, Henry Wagner and Carl Wheat, are indispensable sources for this study, and more emphasis is given here to the maps of the area than to the explorations which produced them. Even as late as the gold rush in California in the 1840s and '50s most visitors arriving by sea sailed from south to north, and an important contribution to the mapping was made by contacts with the indigenous peoples. Their information was incorporated into European maps, such as that of Mexico City of 1542.

As shown on the general map by Juan de la Cosa (c. 1500) Christopher Columbus found when he crossed the Atlantic a group of islands and then the mainland, while trying to navigate to China. Martin Waldseemüller's map of 1507, however, showed a clear break in the landmass, one of the many myths of the time. But by using ships made for them on the coast, Europeans were soon exploring both coasts of the isthmus between North and South America, and in 1520 Ferdinand Magellan found the sea route into the Pacific, through what Antonio Pigafetta called the Strait of Patagonia (1542). The Gulf of California became known as the Sea of Cortes and was sometimes coloured red to bring symmetry with the Old World. Sebastian Cabot's world map of 1544 was an improvement, with no large westward bulge to South America and better delineation of the Pacific coasts of South and Central America. No landing north of about 34° N is known before that of Drake, but Gastaldi's map of 1542-3 clearly shows the strait separating America and Asia, giving hope to explorers of an easy route to Asia by the North-West Passage.

The name America for the northern part of the continent, in addition to the southern lands, was not original to Mercator, but his authority as a cartographer led to its wide acceptance, and his idea of a cylindrical projection for a world map was certainly novel (1569). A similar version by Abraham Ortelius was probably carried by Francis Drake in 1578-79, who complained that the mapmakers were purposely making errors to fool explorers. Some seven years after his return to England, the Drake-Mellon manuscript map claimed all the land from Nova Albion (Drake's California) across the continent to Raleigh's Roanoke (Virgina, now North Carolina) for the English Queen Elizabeth. Drake's landing at about 38° N on the Pacific coast represented the earliest English presence in what was later to become the United States. He sailed both further north and further south in the Pacific than any other European up to his time, and caused alarm in Spain as well as a flurry of mapmaking in Europe, the most influential being that of Jodocus Hondius of 1595, followed by Edward Wright in 1599, whose map summarised much of the current intelligence of the coasts of the world. Spain sent an expedition led by Sebastían Viscaíno to the north in 1602-3, resulting in 32 manuscript maps by Geronimo Martin Palacios showing the coast

from Navidad in mainland Mexico to Monterey in the California bay.

The myth of California being an island gained increasing currency in the 17th century, upheld in a map by Philipp Eckebrecht (1630); this was the first to show longitude by time, based on the Rudolphine Tables of Johannes Kepler, with a prime meridian at the observatory of Tycho Brahe in Denmark. Even the *derrotero* (atlas) captured from a Spanish ship in 1680 and edited by Basil Ringrose suggested an insular California. It was challenged in the map made by Father Eusebio Francisco Kino (1701) who travelled overland, though others (e.g., Herman Moll in 1724) persisted in the myth for many years.

Land journeys also revealed the great bay of San Francisco, as shown in the manuscript map of Juan Perez-Josef Canizares. Expeditions were sent out by Spain partly in response to a feared threat from the Russians. Maps by the Delisle family (1750) based on material gathered in Russia showed great knowledge of eastern Siberia, but perpetuated the myth of a large inland sea in north America. Robert de Vaugondy abandoned this 'sea', but elaborated the idea of Alaska as a series of large islands. In the meantime Spanish missions were reporting better information about California, and a map by Diogo Francoso (1787) showed an administrative boundary between Baja and Alta California which was later to become the United States/Mexico border. Though the Russians had established a settlement at Fort Ross in the early 1800s, it was the British who posed a greater threat to the Spanish, and James Cook on his third Pacific Voyage (1776-79) was instructed to proceed north as far as latitude 65°, and explore any rivers that might lead to Hudson or Baffin Bays. With him was George Vancouver who later established good relations with the Spanish settlers. Vancouver was able to chart all the northern Pacific coast in great detail, finally destroying the myth of the Strait of Anian (1798).

During the 19th century both Britain and the United States were active in mapping the Pacific coast of northern America, as evinced by maps of Frederick William Beechy (San Francisco, 1827) and William Hemsley Emory (San Diego, 1848). Emory went on to survey the 3,000 kilometre-long United States/Mexico border in the 1850s. The west coast of north America, long neglected by Europeans, is now an increasingly important part of what is known as the Pacific Rim.

Early Geographic Knowledge of Mesoamerica: A century of cartographic evolution

W. Michael Mathes

Subheadings: Precortesian cartography
Pre-conquest cartography
Conquest cartography
Cartography of expansion

Early forms of Mesoamerican cartography frequently depicted peregrinations and historical narrative and were thus used to explain precortesian civilization and expansion to the Spanish chroniclers. These maps were also used by European

cartographers to supplement knowledge gained by maritime exploration. Reports of Maya cities on the Yucatan peninsula led to an exodus from the Spanish island settlements to the mainland, the subsequent conquest of the Mexica and neighbouring groups, and the initiation of scientific cartography of the littoral and interior of Mesoamerica.

During the years immediately following the occupation of Tenochtitlan (later Mexico City) in 1521, search for precious metals and a water passage to the Pacific was carried out to the south and west, and these explorations began to appear on European maps. Further explorations in the succeeding decades added more Spanish territory, and in 1535 Cortés explored the peninsula of California.

The establishment of the Viceroyalty of New Spain in 1535 encouraged active exploration and territorial expansion into modern Arizona, New Mexico, west Texas, Oklahoma, Kansas and the Gulf of California, leading to revolutionary cartographic output in the second half of the 16th century, though the general cartographic view of Mesoamerica was formed by 1550. Engraving on copper plates allowed larger editions than from wood blocks, and also correction as new reports were received. In addition to the printed maps, there were notable Spanish maps which remained in manuscript. World maps showing the region engraved on copper appeared in the late 16th century, with a continuing output of regional and town maps.

A half century after the conquest, New Spain was well depicted cartographically, and the massive detailed descriptions ordered by Phillip II in 1569 began to appear on printed maps by the end of the century. Corrections continued to be made, and old plates were only discarded when they were no longer serviceable.

The Cartography of the Interior: The American Southwest

Dennis Reinhartz

The Southwest was one of the first regions of what would become the United States to be visited by explorers after Old World's discovery of the New by Christopher Columbus in 1492, and it was also the last unsettled frontier in the contiguous forty-eight states with Arizona and New Mexico, not admitted to statehood until 1912.

One of the most influential maps showing all of North America was that titled New France by Paolo Forlani in c. 1565, often attributed to Bolognini Zaltieri; it showed the 'Streto de Anian' separating North America from Asia, and was the first to use the term 'Sierra Nevada'. It was, however, the map published by Abraham Ortelius in many editions of his *Theatrum Orbis Terrarum* (1570–1612) which provided the 'Renaissance' view of America, even though it too greatly expanded the Southwestern vastness.

Spanish knowledge was gradually accumulating during the 17th century, with a 'master copy' of the new map, the *padron real*, being constantly updated and



Speakers on the first day (from the left): Al Newman, Warren Heckrotte, Norman Thrower, Denis Reinhartz and W. Michael Mathes.

corrected, but kept secret in order to maintain Spain's monopoly in the area, particularly in the interior.

By the middle of the 17th century the French had come to dominate North American exploration and with it the resulting map trade. Maps by Sanson, Coronelli (based on French information) and Delisle were published in many editions. That by Delisle in 1703 perpetuated a distorted Spanish-French boundary along the Rio Grande instead of the Red and Sabine rivers, which in turn led to renewed Spanish exploration in the area. In England, more popular were maps by Herman Moll, one of the last to maintain the myth of an island California. The only printed Spanish map in the 18th century was that of Jose Antionio Alzate y Ramírez, published in Paris in 1768. It was in part based on sources from the Mexican archives. There were also manuscript maps drawn from mission intelligence, the best being that drawn by Francisco José de Haro in about 1770. The last major European map of the Southwest north of the Rio Grande before the coming of the Americans was prepared by Alexander von Humboldt after his expedition in 1799–1804, which was the basis for an important map published by Zebulon Montgomery Pike in Philadelphia in 1810. Both perpetuated much Spanish misinformation.

Mass markets in the United States encouraged the production of several new maps of the area resulting from American expeditions, especially those of Lewis and

Clark, Pike, Frémont, Emory and others. A map which summarises the current geographic knowledge about the interior Southwest shortly before the American Civil War was drawn by William J. Keeler in 1867. This showed railways lines, towns, settlements and Indian reservations, and claimed falsely to be based on 'actual survey'.

The interior Southwest suffered from commercial neglect, and the lack of correct maps led people to imagine a harsh, monotonous and worthless wasteland. This in turn influenced the priorities and policies of governments, with the result that large groups of indigenous people gathered there, open to continuous contact with the Spanish, the perpetuation some of the early myths, and an effect on contemporary American culture in the region.

The Mapping of California, 1769–1873

Warren Heckrotte

Subheadings

- The Spanish advance into California
- Inland exploration by the Spanish
- The myth of the great rivers
- Maps of the fur hunters
- Fremont and his maps
- Maps of the gold region
- Attempts to obtain an accurate map of the State
- Maps of the California Geological Survey

The land that is now California was discovered in 1542–43 by the expedition of Juan Rodriguez Cabrillo which sailed somewhat north of San Francisco Bay (without discovering it) and landed at a number of places. This and the subsequent early Spanish voyages established a knowledge of the coast, but the interior of California remained unknown until the Spanish *entrada* of 1769.

In 1768 the decision was made in Mexico to move into California and occupy the port of Monterey. Monterey was established in May 1770. The lower arm of San Francisco Bay was discovered in this expedition. A manuscript map of the expedition prepared by Miguel Costansó, a member of the expedition, without any indication of the Bay, is dated 30 October, 1770. A subsequent manuscript map and the printed map, both dated 30 October 1770, show the Bay, the first maps to do so, and were prepared after the discovery of the entrance to the Bay. The maps show a reasonably faithful representation of the coast south of San Francisco Bay, but the interior is blank, an accurate statement of contemporary knowledge. Following the Spanish occupation, the interior of California was explored, but with meagre cartographic results. The interior remained largely unknown to the outside world.

Lack of knowledge about the interior of North America encouraged the myth of a desired waterway across the continent. In the early 1800s the only region which could support the idea of such waterways was California and the land to the east. Soon great rivers, the Buenaventura and the Timparrogas were shown flowing from the east through California to the

Pacific on the maps of North America, such as those of Robinson (1819) and Tanner (1822). The existence of these two rivers was believed in and they were sought for.

Until 1826 no European reached California overland from the east, but this soon changed. Jedediah Smith, a fur trader, starting from near Great Salt Lake reached California in 1826. He hoped to return by way of the Buenaventura River; it soon became apparent that no such river existed. The most detailed map resulting from Smith's travels was published by David Burr in 1839. John Arrowsmith's map of British America (1834) showed information supplied by the Hudson Bay Company. These maps began to give a realistic portrait of the principal geographical features of California.

In 1844 John Charles Fremont followed the Oregon Trail to the Columbia River, turned south for California and looked for the Buenaventura River to take him through the mountains to California and the Pacific. The map of the expedition showed only his route, but was an important contribution to the description of the West, and was immediately adopted by the commercial cartographers. Fremont was back in California between 1845 and 1847. The map of this expedition, prepared by Preuss, incorporated all the known geographical knowledge of the country west of the 104th meridian. This map provided for the first time a reasonably faithful representation of California.

After gold was discovered in January 1848, many maps were prepared of the gold region which collectively increased the cartographic knowledge of the State. The most important of these maps were prepared in California and after 1851 were also printed there.

The large number of commercial maps proves their utility, but they did not offer the accuracy required for legal, planning and administrative purposes. An act of the state legislature passed April 4, 1850 called upon the Surveyor General of California to make an accurate map of the state. Surveyor General William Eddy submitted a draft in 1853 which was accepted as the Official Map of the State. It was engraved and printed by J.H. Colton in New York. The map had a number of errors and as many critics. Despite the need for an accurate map of the state none was made, but it was proposed that one prepared by George H. Goddard should be purchased by the State. It incorporated information from the United States Land Survey, the US Coast Survey, the explorations of the US Topographical Engineers and the Railroad Explorations, as well as surveys by Goddard. Unfortunately the price was rejected, and no copy of the map is known to survive. Goddard prepared a reduced version for commmercial distribution in 1857.

In 1860 the California Geological Survey was established. One of its tasks was the preparation of adequate maps. Using triangulation to measure distances and sketching the topography under the skilled direction of Charles H. Hoffman the state was mapped over a period of years. The first major map of the Survey, first issued in 1867, was of the environs of San Francisco Bay. It was soon followed by maps of Yosemite Valley and the surrounding region of the Sierra Nevada. The map of the State appeared in 1873, and was reissued in revised editions up to 1887. The State had achieved its goal of an accurate map of California.

