Penn Relay Titles Go To Shorey and Moore

Philadelphia, April 26 (as reported by Al Heppner with additions by your editor) Ben Shorey made quite a statement in his first major race as an open athlete. The University of Wisconsin-Parkside sophomore upset pre-race favorite Sean Albert to win the Penn Relays 10 km walk quite handily. Shorey, the US 10 km Junior record holder scored another personal best with a time of 42:10.97. Jolene Moore completed a sweep for Parkside by winning the women's 5 km race in 23:44. For Shorey, it was not a first Penn Relays victory. Last year, he won the Junior 10 in 43:20.60

Shorey and Albert quickly made it a two person race by walking a quick first lap in 1:35. Albert was content to let Shorey lead for the first half of the race, before attempting a breakaway early in the second half. Shorey refused to let the veteran get away. After going through 8 km together in 33:58, Shorey dropped a 1:36 lap to gap Albert (1:42). From then on, Shorey steadily pulled away. Albert was second in 42:29.89. Puerto Rico's Enrique Uozrit was third in 42:57.97. Defending titlist Jim Iley had to settle for fourth this year and last year's runnerup, Matt DeWitt, could manage only tenth.

The women's race was a three person battle between Moore, UW-Parkside sophomore Anne Favolise, and Susan Armenta of New Balance. Moore and Favolise went through the first kilometer in 4:47 with Armenta just two seconds back. The trio were still together at 3 km, with Moore leading the way in 14:30. Favolise was just one-second back, with Armenta (14:32) on her heels.

At 3,400 meters, Moore made her move, walking a 1:53 lap, and only Favolise tagged along. Armenta had slowed to a 2:00 lap. On the successive lap, Moore held pace (1:54) and that was enough to gap Favolise (1:58).

Moore, who competes for the Parkside Athletic Club, is a relative newcomer to racewalking, but is climbing the ranks quickly under the tutelage of UW-Parkside Coach Mike De Witt. She was runnerup to Amber Antonia last year. Antonia did not compete today.

In the junior boy's race, rising Mansfield University Star Adam Staier took the gold 46:30.59, with Erica Adams winning the junior girls race in 25:39.80. As the top junior performer, Adams won a free trip to train at the ARCO Olympic Training Center, according to race director Jeff Salvage. Master's winners were Keith Luoma, who defended his title and Maryanne Torrellas.

This year's Penn Relays racewalk field was one of the largest ever. "We would have had the largest ever, if it weren't for a few late scratches. However, we appreciated that those athletes let us know in advance. I'd also like to take personal credit for holding off the rain. That marks the twelfth consecutive year of perfect weather," Salvage said. By Salvage's accounts, as soon as the women finished, it started pouring. The results follow.


Other Results:


Metropolitan 10K, New York City, April 13:


Boyles Repeats At Mortland 20

Yellow Springs, Ohio, April 13--For the second year in a row, Rio Grande University junior Matt Boyles walked a brilliant solo race to capture the 20 Km title at the 16th Annual Jack Mortland Racewalks, named for some obscure racewalking personality from days of yore. In the process, Boyles got a qualifying time for the 2004 U.S. Olympic Trials as he finished in 1:43:38. Unlike last year's bone-chilling rain, today's weather was near-perfect quite cool to start, but warming to ideal temperature on a sunny day.

Like last year, when Boyles surprised the racewalking world with by debuting at 20 Km in 1:30:27, he walked negative splits. After reaching 10 Km in 46:25, he raced home in 45:09 on the 2 Km out-and-back course. ("My shins got sore at the beginning, but after 4 km stopped bothering me,") he said.

There was also an Olympic qualifier in the women's race as 29-year-old Bobbi Jo Chapman came home in 1:44:20, 1:38 under her best of last year when she ranked seventh in the U.S.


