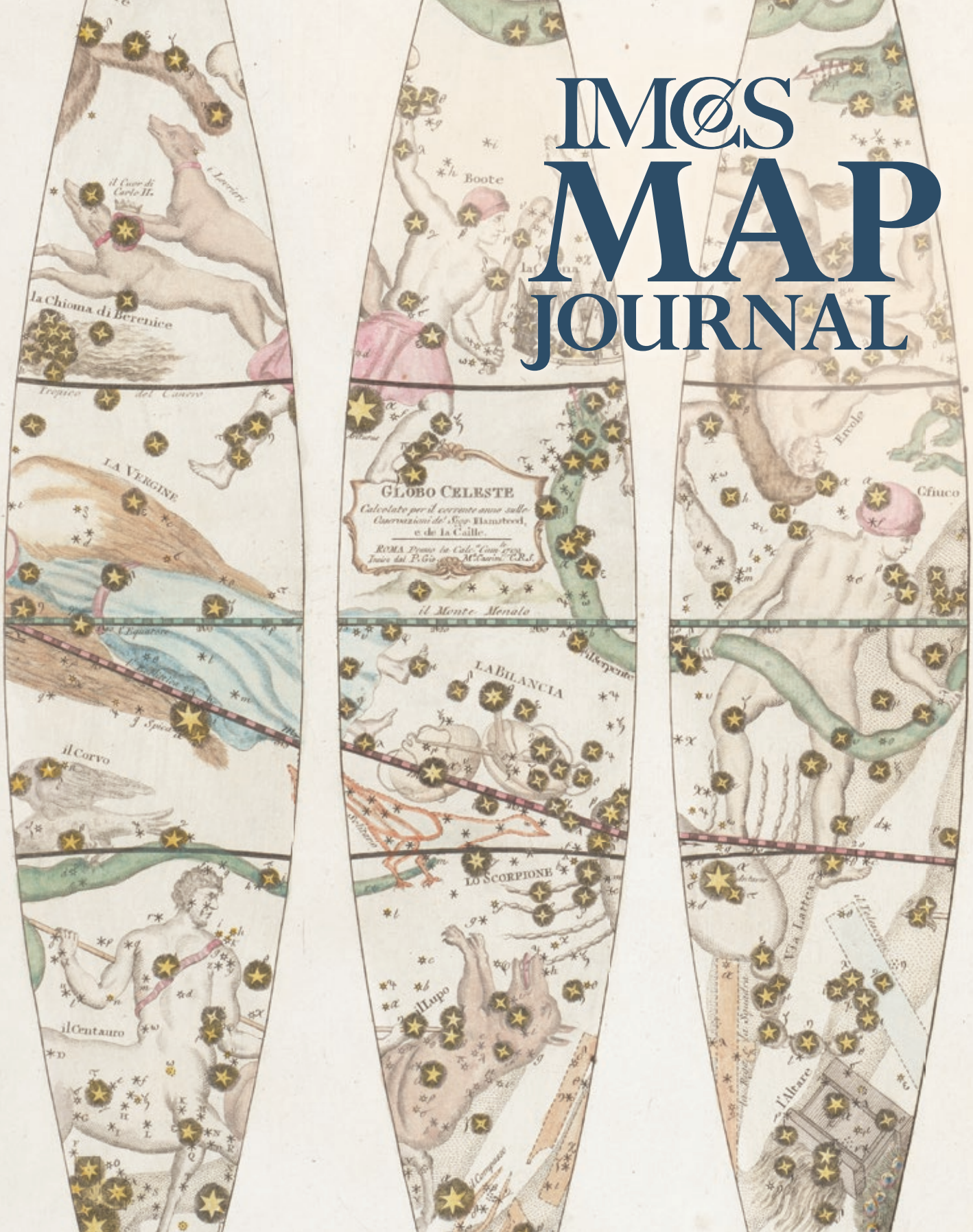


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JOURNAL OF THE INTERNATIONAL MAP COLLECTORS' SOCIETY

SEPTEMBER 2023 No.174 ISSN 0956-5728

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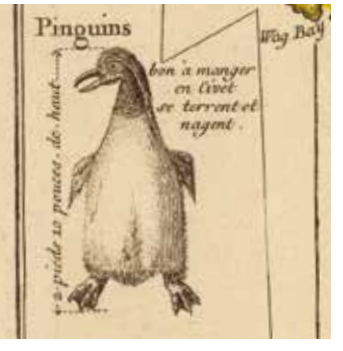
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LETTER FROM THE CHAIRMAN

Mike Sweeting

I have recently re-visited the wonders of the British Ordnance Survey maps. There have been several reasons for doing this. Initially it was driven by the move to a new home in a new area. After 45 years living in Northeast England, from the majestic cathedral city of Durham to the equally majestic moors of Wensleydale, we made a move – only about 150 miles south – but oh how different. Now my wife and I explore the rolling hills of Rutland, the secrets of the Fens, the steep streets of Lincoln, the many, many stately homes of Northamptonshire, and the university colleges of Cambridge.

Of course, that has been an excuse to buy numerous more Ordnance Survey maps to assist particularly with hiking and finding obscure historical monuments. We have found the way that the maps now arrive as Apps on our phones, as well as folded paper artifacts, almost magical. It's very useful indeed when you need to take a detour around a field containing young bulls or urgently find a pub! Our favourite paper maps are now covered in marker pen, indicating the bits we have already trekked over. We now know where rare butterflies hatch and fly, where a 5,000-year-old ritual landscape was excavated, where deer gather in the winter.

That 'today' experience of maps caused me to purchase a first edition of the Ordnance Survey for our area to help consider 'yesterday'. It's easy to forget that this too was once a cutting-edge document causing murmurs of appreciation or sighs of wonder. People who rarely ventured further than the nearest market town were discovering this new-fangled thing called leisure. In 1824, when my map of Rutland was originally published, the rich had plenty of options, but the middle classes were only just being untied from their place of work. However, the first passenger railway line in Britain followed my Ordnance Survey map original publication by a single year!

By the time Thomas Cook invented the 'holiday package' in 1842, starting with his Temperance excursions, the population of Britain were getting itchy feet and the 'County Series' of OS maps was born.

My 1872 version of the Rutland OS Map is laid on linen, and in a slipcase, making it handier and less prone to tear or disintegration – their equivalent of an App! By that year, three hundred and twenty-six OS sheets covered *London alone*. To discover more of the romance of the Ordnance Survey, I do recommend the Charles Close Society. Their members often support our 'Show & Tells' on Zoom, and an overlap is natural. More details can be found on their website: https://charlesclosesociety.org/.

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EDITORIAL

Ljiljana Ortolja-Baird

Expressing his admiration for Ordnance Survey maps in both their digital and paper form, the Chairman in his Letter wrote 'the "today" experience of maps caused me to purchase a first edition of the Ordnance Survey for our area to help consider "yesterday". It's easy to forget that this too was once a cutting-edge document causing murmurs of appreciation or sighs of wonder'. Old maps can indeed provide a gateway to our past and many collectors start their collecting journey by searching for maps of their place of birth, their current residence or that of their ancestors. They are indispensable companions for studying history generally.

Ordnance Survey maps, when first published in the early nineteenth century represented a major advancement in the history of UK mapmaking. However, the trajectory of cartographic development is a long one and along the way there have been many cutting-edge maps, each representing step changes in our understanding of the world as well the ways in which mapmakers rendered new knowledge.

A cutting-edge mapping project designed to help us understand the past was recently undertaken by a team at Ohio State University. Using digitised records of Sanborn Fire Insurance maps, they applied machine-learning tools to create immersive and interactive 3D digital models of historic urban neighbourhoods which have been lost to large-scale infrastructure developments. Their aim, they explained, is to 'give people virtual reality headsets and let them walk down the street as it was in 1960 or 1940 or perhaps even 1881'. The models they have created are invaluable to scholars and planners, for with them they can compare urban development across different time periods and contrast them with present-day urban landscapes. Understanding what has been lost or gained provides information for improved future urban planning, cultural heritage preservation, and historical research.

Their machine-learning technique was tested on two adjacent neighbourhoods on the near east side of Columbus, Ohio which had been destroyed in the 1960s to make way for the construction of a major road network. Both were thriving Black communities.

Sanborn Fire Insurance maps were originally created in the late nineteenth and early twentieth centuries to evaluate fire insurance liability and provide highly detailed historic building-level urban information for over 12,000 American cities. The maps contain information such as street names, land parcel boundaries, block numbers, building footprints, as well as the construction materials, utilisation, and number of stories of each building. They can be accessed in digital format at the Library of Congress (https://www.loc.gov/collections/sanborn-maps/about-this-collection/).

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HISTORY OF CAUCASIAN MAPPING

By Russian topographers from the nineteenth to the early twentieth centuries

Alexei V. Postnikov and Nadezhda A. Ozerova

The Caucasus, in many respects, is a unique region with its specific natural-geographical and geopolitical conditions and has long attracted the attention of scientists. One of the most important aspects in the study of the North Caucasus and Transcaucasia is its cartography. It gave Europeans in the nineteenth to the early twentieth centuries a firm geographical understanding of the location and configuration of this mountain system.

Cartographic information about the Caucasus in Russian sources until the beginning of the 19th century

Evidence of long-standing Russian ties with the Caucasus are in the *Book of the Great Drawing*.[1] It is assumed that the Razryadnyi Prikaz (Military Administration of Russia at that time) compiled the Great Drawing of 'the entire Moscow state and all neighbouring states' in the sixteenth century. Afanasy Mezentsov is believed to be the 'draftsman'.

In May 1626 a great fire broke out in Moscow which resulted in the loss of many valuable documents. Among them, apparently, were maps made by Mezentsov and Nakvassin in 1618.[2] After the fire, the Razryadnyi Prikaz carried out extensive work to restore the lost documents and, in the process, discovered that although the 'Great Drawing' had survived, it was in a dilapidated state. Furthermore, made under previous sovereigns, it was out of date.[3] Clerks of the Razryadnyi Prikaz, Feodor Likhachev and Mikhail Danilov, ordered 'a new drawing for the entire Moscow state and for all the surrounding countries in the same size, taking into account the old drawing'.[4] The new Great Drawing was made in 1627 and supplemented in the same year with 'Drawing of the Field to Perekopi' which marked communication routes – main roads, rivers and settlements – from Moscow to the Crimea.

The 'Great Drawing' and the 'Drawing of the Field to Perekopi' have not survived but the *Book of the Great Drawing*, compiled in 1627, which is a verbal description of both documents, has been preserved. There are 38 copies which date from the seventeenth, to the nineteenth centuries, the greatest number are from the second half of the seventeenth century.[5] When compiling the text for the *Book of the Great Drawing* the drawings were divided among several scribes, each of whom described the roads or rivers assigned to him. The editorial work was not carried out with sufficient attention to detail, so lost places, those no longer in existence but marked on the 'Old Drawing', were not restored and repetitions were not eliminated.

The descriptions in the 'Old Drawing', which also covered the Caucasus, were oro-hydrographic and included the main rivers:[6] the Yaik [Ural], Kuma, Terek, Kura. In addition to the Terek, which has a special section on its basin, the *Book* mentions the Kuba (Kuban) River and its tributary the Laba, the Manych and Kalaus, the Egorlyk, the Kura and its tributaries Larisha, Laban, and Kuma, on which various settlements are marked.

General information about the Caucasian Viceroyalty of the late eighteenth and early nineteenth centuries, in particular maps of its post roads, are available in the materials of land surveyors.[7]

Works in the first half of the 19th century

In the early nineteenth century, shortly after Georgia and some lands of Azerbaijan were annexed by the Russian Empire, expeditionary surveys to explore the possibilities of mapping the Caucasus were undertaken under the leadership of Colonel Drenyakin and Lieutenant Rosier. As a result, in 1802 they compiled: Drenyakin's 'Map of Georgia with an Indication of the Neighbouring Nations and Parts of the Caucasus Line', and Rosier's 'Map of Georgia with the Lands Attached to It'.[8] In 1803 they were assisted by ten officers, and leadership of the work was taken over by Colonel Tikhanov.

Other maps of the Caucasus published in the early nineteenth century were: a map of Astrakhan and Caucasian provinces appended to Ivan V. Rovin's 1809 'Description' of these provinces;[9] a 'Detailed map of Georgia with its annexed lands, compiled by Lieutenant Colonel Verkhovsky in 1817 and engraved in the Military-Topographic Department at the

General Staff ... in 1819', and published on twelve sheets in Tiflis. This colourful map, on a scale of 15 versts per inch [1 verst = 1.06 km/0.66 mile), marked cities, towns, villages, administrative boundaries and communication routes. Also produced was 'Map of Caucasian Lands with a part of Great Armenia' compiled by A. Maksimovich and published by S. Bronevsky in 1823.[10]

Russian instrumental topographic surveys and descriptions were actively developed at the beginning of the second quarter of the nineteenth century, primarily by the Topographic Detachment of the Separate Caucasus Corps which had been working in the Caucasus since 1826.[11] Special approaches were required for surveying in mountainous and poorly explored areas. These surveys required detailed information about the 'mountain tribes', and, in particular, the following six points had to be noted:

1. 'Which tribes live in the area of the detachment and in the neighbourhood; which gorges are occupied by each tribe; the forests and other places; their division into unions and societies, the number of villages of each society, the number of households of each settlement.
2. How they are governed in a state of peace and war.
3. How their dwellings are arranged, and with what household furnishings.
4. What kind of industry, whether they are engaged in growing grain, cattle-breeding, what are their riches and needs.
5. What is their daily food in winter and summer.
6. Where are their winter and summer pastures…'

In addition, it was required to record the character, 'dominant tendencies', customs, manners, laws and religious features of the Caucasian peoples and their relations among themselves, 'and which tribe or society among them prevails', as well as relations with other, 'neighbouring peoples'.[12]

The detailed descriptions compiled on the basis of these instructions and preserved in the Russian State Military History Archive in Moscow are the most valuable sources for studying the ethnic history of the peoples of the Caucasus. In addition, in 1828–1830 a number of fortresses and settlements of the Caucasus were defined by latitude.[13]

In 1832 under the Separate Caucasus Corps a company of topographers No. 3 was formed of 48 people for the systematic collection of military topographic material.[14] In that same year the head of the 'Transcaucasian provinces', Major-General V.D. Volkhovsky developed a version of the reconnaissance survey instructions for the region.[15] His instructions were designed to take advantage of the mountainous terrain, 'to condense' astronomical and geodesic control by graphical triangulation on the plane table, based on two bases – the main and 'verification'. All mainland routes and river courses were to be surveyed by instrumental means '(spreading the survey over three versts in both directions)'; between these main surveys the intermediate spaces were to be supplemented by hand-held plane table surveys; the roads were to be distinguished between 'large and small, convenient and inconvenient for carts, pack roads and paths accessible only for those on foot'. The most important places were to be surveyed on a scale of 200 sazhens to the inch (1 sazhen = 2.1 metres/7 feet). Serious attention was given to settlements which were to be 'marked with as much detail as the scale would allow, namely to show the main partitions of the houses, especially remarkable buildings such as churches, mosques, bazaars, mills, gardens etc., the main ditches, ponds, wells, springs and other waters'. When naming villages, they were instructed to note the number of Christian and Mohammedan households, distinguishing the first with red and the second with yellow numbers.[16]

Instructions to surveyors in the Caucasus played an important role in mapping the mountains. This required determining 'the relationship and direction of the ridges … by making geodetic tracings on the distinctive peaks and by depicting the flow of water.' They were encouraged to be as 'detailed and faithful as possible to the location, expressing mainly the relative elevation and steepness of mountains and accurately distinguishing the features of dividing plains, undulating terrain and especially the mountain spaces'.[17]

Great importance was attached to identifying and mapping in detail the irrigation systems, highlighting the main canals that supplied water to fields from a distance. An essential role was mapping the administrative division of provinces 'into districts or *magals* administrations, and other', which could be done by inquiry. Topographers were advised not to mark boundaries before they had been confirmed by the official Russian administration.[18]

In wartime conditions, topographers paid special attention to the areas adjacent to the territories of 'non-peaceful' mountain dwellers. Surveys in these areas were often accompanied by military clashes and were necessarily carried out under the cover of a



Fig. 1 Title sheet, 'Map of the Caucasian Region' (1847) at a scale of 10 versts per 1 inch (1:420 000).[23]

military convoy.[19] From 1835 to 1846, most of the Transcaucasus region was under 'semi-instrumental survey, i.e. on major roads and rivers, the plane table was used, and the space between them was drawn from sighting [visual survey]; in some impregnable and wooded areas, as well as areas of hostile mountain peoples visual surveying was adopted. In only a few places in the Caucasus region was a full instrumental survey conducted'.[20] This survey was carried out 'under the direction of the General Quartermaster of the Caucasus Corps: 1835 to 1838 – Colonel von der Hoven; 1838 to 1841 – General-Major Mende; 1841 to 1845 – Colonel Ivanov; 1843 to 1846 – Colonel Gerasimov'.[21]

Over these years, surveys covered all accessible areas of the Caucasus, such as the Kizlyar or Pyatigorsk district, the outskirts of Tiflis, as well as the mountainous regions of Chechnya, Dagestan, Georgia, Abkhazia and others. Some surveys, especially in the mountainous areas, were made along routes used by the military.[22] Their work resulted in the publication of 'Map of the Caucasus region with border lands' (scale of 20 versts = 1 inch) in 1834; the 24-sheet 'Detailed map of the Caucasus region', compiled under the leadership of General Hoven, published in 1838 and again in 1842; 'Map of the Caucasus Region', a 21-sheet military-topographic map on a scale of 10 versts = 1 inch in 1847 (Fig. 1).

Surveying by Khodzko and Stebnitsky

In 1846 the School of Caucasian Surveyors was opened in Tiflis, where 'theory of surveying in the mountains with all the details' was taught. Initially the school was attached to the Company of topographers No. 3 of the Caucasian detached corps, in 1853 it was transferred to the civil organisation – the Caucasian Committee. In 1857 it was again transferred to the military department, and later named the Tiflis Land Surveyor School.[24]

In order to create a unified geodetic basis of all



Fig. 2 Lieutenant-General Josif Ivanovich Khodzko (1800–1881).[29]



Fig. 3 Infantry General Ieronim Ivanovich Stebnitsky (1832–1897).[30]

previous and current surveys conducted by the Corps of Military Topographers, as well as the works of the Land Surveyor's Office, it was decided to triangulate the Caucasus, linking it with the already existing trigonometric networks of Central and Northern Russia. Without going into details of the implementation of this project, which is covered in detail in the article by T.A. Kolosovskaya,[25] let us look at the scientific and methodological aspects of these works. In 1840, at the request of the commander of the Separate Caucasus Corps, General of Infantry E.A. Golovin, Lieutenant Colonel Khodzko was summoned to Tiflis 'for geodetic and topographic works' (Fig. 2).[26] At that time there were only a few points in the entire region, they had been defined astronomically by Mr Fedorov who had helped Academician [Friedrich] Parrot on his expedition to the summit of Mount Ararat, and a small number of points in the North Caucasus identified by Academician Vishnevsky; there had also been several reconnaissance surveys'.[27] Trigonometric surveying in Transcaucasia was a gigantic undertaking, which was taken up by Khodzko in 1842. In 1844 he was sent to the Pulkovo Observatory to learn about the improvements made in geodesy; at the same time the Military-Topographic Department ordered geodetic instruments for triangulation from abroad.