Mapping the Northern Trans-Mississippi West

Ralph E. Ehrenberg

Subheadings

French, Spanish, and English maps, 1755–1802
Maps from the Lewis & Clark Expedition, 1804–1814
The Rocky Mountain fur traders and trappers
U.S. Army Corps of Topographical Engineers, 1838–1863
Pacific Railroad Surveys, 1853–1854
Ferdinand Hayden and Yellowstone Park

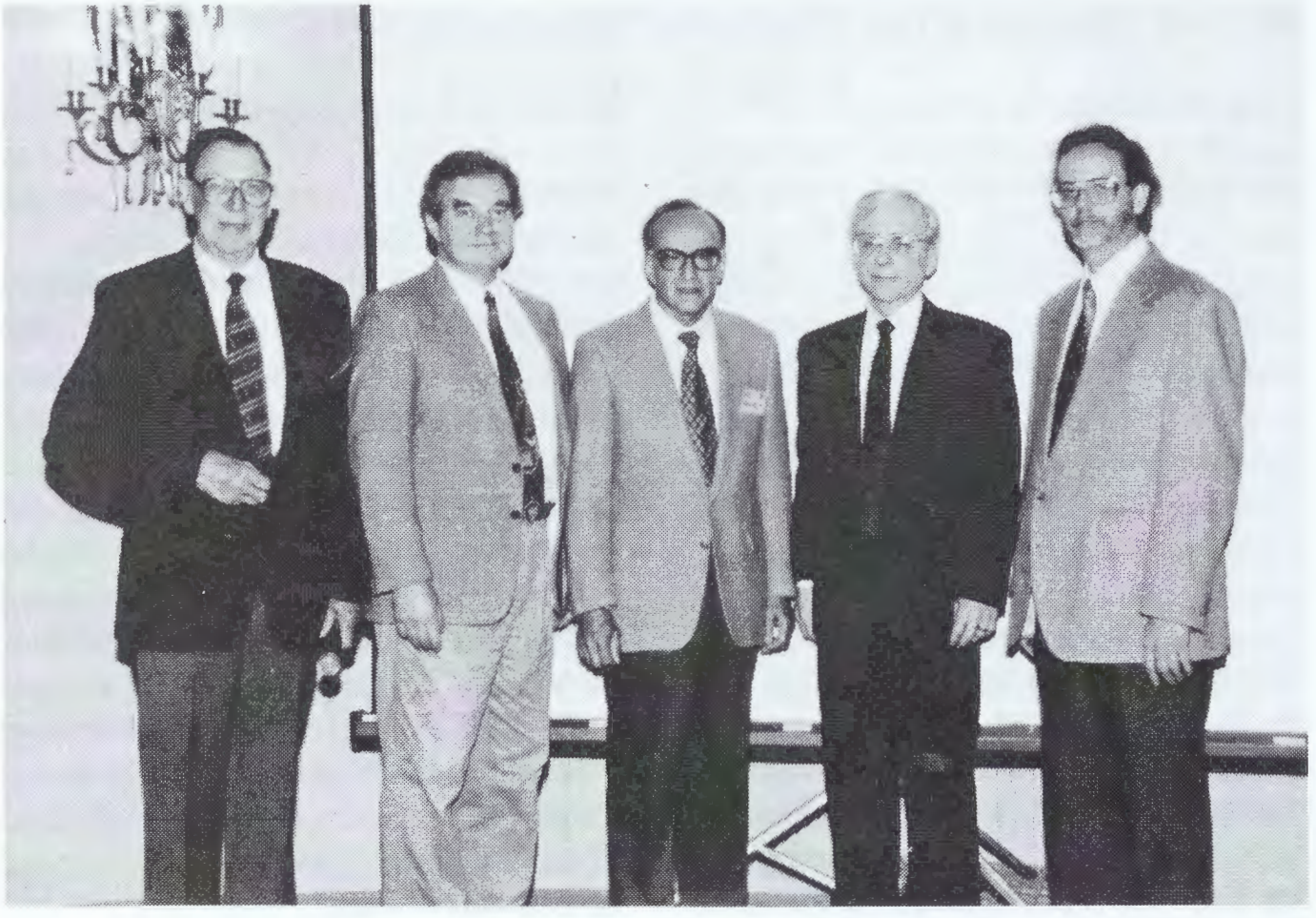
The last part of the trans-Mississippi West to be fully explored and mapped was its northern sector. Stretching from the vast flat lands of the Dakotas on the east to the coastal states of Oregon and Washington on the west, this area encompasses three distinct physiographic regions — the Great Plains, the central and northern Rocky Mountains, and the Columbia River Basin.

While the basic surveying and mapping of the northern trans-Mississippi West began only after the acquisition of the Louisiana Territory in 1803, the earliest geographical images were contributed by French, Spanish and English explorers and fur traders. French knowledge is summed up in the map produced by Jacques-Nicolas Bellin in 1755, and this was followed by subsequent English and American maps as late as 1814. After the upper Missouri River basin had been transferred to Spain in 1763, a map by Antoine Soulard was compiled for the Spanish government in which a greatly elongated Missouri River apparently merged two features, the Great Bend of modern North Dakota, and the Grand Detour in South Dakota.

From the time of the earliest explorers Indian knowledge was incorporated into Western maps. A significant source was a set of native maps prepared by Ac ko mok ki, a Blackfoot chief, which provided the first recorded geographical image of the high western grasslands and the Rocky Mountains derived from personal observation. This was copied through the Hudson Bay Company into Aaron Arrowsmith's large wall map (1795, and later editions) and into a map by Nicholas King (1803), compiled for President Thomas Jefferson, and probably carried by Lewis and Clark.

The scientific exploration of the uncharted Louisiana Territory by Meriwether Lewis and William Clark resulted in some 60 maps in Clark's journals and more than 100 separate route and area maps. They were incorporated into a large manuscript master map, compiled by Clark over several years and engraved by Samuel Harrison in 1814. This served as the basic map for much of the northern region for the next 40 years, and was widely copied by other cartographers.

Fur traders continued to provide much new information. One of the earliest was by Albert Gallatin (1836) in which he identified North American Indian tribes by their linguistic families. Contributions from the Navy in their first official charting expedition led by Charles Wilkes in 1844 included maps of more than 800 miles of the Oregon coast. Most maps still



Speakers on the second day (from the left): Al Newman, Ed Dahl, Gerald Greenberg, Ralph Ehrenberg and William Poe.

relied on personal information from the fur traders.

Between 1838 and 1563 the basic exploration and mapping of the trans-Mississippi West was conducted by the U.S. Army Corps of Topographical Engineers. In addition to surveys of wagon routes and projected railroads they carried out the first systematic studies of the the West's flora, fauna, geology, climate and native population. One of their most important maps was of the upper Mississippi River drainage basin, prepared by Joseph N. Nicollet (1842), who introduced the use of the barometer to determine elevations. His assistant John C. Frémont led five western expeditions between 1842 and 1853 covering more than 2,000 miles, and the resulting maps, prepared by Charles Preuss, and showing only territory actually traversed by the expeditions, stimulated western travel. In 1846 Preuss prepared the first road map to the Western coast, printed in seven sheets for easy handling by wagon masters under adverse conditions. The need to improve the routes led to orders from Congress for additional surveys by the Corps of Topographical Engineers.

By 1853, territorial expansion to the Pacific Coast was completed, and the public demanded a railroad link. Surveys resulted in a 12-volume work, with one volume devoted solely to maps, published by the Federal government between 1855 and 1861. They were enhanced with land-

scape views and scientific illustrations. The most significant achievement of the Pacific Railroad Surveys was the publication of a map by William H. Emory and K. Warren (1857), which represented the culmination of 50 years of western military exploration.

Two major areas remained to be discovered, the middle course of the Colorado River in the south and the headwaters of the Yellowstone River in the north. William F. Raynald failed to reach the Yellowstone Lake but his map of the surrounding area (1869) revealed accurately for the first time the Big Horn Mountains, the ranges guarding Yellowstone Park and the correct alignment of the Big Horn and Wind Rivers. It was left to the surveys of Ferdinand Hayden to produce the first map of Yellowstone itself, and promote the establishment of the first national park (1871). The region of Yellowstone had first been placed on the maps by William Clark in 1807 and its mapping in 1871 marked the end of the early exploratory mapping era and the beginning of the systematic topographic and geologic mapping which led to the founding of the United States Geological Survey in 1879.

The Mapping of Western Canada and Alaska

Edward H. Dahl

A brief look at any of the thousands of maps produced in the years before 1700 shows that the north-western part of the North American continent remained a 'terra incognita' to Europeans. For collectors, printed maps are of more interest than the many manuscript maps produced by explorers, traders, settlers and others, and many of these continued the myths of the early ones. One such myth can be seen in the world map of Pierre Mortier (ca.1700) with its large body of water inundating all of the southernmost Canadian prairie region from the Lake Winnipeg area westward. This myth of the Sea of the West dates back to reports from the 16th century. When it was determined that the Great Lakes were not this sea, the sought-after water body moved westward, perhaps replacing the desired Northwest Passage to the Pacific.

Tentative European exploration began to show on the maps during the 18th century, but as late as Joseph-Nicolas Delisle's map (1752) much of modern British Columbia was shown as a lake, and a series of interconnecting lakes and rivers joined Hudson Bay and the Pacific Ocean. This was not new, but Delisle's authority gave the concept credence.

Only during the 1770s did the map of western Canada undergo the major changes that filled in the vast blank spaces with recognizable geographical features. The chronological sequence in which this exploration took place seldom coincides with the sequence in which maps were actually published and made available to the public. For example, Samuel Hearne's major explorations were carried out in the years 1770–72, but his account and map were not published until1795, though his

route had already appeared on other maps.

Discovering the well-known Indian portage between the watersheds of Hudson Bay and the Arctic, Peter Pond, a US fur trader was able to explore the immense system of rivers and lakes to the northwest. His original maps have not survived, but his information appeared on the maps of others.

Maps by Aaron and John Arrowsmith are important for the study of the development of mapping in the Canadian West, though they also raise problems about the dates when information was disseminated, such as a slip of paper pasted to a map of 1795 copying information published the same year, though it was widely known eleven years earlier. Arrowsmith's maps were printed in revised editions up to 1850 and compiled the steadily increasing geographical knowledge of the day, collected by explorers such as Alexander MacKenzie and David Thompson. MacKenzie travelled down the river named after him to the Arctic Ocean (1789) and to the Pacific ((1793); he was the first white man to travel overland to the coast, and also on the Fraser River near its source. He believed it to be the same as the Columbia River, an error which was corrected by David Thompson's survey of the entire length of the Columbia River in the years 1807–11, as shown on Arrowsmith's map of 1814.

While recovering from a broken leg in 1789–90, David Thompson was able to study astronomy and surveying, which enabled him to provide the first comprehensive maps covering the entire Canadian West, which were based largely on his primary source material. It is unfortunate that none of them were published during his lifetime; this was partly because of their immense size, but also because his employer, the North West Company, did not wish his information to become widely known.

In 1857 John Paliser was sent by the British government to explore the resources of the region between Lake Superior and the Rocky Mountains. His map (1865) includes notes on the topography, its geology, quality of soils, passes through the Rockies, and most importantly, the semi-arid region of Alberta and Saskatchewan, now known as Palliser's Triangle. His reports and comprehensive map were essential for subsequent decisions about the use of Prairie land, construction of railways and establishment of the North West Mounted Police patrol network.

The flood of maps produced towards the end of the 19th century served the purposes of government, commercial houses, railway companies and speculators. An example is that of Joseph William Trutch whose map of British Columbia (1871) incorporated surveys of George Vancouver as well as later charts from the British Admiralty, the British Royal Engineers and others.

Bird's-eye views or panoramic maps were prepared for several towns and cities in the last quarter of the 19th century, and provide today a unique means of identifying buildings, even individual houses. They were prepared from artist's drawings superimposed on large-scale maps adjusted to give the impression of being viewed from an oblique angle. They were used to lure settlers and those seeking gold after the finds in the Klondike, as seen in that of Dawson City (1903).

Any brief overview of 20 decades of mapping of such a vast region must leave

gaps. But the immense energies expended to obtain the geographical information on which the maps were based can be seen, though often overlooked, in the colourful, fascinating pieces of paper we collect today.

The Pre-European Cartography of Native America

Lee Davis. Presented by William Poe

Mapping the world was an activity that native people of North America did often, in many ways. The problem has been that outsiders have not always been able to read the cartographic symbols used in cultures other than their own. Many early European explorers commented on the proficiency of native geographical knowledge but depended on native interpretation to understand the maps. Persecution of the intellectual elite among the tribes led to abandonment of mapmaking, and disregard for their skills. Only recently have the descriptions of their maps handed down by early explorers received the recognition they deserve.

The term map is problematic for non-literate cultures. Not only does it convey the sense of a representation of the world's surface, it also includes mapping behaviours, such as songlines for travelling, story maps for locating meaningful places, and delineation of a cosmological world view.

Two categories of maps can be discerned: a secular one which includes maps intended to communicate essentially topographical features, and a second one which includes maps relating information about moving through sacred as well as social geography. Maps in the latter group are intended as communication about identity and responsibility among kin, between human people and non-humans, and aroused little interest among the early colonists.

When asked to indicate direction or provide a chronology of events, Indian peoples typically traced maps on the ground, or drew on birch bark, examples of maps of the first group, some of which have been preserved. One such map was drawn in the Plains, Dakota Territory, to depict a trip made to steal a horse. Two wooden maps from Greenland in the Arctic Region show two mainland coasts on one block and the offshore islands on the other. Another is a reproduction of the battle of Hard River fought during the Sioux uprisings of the 1860s. A map on deerskin of the area outside Charlestown divides European settlements depicted with squares from those of the indigenous communities which are shown as circles. A variable scale permits the proper spatial ordering of political elements by manipulating distance.