Swing Those Hips To and Fro As A-Racin' We Shall Go

Fri. May 2
Southeastern Masters 5 Km, Raleigh, N.C., 6:30 (L)

Sat. May 3
5 and 10 Km, Broomfield, Col., 9 am (H)
Youth 1 Mile, Edinburg, Tex. (BB)
5 Km, Sequel, Cal. (CC)

Sun. May 4
3 Km, Alexandra, Vir., 8:30 am (O)
5 Km, Denver, 8 am (H)
5 Km, Kentfield, Cal., 8 am (P)
Southeastern Masters 10 and 20 Km, Raleigh, N.C., 7 am (L)
5, 10, and 20 Km, Vancouver, B.C. (C)

Sat. May 10
Youth 1 Mile, McAllen, Tex. (BB)
5 and 10 Km, Royal Oak, MI (W)
2.8 Miles, Seattle, 9 am (C)

Sun. May 11
15 Km, Middleton, Ohio (M)
5 Km, Cambridge, Mass., 9:30 am (AA)
5 Km, Houston (Y)
10 Km, Ft. Collins, Col., 8 am (H)

Sat. May 17
5 Km, Denver, 8 am (H)
5 and 10 Km, Littleton, Col., 9 am (H)
Youth 1 Mile, Mission, Tex. (BB)
North Region 10 Km (Non) and Open 20 Km (8 am), Kenosha, Wis. (T)
5 Km, Clermont, Florida (Q)

Sun. May 18
West Region 15 Km, Riverside, Cal. (Y)
Metropolitan 20 Km, New York City 8:30 am (G)

Fri. May 23
5 Km, New Orleans (www.runnotc.org/races/2003/greekfest)

Sat. May 24
Track 10 and 20 Km, Colorado (Z)

Sun. May 25
Alongi 5 Km Classic, Kentfield, Cal. (P)
Youth 1 Mile and USAATF Youth Road Walk Nationals, Pharr, Tex. (BB)
USAATF Junior 20 Km, Hauppauge, N.Y. (K)
Art Kesz 5, 10, and 20 Km, Toronto, 11 am (F)

Mon. May 26–10 Km, Boulder, Col., 8 am (H)
FROM HEEL TO TOE

Want to be a TV star? Dave McGovern reports that Turner Broadcasting wants to shoot a piece on racewalking in May and have convinced him that this won't be another one of those "look-how-gooey-this-sport-is" sketches. He has suggested that they plan on filming the Greek Festival 5 K in New Orleans on Friday evening, May 23. The race is at 7:20 pm and he feels it would help to have as many racewalkers there as possible. There is prize money for the race and, I have heard, New Orleans is an exciting place to visit, though I think the breast flashing for beads stops with the end of Mardi Gras. Anyway, if you feel the yen to race in this one and perhaps get on national TV contact Dave at RayZwoocker@iol.com or visit his World Class Racewalking web site at www.racewalking.org. Hey, you might want to visit his exciting web site regardless of your interest in a race in New Orleans. ...The other Vaill. Teresa Vaill's twin, Lisa, who was with Teresa on the 1987 US World Cup team, but later turned to running continues to have marathon success as a high school walker in Maine a few years ago...Youth Honor Roll. Jeff Salvage has announced the 2002 Youth Honor Roll for Racewalking. And here it is: Bantam—Ivais Villa, Ariel Callis, Damien Smith, Trevor Hanson, Ian Geer, and Andrew Adams. Midget—Alexandra Bishop, Susan Muraida, Allison Neechipski, Kyle Regul, Eric Lawson, and Ricardo Vergara. Youth—Tina Peters (congratulations to our Ohio representative), Dana Veed, Audra Curtis, Jose Moncada, Paul Regul, and Rand Adams. Intermediate—Erica Adams, Maria Michit, Shannon Gillespie, Chris Dzaj, Terran Suehowski, and Zachary Pollinger. Young Women/Men—Elizabeth Paxton, Jasmine Brooks, Lauren Oliver, Adam Staier, Joseph Trapani, and Mark Dennett. ...World Youth Championships. Some of the above will probably be in Sherbrooke, Canada in July for the IAAF World Youth Championships. The women will race at 5 Km on Thursday, July 10 at 8:10 pm and the men at 10 Km on Sunday, July 13 at 9:30 am. Pregnancy report. Jill Cobb is not racing this year as she awaits the birth of a son in early July. Gosh, we never knew we were having sons until they popped into the world. When our second grandchild (Christopher Scott Mortland) was on the way a couple of years ago (now nearing 17 months of age) we were seeing pictures of him months before he was born. The marvels of modern technology.

