

A return ticket for the Shetland Bus? Scottish-Swedish air connections during the Second World War

John Gilmour

THE German invasion of Norway and Denmark in April 1940 severed not only these countries' but also Sweden's normal contact with the West for the next five years. One famous connection re-established during the War consisted of small fishing boats, which took supplies and agents over from Shetland to Norway and brought Norwegians back. Its regularity, even in the depths of winter, earned it the name 'The Shetland Bus'. The combination of heroism, patriotism and sheer doggedness in appalling sea conditions avoiding German patrols has rightly earned it a place in the history of Shetland, Scotland and Norway (Howarth 2005).

But there is another wartime connection to Scandinavia which barely rates a mention in the history of the Second World War. This is the air bridge that was established between Sweden and Scotland.

This paper will cover the events that led to the creation of these services, several of the personalities involved, some of the very real dramas that occurred, and an assessment of the significance of the connection for the histories of Scotland, Sweden and Norway. Four different services, the Swedish, Norwegian, British and American, connected Scotland to Sweden and each in turn will be dealt with.

The Swedish service

Following the invasion of Norway and Denmark, Sweden struggled to re-establish contact with the West, anxious to minimise reliance on a rapacious Germany which was eager to bind the neutral country's trade and politics into a Germanocentric Europe. After patient negotiations with both Germany and Britain, Sweden succeeded in securing agreement for four ships to pass through the British and German blockades every month to export Swedish products such as timber and paper – but not iron ore and ball bearings – and

bring back badly needed supplies of food and oil. This was called the 'Safe-Conduct traffic' and operated despite interruptions throughout the war.

Similarly, there was strong British interest as early as September 1939 in maintaining Swedish air links disrupted by the outbreak of war. The director of the British CAA urged Sweden's international airline company, 'AB Aerotransport' (ABA), to maintain air traffic and suggested a Stockholm-Oslo-Stavanger-Perth route. As this would have to be agreed with both Germany and Britain, Carl Florman, the larger-than-life managing director of ABA travelled to London in late September before going on to meet Hermann Göring in late October 1939.¹ The British sanctioned one flight per week, and in a discussion carried out partly in German, partly in Swedish, Göring was positive to the idea. Nevertheless, it was to be a long time before the service was established. Britain was now in defensive mode and the penetration of British air space by foreign aircraft was a complication that did not interest the RAF. For safety reasons, Florman's pilots required a radio beacon for navigation and weather forecasts. The Swedes suggested locating a beacon at Peterhead on the northeast coast of Scotland, where planes would make landfall. Both beacons and forecasts were, of course, potentially useful to the Luftwaffe, and the British authorities were reluctant to release such sensitive information in case it was misused. The first test flight from Stockholm to Perth took place on 27 November 1939. However, no beacon was operating to guide the Swedish Junkers 52, painted orange to identify it as a neutral aircraft. While hopes of establishing the link receded, Florman and the Swedish Ministry of Foreign Affairs (MFA) remained persistent. However, the invasion of 9 April 1940, and the subsequent defeat of the Allied armies on mainland Europe changed everything. On 20 April 1940, Florman again travelled to Berlin to see Göring, who gave permission to establish flights from Sweden to Germany. Florman had known Göring in the 1920s, when he was down on his luck and working as a pilot in Sweden, and had even given him a winter coat. Nevertheless Reichsmarschall Göring now treated Florman distantly and barked, 'Bitte, setzen Sie sich Herr Kapitän Florman!' (Nilsson & Sandberg 1996: 66).

In October 1940, the Swedish Red Cross suggested to ABA that a service between Britain and Sweden would be useful to exchange POWs and transport food parcels.

In November 1940, with prompting from the MFA, Florman met Bill Thornton, the Air Attaché in the British Legation in Stockholm, to discuss a thrice-monthly service to Scotland, but no progress was made due to the Swedish concerns about the radio beacon and the weather service. However, another meeting in July 1941 raised the possibility of using Leuchars, the

1 Much of the narrative that follows is sourced from Nilsson & Sandberg (1996: 65-232).

military airfield outside St Andrews, as the destination airport, and the British gave permission in principle subject to detailed discussions. Negotiations stalled as the Germans advanced rapidly into the Soviet Union and Sweden came under enormous pressure on all fronts from the Germans. By November, the situation changed in Sweden's favour when Britain pressed the MFA for the establishment of a Swedish air service as soon as possible. After this, the situation moved relatively quickly and by January 1942, both the British authorities and the Swedish civil aviation authority gave permission for the service to be established. The desire to fly freight, passengers and mail to and from Sweden was strong on both sides of the North Sea.

