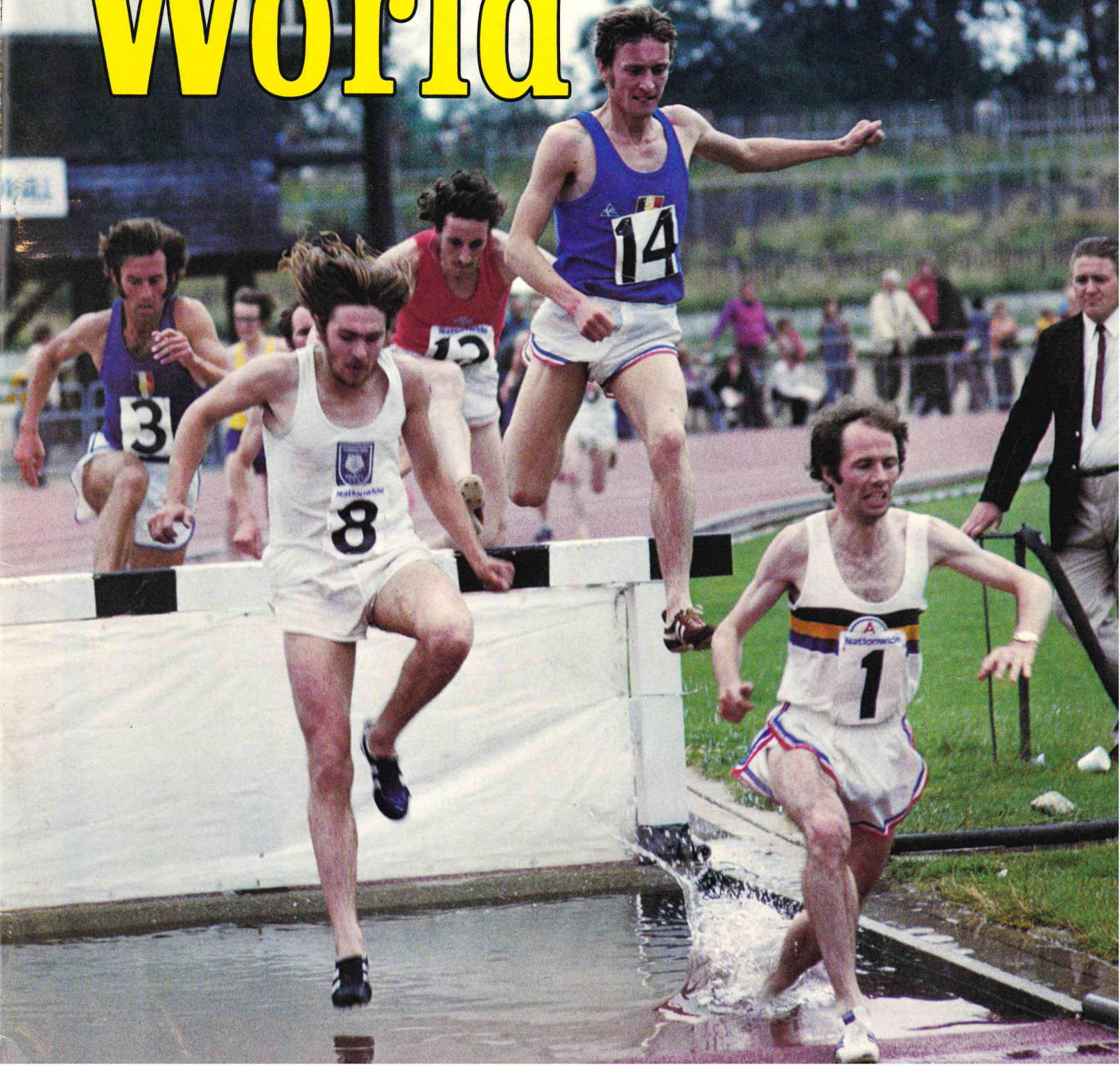


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RUNNER'S WORLD

Volume Ten — September, 1973 — Number Nine



COVER:
The steeplechase: closest a track runner can come to cross-country running. Mark Shearman's photo from Europe introduces the event featured on page 18.

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FROM THE PUBLISHER

When I hired David Prokop last February, I didn't realize some of the problems of bringing in a man from Canada to work. Dave and I decided on a May 1 date for starting his editorial job, but it wasn't until August (almost six months later) that we were given the go-ahead.

The problem was first with Labor. David had to be cleared for job certification. This meant that we thought David was best qualified for the job we had. This took about two months once all the forms and information was filled out.

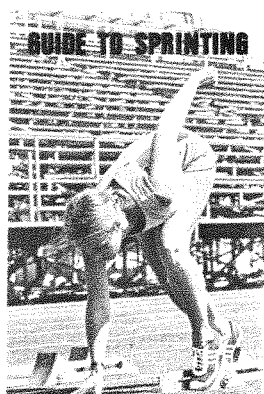
The second problem came with Immigration. In checking we found there would be a two-year waiting period for a permanent visa, yet when I was talking with Labor they mentioned that there would be no hassle at all to bring someone in once the job certification was approved. Yet, this same person told me later after I found out this information that "You have just lost a man."

Well, to make a long story short, David was finally approved all around and he was on the job in late August. He is a most welcome member of our growing list of employees.

Recently, I just hired two other key people in our organization. John Loeschhorn, former Air Force runner, will handle our *Starting Line Sports* division and our distributing division. He has already started his job and is doing well in it.

Shelley Rosenberg will be handling advertising for all our publications. She replaces Jeff Loughridge.

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NEW SCHOOL OF ROAD RACING

Innovation often comes from unexpected places—like tiny College of St. Francis in Joliet, Ill. This winter, the school's running coach Tom Brunick will add road racing as a varsity sport, in addition to the regular cross-country and track programs.

St. Francis will have a separate road team, thought to be the first of its kind. Brunick says, "I know there have been other collegiate long distance running programs which have used marathons, but none has ever gone so far as making road racing an intercollegiate sport."

Brunick outlines his plans:

"The program consists of the traditional cross-country season which runs from September to mid-November. After that, we will get into something entirely new. Instead of a track season, we will have a marathon season comprised of four marathons—North Central in December, St. Louis in March, Drake Relays in April and the NAIA championship in June.

"We have set up a period from January through March in which we will take to the roads against other colleges. Races will be 5-15 miles, and will be scored like cross-country meets."

The main reason for the new program the coach says, "is not to attract big names to the school or big publicity, but rather to provide a program for the average distance runner, the guy who likes to run the roads but very seldom gets the chance when he's in college."

The idea's time has come. It was inevitable that colleges would sanction road racing teams. To Tom Brunick's credit, it happened to start at his school, and others are sure to join.

Road training brought it on. College and high school runners have been training on the roads for years. Many of them have raced there during the summer, and have either liked it better or found more success there than on the track.

Cross-country is the common meeting ground for track and road racers. But the winter and spring divide them again into short or long. Until recently, student-runners have had to go shorter to stay with their teams or longer and leave them.

The runners at Fullerton State faced that choice last year. They had won the NCAA college division cross-country championship. Three of the best runners

preferred road racing to track. Doug Schmenk and Dave White had run 2:17 marathons, and Mark Covert was just over 2:20.

Schmenk, now the AAU marathon champion, said in the July '73 *RW*, "The coach doesn't dig this marathoning. He complimented our 2:17s with the infamous quote, '2:17 doesn't score points at the nationals.' But our success lies in the marathon, so that must be the direction we take."

Such resistance from coaches, though crudely stated, is understandable. They don't want to lose their most effective point scorers. If they feel that way, though, there's a simple solution. Make the marathon (or other shorter road races) scoring events, held in connection with big track meets.

The small-college NAIA already had done that. The marathon has been part of that group's national meet for two years now. Tom Brunick's St. Francis runners will be racing there next spring at the end of their road running season.

The NCAA hasn't yet come around, but this is not to imply that the coaches in that organization are against the idea. They have been talking for three years of adding a national collegiate marathon championship.

Hal Higdon thinks all the college championships will soon have road races. "This will come about not through pressure from coaches with axes to grind," he writes in a college coaching journal, "but as a natural recognition that this is where a lot of our runners are already at."

Once the NCAA gives its blessing, look out established older road racers! Young students usually train more than older specialists, have more basic speed, more free time, and less fear of distance and pace because of their background and youth.

It shouldn't be long before the national collegiate rulers go with the tide. The USTFF, an appendage of the big colleges, has held a marathon for several years now—the most recent one in Wichita, Kans., in June. The college-oriented Drake and Kansas Relays have had marathons, too. And the Penn and Kansas Relay meets joined the trend.

The change, for the most part, is evolving peacefully and quickly. The

main problem has been how to fit this healthy and growing adopted child into the small overall scheme of things—to benefit both individual runners and the schools' programs.

In his article on college road racing, Higdon made several suggestions. The first was to spread the emphasis around; don't center all the attention on the marathon itself, but give the other long distances a piece of the action. Then give road racing a season of its own.

"The next logical step, or perhaps a concurrent one," Higdon writes, "will be the development of road racing a third sport, separate from cross-country or track and field.

"Word has it that the NCAA may schedule its inevitable marathon championship in December in a warm-climate state. This certainly is preferable to tossing the race in as an adjunct to the June track and field championships. But the December date would cause NCAA road running to become merely a tack-on to its cross-country program."

There are definite advantages of having a road race attached to track championships, mainly the team scoring aspect mentioned earlier. Making the marathon an event-for-points might break down lingering resistance from coaches.

But Higdon makes a good case for a winter-early spring season. He says, "I think an NCAA marathon championship might more logically come in early spring, as a climax to a winter of outdoor road racing. There are several reasons for this.

"One is that racing more than two miles on a small indoor track is an act of insanity. It not only causes blisters, but also boredom. Second, it is difficult, if not impossible, to achieve the volume necessary for success as a long distance runner totally while remaining indoors. The risk of injury from running constantly around in circles far exceeds the risk of frostbite."

Regardless of final format, we have to start by lobbying for road races as collegiate championships. The teams like St. Francis' will follow, with full-scale programs (encompassing all distances above six miles) lasting a full season (at least the winter and early spring).

Then we start working on the high schools...

NEWS AND VIEWS

Case in Congress

Gar Williams is president of the Road Runners Club of America. The group strongly supports sports reform legislation pending in Congress (see "Athletes' Case in Congress," Aug. 73). Williams clarifies the proposals and expresses the RRCA viewpoint.

RW readers now have a unique opportunity to help advance the cause of sport and physical fitness. Federal legislation has been proposed which will result in vastly improved sports programs for both the well-trained competitor and the runner concerned with basic fitness. The bill is the "Amateur Athletic Act of 1973," the preliminary ideas of which were discussed by Jeff Darman in last month's RW. Co-sponsored by Senators Tunney (D-Calif.), Pearson (R-Kans.), Gravel (D-Alaska), Cook (R-Ky.) and Thurmond (S-S.C.), it is due to be voted on by the full Senate very soon. Then it will go to the House of Representatives.

Contrary to early rumors, this legislation does *not* provide for government control or supervision of amateur sports and does not superimpose on sport a vast federal bureaucracy. It only provides the tools for the efficient administration of amateur athletics by those who really care about their sport. The bill has two parts or "titles."

- Title I creates a US Amateur Sports Board. This board would not govern amateur sports. Rather, it would simply grant charters to individual sports bodies for them to govern the sport of their interest. The five members of the Sports Board would be appointed by the President of the United States, with the advice and consent of the Senate.

Board members must all have demonstrated ability, knowledge and experience in amateur athletics. One member must be an athlete who has competed on an international level within the past three years. No two members serving at one time shall have been officers or employees of the same sports organization. No person could be on the board and simultane-

ously serve as an official in a national or international sports organization. No member can serve more than once; and each member serves for four years.

Each sport would be autonomously governed by a *different* group which would be licensed by the Board. (*Only* those sports included in the Olympics and Pan-American Games are involved in this part of the legislation. Also, the bill does not apply to interscholastic competition.) The association in charge of each sport must have shown competence in administration. At least 20% of its voting members must be athletes, two of its officers must also be active athletes. And its policies must reflect the views of its athletes.

The charter expires every four years. At that time, any other group may apply for a charter if it feels the current holder is not doing a good job. (Hopefully, everyone interested in a given sport could unite into one democratically-operated organization and work together.)

As the sole US body in charge of a given sport, each association should have no difficulty gaining international recognition, and the Board can revoke the charter in the unlikely event that the group in charge is not recognized.

The Sports Board would appoint a temporary nine-member US Olympic Commission of diverse representation, including two 1972 Olympians, and giving consideration to the representation of women and minority groups. The Commission would review US participation in the Olympics—the administration of the Games in general, the role of the US Olympic Committee, method of selection of teams and officials, and care of athletes. In so doing, the Commission would give particular attention to the views of those who have competed in the Games. It would report its findings within six months to the President, Congress and the Board, and then go out of business.

The Sports Board would have two divisions, both charged with research and study tasks. One division will be the Division of Athletic Facilities and the other the Division of Athletic Safety and Health.

- Title II creates a fund, not run by the US government to promote athletics. Uses of the monies are couched in general terms in the bill, but the funds could be used to (1) increase participation of women, youngsters, older people and low-income groups in running; (2) provide financial assistance to non-profit sporting organizations such as running and promotional clubs; (3) advance coaching and physical education programs, and (4) expand the exchange of runners and coaches with foreign countries.

What an improvement this legisla-

tion would be over the present situation! Your help is urgently needed to bring it about. Write a brief letter right now to each of three people—your US Congressman and your two US Senators—and express your strong support for the Amateur Athletic Act of 1973. Mention your participation in running and the fact that this legislation will be a big step forward for sport and physical fitness.

Your letter *is* important. It's the only way your representatives in the Government will know that you care about this issue. If you don't let them know that you, their constituents, are concerned, there's no telling how they may vote. Take one minute and do it now. Address: The Honorable (name), US House of Representatives, (or US Senate), Washington, D.C.

From Gar Williams

Heart Rate Debate

In June, Dr. Joan Ulylyot reported on the heart responses of Ron Daws during a marathon race ("Monitoring a Marathoner"). Dr. Ulylyot said Daws' heart rate "zipped immediately to the range of 177-180, and stayed right there for almost 2½ hours." This, she indicated, is close to 95% of his maximum. And since heart rate corresponds with oxygen consumption, he could expect to be maintaining a high oxygen uptake reading of 70 milliliters per kilogram per minute.

Dr. Ulylyot also said Ron's heart rate stayed at 80-100 for 1½ hours after the race, which he ran in 2:26. "Since Ron's resting pulse is around 40," she said, "the elevation may reflect continued repayment of oxygen debt incurred during the race."

Alan Claremont, an exercise physiologist from Illinois, thinks the findings were misinterpreted.

It is encouraging to see someone attempt to overcome the technical difficulties of monitoring physiologic responses in a field situation, and acquire data from an actual competitive marathon rather than a simulated run under controlled laboratory conditions.

It is important, however, to critically comment on the author's interpretation of Ron Daws' heart rate response in relation to work intensity and oxygen consumption. The measured heart rate (95% of maximum) elicited during the race was astonishingly high for a superbly trained distance runner.

Maximal heart rate declines with age (Ron is in his mid-30s), and heart

rate during standard exercise and recovery time is lowered with training of the oxygen transporting system. Endurance athletes typically show the most remarkable circulatory capacity for oxygen transport, characterized by lower resting and exercise pulse rates at submaximal levels of work compared to untrained individuals.

In addition, although the linear increase in heart rate with oxygen uptake is a typical feature, there are many exceptions. I suspect some irregularity in the race measurements and/or maximum pulse rate, which may vary plus or minus 10 beats per minutes during repeated tests in a normal population.

The prediction of an energy demand of 70 milliliters per kilogram based on heart rate response is a gross overestimate. Documented prediction (see "Simplified Self-Testing Plan," Feb. 73 *RW*) of oxygen requirements over a wide range of running speeds would require Ron to have run aerobically at 4:31 mile pace—a feat no one has accomplished. In fact, he ran at a pace of 285 meters per second (5:36 mile), which requires an oxygen consumption of approximately 58 milliliters per kilogram.

This is much more in agreement with the findings of Dr. David Costill, who reported that nationally ranked marathoners usually perform at 80-85% of their maximal aerobic power. Ron's maximum consumption, assuming he ran at 80% of it, would be approximately 70 milliliters per kilogram, a much more realistic assessment.

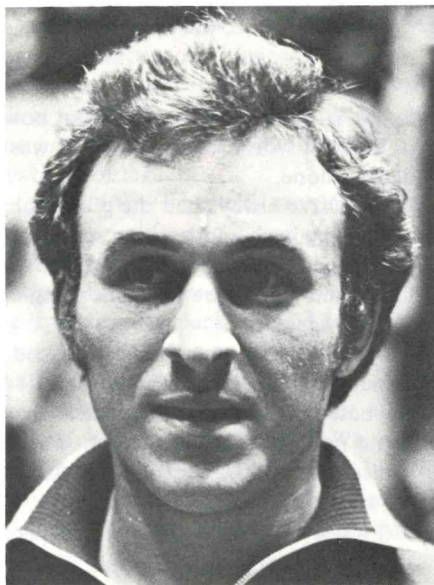
Research by Dr. Jack Daniels on Olympic-class 5000-meter runners has indicated that during a race the majority perform at approximately 92-95% of their maximum. Certainly the stimulus of Olympic qualification motivates them to perform as well as possible, yet they can only tolerate work intensities this high for a maximum of 14 minutes.

Finally, the persistent elevation of pulse above normal for 90 minutes recovery cannot be explained as repayment of oxygen debt. Oxygen debt accumulation in a marathon is minimal, and the rate of repayment of the deficit is accomplished within a few minutes of recovery.

A more probably explanation is the increase in body temperature that resulted from the race. An elevation of heart rate ranging from 12-20 beats per minute can be anticipated from each one-degree (Centigrade) rise in body temperature. Assuming Ron's temperature increased by 2.5 degrees (a conservative estimate), the added temperature effect which would manifest itself well into recovery could have elicited a heart

rate 30-50 beats above the typical resting level (40). This would have given a rate of 70-90 per minute, which agrees closely with measured values.

From Dr. Alan Claremont



Valeriy Borzov (by Paul Sutton)

Runner of Future

Bob French, a runner from Massachusetts, takes a tongue-in-cheek look at physiological testing and tampering.

The "runner of the future" is now in preparation. What had been a closely guarded secret began to leak out with the publication of a story on the "manufacturing" of Valeriy Borzov (see "Scientific Sprinting," Jan. 73). Further details are now being made known. The story is far from complete, but the main outline seems to be clear. One thing is certain: the loneliness of the long distance runner will soon be a thing of the past, for the runner of the future will of necessity be a corporate enterprise.

The story began last fall with the astonishing success of Russians Borzov and Lyudmila Bragina at the Munich Olympics. Since international competition is a matter of foreign policy, the White House last September sent directives to the CIA and the State Department ordering investigations to determine if the Russians knew something we didn't. The investigations revealed that Russian scientific training posed a clear threat to US national security, and retaliatory measures were ordered.

The full extent of these measures is not yet known. But it is certain that multi-million dollar contracts have gone to MIT, Cal Tech, NASA and the Medical

Center at Houston for the purpose of developing the "runner of the future." Preparations are now underway at all four research centers.

Although it is too early to tell what the final results will be, reliable sources report that the scientists at Houston are working with heart transplants in the hopes of developing a runner with two hearts instead of the usual one—"sort of a twin-carburetor model, you might say," remarked one doctor, chuckling. Volunteers for this project are coming from the US Army, which is awarding handsome bonuses for participation. The team at Houston hopes to have a prototype runner on the track by late this fall.

Cal Tech's research is centered on muscle grafting. The theory is simple: since a cheetah is faster than a man, a man will run faster if he has a cheetah's leg muscles. Early tests have had uncertain results. But if all goes well, the Cal Tech researchers hope to graft a horse's leg muscles onto those of the cheetah, and then graft both onto a man, so that their prototype runner will have endurance as well as speed.

The NASA project is perhaps the most daring, and certainly the most expensive. Basically, it is a form of altitude training. NASA is currently preparing to send runners to train secretly on the moon, where a single stride may cover 30 feet or more, and then return them to earth shortly before competition. The expectation is that the effect of extensive moon-training will still be felt. NASA officials are confident that for at least a short time after returning to earth, a moon-trained runner will be able to lope along in strides of 15-20 feet. "That should keep us *numero uno*, eh?" remarked a NASA scientist, who declined to be identified.

The MIT project is shrouded in secrecy. After many attempts, I managed to get through to a Dr. Fuss, reputed to be in charge of the runner research project. "Ich kann nichts sagen," remarked Dr. Fuss just before he hung up.

All researchers have been directed to have working models of their runners ready for testing well in advance of the 1976 Olympics in Montreal. This is not much time, but one senses among the researchers an air of confidence similar to that of the scientists who developed the atomic bomb in a crash program during World War II.

"We'll be ready," said a Cal Tech physicist. "And who knows," he added, "what this may lead to? Give us enough money, and by 1980 we'll have a supersonic runner for you."

From Roberts French

DAVE BEDFORD



Mark Shearman photo

Crystal Palace, Friday the 13th of July.

It was an unforgettable experience to be present that warm evening along with three of my friends, all of whom had been on lunchtime runs through the city of London with the man on the track. He was one of us, having dived in and out of traffic and passed many times over the great Tower of London Bridge.

We were caught up in the emotion, shouting him on and on as he forced himself through shattering 66-second laps again and again until the record was his: 10,000 meters in 27:31.0, breaking Lasse Viren's mark by over seven seconds.

Dave Bedford had been considered a failure by the uninitiated, notably the press, who had attacked him severely after he finished fifth in the 1971 European championships and sixth at the Olympics.

Yet the athletes of Britain have admired Bedford as "the runner's runner," with all the pathos and success that term suggests.

Bedford didn't hide his feelings toward either group. After finishing his record run, he smiled and waved at the crowd with his left hand and gave a "V" sign with his right. (The "V" in Britain doesn't mean victory. It's the equivalent of the American middle-finger salute.)

Bedford explained, "The left hand is for those who are for me, and the right is for those who are against me."

On this night, most of the people at Crystal Palace were with him. But it hasn't always been so, as this interview indicates. I talked with Bedford immediately before he set his world mark.

RW: After you failed to win medals at either the European championships or the Olympics in the 10,000, a great number of critics attacked you. How would you answer them?

Bedford: There were probably 25% of the people before the European and Munich events who were quite prepared to knock me down. I have always trained hard. I have always been a bit different from other people. This means you get a lot of friends who respect what you're doing. But you also get a lot of people who want to detract from what you have

done. It bothered me at first, but now it does not worry me at all. What was done is done.

I have always had the philosophy of looking back and learning something from what's going on, and looking forward to try and make sure the same thing doesn't happen again.

Obviously, everyone has to lose sometime, however good they are. If the best person always won, there would be no point in doing any sport. The whole excitement and interest in sport is because it's so unpredictable.

RW: Because of the high expectations that people hold for you, do you find it hard to continue racing?

Bedford: I run now basically because I have got myself into a situation where it is very, very hard to stop because of what people expect of me. That is one of the reasons why I carry on, but it obviously is not the only reason. There is this inner drive to achieve something which is possible, though very difficult.

Somebody said, "Why don't you run the marathon in the Olympics? You stand more chance of winning the gold medal there." But you don't start doing things because they're easier. The whole reason why you aim at things in life is because they are hard. Fair enough, if you have failed climbing Mt. Everest you go to climb the Eiger instead. But that does not mean you achieved anything fantastic, because you could not do the thing you should be trying to achieve.

I think it is far better to have a "bash," in my case at 10,000. I think in the right circumstances I could win it. I'd rather fail at it than have a go at the marathon, which is slightly easier.

A gold medal is everything it means to me personally, and for me it means winning the 10,000 meters. As far as I am concerned, it is very, very important. And it is probably the one motivating factor that keeps me going because it is still there. But at the same time I realize there are other things to achieve.

RW: It has been said that you, like Ron Clarke, lack the "big kick" needed to win in international competition. What is your reply to that?

Bedford: The sprint is a case of

mentally building yourself up during the race, so that when it matters you can do it. I have run 1500-meter races with people a bit faster than me, and I have gone 'round with them and then won doing a 55 or 54 last lap. So it is not that the speed is not there. It is that I have not been able to produce it when it mattered. I think I have some basic speed there—not as much as many people—but I think in the right circumstances I can use it.

RW: At the Olympics, as in many other races, you have attempted to burn off the kickers. Why do you think this tactic failed at Munich?

Bedford: The thing was, I ran too slow. I thought about the race all summer, and how fast I was going to go through (the first 5000). I did not go through fast enough. I was 15 seconds slower than I wanted, and it knocked my confidence. Had I gone through in the time I had planned (13:30), I would still have expected someone to be there with four laps to go. But I would have stood more chance...

RW: What is the future of a front-runner like yourself in major races? Most of the medals seem to be going to the kickers.

Bedford: I still think the front-runner has a chance of winning. The days of the front-runner are not over. The only thing is, if you are a guy who can sit in you can be having a bad one and still manage to hold on and then use your speed. If you're a front-runner and you're down 1%, you have no second string. The art is being 100% on the right day.

RW: But aren't the odds against this?

Bedford: Sure, the odds are against it. The odds are against anyone winning, anyway. The odds are against you from

the word go. If it was commonplace to win, it would not be worth it. It is not easy to win. That is why it's worth trying to do.

RW: You're known as an extremely tough trainer. Can you give a typical week's training before the Olympics?

Bedford: There is no point really, because it would vary so much. I had a lot of stomach trouble, so the three or four weeks before Munich went very, very hodge-podge. All I can say now is I have always worked hard and will continue to work hard.

RW: What are the main ingredients of your training?

Bedford: Just a long buildup—work, work, work. People know the training I do.

RW: Is it primarily quantity work?

Bedford: I have probably got the best *quality* sessions in the world. Some of the training sessions I did last summer were really superb. I am British record holder at 2000 meters. How dare they say I have got no speed? Seriously, I am not that slow. I have run 13:17 for 5000 meters, 5:03 for 2000. I can honestly break four minutes for a mile. If that is not speed, what is speed?

