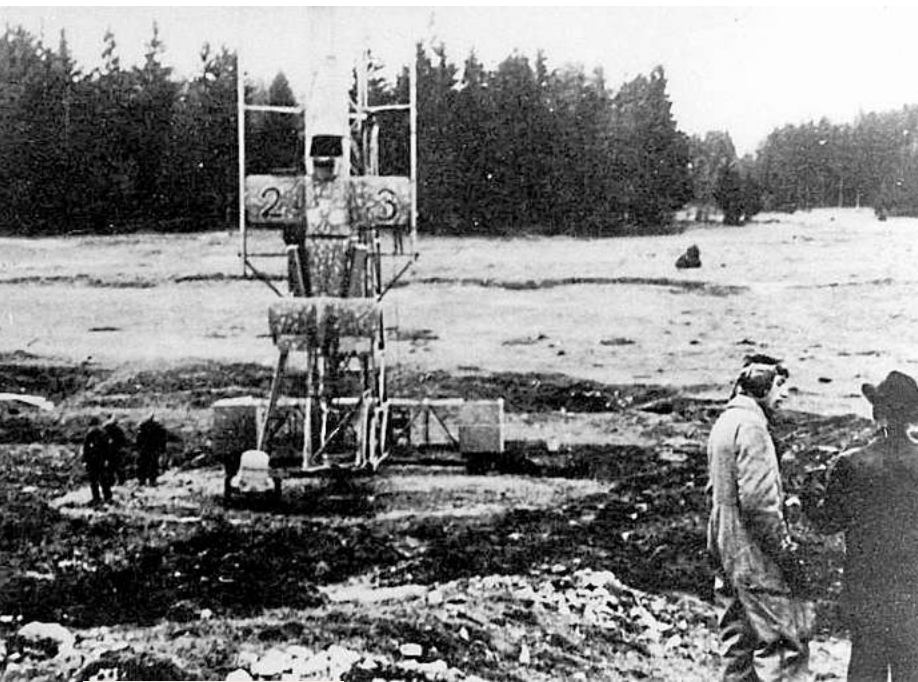


# THE FATAL MISTAKE OF LOTHAR SIEBER

## MARCH 1, 1945: BACHEM-WERK M23 TEST FLIGHT

The career of talented Luftwaffe pilot Lothar Sieber was on the rise when charges of drinking on duty saw him arrested and stripped of rank. To redeem himself, he undertook one hazardous mission after the next until on March 1, 1945, he took on the most dangerous of them all...



**ABOVE:** Test pilot Lothar Sieber speaks with a man identified in most sources as Erich Bachem shortly before his first and only flight in BP-20 M23. The fully prepared rocket-powered vertical take-off aircraft awaits him in the distance.

Having been interested in flying from a young age, 14-year-old Lothar Sieber attended a rally at his home city of Dresden in 1936 and found himself shaking hands with First World War flying ace and recently appointed Reich Aviation Minister Hermann Göring.

It was an inspirational moment, and afterwards Sieber was determined to become a pilot in the newly formed Luftwaffe. Four years later, as soon as he was old enough, he signed up and before long he had not only qualified as a pilot but had also specialised in large bombers, mastering a wide variety of aircraft including captured Allied examples such as Boeing B-17s and Soviet Tupolev TB-3s.

He was promoted to leutnant and given his first command in 1942 – a meteoric rise. His world fell apart in February 1943, however, when he was caught drinking on duty. He was demoted to ordinary pilot and sentenced to

four months in prison. His father wrote to Göring himself, explaining the circumstances and pleading for clemency, and the sentence was reduced to six weeks' close arrest – but the demotion stuck.

Back on duty, Sieber threw himself into his work as never before. In April 1944, he was involved in trials of the Arado Ar 232A, which was designed for short-distance take-off on rough terrain using its centreline row of 10 smaller wheels mounted beneath the fuselage. He also carried out rocket-assisted take-off trials using the aircraft and was so confident of his skills that at one point he looped the loop in a Junkers Ju 52. In August 1944 he was posted to I./KG 200.

While Sieber's quest to regain his original rank continued, work was going on elsewhere which would ultimately ensure that he never succeeded.

### RISE OF THE SNAKE

It was during Sieber's period of close arrest that the Allied bombers began causing disastrous damage to German cities and industry. The Luftwaffe seemed unable to stop them by conventional means, so a number of unconventional ideas were examined by the Reichsluftfahrtministerium (RLM) – the German Air Ministry.

