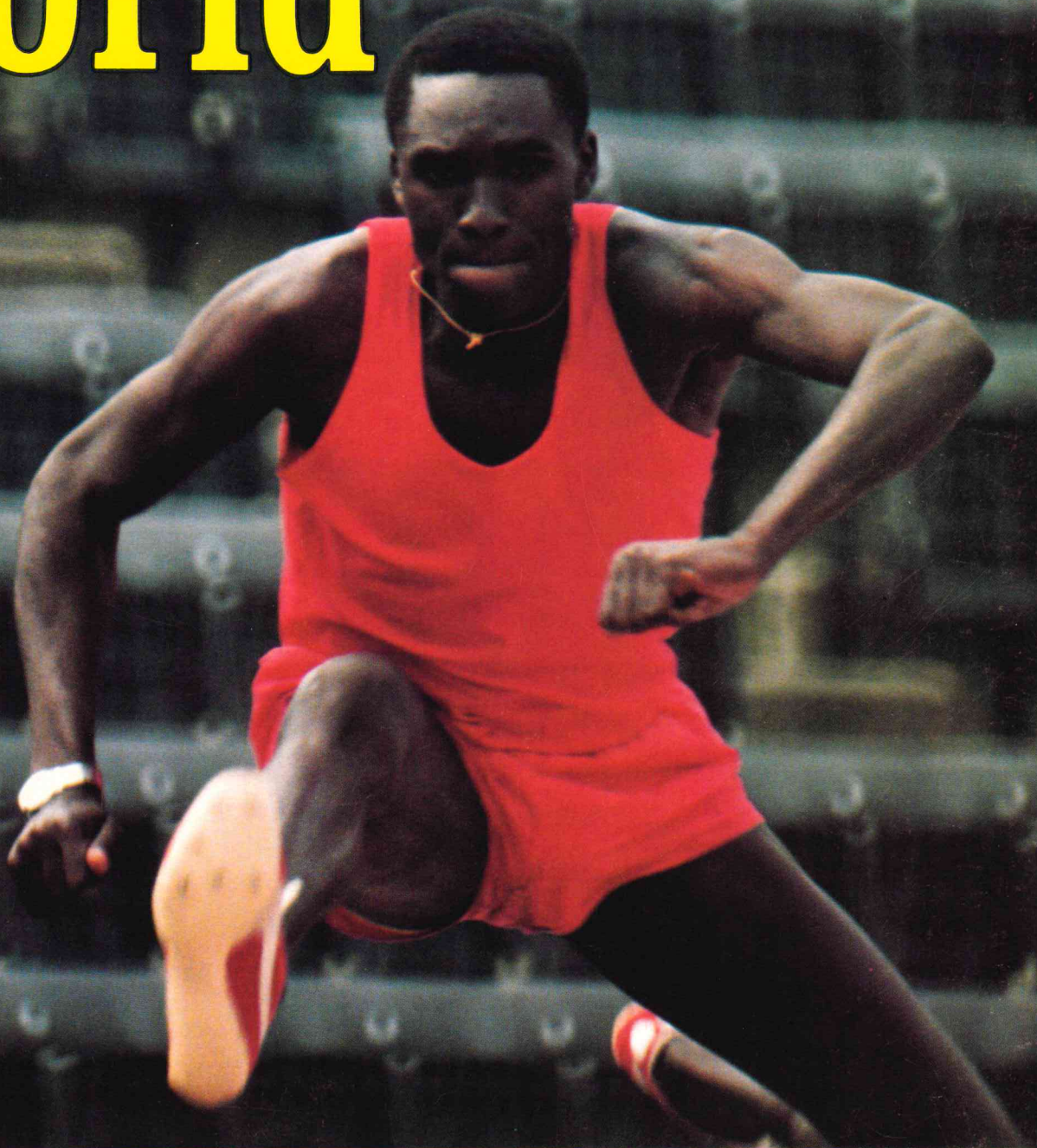


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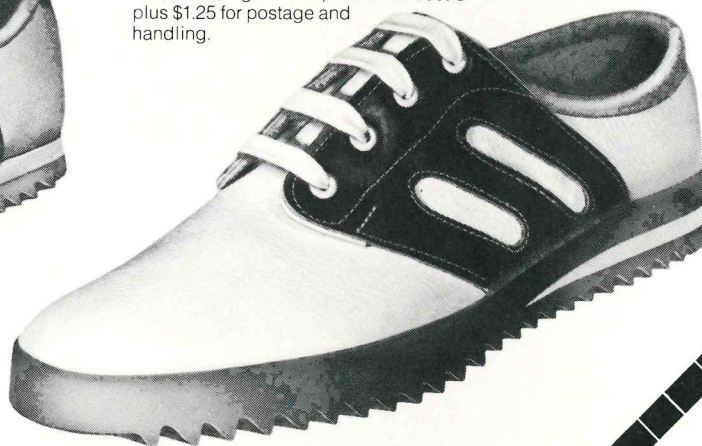
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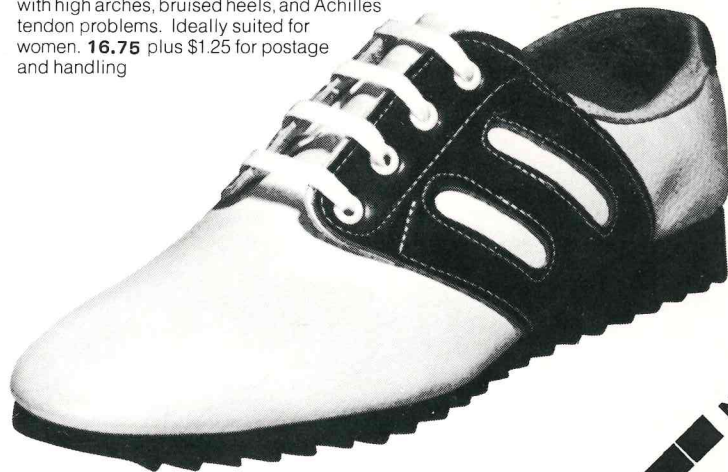
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RUNNER'S WORLD

Volume — Eight November 1973 Number — Eleven



COVER:

An "out-of-this-world hurdler" is the way the feature article beginning on page 26 refers to John Akii-Bua—the Olympic 400 hurdles champion. (Tony Duffy photo)

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FROM THE PUBLISHER

Our office at 931 Industrial in Palo Alto just is too small. When we moved into this 2500-square-foot building in May 1972, we felt we could stay here for at least three years. At that time we had six people working here. We now have 15 full-time people here and one more coming Nov. 1.

People are running all over each other, so we are making a change. Nov. 15 we are moving into a 5400-foot building in Mountain View. It is going to give us a lot more room and will help in our expansion.

The new man we have coming in November is Martin Rudow. He has worked for Kraft for the last five years and right now is one of their top salesmen in Santa Barbara. He has gotten a number of awards and has won several trips and goods for the excellent job he has done with them.

Martin has also helped us out over the years by writing a regular walking column. He was a walker himself but he injured a knee a couple of years back and has been out of action ever since. In October his wife Judy is due to give birth to their first child.

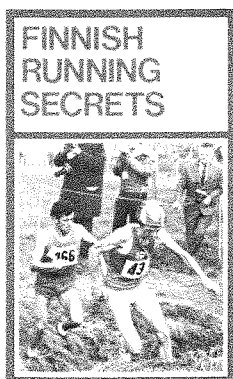
Martin is coming on as marketing manager. His job will involve marketing all of our products. That involves a lot but we have no doubts that he will be able to handle it.

Joyce Stanislawsky is now working in the accounting department and catching on very fast. She takes care of all invoicing and posting of all expenses. If you ever have any questions about an invoice, contact Joyce.

We are looking for a major distributor on the East Coast. We would be talking about a minimum investment of \$40,000, to get started but it could make you good money. If you might be interested in being a World Publications (which includes Starting Line Sports) distributor, please drop me a note direct.

Nordic World is now really getting off the ground. Dave Prokop is helping out heavily in this area and producing some good copy. If you haven't seen a copy of the magazine, we can send you a free sample on request. For that matter, we can send you a free copy of any of our magazines (*Bike World* and *Aquatic World*, too).

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The writer, Matti Hannus, says there are no secrets as far as technique is concerned. The Finns have adapted Arthur Lydiard's methods to the situation. These methods can apply anywhere, and Hannus tells what they are.

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PROGRESS IN RUNNING REFORM

Fresh winds of change were blowing down from the Rockies in October. The AAU, facing threats of Congressional overhaul, seemed willing to make internal structural revisions which might strengthen its crumbling power base and soothe its many critics.

AAU officials were meeting at West Yellowstone, Mont., in what could have been the last convention of its kind—depending on what the Senate and the House of Representatives decided to do with the country's amateur athletic structure. Legislation which could dismantle the group that has ruled US open sports for almost a century was pending in Washington during the convention.

We talked with several of the long distance running committee delegates before they went to Yellowstone, and they were by no means unanimously against Congressional action. Indeed, a number of the committee members were circulating petitions in favor of the Amateur Athletic Act.

To their way of thinking, this wasn't a conflict of interest. They considered themselves runners and running promoters first. Their role in AAU politics was only incidental. They were most concerned with running, and wanted what was best for running's future. A new organization seemed to hold promise because it offered distance running more room to grow than it has now.

The bill in Congress offered autonomy for long distance running. There would be no swimmers or wrestlers or even track and field people helping make distance running decisions—only distance runners.

Meanwhile, as the bill hung in limbo, the reformers of running covered another base. They moved for greater autonomy within the AAU. They were willing to work within the present structure or outside of it. Either way, there was opportunity—inside a group threatened with destruction and willing to make concessions to avert it, or in the new group that might come. The decision on which way the distance runners ultimately would have to turn was in higher hands, so they prepared to go either way.

Men's long distance running already

had a degree of independence, having split from the track and field committee some years back. However, distances still aren't recognized as a distinct entity in the US Olympic Committee, so track people had the power to pick national marathon teams. The women long distance runners still had only a weak subsection in their AAU track committee. These were two main points of dispute.

Reformers felt that the long distance sport had grown up enough to get out from under track's wing. It put on its own events and had its own type of runner. So it deserved full, separate and equal recognition.

This convention was the right place to ask for it. This was the right time to ask the AAU for rule changes that would solidify, consolidate and formalize the growing role of the distance runners.

The Road Runners Club bloc of the distance men led the campaign. Vince Chiappetta and Aldo Scandurra of New York City drew up a detailed amendment to the AAU Code, and lobbied vigorously for its approval.

Contained in the bland wording of the amendment were far-reaching powers and responsibilities. It said the distance committee would:

1. Write its own competitive rules and determine its own policies.
2. Take charge of all races 3000 meters and beyond—on the track, roads or cross-country.
3. Create its own travel fund to send deserving runners outside the country for races.

Currently, rule- and decision-making are more fragmented than the reformers would like. "Long distance" running starts with cross-country's 10,000 meters and includes none of the short track races. The distance committee has almost no money and no way to get it, as was shamefully evident when the US could send no men's team to the International cross-country meet last spring (see "Editorial," May 73).

The proposed amendment laid down a number of rules. The most significant changes were: (a) the committee would keep two sets of official national records one for the track and a new

set for certified road courses; (b) anyone who runs a long distance race must be registered with the AAU as a long distance runner, not as a track and field athlete.

The second ruling, if passed, would bring in the travel money the committee so urgently needs. There are no TV spectator-meet rakeoffs in the long distances, so runners are forced to pay their own way.

Eighty percent of annual AAU registration fees would go into the travel fund. Another 80% of the entry fees from national championship races and 50 cents per runner in all sanctioned marathons would go into the same pot.

The distance chairman, Bob DeCelle, and officials from the women's side were caught up in the reform spirit, too. DeCelle urged the AAU president to push for individuality of the sport with the US Olympic Committee.

The result of separate recognition would be a bigger voice for marathoners in the selection and handling of marathoners on Olympic and Pan-American teams.

The plans presented at the convention didn't mention combining men and women runners under a single committee. But the RRC bloc thinks this must come eventually.

Meanwhile, the spectacular progress of women's running continues. As recently as three years ago, the AAU balked at letting them go more than five miles. A proposal was before the latest convention to establish three new long distance championships for women: 10,000 meters, one hour and the marathon.

Voting on all these measures was going on at West Yellowstone as this issue was going to press. Some are bound to be shot down during committee debate. It was unlikely, for instance, that the long distance runners would gain control of races as far down as 3000 meters. And we don't think they should. That would be stepping on the track people's toes. The natural break is at 10,000 meters, track stopping there and long distances starting.

Minor disagreements aside, though, we like the way these representatives are leading us and the directions they are trying to go. Only this kind of progressive action will save the AAU. If it can't act this way, it isn't worth saving for a 1974 convention.

NEWS AND VIEWS

Races for Women

Women's distance running needs an angel.

While top male athletes enjoy classy distance races in Sao Paolo, San Blas or Fukuoka, and juniors and masters programs are providing ample races and publicity for young and old runners, top females have yet to receive a chance to compete with the best in their event.

The Crazylegs 10,000-meter race in 1972 gave an ironic push to distance races for women (see "News and Views," Sept. 72). The New York Road Runners Club ably took up Johnson Wax's not-so-modest proposal and gave the race some dignity, according to Kathy Switzer ("Leaving the Side-Show Era," Aug. 73). The Marathon Oil race promoters speak of having a women's marathon championship in 1974, Springbank had a females-only race this September, and Puerto Rico planned to host a distance race in November.

With luck, other women's races may get off the ground. But until such races are firmly established, the cause needs a big boost. Either benevolent citizens or public-spirited organizations must back big women's races, preferably at the five- to 10-mile distance.

Like male athletes, many female runners may find their talent at the intermediate distances over the two-mile track distance and under the marathon distance. While women like Caroline Walker, Cheryl Bridges, Nadia Garcia or Vicki Foltz easily outdistance other women runners (and many males), handling sub-six-minute miles up to 10 miles, these women rarely have a chance to compete with each other at any distance longer than two or three miles of cross-country.

On a national level, a large women's race could attract the top athletes by paying their transportation costs. Runners like Francie Larrieu, Kathy Gibbons or Eileen Claugus should also be invited. Best in their one- and two-mile track races, these runners seldom have occasion to test themselves at longer distances.

Money is available to send women to races up to two miles, in big meets. Money is available to send national teams to international meets. But until women can establish their own reputation as distance runners, they will have to seek out their own finances. Benevolent citizens, are you listening?

Women deserve the chance to explore their talents as distance runners. They deserve the dignity of their own races. They need financial backing to provide them with the kind of prestigious race that sparks a national interest and acceptance of women's distance running.

While aimed at the nation's top runners, such a race should also be open to any woman who wants to compete, regardless of speed. The goals of a prestigious women's distance race would be:

1. To promote quality, competitive running for women.
2. To provide incentive and recognition for top female distance athletes because they are "tops" in their event, not because they happen to be women runners finishing in men's races.
3. To allow women a chance to compete on a first-class basis to promote women as runners rather than as the freak sideshow of men's races or as a publicity stunt for race sponsors.
4. To help logically extend the distances that women can contest internationally, with the backing of such organizations as the AAU or USOC.

From Janet Heinonen

What is a Runner?

What is a runner?

Only a runner knows the answer. The inner-satisfaction of running and the experience of running is internally and eternally sacred to him. A runner is many things rolled into one. He or she is not simply a person who runs.

A runner is one who enjoys being thought of as "a little weird" by the non-running population, and who in turn thinks that the non-runners themselves are a little weird. A runner thinks a sub-50 resting heart rate is just about normal and he thinks that 50 miles of running per week is child's play. A runner can quote the times of top runners like Baptists can quote Bible verses.

A runner despises being referred to as a "jogger" and he equally despises being asked to stop and give directions to someone during a workout.

He thinks football is a "minor sport."

A runner thinks that William

Proxmire is the best US Senator simply because Proxmire runs, and he thinks that all Bruce Dern movies are good because Bruce is a runner.

A runner owns at least 10 pairs of running shoes and takes pride in how rapidly he wears them out.

An ideal date for a runner is to go for a country run.

A runner has told the story of the extra 385 yards in the marathon at least 25 times.

He knows that running doesn't get its fair share of the sport's news and he gets angry at sports commentators who perform particularly inept coverages of long races.

A runner waves at all other runners.

A runner feels guilty if he has to miss a running workout for a petty reason like a broken leg.

A runner's eyes light up if a runner is shown on television or in a movie, even if the runners are way in the background and invisible to the non-runner. A runner's ears perk up at the very mention of the word "run" or "running," even if it is used in references to a "run in a stocking" or "running for office."

A runner thinks that LSD stands *only* for long slow distance. He thinks that pre-testing has to do with Steve Prefontaine and he cannot see a Kenmore washer without thinking of the marathoner.

A runner thinks a male, single person is spelled B-A-C-H-E-L-E-R and he cannot hear anyone mention something being shorter without thinking of Frank.

A runner makes puns using the phrase "in the long run," and he has been known to make worse puns about the Finnish being the first to finish.

He thinks the "human race" has to do with competitive running and he will always leave you with the phrase, "I've gotta run now."

From David Corbin

Back to the Heart

In June, Dr. Joan Ulliyot wrote of checking Ron Daws' heart response under racing conditions ("Monitoring a Marathoner"). In September, Dr. Alan Claremont's rebuttal questioned her conclusions ("News and Views"). This is Dr. Ulliyot's final defense.

Alan Claremont raises several points which I did not, for the sake of brevity, discuss in my original article. He essentially asks three questions: (1) Was our measurement of Ron Daws' heart rate (177-180) during a marathon accurate? (2) how valid is the prediction of oxygen consumption based on heart rate? (3)

what did I mean talking about "oxygen debt" when everyone knows the marathon is almost entirely "aerobic?"

The heart rate measurement was really the crux of our study and is, of course, totally dependent on the instrumentation—in this case, the calibration of both the miniature ECG recorder and the scanning equipment used to read and transcribe the tape. Our small Holter Monitor was supplied by Avionics Corporation of Los Angeles.

Since I too (on the basis of Dr. David Costill's treadmill studies of marathoners) had anticipated a heart-rate around 160 (which would be 80% of maximal), I contacted the Avionics company about the high rate actually measured. Since the recorder is calibrated at 60 pulses per minute, was it possible that at a rate $2\frac{1}{2}$ -3 times the instrument would be off by, say, 5-10%?

I was informed (somewhat indignantly) that the monitors are designed to record arrhythmias with rates up to 300 per minute, and must meet specifications of less than one-tenth of one percent deviation over the entire range of heart rates. So I am inclined to trust the instrument—particularly since Ron's wrist pulse, when it leveled off at 80 beats per minute following the race, corresponded well with the recording.

The prediction of oxygen consumption was not guesswork but was derived from treadmill studies in which Ron's maximum consumption—at a heart rate of 187 was 76 milliliters per kilogram per minute. The oxygen consumption at several lower rates (150-183) enabled us to draw a straight-line graph relating the two variables.

From this, the oxygen consumption at a heart rate of 177-180 was between 69 and 70 ml./kg./min., or 90% of Ron's measured maximum. While this is higher than the 70-85% Costill reported in a group of marathoners tested at race pace on a treadmill, it is not out of line when one recalls that individuals may differ greatly in their ability to work close to their maximum capacity.

Costill, in fact, has also reported that Derek Clayton's outstanding marathon performance is not based on an unusually high maximum oxygen consumption (his was 69 ml./kg./min.) but on his ability to run long distances utilizing a high 85% of his aerobic capacity even on the treadmill.

Ron Daws may also have this ability, since his best marathon pace is much closer to his fastest mile time than is usual. Finally, the challenge of a competition may also stimulate greater effort

than a treadmill run, and result in higher values for both heart rate and oxygen consumption.

Dr. Claremont gave an alternative (and much lower) estimate of Ron's oxygen consumption (58) based on his average pace during the marathon. Such an extrapolation for ground speed is similar to the highly simplified (and often misleading) self-testing method described in *RW* last February, which depends on pace during a three-mile run at maximal effort. While there is of course a direct correlation between pace and oxygen consumption in any given individual, this relationship will vary with differences in terrain and environmental conditions (hills, heat, wind, etc.).

Running efficiency also differs between individuals, so that one person's actual oxygen consumption during a six-minute mile may equal another's at five-minute pace. So while my value of 69-70 ml./kg./min. is only an estimate, it is based on measurements made on Ron Daws himself and not on extrapolations from other runners under completely different conditions. I think my method is probably much closer to the mark.

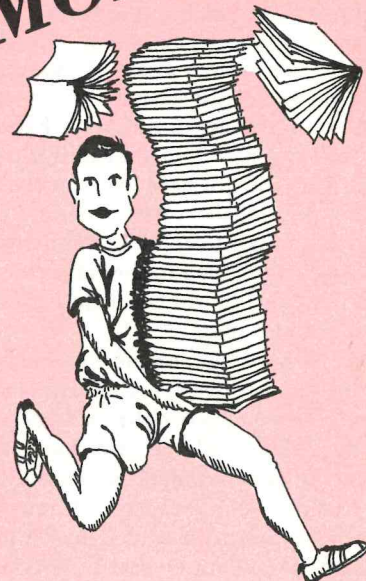
Claremont's objection to my explanation of Ron's prolonged high recovery pulse of 80 (his resting pulse is normally 40) is due to his misinterpretation of "oxygen debt." He states that oxygen debt accumulation is minimal in a marathon. What he means to say is that anaerobic metabolism and the accumulation of lactic acid are insignificant in marathon running. However, the accepted definition of oxygen debt is the increased oxygen consumption following exercise. Since this oxygen debt was long thought (incorrectly) to reflect the magnitude of anaerobic metabolism, the phenomena are still frequently confused.

Dr. G. A. Brooks of the University of California at Berkeley suggests in fact that the term oxygen debt be discarded in favor of the more precise "post-exercise oxygen consumption." Brooks believes that the prolonged increase in oxygen uptake, which is associated with elevated heart rate and temperature, reflects a complex series of "metabolic and thermoregulatory readjustments" at least partly induced by the heat load generated during a run. (Reference: Brooks et al, *Amer. J. Physiol.*, 221:423-431, 1971.)

One of these metabolic disturbances seems to be a decreased efficiency of oxygen utilization at the cellular level. This more extensive definition of oxygen debt encompasses the temperature effects which Claremont discussed.

From Joan Ulliyot M.D.

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MARY DECKER



Doug Schwab photo

I was told by several individuals prior to this interview that I would find Mary Decker to be naive (e.g. while in Europe she was not aware of the fact that she was racing against the Olympic 800-meter champion Hildegard Falck of West Germany). Although it is true that Mary did not have many of the facts of her performances well in hand, I think that it is unfair to consider her naive because of it. She runs her races to win, has fun doing it, and has little regard for times or individuals.

Perhaps this complete openness to the competitive experience goes a long way in explaining her phenomenal success so far. What would be naive for an adult is totally understandable and refreshing to find in a young teenager. Knowing that most bona fide adults, myself included, do not always feel entirely comfortable in the adult role, I am naturally sympathetic to any difficulties that a 15-year-old might have when suddenly thrust into it.

Mary Decker is, lest it be forgotten in the hubbub of athletic stardom, an essentially typical 15-year-old girl. Of course, I base this attestation to normalcy on totally intuitive grounds—which happen to be several vague, and possibly outdated, presuppositions about teenagers. This, along with the fact that she assured me it was true, serve as the basis for the belief that she is a representative teenager.

Whatever the truth of the matter, let it just be said that she likes macrame, politics (she's the class treasurer), pajama parties, listening to records, and boys. She dislikes being away from home for too long (the summer tour made her homesick), taking orders, giving interviews, and, of course, boys. Although all this seemed fairly typical to me, perhaps it is only because of my own rather misshapen conception of what 15-year-olds are really into these days.

Of course, I wouldn't have been in the position of interviewing Mary at all if, in fact, she was totally average. She is also an exceptionally fine runner—talented enough to run, and run well, in international competition.

While still 14 (she turned 15 on Aug. 4), Mary bloomed this year into the leading American 800-meter runner. She lost to Wendy Koenig in the national championships, but then beat Wendy three times in Europe. Mary lost only once on the tour, and in that race (against Olympic champion Falck in Munich) ran her best time of 2:02.4. In subsequent races, Decker beat Olympic medalists Paola Cacchi of Italy and Niele Sabaite of the Soviet Union.

RW: Are you looking forward to running cross-country this fall?

Decker: No, I'm planning on an indoor season more than cross-country. Right now I'm injured—not from running, but from an accident. I got my foot caught in the spokes of my bicycle. It should be something that will heal by itself. But it'll be a matter of a couple of weeks before I can run again. I also gained a little weight. I was 87 pounds and now I'm up to 92.

They want me to go out for the high school cross-country team, but I don't want to. I don't want to run with the boys. It's stupid. I don't think it's right to let girls compete with boys in the first place. If the girls run with the boys, pretty soon the boys will want to run with the girls, and the girls won't be able to run anything.

