

F4717, a standard "Mk. II" F.2B of No. 2 Squadron, displaying the unofficial Flight markings of the early 1920s. Squadron marking was two red bands around rear fuselage, with individual Flight identity by centre-band of white (A), yellow (B) or blue (C) Flight.

(Photo: late W. E. Johns)

# Bristol F.2B Fighters: R.A.F. 1918-32

by Chaz Bowyer

The brainchild of Frank Barnwell, chief designer of the then (1916) British & Colonial Aeroplane Co. Ltd., the Bristol F.2B was to become the supreme Allied two-seat fighter of the First World War. In the last 18 months of war operations, the F.2B established an enviable record for combat, reliability and sheer toughness. Then for close on 14 of the "peace" years that followed, the Bristol F.2B alongside its sturdy companion, the de Havilland D.H.9A bore the onus of Royal Air Force commitments through the British Empire.

The Bristol F.2B was simply and classically named "Fighter" and justified its title a thousandfold. This *Profile* represents only a brief account of the F.2B in service with the R.A.F. during the years from the end of the 1914-18 War until its final withdrawal from squadron use in 1932. For the complementary development history of the Bristol Fighter, readers are referred to the excellent *Profile* No. 21 by J. M. Bruce.

#### **PROLOGUE**

With the rapid run down of the Royal Air Force after the Armistice in November 1918, Hugh Trenchard, as Chief of Air Staff, fought tooth-and-nail to preserve the independence of the youngest Service. This was a formidable task because Trenchard was compelled to build the foundations of the future R.A.F. on parsimonious financial budgets and against renewed opposition from the other two Services aided by misguided politicians—additionally, and not least, by prevailing public opinion; a taxpaying public weary of war and all its embellishments.

Trenchard had to be content to equip his meagre establishment of squadrons with the ragial of wartime-designed aircraft—money for new designs was just not forthcoming. Two proven aircraft types immediately available to him in reasonable quantities were the de Havilland D.H.9A two-seat bomber and the Bristol F.2B.

Although used in the main for pure fighting rôles, the F.2B had also shown its adaptability for more general duties such as photographic-reconnaissance, broad-brush tactical army cooperation and, to a lesser extent, bombing. With a peacetime necessity for versatility in its equipment, the R.A.F. had little choice but to employ the aircraft in practically every rôle except that for which it had been designed. For nearly 14 years the F.2B soldiered on—and did so in spite of increasing age, an appalling lack of maintenance facilities and in flying conditions never envisaged for its use. That the F.2Bs coped so magnificently in their jack-of-all-trades rôle was not only a tribute to the designs but also a measure of the quality of the crews who flew and serviced the aircraft despite rapidly advancing total obsolescence.

## U.K. AND GERMANY

In December 1918, the Royal Air Force still possessed 16 squadrons fully equipped with F.2Bs—mainly in northern Europe as part of the occupation forces in Germany. However, once the demobilization programme settled into a fairly smooth administration, many units quickly became mere shells of their wartime semblances. Thus, by November 1919, only nine squadrons were still established with F.2Bs-these were Nos. 9, 11, 12, 20, 22, 48, 105, 111 and 141. Their duties were by no means onerous, consisting mainly in providing communications and mail services to the forces, interspersed with a variety of training exercises and competitions. These latter activities were designed to preserve a competent air "police force" as protection to the occupation troops. Of the units mentioned, Nos. 9, 11 and 22 Squadrons were the first to be disbanded—on the last day of 1919. By February 1,

1920, Nos. 48, 105, 111 and 141 had also been disbanded; leaving just one fully-operational F.2B (No. 12) squadron in Germany. Based at Heumar initially, but moving to Bickendorf in 1920, 12 Squadron became virtually a dumping ground for other disbanding units' F.2Bs. Meanwhile, an aircraft storage unit, administered by No. 12's commander, became the main reception centre for a wide variety of other aircraft types. No. 12 Squadron continued to provide essential air communication services to the occupation army (the British Army of the Rhine) until July 22, 1922, on which date the unit officially disbanded.

February 1, 1920 saw the rebirth of several R.A.F. units, mainly in India and the Middle East; but the only United Kingdom squadron to be equipped with F.2Bs was No. 2 which reformed at Castlebar, Ireland on that date, charged with army-cooperation duties



Two views of J6586 (Rolls-Royce Falcon III). This was the first of an eventual batch of 215 F.2Bs (J6587-J6800), built to a new, post-1918 contract. J6586 was widely tested with a range of desert equipment—including tropical cooling system—for use in India and Iraq, 1921.

(Photos: via C. H. Barnes)





Standard Mk. I F.2Bs of No. 24 Squadron, climbing for height over typical English landscape, 1919. In foreground is F4341 with wheel covers omitted. Note that no Scarff rings or other armament fitted. (Photo: Ministry of Defence (Air))

with the Irish Command, R.A.F. In April 1920, two more F.2B squadrons rejoined the R.A.F.'s front-line strength. No. 4 was increased from cadre to full establishment on April 30, and at Kenley on April 30, No. 24 Squadron was reformed with F.2Bs; its terms of reference being to provide V.I.P. communication service and Air Staff pilot training. Although mainly equipped with standard F.2Bs, No. 24's establishment included an example of the first Coupe version F.2B, wherein the rear gunner's cockpit was converted to dual seating, protected from the elements by a hinged ply cover. Only two more R.A.F. regular squadrons were to be F.2B-equipped in the U.K. On April 1, 1924, No. 13 reformed at Kenley and, once fully operational, moved base to Andover in June of that year. On the same date, No. 16 Squadron reformed at Old Sarum and was attached to the School of Army Cooperation there. Both units were equipped with "Mk. II" F.2Bs —a slightly-modified form of the Mk. I, incorporating an under-fuselage "pick-up" hook for retrieving messages from ground forces (the standard method in use at that period) plus provision in the gunner's cockpit for W/T and, occasionally, R/T signalling equipment.

Until 1922, all F.2Bs in R.A.F. service, with few exceptions, were still marked in the standard 1918 colour schemes. However, in March 1922, an overall aluminium finish was designated and this "peacetime" finish was generally in use by 1923 throughout the Service.

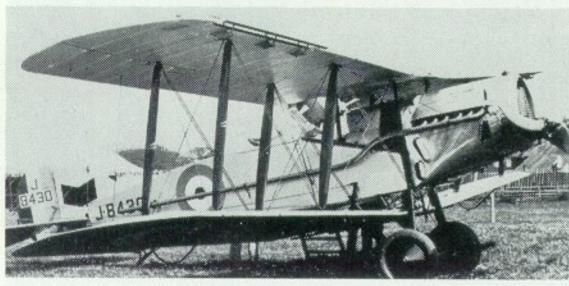
In September 1922, one U.K.-based F.2B unit, No. 4 Squadron, left Britain aboard H.M.S. Ark Royal, hastily despatched as part of the reinforcement formation for the British garrison at Chanak, Gallipoli. No. 4 Squadron remained in Gallipoli until September 1923 and then returned to the U.K. being subsequently retitled No. 4 (Army Cooperation) Squadron in the following year.

In 1926, the Bristol F.2B underwent a complete redesign at its parent manufacturer. Until that time, most F.2Bs had been produced as Mk. Is, the wartime standard production form—or modified to incorporate a variety of items intended to convert the Mk. I to its peacetime army cooperation rôle, both in U.K. and overseas. For "foreign service", such modifications included improved tropical radiators, slightly larger "desert" tyres and the normal impedimenta of contemporary army-cooperation aircraft—all of which



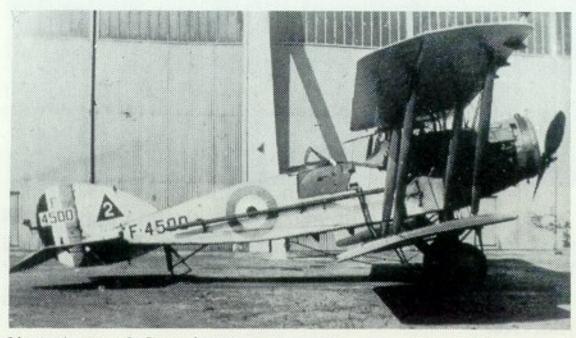
Another formation of 24 Squadron F.2Bs, July 1919. Nearest F.2B (H1460), was one of the first "Coupe" versions, converted for passenger transport and general communications.

(Photo: J. M. Bruce/G. S. Leslie Collection)



J8430 was the second F.2B built of a batch, J8429—J8458, specially converted to two-seat, dual control and completed between January and June 1927. This particular F.2B was further modified to include large rear cockpit windscreen and upper-wing auto-slots. Wheel covers were doped in red; while aircraft was brought onto the strength of No. 24 Squadron for maintenance purposes, as a personal transport for the use of Edward, H.R.H. The Prince of Wales, later H.M. King Edward VIII.

(Photo: via C. H. Barnes)



Variation on 2 Squadron's unit markings, a white "2" on a red triangle, seen here at Manston, on the fin of F4500. Wing leading-edge slats and navigation light housings are in evidence.

(Photo: via P. M. Jarrett)

Three F.2Bs of No. 2 Squadron (B1925 leading J6662 and C767 nearest) over their home base, Manston, Kent. No. 2 Squadron's motto, Hereward was most apt, its literal translation being "Guardians of the Army". (Photo: via C. H. Barnes)



provided (ostensibly) a "Mk. II" version F.2B. An F.2B (R.A.F. serial H1420), was further modified throughout to give higher load-bearing structure, an oleo tailskid, dual controls and a rather stronger undercarriage. H1420 was extensively tested at Old Sarum in the summer of 1926 and thus became the prototype Mk. III F.2B. Eventually this aircraft was allotted to No. 4 Squadron for normal duties. By the end of 1926, the R.A.F. as a whole had approximately 730 first-line aircraft on establishment, spread among 61 squadrons and 2 Coastal Reconnaissance flights. Of this total, 12 squadrons were F.2B-equipped; five in the U.K. and the remainder overseas; almost 20% of the R.A.F.'s operational strength.

