'THE BEAUFIGHTER IN NORTH WESTERN AREA' by Wing Commander C.F.Read DFC

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This article covers all phases of operations by this Squadron during the period November 1942 to July 1943 - also items of general and technical interest are included. The Squadron during this period was equipped with Beaufighter Mk.1 and Mk V1, some of the latter being fitted with extra tanks. The maximum range worked on was 800 N.M. for the short range aircraft, and 1,000 N.M. for the long range, and 90% of sorties were up to the maximum range. The main difference between the Mk 1 and Mk V1. Beaufighter was the performance, the older aircraft, the Mk 1. being superior in speed by 15-20 knots which naturally made it more popular as far as the aircrews were concerned.

Shipping Cover

This was our biggest job and all convoys approaching or leaving Darwin were given cover between 1000 hours and 1500 hours, the period during which most enemy reconnaissance has been experienced. The Squadron to date has flown over 300 sorties covering convoys and each flight has averaged 5 hours. Usually one aircraft at a time was employed, relieved as necessary. This would be immediately increased if the convoy was attacked. It was found very difficult to sight the enemy aircraft before it dropped its bombs, especially with the usual broken cumulus cloud present. For this reason R/T between convoy and aircraft became esssential, and is now being used. Only one enemy aircraft was destoyed during this period and several others were damaged, but the presence of the Beaufighter proved valuable in deterring the enemy's attack and spoiling his aim. It was found that the time over the convoy should be no longer than one and a half hours as after this period the aircrews' efficiency deteriorated rapidly.

Strikes

During the latter part of 1942, while the A.I.F. were still present in force in Portuguese Timor, many attacks were made on enemy occupied villages and roads. These were usually hampered by difficulty in finding suitable targets. Villages generally were "shot up" without seeing any signs of enemy activity; however, reports indicated that many Jap casualties were caused in this manner. The winding feature of the Timor roads, and the mountainous country made straffing attacks difficult, and on occasions truck loads of Jap troops were seen but could not be attacked for this reason; this made us often wish in those days that we had some small bombs to drop. However, the development of Jap Aerodromes in Western Timor brought about a dicontinuence of these attacks.

Five attacks were carried out at intervals on the main Jap Aerodrome of Penfoei. The first four of these were successful and many enemy aircraft were damaged and distroyed. There was one outstanding reason for these earlier successes; complete surprise was achieved. On the fifth occasion, through an improved warning system, the Nips were warned of our approach, and, as soon as the Beaufighter pulled up from ground level for the attack dive, intense A/A fire was encountered, and we sustained 50% casualties, and in fact those aircraft that did return were all extensively damaged. In addition, the Nips had fighters circling overhead as base cover, and these chased and attacked for over 100 miles on the home journey. If you cannot achieve surprise in low flying attack of this discription, it is not worth the risk; a Beaufighter can be shot down by A/A fire the same as any other aircraft, and what is more important, is particularly susceptible to attack by enemy fighters, and of course, cannot be expected to strafe efficiently in the face of both air and ground opposition.

We have encountered enemy fighters, (Zeke, Hap and Rufe) on many occasions, always at or near ground level, and the only tactic is to turn into his attack as soon as possible, and then head for home at maximum speed; if you can get a start he will have a hard job catching you, but remember both "Zeke" and "Hap" have a speed advantage, particularly the latter. The Mk.1 Beaufighter will "wind up" to about 260 knots at sea level, at which speed both the above fighters have continuously attacked, and it is interesting to compare this with a "Spitfire" at sea level, which has a marked inferior speed to the Beaufighter.

In several attacks on Taberfane, Beaufighters have "mixed it" with "Rufe" or "Pete", but it proved very difficult to close to effective range against such manoeuvreable opponents, for it was found they would pull up into a loop or roll off as soon as they were in danger of being attacked, and of course it was impossible to follow them in the unmanoeuvreable Beaufighter...

Good co-operation between pilot and observer, violent evasive action, and a sharp lookout by both members of the crew got us home from many encounters with fighters. Finally, every Beaufighter pilot is well advised to treat "Zeke" and "Hap" with every respect, for in both these the Nips have a good aircraft; so avoid combat with them whenever possible.