Even though I know that I can beat most boys who are my own age, that doesn't help the other girls very much. I'd rather see our school have a girls' cross-country team separate from the boys, but I don't think they every will.

If I'm in shape I may run the nationals, but I'm not really planning on a big cross-country season.

RW: Do you have a favorite running season?

Decker: No. In cross-country season I like that better than track. But I like indoor track better than outdoor track when it's indoor season. And when outdoor season comes I like outdoor season better than indoor season.

RW: That's convenient. I take it

then that you enjoyed touring with the US national team this summer?

Decker: Well...I did get homesick, but I think everyone did. I never got tired of competing. Some people were tired of not eating right though.

If we wanted to, we could go on bus tours and stuff, but I didn't go on very many. It was boring. There really wasn't anybody my own age on the tour. I just hung around with everybody and they were kind of protective of me because I was so young.

RW: Of all the places you visited, which was your favorite?

Decker: Munich. It was cleaner. People weren't *really* friendly, but friendly. It was the only country where, when we were running, the people would cheer for all the athletes, no matter what country they were from. In the other countries they would only cheer for their own athletes. Except in Africa—they would occasionally cheer for Americans there.

In Italy and Russia it was really terrible. In Italy they never once clapped or cheered for an American. In Russia they cheered for me—because I was so young I guess. Like when Steve Williams won (the 400-meter relay), they didn't cheer for him; they booed (Valeriy Borzov. That was it.

RW: What was the most satisfying race for you on the tour?

Decker: The Russian one. I won that one. Last year's indoor season I ran the mile against the Russians in the meet at Richmond, Va. I got third with a really bad time. I wanted revenge for that.

RW: Do you psych-up for some races more than others?

Decker: No, not really. They're all about the same, aren't they? I don't hardly ever get nervous for a race except when I'm warming up right before. I think

that of all races, I was probably more nervous for the nationals down here (at Irvine, Calif.) than I was for any other race.

RW: How did that race go?

Decker: Well, in the first lap we were all in a pack, and I got elbowed a few times and cut off there. Wendy Koenig was out in front while I was getting cut off and elbowed. After that lap and off the turn, I got back up with her and was on the outside lane, on her shoulder sort of I guess.

Then we were going around the corner and I got elbowed by somebody else. I was...I forget exactly how it went. I got elbowed and cut off a lot of times in that race. This sort of thing happens more in the big races because everybody wants to make the team and everybody's vicious.

Off of the last turn Wendy started going and I didn't realize it or something. Then I started moving and we were far enough ahead, I didn't worry about anybody catching me from behind. I was satisfied with second because it made the team. I think if I had run that race the way I ran the ones over in Europe, I could have beaten her.

RW: How did you run the races in Europe?

Decker: I stayed near the back and off of the last turn, the last 200 meters or so, I'd pick it up. They'd be in front of me like she (Wendy) was, the same distance and stuff, but I'd just sprint, just all-out and sprint and go by people.

RW: Do you have any idea what your last 200 meters was run in?

Decker: No, I don't pay much attention to things like that. I just sprint.

RW: What long-range running goals do you have?

Decker: I'd like to win an Olympic gold medal. If I don't do what I want to in the first Olympics, I'll just stay with it until the next.

My best distance is 800 meters, but my coach thinks that I can move up to the 1500 and win a gold medal in both events. Right now, though, I don't know about both. I think that I could in the 800, because Dave Wottle told me that when he was my age he was only running like 2:15. He also said that I'm young enough where I won't go downhill if my years are planned right. He says that all I'll do is improve. I don't believe that people burn out physically. I think they burn out mentally.

RW: Is Dave Wottle an idol of yours?

Decker: Sort of. I really look up to him and like the way he feels about track. He's told me a lot of things about how to run a race.

Also, he's got a good personality. A lot of runners will think that they're the center of the world or something and he's not like that. He treats other people good. A lot of track people won't talk to other people because they think they're so special.

RW: Say you do win a gold medal in the Olympics. What then?

Decker: I'd probably quit. After you set out to do what you want to do, and achieve it, there's really nothing left in it any more.

I might consider turning professional, but only after I've done what I wanted to in the Olympics. I think that pro track will go over pretty big. This is only its first year. I think that by the time I'd be ready to get into it, there'll be women's events.

I figure that if you put a lot of work into something that you should get something out of it, too. Even now, a lot of people ask me to advertise things for them. But by being in the AAU you can't do things like you normally could. For instance, I was called recently to be on the "Dating Game." Any other girl could have been on without any hassle, but I couldn't because I'm in the AAU. You'd be surprised how much they can meddle in your life.

E.R.G.

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replace salts and vital
minerals before and
during practice and
competition.*

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Starting Line Sports

RW: Do you feel that people in general try to butt into your business and tell you how to live?

Decker: Yes, everybody expects me to be perfect. I do things and I make mistakes just like any other normal kid. People think I'm supposed to be some kind of saint or something. I'm supposed to set this big example for the other kids because, so they say, everybody looks up to me. I have an image now to live up to and I don't like living up to an image someone else sets for me.

RW: Do you think that you've been pushed, against your will, into running?

Decker: No, I really love to run. I've been in it about seven years now and I'll continue until it's no more fun. My parents are really good about it and they don't pressure me at all.

Some parents will try to tell the coaches how to coach their kid and a lot of parents won't let their kids quit when they want to. They just push them and it just makes it worse for the kid. If I was pushed I just wouldn't do it. It isn't any fun when someone is pushing you into something that you don't really want to do. Even if you do like it but are being pushed into it more, it's not fun anymore.

RW: What would you consider a perfect interview? How would you like this interview to portray you?

Decker: Just as a normal person, but then... if I was completely normal no one would be interested in reading about me. But generally, a typical 15-year-old. I swim and sew and bike and do all sorts of things just like any other normal kid.

RW: Do you ever have any worries about becoming muscle-bound and unfeminine because of athletics?

Decker: A lot of women don't go into sport because they think it's unlady-like. That's just their excuse because they can't do it. Like in Russia, the women look like men because they take steroids and do their weight work. If you just like sports it's not going to make you unfeminine or anything like that, because you don't have to go taking steroids because you're not supposed to anyway. It's illegal but they can't detect it.

And you don't have to go lifting weights like a man, because you don't have to be as fast as a man. It will turn a lot of women off to it if they think they have to put up with big muscles and stuff to succeed. It's stupid. You don't have to look like a man to compete.



RUNNING WITH STYLE

Movement habits--good and bad ones, inborn and learned--determine how fast you can travel.

HOW MUCH CAN WE RELEARN?

It is dusk, and you're running home into the lingering glow of the western sky. Up ahead, a quarter-mile away on the crest of a hill, another runner cuts across your path. He's silhouetted against the reds and golds of early evening.

From this distance and with this backlighting, you can't see the runner's face. But you recognize him immediately. You know him by the way he runs. His identity is in his style of movement—his stride, his trunk, arm and head carriage.

Style is a personal trademark as different from runner to runner as are their fingerprints. The way one runs is partly hereditary, partly learned while growing up, and only slightly changed through running training. A runner looks much the same after a year or five or 10 years of serious work as he did when he started. He's more efficient perhaps, but the basic habits are still there.

Some glide over the ground like deer, barely seeming to touch down. Others pound the earth like angry rhinos. There are "striders" who gobble up the earth in great gulps, and "choppers" who take it in jerky little bites. There are "windmills" who flail their arms like propellers, and "boxers" who run as if they were protecting their faces from

LEFT: Some would say Jim Ryun has a form fault—his "head-rolling" habit. His results haven't suffered. (Mark Shearman photo)

attack. There are "head-rollers," "stargazers" and "ground-watchers" who all look everywhere but ahead. Their individual styles identify them.

The style variations aren't necessarily wrong or in need of change. In fact, more harm may come from treating insignificant personal quirks as problems than from ignoring them.

Ken Doherty, a leading American technical track writer, says in his *Track and Field Omnibook* that "running technique is primarily an individual matter. It began when the athlete was two years or so of age, and over the course of a dozen or a score of years it had become so 'natural'—or at least so firmly established—as not to be changed without disturbing a man's inner as well as outer balance and relaxation. A sound rule of thumb when it comes to running technique is to leave it alone."

Doherty isn't saying that obvious and easily-corrected form faults don't warrant correcting when they slow a runner down. He's saying that more effort is wasted in trying to produce picture-perfect form than in running the familiar less-than-perfect way.

The technique of some men can and should be improved," Doherty says, "as long as we remember that improvement is related to a man's competitive performances—not to whether his technique is aesthetically pleasing."

There are no prizes for form. Otherwise, people the caliber of Jim Ryun, Emil Zatopek, Murray Halberg and Bruce Kidd would have been left out.

Ryun, still history's fastest 1500 and mile runner, always has been a "head-roller." Four-time Olympic winner Zatopek "boxed" his way through his races. Former two- and three-mile record holder Halberg all but lost the use of one

arm in an accident, yet compensated nicely. Kidd, onetime boy-wonder of distance running, threw his arms every way but the "right" way when he raced.

Normal and acceptable running style covers a great range of individual quirks, even at world class level. And only a very few of these quirks need to be—or even can be changed.

Ken Doherty advises, "Do what comes naturally, as long as 'naturally' is mechanically sound. If it isn't, do what is mechanically sound until it comes naturally."

He says the focus should be on "the overall action rather than the details of technique. To focus attention on one part is to upset the vital balance. And man is not likely to run economically until that vital balance is restored."

Economical running springs from the unconscious mind. A runner who focuses too strongly on single steps may change his overall flow so much that he trips over his own feet. These are Ken Doherty's views.

Percy Cerutti would scoff at this appraisal of running technique. Doherty has built his reputation by reporting the accumulated wisdom of track. His writing reflects well-founded, conventional approaches.

Cerutti is not conventional. The Australian made his name 15 years ago through the tradition-challenging training he gave miler Herb Elliott. Elliott stayed away from the track and the stopwatch—a radical departure in the 1950's and instead charged up sandhills, lifted heavy weights and tried to adopt the unorthodox style Cerutti was teaching.

Doherty and Cerutti agree on one thing. They both say that running habits are learned in the early years. But Doherty says they're permanent and therefore should be left alone. Cerutti argues that

these are bad habits that must be torn down and rebuilt.

Cerutti claims that "homo sapiens have lost most of the ability—through separation from natural and primitive living—to move as an animal." He teaches his athletes to run like horses. This, he says, "requires re-education as to movement, posture and relaxation."

Doherty and Cerutti represent extremes of thought on this running form question. Doherty warns not to think much about it. At best, this preoccupation is a waste of time, he says. At worst, it is damaging to overall running performance. Cerutti says go primitive. There's no better way to spend effort than in breaking sloppy human running habits.

Between the two extremes stand Bud Winter and Bill Bowerman. Both have now retired from college coaching, but still are known as the most successful American men in their events.

Winter is a sprint master. Three of his runners—John Carlos (100y), Tommie Smith (200m and 220y) and Lee Evans (400m)—hold world records. Smith and Evans won Olympic titles at Mexico City.

Bowerman works his magic with distance runners. Two of his pupils—Steve Prefontaine (5000) and Kenny Moore (marathon)—placed fourth in last year's Olympics. Two of Bowerman's steeplechasers—Mike Manley and Steve Savage—also ran in Munich.

While Winter and Bowerman don't go to Cerutti-like lengths to remake a runner's style, they do feel that emphasis on this trait is well-placed. They tend to agree with *Sports Illustrated* writer Gwilym Brown, who says, "The answer to the question of why one man can run fast while another of similar physique seems forever destined to be slow is more often that the slow fellow is running incorrectly than he was born that way."

These four coaches, and writer-runner Brown, are dealing in areas of speculation. Toni Nett doesn't speculate. He deals with the blacks and whites of statistics and photo images on paper. Nett, a West German, specializes in technical analysis of track and field athletes, using sequence photography as his main tool.

Nett and the four coaches all look at running technique from different viewpoints. All speak with authority, and a composite of their views gives a clearer picture of what this technique is or should be.

They seem to say:

- Foot-fall and stride length are

functions of running speed, and must shift to fit that speed.

- Erect body carriage gives maximum power and efficiency.
- Arms aren't just along for the ride, but have important balancing and driving functions.
- Stride, stance and arm action are the keys to improving technique if it can be improved.

WHERE FEET MEET EARTH

"Foot-fall and stride length are functions of running speed, and must shift to fit that speed."

Tony Nett has verified part of this from photographic evidence. In his technical track studies, Nett has shot hundreds of top runners and has checked their styles. The only "universally applicable technique," he says, is the foot-planting pattern.

Nett states that all good runners plant the same way at a particular pace, and shift only as speed picks up or slows down. He finds that a sprinter running long runs like a distance man, and that a distance runner kicking at the end of his race plants his feet like a sprinter.

Nett's slow-motion and sequence films show an increasingly flat-footed

landing as distances go up from the sprints and speed drops. He lists his conclusions in *Track Technique* ("Foot Plant in Running," March 1964):

1. All runners at all distances land first on the outside edge of the foot then roll inward. This has a "shock-absorber" effect.
2. The precise point of contact along the outside edge varies with speed.
3. In the 100- and 200-meter sprints, the landing is high on the ball of the foot, near the joints of the little toe. In the 400, it is a bit farther back.
4. In the 800 and 1500, the contact point is the metatarsal arch area. The landing looks nearly flat.
5. In longer distances, there is heel-first contact.

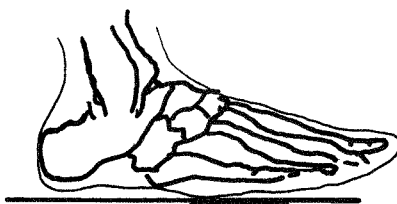
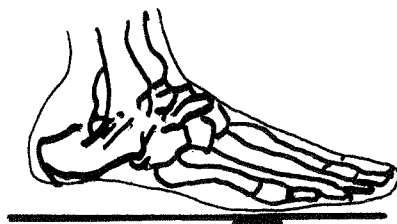
The West German says no such universal pattern shows up in the carriage of the arms, trunk and head, or in the length and number of strides. These are questions of "individual style," though somewhat related to pace as well.

Stride length, like foot-plant, shifts with pace. It shortens as the runner slows and stretches out as he speeds up, like a car shifting gears. "Overstriding" and "understriding" imply running in the wrong gears for the circumstances at hand.

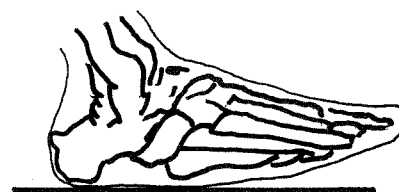
Bill Bowerman lists two fundamental rules for controlling stride length ("The Secrets of Speed," *Sports Illustrated*, Aug. 2, 1971:

- "First, your foot should strike *after* it has reached the farthest point of advance and has actually started to swing back."
- "Second, when your foot first strikes, the point of contact should be

STANDARD STYLES IN FOOT-PLANT



Above left: For sprinting.
Below left: Middle distances.
Below right: Long distances.



directly under your knee, not out in front of it, and as nearly as possible squarely beneath your center of gravity."

"Fortunately," Bowerman adds, "both fundamentals are easy enough to comply with by keeping your knees slightly bent at all times and by not overstriding. If the foot hits the ground ahead of the knee, the leg will be too straight and will act as a brake instead of an accelerator."

In short, keep your legs under you and stay with the pace they're setting.

"LEAN" YEARS HAVE PASSED

"Erect body carriage gives maximum power and efficiency."

Percy Cerutti says we run *on* the legs rather than *with* them. He points out that most of the body's weight and much of its power potential is centered above the hip sockets. Using the upper body properly is an important as balancing the load on the back of a pack mule.

The lean is out-forward lean, backward lean, any kind of lean (except when starting or dipping into the tape or climbing a steep hill). Body lean is inefficient, for sprinters and distance runners alike, because it throws the load out of balance and creates extra work.

Both Bill Bowerman and Bud Winter are advocates of running erect. They make their points with graphic illustrations.

Bowerman says in his *SI* article, "A forward lean might be useful for someone trying to bash down a wall with his head. But in running it merely gives the leg muscles a lot of unnecessary work."

Winter talks of sprint form in the *Track and Field Quarterly* (Vol. 72, No. 1), and some of his comments are in the *Guide to Sprinting* booklet. The retired San Jose State coach says, "In the old days, we used to think that an exaggerated (forward) lean was necessary, which meant running with head down and the caboose sticking way out in back.

"We now know that sprinters have to 'run tall.' To do this, they must push the chest out, pull the caboose in and run high on their toes. The position is similar to that of a soldier standing at attention."

The most vital element in a smooth and efficient running style, according

to Bowerman, is an upright posture. George Sheehan comments, "Bowerman's prescription for perfect running could already have been deduced from watching his men in action. In more exaggerated form, it would be a Groucho Marx walk—a semi-sitting position with the shoulders kept level at all times, but easy and relaxed. That's the Oregon style. The straight back is a Bowerman trademark."

Bowerman himself says the posture should be so erect that you could drop a plumb-line from ear level and it would fall "straight down through the line of the shoulder, the line of the hip and then on to the ground."

The way to accomplish this is to pull back the shoulders and pull in the buttocks. Balance the trunk over the legs and the head over the trunk.

In Bud Winter's words, get a proud look on your face. "Run tall!" Winter tells a sprinter. "Keep the eyes right on the finish line all the way."

Run *on* the legs.

THE VALUE OF HAND-HOLDING

"Arms aren't just along for the ride, but have important balancing and driving functions."

Three of the coaches agree here, Bill Bowerman: The faster you swing your arms—so long as the action is rhythmic—the faster you will be able to move your legs."

But Winter: "The arms are a source of speed and power. The faster the arms go, the faster the legs will have to go."

Percy Cerutti: "According to my ideas, all running starts with the thumbs and ends on the feet... When all the upper-body and arm movements are correct, the legs will function properly."

Hands and arms influence the movement of the legs and the body carriage. Seemingly insignificant details of fist and wrist position, elbow angle and shoulder sway can set off a chain-reaction of form faults.

Run with the fist loosely cupped, the wrist fixed, the elbow unlocked and at an angle, the shoulders so level you can balance chips on them. In summary, this is the advice of the three coaches.

Again, these are slight differences



The last phase of a stride—the left foot about to push off as the right reaches out for a new stride and plant. (Photo of Jon Sutherland by George Beinhorn)

between sprinters and distance runners. But most of the principles carry through from event to event.

Winter's technique for the sprints: "Hold the hands cupped and relaxed. Now bring the arms up to almost 90 degrees, palms upward a bit to keep the elbows close to the sides. Swing the arms parallel to each other, not across the chest. By pumping the arms parallel, you can gain some inches."

Bowerman concurs: "While sprint-

ing, keep your arms low and pump them hard and rapidly."

The arms are a driving, pumping force in the sprints. In longer runs, with more of a coasting action, the arms are more of a balance mechanism. They swing somewhat across the chest, but not excessively so.

Cerutti: "The hands never pass a center line projected out in front of the chest, but always work in toward that center line"

Bowerman: "For slower running, hold your arms in a comfortable, restful position and keep their action to a minimum. Your hands should be fairly close to your chest, at about the height of the pectoral muscles... Lower each hand and arm no more than a foot or so as the leg on the opposite side goes back."

The arms work gently in the distances, in a state of poised relaxation. They are neither rigid nor flaccid, but are somewhere in between. They're in a position to fight off tension.

Tension begins in the hands and arms, and tension is lowered when the hands are cupped and arms are flexed. Try this. Straighten the fingers and the forearm, and note the feeling of rigidity. Now pull in the fingers and bend the elbow, and feel the muscles relax. Flap the wrists up and down a half-dozen times, then think how tired they'd get if they kept this up for miles.

Fist loosely clenched, wrist rigid elbow unlocked and angled... This is what Percy Cerutti means when he talks of running starting from the thumbs and moving up from there. The outspoken Australian coach says that unclenched hands and limp wrists are signs not only of weakness in running form but also weakness of character.

But the worst of faults, according to Cerutti, is the unmoving elbow. In his book *Middle Distance Running*, he says, "Above all else, the elbows must be unlocked. The most common fault of all is the locked elbow." Cerutti has found that when the elbow is locked, the shoulders sway and dip wastefully.

It takes just that much to destroy a delicate balance.

GETTING YOUR RACING KICKS

Practice makes perfect?

Ken Doherty thinks not. He says

technique is so ground into a runner by heredity and early environment that it can't be changed much.

Percy Cerutti says yes, technique is learned. If learned improperly, it must be unlearned and relearned to make it right.

The two of them argued this out earlier, and this much is clear from what was said there and since. If practice doesn't make perfect, it at least (a) compensates for some weaknesses by creating new strengths; (b) chips off the rough edges to produce smoother and more efficient running, and (c) removes self-consciousness from the form and pushes it back into the unconscious—a kind of "automatic pilot."

This is *general* form we're talking about—the kind of action that takes us through 99% of our running and racing miles. There also are *specialized* kinds of running form, and these without doubt are perfected in practice.

Starting, running hills, finishing—all are special techniques. We've talked about the mechanics of sprint starts and methods of climbing and descending hills in recent issues. ("Standing in the Blocks," May 73, and "Try This for a Start," Oct. 73, cover starting. "Gearing Yourself for Hills," Oct. 73, covers hill running.) Refer to those for details.

Finishing needs more discussion. Finishing a distance race can be the best or the worst of experiences. It can be a powerful acceleration or a "survival shuffle," depending on the kind of background a runner has. That's where learning comes in. Repeated experience tells a runner how much and what kind of training he needs, how to pace himself, and how, when or if he can kick.

Tony Benson is a master kicker. The Australian (featured in the Sept. 73 "Profiles") has run the last lap of a 5000-meter race in under 52 seconds. In his career, he has lost only once when he was with the field at the bell.

Benson says, "I believe the possession of the big kick is partly a mental faith, partly (pace) judgment, partly will to win and, most importantly, the result of the correct combination of cardiovascular efficiency, basic speed capability and power training designed to allow fast changes of momentum."

Benson trains for endurance and the speed needed to hold the pace. All runners do that. But he goes an extra step into special "kick" work.

"Kick," he says, "relies specifically on the ability to open an unbridgeable gap of 15-20 meters, and is usually executed within the final 300 meters. Obviously, practice is necessary."

Tony practices fast uphill sprints, with accelerations at the crest, "oxygen-debt work" over the race distance (for instance, 5000 meters of 100 sprinting, 100 striding) and accelerations over 150-300 meters. This, of course, comes on top of endurance and pace-speed training. Without them, there'd be no base to kick from.

He says that "merely recording faster underdistance times than one's rivals is no guarantee of success, and may in fact mean the opposite because of the emphasis (on speed) needed to achieve these times. The Munich 5000 was a classic example in that Lasse Viren and Mohamed Gammoudi outkicked the much faster Ian Stewart, Steve Prefontaine and Emiel Puttemans."

Kick isn't so much a matter of speed as being able to shift suddenly into a higher gear at a point where the natural urge is to shift the other way. This ability to kick is a fortunate combination of learning and emotion.

TEACHING TECHNIQUES

BY SKIP STOLLEY

Skip Stolley was until recently a highly successful distance coach at Proviso West High School in the Chicago area. He now is an assistant coach at the University of Florida.

A training program for distance runners should be determined in part by the type of competitive "weapons" the runner needs. Some of these weapons are:

- The ability to know and hold pace.
- The ability to make and respond to changes in pace.
- The ability to maintain contact when behind.
- The ability to run comfortably and aggressively when leading.

But the most important weapon and most successful tactic of all is the ability to "kick." In the closing stages of distance races, everyone becomes a sprinter. And from Moosejaw to Munich, the kickers are winning more than their share of races.

At Proviso West, we help our

runners become more effective kickers by teaching the following:

1. Technique: Many runners and coaches believe that if one simply does enough running, he develops a mechanically efficient running style as a matter of course. I have observed, however, that the great majority of runners do not run with good form and that technique is one of the most neglected aspects of the sport. I don't believe a runner can sprint at the end of his race, using good form, if he has run most of the distance using poor technique.

We first teach our runners always to run with the trunk upright. Forward lean causes the center of gravity to drop, thus inhibiting knee lift and other mechanics of the stride. Running erect enables a pendulum-like swing of the legs to occur, with optimum knee lift and stride length, a natural, rolling heel-to-ball landing and a high recovery of the foot. We emphasize the flexed-knee, heel-first landing and encourage some runners to toe-in slightly for a better running line.

We practice two types of leg action: (1) "lift" with the emphasis on a high but not exaggerated knee action, and (2) "drive" with emphasis on a strong, straight-leg spring off the ball of the foot.

We teach that the arms swing across the chest in the same plane they swing when running. This keeps the shoulders perpendicular to the line of running and eliminates unnecessary upper body counter-rotation, which restricts the free swing of the hips.

We employ two types of arm action: (1) a relaxed, rhythmic "swing," keeping the angle of the elbow at 90 degrees, and (2) a vigorous "pull" with the angle of the elbow closing on the up-swing and opening on the downswing.

