

WOMEN'S TRACK WORLD

NOVEMBER 1980

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Distance Running —
Part II

World All Time
Top 50

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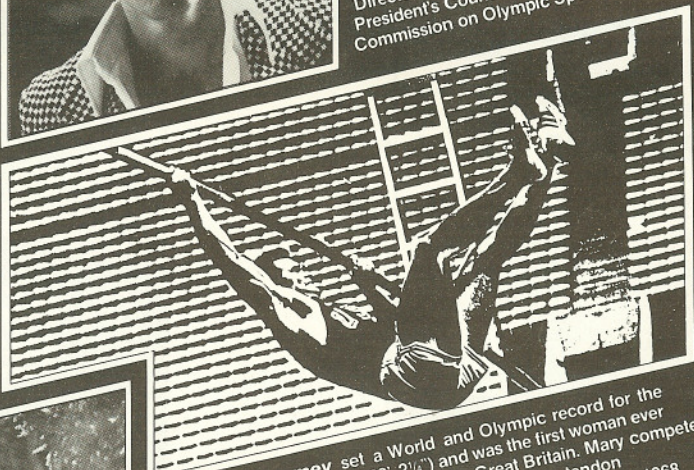


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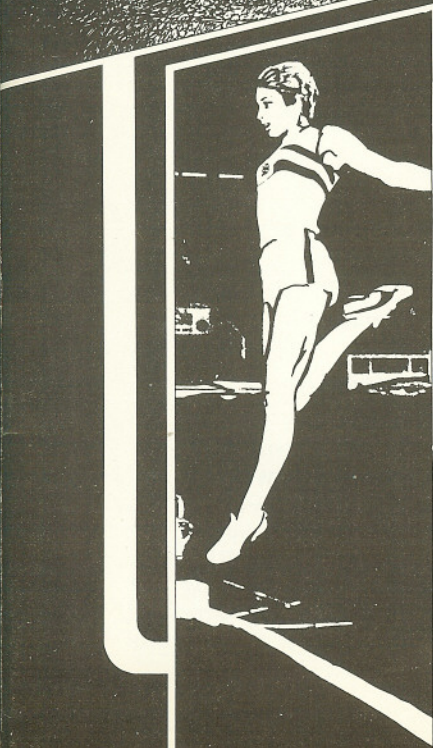
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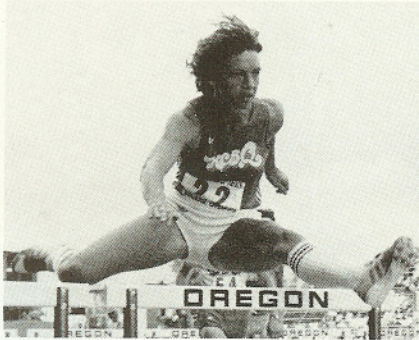
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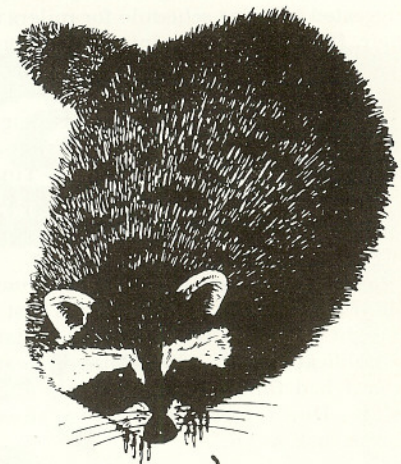
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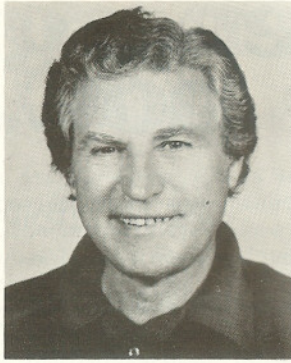
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REEL OFF

About 1930 I bought my first book on track technique. Since that time, I have acquired numerous tomes on the sport. Before that time, when I started high school, I purchased technique books by Spalding Brothers and I still have all the books which have come into my hands. After all these years, which books would I recommend and which books rank as best on my all-time list. My first purchase was "Track and Field" by T. E. Jones, coach at University of Wisconsin. To illustrate the difference between workouts in 1925 and modern workouts, compare your training sessions to the suggested training schedule for milers in their fifth week of training: Monday—Easy 1½ miles; Tuesday—Few starts, bounding work, fast 440; Wednesday—Jog 440, then run an 880 at mile speed, jog a 440; Thursday—1320 at mile speed; Friday—Easy jogging; Saturday—Time trial or competition; Sunday—Rest. One thing for sure, runners weren't too tired for that race day!

Another interesting book was "Track and Field" by Ray Conger. At first I thought this was a real oldie, but its date of publication was 1938 — three years after I had finished my collegiate eligibility. Don't understand how those photos look so OLD!

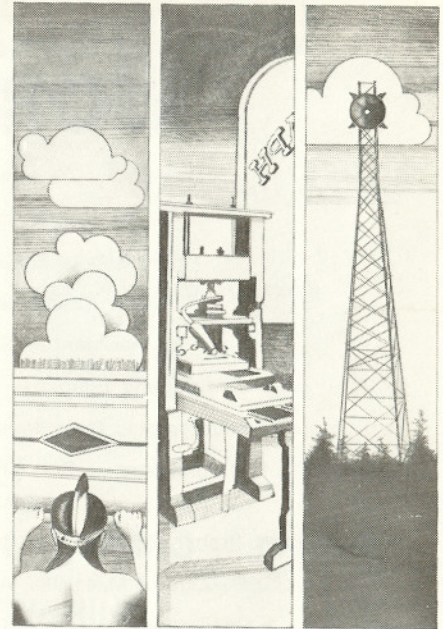
In the later, modern times, books by Doherty and others by winning coaches were all well done and informative and the best publication I came across for the beginning coach was the Canadian publication "Recreational Track and Field" released in 1974 by R. S. Parker.

As for my top favorites I would list "The Mechanics of Athletics" by Geoffrey H. G. Dyson, National chief coach of England and Tom Ecker's "Track and Field Dynamics". But the book which really turned me around and influenced my coaching more than any other publication was released in 1955. Covering only the flat running events, "Franz Stampfl on Running" was my

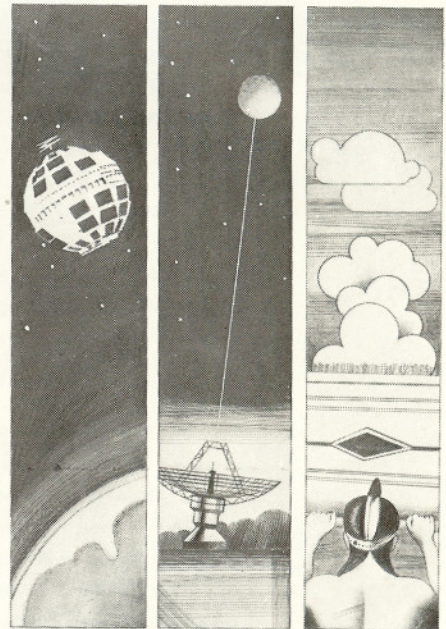
favorite. Stampfl (who is still coaching in Australia — he coaches Gael Mulhall, Oceania's Athlete of the Year for 1979, a shot and discus thrower), writes more information on tactics, running fundamentals, training, style, pace, position than is available in any other book. If you want to learn tactics and strategy, Stampfl's book will teach you. After reading this book it is impossible to watch a distance race and not get involved in the tactics and strategy of the runners. I would have to rate "Franz Stampfl on Running" as having the most influence on my coaching career.

It's about time the AIAW tackles the problem of transferring from one college to another. The present set of (Non) rules covering switching from place to place is ridiculous. Of course the idea behind the rule — that of trusting the world and coaches — is great, except it doesn't work. Even now it is difficult to know where an athlete will turn up next year — or next semester. Or next week. They pop in and out of schools like ground squirrels out of the ground. The NAIA and NCAA making a big push into women's collegiate sports and if and when their programs begins to catch on, the women will be plagued by two sets of rules as the men are in colleges who belong to both the NAIA and the NCAA. I oppose the hop-scotching around from place to place and favor a transfer rule similar to the NCAA. The AIAW began on the premise that females were more honest than males and did not need to have transfer rules since all female athletes and coaches of female athletes were nicy-nice and would not ask to be transferred or encourage transferring. But, alas, this is not the case and it will get worse before it gets better. We believe someone has to control this problem.

WTW



**We can't
afford
to run out
of ideas.**



Our colleges and universities — our most vital source of new ideas — are in deep financial trouble. If they can't get the money they need to do their job right, we may all be back to smoke signals again before we realize it.

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The University of Arizona has a hidden threat for this cross country season. Twins Joy and Joan Hansen. Joan is eligible and Joy is not — or is it the other way around? Their hidden threat is the possibility of having Joy run one week and Joan the next. Thus allowing eligible Joan two weeks of training between runs . . . Wyoming has joined the foreign brigade with Sissel Bjerkenas from Norway as a squad member . . . Is it true women are smarter than men and track athletes are smarter than all other athletes? University of Oregon statistics say "yes". The number of athletes earning honors for a

3.0 or higher Grade Point Average at Oregon was 78. The women had the advantage 43 to 38 with both sexes scoring in eight sports. Among the men, track athletes had the most individuals with nine. Next highest was, surprisingly, baseball with seven. For the women, the tracksters placed 18 on the select list with the next sport tallying eight for the swimmers.

Already more than 3300 entries have been received for the Annual Honolulu marathon. Racing date is 7 December . . . The TFA/USA will stage the Women's Heptathlon on March 14/15 at Oregon

State University. Two divisions — Open and Collegiate . . . If someone asked you "which is the strongest track team, North Carolina State or the University of Redlands?" Of course everyone would answer North Carolina State with the Shea sisters and Springs and all those stars who finished second in the AIAW Championships last year. But is this true? North Carolina State has the best school records in only four of the standard 16 collegiate events. The southerners are tops in the expected 1500, 3000, 5000 runs

(continued on page 27)

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Distance Running

By Ronald Wallingford
from "Athletica"

PART II — THE SOURCE OF ENERGY

This is the second of a series of three articles on distance running by Ron Wallingford. Dr. Wallingford is now acting Director of the Division of Physical Education at Laurentian University, Canada.

The ideas presented have been gained from many sources, but most importantly from the author's years of practical experience as a distance runner, and also from his professional background in physiology as a professor of physical education.

What is the significance of a high maximum oxygen uptake for distance runners?

Athletes who can utilize high levels of oxygen from the atmosphere demonstrate what are referred to as high levels of aerobic power. In some individuals this is an inherent quality but in most it is achieved by improving the effectiveness of all the cardio-respiratory factors related to the transfer of oxygen from the atmosphere to the active muscles. Athletes with a high oxygen uptake can run at a faster speed without incurring an oxygen debt. An oxygen debt (anaerobic metabolism) signifies the build up of substances in the body which leads fairly soon to a reduction of the pace.

Although the research is somewhat controversial, it is believed that people can increase the maximum oxygen uptake ability by 10 to 25% from their initial levels. If this is measured in millilitres of oxygen per kilogram of body weight, this increase can be even more significant if the person loses weight.

For national and international athletes, the maximum oxygen uptake will eventually level off after years of hard training at somewhere between 65 and 80 ml/kg/min for men and somewhat lower for women. However, even though the absolute ability levels off, individuals can still increase the length of time they can maintain this maximum or near maximum level and thus continue to improve their race performance potential.

It is also noteworthy that several very good international runners with lower absolute levels can maintain their levels of performance at close to maximum longer and are thus not particularly handicapped in a race because of their lower levels. Interestingly, there is a linear or almost direct relationship between the total distance covered in training and the amount of oxidative enzymes in the muscles. Theoretically,



JEFF JOHNSON PHOTO.

therefore, the more total aerobic training the greater the potential improvement in performance even though the maximum oxygen uptake may have leveled off.

How important is glucose loading?

Glucose loading is storing extra glucose in the running muscles. This is accomplished by first depleting the glucose level of the running muscles by a long run of 30 km or more (say 20 miles), then by following a diet composed almost exclusively of protein and fat (no car-

bohydrates) for two days, and finally by following an almost completely carbohydrate diet for two to three days. Most runners can almost double the amount of glucose stored in their muscles by this technique. Apparently, after the muscles have been in a deprived glucose state, they get "greedy" and store more than normal amounts of glucose. This could ultimately assist a marathon runner who may run low on his glucose stores after 30 km or so.

The problem is to avoid disrupting your psychological disposition before the race by the change of diet. Since almost as

much glucose storage can be obtained by simply going to the high carbohydrate diet directly for two or three days before the race, many distance athletes ignore the difficult high protein — no carbohydrate days.

Unless an athlete is competing in an event longer than 30 km it does not appear to be of any particular value to store additional glucose in this fashion.

What nourishment should be taken during a long race?

If it is a warm day, replenishing the body fluids is your most important goal. As glucose or any sugar added to the drink appears to slow down absorption of the fluid from the stomach into the body, it is advisable to drink plain water in warm weather. In cooler weather, some sugar in the solution could help you to replenish the depleting body glucose and thus maintain you in a more effective state. When heat is a problem, replenishing body glucose is of secondary importance to maintaining body fluids.

Solid sugar requires body fluid to assist in its absorption through the stomach walls, and thus depletes, at least temporarily, the total effective body fluid and hampers the cooling effectiveness of the body. Sugar in solid form should therefore never be taken during races.

Since the body gets more concentrated rather than less concentrated as you lose fluid during a race, you should not take salt until after the race when you are taking fluids to replace your water loss.

You should practice taking water or liquid refreshments before and during training so as to familiarize your body with the sensation of running with fluid in the stomach. Immediately before a long race on a hot day, it is wise to consume a fair amount of water, and you should similarly accustom your body to this beforehand during training.

"Front runner" or not?

If you set the pace in a race, you have the advantage of being able to force the field to adjust to your personal fluctuations of speed. In some respects you also have a psychological advantage in being ahead of the others, and you may be able to impose your superiority over the field as did Lasse Viren in the 1976 Olympic 5000m final. On the other hand, apart from breaking the wind, the leader is for some inexplicable reason a relatively inspiring goal for hangers-on. If you lead, your best tactic is to try to break contact before the last lap (in a track race) or the final stretch (on the road) so as to discourage the field.

Although this is a debatable topic, it is somewhat unfair for people of comparable ability not to share in the pace-setting chore during a race, particularly

in a non-championship or preparatory event. With a team effort against the clock, even the people who do not place first have a greater assurance of a personal best time. This is the best way to improve the total running ability of the group in the race, and runners all gain the feeling of being associates in conquering the clock more than each other.

Some runners run better from the front, others from behind. Unfortunately, crowds tend to cheer for the underdog and would rather see someone from the back of the pack win than a person who has courageously set a good pace. In some respects, the public needs to be educated as to who, in fact, is showing the most courage when the lead is not shared.

Coaches too should not always be overconcerned about who places first, but rather how fast the race has been. It may be wise for a runner to risk losing some of his preparatory races in order to more closely achieve his current potential.

Many an athlete never fully realizes what he is capable of when he continually relies on others for the pace-setting responsibility.

Must I give up everything for international success?

The answer is — certainly not. It is true that you must blend in a phenomenal amount of training to reach the level of fitness now required for international competition. However, if you organize your life well, you can achieve amazing results. You may wish to take slightly longer to complete your academic studies, or you may wish to curtail your job obligations slightly during heavy preparations for special Games, but your usual heavy training can be compatible with normal employment or studies. In fact, I think it is highly advisable to make it so.

There are many reasons for this. Firstly, the body has a built-in limitation to the amount of training it can take. Exceeding this tears down the body unreasonably instead of building it up. Running three or four hours per day, for example, seems to be the maximum possible for daily recovery, and few runners do nearly as much as this. The second point is that if you don't have a serious diversion from your training, you can get so engrossed with your athletics that you stultify your total growth as a person and become overwhelmed by the thought of the training demands. This can eventually dry up your creative urge to carry out the serious effective training necessary. You can get to dread your second training session of the day if you are never forced to get your mind off the first one by having an interesting occupation.

Frequently, the knowledge that you are developing a career at the same time as you are improving your athletic skills helps to tide you over the bad patches you

will inevitably run into. Too many fail to realize this crucial fact and continually feel that full-time training is the only answer, when, for most athletes, it probably is not. If you have strong drives for an exciting career as well as athletic success, you should be encouraged to accommodate both interests harmoniously.

Of course, if you are attempting very high attainments on two avenues, you must be even more careful of your spare time. You can taste of the niceties of life, but you cannot overindulge yourself.

Frequently, adherence to the discipline demanded from a sport imposes a way of life on a person which makes him more anxious to make the most of his spare time. Medical science has tried incessantly to add years to people's lives. Perhaps the discipline imposed by athletic training can assist people in adding more life to the years they have. From our knowledge of the human body, it would appear that optimum functioning occurs when the body is challenged to grow in several spheres at the same time.

What about international travel?

Altitude is very difficult to prepare for short of being there. If you are competing at altitude you should either get there more than a week to 10 days in advance or else arrive as close before the race as is practical. Arrival two to three days before the race leads to uncompensated acid-base alterations which will impede your performance at altitude even more.

Some athletes bring with them a small supply of foods they are accustomed to, so that the meal before the race is as familiar to the body as is practical.