The aircraft type selected for the operation was the Douglas DC3, and in February 1942, the first test flight took place from Stockholm's airport at Bromma to Dyce airport outside Aberdeen. Radio beacons remained a difficulty, and the weather forecast was given personally to the pilot at Bromma by the British Air Attaché to ensure security. Florman was on the first flight with his crew, as were a British pilot and a radio operator to give advice. It was a success and, in March 1942, the British gave permission for the service to begin on a regular basis. There were three DC3s in service and they were given memorable names with distinctive raptor connotations. The service was inaugurated by Gripen, and supported by Gladan and Falken. The 'Griffin',² the 'Kite', and the 'Falcon' represented the reconnection of Sweden with Britain by air. Gripen had been equipped with oxygen equipment for both passengers and crew, and the aircraft painted orange with *Sweden/Schweden* in large black lettering to identify it as a neutral plane. ABA had tried to get guarantees from the Germans for safe-conduct but their conditions were onerous. The Germans wanted complete information on all passengers and cargo, only Swedish citizens to be allowed to travel, and no freight that could assist the enemies of Germany, such as ball bearings. Even at that high point in German influence on Sweden, this was unacceptable and the Swedes refused. Gripen's test flight crew had been given a secret code to contact the radio station at Dyce in Scotland to ensure that the 'Orange Bomber', as it became known, was allowed through Britain's air defences. When they landed at Dyce, their luggage was searched thoroughly and each person was extensively interrogated. The Swedish visitors were struck by the shabby conditions of a country almost three years into a war for survival, but heartened by the welcome from the BOAC officials, who had been detailed to provide support. Luncheon was then taken at Aberdeen's Caledonian Hotel, while accommodation was provided at the city's Northern Hotel, nearer to Dyce Airport and less conspicuous. Despite the success of the test flight,

2 Unless otherwise stated, translations are by the author.

further arrangements had now to be made with Britain: all flights had to approach or depart in daylight; altitude and exclusion zones were laid down; radio traffic and fuelling arrangements were agreed.

ABA also urgently required more powerful engines to take the DC3s to a safer altitude to avoid unforeseen anti-aircraft fire over Denmark or Norway. They had ordered three engines from the United States in 1940 but these had been confiscated by the authorities there. The head of the British Special Operations Executive (SOE),³ Charles Hambro, was persuaded by Florman to use his influence to procure these engines. In July 1941, ten engines arrived to re-equip Gripen, Gladan and Falken. ABA now had three planes capable of operating the Stockholm to Aberdeen service.

The return test flight took place on 23 February 1942 with the Swedish diplomat, Bjorn Prytz, on board. On the second flight, two British aircrew from BOAC again accompanied the flight, which was diverted to Wick due to high winds at Dyce. They had no map and navigation was difficult due to poor visibility, snow squalls and a mix-up over radio communication. The military nature of Leuchars meant that ABA was discouraged from landing there, and so diversions were unwelcome. Now, each flight carried sufficient fuel to make the return journey to Sweden in case the plane was forced to turn back. An intermediate stop at Sätenäs in western Sweden was introduced to enable departure times to be kept secret – there were suspicions of German espionage at Bromma – and allow the plane to pick up freight including ball bearings from the SKF (*Svenska Kullagerfabriken*) factory at nearby Gothenburg.

Then disaster struck. On the night of June 21 1942, shortly after the service started, Gripen was attacked by German fighter over the Skagerrak, north of Jutland, on its return flight to Stockholm. It raked the un-armed civilian aircraft with tracer bullets causing serious damage to the plane and wounding both the co-pilot and the wife of the Swedish Minister in London. Aino Prytz survived despite a minor neck wound and the plane landed safely in Stockholm. That it was a German attack was in no doubt. When the bullets were recovered from the mailbags on the aircraft and shown to Generaloberst Hans-Jürgen Stumpf, the visiting head of German Fifth Air Fleet, he confirmed that they were indeed German. The radio operator's raincoat was riddled with these bullets, but his request for a replacement at company expense was turned down! The evasive action taken by pilot Marshall Lindholm had been vital for their survival. Fortunately, Lindholm had practiced such manoeuvres with air force bombers a year previously.

3 The Special Operations Executive was an organisation set up by Churchill to encourage resistance in occupied Europe.

The MFA did not officially protest but ABA asked the German attaché for an explanation, and proposed that the flights be subject to the same protocols as German courier flights over Sweden. The harsh reality was that airspace over the North Sea was a hotly contested battlefield with British and German planes seeking out enemy vessels and bombers to destroy them. The decision was taken to suspend the flights during the light summer months.

The service resumed again in August 1942. Although a few scares occurred, with suspected fighter intervention and anti aircraft fire from occupied Norway, there were no major incidents until August the following year. These incidents emphasised the crucial importance of exact navigation to flight safety but there remained suspicion that aircraft Radio Direction Finding equipment was interfered with at Bromma. The service was now operating at full volume with the two undamaged ABA planes being joined again by the repaired Gripen. By the end of 1942, ABA had made 60 round trips to Scotland. In 1943, flights continued until the summer break in early June and resumed in August.

During the night of 27 August 1943, on the return flight to Sweden from Dyce, Gladan disappeared without trace with three passengers and four crew. Gripen and Falken, both flying the same route that night landed safely at Bromma. The bodies of Gladan's two pilots were recovered almost three weeks later, on 21 September – one offshore at Grebbestad on Sweden's west coast, and the other off Skagen point on Jutland by fishermen – and buried at sea. None of the passengers were ever found. After the war, a German document from the Luftwaffe confirmed that they had shot down Gladan, believing it to be in a prohibited zone. The document also made it clear that the German authorities had no intention of disclosing this to Sweden and had cynically participated in the search operation to mislead the Swedish authorities. 'It would not be desirable to strain German-Swedish relations by making the real truth of this matter be known.'⁴

The disappearance of Gladan intensified Florman's anxiety to improve aircraft recognition procedures with the Germans. The planes would now be illuminated with searchlights and floodlights and estimated times of passage through the Skagerrak would be given in advance to the German Air Attaché in Stockholm. Germany refused to guarantee that even with this information, there would not be risks. After a break for full moon, flights were resumed. On 22 October 1943, on returning from Aberdeen, Gripen was again attacked and the aircraft crash-landed on the little island of Hällö, southwest of Smögen in the Bohuslän archipelago. This time, thirteen passengers died in the crash.