'However, despite these preparations, the commander of a separate Caucasus corps, Adjutant General Neidgart, in view of the special military circumstances beyond the Caucasus, proposed to postpone the trigonometric survey until a more convenient time.'[28]

With the appointment of Prince Mikhail S. Vorontsov as Commander-in-chief of a separate Caucasus corps in 1844, the project was resurrected and approved by Nicholas I in 1846. Work resumed in 1847 under the leadership of Khodzko. Assisted by

Captain D.D. Oberg, Khodzko was responsible for the production of triangulation. Staff-Captain of the Corps of Military Topographers P.N. Alexandrov was charged with the direct determination of the coordinates of reference points from astronomical observations. Triangulation field works started in April 1847 on the steppe of the right bank of the river Kura in the Yelisavetpol province, near the Shamkhor station using 8.5 versts as the basis. They continued uninterrupted until November or December of 1853.[31]

The military topographers established and determined the coordinates of twelve triangulation points throughout 700 versts from Mount Oshtek in the upper reaches of the Belaya River (later the territory of the Kuban region) to Bazarduz on the border of the Kuba district of Baku province. Another eighteen points were established in the southern part of Transcaucasia. All of them were either on snowy peaks or on mountains which were snow free for no more than two or three months of the year.[32]

Khodzko wrote of his experience:

In July, on the above-mentioned mountains there was not more than 2-3 degrees of heat (in the shade) during the day; at night the temperature dropped to 13 degrees of cold; at the same time the heat in the hot valleys of the Kura and Araks rivers came to +35°, and in Tiflis to +31°. This deprived us of the possibility to measure angles in triangles in the order, as their tops were connected with each other – we had to work in valleys in spring, moving from there to mountains in June and coming back to lowlands again in October.[33]

One of the most striking events of the Caucasian triangulation in the middle of the nineteenth century was the ascent of military topographers to the summit of Mount Ararat in late July–August 1850. The famous scientist, orientalist-geographer, ethnographer, and later active fellow of the Caucasian Department of the Imperial Russian Geographical Society and director of the meteorological surveying department Nikolai V. Khanykov took part in the ascent. He was accompanied by A.F. Moritz Colonel of the General Staff, P.K. Uslar expert on the languages of the Caucasian peoples, P.N. Alexandrov astronomer of triangulation, P.I. Sharoyan Staff-Captain and translator, 'topographer Sidorov and a team of 60 Cossacks and soldiers'.[34]

According to Khodzko:

On the 3rd, at 2 p.m., the soldiers pitched two tents, 300 fathoms above our lodging place, on a very steep slope (up to 30°), covered with a thin layer of ice. There we lived two days and three nights, and only on the 6th, having climbed to the elevated (western) top of the biblical giant, we erected on it the banner of Christianity – a black wooden cross. We buried two tents in the snow, leaving a small hole for the entrance; we put the pointed feet of theodolite tripod on small stone blocks, brought on a sledge, and poured water over them, which then froze, as the air temperature was all the time below zero, varying from 3 to 13 degrees of cold; when the sun shone, we covered the bottom of the tripod with thick felt. By this measure the aim was quite achieved, – the angle gauge got a perfectly stable position. We cooked our food in large copper basins filled with charcoal. I stayed with one Cossack on the summit until August 12, and the other members of the expedition changed daily, taking turns with me to make meteorological observations, hourly, day and night, for four days; in addition, I measured 134 zenithal distances of the main triangulation points.[35]

Stebnitsky noted in 1882, 'to this day, despite the fact that geodetic work continues in other mountain areas, none of the geodesists has yet made measurements at such a significant height as I.I. Khodzko'.[36] Khodzko completed the trigonometric survey of Transcaucasia in 1853. It 'was expressed in the definition of 1,386 points by geographical position and altitude; almost half of the most difficult observations because of inaccessibility were made by I.I.Khodzko. Only after this measurement was completed was it possible to produce accurate [topographic] surveys in the region and to open a land survey.'[37] A description of the Transcaucasian triangulation was published in *Notes of the Military-Topographic Department of the General Staff* in 1858 (Fig. 4).[38]

In 1854 the establishment of 'The Military-Topographic Department of the General Staff of the Separate Caucasus Corps for geodetic, topographic and land surveying work in the Caucasus and generally for the military part' was approved by His Majesty, and Khodzko was appointed head of the department.[39]

In 1856, taking advantage of Russian occupation of Kars, Khodzko made a topographic survey of the border from Little Ararat to the Black Sea. It was published as a 20-verst road map of the Caucasus in 1858.[40]

Khodzko's proposal for the continuation of triangulation to the north, 'up to the connection with

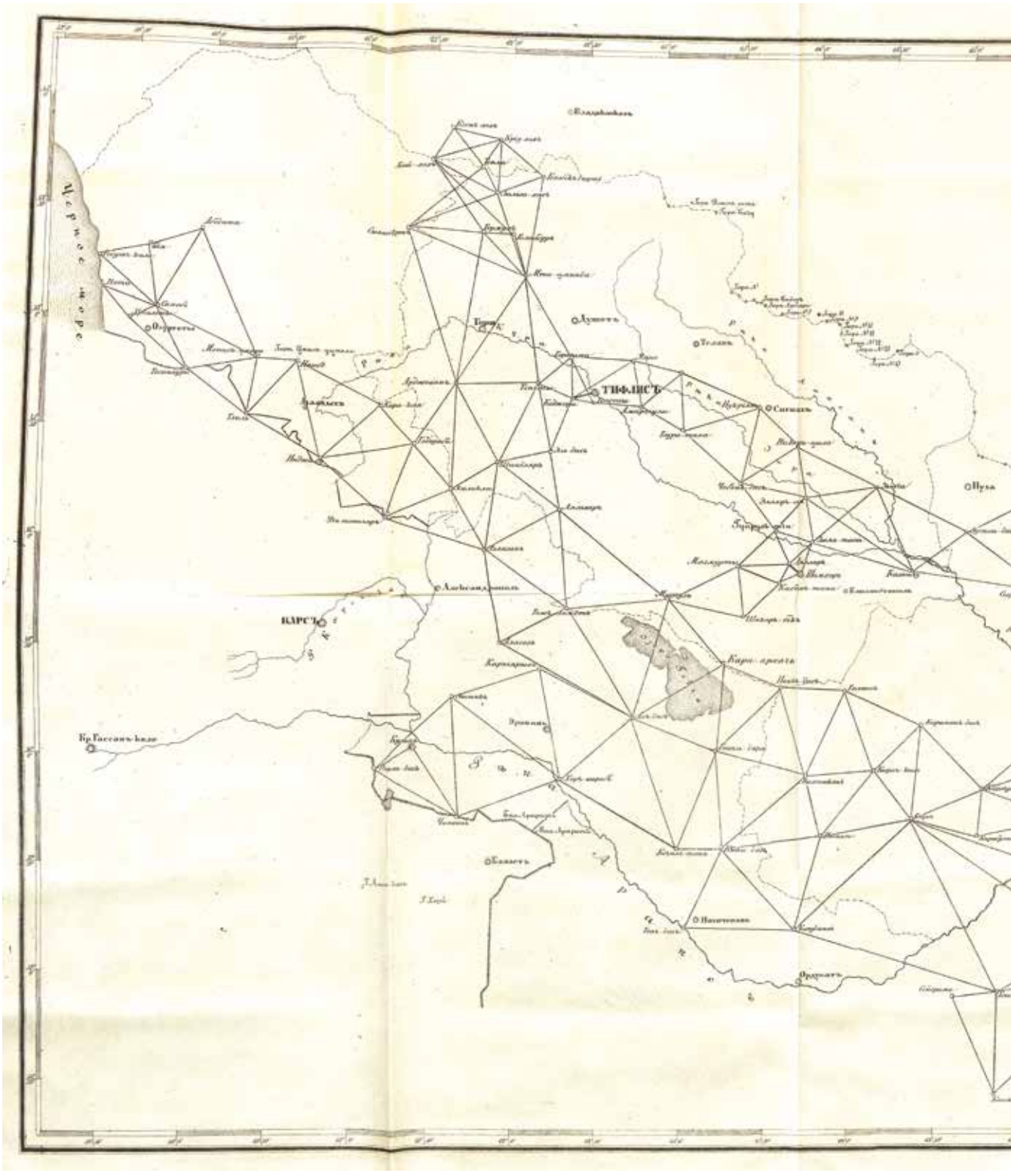
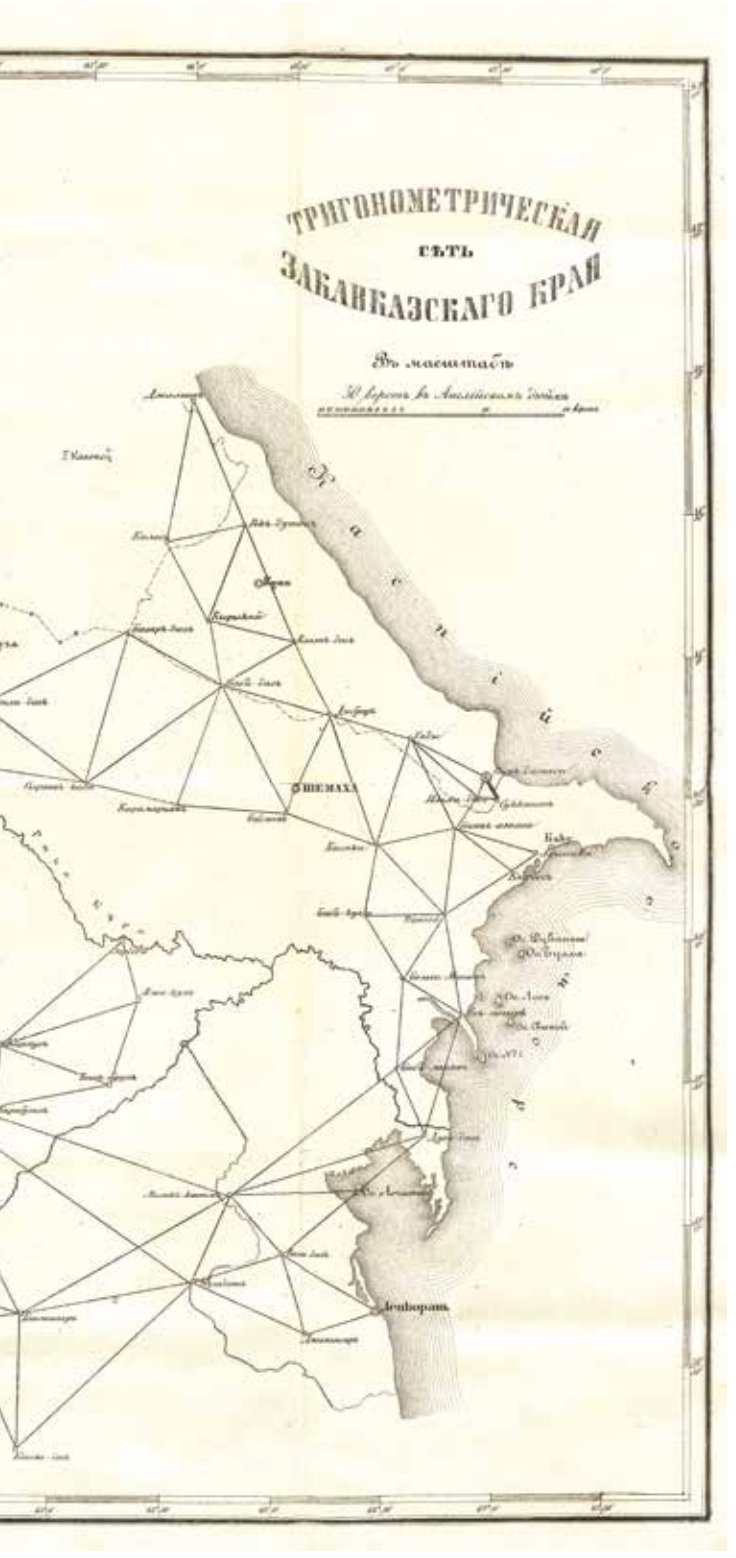


Fig. 4 Trigonometric network of the Transcaucasus region.[43]



the Novorossiysk and Crimean triangulations',[41] which, 'on the recommendation of the Commander-in-Chief of the Caucasus Army, Field Marshal General Prince Baryatinsky, received the highest approval in 1859'.[42] In 1860 when the works began, Khodzko was appointed head of triangulation of the North Caucasus (Fig. 4). Stebnitsky, who was appointed assistant chief of the Military-Topographic Division of the Caucasus Military District that same year and went on to head the Military-Topographic Department of the Caucasus Military District in 1866, also took part in the surveys.

'On the pacification of the Eastern Caucasus' in 1860-1865 [44] surveys were carried out north of the Main Caucasus Range, including in the mountainous regions of Chechnya and Dagestan. The chief of triangulation of the North Caucasus Khodzko 'was appointed Major-General (now Lieutenant-General) of the General Staff, his assistant was Captain Stebnitsky of the same Staff and the astronomer for the triangulation was General Staff-Captain Oblomievsky. Employed to produce geodetic works were General Staff-Captain Viskovatov, Topographic Corps staff-captains were General Staff Staff-Captain Viskovatov, Topographic Corps Staff-Captains: Pisarsky and Overin, Lieutenant Bliznetsov and Ensign Sidorov; militia cadet P. Sharoyan was translator for triangulation, and F.P. Brex, mechanic. Topographers were appointed as needed but never more than six or seven. The surveys were also attended by the lower ranking officers and Cossacks. Triangulation of the North Caucasus was started by Khodzko and completed under the leadership of Stebnitsky (Fig. 5).[45] In 1864, 'after the conquest of the western Caucasus, I.I.Khodzko made a reconnaissance of the western tip of the Main Caucasus Range, and the next year he completed his forty-year geodetic activities with observations at the highest points of the Kuban region, which concluded the triangulation of the North Caucasus'.[46]

The field surveys conducted by military topographers, which created the basis for the cartography of the Caucasus, were appreciated by the scientific community of Russia. In 1868, after completing the triangulation of the Caucasus, Khodzko was awarded the Konstantinov Medal, the highest award granted by the Imperial Russian Geographical Society.[47] The Commission, created to analyse the results of the works conducted in the Caucasus, came to the following conclusion:

General Khodzko's triangulation by its accuracy

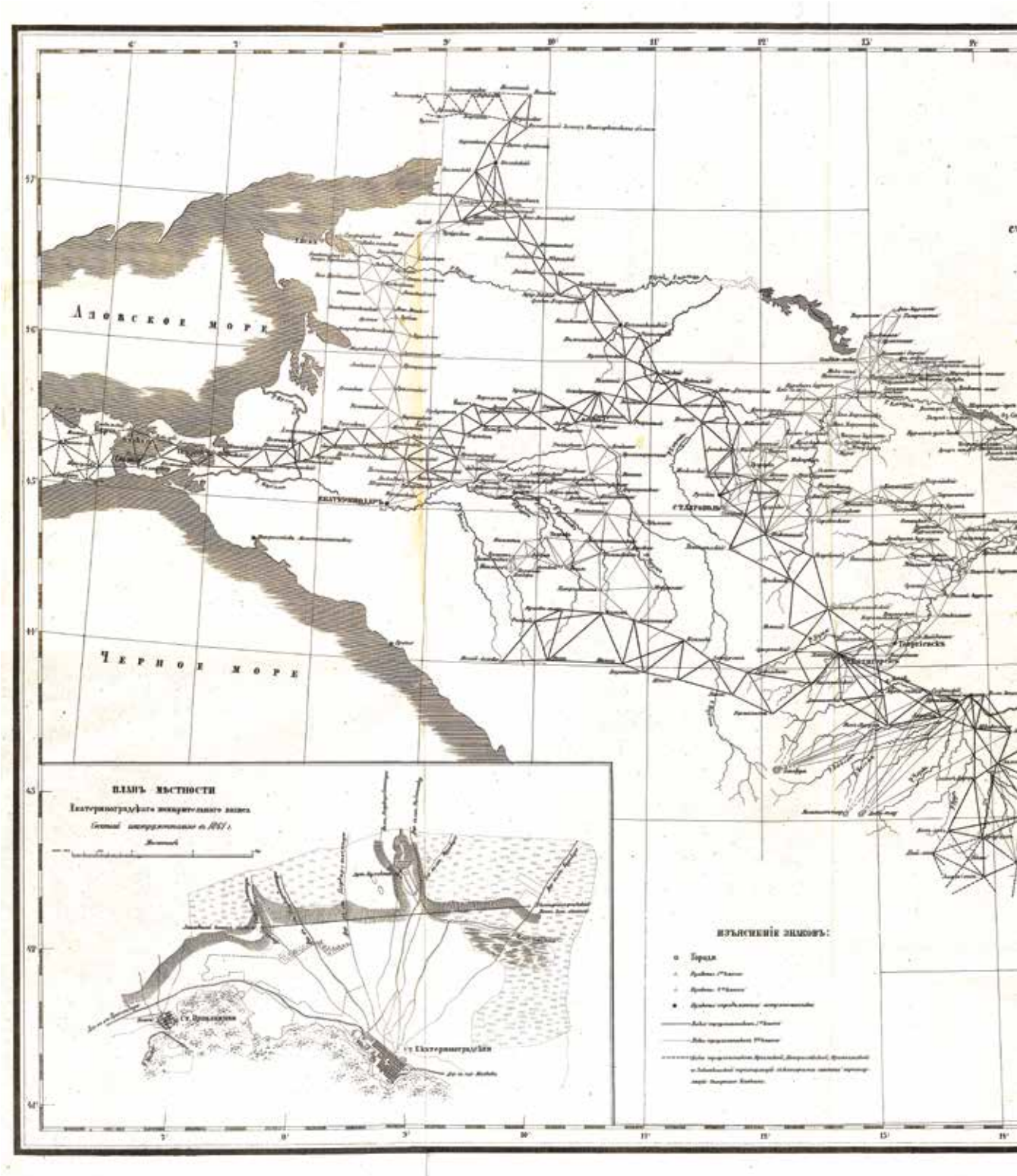


Fig. 5 Map of the trigonometric network of the North Caucasus.[56]



satisfies not only all its direct cartographic purposes, but also the strictest requirements of the geodesy itself. It contains a rich material, whose final processing promises a lot of curious and important conclusions for science … and the difficulty of execution, in the dedication of the producers, can easily rival all similar works produced anywhere on the globe, not excluding the Indian triangulation, which 25 years ago made famous the name Everest.[48]

A description of the triangulation of the North Caucasus in 1860–1865 was published in 1869 and 1870 in the *Notes of the Military-Topographic Department of the General Staff* (Fig. 5).[49] The scientific processing of these works was carried out by Stebnitsky.[50]

According to L.P. Zagursky, 'the Military-Topographic Department determined more than 2,000 trigonometric points. Many points were also determined by ranks of the Land Surveyor's Office (established in 1862), which was originally supervised by I.I. Stebnitsky. The mass of accurate data obtained in this way made it possible to carry out correct topographical surveys in almost the entire territory of the Caucasus and Transcaucasia and land surveying works in a large part of the region'.[51] At the same time Transcaucasia was a 'pleasant exception' among the regions of the Russian Empire, for here the surveying works were based on triangulation points and met the requirements of accurate topographical works.[52]

Triangulation in the Caucasus left its memory in the form of marks on the ground which had served as landmarks for topographers engaged in the surveying. In the 1840s and 1850s, stone pyramids were built at the 'ends of the line' of the survey base.[53] Between 1860 and 1865 a signal consisted of: '1) a middle bar [pole], dug into the ground, to the top of which was attached a circle to set the instrument on it, 2) a floor separate from the bar [pole], on which the observer and his assistant stood, 3) the upper pyramid, padded [lined] with boards and 4) a ladder to the signal floor; the height of the signals was different, from 6 to 14 fathoms ...' (Fig. 6).[54] Signals at points of second class (lower) triangulations consisted of poles between '2 to 3 fathoms high, set [and] hammered into the ground; on top of the poles the round drum made of straw or tree branches was put... If there was not enough wood at second-class points', stone or earth pyramids of about 'a fathom high, were set.[55] Many survived intact for a long time and, apparently, become legendary over time, their stories rarely having anything to do with geodesy or cartography.