Taking the trouble beforehand to learn a few words of the language of the country you are visiting can help considerably in getting around. It could also sow the seeds of a deeper cultural exchange which is one of the things that track and field is all about.

The actual travel through several time zones is tiring, but you should expect this and not worry excessively about how terrible you feel as the race day and the race approach. Your years of training and experience will almost automatically carry you through a solid performance. While worry just jeopardizes a free-wheeling performance, lack of sleep and confined quarters, surprisingly, frequently don't impede top results — there are innumerable examples of athletes setting records after virtually no sleep the night before. The best advice is just to perform, forgetting any obstacles you may have had to a top performance. This doesn't mean that you shouldn't do everything possible ahead of time to provide the best conditions, just that you

(continued on page 12)

Results — Results — Results — Results

Spencer Wins L'eggs

Minneapolis, Minnesota, September 28 — Mary Beth Spencer, 23, overtook Rochelle "Rocky" Racette with 1½ miles left and went on to win the Minneapolis L'eggs/YWCA 10000 meter run by 11 seconds.

"Rocky" Racette, 21, was second. She led at the one-mile point with Spencer trailing five to 20 yards behind. Soon after Racette slowed and took water in the September 13 race for women only, Spencer surged ahead.

Earlier this year, Racette was third at the Olympic Trials 5000 meters exhibition event behind the Shea sisters, Julie and Mary.

Third place finisher Pat Reisdorfer, 22, of Sioux Falls, SD, was 300 yds. back finishing in 36:55. The student at Augusta College in Sioux Falls drove five hours Friday night to compete.

Spencer of Anoka, MN, a graduate student at the University of Wisconsin at Madison, won an expenses-paid trip to the L'eggs Mini Marathon in New York on May 30. Her 35:39 time was a new personal record by one second.

The pre-race favorite Lorraine Moller of New Zealand, who trains in Minneapolis, did not compete after running a 2:31 marathon the week before.

Spencer said she wished Moller was in the race "because it makes for good competition."

Nearly 1,000 women started the race under cloudy skies and temperatures in the 70s. There were 854 finishers in this first L'eggs/YWCA run in Minneapolis.

The race started in Minnehaha Park in Minneapolis and went into St. Paul. The scenic course paralleled both sides of the Mississippi River and ended in Minnehaha Park.

The youngest finisher was seven-year-old Katie Hunt of Edina, MN in 59:22. Helen Reiter, 63, also of Edina, was the oldest finisher in 59:45.

RESULTS: 1—Mary Beth Spencer (Mn) 35:39, 2—Rocky Racette (Mn) 35:50, 3—Patricia Reisdorfer (SD) 36:55, 4—Jan Ertle (Mn) 37:31, 5—Mary Bange (Wis) 37:59.

Moller Wins Nike/OTC

Eugene, Oregon, September 6 — Foreign athletes grabbed the first four places as the Oregon Track Club and Nike sponsored their annual marathon. New Zealand's Lorraine Moller took top honors with a personal best at 2:31:42. Shirley



Mary Beth Spencer, 23, wins L'eggs/YWCA 10K in Minneapolis.

Durtschi of Oregon was the first American across the line in fifth position. Twenty-seven runners were clocked under the three hour mark. Oldest finisher was 72-year-old Mavis Lindgren in 4:56:44.

RESULTS: 1—Lorraine Moller (NZ) 2:31:42, 2—Marja Wokke (Ned) 2:32:39, 3—Allison Roe (NZ) 2:34:29, 4—Gillian Adams (GB) 2:40:34, 5—Shirley Durtschi (Ore) 2:42:15, 6—Anne Sullivan (RI) 2:42:45, 7—Heike Skaden (Cal) 2:43:00, 8—Jane Robinson (Wa) 2:43:16, 9—Lorrie Dierdorff (Ca) 2:45:11, 10—Sue Peterson (Ca) 2:45:24 . . . 30—Vicki Foltz (Wa) 3:02:35.

Penn State Wins Opener

University Park, Pennsylvania, September 20 — Ten teams gathered for competition in the Lady Lion Invitational, but the Lady Lions themselves ended up with top honors over the 4.4 mile course. Individual winner was former Penn State great Kathy Mills. Mills was followed across the line by three Penn State runners led by diminutive Heather Car-

michael. Mills covered the first mile in 5:40 and never wavered as she won in a good 25:09.

RESULTS: 1—Kathy Mills (Un) 25:09, 2—Heather Carmichael (PS) 25:16, 3—Pattie Murnane (PS) 26:26, 4—Mary Rawe (PS) 26:31, 5—Kathy Warlow (West Virginia) 26:39, 6—Sheila Fleming (Ind/Pa) 27:00, 7—Ann Miller (Cornell) 27:19, 8—Peggy Cleary (PS) 27:22, 9—Theresa Wilson (New Hampshire) 27:26, 10—Chris Bergeron (NH) 27:30. Scores, 1—Penn State 24, 2—New Hampshire 65, 3—Cornell 73, 4—West Virginia 105, 5—Indiana/Pa 110, 6—Kent State 158, 7—Bucknell 178, 8—Indiana/Pa "B" 263, 9—Bucknell "B" 265, 10—Temple 293. Number of finishers — 88.

Oregon Wins Franklin

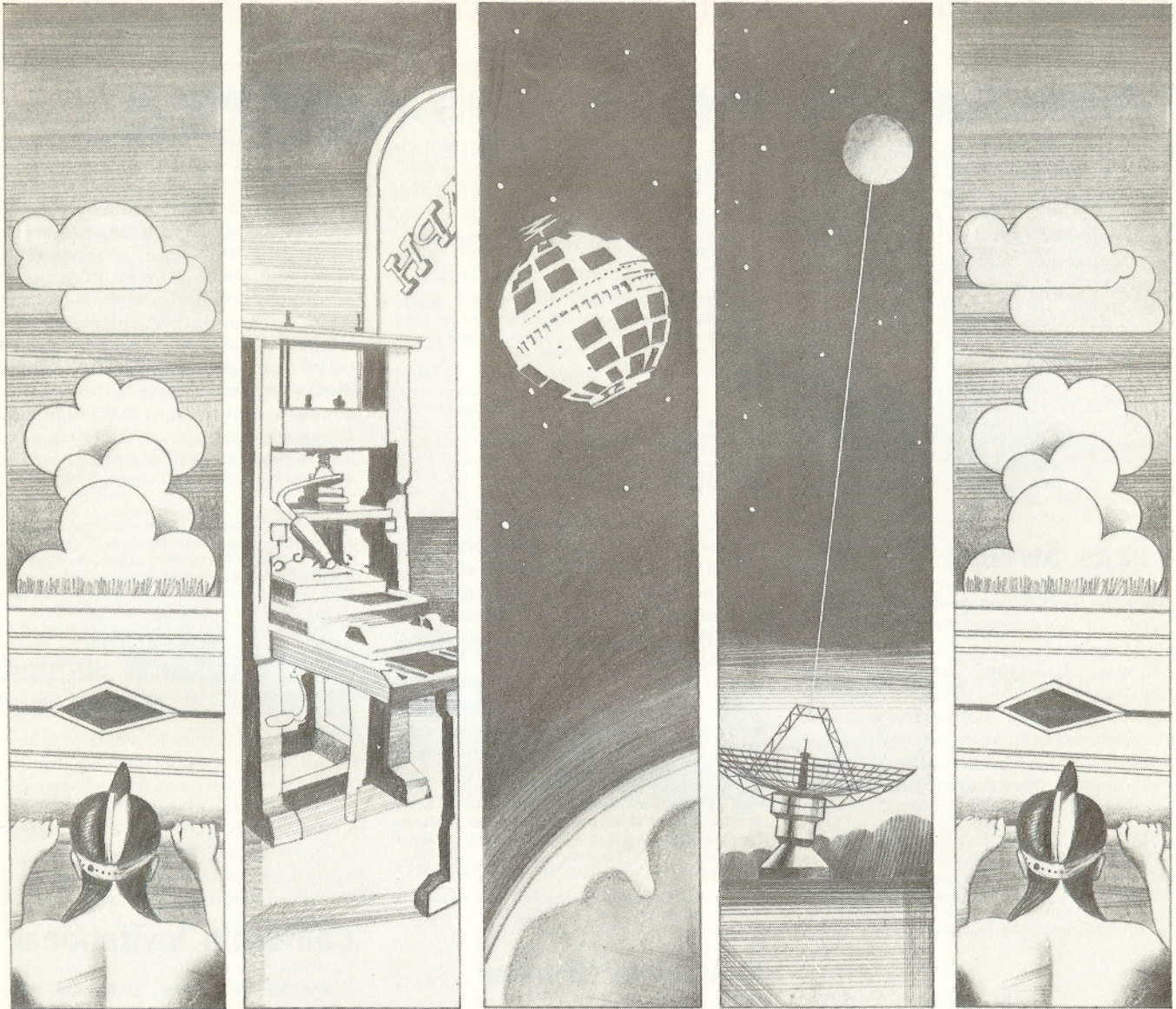
Eugene, Oregon, September 27 — Powerful University of Oregon easily won the Lane CC sponsored Garrie Franklin Classic by scoring 21 points to second place Oregon State's 61. Thirteen universities and community colleges took part in addition to club and unattached runners. Individual winner was Athletics West's Cathie Twomey who covered the 5000 meters in a very swift 17:09.0. Eryn Forbes led the Oregonians in second place.

RESULTS: 1—Cathy Twomey (AW) 17:09.0, 2—Eryn Forbes (Ore) 17:41.8, 3—Jennifer White (AW) 17:42.5, 4—Leann Warren (Ore) 17:47.1, 5—Joanne Lahti (OreSt) 17:49.6, 6—Connie Case (OreSt) 18:04.1, 7—Robin Baker (Ore) 18:07.7, 8—Joan Hopfenspirger (Ore) 18:12.2, 9—Tina Francario (Ore) 18:18.5, 10—Caroline Walker (OreSt) . . . 13—Irene Griffith (Ore) 18:30.1 . . . 15—Molly Morton (Ore) 18:36.5. Scores, 1—Oregon 21, 2—Oregon State 61, 3—Boise State 105, 4—Lane CC 143, 5—Clackamas CC 189, 6—Oregon College of Education 207, 7—SWOCC 294, 8—Umpqua CC 301.

Michigan State Upsets

University Park, Pennsylvania, September 27 — Visiting Michigan State scored a mild upset when they downed nationally-ranked Penn State and University of Maryland in a triangular meet on the Lady Lion course. The Michigan crew tallied 35 points to win the tough contest over Penn State (40) and Maryland (45). Penn State's Heather Carmichael won the race in 17:38 by 11 seconds over Maryland's Jean Whiston, but the Spartans massed runners into 3-4-5-9-14 for their victory.

RESULTS: 1—Heather Carmichael (PS) 17:38, 2—Jean Whiston (M) 17:49, 3—Kelly Spatz (MS) 17:59, 4—Jill Washburn (MS) 18:01, 5—Karen Campbell (MS) 18:05, 6—Patty Murnane (PS) 18:07, 7—Pat Walker (M) 18:10, 8—Mary Rawe (PS) 18:21, 9—Ann Prowe (MS) 18:21, 10—Peggy Cleary (PS) 18:24, 11—Mary Walsh (M) 18:24, 12—Kim Dunlap (M) 18:32, 13—Debra Pavik (M) 18:46 . . . 25—Penny Fales (PS) 20:08. Scores, 1—Michigan State 35, 2—Penn State 40, 3—Maryland 45. Number of finishers — 28.



We can't afford to run out of ideas.

How many ideas do you suppose it took to develop human communications from smoke signals that covered a few miles to satellites and laser beams that reach from here to the moon? Most of those ideas came from college-trained minds and college-based laboratories. Now these vital sources of ideas are threatened — by shortages of money that are forcing

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Princeton Wins

Princeton, New Jersey, September 26 — Princeton University won over four rivals in a three mile cross country match, but it wasn't easy. Rutgers University, led by Nancy Seeger, grabbed off first, second and fourth places, but Princeton bunched their runners in 3-5-6-7-8-9 to win the match 29-34. Seeger won by only three-tenths over teammate Holman.

RESULTS: 1—Nancy Seeger (Rut) 17:27.2, 2—Holman (Rut) 17:27.5, 3—Zollo (P) 17:36, 4—Guldotti (Rut) 17:39, 5—Schulte (P) 18:04. Scores, 1—Princeton 29, 2—Rutgers 34, 3—Pennsylvania 69, 4—Barnard 123, 5—Montclair State 138. Number of finishers — 67.

Texas Sweeps

Abilene, Texas, September 27 — University of Texas swept the first six places to completely dominate the Abilene Christian University Invitational and had their first nine runners within a 62 second spread. The Longhorns won with 15 points to 52 for runner-up ACU. Kelly Wells led the Texas gals with a time of 17:29.7, just two-tenths in front of teammate Jayne Sweigart.

RESULTS: 1—Kelly Wells (Tx) 17:29.7, 2—Jayne Sweigart (Tx) 17:29.9, 3—Terri Ebanks (Tx) 17:34.6, 4—Lori Nelson (Tx) 17:36.5, 5—Maryanne Pils (Tx) 18:03.8, 6—Christy Garcia (Tx) 18:04.0. Scores, 1—Texas 25, 2—Abilene Christian 52, 3—Angelo State 98, 4—Texas Tech 105, 5—West Texas State 129.

Tennessee Upsets NC

Knoxville, Tennessee, September 27 — University of Tennessee scored a huge upset as they defeated defending AIAW champion North Carolina State at the Lady Vol Invitational. The Tennessee crew received a big break when Julie Shea did not compete and won the meet with 35 points to 38 for the Tar Heels. Assuming Julie had run and finished in the top three, North Carolina State would have edged Tennessee 36-40. It was a close contest with eight teams competing. Mary Shea and Betty Springs went 1-2 for State, but the Lady Vols placed runners 3-5-6-9-12 for their victory.

RESULTS: 1—Mary Shea (NCS) 17:25.3, 2—Betty Springs (NCS) 17:57.5, 3—Brenda Webb (Knoxville TC) 18:08.6, 4—Linda Portasik (Tn) 18:10.7, 5—Sue Jackson (Ala) 18:18.7, 6—Kathy Bryant (Tn) 18:19.5, 7—Eileen Hornberger (Tn) 18:20.2, 8—Suzanne Girard (NCS) 18:22.3, 9—Cindy Durante (Clemson) 18:25.1, 10—Miriam Boyd (Tn) 18:42.4, 11—Sande Cullinana (NCS) 18:46.4. Scores, 1—Tennessee 35, 2—North Carolina State 38, 3—Clemson 96, 4—Alabama 103, 5—Auburn 123, 6—Richmond 165, 7—East Tennessee 184, 8—Virginia Tech 201. Number of finishers — 61.

Utah State Triumphs

Logan, Utah, September 27 — Dr. Lyle Knudson's Utah State cross country team easily won a cross country match over Idaho State 21-34 as Cindy Wells led her team to victory over the 5000m course in 19:09.

RESULTS: 1—Cindy Wells (Utah) 19:09, 2—Noreen Shea (Utah) 19:11, 3—Doris Lahti (Idaho) 19:15, 4—Charlene Delventhal (Idaho) 19:25, 5—Tracy Atkins (Utah) 19:52.

Sacramento Whips Three

Chico, California, September 27 — Fast improving Cal State Sacramento upset the defending AIAW Division III champion Cal State Hayward and won invitational competition at famous Bidwell Park. Hayward's Stephanie Stout was the individual winner over the 5000 meters in 18:29 with Hayward's ace, Michele Aubuchon, back in third behind Sacramento's Carol Hannigan.

RESULTS: 1—Stephanie Stout (Hay) 18:29, 2—Carol Hannigan (Sac) 18:37, 3—Michele Aubuchon (Hay) 18:38, 4—Maryanne Scannell (Sac) 18:41, 5—Krista Roberts (Sac) 18:44, 6—Robin Tracey (Sac) 18:56, 7—Dianna Pappas (Sac) 19:01, 8—Ellen Schmidt (Un Reno) 19:05. Scores, 1—Cal State Sacramento 24, 2—Cal State Hayward 34, 3—Chico State 114, 4—UC Davis 124.

Bussa and Purdue Win Again

Kenosha, Wisconsin, September 27 — Diane Bussa and her Purdue University teammates kept their winning streak alive by annexing the TFA/USA Mid-American Collegiate Cross Country Championships. Bussa won the individual title by five seconds over Drake's Liz Hjalmarsson and Purdue easily took the team title with 47 points, far ahead of runner-up Drake who tallied 75. Fifteen teams competed in this championship competition and 126 runners completed the three mile course.

RESULTS: 1—Diane Bussa (Pur) 17:26, 2—Liz Hjalmarsson (Drake) 17:31, 3—Letha Davis (Drake) 17:32, 4—Debbie Vetter (ISU) 17:36, 5—Wendy Burman (UW/Parkside) 17:40, 6—Rose Thompson (Wis) 17:49, 7—Shannon Cline (Pur) 17:50, 8—Cheryl Konkol (UW/Mil) 17:52, 9—Barb Hock (UW/Mil) 17:54, 10—Lindy Nelson (S.Ill) 18:01, 11—Becky Cotta (Pur) 18:01, 12—Wren Schafer (Pur) 18:05, 13—Susie Houston (Wis) 18:24, 21—Diane Vetter (ISU) 18:25. Scores, 1—Purdue 47, 2—Drake 75, 3—Wisconsin 87, 4—Iowa State 106, 5—Indiana State 165, 6—Marquette 190, 7—Southern Illinois 202, 8—Southwestern Michigan 241, 9—UW/Milwaukee 253, 10—UW/Parkside 267, 11—UW/Stevens Point 279, 12—UW/Eau Claire 292, 13—Northern Illinois 349, 13—Hillsdale College 384, 15—Beloit 425.