More difficult for other cultures to understand are maps of the second category. One called Powhatan's Mantle dates from around 1608 and consists of four deerskins sewn together and decorated with shell beads to depict a human flanked by two animal shapes. Around them are 34 circles of beads representing the separate chiefdoms under Powhatan's control. Others depict the paths of move-

ment through the cosmos, where cosmology is transformed into cartography, a style of mapping that was incomprehensible to the Christian invaders.

Examples of this type of map include a depiction of ceremonial space from the Creek tribe of the southeast, and sand paintings made by the Navaho of the southwest designed for use during certain ceremonies. Some symbolise, for example, the route of the First People rising from the underworld through a reed, and a line of pollen connecting two heads of deities, a spiritual pathway. Seemingly geometric designs can depict the Blackfeet view of their social and spiritual geography, while success in the battlefield can be read from a painting on a tunic.

Current work has coined the term 'chronotopes' to depict 'points in the geography of a community where time and space intersect and fuse. Time takes on flesh and becomes visible for human contemplation.' Memories of land lead to right behaviour, while ignorance of it leads to trouble. Stories cannot be separated from geographical locations; with loss of land memory goes loss of identity.

Status of Current Federal Digital Cartography in North America

Gerald L. Greenberg

Traditional reasons for topographical/hydrographic surveying and mapping are similar throughout history. Cultural developments and expansion require discovery, description, analysis and control of lands and seas. More recent mapmaking requirements are for recording and studying dynamics of peoples, resources, environments, ecology and geophysical-astrophysical forces.

Mapmaking in Canada, Mexico and the United States has been modernized during current decades. Changes in methods of surveying and map production were brought about through academic, commercial and government agency research in surveying and photogrammetry data acquisition (remote sensing—RS), Geodesy (global or satellite positioning systems—GPS, electronic distance/angle measurers—EDM) and automated mapping facilities management —AM/FM (geographic information systems—GIS, computer assisted drafting—CAD and desktop publishing). These cartographic innovations are not unique to North America; they are fast becoming ubiquitous throughout modern nations.

In Canada, GIS growth prospects are supported by the ongoing role they play in highly active energy, mining and renewable resource industries, as well as settlement of native land claims. Development of the world's first GIS in 1963 is claimed by Canada. Recent GIS mapping projects include a land registration system in Ontario, and land resources management systems in British Columbia, Alberta, Saskatchewan and Manitoba provinces. Major thematic mapping applications focus upon agriculture, forestry, fisheries, mining, wildlife, recreation areas and na-

tional defense. Digital map databases are being created for the Canada Central Mapping Agency, and Canada is a participant in the Digital Chart of the World global data base at a scale of 1:1,000,000.

In Mexico there have been efforts to develop and use automated mapping technologies since 1974. With recent constitutional changes in land tenure laws, there have been multiple uses of remote sensor data and GIS in agriculture, forestry, and rural and urban planning activities. Automated mapping innovations are in use with many Federal agencies. The Direccion General de Geografia recently completed a 'Border Plot Project' covering the international boundary between El Paso and Juarez. Academic institutions are also applying automated mapping technology to spatially-relate demographic, agriculture, forestry and ecology problems.

In the United States, in April 1994, the President signed an executive order to establish an electronic National Geospatial Data Clearinghouse. This establishment is essential to help organise and centralise public and private access to a huge amount of digital mapping data or products, as well as to promote use of Spatial Data Transfer Standards. In the Federal production sector there is a core of mapping agencies which have fostered new technical developments for several decades since the formative stages of map automation. There are many in the Departments of Commerce, the Interior and Defense, and in other agencies too. Support for digital mapping innovations also comes from prominent professional organizations, and many examples of national map base series are being converted to a digital mode.

Aerial photo surveys and photogrammetry have, since the 1930s, played vital roles in changing map data acquisition and compilation. Satellite imagery and electronic image processing have had similar effects since the 1960s. Development of Side-looking airborne radar has led to increased capability for all-weather and day or night survey applications.

The classical design of base maps, in which features are represented by point, line and area symbols, will be supplemented by digital vector graphics or replaced to a large extent by electronically compiled and scanned photoimage and map composites called digital raster graphics. Traditional map character and survey sources must change! The map user's traditional dependence on conventional map symbol abstractions will decline, and cartographic communication efficiency will increase through more realistic, personal-visual interpretation of natural landscape photoimages, spatial patterns, and spectral tones and colors which are enhanced by digital cartographic analysis and processing of related digital cartographic data from 'seamless' archives.

ABSTRACTS FROM THE SAN FRANCISCO SYMPOSIUM

These eight abstracts are taken from the texts of the papers that were handed out to particpants at the end of each day, an excellent arrangement. If the papers had been handed out before, there would have been a disturbing rustle as people turned pages! Not only were the full texts available, but also black and white copies of all the slides. Our thanks to Al Newman and his committee for undertaking a difficult task with splendid results.

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The IMCoS Symposium 1995
San Francisco, October 8 - 11
Personal Impressions

The History of the United States, California State Series of School Text-Books, compiled under the Directory of the State Board of Education and entered according to Act of Congress, in the year 1888, by the State of California, in the office of the Librarian of Congress, at Washington, states on page 382 nr.761, that the white population of California (in 1846 about 1,000) represented chiefly descendants of Spanish lineage. Further down, on the same page, one reads that Californians "were intelligent, quick witted, brilliant in conversation, but had no great endurance to maintain a cause or to resist moral temptation".

From the Oregon / California border where we had only been asked whether or not we had to declare any fresh citrus fruit or vegetables and when our re-importing from Oregon to California of some Californian apples caused only a friendly smile on the face of the officer on duty, to the confines of San Francisco we had noticed none of the character traits described above. It was thus with a certain degree of curiosity that our party crossed the Golden Gate Bridge on the afternoon of Wednesday 4th October, to find our way to Sutter Street and the Marines Memorial Club of San Francisco, the venue of this year's IMCoS symposium.

The Marines Memorial Club proved



IMCoS President Oswald Dreyer-Eimbcke cuts the tape at the Map Fair, with George Kane on the left.

to be a different place from what we had expected. There were no antique or even old sea charts or items reminiscent of explorations of long times past; the reference to marines was, however, of no lesser tradition. We had to do with the Marines of military fame! The Club turned out to be a hospitable hotel with friendly and efficient staff who looked after us well for the entirety of our stay.

Sunday 8th October

Three days in San Francisco were sufficient to make one feel at home in this city of about 750,000 inhabitants with European type transport like trolley buses, trams and cable cars, means of transport disappeared for the most part from the streets of European towns. Eventually Sunday arrived and time for registration for the big event. Every participant was handed a large and strong bag with all the symposium's details including a couple of glasses to savour Californian wines.

And so off to view the maps and books that were on offer for the following day's auction. My eye was caught by a fine set of James Cook's account of his voyages estimated at $18,000 to 25,000, several lovely maps by Blaeu of the Americas, Asia and Europe, and a number of beautifully engraved maps by Coronelli of North and South America, the Caribbean, Mexico, Canada and China. There was generally great interest in the material on view considering the number of visitors although I felt that pricewise many of the items might be out of reach for the average collector. At any rate I decided to go to the auction the following day to observe how the bidding was going to develop.

At the map fair of the approximately 40 map dealers only 5 had crossed the Atlantic from Europe to exhibit. The Europeans were thus somewhat under-represented looking at times a bit forlorn as particularly one of the European dealers did tucked away in a corner of the room. Map collectors and dealers alike took great interest in the material on offer as one could tell from the background noise prevailing in the room. From talking to some of the American dealers, it appeared that also by US standards, this was a particularly big map fair as they are normally not held even in the United States.

The hustle and bustle was interrupted by a strong clear voice that demanded attention and that was to stay with us for the rest of the symposium and its social events: Alfred W. Newman, president of the California Map Society, entered the scene to extend a warm welcome to all those who had taken the first opportunity to visit the fair and inspect the maps and books up for auction. After a couple of administrative announcements, during which he stated that the number of participants had initially been estimated to be 150, had then been corrected upwards to 180 and had now finally reached approximately 200, he invited everyone not to forget the wine and cheese reception in the evening. He also announced that, as advertised in the local press, IMCoS Chairman Susan Gole would give a talk on the floor above on map collecting for beginners. This was well attended, with several people arriving with the printed advertisement in their hand — good publicity

The reception, hosted by The Map Collector and Map Line, turned out to be a lively affair permitting all participants to

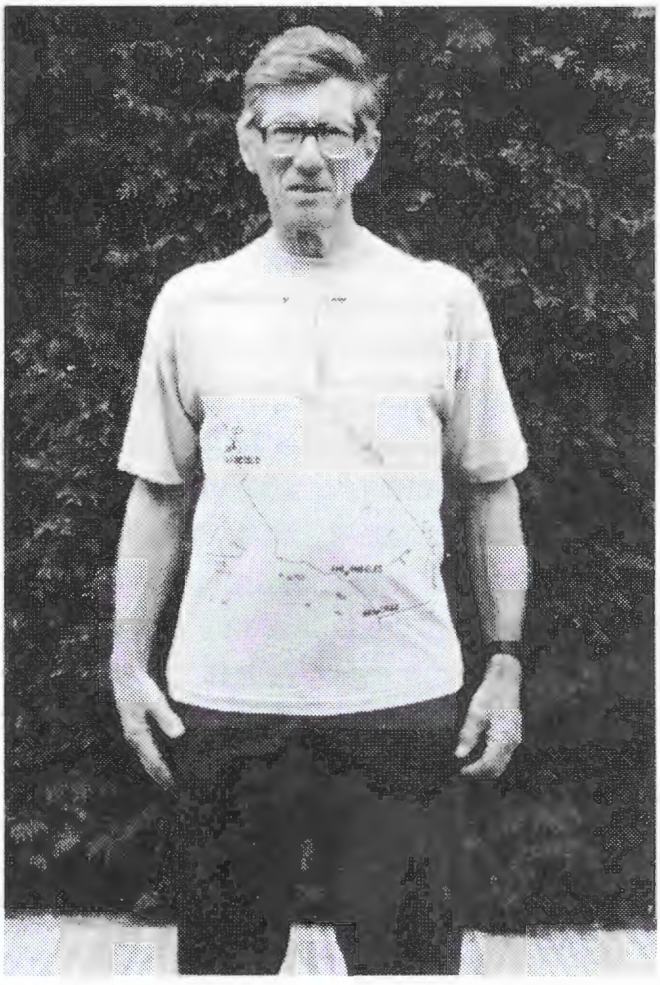
become gradually acquainted, to establish new and to renew old contacts. Over talks on maps and 'Where do you come from?', a good selection of Californian wines and cheeses was very much appreciated. We finally left at 20:00 leaving many people still enjoying themselves.

Monday 9th October

After breakfast some reluctant sightseeing since the map fair was waiting to be visited. I went back before lunch and by 17:00, when the fair closed its doors, I had managed to visit almost every stand and exchange a few words with the exhibitors. There were maps for practically everybody's taste and for everybody's financial means. I did note, however, that my taste very frequently seemed to be more on the expensive side than otherwise. Most of the material on offer was geared to generally more local and US customers as was to be expected. Nevertheless, I found a coloured John Seller map in original colour which I happily carried away. There were some outstanding maps of the Americas on sale, two large Leo Belgici and the famous Bünting world map in the shape of a clover leaf.

It was necessary to tear myself away from the fair to pay a visit to the Book Club of California who had extended a special invitation to IMCoS members. The Book Club was founded in 1912 and is a non-profit association of book lovers and collectors who have a special interest in the literature and history of the Pacific Coast, in the graphic arts and in fine printing.

For the occasion of the IMCoS symposium, Warren Heckrotte had mounted and displayed some 25 maps from his



IMCoS photographer David Webb, wearing the shirt he painted specially for the symposium: California on the front, and Riga on the back (see page 36).

collection depicting the mapping of the western United States. Of great historical interest they covered the period between 1650 to 1883 some showing the advance of the Russians into Northern California on the one hand and the progress of the Spaniards from the South on the other. Asking one of the Book Club members which of the maps in his view where his favourites, he pointed out two items: Miguel Consant's 'Carta Reducida Del Oceano Asiatico, O Mar Del Sur, Que Comprehende La Costa Oriental Y Occidental de La Peninsula De La California,....' dated Mexico Octobre 30, 1770. This chart, I learned, is the first printed

chart to show San Francisco Bay. The other map to make a collector's heart beat faster I understood was John Parke's and Richard Kern's Map of the Territory of New Mexico of 1851. Experts say that at the time this was the best map of most of the region.

A big 'Thank you' to Warren Heckrotte and the Book Club of California, and in particular to the members of the Club who were prepared to spend their spare time in the Club to welcome the many IMCoS members that came to see the maps, exchange views and discuss matters of mutual interest.

After a welcome cup of coffee and biscuits, back to the map fair for a last look at maps and books; the intense browsing, viewing and dealing was interrupted by the now almost familiar sonic voice of Al Newman who announced, certainly to my regret, that the fair was to close at 17:00 sharp. On the other hand, this call to order was not heard with too much disappointment as there was still the Arader Gallery to be visited, and that invitation was not to be ignored either.