Then, in April 1927, another U.K.-based F.2B unit was sent overseas on detachment. No. 2 Squadron sailed to Shanghai in H.M.S. Hermes as reinforcement to the Shanghai Defence Force, at that time under considerable pressure from civil disturbances in the colony. In the U.K. No. 13 Squadron re-equipped in August 1927, exchanging its F.2Bs for Armstrong Whitworth Atlas army-cooperation two-seaters. And two years later, Nos. 2 and 4 Squadrons also reequipped with Atlas aircraft, respectively in December and October, 1929. The sole remaining F.2B squadron in the U.K. No. 16, finally converted to the Atlas in January 1931. Thereafter the only "squadron" F.2Bs were those flown by the Oxford and Cambridge University Air Squadrons. Each was established for five F.2Bs in 1930, in addition to their 10 Avro Lynx. These particular F.2Bs were Mk. IV standard, a further modified version of the Mk. III, incorporating a greatly strengthened undercarriage and general structure, automatic Handley Page "slots" on mainplanes and, most easily recognizable outwardly, an enlarged fin and horn-balanced rudder. These particular squadrons were among the last F.2Bs to bear a newly-introduced R.A.F. colour marking whereby the rudder stripes of red, white and blue were "reversed" from their 1918 style. That is, after August 15, 1930, all R.A.F. aircraft were ordered to be repainted to display rudder stripes as Red next to the rudder post. This initial order required such marking conversion to be completed by October 30, 1930. Such markings supplemented normal Flight colours authorized on December 18, 1924 whereby wheel discs were permitted to be coloured Red (A Flt), Yellow (B Flt) or Blue (C Flt) within an individual squadron. Certain extensions to this Flight colour identity were left to the discretion of individual commanders of groups and wings.

Although obsolete and generally replaced by postwar-designed aircraft types by 1932, the Bristol F.2Bs continued to be used in many training establishments of the R.A.F. for several years, albeit in merely ones or twos.

Today in the U.K., only two known examples have survived. The first, E2581, in purported authentic 1918 wartime markings, is displayed in the Imperial War Museum in London. The second is the only flying example, the superbly-restored (though rather hybrid) D8096; now a Shuttleworth Collection resident at Old Warden Aerodrome, near Biggleswade in Bedfordshire. And it probably speaks volumes for the sheer "character" of the design to quote the description given by a well-known modern test pilot, Godfrey



Back-to-Back—the classic fighting arrangement for the two-man crew of a Bristol Fighter.

(Photo: Ministry of Defence (Air))

Auty, after he had flown Old Warden's veteran, when he said: '... From the moment of placing one's left foot on the root of the lower port wing to hoist oneself into the cockpit, there is a feeling of unity between man and machine.'

#### INDIA

Although the turbulent and bloody history of Britain's Imperial control of the Indian subcontinent covered a vast area of wars and operations, the major region over which the British air services operated during the years 1916–1939 was the North-West Frontier—a wild, mountainous territory now encompassed by the independent state of West Pakistan. In particular, the tribal areas adjacent to the Afghanistan border proved to be a constant source of dissension, rebellions and large-scale wars, involving many thousands of men.

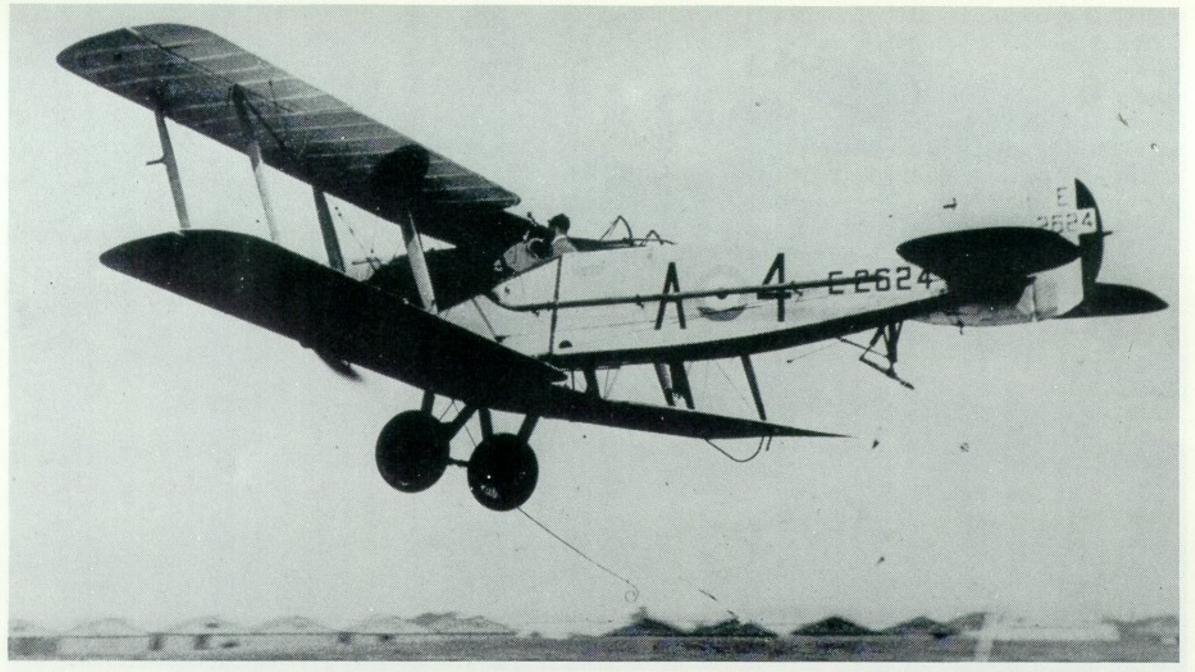
During the 1914–18 war, the first Royal Flying Corps' units—Nos. 31 and 114 Squadrons—gave an inkling of the potential of air power in assisting the Army to control the dissident "Pathans"—a collective title for an overall population of some 10 million fighting tribesmen of many distinctly individual characters and wavering loyalties. Overwhelmingly Moslem in faith, the Pathans were born fighting men to whom the excitement of battle with the "infidels" was a way of life, apart from the many mundane opportunities for gaining booty. As hill and mountain fighters, these tribesmen had no equal and it was against such skilled opponents that the British Services were pitted.

At the time of the November 1918 Armistice in Europe, only two R.A.F. squadrons were based in India, the already-noted Nos. 31 and 114 Squadrons—though the latter had its main aircraft Flights detached widely; one being as far afield as Aden. Henceforward, the first Bristol F.2Bs to arrive in India were those of

Nos. 20 and 48 Squadrons, both units being hastily transferred from Germany to India in the summer of 1919 to reinforce British and Indian Government forces involved in the Third Afghan War. Almost immediately, No. 20 Squadron was split into detachments of four F.2Bs each at Tank, Bannu and Sora Rogha; while 48 Squadron took up residence at Quetta, to the southwest. Two other squadrons soon joined them-No. 97 (D.H.10s) and No. 99 (D.H.9As) -and all units were immediately involved in daily operations, bombing and strafing the would-be invaders from Afghanistan. An example of these operations was the so-called Battle of Mandanna Hill -December 20-25, 1919, when four F.2Bs, six D.H.9As and three D.H.10s kept up a continuous bombing assault for the whole five-day period. Further operations continued into the new year and were by no means as one-sided as might be thought, as can be seen by the results of a specific raid in the Ahnai Jangi Gorge on January 14, 1920. Three F.2Bs of 20 Squadron were lost to Pathan rifle-fire. Two of these were completely wrecked—and their crews killed while the third F.2B crashed without serious injury to its crew.

On February 1, 1920, No. 48 Squadron at Quetta was re-numbered to become the reborn 5 Squadron, and 114 Squadron became renumbered 28 Squadron. (Within a few weeks Nos. 97 and 99 Squadrons had also been retitled as 60 and 27 Squadrons respectively). By June 1, 1920 the R.A.F. in India could muster a total of 67 serviceable aircraft for operations—40 of which were Bristol F.2Bs. The "paper" changes of titles in no way interfered with operations which continued until May 7, when tribal leaders finally surrendered to governmental terms of "peace"—a relative term at any period of the Frontier's history.

By September 1920, the only unit in direct support



E2624, "4" of A Flight, No. 4 Squadron demonstrating the hook-up method of retrieving messages from the ground—the main procedure in use in the 1920s and early 1930s by all RAF Army Cooperation aircraft. (Photo: Author's Collection)

of army garrisons in Waziristan was 20 Squadron; although all other squadrons continued to be immediately available. No. 20's Bristols were maintained in semi-primitive conditions, usually in the open where they were subject to all the depredations of a blistering Indian sun, sudden dust storms and ageing airframes and aero-engines—the latter constantly overheating as pilots struggled to maintain or gain height in the thin air of the mountainous frontier. Constant flying in temperature ranges of zero to 120 degrees Fahrenheit and navigating through mountain "nullahs" (passes) bounded each side by rock hills reaching upwards by thousands of feet meant only one thing—the R.A.F.'s aircrews achieved their skills by dint of undiluted hard experience.

Most F.2Bs of that period were of wartime vintage—indeed, several of No. 20's Bristols still carried patched-over German bullet holes in their wings—and crews literally took their lives in their own hands each time they took-off. For example, one of 20 Squadron's Flight commanders had his engine disintegrate at 2,000 feet. Only by sheer airmanship did he manage to get his Bristol down safely—a mishap which nearly terminated the career of a future Chief of Air Staff, Sir John Slessor. Nor was the general state of maintenance of the R.A.F. in India helped by the niggardly attitude of the Indian Government in supplying funds for spares and replacements.

Under the contemporary arrangements for financing the British Fighting Services, the R.A.F.'s annual "budget" was merely one small section of the main Army account; with an inevitable diminution of the air Service's allotment of money. As one ex-F.2B pilot put it: 'We flew over the Frontier hills on one magneto because the Government of India could "not afford" to pay for a second.'

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In India, 1920-21, it was no uncommon sight for three or four aircraft to be "cannibalised" for spare parts in order to put one aircraft into the air. Even then, F.2Bs were often required to embark on operations, with full warloads, on their metal wheel rims new tyres were "unavailable". This situation continued for several years and was only partially resolved by the protests of many individuals; one of whom was the commander of 31 Squadron, Squadron Leader Arthur T. Harris. This future chief of R.A.F. Bomber Command in World War Two became so incensed at the deplorable state of maintenance and lack of financial support, even for essentials, that finally he refused to send out his pilots on patrols and then handed in his resignation from the R.A.F. The overall effect of this near-scandalous situation was reflected in the annual average figure of flying hours accomplished. Throughout 1921, each aircraft in India flew a scant average of 44 hours, compared with 119 hours per aircraft in Iraq.

Serviceability continued to depreciate during 1922 although this fact did not deter pilots from trying their utmost to fulfill their duties. On April 6, four squadrons were ordered to muster "all available" aircraft for immediate operations against a large tribal force investing the army garrison at Wana Fort. Of 30 aircraft ostensibly available in those squadrons, only 12 were declared in any sense serviceable; seven of them being F.2Bs. At the end of the same month, of the six resident squadrons in India, only 49 aircraft were considered fit for operations; 38 of which were, again, Bristol F.2Bs. Such a meagre number was expected to maintain constant support for the many forward army garrisons and formations scattered throughout an area of nearly 30,000 square miles roughly the size of Scotland.

