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| **R34 - The Record Breaker** |

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| |  |  | | --- | --- | | **Statistics:** | | | Length | 643ft | | Diameter | 79ft | | Speed | 62mph | | Engines | 5 x 270hp | | Volume | 1, 950, 000cft |  |  | | --- | |  | |  | | [http://www.airshipsonline.com/airships/r101/images/R34%20Flimclip.gif](http://www.airshipsonline.com/airships/r34/r34%201.mpg) | |  | |  |   To the members of her crew, His Majesty's Airship R34 was known as 'Tiny' - inevitably. The ship was enormous: as big as a contemporary 'Dreadnought' battleship. Her overall length from bow to http://www.airshipsonline.com/airships/r34/images/R34%20in%20flight%2009_r.jpgstern was 643 feet, twice as long as a football field; her maximum diameter was 79 feet and her overall height just short of 92 feet. Her cost was around £350,000 and her total gas capacity was 1,950,000 cubic ft, giving a gross lift of about 59 tons and a disposable lift, when the weight of the structure and permanent fittings was discounted, of 26 tons. Like her sister ship, five engines were fitted, each of 250h.p  At the time, German technical development had been kept under close observation and R34, in particular, had departed from the engine plan of L.33 to follow instead that of the later and more advanced L.49, which had been forced to land in France in October 1917. The former ship had boasted six engines: one to each of the three forward propellers, one to the rear propeller and two driving small 'wing' propellers by shaft. On the latter vessel, the designers had done away with this cumbersome arrangement, eliminating one engine and the two wing propellers entirely, harnessing the power of two rear engines to a single enlarged propeller.   http://www.airshipsonline.com/airships/r34/images/r34gfx.jpgConstruction began at the Beardmore Inchinnan airship factory in 1918. The whole framework was varnished to prevent atmospheric corrosion and heavily braced by wiring. Lengths of linen fabric were stretched between each pair of frames, where they were attached by laces. Narrow strips were then glued over the lacing and the covering of the hull was painted with dope containing aluminium powder, to reflect sunlight and so reduce superheating. In the chambers formed by the main circumferential frames and the longitudinal girders were the gasbags, nineteen in all and made of one thickness of rubber-proofed cotton cloth, varnished and lined with goldbeaters' skins. Each gasbag was contoured to fill all the available space and was surrounded by cord mesh to prevent chafing against the girders. Following the same design as the R33, beneath the main body of the airship, suspended by long, wooden struts and braced rigging wires, were four small gondolas.   |  | | --- | | [http://www.airshipsonline.com/airships/r34/images/Control_Car_r.jpg](http://www.airshipsonline.com/airships/r34/images/Control_Car.jpg) | | R34 Control Car and front engine car | |  | | [http://www.airshipsonline.com/airships/r34/images/Wing_Engine_r.jpg](http://www.airshipsonline.com/airships/r34/images/Wing_Engine.jpg) | | Wing Engine Car | |  | | [http://www.airshipsonline.com/airships/r34/images/Rear_Engine_r.jpg](http://www.airshipsonline.com/airships/r34/images/Rear_Engine.jpg) | | Rear Engine Car | |  | | [http://www.airshipsonline.com/airships/r34/images/R34_Launch_r.jpg](http://www.airshipsonline.com/airships/r34/images/R34_Launch.jpg) | |  | | [[http://www.airshipsonline.com/airships/r34/images/r34side.jpg](http://www.airshipsonline.com/airships/r34/images/R34sidel.jpg)](http://www.airshipsonline.com/airships/r34/images/R34sidel.jpg) | |  | | http://www.airshipsonline.com/airships/r34/images/r34.jpg |   As designed in the R33, the forward gondola, appeared to be a single unit some fifty feet long, but was actually made up of two parts separated by a narrow gap, intended to prevent vibration from the engine affecting the W .T. equipment. Incorporated in the forward section were a control room and a small wireless cabin, below which, during flight, trailed a long aerial. The control cabin was fronted with 'Triplex' safety glass and had handling rails mounted on each side. Here were the steering and elevator wheels, the gas-valve controls, the engine telegraph, the various navigational and WT instruments and the toggles controlling the emergency forward water ballast. Connecting the control-cabin with the keel was a ladder, protected from the elements by a streamlined canvas cover. Another cover similarly enclosed the numerous control-wire connections that led up into the hull. In the rear section of the forward gondola was the first of the engines, driving a single pusher propeller 17 feet in diameter. In the middle of the lower hull amidships were the two smaller 'wing' gondolas housing an engine together with reversing gear -a refinement that enabled the airship to be operated if those in the main control-cabin failed. The rear car was ringed with a rail to assist handlers and, as with the forward gondola, two 'bumping bags' of compressed air were positioned underneath to help cushion landing shocks.   Each of the five engines was a Sunbeam 'Maori': a new type designed for the Wolverhampton firm by a Frenchman, Louis Coatalen, and intended specifically for airship use but clearly inferior to the Rolls Royce engines used by earlier British rigids. Unfortunately, no Rolls Royce engines could be made available as all those produced were now reserved for aeroplane use. The Sunbeams had been accepted reluctantly. Each engine had twelve water- cooled cylinders, which were intended to produce full power at a theoretical 2,100 rpm, although in practice it was rare for 1,600 r pm to be exceeded. In the forward and wing cars, the radiators were mounted externally and controlled by folding shutters. The after gondola of R34 contained two engines geared to one propeller.   The engines were each fitted with a hand starter, while the drive to the propellers was through a sliding Hele Shaw dog-clutch and a reduction gearbox with a ratio of 1:3.86. The clutch enabled the engine to be started and warmed up before flight without endangering the handling-party and made it easier to carry out repairs in the air. If the engine should be stopped during flight, the disconnected propeller could rotate freely in the airstream to reduce head resistance, although if it was required to remain stationary for landing or any other reason, a special brake was provided for this purpose. Assuming that the airship was still moving forwards, the engine might then be started by releasing the brake, engaging the clutch again, and allowing the airstream to turn the engine.   In addition to the gondolas, a considerable amount of space was available also inside the hull and invisible to the outside observer. Running almost the entire length of the ship was a long keel corridor, consisting of a succession of A-shaped frames standing on the two lowest girders, and with three auxiliary longitudinal girders of their own to fence off the surrounding gasbags. At its widest part, this corridor was about 10 ft across, narrowing somewhat towards the extremities. Leading to the wing and after cars were narrow ladders, fully exposed to the force of the elements. It had been discovered following tests on R33 that the turning co-efficient of the two airships was 6.4, giving a minimum turning circle some 4,100 feet in diameter. However, so strong was the effect of the slipstream of the after propeller acting on the rudder, that with the forward engine still and the wing propellers both running in reverse, it was possible for R33 and R34 to pivot virtually on the spot.   Designed slimmer than the theoretical ideal, the aerodynamic shape of R34 was a distinct improvement on most earlier designs - her total air resistance being only seven per cent of a hypothetical flat disc of the same diameter. In later airships, this was reduced even further, but in her own day the streamlining of R34 was excellent and twice as effective as that of her British predecessors. Even though the R34 was designed during a time of war, the R34 was never fitted with a full armament. In addition to bomb racks, the original plan had been to include a ventral 'gun house' behind the rear car, which would carry a one-pounder Pom-Pom and two Lewis machine guns. Another Lewis gun was to be mounted on the rear platform behind the tail, while six more were to be shared equally among the two wing-cars, the forward gondola and the top gun platform. A further arsenal of weapons was tp include two-pounder quick-firing guns which were to be placed on each side of the hull and two more were to join the Lewis guns on top. This heavy armament was presumably intended for defence against German Zeppelins, but in the event the gun house was never fitted and the number of guns was considerably reduced. The original specification showed that her bomb-load was quite considerable: twenty at 100 lb and four at 550 lb.   The firm of William Beardmore and Company Ltd. of Inchinnan near Glasgow began work on R34 on 9 December 1917 and she was completed just over a year later. Preparations to H.M.A.R34 were completed in December 1918 and her lift and trim trials were carried out successfully on the 20th of that month. By the time R34 was ready for her test flights, the war was over and she was too late to see active service. On 30th December 1918, while bad weather delayed the trial flight, the Admiralty agreed to lend their airships to the Air Ministry for long-distance trials. R34 was specifically mentioned but because of the persistently bad weather it was not until the following March that she left her hangar at lnchinnan, near Glasgow, where the Beardmore Company had their works.    