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# On Two Wheels

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**THE INSIDE STORY OF MOTOR CYCLING**



# On Two Wheels

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**Montesa Cota 348** – *Mike Winfield*. We take a look at one of the best trials machines available today.

**Monthéry** – *Cyril Posthumus*. This French circuit was once a major centre of racing and record breaking.

**Monza** – *Christopher James*. Italy's famous high-speed road racing circuit with a tragic history.

**Moore, Ron** – *Andrew Edwards*. The long-serving speedway ace who later turned to four wheels.

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**Morbidelli** – *Steve Harvey*. The newest and most promising of Italy's Grand Prix road-racing machine manufacturers.

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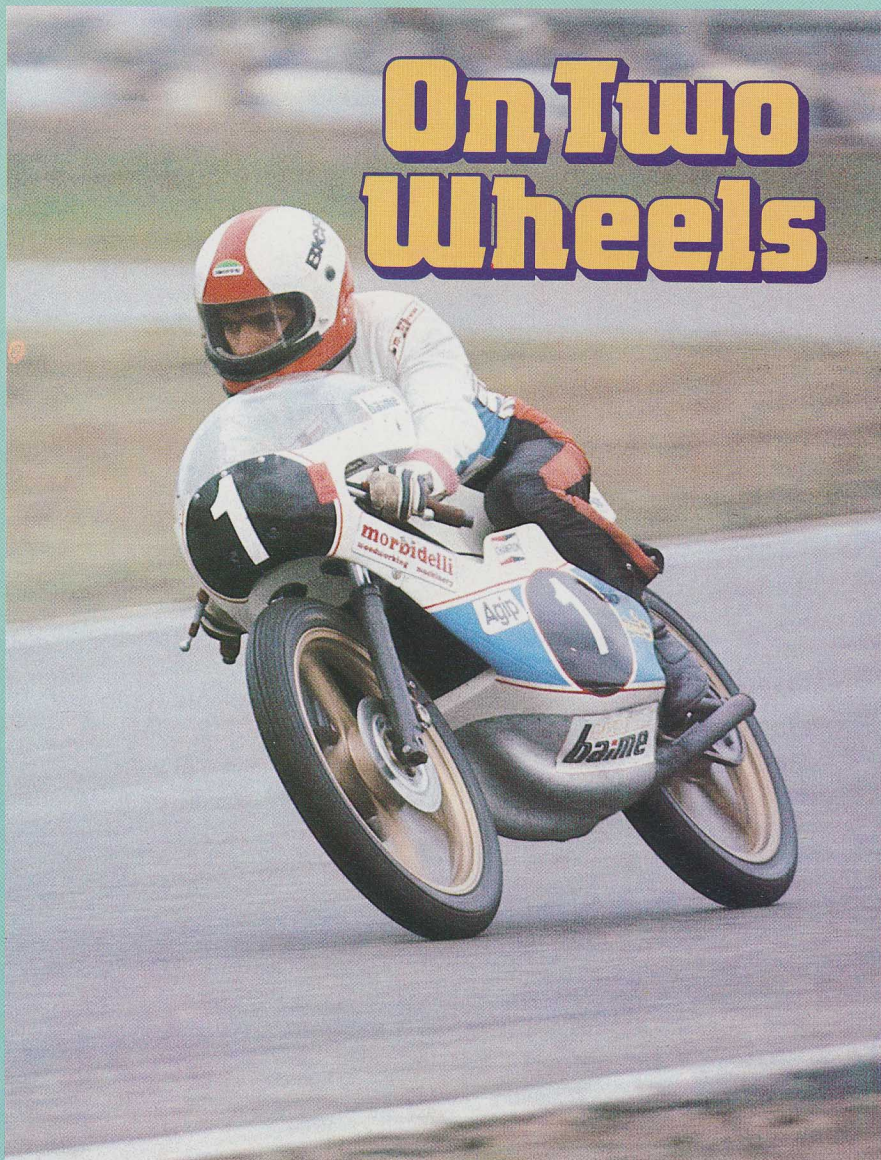
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# THREE YEARS & A SWANSONG

The name Mondial is usually associated with small capacity racers

Three golden years and a swan song. This phrase better than any other highlights the story of Milan based motor cycle makers Mondial. Although the company started life in the late 1920s, and was in fact still thriving in 1977, it will most certainly be best remembered for its famous victories in road racing between 1949 and 1951, and for one last glorious fling in 1957, after which, together with fellow Italians Moto Guzzi and Gilera, Mondial quit the international racing arena. Had the company not pulled out of racing, there can be little doubt that it would have added to the five Manufacturer's World titles, and a similar number of individual World Championships, that had already gone its way.