FARE



Scene at RAF Halton, Bucks. airfield in 1923. F.2Bs, J6880 (nearest) and F4845 (ex-12 Squadron) which were part of the "Three Types Team Race" entered by Halton in the Duke of York's Cup race at Hendon on June 30, 1923 and, in the event, the winning team. Other aircraft in the background is an Avro 504K. (Photo: P. M. Jarrett)



F4502, "B7", piloted by Flight Cadet R. L. R. Atcherley (later, Air Chief Marshal Sir Richard Atcherley), landing past a line of C Flight Avro 504Ks (nearest, D8863, "C3"), Cranwell.

(Photo: Ministry of Defence (Air))

Full establishment of a Bristol F.2B squadron at that time comprised 12 aircraft, 21 officers, 25 N.C.O.s, 89 airmen and 90 Indian tradesmen and labourers. Yet on August 31, 1922, of the four F.2B units, only 27 of the 48-aircraft establishment were fit for flying. And these four squadrons, Nos. 5, 20, 28 and 31—No. 31 having re-equipped with F.2Bs in 1921—represented two-thirds of the R.A.F.'s fighting potential in India at that time.

The scandal (for it was no less) of the R.A.F.'s position in India finally forced the British Government to take action and Air Vice-Marshal Sir John Salmond was sent to India to investigate and report on the whole matter. His findings were summarized in his report to the Viceroy of India in August 1922. In blunt terms, Salmond declared the R.A.F. in India as being virtually non-effective and whose subordination to the Army had to be rectified if air control were to be fully exploited. Among his many recommendations was a raising of the squadron establishment to eight. Although these suggestions were agreed by higher authority, it was to be another six years before the two extra squadrons arrived in India.

On December 17, 1922, operations began in the

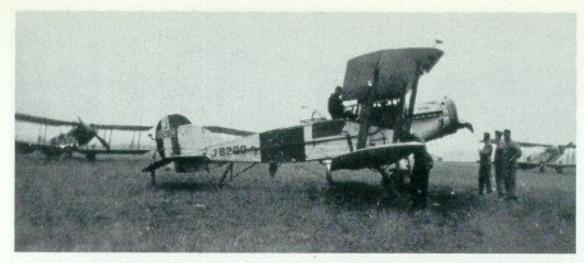
Razmak area and 28 Squadron moved from Kohat to a forward airfield at Fort Dardoni. In freezing conditions the operations continued until May 1923 with the aircraft in dawn-to-dusk daily action. On January 24, 1923 an F.2B of 28 Squadron was forced to land in tribal territory, its downfall being caused by a box of Baby incendiary bombs disintegrating in the aircraft and setting fire to the fuselage. The F.2Bs crew, Flying Officers R. M. Foster, D.F.C. and L. M. Ridley, survived the crash-landing, only to be seized by hostile tribesmen. Stripped and beaten, they were then staked out in the centre of the target village with a threat of instant death should any aircraft bomb the village. Luckily, both men survived and were eventually returned to safety on February 12. It was just one example of the treatment all crews could expect if forced-down in hostile country-and not all such crews could rely on being returned unharmed or even alive.

Another hazard was the constantly-changing weather. In July 1923, during a series of sporadic raids near Razmak, dense cloud conditions suddenly closed in among the hills surrounding the target area, causing several crashes, including two F.2Bs of 20 Squadron

A straight-from-the-factory example of the dual control/seat version of the F.2B supplied to the RAF Cadet College, Cranwell in 1925. This particular aircraft (H1642) was reconditioned to "J" (or "Mk. II") standard in October 1925.

(Photo: Bristol ref. 494, courtesy Flight International)





A Mk. IV in "enemy" rear fuselage markings for the September 1929 UK Air Exercise, when J8290 was serving with 13 Squadron. (Photo: via C. H. Barnes)

whose four crew members were killed. Serviceability of aircraft was still poor and on March 31 a total of 61 aircraft was declared fit for operations, 46 of these being F.2Bs.

Continuing their constant watch-and-ward rôle over the frontier province, in 1925 the R.A.F. squadrons were given a unique opportunity to demonstrate the efficacy of air power alone in dealing with a tribal uprising. From July to October 1924, tribes in southern Waziristan, notably the Mahsuds, had engaged in a number of attacks on Government or Service outposts. Finally, they had been subjugated and came to terms. One exception was the Abdur Rahman Khel, a tribe which continued its forays against army posts at Manzai, Spli Toi and Gomal. The Air Officer Commanding R.A.F., India, decided to undertake conclusive air operations against these rebels; but without the customary support of the costly and cumbrous army formations. Wing Commander R. C. M. Pink—Officer Commanding No. 2 (India) Wing—was nominated in charge of the whole operations and made his headquarters at Tank. The D.H.9As of 27 and 60 Squadrons moved to forward airfields at Miranshah, with 5 Squadrons' F.2Bs based at Tank.

On March 9, operations started on a round-theclock basis; the D.H.9As bombing by day, while No. 5's F.2Bs flew day reconnaissances and then bombed by the light of flares through the nights. For 54 days and nights these sorties continued until the tribal chiefs came to terms—demoralized by the constant

# Key to colour illustrations

- 1 F.2B, C801 of 5 Squadron, India, circa 1925.
- 2 J6758 of 20 Squadron, India, circa 1924.
- 3 Mk. I, F4611, 48 Squadron, Quetta, India, 1919.
- 4 FR4582, a rebuilt Mk. II F.2B, of 208 Squadron, Ismailia, Egypt, 1928.

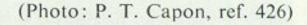
attentions of the R.A.F. Flying a total of 2,720 hours for the loss of one D.H.9A and its crew, the R.A.F. had successfully conducted the whole campaign from its own resources. Immortalized in R.A.F. history as "Pink's War", this brief campaign proved to be the turning-point in policy for the Indian Government in its attitude to both the R.A.F. and the whole question of tribal control on the northern frontier.

By 1926, the general maintenance position of the R.A.F. in India had improved greatly, thus permitting far more extensive flying. For example, No. 5 Squadron flew an annual total of 3,194 hours that year, an average of 266 hours per aircraft. Although anti-tribal operations continued spasmodically, much of the F.2Bs work was flown in their major rôle, army cooperation. This comprised many hours of photographic-reconnaissance, enabling accurate wholesale mapping of the frontier areas to be completed; and continuing improvement in direct communications air/ground/air with outlying and mobile army formations.

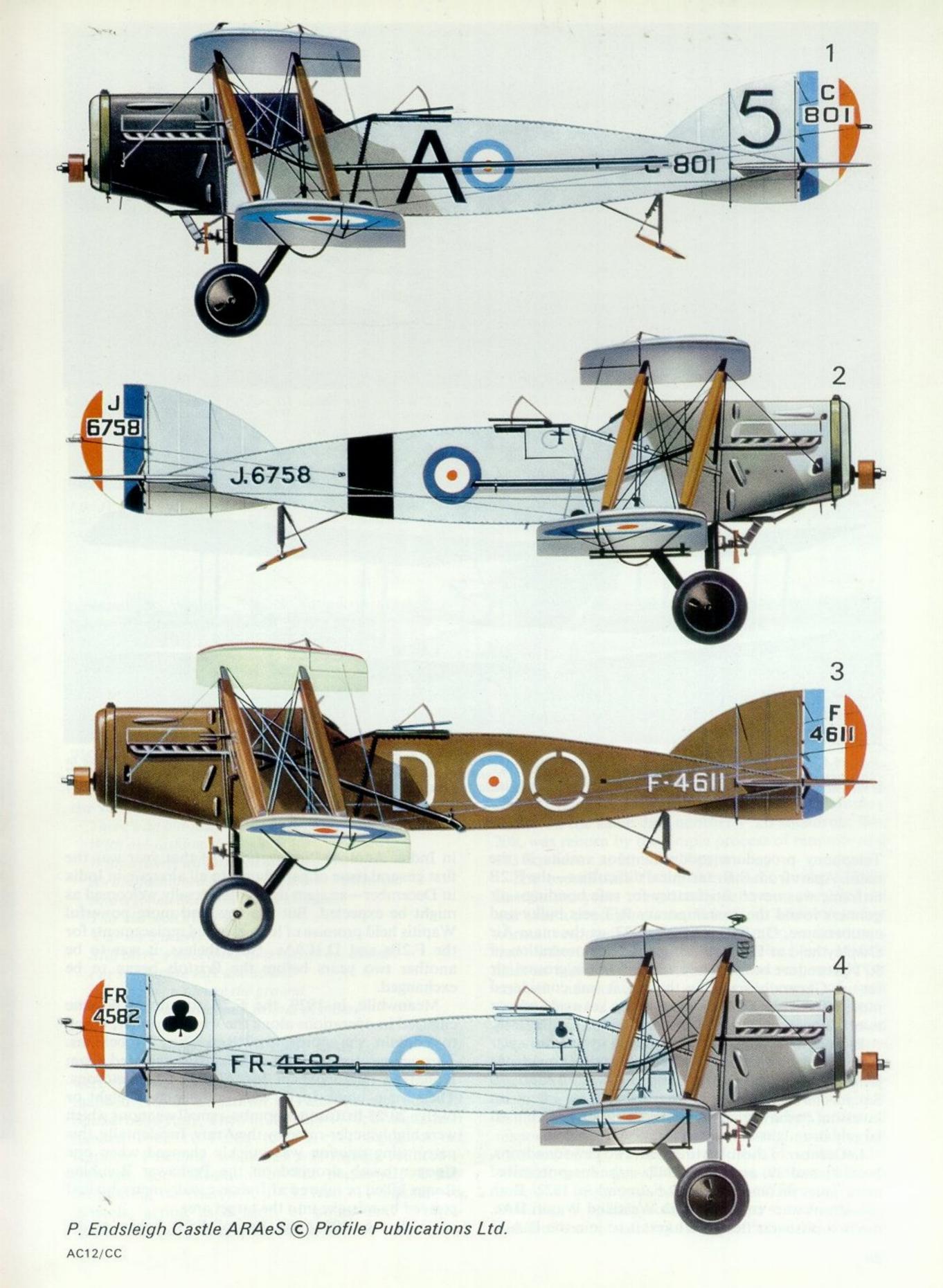
All F.2Bs were fitted with the standard underfuselage pick-up "hook" for retrieving messages from the ground. Even so, a major problem was that of developing a satisfactory means of delivering such intelligence to the army columns. The normal method of flying low over the recipients and literally handdropping any message was not only time-wasting but, in the hill country, decidedley dangerous for air crews fighting against up-currents and heat "bumps" among the mountains.

In 1927, series of experiments were made with the use of W/T and R/T equipment fitted in the rear cockpits of the Bristols. While Wireless Telegraphy using the Morse Code was reasonably successful, the Radio

H1598—another Cranwell F.2B, seen here at Stag Lane airfield, Hendon in May, 1925.









