



CHASING 2:40

Despite deeper pro fields and constant advancements in bike and run technology, the best Ironman athletes in the world are still chasing after the elusive run record on the Big Island—a record that has stood for 23 years (and counting).

BY KIM McDONALD

HONOLULU RUN RECORD

JEFF CLARK



inning an Ironman World Championship isn't easy, but the basic ingredients are fairly simple: Arrive on the Big Island in early October ready to swim fast enough to stay with the front pack over the first 2.4 miles. Have the leg strength and endurance necessary

to bike 112 miles with the very best riders in the sport against fierce winds that blow from every direction. And most importantly, come physically and mentally prepared to run a fast marathon in the searing heat of the lava fields, where the race is typically won or lost.

No one in the race's history better met those criteria than Mark Allen and Dave Scott. Their pursuit of Ironman perfection came to a head in the famous 1989 Iron War (pictured above). You know the story: They raced side-by-side until Allen dropped Scott less than two miles from the finish to win his first of six Ironman world titles. When the clock stopped Allen had split 2:40:04 and Scott 2:41:03—still, 23 years later, the first and second fastest marathons ever run in Ironman Hawaii.

As history predicted, a fast run was the key to winning this brutal race in 2012. Australian Pete Jacobs won the men's race by more than

five minutes in a time of 8:18 with the third fastest run of the day, while Great Britain's Leanda Cave won the women's race by more than a minute with the third fastest marathon split among women.

They came into the race with widely different expectations for how they would perform in the marathon. Jacobs, the runner-up in 2011 (who has run 2:42 and 2:41 in Hawaii, the third fastest ever), arrived in Kona the week before the race intent on breaking Allen's record. "This has been the best running build-up I've ever had for any race," he confided to me days before the race. "If I run really well, it won't be a surprise." When he crossed the finish line the year before, Jacobs revealed his goal to the man he revered: "I said to Mark, 'I want your run record.'"

But strong winds on the bike and extreme heat thwarted that plan and took their toll on the entire field of fast runners, which included Andreas Raelert, his brother Michael, Chris McCormack and Craig Alexander. The battle on the run course never materialized. McCormack pulled out of the race before the turnaround on the bike, and defending champion Alexander was never a factor, finishing 12th. Jacobs had the ride of his life and came out of T2 ahead of every

LOIS SCHWARTZ; NICK SALAZAR

serious challenger, except Marino Vanhoenacker, who had earned an eight-minute advantage over the field with an all-or-nothing solo breakaway. Jacobs quickly chipped away at his advantage off the bike, and the Australian took the lead for good at mile 15 in the run.

Realizing he had a big lead once past Vanhoenacker, Jacobs dialed back his pace to avoid cramping and risking the win. "I walked through the ice stations of most aid stations and slowed down to drink," he said. "I knew I had a four- to five-minute lead out of the Energy Lab over Andreas, whom I outran last year when I felt worse, so that gave me confidence to relax and focus on making it home in one piece. I couldn't have gone much faster. I had worked very hard on the bike, and I was a little flat on the run."

THE PERFECT STORM

Why no one has been able to run faster than Allen or Scott did in Kona in 1989 is one of triathlon's enduring mysteries, especially considering all of the improvements that have been made over the past two decades to footwear, nutrition and training, not to mention the increasing quality and depth of the men's field that arrives on the Big Island each year. Even more puzzling is that the record was set on a hillier course than today's. Many of the top competitors in 1989 remember it back then as more difficult than today's because they had to run south from T2, which was located at the old Kona Surf Hotel, now the Sheraton Keauhou, up the hill at the end of Ali'i Drive, then down a steep windy road and back up from an area known as "the Pit."