The company was founded in 1929 by former World Champion Massimo Boselli but it was not until the years immediately following World War II that Mondial really began to make an impact on the world motor cycling scene.

Until the end of 1948, Mondial's main concern had been commercial engineering as well as the production of trucks. In 1949, however, Mondial turned their attention to motor cycling and produced two machines, of 125cc and 200cc capacity, both with single-cylinder, four-stroke motors. These machines were to remain in production for many years and

it was from the 125cc engine that Mondial developed a highly-successful racing machine.

By 1949, when the FIM formulated the structure of the present World Road Race Championships, the engine design of Mondial's four-stroke 125cc racers was so far in advance of the opposition that the ensuing racing season provided little competition. Works rider Pagani using his bike's superior power to full advantage in winning every round in the Ultra Lightweight class to take the 1949 World title. He scored a total of twenty-seven points, well clear of compatriots Magi and Masseti, both on Morinis.

The 123cc double-overhead-camshaft power unit at the heart of Mondial's success employed unit construction for engine and gearbox. Deep finning was used on both cylinder and cylinder head, and this also enclosed the gear train drive to the camshafts. The hairpin pattern valve springs were cooled by their ends being exposed to the air through cut-aways made in the head finning. To the front of the bottom half of the crankcase a Marelli magneto was housed. This engine was a classic example of the perfection that many Italian designers of that time were achieving by minute attention to detail. It was beautifully constructed and was capable of around 11,000rpm.



Above: Nello Pagani in action on the single-cylinder, four-stroke 125cc Grand Prix Mondial racer of 1949. That year saw the company win the first of its four world titles, the 125cc World Champion being works rider Pagani

Left: two years later, in 1951, the 125cc World Champion was again a works Mondial rider; this time Carlo Ubbiali took the honour. Later, once Mondial had lost its supremacy, Ubbiali left the team to join deadly rivals MV Agusta

Right: the all-conquering 125cc Mondial Grand Prix racer of 1949. It used a four-stroke, single-cylinder, overhead-camshaft engine of 123cc