RW: How much mileage do you really put in? Is it the widely-quoted 200 a week?

Bedford: When we talk about mileage, we tend to count anything we do faster than walking. I have only run 200 miles a week five times in my life. On the average, it is down to 160-170, or something like that.

There is nothing scientific about this. It all comes down to the basic fact that if you want a nice simple expression on how to achieve in athletics, it is "work." If you don't work, you can forget all the nice little notions and nice little formulas about doing speed and now slow work. When it comes down to it, if you work in training, you'll succeed. Anyone will succeed with work. Even without ability they will succeed in their own personal sphere of work.

I think my training is the one thing that has been right in my whole athletic career. I think Bob Parker has coached me really well, and I think the one thing that has gone slightly wrong is the mental side of it. Bob has not actually been in the situation himself and has often been unable to advise me how things are going to feel.

RW: After some of your biggest races have gone badly, have you wondered if all this work is worth it?

Bedford: When everything is going well for you, it is easy to say it's worth it. When you're running well, training well and winning, you're convinced it's worth it because you get a great deal of satisfaction out of it.

But at times it gets very bad. You have a bit of injury, you have personal trouble, this type of thing. As soon as this occurs, your running stops going well. It's at times like this when people knock you and their comments get through the thick outer layer.

I had this hamstring trouble for 10 weeks this spring, and it was getting bad. Towards the last couple of weeks, I was getting a bit frightened about it and thinking it was best to pack it up. Fortunately, it turned for the better at the right time, and I got my enthusiasm back.

In that time I had done a lot of thinking, which is often good to do. When everything is going well, you don't look at yourself, your training, or your situation. It's only when you are having a bad patch that you are able to sit down and sort yourself out.

RW: Running as much and as well as you do, how do you manage to keep a sense of perspective and a sense of humor?

Bedford: If you're running 200 miles a week, all you basically want to do is get it out of the way so you can lead some kind of other life as well. Running to me is very, very important, but only as long as I can do other things as well.

You have got to take running seriously. You have to give it all you've got. But at the same time you have to be able to almost detach yourself from it at times. I detach myself with friends, watching football, playing golf, drinking, eating. I think it is important to be able to take running seriously, and yet be able to keep other things away from it.

RW: Has your outlook on running changed to any great extent since your disappointment of a year ago?

Bedford: I am just building up slowly now. I like to get out in the early morning when the sun's out. I get out in the park and take my vest off, and I get the feeling of just moving smoothly in the sunlight. I can still get a sensation out of it. It is so different from trudging out the miles in the winter, or the pressure training before big Games.

When you have been injured and you start back, you have a challenge again—not just to win a gold medal, but even to get back a square one again. I think it's like setting out on a long journey again. You start training and you increase slowly. It builds up and up. It's not just the achieving but the getting there

which causes so much satisfaction.

RW: You're choosing to live on hopes instead of memories, is that what you're saying?

Bedford: Bob Parker keeps a scrap book. I don't like looking through it because there are a lot of unhappy memories in it. And I know all the happy ones by heart, anyway. All the pages of Munich and Helsinki are pinned together. And if I ever get overconfident, I read these pages. Otherwise, I won't open them. I know what's in there. I know what people said when things were going badly, and I know after a thing like Munich just who my friends are.

I have memories of running the (British) 10,000 record the first time at Crystal Palace, and memories of all the press men being at the Oxford and Cambridge match. They drove over in taxis and missed me. Ever since, they have never stopped chasing me.

I remember, too, that I am very much a club runner, and as soon as I do step down from competition I will run for the club.

Last year in many ways was a failure. But I went to the North London AC's athletic dinner and dance a little while ago, and I was presented with a cup which said: "Dave Bedford, Services to Athletics, 1972." And 1972 was underlined. It was absolutely fantastic—probably one of the most touching moments of my life because it meant a lot of fellow athletes understood.

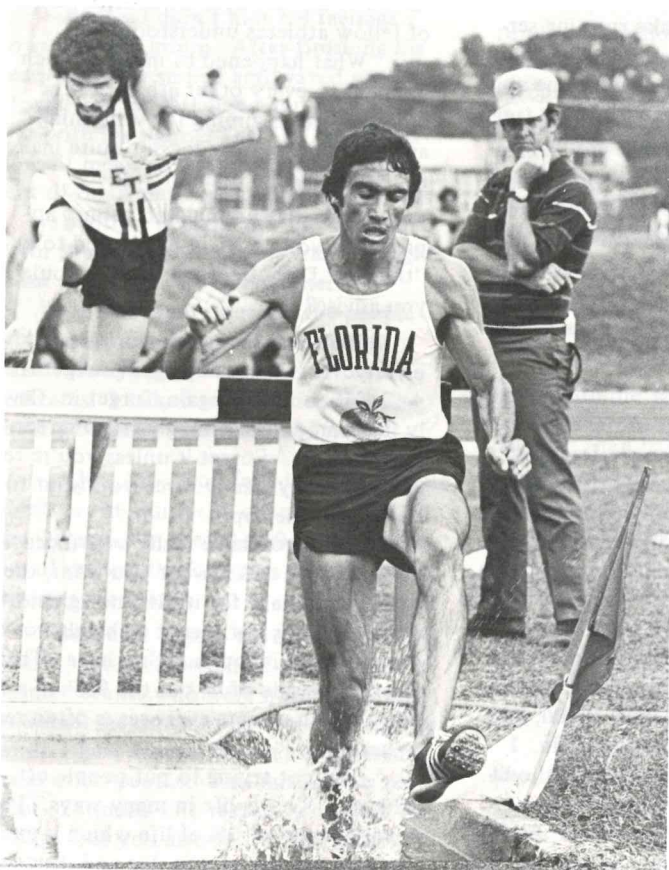
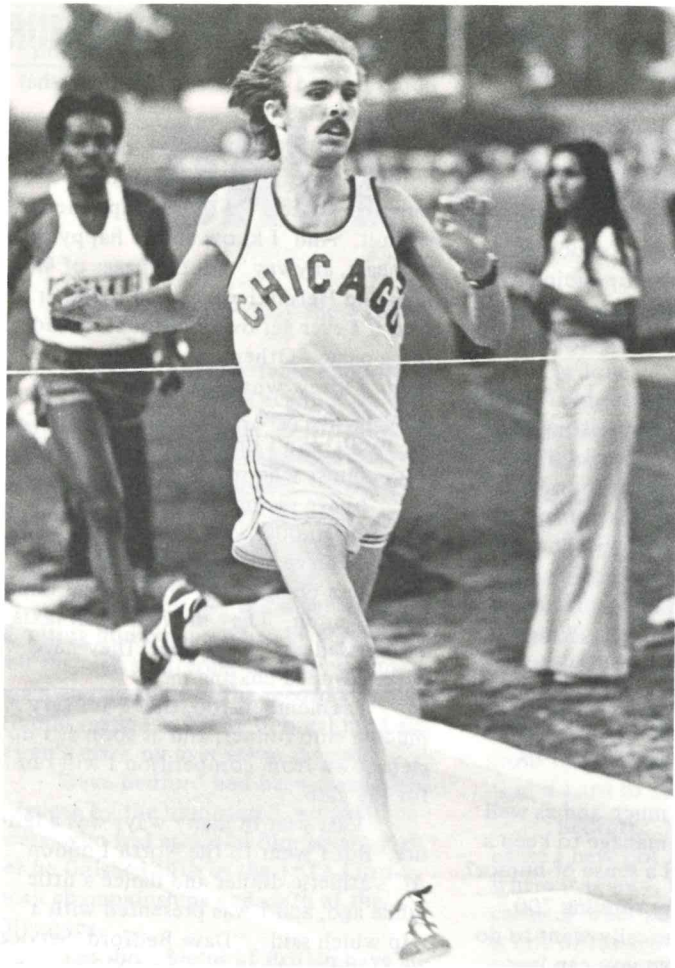
What happened to me in Munich happens to every other athlete in the country who is aiming for something and for some reason doesn't quite make it. Normally, no one notices.

RW: If a young club runner approached you and said he wanted to be "the next Dave Bedford," what would you advise?

Bedford: Forget it. Forget it completely! If it comes up again, forget it. And if it comes up again, forget it. Only if it comes up again, give it some serious thought. Forget it unless you're really sure—really, really sure—you want to make it to the top.

Once you have really convinced yourself that this is what you want, then work really hard for it. It's not glamorous at all. It's not meant to be glamorous work. It is tough. It's a bore. There is a glamor side of it, but the 99% of athletics which no one ever sees is often really hard.

I'm not trying to put people off athletics. This is life in many ways. There is only perhaps 10% of life which is exciting, and the rest of it is slog and drudge.



TRAINING TO COMPETE

*A guide to racing: preparing for
races, peaking in them,
recovering from them.*

by Joe Henderson

UPPER LEFT: Rick Wohlhuter. (Stan
Pantovic). RIGHT: Willie Eashman of
Hayward State leads milers. (Pantovic)
LOWER LEFT: Barry Brown. (Kasper)

HANDLING THE RACING URGE

A runner who wants to race *has* to race. It's both a psychological urge and a physical necessity.

George Young, one of the world's most competitive 36-year-olds, has said, "There's no better way to get in speedwork than running a race. You talk of speedwork in terms of quarters and all those other things. But you don't get the speedwork (there) that you gain in a race. You never really reach the pain barrier, or whatever you call it, in any other way than running the race and hurting that way."

Young and I are poles apart in our approaches to running, yet I have said much the same thing. In the book *Long Slow Distance* is the statement, "A quick race or two sharpens the speed... And this is a pleasant means for regaining it. Just thinking about a race stirs the imagination, gets the blood and adrenalin pumping a bit faster. There's a crowd, the company of other runners, prizes at stake—even if only times on a watch. Fatigue is submerged in the excitement of the moment."

Racing is going beyond oneself and one's imagined limits, and the race is the only place this can be conveniently done. But coming to a racing peak also puts one on the brink of exhaustion, illness and injury.

George Sheehan said in the *Runner's Training Guide*, "The story is a familiar one whenever coaches and runners talk about the mysteries of running. A personal best performance, another push to the limits, and then disaster. Being at absolute peak is just one step from losing it all... The urge toward excellence can breed biological arrogance, a feeling that you are superior to the laws of nature."

Tom Osler agrees. The author of *Conditioning of Distance Runners* wrote several years ago, "I have concluded that the marathon race is a definite form of self-abuse for one who trains as I do (60-80 miles a week). That is, to stand on the road and tell yourself that you will run as fast as possible for 26 miles is a most unnatural endeavor, and one which the body was not designed to withstand."

Yet Osler added, "I do it, and will continue to do it because I like to. However, I am aware that as the fatigue progresses I am likely to become injured, and to lower my overall resistance in a most foolish way."

Recently, Osler said in a letter to *RW* that he had seriously damaged a heel

after eight injury-free years. He hadn't been able to race for a year. The irony here is that he liked racing so well he'd put himself in a position where he couldn't race at all.

This happens often. In the reader survey a few months back, *RW* found that three-fourths of the responding runners are racers at one level or another. Two-thirds of the 1700 had suffered serious injury at some point in their careers.

We compared the healthy with the injured runners. There was little difference in the length of time they'd been running. The healthy group had been in the sport slightly more time. They ran slightly less mileage, on the average, than the injured ones, did less running on the hard roads and had more frequent rest days. But the differences weren't too significant.

Racing separated them. Of the injured group, 97% were racers. The percentage among the healthy group was 37%. The majority of the injured racers competed more than once a month, while the bulk of the healthy ones raced less than monthly. The healthy racers also were slower. Only one in six of them had broken five minutes in the mile, three hours in the marathon or the equivalent. One in two of the injured ones had, indicating they took their racing more seriously.

Fast racing has some risk. For many, it's obviously a risk worth taking. I'm not about to deny them that. As Dr. Sol Roy Rosenthal said in the July issue, "Man is more efficient, more creative and more productive after risk exercise... He is still happiest when physically threatened."

But Dr. Rosenthal added, "Let's be sure we understand each other. I'm not advocating recklessness." He said the risks should be "well calculated."

The high injury statistics hint that racing as presently carried out is more foolhardy than calculated. Racers either lack the guidelines that can make their racing relatively safe, or they ignore them.

Paul Slovic, author of a training study quoted later in this section, says, "The amazing thing about this tremendous expenditure of time and effort (in preparing for races and running them) is that most of it is fashioned without benefit of sound factual evidence. Intuition and hearsay, mixed with imitation, eventually modified by personal and sometimes painful experience, serve to shape the runner's program."

The articles that follow are attempts, sometimes groping ones, at refining the techniques of training for racing. They center on three broad areas:

- **Training background**—How much mileage does a runner need, and for how long a period, simply to finish a race?

- **Race-spacing**—How much time does a runner need between races to recover and rebuild adequately?

- **Seasonal peaking**—How long does it take to reach top racing form, and how long can it be maintained once gained?

The first two apply primarily to long distance runners, the last to sprinters and middle distance runners. Together they give a clearer picture of how to maximize results and minimize risks.

THE THEORY OF COLLAPSE

The first step is acquiring training background. Training base sets a height limit on racing's peak.

How much background mileage? Let's start with Ken Young's theory and see if it has value. Young, best known for his ultra-marathon racing, briefly spelled out his formula in the June issue ("Running Shorts").

He doesn't mince words. He calls this his "collapse point" theory. Young says that the point at which one breaks down in a long distance race will be about one-twentieth of his total mileage for the past two months.

In other words, if you logged 400 miles during that period and you're trying to race a marathon, you may be in trouble after 20 miles. Twenty miles is one-twentieth of 400. Young uses two months' training as a basis because that's how long it takes to accumulate the desired training effect.

There's a simpler way of expressing Young's formula and yet not tamper with its basic premise. Reduce the mileage to a daily average. Tripling that average gives the same collapse point as Young's original method.

The practical significance is this: If you want to finish a race before the physical resources run dry, plan on averaging at least one-third of the race distance per day for 6-8 weeks before the race. Beyond the collapse point lurks not only slowdowns and dropouts, but potential injuries from severely depleted reserves.

A common daily average for marathoners is 50 miles a week. That's seven each day. Triple that, and the collapse point is about 21 miles. Young doesn't think it is coincidence that "so many low-mileage runners hit the wall around 20 miles of a marathon."

Ken says, "I would emphasize that these are basically absolute minimums. You can't expect to go farther than the collapse distance even under the *best* conditions. And under average (typical) conditions, you may collapse before this point. Also, if the collapse point is close to the racing distance, the runner is only going to be able to cover the distance without collapsing. This does not mean he is going to be able to race well at six miles, for example, by maintaining two miles a day. He will just be able to cover six miles."

Young admits that the theory springs from his own racing experience. But since his articles came out in *RW* and the *Runner's Training Guide*, he has picked up authoritative statistical backing.

Paul Slovic found in a detailed statistical study of several hundred marathoners at Seaside that those who slowed down least in the late stages of the race ran best. And those who had more substantial training background held up best toward the end.

The entire field averaged 42 miles a week, or six a day, according to Slovic. This was in the eight weeks before the late February race.

But the men finishing under three hours were doing about nine miles a day, compared to five miles for the slower runners. The sub-three group had a projected collapse point of 27 miles; the over-threes could expect trouble after 15 miles.

Slovic matched pace for the first 10 miles against the last six-plus. All run-

ners slowed somewhat. But in the sub-three-hour group the slowdown averaged 14% while in the lighter trainers it was almost three times as great—40%!

Slovic separated the runners breaking 2:45. They trained 10 miles a day, putting their collapse point farther beyond marathon distance. The average drop in pace for these runners was only 8½%. (A complete report of Slovic's study will appear in a later issue.)

Ken Young says the collapse point can be pushed back, and the fastest, least painful way to do it is begin at the bottom. He tried going from the top, frequently going as far as he was able then trying to labor on.

"It took me two years to increase my collapse point from 20 to 30 miles using this method," he says. "But since realizing the correlation between total mileage and collapse, I've added roughly 20 miles to my collapse point in 1½ years."

He did so by upping his average.

TRAINING LIMITS

These training suggestions are based on Ken Young's "collapse point" theory. Young says a runner typically reaches his physical limit at triple his normal daily distance, so he must average at least one-third of the race distance per day for the final 6-8 weeks before a race.

Young's recommended minimums for long distance racers:

RACE DISTANCE	DAILY AVERAGE
10km/6miles	2+ miles
15km/10 miles	3½ miles
20km/half-mar.	4½ miles
25km/15 miles	5+ miles
30km/20 miles	7 miles
Marathon	9 miles
50km/31+ miles	10½ miles
50 miles	17 miles

RACE-SPACING AND RECOVERY

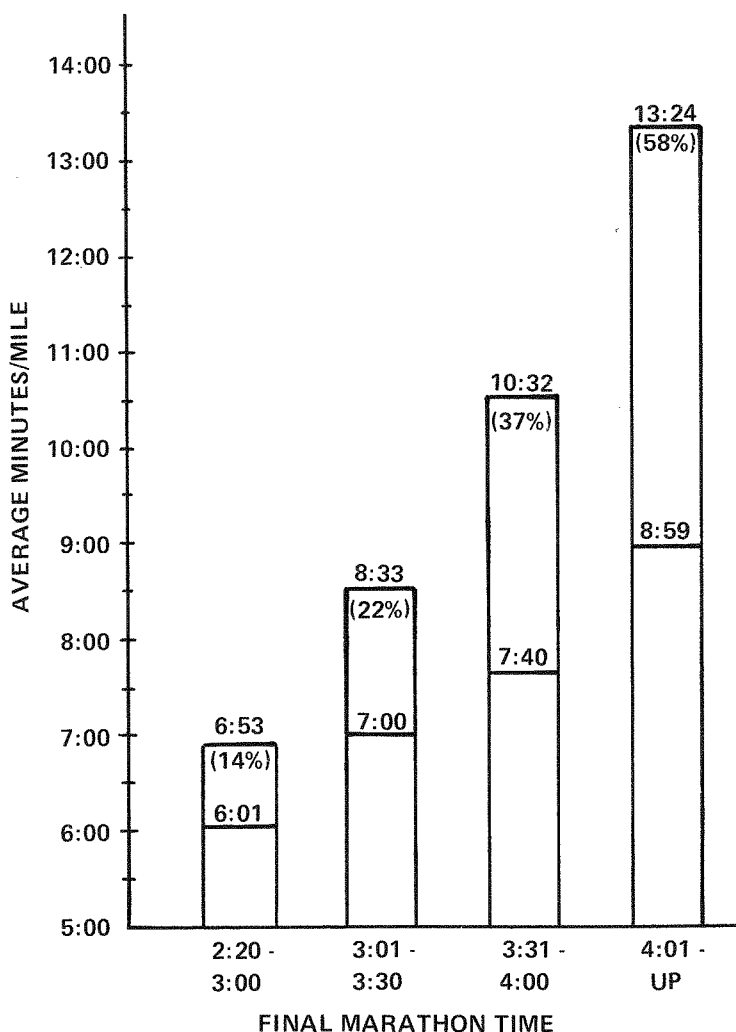
As so often happens, I solved this riddle of nature when it was almost too late to put the new knowledge to use.

Now that I've broken this code, I wonder why it took so long and so much pain to see something so simple. In retrospect, it doesn't look that mysterious. My breakdown was predictable, and avoidable, if I'd known the code in advance.

There are few accidents in running.

MILEAGE, TIME AND "COLLAPSE"

This graph from Paul Slovic's Seaside marathon figures compares each runner's pace for the first 10 miles (lower line on each bar) with running rate over the final 6.22 miles (upper line). Percentages indicate rate of slowdown. Runners in the 2:20-3:00 group averaged about nine miles a day for eight weeks before the race; 3:01-3:30 runners did six miles; 3:31-4:00, five miles, and 4:01-up, four miles.



Luck plays little part in it. Runners mainly get hurt on schedules that are too heavy, too fast and too much. It happens when racing ambitions outrun nature's laws and limitations.

In the time since I switched to the style of running called LSD, I spent the first three living within those laws without realizing what they were. Then two more years violating them with the same reckless naivete. And the last two years figuring out why I was spending more time at the podiatrist's office than on the roads.

The code-breaking started from this premise: Racers build to destroy.

Runners training for races are like children building sand castles. We work long and carefully on the building. Then, swoosh. A hard race rolls in like a wave to level the project. Then we carry away the remains to start building again.

Racing is as destructive as it is rewarding. Sometimes the destruction is slow and subtle. Sometimes it is quick and violent. But there's always some tearing down of what has been built so carefully.

Racing works against fitness. It can be disheartening. It is most unnatural. It is unnatural because man wasn't made to run long distances at maximum speed. He evolved a body that thrives on moderate sustained efforts, short bursts of speed and periodic rest stops. Outside of these limits, he suffers. And almost all racing is outside these limits.

This warning doesn't stop many runners from racing. It never discouraged me. Only the more serious natural consequences of ignoring the first warning stopped me. And yet, even knowing what I do now, I'm anxious to get back to regular racing after almost two years away. Next time I'll be armed with a code that should make it safer—not absolutely safe, but more sensible than before.

The trick is (1) building faster than destroying; (2) confining most of the hurting to race days and not race on days when hurting before the start; (3) spacing the races so damage is more than repaired in between them.

The answer to race spacing may be a formula: Race no more than 10% of the total mileage.

Artificial, yes. Arbitrary, yes. Scientifically tested, no. This prescription is based only on advice from my friends and my own experience. It has worked for me—both ways. I promise nothing more from it than that it's a starting point for your own trials and errors.

In seven years of slow running (and eight more years of fast training before

that), I've gone through lots of trials and almost as many errors, but have had a few good lessons left over. I'm talking mainly of the LSD period here because the daily running has been extremely consistent through most of those years: seven hours of running a week at one of two speed—easy or all-out.

The "all-out" part was the races. They have varied radically in type (cross-country, indoor and outdoor track, road), distance (mile to 70 miles), frequency (10 to 50 a year) and quality (personal records to DNFs).

So it would have been quite easy to measure the racing variables and draw conclusions from them. It would have been easy if I'd known they meant anything. But I was only vaguely aware of that. I'd written in the LSD book, published four years ago, that regular racing was somewhat important in making slow running effective as race preparation. But I had little idea of precise relationships.

Even when I read that German

coach Ernst van Aaken and New Zealander Arthur Lydiard were proposing 2-10% racing quotas, their advice had gone over my head. I was racing well then. I didn't bother to check my own figures.

I didn't bother to check until I read of a runner named Lee Dorsey in the booklet *Racing Techniques*. The only reason I checked then was because Lee's case sounded so much like my own. Since the similarities of us two are so striking, I suspect there are hundreds of others in the same shape.

"What I'm talking about," Lee says, "is racing too much and too hard, without taking enough recovery/rebuilding running in between."

He points to his diary and says, Look at this. The last four years break to distinct two-year periods. The years 1968-1969 were best for racing. I set personal records nearly every time I ran, over distances as short as a mile and as long as 20 miles. But then I went on an

RACE-SPACING RECOMMENDATIONS

The easiest way to keep racing under control is to run a certain quota of recovery/rebuilding mileage before racing again. The charts here list quotas on the basis of 10% racing, 5% and 2%. The quotas simply are the racing distances times 10, 20 and 50. The second chart does the same thing, but in time terms for those who keep their records that way.

Racing Distance	Recovery/Rebuilding Mileage		
	10%	5%	2%
1500m/mile	10 miles	20 miles	50 miles
3000m/2 miles	20 miles	40 miles	100 miles
5000m/3 miles	30 miles	60 miles	150 miles
10,000m/6 miles	60 miles	120 miles	300 miles
15 km./10 miles	100 miles	200 miles	500 miles
20 km./Half-mar.	130 miles	260 miles	650 miles
25 km./15 miles	150 miles	300 miles	750 miles
30 km./20 miles	200 miles	400 miles	1000 miles
Marathon	260 miles	520 miles	1300 miles
50 km./31+ miles	310 miles	620 miles	1550 miles
50 miles	500 miles	1000 miles	2500 miles

Racing Time	Recovery/Rebuilding Time		
	10%	5%	2%
5 minutes	1 hour	2 hours	4½ hours
10 minutes	2 hours	3½ hours	8½ hours
15 minutes	2½ hours	5 hours	12½ hours
30 minutes	5 hours	10 hours	25 hours
One hour	10 hours	20 hours	50 hours
1½ hours	15 hours	30 hours	75 hours
2 hours	20 hours	40 hours	100 hours
2½ hours	25 hours	50 hours	125 hours
3 hours	30 hours	60 hours	150 hours
4 hours	40 hours	80 hours	200 hours
6 hours	60 hours	120 hours	300 hours

incredible two-year racing binge, marked by frequent illness and injury, and generally disappointing racing. Finally, my legs rebelled and brought me to a limping halt."

Lee had gone back to review his racing percentages. He did 8% in the good-racing years, 20% in the years of illness-injury.

"The unavoidable conclusion," he says, "is that I seem to race best when I race least—or at least less than 10% of my total running miles. When I get above 10%, I seem to undermine not only my racing ability, but good health itself."

I had undermined mine, too, which was sufficient motivation to find out why. I reviewed figures for seven years. I compared two extreme periods. One was trouble-free and included my best times at nearly every distance raced. It lasted eight months, one of which went over 10% racing. The average was 5%.

But because I wasn't aware of the code, I couldn't stick to it. Racing escalated, both in number and distance. For the next two years, I topped 10% in all but five months. On one last streak, I averaged 18% for eight months, got sick, then topped 20% for two more months.

That racing orgy ended two years ago, and I haven't fully recovered yet. It was one problem after another, each one seemingly worse than the one before. Each one of them came on the heels of a high-racing period. And even when I wasn't hurt, I wasn't racing well, which hurt almost as much as the injuries.

Only now have the precise relationships between racing and easier running, destroying and rebuilding, come clear to me. Again, a disclaimer. This is how it is *with me*. Ten percent appears to be my racing limit, but I'm not saying it will be yours. But take this prescription at your own risk. Be willing to modify it.

The best way to find your own limits is to keep your own records. That way you can look back and see what you were doing when you were healthy and hurt, sharp and dull, fresh and tired, and

After a long road race, this runner is well aware that "racing is as destructive as it is rewarding. Sometimes the destruction is slow and subtle. Sometimes it is quick and violent. But there's always some tearing down of what has been built so carefully."