Graham Arader proved to be a generous host greeting us with a hot meal, cheese and wine. They had some very fine maps and celestial charts on display; some outstanding and elaborate framing did not go unnoticed. We left after about an hour after expressing our gratitude for the supper reception and the opportunity to visit a gallery all map collectors world-wide had heard of but not very many had had a chance to visit until to-day.

For those who enjoyed a walk, Marianne Hinckle had prepared a magnificent spread in her home overlooking North Beach. Set on a rural, wooded hillside, now under strict conservation orders, her 'cottage' is a most confortable retreat from the busy streets, and commands a spectacular view. Marianne was the inspiration behind the use of the map on all the symposium literature, and she undertook the production of the splendid cartobibliography *The Mapping of California as an Island*, generously donated to each participant by author Glen McLaughlin

Back to the Marine's Memorial Club and its 10th floor for the auction. Interest in the event was such that the auction room was packed to the last available seat. Many had to stand in the rear of the room and some were sitting outside. Having been to a number of auctions in London, Germany and Belgium, this was the first such event the undersigned witnessed in the United States. It was novel to the degree that there were no knock-down prices since there was nothing to knock the prices down with or onto — neither pulpit nor desk nor hammer were used; the efficiency however with which the auction was conducted was no less than in Europe; indeed it was refreshingly casual. The auction lasted for about an hour with a relatively high number of the more expensive items left unsold.

When finally calling it a day that evening I wondered whether or not I was going to need a holiday upon our return home to recover from the demands of what seemed to be developing into a most interesting symposium.

Tuesday 10 October

The symposium day began relatively early at 9:00 with the first series of lectures being introduced by Al Newman. He

confirmed the large number of participants to the symposium, comparing the flocking of people to San Francisco on the occasion of the event with the past gold rush and inviting everybody to spend as much money as they possibly could in order to support the Californian economy.

The speeches during the morning covered the subjects of Maps of the Pacific Coast of North America until 1800, Early Geographic Knowledge of Mesoamerica, The Cartography of the Interior: The American Southwest and The Mapping of California, 1769 - 1873. With these presentations being printed in abstract form (pending a possible book edition) in the IMCoS Journal, there is no need for the undersigned to dwell much longer on the contents of well developed themes about the mapping and the cartography of the western United States. It suffices to say that the lectures were very well attended and followed with great attention.

There was hardly any time to breathe and less for lunch, when at 14:00 all, or almost all, symposium attendees boarded 4 huge buses that took them to the University of California, Berkeley, but not before stopping for a short time at the Wells Fargo History Museum, where Dr Robert Chandler gave a brief introduction to the collections.

People like myself who as teenagers were drawn towards western movies and became captivated by the genre are as familiar with Wells Fargo as if it had been the enterprise established down the road from where they lived. It was with such feelings that I entered the museum to be immediately fascinated by the stagecoach which occupied the centre of the hall. Built to seat nine people inside and as many as were willing, capable and strong enough to sit outside, either next to the driver, on the roof or at the rear, the average stage coach provided a means of transport to approximately 15 to 18 passengers during any one journey. A model of a similar coach could be boarded, just for the fun of it, which we did, cramming nine of us into the inside without however venturing onto the roof. It was difficult to imagine how passengers were made to suffer the stress of a journey, for instance from Sacramento to Omaha, for a price at the time of US $300. During our stay in California in October, special bargain flights were on offer from San Diego to any one place in California for $39! Wells Fargo began their existence as a Company in the 1840s during the days of the California Gold Rush. They have been thriving ever since, holding the oldest bank in California. They controlled the overland mail and transportation in the western United States between 1866 and 1869.

The museum holds a number of artefacts and memorabilia important to Wells Fargo and the development of the American West. Apart from the stage coach other exhibits included gold nuggets, quartz crystals and tools related to gold digging. About 2300 tons of gold were produced in California between 1848 and 1900. Several maps were on display amongst which I found a San Francisco to Burlington Railroad map of particular interest as the approach taken to inform travellers about their whereabouts was not so much different from the Ogilby road maps. We were grateful to the organisers for putting up with such a huge crowd that descended upon the Museum all at once.

We boarded our buses again settling

into our seats with sighs of relief, grateful that they were not dozens of stage coaches taking us on a bumpy ride to Berkeley.

The journey to the University of California, Berkeley, took us across Bay Bridge and for the last few kilometres through an extremely well kept and lovely university campus. Our first stop was at the Department of Geography were we met Cherie Semans and visited the section on computer cartography. Here the demonstrations of computer-aided cartography were breathtaking; it was staggering to realise what this technique was capable of achieving in terms of map drawing. An example may be found on the last page of the symposium programme which shows a map drawn using the Adobe Illustrator 5,5 software running on an Apple Macintosh Quadra 800 processor. A larger version of a similar map used as a wall map was on display in the department. The expert and friendly staff — students and teachers — did not tire answering the many questions by us interested lay persons. It was with some regret that many of us had to move on after a captivating but all too short stay, not, however, without expressing our gratitude to those that had waited on us to make our visit a most captivating one.

A brief walk took us to the Earth Sciences and Map Library and more particularly to the Water Resources Center Archives. Philip Hoehm told us that this reference collection was begun in 1957 as the hydrology division and later merged with other collections from the Departments of Geography, Geology and Geophysics, and Paleontology to form the Earth Sciences Library. The collection which concentrates on California serves all of the university but is also open to the public. The map collection relies heavily on donations; the current material is made up of some 300,000 maps, aerial photographs, atlases and books. Computer access from the library, the office or home is available to a variety of local and worldwide sources of text, data and image databases via MELVYL and Internet. We were informed that much of the material is used by hydrology engineering. The maps displayed on the occasion of our visit were a series of interesting topographical and irrigation maps. We separated with much appreciation from our hosts who had managed to teach us about an area of cartography with which most of the participants were not very familiar.

Our next stop lead us to Gianini Hall to visit the Map Collection composed of some 800 cartographical items two thirds of which were facsimile maps. The originals are kept in the Bancroft Library. In addition to these maps the collection holds a vast number of books and a considerable accumulation of maps in digital format. Finally, a large amount of aerial maps has been added to the department's stock since 1928 which are used for home planning. Much of the collected material is disposable on-line and via Internet. We were grateful for yet another aspect of what the University of California, Berkeley had to offer in terms of versatility of research in the area of cartography.

The group then continued towards the Bancroft Library with the undersigned looking forward to inspecting some truly old maps. Dr Carl Faulhaber, the director of the library, bade everyone a warm welcome inviting us to partake of snacks of cheese and to try some of the local Cali-



There were plenty of interesting maps to see at every halt on our excursions.

fornian wines. He then gave the participants a brief overview of the library's history. H.H.Bancroft, a bookseller, started the collection in the late 1850s, concentrating on the history of California. Some of this material was published in 1896; during 1905 Bancroft sold the collection to the University of California, Berkeley. The collection was amalgamated with other collections notably with the collected papers of Mark Twain, but also with a large variety of papyri adding a new dimension to the collection. To date, the collection comprises some 20,000 items mostly of the western United States and California including the map collection of the university library and covers now all areas of the world. The Bancroft Library prides itself on having as part of the collection the Codex Fernandez Léal, a pre-Colombian codex tracing the Aztec people and their history. Lastly, the collection embraces some 1500 sketch maps from Spanish and Mexican land Grande.

Richard Walker, a colleague of Carl Faulhaber, added that maps tell us other things about people, their past activities, occupations and worries. Future computer systems were to help us bridge the past and relate it to the present, one being for example the Geographic Information System, GIS.

As a sign of appreciation of IMCoS, its president, Oswald Dreyer-Eimbcke, presented Dr Faulhaber with a reference

book on California as an island. Susan Gole also expressed her gratitude on behalf of all IMCoS members stating what a big privilege it was to have been invited and become acquainted with the Bancroft Library and its treasures. Richard Walker, half jokingly and half in earnest, referring to the latter, stated that normally visitors and scholars alike visiting the library, in order to minimise the risk of damage to old maps, were allowed to bring with them only pencils — ball point pens were strictly taboo. As far as he could recollect, this occasion today was a first with respect to food and drink being allowed for consumption in the hall.

Next, Mary Elizabeth Berry from the history department, gave a lecture on the library's collection of Japanese maps, regarded the largest outside of Japan. Her presentation was fascinating and allowed visitors to gain a deeper understanding for the Japanese art of map making and what kind of information important to Japanese customers these maps held. In view of several Japanese maps on show, both large format and as scrolls, it allowed participants to read them better — particularly against the background of the rather poor knowledge of Japanese most of us had. We learned that the Japanese 'early modern period' of map making began in the early 1630s. The promoters in those days were the state who contracted for four surveys to be carried out, and private patrons. Maps were drawn on paper and on silk and mostly in the forms of screens or scrolls. The latter form makes the reading of maps more difficult insofar as the map of a river would show on one scroll what was to be seen on one bank of the river going up-stream, for instance, while a second scroll would depict what was to be found on the other bank of the same river but this time going down stream.

Most of the Japanese maps would be woodcut maps, little was made in copper plate; few maps existed as sheet maps. Hand colouring of maps was done from the beginning of the 17th century. Maps in Japan were published on a wide commercial scale: between 1600 and approximately 1850 some 2000 editions of Tokyo were published.

A further interesting feature of Japanese maps was that they had no scales and that distances were given in days' travel, information modern road maps could well be expected to hold too, albeit in hours rather than in days. Japanese so-called neighbourhood maps were in high demand. These maps provided information readily of what would today be considered highly personal and confidential data like income of the inhabitants of houses in a given road, and the size of the house they lived in; this information was complemented by data on cemeterys indicating who was buried where and what the size of the grave was. Japanese maps of the 1630s were saturated with facts at times converting religious sanctuary into public history.

Ms Berry received an enthusiastic round of applause for what all without exception considered to have been an astonishing survey of Japanese map making, told with such expertise and devotion to the subject.

From the Bancroft Library a short walk took the symposium participants to the Great Hall of The Faculty Club for dinner and drinks and more lively conversations about the day's events, and im-



The symposium speakers receiving applause and warm thanks at the Banquet.

pressions with old and newly gained friends and acquaintances, a liveliness to which the Hall, reminiscent of a huge overturned ship's keel, contributed a great deal. And so, after a copious meal, back to San Francisco.

Wednesday 11 October

Breakfast too early for a holiday, and off to the meeting room to safeguard a chair closer up front, given that the quality of the acoustics in the meeting room left something to be desired. With the abstracts and contents of the lectures to be reproduced in later editions of the IMCoS Journal it shall suffice here to report that Oswald Dreyer-Eimbcke spoke for everybody when he expressed his gratitude at the addresses of the speakers who had gone through much trouble to work out their presentations; congratulations also went to the organisers for the preparation of the symposium and for succeeding in convincing the most recognised authorities in their field of research to speak to the attendees.

The meeting finished at around 12:00 leaving all those taking the tour to Stanford University with relatively little time to freshen up and get ready to board the buses again at 12:30, not before, however picking up en route a lunch packet in the reception. The motor way to Stanford University provided additional opportunities to admire the landscape, or doze off.

Our tour of Stanford University

started with a visit of the university chapel which shortly before had undergone some repair after the last earthquake three years earlier. The chapel turned out to be larger than its designation 'chapel' would lead one to believe, with very ornate decorations, and modern stained glass windows. It did not come as a surprise to learn from Al Newman that the chapel was in high demand for weddings.

Leaving the chapel and its calm atmosphere behind, we were taken first to the Branner Earth Sciences Library and Map Collections to hear about the kind of maps being collected there; the collection which was begun in 1892 can safely be regarded as one of the largest today . We received a hearty welcome by Judith Smith who explained that the art on how to make geological maps was taught on the premises; to everybody's surprise we were also informed that the geography department of the university had been closed in the 1950s due to lack of students at the time. Joe Herro gave an overview of the maps the collection contained: these were mainly city and county maps of San Francisco notably one by George Goddard dated 1869. The collection also held an atlas of Mongolia and a world map of volcanoes. The bulk of the maps in the collection consisted of topographical maps, geological maps, etc. During our short stay in the department there was an opportunity to study the Graphic Chart of the Comstock Mines in Nevada dated 1878 and the Map of the Trans-Mississippi Territory of the United States during the period of the American Fur Trade, 1807 and 1843.

The group's next stop was to meet again Gerald Greenberg at the United States Geological Survey Facility, Menlo Park, and to learn all we wanted to know about the Anticipated Earth Quake Hazards in San Francisco, and about Watching and Listening for Clues to the Next Big Earthquake. There was a multitude of charts and graphs on earthquake damage and on the effects of the 1989 earthquake of Loma Prieta in 1995, the earthquakes in Kobe in January 1995, Hanshin in 1995 and Northridge, California in 1994. The San Andreas Fault System in California was explained at length and I decided I was going to study it at home! I did my best to forget what I had seen and heard which I managed to achieve with some difficulty, considering the earthquake we had heard about in the news the day before having struck Mexico City and the reverberations of which were felt as far away as Dallas, Texas. By geological standards, I pondered, how important was a distance of a couple of thousand miles for two continents rubbing shoulders?

