

IS THE BOMBER OBSOLESCEMENT ?

Alfred's fleet not driven off Rollo the Norseman, Normandy might have been founded in England instead of in France. About a century and a half later the Normans slipped across the Channel unopposed. It was after the defeat of the Armada in 1588 that Shakespeare wrote the famous lines:—

" This precious stone set in the silver sea
 " Which serves it in the office of a wall,
 " Or as a moat defensive to a house,
 " Against the envy of less happier lands."

William of Orange brought Dutch troops into England in 1688, but he came at the invitation of Englishmen, and the majority of them welcomed him. Napoleon's attempt to invade was baulked by British sea power, and in the war of 1914-18 the Royal Navy always ruled the surface of the seas. On the other hand English or British armies have landed on the Continent on innumerable occasions. So long as English or British battleships controlled the seas, England was safe at home and could attack continental enemies.

Now sea power by itself is not enough. Britain must rule the air before sea power can become effective. On the water as well as on land the dictum of Field Marshal Montgomery holds good: "First we must win the air

battle, and then we win the land (or sea) battle." So it all boils down to the question of whether air attack or air defence is to be the master in the future.

We have suggested above that the Battle of Britain provides no conclusive answer to the query, because the Germans mishandled their attack. It may also be held that the bomber offensive against Germany fails to solve the problem. Though anti-aircraft guns are a valuable part of the defence, the only real counter-weapon to the bomber is the fighter aircraft. Germany failed to stop the Allied bombers from achieving their object; but it may be held that that was due to another German mistake. At one point they slowed down the production of bombers in order to concentrate on fighters. It has been suggested by some students that if the Germans had taken that step earlier they might have mastered the attack of the Allies.

It is not much use arguing about "ifs" which did not happen. For the moment we are glad enough to have beaten Germany, even though our success was largely due to German mistakes. Against some more clever enemy in the future (the very distant future, we all hope) our survival may well depend on air defence proving stronger than even well-planned air attack. If the rocket is developed into a weapon of accuracy and no antidote to it is discovered, then no sort of defence may avail us. But if air attack is to remain a matter of piloted bombers, then we must concentrate every nerve and brain and sinew on seeing that our defence is able again to beat off air attack.

Target Analysis

Tonnage of Bombs Dropped and Number of Sea Mines Laid by R.A.F. Bomber Command Monthly from September, 1939, to May, 1945

IN the following analysis the employment of every single bomb dropped by Bomber Command in the 1939-45 war in Europe is shown. Students of military strategy and historians will find endless interest in these figures. The continual fluctuation and change in the fortunes of war can be traced, as can also the ever-growing strength of Britain's bomber effort. Industrial towns, which received no attention until after the *Luftwaffe* started indiscriminate attacks on Britain in 1940, received by far the heaviest punishing. Naval targets had pride of place in 1940, but by 1945 they were fifth in the order of bomb tonnage.

Target	ON THE CITIES	Tons.
Berlin	...	45,517
Essen	...	36,420
Cologne	...	34,711
Duisburg	...	30,025
Hamburg	...	22,580
Dortmund	...	22,242
Stuttgart	...	21,016
Gelsenkirchen	...	19,606
Mannheim Ludwigsbaven	...	18,114
Dusseldorf	...	17,769
Kiel	...	16,712
Frankfurt	...	15,090
Hanover	...	14,776
Le Havre	...	13,449
Nuremberg	...	13,021
Bremen	...	12,531
Bochum	...	10,784
Calais	...	9,736
Brest	...	8,128
Boulogne	...	7,827

	Industrial Towns	Troops and Defences	Transportation	Naval Targets	Oil Targets	A/Fs. & A/C. Factories	Specific Industries	Military Installations	Miscellaneous	Total Tons	No. of Mines Laid
1939											
September	—	—	—	6	—	—	—	—	—	6	—
October	—	—	—	—	—	—	—	—	—	—	—
November	—	—	—	—	—	—	—	—	—	—	—
December	—	—	—	25	—	—	—	—	—	25	—
Total 1939	—	—	—	31	—	—	—	—	—	31	—
1940											
January	—	—	—	—	—	1	—	—	—	1	—
February	—	—	—	1	—	—	—	—	—	1	—
March	—	—	—	11	—	20	—	—	—	31	—
April	—	—	—	18	—	76	—	—	18	112	118
May	—	1,245	249	—	117	50	7	—	—	1,608	70
June	—	621	616	22	375	274	192	—	200	2,300	97
July	—	—	225	176	219	488	39	—	110	1,257	156
August	—	—	147	97	297	445	201	—	178	1,365	138
September	—	—	241	1,399	120	184	172	—	223	2,339	49
October	—	—	167	623	209	275	187	—	100	1,651	56
November	—	—	338	294	204	231	183	—	96	1,316	31
December	137	—	165	281	88	105	104	—	112	992	47
Total 1940	137	1,866	2,148	2,802	1,710	2,149	1,085	—	1,037	13,033	732=510 tons
1941											
January	97	—	107	372	112	25	45	—	19	777	45
February	513	—	80	491	140	96	45	—	66	1,431	66
March	716	—	18	687	153	101	3	—	66	1,744	70
April	972	—	21	1,035	79	108	32	—	149	2,336	129
May	1,513	—	32	941	34	59	152	—	115	2,846	121
June	2,138	—	768	865	4	103	115	—	317	4,310	76
July	1,348	—	1,532	901	48	122	424	—	9	4,384	133
August	1,411	—	1,874	546	6	144	103	—	158	4,242	81
September	962	—	708	901	—	80	204	—	34	2,889	101
October	910	—	1,029	686	—	164	144	—	51	2,984	75
November	1,062	—	—	482	—	38	8	—	317	1,907	111
December	697	—	—	940	—	8	58	—	91	1,794	47
Total 1941	42,330	—	6,169	8,847	570	1,048	1,333	—	1,392	31,704	1,055=707 tons