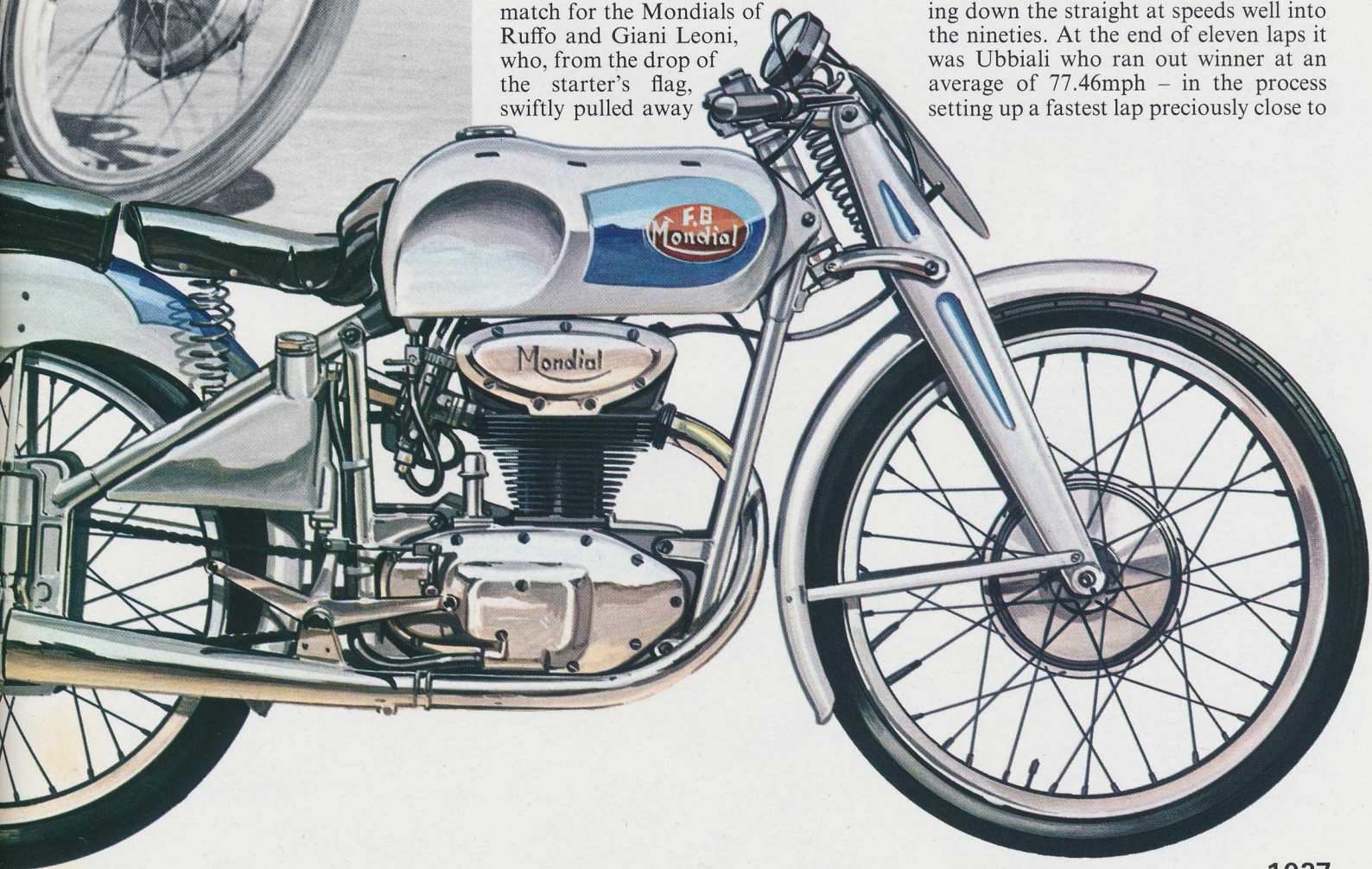
The best racing engines in the world would be virtually useless if not housed in a frame that would allow their potential to be fully utilised. However, despite the enormous improvements being made in frame design during the late forties and early fifties, Mondial persevered with a rolling chassis which even at that time was positively antiquated. While other manufacturers were developing hydraulically damped forks, Mondial stuck to their blade type girder units, with no rebound damping. Rear suspension was of short moving plunger type and the large diameter wheels were what can only be described as spindly, having very narrow section tyres. The reasoning behind Mondial's apparent lack of interest in frame development was that they found their system lighter than their rivals, and the limitations of axle movement and reduced torsional rigidity were less important than weight reduction in machines with a small engine capacity.

The 1950 125cc World title was centred on three rounds of the Championship calendar; these being the Dutch TT, Ulster Grand Prix and Grand Prix des Nations (later to become the Italian Grand Prix). On the grid at the start of the Dutch event was a variety of superbly prepared machines, including those of Morini, MV and Eysink, with their almost unrecognisable Villiers two-stroke engines. However, these proved to be no match for the Mondials of Ruffo and Gian Leoni, who, from the drop of the starter's flag, swiftly pulled away