On 14 March, R.34 was brought out from her hangar and her crew began the task of accustoming themselves on the ship. The maiden flight lasting nearly five hours, was uneventful and the ship was returned safely to her shed. On 24th March, despite cold, windy conditions with intermittent fog, snow and hail, R.34 left lnchinnan in the late afternoon for a more extended trial. She flew down the Clyde, and then turned to fly over the North of England, towards Newcastle, then turned and returned via Liverpool, over the Irish Sea to Dublin, and returned via the Isle of Man. During this trial it was discovered that her elevator had jammed down, lifting the nose up, after bringing the ship to an even keel, the ship was nursed home to Scotland. No real damage had been done, but on return on the base, the ship was badly handled by the ground crew, which caused damage to her propellers and some of the main girders. The damage caused the ship to be laid up to be repaired, it was this incident which caused the delay in the trip to the USA, and hence loosing the title of the "first to cross the Atlantic" to Alcock and Brown.   R34 was ready for service again at 6.00pm on 28th May and the ship left Inchinnan for her new home of East Fortune, the main airship base on the Firth of Forth. The R34 was enveloped in fog and so headed out to sea to wait an improvement in the landing conditions . The ship had to wait longer than expected and finally landed at 3.30pm the next afternoon, the crew hungry after 21 hours as no food had been carried on board this flight. The plans for the transatlantic voyage were hurried forward . Two weeks after arriving at East Fortune, the R34 flew with the R29 over Edinburgh and Berwick. This short 6-hour flight was to confirm the stability of the ship. On the evening of the 17th June 1919 the R34 was sent on an endurance voyage to give her a proper test before her major flight. The idea was that the ship would be scouting the German Baltic Shores. The ship carried out its duties and also flew up to Denmark, Norway and Sweden. The ship landed after this endurance trial on the morning of the 20th June after a trip of 54 hours.  The Air Ministry had now finally decided to take the R34 to the USA, and a northerly coastal route was decided in case the ship ran out of fuel, then she would never be too far from landfall. Two warships, the Renown and Tiger were offered as supply vessels in case the ship would come in to difficulty and also to offer meteorological reports. It was agreed that if the ship did get in to difficulty, then the R34 would be taken in tow. The plans which were being arranged in New York were the supply of hydrogen for the ship, and a party of 8 experienced airmen were dispatched to America to arrange and train the main part of the American ground crew. The American s had at that time, no experience of a rigid airship.  [[http://www.airshipsonline.com/airships/r34/images/routemap_r.gif](http://www.airshipsonline.com/airships/r34/images/routemap.jpg)](http://www.airshipsonline.com/airships/r34/images/routemap.jpg)At the Admiralty, a room was set a side for wireless messages. A map was also provided for the ship's progress. At East Fortune, further alterations were being made to the ship itself for the voyage. Food lockers replaced bomb racks, which had been installed at her construction, and a compass was placed on the upper gun platform in order that the magnetic field would not be interfered with by any of the electrical equipment. Additional tables and new wash basins were added in the crew space, and furnished with lightweight curtains to stop the drafts from the interior of the hull. Along the keel an additional 24 petrol tanks were fitted bringing the total fuel capacity to some 6,000 gallons.    The crew were divided in to two watches for the trip. In addition to the RNAS uniforms, the crew was issued with heavy duty flying suits, which were redesigned to include parachute harnesses and integral life saving collars.   On 1st July 1919 the ship was gassed to its limit and loaded to its full capacity, and by the end of the evening the ship was ready to go. The ships official departure time was set at 2.00am (GMT) on 2nd July in order to obtain the maximum lift from her gasbags. The ship was eased out of her shed slowly by 700 members of the handling party. The weather forecast was favourable and Major Scott decided not to wait any longer, and at 1.42 am (GMT) the signal to release was given and the R34 lifted slowly in to the misty night sky.  The engines were signalled to commence and the propellers roared into life. The ship was on the way to America, but was so loaded for the journey, that even with the forward momentum of the engines, she very slowly gained height. The R34 travelled along the Firth of Forth, then at a height of 1,300ft she cleared Rosyth, Glasgow, and down the Clyde by daybreak.   |  | | --- | | [http://www.airshipsonline.com/airships/r34/images/R34_crew_r.jpg](http://www.airshipsonline.com/airships/r34/images/R34_crew.jpg) | | The R34 Crew - notice the crew pets - two dogs, and a cat called Whoopsie. Whoopsie accompanied the stowaway William Ballantyne to America. | |  | | [http://www.airshipsonline.com/airships/r34/images/R34_return_r.jpg](http://www.airshipsonline.com/airships/r34/images/R34_return.JPG) | | Smiling Captain Scott on the successful return | |  |   Life on board began to settle in to routine of the agreed scheduled watches, meals and rest times. Strains of jazz could be heard through the ship from the gramophone , which was carried on board for the entertainment of the crew. Crossing the ocean, the morning fog lifted and the crew saw that they were stuck between two cloud layers, the upper obscuring the sun. The wireless operators were finding that these weather conditions were causing electrostatic shocks from the equipment. The clouds soon parted and the sun broke through. Major Scott was wary of the effect of superheating on the gasbags, and wanted to avoid at all costs the valving of hydrogen at this early stage of the flight, and so he bought the ship down low into the layer of fog, which protected the ship from the sunshine and soon cooled the gas. The ship carried on with her voyage at a steady pace, and standard routines.  The main upset occurred at 2.00pm on the first day. It was discovered that a stowaway had managed to creep on board the ship, and hide up in-between the girders and the gasbags inside the hull of the ship. Before starting on the voyage, it was decided that some of the members of the crew, including W.W. Ballantyne , must be left behind, the numbers being limited of necessity to thirty on the voyage. Two hours before the flight, William Ballantyne managed to climb back on board the ship, and hid himself in the darkness of the ship. He had also carried with him, the crews' mascot, a small tabby kitten called "Whoopsie". Both of these stowaways had hidden themselves. But the cramped conditions and the fact that the smell of the gas had made Ballantyne nauseous, made him give up and come out of hiding.  The dishevelled stowaway was brought in front of Major Scott and Maitland, and it was decided that there was actually nothing they could do about it. It was agreed that had they been over land then Ballantyne would have been put overboard by parachute, but as the next landfall was in fact America, he was to stay on board. The only problem that could occur was the strain on the very limited and controlled resources. Having been quite ill for some time, he was rested on one of the hammocks, and attended to by Lieutenant Luck. When he recovered, Ballantyne was, as with traditional stowaways, made to work his passage as cook and often having to hand pump the petrol into the tanks. As to the second stowaway, Whoopsie, it was deemed that the oldest airman on board, 42 year old George Graham accepted responsibility for the cat, and Whoopsie worked her passage throughout the rest of the voyage, providing entertainment and comfort to the other crew members.   The weather slowly worsened, and all the ships engines were engaged to full power as the wind speed increased and a storm began to approach. The next morning the R34 was halfway across the Atlantic but the weather was continuing to deteriorate. However throughout the day there were some breaks in the weather causing the ship to be able to view the transatlantic shipping traffic below, for some 50 miles in each direction. By the evening the weather became increasing stormy and the wind turned head on to the ship. Coming up from the southeast, the winds were blowing at about 50mph causing the ship to fight her way forwards and sideways.   Throughout the night, Major Scott tried to move the ship up higher to avoid the wind, but if was found to be the same at each level. By morning the cloudbank had moved away and clear skies brought a sight of a 150ft iceberg below the ship, further behind it smaller bergs and pack ice was visible. The clouds soon returned as Newfoundland was not far off the ship, and fog enveloped the ship once more. Concern was beginning to show by Major Scott as there were no gauges on the petrol tanks and use of the dipstick showed that there were only some 2,200 gallons of petrol left. With further strong headwinds expected down the coast, the thought of getting to New York without stopping was looking more unlikely every hour that drew on.   The ship flew over Labrador and at 12.50 the land was sighted for the first time. Now the ship had to follow the coast down and head for it's landing place at New York. With only 500 gallons of fuel left, the ship was bought down to 800ft to try and escape the worst of the headwinds. From this height, the crew had superb views of the North American forests and could see, smell and hear every detail. The ship had been in the air for 4 days and the crew was beginning to tire. Emergency preparations were tentatively being made in Boston for emergency landing there, but the ship continued on her voyage. Each fuel tank was inspected and whatever was left in the bottom of the tanks was collected and poured in to the main tanks to keep the engines running. Major Scott made the decision to continue onto the agreed landing area at Mineola, Long Island, New York. In the last hour of the flight, the crew busied themselves in making themselves presentable.   