We preach "conservation of the arms" for as much of the race as possible, and therefore use "swing" arm action almost exclusively in training, regardless of the pace. A runner can always muster a kick if he has the strength to run with an accelerated "pull" arm action at the end of his race.

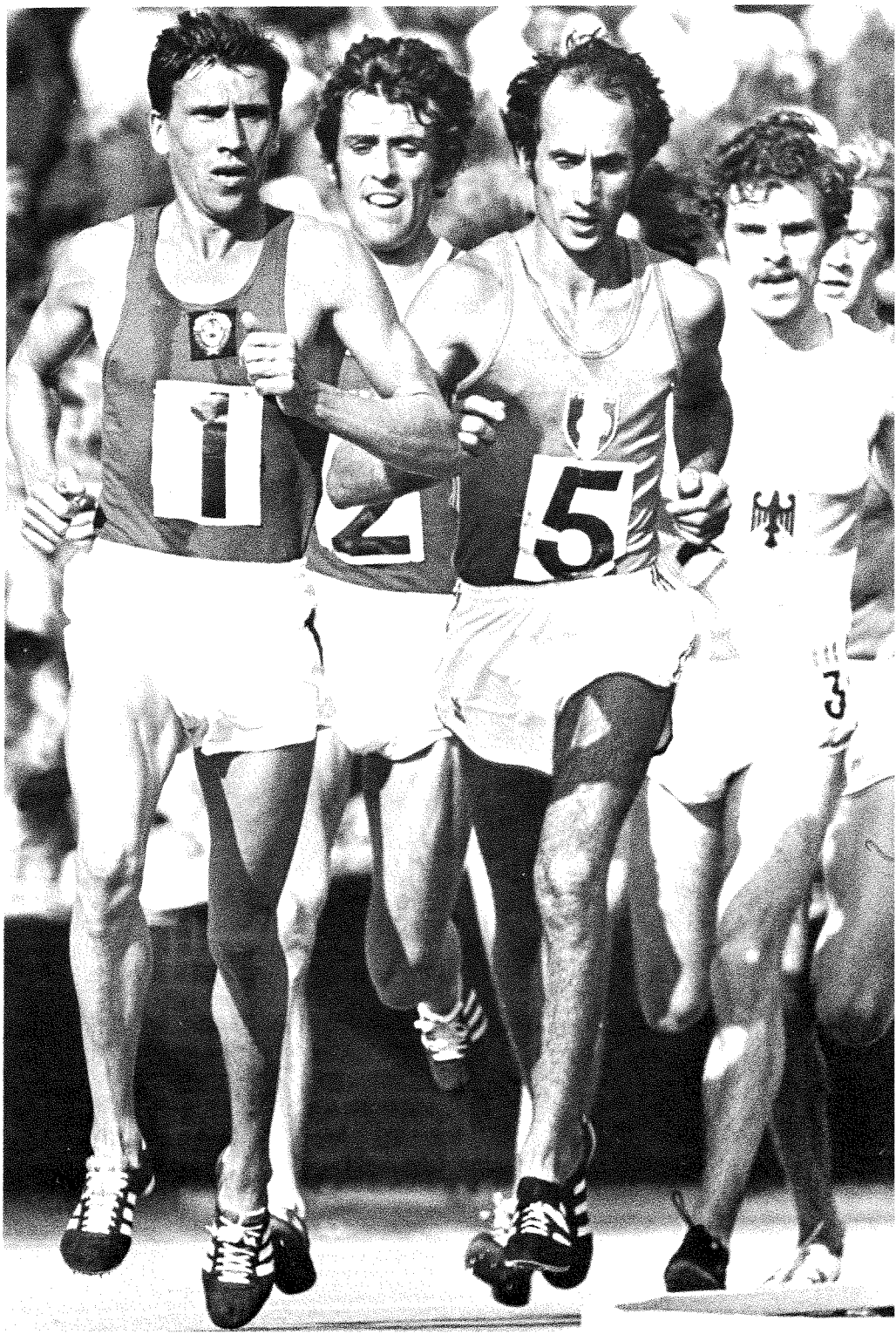
2. Sprinting: Early season, late season, in season, out of season, we sprint. The increased cadence and range of motion required of the legs when sprinting is a movement skill that is not easily acquired—and is quickly lost in the absence of sprint training. Regardless of the major emphasis of any phase of our training pattern or a particular workout, we include some hard speedwork at the end of each session.

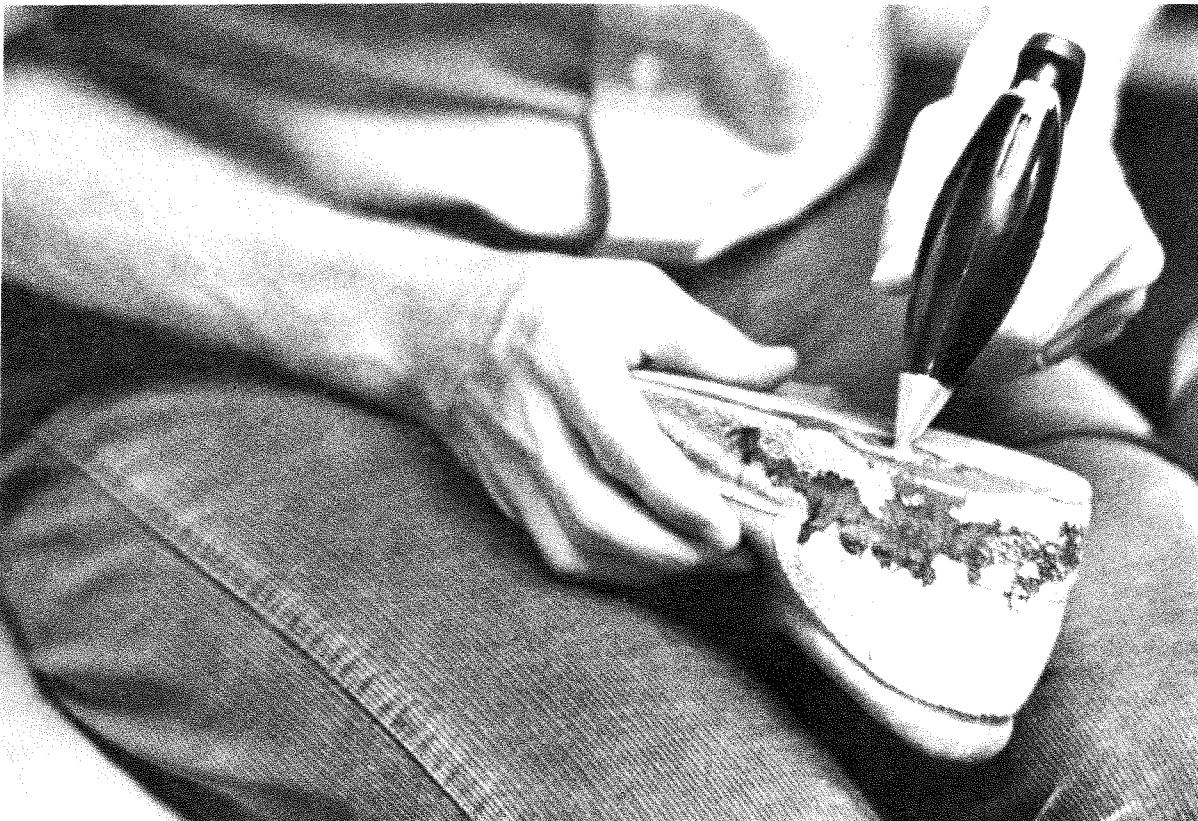
3. "Kicker's Disposition": The less a runner feels up to sprinting at the

conclusion of his workouts, the more important it is that he do so. Anyone can kick at the end of a slow race. But it takes real will-power to force burning lungs, heavy legs and aching arms to sprint at the end of a flat-out, hard-fought race. We strive to make sprinting in the face of fatigue almost a reflex action.

This action often is triggered by the emotion of the race. For as Greg Fredericks said last year after winning the AAU 10,000 title (and setting an American record) with a 55-second last lap, "Kicks are emotional. Today I was a little more emotional at the end of the race than the other guys."

10,000-meter runners at every stage of striding. Nikolay Sviridov (No. 1) won the European Cup race in 28:44.2. Detlef Uhlemann (3) ran the same time for second, and Karl-Heinz Leiteritz (2) was just two-tenths slower. The runner on Sviridov's elbow is Pierre Liardet (29:15.2 for fourth). (Mark Shearman)





George Beinhorn photo

HAPPINESS IS A WARM GUN

Electric glue gun, that is.

It may be the simplest and cheapest heel-repair tool.

by Joe Henderson

If you're like me, you land heel-first when you run. That in itself is no reason to be disturbed. The articles on running form say this is the way a long distance runner is supposed to land.

The trouble lies in what this kind of landing does to running shoes. It grinds them down as if they were gum erasers trying to smudge out the yellow lines on the road. I go through the first layer of rubber on my Tiger Bostons in three or four weeks. I'm not picking on the Bostons. Other shoes go just as quickly. But I happen to be wearing Bostons now.

With shoe prices as they are, you may think you can't afford good shoes. The truth is, you can't afford *not* to have them—whatever the cost.

My current shoes happen to be freebies, wrangled from a shoe dealer

with the understanding that this wasn't to become a regular thing. Otherwise, I've always paid cash for shoes, just like everyone else. It's taking more cash now, without a corresponding increase in shoe life.

A pair of Bostons lasts four months, five if I press my luck. The heels are down into the blue layer by then, and little pains are beginning to crop up. There's a definite connection between run-over heels and injuries, and my old and mangled feet let me know right away when the danger point is reached.

A woman who wasn't used to looking at runners' feet was horrified when she saw mine. She said, "You have a 20-year-old body and 80-year-old feet holding you up." Those feet are as crotchety and sensitive to change as an 80-

year-old, and I suspect most other runners age much the same way.

So while we complain about the cost of new shoes, we know we can't go without them. We throw away maybe three pairs a year that are solid in every respect except those ground-down heels. We do it because experience has taught that even a quarter-inch of wear might hurt an achilles tendon or calf muscle or knee.

Meanwhile, the search for the perfect shoe that gives 5000 miles of service goes on. Or, after realizing this is futile, the search switches to looking for the perfect repair method—one that is cheap, quick, easy and effective.

I've either tried or heard of all these methods—all the goops and patches and replacement parts, do-it-yourself jobs and so-called professional work.

They've always been disappointing—either not cheap, quick, easy and effective, or some combination of these. And I've always gone back to throwing out old shoes three times a year, thinking this was an inevitable cost of being a runner.

"The last time we went to the shoes store," Pat Cunneen was saying, "I had to write a check for \$95. I can't afford that three times a year."

Pat, his wife Betty and their four young children all run. (They were pictured on the cover of the May 73 *RW*.) Keeping the family in running shoes is a major expense for Pat.

I was talking with him at a race. He was carrying his shoes, and I'd noticed a smooth, plastic-looking plate on each of his heels. He was explaining.

"I'd tried everything," he said, going into the standard runner's lament. "I'd tried all the standard methods, and none of them worked well enough to suit me. The sole coatings wore off too fast. The bicycle inner tube patches fell off. Taking the shoes to a shop cost almost as much as new shoes."

He tapped the heel, smiled and said, "Then I found this." He described an electric glue gun he'd bought at Montgomery Ward. He said patching heels was as simple as melting the glue onto the shoe rubber. The glue dried hard in minutes and held firmly until it wore away a hundred or so miles later. Pat said the glue gun had tripled the life expectancy of his family's shoes.

"It's that simple?" I asked skeptically. It sounded too simple—no clamping, no waiting, no materials except the gun and the glue.

"It's so simple that even the kids can do their own shoes," Pat said.

It would have to be that simple. I'm no handy-man. When Dr. George Sheehan described the typical distance runner as "manually inept," he used me as his prototype. I have an inbred mistrust for things mechanical, so I avoid them.

Even after I'd found the glue gun (Mine cost \$5.99, with the bullets of glue an extra 10 cents apiece), I wasn't at all sure it would work for me. It did—which means it will work for anyone.

The glue took a couple of minutes to melt. Then a little squeeze of the trigger oozed it out of the hot barrel. The glue was liquid enough to spread easily, but solid enough not to run all over my hand and the floor.

It came out clear, but turned milky as it dried. As Pat promised, it was hard and dry within minutes. It dried with waves on the surface, looking like pale

fudge. "Don't worry about that," Pat had said. "It will smash down and smooth out as you run." From start to finish, the work hadn't taken 10 minutes.

The patch wasn't a 16th of an inch thick after it was smashed and smoothed on the next day's run. Yet that coating lasted through 150 miles of heel-first landing on road, including a marathon race. When that layer of glue wore through, I put another right on top, and others as needed. This pair of shoes has passed the normal life span, yet the tread is still there on the heels—looking out through a protective coat of glue.

The soles, under the ball of the foot, aren't beginning to go. But when they do, the shoes will be ready for junking, I guess, since Pat Cunneen says glue doesn't work well in that area. The constant bending and twisting apparently pulls the patch loose from the rubber.

This technique of heel-patching is so ridiculously easy that further directions aren't really necessary. Trial and error will teach you soon enough that:

- The shoe surface must be clean and dry before glueing.

- Roughing the heel with sandpaper insures a firm bond, but sanding isn't essential.

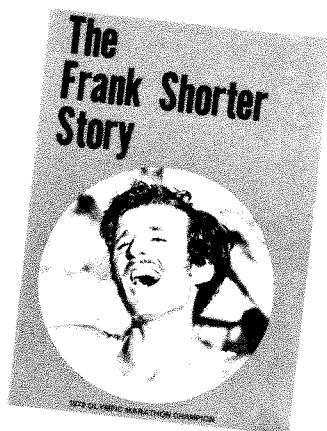
- Heating the heel rubber with a match before glueing also promotes sticking.

- This method works best as preventive maintenance on new shoes. By applying a thin coating early, you wear out the glue instead of the rubber. (On my shoes, the glue wears slower than the rubber.)

- With well-worn heels, it helps to make a "dam" with masking tape along the side of the heel, then fill to the appropriate height.

- Heel heights are critically important. Tolerances are so small that changes of a quarter-inch can cause foot and leg troubles. That's a quarter-inch *either way*. Excessive or uneven glueing can cause damage as surely as excessive wear. An extra minute's effort toward building a proper heel is well spent.

The Frank Shorter Story



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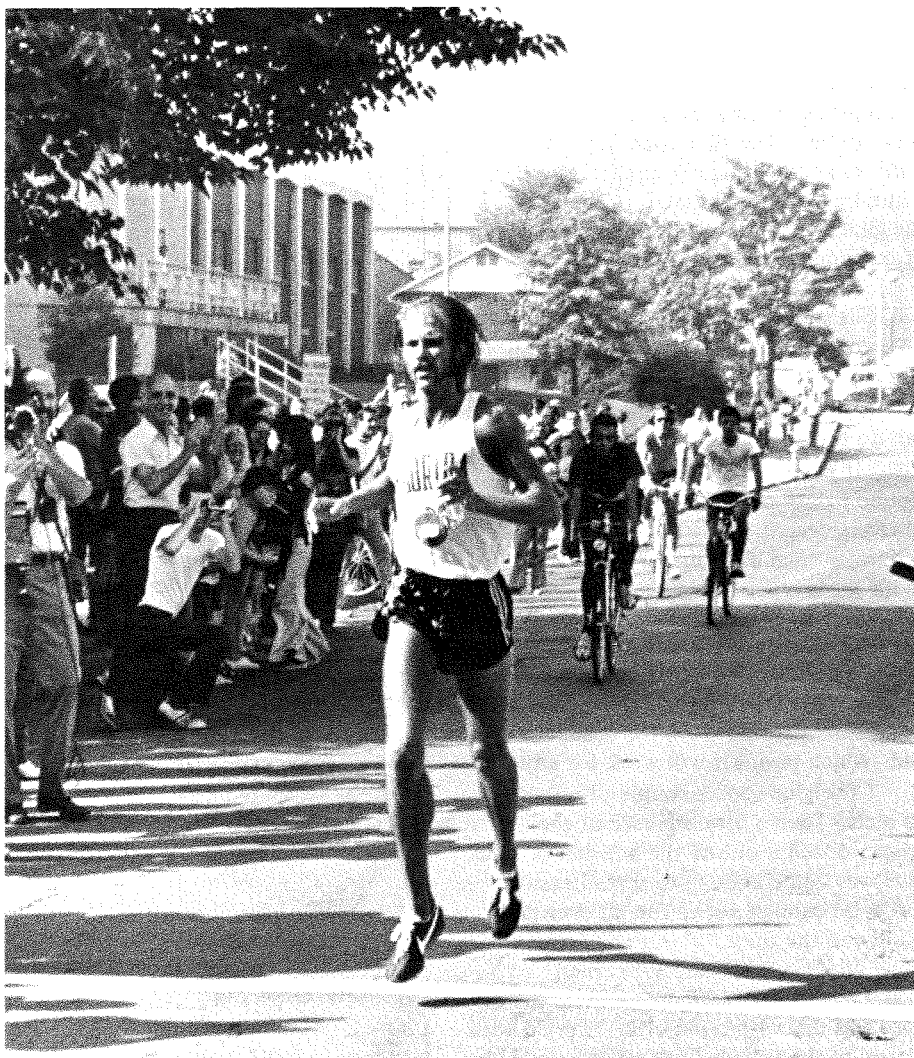
CREATING AN INSTANT CLASSIC

by Hal Higdon

What can you say about the competitive abilities of someone who goes to a race where they give watches to the first 10 finishers—then places 11th?

With a mile to go in the annual Charleston Distance Run, I could look ahead down Quarrier Street and see another runner dancing in the distance, his figure distorted by the heat waves rising from the pavement. After having led briefly at the start, I had faltered in the hills in the first half-dozen miles and dropped to 19th position. But as the course flattened I had begun to pick off other runners one by one until, by my reckoning, I had moved up to 11th. I thought of that 10th runner ahead of me as a thief. He was stealing the watch that should have been mine.

I crossed the finish line at the Charleston Civic Center buoyed by cheers from several hundred spectators. At the end of the chute, I glanced at the scoring



TOP PHOTO: Shortly after the start of the Charleston 15-miler, Jon Anderson is pictured second and Jeff Galloway eighth.

RIGHT: Galloway is an easy winner in the event that has plans of being one of America's best. (Ferrell Friend photo)

Charleston, West Virginia, went big-time with its first race--and has even bigger plans.

sheet hoping that one of those ahead had dropped out. None had, so I accepted gracefully the trophy tee-shirt, and traveling bag that were my prizes as first finisher in the age 31-46 division.

But I could have used that watch.

That fact that 10 watches (five gold, five bronze) were being awarded as prizes in a race nobody had even heard about until barely a month before was symbolic of the growing status of long distance running in America. You won't find the Annual Charleston Distance Run listed on any 1973 race schedules. When I called *Runner's World* to suggest I cover that race, they admitted they had received no advance notice of the event. Nevertheless, 223 runners appeared at the starting line on Saturday morning, Sept. 1 for the 15-miler, which civic fathers say will not be the last held in Charleston, West Virginia's capital and a city of 71,505 people.

The reason for the large field was simple: money. For the last three years, the downtown businessmen had sponsored a Sunday afternoon sternwheel regatta on the Kanawha River. They wanted another event to balance the weekend, so Donald Cohen, an optometrist and part-time runner, suggested a long distance race.

The private businessmen offered him a budget of more than \$10,000 and told him to find some runners.

Charleston set its goal on emulating another city that hosts a major distance race: Boston. Wisely, the city decided not to emulate another trend, that of sponsoring most major races as full-distance marathons. Cohen and his committee instead decided to run a more medium distance. They selected a course which on later measurement turned out to be 14.2 miles, so they extended it to an even 15. "We measured it by automobile," admitted Cohen. "Actually, I contacted Ted Corbitt of the AAU standards committee to find out how to get the course certified, but we simply ran out of time."

Barely a month before the starter's pistol would fire, Cohen's committee began to recruit competitors. Carl Hatfield, West Virginia's top runner, offered suggestions on whom to invite. First on the list was Jon Anderson, winner of the 1973 Boston marathon. Second-placer Tom Fleming also agreed to compete. Since NCAA cross-country champion Neil

Cusack attended school at nearby East Tennessee State, he was easy to recruit, as was AAU 25-kilometer champion Paul Talkington of Ohio. Olympian Jeff Galloway was contacted in Florida.

Competition attracts more competition. As word spread of the name runners who would compete, many of the near-great and not-so-great athletes in the area began to write and call for invitations.

Women runners also were courted. Jacki Hansen, winner of the Ms. division at Boston, came from California. Francie Larrieu, en route to school at Florida State, stopped to compete. With only a few months of work, Don Cohen had assembled a cast of characters tougher than for most national championships. In addition to the race, he also organized a track seminar and a parade. For those he invited Dave Wottle, Steve Prefontaine, and Jesse Owens. In case anyone had failed to notice, the Annual Charleston Distance Run had been programmed as a Very Important Event.

Anybody who wanted to run could get a room and meals at a nearby university, and the better runners were offered lodging at the Charleston House, a Holiday Inn. They also attended a Friday evening feast at Don Cohen's home. Jon Anderson and several others arrived with wives, whose expenses also were paid.

"Jon often gets invitations to run in races," commented his wife Yvonne, "but they don't usually ask me to accompany him. I was delighted to come. When we arrived in town, they asked us if we would like to have a car. We told them, 'no, you've already done too much for us.'"

The course chosen seemed at first glance maniacal, but in execution turned out to be inspired. The race began at the civic center north of the downtown area. After about a mile's run through city streets (with traffic halted) and past cheering natives, we crossed the river to ascend some hills. West Virginia is known as the mountain state and we soon understood why. We ran steadily uphill for nearly 2½ miles with only a few level respites, then came plummeting downhill through a heavily wooded area to recross the river.

The last nine miles of the race would go up and down parallel city streets. This provided an opportunity for the

people of Charleston to see the runners frequently. By walking one block they could catch the runners coming back in the other direction a mile or two later.

The race thus was a cool, hilly six miles followed by a hot, flat nine miles. The eastern half of the nation had suffered through a week-long heat wave with temperatures in the 90's and humidity about as high. But because the race began early the temperatures reached only the 80's, and of 223 starters only 10 failed to finish. This record was particularly remarkable when you consider that we passed within a few blocks of the finish line twice during the last four miles.

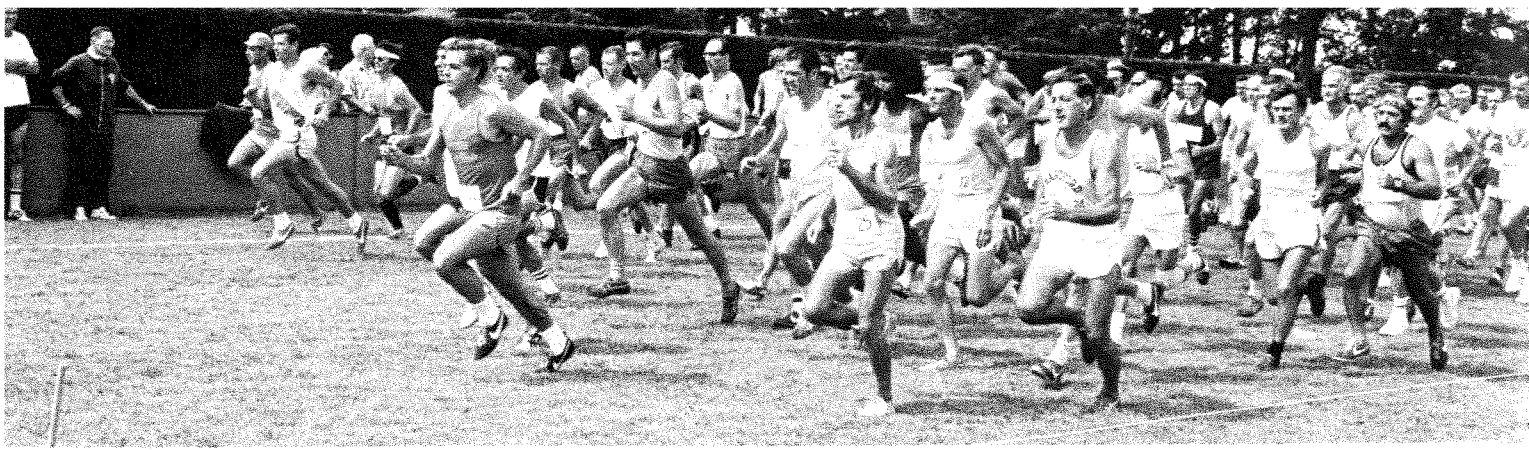
Tom Fleming led to the bridge, but going up the hills across the river Neil Cusack pulled alongside him, then passed. Lucien Rosa, a Ceylon Olympian and Drake Relays marathon victor from the University of Wisconsin/Parkside, followed a short distance behind. After another gap came Jon Anderson and Jeff Galloway. I was able to watch the jockeying during the early stages because I was near the front, but soon the better runners pulled away.

