

The Hidden Treas



The RAF Museum Reserve Collection, a cornucopia of former RAF “kit” embracing everything from biplanes to buttons, is housed in a 60,000ft² building at RAF Stafford. It is normally beyond the public gaze, but **BOB GARDNER** and photographer **PAUL BUNCH** were granted special access to report on, and photograph, the contents of this incredible treasure-house



ABOVE Curator at Stafford, Ewen Cameron, with a section of ladder from the Messerschmitt Bf 110 used by Rudolf Hess for his flight to Scotland on May 10, 1941.

THE RESERVE COLLECTION of the RAF Museum (RAFM) is housed in a pre-war Equipment Supply Depot shed on a satellite site of RAF Stafford, in Staffordshire, which was originally home to No 16 Maintenance Unit. It is now rather prosaically called a Defence Supply and Distribution Centre, and most units from RAF Stafford will soon move to RAF Wittering as part of essential defence savings, effectively closing the base. The Army is now exploring the possibility of taking over the base, but fortunately the Reserve Collection has a 25-year lease on its facilities. It has been at Stafford for a relatively short time, forming during 1999–2000, when the collection moved from Cardington in Bedfordshire. The staff of three comprises deputy keeper Ken Hunter, who has been with the RAFM for 34 years, curator Ewen Cameron, who joined the museum in 1997, and Martin Ward, the storekeeper/recorder.

The Reserve Collection is probably home to more than 80,000 items. By contrast, only a few thousand items are on public display at Hendon and Cosford in Shropshire. Stafford’s main task is to bring all the catalogued items on to the RAFM’s computerised management system (CMS), and 36,000 items are now listed, with 26,000 recorded to at least inventory level (a basic description and origin). The backlog of

10,000 items yet to be quantified consists almost entirely of “clothing”, the term embracing everything from No 1 Home Dress, through flying suits to donkey harnesses! A further 30,000–40,000 uncatalogued items are not yet on the CMS, mostly post-war RAF items. Cataloguing these is the next priority.

Eventually the public will be able to view many items online through the Navigator on the RAF Museum’s website at www.rafmuseum.org.uk. This interesting new venture was launched at the end of March, and will eventually describe 30,000 items from all three RAFM sites. The things most suited to this form of display are two-dimensional items such as paintings, documents and photographs, although some three-dimensional exhibits will be shown as well. The virtue of this project is that large tracts of the various collections can be viewed without the huge expense of building additional galleries and without handling the items. To illustrate what can be expected, the archives hold personal papers, aircrew logbooks, aircraft record cards, RAF airfield site plans and Air Transport Auxiliary records.

The Library Collection holds tens of thousands of printed works, ranging from the 18th Century to current publications, books and periodicals, as well as official tomes such as Air Publications, maps and other ephemera.

The Fine Art Collection holds more than 6,500 works in the form of paintings, drawings and posters relating to the people, aircraft, equipment and Service life in the Royal Flying Corps, Royal Naval Air Service and RAF. The museum has numbers of portraits by Eric Kennington, an official war artist in both the First and Second World Wars, who went to Arabia with T.E. Lawrence in 1922 and prepared the illustrations for Lawrence’s *The Seven Pillars of Wisdom*; Capt Cuthbert Orde, who portrayed the wisdom of Fighter Command, and Sgt Elva Blacker, the Second World War WAAF artist. Cartoons and caricatures are represented in works by Bill Hooper of “Pilot Officer Prune” fame.

The impressive photographic collection covers the history of aviation in Britain from the 19th Century to modern times. The earliest photographs show the Royal Engineers’ ballooning activities from 1890 to 1893. There is a large

BELOW An amazing collection of gun turrets, many of which no doubt saw use as garden cloches before being acquired by the RAF Museum.



ures of Stafford



PAUL BUNCH



BOB GARDNER

ABOVE Supermarine Spitfire PR.XIX PM651, formerly on show in the Bomber Command Hall at Hendon, and Spitfire LF.XVII SL674, much photographed while it was displayed outside the RAF Memorial Chapel at Biggin Hill from 1954 to 1989.



