

Gnati~~n~~onal treasures



What's large, yellow and livened up the M25 on a grey day in August? The answer is the best part of Folland Gnat T.Mk1, G-MOUR, a 45-year-old ex-Red Arrows trainer which once belonged to Dave Gilmour of Pink Floyd fame. (The clue is in the tail number).

The aircraft was on its way to North Weald from Kemble, where it was to join two others of the type. All three are owned and operated by The Heritage Aircraft Trust, a charity set up by the UK's only private ex-military jet display squad, The Gnat Display Team. Although her siblings are red, G-MOUR is

painted in Yellowjacks colours – the original RAF display team that evolved into the Red Arrows.

Moving an old jet is not a simple operation. The ideal method is to obtain a CAA permit to ferry and fly it to its destination. However G-MOUR was not playing ball. Her canopy jettison system was acting up, so she had to go by road under the watchful eye of Red Gnat ground operations manager Oliver Wheeldon.

The on-site engineer at Kemble was pessimistic about the journey, predicting dire outcomes en route as the aircraft barrelled

along the motorways. "The biggest worry is not to damage it," he says. "The Gnat is very small and everything is compressed and close-coupled inside. If you press the skin in you could damage a component."

Mover Dave Thomas had no such qualms. An expert in transporting historical aircraft, he had turned up with a huge rig, regular cohort Glyn Davies and a special lifting sling to cradle the Gnat gently onto the lorry. Thomas is deeply involved with Bruntingthorpe Aviation museum in the Midlands and is an old hand at shifting vintage heavy metal. He says: "I've always



*A dedicated group of PPLs is committed to preserving the Red Arrows first display aircraft in flying condition, as **Liz Moscrop** reports*



Rich Cooper

been interested in aircraft and have moved more than 225 of them." Before loading G-MOUR, he produced a well-thumbed book of photographs documenting exactly how he had done just that to reference the best method of hoisting the Gnat onto the truck.

G-MOUR's size was a problem. The police are ultra strict about how wide a motorway load can be, so the movers prepped her by removing her nosewheels, a mainwheel and wingtips. The aircraft was then tilted onto the rig and anchored at an angle, using plenty of high-tech tools such as fairy liquid

and miles of cling film.

Even that was not good enough. The police arrived with their tape measures and the team had to remove the ailerons

before the aircraft was allowed to travel with escorts to her new home. She arrived intact and is now in North Weald awaiting heavy maintenance. The idea is to roll her out in time for the 2011 display season, where she will take the lead slot in a new three-ship Gnat routine, which has not been seen since the late 1970s.

Gnat Display Team

Moving G-MOUR took up several days of Wheeldon's time. He is one of a group of five people passionate enough about the Gnat to spend vast amounts of time and money keeping a few airborne. All volunteers, the team spend their weekends repositioning aircraft, or driving to airfields miles from their homes to sort out logistics, in addition to practising their flying routine. Between them they have bought three Gnats (including G-MOUR) and donated them to the Heritage Aircraft Trust. Three of the five are qualified to display the aircraft, with two