Drake Wins at Drake Invitational

Des Moines, Iowa, September 30 — If you want to win a cross country meet, stage an Invitational. Following in the footsteps of Tennessee, Wisconsin, California and others, Drake University had no difficulty winning their own Invitational over six other university teams with the low score of 28 points — 50 points better than runner-up St. Olaf. Mankato State's Donna Gathje was the individual winner over the tough course in 19:07, but Drake runners crossed the finish line in 2-3-7-8-11 positions to win easily. Liz Hjalmarsson was the best of the Drake crew.

RESULTS: 1—Donna Gathje (Mankato State) 19:07, 2—Liz Hjalmarsson (Drake) 19:26, 3—Latha Davis (Drake) 19:45, 4—Wren Schafer (Iowa State) 20:01, 5—Beth Stronge (St. Olaf) 20:19, 6—Lisa Kramer (Nb) 20:31, 7—Jana Noel (Drake) 20:35, 8—Marie Simonsson (Drake) 20:49, 9—Lori Bearson (Mankato State) 20:54, 10—Jan Ensrud (St. Olaf), 11—Sandy DeNoon (Drake) 21:02, 12—Debbie Vetter (ISU) 22:38, 13—Diane Vetter (ISU) 22:43, 14—Donna Tieg (Mankato State) 23:51. Scores, 1—Drake 28, 2—St. Olaf 78, 3—Minnesota 79, 4—Iowa State 79, 5—Mankato State 83, 6—Southwest Missouri 172, 7—Northwest Missouri 195. Number of finishers — 74.

California Invitational

Berkeley, California, October 4 — Ten teams, including some of the nation's top squads, toed the line at the start of the Annual California Invitational and when the smoke had cleared, it was the host team the winner. Maggie Keyes, Cal Poly/SLO, took the individual title in 17:44.4 and led her team to a surprise second place ahead of nationally-ranked Wisconsin and Washington. It was a tough team battle, but Coach Vern Gambetta's troops were equal to the task as the Bears scored 51 points, 10 ahead of Cal Poly. Jan Oehm was the leading California runner, finishing in second spot. Cindy Schmandt, regularly one of UC's top five, did not compete because of a knee injury.

RESULTS: 1—Maggie Keyes (CP/SLO) 17:44.4, 2—Jan Oehm (Cal) 17:46.5, 3—Kim Schnurpfel (Stanford) 17:52.6, 4—Ellen Lyons (Stanford) 17:59.6, 5—Regina Joyce (Wash) 18:09.9, 6—Suzanne Richter (Cal) 18:17.2, 7—Rose Thompson (Wis) 18:20.3, 8—Alice Trumbly (Cal) 18:26.5, 9—Susy Houston (Wis) 18:27.4, 10—Eileen Kummer (CP/SLO) 18:28.9. Scores, 1—California 51, 2—Cal Poly/San Luis Obispo 61, 3—Wisconsin 75, 4—Washington 94, 5—Stanford 116, 6—Cal State Hayward 119, 7—Brigham Young 191, 8—Utah State 236, 9—California "B" 237, 10—Cal State Hayward "B" 290. Number of finishers — 68.

Sacramento Wins

Sacramento, California, October 4 — Cal State Sacramento scored a low of 18 points to completely dominate a six-way competition at the Sacramento River 5000m course. The race, run in 92° heat, was won by Sacramento's Mary Anne Scannell, who was followed across the line by three teammates (although unattached Kathy Way slipped in for second). There was a tight battle for second with Cal State Chico edging Humboldt State 66-68.

RESULTS: 1—Mary Anne Scannell (Sac) 18:32, 2—Kathy Way (Un) 18:48, 3—Diana Pappas (Sac) 18:51, 4—Carol Hannigan (Sac) 18:53, 5—Robin Tracey (Sac) 19:13, 6—Kathy Kaiser (Un) 19:22, 7—Claudia Bergsohn (Hum) 19:34, 8—Leann Knedler (Chico) 19:36, 9—Delores Adame (Hum) 19:53, 10—Patty Kuphaldt (Sac) 20:17. **Scores**, 1—Cal State Sacramento 18, 2/Cal State Chico 66, 3—Humboldt State 68, 4—Sonoma State 117, 5—UC Davis 129, 6—San Francisco State 142. Number of finishers — 48.

Oregon Wins at Fort Casey

Whidbey Island, Washington, October 4 — Placing seven runners in the top ten finishers, Tom Heinonen's Oregon Ducks had no trouble winning the Fort Casey Invitational, a meet they didn't get to in 1979 when their ferry ran aground. Individual winner was Seattle Pacific's freshman, Laurie Shanaby, who covered the three miles in a fine 17:16. Led by Eryn Forbes second place, the Oregon team scored 22 points, far ahead of runner-up Idaho who tallied 70. Seventeen teams took part in the Invitational.

RESULTS: 1—Lauri Shanaby (SP) 17:16, 2—Eryn Forbes (Ore) 17:24, 3—Leann Warren (Ore) 17:34, 4—Robin Baker (Ore) 17:35, 5—Patsy Sharples (Idaho) 17:43, 6—Tina Francario (Ore) 17:52, 7—Lisa O'Dea (Ore) 17:59, 8—Joan Hopfenspirger (Ore) 17:59, 9—Sonia Blackstock (Idaho) 18:04, 10—Sisie Neidermeyer (Ore) 18:09 . . . 15—Doris Heritage (Falcon TC) 18:33 . . . 18—Vicki Foltz (EvCC) 18:36 . . . 20—Debbie Campbell (UnVC) 18:46 . . . 29—Irene Griffith (Ore) 18:55, 30—Molly Morton (Ore) 18:56. **Scores**, 1—Oregon 22, 2—Idaho 70, 3—Seattle Pacific 104, 4—Falcon TC 163, 5—Montana 186, 6—Washington State 202, 7—Seattle CC 214, 8—BCC 254, 9—EWU 263, 10—UBC 280, 11—Seattle TC 286, 12—PLU 301, 13—WWU 302, 14—UPS 317, 15—U. Portland 357, 16—Whitworth 364, 17—EvCC 434. Number of finishers — 187.

Eastern Illinois Wins

Carbondale, Illinois, October 4 — Lindy Nelson of the home team won the 5000m cross country race against Eastern Illinois, but the visitors grabbed off the next four places to annex the dual meet 23-33 over Southern Illinois.

RESULTS: 1—Lindy Nelson (SI) 19:17, 2—Gina Sperry (EI) 19:35, 3—Dawn Campbell (EI) 19:40, 4—Darlene Swank (EI) 19:52, 5—Julie Curry (EI) 20:04. Number of finishers — 18.

Texas Wins at Arlington

Abilene, Texas, October 4 — Led by freshman Terri Ebanks, the University of Texas had little trouble winning the Arlington Invitational with a score of 21 points. Ebanks covered the 5000 meters in a swift 17:11.6 and triumphed over North Texas' Leana Hocking, one of the USA's best in 1979. The Texas crew placed 1-3-5-6-9-10 for their win.

RESULTS: 1—Terri Ebanks (Tx) 17:11.6, 2—Leana Hocking (NTx) 17:21.1, 3—Lori Nelson (Tx) 17:39.6, 4—Tina Bengston (LSU) 17:41.2, 5—Kelly Wells (Tx) 17:42.6, 6—Jayne Sweigart (Tx) 17:45.8, 7—Michelle Gross (LSU) 18:00.0, 8—Laurie Taylor (ACU) 18:05.6, 9—Maria Espinosa (ACU) 18:06.0, 10—Maryanne Pils (Tx) 18:06.3. **Scores**, 1—Texas 21, 2—Louisiana State 35, 3—Abilene Christian 59, 4—Angelo State 104, 5—Texas Women's University 135, Baylor, North Texas State, Rice and Texas Christian did not have complete teams. Number of finishers — 48.

Rutgers Invitational

New Brunswick, NJ, October 4 — Powerful Penn State eeked out a four point win over the University of Maryland to grab top honors at the Rutgers Invitational over the 5000 meter course. Penn State's Heather Carmichael, a 97 pound terror, was across the line first in 17:21, six seconds in front of Maryland's Mary Walsh.

RESULTS: 1—Heather Carmichael (PS) 17:21, 2—Mary Walsh (Md) 17:27, 3—Mary Rawe (PS) 17:29, 4—Jean Wheston (Md) 17:33, 5—Pat Walker (Md) 17:49, 6—Judy McCrane (Mass) 17:53, 7—P. Moores (Mass) 17:54, 8—Patty Murnane (PS) 17:54, 9—Kim Gallagher (Willingboro TC) 17:55, 10—Nancy Seeger (Rutgers) 17:56. **Scores**, 1—Penn State 36, 2—Maryland 40, 3—Rutgers 124, 4—Princeton 132, 5—Auburn 132.

Colorado Collegiate Invitational

Boulder, Colorado, October 4 — Eleven teams entered the Colorado Collegiate Invitational but at the finish there was no team close to the hosts. University of Colorado won the competition with 19 points as they grabbed off the first four places led by Ruth Hamilton. The Air Force Academy and Colorado State had a close battle for the runner-up spot with the cadets underscoring the CSU opponents 85-88.

RESULTS: 1—Ruth Hamilton (Col) 18:16, 2—Fran Montes (Col) 18:18, 3—Lori Jorgensen (Col) 18:20, 4—Carleen Thom (Col) 18:23, 5—Chris Roth (Montana State) 18:29 . . . 8—Sharon Hulse (Col) 19:08 . . . 13—Charlene Dekventhal (Idaho State) 19:15. **Scores**, 1—Colorado 19, 2—Air Force Academy 85, 3—Colorado State 88, 4—Minnesota 101, 5—Montana State 121, 6—Idaho State 143, 7—Adams State 189, 8—Dodge City 235, 9—Colorado College 271, 10—CWC 291, 11—UNC 293. Number of finishers — 97.

Arizona Keeps Rolling

San Diego, California, October 4 — Powerful University of Arizona, led by Joan Hansen, easily won the Annual Aztec Invitational scoring 24 points to 57 for UCLA. Sixteen teams took part as the Arizona crew placed 1-2-3-6-10 for their win. Hansen covered the 5000m course in 16:57.3 for a new course record and a half minute margin over Sabrina Peters.

RESULTS: 1—Joan Hansen (Ariz) 16:57.3, 2—Sabrina Peters (ArizState) 17:20.8, 3—Stacey Crystal (Ariz) 17:27.2, 4—Marjorie Kaput (Ariz) 17:28, 5—Linda Goen (UCLA) 17:35, 6—Anthea James (Ariz) 17:36, 7—Sheila Ralston (UCLA) 17:48, 8—Elizabeth Milewski (CSN) 17:49, 9—Liz Baker (SDS) 17:54, 10—Krista Holmes (Ariz) 17:57 . . . 12—Su-Mei Lee (SCRR) 18:07 . . . 14—Sue Kinsey (Un) 18:14, 15—Ann Regan (UCLA) 18:16 . . . 33—Doreen Assuma (CSLB) 19:17. **Scores**, 1—Arizona 24, 2—UCLA 57, 3—San Diego State 90, 4—Arizona State 128, 5—CSLB 145, 6—CS Northridge 151, 7—UNLV 221, 8—Phoenix College 223, 9—Occidental 241, 10—Northern Arizona 262, 11—Pt. Loma 334, 12—Central Arizona 335, 13—Glendale CC 361, 14—Redlands 365, 15—Mesa CC 406, 16—Imperial Valley CC 483. Number of finishers — 136.

UCLA Easy Winner

Northridge, California, October 11 — Powerful UCLA scored a routine win in a three-way affair at Cal State Northridge. The Bruins scored 21 points as they were led by Linda Goen over the 5000 meter course. The home team was next with 34 points and UC Irvine brought up the rear with 74.

RESULTS: 1—Linda Goen (UCLA) 17:27.8, 2—Sheila Ralston (UCLA) 17:48, 3—Beth Milewski (CSN) 18:09, 4—Ann Regan (UCLA) 18:31, 5—Heidi Perham (UCLA) 18:41.

Iowa State Wins

Carbondale, Illinois, October 11 — The Vettors are back and so is Iowa State. The Iowa State cross country team, until 1979 the best team in the nation and winner of four straight national titles until injuries sidelined the Vetter twins in 1979, won their first major title in two seasons as they easily annexed the number one spot at the Saluki Invitational scoring 36 points to 58 for runner-up Arkansas. Winner of the individual title was Debbie Vetter with twin sister Diane crossing the finish line in sixth place. Wren Schaeffer, who has been running number one for Iowa State this season, picked up second place. Distance was 5000m.

RESULTS: 1—Debbie Vetter (ISU) 18:09, 2—Wren Schaeffer (ISU) 18:41, 3—Patty Carrell (Ill.State) 18:45, 4—Lindy Nelson (S.Ill./Carbondale) 18:46, 5—Jody Rittenhouse (Ark) 18:48, 6—Diane Vetter (ISU) 18:57, 7—Maria Tilman (Ark) 19:07, 8—Tanya Heard (Kansas) 19:16, 9—Laura Brewer (Memphis State) 19:17, 10—Cathy Stone (Ark) 19:24. **Scores**, 1—Iowa State 36, 2—Arkansas 58, 3—Minnesota 84, 4—SIU/Carbondale 101, 5—Kansas 113, 6—Murray State 135, 7—Illinois State 200, 8—Southeast Missouri State 220, 9—Northern Illinois 233. Number of finishers — 77.

RESULTS — RESULTS

(continued)

Oregon State Triumphs

Willamette, Oregon, October 12 — Oregon State took advantage of a "second string" University of Oregon entry and walked off with the title at the Willamette Invitational. Ten teams took part in the 5000m contest. Oregon first-stringer Robin Baker was allowed to compete and she successfully retained her 1979 championship with a swift 16:29 clocking.

RESULTS: 1—Robin Baker (Ore) 16:29, 2—Joanne Lahti (OreSt) 16:38, 3—Connie Case (OSU) 16:40, 4—Susie Niedermeyer (Ore) 16:46, 5—Luanne Park (Un) 16:50 . . . 14—Molly Morton (Ore) 17:21. Scores, 1—Oregon State 53, 2—Oregon 67, 3—Linfield 99, 4—Oregon TC 197.

Big Day for Hayward

Stanford, California, October 11 — Cal State Hayward took top honors in the Stanford Invitational as the defending AIAW Division II team tallied a low of 38 to nip the hosts by 10 points and Cal Poly/SLO (running without Maggie Keyes), by 11. Seventeen teams took part in the Stanford affair plus incomplete teams from Sacramento State and Arizona State.

RESULTS: 1—Sabrina Peters (ArizSt) 17:13.7, 2—Ellen Lyons (Stanford) 17:19.8, 3—Kim Schnurpfel (Stanford) 17:29, 4—Eileen Kraemer (CP/SLO) 17:42, 5—Frannie Castro (CSH) 17:49, 6—Michele Aubuchon (CSH) 17:56, 7—Liz Stangio (CP/SLO), 8—Stefani Stoutt (CSH) 18:05, 9—Connie Hester (CSH) 18:12. Scores, 1—Cal State Hayward 38, 2—Stanford 48, 3—Cal Poly/SLO 49, 4—UC Santa Barbara 100, 5—San Jose Cindergals 150, 6—UN Reno 242, 7—Greater SFTC 255, 8—West Valley TC 263, 9—CS Hayward "B" 277, 10—Aggie Running Club 294, 11—Santa Clara 309, 12—Chico State 317, 13—West Valley College 342, 14—UC Santa Cruz 399, 15—Stanford "B" 400, 16—University of San Francisco 438, 17—Sonoma State 472.

Texas with Ease

Denton, Texas, October 10 — The University of Texas had no difficulty winning the TFA/USA Cross Country championship for their district scoring 29 points over the North Texas State course. Oklahoma and Lamar followed the burnt orange clad Texas runners in the scoring. With a speedy 16:50 for the 5000 meters, practically unknown Kelly Cathy of Oklahoma was the individual winner as she upset a passel of fine runners.

RESULTS: 1—Kelly Cathy (Ok) 16:50, 2—Midde Hamrin (Lamar) 17:06, 3—Carol Urish (Houston Harriers), 4—Terri Ebanks (Tx) 17:39, 5—Jayne Sweigart (Tx) 18:04, 6—Lori Nelson (Tx) 18:07, 7—Siri Bjelland (Ok) 18:07, 8—Kelly Wells (Tx) 18:27, 9—Stacey Zartler (Striders) 18:31, 10—Juanita Wilson (Striders) 18:33, 11—Mary Ann Pils (Tx) 18:33. Scores, 1—Texas 29, 2—Oklahoma 55, 3—Lamar 74, 4—Metroplex Striders 120, 5—Rice 127, 6—Oklahoma State 159, 7—Texas Women's University 194, 8—Houston 204, 9—West Texas State 225. Number of finishers — 69. **WTW**

Beer and Running

from Savannah Striders Newsletter

A lot of distance runners "carbo-load" by tanking up on beer the night before a race. Is this a good idea? Recent articles in the newspapers and in running magazines are causing some runners to scratch their heads and have second thoughts when they look at the head of a beer. Why? Several reasons. (1) **Additives.** Beer and other liquor manufacturers are not required to list their ingredients and they have fought long and hard to keep from having to do so. Would you drink something that had Calcium Disodium Ethylenediaminetetraacetate, Sodium metabisulfate, FD&C Yellow 5, FD&C Blue One, FD&C Red 40, Pepsin and papain, N-heptyl p-hydroxy benzoate and carbon dioxide? And from 6 to 66 times as much Nitrosamines, a suspected carcinogen (the amount depends on which brand), as is allowed in bacon? Well, have a beer and you get some or all of the above. (2) **Alcohol.** Okay, not much in beer, but who drinks just one beer? Alcohol reduces oxygen flow to the brain and reduces by up to 30% the ability of a body to utilize glucose. (3) **Heat Tolerance.** Several studies done recently show that a single beer can reduce an athlete's heat tolerance for 24 to 48 hours. More, of course, can affect you longer.