The first production Mk. III Bristol Fighter, J8251 (Type 96), fitted with Rolls-Royce Falcon III engine. Flight tests were flown on October 7, 1926. Clearly visible are under-fuselage pick-up hook and redesigned tail skid. (Photo: via C. H. Barnes)



Type 96A, Mk. IIIA (H1417) in March, 1926. This F.2B became the prototype Mk. IV F.2B and had square-cut upper wing tips, due to convenience of affixing wing auto-slots (linked to ailerons). Originally converted to "Mk. II" standard on November 15, 1924; H1417 is seen here with the characteristic Mk. IV larger fin and horn-balanced rudder. (Photo: via C. H. Barnes)

Telephony procedure produced poor results in the main. Apart from their technical difficulties—the F.2B airframe was never satisfactory for safe bonding—air gunners found the contemporary R/T sets bulky and cumbersome. On February 21, 1927, at the mass Air Display held at Delhi, F.2Bs gave a demonstration of R/T procedure both in the air and in an air/ground/air set-up. Generally speaking though, it was considered more efficient to have each squadron set aside one or two F.2Bs for R/T duties, specially fitted for the task.

By June 1927, operations reopened in the Peshawar district when the D.H.9As of Nos. 27 and 60 Squadrons joined forces with the F.2Bs of Nos. 5 and 20 Squadrons in repelling a large tribal force intent on investing Peshawar. Again, No. 5's Bristols were used largely in a night-bombing rôle.

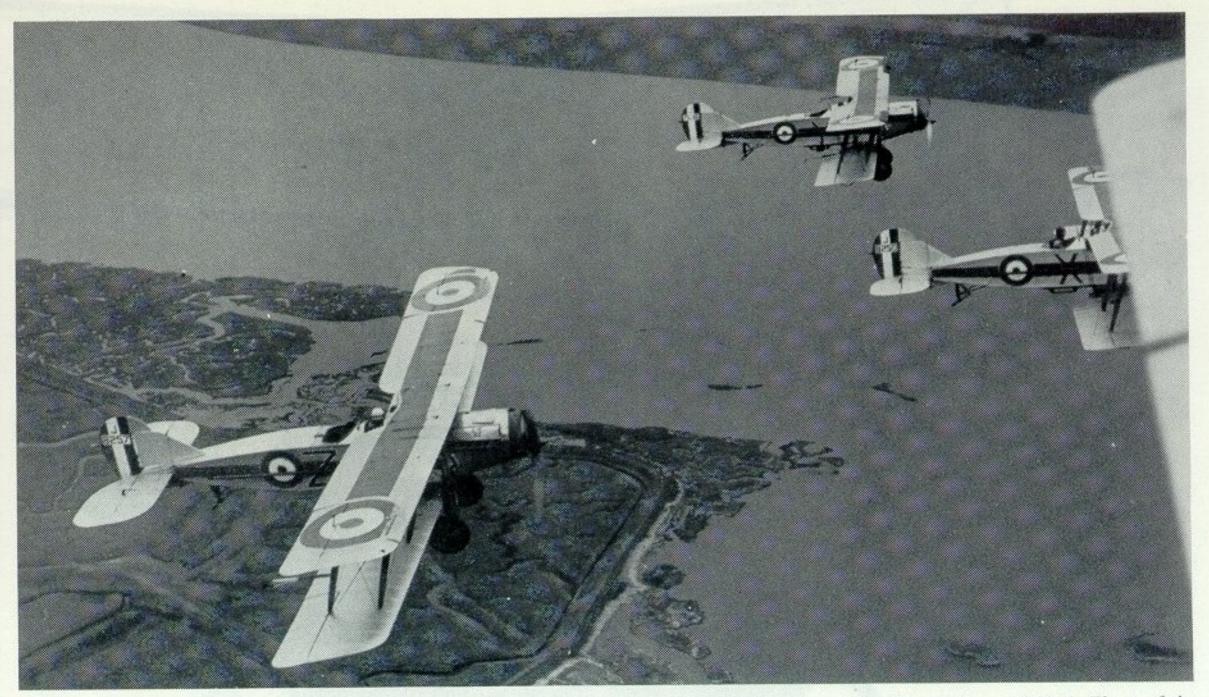
In October of the following year, two new squadrons, Nos. 11 and 39, arrived in India—the long-promised extra units recommended by Salmond in 1922. Both squadrons were equipped with Westland Wapiti IIAs, the first post-war designed aircraft to join the R.A.F.

in India. Another "innovation" of that year was the first general issue of parachutes to all aircrews in India in December—an item not as universally welcomed as might be expected. But the new and more powerful Wapitis held promise of long-awaited replacements for the F.2Bs and D.H.9As. Nevertheless, it was to be another two years before the Bristols began to be exchanged.

Meanwhile, in 1929, the F.2B squadrons became engaged in operations along the whole frontier, trying to contain the notorious "Red Shirt" rebellions. Throughout the summer, 5 Squadron operated from Kohat as reinforcement for 27 and 60 Squadrons. Their main bomb loads were comprised of eight or twelve 20/25-lb. Cooper bombs—small weapons which were highly under-rated by the Army. Incidentally, this patronising opinion was quickly changed when one Cooper bomb dropped on the Peshawar Bombing Range killed or injured 17 Indian cavalrymen who had strayed by mistake into the target area.

Finally, in 1931, the Bristol F.2B began to be

rose



Mk. IV F.2Bs were initially issued to the Oxford University Air Squadron in July 1928 and continued in service until 1931. Three of the unit's Mk. IVs; J8257 (Z), J8250 (X) and J7836 (Y) are seen here formating over part of the Thames Estuary. Squadron pride was exemplified by doping all blue colouring in "Oxford Blue" shade instead of the standard RAF tone.

(Photo: Flight International, ref. 10329)

replaced by Wapitis. No. 5 Squadron started reequipping in February; then 28 Squadron in September, followed by 31 Squadron. The last unit to use F.2Bs operationally in India, 20 Squadron, started their re-equipment with Wapitis in March 1932.

Veteran of 12 years Indian service alone, the Bristol F.2B Fighter—colloquially known as the "Brisfit"—held a place of near-affection among the crews who used the aircraft; a feeling partly shown by the cynical humour of a 28 Squadron ditty dedicated to the F.2B. Sung to the tune of "Old Fashioned Mother of Mine", the verse ran:

'There's an old-fashioned Bristol
With old-fashioned planes
With a fabric all tattered and torn.
An old-fashioned engine that starts with a roar
And a sound like a thousand tin cans.
Tho' she won't loop or spin
'Cos she's nearly done in
Still there's something that makes her divine.
For she's quite safe and sound
'Cos she won't leave the ground
Will that old-fashioned Bristol of mine.'

## MIDDLE/NEAR EAST

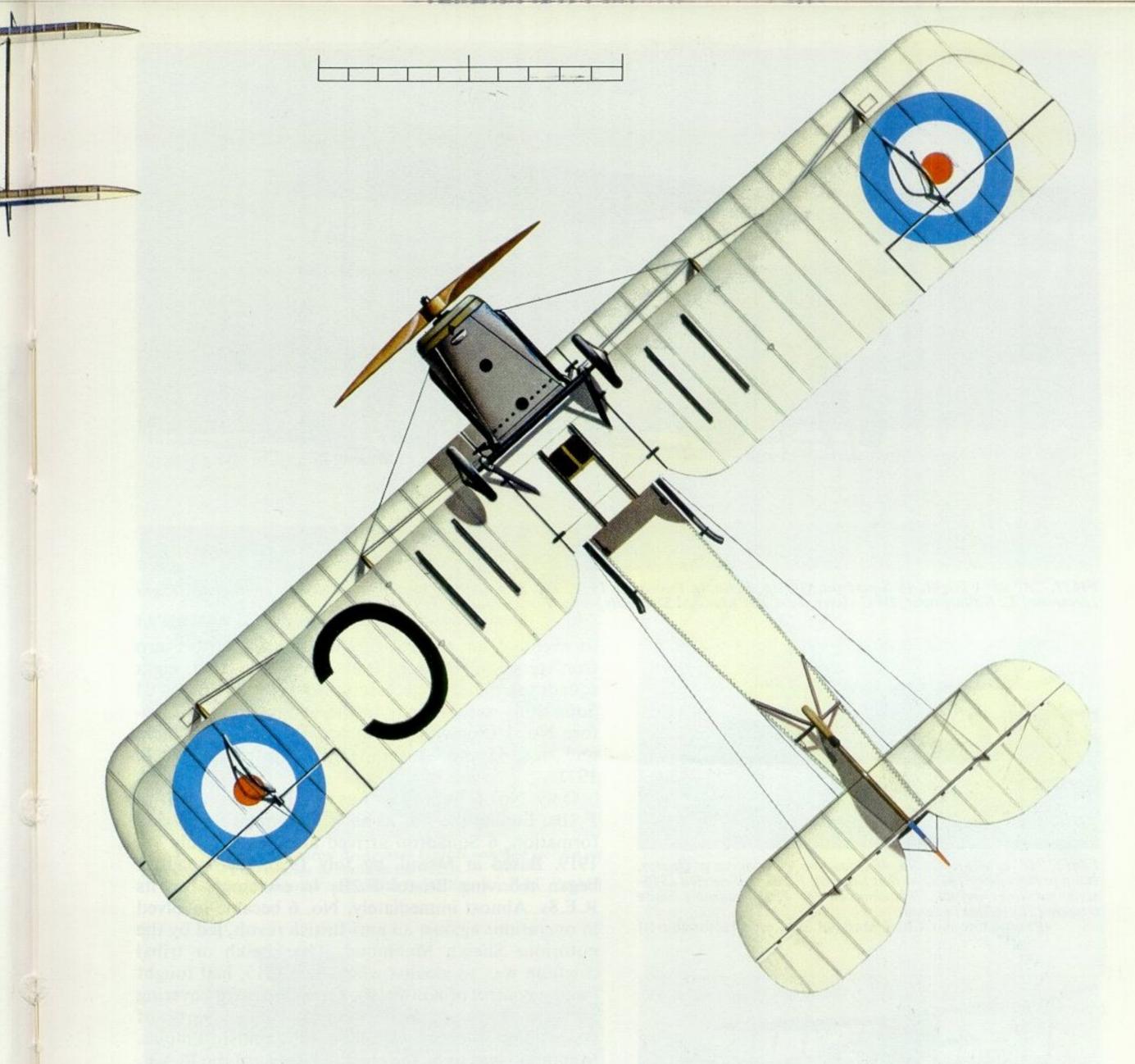
In the Middle East in November 1918, only two units were fully equipped with F.2Bs; the Australian-manned No. 67 Squadron in Palestine and No. 139 Squadron in Italy. Then in January 1919, 67 Squadron handed over 12 F.2Bs to No. 111 Squadron at Ramleh, Palestine, while 139 was rapidly reduced—through demobilization of its personnel; finally disbanding on March 7, 1919. No. 111 Squadron's Bristols, acting as a form of police and general-reconnaissance force, spent much of their time in the

air on relatively distant patrols to outlying army units. Such sorties meant long hours flying over uncharted desert wastes, with all the inherent dangers associated with any forced-landing.

