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The Country Boy--Jozef Pribilinec

By Ladislaw Krnac

(From the November 1989 issue of *International Race Walkers Club Newsletter)* Three months before the Olympic Games in Seoul, Jozef Pribilinec, one of the most successful walkers of the eighties, the only gold medal hope of Czechoslavak track and field, made a surprising move. He wanted, and got, the green light from the leadership of the Army sport center in Banska Bystrica to practice alone, without his long time coach Kuraj Bencik. After 11 years, the athlete usually knows better than anyone else what helps his body and mind and what does harm. He needs a consultant and not a teacher with a cane in his hand. At the age of 28, Pribilinec mastered the risk of his decision and made it his way, preferring more speed work than endurance. Today, he is the first Slovak Olympic champion in track and field, and the first walker to better a time of 1:20 for 20 km at the Olympics. Afterwards, he gave no interview without praising the role of his coach, but every time added--"I fought on my own. . ." Maurizio Damilano (Italy's 1980 Olympic gold medalist at 20 Km) told me, during the 1986 European Championships, that Pribilinec is the man with the most devastating kick of all contemporary walkers. The duel between Ronald Weigel and Pribilinec in Seoul proved that the successor to Frigerio, Dordoni, and Pamich was right.

Oly champ Pribilinec.

Pribilinec has one sister and four brothers, but only he chose sport as the mainstay of his life. As a boy, he loved to ski around his native village of Kopernice in the mountains of middle Slovakia. He came to walking by chance. With entries full for every event of a youth meet except for the 10 km walk, he learnt, in just one day the rules and technique, and won in about 62 minutes. Winning ever the motivation, Pribilinec, said goodbye to skiing. That happened back in 1977 when he was 17; 11 years later he was an Olympic champion.

What was the price? Earlier, knees not protesting, he managed 10,000 kilometers in a year, later reduced to around 7,500. He wrecked a pair of shoes after every 750-900 kilometers. During a race, he usually loses about three kilograms (6 1/2 pounds). He married in 1978 and his wife well understands solitude!

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Gary Morgan leads Dave McGovern and Jeff Salvage in National 2 Hour in Cambridge, Mass. on October 8. (Photo by Elliott Denman.

Hobbies sometimes tell much about the man, and what Pribilinec like most is hunting. In his fourth season, his trophies are interesting--a big brown bear and boar weighing, without entrails, about 170 kilograms. Tat is why he chose to fly home the day after his victory in Seoul.

The question after the Olympics was quite clear: should he call it a day or have one or two more seasons? As usual, it was a compromise. He has taken a year's rest and is starting training again in 1990. His plans? First of all to cure his knees, especially the right one, which he can feel even when driving his Lada. Then to spend more time with his family, including his two daughters. As I know him, only serious health problems can stop him going for the only title still missing--the world championship. That meet is next scheduled in Tokyo in 1991. After all, compared to Vladimir Golubnichiy, Pribilinec will still be a young walker when competing in Japan.

The Pribilinec record: In 1981, Pribilinec was ranked ninth in the world by the ORW, but he finished only 40th in the World Cup on an offday. The next year, he finished second in the European Championships in 1:25:55 and was ranked second in the world. He rose to number one ranking in 1983, after finishing second in the World Championships (1:20:59) and winning the World Cup (1:36:25). He did not compete in the 1984 Olympics (boycott) and was unranked that year. In 1985, he was DQ'd in the World Cup, but still ranked eighth in the world. A first in the 1986 European Championship (1:21:15) earned him another number one ranking in 1986. He missed much of 1987 with injury, including the World Cup race, but his second in the World Championship (1:21:07) earend him a number two ranking. He was ranked number one again in 1988 with his Olympic win in 1:19:57.

