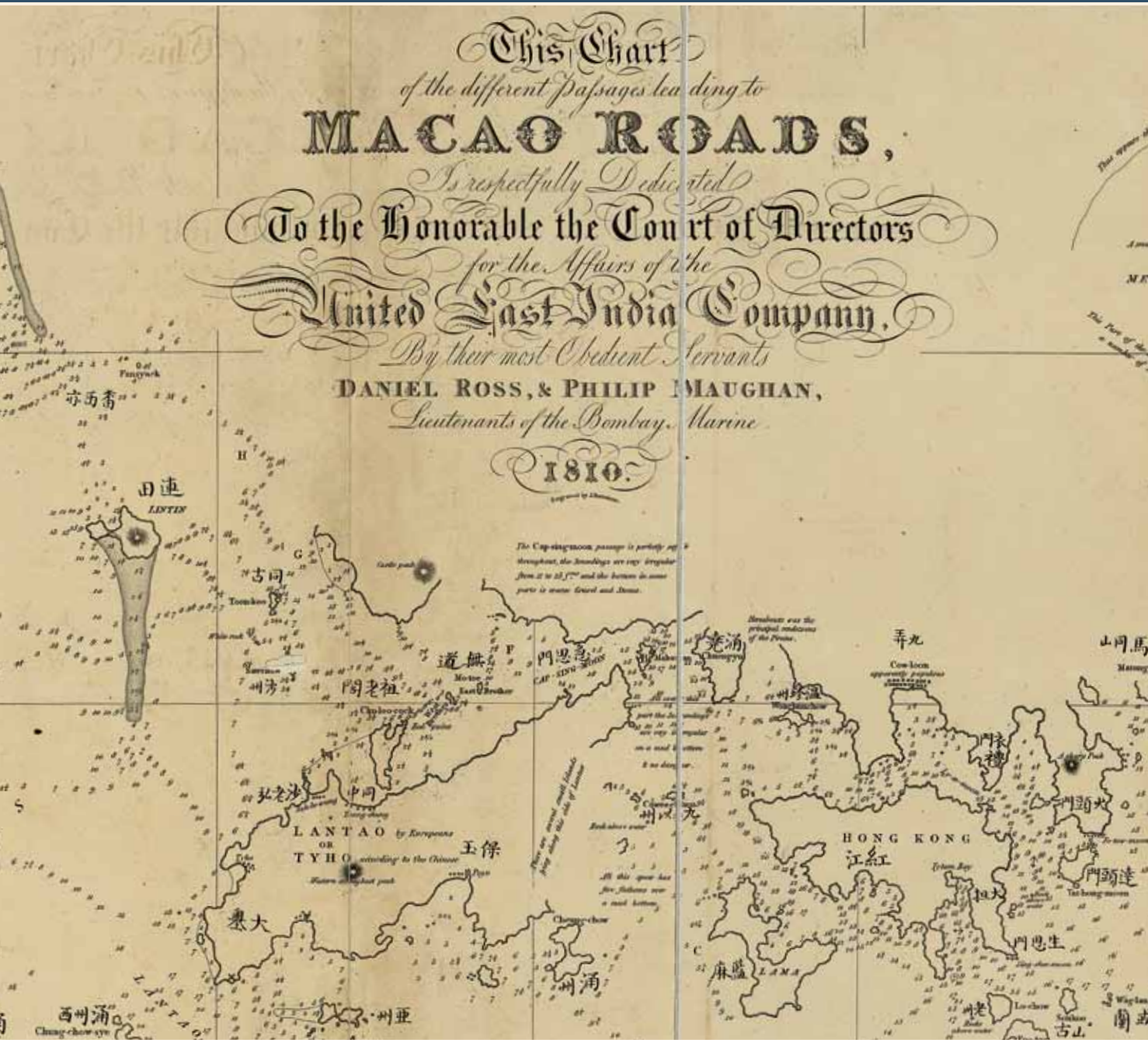


IMCS JOURNAL

DECEMBER 2018 No.155





Detail of Josua & Reiner Offens glorious sea chart "Maris Mediterranei", published circa 1720 in Amsterdam.

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JOURNAL OF THE INTERNATIONAL MAP COLLECTORS' SOCIETY

DECEMBER 2018 No.155 ISSN 0956-5728

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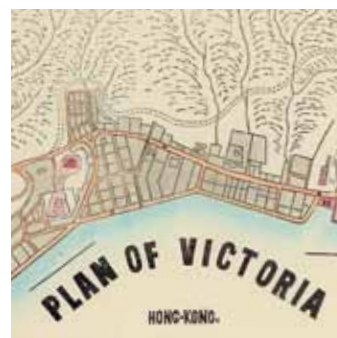
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Front cover Daniel Ross and Philip Maughan, detail of 'Passages leading to Macao Roads', 1819. Courtesy Library of Congress, Geography & Map Division.

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IMCoS are looking for a new designer to work closely alongside the editor to produce their journal.



The journal is published four times per year, in March, June, September and December, and the position would be ideal for a freelancer who is looking for regular work. Some flexibility with the working hours may be useful especially when deadlines are near at hand!

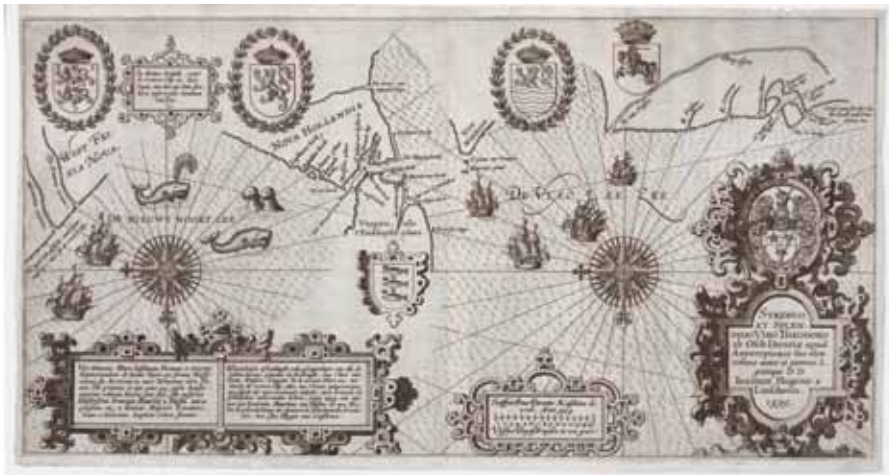
The job involves adapting layouts within an established grid and brand. The successful candidate must be a good communicator and have a love of typography and design. Attention to detail is vital to the role. An interest in maps is a bonus but not essential.

The designer is responsible for the organisation of the journal's digital files and for its backup during the design process and after each issue is completed.

- **Expert knowledge of Adobe Indesign, Photoshop, Acrobat and Illustrator.**
- **In depth experience of layout and editorial design; preferably over 5 years.**
- **Typographic expertise and an ability to work well with large amounts of text.**
- **In depth knowledge of artworking for print as well as preparing versions of the journal for usage on websites and social media.**

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LINSCHOTEN, Jan Huygen van [Amsterdam, 1601] *Vera delineatio Maris Insularum Tozar per fretum Nassoviaticum seu Arcticum in mare Tartaricum ultra flumen Obi pretense eo quo anno 94...*

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A LETTER FROM THE CHAIRMAN

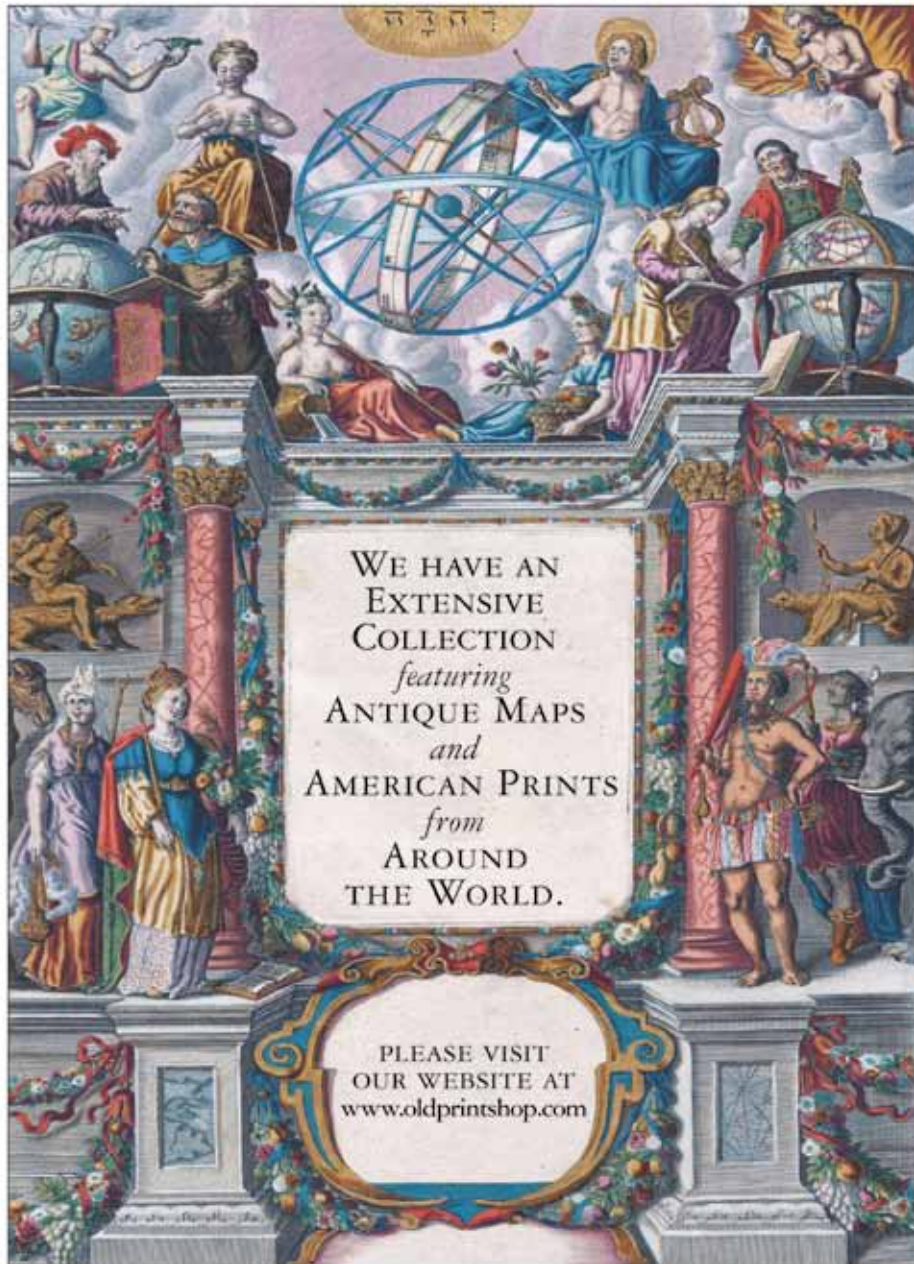
Hans Kok

Just attended our 36th Annual International Conference at Manila and Hong Kong. A pleasure to meet old friends and make new ones. Fewer delegates than expected from Europe and the United States; many more from the Far East, proving it to be one of the regions where historical cartography is flourishing. Where Western cartography tended to call the tune in various aspects in the past, now we were introduced to, and immersed in, cartography from China, Korea and Japan. The Manila part was organised by Rolf and Elizabeth Lietz, (owners of Gallery of Prints), with German 'Gründlichkeit' and Philippine hospitality, in the Ayala Museum, supported by PHIMCOS and local sponsors. It featured, amongst others, cartography based on the Spanish past of the Philippines. As Dr Ocampo, one of the speakers, put it, maps helped awaken the self-confidence of the Philippine peoples, a pre-requisite to nationhood. The Hong Kong part of the Symposium was very ably put together by the Maritime Museum at Central Pier No. 8, just across from Kowloon's Star Ferry terminal, a ferry that reminded your chairman of his active days flying into Kai Tak Airport (now a cruise ship terminal). Mr Tam's excellent exhibition of Chinese maps in the Maritime Museum was very much of interest and distinction, further enhanced by the guided tour given by him. An interesting panel discussion on the future of map collecting was entertaining, worrisome, to a certain degree ('one can get into collecting but not out of it'), and enlightening. Peter Geldart, the lynch pin between the Manila and Hong Kong parts of the conference, and Jonathan and Vicky Wattis, our hosts at Hollywood Road, are also deserving of our gratitude. A Manila publication of high quality was made available during the Symposium and Hong Kong provided the abstracts of the presentations also. Thank you, Richard Wesley, Libby Chan and Abbie Hui! We also got to meet the people supporting the Maritime Museum, which once again goes to prove that nothing ever happens unless a number of dedicated people make it happen. A special item in our Manila goody bag was provided by our long-term member and most loyal Symposium delegate David Webb. Many of you may remember the occasions when David wore his hand-embroidered T-shirt, showing the location of the IMCoS Symposium venue, relevant at that time. In Manila he donated a tea towel showing all 36 Symposium venues, that IMCoS has visited so far. In view of the fact that every delegate was to receive a tea towel, this time it was not hand-embroidered but printed on linen, paralleling the development of maps going from manuscript to printed when multiple copies were required. Thank you, David! It seems that I got so carried away that I almost forgot to wish you all a Merry Christmas (or equivalent) and a Happy New Year or *Gong xǐ fā cái* in Chinese, although the Chinese New Year arrives a bit later!

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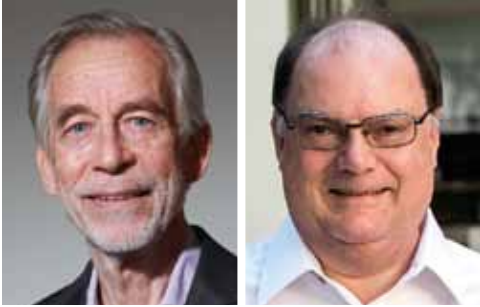
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GUEST EDITORIAL

Rudolf J.H. Lietz & Peter Geldart

‘Insulae Indiae Orientalis’, Manila

The lavishly illustrated catalogue, produced to accompany the Manila section of the 36th IMCoS Symposium, is a wonderful window on the proceedings of the three-day event, during which the historical cartography of the Philippine archipelago was examined. It also records, in full, the exceptional exhibition of maps, charts and views of the country’s many islands that was mounted in the Ayala Museum where the symposium took place. Many of the exhibits were featured in the presentations of the symposium’s eleven speakers.

Probably for the first time since the British left Manila in 1764, when they took with them Murillo Velarde’s original copperplates as war spoils, three original 1734 1st editions of Murillo’s map were on display in one room. Executed by Nicolas de la Cruz Bagay (map) and Francisco Suarez (vignettes), they represent the best that the archipelago had to offer: engravings of the highest artistry that established Manila’s reputation as a centre of colonial printmaking in South East Asia and beyond.

Copies of Murillo’s 1734 and 1744 maps had reached Europe early and prompted French cartographers such as Bellin to update sea charts for publication by the *Dépot de la Marine* in 1752. While attributing his copy to Murillo, he also added his ‘improvements’ by reintroducing the large non-existent island of San Juan to the north-east of Mindanao – an island which Herrera had depicted in 1601 but which Murillo took pains not to show as he knew about this fallacy.

No amount of writing will do justice to the discoveries in the vast Pacific – this oxymoron of a water mass that took Magellan months to cross only to meet his death at the end of it; yet, ironically, he did not know where he was nor what he had truly accomplished. Next year, the Philippines will commemorate the half-millennium of the beginning of the epic first circumnavigation in 1519 and the resulting exploration of the Pacific in the search for riches.

One of the Western voyagers broached briefly in the symposium is Thomas Cavendish, brother-in-law

to Robert Dudley, with whom he may have shared information on the Philippines and which then found their way into Dudley’s charts? Susan Maxwell suggests so in her article in this issue of the *Journal*.

Rudolf J.H. Lietz, Manila

‘Cultural Encounters in Maps of China’, Hong Kong

After Manila, the 36th IMCoS Symposium moved to Hong Kong, to be hosted by the Hong Kong Maritime Museum, the Hong Kong University of Science and Technology Library, and Wattis Fine Art. The symposium covered a spectrum of topics on the theme *Cultural Encounters in Maps of China*. The HKMM displayed Chinese maps from the collection of Mr K.L. Tam, including the impressive ‘Blue Map’ of Qing-dynasty China, two scroll maps of the coast of southern China and rare manuscript maps of Chinese provinces, together with Western charts of the China Sea from the collection of Dr Gordian Gaeta. Both gentlemen gave talks, and were joined by academic speakers on Arabic cartography (Prof. Fung Kam-Wing); the Martini / Blaeu *Novus Atlas Sinensis* (Dr Mario Cams); the charts of Captain Daniel Ross (Dr Stephen Davies, whose article on Ross appears in this issue of the *Journal*); early Western maps of China (Dr Marco Caboara); and maritime trade in the China Seas (Dr Richard A. Pegg).

On the second day symposium participants visited HKUST where Dr Caboara discussed his project to publish a comprehensive cartobibliography of Western maps of China up to 1800, and displayed maps from the university’s collection including a late-sixteenth century Jesuit map of the Kingdom of China and adjoining islands of which only one other example is known. The symposium concluded with the Wattis Fine Art exhibition *A History of Hong Kong in 50 Maps: A selection of unusual maps, charts and plans 1775–1979*, from which the article on Hong Kong street plans in this issue has been based.

Peter Geldart, Hong Kong

IMCS MATTERS

DATES FOR YOUR DIARY

15 January 2019

Nominations for the IMCoS/Helen Wallis Award

IMCoS has been presenting an award to an individual, who in the opinion of the selection sub-committee has been responsible for cartographic contributions of great merit and wide interest to map collectors worldwide. Though the award is intended to recognise individual merit, in special circumstances a group of people or an organisation could be eligible. The award is presented at the Annual Dinner of the Society in the June weekend in London, normally held in conjunction with the London Map Fair.

Please send your nominations to Valerie Newby at valerie.newby4441@gmail.com by 15 January 2019.

September 2019

Proposed IMCoS visit to Oxford

Valerie Newby and Jenny Harvey are planning a visit to Oxford in the first week of September 2019. The

highlight of the trip will be a visit to the Bodleian's major new exhibition: 'Talking Maps'. Nick Millea, who is curating the exhibition with Jerry Brotton, will be showing us around. We hope to hold our annual Collectors Evening on the same day. Details will be posted on the website as soon as they are confirmed.

7 June 2019

IMCoS Annual Dinner & Malcolm Young Lecture

The venue for this event will be confirmed in the March 2019 issue of the journal.

8 June 2018

IMCoS Annual General Meeting

The meeting will be held at the Royal Geographical Society (with IBG) at 1 Kensington Gore, London SW7 2AR.

8-9 June 2019

London Map Fair

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REPORT FROM 36TH IMCoS INTERNATIONAL SYMPOSIUM, 2018



The Manila section of the symposium came from far and wide – Australia, China, Germany, Guatemala, Hong Kong, Macau, Malaysia, Mexico, The Netherlands, Singapore, Spain, UK and the US – to augment the large Filipino contingent. The group is seated in front of the Ayala Museum where the symposium took place.

The 36th symposium was a bipartite event with Manila hosting the first segment: ‘**Insulae Indiae Orientalis**’. The event was spearheaded by Rudolf J.H. Lietz of the Gallery of Prints and supported by the Philippine Map Collectors Society (PHIMCOS), the Ayala Museum and a number of prominent Filipino donors.

The Ayala Museum, in the district of Makati, Metropolitan Manila, was the centre for the three-day event, an easy walking distance for participants except for those who chose the air-conditioned route through bewilderingly confusing shopping malls. Committed to promoting Philippine history and its culture, the museum provided the ideal environment for examining the historical cartography of the 7,000, and something, islands that make up the archipelago.



Organiser Rudolf Lietz welcomes the participants to the opening of the three-day event.

First presenter **Ambeth Ocampo**, favoured Filipino public historian provided an eloquent framework to the shape of the presentations to come. ‘Maps and the Emergence of the Filipino Nation’ outlined the role of historical maps in documenting the development of nationhood.

Carlos Madrid shifted the focus from a panoramic view of Philippine history to a close analysis of the cartouche on printings of Fr Murillo Velarde’s map of the country. It is the Philippine’s most revered cartographic representation of its archipelago. Made in 1734 and reprinted, and copied, multiple times over the centuries, Madrid drew our attention to the significance of alterations to the cartouche and the event/s that precipitated these changes. For instance when the Jesuits were banished from the territories of Spain in 1767 the reference to the Jesuit order on Murillo’s map was removed.

Specialist dealer in antique cartographic items **Daniel Crouch** introduced the exquisitely beautiful 1531 planisphere by Vesconte Maggiolo which he suggested is ‘one of the earliest maps, if not the earliest, to show the present day Mindoro and Luzon’. He argued that the portolan represents the struggle between the houses of Hapsburg and Valois in the first half of the sixteenth century.

Hans Kok considered the mapping of the Philippine’s neighbouring archipelago of Indonesia and gave the audience a sweep of the VOC’s extensive cartographic activities in this region during its 200-year existence.

Trade networks with the Philippines were explored by **Martine Chomel**, **Richard Pegg** and **Robert Clancy**. Chomel focussed on New Spain; Pegg on how the networks were expressed on Chinese maps; and Clancy on the European–South East Asian trade circuit.

Cartographical visions of the Philippines in the nineteenth century were addressed by **Rudolph Lietz** in his presentation of Heinrich Carl Wilhelm Berghaus’s *Atlas of Asia*; your editor discussed the travel account of Anna D’Almeida, a young Victorian tourist to Manila.

Justice of the Supreme Court **Antonio Carpio** brought the discussion into the twenty-first century when he explained the way in which old maps and charts of the Philippines were used to overturn China’s claim to sovereignty over the Paracel and Spratley Islands and the Scarborough Shoal.

Lietz and his team produced a handsome, fully illustrated catalogue to accompany the symposium. It contains abstracts, and in some cases, full transcripts of the papers delivered. Copies of the catalogue can be obtained from www.gop.com.ph.

A key and exciting component of the symposium was the exhibition ‘*Insulae Indiae Orientalis*’ on display at the Ayala Museum. Curated by Lietz, the exhibition of 150 maps, charts and views carefully plotted the evolution of Western understanding and depiction of the Philippines. The items were assembled from collections lent by presenters from the Philippines and overseas, Lietz’s personal collection, fellow members of PHIMCOS and the Gallery of Print. A significant feature of the exhibition was the Murillo Room, in which was displayed the largest ever number of Murillo maps, including three examples of the 1734 first edition.



One room, amongst several, displaying the outstanding exhibition ‘*Insulae Indiae Orientalis*’ celebrating the Philippine’s rich mapping history. It was specially mounted to coincide with the symposium.



Participants examine one of many examples of Murillo Velarde’s map of the Philippines in the exhibition. In fact, on display were three examples of the 1743 first edition.

The serious interest in the nation’s cartographic representations of itself was evident from the excursions organised for the group.

We celebrated the launch of the much-expanded fourth edition of Carlos Quirino’s *Philippine Cartography 1320–1899*. Quirino’s book started its life some sixty years ago as a privately published bibliographical list of maps of the Philippines. It was then the only book on the subject. In the intervening years it has been intermittently revised. This edition has had a major makeover by historian Dr Carlos Madrid (speaker at the symposium). The launch was attended by his family, publisher and an enthusiastic crowd of well-wishers. The late Carlos Quirino would be proud of the longevity and continued importance of his legacy in promoting the archipelago’s cartographical history. A review of the book by Peter Geldart can be found on page 55 of this issue.

Mrs Giovanna V. Fontanilla, Assoc. Prof. & Director, Office of Public Affairs of The Miguel de Benavides Library of the University of Santo Tomas welcomed the group with a specially mounted exhibition, with catalogue, of some of their rare holdings. The oldest existing university in Asia, Santo Tomas was set up in 1611 by the third Archbishop of Manila, Miguel de Benavides, with fathers of the Dominican order. The display of over 100 items included manuscript estate maps of the university’s property in the countryside outside of Manila and maps of the island throughout its various foreign occupations. The loose charts were complemented with numerous books and atlases which, until relatively recently, were on open shelves for the students and



The Santo Tomas university library is named after its founder Fr Miguel de Benavides. It was initially created in the early seventeenth century when he, and other benefactors, donated their private collections to the university. © David Webb.