Information for Coaches About Racewalking

by Jim Hanley

(Jim Hanley has a lifetime interest in our sport as a former national champion, a coach, and a long-time official. He may be surprised to see this article since it has been some time since he sent it to me. But, it is timely, in that we seem to be in a crisis situation in regard to depth in our national program—see many discussions in these pages and on the racewalking list on the internet in recent years. Something that always comes up—as it should—is to encourage racewalking in high school and college T&F programs. That requires convincing coaches that there might be some worth in doing so. In this article, Jim introduces some good arguments for giving greater attention to our sport. Although, as you will see, I don’t agree with all that he says, his comments deserve an audience and few could be used in trying to persuade others to give racewalking a boost.)

On every team are athletes who work hard, but don’t have a lot of god-given talent. Because these kids are constantly being beaten in races by the same superior runners, coaches fear that they may lose interest and quit the sport entirely. These types of kids are perfect candidates for racewalking because, in no other event is hard-work rewarded with such great increases in performance. Why not steer some of these kids into an event in which they can experience some success? (Ed. I can’t agree entirely with this if the goal is to develop some elite athletes and not just a greater number of racewalkers. We want to attract talented athletes. On the other hand, Ron Laird probably matched this profile quite closely when he took up racewalking and he wound up on four Olympic teams and with two World Cup bronze medals, not to mention his plethora of national titles. In any case, the gist of Jim’s arguments hold up whether we are looking for elite athletes or a great number of athletes.)

Myths and facts about racewalking.

Racewalking hurts an athlete’s form for running, hurdling, etc. Not so! If a hurdler or a sprinter was trying to racewalk in a hurdle race, this might be so. But these are totally different activities. Just as a breast stroker in swimming has no desire to swim the crawl, walkers have no desire to run in their races. And runners have no desire to racewalk during their races. Years ago, coaches commonly said that swimming hurt your ability to run track. That was before UCLA’s Bob Day, originally a swimmer, ran a four-minute mile. Many other swimmers have had great success in track since then. By the way, hurdler Bruce MacDonald tried out for track and made three Olympic teams as a 50 Km walker. (Ed. Actually, two at 50 and one at 20.) In the good old days, we were also told not to drink water in races or lift weights—both absolutely wrong according to current medical wisdom. German weightlifter Bernd Kannenberg switched sports and won an Olympic gold medal in the 1972 50 Km walk at a time when some coaches were telling him that weightlifting would hurt his walking form because walkers were supposed to be thin. Fact. Because walkers pull their arms vigorously to move faster, the increased arm strength will help runners ‘kick’ at the end of a race or crest the top of a hill in cross country.

I don’t want my athletes getting injured in racewalking events. Racewalking is relatively injury free. Except for the muscle soreness when one first tries it, there is little chance of getting hurt in this event. There is less pounding on the ground than with running and, therefore, less stress on the skeletal system. Fact. An Illinois coach was losing sprinters every season due to Achilles’ tendon problems. Desperate for edhp, he tried having his best sprinters racewalk once a week. The result is that he has never had another Achilles’ tendon problem with any of his runners!
Likewise, racewalking makes one's ankles tremendously strong. Runners who racewalk rarely have sprained or twisted ankles.

I don't want to lose my athlete to racewalking. This is a possibility since racewalking is not an official high school or NCAA event, but it is highly unlikely. Kids prefer school competition with their friends. Also, it takes three years of training to get good at racewalking. (Ed. This may be a good rule of thumb, but I can cite numerous exceptions.) By that time, the potential racewalker will have graduated anyway. I suggest that he or she continues to race and train as always. He or she should just do racewalking workouts two times a week. The running will help the full general fitness base and endurance and the athlete will improve tremendously as a racewalker with just two days of specialized training a week. I'd encourage the walker to enter in USATF racewalking competitions once a month. Better yet, provide exhibition walks at some of your track meets.

There is no future in racewalking. Are you kidding? There are three racewalks on the Olympic program. That means that three gold medals are available to one in, for example, the pole vault. (Ed. Whoops. There Jim has made a little mistake. One of the three gold medals in racewalking will go to a woman. So there are not three golds available to any single athlete. And, there is also a woman's pole vault, so, by his reasoning, there are two golds available there.) It is part of all major track meets including the Goodwill Games, dual meets between various countries, and the USA Championships, including Junior Olympics and the Age Group Nationals. Racewalkers get free trips to meets all over the world. Because there are not as many walkers in the U.S. compared to runners, the easiest way to get to the Olympics might be to racewalk. Fact: Racewalking is extremely popular in other countries. Racewalkers in Canada and Mexico have been featured in McDonald's and Coca Cola commercials and TV in most countries nearly always shows the long Olympics in their entirety. (Racewalkers have been featured in commercials in the U.S., too, but usually as some sort of comic relief)

Racewalking is a goofy event. Not so. Walking is a practical activity that nearly 5 billion people do every day. How useful is it to throw a 16-pound ball, hop three times for distance, or jump over a high crossbar in your everyday life? Let's face it, all track and field events are goofy. (Ed. Well, not all. Running fast and running far can be pretty basic skills in survival and an integral part of many other sports.)