By 9.00am Mineola came in to view. All the carparks were full and a huge grandstand had been erected for local and national dignitaries. Major Pritchard donned a parachute and whilst the ship circled overhead, dropped to the ground and became the first man to arrive in America by air. He hastily arranged the ground crews, and helped ease the ship to the ground. The R34 landed at 9.54am after 108 hours 12 minutes flying time. This became the world endurance record breaking that set previously by the British NS 11. There were 140 gallons of fuel left on board, which was sufficient only for another 2 hours flying at reduced power.  [<http://www.airshipsonline.com/airships/r34/images/R34salte.jpg>](http://www.airshipsonline.com/airships/r34/images/R34salte.jpg)The ship was only in America for 3 days. During this time the crew were allowed to rest and have hot showers, they attended a constant series of events where they were saluted for their historic crossing. The people of New York lavished their generosity on the crew and they were bombarded with offers of invitations to formal functions during their stay. The engineering crew stayed with the ship ready to give the engines a long-awaited overhaul and a full check over in preparation for their return voyage home. It was found that that no repairs were necessary and the engines had performed well. The propellers had accumulated a thick coating of engine oil and this was proudly removed by a local firm, free of charge and just happy to offer assistance to the crew and to the ship.  The R34 was in very good shape, and moored to a three-wire system at the bows, whose own lift kept the wires taut. The crew returned to the ship and provisions were loaded back onto the ship for her return voyage. The final preparation was to gas the ship, and this was carried out using thousands of cylinders of hydrogen gas. As with the flight to America, the R34 would be gassed to capacity again, and await the coolest part of the day to depart, and so the ship was finally launched at 6 minutes to midnight on Wednesday July 10th. The great crowd which had always been around the R34 her entire time in America gave a huge cheer, and the ship was launched.  The wind had picked up before the launch and was gusting at 30mph, which caused concern, but the ship cleared the landing field, and made her way eastwards. As a gesture of gratitude to the city, which had generously hosted her crews, the R34 flew towards the illuminated metropolis. The ship made her way up to a height of 2,000ft as Major Scott was unsure of the height of the skyscrapers. Searchlights illuminated the ship as she flew over the city and, despite it being 1.00am in the morning; thousands of well wishers took to the city streets and rooftops to wave. The ship then turned out to the sea and headed on towards home.   Very good progress was made during the night as the ship had the advantage of a strong tail wind, and her speed increased to 90mph as she flew in the prevailing air current. The forward engine was rested and still the ship was managing to race along at 90 mph. The crew was unprepared for the swiftness of their eastward crossing of the Atlantic. It was considered that, as the R 34 was gaining time on her voyage and not expending much of her fuel compared to her outward journey, the ship change her flight route and fly over London before returning to East Fortune. The return home was uneventful, and the standard ship routine continued. The only problem occurred when an engineer fell against the clutch of an engine causing the engine to be freed and race until destruction because the connecting rods fractured.  The repairs could not be made in flight and so the engine was stopped, but this in no way impeded the speed of the ship. Due to this event and not having any spare power in case of emergencies, it was decided to cancel the voyage over London and head straight home. It was not until the final evening at midnight when a message was received from the Air Ministry to divert the ship from landing at East Fortune, but go directly to Pulham. It was initially due to bad weather at East Fortune, but a few hours later a message from East Fortune confirmed the weather conditions had improved. A request was put in to the Air Ministry to have the ship return to East Fortune but this was turned down and the ship was ordered to Pulham. No reason was ever given for this change in plan and no explanation can be found for it. The ship carried across the English countryside and came, rather quietly to Pulham Air Station at 6.57 GMT to be welcomed by the RAF personnel, which was rather quieter than that which greeted the ship at New York, and than expected at East Fortune.  The return journey had taken three days three hours and three minutes. The ship had travelled some 7,420 miles on this voyage at an average speed of 43 mph.  The ship did return to East Fortune and spent 6 months being refitted. In February 1920 the R 34 then made a seven and a half-hour flight back to Pulham. The ship remained at Pulham for six weeks where no flights were undertaken. It was later decided that the ship be assigned to Howden Airship Station, and she was flown upto Yorkshire at the end of March 1921.  At Howden the R34 was to undertake further changes, like her sister ship the R33, to enable her to be moored at a mooring mast. Her bows were to be altered to allow access to the ship and a mooring cone was added. The new cone was ordered and placed on the R33 but the R34's mooring gear had not arrived to be fitted to the ship. On 27th January 1921 the R34 left Howden on her first voyage for several months. It was deemed that she was to carry out duties as with the R32, as an instructional ship for American crew.  **The R34's final destruction** http://www.airshipsonline.com/airships/r34/images/r34crash.jpgShe carried an instructional crew as part of a training flight but also to check on the recent repairs to the ship had been successful. The ship moved out over Spurn Head and during this time due to confusion with radio messages, contact was lost with the ship. Commander Maitland decided to recall the ship and the message was ordered to be repeated until understood. The ship finally heard the signal and began to return home. Confusion occurred on the R34 as the navigating officer had lost his way, and thought that the ship was safe to journey home, however during the voyage the weather had deteriorated and a heavy fog enveloped the area. The signals were confused as to the ships exact location, however the crew continued in the direction of Howden.  By midnight, the crew was settling into their bunks and the watches were changing when a loud grinding sound was heard and a shudder went through the ship. The control gondola lights went out and the crew was thrown to the floor. Upon recovery it was discovered that at 12.10 am a sudden downdraft had pushed the ship into an unseen slope of the moors. Luckily the ship "bounced" and lurched upwards, and the captain rang for the engines to be stopped  [<http://www.airshipsonline.com/airships/r34/images/r34crsh2.jpg>](http://www.airshipsonline.com/airships/r34/images/r34crsh2.jpg) The R34 was floating helplessly in the wind whilst the damage could be assessed. It was discovered that clumps of heather were stuck to the forward gondola, some of the windows were smashed and the bumping bags had been carried away. One girder in the keel had been twisted, tow engine car struts were damaged, the wireless aerial shortened and the fore and aft propellers were reduced to stubs. This last assessment of damage meant that the ship was now deprived of 50% of her power. The remaining engines were started and able to check the drift of the ship against the wind. The R34 had floated out over the North Sea, and like her sister ship, limped home against the wind, damaged and underpowered. By midday the R34 neared Hull, which was only 20 miles from Howden, it then took three hours the get the ship back to her home landing field. At 3.00pm the sky had grown dark and the landing crew assembled to haul the ship home.   The ship was almost to the doors of the hanger when a gust took the ship back out on to the landing field. The wind was gusting very strongly now, and the handling crew were at times being carried aloft as the ship bucked in the gale. More damage was done to the fore and after cars, the rudder had jammed and the controls were therefore inoperable. Commander Maitland then had to give the order to abandon ship, and the crew scrambled safely to the ground. The R34 was then taken back to the mooring block with the idea to have the ship ride out the storm on the tree wire system which she had used at Mineola.  Further damage occurred in trying to get the ship moored, a girder punctured some of the gasbags when it buckled. The ship was finally moored and it was thought that the ship would be able to survive the night, however the gales increased in strength and the ships loss of gas caused her to settle to the ground. Her bows were smashed and the hull of the ship damaged beyond repair by the first light of the morning, it was obvious that R34 would never fly again.  Within 3 days of the accident, the R34 had been striped of her equipment and outer cover, anything salvageable from the ship had been reclaimed and the rest of the hull structure was destroyed. The sad remains of the R34 were sold for scrap. |

