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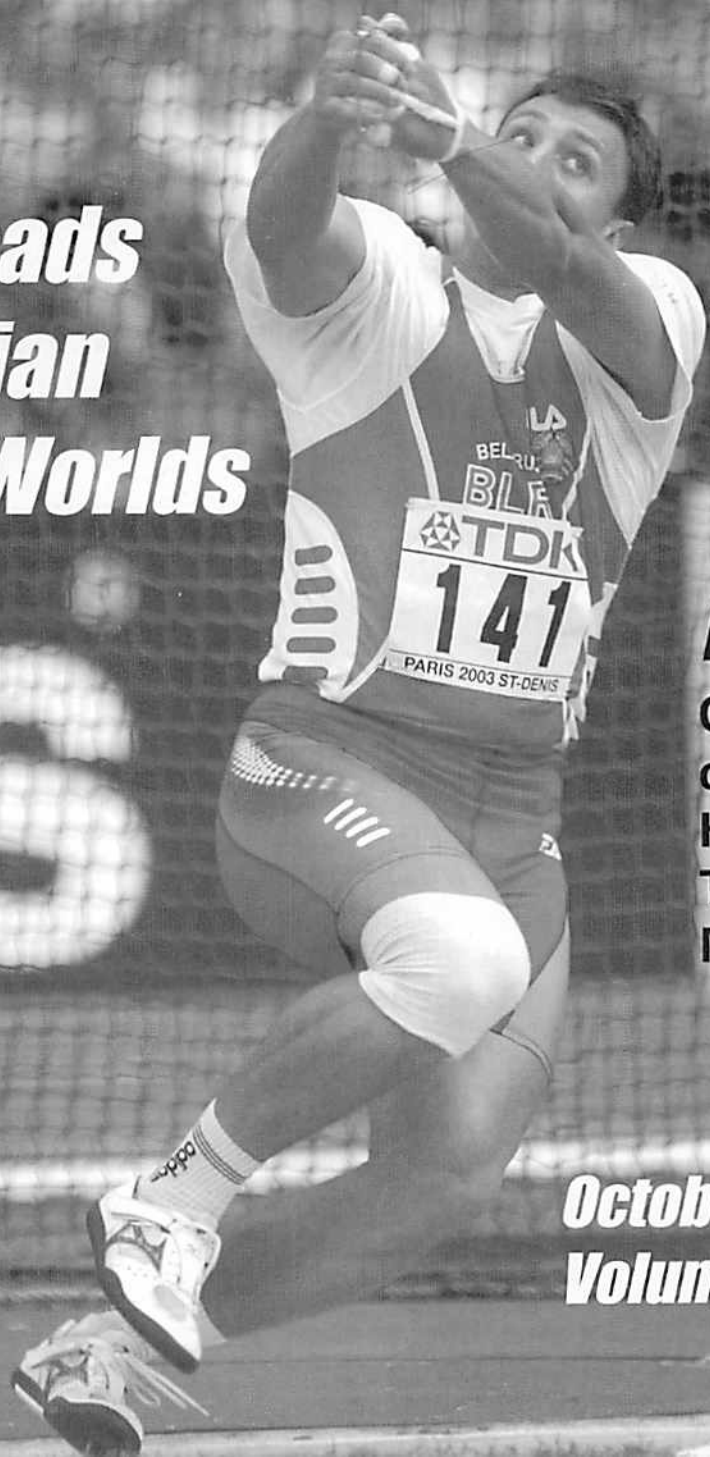
Long & Strong Throwers Journal

***Tikhon Leads
Belarussian
Romp at Worlds***

INSIDE:

Championships
coverage, Reese
Hoffa, Technique,
Training and
MUCH MORE!

***October, 2003
Volume 6/Issue 2***



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On the cover: Ivan Tikhon whirls to an IAAF title. (Victor Sailer)
This page: Tikhon listens to his national anthem atop the podium. (Victor Sailer)

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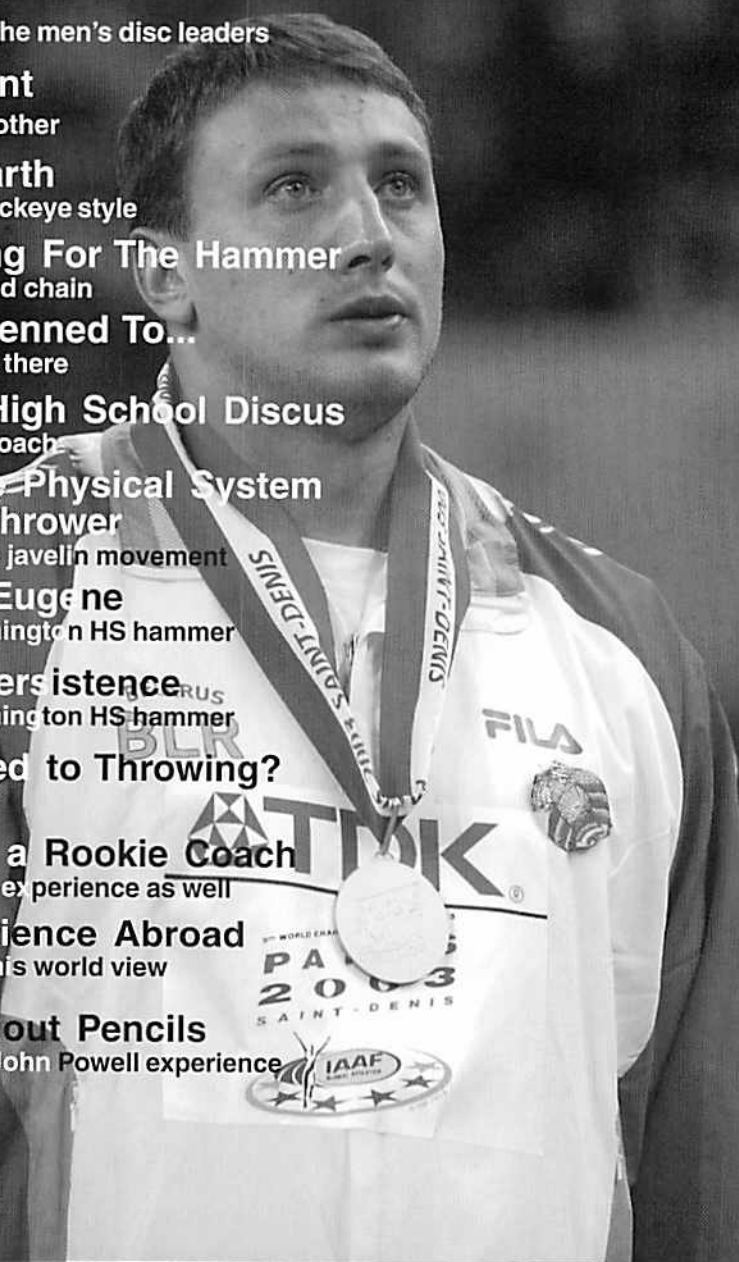
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LETTER FROM THE EDITOR

DOMESTICATION

When I first got a PC at home six or seven years back and discovered the internet, I had found a cool new toy. With so much information suddenly at my fingertips, I was truly amazed. And with time, I've found that 80% of my PC time is throwing related. When I'm not working on the next issue of this publication, I'm corresponding with other throwers about this thing or that.

This dedication to cyber-throwing has accentuated some of my deficiencies as a card-carrying member of suburbia. Given a choice between throwing related activities and tending to the homestead..."Honey, have you seen my chalk?"

Come the summer months, the other men on the block fire up their grills and lather on the barbecue sauce. Me? I'm secure in my manhood and let the Mrs. do what she does best. This is a partnership after all. You won't find me on any KC Masterpiece commercials, at least not wearing the apron.

Such is my life. My neighbors have neatly manicured lots without a single dissenting speck of crabgrass. My yard looks like the Olympic hammer qualifying, prelims and finals were held out back. Their siding is always spotless while mine looks like a battalion of arachnids are using it for basic training maneuvers.

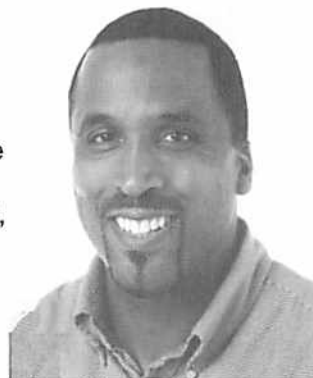
Archaeologists have requested permission to remove the crust on my car, strata by strata. But hey, nobody on the block has a nicer power rack than mine, and they can't make a disc spin through the atmosphere like an airborne gyroscope. Okay, forget the last one, but did I mention I have a power rack?

Through my magnificent powers of conversation, I sit peacefully at my PC as the neighborhood comes alive with the sound of Lawnboys and John Deere. We have a double lot in our quaint neighborhood. I always wanted to have a little space around me. And while I do enjoy it, the patron saint of turf mocks me from somewhere above as I take more laps around my yard than a Kenyan running the 10,000m.

This home improvement thing seems to be of some import as well. I see the neighbors bustling about their properties, painting, finishing and landscaping. I've got big plans as well...soon as I retire, right after I learn hammer footwork.

I'm not much good with handyman chores. My home has character. That's my way of saying it's got busted

stuff that I don't have the skill, interest or time to deal with. We used to have a handyman who handled all that stuff, but he moved, so character abounds as never before at 3604 Green.



Glenn Thompson

That's not to say that I'm completely helpless.

Absolutely not. I have a rechargeable screwdriver, which causes testosterone surges somewhere deep within everytime I tighten a screw or put together some particle board-based piece of furniture from a department store. However, that is probably about the height of it.

I'm kind of like Tim Allen on the sitcom *Home Improvement*, without the knowledge, interest, tools, or Pam Anderson. I go to Home Depot to buy light bulbs and make copies of keys. Lumber? Miter saw? Routers? Drill press? Puhleeeez! Hey, maybe they have that color of spray paint I want for my shot put.

I cut my finger when I was a shorty with a toy saw I got for Christmas gift. Can remember that searing pain like it was yesterday and I never picked up that saw again. Can I blame my impairment of my father? I think I was scarred from that moment forward. Shop class in high school? I was there, but more focused on graduating and being able to grasp the diploma with all ten digits.

I've made significant advances since my days of repairing everything with a butter knife and duct tape. I've got several tool sets, none of which resemble their original composition. Screwdrivers and sockets are everywhere in my home, except in my toolboxes. Which is why I always seem to come back to the butter knives...always know where to find them. I've hidden the Allen wrench set. Guys gotta take his discii apart every so often, you know?

My next goal in the advancement of the throwing community is to hook up with a real estate developer and some of my like-minded throwing friends and populate our own little community. A javelin runway in every yard! And better yet, everyone's yard would look just like mine.

Glenn Thompson
Publisher

ARMS RACE

By Glenn Thompson
(compiled from news reports)



Miknevich

Somewhere deep in the Russian terra firma, Nikita Krushev must have cracked a smile of satisfaction.

The break up of the Soviet Union has not meant the dismantling of the old Russian sports system. More likely it has meant the unleashing of world-class talent, which no longer has to beat each other up for three spots on the Soviet team. Where there were once three team members, there are now 12 or 15 world-class performers making medalling at world championship competitions that much more difficult. Mother Russia has even taken a backseat to its former satellite states such as Lithuania, Estonia, Ukraine and more significantly Belarus. Belarus won its independence in August, 1991 as the Soviet states fell apart. With a population of just over 10 million, the Baltic state collected an astonishing three golds, a silver and a bronze.

Russia and its former states took gold in six of the eight throws, and racked up a sweep of the first four places in the women's shot, not to mention assorted silver and bronze in the other events. Former Soviet Bloc eastern European states chipped in as well, not to mention Cuba taking gold in the women's hammer.

Men's Shot

Controversy was in the air from the very first day of competition. Belarussian



Toth

glider Andrei Miknevich emerged from a 2 year doping suspension to dominate the men's shot from the opening stanza, with four of five fair throws being good enough for gold. Adam Nelson struggled during prelims, but mustered a 21.26m in the fourth stanza to lock up silver. Veteran Yuri Bilonog was in the chase once again.

"I had a new coach over the past three years and we worked a great deal on my technique," said Miknevich afterward. "This has been the most important change for me. In the final, I really felt I had a chance to be on the podium and maybe even win, which boosted my efforts even more.

Nelson's comments on a Canadian broadcast were purposely vague when asked about his feeling of losing to a recently suspended athlete. "No comment", said Nelson, his eyes speaking volumes. "You can read into that anything you want."

An all-star cast failed to make the finals. Former NCAA champs Janus Robberts and Carl Myerscough failed to get out of qualifying, and Joachim Olsen was a DNS at prelims. Manuel Martinez, the 2003 IAAF Indoor champ, came up short in qualifying as well and John Godina, the defending three-time champion, was called for a controversial heel foul during his reverse on his third prelim effort, which would have advanced him to finals.