Cusack attacked the hills, opening a lead, but faded to third once he got back down on the flat. Galloway triumphed with Rosa second. Anderson and Fleming duplicated their Boston relationship in fourth and fifth. Talkington, troubled by achilles tendon problems, could place only eighth. Hatfield, cheered by the crowd, was in front of him. (See results in "Racing Highlights.")

But the story at Charleston was not the placing of the runners, rather the attitudes of townspeople who seemed awed that their community had been selected to receive this gift of athletic talent. They lined the streets, as at Boston, and referring to programs in their hands to cheer runners by name. They generated even more warmth than did the sun.

While walking around town the previous day, in fact, several strangers had approached me to say, "Good luck in the race tomorrow." One leaned out the window of his car while driving past to wish me luck. An awards banquet with tickets prices at \$3.50 was scheduled after the race, and so many people appeared that extra tables had to be placed in the halls. Finally, one had to admire the race sponsors who, in establishing the first significant long distance running race ever held in their city--or for that matter in the state of West Virginia--had the *chutzpah* to call it the "Annual Charleston Distance Run."

Charleston's mayor said at the banquet, "This isn't Boston yet, but beginning next year it will be."



MASTERS BERKSHIRE



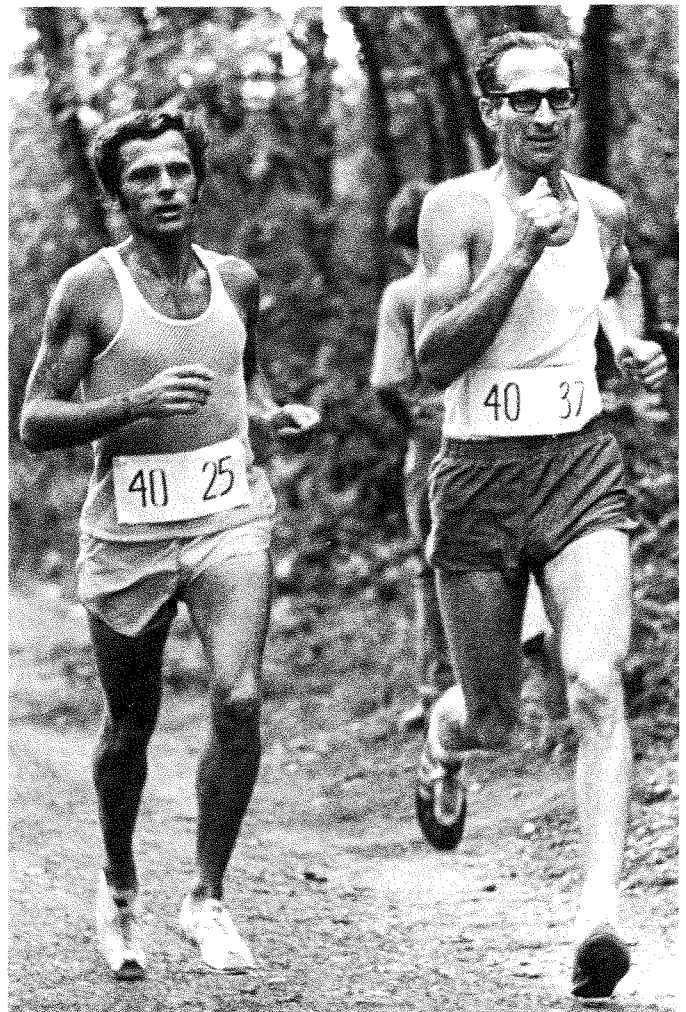
Photo impressions of the prestigious Eastern race for over-40s.



ABOVE PHOTOS:
Nearly 200 veterans compete in the five-mile at Westfield, Mass. (Rick Levy)
The event's organizer, Otto Essig. (Doug van de Zande photo)

LEFT: Record-setter in the over-70 division, Carl Willberg. (van de Zande)

RIGHT: Manfred Kandschur (right) and Chet Fortier were to finish one-two overall. (van de Zande)



A RACE WITH ALL THE EXTRAS

In August, Ric Raymond wrote "Stripped-Down Racing Model," an article telling how to put together small and simple distance races. This is his sequel to that, dealing with a big and ambitious marathon. He helps promote the Island marathon described here. The race this year is on Nov. 24 in Portland, Ore.

Last year the Island marathon was the ninth largest in the United States. Two years ago the Island marathon was just an idea in the minds of a few runners. What was done to bring the idea into reality?

Two outstanding things we learned were that big marathons mean lots of work, and lots of money. The amount of work required can be reduced by good organization. But short of having a rich sponsor, I can see no way to reduce the amount of money required. What you must do is draw enough entrants to pay the bills. We reduced the work load by finding sponsors to do specific jobs. We almost covered our expenses by drawing 400 entrants at \$2.00 each.

Our race was scheduled for late November. Our major organizational effort started in mid-August. We had already established the course and the date (this had been done a year earlier to be listed in the *Marathon Handbook*), obtained an AAU sanction, and established the awards and entry fee. Our first act was to list our planning needs:

1. Manpower for promotion, registration, officiating, measurement, refreshments, awards.
2. Facilities for dressing, parking, toilets, awards ceremony.
3. Logistics for road permit, traffic control, runner transportation.
4. Money for everything above.

The three biggest challenges arising from these needs were getting the right sponsors to deal with the needs, avoiding the traffic congestion of the road to maintain good public relations, and getting adequate entrants to defray expenses.

Each of the sponsors for this race was selected for the ability to handle a particular need in a most efficient manner. The sponsors were (a) the Oregon Road Runners Club, an organization with experienced personnel able to lay out and

measure the course, and anticipate and describe solutions for problems that might arise; (b) the Portland Junior Chamber of Commerce, a respected organization with young manpower and a "get-it-done" reputation to handle registration details and provide manpower to assist with parking problems; and (d) the Portland Park Bureau, able to provide manpower, equipment and supplies to handle all phases of the seven refreshment stands.

Not only did we ask for something from our sponsors, we also offered them something. We offered an event sure to draw much favorable publicity that each sponsor could capitalize on in its dealings with the community. In order to be able to promise publicity and exposure we had to work at it. This aspect was handled by the race director personally.

In mid-September, a publicity flyer suitable for posting was mailed in multiple copies to group assembly areas. A list of the places might be instructive. It included the Portland YMCAs, running shoe stores in Portland and Eugene, Multnomah Athletic Club, Elks Club, Park Bureau, Jaycees, all high schools, intermediate schools, community colleges and colleges in Oregon and Washington, the County Medical Society, the Oregon Medical School, running clubs in Oregon, Washington and Vancouver, B.C., all members of the ORRC, and all participants on Oct. 1 marathon at Eugene.

In addition, a professionally prepared press release was mailed to all area weekly and daily newspapers. Ten-, 20-, and 30-second spot news features were sent to 15 area radio stations, and news stories were broadcast on at least two area TV stations.

Special interest articles were prepared and taken, in person, to the Portland daily papers. The day before the race each daily was provided, in person, with a master registration list so that picture captions and news stories would be accurate and convenient to obtain.

Finally, a pre-registration mailing including a course map, two-page information sheet and two full-page application forms was sent to all the places already mentioned plus all entrants in the 1972 Trail's End marathon. This package also was sent immediately to all who inquired about the race. In all, 1400 packets were distributed.

All the work paid off. We had 400 entrants, two days of full-page spreads in the local dailies, TV coverage on race day, and ended up with an inch-thick file of newspaper clippings.

Our successful publicity created some problems. The large number of entrants required that we have dressing rooms. We were able to rent a school two miles from the course. This necessitated a shuttle bus to transport runners to and from the school since there was no parking area at the course. It also required rental of chemical toilets for the race site to take care of last-minute emergencies.

We made arrangements with the County Sheriff to have several cars on hand to handle traffic and control the runners, and got a permit from the County Public Works Department to use the road. We also felt it necessary to obtain insurance and coverage for the race just in case of an accident. Most of this was necessary only because of the size of the field.

We could have run a race of 10 or 20 runners with no preparation and no one would even have noticed. That is just the point: we wanted to be noticed. We wanted to get people to try running. The Road Runners Club wanted to expand membership. The Jaycees wanted a public service project. We wanted to give distance running a bit higher profile in our area, and we succeeded.

In order to ensure a good race this year, and also to make things a bit easier, we continued our efforts after race day. We want runners to feel eager to run our marathon again so we did some things to promote this. Results—with splits at 10, 15, and 20 miles—were mailed to all registrants. Any finishers who were written about in the papers also received copies of the news clippings.

Results were also sent, with a personal letter of thanks or appreciation, to about 40 individuals who had helped or had an interest in the marathon. These people included coaches, sports editors, broadcasters, school principals, doctors, parks personnel and others. These efforts resulted in offers of assistance and support for our second effort this November. Based on the groundwork laid earlier, the event is well on its way to being even more successful than the first one.

"STEEPEST RACE IN THE WORLD"

by Steve Murdock

The entry blank alone contains one of the most fearsome disclaimers in the long history of running:

"I realize and acknowledge that this event is a foot-race over a rugged, narrow, unpaved mountainous, rocky, steep, twisting course, which is not designed for running or for crowds. I realize that more than 1500 runners are expected and that a severe winter has made the course even more hazardous than in previous years."

The Dipsea, called by some the "steepest foot-race in the world" (although Pike's Peak people doubtless will disagree), is unique in the chronicles of running because of its peculiar terrain and the kind of tradition that has come to surround it.

It was won this year by a 10-year-old girl, Mary Etta Boitano. Her brother Mike, 11, the defending champion, finished second. That may make it sound easy. It's anything but.

It's really a short race—only 6.8 miles—but it's something like trying to run inside a churning washing machine while the machine is being airlifted over the Andes. Perhaps it's more accurate to say it's like trying to run through a press of 5 o'clock pedestrians while someone keeps tipping the street up and down, as in an earthquake.

In the 6.8 miles from Lytton Square in Mill Valley, Calif. (north of San Francisco) over a shoulder of Mt. Tamalpais to the ocean shore at Stinson Beach, the trail climbs from 60 feet to a highest point of 1500 feet and then returns to sea level. But such a terse explanation fails to capture the indignities the course inflicts upon the human body and spirit—challenges that have given it such runner-inspired place names as Cardiac Hill, Swoop Hollow, Steep Ravine and Insult Hill.

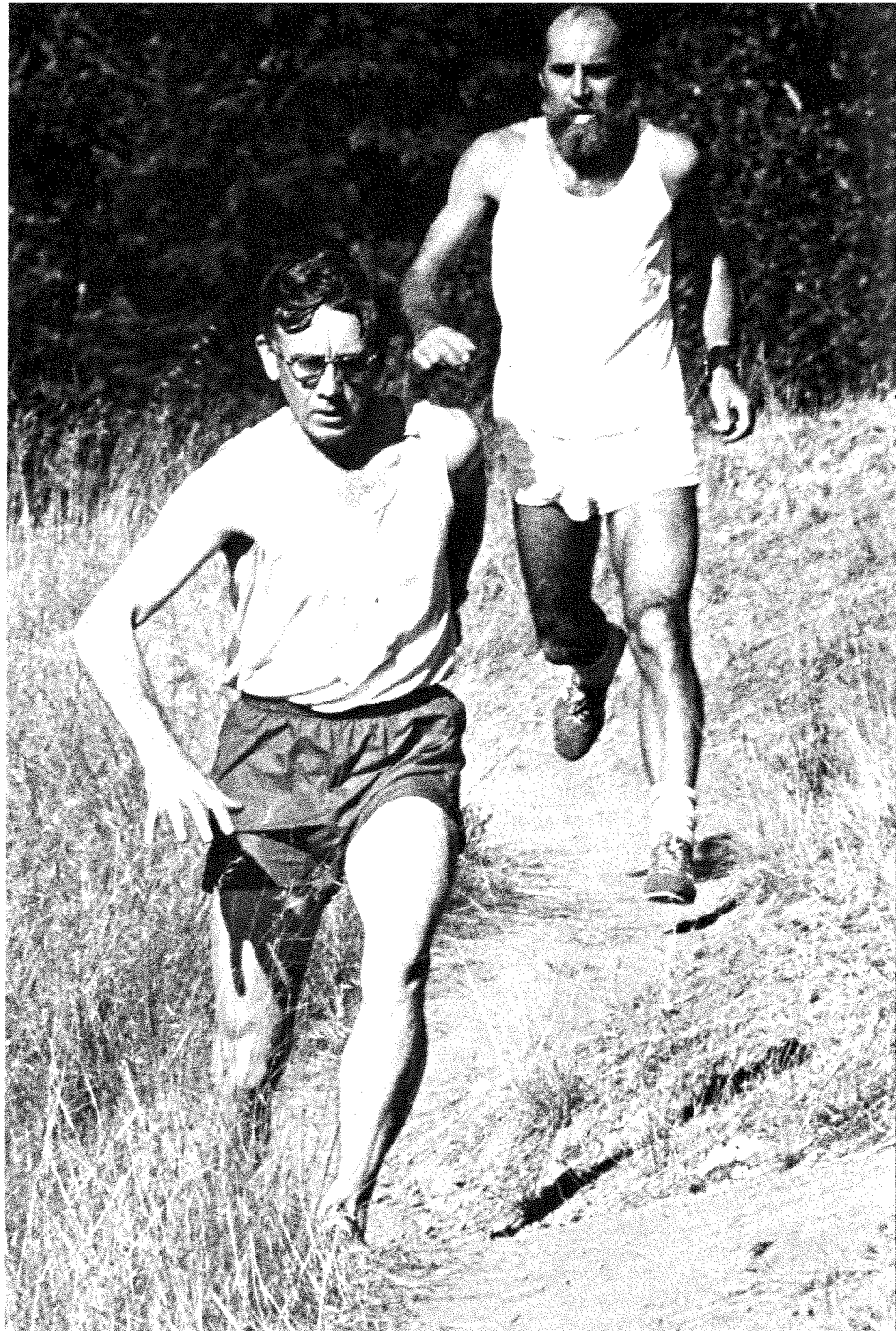
Perhaps the disclaimer each runner is required to sign is still the best description of the race's hazards:

"I am fully aware that running or walking this course is dangerous to life and limb, even under the best weather and traffic conditions. I am aware that the crowds of runners, adverse physical conditions and possible adverse weather condi-

tions will result in a very dangerous and hazardous condition on the day of the race."

One gets the feeling that lawyers for the Mill Valley Junior Chamber of Commerce, sponsor of the race, stayed up far into the night attempting to devise an entry form that would somehow scare off all but the most reckless of the potential entrants. The form continues:

"I realize and understand that many runners are likely to be injured and that some injuries are certain to occur. With full knowledge of the above facts and warnings, I intend to participate in and/or allow my child or children to participate in this race and accept and assume all



This narrow, rough, rock-strewn trail supports hundreds of runners in each Dipsea. (Beinhorn)

risks involved in or related to said participation in this race including full legal responsibility and liability for myself, my child or children, and all of my and/or their acts or omissions."

The failure of that prose to deter entrants is illustrated by the fact 1500 persons of all ages (and sexes) entered this August's race. And no less than 1213 finished. Finishers get "survivor's medals"—that is if they cover the 6.8 miles in 2½ hours or less.

It's no easy thing, yet for the past four years they've been staging an excru-

tiating encore two weeks later a *double* Dipsea! One runs from Stinson Beach to Mill Valley and back.

The single Dipsea, now 68 years old, has enough stories in its history to fill a book without going into the double, which is the invention of that notably indestructible runner in the over-60 bracket, Walter Stack.

Stack, who is two years younger than the Dipsea (but who did not run it for the first time until 1962), came in this year looking like he had fallen into a coal bin.

"I took a real bad fall," he said, which is a little bit like a glider pilot saying he overshot the landing strip.

The fall occurred in Steep Ravine, which comes just before Insult Hill, which is the last climb before White Barn Gate and the final wild dash down the slope of the Coast Range to Stinson Beach.

Steep Ravine, Stack explains, is just about where the old and young with 15-minute handicaps start being overtaken by the runners with lesser handicaps and the fast young scratch starters. So the traffic gets a bit hairy.

But the entry lists grow each year. There were 110 runners facing the starter on Nov. 19, 1905, when the first race was held. This year the Mill Valley Junior Chamber of Commerce used a computer to keep track of the runners who formed a minor mob scene in front of the Mill Valley bus depot. And their friends, wives, husbands, fathers, mothers, aunts, uncles, cousins, grandfathers, grandmothers and aspiring siblings constituted another mob scene in the streets of Stinson, where it all ends—in the finest tradition of the men who started it all.

The original race grew out of contest between two young members of the San Francisco Olympic Club—Charlie Boas and Al Coney. They raced each other from Mill Valley across the shoulders of Tamalpais to an long-vanished hostelry called the Dipsea Inn, which was further out on the Stinson sand spit than is the present town.

Boas, it is recorded, won the original race and the sponsors, in the best stock market tradition, "went public" and decided to let anyone in. Before long, however, the race was shortened to eliminate the sand spit portion. This put the finish line in Stinson Beach, then known as Willow Camp.

That's where it is today. That's where the harder-drinking natives wander into the crowded Sand Dollar bar after the race, complaining about the "Mongolian idiots" who have "run across the mountain" and are cluttering up the town.

Actually, the Dipsea has become a

major Stinson Beach social event.

Most runners and their families arrange to picnic on the beach or in the adjoining state park picnic area after the race. The Olympic Club stakes out a table befitting of the founding role of its earlier members. Runners shower in the public bathhouse at the beach, and there is much limping and taping of blisters.

As Stack says, the simple fact that running has become a major national sport has elevated this race to a status far beyond the wildest imagining of those who conceived it.

As a race, it's just plain nasty. But it's a fascinating challenge to the runners. Shortly after the start, they have to climb 671 steps. Then they have to run up over a ridge and plunge down the first of several precipitous slopes into the valley that contains the celebrated Muir Woods redwood grove.

Up out of Muir Woods, the runners climb a long slope over Dynamite Hill and Hog's Back Rise to Cardiac Hill. The trail leads through woods and open meadows and is anything but level. The travail of this stretch brings the runners eventually to Lone Pine Spring, the race's highest point, and thence down into the last valley before Stinson.

Steep Ravine is the last horrible stretch just before Insult Hill and the emergence at the Panoramic Highway. Stinson's white strand is in clear view below, but the trail's final descent to the sea is a leg-jarring terror almost as frightful as some of the climbs. Some of the views along the way are spectacular, but the runners don't have much time for scenery.

Most of the way, the trail is narrow. With 1500 runners entered, some terrible traffic jams develop. Some runners have to walk when they don't want to. Stack, who knows the course as well as anyone, says "the elbows get pretty sharp" in some of the tighter spots.

But for an hour or more they come sprinting down the hill into Stinson to the handclapping of relatives, friends and just plain bemused onlookers.

The race has been all over the fall calendar. The first official race was run in November. Then for many years it was run on the weekend after Labor Day. (That's now the date of the Double Dipsea.)

Then someone figured out the weather was playing dirty tricks on the runners. August is traditionally a foggy money in the San Francisco Bay area. September traditionally is sunny and hot. The runners would train in cool August and then compete in hot September. One

year a runner whose blood sugar level dropped out of sight in the heat went out of his head and kicked the windows out of a Marin county sheriff's car. So the date has moved back two weeks—into the fog, so to speak.

As a result, an "unbreakable" record was broken. Back in 1937 Norman Bright, then a world class runner who had upon occasion beaten men of the caliber of Glenn Cunningham, caught the Dipsea course on a foggy day. Furthermore, he saw to it that the course was in the best possible shape. Gates were open. He knew all the short cuts. He ran the course in about 47 minutes and for 33 years that stood as a record. The experts predicted the record would never be broken because runners with Bright's speed were avoiding the race. They didn't want to get killed or ruin promising track careers with injury.

Then in 1970, Bright, now in his 60's and a Seattle school teacher, returned to the course. Exploiting a 15-minute handicap, he won—only to have a scratch runner, Don Makela, break his record.

Bright ran this year, too, but with his arm in a cast. He fractured it in a tumble in a Rocky Mountain training camp at the time of the Pike's Peak marathon. He did not finish among the leaders.

The handicap system gives the young and the old an advantage in this race. The youngest and oldest competitors take off a full quarter-hour before the scratch runners, and that can be a margin of victory in a race that covers only 6.8 miles. Many a winner has been a handicap runner. For one thing they beat the crowd.

This year it was 10-year-old Mary Etta Boitano of San Francisco who used a 15-minute handicap to get to arrive at Stinson Beach first in 42:43 (actually 57:43). She didn't get as many cheers as she deserved from the crowd because many of the spectators couldn't believe that little girl in the blonde pigtailed was the first one over the mountain. Her brother, Mike, a 10-minute handicap runner, came in at 45:22. He had won the race in 1971 and 1972. The fastest scratch time was 49:11 by Ron Elijah.

The statistics of the finish tend to get complicated. And they detract from the pain and the job. Marshall Kilduff, a reporter for the *San Francisco Chronicle*, ran the race this year and wrote an impressionistic piece that was carried in the news pages, not the sports section. He said:

"Small pinwheels of color skate across the eye, fatigue fades and the runner glimpses only the pink flesh of his kneecaps out of the bottom of his glassy stare."

That's the Dipsea, and the entry list grows each year.



MEL BRODT OF BOWLING GREEN

*The coach whose program produced Olympic champion
Dave Wottle and American record holder Sid Sink.*

by Jim Ferstle

Jim Ferstle formerly ran for Coach Mel Brodt at Bowling Green State University. One of Ferstle's teammates there was Dave Wottle, and Jim is now writing "The Dave Wottle Story"—the December Booklet of the Month.

"A man of suppressed merriment," is the way writer Kenny Moore described him in *Sports Illustrated*. "MEB" is the nickname given to him by his athletes, but they address him as "Coach."

His name is Melvin E. Brodt (MEB), track and cross-country coach at Bowling Green State University. He's also the president of the United States Track Coaches Association, NCAA representative on the USTFF executive committee, former vice-president of the USTCA, secretary of the US Cross-Country Coaches Association, former president of the Central Collegiate Conference, former president of the Ohio USTFF, 1972 district coach of the year in cross-country and 1972 indoor track coach of the year.

But he's probably best known as the coach of Dave Wottle, Sid Sink and Paul Talkington. For in conjunction with his administrative duties he has made his mark in a profession that demands victory as a measure of success. His record while at Bowling Green includes second place in the 1972 NCAA indoor championships, and ninth, eighth, seventh and sixth in the last four NCAA cross-country meets. He is one of the most successful coaches in the country.

Yet honors won by the teams and individuals he coaches tell only part of the story of Mel Brodt. One need only take note of a scene in the coach's office in early 1969. Three athletes were sitting and talking to Brodt about the

upcoming workout when another member of the team, who had just been informed of the all-day search the coach had conducted for him, came into the office.

"Where have you been? We've been trying to get you all day," said Brodt.

"Just at class and at the library," the athlete replied.

"Well, sit down please. I have something to tell you."

The coach leaned forward on his desk and clasped his hands in front of him. "What I'm going to tell you isn't an easy thing for me to do," he said. "I received a call from your home today and they told me your father has been in an accident. He was fishing and he apparently slipped and fell and hit his head. He is dead."

The shocked silence was broken by the coach's condolences and offer of assistance to the stricken team member. An athletic department car was obtained to take the athlete home to Detroit to be with his family. One of the teammates volunteered to drive his teammate. He and another teammate helped their friend load his belongings and get on his way toward home. In time of need, a coach became a parent and teammates became family.

That is one of the functions of a team at Bowling Green. To Mel Brodt his team is an extension of his family, and for nine months of the year coaching takes on an extra dimension.

The sorrow is shared along with the joy. When the cross-country team won the first Mid-American cross-country title in the school's history in 1960, the team's fifth man ran up to the press box to shake the coach's hand and share the victory with him.

"We did it coach!" he said. In a trembling, emotion-filled voice came the reply, "Thanks."

These are the things most people don't see. They don't see the man coming to work every morning to a little office housed in the corridor of the football stadium. They don't see the light still shining in the office after darkness has fallen at night. They only read about which team won or lost on Saturday, not what went on Monday through Friday.

A day in the life of Coach Mel Brodt goes something like this. He arrives in the morning at the office to sift through the recruiting files, class schedules, results, class papers and the day's lesson for his students. He spends his office time calling and receiving calls from other coaches and track organizations, arranging or confirming his meet schedule and conducting the business of a college track team. He recruits, sends notes to parents of team members, gets last week's results ready for the secretary to type, along with this weekend's itinerary.

In this day he sandwiches meals, teaching class and the duties of a teacher and advisor, plus planning and supervising the team's afternoon workout. Then, if he's lucky, he gets home before seven for dinner.