"It was a much tougher course back then," said 1994 Ironman World Champion Greg Welch, who finished third that year. What's more, the official 1989 run times included the bike-to-run transition times, so the actual marathon times were even faster than the records show. How much faster? Dave Scott said Pat Feeney, a physicist friend from his hometown of Davis, Calif., calculated that Allen spent 1:13 in transition and Scott 1:15, so the actual marathon times would have been 2:38 for Allen and 2:39 for Scott. In many respects, the 1989 Kona marathon record remains triathlon's "Beamesque" moment—a singular athletic achievement that took place on a perfect day, like Bob Beamon's 1968 Olympic long jump, which broke the world record at the time by 2 feet and remained untouched for the next 22 years.

Paul Huddle, one of the top pro finishers in 1989, remembers the weather that day as unusually cool and windless, which set up all of the athletes for fast runs. "Maybe a slightly easier ride allowed for a faster run split that day," he speculated. "'89 was a spectacularly easy ride. I recall light rain, but barely any wind to speak of in Hawi and a tail wind on the return trip and cooler than normal temperatures."

But perhaps the most important factor responsible for the fast times that day, many experts agree, was the rare alignment of two extremely talented athletes pushing themselves to the limit to win in a shoulder-to-shoulder battle over the entire marathon course. "I think it was the athletes, quite frankly," said Welch. "Mark and Dave were two of the greatest athletes who ever set foot on the planet in triathlon or in any sport."

"I don't think everyone appreciates how good Mark and Dave were," added Huddle. "Both of these guys were incredible all-arounders—swim, bike and run. In my opinion, Dave always ran way above his basic running ability in Kona, and Mark was one of the only really great runners in our sport at the time who came close to his

[open marathon] potential in Kona."

Asked why no one has run faster than he and Allen did back in 1989, Scott said he doesn't have a good answer. What's especially puzzling to him is that many of the athletes who show up in Kona year after year are faster runners than he and Allen ever were, at least over shorter distances. Some have run 1:09 or better off the bike in half-Ironman races, and if you double their half-marathon times from those races and add 15 minutes (which Scott figures should give a good approximation of what they should run in an Ironman), they have the potential to run a 2:33 marathon, he said. "But none of these guys has gone under 2:40 at Kona," says Scott.

"For the men, I think it's a combination of things," Scott added. "When I've watched the bike leg, a lot of the men I think are seemingly sitting in. I never get the idea they sense they can actually win this race but they're there to play the game on the bike. And the irony is that when they get off the bike, within the first two miles there are some guys who can't even run a 6:30 mile, which is slow, and they're already off the back. And there's a disparity. You may see six or seven guys come in together on the bike, yet two miles on the run there may be a gap of 50 seconds or even more. And I always ask the question, 'Why aren't they able to hang on at the outset of the run? Have they just mentally given up? Or is it that they just don't have the tools?' I wonder if the top pros are doing enough supplemental strength training so they can get off the bike and not feel like their legs are completely beaten up."

Besides a lack of strength, Scott thinks the way the pro men's field now rides to avoid drafting penalties, in an accordion-like procession that requires them to slow

FOUNDATION

According to six-time Ironman world champ Dave Scott, the key to efficient running technique is a strong core—and he doesn't mean a six-pack.



As a college water polo player, Dave Scott trained like a "madman" in the weight room to stay competitive with the bigger, stronger players in the pool. When he continued the same strength regimen as a triathlete, he began to see the benefits for his new sport—not only for improving his swim and bike, but also for maintaining his running form off the bike at Ironman Hawaii. "I've found that [strength training] has been paramount," he says.

That message, though, still hasn't gained much traction among triathletes, especially long-course athletes who need it most. Scott says when he asks pros as well as age

THE HISTORY OF THE KONA RUN

A look back at how the run records have fallen



1978 Gordon Haller wins the first Ironman with a 3:30 marathon.

1981 Joe Kasbohm, a 19-year-old college student, runs 2:59:18, the first sub-3:00 marathon.

1983 Twin sisters Sylviane and Patricia Puntous both run 3:22 marathons to finish first and second.

1989 Mark Allen runs 2:40:04 and Dave Scott 2:41:03 during their famous Iron War, the fastest two times ever run in Kona.