Back on board our buses we turned towards San Francisco heading for the Sutro Library, our last visit on the itinerary of this year's symposium. We were given a warm and jovial welcome by Professor W. Michael Mathes and invited to enjoy the cheese and Californian wines. Somehow the embarrassing news of carelessness with glasses in the Bancroft Library must have reached Sutro Library before our arrival as we were kindly reminded not to deposit food or drink on the book shelves — no untoward incidents were recorded that afternoon!

Professor Mathes briefed the attentive audience about the history of the library and its founder. Adolph Sutro came from Aachen — Aix-la Chapelle — the

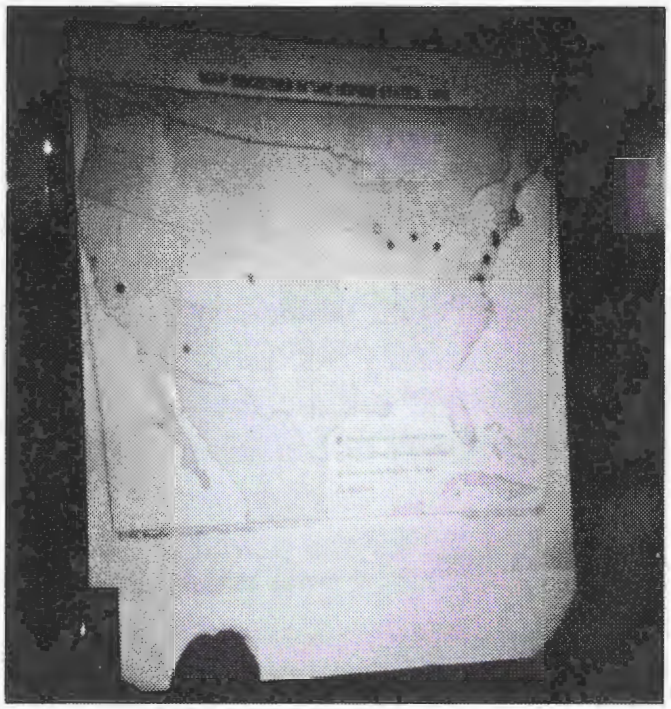
city were Charlemagne built in the 9th century part of the Minster which can still be visited today. He, Sutro, was a cigar merchant and was asked to find a way to help drain the Comstack mines. At some time he became mayor of San Francisco and created some of the city's infrastructure. Fortunately for bibliophiles, map collectors and researchers of today, he created a library by acquiring books of all sorts, and maps, thereby laying the foundation for the largest privately owned library with ca. 250,000 titles and consequently creating an invaluable place for research.

After Sutro's death, his heirs donated the library to the State of California. Later the collection was extended by incorporating the collection of Sir Joseph Banks, a companion of Captain James Cook. The collections also include the original drawings of Captain Bligh. Furthermore, a wide range of British and Mexican political pamphlets are part of the library today. After some warm words of thanks by Al Newman, we were all given the opportunity to inspect the maps and atlases displayed for our benefit and pleasure. Noteworthy among others were two atlases by de Bry, several maps of Mexico and a map of Louisiana by de l'Isle and Philippe Buache of 1745, the first map mentioning Teijas, i.e. Texas.

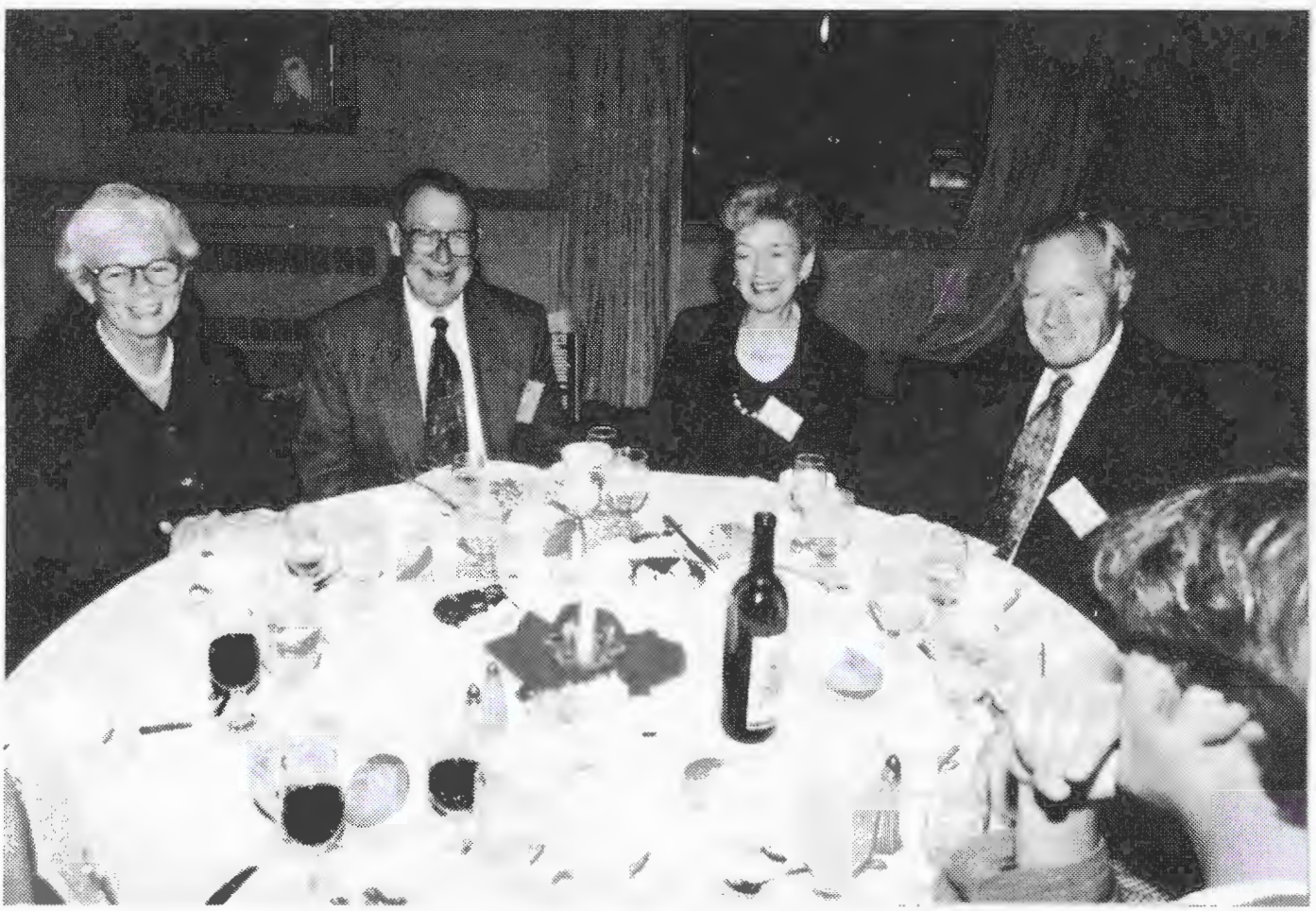
The highlight of the day, I must qualify this as a very personal opinion, came unexpectedly towards the end of our stay at the Sutro Library when, in anticipation of our return to the hotel and to preempt any physiological needs that might emerge during the final stage of our bus journey, I asked someone for directions to the toilet. 'Go down that corridor', was the answer I was given with a broad smile, 'where Rodney Shirley is with that crowd.' I walked as I was told down the corridor wondering why Rodney and a crowd of people would be standing in front of the toilets. The mystery was quickly resolved. Indeed, there they all were, only by chance within sight of the toilet, gathered around Rodney Shirley and in front of the only known copy of 'Nova Totius Orbis Mappa, Ex Optimus Auctoribus Desumta, studio Petri Kaeri', Pieter van den Keere's wall map of the world, Amsterdam 1611. The whereabouts of this map had been unknown till 1977, when Rodney Shirley — and others as he writes in The Mapping of the World — noted a photostat in the Library of Congress files. The map was finally discovered in San Francisco; Rodney Shirley had no idea he would find it hanging here in a corridor so unobtrusively. Rodney had already twice given a brief lecture on the van den Keere map when I joined; he readily accepted to repeat his thoughts and analysis of this outstanding example of cartographic craftsmanship — he did so four times altogether. It was fascinating to suddenly stand in front of a wall map that few researchers have had and will have a chance to see and study and simultaneously listen to the authority on world maps, Rodney Shirley, flow over with admiration in the face of a map drawn almost four centuries earlier. Personally, this episode I found the most moving experience of the symposium.

And so back to the hotel to prepare for the banquet. A convivial event it became and only slightly more formal than the dinner at the UC Faculty Club thanks to our American hosts who know how best

to make foreign visitors feel at ease. The guests were bade welcome by the Master of Ceremonies, Alfred Newman, whom nobody had difficulty in understanding even in the most distant corner of the banquet room. After dinner recognitions were delivered by Tom Worth, the California Map Society Treasurer, to the symposium speakers, and Stanley Walsh introduced a CMC committee members. Susan Gole then asked each of the IMCoS commttee members and International Representatives to stand up as she introduced them. Ralph Ehrenberg, who had already given a lecture during the morning session, had not shied away from the additional trouble of talking about the Map societies in the United States and the Phil-



Map prepared by Ralph Ehrenberg to show the many map societies active in USA.



Al and Kitty Newman flanked by Erica and Oswald Dreyer-Eimbcke at the Banquet.

lips Society. Robert Clancy, having come all the way from 'down under' to enjoy, almost professionally one is tempted to add, his hobby of map collecting and writing about the subject, outlined his thoughts about Map Societies in the rest of the world and the role of IMCoS.

In the absence of IMCoS Director Themis Strongilos, who was unfortunately called away to Moscow on work, and of International Chairman Malcolm Young, who had had to break his record of attending every single IMCoS meeting, Susan Gole then requested IMCoS President, Oswald Dreyer-Eimbcke, to express on behalf of us all appreciation to those who had made this such an outstanding occasion. He then briefed everyone on the position of the arrangements for next year's IMCoS symposium to be held in Riga, Latvia, in October 1996. Oswald pointed out the difficulties an emerging democracy like Latvia; these start with the availability of hotel rooms and the underlying fear that spoiled Westerners may be difficult to satisfy. While expressing his gratitude to the organisers for the perfect organisation of the symposium and the accompanying social activities and visits Oswald presented the Chairman of the California Map Society, Al Newman, with the IMCoS plaque, as a token of our thanks.

Thus ended a fine event which will long be remembered, perhaps for different reasons, by all those who decided to venture across the Atlantic to revisit, or visit, a city and its people that, justifiably, cannot easily be compared with any other city in the United States.

ROLF LANGLAIS



Maps and clothing are growing ever stronger links, all records were broken in SF.

RODERICK M. BARRON

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MATTHAUS SEUTTER *c.*1740 IMPERIUM JAPONICUM



A superb mid 18th Century map of Japan

ローデリック・M・バロン

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世界各地及び日本古地図
専門取扱い

International News & Events

1996 15th International Symposium
Riga, Latvia
6–9 October
Contact: Dr Janis Strauchmanis
Tallinas 83–40, LV-1009
Tel: 371 2 29 05 72
Fax: 371 2 22 50 39

1997 16th International Symposium
Budapest, Hungary
26–29 September
Contact: Dr Zsolt Török
Dept of Geography,
Eötvos University
Ludovika 2, 1083 Budapest
Tel: 36 1 134 2785

1998 17th International Symposium
Tokyo, Japan
Tentative date: early October
Contact: Mr Kazumasa Yamashita
10-7-2 chome, Sendagaya
Shibuya-ku, Tokyo

RIGA, 1996

Arrangements for the symposium next year are proceeding satisfactorily. The following programme has been suggested:

6th Oct.	Sunday: Registration and Reception
7th & 8th Oct	am Symposium pm Visits to map collections
8th Oct evening	Banquet
9th Oct	Symposium
10th Oct	Optional tours, depending on request, to Rundale Palace and Jelgava City.

Papers at the Symposium will be in English or German. A full translation of each paper into the second language will be supplied.

Registration Fee

This may be paid on arrival in Latvian currency. The exchange rates at present are US$1 = 0.55 Lats; £1 = 0.83 Lats; DM1 = 0.37 Lats

For those who have returned the application form before 1st October 1995, as requested, the rate will remain the equivalent of DM 200, £80 or US$ 120 (DM 150, £60 or US$ 90 for accompanying persons), whether they pay before 1st March 1996, or on arrival. These rates will also apply to those who pay before 1st March 1996 (even if they had not sent in the Registration Form before 1st October

	DM	£	US$	Lats
Registration before 1.10.95 & paying on arrival	200 (150)	80 (60)	120 (90)	75 (56)
Paying before 1.3.96	200 (150)	80 (60)	120 (90)	75 (56)
Paying after 1.3.96 without having registered before 1.10.95	250 (200)	100 (75)	150 (120)	95 (74)

(Figures in brackets refer to accompanying persons).

1995). This is based on the current exchange rates, and assuming they do not change radically in the meantime.

For those who neither registered before 1st Oct nor paid the money before 1st Mar 1996, the following rates apply: DM 250 (200), £ 100(75), US$ 150 (120) . See the table on previous page.

The registration fee will cover symposium material, reception and banquet, visits to museums and libraries for exhibitions, and a sightseeing tour of Riga.

