

DELL'ARCANO DEL MARE

MYSTERIES OF THE SEAS

right:
J. Brown after G.P. Harding
F.S.A.
*Sir Robert Dudley, Son of Robert
Dudley, Earl of Leicester K.G.*
reproduced from *Dell'Arcano
del Mare* vol. 1 by Robert
Dudley (In Fiorenza: Nella
nuova stamperia per Guiseppe
Cocchini all'insegna della
stella, 1661)
Maps Collection, MAP Ra 248

below:
Title page from *Dell'Arcano
del Mare* vol. 2 by Robert
Dudley (In Fiorenza: Nella
nuova stamperia per Guiseppe
Cocchini all'insegna della
stella, 1661)
Maps Collection, MAP Ra 248

Bill Geering and Martin Woods introduce one of the rarest and most beautiful atlases in the Library, and the Englishman who created it

Four hundred years ago, in 1607, an Englishman, Sir Robert Dudley, was appointed shipbuilder to the arsenal of Ferdinando I de' Medici, Grand-Duke of Tuscany. It was the beginning of a relationship that led to the creation by Sir Robert of one of the rarest and most beautiful atlases in the National Library's Maps Collection, *Dell'Arcano del Mare* or *Mysteries of the Seas*. The atlas was first published in 1646, and is reputed to be the first sea-atlas of the world to include Australia. Sir Robert Dudley, one of the more flamboyant characters to emerge from the Elizabethan era, was a sailor, privateer, engineer, inventor, mathematician, map maker and bigamist.

So, how is it that an Englishman, working for an Italian duchy, printed a sea-atlas in which the first map of a Dutch voyage to Australia appeared?

Sir Robert Dudley was the son, possibly illegitimate, of the Earl of Leicester, principal courtier and possible secret lover of Queen Elizabeth I. The Earl of Leicester may have married his son's mother, Lady Sheffield, but could have kept this secret to avoid the wrath of the Queen. Young Robert's early influences included the poet and naturalist Thomas Chaloner, who also became his close friend. He was enrolled at Christ Church, Oxford, in 1587 with the status of 'filius comitis', the Earl of Leicester's son.



In 1588, at the age of 14, Robert served under his father who had overall command of the army and navy preparing to resist the Spanish invasion. On September 4, the Earl died, and his will gave Robert a large inheritance, including his castle and estate at Kenilworth and the lordship of Denbigh and Chirk. Eighteen months later, Robert also inherited from his uncle Ambrose Dudley, Earl of Warwick.

The nephew of three English Admirals, Dudley's interest in the sea and navigation is not surprising, though he applied greater than usual capacity for the science. At 17, he began to concentrate his efforts on the study of navigation, and was reputed to have been tutored by famed mariner Abraham Kendal, who sailed with Francis Drake. Dudley expressed particular belief in employing army command principles to

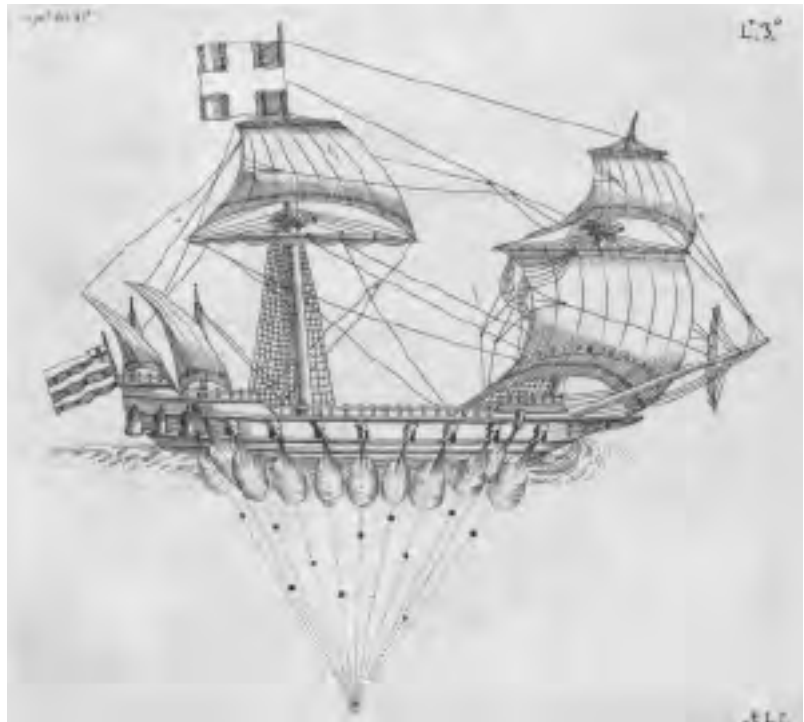


the maritime theatre, a method he later advocated in the text of his great atlas.