BOB GARDNER



BOB GARDNER

ABOVE The cockpit section of Fairchild PT-19A Cornell N9606H/15195. This Cornell arrived in Britain in a crate during 1974 for the Historic Aircraft Museum at Southend, passing to the RAF Museum in the early 1980s. RIGHT The cockpit door from a Hawker Hurricane used by Sqn Ldr W.C. Simpson when he commanded 245 Sqn at Aldergrove in late 1940. Simpson was the subject of a book, *Combat Report*, written by Hector Bolitho and published in the spring of 1943.



BOB GARDNER

TOP The desk used by Air Marshal Arthur Harris while he was Commander-in-Chief of Bomber Command. ABOVE Nazi SA4000 "dirty" bombs, the first manifestation of a now-topical device.



ABOVE Fairey Swordfish IV HS503, one of a dozen or so former Royal Canadian Air Force examples that resided on Ernie Simmons's farm in Tillsonberg, Ontario, during 1946–70 (see *Saviour of the Yale*, April 1997 *Aeroplane*).

collection of aviation photographs by Charles E. Brown, who was active from the 1920s to the 1960s. The British Aerospace Kingston collection covers the history of the Sopwith, Hawker and Hawker Siddeley companies.

It should be emphasised that the reserve collection's 80,000 items are not quite as good as they sound. Many are duplicates. For example, there are 12 bulbs in a box of instrument bulbs, but each is individually catalogued. Also, many of the things that were kept as war mementoes and then bequeathed to the museum are duplicated. Navigational computers (*sic*) and wooden propellers abound. Finally, I would be failing in my duty if I did not point out that the collection's location within the secure depot at Stafford, the large number of boxed items and the small staff preclude any possibility of this part of the museum being opened to the general public.

The collection has 15 historic aircraft on its books, and also holds the remnants of crashed Short Stirling LK488 from Mickle Fell, essentially the mainspar centre section including the fuselage, and the rear fuselage. There are large sections of mainplanes from an Airco D.H.10, Handley Page O/400 and Armstrong Whitworth Siskin, plus a good selection of parts from a Sopwith Snipe.

I visited to carry out some research on First World War propellers. The curator, Ewen Cameron, a tall and energetic Scotsman far removed from the archetypal museum curator, met me at the door. He led the way into the main store-room, a warehouse larger than any B&Q I have ever seen. Modern racking reached to the roof, almost touching a network of heating pipes and red fire-prevention water pipes. Huge sodium lights cast a bright yellow hue, adding a slight effect of disorientation. Our footsteps echoed among the silent rows.

Momentarily, there was little to connect my surroundings with aircraft. Ewen paused, picking up a 2ft length of bent aircraft ladder. "From a [Messerschmitt] Bf 110" he said. "The last foot on this rung was Rudolf Hess's."

We walked on past rows of Air Ministry furni-

ture palletised and stacked to the roof — the mundane and ordinary also needs preserving. A dusty large desk sits forlornly, well-used and scuffed, fastened to a modern pallet. It was used by Air Marshal Arthur "Bomber" Harris during the Second World War. I reach forward and touch and withdraw my hand quickly, ashamed at my impropriety. I don't know why.

We are heading for the First World War aircraft propellers. There are about 300 here, but we pause and I follow Ewen's finger, pointing to the top shelf of the racking. Two yellow cylinders, rather like 50gal oil drums, sit there harmlessly. "We only recently discovered what those were", comments Ewen. "We knew they were German from World War Two. For a long time we thought they were a type of aerial mine. All we had to go on was 'SA4000' painted on the side, but eventually we discovered that it was one of Hitler's nuclear weapons. Not a proper fission weapon, you see, but the original dirty bomb. It was designed to drop a mixture of radioactive isotopes and high explosive; the conventional explosion would scatter radioactive contamination over a wide area." Germany experimented with nuclear piles during the war, none of which became critical, and toyed with the idea of making a nuclear weapon but lacked the facilities and expertise.

After Germany declared war on the USA in December 1941, planning to bomb America began again, and on May 16, 1942, a conference was held at Luftwaffe GHQ to discuss the possibility of long-range strategic bombing attacks, particularly against New York. Design bureaux at Focke-Wulf, Junkers and Messerschmitt prepared detailed proposals for intercontinental bombers with a 4,000kg bomb load. Hence the name of the SA4000 bomb, presumably. One of the designs, the Messerschmitt Me 264, unofficially named the *Amerikabomber*, grew out of an earlier *Reichsluftfahrtministerium* (RLM) feasibility study into attacking the USA. Designed to carry a 2,000kg bomb load, it had a range of 9,315 miles and a speed of 338 m.p.h. The RLM ordered three prototypes, the first of which flew in December 1942. The second was destroyed in

BELOW Deputy Keeper Ken Hunter has been with the RAF Museum for 34 years.