Racewalking is just too complicated to teach and to judge. Nope! There are basically just two rules. Walkers must have contact with the ground at all times, as judged by the unaired eye, and they must straighten their leg as the front heel strikes the ground. Fact. Young kids make great racewalk judges, as do officials specializing in technical field events (such as discus, shot, pole vault) where observation is the key to good judging. There are many USATF track judges out there who can help you learn to coach and/or judge the sport in a very short time.

Racewalking looks stupid. It sure does. But when it is done properly, it is a beautiful, smooth, and efficient mode of locomotion. Fact. When movies of people walking normally are speeded up, it looks much like racewalking.

African-Americans do not make good racewalkers. Several years ago we were told the truth that black athletes do not make good distance runners. Have you been watching track meets lately? African runners are totally dominating the distance events and will for a long time. Likewise, there are several racewalkers in Kenya alone that are better than the best American. (Ed. ??) Fact. Over the years, the U.S. has had several fabulous African-American racewalkers, such as Alan Price and Ray Parker, whose exploits have been virtually ignored by the media. (But, of course, racewalking has been virtually ignored by the media.) Racewalking takes a lot of time. True. It sure does. To get really good at any track event will require a dedication and desire to succeed far above the ordinary. Again, it takes three years to get good in the sport. Fact. Distance runners reach their peak in their late 20s and some walkers have had PRs into their 30s and even 40s. This can be an injury-free sport of a lifetime.

My athletes get beaten badly by women and old men in an all-comers race. They can't be very good. Yes they can. In racewalking, people improve more than in an other event. Thirty second PRs a week are not uncommon for new racewalkers. The result is that people who do this sport a long time are very fast compared to newcomers. New walkers should not worry about winning races against 'old men'. Instead, they should concentrate on having good form and charting their improvement from race to race. If you stick with the sport, you will be amazed at how much you improve and how fast you become.

I don't know anything about racewalking and there is no place to get help. There are many places to get help. Your local USA T&F Association can put you in touch with your local Racewalk Chairman and/or various walking clubs in your area. Many books and videos are available, but it is a good idea to first check with the above sources for good ones because some are pretty bad. Remember, USATF is made up of volunteers whose sole motivation is a love of their sport. These people will help you if you ask.

American racewalkers really stink compared to those in other countries. While this is an exaggeration, let's put our relatively poor showing in perspective. Imagine what would happen if every high school and college in America dropped their track and field program. How many Olympic medals do you think the USA would then win? This is practically the situation facing racewalking. In most cases, the high school and college governing bodies have chosen to ignore this fine sport and over-develop a few events. You as a coach can perpetuate this dismal situation by going along with the myths above, or you can help develop racewalkers. Please be part of the solution and not part of the problem.

* * *

A few months, we published a profile of 1964 Olympic 20 Km gold medalist Ken Matthews as it appeared in the book Training For Racewalking by Frank McGuire, published in 1962. Among the many other athletes profiled in that book is one still very visible on the the racewalking scene. 1960 U.S. Olympian Bob Minn, now 78 years old, is still quite prominent in masters races throughout the world. I have no idea how many worlds and masters titles he has won, or age-group records he has set as he advanced through the masters categories, but it is sure a lot. So, I thought it would be interesting to reflect on how he trained more than 40 years ago.

Robert F. Minn

Olympic representative, Rome 1960. Levittown, Pa., USA


Pre-training warmup: Jogging, stretching exercises, moderately slow walking with short sprints.

Pre-race warmup: As above, but with less slow walking and more sprints.

Training for 3000 meters: "When concentrating on a distance of approximately 3000 meters, I like to do repetition work at a very fast pace. Perhaps 440s fast and slow or a combination of 220s, 440s, and 880s. I do not follow any rigid training scheme."
Training for 10,000 meters: As above with longer distance and added road work from 7 to 10
miles. Some 3 x 2 miles or 5 miles training early with 10 miles strolls on Sunday and increases
distances each Sunday until distances are up to 100 miles. Fast work during the week, two
workouts of from 5 to 20 miles. If time allows, one day on track for 10,000 meters.