The following year—February 1, 1920—there came the first machinations of a curious Air Ministry "policy" of renumbering existing squadrons; despite Trenchard's expressed view that '... By changing the titles and making new squadrons, traditions built up through four years of war will be lost....' First in the Middle East to be affected by this administrative move was 111 Squadron which was disbanded on February 1. Yet on the same day, another F.2B squadron, No. 208, was reborn by the simple process of renumbering 113 Squadron at Ismailia, Egypt.

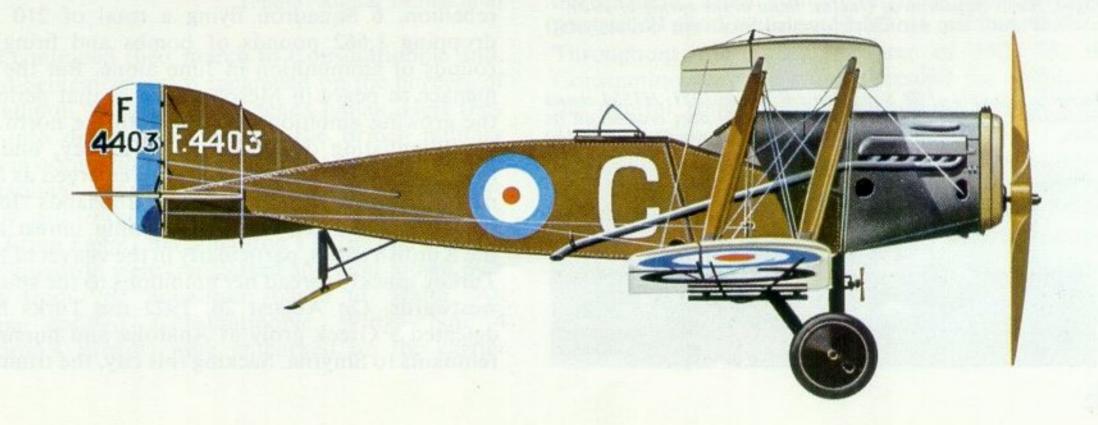
The overall task facing the R.A.F. in the Middle East in the years immediately following the 1914-18 war was a prodigious one. Britain, in addition to her normal responsibilities for Empire member countries, had "inherited" large areas of the Near and Middle East as mandated territories and was responsible for control, administration and development of such territories until their eventual self-assertion as independent countries or states. With the introduction in December 1919 of the Trenchard/Churchill Memorandum, outlining a proposed basis for a future R.A.F., the bulk of R.A.F. squadrons was to be based overseas. Egypt, a key "half-way house" between Great Britain, her Empire and her many other territorial responsibilities, was considered most suitable for location of central control of R.A.F. units in the Mediterranean area. The major area under mandatory control of Britain was Mesopotamia ("Mespot" to the Services), a loosely-defined territory which included much of the present-day Iraq and Persia. With a view





F.2B, Mk. I, F4403 of 5 Squadron, R.A.F. Flown by Flt. Lt. L. N. Hollinghurst D.F.C., Quetta, India, 1920.

P. Endsleigh Castle ARAeS © Profile Publications Ltd.



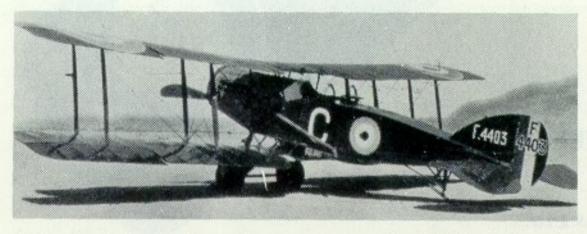


F4637, "A" of A Flight, 48 Squadron, Quetta, India, in December 1919. This was personal aircraft of the Flight commander, Flight Lieutenant L. Hollinghurst, DFC (later Air Chief Marshal Sir Leslie) who is the second figure from right.

D ⊙O F4811

F4611, "D" of A Flight, No. 48 Squadron, running-up at Quetta, India in December 1919. At that time, all F.2Bs still carried 1918-style markings overall, including (here) 48 Squadron's white trisected circle unit insignia.

(Photo: late Air Chief Marshal Sir Leslie Hollinghurst)



Subject of the 5-view colour centrespread, F4403, "C" of A Flight, No. 5 Squadron at Quetta, India in the spring of 1920. (Photo: late Air Chief Marshal Sir Leslie Hollinghurst)

An early example of 28 Squadron's F.2Bs in 1921. H1554 shows graphically the effects of blistering sun and dust erosion on its fabric. (Photo: Author's Collection)



(Photo: Squadron Leader L. A. Sparks, RAF Ret'd.) to eventual air control of this mandate, the Cairo Conference of March 1921 concluded that eight squadrons would be necessary. Nos. 6, 8, 30, 55 and 84 Squadrons were already in the command and therefore No. 1 (Sopwith Snipe) was brought from India and Nos. 45 and 70 were transferred from Egypt in 1922.

Only No. 6 Squadron was equipped with Bristol F.2Bs. Ending the war as an R.E.8 army cooperation formation, 6 Squadron arrived at Basra on July 18, 1919. Based at Mosul, by July 1920, the squadron began receiving Bristol F.2Bs in exchange for its R.E.8s. Almost immediately, No. 6 became involved in operations against an anti-British revolt, led by the notorious Sheikh Mahmoud. The Sheikh or tribal chieftain was an idealist who, since 1915, had fought foreign control of Kurdistan, a nebulous area covering northern Mesopotamia, western Persia, parts of Russia and the old Ottoman or Turkish Empire. Mahmoud was to be the chief opponent of the R.A.F. for another 10 years—his constant attempts to bring about a united Kurdistan under his personal rule earning him the ironic "title" of "Commander-in-Chief, R.A.F. Training" from his British adversaries.

All R.A.F. units were called upon to quell the 1920 rebellion, 6 Squadron flying a total of 210 hours, dropping 1,662 pounds of bombs and firing 3,730 rounds of ammunition in June alone. But the larger menace to peace in Mesopotamia at that period was the growing ambition of Turkey, to the north. After her humiliating defeat in 1918, Turkey, under the leadership of Mustafa Kemal, had emerged as a vital, new nation and hungry to reclaim the lands "lost" by the 1918 Armistice terms. Instigating unrest among the Kurdish tribes, particularly in the vilayet of Mosul, Turkey quickly spread her ambitions to the south and westwards. On August 26, 1922 the Turks heavily defeated a Greek army at Anatolia and pursued the remnants to Smyrna. Sacking this city, the triumphant

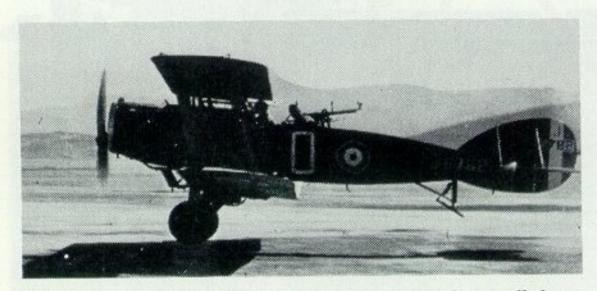
Frank



J6613, "O" of 5 Squadron provides a variation in landing technique at Fort Sandeman, 1928. (Photo: Ministry of Defence (Air))



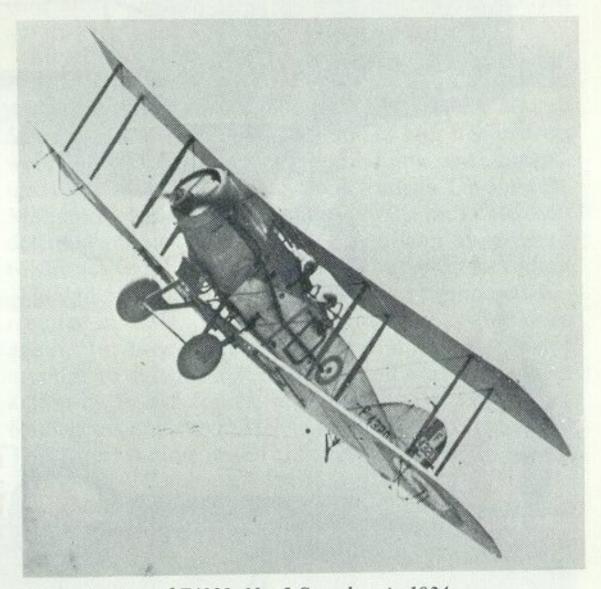
H1546, "O" of 5 Squadron flying over typical parched terrain on the North West Frontier of India in the 1920s. (Photo: Squadron Leader L. A. Sparks, RAF Ret'd.)



Getting away. J6782, "O" of 31 Squadron taking off for a reconnaissance from Fort Dardoni, 1923.