4 Minister Frohwein, 25 August 1943, Deutsches Bundesarchiv. Cited in Nilsson & Sandberg (1996: 121).

While the Germans were again not prepared to identify the perpetrator, the German Air Attaché in Stockholm more or less admitted responsibility. After the war, German records showed that it was a Ju88 pilot from a night fighter squadron, who on the same night had shot down two Lancaster and two Halifax bombers attacking Germany.

Not surprisingly, the service was then suspended by Florman in order to improve safety precautions for the planes. Florman had further negotiations with the Germans in Berlin to provide clearance and procedures to ensure accurate recognition of neutral Swedish unarmed civilian aircraft. Also, the Germans proposed that that a safe route could be permitted over Denmark – provided that the plane stopped in Copenhagen for inspection by the Germans. It is significant that both governments had been keen to restrict discussions to the aviation authorities, and not involve diplomats but now even this had become a diplomatic issue. The question of flights had become entangled with the safe-conduct of sea traffic, which was firmly in the diplomatic arena. However, the Germans prolonged negotiations, while mail and passengers were queuing up. Even Florman's pilot von Rosen, who happened to be Göring's nephew, was sent to Berlin to try to persuade his uncle to speed things up. Göring approved a resumption, provided no belligerents' citizens were passengers and that the aircraft windows were painted over. By January 1944, the Germans had dropped their demand for a stopover in Copenhagen but demanded guarantees that the British would not use the safe air corridors to infiltrate German airspace. Later in January, the Secretary of the MFA, Erik Boheman wrote to British Minister in Stockholm, Victor Mallet, to seek the assurances that Germany had asked for.

Flights resumed at last in March 1944 with the 'Flying Christmas Tree', as the illuminated Falken was nick-named, and went without incident. Barely six weeks later, the service was again suspended by Britain in the lead up to the invasion of Europe in June 1944. As part of D-Day security, no mail was permitted to go to Sweden during this period. The last flight to Scotland had to be diverted to Prestwick due to weather conditions at Dyce.

The service again resumed in October 1944 until the end of the war. The Swedish DC3s had now been replaced by converted United States Boeing B-17 bombers (popularly known as Flying Fortresses) that had crash-landed in Sweden and been purchased from the United States. SAAB rebuilt seven of these as civilian aircraft and re-named them 'Type Felix' – Felix was the name of the United States Air Attaché who had been instrumental in arranging the purchase of the planes. In 1943-4, three entered service on the Scottish route. A further two were given to Denmark and held in Sweden until the war ended. This cooperation was one of the events that led to the formation of the inter-

Scandinavian airline company SAS. The first Felix flight by ABA took place in early October 1944 from Stockholm to Prestwick. At the celebration dinner there, pilot Marshall Lindholm managed to commit the major *faux pas* of expressing his joy at being able to return to 'England' again – but was forgiven by his Scottish hosts (Nilsson & Sandberg 1996: 219). Mail and ball bearings again flowed from Sweden to Scotland along with passengers. However, some of the engine problems at high altitude which had forced the planes down in Sweden also struck the Felixes. Flights experienced engine stalling, with one having to make an emergency landing at Sumburgh on Shetland – where no plane of that size had ever landed before – after jettisoning 230 kg of the so-called 'magnetic freight'! The co-pilot later recalled,

I have no memory of being treated with any suspicion. In fact we did not see ourselves as guests but as allies in the war. I suppose it was because our enemy was the same and because everyone knew that we also had our problems during our flights. And we also brought ball bearings – even if we had thrown them overboard this time. (Nilsson & Sandberg 1996: 235)

By early 1945, all three Felix aircraft were back in service, albeit with intermittent engine problems. However, the wartime service ended on 12 April 1945, with pilots considering it too dangerous to fly over occupied Norway during the closing weeks of the War.

Over its three years, the service was used by many different people: diplomats travelling abroad and returning, families reuniting, businessmen negotiating deals and even trade-unionists going to meet their British colleagues. While this Swedish service has been somewhat lost in the greater stories of the Second World War, it transcends a mere logistics exercise and exemplifies something at the core of the Swedish war experience. Sweden feared the ambitions of its German neighbour, generally loathed the Nazi doctrines of racism and the Führer principle, and resented being forced to be economically dependent on German coal and coke in return for iron ore and ball bearings. Along with the 'Safe Conduct Traffic' from Gothenburg, the air service to Scotland provided another lifeline, not just for the transport of people but a connection to Western democracy, culture, and resistance to the Nazi menace. The emphasis which Sweden put on establishing this connection was not simply based on transport but also on community. The Swedish Prime Minister, Per Albin Hansson, had said before the war started that Sweden had to ensure that if war drew Sweden in, Sweden must join on the 'right' side (Gilmour 2010: 14). The Swedish air service was one of the important threads that bound Sweden to that right side.

The British service

Yet neutral Sweden was not alone in seeking to establish an air connection. Fighting Britain also had a strong interest and motivation to do so. There were several factors behind the British effort.

Firstly, with the sudden severing of connections with Scandinavia in 1940, British access to Swedish products, particularly ball bearings, was now denied. Despite SKF having a manufacturing plant for ball bearings in Luton, Britain was already using all the ball bearings that it could procure to manufacture modern military equipment. So desperate was Britain to secure ball bearings from Sweden that two very dangerous naval operations were mounted. January 1941's *Operation Rubble* and March 1942's *Operation Performance* used Norwegian ships and crews to break through the blockade from Gothenburg, carrying much-needed ball bearings. The cost was immense, with 150 Norwegian seamen captured and imprisoned in Germany, where 43 of them died in the terrible conditions (Barker 1976: 135). Other Swedish goods sought by Britain were speciality steel for lathes, spring steel for instruments and a special type of electrical resistor for the British railway network (Nilsson & Sandberg 1996: 155).

