WILEY

International Aeronautical Maps

Author(s): W. S. Brancker

Source: *The Geographical Journal*, Vol. 57, No. 6 (Jun., 1921), pp. 477-479

Published by: geographicalj

Stable URL: <http://www.jstor.org/stable/1780810>

Accessed: 26-06-2016 20:36 UTC

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at
<http://about.jstor.org/terms>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.

Wiley, The Royal Geographical Society (with the Institute of British Geographers) are collaborating with JSTOR to digitize, preserve and extend access to The Geographical Journal

with his usual thoroughness was always willing and ready to help wherever his experience could assist us.

It was this same attachment to his fellow-men and his conscientiousness in affairs which had rendered his career in India and at the India Office so successful. Indians and British alike could feel that he started anxious to be on good terms with them and anxious to help them, and that if he did help them he would help them thoroughly. He was dependable, and he was affectionate; and the loss of one with so strong a sense of fellowship our Society has the strongest reason to deplore.

F. E. Y.

Captain S. C. Plant.

News has been received from China of the death at sea, in February 1921, of Captain S. C. Plant, whose name has long been a household word to all interested in the opening of the Upper Yangtse to trade and navigation. It is well known what an obstacle to navigation is caused by the gorges and furious rapids which obstruct the river during its passage through the mountainous belt above Ichang, and which long made communication with the upper river possible only by the slow and laborious method of "tracking"—the towing of native vessels from the banks by long strings of men. When, mainly owing to the efforts of the late Mr. Archibald Little, it was at last decided to attempt the passage of the rapids by a steamer, the *Pioneer*, the command was given to Captain Plant, who had previously had special experience of river navigation on the Euphrates. The attempt succeeded, and though for some years the difficulties proved too formidable to permit the opening of regular navigation, the measure of success attained encouraged the expectation—now realized for a good many years—that the formidable barrier would at last yield to further effort. Captain Plant continued to give his services to the cause, year by year adding to his knowledge of the rapids, and in 1913 was appointed by the Chinese Government to the newly created post of River Inspector for the Upper Yangtse.* He was the author of a 'Guide to Shipmasters and Pilots on the Upper Yangtse,' and only this year published at Shanghai a small volume descriptive of the rapids and their navigation, illustrated by a striking series of photographs and pen-and-ink drawings by Mr. I. A. Donnelly ('Glimpses of the Yangtse Gorges.' Shanghai: Kelly & Welsh). At the time of his death he had just started home on leave, succumbing to pneumonia only the day after sailing from Shanghai.

CORRESPONDENCE

International Aeronautical Maps.

IT is only this morning that I have had the opportunity of reading Colonel Lees' interesting lecture on Aeronautical Maps, which I was unfortunately prevented from attending. I am surprised to see that apparently no British Air Officer contributed to the discussion. The subject is of great interest, and I feel that some independent opinion from the aviation point of view should be put forward.

* Captain Plant's services to Yangtse navigation are summarized in an article by Captain P. A. Lapique in the *Bulletin Econ. de l'Indo-Chine* for 1917 (see *Journal*, vol. 50, p. 459).

Dealing first with the three controversial points enumerated by Colonel Lees :

1. *Mercator's Projection.* I am not a navigator, but I have had a great deal to do with maps and map-reading all my life ; I confess that I have a rooted objection to the use of Mercator's Projection for air work. The speed of aircraft is so great and their range of vision so wide that as aerial transport extends its activities over the world, the general map will be far more frequently employed than the local one. Even on this small scale I consider that any distorted representation of the Earth's surface is most undesirable from the aviator's point of view. We must remember that an aerial navigator in the true sense of the term does not exist to-day ; no living man has sufficient experience to claim such a qualification. I think I am right in saying that the airmen who demand the Mercator's Projection are all men trained on strictly naval lines. The present system of naval navigation is based on the fact that the sailor cannot see any of the natural features of the Earth ; such a system cannot be suited to a pilot who can see literally hundreds of square miles of the Earth's surface at one moment.

No body of expert opinion exists to contradict the naturally conservative ideas of men trained to navigate the sea ; the average pilot, no matter how brilliant a flyer he may be, has only the foggiest knowledge of navigation, and can voice no useful opinion.