(Photo: Author's Collection)

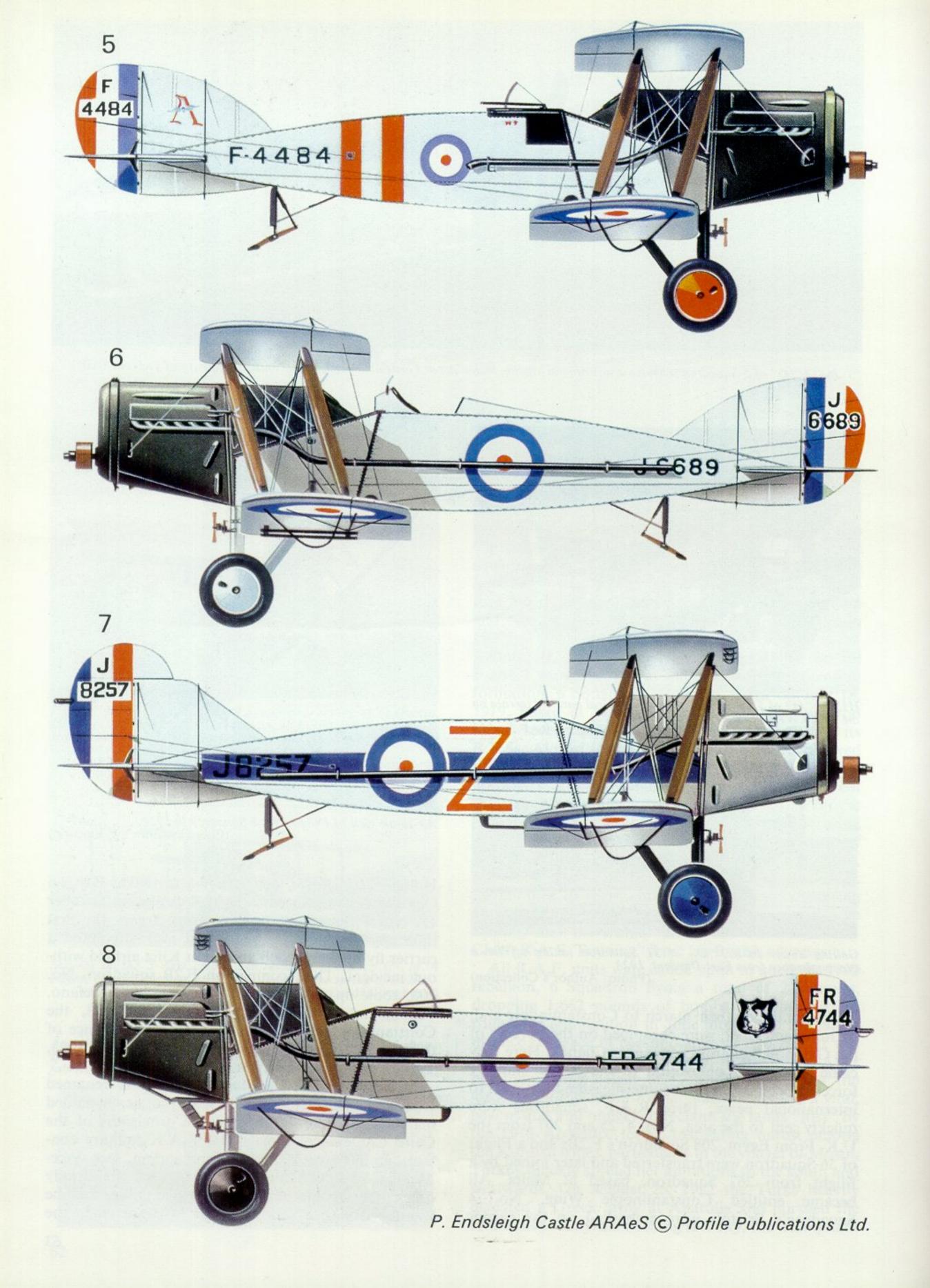
Turks continued their march to Constantinople and, by mid-September, were encamped on the borders of the Gallipoli "neutral" zone, near Chanak. Here they came into direct opposition to the British military forces in occupation. To countermeasure this threat to international peace, three R.A.F. squadrons were quickly sent to the area, Nos. 4, 25 and 207 from the U.K. From Egypt, 208 Squadron's F.2Bs and a Flight of 56 Squadron were transferred and later joined by a Flight from 267 Squadron, based at Malta. All became entitled Constantinople Wing. No. 4 Squadron's Bristols were embarked on the carrier



Air-to-air view of F4320, No. 5 Squadron in 1924.
(Photo: Author's Collection)

H.M.S. Ark Royal and arrived at Kilia Bay on October 8. Transferred to H.M.S. Argus, on October 11, No. 4 Squadron took-off from Argus—the first time any of the F.2B pilots had ever attempted a carrier fly-off—and each arrived at Kilia airfield without incident. Their companion F.2B squadron, No. 208, took up temporary residence at San Stefano. Throughout the freezing winter of 1922–23, the Constantinople Wing stood prepared for defence of the neutral zone at Gallipoli and in August 1923, Turkey finally withdrew her army.

In September 1921, Mesopotamia was renamed Iraq and, on October 1, 1922, the newly-named mandate (in accordance with the provisions of the Cairo Conference) came under R.A.F. military control; its first Air Officer Commanding, Air Vice-Marshal Sir John Salmond taking up his post officially on October 22. No sooner had he taken office than he was faced with a serious threat to peace when the



# Key to colour illustrations

5 F4484 of A Flight, 2 Squadron, Manston, 1925.

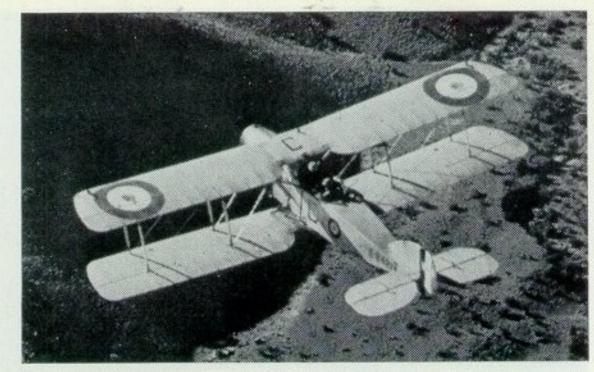
6 J6689, a dual-cockpit version used by Cadet College, Cranwell, 1927/8.

7 J8257, a Mk. IV dual-cockpit trainer of Oxford University Air Squadron, 1932. Note rudder blue was painted in "Oxford Blue" instead of R.A.F. standard.

8 FR4744 of 6 Squadron, Ismailia, Egypt, 1931. Another "rebuild", as indicated by serial lettering, to Mk. III standard.

recalcitrant Sheikh Mahmoud declared himself "King of Kurdistan" and announced a Jehad (Holy War) against the British. The R.A.F. immediately concentrated a total of 42 aircraft from Nos. 6, 8, 30 and 45 Squadrons and launched operations against the rebel faction. Particular attention was paid to Sulamaniya—the city where Mahmoud had made his "palace" and headquarters—and it received a total of 28 tons of high-explosive bombs. The operations dragged on into 1924 and, in July of that year, Sulamaniyah was occupied by British and Iraqi troops and Mahmoud's activities were once more nullified.

Almost immediately, the scene of operations shifted back to the Mosul district where Turkey renewed her attempts to occupy the Mosul vilayet or district. On September 13, 1924 intelligence was received that the Turks intended crossing the frontier to seize Zakho that night. Nine F.2Bs of 6 Squadron were despatched at dawn on September 14 and within 15 minutes had discovered some 300 Turk cavalry crossing the river Borana. Sweeping into action, the F.2Bs quickly dispersed this force at the cost of one pilot wounded. Refuelled and rearmed, the F.2Bs returned and effectively strafed a second Turk cavalry formation. This highly effective and immediate retaliation set a



From its temporary base at Tank, E2421, "C" of 5 Squadron is seen here returning from a bombing sortie during "Pink's War", 1925; flying over Jelal Khel. (Photo Author's Collection)

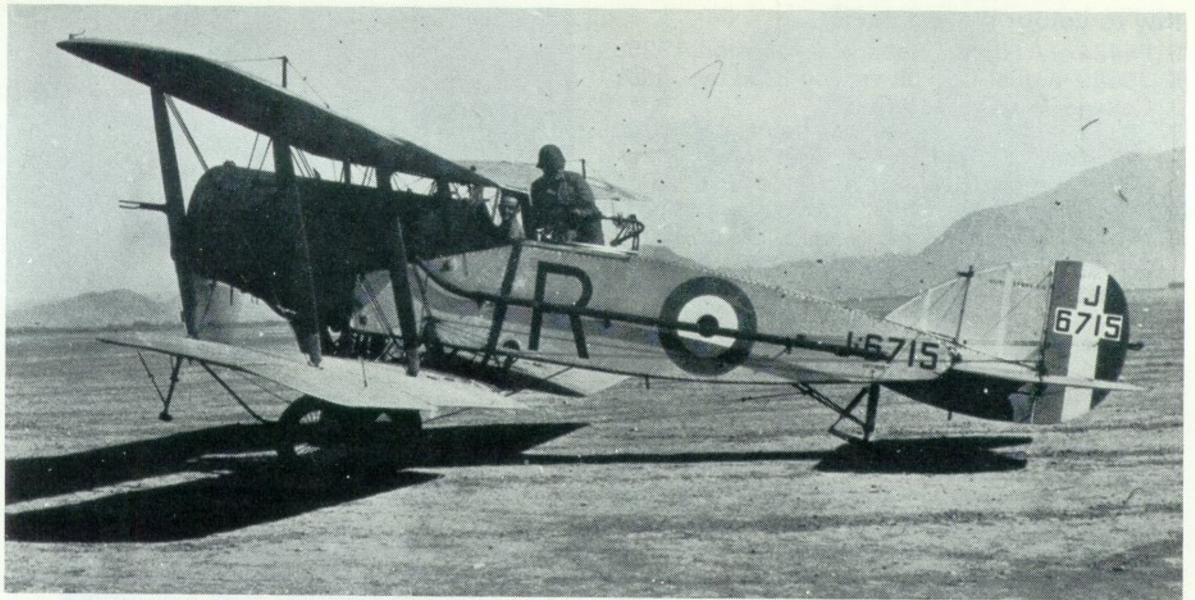
pattern for stultifying subsequent Turkish forays into Iraq and eventually the League of Nations brought about a tripartite agreement, in 1926, at Angora.

Meanwhile the constant activity of Sheikh Mahmoud brought the R.A.F. into further action during the spring of 1925. No. 6 Squadron's F.2Bs, Nos. 30 and 55's D.H.9As and a flight of Snipe of No. 1 Squadron were again instrumental in subduing the various uprisings instigated by Mahmoud's edicts. On June 20, Mahmoud led a heavy attack on Choarta but was defeated and he fled to Persia. A year later he returned to stir active rebellion yet again but prompt air action -in which 6 Squadron's F.2Bs figured prominentlyresulted in Mahmoud retreating to sanctuary in Persia again. In June 1926, Mahmoud made one more attempt to drive out the British and was brought to action by British forces, supported constantly by No. 6's Bristols and the D.H.9As of 30 and 55 Squadrons. This latest action lasted throughout the 1926 winter

Up, up and away. C1039, "B" of 5 Squadron, displaying the early style of unit identity on its fin.

(Photo: via C. H. Barnes)





J6715, "R" of 5 Squadron at Quetta in 1925. In June 1923, this aircraft served as "A1" of 4 Squadron during the "Chanak Incident", Gallipoli.