Secondly, MI9⁵ was interested in getting a secure method of transport back from neutral Sweden. If escapees reached Sweden, an air service would enable them to return to Britain (Pitchfork 2007: 21).

Thirdly, SOE was rapidly expanding its operations in Scandinavia. The British legation in Stockholm was central to SOE operations in Denmark and Norway and so, as a means of communication with Sweden, was absolutely vital for sending out and returning agents.

Fourthly, the German propaganda machine had been extremely successful in delivering vast quantities of propaganda material from Germany using the easy transport links between Sweden and Germany. With Scandinavia cut off from Britain, the British propaganda effort had no such advantage, and material was at a premium. Whatever newspapers, publications and films that could be brought to Sweden would be of instant and immediate benefit.

Finally, it was important to the prestige of Britain in Sweden that British personalities could make an appearance there to represent some of the British values that Swedish people admired, and give heart to the spirit of resistance in both countries.

For all these reasons, Britain put a high priority on establishing an air connection with Sweden. The service had, of course, to be civilian and not

5 MI9 was the secret government department responsible for securing the successful repatriation of military personnel trapped in occupied Europe, either in prison camps or on the run.

military, in order to get permission from the Swedish authorities to enter Swedish air space and land in Sweden. This British service started secretly in late 1939, with British Airways running flights from Perth, in Scotland, to Oslo, Helsinki and Stockholm. The flights were undertaken using three German Junkers Ju-52 aircraft and a Lockheed Electra, but were severed after the German invasion in April 1940, which left one Junkers confiscated at Oslo and another stranded at Bromma in Sweden.⁶ On its return to Perth on 17 April, this aeroplane was attacked by a German seaplane, with the result being that no British plane would return to Bromma until the following year.

In March 1940, the service was transferred to the British Overseas Airways Corporation (BOAC). Although operated by a civilian carrier, using its own colours, the service was military in character, and was re-located to the Leuchars RAF base in Fife. The 500 nautical miles service route over the North Sea using unarmed aircraft suffered from three major difficulties: the risk of being shot down; the absence of reliable weather forecasts; and inferior aeroplanes. The aircrew were sometimes Norwegian, and the early flights used aircraft which were suitable workhorses, but their limited speed made them especially vulnerable to attack by German fighters over the Skagerrak. Various routes were attempted between Sweden and Scotland to try to minimise the dangers. Extreme northerly routes were attempted to evade German fighter intervention but it was clear that different aircraft with higher speed and operating at a higher altitude would improve the chances of survival.

The Secretary of the MFA, Erik Boheman, in his wartime memoir recounted a flight to Britain on the British service in October 1942 to meet Churchill. This account gives a good impression of what being a passenger was like:

The journey to London went in the usual way with a British Dakota DC3 which by a roundabout route went from Bromma to somewhere in Scotland. We were kitted out in flying kit, parachute on the back and lifejacket and provided with a little red torch and whistle which could attract the infrequent shipping which could be found in the North Sea [...] if we got permission to jump. The plane was as usual unheated and pitch black on the journey that took its plucky eight hours. The temperature sank to below freezing. During such a journey, the time goes with a slowness that must be experienced and can hardly be described. In the heavy quilted flying kit one could hardly move and the chill felt piercing. You couldn't sleep because of the higher altitudes at which we mainly flew, one had to breathe through an oxygen mask which was already uncomfortable. No one who

6 Much of the narrative that follows is sourced from Nilsson & Sandberg (1996: 153-167).

was on such a flight was completely free from a nagging fear. As soon as we came over Norwegian territory, a machine-gun, previously hidden under a cover was mounted in a glass or plastic dome in the middle of the plane's ceiling and a shapeless figure swung round on the lookout in all directions. It wasn't difficult to imagine what an easy prey a relatively slow plane of this type would have been for a passing German fighter plane, and when the moon now and then appeared from between sheltering cloud banks, the sense of safety became a little less felt. When one emerged over the sea, one thought of how it would feel to crash down with a parachute and in all probability be killed by the waves or, if the sea was improbably calm, to float around for a few hours and signal on the torch and sound on the whistle before undoubtedly being forced to give up. Now and then, one succeeded with great effort in lifting up one's arm, pulling off the huge gloves and taking a look at the luminous watch in the hope that at least half an hour had passed since one looked at it last, only to find that hardly 10 minutes had gone past. Smoking was naturally forbidden and besides was prevented for most of the time by the obstructive oxygen mask. One sat on the floor uncomfortably leaning against the vibrating plane's bare and ribbed fuselage.

This time however the flight went without any incident and with deep relief, we greeted a grey drizzly morning on the rather unfriendly airfield in Scotland. I now cannot precisely remember after so long where in Scotland we landed. I landed at or left from various places during the war years and the barracks looked approximately the same and the drizzle appeared to be constant. It was pleasant to get out of the heavy clothes and the other attire, to warm up next to the obligatory coal stove and get a cup of hot strong tea down. (Boheman 1964: 189-91)

Unfortunately, Boheman's memory was faulty in two respects. Firstly, no plastic dome existed on the Dakota; and, secondly, Boheman himself had previously berated the British Minister, Mallet, when machine guns were smuggled into Sweden earlier that year to arm the merchant ships breaking out of the Skagerrak blockade from Gothenburg. Their presence on a civilian British aircraft, even hidden under a sheet, is improbable.