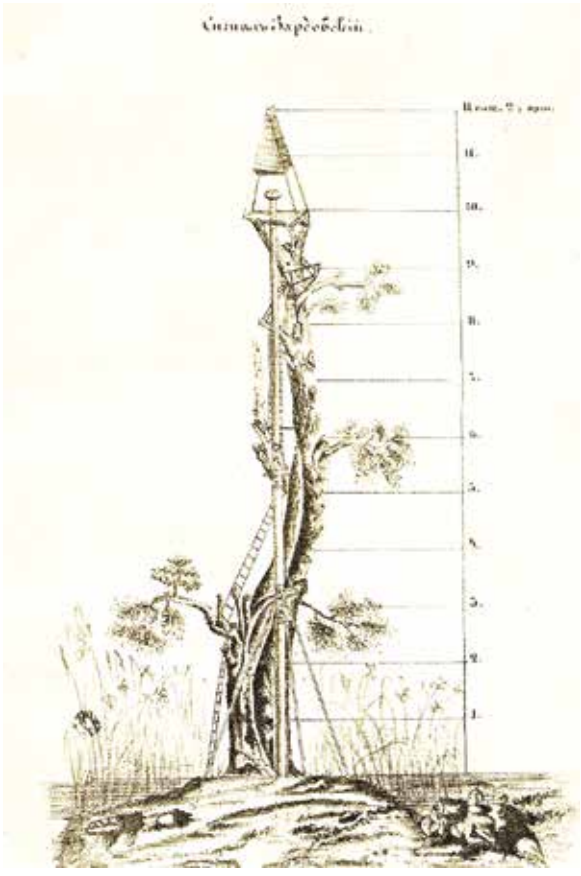


Fig. 6 Signal, constructed during triangulation in Transcaucasia (in Azerbaijan). [62]

It is likely that a pyramid existed at the strategically important Kerket Pass in Gornaya Chechnya, not far from the first-class point on the Kashker-lam ridge, marked on the triangulation map where there was a shortage of wood (see Fig. 5).[57] This region was visited by Emperor Alexander II in the autumn of 1871. A researcher of the Caucasus, A.E. Rossikova, wrote in 1895, thirty years after the completion of triangulation of North Caucasus and a quarter of a century after the the Tsar's visit: 'Among the lush greenery of grass and flowers at the top of the pass stands a pyramid, built of stone in memory of the passage of the Emperor Alexander II in 1871'.[58] Naturalist K.F. Gan wrote in 1902 that on the Kerket Pass 'there is a stone pyramid in memory of the visit of Emperor Alexander II, who was here in 1871'.[59] It is possible that different legends were attributed to other pyramids in the Caucasus.

Barometric determination

Barometric determinations of height were made during the triangulation of the North Caucasus. The method was adopted for use in close and low places which were inconvenient for taking trigonometric measurements. These observations were made with barometers of the Parrot or Heylusak system and thermometers. They were compared with the normal instruments of the Tiflis Observatory before leaving for the field and after returning.[60]

Barometric observations established the absolute altitude of 286 points. In addition, the data were supplemented by barometric determinations of heights already published in 'Caucasian calendars' and other publications. These had been made 'in a very large number by Academician Abikh during his geological research in the Caucasus and by Academician Ruprecht during his trip to the Caucasus in 1860 and 1861'.[61]

Thus, the altitudes of a total of 1,590 points were determined barometrically.[63]

'A relief map' of the Caucasus was made using this information, a copy of which was exhibited at the Paris World's Fair in 1867. It was awarded the Highest Commendation a year later.[64]

Determinations of the the barometric heights of the ridges and peaks of the Caucasus allowed Stebnitsky to clarify the position of the snowline on the northern and southern slopes of the Greater Caucasus, determine the 'limits of growth' of the forest and the number of crops of barley, rye, wheat, grapes that could be grown. He established that 'the highest inhabited place in the Caucasus is the village Kurush in southern Dagestan, 8,175 feet absolute height, then the village Kalota (on the river Fiag-don in Ossetia) at 7,746 feet absolute height.[65] Knowledge of the heights of the snowline was of great practical value, since it determined the accessibility of mountain passes in the summertime.

In the 1860s Russian surveyors began to use telegraph to derive differences in longitudes. This innovation made the work much cheaper and more accurate. In the Caucasus this method was first used by Stebnitsky and N.A.Tochalov, who in 1874 determined the difference of longitudes between Erivan and Tehran. In 1882 P.P. Kulberg and D.D. Gedeonov, with the help of telegraph, determined the difference of longitude between Rostov-on-Don and Tiflis, and in 1885 Tiflis and Batumi.[66]

Stebnitsky was the founder of gravimetric observations in the Caucasus, which were continued by geodesists and topographers Kulberg, Gedeonov and N.D. Pavlov. These observations were of great theoretical importance for determining the shape and

size of the Earth, which, in turn, must necessarily be taken into account when calculating cartographic projections.

Significant explorations and surveys of the second half of the 19th century

Andrey Vasilyevich Pastukhov was a bright figure among the topographers of the late nineteenth century. Under his leadership from 1881 surveys were made in the high mountain zone of the Caucasus.[67] These allowed him to link the Transcaucasian triangulation with the triangulation of the North Caucasus.[68] He is known for his ascents of the mountains Kazbek, Alaghez, Elbrus, Khalatsu, Shakhdag and Ararat. With each ascent he carried out a broad programme of observations and research. He published descriptions of his travels, along with maps of mountain summits, glaciers and lakes in issues of the *Caucasian Department of the Imperial Russian Geographical Society.* His work remains relevant today.

In the 1870s and 1880s triangulation works continued in the Caucasus, which, as required, were carried outside the two main triangulations (Transcaucasian and North Caucasus): in Kutaisi, Kuban, Terek, Kara regions, in Dagestan, Baku, Erivan and Elisavetpol provinces. There were no trigonometric points to the south of the North Caucasus triangulation points in the Terek region to the watershed line of the Main Caucasus Range before 1884. In 1885 a number of triangulations from the west and east were laid, and in 1891 they were connected. As a result, by the beginning of the twentieth century the Caucasian region was covered by a common network of trigonometric points, which served as the basis for all subsequent topographic and land surveying. By 1917 fifty percent of the territory of the Caucasus had been accurately surveyed.[69]

Zagursky wrote 'as a result of properly conducted geodetic, astronomical and topographic works, accurate geographical maps were to be produced'.[70] Already in 1862, a new 10-verst map of the Caucasus had begun. It was engraved in Gotha at the famous cartographic establishment of Justus Perthes. A new 5-verst map of the Caucasus was created in 1866. This map was continuously revised and improved technically and was a valuable source of knowledge about the topography of the region for administrators, explorers and serious travellers. A road map on the scale of 20 versts followed in 1872. It was published numerous times with appropriate additions and corrections. Finally, in 1868, at the request of the Caucasian Department of the Imperial Russian Geographic Society, a 40-verst map of the Caucasus was published in Tiflis.[71] Despite the relatively small scale of this map, it was notable for the completeness of geographical information, clarity and ease of navigation. Heights of the main mountains and passes, the boundaries of the locations of snowlines and grass vegetation, the location of forests and cultivated plants, settlements, meteorological data for points which were regularly measured were indicated in the margins of the map. In 1883 a new edition of this map was published with corrections and additions.[72] At the end of the century a two-verst map of the Caucasus was drawn on the basis of a one-verst instrumental survey which began in 1886.[73]

'Detailed Map of the Caucasus Region' on a scale of 10 versts per 1 inch is a remarkable achievement of the Russian surveyors and geodesists in the Caucasus. It became one of the fundamental maps of the southern Russian Empire and was published several times with corrections in Tiflis: 1869 (55 sheets), 1871 (26 sheets) and 1892 (58 sheets). It was supplemented by maps made from surveys of adjacent territories. Between 1902 and 1914 the map was completely corrected, and the number of sheets reached 83. In 1913 an alphabetical index to the five-versts map, compiled by D.D. Pagirev, was published in *Notes of the Caucasian Department of the Imperial Russian Geographical Society.*[74] The lengthy index contained some 34,000 place names and included a collated map sheet. This map was reprinted several times after 1917. Figure 7 overleaf is one sheet from the 1926 edition.

Conclusion

The North Caucasus is a mountainous territory dissected by river valleys, with fertile climatic conditions, good soils and healing mineral springs. It has long been of great interest for all kinds of research due to its variety of natural resources. The activities of the military topographers in the Caucasus were responsible for not only new cartographic publications which contributed to the improvement of the region's economic development but the vast data they obtained was a significant contribution to science. The information accumulated during the topographic surveys, geographic descriptions and geodesic works had a significant impact on the formation of the scientific foundations of Russian Caucasian studies.

Fig. 7 *Overleaf.* **One sheet from 'Detailed Map of the Caucasus Region', 1926.**


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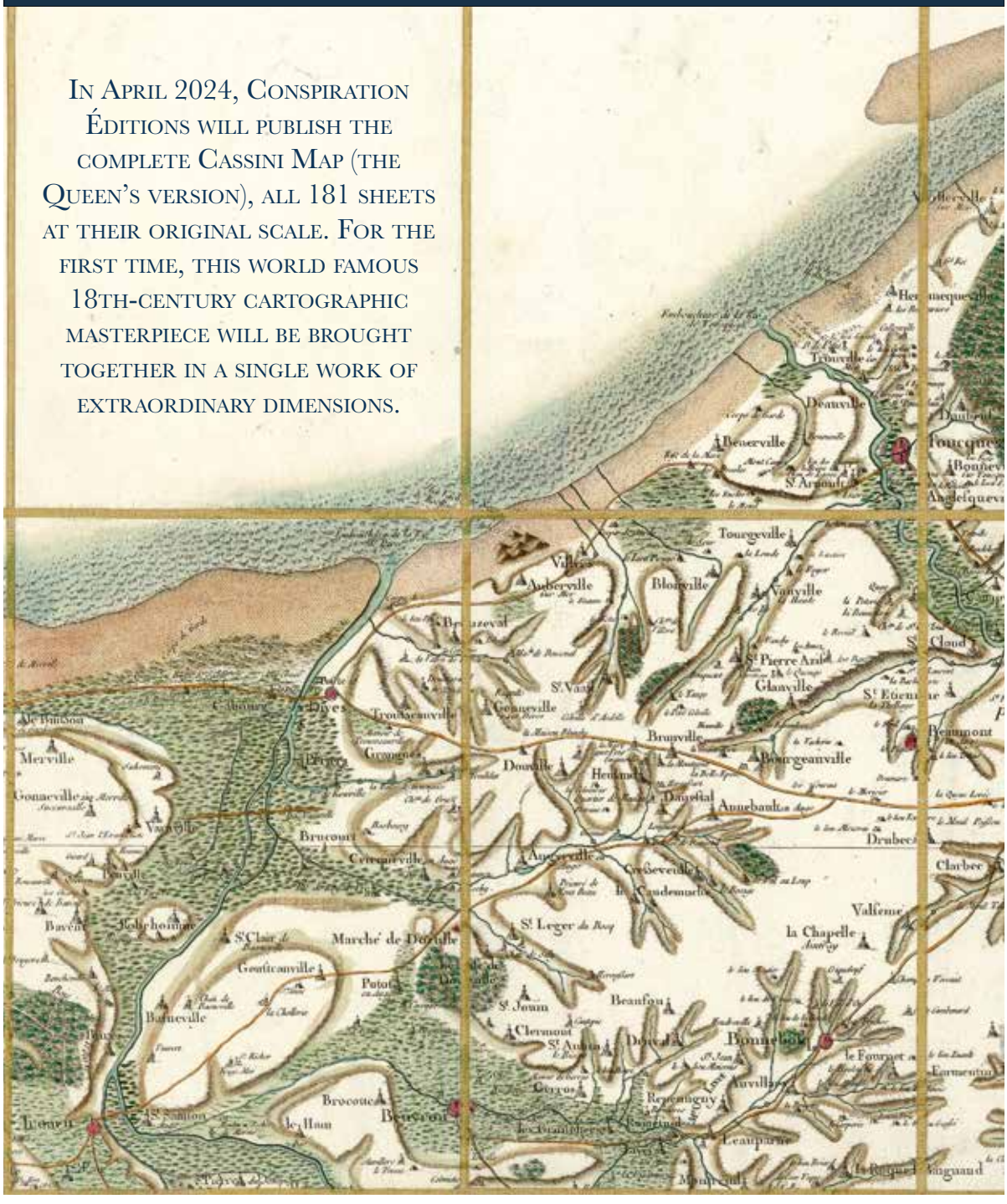


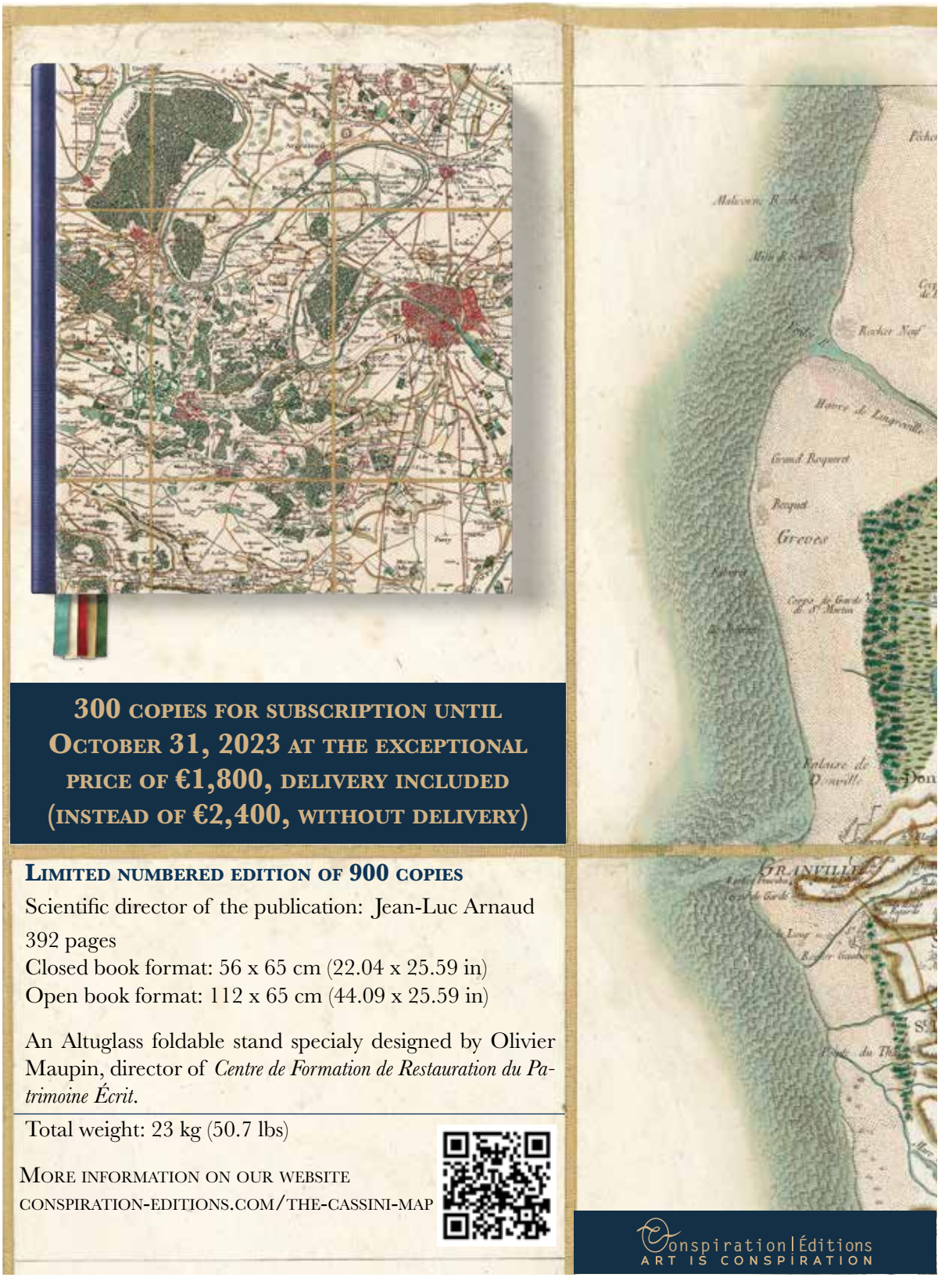
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MAP COLLECTING EASY TO START, HARD TO GIVE UP

A few explanatory, sometimes philosophical notes on the Hans and Eva Kok Collection (HEK)

Hans Kok

The start and modern times

In 1962 in Lisbon I bought my first map: it happened to be one of the XVII Provinces of the Netherlands by Willem Blaeu, a single map, separately published in 1608. I was walking along the city's streets during a stopover on a flight to South America, when I noticed a shop, three steps up from street level with a familiar map in its window. Those were the days, when atlases were broken up by dealers, selling off local maps quickly and sitting for years on those not directly related to their own country. As a consequence, local maps were more expensive; the non-local ones tended to be cheaper than in their respective homelands. Improved international communication allowed dealers to sell or exchange the rest of an atlas with colleagues in other countries, where better prices were expected, even when the commission for a local dealer had to be considered.

Since then, mobile phones, email and internet have made buying and selling easier. International buyers are now welcome at any dealer's website and shipping occurs mainly directly from seller to buyer. As a result, complete early atlases are in short supply while loose maps have become abundantly available, with price tags reacting accordingly. The practice of breaking up atlases and travelogues has been reversed and dealers have started collecting 'missing' maps in order to complete an atlas which may bring a better price than the value of all the loose maps added together. Collectors may receive an inquiry: 'Did you



Fig. 1 'The world from above' presented as an azimuthal projection. The North Pole is at the centre with equidistant concentric circles. The very outer ring will ultimately become the South Pole. Pieter van der Aa, 'Planisphere Terrestre', Leiden, 1713, published in his *Atlas Le Nouveau Théatre du Monde* and in 1729 in his *La Galérie Agréable*. HEK MC 289.


PLANISPHERIUM TERRESTRE
MER du NORD et OCEAN SEPTENTRIONAL
OCEAN OCCIDENTAL
OCEAN MERIDIONAL
OCEAN ETHIOPIEN
INDE
MER PACIFIQUE


Noort Star
Klaer-Lichtende
NOORT-STAR
Ofte
ZEE-ATLAS;
Waer in vertoont worde,
De gelegentheydt van alle de Zee-kusten
des geheelen Aerdtbodems.
Nieuwelicks uyt-gegeven, door
JOANNES van LOON.
TAMSTERDAM,
By JOANNES JANSSONIUS van WAESBERGE,
en JOANNES van LOON, by d'Oude St. Anthonis-
Poort, aen't Kerck-hof, in't Lely-Straetje, worde
tot Middelburg by Wilhelmus Goeree, 1669.
P. MEDINA
E. WRIGHT

not have a map of Japan by Blaeu from the *Atlas Sinensis*? Would you want to sell or exchange it, because it would complete my Atlas for which I have a customer?' I call this the waves of history when things that once were valuable, no longer are, and then become fashionable again after X number of years. A continuous process like the ocean waves lapping the shore.

Respect for navigators of old and the world from above

I bought a few more maps, because I liked them for their beauty or history, for obvious errors or unexpected accuracy regarding their date of origin.

When I flew the world as a commercial pilot I used my Mark IX or Kollsmann periscopic sextant to figure out where on earth my plane was as it plodded towards its destination. And in cloud, with no celestial bodies to observe, I did not know whether we were making sufficient progress, in consideration of the distance to go, fuel remaining and weather at our destination. It made me think of seamen in the sixteenth and seventeenth centuries, out on the ocean with adverse winds and unknown currents, with no idea of local or Greenwich Mean time, contending with scurvy or cholera rampant among the crew, inadequate food infested with maggots and bugs, and pirates and other enemies on the prowl. Communication with the home country or company was impossible then, let alone diplomatic or military support when needed. I started to wonder how they fixed their position, what kind of maps and charts they had available to them and how accurate these would be. In short, I was raising my hat to the navigators of old who experienced the same problems as myself but who had fewer navigational aids to solve them.

A touch of philosophy

Looking at our planet from up high, there are no national borders to be seen, suggesting there would be no real need for passports, work permits, visa and immigration or emigration procedures. Maps, however, show borders, but charts of the oceans do not, they are, according to my learned compatriot Hugo Grotius of the seventeenth century *mare liberum*, free for all to use and enjoy. It makes sense, for how on earth, do you mark boundaries to trespass or adhere to on water?

I learned to judge winds at sea from the foamy crests that I could see from above, I knew that a river was carrying a lot of water, because the brown outflow into the ocean was reaching much farther out from shore, compared to the last time I passed overhead. I learned to look at the lands below and noticed that remnants of meandering rivers were still clearly visible in outline as green vegetation tended to persist there. When a volcanic eruption had been reported near our route, we planned to fly safely around its downwind trails. When in-flight, and smelling something unusual, I first checked whether it could be smoke from the air-conditioning or electrical short circuits in the aircraft systems, and when neither, we flew a wider curve around the ash tail. I remember that the proximity to New Delhi can be sniffed from 35,000 feet in winter due to the numerous coal and wood fires that were used for heating and cooking. The forest fire in Newfoundland, that I had read about, was discernible by smell; it stank to high heaven when you got close. I picked up other meteorological knowledge and realised that aviators and seamen share some similar experiences such as negotiating the effects of wind gusts and the wind-effect on rolling fog or its dissipation.