**R34**

[](https://vignette.wikia.nocookie.net/airship/images/2/2d/Image-r34.jpg/revision/latest?cb=20070622210533)

coming in for a landing!

The R34 was One of the many British constructed Airships and a Memorable one in [airship](http://airship.wikia.com/wiki/Airship) history. It was the largest ship at that time for a month or so, with a big length of 645 ft. She was the first ship to cross the atlantic from Britain to america, and is one of the most successful Airships of all time. The R34 opened a new Era in [airship](http://airship.wikia.com/wiki/Airship) history and with this record breaking ship, the future of Airships looked very bright

**Construction**

Construction began at the [Beardmore Inchinnan airship factory](http://airship.wikia.com/wiki/Beardmore_Inchinnan_airship_factory?action=edit&redlink=1) in 1918. The whole framework was modified to prevent atmospheric emplosion and heavily braced by wiring. Lengths of linen fabric were stretched between each pair of frames, where they were attached by laces. Narrow strips were then Glued over the lacing and the covering of the hull was painted with dope containing aluminium powder, to reflect sunlight and so reduce superheating. In the chambers formed by the main circumferential frames and the longitudinal girders were the gasbags, nineteen in all and made of one thickness of rubber-proofed cotton cloth, varnished and lined with goldbeaters' skins. Each gasbag was contoured to fill all the available space and was surrounded by cord mesh to prevent chafing against the girders. Following the same design as the [R33](http://airship.wikia.com/wiki/R33?action=edit&redlink=1), beneath the main body of the airship, suspended by long, wooden struts and braced rigging wires, were four small gondolas. [R34gfx](https://vignette.wikia.nocookie.net/airship/images/0/04/R34gfx.jpg/revision/latest?cb=20070622212331)

The design of R34.

**The record-breaking voyage**

Shortly after construction, the [Air Ministry](http://airship.wikia.com/wiki/Air_Ministry?action=edit&redlink=1) had now decided to take the R34 to the USA, and a northerly coastal route was decided in case the ship ran out of fuel, then she would never be too far from landfall. Two war airships, the [Renown and the Tiger](http://airship.wikia.com/wiki/Renown_and_the_Tiger?action=edit&redlink=1) were offered as supply vessels in case the ship would come in to difficulty and also to offer meteorological reports. It was agreed that if the ship did get in to difficulty, then the R34 would be taken in tow. The plans which were being arranged in New York were the supply of hydrogen for the ship, and a party of 8 experienced airmen were dispatched to America to arrange and train the main part of the American ground crew. The American s had at that time, no experience of a rigid airship. The voyage went on uneventfull and the Ship safely arrived in new york with the streets completely jam-packed with cheering people welcoming the arrival of the ship. After this, the good ship, crew and captain became legandary.

**After voyage.**

after the record-breaking voyage the R34 flew a total of 51 more flights before she crashed. The ship became a popular and common sight in the sky in britain and sometimes New York (united states)

**the big crash**

First off, no one died, let alone was even hurt in the crash. only [Whoopsy the kitten](http://airship.wikia.com/wiki/Whoopsy_the_kitten) was hurt, with just a little bruise on her paw.The ship moved out over Spurn Head and during this time due to confusion with radio messages, contact was lost with the ship. Commander Maitland decided to recall the ship and the message was ordered to be repeated until understood. The ship finally heard the signal and began to return home. Confusion occurred on the R34 as the navigating officer had lost his way, and thought that the ship was safe to journey home, however during the voyage the weather had deteriorated and a heavy fog enveloped the area. The signals were confused as to the ships exact location, however the crew continued in the direction of Howden.

By midnight, the crew was settling into their bunks and the watches were changing when a loud grinding sound was heard and a shudder went through the ship. The control gondola lights went out and the crew was thrown to the floor. Upon recovery it was discovered that at 12.10 am a sudden downdraft had pushed the ship into an unseen slope of the moors. Luckily the ship "bounced" and lurched upwards, and the captain rang for the engines to be stopped.

[](https://vignette.wikia.nocookie.net/airship/images/d/d5/R34crash.jpg/revision/latest?cb=20070622211412)

The big crash in progress

in the end of a series of ordeals, every one of the crew was recovered and safe, and the front was repaired. The mighty ship flew two more little Test flights before being scrapped, and it was very well one of the most successfull Airships in histo[](https://vignette.wikia.nocookie.net/airship/images/a/aa/R34salte.jpg/revision/latest?cb=20070622211833)

British army men salute the R34.

The only other airship in the class, **R34**, became the first aircraft to make an east to west [transatlantic flight](https://en.wikipedia.org/wiki/Transatlantic_flight) in July 1919 and by the return flight, completed successfully the first two-way crossing, and was decommissioned two years later after being damaged during a storm. The crew nicknamed her "Tiny".[[1]](https://en.wikipedia.org/wiki/R33-class_airship#cite_note-AHR-R34-1)

### R34

R34 made her first flight on 14 March 1919 and was delivered to her service base at [East Fortune](https://en.wikipedia.org/wiki/RAF_East_Fortune) on 29 May after a 21-hour flight from Inchinnan. R34 had set out the previous evening but thick fog made navigation difficult, and after spending the night over the North Sea the airship was unable to moor in the morning due to fog. After cruising as far south as Yorkshire R34 returned to East Fortune to dock at about 3 p.m.[[10]](https://en.wikipedia.org/wiki/R33-class_airship#cite_note-10) The airship made her first endurance trip of 56 hours over the Baltic from 17 to 20 June.[[*citation needed*](https://en.wikipedia.org/wiki/Wikipedia:Citation_needed)]

It was then decided to attempt the first return [Atlantic crossing](https://en.wikipedia.org/wiki/Transatlantic_flight), under the command of Major [George Scott](https://en.wikipedia.org/wiki/George_Herbert_Scott).[[11]](https://en.wikipedia.org/wiki/R33-class_airship#cite_note-11) R34 had never been intended as a passenger carrier and extra accommodation was arranged by slinging hammocks in the keel walkway. A plate was welded to an engine exhaust pipe to allow for the preparation of hot food.[[*citation needed*](https://en.wikipedia.org/wiki/Wikipedia:Citation_needed)]

The crew included Brigadier-General [Edward Maitland](https://en.wikipedia.org/wiki/Edward_Maitland_(aviator)) and [Zachary Lansdowne](https://en.wikipedia.org/wiki/Zachary_Lansdowne) as the representative of the US Navy.[[12]](https://en.wikipedia.org/wiki/R33-class_airship#cite_note-12) William Ballantyne, one of the crew members scheduled to stay behind to save weight, stowed away with the crew's mascot, a small tabby kitten called "Whoopsie"; they emerged at 2.00 p.m. on the first day, too late to be dropped off.[[13]](https://en.wikipedia.org/wiki/R33-class_airship#cite_note-aht34-13)

[](https://en.wikipedia.org/wiki/File:R-34_Wrecked.JPG)

The wreck of the R34 at Howden in January 1921

R34 left Britain on 2 July 1919 and arrived at [Mineola](https://en.wikipedia.org/wiki/Mineola,_New_York), [Long Island](https://en.wikipedia.org/wiki/Long_Island), [United States](https://en.wikipedia.org/wiki/United_States), on 6 July after a flight of 108 hours with virtually no fuel left.[[14]](https://en.wikipedia.org/wiki/R33-class_airship#cite_note-Flight_10_jul-14) As the landing party had no experience of handling large rigid airships, [Major E. M. Pritchard](https://en.wikipedia.org/wiki/J._E._M._Pritchard) jumped by parachute and so became the first person to reach American soil by air from Europe. This was the first East-West aerial crossing of the Atlantic and was achieved weeks after the [first transatlantic aeroplane flight](https://en.wikipedia.org/wiki/Transatlantic_flight_of_Alcock_and_Brown). The return journey to RNAS Pulham took place from 10 to 13 July and took 75 hours. Returned to East Fortune for a refit, R34 then flew to [Howden](https://en.wikipedia.org/wiki/RNAS_Howden), [East Yorkshire](https://en.wikipedia.org/wiki/East_Riding_of_Yorkshire), for crew training.[[*citation needed*](https://en.wikipedia.org/wiki/Wikipedia:Citation_needed)]