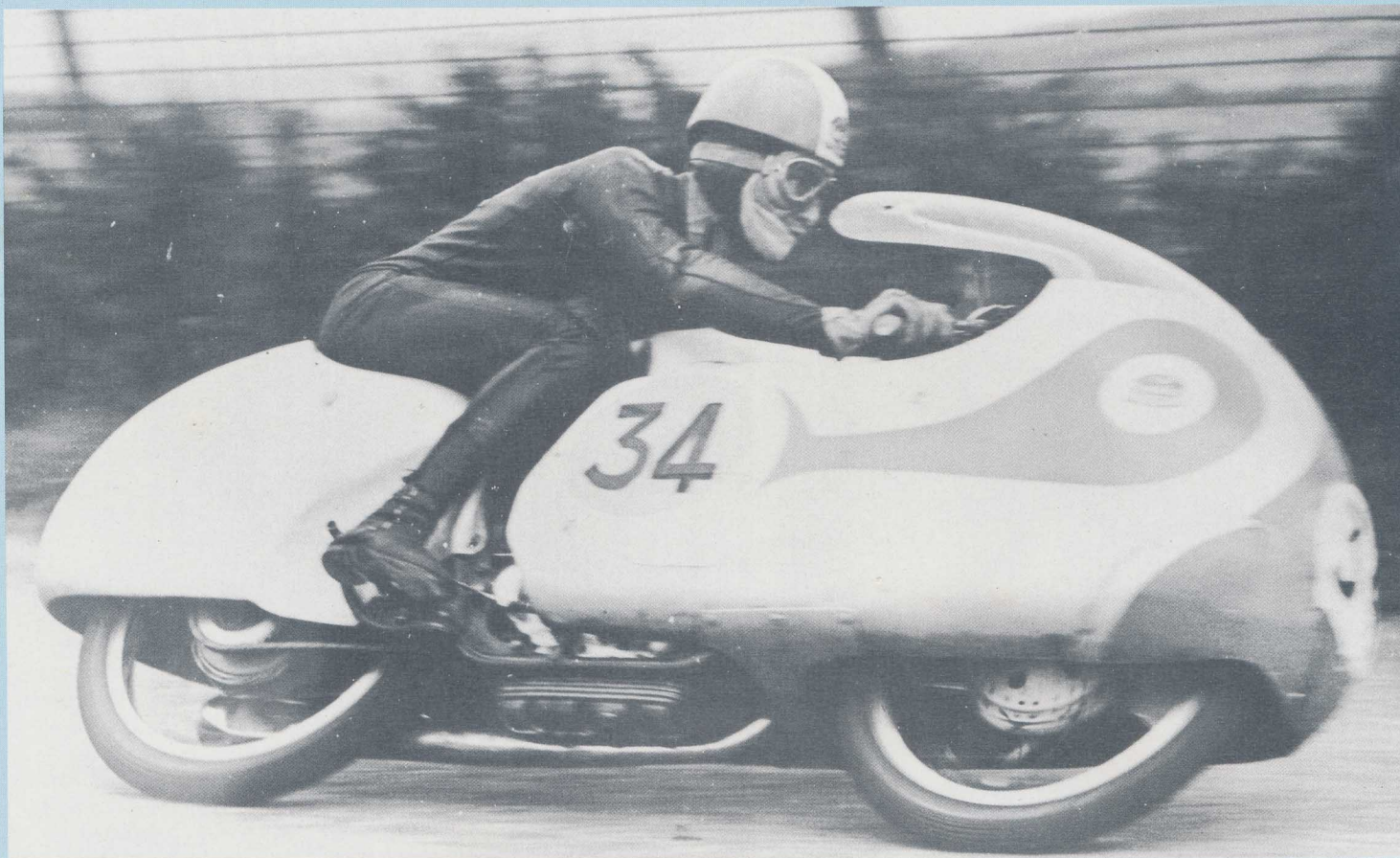
from the pack. For the greater part of seven laps the two Italian riders became virtually inseparable, as first one then the other forced their machines into the lead, and as Grand Prix races go this event certainly lived up to its Classic title. In the end it was left to a sprint from the final bend to separate the two flying Mondials, with Ruffo eventually gaining the decision over team-mate Leoni by a mere one-tenth of a second.

With the rain pouring down at practice for the Ulster Grand Prix it came as a welcome surprise to everyone involved when Ruffo, Leoni and the young twenty-year-old Carlo Ubbiali suddenly turned up with their three works 125cc Mondials. Just how the ultra lightweights happened to be there was something few people could at the time fathom out but as it transpired a number of Italians had entered for the event – which had not existed in the original rules – some time after the closing date. Nevertheless, to the delight of the Irish crowd a quick piece of juggling by the organisers meant that the Ulster Grand Prix saw its first ever 125cc event.