Travel Arrangements

IMCoS has appointed a Travel Agent for travel to Latvia in 1996:

REGENT HOLIDAYS (UK) LTD
15 JOHN STREET
BRISTOL BS1 2HR, UK
Tel: (0117) 921 1711 (24 hrs)
Fax: (0117) 925 4866

Neil Taylor of Regent Holidays is a member of IMCoS, and will be with us in Riga.

Group travel is being arranged from London to Riga on Friday 4th October, departing from Gatwick at 14.00 with Riga Air. For those not wishing to join a post-symposium tour, the return will be on Thursday Oct 10 departing Riga around 12.00, arriving Gatwick at 13.00 (provisional times). Alterntive return dates can be arranged directly with Regent Travel.

The return fare is expected to be £270 plus UK and Latvian air taxes, which are currently both £10 each. Coach transfer in Riga is included. (It is possible that rates may change, and Regent will keep participants informed.)

Those wishing to fly by other airlines may make their own arrangements, or



'Whatever way you travel don't miss Riga in Oct 1996', says David Webb on his shirt.

contact Regent Holidays for further information.

Hotels

Regent Holidays is arranging block bookings in the following hotels:

Hotel Latvia, six nights in a twin room, including daily breakfast, and dinner on Oct 5th only: £170 per person
Single room rate for the above: £266
Flight and Hotel: nights of Oct 4 – Oct 9th: Twin room per person £440
Single room £536

Hotel de Rome, six nights in a twin room, including daily breakfast, and dinner on Oct 5th only: £295 per person
Single room rate for the above: £515
Flight and Hotel: nights of Oct 4 – Oct 9th: Twin room per person £565
Single room £785

For those not wishing to fly from/through London, bookings for the group rates in either hotel can be arranged by Regent Holidays. For those coming from beyond UK, application may be made to Regent Holidays for a through booking.

[There are also more reasonable hotels for those who wish to make their own arangements, for travel and/or hotels.]

Payment may be made by Credit Card direct to Regent Holidays (thus avoiding very heavy bank charges for a cheque sent to Riga). Payments can be made in sterling, Deutsche marks or US dollars.

Participants should make an **initial deposit** of £50 to Regent Holidays by 1st June 1996, and the **balance** should reach Regent Holidays by 10th August 1996.

Insurance

This can also be arranged through Regent Holidays: £16 for those up to 69 years, and £24 for those 70 years and older. Medical certificates are required for those 70 and older. To cover extra administrative costs, there is an additional charge for those applying from abroad.

Registration forms

A form for those wishing to book through Regent Holidays will be enclosed with the Spring 1996 Journal. In the meantime, those wishing further details may contact Regent Holidays direct.

Suggested reading

Bradt Guide to Latvia (£11) and the Lonely Planet *Baltics Phrase Book* (£3.50)are invaluable background reading and will make your visit more enjoyable.

****

News from Iceland

Kjartan Gunnarsson writes:

The President of Finland visited Iceland in September (State visit) and he brought with him a most interesting map collection from Helsinki. The exhibition '500 years of maps in Finland' was opened by the Finnish President in the presence of the President of Iceland Ms Finnbogadottir and members of the government (plus other guests including myself). The exhibition is in the new State Library in Reykjavik which was opened last year. This year 12 maps from my collection were given to the Library and work is in progress to make it possible that

the Library will take care of my whole collection later this year. This would enable it to establish a map department there as planned for many years.

From Cyprus

The third lecture on Cyprus Cartography was given by Susan Gole in Nicosia on 2 November 1996. The series has been established by the Cultural Foundation of the Bank of Cyprus. Two earlier speakers were the late Dr Helen Wallis (in 1991) and Tony Campbell (1993). The title this year was 'Maps of Cyprus on the Table of the British House 1878–1920', and the lecture was named in honour of Dr Eila Campbell (1915–94), Professor of Geography at Birkbeck College.

In addition to maps which were published in the Parliamentary Papers (and will be included in the book to be published shortly by the Cultural Foundation), Mrs Gole also showed manuscript maps from the Public Record Office which had been prepared to accompany reports to the House of Commons, but were never printed for distribution with the Papers.

From Hungary

Zsolt Török reports progess on a new edition of the famous Coronelli globe of 1688. It will be constructed by traditional methods in the same size as the original, 110 cm, and the gores will be printed from copper plates made by the traditional methods. The aim is to not to reproduce Coronelli's work, but to reconstruct the creative process of traditional globe making. The edition is limited to twelve pieces, and the first is expected to be ready in May 1996.

From Sweden

Lief Âkesson has sent the two stamps illustrated below, and writes:

'In 1996 it will be 550 years since the Danish astronomer Tycho Brahe was born in Skåne which then belonged to Denmark. To celebrate that the Danish and Swedish Post Offices in cooperation have issued two stamps.

'One has a bird's-eye view of his observatory Uranienborg on the island Ven, where he had many pupils, among them, as you know, Willem Blaeu who spent two years there. The other one shows an instrument used to determine the equator.'





From Washington, DC, USA

Ralph Ehrenberg announces the formation of the Philip Lee Phillips Society, an association of friends of the Geography and Map Division, Library of Congress. The Society has been established to further develop, enhance and promote the collections of the Geography and Map Division by encouraging financial donations to supplement appropriated funds fro the acquisition of rare maps; stimulate interest among map collectors, map producers, geographers, cartographers and historians in order to make the vast resources of the nation's premier cartographic and geographic collections more widely available.

The Society is named in honour of

Philip Lee Phillips. He was the first to recognise the value of the Library's cartographic materials and to organise and care for them. Many IMCoS members will have used his volumes listing the maps in the Library of Congress, now, of course, long out of date.

From Wisconsin, USA

David Woodward writes that funding by the US government for cultural activities is being drastically reduced or eliminated, and the History of Cartography Project requires financial assistance. *Cartography in the Traditional African, American, Arctic, Australian, and Pacific Societies* will complete the trilogy on non-Western cartography, and editorial work on *Cartography in the European Renaissance* is in progress. Work on the remaining volumes is already far advanced.

Gifts of any amount are welcome, and the National Endowment for Humanities will match private donations, making any gift double in value to the Project.

****

International Representatives

We welcome two new representatives this autumn. Rudolf Lietz takes over in the Philippines from C. J. Beresford-Jones, who moved back to UK some time ago, and Geoff Edwards will represent Indonesia. This country was formerly included with Singapore and Malaysia, represented by Julie Yeo, but the area is so large, and so diverse in its maps, that we welcome a separate identity for Indonesia. Addresses for Rudolf and Geoff can be found inside the back cover.

If you live in a country that is not represented, and you would like to be nominated, please get in touch with the Chairman. Duties are light! Or you can be as busy as you like.

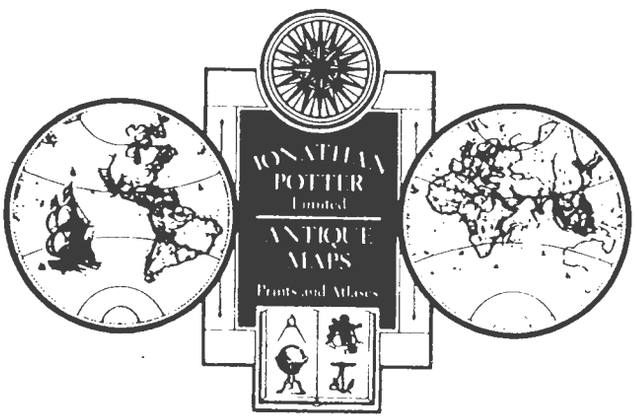
A meeting of representatives who managed to attend the San Francisco symposium was held under the chairmanship of Int. Sec. Robert Clancy. Those present included:

President	Oswald-Dreyer Eimbcke
Chairman	Susan Gole
Development	Caroline Batchelor
Australia	Robert Clancy
Canada	Ed Dahl
Indonesia	Geoff Edwards
Japan	Kazumasa Yamashita
Mexico	Martine de Chomel
Netherlands	Hans Kok
Philippines	Rudolf Lietz
Thailand	Dawn Rooney
USA East	Bob Highbarger
USA West	Al Newman

Among other suggestions, it was agreed that we should all do more to increase the membership, especially to encourage dealers to be more active.We might put out a guide to map collections worldwide, as well as a list of key maps for country. And we need more young members. How can we interest them?

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The World Map by Pieter van den Keere in the Sutro Library, San Francisco

Members of IMCos who attended the recent conference in San Francisco will have had the opportunity to see one of the most magnificent large world maps ever produced. This is the 'Nova Totius Orbis Mappa' by Pieter van den Keere, of which the only example known is in the Sutro Library just outside San Francisco.

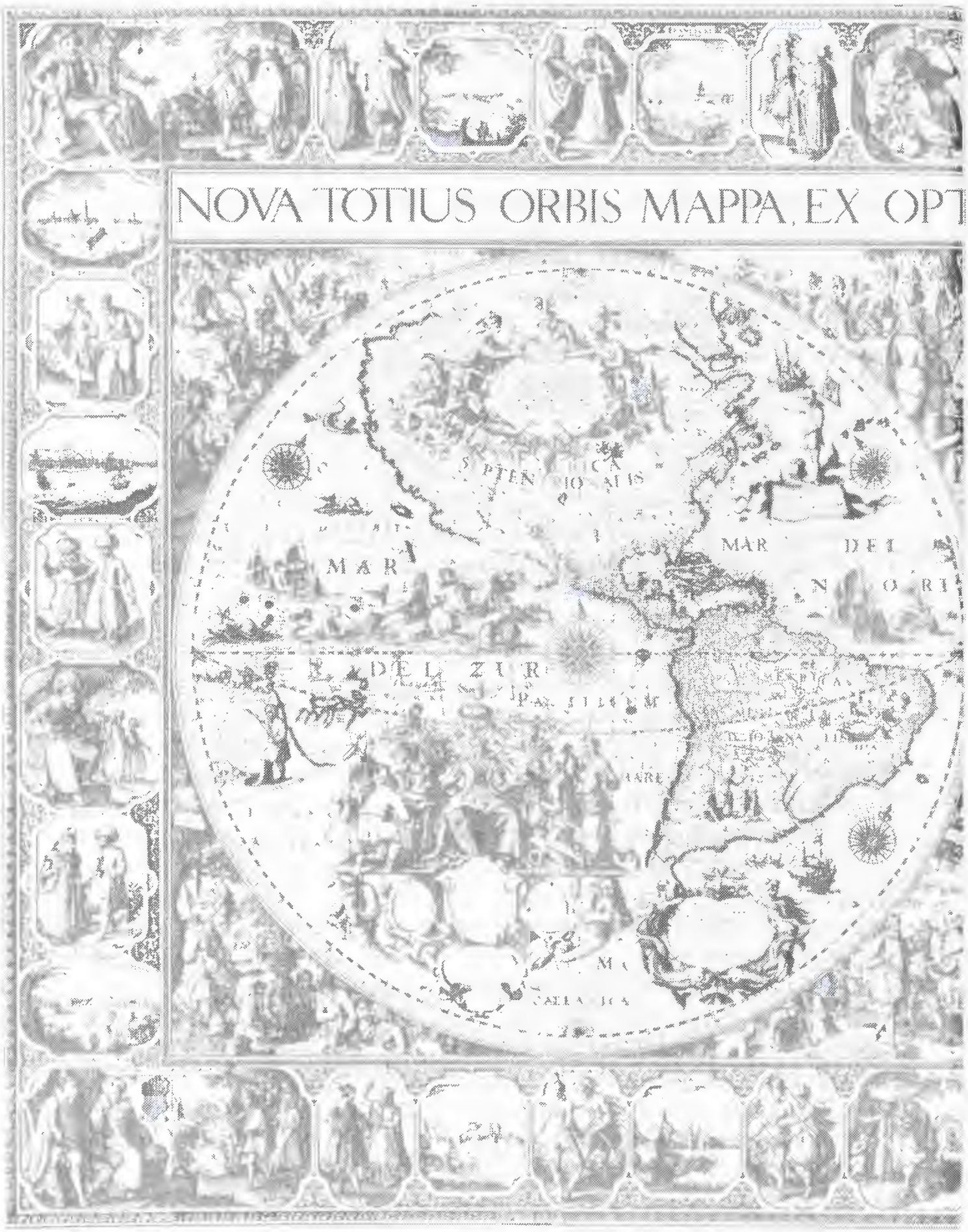
Items in the Library represent the collection of the mining engineer Adolph Sutro. He is known to have purchased this map somewhere in Europe in the late nineteenth century but no further details of its provenance are recorded. In the Library, the map is almost hidden away as it hangs out of immediate sight down a back corridor. Until the Sutro Library's recent move to their present location the map was on an office wall, open to the elements, but it has now been carefully framed and glazed. It is fortunately still in excellent condition: a fine dark and sharp engraving of the highest quality.

Pieter van den Keere (or Petrus Kaerius according to the latinised name he often used) was an accomplished mapmaker and engraver. But because he only produced one atlas — his *Germania Inferior* of 1617 — his work largely survives through single-sheet or derivative maps. Many of these are uncommon, if not rare,. He often engraved maps for other better known map makers; for example the wall map on Mercator's projection by Jodocus Hondius of which the Royal Geographical Society in London possesses the only known copy.