WTW

DISTANCE RUNNING

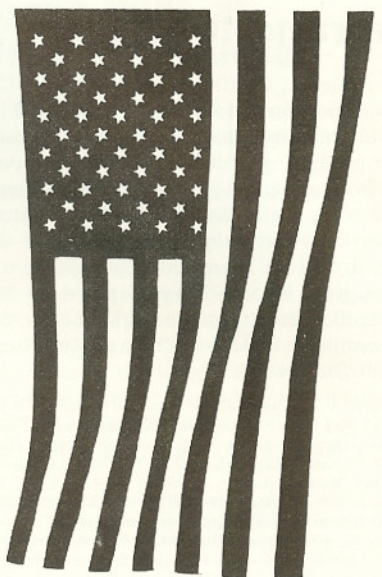
(continued)

shouldn't get too upset when travel delays, etc., cause unexpected hardships.

If you expect to be selected for an international trip, you will be wise to ensure your passport is always valid and that you have the necessary common vaccination shots completed well ahead of time. Frequently, invitations only come at the last minute and interesting trips can be forfeited because of a lack of a valid passport or shot.

Remember, finally, to honor your hosts with your best performance.

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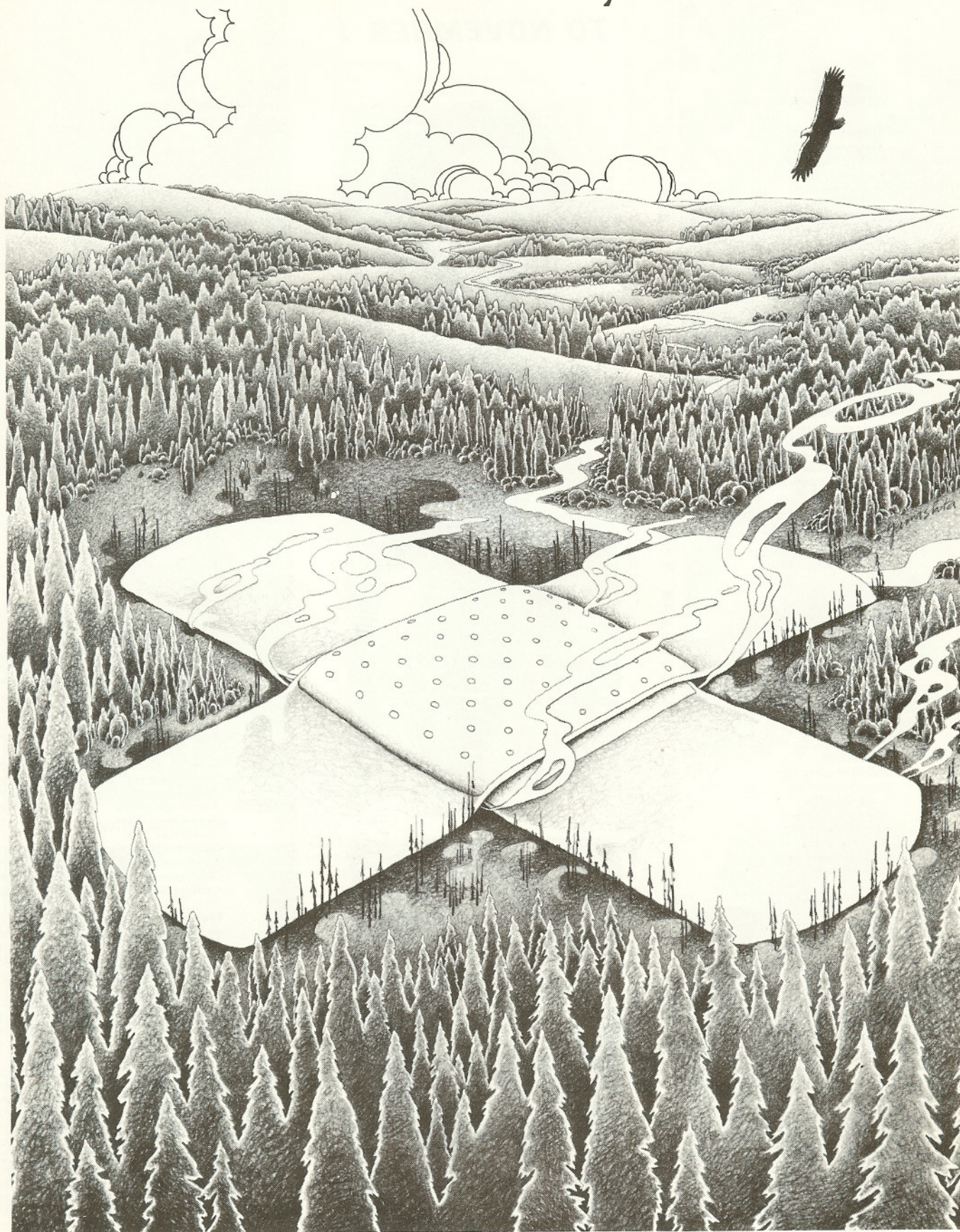
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11.03	Monika Hamann (DDR)	77
11.04	Inge Helten (Ger)	76
11.06	Lyudmila Kondratyeva (SU)	80
11.07	Renate Stecher (DDR)	72
11.08	Wyomia Tyus (USA)	68

11.08	Brenda Morehead (USA)	76
11.08	Ingrid Auerswald (DDR)	80
11.08	Barbel Wockel (DDR)	80
11.11	Barbara Ferrell (USA)	68
11.13	Irena Szewinska (Pol)	74
11.13	Chandra Cheeseborough (USA)	76
11.14	Leleith Hodges (Jam)	78
11.15	Chantal Rega (Fra)	76
11.15	Stefka Popova (Bul)	80
11.16	Andrea Lynch (GB)	75

11.16	Linda Haglund (Swe)	80
11.17	Silvia Chivas (Cuba)	77
11.18	Christine Brehmer (DDR)	79
11.19	Mona-Lisa Pursiainen (Fin)	73
11.19	Martina Bloss (DDR)	76
11.20	Raelene Boyle (Aus)	68
11.20	Angela Taylor (Can)	79
11.20	Sonia Lannaman (GB)	80
11.21	Lyudmila Storoshkova (SU)	77
11.21	Lyudmila Maslakova (SU)	80

11.21	Alice Brown (USA)	80
11.22	Chi Cheng (ROC)	70
11.22	Carla Bodendorf (DDR)	76
11.22	Beverly Goddard (GB)	79
11.22	Natalya Bochina (SU)	80
11.23	Lilyana Ivanova (Bul)	79
11.24	Heather Hunte (GB)	80
11.24	Kathy Smallwood (GB)	80
11.25	Maria Stoyanova (Bul)	80
11.25	Maria Schischkova (SU)	80

11.26	Vera Kornisova (SU)	80
11.27	Iris Davis (USA)	72
11.27	Barbel Lockhoff (DDR)	80
11.28	Gesine Walther (DDR)	80
11.29	Eva Gleskova (Cze)	68
11.29	Margaret Bailes (USA)	68
11.29	Ingrid Brestrich (DDR)	77
11.29	Marisa Masullo (Ita)	80
11.30	Elfgard Schittenhelm (Ger)	72
11.30	Dollie Fleetwood (USA)	80

11.30	Lisa Hopkins (USA)	80
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200 METERS

21.71	Marita Koch (DDR)	79
21.83	Evelyn Ashford (USA)	79
22.01	Barbel Wockel (DDR)	80
22.19	Natalya Bochina (SU)	80
22.20	Merlene Ottey (Jam)	80
22.21	Irena Szewinska (Pol)	74
22.31	Lyudmila Kondratyeva (SU)	80
22.31	Kathy Smallwood (GB)	80
22.35	Denise Boyd (Aus)	80
22.36	Marlies Gohr (DDR)	79

22.38	Renate Stecher (DDR)	73
22.38	Brenda Morehead (USA)	80
22.39	Mona-Lisa Pursiainen (Fin)	73
22.39	Annegret Richter (Ger)	76
22.45	Raelene Boyle (Aus)	72
22.47	Romy Muller (DDR)	80
22.53	Jamila Kratchochvilova (Cze)	80
22.55	Gesine Walther (DDR)	80
22.58	Sonia Lannaman (GB)	80
22.60	Ingrid Auerswald (DDR)	80



CHANTAL REGA



HEATHER HUNTE



MONA-LISA PURSIANEN

PETER PROBST PHOTO

22.60	Vera Kornisova (SU)	80
22.61	Christina Brehmer (DDR)	79
22.61	Angela Taylor (Can)	80
22.62	Chi Cheng (ROC)	70
22.62	Lyudmila Maslakova (SU)	78
22.64	Carla Bodendorf (DDR)	76
22.65	Barbel Lockhoff (DDR)	80
22.68	Inge Helten (Ger)	76
22.72	Marina Sidorova (SU)	73
22.72	Beverly Goddard (GB)	80

22.73	Ellen Strophal (DDR)	73
22.73	Denise Robertson (Aus)	74
22.73	Lilyana Ivanova (Bul)	79
22.74	Chantal Rega (Fra)	76
22.76	Monika Hamann (DDR)	78
22.77	Chandra Cheeseborough (USA)	75
22.78	Karen Hawkins (USA)	80
22.80	Jackie Pusey (Jam)	80
22.81	Pam Jiles (USA)	75
22.81	Margit Sinzel (DDR)	76

22.82	Linda Haglund (Swe)	79
22.84	Tatyana Anisimova (SU)	79
22.85	Silvia Chivas (Cuba)	77
22.87	Barbara Ferrell (USA)	68
22.88	Jennifer Lamy (Aus)	68
22.88	Marion Bohmer (DDR)	79
22.88	Carla Eberding (DDR)	80
22.89	Christina Heinich (DDR)	72
22.89	Annegret Kroniger (Ger)	72
22.90	Alice Annum (Gha)	74

22.90	Kerstin Walther (DDR)	80
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400 METERS

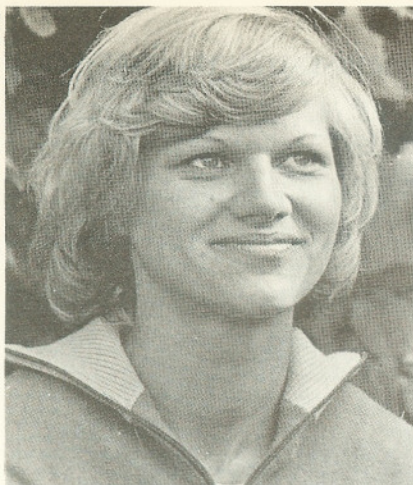
48.60	Marita Koch (DDR)	79
49.29	Irena Szewinska (Pol)	76
49.46	Jarmila Kratchvilova (Cze)	80
49.63	Maria Kulchunova (SU)	79
49.66	Christina Lathan (DDR)	80
50.07	Irina Bagryanseva (SU)	80
50.14	Riitta Salin (Fin)	74
50.15	Ellen Streidt (DDR)	76
50.17	Nina Zyuskova (SU)	80
50.26	Brigitte Rohde (DDR)	76

50.34	Doris Maketzi (DDR)	76
50.49	Tatyana Goichik (SU)	79
50.56	Pirjo Haggman (DDR)	76
50.56	Aurelia Penton (Cuba)	78
50.62	Rosalyn Bryant (USA)	76
50.62	Karolina Kafer (Aut)	77
50.70	Gabi Kotte (DDR)	79
50.78	Gisela Anton (DDR)	76
50.78	Olga Mineyeva (SU)	80
50.85	Gabriele Lowe (DDR)	80

50.88	Rita Wilden (Ger)	74
50.88	Joslyn Hoyte-Smith (GB)	80
50.90	Sheila Ingram (USA)	76
50.92	Margit Sinzel (DDR)	75
50.96	Nadyzhda Olizaryenko (SU)	80
50.98	Yelica Pavlicic (Yug)	74
50.98	Marina Sidorova (SU)	77
51.00	Tatyana Proroschenko (SU)	79
51.01	Rita Kuhne (DDR)	76
51.02	Marilyn Neufville (Jam)	70

51.02	Dagmar Rubsam (DDR)	80
51.03	Barbara Krug (DDR)	80
51.04	Lorna Forde (Bar)	78
51.08	Monika Zehrt (DDR)	72
51.09	Sherri Howard (USA)	79
51.10	Gaby Bussmann (Ger)	80
51.11	Patricia Jackson (USA)	78
51.16	Linsey MacDonald (GB)	80
51.19	Nadyezhda Ilyina (SU)	76
51.20	Mariana Suman (Rum)	74

51.22	Lyudmila Chernova (SU)	80
51.23	Debra Sapenter (USA)	76
51.24	Angelika Handt (DDR)	74



ELFGARD SCHITTENHELM



RENATE STECHER



ANNEGRET RICHTER

51.24	Jutta Morig (DDR)	76
51.25	Marina Makeyeva (SU)	80
51.27	Mona-Lisa Pursiainen (Fin)	73
51.27	Lyudmila Aksyonova (SU)	76
51.27	Beatrix Castillo (Cuba)	78
51.28	Donna Hartley (GB)	75
51.28	Tatyana Goyshchik (SU)	80

800 METERS

1:53.5	Nadyezhda Olizaryenko (SU)	80
1:54.9	Olga Mineyeva (SU)	80
1:55.0	Tatyana Kazankina (SU)	76
1:55.5	Nikolina Shtereva (Bul)	76
1:55.5	Tatyana Providokhina (SU)	80
1:55.6	Elfi Zinn (DDR)	76
1:55.8	Anita Weiss (DDR)	76
1:56.1	Valentina Gerasimova (SU)	76
1:56.2	Totka Petrova (Bul)	79
1:56.3	Martina Kampfert (DDR)	80

1:56.5	Svetlana Styrkina (SU)	76
1:56.6	Zoya Rigel (SU)	78
1:56.7	Fita Lovin (Rum)	80
1:56.9	Lyudmila Veselkova (SU)	80
1:57.0	Jolanta Januchta (Pol)	80
1:57.0	Nina Ruchayeva (SU)	80
1:57.0	Samira Saizeva (SU)	80
1:57.0	Olga Vakrusheva (SU)	80
1:57.1	Ulrike Klapezynski (DDR)	76
1:57.2	Yekaterina Poryvkina (SU)	79

1:57.2	Hildegard Ullrich (DDR)	80
1:57.3	Svyetla Koleva (Bul)	76
1:57.3	Elzbieta Katolik (Pol)	80
1:57.4	Ileana Silai (Rum)	77
1:57.6	Christine Wartenburg (DDR)	79
1:57.7	Gabriella Dorio (Ita)	80
1:57.8	Maricica Puica (Rum)	79
1:57.9	Madeline Manning (USA)	76
1:58.0	Shin Kim-Dan (NK)	64
1:58.1	Ulrike Bruns (DDR)	78

1:58.2	Lilyana Todorova (Bul)	74
1:58.2	Doris Gluth (DDR)	76
1:58.4	Maria Yenkina (SU)	79
1:58.5	Hildegard Falck (Ger)	71
1:58.5	Nina Kovylna (SU)	79
1:58.6	Mariana Suman (Rum)	77
1:58.7	Gunhild Hoffmeister (DDR)	76
1:58.7	Niola Sabaitte (SU)	72
1:58.7	Tamara Sorokina (SU)	76
1:58.7	Raisa Belousova (SU)	78

1:58.7	Maria Schesterova (Bul)	80
1:58.7	Aleksandra Bucharova (SU)	80
1:58.7	Taisa Popova (SU)	80
1:58.9	Christina Neumann (DDR)	76
1:58.9	Vesela Yatsinska (Bul)	79
1:58.9	Anna Bukis (Pol)	80
1:59.0	Olga Dvirna (SU)	79
1:59.0	Charlene Rendina (Aus)	76
1:59.0	Jozefina Cerchlanova (Cze)	76
1:59.1	Christine Boxer (GB)	79

1:59.1	Martina Kampfert (DDR)	80
1:59.1	Tatyana Mischkel (SU)	80

1500 METERS

3:52.5	Tatyana Kazankina (SU)	80
3:56.7	Lyubov Smolka (SU)	80
3:56.8	Nadyezhda Olizaryenko (SU)	80
3:56.9	Zamira Zaitseva (SU)	80
3:57.4	Totka Petrova (Bul)	79
3:57.4	Yekaterina Podkopayeva (SU)	80
3:57.8	Christine Wartenburg (DDR)	80
3:58.2	Natalia Marasescu (Rum)	79
3:58.5	Ilena Silai (Rum)	79
3:59.1	Giana Romanova (SU)	78