Has no personal coach and plays no other sport. Has done weight training to advantage, but can't
find time now. Takes multiple vitamin tablets. Pre-race meal: Oatmeal, tea, perhaps toast and
juice. During 50 Km: Drinks soda—perhaps with honey. Nothing to eat.

(Following the Bob Mimm entry in the book is one for John E. Mortland, also USA. I'm not sure
how I got in the book, I guess because I represented the U.S. in the US-USSR dual meet in 1961,
because it was still quite early in my racewalking experience and I was just learning what was
doing. Probably won't embarrass myself by publishing that entry anytime soon, but there are
others I might pick on at future times.)

LOOKING BACK

40 Years Ago (From the April 1963 Race Walker, published by Chris McCarthy)—Canada's Alex
Oakley won the Pan American Games 20 Km in Sao Paulo, Brazil with a rather pedestrian
1:42:43, thanks largely to temperatures in the 80s and 3000-ft altitude. Nick Marone completed a
Mexicans weren't to be heard from for another 5 years... The National 20 Km in Los Angeles
went to Mick Brodie in 2:49:34, better than 5 minutes ahead of Ron Daniel, with Bob Bowman
another minute back. Just 18 days before his Sao Paulo demise, Zinn had done 12 miles in
Philadelphia in 1:32:05 with Akos Szekely just over a minute back. ... Apparently Chris had a very
late April issue, because it carried the results of the National 10 Km held on Chicago's Stagg Field
track on May 25. Zinn won in 46:15. Laird edged out the Ohio TC duo of Blackburn and
Mortland for second. Those two had 48:10 and 48:07. Laird's finish gave the New York AC the

25 Years Ago (From the April 1978 ORW)—Augie Hirt missed Shaul Ladany's meet record by
less than a minute in winning the National 75 Km in 7:05:46. Martin Kraft had 7:10:32, with
Ladany a distant third on this day. The master's title went to Sal Corallo in 8:01:52, sixth overall.
Kohn won the National 35 Km in Des Moines, Iowa with a 3:05:42. In Mexico City, Raúl
Gonzales went nearly 7 minutes under Bernd Kannenberg's world record for 50 Km with a
3:45:52 on the track... On the local scene, Chris Knotts showed his potential with a 47:17 for 6
miles. Steve Pecinovsky topped him, however, with a 47:03, but did not satisfy the hard-nosed
director, Dr. John Blackburn. Jack Blackburn won the old man's battle over Mortland in 50:08.

20 Years Ago (From the April 1983 ORW)—Jim Heiring caught Ray Sharp with just 600 meters
to go, and then hung on to win the National 25 Km in Washington, D.C.. Heiring's 1:50:38 beat
Ray by just 1 second. Dan O'Connor had 1:53:24 and Tim Lewis 1:55:11. Steve Pecinovsky,
Sam Shick, Tom Edwards, and Mike Morris also finished under 2 hours... At the same site, Susan
Liars-Westfield won the Women's National 20 Km in 1:50:28, with Teresa Vaill recording the
same time in second. Chris Anderson and Carol Brown were far behind. Sharp came back in 2
weeks to win the National 35 Km in Cleveland in 2:55:00, with Mike Morris 1:40 back. Wayne
Glusker had 2:57:38 in third. Jack Blackburn's 3:33:58 won the Master's title when his obliging
teammate, Jack Mortland, dropped out shortly after passing 30 Km in under 2:59. Dan O'Connor
travelled to Tokyo and came second in a 20 Km with a 1:27:37.

15 Years Ago (From the April 1988 ORW)—The Olympic 50 Km Trials in Indianapolis saw Carl
Scheuler take command from the start and move to an easy win in a impressive 3:57:48. Marco
Evonulik and a surprising Andy Kaestner captured the other two Olympic berths in 4:03:33 and
Scheuler went through 25 Km in 1:56:53, but without competition couldn't maintain that pace.
There were 16 finishers and 2 DQ from 22 starters... Gary Morgan was an impressive winner at
the Jack Mortland 20 Km in Columbus, covering the distance in 1:27:30. Steve Pecinovsky
was second in 1:30:54 and Dave McGovern third in 1:32:15. Of 34 starters, 31 finished. The women's
10 Km went to Maryanne Torrellas in 48:03 with Debby Lawrence 20 seconds back. Canada's
Pascale Grand was right on Debby's heels in 48:25... In the National Invitational 20 Km in
Washington, D.C., Paul Schwebersdoug prevailed in 1:26:39. Richard Quinn, Marc Bagan,
and Curtis Fisher followed in 1:31:07, 1:31:35, and 1:31:37. The women's 10 Km went to Teresa
Vaill in 47:11, 3 minutes ahead of Mary Howell.