Adrian Pingstone

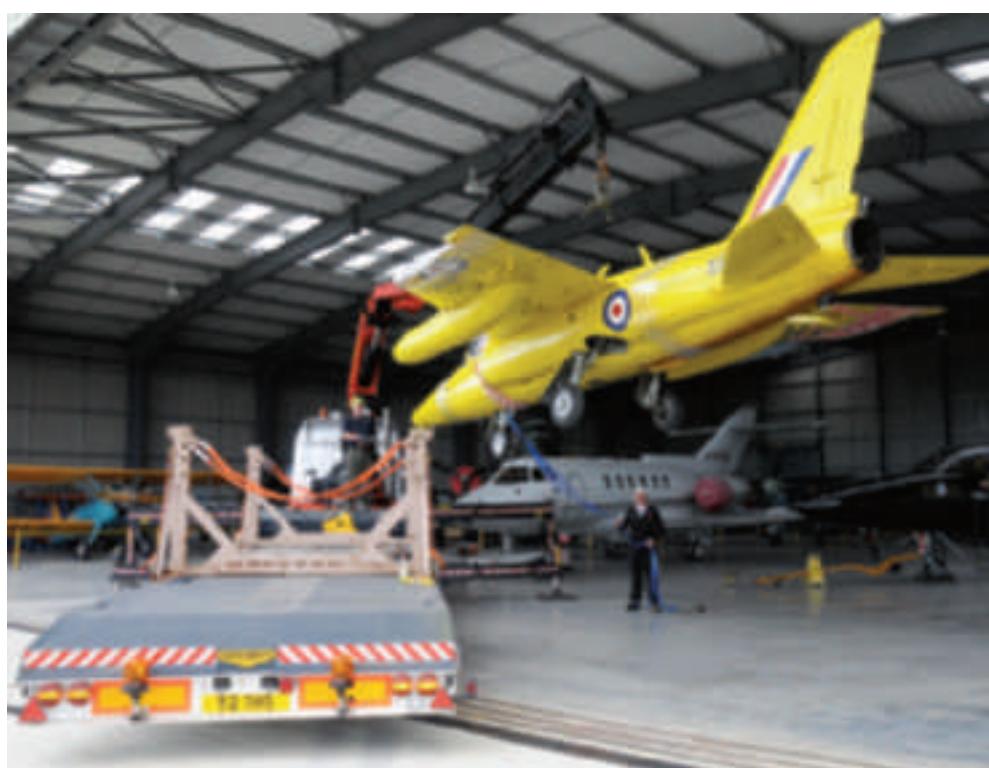
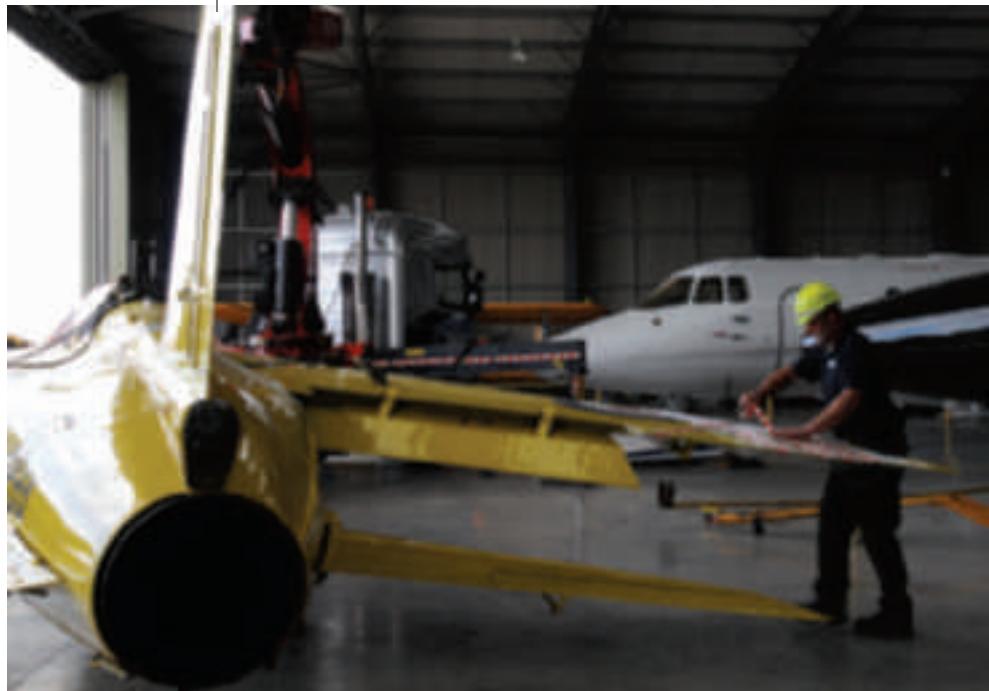
more in training. Two additional honorary members are serving RAF test pilot Wing Commander Willy Hackett and Squadron Leader Chris Heames, who act as standby display pilots, instructors and mentors.

Apart from Hackett and Heames, the group comprises civilian high achievers. Like former owner Gilmour they are successful people who want to fly fast jets and to preserve an aircraft that captured their childhood imaginations. They are largely PPL holders with an impressive list of types and hours under their belts who met when they joined a Mk3 Jet Provost syndicate at North Weald.

The team flies two Gnats and have worked together for the last three air show seasons. They all have nicknames and individual callsigns and have performed at over 50 events including Biggin Hill, Duxford, Eastbourne, Jersey and Shoreham, as well as international shows at Al Ain in the UAE, Koksijde in Belgium, Volkel in the Netherlands and Lens in France.