3:59.3	Tamara Sorokina (SU)	80
3:59.3	Maricica Puica (Rum)	80
3:59.5	Mary Decker (USA)	80
3:59.8	Raisa Katjukova (SU)	76
3:59.9	Gabriella Dorio (Ita)	80
3:59.9	Ulrike Klapezynski (DDR)	76
3:59.9	Beate Liebich (DDR)	80
4:00.0	Svetlana Ilmasova (SU)	79
4:00.2	Valentina Ilynych (SU)	78
4:00.3	Lyudmila Shesterova (SU)	80

4:00.6	Grete Waitz (Nor)	79
4:00.7	Ulrike Bruns (DDR)	80



CHRIS BOXER



ANITA WEISS



GABRIELLA DORIO

WORLD ALL TIME TOP 50 (continued)



ILEANA SILAI



GUNHILD HOFFMEISTER

4:00.8	Olga Dvirna (SU)	79
4:01.4	Lyudmilla Bragina (SU)	72
4:01.4	Gunhild Hoffmeister (DDR)	76
4:01.6	Brigitte Kraus (Ger)	78
4:01.6	Christine Benning (GB)	79
4:01.8	Tatyana Providokhina (SU)	80
4:02.0	Svetlana Guskova (SU)	79
4:02.1	Lyudmilla Kalnitskaya (SU)	78

4:02.2	Tamara Koba (SU)	80
4:02.4	Nikolina Shtereva (Bul)	76
4:02.5	Yelena Sipatova (SU)	80
4:02.7	Jan Merrill (USA)	76
4:02.9	Paola Pigni (Ita)	72
4:02.9	Raisa Byelusova (SU)	80
4:03.1	Gabriele Lehmann (DDR)	78
4:03.5	Natalya Kuznyetsova (SU)	78
4:03.7	Fita Lovin (Rum)	80
4:03.9	Zoja Rigel (SU)	78

4:04.2	Karin Bumeleit (DDR)	72
4:04.2	Cornelia Burki (Swi)	80
4:04.3	Christine Stoll (DDR)	76
4:04.7	Anna Bukis (Pol)	80
4:04.7	Lyudmilla Veselkova (SU)	78
4:04.7	Vesela Yatsinska (Bul)	80
4:04.7	Doina Besliu (Rum)	80
4:04.8	Lyubov Ivanova (SU)	78
4:04.9	Sheila Carey (GB)	72
4:05.0	Lilyana Todorova (Bul)	74

ONE MILE

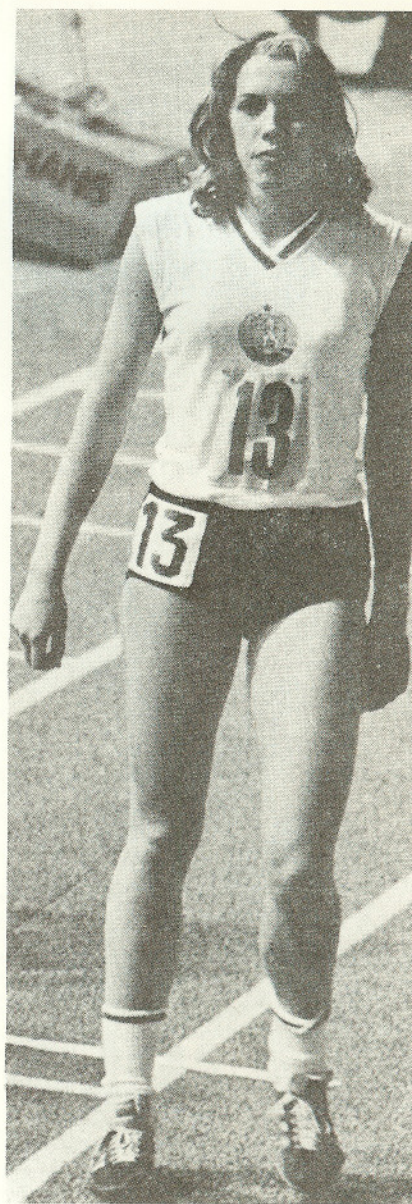
4:21.7	Mary Decker (USA)	80
4:22.1	Natalia Maracescu (Rum)	79
4:23.3	Gabriele Dorio (Ita)	80
4:26.9	Grete Waitz (Nor)	78
4:27.6	Francie Larrieu (USA)	79
4:28.3	Jan Merrill (USA)	79
4:28.8	Adrienne Beames (Aus)	72
4:29.5	Paola Pigni (Ita)	73
4:29.6	Samira Zaitzeva (SU)	80
4:30.2	Loa Olafsson (Den)	78

4:30.2	Christine Boxer (GB)	79
4:30.3	Julie Brown (USA)	80
4:30.4	Mary Purcell (Ire)	80
4:30.8	Brigit Friedman (Ger)	80
4:31.0	Brigitte Kraus (Ger)	79
4:31.1	Debbie Heald (USA)	78
4:31.6	Cindy Bremser (USA)	78
4:32.9	Wendy Smith (GB)	80
4:33.2	Janet Marlow (GB)	79
4:33.6	Gillian Dainty (GB)	79

4:33.8	Sarina Cronjje (RSA)	80
4:34.2	Bronislava Ludvichowska (Pol)	77
4:34.3	Jo White (GB)	79
4:34.9	Glenda Reiser (Can)	73
4:35.3	Ellen Tittel (Ger)	71
4:36.6	Linden Wilde (NZ)	80
4:36.7	Ruth Smeeth (GB)	79
4:36.7	Sonja Laxton (RSA)	79
4:36.8	Maria Gommers (Ned)	69
4:37.0	Anne Smith (GB)	67

4:37.1	Alison Wright (NZ)	79
4:37.2	Christa Merten (Ger)	73
4:37.9	Maggie Keyes (USA)	79
4:38.1	Joke van der Stelt (Ned)	71
4:38.1	Paula Fudge (GB)	79
4:38.3	Kate Keyes (USA)	78
4:38.3	Bernadette Madigan (GB)	79
4:38.4	Glynis Penny (GB)	79
4:38.7	Bemie Boxern (Ned)	71
4:38.9	Mary Chemweno (Ken)	80

4:39.0	Lynn Jennings (USA)	78
4:39.6	Doris Brown (USA)	71
4:40.3	Sandra Arthurton (GB)	79
4:40.5	Kathy Gibbons (USA)	73
4:40.7	Eileen Clausus (USA)	73
4:41.0	Aneen De Jager (RSA)	77
4:41.2	Regina Joyce (GB)	79
4:41.3	Judy Graham (USA)	77
4:41.4	Marise Chamberlain (NZ)	62
4:41.4	Cheri Williams (USA)	79



NIKOLINA SCHTEREVA



ELZBIETA KATOLIK

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WORLD ALL TIME TOP 50 (continued)

TONY DUFFY PHOTO



CHRIS BENNING



BRIGITTE KRAUS

PETER PROBST PHOTO



CORNELIA BURKI



MARJA WOOKIE

3000 METERS

8:27.2	Lyudmila Bragina (SU)	76
8:31.8	Grete Waitz (Nor)	79
8:33.2	Svetlana Ulmasova (SU)	78
8:33.6	Natalia Marasescu (Rum)	78
8:33.6	Yelena Sipatova (SU)	80
8:33.9	Tatyana Sycheva (SU)	80
8:34.0	Faina Kraznova (SU)	80
8:36.0	Lyubov Smolka (SU)	80
8:37.6	Tatyana Posdnyakova (SU)	80
8:38.8	Mary Decker (USA)	80
8:40.4	Nina Yaneyeva (SU)	80
8:41.0	Maricica Puica (Rum)	78
8:41.8	Raisa Katjukova (SU)	76
8:41.8	Giana Romanova (SU)	80
8:42.3	Loa Olafsson (Den)	78
8:42.6	Jan Merrill (USA)	78
8:44.1	Yelena Sipatova (SU)	79
8:44.7	Raisa Belousova (SU)	79
8:44.7	Raisa Sadretidinov (SU)	80
8:45.6	Valentina Ilyinich (SU)	78
8:45.6	Olga Ilyina (SU)	80
8:46.2	Cornelia Burki (Swe)	78
8:46.2	Raisa Smekhnova (SU)	79
8:46.2	Nina Konyakina (SU)	80
8:46.8	Svetlana Guskova (SU)	79
8:48.1	Brigit Friedmann (Ger)	80
8:48.8	Paula Fudge (GB)	78
8:48.8	Yelena Zuchlo (SU)	79
8:49.1	Lyubov Kopeikina (SU)	79
8:49.1	Lyubov Skripkina (SU)	80
8:49.2	Ulrike Bruns (DDR)	77
8:50.3	Karoline Nemetz (Swe)	80
8:51.1	Francie Larrieu (USA)	79
8:51.1	Inger Knutsson (Swe)	75
8:51.4	Margherita Gargano (Ita)	79
8:52.3	Chris Benning (GB)	78
8:52.6	Gabriele Lehmann (DDR)	78
8:52.8	Ann Ford (GB)	77
8:52.9	Vesala Yatsinska (Bul)	79
8:53.1	Mary Purcell (Ire)	78
8:53.8	Wendy Smith (GB)	80
8:54.0	Meinel (DDR)	77
8:54.0	Chuplova (SU)	80
8:54.0	Yelena Nowikova (SU)	80
8:54.2	Olga Dvirna (SU)	76
8:54.4	Brigitte Kraus (Ger)	79
8:54.5	Maria Maksimyenko (SU)	80
8:55.0	Thelma Wright (Can)	75
8:55.0	Irina Kravitskaya (SU)	80
8:55.1	Nina Holmen (Fin)	74
8:56.6	Paola Pigni (Ita)	73

5000 METERS (Under 15:50)

15:08.8	Loa Olafsson (Den)	78
15:30.6	Jan Merrill (USA)	80
15:35.5	Kathy Mills (USA)	78
15:36.9	Charlotte Teske (Ger)	79
15:41.3	Julie Shea (USA)	80
15:41.1	Natalia Marasescu (Rum)	77
15:41.6	Peg Neppel (USA)	76
15:41.9	Raisa Sadretidinova (SU)	78
15:43.1	Joan Benoit (USA)	79
15:43.4	Julie Brown (USA)	74
15:45.8	Galina Golovinskaya (SU)	78
15:47.7	Cindy Bremser (USA)	79
15:47.7	Chris Ramirez (USA)	79
15:48.6	Adreanne Beames (Aus)	74
15:49.6	Kate Binns (GB)	80

10000 METERS (Under 34:20)

31:45.4	Loa Olafsson (Den)	78
32:42.3	Natalia Marasescu (Rum)	78
32:52.5	Mary Shea (USA)	79
32:52.7	Joan Benoit (USA)	79
32:57.2	Kathryn Binns (GB)	80
33:02.4	Julie Shea (USA)	80
33:03.4	Betty Springs (USA)	80
33:10.2	Midde Hamrin (Fin)	80
33:15.1	Peg Neppel (USA)	77
33:31.1	Judi St. Hilaire (USA)	80
33:33.1	Carol Urish (USA)	80
33:37.5	Ellen Hart (USA)	80
33:40.2	Ellison Goodall (USA)	78
33:42.7	Sue Kinsey (USA)	78
33:45.6	Kristen Bankes (USA)	80
33:48.5	Anne Sullivan (USA)	80

33:51.7	F. Morrish (Ire)	80
33:55.6	Jan Oehm (USA)	80
33:57.1	Charlotte Teske (Ger)	79
34:01.4	Christina Vahlensieck (Ger)	75

34:03.8	Nancy Conz (USA)	80
34:05.6	Beth Sheridan (USA)	80
34:05.6	Jill Molen (USA)	80
34:16.6	Mary Walsh (USA)	80
34:17.3	Karen Bridges (USA)	78
34:19.4	Debbie Eide (USA)	80
34:19.5	Julie Brown (USA)	77

MARATHON

2:27:33	Grete Waitz (Nor)	79
2:31:22	Patty Lyons (USA)	80
2:31:23	Joan Benoit (USA)	80
2:31:42	Lorraine Moller (NZ)	80
2:31:42	Jacqueline Gareau (Can)	80
2:32:29	Marja Wokke (Ned)	80
2:33:32	Joyce Smith (GB)	80
2:34:29	Allison Roe (NZ)	80
2:34:48	Christa Vahlensieck (Ger)	77
2:35:09	Gayle Olinek (Can)	80

2:35:15	Chantal Langlace (Fra)	77
2:35:57	Vreni Forster (Swi)	80
2:36:02	Nancy Conz (USA)	80
2:36:23	Julie Brown (USA)	78
2:37:39	Linda Staudt (Can)	80
2:37:57	Kim Merritt (USA)	77
2:38:04	Charlotte Teske (Ger)	80
2:38:09	Manuela Angenvoorth (Ger)	77
2:38:19	Jackie Hanson (USA)	75
2:38:31	Gillian Adams (GB)	79

2:38:45	Ingrid Christensen (Nor)	80
2:38:50	Sue Krenn (USA)	79
2:39:11	Miki Gorman (USA)	76
2:39:22	Laurie Binder (USA)	80
2:39:37	Sissel Grottenberg (Nor)	79
2:39:48	Elizabeth Hassell (Aus)	79
2:39:48	Gail Volk (USA)	79
2:40:35	Dorthe Rasmussen (Den)	80
2:40:37	Carol Gould (GB)	79
2:41:01	Martha Cooksey (USA)	80

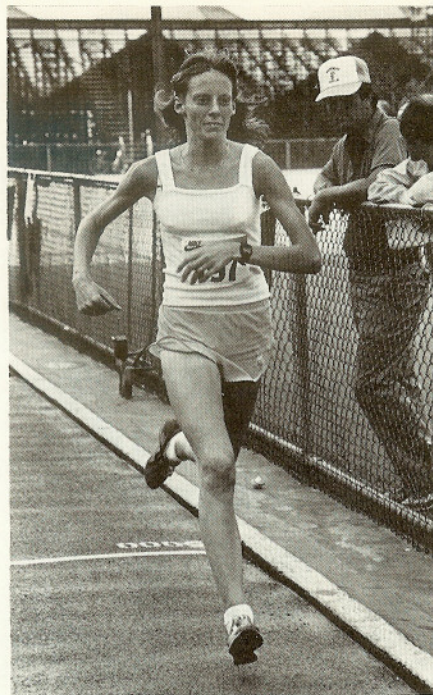
2:41:07	Jane Welzel (USA)	80
2:41:10	Elizabeth Berry (USA)	78
2:41:44	Beth Guerin (USA)	80
2:41:47	Celia Peterson (USA)	78
2:41:50	Kathleen Samet (USA)	80
2:41:52	Karen Fitz (USA)	80
2:42:08	Sue Kinsey (USA)	79
2:42:11	Chris Lavalee (Can)	80
2:42:15	Shirley Durtschi (USA)	80
2:42:23	Ellison Goodall (USA)	80

2:42:24	Liane Winter (Ger)	75
2:42:44	Sue Peterson (USA)	78
2:42:45	Anne Sullivan (USA)	80
2:43:00	Heike Skaden (USA)	80
2:43:16	Jane Robinson (USA)	80
2:43:20	Joann Dahlkoetter (USA)	80
2:43:38	Cindy Dalrymple (USA)	79
2:43:51	Janis Areny (USA)	79
2:43:51	Jane Robinson (USA)	79
2:44:11	Gillian File (NZ)	78

100m HURDLES

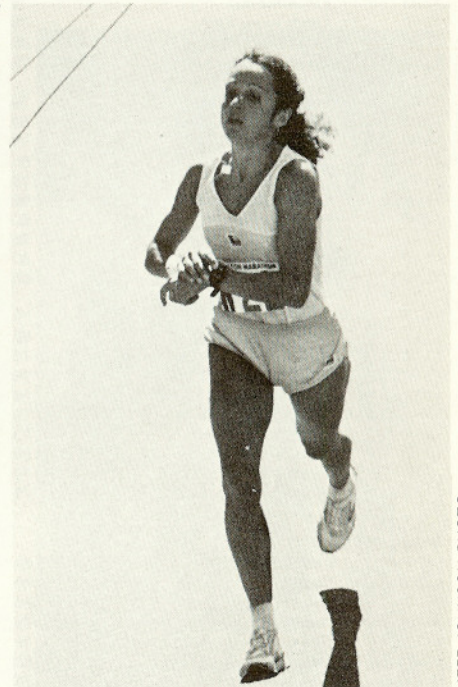
12:36	Grazyna Rabsztyń (Pol)	80
12:39	Vera Komisova (SU)	80
12:44	Lucyna Langer (Pol)	80
12:56	Johanna Klier (DDR)	80
12:59	Annelie Ehrhardt (DDR)	72
12:60	Kersten Claus (DDR)	80
12:63	Zofia Bielczyk (Pol)	79
12:65	Danuta Perka (Pol)	79
12:67	Tatyana Anisimova (SU)	78
12:67	Bettina Gartz (DDR)	80

12:73	Gudrun Berend (DDR)	78
12:80	Natalia Lebedyeva (SU)	76
12:80	Elzbieta Rabsztyń (Pol)	80
12:83	Nina Morgulina (SU)	78
12:84	Valerie Bufanu (Rum)	72
12:84	Irina Litovchenko (SU)	80
12:86	Deby LaPlante (USA)	79
12:87	Lyubov Nikityenko (SU)	77
12:89	Annerose Fiedler (DDR)	74
12:90	Karin Balzer (DDR)	72