1990 Erin Baker runs 3:04:14, the fastest time run by a woman in Kona, to beat Paula Newby-Fraser for her second Kona win.

1991, 1992, 1995 Mark Allen continues his streak of fast marathons in Kona, running 2:42 in each of those three years.

groupers who show up in Boulder to train with him what kind of strength training they've been doing, it's usually not enough by his standards to give them any real benefit.

"I hear that quite often," he says. "They just do a little fluffy stuff. And I say, 'Why bother? That's like going to the pool and swimming easy breaststroke all of the time!'"

What did Scott do in the weight room back in the day that helped him run in 1989 what still remains the second fastest marathon in Kona of all time? Lots of traditional Olympic lifting that focused on improving his leg strength: squats, staggered squats, Romanian deadlifts. "I was doing what I called split leg rockers, a lunge motion, at different speeds," he says. "I did a lot of hamstring and glute stuff." To strengthen his abs and core, he did knee-ups in the pool and used gymnastics rings to do core exercises similar to those now done on the suspension training system TRX.

"All those core muscles help stabilize your spine and, if they're not strong, you start to get sloppy in your pedal stroke and you can certainly see it on the run when people's hips drop," Scott adds.

To Scott, the key to running a fast marathon off a 112-mile Ironman bike leg is being strong enough to remain stable in the "stance phase," the split second during which you're balanced on one leg with your other leg extended behind you. If triathletes aren't strong enough in this position, their knees rotate toward the center of their bodies and their arms pull back, Scott says, "so what everyone's eye notices is a lot of upper body movement. You see this in the marathon when it comes down to the last six or seven miles. And you don't even have to have a discerning eye or know much about biomechanics. You can just see that guy has a lot more movement in his upper body. And consequently if you look down at his lower legs, the legs will start spiraling a little bit."

In addition to being stable in the stance phase, Scott says building a stronger core with weight training allows you to run tall and delays the body posture droop that comes with fatigue. "Even if you drop your head one degree, it brings your chest down and ends up loading your quads, and that's the opposite of what you want," says Scott. "You want to be able to run tall!"

down and accelerate constantly over 112 miles, also negatively affects their run. "It's really fatiguing and also burns glycogen at a much higher rate," he said. "We didn't have as much of this back when I raced. In fact, going back to 1989, we were allowed to fan out on the road, so if you got to a hill and you were stronger than someone else, you'd just slide to the left and climb that hill. ... But when I watch those guys accordion back and forth I just think it's debilitating and that may be one of the reasons they're not able to run well."

Others think the speeds at which the top men now have to ride are contributing factors. "I wonder how fast Greg Bennett or Macca or Jacobs would run if they weren't pushed to ride 4:25 to 4:30?" asks Huddle. "It's always a question of giving up five minutes on the bike to gain 10 minutes on the run. But what is the

right ratio of energy expenditure on each side that gives you the best outcome?" That may be one reason why the men's marathon record has not been touched for 23 years, while the women have been able to steadily chip away at their run records.

"Often the run consists of just doing what it takes to win," said triathlon running expert Bobby McGee about the men's times. "Great riders from the recent past know that a solid run that keeps them just far enough ahead to demoralize the competition is all that is required after a mythical ride, and this is often only a low 2:50. The girls are not strong enough to ruin themselves on the bike and conversely have relatively more left for the run."

McGee and Welch also think that the aggressive aerodynamic positions of today's tri bikes restrict and negatively impact the



One of the speediest runners on the Ironman circuit, German Andreas Raelert ran the fastest marathon in the top 10 men in Kona (2:47:24) in October, but finished second, five minutes behind Pete Jacobs.