"Time is a key word with our situation here at BGSU," says Brodt. "Being available to devote adequate time to the team personnel. I'm extremely proud of all my team members and their performances, no matter what their event. But in the last three years I've been able to utilize time more wisely since having an assistant coach (Lloyd Crable) for the field events, and this has helped the success of our program."

Greying and more rotund than in his running days, Brodt's roots in coaching go back to the Army Air Corps in World War II.

"Army Air Corps service time in the Aviation Cadet Program provided time



Brodt's biggest moment: the final lean which won Dave Wottle the 1972 Olympic 800-meter title. (Horst Muller photo)

at John Adams High School in Cleveland.

"My basic philosophy of training has been developed over the years from a base of 'common-sense' training, always set up by working backwards from your most important competitions and then conditioning and training toward a six-to seven-week peak performance level of competition," says Brodt. "It was developed from past running experiences, trial and error, plain common sense and gaining the feel of what the performer is doing and going through both mentally and physically.

"In 1952, while coaching at John Adams High School, I began using what is now termed the 'interval system.' But due to lack of knowledge at that time by anyone with that method of training, little else was gained by anyone except my own team members. From 1953 through 1960, when I came to Bowling Green, I had at John Adams seven individual state champions in either cross-country or the mile with the interval system, and the short middle distances were the nucleus for our four state championship teams."

This record indicates the success of his philosophy of competition.

"My philosophy of running is predicted on winning races with adequate efforts and with no concern about the time," says Brodt. "A foot race is a contest with man running against man, and pressures become too great if one is constantly running against the clock."

Jumping from high school to college coaching presented a problem that all new coaches face: the integration of their system.

"At Bowling Green it took three to four years before I could recruit runners and utilize my own system of running philosophy and put it into action. At that time, with only cross-country and the short distances (two miles maximum) on the track, it was not necessary to have a strong nucleus of middle distance runners. Adjustments must be suited to personnel, and then faith and respect by the runners must be gained. This is sometimes difficult to do until one is successful, especially at the college level where runners come to the coach from many and varied previous training programs.

"I suppose at the present time,

since BG has had two great middle distance athletes in Sid Sink and Dave Wottle, my image or reputation is one of being a better than average distance coach," says Brodt. "It was only a short six or seven years ago, prior to the MAC adding other distance events to the program, that I was a sprint and field coach with a 3:08 mile relay, and 9.4, 9.5 sprinters. This was during the pre-assistant-coach era and with only 15 events on the conference program."

"I've always had the 'feel' of the distance runner and I'm now able to devote the necessary time to the middle distance group to coach them with many personal feelings involved," adds Brodt. "The respect and rapport with this group are probably the two biggest assets gained in recent years, and again this is primarily due to the availability of time to coach,"

Starting with Paul Talkington and Bob Parks up to the present group, the talent was present for concentration on a middle distance program and the building of "tradition." Now the coach's calling card reads, "Home of the Middle and Distance Champions." And along with Oregon, Bowling Green has been the only major university to place in the top 10 at the NCAA cross-country championships for the last four years.

The coach says, "Tradition is something you have to build. That's why I've geared our program toward the specific area of middle distances and I try to get a few from other areas for a good sound team. Our successes over the past six to seven years have been a result of the better than average runner (4:16 milers, 9:30 two-milers) matriculating to Bowling Green for little or no financial aid. With improvement in performances, aid is earned and he (the athlete) becomes a member of a happy and unified group of young men who are dedicated to the team and individual performances, improvements and resulting successes."

No freshman has ever come to Bowling Green on a full-ride scholarship, and the earliest any performer has ever reached that pinnacle has been at the end of his sophomore year. This is because of the coach's philosophy that scholarships must be earned, not given to untested talent. High priority is given to those events where the measuring stick is the same in high school as it is in college (a long jumper has an advantage over a high school shot putter because the conditions will be the same for his event in both high school and college; same with the sprinter over a hurdler).

"If the high school performer is doing the same as the best you've got, you have to offer him more because the

near the end of the war for me to attend a month-long school of physical training," he says. "Upon completion of the school, the practical experience in teaching and conducting classes led me to teaching and coaching."

After leaving the service, he entered Miami (Ohio) University, where he ran on the track and cross-country teams. He graduated in 1949, then proceeded to obtain his master's degree from the University of Illinois in 1950. In 1951, he became the track and cross-country coach

other colleges will be offering him more," says Brodt. "But I'd rather have an academically talented runner who might have run a little slower but has more potential than a non-academically talented but faster runner."

This has been his recruiting philosophy. And while Brodt has never "landed" a high school athlete with the prowess of a Prefontaine or a Craig Virgin, he has had the satisfaction of taking Dave Wottle, a 4:20 high school miler, and helping him become an Olympic gold medalist.

Brodt is most effective with the parents of the athletes. They like his jolly manner and "work and earn" philosophy, plus a straightforward approach that lets them know he cares for his athletes not only as performers but as people.

He says, "Track and cross-country coaching has been very enjoyable to me over the years, and I attribute most of the success which I've had to the following qualities: (1) the ability to remain sane during the down years; (2) never get overly excited and remain calm during the times of adversity; (3) work untiringly with dedication to the sport and the young men; (4) always be sincere, fair and honest with my athletes; (5) never lose sight of the direction toward which I'm going and (6) smile. These personal attributes, coupled with a little knowledge and experience, ability and refreshing desire have made it very easy for me to smile during these past few years."

The smile can also have another meaning, as his athletes will tell you.

"If he's got a big grin on his face when he comes out to give you the workout, you're in for a tough day," says one team member. "But if he's smiling, laughing and joking, you know it's going to be a bear."

Success hasn't brought many changes to Bowling Green, where the most modern facility is the weather-beaten Tartan track that sits out in the open next to the football stadium. Bowling Green has no indoor facility. So the distance men work on the brushed off Tartan during winter. The sprinters, hurdlers and field event men work out in the ice arena—on the concrete oval that ducks beneath the stands surrounding the ice rink.

"I'm suprised we do as well as we do in the indoor season," says Brodt.

During cross-country season, because of the flatness of the city of Bowling Green (it has one hill and that is man-made), the team members hop

into cars or a team bus to drive 10 15 miles to Riverby golf course to practice hills. This is done once or twice a week, depending on the hilliness of upcoming meets.

Most days, however, the routing and location are similar. The team starts its workouts with a 3-4-mile run around the campus and golf course area and meets for loosening-up exerises on old fairway 8 on the Bowling Green university golf course. The coach arrives a few minutes later, riding out to meet the runners in his maintenance department "golf cart" ready to conduct the workout.

The workouts are set up in the following pattern:

Monday—either a controlled fartlek run of about an hour at Riverby or some combination of repetitions from a half-mile up.

Tuesday—speed or tempo work on the fairways of the BG golf course, usually a mix of quarters and halves or shorter distances.

Wednesday—pace or repetition workout of halves, miles, two miles or a combination of mixed distances, either at a set pace or broken up in sections of an Igloi-type system of efforts (easy, brisk, good, hard or all-out).

Thursday—"junk work," a variety of distances and efforts depending on the time of the season, condition of the team or the weather; in late season the day consists of a fartlek distance run.

Friday—a pre-race run of 5-7 miles, usually interrupted by team wrestling matches and other "games" that team members play to keep loose and relaxed after a hard week of practice.

There are other "gimmicks" that the runners use to keep their sanity, and most are the result of the loosely disciplined coaching and increased rapport and camaraderie of the teammates. For example, there is the "Riggie Award," which is given to the runner who ties up the worst during his race the previous week. This award has varied from a plastic turtle to the list posted on the team bulletin board of the winners, along with the "honor" of carrying the "riggie" baton at Monday's practice.

The constant "razzing" of the teammates over things like riggie keeps the team loose and prevents, as much as possible, egos from being bent out of shape. One of the prime movers for this team togetherness and merriment has been Sid Sink, first as an athlete and later as a graduate assistant coach.

There has been nobody, short of the coaches themselves, who has contributed more to the Bowling Green track and cross-country programs than Sink. His complete faith in Brodt's system led to his success as a steeplechaser (he

still holds the American record) and nine-time All-American selection. Along with this obvious assist of being a point scorer, Sink added his ability as a motivator and infused his enthusiasm for the sport into his teammates. Brodt's biggest disappointment in coaching was when Sid failed to make the Olympic team last year.

Selfless, dedicated individuals have been the primary force behind Bowling Green's successes the past few years. But all has not been peaches and cream. Some criticism has been leveled at the system that puts the athlete on the track 3-4 days of the week and the orientation of the team toward middle distance runners. Brodt, who is not "old fashioned" while at the same time couldn't be classified as progressive, has had to deal with his share of disciplinary problems.

"Our BGSU track and field teams are definitely not all middle distance oriented or we wouldn't win dual and triangular meets or be contenders for the MAC championships," says Brodt. "No matter what successes come to my teams, I will never lose sight of the individual, no matter what event. If our individual and team successes are now in the middle and distance running, fine. But I personally feel very competent in all phases in the complexity of track and field coaching.

"The use of intervals for a 3-4 day period can be so diversified, with its complexity variables and the intermingling of various efforts and distances, that unless one thinks about it the interval system (rigid system, per se) is mostly camouflaged. To be used effectively for the benefit of the runner, the coach must be present at all times, be flexible and have ingenuity with diversity to prevent boredom, repetition and laxity—and make it as much fun as possible but get what needs to be accomplished done. Primarily what I hope to accomplish with this system is to prepare the body to meet challenges in competition."

His track workouts are patterned much the same as in cross-country, i.e., Monday—distance, Tuesday—speed, etc. Each interval is paced according to effort on a modified Igloi scale of exertion. "Easy" means better than a good jog, "brisk" emphasizes high knee-lift, "good" is half-speed, "hard" is three-fourth speed, and "all-out" is a controlled maximum speed effort. Emphasis is placed on relaxation and control, with bursts or accelerations mixed into the intervals at the end of the workout to accustom the runner's body to this kind of stress so he is able to accelerate in competition.

"I have not been nor will I become a strong advocate of LSD (long slow distance training)," he says, "because I've seen too many young men under the system of training fail to become competitors. They become too entrenched with the slow pace and physically locked in gear for a 7:30-8:00-minute mile. Unfortunately, on the high school and college levels of competition there are no distances for which that pace is suitable."

This year, Brodt will have other problems besides his own teams as he assumes the role of president of the USTCA.

"This is such a critical time with the amateur sports scene so much in the limelight and so much confusion and unrest within the United States," says Brodt. "The leadership role in attempting to direct thinking and action taken toward the betterment of track and field in the US is definitely quite a challenge. With Congressional action being involved, it now points to an entirely different aspect of leadership this year than in a 'normal' term of office. The year 1973-74 could be one of the most important and influential years for the future of track and field in the US, and I trust that our (USTCA) judgments

and actions will be the correct ones as we'll have to live with the decisions for a long time."

He is also aware of the problems regarding the "alphabetical involvements (AAU, NCAA, USOC, USTFF)."

"The total picture is very unfortunate for the amateur track and field athlete. It's a catastrophe that the athlete must suffer because mature men cannot sit down and agree on what's best for the fine sport of track and field. Congressional intervention is now taking place in the attempt to clarify the entire amateur sports picture in the United States. Hopefully, this action will alleviate the conflicts and make it possible for our amateur athletes to compete without harassment, at any place, anytime and against any opponents."

Another problem he considers serious is the situation of foreign athlete. He says, "Wholesale recruitment or 'buying' a ready-made foreign team for any NCAA sport is ridiculous except for the betterment of the individual coach's ego and record. This situation could be rectified in a hurry if the powers that be would take a strong, firm stand in the matter."

"I do not wish to deny the foreign athlete the opportunity to obtain open

competition. But to permit them to dictate and deny or 'take away' American championships from our American athletes definitely defeats our primary purpose for conducting sports programs in our universities."

Brodt would be the last person to deny anyone the opportunity to compete. As one team member put it in a mock imitation of the coach, "Compete or get beat." In four words that is the motto for success at Bowling Green.

"It has always been my feeling that success should breed success as aspiring young men seek and accept the challenge presented when confronted with a team which has the personnel to excel," says Brodt. "It takes depth to win meets in cross-country and to have a strong middle distance program on the track. In cross-country, your team's success depends on your fifth, sixth and seventh men and in track you have to have strength in every area—distance, field events, sprinting and hurdling."

But for Brodt winning is only part of the overall picture which hopefully results in the end-product of helping "better a young man in life" as the most satisfying reward for a coach.

"If winning was all there was to sports," he says. "I wouldn't be in coaching."

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Stan Pantovic photo

"It's going to be Apollo 11 moon-landing business," John Akii-Bua said before his Olympic race.

OUT-OF-THIS-WORLD HURDLING

John Akii-Bua is a boyish, friendly, cheerful young man to whom worry and tension seem total strangers. I had never seen the long-legged Ugandan until the summer of 1971 when he was competing in the first United States-Africa track meet at Durham, N. C. That first impression was lasting.

There he was, on the sun-baked second day of the meet, being chauffeured to the starting line with his fellow hurdlers on little electric carts. As you studied the faces of the athletes, you noticed they were stone serious, tense, all but Akii-Bua's. As he rode by us on the backstretch he was smiling cheerfully, waving to the people in the crowd.

Three minutes later he streaked through the first 200 meters of his race in 23.3 to 23.5 seconds, going on to win comfortably in 49.0—which was to be

the second fastest time in the world for the year.

This, one quickly concluded, was a special sort of athlete.

The 6'1½", 168-pound Uganda policeman's performance in the 400-meter hurdles at the Munich Olympics, which established him as a superstar among track athletes (*Athletic's Weekly* called his race "probably the finest single track achievement of all time") is now part of track history. Facing the best in the world, Akii-Bua simply ran away from them over the final three hurdles, wiping Dave Hemery's sensational 48.1 of the Mexico City Olympics clear off the books with his 47.8. Without stopping for an instant, he went straight into an unforgettable victory lap around the track, waving to the crowd, smiling broadly, jumping over

by Dave Prokop

hurdles (some real, some imaginary) as he went. This display, after a race having the reputation of being one of the most brutal of all track events, was all but unbelievable. In a way it was reminiscent of Abebe Bikila's behavior in the 1964 Olympics where he went through a series of vigorous exercises immediately after winning the marathon.

Like most track fans, I watched and marveled at the phenomenon that was John Akii-Bua at Munich. But my image of the athlete was strongly shaped by memories past—the Akii-Bua of Durham who had smiled and waved en route to the starting line and had asked me, when I interviewed him after the race, if I knew anything about interval training. He'd heard about it and would like to try it. Could I send him some information? I remembered him from the witty and honest nine-page letter he'd sent me in the spring of '72, some four-five months before Munich, after I'd written him asking for some biographical information for a story I was writing. I remember him describing in his letter the problems of trying to train through Uganda's rainy spring on sopping wet grass tracks (Uganda has no cinder tracks). "I don't think Ralph Mann would like to train on a wet grass track for three months like me" he said.

One fact about John Akii-Bua that has received considerable publicity is that he comes from what can be described as, for want of a better word, a *big* family. In all, he has 42 brothers and sisters, although many of them are half-brother, half-sisters. More pertinent in an athletic vein, yet rarely revealed, is the abundance of athletic talent in the family.

"I come from a very athletic family," says John. "About 10-15 of my brothers have been very active athletes. Some of them made Uganda's name known abroad from 1950-67. L. Ogwang-Bua who did 50 feet in the triple jump and represented Uganda in the 1954 and '58 Commonwealth Games, and in the 1960 Olympic Games. T. Opaka-Bua did 120-yard high hurdles in 15.4 seconds and was many times East Africa champion. Average athletes were A. Owalla-Bua, R. Angura-Bua, P. Agetta-Bua and I. Otim-Bua.

"After 1964 another group came. J. Ochen-Bua replaced Ogwang-Bua in the triple jump and was many times East Africa champion. He held the

East Africa and Uganda records with a leap of 51 feet. He competed in the 1966 Commonwealth Games in Jamaica, reaching the final and placing 12th. A soldier, single, we never saw him again after the coup in Uganda in January 1971. My brothers, S. Agetta-Bua, W. Agetta-Bua and Atepo-Bua are high jumpers, all over 6'4", and all except Atepo-Bua, compete in our own internal track meets."

Kenyan distance runner Philip Ndoo (now at school in Eastern New Mexico University) is both a journalist and a friend of John Akii-Bua's. Says Ndoo, "Some of his brothers could probably have been world record holders if they'd had good coaching."

For John Akii-Bua the road to the top step of the victory stand at Munich started years ago and rather humbly. "I remember very well in 1956-60 when our father used to set us up for 150-yards dash and he who wins gets a packet of sweets. I never got any."

Tall as a teenager but, by his own admission, rather weak in the joints, John Akii-Bua started as a triple jumper (what else?) and a long jumper. At age 14 he did 44 feet in the triple jump. In 1967, when he was 17 and a member of the Ugandan police force (he joined the force long before he became an athletic star), he was the terror of the Uganda Police Championships, winning the high hurdles (15.4), the 440-yard dash (54.0), the long jump (20 feet), the triple jump (45 feet) and helping his team to victory in the 4 x 440 relay. At the national championships, however, it was a different story. He never got past the semifinals of the high hurdles, which had started to emerge as his strong event. Nonetheless, he was beginning, in his own words, "to pick up ideas on athletics."

In 1968, an Olympic year, Uganda hired a British coach—former international triple jumper Malcolm Arnold—to prepare the country's best athletes for the upcoming Games. Arnold helped the 18-year-old policeman with his steps and his technique in the high hurdles. That year, for the first time, John got a chance to compete outside the country, he and his brother Ochen-Bua being selected to participate in a meet in neighboring Kenya. Both won, John taking the high hurdles in 15.1, beating Kenyans who had been doing 14.5 to 14.9 previously, and Ochen-Bua setting the East African triple jump record with 50'5½".

The Olympic standard for the high hurdles in '68 was 14.0. For Akii-Bua

it was a long way down from 15.1 to 14.0, but there was a chance. The chance became more like a hope when he did 14.3 in the semifinal of the Uganda championships later that year.

"A British hurdler who had competed in the 1960 Olympics was in Uganda for his holidays then," says John, "and he did 14.4 seconds in the semifinal. The next morning in the papers there was my photograph and the Briton predicting I would win. I only won in the newspapers. In the final, I was beaten back to third place. It was a very big disappointment to me that I was not selected for the Olympic team."

That same year, John Akii-Bua competed for the first time in the 400-meter hurdles, placing third in the East African Championships in 53.4.

The following year John dominated the high hurdles in Uganda, a country that had developed quite a number of near-international-class hurdlers over the years. He had several times in the 14.3 to 14.5 range. That same year the qualifying times for the 1970 Commonwealth Games came out: 14.5 in the high hurdles, 52.5 in the 400-meter hurdles. Making the national team seemed well within his grasp.

A significant development followed in early 1970. John, who had continued working with coach Arnold all along, hooked up with training partner Amos Omolo, a 45.3 400-meter runner and a finalist in the event at the Mexico City Olympics two years earlier.

"I almost did every training session with him with a view to moving to the 400-meter hurdles," says John. "I ran several times under the qualifying standard in the 110-meter high hurdles. Then one day I went for a play-around in the 400-meter hurdles and I clocked a 52.5 qualifying time."

By the time of the Commonwealth Games in Edinburgh, John had brought his best time down to 51 flat. His Ugandan teammate, Kenyan-born William Koskei, had a 50.6. The two of them, and Kipkemboi Yego of Kenya, would break some important new ground for Africa in the intermediate hurdles in Edinburgh, Koskei finishing second, Yego third and Akii-Bua fourth behind the gold medalist, Great Britain's John Sherwood.

John Akii-Bua describes his Edinburgh performance: "I ran my first heat, won and went on to the final. There I was given lane eight (a bad lane in the event since the hurdler can't see his opposition or gauge his pace until past halfway in the race). At 300 meters I was eighth but I pulled up to fourth place

at the finish with 51.1 seconds. After the race I didn't feel tired at all. I felt as if I had half of my strength still left. But with only half an idea (of the technique) in the 400-meter hurdles, that was all I could turn out."

The hurdle placement in the 400-meter hurdles, competitors will tell you, is awkward—particularly in view of speeds at which the event is run today. The barriers, which are 35 meters apart, are too far apart for a runner to maintain a 13-stride pattern all the way (unless he's unusually tall). On the other hand, using 15 strides between hurdles makes it almost impossible for an athlete to develop the type of speed modern competition demands. Fourteen steps would seem the ideal. But this stride pattern requires that a hurdler alternate lead legs, a difficult physical feat for most hurdlers. Difficult or not, it's a technique that today's intermediate hurdler has been forced to learn by the progress in his event.

That technique learned, most top hurdlers resort to a sort of half compromise, using 13 strides for as long as they comfortably can, then switching to 14 strides over the remainder of the distance. This was the technique David Hemery used to blast the field and the world record in the Mexico City Olympics and this was the technique John Akii-Bua set out to acquire after the 1970 Commonwealth Games.

"I was already a half-made hurdler when Malcolm Arnold started working with me. With my advantageous height, he had no problem putting me correct. I did a lot of 600-meter and 500-meter runs so my stamina was good. The big breakthrough was to learn how to alternate (my lead leg). I got it after five months hard work. I mean, sometimes my head was tied to my left leg with a rope and I spent 10 minutes or 20 minutes sitting like that in a hurdling position. So you can figure out for yourself how hard it was."

By 1971 John Akii-Bua was ready for his entrance as a star on the world stage. He flew to Israel for the Hapoel Games. There he beat the fine American intermediate hurdler Dick Bruggeman, recording a time of 50.2 seconds ("Had I not started late from the blocks I think I could have run sub-50 seconds there"). At the same meet he followed this performance up with a 14.3 victory in the 120-yard high hurdles over another American, Leon Coleman, who had been fourth in the event at the 1968 Olympics.

Three weeks later in Kampala, where he lives, he ran 49.7. Then came the US-USSR-Commonwealth All-Stars

meet in Los Angeles. With Ralph Mann, world record holder for the 440-yard hurdles, absent, Akii-Bua exploded over the last 150 meters to score a resounding international victory—this time in 50.1. The 49 flat at Durham came next. Once again Mann was absent. John was disappointed but he had a private goal to divert him from thoughts about Mann. That private goal was: beat Koskei.

"Let me tell you one thing about this boy Koskei," he confides. "After winning the silver medal in the 1970 Commonwealth Games, he deserted Uganda and went back to Kenya. He brought about a lot of confusion in the Uganda sports body. It wasn't until I ran my 49.7 in Kampala that the Uganda association decided to turn him free. But Koskei had been ever beating me for the past two years and the Kenyans, who are very good friends to Uganda, said that my run (in Kampala) was timed with *alarm clock*. They did not want me to come to the North Carolina meet. They wanted the hurdlers to come from Kenya only. In our national paper before I went to the USA I was praised and the story said that it's now time for Ugandans to show that they are catching up in track and field and my main problem was to beat Koskei only, that I must not stay behind him any more at all costs."

What happened in Durham was gloriously decisive and to the point: the gun went, Akii-Bua seemed to be at the 200 meters before the smoke cleared, and that was that.

Many experts rate the 400-meter hurdles the most punishing event in track. Sprinting this distance full throttle on the flat is tough enough, as any runner knows. Add 10 three-foot hurdles, each hurdle growing higher and higher as one's fatigue mounts, and you have a graphic picture of the demands of the 400-meter hurdles. The event generally ties strong athletes into knots. As a matter of course, intermediate hurdlers, even the best ones, seem to start the race running and hurdling like gazelles only to be reduced to straining, awkward buffaloes down the homestretch.

Not John Akii-Bua. In the intermediates, he runs like a gazelle all the way, his physical strength and abilities such that he looks as loose and relaxed over the last two hurdles as he did over the first two.

Part of the secret lies in his training. Whereas African distance runners, many of them living at high altitudes, have the reputation of doing less physical work in training than distance runners

from other continents, with John Akii-Bua the reverse seems to be true about his training: he trains harder than most intermediate hurdlers in other countries.

Philip Ndozi wrote a story on John in early 1972 for Nairobi's largest newspaper, *The Daily Nation*, after visiting him in Kampala. Said Ndozi, "He was training a lot harder than some distance runners. He had been jogging up to 16 miles a day, although he had cut back to eight miles (a day) by the time I visited him."

He reportedly ran and hurdled in practice with a lead-weighted belt around his waist. Describing his training after winning both the high hurdles and the intermediate hurdles at the Hapoel Games in 1971, he said: "I did a lot of repetition work on the 200-meter hurdles, 300-meter hurdles, and 500 meters and 600 meters on the flat. My best 200 meters over hurdles was 23.9 and my best 600 meters was 82 seconds. I ran consistent 50.5-50.9 400-meter hurdles in practice with a 14-stride pattern most of the time. Then, on the 29th of May, I decided to make a trial run with 13 strides to hurdle five, then alternate the rest of the way. I turned in a good 49.7 after hitting the seventh hurdle so hard the hurdle weight flew up eight feet, although I didn't feel it at all. The same day I ran a 46.4 relay leg."