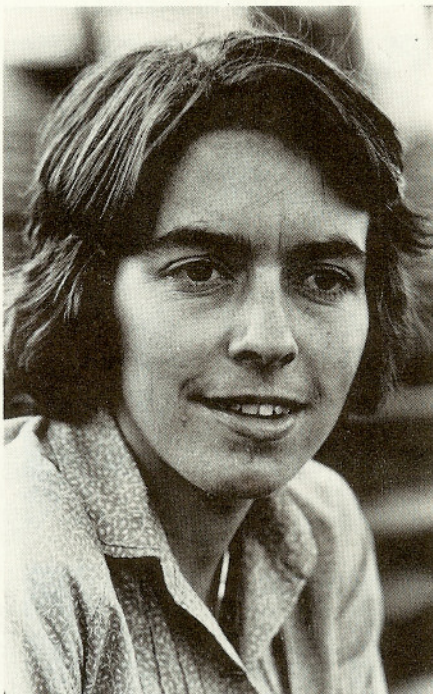
NANCY CONZ

JEFF JOHNSON PHOTO



JACQUELINE GAREAU

JEFF JOHNSON PHOTO



GILLIAN ADAMS

JEFF JOHNSON PHOTO



LAURA BINDER

JEFF JOHNSON PHOTO

WORLD ALL TIME TOP 50 (continued)

12.90	Stephanie Hightower (USA)	80
12.91	Danuta Straszynska (Pol)	72
12.91	Teresa Novak (Pol)	74
12.91	Bozena Nowakowska (Pol)	75
12.93	Chi Cheng (ROC)	70
12.93	Pam Ryan (Aus)	72
12.93	Esther Rot (Isr)	76
12.95	Candy Young (USA)	79
12.99	Nina Derbina (SU)	80
13.02	Daniela Teneva (Bul)	79

13.02	Regina Beyer (DDR)	79
13.03	Laurence Lebeau (Fra)	80
13.06	Silvia Kempin (Ger)	79
13.06	Shirley Strong (GB)	80
13.08	Lorna Booth (GB)	78
13.08	Christine Laser (DDR)	80
13.10	Penny Gillies (Aus)	80
13.11	Sharon Colyear (GB)	76
13.11	Nina Morgulina (SU)	80
13.11	Benita Fitzgerald (USA)	80

13.13	Doris Baum (Ger)	79
13.13	Laurence Elloy (Fra)	80
13.14	Marlies Koschinski (Ger)	75
13.14	Burglinde Pollak (DDR)	76
13.14	Patty Van Wolvemaan (USA)	78
13.14	Bozena Swierczynska (Pol)	79
13.17	Barbel Eckert (DDR)	73
13.17	Xenia Siska (Hun)	80
13.18	Yekaterina Smirnova (SU)	79
13.19	Penka Sokolova (Bul)	75

400m HURDLES

54.28	Karin Rossley (DDR)	80
54.55	Barbel Broschat (DDR)	80
54.56	Ellen Neumann (DDR)	80
54.78	Marina Makeyeva (SU)	79
54.89	Tatyana Zelentsova (SU)	78
54.80	Tatyana Storosheva (SU)	80
55.14	Silvia Hollman (Ger)	78
55.44	Krystina Kacperczyk (Pol)	78
55.46	Brigitte Kohn (DDR)	78
55.60	Petra Pfaff (DDR)	80

55.63	Anita Weiss (DDR)	78
55.66	Yekaterina Fesyenko (SU)	80
55.81	Anna Kastezkaya (SU)	80
55.84	Ingrid Barkane (SU)	79
56.06	Christine Warden (GB)	79
56.09	Tatyana Zubova (SU)	80
56.16	Esther Mahr (USA)	80
56.40	Sandy Myers (USA)	80
56.47	Hildegard Ullrich (DDR)	78
56.51	Mary Appleby (Ire)	80

56.56	Nadyezhda Ryseva (SU)	80
56.61	Mary Ayers (USA)	77
56.62	Irena Szewinska (Pol)	77
56.63	Debbie Esser (USA)	79
56.63	Lyn Young (Aus)	80
56.67	Gonowefa Blaszk (Pol)	78
56.68	Yordanka Ivanova (Bul)	78
56.68	Svilenka Filippova (Bul)	78
56.71	Lea Alaerts (Bel)	78
56.72	Ann-Louise Skoglund (Swi)	80

56.83	Danuta Piecyk (Pol)	74
56.85	Hilde Fredericksen (Nor)	80
56.90	Erika Weinstein (Ger)	78
56.91	Elzbieta Katolik (Pol)	77
56.96	Bonka Dimova (Bul)	80
57.08	Heike Bessler (DDR)	80
57.12	Liliana Ivanova (Bul)	78
57.21	Yelena Kolesnik (SU)	78
57.23	Alexandria Badescu (Rum)	78
57.24	Arthurene Gainer (USA)	78

57.27	Karola Claus (Ger)	74
57.28	Marian Fisher (Aus)	77
57.30	Eva Mohacsi (Hun)	79
57.33	Ann Michel (Bel)	79
57.34	Isabella Keller (Swi)	78
57.35	Rita Bottigliere (Ita)	77
57.43	Elizabeth Sutherland (GB)	78
57.45	Adriana Stancu (Rum)	79
57.47	Rosa Colorado (Spa)	80

4x100 RELAY

41.60	East Germany	80
42.10	Soviet Union	80



STEPHANIE HIGHTOWER



ESTHER MAHR

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42.43	Great Britain	80
42.59	Germany	78
42.67	Bulgaria	80
42.84	France	80
42.87	United States	68
43.08	Poland	75
43.17	Canada	76
43.18	Australia	76

43.19	Jamaica	80
43.35	Cuba	68
43.44	Netherlands	68
43.95	Finland	75
44.23	Sweden	80
44.31	Switzerland	79
44.32	Italy	79
44.35	Ghana	74
44.51	Hungary	74
44.57	Czechoslovakia	80

44.63	Nigeria	78
44.68	New Zealand	74
44.85	Belgium	77
44.90	Argentina	68
44.95	Yugoslavia	74
45.1	Israel	76
45.13	Trinidad & Tobago	78
45.21	Brazil	68
45.23	Rumania	79
45.25	Austria	74

45.5	Denmark	76
45.6	Bermuda	76
45.7	Colombia	71
45.78	Puerto Rico	77
45.9	Norway	66
45.9	Uganda	76
46.0	Japan	77
46.63	Tanzania	74
46.66	Panama	60
46.7	Spain	77

46.76	China	74
46.8	Mexico	68
46.9	Barbados	72
46.9	Philippines	72
47.10	Singapore	74
47.2	Venezuela	71
47.24	Taiwan	68
47.3	Portugal	73
47.32	Peru	71
47.40	Thailand	77

4x400 RELAY

3:19.23	East Germany	76
3:20.2	Soviet Union	80
3:22.81	United States	76
3:25.56	Australia	76
3:25.7	Finland	74
3:25.71	Germany	76
3:26.4	Poland	74
3:26.6	Great Britain	75
3:27.5	France	72
3:27.7	Rumania	80

3:27.9	Bulgaria	79
3:27.9	Hungary	80
3:28.81	Canada	76
3:30.4	Czechoslovakia	78
3:30.8	Belgium	80
3:31.34	Cuba	78
3:31.5	Jamaica	80
3:32.6	Sweden	72
3:34.42	Austria	76
3:34.7	Netherlands	78

3:35.0	Nigeria	80
3:35.6	Ghana	78
3:36.3	South Africa	78
3:37.4	Ireland	72
3:37.5	New Zealand	74
3:38.2	Switzerland	73
3:38.2	Italy	78
3:38.7	Norway	79
3:39.0	Yugoslavia	79
3:39.4	Kenya	78

3:39.9	Uganda	78
3:40.4	Japan	75
3:43.2	Spain	73
3:43.6	Norway	75



DEBBY LA PLANTE



ULRIKE MEYFARTH

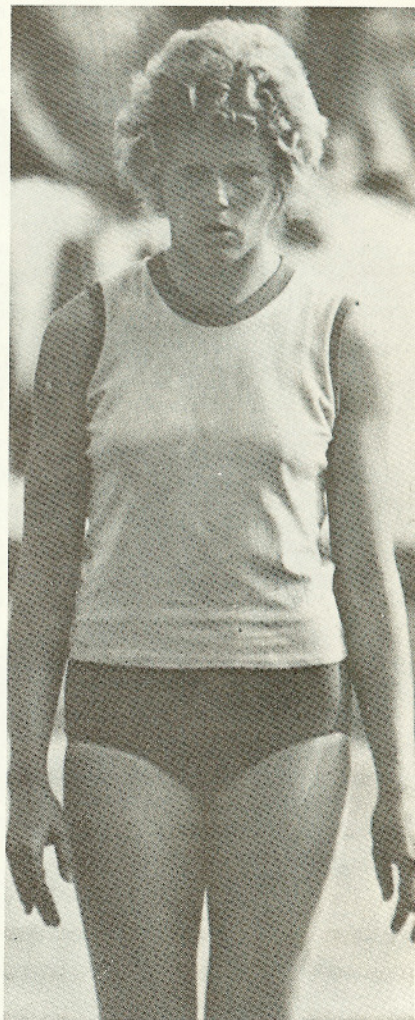
3:43.8	Brazil	75
3:43.9	Singapore	74
3:44.5	Barbados	72
3:45.1	Burma	75
3:46.4	Trinidad & Tobago	72
3:46.6	Puerto Rico	77
3:46.7	Albania	77
3:46.9	China	77
3:47.1	Taiwan	77
3:47.4	Portugal	77

HIGH JUMP

2.01/6'7	Sara Simeoni (Ita)	78
2.00/6'6½	Rosemarie Ackermann (DDR)	77
1.97/6'5½	Debbie Brill (Can)	80
1.97/6'5½	Tamara Bykova (SU)	80
1.96/6'5¼	Nina Serbina (SU)	80
1.95/6'4¾	Brigitte Holzapfel (Ger)	78
1.95/6'4¾	Ulrike Meyfarth (Ger)	78
1.95/6'4¾	Kristine Nitzsche (DDR)	79
1.95/6'4¾	Elena Goloborodko (SU)	79
1.95/6'4¾	Louise Ritter (USA)	80
1.95/6'4¾	Urszula Kielan (Pol)	80
1.95/6'4¾	Valentina Poluiko (SU)	80
1.95/6'4¾	Jutta Kirst (DDR)	80
1.94/6'4½	Yordanka Blagoyeva (Bul)	72
1.94/6'4½	Andrea Matay (Hun)	79
1.94/6'4½	Elzbieta Krawczuk (Pol)	80
1.94/6'4½	Louise Miller (GB)	80
1.94/6'4½	Andrea Reichstein (DDR)	80
1.93/6'4	Ilona Gusenbauer (Aut)	72
1.93/6'4	Cornelia Popa (Rum)	76
1.93/6'4	Katrina Gibbs (Aus)	78
1.93/6'4	Kerstin Dedner (DDR)	79
1.93/6'4	Marina Sysoyeva (SU)	80
1.93/6'4	Colleen Reinstra (USA)	80
1.92/6'3½	Virginia Ioan (Rum)	74
1.92/6'3½	Maria Mracnova (Cze)	76
1.92/6'3½	Anne-Marie Pira (Bel)	77
1.92/6'3½	Milada Karbanova (Cze)	77
1.92/6'3½	Tatyana Denisova (SU)	79
1.92/6'3½	Pam Spencer (USA)	79
1.92/6'3½	Charmaine Gale (RSA)	80
1.92/6'3½	Yelena Popkova (SU)	80
1.92/6'3½	Nadyezhda Oskolok (SU)	80
1.92/6'3½	Maria Serkova (SU)	80
1.92/6'3½	Zheng Da Zhen (PROC)	80
1.91/6'3¼	Iolanda Balas (Rum)	61
1.91/6'3¼	Petra Wziontek (Ger)	79
1.91/6'3¼	Doris Haverney (DDR)	80
1.91/6'3¼	Chris Stanton (Aus)	80
1.90/6'2¾	Rita Schmidt (DDR)	72
1.90/6'2¾	Joni Huntley (USA)	75
1.90/6'2¾	Tatyana Boyko (SU)	76
1.90/6'2¾	Vera Bradacova (Cze)	76
1.90/6'2¾	Galina Filatova (SU)	76
1.90/6'2¾	Nadyezhda Marinyenko (SU)	78
1.90/6'2¾	Tamami Yagi (Jap)	78
1.90/6'2¾	Olga Bondarenko (SU)	79
1.90/6'2¾	Doris Matzen (DDR)	79
1.90/6'2¾	Cornelia Sulek (Ger)	79
1.90/6'2¾	Anette Harnack (Ger)	79
1.90/6'2¾	Danuta Bulkovska (Pol)	80
1.90/6'2¾	Maria Godintschuk (SU)	80
1.90/6'2¾	Niculina Vasile (Rum)	80
1.90/6'2¾	Susanne Lorengton (Swi)	80

LONG JUMP

7.09/23'3¼	Vilma Bardauskiene (SU)	78
7.06/23'2	Tatyana Kolpakova (SU)	80
7.04/23'1¼	Brigitte Wujak (DDR)	80
7.01/23'0	Tatyana Skatschko (SU)	80
7.00/22'11½	Jodi Anderson (USA)	80
6.99/22'11¼	Sigrun Siegl (DDR)	76
6.95/22'9¾	Anna Wlodarczyk (Pol)	80
6.92/22'8½	Angela Voigt (DDR)	76
6.85/22'5¾	Sigrid Heimann (DDR)	80
6.84/22'5¼	Heidi Rosendahl (Ger)	70
6.84/22'5¼	Lidiya Alfeyeva (SU)	80
6.83/22'5	Jarmila Nygrynova (Cze)	80
6.82/22'4½	Viorica Viscopoleanu (Rum)	68
6.81/22'4	Margrit Herbst (DDR)	71
6.81/22'4	Natalia Alyoschina (SU)	80



RITA KIRST



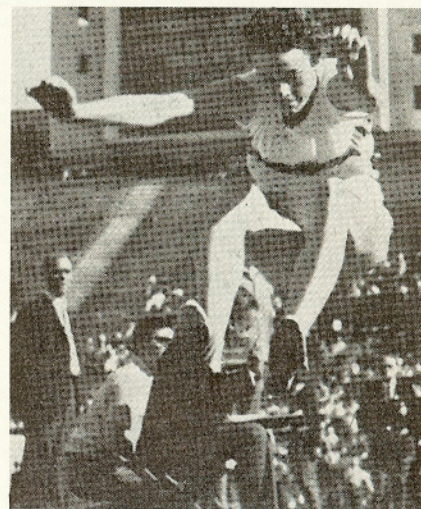
BRIGITTE HOLZAPFEL

WORLD ALL TIME TOP 50 (continued)

6.80/22'3½	Anita Stukane (SU)	79
6.80/22'3½	Anke Weigt (Ger)	80
6.79/22'3¼	Olga Rukavishnikova (SU)	80
6.78/22'3	Kathy McMillan (USA)	76
6.78/22'3	Yekaterina Smirnova (SU)	79
6.78/22'3	Heike Schmidt (Ger)	80
6.77/22'2½	Diana Yorgova (Bul)	72
6.77/22'2½	Marianne Voelzke (DDR)	74
6.77/22'2½	Maryne van Niekerk (RSA)	80
6.77/22'2½	Olga Kuraniga (SU)	80
6.76/22'2¼	Mary Rand (GB)	64
6.76/22'2¼	Ingrid Mickler (Ger)	71
6.76/22'2¼	Heide Wycisk (DDR)	77
6.76/22'2¼	Ildiko Erdelyi (Hun)	77
6.73/22'1	Tatyana Shchelkanova (SU)	66
6.73/22'1	Sheila Sherwood (GB)	70
6.73/22'1	Meta Antenen (Swi)	71
6.73/22'1	Ramona Neubert (DDR)	79
6.73/22'1	Nadyezhda Tkachenko (SU)	80
6.71/22'0¼	Lilyana Ivanova (Bul)	76
6.71/22'0¼	Gina Panait (Rum)	76
6.71/22'0¼	Helga Radtke (DDR)	80
6.70/21'11¼	Lynette Jacenko (Aus)	78
6.70/21'11¼	Irina Palyenko (SU)	79
6.70/21'11¼	Ludmilla Chaustova (SU)	80
6.69/21'11½	Angelika Liebsch (DDR)	72
6.69/21'11½	Sue Reeve (GB)	79
6.68/21'11	Alina Gheorghiu (Rum)	77
6.68/21'11	Susan Hearnshaw (GB)	79
6.68/21'11	Christina Sussiek (Ger)	80
6.68/21'11	Lyudmila Sheludkova (SU)	80
6.67/21'10½	Irena Szewinska (Pol)	68
6.67/21'10½	Eva Suranova (Cze)	72
6.66/21'10¼	Tatyana Talisheva (SU)	68
6.65/21'9¾	Ilona Bruzsenyak (Hun)	74
6.65/21'9¾	Isabella Lusti (Swi)	75
6.65/21'9¾	Teresa Marciniak (Pol)	79
6.65/21'9¾	Margarita Butkiene (SU)	80