Women's Shot

The women's shot put final was dominated by Eastern Europeans with the victor being world leader, Russian Svetlana Krivelyova with a distance of 20.63m. The 1992 Olympic champion took the lead with her first effort and improved with the next two, leading by a narrow 27cm going into finals. Her fourth round put sailed out to 20.63m, 14cm below her season's best, to make victory look more certain.

The battle for the silver medal was much less predictable, with Belarussian Nadezhda Ostapchuk and Vita Pavlysh (UKR) outdoing each other in each round.



Godina



Makarov

Pavlysh, the 2001 World Championship bronze medallist, tossed a season's best 20.03m to overtake Ostapchuk in the third round, but was bested by the Ostapchuk's personal best of 20.12m two rounds later to clinch silver. Pavlysh, who returned from a two-year ban in 2001, had to settle for bronze when she improved only slightly, with a fifth round effort of 20.08m.

Men's Javelin

Jan Zelezny is the Al Oerter of his event, coming up big in every world championship. but the three-time World and Olympic champion could muster nothing better than an 84.09m effort, good for only fourth place. Further back was Steve Backley (GBR) at 80.13m in ninth place, missing the cut for the final three throws.

Makarov's 85.44m winner was the lowest winning mark since 1987, when the 'new' specification men's spear was first introduced at the World Championships. Makarov's is the second generation of spear throwers in his family. Father Aleksandr was the Olympic silver medallist in the 1980 Olympics in Moscow and wife Oksana was once the Russian record holder and finished eighth at the 1999 World Championships.

"I have never had such a great feeling in all my life, this is a great victory," said Makarov. "I cannot compare this sensation with anything else in my life. To win! It's crazy what a difference there can be between silver and gold."

The opening round determined the silver and bronze medals. Estonia's Andrus Värnik took the silver medal with 85.17m, and Germany's Boris Henry, who at 29 years of age has had a similar series of minor podium places to Makarov - 1995 Worlds and 2002 Europeans, both bronze - fell into that third place category again with 84.74m.



Manjani

Women's Javelin

The women's Javelin final had the reigning World champion and world record holder Osleidys Menendez of Cuba, but her form this season did not make her a favorite.

Russian Tatyana Shikolenko started with a solid 62.76m, but Greek Mirela Manjani nailed the best opener with a seasonal best 64.55m. Menendez managed 61.18m, on par with her 2003 performances. Third was 2002 European Championships bronze medallist, Mikaela Ingberg (FIN) with 61.37m.

Round two had Shikolenko bettering her performance to 62.99m and Steffi Nerius (GER), the silver medallist in European Championships last year, moving to third place. Shikolenko again gained ground in the third moving to 63.28m. Ingberg passed her third throw due to injury, but bounced back in fourth, coming close at 62.02m, her best of the day, but short of bronze. During the same round Manjani finally clinched her victory with a world leading 66.52m throw. Menendez finally showed some life moving to fourth place past Ingberg.

The final stanza was anticlimactic, with only Ingberg, able to improve. 62.20m to fourth place, beating Menendez by only one centimetre (62.19m).

Men's Hammer

A pressure packed Men's Hammer Throw final literally went down to the wire. Ranked number two in the world this year, Belarussian Ivan Tikhon outclassed his opponents, wrapping up the win with his second attempt. With the gold secured, Tikhon whirled to a final throw of 83.05m to miss the Championship record by just 33cm.

Whilst the gold medal always looked safe, bronze and silver were up for grabs. The silver looked to be going to Japan's record holder, Koji Murofushi, after he threw 80.12m on his fifth attempt, but it was a big final effort by former world number one Annus, to register 80.36m, relegating Murofushi to the bronze medal position.

The fourth round saw a failure of the Electronic Distance Measurement equipment, as it registered a 82.55m throw for Greek Alexandros Papadimitriou, when the hammer clearly fell short of the 80m mark.



Moreno

Papadimitriou was asked to re-throw at the end of the round. Both Andriy Skvaruk (UKR) and Slovenia's first Olympic hammer thrower, Primož Kozmus, threw 79.68m and finished the competition fourth and fifth respectively on second best throws.

Leading qualifier and Barcelona silver medallist, Igor Astapkovich provided the major shock of the competition, failing to make the cut after three rounds fouling each attempt.

Women's Hammer

The French gold medal hope Manuela Montebrun had qualified easily, with the best mark of all the finalists at 71.36m, sparking the hopes of the home crowd. But Montebrun managed only a 69.38m opener which would set the tone for her day. Meanwhile defending World Champion from Edmonton 2001, Yipsi Moreno (CUB), showed why she was the world leader (75.14m). The Cuban whirled to 71.02m, and was leading clearly after round one. Susanne Keil (GER) was in second place with her 69.43m and Montebrun third (69.38m).



Brown

The second round saw Chinese Gu Yuan, the 2002 World Cup winner and Asian record holder at 71.10m, and Olga Kuzenkova (RUS), the 2002 European Champion and second in the world list this season, jockey for silver. However, it was Moreno's 73.33m that salted away the gold.

Gu was able to better her mark in the third round by throwing 70.77m, her second best throw all-time. Moreno again got well over 70m with 72.52m, but would not come close again.

In the fourth round the French crowd rose to its feet as Montebrun surpassed Gu by 15 centimeters to grab the bronze medal with 70.92m. Kuzenkova secured her silver medal during the same round with 71.71m. No one improved over the last two stanzas.



Yatchenko

Men's Discus

Virgilijus Alekna (LTU) cemented his claim as the world's best discus thrower by outdistancing legendary Lars Reidel and upstart Robert Fazekas. The reigning Olympic champion and 2001 World Championships silver medallist, Alekna made a statement during qualifying launching a seemingly effortless 68.29m on his first throw.

In the final Alekna once again struck on his first throw. The discus landed at 69.69m, his season's best. The 2002 European champion, Fazekas (HUN) and the world's leading thrower the last two years, responded with his second throw, measured at 69.01m. He would not get any closer. Reidel's first throw of 66.28m was only enough for the fourth place.

Another Belarussian, Vasiliy Kaptyukh, bettered his season's best in the qualifying round, with 65.76m, and his first throw in the final was 66.51, giving him the bronze medal. Kaptyukh finished fourth at the 2000 Olympic Games. All the medal throws were launched in the first two rounds of the competition.

Another German, Michael Mollenbeck, the Edmonton bronze medallist, was fifth with 66.23m, and Frantz Kruger (RSA) sixth, at 65.26m.

Women's Discus

Irina Yatchenko joined teammate Ivan Tikhon, gold medallist in the men's hammer, on the winner's podium Monday night. The 37-year-old bronze medallist at Sydney was competing at her sixth World Championships. Her longevity bore dividends as she hit the winning throw in the first round, a season's best 67.32m.

"My first throw today has been my best one for years. It was only one meter under my personal best," she said.

Yatchenko was never headed, with the only threat coming in the final round from Anastasia Kelisidou (GRE), who won silver. Kelisidou recorded a season's best final throw of 67.14m, but fell short by 18cm. Greek Ekaterini Voggoli took the bronze medal with an outstanding effort, recording two personal bests to finish at 66.73m, nearly a two meter improvement on her previous best.

Ukraine's Olena Antonova (65.90m), Czech Republic's Vera Pospisilova (65.55m) and Russia's reigning World Champion Natalya Sadova (65.22m) all followed closely behind to finish fourth, fifth and sixth respectively. ***LSTJ***

Sightseeing in Paris

By Anna Swisher

I spent my time leading up to the opening day of the World Track and Field Championships admiring the gargoyles of Notre Dame, gazing at the Mona Lisa in the Louvre, and climbing the stairs to the top of the Arc de Triomphe. But what I really wanted to see in Paris was Lars Riedel and Virgilijus Alekna go head to head in the disc; Adam Nelson, John Godina, and Kevin Toth fight it out in the shot; and Koji Murofushi or Adrian Annus drop 82 meter bombs.

When opening day finally rolled around, I rode the Metro to the Stade de France early in the morning and got my first look at the colorfully decorated stadium. It was adorned with hot-pink, blue, and orange signs that had the words "Lancer", "Sauter" and "Courir" printed below drawings of throwers, jumpers and runners.

I took in the men's shot qualifications at around 8:30 am in a pretty empty stadium and then got up to move to the opposite side to watch some hammer. As I tried to walk around the stadium, I learned that there were four huge metal gates that sliced the stadium into quarters, each guarded by numerous ticket checkers to restrict crowd flow (typically an issue during soccer matches). Spectators were unable to move freely between quarters of the stadium, so watching shot and hammer in the same session was impossible as they were on opposite sides of the infield. Indebted to my mother for making me take seven years of French in school, I managed to see all the throws by talking my way around the stadium using any and all means necessary. "Pardonnez-moi, je suis la soeur d'Anna

Mahon et elle veut me voir dans le sud toute suite. Merci, au revoir."

The night of the men's discus final, I enjoyed my first experience as part of an organized cheering section for throwers. I walked up to my seat in the stadium, now totally

packed with people who had come to watch the sprint finals, and I spotted a group of fairly large men. Most were dressed in yellow, red, and green and were proudly waving the Lithuanian flag. They gave me the once over, noticing my video camera and my "Williams College Throwers" shirt, and they gathered that I would help their cause. During the competition, I joined the enthusiastic Alekna devotees in starting the clap for their hero as well as the other throwers. The athletes were reacting to and encouraging the fans, and it was phenomenal to feel, in a small way, a part of the competition. Franz Kruger got people into it the most, stirring the crowd both before and after each of his throws. Alekna was the eventual world champion and our section applauded and yelled loudly as he

waved up to the crowd. A job well done, we thought, both in the ring and up in the stands. It was a thrilling couple of hours and I was sad to leave the throwing fans behind at the end of the night.

After the women's discus qualifications, I started to make my way across the stadium again, preparing my story for the gate guards (I am dating Franz Kruger, you must let me through to see him). Out of the corner of my eye, I caught sight of a group of athletes that were just coming out of a tunnel that led down to the track, emptying about 50 feet from where I was standing. Among them I spotted the tall, lean figure of Suzy Powell clad in the familiar team USA blue and red uniform. I began to head in her direction and as I got closer, she seemed to notice my "USA World's #1 Track and Field Team" shirt amidst the French and Swedish outfits. I congratulated her on making the discus final, and as I wished her good luck, she smiled graciously and thanked me before continuing on her way out of the stadium.

Meeting Suzy Powell was definitely a highlight for me after walking past and sitting close to several famous athletes and coaches. But just having the opportunity (Thanks Mom!) to sit alongside 50,000 track fans each night and to feel the excitement that filled the stadium was an experience I will never forget. Anyone up for Helsinki in 2005? ***LSTJ***



The author found time to take in the small (Louvre above) and the large (Alekna, bottom left) attractions

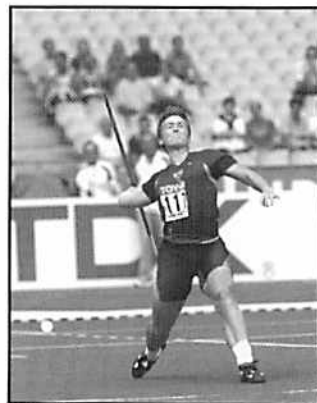


Alekna

Field Observations

Kim Kreiner, USA, Javelin, non-finalist, 54.84m

"My performance left something to be desired. It wasn't the way I had wanted my season to end...not even close. The day of competition was great. The weather was perfect and there was not much wind in the stadium. I went through my normal pre-competition routine in the morning and felt pretty good. Even my warm-up prior to the competition was great. I was feeling pretty loose and confident that I was going to do very well. Once we got out onto the runway we had our three warm up throws in order, again things were just fine. Then the qualification round started and that's when things changed. My first throw I start my approach where I normally do for competition, the only thing was, this wasn't a normal competition. There were a few thousand people in the stands and music playing and since we were the only event going on at that time everyone was cheering for us. Well I got a little excited and that lengthened my stride and I fouled my first throw. It was by far my best throw of the meet looking back. But I just couldn't hold it. And from that point it was all downhill. I had never been in the situation where I only had three throws to qualify for finals. So I started to do something I normally don't do. I started to panic just a little. And from that point on I was out of my game and could not recover. I ended up throwing just under 55 meters.



Victor Sailer

Kreiner

The qualifying rounds were pretty good. I was in the first round and by far that round had the most of the "big guns" in it. There were eight qualifiers from my round and something like five or six of them were automatic qualifiers. Having watched the other round from the stands and looking at the marks from finals I realize that nothing is out of reach for me. The marks were not too impressive to me. The winning mark was 66 meters, but a throw of 62 or 63 meters puts me right there in the hunt. I believe I can do that next year during the Olympics.

The experience of competing at Worlds was great. I think I learned just as much if not more off the track as I did on. It takes a lot of mental toughness to be able to put up with all the pressures of competing at that level and I believe I am almost there. I just can't let anything knock me off my game. I was grateful for the chance to go to Paris and represent my country. This was a bit of a dry run for the Olympics. My coach, Ramona Pagel, has been a great help in getting me ready for the types of things that I will see and may occur during the Olympics and any other big competition. Although she probably would've liked to see me perform better this year, so would I. This was definitely a learning experience and I can definitely take more positive things away from this than negative. You've got to learn to take the good with the bad. You have to get the experience so that you can get better."