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RESULTS

Dartmouth Relays, Hanover, NH, Jan. 7: Women's 1 Mile--1. Teresa Vaill 6:50.4 2. Gretchen Eastler 7:46.1 3. Leslee Kerwin, Can. 7:59 4. Jenn Kelly 8:15.8 5. Andrea Grochowski 9:05.5 6. Karol Kay 9:28.4 **Men's 2 Mile**--1. Curtis Fisher 13:26.2 2. James Kilborn, Can. 14:20.4 3. John Tucker, Can. 14:37 4. Justin Kuo 18:18.5 **1 Mile, Cambridge, Mass., Dec. 16**--1. Jean Pierre Vernier, France 6:24.6 2. Mark Fenton 6:36.3 3. Justin Kuo 7:53.8 4. Bob Ullman 8:26.0 Women: 1. Christie Kuo 9:24.4 2. Carol Kay 10:06.3 **5 MIle, Needham, Mass., Jan. 1**--1. Phil McGaw 42:58 2. Bob Ullman 44:37 3. Justin Kuo 44:49 4. Carole-Terese Naser 59:58 5. Charles Mansbach 50:00 **New England Indoor 3 Km Championship, Brighton, Mass., Jan. 21**--1. Tim Barren, Can. 11:29.6 2. Dave McGovern 12:28.7 3. Mark Fenton 12:40.6 4. Wil Desrosiers 13:49.8 5. Mike Heitezman 14:02.6 6. TOm Knatt 14:20.7 (1st master) 7. Justin Kuo 14:42.6 Women: 1. Teresa Vaill 13:07.8 2. Lynn Weik 13:22.8 3. Maryanne Torrellas 13:37 4. Louise Aubin, Can. 13:43.3 5. Laura Rigutto, Can. 13:52.4 6. Sue Liers 14:34 7. Christie Izzo 15:01.2 8. Gretchen Eastler 15:09.5 9. Kaisa Ayaye 15:57.4 10. Carol-Terese Naser 16:01.9 11. Christie Kuo 17:21.4 12. Andrea Crochowski 18:14.8 **5 Mile, New York City, Jan. 7**--1. Mark Bagan 338:11 2. Gary Null 38:25 3. Nick Bdera 40:25 **5 Km, Buffalo, Dec. 2**--1. Bob Lubelski 27:17 (1st over 40) 2. Steve Podlas 29:21 (2nd over 40) Women: 1. Cheryl Rellinger 26:54 2. Karen Fina 30:45 **5 Km Delegates Race (with TAC Convention), Washington, DC, Nov. 30**--1. Tim Lewis 21:28 2. Dave Waddle 22:22 3. Ray Funkhouser 22:29 4. Dan Pierce 25:56 5. Dave Lawrence 26:14 6. Justin Kuo 26:59 7. Alvia Gaskill 28:35 (14 finishers) **20 Km, Washington, DC, Jan. 21**--1. Jim Lemmert 2:02:09 2. Mitchell Segel 2:06:29 **NTAC Jr. 31500 meter, Chapel Hill, NC, Jan. 13**--1. John Lauve 9:04.4 2. Sherrard Burton 9:10.9 Women: 1. Melissa Anderson 9:11.1 **NTAC Jr. 3 Km, Chapel Hill, Jan. 20**--1. Lauve 21:47.3 **3 Km, Raleigh, NC, Oct. 14**--1. John Byzek