An aircraft was needed which could climb at high speed to intercept the bombers as they appeared, inflict maximum damage, and then return quickly and safely to earth.

The idea of a vertical take-off rocket-powered interceptor had originated with a 27-year-old Dr Wernher von Braun in 1939. Already working on a number of rocket projects for the Luftwaffe, he had submitted a proposal to the RLM outlining a fighter that could be launched vertically from the back of a lorry, up to an altitude of 26,250ft in 53 seconds before switching to horizontal flight.

The aircraft's main engine would then cut out and a smaller secondary unit would take over. When the mission was over, the aircraft would land on a skid. The RLM turned von Braun's report over to Heinkel, the company already responsible for building the world's first liquid rocket powered aircraft, the He 176, for assessment.

The firm's development team was sceptical about the idea, suggesting that the engine envisioned by von Braun would not be powerful enough, its fuel would run out too

quickly, and there was no tactical benefit to having a very short range high-altitude fighter.

The proposal was not rejected however, and was next handed to Gerhard Fieseler's engineers, led by the firm's technical director Erich Bachem, modified the idea to form the basis for a pair of 'rider and horse' designs, where a rocket would be used to boost a jet-powered aircraft to high altitude.

This was purely a paper exercise, however, as Fieseler was busy with other projects such as expanding production of the highly successful Fi 156 Storch. Von Braun resubmitted his idea in 1941, only to have it finally rejected outright by the RLM a few months later.

By now, the RLM was already backing a different team, led by Alexander Lippisch, building a different rocket interceptor – the Messerschmitt Me 163 Komet.

Work on the Me 163 was slow, however, and disagreements between Lippisch and Willy Messerschmitt led to the former leaving the company in 1943. When the bombs started to fall on Germany in earnest, the Komet was woefully behind schedule and beset with teething problems.

It was also complex and at best offered only four minutes, 11 seconds of powered flight at full throttle.

A requirement was therefore issued in 1944 for an even smaller fighter that could be built from basic materials such as wood and powered by a Walter 109-509 liquid rocket unit – the same power plant as that fitted to the Me 163. It would also have to be capable of being flown by a pilot who had received only minimal training, since all qualified fighter pilots were urgently needed by the front line units.

Meanwhile, Bachem had left Fieseler in 1941 with the intention of setting up his own business, Bachem-Werk GmbH being formally established on February 10, 1942, at Waldsee, Upper Swabia, by Bachem and his business partner, former Fieseler test pilot Willy Fiedler. The new company specialised in wooden aircraft parts and was initially kept busy with contract jobs – eventually designing and making parts for the Dornier Do 335 Pfeil and Heinkel He 162. It may also have manufactured parts for Fieseler's Fi 103 V-1 flying bomb.

The only uniquely Bachem aircraft at this time was an ultralight known as the Lerche. When the RLM requirement was issued for a small wooden rocket fighter, Bachem found himself in an excellent position to draw up a proposal that could successfully fulfil it. He said later that he vaguely remembered seeing von Braun's proposal during his days at Fieseler and resolved to design something similar, which he named 'Natter' or 'Snake'.

He began with a rough sketch of something resembling a manned missile on July 16, 1944. The parachute-wearing pilot lay prone within a cigar-shaped fuselage, a rocket projectile weapon ahead of him in the 'aircraft's' nose.

Further design drawings fleshed out this concept and it was given the factory designation BP-20-01. Bachem wrote up a terse outline of his design's purpose in a document headed 'Projekt Natter': "Annihilation of enemy aircraft especially bombers by bringing up a gunner within the immediate vicinity of the enemy and discharging rocket projectiles at him with the smallest possible amount of manoeuvring and propellant.

"No self-destruction of the pilot, on the contrary, armoured protection of him. Smallest possible production cost, maximum use of wooden parts, reduction of iron. No burden on standard aircraft industry. Exploitation of the large, partly free, timber resource. Repeated use of the most critical airframe and propulsion unit parts by parachute recovery.

"Little requirement of the pilot, due to the omission of a normal landing. Little ground input. Little transport cost. Easy



transferability. Good camouflage potential."

With Bachem providing the outline, the project's chief designer was Dutchman Henri Frans Bethbeder. At an early

stage, it was envisioned that the Natter's nose would house 19 55mm R4M rocket projectiles but no firm decision was made on armament. As for the rest of the aircraft, several design variations were worked on simultaneously.