Our history, recorded on maps

After this flimsy outburst of philosophy, back to the considerations that helped inform my map collecting. Our history often flows calmly but on occasion re-sets wildly due to violence and war. Politics and wars may move borders to and fro, creating new ones, obliterating old ones. The place to see it all documented and recorded is on maps! When maps are dated, the changes are easily put into perspective; when not, we need to figure it out. Can we find out? Most usually yes, by combining common sense, simple logic, in-depth research, and knowledge of history. Maps may be in essence political, thematic, propagandist, designed for planning a fortification, a battle or canal (see Fig. 6), or they may be the 'How do I get there?' type. Maps of the seabed and the heavens exist also. Maps of the sea surface are not much use, however, with the addition of a grid of latitude and longitude, a scale bar and a compass rose they become sea charts for general navigation. Where are we? How do I get from A to B, quickly, efficiently, safely? I find these matters are all highly interesting.

Fig. 2 Title page of Joannes van Loon's sea atlas, ***Klaer-Lichtende Noort-Star ofte Zee-Atlas*****, Amsterdam, 1665. A seascape is shown under a starry sky with the Polar Star prominently displayed, emphasising its use for latitude determination at sea. HEK MC 471.**



Fig. 3 Johannis van Keulen, 'Paskaart van de Garomne of Rivier van Bordeaux', from his sea atlas, 1682. Detail showing the entry passage to Bordeaux from the Garonne River. Note the multiple bearings on landmarks to provide safe entry, marking turning points and avoiding the sand banks. The chart is oriented to the south. HEK MC 314.

I recognised that the scope of maps was vast and seeing them from their many points of view, I bought more, as well as charts and atlases and travelogues. I was greedy, I wanted that map, that one and the other, and no, I did not want to sell any, I am a collector! I bought more until I finally realised that if I continued in this way, I would end up with a pile of old paper which nobody would appreciate for its underlying motives. It dawned on me that I needed to limit my interests, create a common thread that would be understandable or at least recognisable in its logic. The problem was that by fixing on collecting only sea charts, for instance, I could not buy a particularly beautiful or interesting terrestrial map, or celestial maps or town plans. Should I impose a geographical restriction on myself and focus only Holland or Europe? I could wallow in national pride with a collection of Dutch maps that tracked its history, but wait a moment, don't the other lands that I see from above have equal pride in their own history and cartography? Maybe I could restrict myself to world maps. No, regrettably their scale is too small, and without details there is no local relevance at all.

IMCoS and the collection focus

I stopped buying maps in 1965 or thereabouts, lacking time during a particular busy period in my professional career. It gave me the opportunity to consider the enigmas of map collecting. In 1976 I returned home after a number of postings abroad and got into a more



Fig. 4 Claes Jansz. Visscher, 'Leo Hollandicus', third state, issued on the occasion of the Treaty of Munster in 1648. Earlier states from 1622 and 1633; the first state marked the end of the Twelve Years' Truce (1621) during the Eighty Years' War between Spain and the Dutch Republic, then still struggling for independence. HEK MC 909.



Fig. 5 ' **Praefecturae de Paraiba, et Rio Grande',** a sheet of the wall map prepared by Georg Margrave for Governor Johan-Maurits van Nassau in Brazil, published 1663 in Willem Blaeu's *Atlas Maior.* The main details are along the coast and upriver. HEK MC 363.

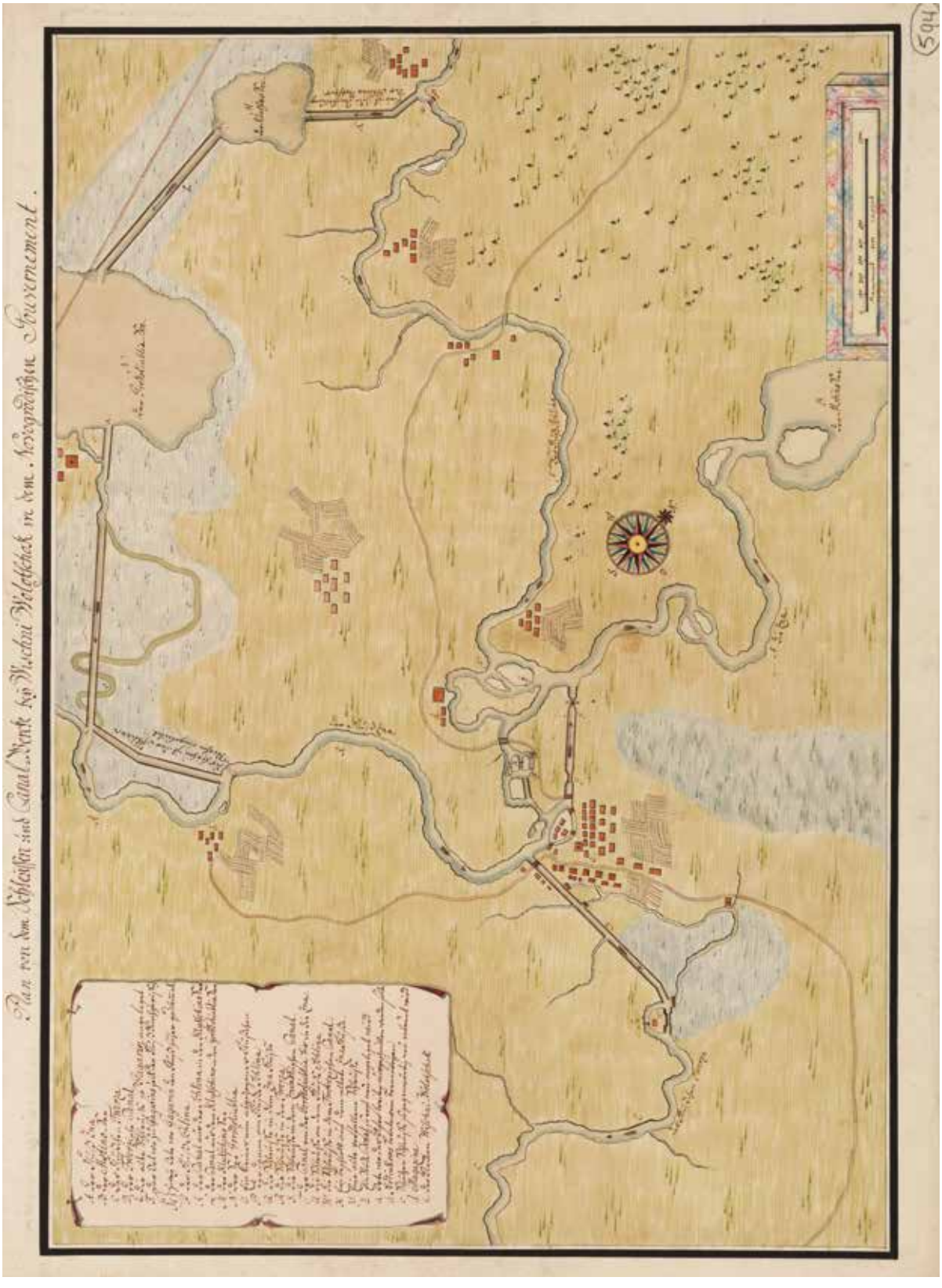


regular pattern of work. It wasn't until 1981 when I entered a map dealer's shop in Singapore's Tanglin Shopping Centre that I started to buy maps again in earnest. A few years later, Mike Sweet, owner/founder of Antiques of the Orient and IMCoS National Representative for Singapore at the time, suggested that since I was spending so much money on maps, I should consider joining IMCoS in London. I agreed and joined the Society but I was still struggling to find a theme for my collecting interests. I considered a number of options but rejected them all as they seemed too limiting for my taste. My Eureka moment also came in Singapore while lying awake with jetlag, ruminating my problem. There I arrived at a decision to collect maps following the overseas route from Amsterdam to the Dutch East Indies and the period of the Dutch East India Company (VOC, 1602–1799). Later, I adjusted the time span slightly to start at 1568 with the Dutch Eighty Years' War of Independence from Spain and stop at around 1800, when the French (Napoleon) invaded the Netherlands.

This geographic scope and time frame permitted me to collect town plans of VOC cities, maps of the Netherlands, sea charts of the North Sea, sail around England, Scotland and Ireland on maps, go to Brazil, where the Dutch ousted the Portuguese and ran a colony (1630–1654) (see Fig. 5), further to South Africa, where a settlement (Cape Colony, initiated in 1652), now Cape Town, was in the making, onwards to Java and Batavia/Jakarta and beyond.

The VOC had a stronghold in Sri Lanka and Malacca for some time, and monopolised the Japan trade from Deshima Island in Nagasaki Bay until 1853. We needed the stars of the Southern Hemisphere for navigation, so I felt free to buy celestial maps to document progress in this respect (see front cover).

Ouch, was this still whimsical collecting? You might think so, though I beg to differ. My common thread of stringing multiple historic and cartographical aspects together held great attraction for me. I compared Dutch to non-Dutch cartography of the time; it gave me information on the distribution and transfer of knowledge from one country to another. How long was it before Coronelli knew about Australia, then called New Holland? Look! Blaeu's wall maps are being copied in Italy. And did the English ever pay copyrights for their 1588 Waghenaer edition? Abel Tasman discovered Tasmania (Van Diemen's Land), the name did not stick (who would want to live in Van Demon's Land?), and New Zealand. He sailed north along the coast of New


Plan von dem Schlosse und Canal Werke bey Pleskau Belegenheit in dem Herzogthume Livlandt.
504

Guinea and south along it some other time. The sea charts of the Indonesian archipelago took shape within the geographic and time frame of my collecting interest. VOC Governor-General Anthonie van Diemen dispatched Maarten Gerrits Vries to Japan in 1643 at the same time as Tasman set off to Madagascar, from where he sailed south and east. Was the landmass that Vries found in the north beyond Japan, Hokkaido, Companies Land, Kamchatka, Yeso or even Alaska? Not much else happened out there, north of Japan, over the next several decades but to help figure things out La Pérouse travelled there in 1787. Sadly, he disappeared into the blue yonder of the Pacific and was never heard of again.

The Dutch had settled in Manhattan in the first decades of the seventeenth century, lost it to the English, got it back, then exchanged it in 1667 for Surinam and thus lost it for good. In hindsight hardly smart business after a successful Anglo-Dutch war! Look at all the Dutch words absorbed nevertheless in the American and English languages: the Yankees from Jan and Kees, common Dutch first names, the Jay's ('ja') and the Nays ('nee' in Dutch, pronounced nay in English) still used in the voting in Parliament: 'the Nays have it', when a motion is voted down in Parliament! Harlem, Brooklyn, Flushings remain, the Bowery stems from 'de Bouwerij' Dutch for a farm. Agriculture is 'landbouw' still in Dutch. Interesting, sometimes funny, but of course place naming is a reversible process, as proven by New Amsterdam becoming New York and the host of other places that have undergone name changes.

After 1703 Russia's Tsar Peter the Great fetched people from Holland to run his Navy, survey the coasts of the Caspian Sea, plan a design to interconnect the Volga and Dnieper drainage basins across their watershed, thus permitting access to the Black Sea and the Mediterranean from Moscow (see Fig. 6). A hot item for Russians strategically, who today want overland access to the Crimea with their Black Sea fleet at Sebastopol. And, admittedly, another extension of the collection strategy. Due to tensions with the Cossacks and Ottoman Turks, followed by lack of money and technology, the watershed was not breached until 1952 under Stalin. All these events are documented on maps: historic cartography is about maps with a history and history on a map.

After 1637/39 the VOC was the only European trading company allowed to stay in Japan though they were ordered to move from Hirado to Deshima Island in Nagasaki Bay. As a consequence, the Dutch ended up with something like a monopoly on Western trade with Japan, probably allowed to do so because their interests were commercial and not the proliferation of Christianity. This situation resulted in them gaining rather exclusive knowledge of Japanese culture and trade, while at the same time the 'red-barbarian' Dutch became the only source of Western information for the Japanese until 1853/54, when USA's Commander Perry's 'black ships' achieved the opening of Japanese



Fig. 6 (*Opposite*) **'Plan von dem Schleussen und Canal-Werke bey Wischni Wolotschok in dem Novogrodischen Gouvernement'** showing interconnecting the drainage basins of the Volga and Dnieper rivers across the watershed. A manuscript map rendering of *c.* 1730 of one of the connection projects planned by Peter the Great, potentially allowing access from Moscow to the Mediterranean Sea, made by a German military hydrographer in Russian service. HEK MC 594.

Fig. 7 **Complete picture of the newly opened port in the Yokohama Bay area** on eight sheets by Sadahide, *c.* 1860, with the just finished Kanagawa bridge in the upper right. One of three editions. Not all the sheets of this edition have been updated. HEK MC 373.

ports to other Western nations. This interesting period, recorded in both Japanese and Dutch documents including maps and prints, inspired me to develop a Japan collection, with an end date of around 1860.

I believe that I convinced myself that a Japan collection would be a useful and logical extension of my VOC topic. Please appreciate, that the Dutch staff at Deshima were in isolated limbo after the French invaded Holland in 1795. They were insecure about whose orders to follow, made more complicated when the English later sent Sir Stamford Raffles to rule in Java, to keep the French from controlling the Dutch colony. Deshima received its orders from the VOC in Batavia/Jakarta until its demise in 1799, after which it survived basically uncontrolled by Dutch, French or English instructions, not knowing who was friend or foe.

From 1815, after the Vienna Congress, Deshima found itself subject to Dutch orders again, now coming from a national colonial government that had replaced the VOC trading company's orientation with a more political perspective applicable to the whole Indonesian archipelago.

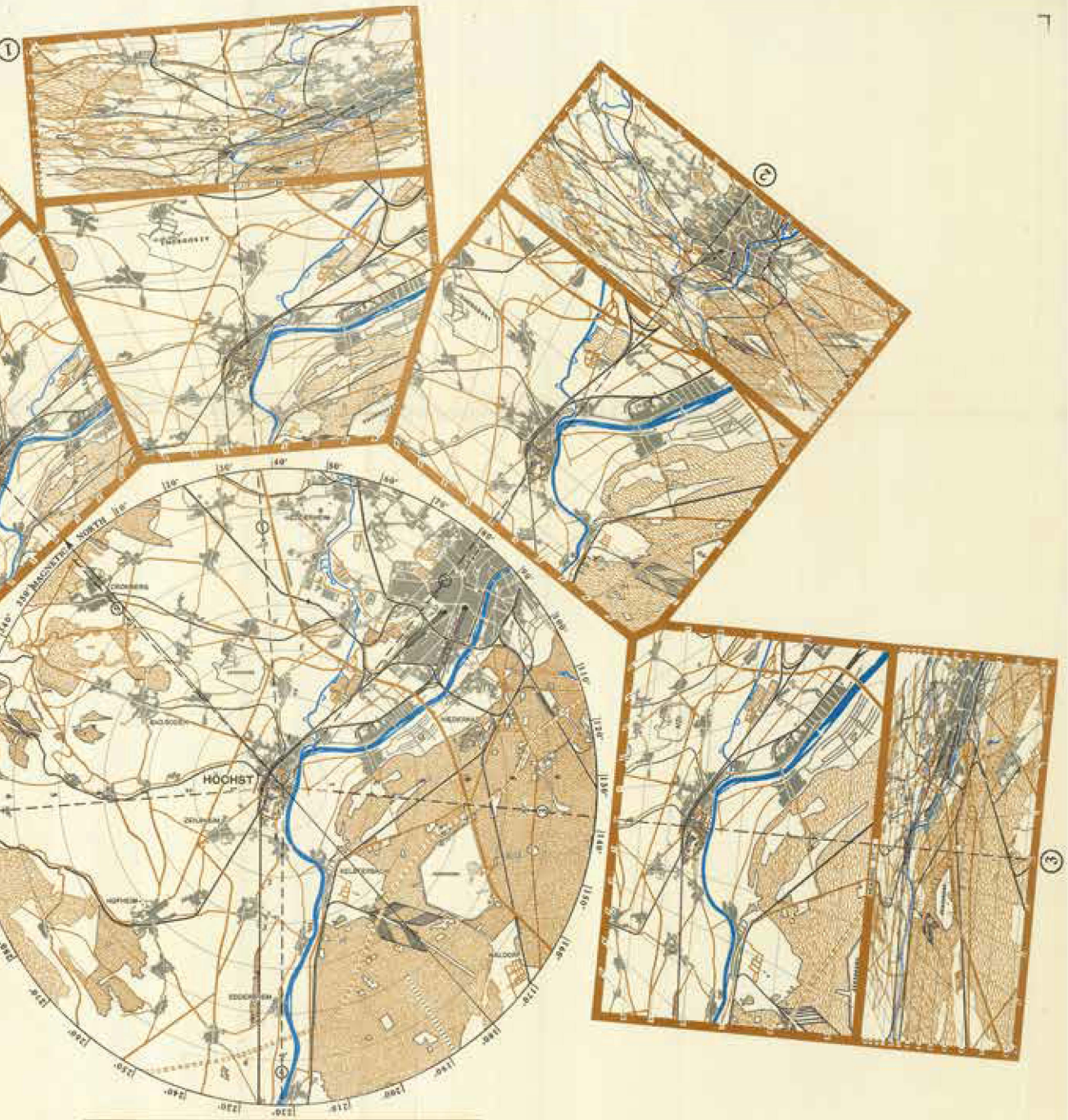
Collection structure in the future

So far so good, the collecting journey has been exciting but without children to pursue my cartographic interests, the question popped up, what to do with my collection. Sell it and be saddled with a money problem or donate it, keeping the collection intact and available for research and exhibitions, two areas which have always been close to my heart. By the end of 2020, the decision was taken to donate the major part of my collection to the National Archives of the Netherlands in The Hague. The decision was influenced by their policy to make everything accessible, free of charge to the general public, including high resolution scans of each item.

My collection has been split into sections, more or less along the lines I had established myself. To give a general idea: the section dedicated to world and maps of continents shows how exploration helped to complete the image of our planet (see Fig. 1); sea charts for coastal navigation and for navigation on the high seas (see Fig. 3); celestial maps for developing



Fig. 8 **Perspective map for bombing raids** on Frankfurt/Höchst (refinery) 1943, issued by the Ministry of Defence in London. The central section with the target is surrounded by six approach sections, each show perspective views in two stages for target location for bomber crews in flight. HEK FC 385.



TARGET NO.2 (c) 281/PERSPECTIVE (Sept.'043)

HÖCHST (Germany)

COORDINATES FOR CENTER OF MAP: 50° 06' 00"N-08° 32' 14"E

ABOVE SEA LEVEL: 350 FEET

[illegible] (250,000—M321/5/8

[illegible]: Circular lines on center map [illegible] miles apart

Grid lines on perspective views [illegible] mile

RAILROADS: Main line

Secondary or narrow gauge

HIGHWAYS: Main roads [illegible]

WATER: Shown blue

SURFACE COAL MINES OR [illegible]

IMPORTANT: IT WILL BE THE RESPONSIBILITY OF INTELLIGENCE PERSONNEL TO MARK TARGET IN RED ON CENTER MAP AND ALL PERSPECTIVE VIEWS JUST PRIOR TO BRIEFING

This sheet should be taken in air as an aid to navigators and bombardiers in locating target

knowledge of the cosmos, the stellar constellations and the unknown stars of the Southern hemisphere. A section for the Caribbean area and Surinam which the Dutch had colonised, and another for South Africa and Brazil (see Fig. 5).

An overview of Dutch efforts in surveying the Arctic and one for Russia, its big rivers, the Black Sea and the Caspian Sea (see Fig. 6). No maps featured what was the fourth largest lake in the world, the Aral Sea as it hadn't appeared on the maps at the time of Dutch presence in Russia. Now it has dried up as its influx water was re-routed to serve Russian cotton plantations upstream.

Each section shows the interconnection of trade and geographical knowledge and the cultural and political cross-fertilisation that occurs as a result thereof. Additionally, there are my atlas title pages (see Fig. 2), not to mention the town plans or the globe gores that never cease to amaze me (see front cover). I can understand that when gluing them onto the globe proper, the paper gores supposedly expand which would leave the last gore short of space. The dexterity of copperplate engravers is astounding but fitting the last gore on a globe comes next on my admiration ladder.