16:55 2. Kathy DOnley 17:57 3. Linda McDougle 19:51 **Marathon, Greensboro, NC, Nov. 19**--1. Ray McKinnis 4:00:48 2. Alvia Gaskill 4:30:07 **24 Hours (track), Durham, NC, Oct. 20-21**--1. Ray McKinnis 100 miles in 24:19:46 (10:59:45 at 50) 2. Alvia Gaskill 73 miles **5 Km, Research Triangle Park, NC, Oct. 22**--1. Alvia Gaskill 30:10 **5 Km, Raleigh, NC, Oct. 21**--1. Andrew Brigs 30:28 2. Ken Long 30:34 **10 Miles, Raleigh, Oct. 14**--1. ALvia Gaskill 1:34:07 2. Kathy Donley 1:40:19 **10 Km, Carrboro, NC, Nov. 5**--1. Alvia Gaskill 56:08 2. Andrew Briggs 62:56 **10 Km, Raleigh, Nov. 12**--1. Ray McKinnis 50:43 2. Alvia Gaskill 57:50 **1 Hour (track), Raleigh, Dec. 16**--1. Ray McKinnis 11,761 meters 2. Alvia Gaskill 10,734 3. Kathy Donley 10,108 4. Andrew Briggs 10,019 5. Madho SIngh 9209 **5 Km, Boca Raton, Florida**--1. Lee Duffner (50-59) 26:43 2. Eric Fagerstrom 27:41 3. Terry Harville 27:54 4. Peter Black (40-49) 28:15 5. Fred Cichocki (40-49) 28:38 6. Bert Kunze (50-59) 29:41 Women: 1. Bonnie Stein 29:25 2. Sondra Vladem 30:00 3. Linda Stein 30:15 **5 Km, Coral Gables, Nov. 25**--1. John Fredericks 24:55 2. Pete Black 28:55 3. Tom Voegtli 29:27 4. Fred Cichocki 29:28 **5 Km, Weston, Florida, Dec. 16**--1. John Fredericks 24:26 2. Lee Duffner 27:22 3. Michael Comstock 27: 42 4. Peter Black 28:40 Women: 1. Sondra Vladem 29:50 2. Linda Aprilletti 30:03 3. Bonnie Stein 30:28 **10 Km, Florida, Dec. 2**--1. John Fredericks 50:02 2. Bill Halford 58:32 3. Fred Cichocki 59:15 **5 Km, same place**--1. Lee Duffner 26:12 2. Charles Poladian 30:24 Women: 1. Bonnie Stein 30:12 **5 Km, Orlando, Florida, Jan. 13**--1. Christine Ingram 29:49 2. Verna buchs 30:57 **5 Km, Planatation, Florida, Jan. 13**--1. John Fredericks (41) 24:32 2. Charlie Poladian (67) 29:58 3. Linda Stein (42) 30:00 4. Louise Tolson (39) 30:16 **5 Miles, Miami, Florida, Jan. 14**--1. John Fredericks 39:25 2. Peter Black (47) 46:19 3. Tom Voegtli (37) 47:05 4. Henry Clifford (41) 47:43 Women: 1. Linda Parilletti (28) 49:58 **Columbus Marathon, Nov. 12**--1. Dave Lawrence 4:15:58 **Jack Blackburn's 25th New Year's Eve 6 Mile, Ohio Veteran's Children Home, Xenia, Ohio, Dec. 31** (Through the year's, the race has been held in Columbus, Worthington, Rathbone, Van Wert, Continental, and Springfield, following Mr. Blackburn's wonderlust)--1. Tim Blackburn 55:13 2. Jack Blackburn 59:21 3. Nate Blackburn 61:41 4. Rich Meyers 70:14 5. Phil Lewis 76:52 6. Abe Blackburn 79:25 7. Judy Blackburn 79:26 (10 finishers, with no more Blackburns) **1 Mile, Milwaukee, Wis., Dec. 16**--1. Pete Williams 8:02.7 2. Don Mowles 8:13.7 Women: 1. ALi DeWitt 9:22.6 2. Ruth Leff 9:40.0 **2 Mile, same place**--1. Rob Cole 13:44.7 2. Jon Jorgenson 14:28.7 3. John Marter 14:50.8 4. Wil Prieschel 15:18.6 5. Brian Schultz 16:05.5 Women: 1. Gina Impagliazz 16:29.6 2. Michelle Marter-Rohl 16:46.3 3. Lori Seidel 17:29.4 **2 Mile, Milwaukee, Jan. 6**--1. Dave Doherty 14:05 2. Mike DeWitt 14:23 3. Brian Schultz 15:56 4. Pete Williams 16:43 5. Don Mowles 17:38 Women: 1. Ruth Leff 19:53 **Women's 1 Mile, same place**--1. Ali DeWitt 9:07 2. Jill Pfarr 9:24 **4 Mile, Denver, Thanksgiving Day**--1. Carl Schueler 30:03 2. Dan Peirce 32:28 3. Debby Van Orden 33:05 4. John Tarin 36:40 5. Nancy Hardesty 40:05 **5 Km, Denver, Dec. 9**--1. Dan Pierce 24:49 2. Greg McGuire (40) 27:09 3. John Tarin 27:54 4. Dan Dea 29:47 5. Bob Carlson (65) 31:40 (30 finishers) **2 Miles, Albuquerque, NM, Jan. 1**--1. Larry Martinez 16:47 2. Matraji Graham 17:57 3. Joe Sutton 18:30 4. Fred Moore 19:30 5. Jackie Kerby 19:32 6. Marcus McCarty 19:45 (41 finishers) **1 Mile, Albuquerque, Jan. 13**--1. Larry Martinez 7:53 2. Mataji Graham 8:24 3. Jackie Kerby 9:09 4. Jim Spiller 9:14 5. Fred Moore 9:18 **1 Hour walks, Los Angeles (composite results of races held Nov. 18, Dec. 9, and Dec. 17)**--1. Rene Haarpainter (27) 13,273 meters 2. Larry Walker (46) 13,248 3. Allen James (25) 13,227 4. Federico Valerio (28) 12, 166 5. Enrique Camarena (39) 11, 739 6. Dana Marsh (24) 11,697 7. John Kelly (60) 10,665 8. Wayne Wurzburger (47) 10,542 9. RIchard Oliver (53) 10,541 10. Carl Acosta (55) 10,473 11. Dave Snyder (45) 10,422 12. Jesus Orendain (47) 10,334 13. Carl Warrell (40) 10,116