When he wrote me in the spring of 1972, he made training in the spring in Kampala sound like running around a football field an inch deep in water. He desperately hoped, he said, that he would get the opportunity to train on an all-weather track, and if not that, at least a cinder track. He got his opportunity, I later learned, when he went to Germany in mid-July to complete his Olympic preparation along with some 33 other African and West-Indian athletes.

He worked there for a full month, doing repetition training over hurdles, moving up in distance until he was going as far as eight, nine and the full 10 hurdles. He also ran occasional interval workouts on the flat (such as 3 x 600 meters in an average of 80 seconds). In one workout he ran 44 seconds for 10 hurdles (a distance of 360 meters), rested for 20 minutes, then came back and ran 49.5 over all 10 hurdles for the full 400-meter distance. He ran trials over the 400-meter hurdles in the 49-second range with ease, his transition from 13 strides to 14 strides after the sixth hurdle invariably flawless.

Ulrich Jonath, the German Track and Field Federation's coach for the 400-meter hurdles, said, "The training of Akii-Bua is incredibly hard compared to the

situation here in Germany. Such training is only possible for a man like him who is physically very resistant and, as a policeman in Uganda, a civil servant, does scarcely anything but train, train, train. He himself confirmed this to me in Munich."

As a result of the success of athletes like Koskei, Yego and John himself in the hurdles in 1971, there was a feeling in some quarters that Africa had a chance to sweep the medals in the 400-meter hurdles at Munich. When I asked John in my letter about the possibility of a sweep, his reply had been somewhere between "non-committal" and "optimistic"

"Everything is possible," he said, "but I can't tell at the moment. I am coming with two fellow Ugandans and Kenya has three also. But I tell you it will be Apollo 11 moon-landing business. We shall come with 49-flat on wet grass track."

Of his own private thoughts about prospects of success, he had said, "I have dreams of falling just before reaching the tape in the final. Sometimes I come in fourth or sixth after leading all the way. Another one is that I run up to the third hurdle and stop. But I will run and run in the final. So many people wrote to me to take care of Mann but I think also of Nallet, Gavrilenko, Hemery, Williams, Rudolph and Stukalov. I am not afraid of any of these runners. Let me only get two months training on a Tartan track and you'll see what I can do for the finals. God knows? With that nice weather in Munich I guess the times will be very fast—maybe below 48 seconds."

The name 'Ralph Mann' has loomed very large in John Akii-Bua's thinking since 1971. It's a pertinent and enlightening point in view of the sour note the tone of their rivalry has hit this year. On John's 1971 visit to the United States he yearned to compete against the 440-yard hurdles record holder. But probably through no intention on anybody's part, wherever Akii-Bua was that season, Mann wasn't. Still Mann remained the ultimate adversary, the man he would have to beat to prove he was the best.

In Munich the showdown came, with Akii-Bua the decisive winner. But a blemish on the victory was a statement by several intermediate hurdlers (Mann among them) and coaches that a film of the race revealed Akii-Bua had dragged his trail leg around the inside of the first two hurdles—an action that, if caught by the officials, would have led to his disqualification. Probably because Akii-Bua's victory had been so decisive, no one was about to suggest

that his medal be taken away. But...

For all of John Akii-Bua's happy-go-lucky nature, he is also a sensitive young man. According to some inside observers, his pride was wounded by the statement that he had taken the first two hurdles at Munich illegally. He determined that he would have to prove exactly how good he was—again. Since Mann was the best among his opponents he would be the victim. Adding fuel to Akii-Bua's ambitions were some quotes attributed to Mann in the newspapers before this year's World Games. In the paper, Mann was quoted talking confidently about his chances against Akii-Bua and saying the Ugandan trained like a distance runner, not a hurdler.

In the race the next day, Akii-Bua had a safe lead after the final hurdle when he turned to the chasing Mann and beckoned to him, with a smile on his face, as if to say, "Come on. What's keeping you?" The large Helsinki crowd (not to mention Mann) was extremely unhappy with the display and booed Akii-Bua roundly.

Indeed, the Olympic champion's Helsinki behavior lacked sportsmanship and was properly censured by the crowd. A more intriguing question is: why did he do it?

The first point in understanding the situation is to recognize that John Akii-Bua is a free spirit, giving vent to his inner emotions freely, perhaps naively. The spontaneous, exuberant victory lap of Munich is ample evidence.

Philip Ndoo adds, "I think he knew he wouldn't be popular with the crowd when he did that in Helsinki. But I think he just wanted to satisfy his ego. He feels very cross about the story that he cut the hurdles in Munich and when he read Mann said he trained like a distance runner and that Mann was going to beat him, I think he just wanted to show him—you know, 'If you're so good, why don't you run faster? Why aren't you up here?'"

There is, in other words, considerable ego involved in top-level athletics. Not to excuse what many will call an unsportsmanlike action, free-spirit John Akii-Bua simply got caught with his gesture showing.

Today, at age 22, John Akii-Bua ranks alongside Kenya's Kip Keino and Ethiopia's Abebe Bikila on the list of super athletes who have come from Africa. Yet, more than the other two, he is unique. Keino and Bikila were distance runners, excelling in so-called "natural" events. John Akii-Bua is the first African super athlete in a technique track event.

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FROM LOWEST TO HIGHEST

*Measuring the physical strain of running from
Death Valley's floor to Mt. Whitney's peak.*

by Joan Ulliyot M.D.

The challenges grow larger as years go by and smaller tests are disposed of. San Francisco's odd couple, Paxton Beale and Kenneth Crutchlow, ran across California two years ago. Last year, they bicycled to Alaska in a race with a ship—and won. What next?

Crutchlow, a young British adventurer (see "World's Best Non-Runner," July 71), noticed that the lowest and highest points in the 48 United States were only a couple of hundred miles apart. Ken pointed out this quirk of geography to Beale and said, "Let's try."

Crutchlow doesn't run enough to know how hard something like this could be. Beale is a veteran marathoner. He knows, and immediately rejected the idea. Only when Ken mentioned that they could get medical mileage from the run was Pax's interest sparked. Beale directs the hospital where Crutchlow is employed.

The runners arranged for Joan Ulliyot, a physician and long distance runner, to go along with them and conduct medical studies. Earlier, Dr. Ulliyot, had tested Ron Daws in a marathon race ("Monitoring a Marathoner," June 73).

The run started at Badwater—289 feet below sea level—in mid-August. It ended 59 hours later at the summit of Mt. Whitney 14,446 feet up. Seldom, if ever, have runners gone through these extremes of temperature and altitude in 2½ days' time. Temperatures on the floor of the valley rose to 130. On the mountain, it was 100 degrees less, with snow falling.

Joan Ulliyot reported on the reactions.

The temperature was close to 100 degrees in Las Vegas, and my fog-adapted San Francisco bones shrank from the furnace ahead. To my surprise, Ken Crutchlow and Pax Beale cheerfully gave interviews to the press and packed the car with supplies for the trek as if they fully intended to go through with

it. I privately expected to scrape them off the road the next day, after they had been fried by the sun like two eggs.

In preparation for possible emergencies, I had read up on the treatment of heat stroke and heat exhaustion, and brought along a box of medical supplies—mainly intravenous fluids—which I hoped we wouldn't need.

As for research data, we obviously would not have access to laboratories or complex equipment, but there was much we could learn with simple measurements: (1) weight, fluid intake and output to check fluid loss from sweating; (2) blood pressure, pulse and temperature to follow the cardiovascular and thermoregulator response to activity in the heat; (3) periodic blood samples to show changes in salts, serum enzymes, etc.

Finally we obtained on loan from Avionics Corporation a miniature ECG recorder like the one used on Ron Daws in February. I planned to obtain tracings from both Ken and Pax, for a maximum of four hours each—hopefully a strenuous period—which might provoke some interesting ECG patterns.

Simple as all these studies sound, they became horribly complicated when carried out in Death Valley. The effect of the desert heat was surrealistic, like working in an immense sauna, isolated from the rest of the world by burning mountains. I drew the first blood samples by the light of a flashlight at 4 a.m. Saturday, just before Ken and Pax started out from Badwater. The temperature was 105.

All went well for the first few hours until the sun rose. Ken quickly discovered an effective cooling device which Pax also adopted—a Turkish towel, soaked in icy water during each rest, and draped over the head and neck. With his dark glasses and headgear, Pax looked like King Farouk striding purposefully through the desert in his shorts and cryptically inscribed tee-shirt ("Pregnancy Control Center"). Occasional passing motorists nearly drove off the road while

staring at him.

Both men were drinking as much cold fluid as they wanted but with a significant difference: Pax opted for Gatorade diluted with varying amounts of water and ice. Ken, afraid he might upset his stomach with the unfamiliar drink, took only pure water.

Pax also ate handfuls of "gorp," a concoction for the trail which contains nuts, M & M's, raisins and the like—also, significantly, plenty of salt. Again, Ken abstained.

By 12 noon, when Pax had lost eight pounds and Ken five, the difference made itself felt. Ken began to stagger around the roadside, vomiting up large but unmeasured amounts of water. (We discontinued his intake and output record at this point). His muscles were twitching ominously and I anxiously checked his vital signs. Despite his exhausted appearance, blood pressure, pulse and—most importantly—body temperature were all perfectly normal. So I let him continue the relay, but insisted he switch to Gatorade and try to eat. His stomach couldn't get much more upset at that point, and he might retain some useful salts.

When we crawled into the dusty town of Stovepipe Wells that afternoon with the heat at its peak, I wired Ken with the ECG monitor, taking plenty of time with it since we were resting in the shade (120 degrees). Then Ken staggered off again (up the 5000-foot Panamint ridge), recording his heart beats for posterity while I wondered what the American Medical Association would say about all this... ("Doctor Loses Two Runners in Death Valley"—"Why do you think it's called *Death Valley*, you fool?")

Meanwhile, despite his haggard appearance, Pax seemed to be holding up well. His heart rate after each relay leg fell below 100 within the first minute of recovery. He too was moving at a snail's pace up the ridge, however. As for the intrepid pit crew, we were flaked out just sitting in the cars in that heat and could barely summon the energy to soak the towels for Ken and Pax.

All suffering from lack of sleep, we kept on through most of the night and the next day, replenishing our ice supplies frequently and once (Oh, Heaven!) bringing back a six-pack of cold beer from a little store 20 miles away from anywhere else in the desert.

After crossing two deserts and two ridges, the climb up Mt. Whitney was simply a matter of endurance. By then we knew Ken and Pax would make it. The predictable effects of altitude,

while distressing, were not really so dangerous as the desert heat. Unaccustomed to the thin air, our runners clambered up the rocky trail ever more slowly as we approached the summit. The main hazard here was a possible fall off the sharp ridge if they should be overcome by dizziness.

Remarkably, they were more sure-footed at the summit than I was—loaded down with packs carrying water, blood pressure cuff and movie camera, I stumbled over the rocks more than once. I filmed the men as they completed the ascent in a snow flurry, then checked their blood pressure quickly before they froze (systolic pressure normal, diastolic slightly elevated). Recovery from exertion at altitude is characteristically rapid, and Ken and Pax—exhilarated by their successful feat—charged back down the mountain toward food and sleep, outdistancing their support troops.

What did we learn from all this? Nothing really new, but a lot that reinforces previous ideas about heat stress under less extreme conditions.

First, why didn't Ken and Pax succumb to heat stroke or exhaustion as I had feared? Their endurance was not the result of heat conditioning. Although Pax had run around a sauna a few times before coming to Death Valley, Ken was totally unprepared for the temperature (he prides himself on meeting challenges untrained, like any man off the street).

It is obvious, since their body temperatures remained normal, that the environmental heat as well as the heat generated by their activity was being dissipated effectively. This was done primarily by sweating. For instance,

Pax lost a total of 15 pounds in the first two days while taking in more than 20 quarts of fluid. This adds up to 55 pounds lost in sweat.

To be effective in cooling, the sweat must evaporate from the skin, and the dry desert air did this. The same environmental temperature in a wet jungle atmosphere would be much harder to handle.

Drinking the cold fluids and covering the head and neck with wet cloths also appeared to reduce body heat. Finally, the men slowed spontaneously to a walk during the hottest parts of the relay, thus generating less body heat. So they survived.

The blood samples taken at intervals show the combined effects of increasing blood concentration and simultaneous salt depletion (an obligatory loss through the sweat).

The most interesting physiological finding was totally unexpected. Ken and Pax slept a lot for a few days, but felt sufficiently recovered by that weekend to tackle the Dipsea race near San Francisco—6.8 miles of "cross-country gone wild" over two mountains. They didn't do well at all, even allowing for residual fatigue.

A few days later Ken and Pax were tested at Jack Wilmore's Human Performance Laboratory at University of California in Davis. To Wilmore's surprise, Ken's aerobic capacity, as determined by his maximal oxygen consumption rate, had declined drastically from a pre-relay value of 61. His lean weight (exclusive of fat) had decreased by six pounds.

Pax had no previous measurements for comparison. But given his training (up to 70 miles per week) and performances in races, one would predict an oxygen intake capacity of around 60. Instead, he tested out at 48, again barely above the unfit and untrained man. It is undoubtedly this surprisingly low oxygen consumption rate which underlied the poor running performance.

We can only guess what aspect of the Death Valley-Mt. Whitney run might have caused this change. One possibility is that the stress might have caused enough loss of red blood cells to account for the decreased oxygen consumption. However, repeat blood studies back in San Francisco showed no evidence of significant red blood cell damage.

Another possibility is breakdown of muscle myoglobin (a substance which attracts oxygen to the tissues). This is known to occur during exhaustive exercise in the heat, and has caused death in several military recruits ordered to do hours of pushups as punishment. We did have some laboratory evidence of myoglobin in the serum.

Any widespread cellular damage due to heat and stress would account for the observed decrease in oxygen consumption rate, loss of lean weight and various changes in the body's chemical balance.

Whatever the mechanisms of change, Ken and Pax recovered completely enough within a few weeks to be planning their next exploit—perhaps a race (against camels?) over the Khyber Pass. Whatever it is, I hope to go along.

ANNOUNCING—

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December 29, 1973, 10 a.m.

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For information, contact:

Pete League
5471-A Jackwood St.
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VIII.

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For information, write:

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3RD ANNUAL

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RUNNER'S GUIDE TO PHOENIX

Steve Stephenson, a Phoenix attorney, is both a leading over-40 runner in his area and a distance race promoter.

From October to March, the Phoenix runner thinks he has the nation's best running climate. Desert dryness, blue skies and constant sunshine make this the "Valley of the Sun." He need not accommodate his running to, for example, the 118-degree day or the 113 days of 100-plus temperatures—Phoenix records best forgotten by the runner.

Timothy Timetable is training for a December marathon. On this November Monday, 80-degree high, he decides to inaugurate his weekly 20-milers to Scottsdale, via the bank of the Arizona Canal. This irrigation system extends from Mesa through Tempe, across Phoenix in three major canals, and west to Glendale, Maryvale and points beyond.

Rugged running in spots because of rocks, loose sand or clods, the road-size canal banks are popular with girls' clubs, high schoolers and other runners. And horse riders, gnats, motorcycle nuts (despite a ban on them) and dogs.

After an early evening start, Tim cruises past the Wrigley Mansion, then the Biltmore Hotel designed by Frank Lloyd Wright, past a golf course and orange grove. He looks into supper scenes in the houses along the way, and flushes two high schoolers lighting up who fear he is police from the way they disappear.

Invited to work out at Tempe on

Tuesday around the Arizona State University campus, Salt River bottom and Papago Park—Tim declines in favor of an easy eight-miler from his doorstep. The cool evening air is refreshing as he runs through quiet residential streets, past apartments, churches, a 25-court tennis complex and turns back at the noxious Black Canyon Freeway.

Wednesday finds Tim taking off work early to meet an ASU runner at Squaw Peak Park. They chug part way up the 1200-foot landmark in northeast Phoenix, watch city lights sparkle on and then go to a steep side street for a series of hill reps.

The mid-city grassy oasis called Encanto Park lures Tim on Thursday for a 10-miler with an old friend. Geese and ducks hiss and quack at them from the lagoon banks, and the bright lights and carousel music from the amusement park greet them each four-mile loop around the golf course.

On Friday he takes a day off, but answers a call about the Fiesta Bowl marathon course. He describes it as starting 30 miles north, in the Old West type town of Cave Creek. Routed past Carefree, the course drops 900 feet down Scottsdale Road through rolling desert, lush with saguaro, ocotillo, cholla and prickly pear cactus—and Fords, Cadillacs, and Jeeps. Fortunately, so far there are no houses from mile three to mile 17 of the marathon course. The finish is at Scottsdale.

Saturday is old homecoming day

for the gang that runs each week to the KTAR-TV tower at South Mountain Park, some 1500 feet of climb. The city park is bragged about as the "Largest City Park in the etc., etc." To Tim's group, it means a 16-mile early morning workout with only five or fewer vehicles encountered, a spectacular view of the city and, if the copper mine's air pollution is moderate that day, a panorama of central Arizona's mountains for 75 miles. They plan to add the extra eight miles to San Juan Point and back next week to make a 24-miler.

At a 10-mile road race Sunday, at Glendale Community College on the northwest side of the city, the runners make 10 giant chessboard moves at one mile section lines, past cotton, lettuce, onion, carrot and cabbage fields. This is Tim's favorite course, with its squared mathematical certitude and accurate measurement.

Afterwards, at the pizza parlor with iced mugs and a pitcher of Coors, a few of the old-timers reminisce about the day it rained and hailed *before* a Glendale 10-miler. And two of them actually ran, they recall, a three-miler in the rain. It was on the Phoenix College track one summer. Credulity strained, the others interrogate for details. Tim wishes it had been him. That would be something to put in his diary.

(For Phoenix area race information, contact Jerry Smith, Secretary, Arizona Road Racers, 2041 E. Minton, Tempe, Ariz. 85281; 602/839-1160.)

For the Post Office

Statement required by the Act of August 12, 1970; Section 3685, Title 39, United States Code showing the ownership, management and circulation of —

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I certify that the statements made by me above are correct and complete.

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by George Sheehan M.D.

MEDICAL ADVICE

AGES AND DISTANCES

Q: What distances are appropriate for junior high-aged runners (12-14) competing in school track and cross-country events? (R. H., Colorado)

A: Experience has shown us that 12- to 14-year-old runners can handle long distance running, even marathon distances, without difficulty. Studies of German physiologists have shown that children at age nine have extremely favorable ratios of heart size to body weight. After reviewing available literature, a Canadian physiologist concluded that 10-year-olds are the best conditioned Americans.

The major problem with young runners is the lack of experience and judgment of their coaches. Even older runners overrace, overtrain and endanger themselves while running in hot, humid conditions. Younger runners responding to coaches rather than what their bodies tell them are particularly at hazard.

With this in mind, I would suggest the following:

Racing distance is irrelevant. In fact, longer races are less demanding on the heart than shorter ones. What is essential is that the youngster have sufficient training to negotiate the distance. Training between races should total approximately 10 times the racing distance.

What this means to me is that the actual racing should be cut down. I was against this at first, but I see now in my own area that high school boys are racing three times a week in three-mile cross-country races, and are gradually getting depleted. This leads to sore throats, colds and mononucleosis.

What I'm saying is that medically there is no reason why 12-14-year-olds should not run any distance, even marathons. However, unless racing is restricted voluntarily or by rule, they are likely to develop staleness and fatigue symptoms which will have a noticeable effect on their physical and mental condition.

My own suggestion is that races (I presume they would be about two miles) be held once or at most twice a week. Races over that distance would require longer interim training.

Heat is the real danger. And in the healthy runner is virtually the only death-dealing situation I can imagine. Coaches should be *very* familiar with heat difficulties, their prevention and emergency treatment.

MUSCLE BALANCING

Q: Lately I have read of the need for balanced muscular development. Occasionally I ride my bike to and from work. My question is, will riding a bike about four miles help or hinder running? I know it is not likely to hurt one's conditioning, but what about its effect on the muscles? (J. D., Washington, D.C.)

A: Bicycling is a fine way to maintain cardio-pulmonary conditioning—usually two miles by bike being equal to one mile of running. The muscles used in biking are different, however. The quadriceps get a good deal more action while riding, as do the muscles on the front of the leg.

Muscle balance can better be established by exercises for the anti-gravity muscles, shins, quads and stomach—done on a regular basis. Running backwards is a trick. Some half-court basketball would be a more enjoyable way of doing it.

Q: After reading that running overbuilds certain muscles, I thought how ideal Emiel Puttemans' job is for a runner. Puttemans (world 5000-meter record holder from Belgium) is a gardener who must bend over a lot in his work, which is the same sort of exercise one gets from doing bent-leg situps. Do you agree that gardening is beneficial in this way? (J. G., Pennsylvania)

A: Yes. And I might add that gardening is also fine for the soul, adding something that bent-leg situps will never provide.

GOUT

Q: I have seen no articles on the gout runner. What is the effect of running on these symptoms? (D.H., Maryland)

A: The common feature of people with gout is an excessive uric acid pool in the body. Clinical gout occurs when urate crystals deposit from supersaturated body fluids.

The exact mechanisms that cause this are unknown. Clinicians have thought, rightly or wrongly, that starvation, great effort, or excessive intake of purines in food can precipitate an attack. Recently, relative adrenal insufficiency has also been considered a trigger factor. The occurrence of acute gout soon after major surgery would seem to confirm this.

My opinion is that gouty runners have two types of gout reaction to running. The first is muscular and joint pain due to an approaching fatigue state. These pains are not associated with swelling or tenderness. They are also in joints and tissues unrelated to running.

The second gout problem is the tendinitis Canadian researchers have described. But I have a different interpretation of this. Here, the gouty reaction is in the tendon, joint, fascia or whatever, which is bearing the brunt of some structural imbalance.

In both instances, the essential treatment is physiological: (a) reducing training if fatigue state exists; (b) restoring structural balance where a specific area is under stress (using foot supports, for instance).

It goes without saying that a runner with gout unrelated to running should be on the usual regimen of drugs, diets and fluids as recommended by his physician.

PULSE

Q: I am 40 years old and have been doing distance training for three years. This year, in an attempt to increase my speed for short distances such as a mile, I added some interval track work. My usual workout was 12 x 220, each about six seconds slower than all-out. I checked my pulse to see if it fit the classical "run to 180, recover to 120" principle. I found that my pulse rose to about 110 and recovered to about 60 by the time I had walked 200 yards. My pulse at rest is 38. Is it unusual for my pulse to remain low even while running? Or is it an indication that I should run the 220's faster? (B. R., New York)

A: You have an unusually slow pulse to start with. Then you add to that the increasing difficulty to increase your pulse as you age. The maximum drops about a beat per year after the mid-20's.

Some good masters runners have low maximal pulse rates. Jim Hartshorne, once a national champion and now 50 years of age, has a top rate of 150.

But even given this, you have a response which suggests your 220s are not fast enough to put you in the optimum training range. I would suggest you find what your maximum pulse rate is. (A flat-out 220 or 440 would give you this.) Then increase the pace of your intervals until you are running approximately 90% of this. This would correspond to the "run to 180" principle, which is based on a peak pulse rate of about 200.

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The Pacex is designed for three general uses:

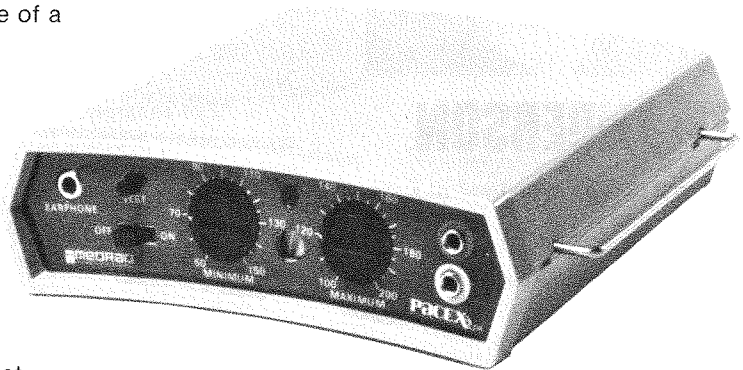
Now you can participate in exercise programs or competitive athletics and receive maximum benefits when your heart rate is increased and maintained in a prescribed training zone

If you should limit physical activity, the Pacex can be programmed and set to alarm when your maximum prescribed heart rate is exceeded. The Pacex will remain silent... while continually monitoring the heart rate... and when the maximum setting is reached, the Pacex will trigger an audio alarm signal.