George Piness and William Brandenburg in the conservation department of the Heritage Library. © David Webb.



staff. Fr Angel Apparicio Prefect of Libraries guided the group through the Antonio Vivencio del Rosario UST Heritage Library and, en route to the conservation department, pointed out a first edition gem amongst their rare books: *Nicolai Copernici torinensis De revolutionibus orbium coelestium: libri VI*. (1543).

The Lopez Museum and Ortigas Foundation Library also prepared a special one-day exhibition for the symposium delegates. We were welcomed by Executive Director of the Ortigas Foundation John Silva who explained that the library was established with the acquisition of the Netzorg Filipiniana Collection from Cellar Books, Detroit and library of the late Dr G.F. Zaide, and in 2009 augmented with a loan of some 9,000 books, photographs and documents from the Rafael Ortigas Jr family. Mr Alberto Montilla, an Ortigas Library trustee, and significant collector, particularly noted for his military maps, was responsible for curating this excellent exhibition which included fine examples from the seventeenth century onwards.

Compelling amongst the exhibition was the 4.9-metre map that was used by Spanish and American negotiators at the 1898 'Treaty of Paris' after the Spanish–American War. The defeated Spaniards offered to part with their former colony for 100 million dollars. The Americans scoffed at the suggestion and offered 10 million. The deal was settled for 20 million.

The symposium concluded with a farewell dinner at which thank yous were extended to organisers, donors, and delegates. *Salamat po*.

Left Participants enjoying the fine collection of maps and charts at the Ortigas Library and Lopez Museum.

Below The group at the Ortigas Foundation Library viewing the monumental Treaty of Paris map which was used in the negotiation of transferring the Philippines to the Americans after Spain's defeat in the Spanish–American War.



Part 11 ‘**Cultural Encounters in Maps of China**’ of the Symposium was co-hosted by the Hong Kong Maritime Museum, the Hong Kong Science and Technology and Technology Library and supported by Jonathan Wattis, IMCoS representative for Hong Kong and Director of Wattis Fine Art.

Day one of the proceedings took place in the Maritime Museum, and set on the harbour waterfront it was a perfect location for the event. Founded in 2003 by members of the Hong Kong Shipowners Association, the museum’s objective is to tell the story of trade and maritime history in Hong Kong and the Pearl River Delta.



Hong Kong Maritime Museum at Central Pier 8. KTo288, Creative Commons Attribution-Share Alike 3.0 Unported license.

After the opening addresses, Museum Director **Richard Wesley** invited the first speaker **K.L. Tam** HKMM Board Director and prolific collector of Chinese maps to the podium. Tam spoke on the cultural shift in early Chinese navigation from descriptive sailing instructions to quantitative chart making. He explained the role Chinese ambassadors played in the adoption of Western methods and instruments of navigation.

Fung Kam Wing from the University of Hong Kong discussed navigation practices in the Islamic world through key primary Arabic sources such as Piri Reis’s *Kitab-t Bahriye* (Book of Navigation).

Mario Cam from the Macau University spoke on the *Novus Atlas Sinensis* (Amsterdam 1655) and argued that it was by successfully exploiting the shift in seats of power taking place in Europe and China that Jesuit missionary Martino Martini (1614–1661) was able to publish the first full atlas and geography of East Asia.

Gordian Gaeta, whose collection of maps is currently on long-term loan to the museum, spoke of the impetus that prompted the charting of the Hong Kong coastline and outlying islands. He identified three key reasons for its mapping: ‘local knowledge and protection from pirates’; providing illegal opium traders information on where to safely offload their contraband cargo; and to guide the British Navy to sites of the illegal activity.

Stephen Davies offered an in-depth look at one such chart maker: Lieutenant Daniel Ross of the Bombay Marine. Initially instructed to take responsibility for anti-piracy patrols in the China Sea, Ross became better known for the hydrographical surveying he completed of the coast of China, the port of Canton, Hainan, the Paracels and the approaches to Macao and Whampoa. An article based on his paper can be found on page 14.

Marco Caboara spoke about Jansson’s 1657 ‘Xuntien alias Quinzay’ highlighting the degree to which its fanciful representation of the city persisted in mapmaking despite the availability of more accurate knowledge. He drew our attention to the problems of dating ‘Sinarum Regni aliorumque regnorum et insularum illi adiacentium description’ and its relationship with Ortelius’s 1584 map of China. It is a rare map. Three known copies exist: in the BL, HKUST and ARSI (Rome).



Museum Director Richard Wesley introduces the panel discussion ‘Challenges for Map Collecting’. Seated L to R Dr Gordian Gaeta, Jonathan Wattis, Dr Richard Pegg, K.L.Tam HKMM Ltd Board Director, Prof. Fung Kam Wing and Dr Libby Chan, Assistant Director. © Geoff Edwards.

'Maps and Ships: Maritime Trade in the China Seas from 16th to 18th Centuries' presented by **Richard Pegg** was an apt contribution to highlight the Maritime Museum's collecting interests. He discussed the ships that were used in the Japanese red-seal maritime trade system operating in the China Seas.



Example of a seventeenth-century red-seal ship.

To complement the programme of presentations, a special exhibition was curated by the HKMM together with the Guest Curator K.L. Tam. Maps and charts of China and East Asia between the sixteenth and the twentieth centuries vividly outlined the development and the cross-cultural interactions of mapping technologies in early modern China. The exhibits on display were from the HKMM collection, alongside long-term loans from important private collections, particularly those of K.L. Tam and Dr Gaeta. A standout item was an eighteenth-century scroll map from the Qing dynasty (before 1839). Untitled and unsigned, but from the elegant script it is believed to be executed by an official cartographer. The long scroll depicts zones of control along Guangdong coast, marking settlements, forts, custom facilities and safe anchorage.

The success of a long day was celebrated with a traditional Chinese banquet at the Peking Gardens.

Hong Kong excursions included a visit to the Lee Shau Kee Library at the Hong Kong University of Science and Technology. Situated at the northern part of Clear Water Bay Peninsula, the university has spectacular views overlooking Port Shelter in Tai Po Tsai. The campus has a steep sloping terrain and the buildings and facilities are built on separate terraces carved out of the hillside, down to the seafront.

Dr Caboara introduced us to the library staff and its collection highlights, especially assembled for us to view. The exhibition included a good range of excellent examples of European map and chart makers' understanding of China commencing from the sixteenth century. There were fine examples by Da Vignola, Coronelli, Dudley, Seutter, Wit, to mention but a few, and of course, the wonderful Martino Martini/Blaeu *Novus atlas sinensis*. The library's collection can be accessed at <https://lbezone.ust.hk>.

Dr Caboara explained that they were working on a comprehensive cartobibliography of Western printed maps of China between 1580 and 1799. This massive project will be published by Brill. We all look forward to its publication and adding it to our library collection.

The afternoon was spent in the Central district of Hong Kong attending a reception and exhibition hosted by Vicky and Jonathan Wattis at the Wattis Fine Art gallery. The exhibition 'A History of Hong Kong in 50 Maps: A selection of unusual maps, charts and plans 1775–1979' presented a fascinating overview of this extraordinary city's urban development from its early settlement at the water's edge of a barren rocky outcrop to the vertical metropolis it has become.

L to R Dr Libby Chan, Dr Richard Pegg, K.L. Tam, Prof. Fung Kam Wing, Toshi Kaida, Dr Marco Caboara, Vince Ungary. © Toshi Kaida.

Ensuring our noodles were fresh, restaurant chef prepares them for the group. © Jenny Harvey.





Left A bird's-eye view of the Hong Kong University of Science and Technology campus. Creative Commons Attribution-Share Alike 3.0 Unported license © Hkust pao.

Below The symposium group with members of Special Collections at the Map Gallery, Hong Kong University of Science and Technology. © HKUST Library.



Far left At the reception, held at Wattis Fine Arts, Chairman Hans Kok thanks Hong Kong organisers Peter Geldart and Jonathan Wattis for all their work in making the HK part of the symposium such a success. Jonathan had also mounted an excellent exhibition of historic maps, charts, plans and views of this former British colony. © David Webb.

Left The exhibition catalogue of *History of Hong Kong in 50 Maps* can be bought from Jonathan at info@wattis.com.hk.



Symposium devotee David Webb, flanked by long-time IMCoS members Wes Brown and Robert Clancy, displays the tea towel he designed and had printed showing each of the 36 IMCoS Symposium destinations. © David Webb.

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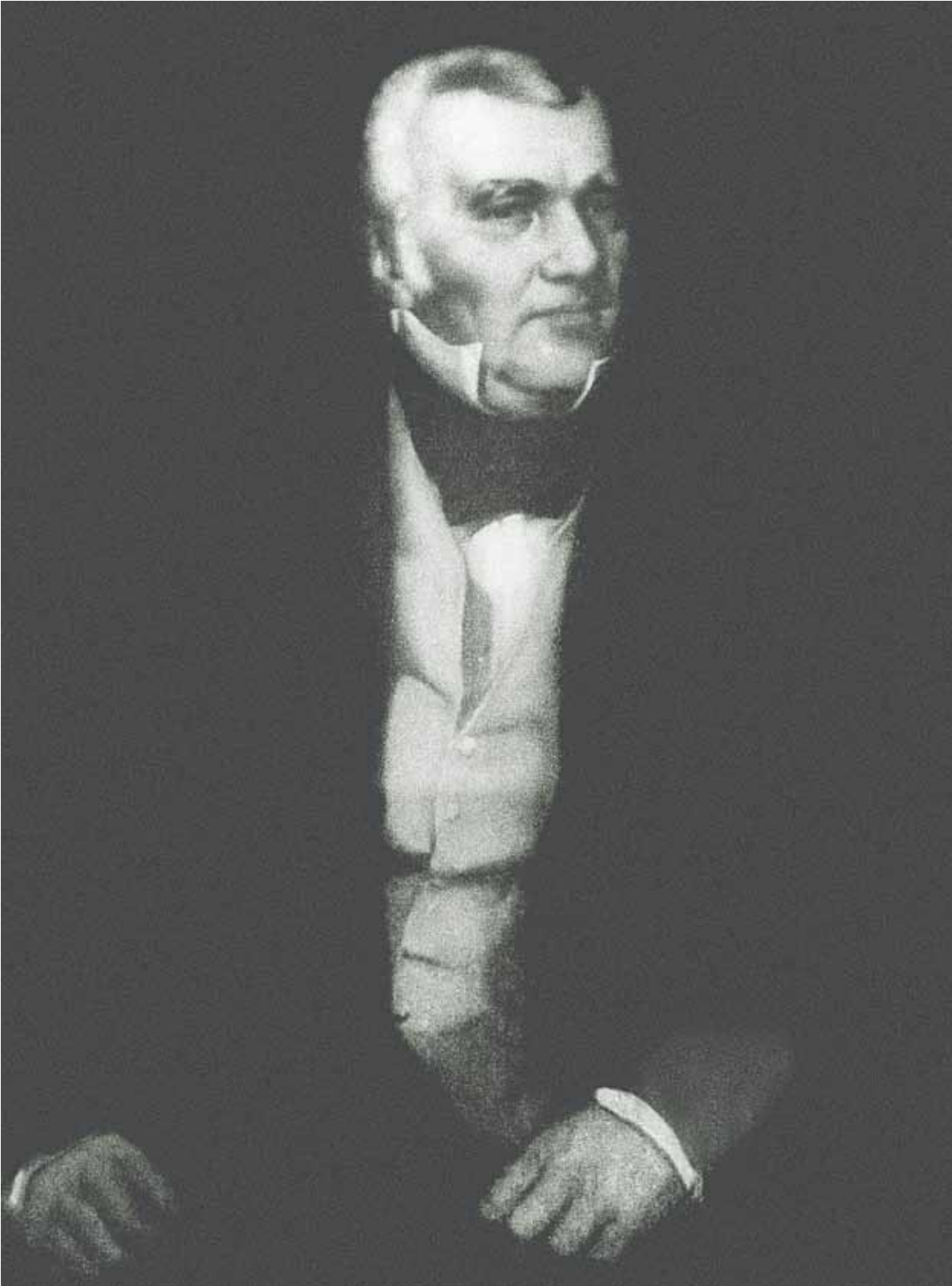
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‘SOME DEEP-LAID SCHEME OF THE PERFIDIOUS ENGLISH’

Captain Daniel Ross, FRS, IN and the systematic hydrographical surveying of the China Seas, 1806–1820

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In 1806 a young Bombay Marine officer, Lieutenant Daniel Ross, began thirteen years of work that, as its principal achievement, was a properly surveyed set of charts of China’s south coast from Hainan to Shantou, with larger scale charts of the approaches to Macao and Whampoa and other key anchorages of refuge, and accompanying sailing directions. This article will trace the progress of these surveys, focusing on the approaches to, and passages up, the Pearl River to Whampoa, and identify the thirty-six charts of the China Seas and ten charts of Burmese (Myanmar) waters that resulted.

Introduction

In histories of eighteenth- and nineteenth-century cartography published over the last thirty years or so, the history of maritime mapping – hydrography – is sometimes treated as below the salt. That is because charts were workaday; specifically surveyed, designed and produced to help navigators on ships find out where they had been, where they now were, where they were headed and how they would get there.¹

It seems only Western cartographic tradition developed in this way.² Partly because that was the case, in 1806 the young Lieutenant Daniel Ross (1780–1849) of the Bombay Marine and his first officer, Lieutenant Philip Maughan (c.1785–1866), were sent by the British East India Company to the Pearl River Delta to occupy themselves combating pirates and protecting East India Company interests whilst, when they had time, improving hydrographical knowledge of the local waters.

What Ross and Maughan were to push forward when they arrived in Macao was a nearly 300-year old tradition. Ever since early modern Western navigators had headed out beyond familiar waters, they and those who sent them or supported them had a clear idea of the need for charts. The first recorded statement of this told early Spanish navigators what was expected.³ At regular intervals thereafter others followed suit.⁴

But at the time Ross began his work, hydrography was still not very well organised. Official hydrographic agencies were young, few, underfunded, low in the pecking order and still suffering from the mentality that, when it mattered at all, hydrographic information was a corporate or state secret. The private sector was ramified, competitive, plagiarist and in many respects unscrupulous as to the veracity and accuracy of their data. Coordination and data sharing – even within organisations like the Royal Navy and the East India Company – were the exception rather than the rule. It was to be several decades before a genuine shift to international cooperation and a dedication to accuracy and common standards, was to ripen.⁵ This explains some of the puzzles in correlating Daniel Ross’s surveys with the resulting charts.

Scotsman... or not? Surveyor... or not?

On the face of it, Ross was just another of the Scotsmen who played a disproportionate part in building Britain’s overseas empire as ‘settlers, soldiers, merchant seamen, botanists, foresters, engineers, missionaries, teachers, founders of universities, and not least as bankers, merchants, and creators of companies’.⁶ That would be half correct. His father, Hercules Ross, was indeed a Scotsman and Daniel Ross, born on 11 November 1780, had his schooling in Scotland, though where is unknown. But he was a Scot by cooption. By birth he was Jamaican, his

Fig. 1 Captain Daniel Ross FRS, IN, artist unknown, c.1847. The portrait was painted as part of a presentation in honour of Captain Ross to the Bombay Geographical Society. Reproduced from a black and white photograph taken by Ms Agnes Butterfield in c.1980 when the portrait, now lost, was in the possession of the Asiatic Society of Bombay. Tracts X473/19 frontispiece © The Royal Society.

mother was his natural father's quadroon ex-slave, freed in 1776 to become Hercules Ross's 'housekeeper'. By the time Hercules Ross took the five survivors of that arrangement away to Scotland with him in 1782, Elizabeth Foord had given birth to seven children, the first when she was only around fifteen years old. She was left comfortably circumstanced⁷ and her children, though never formally acknowledged, were given an education and placed as advantageously as keeping them at a distance could manage. The girls were set up with a dame school in Doncaster and the boys sent to India.⁸

Daniel Ross was appointed a Volunteer in the East India Company's Bombay Marine – in effect its private navy – in 1795. He was meant to leave for India in the *Berrington* but his baggage hadn't arrived and he missed his ship when it left on 9 July. The *Berrington's* skipper, Captain George Robertson, told the young Ross to return to London and explain matters to the Company. There he was told that he would have to go out in the next year's ship. That would have meant a loss of seniority and no sure way of surviving in the interim. On his own initiative the fourteen-year old found a schooner heading for India, signed himself aboard as a midshipman and worked his passage. It was a pointer to the quality that would take the bastard son of a Jamaican ex-slave to a fellowship in the Royal Society. It was also quite fortunate. The *Berrington* had a circuitous voyage, never calling at Bombay (Mumbai) once she had reached Madras on 15 December 1795, so Ross would probably have arrived in Bombay later than he did.⁹

Thanks to his initiative Ross arrived in Bombay in February 1796 and was appointed as a Midshipman to the bomb ketch *Stromboli*. Over the next ten years he served in several of the Bombay Marine's small fleet. He was also seconded from February 1797 until July 1798, successively to HM ships *Hobart*, *Orpheus*, and *Victorious* and the East Indies Station flagship *Suffolk* (Vice-Admiral Sir Peter Rainier) before going back to the *Orpheus*. There is no explanation for this save, possibly, a chance to move to the more prestigious Royal Navy that didn't come off.

In 1799–1800, in the HC brig *Star* (Lt Scott) with the Bombay Marine's senior officer, Captain John Hayes in the *Swift*, along with the other Bombay Marine vessels, HC ships *Bangalore*, *Albion*, *Resource* and *Splinter*, Ross took part in the blockade and capture of Ternate from the Dutch. He sufficiently distinguished himself to be mentioned in despatches, was promoted to 2nd Lieutenant and rewarded by being sent in the *Star* to Britain with the news of the capture, arriving

on 12 January 1801.¹⁰ He spent over a year in Britain, which included an unpleasant visit to his father's home, Rossie Castle, where he seems to have been rebuffed, and on 17 June 1802 he returned to India in the *Travers* arriving 25 September 1803.

When he got back to Bombay he was sent to the schooner *Panther*.

At this point, which matters in understanding Ross's subsequent career, the shambolic Bombay Marine records offer nothing but muddle. Agnes Butterfield argues that in 1804 Ross was in the *Queen*, of which ship he was made commander when promoted to First Lieutenant in May 1805. However, the *East India Register and Directory* has Ross in the *Panther* from 1804 until at least 1805. The detail matters because of Ross's great achievements as a hydrographical surveyor, for in December 1804 the HCS *Panther*, under Captain Charles Court, set out on a major survey of the Red Sea accompanied by the HCS *Assaye* (Lt Maxfield).

Was Ross involved, given that he was shortly afterwards to make his name as a surveyor and be labelled by Clements Markham 'the father of the Indian Surveys'?¹¹ According to his fulsome obituary and some orders he was given as skipper of the *Queen*, the answer is that he was not.¹² He was in the *Panther* only until April 1804, when he was made First Lieutenant of the *Queen*. Just over a year later, in March, not May, 1805, he was promoted and made Commander. He proved himself an able fighting captain, at one point fighting off three alleged pirate vessels at once. He stayed with the *Queen* until October 1805, when he was posted to the *Antelope*. He supervised her fitting out for her intended work in China to the precise nature of which we can now turn.

The oddity of someone being put in command of an apparently major surveying expedition, who seems to have had no formal surveying experience can be resolved if we ignore outcomes and note the *status quo ante* and the actual task for which Daniel Ross was chosen. As we shall see, that was not primarily surveying. It would follow that Ross's conduct in Ternate and his successes in carrying through his dispatches despite the redoubtable opposition of the pirates are likely to have been what recommended him.

The task

The task on which Ross was dispatched had a clear order of priorities. His superiors in London and India adjured him to protect the Company's trade and take responsibility for anti-piracy patrols. In their

instructions to Ross's superiors they had noted, 'The competency of the Crew for Warfare will, of course, be attended to you by you...'.¹³ But then added as a rider: 'we have conceived that the vessel may occasionally be employed in Surveying the Coast and Islets of the Country for the purpose of discovering where our ships might, in an emergency find shelter...'. So, when they went on to instruct 'we therefore direct in the Appointment of a Commander you do select persons properly qualified for this branch of duty', we have to take note of the use of the plural 'persons' as a qualifier for 'Commander'. The prime task was protection and a need for competence in warfare. The secondary task needed surveying abilities.

It is important too to understand the sort of survey work London envisaged. It was not a comprehensive, systematic, interlinked survey of an entire coast and the routes along it and to it, which would have been still unusual at this stage in the history of hydrographic surveying. It was modest and typical: to identify – not even primarily to survey – what we would call ports of refuge. In short, Ross's main job was to be what at Ternate and in the Persian Gulf he had shown himself good at: fighting. It accordingly makes sense that when the Bombay Marine authorities selected the team, they chose the man suited to the primary task with, as his deputy, an officer with surveying experience and skills.¹⁴

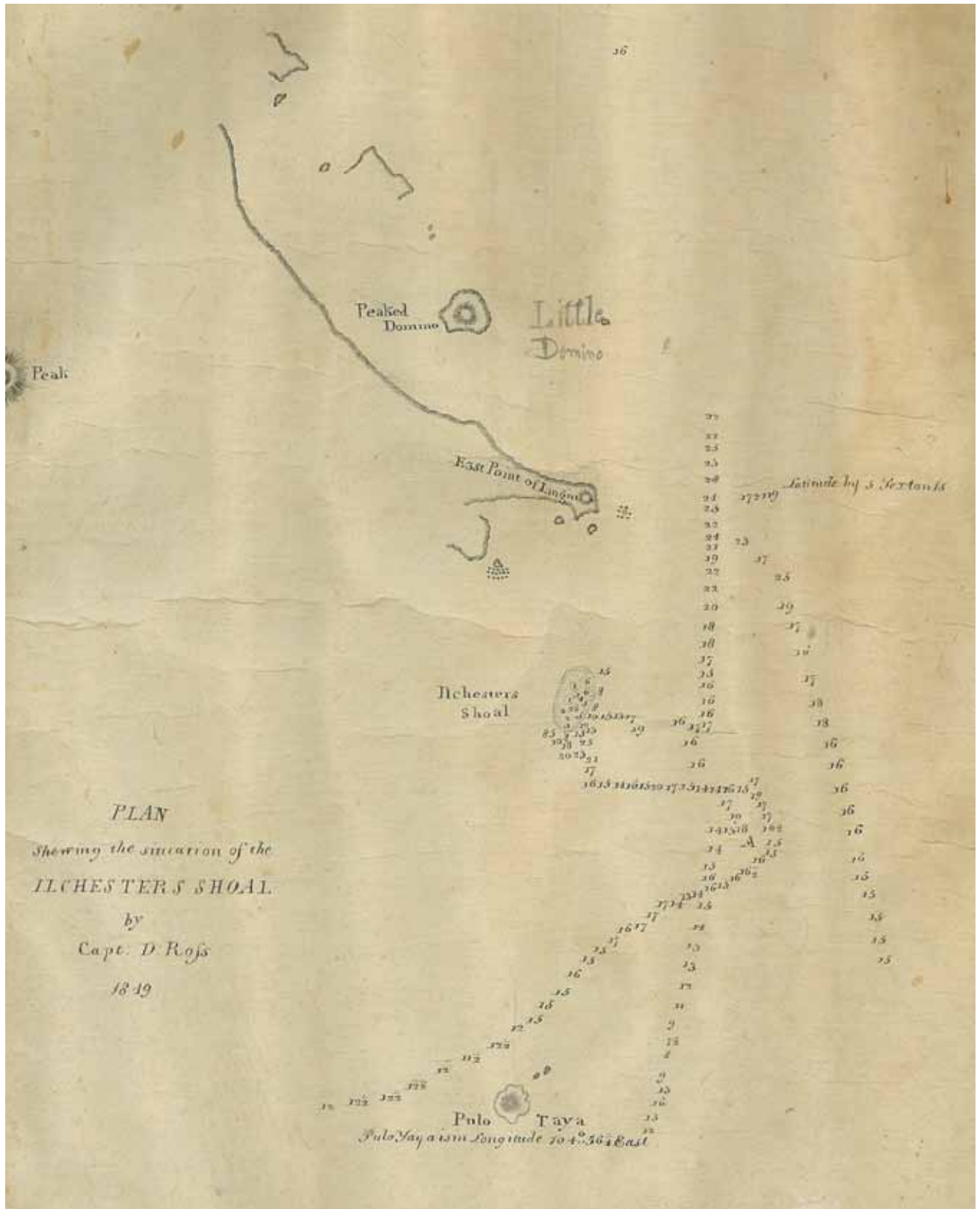
However, we should not conclude that the difference in navigational abilities as between Ross and his deputy would be as great as would today be those between a deck officer of any navy and a member of the specialist hydrographic surveying branch. In the late eighteenth and early nineteenth centuries it was critically upon the intuitive, mathematical, observational and technical navigational skills of a ship's officer that lives depended. Charts were only just emerging from their early adolescence. Instruments had reached high levels of precision only within the preceding generation. Modern comprehensive sailing directions, in the form of James Horsburgh's path-breaking *The India Directory* began appearing well after Daniel Ross and Philip Maughan began their work.¹⁵ The best officers, like Ross, were good navigators with skills uncommon then and vanishingly rare today. As Ross's obituary noted, 'He was eminently blessed with the talent, important everywhere...for the promotion of scientific research; he could perform his work with any implement, and transform and employ his instruments so as to attain ends by their use for which to others they would seem least adapted'.

