

was sanctioned by the Air Ministry and carried out, but five squadrons were definitely too many for the total number of Buffaloes available, and overstrained the reserves.

84. The Buffalo proved disappointing, at any rate when up against the Japanese Zero fighter. This was due partly to technical reasons and partly to incomplete training of pilots. With regard to the former the performance of the Buffaloes at heights of 10,000 feet and over were relatively poor. (See Appendix "L"). Whilst it had been realised that the Buffalo lacked speed, it had been hoped that, with good warning system and the comparatively small area of important objectives, e.g., the Naval Base, it would be able to reach the height necessary before the arrival of enemy aircraft, and that its better armament would enable our squadrons to give a good account of themselves. Whether deliberately or not, the Japanese appear to have sacrificed armour and armament in their Zero fighters in order to save weight, thereby obtaining the advantage of rate of climb and manoeuvrability at heights. In the case of these two particular types, the technical advantage certainly lay with the Japanese. Attempts were made to improve the performance of the Buffalo by substituting .303 for the .5. In addition some trouble was experienced with the valve gear of the Cyclone engine in the Buffalo, and with the interrupter gear of the two fuselage guns. The Buffalo was unsuitable for night flying owing to the exhaust flames, flame dampers would have been essential for night flying but were not available. Actually this was not serious as I had laid down that the Buffalo was to be used for day work only, and that, by night, reliance was to be placed on the A.A. guns assisted by Blenheim fighters.

Pilots have been referred to in paragraph 83 above. What the R.A.F. lacked in Malaya was a good proportion of pilots with practical war experience. Apart from forming a leaven when operations started, they could have taught the new pilots those niceties of manoeuvre and aiming which just make the difference between missing the enemy and bringing him down, the type of training that can only be given as a result of experience. Again all the Buffalo squadrons were formed in Malaya and there was no squadron with practical war experience to set a standard, and it is possible that in some respects ours was not sufficiently high for modern conditions.

85. Apart from the fighter squadron in Burma, we had in Malaya in December, 1941, a total of four Buffalo squadrons, one Dutch fighter squadron, which arrived on the 9th December, and one Blenheim squadron, the last principally for night fighting. This total was considered adequate both by the Chiefs of Staff and by my own General Headquarters, but results showed that more fighter squadrons were required, largely because the scope of a fighter's duties has widened. One Buffalo squadron was specially trained for Army co-operation, and we really wanted two. I had also agreed with the Commander-in-Chief, Eastern Fleet, that one squadron, which ought to have been a Buffalo, should be trained in the duties of fighter protection for ships. Fighter squadrons are also the most efficient type with which to attack enemy aerodromes. To carry out these functions at all adequately, as well as the normal duties of a fighter, at least seven fighter

squadrons were needed in Malaya alone, without allowing for night fighters.

#### *Long-Range Bombers.*

86. The need for long-range bombers had been constantly pressed from the time I was first appointed Commander-in-Chief, Far East. At that time I had merely felt that they would be wanted without having any concrete proposals, but as the Japanese advanced into Southern Indo-China, the object for which they would be used became clear and definite. The targets which we wished to reach in Southern Indo-China were just within reach of Blenheim IV's from the Northern end of Malaya, and of Hudsons, but we had too few of the former and the latter were required for overseas reconnaissance.

Six Beauforts were flown from Australia a few days before the war started, but as these aircraft were not operational, and as the crews required considerable operational training in their use, the Air Officer Commanding, with my concurrence, sent all but one, which was retained in the hope of using it for photographic work, back to Australia in order that they might continue their training under suitable conditions.

#### *Other Requirements.*

87. Other requirements which were realised too late were special aircraft for photographic reconnaissance and transport aircraft for facilitating the rapid movement of squadrons. Photographic aircraft were first asked for in August, 1941, after the visit of a special photographic officer. The Dutch were ready to help us in the second requirement, but once war had started were making full use of their transport aircraft for their own purposes, and we felt the lack of having a few of our own available at very short notice.

It was also suggested at one time that a balloon barrage would be valuable for the protection of Singapore, especially the Naval Base. Experiments, however, proved that the climate and meteorology of Malaya were quite unsuitable for the use of kite balloons.

88. The strength and location of the Royal Air Force in the Far East on the 7th December, 1941, are given in Appendix J and a summary of serviceable aircraft in Malaya on different dates in December in Appendix K.

Our most serious deficiency at that time was in reserves, partly of pilots, but principally aircraft. It was not only a stock of reserve aeroplanes we wanted, but also a continuous flow of new aircraft to replace wastage, for aeroplanes must be regarded as expendable material, and there must be a regular, continuous channel of supply. Without these it was impossible to keep the squadrons up to their first-line establishment. Apart from the material weakness, failure to keep up what is commonly known as "a full breakfast table" always has an adverse effect on squadrons' morale.

89. There were several civil flying clubs in Malaya, and the Air Officer Commanding had organised for these an Auxiliary Air Force, which did useful work in communication and assistance to the Army in certain aspects of training.

#### IX.—ARMY STRENGTH AND REQUIREMENTS, MALAYA.

90. In the appreciation of the situation drawn up by the Commanders in Malaya previous to the Singapore Defence Conference of October,