The overall cost of the Natter was expected to be about 1/50th of that for a normal fighter aircraft and it was further anticipated that full production could begin within six months. By September



**LEFT:** The first manned test of the Bachem BP-20 was carried out using the M1 glider towed by a Heinkel He 111. It took off from a trolley with Flugzeugführer Erich Klöckner at the controls but was destroyed on landing, Klöckner having already bailed out.

**ABOVE:** Lothar Sieber was an outstanding pilot but had his career ruined by a charge of drinking on duty. He was looking for any opportunity to redeem himself and regain his original rank.

**BELOW:** Erich Bachem and famous test pilot Hanna Reitsch on July 17, 1938, at an air show in Kassel-Waldau. Bachem, then the technical director of Fieseler, oversaw the day's events. Just six years later he would be responsible for building one of the most dangerous aircraft ever flown.





**RIGHT:** The unmanned M17 test vehicle was brightly painted for visibility, with asymmetrical stripes painted on its wings so that its orientation could be better discerned from photographs of the launch.

**BELOW RIGHT:** Fired off on December 29, M17 flew vertically as planned but its parachute detached on the way down and it was destroyed when it hit the ground.

the favoured design had shifted to that of a manned rocket aircraft, BP-20-09, rather than a manned missile – the pilot now seated rather than prone. The single rocket engine in the rear of the fuselage was augmented by a pair of disposable Schmidting SG 34 solid fuel boosters attached on to each side of the aircraft.

The launch sequence was to involve the pilot bracing himself against padded head and back rests and gripping handles on either side of the rear nose frame. On the left handle was the button to fire the boosters.

Once this was pressed, the Natter would rise under the control of a basic autopilot and after 10 seconds it would be at an altitude of 4000ft and a speed of 550mph. The exhausted boosters would then automatically detach and the Walter engine would take over.

Within another 50 seconds, the Natter would reach the same altitude as the bomber formations. The pilot would then turn off the autopilot, grab the control column and bring the aircraft around in a shallow curve to line up a target.

***“Within another 50 seconds, the Natter would reach the same altitude as the bomber formations.”***

At a distance of 300m he would fire the Natter’s weapons at the bomber. The Walter engine would then run out of fuel and the pilot would put it into a dive. Pulling out at low level, the pilot would activate a mechanism to detach the aircraft’s nose, which would fall away, and he would then be catapulted out by the sudden deceleration – activating his parachute.

The Natter’s fuselage, minus the nose, would then descend to earth on its own parachute, ready to be refurbished and reused.

Tendering for the RLM requirement had, however, ended in August and Bachem’s early design was the one submitted for consideration. It was up against advanced designs from three much larger firms – Messerschmitt, Junkers and Heinkel.

**FRIENDS IN HIGH PLACES**

In early September, the RLM awarded Heinkel a contract for 20 prototypes of its P.1068 vertical take-off rocket aircraft design – later to become the P.1077 ‘Julia’. Messerschmitt

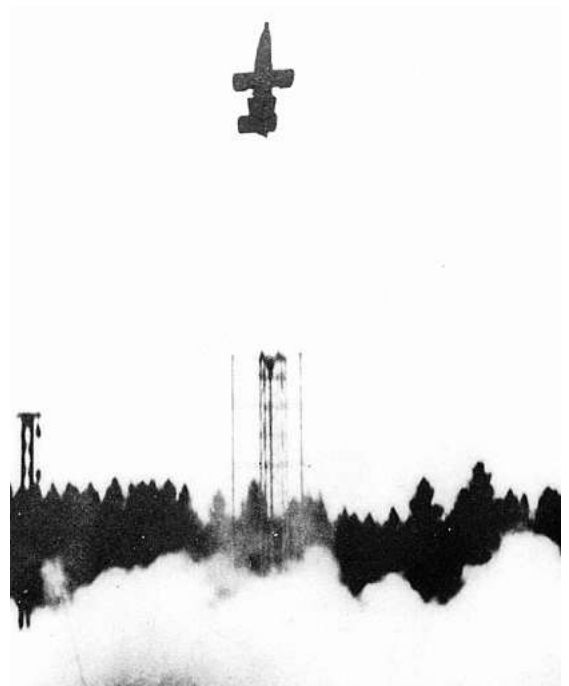


and Junkers, which had both tendered horizontal take-off designs, and the Natter were seemingly out of the race.