Adam Nelson, USA, Shot Put, 2nd, 21.26m

"With the exception of the winner, no one threw very well. There's no explanation for it. Though I finished second again, I think this was one of my best competitions ever. This year has been very tough. Minor injuries during the early part of the season limited my practice time and competitions. It wasn't until the middle of July that I felt comfortable in the circle during a competition. However, when it really mattered I was able to dig a little deeper and pull a solid throw together to medal at the World Championships.



Victor Sailer

Nelson

Though the dining hall was a little undersized and the transportation not exactly smooth, the French did an otherwise fantastic job organizing this event. There were great weight rooms, great training facilities, and extremely nice volunteers. More than the facilities, the fans were great. The French fans embraced this World Championship, cheering on every event at deafening levels. They even embraced the shot put, something I was disappointed that the press did not focus on more. I guess the other stuff sells more papers.

Building comradery amongst track athletes is not always an easy accomplishment. However, the team managers and coaches did a fantastic job in developing a TEAM atmosphere."

Jason Tunks, Canada, Discus, 11th, 62.21m

"This World champs was a puzzle. A lot of good throwers kind of melted and some people threw very well, people that were not even thought of. Alekna and Fazekas are tops right now, no doubt about it. Reidel is much bigger than before, all top heavy. He seems slower and 66-66.70m seems to be about it [for him], with no wind of course.

My performance I would rank as pretty poor. I had an ankle and knee surgery in December, which seemed to be okay in the early season, but got very bad towards the end. [Only] 66.51m was third....this is something that should have been done with the training I had early in the year. Kaptyukh...well, Belarus has the power right now, but time will tell how they continue to develop. As for everyone else they had pretty normal performances." ***LSTJ***



Tunks

2003 IAAF OUTDOOR CHAMPIONSHIPS RESULTS



WOMEN'S SHOT

1 Krivelyova Svetlana, RUS, 20.63, 2 Ostapchuk Nadezhda, BLR, 20.12 (PB), 3 Pavlysh Vita, UKR, 20.08 (SB), 4 Korzhanenko Irina, RUS, 19.17, 5 Adams Valerie, NZL, 18.65, 6 Zabawska Krystyna, POL, 18.62, 7 Kleinert Nadine, GER, 18.48, 8 Legnante Assunta, ITA, 18.28, 9 Adriano Elisângela, BRA, 18.11, 10 Tunks Lieja, NED, 17.99, 11 Li Meiju, CHN, 17.92, 12 Terzoglou Irini, GRE, 17.88

WOMEN'S DISCUS

1 Yatchenko Irina, BLR, 67.32 (SB), 2 Kelesidou Anastasia, GRE, 67.14 (SB), 3 Vóggoli Ekaterini, GRE, 66.73 (PB), 4 Antonova Olena, UKR, 65.90 (SB), 5 Pospíšilová Vera, CZE, 65.55, 6 Sadova Natalya, RUS, 65.22, 7 Song Aimin, CHN, 63.84, 8 Söderberg Anna, SWE, 61.61 (SB), 9 Powell Suzanne, USA, 59.86, 10 Machado Teresa, POR, 59.46, 11 Robert-Michon Mélina, FRA, 58.52, 12 Singh Neelam Jaswant, IND, 57.92, 13 Faumuina Beatrice, NZL, 56.86

WOMEN'S JAVELIN

1 Manjani Miréla, GRE, 66.52 (WL), 2 Shikolenko Tatyana, RUS, 63.28, 3 Nerius Steffi, GER, 62.70, 4 Ingberg Mikaela, FIN, 62.20, 5 Menéndez Osleidys, CUB, 62.19, 6 Bicet Sonia, CUB, 60.17, 7 Coslovich Claudia, ITA, 59.64, 8 Eve Laverne, BAH, 59.60, 9 Zabruskova Valeriya, RUS, 59.51, 10 Kolkkala Taina, FIN, 57.50, 11 Ma Ning, CHN, 57.43, 12 Szabó Nikolett, HUN, 56.98

WOMEN'S HAMMER

1 Moreno Yipsi, CUB, 73.33, 2 Kuzenkova Olga, RUS, 71.71, 3 Montebun Manuela, FRA, 70.92, 4 Gu Yuan, CHN, 70.77 (SB), 5 Keil Susanne, GER, 69.43, 6 Melinte Mihaela, ROM, 68.69, 7 Mahon Anna, USA, 68.45, 8 Skolimowska Kamila, POL, 68.39, 9 Scott Candice, TRI, 67.73, 10 Shaw Lorraine, GBR, 65.95, 11 Heidler Betty, GER, 65.81, 12 Price Melissa, USA, 62.34

MEN'S SHOT

1 Mikhnevich Andrei, BLR, 21.69 (PB), 2 Nelson Adam, USA, 21.26, 3 Bilonog Yuriy, UKR, 21.10, 4 Toth Kevin, USA, 20.89, 5 Anlezark Justin, AUS, 20.61, 6 Bartels Ralf, GER, 20.50, 7 Reinikainen Tapa, FIN, 20.45, 8 Tiisanoja Ville, FIN, 20.09, 9 Godina John, USA, 19.84, 10 Virastyuk Roman, UKR, 19.61, 11 Snyder Bradley, CAN, 19.38, Olsen Joachim, DEN, DNS

MEN'S DISCUS

1 Alekna Virgilijus, LTU, 69.69 (SB), 2 Fazekas Róbert, HUN, 69.01, 3 Kaptyukh Vasiliy, BLR, 66.51, (SB), 4 Riedel Lars, GER, 66.28, 5 Möllenbeck Michael, GER, 66.23, 6 Kruger Frantz, RSA, 65.26, 7 Tammert Aleksander, EST, 64.50, 8 Pestano Mario, ESP, 64.39, 9 Brown Carl, USA, 62.66, 10 Shevchenko Dmitriy, RUS, 62.28, 11 Tunks Jason, CAN, 62.21, 12 Cherevko Leonid, BLR, 61.90

MEN'S HAMMER

1 Tikhon Ivan, BLR, 83.05, 2 Annus Adrián, HUN, 80.36, 3 Murofushi Koji, JPN, 80.12, 4 Skvaruk Andriy, UKR, 79.68, 5 Kozmus Primož, SLO, 79.68, 6 Konovalov Ilya, RUS, 78.55, 7 Devyatovskiy Vadim, BLR, 78.13, 8 Papadimitriou Alexánder, GRE, 77.79, 9 Konopka Miloslav, SVK, 75.86, 10 Rendell Stuart, AUS, 75.72, 11 Figère Nicolas, FRA, 74.06, Astapkovich Igor, BLR, NM

MEN'S JAVELIN

1 Makarov Sergey, RUS, 85.44, 2 Värnik Andrus, EST, 85.17, 3 Henry Boris, GER, 84.74, 4 Zelezný Jan, CZE, 84.09, 5 Parviainen Aki, FIN, 83.05, 6 Nicolay Christian, GER, 81.77, 7 Guzdek Miroslav, CZE, 81.40, 8 Blank Peter, GER, 80.34, 9 Backley Steve, GBR, 80.13, 10 Li Rongxiang, CHN, 78.24, 11 Thorkildsen Andreas, NOR, 77.75, 12 Ivanov Alexandr, RUS, 77.32

A Truly Weltklasse Weltklasse

By Dan McQuaid

The thing is, I'm no Euro-basher. I like my fries French, my chocolate Swiss, and my beer German. Or Austrian. Or British. Come to think of it, Swiss beer is pretty tasty as well. And Belgian? Holy cow. Nine percent alcohol by volume! Ever wonder why the Germans always swung through Belgium on their way to invading France? Fire down a couple of Belgian Trappist ales, and you will wonder no more. What's remarkable is that the German soldiers were able to find France at all after sampling the Belgian brew. That said, there is one thing about Europe that drives me crazy. Camera crews behind the throwing rings. I know. I know. In the grand scheme of things this is no big deal. But darn it, I don't have x-ray vision and when I pay my thirty Euro to see some throws I want to actually see some throws and not a cameraman's back. There I was though, having staked out a prime spot in the standing room section of Leitzigrund Stadium during this year's Zurich Weltklasse meet, admittedly packed in like a sardine, but content with my sardine-like condition because I had an unobstructed view of the discus ring. At least while the ring was empty I did. Then, a couple of minutes before warm-ups began, some dufus wheeled over a humvee-sized television camera and parked it right in my line of sight. I understand the logic here. Televised track meets are a big deal in Europe, and (another reason to love these folks) the throws are a featured part of the telecasts. Hence the need for cameramen with a clear view of the throwing ring. But what about the people who pay to see the meets in person? I may be going out on a limb here, but I'd wager that most of us who purchased tickets in my section at the Zurich meet this August did so with the intention of watching the best throwers in the world launch the platter. I know I did, and so, much vexed and doing my best to cuss in Swiss, I elbowed my way through the packed crowd to a better view a couple of sections over. In doing so, however, I was forced to abandon a freshly purchased cup of very smooth Swiss pilsner. That, I do not forgive.

But what of the competition? Veeery good stuff. Unlike last year, when it looked like Robert Fazekas and Mario Pestano were the only ones who'd had their Wheaties, it became clear after a couple of warm-up rounds that Fazekas, Reidel, and Virgilius Alekna were all in fighting trim. Reidel, having sat out last year's Weltklasse due to injury, looked buff (as a man of the New Millennium I can feel comfortable saying that about another guy) and determined. He dominated the Weltklasse for most of the 1990's, and appeared quite

anxious to resume his spot at the top of the awards stand. Unfortunately, even for a stallion like Lars anxiousness has a way of mutating into over-anxiousness and the big man (after opening with 65.33m and a foul) rifled throws number three and four into the cage. He regained his composure to finish with 66.52m and 66.53m, good enough for third place but certainly not the definitive "I'm baaaaaaack" he had hoped for.

Virgilius Alekna was on a similar mission in Zurich. After putting the hammer on Lars with multiple 70-meter throws in 2000 and 2001, he displayed a remarkable degree of sluggishness last year in coughing up his title to Fazekas. Not so this year. A couple of effortless 70-meter warm-up tosses showed that he remembered to pack his mojo. Brimming with confidence, he strode into the ring during round one and nailed a 68.95m, just to give everyone else something to ruminate on between throws. Here's how good he was: After each of his next four throws (68.61m, 68.54m, 67.15m, 67.25m) he walked out of the ring head bowed in disappointment. And he wasn't showing off. Clearly, he had the stuff to break 70 meters, but just couldn't quite get hold of one. Fazekas must have put the Hungarian Stink Eye on him for round six though, because he launched one out of bounds to the left, a rarity for a right-handed thrower.

Aaaaah, Fazekas. The Sultan of Speed. The Hungarian Hurricane. The first time I saw him throw (at the Weltklasse in 2000) I dismissed him as a wildman who would never be able to control his quicks. Of course, I'm the same guy who used to make fun of Adam Nelson's bullwhip left leg action until he started throwing 22-meters on a weekly basis. Even in 2002 when Fazekas seemed to win every big meet, I suspected him of being a flash-in-the-pan. Not any more. After watching him take down Alekna with a 69.14m in round two, I am a believer. In spite of his goofy "Don't rush me I'm in a trance" windup ritual, and his warp-speed entry into the throw, I have become a big admirer. He's tough. He's consistent (four out of six throws over 67 meters with no fouls) and he's going to pose one hell of a problem for anyone interested in winning the gold medal in Athens.

One happy note before closing. Carl Brown, in what I believe was his first competition of this magnitude, showed up great. He looked a little nervous warming up, but the locals really seemed to embrace him and gave him a nice ovation during introductions. That

must have settled Carl down because he opened with a solid 64.25m, backed that up with 64.20m in round five, and ended up finishing sixth. The question remains as to whether or not Carl is the man to lead an American discus throwing Renaissance. He's quick, smooth, and technically sound, but needs to find another two or three meters somewhere if he wants to bow-wow with the big dogs in Athens.

One sad note before closing. Franz Kruger, a true gentleman and a heck of a fine thrower, stunk it up. Though he looked to have added several pounds of solid muscle over the past year (remember, it's okay for guys to say that about each other now) Franz barely made the finals in Zurich (his best throw was 63.00m) and staggered home in eighth place. A dismal result for a guy who two years ago seemed ready to challenge Reidel and Alekna for the title of Big Chief Discus. Since he did not seem injured in Zurich, I must conclude that his recent marriage has done him in. All I can say is, welcome to the club.