On 27 January 1921 R34 set off on what should have been a routine exercise. Over the North Sea the weather worsened and a recall signal sent by radio was not received. Following a navigational error the craft flew into a hillside on the North Yorkshire Moors during the night, and the ship lost two propellers. She went back out to sea using the two remaining engines and in daylight followed the [Humber Estuary](https://en.wikipedia.org/wiki/Humber) back to Howden.[[15]](https://en.wikipedia.org/wiki/R33-class_airship#cite_note-15) Strong winds made it impossible to get her back into the shed and she was tied down outside for the night. By the morning further damage had occurred and R34 was written off and scrapped.[[16]](https://en.wikipedia.org/wiki/R33-class_airship#cite_note-16)

**The R34 airship, which made the first ever east-west flight across the Atlantic as well as the first-ever return flight across the pond, is a forgotten chapter in British aviation history.**

The Scottish county of East Lothian is known for its scenic golf courses, historic castles and one of the biggest gannet colonies in the world at the Bass Rock. What’s less known is its place in aviation history. In the early hours of 2 July 1919 the biggest airship in Britain left its hangar at the airfield at East Fortune. The 643ft-long craft soon took off and headed west. After a journey of four and a half days that encountered poor weather and engine problems the dirigible landed in the USA. The R34 had completed the first east-to-west aerial crossing of the Atlantic. It touched down with approximately one hour's fuel left.

Along the way two stowaways had been discovered, a kitten called Whoopsie and a human called William Ballantyne – a crew member who had been removed to make room for an American observer but didn’t want to miss out. He was found over water, otherwise he would have been given a parachute and sent homewards. A parachute was used by one of the officers who jumped to help the American reception personnel who were unused to dealing with an airship of that size.

The crew were fêted by the people of New York, and met the American President Woodrow Wilson. After several days of being entertained and re-equipping the airship, it was time to return. The journey home encountered no major issues. The R34 was scrapped in 1921 following an accident. In the Museum of Flight that now stands on the East Fortune airfield site, the airship’s nose cone, in the shape of a heraldic crest, can be seen.

90th Anniversary of R34 Arrival in America

TOPICS:[anniversaries](https://www.airships.net/blog/tag/anniversaries/)[british](https://www.airships.net/blog/tag/british/)

**Posted By:** [**Dan Grossman**](https://www.airships.net/blog/author/dan-grossman/) July 6, 2009

Today is the 90th anniversary of the arrival of the British airship R34 in America on July 6, 1919, after its historic transatlantic crossing.

[](https://3iz4pu1r2cxqxc3i63gnhpmh-wpengine.netdna-ssl.com/wp-content/uploads/r34-mineola.jpg)

R34 arriving at Mineola, New York. July 6, 1919.

At approximately 9:00 AM on July 6, 1919, R34 arrived at Mineola, New York after crossing the Atlantic from Scotland, and Major E.M. Pritchard parachuted from the airship to the ground to supervise landing operations.

R34 had departed East Fortune, Scotland on July 2, 1919, and completed the 3,130 nautical mile journey to America in 108 hours and 12 minutes.

[](https://3iz4pu1r2cxqxc3i63gnhpmh-wpengine.netdna-ssl.com/wp-content/uploads/lansdowne.jpg)

Zachary Lansdowne after arrival of R34. July 6, 1919.

The ship was under the command of Major George Herbert Scott, who was later killed in the crash of the R101 in October, 1930.  Also aboard was American naval officer [Zachary Lansdowne](https://www.airships.net/us-navy-rigid-airships/uss-shenandoah#lansdowne), who later served as captain of the United States Navy airship [Shenandoah](https://www.airships.net/us-navy-rigid-airships/uss-shenandoah).

Just before midnight on July 10, 1919, R34 departed New York for its return to the United Kingdom, arriving in Pulham, England after a flight of 75 hours and 3 minutes. It was the first round-trip crossing of the Atlantic by air.

**Built in Glasgow, manned by a largely Scottish crew and launched from an airfield in East Lothian, the R34 airship made the first-ever east-west flight across the Atlantic and wowed New York. So, why has this piece of national pride been forgotten?**

• The R34 under construction in Glasgow

SIX MINUTES before midnight on Wednesday 10 July, 1919, a Clyde-built airship named the R34 rose into the air above Long Island and made its stately progress over the city of New York.

As the machine, carrying 4,500 gallons of petrol, 230 gallons of engine oil, 30 members of crew and a cat named Whoopsie, flew over the districts of Queens and Brooklyn and finally above the skyscrapers of Manhattan, hundreds of thousands of people lined the streets to gaze at the huge silver machine – as long as an ocean liner – that filled the sky.It was, the New York Times reported breathlessly the next day, "one of the finest spectacles New Yorkers had ever seen".

The R34, which made the first ever east-west flight across the Atlantic as well as the first-ever return flight across the pond, is a forgotten chapter in British aviation history. Consigned to the scrapheap just two years after its victorious transatlantic flight, the R34's achievements – it was the longest flight by any aircraft at the time, and the longest time any airship had spent in the air – have been wiped from memories to such an extent that even aviation experts struggle to recognise its name.

Built in Scotland by William Beardmore in Glasgow, manned by a largely Scottish crew and launched from an airfield in East Lothian, it should have been a matter of national pride, yet its only remembrance today is a cafe/restaurant with the same name at Inchinnan, near where the airship was built. So why has this titan of the sky – a Scottish Hindenburg with a happy ending – been allowed to be forgotten?

Just several weeks before the R34's double transatlantic voyage, John Alcock and Arthur Brown made the first non-stop transatlantic flight in a modified Vickers Vimy bomber plane, becoming overnight celebrities and putting aviation in the national headlines. George Rosie, whose new book about the R34, Flight of the Titan, attempts to shed light on the forgotten airship, believes the R34 and its crew were – to a certain extent – victims of circumstance.

"In the public eye they were somewhat overshadowed," says Rosie, "Alcock and Brown had been given massive publicity just a few weeks previously, and they were knighted. But with the R34 that just didn't happen. I've heard it suggested that they were such a huge deal in the United States that they were always going to receive a muted reception when they came back. And then there's the theory that Churchill was so opposed to airships that he worried if it got huge public acclaim that they might have to build more of them."

The R34 was conceived as a warship. Built on Clydeside by Beardmore while the First World War still raged in Europe, it was constructed at a time when it seemed that airships, which used far less fuel than planes or ships – might be the future of transport both military and civilian. By the time construction was finished, however, the Great War was over, and the RAF needed something to do with it. The idea to send it across the Atlantic was conceived.

The crew consisted of 30 airmen, many of them grizzled war veterans for whom nothing was too much of a challenge, and the driving force behind the R34 was Brigarider-General Edward Maitland, a veteran of the Boer War, the First World War and one of Britain's first aeroplane pilots.

"Maitland was a very interesting figure," says Rosie. "He was one of those imperial warrior adventurer figures, the first man to jump in a parachute from 11,000 feet, and always immaculately dressed and very dapper. He struck me as being like a TE Lawrence of the air." During the voyage Maitland kept scrupulous – and highly entertaining – logs of the journey documenting the experience of flying across the treacherous Atlantic in an airship.

Just after taking off from East Fortune Airfield in East Lothian on Wednesday 2 July, 1919, he wrote the following. "All is now more or less plain sailing, as we can make out the Firth of Forth. Passing over Forth Bridge and Rosyth, which shows up clearly – a blaze of lights… Rosyth is a beautiful sight – a fairyland of lights. Ships in docks and ships moored in Firth plainly visible."But the journey was far from, as Maitland put it "plain sailing". The airship battled strong headwinds and a fuel shortage, as well as violent squalls and the occasional leak.

At one point, Maitland recorded too the crew's first sighting of icebergs in the North Atlantic, the first time they had been seen from the air and at a time when the sinking of the Titanic was a fresh and disturbing memory. "Looking down upon this huge iceberg from the open window of the forward car we can clearly see treacherous green ice protruding under the water in all directions," Maitland wrote.