Navigation

To every aircraft in the Squadron we installed an Astro Compass and Drift Recorder, and both these were used extensively by observers. All our operations were carried out over long stretches of sea, and as the last 100-150 miles was always carried out at 50 feet (to achieve surprise), accurate navigation was essential. It was the custom of the observer in the Flight Leader's

aircraft to do the final stages of navigation to the target, (the other observers by this time are looking aft for possible aircraft) because the pilots of all aircraft have their time taken in flying formation 40-50 feet above ground level. The navigating observer, on crossing the coast starts his stop watch, and passes time every few minutes to his pilot, and which side, port or starboard to expect the target. As can be seen, navigation at this final stage must be accurate to within several hundred yards because a sharp turn by the Leader to get on to the target at the last moment will disturb the entire formation. The formation, incidentally, should attack in "line abreast"; the main reason is to share the A/A fire. After the attack, each aircraft had to be prepared to navigate back to base alone as it was very infrequent that the entire formation formed up again on the Leader. During the last few months with improved R/T between aircraft, more control was possible, and the flight leader could pass instructions whenever he considered it necessary.

Compass swinging was a never ending job due to the deviations caused by the cannon firing. It was the custom to leave each aircraft 24 hours after the armament had been used and let the compasses settle down before reswinging them. If extensive operations were being carried out, when regular swinging was not possible, the rear compass or the astro compass was used. The average deviations experienced after cannon firing was 12 degrees in the front compass, and 3 degrees in the rear compass. When returning in formation, it was the custom for observers to compare notes, and to take an average course. The maximum deviation was 45 degrees in the front compass, but this was exceptional.

Wireless Equipment

Our Beaufighters are equipped with the usual RAAF set, the A.T.R.58., and having only the one set we had to adopt a rather complicated procedure during attacks. On the way to the target, the Flight Leader listened on the primary reconnaissance frequency, and the remaining aircraft in the formation were tuned up for R/T on a suitable high frequency using crystal control. Half an hour before the target the Leader changed to this R/T frequency and remained on it until well clear of the target when he changed back to primary reconnaissance for D/F bearings etc.. Wireless silence was always observed prior to the attack.

We found very early that crystal control was the only reliable means of R/T communication. Using self excited, slight differences in frequency between aircraft were sufficient to cause poor I.C., and we could not afford to have our observers with their heads down trying to adjust the sets in the middle of an attack.

The D.F. loop on the Beaufighter has a "Perspex" cover and during the wet season this warped very badly, jamming the loop. Also, on several occasions during high speed dives the cover and loop blew clean off the aircraft.

Throat microphones were used by all aircrews and were found to be satisfactory, although the average life of each microphone was six months; deterioration of the granulen being caused by heat, dust and perspiration.

Armament

We used the following loading for our ammunition. The 20 mm cannon were all loaded with 50-50 Ball and H.E.I., and the machine guns, 4 with A.P. only and 2 with incendiary. We never used tracer as it tends to distract attention from the sights. The harmonization was at 400 yards, rather far for air to air fighting, but our roll was ground straffing, and we opened fire at 1,000 yards and held it until we pulled out at about 50 feet. With a good burst of cannon on a Nip aircraft it would burst into flames, up to 100 feet in height, well before the Beaufighter actually passed over it; it was quite an experience flying through such a wall of smoke and flame.

The .303 machine guns, as far as aircraft armament, are obsolete. A good example was an attack by one of our Beaufighters on a beached float plane in the Aru Islands. The cannon had cut out, and while the observer was endeavouring to clear the stoppages, the pilot made five runs on the float plane using machine guns (.303) only, then, the observer managed to get one cannon going; the pilot made a final run, fired, and the float plane burst into a mass of flames.

The cannon, however, were very "touchy", and needed constant attention as the smallest amount of dust would cause stoppages. We kept toilet paper pasted over all the ejection openings to keep the dust out. This would blow of in the slipstream when the aircraft became airborne. However, it was a problem landing at an O.B. to top up with fuel as they were always very dusty, but a minimum of taxiing helped a lot.

We carried out three major modifications to the armament :-

- (1) Scare guns for the observer.
- (2) Bomb racks. (American type)
- (3) Two extra .303 machine guns for long range aircraft.

The observer's scare gun was loaded with tracer, and was effectively used by many observers against attacking fighters who showed reluctance to close in the face of a stream of tracer. Unfortunately the observer's cupola is small and the gun could not be effectively aimed and the observer had to take care, and not shoot through their own tail plane and rudder.