Although Leoni was forced to retire during the race, Ruffo and Ubbiali put on a display which few people were to forget. It must be remembered that road going 125cc machines of that time were only capable of speeds between 50 and 55mph and here were two bikes hammering down the straight at speeds well into the nineties. At the end of eleven laps it was Ubbiali who ran out winner at an average of 77.46mph – in the process setting up a fastest lap preciously close to







80mph. These sort of speeds were greater than those gained by many 250cc bikes of that time and were responsible for putting 125cc Grand Prix racing well and truly on the map.

And so it was on to Monza and the Grand Prix des Nations. This was the feather that Mondial dearly wanted in their cap and in front of over one hundred thousand fiercely patriotic supporters they sent the foursome of Leoni, Ubbiali, Ruffo and Alberti into the fray. There can be few stranger sights in motor cycling history than some of the riding positions taken up by the Mondial works rider in 1950. Of these the styles of Ubbiali and Leoni were probably the most outrageous. Padding on the tanks and over the rear mudguards of their machines meant that this pair of Italians were able to lay, in comfort, prostrate along their bikes. This was aided by foot pegs situated in the region of the rear spindle so that they could hang their legs almost straight out behind them. Practices such as these have since been outlawed by the FIM but in 1950 they were very much the vogue. Leoni's Mondial was also aided by the use of 'shell-egg' streamlining and it was he who eventually took the verdict at Monza.

The only blot on Mondial's copy book at the end of the race was the fact that the Morini mounted Zinzani had managed to slip in between their quarter. This, however, seemed to matter little to the Italian crowd who were treated to some

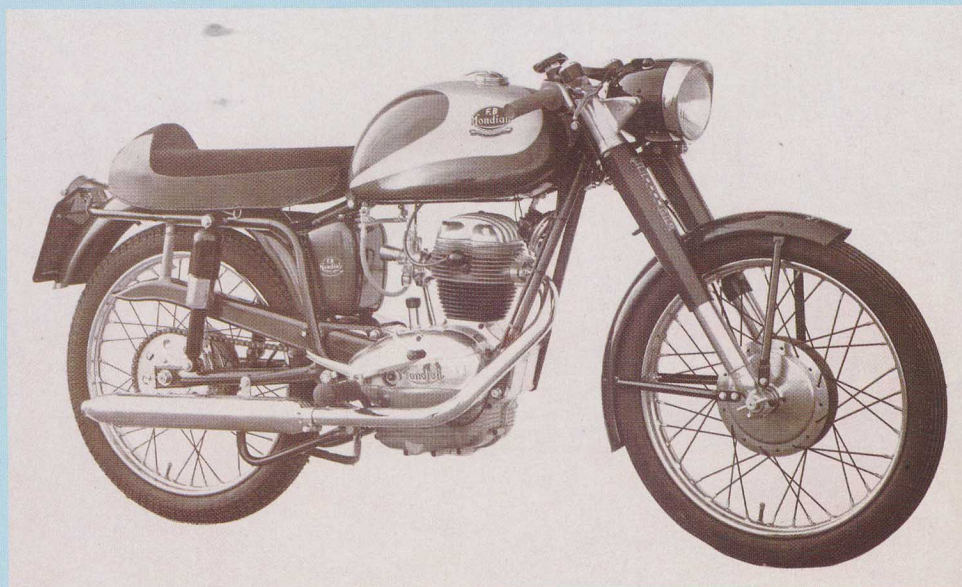
truly exciting racing, with the first three home being separated by a single second, and all averaging over 82mph.

So there it was, the 1950 Grand Prix racing season at a close and another 125cc Manufacturers World title going the way of Mondial. It probably mattered little to them which of their factory riders won the Individual Championship – for they had not given any team instructions to this effect – but, with victory in the Dutch TT, second place in the Ulster Grand Prix and a safely collected fourth place in the Grand Prix des Nations, Ruffo took the title with a total of

*Above: Tarquinio Provini hurls his 250cc Mondial round the Isle of Man circuit during the 1957 Lightweight TT. The race, however, eventually went to teammate Cecil Sandford who also went on to win the 250cc World Championship. In fact, Mondial works riders filled the first three places in that year's Championship table*

*Below: the sporty single-cylinder Mondial Special of 1957*

*Opposite page: a dohc Mondial 125cc racer of 1958*





seventeen points, three points in front of his two team-mates Leoni and Ubbiali.