Just kidding. Thanks as always to my beautiful wife for somehow managing without me for a week. Thanks to my brother-in-law Larry and his lovely wife Suzie for putting me up. ***LSTJ***

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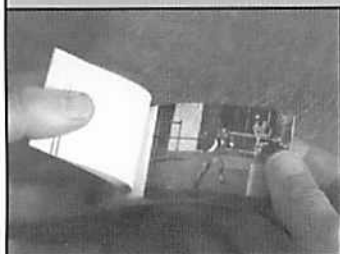
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Kreiner Ups AR At Pan-Ams

By Glenn Thompson

Kim Kreiner came up big at the Pan Am games on August 7 in Santo Domingo, Dominican Republic. Kreiner's effort snared the gold medal and a new American record of 199 feet, 8 inches bettering her previous record by 7 inches. She also became the first U.S. woman to win the event in the Pan Ams since 1975.

"I was training pretty hard up until about two weeks before this meet. [Coach Pagel] Ramona and I wanted to time it so that I would "peak" for this meet. It was great. to have four of the top 15 women javelin throwers in the world there. That's pretty good, and to have [Cuba's] Osleidys Menendez, the world record holder there was definitely awesome.

The American record happened on my last throw of the competition. No one had really thrown so far that it wasn't possible for me to at least medal. Before my last throw I was actually in third, so I was thinking that if I had a decent throw I could possibly move up to second. As I stood on the runway to take my last throw, something Ramona always tells me popped into my head. She always says, "Last throw, best throw",

so I repeated that to myself before I started, and guess what, I threw 60.86m. Not a spectacular throw, but a PR and AR and it put me in first place.

The throw itself felt effortless. I mean everything just happened. I stayed back and got a much better stretch on the javelin and stayed relaxed throughout the entire run-up and release, which is what I think really helped. Finding that spot between intense and total relaxation.

I don't really think that I "knocked off the Cubans". I know that Menendez is a remarkable thrower and capable of throwing much farther. It just so happens that on that day, I had a better day.

It felt great to win my first big international competition. Looking back, and actually while competing, I realized that no one was really stepping up. That no one was taking the lead and bombing throws out there. So I just mustered everything I had for that last throw and waited to see if anyone else could match it."

LSTJ

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Glenn Thompson



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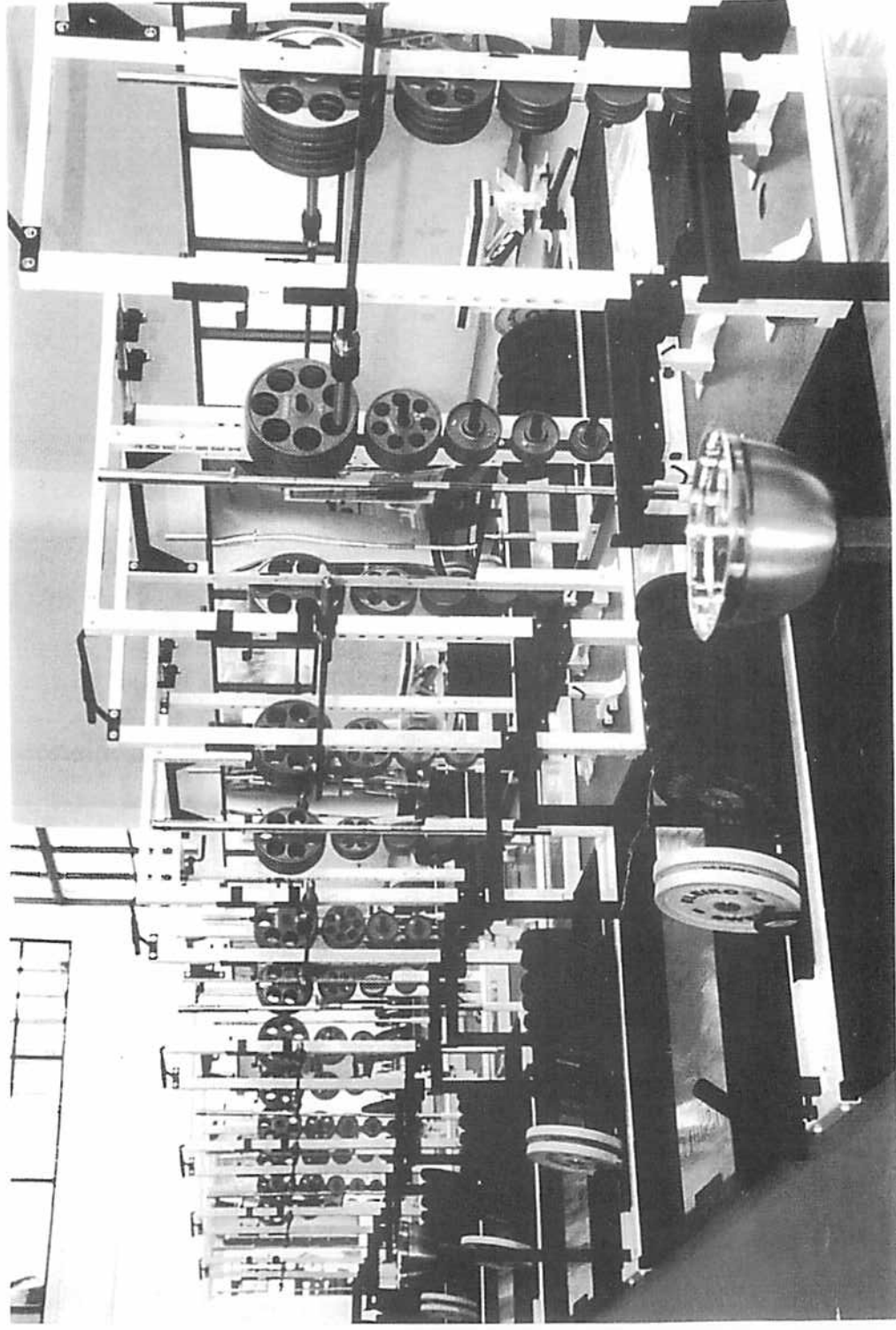
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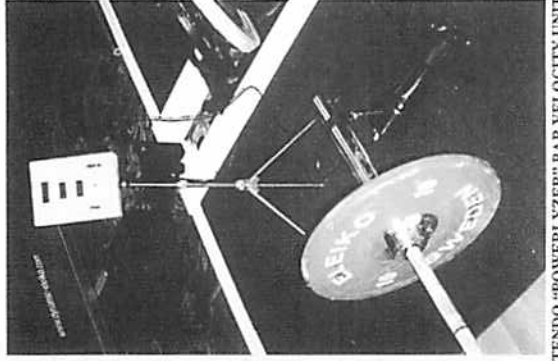
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Reidel vs. Fazekas:

Yin and Yang

By Kevin Carr, The Ring

It can be confusing to watch the discus these days.

During the late 1970's and 80's the technique developed by Jay Silvester and perfected by Mac Wilkins and Wolfgang Schmidt dominated. This way of throwing is characterized by a pronounced lean into the middle of the circle out of the back, a wide right leg sweep, and an explosive reverse at the front.

We in the U.S. viewed the Wilkins model as Truth with a capital T. We sprinted to the middle of the circle and exploded vertically. Ground contact and separation were optional.

Then Lars Reidel began throwing with no lean into the middle, narrow legs, and no reverse. Reidel displayed inhuman separation, the longest right foot turn and pull imaginable, and no reverse or explosion at the delivery. The ugliest thing we Americans had ever seen. Until it went 70m with no wind in a stadium. Thank you Tony Washington for beating him at least once in the now ugly-American style.

Now in 2003 we have Robert Fazekas, looking more Wilkins-like than late 70's Wilkins, with an out of control lean into the middle, no separation in the shoulders until the delivery of the throw, very little ground contact and separation, and an explosive reverse. Result: 70m.

So we have a stalemate. Is reversing good or not? Should we get lots of separation and torque right out of the back of the ring, or not? For watching throwers over the years I believe that the athletes physical tools guide him/her to use one type of technique or the other.

Lets get back to basics

The goal of technique is to maximize discus velocity. I will use the term "kinetic energy (KE)" in place of velocity (they aren't the same but they are related. The more KE the more velocity for a given mass.

$KE = \text{"work"} = \text{Force} \times \text{distance}$. So when we throw anything, we are trying to maximize the product of force and distance in various ways.

In the discus, a lot of the "work" ($F \times d$) comes at the end of the throw during the so-called "stretch reflex." Your throwing arm stretches back and it "whips" the discus, just like a rubber band uncoiling.

To make it simple, think of the stretch reflex action as comparable to a sling shot. What we want with a sling shot is the greatest final velocity. We can accomplish this by:

- a) pulling the bands back very far, increasing the distance (d) over which force is applied, or
- b) making the bands stronger, increasing the force (F) applied.
- c) both (a) and (b)



Reidel

Victor Sailer

The stretch reflex pattern for any given athlete varies as a function of many factors. One athlete may be very flexible in the shoulders, potentially allowing for a long stretch and reflex, maximizing a). Another athlete may be less flexible, but have very strong pectorals and obliques to compensate, maximizing b). All throwers have to find a balance between strength and flexibility.

So it's more complicated than simply saying "the longer the pull and the more ground contact the better," or, "the quicker and more explosive the better." It

depends on the throwers physical tools.

Lets look at Reidel and Fazekas in this way.

Reidel

Reidel is super-flexible, meaning that he is able to generate a long, long, pull, maximizing "d" in the equation:

$$KE = \text{work} = f \times D$$

For Reidel to produce this long of a stretch reflex he has to rotate the hips way, way ahead of the right arm out of the back, producing in the middle the classic "C" position and a very pretty "whip" on the discus. This process takes a relatively long time to unfold, resulting in longer ground contact, full right foot turn, and no reverse.

Fazekas

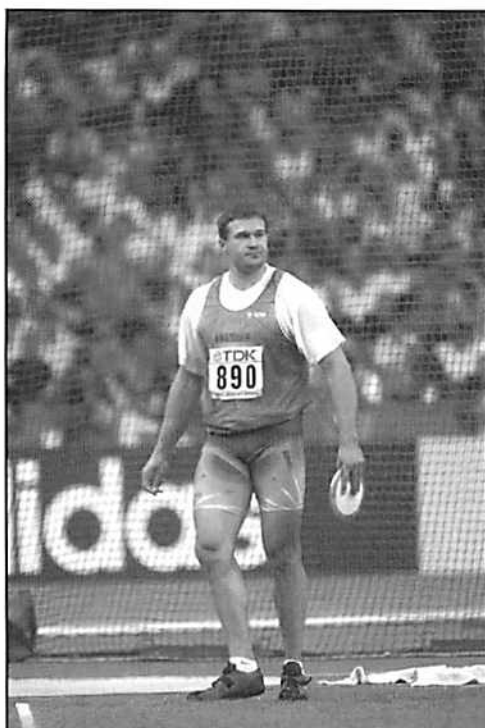
Now let's consider Fazekas, a thrower who, from what I understand, is pretty strong upstairs but not so flexible. Fazekas's equation might look like:

$$KE = \text{work} = F \times d$$

In Fazekas' case, the distance of the pull (d) is shorter, allowing for less time for ground contact, turning the right leg, and the classic "C" position. But, because the force (F) is greater, the resulting KE and discus velocity could very easily be similar.



Fazekas



Alekna

Hey, You've Got Chocolate in My Peanut Butter

Reidel and Fazekas have different physical challenges. Reidel could get a stronger stretch reflex, without shortening the pull. Fazekas needs to get more flexible without getting weaker. It's a paradox for each thrower. If Fazekas tried to throw like Reidel without a reverse, he would have to slow the movement down and fail to achieve maximum force. If Reidel tried reversing he would lose pull. It's like chocolate and peanut butter, Yin and Yang, Fazekas and Reidel. Fazekas and Reidel are way out on opposite ends of the curve so it's interesting to analyze.

Other Throwers

Godina throws like Fazekas. Strong upstairs with short pull and short ground contact equals a lot of KE.

Krueger throws like Reidel. Freakish flexibility and long slow unwind results in a lot of KE. Alekna seems closer to Reidel than Fazekas.

Schult changed from Fazekas to Reidel somewhat as he aged.

Wilkins threw more like Fazekas than Schmidt did. Schmidt used to work very hard at no-reverse throws just to keep his foot down for a fraction longer in competition.

I don't know where to fit Powell into this scheme.

LSTJ

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Unmasked Talent

By Glenn Thompson

The men's shot put has garnered unusual amounts of attention the last two years for high performance levels and showmanship amongst the big three of Adam Nelson, John Godina and Kevin Toth. But there's some new blood bucking for inclusion into this exclusive group. Reese Hoffa served notice time and again this season that he belongs with the big boys, upping his PR multiple times in big meets, taking third at the USATF Nationals (and joining the World Championships team), and PR'ing and winning the Pan Am Games shot.

And all along Hoffa has remained true to himself. The rubick cubed, voodoo-sticked, turkey leg-weildin' Georgian even added a mask at the Home Depot Invitational this year. And rather than be distracted by being the show, he knocked out another PR. But Hoffa has always been distinctive for his spontaneous shrieking, flexing celebrations. Hoffa excels because he's not putting on a show, he's just being Reese. Now more people are paying attention because of his performances.