KURT HOY; LOIS SCHWARTZ



Cyclists during the 1989 Hawaii Ironman, the year of Iron War, were allowed to fan out across the road, unlike today's Ironman pros who ride in an accordion-like procession to avoid drafting penalties.

running muscles. "Just recently, I worked with a pro whose running was steadily declining until we changed her fit to a far less aggressive position," McGee said. "Her running dramatically returned and she podiumed soon after that. ... From footage, it is clear that neither Mark nor Dave were very aero on that ride that day, both being quite upright and without those crazy hip angles the guys get into today. Their riding posture clearly impacted their running far less."

ON THE HORIZON

Ask the man who has the best chance of breaking the Kona marathon record what it takes to go sub-2:40 off the bike in Kona, and he'll sum it up with one word: efficiency. "I always say that to run well in Kona you need really good efficiency because the heat raises your heart rate that extra bit," said Jacobs. "If it's in cool conditions a guy might be able to hold a 2:45 marathon pace comfortably at 80 percent of his max heart rate. But you put him up to 85 percent heart rate in the heat, because his efficiency is blown out, that extra 5 percent blows his run time to a 2:55."

Jacobs said he went from a three-hour-plus marathon runner in Ironman races to a 2:41 marathoner in the heat and humidity of Kona largely by focusing on perfecting his run technique to become more efficient. "I work really hard on that," he said. "I think about it every single day in training."

When he prepared for his first Ironman in Australia as an age grouper in 2002, a friend advised him to run by bending more at the knee, so that he would squat down before pushing off with every stride. But when another friend remarked, "You're a bit of a heel striker, Pete, like it was a bad thing," he picked up a copy of Christopher McDougall's *Born to Run* and changed his stride, becoming a forefoot striker with a slight forward lean. "It opened my eyes to improving my running, what technique is and how the body was made to run," he said. "It all clicked and when I ran 2:41, I went, 'Wow, this works.' What I'm doing with technique works; I'm on the right track."

Jacobs said he notices that many of his competitors in Kona, particularly the strong cyclists with bigger glutes and quads, suffer more in the run because of their poor running technique. "Once you start

3:30 3:22

1996 Luc Van Lierde runs 2:41:48 to win the race.

1998 Defending Ironman Champion Heather Fuhr runs 3:04:02, breaking Baker's record.

1999 In winning her fifth Kona title, Lori Bowden shatters Fuhr's run record with a 2:59:16, the first sub-3:00 marathon by a woman.

2008 Chrissie Wellington and Sandra Wallenhorst break Bowden's record with a 2:57:44 and 2:58:36 respectively.

2009 Mirinda Carfrae breaks Wellington's record with a 2:56:51.

2010 In winning her first Kona title, Carfrae shatters her own record with a 2:53:32; Caitlin Snow runs 2:56:04, the fastest time for an American woman; Pete Jacobs runs 2:41:06, the third fastest ever run in Kona.

2011 For the fourth year in a row, the women's record falls as a foot race between Carfrae and Wellington leads them to break it in 2:52:09 and 2:52:41, respectively.

How fast can they go?
Dave Scott predicts the men could run 2:31-2:32 and the women, 2:43-2:44.

TRAIN TO RUN LIKE THE BEST

to get hot," he said, "you bend at the hips a little bit and once you do that you lose 10 to 15 seconds a kilometer."

Those who have competed at the top level in Kona believe it's only a matter of time until another cooler, cloudy day combines with a steady paced bike in Kona for Jacobs, the Raelert brothers or another super runner to dip under the 2:40 mark. "I do think it's likely the record will fall sometime soon simply because of the number of good runners these days and the chances of two or three pushing each other all the way, similar to how Mark and Dave ran that day," said Ken Glah, the fourth-place finisher in 1989.

Once that mental barrier is broken, expect to see a slew of faster times.

"If [Javier] Gomez or [Alistair and Jonathan] Brownlee can make it to Kona from short course with success as Raelert, Crowie and Macca have done before them, I believe we could see run splits in the 2:35 to 2:37 range on the absolute ideal day and race," said Torbjørn Sindballe, who was third in Kona in 2007 and extensively studied the impact of heat and humidity on running ability.