Mondial's 1951 racing season followed on much the same lines as that of the previous year; the only difference being that it was Ubbiali who took the 125cc World title and not Ruffo. The factory's bikes filled the first three places in the Championship table and they easily won their third Manufacturer's crown. An exciting feature of the year as far as Mondial was concerned was their successful first appearance at an Isle of Man TT. Here their bikes once again proved their superiority of power and reliability. A demonstration of just how reliable they were was highlighted by the fact that the first time the cylinder heads were removed from the bikes was after the race, when the engines were stripped for measurement – no work being needed during practice.

The introduction of a 125cc Ultra Lightweight class into the 1951 TT calendar was viewed with a great deal of amusement by many larger capacity bike riders of the day. However, Mondial's superb performance, as their factory riders rode home to take the first four places, left the one time sceptics gazing on in awe. It seems ironic that 125s should have ever been thought too small, when one considers that not too long

afterwards machines of less than half this capacity were lapping 'the Island' at speeds over 85mph.

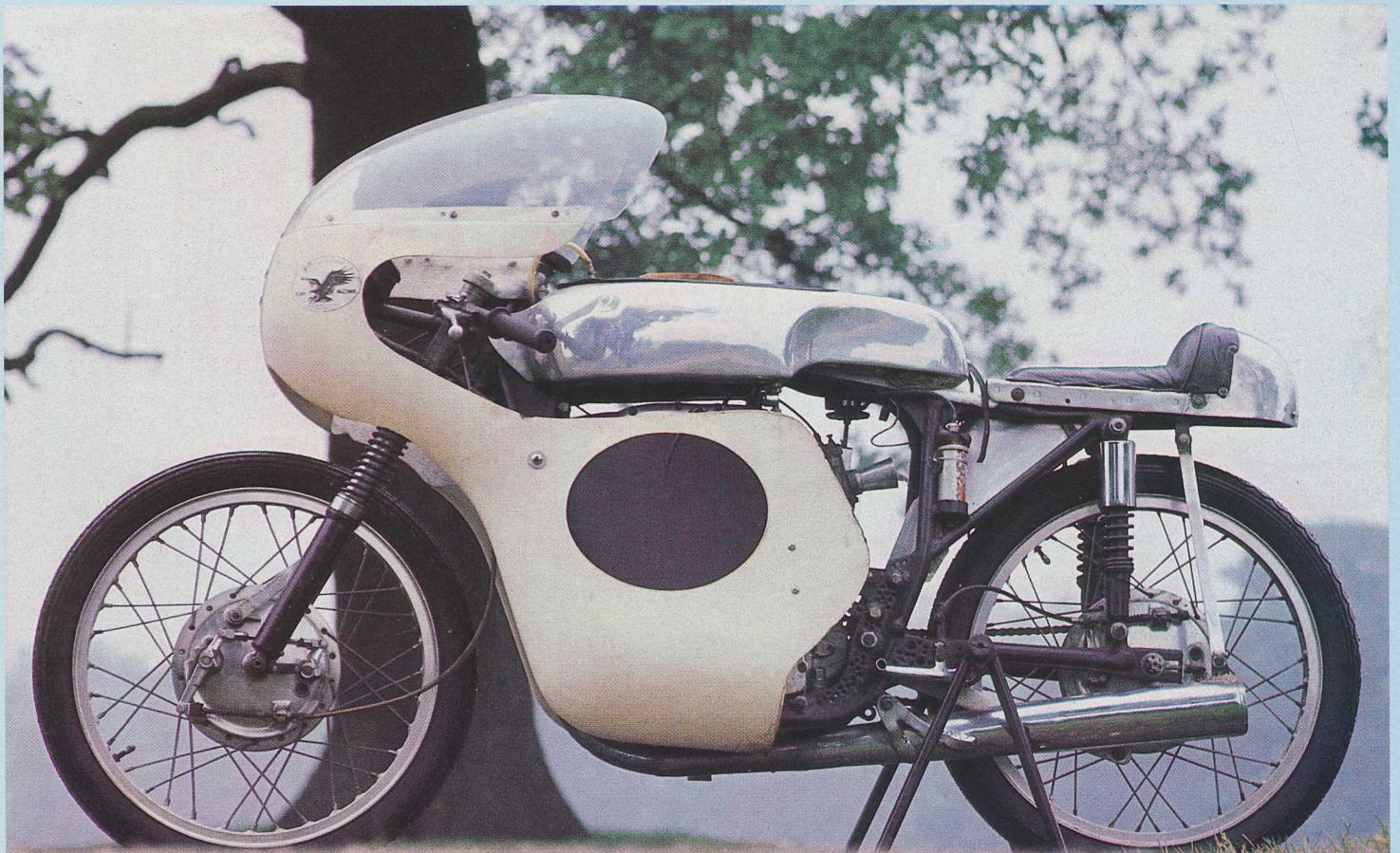
The 1951 event was run over two laps of the Island circuit and after MV Agusta's challenge faded on the first lap – their sole entry retiring on Bray Hill – the four Mondials proved too hot a proposition for the multitude of British specials and a couple of Spanish Montesas, which made up the rest of the entry list. The race was won by Ulsterman, Cromie Macandless, at an average speed of 74.85mph and he was followed home by Ubbiali, Leoni, Ruffo and the famous J. S. Bulto, on a Montesa. In addition to winning, Macandless also established the fastest lap with a speed of 75.34mph.