Bachem refused to accept this rejection however. He took his idea to SS-Obergruppenführer Hans Jüttner and Sturmbannführer Otto Skorzeny who, excited by it, took it directly to the leader of the Waffen-SS, Heinrich Himmler. Himmler granted Bachem an audience and offered him the full support of the SS for his “war deciding device”.

Now under pressure from the SS, in mid-September the RLM was forced to give Bachem a contract for 15 BP-20 aircraft. Himmler sent some of his own people to oversee the project too – SS-Obersturmführer Heinz Flessner, who led a team of 120 Waffen-SS construction workers

**BELOW:** Natter airframes under construction within the cramped confines of the Bachem-Werk factory.



seconded to Bachem-Werk, and SS-Obersturmführer Gerhard Schaller.

The first Natter V1 prototype was finished on October 4, 1944, and on October 28 it was given the official RLM designation 8-349, later Ba 349, though this name was seldom if ever used at the time. The aircraft was known as the BP-20. Construction was now well under way on the 15 aircraft 'ordered' by the RLM. The Natter's basic dimensions now featured a stubby wingspan of 11ft 9in, a short fuselage of 19ft 2in and a fuselage width of 2ft 11in.

Various different armaments were discussed including a pair of MK 108 30mm cannon, a battery of 28 R4M rockets and a cluster of 32 single-shot 30mm cannon barrels, but again no satisfactory conclusion was reached.

On November 3, a manned gliding trial took place with an engineless Natter airframe designated M1. It was towed along the runway behind a Heinkel He 111 on a take-off trolley with Flugzeugführer Erich Klöckner at the controls.

A Junkers Ju 87 was used as an observation platform. All three aircraft became airborne at around 4pm but Klöckner struggled to control the M1 until he moved a trim weight inside it, altering the centre of gravity. Even so, he was forced to bail out when he realised that the aircraft could not be brought into a normal towed position and therefore its parachutes could not be deployed.

The M1 landed behind the He 111, twisted, detached and then span away, coming apart in the process.

A second glider, the M3, was fitted with an undercarriage so that it could be properly landed and reused. It was completed on November 20 and test-flown by Klöckner on December 14. Again, he was forced to bail out but this time the Natter glider landed safely without its pilot.

The first attempted vertical take-off test of the Natter was on December 18 at Heuberg – a military training area about 40 miles west and slightly north of Waldsee – using prototype M21. While the boosters went off as planned, the release clamps failed and the aircraft was engulfed in flames and burned out on the ground.

On December 22, 1944, the first successful launch took place with prototype M16. It flew up to about 230ft before tipping over onto its side. It crashed 5250ft away. That same day, a new test pilot arrived at Bachem-Werk – Lothar Sieber.

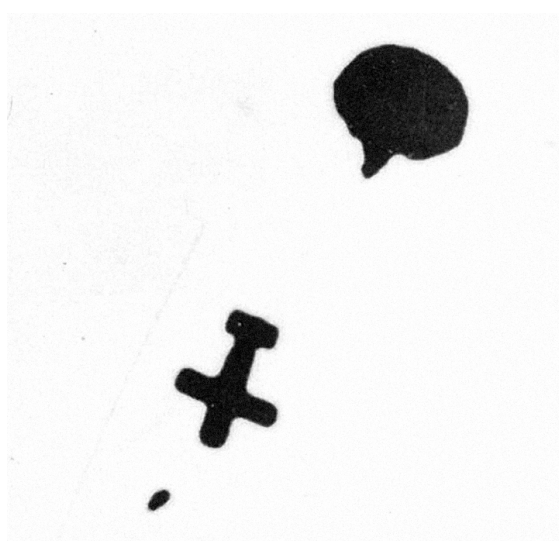
#### LAST WILL AND TESTAMENT

Sieber had been recommended for the job by Sturmbannführer Skorzeny. He had met the 22-year-old after he had gone behind enemy lines in an Ar 232 to rescue 23 of his KG 200 comrades who had become encircled by the Soviets in Ukraine. It was a close-run thing. Despite being under heavy fire, Sieber managed to get the transport aircraft off the ground and then flew it at low level all the way back to base.

This feat earned him a personal letter of commendation from KG 200 commander Oberst Werner Baumbach and the Iron Cross 1st Class. After further heroics on the front line, Skorzeny recommended him for another bravery decoration, the German Cross in gold. He also offered him the opportunity of promotion to oberleutnant if he would undertake a mission for the SS – fly Bachem's new SS-sponsored rocket-powered interceptor.