14. Richard Nakawatase (39) 9,684 15. Bill Neded (50) 9,675 Women: 1. Victoria Herazo (30) 11,865 2. JoAnn Nedelco (46) 11,278 3. Paula Kash (40) 10,469 4. Kathy Mish (35) 10,453 5. Jennifer Curry (19) 9,671 6. Jane Janousek-Diaz (35) 9,299 **1 Hour, San Francisco, Dec. 10**--1. John Ratto (24) 7 mi 906 yds 2. Fred Dunn (60) 6 mi 964 3. Richard Quinn (26) 6 mi 880 (46:25 at 10 Km--DQ'd in error and pulled from the track) 4. Skip Bockoven (37) 6 mi 777 5. Ron Daniel (48) 6 mi 769 6. Bryan Winter (32) 6 mi 561 7. Bob Edwards (30) 6 mi 551 8. Laura Cribbins (32) 6 mi 284 9. Sandy Womack (41) 6 mi 183 10. TIm Quilantang (15) 6 mi 150 11. Donna GIlliland (32) 6 mi 53 (JoAnn Nedelco DQ'd) **5 Km, Salem, Oregon, Dec. 15**--1. Randy Jacobs 24:16 2. Philip Dunn 24:49 3. Andrew Herman 25:41 4. Marvin Dunn 27:18 5. Bob Brewer 29:11 6. John Hanan 29:41 **5 Km, Salem, Dec. 3**--1. Philip Dunn 23:57 2. Marvin Dunn 26:03 3. Joe Lucas 26:21 4. Andrew Herman 26:43 **Honolulu Marathon, Dec. 10**--1. Eugene Kitts (42) 3:52:31 2. Glenn Tachiyama (33) 3:54:45 3. Stan Chraminski (42) 4:14:36 4. Daniela Hairabedian (35) 4:18:52 5. Patricia Carroll (40) 4:20:09 (15 finishers) **10 Km, Tacoma, Wash., Nov. 18**--1. Blake Surina 53:22 2. Lew Jones 59:02 **5 Km, Kent, Wash., Dec. 16**--1. Herman Nelson 22:52 2. Glenn Tachiyama 23:02 3. John Kerfoot 24:10 4. Ric Holt 24:25 5. Stan Chraminski 25:48 6. Bob Novak 25:54 7. Ernie Smith 27:02 8. Daniela Hairabedian 27:10 9. Lew Jones 27:54 10. S. Frederickson 28:22 11. Ann McCulley 28:35 12. Bev LaVeck 29:28 (40 finishers) **15 Km, Seattle, Dec. 17**--1. Glenn Tachiyama 1:19:08 2. Stan Chraminski 1:20:44 3. Daniela Hairabedian 1:27:04 **10 Km, same place**--1. Herm Nelson 50:40 2. Ric Holt 51:20 **5 Km, same place**--1. Bob Novak 26:43 2. Lew Jones 27:58 **25 Km, Seattle, Jan. 5**--1. Glenn Tachiyama 2:11:13 2. Stan Chraminski 2:20:31 3. Daniela Hairabedian 2:26:37 4. Jim Bryan 2:35:24 5. Bob Novak 2:36:26

FOR THE DISCRIMINATING RACER (ALSO FOR WALKING BUMS)

Sat. Feb. 10	Women's 3 Km, Men's 5 Km, Toronto (G)
	30 Km, Portland, Oregon (D)
	4 Mile, Atlanta, 8 am (H)
Fri. Feb. 16	LA Times Indoor 1 Mile (Qual. times: 6:45 men, 7:36 women (B)
Sat. Feb. 17	5 Km, Atlanta, 9 am (H)
	15 Km, Long Branch, N.J., 11 am (L)
	15 Km, Tacoma, Wash., 9 am (C)
Sun. Feb. 18	5 and 10 Km, Los Angeles, 8:10 am (B)
	15 Km Denver, 9 am (F)
	Masters Indoor 2 Mile, Cincinnati, Ohio (O)
Fri. Feb. 23	**National TAC Indoor Championships, 5 Km men, 1500 women (or 3 Km women, I'm told that's what the entry blank says, but national schedule says 1500), New York (G)**
Sat. Feb. 24	Georgia 30 Km Championship, Atlanta, 8 am (H)
Feb. 17-25	Arizona Senior Olympics 1500 meters and 5 Km (E)
Sun. Feb. 25	Indoor 2 Mile, Air Force Academy (F)
Sat. Mar. 3	5 Mile, Stone Mountain, Georgia, 9 am (H)
Sun. Mar.4	5 Km, Salem, Oregon (D)
	Los Angeles Marathon (B)
	Ohio TAC Indoor 1500, Columbus (K)
Sat. Mar. 10	5 Km, Atlanta (H)
Sun. Mar. 11	Western Zonal 20 Km Championship, Long Beach, Cal. (B)