(Steve Sutton photo)

you can find correlations. I'm sure there will be some.

Your border line might not be 10%. But somewhere in there you're going to find three easily-spotted points.

- **Minimum sharpness.** If you're racing, you need a specific kind of preparation that only racing can give. A certain small percentage is essential. Otherwise, you'll feel sluggish or awkward. I've never been low enough to find what mine is, though I suggest it lies around 2%.

- **Best racing.** This is the ideal balance. You're sharp, but you're not drain-

ing yourself too much. This is where the best races lie. For me, it is 5%.

- **The limit.** The most you can race without inflicting long-term damage. For me, 10%.

I'm talking here mostly to LSD runners who race long distances, because I feel I owe an explanation to the two or three of you who bought the book and believe what it says. But I think, too, that some kind of racing limit has universal application, regardless of training style.

Ten percent may be an outside fig-



ure for everyone if it is for an LSDer, whose everyday work is strictly low-stress. Five percent may be a more likely limit for faster trainers, whose training is more like racing. And 2% might be enough for those who hit the speedwork regularly.

A California high school coach has used the latter guidelines the last two years. Tom Gleason of Lancaster won't let his cross-country runners race again until they've logged 100 training miles, which include one speed run at the end of each day's distance. The racing percentage under this system works out to less than 5%.

Gleason says, "We have had only one injury in the last two years. That was when a kid tripped over a fence he was trying to jump."

We're talking about recovery and rebuilding here, and Gleason's way is the easiest means of controlling it. You don't need foxy formulas or high math to insure that the interval between races is adequate.

Say you've found from experience that 5% is your best level. Okay, simply multiply your racing distance by 20. Don't run another race until you've gone that far. If it was a five-mile race, take 100 miles to rebuild. Or you can do it by time, as I now do. If the race lasts 30 minutes, run 600 minutes or 10 hours before the next one. It all works out about the same. (See accompanying chart.)

Two self-adjustments are built into the formula. Theoretically, the more one is accustomed to running, the quicker he recovers. The percentage allows a high-mileage runner to compete more often than a lighter trainer. And, in theory, the mile doesn't demand nearly as much recovery time as the marathon. So miles can be run more often.

The code, once broken, turned out to be about the same as most of the others that have puzzled me. It was just a matter of returning to a more natural balance between fast and slow, hard and easy, more and less, tense and relaxed.

SHORT STOPS AT THE PEAK

Racing energies rarely flow evenly. They warm and cool as the seasons do—often in tune with those seasons. Traditionally, in the United States at least, running has been a moderate-weather sport: track in the spring, cross-country in the fall.

RACING TO A PEAK

The figures come from the 1972 world rankings for men and women, taking the top 10 from each event. Only major outdoor races at the main competitive distance are included. Additional races might, of course, influence these averages somewhat. But the chart still gives an accurate picture of that phase of racing which world-ranked athletes emphasized most.

Event	Total Races	Best Time	Total Months	Months to Best
Sprints/Hurdles (Men, 100-400m)	7.1 races	5th race	3.8 months	1.9 months
Sprints/Hurdles (Women, 100-400m)	5.4 races	3rd race	2.6 months	0.9 months
Middle Distances (Men, 800-10,000m)	5.1 races	4th race	3.3 months	2.0 months
Middle Distances (Women, 800-1500m)	5.1 races	5th race	2.5 months	2.2 months
Long Distances (Marathon & walks)	2.9 races	2nd race	3.6 months	2.1 months
Overall	5.1 races	3rd race	3.2 months	1.8 months



The final result. (G. Beinhorn)

As indoor track, summer international competition and road running have exploded, though, racing has oozed out to all corners of the year. Racing is never out of season.

With proper race-spacing (see previous article), this need not give long distance racers problems. If races are spaced adequately, seasons take care of themselves. You race, then take a recovery-rebuilding break that in many cases lasts months.

Middle-distance runners and sprinters/hurdles, however, can race as often as every few days. They can continue racing this way year-round. But should they? Available evidence indicates they should not. Instead, they should race for a few months, then back off to rebuild.

The year needs a focus, a peak period, and it also needs a building phase. This is a central theme of Arthur Lydiard, the well-traveled and successful coach from New Zealand.

"You can't race well the year-round," Lydiard says, "because your condition will only take you so far. When you're racing hard, you can't train hard. If you compromise, you can hold your form for three or four months. But (then) you're going to have to go back and start to build up again."

Lydiard's latest success has come with the Finns. Though not coached directly by Lydiard, Lasse Viren echoes Lydiard's peaking philosophy. But Viren sets tighter time limits.

Viren said after winning the 10,000 and 5000 at last year's Olympics, "Top shape can be planned and timed fairly ac-

curately. And, at least in my case, top shape will stay for a period of about three weeks... It is not possible to conserve good form for a long time in distance running. My first important race in 1972 was the 10,000 meters in Munich."

Statistics from world-class athletes support the peaking plan, not only in the middle distances that Viren runs, but in the sprints and hurdles too.

We analyzed the seasonal records of world-ranked men and women from 1972. (All the major races for the 10 leaders in each event are listed in the January 1973 issues of *Track & Field News* and *Women's Track & Field World*. Only outdoor races at the distance in question are included.)

We checked four factors: (1) total number of races during the year; (2) race in which the best time was run; (3) months between the first and last race; (4) months from the first race to the fastest.

These figures indicated how long and how many races it took to reach peak form, and how this compared to the total length of the season. Results:

1. The season had progressively fewer races as the distance grew: about 6½ important ones for sprinters/hurdlers, five for middle-distance runners (800-

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10,000 meters) and three for long distance athletes (marathoners and race walkers).

2. Regardless of event, racers reached peak form after about three-fifths of their season—in the third of five races, for instance.

3. The length of season ranged from about 2½ to four months.

4. In all groups except women sprinters, peak racing came either late in the second month of racing or early in the third.

Two conclusions come from these figures (see chart):

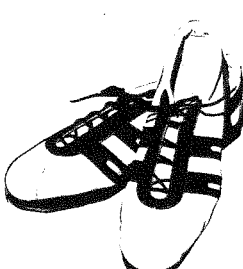
• *There's no substitute for racing as a sharpener for racing.* George Young mentioned this earlier, and the facts here say the same. Most runners need from two to five races at their main racing distance before getting their best times. This specific conditioning apparently is best achieved within a six- to eight-week period.

• *This peak, once achieved, doesn't last very long.* And most racers continue beyond it, even at the world-class level. They typically race twice in the month and a half after peaking.

Slipping performance, Tom Osler says, is the first sign of energy depletion. "One can rarely maintain a high performance level for more than three months," according to Osler. "(Heavy racing) must, therefore, be terminated after about three months or when symptoms of energy depletion are first observed."

He calls for a return to the seasonal racing tradition, which more or less corresponds with nature's seasonal cycle. Osler thinks runners tend to work in six-month cycles—three months high and three low. Each year has two high seasons and two low, two for sowing (background training) and two for reaping (racing).



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A RESULT OF EARLY MILEAGE

In the waning hours of 1963, the running world suddenly found a phenomenon in its midst. Standing less than 66 inches and hailing from the unlikely city of Spokane, Wash., this mini-dynamo fired the opening shot of the youth running revolution. The clues are too obvious for the reader not to guess he was Gerry Lindgren. Lindgren's feats as a high schooler are as yet unmatched, but his emulators have been many—and many have surpassed their master in training volume.

The trend today is toward greater and greater mileages. Times have continued to plummet as young runners explore their capabilities. The question that intrigues me is this: What is the long range effect on these athletes' bodies, not to mention their future in running.

I can clarify that question somewhat by relating my own experiences. In the summer of 1965, I had claimed times of 4:13 (mile), 9:11 (two-miles) and 14:08 (three miles). I embarked upon a program of volume mileage. Within a year, the results were startling: 4:04.7, 8:48.4, 13:35.6, plus 14:00.2 for 5000 meters and 29:11.6 for six miles. From two miles to 10,000 meters, I was the leading junior runner in the world for 1966.

Then, as suddenly as I appeared, my name submerged and did not surface again until 1969. Several things occurred during that time that pushed me into obscurity. Pre-eminent among them was a massive series of injuries and illnesses. Arch injuries, back injuries and tonsillitis, to mention a few. As I would begin to reach a decent level of fitness, an injury would set me back.

The mileages I ran in 1965-66 may give a clue. My lowest week during that period was 76 miles. During that week, I set the national high school record of 8:48.8 for two miles. My highest week of the year was 131 miles. I seldom dropped below 110.

The injuries I suffered in 1967-68 were closely related to high volume intense mileages. Many of the interval workouts I used contained as many as 60 repetitions of varying distances. Road runs were as long as 28 miles in one session.

Perhaps evidence is lacking at this moment since the trend toward such high mileages is so new. But I believe that volume running can be harmful on young,

immature bodies. Each case may be unique in that body types differ drastically. I am 5'8" and weigh 124 pounds. My feet are small and I injure tendons and ligaments easily. However, even if each person is different and does not acquire injuries easily, it is difficult to keep motivated until one is at his "peak" age.

Lindgren ran incredible workouts in high school, training from 120-140 miles per week. Except for a stress fracture during this period, the injuries he sustained were not of great consequence. His college career was quite different. Illness, bad knees, bad ankles and tendinitis plagued him. Lindgren scaled down his training to 50-60 miles per week. It was not until his post-college days that he increased his mileage. In the fall of 1971, rumors persisted that he was running 50 miles *per day*. The benefits of such training were not seen the following year, and haven't been evident since he turned professional.

Canadian Bruce Kidd preceded Lindgren and was an ambitious trainer between the ages of 16 and 19. After that, he faced numerous foot injuries and was forced to undergo surgery to correct his problems. His career was virtually over by the time he was 21.

As is well known, milers Martin Liguori and Jim Ryun were talented enough to run sub-four-minute miles while in high school. It would be redundant to state that Ryan succumbed to pressures involving his running while in college. It is sad but true that injuries and psychological problems seriously hampered him while he was only 22. Liguori also has been sidelined by serious foot problems.

The only other sub-four-minute high schooler, Tim Danielson, has never come close to that time since. Perhaps this is a point for lack of motivation.

It may be coincidental, but many European runners do not run volume mileages until they are 20 or 21. Their

bodies have matured, they are strong, and some compete into their 30s. At present, I am 25. I run national class—if not world class—times and I enjoy my running. If injuries do not put a damper on my enthusiasm, I hope to compete into my 30s also.

There have been times, especially during the past six months, which prompted me to question whether I would be able to continue. Throughout the fall and winter, I averaged 70-80 miles per week. Since the weather in the northwest begins to improve in February, I traditionally increase my mileage at that time. After two weeks of slightly over 100 miles, a series of injuries came rapidly and without warning. The first of these was a severe soreness in my left shin and tendinitis of my left achilles. Two days later, while at work, I noticed stiffness in my right knee. I trained for about 45 minutes on a golf course that afternoon, but was forced to terminate the session due to extreme soreness in the knee.

A month later, after races of 8:43 (two miles) and 13:36 (three miles). I suffered further achilles tendinitis. This has continued to plague me, even though I was able to record times of 4:04 and 13:26 early in June. My mileage during this period never exceeded 65 miles, and at one point was as low as 27 miles. At present both tendons are inflamed following a 13:29 three-mile.

It is amazing and even wonderful what the high school and pre-high schoolers are doing in terms of times. Recently, a 12-year-old in Spokane ran a 5:06 mile, and my own brother Tim recorded a 4:45 mile while only 13. The 12-year-old claims he has gone over 100 miles in one week of training. I wonder if he will still be running when he is 20 or 25?

Perhaps the running world will produce gold medalists at 13 and has-beens at 19, much like the swimming set. This thought makes me shudder. I would hope that youngsters would enjoy running for the benefits it brings, and not retire because of lack of interest or injury.

We should seriously examine the loads that our bodies can sustain. Youthful enthusiasm is often greater than the body's ability to accept training. In the future, research may in fact support this proposition.

The writer, Rick Riley, was an international competitor just after leaving high school. He held the national two-mile record as a prep and broke 4:00 for the mile at Washington State.

PLOTTING OUT A RECORD RACE

by Hugh Sweeney

It isn't easy to arrange for an American long distance track record. It's a job which needs plenty of preparation, as the New York Road Runners Club's officials learned in July.

A record attempt requires a sanctioned race, scheduled in advance; a track, surveyed, certified and fast; timers, checkers, lap counters, water boys, all of whom know their duties; record application blanks, and an organizer with the patience of Job to assure that all of the above are available at the same time.

Before the record race can be run, literally dozens of phone calls, questions, explanations, interpretations and still more phone calls must be dispensed with. The organizers can't have any foul-ups.

Oh yes, the record run requires one more ingredient: a runner capable of setting up the new standard. While not minimizing the efforts of Tom Fleming, his essential presence seemed almost secondary to all the preparation made on short notice by the RRC.

Four days before his race, there was no such thing as a record run in the works. Tom had not thought of going for any marks, and no race was planned for that purpose.

Tom called me on Wednesday to go for a run. I hadn't seen him for some time, so we talked. He'd just returned from winning an international 20-mile race in Puerto Rico, having averaged 4:59 a mile in that one.

Two weeks before the Puerto Rican race, Tom had put in 170 miles in seven days. The day before he'd called me, he had done a most unusual Fleming workout—12 x 440 in 60.5 seconds with Marty Liquori, who lives nearby. Measured by distance, speed and racing form, Tom was in great shape.

The conversation turned to American track records. We examined Bill Clark's record-setting pace when he had been timed (or measured) in records at 15 miles, 25 and 30 kilometers, 20 miles and two hours. Quick arithmetic revealed

Tom Fleming sets two long marks on short notice with a lot of help from his friends.

that Clark had averaged about 5:12 per mile for 15 miles and 5:16 for 20.

Fleming was pessimistic. "It's harder to run on the track than on the road. The turns spoil your momentum."

I said, "But Clark never ran a 2:17 marathon, Tom, and you just averaged 4:59 for 20 in Puerto Rico. Clark's records aren't that good, and if you don't get them, pretty soon someone else is sure to."

Tom agreed, and the wheels were in motion. Or should I say the dial? The telephone is certainly Alex Bell's contribution to distance running.

A call to Ed Grant (a local track writer and running authority) revealed we should first check with Al Post of the AAU records department as to requirements. I couldn't reach Al.

A call back to Fleming with a suggestion that we call Joe Kleinerman of the RRC to see if Tom could join the 10-mile track run in New York that Sunday, and continue to 20 miles. Tom said, "Give it a try. Why not?"

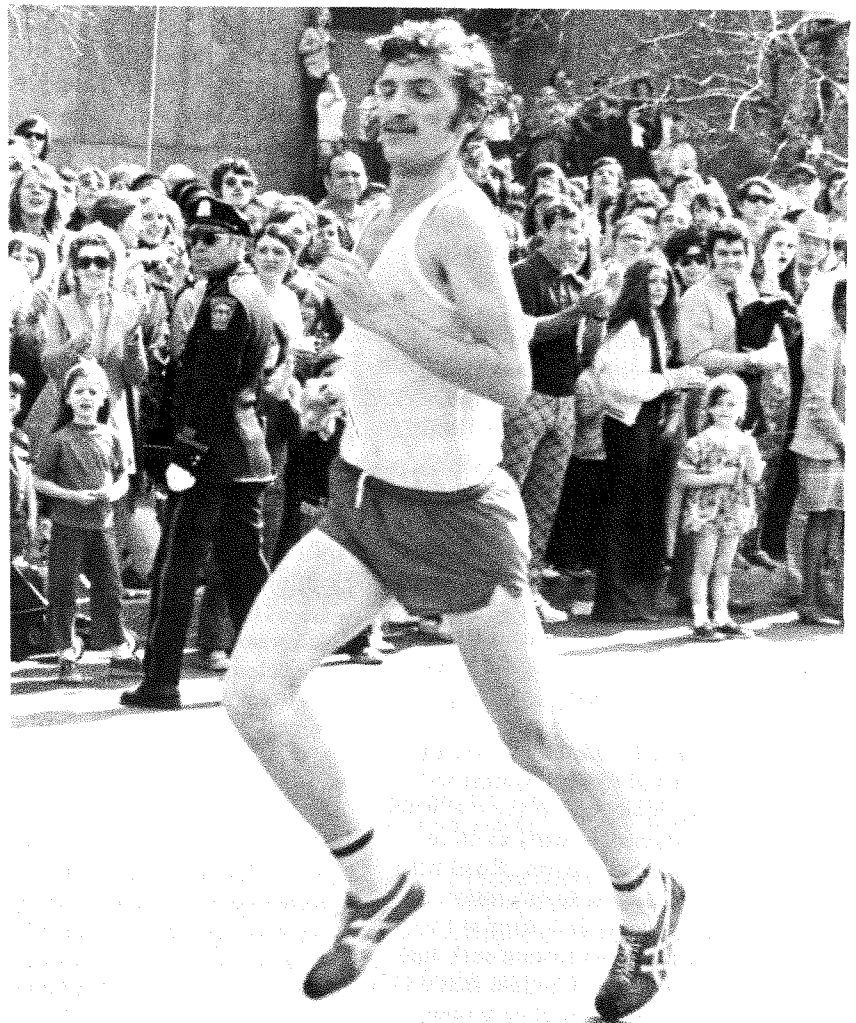
A call to Kleinerman got no answer. A call to Kurt Steiner (also of the NY RRC) revealed only that he had changed his number. Later, when I reached Kleinerman, he said to call Fred Lebow, who was promoting the 10-mile race.

The next day, Thursday, a call to Lebow... He agreed to let Tom run 20 miles. A call to Fleming... He was to call Lebow to work out the details.

Friday: A call back to Fleming. His mother told me he was out running with Liquori. "Uh, oh," I thought, "he's running fast 440s again. He doesn't plan to go 20 on Sunday." But a while later, Tom's father, Joe, called to ask if I wanted to go to the RRC race on Sunday.

"So the race is on and Fleming's not even tapering off for it," I thought.

Tom Fleming finishing his second-place race at Boston earlier in the year.



Since the phone was warmed up now, I called Bill Bragg, a 2:26 marathoner, to see if he'd be able to go the full 20 miles in case there's a rule requiring at least two finishers in a race. Bragg agreed to run.

That night, Tom called to talk about the race. We decided I should call Al Post (of the records committee) again. Al said we'd need a record application for each record set, that the three watches should be checked for accuracy, the track surveyed, the race distance advertised at least a day in advance, the entire run completed for intermediate marks to count, etc., etc.

Post had only two record forms. I told him to leave them in his mailbox. Fleming would pick them up on his Saturday morning run. The forms could be Xeroxed.

Call to Fleming. He would call Lebow to relay the information from Post.

Saturday: Fleming called to say that there would probably be two sections of the 10-mile race on Sunday, so there might not be time to run 20 miles. We speculated that the weather would be too hot to run 20 miles, so why not quit after 25 kilometers (15½ miles).

Called Lebow to relay this information. He had been on the phone all day, talking to RRC organizers Aldo Scandurra and Vince Chiappetta about coordinating timers, surveyors, sanctioning, water boys, etc., etc. Chiappetta was talking to Lebow at that moment, on a different phone. Lebow put both phones together so Vince and I could hear each other. I told him Fleming would probably stop at 25 kilos. I could hardly hear what was coming back from Chiappetta's end... mostly sounds like "Okay, okay. Good. Hello? Hello?"

Lebow said he had some more calls to make, but that everything seemed under control. He said he'd been telephoning for 3-4 hours on his end of the project. I guessed it might have been more.

Sunday, race day, was humid, with a big sun burning through a heavy sky. It was 83 degrees in the shade that day. Only about 30 runners showed up, so we decided to run one section. Lebow's phone calls had been effective. There were plenty of checkers and timers, and enough volunteer extras to man five water stations per lap. The all-weather track was cracked and worn. But there was a cold-water fountain on the backstretch so buckets could be refilled as often as necessary.

Besides Fleming, 2:25 marathoner Norbert Sander and 2:26 man Bragg were there. Both agreed to go the full 25 kilos and it looked like Fleming would have

some pacing from the 10 others on the early laps.

I mentioned to Tom that Ken Moore's 20-kilometer record of 1:02:25 required about 5:01 per mile. He too had worked out the arithmetic. But he was surprised to learn that if Moore's record was broken, only about 5:45 pace would be needed after that to get Clark's mark at 25 kilos.

Already the air was uncomfortably warm when we got to the line. Fleming, I thought, would do well to run this thing at an even pace. I decided to set the pace for a few laps. But I gave up the lead on the backstretch as Fleming came barreling past. He was far out of contact after only two laps. I later learned that his splits were as uncomfortably hot as the weather: 70 at the quarter, 2:19 at the half, 4:43 at the mile, fast enough for a 28:20 six mile!

He settled down to about five minutes per mile after that, reaching 10 miles in 50:09, slightly ahead of record 20-K pace. Many runners had dropped out before 10 because of the weather. Remembering how the heat had knocked them out, they pitched in with water and cheering. But Fleming was slowing.

Later, he mentioned that he was feeling the effects of too much Gatorade at that point, resulting in the sensation of approaching diarrhea. The 11th mile was 5:10, the 12th 5:13. Tom missed Moore's 20-K record by 16 seconds, passing that point in 1:02:41.4.

With Clark's longer marks still well within reach, though, Fleming started picking back up. The 13th mile took 5:08,

the 14th 5:04. Tom looked stronger than ever, and was even refusing water. But on the 15th mile he slowed drastically. He didn't look any more tired, only slower. He still reached 15 miles in 1:16:11.2, over 1½ minutes under the old record.

Something was wrong. With a little more than two laps to go, Fleming was no longer even gaining on slower 10-milers he had lapped 20 times.

Suddenly he trotted off the track on the backstretch. Was he quitting? If he was, not even his 15-mile mark would count. He disappeared behind a small building 40 yards away, and it took a while for the meaning to set in.

Geez, I thought. I didn't know he was so modest. Why couldn't he just stop on the far turn and do what he had to do? After about a minute, Tom trotted back into sight, then he covered the last two laps at top speed. His final time of 1:19:52.2 was still about 50 seconds under Clark's record.

The race was over and Fleming had his two American records. The whole thing took him less than two hours, and he'd be back into hard training (23 miles total) the next day.

But the work involved in getting the record approved hadn't begun. Lebow had forms to fill out, more phone calls to make, letters to write, and more phone calls to make. It took him another six hours of hustling before the event was finally laid to rest. Lebow, Chiappetta and crew don't mind the work, though. They're probably prouder of the records than Fleming is.

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THE PEOPLE IN THE STEEPLE

It's called plastic cross-country, and the runners in it aren't jumping for joy.

The start of the new US cross-country season is the right time to be talking about the steeplechase. That's all the steeple is, really: out-of-season cross-country running, a stylized, standardized—or in the words of steepler Mike Manley, “plasticized”—cross-country which is ill at ease on the track and makes its participants feel the same way.

Manley, an Olympian last year, told Kenny Moore, himself one of many retired steepplers, “It's really just plasticized cross-country. The barriers had their beginnings in fallen logs and streams. Perhaps that is so removed from Tartan tracks and striped traffic barricades that our absurdity is showing.”

Steeplechasing began as an English horse race, with church steeples originally marking the start and finish. The horses crossed whatever natural obstacles that happened to be in the way. When humans took to cross-country running as a sport, they used the same kind of terrain. Fences and streams are still part of European harrier running.

Some present-day steeplechasers wish it had stayed in the country, if not with the horses. On the track, it is often a frustrating race. True experts at it are hard to find, because few runners can tolerate it long enough to become expert. More are conquered by it than conquer its tricky technique.

Sid Sink seemed to have mastered it in 1971. He set an American record of 8:26.4 while winning the AAU championship at Eugene, Ore. (*RW* featured Sink, along with Mike Manley, in the Sept. 71 interview.) One year later,

This is at the same time the most beautiful, most dramatic, most dangerous, and often most humorous point in the steeplechase. The jarring water hazard has to be crossed seven times during the race. (Stan Pantovic photo)

though, Sink's hurdling form had turned so sour that he beat but one runner in the Olympic Trials. Sid switched to flat racing.

The only man behind Sink at the Trials was Joe Lucas. A month earlier at the same track, Lucas had won the NCAA meet with a record 8:30. At the Trials, he literally took a bath. Lucas' form hasn't yet returned.

Kerry O'Brien's luck was even worse. He set a world record in 1970, then nosedived into the water jump at the Commonwealth Games a short time later. His world record still stood at Munich, but O'Brien didn't. He ended his race, and most likely his serious steeplechasing intentions, tripping over a hurdle in his Olympic heat.

Even those who have fared better have left the event in disgust. Gaston Roelants won the Olympic Games in 1964, but quit it after '68 for the relative serenity of the 10,000 and marathon.

Kip Keino vowed after winning at Munich that this was his last steeple. He said, “This race is for animals.” After finishing third at Mexico City, George Young snarled, “That is the last steeplechase anyone will ever see me run. They should have left it to the horses.”

Running almost two miles is bad enough, they say, but steeplechasing is 35 times worse. Thirty-five is the number of obstacles littering the steeplechase course—four solid three-foot barriers per lap, 28 of them in all, and seven horrendous water hazards. The water is about 2½ feet deep in front of the barrier, and slopes up to the ground level 12 feet away.

The distance is 3000 meters, or 239 yards short of two miles. In that distance are 35 breaks in rhythm, 35 jarring landings, 35 chances of falling.

It isn't an event, as *Sports Illustrated* said recently, in which a runner jumps for joy. He jumps with caution, and perhaps some fear and/or contempt. But despite the harshness of the race and the words spoken about it, more and better steeplechasers than ever before are running it.

Ben Jipcho (8:14.0) and Anders Garderud (8:18.4) have run the fastest times in history this year. Doug Brown and Barry Brown trail only Sid Sink on

the all-time US list after running 8:26.8 and 8:27.2 at the latest AAU meet.

Such marks were bound to come from a boom period that began in 1971. That season, the number of sub-8:30 runners on the world list increased five-fold. The number of sub-9:00 Americans doubled. And these numbers have gone up since, meaning better competition all around.