After arriving at Waldsee, Sieber watched several vertical take-off trials of Natter prototypes, including the successful test of version M22 on February 25, 1945, where a dummy pilot was fired into the sky and then floated safely down on a parachute after the nose separation was activated automatically. The fuselage parachute also activated but traces of fuel left in the Walter engine's tanks ignited and M22 was burned out.

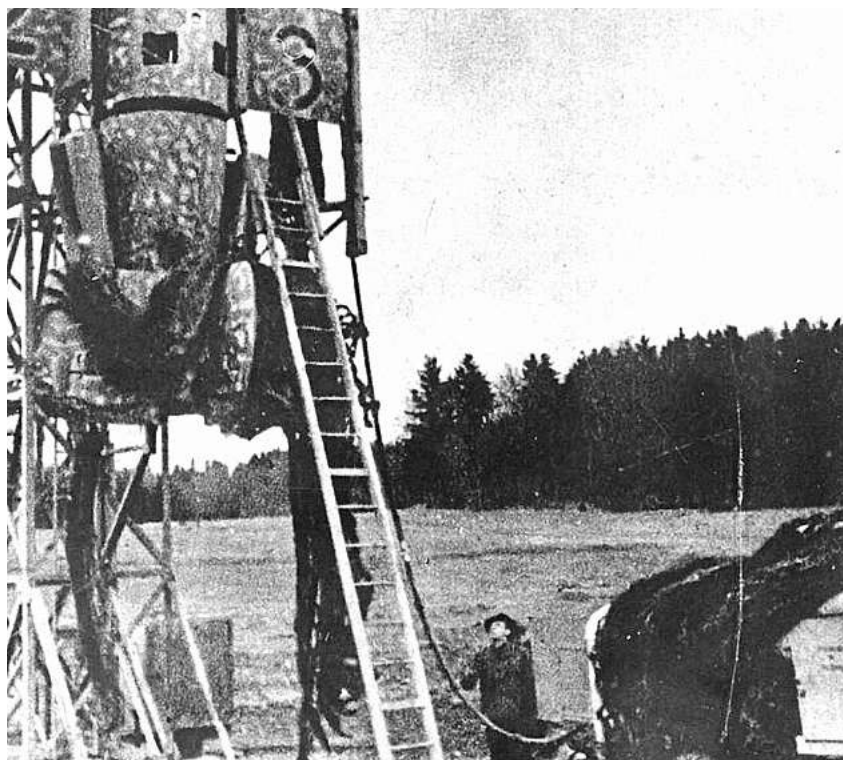
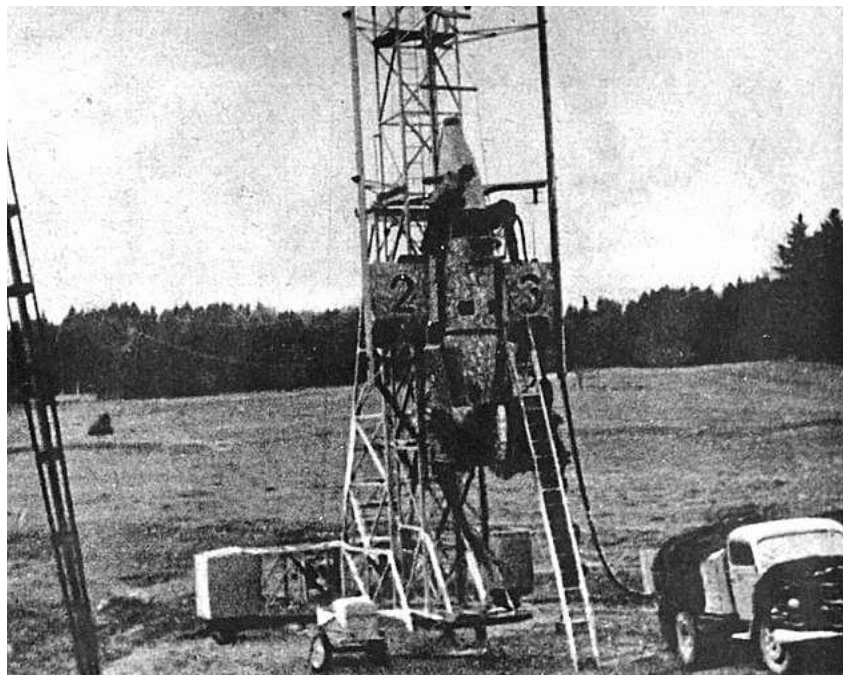
The first manned test, Sieber's first flight in the Natter, was scheduled for March 1. Asked how he felt about the prospect, he apparently replied: "In the course of this war I have already done riskier things, let me worry about this. I look upon the testing of the device as a self-imposed



**LEFT:** The Natter was designed with a disposable nose but it was intended that the rest of the fuselage would float safely back down on a parachute once its mission had been completed.