Colonel Jack says that flying in the Polar Regions is not likely to be very common, and he therefore does not think the extreme distortion in the north any serious disadvantage. Don't be too sure ; the Arctic circle offers a most attractive and economical aerial course for lighter than air craft at certain seasons of the year. No, I view with apprehension the apparently hasty decision of the Convention to adopt Mercator's Projection. I am not sufficiently expert to say what system should be used, but no matter how small the scale, no serious distortion of the Earth's surface should be involved.

2. I am on the whole in favour of hill-shading ; not because I think the local map should be the complement of the general map, but because the shading method tells a pilot what he wants to know more quickly and more reliably. For plotting out a course before the start, shading seems to have all the advantages of the layer system, except that the line ruled to show the course is a little harder to see. In the air, the following is the class of problem which presents itself to the comparatively small type of heavier than air craft. Let us say that an aeroplane is flying south under the clouds, which are at 3000 feet, with a view to crossing the Pyrenees. As the mountains are approached it becomes obvious that the clouds will be down on all the higher ridges. The pilot now has to make up his mind : (1) how high he has to climb to clear the highest points ; (2) at what point of his course he must start climbing through the clouds ; and (3) for how long after that point he must fly before coming down out of the clouds. This problem, I think, can be most readily solved on a shaded map marked with the heights not only of the highest points but of the largest projecting spurs, and this, to my mind, applies to general maps as well as the local.

3. The proposal to show railways in red and roads in burnt sienna appears quite sound. I see that Captain Lloyd suggested exaggerating the main features of towns ; once more I am all against any form of distortion.

Finally, I trust that a judicious selection will be made of the areas to be produced first. For instance, the provision of maps for these islands would, in my opinion, be waste of time and money at the present juncture ; the

existing Ordnance Survey is quite good enough for any one, and an aeronautical map would be an unjustifiable luxury. Let us start on localities of which the maps are poor and which offer prospects of regular aerial traffic in the future. Calcutta to Rangoon and Singapore; Aden to Mombasa; Khartoum to Nairobi; and similar links, spring to the mind as the most useful field for our first efforts.

W. S. BRANCKER,

Major-General R.A.F. (Retired).

2, Dorset Street, London, W.1,
9 May 1921.

The Circulation of the Earth's Crust.

May I be allowed a word of comment on the subject of Colonel Tandy's paper in the May number, at the reading of which I could not be present?

The paper dealt mainly in generalizations, and I would suggest that the validity of the theory might be tested by looking at the actual facts of erosion and deposition in an area easy of study like the English Lake District. I select this as an area of marked relief within small compass, and one with which I am more intimately acquainted than perhaps any other of like extent. As assistant to Dr. Mill in his survey of the under-water contours of the lakes in 1893-94, my attention was naturally called to the problem of the origin of the heights and hollows, and in the discussion after Dr. Mill's paper I ventured to draw some conclusions—arrived at independently, but in accord, I believe, with those of other observers.* In trying to account for the fact that the deepest hollows seemed generally associated with the greatest heights, it occurred to me for a moment that the matter from beneath the hollows had, as I then expressed it, "gone to make the mountains" (by a somewhat similar process to that supposed by Colonel Tandy). But an examination of the facts showed that the idea did not square at all with these. The deepest hollows seemed everywhere to be portions less subject to deposition, while the shallower parts were everywhere associated with areas of degradation, the products of which had been transported into the original basins. The steepness with which the deltas of the main feeders fall to the depths has struck all observers, large masses of shingle and even blocks of some size being pushed out by the current and resting at the edge at an angle even steeper than that at which such *débris* rest above water, *e.g.* on the spoil-heaps of quarries. The forward advance of such deltas is very noticeable, even within a limited period, and in some cases (*e.g.* in Haweswater) bids fair to divide the lake into two basins, a stage which has been reached in the case of Buttermere and Crummock, Derwentwater and Bassenthwaite, respectively. Surely all this is directly opposed to Colonel Tandy's theory. Why, *e.g.*, should such deltas persist at all, instead of being engulfed in the subjacent rocks?

Dr. Evans has already criticized the main idea of the paper on the ground that it would furnish a case of perpetual motion. However this may be, it would seem at least to introduce a new principle—multiplication, in place of conservation, of energy. Is there not some similarity between the ideas put forward and those of a would-be inventor who should propose to use the heat generated by a continuous brake to accelerate the motion of the train? He too might meet objections by saying that he was not pretending to create new force, but merely to draw upon that supplied by the combustion of the coal.

* See *Journal*, vol. 6, p. 165. Mr. J. Y. Buchanan afterwards told me that he had arrived at similar conclusions in regard to the Scottish Lochs.