The influx of fast new steepplers is coming from several directions. One is the traditional path. A runner lands in the event because he's not quite good enough to make it on the flat. This is the journeyman steeplechaser who dominated the event until recently. This is changing.

Cordner Nelson of *Track & Field News* speculated after the 1972 Olympics, “Few of the exceptionally good runners ever try the steeplechase, but when they do they are inordinately successful... Steeplechasing can be unpleasantly difficult, and so it will continue to attract less-gifted runners who find more success over the barriers than on the flat. But it will also, in the important meets, more and more often attract the truly gifted runner who perceives its opportunities.”

This has happened. Increasingly, steeple prizes are going to highly talented flat runners who do a bare minimum of barrier work. Their talent has been such that they don't need much special work. They aren't good steeplechasers in the technical sense, but being a superior *runner* has compensated for lack of polish.

Kerry O'Brien says he never practiced over the barriers, but his 8:19 two-mile speed made up for that. Neither O'Brien nor Kip Keino—who ran 7:39 for 3000 meters on the flat—ever cleared a water jump in practice. And Kenny Moore says they “step on the hurdles like arthritic old ladies.”

A skilled steeplechaser, according to Cordner Nelson, is one who spends only about 30 seconds of his race going over hurdles. In other words, the steeplechase time is within a half-minute of one's flat 3000 best.

By this standard, O'Brien and Keino aren't skilled steepplers. Kerry shows almost a 40-second spread, and Kip's

air time is 45 seconds. George Young wasn't that skilled either. His time lag was the same as Keino's. Apparently it didn't matter much.

But it has started mattering more since the 1972 Olympics. Shortly after the Games, Anders Garderud broke the world record. The Swede had come to the steeplechase via the 1500. Several months later, Kenyan Ben Jipcho tied Garderud's mark. Jipcho had been a 1500 finalist at the Mexico City Games.

Both Garderud and Jipcho obviously have speed. But they have more. They added technical talent to it. This summer, Jipcho has improved the world record to 8:14, and Garderud has run 8:18. The significant difference between them and Keino or O'Brien is hurdling time. Jipcho was in the air 30 seconds, Garderud 29.

The bronze medalist at Munich, Tapio Kantanen of Finland, is now the third fastest steeplechaser of all-time. He illustrates a third type of steepler, one with a special talent for cross-country.

Kantanen was fourth in the latest International cross-country race. His countryman Pekka Paivarinta, a steeple finalist at Munich, won the International. Mariano Haro of Spain, a steepler at Mexico City, placed second. Gaston Roelanta, former steeplechase world record holder, has won the cross-country championship four times.

Steeplechasing's relationship to cross-country isn't too distant. The two still demand the same kind of responses from a runner: namely strength and concentration beyond that of flat track runners.

Doug Brown says, "Not every distance runner can run the steeple. It takes a different type of runner, a cross-country type, because it demands a lot of strength and not necessarily a lot of speed. And I think my biggest asset is strength."

Cross-country's changing terrain requires attention to detail and flexibility of response. So does the steeple. "You have to concentrate and know what's happening all the time," says Brown. Doug finished second in the NCAA cross-country last fall after making the Olympic steeplechase team.

The University of Oregon has won national cross-country titles, most recently in 1971. While Bill Bowerman was still coaching there, all his distance runners steepled during the fall. Much of this running was over improvised log barriers, away from the track. The other two US Olympians, Steve Savage and Mike Manley, were trained at Oregon.

Steeplechasing's link to its cross-country ancestry is stronger than it looks.

DOUG BROWN'S UPS AND DOWNS

Confidence, competence and commitment make him the top young U.S. steeple prospect.

by Jerry Soifer

Jerry Soifer is a reporter for the Los Angeles Times, as well as a practicing distance runner.

The AAU steeplechase champion Doug Brown says the water jump is enough of a barrier in his specialty, that he can't have any women getting in his way.

"I could never marry a woman who told me I couldn't run the steeplechase," says the 21-year-old University of Tennessee junior. "In fact, I just broke up with a girl over running."

Brown's broken romance wasn't any casual affair but a four-year relationship with his high school sweetheart from Harper Woods, Mich.

"She felt track was taking me away from her, and I told her if she couldn't cope with it then we'd better split. I figure you have only one chance in life to accomplish something like this, so I'd better take advantage of it."

But Brown says he doesn't let track come between himself and a normal social life. He just rearranges his life to fit it all in. "I go out on Friday and Saturday nights and occasionally on week nights, and sometimes I'll stay out to one or two in the morning. But I'll be up at 6:15 to take my morning run with my teammates, and then I'll go back to bed for several hours."

The Tennessee student is a psychology major. How does he squeeze his book work into his frenetic life?

"I can't tell you how much I study a day, sometimes not at all, sometimes just an hour. When I have a test coming up, I cram for it and it's worked out pretty well. I've had a 4.0 average the last two semesters."

In June, Brown, wearing a Dave Wottle-style cap, won the AAU steeplechase in Bakersfield, Calif., in 8:26.8, just four-tenths off the American record held by Sid Sink. The week before, Doug captured the NCAA title, and in May he won the Southeast Conference steeple, three-mile and six-mile runs.

In his Bakersfield triumph, Brown received a last-lap challenge from the Florida Track Club's Barry Brown. In fact, Florida Brown passed Tennessee Brown over the last hurdle before the water jump. The latter seemed more concerned with adjusting his hat than re-adjusting the race at hand. Then the runners bounded over the water jump and Tennessee sprinted away from Florida.

A reporter asked, "Wherefore the preoccupation with the hat?"

"It keeps me relaxed. It's no big deal."

The 6'2", 150-pound Brown fell on the water jump in the Olympic Trials in Eugene last year. But he got up and qualified for the trip to Munich, where he was ninth in his heat in 8:41.2 and didn't make the final.

He has come back a better, if brasher, runner. "I'm not going to predict a world record this year," he said after the AAU, "but I will predict an American record. I'm really looking forward to the Olympics in 1976. You don't reach your peak in the steeple until your middle and late 20s."

Doug's summer tour to Europe was less than he'd hoped. Though he said, "Now I'm ready for the Europeans. Bring them on," he didn't win a race. Brown was sixth in the West German-Swiss meet, third against the Italians and a close third in his Soviet race. But he remained confident that the American record is yet to come, and his peak is still years away.

Brown, a cocky sort, says he's out of the Steve Prefontaine mold. "Pre's my kind of man," he says. "I'm like Pre."

Prefontaine says of his friend Brown, "He's an outgoing, friendly type and easy to get along with. He's a good man to go out and have a few beers with. He's adventurous, and he likes doing exciting things."

The steeplechase has been called a race for animals by Olympic champion Keino. Why does Brown want to keep at it? "The steeple is a challenge, pure and simple."



The Browns—Doug in the cap and Barry with the Florida orange—are the second and third fastest steeplers in US history. (Don Chadez photo)

Why does Brown fancy track so much?

"Running in front of a crowd is a big part of the pleasure and in track there is a sense of achievement in beating people and attaining better times. Cross-country (where Brown finished second in the NCAA meet) only gives you a kick in beating people. Times don't matter, plus there aren't nearly as many people watching you."

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Box 366, Mountain View, Ca. 94040.

Brown ran the two-mile in 8:57.8 at Notre Dame High in Harper Woods. As a Tennessee freshman, he finished third in the NCAA six-mile in 27:51.6. As a sophomore, he was third in the NCAA steeple in 8:33.6, and then won a plane ticket to Munich.

Los Angeles track authority Dick Bank says of Brown, "He's the best steeplechase talent the US has ever had. I think its great to see a guy like Brown who has that kind of talent specialize in the event. Most guys in this country who have his kind of ability go in the mile."

This kind of ability, added to Brown's commitment and confidence, is a combination which should make American steeplechases exciting for years to come.

THRIVING ON FOREIGN SOIL

Briton Gordon Minty likes the U.S. so well he's winning its championships and wants to stay.

by Jim Ferstle

"A reporter asked me after the race whether the AAU six miles was the most important race I'd ever won, my most satisfying victory. I told him it was but when I got back to my room that night after the race I thought back to the time I first broke five minutes for the mile. I was happy for days after that. The same thing happened when I broke two for the half. I was so excited I was on a cloud for the next week. I guess I was younger and more emotional then, but when I think of it I was probably happier then than after the six-mile."

—Gordon Minty

Gordon Minty is a rare breed of cat in this day of image-conscious athletes. An immigrant to the US from England, Minty was the first Britisher to win an American AAU championship with his 27:20.8 at Bakersfield. He won it with a 59.1 last lap which is not so fast until you consider that Minty still has troubles breaking two minutes in the half and his best quarter time is around 55 seconds.

"When I went to take the lead with a 330 to go, I took it without going all-out," says Gordon of the AAU race. "With a 220 to go I looked around and saw two shadows. I almost died! I thought (Jeff) Galloway was still there, so I looked around some more and I realized it was just the position of the stadium lights that gave me two shadows. I was very relieved and I just coasted the last straight because I was so happy."

After a three-year climb, Minty has reached the top of the pyramid of US distance running. Yet he still has had trouble getting into major races—both in the US and back home in England.

"I hope things will change and I'll get some invitations to run in more of the big meets," says the Eastern Michigan University runner. "If I was an American, I'd probably get invited over to Britain to run in the British championships. But since I'm British, why invite me back?"

"This aggravates me," says Minty. "I've written them (the British AAA) and they never bother to write me back. Last year before the Olympics, I wrote them

asking about the method of qualifying for the British team, and they sent me outdated information. So when I got over there I found out that it all came down to one race instead of taking into consideration the whole season's performance."

"I made the mistake of running in both the 5000 and 10,000 meters. I think that if I would have run just the 10,000 I would have made it. But I didn't appreciate the way they kept me in the dark. I think the way they run things is wrong because it caters to the good runners, the (Dave) Bedfords and (Dick) Taylors. I think it's wrong because the good runners can look after themselves. They need to develop the younger runners."

Minty continues, "Cross-country and distance runners are tough in England. That's why they can probably forget about me. One guy doesn't mean that much. On the whole, though, the British are always good at making excuses."

These are strong words for the quiet, passive Englishman, but the problems he's had with British authorities have made him think seriously about the possibility of American citizenship when he becomes eligible next year. He has gone as far as "dreaming of doing a Viren at the Olympics with a US on my chest" and putting aside for now his boyhood dream of getting an "English vest."

"In America, running is more practical," says Gordon. "It's more of a practice than a science. Excuses don't count. If you have a stomach problem in a race in America, it's just your tough luck. In England, they'd say, 'Oh that's too bad. You could have done it if your stomach didn't bother you.'"

"In America people accept things for what they are. If I had been in England and won the AAU's without Shorter running, there would be all sorts of people saying that if Shorter was in the race, I wouldn't have won. Americans accept it for what it is. You run the meet and you win; you are the champion. If you don't run, you forfeit your chance to win.

"The beautiful thing about winning is that you can always say that you ran just fast enough to win and nobody can argue with you."



Gordon Minty. (Jay McNally)

For all his criticism of England, Minty realizes that he probably wouldn't be where he is now if he wasn't from England. As an Englishman, he was able to come over to the US and go to school just at the time he was finally showing improvement in his running performance.

"I started running when I was 12 for the Thames Valley Harriers," Gordon says. "I ran all right in cross-country, but I was never good enough to run in the Nationals or the Southern County championships. My improvement was delayed by one year when I was injured. The year before I came over to the US, I was run-

ning about 14 minutes for three miles.”

“One reason why I didn’t improve as much in England was that I couldn’t eat right. My parents had been over here two years before I came. I was doing an apprenticeship in toolmaking and I didn’t want to cut it off. But my bills were about as much as I was earning. I was always tired and nobody could believe I ran because I was always the slowest guy in the workshop.”

His Eastern Michigan teammates had some doubts about him during his first cross-country season, as he was “consistently inconsistent.” He finished third in the NCAA college division championships and 101st in the NAIA the next week. During the indoor season, he began to come around as he took a second in the Central Collegiate Conference three-mile in 1971. Minty promptly reassessed his priorities.

“After the CCC’s, I told myself that the day I couldn’t run 15 miles after partying would be the day I stopped partying,” Gordon says. “Before that it would have been the other way around.”

Increased mileage produced better performances and Gordon’s confidence increased. Always a very competitive runner, his big breakthrough came at the 1971 NAIA championships.

“The biggest turning point in my whole track career was the NAIA three-mile,” he says. “I felt so good I didn’t understand why people were dropping back. Then I was all alone with (Rex) Maddaford (from New Zealand) and I thought he was just playing with me. So when he started to kick I thought to myself, ‘Kick as hard as you can and see what happens.’ I made my move and went by him like he was standing still. I was probably more shocked than he was.”

This is when thoughts of making the British Olympic team first popped into Minty’s head. During the summer while working the 3-12 shift, he started 10-mile road runs, and in the fall he made it 10 and 10—morning and evening. But the build-up came too quickly. In the middle of the cross-country season in 1971, he was hobbled by a stress fracture.

“When I was training hard during the summer I had my first thoughts of the possibility of making the Olympics,” said Gordon. “The stress fracture threatened to end all my hopes. So when I got back from the injury I just went mad. I was really lucky I didn’t get hurt again.”

“Going mad” brought him a 13:11 at the Drake Relays (for third) in the three-mile and a second to John Halberstadt in the NCAA six-mile. Then it was over to England and disappointment. He succumbed to the pressure and Dave Bed-

ford’s killing pace in the 5000, which left him both physically and mentally drained in his try at the 10,000.

“I was hoping that Bedford would not show for the 5000,” says Minty. “But at the start, there he was. I was 4:14 at the mile and I was out of the race! I tried holding the same pace but I was losing ground and I just blew up!”

Depressed and disillusioned, Gordon had only one race all cross-country season that he was “up” for—the Mid-America Conference championship which he won—and ended the season by finishing 24th at the NCAA championship.

Indoors, he showed signs of life with his 13:27.4 three-mile win at the Central Collegiates. He won the six-mile in 28:08.6 at the Kentucky Relays, but was dissatisfied with his progress.

“After the Kentucky Relays this year, I felt I was lacking something. I didn’t feel very strong,” he says. “Because I run so slow on the roads, I decided I needed a good road run. So on Wednesday, Tom (Hollander) and I added a 3½-mile run at around five-minute pace. It’s not a race but just a good hard run.”

Gordon follows what some may think is a rather boring routine, doing the same workouts every week except for the rotation between three different selections on Tuesday. Monday is 12 quarters at 65; Tuesday either six halves, four 1320s, or three times one mile, and Thursday a half at two minutes or better and two quarters in 60.

Every morning is 10 miles at a relaxed easy pace until the end of the season, when Gordon cuts it down to 3-8 miles. On Sunday, when man is supposed to rest, Gordon hits the roads for 10 in the morning and 10 in the evening.

“I don’t think I’ve ever done what I’ve planned to do for the whole week,” he confesses. “When we run our workouts, we (Gordon, Tom Hollander and any other EMU teammate who cares to join them) run with each other, never overtaking the leader. It’s discouraging to drop people in workouts. If a guy is getting tired and he runs a 68 (on the Monday quarter workout) when it’s his turn to lead, we run a 68. Usually it’s just Tom and me and we go out and do our 65s and be done with it. Even if we run 62s, though, I still record it as 65. Otherwise, there is always the feeling that you are going downhill if you don’t do as good next week. I hate to have the pressure of having to improve on the last workout.”

Gordon may not improve on workouts, but his improvement in racing has been due to increased confidence and a potent kick.

“Most people think I have a good kick because they see in the race results that I win a lot of races by one or two seconds,” he says. “They think if a guy can win so many good races he must have a good kick. Actually it’s the other way around. People are catching up to me at the end and that makes the times close.

“It’s mainly the other runners that give me confidence in my kick. I know when I was younger if I was with someone with a lap to go it was a sure bet that I’d be outkicked. I’d have to go a long way to find runners that I could outkick. Now everyone says I have a good kick so I won’t argue with them.”

He didn’t argue either when officials informed him he couldn’t keep his medal after the AAU win. “I know I won and so does everyone else,” he said. But he did find some humor in the prize he was allowed to keep.

“Gee, these binoculars were made in Japan,” he observed. “You’d think that in the American championships they’d give you something made in America.”

Humor is a big part of survival in the sport in the Midwest. Minty, whose English accent adds spice to his conversations, shares in the antics that help keep the Eastern Michigan runners’ sanity as they trudge through the snow and ice of winter. One of their “jokes” recently received national attention. It involved Tom Hollander, Gordon’s training partner.

Minty says, “It all started when Fred LaPlante (runner-up in the 1972 NCAA small college 1500) had Tom Hollander Fan Club tee-shirts printed up. Tom didn’t even know about it. “There were about one or two girls who wore them at first, but after he ran 13:29 indoors at the CCC’s the group doubled in size and *Track & Field News* ran the picture of one of the girls wearing the shirts.”

Deby Lansky, second-place finisher in the women’s AAU 100-meter hurdles, wore the shirt in the indoor championships in February, and at the outdoor CCC’s a reporter approached Minty after his six-mile, three-mile double win to ask about the club.

“At the Central Collegiate Conference meet a reporter asked me, ‘Where’s Tom’s fan club?’,” says Minty. “I told him that they were all out of school and they’re not that loyal to come up here after school is out.”

But Gordon remains loyal to his partner who shares the long hours of work necessary to reach the heights they’ve attained, “You’ve got to put Tom’s name in the article,” he said. “Otherwise, he’d get mad at me.”

We wouldn’t want to break up a combination that’s working so well!

UGLY AMERICANS IN PARIS

by Jerome McFadden

Saturday, 9:30 a.m.: I have just dropped my running clothes off at the laundromat (after eight years of marriage my wife still refuses to wash them) and am driving leisurely across town in anticipation of a great weekend. My running club in Paris is sponsoring an "important" international meet. A runner's paradise: Marcello Fiasconaro, Yevgeniy Arzhanov, Filbert Bayi, Lyudmila Bragina and John Akii-Bua have all accepted invitations. As there will also be a couple of Americans and Englishmen, the club secretary has asked me to help out as an interpreter. It will be fun talking to the Americans to find out what's happening on the running scene back home.

10:00 am: I have walked full face into a hurricane! It seems the three Americans arrived by train from Italy last night and have been raising all kinds of hell ever since. I am practically seized at the door and carried bodily into the club office. The club president is on the phone apologizing to someone at the *Institute National des Sports* for the behavior of the Americans. He eyes me as I come through the door and tells the someone that he is sending "our" American right over to get it straightened out. What am I getting into?

10:30 a.m.: I have just set a speed record for driving across Paris on a busy Saturday morning. The assistant director of the *Institute* regards me suspiciously until I speak to him in French, then sighs heavily. The US (French-speaking) cavalry has arrived.

He relates his side of the story: *Un vrai scandale*. The Americans refused last night's supper because it was lousy, then went sightseeing until way late. On their return they insisted on something to eat. The assistant director routed the chief cook out of bed, and the cook tried to serve them cold roast beef sandwiches. The Americans refused to eat it and walked out. (This I understand: the French eat their roast beef so rare that most Americans would consider it only a slightly wounded cow.) They've also been complaining about the showers, rooms, etc.

10:40 a.m.: The Americans seem stunned that someone in France speaks American. I ask what the problem is and get a barrage of complaints, including the fact that they haven't eaten for two days. I try to explain the *Institute* to them, that it is really just a training dormitory for the national teams. It has set meal hours and

a curfew and only the basic requirements for day-to-day living. If they don't like it, I can move them into a hotel. They immediately opt for the hotel. But first they want to go to lunch and then talk to the club president and then work out.

12:30 p.m.: I take them to lunch in a little outdoor restaurant in the *Bois de Boulogne*. We order tomatoes, steak, french fries and ice cream, which is as close as they want to get to French cuisine. The waiter rolls his eyes in despair when they ask for catchup. His eyes practically pop their sockets when they send the steaks back to be cooked over again.

The realities of "big" racing in Europe: complaining, home cooking and \$500 payoffs.

2 p.m.: They insist that the next stop is to see the president of the running club. I assume they want to take their complaints to the head man. I am wrong. The point to be discussed is finances.

The president clears the room and closes the door. I get to stay because he doesn't speak a word of English and they can't speak French. The three sprinters have never bothered to ask what I do for a living and are therefore unaware that my journalistic blood is gleefully pounding to find out what this is all about.

The president begins the conversation by asking what they want for running. The response is \$700 each. I try not to fall out of my chair, but do hear myself stuttering as I repeat it in French.

"Too much. Tell them I'll pay them \$1000 for all three. They can split it any way they want."

"They paid us \$700 each for running in Italy."

The president repeats his offer.

"No way, man. We didn't come all the way over here for that."

"Yeah, tell him that we won't even

step on his track for less than \$500 each."

The president considers that, then agrees to that, provided they will run two races each.

"I don't have to do that, man. I'm an Olympic medalist. Tell him that."

The man says he will have 10 athletes on the field who are Olympic medalists and a couple of them are gold, so that argument doesn't mean much. Besides the feature of this meet is the 800-meter race between Fiasconaro and Arzhanov, not the sprints. So take the \$500 or leave it.

The three reluctantly agree, but they insist on having it in dollars and they want it sometime before the meet begins.

4 p.m.: Back to the *Institute* for a workout. But my heart is no longer in it. They limber up, take a few starts, and lay around the infield signing autographs and enjoying the adulation of the few spectators. But it gets too late to check out of the *Institute* and into the hotel, so they decide they will stay here overnight if I take them out to supper.

7 p.m.: The evening ends on an upbeat. Through sheer brilliance, my wife remembers Haynes', the only place in Paris you can get American southern fried chicken, corn on the cob and apple pie. Haynes himself is an old football player/shot putter who has been in Paris the past 25 years making a living on Americans who come all the way to France to eat American food. The sprinters enjoy themselves. Then we make a small swing through Pigalle and Montmartre. They dig the scene but look a little hesitant when I finally dump them back into a taxi and tell the driver to take them back to the *Institute*.

Sunday, 11:00 a.m.: The three are still sleeping when I come by to pick them up for the scheduled 11:30 pre-meet luncheon. They immediately begin packing. They insist they are going to the hotel tonight. The taxi driver got all kinds of lost trying to get them back here, then the front gate of the *Institute* was locked and they had to skin the fence to get back in. They aren't too happy with the *Institute*.

12:30 p.m.: Better late than never? We make a grand entrance to the luncheon and the three of them are acting surly and upset. The French react in their best feline manner and avoid them like the plague. It is a long lunch at our isolated

table. There is only one saving grace: the Russian delegation is acting as surly and as abrasive as the Americans, and are being treated equally coldly. Vladimir Kuts is managing the Russian delegation and is incredibly fat, as if he has never jogged another step past his last Olympic victory.

3 p.m.: A bus is leaving for the hotel for those people who want to rest before the meet. I tell the Americans to get on it as it is the surest way to get to the hotel. (And I've had enough of the whole scene.) I bump into Mihaly Igloi, who is coaching the Greek team, and he promises to see that the three get checked into the hotel and back to the meet in the evening.

7 p.m.: The three of them have somehow made it to the stadium. But now they are complaining because the hotel is way on the other side of town. I curiously but quietly ask if they have received their "payment." They have, but they are disgruntled because some of it is in francs, not all dollars as promised.

They take first and second in the 100 meters and first in the 200 meters. Using one of the club runners, they also win the 400-meter relay. But they let up disdainfully when they see they have an easy victory even with a "borrowed" runner. The fans boo but the Americans are indifferent, obviously feeling this is the way to get even for all the hassle they have had.

10 p.m.: I herd them to the post-meet reception. They retreat to their surliness and isolation in a far corner. Fiasconaro gets the trophy for the outstanding athlete of the meet for his 1:45.6 victory over Arzhanov. I have a friendly but vague talk with Igloi about training. At the end of the reception, I make sure the three get back to their hotel. They ask if I will drive them to the airport tomorrow morning. The answer is no. Anyone who got paid what they did for running 100 meters can afford a taxi.

Midnight: I am driving leisurely across Paris again, wondering if I will remain a track fan. Probably. But it will be a long time before I volunteer to help out in an "important" meet again. Big Sport has just found another detractor.

Writer's note: In no way should this be taken as an accusation against all 'international' runners. I have helped out with other AAU groups in Europe and North Africa, and have never witnessed this particular bad scene before. It was just these three sprinters. The ability to run fast is only a small part of representing your country overseas.

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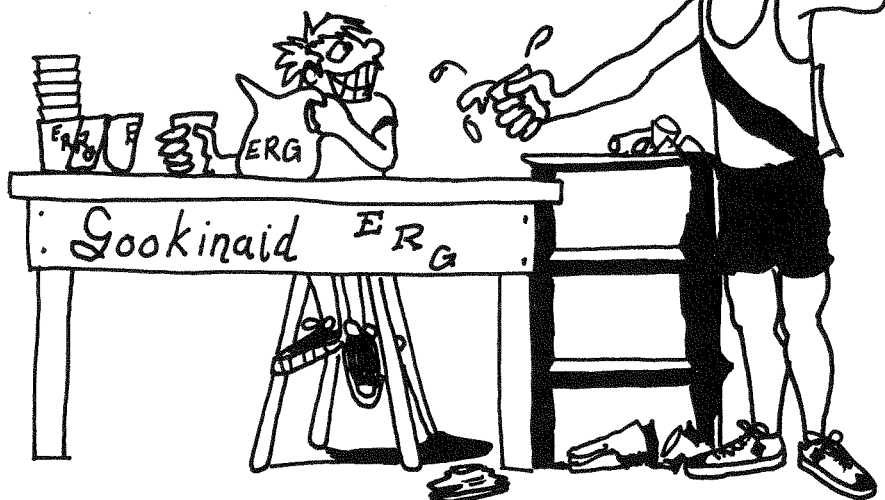
● "I didn't take any E.R.G. until 22½ miles but immediately I felt better and picked up four places in the last four miles. My time was 2:27."

● "It's bitching. About 3 to 4 minutes after taking E.R.G. you really feel that glucose."

● "It pays to take it before you run. I think it really helped me. I was out of shape and still ran one of my better times."

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HOW TO QUIT YOUR STITCHING

by George Sheehan, M.D.