**BOTTOM:** Camouflage netting clings to the tail of the M23 vehicle on the morning of March 1, 1945, as the aircraft is prepared for Lothar Sieber's test flight.

**BOTTOM:** Netting still in place, ground crew work to fill M23's tank with C-Stoff – the chemical which, when combined with a second chemical, T-Stoff, produced the violent reaction which provided the rocket engine's thrust.







**ABOVE:** Fully fuelled and ready to fly, M23 hangs from its launch ramp awaiting only its pilot. Sieber's padded head rest, attached to the cockpit hatch lid, can clearly be seen.



**RIGHT:** Lothar Sieber, having scrambled up a precarious wooden gangplank, grips a handle on the nose of M23 as he struggles to manoeuvre himself into the cockpit.



task that I would like to accomplish and I firmly believe in a successful outcome.”

Despite this bullish attitude, he still prepared a last will and testament on February 28 which left all his worldly goods to his fiancée Gertrud Nauditt, who was four years his senior.

The day of the launch saw grey skies over the Heuberg launch site and mist on the ground which began to clear as the morning wore on. M23 was the Natter prepared for the launch and its design had been significantly altered from M22.

It had a safety chute to decelerate the fuselage as the pilot bailed out – in place of a parachute to ‘rescue’ the fuselage, which was to be sacrificed on this occasion – rudders were installed in the tail and the elevons were increased in size by 20%.

There was a pitot tube on the right wing for monitoring air speed and other sensors were fitted to monitor the aircraft’s performance. There was no autopilot – the control column had been fitted with a slight depression of 2° but otherwise Sieber would be required to simply hold it in the neutral position during take-off.

***“In the course of this war I have already done riskier things, let me worry about this. I look upon the testing of the device as a self-imposed task that I would like to accomplish and I firmly believe in a successful outcome.”***

Take-off was scheduled for 11am and while final checks were being carried out on M23, Sieber stood on a low hill overlooking the launch site. He wore his full bulky flight suit and helmet. At some point he received final words of advice or encouragement from both Erich Bachem and Willy Fiedler.

Close to 11am, he walked over to the launch tower and climbed vertically up to a steeply angled wooden gangplank which took him up to the leading edge of M23’s left wing. A trio of ground crew helped him awkwardly scramble around the outside of the machine and into the cockpit. Going in legs first, he lay on his back in the seat and buckled on his parachute before fastening his seat belts. He put on his oxygen mask and the canopy hatch was closed by the crew.

They then climbed down from the tower and retreated to a safe distance before signal rockets were launched to tell Sieber that it was time to start the Walter engine. This was allowed to build up to full thrust – a cloud of smoke enveloping the Natter in the process – before Sieber ignited the four boosters with a bright flash visible through the haze.

The Natter’s locking mechanism released flawlessly and Sieber’s machine shot upwards. After climbing to about 330ft, the aircraft began to curve onto its back at an angle of about 30° – then the canopy hatch flew off. Something had gone badly wrong but the aircraft continued its ascent to about 5000ft whereupon it disappeared into a bank of low-lying cloud.

Just 15 seconds into its climb, the Natter’s engine stopped and it rolled right over on to its back before entering a nose dive. Several kilometres from the launch site, Lothar Sieber’s first and last flight in the Natter ended when it crashed vertically into the ground. It had been in the air for less than a minute.