It is thus no surprise to learn that although the surveying task on which Ross was sent in 1806 seemed to be secondary, he equipped himself as if it were primary. On his first major survey he had four chronometers at a time when the average vessel had a chronometer only if its captain owned one. His sextant was a Troughton and he had a mercury artificial horizon. Butterfield indicates that at some stage, though possibly for the second episode of the China Sea survey, he also used the latest in high-tech, a Massey's patent towed log, the first mechanical log ever made.¹⁶

So what happened to change things? The answer lies in the Select Committee in Canton, who had asked for the ship to be sent. For it seems they took a different view to their masters in London and India.¹⁷ Following the *Antelope's* arrival, on 5 May 1806, they instructed the 26-year-old Ross that his main priority was to be 'the accomplishment of a complete and regular survey of the China Seas, including those parts which have never been visited by Europeans as well as such coasts and islands therein as are imperfectly known or inaccurately described...'. His first task was 'a survey of the coast of China more immediately in the vicinity of the port of Canton, including the neighbouring coast of the island of Hay-nan to the westward, and proceeding from thence, provided the state of the weather and other circumstances will admit, as far southward as the northernmost of the Paracels and the Lincoln and St. Esprit Shoals'. An accomplished fighting officer was swiftly going to have to acquire significant new skills.

Once we understand things this way, our appreciation of Ross's abilities as a surveyor is enhanced by the swift and effective way he responded to what had unexpectedly become his primary task. His deputy, Maughan, said of Ross, 'concerning Captain Daniel Ross's labours in the China Seas from 1806–1820 believe me the British Merchants Trading to China and the Captains and ships owe much to his scientific exertions...no fatigue night or day damped his ardour to benefit his country – I was with him most of the time & witness to his exertions'. He went on, 'He (Ross) carried out all his surveys on a trigonometrical basis; all his angles were checked with the sextant and his triangulation frequently checked by astronomical observations'.¹⁸

So, what had initially been a fairly normal patrolling and interdiction task, in the context of the ongoing war with the French and the tenuous control exercised by the Qing authorities over their coastal waters, rapidly morphed into the first systematic survey of the southern coast of China and its neighbouring seas.



The timeline and its puzzles

Ross’s surveys of the China Seas took place in two major bursts that bracketed one minor effort: 1807–09, 1810–11, 1812–17. Thereafter his focus shifted first to the Malacca Straits and Singapore area and southwards towards Banka Island. After a pause from 1819 until 1823, whilst he was in Britain appearing before a Parliamentary Select Committee and being elected a Fellow of the Royal Society of London, he became Marine Surveyor General until 1835, during which time he was almost exclusively focused on the coast of Burma. Throughout his period of active surveying – a story that reverberates throughout the history of British hydrographic work – Ross and his ships were constantly being interrupted and occasionally entirely derailed from any systematic programme.

Ross’s first China coast efforts began almost as soon as he arrived in Macao. They continued, with frequent interruptions, until he was captured, along with his fair charts, by the French frigates *Cannonière* and *Laurel*, when approaching the Romania Shoals east of Singapore on 17 January 1809. He was at the time on his way to India in the HEICS *Discovery*, in company with the sloop HMS *Diana*, with the paroled crew of HMS *Greyhound*, which had wrecked on Bagualatan Shoal on 11 October 1808.¹⁹ By that point Ross and his team had produced nine charts. Six covered the coast west of Macao, with a medium scale coasting chart and five larger scale plans of harbours of refuge.

The first major accomplishment was finally to settle all the uncertainties surrounding the extent and position of the major hazard for mariners on their passage to and from China: the Paracel Islands.²⁰ Indeed it had been their very hazardousness that had advanced them up the priorities list in the first place, since one task for the *Antelope* had been to see if it could find out not only what had happened to the East Indiaman *Earl Talbot*, which had disappeared on its way to Macao in October 1800, reportedly foundering on the Paracels, but what had happened to the Bombay Marine vessels, the cruisers *Intrepid* and *Comet*, sent to discover the fate of the East Indiaman, disappearing themselves in early 1801, again it was thought on the Paracels.²¹

If the survey, with its two larger scale plans and one medium scale passage chart was an unqualified success,²² the search Ross had been asked to conduct to verify the position of the St Esprit Shoals failed after several days of

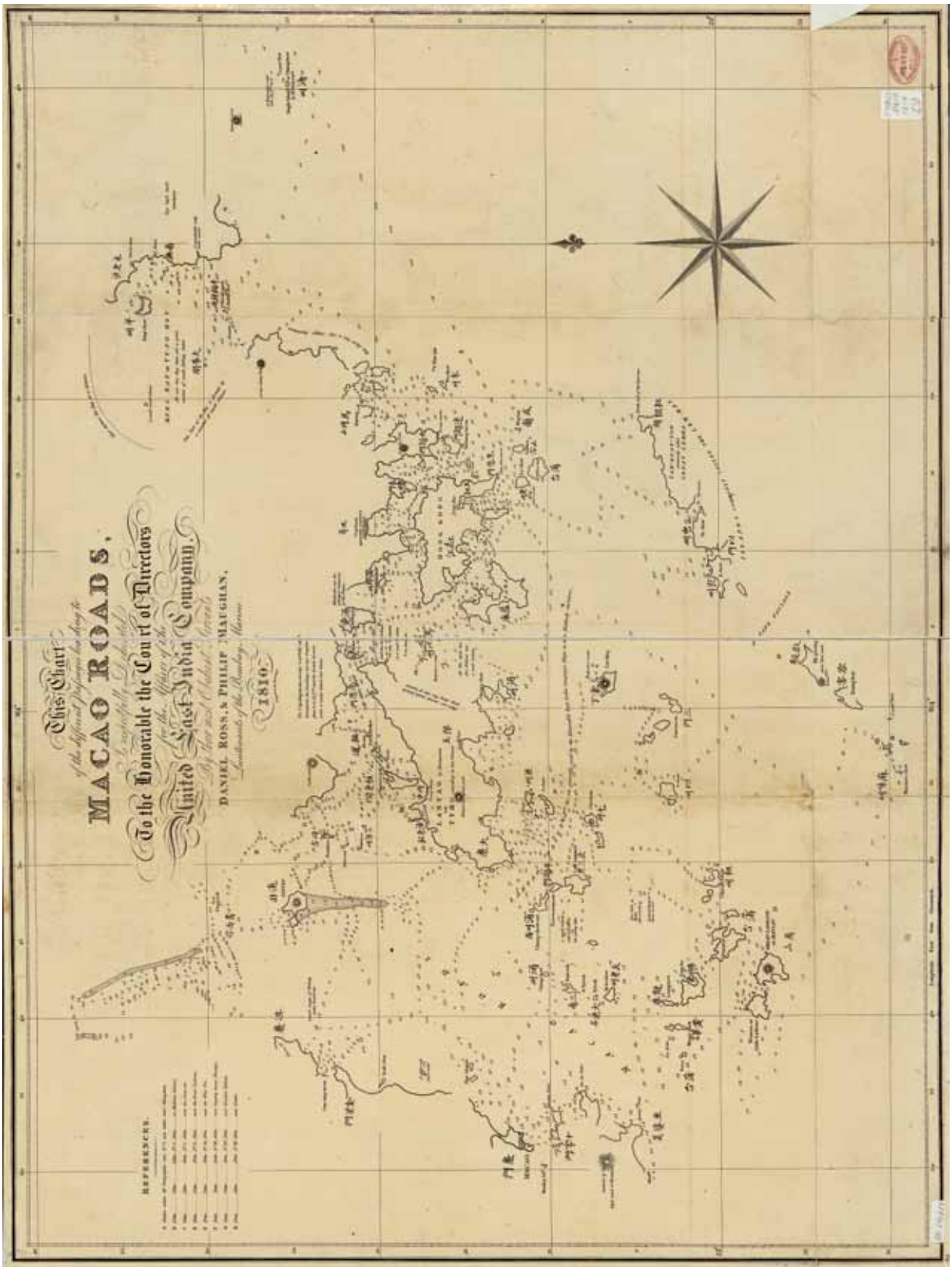
searching. He was not able to find anything where the shoal had been reported until 1813.²³ Although no doubt it had been known to Cantonese fishermen for centuries, the shoal had first been reported by the Spanish ship *Asséviedo* in 1755. That small detail highlights one of the major points this paper is making. The successive directories by Dalrymple, de Manneville, Horsburgh and others, and Henry Tizard’s report from the *Rifleman*, show that what distinguishes this new conception of maritime space, of which Daniel Ross is so pivotal an exemplar in the China coast waters, is precisely the geodetically rooted, quantified, successively recorded and communicated, and therefore cumulatively corrected, positional and bathymetric data on which the entire system rested.²⁴

In October 1809, once released from the Meester Cornelis fort outside Batavia, Ross went to Malacca, where he shipped aboard the East Indiaman *Cuffnells*, arriving back in Macao towards the end of 1809. In his absence Lt Philip Maughan had kept going with the surveys, though there would have been little time to have got much done. Back in command of the *Antelope*, Ross headed to the Paracels to see if he could find any survivors from the East Indiaman *True Briton* (Capt. George Bonham), which had disappeared after having last been seen on 19 October 1809, not long after leaving the Singapore Straits headed for Macao. It was thought to have wrecked on the Paracels. Ross found nothing and got back to Macao in May.

From the record on the resulting chart, on his way back to Macao Ross detoured to explore the coast of Palawan. The resulting chart was what is called a sketch survey, fleshed out as far as possible with data from four other sources, the tracks of two East Indiamen and of a ship called the *Cape Packet* from South Africa, and from an earlier, passing visit from the *Discovery* before her capture. The chart is short of detail. It would require exhaustive work by Commander William Thornton Bate in 1850–54 to fill in the gaps.²⁵

Once Ross and Maughan in the *Antelope* got back to Macao, where that September the thirty-year-old Ross was to marry the seventeen-year-old Maria Rosa Teresa Pépin,²⁶ the surveyors evidently completed a survey they had begun before they had been interrupted by the rescue mission for the Greyhounds that had ended with Daniel Ross’s imprisonment in Java.²⁷ Of the two charts published in 1809–11 the

Fig. 2 ‘Plan Shewing the situation of the Ilchesters Shoal by Capt. D. Ross, 1819’. This is a typical sketch chart showing three limited passes to identify the location of the shoal. The ‘latitude by 5 sextants’ (00 17’ 21.19”S) looks like three soundings because it has no symbols like the longitude of Pulau Taya (104° 56¼) shown towards the bottom. Where the latitude is extremely close to today’s value, the longitude is c. 3 miles too far west. Courtesy of Wattis Fine Art.



main one, 'Passages leading to Macao Roads', was a somewhat belated fulfilment of the Select Committee's request almost as soon as Ross arrived on station that 'After returning from the Westward you will avail yourself of the first favourable opportunity of examining and laying down the Islands on the other side of these Roads, including the passage at the back of Lantao as far as the Island of Lintin'.²⁸ That this was thought of as urgent is indicated by a reiteration in January the next year: 'We must also recommend to you, whenever the same can be accomplished consistently with other objects in view of more importance, to commence the survey of the Islands to the Eastward, particularly the passage between Lantao and the main, called by Mr Dalrymple Cowhee Passage, and from thence extending your observations as far as the Lema Islands and Macao Roads'.²⁹

Other objects in view, if not of more importance then of greater exigency, had intervened over the ensuing three and a half years.

The productive interlude was brief because at the end of 1811 the *Antelope* had to be taken back to India as a result of an organisational change. Captain Charles Court, as the second incumbent of the still new office of Marine Surveyor General, was for the first time intending to put the surveying activities of the Bombay Marine onto some sort of systematic footing. Its surveying had hitherto been more *ad hoc*, responding to demands for better data here or there depending on whatever appeared most exigent, or had the most powerful backing.

The results of Ross's first five years had received general praise. The Select Committee in Canton had written to Ross's boss, the Superintendent of Marine in Bombay, that along with the charts and plans they had already forwarded, those they were enclosing with their letter 'will prove the satisfactory manner in which (Lieutenants Ross & Maughan) have discharged thus far the duties of the service in which they were engaged'. They added, in case the authorities in India were minded to change things, 'from the correct manner in which Lieutenant Ross has commenced the undertaking we feel desirous of continuing to derive the benefit of his services'.³⁰ The appeals of the Select Committee, the quality of the work thus far and the enthusiasm of Charles Court ensured that Ross's

second great period of surveying the China Seas would go ahead. Two new vessels were acquired for surveying, the one-year old, bought-in second *Discovery*³¹ and the dedicated new build *Investigator*.³²

Ross and Maughan returned to the China Seas in 1812, though disentangling what surveys were done when is not easy for a number of reasons. First is the trivial but important point that publication dates are not necessarily a guide to when the survey work was done. There is at least one instance, 'The South East coast of Hainan', where the apparent gap between the survey and publication was five years. Second, of course, is that not all surveying actually resulted in a published chart. At least some of Ross's data was gathered in by James Horsburgh and incorporated in Horsburgh's charts without him always giving the sort of acknowledgement that later became standard. Recalling that a Hydrographer was originally, and largely has remained, a compiler of charts from whatever sources of data he could find, Horsburgh seems to have had a mental rule of thumb that gave specific acknowledgement to a source only when he thought the contribution had been sufficiently significant. Otherwise, only Horsburgh's name appears. The noted exception is the fulsome acknowledgement on Horsburgh's 'China Sea Sheet I, 1821' which reads:

*To Capt D. Ross, and His Assistants Lieut^s P. Maughan, P. Crawford, and J. Houghton of the BOMBAY MARINE: Who under the auspices of the Hon^{ble} East India Company having performed with Arduous Zeal a difficult and dangerous exploration of the CHINA SEA, so Essential to the safety of Navigation THIS CHART Although with an extension of Limits being Chiefly Constructed from THEIR Valuable Surveys is now Inscribed as a TRIBUTE due to Those Laudable Exertions.*³³

Finally, there is the additional surveying incorporated in subsequent editions of earlier charts, and here Daniel Ross stands in need of a scholar such as Dr Andrew Cook with Alexander Dalrymple to identify exactly how many editions there were of his charts.³⁴

It is beyond the scope of this paper to go past the point at which Ross quit the China coast area. Whilst

Fig. 3 'This chart of the different passages leading to Macao Roads is dedicated to the Honourable the Court of Directors for the Affairs of the United East India Company by their Most Obedient Servants Daniel Ross, & Philip Maughan, Lieutenants of the Bombay Marine, 1810'. Engraved by J. Bateman. This is the chart that marked a step change in the quality of charting of the Pearl River Delta. The names in Chinese characters, probably added in London and using the sound of the Romanisation, are mostly wrong and are wonderfully lampooned in Dung Kei-cheung's memorable *Atlas: The Archaeology of an Imaginary City*, Columbia: Columbia University Press, 2012, Part I, Theory: 1. 'Counterplace'. Photo courtesy Library of Congress, Geography & Map Division.

Table Daniel Ross: list of charts 1807–1833 * Both Daniel Ross and Philip Maughan named as Surveyors

No.	Year of survey	Year of publication	Title (no. of sheets)
1	1807	1807	<i>Survey of Part of the South Coast of China (2 sheets) *</i>
2	1807?	n.d.	<i>Plan of Tihen-Pien, or Tien-Pack Harbour, on the South Coast of China</i>
3	1807?	n.d.	<i>Plan of the Harbour of Hui-Ling-San on the South Coast of China</i>
4	1807	1807	<i>Plan of Namu Harbour, on the South Coast of China in 1807</i>
5	1808?	n.d.	<i>Plan of the Broadway to the Westward of Macao</i>
6	1808?	1808	<i>Plan of the Channel from Lintin to the Bocca Tigris; also This survey of the River Choo-Keang, or Tigris, by the Chinese, by Europeans from Longkeet to Second Bar *</i>
7	1808	1808	<i>Chart exhibiting the Tracks of the Discovery and Antelope with the exact situation of the Paracels; also Coast of Cochinchina (Tracks of the Discovery and Antelope, and situation of the Paracels) and Chart of the Paracels (two sheets) *</i>
8	1808	1808	<i>The Western Group of the Paracels</i>
9	1808	1808	<i>Plan of the Amphitrite Islands, composing part of the Paracels</i>
10	1810	1810	<i>Chart Exhibiting the Track of the Honourable Company's Brig Antelope on the Coast of Palawan in 1810</i>
11	1808–10	1810	<i>Chart of the different Passages leading to Macao Roads</i>
12	1812–13	1813	<i>Chart of the Coast of China to the Eastward of the Great Ladrone</i>
13	1813	n.d.	<i>Plan of Harlem's Bay and part of the Coast of China</i>
14	1813	1814	<i>Track of the ship Discovery through the straits of Billiton</i>
15	1813	1815	<i>Chart Exhibiting the Track of the Honourable East India Company's Ship Discovery to the Northward of Lucepara Island, as well the situation of a Dangerous Rock in the Straits of Gaspar</i>
16	1813–15	n.d.	<i>Plan of the Channel from Lintin to the Bocca Tigris</i>
17	1814	1816	<i>Plan of the Tumbelan Islands</i>
18	1815	n.a.	<i>Chart of the passage to the East of Banka laid down from Observations in the Ship Vansittart, by Capⁿ. Lestock Wilson (manuscript)</i>
19	1816	1816	<i>Plan of the Appo Shoal and Islands Adjacent</i>
20	1816	1817	<i>Continuation of the Coast of China from Breaker Point to the Lamock Islands</i>
21	1816	1817	<i>Chart Exhibiting the Tracks of the Honourable East India Company's Ships Discovery and Investigator in the Yellow Sea, when accompanying the Embassy under His Excellency Lord Amherst in 1816 *</i>
22	1816	1817	<i>Gulf of Petchee-lee</i>
23	1816	1817	<i>Trigonometrical Plan of Ki-San-Seu or Zeu-Oo-Tao Harbour</i>
24	1817	1822	<i>The South East coast of Hainan</i>
25	1818	1819	<i>Plan of the Channel to the Westward of Romania Reef</i>
26	1818	1819	<i>Plan of the Channel between Sumatra and Lucepara Island</i>
27	1818	1819	<i>A Trigonometrical Plan of the Western part of Puloeat or Middle Island and the correct situation of the Coral Reefs extending off it</i>
28	1818	1819	<i>Survey of Gaspar and Clements Strait</i>
29	1818–19	1820	<i>Chart delineated by Capt. D. Ross, Company's Marine Surveyor on his passage in the Charles Grant. Chiefly from his own surveys. His homeward track from China in 1819, off Bintang and Lingin to Banca Strait</i>
30	1818–19	1819	<i>Islands eastward of Bintang</i>
31	1818–19	1820	<i>Plan Shewing the situation of the Ilchester's Shoal</i>
32	1818–19	1819	<i>North and South Sands in the Straits of Malacca</i>
33	1818–19	1819	<i>Arroa Islands in the Malacca Strait</i>
34	1819	1820	<i>Plan of Singapore Harbour</i>
35	1825	1825	<i>Rangoon River</i>
36	1827	1829	<i>A survey of Singapore Harbour and islands in its vicinity</i>
37	1827	1829	<i>A Plan of the Harbour near Singapore</i>
38	1827	n.a.	<i>A survey of Martaban River (manuscript)</i>
39	1824–28	1828	<i>Northern part of Mergui Archipelago: Lord Loughborough [Island] to Mergui</i>
40	1824–28	1828	<i>Chart of the Tanasserim Coast from Martaban to Tavoy Point – Sheet I (on two sheets)</i>
41	1824–28	1828	<i>Survey of the Tanasserim Coast from Tavoy Point to Mergui – Sheet II</i>
42	1824–28	1828	<i>Chart of Part of the Mergui Archipelago – Sheet III</i>
43	1824–28	1829	<i>A plan of Hastings Harbour, in the Mergui Archipelago, and the adjacent islands</i>
44	1830–32	1833	<i>A survey of Kyook Phyoo Harbour and Combermere Bay</i>
45	1830–33	1833	<i>Chittagong to Arracan River</i>
46	1830–33	1833	<i>Arracan River to Foul Island</i>

on the China coast he had looked at but, sadly, had not surveyed the Penghu (Pescadores) Islands and the southern part of Taiwan, as well as the Luzon Strait area. And he was diverted for the most of a year as part of the escort to the Amherst Embassy in 1816.³⁵ Once he left the China coast he did not immediately leave what in contemporary terms were known as the China Seas.³⁶ Indeed from the beginning of his second great exercise in Chinese waters, he had done work elsewhere. In 1813 he had made his first surveys around Singapore, which would become his primary focus in the years 1818–19, when he identified the site of the future settlement for Sir Stamford Raffles.³⁷ In addition to his eighteen charts of the coasts of China, the South China Sea and the Philippines done before 1817, between 1813 and 1827 Ross produced sixteen charts of the area from today’s One Fathom Bank to Selat Gelasa.

In 1819 Ross headed to Britain with his wife and the younger girls in his burgeoning family.³⁸ The main purpose of his trip was his election as a Fellow of the Royal Society in recognition of his work in charting the China Seas: an election backed by a powerful bevy of the East India Company’s good and great. Whilst Ross was in Britain Captain Charles Court died and so, no doubt feeling that his principal work in China and around Singapore was done but that much might yet be done to better organise the survey work of the Bombay Marine, he applied for the vacant post of Marine Surveyor General.

Daniel Ross took up the post in January 1823 and began a tiring, ten-year battle fighting an indifferent bureaucracy and a high command that always had other priorities. His wife, Maria Ross, was still in Britain settling in her three youngest daughters with Ross’s sisters, by this date in Ramsgate, and she died at sea on the Indiaman *Protector*, whilst returning from Britain in 1828 to join her husband. Ross accordingly threw himself into the survey work he was able to organise between interruptions caused by warfare or parsimony, spending the years from 1823 to 1833 mainly surveying on the coasts of Burma and producing ten charts. Hit hard by a financial disaster when the agency house where he banked his savings, Ferguson & Co., went bankrupt during the 1829–30 commercial crisis in Bengal, Ross needed to recoup.³⁹ He applied for the comparatively well-paid job of Master Attendant, in effect the Harbour Master, at Bombay and moved there during 1833.

He became a very active member of the Bombay Geographical Society, founded in 1831 as a branch

of London’s Royal Geographical Society, becoming President from 1839–45. By 1845 Ross was beginning to feel the effects of what had been a hard and very active life, with the usual recurrent bouts of fever standard in the lives of nineteenth-century hydrographical surveyors. The following year his health began to fail and he had his first stroke. By 1848 he was no longer able properly to exercise his job as Master Attendant so resigned to face a future on the small pension of Rs350 a month, which despite his long and worthy service and the support of the Governor-in-Council, the Company authorities in London refused to increase. He died on 29 October 1849, thirteen days short of his sixty-ninth birthday.

Conclusions

So, were the surveying activities of Daniel Ross and the ships under his command a ‘deep-laid scheme of the perfidious English’?⁴⁰ In a sense, of course, yes, though not with respect to the Portuguese, who had voiced the suspicion. Portuguese navigators, after all, had by this time been busy charting Asian waters for the best part of three centuries.

But from the Chinese, Malay and Burmese points of view, having how their maritime space should be perceived wrested from them by it being comprehensively, scientifically and systematically charted was a ‘deep-laid’ scheme in more than a merely punning sense. With today’s sensibilities and sensitivities we tend to think people like Ross should have ‘behaved themselves’, ‘respected’ other ways of doing and seeing, and not done what they did. But to suppose that is to commit an anachronism. For someone like Daniel Ross, the better charting of *any* waters had to be done and people who couldn’t or wouldn’t see its value could be ignored, much as we ignore flat-earthers and those predicting the end of the world tomorrow. He had been told to survey. Surveying is what he and his ships did. His only recourse was to survey and do his best to stay out of trouble.