10 Years Ago—(From the April 1993 ORW)—The World Cup was held in Monterrey, Mexico, and
the home team ignored stifling heat that brought many elite walkers to their knees to romp home in
the men's competition. The Italian women had a strong team effort to win that competition. Ileana
Salvador led the Italians, although finishing sixth. But with Annarita Sidoti in seventh and
Elisabetta Perrone in tenth, the Italians finished three points clear of China and Russia, who did not
pack their teams nearly as well. China's Yan Wang won in 45:10 over Finland's Sari Essayan
(45:18) and Russia's Yelena Nikolayeva (45:22). Debby Van Orden led the U.S. contingent with
50:22 in 44th, two places ahead of Dana Yarborough. The U.S. team finished 13th. Mexico, with
first and third in the 20 and first, third, and fourth in the 50, finished 149 points ahead of second
place Spain in Italy's third in the men's competition. Daniel Garcia won the 20 in 1:24:26.
seconds ahead of Spain's Valentina Massana. Alberto Cruz was third for Mexico in 1:24:37, with Poland's Robert Korzeniowski fourth. Jonathan Matthews was the first U.S. walker in 41st (1:31:28). Carlos Mercenario beat Spain's Jesus Garcia at 50, 3:50:28 to 3:52:44, with German Sanchez (3:54:15) and Miguel Rodriguez (3:54:22) completing the Mexican team effort. Canada's Tim Berrett was a brilliant fifth in 3:55:12. Andrzej Chylinski led the U.S. in 38th (4:17:36). The U.S. team finished 11th... Teresa Vaill broke the American 5 km record as she won the Penn Relays in 21:28.17, nearly 4 seconds ahead of Debbi Lawrence's old record. Gretchen Eastler was just 19.4 seconds back. The men's 10 km went to Curt Clausen in 43:31.40.

5 Years Ago (From the April 1998 ORW)–The Rohls cleaned up at the National Invitation in Manassas, Virginia as Michelle won the women's 10 km in 46:55 and Mike captured the men's 20 km in 1:37:06. Michelle was 47 seconds ahead of Joanne Dow at the finish, with Teresa Vaill third in 48:04. Mike had a tougher time, but vanquished 43-year-old Steve Fecimovsky by 23 seconds...

Down under, Craig Barrett did a 19:54.36 to win the New Zealand 5 km title, but Nick A'Hern and Dion Russell went even faster in Melbourne with 19:12.92 and 19:39.62. Barrett also had 1:24:45 for 20 km.

The secret to Italian success in racewalking? Mostly familiar exercises, but for your information here is a page from an Italian booklet “La Marcia Atletica”, which incidentally, lists the Ohio Racewalker, along with England's Race Walking Record and Switzerland's Marcatore Svizzero, under the heading “Riviste nel mondo”.

**Stretching per la marcia (metodo Anderson)**

- **Quadricipiti**
  - (30°)

- **Polpaccio**
  - (30°)

- **Gluteo e flessore della coscia**
  - (30°)

- **Adduttori e area laterale del tronco**
  - (30°)

- **Bacino, adduttori delle cosce e muscolatura posteriore delle cosce**
  - (20°)

- **Muscoli profondi della schiena e eteritori**
  - (20°)

- **Muscoli dell'area inguinale**
  - (30°)

- **Flessori della coscia, posteriori e laterali della schiena**
  - (30°)

- **Grande psoas, sartorio, quadricipiti e adduttori (30°)**

- **Legamenti dell'articolazione della caviglia**
  - (10°)

- **Muscoli della zona lombare, adduttori della coscia e muscolatura dei fianchi**
  - (30°)

- **Muscolatura lombare e esterna dell'anca**
  - (30°)

- **Muscoli dell'area inguinale e adduttori interni della coscia (30°)**

- **Flessori della coscia, posteriori e laterali della schiena (30°)**