Long & Strong: *You are very entertaining in and around the circle, always have been. You're very intense and have a yell that is a borderline shriek. Where does that come from? Are you a natural showman?*

Reese Hoffa: My showmanship is something that I try not to do consciously it just happens. Most of the time I do things on a whim because I like to throw in a relaxed environment. If I am that person doing something crazy it calms me down inside and allows me to have fun and throw even farther. Over time I have become more and more comfortable with being a showman, and I don't have to work hard at it. For me, I now try to carry my emotions on my sleeve so that when I do hit a big throw I can scream and yell loud enough for the throwing gods to hear me and bless my throws as worthy of their approval.

LSTJ: *What was up with the turkey leg at the 2000 Drake Relays?*

RH: The turkey leg victory lap was something that



Hoffa's performance was not so 'Unknown' at the 2003 Home Depot Invitational

Coach [Don] Babbitt and I cooked up after I won the Drake Relays for the first time. The first year that I won I did a quarter victory lap, and from what I was told, the first by a thrower. So while I was recovering in the stands Babbitt had the idea that I should do a victory lap with a turkey leg the next year if I win. Since I was a freshman I have always heard about the turkey legs that they cook up outside the stadium. So it sounded like a good idea, but that is the easy part I had to win to make my little dream come true. Drake finally comes around and Babbitt reminded me of the mission of the day, and that is to win and do the turkey leg lap. I win Drake on my last throw and Panagiotis Mavraganis runs and buys the leg. I do the lap and the crowd goes crazy. It was one of the proudest moments in my life and I got a good laugh out of it too.

LSTJ: *How did the "Unknown Shotputter" gig in June come about? Can you talk about the competition experience itself? Obviously it didn't distract you much as you threw well.*

RH: Basically Don and I have talked about doing something crazy for the shot put since I've been at Georgia. One of the ideas was for Thrower X or the Unknown Shot Putter. We envisioned it as a masked thrower with a cape and midget sidekick with chalk on his head. The midget was to cheer for me after every throw and retrieve my shot put. Bruce Tannin, the announcer for the Mt. Sac meet, was in charge of elite athletes for the Home Depot meet. Don threw out the idea for Thrower X over the phone. Bruce loved the idea and wanted me to throw at the meet anyway so he said he would give me a little bit of money to throw as the Unknown Shot Putter. Don and Paul Doyle (my agent) asked me if I was interest in doing it. Of course I said yes. So I went to the local costume shop in Athens and bought two masks, one to train in, the other to compete in. When I first started to train in the mask it was very difficult. I was hot and the sweat poured down my face and neck and I could not see

that well. So I cut some eye, nose and mouth holes in the black garbage bag I was using and things got better. Just kidding, I cut some better eyeholes and cut a big section off the side that allowed me to hold the shot to my neck better. As for the competition I was very psyched up, but I did have a concern that if I threw poorly, the highlight of the meet would be the mask instead of my performance. Good thing is I had a lot of fun out there, and got a PR for that time of the year. I beat numerous quality throwers that are very tough any time of the year. The fans that were there enjoyed the meet, and I had a few people cheer for me that made it a little easier to throw with the mask on. I believe a lot of attention was brought to the shot put for not only the far distance, but also for the entertainment.

LSTJ: *You've been able to steadily continue your progression in the two years since graduation from the University of Georgia. What is the difference between Reese now and then?*

RH: Before I came to Georgia I only had a year and half of training in the throws coming out of high school and only about a year of experience with the spin. Coming to Georgia has allowed me to gain the experience needed to understand and reform the spin correctly and consistently. As for now I am more consistent with the spin. I am able to hit most the positions that I feel will allow me to throw far. Also, I have a lot more confidence that when I throw the ball will go far.

LSTJ: *Do you work full/part-time since graduation? Are you throwing for NYAC?*

RH: I work a part time job at a wonderful place called Dial America. My job is to take credit card applications over the phone, and I also route refinancing and loan calls for Chase Manhattan. This job allows me to work out in the afternoons and work at night. The only thing I do is talk, so I am not physically tired, just mentally. Yes, I throw for NYAC which is a great organization. Hopefully as I continue to grow so will their support.

LSTJ: *What's it like training in Athens with Don Babbitt's crew?*

RH: Training with Babbitt and the crew of athletes in Athens has been great. Since the arrivals of Brad Snyder, Breau Greer, Adam Nelson, and Renata Foerst, my intensity of training has increased, my

preparation for meets is better, and I have been shown what it takes to compete at a high international level. Also Don Babbitt is cool too. One of his best training techniques to prepare his athletes to throw far is the whopper joke. He has used it since I have been at Georgia. Brad, one of the first athletes to come to Georgia, has given me his generosity, training habits and a dedication to one of the greatest TV series in the world, The Simpsons. Breau, who came in later that year, is great friend, travel companion, and is the best natural Scrabble player, who I hope to beat someday. Adam has taught me a great deal about throwing, competing, and how to make karaoke look good ('99 Nationals for all that were there).

LSTJ: *Relative to many of your peers, physically you are not a dominant presence. So how do you explain your success at the elite level?*

RH: I want to prove everyone wrong that a 6'0", 290 lbs. guy can move the ball just as fast and far as someone that is bigger. For the most part it hasn't bothered me that I'm not as big or strong as the next man. I have won meets even in high school and college not because I am the biggest. It is because I rely on my technique more than anything else. In high



Hoffa cruised to a bronze at the 2003 USATF Champs and a World Champs birth

Victor Sailer

school, David Macohevec, my coach, taught me that it is positions that create power. Plus have you ever seen my calves?

LSTJ: *When did you become a spinner? How would describe your technical approach...what do you have to do to be successful?*

RH: I started spinning near the end of my junior year under the careful eye of David Macohevec. He started to teach me the basic steps to the spin at a track meet. The teaching of the technique took on a life of its own. Both coach Mac and I would not stop until I finally got it down to something that I could use in competition. Three months later at the state championships we unveiled the fruits of our labor and on my first throw with the spin I threw 58'8" to not only win, but to have the farthest throw of that year for the state of Georgia. It happened to be a five-foot PR and the start of my journey to the University of Georgia. As for my technique, being a shorter shot putter, I have to work the speed of my spin and lift the shot at the end. An analogy that I have used over the years is "controlled fury". In order for me to be successful with my throws, I try to think as little as possible and let the many throws that I did in practice take over in the form of muscle memory. If for some reason I have to put a little bit of "stank on it" if you will, I will put everything I have into the ball and know that it will go far.

LSTJ: *Talk about your weightlifting philosophy. What are some of your best lifts (maxes or reps at a particular weight)?*

RH: I want to lift as heavy as possible and be able to move the weight as fast as possible. I concentrate most on the clean, bench, squat, incline bench, push press, push jerk, and snatch. I also do some short sprints, stairs, and bounding to keep me reactive. I try to build a strong core in the fall and get as strong as I possibly can. I try to hit all the weights with as much intensity as I can and if I am not tired during that time then I did not work hard enough and I will work even harder when I go again the next time. When the season gets closer I try to keep the same intensity but at lower reps and get plenty of rest. I also try to make sure there is an even mix of lifts that I do throughout the year so I can hit the muscle from every angle. I try to taper off later in the season to maximize recovery and lift whenever I can while I am on the road in places that do not have the facilities

that we have in the States.

My bests:

Snatch	130 kgs. x 1
Clean	175 kgs. x 1
Bench	485 lbs. x 1
Squat	560 lbs. x 3
Push jerk	405 lbs. x 3
Push press	175 kgs. x 1
Incline bench	350 lbs. x 2

LSTJ: *What is your standing throw on a good day?*

RH: About 57 feet.

LSTJ: *Talk about your Pan American Games record last month with a personal best throw of 20.95m (68'8.75").*

RH: Going into the meet, I did not feel like I was going to throw a PR, but I did feel good. Prior to the meet I was training with a new shot from Jump Start Athletics. It was a 128mm JSA Polanik. It has a texture to it that is good to throw in competition right out of the box. I am thinking about changing to this shot. I would like to thank Jeff Gorski, the US javelin coordinator, for sending me the shot. During the

meet I felt that the first person to go over the meet record line of 67'7" would have the best chance of winning the meet. On my second throw of the meet I threw 68'8.75" the meet record. First off I could not believe the ball went that far and second I had a good idea that I had the meet won unless someone goes and throws out of their mind. I was very excited that I threw far and won a major meet so early in my short career. I'd like to thank the competitors for pushing me to such a good throw, especially Brad Snyder who I knew was a major threat.

LSTJ: *Can you explain the mysteries of the Rubik's cube to our readership?*

RH: The Rubik's cube is a game that not many people are ready to explore yet. The Rubik's cube chooses you to solve it, and you do not choose when to solve it. I have seen many people attempt to solve the cube and have failed time after time. I was one of those hopeless souls that thought it was my time to show the Rubik's cube who is boss and each time I failed. One day when I was not even ready the cube called to me, and it sent me on a three-month journey to the solution of the cube. Some of the weak souls read the

THROWING PROGRESSION

High School

Junior 58'8"

Senior 64'3"

College

Freshman 62'7¼"

Sophomore 63'10½"

Junior- 64'11¼"

Senior 66'4¼"

Professional

1st year 67'2"

2nd year 68'8¾"

little book that comes with the cube. For me I threw it aside and did it somewhat like the forefathers of the cube did, and just figured it out with trial and error. Finally I found the solution and my journey was over. I still do the cube to this day in hopes of completing my training and become a Cubemaster. I am close and I will have the title of Cubemaster and share my gift with the world.

LSTJ: *What's the story on that voodoo stick you had a couple years back?*

RH: The voodoo stick is something I found when I did a meet in Puerto Rico when I was a junior in college. I bought it from an old lady in a grass hut, and she told me that I would have good luck as long as I took care of it. Which means I could not destroy or break it or it will reverse my fortune and it will bring me bad luck. She pricked my finger and rubbed my blood on the top of the skull head and sent me on my way. I did not think anything about it at first and did the meet and won. I took the stick back to the house where I was staying, and had no problems that night, until Chris, the guy I was staying with, and I were playing around and the stick sustained a minor fracture. I taped it up and it looked good as new. The next day I woke up, and I was two hours late for my flight. When we got to the airport, they told me everything was fine because the airplane I was going to take had a blown engine. I took the stick to my first Nationals hoping for the same kind of luck. Once again it comes through and I make the final. At the meet it broke in half, and then broke again, so all I had left was the skull head. I took it back to Georgia, where I was taking summer classes, and I failed every single test I took the first week of classes. Then the water pump on my car went out. I tried to give it to my brother, but he would not take it. So I had to take the skull and bury it in the woods somewhere in

Augusta, Georgia. I would tell the exact location, but I would not wish anyone that bad luck.

LSTJ: *What are the key elements of your spin technique?*

RH: The key elements on my spin technique would have to be trying to stay under control the whole time I am throwing. I have a tendency to get out of control and press when I am trying to throw far. I also try to stay on the ball of my foot as much as possible but for some reason I have a bad habit of turning out of the back like I am trying to do a hammer turn. So far I have been able to get away with it, but when I am throwing far, I am on the toe better out of the back. Speed is the main thing that allows me to throw with the big boys. I lack height but I look at it as if I have more ring to work with so I can push a little harder and create more speed through out the entire throw. The last thing that is key for me is to try to throw the ball

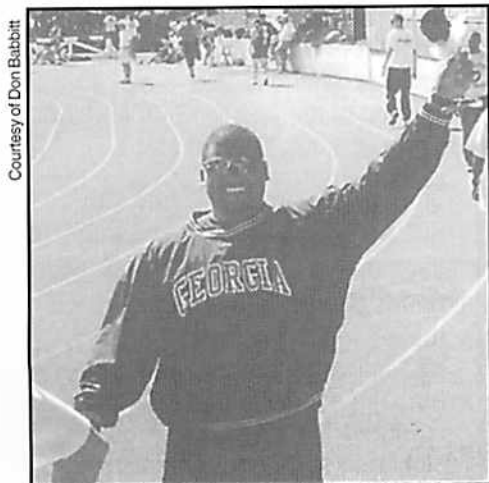


as close to a 45 degrees angle as possible. I know it is very hard and there are very few that can get the ball there but I have to be as close to perfect in order to keep up with the guys that are taller and stronger than I am.

LSTJ: *What do you see in your future, throwing and otherwise?*

RH: Next year, I hope to put myself in the 70-foot club and make the US Olympic team for the first time, just as long as the rest of the guy's cooperate with me. I will hopefully be closer to my goal of being the number one shot putter in the world. I hope to make a few more world championship teams and Olympic teams. I know that there are some very talented throwers coming up and getting to the top will be very tough. After my career in throwing is over, I will hopefully find a coaching job somewhere, so I can teach the next generation of shot putters how to do it Hoffa style.