#### **THE FINAL MOMENTS**

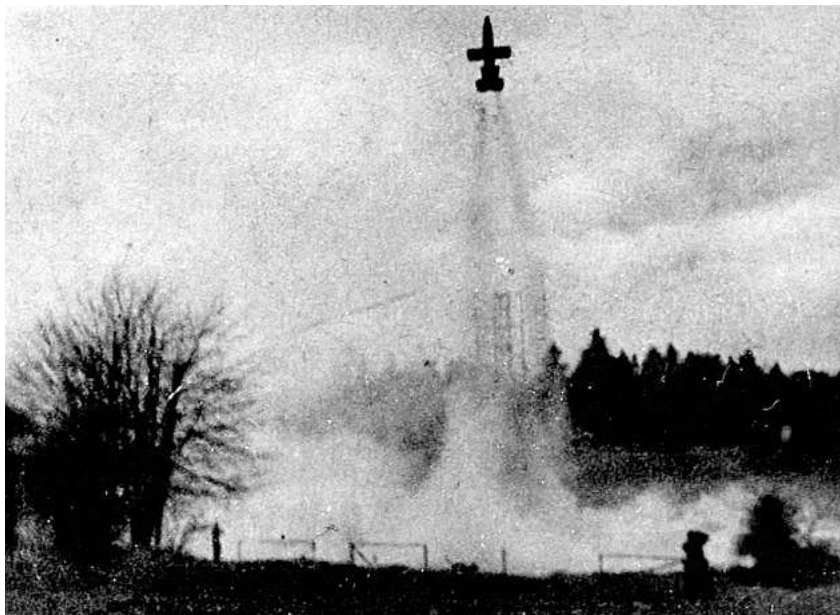
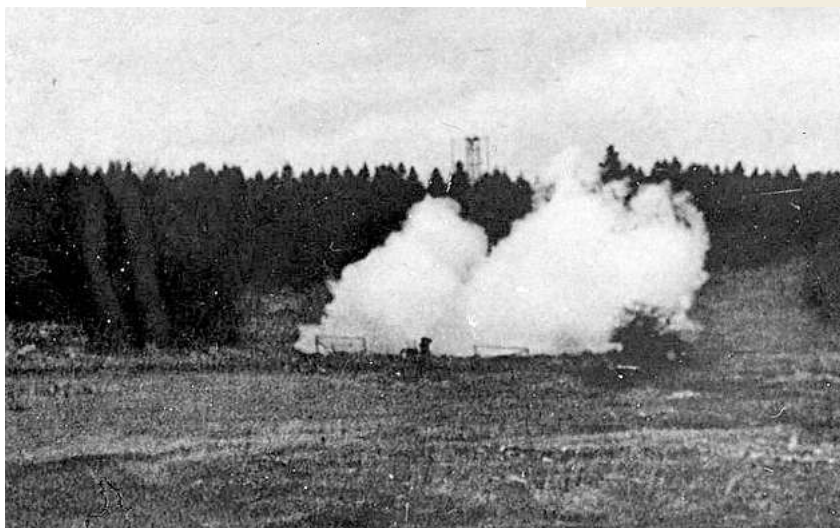
After waiting an hour in the hope that Sieber had parachuted to safety and would come walking back, the Bachem team went in search of the crash site. Writing several years later, Bachem himself described the scene: “We found the machine completely destroyed. The pilot had made no attempt to escape. Of our comrade we found only



**LEFT:** With nothing between him and a plunge to the ground, Sieber clambers into the Natter’s cockpit legs first, assisted by ground crew.

**BELOW:** The Natter launch procedure called for its Walter rocket engine to be ignited first. The thrust produced was insufficient, on its own, to lift the aircraft so it produced a dense cloud of smoke instead, completely enveloping the machine.

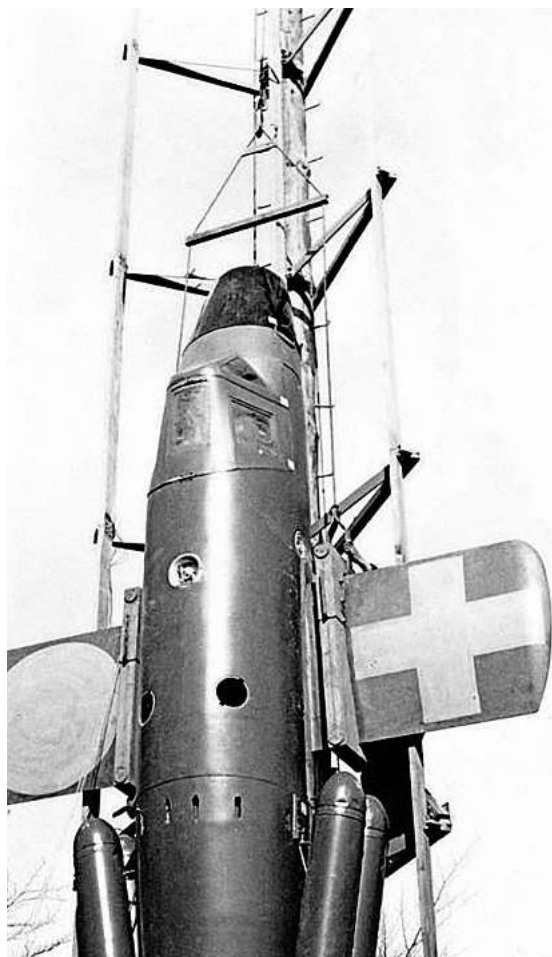
**BOTTOM:** Solid-fuel boosters ignited, M23 roars skywards with Lothar Sieber attempting to hold the control column in the neutral position, despite a 3G load on his arms. The production Natter was intended to have an autopilot for this stage of the flight but this was not yet ready on March 1.







