

Editors note: *The following article was forwarded by Klaus Ohlmann after I wrote him requesting a description of his prize-winning flight for my Editor' comments. I have taken excerpts from the article that directly relate to the flight. At the end, I have inserted the flight track and barogram trace from the *.igc file Ohlmann sent me. The flight report submitted to OSTIV by Ohlmann will be reprinted in the next issue.*

The Kuettner Prize Flight

Marty Taylor

Like putting a man on the moon, climbing to the top of Everest or trudging to the South Pole, the Kuettner Prize was a race—a contest of endurance and skill in an extreme and unexplored environment. The goal of the prize was to fly 2000km in one direction replacing the power of combustion with the power of nature.....

.....These downwind and cross-wind flights were the precursors of all modern wave flying and the rationale behind Kuettner's challenge to pilots to be the first to fly 2000km. "I am sure I would have flown 2000km long ago but I pursued other exciting projects." claims Kuettner.... By 1987 he realized he would never make the flight so he put the prize forward as an incentive to pilots around the world to investigate the extremes of flying in wave. According to Kuettner, "I issued the challenge because I believed 2000km could be flown but only in wave. The advantage of wave is that rising winds are always pushing you up so you can fly fast in a straight line."

.....In gliding circles people began to claim that the Kuettner flight was impossible and that Kuettner knew it could never be achieved. This myth was perpetuated by pilots who pointed to an extraordinary free distance flight made by German gliding ace Hans Werner Grosse in 1972 over 1460km from Lubeck in Germany to Biarritz in France. Grosse used every available minute in the day and squeezed every inch of speed out of his high performance glider and the flight was still more than 500km short of the Kuettner distance. Others presented scientific data showing that the flight would be impossible because weather systems are significantly shorter than 2000km.

Meanwhile, few people in Europe paid much attention to the mild mannered Dick Georgeson of New Zealand who continued to fly crosswind in wave. During summer flying camps and days off work Georgeson continued to collect the occasional world record for speed, distance and gain in height while surfing the Nor'west arch. In the summer of 1974 Georgeson set a new 'declared' distance record after flying 1254km in one direction. Those that studied the Georgeson flight soon realized that setting a free distance record in New Zealand would be impossible because the country is too short.

Georgeson became the inspiration for a new generation of New Zealand pilots and on 14 December 1990, Ray Linskey became the first person to fly 2000km and, in 1994, Terry Delore became the second by extending Linskey's record by

23km. Despite flying the distance required, neither flight met the Kuettner criteria because they doubled back on themselves landing at the same airfield they took off from. According to Klaus Ohlmann, another brilliant wave pilot, these flights stunned the gliding world. "People in Europe could not believe this. We had been trying for many years and we were only flying a little over half this distance. This type of out and return flight was unprecedented and a little unconventional. But the flight was so outstanding it caused the FAI [international flying body] to devise a new class to honor it. Pilots everywhere began studying the Linskey and Delore flights to understand how they had achieved this distance. We found the answer lay in wave just as Kuettner had predicted."

After the New Zealander's flights Ohlmann opened an atlas and started looking for places in the world that had very similar conditions to New Zealand. Ohlmann needed to find mountains that ran north to south for more than 2000km with consistently strong wind blowing from the west. The most likely place looked like the Patagonian Andes. In World War II bomber pilots flying long missions discovered that winds blowing from west to east generated strong winds at high altitudes. These winds became known as the Jet Stream. Along the Andes, the polar and tropical jet streams blow above normal weather systems at altitudes greater than 20,000ft and can reach speeds in excess of 480kph. Ohlmann was convinced that this combination of factors would help him set new distance records.

Flying in Patagonia is exhilarating but risky. The vast tracts of country can go for hundreds of kilometres without an airstrip to seek refuge if conditions collapse. In this situation the pilot must be creative in their choice of landing site. Since 1997 Ohlmann has been exploring the power and idiosyncrasies of the Patagonian wave systems. In the 2002-3 southern hemisphere flying season, his years of exploration paid off when he broke Grosse's thirty-year-old free distance record by becoming the first person to fly more than 1500km in one direction. He also completed an extraordinary zigzag flight becoming the first person to fly 3000km in a sailplane. Despite these dramatic flights, Ohlmann was most excited by an observation he made. He was convinced that during November and December the polar and tropical jet streams complemented each other in such a way that it created a highway in the sky that easily exceeded the 2000km Kuettner distance. Instead of keeping this secret Ohlmann contacted Kuettner who consulted relevant scientific weather data, which confirmed Ohlmann's observation.