By the time Ross had finished his work Horsburgh’s ever more accurate small scale charts of the China Sea brought mariners to within visual landfall of China’s coast. At that point Ross’s linked series of five charts to roughly equivalent small to medium scales running from Hainan to Shantou, provided navigators with the detail necessary for a safe coastal passage towards their destination, whether they made landfall to the west or east of the entrance to Macao Roads. Whether in need because of damage or stress of weather, or when navigating within the intricate confines of the Pearl

River Delta, Ross's medium to large scale charts showed ports of refuge and routes to the Macao Roads, including Hong Kong, and onwards to the anchorage in Whampoa. To help ships working northwards he had pinpointed the Paracels and, had they missed the monsoon, he had done much to clarify the labyrinth of the South China Sea's 'Dangerous Ground' and the channel along the coasts of Borneo and Palawan.

It had indeed been a deep-laid scheme requiring beautifully made and highly accurate instruments, a commitment to accuracy and precision, great skills, highly gifted seamanship, leadership, and much arduous labour. It produced charts of signal beauty. Perfidy? Not to a globalising maritime world at large we can be sure, whatever it might seem to those of more parochial and landlubberly perspectives.

Notes

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2 Denis Wood, *Rethinking the Power of Maps*, New York: Guilford Press, 2010, pp. 18–38 and especially pp. 26–2.
3 Alison Sandman, 'Spanish Nautical Cartography in the Renaissance', Ch. 40 in David Woodward (ed.), *The History of Cartography*, Vol. 3: Cartography in the European Renaissance, Part 1, Chicago: University of Chicago Press, 2007, p. 1101.
4 Archibald Day, *The Admiralty Hydrographic Service 1795–1919*, London: HMSO, 1967, pp.338–39. C.H. Philips, 'The Secret Committee of the East India Company', *Bulletin of the School of Oriental Studies, University of London*, 10.2, 1940, pp. 299–315. East India Company, *Orders and instructions given by the Court of Directors of the United Company of Merchants of England trading to the East Indies to the Commanders of Ships in the Company's Service*, London: EIC/E. Cox, 1819.
5 Stephen Davies, 'Counter-current: the move from private to public in the provision of charts and pilots in the China Seas', *Private Merchants of the China Trade 1700 to 1842*, Conference held 28–30 November 2013, Sun Yat Sen University, Guangzhou.
6 John M. MacKenzie & T.M. Devine, *Scotland and the British Empire*, Oxford: Oxford University Press, 2011, p. 2.
7 'She owned 3 houses and a penn, with personal property valued at £6,903.3.4½ currency including 52 slaves, 35 sheep, £300 worth of silver teapots, coffee pots, waiters and other articles, and the furniture of her houses, two of which she ran as boarding houses, the New House with 12 bedrooms, the older with 8 bedrooms both two storied buildings with piazzas front and back.' in Agnes Butterfield, *Hercules Ross of Kingston, Jamaica and Rossie, Forfar 1745–1816, with a sketch of the career of Captain Daniel Ross, FRS, Bombay Marine, later Indian Navy 1780–1849*, unpublished typescript, Montrose Public Library, MA thesis, University of Manchester, n.d., p. 95.
8 Stephen Davies, 'American Ships, Macao, and the Bombay Marine, 1806–1817 in *Americans and Macao*, ed. Paul Van Dyke, Hong Kong: Hong Kong University Press, 2012, pp. 33–48.
9 The *Berrington* spent most of 1796 moving between ports in India and Ceylon.
 See http://searcharchives.bl.uk/IAMS_VU2:IAMS045-001114624.
10 Ida Lee, *Commodore Sir John Hayes, his voyage and life (1767–1831) with some account of Admiral d'Entrecasteaux's voyage of 1792–3*, London: Longman's Green, & Co., 1912, p. 206
11 Clements R. Markham, *A memoir on the Indian surveys*, London: W.H. Allen & Co., 1871, p. 9.
12 Charles E. Davies, *The Blood-red Arab Flag: An Investigation into Qasimi Piracy, 1797–1820*, Exeter: University of Exeter Press, 1997, p. 140. The obituary was reprinted in the *Straits Times*, 18 December 1849, p. 3.

13 Agnes Butterfield, *Captain Daniel Ross, FRS of the Bombay Marine, later Indian Navy, 1780–1849, a sketch of his career*, typescript, signed 1982, archives of the Royal Society of London, TRACTS X473/19 p. 5.
14 In 1804 Lt Maughan had surveyed the Gulf of Kutch and was awarded Rs1000 by the government 'as an encouragement to others to emulate his praiseworthy conduct', Charles Rathbone Low, *History of the Indian Navy*, 2 vols., London: Richard Bentley & Son, 1877, Vol. 1, p. 394.
15 Compare the 6th edition of William Herbert, *A New Directory for the East Indies* (London: Gilbert & Wright, 1791) with Horsburgh. Today's sailing directions are clearly heirs of Horsburgh, not of Herbert and his forebears.
16 Butterfield (n.d.), p. 97.
17 James Horsburgh had hoped to take on the task of delimiting the Paracel Islands. See James Horsburgh, Letterbook, British Library, IOR: MSS Eur F305(i).
18 Butterfield (1982), pp. 16–17.
19 *The Naval Chronicle for 1810*, Vol. XXIV from July to December, London: Joyce Gold, 1810, p. 315 indicates this was Scarborough Shoal (Kulumpol ng Panatag, Bajo de Masinloc, or Huangyan Dao (黃岩島)).
20 Xīshā Qúndǎo (西沙群島) or Quān dào Hoàng Sa.
21 The *Earl Talbot* had foundered on the Pratas Reef (Dōngshā Qúndǎo (東沙群島)) on around 22 October 1800. In the Paracels Ross learned that the *Intrepid* and *Comet* had been seen taking on water at the Amphitrite Group – *The Naval Chronicle for 1810*, Vol. XXIII from January to June, London: Joyce Gold, 1810, 'Extract of a Letter from a Gentleman on board the *Discovery*', p. 490.
22 See the contrast between James Horsburgh's 'China Sea, Sheet II' of 1820 and his 'China Sea, Sheet II' of 1823.
23 A definitive position had to await the survey by HMS *Rifleman's* tender, HMS *Dove*, in 1865, *The Nautical Magazine and Naval Chronicle for 1866*, London: Simpkin, Marshall & Co., 1866, pp. 554–55.
24 James Horsburgh, *The India Directory*, 5th edition, London: W.H. Allen, 1841, pp. 361–62; *The Nautical Magazine* (1866), pp. 554–55 illustrate the difference between oral memory knowing someone knows something exists somewhere, and something being accurately depicted in published sailing directions and on charts.
25 'China Sea, Palawan Island, surveyed by Com^d W.T. Bate R.N., assisted by Lieut^t C. Pasco, & C. Bullock and Mr W. Calver, Mast., 1850–54', London: Hydrographic Office of the Admiralty, 1856.
26 Another pointer to Daniel Ross's exceptionalism. His future wife had been born in the French enclave of Pondicherry (Pondichéry, Puducherry) in 1793, so was probably, as her name suggests, French.
27 They must have begun in 1808 or 1809 because Daniel Ross recorded using Cheung Chau (an island west of Hong Kong) as a triangulation station and noting that it had recently been visited and laid waste by Zhāng Bǎozāi.
28 Canton Consultations, IOR G/12/153, p. 77.
29 Canton Consultations, IOR/G/12/154, pp. 199–200
30 Canton Consultations, IOR/G/12/170, p. 45
31 303 tons, built Matthew Smith, Howra, 1811, originally called the *Margaret & Frances* bought for surveying and renamed – John Phipps, *A collection of papers relative to ship building in India, with descriptions of the various Indian woods employed therein, their quality, uses and value, and a register comprehending all the vessels built in India to the present time*, Calcutta: Scott & Co., 1840, p. 103.
32 174 tons, built J. Scott & Co., Fort Gloster, Howrah, 1812, Phipps (1840), p.105. The ships' names probably echoed George Vancouver's 1791–1795 *Discovery* (1789–1834) and Matthew Flinders' *Investigator* (1795–c.1872).
33 James Horsburgh, 'China Sea, Sheet 1', engraved John Bateman, London: East India Company, October 1st 1821. On the two sheets of Horsburgh's 'China Sea', he specifically identifies Ross's data with a letter 'S'. There are fifty 'S's' on the two sheets.
34 There was a second edition of '*Passages leading to Macao Roads*' (1810) in 1815, another, possibly, in 1818 and a third in 1840, with additions from other sources and retitled 'Entrance to the Choo Keang or Canton River from the outer islands to Lintin'.
35 Which has left an intriguing residual puzzle about Ross's inaccurate depiction of Aberdeen Harbour on the west coast of Hong Kong Island, see Davies (2012), *op. cit.*

36 *The China Sea Directory* (London: Hydrographic Department, 1876 onwards) had four volumes. Volume 1 covered the approaches through the Malacca and Sunda Straits, Volume 2 the South China Sea and its coasts, Volume 3 from Hong Kong northwards to Korea and Volume 4 Korea, Japan and the Sea of Okhotsk.

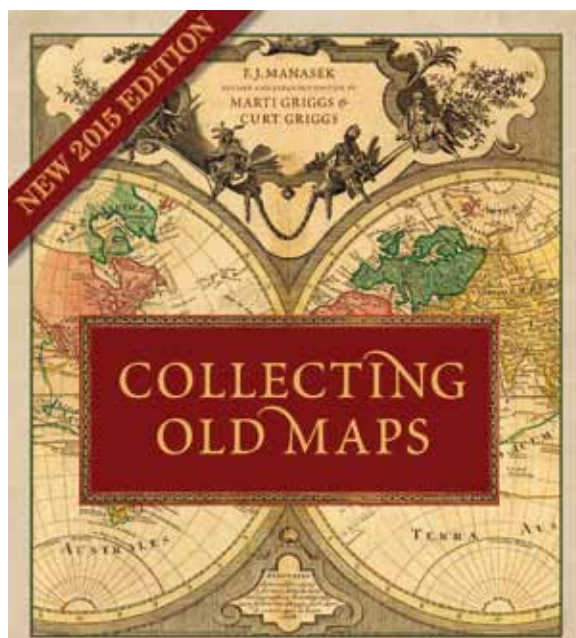
37 *Crawford Diary 1818-1819* (The diary of Captain JGF Crawford IN), typescript (presented to the Raffles Museum by C.E. Wurtzburg 1938), 27 January 1819, p. 13; Butterfield, 1982, p. 12.

38 Descendants through one of Daniel Ross's daughters, who married his successor as Master Surveyor General, Captain Richard Lloyd, identify a total of nine children, six girls and three boys born 1811-1822.

39 In the early years of British India merchants 'combined their merchant business with banking...receiving deposits, making advances for produce and trade, and issuing paper money', see Sashi Sivramkrishna, In *Search of Stability: Economics of Money, History of the Rupee*, Abingdon & New York: Routledge, 2016, p. 202. For the crisis in general, a function of speculation in indigo production, S.B. Singh, *European Agency Houses in Bengal (1783-1833)*, Calcutta: Firma K.L. Mukhopadhyay, 1966, Ch. VIII.

40 H.B. Morse, *The chronicles of the East India Company trading to China, 1635-1834*, Oxford: The Clarendon Press, 1926, Vol. 2.

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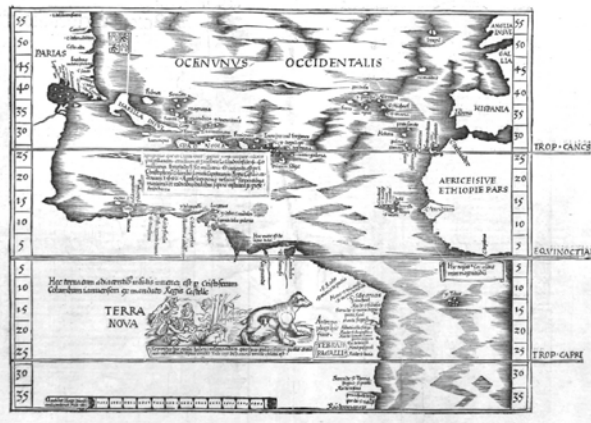


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Oceani occidentalis sive terre nove tabula, woodcut map by L. Fries from the Ptolemaeus edition by J. Grüniger, Strasbourg, 1525



Portrait of Thomas Cavendish, artist unknown, after Hondius, in reverse, n.d. Courtesy of Ian Harvey.

THE PHILIPPINES

A link between Thomas Cavendish (1560–1592) and Sir Robert Dudley (1574–1649)

Susan Maxwell

By examining a selection of Robert Dudley's charts willed to his wife, Anne Cavendish, this paper aims to establish, for the first time, a strong link between Thomas Cavendish's circumnavigation (1586–88), his last voyage (1591–92) and Sir Robert Dudley's *Dell'Arcano del Mare* (1646–49). The study points to a greater place for Cavendish in English maritime history than has so far been given and opens up new areas for research.

The extant records of Cavendish's circumnavigation with regard to the Philippines include the 'N.H.' narrative in Richard Hakluyt's *Principall Navigations* (1589), Francis Pretty's narrative (1598) and the navigation notes of Cavendish's pilot, Thomas Fuller (1598). These will be compared with the relevant Philippine island maps in Dudley's 1646 atlas, and further corroborated by Spanish records. I will touch on the relationship with Drake's circumnavigation, and the link between Cavendish's pilots and the early Dutch voyages to the area, both aspects which need further study.

Dudley's manuscript charts referred to in this article reside in the Bayerische Staatsbibliothek, Munich, and the published maps at the National Library of Finland and the Harvard Map Collection, Harvard University.¹

Thomas Cavendish circumnavigated the globe between 1586 and 1588, navigating through the Philippine and Indonesian archipelagos between 14 January and 16 March 1588. The relevant period considered here is between 14 January and 15 February, when Cavendish arrived at eleven or twelve small islands near Molucca and considered he had finally left the Philippines.

These dates are derived from Pretty's account: 'The admirable and prosperous voyage of the Worshipfull Master Thomas Candish (*sic*) of Trimley in the Countie of Suffolke esquire, into the South Sea, and from thence round about the circumference of the whole earth.... Written by Master Francis Pretty lately of Ey [Eye] in Suffolke a Gentleman employed in the same action'.² Pretty had originally been master of the *Hugh Gallant*, scuttled after action at Puna Island, Ecuador,

after which he transferred to the admiral's flagship *Desire* for the remainder of the voyage. The dates broadly correspond to those of Fuller in his: 'Certeine rare and special notes most properly belonging to the voyage of M. Thomas Candish's'.³

Both documents had been made available to Emanuel van Meteren soon after Cavendish's will was proved in 1596. Van Meteren was Consul for the Traders of the Low Countries in London, leader of the city's Dutch community, and close friend of Richard Hakluyt. Hakluyt probably gained access to the Cavendish material through his familial links: he married Cavendish's cousin Douglas Cavendish and moved to the village of Wetheringsett close to Cavendish's estate in east Suffolk.⁴

The only two manuscript charts on vellum positively assigned to Cavendish are believed to be based on lost Spanish originals, and show additions by Cavendish or one of his pilots. One shows the Atlantic coast of South America and the African coast around Sierra Leone, with an additional inset map of the Strait of Magellan. Thickened lines on parts of the coasts probably indicate areas and places Cavendish's fleet charted and/or visited, inferring that the Spanish chart was a basis for his own navigation. Now in the Biblioteca Nazionale Centrale, Florence (Port.30), it is annotated on the back 'Brasilische Caarte'. David Quinn considers it came from Holland with another (unidentified) map through the auspices of the Grand Duke Cosimo III de' Medici (1670–1723), and which Hakluyt collected with other Cavendish material and sold to Emmanuel van Meteren for the Dutch.⁵

The second chart, in the Algemeen Rijksarchief, The Hague (Leupe Inv. 733), is complementary and tracks the whole of the Pacific coast of South and Central America, and also shows the western part of the Caribbean. It has an almost identical inset map of the Strait of Magellan. This seems to be a working chart, with dark lines suggestive of folding; it is damaged on its upper part, with part of the coastline missing.⁶

Cavendish charted in detail the coastal area of Sierra Leone, parts of the Atlantic coast of South America

where he wanted to water, or refit, and the Strait of Magellan. We know that there he sent a ship's boat, or pinnace, ahead of the fleet during each day to sound the water's depth and chart the waters.⁷

The Strait of Magellan was notoriously difficult to navigate well. Parallels can be drawn for the waters in the Philippine archipelago, also known as tricky to negotiate, and where no Englishman had sailed before (Drake had sailed through the seas around the Moluccas and further south but had not ventured into the Philippines). Governor Santiago de Vera (in office 1584–90) noted fifty men in Cavendish's crew, 'most of them pilots', and that he 'only reconnoitred here, without remaining in any one place'.⁸ Domingo de Salazar, first bishop of Manila (1581–94), writing also to Philip II, stated Cavendish's men 'came to these islands with more than human courage, they passed through the midst of them with a ship of a hundred *toneladas*, where natives venture with trembling in very light boats'.⁹

Presumably Cavendish applied the same navigational tactics he had used in the Strait of Magellan where he passed into the South Sea in one of the shortest times recorded, and is a testimony to his navigating skill. The English government enforced silence on this data and did the same for his activities in the Philippines. There is a lacuna in the narratives at Capul Island and between the recording of the latitude of the head at Seboyan Island and the encounters with the Spanish on Panay Island of a few days each.

These gaps in the log record, lasting approximately four days, gave skilled pilots enough time to plot courses to areas not mentioned in written records: i.e. Cavendish had ample time at Capul Island to chart the waters and islands south of this base and contact the natives for tribute (which he later returned) and seal a deal to return with a larger force to aid them against their Spanish overlords. He also had time to continue northward from Seboyan Island along the Manila–Acapulco galleon route to their home port, charting as he went, noting useful anchorages close to, but not, on that route, and any hazards like rocky outfalls and shoals.

His one vessel with fifty men was too weak to attack Manila. However, he must have visited Manila Bay as Bishop Salazar stated: 'this infidel dared not only to come into our midst, but to collect tributes from your Majesty's vassals [as noted above].... he displayed the silks, brocades and cloths of gold which he had seized as plunder [from the *Santa Anna*]. Not content with this he went away threatening us that he is to return soon to drive us all hence, and to destroy the nest that we

have made here – meaning thereby the stone fortress built here [in Manila]'. He was incensed more by Cavendish's audacity 'to come to my own place of residence, defy us, and boast of the damage that he wrought' than in the Filipino merchants' ruin.¹⁰

If Cavendish routinely logged his course, then the areas which Fuller and Pretty do not mention may have been the subject of censorship before Hakluyt published them. Pretty's incomplete narrative of their time in Sierra Leone echoes John Sarracoll's account of that area, made for the Cumberland voyage later in 1586.¹¹ Why such a lacuna should occur in Pretty's narrative is not clear.

Robert Dudley

Dudley's *Dell'Arcano del Mare*, engraved by the Italian Antonio Francesco Lucini between 1646 and 1649, is the first atlas of charts on the Mercator projection. It is based on manuscript maps collected by Dudley perhaps from 1636. Nearing the end of his life, Dudley decided to have them published in Italian for the Medicis. As they were being engraved new information was added and the originals edited, and only some manuscript maps were used. It has been generally thought that they were mostly compilations from sources unknown but perhaps from the voyages of the Dutch East India Company, although the group concerning the north coast of South America are Dudley's charts, made on his voyage there in 1594–95.

The first clue that Cavendish might have contributed to Dudley's atlas is revealed from Cavendish's family connections with Dudley. When Cavendish returned from his circumnavigation in 1588 he settled in the parish of St Anne's Blackfriars, London, was elected as an MP and centred his life around the royal court where his younger unmarried sister Anne was one of Elizabeth I's Maids of Honour. By the end of 1588 he had bought the *Galleon Dudley*, probably from the estate of Dudley's father, Robert Dudley, Earl of Leicester, who had died a few days before Cavendish landed in Plymouth. He wanted a speedy return to the Far East to repeat his circumnavigation but in the event Lord Burghley, High Treasurer of England, stayed Cavendish's ships; the *Dudley* subsequently being used for privateering in 1590 along with a second ship, the *Roebuck*.¹²

Robert Dudley junior was the illegitimate son of the 1st Earl of Leicester and named as his father's heir, gaining a large and rich estate. He was a favourite at court where he was an attractive 'catch' for the unmarried women serving the Queen. Early in 1591 she agreed that Dudley could marry Frances Vavasour

when he was older but later that year Vavasour, secretly married Sir Thomas Sherley. Dudley then went on to secretly marry Anne Cavendish, the sister of his friend Thomas, whose maritime skills and interests he admired and shared. The marriage took place after Cavendish had set out on his last voyage on 26 August and probably before October 1591 when it was recorded that ‘Master Dudley is forbidden the Court for kissing Mistresse Candishe (*sic*) in the presence, being his wife as it is said’.¹³ Apparently Cavendish never knew of Anne’s new status.

Cavendish died at sea before reaching England but before his death he dictated his will with a long supportive statement in favour of Anne. It eventually arrived in England in 1593 on either the *Roebuck* or the *Galleon Leicester*. He left the ships and all their equipment (including presumably all his charts and navigation instruments) to Anne and nothing to their sister Beatrice.

Dudley had had no news of Cavendish since his departure on 14 March 1593. Before the will turned up, he assumed Cavendish was dead and, as Anne’s husband, took out Letters of Administration on the estate, so was able to legally gain control of it, despite it being left to Anne.¹⁴

Most secondary sources mistake Dudley’s wife as Margaret not Anne, missing the strong connection with Cavendish. The importance of his bequest of the contents of two of the ships he owned on the 1591 voyage is also lost. Dudley would get something more precious to him even than Cavendish’s ships: his charts, papers and instruments taken on the 1591 voyage to aid his second circumnavigation, most of which probably derived originally from the 1586–88 voyage.

In 1591 Dudley had also intended to circumnavigate the world, but Elizabeth had refused, finally allowing his 1594–95 expedition to the West Indies. He probably hoped to repeat Cavendish’s exploits when he received the navigational materials from the *Galleon Leicester* in 1596, but instead participated in an expedition to Cadiz. Anne died either in 1596, after the will was proved, or in 1597, possibly from the plague, rife in London through that decade. Dudley then married Alice Leigh, the rich heiress of the Stoneleigh estates in Warwickshire adjoining his father’s property; land which ironically had been inherited by Thomas Cavendish’s father William Cavendish in 1558 as a co-heir of Henry VIII’s favourite Charles Brandon, who then sold them to Alice’s father Thomas Leigh and Richard Hill, two rich London merchants, between 1560 and 1561.¹⁵

The first inkling that information from Cavendish’s

charts were incorporated into Dudley’s atlas came in 1873 when American Unitarian minister and historian Edward Hale (1822–1909) read a paper, ‘Early Maps of America and a Note on Robert Dudley and the Arcano del Mare’, to the American Antiquarian Society.¹⁶ Hale had consulted the Dudley manuscript maps in Munich noting things of interest.¹⁷ For MS 138 he wrote ‘[it] is four heavy volumes folio, of charts – roughly drawn, but evidently for use – on coarse, strong drawing paper’. Hale only consulted Volume II, and then only the American charts which began at number 40; number 48 begins the charts of the western coast of North America. Hale discusses the mapping of Drake’s 1579 voyage up the Californian coast, places which are clearly marked on Chart 83. He points out at the end of his discourse: ‘It is known that he was Cavendish’s brother-in-law, and it seems impossible that he should not have had Cavendish’s charts’.

Hale followed the ‘Notes’ with some information on Dudley’s link with Cavendish: ‘This circumstance seems to me to give special interest to Dudley’s notes on the Pacific Ocean and his maps of the Californian coast, of which he always speaks as if he had authorities at first hand. Cavendish had entered the Pacific Ocean on 6 January 1587, had passed along the coast to Acapulco *and California*’ [Hale’s italics]. Later he wrote: ‘I have already said that there is reason to suspect that the maps of the Pacific coast were drawn from the original observations of Cavendish’.