Not inactive in other realms, the young Dudley married Frances Vavassour, one of the Queen's maids of honour, before his 18th birthday—a secret union that, once revealed, was annulled. Within a year, he married Margaret Cavendish, sister of Sir Thomas Cavendish, the circumnavigator, though she died not long after. Dudley later married Alicia Leigh, who bore him four daughters, but not before he had fulfilled his boyhood dreams of maritime exploration.

Wealthy, ambitious and with an adventuring streak, in 1594, at age 21, Dudley assembled a fleet with which he intended to harass Spanish shipping across the Atlantic. However, the court did not approve of his plans because of his inexperience and the value of the ships, and Dudley was given a lesser commission to the West Indies, a speculative venture to open the way to the 'Empire of Guiana'.

Dudley's explorations in Guiana and Trinidad were more successful for their cartographic achievement than any great plunder or victory over the Spanish. His fleet sailed in November 1594, and a storm separated the ships almost immediately. In December, the expedition finally managed to capture two Spanish ships at Tenerife and, in January 1595, sailed to Trinidad. There, he recruited a Spanish-speaking Indian who promised to escort an expedition to a gold mine up the Orinoco



River. However, after two weeks, the guide deserted them and the expedition struggled back, disappointed. Though unsuccessful in this venture, he returned to Trinidad and was the first to publish a map of this coveted region. The map was much imitated and remains a favourite among collectors to the present day.

Dudley's natural rise was derailed by his association with the Earl of Essex, to whom he was related by marriage through his mother. Essex, once a favourite of Queen Elizabeth, committed a series of offences and was executed for treason in 1601.

above:
Sir Robert Dudley (1574–1649)
Ship firing cannons, showing
range and sequence
reproduced from *Dell'Arcano
del Mare* vol. 1 by Robert
Dudley (In Fiorenza: Nella
nuova stamperia per Guiseppe
Cocchini all'insegna della
stella, 1661)
Maps Collection, MAP Ra 248

left:
Sir Robert Dudley (1574–1649)
Map of Guiana, showing the
mouth of the Orinoco River
reproduced from *Dell'Arcano
del Mare* vol. 2 by Robert
Dudley (In Fiorenza: Nella
nuova stamperia per Guiseppe
Cocchini all'insegna della
stella, 1661)
Maps Collection, MAP Ra 248



Dudley, his friend, though imprisoned, was soon released but claims of his illegitimacy persisted. Sealing his downfall at the English Court, Dudley forced a disastrous law court proceeding where he failed to establish his legitimacy and his claims to titles.

Abased and without access to most of his inheritance, in 1606 he made the decisive step which led him to the Grand-Ducal Court of Tuscany. Dudley left behind his wife and children, but was accompanied by a young cousin, Elizabeth Southwell. Under the pretext of his conversion to Catholicism, Dudley received papal dispensation to marry Elizabeth. He neglected to mention the slight impediment of his existing wife and children, and the news of this elopement caused a great sensation in England. The two were married in Lyons, and then, in January 1607, they moved to Italy, first Pisa and Leghorn and then Florence, where they were to spend the remainder of their lives. Elizabeth bore Robert 12 children, before dying of the plague in 1631.

According to documents contained in the Archivio Mediceo in Florence, Dudley commenced his shipbuilding for the Medici in 1607. Despite apparent offers, including an Earldom, to lure him back to England, Dudley would not accept these as compensation for the previous claims of his illegitimacy. James I revoked Dudley's travel licence and his estate was confiscated. At the same time, Dudley realised that a worthy future was opening up before him. Indeed, he worked for Cosimo II de Medici for over forty years, during which time he designed and built many ships and galleons, engineered the draining of the marshes between Pisa and the sea, and expanded the port of Leghorn,

convincing Cosimo II to declare it a free port and thus attract many English traders. As a Florentine courtier, he duly adopted the assumed title of the Duke of Northumberland, awarded to him by Ferdinand II, Holy Roman Emperor in 1620.