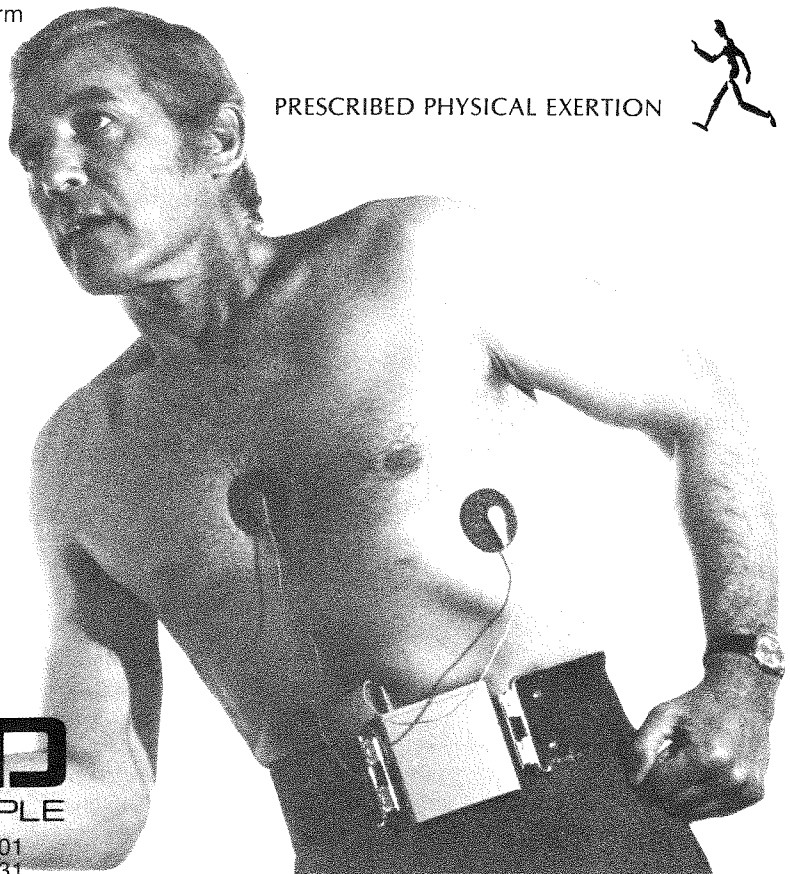
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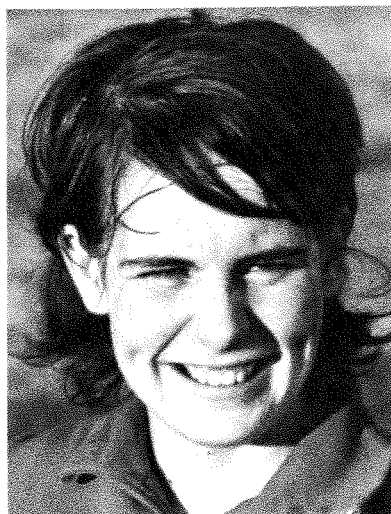


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PROFILES

Doug Schwab photo



TERI ANDERSON

When Teri Anderson lived in Kansas, which was as recently as May, she was too good for her area. She had outgrown her competition. And this, strangely enough, was hurting her as a competitor.

"I had only men to run against back there," she says, "unless I dropped into an event that was too short for me—like a 440 or 220."

Instead of going that way, she went the other. She went to the marathon. Late last year, Teri ran her first one in 2:55. She followed it with a 2:53—second fastest ever by a woman.

Still she wasn't satisfied. "I know I'm better at the long, long distances," she thought, "but there is only the 1500 meters in the Olympics in 1976. So I have to train to race the distance they have."

Teri's range of abilities is greater than perhaps any other woman's. She's a 4:41 miler on the track, and has run 10 miles on the road in 57 minutes in addition to her marathon.

But the shortage of women competition has always held her down, she feels—"I never got any competition in the midwest," she says. "So every time I've run in a national meet, I've choked. I just don't know what it's like to see other girls' backs."

In hopes of remedying that, Teri moved to California this summer to join the strongest club—the San Jose Cindergals—in the most competitive state.

Teri Lynn Anderson: Santa Clara, Calif. (San Jose Cindergals). 20 years old (born July 12, 1953, at Manhattan Kans.). 5'2½", 110 pounds. Single. Physical education student. Began racing in 1968 at age 15. Coached by Augie Argabright.

Racing: 220—26.9 (1970); 440—57.9 (72); 880—2:10.4 (72); mile—4:41.6 (72); 2 miles—10:08.0 (72); 10 miles—57:57 (73); marathon—2:53:40 (73).

Training: twice a day, 6 days a week, once on Sunday; 11 months a year; 50-100 miles a week.

My program has changed completely since I moved to California (in the summer of '73). I had been based primarily around long hard runs and pace. Now the coach is changing me, and his program is based entirely around interval. I have cut down from 18-22 miles a day—an average of 140 per week—to 100 miles per week. And much of this 100 is interval—no more long, hard runs."

"For example, a typical week of cross-country training in Kansas included eight miles every morning, Monday through Saturday. Afternoon runs would be 10-14 miles, the 10 being fartlek and the others steady. On Sunday, I'd take a single 13-miler."

"My training now for cross-country is five miles on the morning runs and a long run of 10 miles on Sunday. Afternoon workouts: Monday—10 x 880, 10 x uphill sprints; Tuesday—10 miles; Wednesday—8 x 1320; Thursday—7 x 1320, 8 x 220 hill; Friday—14 x 440, 10 x hill; Saturday—race. (In track, most of the long runs are replaced by more interval, with the longest of the week being an eight-miler.)"

LUANNE KRALICK

When the AAU Masters championships allowed women in the marathon for the first time this July, Luanne Kralick was the only one to accept the invitation.

A scattered few women in their 40's are running marathons, but they rarely have had the opportunity or encouragement to race each other. The best time before the AAU race in San Diego was 3:43.

Mrs. Kralick had no reason to believe she'd break that. She'd been running just four years, first for fitness only, and then as a sprinter.

"I joined a girls' track team in the winter of 1971," she recalls. She felt like the mother of the team, since the



Luanne Kralick (104) running the AAU Masters marathon.

next oldest runner was 18. Lou was 39 and was training to sprint the 100 and 220 in the Senior Olympics.

An injury led to longer and slower distance training, training to racing, and racing inevitably to the marathon. Lou's first one was Palos Verdes in June—just a month before her AAU race.

"I came in fifth (among the women) at PV at 3:53 and didn't strain," she says. "I thought that was funny because I wasn't even trying."

She tried harder at San Diego. The result was a time of 3:29:07—more than 13 minutes under the old over-40 record for women, and (of equal importance to Lou) below the Boston qualifying standard.

Luanne Kralick: Anaheim, Calif. (Senior Track Club). 41 years old (born Nov. 21, 1931, at Tacoma, Wash. 5'10½", 134 pounds. Divorced, 3 children. Occupation: real estate sales. Began racing in 1971 at age 39. Coached by Gary DeWitt.

Racing: marathon—3:29:07 (1973).

Training: once or twice a day, 5-6 days a week, 12 months a year; 55 miles a week.

"Some days I do five miles in the morning and five in the evening at eight-minute pace, or eight in the morning and five at night. But I generally prefer a single 10-11-mile run in the early morning as traffic is down and it's quiet out. A great way to start the day is to climb a steep hill and have the sun come up just as you get to the top.

"Anaheim is terribly flat, but we've managed to find a beautifully hilly area. We try to do hill work at least once a week (11 miles in 1½ hours). Occasionally, I run a 15-miler with the Palos Verdes 'breakfast club' group, too, and they are really an inspiration because to me they're all world-class runners."

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WOMEN'S TRACK TIMES FOR 1973

100 METERS

10.8 R. Stecher (E Ger)
11.0 P. Kandarr (E Ger)
11.0 D. Selmigkeit (E Ger)
11.1 S. Chivas (Cuba)
11.1 C. Heinrich (E Ger)
11.1 D. Maletzki (E Ger)
11.1 M. Meyer (E Ger)
11.1 I. Szewinska (Pol)
(5 runners at 11.2)

200 METERS

22.1 R. Stecher (E Ger)
22.3 D. Maletzki (E Ger)
22.4 P. Kandarr (E Ger)
22.7 M. Pursiainen (Fin)
22.7 M. Sidorova (USSR)
22.7 E. Strophal (E Ger)
22.7 I. Szewinska (Pol)
22.8 R. Boyle (Aus)
22.9 C. Heinrich (E Ger)
22.9 C. van Straaten (S Afr)

400 METERS

51.0 M. Pursiainen (Fin)
51.1 R. Kuhne (E Ger)
51.5 N. Koleznikova (USSR)
51.5 M. Zehrt (E Ger)
51.8 Siebeck (E Ger)
52.0 L. Tomova (Bul)
52.1 Kafer (Austria)
52.1 V. Bernard (GB)
52.2 Tschistyakova (USSR)
52.3 W. Dietsch (E Ger)

800 METERS

1:57.5 S. Zlateva (Bul)
1:58.9 G. Hoffmeister (E Ger)
1:59.5 L. Tomova (Bul)
1:59.9 M. Politz (E Ger)
2:00.1 K. Krebs (E Ger)
2:00.2 N. Sabaite (USSR)
2:00.8 Kotolik (Pol)

2:01.2 J. Allison (GB)
2:01.4 H. Falck (W Ger)
2:01.4 S. Yordanka (Bul)

1500 METERS

4:04.6 K. Krebs (E Ger)
4:07.5 I. Knutsson (Swe)
4:09.0 T. Petrova (Bul)
4:09.4 P. Cacchi (It)
4:10.1 L. Bragina (USSR)
4:10.8 G. Hoffmeister (E Ger)
4:12.0 I. Silai (Rum)
4:12.2 J. Allison (GB)
4:12.5 F. Larrieu (US)
4:12.5 G. Reiser (Can)

ONE MILE

4:29.5 P. Cacchi (It)

3000 METERS

8:56.6 P. Cacchi (It)
8:57.4 L. Bragina (USSR)

8:58.4 I. Knutsson (Swe)
9:00.6 Holmen (Fin)
9:03.0 Vihonen (Fin)

100-METER HURDLES

12.3 A. Ehrhardt (E Ger)
12.8 G. Rabsztyn (Pol)
12.8 T. Nowak (Pol)
12.9 A. Krumpholz (E Ger)
13.0 Tkatschenko (USSR)
13.0 Schaller (E Ger)
13.1 M. Antenen (Switz)
13.1 V. Bufanu (Rum)
13.1 B. Pollak (E Ger)
13.1 Eckert (E Ger)

400-METER HURDLES

56.7 D. Piecyk (Pol)
57.3 M. Sykora (Austria)
59.0 K. Kacperczak (Pol)
59.1 W. Koenig (US)
59.3 E. Skowronska (Pol)



Last year they all were Olympic finalists at 800 meters (left-right): Hildegard Falck, Gunhild Hoffmeister, Niele Sabaite, Vera Nikolic, Svetla Zlateva and

Ileana Silai. This year Zlateva has lowered the world record to 1:57.5, and Hoffmeister has won the European Cup. (Mark Shearman photo)

DECEMBER COMING EVENTS

Please send your 1974 running and race walking schedules to Runner's World, Box 366, Mountain View, Calif. 94040. Listings for the new year begin in the next issue.

NORTHEAST

- 16 Dixon Marathon, Chester, Pa. (City Hall; Harry Durney, Athletic Dept., Widener College, Chester, Pa. 19063).

SOUTHEAST

- 1 25-kilometer, Greenbrier, Ark. (10:30 a.m.; open; Denver Prince, State College of Arkansas, Conway, Ark. 72032).
- 15 20-mile, Raleigh, N.C. (Carmichael Gym, 10 a.m.; open; Russell Combs, Department of P.E., North Carolina State University, Raleigh, N.C. 27607).
- 15 15-mile, New Orleans, La. (Brown Gym, 8 a.m.; open; (Larry Fuselier, 4712 Perdue St., Metairie, La. 70002).
- 21 Deerfield Beach marathon, Deerfield Beach, Fla. (1 p.m.; open; William

Boynton, Deerfield Beach High School, Deerfield Beach, Fla. 33441).

- 28 Melbourne marathon, Melbourne, Fla. (Wickham Park, 8 a.m.; open; Frank Craig, 761 Thomas Barbour Dr., Melbourne, Fla. 32935).
- 29 Arkansas AAU 15-kilometer, Little Rock, Ark. (Burns Park, 1 p.m.; open; Rich Richardson, 422-B Sierra Madre, North Little Rock, Ark. 72118).
- 29 Peach Bowl marathon, Atlanta, Ga. (Westminster School, noon; open; Tim Singleton, Dean of Men, Georgia State University, Atlanta, Ga. 30303).

MIDWEST

- 1 North Central marathon, Naperville, Ill. (11 a.m.; open; Robert Schrader, 127 No. Center St., Naperville, Ill. 60540).
- 1 Mel Vos Memorial marathon, Topeka, Kans. (Lake Shawnee, 1 p.m.; open; Karlton Naylor, 120 N.W. 35th St., Topeka, Kans. 66617).

SOUTHWEST

- 8 Texas Cross-Country Championship 10-kilometer, Austin, Tex. (Neal Picken, 10106 Newdale Dr., Houston, Tex. 77072).
- 8 Odessa marathon, Odessa, Tex. (Nimitz Junior High, 9 a.m.; open; Jack Petty, 907 West 2nd, Odessa, Tex. 79763).
- 8 Gulf AAU cross-country, Houston, Tex. (Memorial Park, 10 a.m.; open; Pete League, 5471 Jackwood, Houston, Tex. 77035).
- 9 Arizona AAU 10-mile, Glendale, Ariz. (Glendale College, 2 p.m.; open; Steve Stephenson, 201 W. Flynn Ln., Phoenix, Ariz. 84013).
- 21 Fiesta Bowl marathon, Cave Creek to Scottsdale, Ariz. (9 a.m.; open; Tom

Harris, Phoenix, YMCA, 350 N. 1st Ave., Phoenix, Ariz. 85003).

- 29 Houston marathon, Houston, Tex. (Memorial Park, 10 a.m.; open; Pete League, 5471 Jackwood, Houston, Tex. 77035).

ROCKIES

- 15 Holiday marathon, Pueblo, Colo. (10 a.m.; open; Jeff Arnold, Route 5, Box 226, Rye, Colo. 81069).

WEST

- 1 Seattle marathon, Seattle, Wash. (Seward Park, 11 a.m.; open; Ambrose Salmini, 4525 N.E. 124th St., Seattle, Wash. 98125).
- 2 Western Hemisphere marathon, Culver City, Calif. (Veterans' Building, 8 a.m.; open; Carl Porter, 4117 Overland Ave., Culver City, Calif. 90230).
- 15 Madera marathon, Madera, Calif. (Madera High School, 10 a.m.; open; Dee DeWitt, Madera High School, Madera, Calif. 93637).
- 15 Southern Nevada AAU 20-kilometer, Las Vegas, Nev. (Sunset Park, 10 a.m.; open; Las Vegas Track Club, Box 869, Las Vegas, Nev. 89109).
- 15-6 Rim of the Pacific marathon and Hawaii AAY 50-mile, Honolulu, Hawaii (open; C.H. Greenley, 1520 Ward Ave., No. 1402, Honolulu, Hawaii 96822).
- 22 Southern Nevada AAU 10-kilometer, Las Vegas, Nev. (University of Nevada, 10 a.m.; open; Las Vegas Track Club, Box 869, Las Vegas, Nev. 89109).

INTERNATIONAL

- 2 International marathon, Fukuoka, Japan (invitational; Nihon Rikujo-Kyogi Renmei, 25 Ginnancho, Shibuya-Ku, Tokyo, Japan).

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RACING HIGHLIGHTS

TRACK ROUNDUP

Two recent women's records had more than the usual significance. Mona-Lisa Pursiainen extended Finland's track power into the women's sprints with her 400-meter mark. And Svetla Zlateva cleared up a shady area in the record book by bettering Sin Kim Dan's questionable (and long unrecognized) 800 time of 1:58.0.

● **Women's 400 meters**—51.0 by Mona-Lisa Pursiainen (Finland) at Helsinki, Sept. 16, tying world record.

● **Women's 800 meters**—1:57.5 by Svetla Zlateva (Bulgaria) at Athens, Aug. 24, breaking world record of 1:58.5 and unratified mark of 1:58.0.

The major international meet of the year, the European Cup, featured team competition. Each of the final six countries entered one runner per event. The Soviet Union won the men's title and East Germany the women's. Individual champions:

Men: 100m—Siegfried Schenke (EG) 10.3. 200m—Chris Monk (GB) 21.0. 400m—Karl Honz (WG) 45.2. 800m—Andy Carter (GB) 1:46.4. 1500m—Frank Clement (GB) 3:40.8. 5000m—Brendan Foster (GB) 13:54.8. 10,000m—Nikolay Sviridov (SU) 28:44.2. 110m hurdles—Guy Drut (Fr) 13.7. 400m hurdles—Alan Pascoe (GB) 50.1. Steeplechase—Tapio Kantanen (Fin) 8:28.6. 400m relay—East Germany 39.5 (Kokot, Droese, Bombach, Kurrat). 1600m relay—West Germany 3:04.3 (Kohler 46.4, Schloske 46.1, Herrman 46.3, Honz 45.5).

Women: 100m—Renate Stecher (EG) 11.3. 200m—Stecher 22.8. 400m—Monika Zehrt (EG) 51.8. 800m—Gunhild Hoffmeister (EG) 1:58.9. 1500m—Tonka Petrova (Bul) 4:09.0. 100m hurdles—Annelie Ehrhardt (EG) 13.0. 400m relay—East Germany 43.0 (Kandarr, Stecher, Heinrich, Selmigkeit). 1600m relay—East Germany 3:28.7 (Dietsch 52.8, Siebach 51.8, Zehrt 53.1, Kuhne 51.0).

LONG DISTANCES

In two of the continent's classiest races, Neil Cusack and Dan Shaughnessy won at Springbank, and Lucien Rosa led the international field at Charleston, W. Va. (see earlier article on the Charleston race).

Other than those, the best recent race was the Canadian marathon championship. Jerome Drayton ran his fastest marathon since 1969 (2:13:26.8), and

had to do it to hold off Brian Armstrong (2:13:39.2). Tom Howard and Bob Moore also broke 2:20.

In Australia, Derek Clayton ran 2:12:07.6.

Eileen Waters set a world women's best at 50 miles, running 7:05:31. She was nearly 20 minutes under the old mark.

Max White won the AAU's first 50-kilometer championship.

Results received by Oct. 8.

NORTHEAST

● **Pittsburgh, Pa., Sept. 1**—Irish Day marathon: 1. Don Slusser (Pa) 2:44:00; 2. Stephen Molnar (Pa) 2:55:00. (6 finished, 3 under 3:30, 5 under 4:00; from C. A. Herman).

● **Pownal, Vt., Sept. 2**—National AAU 50-kilometer: 1. Max White (22, Mass) 3:19:17.4; 2. Jim Bowles (24, NY) 3:21:41.8; 3. Ed Walkwitz (23, Mont) 3:26:24; 4. Bennett Gershman (31, NY) 3:26:43; 5. Clayton Bristol (23, Conn) 3:28:26; 6. Ralph Thomas (38, Me) 3:32:18; 7. Vince Chiappetta (40, NY) 3:34:28; 8. Jim McDonagh (49, NY) 3:35:02; 9. Ted Corbitt (53, NY) 3:40:00; 10. Peter Kuchinski (20, Mass) 3:40:56... 17. Nina Kuscsik (34, NY) 4:11:58. (39 finished, 12 under 4:00, 21 under 4:30, 32 under 5:00; from Melvin Goldberg).

● **Harrisburg, Pa., Sept. 3**—Harrisburg National marathon: 1. Bill Dawson (Pa) 2:56:33; 2. Alan Sommerville (Ohio) 2:57:36... 6. Bill Jackson (40+, Md) 3:18:47...51. Pauline Bayer (Pa) 5:15:18. (125 runners, 9 under 3:30, 22 under 4:00; 95 degrees; from Duane Johnson).

● **Westport, Conn., Sept. 3**—Labor Day 10-mile: 1. Bob Hensley (19, Conn) 53:48; 2. Norb Sander (30, NY) 56:05; 3. Bill Bragg (24, NJ) 56:39; 4. Hugh Sweeny (27, NJ) 58:06; 5. Carlo Cherubina (19, NY) 58:09...17. Joe Burns (44, NJ) 1:02:23...52. Frances Goulart (35, Conn) 1:11:30. (127 finished, 8 under 1:00, 24 under 1:05, 45 under 1:10; from George Sheehan).

● **Baltimore, Md., Sept. 16**—Montebello Lake 13.1-mile: 1. Ray Morrison 1:12:50; 2. Rick Warren 1:15:22. (13 finished, 3 under 1:20, 8 under 1:30).

● **Westfield, Mass., Sept. 16**—Berkshire 5-mile (over-40 only): 1. Manfred Kandschur (43) 26:32.8; 2. Chet Fortier (40) 26:58; 3. Walt McConnell (42) 26:41; 4. H. Snyder (41) 26:43; 5. C. Hanson (44) 28:02; 6. A. Sapienza (44) 28:06; 7. V. Fandetti (42) 28:08; 8. G. Harvey (40) 28:37; 9. J. Sullivan (41) 28:47; 10. M. Uher (41) 28:47. Ages 50-59: 1. J. Gardner (51) 29:34; 2. J. Hartshorne (50) 30:00; 3. A. Hossack (51) 29:58; 4. C. Hammen (50) 30:00; 5. W. Tribou (53) 30:20. Ages 60-69: 1. J. Wall (60) 30:41; 2. W. Brobston (60) 33:23; 3. F. Goodnow (60) 35:21. Ages 70-up: 1. C. Willberg (76) 41:08; 2. M. Cavanaugh (76) 43:51. (183 finishers in all divisions; from Charles van de Zande).

● **Syracuse, N. Y., Sept. 23**—Syracuse Chargers-First Trust 20-kilometer: 1. Larry Frederick (24, NY) and Bill Tylutki (26, NY) 1:08:44; 3. Bill McMullen (20) 1:12:52...

11. George Gavras (47, NY) 1:19:04...39. Gail Killin (19, NY) 1:42:50. (41 finished, 5 under 1:15, 13 under 1:20; from Bill O'Brien).

● **Bronx, N. Y., Sept. 23**—5-mile cross-country: 1. Ed Bowes (30, NY) 26:32.2; 2. Jim Schindler (30, NY) 26:22.2; 3. Norbert Sander (31, NY) 27:01...19. Tom O'Brien (42, NY) 30:37...34. Nina Kuscsik (34, NY) 33:48. (82 finished, 17 under 30:00, 37 under 35:00; from Joe Kleinerman).

SOUTHEAST

● **Greensboro to Winston-Salem, N. C., Aug. 21**—Greens-Winston marathon: 1. Gareth Hayes 2:30:26; 2. Rick Shriver 2:41:58; 3. DeNorris Bradley 2:50:22; 4. Ed Strabel 2:50:22; 5. Ed Jerome 2:52:20. (26 finished, 6 under 3:00, 18 under 3:30, 23 under 4:00).

● **Charleston, W. Va., Sept. 1**—Annual Charleston 15-mile: 1. Jeff Galloway (Fla) 1:16:29; 2. Lucien Rosa (Wisc/Ceylon) 1:17:35; 3. Neil Cusack (Tenn/Ireland) 1:18:55; 4. Jon Anderson (Ore) 1:18:55; 5. Tom Fleming (NJ) 1:18:58; 6. Ronald Martin (Va) 1:19:27; 7. Carl Hatfield (WV) 1:21:17; 8. Paul Talkington (Ohio) 1:21:27; 9. Stephen Smith (Va) 1:21:31; 10. Gareth Hayes (NC) 1:21:40.

11. Hal Higdon (42, Ind) 1:22:07; 12. Tom Findley (Ky) 1:23:14; 13. John Greenplate (Va) 1:23:51; 14. William Louv (Va) 1:24:06; 15. Felix Rendina (Ohio) 1:24:06; 16. Jim Kramer (Md) 1:24:17; 17. J. Brent Hawkins (WV) 1:24:36; 18. Gene Schultz (Va) 1:25:29; 19. Jerry Young (Ky) 1:25:29; 20. Ted Neeves (Va) 1:25:32...63. Jacqueline Hansen (Cal) 1:39:28...81. Francie Larrieu (Cal) 1:46:44...132. Sandra Triplett (WV) 2:15:03. (213 finished, 36 under 1:30, 77 under 1:45, 103 under 2:00; from Don Cohen).

● **Pensacola, Fla., Sept. 3**—Labor Day 3.6-mile cross-country: 1. Ken Misner (Fla) 19:04; 2. Bobby James (Fla) 19:32; 3. Charles Thomas (Va) 19:33; 4. Frank Ogles (Ala) 19:51; 5. Johnny Johnson (Ala) 20:01. (65 finished, 20 under 22:00, 34 under 24:00; from Lou Gregory).