Sadness in goodbye. New horizons

I felt a bit sad when the trucks left our house for the National Archives, a final goodbye after so many years of collecting and some nine months of defining, negotiating and organising the transfer proper. My atlases gone, the maps and charts, the travelogues, all available now in The Hague 'for whom the bell tolls'. Ernest Hemingway will forgive me stealing his title for the occasion.

However, a few maps remain. I did not want to clear the walls of our home of the maps decorating them. The Archives could not accept my globes, as they specialise in 'flat' things. They stayed behind and still give me pleasure. By-products of navigation instruments like octants and sextants have also stayed behind in their cupboards.

My wife Eva considered the collection would be well taken care of in The Hague. She has always been supportive and never complained about the money spent on the collection, its upkeep, the exhibitions that were organised or the costs of preparing the maps that went out on loan. She must have enjoyed watching the metal chests of drawers leaving the house and may have suspected that some would return.

I hope this account of my journey does not suggest that only costly antiques are suitable to collect. There can be just as much satisfaction and joy derived from smaller, less expensive, or more locally oriented map collections.

Now I spend most of my time on aviation maps (see Fig. 8). Aviation for machines heavier than air is just over one hundred years old by now, as you will know. I have owned some aviation maps for a long time – fifty years or so – but while never considering them part of my map collection, felt they were too interesting to be thrown into a wastepaper basket. They survived all these years in a Chinese camphor chest, until it dawned on me that they were rare, indeed, few people were aware of their existence, let alone of what was on them and why. They document the transition from visual navigation to radio navigation and astronomical navigation; the emergence of approach aids; Polar navigation without a usable magnetic compass; inertial navigation and use of GPS in the end. Amongst these now are World War II Air Force maps and airline posters, as long as they show air routes or network maps. The posters were used in marketing and sales and demonstrate how the global networks of civil aviation grew over time, fostering a mature system of worldwide transportation, regardless of weather conditions and now with an unsurpassed level of safety. So, it seems that I maybe recreating an old problem quite anew, starting a collection and not knowing how to terminate it. At my age, I ought to be smarter, but it is fun once more, I will admit.

Alas, collecting maps etcetera is an infectious disease without any known cure. I have added space exploration maps to my aviation collection in the meantime. Surprising how many paper maps one still needs to plan for getting on the moon and off again. In case I have to move house to a retirement centre in due time, I can always start collecting maps on stamps to save space. When cartography and mapmaking go fully digital, they may be the last new maps around in hardcopy, anyway. Closing on a less pessimistic note: let this prospect not deter you from collecting maps and enjoying the chase, the find, the possession and protection of historic maps, whatever your choices out of so many options.

Editor's note: The HEK map collection is expected to become available to the general public by the end of 2023. They will be catalogued by the National Archives of the Netherlands as 4.HEK.MC followed by the map number. The atlases and travelogues will follow in due time.

ADMIRED, EXAMINED AND EATEN

Penguins on maps

Stephen Martin

Two penguins decorate the cartouche of 'Exquisita & magno aliquot mensium periculo lustrata et iam retecta Freti Magellanici Facies'. It was published in the 1630s and shows the strait between Tierra de Fuego and America. These intriguing birds are among the first penguins to be depicted on maps. They appear haughty, or display perhaps just a resigned solemnity as they are clasped into the elaborate designs of the cartouche. If they looked across the landmass, in addition to the practical information in the map of the passage through the Strait, indications of landforms and depths of the waterway between the South American landmass and Tierra de Fuego, they would see a whale at the western opening of the Strait near a fleet of ships, and two sea lions, one with pups, decorating the bottom left of the map. If they looked a little closer in one of the bends of the Strait, they would discover the island 'Pinguyns Eyllanden'; no doubt their home.

Olivier van Noort, in his account of his voyages in 1599, identified two Penguin islands on his map of the Straits of Magellan. One in the Strait and the second on the northwest coast of America near Porto Desire. Standing prominently at the southern tip of America is an illustration of a 'Pinguyn'.

Here the bird stands for more than decoration. This

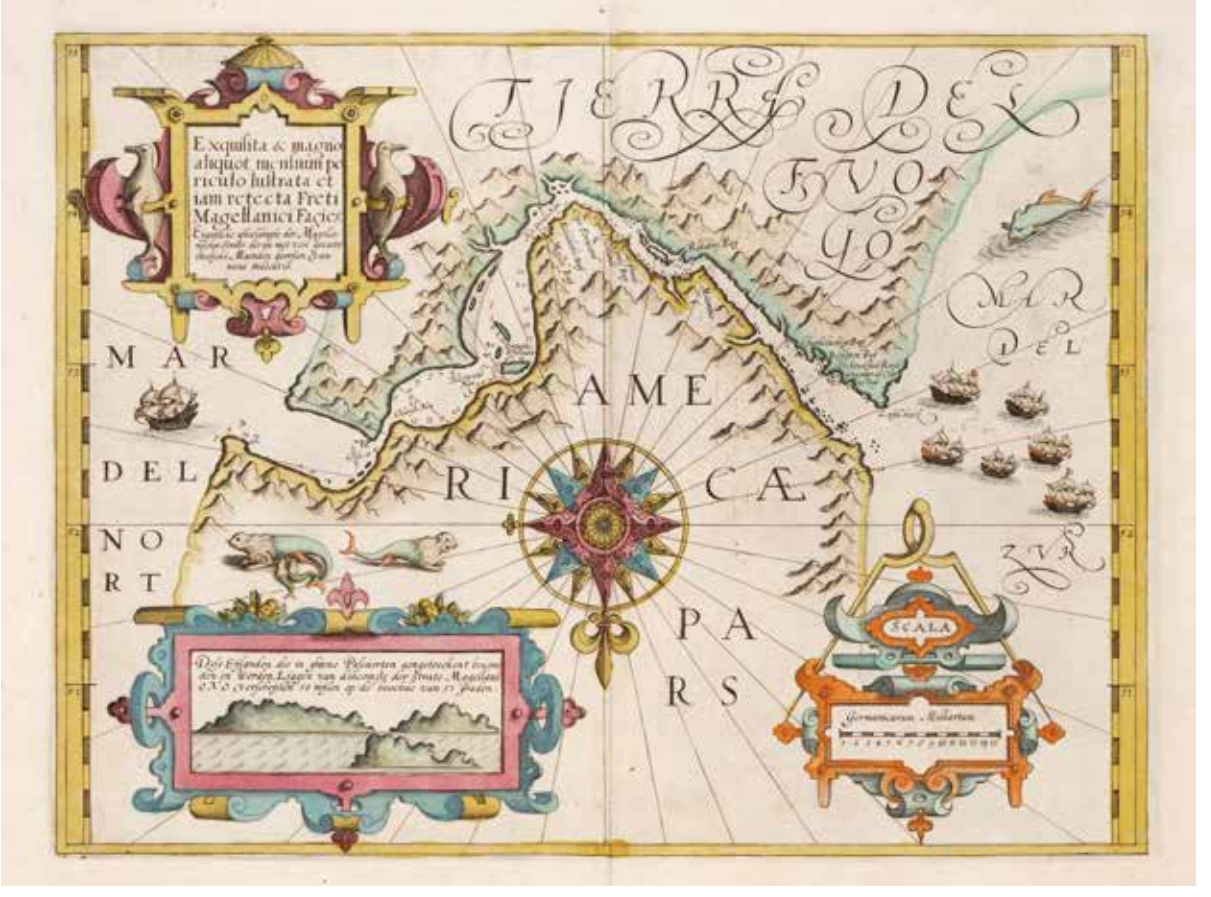


Fig. 1 Mercator / Hondius, 'Exquisita & magno aliquot mensium periculo lustrate et iam retecta Freti Magellanica Facies', 1630. 35 x 46 cm. Two penguins, nondescript but alert, incorporated in the design of the cartouche. State Library of NSW X910/6A.

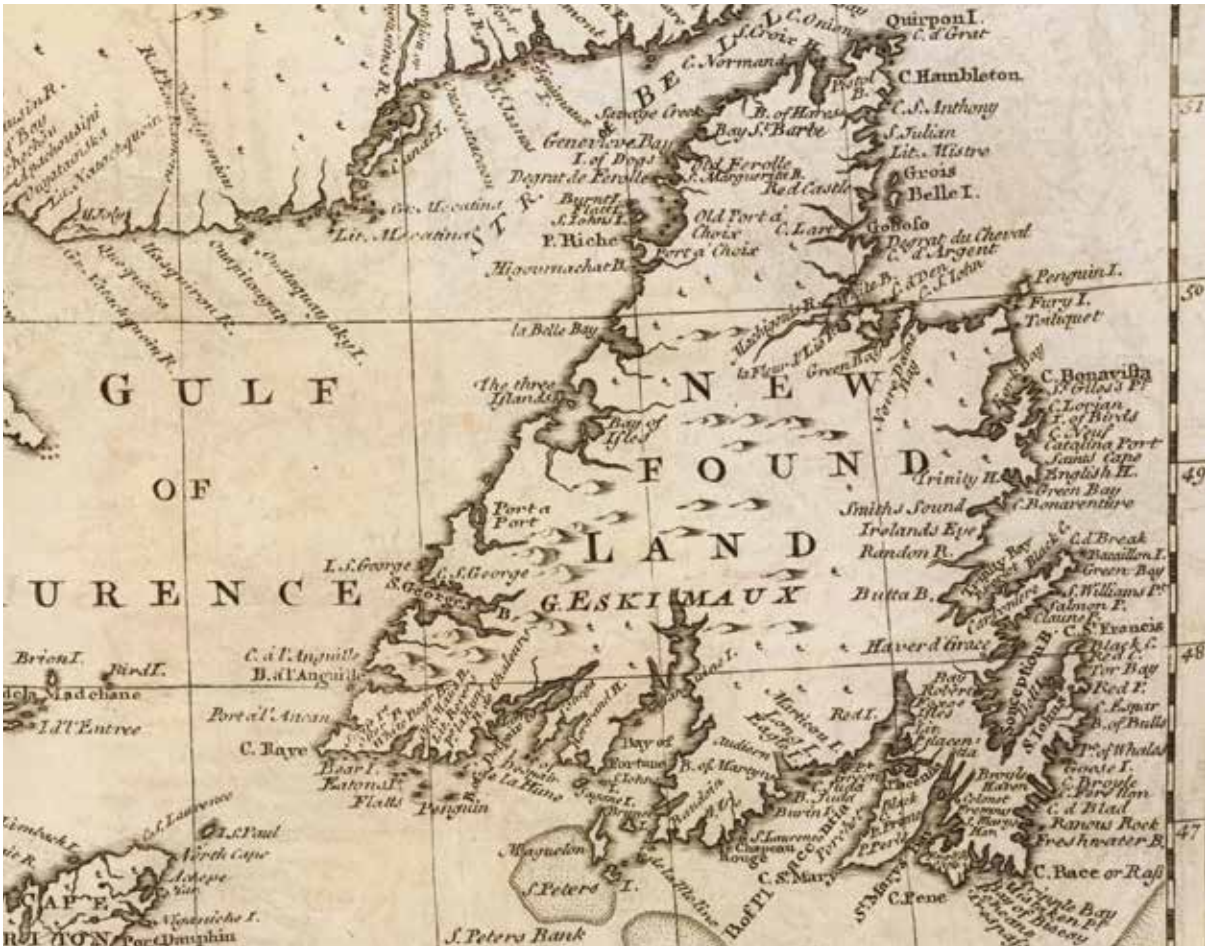


Fig. 2 Emanuel Bowen, 'A new & accurate map of the islands of Newfoundland, Cape Briton, St. John and Anticosta; together with the neighbouring countries of Nova Scotia, Canada &c. Drawn from the most approved modern maps and charts...', London, 1747. 35 x 43 cm. 'Penguin' [Islands] appear off the south coast near C. Raye and another 'Penguin I'[sland] north of C. Bonavista on the east coast. David Rumsey Collection

is no cartographic sleight or engaging conceit. This a deliberate and accurate reference to the location and nature of an island that was, in some cases, a lifesaving source of food. In the southern summer, penguins and penguin eggs were a staple source of food for mariners who quickly learned where and when penguins and their eggs were available for the taking. The birds were killed and stored in salt for future consumption.

Penguins have been a part of European culture for more than 400 years and for just as long have been admired, examined, and eaten. Europeans in southern penguin habitats commented frequently on the appearance of the flightless birds often alluding to recognisable, even attractive, human-like attributes of their shape or behaviour.

In 1578 the English sailor, explorer and sometime pirate, Sir Francis Drake sailed south along the coast of Patagonia. John Winter sailed with him and left us with the following account of an encounter with penguins on St Georges Island (now called Santa Magdalena) about 25 miles north-east of Tierra de Fuego:

> *Here we stayed one day & victualled our selves with a kind of foule which is plentiful in that isle, and whose flesh is not farre unlike a fat goose in England: they have no wings, but short pineons which serve their turne in swimming. Their colour is somewhat blacke mixt with white spots under their belly, and about their necke. They walke so upright, that a farre off man would take them to be little children* [1]

Winter was probably not the first to make such a comparison and he certainly was not the last. In 1694 Sir John Narborough published an account of his voyages south and included in it the account of his

gathering penguins for food. This included a description of the penguin that was to be often repeated in stories about the bird: 'They are short-leg'd like a Goose and stand upright like little Children in white Aprons'. [2]

Familiarisation grew into a fondness; penguins became an attraction, an acceptable decoration on all sorts of commodities, including maps.

Penguins occupied a similar ecological niche to that of the Great Auk (Pinguinus impennis), commonly called penguins, in the north. The two birds resembled each other in appearance and to some extent in behaviour. Both were flightless, easy to catch and good eating. The Great Auk was found in the cold North Atlantic coastal waters along the coasts of Canada, the northeastern United States, Norway, Greenland, Iceland, the Faroe Islands, Ireland, Great Britain, France and northern Spain. It left the North Atlantic waters for land only to breed.

Sailors took them in enormous numbers for food. Islands with auk rookeries took on the name of the bird and 'Penguin I'[sland] appeared on maps of northern seas (Fig. 2). Auks had probably been hunted in Newfoundland by Europeans since the middle of the fifteenth century and in 1844, after years of such exploitation, they became extinct.

So, when sailors and sea travellers went south and saw a small flightless bird that gathered in colonies and which were both edible and easy to catch, they marked the locations down on their personal and published maps. They called them penguins. The name stuck. Penguin Islands appeared on maps of the south.

Southern penguins were also being noted and described in journals and published accounts of voyages. Among these early descriptions penguins are described as exotic, almost marginal creatures. They may have childlike qualities, but they were mysterious birds; unfamiliar and being seabirds, from a different element. Often they were seen as half bird, half fish.

Illustrators mainly relied on textual descriptions and skins rather than on live specimens for reference. Representations vary – the standard silhouette, of a creature standing upright, with a distinctive beak and flippers was (and is) consciously used, with variations.

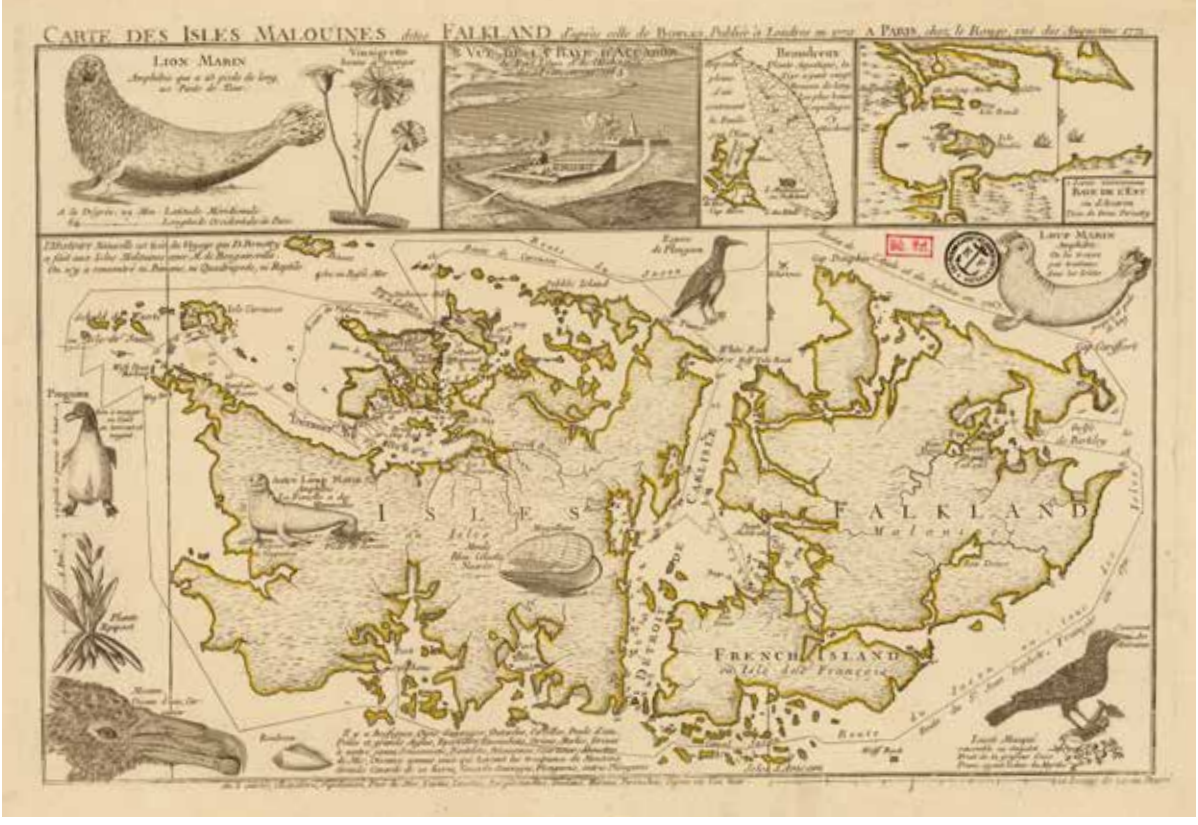


Fig. 3 Georges-Louis Le Rouge, 'Cartes des Isles Malounies dites Falkland d'apres celle de Bowles', Paris, 1771. 33 x 47.5 cm. Penguins, here are noted as 'bon a manger', a source of nourishment and example of the Island's natural inhabitant. BNF.

While the body shape was distinctive, accuracy relating to particular species did not appear to be a priority, if indeed the illustrator knew about these details. If accurate, the penguins drawn on the Mercator/ Hondius map would have had distinctive bands of white across their breasts. The King Penguin on Le Rouge's copied map of the Falklands Islands would not have had such bent flippers (Fig. 3).

Penguins as occupiers of a region took on a possessive quality as well, especially in regions such as Antarctica where there were no human inhabitants. The Australian claim to 42 percent of the continent, as signalled on a 1959 postage stamp issued by the Australian Post Office shows two Emperor penguins before a map of the Australian claim. It is as if they (as inhabitants rather than decorative motifs) validate the national claim. Australia was not alone in this conceit, as United States of America and Argentina also use the penguin symbol on maps, stamps and first day covers.

The distinctive shape and charismatic appeal of penguins were put to good use as tourist commodities and today are firmly established as tourist attractions.

Little Penguins regularly come ashore on the beach on Phillip Island near Melbourne, Australia after being at sea hunting. The sight of what has become known as the Penguin Parade is a charming and wonderful experience. In the 1920s the first informal tours of the Parade were conducted. Since then they have become a lucrative tourist attraction – 'business ducks' as recently described by Phillip Island tour guide, Dr Ann Jones.[3]

Broadbent's Official Road Guides include a detailed map of Phillip Island (1937) (Fig. 4). Indicated are fishing grounds, locations of mutton bird rookeries, seals, 'native bears' (koalas), wallaby, wild ducks, and – on Summerland Beach just south of Swan Lake in bold capitals – PENGUIN ROOKERIES. You could also view the 'Lonely Grave' and 'Volcanic Hills' if you still had time.

