

## CORRESPONDENCE

*To the Editor of the JOURNAL OF THE ROYAL AERONAUTICAL SOCIETY.*

SIR,—Several emotions conflict on reading pages 241 to 243 of your issue of April, 1928, which you courteously sent me. The spectacle of my statement sandwiched between your salutatory and Mr. Griffith Brewer's valedictory has a Daniel-in-the-lion's-den aspect that amuses one, while arousing other impressions. It has been sufficiently obvious for several years that nothing the Smithsonian could do or leave undone would meet with Mr. Griffith Brewer's approbation, but I confess surprise that you, Sir, should have thought fit to prejudice your readers in advance against my proposal by your introduction:—  
 “. . . after the death of Professor Langley, Secretary of the [Smithsonian] Institution. A campaign was begun to take from the Wrights credit, which had up to then never been disputed. . . . In view of the importance of combating the unfounded and ungenerous attacks on the achievement of the Brothers Wright, the circular notice recently received by the Editor is published here. . . .”

If it is insisted that the Smithsonian Institution must confess to knavery before this controversy can be settled, we dismiss the subject. I, indeed, regret that it was thought wise either to make the experiments of 1914 or to claim priority for Langley's heavier-than-air machine of 1903 as the first capable of sustained free flight carrying a man. I have never doubted that only bad luck prevented its success on October 7, 1903, but as this must always remain a matter of opinion, I regret that the claim was made: First, because it has wounded the sensibilities and seemed unfair to Mr. Orville Wright, whom I have met in most friendly fashion, and admire as a gallant, lovable, able pioneer, who with his brother mastered the problem independently by their own experiments; second, because the Smithsonian Institution, which deserves public respect and confidence, has suffered thereby gross misrepresentation and vituperation.

There is nothing which hinders me from going very far to satisfy Mr. Wright and close this unfortunate episode except the insistence that we confess ourselves to be insincere knaves. You may judge if this charge is true when I recall to you the following facts:—

1. Langley himself said after the two unsuccessful launchings: “Failure in the aerodrome itself or its engines there has been none; and it is believed that it is at the moment of success, and when the engineering problems have been solved, that a lack of means has prevented a continuance of the work.” He died in the same belief.

2. Manly twice risked his life in this faith, and eagerly wished to risk it thus again. From conversation I had with him in 1925, I am certain that he also died in the same belief.

3. Chanute on several occasions stated that “he had no doubt” that Langley's machine “would have flown if it had been well launched into the air.”

4. Walcott in 1925, after the publication of Mr. Griffith Brewer's celebrated attack, wishing to correct any mis-statement, asked Messrs. Ames and Taylor, eminent, disinterested students of aviation, now Chairman and Vice-Chairman, respectively, of the National Advisory Committee for Aeronautics, to examine the circumstances. They did so, and, in a report released for publication June

9, 1925, sustained the claim, but suggested that it be modified to read merely a statement of opinion, which was done. Walcott died believing the claim.

I have asked Mr. Wright nothing more than the recognition that those who represent the Smithsonian are honest in this belief, as a necessary preliminary to concessions from the Institution. Without the recognition of the honesty of the Smithsonian Institution from him, any move I might be glad to make would be seized upon by detractors to brand the Institution as pusillanimous as well as knavish.

I am, Sir, yours faithfully,

C. G. ABBOT,

*Secretary, Smithsonian Institution.*

*April 27th, 1928.*

[Dr. Abbot appears to have overlooked the fact that his original statement, published in the April number of the Journal, was written by him for the American Press and required an editorial note to introduce it over here. Ten days after the date of Dr. Abbot's statement, the Board of Regents of the Smithsonian Institution passed a solemn resolution declaring that the Wrights were the first to fly. It is evident that they did not formerly concede this fundamental fact, and therefore it should be easy for Dr. Abbot—pleading the innocence and not the knavery of the Smithsonian as the cause of his unwelcome inheritance—to withdraw the past misleading propaganda.

My introductory note has drawn the very generous statement from Dr. Abbot, however, of admiration for Mr. Orville Wright as "a gallant, lovable, able pioneer, who with his brother mastered the problem independently by their own experiments." We are now apparently in agreement, and the way can surely be found to bury the bone of contention so deeply that it may never be resuscitated.—EDITOR.]

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The Secretary,  
The Royal Aeronautical Society,  
7, Albemarle Street, London, W.1.

DEAR SIR,—In the Journal of the Society for May there is a communication from Mr. Simmonds in which he criticises adversely the part of my lecture dealing with range.

In the first place, the subject of the lecture was not the determination of the maximum range of flying boats, but on matters relating to the Problem of the Long Range Flying Boat. An endeavour was made to show, by means of characteristic curves, the main factors on which range and cruising speed depend.

In Fig. 1 the ranges were calculated using an average figure for the air miles per gallon, which figure was obtained not by rough calculation, as mentioned by Mr. Simmonds, but by estimating the air performance at various loads, and hence by means of the propeller and engine characteristics, using mixture control, the consumption at the most economical speed was obtained.

To obtain the range integration was found to be unnecessary, as the air miles per gallon varied linearly with the weight. At the heaviest loads I admit the ranges given are probably on the high side, but at these loads the boat could not take off. For the purpose in view, the ranges shown in Fig. 1 for weights from 24,000 lbs. to, say, 37,000 lbs. are of sufficient accuracy and agree with those given by Mr. Simmonds, as there is no reason to accept his figures as being strictly accurate, although he works out the range to within one sixth of one per cent.

Now, with regard to the question of the relation between the air miles per gallon and the weight, the fact remains that the relationship is linear over a considerable variation in weight, when mixture control is used. Extensive consumption tests have been carried out on Iris II. by the Air Ministry, and the results definitely show the air miles per gallon to vary linearly with the weight, with sufficient accuracy for all purposes, over the range from 24,000 lbs. to 33,000 lbs., and further, over this weight variation the economical speed remains constant.

Yours faithfully,

J. D. RENNIE.