Sat. Mar. 17	5 Km, Albuquerque, NM (N
	20 Km, Tacoma, Wash. (C)
Sun. Mar. 18	National Invitational 20 km and Women's 10 Km, Washington, DC (I)
Sat. Mar. 31	**National TAC Masters Indoor 3 Km, Madison Wis. (J)**
	15 Km, Columbia, Missouri, 9 am (M)
	North American Masters 5 Km, Tampa, Florida, 10:30 am (P)
Sun. Apr. 1	7 Mile, Atlanta (H)
	5 Km, Redlands, Cal., 7:45 am (B)
	15 Km, Carmel, Cal. (Q)
Thur. Apr. 5	2.8 Mile, Seattle, 6 pm (C)
Sat. Apr. 7	TAC Women's 10 Km Zonal and South Section Championship, Atlanta, also 5 Km Open (H)
	New Mexico 10 Km Championships, Albuquerque (N)
	10 Km, Seattle (C)
	5 Km, Carmel, Cal. 9 am (Q)
Sun. Apr. 8	**National TAC 50 Km and Junior 20 Km, Atlanta (H)**
	Jack Mortland Invitation 20 Km Women's 10 Km, Columbus, Ohio (K)

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F--Bob Carlson, 2261 Glencoe St., Denver, CO 80207
G--Athletics Congress, P.O. Box 427, Crugers, NY 10521
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J--Peter Tegan, 1702 Lynndale, Madison, WI 53711
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O--Wilfred Shnier, Track Coach, U. of Cincinnati, Cincinnati, OH 45221
P--NaturalSport Race Walk, 33 E. Minor St., Emmaus, PA 18098
Q--Walk Walk Walk Club, P.O. Box 221172, Carmel, CA 93922

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FROM HEEL TO TOE

Northern California's JoAnn Nedelco and Southern Californiia's Larry Walker were named the outstanding master's racewalkers for 1989 at the annual TAC/USA Convention in Washington, DC in December. Vissha Sedlak and Max Green were very close seconds. In addition, one walker was recognized for significant performances in each of the five-year age categories. These recipients were: Women: 30-34--Kathy Kinch, Wyoming; 35-39 Martha Iverson, Colorado; 40-44 Viisha Sedlak, Colorado; 45-49 JoAnn Nedelco, California; 50-54 Jill Latham, California and Bev LaVeck, Washington; 55-59--Ruth Eberle, Missouri; 60-64 Collie Greene, California; 65-59 L. Hottensmith, FLorida; 70-74 Ernestine Yeomans, Ohio; 75-59 Anne Clarke, Illinois, 80-84 Marilla Salisbury, California. Men: 30-34 Rany Burden, California; 35-39 Bob Korn, Oregon; 40-44 Gary Null, New York; 45-49 Larry Walker, California; 50-54 Richard Oliver, California; 55-59 Max Green, Michigan; 60-64 Bob mimm, New Jersey, 65-59 George Heller, New Jersey, 70-74