**ABOVE:** With Lothar Sieber dead, the Natter test programme reverted to unmanned testing. Here, vehicle M52 is winched into position on a newly designed single-rail tower.



**RIGHT:** Another view of M52 attached to its pole launcher – essentially a straight tree trunk shorn of branches.

the left hand with a piece of forearm and a left leg that was ripped off below the knee.”

The crater left by the impact was 5m deep and when it was excavated a small shard of Sieber’s skull was found. When little remained of him was buried with full military honours in the cemetery at Nusplingen.

The investigation carried out by Bachem-Werk afterwards had little hard evidence to go on but attention was concentrated on the canopy hatch that had broken away from the aircraft during its ascent. It was recovered intact not far from the launch site and the latch meant to fasten it in place appeared to be bent.

Over the next few days a sequence of events was pieced together. It was suggested that for the first few seconds after take-off, Sieber’s body would have been subjected to forces of about 3G – pinning him back in his seat and applying backwards force to his arms.

Since he was holding the control column, this would account for the aircraft curving steadily on to its back. As the aircraft became increasingly upside down, Sieber’s body would have been pushed up against the hatch – his seatbelt having enough ‘give’ to allow this to happen. The latch might well have then given way, causing the hatch to be caught by the slipstream and spin away.

The pilot’s headrest was a part of the hatch so when the hatch suddenly parted company with the aircraft, Sieber’s head would have been violently flung back 25cm, against the wooden rear wall of the cockpit. This was likely to have concussed him, rendered him unconscious or even broken his neck.

It was considered possible that a dazed Sieber might have shut down the rocket engine himself after 15 seconds but it was equally possible that the odd angle of ascent might have caused air bubbles in the Walter engine’s fuel, causing it to cut out.

Either way, the Bachem team felt they had been



pressured into conducting a manned launch too early. It seemed as though Sieber's accident might have been avoided if an autopilot had been available to prevent the control column from moving.

This was small consolation to his family and his fiancée.

### THE INFAMOUS NATTER

The first Natter to be flown with automatic guidance, M14, flew on March 16. After a successful take-off, it went into a spiral and was destroyed after its safety chute failed to prevent a hard landing.

A total of seven further vertical launches were carried out from the tower after Sieber's death and plans were advanced to bring the Natter into service under the code name Krokus. This was chosen because the crocus

***“We found the machine completely destroyed. The pilot had made no attempt to escape. Of our comrade we found only the left hand with a piece of forearm and a left leg that was ripped off below the knee.”***

blooms in March, when the attacks on bombers had very optimistically been expected to begin.

A mobile pole launcher was designed for use with the Ba 349A-1 and a test machine, M52, was successfully fired from it some time after April 5. Ten production Natters, still regularly referred to as BP-20s, were under construction during late March and into early April. The final armament of a nose-mounted honeycomb type launcher for 24 Henschel Hs 297 Föhn rockets was fitted.

A handful had been completed by mid-April when French ground forces entered the vicinity of the Bachem-Werk factory. Attempts were made to put the Natters into operation but in reality the personnel involved were only just able to keep the aircraft away from the advancing Allies by driving them around on the back of trucks.

Four lightly damaged Natters and the personnel accompanying them were captured at St Leonhard in Austria on or around May 6, 1945.



**ABOVE:** A frontal view of a Natter captured by the Americans, showing the honeycomb Föhn rocket launcher finally chosen as the aircraft's armament.

After the war, Bachem's factory was closed by the French and the firm was dissolved, its holdings being sold to the Wolf Hirth company. Bachem tried various subsequent business ventures but died in 1960 after a long illness. Willy Fiedler got a job working for the American military and after some initial involvement with Northrop, ended up working for Lockheed. He helped to design submarine-launched missiles such as Polaris and died in California in 1998. ●



**LEFT:** Americans examine one of four damaged production Ba 349A-1 Natter aircraft captured in Austria.