(Photo: S. Wright)

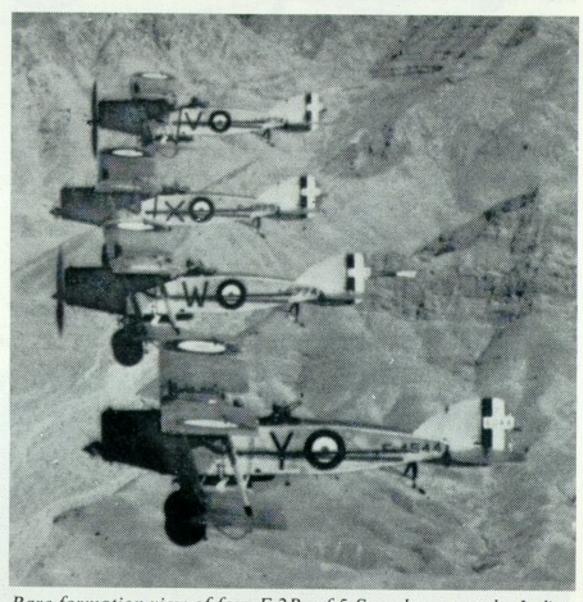


Two F.2Bs, F4947 ("G") and J6647 ("F") of 20 Squadron, patrolling over the Peshawar Valley, in 1926.

(Photo: Author's Collection)

and eventually, in 1927, Mahmoud was persuaded to come to terms. For the next three years he remained inactive. The year 1927 proved to be relatively quiet throughout Iraq, apart from the simmering unrest in central Kurdistan engendered by Sheikh Ahmad of Barzan. With Mahmoud's activities at least muted, a decision was taken to strengthen Government forces in Sheikh Ahmad's area of influence and Barzan was occupied by Iraq Levies, assisted by 6 Squadron and a Flight of 55 Squadron. After a series of minor actions, Ahmad flew to the hills and ceased to be a serious threat to peace.

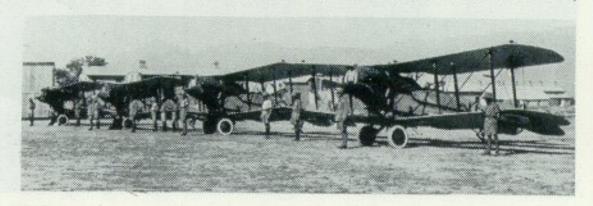
No. 6 Squadron, the only Bristol F.2B unit in Iraq, in many ways held a unique position. Like most overseas R.A.F. units of that period, the squadron was virtually an independent formation; its commander being almost solely responsible for maintaining the peace in an area nearly as big as England—and with just 12 aircraft. Yet despite the myriad dangers of



Rare formation view of four F.2Bs of 5 Squadron over the Indian foothills in 1925. Identities of individual aircraft are: F4544 ("Y"), J6774 ("W"), F4825 ("X") and J6634 ("V").

(Photo: Ministry of Defence (Air))

B Flight of 20 Squadron "on parade" at Quetta, 1924. Note the whitened sidewalls of the tyres. (Photo: Author's Collection)





The "Hook-up" technique for retrieving ground messages. An F.2B about to collect a message, suspended between two poles, by use of the standard under-fuselage "hook"—a procedure which could prove highly dangerous for aircrews when attempted among the hills and mountains of India.

(Photo: Ministry of Defence (Air))



F4643, "J" of 31 Squadron, taken on June 1, 1928, in India. Protrusion showing above upper wing is "barrel" of a Hythe Camera-gun. (Photo: Author's Collection)

Line-up of A Flight, No. 5 Squadron at Quetta, circa 1925.

(Photo: D. Metcalfe)





C801, "A" of 5 Squadron, 1927, piloted here by Flight Lieutenant A. C. Sanderson, DFC (later Air Marshal Sir Clifford).

(Photo: C. H. Barnes)



"A" of 28 Squadron preparing for take-off at Secunderabad India, on January 17, 1931. Of particular interest are the "desert" tyres, tropical radiator and upper wing centre-section cooling outlet piping. (Photo: courtesy No. 28 Squadron, RAF)

flying and fighting over the bald desert vastness, there was a quality to the experiences gained by the F.2B pilots and crews which is unlikely ever to be repeated. As one ex-6 Squadron pilot has, almost poetically, described those times: 'Flying over the Kurdistan mountains was an experience which rarely lost its fearful charm . . . gazing down on row after row of misty white peaks, looking like sleeping giants; deep dark, valleys whose sides are so sheer that one wonders that even light cares to penetrate into their depths. . . . '\* Not that the squadron was entirely immersed in admiring the scenery, as was witnessed in 1927 when 6 Squadron, despite its ageing aircraft, won the all-R.A.F. Squadron Gunnery Competition. They repeated this success in the following year with several pilots achieving 100% "shoots".

In the autumn of 1930, Sheikh Mahmoud emerged from exile and made his final attempt to establish sovreignity of the Kurdish State by crossing from Persia into Iraq and gathering a large force of dissidents. With a political situation whereby Iraq was on the verge of becoming an independent member of the League of Nations, it was decided to use Iraqi troops only in opposition to Mahmoud, though air-support was given by the R.A.F. A series of counter-actions began and continued through the winter of 1930-31. In March 1931, the R.A.F. was used to bomb villages at Beluli and this action was mainly responsible for subjugating the local tribes. Continuing to spearhead every action, against Mahmoud's followers the F.2Bs and D.H.9As finally dispersed the bulk of rebels and on May 13, 1931, Sheikh Mahmoud, chief opponent to British control for some 16 years, finally surrendered. Flown to Ur, he was received with a certain amount of formal ceremony and then permanently banished from the country.

On October 23, 1929, 6 Squadron completed its 10 years of Iraq operational work by moving base to Ismailia, adjacent to the Suez Canal. But before the unit left Mosul, the airmen carved a squadron crest

F.2B among its successors. A No. 5 Squadron F.2B in company with Westland Wapiti IIAs of 27 Squadron at Kohat, May 1930.

(Photo: Ministry of Defence (Air))

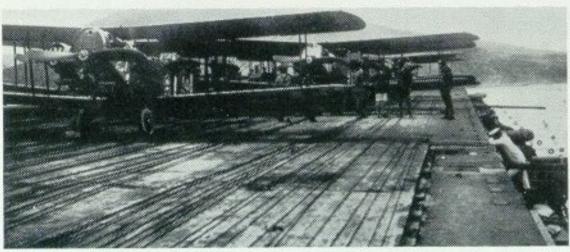


<sup>\*</sup>Flying Years by C. H. Keith.



J6696 of A Flight No. 2 Squadron, which ran into a "farming machine" (sic). Of interest is the 1918 overall style of markings and 2 Squadron's unofficial squadron/flight insigne, comprising (here) two outer red bands and centre-band of white around rear fuselage.

(Photo: P. M. Jarrett)



No. 4 Squadron's F.2Bs lined-up on the flight deck of HMS Argus, October 11, 1922; prior to taking-off.

(Photo: Ministry of Defence (Air))



Chocks away. A 4 Squadron F.2B at the "unstick" point, HMS Argus October 11, 1922. (Photo: J. M. Bruce/G. S. Leslie Collection)

... and off! Another 4 Squadron F.2B achieves take-off from the flight deck of HMS Argus on October 11, 1922. Note unit marking of single white fuselage band.

(Photo: Ministry of Defence (Air))



and motto in a huge rockface at Abu-Saif, just south of Mosul airfield—a permanent reminder of their service in "Mespot". Once settled at Ismailia, however, all three Flights were detached to Ramleh, Palestine to reinforce the army during an outbreak of fighting between the Arabs and Jewish population. And in February 1930, No. 6's F.2Bs were once more in action, this time opposing a rebellion of Arabs led by Ibn Rachid of Hail; the latter intent on massacring the Jews in Palestine. On June 10, 1931, 6 Squadron received two Fairey Gordons, K1729 and K1730; the first of the unit's replacements for their stalwart Bristols. Thus No. 6 Squadron was the last operational unit to fly Bristol F.2Bs; its companion unit in Egypt, No. 208 Squadron, having exchanged its F.2Bs for Armstrong Whitworth Atlas aircraft in 1930.

## **EPILOGUE**

Whatever might be written of the R.A.F.'s early struggles to fulfil its many duties, ill-equipped and poorly supported by its political "masters"; there can be little argument about the quality of the men who created or added to the Service's great traditions despite grim conditions. Equally, there can be no denying the stalwart service rendered by veteran aircraft like the D.H.9A and the Bristol F.2B "Fighter" in spite of their increasing obsolescence. Enduring in the near-primitive conditions of foreign service, devoid of luxury or even reasonable maintenance facilities, the dependability of the F.2B endeared it to its crews; while its operational longevity ensured the "Brisfit" a permanent niche in R.A.F. history. In 1918, F.2B crews composed a tribute to the F.2B—"The Ballad of the Bristol Fighter". Just two verses of that "Ballad" probably reflect what all F.2B crews felt:

'She stands at her place on the tarmac Like a tiger crouched for a spring From the arching spine of her fuselage line To the ample spread of her wing.

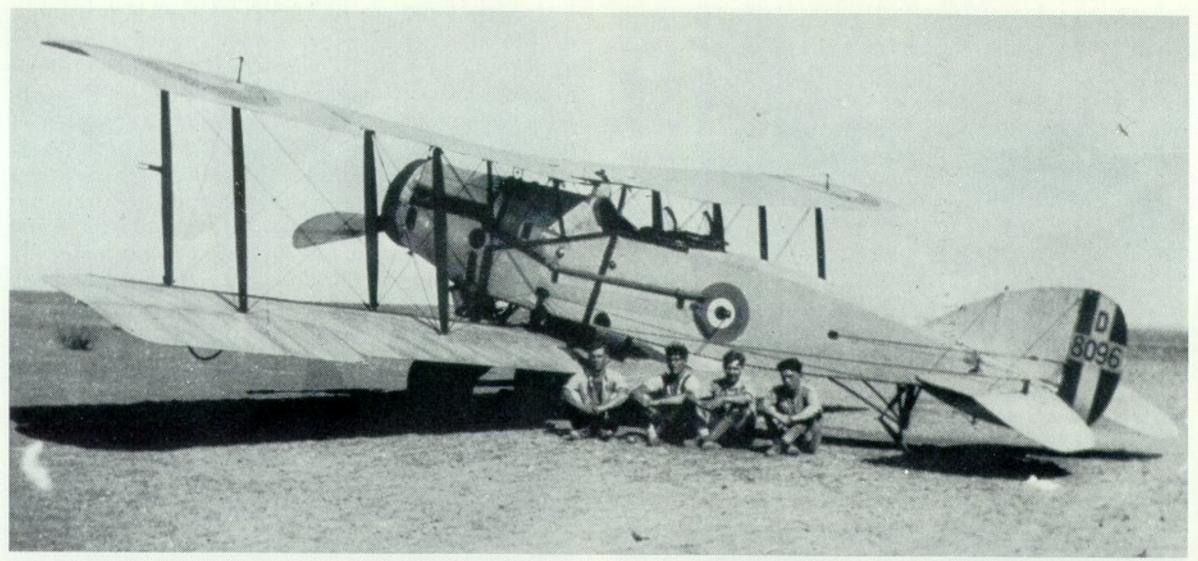
With her wires like sinews tautened And her tail skid's jaunty twist Whilst her grey cowled snout juts grimly out Like a boxer's tight, clenched fist.'