<img src="https://res.cloudinary.com/jpress/image/fetch/w\_auto,f\_auto,ar\_3:2,q\_auto:low,c\_fill/if\_h\_lte\_200,c\_mfit,h\_201/https://www.scotsman.com/webimage/1.4837900.1543698389!/image/image.jpg" class="teaser\_\_image" alt="Runrig bowed out of performing live after 45 years this summer." />

[**Runrig honoured for services to Gaelic at Scots Trad...**](https://www.scotsman.com/lifestyle/culture/music/runrig-honoured-for-services-to-gaelic-at-scots-trad-music-awards-1-4837901)

"As this underwater ice could, under no circumstances, be seen from a surface ship, it brings home to one the hidden dangers that ocean-going vessels are liable to meet within this portion of the Atlantic."

The R34 even had its own stowaway. William Ballantyne, a 22-year-old Aircraftman second class was bumped off the crew at the last minute to make way for a US observer, but decided to sneak onboard anyway, even if it meant risking a court martial. He was discovered after 12 hours between two of the ships' gas bags, violently sick after breathing in small quantities of hydrogen, and assigned to grunt duties onboard for the rest of the trip, such as peeling potatoes.

There was also a feline stowaway, in the shape of the unfortunately named Whoopsie, a cat that had been rescued from the streets of Renfrew, brought to the airfield and had later hidden away onboard. On their arrival in the US, both Ballantyne and Whoopsie became celebrities in their own right in the American press, although only Whoopsie – whom one Broadway actress offered the crew $1,000 for and was turned down – was allowed to make the trip home via the R34, with Ballantyne made to find other means of transport as penance.

Their reception in New York was rapturous, with the crew treated to fine dinners and nights out, while one American paper, the Brooklyn Eagle, took the opportunity to lambast the US military for not having produced something similar in stature to the R34.

On their return home, while New York peered up in wonder at the R34, the crew too, stared down in amazement. "The Times Square, Broadway, is a remarkable sight – we see thousands of upturned faces in spite of the early hour, and the whole scene is lit up by the gigantic electric sky signs, which seem to concentrate about this point." Maitland wrote in his log.

But, returning home on Sunday 13 July to an English airfield, rather than the planned Scottish one, the reception at home was muted, and certainly nothing like the lavish ceremonies that had been laid on in America. In the months afterwards Maitland continued to be an enthusiastic fan of the airship, giving speeches in which he predicted it would be the premier mode of transport of the future. But in 1921, his life was tragically cut short when he, along with several other crew members of the R34 were killed when, on 23 August, its sister ship, the R38, was destroyed by a structural failure over Hull, killing 44 or the 49 crew on board.

When another airship, the R101 crashed in October 1930 on its maiden voyage killing 48 people including a senior government minister, it signalled the death knell for the British airship industry. After the Hindenburg famously suffered a similar fate in 1937, airships were abandoned, consigned to romantic history. But, says Rosie, they still – the R34 in particular, which was scrapped in the early 1920s – leave their legacy.

"If you can solve the problem of making them weatherproof they are still an interesting piece of technology. The US military are now very intriuged by the prospect of getting a huge airship to lift tanks and thousands of men because it's faster than ships and so much cheaper. That's its legacy. The idea is still there."

And there is a parallel to be drawn, he says, between airships, Scotland's R34 and another titan of 20th century aviation.

"Like Concorde they had about 20 years of doing well and then one particular crash ended it," he says. "With both there was a time when it looked like the way ahead. In fact, it proved just not to be."

Thousands of people waited anxiously for the British airship *R.34* to arrive on the morning of July 6, 1919, at Hazelhurst Field, at Mineola, New York. Looking like a huge aerial whale, it glided into view. What happened next is described by Grover Loening in his book *Take Off Into Greatness*. As the airship ‘floated stationary over the field at an altitude of 1,000 feet, a sudden burst of white fell from its control cabin… in a moment the object opened into a parachute, and with a chic that only the English can put over, the *R.34* executive officer landed lightly and unconcerned in full be-ribboned uniform, carrying a swagger-stick.’

Major J.E.M Pritchard’s unique arrival had a serious purpose. No one on the field was qualified to handle the landing of a large airship. Pritchard volunteered, took command and efficiently organized the landing party while *R.34* made a circuit of the field. With engines stopped and propellers in the horizontal position, she was carefully eased into the hands of the landing party at 9:50 a.m.

*R.34* had flown the Atlantic ocean in 108 hours and 12 minutes from its base at East Fortune, near Edinburgh, Scotland. The flight was a landmark in aviation history, though in 1919 it seemed a natural progression in the onward march of aviation.

Although the rigid airship-constructed with gasbags inside a frame strengthened with a keel-was considered a failure in war, it was now seen as a potential passenger carrier. A meeting at the Air Ministry in London on March 4, 1919, discussed a flight to test its suitability for that role. On March 13, Alan R. Hawley, president of the Aero Club of America, invited the Air Ministry to send an airship to Atlantic City, N.J., to attend a muster of aviation groups to be held in May.

The Admiralty, which owned the airship, ceded to the Air Ministry the responsibility for the flight, and the new airship *R.34* was chosen. The purpose of the flight was to obtain information about flying conditions over the Atlantic and to demonstrate the airship’s capability on long voyages. Strict conditions of acceptance imposed by the Air Ministry were beyond the scope of the Aero Club. The U.S. Navy agreed to provide *R.34* with hydrogen gas, supplies and other facilities.

The chosen route, some 3,000 nautical miles, began at East Fortune, continuing via Newfoundland to New York. The Admiralty sent the battlecruisers HMS *Renown* and *Tiger* to provide weather forecasts along the route. In London a control room was established. The Americans did not have experience with rigid airships, so two Royal Air Force (RAF) officers, Lt. Col. F.W. Lucas and Major H.C. Fuller, with eight experienced airmen, were sent to form the nucleus of a handling party.

Fostered by the press, public interest in Britain and the United States grew. The *London Times* commented, ‘there would be only ginger beer to drink in America but the crew of the *R.34* would get a hearty reception.’ The *Times* correspondent in New York reported: ‘the… flight has put the city in a flutter of excitement. Discussion has entirely superseded [the prospect of] Prohibition as the… preoccupation of the bulk of the citizens.’ He added, ‘there will be enormous crowds… which has led the authorities to issue elaborate regulations for the handling of the thousands of spectators and motor-cars.’

Success depended on the 30 experienced RAF men, with their army-style ranks, flying in a naval airship. They were led by Major George Herbert Scott, an Air Force Cross recipient who was also an experienced and skilled airship officer. His wife, Jenie, the daughter of the senior yard manager of William Beardmore and Company, (builders of *R.34*) at their site at Inchinan, Scotland, when asked if the flight concerned her, replied: ‘My father built her, my husband commands her. Why should I worry?’ This trust showed in the crew, who never doubted that they would succeed, asking only, ‘How long will it take?’

The crew included three officers with special duties. The most senior, Brig. Gen. E.M. Maitland, a professional soldier and experienced balloonist, had in 1908 made a record-breaking balloon flight of 1,117 miles from London to Mataki Derevni, in Russia. Considered by many the father of military ballooning in England, Maitland was strong and adventurous. His attitude about the Atlantic voyage was, ‘What more wonderful or more delightful adventure could anyone be called upon to undertake?’

Lieutenant Commander Zachary Lansdowne represented the U.S. Navy. In his definitive work, *Giants in the Sky*, Douglas H. Robinson said Lansdowne was ‘an officer of the highest professional qualification and an unforgettable figure in the history of the rigid airship.’ (Sadly, while serving as commander of the airship USN *Shenandoah*, he would be killed when the craft broke up over Ava, Ohio, early on September 3, 1925.)

Major J.E.M Pritchard, an experienced airship officer, had an unusual background. English by birth, American by descent, his father had left America after the defeat of the Confederacy. Pritchard was *R.34*‘s photographer.

The crew were experienced and dedicated servicemen, mainly riggers and engineers. The riggers’ hazardous tasks included the continuous maintenance of the airship’s gasbags with patches of rubber solution. Singing and whistling were encouraged, because a change in tone indicated escaping gas. A dangerous aspect of their work required a walk along the spine of the airship to inspect the skin and gas valves. A rope was attached to them for safety, but most riggers were skilled in walking without the rope, leaning into the wind.The engineers had a difficult, dirty and noisy time of it. The temperamental engines, constantly troublesome, required ‘mothering’ to keep them operational-pumping fuel, cleaning and repairing.