Other planes such as the Whitley IV converted bombers and the Curtiss-Wright C46 were trialled but found to be too slow for evasive action. The Douglas C47 Dakota cargo plane was tested in March 1943 and used extensively to ship urgently needed ball bearings until May 1943, when the light summer months meant suspension. In October, the Dakota was tested on the Northern route over Shetland but the test pilot reported that, 'this route

requires an aircraft of greater performance – speed, higher ceiling, and more endurance so that the route over enemy territory can be changed’ (Nilsson & Sandberg 1996: 157). Such an aircraft was imminent. In August 1942 an RAF de Havilland Mosquito in anonymous grey flew to Stockholm on a test flight to establish the feasibility of using this high performance, extremely fast fighter-bomber as a service flight. The test was successful and in December 1942 BOAC took delivery of the first of these disarmed warplanes, which replaced the Lockheeds. Mosquitoes were tuned for speed and their bomb bays became one-man passenger pods. Six more Mosquitoes were delivered in spring 1943; a further three in April 1944 brought the total up to ten. Most importantly, they could ship 650 kg – or between ten and twelve crates – of ball bearings every trip in the bomb bay.

Secrecy surrounded the Mosquito operation for several reasons. These were Britain’s most advanced warplanes at the time and represented technical superiority, which Germany would have dearly loved to emulate. Naturally, flight arrival and departure times would have given German fighters the possibility of intercepting a Mosquito – if they could catch one! And, of course, the human and material cargoes were of great interest to German intelligence. Not that the Germans were unaware of the service. In May 1941, Dankwort of the German Legation in Stockholm told the MFA’s Staffan Söderblom that the British service was ‘undesirable’ (Nilsson & Sandberg 1996: 71), and by permitting it, the Swedish government was providing the British with advantages. He stressed that Sweden should not permit British planes to land in Sweden. Söderblom maintained that the service was entirely civilian and under the complete control of the Swedish authorities. The Germans then threatened the MFA that these flights would be brought to the Führer’s attention, and their discontinuation stipulated as a military necessity. This and other consequences were dismissed by the Swedes, who responded that the British might stop the Safe-Conduct sea traffic if the British air service was suspended. Between 1941 and the end of the war, more than 1,200 trips were made.

By 1943, the need for ball bearings was once again acute and orders had to be placed in Sweden. In June, two Mosquitoes took off with two civilians, firstly the ball bearings expert from the British government, and secondly the President of SKF in Britain, wrapped up in flying suits, given oxygen masks. These pioneers were to lie squeezed in to the planes’ bomb bays, equipped with a long piece of string attached to the pilots’ leg. If conditions became intolerable, they were to pull the string! Despite the doors opening slightly under pressure from their body weight and an alarming gap appearing,

the human cargoes were delivered safely for their negotiations (Nilsson & Sandberg 1996: 160-1).

Perhaps the most famous of the Mosquitoes' human cargo was the Danish Jewish physicist, Niels Bohr, who fled with his family from Denmark over the Sound to Sweden in the early autumn of 1943. On 6 October Bohr found himself being trussed up in a flying suit, given a bottle of whisky and oxygen equipment to prepare him for the flight in the bomb-bay of the Mosquito. After the flight took off, the crew were increasingly concerned when all attempts to contact their middle-aged passenger failed. It was not possible to check him *en route* but they took the aircraft down to a lower altitude in case there was a problem with oxygen. Indeed there had been, and Bohr had passed out due to a misunderstanding about how to operate his oxygen equipment valve. Nevertheless, as is well known, Bohr went on to help the Manhattan team develop the atomic bomb. Another compatriot, Ebbe Munck, the Danish resistance organiser based in Stockholm, had travelled with the service before and knew to bring a blanket to combat the cold in the bomb bay. He had brought the 'Riddle of the Sands' to read, but twenty minutes into the flight, all thought of excitement from the book was replaced by real-life drama as the bomb doors slowly opened and the blanket was sucked out through the gap into the slipstream. Munck wedged himself into the space but when the pilot called to check, a cultural clash meant that his Danish understatement about his dangerous plight was taken as a joke by the airman and he was left to hang on for the next hour until landing, frozen and cramped in Stockholm (Nilsson & Sandberg 1996: 162-3).

However, the standard cargo on these flights was not just people but also ball bearings. The Mosquito could carry up to 650 kg of these vital components and as a result, in the six months ending 31 December 1943, 157 flights were made of which 129 were by Mosquitoes. These flights carried about 110 tonnes of freight, mainly ball bearings. During the course of the war, over 520 flights were made by the Mosquitoes. Although it was recognised that the air service could not carry the same tonnages as a sea vessel, the flights delivered Swedish ball bearings to Britain on a regular basis. Such was the demand for additional tonnages of ball bearings that, in late 1943, disarmed motor torpedo boats, also in civilian guise, crossed the North Sea through the German blockade in the Skagerrak in *Operation Bridford* to collect ball bearings from Lysekil on the Swedish west coast (Barker 1976: 146-212).