United by a common love of the Gnat, they are predominantly in their thirties, so were boys when the jet was in service. Stephen 'Maverick' Partridge-Hicks heads up a big

Above: G-MOUR, alias XR991, used to be displayed by David Gilmour's Intrepid Aviation
Top right: distinctly low-tech protection for the Gnat's wing - Fairy Liquid and clingfilm
Right: Dave Thomas turned up with a huge rig, and a special lifting sling
Below: bandaged up and ready to roll, the Gnat formerly owned by Pink Floyd's David Gilmour



Rich Cooper



credit hedge fund, yet spoke about how the aircraft had gripped him as a child. Now training to fly the Red Gnat 2 position, he says: "I remember being at prep school watching the Red Arrows when I was ten years old and being mesmerised."

He becomes boyishly enthusiastic when describing what flying the aircraft does for him. "The first time you do a cross wind landing on a wet runway and you manage to plant it down just right, protecting the aircraft and treating her well, it's very satisfying indeed."

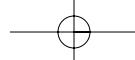
Another member Kev 'Jester' Whyman left



*Top left: lifelong Gnat aficionado Stephen Partridge-Hicks, now a hedge fund manager
Top: former RAF pilot Kevin Whyman, now a City trader; the Gnat helps him stay sharp
Above: IT salesman by day, jet display pilot at weekends – Mark Grimshaw gets ready to fly*

John Windover

John Windover



the RAF to work as a trader for a US investment bank in the city. "I have an affinity for aviation and flying helps me keep the fast jet dream alive," he says. "It's a fantastic release from my Monday to Friday job. My head and brain is in no other place."

Oliver 'The Chief' Wheeldon works for a blue chip communications company and joined the team in 2008. He says: "I had been lucky enough to be offered a few back seat trips in the Gnat and was sold on it as an aircraft that I wanted to master. The beautiful shape, the compact size, the snug cockpit, the superb performance, and the Red Arrows historical connections were all key selling points."

Mark 'Reaper' Grimshaw works in IT sales by day and flies in the Red Gnat 1 position –

the Leader – and extolled the virtues of the aircraft. He says: "We are very lucky. The Folland Gnat was chosen by the Red Arrows prior to the Hawk they fly now and is perfectly designed for display flying. Although it is quite small, it produces the 'wow' factor. One of the great things about the UK CAA is that they will actually let us fly these jets, which isn't the case in every country."

The other three members are Mark Fitzgerald, who works for a technology company, Peter 'Willy' Hackett and Chris 'Huudge' Heames. Fitzgerald completed his initial RAF pilot training during the late 1990s and holds a CAA Display Authority for the Jet Provost, Folland Gnat and the Bell UH1-H Huey helicopter – all of which he has flown on

the European air show circuit. Hackett, meanwhile, flew on operations in the Gulf and the Balkans. He was the RAF Tornado F3 display pilot for the 1997/98 seasons and the test pilot on the Eurofighter Typhoon and F35 (Lightning II) programmes. Heames flew Lightnings and Phantoms in the 80s, has flown thousands of hours in Tornados as an instructor and now oversees all gliding for the RAF.

Displaying the aircraft

Whyman is the driving force behind getting gigs. Back in 2006 he Googled the main airshow players such as TSA Consulting and called them up to offer a Gnat display. The team then sat down with Hackett and Heames

'You're flying a proper jet now'

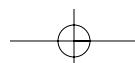


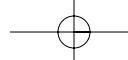
John Windover

Oliver Wheeldon,
who soloed in the Gnat in summer, explains how it feels for a PPL to fly a fast jet

Every solo on every different type of aircraft you learn to fly is memorable, but until the Gnat mine had all been side-by-side seating arrangements and first solos had always been flown off the back of a final dual instructional sortie, with a running change. This always takes you by surprise, but it's a very quick changeover as the instructor jumps out, engine still running, pats you on the shoulder and disappears.

In the Gnat, a solo is a wholly different affair. The aircraft is limited on fuel and special solo bars have to be inserted into the back seat, which needs to be done after engine shutdown. You are then briefed carefully before you climb into the cockpit, strap in and close the canopy. Fortunately any thoughts of the missing guy in the back quickly disappear, as





to work out a routine that would demonstrate the aircraft to best advantage.

Two years later the squad was ready. Whyman says: "In 2008-9 we delivered on what we signed up to do. A display routine must be complex and pleasing to the public. We have to be reliable and professional." He reckons that the team is now connected with some 50% of UK air shows and adds: "We have a reasonable footprint and have made repeat appearances at Biggin Hill, Eastbourne and Southend."