Unfortunately Hale gives no evidence to back up his claims, but both the Pacific coast charts he refers to and most of the Filipino ones discussed in this article are labelled ‘Carta Particolare’ rather than ‘Carta Generale’ which I take to mean are charts which have been personalised for charting specific areas in detail during a voyage rather than to aid navigation in a general way, perhaps over whole oceans using dead reckoning, for example. As Cavendish used Spanish charts as a basis for his mapping of the South Atlantic, Magellan Strait, Pacific, and South and Central America the ‘Generale’ became ‘Particolare’ as he or his pilots mapped the area for themselves, noting accurately soundings, anchorages, shoals and rocks.

These charts would have complemented the written descriptions of the routes and conspicuous landmarks which formed the log. It is not known whether Cavendish also had the use of an artist, as Drake did in 1577; Martin Frobisher in his search for the Atlantic Northwest Passage; and Richard Grenville in Virginia (both Frobisher and Grenville used John White).

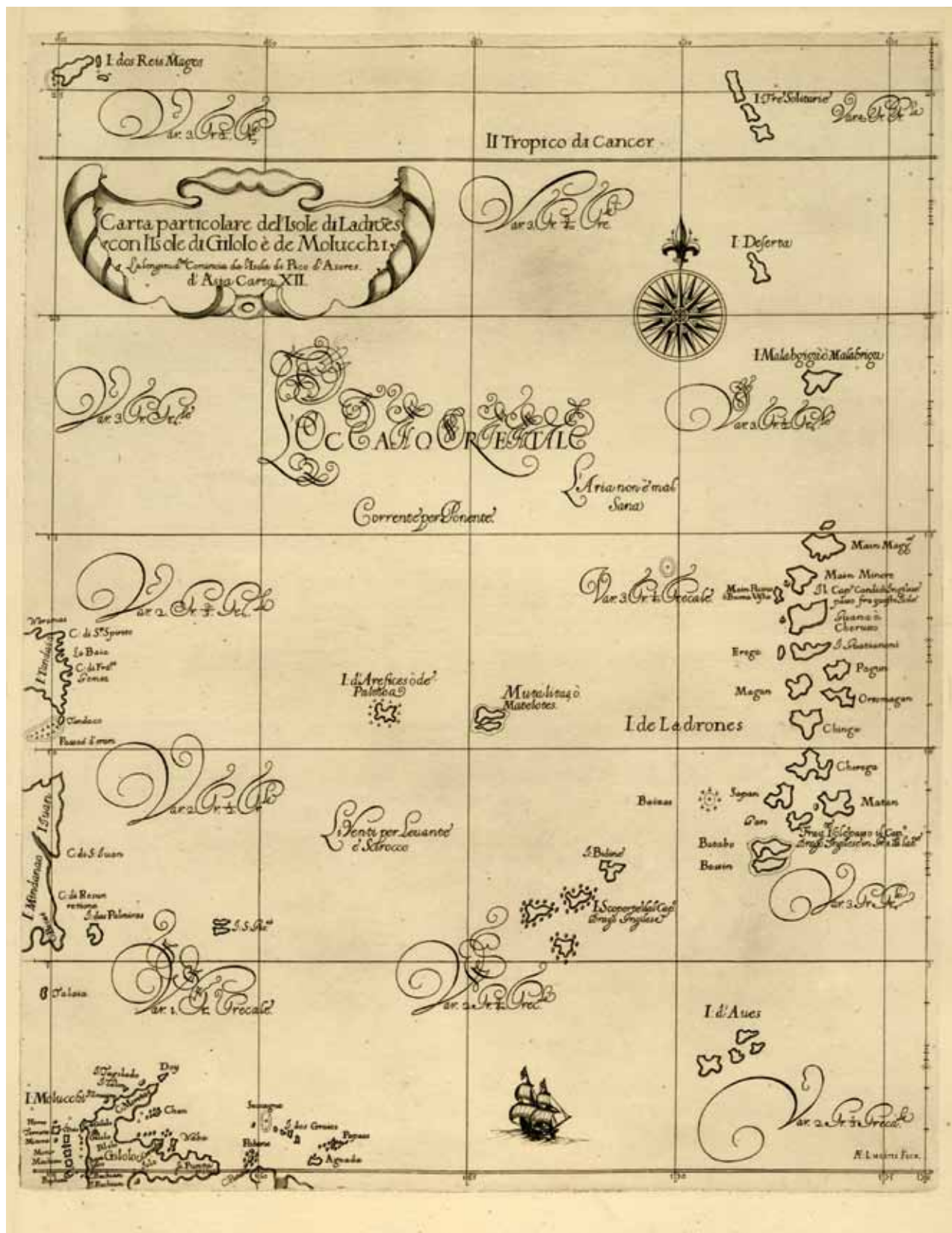


Fig 1. 'Carta particolare del'Isole di Ladrones con l'Isle di Gilolo e de Molucchi, d'Asia'. Carta XII.
<http://urn.fi/URN:NBN:fi-fe201002051338>, National Library of Finland.

Dudley's charts

Carta XII (Fig. 1) shows that Cavendish and Drake came to different islands in the Ladrões [today the Mariana Islands/Wanshan Archipelago]. Cavendish visited two islands in the north of the group, with anchorages off both, and Drake identified one in the south from where he sailed south-west to a group of four islands which he obviously circumnavigated as they are shown surrounded by rocks. The Spice Islands of the Moluccas are south-west of this group, off the west coast of Gilolo [Today Halmahera, the largest island in the Maluku Islands]. Carta XII seems to be a compilation of data by Cavendish and Drake; but from where Dudley obtained Drake's material is unknown. Carta XIII charts the Spice Islands with numerous anchorages: perhaps reflecting Drake's visit?

Carta VIII (Fig. 2) and Carta X (Fig. 3) complement each other, with Carta VIII being the enlargement of the Manila–Acapulco Galleon route showing soundings from Cabo del Spirito Sancto approaching the Strait of San Bernardino north-west to the Bay of Manila. Additionally, Carta X shows soundings south of Capul Island not on Carta VIII, whilst Carta VIII shows soundings into the large bay south of Manila missing from Carta X and the shoals across that bay and to either side of Marinduque Island (also shown on Carta VIII), and the island of Burias or Borias, both of which are off the south coast of Luzon Island.

Carta VIII shows anchorages south-east of the Island of Lobos and north of Samar (entrance to San Bernardino Strait to the east) west of Capul Island; south-west of the island of Cabojan (Seboyan); between the island of Cafao (Sabao) and the north coast of Mindora (Mindoro); and a more westerly anchorage off the north coast at the entrance to R. Mindora. South of Luzon these anchorages are marked: sheltered behind three islands midway through the San Bernardino Strait; south-west of Cape Tassian in an open roadstead; the entrance to a river at Bacco and the entrance to Manila Bay. Two further anchorages are off the point where the shipyard at Cavite is situated and another within the sheltered inlet south-west of Cavite.

These suggest main anchorages for the Manila–Acapulco Galleons on their outward journey possibly being places where the galleon could safely wait for better weather or tides.

Carta X shows anchorages only at Capul; behind the three islands midway through the San Bernardino Strait; south of Seboyan and at the entrance to R. Mindora. However, its scale is much smaller and shows

a larger area of the Philippines, enabling triangular shoals to be marked off the south coast of Mindora at Cabo della Baia; and south of those around three unnamed islands, features not shown on Carta VIII. In fact, on the south coast of Mindora is a legend stating the coastline is unknown, and the three unnamed islands are not marked on it at all. If Carta X was a map adapted from Cavendish's information then these islands are not mentioned in either Fuller's or Pretty's records, and were unknown to the Spanish, perhaps because the area was subject to typhoons (information also recorded on the map in that area).

As far as I am aware the Dutch voyages prior to the foundation of the VOC did not sail in this area, and it seems it was not surveyed by the Spanish, leaving only Cavendish as a candidate. This view is strengthened when the soundings south of Capul Island are viewed, as Cavendish or his ship's boat collected tribal tributes owed to the Spanish from the islands, causing Vera to bitterly complain to the Philipp II about Cavendish's audacity.

Added to these observations are the soundings on Carta X along the east and south coasts of Panay ending in an anchorage behind an island at the entrance to a large estuary where the Spanish shipyard of Raguan is shown. Pretty relates a long description about this area where Cavendish captured a rather simple Spanish man who told him nothing relevant. Cavendish then made an unsuccessful attempt to destroy a galleon called the *Santiago* which was nearing completion, episodes noted in the Spanish records.¹⁸

Carta X exactly charts where Fuller details this anchorage near the site of the Arevalo shipyard (Raguan). Anchorages off the west coast of Negros Island and off the north-west point of Mindanao are also exactly charted on this map. Additionally, a shoaled island north-west of the southerly point of Panay and soundings heading for the anchorage off Negros, plus shoals south-west of the Mindanao anchorage are marked, although not mentioned in the written records. If these record Cavendish's movements then he was thorough in his exploration of the part of the archipelago he visited.

Carta XI (Fig. 4) overlaps Carta X at a different scale with the southern part of Mindanao to the north. It too shows the anchorage to the west of Mindanao at Baia di Galera. Moving south there is marked a large area of rocks and a small island within a shoal tending south-east and adjoining two largish islands running south-west, to the north-east of which is large group of small islands labelled 'Isolette

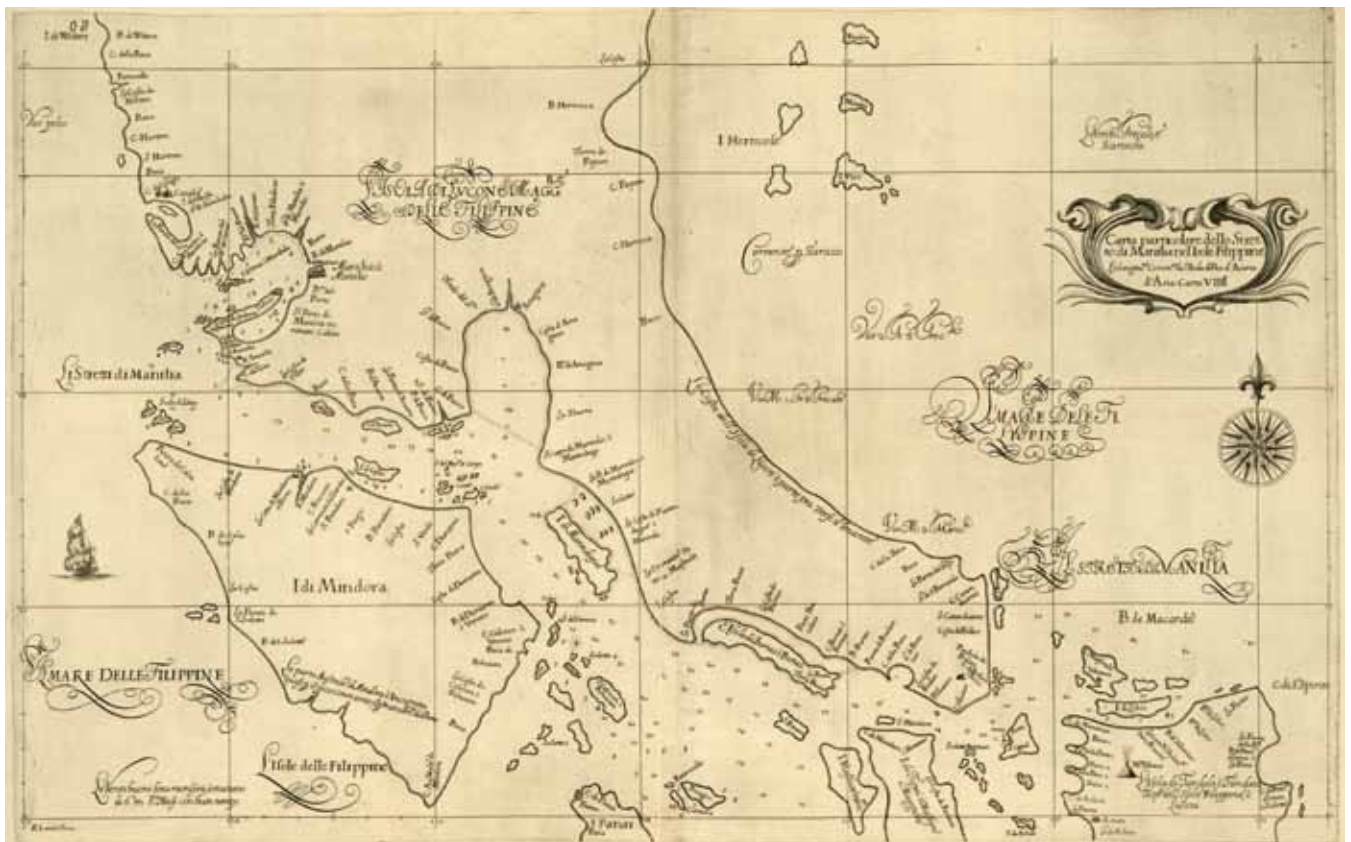


Fig. 2 'Carta particolare dello Stretto di Manila nel Isole Filippine, d'Asia'. Carta VIII. <http://urn.fi/URN:NBN:fi-fe201002051338>, National Library of Finland.

24 Viste del Cap^{no} Candish'. These twenty-four islands are mentioned in Fuller's notes.

South-west of these islands are others shown as 'I. Solor' including one which looks like a collapsed volcanic isle, with the ex-caldera as a bay in which are marked soundings and an anchorage. It seems obvious that this was Cavendish's chosen, hidden anchorage. Governor Vera, as soon as he received reports of Cavendish's intentions and activities from the Filipino lad who had escaped at Capul, and the 'simple' Spaniard from Panay, sent messages south as far as Batochina and Indonesia for him to be stopped and apprehended. It is unknown whether Cavendish was aware of these threats to his expedition. These islands are shown on the eastern edge of Carta VI (not illustrated).

From the group of twenty-four islands, Cavendish sailed south-east using the prevailing winds and currents (labelled on Carta XI) towards the Moluccas, landfall being at Batochina (on the mainland of Gilolo Island). Carta XI shows shoals marked off the north-west coast and round the north-east islands of Gilolo. Others are marked much further east enclosing rocks off the 'I. des Proas', but whether Cavendish sailed this far east is

very uncertain. Drake had visited Ternate in the Spice Islands south of Batochina and to the west of Gilolo, so the soundings of one of these islands may derive from him, especially as the island Drake visited in the Ladrones is differentiated from another Cavendish visited by specific labels on Carta XII. Dudley seems to have taken some trouble to show different sources on his maps as far as possible, though if they visited the same places that might have proved difficult. Both Fuller and Pretty are vague about the route Cavendish took from the Moluccas to Java, but Carta XV (Fig.5) gives us some indication.

Again Carta XV follows on south from Carta XI at a smaller scale (paralleling Carta VIII and Carta X), with south Gilolo marked in the north-east of the southern part of Celebes. Between is the Moluccan Sea. At 3° S is marked 'XII Isole viste (?) dal Ca^{no} Candish'. East of this group is a shoal with outlying rocks guarding an approach to the Island of Seram. North-west of the group, offshore of a small island off the coast of Celebes, are two shoals, the southernmost with an eastern outcrop of rocks. Off south-east Celebes is the large island of Botorro, and between that island and the coasts of Celebes is a linear-shaped

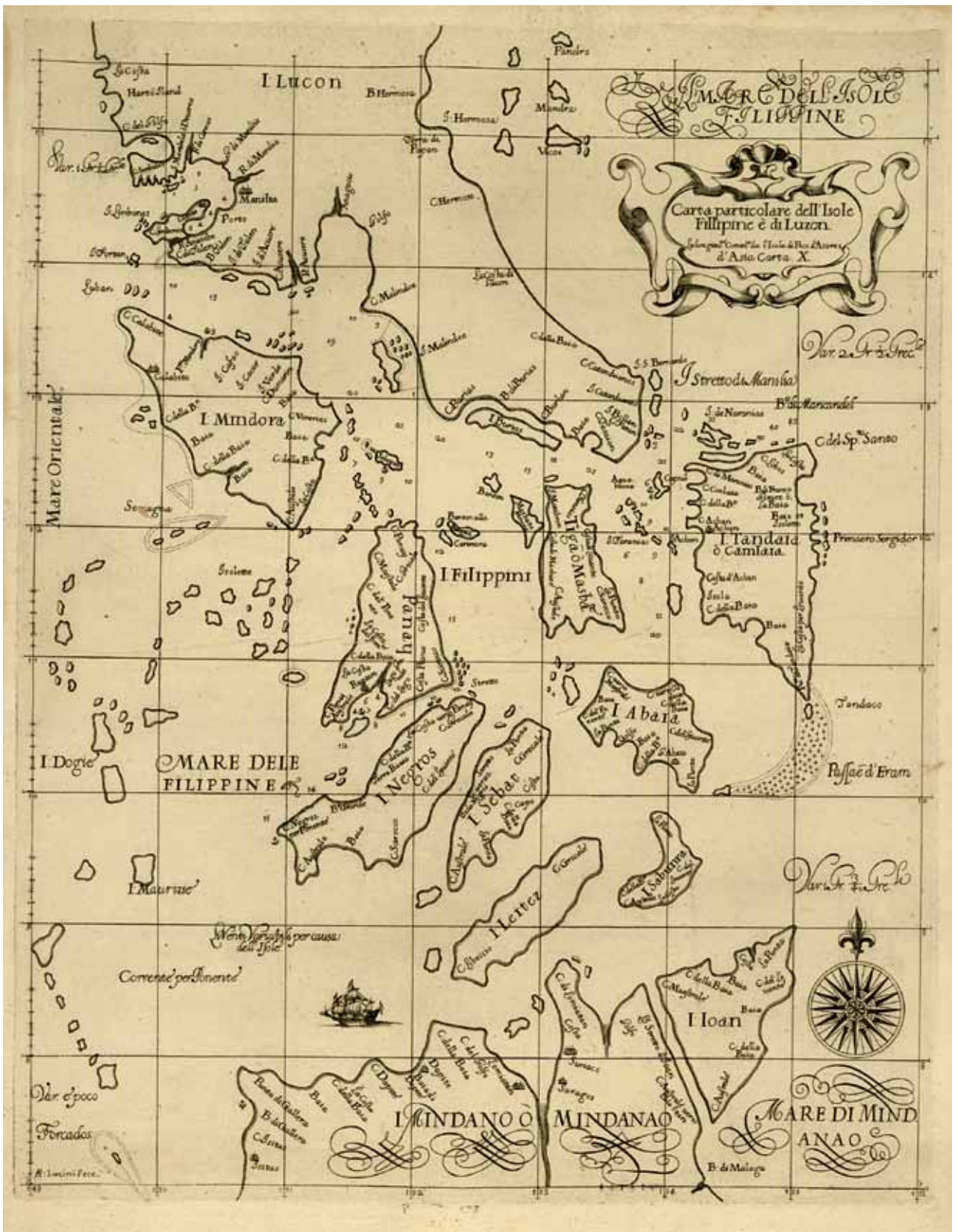
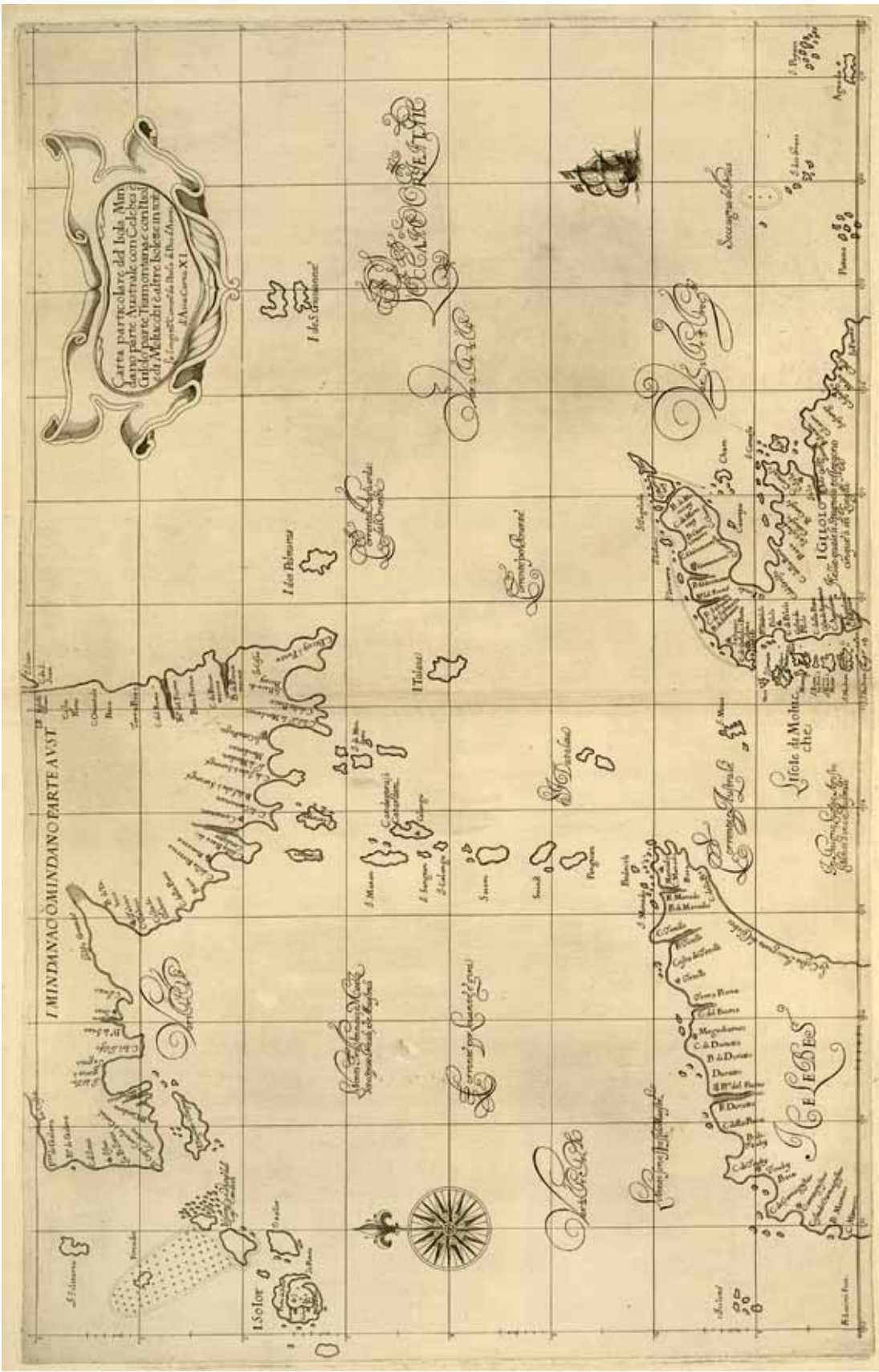
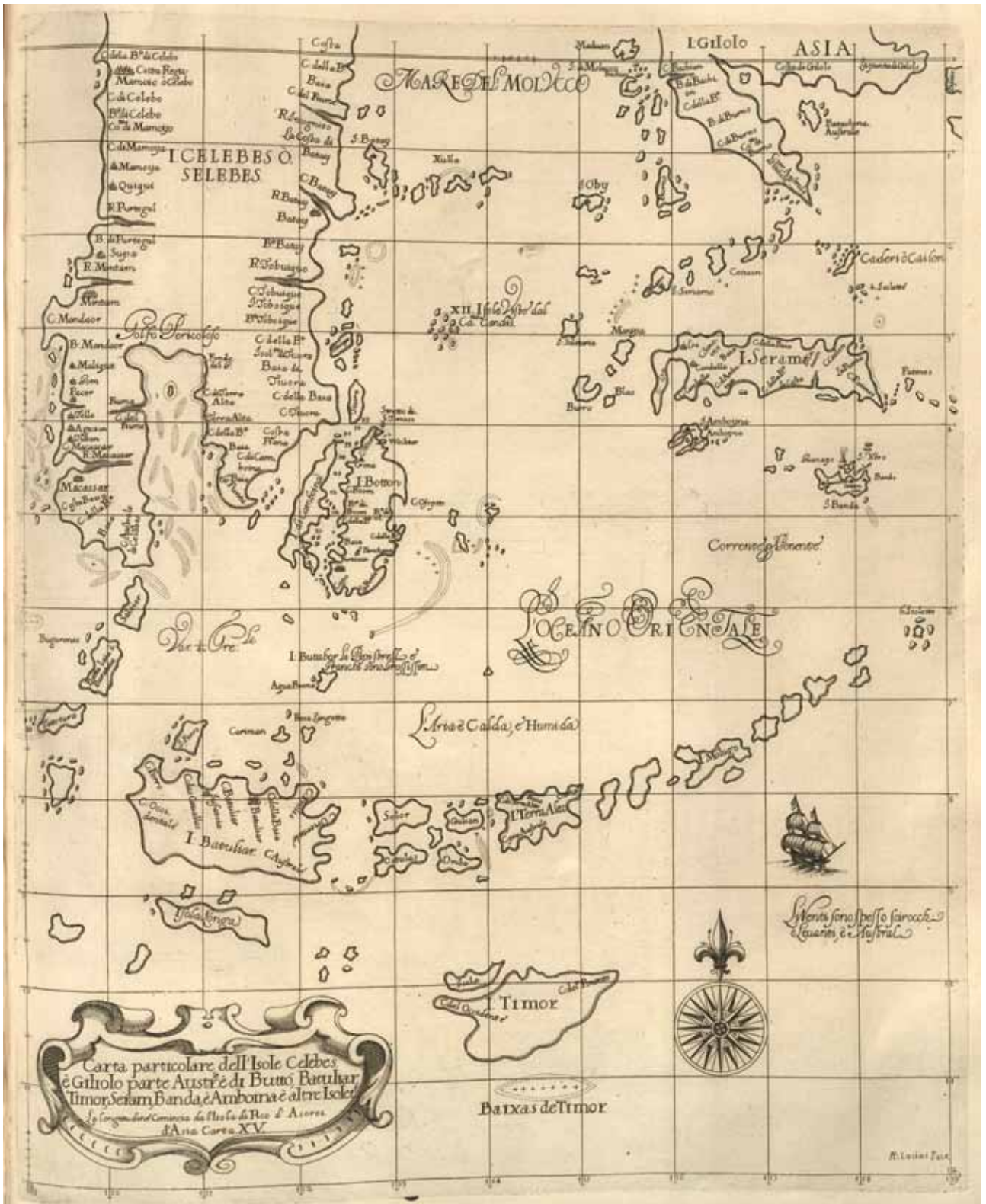


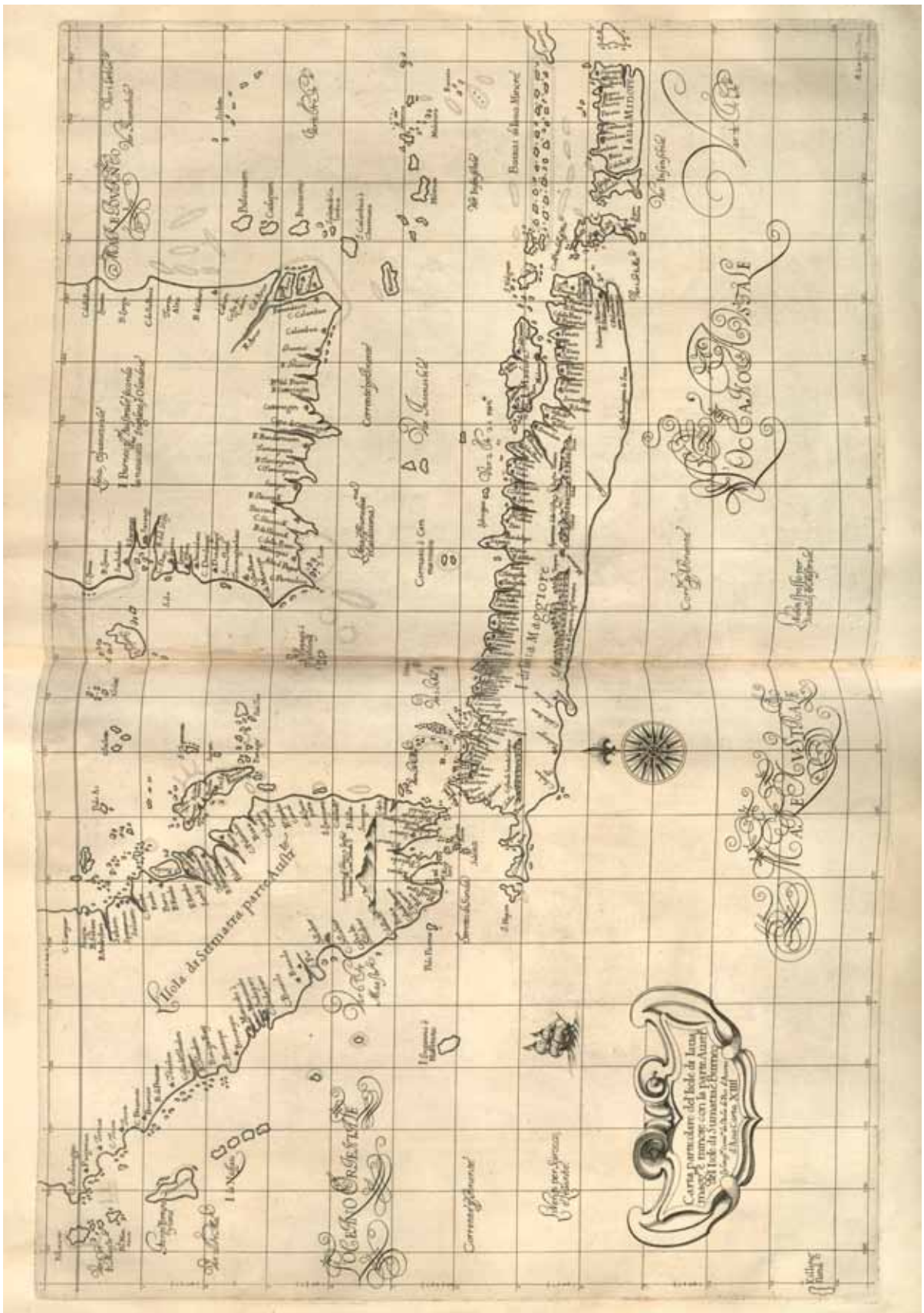
Fig. 3 'Carta particolare dell'Isole Fillippine (sic) è di Luzon, d'Asia'. Carta X. <http://urn.fi/URN:NBN:fi-fe201002051338>, National Library of Finland.





Opposite Fig. 4 'Carta particolare del' Isola Mindano parte Australe con Celebes è Gilolo parte Tramontana con l'Isole di Molucchi è altre Isolette in toro, d'Asia'. Carta XI. <http://urn.fi/URN:NBN:fi-fe201002051338>, National Library of Finland.

Above Fig. 5 'Carta particolare dell'Isola Celebes è Gilolo parte Australe di Butto, Batuliar, Timor, Seram, Banda, è Amboina è altre Isolette, d'Asia'. Carta XV. Courtesy of Harvard Map Collection, Harvard University.



smaller island of Camboina, with a strait between them. Soundings were recorded for the whole way.

An anchorage is marked within the strait in what looks like a sheltered bay off Camboina. One other anchorage shown is within the bay of Amboyne Island south of Seram. The third anchorage, west of the small island of Butabor, is associated with a label showing the island in the possession of the French. Further study should reveal the date(s) when the French were present, but it suggests that the many shoals marked around the southern coast of Celebes originate from French charting rather than from Cavendish, though the latter is not impossible.

Cavendish probably navigated from the Celebes area south or south-west through the seas where the winds are described on Carta XIII as 'insensibile' (Fig. 6). From Pretty's narrative, it is known that he visited the island of Bali east of Java and two anchorages are shown on Carta XIII, one to the east and one to the west accompanied by soundings, and also that he anchored about at a place where the King of Balaboam lived or controlled. Carta XIII shows an anchorage in a bay on the south-west coast of Java called Palambo. Seventeenth-century maps give this name in varying forms. Approaching the islands of Java from the north there are many small islands intertwined with rocks and surrounded by shoals but the strait leading to Bali and the east coast of Java is shown as clear of hazards.

Although historical records show this area was first visited by the Dutch, it is clear that Cavendish was the first European to make an agreement with the Portuguese merchants he found on Java and points to the distinct possibility that he was the first to chart the area. Borneo is shown as having been charted by both Dutch and English but whether that was by Cavendish or later by the Dutch (VOC) and the English East India Companies is unknown. The East India Company (EIC) certainly followed up mercantile contacts made by Cavendish in Java and the first EIC voyages used pilots he had trained or worked with, for example Thomas Eldred from Ipswich, on the circumnavigation and John Davis on the 1591 expedition.

If these studies are generally accepted, showing those charts by Dudley which derive directly from Cavendish, then it can be said that Cavendish holds a larger place in the history of navigation, exploration and emergence of the British presence in the Far East

than has so far been recognised since the seventeenth century, when his reputation as navigator ranked alongside Drake, Frobisher and Davis. Perhaps now his proper place in English cartographic history can begin to be given.

Notes

- 1 Manuscript charts at the Bayerische Stadtmuseum Munich, <http://daten.digitale-sammlungen.de>. Printed maps at the National Library of Finland at <http://urn.fi/URN:NBN:fi-fe201002051338> and Harvard Map Collection, Harvard University, <https://library.harvard.edu/libraries/harvard-map-collection>.
- 2 Pretty's narrative, in Richard Hakluyt, *Principall Navigations* (1598–1600), his second edition, [Hereafter, P N 2nd edition]. The earlier narrative by 'N. H.' in the 1589 first edition of the *Principall Navigations* gives little useable information.
- 3 Thomas Fuller, 'Certain rare and special notes most properly belonging to the voyage of M. Thomas Candish next before described; concerning the heights, soundings, lyings of lands, distances of places, the variation of the Compasle, the iust length of time spent in sayles betweene diuer places and their abode in them, as also the places of their harbour and anckering, and the depths of the same, with the obseruation of the windes on seuerall coastes: Written by M. Thomas Fuller of Ipswich, who was Master in The desire of M. Thomas Candish in his foresaid prosperous voyage about the world' in Richard Hakluyt, *Principall Navigations* (1598–1600).
- 4 W.W. Lillie, 'Hakluyt of Wetheringsett', *Suffolk Institute*, Vol. XXII, Pt 2, 1935, pp. 225–27; Meteren, publication in Dutch: translation of Francis Pretty: *Beschryvinge van de overtreffelijcke, ende wijdtvermaerde zee-vaerd vanden ... Thomas Candish ... den 21 julij, 1586, ende in Pleymouth, den 9. September 1588 ... Beschreven door M. François Prettie ... Hier noch by ghevoecht de voyagie van Sire François Draeck, en Sire Ian Haukens, near West-Indien*, Amsterdam 1598.
- 5 David Quinn discussed the relationship between the two maps in detail as an appendix to his *The Last Voyage of Thomas Cavendish, 1591–2*, Chicago and London: Newberry Library, 1975, and gives other relevant secondary sources.
- 6 Quinn; Robert K. Batchelor, *London: the Selden Map and the making of a global city, 1549–1689*, Chicago: Chicago University Press, 2014, 273 n. 86: ch. 2 discusses the China map Cavendish brought back to England in 1588 at length.
- 7 Declaration which by order of the Viceroy of Peru, Don Francisco de Borja, Prince of Esquilache, Tome Hernandez made before a Notary respecting what had happened in the settlements founded in the Strait of Magellan, by Pedro Sarmiento de Gamboa," (21 March 1620): www.rockvillepress.com/tierra/texts./SARMIENTO-2.PHP#
- 8 E.H. Blair & J.A. Robertson (eds.), *The Philippine Islands, 1493–1898*, Vol. VII (1588–1591), 52ff, Letter, Vera to Philip II, Manila, June 26 (NS) AGI, Simancas-Secular; Audencia de Filipinas; Cartas y Expedientes del gobernador, vistas en el consejo: 67–6–6.
- 9 Blair & Robertson, Vol VII, p. 68: Letter, Salazar to Philip II, June 27th [NS] Manila: AGI Simancas- Ecclesiastico: Audencia de Filipinas: Cartas y espedientes del arzobispo de Manila vistos en el Consojo: 68–1–32. [Hereafter: Salazar]
- 10 Salazar, 67–68.
- 11 P.S. Palmer, "'All suche matters as passed on this vyage": Early English Travel Anthologies and the Case of John Sarracoll's Maritime Journal', *Huntington Library Quarterly*, 76:3, 2013, pp. 325–344.
- 12 TNA E 101/64/21 obligation: delivery of culverin from the Tower 22nd Dec 1588; E101/64/23 f.2, abstracts of bonds taken by Sir Robert Constable, Lieutenant of ordnance, Tower of London, 22nd Dec 1588 for the *Galleon Dudley*.
- 13 Vavasour: online article 'The Life and Loves of Frances Vavasour', <http://cupboardworld.blogspot.com/2014/09/the-life-and-loves-of->

Fig. 6 'Carta particolare del' Isole di Iaua maggiore è minore con la parte Australe del Isole di Sumatra è Burneo, d'Asia'. Carta XIII. Courtesy of Harvard Map Collection, Harvard University.

frances-vasavour.html; Anne Cavendish: Historical Manuscripts Commission, Cecil Mss [ser.9], 4 (London, 1892), 153.

14 The National Archives, Kew, PROB 10/5/49: Administrations Act Book, 1592–98; Quinn, 39.

15 The transactions 1560–61 are fully documented in Warwickshire: Shakespeare Birthplace Trust (Stratford-upon-Avon) Leigh Family of Stoneleigh Abbey MSS: series DR/18.

16 Thanks to Stephen Perry of the Philippine Map Society for drawing my attention to this article.

17 Robert Dudley, Arcano del Mare, Tomo III (Europa, Asien, Africa, Amerika) mit 5 Portulanen: Bayerische Staatsbibliothek, Munich, BSB-CodIcon online 140: e.g No 41, Carta VI shows the western Pacific including the Ladrões, Philippines and the Moluccan Islands, which Dale did not comment on.

18 J.S. Cummins (transl. and ed.), *Sucesos de Las Islas Filipinas*, Hakluyt Society, 2nd Series, 140, 1971, calls the yard Arevalo. Shirley Fish, *The Manila- Acapulco Galleons: the Treasure ships of the Pacific*, Author House UK Ltd, 2011), Ch. 7, names the galleon: its saviour was the Spanish soldier, Captain General Manuel Lorenzo de Lemos, who sailed with the *Santiago* to Acapulco in 1588.

Susan Maxwell is a retired teacher and graduate from Durham University. She has been researching Thomas Cavendish since 1969 and has published articles on him, Henry Seckford, Robert Hues and Emery Molyneux for the ODNB. Her biography on Cavendish is nearing completion.

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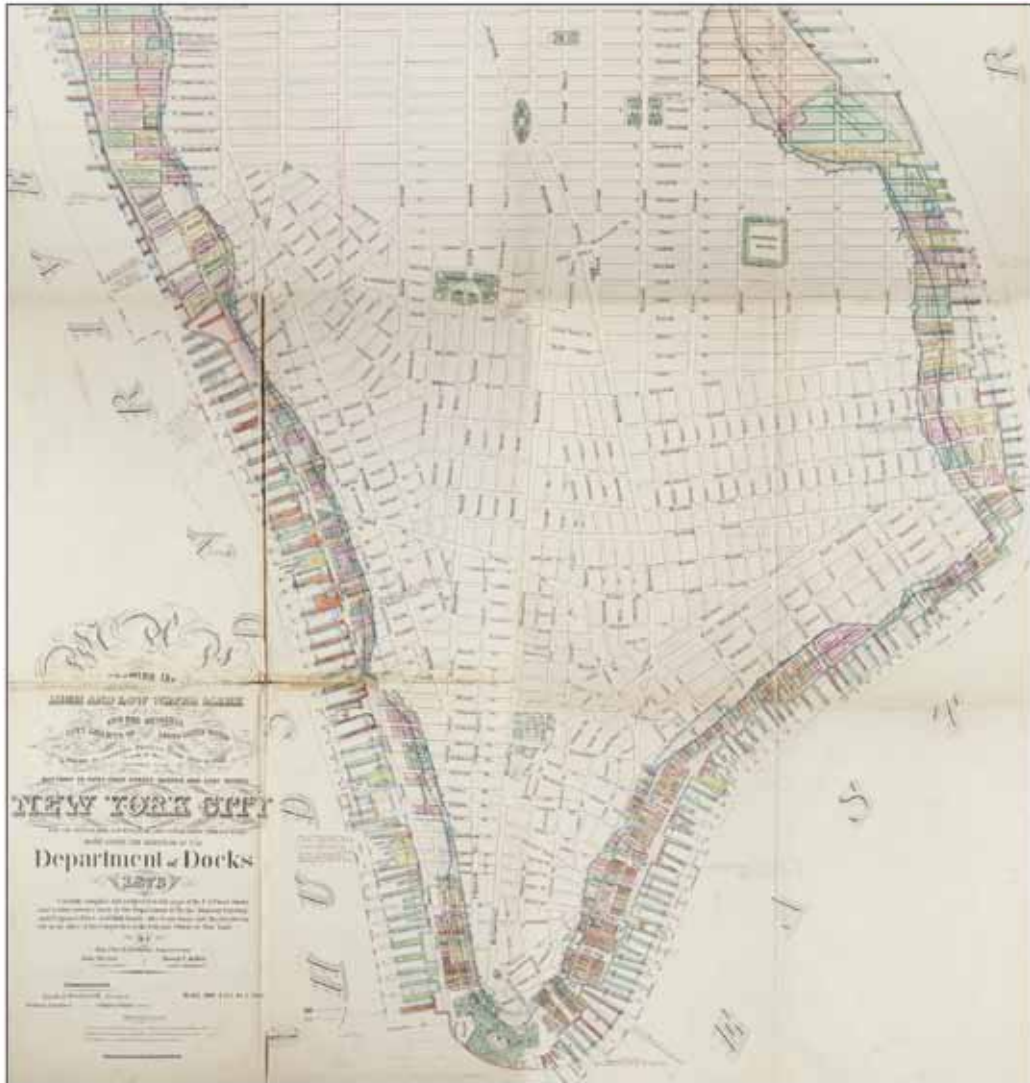
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Frederik de Wit, 1660

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Map of Manhattan issued by the Department of Docks, compiled by Charles K. Graham, 1873. Sold June 2018 for \$8,750.

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EXPANSION & RECLAMATION

A brief history of urban Hong Kong in street plans

Jonathan Wattis & Peter Geldart

This article is largely drawn from A History of Hong Kong in 50 Maps – A selection of unusual maps, charts and plans 1775–1979, Wattis Fine Art, Hong Kong, 2018.

Hong Kong is a dynamic, ever-growing metropolis and its urban history can be followed in detail from both official maps and commercially-published street plans that show how the town of Victoria and the

built-up areas of the Kowloon Peninsula have grown over the decades. In particular, urban growth involved a succession of projects to reclaim land on both sides of Victoria Harbour, thereby incorporating or connecting a number of former islands.

Following the outbreak of the First Opium War between Great Britain and China in 1839, and the tentative Convention of Chuenpi of 20 January 1841,



Captain Sir Edward Belcher, RN in HMS *Sulphur* was instructed to make the first accurate survey of the island of Hong Kong. As he wrote:

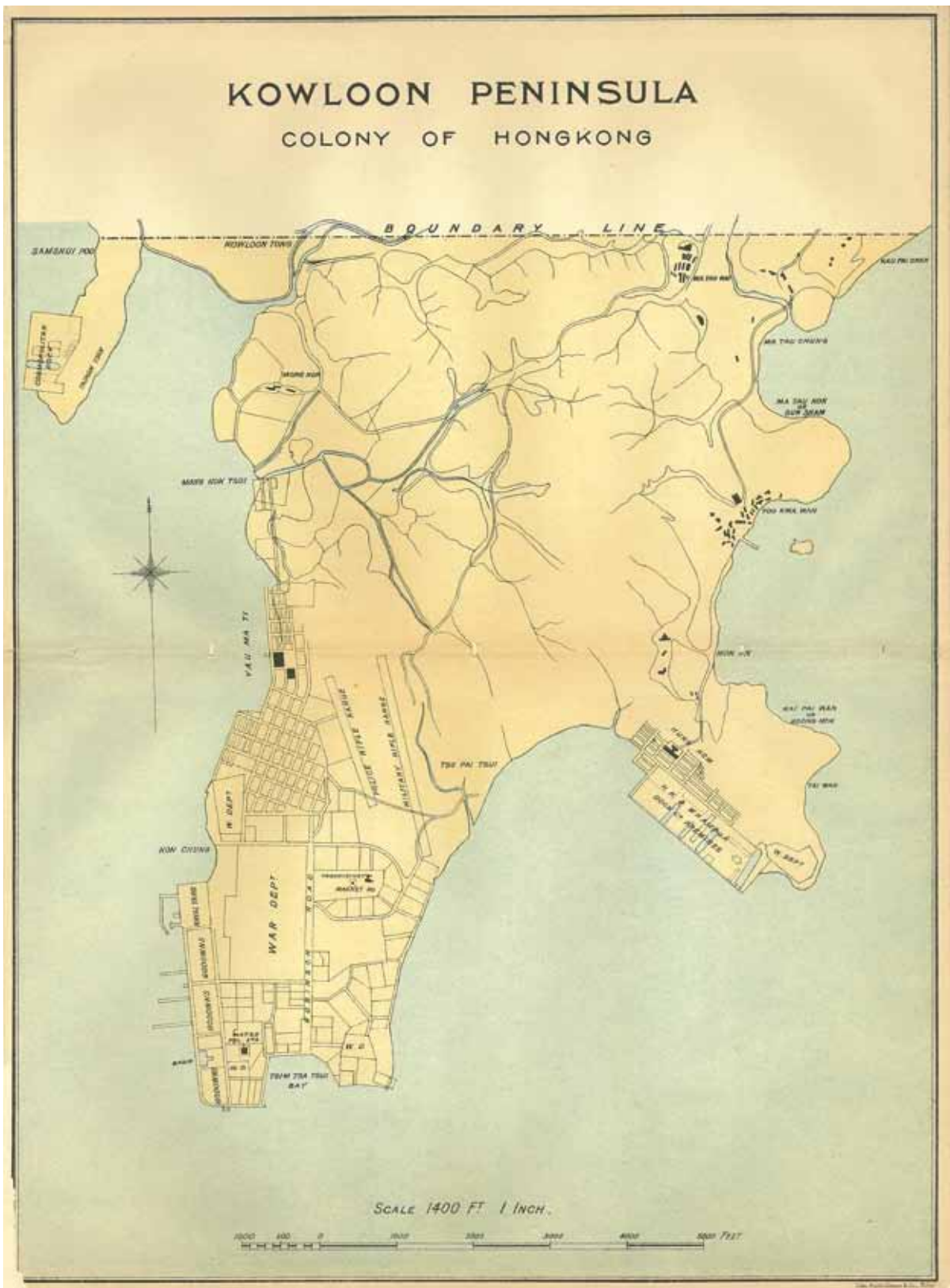
On the 24th [January 1841], we were directed to proceed to Hongkong, and commence its survey. We landed on Monday, the 26th, at fifteen minutes past eight, and being the bona fide first possessors, Her Majesty's health was drank with three cheers on Possession Mount. On the 26th, the squadron arrived; the marines were landed, the union hoisted on our post, and formal possession taken of the island, by Commodore Sir J.G. Bremmer, accompanied by the other officers of the squadron, under a feu-de-joie from the marines, and a royal salute from the ships of war.¹

By the time Belcher's work was published in 1843 a small town had been built on the northern side of the island, and his chart shows Possession Point, the British Settlement, Socont (Sheung Wan), and the 'Road cut by the Engineers' along the waterfront towards Observation Point. In the third (1846) state of the chart Queens Road, Ordnance Jetty, the church, the market, the hospital, several barracks and quite a number of houses have been added.

To quote Hal Empson: 'Fortunately the early British administrators had the good sense to record the occupations and development of the land and to plan for the future in matters both military and civilian. To do these things does, of course, require maps, of which, happily, a number have survived'.² According to Empson,



Fig. 1
 'Plan of Victoria',
 1866, (32 x 69 cm).
 © Wattis Fine Art.



Above Fig. 2 'Kowloon Peninsula - Colony of Hong Kong', 1886, (31 x 22 cm). © Wattis Fine Art.

Opposite Fig. 3 'Plan of the City of Victoria, Hong Kong', c.1890, (22 x 73 cm). © Wattis Fine Art.



the earliest of these are a manuscript sketch map attributed to Sir Henry Pottinger, Hong Kong's first Governor, which 'attempts to record the first hurried sale of lots in 1842 by Captain [Charles] Elliot';² a map made by Mr A. Gordon, the first Land Officer, in 1843 (which is known only from a copy dated 1845 in The National Archives in Kew); and a third manuscript plan (in two parts), also in The National Archives, dated 1856.

The earliest commercial city plan of Hong Kong is 'Plan of Victoria Hongkong 1866' (Fig. 1), from *The Treaty Ports of China and Japan* by W.F. Mayers, N.B. Denys and Chas. King, published in 1867.³ The plan, from a woodblock produced in Hong Kong by a Chinese engraver, is (unusually) oriented with south at the top. The map shows the extent of twenty-five years of construction of the city of Victoria on the northern coast of the island, including the main roads and major buildings such as the offices of P & O, Jardine, Matheson & Co., and Dent & Co. A grid is shown on the Causeway Bay waterfront for potential reclamation, but this reclamation did not in fact take place until 1949.

A series of urban street plans of Hong Kong were produced for *The Chronicle & Directory for China, Japan, & the Philippines*, which appeared annually from the mid-1860s until the 1930s (later editions with the name *The Directory & Chronicle for China, Japan, Corea, Indo-China, Straits Settlements, Malay States, Siam, Netherlands India, Borneo, the Philippines, &c.*). The directories were published by the *Hongkong Daily Press* (one of the oldest daily newspapers in the Far East) and also in London, San Francisco and New York. The maps and plans, which were frequently folded into the books, are lithographs with a typical yellow (land) and blue (water) colour scheme, and were drawn and engraved by the Edinburgh firm of John Bartholomew & Co.

One of these maps, 'Plan of the City of Victoria – Hong Kong 1874, Reduced from the Government Plan', was produced in the year of the great typhoon which hit Hong Kong on the night of 22–23 September 1874. The typhoon, reported as 'one of the most appalling disasters that has ever happened in this Colony',⁴ made front-page news for newspapers across the world as more than 2,000 people were injured or killed, and over forty ships were sunk or badly damaged. Four years later another tragedy hit the colony. The Great Fire of Hong Kong broke out on the evening of Christmas Day 1878 and small fires were still burning two days later. The extent of the devastation, in which some ten and a half acres of the city had been reduced to ashes, is recorded in a

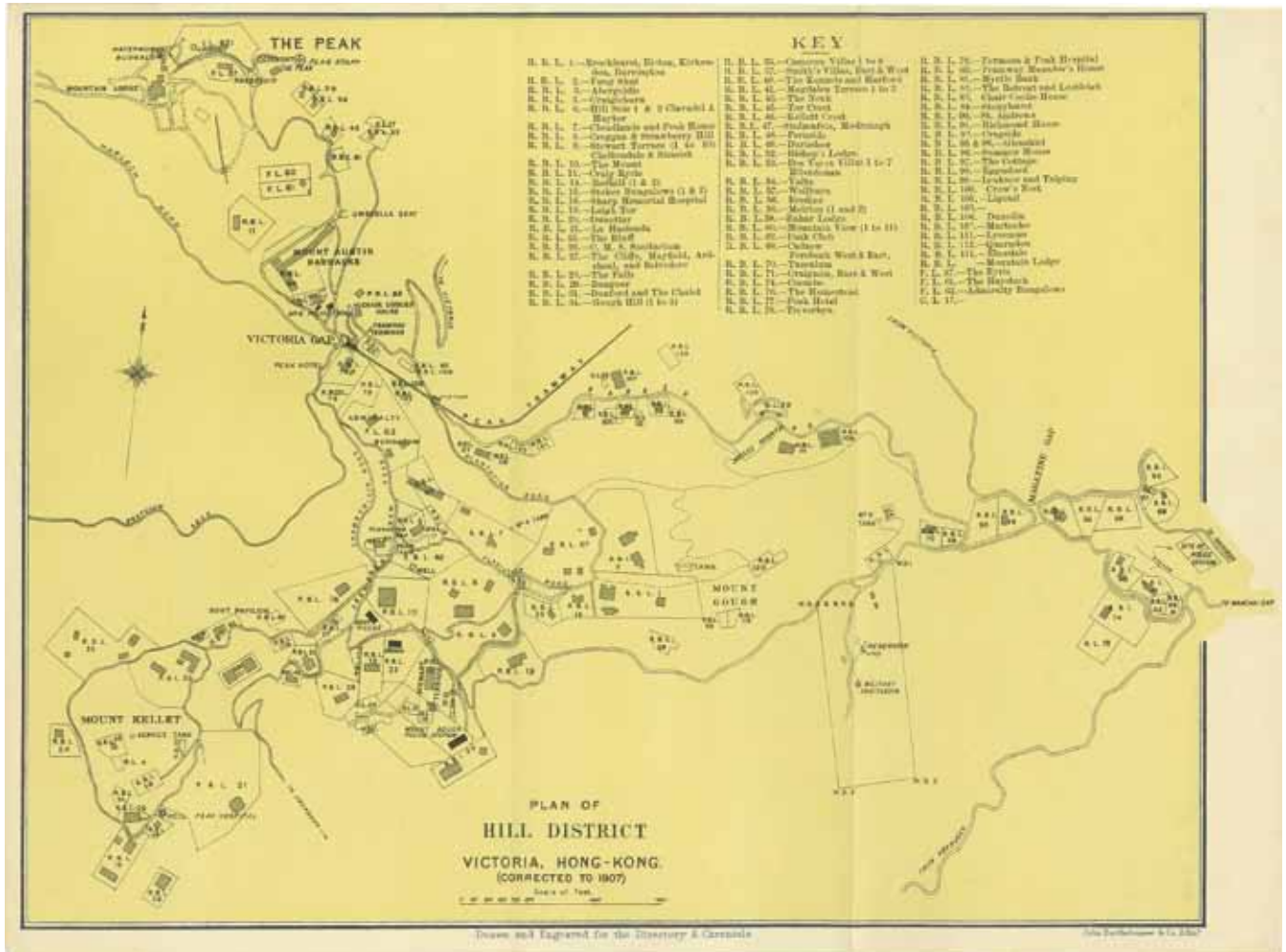


Fig. 4 'Plan of Hill District - Victoria, Hong Kong', 1907, (22 x 28 cm). © Wattis Fine Art.

manuscript outline map of Central contained in the scrapbook of Daniel Wares Smith, proprietor of the *Shanghai Recorder*.

An unusual 1882 'Plan of the City of Victoria - Hong Kong' by Osbert Chadwick shows not only the major districts, roads, markets, hospitals, churches, barracks, cemeteries and other buildings and landmarks, but also has a reference key that indicates Sewers, Public Latrines and Police Stations. This map was published in the Chadwick Report,⁵ which looked into the state of sanitation and Hong Kong's water supply. As a result of the report the impressive Tai Tam Reservoir was built, and the water supply to the city channelled along conduits was increased significantly.

The part of Kowloon south of Boundary Street had been leased to Britain by China in March 1860, and in October of that year it was formally ceded to

Britain under the terms of the Convention of Peking of 1860 which brought the Second Opium War to an end. For many years the area remained largely undeveloped, being used by the British for military firing ranges and tiger-hunting expeditions. In 1886 the *Chronicle & Directory*⁶ published a plan of 'Kowloon Peninsula - Colony of Hong Kong' (Fig. 2) which shows the extent of development in Kowloon some twelve years before the leasing of the New Territories. Robinson Road would later be renamed Nathan Road (in the early twentieth century). The Water Police Station (later known as the Marine Police Headquarters), built in 1884, is shown beside Tsim Tsa Tsui Bay (now Tsim Sha Tsui). Also shown are the Observatory; Magnet House; the H.K. & Whampoa Dock Co. Premises in Hung Hom; the Cosmopolitan Dock in Shamshui Poo, just below

the Boundary Line; the Police and Military rifle ranges; the Naval Yard; godowns; and a number of properties belonging to the War Department (notably today's Kowloon Park, the former site of Whitfield Barracks).

Another John Bartholomew & Co. map, produced for the *Chronicle & Directory* in c.1890, 'Plan of the City of Victoria, Hong Kong' (Fig. 3), is of particular interest because it shows the projected land reclamation along the waterfront from the Western to the Central districts proposed by Sir Catchick Paul Chater. In 1889 Chater and James Johnstone Keswick established The Hongkong Land Investment and Agency Company Limited, and from 1890 they promoted the Praya Reclamation Scheme which, by the time it was completed in 1904, would add up to 65 acres of land to Hong Kong's waterfront (including Statue Square, through which Chater Road now runs).

The plan also shows the ten administrative districts of (from west to east) Kennedy Town, Sheklongtsui, Sei Ying Poon, Taiping Shan (today's Mid-Levels), Sheung Wan, Choong Wan, Ha Wan, Wanchai, Bowrington (named after Governor Sir John Bowring), and Sookun Poo. All major roads are named along with schools, police stations, piers, wharves and major buildings. In the east a stream or *nullah* runs downhill, past Wongnei Chong Village, between the racecourse and the Hindoo, Parsee, Protestant, Roman Catholic and Mahomedan Cemeteries, to Bowrington Canal and the Harbour. Morrison Hill appears, but would be levelled in the early 1920s. Scandal Point (named after the original in Shimla) is indicated beside Head Quarter House, where 'in the afternoons ladies would be carried out in their wicker sedan chairs [to] sit and read in the fresh air'.⁷ The new Service Tank and Albany Filter Beds appear at the beginning of Bowen Road, and although Conduit Road has yet to be built a reservoir appears to the south of and above Belilios Terraces.

To escape the summer heat in the city, in c.1868 Governor Sir Richard MacDonnell had a summer residence built on The Peak, and other wealthy residents of Hong Kong followed suit. The Peak District Reservation Ordinance, 1904 stipulated that 'it shall not be lawful for any owner, lessee, tenant, or occupier of any land or building within the Peak District to let such land or building or any part thereof for the purpose of residence by any but non-Chinese, or to permit any but non-Chinese to reside on or in such land or building'.⁸ The Ordinance, which did not apply to servants, was in force until 1930. In 'Plan of Hill District

– Victoria, Hong Kong (corrected to 1907)' (Fig. 4), which was also drawn and engraved for the *Directory & Chronicle*, houses are listed in an index in the upper right-hand corner, identified by their name and Rural Building Lot (R.B.L.) number. Major roads are shown, together with reservoirs, tanks, wells, the Peak Flag Staff, police stations, hospitals, the Mount Austin Barracks, the Peak Tramway Terminus, the Chair Coolies House, the Peak Hotel, and the Peak Club.

Not only the British made and published plans of Hong Kong. In 1915 the Imperial Japanese Government Railways published a detailed city plan of 'Hongkong'. The map shows the route of the tram on the northern side of Hong Kong Island, from Cadogan Street in Kennedy Town to Causeway Bay; the Peak Tramway; and the new 'Hong-kong University' which had opened in 1912. The Proposed Eastern Praya Extension is indicated in the harbour; when completed some ten years later this would become the heart of Wanchai. In the top-left corner a table lists reference numbers for eight important buildings in what is now Central: Kings' Building, Alexandra Building, King Edward Hotel, Prince's Building, Queen's Building, the Japanese Club, the Hongkong Hotel, and the Hongkong Club. An accompanying map on a smaller-scale, 'Environs of Hongkong and Kow-Loon', shows developments in the Kowloon Peninsula including the track of the Canton-Kowloon Railway which had opened in 1910.

Also published in c.1915 was a 'Street Map of Victoria, Hong Kong' (Fig. 5) by an unnamed Hong Kong mapmaker, which was produced for the Peak Hotel. In this detailed map, oriented to the south, the Peak Road and the Peak Tramway are highlighted, and many of the houses on the Peak and in the Upper Mid-Levels are named. The date of the map can be estimated by the appearance of the Supreme Court on Chater Road and the Magistracy on Arbuthnot Road, which were built in 1912 and 1914 respectively, whereas the extension of the Central Police Station, built in 1919, is absent. An inset at lower right depicts a view of the Peak Hotel, at the upper terminus of the Peak Tram, which was opened at the time of the inauguration of the Peak Tram in 1888, rebuilt and re-opened in 1890, closed in 1936, and demolished in 1938. This city plan of Victoria was used by a number of companies involved in different commercial enterprises, for example a Chinese-titled map published and/or printed by Chen Kwong Co. Ltd. also in c.1915. Roads and key buildings are named in English, but with the addition of Chinese

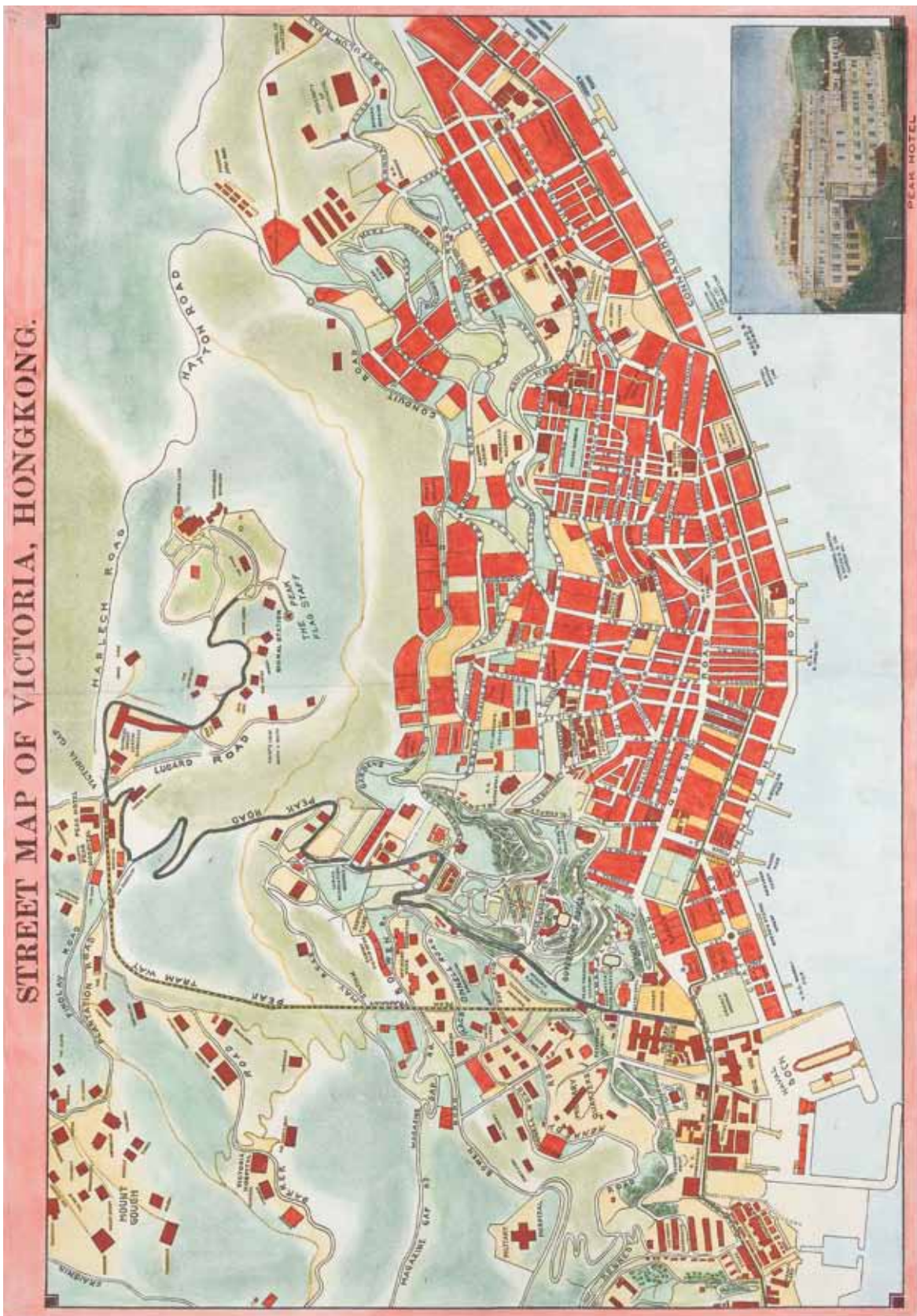


Fig. 5 'Street Map of Victoria, Hong Kong', c.1915, (36 x 54 cm). © Wattis Fine Art.

characters in black and red. Below the plan are a series of Chinese advertisements for leading shops, including The Sincere Co. Ltd.

'Plan of the City of Victoria Hong Kong (corrected to 1928)' is another detailed street map drawn and engraved by John Bartholomew & Son, Ltd. for the *Directory & Chronicle*. It shows the tracks of the Electric Tramways (inaugurated in 1904 and extended to Happy Valley in 1922) and proposed lines of harbour reclamation at Wanchai, North Point and Shau Ki Wan. The Polo Club Pavilion, CRC (Chinese Recreation Club) Pavilion and Riding School appear in the Queen's Recreation ground beside Tai Hang Village, Government Quarters are shown around Leighton Hill and Ventris Road, and there is a golf club in Wongnei Chung Valley (now Happy Valley). Nearer to Central, the New Law Courts are shown beside the Cricket Ground, Scandal Point is indicated between Murray Barracks and Victoria Barracks, the Ladies Recreation Ground is on Peak Road, the Masonic Hall is on Ice House Street, and Club Lusitano appears on Elgin Street. Further west, Hong Kong University Main Building is shown, with the Principal's House, Professors' Quarters and Students' Hostels nearby.

In c.1931 Sanxing Press published a detailed plan of Victoria – 'Latest edition of the map of Hong Kong in full detail; with a map of Kowloon; for the use of all

purposes' – in which street names and landmarks are all in Chinese characters. At the upper centre are the flags of twenty countries, but in a later edition printed by Tungar Printing Co. in c.1936 (Fig. 6) these are reduced to seventeen by the removal of the flags of the Axis powers (Germany, Italy and Japan). At the bottom there is a table of the official Typhoon Warning Signals, showing both Day Time signals and Night Lamps, which had been amended and increased to ten in 1931.

During the World War II Japanese occupation street maps of Hong Kong were published in Tokyo. A bird's-eye view of Hong Kong was printed by the 'Society of Japan Famous Sites Illustration' in November 1940 (Showa 15), in which landmarks and important buildings are shown, including Japanese restaurants. It was published in a folded pocket guide to Hong Kong together with a map of Hong Kong Island. Another Japanese city plan of Hong Kong, published in April 1942 (Showa 17), lists the proposed new Japanese street names. These include Sumiyoshi Dori for Connaught Road, Meiji Dori for Queen's Road, and Showa Dori for Des Voeux Road.

After the war Hong Kong became a popular port of call for the United States Navy, and the American Community of Hong Kong sponsored a series of Servicemen's Guides. These informative, folding, two-sided pocket guides, titled *Welcome to Hong Kong*,



Fig. 6 'Chinese plan of Victoria', c.1936, (29 x 74 cm). © Wattis Fine Art.

include street plans of Kowloon and the north side of Hong Kong Island, with an inset of Central, showing churches, the ferry, places of interest, the railroad, the streetcar (tram) and theatres. The descriptive text covers transportation, tours, general information and a shopping guide, together with words of advice:

'Warning – Do not carry your money in your jumper pockets! Do not entrust your money to others to change. Do not let your wallet show. Street Guides (whether in uniform or not) will try to pick you up. These fellows are, for the most part, members of gangs who lead you to places where you may be cheated. If they annoy you, call a policeman'.

In 1968 Walter K. Hoffman created street maps of Hong Kong and Kowloon which were based (with permission) on Hong Kong Government survey charts. These maps, published by A-O-A Ltd., became (and have remained) the standard pocket maps handed out to tourists by the Hong Kong Tourist Association at the airport, rail, ferry terminals and hotels.

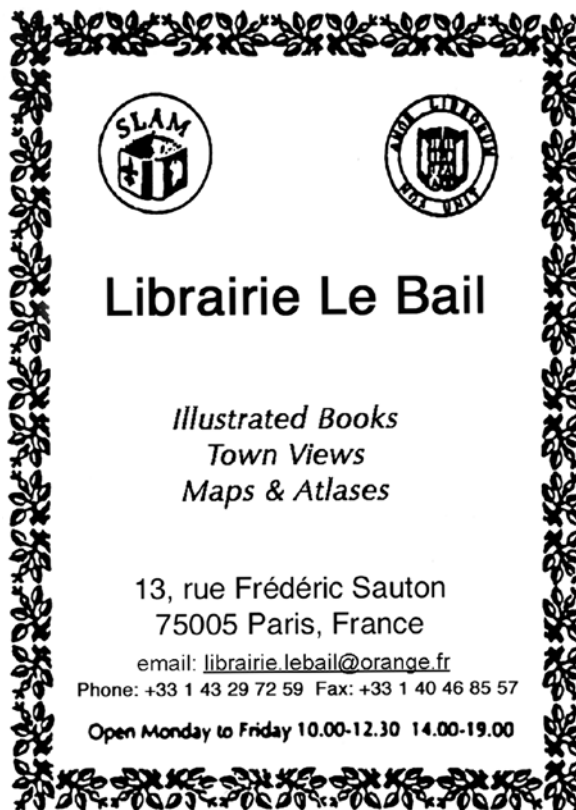
Today such physical cartography is being increasingly replaced by digital maps viewed on our ubiquitous mobile devices, but printed maps remain an important record of the city's growth through expansion, land reclamation and regeneration. Twentieth-century cartographic ephemera in particular have become desirable acquisitions for collectors, to be sought out, preserved and studied before they end up in landfill or the municipal incinerator.



Notes

- 1 Sir Edward Belcher, *Narrative of a voyage round the world, performed in Her Majesty's ship Sulphur, during the years 1836-1842, Including details of the naval operations in China, from Dec. 1840, to Nov. 1841*, Vol. II (p. 148), Henry Colburn, London, 1843.
- 2 Hal Empson, *Mapping Hong Kong, A Historical Atlas*, Government Information Services, Hong Kong, 1992.
- 3 William Frederick Mayers, N. B. Dennys and Chas. King, *The Treaty Ports of China and Japan: A Complete Guide to the Open Ports of Those Countries, together with Peking, Yedo, Hongkong and Macao forming a Guide Book & Vade Mecum for Travelers, Merchants, and Residents in General*, Trübner and Co., London, and A. Shortrede and Co., Hong Kong, 1867.
- 4 *North-China Daily News EXTRA*, 'Terrific Typhoon at Hongkong. Immense Loss of Life and Property', Tuesday, 29th September 1874.
- 5 Colonial Office, *Mr. Chadwick's Reports on the Sanitary Conditions of Hong Kong; with Appendices and Plans*, Frederick Dangerfield & Co., London, 1882.
- 6 *The Chronicle & Directory for China, Corea, Japan, the Philippines, Cochinchina, Annam, Tonquin, Siam, Borneo, Straits Settlements, Malay States, &c. for the Year 1886*, published "At the 'Daily Press' Office, Wyndham Street", Hong Kong.
- 7 Jan Morris, *Hong Kong – Xianggang*, Random House, New York, 1988.
- 8 Historical Laws of Hong Kong Online – <http://oelawhk.lib.hku.hk/items/show/942>

Jonathan Wattis is an expert dealer of antique prints, maps, photographs, paintings and books on East Asia. After working with Christie's auction house in London he set up Wattis Fine Art in Hong Kong, opening his premises on Hollywood Road in 1988. Since then its reputation has grown to become the foremost gallery in Asia specialising in depictions, on paper, of East Asia.

Peter Geldart is a keen collector of antique maps who spends his time between the Philippines and Hong Kong. In 2017 he curated the exhibition 'Mapping the Philippines' at the Metropolitan Museum of Manila and wrote the accompanying catalogue. (see IMCoS Journal, No. 151, p. 59). A director of the Philippine Map Collectors Society, he is also editor of the society's journal *The Murillo Bulletin*. He has recently assisted the Hong Kong Maritime Museum in cataloguing the *Gordian Gaeta Map Collection*.



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CARTOGRAPHY CALENDAR

Exhibitions



Rand McNally and Company, 'Bird's-eye view of the World's Columbian Exposition, Chicago, 1893', 64 x 95 cm. Library of Congress, Geography & Map Division.

Until 31 December 2018, Chicago
Newberry Library

Pictures from an Exposition: Visualizing the 1893 World's Fair, is a fascinating exhibition that mines the institution's archives to display maps, postcards, artwork and other fair-related items. Information: <https://www.newberry.org/09282018-pictures-exposition-visualizing-1893-worlds-fair>

Until 2 January 2019, Santa Barbara, California

Santa Barbara Museum of Natural History ***The Kingdom of California; Mapping the Pacific Coast in the Age of Exploration*** offers stories of early mapping of the Pacific Coast told through antique maps on loan from La Jolla Map and Atlas Museum, the Santa Barbara Mission Archive-Library and the Santa Barbara Museum of Natural

History's Rare Book Collection. Information: <https://www.sbnature.org/>

Until 20 January 2019, Paris
Musée de l'Armée
À l'est la guerre sans fin, 1918-1923

The exhibition comprises over 250 items from 15 countries that include documents, treaties, as well as maps that shaped Europe after World War I such as the Sykes Picot agreement, the secret accord between France and the UK for the dismemberment of the Ottoman Empire and the ratification letter of the Treaty of Lausanne by the newly founded Turkish Republic. Information: <http://www.musee-armee.fr/>

Until March 2019, Lewisburg, West Virginia

North House Museum
James Wilson, America's First Terrestrial and Celestial Globe Maker.

Wilson was a self-taught globemaker from New Hampshire. Wilson and three of his sons operated two manufacturing plants in Bradford, Vermont and Albany, New York. After just a few years of operation they were able to outsell the European competitors who had dominated the American market. Information: <http://www.greenbrierhistorical.org/map-exhibit.html>

Until 20 April 2019, Boston

Norman B. Leventhal Map Center
Crossing Boundaries: Art // Maps
The exhibition compares contemporary works of art with maps spanning six centuries. These juxtapositions aim to create a dialogue that can illuminate the crossing of the traditional boundaries of art and maps, and stimulate fresh appreciation of both media. Information: <https://www.leventhalmap.org/>

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Antonio Lafreri [Carta Marina] Olavs Got. Benigno Lectori... 1572.

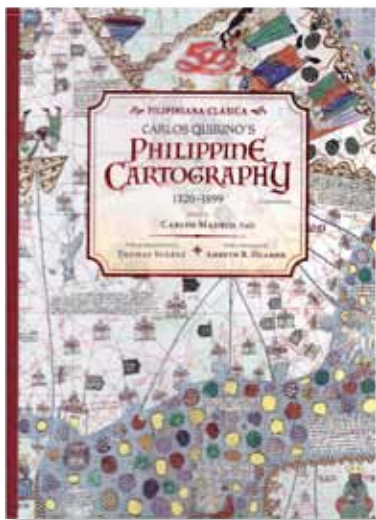
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BOOK REVIEWS

Carlos Quirino's Philippine Cartography 1320–1899, Fourth Edition edited by Carlos Madrid, PhD, with an Introduction by Thomas Suárez and a Foreword by Ambeth R. Ocampo. Quezon City: Vibal Foundation, 2018. ISBN 9789719707073 HB / 9789719707080 PB. xxix, 274, profusely illustrated. PHP.2,700 HB / PHP.2,200 PB. The book can be ordered from Gallery of Prints, Manila at www.gop.com.ph



Although the list of new books about maps expands and becomes evermore specialised, some books remain classics that anyone interested in the cartography of a specific country must read. One such book is *Philippine Cartography 1320–1899* by Carlos Quirino, which was first published in 1959. As the second edition of 1963 (reprinted in 1969) had become unobtainable, aficionados of maps of the Philippines were delighted when a third edition was published by Vibal Foundation in 2010. However, the text and list of maps in the third edition were largely the same as in the second, and in the six decades since Quirino wrote his seminal work a great amount of additional knowledge on the subject has been assembled.

Consequently the fourth edition is both welcome and necessary. This is a handsome publication, in a larger format than its predecessor, with some 20 per cent more pages. Quirino wrote with great knowledge of the history of Western and Chinese cartography of Asia, including chapters on the early Portuguese and Spanish navigators, and a detailed discussion of Fr Pedro

Murillo Velarde's 1734 'Carta Hydrographica y Chorographica delas Yslas Filipinas'. To quote the editor: '*Philippine Cartography* remains a true rarity among scholarly Philippine books and a veritable monument to [his] erudition'. The twelve chapters of the earlier editions have been edited and expanded, and three well-researched new chapters added on important topics: the Selden Map, 'Filipinas and Empire via the Allegorical Hispania', and the Comisión Hidrográfica de Filipinas.

Additions to Quirino's original text are marked with square brackets, but not all changes are noted. For example, on the famous Murillo Velarde chart of 1734 Quirino commented 'so important is [the] map, so neat is the engraving and so faithful are the illustrations, that ... it will continue to be reproduced periodically in the years to come', but for no apparent reason the word 'neat' has been changed to 'meticulous'. On the other hand, fidelity to the original can be misleading; Quirino wrote 'not generally known to students of Philippine cartography are the charts of Sir Robert Dudley', a statement that was accurate in 1959 but is no longer, given that Dudley's charts have featured prominently in at least two recent exhibitions in Manila and are now well known to collectors and academics.

The fourth edition has not been as carefully copy-edited as would have been desirable. As well as typos, the information on maps and cartographers is not always correct, either because it was not available to Quirino himself, or through lack of attention to detail. For example, Marcos de Orozco is incorrectly called Manuel (a mistake made by Quirino), and the (new) entry on the great French cartographer J.B.N.D. d'Après de Manneville mentions the first (1745) edition of his famous sea atlas, *Le Neptune Oriental*, but not the much larger and better-known second edition of 1775. In the list of maps, not all the dates are accurate, and although for the most part the entries are catalogued under the name of the mapmaker, some of them appear under the publisher or even the author of the accompanying text. The sizes of the maps are given sometimes in centimeters and sometimes in inches. And why, in a book with the title *Philippine Cartography 1320–1899*, have four maps dated from 1900 to 1907 been added?

Perhaps the most important feature is the chronological list of maps, charts, plans and views, which takes up half the book and to which 456 entries



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have been added to ‘make this the largest and most comprehensive listing of the most important Philippine cartographic materials’. Unfortunately, despite this commendable effort to make the antique map dealers’ favourite phrase ‘not in Quirino’ obsolete, the list is still incomplete. To mention but a few, the Plancius map of the East Indies is missing, as are Jonas Moore’s map of the Philippine Islands, the Dutch, German, Italian, Danish and Russian editions of J.N. Bellin’s well-known maps, the charts of the Philippines by William Heather, Aaron Arrowsmith and Daniel Ross, and the ‘Plan of Manila and Suburbs 1899’ by George Sellner. Of the 80 or so charts and plans of the Philippines published by Alexander Dalrymple, only 36 are included (including insets, which are listed separately from the maps in which they appear), two of them twice. Only 33 of the 51 charts of the Philippines published by the British Admiralty in the mid- to late-nineteenth century are listed (with several in different editions), and many French charts are also missing.

The book is lavishly illustrated with pictures of maps, mostly in colour, and more than a hundred have been added to the 121 published in the third edition. Many of these maps are those most important to the history of Philippine cartography, but some of the new maps have never previously been published. The majority are reasonably good quality images, and the folding copy of the wonderful ‘Topographia dela Ciudad de Manila’ by Antonio Fernández de Roxas (courtesy of the British Library), provided in a special pocket, includes a dozen high-resolution details. Regrettably some of the images are blurred, especially those reproduced from low-resolution photographs, and the image of the 1749 quarter-size edition of the Murillo Velarde map is not only poor quality but shows an example of the map with heavy green and brown colouring that makes the details indistinguishable.

Like the curate’s egg, the fourth edition of Carlos Quirino’s book is for the most part excellent. The book will be an essential addition to the library of any academic, student, collector or dealer with an interest in the subject, whether or not they already have one or both of the earlier editions. For now this is the one book to buy on Philippine cartography, although it is to be hoped that in due course a fifth edition will be published with the errors and omissions corrected, the list of maps expanded further, and the quality of all of the images improved to the standard warranted by the importance of the maps themselves.

Peter Geldart, Manila

The Times Comprehensive Atlas Of The World
15th edition, 2018. Glasgow: Times Books. ISBN
9780008293383. HB, 527, 45.6 x 31.8 cm. £150 STG.



John Keats wrote: ‘A thing of beauty is a joy for ever: / Its loveliness increases; it will never / Pass into nothingness; but still will keep / A bower quiet for us’.

This atlas is simply ‘a thing of beauty’. It is lovely, and to turn its pages is almost to caress the cheek of a loved one. Like a smartphone it is obsolete before it comes off the production line, for its subject matter is so fluid it changes almost daily, yet it is a valuable snapshot of what our world was like when the last data update was entered.

No expense has been spared in its production. Each map is a photographic coloured plate, and there are 132 of them covering 263 pages; the paper for the rest of the atlas is top quality, the diagrams beautifully executed, and the print is crisp and clear. The Index alone covers 223 pages. At the beginning there are 41 pages principally given to articles and maps, all written by prominent scholars.

Great attention has been given to political boundaries and accurate names, with references to human problems and developments. In fact it is an atlas devoted largely to Human Geography and as such is a wonderful reference work. But one has to question just which market it is aimed at. It is very heavy and difficult to hold, requiring a table on which to study it. It is not a handy home reference work but obviously belongs in university libraries – few schools could afford £150 for one atlas. That its price reflects the quality of its production, and is well worth the money on that score, cannot be doubted, but this does not impact on its utilitarian value. Who will get £150 worth of use out of it? It is too advanced for the general

public and of limited use to the academic geographer.

Academic geographers analyse and require information from which to draw conclusions. Articles and supplementary maps define its broader usefulness. It is not what is in the atlas which raises questions but what is absent. Two pages are given to Tectonics. That is all there is on the geological side. There are 64 climate graphs representing different climatic types but no general map, or temperature and rainfall maps. There is nothing on vegetation, soils and mineral deposits, all of which impact on things which are covered like energy, economy, population, health and urbanisation. Even the Human Geography section could use a map of religions, for these impact at many different levels of human development. Six pages of data on countries, listing area, population, and capitals, with pictures of their flags, look lovely and would delight quiz enthusiasts, but such information could be Googled easily and far quicker than accessed in a volume like this.

But this atlas is not competing with modern electronic information devices. This is a beautiful work of art. If all that is wanted are cold facts, look elsewhere. It is dedicated to the Queen with her approval, and she will love it.

Graham A. Fisher, North Marston, UK

Atlas of the European Campaign 1944–45

by Steven J. Zaloga. Oxford: Osprey, 2018. ISBN 9781472826978. HB with slipcase, 280, 127 maps. £40 STG.

This 280-page volume comes in a large dark green cloth-bound slipcase. It looks great. What it contains is less impressive, although for some, very useful.

Let's look at the positives first. The maps are in a single style, very clear indeed; always four-colour. These are presented on the right-hand page, whilst each is commented on and explained on the left. One hundred and twenty-seven maps take us from the planning prior to D-Day, through to Operation Overlord and the many Allied operations that followed. That is a good number of maps! Anybody with an interest in the progress of that campaign will get exactly what they need – at a price that is well below what a similar book aimed purely at the map fraternity would cost. This is simply because there are many more military enthusiasts, guaranteeing longer print runs for every title.

However, this immediately highlights the book's greatest weakness as well. The maps are derived from

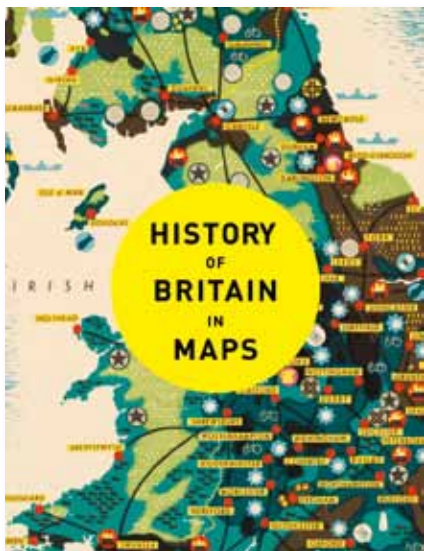
Osprey's standard offering: a 48 or 64-page large (thin) paperback on a military unit, battle or campaign. These are 'streamed' into several consistent sub-brands. Most of what I see here has been directly copied from the 'Campaign' brand, which is usually slightly fuller, but with a reputation for atrocious maps. What is so bad about these maps? Firstly, they lack consistent scales. The scales used are typically to fit the format rather than enhancing the 'story' of the campaign. Each campaign gets the same number of maps whether it deserves it or not, which can leave some sequences very, very similar from one map to another, showing a glacial progress of the relevant units. Some maps appear very bare for the same reason. However, the opposite becomes the case when a complex or lengthy operation is being covered. Now, the map is covered in numerous overlays – overlays for troop movement, for unit types, for times of day, and so on. The colours used can sometimes be far too similar.

Secondly, these maps are computer-generated (or look like it) which makes them look very bland. Areas that lack interest for the artist are not included. This can make orientation on inland areas quite difficult. We can work out the Caen area by reference to the coast; but working out the Ardennes or Lorraine can be more challenging. In all cases, only a general sense of troop movement is gained. You know that US Task Force A turned right, but not actually where. No crossroad, no village name, just some place. You do know it got to St-Brieuc during 6 August 1944, though.

There is a single page introductory essay, which might as well not exist. Most maps and their related short essays in this volume describe the Allied point of view. This is unusual, since the volume is a synthesis of maps lifted from shorter titles already published by Osprey, titles that focus on single battles. These shorter volumes are almost always marketed as being about German forces. In this case, things are the other way round, with Allied operations getting most attention. Exceptions that look at things from the Axis point of view are the entries on the 'Battle of the Bulge', and on a trio of much less known, but equally doomed Nazi offensives – 'Luttich', 'Nordwind' and 'Sonnwende'. In contrast, twenty-one named Allied Operations are studied, with several getting multiple maps each. What this bias illustrates is the ease of finding and copying Allied material from unit combat diaries, despite the greater commercial appeal of German. Not a book for map people, or for students of German military operations either.

Mike Sweeting, North Yorkshire, UK

History of Britain in Maps by Philip Parker.
 Glasgow: Collins, 2017. ISBN 9780008258344.
 HB, 255, 120 illus. £25 STG, Can \$49.99.



This is a remarkable book in many ways. I don't know the author personally but I am full of admiration for the in-depth research he has done and the clear and precise way he has written the text. Somehow he brings each map to life and I learned facts that I had never come across before in any other reference work. In his introduction he says that he recounts the story of England, Wales, Scotland and Ireland by reflecting on what those maps can tell us about the motives of the mapmakers and the history of the eras in which they lived. For instance, the 1571 map by William Bowles of Elizabeth I's progress (or royal visit) to Norfolk is at one level a prosaic administrative document used for planning the queen's provincial trip, and yet at another it is a sign of the need of early modern monarchs to reinforce the mystique of their rule by very solid appearances before their aristocratic subjects.

So, in effect, we are looking not only at the beauty of each map the author has chosen but also at the history behind its production. I learned so much and venture to suggest that the author did too. He has made amazing discoveries which underline how rich are the stories woven into the humblest seeming maps. For instance, who would have guessed that the first ever weather map published in a newspaper (*The Times*, 1875) was tied up with a double suicide and the theory of evolution. The map was drawn by Francis Galton, a polymath with a fascination for meteorology, who was a cousin of Charles Darwin. Darwin had voyaged on

The Beagle to the South Atlantic which led him to formulate his theory of evolution. The captain on Darwin's second voyage was Robert Fitzroy who had been persuaded to take Darwin in order to dispel the gloom that had caused his predecessor, Pringle Stokes, to commit suicide. Fitzroy set up a network of weather stations that could alert mariners to imminent storms but he, in turn, was criticised by Galton and locked himself in his dressing room and also committed suicide. Galton was commissioned to write a report in the aftermath of Fitzroy's death examining the benefits of weather forecasting but he was highly critical of Fitzroy's work and as a result the storm warnings for mariners were temporarily suspended. However, the main weather forecasts were not resumed until 1879. Galton did make some amends for his treatment of Fitzroy and produced his first weather map for *The Times* but few of its readers would have been aware of the storms which lay behind its production.

Amongst old favourites such as the Hereford mappa mundi and an Ogilby road map Parker offers a wide variety of maps for consideration. There is a map which sets out the railway lines Sir Richard Beeching chairman of British Railways was planning to axe in the 1960s, one of which plots the development of the North Sea oil fields, fire insurance maps, a solar eclipse map and one of the voting patterns of the European Union.

Unusual and eye-catching is the front cover map which is of Britain in the 1940s (a brave choice for a cover picture) showing where the nation's natural resources were located during the Second World War and giving an impression of a prosperous and self-reliant Britain. However, we learn that during this time Britain was actually engaged in a life-and-death struggle to guarantee the importation of the strategic resources to enable it to continue the war with Germany.

Another feature of this book is the excellent quality of the reproduction of the maps. A great deal of thought has gone into how they are presented to show each to their best advantage: sometimes a full page, sometimes over two pages, sometimes in portrait or landscape format.

In the introduction the author proclaims that every map tells a story, and he has shown how true this is. All I can say is that if there was a fire in my office and I had to choose a handful of books to rescue from my reference library this would undoubtedly be one of them.

Valerie Newby (formerly Scott), Buckinghamshire, UK

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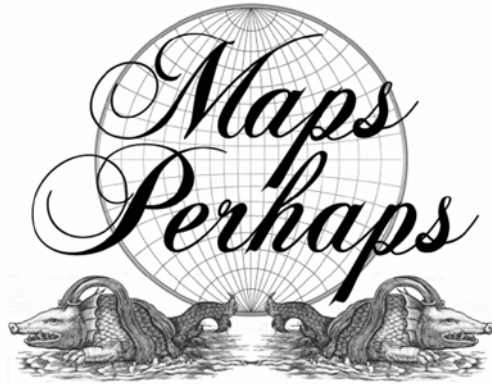
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<i>The Mapping of Ukraine – European Cartography and Maps of Early Modern Ukraine, 1550–1799; over 40 maps with English and Russian supporting text</i>	Bohan S. Kordan, Curator	2008	The Ukrainian Museum	10
<i>Antique Maps of Monmouth, Part 1, 1573–1695</i>	O. Talog Davies	1985	Talog Davies	5
<i>Irish Map History—a Selected Bibliography of Secondary Works, 1850-1983</i>	P. Ferguson	1983	University College Dublin	5
<i>Old Maps of the Land of Israel – The National Museum of Haifa</i>	Arie Ben Eli	1963	Reprint 1984 Koisser, Vienna	5
<i>India within the Ganges</i>	Susan Gole	1983	Jayaprints	25
<i>Four Centuries of Geographic Expressions of the Central American Isthmus – 1500–1900; Spanish and English text</i>	Jens P. Bornholt	2007	Universidad Francisco Marroquin, Guatemala	40
<i>Panoramic Maps of Anglo-American Cities: A checklist of maps in the collections of the Library of Congress, Geography and Map Division</i>	John R. Hébert	1974	Library of Congress	5
<i>Plans of Harbours, Bays and Roads in St George's Channel–1748 (copy 1)</i>	L. Morris	1987	Beaumaris, Lewis Morris Publications	8
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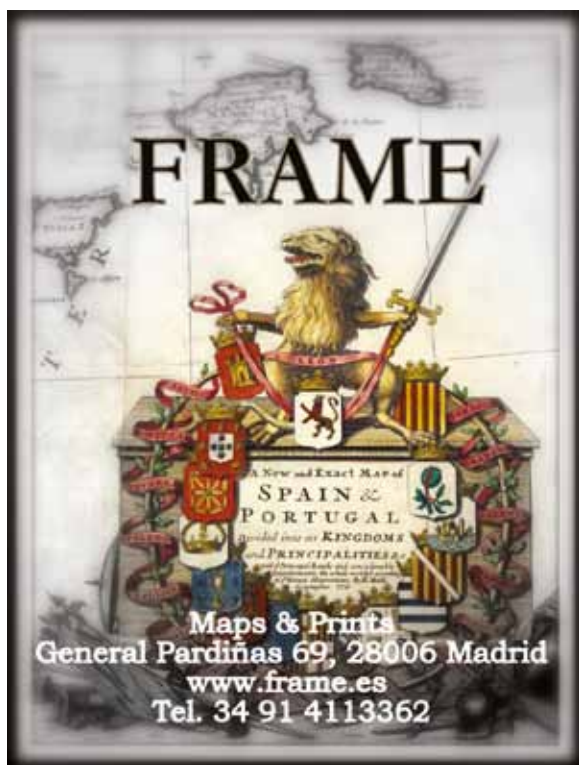
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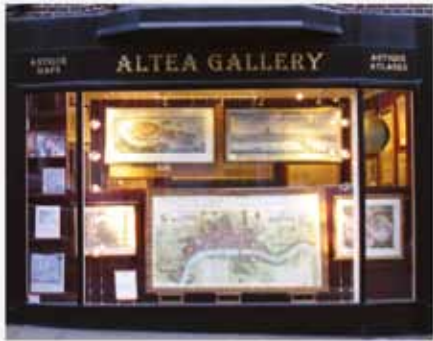
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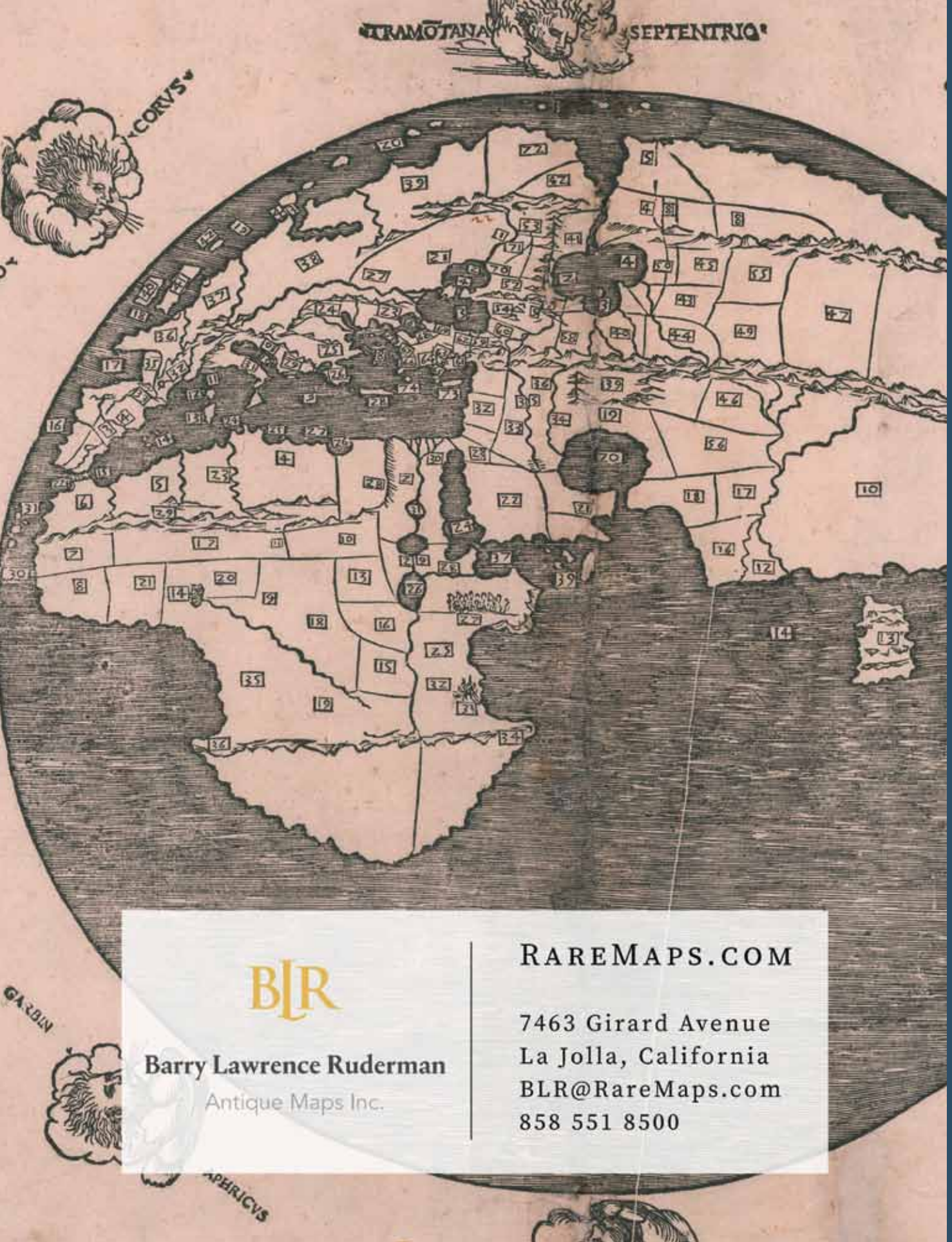
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