Ciley Damon, Virginia; 75-59 Guilio De Petra, California; 80-84 Tony Perona, California. . .The Potomac Valley Walkers in cooperation with the Potomac Valley Athletics Council and TAC/USA will sponsor a TAC officials certification course on March 7, 1990 and March 14, 1990 in Washington, DC. This course is intended to re-certify existing officials and racewalk judges and train new persons wanting to be a TAC official and racewalk judge. The course will be conducted in two sessions. The first session will cover TAC officiating andcertification of TAC events. The second session will train individuals on racewalk judging and certification. Sessions must be taken concurrently for persons who are not TAC certified officials. For additional information and registration send SASE to Potomac Valley Walkers, 103 E. Monroe Ave., Alexandria, VA 22301-1917. . .Australian Denis Strangman is compiling an *Annotated Bibliography of Race Walking and Related Subjects, with Particular Reference to the Young Athlete*, which he hopes to have out soon. We will give you more details when available. In the meantime, his son Kieran is seeking a pen pal in the U.S. interested in walking. He is 12 years old and also interested in stamp collecting. He has a sister aged 14 and three brothers, 10, 8, and 3. The two oldst brothers also do racewalking. His address is: Kieran Strangman, 10 Carrodus Street, Fraser, A.C.T., 2615, Australia. . .Veteran subscriber Bob Mimm comments: "I agree with Leonard Jansen zero percent. His "hide your head in the sand" approach to the problems of race walking makes no sense. Ignore the problems and they will go away! There are problems, but they will only change with open discussion. Let's try to find out why one judge will give everyone in a race a call, while another judge will only give one or two calls **in the same race**! Perhaps, some day we will find an electronic method of judging walking, Until then, let's not hide the problems. Besides, the controversy makes the exciting ORW even more interesting.". . .On the same matter, Tom Knatt comments: "Why don't we require participants in races to (1) have a grease mark on the outside of each knee, applied before the race by judges, which will be straight when the patiicipant's knee is straight and (2) have light colored (white or yellow) soles for race shoes to facilitate judging for lifting? Soles could be spray painted if they didn't meet the standard. We are short changing ourselves in racewalking by not being able to control the judging adequately. Money is available to most other track and fireld events because thres is not as much controversy in the judging. If we insist on judging by eye until better methods become available we will get the short shrift until we improve our credibility." . . .And more: John Allen sends along a copy of a letter from Connor Johnson, an 80-year-old South African who was DQ'd for bent knees in the U.S. Nationals in San Diego last summer, along with others, and was rather shocked. He feels something should be done to amend the rules to help those, like himself, who cannot fully straightne their knees. John comments: "I concur. Discretion and individual observation. Now, these hard and fast abusers of authority should DQ chronic lifters who cheat 2 to 6 inches each stride. The 80-year-old bent knee gets **no** assist. Simple. 50-year-olds start the knee problem and are harrassed continuously. Johnston's letter to *National Masters News* was answered by some non-walk idiot. Tells you where we're at." Actually, the letter was answered by Iowa's Bob Jordan, who is a walker and who once edited the famous *12 Stone Harrier*, referenced from time-to-time in these pages. Jordan, who's walking career has been handicapped by weight, merely offers the opinion that rules are rules and should apply regardless of age. If one can't comply with the rules, one seeks another endeavor. I tend to agree with that. John Allen's long-time contention is that the other half of the rules (contact) is not being enforced fairly (and many agree). Therefore, he can't see why we penalize the older athlete who is doing the best he or she can to comply. . .Surprisingly, only one addition or correction to date to last month's

annual lists. The U.S. women's 10 Km list whould include Pauline Stickels at 58:40. . .In the *Official Guide and Souvenir Program to the XXIVth Olympiad*, walking is described thusly: "Athletes in this race walk very quickly but should not run. The forward foot must remain on the ground until the other moves to the front. The leg on the ground should be stretched for a moment. In following these rules, athletes have no choice but to walk like ducks." Alvia Gaskill suggests this must have been the NBC briefing book for the walks. . .Copies of the 1990 U. S. Athletics Calendar are now on sale through the Book Order Department of the Athletics Congress. The Calendar includes monthly date, site, and meet contact informatin for all top events (including walks); separate schedules for national championships, IAAF Permit Meets, and IAAF Grand Prix meets; qualifying standards for TAC senior and junior championships; and separate list of state high school championships. Oder for $8 from Book Order Department, The Athletics Congress, P.O. Box 120, Indianapolis, IN 46206. . .A comment from Ian Whatley, who is initiating Southern Region Race Walk rankings through the *Running Journal*. He is stipulating that allresults sent to him should include the following information: 1. T--Track; C--Certified course; or U--uncertified course. 2. J--Judged or U--Unjudged. He says: "This was a popular idea and might be something for you to consider. It gets rid of the criticism you have (unfairl) received for you editorial comments on 'dubious' times. It's quite fair to deote a race as (U,U), which is to say "uncertified and unjudged". It is an objective statement as opposed to you having to put yourself on the firing line with something like: 'Ed. There is some question about the exact length of this course.'" Excellent idea and I will try to do this to the extent I receive the information on results.

TWO STYLES OF RACE WALKING--WHICH IS BETTER?

by M. Kaimin, V. Tupa, A. Polozkov, A. Frukov, and N. Maikhailov

(From *Legkaya Atletika*, No. 12, 1979 and No. 1, 1980) Most coaches teach their students a straight-legged foot-plant. Some though they are in the minority, are confident that a bent-legged foot plant is more effective. In this style, the leg is straightened toward the moment of being vertical; thus, this method does not conflict with the international rules. However, the question arises: What distinguishes these methods from each other and which is the more effective? In order to answer these questions, the authors ran an experiment, which involved one of this articles co-authors--an international-class Master of Sport equally skilled in both methods. Tensodynamography, electromyography, and stroboscopic stereophotography were used in order to record the walkers' movements. The location of the sterocameras was such that one of them covered the left side of the body and the other (simultaneously) the right. The walkers' joints were marked with 21 neon bulbs, which flashed at a frequency of 96 times a second. The sportsmen were directed to walk at maximum speed with each method.