Dudley was an innovator whose loyalty was chiefly to science. *Dell'Arcano del Mare* is both atlas and monumental treatise on the science of navigation, a work he pursued throughout his time in Italy, until his death there in 1649. The atlas was remarkable for its originality. It is considered the first in which all maps and charts are based on the new Mercator cylindrical projection of the world; the first to give magnetic declination; the first to give prevailing winds and currents; the first to expound the advantages of 'Great Circle Sailing' (the practice of navigating a vessel along a given circular track between two points on the surface of the earth); and, perhaps less important, the first sea-atlas to be compiled by an Englishman.

A great part of the multivolume work is text, in Italian. It contains an eclectic collection of writings related to seamanship. These include, amongst other things, a comprehensive treatise on contemporary knowledge of navigation; plans for construction of a navy comprising five different types of ship; discussion of naval organisation and discipline; and designs for naval instruments.

The Library's copy, acquired at auction in 1985, is a second, posthumous edition, 'Impressione Secunda', published in two volumes in Florence in 1661. The two large unmanageable tomes weigh about 7.5 kilograms each, and contain 145 large-scale maps and charts of Europe, Africa, Asia and the Americas, together with a detailed description of each, again in Italian. There are a number of maps significant to early European contact with the Australian continent.

The atlas includes a section of 29 maps for Asia. The map of special interest to Australians is *Carta Particolare della Costa Australe Scoperta dall'Ollandesi*. One of the first printed charts of the Australian coastline, and the first by an Englishman, this 'Detailed Map of the South Coast Discovered by the Dutch' shows, in addition to the west side of the Cape York Peninsula, much of the island of New Guinea. The map is based on the discoveries of the Dutch navigator Jan Carstenz. In 1623, with the ships the *Pera* and the *Arnhem*, Carstenz sailed as far south as Statenrivier (Staten River), named in honour of the States General of the Netherlands.

Sir Robert Dudley (1574–1649) Shooting the sun with an early quadrant reproduced from *Dell'Arcano del Mare* vol. 1 by Robert Dudley (In Fiorenza: Nella nuova stamperia per Guiseppe Cocchini all'insegna della stella, 1661) Maps Collection, MAP Ra 248





Dudley was particularly concerned with the accurate representation of geographical coordinates and features, updating and amending them from source materials wherever possible. The mapping on which Dudley's map is based allows us into the secrets of his cartography. After Carstensz, Dutch charts regularly fused the tip of Cape York Peninsula with New Guinea. However, by actually labeling the Torres Strait 'Golfo Incognito' both to the south and north, Dudley asserts the possibility of a gulf between New Guinea and the southern continent. The uncertainty about a connection between the two land masses was only definitively resolved by James Cook, a century and more later.

Although containing a wealth of information for navigators, the maps in *Dell'Arcano del Mare* are deceptively simple, and the overall impression is aesthetically very appealing. Much of their artistry can be attributed to Antonio Francesco Lucini, the renowned Tuscan engraver. The details, including the design of the cartouches, the scrolled writing, and the drawings of sea monsters, sailing ships, and compass roses give an intense feeling of Italian baroque. Lucini famously wrote in his memoirs that they took 12 years to complete and used 5000 pounds of copperplate.

The National Library's copy of the atlas has some old hand-written sheets pasted in

both volumes, probably relating to previous owners of the books. In the second volume, there are some very old sheets in German stuck to the back of one of the maps. These appear to be from a letter or a diary, and suggest that the atlas has had a German owner at some stage in the last 350 years. While they have nothing to do with the atlas, the text begins with an epithet—that it is not so important to be famous, but more important to have self-respect, and the respect of others. Perhaps the words describe the life course of Sir Robert Dudley, who gained the respect of many with this great work.

Dell'Arcano del Mare is available on request for viewing, under supervision, in the Maps Reading Room of the National Library of Australia. Some of its maps, and secrets, will soon be digitised and included on the Library's Digital Collection website.

BILL GEERING is a Maps volunteer at the Library and a member of the National Library Friends Committee

MARTIN WOODS is Curator of Maps at the Library

above left:
Willem Janszoon Blaeu
(1571–1638)
*India quae Orientalis Dicitur, et
Insulae Adiacentes* (detail) 1635
coloured map; 39.5 x 48.3 cm
Maps Collection, nla.map-t224

above right:
Sir Robert Dudley (1574–1649)
*Carta Particolare della
Costa Australe Scoperta
dall'Olandesi* 1647
map; 47.5 x 37.3 cm
Maps Collection, nla.map-t483

Blaeu showed Cape York Peninsula connected to New Guinea, while Dudley included 'Golfo Incognito', in recognition of the voyage of the Spaniard Torres in 1606.