SIGRAN SIEGL



INGRID BECKER



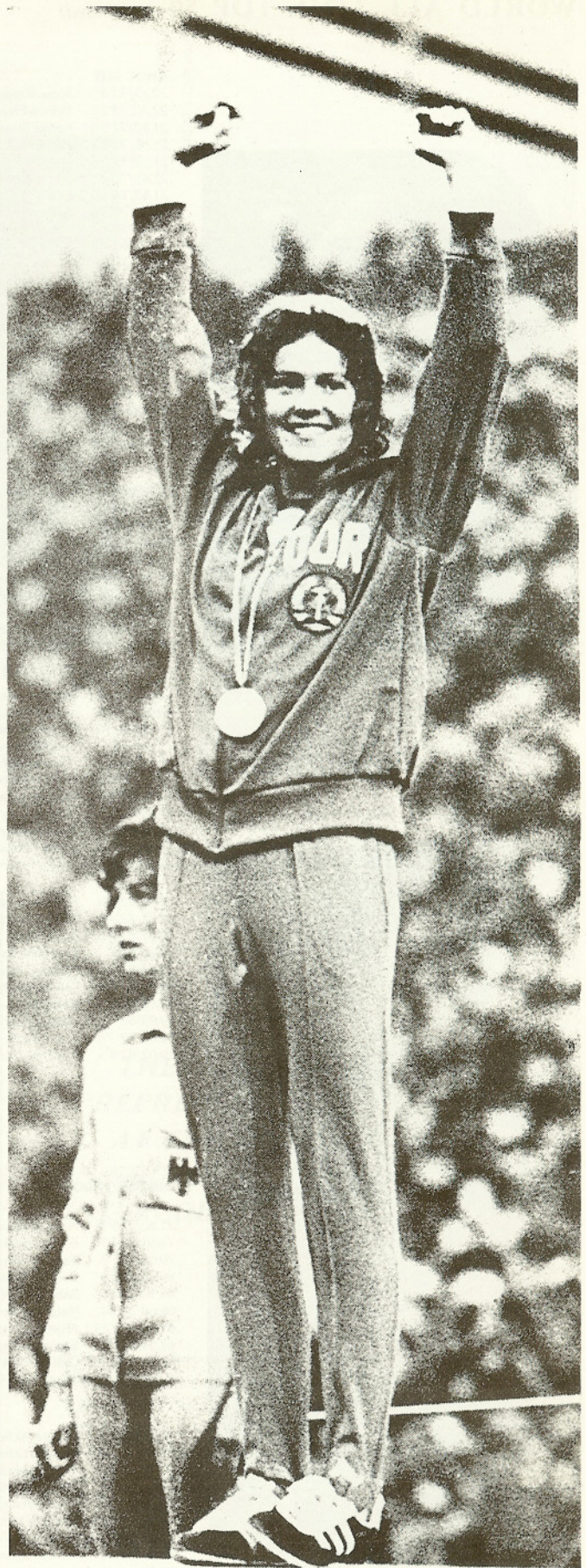
VIORICU VISCOPEANU



VILMA BARDAUSKINE



TATYANA TALISHEVA



MONIKA ZEHRT

WORLD ALL TIME TOP 50 (continued)



SVETLANA KRACHEVSKAYA



IVANKA CHRISTOVA

SHOT PUT

22.45/73'8	Ilona Slupianek (DDR)	80
22.32/73'2¼	Helena Fibingerova (Cze)	77
21.89/71'9¾	Ivanka Khristova (Bul)	76
21.86/71'8½	Marianne Adam (DDR)	79
21.58/70'9¼	Margitta Pufe (DDR)	78
21.45/70'4½	Nadyezhda Chizova (SU)	73
21.43/70'3¾	Eva Wilms (Ger)	77
21.42/70'3¼	Svetlana Krachevskaya (SU)	80
21.37/70'1¼	Nunu Abaschidse (SU)	80
21.30/69'10½	Virginia Veselinova (Bul)	80

21.01/68'11½	Ivanka Stoicheva (Bul)	79
21.00/68'10¾	Ines Reichenbach (DDR)	80
20.99/68'10½	Helena Knorscheidt (DDR)	78
20.95/68'8¾	Elena Stoyanova (Bul)	80
20.76/68'1¼	Esfir Krachevskaya (SU)	79
20.51/67'3½	Ivanka Petrova (Bul)	80
20.44/67'0¾	Natalya Achrimoenko (SU)	80
20.40/66'11¼	Maria Sarria (Cuba)	80
20.25/66'5½	Nina Isayeva (SU)	79
20.22/66'4	Margitta Gummel (DDR)	72

20.12/66'0¼	Vera Tsapkalenko (SU)	77
20.06/65'9¾	Raisa Taranda (SU)	76
20.04/65'9	Gabriele Retzlaff (DDR)	80
20.03/65'8½	Faina Melnik (SU)	76
19.93/65'4¾	Zdenka Bartonova (Cze)	80
19.92/65'4¼	Tamara Bufyetova (SU)	78
19.90/65'3½	Natalya Nosyenko (SU)	76
19.86/65'2	Cordula Schuize (DDR)	79
19.80/64'11½	Svetlana Melnikova (SU)	78
19.73/64'8¾	Brunhilde Loewe (DDR)	75

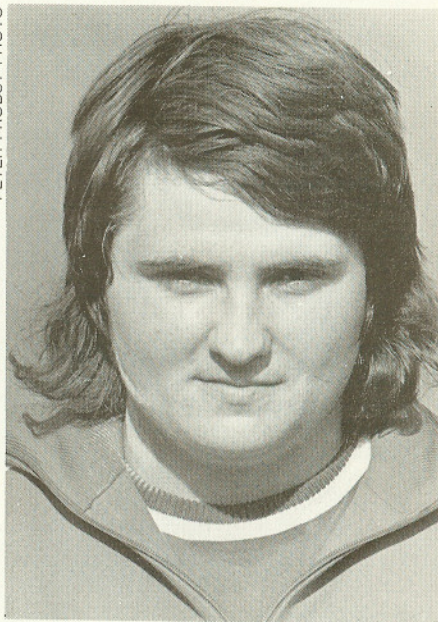
19.65/64'5¾	Brigitte Griessing (DDR)	76
19.63/64'4¾	Liane Schmuhi (DDR)	79
19.59/64'3¼	Rimma Muzikyavichyene (SU)	80
19.58/64'3	Ludvika Chewinska (Pol)	76
19.55/64'1¾	Mihaela Loghin (Rum)	80
19.42/63'8½	Simone Michel (DDR)	79
19.41/63'8¼	Brigitte Michel (DDR)	79
19.40/63'7¾	Marita Lange (DDR)	74
19.39/63'7½	Antonina Ivanova (SU)	71
19.36/63'6¼	Birute Kersuliene (SU)	80

19.35/63'5¾	Birgit Haarnagel (DDR)	76
19.32/63'4¾	Natalya Gorbatschova (SU)	77
19.27/63'2¾	Karin Fitzner (DDR)	79
19.25/63'2	Radostina Bachtschevanova (Bul)	77
19.18/62'11¼	Natalie Zubechina (SU)	79
19.12/62'8¾	Yelena Korablyova (SU)	74
19.10/62'8	Beate Habrzyk (Pol)	79
19.09/62'7½	Natalya Akhrimenko (SU)	78
19.09/62'7½	Maren Seidler (USA)	79
19.02/62'4¾	Valentina Cioltan (Rum)	76

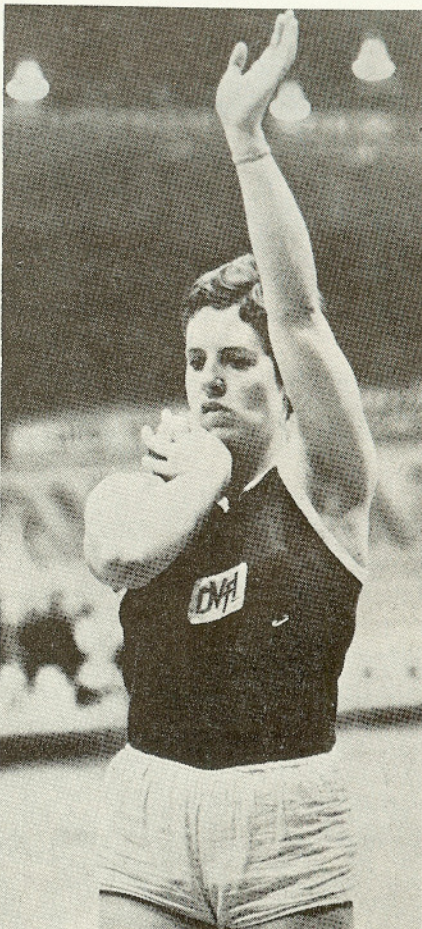
DISCUS THROW

71.80/235'7	Maria Vergova (Bul)	80
71.50/234'7	Evelin Jahl (DDR)	80
70.50/231'3	Faina Melnik (SU)	76
69.08/226'8	Carmen Romero (Cuba)	76
68.92/226'1	Sabine Engel (DDR)	77
68.68/225'4	Margitta Pufe (DDR)	80
67.96/222'11	Argentina Menis (Rum)	76
67.54/221'7	Svetlana Petrova (SU)	78
67.52/221'6	Galina Muraschova (SU)	80
67.44/221'3	Gisela Beyer (DDR)	80

67.40/221'1	Brigitte Michel (DDR)	79
67.40/221'1	Tatyana Lesovaya (SU)	80
67.26/220'8	Svyetla Boshkova (Bul)	78
67.22/220'6	Galina Savenkova (SU)	80
67.02/219'11	Gabriel Hinzmann (DDR)	73
67.02/219'11	Florenta Tacu (Rum)	80
66.96/219'8	Nadyezhda Yerosha (SU)	80
66.60/218'6	Natalya Gorbatschova (SU)	76
66.30/217'5	Lyudmila Isayeva (SU)	79
66.06/216'9	Svetlana Myeinikova (SU)	79



HELENA FIBINGEROVA



MARGITTA GUMMEL

PETER PROBST PHOTO

HORSTMULLER PHOTO



NADYEZHDA KARYAKINA

LACEY PHOTO



NADYEZHDA CHIZOVA

MEZAVILKS PHOTO



MARIANN ADAM



**THESE YOUNG WOMEN
REPRESENT THEIR TEAMS
AT THE UNIVERSITY OF
SOUTHERN CALIFORNIA
IN INTERCOLLEGIATE COMPETITION**

*Front row: Sandy Crabtree, track & field, Glendale, AZ
Kathy Haynes, basketball, Madera, CA; Anna Marie
Fernandez, tennis, Torrance, CA; Meredith Williams
swimming, San Jose, CA; Jill Ornstein, gymnastics
Huntington Beach, CA.*

*Back row: Denise Strebeg, golf, San Bernardino, CA
Cathy Stukel, volleyball, Champaign, IL; Elizabeth
Palmer, crew, San Marino, CA.*

For more information please contact: USC Women's Athletic Dept., Heritage Hall, University Park, Los Angeles, CA 90007, (213) 741-7693 or 7770

WORLD ALL TIME TOP 50 (continued)



TODTEN & R. FUCHS



KATE SCHMIDT

65.96/216'5	Meg Ritchie (GB)	80
65.94/216'4	Tatyana Berezhnaya (SU)	80
65.82/215'11	Maria Betancourt (Cuba)	80
65.72/215'7	Petra Sziegaudd (DDR)	80
65.38/214'6	Valentina Styepushina (SU)	76
65.26/214'1	Olga Andrianova (SU)	76
65.20/213'11	Vera Safonova (SU)	77
64.96/213'1	Lisel Westermann (Ger)	72
64.86/212'9	Irina Meszynski (DDR)	80
64.80/212'7	Petra Wendlandt (DDR)	79
64.78/212'6	Carmen Ionesco (Can)	76
64.70/212'3	Natalia Burluzkaya (SU)	79
64.64/212'1	Valentina Kharchenko (SU)	79
64.58/211'10	Radostina Balkhchevanova (Bul)	76
64.52/211'8	Martina Opitz (DDR)	79
64.50/211'7	Zdenka Bartanova (Cze)	80
64.48/211'6	Tamara Bereshnaya (SU)	77
64.42/211'4	Svetlana Suchova (SU)	79
64.40/211'3	Ilona Slupianek (DDR)	77
64.34/211'1	Vasilka Stoeva (Bul)	72
64.34/211'1	Natalya Akhrimenko (SU)	78
64.04/210'1	Jitka Prouzova (Cze)	78
64.00/210'0	Elyu Kubi (SU)	80
63.98/209'11	Lyudmila Khmelevskaya (SU)	76
63.66/208'10	Karin Illgen (DDR)	70
63.66/208'10	Simeon (Ita)	80
63.58/208'7	Lyudmila Gnidzenko (SU)	79
63.54/208'5	Valentina Mesenzova (SU)	76
63.52/208'5	Ute Rekeschat (DDR)	80
63.38/207'11	Galina Murashova (SU)	79

JAVELIN THROW

70.08/229'11	Tatyana Biryulina (SU)	80
69.96/229'6	Ruth Fuchs (DDR)	80
69.70/228'8	Tessa Sanderson (GB)	80
69.32/227'5	Kate Schmidt (USA)	77
68.80/225'9	Eva Raduly (Rum)	80
68.40/224'5	Maria Colon (Cuba)	80
68.28/224'0	Saida Gumba (SU)	80
67.84/222'7	Yadвига Putiene (SU)	80
66.66/218'8	Ute Richter (DDR)	80
66.54/218'4	Ute Hommola (DDR)	80

66.40/217'10	Antoaneta Todorova (Bul)	80
65.74/215'8	Pam Matthews (Aus)	79
65.46/214'9	Sabine Sebrovski (DDR)	76
65.38/214'6	Ivanka Vancheva (Bul)	80
65.14/213'8	Marion Becker (Ger)	76
65.02/213'4	Nina Nikanorova (SU)	80
64.90/212'11	Ledlita Blodniece (SU)	80
64.78/212'6	Karin Smith (USA)	80
64.40/211'3	Eva Helmschmidt (Ger)	79
64.34/211'2	Jacqueline Todten (DDR)	74

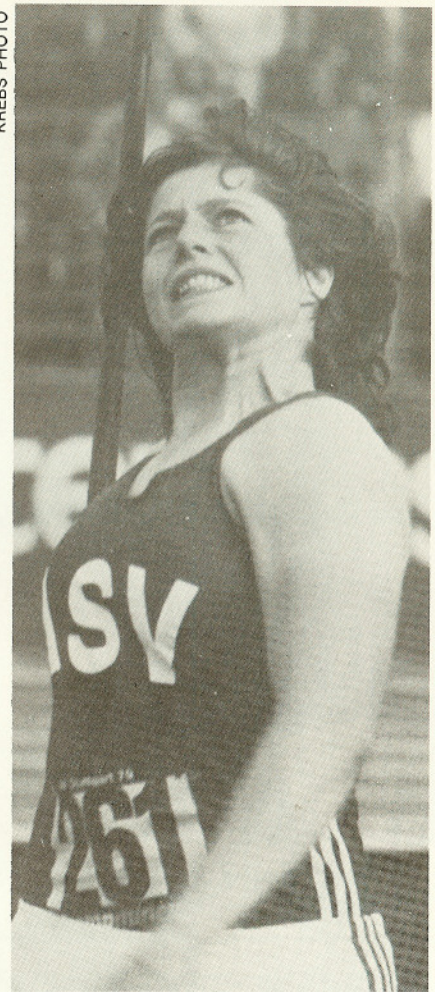
64.04/210'1	Ingrid Thysson (Ger)	80
63.96/209'10	Elvira Ozolina (SU)	73
63.92/209'8	Fausta Quintavalla (Ita)	80
63.86/209'6	Lyudmila Pasternakevitch (SU)	76
63.74/209'1	Svetlana Babitch (SU)	76
63.38/207'11	Sherry Calvert (USA)	78
63.28/207'7	Nadyezhda Yakubovitch (SU)	76
63.22/207'5	Tatyana Zhigalova (SU)	75
63.08/206'11	Felicia Kinder (Pol)	74
63.06/206'11	Sandra Leiskaine (SU)	80

62.96/206'7	Roswitha Potreck (DDR)	80
62.76/205'11	Bernadetta Blachacz (Pol)	79
62.70/205'8	Eva Gryziecka (Pol)	72
62.60/205'4	Lyutyan Mollova (Bul)	74
62.54/205'2	Zvetana Relinska (Bul)	79
62.40/204'9	Yelena Gortschakova (SU)	64
62.30/204'5	Daniela Jaworska (Pol)	73
62.24/204'2	Petra Rivers (Aus)	73
62.18/204'0	Natalia Sipova (SU)	80
62.12/203'10	Natasa Urbancic (Yug)	73

62.12/203'10	Ana Nunez (Cuba)	79
62.10/203'9	Petra Felka (DDR)	80
62.10/203'9	Angelika Fuchs (DDR)	80
62.04/203'6	Nina Marakina (SU)	71
62.04/203'6	Sandra Leiskaine (SU)	80
61.96/203'3	Heidi Repser (Ger)	77
61.84/202'11	Maria Gonzales (Cuba)	80
61.80/202'9	Eva Janko (Aut)	73