In the 2003-4 summer season three serious contenders descended on the Andes keen to claim the Kuettner Prize. Ohlmann the undisputed champion of long distance, Delore and his sponsor US billionaire balloonist Steve Fossett (who in Kuettner's view posed the greatest competition to Ohlmann) and a small but very talented French Team led by multiple-world record holder and aesthete Jean-Marie Clement—who was inspired by the 'beauty of the flight'.

On 14 November Delore claimed first blood with three records for speed and out and return distance. Ohlmann was in the air at the same time but made a tactical error in his choice of flying task. Above all, this mistake acted as a reminder to Ohlmann that he was in competition with some of the best wave pilots in the world. A week later the weather patterns appeared to be setting up well for more records. Each team had one eye on the weather and one eye on the competition while jealously guarded their task selection and intentions.

On 19 November, Clement recognized a building wave system and planned an out and return flight to extend the records set the previous week by Delore and Fossett. Delore had been dogged by electronic and operational hassles since collecting the first records of the season and decided the longer-term weather prospects looked more encouraging. He put his efforts into familiarizing himself with local conditions and ironing-out the problems he was having before putting the call out to Fossett to join them in El Calafate.

Having flown in Patagonia for the previous four seasons Ohlmann had experience and local knowledge on his side. He knew every peak and every wave system from El Calafate in the south to San Juan in the north. Ohlmann knew that predicting the weather was a cross between an art, a science and a gamble but on 19 November he thought he saw the jet streams start to synchronize and line up. With such talented pilots on his tail, Ohlmann decided he had to throw caution to the wind and get to El Calafate as soon as he could. In a flamboyant move, he planned to extend the free distance record he set the previous year by flying from Malargue to El Calafate a distance of 1677km and get into position for the Kuettner flight. "This was a difficult flight" recalls Ohlmann. One of the greatest dangers of a flying is losing site of the ground or being forced to fly through cloud. "From Esquel where the cloud cover was very dense we had to fly further east and risk flying away from the good conditions." Despite these troubles Ohlmann and his co-pilot Herve Lefranc of France arrived over Calafate with plenty of daylight to spare and a powerful wind that could have taken them significantly further south. With the record under their belts, the greater prize in their sights and the ever present threat that another team waiting in El Calafate, the pair decided to land and spend a day preparing and relaxing. To their relief, they were alone in El Calafate.

The sun rises nearly one hour earlier in El Calafate than in the north where Clement and Delore were based, so Ohlmann and Lefranc were first in the air on 23 November. Both pilots were in high spirits after their successful flight south and

weather reports that confirmed the jet streams were falling into alignment. "I had been waiting for these conditions for four years," recalled Ohlmann. "The beginning of the flight was tremendous as much for the landscape as for the weather conditions—the beautiful glaciers slipping in to the blue lakes. The wave was well marked and the southwest wind pushed us strongly." With 15 hours to make the flight, the tactic was to fly slowly with an air speed of 120kph. This gave them plenty of time to fly the 2120km to San Juan. The tail wind meant that 120kph airspeed often converted to speed over the ground between 200kph and 300kph. The pair hit their maximum speed around Lago Fontana where they reached 400kph. Most of the flight oscillated between 4000 and 7000m. The tension during the early stages of the flight had gently melted away until the pair joined the Mendoza airspace.

The voice of the air traffic controller crackled over the radio. "Do you have a squawk HG?" "Uh—negative." replied Ohlmann slightly panicked. "Report to 2000ft over the airfield," ordered the voice over the radio. If they were forced to descend to 2000ft the flight would be over. "Using my most supplicant voice, I asked this charming woman: 'Please, I am flying a world record. Can I fly along the west of the area via Laguna Diamante.'" With his heart in his mouth Ohlmann waited. Would bureaucracy undo this 'beautiful' flight? After what felt like an eternity the radio again fired into life. "Affirmative but no higher than 6000m." (Mendoza, S 32° 53' 0"/W 68° 49' 0")

The momentary panic subsided even though Ohlmann knew the summits between Mendoza and San Juan exceeded 7000m. Flying with their airbrakes open to keep below 6000m, the pair flew along the stunning cordillera with Tupungato and Aconcagua towering above them. "I know these valleys and mountains from having climbed the top of the highest peak of the Cordillere six years ago. They are very impressive but there is nowhere to land. My map showed an airfield but I could not see it. We continue to the north, along endless lenticularis clouds. It would be possible to fly at least 2400 km. But we are limited at 6000m and the quiet laminar flow, which allows fast surfing above the clouds is at least 1000m higher. We have to fly in the bumpy turbulences of mighty rotorsystems.

So, after breaking our own free world- record we set two days before with 500 km more we turn past San Juan. It is done—the longest motorless one-way-flight from the cold Patagonian glaciers to the hot subtropical region in the north of Argentina is mine!" They land at 8pm, 14 hrs 35 minutes and 2120km from their take off.