### R.A.F. SERVICE USE, POST-ARMISTICE 1918

Omitted are units which used merely one or two F.2Bs for "hack" communications and in non-flying capacities; for example, Storage depots, Technical training schools and others.

No. 6 Squadron F.2Bs on reconnaissance over Baibu, Kurdistan, C623 leading. Gara Dagh, the snow-covered mountain in the background, is 11,500 feet high. (Photo: via C. H. Barnes)





The original D8096—see earlier photograph—of 208 Squadron at San Stefano, Turkey, early 1923. This aircraft, since extensively rebuilt, exists today, based and flying from Old Warden Aerodrome, as part of the Shuttleworth Collection.

(Photo: J. M. Bruce/G. S. Leslie Collection)



Rebuilt F.2B, JR6788 of 208 Squadron, flying over Suez Canal area. This particular aircraft has been locally modified by removing the gunner's Scarff ring and fairing over the rear fuselage, possibly for use as a unit "hack" communication vehicle. The Flight markings of a black "Club" on a white circle (denoting A Flt.) was doped on fin, upper centre section and under starboard lower wing.

(Photo: Wing Commander J. H. Halliwell, OBE, RAF, Ret'd.)

No. 6 Squadron paraded for inspection by the ACC-in-C, Air Vice-Marshal Sir Robert Brooke-Popham at Mosul, 1928. The "Shiny Six" prided themselves on their aircraft smartness, burnishing all metal coverings (engine cowlings et cetera)—as is evident from this and previous photographs.

(Photo: courtesy Flight International)



Vine



Final replacement. F.2B, FR4744 alongside the aircraft type which replaced it, Fairey Gordon, K1730-one of the first two Gordons to reach 6 Squadron at Ismailia, Egypt, in 1932. In background can be seen Ismailia's well-known (then) airship mooring tower. (Photo: courtesy Flight International)

F4484 of A Flight, 2 Squadron which crashlanded at Manston, displaying later markings style.

(Photo J. J. Halley, Air-Britain)

Two F.2Bs (nearest, FR4583) of 6 Squadron revving-up at Ismailia, Egypt, in 1931. Underwing containers hold personal kit, not bombs.

(Photo: courtesy Officer Commanding 6 Squadron, RAF)



U.K.-based

Squadrons-Nos. 2, 4, 13, 16, 24, 33, 39, 51, 75, 76, 105, 138. Nos. 1, 2, 4, 5 Flying Training Schools; Central Flying School; Cadet College Cranwell, Oxford and Cambridge Universities' Air Squadrons.

Night Flying Flight, Biggin Hill.

Schools of Army Cooperation, Winchester and Old Sarum. Royal Aircraft Establishment, Farnborough and Martlesham Heath. 186 Development Unit, Gosport. Eastchurch Air Gunnery School.

School of Photography.

Andover Staff College. Inland Area Communications Flight. No. 27 Group, Bircham Newton. Dept. of the Chief of Air Staff, Northolt.

Electrical and Wireless School Flight.

Germany

Squadrons—Nos. 9, 11, 12, 22, 48, 62, 88.

Middle/Near East

Squadrons-Nos. 6, 8, 67, 70, 111, 139, 208. Aden Flight. Palestine Group, Ismailia.

India

Squadrons—Nos. 5, 20, 28, 31. Quetta Station Flight. No. 1 (India) Group, Peshawar.

Examples of F2Bs used

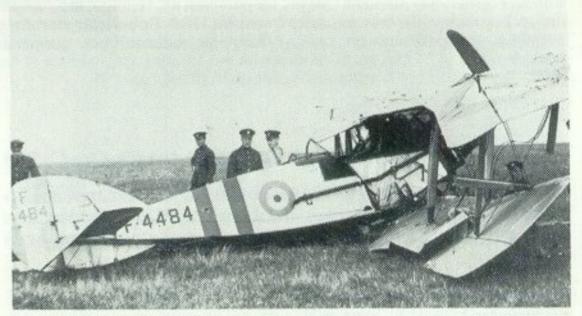
2 Squadron-F4366, F4412, F4428, F4484, F4500, F4537, F4717, F4854, F4967, H1526, J6592, J6662, J6669, J6694, J6794, J7699, J8267, J8269.

4 Squadron—E2624, F4944, H1415, H1420, H1486, J5721, J5784, J6715, J6719, J7686, J8275.

5 Squadron—C1039, D7830, D8035, E2421, E2501, F4320, F4461, F4498, F4592, F4607, F4634, F4706, F4746, F4929, H1461, H1513, H1528, H1565, J6500, J6601, J6631, J6700, J6762, J6777.

6 Squadron-C766, C923, C1048, C4683, C9879, DR8056, E2529, E2629, F4362, FR4583, F4590, F4599, FR4600, F4680, F4686, FR4744, F4880, F4903, FR4925, F4928, H1493, J6742, JR6785, J8281.

8 Squadron—B1167, C9873, D2649, D7823, D7852, D7879, D7881, D7892, D7898, D7901, D7952.



9 Squadron—C836, C924, D7997, E1908, E2150, E2271, E9582, E9588, E9595, E9602, E9617, E9642.

12 Squadron-C1031, C1037, C9982, D8059, D7914, E2220, E2833, E9609, F4402, F4410, F4425, F4435, F4442, F4529, F4661, F4847, F4893, F5140, H1514, H1566, H1571, H1581, H1594, H7061.

13 Squadron—F4448, F4488, F4503, F4572, F4708, F4948, F4957, H1440, H1623, H1627, J6694, J6710, J6743, J6766, J6800, J7660, J8290.

16 Squadron-F4513, F4519.

20 Squadron—C957, D7864, D8039, E2429, F4304, F4330, F4562, F4700, F4839, F4905, F6116, H1428, H1601, J6594, J6621, J6650, J6700, J7682.

24 Squadron—D7864, F4571, F4688, F4878, F5996, H1460, H1617, J6681, J8249, J8258, J8262, J8430.

28 Squadron-E2442, F4614, F4630, F4634, FR4640, H1508, H1512, H1520, H1537, H1548, H1554, J7677.

31 Squadron—D7807, D8034, E2297, F4494, F4643, F4658, H1457, H1510, J6623, J6758, J6761, J6782.

70 Squadron-D8095, F4925, J6622.

208 Squadron—C4651, D7839, D8096, E2299, FR4582, F4583, FR4588, FR4589, F4950, H1455, H1463, H1490, H1501, H1623, H1649, H1670, H1673, H1678, JR6767, JR6785, JR6788, JR6789, J6798, J7640.

Oxford U.A.S.—J6685, J8250, J8257. Cambridge U.A.S.—C4740, F4542, F4548, J8434.

No. 1 F.T.S.—D7816, F4651.

No. 2 F.T.S.—C1018, F4389, F4420, F4618, H1425, H1430, H1460.

No. 4 F.T.S.—C4942, H1677.

No. 5 F.T.S.—C799, J8282.

-F4418. C.F.S.

N.F.F., Biggin Hill-F4745, J6600, J6714.

Cranwell—C763, C768, D2703, D8083, E1971, F4502, F4511, F4747, F4762, F4884, H1438, H1439, H1598, H1642, H1689, J6677, J6689, J6743, J6748, J6760.

School of A.C., Winchester-C1037, D8092, E2533, F4295, F4518, F4542, F4579, F4622, F4651, F4813, F4836, H1395, H1432, H1599, H1603, J6682, J6754.

School of A.C., Old Sarum-C1014, D7847, F4590, F4646, F4952, H1668, H1562.

No. 27 Group, Bircham Newton—F4805, F4806.

R.A.E., Farnborough—B1201, C4654, C4776, F4329, F4360, F4587, F4675, F4728, H1450, J8263.

Martlesham Heath—F4631, J6753, J6790.

186 D.U., Gosport-E2564, E2607. No. 1 (India) Grp., Peshawar—D8036, F4652, F7654, J6650.

Quetta Station Flt.—C803, D7809, D7813, D8036, F4541, F4643, F4766, F4908, F4953, J6700, J6781, J6782.

#### SPECIFICATION

Engine: (Standard Service aircraft) Rolls-Royce Falcon III, 285 h.p. at 2,200 r.p.m.; max. 288 h.p. at 2,300 r.p.m.; dry weight, 715 lb.; fuel consumption, 18.75 lmp. gal./hr.

Top Speeds: Mk. II, 113 m.p.h.; Mk. III, 110 m.p.h.; Mk. IV, 110 m.p.h. A.U.W.: Mk. II, 3,160 lb.; Mk. III, 3,250 lb.; Mk. IV, 3,350 lb.

Petrol: 55 Imp. gal. (two tanks).

Oil: 3¾ gal.

Water: 8½ gal. Endurance: 3 hr.

Service ceiling: 20,000 ft. (Absolute, 22,000 ft.)

Dimensions: Span, 39 ft. 3 in.; length, 25 ft. 10 in.; height, 9 ft. 9 in.; wing chord, 5 ft. 6 in.; wing area, 405-6 sq. ft.

#### Armament

Virtually standard for all Marks. Comprised one Vickers 0·303-inch machine-gun, fitted Constantinesco C C Gear, firing forward, for pilot. One Lewis gun 0·303, hand-operated on Scarff Ring in rear cockpit. Ammunition loads of 1,200 rounds for Vickers and seven Lewis drums for rear machine-gun; one on gun and six stowed. Provision for carriage of up to 12 × 20/25-lb. Cooper bombs on racks under wings. All post-1918 F.2Bs provided with message-hook attachment under fuselage. Holt flares usually carried at extreme lower wing tips. Cameragun provision on top centre-section, when needed.

#### Equipment

Overseas unit aircraft all fitted with external tropical radiator. "Desert" —that is, slightly larger "doughnut"—tyres fitted overseas. W/T and/or R/T signalling equipment fitted in rear cockpit of few selected aircraft. Bomb racks usually acted as carriers for personal kit, tentage, etc., when not in bombing role. For casualty transport, Neil Robertson stretcher normally clamped/tied on top of fuselage, behind rear gunner's cockpit.



Another view of J6774, when "W" of 5 Squadron, mid-1920s.
(Photo: Ministry of Defence (Air))

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The last flying F.2B in the world today, a rebuilt D8096, now part of the Shuttleworth Collection, Old Warden Aerodrome, near Biggleswade, Beds.

(Photo: Bristol Aeroplane Co. ref. 41792)