"The current best Olympic athletes are close to a minute faster on a 10K in a triathlon than any of the guys on the Ironman circuit have ever been. And in a full marathon that could turn into much more." Welch agrees that "a 2:36 to 2:38 is probably the best someone is going to end up doing one day, with the women going 2:50 to 2:51." But Scott is more optimistic, predicting that the men will eventually run 2:31 to 2:32 and the women 2:43 to 2:44.

MAKING IT HAPPEN

No one doubts the men's marathon record will eventually be broken. The women have already provided a blueprint of how to do it, and the formula closely matches elements mentioned by the sport's historians and pundits.

Lori Bowden set the record in 1999 with a 2:59:16 split, which stood for almost a decade. In 2008 Wellington dropped the record by 90 seconds, then Carfrae lopped almost three minutes off the following year and another two and a half minutes the year

after that. In 2011—while Cave ran a 3:06 to reach the podium in third place—Carfrae set the course record with a 2:52:09 marathon, but only took 32 seconds from Chrissie Wellington, who won her fourth world title. It was the fourth consecutive year the women's run course record was broken.

If the men are able to ride the Kona bike course more like the women, without the accordion-like procession that saps their legs from unnecessary accelerations; if they have more head-to-head run battles like the ones involving Carfrae and Wellington;

and if someone can finally break the mental barrier of running faster than 2:40, the men could be on their way to a succession of marathon records in Ironman Hawaii.

Some take exception to the idea that the women have been able to break their marathon records year after year because they are putting less effort into the bike.

"The women have to ride just as hard," maintains Cave's coach (and Carfrae's former coach) Siri Lindley. "There's a huge handful of girls who can ride, so we're racing basically the same way the

men are." She also believes a marathon PR is possible after a hard 112-mile bike, and the training she put Cave through last year to run faster than she's ever run in Kona is proof.

With Wellington taking a hiatus from the sport, Cave's goal in 2012 was to avoid being passed in the run by her main rival, 2010 Ironman world champion Carfrae. Cave ran with Mary Beth Ellis, who would end up fifth, for much of the early miles of the run until she broke away and passed Steffen at mile 23 for the win. "I didn't feel good when I started the run to be quite honest," Cave said. "I felt pretty average." But at around 14 miles she began feeling stronger. When Carfrae caught up to her a mile before the entrance of the Energy Lab, a lonely stretch of the run, Cave was focused. Over the next five minutes, Carfrae ran up on Cave's shoulder and remained about half a step behind. Then Cave surprised everyone by pulling away from the women's marathon record holder, which proved to be the defin-

Paul Huddle's strength as a young pro in the early days of triathlon was the run, but he never realized how important the bike and swim were to a good marathon in Kona until he asked his housemate, Mark Allen, why he was so religious about making every morning swim workout. "He said if his swimming was as fit as possible, it would have minimal impact on the rest of his race," Huddle recalls. "It didn't get me to swim much more, but I thought about that concept as it applied to my marathon at Ironman. Since cycling was my weakness to begin with, I started to think that maybe I was focused too heavily on my strength, which was running. If I were to run a better marathon, maybe cycling was the answer. I hadn't come close to what I felt was my potential in the marathon of an Ironman and, since I'd already been focused on running since that was what I knew, I decided to become a cyclist. I reasoned that if 112 miles didn't impact me, perhaps I could maximize my running abilities. I was right. I doubled my cycling volume and my marathon time became competitive. On top of that, my bike split also improved."



JEFF CLARK/AARON HERSH

Most top-end Ironman coaches agree that the stronger you become on the bike, the better able you'll be to run to your potential in an Ironman. "Just because an individual athlete has shown brilliance in one or all of the disciplines at another distance or as a single-sport athlete, it's no guarantee of success in Kona," Huddle says. "How many sub-2:20 marathoners have come to Kona and gone five hours? I can name five off the top of my head."