In contrast, the wall map in the Sutro Library is in the more traditional form of two hemispheres. It is printed on eight sheets, plus four part-sheets comprising the decorative border of rulers, town views and costumed figures. Topographically, the map presents as up-to-date a picture of the known world as could be expected for the time. The latest date marked on the map is 1610 and so the map probably dates from shortly after this time. It is normally attributed to 'c.1611'.

However, the glory of the map lies in the brilliance of its design, decoration and artistic elements. There are numerous imaginative cartouches and vignettes on the surface of the map whose symbols and allegorical images are complex and revealing. In the corners are representations of the four continents, with further displays of the peoples and towns of the world in the wide surrounding borders. As I said in entry 274 for this map in my *Mapping of the World*: 'The engraving throughout is of the highest calibre, giving the map a depth and visual attraction scarcely equalled by any other large-scale map hitherto. The decorative borders, which have in fact been etched rather than engraved, are the work of Claes Janszoon Visscher whose monogram can just be seen to the right of the figure of Asia between the two hemispheres at the top.'

Dr Günter Schilder has written fully about this map in a facsimile edition (Amsterdam, 1980), with a contribution by the art historian James Welu on the significance of the symbolism and ornamentation. This map is also illustrated in Peter



The only known example of the wall map of the world by Pieter van den Keere, c.1611.



Size 1260 x 1970 mm. Courtesy The Sutro Library, San Francisco.

Whitfield's more recent book, *The Image of the World* (London, 1994) but the reproduction has been 'enhanced' with artificial colouring. In this instance the effect is regrettable, tending to cheapen rather than enhance the clarity and impact of the original.

Returning to San Francisco, several of those who saw Van den Keere's map in the Sutro Library said they were astonished at its size, grandeur and beauty. In terms of cartographic material seen, it was the highlight of the conference. I myself rank it as one of the finest examples of the map maker's and engraver's art from the early golden age of Dutch cartography.

RODNEY SHIRLEY

****

A Comparison between Chalk and Cheese

John Aubrey, antiquary and topographer, was born in 1625 at Lower Easton- Pierse, near Chippenham on the lowland dairy/cheese farming area of North Wiltshire. Upon the death of his father he inherited the lease of the Manor Farm at Broad Chalk upon the sheep farming upland/chalk downs of South Wiltshire.[1]

He was a prolific writer, recorder, diarist, and scribbler, but he was no organiser and none of his writings were published in his lifetime.

Although nurtured on cheese, the following extracts show Aubrey's preference for chalk.[2]

'In North Wiltshire (a dirty clayey country) the Aborigines, speake drawling; they are phlegmatique, skins pale and livid, slow and dull, heavy of spirit; hereabout is but little tillage or hard labour, they only milk the cowes and make cheese. They feed chiefly on milke meats, which cools their brains too much . . . On the downes, sc. the South part, where 'tis all upon tillage and where shepherds labour hard, their flesh is hard, their bodies strong.'

'To find the proportion of the downes of this countrey to the vales, I did divide Speed's Mappe of Wiltshire with a paire of cizars, according to the respective hundreds of downes and vale, and I weighed them in a curious ballance of a goldsmith, and the proportion of hill country to the vale is a ... to ... sc. about three quarters.'

The 'magotie-headed' Aubrey (as called by a contemporary) having made this 'ingeniose' experiment then mislaid the result. Perhaps Aubrey had been fed too much milke meats in his youth!

'I have oftentimes wished for a mappe of England coloured according to the colour of the earth with marks of fossils and minerals.' An idea first published by Dr Martin Lister in 1683; William Smith produced the first map of the strata of England and Wales in 1815.

NOTES

1. Memoir of John Aubrey, F.R.S., by John Britton, F.S.A., 1845; BL ref. Ac. 5741/2.
2. The Natural History of Wiltshire (unpublished), by John Aubrey F.R.S. in 1685; edited and elucidated by notes, by John Britton, F.S.A., 1847; BL ref. Ac. 5741/4.

KEITH NEEDELL

UK News & Events

Tuesday, 30th January 1996
Informal Evening at the Farmers' Club
3 Whitehall Court, London (nearest tube station: Embankment on Bakerloo/Northern/Circle Lines)
6.00 to 8.30 pm

Refreshments will be served, and there is an entrance charge of £10 to cover them and the room hire.

All members are welcome, and guests as well. It is a good time to introduce new members to IMCoS, so they can see what a friendly informal group of people we are.

Those who wish to do so bring along a map from their collection, and talk about it for a few minutes; or perhaps a new acquisition they would like to learn more about, or something rare and unusual they have found during the year.

It is helpful if you would phone Harry Pearce (0181-769-5041) to let him know you are coming, so that he can cater accordingly.

Jun.22 1996
IMCoS Annual Symposium
At The Royal Geographical Society, 1 Kensington Gore, London .

Jun.22 1996
IMCoS Annual Dinner
At The Royal Overseas League, London.

Jun 23 1996
IMCoS International Map Fair
At Bloomsbury Crest Hotel Coram Street
Open to IMCoS members at 10.00 am, and to public at 10.30 am

Maps and Society Lectures
Held at the Warburg Institute, Woburn Square, London WC1H 0AB, at 5.00 pm
The next three meetings are:

Dec. 7 Dott. Alessandro Scafi: Where is Nowhere? Paradise on Maps

Jan 18 Dr Marcia Kupfer: The Lost Wheel-Map of Ambrogio Lorenzetti: its Rotation and Location in the Communal Palace of Siena

Feb 22 Alain Pottage: Property and Topography since the Sixteenth Century: Visualising Titles in Land Law

Oxford Seminars in Cartography
Held at the Bodleian Library at 5.00 pm

Feb. 1 David Gatfield & Michael Chesterman: GIS in Thames Water Utilities Ltd.: A Pipe Dream?

Exhibition
Nov. 28 – Feb. 25
At the British Library, in the King's Library: 'Maps & Prints in the Italian Renaissance'

Associated Lecture
Dec. 6 and 13, at 11.30 am: Emma-Rose Flett: Late Renaissance Maps & Prints

Advance notice
Apr. 12 1997 (yes, 1997)

There will be an all-day 'celebration of Helen Wallis' at St Hugh's College, Oxford (her old college). All will be welcome. Details about speakers and their topics will be supplied later.

IMCoS Fifteenth Annual Symposium

at the

Royal Geographical Society

1 Kensington Gore, London SW7 2ET

on

Saturday, 22nd June 1996

Papers will be presented on the following themes:

Livingstone in Africa, by Francis Herbert, Map Curator, RGS
Canal Maps, by Prof. A.W. Skempton, Professor Emeritus, Imperial College, London
The Fordham Collection of Road Atlases, by Donald Hodson
Maps of the Crimea, by Major Colin Robins, Editor of *The War Correspondent*

The registration forms and confirmed programme will be sent with the Spring Journal.
Members are requested to return them as early as possible.
Buffet Lunch will be available on pre-order, with a cash bar.

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Letter to the Editor

Baltimore 111-1801
Mexico, D.F.
0372 Mexico
23 October 1995

Dear Madam

One of the stated aims of IMCoS is that 'The preservation of maps for future generations is encouraged and practical information is provided to assist this process.' Surely this means that maps should be preserved as far as possible in their original condition, the way they were published. Nothing should be added or modified.

Unfortunately there is a widespread practice of colouring maps. This changes the map from the condition in which it was published. In olden times some maps were sold as they came off the press, others were coloured according to the wishes of the geographer or publisher. There was a reason and an intent for the colours which were added to the engravings, or for leaving them without. Adding colour is tantamount to making corrections to a 'faulty' cartography on a map which when published, was thought to be correct.

Sadly one comes across many maps to which colour has been added, for no better reason than 'that they sell better', as one dealer once told me. Sometimes I am faced with a real quandary, on whether to buy an unusual map to which inaccurate and meaningless colouring has been added, or just to forego it. It is sad that ever more defaced maps will reach future generations.

I believe that IMCoS should encourage map dealers not to change the condition of maps by colouring them.

Yours sincerely
R.L. Mayer

Book Reviews

The World on Paper — A Celebration of the Mapmaker's Art, by Mead Cain. New York, Columbia University Libraries, 1994. $20 + $3 P&P.

This elegantly printed, well illustrated 56 page catalogue (with thirty- six plates) describes the exhibits in an exhibition held at Colombia University Library, New York between March and early June in 1994. The display was organised as a result of another being postponed leaving space available and the realisation that a map show 'would be easy to mount' (!) and display in the Gallery cases; all the same, upon starting preparatory work, it rapidly became obvious that this was not going to be an 'easy' exhibition. The institution was lucky to find a very capable guest curator, Mead Cain, to co-ordinate the show which he based on the famous exhibition *The World Encompassed* shown at the Baltimore Museum of Art in 1952. In the introductory essay Mr Cain tells us that '. (. . virtually all . . . ' his attention was devoted to the organisation for a month — it would seem that he achieved a great success in such a very short time.

Dividing the exhibits into ten separate — mainly chronological — headings some seventy-eight items were displayed and the catalogue gives a brief, but thorough, description of each of them. Although a rather simplified version of the earlier Baltimore display it was surely a great hit with the American public who are not, in the main, as well informed as Europeans in the cartographic arts. All items on show came from Colombia University LIbrary and it is to be hoped that it proves possible fro further exhibitions to be sourced from this major collection. It would seem very probable from this tantalising selection that their holding of early cartographic items is very good indeed, albeit not very well known or well catalogued; indeed the published catalogue of the Map Room is dated 1931 and does not include the great gift of medieval and Renaissance items made in 1936 by George Arthur Plimpton.

As finance for the academic areas of cartography becomes more and more difficult to find in Europe generally, and especially so in the UK, it is very gratifying to find that American institutions are prepared to stimulate the general interest in the USA; this will, it is to be hoped, start a new generation of informed collectors. It is to be regretted that only seven hundred and fifty copies of this brief but useful catalogue were printed so restricting the circulation of a scholarly glimpse of the treasures of Colombia! has anyone got a spare copy?

DAVID BANNISTER

The Mapping of the Heavens, by Peter Whitfield. London, The British Library, 1995.

Recently the British Library has given us a rare treat with their exhibition 'The Earth and the Heavens' in the King's Library and now Peter Whitfield has almost equalled that with the publication of his book *The Mapping of the Heavens*, a brilliant companion to his *Image of the World*; brilliant in two senses: beautiful to

FRAME

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look at with the many coloured reproductions and, more rarely, interesting and enthralling for the layman to almost comprehend.

The Heavens are of total wonderment. Herodotus, 484–424 BC, recorded that it was the babylonians who introduced the system of dividing the circle of the sky into 360 degrees, the degrees into minutes and the minutes into seconds and thus related the earth to the sky and allowed the former to be plotted in relation to the stars in a constant and proportional manner. Peter Whitfield expands the beginning of the study of the Heavens and the volume covers the fascinations from man's rudimentary knowledge to the awesome realisations of today which instil fear, incredibility and wonder in equal proportions. The illustrations contain many of the most beautiful reproductions from early illuminated manuscripts which over the last few years are happily becoming more familiar to us with no loss of enjoyment. The printed and beautifully coloured celestial charts of the 17th and 18th centuries are perhaps still the most satisfying of all to gaze at. The black and white reproductions are only a little less entrancing as they have been printed from colour negatives.

However, I found the text the most enthralling and in the later pages, for instance, Edwin Hubble's pioneering work on the systematic photography of the galaxies and his calculations on their distances and speed of movement are more exciting than my simple mind can encompass. But nevertheless I am compelled to try and have read and re-read pages 123 to 128 with mounting enthusiasm but little more comprehension.

IMCoS-R.V.Tooley Award 1996

Nominations are invited for the IMCoS-R.V.Tooley Award for 1996. This is granted each year to the individual who, in the opinion of the Selection Committee, has been responsible for cartographic contribution of great merit and wide interest to map collectors worldwide. Though the award is intended to recognise individual merit, in special circumstances a group of people or an organisation could be eligible.

Nominations may be sent to the Chairman before 1 March 1996, for forwarding to the Selection Committee.

So what, I wonder, were Peter Whitfield's principal aims when he started this book? Was it to provide a beautiful coffee-table book to take up and put down after some cursory glances; to please us with the beauty of the illustrations; to carry us along with the opportunities of new knowledge of the development and history of the sky, the stars and the planets; to make us realise the total vastness of the universe or to make us eager to learn and know more? If any or all of these aims were his then he has succeeded most admirably.

BIC WARDINGTON

Le Globe et son Image, by Catherine Hoffman, Danielle Lecoq, Eve Netchine and Monique Pelletier. Bibliothèque Nationale, Paris. 1995. ISBN 2- 7177-1942-3. FF 125.