The "stitch" will never make Disease-of-the-Month or have a foundation named after it. Discovering the cure for the stitch won't mean the Nobel Prize, or an invitation to the White House, or even a line in the medical journals. But it will make a lot of runners happy. And it will silence those malcontents who go around saying, "They can put a man on the moon but then can't cure the stitch."

Oddly enough, it looks as if "they" are about to cure the stitch. The pieces are coming together. The pieces are "backward breathing" and "air trapping," and their antidotes "belly breathing" and "resistance."

But let's start at the beginning. The stitch is known to be due to diaphragm spasm. This excruciating pain in the lower rib cage and its frequent satellite pain in the shoulder is caused by a charleyhorse of the muscle that divides the chest from the abdomen. The stitch is the diaphragm gone haywire. Man's perfectly designed ventilatory system is being mishandled by its owner.

The most obvious maltreatment is the sudden, prolonged use of the diaphragm in a sedentary individual. The diaphragm is accustomed to moving 1.5 centimeters 18 times a minute while we are at rest. Maximal effort brings those figures to nearly seven centimeters a breath and a rate of 45 breaths a minute. No wonder the diaphragm complains.

Such demands on an unconditioned muscle explains the stitch that occurs in beginning runners. But what of the veteran runners who still are bedeviled by this spasm? What about accomplished distance runners who still experience this pain from time to time?

These athletes, the scientists suggest, are doing other and more serious things to their diaphragms. They are breathing backward or trapping air, or both. Pulmonary function experts are finding that certain normal people have a tendency for their tiny bronchial tubes to collapse and accumulate air in the lungs. Breathing backward is a much more common phenomenon. When I breathe, my diaphragm should go down and my belly

*Relief may be
just a breath away.*

out. A minute's observation will convince most people they are doing quite the opposite. When they breathe in, their bellies go in; when they breathe out their bellies go out.

When the diaphragm is being stretched by air trapping and being further stretched by backward breathing, it is only a matter of time until the runner once more experiences the most dreaded of all racing pains—the stitch.

Knowing these mechanisms, however, we can now move toward a cure. This means no less than a complete re-education of the breathing cycle, the sort of thing you might learn best from a singing teacher rather than a track coach. Maximum breath control is a necessary—you could say vital—part of every singer's schooling. They have to develop the ability to fill every nook and cranny of their lungs before they go into those arias.

Only the correct belly breathing method can do this. At the same time, singers are automatically correcting any tendency to trap air. Singing, which is expelling air against resistance, is as good a way as any to keep these small bronchial tubes from collapsing and retaining air. In fact, any slight resistance to exhalation will do it. Some simple home exercises may do just as well:

- Learn to use your diaphragm correctly. Lie on the floor with a weight or books on your stomach. As you breathe, the books should rise. Keep this up until you breathe this way naturally. It is, after all, the way the body was designed to breathe. One difficulty will be tight stomach muscles. Stretching exercises usually have to be done quite persistently to overcome this difficulty.

- Make it a habit of breathing out against a slight resistance. An occasional groan to get maximal exhalation is very helpful. Groaning also induces you to contract your stomach muscles when you breathe out. Some very good runners grunt or groan with each breath even in long races. They have apparently found on their own the value of belly breathing and exhaling against resistance.

TAMING THE LOCAL HECKLERS

The problem, of course, is one of environment. The amount of verbal abuse heaped on the lonesome runner depends on a large extent on *where* he runs. At the races, your competitors (be they elite runners or fellow dawdlers) are friendly, sympathetic, involved. No one would dream of laughing at a middle-aged, balding fun-runner with a bit of a paunch wearing a slightly religious tee-shirt and baggy nylon trunks. All is solicitous camaraderie. The race day is sacred.

Not so the hometown streets. My mornings have been punctuated, as have the mornings of other road runners, with the cat-call and the sneer—the flip of a bird and the Higdonian slings and arrows from canines and populace.

“Whatcha tryin’ ta do, mister, catch a bus?”

“What happened to all your hair, baldy? You runnin’ too fast for it to grow? (Har Har).”

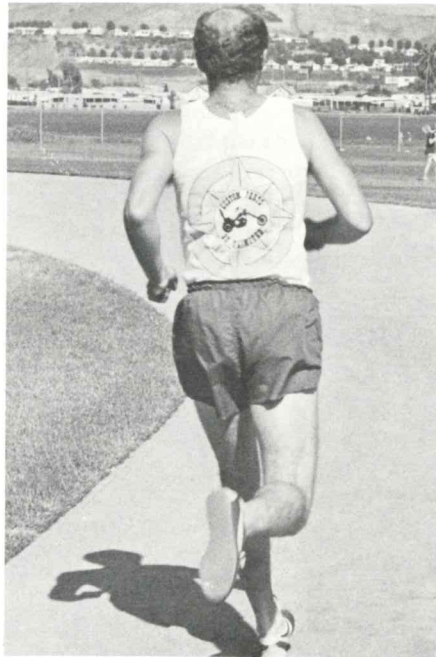
Fortunately, the era of bad-mouth and badinage—for me, anyway—is over. I have discovered a form of protective camouflage which has literally transformed me from the neighborhood goat into the local lion. The discovery was entirely accidental, and it all started a month ago when an enterprising motorcycle buddy laid a freebie tanker-top (glorified undershirt) on me. The back of the shirt features a silhouetted chopper inside a yellow compass rose; around the perimeter it proclaims: “Custom Parts by Unlimited.”

Two weeks ago, I put the thing on for my morning run, figuring that the snickers wouldn’t be greatly amplified by the addition of the free billboard. So there I go, swooping along comfortably at my usual pace, and up ahead there are these two young, pot and pollution freaks sharing a morning smoke at the school bus stop. Realizing I am about to be verbally assaulted, I prepare to console myself with a casual “up yours” as I pass.

As I go by the anticipated barb comes: “Hup, two, three, four—hey, mister, you —” And then the other kid sees the chopper advertisement on the back of my shirt and cuts his buddy off with a preemptory stage whisper: “Hey, shut up, man. The dude’s a real runner.”

“What’s that? What’d he say?” I flip my head around reflexively and the one kid says, “Hang in there, man.” The other kid waves at me. My God!

The next morning the same two kids



The “Famous Runner” himself.

are part of a large group waiting at the bus stop. I come chugging by trying to hold my stomach in. One kid sees me coming, waves, says good morning. I try on a shakey smile. The rest of the group stands respectfully quiet as I slog by. I hear one explain, “He’s a runner lives around here. I think he was in a race last week.” I love this kid. I consider leaving him a carton of cigarettes in my will.

Of course it has to be the freaky tanker-top, right? Nothing else has changed (least of all my pace), so it has to be the inscription on the tanker-top. The possibilities are mind-boggling. That afternoon I go out and buy a half-dozen more—plain white. A school teacher buddy happens to be on a silk-screening kick...and I have this plan.

To verify the phenomenon, I change my route two mornings later. I am wearing my new, experimental undershirt. It has a wide green horizontal stripe beneath my armpits and it says “O.T.C.” on the back. The random numbers 174 are stenciled on the front.

It is an unqualified success. Nothing but friendly waves, sidewalkers moving aside with big smiles to let me pass, and a couple of youngsters who ask me how far I’m running today. “Only four miles today,” I tell them, leaving behind the implication that tomorrow and yesterday were 20-milers at the minimum. I am rewarded for this irresistible bit of decep-

tion by a warm, respectful, “Geee.”

I go wild with the feeling of power. My next shirt is a veritable blitzkrieg of unintelligible lettering in ornate Old English. It looks like it says “Famous Runner,” or “Fantastic Ripper” but actually it reads: “Frijkne Riffglik.” On the front there is a powder blue replica of the Finnish flag. I wear it down to the high school track, and not once but twice I am saluted in passing by hard training high-schoolers who apparently believe that my eight-minute miles are simply LSD instead of an actual FOR (flat-out-run). “Nice pace, man,” says one. “Montreal ’76!” says the other. The words are burned indelibly on my laboring brain.

There follows an exploration into the limits of gullibility. “Nevada State Pole Vaulting Association” is followed by two motorcycle motifs: “Mother’s Choppers A.C.” and “Harley-Davidson Striders.” The latter brings the experiment’s only suggestion of disbelief when a long-legged type overhauls me one afternoon, slows down to match my pace and gives me a fish-eye.

“That a local club?” he asks.

“No,” I pant. “Got it from a buddy in Milwaukee.”

“Oh,” he says, then smiles fraternally. “See you around.” He bounds off in search of a four-minute mile.

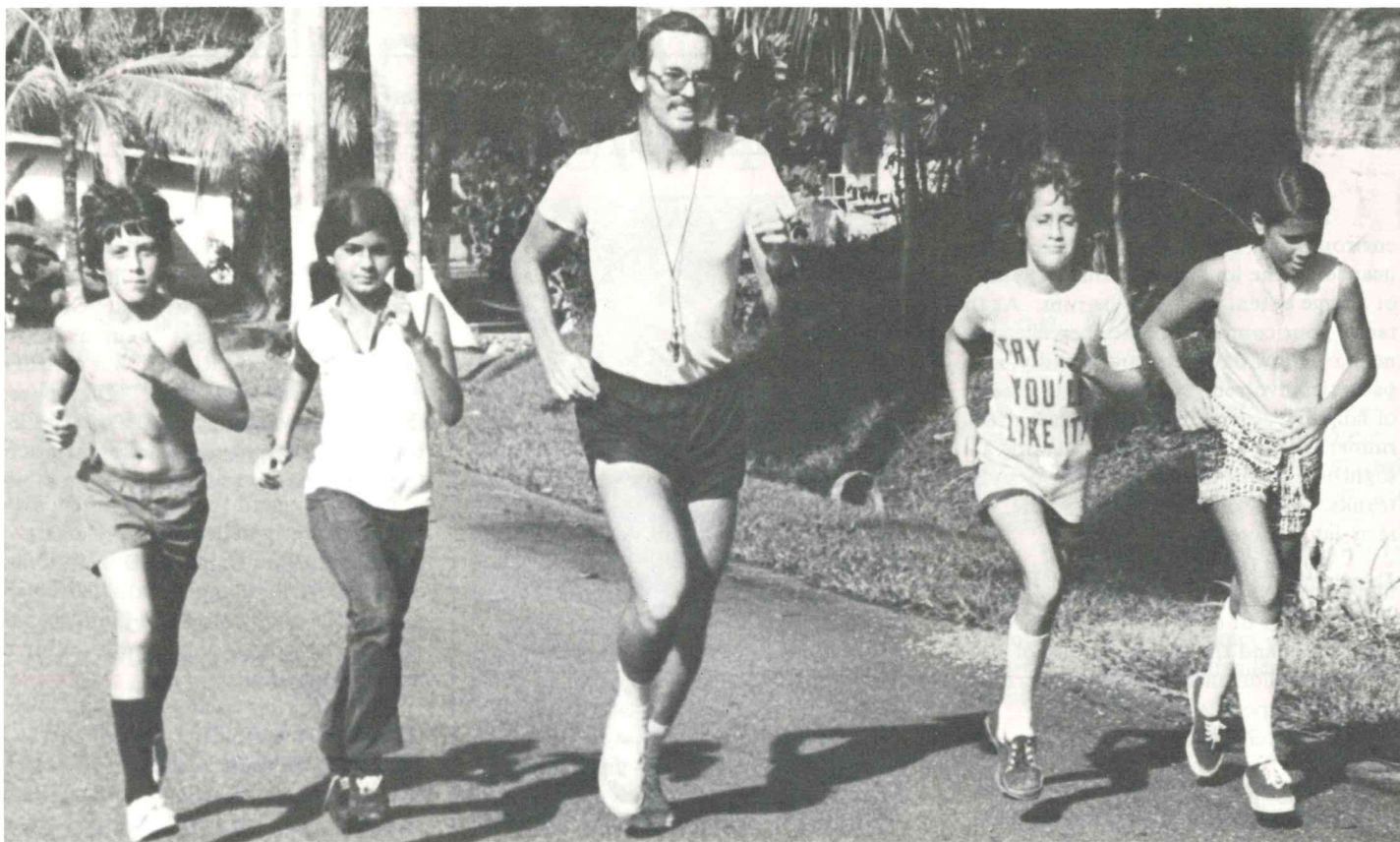
The final glory comes about a week later when I am trudging away from the track trying to sweat out a hangover. I am wearing my latest creation—which turns out to be the pinnacle of the newly discovered art form. It brings a young child to my struggling side bearing a pencil nub and a piece of brown paper bag. Lord help us—he asks me for my autograph!

There is one remaining problem. Last week I made the mistake of showing up at a nearby AAU 15-kilometer event in one of my “famous runner” tops. It reads: “Classic and Antique Motorcycle Racing Association” and it elicits a veritable barrage of horse-laughs, cat-calls and pointing fingers.

“Hey buddy,” chortles a fellow fourth-rater, “can’t you make that antique move faster?”

“Traaack!” yells a struggling 50-year-old as he passes me in the final quarter-mile.

The problem, of course, is one of environment.



WHY THE KIDS ARE RUNNING

by *David Corbin*

I am so thoroughly convinced of the values of running that I find it hard to comprehend the values of non-runners (or at least non-exercisers). However, I dislike being a missionary for running if coercion is part or all of the "influence."

So when I decided to start a running program at the school where I taught—Ft. Buchanan, Puerto Rico—my main goal was to get people to run voluntarily, and ultimately to get them to like running and realize its benefits.

First, I announced to my boys' intramural groups (ages 9-13) that a running program would begin and that certificates and ribbons would be awarded to those who totaled 25 miles, 50, 75 and 100 during the school year. I ran with the students to encourage them and offer an example. Soon the program grew to more than 50 boys.

I was pleased, of course. But I was not completely satisfied with the running program because the names on the runners' list corresponded with the names of the better athletes in the school. Although the program was well accepted by these boys, it didn't attract the "non-athlete" or the "non-competitor," and these are the people who need running the most.

It struck me as funny when I read about the ordeal Frank Shorter had to go through when running near Ranchos de Taos in New Mexico. His father had to follow him in a pick-up truck while he carried a shotgun to protect Frank from the local hecklers. What struck me as funny is that the average person would have to have the shotgun pointed at *himself* to get him to run at all.

I decided motivational techniques were very important, but not of the shotgun variety. You can preach about the benefits of running until you turn blue, and you may even get everyone to agree with you. But most will go back home

One teacher gets over 500 Puerto Rican students turned on to "the experience."

and be as sedentary as ever. Running must be presented as an experience, not a discipline—a pleasant experience, a social experience and an experience of inner satisfaction.

How can running be made more pleasant? I believe by making it less competitive. Competition is fine for excellent runners and even for good runners, but what about the mediocre and slow runners? Should these non-greats be deprived of fitness just because they are not champions? I wanted to emphasize the "act of running," not the time it took. Later on, if a person wished to compete, he could do so as a self-actualized runner. Perhaps he could say with pride as I did, that he came in 140th in a race. But before a runner can even consider competition he must be a member of "the running experience."

I decided that a whole new attitude toward running should be made public. What I needed was public relations—a P.R. man in P.R.

I began the pitch by placing huge posters in the school cafeteria, advertising the running program. I also posted samples of the certificates and ribbons that would be awarded. The initial response

LEFT: David Corbin (center) and his young "converts." (Jose Garcia photo)

was similar to the response of the year before—about 50 students.

Although I was in charge of the boys' program, I also wanted to encourage girls to run. I gained about 20 more students.

I began to post the names of all students who had earned running awards. I wrote a letter to the editor of the *San Juan Star* about the perils of running in San Juan—the lack of facilities and the lack of courtesy toward runners. It is my theory that people heckle that which is strange or rare. If more people ran, others would gradually accept them as a part of life. Consequently, runners would be greeted with smiles rather than cat-calls. The letter helped relate my philosophy of running to the parents of the children at school.

Since most of the students at our school ride buses, many of them could not participate in the running program after school. I sought and received permission from the administration to allow the running program to begin the last half-hour of the school day. This helped the program immensely. By December, there were 128 boys and 66 girls in the program.

I was so pleased I tried for an extra boost. First, the program was made more individualized. A child could run between 2:30 and 3:30 every day. If he only wanted to run once or twice a week, it was fine.

Santa Barbara Marathon

Sunday, October 14, 7:30 a.m.

- American Medical Joggers Association Running Symposium, Saturday, October 13, 2:30 p.m.
- Awards: 15 open; five 40-49; three 50-59; two 60+; three women; three open teams; one masters' team.
- Entry fee \$1.50.
- Picnic after race.

Write for entries:

**Santa Barbara Jaycees,
P.O. Box 15,
Santa Barbara, Calif. 93101**

The only restrictions were that all miles had to be run—not walked.

The students were instructed that they must build gradually if they wanted to run more than one mile at a time. A graduated schedule was prepared. Most students started by running a mile, but special allowances were made for certain individuals (many of them overweight) to begin running anywhere from one-eighth to three-fourths mile.

Each day that the child ran, he reported the distance to me and I would "X" the distance in on a chart at the physical education office near the end of the running course. (I soon ran out of wall space as the program grew, and I had charts on several walls). The honor system prevailed and was not often abused.

The running course itself was changed from the previous year to make the run more scenic and less subject to auto traffic. The course is lined with palms, grass and mango trees. (The mango trees proved to be a little distracting toward the end of the school year as the fruit ripened, but the students picked up the mangos and kept on running...and eating.)

The next boost would again be the press. I called the *San Juan Star*, explaining about the running program and how large it had grown. I stressed that it was voluntary and I stated my disdain toward teachers or coaches who have students run laps as a punishment, thus making them hate running. This was "Run-for-Fun" program.

Not only did the *Star* write about the running program, but it also placed a color photo on the cover of the Sunday magazine section.

I revised my goal, and sought to attract 350 students (approximately half of the student body). Later I was surprised.

The pride of accomplishment of the children was evident. Even if they did not earn an award, they realized that they could run a mile. To many of the students, a mile seemed unfathomable at the beginning of the school year. Not any more. The children's parents glowed with pride also. The newspaper article helped make the running program the "in" thing. Running was socially acceptable for boys and girls. Bulletin boards around school emphasized the "Run-for-Fun" attitude.

A thermometer chart showing the progress of total miles run by the middle school students was kept in the cafeteria. *Runner's World* was ordered by the school library and soon became one of the most popular magazines in the library.

Scores of students from the nearby elementary school asked to join the program. Soon several six-, seven- and

eight-year-olds were voluntarily running miles with the elderly middle-schoolers.

A school dance was held and money was earned to buy tee-shirts for all students who had accumulated 150 miles or more. My goal of 350 participants was more than realized with a final count of 561 middle-school participants who logged a total of over 15,000 miles.

The next obvious step was to get the teachers involved. I explained the benefits of running to several teachers, loaned them books like *Aerobics* by Kenneth Cooper, and encouraged involvement. Word of mouth from the students and the press coverage helped to encourage the teachers further. Many became regulars in the program. I found that the teachers cherished their awards just as much as the children, sometimes more. And the children from a running teacher's classroom seemed to take special pride in their teacher's stamina. The applause was overwhelming for teachers who earned running certificates that were awarded at school assemblies.

No data is available to determine the total pounds lost on the running course, or the amount of shoe rubber worn out, or the amount of tension released, or the amount of cardiovascular endurance that was gained. But it was evident that the running program was successful. Pride, enthusiasm, fun and acceptance were all present.

Although the long-term effects are yet to be seen, at least many people experienced running and began to love it. Maybe they have loved and lost, but perhaps some have loved and will continue to love.

ANDREW JACKSON MARATHON

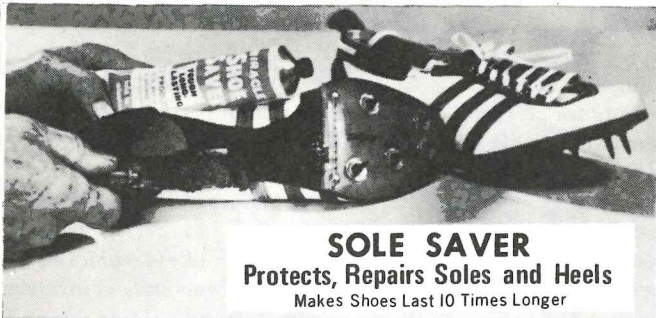
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- Entry fee \$2.00 if postmarked by Sept. 29; \$3.00 thereafter.

For entry blanks, course maps & further info send self-addressed, stamped envelope to: James M. Harts-horne, 108 Kay St., Ithaca, N.Y. 14850. Phone: (607) 257-0426.

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Sub-2:25 marathoners may inquire about limited travel expenses which might become available. You must be 16 years old to enter this marathon.

RUNNER'S GUIDE TO ATLANTA

Don Gamel is a road race promoter with the Atlanta Track Club and lives in nearby East Point. He is in charge of the East Point six-mile race scheduled for Oct. 6.

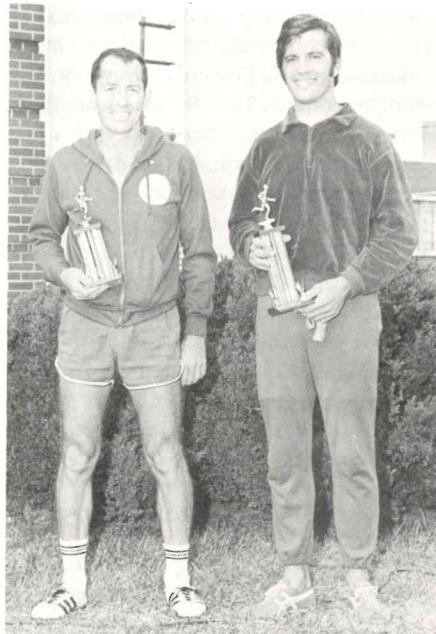
This July 4, 540 people—young and old, men and women, slow and fast—ran down Peachtree Street on a hot 85-degree day toward the finish line in the center of town, 10,000 meters away.

This isn't Boston, San Francisco or Paris. This is in Atlanta, Ga., where the Carling-Peachtree July 4 road race was the largest distance run ever conducted in the Southeast.

Atlanta's symbol, the Phoenix bird rising from the flames, epitomizes what is happening in the South—and particularly in Atlanta—in distance running. Running is growing at a fantastic rate, as the growth of races indicates. Attendance is jumping at a rate of 50% each year.

But you don't necessarily have to race to enjoy the city. Nine or 10 months of the year, the climate is ideal for running, and the city has many beautiful parks and golf courses to tour.

For visitors staying in the downtown area, Piedmont Park is a good running site. It is two miles north of downtown Atlanta. The park has wooded areas, streets and a golf course, and like New York's Central Park, Piedmont has mounted police to ward off potential attackers. On some Sundays, there are free concerts in the park. East of it is the Morningside neighborhood, another area favored by local runners.



Atlanta organizer Tim Singleton (right) with runner Ken King.

On the east side of the city is the Emory College campus and another nice surrounding neighborhood used heavily by runners. The Emory quarter-mile track is open to runners year-round.

Adams Park in southwest Atlanta features a golf course and very hilly terrain. A number of high school cross-country teams train and race here.

In the northwest section of town, off I-75, is the Atlanta waterworks, which has two courses around lakes. Each course is about 1.2 miles.

Another popular running area in the

northwest is the West Paces Ferry neighborhood, a section of wide, tree-lined streets and \$100,000 homes.

On the outskirts of Atlanta, 15 miles to the west, is Stone Mountain Park. Runners find it is well worth their time to drive out to Stone Mountain for an outing. The run around the mountain, starting from the main parking lot, is a very hilly five miles.

The Atlanta Track Club is responsible for most of the open and age-group competition in and around the city. In the not too distant past, such opportunities were rare. But the track club has worked hard the past several years to open up the sport to all ages and abilities. Tim Singleton conducted the first age-group competition in 1967 by introducing a "fountain of youth" (30 and over) division in a local race.

This year, the Track Club is sponsoring about 20 road and cross-country runs from four miles to the marathon. Many of these include a mile run for novices.

The club also held 11 all-comers track meets this summer at Tara Stadium in Jonesboro, Ga.—15 miles south of Atlanta. Between 60 and 100 runners showed up each Wednesday night.

These and a number of other events further prove that Atlanta has risen from the dark ages of running into an era of events for all.

(For a free schedule of races, write to the Atlanta Track Club, P. O. Box 12345, Atlanta, Ga. 30305, or call me at (404) 767-7368.)

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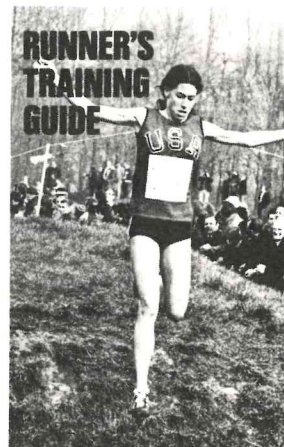
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RUNNER'S TRAINING GUIDE

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MARATHONERS' TRIPLE-HEADER

Bob Crane directs the National Capital Marathon Festival, scheduled for Oct. 20-21. For information, write Crane at 511 Kramer Dr., Vienna, Va. 22180.

What is more exciting for a distance runner than a marathon? Why, three marathons, of course! During the long Veterans Day weekend in October, the National Capital Marathon Festival will offer the first such triple-header in distance running history:

- **The Marathon.** Three 8.7-mile laps pass all the major scenic attractions in the nation's capital, with start and finish at the Washington Monument.

- **The Ultramarathon.** It winds 18 miles from the Washington Monument along new National Park Service bicycle paths beside the Potomac River, to Mount Vernon, then 18 miles back to a finish in front of the Jefferson Memorial.

- **The Supermarathon.** America's first race beyond 100 miles follows a wide and absolutely flat, packed earthen footpath from Cumberland, Md., in the Appalachian Mountains, along the wild Potomac River to the Washington Monument 180 miles away.

A preposterous idea? The majority of District of Columbia Road Runners Club's board of directors thought so. Closing down the city of Boston for a bunch of running addicts is one thing. But Washington D.C.? And for two days? And who but a masochist would even think of running 180 miles, even in mile or time segments? The TV coverage of these finishers would ruin the good image of running forever!

Almost alone, Gar Williams, the current president of the Road Runners Club of America, quietly prepared the way for the Festival by agreeing to test its feasibility in a 36-mile "dry-run" last fall.