Their twelve-minute display starts with several close passes and 360 degree turns in front of the crowd to show off the top and undersides of the aircraft. They fly for five minutes in close formation, using smoke. They

there are pre-start checks to carry out.

The Gnat has no self-starting ability, so you need a ground crew to operate an external 'Palouste' engine, which generates compressed air to spool up the aircraft's engine. With the screech of the Palouste in my ears, I hit the 'relight' button on the throttle and the aircraft quickly came to life. After-start there were a whole host of checks, then it was time to call the tower, wave the chocks away and taxi off.

After lining up it was quickly up to 90% rpm, holding on the brakes, then releasing them and slowly pushing up to 100% thrust. The Gnat seemed to lurch forward even more quickly than usual with only one pilot on board and lifted off at around 130 kts. Once airborne there was no time to admire the view; the undercarriage had to be quickly retracted and there was a sharpish left turn required to avoid busting speed and height restrictions underneath Stansted.

I remember glancing backwards across the wing and thinking, "well – you're really flying a proper jet now". I then had to do some fairly high-G level turns to get the feel of the aircraft. Almost as soon as the fun had begun, I reached my 'bingo' fuel state and had to head back.

After a quick radio call, I was cleared to join at 'initials' for a run and break into a right-hand circuit at North Weald. The brief was to carry out a low approach and go-around, then do a second circuit to land. Halfway down the runway I closed the throttle, popped the airbrakes and rolled into a right hand turn, then pulled fairly hard through 180 degrees onto the downwind leg. There was just enough time to get the downwind checks out of the way, calculate the threshold speed, and then roll into the finals turn.

Radio call made, quick check that full flap was selected and the gear was down, then I flew around the corner, nailed to the correct speeds as best I could. Once lined up it was a case of driving the jet down the approach path. Over the numbers, I closed the throttle and just checked back on the stick slightly before placing the jet back on the runway and coming to a stop on the ORP at the far end. I carried out my after-landing checks, then that was it... I couldn't help breaking into a huge grin. This was no normal grin; it was a grin that lasted for days. It was one of the most rewarding moments of my life.

Top left: wide undercarriage makes the Gnat look slightly ungainly on the ground
Left: Wing Commander Willy Hackett greets Oliver Wheeldon after Wheeldon's first solo in the Gnat

then perform a 6G break in front of the crowd and position to fly straight towards each other in an opposition pass, crossing at the centre of the crowdline at a combined speed of 800mph. Both aircraft then perform simultaneous individual loops and rolls. They end their show by painting a half-mile high smoke heart in the sky, which measures a quarter of a mile across.

The routine represents hours of practice. Partridge-Hicks explains: "It takes discipline and a high level of trust. The display is about the aircraft and how to make them look good and give the crowd some pleasure. You have to mix figures and shapes."

The Heritage Aircraft Trust

As long as the Gnat is in the public eye there is a fighting chance that they will survive. Only 110 of the two-seaters were made, and it's getting difficult to source parts since most of them disappeared overseas. Once some Gnat components reach the end of their lives they are irreplaceable. Other parts are easier to find; Dunlop held on to the mould for the tyres, which come in at a hefty £400 a pop. Robust enough to withstand a 150mph touchdown, the main tyres are good for ten landings.

Running costs are huge, and Grimshaw explained why the team set up the Trust. "In

order to keep aeroplanes like this flying we set up a charity, which was no mean feat since the Charities Commission is very careful about who they allow to become a charity," he says. "They finally agreed, however, that restoring and maintaining these aircraft was of historical value."

Airshow fees and operating as a charitable trust helps the individual members recoup some of the costs involved, and they are also looking for sponsorship to help keep the show going. Partridge-Hicks hopes that the public will be enamoured once they see the Gnat in action. "We are operating national assets that are part of the collective consciousness," he says. "Grimshaw adds: "We are completely not for profit. We had to donate the aircraft [to the charity], which we were delighted to do as it means that the aeroplanes will keep flying for longer and that is really important."

The Gnat Display Team is next performing in the UK in the spring of 2011. For more information, including sponsorship options, go to www.gnatdisplayteam.com or contact them on +44 (0) 1992 525657.

Below: Red Arrows past and present – a Heritage Aircraft Trust Gnat meets its modern counterparts at an air show



John Windover



This photo: the Heritage Aircraft Trust Gnat pair fly over their predecessors, and the Vulcan