A prosaic reference to Royal Penguins on the subantarctic Macquarie Island serves as a reminder of

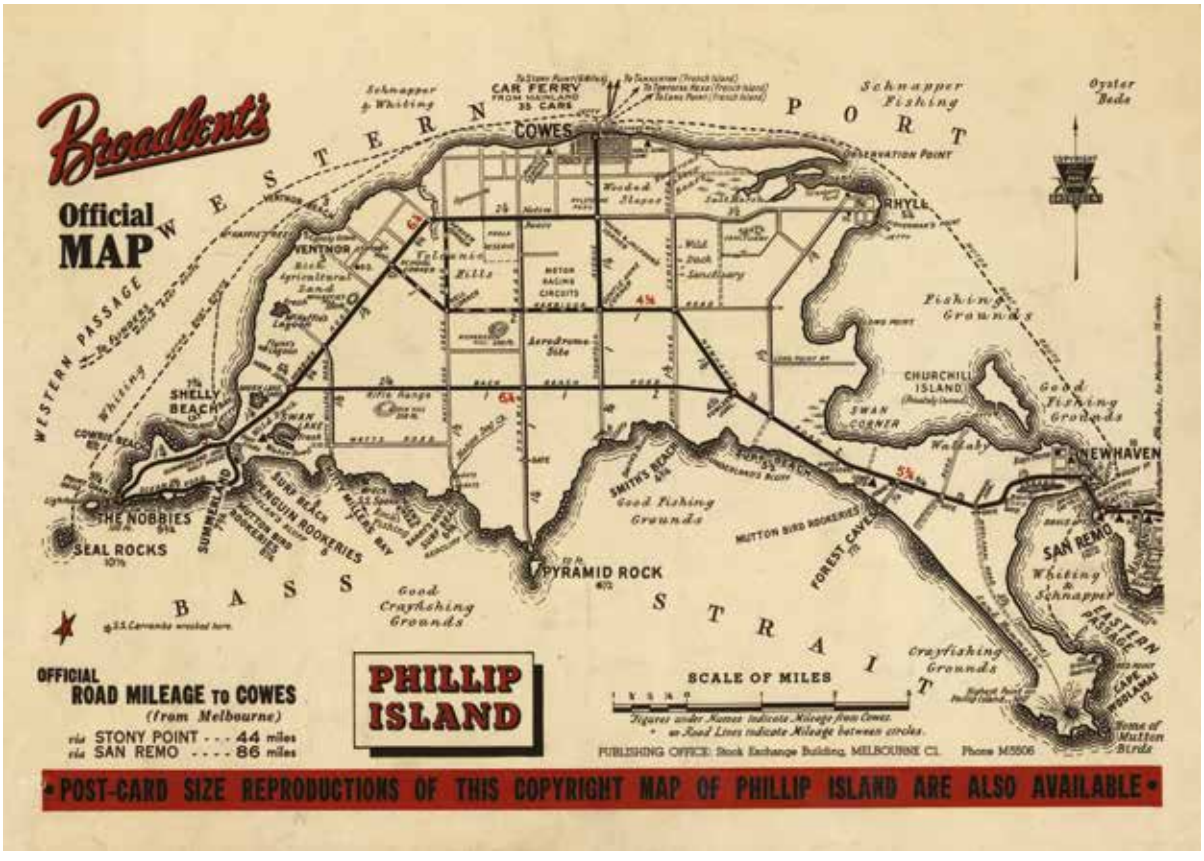


Fig. 4 'Broadbent's Official Map [of] Phillip Island', Melbourne, 1937 [?]. 31 x 46 cm. Penguin and mutton bird rookeries are listed, near Swan Lake as a Phillip Island attraction. State Library of NSW. Z/M2 821.3//1937/1.



Fig. 5 George Annand, G. F. Corp, 'Authorized map of the Second Byrd Antarctic Expedition', New York, 1934. 40.5 x 50.5 cm. Here the penguins identified as continental possessors, and possible guides are depicted welcoming and leading American explorers into the heart of the unknown. State Library of NSW. M2 180/1934/1.

the basic utilitarian purpose of some maps. The map relating to anchorages near the island made in the early twentieth century by members of the Australasian Antarctic Expedition, shows the lie of the land near Caroline Bay. Down the gulleys of a contoured landscape a small creek – a potential source of fresh water is marked out. But the warning, 'polluted by penguins, and unfit for use 6 months of the year'[4] given in the accompanying text, and reinforced in simple language on the map, is that a Royal Penguin colony exists on the creek. There's no horror of empty space, no decorative elements, not even an illustration, just a clear cartographic warning about the location and potential threat of a penguin colony.

United States Antarctic pioneer Admiral Richard Byrd led several expeditions to the ice shelf near the Bay of Whales. Here he established a series of bases called Little America, from where he and his men made exploratory journeys, including flights into the continent. Like many who travel to Antarctica, Byrd liked his penguins. He saw them almost as de facto inhabitants of an unpeopled land.

George Annand's 'Authorized map of the Second Byrd Expedition', 1930 shows the now familiar Antarctic icons: whales in the ocean and huskies and penguins with a portrait of Byrd decorating the cartouche (Fig. 5). Here the penguins occupy pride of place on the cartouche, and as possessors and guides to the continent. One with outstretched flipper points to the 'MOST INACCESSIBLE Area' and, below the Polar Plateau, a pair hold up a banner reading 'Unexplored'.

Byrd tried to bring some Emperor Penguins home. One poor individual, touted as the 'mascot of Little America' died before reaching Boston but now 'lives' – a richly symbolic reincarnation – as a stuffed exhibit in the lobby of the Little America Hotel and Resort in Wyoming USA.

Scientists and administrators need assessments of penguin populations for their work: these inform theory and develop understanding about competition with other species, for example, Krill consumption, for the rapidly evolving field of climate change studies, and policy on conservation.

Counting penguins has always been a challenging task and many frustrating hours have been spent in remote parts of the world counting (or perhaps we should say estimating) the number of penguins in colonies. In Antarctica, penguin counts can be even more difficult. Attempts have been made using aerial photography with reasonable success.

The Emperor Penguin is dependent upon access to level ice to establish colonies to reproduce. As questions develop about the overall reduction of Antarctic sea ice it is becoming evident that the population will be threatened by global warming.

In 2012 an international team of scientists, led by Peter Fretwell of the British Antarctic Survey, worked on a plan to count and map Emperor Penguins from space.

The notion of counting penguins from space excited the scientific community. William Ferguson of *Scientific American* enthused. 'Explorers venture into uncharted territory to help scientists map Antarctica's emperor penguin colony from space … we think emperor penguins are like a canary in a coal mine for climate change. This approach could help us notice when something is wrong before it is too late for any kind of action.' [5]

Images from satellites were clear enough to differentiate between birds, ice, shadow, and guano. Emperor Penguins regularly return to a particular location to breed and raise chicks. It's a tough process, as revealed in the popular movie *March of the Penguins*. During the season penguins leave behind what all birds do and the resulting guano patch can extend for several square kilometres. They can be seen from space.

Once located, penguins can be counted from photographs. The concept of 'ground truth' with its connotations of locality and accuracy, is clearly integral to mapping, and recently to penguin counts. Ground truthing is a verification of such methods by visiting the colonies and conducting counts of the penguins. (Those of us who have been on the ground in penguin colonies and breathed in the acrid stench of thousand-year-old piles of guano, know other meanings to the concept of ground truth).

The counts of Emperor Penguins from satellite images, verified on ground, appear to be accurate. Indeed, several new colonies of Emperor Penguins were located around the coast of Antarctica. In the latest count, in 2022, there were nearly 600,000 Emperor Penguins associated with 66 colonies.

If you're going to count penguins from the air, you need clear and accurate photographs. In 2022 Trevor Joyce and Jefferson Hinke flew a drone to take high resolution images of penguin colonies on King George Island, in the Antarctic Peninsula region, 'in order to count penguin chicks produced in the current breeding season'.

Aerial images and 'associated flight telemetry' data collected during these flights were combined to produce 'orthomosiacs'. An orthomosiac map is a detailed accurate photo representation of an area, created out of many photos that have been stitched together and geometrically corrected ('orthorectified') so that it is accurate as a map. It was another form of mapping penguins.

For many years, scientists have been carefully counting and mapping the change of nesting places of Gentoo and Adelie penguins. Adelie penguins are one of the two penguin species that are Antarctic breeders; like the Emperor Penguin, they have adapted to the ice to breed and raise young. The presence of ice is a significant factor in the distribution of Adelies. Gentoos are slightly larger and more adaptive than Adelies. They can, and do, breed in places farther north without the ice that normally prevails on the Antarctic continent.

Studies in the nesting patterns of these two penguin species have centred on the islands near Palmer Station on the Antarctic Peninsula, at 64° S. In the winter the sea and islands near the base freeze over. During the summer months, the ice slowly melts and retreats. Long-term records show that Palmer Station is now ice-free for one hundred days longer than 35 years ago.

The Antarctic Peninsula is the fastest warming place on earth. Average winter temperatures are up -11 C / 12° F over the last 65 years (five times the global average). As the ice retreats south, the Adelie are gradually moving farther south. On Humble Island, for example, in the 1970s, there were 2,700 nests. In 2013 there were 213. There are other examples. The changes are measurable, and researcher Donna Fraser said to an audience, "I'm not here to change your mind, but I will tell you what I see". She does so by using data and maps.

Like many other cartographic symbols, penguins have changed in purpose and meaning, particularly as the symbol of penguin has become more established in human culture. A pictorial map of the world published in 1954 shows penguins 'roaming', unattached to

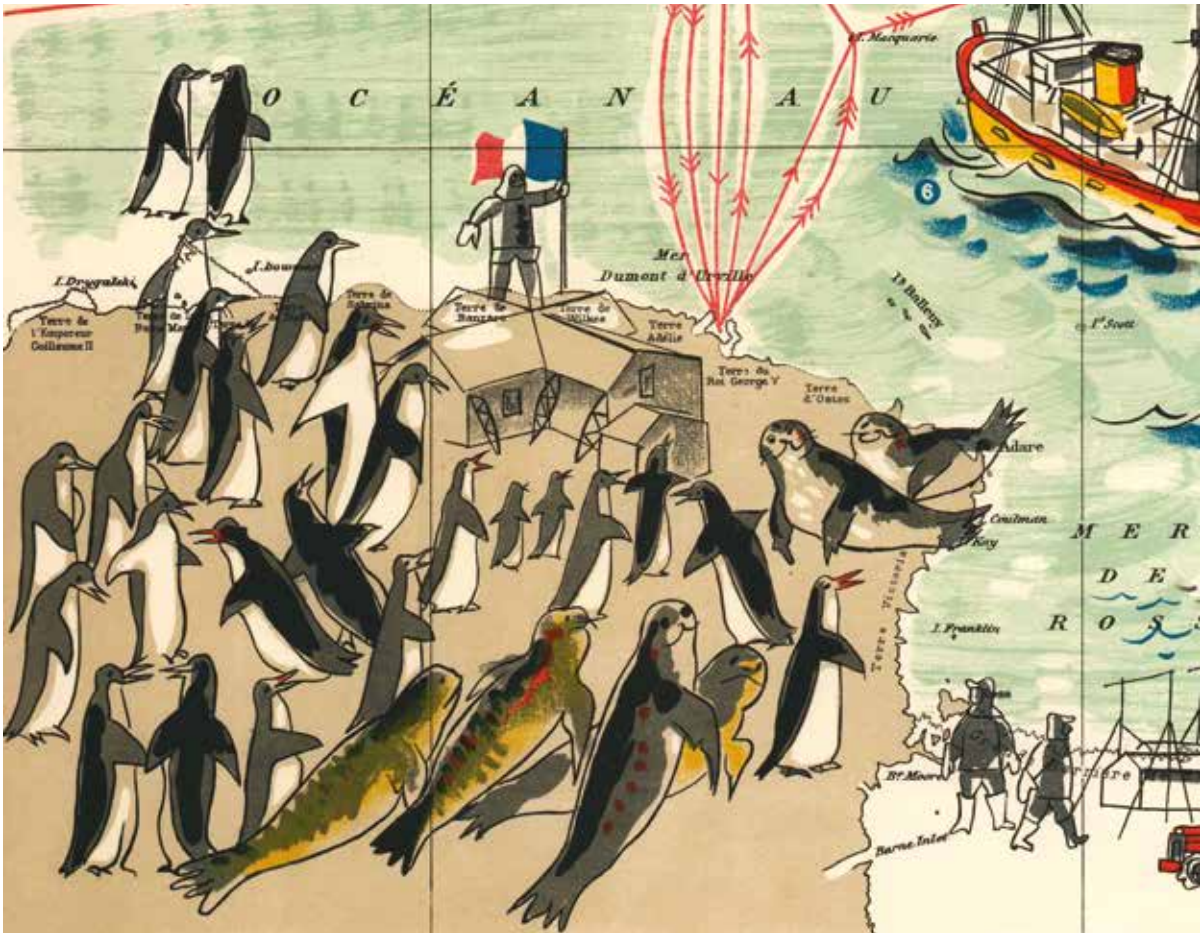


Fig. 6 Detail from Hervé Baillé, 'Quelques voyages récents de bâtiments de guerre', Marine Nationale Service Presse, Paris, *c.* 1954. 75 x 106 cm. Playful and curious, penguins gather around the French Station on the Adelie Coast, one of the five districts of the French Southern and Antarctic Lands. Geographicus Rare Antique Maps, www.geographicus.com.

specific locations (Fig. 6). Depicted as an indeterminate species, they adorn the bottom boundary, leaning against the inset frame and running free. These comical and inoffensive penguins, 'like children in waistcoats' and by now recognisable symbols of location, are occupiers and entertainers of the frozen south. No longer locked in cartouches, these penguins run free both within the map as amusing creatures, but also as free-spirited decorative elements of the map itself.

Even those two penguins in Mercator / Hondius' cartouche, gazing on their world, would not have imagined the uses to which people would put penguins and how they would appear on maps.

Notes

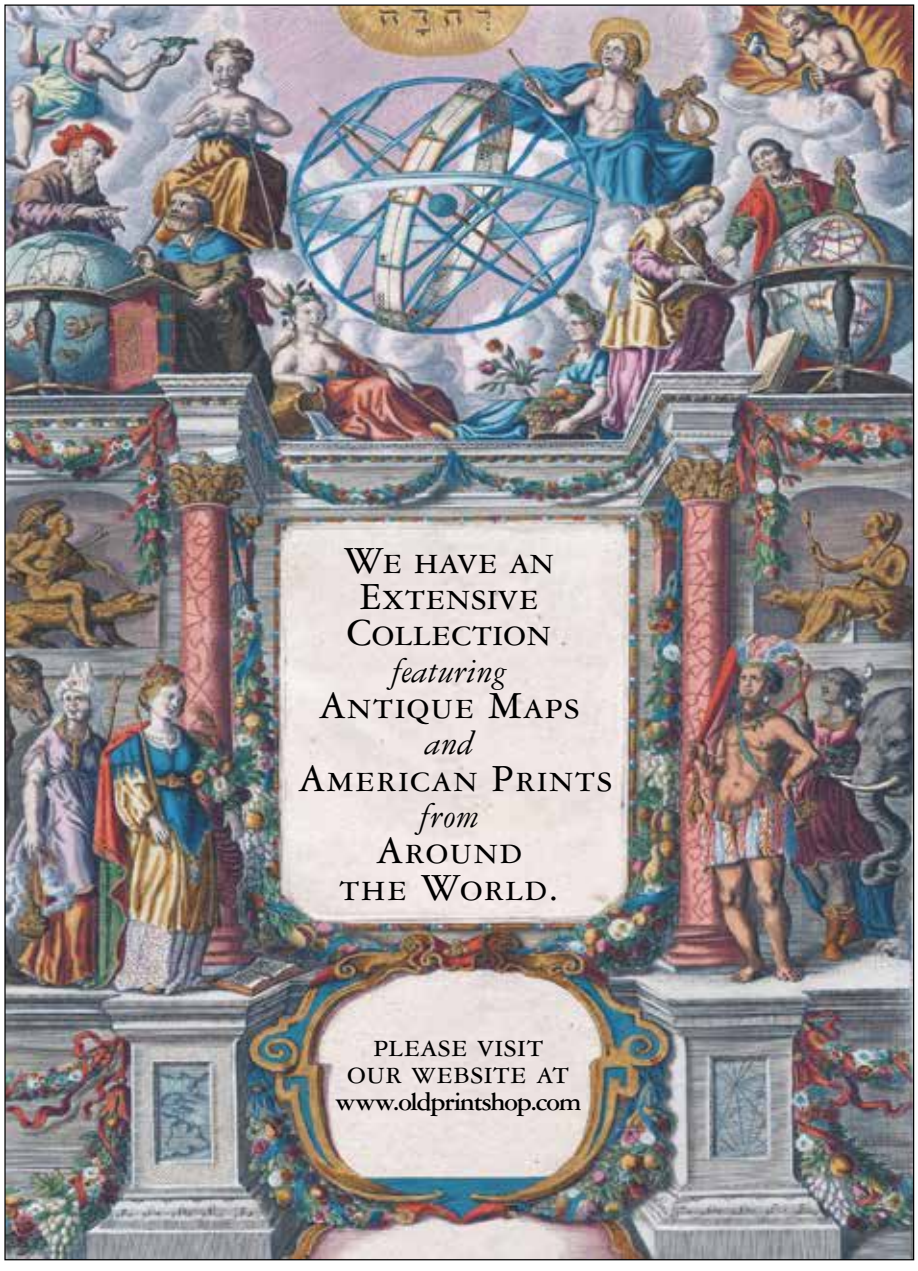
1 Stephen Martin, *Penguins,* Reaktion Press London, 2008, p. 20.
2 Martin, *Penguins* op. cit. p. 23.
3 Dr Ann Jones, *Australian Review*, 25–26 June 2022, p. 20.
4 Douglas Mawson, 'Macquarie Island, Its Geography and Geology. Australasian Antarctic Expedition 1911–1914', Scientific Reports Series A. Vol. 5, NSW Government Printing Office 1943, p. 21.
5 William Ferguson, 'Seeking Antarctica's huddle masses: Humans make first contact with Emperor Penguin Control', *Scientific American*, 13 July 2013.

Stephen Martin is a writer and librarian with the State Library of New South Wales. From time to time, he is contracted as a tour guide and lecturer on cruise ships in the Polar Regions. Thanks to Alice Tonkinson and Maggie Patton at the State Library for their guidance and assistance with this article, and to Ljiljana Ortolja-Baird for her patience and astute reading of the original text.

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IMCoS Matters

London Map Fair weekend, 10–11 June

As you will have read in the June issue of the journal there was no Helen Wallis/IMCoS award made this year and no award dinner, so the weekend was less hectic and allowed more time to enjoy the Fair. The annual Malcolm Young Lecture which is normally given at the award dinner was still held, though not face-to face, but on Zoom some days before the Fair. Emeritus Professor Dennis Reinhartz, Professor of History at Texas University in Arlington gave two lectures dedicated to the misconceptions of Russia.

The weekend at the Royal Geographical Society (with IBG) was enjoyed in a blaze of sunshine, and though the Fair had fewer European dealers attending, it had a steady flow of eager visitors.

News in: Amsterdam will be hosting its first ever map fair. It will be held at the Maritime Museum on 7 September 2024 from 11.00 until 18.00.



London Map Fair, 2023.

IMCoS Annual General Meeting

The AGM was held at the Royal Geographical Society on the 10 June and was attended by members from the Philippines, USA, the Netherlands, Singapore and the UK.

Chairman's report for 2022–23
Dr Mike Sweeting

Thank you all for your continuing support for our Society. The more members I meet and the more I hear, the greater my appreciation for the wider mapping community. Recently we had a great time in Leith, Scotland with members from four countries. A good number of delegates have already registered and paid for the International Symposium in Helsinki. However, through the wonders of modern technology I have had the opportunity to communicate with all of you, and to converse online with scores of members I had previously only known as names on a list!

I will now go through the key matters that I feel have been significant in the Society's most recent year of activity.

1. Membership

We currently have a very good, but not perfect, renewal rate. During the period covered by this report we have only declined in total by seven members, like for like. However, incoming new members are still not replacing outgoing ones.

Put bluntly, membership has been on a very slow decline for a decade. At a macro level it's the UK that has declined the most, although even that is only 21 people over seven years! The USA and the Philippines have seen overall growth.