LSTJ



Drake Relays...a man and his turkey leg

WORKING THE EARTH

By John Smith, Ohio State University



Gliders have thrown 75'+ and spinners have thrown 75'+. There has been more 22 meter efforts in the last ten years with the rotational technique, but the glide has produced more World Championship and Olympic medals in the history of the event. The glide seems to hold up better under pressure situations simply because there are less technical movements that can go wrong. The rotational technique on the other hand, seems to produce more 70'+ throws and better standing throw to full technique differential. The glide seems to require bigger weight room numbers to produce a 70'+ throw, but is more stable under adverse situations.

I was a rotational thrower who glided at one time and thought the glide was an uncomfortable way to throw the shot. I ended up coaching a female athlete (Connie Price-Smith) for 15 years that went from 42 feet to 60 feet in two years and 4.25 feet in the next 13 years while using the glide technique. Connie on average would put 113-115% on standing throws with shots ranging from 4 kg.-12 lbs. and up to 116%-117% on shots that ranged from an 7 lbs.-8 lbs. The technique performed well under many national and world situations.

From this experience I started thinking about taking some of the rotation out of the rotational technique and take a page out of European methods of developing discus throwers. American throwers fly around the ring and are very airborne with an airborne reverse. European discus throwers have short single support phases and work to grind the earth with non-reverse leg action. Being connected to the ground seems to hold up very well in high pressure world class situations because the many moveable parts of the discus technique have been reduced to a more efficient technical model with less technical points to work on, think about and make mistakes on. The technique is easier to teach, perfect and can run on autopilot once many years of repetitions are put in.

The two things that I have learned from teaching the glide are running the ball in a straight line (ball alignment) and strong leg action against the earth that creates a good strike and finish (non-reverse throwing). With this linear philosophy in mind, I started rethinking the rotational technique. Rotational throwing presents many problems

when developing an athlete from the beginning, so a training procedure had to be developed to insure that 80-90% of all throws were taken in a correct fashion to develop a technical model that could hold together in high pressure situations, but yet produce more than the 115% of the standing throw at all times to justify making that athlete a rotational thrower over a glide-style thrower.

I will try to outline a daily training procedure that I used with Dan Taylor to go from 62'8" with the 12 lbs. shot to 69'11 3/4" with the 16 lbs. shot from September 25th of 2000 to March of 2003 (2.5 years). Dan is a 6'6", 330 lbs. northeast Ohio boy with good talent and almost zero weight-training background. Even though the strength work involved accounted for approximately half his increases, I will try to stick to the weekly throwing and drill work it took to develop this in such a short time.

Throwing Progression and Drill work:

§ Non-reverse Standing Throws- (18 lbs., 16 lbs., 14.5 lbs. for 6-8 throws men) (12.5 kg., 10 lbs., 4 kg., 3.5 kg., 3 kg. 6-8 throws women). Stands are taken in the order written. Attention is paid to proper leg action and working the feet to drive the hip forward. I am also looking for a good left side block and a long straight-line strike on the shot over the board. Striking and finishing a strike is very important. Right hip is taught to lift, then turn.

§ Non-reverse half turns- (Learning to work the earth) You use the same balls and throws as the non-reverse standing throws. You start by placing the right foot in the middle of the ring with the right toe pointing to the 10 o'clock position (the front of the ring is 12:00 and the back of the ring is 6:00). The left foot is

placed where the left will be at the start of a full throw. Head up, belly ahead, shoulders square to the field, then the ball of the right foot grinds the earth (the ring) to move the left leg to the front of the ring. It's important that the left leg does not take a circular path but rather a straight line to the power position, similar to someone trying to kick



John Smith

Dan Taylor

you with the back of your heel. If you keep the thighs squeezed tight this will also control the left leg in a straight-line path. This is a quicker way to get the left down and also promotes the ball being driven in a straight line. While this leg action is going on, the upper body stays back in a locked position while the shot stays almost in the same position while the whole system is turning. This is how the ball is kept in straight-line alignment during the rotational technique. The ball becomes part of the pivot point of the body and puts the thrower in a position to immediately strike on the ball when the left leg makes contact. This movement will end up being very similar to the same strike that a good glider has with better leg action and upper body action. This drill is deadly important because it can produce 87-90% of the full throw and for this reason a thrower must become very good at this move and make it a high priority. The better the athlete half-turns, the greater the potential of the full rotational throw. (A triple half-turn: turn to the front- turn to the back-turn to the front and throw) can be used to teach the half-turn if the athlete is having problems staying back and pivoting correctly on the right leg while the left finds the straight line power position. Any miscue will show and make the athlete feel what is going wrong.

- § Non-reverse Giant Steps- (linking the move out of the back to the half-turn position) You use the same implements and throws as the last two drills. Once a descent half-turn throw is created, then the problem exists on how to get out of the back to arrive into the half-turn position. A giant step is simply starting in the normal full throw position (straddling middle). The first move is left (pushing off the left leg, hip and arm) to the left so that 90% of the weight is on the left side as the right foot pushes off and causes the body and the right leg to turn to the top (5 o'clock position). The left side and arm are pointing directly towards the center of the field (12 o'clock) as the left toe of the left foot is pointing towards the 2-3 o'clock position. This is very similar to a soccer style kick. Then you slowly drive the inside of the right knee towards the middle of the ring. When contact is made with the ring, the thrower comes to a stop. At this point the thrower should be in a half-turn position exactly like the half-turn the thrower practices everyday. The thrower then does a half-turn and makes a non-reverse throw.

- § Non-reverse Walking Throw- (Slow motion full throw) Use the same implements and throws as the last 3 drills. This drill is a giant step without the stopping in the middle. This teaches the right leg to make ground contact then "Work the Earth" rather than turning in mid air then landing. Many rotational throwers that turn in mid-air, and wait for the right foot to land, do little with their legs and the throw usually slides out to the right sector line. Even though the right rarely points towards 10 o'clock on a full throw, it should be practice this way to over exaggerate the right leg action and drive in single support section of the throw. This drill really starts to teach the athlete ball alignment and the sequence of biomechanical events that has to happen using the easier to learn slower speed. Sometimes it's surprising how far you can throw off this drill. 90-94% of full throw can be accomplished with this drill. Saying "Turn-Step-Turn-Throw") during the movement is a great way to get the athlete to time this drill and learn the movements.

Blending Drills:

- § Non-reverse walking throw, followed by a non-reverse full throw- These throws are taken with normal weight shots, 16 lbs. for men and 4 kg. for women with the walking throw followed by a full throw with a 14.5 lbs. or 15 lbs. for men and a 3.5 kg. or 8 lbs. for women for 6-8 throws. This drill is simply training the body for a full speed movement, using the walking throw as its guide. Blending drills are sometimes amazing, even making the athlete feel like the throw is happening with little effort. In essence what you have done is patterned or programmed the nervous system to react a certain way by setting up the system with the drill progression.
- § Non-reverse full throws, followed by reversed full throws Same shots and pattern as the preceding drill, but you can take as many throws as you want until the technique starts to break down.

Practice Tricks:

- § Throw up a hill or over something. I have a ring sent up to throw up a hill at Ohio State. It makes the athlete work the ball up and the leg up then out without worrying about how far they are going. Dan Taylor spent two summers and falls throwing up the hill.

- § Having a hard time with an athlete over-turning? Place a bench in the ring and give them just enough room to run a straight line. If they over-turn they hit the bench. They only do this once and the coach doesn't have to say you over-turn a million times.
- § Having problems staying in the ring? Place a bench or a 55-gallon garbage can in front of the ring. Athletes start to learn to stay in. Throwing into a net also works well.
- § Having problems blocking at the front? Set up a table and two garbage cans on each end and give the athlete a tunnel to throw through. Can't fall away and throw right and can't rotate by the left side and throw to the left.

Fall Training (Dan Taylor):

- § Shot practice 3 times a week- throwing a 20, 18, 16, and 14.5 lbs. I move an athlete up once they have hit 60 with the heaviest ball. One practice will become a non-reverse full/reverse full practice to make the full move more precise. Everything else will stay the same.
- § Discus practice 3 times a week- Throwing 4k, 3.5k, 3k, 6lb balls and 2.5k, 2.25k and 2k discs. Discus practices are very similar to shot practices. Heavy ball throwing has been added to develop specific strength. Dan creates torque that he is not strong enough to bring through. He has a unique ability to throw a 1k 280 feet.
- § Hammer practice 2 times a week- One heavy ball practice, one light ball practice, 15-20 throws each. He really does not like to practice hammer. But when you have a 451 lbs. hang clean, the ball will go.
- § Lift twice per week- We do nothing but lift on lifting days and throw on throwing days. One day is a pulling/upper body day and the second day is a squatting/upper body day.
- § One or Two days off per week- The second day after squatting is always an off day, and any other day I see fit if the athletes look like they need a break.
- § Shot PR's - 69'11 $\frac{3}{4}$ " competition, 73'2" with a 14.5 lbs. in practice from a full, 60' half-turn with the 18 lbs., 63' half-turn with the 16 lbs., 66'5" half-turn with the 14.5 lbs. Standing throws: 52' with the 18 lbs., 56' with the 16' (meet time) 60' with the 14.5 lbs. Best meet time standing throw to full throw differential 56'/69'11 $\frac{3}{4}$ " (14 feet). The worst has been 10'. Dan's average is 12'.
- § Lifting PR's- 451 lbs. hang clean with little drop and done with straps, 480 lbs. bounce bench, 303 lbs. hang snatch, 440 lbs. box

clean, 650 X 3 box squat (parallel position), Safety Squat 800 x 3 below parallel position pulling out of the bottom with the handles. Dan does not back squat do to positioning problems.

- § Athletic ability- 4.8-4.9 40-yard dash and can tomahawk dunk from a standstill. Dan is very quick for a big man.
- § An all-around thrower- 193'4" in the discus, 217' hammer, 73'4" in the 35 lbs. weight. It is important to be an all-around thrower when you are young. The best throwers in history have a good all-around throwing background.
- § Competition Warm-up- Two standing throws, one half-turn, one full throw, then compete. Then he opens with an 80% effort unless he feels the urge to go after the first throw.

The Future

Even though the rotational technique in the past has been a great equalizer for the smaller man to compete with the bigger man, I believe the evolution of the event is going to favor bigger men. The seven-foot ring is going to be the biggest obstacle for a big man, but if they can develop a move with good ground contact and leg action and learn to stay back and contained, I can envision the same throwing that we saw during the late 80's and early 90's. The long throws will happen, there is no doubt in my mind. But the technique has

to be simple and solid enough to survive high-pressure situations.

This is what I am trying to create with "Working The Earth", a simple solid

move that can put 12-14 feet on a standing throw. Then all that has to be developed is a 20m+ half-turn and a 60'+ standing throw. Those qualities can be created with weight room strength and specific strength on the throwing field. The gliders of the late '80's had 70' stands in their arsenal to throw over 22 meters. A good rotational thrower needs only an 18-19 meter stand to accomplish the same distance. A big man is needed to produce that kind of horsepower without the aid of drugs. We have many shot putters that are world class because of the distance they are pulling off the standing throw. The Europeans have been stubborn to change and seem to be sticking with the glide. I wonder how long it will take them to see what the Americans have seen for the last 20 years.

LSTJ



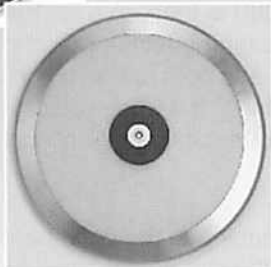
Taylor

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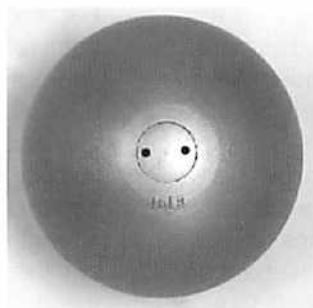
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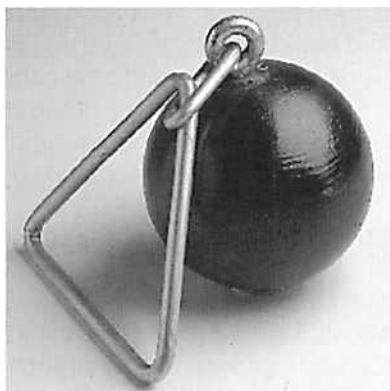
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Strength Training for the Hammer Throw

By Todd “Ironman” Taylor

Introduction

The goal of this article is to share some concepts and ideas about acquiring and maintaining strength for the hammer throw event. My present day cyberspace name of “Ironman” is actually an old college fraternity house nickname from back when athletes rarely saw the inside of a weight room. At best, one might be using some old Universal gym machines and doing free weight squats “back in the day”. Strength sport athletes did little lifting and only then in the off-season. I got the name because I loved to climb to the little weight room on the 3rd floor of a big old brick field house built in the 1800's and throw the iron around. I owe a great deal of my success in athletics over the years to weightlifting in a classic old gym starting as a 5-foot, 102 lbs. 13 year-old who wanted to play high school football. By my senior year, having gained 20 lbs. a year, I was introduced to the Olympic lifts.