Our analysis of the resulting data showed that the second walking style--a bent-legged foot plant--was more effective and more economical that the first (straight-legged), with practically identical space-time characteristics. (That is, the length and time of the cycle, the tempo, the speed of cycle, and the support time. The walkers were taking about 1.2 meter strides at a rate of 210 steps per minute.)

This advantage is indicated primarily by the energy cost of the rotary movements of the 15 main segments of the race walker's body, converted to a 1-meter path. Both the total energy cost and the individual energy cost in each plane was less for the bent-legged (BL) foot plant than for the straight-legged (SL) plant. The largest differences relate to the amount of energy expended on lateral movements. In turn,its decrease in the BL style is achieved mainly as a result of leg movements. In the BL style, the sportsman places his feet closer to each other in the lateral direction: the distance between the centers of the ankle joints is 11.9 cm as opposed to 15 cm in the SL style. This decreases the lateral amplitude of leg movement during the period of the leg forward carry (airborne phase) and

decreases the oscillation of the pelvis and the body's center of mass in the same direction by 1.6 and 0.8 cm, respectively. In the sagittal plane (in the direction of walking), in which the main movements of the body segments take place, the main differences also relate to energy cost during leg movements. The primary energy cost (60 to 70 percent of the energy cost spent on rotation of the whole leg) in this place occurs as a result of contraction of hip-joint muscles. In the BL style, the energy cost in the hip joint is significantly less than in the SL style during the push-off phase, in which the flexor muscles are stretched, and the force moment is directed at thigh flexion and counteracts the walker's weight and inertial force. Finally, in the horizontal plane, the energy cost in the BL style is lower as a result of a lesser contribution of trunk and arm rotation, i.e., their movements are nearer to the sagittal plane than in the SL style.

The second position that characterizes the BL style positively is the amortization)shock absorption) of the athlete's body during the foot plant. In the SL style, amortization takes place during the rock-over of the foot from the heel onto the whole of the foot along with the yielding movement of the pelvis downward in the frontal plane. In the SL style, the rock-over from the heel is accomplished in the presence of an extension=type force moment in the ankle joint, i.e., the foot drops down onto the sole by means of eccentric contraction of the anterior tibialis muscles. In the BL style, in which the shine is placed at a greater angle relative to the ground, the foot drops onto the sole almost immediately. The force moment in the ankle joint is directed at flexion of the foot, i.e., the tension of the gastrocnemius muscles exceeds the tension of the anterior tibialis muscles. These facts are very interesting from the perspective of the problem of fatigue of the anterior tibialis muscles. It is know that these muscle are taxed)contracted) both during the period of support (during the rock-over of the foot) and during the period of the swing forward, in which the athlete dorsiflexes his foot. As a result, muscle fatigue of this unlucky muscle, have arisen in the search for the solution to this problem. One of these hypotheses consisted in reducing the workload on these muscles, changing the coordination of the walking so that the rules would not be broken.

In the BL style, the work of the anterior tibialis muscles is sharply reduced, and the amortization work of the rock-over from the heel onto the whole foot is practically nonexistent. This resulted in an increase in the amortizational yielding movement of the pelvis in the frontal plane. In the SL style, the right hip joint was 5.7 cm lower than the left (when the left foot was grounded). In the BL style, it was 8.3 cm lower, i.e., there was greater rotation of the pelvis in the frontal plane. The center of mass of the pelvis in the BL style increased its vertical oscillation insignificantly (by 0.3 cm); however, the compensatory movements of the upper part of the trunk led to a 0.9 cm decrease in its vertical oscillations. The above-mentioned pelvic rotations in the frontal plane not only did not increase the range of oscillation of the walker's overall center of mass, but even decreased it.

We have clarified the primary differences between the two walking styles, and we give more preference to the bent-legged style of foot placement. However, voluminous material was obtained during the course of the investigation--material that makes it possible to consider, in passing, certain questions that have much significance for understanding and improving race walking technique in general. First: which joint muscles bring about an increase in walking speed and what detail of techniques is the most "vulnerable"?