“A moment’s wriggling between Spitfire wings reveals the fuselage of a Fairey Swordfish. Although derelict and engineless, it is complete, and so much more interesting, to my excited eye, than a restored exhibit”

an air raid, and the third was never built as the Me 264 programme was cancelled in 1944.

We stride on towards the propellers. Ewen indicates another nuclear bomb, again from the 50gal oil drum school of design. Elegance of shape becomes immaterial with a megaton weapon. “*Yellow Sun*; the British thermonuclear weapon. The Mk 2 was in RAF service with the V-bomber fleet from 1961 to 1972.” I try to persuade him to sit on it, cowboy hat in hand, for a photograph, but he demurs. Frivolity is also immaterial in the company of a hydrogen bomb.

“We have two or three of these”, explains Ewen, pointing to a Hunting JP.233 airfield denial weapon for the Panavia Tornado, designed to destroy and prevent the repair of Warsaw Pact airfields, and used in the first Gulf War. “It’s been withdrawn from service now, banned under the Ottawa Protocol that prohibits the use of land mines. It has two submunitions. The rear section carries anti-runway weapons, which penetrate the runway surface before exploding and cratering the runway. The forward portion carries area denial mines that are scattered around the damaged area and make life difficult for any repair teams.”

We pass sundry missiles, dusty, inert and devoid of human connection, and arrive at an orderly pile of mainplanes from the era of spruce and fabric, including wings from a D.H.10 and a Handley Page O/400.

Then my heart lifts. There in the corner behind me are two sets of elegant elliptical wings, one in natural metal, the other in the pale blue of a photographic-reconnaissance Spitfire. Their fuselages sit a little further along, dwarfed by the high-rise stacking which holds the huge five-bladed Rotol propeller from one of the Rolls-Royce Griffon engines, and wheels, seats and other Spitfire parts. Behind the wings are more early mainplanes, bereft of fabric. A moment’s wriggling between the Spitfire wings reveals the fuselage of a Fairey Swordfish, the enclosed canopy identifying it as a Mk IV. It came some years ago from a cache on the Canadian prairies. Although derelict and engineless, the air-

Aircraft in the Reserve Collection

Curtiss JN-4	Unknown
de Havilland D.H.89 Dominie II	RL962/G-AHED
de Havilland Vampire FB.6	J-1172
Eton TX.1 glider	WP270
Fairchild Cornell II	15195
Fairey Swordfish IV	HS503
GAF Jindivik 4A	ZJ493
Miles M.2H Hawk Major	DG590/G-ADMW
Morane-Saulnier BB	A301
Percival Proctor III	Z7197/G-AKZN
Santos-Dumont Demoiselle replica	BAPC 194
Slingsby Sedbergh TX.1	VX275
Spitfire LF.XVII	SL674
Spitfire PR.XIX	PM651
Spitfire F.21	LA226

frame is complete and so much more interesting, to my excited eye, than a restored exhibit. Here is original paint, the scuff marks of a pilot’s boot, the morse key smoothed by an observer’s finger; this is a real aircraft. Behind it, almost inaccessible, hides another fuselage, a de Havilland D.H.89 Dominie. It takes me a moment to work out what it is. Just beyond the two Spitfire fuselages lies a third, the long nose and box-like engine bearers indicating a Griffon engine. Near it is an ex-Swiss Vampire and one of the two gliders. Nearby a number of engines sit on stands; an Alvis Leonides from a Bristol Sycamore helicopter, a radial Wasp, a huge Bristol Centaurus engine complete with cowling from a Blackburn Beverley and a Wright Cyclone from a Dutch Navy Lockheed P2V Neptune.

“That’s a Model T Ford”, says Ewen, indicating a rolling chassis, complete with engine, nestling in the racking, dwarfed by ferry tanks around it. “We’ve got two”, he adds. “One was made for the UK market; you can tell by the seating.”