I have always loved the lifting part of training or conditioning. However, I can also readily admit that strength training, and especially the free weight lifting part of it, is only one piece of learning to become a proficient hammer thrower, i.e., one who can throw far using good technique. While there are some good resistance training exercises that benefit all of the throws, I will focus specifically on what exercises and lifts are most beneficial for the hammer event. The multi-event thrower will then have to look at things that might be incorporated into or emphasized in his/her current program. A limiting factor will be access to and quality of facilities and equipment, your training workload capacity, and time constraints. I will also address incorporation of strength training into periodized training programs and what the priorities should be during the major phases of training.

Strength Attributes of the Hammer Throw

In a past article on hammer throw technique in the *Long & Strong Thrower's Journal*, I addressed the strength attributes involved in throwing the hammer. Certainly, general overall strength is beneficial when you are trying to put a heavy object and your body in synchronous rotation. Lower body (legs) and core stability (lower back, abs, obliques, hip flexors), often referred to in strength sports as the body's “power zone”, is more important than upper body strength in the modern throwing technique. Strength in the hammer is needed for counterbalancing the outward pulling force generated by the hammer and to get into and hold the key positions during the throw. So, one would also want to be strong in the shoulder girdle and back as well as having strong stabilizer muscles for

all the continuous tension (against the ball) and balancing involved in a hammer throw. A great finish in a hammer throw releases the energy built up in the turns through an explosive upward lifting of the legs, hips, back, and arms in a smooth, controlled, forceful movement. Finally, good flexibility and range of motion throughout the throw is very important—one of those paradoxes of hammer throwing...flexibly strong.

Thus, we have just said that in throwing the hammer, the thrower must have “strength” that addresses base or overall strength, core stability, explosive power, flexibility and range of motion used in the event. For purposes of this article, I will not address core stability, flexibility, and agility exercises since the available literature and Internet resources are pretty good for these areas.

Olympic-Style Lifting for Power Development

The foundational lifts/exercises for the hammer throw involve the Olympic lifts and their variants (power and hang cleans and snatches and pulls) for one reason—these are explosive multi-joint movements engaging muscles, tendons, and connective tissue that generate high power output. Olympic lifting movements help train and condition the body for developing maximum torso kinetic energy through a full-range of coordinated and continuous movements in the hammer throw. Throwing is about “slow to fast” movements and powerful acceleration that pushes the limits of the “force-velocity curve”, i.e., huge acceleration in a very short time frame. “Power” is expressed as $\text{Force} \times \text{Distance} / \text{Time}$; thus, explosive power is often referred to as “speed-strength” because your choices to become more powerful are to be quicker or have more “limit” strength. Velocity (speed) is the y-axis and Force (strength) is the x-axis for the force-velocity curve. The training effects of Olympic lifts and their variants increase both speed/quickness and strength, thereby “pushing” the force velocity curve and the ability to generate maximum power on demand.

Yeah, I know I am preaching to the choir here, but those who would take the straight bodybuilding or powerlifting path to building strength in the hammer need to know that the greatest transfer to the athletic movements in the hammer (and all of the throwing events) comes from the Olympic lifts and their variants. Here is a practical illustration of the force-velocity curve (power output) at work. Patrick O'Shea in *Quantum Strength & Power Training* compared the actual power in wattage (distance moved and amount

of time to lift the weight divided by body weight) for two former world record holders in the deadlift (Doyle Kenady) and clean movement of a clean & jerk (Alex Pisarenko). Kenady took 2 seconds to pull 405 kg. .40m, generating 5.67 watts for his 140 kg. bodyweight. Weighing about 40 lb. less, Pisarenko pulled his 265 kg clean to a height of .90m generating 21.64 watts—4 times the amount of power!

“Why is that?”, you ask. Good question and some important concepts to grasp so you can see the correlation between what some call the “quick” lifts and throwing in general—and definitely the hammer. First, in the clean and the snatch, if done correctly, you initiate the movement of the bar by generating a downward force or push into the ground with your feet. Second, the really powerful Olympic-style lifters are able to pull for a longer distance and time before they get under the bar. The best throwers can generate force for the longest path before release. Third, the great amount of force generated with a heavy weight is what creates the greatest stimulation and development of the fast-twitch fibers—the type of muscle you need for explosive throwing movements. Finally, that explosive throwing movement occurs because of not only the power generated but through a “summation of forces”; in both the Olympic lift and the throw, the bar/ implement is increasingly accelerated with each successive movement.

Developing Strength Along the Pathways of Motion

Now having set the stage for throwing all this iron around in the gym, we need to be as balanced in our strength training approach as we are in the ring with the hammer. The foundational pulling movements, however, are essentially along one plane of motion (vertical) while the actual throwing motions in track and field are multi-directional and rotational as well in the hammer. So, it is equally, if not more important, for the thrower to do twisting and turning movements with resistance (tubing, bars, med ball, plates, dumbbells, pud, etc.) along the pathways of motion actually used in the hammer. For the multi-event athlete, then, these exercises will be the greatest addition to their core-lifting program if he/she wants to add something event-specific for the hammer. This is not unlike the core training of javelin throwers who do more med ball, knockenball, tubing, and assistance lifts than other throwers. For the record, the 2003 NCAA D-II men’s hammer champion and 3rd, 5th, and 9th place women’s finishers were from Western Oregon University where the women do only this type of resistance training and it is the mainstay of the men’s.

A Warning to Muscle Heads

I also want to emphasize a point I made in my earlier article. One can certainly achieve a measure of

success “muscling” the hammer and weight (its indoor version), however, this can create bad habits that interfere with proper technique to throw far and maximize your potential. Generally, strength gains should parallel improvements in technique and training plans should favor drills, agility, explosiveness and throwing during the competitive season. Create a goal to develop more base strength or power or address specific weaknesses in muscles or the kinetic chain in the off-season. But all things being equal, technique rules in the hammer. Short-term gains in distance from strength gains may eventually be comprised by poor technique, usually expressed as being a “strength thrower”.

Melissa Price’s 2003 USATF National Championship in the hammer (70.34m) was labeled by her coach, Mark Colligan, “That’s a 275 lb. clean!” That’s real world validation of the correlation between Olympic-style lifting and power output. But one also needs to note that this is an elite thrower with very good technique who specifically set out to integrate increased strength and power levels into her overall periodized training plan.

Unfortunately, some throwers also have to be reminded that throwing hammers for a training session is a form of strength training in itself that is the most applicable strength training that can be done. Variable weight training with heavier hammers in the pre-season can help develop specific strength for the hammer throw. When planning weight room workouts, please remember not to over train yourself by forgetting that throwing sessions are strength training as well.

The training session imposes increased resistance or progressive stress overload on the body and the body responds to the stress with the SAID principle—Specific Adaptation to Imposed Demands. Huge workload volumes and a bazillion sets do not build strength, rather they fry your central nervous system and get you over-trained. The growth in muscles and your strength gains come while the body is recovering from the workout. If you are wiped out from a ton of lifting, drills, and throwing, then you are pedaling backward not making gains.

Something to think about right up front, then, is what components of your training should be put on the back burner for awhile if you are not feeling fresh and strong for either ongoing training or competition? If you are a thrower, you should always throw—less volume or less intensity and/or more drills and fewer throws. The exercises that develop functional strength along the pathways of motion (tubing, bars, med ball, plates, dumbbells, pud, etc.) have the closest correlation to the actual throwing motion. So, the things to drop are

those that the Ironman and many others just hate to do—back off the heavy lifting in the weight room. Backing off can mean training sessions/days, volume (sets), intensity (weight), or speed (quick lifts with less weight).

So, regardless of your “training age”, listen to your body to keep from getting over-trained or signs you might need to back off—the “haze” or “fog” that comes over you, zapped energy level, waning enthusiasm, etc. Be dedicated; not dumb! Be committed; not comatose!!

Core Lifts—Strength & Power Development

Keeping in mind that most throwers are multi-event throwers, I will prioritize the lifts for those that want to emphasize the hammer in their overall training. Keep in mind, I have never been or coached a 65m or above thrower, but I will give you my rationale for prioritization.

1. Power Snatch
2. Front Squats
3. Rack Romanian DeadLifts
4. High Pulls/Power Cleans
5. Bent Barbell Rows

Power Snatch The power snatch is the one lift that most closely mimics the power generated in the hammer throw at time of release. As the hammer comes down between your legs you are lifting straight up with the hips, legs, back, chest and arms—pretty much a snatch!! The one difference is that your hands are closer together holding the handle, thus, I like to use a grip width on the Olympic bar that is just outside my knees. Really push into floor at the start of the snatch and have your weight back on your heels. In the power snatch you get under the bar but with a much longer pull upward than into the squat “catch” position. I like to think in terms of throwing the bar up and getting under it to keep myself from throwing behind my head and off balance. One more thing....I like the athleticism of the split-leg snatch. Think about it...in the hammer you step to the ball with the right leg/foot to “catch” the hammer as the ball is approaching it’s high point in the orbit and most powerful outward pull on you. So, I split-leg snatch with the right foot out front.

Relax the Traps! Speed kills in the hammer, but radius rules!!! At the same speed, 2-3 inches of additional radius can add significant distance to the throw, if you understand the physics of centrifugal force at work in the hammer throw. Tight trapezius muscles and shoulder girdle during the throw will greatly shorten the radius. Thus, in the pulling motion of the snatch (and clean too), I let the traps relax and concentrate on the pulling motion being a continuation

(or summation) of the force generated getting the weight off the floor. I also do the whole movement under control. So, *when you are doing your Olympic and other lifts you should mimic various aspects of the hammer throw.*

Front Squats If you are doing Olympic lifts, you are working the hips, thighs, and hamstrings. Squats just give you more emphasis in those areas. Some throwers just mix in front with back squats for variety or think that they work different muscle groups. However, the hammer thrower should be keeping his/her hips behind the heels and not piking (bending at the waist). The front squat keeps you in a more upright position like throwing a hammer than does the back squat. If you stop and think about it, hammer throw release is about a three-quarter squat movement. But during the hammer throw you are reacting to the increasingly outward pulling force of the ball as you counter the hammer. Thus, I think it’s a good idea to do some heavier squats in the one-half to three-quarter position, but also do some full range of motion front squats to strengthen the hips and stabilizer muscles for the varying angles you get into countering the ball through three or four turns. Again, thinking about mimicking the hammer throw, with the weight racked in front, you have to think about resisting falling forward just like resisting the outward pull of the hammer by countering with the hips behind the heels.

Rack Romanian DeadLifts Okay...what the heck are these? Throwers need to make sure they don’t have a muscle imbalance between the quadriceps and hamstrings. Romanian deadlifts, done correctly provide great hamstring and lower back development. Generally these are performed by moving from a “hang” position with an Olympic bar to just below the knees by sitting your butt/hips behind your heels with your head and chin up, i.e., an erect posture; then, you stand up with the weight. My variation on this is to use a heavier weight in the power rack with the weight starting point just above the knees. Take a comfortable clean grip just outside your knees. Keeping the weight way back on the heels, stand up with the bar without shrugging the shoulders and let the bar essentially “roll-up” your thighs to your waist. There is a pulling motion up the thighs but it is primarily a hip/leg action. A barbell plate under the heels or Olympic lifting shoes will enable you sit back better.

High Pulls/Power Cleans The two exercises are coupled together because you can decide what works best for you. The main benefit is the heavy pulling movement, so I prefer the Tibor Gecesk method of not “racking” the pull onto the shoulders (the clean) until the last rep of the set or not even racking it. I am an old guy without great wrist flexibility, so I still find that

I get the benefit of handling heavier weight than a snatch. The power clean “catch” of the weight is more of a three-quarter squat and erect like throwing the hammer than the true “rock bottom” deep squat catch of an Olympic lifter. Nothing wrong with the Olympic clean; it’s just not necessary.

Bent Barbell Rows This is one of my favorite exercises along with “close grip lat pulldown’s” on a machine. Technically, these rows would be called an “assistance lift” like the pulldowns on a machine, but I count “core” lifts as the ones where I am focusing on strength and power with only a few reps (five or less). The true bent barbell row position is almost like a “good morning” bent with your back parallel to the floor with bent knees, except you row/pull a bar toward you. I like to take the lower back out of this and work on the pulling motion while putting my butt/hips behind the heels. The only difference between this bent barbell row I am describing and the Rack Romanian DeadLift above is that the bar is pulled into the waist from that bent position (you don’t stand up). Or, another way to describe it is a barbell row from the Romanian deadlift position.

Core Lift Progressions—Positions and Sets/Reps I will not take the time to discuss periodized training and lifting programs but generally you will move through general conditioning, general preparation, specific preparation and competition (in-season) programs. As one progresses toward the season, a starting point with the core lifts for “strength” cycles (off-season) would be 5 sets of 5 reps with the Olympic variant lifts being performed from the floor. A “strength and power” cycle(s) moves the reps down to the 3-rep range for 2-3 sets. Generating peak power production occurs in the 1-2 rep sets with 3 to 5 minutes rest in between sets so your energy stores are fully replenished. Olympic lifters will tend to work a lot at this latter level, but throwers only “work up” to heavy volume and intensity for a cycle or two at most and during the season can maintain strength levels at 85% of one rep max (1RM) for 3-5 reps in 2-3 sets.