The crew were divided into two watches, port and starboard. All wore heavy-duty flying suits that incorporated life-saving collars and a parachute harness. The parachutes hung in their packs from girders in accessible places.

Meal times were crucial. The watch going on duty ate first, followed half an hour later by the men coming off duty. The schedule was breakfast at 7:30 a.m., with lunch at 11:30 a.m., tea at 3:30 p.m. and dinner at 7:30 p.m. The food was basic but filling. Beef, ham, eggs and potatoes were precooked. Plenty of bread, cheese, jam, fruitcake, chocolate and tinned milk supplemented the diet, while drinks consisted of Oxo, Bovril, tea and cocoa, along with plenty of drinking water.

East Fortune, Scotland, lay under low cloud and mist, and a slight, cold wind blew from the north-east early on the morning of July 2, 1919. *R.34*, surrounded by the handlers, was ready in her floodlit hanger. The crew, comfortable after a midnight meal, settled at their stations. Scott, assured that all was correct, signaled, and a heavy tractor pulled the massive doors apart. ‘Walk her out!’ Scott ordered, and a bugler emphasized the command. The airship slid out, and once clear she was turned into the wind. The engines fired at 1:42 a.m. Scott ordered the start, the ropes were released and the hull lifted slowly. Engine clutches engaged, the engines roared and, nose-up, *R.34* disappeared into the clouds.

The airship was heavily laden, even after a quarter of the main water-ballast was dropped. But with all engines working hard, Scott maintained height on a course set to the west. Keeping south of the Lennox Hills, Stirlingshire, they flew through the night along the Firth of Forth on to Glasgow, arriving at dawn, and then proceeded down the Clyde River, where they encountered rough weather.

Once they were over the ocean, the clear skies changed to rolling mist. Scott tried to avoid it by going low, but he was compelled to climb, flying at an attitude of 12 degrees to maintain height. Moisture permeated everything; the crew would endure cold and dampness throughout much of the flight.

It was particularly hard for William Ballantyne, 22, a former member of the crew. Left behind, he had sneaked on board, hiding on a girder between gasbags 6 and 7 above the crew’s quarters, feeling cold and ill.

Maitland, in his diary *The Log of HMA R.34*, described what happened when Ballantyne was discovered. ‘Scott came to my hammock… stowaway on board… cannot help sympathizing with his motive… bad from disciplinary point of view… risking the success of the flight… had there been land beneath us instead of ocean we would put him off at once in a parachute.’ Instead, Ballantyne ‘worked’ his passage by acting as a cook and pumping oil.

The misty weather of the first afternoon gave way to thinning clouds, at which point the crew could make navigational sightings. Scott’s task was like that of an old-time sailing master, where a delicate balancing act of all the forces-temperature, wind, lift and weight-was needed. Flair was required, and Scott possessed it.

It was not all work and discomfort, however. Their first tea that day was, as Maitland described it, ‘bread and butter, greengage jam and two cups of scalding tea which has been boiled over an exhaust pipe ‘cooker’ fitted to the forward engine.’ Entertainment was provided by a gramophone, on which they enjoyed listening to the ‘latest Jazz tunes.’

Weather reports from the two naval cruisers enabled Scott and his meteorological officer, Lieutenant G. Harris, to plan ahead. Harris observed unusual cirrus clouds to their southwest and identified them as the first sign of a depression moving north. It was good news, as Scott hoped to take advantage of a good tail wind.

At 3:30 p.m. 2nd Lt. R.F. Durrant, the wireless officer, managed to communicate with St. Johns’s, Newfoundland, although the signal was quite faint. They were still in contact with East Fortune and Clifden, a radio station on the Irish west coast.

That evening the weather grew colder. Flying at 3,000 feet, *R.34* was plunging in and out of the clouds, and the airship’s gas was cooling. To maintain altitude, the crew had to keep all engines at full throttle to drive her at an uncomfortable nose-up angle.

They reached the halfway point across the Atlantic Ocean at about 9 a.m. on July 3, but the bad weather persisted. However, there were a few idyllic moments. Maitland described one such time, when ‘the deep blue of the sea being matched by the light blue of the sky.’ The stand-down watch was occasionally able to relax in the fresh air at the stern. Some sat on top of the hull, backs against the tailfin.

According to Maitland’s diary, *R.34* was soon creeping through swirling fog ‘in a stranglehold of grey darkness’ that later turned to gale conditions with fierce gusts and heavy rain. The crew had to bellow to be heard above the hammering of the airship, which developed water leaks that soaked everything. Throughout it all, *R.34* remained stable, with a slow, pitching motion.

Wireless traffic was brisk throughout the flight. At this point in the journey, greetings arrived from the governor of Newfoundland and the Canadian Pacific Railway. They seemed premature to *R.34*‘s officers, who were still struggling to reach North America’s coast.

Everyone on board was alert for the first sight of land. At 12:50 p.m. on July 4, Scott spotted some small islands lying off the east coast of Newfoundland. Maitland recorded it as ‘the most thrilling moment of our voyage-successfully accomplished the first stage… the first to bridge the gulf from east to west by way of the air.’

They reached Newfoundland at Trinity Bay, where they looked down on an awesome wilderness of bleak lakes and dark forests. Patrick Abbott, in his book *Airship*, makes an interesting point: ‘the loneliness was in marked contrast to the condition experienced by the men… crammed together in the restricted living quarters… there was no privacy… most of the men were not only unshaven, but also distinctly dirty, for the supply of fresh water [was] very much depleted.’ They still had 1,000 miles to go.

At Fortune Bay, Newfoundland, the crew dropped a package of letters. One man threw overboard a postcard addressed to his wife in Scotland. Surprisingly, she actually received it-although it was somewhat battered-three months later.

*R.34* flew on southwest, toward Nova Scotia. The weather cleared, but a serious, although not unexpected, problem arose-they lacked sufficient fuel to complete the journey. Scott decided to call at Montauk Air Base, on the eastern tip of Long Island, to refuel.

The airship encountered strong winds on the morning of July 5 that aggravated the fuel crisis. Scott headed for the Bay of Fundy, a long inlet between Nova Scotia and the mainland, seeking relief from the wind. He also considered alternative landings (Boston for one) and requested a warship in case a tow was needed. The United States sent two, *Bancroft* and *Stevens*. In New York, Major Fuller drove from New York to Boston to organize a landing party.

*R.34* flew on down the bay and was caught by a thunderstorm that came up behind it. Although the airship was badly shaken and fell several hundred feet, pitching violently, no one in the crew was hurt in the storm, although one man came close to falling out of a hatch in the rough conditions. Second Lieutenant J.D. Shotter, the hard-pressed chief engineer, had been caught off guard, near the open drogue hatch in the bow. The ship’s violent motion propelled Shotter along the keel toward the hatch, and only by jamming one of his feet around a girder did he manage to save his life.

The evening was calm at first, and then there were a series of violent bumps-the worst the crew had experienced during the whole flight. *R.34* pitched up and then went into a steep, nose-down position, ‘like a playful whale disporting itself,’ according to Abbott. He continued, ‘when looking back from the control-cabin… it was even possible to see her tail flex under the strain.’ But they also encountered a tail wind that encouraged Scott to think of reaching New York again. He asked Shotter to organize a small party armed with containers to drain out the last drop of gasoline from 80 fuel tanks. After taking stock of the remaining fuel, Scott decided to press on for New York.

The crew sighted Mineola at 9 a.m. on July 6. Below, there was confusion on the field. Major Fuller, who had traveled to Boston, anticipating their arrival, had not returned to New York. An experienced officer was needed on the ground to organize the landing, and Pritchard volunteered. He washed and shaved in hot water from one of the engine radiators, then two fellow officers helped him through one of the windows, and he parachuted into the history books.

It had been a close-run flight. Only 140 gallons of fuel remained when they landed, but no one on the field knew how narrowly the airship had avoided tragedy. A band played ‘God Save the King’ as the crew emerged, but the music was drowned by cheering crowd. Thousands had arrived to see the airship touch down. Newspapermen and photographers recorded every aspect of their reception.