● **Cades Cove, Tenn., Sept. 16**—Cades Cove 10-mile: 1. Bill Herron (21, Tenn) 49:15; 2. Paul Bannon (19, Tenn) 50:13; 3. Tom Carter (21) 51:01; 4. Dennis Spencer (21, Ga) 51:44; 5. Les Steele (20, Tenn) 52:08; 6. Ronald Addison (19, Tenn) 52:43; 7. John Angel (20, Tenn) 52:46; 8. Heinz Wiegand (25, Tenn) 53:18; 9. David Graeflin (28) 53:26; 10. Greg Camp (26, Ga) 53:53...Charles Gibson (50, Tenn) 58:46. (117 finished, 13 under 55:00, 49 under 1:00; from Hal Canfield).

MIDWEST

● **Ashland, Ohio, Sept.**—10-mile: 1. Edwin Fry (Pa) 52:43; 2. Bill Welsh (Ohio) 53:45; 3. Bob Gutjahr (Ohio) 54:30. (48 finished, 14 under 1:00, 27 under 1:05; 90 degrees; from Paul Armor).

● **Des Moines, Iowa, Sept. 1**—Iowa AAU 50-mile: 1. Loren Moes (Ia) 4:36:55; 2. John Copping (Ia) 5:14:55. (either times or distance incorrect; from Butch Hammer).

● **Columbia, Mo., Sept. 3**—Heart of America marathon: 1. Tim Hendricks (27,

Nebr) 2:43:40; 2. Roberto Rosales (31, Kans) 2:43:59; 3. Dennis Katzer (20, Nebr) 2:49:01; 4. Lou Fritz (30, Nebr) 2:49:37; 5. Jay Birmingham (28, Ohio) 2:54:28; 6. Alex Ratelle (48, Minn) 2:55:44. (48 finished, 8 under 3:00, 26 under 3:30, 34 under 4:00; from Joe Duncan).

● **Brookings, S. D., Sept. 9**—Lake Oakwood 5½-mile: 1. Paul Boerema (SD) 31:18; 2. Kent Herrboldt (SD) 31:19; 3. Bob Bartling (47) 32:25. (14 finished, 7 under 35:00).

● **Kettering, Ohio, Sept. 23**—10-mile: 1. Mike Ryan 55:09; 2. Jim Ackley 55:55; 3. Jerry Pierce 58:38...9. Bob Cushman (42) 1:02:38. (31 finished, 4 under 1:00, 10 under 1:05; 86 degrees; from Wayne Yarcho).

● **Rochester, Minn., Sept. 23**—Goose Chase 4-mile: 1. Juan Schmidt (22, Ia) 20:21; 2. Even Schull (30, Minn) 20:41; 3. Bob Brewington (21, Minn) & Larry Webinger (24, Minn) 21:07. (34 finished, 6 under 22:00, 16 under 24:00; from Allen Gilman).

SOUTHWEST

● **Houston, Tex., Sept. 15**—Gulf AAU 20-kilometer: 1. Gary Tuttle (25, Tex) 1:03:11; 2. Len Hilton (24, Tex) 1:07:22; 3. Dennis Manske (32, Tex) 1:09:07...12. John Stowers (45, Tex) 1:16:30...38. Gay Fowler (26, Tex) 1:36:11. (45 finished, 7 under 1:15, 16 under 1:20; from Pete League).

● **Tulsa, Okla., Sept. 15**—Tulsa Running Club 20-kilometer: 1. Larry Aduddell (28, Okla) 1:07:31; 2. Terry Lewis (21, Okla) 1:07:48...5. H. E. Barker (43, Okla) 1:18:20...15. Vern Whiteside (54, Okla) 1:26:05. (26 finished, 4 under 1:15, 8 under 1:20).

WEST

● **Kalispell, Mont., Sept. 1**—Kalispell marathon: 1. Rich Casperson (33, Idaho) 2:47:43...4. Gigi Brown (Mont) 3:58:36. (6 finished, 1 under 3:00 and 3:30, 5 under 4:00; from Larry O'Neil).

● **Santa Monica, Calif., Sept. 2**—Santa Monica Festival 6.1-mile: 1. Jim Schankel 30:50; 2. Bill Scobey (28) 31:05; 3. Reid Harter (22) 31:18; 4. John Kennedy 31:28; 5. Howard Miller 31:38...34. Owen Gorman (43) 34:33...75. Judy Graham 37:47; 76. Rudy Ceja (50+) 37:53. (217 finished, 39 under 35:00, 115 under 40:00; from John Brennand).

● **Oceanside, Calif., Sept. 2**—10-mile: 1. Rick Barnard (Cal) 52:57.4; 2. Kirk Pfeiffer (Cal) 53:20; 3. Greg Beal (Cal) 53:47; 4. Lee Dick (Cal) 54:04; 5. Kaj Johansen (Cal) 54:52...10. Bill Gookin (40, Cal) 57:06...28. Augie Escamilla (50, Cal) 1:01:46...40. Nadia Garcia (19, Cal) 1:03:47. (96 finished, 18 under 1:00; 80 degrees);

● **Mt. Baldy, Calif., Sept. 3**—8 miles uphill: 1. Chuck Smead 1:06:00; 2. Art Ting 1:10:56; 3. Brad Croad 1:11:30; 4. Alan Haas 1:12:55; 5. Greg Croad 1:14:26...12. Conrad Eroen (44) 1:20:07...39. Ed Keysar (51) 1:32:55...41. John Montoya (61) 1:34:20...74. Linda Bottlik (10) 1:51:21. (79 finished, 33 under 1:30; from John Brennand).

● **Ogden, Utah, Sept. 3**—Garden of Eden 11-mile: 1. Al Yardley 59:30; 2. Scott Bringham 59:35; 3. Gerry Miller 1:01:13;

4. Craig Jones 1:03:57; 5. Dan Price 1:03:58. (84 finished, 16 under 1:10; from Marv Casteel).

● **Los Angeles, Calif., Sept. 8**—Will Rogers 15-kilometer: 1. Chuck Smead 48:53; 2. Bill Scobey 49:22; 3. Phil Ryan 50:25; 4. Roger Davis 50:43; 5. Luis Patterson 50:47...25. Peter Mundle (40+) 56:20...45. Augie Escamilla (50) 1:00:27...13. Al Burton (60+) 1:19:53...105. Linda Bottlik (10) 1:10:06. (136 finished, 19 under 55:00, 44 under 1:00; from Wes Alderson).

● **Stinson Beach, Calif., Sept. 9**—Double Dipsea 13.6-mile: 1. Bob Bunnell (23) 1:43:16; 2. Homer Latimer (34) 1:47:08; 3. Dan Anderson (21) 1:51:40; 4. Alejandro Aguilar (17) 1:51:44; 5. Francis Mason (25) 1:54:17...Peter Mattei (49) 2:00:18; Ralph Paffenbarger (50) 2:03:46; Tommy Owen (10) 2:05:08; Mary Etta Boitano (10) 2:17:17; Norman Bright (63) 2:42:38. (173 finished; from Walt Stack).

● **Fairbanks, Alaska, Sept. 22**—Equinox marathon: 1. Chris Haines 2:58:19; 2. Will Whiton 3:11:59; 3. Forrest May 3:12:24; 4. Bob Mielke 3:23:38; 5. Evan Smith 3:29:25...Marcie Trent (50+) 4:15:22; Betsy Haines 4:18:54. (123 finished, 5 under 3:30, 16 under 4:00).

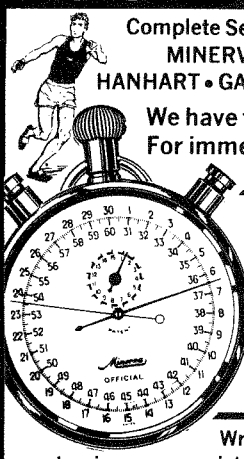
● **Santa Monica, Calif., Sept. 29**—Beverly Hill Striders-Southern Pacific AAU 50-mile (track): 1. Carlos Alfaro 6:15:26; 2. Bill McCray 6:23:09; 3. Tom Cory 6:27:50; 4. Truman Clark 6:52:18; 5. Eileen Waters 7:05:31 (women's world best); 6. Jim Flanigan 7:34:55; 7. George Bruce (43) 9:09:18; 8. Jack Lee (48) 9:25:08. (8 finished; from Tom Sturak).

● **Napa, Calif., Sept. 30**—Champagne marathon: 1. George Stewart 2:21:29; 2. Daryl Zapata 2:28:37; 3. Mike Buzbee 2:29:55; 4. Homer Latimer 2:34:25; 5. Bob Darling 2:34:40; 6. David Cortez (15) 2:34:54; 7. Mike Conroy 2:35:24; 8. Frank Krebs 2:38:25; 9. Harold DeMoss 2:38:45; 10. Ross Smith (45) 2:39:36...38. Flory Rodd (50) 2:57:53...78. Joan Ulyot 3:17:29...102. Tommy Owen (10) 3:33:05...110. Walt Stack (65) 3:37:26. (139 finished, 42 under 3:00, 97 under 3:30, 128 under 4:00; from Jim Engle).

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CANADA

● **St. Johns, Newfoundland, Sept. 15**—Canadian marathon championship: 1. Jerome Drayton (Ont) 2:13:26.8; 2. Brian Armstrong (Ont) 2:13:39.2; 3. Tom Howard (BC) 2:18:59.4; 4. Bob Moore (Ont) 2:19:10.6; 5. Wolf Schamberger (BC) 2:20:09.4; 6. Bruce Shaw (BC) 2:20:13.8; 7. Norm Pate-naude (Ont) 2:21:42.8; 8. Peter Lever (Ont) 2:23:35.8; 9. Carl Christenson (BC) 2:24:42.4; 10. Brian Stackhouse (Alta) 2:25:03.4. 11. Bill Herriot (Alta) 2:25:56.4; 12. Dave Landriault (Ont) 2:28:11.2; 13. Jack Taunton (BC) 2:29:24.2; 14. Randy Barkhouse (NS) 2:30:19; 15. Rick Hanna (BC) 2:30:52. (22 finished, 20 under 3:00).

● **London, Ontario, Sept. 23**—Springbank International Road Races: 11.5-mile: 1. Neil Cusack (Tenn/Ireland) 56:11.8; 2. Jon Anderson (Ore) 56:21; 3. Kenny Moore (Ore) 56:28.6; 4. Jeff Galloway (Fla) 56:35; 5. Tom Fleming (NJ) 56:58; 6. Lucien Rosa (Wisc/Ceylon) 57:15; 7. Philip Ndoo (NM/Kenya) 58:24; 8. Steve Savage (Ore) 58:52; 9. Bob Thurston (DC) 59:35; 10. Phil Hince (Mich) 59:41.

4.3-mile: 1. Dan Shaughnessy (Ont) 19:59.4; 2. Ken Misner (Fla) 20:01.4; 3. Grant McLaren (Ont) 20:13.4; 4. Ed Leddy (Tenn/Ire) 20:17; 5. Dick Buerkle (Fla) 20:19; 6. Sid Sink (Ohio) 20:38; 7. Barry Brown (Fla) 20:42; 8. Bill Marcotte (Ont) 20:48; 9. John Finlay (Ont) 20:52; 10. Tracy Elliott (Ohio) 20:55.

Women's 4.3-mile: 1. Francie Lariou (Cal) 24:09.4; 2. Claire Morgan (Ont) 24:17.6; 3. Abby Hoffman (Ont) 24:46; 4. Marlene Harewicz (Pa) 25:17; 5. Donna Churchill (Ont) 25:22.

Veterans' 5.75-mile: 1. Ron Wallingford (Ont) 30:07.6; 2. John Doyle (Ont) 30:19.6; 3. Art Taylor (Ont) 30:30.2; 4. Bob Bowman (Ont) 31:14; 5. Bryan Martindall (Ont) 32:07.

RACE WALKS

● **Beverly Hills, Calif., Aug. 25**—National AAU Junior 5-kilometer: 1. Jim Bentley (Nev) 25:35.2; 2. Brad Bentley (Nev) 26:19; 3. Bryan Snazelle 27:26; 4. Mark Randle (Cal) 28:42.2; 5. Paul Schoenfeld (Cal) 29:00; 6. Jerry Lansing (Cal) 30:18. (from Jack Mortland).

● **Santa Monica, Calif., Sept. 1**—Sports and Arts Festival 15-kilometer: 1. Larry Walker 1:11:38.4; 2. Bill Ranney 1:11:42; 3. Ed Bouldin 1:15:01; 4. Dennis Reilly 1:17:32; 5. Bob Bowman 1:20:16...8. John Kelly (40+) 1:28:25. (17 finished, 8 under 1:30; from Martin Rudow).

● **Fairfield, Conn., Sept. 9**—Connecticut AAU one-hour: 1. Roy Yarbrough (Conn) 6 miles 1016 yards; 2. Dave Semar (Conn) 6m 951y...5. Judy Salkoski 4m 896 y. (5 walkers; from Jack Boitano).

● **Seattle, Wash., Sept. 22**—National AAU 35-kilometer: 1. John Knifton (NY) 3:00:30.8; 2. Bill Ranney (Cal) 3:03:53; 3. Jim Bean (Ore) 3:10:38; 4. Bob Bowman (Cal) 3:14:55; 5. Wayne Glusker (Cal) 3:17:49; 6. Bob Rosencrantz (18, Wash) 3:20:37...Don Johnson (50+, NJ) 3:50:43; Larry O'Neil (60+, Mont) 3:58:59. (18 finished; from Don Jacobs).

CLASSIFIED NOTICES

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64th ANNUAL TURKEY DAY RACE—Second oldest road race in America. 10 a.m., Thursday, November 22, 1973. 5.5 miles from Ft. Thomas, Ky. over the Ohio River to Cincinnati, Ohio. Course record holder: Reginald McAfee, 25:48. Trophy and medals for two age groups for women and six age groups for men. For information: Don Wahle, 3420 South Clubcrest, Cincinnati, Ohio 45209. (513) 321-4338.

HARRISBURG NATIONAL MARATHON—Sept. 2, 1974, Labor Day. To be on mailing list, write: Jack Scarbrough, c/o YMCA, Front & North Sts., Harrisburg, Pa. 17101.

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ODESSA MARATHON—2nd Annual, Saturday, December 8, 1973, 9 a.m., Odessa, Texas. Sponsored by the Darville Co. and The West Texas Running Club. Six divisions: I—H.S., II—open, III—30-39, IV—40-49, V—50-up, VI—ladies. Trophies to six places in each division. T-shirts, patches, certificates to all the finishers, plus merchandise awards. Entry fee \$2.00, \$3.00 after 24 hours before race. Flat, asphalt course. Contact: Jack Petty, 907 W. 2nd St., Odessa, Tex. 79763.

3RD ANNUAL USTFF-NORTH TEXAS STATE UNIV. MARATHON—January 12, 1974, Denton, Texas. For information, write: Coach Ken Swenson, Assistant Track Coach, Athletic Department, P.O. Box 13917, North Texas State University, Denton, Texas 76203.

RUNNING SHORTS

● Ken Young is well on his way to devising a scoring system that rates performances according to the age of the runner. He wrote of this in the November 1972 *RW* ("Age-Grading"), and wants to come out with a booklet on the subject when his work is finished.

He still needs help: "I need any (and all) race results on certified courses or tracks, giving age and time—with particular emphasis on age-group racing for both young and old." Young asks race directors to contact him at the National Center for Atmospheric Research, P. O. Box 1470, Boulder, Colo. 80302.

● College faculty members are beginning to realize they can profit by practicing what (or where) they teach. Increasing numbers of them are taking advantage of the splendid facilities at hand.

Now a group at the University of Nebraska is proposing a national organization of faculty runners. Phil Siena is behind the project. The goal would be to encourage communication and competition among these runners. One such event—the 100-mile relay started by the University of Toledo—is already operating.

Contact Siena at the University of Nebraska's Department of Recreation, Lincoln, Neb. 68508.

Tom Brunick, subject of the September editorial ("New School of Road Racing") as an innovator in college road racing, has another idea. He wants to promote a national cross-country championship *for coaches only*. Initially, he wanted to hold it in connection with the NAIA race this fall, but the planning got going too late. Next year, he's hoping.

Brunick's address is College of St. Francis, Joliet, Ill. 60435.

● *RW* is starting work on its fifth annual *Marathon Handbook*. If you're sponsoring a marathon or longer race in 1974, please send the details to Box 366, Mountain View, Calif. 94040. All scheduled US and Canadian races will be listed, along with all runners who broke three hours this year.

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READERS' COMMENTS

OLYMPIC EVENTS

So the International Olympic Committee, in its infinite wisdom, has decided somewhat belatedly to prune the Olympics. It has accomplished this by stopping the walking events after Montreal ("News and Views," Oct. 73) and not admitting any new events to the track program. Two new events that surely warrant admission are the women's 3000 meters and the women's 400 hurdles. You've been training for these, you say? Too bad. Can you ride a horse?

It seems that the IOC could have done its pruning job much better. For a start, it could have thrown out all those elitist sports such as yachting and show jumping.

We can do it better without all the surrounding Olymphanalia. I recommend a world championships in track and field, held every two, three or four years, and encompassing any event that is thought suitable.

The (Olympic) crowds come to see the track events. They would come to the world champs.

*Mick Hamlin
Tunbridge Wells, England*

AFFAIR IN PARIS

The article by Jerome McFadden ("Ugly Americans in Paris," Sept. 73) was quite interesting—especially so when he wrote of Marcello Fiasconaro's victory over Yevgeniy Arzhanov with a 1:45.6 clocking. The two middle distance men have lined up to race only once. This was the 800-meter event in the 1973 European Cup semifinal at Oslo. Therefore, the race that Mr. McFadden described never took place. Is his article factual or fictional?

*Bill Neale
Dallas, Tex.*

Mc Fadden answers: I expected to get some strong reactions to that article, but not on that point. The article is factual. The two men have now lined up to race twice, and both races were badly marred by incidents. In their first race, it was Arzhanov who never got to the finish line. He took a nose-dive to the Tartan after 400 meters. I

have photos of the race. Incidentally, Fiasconaro's time was misprinted in the article. It was 1:45.9.

JUNIOR TOUR

As one of the managers of the US junior track team that recently completed a three-nation European tour with outstanding results, I'd like to pass the word that this was one magnificent group of athletes ("Matt Centowitz's Summer," Oct. 73). These young athletes, in most cases making their first overseas trip, conducted themselves with a huge amount of maturity.

In these days when too many sportswriters take sport in attacking the AAU, it must be said that the entire AAU staff did a tremendous job in putting this trip together in such fine fashion. As Coach Joe Healey said before the team departed from New York, "It's time people ceased blaming things that go wrong on 'those people at the AAU' because those people are really us." So much went right on this trip that I think all American athletics enthusiasts can bask in this moment of high spirits.

*Elliott Denman
West Long Branch, N. J.*

MARATHON WORK

I was both amazed and disappointed in the article on the Marathon marathon ("Marathon Fuels a Marathon," Aug. 73). I was amazed because of the lack of complete information contained therein, and I was disappointed in your magazine for not following up on the information presented there.

There is no doubt that without Marathon Oil Company's wholehearted financial support, the Marathon marathon would have begun as a small local race with very little hope of ever growing into a super event. However, that is only a small part of the story behind the race. You seem to forget the literally hundreds of people on the local scene in Terre Haute who really have made this the fine runner's race it is.

In 1973, a management committee functioned for several months and, along with 150 other volunteers, took care of all the details of making the race AAU certified, well-organized and safe. I could

NEXT ISSUE:

The special feature section looks at group, team and club running. Dave Prokop writes on the Springbank races in Canada. Hints on winter training for track.

fill a book the size of your magazine detailing all the bits and pieces that went into making the Marathon marathon an overnight success.

*Pierre Burke, Chairman
Management Committee
Terre Haute, Ind.*

PSYCH COLUMN

In that the mental aspect of running ("Running Away from Worries," Oct. 73) plays such a great part in the total struggle, it would seem that a regular column by a psychologist would be a sure hit in *RW*.

*Jimmy Stoian
Cleveland, Ohio*

MOTIVATION

RW has done much to motivate me so I can continue my running while I'm stationed in Iceland with the Air Force. During six months of the year, the wind and cold make outdoor running close to impossible. With the many articles on the psychological and physiological aspects of running, I've been able to brave the winter weather and keep a high level of fitness throughout the year. Without *RW*, I would have sat out this year, and it would have taken me over three long, hard years to get back into shape.

*David Tronud
FPO New York, N. Y.*

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2. Backpacking Artist Roy Kerswill. This man treks in the Wyoming mountains gathering material for his famous paintings.

3. Family Hiking in England. One man's family (with five children under 12) take to the mountains of England and Wales.

4. Buying Report on Tents. Guide to the 23 better tents, with evaluations, ratings and specifications.

5. On the Chilkoot Trail in Alaska. Here is a hiking adventure rich in history of the 1890's Gold Rush.

6. Eliot Porter Tells How to Take Nature Photos. With a portfolio of magnificent photos by the world's foremost nature photographer.

7. Battle Tools: Backpack and Camera. How the modern Davids use humble weapons to save the wilderness in the battle against the bulldozers.

8. Are you a Glacier Skier or a Ski Mountaineer? Does your heart beat faster just before you reach the summit or just after you start back down?

9. How Maps are Made. A scientific discussion of maps—telling how to read them, what to expect of them.

10. Studying Rare Spiders in Peru. These scientific trekkers search for spiders in the forests of the Andes.

11. Orienteering: The latest word by the man who invented it. Everything you need to know to enjoy this fascinating new sport.

12. St. Francis or St. Benedict? Backpacker casts a vote in the debate over which patron for the ecology movement.

13. Can Walking be a Religious Experience? These California Christians believe backpacking is the ultimate way to turn on to the God within us.

14. Beneath the Tetons. Beneath the towering Teton Mountains are caverns rarely seen by man. Here are magnificent color photographs of this otherworldly splendor.

15. The New Political Tool: Hiking. Why have the new populist Governors begun hiking from one end of their states to the other? What are they finding out?

16. First Woman to Climb Mt. Blanc, by an MS. Staffer. She suffered more difficulties in a "man's world" than with the hardship of mountaineering.

17. Hiking in Japan. Explore the wild mountain flowers and mosses at timberline on Japan's calendar-picture mountain.

18. How to Make Your Own Foul Weather Gear. How to make the pattern, cut and sew it, and where to get the materials.

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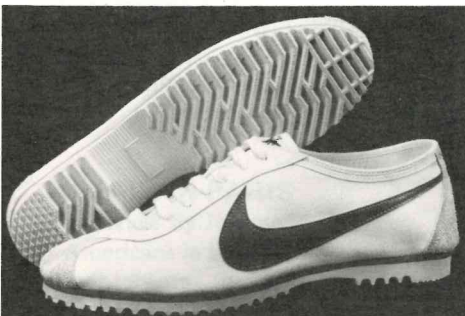
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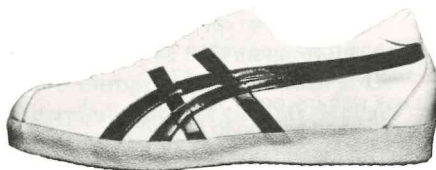
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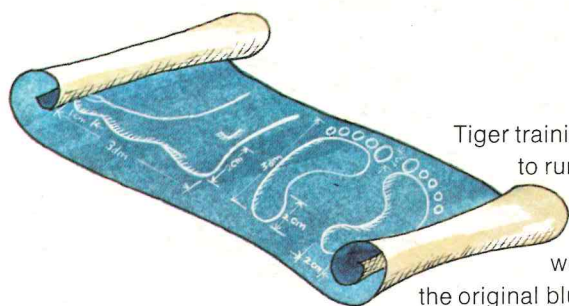
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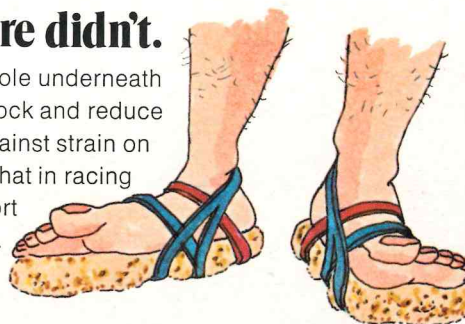
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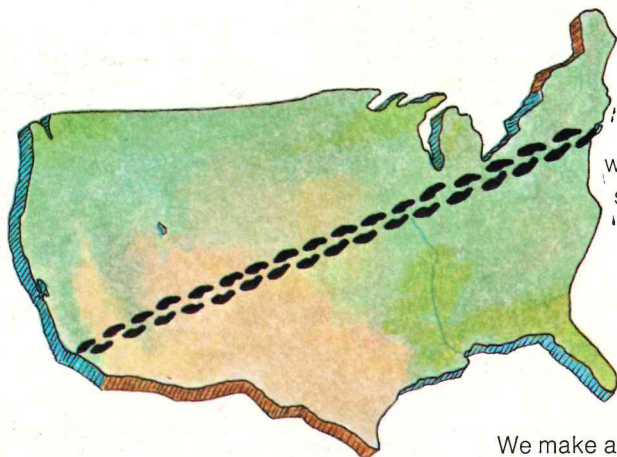
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