About this time, the mayor of Alexandria, Va., was looking for a colorful event to celebrate the Scottish founding of this colonial city located midway between Mount Vernon and the center of Washington, D.C. The roundtrip between these two points is exactly 36 miles.

Conveniently, 36 miles is the exact distance of a fabulously well-organized event in Scotland called the Two Bridges

Road Race. By another coincidence, the D.C. area course also crossed two main bridges over the Potomac. Happily, the sponsors of this Two Bridges Road Race agreed to combine their race with a "twin" originating in Alexandria. Both sides would attempt to raise money to send their winning team to the other race.

With only six weeks notice, we put together the 36-mile International Two Bridges race. The result was beyond anyone's expectations. All but three of the 33 finishers maintained an overall pace of faster than nine minutes per mile, and 23 of these ran between seven and eight minutes. The first four—Max White, Park Barner, Ted Corbitt and Al Meehan—averaged 6:15, 6:20, 6:44 and 6:57, respectively.

All of the runners proclaimed that they would return, even the 18-year-old Greek runner, Vasilios "Bill" Triantos, featured on the February cover of *Runner's World*. Bill passed the marathon point in 3:09 and then went home, thinking he had finished the race.

After this initial success, who could argue against its expansion into a real festival of marathons, with something for everybody? Even the National Park Service joined in the enthusiasm. The Director of Special Events, Art Lamb, optimistically proposed, "What we need is a giant festival of running with thousands of runners in the nation's capital to celebrate the Bicentennial Year of 1976."

The formal Festival prospectus for the National Park Service states: "The number of entrants in the Festival races is expected almost to double every year from now through 1976. The Reflecting Pool Jog (two-mile) should increase from about 200 to 1600. The marathon should mushroom from more than 300 to almost 3000 runners. The 36-mile ultramarathon

should grow from last year's 33 finishers to 50 this year to as much as 500 in 1967. Individual entrants in the 180-mile supermarathon may grow from an anticipated five runners this year to 25 in 1976. And the American Indian relay team-run scheduled for this year may grow into a 180-mile race of teams from a dozen different nationalities.

"Careful planning for the enjoyment of all concerned, both runners and race officials, should attract more than 5000 runners to participate in the National Capital Marathon Festival as part of the Bicentennial Year."

An anonymous financier, who started running this year, offered to give \$5000 seed money to "start things properly." Much of this sum will go to pay the transportation of the winning three-man ultramarathon team to next year's Two Bridges race in Scotland. His objective, as stated in the Festival prospectus, is "to establish a high-visibility national sporting event on a permanent basis, capable of earning substantial money in subsequent years to promote post-collegiate distance running in America, and to send American distance runners to races abroad."

Gar Williams has placed his confidence in those whose sights are on much higher goals than most of his colleagues have thought possible. The wisdom of his foresight has yet to be proven.

But consider the evidence. Ten years ago a dozen standard marathons were held in the United States annually. In 1972, there were more than 10 times that number, and the total number of entrants had increased almost 100-fold.

The special sport of ultramarathoning, though starting from a smaller base, is beginning to experience the same rate of growth, both in number and quantity of runners. The largest, the JFK 50-mile run over the Appalachian Trail and the Chesapeake and Ohio Canal Towpath (only an hour's drive from Washington), has almost doubled its size every year since 1968. This year's race attracted 1724 starters, of whom more than half reached the 35-mile point. The number of finishers since 1968 reads: 17...40...74...150...307...675. And improvement in the quality of the runners has kept pace.

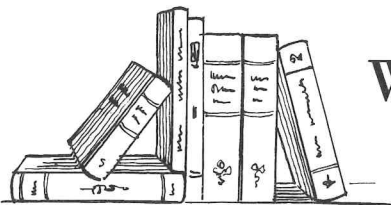
This is the kind of interest and growth that the National Capital Marathon Festival wants to promote.

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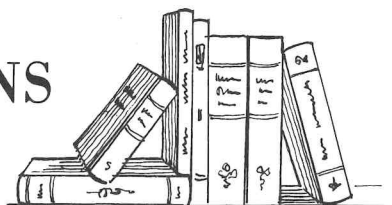
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WORLD PUBLICATIONS BOOKLIST

RUNNER'S WORLD - BIKE WORLD



NEARLY 100 TRACK & FIELD BOOKS - RUNNER'S WORLD, BOX 366, MOUNTAIN VIEW, CA.

COMPETITIVE RACE WALKING, Ron Laird. A modern guide to technique, training, judging, etc. by one of America's top walkers. Well illustrated. 8½ x 11, illustrated. \$3.00.

GUIDE TO DISTANCE RUNNING, edited by Bob Anderson and Joe Henderson. With over 100 articles and 100 photos this book covers distance running like it has never been covered before. Chapters on the basic physiological factors, racing methods, training and coaching techniques, philosophical observations and the people in the Sport. Must reading for all distance runners, coaches and people interested in the sport. 1971. Paperback, 208 pages, (8½ x 11), illustrated. \$4.95.

COMPUTERIZED RUNNING TRAINING PROGRAMS, Jim Gardner and Gerry Purdy. A new concept in training. Using a computer, the authors have taken the guesswork out of interval training—devising sets of workouts geared to the specific ability of each runner, all distances. Paperback. 1970. 100pp of text, 122pp of tables. Illustrated. \$4.50.

JIM RYUN STORY, Corder Nelson. A detailed description of the life and times of America's number one track hero. Brilliantly illustrated with nearly 200 photos by Rich Clarkson. 1967. Hardback, 272 pp. \$5.95.

KIPCHOGE OF KENYA, Francis Noronha. Keino—the greatest athlete in the history of African track. We know that he is a world record holder, an Olympic champion. But what of the man? This book answers these questions. Paperback, 160 pp., illustrated. \$2.95.

THE LONELY BREED, Ron Clarke. Clarke looks deeply into the personalities and methods of 21 distance greats that he admires most. 1967. Hardback, 187 pp., illustrated. \$5.95.

THE UNFORGIVING MINUTE, Ron Clarke. The autobiography of history's most successful record-breaker gets into the factors and philosophies behind his times. 1966. Hardback, 190pp., illustrated. \$5.95.

AEROBICS FOR WOMEN, Mildred and Kenneth H. Cooper. Liberating body and mind through pride in health and a sense of aliveness. Just as hope-giving and fascinating as the original "Aerobics" book. 1972. Hardback, 160 pp. \$5.95.

THE NEW AEROBICS, Kenneth Cooper, M.D. The new book picks up where the other left off. Here, Cooper offers age- and sex-adjusted programs, refined charts and schedules, chapters on women's training and indoor exercises, plus answers to questions arising from the original book. 1970. Hardback, 190 pp., illustrated. \$6.95.

COMPLETE BOOK OF ATHLETIC TAPING TECHNIQUES, J.V. Cerney. "Flexible casting" as an "offensive and defensive weapon against injury." A remarkable book for preventing and caring for athletic injuries. The illustrations and clear descriptions make all kinds of tapings easy. 1972. Hardback, 242 pp., ill. \$10.75.

COMPLETE GUIDE TO HIGH SCHOOL TRACK AND FIELD COACHING, Ray Kring. An essential book for every prep coach. Chapters on selling your program, practice organization, staging meets, coaching all events, making equipment, much more. 1968. Hardback, 280pp., illustrated. \$12.95.

FOUR MILLION FOOTSTEPS, Bruce Tulloh. Tulloh's lively and literate book describes his epic "record" run across the United States during the summer of 1969. He tells of the mammoth obstacles imposed by injuries, fatigue, traffic and sheer mileage during his 65-day journey. Fascinating! 1970. Paperback, 175 pp., illustrated. \$1.95.

RUNNER'S WORLD, Box 366, Mountain View, Calif. 94040

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CROSS-COUNTRY WITH NO SWEAT

by Joe Owens

Joe Owens is cross-country coach and athletic director at New Paltz State University in New York.

This is probably one of the most amazing stories in distance running history. It concerns a 10:24 two-miler. Not an amazing time, is it? It sounds even less amazing when I tell you a collegian ran it, and it's our school record. The amazing part, though, is not the time itself but the way Jim Borden set that mark.

Borden was born with ichthyosis. This means 99% of his skin surface lacks sweat and oil glands. Jim cannot perspire. His case of ichthyosis is severe, which means his body temperature, when exercising, can soar high enough to kill him instantly. This can happen in a very short time. Logically, this problem would prevent participation in athletics.

I first met Jimmy in an "Introduction to Physical Education" class at New Paltz State. The group, 25 of them, was sitting on rolled wrestling mats. Smack in the middle was this huge, delightful smile. In addition to the smile, my eyes and thoughts were drawn to the boy's appearance. My first thought was that he had been a fire victim. His body appeared to be covered with cornflakes.

He told me later that his thoughtless primary grade classmates called him "Scaly-Skin." But I found Jim Borden to be a handsome lad. His features are striking.

Thanks to the bucket brigade.

ing. His smile is infectious. His skin condition is neither ugly nor repulsive, but merely warrants a second glance.

Part of my orientation in class was to recruit freshman distance runners. This I did with zeal. After class, Jim came to me and said he wanted to run. Asking personal questions is not normally my forte. But for some reason—I think it was because of Jim's cordiality and eagerness to talk about himself—I asked him about his skin. Jim enjoyed telling about himself and his plight.

He told me that at birth the skin of his entire body was red, swollen and inflamed. He was given 12 hours to live. Complications arose. Infection set in, his body temperature could not be controlled and a bladder problem developed. Application of petroleum jelly to relieve dryness and antibiotic treatment saved his life.

His entire life was, and is, a myriad of treatment methods. Goats milk and vitamin A make up much of his diet. He still smears his body with petroleum jelly to relieve dryness of his skin. His doctors told him to stay out of sports and to avoid sunlight. Both can cause his body temperature to skyrocket and cause permanent damage, if not death.

People with ichthyosis, under normal conditions, can live a normal life. Borden's decision to run long distances complicated his life. Persons with ichthyosis rid body heat much as a dog does. The evaporation of moisture during breathing cools the body. But in Jim's case, while running a long distance, his body temperature would go up and "normal" breathing would not cool him.

Jim tried wrestling his freshman year. The temperature in a wrestling practice room is kept high. Wrestlers try to lose weight by perspiring, hoping they will lose weight but not strength. Borden recalls, "I passed out and my temperature went up to 106. The coach then convinced me that wrestling could be even more detrimental to my life than running." Also it was more detrimental to my own ulcer.

When Jim decided to run cross-country, he used coercion. He said, "If you don't let me run, I'll tear the gym apart brick by brick." He was allowed to run.

College freshmen ran a three-mile course. I had to think of a way to keep Jim cool. One idea was to supply Jim with a frozen tee-shirt that would provide a flow of cool water as it thawed. We rejected this, and instead devised a bucket brigade. We dispersed teammates and managers at key spots along the course with buckets of water. They would then step out and douse Jim with cool water as he passed. The dousing kept his temperature from reaching dangerous levels.

On cool, damp days our problem was lessened, of course, but still present. Many times—too numerous for my ulcer—Jim would collapse at the finish line. And there would be anxious moments before I got the signal that he was okay, though lying on the ground face down.

It didn't end there. Jim indicated he wanted to keep running, meaning he would move up to the five-mile varsity distance the next year. That intervening summer, whenever the thought would occur to me, I secretly wished he would hang up his running shoes. No such luck. There he was, the first day of registration, in my office asking for a practice schedule. We increased the bucket brigade for Jim and the antacids for me.

We made it. We made it beautifully.

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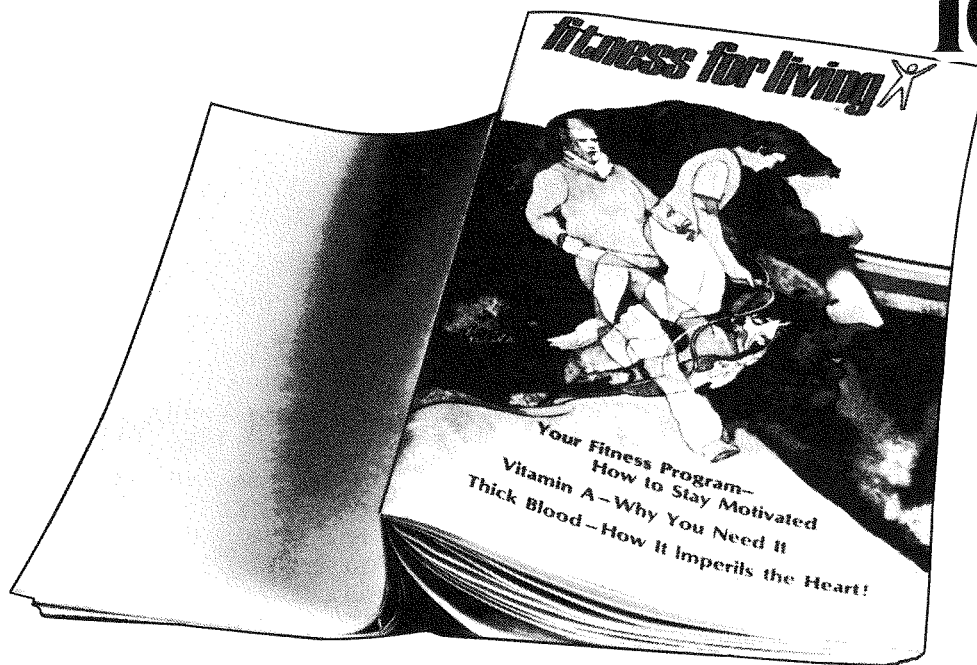
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PROFILES

Stan Pantovic photo



TONY BENSON

If you don't know Tony Benson and you're planning to see any professional meets next season, it's time you get acquainted. Tony isn't well-known now in the US, but he will be if he hooks up with the ITA.

Benson is Australian—perhaps the second-best 5000-meter runner in Australian history behind Ron Clarke. Admittedly, Tony is a fair distance behind Clarke, but he has an impressive record of his own.

Leading up to last year's Olympics, Benson had never lost to anyone except his world record holding countrymen Clarke and Kerry O'Brien between 2000 and 5000 meters. He had beaten Kip Keino, Lasse Viren, Emiel Puttemans and others in their class.

Benson prizes his sprint finish. He has run the last lap of a 5000 under 22 seconds. But at Munich it failed him for the first time because a torn hamstring had destroyed his acceleration.

Shortly afterwards, Tony turned pro.

Anthony Charles Benson: Ballarat, Victoria, Australia. 30 years old (born May 20, 1943, at Melbourne). 6'0", 144 pounds. Married, three children. Teacher. Began racing in 1963 at age 19. Self-coached.

Racing: Mile—3:59.8 (1971); 2000m—5:06.2 (72); 3000m—7:50.2 (71); 5000m—13:36.2 (71).

Training: twice a day, 7 days a week, 12 months a year; 100-130 miles a week. "I notice that training books ignore one very important aspect of running—that of powerful, explosive acceleration. It is the most important difference in big races, as Dave Wottle, Pekka Vasala and Lasse Viren showed in the last Olympics.

"Most of my success has been built on the long slow running (examples, 15-20 miles at 6-7 minute pace; 10-14 miles at 5:30-6:00 pace). Whatever speed work I do is very fast, usually not farther than 300 meters or more than five repetitions.

"Occasionally I have run 12 x 400 meters in 60 seconds with a one-minute jog. Track work has been very specific for 5000-meter racing, and I often run 5000 meters of 100 fast and 100 striding (total time 14:30-15:00), or run time-trials from 1200-4000 meters.

"I concentrate on building an explosive burst over the last 150 meters of my race, and my training for this has been hill sprints—up to 20, from 30-150 meters on varying inclines, bursting fast into the hill and again just on top.

"This has enabled me to run 52.4 (last 400m) at the end of a 1500, 51.8 at the end of a 5000, and 25.9 (last 200m) at the end of a two-mile. Never once have I lost a race of 2000-5000 meters if I was with the field with a lap to run, except in the Olympic 5000 heat when I had torn a hamstring. Only Ron Clarke (once) and Kerry O'Brien (once) were able to beat me from mid-1968 on."

JERRY BROWN

Boulder, Colo., 6000 feet up in the Rockies, appears to be developing the best walkers in the country. Bill Weigle started there and walked onto

the Olympic team at 50 kilometers last year. The Boulder-based Colorado Track Club has won eight of the last nine national races it has entered. And now the club has internationalists at both standard distances.

Jerry Brown finished second in the AAU 20-kilometer championship, qualifying for the European team. Later, Brown finished fourth in the national 50, while teammate Weigle won and Floyd Godwin was fifth.

In one respect, Brown's 50 was more amazing than his 20, though he finished lower. Fifty kilometers is about 30 miles, yet Jerry says he only does 37 high-quality training miles a week.

Regis Gerald Brown: Boulder, Colo. (Colorado Track Club). 29 years old (born Jan. 28, 1945, at Pittsburgh, Pa.). 5'9", 143 pounds. Married, one child. Accountant. Began racing in 1960 at age 15; resumed in 1970 at age 25 after six-year layoff. Self-coached.

Racing: mile—6:41 (1972); 2 miles—14:03 (72); 5 miles—37:19 (73); 10 kms.—45:15 (72); hour—8 miles 20 yards (73); 15 kms.—1:10:30 (73); 20 kms.—1:34:37 (73); 30 kms.—2:40:00 (72); 40 kms.—3:40:00 (73); 50 kms.—4:37:18 (73).

Training: once a day, 4-6 days a week, 12 months a year; averaging 37 miles a week. "General pattern: three hard workouts each week at *race pace*, ranging from 6-10 miles. The other days are very easy with 2-4 mile jogs.

"Seasonal variations: Winter—race walk twice a week, rest of the time jogging and running. From March through October, I follow the general pattern for my training.

"My body adapts exactly to the strains I put it through, and that is why I don't do any interval training. I believe that the interval training approach gets me in good shape for intervals, but not for the actual race and race conditions."

DON KENNEDY

It's no longer news to anyone that the South has risen in distance running. Five southern distance men made the Olympic team last year, three of them from Florida.

But the news is that the balance of Southern distance power has shifted away from Florida in the post-Olympic season. It has moved up to North Carolina.

While it's true that Jeff Galloway and Jack Bacheler have moved to Raleigh, they aren't the only reason for



the shift. The runners in the North Carolina Track Club are responsible.

The club has five marathoners at 2:25:31 or better, and they recently won the national AAU one-hour run championship. The fastest of the marathoners and the leading hour runner is Doug Kennedy. He's also the most improved.

Kennedy improved his time by seven minutes in the AAU marathon at San Mateo, Calif., in June. He finished third, breaking 2:20 by two seconds.



John Marconi photo

Don, who is bound for an international marathon in Czechoslovakia in October, attributes the breakthrough to increased speedwork and regular rest days.

Donald Earl Kennedy: Fayetteville, N.C. (North Carolina Track Club). 25 years old (born Dec. 23, 1947, at Fayetteville). 5'6", 120 pounds. Graduate student. Single. Began racing in 1964 at age 16. Self-coached.

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Racing: 880—1:57.6 (1970); mile—4:23 (73); 6 miles—30:03.6 (73); 10 miles—51:21 (72); hour—11 miles 1350 yards (73); marathon—2:19:58 (73).

Training: twice a day, six days a week, 12 months a year; 75-100 miles a week.

"Due to being a graduate assistant track coach at Appalachian State University, my training schedule is not very routine but is basically consistent. The morning runs are around 6-8 miles (in accordance with upcoming race) or interval.

"If racing, frequently I do only a limited amount of interval—usually no more than once a week and then essentially Lydiard's 'transitional work.' The transitional work is 16-24 x 440 at 70-75 seconds with 1:30 rest, or up to 30 220s at 32-34 with 1:00 rest, 880s

around 2:25-2:32, miles 5:00-5:05, etc. This usually totals 8-10 miles, including warmup and warmdown.

"On all my distance, I try to use variety. Living in the mountains of North Carolina greatly enhances this possibility. Close by is the Blue Ridge Parkway, plus numerous trails and park areas that make training enjoyable. The pace varies from 6:15-7:00 a mile, in relation to the distance run—that is, longer and slower or shorter and a little more quickly. Occasionally I run a 12½-mile loop in about 5:30-5:40 pace.

"I am a strong advocate of rest day once every week or so to keep down injuries and stay mentally refreshed. My aim is to enjoy my running and to look forward to each race without getting uptight about it."



by George Sheehan M.D.

MEDICAL ADVICE

SELF-SUPPORTING

In June's column, Joe Duke of Heltown, Pa., told of his less than successful use of custom-made shoe inserts for his injuries. This is his experience since.

I have taken 10 giant steps forward. For over a year, I wore orthotic appliances nearly 100% of the time. I wore them for work and for all my running. I was in so much pain that I could do virtually no running in January, February or March. In April, I began again.

I changed my routine and my philosophy, and began doing stretching exercises. I decided to get more rest and not run when tired. Each day I run my first three miles easy and determine my pace and workout as I go rather than by a pre-set schedule.

I am on my feet 50-60 hours a week in addition to my workouts, so I must be careful. I modified the shoes I wear to work and eliminated my supports completely. I wear (to work) a thin, flexible-soled shoe with a heel no more than a one-eighth-inch higher than the forefoot. I came to this conclusion because I found barefoot walking at home to be most soothing.

I also have mastered building permanent arch supports in my running shoes. I started by discarding the podiatrist-built supports, and using (Dr. Sheehan's) advice I build a support with half-inch layers of felt. I built a heel wedge and added crescents to the arch area for additional support. Later I discarded the wedge and used two-faced rug tape to put only the arch pad into my leather Cortez (the only shoe I have had any success with).

It worked. Everything is working. From April to July, I have averaged 50-75 miles a week. The true test came in my marathon at Yonkers on May 20. I ran 2:49:45, felt great and finished strong.

I am optimistic. I now have to ask, is abnormal necessarily wrong, or sometimes just different? Did I look too hard at my feet for my faults and overlook everything else?

Dr. Sheehan comments: I am delighted to hear that do-it-yourself felt supports are possible. I have advised runners to try that, especially where podiatrists

are unavailable. You have proven it can be done—in fact, that it *has* to be done.

I also agree with you about the Cortez, although those with wider feet might do well with the Puma 9190 and its equivalent in other makes. The solid shank and the thicker rubber sole make the difference.

What seems to have happened with you is that the flexibility exercises have relieved the stress on your feet immeasurably. Those of us too lazy or preoccupied to get into full flexibility yoga exercises will still need maximum podiatric aid.

Foot-leg relationship is not a one-way street. Treatment of the leg (flexibility for back leg muscles and strengthening of the front leg muscles) will reduce the need for foot treatment, just as foot treatment has helped solve upper leg problems.

KNEE "TENDINITIS"

Q: For nearly six months, my knee has been aching. I don't think it's chondromalacia. My school trainer thinks it's tendinitis. I'd like to know the difference between the two, and if tendinitis results from an imbalance of the foot. (M.S., Ohio)

A: Most knee problems in runners are chondromalacia, even when they're called tendinitis. When tendinitis occurs, however, it develops for the same reason—a twist applied to the knee through each foot strike. As in chondromalacia, you must look to some imbalance in your foot, a shoe type with a weak shank which fails to support your mid-foot, or excessive wear in the shoe.

Most runners have an unstable heel, a weak arch, a short big toe, or all three. In addition, they may have shortening of the achilles, gastrocs and hamstrings which could add to the stress on foot structures.

Start with flexibility exercises and a shoe with a solid shank (Tiger or Nike Cortez, Puma 9190, Adidas SL-72, Tiger Boston, for instance). Then add commercial or home-made arch supports. If you still have problems, see a sports-oriented podiatrist.

"POTHOLE STRAIN"

Q: One morning I accidentally stepped into a pothole while running alongside a highway. Nearly falling, I felt a slight pain in my leg but was able to continue to run. The next day, however, my thigh hurt as though a muscle had been pulled. I couldn't run without limping, and I developed a pain in the area of the hip on the other leg. Three months later, the pain in the hip persists. (M.M., Maryland)

A: Apparently your limp, whatever the cause, created a strain in your spinal-pelvic junction, which is causing your hip pain. This pain, therefore, is "referred pain." That is to say, pain carried along a nerve from your now mal-adjusted spine to your hip area.

If I am right, you will have to start on exercises to correct this lack of alignment. Stretch your hamstrings and iliopsoas to allow flattening of the back. And do abdominal situps to strengthen your abdominal muscles. In addition, I would recommend the use of a lumbo-sacral belt made by Bellhorn or Futuro. You can get one in most drugstores.

These measures may take time. Do not be discouraged.

DIABETES

Q: A 14-year-old patient of mine with diabetes plans to participate in both track and cross-country. In cross-country, he would be competing over the three-mile distance. What problems do you anticipate with a diabetic in distance running, both in training and competition, in regards to utilization of glycogen stores and possible insulin reactions? How should his diet be modified? (W.M., New Jersey)

A: Long distance running puts a drain on available glycogen in a diabetic. This action can have especially serious effects unless prepared for adequately.

First, it appears that such glycogen stores are not threatened in runs of six miles or less. However, repeated daily heavy training schedules can cause chronic depletion. This suggests that his training schedule should allow replenishment of glycogen reserves, by having his alternate days be extremely light. In addition, his glycogen supply should not be challenged acutely by runs over six miles—at least not until he has found a definite and predictable pattern of response.

As to insulin and diet: (1) He should reduce his insulin to one-half on the days of racing or hard training; (2) He should have a high-protein meal prior to running; (3) Sugar and orange juice should be available at the running area, which should be a small area until his pattern of response is established; (4) The major problem is maintenance of glycogen stores, which can be done with a high carbohydrate diet on easy running days.

Address your medical questions to Dr. Sheehan, Runner's World, P.O. Box 366, Mountain View, Calif. 94040. Many running problems are discussed in his book *Encyclopedia of Athletic Medicine* (\$1.95 from RW).

OCTOBER COMING EVENTS

This section includes all known national, regional and AAU district championships—running and race walking, at all distances—plus selected other major races. Obviously we don't have them all, often because no one let us know the details. Please send your schedules at least two months before the event.

Information here includes dates, name and site of race, starting place and time, entry limitations, name and address of director if known. Since information often changes without notice, we suggest you write ahead for confirmation before traveling long distances.