Among the formal reception party were military and naval officers who made speeches to which General Maitland replied in kind. The formalities over, the crew took advantage of hot baths followed by a luncheon and press conference at the nearby Garden City Hotel.A thousand men were detailed to cater to the needs of *R.34* and its crew. Hydrogen, gasoline and other items were provided. Maintenance assistance was offered as well, although the crewmen ended up doing most of their own work.

The next few days continued in the same vein. When Maitland had a tooth repaired, the dentist asked only for his signature in payment. The Americans were universally generous in their response to the crew.

Not everyone was impressed by *R.34*, however. Aircraft designer Grover Loening wrote: ‘my first impression was how ‘unrigid’ it really was… close up one was astounded to see how the frame squeaked, bent and shivered with the cloth covering almost flapping in wind gusts… I was shocked at its flimsiness… frantically the crew and many others tugged and pulled on ropes and handrails to restrain the monster… .’ Surely his reaction is further evidence, if any is needed, of the crew’s skill and courage.

Some Americans looked beyond the euphoria. The *New York Times* commented on the threat of British commercial airships in the future: ‘John Bull is hard-headed and business-like. He is set on being master of the air. What is Uncle Sam going to do about it?’

Although the crew enjoyed the celebrations, they also had to prepare for the return journey, and the moment for departure soon came. Scott, while at dinner on July 9, received news of high winds approaching, and he decided to leave at once. The crew assembled, and the airship was filled with hydrogen and fuel. At the last moment, a man barged his way through the crowd surging around *R.34* and dumped a wooden box aboard-a case of rum.

The engines barked into life, and Scott ordered: ‘Let go all.’ Four hundred men obeyed, and *R.34* lifted cleanly into the night sky at 11:54 p.m. The cheers of the crowd reinforced the crew’s confidence. They knew what to expect and believed that their discipline, skill and attention to detail would take them safely home.

To show their gratitude for all the Americans had done, Scott agreed to fly over New York. He took *R.34* to 2,000 feet, uncertain of the height of the skyscrapers. Abbott described the moment this way: ‘the probing white fingers of searchlights crept through the darkness… there were many thousands of sightseers still in the streets… the crew looked down on their upturned faces, garishly illuminated in the multi-colored lights as they waved wildly and mouthed unheard farewells.’ For a time *R.34* rode the bumpy air currents around the tall buildings. After 10 minutes, they left the searchlights behind and turned eastward, toward the Atlantic Ocean.

The airship made good progress that night. By morning, with their groundspeed of 90 mph helped by the prevailing wind, they had covered 400 miles. Scott knew that two large depressions near Newfoundland and Iceland could be helpful if he flew close to their southern edge and made use of the westerly airflow. As things continued to go well, their progress tempted Scott and Maitland to change the original flight plan and aim for London. But that scheme was dashed when, early on July 11, the starboard engine of the two engines in the rear car failed.

The weather deteriorated, with great clouds rolling in. Scott took the airship up to 3,000 feet to get the benefit of the tail wind. Later in the day, a gray world of rain and damp returned to make the crew’s life miserable. All the engines needed constant attention, and the forward engine in the control car had to be closed down for two hours to replace broken valve springs.

In spite of those problems, *R.34* steadily neared the Irish coast. The crew could now hear wireless traffic from Clifden. One signal surprised them. At 10 a.m. on July 12, the Air Ministry ordered Scott to land at Pulham, north of London. Maitland recalled their reaction: ‘This not understood as, according to weather reports, conditions seem better at East Fortune than at Pulham. Besides, the wives, families of the crew are all at East Fortune, waiting to welcome them… this comes as a great disappointment.’

Scott queried the signal. Confirmation of the order came at 11:30 p.m. No explanation has ever been given. According to Abbott: ‘those who supported only an aeroplane programme may have contrived the altered destination in order to avoid the publicity of the great welcome that was being planned at East Fortune. Pulham, by contrast, was comparatively isolated… so ensuring the minimum fuss and excitement. If this theory is true-and it accords with later policy development and the shabby treatment soon meted out to everyone on board-then the manoeuvre was an unworthy affront to servicemen who could neither disobey nor complain.’

On *R.34*, hopes remained high that they would successfully complete their flight. Improving weather ensured a smoother flight on July 12. Now at 5,000 feet, the crew looked out over the ocean and were struck by the ‘awful emptiness of the Atlantic.’ For some time they saw few ships, but five hours later, at a distance of about eight miles, they sighted two trawlers to the south-seemingly an indication that land was close by. Two hours later, Lt. Col. W.N. Hensley of the U.S. Army (the only American on *R.34*, who had replaced Lansdowne and was on a mission to Europe to try and negotiate the purchase of an airship for the army), sighted land.

Once across the Irish coast, the airship moved over a landscape of valleys and woods. A small bi-plane buzzed them, then flew away. The crew felt that they were almost home as they crossed the English coast near Liverpool. Tired but jubilant, they retained discipline as they ploughed on through the night. The engines continued to be troublesome right up to the end, when only two were operational. To make a good impression to the waiting crowd, the crew allowed the propellers of the silent engines to rotate freely in the airstream.

Pulham, with 400 men ready to bring her safely in, tried to make it a good homecoming. A small RAF band had been hastily assembled, joined by a number of reporters and spectators who had somehow managed to get to the remote spot in time for the airship’s landing. It was July 13, a Sunday. But the contrast between the reception here and the one in New York was marked. ‘Rather tepid reception was already obvious, even from the air,’ said one observer, and one reporter who witnessed the landing wrote: ‘The ship was met by a motley crowd dressed in all varieties of Air Force uniform.’

Scott had *R.34* make two circuits of the field. The airship was positioned into the slight wind, bows down and all engines shut down, when Scott realized that it was coming in too nose-heavy. He emptied a bag of water ballast to adjust the trim, just as the unfortunate band beneath them was playing ‘See the Conquering Hero Comes.’ Drenched, the musicians played on.

At 6:57 a.m. the journey finally came to an end. It had lasted three days and three hours. The airship had covered 7,420 miles at an average speed of 37.1 knots. It is interesting to note that the surface speeds of the outward and homeward flights were 28.9 knots and 44.2 knots, respectively.

Maitland’s reaction was typical of his optimistic personality. ‘*R.34*‘s journey was just one long, wonderful and delightful experience,’ he said.

*R.34* had set several new records. It was the first east-west crossing of the Atlantic by air, the first double crossing and the first by an airship. Many hoped that those accomplishments would be recognized in an appropriate manner, but their hopes were largely disappointed following the flight.

Shortly after their return, Maitland and others presented a report on the journey at a special meeting in the Air Ministry before a small group of distinguished people. It marked, according to author Peter Abbott, ‘the signing off of the whole venture.’ But despite enthusiastic coverage of the feat in the press, the British military establishment downplayed the event. Although the news media were convinced that the venture was epoch-making, Air Ministry officials and some experts appeared to treat the crew of the *R.34* with neglect as time went on.

In his book *Great Flights*, Edwin Colston-Shepherd, sums up the remarkable accomplishments of *R.34*‘s crew in the face of personal danger as well as bureaucratic apathy: ‘The crew had taken all the chances that go with a first attempt and had made them look small and ordinary by their diligence and attention to detail. The accidents of later years showed how great their achievement was… nothing can rob the feat of its own inherent greatness and none can dispute the courage of men who did so fine a job so greatly and well.’

This article was written by Peter Holt and originally published in the May 2002 issue of *Aviation History*.

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Airship R34 completes the first airship return journey across the Atlantic - On this day in history

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On this day in history, 1919: airship R34 lands in Norfolk having completed the first airship return journey across the Atlantic. She hadn’t been designed to carry passengers and so hammocks were slung up in the walkway, and food was heated up on an engine exhaust pipe. Her adventurous crew of 26 were nothing if not brave and inventive. Nicknamed ‘Tiny’ she actually measured a whopping 643 feet long, and was flown for a further two years before being damaged in bad weather in early 1921 and scrapped.

Do you have an early aviator or adventurer on your family tree? Let us know on our Facebook page - [Facebook.com/familytreemaguk](http://www.facebook.com/familytreemaguk).

Watch this clip of the R34 landing in America at the end of the first leg of its return journey: