immediately impounded by the Russians, hardly the action of an ally, and copied, later appearing as the Tupolov Tu-4 heavy bomber, which was given the NATO reporting name of 'Bull'. The B-29 was the aircraft that dropped the atomic bombs on Hiroshima and Nagasaki. The Soviet Union had an aircraft post-war that gave it a strategic bombing capability for the first time.

## Appendix I

## The Convoys

Taking Convoy PQ18 as an example, the volume of war material that could be shipped to the Soviet Union in a typical convoy was considerable:

 Vehs Tanks Aircraft Explosives Other Cargo\*

 Ships from UK
 312
 230
 271
 1,601 tons
 37,799 tons

 Ships from USA
 2,588
 384
 175
 7,297 tons
 72,288 tons

 Lost UK ships
 4
 123
 89
 38
 134 tons
 10,862 tons

 Lost US ships
 8
 1,385
 132
 82
 2,249 tons
 36,554 tons

The loss of the tanker Atheltemplar also meant the loss of 9,541 tons of fuel oil.

\* Other cargo included more than 11,000 tons of TNT.

## The Convoys

Operation Dervish left Liverpool 12 August 1941, then Hvalfjord on 21 August.

This was followed by **Operation Gauntlet** on 19 August, which picked up Russian miners and took them to Spitzbergen, while the Norwegian residents were evacuated.

Royal Air Force personnel were taken to the Soviet Union as **Operation Strength**, which departed on 30 August 1941.

A British and American government mission to the Soviet Union left the UK on 22 September, sailing aboard the cruiser *London*.

This was followed by a mission from the Trades Union Congress (TUC) on 6 October, sailing to Seidisfjord aboard the destroyer *Antelope*, and there they transferred to the destroyer *Norman* for passage to Archangel. The mission returned from the Soviet Union on 27 October, arriving in the UK on 2 November.

**Convoy QP1:** The first convoy from Russia, it returned the ships used in **Operation Dervish** as well as Soviet vessels, and left Archangel on 28 September 1941.

**Convoy PQ1:** The first eastbound convoy, it assembled in Iceland and left the Hvalfjord on 29 September 1941.

Convoy PQ2: Left Scapa Flow in Orkney on 17 October 1941.

Convoy QP2: Left Archangel on 3 November 1941.

Convoy PQ3: Left Hvalfjord on 9 November 1941.

Convoy PQ4: Left Hvalfjord on 17 November 1941.

Convoy QP3: Left Archangel on 27 November 1941, returning the ships of PQ2.

Convoy PQ5: Left Hvalfjord on 27 November 1941.

The Foreign Secretary visited the Soviet Union in December, sailing from the UK on 8 December to

arrive in the Soviet Union on 12 December, leaving for the return voyage on Christmas Day and arriving back in the UK on 29 December.

**Convoy PQ6:** Left Hvalfjord on 8 December 1941.

Convoy QP4: Left Archangel on 29 December 1941.

Convoy PQ7A: Left Hvalfjord on 26 December 1941.

Convoy PQ7B: Left Hvalfjord on 31 December 1941.

Convoy PQ8: Left Hvalfjord on 8 January 1942.

Convoy QP5: Left Murmansk on 13 January 1942.

Convoy QP6: Left Murmansk on 24 January 1942.

Convoys PQ9/10: Left Reykjavik on 1 February 1942.

Between 9 and 15 February, the British ran warships through to transfer a number of sailors.

Convoy QP7: Left Murmansk on 12 February 1942.

**Convoy PQ11:** Left Loch Ewe on 6 February and sailed via Kirkwall in Orkney, leaving there on 14 February.

Convoy QP8: Left Murmansk on 1 March 1942.

Convoy PQ12: Left Loch Ewe and sailed via Reykjavik, which it left on 1 March 1942.

Convoy PQ13: Left Loch Ewe on 10 March and again sailed via Reykjavik, which it left on 20 March 1942.

Convoy QP9: Left the Kola Inlet on 21 March 1942.

Convoy PQ14: Left Oban on 26 March and Reykjavik on 8 April 1942.

Convoy QP10: Left the Kola Inlet on 10 April 1942.

Convoy PQ15: Left Oban on 10 April 1942 and Reykjavik on 26 April.

Convoy QP11: Left Murmansk on 28 April 1942.

HMS Trinidad left Murmansk on 13 May.

**Convoy PQ16:** Sailed from Reykjavik on 21 May 1942.

Convoy QP12: Sailed from Kola on 21 May 1942.

Convoy PQ17: Sailed from Reykjavik on 27 June 1942, but was ordered to disperse on 4 July.

**Convoy QP13:** Sailed from Archangel on 26 June 1942, and was joined by ships from Murmansk on 28 June.

These were followed by **Operation Gearbox**, a code used repeatedly for relief of the Spitzbergen garrison, and in this case operated between 25 June and 3 July.

Ammunition and stores for the ships of the **PQ17** escort were sent from Scapa Flow on 20 July.

Followed by an independent passage by the *Friedrich Engels* sailing from Reykjavik on 11 August, and another by the *Belomorcanal* the following day.

RAF personnel and stores were sent from Greenock on 13 August. Later, on 24 August, an anti-submarine operation sailed from North Russia.

Convoy PQ18: Left Loch Ewe 2 September 1942, left Hvalfjord on 8 September.

Convoy QP14: Left Archangel on 13 September 1942.

Between 13 and 28 October, RAF medical personnel, previously rejected by the Soviets, were moved to Russia and on the return the air and ground crew of two Hampden squadrons, transferred to the Red Air Force, were brought home.

Operation FB: Operation Torch then interfered with the operation of convoys, and PQ19 had to be cancelled. As a sop to Soviet anxieties, it was decided to run a number of independent sailings east and westbound, with the former known as Operation FB. The idea was to run merchant ships lying in Iceland at twelve hour intervals, with British and American ships alternating, between 29 October and 2 November. A thirteenth ship – Russian – was added at the last moment. The demands of the invasion of North Africa meant that escorts could not be provided, but seven armed trawlers were stationed at intervals along the route, while additional reconnaissance flights were made by RAF Catalina flying boats. An attack on a U-boat by one of the trawlers, *Northern Spray*, and the recce flights may well have alerted the Germans. The result was that only five of the ships completed their voyages, with another five sunk and three more turned back. The ships waiting to leave the Soviet Union fared much better, with twenty-two out of twenty-three arriving safely in Iceland. Unusually, the lost merchant ship was attacked by a German destroyer, *Z27*. The westbound operation was not given an official code-name.

**Convoy QP15:** The last convoy of the PQ/QP series, left Archangel on 17 November.

**Convoy JW51A:** Sailed from Loch Ewe avoiding a call at Iceland on 15 December 1942. NB: This one remained undiscovered!

**Convoy JW51B:** Sailed from Loch Ewe on 22 December.

Convoy RA51: Sailed from the Kola Inlet on 30 December.

After the Battle of the Barents Sea, two destroyers made an independent passage from Kola to Scapa Flow between 11 and 15 January 1943, carrying seriously wounded personnel.

**Convoy JW52:** Sailed from Loch Ewe on 17 January 1943.

The Russians sent four merchantmen on independent sailings westwards during January 1943, of which two were lost on 26 January to U-255, while the two that reached Iceland safely were damaged in air raids.

Convoy RA52: Sailed from Kola on 29 January 1943.

**Convoy JW53:** Sailed from Loch Ewe on 15 February, with **Convoy JW53A** (just three ships) sailing the following day to catch up and combine with the main convoy. In bad weather the cruiser *Sheffield* had to turn back after a wave peeled the roof off 'A' turret, while the escort carrier *Dasher* also had to turn back after the forward end of her flight-deck was damaged.

Convoy RA53: Sailed from Kola on 1 March 1943.

Convoys were suspended in mid-March 1943 as the battleship *Tirpitz*, battle-cruiser *Scharnhorst* and heavy cruiser *Lutzow* were all based in northern Norway. The Allies were concerned that this powerful striking force would break out, and the United States Navy hastily assembled Task Force 22 at Portland, Maine, to reinforce the Royal Navy's Home Fleet and protect the Atlantic convoys in case of a break-out. Heavy losses in the North Atlantic, problems in cooperating with the Soviets and the longer hours of daylight all meant that convoys to the Soviet Union would have to be suspended until the darker days of winter.

At the end of the autumn, in **Operation FQ**, the Norwegian garrison at Spitzbergen was relieved by an American cruiser and destroyer assisted by two British destroyers.

**Operation Holder** saw British and Canadian destroyers sail to Russia with supplies for the escort vessels that had spent the summer there waiting for the convoys to resume. This was between 1 and 11 October 1943.

Operation FR saw additional escorts sent to the Soviet Union to bring back merchant ships stranded

there during the summer suspension of sailings.

**Convoy RA54A:** First convoy of the 1943–44 winter sailed westward from the Kola Inlet on 1 November.

Convoy JW54A: Sailed from Loch Ewe on 15 November 1943.

**Convoy JW54B:** Sailed from Loch Ewe on 22 November.

Convoy RA54B: Sailed from Archangel on 26 November.

**Convoy JW55A:** Sailed from Loch Ewe on 12 December.

Convoy JW55B: Sailed from Loch Ewe on 20 December. This led to the Battle of the North Cape on 26

December 1943, which saw the loss of the *Scharnhorst* with just thirty-six survivors – all ratings.

**Convoy RA55A:** Sailed from the Kola Inlet on 22 December.

Convoy RA55B: Small convoy of eight ships sailed from the Kola Inlet on 31 January 1943.

Convoy JW56A: Sailed from Loch Ewe on 12 January 1944.

Convoy JW56B: Sailed from Loch Ewe on 22 January 1944.

**Convoy RA56:** Sailed on 3 February 1944 with the ships of the two preceding convoys, as well as their escorts plus three additions.

**Convoy JW57:** Sailed on 20 February 1944. The growing problems of detecting U-boats in Arctic waters meant that greater attention was paid to the anti-submarine escort, with an escort carrier, *Chaser*, with experienced anti-submarine airmen aboard, as well as a radar-equipped cruiser dedicated to directing aerial operations.

**Convoy RA57:** Sailed from the Kola Inlet on 2 March, supported by *Chaser* and *Black Prince*.

**Convoy JW58:** Sailed from Loch Ewe on 27 March and was joined at sea by three ships from Iceland. Two escort carriers.

**Convoy RA58:** Sailed from the Kola Inlet on 7 April 1944, with the same two escort carriers as **JW58**, *Activity* and *Tracker*.

As a number of empty merchantmen remained in Russian ports, a number of escort vessels were sent to Kola arriving on 23 April. Unfortunately, they were also supposed to escort a large transport to collect 1,430 Russian crew for British warships awaiting transfer to the Soviet Navy, but this ship had to turn back with mechanical defects.

**Convoy RA59:** Sailing on 28 April, this carried the Soviet sailors in many of the merchant ships of this large convoy, while United States Navy personnel returning to the West were accommodated in Royal Navy vessels, as were the Russian admiral and his staff, with their first close-up of carrier operations aboard *Fencer*.

The Normandy landings, **Operation Overlord**, then took up the available escort and heavy units of the Royal and United States navies, suspending convoys to the Soviet Union for the time-being. **Operation DC** saw three destroyers sail on 29 June with supplies for the escorts stranded in Soviet ports, starting their return on 4 July.

**Convoy JW59:** Sailed from Loch Ewe on 15 August, and was joined on 17 August by the ex-British warships now with the Red Navy, giving the escort an extra battleship as well as twelve patrol boats.

Convoy RA59A: Sailed from Kola on 28 August.

Convoy JW60: Sailed from Loch Ewe on 15 September.

Convoy RA60: Sailed from Kola on 28 September.

Convoy JW61: Sailed from Loch Ewe on 20 October.

**Convoy JW61A:** Sailed from Liverpool for Murmansk on 31 October, consisting of just two large troopships carrying 11,000 Soviet nationals captured in Normandy while serving with the *Wehrmacht*. No one from the British ships, merchant or naval, was allowed ashore! The cruiser *Berwick* also carried a Norwegian contingent destined to serve alongside Soviet forces poised to invade the north of occupied

Norway and intended to ensure the continued sovereignty of Norwegian territory. Additional Norwegian troops that should have been flown in, but were prevented from doing so by bad weather, were embarked in two destroyers in **Operation Freeman**, making an independent passage sailing on 3 November and catching up with **JW61A**.

**Convoy RA61:** Sailed from the Kola Inlet on 2 November, although some ships had started their passage from the White Sea as early as 30 October.

Convoy RA61A: Sailed from the Kola Inlet on 11 November with two ships of **JW61A**, and no doubt their guards, probably around 1,100 British troops.

Convoy JW62: Sailed from Loch Ewe on 29 November.

Convoy RA62: Sailed from the Kola Inlet on 10 December.

Convoy JW63: Sailed from Loch Ewe on 30 December 1944.

Convoy RA63: Sailed from the Kola Inlet on 11 January 1945.

Convoy JW64: Sailed from the Clyde on 3 February, after Loch Ewe anchorage ended.

Convoy RA64: Sailed from the Kola Inlet on 17 February.

Convoy JW65: Sailed from the Clyde on 11 March 1945.

Convoy RA65: Sailed from the Kola Inlet on 23 March.

Convoy JW66: Sailed from the Clyde on 16 April 1945.

This was a major operation to stop U-boats blocking the Kola Inlet, where thermal layering made asdic detection more difficult. Despite the problem, the Soviets delayed authorizing the laying of deep level mines, too deep to harm passing surface vessels but well placed to catch a passing U-boat, and permission was not given until 16 April. The ships for **Operation Trammel** sailed from Scapa Flow at 22.00 on 17 April, arriving at Kola at noon on 21 April, planning to begin the deep lay that night, but a further day was lost due to chaotic refuelling arrangements. Nevertheless, the deep lay was completed before the arrival of **JW66**.

Convoy RA66: Sailed from the Kola Inlet on 29 April, but was joined by a second fleet oiler on 5 May.

**Convoy JW67:** Sailed from the Clyde on 12 May, four days after German surrender and well before the Soviet Union declared war on Japan, but as all U-boats had not been accounted for, the Royal Navy maintained that convoys should continue for some weeks.

**Convoy RA67:** Final sailing from the Kola Inlet on 23 May 1945. Between June and August 1945, thirteen merchant ships sailed independently from the Soviet Union westbound, while another five were retained in the Soviet Union.