Our Membership Secretary Peter Walker has drawn EXCOMs attention to the wild fluctuation in membership if just looked at month by month, numbers varying enormously and changing rapidly. The simple root of this is that people join or renew when it suits them. However, it is partially because existing members are often very slow to make their renewals. *Please* help our Society by renewing promptly!

97.7 percent of members have an email address, which is a great help to communication. This has been reflected in good take-up on online events, both of the 'Show & Tells', and the 2022 lecture series.

Since age of member is the single biggest factor in the decline, the only way to reverse the decline, other than briefly, is to add younger members. I thus add a second appeal to members, regarding consciously seeking to draw in the next generations.

2. The Executive Committee

We were delighted to welcome Mark Rogers onto EXCOM last year and that we were joined also by Christine Rafalko, serving as a co-opted member initially. Mark is now our General Secretary, following in the very large footsteps of David Dare, who held the post for twelve years. Our esteemed President, Peter Barber has agreed to continue with another term in post. Both existing EXCOM members who were due for re-election have agreed to serve again. However, Peter Walker who covers Membership and related financial matters would appreciate the opportunity to stand back within two years.

3. National Representatives

Working with Wes Brown and Robert Clancy, the existing network of National Representatives has been comprehensively overhauled. I would like to take this opportunity to thank them for all the thought and labour that has gone into this.

Consequently, four new International Reps have joined us since I last made my Chairman's Report. You will have seen their names and details in the current issue of the Journal. It is significant that two are in the USA. Representatives are still needed, partly to replace those wishing to stand down due to age or infirmity, and partly as we add members in new countries. So, we welcome enquiries from those open to serving the Society in countries that have no current National Representative. If you know of anyone willing to serve in this way do point them towards Wes. I will leave the rest to him in his own report to the AGM.

4. The Journal

The Journal had a good year, despite rising costs of production. We still need fresh contributors to the Journal. Submissions do not need to be lengthy. The Society has an extensive image resource if that is a barrier.

5. Summary

Your Society remains in good health with good financial reserves and a good team. International Symposia for both 2024 and 2025 are already in the planning stages. However, we live in a world with sharply rising costs so will need to be particularly prudent over the next two or three years. World events, for instance, affect our Journal advertisers as well as both the Society and yourselves. Like so many other voluntary organisations we face the challenge of introducing sufficient change to attract new, younger participants, whilst continuing to well serve those who have been pillars of the organisation for a long time. We live in the 'Interesting Days' that Chinese philosophers spoke of!



† Susan Gole (1936–2023)



Susan was a vibrant personality always ready to try something new and visit somewhere unfamiliar. She had endless energy and enthusiasm especially for travelling to far off places and was rarely daunted by any problem. I remember when we were in Italy, she spent several sleepless nights studying Italian so that she could converse with the organisers of the symposium we were attending, and she did! Susan died on 7 May aged 87 and her funeral was held on 23 May in Reading.

I can't remember exactly when we first met but it must have been when she joined IMCoS. She went on to become a passionate member for the rest of her life, acting as Chairman from 1989 to 1996 then International Chairman. She also took on the editorship of the *IMCoS Journal* from 1991; a post she held for fifteen years. As a result, she was presented with the IMCoS/Tooley award for her outstanding contribution to the history of cartography and the Society in 1998. A well-deserved tribute.

Susan was born in England and attended Bristol University. After university she went on a cycling tour to Australia followed by travel to Turkey and subsequently to India where she met her husband. She had to obtain her family's permission to marry an Indian and having gained it she promptly went to India by ship tying the knot in 1959. Her children Vivek and Mala were born in 1959 and 1963. But Susan found the heat of India too difficult which eventually led to her returning to England for good and, sadly, a divorce from her husband.

Her love for India remained, particularly for early maps of India which became the title for her first book on the subject. This was followed by *India Within the Ganges (*1983), *Maps of Mughal India: Drawn by Colonel Jean-Baptist-Joseph Gentil:Agent for the French Government to the Court of Shuja-Ud-Daula at Faizabad in 1770* (1988), *Indian Maps and Plans from Earliest Times to the Advent of European Surveys* (1989) and several articles in *The Map Collector* magazine. It was on one of her visits back to England whilst walking past the Grosvenor Hotel in London Susan saw a large sign announcing that a map fair was being held that day. She went and was very excited because at the fair she saw maps of India she had never seen before and was able to add them to her collection. The fair was, of course, being run by IMCoS and in 1981 she joined the society.

In earlier days IMCoS regularly held map fairs and Susan was always at the forefront organising everybody and making sure we had a good site and everything was shipshape. She was someone with enormous optimism and energy; a great example to us all. She will be missed.

Valerie Newby (formerly Scott), May 2023



I met Susan for the first time at an IMCoS gathering at Imperial College, London, when both of us were invited as new members. She had just returned from India after publishing several books on the history of cartography of that vast and important subcontinent, for which she had been invited by Indira Gandhi to a private meeting to say thank you for her work.

Susan was fluent in Hindi and familiar with some other foreign languages like Greek. At the History of Cartograph conference in Moscow in 2011, after learning Russian just for two months, she could converse with the locals with help of a pocket dictionary.

Susan became the editor of the *IMCoS Journal* which at that time was in its infancy years. Being a hard-working person, she developed it into a proper and beneficial quarterly magazine for all map lovers throughout the world. It was her encouragement which led me to write several articles and pieces for the Journal.

Susan was an enthusiastic walker, and wherever IMCoS symposiums took place, she would walk the city for several hours at a pace nobody could match. So, she would go solo, exploring the city and gathering useful cartographic information to share with the participants.

Her collection of maps and documents of India was extensive – some 1,600 pieces – and unique, which was later taken over by an Indian institution. 'Not in Gole' was advertised by some dealers, meaning that the specific advertised map was so rare that it could not even be found in one of Susan's several books dealing with maps of the Indian subcontinent.

About ten years ago, she was invited to India to give a series of lectures on the history of maps of India. Among the maps she had chosen to present were a few from the Mughul period with inscriptions in Persian, as it was the official language of the Court of Mughuls. She visited me for a whole day to have those inscriptions translated into English. I was very happy to have done that small job for her, in return for her enormous help in editing my books.

Cyrus Alai, London, May 2023

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Claudius Ptolemy – Francesco Berlinghieri. Untitled map of the British Isles published in 'Geographia di Francesco Berlinghieri Fiorentino in terza rima...'. Florence 1482.

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REPORT ON IMCoS EXCURSION TO SCOTLAND

May 16–18 May 2023

Walking tour of Leith

In the early evening we gathered for a walking tour of Old Leith, Edinburgh's port district. IMCoS member and organiser of the Scotland excursion, Diana Webster, led the walk. She did an outstanding job of drawing our attention to all points of interest and painted an excellent picture of the town's rich history.

The river divides Leith into north and south. Known as the Waters of Leith (the Scots call rivers waters), it starts in the Pentland Hills, flows through central Edinburgh and discharges into the port of Leith. Our meeting point was near Timberbush – the old timber market where timber, much from Norway, was offloaded from ships before sale. Archaeological evidence indicates that the trade was in existence as far back as the twelfth century. Nearby is the Signal Tower (1685-86), one of Leith's oldest surviving buildings. Originally a windmill for rapeseed oil, it was repurposed in 1805 to provide signalling information about the depth of water for ships entering the harbour. In the same area, pointing out to sea, is the Christian Salvesen harpoon gun – a reminder of Leith's whaling past. Originally they were caught locally and off Iceland, but by the time this gun was built the Salvesen Company had extended its reach to the Artic and Antarctic.

On the north side of the Water we visited Lamb's House where, reputedly, Mary Queen of Scots was entertained in 1561; the Custom House where dues were collected on goods traded through the port; and the remains of the Citadel built in 1650–56 to house Oliver Cromwell's troops. Determined to bring Scotland back into the Commonwealth, Cromwell spent £100,000 to strengthen Leith's defences. Following the restoration of the monarchy in 1660, most of it was demolished. Leith was under threat again from Scottish-born John Paul Jones who worked for



Fig. 1 The Water of Leith flowing into the port of Leith. The gabled riverside buildings have strong suggestion of Dutch architecture.

the American Navy during the height of the American War of Independence. His mission was to sail his three warships up the Forth to provide a diversionary attack on Leith while the French and Spanish launched the main attack on southern Britain. Despite meeting no resistance Jones failed. The weather got the better of him – strong easterly winds caused havoc and forced him to sail out of the Forth and down the coast to Yorkshire. In response, fortifications – Leith Fort – were hurriedly erected in the 1780s to protect the harbour and deter future attacks on the port.

At Commercial Quay we learned about the rise in popularity of whisky over wine and brandy in the nineteenth as result of grape phylloxera that decimated European wine production. Scotland smartly increased its production of whisky and Leith converted its bonded warehouses for the nation's favourite drink.

The concentrated fruit juice Rose's Lime Juice also has its origins at the quay. By the late eighteenth century, a daily ration of lemon or lime juice had become normal practice on long sea voyages. Alcohol was added to preserve the juice. Ship chandler Lauchlan Rose saw an opening in the market to make the juice suitable for everyone and patented an alcohol-free version in 1867. He built his first factory in Leith docks and never looked back. Today Rose's Lime Juice is manufactured by Coca-Cola Enterprises Ltd.

The town was not without its leisure and entertainment. Leith is famous in the history of golf. The rules of the game were drawn up here and adopted by the Royal and Ancient Company of Golfers in 1777. Horse racing on the beach at Leith began in the 1500s which, by all accounts, was a riotous affair. By mid-eighteenth century the annual event was recognised as a major sporting fixture in the Scottish sporting calendar.

Maps Reading Room

The following morning was spent enjoying maps and lectures in the Map Reading Room of the National Library of Scotland (NLS). It is located in a specially designed modern building away from the main Library which is situated on the George IV Bridge. The collection holds several million cartographic items, making it the largest collection of maps in Scotland, twenty percent of which is digitised. The origins of the collection date from around 1700 when the first maps were acquired from the Advocates Library. About two thirds of the collection relates to the British Isles, the remaining covers the rest of the world. Map curator Paula Williams introduced us to the library's various collections but focused on three types: business, private and country house.

(i) The **Stevenson Collection** is a large collection of nineteenth- and twentieth-century manuscript and printed maps, engineering drawings and building plans from the famous Scottish engineering family who specialised in building lighthouses, harbours and other large-scale civil engineering projects. The bulk of the collection covers works designed and constructed in the United Kingdom, but their remit was worldwide, including Japan and New Zealand. The collection was acquired from the family in stages over several decades between the 1950s and 1990s, some were donated and others purchased.

(ii) The **Charlotte Smith Collection** is a good example of a twenty-first century private collection. The collection was purchased by the Library directly from the collector, Mr John Smith, in 2017. It is named after his daughter Charlotte. It comprises more than 300 antiquarian maps of Scotland and environs. They range in date from 1548 to the 1880s and include many of the most important maps of Scotland and Edinburgh made during those three hundred years. The collection also includes maps of Scotland within the wider geographic context, both the British Isles and the North Sea. The maps are in exceptionally fine condition. Highlights include 'Carte nouvelle d'Ecosse' by Paul de Feuille, 1706 and subsequent editions published by Ratelband, Pierre Aveline's bird's-eye view of Edinburgh 'Edinbourg, ville de l'Archevache de St Andre', around 1680, and three separate states of 'L'Ecosse suivant les nouvelles observations' by Van der Aa from 1700.

(iii) The **Newhailes Collection** comes from the library of the Dalrymple family, formed largely by Sir David Dalrymple, Lord Hailes (around 1665-1721). It required the construction of a new wing at Newhailes House to accommodate it. The collection consists of around 7,000 volumes as well as pamphlets, broadsheets, prints, atlases, maps and music. Despite its Enlightenment reputation, the majority of the collection at the time of Lord Hailes's death that has come to the National Library, was printed before 1750. Notable cartographic items included Sanson's *Geographie* of 1696, the four-volume *Nouveau Theatre d'Italie* of 1704 by Blaeu and a 1675 edition of Volume I of John Ogilby's *Britannia*.



Fig. 2 Members enjoying the exhibition of treasures in the Map Reading Room of the National Library of Scotland.

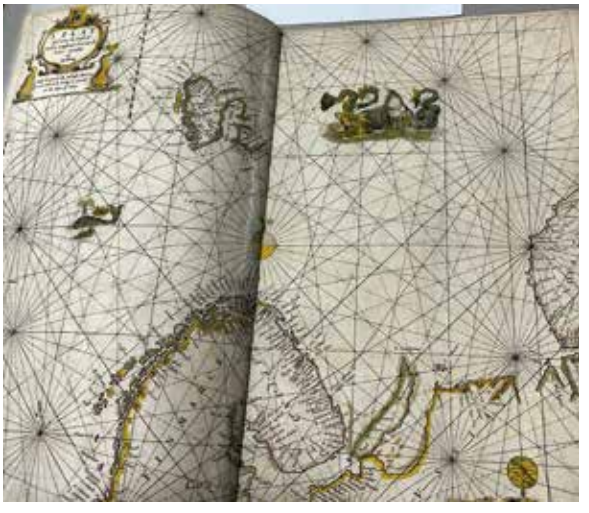


Fig. 3 Detail of 'A Plat Discovering the Coasts of Russia, Lapland Finmarck, Nova-Zembla & Spitsberg', Joseph Moxon, 1657.



Fig. 4 Paula Williams, Curator and Head of Maps with Diana Webster who organised the tour for us.



Fig. 5 Newhailes House, a Palladian style villa, home of generations of the Dalrymple family.

Newhailes House

A short bus ride from the Library took us to Newhailes near the town of Musselburgh. The Palladian mansion was designed by James Smith in the late 1600s. Originally known as Whitehill, it was bought by David Dalrymple in 1709 and renamed Newhailes. It remained in the family until 1997 when it was gifted to the National Trust for Scotland. David Dalrymple set about making changes to the house and estate with construction of a library in a new east wing for his extensive book collection and state apartments in the west wing. The house became a fashionable centre for Edinburgh's Enlightenment society.

Trinity House

The morning spent at Trinity House was a highlight of our trip to Scotland. This elegant Georgian building in Kirkgate Street holds an outstanding collection of maritime memorabilia. It started out in the fourteenth century as the Incorporation of Master and Mariners of Leith which had the right to levy a duty, called prime gilt, of 12 pennies on each ton of goods landed at Leith. An additional voluntary contribution, called crown money, was also collected. These funds were used for the relief of the sick, the poor and the widows and orphans of lost or captured mariners, and to care for aged mariners. The medieval



Fig. 6 Members poring over maritime exhibits in the Convening Room at Trinity House.



Fig. 7 Curators rolling out a Laurie and Whittle wall map of America from an unusual map holder in the vestibule of Trinity House.

Incorporation served as a blueprint for the establishment of Trinity Houses in other maritime centres across the country. Over the next centuries their role expanded to teaching mathematics for navigation to apprentices and sons of shipmasters, and improving safety at sea. They established the first formal nautical training in the country, chose and licensed harbour pilots for the Forth and around the Scottish coast. They introduced Licht Money (light money) for maintaining primitive coal-fired lights in the Forth. In the nineteenth century Trinity House was involved in planning and funding new and more reliable lighthouses that took advantage of the latest technology offered by the engineering firm of Stevenson whose plans we viewed the previous day in the Map Reading Room.

Abbotsford

Set on the banks of the river Tweed in the Scottish Borders is Abbotsford, the home of nineteenth-century novelist and poet, Sir Walter Scott, famed for his blockbusters *Waverly, Ivanhoe* and *Rob Roy.* It was constructed on the ample proceeds of his literary career and is an enduring monument to his tastes, talents and achievements. Fondly known as the 'Great Scott' he was responsible for popularising tartan, saving the



Fig. 8 Sir Walter Scott's library in Abbotsford Castle.

Scottish banknote, organising the festivities for George IV's first visit to Scotland in 1822, and in the process rediscovering his country's Crown Jewels. His home appears as a 'castle-in-miniature', with small towers and imitation battlements. He was an avid collector of items of antiquity which he incorporated into his house and garden. Some of the most interesting aspects of the house are his personal collections which include unusual items such as the weapons of Rob Roy, the case book of Napoleon, and even a bullet and piece of oatcake taken from the site of Culloden Battlefield.

Scott enjoyed his residence for a year only (1825) before he met with a reverse of fortune which plunged his beloved estate in to debt. It was saved by his publisher Robert Cadell who in exchange for the family's share in the copyright of Sir Walter's works took care of Scott's debt.

Great Tapestry of Scotland

Hand stitched by 1,000 needleworkers from across Scotland, the Great Tapestry of Scotland is one of the world's largest community arts projects. It measures 143 metres (469 ft) long and is made up of 160 embroidered linen panels which together tell the story of Scotland's history, heritage and culture – commencing from the country's land formation millions of years ago to 2013 when the last panel was completed celebrating tennis champion Andy Murray's win at Wimbledon. It was inspired by author Alexander McCall Smith, historian Alistair Moffat chose the episodes from Scottish history to be included and artist Andrew Crummy created the visual style for the panels. The tapestry is on permanent display in its own purpose-built gallery and visitor centre in the town of Galashiels in the Scottish Borders.



Fig. 9 'The Ordnance Survey Begins', a panel from the tapestry.

Great Polish Map of Scotland

The last treat before our farewell dinner at Barony Castle Hotel was a visit to the Great Polish Map of Scotland. The tour was led by David Cameron. Measuring 50 x 40 metres, this large relief map is located in the grounds of the hotel, outside the village of Eddleston in the Scottish Borders. Made of concrete, the scale model of Scotland was the brainchild of Polish war veteran Jan Tomasik. It was built between 1974 and 1979 and is claimed to be the world's largest terrain relief model.



Fig. 10 The Great Polish Map of Scotland in the grounds of Barony Castle Hotel in the Scottish Borders.



IMAGO MELITAE 2024

IMCoS 41ST INTERNATIONAL SYMPOSIUM MALTA

DRAFT PROGRAMME

16–19 OCTOBER 2024

Wednesday 16 October 2024
Valletta:

9.00 am – 10.30 am Specially-curated tour at MUŻA (The Malta National Community Art Museum) to see the Albert Ganado Malta Map Collection and other cartographic treasures.
10.30 am – 11.00 am Talk at MUŻA.
11.00 am – 11.30 am Coffee break.
12.00 am – 1.30 pm Specially-curated tour at the National Library of Malta.
1.30 pm – 2.00 pm Talk at National Library
Free Time
5.00 pm - 6.30 pm Walking tour.
6.30 pm – 7.30 pm Visit to the Arts School in Valletta to see a demonstration of the printing techniques. Talk about printing techniques. Refreshments.

Thursday 17 October 2024
Rabat and Mdina:

8.30 am Pick-up point for coach.
9.15 am – 10.30 am Specially-curated tour at the National Archives of Malta, Rabat.
10.30 am – 11.00 am Talk at Malta National Archives of Malta.
11.00 am Walking tour and refreshments in Mdina or Rabat.
12.30 pm – 1.30 pm Specially-curated tour at the Mdina Cathedral Museum.
1.30 pm – 2.30 pm Talk and tour of the Mdina Metropolitan Archives.
Free Time
Optional: Palazzo Falson Tour.



Aerial view of Mdina fortification. https://upload.wikimedia.org/wikipedia/commons/d/dd/Aerial_view_Mdina%2C_Malta.jpg



Valletta. https://commons.wikimedia.org/wiki/File:St_Sebastian_Curtain_(cropped).jpg

Friday 18 October 2024
Vittoriosa:

9.00 am – 9.15 am Cross by boat to Vittoriosa.
9.30 am – 10.30 am Specially-curated tour at the Malta Maritime Museum.
10.30 am – 11.30 am Talk at Malta Maritime Museum. Break. Refreshments will include 'Tasting History' menu.
12.00 pm – 1.00 pm Walking tour of Vittoriosa
1.30 pm – 2.15 pm Specially-curated tour at the Inquisitor's Palace.
2.15 pm – 3.00 pm Talk at the Inquisitor's Palace.
Free Time
Optional: Tour of the Malta Hydrographic Office by the Head Hydrographer, Mr Mark A. Chapelle.

Saturday 19 October 2024
Valletta:

9.00 am – 11.00 am Specially-curated tour at Lascaris War Rooms, Valletta.
11.30 am – 12.30 pm Opening of Map Exhibition, titled *British Malta Maps*, at MUŻA. Small reception.
Free Time
Optional **1.30 pm – 2.30 pm** Tour of St John's Co-Cathedral and the Caravaggio Museum.
8.00 pm – 8.30 pm Tour of the Palace.