MI9 provided the distinctly irregular human cargo on some of these flights in the shape of prisoners of war who had by one means or another arrived in Sweden and were seeking repatriation to Britain. One such was Jack Byrne, a member of the regiment which subsequently became the British

SAS. Byrne had escaped from a prison camp in Poland, made his way to Gdansk, and stowed away on a Swedish merchant ship which brought him to Gothenburg. After he arrived in Stockholm, he was repatriated to Leuchars in the bomb bay of a Mosquito and was able to retrain as a commando and take part in the Normandy landings. Such men were extremely valuable to the British war effort (*Daily Telegraph* 17 Feb 2007).

Wing Commander Don Bennet was shot down in a raid on the German battleship *Tirpitz* in April 1942. MI9 described this method of reaching Sweden as a 'fighting patrol to the Swedish border', without local help which could attract reprisals. Four airmen from a Coastal Command Liberator also shot down in Norway made it from the Lofotens to Sweden with the help of local people between May and July 1942. It took them five weeks to do so, but when they arrived, they were repatriated to Leuchars (Pitchfork 2007: 125-33).

Even more famous were the three escapees featured in Eric William's 1949 novel, *The Wooden Horse*, adapted for the screen in 1950. One of the three, Oliver Philpot, stowed away on a Swedish ship in Gdansk in November 1943, by climbing up one of the mooring cables. When the ship docked in Södertälje, he spent the night in a police cell, and the next day in the British Legation in Stockholm from where he and his companions, Williams and Codner, were repatriated by air. Finally, two of the three successful escapees from the '*Great Escape*' (a 1950 novel by Paul Brickhill, filmed in 1963), Norwegians Peter Bergsland and Jens Muller, reached Sweden and flew back to Scotland.

As well as escapees, the service repatriated agents and commandos who had landed in Norway and crossed the border to Sweden, so-called 'insertion and extraction' operations.

In *Operation Musketoon*, for example, in September 1942, ten British Commandos and two Norwegian SOE agents were dropped in North Norway to blow up an electricity power station supplying an aluminium factory whose output was used by the Germans for war production. The force succeeded in blowing up the power station which meant that the Germans were unable to reopen the aluminium factory during the war. Four of the commandos were repatriated from Stockholm to Leuchars and congratulated for their daring and successful raid.

Perhaps the best known insertion and extraction operation was *Operation Gunnerside* in February 1943. We now know that the Germans were never likely to develop a usable atomic weapon during the war but in February 1943 such an eventuality could not be risked. One element in the German bid to construct an atomic weapon was the production of heavy water in a plant in southern Norway. *Operation Gunnerside* was designed to sabotage the German production facilities. Six Norwegian commandos were dropped into Norway

and joined a team of four already there. The combined force successfully penetrated the heavily guarded site, placed their explosives and escaped. Six skied 400 km to Sweden and were repatriated by the air service. The film *The Heroes of Telemark* (1965) commemorates one of the most successful SOE operations of the war but this success was based on intelligence brought by the Norwegian physicist, Leif Tronstad. He had escaped to Sweden and been flown to Scotland with the vital scientific information about heavy water production towards the end of 1941. Without Tronstad arriving in person to alert the authorities, it is doubtful whether the importance of heavy water production would have been recognized by Britain (Høgskolen i Oslo nd).

The importance of the air service in SOE operations cannot be understated. It was an integral logistic support to the success of such raids and intelligence that created them. The flights were not, however, without their dangers. Even the Mosquitoes were subject to attack. In July 1943, a flight from Scotland was attacked by two FW-190s at 23,000 feet. The pilot, Gilbert Rae, dived down to sea level at more than 400 mph on full throttle. The descent was so violent that his Radio Officer had to spend two weeks in hospital to recover from his injuries but the damaged plane landed safely in Scotland (Gann 1976: 146-8; Nilsson & Sandberg 1996: 180-1).

Less exciting, but perhaps equally important, was the delivery of propaganda material and British personalities to Sweden in order to bolster the British message against the German onslaught of both propaganda and visiting personalities. Such luminaries as T.S. Eliot, Harold Nicolson and Sir Kenneth Clarke were able to visit Stockholm. Sir Stafford Cripps was there in 1941 before the invasion of Russia on his return from his posting as Ambassador in Moscow. The Ministry of Information (MOI) had a great deal of difficulty in planning and arranging these cultural visits. Foreign Office file notes from 1942 illustrate the problems of wartime organisation and resources:

We have had the most awful trouble trying to get Sir K Clark off to Sweden [...] the air service has been practically paralysed'. (NA FO 371/33055 17 Feb 1942)

Despite this, the MOI eventually succeeded in lining up T.S. Eliot and film star Leslie Howard; Eliot went but Howard did not. Despite the difficulties, the Legation was able to support the British Council and maintain a flow of speakers who played an important role in influencing Swedish public opinion. The British Minister in Stockholm during the war years, Sir Victor Mallet, recalled in his memoirs:

Some of the visitors who were flown out to Stockholm were fascinating guests organised by the British Council. Nobody ever knew how soon they would be given a passage home again and they sometimes stayed for two or three weeks before this happened. Thus it was that we made friends with many likeable and distinguished people in many walks of life including Dr Malcolm Sargent, Sir Kenneth Clarke, Sir Harold Nicolson, the Bishop of Chichester, Professor William Holford, Mr T.S. Eliot, Dame Caroline Haslett, Sir William Bragg and others. It was most refreshing to get news of how civilisation still existed in wartime England and of new developments in the arts and sciences. The Swedes, who by now were suffering from a kind of isolation complex, took full advantage of these visitors and we were able to make all kinds of interesting contacts in the Swedish cultural world [...] T.S. Eliot pursued in his quiet way the Swedish Pen club and other intellectual bodies and achieved an outstanding success. We were much amused when he came home late one evening from one of these parties whose cheeks covered with lipstick from being embraced by a number of enthusiastic Swedish girls after a reading of some of his poetry. I had been rather alarmed at the arrival on a long visit of the erudite modern poet and was puzzled what books to put in his room. The solution turned out to be easy as what he really liked were detective stories, of which we had several [...] the Swedes were hungry for intellectual contact with the West and showed a remarkable appreciation of Tom Eliot and his poetry.