On entry into 125cc road racing Mondial's four-stroke works bikes, as we have seen, had no equals but with the start of the 1952 season they soon found that their main opposition, namely MV, had not been idle. It is perhaps understandable that success such as the previous year's 1-2-3-4 in the Isle of Man TT should inevitably lead to a certain degree of complacency, but when MV released their 1952 125cc racers Mondial were caught well and truly on the hop. Ubbiali was subsequently forced into second place in the title race – Britain's Cecil Sandford taking the Championship

for MV – and from here on Mondial mounted riders steadily started to lose their grip on 125cc Grand Prix racing.

Not only did their bikes begin to lose their competitive edge, the factory also lost Ubbiali, their number one rider, to MV. This was obviously a state of affairs that Mondial found unacceptable, so engine designer Alfonso Drusiani went back to his drawing board and began to formulate ideas for a new breed of Mondial racers. These appeared in 1957 and it was definitely a case of *deja vu* as far as the motor cycle racing world was concerned. This time Mondial contested two classes, 125 and 250cc, and in both their new beautifully streamlined machines dominated.

Not only were Mondial's 1957 machines of great interest, their line-up of works riders is also worth a mention. These included Cecil Sandford, Tarquinio Provini, a master of lightweight racing, and one S. H. Miller, later to become the most successful trials rider the world has seen. This trio filled the first three places in an easily won 250cc World Championship but the 125cc class was a much closer run thing. Here Provini was pushed hard by MV's Luigi Taveri and Ubbiali. However, in the end his outstandingly fast Mondial saw him safely to the first of two World titles that were eventually to





## Mondial/THE MACHINES

go his way.

The 350 and 500cc classes of the 1957 Championship were won by Moto Guzzi and Gilera respectively and it was a sad day for motor cycle sport when at the end of the season Mondial together with these two other Italian factories decided to pull out of road racing. Since that time Mondial have continued building road going machinery of various types and engine capacities.

By 1960 the company were offering a range of nine models, both two-stroke and four-stroke, from 50 to 200cc. Production continued during the 1960s and '70s, but it was only on a limited scale. Their bikes were intended mainly for the home market and were altered as and when the demand arose. Indeed, by the mid 1970s, Mondial were even producing off-road machines with Sachs engines. However, at the start of 1977 their range had been condensed to just three machines, a 50cc two-stroke moped, a 125cc two-stroke single and, of course, a model of the same engine type and capacity as those which gave the company prominence in motor cycle history, a single-cylinder 125cc four-stroke. AW



*Top: another of the unusual models produced by Mondial during the 1970s was this mini bike of 1972. It was known as the Mini Cross and was powered by a 48cc two-stroke engine allied to a four-speed gearbox*

*Above: the highly competitive off-road Mondial of 1975 has a two-stroke Sachs engine of 125cc*

*Right: Mondial have been making mopeds for a number of years and this is their Matic Mk 2 model of 1975. It was a step-through type machine aimed mainly at the commuter and used a two-stroke engine of 50cc.*