In a number of textbooks and manuals, the thigh is considered to be the prime moving component during the support period. A comparison of the angular speeds of the segments of the leg relative to the horizontal axis, the force moments in the joints, and the longitudinal component of the speed of the sportsman's overall center of mass indicated that this is not so.

In the first half of the deceleration phase, when the speed of the body's overall center of mass drops, and when the longitudinal component of the support reaction is directed counter to the walker's movement, the force moments in the knee and ankle joints are directed at clockwise rotation of the leg and unidirectional with the rotation speed of its segments. The magnitude of the moments reaches extreme values: Their coincidence with the vertical component of the support reaction indicates that they are directed at counteracting the peak of impact force that arises at the time of placing the heel on the ground. The active muscles, here, are the thigh extensors, whose tension (contraction) provides the indicated direction of the force moments.

Further, in the deceleration phase, a force moment, directed at thigh flexion, arises in the hip joint; in the knee joint--there is a force moment directed at extension (in the BL

style) and at holding the fully extended knee joint (in the SL style). It is evident that this phase coincides with the regular spark of activity of the biarticular (two-joint) rectus muscle of the thigh--the thigh flexor and the extensor of the knee joint. In the push-off phase, the speed of the body's overall center of mass begins to increase and the longitudinal component of the support reaction is directed laterally to the sportsman's movement. At this same time, the flexor force moment in the knee joint increases, and the force moment in the ankle joint, directed at increasing the angle therein, increases.

These factors indicated that the thigh (Knee joint) and the hip joint muscles do not create the speed increase in the body's overall center of mass: The knee joint is straightened (extended) nonmaximally in race walking, and its muscle work at maintaining this position. The main segment that is directly related to increasing a walker's speed is the foot; and the main joint in the ankle joint, with its flexors--the gastrocnemius and soleus muscles. There is forced knee joint extension, from inertia and body weight forces, but the muscles of the hip joint are stretched and oppose these external forces. The work of the thigh (hip joint) extensors and knee flexors in the first half of the deceleration phase is capable only of diminishing the magnitude of braking, e.e., of reducing the walker's loss os speed.

Second: the question of the "weakest" link in race walking technique. In our experiment, we used weights on the distal part of the lower leg (1.5 km) and on the proximal parts of the lower leg (2.5 kg) when planting the leg in the bent position.

The most "vulnerable is the flexion in the hip joint in the take-off phase during the forward carry of the leg (flexor moment). When walking with weights on the distal parts of the lower leg, the force moment in the knee joint did not change; but in the hip (joint) it almost doubled. In spite of this, the increase in the flexor moment was clearly inadequate in order to provide the previous time for the forward carry of the let. Walking tempo and linear speed dropped to 199 strides/min. and 3.72 m/sec (from about 4.2).

When walking with weights on the proximal parts of the lower leg, force moments increased both in the knee joints and hip joints; and the tempo and speed dropped even more--to 186 strides/min, and 3.43 m/sec. The coordination of walking was not changed when using weights, and the drop in tempo and speed was determined by the character of the force moments in the joints. An exception was the fact that extensor force moments, characteristic of the SL style, appeared in the phase of the rock-over of the foot. COnsequently, there arose a need for an additional amortizational mechanism and for increased tension in the anterior tibialis muscles as a result of the large inertial forces of the lower leg at the time of placing the heel on the ground. Naturally, the use of weights in the SL style increases the work and fatigue of these muscles even more. In summary, the use of weights accomplishes the task of diminishing the fatigue of the anterior tibialis muscles: it is necessary to increase their workload during the process of training so as to increase their functional capacities.

Conclusions:

1. Race walking with a bent-legged foot plant is more energy efficient than walking with a straight-legged foot plant
2. The prime moving link in race walking is the foot.
3. The flexors of the hip joint are the most vulnerable muscle group. Weights on the distal parts of the lower leg can be utilized to provide a local increase in their functional capacities.
4. The problem of fatigue of the anterior tibialis muscles can be solved in two ways: either decrease their tension during walking (by using bent-legged foot plant) or increase their functional capacities by walking with weights on the lower legs.

On the next page: Elliott Denman's gallery of great guys of the sport. Elliott's captions are:

Top: A great American walker still officiating in his favorite sport. . .the one, the only, Paul Schell.

Bottom: Two of the all-time greats of American walking. Fred Brown (left), who has been "Mr. Walking" in the New England states for half a century, and Bruce MacDonald, of Port Washington, N.Y., American walking's only 5-time Olympian (1956, 1960, and 1964 as competitor; 1968 and 1972 as manager). Where would we be without these guys! And, Fred is still competing. As we head into the '90s, a salute is definitely in order.