So bike more and run off the bike regularly in your training. "If you don't have a strong running background, consider double runs as a safer way to boost running volume," says Huddle. "One hour after a long ride is as long [a brick workout] as I'd suggest." Long runs and higher intensity runs should be done fresh to avoid injury or necessitating a long recovery, but they are an irreplaceable component of high-level Ironman run training.

And how long should your longest run be? Running expert Bobby McGee says anything over two or two-and-a-half hours is counterproductive. What you want to focus on, he says, is quality and leg strength. McGee has his athletes do one long run every two weeks and in between an intermediate distance run with a quality finish. "Fast finish long runs or runs with strides toward the end are super ways to reduce recovery time and teach athletes to finish strong," he says. He also advocates running workouts that build your functional strength and mechanical efficiency: springing up a steep hill for 30 to 45 seconds at a time; hill interval workouts with 10 1.5- to 3-minute repeats up a moderate hill focusing on good form; and the bread-and-butter race-pace intervals off the bike. "I'd keep them short, fresh and plentiful," says McGee, "like 200-meter to 1-mile reps at race pace, fresh and off the bike."

McGee also has his Ironman athletes do their long run sessions with fewer calories until they can manage more than two hours on water and electrolytes alone. Why? "Reducing the need to feed reduces the mechanical stresses on the gut and makes for a higher likelihood of a clean run, especially in the heat," he says.

He also trains his athletes to walk fast and long, building them up to "some really nasty, gnarly four- to six-hour hikes. The muscle endurance and fat-burning skills gained here are hugely beneficial to the age grouper," McGee says. "The walk/run method is a total no-brainer. ... We have five years of anecdotal proof that this is the way to go fast, and I'd hazard a guess that even sub-three-hour [marathon] runners could benefit from this."

Women's run course recordholder Mirinda Carfrae bridged up to Leanda Cave before the Energy Lab on the run of the 2012 world championship, but Cave proved stronger on the day and ran away from her for the win.



ing point of the women's race. "I had no idea that Rinny was coming up, I really didn't," Cave said. "I had no idea she was that close," adding that she was so focused she also didn't see or hear her coach yelling at her on the side of the road to pick it up.

Lindley said she modified Cave's run training slightly over the past year so she could access that extra gear late in the marathon. "What I knew was likely to happen was that someone like Rinny or a Caitlin Snow would run up on her," said Lindley. "So what we had to focus on was giving her the tools to be able to handle that mentally, and, most importantly, physically."

After winning the Ironman World Championship 70.3 in mid-September, Cave headed straight to the Big Island more than a month before the race. It gave her the extra edge to tackle the extreme heat and humidity on race day. "Training in Kona the five weeks before allowed me to realize how much I needed to eat and drink," she said. "I think all those things you discover when you're out in those conditions training [helped my race] as opposed to coming in from a cooler climate and going, 'OK, good luck on race day!'"

Scott, who coached four-time Ironman world champion Wellington for four years, said after Wellington ran a 2:44 marathon

off the bike at Challenge Roth in 2011, "I thought she would go 2:46 or 2:47 in Kona, and that's what we were shooting for before she got into that [bike] accident two weeks before the race" last year. "So I think the women collectively are getting faster and faster," he said.

Lindley, who coached Carfrae to her three Kona marathon records, agrees and believes there's no reason why Cave can't have another breakthrough day and eventually run 2:52 or faster herself. "Anything is possible," she said. "People put limits on themselves because something seems impossible. But the way I've always been is anything's possible and we'll do everything we can to make it happen."

Like Scott, Lindley believes the barriers to running a fast marathon in Kona are as much mental as physical. The key is believing you can do it.

"I knew Leanda could be one of those girls who could lay it down on the bike, but my goal was recognizing her potential to run faster as well," added Lindley. "She had a breakthrough in Ironman Arizona last year where she ran under three hours. I thought to myself and told her, and she agreed with me, that there's no reason why we can't do that in Kona. So it's just believing that it's possible and not being afraid to go for it." **IT**