This catalogue was designed to accompany an exhibition held at the Bibliothèque Nationale during April and May 1995. Scholarly details about the exhibits neatly complement its three thematic es-

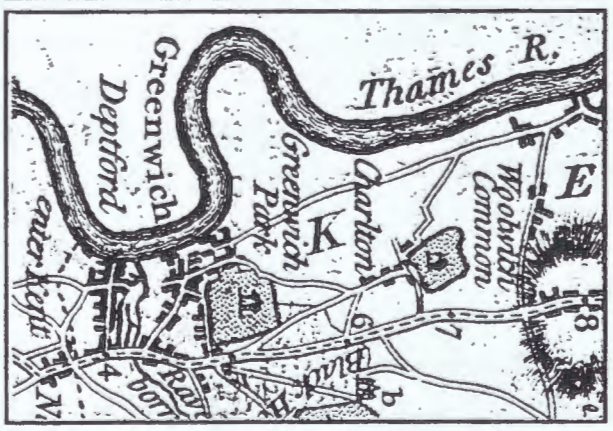
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says. Fifty illustrations range from the equestrian statuette of Charlemagne holding a globe made in 875 AD to Monsiau's painting of Louis XVI helping to frame the instructions for La Perouse's ill-fated voyage. It forms a competitively priced review of how globes were used as symbols of political power from the 1st to 19th centuries and shows how they were also used in theological contexts; and as expressions of scientific knowledge and authority; and, latterly, in a satirical response to absolutism and the progress of science during the 17th century.

First, Lecoq establishes the quasi-religious root of authority associated with the use of the Nike atop a globe on the coinage of the Roman Empire. Similarly, the Byzantine Emperor Justinian II (705–711) is shown on a *solidus* holding a crucifix atop a globe marked 'PAX', symbolising his authority as Christ's anointed deputy on earth responsible for the rule of peace and law. Later western European scribes and artists developed similar themes around a globe held in the hand, especially within the Holy Roman Empire under the Ottonian dynasty. Several later manuscripts illustrate the tripartite division of that symbol of the known world, using the 'TO' division into Asia, Europe and Africa (a division centres on Jerusalem).

Pelletier deftly develops themes and sources more familiar to map collectors in showing how globes were adopted by Europe's monarchs seeking more secular images of power following the Reformation. Adoption of Ptolemy's 'Geography' gave special precision to European claims of overseas discovery and colonial authority, and allowed these to be shown with impressive effect on a globe. In France, globes were used as symbols of scientific authority and the extent of the monarch's authority. In the late 17th century, Coronelli's three-metre diameter globes allowed Louis XIV to allude to his power and to his patronage of science. Meanwhile Dutch-made globes were widely used in teaching contexts, as the frontispiece of WJ Bleau's *Flambeau de la navigation* of 1620 illustrates.

Hoffman's original approach presents advances made by French scientists between 1500 and 1750 alongside images satirizing globes as symbols of power and astrological authority. Images developed between 1611 and 1711 by Rollenhagen, Crispin de Pas, Jorgensen and Stalbert show globes as symbols of human folly, vanity and doubtful consumption. With Netchine, she shows why, within the Académie Française founded in 1666, globes soon ceased to have practical value to the growing scientific establishment but nonetheless remained in use as a symbol of scientific enquiry until the French Revolution.

RCD BALDWIN

La Cartografia dels PaÏsos Baixos: 4rt curs Cicle de conferències sobre Història de la Cartografia. Organised by the Institut Cartogràfic de Catalunya i el Departament de Geografia de la Universitat Autònoma de Barcelona. Barcelona, 1994. Size 240 a 170 mm; 267 pp. 31 black and white illustrations.

English-speaking readers should not be out off by the lengthy Spanish title of this small book. It is indeed an account of the 4th History of Cartography conference held in Barcelona in 1994 but all the text

is in English, and is a valuable re-assessment of Dutch cartography from the sixteenth century to, almost, the present day. There are only three papers or chapters but they are each of substantial length and each is written by a leading Dutch cartographic historian.

In the thriving entrepreneurial Netherlands of the 17th century, commercial cartography was foremost. We all have some familiarity with the chart and atlas production of the great Amsterdam houses of Blaeu, Janssonius, Goos, de Wit, Van Keulen and others. But, as Dirk de Vries, the map curator of the University Library, Leiden, recounts in his paper 'Official cartography in the Netherlands', many maps were devised for institutional and state purposes. His overview discusses maps prepared for legal, official, military, water management and cadastral purposes, spanning the years from the early 1500s to 1864. The Netherlands were unaccountably omitted from the otherwise excellent Newberry Library lectures and subsequent publication, *MOnarchs MInister and Maps: the Emergence of Cartography as a Tool of Government in Early Modern Europe* (edited by David Buisseret, Chicago & London, 1992), and Dirk de Vries' contribution in this book redresses the balance. Of the three papers, this is the most absorbing in originality of content.

Peter van der Krogt's paper 'Commercial Cartography in the netherlands' expertly summarises and updates the large amount of information contained in the writings of Professor Koeman and others. It is Koeman's monumental 6-volume work *Atlantes Neerlandici* that Mr van der Krogt is in the process of revising. In his paper, the 18th and 19th centuries are disposed in a couple of pages, and it is sobering to reflect on the sad stagnation and decline of Dutch atlas output after the innovative brilliance of the years before.

The third paper is by Jan Smits, map curator of the Royal Library at The Hague, and is titled 'For Pleasure and Support (Bis Dat Qui Cito Dat)'. It reviews the great collectors and collections and archives of maps in the Netherlands. Smits enthusiastically describes the key role of many early collectors and one-time dealers, among them Romswinckel, Nijenhuis, Engelbrecht, Muller, Mensing and Wieder. Their researches and acquisitions underpin many repositories in the Netherlands today. The paper moves into the late 20th century with an account of the current map and atlas cataloguing methods, including progress towards a Dutch Union Map Catalogue and integrated catalogue automation. There is 43-page list of all Dutch atlases up to 1800 — including several not in Koeman's *Atlantes Neerlandici* — and an appendix with brief descriptions of eight of the major institutional collections in the Netherlands.

The Institut Cartogràfic de catalunya is to be congratulated on organising the conference which led to the publication of this informative and highly readable volume. An earlier conference in 1992 led to a similar booklet (mainly in Italian) devoted to Italian cartography. Subsequent conference on french mapping and on german mapping have been held, and one on British mapping is planned for 1996.

IMCoS is grateful to its Council Member Sra Montserrat Galera i Monegal

of Barcelona for kindly providing a copy of *La Cartografia dels Països Baixos* for the IMCoS Library.

RODNEY SHIRLEY

Historical Atlas of South-East Asia, by Jan M. Pluvier. Leiden, New York & Köln, E.J. Brill. 1995. 147 pages; 64 full-colour maps.

This attractively presented atlas covers the historical development of South-East Asia chronologically through a series of excellent maps, all in full colour. The modern term, 'South-East Asia', is an ambiguous one and the author clarifies it at the beginning by dividing the region into two parts based on geography — continental and maritime South-East Asia. The introduction gives details on the content and context of each of the sixty-four maps. Within the framework of an introduction followed by illustrations, the book traces the development of the region from the earliest times to the present.

The first map charts migrations in the prehistoric period based on a linguistic pattern of evolution. Indian and Chinese influences on South-East Asia from the beginning of the Christian era for the next five centuries follow on a succeeding map. The early Hindu states transported from India to the continental area are pinpointed and the extent of their religions and cultural impact on the great Khmer Empire is delineated. All major empires and kingdoms of the area are shown through further maps. The spread of Islam in the region is depicted. from the fourteenth century onwards, the development of both mainland and maritime South-East Asia are followed through maps, with considerable attention given to the European influence, beginning with the early voyages in AD 1600. Other maps highlight the colonial; empires of the nineteenth and twentieth centuries. The final map conveys the latest cartographic knowledge to date and shows South-East Asia from 1980 until 1995. A select bibliography arranged geographically supports the text and illustrations. Two indexes — one of personal names and another one of geographical names that appear in the book — are also included.

This publication should serve as a valuable, and previously unavailable, reference on South-East Asia. The author is Emeritus Professor of Modern Asian History at the University of Amsterdam and has published several books on the history of South-East Asia.

DAWN ROONEY

Official Cartography of the Netherlands, by Dirk de Vries.

The history and development of cartography in the Netherlands will always be a stimulating subject to the cartographically orientated person and this new volume is a welcome addition to what is already in print on the subject, including the monumental research work which we all know so well by Professor Koeman. This new volume fully complements all that has been researched and written hitherto on this fascinating topic.

The book layout is clear, the historical background beginning with Ptolemy and his place in the history of map making, and separated very sensibly, medieval cartography from the birth of scientific cartography in the middle ages, though even in the 15th century the map maker was primarily an artist whose predomi-

nant land features were still monasteries and churches, but the author demonstrates how this situation changed quite dramatically in the middle of the century when a map was used as a legal document, associated with a land dispute at the County Court in the Hague.

The volume moves in a clear and logical manner through the early names associated in the unfolding drama of the mapping of the Netherlands, with Gemma Frisius who is attributed with having trained the famous Jacob van Deventer (1500–75), credited as the first person to draw, engrave, print, colour and sell his maps himself, and over a period of only 10 years had surveyed all of the Northern netherlands in great detail.

Included is a very good chapter on marine cartography, for the Dutch have long been famous for their contribution to the charting of the great oceans, seas and coasts. late 16th and 17th century charts remain some of the most sought after decorative maps by the collector, with those by Waghenaer, Goos, Doncker, and the famous Van Keulen being firm favourites.

The chapter by Jan Smits is devoted entirely to map collecting, its history and origins, tracing very satisfactorily for the collector, from where collecting roots begin. It tells of some early collectors and collections, eventually bringing the reader right up to date with archival information on map libraries throughout the Netherlands. The chapter concludes with an excellent and invaluable 25 double page descriptive catalogue of Dutch maps to the year 1880.

In conclusion, this reviewer liked the volume and would have no hesitation in recommending that map collectors, curators and dealers should have a copy as an invaluable additional reference work.

A. CARSON CLARK

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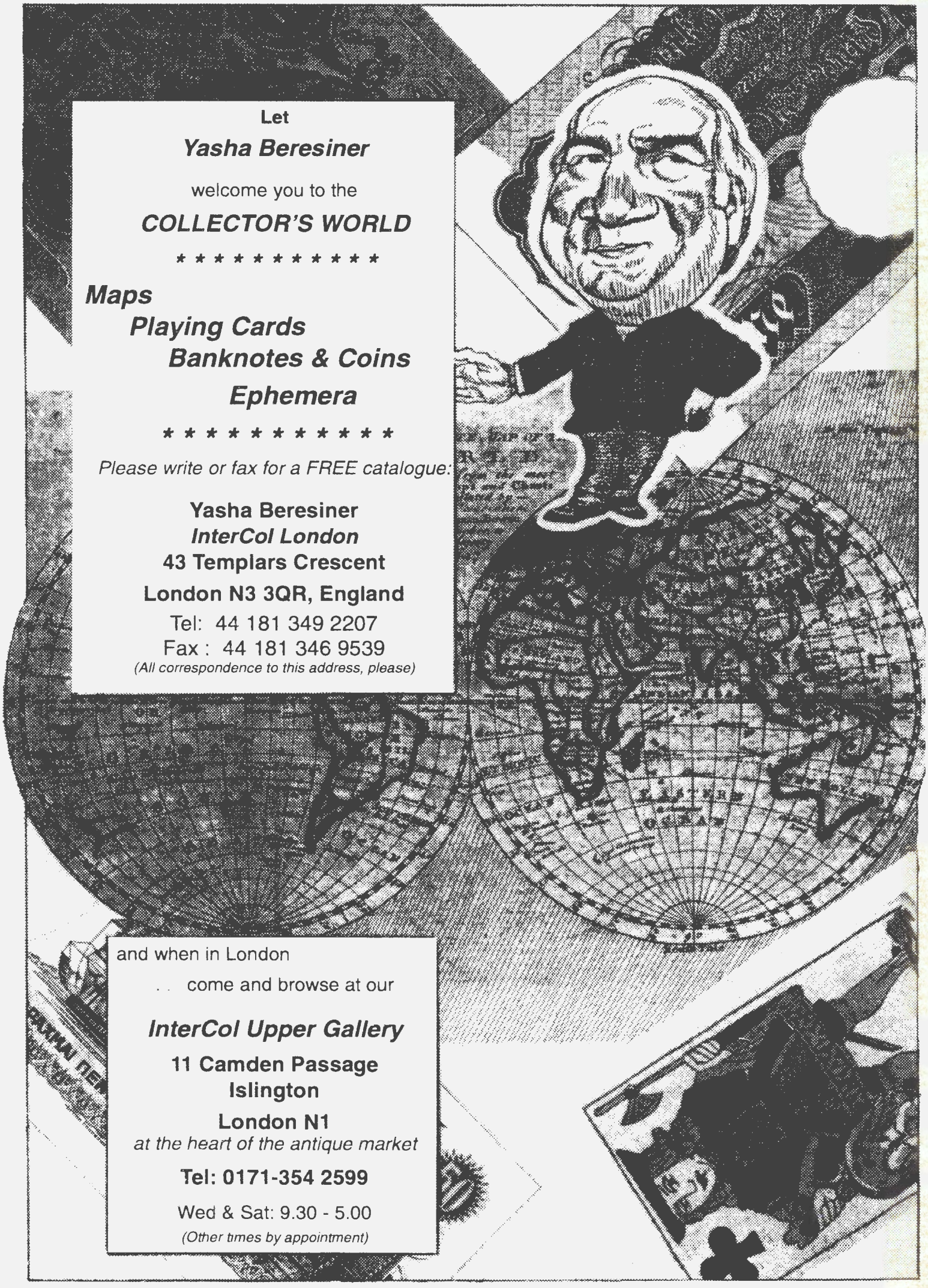
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