The bomb rack is a very recent modification and is fitted below the fuselage, carrying 2 x 100lb. or 2 x 300 lb. American Demolition Bombs. As the long range aircraft did not have any machine guns, we managed to squeeze two Brownings in the fuselage, firing forward, between each pair of cannon.

Enemy A/A Fire

The enemy equivalent of our Bofors we found superior due to the fact they were able to vary their fuse setting. The rounds appeared to be in magazines of five, which could be set to explode anywhere from 200 feet to 15,000 feet. On one occasion during a combined attack with high level bombers, it was amusing to look back, after passing through the target, at the Ack Ack shooting at the bombers which were about 8,000 feet, and all the bursts were about 500 feet above ground level; apparently the Nips had set all their fuses during the Beaufighter's attack and had forgotten, or been unable to change them to the correct height.

The light A/A caused a lot of damage to our aircraft, and after an attack nearly all aircraft would have holes in them. One aircraft returned with over 150 holes (we stopped counting at that figure), but quite lot of this was due to enemy fighters. Several aircraft were hit in the wings with 20 mm shells which exploded and did considerable internal damage, and it was always quicker to replace the wing than to repair it.

The Beaufighter's metal armour plate would not stop anything except shrapnel or sensitive cannon shell, but the glass wind shield was very good and stopped all .303. We found the sensitive cannon shells, as used by the fighters, would explode outside the fuselage on the slightest contact and do little or no damage; these, of course, were all fired during stern attacks.

Weather

A considerable amount of cloud and rain was encountered during the wet season, and even during the dry it was nearly always bad over and en route to the target; there appears to be a persistent front about 8 degrees S. north of Darwin, but the weather never really worried our aircrews except when it was raining over the target which made accurate shooting impossible.

New aircrews found the towering cumulus and heavy tropical rain frightening at first, but we found you could always get a single Beaufighter through any weather at all, provided, of course, the pilot knew his intrument flying. Our problem was getting the formation to the target intact. The Flight Leader would always fly fairly low in the rain, avoiding the clouds, and the rest of the formation would stay in close. Even in the heaviest rain with the storm window open, visibility was 25 yards, but it is impossible to keep in formation through cumulus cloud with its reduced visibility and severe turbulence. During the entire nine months operations, which included wet season, we only stopped flying one day due to the weather.

Quite a number of strikes were made on enemy bases timed to arrive at first light, but could only be undertaken successfully when the weather was clear as it entails approximately 2 hours night flying in formation. When the weather was known to be doubtful a rendezvous point was arranged 30-40 miles from the target, and each aircraft circled this once if it became separated from the formation, and usually all the aircraft would turn up and could proceed with the attack. A lesser number of strikes were carried out at last light, but these were kept to a minimum owing to difficulties in navigation and lack of fuel on return.

General

The Squadron losses due to enemy action were 16 aircraft and 14 crews. The 2 crews which returned to the Squadron safely after losing their aircraft were, strangely enough, engaged on the same operation. Both aircraft were damaged by A/A fire during an attack on a Timor village, one force landed about 1 mile from the island and the crew swam ashore and eventually, with the help of the natives and the A.I.F. Commando Troops, returned to Australia. The other aircraft with one elevator shot away, completed a hazardous trip back to Australia and the crew baled out safely over Bathurst Island.

A number of aircraft were lost in accidents on the landing strip; the most common being a swing to the right during take-off, although a number of landing accidents also occurred, but the cause of the latter, in most cases, was due to damage during operations. Even experienced pilots (ex instructors) found difficulty in strip landings at first, especially when there was a 10-15 M.P.H. cross wind blowing. With pilots of 300 hours, fresh from O.T.U., 80% had accidents either taking off or landing, but with increased training on strip flying, accident rates decreased to reasonable proportions.

The present aircraft strength is 21 and since the formation of the unit, 11 months ago, 28 aircraft have been lost or badly damaged. This includes those mentioned above as being lost in action, 2 were burnt on the ground by air raids and the remainder in flying accidents.

Enemy losses

The Squadron has destroyed 58 enemy aircraft and damaged 61 others. The destroyed aircraft are classified as such, having been seen to be burning furiously after the attack, while those classed as damaged were fired at but not seen to catch fire. The damaged aircraft were usually those fired on with machine guns only, the cannon having stopped. These figures show a good credit during 9 months operations, and the Squadron has been fortunate in having such small losses.