Farewell evening dinner
Venue is still to be decided.
Dress smart/casual.



St Paul's Cathedral, Mdina.
https://en.wikipedia.org/wiki/Mdina#/media/File:Malta

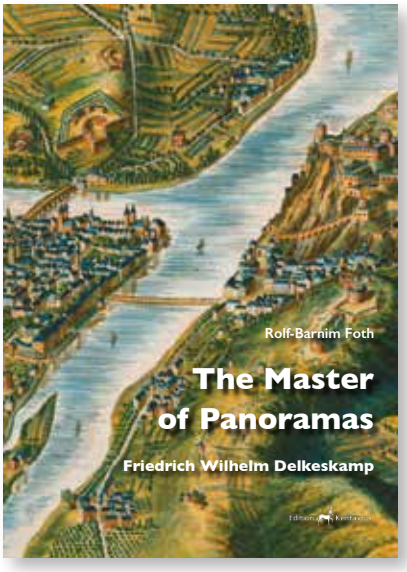


Malta Maritime Museum, Vittoriosa.
https://en.wikipedia.org/wiki/Malta_Maritime_Museum#/media/File:Malta_Maritime_Museum_from_Senglea.jpg

Note
We reserve the right to make changes to the programme and schedule. This can mean changing speakers (if they become unavailable due to sickness or any other reason). If a speaker becomes unavailable, we will find a fitting replacement or cancel the event if that is not possible. If changes need to be made to the itinerary, we will inform the participants as soon as it is reasonably possible.

BOOK REVIEWS

***Der Meister der Panoramen: Friedrich Wilhelm Delkeskamp* / The Master of Panoramas** *by Rolf-Barnim Foth. Hamburg: Edition Kentavros 2022, ISBN 9783982174471. 310 pp and 220 pictures. €39.80. English version: Hamburg: Edition Kentavros 2023, ISBN 97839824852.3.2. 296 pp and 220 pictures.*



Imagine you are sitting in a comfortable café or bar with three mapping enthusiasts. The first recounts how they invented a new style of map which was so easy to use it became a bestseller almost overnight. The second then claims to have climbed every single mountain and hill in Switzerland, some of them several times, although to be fair not always to the summit each and every time. You are somewhat sceptical at first, incredulity steps in when they show you the maps they produced. The third of your companions looks rather crestfallen and when prodded proceeds to recount that they produced maps which were better and more accurate than Google maps but though their idea was admired it was ignored and then forgotten. Far fetched? Yes. In fact, you only needed one companion at that table, but it needed to be Friedrich Delkeskamp: and he did all three things in the early to late 1800s.

Rolf-Barnim Foth has been fascinated by the character of Friedrich Wilhelm Delkeskamp for a considerable time and has spent countless hours and kilometres in his quest to piece together the puzzle which completes the man. His part bibliography, part cartobibliography appeared privately printed and published by Edition Kentavros under the magnanimous support of the Stiftung (Foundation) of the Fehlmann of Winterthur in Switzerland in 2022 in German as *Der Meister der Panoramen Friedrich Wilhelm Delkeskamp*. The book was not put on sale as such but issued to libraries and institutions. The book has now been translated into English and is available either as a hardback or absolutely free as a pdf file in A4 format.

The original work introduces the reader to the Delkeskamp family going as far back as the Seven Years War to throw insight into the mixed fortunes of the family. Friedrich W. Delkeskamp was born in Bielefeld in 1794 and his early years are sketched out with much detail of his wanderings through Germany after his apprenticeship as an artist. It was the practice then (and still exercised by some carpenters in Germany today) to travel for several years after completing their studies. These *Wanderjahre* took Delkeskamp to Berlin, to parts of modern day Poland (especially Silesia) and south to Frankfurt.

In Frankfurt from 1823 he began work for the Wilmans publishing company, providing highly attractive views 'drawn from nature'. He was already an accomplished artist and engraver and soon he was permitted to sign most of his work which was not usual at the time. Either he or Wilmans could have been made aware of an engraving of a small part of the Rhine River published as a 'birds-eye' view and executed by a very accomplished artist Susanna Maria Rebecca Elisabeth von Adlerflycht (1775–1846). Delkeskamp´s idea was to produce a similar view of a much longer stretch of the river but drawn more realistically and again drawn from nature. After much hard work, travelling along the banks of the river sketching in the summer months and completing the engraving in the winter, a series of Rhine panoramas appeared from 1825 to 1837. Similar leporellos, or the characteristic long fold-out plans, of the Mosel and the area of Baden-Baden were published by Wilmans. If the public found these illustrations of long and winding rivers presented in a straight line attractive and novel when they first appeared by the time the later series with all the blank areas the riverbanks

filled with delightful views were published, they were an instant hit with the public and critics. They were miniature works of art.

If the Rhine panoramas which bear his name were Delkeskamp's only achievement it would be sufficient to want to learn more about him, but the story continues. Having travelled to Switzerland at an early age, Delkeskamp fell in love with the mountains and from 1837 until the mid-1850s Delkeskamp worked on two 'Picturesque Relief Maps of Switzerland and the Adjacent Alps'. Executed on ten full and three half sheets, the later map covers a broad expanse of Switzerland in a detail that few had achieved for any country before him.

Friedrich Delkeskamp was not a man to sit idle for long. Plagued by financial problems due to his single-handed attempt to map Switzerland, he was living off the revenue from his Rhine panoramas. Sadly, this income was being eroded by pirate operators copying his work and undercutting his prices. Undeterred, he began his next epic adventure – the city of Frankfurt, where after some 'truth bending' he had managed to become a citizen. It was a booming centre, increasing by size and population every year – from 68,000 in 1858 to 78,000 in 1864. His next achievement was to map it at an unprecedented scale and accuracy. The completed work is recreated here in facsimile over fifteen complete pages. Every house, every garden and almost every tree has been lovingly engraved and one has the feeling that Google Earth is no real competitor.

It was met with universal approval but failed to achieve any commercial success. A rival, Friedrich August Ravenstein, issued a traditional plan of the city on a geometrical basis, which achieved greater sales. Friedrich Delkeskamp died not in poverty but certainly in dire straits in 1872. This book, published in 2022, exactly 150 years later, is a tribute to him. Packed full of information there are full annotations of sources as you would expect and a complete cartobibliography of his maps and drawings. Every scrap of information which the author has accumulated over the years of research is offered to the reader, both to complete the current picture of Delkeskamp and to provide as much background as possible for future researchers.

All of Delkeskamp's trials and tribulations are revealed in Rolf Foth's book and it is so full of illustrations that one wonders at the genius of the artist he is portraying. The many documents relating to Delkeskamp are not only illustrated but also have been painstakingly transcribed and, in the newly revised second edition, translated. The original German version at 310 x 240 mm is abundantly illustrated with views and watercolours by the artist from archives throughout Europe. The English version (A4), although somewhat smaller, is printed at a resolution which allows full appreciation of his work. Many of the panoramas are reproduced fully over ten pages.

The book in both forms and languages has been a labour of love for the author and he is happy for the work to be distributed as widely as possible. Both the original German issue as well as the English edition were supported by the Fehlmann Foundation Winterthur.

Two digital versions are available: a high resolution version at just €29.80 and a free-to-download, low-resolution copy. Further details van be found at: https://www.edition-kentavros.eu/13.html.

Kit Batten, Germany



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CARTOGRAPHY CALENDAR

Lectures & Conferences

12 September 2023, USA
The California, Chicago, New York, Philip Lee Phillips, Rocky Mountain, Texas, and Washington Map Societies are offering a virtual lecture via Zoom. **Richard Francaviglia** (Prof. Emeritus, Univ. of Texas at Arlington; currently Assoc. Scholar, Willamette University, Salem, Oregon) will discuss ***The Role of Maps in Films about Exploration and Discovery: Some Latin American Examples.*** He will explore the varied ways films depict the process of exploration and discovery in South America. RSVP to John Docktor at washmap@gmail.com to receive the meeting ID and passcode. Meeting starts at 19.00 ET, 18.00 CT, 17.00 MT, and 16.00 PT.

20 September 2023, Cambridge UK
The Map Curators' Group of the British Cartographic Society will hold its Annual Workshop in person at the British Antarctic Survey. The Group is for anyone interested in using and sharing maps, bound together by a shared interest in curating, maintaining, and sharing our map collections. The MCG workshop theme will be: ***Exploring Maps***. Information: Paula Williams P.Williams@NLS.UK

20 September 2023, Rochester, Massachusetts
Charlie Rowley will present ***Mapping Rochester*** at the monthly meeting of the Rochester Historical Society. Meeting is at 19.00. Information: https://www.rochesterhistorical.org/

21–24 September 2023, Minneapolis
The Annual Conference 2023 of the Society for the History of Discoveries is titled ***Worlds of Exploration***. It will be hosted by the James Ford Bell Library at the University of Minnesota. There will be a Thursday evening reception and a post-conference excursion in Minneapolis. Information: https://discoveryhistory.org/

26 September 2023, Oxford
The Bodleian Library, University of Oxford Seminars in Cartography Conference are presenting ***Artful maps: exploring the visual culture of cartography***. Cartography has long been recognised as art and science. This conference explores how art affects cartography's process, products, and personnel. Ranging over all types of maps, all areas of the world, and all time periods, the conference considers the relationship between art and cartography. Registration will be available nearer the time. Information: elizabeth.baigent@geog.ox.ac.uk or nick.millea@bodleian.ox.ac.uk

28–30 September 2023, Berlin
The International Coronelli Society will hold its ***XV International Symposium About Globes*** in the Humboldt Hall of the Staatsbibliothek. Researchers of globe studies and all interested parties are invited to this symposium. It will address all aspects of globe studies, in particular the history of globes and their position in the socio-economic context, but also contributions to globe-related instruments such as armillary spheres, planetariums, telluriums and lunariums. Conference languages are German and English (no translation). Information: https://coronellidotorg.wpcomstaging.com/symposium-of-globe-studies/

18–20 October 2023, Stanford
The David Rumsey Map Center, along with sponsor Barry Lawrence Ruderman Antique Maps, Inc., is excited to announce dates for the Fourth Biennial Barry Lawrence Ruderman Maps Conference on Cartography: ***Data Visualization.*** Details to be announced later in the year.

26 October 2023, Washington
The Philip Lee Phillips Society's 'Fall Presentation' will be given by PLPS Fellow **Ernesto Capello** on ***Mapping Mountains.*** Details to come. Information: https://www.loc.gov/rr/geogmap/phillips.html

16 November 2023, London
Isabella Alexander (Faculty of Law, Univ. of Technology, Sydney) will speak on ***Maps, and markets in the early 19th century: a view from the legal archive.*** Information: c.delano-smith@qmul.ac.uk or philip.jagessar@kcl.ac.uk

20 November 2023, Vienna
The Austrian Academy of Sciences and the Institute for the Research of the Habsburg Monarchy and the Balkans are hosting a lecture (in German) by Prof. Dr Stefaan Missinne.
Lecture: ***Leonardo und Verrazzano: Der 500. Jahrestag der Entdeckung von New York 2024 [Leonardo and Verrazzano: The 500th anniversary of the discovery of New York 2024].***
Registration: IHB@oeaw.ac.at

6 December 2023, USA
The California, Chicago, New York, Philip Lee Phillips, Rocky Mountain, Texas, and Washington Map Societies are offering a virtual lecture via Zoom. Anyone interested must RSVP to John Docktor at washmap@gmail.com to receive the meeting ID and passcode. **Imre Demhardt** will discuss ***The Changing Map of the Island of Enchantment: Puerto Rico and the Spanish-American War of 1898.***

7 December 2023, London
Tom Simpson (Dept. of Geography, Univ. of Cambridge) will speak on ***Maps that made climate change, c.1800 to the present day.*** Information: c.delano-smith@qmul.ac.uk or philip.jagessar@kcl.ac.uk

Looking Forward

1–5 July 2024, Lyon Imago Mundi and the University of Lyon are pleased to welcome you back to France during the 30th International Conference on the History of Cartography, postponed from 2023. The idea of organising the conference in Lyon with the theme ***Confluences - Interdisciplinarity and New Challenges in the History of Cartography*** is inspired by the very location of the city, as a confluence between North and South, between Saône and Rhône rivers, the Rhône Valley and the Alps. The official language of the conference will be

English. There will be a pre-conference visit to Paris and Bibliothèque Nationale de France on 29 June and a post-conference tour on 6 July. Information: ichc2024@univ-lyon3.fr

Exhibitions

Until 22 October 2023, The Hague
The National Archives of The Netherlands manages a collection of 300,000 maps and drawings, and 400 atlases and map books. The exhibition ***On the Map*** explores the ideas and intentions of clients and mapmakers. Interviewees talk about historical maps that have a personal meaning for them. Visitors are encouraged to give their personal response to the maps by compiling their own travel journal. Information: https://www.nationaalarchief.nl/en/beleven/tentoonstelling/on-the-map Information: www.nationaalarcchief.nl

Until 29 October 2023, Leiden
Are maps really that truthful? Are they what they seem? A map is always a simplification of reality, whether it be reduced, distorted or reflect only the information the mapmaker wishes to reveal. ***Maps: Navigating and Manipulating*** displays maps from all over the world in combination with works by contemporary artists. It is a joint project between Leiden University Libraries and the Museum of Ethnology. Information: https://www.library.universiteitleiden.nl/news/2022/10/exhibition-maps-navigation-and-manipulation

Until 29 October 2023, Cartersville, Georgia
Treasures of NOAA's Ark will explore the history of the National Oceanic and Atmospheric Administration (NOAA) and how this federal agency has impacted people across the nation and the world. The exhibition will feature 18th-century maps and charts and early scientific instruments. It will highlight NOAA's legacy of science, service, and stewardship and explore how we are all connected to the environment. Tellus Science Museum. Information: www.floridakeys.noaa.gov

Until 29 October 2023, Shepherdstown, West Virginia
Some 20 maps of Shepherdstown, Jefferson County and the surrounding area are on display at the Historic Shepherdstown Museum. ***Great Dreams: Maps of Shepherdstown and Jefferson County from the 17th through the 21st Century*** includes what is believed to be Thomas Shepherd's original plat map of Mecklenburg, maps of Jefferson County by S. Howell Brown, an 1890 plat map of Shepherdstown by S.E. Humrickhouse, and a Shaw and Whitmer map of Jefferson County. Included are maps that trace the evolution of Jefferson County, Civil War-era maps and an aerial map that outlines the Historic District of Shepherdstown. Information:www.historicshepherdstown.com

Until 29 October 2023, Ticonderoga, New York
Rare artifacts from the Robert Nittolo Collection are on view for the first time. ***Success: The End of the Seven Years' War*** is heavily illustrated with historic maps and prints. Information: https://www.fortticonderoga.org/news/

Until 18 November 2023, Washington
The George Washington University Museum is exhibiting their rare exemplar of 'The New Naval and

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Military Map of the United States' which is embellished with portraits of political and military leaders, statistical charts and nationalistic scenes. Information: https://museum.gwu.edu/exhibitions

Until 3 March 2024, St Gallen, Switzerland
Celestial globes made by Swiss instrument maker Jost Bürgi (1552–32) are displayed in the exhibition ***Key To The Cosmos.*** Information: https://kulturmuseumsg.ch/ausstellungen/Buergi2023.php

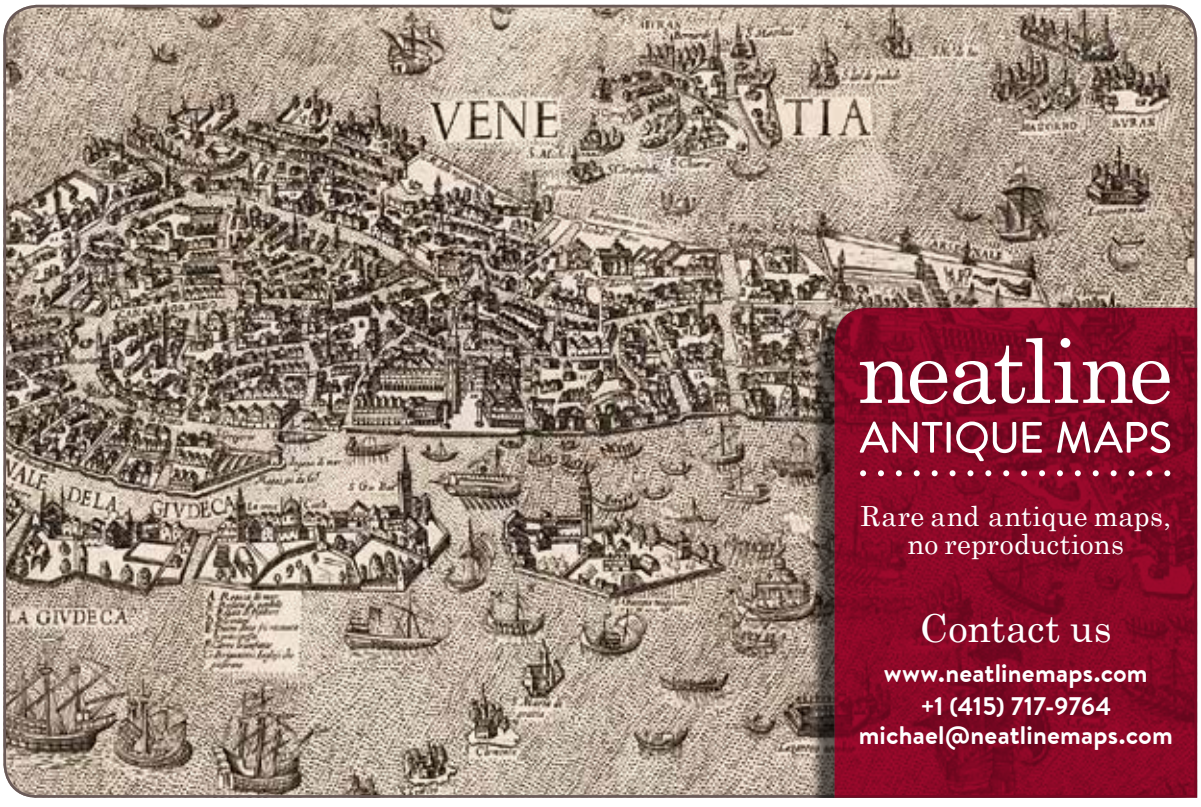
Until 27 April 2024, Boston
How do Bostonians get from here to there in a city full of trains, trolleys, ferries? ***Getting Around Town: Four Centuries of Mapping Boston in Transit*** features an extraordinary collection of transit maps dating from the seventeenth century to the present, and invites questions about how people have moved around the city in the past, present, and future. At the Leventhal Map & Education Center. Information:https://www.leventhalmap.org/articles/interview-steven-beaucher/

Until May 2024, Boulder, Colorado
Featuring the works of two contemporary women artists, Charlotte Bassin and Deborah Cole, and maps from the Earth Sciences & Map Library collection; ***No Boundaries: Women Transforming the-World*** highlights how using maps in art-making prompts us to re-evaluate what we know about space, place and the depiction of ourselves in the world. The exhibit will also a display maps by women cartographers from the collection, highlighting the historic and current role of women in cartography, exploration and geographic representation. Information: https://www.colorado.edu/libraries/libraries-collections/earth-sciences-map-library

Map Fairs

4 November 2023, Paris
The **Paris Map Fair** will be held at the Paris Ambassador Hotel, 16 Boulevard Haussmann, 75009 between 11.00 and 18.00 on Saturday. **Entrance to the Fair is free.** There will be a cocktail reception on the Friday evening at 19.00 to which IMCoS members are invited. The Fair is organised by Librairie Loeb-Larocque and Le Zograscope.
Information: Librairie Loeb-Larocque at www.paris@map-fair.com

7 September 2024, Amsterdam
The first **International Amsterdam Map Fair** will take place in the Scheepvaart Museum (Maritime Museum). Thirty dealers will be participating from across Europe, United States and the UK. **Hans Kok**, past Chairman of IMCoS will deliver the inaugural lecture: ***Is it a Sea Chart?*** at 15.00. Opening hours: 11:00-18.00. Entry is free. Information: Céline@celinevanhoorn.com



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