Kenneth Clarke gave a series of lectures on landscape painting and on modern British artists and was probably the first person to introduce the Swedes to the art of such outstanding post-war figures as Graham Sutherland and Henry Moore. (Mallet *Unpublished*: 143-4)

The Norwegian service

Another category of service flights connecting Sweden and Scotland was started by the Norwegians to extract the thousands of Norwegian men who had escaped to Sweden and wanted to serve in the Norwegian forces in exile. In May 1941 the service was agreed and was to operate with two Lockheed Lodestars but to ease acceptance by Sweden, it would be run by BOAC, the Norwegian crew would have British passports, and the planes would have British civilian markings. The service began in August 1941 and the two planes made 24 flights up to February 1942. Nonetheless the Norwegians felt that the British were not doing enough to support them to increase the service capacity. Flight frequencies increased but the unsuitable Lodestars suffered technical failures as well as poor operating performance. Through their familiarity with Norwegian geography, the Norwegian crews were able to use natural features

such as valleys between Stavanger and Bergen to evade detection by German patrols. Tensions over support in 1943 led the Norwegians to insist on total control of their operation. They continued with the Lockheeds in October when the British replaced them with Mosquitoes, but, remaining short of aircraft, approached the United States for help. The Americans delivered more Lockheeds but the British dragged their feet over the parts and facilities required to convert them for the service as Norwegian pilots were now also flying Mosquitoes. The Americans again offered help in Spring 1944, and following personal pressure on Churchill by King Haakon, briefed by Trygve Lie, the Norwegian Air Force were permitted to use transport planes to fly to Stockholm and collect 2,000 of the 20,000 Norwegians in Sweden and bring them back to Britain for training (Nilsson & Sandberg 1996: 174-5).

A recollection by one of the Norwegians who was able to get to Scotland from Sweden gives a good example of the emotions that the passengers experienced. Erling Storrusten from Gudbrandsdal remembered:

One day I discovered that London had seconded some men to jobs in the Air Force. This was for me and I made the necessary applications. In what seemed like no time at all I was sitting in a civil BOAC Lockheed Loadstar (*sic.*) bound for Scotland. [...] The windows were blacked out and we were given strict instructions not to show any light. However, I couldn't resist taking a peep and below, bathed in moon-light, I got a farewell glimpse of Norway [...]

Perhaps it will be difficult for my descendants to understand the unreal feeling of sitting in a civilian English aircraft, flying over our own country, with German fighter planes chasing us. But now I was about to attain the dream of thousands of Norwegian young people: to be in England and perhaps join the fight against the Germans. For me, this reality had come so quickly, and so unexpectedly, that it was almost unbelievable. (Ward & Ward 2007)

The most famous return ticket on the Shetland Bus was that of the Norwegian, Jan Baalsrud. After fighting the Germans during the invasion of Norway in 1940, Baalsrud escaped to Sweden, where he was expelled for espionage and made his way by a circuitous route to Britain. There, he joined the Norwegian commandos and in March 1943 was about to land in Norway from a Shetland bus, the fishing vessel *Brattholm*, when it was attacked by the Germans. Baalsrud escaped and went on the run for two months during which he shot a German Gestapo officer, suffered frostbite and snow blindness and was then taken over the Swedish border by the Sámi. His physical condition was so bad that it took seven months for him to recover in hospital in Boden

before travelling to Stockholm and being flown back to Britain in a Mosquito. Baalsrud is the subject of one of the most popular and Norwegian war films of all time – *Ni Liv* (1957; 'Nine Lives').

The United States service

The United States also joined in this service and a colourful Norwegian-American Colonel, Bernt Balchen, masterminded *Operation Sonnie* in 1944 with a fleet of five B24 Liberators which flew to Sweden as civilian aircraft stripped of all military equipment and markings. *Operation Sonnie* transported over 4,000 passengers, mainly Norwegians but also downed American bomber pilots, to Britain (Gyllenhaal & Gebhardt: 2001: 123-4). One of the pilots recalled:

It was necessary for us to fly over Norway when flying to and from Sweden. During the summertime period in that part of the world it never gets dark at our operating altitude of 12,000-14,000 feet. We never flew missions unless bad weather was forecast over Norway [...] When the weather forecast was favorable we would change from our uniforms to civilian clothes, jump into our B-24 Airliners and proceed to Stockholm. While in Stockholm we stayed in rooms our government had leased in a very nice small hotel. Each morning we went to the British Overseas Airway Corporation (BOAC) office to pick up our daily per diem and ration coupons. Bread and a few other food items were rationed. It was necessary to do this daily as the weather forecast determined if we would return to Scotland or stay another day. On one mission we were in Stockholm seven days waiting on the right forecast. During this stay a formation of several B-17s landed because of insufficient fuel to return to England and the crews were interned. It was several months before we started flying our interned combat crews back to England to resume their combat tours.