The July issue includes a list of individuals to contact for schedules of smaller open distance runs and race walks in their areas.

Send race listings to RW, Box 366, Mountain View, Calif. 94040.

NORTHEAST

- 7 Finger Lakes marathon, Ithaca to Marathon, NY (Ellis Hollow Road, 12:30 p.m.; open; James Hartshorne, 108 Kay St., Ithaca, NY 14850).
- 14 National AAU 20-kilometer championship, Gloucester, Mass. (11 a.m.; open; Bob Campbell, 39 Linnet St., West Roxbury, Mass. 02132).
- 20-1 National Capital Marathon Festival, Washington, DC (marathon, 36-mile and 180-mile; open; Robert Crane, 511 Kramer Dr., Vienna, Va. 22180).
- 21 Connecticut AAU 15-kilometer, Fairfield, Conn. (Fairfield University; open; John Boitano, 40 McLeod Pl., Stratford, Conn. 06497).
- 21 Metropolitan AAU 30-kilometer, New York, NY (Central Park, 11 a.m.; Joe Kleinerman, 2825 Claflin Ave., Bronx, NY 10468).
- 21 Green Mountain marathon, Burlington, Vt. (1 p.m.; open; Larry Kimball, RFD 2, River Rd., Winooski, Vt. 05404).
- 28 Bay State marathon, Framingham, Mass. (YMCA, 11 a.m.; open; Director YMCA, 280 Old Connecticut Path, Framingham, Mass. 01701).
- 28 Road Runners Club and AAU Junior marathon, Atlantic City, NJ. (noon; RRC race open, "Junior" for runners 19 and under; Ed League, P.O. Box 732, Atlantic city, NJ. 08404).

SOUTHEAST

- 6 East Point 6-mile, East Point, Ga. (noon; open; Don Gamel, 2493 Ben Hill Rd., East Point, Ga. 30344).
- 21 Florida State cross-country, Miami, Fla. (Ransom School; open and all age-groups, men and women; Ray Russell, 2506 N.E. 8th St., Ft. Lauderdale, Fla. 33304).
- 27 Georgia AAU 15-mile, Stone Mountain Park, Ga. (9 a.m.; open; Don Hale, 1352 Jody Lane, Atlanta, Ga.).

MIDWEST

- 6 Canton marathon (plus half- and quarter-marathons), Freeburg to Canton, Ohio (1 p.m.; open; Marathon Committee, Downtown YMCA, 405 Second St., NW, Canton, Ohio 44702).
- 20 Linn Tech marathon, Linn to Jefferson City, Mo. (10 a.m.; open; James Symmonds, Linn Technical College, Linn, Mo. 65051).
- 21 Land of Lakes marathon, Minneapolis-St. Paul, Minn. (open; John Christian, Route 1, Box 175, Maple Plain, Minn. 55359).
- 21 Monroe marathon, Monroe, Ohio (Congress Inn Motel); noon; open; Wayne Yarcho, P.O. Box 162, Dabel Station, Dayton, Ohio 45420).
- 21 Tri-States marathon, White Cloud, Kans., to Falls City, Neb. (9 a.m.; open; Louis Fritz, Verdon, Neb. 68457).

SOUTHWEST

- 20 Gulf AAU 15-kilometer, Houston, Tex. (San Jacinto Monument, 4 p.m.; open; Pete League, 5471 Jackwood, Houston, Tex. 77035).
- 21 Albuquerque marathon, Albuquerque, NM (7:30 a.m.; open; New Mexico Track Club, Box 4071, Albuquerque, NM 87106).

WEST

- 6 Fresno State Invitational cross-country, Fresno, Calif. (invitational; Red Estes, Cross-Country Coach, Fresno State University, Fresno, Calif. 93710).
- 7 Oregon TC-Nike marathon, Eugene, Ore. (Alton Baker Park, 10 a.m.; open; Geoff Hollister, The Athletic Dept., 855 Olive St., Eugene, Ore. 97401).
- 7 Hawaiian AAU 25-kilometer, Honolulu, Hawaii (open; David Cadiz, Suite 601, 810 Richards, Honolulu, Hawaii 96813).
- 13 Sacramento Invitational cross-country (Sacramento State University; invitational; Stan Wright, Track Coach, Sacramento State University, 6000 J St., Sacramento, Calif.).
- 14 Pacific AAU 50-mile, Rocklin, Calif. (8 a.m.; open; Robert DeCelle, P. O. Box 1606, Alameda, Calif. 94501).
- 14 Santa Barbara marathon, Santa Barbara, Calif. (La Playa Stadium, 7:30 a.m.; open; John Brennand, 4476 Meadowlark Ln., Santa Barbara, Calif. 93015).

CANADA

- 6 Oktoberfest marathon, Waterloo, Ontario (University of Waterloo, 1 p.m.; open; Road Race Director, Family Y, 145 Lincoln Rd., Waterloo, Ont., Canada).

INTERNATIONAL

- 7 International marathon, Kosice, Czech. (invitational; Czechoslovak Athletic Section, Na Porici 12, Prague 1, Czech.).
- 22 International marathon, Novi Sad, Yugoslavia (invitational; Federation Yougoslave d'Athletisme, Belgrade, Str. Bana 73A, Yugoslavia).
- 27 British AAA marathon, Welwyn Garden City (invitational; British Amateur Athletic Board, 26 Park Crescent, London, W1N 4BQ, England).
- 28 International marathon, Budapest, Hungary (Invitational; Magyar Atletikai Szovetseg, Budapest XIV, Istvan Mezei-ut 5, Hungary).

RACE WALKING

- 12 Lugano Cup 20-kilometer, Lugano, Switzerland
- 13 Lugano Cup 50-kilometer, Lugano, Switzerland.
- 14 Airolo-Chiasso relay, Swiss-Italian border.
- 27 National AAU women's 10-kilometer, Columbia, Mo. (Hickman High School, 5 p.m.; Joe Duncan, 4004 Defoe Dr., Columbia, Mo. 65201).
- 28 National AAU 30-kilometer, Columbia, Mo. (Leawood Subdivision, 10 a.m.; open; Joe Duncan, 4004 Defoe Dr., Columbia, Mo. 65201).

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RACING HIGHLIGHTS

TRACK ROUNDUP

Track racing has cooled somewhat since last issue—except for Renate Stecher's and Dave Bedford's. Stecher lowered her earlier world records for 100 and 200 meters. Between injuries, Bedford set a 10,000-meter world mark (see Interview).

The recent records:

● **100 meters (women)**—10.8 by Renate Stecher (East Germany) at Dresden, July 20, breaking world record of 10.9 which she had tied in the preliminaries the same day.

● **200 meters (women)**—22.1 by Renate Stecher (East Germany) at Dresden, July 21, breaking world record of 22.4.

● **10,000 meters**—27:31.0 by Dave Bedford (Great Britain) at London, July 13, breaking world record of 27:38.4.

● **100-meter hurdles (women)**—12.3 by Annelie Ehrhardt (East Germany) at Dresden, July 22, breaking world record of 12.5.

● **110-meter hurdles**—13.1 by Rod Milburn (US) at Siena, Italy, July 21, tying world record.

● **400-meter hurdles (women)**—57.3 by Maria Sykora (Austria) at Frankfurt, West Germany, breaking world record of 58.6.

Also in Europe, Emiel Puttemans ran the second fastest outdoor times in history at both two miles and 5000 meters—8:16.4 and 13:16.0.

LONG DISTANCES

Tom Fleming's two record races were reported in detail earlier in this issue: 15 miles in 1:16:11.2 and 25 kilometers in 1:19:59.2.

Bill Gookin led the AAU Masters marathon with 2:32:37. Luanne Kralick, 40, ran the fastest ever for a woman her age in that same race. She did 3:29:07.

In Australia, John Farrington's 2:11:12.6 was the year's best marathon thus far. Dave White's 12-mile 100-yard total was the best US hour run mark.

RACE WALKING

New AAU champions since the last issue: Jerry Brown at 15 kilometers, John Kelly in the Masters 20-kilometer,

and Sue Brodock in women's five-kilo. Long distances and race walking results below are those received by Aug. 9.

NORTHEAST

● **Edgewood Arsenal, Md., June 30**—Gunpowder Neck 10-Mile: 1. Vic Nelson (24) 55:38.8; 2. Charles Messenger (26) 58:24; 3. Don Spicer (27) 1:01:39... 13. Tom Barrett (47) 1:16:40... 15. Joe Holland (51) 1:19:40. (27 finished, 6 under 1:10; 85 degrees, humid; from Richard Warren).

● **Farmingdale, NY, July 1**—RRC 10-mile track: 1. Tom Fleming (21, NJ) 50:09.4; 2. Norbert Sander (30, NY) 52:25; 3. Bill Bragg (24, NJ) 53:10.6... 5. Nina Kuscsik (34, NY) 1:04:37.2; 6. Joe Viverito (40, NY) 1:05:01. (15 finished, 4 under 1:00). 25-kilometer (2 runners continued after 10 miles): 1. Fleming 1:19:59.2 (American record; also record at 15 miles, 1:16:11.2); 2. Sander 1:22:48.2. (from Joe Kleinerman)

● **Takoma Park, Md., July 4**—DC AAU 15-kilometer: 1. Sheldon Karlin (23, Md) 52:55; 2. Kent Staver (18, Md) 53:24; 3. Mike Sabino (34, Md) 54:17; 4. Wayne Vaughn (27, Md) 55:01; 5. George Bagvis (17) 55:34... 41. Bob Horman (55) 1:04:30. (86 finished, 21 under 1:00; 90 degrees, very humid; from Bob Thurston).

● **Mahopac, NY, July 4**—8½-mile: 1. Bill Wilbur (23, NY) 43:52; 2. Sonny Fennell (22, NY) 43:59; 3. Giles Kemp (22, NY) 44:22; 4. Tom Birch (19, NY) 45:27; 5. Erich Komdat (15, NY) 45:49... Jim McDonagh (49, NY) 47:35. (124 finished, 22 under 50:00; from Joe Kleinerman).

● **Langley, Va., July 9**—5-mile: 1. Bernie Allen (27) 26:49; 2. Wayne Vaughn (27) 27:08; 3. Mike Turmala (20) 27:19... 19. Hubert Morgan (51) 30:35. (68 finished; from Bob Thurston).

● **Albany, NY, July 11**—One-hour: 1. Langford 10m 1060y; 2. Ellis 10m 940y. (9 runners, 3 over 10 miles).

● **South Huntington, NY, July 22**—Met AAU one-hour: 1. Phil Bonfiglio (21, NY) 11m 282y; 2. Bill Wilbur (23, NY) 11m 50y; 3. Pat Bastick (39, NY) 10m 1086y... 6. Joe Burns (44, NJ) 10m 671y... 23. Nina Kuscsik (34, NY) 9m 565y. (51 runners, 11 over 10 miles).

MIDWEST

● **Toledo, Ohio, June 17**—Glass City marathon: 1. Sid Sink (24, Ohio) 2:32:15; 2. Peter Hallop (26, Ohio) 2:36:37; 3. Roger Rouiller (34, WV) 2:37:43; 4. Don Slusser (21, Pa) 2:38:30; 5. Thomas Bryant (19, Ohio) 2:39:12; 6. Lou Wagner (29, Ohio) 2:39:48... 52. George Gilmore (45, Ohio) 3:08:34... 76. Sigrid Nadon (31, Ohio, 1st woman) 3:18:14... 89. Art Thompson (53, Ohio) 3:23:07. (186 finished, 38 under 3:00, 100 under 3:30, 148 under 4:00; from J. G. Edwards).

● **Akron, Ohio, June 23**—Lake Erie AAU one-hour: 1. Paul Talkington (26, Ohio) 11m 1531y; 2. Cletus Griffin (22, Ohio) 11m 472y; 3. Dan Shook (21, Ohio) 11m 208y; 4. Dan Sekerak (26, Ohio) 11m 160y; 5. Bill Welsh (18, Ohio) 11m 48y... 25. Jim Comyns (41, Ohio) 9m 653y. (39 runners, 17 over 10 miles; from Jim Klett).

● **Columbus, Mo., June 28**—Missouri Valley AAU one-hour: 1. Fred Binggeli (21, Mo) 11m 156y; 2. Dennis Stewart (24, Mo) 10m 585y... 11. Rex Frazer (41, Mo) 9m 572y... 25. Linda Maddox (21, Mo) 7m 478y. (34 runners, 7 over 10 miles, 15 over 9 miles; from Joe Duncan).

● **Monticello, Ill., July 1**—Freedom marathon: 1. Dike Stirrette (24, Ill) 2:30:47; 2. Barney Hance (23, Ill); 2:33:17; 3. Bob O'Connell (24, Ill) 2:34:23; 4. Gary Long (17, Ind) 2:36:27; 5. Peter Elliott (26, Ill) 2:36:36; 6. Craig Harms (22, Ohio) 2:39:08; 7. Jim Eicken (16, Ill) 2:39:58... 13. George Branam (42, Ind) 2:46:23... 43. Bob Martin (52, Ill) 3:20:16. (69 finished, 28 under 3:00, 51 under 3:30, 67 under 4:00; from Steve Goldberg).

● **Brookings, SD, June 30**—South Dakota AAU one-hour: 1. Joe Skaja (23, Minn) 11m 639y; 2. Chuck Ceronsky (25, Minn) 10m 1713y... 7. Bob Bartling (46, Minn) 10m 291y... 13. David Griffith (52, SD) 7m 871y. (15 runners, 7 over 10 miles, 9 over 9 miles).

● **Whitewater, Wisc., July 1**—Whitewater marathon: 1. Tom Hoffman 2:33:51; 2. Peter Farwell 2:36:57; 3. Harold Sutherland 2:38:24; 4. Bruce Fraser 2:38:53; 5. Tom Rachubinski 2:44:47... 31. Jeff Shuman (13) 3:15:54... 53. Jeanne Crandall (15) 3:40:19. (65 finished, 17 under 3:00, 48 under 3:30, 62 under 4:00; from Rex Foster).

● **Muncie, Ind., July 14**—Prairie Creek 15-kilometer: 1. Mark Gibbens (25, Ind) 46:32; 2. Dick Bowerman (23, Ind) 46:42; 3. Bob Bowman (20, Ind) 47:08; 4. Bill Gavaghan (22, Ind) 48:24; 5. Hank Nash (20, Ind) 48:38; 6. Chuck Koeppen (27, Ind) 46:42; 7. Joe Sherman (17, Ind) 50:04... 14. George Branam (42, Ind) 52:03... 56. Bernie Middleton (50, Ind) 59:48... 132. Becky Pierce (25, Ind) 1:24:26. (137 finished, 21 under 55:00, 57 under 1:00; from Bill Fink and Steve Lewark).

● **Rochester, Minn., July 15**—Corncob 9-mile: 1. Tom Hoffman (25, Wisc.) 46:26; 2. Dennis Fee (18, Minn) 46:42; 3. Chuck Burrows (24, Minn) 48:10... 29. Ed Leete (45, Minn) 56:26... 66. Jan Arenz (23, Minn) 1:09:47. (69 finished, 9 under 50:00, 25 under 55:00, 44 under 1:00; from Ken Miller).

● **Columbia, Mo., July 14**—Missouri Valley AAU 15 kilometer: 1. Fred Binggeli (22, Mo) 48:55; 2. Bob Busby (24, Mo) 49:15... 16. Rex Frazer (41, Mo) 57:51. (37 finished, 6 under 55:00, 20 under 1:00; from Joe Duncan).

● **Charleston, Ill., July 28**—Central AAU 20-kilometer: 1. Mark Gibbens (25, Ind) 1:04:33; 2. Phil Davis (27, Ill) 1:05:07; 3. Dike Stirrett (24, Ill) 1:05:40; 4. Dennis Delmott (25, NC) 1:05:56; 5. Duane Gaston (21, Ohio) 1:06:52; 6. Jim Buell (17, Ill) 1:07:08... 22. George Branam (42, Ind) 1:11:00. (124 finished, 16 under 1:10, 41 under 1:15; from Tom Woodall).

SOUTHEAST

● **Hallandale, Fla., July 4**—Florida 15-kilometer: 1. Jim Schaper (21, Fla) 48:27; 2. J. D. Evilsizer (21, Fla) 48:56; 3. Pat Chmiel (27, Fla) 49:40; 4. Neil Murphy (18, Fla) 49:50; 5. Tom Elbert (19) 50:58... 25. Paul Jarrett (52, Fla) 57:28... 50. Nathan Bender (62, Fla) 1:12:41... 59. Tammy Talles (15, Fla) 1:46:15. (59 finished, 12 under 55:00, 30 under 1:00; from Ray Russell).

● **Grandfather Mountain, NC, July 14**—Mountain marathon: 1. Don Kennedy (NC)

2:38:13; 2. Gareth Hayes (NC) 2:41:56; 3. Phil Southerland (Fla) 3:03:07. (38 finished, 14 under 3:30, 23 under 4:00; course climbs 1000 feet in elevation; from George Phillips).

SOUTHWEST

● **Tulsa, Okla., July 7**—8-mile: 1. Terry Ziegler (22, Okla) 41:14; 2. Art Botterill (27, Ark) 42:06; 3. Henry Shawnee (23, Okla) 43:54... 15. Art Browning (41, Okla) 52:55... 20. Vern Whiteside (53, Okla) 55:50. (24 finished, 8 under 50:00).

● **San Antonio, Tex., July 28**—Southwest Texas AAU one-hour: 1. Gary Tuttle (Tex) 11m 12:09y; 2. Scott Taylor (Tex) 10m 11:11y; 3. Larry Seethaler (Tex) 10m 7:99y... 7. Al Becken (44, Tex) 9m 53:4y... 22. Kathy Loper (31, Tex) 8m 22:1y. (51 runners, 92 degrees).

● **Tulsa, Okla., July 28**—10 kilometer: 1. Art Botterill (27, Ark) 31:30; 2. Terry Lewis (21, Okla) 33:53... 13. Harold McDonald (45, Okla) 39:33... 19. Vern Whiteside (53, Okla) 42:41. (21 finished, 4 under 35:00, 15 under 40:00).

WEST

● **Morro Bay, Calif., June 24**—6-mile: 1. Ed Cadena (25, Fla) 32:38; 2. Vince Engel (25, Fla) 32:38; 3. John Beaton (19, Cal) 33:00... 11. Leonard Thornton (43, Cal) 35:48... 68. Mary Carman (12, Cal) 43:43. (157 finished, 9 under 35:00, 41 under 40:00, 73 under 45:00; from Terry Record).

● **Aurora, Colo., June 30**—Rocky Mountain AAU and National Junior 20-kilometer: 1. Chuck Smead (21, Cal) 1:08:54; 2. Steve Floto (21) 1:10:25; 3. Jack Pottle (18, Colo) 1:10:39; 4. Lee Courkamp (30, Colo) 1:11:20; 5. Ken Hunter 1:11:31. Juniors: 1. Pottle; 2. John Ziegler (19, Wyo) 1:11:47; 3. Ronald Maestas (17, NM) 1:14:31; 4. Don Wilder (19, Neb) 1:15:26; 5. Tom Stermitz (18, Colo) 1:16:03. (44 finished, 8 under 1:15, 17 under 1:20).

● **Valencia, Calif., July 1**—7-mile: 1. Larie O'Hara (40+, England) 39:11; 2. Ben Martinez 39:54; 3. Ed Chaibes 40:10; 4. Guy Arbogast (high school) 40:33; 5. Jim Arguilla (22) 40:51. (126 finished, 17 under 45:00, 42 under 50:00; from John Brennand).

● **Ogden, Utah, July 4**—Molestus half-marathon: 1. Scott Bringham & Bill Haviland (Ohio) 1:09:43; 3. Howard Miller 1:14:16; 4. Dan Walker 1:17:58; 5. George Lysy 1:18:08... Mary Matthews 1:48:11. (from Jan Cheney)

● **Mt. Evans, Colo., July**—Mt. Evans 14.2-mile run (10, 400 to 14,264 feet): 1. Chuck Smead (21, Calif) 1:46:25; 2. Damien Koch (Colo) 1:50:33; 3. Don Starbuck (Colo) 1:53:55... 17. Frank McCabe (55, Colo) no time... 46. Frankie Ortega (12, NM) nt. (64 finished under 2:45).

● **Santa Barbara, Calif., July 4**—Southern Pacific AAU 15-kilometer: 1. Mike Wagenback (23, Cal) 46:50; 2. Dave White (Cal) 47:05; 3. Terry Williams (18, Cal) 47:33; 4. Bill Scobey (28, Cal) 47:37; 5. Dave Babiracki 47:51; 6. Ron Kurrle (25, Cal) 48:08... 29. Dick Bartok (40+, Cal) 52:29... 76. Jacki Hansen (24, Cal) 1:01:15. (156 finished, 8 under 50:00, 42 under 55:00, 69 under 1:00; from John Brennand).

● **Winchester, Ore., July 7**—10-mile: 1. Dave Wilborn 51:49; 2. Ted Wolfe 51:59; 3. Bob Gray 52:43.

● **Felton, Calif., July 8**—9-mile: 1. Jack Bellah (Cal) 52:32; 2. Dan Anderson (Cal) 53:29; 3. Alex Aguilar (17, Cal) 53:59; 4. Doug Butt (Cal) 54:41; 5. Rich McCandless (18, Cal) 54:58; 6. Dean Chesnut (Cal) 54:59... 19. Ken Napier (40, Cal) 58:15... 48. Teri Anderson (19, Cal) 1:02:39. (27 under 1:00; very hilly course; from Jack Leydig).

● **South El Monte, Calif., July 7**—7.9-mile: 1. Bill Scobey (28, Cal) 41:13; 2. Ron Kurrle (25, Cal) 41:45; 3. Tim Tubb (Cal) 42:27; 4. Joe Toledo (25, Cal) 42:38; 5. Ed Chaides 42:55... 38. Sam Nicholson (44, Cal) 48:30... 79. D. T. Sanchez and S. M. Sanchez (1st women) 54:06. (148 finished, 15 under 45:00, 52 under 50:00; from John Brennand).

● **San Diego, Calif., July 8**—AAU Masters marathon: 1. Bill Gookin (40, Cal) 2:32:37; 2. Bill Allen (41, Canada) 2:33:07; 3. Steve Goldberg (40, Ill) 2:38:25; 4. Howard Miller (46, Wash) 2:42:55; 5. Tom Buckingham (54, England) 2:46:33; 6. Alex Ratelle (48, Minn) 2:47:15; 7. Don Jones (47, Cal) 2:47:32; 8. David Parker (42, Cal) 2:47:59; 9. Robert Coffee (41, Tex) 2:48:42; 10. Byron Cattell (40, Wash) 2:49:53.

Over-50: 2. Wayne Zook (56, Cal) 2:57:39; 3. Robert Bruce (51, Ill) 3:08:56; 4. Leroy Zimmerman (52) 3:11:03; 5. Frank McCabe (55, Colo) 3:13:07. Over-60: 1. Urban Miller (62, Cal) 3:13:17; 2. Sam Lee (60, England) 3:22:08; 3. John Montoya (61, Cal) 3:25:21; 4. Walt Stack (65, Cal) 3:38:08; 5. Alan Flanigan (61, Cal) 3:50:49. Over-70: 1. Noel Johnson (74, Cal) 4:59:00. Women: 1. Luanne Kralick (40) 3:29:07 (women's over-40 world best). (76 finished, 18 under 3:00, 52 under 3:30, 68 under 4:00).

● **San Jose, Calif., July 13**—50-mile track: 1. Bill McCray (23, Cal) 6:57:25; 2. Walt Stack (65, Cal) 8:05:27. (9 started, 2 finished; from Scott Rayer).

● **Portland, Ore., July 21**—Oregon AAU one-hour: 1. Randy Henry (17) 10m 35:9y; 2. Kaj Johansen (28, Wash) 10m 24:6y... 5. Field Ryan (41, Wash) 9m 12:14y. (27 finished, 2 over 10 miles, 14 over 9 miles; 85 degrees; from Richard Raymond).

● **Seattle, Wash., July 28**—Pacific Northwest AAU one-hour: 1. Jim Shepard (27, Wash) 11m 8:14y; 2. Guy Renfro (24, Wash) 11m 15:1y; 3. Fred New (21, Wash) 11m 14:0y... Field Ryan (41, Wash) 10m 14y. (17 runners, 12 over 10 miles; from Al Huff).

● **Santa Barbara, Calif., July 28**—Southern Pacific AAU one-hour: 1. Dave White (21, Cal) 12 miles 100 yards; 2. Ron Kurrle (25, Cal) 11m 13:20y; 3. Jerry Alexander (19, Cal) 11m 8:42y; 4. Phil Ryan (29, Cal) 11m 8:31y; 5. Todd Ferguson (30, Cal) 11m 7:77y; 6. Joe Toledo (25, Cal) 11m 6:96y; 7. Rich Elliott (21, Cal) 11m 4:40y... Dick Bartek (40, Cal) 10m 17:55y. (from John Brennand).

CANADA

● **Toronto, Ontario, July 1**—Canada Day marathon: 1. Dave Viney (22)—no time (mis-directed late in race and ran less than full distance); 2. Dave Landriault (22) 2:38:25; 3. Bill Allen (41) 2:53:11... 14. Joe Fernandez (50, NY) 3:18:36... 38. Judy Kazdan (54) 4:33:15. (39 finished, 4 under 3:00, 23 under

3:30, 35 under 4:00). Half-marathon: 1. Bob Moore (32) 1:11:11; 2. Bruce Dewsberry (19) 1:13:15. (29 finished, 7 under 1:20, 12 under 1:30; from Lorne Buck).

RACE WALKS

● **Boulder, Colo., June 24**—National AAU 15-kilometer: 1. Jerry Brown (Colo) 1:13:26; 2. Ron Laird (Cal) 1:14:22; 3. Floyd Godwin (Colo) 1:14:53; 4. Peter Van Arsdale (Colo) 1:19:59; 5. Chuck Hunter 1:29:26; 6. Bob Carlson 1:36:00; 7. Joe Manning 1:45:06. (Only finishers; from Jack Mortland).

● **Broomfield, Colo., July**—Rocky Mountain AAU 30-kilometer: 1. Floyd Godwin (Colo) 2:29:57; 2. Chris Amoroso (Colo) 2:57:38. (4 finished).

