Sheetlines

The journal of
THE CHARLES CLOSE SOCIETY
for the Study of Ordnance Survey Maps

"DSA seminar 2011"

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Sheetlines, 93 (April 2012), pp.39-40

Stable URL:
http://www.charlesclosesociety.org/files/Issue93page39.pdf

Published by
THE CHARLES CLOSE SOCIETY
for the Study of Ordnance Survey Maps
www.CharlesCloseSociety.org

Defence Surveyors' Association annual seminar 2011

The DSA held its fifth annual 'Maps and surveys' seminar at the Royal School of Military Survey, Hermitage on 11 June 2011. The seminar was organised by Mike Nolan, supported on the day by Peter Walker and Tony Keeley.

The seminar concentrates on presentations and discussion of military and hydrographic surveying, mapping and charting and their production, and this year's programme was demonstrably of interest to Charles Close members who attended. The DSA would welcome future speakers from CCS. The content of Maps and surveys is unclassified and CCS members and the public are welcome to attend.

This year there were six, forty-minute presentations. First up was Michael Cooper, Professor (emeritus) at City University and (visiting) at UCL. His topic was the Sumerians who in 3300BC were civilisation's earliest surveyors and calculators (by one millennium). They invented, so far as is known, arithmetic. The Sumerian 'number' was related to the length of a strip of land with unit width; 'positive' was your land, 'negative' was your neighbour's. They had no concept of 'zero', since of what use is absent land? To calculate an area the surveyor would take out known shapes such as rectangles and regular triangles, to leave a residue of irregular quadrilaterals. Then presuming the irregularity is not too great, area was a product of the four sides of these quadrilaterals, apparently sufficiently accurate for purpose.

Next to speak was Dominic Fontana (University of Portsmouth) who reviewed the Cowdray engraving of the sinking of Mary Rose on 19 July 1545 in comparison to contemporary military maps. All aspects topographic, architectural and military are found accurate both for town, dockyard, harbour and the middle-distant Isle of Wight. Cowdray shows the moment just after Mary Rose has sunk, dead English sailors floating exactly at the spot where the flagship went down, and the vital bridge near Cowes on fire.

During the lunch break a display of historical military mapping/charting was set up; two examples can be mentioned. One, showing a large-scale map of the Bocage in Normandy, was immediately recognisable as British 'Benson Project' 1:25,000 map but on closer examination turned out to be a map captured on D-Day + 2 and turned round by the Wehrmacht in less than two weeks with full German language legend and graticule in a delicate green. The second example showed how, for the D-Day landings, beach profiles were derived from air photographs taken at differing tide levels and knowledge of tide heights from Admiralty tables.

After lunch Mike Nolan spoke on the WW2 RE Air Survey Liaison Sections describing the Z(M) chart programme and the photography and production of very large scale, closely contoured, potential airfield sites in Normandy for advanced airstrip construction planning, these being plotted by a Canadian survey unit using multiplex stereoplotters. Similar work was carried out by other sections in Sicily, Italy, Burma and Malaya.

The next speaker was Rod Siggs another retired RE surveyor whose subject was the 1950s mobile train, supposedly 'a timely dinosaur'. The mobile originated as WW2 field-deployable printing equipment in Leyland Retriever 3-ton trucks, descendants of the Boer war horse-drawn printing wagons. Whatever methodology of map generation/ storage/ reproduction prevailed the train had it.

Then CCS member John Cruickshank spoke on Russian and Soviet military mapping since the Russo-Jap war of 1904. He began in 1904-05 when the Tsarist army found itself fighting (and losing) a war across an unsurveyed part of its own territory. The famous trans-Siberian railway was only properly surveyed to the barest minimum of a kilometre or so on either side of its route. Not much had improved at the debacle of WW1 or solved at WW2, during which conflict the Wehrmacht often had better maps. Nevertheless by the 1980s the entire world had been mapped by dint of tremendous Soviet effort and organisation.

The final speaker, Chris Howlett (UK Hydrographic Office, Taunton) began his talk 'Surveying for Safety – modern hydrographic surveys on the UK continental shelf' by noting that although 'by the 1980s the entire world had been mapped' the seas and oceans remain largely unsurveyed. Of the UK continental shelf only 48% has been surveyed to a modern standard, 22% surveyed but not updated, and a startling 24% never systematically surveyed. The principal reason is that a ship must sail directly over the seabed in order to map it and ship availability has always been a limiting factor. We do indeed need to make a full survey because a shelf seascape is the most hazardous, and surveys by the oil industry and Royal Navy are not in the public domain. The EU, being desirous for complete coverage of all European inshore waters provided funding to Ireland, who went ahead fast on their steep Atlantic shelf. Sea floor survey continues to use the well-known 'pinging' of ultrasonic pulses. With modern rastering and sideways sonar this has become very powerful and, no doubt, involves defence secrets. Chris told a cautionary tale demonstrative of the hazards. Whilst a UKHO ship was in transit to a designated survey area it responded to an SOS mayday call from nearby, as all seafarers must. At full speed ahead the ship therefore drove directly over an unswept area; and yes, went aground herself! Meanwhile their instrumentation was switched to echo-sounding. Its unobserved record was later found to show depth inexorably decreasing to zero until the crunch.

John Seeley

The Defence Surveyors' Association's sixth 'Maps and surveys' seminar on historical military and hydrographic surveying, mapping and charting will take place at the Royal School of Military Survey, Denison Barracks, Hermitage near Newbury on Saturday 16 June 2012. The cost of attendance is £20, to include tea and coffee breaks and a finger-buffet lunch with drinks.

Information and bookings to Mike Nolan at *maptnolan@googlemail.com* or 01635 253167.