The conversation turns to RAF vehicles and the Hucks starter. I marvel at the extent of his knowledge, and wonder if he knows details of all 80,000 items. “Och, No!” He smiles in self-deprecation, then smiles again at the thought of the detective work yet to come.

“Discovering what some of these things are

ABOVE LEFT A selection of floats from a variety of former RAF flying-boats. **ABOVE** Former Swiss Air Force de Havilland Vampire FB.6 J-1172, which has spent time on display at the RAF Museum Cosford and the Museum of Science and Industry in Manchester.

BELOW “Twinkle Toes”, Alcock and Brown’s mascot on their 1919 Transatlantic flight, is one of the most cherished items of memorabilia housed at RAF Stafford.



RIGHT Miles M.2H Hawk Major G-ADMW, one of only two examples of the type in Britain. Originally delivered to W.R. Norman at Heston in August 1935, it went on to fly with the Portsmouth Aero Club in 1939 before being impressed as DG590. In September 1946 DMW went back to Miles Aircraft at Woodley, Reading, and was used by the Reading Aero Club. In October 1952 J.P. Gunner acquired the machine, basing it at Sleep. After being withdrawn from use in July 1965 it joined the RAF Museum collection and was repainted in its impressment colours as DG590.



PAUL BUNCH

can be very satisfying. The internet has made my job a lot easier. Take that German dirty bomb, for instance. Put SA4000 into a search engine and you can get an instant answer as to what it is. You have to be careful, though. There's quite a bit of duff gen out there.

"But some things just require common sense and logic. That wing over there is from a Fairey Seafox. All we knew about it was that it appeared to be a two-bay, port upper mainplane from a British 1930s biplane. We discovered a Fairey data plate and drawing number tucked away at the wingtip, but that doesn't necessarily mean that we are looking at a Fairey aircraft; they might have been subcontractors. The leading edges have slats, which are quite common on aircraft of this period, but the really unusual feature is that the trailing edge had a space for flaps. That's very unusual for upper mainplanes, and suggests that the designers were looking to get this aircraft up into the air quickly and at relatively slow speeds. This led us to think of seaplanes, and, more particularly, of catapult-launched aircraft from ships. That narrows the field considerably, and it just so happens that the Seafox is an exact match. The only problem I've

run into is that for some reason the wingtip appears to be the only part of the airframe not listed in the spares manual. The rest of the wing structure is listed, but not the bit we have the drawing number for."

"How many beings flew the Atlantic in the Vimy? It was supposed to be two, but it was three." He laughs. "Alcock and Brown took 'Twinkle Toes' with them." He produces a small cloth toy cat. "He flew the Atlantic twice. Tony Alcock, who was the nephew of Sir John Alcock, and Norman Brown took him in their Phantom when they flew the Atlantic to commemorate the 60th anniversary in 1979."

"We have another animal you might like to meet", he says, leading the way through a door. "We keep memorabilia from disbanded squadrons in here", he adds, and introduces me to Wg Cdr Roland, a rather splendid rat guarding the Jaguar-embossed decanters of 16 Sqn RAF.

We go next door to the clothing store, the contents of which are as yet uncatalogued. Rows of modern suit bags reminiscent of Moss Bros protect and hide their treasures. "All these are flying suits; every mark", says Ewen. "This area here is the DPM area", he adds, indicating clothing made in the modern disruptive-pattern-style camouflage. "DPM has been around since the 1960s, and there have been frequent changes. The early versions are now pretty hard to find", he says, as we pass helmets, flying boots, respirators and mess kit.

Finally we arrive at rows of early wooden propellers; the reason for my visit. I spend the next 3hr photographing and exploring, but my mind wanders. I imagine the distant laughter from 16 Sqn as the port was passed to the left under the watchful eye of Wg Cdr Roland. I picture the pilots who flew the Swordfish climbing into the cockpit; I sense Air Marshal Harris at his well-worn desk; and Twinkle Toes performing mascot duties on two transatlantic crossings.

Eventually Ewen returns, and it is time to go. The door closes behind me and the ghosts become still. They are in good hands. **A**

BELOW The fuselage of former Air Cadets Slingsby Sedbergh TX.1 glider VX275, with the fuselage of Spitfire F.21 LA225 to its left.



PHOTOGRAPHY