● **Bridgeport, Conn., July 4**—5-mile: 1. John Kniffton (NY) 38:32:6; 2. Ron Daniel (NY) 39:45; 3. Gary Westerfield (NY) 40:17; 4. Karl Johansen 40:42; 5. Ron Kulik (NY) 41:27... Bob Mimm (40+) 42:09... Carol Siciliano 50:00... Don Johnson (50+, NJ) 51:13.6. (45 finished; from John Boitano).

● **San Diego, Calif., July 8**—AAU Masters 20-kilometer: 1. John Kelly (44, Cal) 1:51:07; 2. John Markon (44, NY) 1:55:22; 3. Don Johnson (56, NJ) 2:00:08; 4. John MacLachlan (42, Ill) 2:02:03; 5. Justin Ger-shuny (46) 2:04:28; 6. Arthur Smith (52) 2:08:57... 8. Larry O'Neil (65, Mont) 2:11:34. (11 finished, all under 2:30).

● **San Francisco, Calif., July 8**—Pacific AAU one-hour: 1. Wayne Glusker (Cal) 7m 10:90y; 2. Manny Adriano (Cal) 7m 30:0y; 3. Phil Mooers (50+, Cal) 5m 12:45y. (only finishers).

● **Munich, West Germany, July 12**—US-West Germany-Switzerland 10-kilometer: 1. Bernd Kannenberg (WG) 43:48.4... 4. Jerry Brown (US) 44:56; 5. Bill Ranney (US) 45:46.

● **Heidenheim, West Germany, July 14**—US-West Germany Junior 10-kilometer: 1. Boegelmann (WG) 48:37.2... 3. James Patton (US) 52:04.8; 4. Randy Mimm (US) 53:49.4.

● **Turin, Italy, July 18**—US-Italy 10-kilometer: 1. Vittorio Visini (It) 44:15.2... 3. Jerry Brown (US) 45:47.4; 4. Bill Ranney (US) 46:07.

● **Boulder, Colo., July 21**—National AAU women's 5-kilometer: 1. Sue Brodock (17) 27:40; 2. Ellen Minkow (18, NY) 28:02.4; 3. Esther Marquez (17) 28:20.2; 4. Cindy Arbelbide (23, Cal) 28:47.4; 5. Cristy Dotseth (14, Ill) 28:52.6; 6. Carol Mohanco (18, Ohio) 29:22.8. (17 finished, 9 under 30:00; from Elisa Haire).

● **Warsaw, Poland, July 20**—US-Poland Junior 10-kilometer: 1. Kazimierski (Pol) 46:37.2... 3. James Patton (US) 50:34.8; 4. Randy Mimm (US) 51:44.0.

● **Minsk, USSR, July 24**—US-USSR 20-kilometer: 1. Yevgeniy Ivchenko (USSR) 1:35:31.6... 3. Bill Ranney (US) 1:36:35.8; 4. Jerry Brown (US) 1:37:41.0.

● **Kharkov, USSR, July 17**—US-USSR Junior 10-kilometer: 1. Podtchouk (USSR) 45:32.8... 3. James Patton (US) 49:47; 3. Randy Mimm (US) 49:52.2.

● **Seattle, Wash., July 28**—Pacific Northwest AAU one-hour: 1. Bob Rosencrantz (Wash) 6m 15:89y; 2. Dick Arkley (Wash) 6m 57:1y. (5 walkers, all over 6 miles; from Al Huff).

CLASSIFIED NOTICES

Reach over 16,000 subscribers with your advertisement in *Runner's World*.

Rates: meet/race notices 15 cents per word; general notices 20 cents/word.

Deadline for Sept. issue was Aug. 6; Oct. deadline is Sept. 4.

THE FLORIDA STATE AGE-GROUP CROSS COUNTRY CHAMPIONSHIPS

(sanctioned by AAU & RRCA)—October 21, 10 a.m., Ransom School, Miami. Medals to first three boys and first three girls in each age group. Ribbons to all finishers. Age groups (distance in parentheses): 7 & under (1½); 8-9 (1½); 10-11 (1½); 12-13 (1½); 14-15 (1½); 16-17 (2½); open 18-39 (2½); vets 40 & over (2½); Entry fee \$1.00. Deadline for entries October 13, 1973. Ray Russell, 2506 N.E. 8th St., Ft. Lauderdale, Fla. 33304. (305) 563-6850.

THIRD ANNUAL EAST POINT ROAD RACE

Starts at City Hall, 10:30 a.m., Saturday, Oct. 6, 1973. Six-mile open, masters 30-40, 40-50, 50 & up, women; 12 & under 3-mile, one-mile novice, 12 & under; 19-30, 30 & up, women, large team trophy, gatorade party. Trophy or medals to 1st 15 open, 1-7 in others, 2 medals to one-mile novice per division. Some of the top masters and open athletes will be on hand. 450 expected. Write East Point Recreation Dept., c/o Don Gamel, 2493 Ben Hill Rd., East Point, Ga. 30344, or call (404) 767-7368, 6-8 p.m.

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KIWANIS-CIRCLE K MARATHON

September 29; Adirondack AAU Ch. Paul Smith's College to Lake Placid, N.Y. Entry blanks and information: Tom Agan, Box 83, Paul Smiths, N.Y. 12970.

THIRD ANNUAL MASTERS INDIVIDUAL AND TEAM AAU—10,000-METER CROSS-COUNTRY CHAMPIONSHIP

November 17 at 2 p.m., Lorain County Community College, 1005 N. Abbe Rd., Elyria, Ohio. Age groups 40-49, 50-59, 60-69, 70 and over. Team race can include any combinations of age groups.

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sponsors two 1973 fall events in beautiful Forest Park. Oct. 13—Second Annual Fall Footrace (6-mi., age group awards). Oct. 27—First Annual Central USA X-C Club Championships, 10,000 meters (5-man open teams, 3-man master teams; award jackets to first 3 teams in each division, award banquet after). Both events begin 1 p.m. For entry blank and additional information, write: Jerry Adams, 1528 Locust St., St. Louis, Mo. 63103.

ALBUQUERQUE MARATHON

Sunday, October 21, 1973, at 7:30 a.m. Awards: Open, places 1-25; Masters, places 1-5; Youngest finisher; First woman finisher; T-shirts to all finishers. Entry Fee—\$2.50. Contact: NM-TC, P.O. Box 4071, Albuquerque, N.M. 87106.

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RUNNING SHORTS

● Aging doesn't wait until middle-age to start. Wear and tear—the kind running counteracts—begins at about the time most men and women are leaving school and “settling down.” Their condition deteriorates faster between ages 25 and 35 than in any other decade of life, according to the Fitness Institute of Toronto.

Lloyd Percival of the Institute, writing in the August issue of *Sports and Fitness Instructor*, calls 25-35 the “dangerous decade.” He says these years are where patterns and problems of a lifetime are established.

“Sports activities begin to fade,” Percival says, “as career, family and home take up more and more time and interest.” As a result, fitness levels drop dramatically, with the decline becoming quite apparent in the late 20s and early 30s.

The Fitness Institute compared 18-year-olds and 30-year-olds. The most important differences were in oxygen uptake capacity and body fat. Minimum oxygen uptake dropped 27% by age 30. Fat was up by 50%! Performances by the 30-year-olds were equally poor in other fitness areas: flexibility (21% decrease), strength (14% decrease), heart performance (24% decrease).

The Institute found, however, that those who stayed reasonably active during the dangerous decade had maintained youthful fitness levels and “reported far fewer health problems, had less tension, were much leaner and had a higher morale.”

● Some clarification is called for on the running survey quoted in the June issue. We said that the President's Council on Physical Fitness had learned there are 5.6 million adult runners in the country.

The number is correct, but the President's Council adds that “one-third of the persons who say they jog do so only once or twice a week (and many others do it less frequently). About the same number jog no more than 10 minutes per outing.”

Since the generally recognized minimum standards of fitness are three sessions a week of at least 10 minutes each, this eliminates nearly half the 6.5 million from being called serious runners.

U.S. DISTANCE TIMES FOR 1973

These are distances beyond the normal track range, which stops at 10,000 meters. Except for the hour- and two-hour runs and Tom Fleming's record races at 15 miles and 25 kilometers (see earlier article), these are road events. So measurements are often questionable. These are the best performances on courses thought to be reasonably accurate, by American citizens, reported by Aug. 6. Please send additions and corrections to RW, Box 366, Mountain View, Calif. 94040. (t=track race)

15 KILOMETERS

45:58 Amby Burfoot (26, Conn)
 46:09 Will Durette (Mass)
 46:32 Mark Gibbens (25, Ind)
 46:42 Dick Bowerman (23, Ind)
 46:50 Mike Wagenbach (23, Cal)

Over-40

49:28 Bill Gookin (40, Cal)

Under-20

47:33 Terry Williams (18, Cal)

Women

55:02 Nadia Garcia (19, Cal)

10 MILES

47:49t Jeff Galloway (27, NC)
 50:09t Tom Fleming (21, NJ)
 51:03 Dan Clark (21, Minn)
 51:07 Phil Camp (25, Cal)
 51:22 Sam Bair (25, Pa)

Over-40

53:17 Gar Williams (40, Va)

Under-20

52:18 John Sheehan (19, Cal)

Women

1:04:37t Nina Kuscsik (34, NY)

ONE HOUR (TRACK)

12m 100y Dave White (21, Cal)
 12m 95y John Vitale (24, Conn)
 12m 90y Amby Burfoot (26, Conn)
 11m 1531y Paul Talkington (26, Ohio)
 11m 1380y Larry Olsen (26, Mass)

Over-40

11m 677y Hal Higdon (41, Ind)

Under-20

11m 1174y Dan Schlesinger (17, NC)

Women

9m 1625y Nadia Garcia (19, Cal)

20 KILOMETERS

1:01:28 Ron Kurrle (25, Cal)
 1:02:41t Tom Fleming (21, NJ)

1:03:30 Larry Miller (23, Ore)
 1:03:34 Phil Camp (25, Cal)
 1:04:19 Rich Kimball (16, Cal)

Over-40

1:09:07 Jerry Smartt (41, Cal)

Under-20

1:04:19 Rich Kimball (16, Cal)

Women

1:22:21 Nina Kuscsik (34, NY)

15 MILES

1:15:03 Paul Talkington (26, Ohio)
 1:16:11t Tom Fleming (21, NJ)
 1:17:25 Carl Hatfield (25, WV)
 1:18:10 Amby Burfoot (26, Conn)
 1:18:10 John Vitale (24, Conn)

Over-40

1:24:59 Hal Higdon (41, Ind)

Under-20

1:20:36 John Foran (17, Conn)

Women

(no times available)

25 KILOMETERS

1:18:10 Amby Burfoot (26, Conn)
 1:18:10 John Vitale (24, Conn)
 1:19:52t Tom Fleming (21, NJ)
 1:20:25 Skyler Jones (20, Ariz)
 1:20:36 John Foran (17, Conn)

Over-40

1:24:59 Hal Higdon (41, Ind)

Under-20

1:20:36 John Foran (17, Conn)

Women

(no times available)

30 KILOMETERS

1:38:46 Paul Talkington (26, Ohio)
 1:38:50 Tom Fleming (21, NJ)
 1:39:10 Joe Toledo (25, Cal)
 1:40:04 George Stewart (23, Cal)
 1:40:25 Phil Camp (25, Cal)

Over-40

1:43:21 Dave Waco (40, Cal)

Under-20

1:40:45 Tom Smith (19, RI)

Women

2:12:22 Jacki Hansen (24, Cal)

20 MILES

1:41:27 Tom Fleming (21, NJ)
 1:44:31 Tom Hess (22, Tex)
 1:51:06 Dan Winzenried (20, Wisc)
 1:52:35 Dale Roe (25, Wisc)
 1:54:01 Stephen Miller (27, Wisc)

Over-40

2:02:32 Norm Alsobrook (42, Tex)

Under-20

(no time available)

Women

2:24:36 Nina Kuscsik (34, NY)

TWO HOURS (TRACK)

21m 1481y Tom Childers (Va)
 21m 1190y Ray Morrison (26)
 20m 876y Pete Elliot (26, Ill)
 20m 680y John Cramer (21, Minn)
 20m 658y Ken Young (31, Ill)

Over-40

19m 814y Tony Diamond (43)

Under-20 and Women

(no times available)

MARATHON

2:12:03 Frank Shorter (25, Fla)
 2:15:48 Doug Schmenk (22, Cal)
 2:16:03 Jon Anderson (23, Cal)
 2:16:15 John Vitale (24, Conn)
 2:17:43 Bill Scobey (28, Cal)

Over-40

2:31:52 Bill Gookin (40, Cal)

Under-20

2:23:47 Mitch Kingery (16, Cal)

Women

2:53:40 Teri Anderson (19, Kans)

50 KILOMETERS

2:52:24 Bill Scobey (27, Cal)
 3:03:39 Carlos Alfaro (27, Cal)
 3:10:45t Ken Young (31, Ill)
 3:11:59 Bill Anderson (29, Cal)
 3:14:00 Doug Sailors (Cal)

Over-40

3:18:25 David Parker (42, Cal)

3:18:25 Dave Waco (40, Cal)

Women

4:41:22 Linda Bottlik (10, Cal)

50 MILES

5:26:40t Martin Smith (23, Ia)
 5:55:30 Max White (22, Va)
 6:12:20 Rich Warren (26, Cal)
 6:23:53 Park Barner (29, Pa)
 6:53:13 Ed Jerome (29, Va)
 6:53:13 Steve Yates

Over-40

7:16:56 Bill Jackson (45, Md)

Under-20

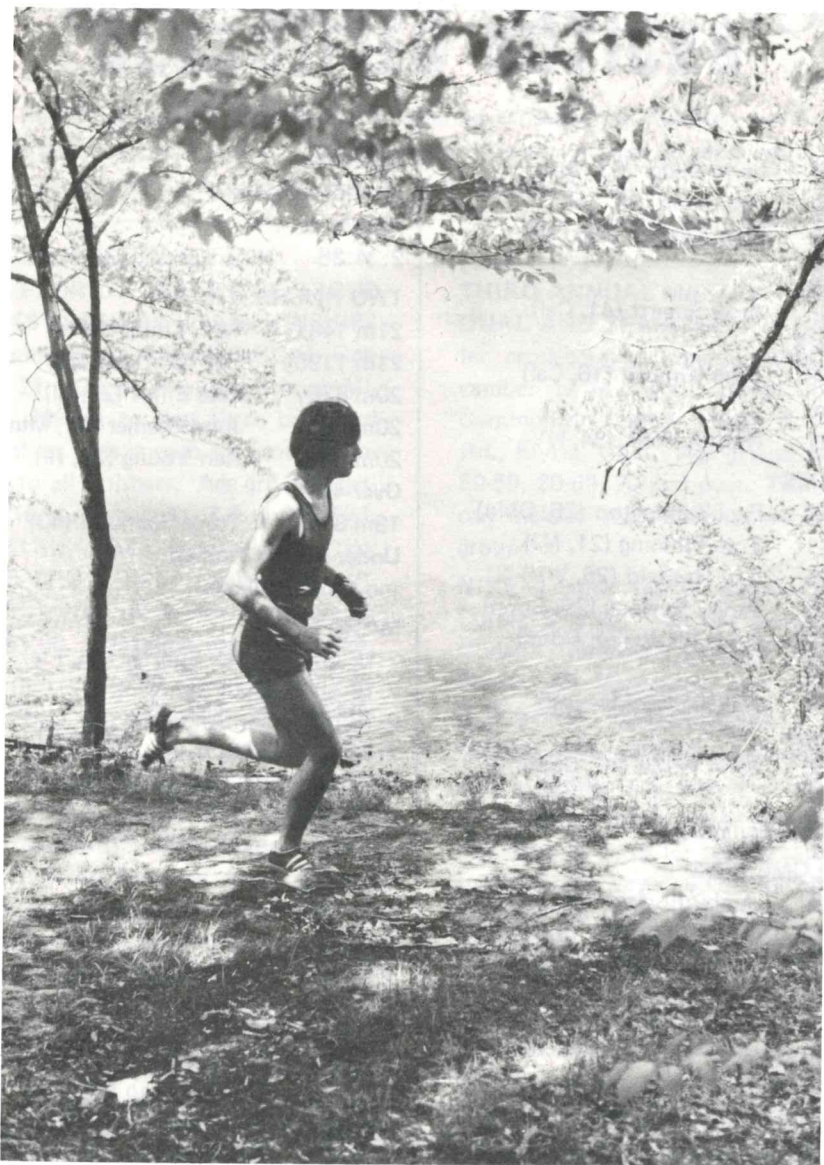
(no time available)

Women

8:26:07 Donna Aycoth (23, Md)

100 MILES

18:09:16 Natalie Cullimore (35, Cal)
 22:21:39 John Arberry (Cal)



You can find joy in running alone, as in John Cooper's photo, or with other runners—like those who work at Starting Line.

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- **Jog Joy warm-ups** — 100% acrylic warm-up suit both jacket and pants. Sixes: xs, s, m, l, xl. Colors: navy, royal blue, forest green, red. **Price — \$21.95.**
- **Liberty Action warm-ups** — 100% stretch nylon with white stripe on legs and on arms. Sizes: xs, s, m, l, xl. Colors: forest green, kelly green, royal blue (all with white stripes). **Price — \$22.95.**

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- **E. R. G. Athletic Drink** — See ad page 32.

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● **Atomic Balm** — Made by Cramer. Good for those aching muscles. 3 oz. tube. **Price — \$1.85.**

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All marathon runners who complete the course in under
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Running shirts will be provided all entrants.

READERS' COMMENTS

LEGISLATION

In the August issue of *Runner's World*, an editorial ("Shaking Up Track's Rulers") discusses the many problems in the present structure of track and field in this country. However, you dismiss Congressional efforts to solve those problems by referring to the formation of a so-called "super-group" and conclude, "This won't solve anything." I would like to register my disagreement in the strongest possible terms.

With regard to the proposed Amateur Athletic Act of 1973, I and Senators Pearson, Cook, Gravel and Thurmond feel this bill could be a very real answer to the problems of amateur athletes in this country.

The legislation would create an Amateur Sports Board which would oversee the activities of those groups which are recognized as the governing bodies for Olympic sports in the country. One of the requirements for recognition is that at least 20% of the voting power in any such body be held by athletes. Contrary to your suggestion that this will lead to less responsiveness to the needs of athletes, we firmly believe that this will have to make amateur sports bureaucracies more responsive to the needs of athletes.

In addition, the charters awarded by the Board in Olympic sports would expire every four years, and the performance of the group which had held a charter in any sport would be subject to rigorous review. This will clearly improve the present situation in which sports bodies are self-perpetuating and interested only in preserving their powers and not in the interests of athletes.

The editorial further goes on to suggest that a "central clearing house for information" is a present necessity in sports. The proposed Board would have two divisions (Facilities, Safety and Health), the purposes of which would be the collection, analysis and dissemination of information just as you suggest.

Further, you advocate more funds for development and research. The proposed legislation contains provisions for the establishment of a National Sports Development Foundation, which would administer a trust fund made up of as

much as \$50 million in private funds and \$50 million in Federal matching funds. This would mean that \$5-10 million per year could be spent on the precise areas of need to which you refer. Indeed, these two areas are the very ones with which the Foundation would be created to deal.

In summary, we believe that the Amateur Athletic Act of 1973 is a reasonable and well thought-out way to deal with the problems which concern all of us who are interested in the future of amateur athletics. It is not an attempt to create a massive Federal bureaucracy which will administer sport on a day-to-day basis. It is an attempt to see that the athletes are able to compete under the best conditions possible.

Because we believe that we share these concerns with you and your readers, we would like to solicit your support for our efforts. This legislation could signal the beginning of a progressive new era in American amateur sports.

John V. Tunney
United States Senator

A WARNING

A quick comment on the Tarahumara's running ability ("A Case for Undereating," July 73): They are able to run not because of their diet, but rather their ability is more influenced by heredity, adaptiveness to adversity and their actual running "practice." The Tarahumara's diet is inadequate in both protein and in some cases calories. Their infant mortality rate is the biggest enemy due to poor nutrition and disease. Thus I caution any runner who wishes to imitate the Tarahumara's diet and thinks it will allow him to run as these Indians do.

Arthur Andersen
Erie, Pa.

CARBOHYDRATES

Your article on "Loading and Overloading" (July 73) is interesting indeed. I would hate to see this become too much of a bone of contention, especially when the EKG and the coronary-clogging rry may not be a factor at all.

NEXT ISSUE: The special section on the connection between physical and mental health, and the Doug Schmenk interview will highlight the October issue. Late-breaking news this month caused the slight delay.

Though I believe scientific research needs to be done along these lines to establish the point, it is my opinion that all super marathon runners are hyperinsulin types and therefore utilize sugar readily. But we have to realize that not all runners are super marathoners. And to go one step beyond that, we must consider the possibility that not all runners can utilize carbohydrate readily.

What is one man's meat can be another man's poison. I run with a fellow who claims that before he began running he ran a high blood sugar. With a program of running, his blood sugar became normal. It seems the running enabled his body to overcome the problem. When he heard of carbohydrate loading, he tried it—as we all did—but with him it was strictly negative.

I am a hyperinsulin type and utilize carbohydrate well. However, through experience I have found that a continued high-carbohydrate diet—especially with a lot of sugar foods—leads to a breakdown in well-being and performance. I like to "gas up" with carbohydrate for a race. But I believe in a high-protein followup.

Dr. James Gunias
Akron, Ohio

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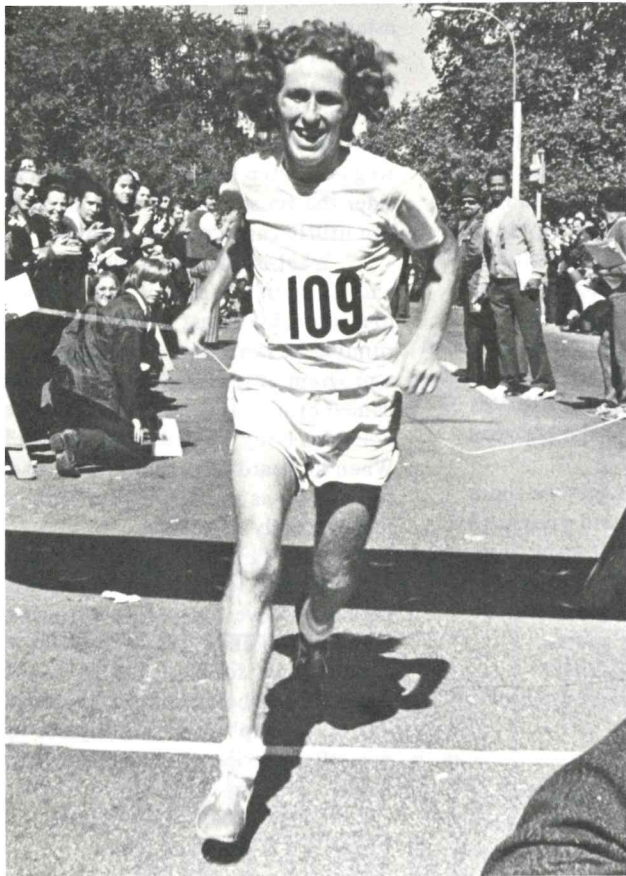
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In consideration of your accepting this entry, I, the undersigned, intending to be legally bound, hereby, for myself, my heirs, executors and administrators, waive and release any and all rights and claims for damages I may have against the Road Runners Club of America, Olympic Airways, the West Side YMCA, the Metropolitan Association of the A.A.U. and the City of New York, their representatives, successors, and assigns for any and all injuries suffered by me in said event. I attest and verify that I am physically fit and have sufficiently trained for the completion of this marathon of over 26 miles and my physical condition has been verified by a licensed Medical Doctor.

Signature in full _____

Parent's signature if under 17 years of age _____

Print name _____ Street _____

City & State _____ Zip _____ Tel. No. _____

Occupation _____ Age _____ AAU No. _____

Club, organization, or school _____

Best marathon time _____ Where run? _____ Date _____ Finish place _____

Please include any other athletic biographical data about yourself. _____

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boston '73



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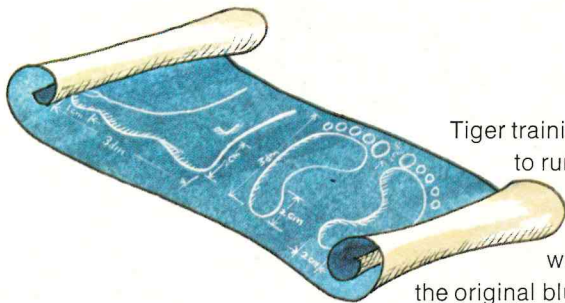
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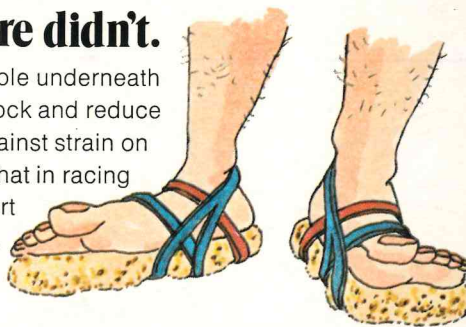
The best training shoe is more like a foot than a shoe.



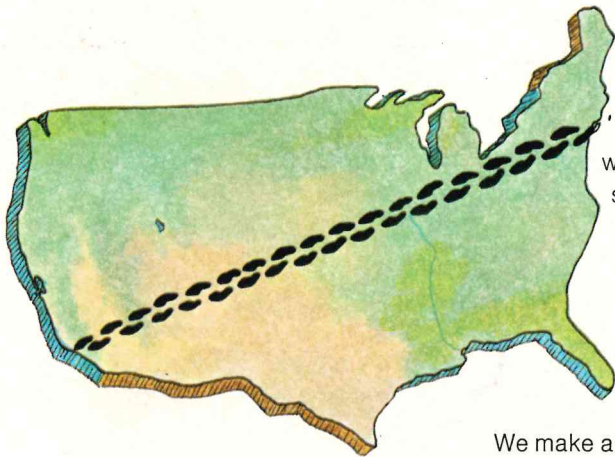
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