61.50/201'9	Andrea Findeis (DDR)	80
61.46/201'8	Maria Vago (Hun)	80

KREBS PHOTO



INGRID THYSSEN

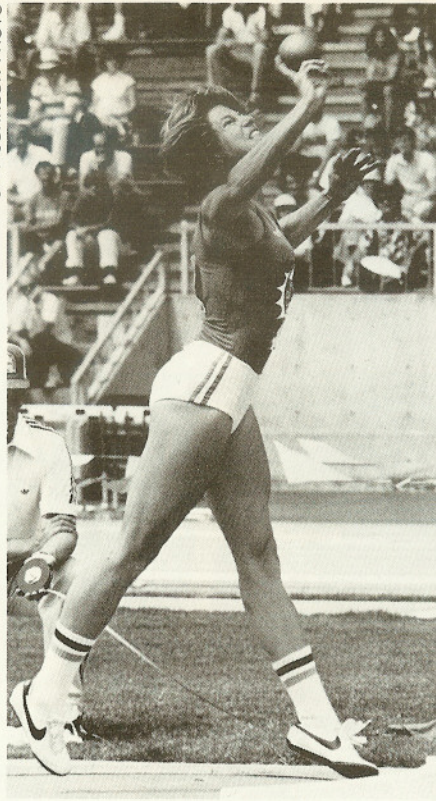


DANIELA JAWORSKA

PENTATHLON (M = Manual Timing)

5083	Nadyezhda Tkatchenko (SU)	80
4937	Olga Rukavishnikova (SU)	80
4875	Olga Kuragina (SU)	80
4834	Yekaterina Smirnova (SU)	79
4823	Eva Wilms (Ger)	77
4768	Diane Konihowski (Can)	78
4735	Natalia Alyoshina (SU)	80
4724	Christine Laser (DDR)	80
4718	Ramona Neubert (DDR)	80
4708	Jane Frederick (USA)	79
4707	Burglinde Pollak (DDR)	80
4686	Kristine Nitzsche (DDR)	79
4675M	Margit Papp (Hun)	78
4669	Nadyezhda Karyakina (SU)	79
4657	Sabine Everts (Ger)	80
4651M	Jodi Anderson (USA)	80
4652	Natalia Korotayeva (SU)	80
4650	Valentina Dimitrova (Bul)	80
4627	Sabine Mobius (DDR)	80
4592	Beatrix Phillip (Ger)	78
4591	Cornelia Sulek (Ger)	79
4590	Yekaterina Gordiyenko (SU)	78
4550	Petra Rampf (DDR)	77
4550	Ludmilla Palamarenko (SU)	80
4538	Sylvia Barlag (Ned)	80
4533	Zota Spasovkhodskaya (SU)	77
4531M	Natalya Prokopchenko (SU)	77
4522	Lyudmilla Popovskaya (SU)	77
4514	Ina Losch (Ger)	78
4513	Anke Vater (DDR)	80
4508	Christa Kohler (Ger)	77
4503	Gabriella Ionescu (Rum)	79
4481	Tatyana Schlapakova (SU)	79
4463	Florence Picaut (Fra)	80
4456M	Themis Zambrzycki (Bra)	79

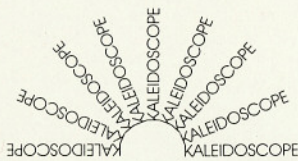
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JANE FREDERICK



HEIDE ROSENDAHL



and the javelin. And the 1500 and javelin are quite close. Biggest surprise was the 800 where the school record at North Carolina State would not even make the top 10 list at Redlands. Enrollment at NCS is 18,500. Enrollment at Redlands is 1700.

Ninty thousand spectators watched the eight-nation meet in Tokyo, a meet which saw the USA finish in seventh place behind USSR, Great Britain, Poland, Italy and West Germany while beating Finland and Japan . . . All-time "height differential" now belongs to the Soviet's Marina Sisoyeva who cleared 6'4 in spite of her 5'5 $\frac{3}{4}$ height . . . When Ilona Slu-pianek tossed the shot 73'6 $\frac{1}{4}$ at Moscow, it was the 10th time this year she exceeded 22 meters (72'7 $\frac{1}{4}$). Until this year there had been only five marks beyond 22m in all of history . . . Mary Decker had her annual surgery recently. This time it was Achilles problems . . . Faina Veleva is once again single and will revert to Faina Myelnik . . . Long jump record holder

Vilma Bardsuskien has retired . . . San Diego State's Liz Baker is a senior and 22 years old. Baker transferred to the California school this September from Indiana and has been the Aztec's number one runner in every meet. However, she still has three years of eligibility for she competed for a track club and not the university in Indiana . . . Names I Like for this month include Natalie Updegrove of Penn State, Leslie Duck from Washington State, Keekee Shegog from Memphis, Gayle Proudfoot from the Oregon TC, Stormy Cushing of Grant's Pass HS, Lydia Shook from Lamar and Gay Weaver from the Air Force Academy.

The event with the smallest number of entries at the Olympics was the 100m hurdles. Only 20 hurdlers appeared . . . Baton exchanges during the 4x100 at Moscow saw the eventual winning East German runners passing the baton BACKWARD on the first two exchanges — and they still set a world record and ran in the outside lane . . . Splits for the Russians and the DDR runners in the 4x400 at the OG were: USSR 50.2-51.5-49.7-48.8, DDR 50.6-50.5-51.0-48.3 . . . OG long jump produced 26 jumps over 22 feet including three jumps beyond 23 feet . . . Pentathlon champ Tatyana Tkachenko is 32 years old and at the Games set PR's in the 100H (13.29), high jump (6'0 $\frac{1}{2}$), long

jump (22'1), 800 (2:05.2) and was only $\frac{3}{4}$ " under her PR in the shot (55'3). Tkachenko stands 5'5 and weighs 157 . . . When Kazankina set her world record of 3:52.47, she passed the 800 mark in 2:04.5 which was 0.4 faster than the first two laps of the men's 1500 in the Olympic Games . . . Only one nation has taken part in every Olympic Games in modern times. Give up? It's Australia. Thanks Jimmy . . . The IAAF says it is no longer necessary for throwers to have a medical certificate in order to tape their wrists . . . And at the "set" command, BOTH hands must be on the ground and starting blocks are MANDATORY for events through 400m but are not allowed at longer distances.

Drake's Sandy DeNoon, out of school for seven years, has a 3.70 GPA, at age 25 she is a sophomore. Husband is Don De-Noon, Drake coach of a team consisting of three sophomores and five freshmen . . . California has lost Kerry Martinson for the year with a stress fracture . . . San Diego State also has a team of freshmen and sophomores . . . Russia ran its first-ever marathon in August of this year. Winner was Arina Zinuriva with a time of 2:42:46 which is their national record. Nineteen women took part in a race which saw both men and women taking part.

WTW

WORLD ALL TIME TOP 50 (continued)

4437	Emilia Kunova (Bul)	80
4430M	Margit Ader (DDR)	79
4427M	Irina Kolesnikova (SU)	79
4424	Silvia Oja (SU)	79
4419	Conceicao Geremias (Bra)	80
4412	Nina Golovina (SU)	80
4409	Natalia Gratscheva (SU)	80
4403	Iris Kunstner (Ger)	79
4393	Iraida Stepanova (SU)	79
4386	Maldorzata Guzowska (Pol)	80
4388	Galina Shulzhenko (SU)	78
4385	Susan Longden (GB)	77
4382	Krolkiewicz (Ger)	80
4375M	Vera Karpova (SU)	79
4352	Els Stolk (Ned)	79

WTW

All Time World Top 50 Analysis

Always of interest while reading an All-Time List is the question in one's mind as to which countries boast the most performers. One also wonders about seeming specialization by certain nations in certain events. The Soviets cop the title of the most listings with 108 in the track events and 108 in the field events for a total of 216. They are followed by East Germany with 86-62 for 148 positions. Far back in third position is the United States with 37 tracksters and 13 field eventers for 50 spots. The Soviets weak events are the 100 and 200 where they obtained only six positions out of the top 50. The DDR crew is weak in the 3000 (only two out of 50) and the 1500 (eight positions). Poland, with only 35 positions for all events, has nearly half of those spots in the hurdles (15). Cuba grabbed 10 spots and more than half were gained in the three weight events. Of the 50 positions for the USA, 21 of them are in the three short sprints and another 10 in the hurdles. Highest number of places scored by a nation was the 24 positions scored by Russia in the 3000 — that's practically half of the all-time world bests! They also scored 24 positions in the discus, 22 in the 1500 and 20 in the 800. Tops for East Germany was the 200 with 17 positions. The DDR also had 16 spots in the 400 and the shot. USSR, DDR and GFR were the only nations to place at least one individual in every event. The USA missed out in the discus and Poland was zipped in the 3000 and discus. Here's the chart:

CHART

	100	200	400	800	1500	3000	100H	400H	HJ	LJ	SP	DT	JT	Pent	Total
USSR	6	6	12	20	22	24	8	10	14	15	19	24	16	20	216
DDR	14	17	16	11	8	2	11	7	8	10	16	12	8	8	148
USA	10	6	5	1	2	3	5	5	4	2	1	0	3	3	50
GFR	3	3	2	1	1	3	3	3	5	4	1	1	4	7	41
BUL	2	1	0	6	4	1	2	4	1	2	6	4	4	2	39
POL	1	1	1	3	1	0	10	5	3	3	2	0	4	1	35
GB	5	3	3	1	2	5	3	2	1	4	0	1	1	1	32
RUM	0	0	1	4	5	2	1	2	4	3	2	2	1	1	28
AUS	1	4	0	1	0	0	2	2	1	0	0	2	0	0	15
CZE	1	1	1	1	0	0	0	0	3	2	2	2	0	0	13
CUBA	1	1	2	0	0	0	0	0	0	0	1	2	3	0	10
ITA	1	0	0	1	2	2	0	1	1	0	0	1	1	0	10
SWI	0	0	0	0	1	0	0	3	1	3	0	0	0	0	8

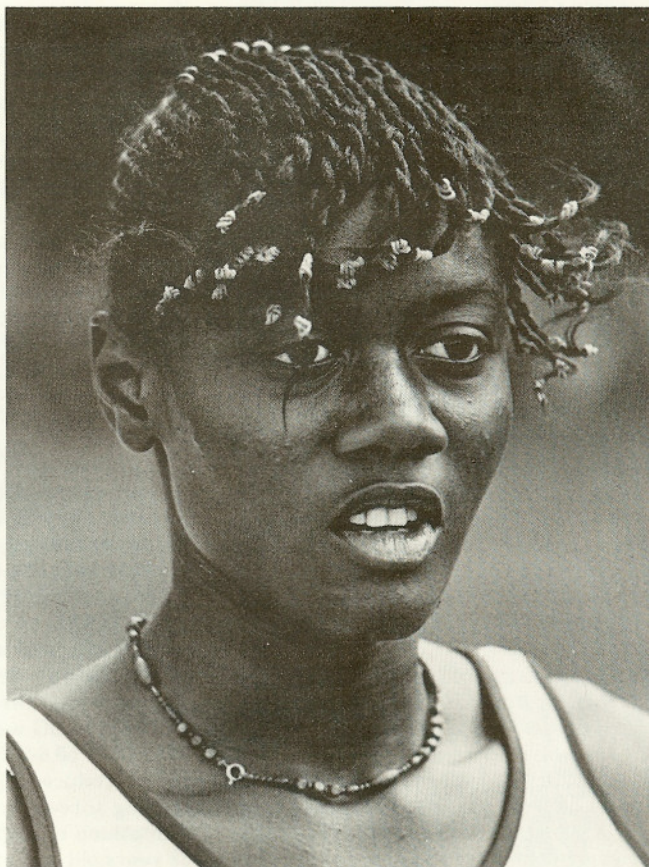
Also Hungary 7, Finland 6, Canada 6, Sweden 5, Jamaica 4, France 4, Republic of China 3, Austria 3, Norway 3, Netherlands 3, Belgium 3, Yugoslavia 2, South Africa 2, Brazil 2, Ireland 2, Spain 1, Barbados 1, Japan 1, North Korea 1, Denmark 1, Israel 1, Greece 1. Thirty-five nations had athletes on the All-Time World Top 50.

Who has the oldest mark remaining on the Top 50 List? That honor goes to Yolanda Balas of Rumania whose leap of 6'3¼ back in 1961 is still number 35. Three marks made in 1964 are still around. North Korea's questionable Shin Kim-Dan covered 800 meters in 1:58.0, but she has her detractors who question she could pass the present-day sex test. The other two 1964 performances still on the books were Mary Rand's (GB) 22'2¼ leap in the long jump and Yelena Gortschakova's toss of 204'9 (SU) in the javelin.

Of course the most marks on the List come from 1980 and they go down from there in a rather predictable manner. We must remember, however, that the 100 and 400 hurdles, the 1500 and 3000 weren't around until the 70's and the pentathlon as we now know it didn't begin until after the 1976 Olympics — and will be gone forever after 1980 to be replaced by the heptathlon. Here's the way the marks went by years:

Year	Track	Field	Total
1980	139	113	252
1979	70	82	132
1976	53	36	89
1978	57	26	83
1977	19	24	43
1972	18	10	28
1974	15	8	23
1973	8	7	15
1975	10	5	15
1968	7	3	10
1970	4	3	7
1971	2	5	7
1964	1	2	3
1961	0	1	1
1966	0	1	1
1969	0	1	1

JEFF JOHNSON PHOTO



MERLENE OTTEY

WTW

BEST OF THE WORLD ALL TIME BEST



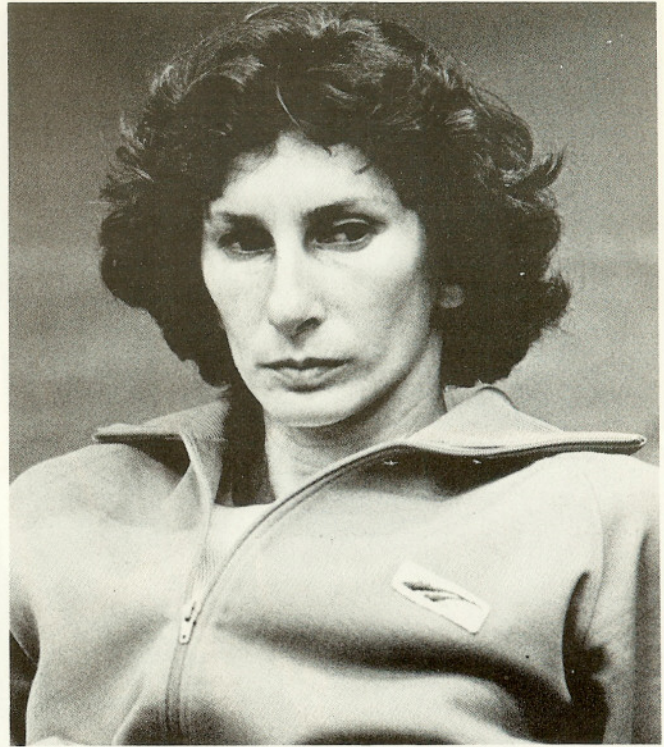
Oldest mark on the World All Time Top 50 list goes to Yolanda Balas, Rumania, with a jump of 6'3³/₄ set in 1961, and she jumped a modified scissors style.

BEST OF THE WORLD ALL TIME BEST

V. D. RAKT PHOTO



RALPH MERLINO PHOTO



Top performers are (left) Natalia Maracescu (Rumania) and Irena Szewinska (Poland) who are ranked in five events. Maracescu made the top 50 in the 1500 — Mile — 3000 — 5000 — 10000 and the versatile Szewinska in the 100 — 200 — 400 — 400H — LJ.

MIKE STREET PHOTO



GRETE WAITZ

JEFF JOHNSON PHOTO



JAN MERRILL — JULIE BROWN

SJOBORG PHOTO



LOA OLAFSSON

Appearing in four events was Grete Waitz (1500 — Mile — 3000 — Marathon), Jan Merrill (1500 — Mile — 3000 — 5000), Julie Brown (Mile — 3000 — 5000 — Marathon) and Loa Olafsson (Mile — 3000 — 5000 — 10000). Those making three lists were Gabriella Dorio (800 — 1500 — Mile), Paola Pigni (1500 — Mile — 3000), Mary Decker (1500 — Mile — 3000), Chi Cheng (100 — 200 — 100H), Marita Koch (100 — 200 — 400), Barbel Wockel (100 — 200 — 400), Mona-Lisa Purisianen (100 — 200 — 400) and Nadyezhda Olizaryenko (400 — 800 — 1500).

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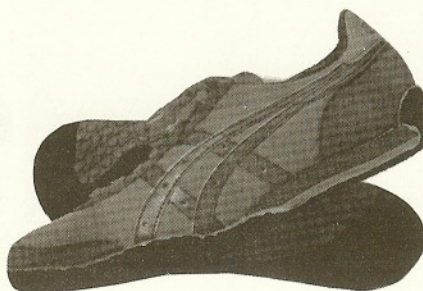
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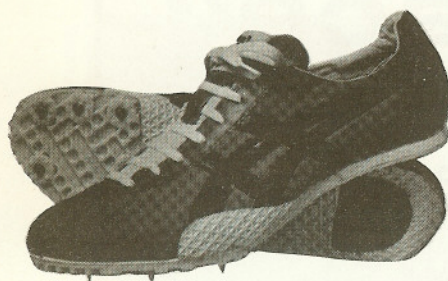
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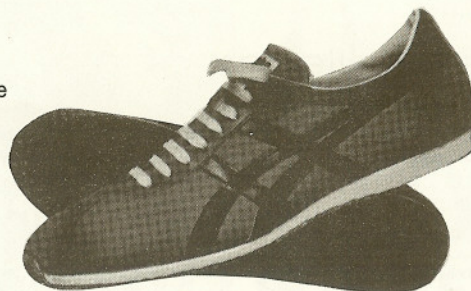
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