Each evening while in Stockholm we went to the secret weather station in the British Embassy for a weather briefing to determine if we went back or stayed another day.

When the go signal was given forty Norwegians would be waiting to climb into the bomb bay with their baggage. This was a very crowded situation for our passengers. (Carnine nd)

One of the most unusual *Operation Sonnie* cargoes was the transport of fragments of a German V2 rocket which had crashed in Sweden. The wreckage was handed over to the British by Sweden for analysis and research in a distinctly non-neutral act! (Gyllenhaal & Gebhardt: 2001: 124)

Conclusion

This air service, or rather these air *services*, between Sweden and Scotland deserve to be commemorated along with the Shetland Bus by the people of Scotland, Norway and Sweden. Certainly, the physical rigours of winter passages on a small inshore fishing boat in the Norwegian Sea could not be matched by flying over the same waters. Nevertheless, many of the other risks taken by the crew and passengers on these flights deserve admiration. Many of the Norwegian passengers had braved the German patrols on the Swedish-Norwegian border to get to Sweden and then found themselves again flying over occupied territory through air patrols capable of shooting down their planes. The experiences of Gladan and Gripen and their unfortunate passengers made this danger all too real.

Each of the services exemplifies the differences between each country's struggle during the Second World War and affects the way in which we remember the events:

Sweden was struggling to re-establish its lost connections with the democratic West and to reduce its economic dependence on the German regime. It was prepared to risk crew and machines in order to do so, and the service demonstrates the determination of Sweden not to be cowed by the Nazis. Yet Sweden's post-war reluctance to draw attention to the country's trading links with Germany meant that the bravery of the Swedish crew and passengers of other nationalities who flew to and from Scotland has been overlooked. Commemoration is long over due.

Britain was striving to wage war on continental Germany and urgently needed the materials to build weapons. Ball bearings were vital to the construction of this equipment and Britain was willing to devote Mosquitoes to bringing these over from Sweden by aeroplane as well as by sea. The fact that Sweden supplied ball bearings to Britain throughout the war is often overlooked by those seeking to brand Sweden as a willing trading partner with Nazi Germany. The British service also carried a range of individuals involved in cultural, military, trade, scientific, and covert operations who were judged to be crucial to the war effort. Because the service was civil, however, its importance for historians of the Second World War has been somewhat downgraded.

For Norway, the desire to extract Norwegians exiled in neutral Sweden to join the active fight against the occupiers of the country drove the push to establish an air service which would ensure greater numbers in Britain and North America for training.

The Americans were anxious to help the Norwegians but also to gain a foothold in Scandinavia for the OSS through Sweden. Bernt Balchen was not

simply flying out Norwegians, he was also flying in weapons and agents for the OSS.

The common denominator in all of these services was the willingness of Sweden to promote links with Britain and the airfields in Scotland which provided the facilities to operate, and is yet one more chapter in the long history of Scottish Swedish connections stretching back to the Viking Age.

John Gilmour

**Division of European Languages & Cultures: Scandinavian Studies
The University of Edinburgh**

Bibliography

Barker, R. (1976): *The Blockade Busters* (London: Chatto & Windus).

Boheman, E. (1964): *På vakt. Kabinettsssekreterare under andra världskriget* (Stockholm: Norstedt).

Carnine, G.D. (nd): *Colonel Bernt Balchen's B-24 Airline*. <http://www.b24.net/stories/carnine.htm> (Accessed 12 Dec 2009).

Daily Telegraph (17 Feb 2007) Obituary, Jack Byrne.

Gann, E.K. (1976): *Ernest K. Gann's flying circus* (London: Hodder & Stoughton).

Gilmour, J.L. (2010): *Sweden, the Swastika and Stalin. The Swedish Experience in the Second World War* (Edinburgh: Edinburgh University Press).

Gyllenhaal, L. & Gebhardt, J.F. (2001): *Slaget om Nordkalotten: Sveriges roll i tyska och allierade operationer i norr* (Lund: Historiska media).

Høgskolen i Oslo (nd): *Leif Tronstad: Vitenskapsmann, etterretningsoffiser og militær organisator 1903 – 1945*. <http://www.iu.hio.no/~ulfu/historie/tronstad/index.html> (Accessed 12 Dec 2009).

Howarth, D. (2005): *The Shetland Bus* (Lerwick: Shetland Times).

Mallet, V. *Unpublished Memoirs* (Cambridge: Churchill College; with kind permission of Philip Mallet).

NA: National Archives, London.

Nilsson, L.-A. & Sandberg, L.A. (1996): *Blockade runners: Sweden's lifeline in the Second World War*, tr. E.H. Nilsson (Gothenberg: Nilsson & Sandberg).

Pitchfork, G. (2007): *Shot down and on the run: the RAF and Commonwealth aircrews who got home from behind enemy lines, 1940-1945* (London: National Archives).

Robson, P. (2004): *Mosquito to Sweden*, BBC History, WW2 Peoples War, Article ID A2679816, 30 May, 2004. <http://www.bbc.co.uk/ww2peopleswar/stories/16/a2679816.shtml> (Accessed 12 Dec 2009).

Törnsäter, H. (2005): 'Försvar och beredskap kring Bromma flygfält.' *Brommaboken. - Bromma hembygdsförenings årsskrift* (Bromma: Bromma hembygdsförening).

Ward, E. & G. (2007): *Norge: Krig, Motstand, Fred: Erling Storrusten – 'potetspionen'* http://www.wwiinorge.com/Storrusten_eng.htm (Accessed 12 Dec 2009).