For variety and to work explosiveness, I like to see a progression over the entire pre-season and competitive season in the snatch, pull/clean done from the floor, boxes (below & just above knees), and hang positions. During the season, a good option for keeping up strength levels and being explosive is alternating what some would call “strength” and “speed” weeks. In the strength week, do your core lifts in that strength maintenance range of 2-3 progressive overload sets of 3-5 reps (85% 1RM). During the speed week, take a 50-60% 1RM weight and do those core lifts in “Bulgarian sets”. Angel Spassov got these from the Bulgarian Olympic lifters who would do as many reps as they could within 20-second sets. For

the snatches, cleans, pulls—do them from the hang position. I really like the explosiveness in the Bulgarian’s with a “hip” snatch—starting with the bar at hips. In the early part of the season, most throwers lift and throw “through the meets” and then peak for one or two special meets (conference, region, etc.). The Bulgarian sets in a speed week are great for the “bigger meet” competitions during the season, i.e., you will keep some strength up but still be fresh for the meet.

More on Speed and Explosiveness

Because of the influence of football coaches and strength training in high schools and health clubs, American throwers associate “strength” with a big bench press and huge back squat. But many roads lead to Rome as the saying goes. Squat and deadlift movements may be fine for foundational or base strength, but if you think about the throwing events—especially the hammer—your feet are neither staying in one place and exerting force vertically in a single plane nor do they have your bodyweight equally distributed throughout the throw. As you move from double to single support, catch the hammer at the top of the orbit, and move again through double support, you are doing a lot of single leg and hip movements. Getting into the season, then, more explosive movements that use each leg would include: jump squats, step-ups, and one-leg presses.

Jump Squats Perhaps one of the most enduring impressions of hammer throw WR holder Yuri Sedykh in his training is the film footage of him doing jump squats with dumbbells. Done correctly this is more of a plyometric-type exercise where minimal time is spent gathering yourself upon contact with the ground; the emphasis is on the upward explosiveness. Using lifting straps, you can use some serious weight with just the dumbbells. Another way is with an Olympic barbell from a one-half or three-quarter back squat position. Regardless of free weight choice, correct posture with the chest and head up are important to mimic the position of the hammer throw.

Step-Ups The Russians are also famous among powerlifting and weightlifting devotees for the “Russian Squat Routine” which is designed to be inserted three times a week into a six-week cycle of periodized training to improve squat strength (+5% 1RM). Yet, Angel Spassov noted that former Russian great hammer thrower and coach, Anatoly Bondarchuk, concluded through research that high step-ups were much more beneficial than the heavy back squat. First, at the bottom of the squat, a load twice what is being lifted is placed on the lower back (as in greater injury potential); two, you never assume the back squat position in throwing or sports; and, third, the step-up generates more “power” in the thigh and hip.

Similar to the jump squat, you can do these with a barbell on the back or holding dumbbells. Ideally, the hammer thrower would want to keep a 90-degree angle of the leg (thigh parallel to floor) at step-up to the platform or box. You simply step up to the platform with one leg while pushing off with the toe of the other foot; as you step up, feel the thigh and hip engaging. For example, step up with the right, then the left and step back down with the left, followed by the right. Keep your good hammer posture with the head and shoulders over the hips and get a nice rhythm going. I visualize myself stepping to the ball with the upward moving leg. One can do all the reps on one leg and switch or simply alternate legs during the set. The Bulgarian weightlifting team replaced the squat as a core lift with heavy step-ups progressing from 5-6 reps to 3-rep progressive overload sets. Not only did they recognize greater muscle fiber recruitment and muscularity, the resulting world records led them to replace the squat in their training with the heavy step-up.

One-Leg Press Think about the catch of the hammer: the left leg is collapsing with the hips behind the heel like a piston absorbing the outward pull of the ball, as the right leg touches down and applies centripetal force into the ground to begin acceleration of the ball from the top of the orbit down to through the back of the circle into the next turn. Boy what a mouthful....but the legs are working both together and independently in that transition from double to single and back to double support. The single or one-leg press can help develop that strength as well as the small stabilizer muscles involved in balancing. While holding onto a power rack, you can do one-leg squats at bodyweight or with a sandbag on the shoulders. Machine one-leg presses are easier to perform. Concentrate on the pushing motion in an explosive fashion; if you can't do it explosively then reduce the weight. Stay in the 6-8 rep range. I like the one-leg press with the machine because you should be pushing into the ground with the right forefoot (and setting your hips behind the heels) when you catch the hammer coming out of single support.

The Rationale Strength training guru, Ken Sprague (owner of the original Venice Beach, CA Gold's Gym), weighed in on this subject in a recent post on *The Ring* throwers discussion forum. He supported all three of these exercises as superior for "power-building for a ground-based movement." He stated that the real issue for strength training in the throws is finding "how to best train the body to increase acceleration." He then gave a twofold answer: "1) maximally train each joint angle involved in the technical movement, so that maximal force can be applied at each joint angle, and, 2) train to meet the enormous bilateral forces the body encounters in the technical move-

ment." So, in addition to summation of forces involved in the throws, especially in the hammer throw, you want to think in terms of the direction and angle of those forces for the generator of those forces—your legs from the ground up.

Sprinting and Jumping Now, if you have the time, go ahead and work in plyometrics (hops, bounds, jumps, etc.) and sprint or hill work for explosive legs. But, the above exercises could be all that most throwers need during a competitive season when you should be doing a lot of throwing. Learn to do a few things well and don't get yourself burned out and over-trained. I tend to see those exercises as more pre-season and conditioning work for the time-constrained thrower. The Bulgarians found that the step-ups produced leg muscularity similar to those athletes who did a lot of sprinting and jumping in their training.

Hammer-Specific Exercises

Didn't think we'd ever get here, did you? This is the section that most throwers already doing lots of weight training will have jumped to while skimming through the preceding material. [Hey....go back and read it...can't hurt you!] When I say hammer-specific exercises, I am referring to exercises that have the greatest carry-over in terms of utilizing the functional muscular pathways and range of motion used in the hammer throw. As I stated at the beginning of the article, these would be the exercises to "add" for training specificity and the last exercises to drop next to throwing if you are getting over-trained. Conversely, do these exercises in your peaking weeks for competitions or for the day before and day of competition for stimulation.

Plate Twists and Swings

Twist-to-180 The absolute number one best exercise will be the plate twist around to 180 degrees behind you in a dynamic, fluid motion (do not treat this as a rigid core-trunk building exercise although it is great for the obliques). You grasp an Olympic barbell plate with both hands and turn to your right side (looking directly at the plate) with the trunk while pivoting only on the left foot; let the plate swing down in front of you (counterbalancing with the hips as it passes in front); then turn to the left side while pivoting only the right foot and let the plate "run long" like the hammer to 180° behind you (see 180°). Do this for 6-8 reps (3 reps to each side) and feel the rhythm to each side; several sets.

Stop and think about what is going on here: 1) You are developing range of motion and flexibility, 2) your shoulders and head are aligned with the plate/hammer, 3) your hips are countering the outward pull of the weight, 4) your pivoting right foot/leg creates a ground-up force, 5) you feel the plate/hammer pull you into

the turning motion, and, 6) you mentally ingrain the feeling of letting the hammer run to its high point in the orbit. For variety, I step outside to the patio and throw the plate in a release at the end of the last rep to the left side. Anticipating the release and correctly lifting everything up as it comes by the front of your legs and throwing out into the sector, you should see the plate spin flat—up and out like a flying saucer.

Pendulum Swing Finish In the plate twist-to-180, we did everything in the throw except step to the ball in single support and get into double support for accelerating the hammer (if we do split-leg snatches and step-ups we mimic stepping to the ball). Done correctly, the finish or release of the hammer is not a violent, jerking, radius-shortening movement at the end of the throw. In the words of Lance Deal, “it’s just another throw of the ball out to 180°.” In the pendulum finish with a barbell plate, grasp it with both hands and place directly over your head as you pivot to the right side. Your arms should be straight upward, the plate overhead and parallel to the ground. Then from this starting position, using ground up forces, pivot with both feet/legs to the left as you swing the plate down through 0° in front of you and get into the same position on the left side. To mimic the release, you need to anticipate the plate coming through the bottom of the pendulum and lifting with the legs and arms upwards as you pivot to the left and the arms swing overhead. Then continue back and forth. Same as the plate twist-to-180°, do multiple sets of 6-8 reps. Don’t muscle this exercise and just use the upper body; you want to feel the ground-up force being generated and the rhythm.

Plate Wind The winds in the hammer throw should ideally involve a full-range of motion with the shoulders and not just the arms moving around the head. Take a barbell plate with both hands and begin doing winds with a full shoulder motion—be able to turn to 180° behind you with the leading elbow. Do 6-8 reps on each side for multiple sets. The emphasis here is feeling a full range of motion and rhythm. Feel the gravity drop of the plate/hammer from the top on down through 0° between your legs in front of you. This rhythm is key to setting up the turns and the throw—you should feel this rhythm during your hammer winds.

During the off-season when starting all over with general conditioning circuit training before I get back into any kind of hypertrophy or strength and power weight training, I do these plate exercises along with at least weekend throwing to keep the neuromuscular pathways well-grooved. For a young athlete, the plate exercises and med ball throws are a good starting point for developing functional strength as their technique improves through drills and throws.

Pud Throws

The “pud” is a hunk of iron with a handle that is used for partial throwing movements of the hammer throw. You can find Lance Deal’s nicely manufactured pud’s through the major track and field suppliers. The pud can be thrown overhead or frontward for general core strength development; concentrate on the hip pop or snap just like in a snatch to generate the momentum. Grasp with two hands, good three-quarter squat position, swing the weight behind your knees and waist or chest high, then swing it back down and throw it. I will generally do these with a 35-lb. pud for 10 throws each (forward and overhead); this basically just duplicates a snatch movement. Sometimes I’ll even throw a 45-lb. Olympic plate from this position; or even heavy boulders during my general physical preparation (GPP) training period in the pre-season. However, the most hammer-specific of the pud throws is the “sling”—gripping the pud handle in the left hand, cradle it in the right hand over your right shoulder, and let the pud sling down through 0° between your legs, lift with the legs and hips as you pivot and release out over the left shoulder. This is a great mimic of the left side action at the finish of the throw. Make sure it is a rhythmic “backhand” with the pud and not a leaning with the left side or pulling motion with the left arm (bad habits). For the slings, I would go for 10 throws to each side; always work both sides to maintain balance in your throwing muscles. Don’t forget to let the feet pivot, and again, generate force from the ground up as you pivot.

Bar Twists

This is probably the single most recognized exercise for increasing rotational strength. An Olympic bar (and weights as necessary) is placed on the shoulders with the arms resting on the bar. Slowly pivot to each side and try to see 180° behind you. This is one of the best exercises to understand “ground-up” generation of forces for throwing the hammer. Forget that conditioning or beginning weightlifting class where you may have first learned this exercise by simply turning your obliques or shoulders. Press your right foot into the ground and feel the force work upward through the knee, thigh, hips, obliques and shoulder girdle as the bar makes a nice long turning path around to your left; then repeat to the other side. Don’t keep your bodyweight centered; instead, try to feel the generation of force with the ground-up shifting of weight from side-to-side; head up and moving with your shoulders. Do 10 reps each side for multiple sets.

Med Ball Throws

Well, it certainly doesn’t take any strength to throw a med ball, but you won’t find a better implement for grooving those neuromuscular pathways for throwing events. For the hammer throw, the traditional med ball can be thrown two-handed from the opposite hip or

shoulder like the pud sling throw. The med balls with handles ("power ball" and other names) can also be used. You can also do a one-turn throw from the sling and finish into a wall. Obviously, these things don't weigh a lot, so you focus on the correct movements and positions. Try lying with your hips on a Swiss Ball, rotating to the side with outstretched arms, catching a med ball thrown by a partner, rotating 180° on the med ball to the other side, and then rotate back throwing the ball to your partner. Here's a hint....you do that with just your arms and you will throw yourself off the Swiss Ball...use the trunk/obliques to both balance yourself and do the rotating with your arms along for the ride.

The Core Blaster

I just had to make a plug for one of my favorite exercises, although this one is pretty close to the snatch. I "stole" this one from a Tibor Gecsek clinic and handouts—his favorite exercise. I had a blacksmith friend of mine make me (and a few special friends) a device to swing a stack of barbell plates—a plate on the bottom welded to an 18" upright pipe (Olympic bar diameter) which has a hole drilled near the top for a removable rod. The rod serves as a handle for swinging the weights and is removed to slide plates on & off. The movement is like doing a repetitive forward pud throw as you grip the perpendicular rod at the top, get into that good three-quarter squat position, and start swinging the "core blaster" chest high and then down behind the knees. Keep the weight back on the heels and really use the hips to

pop forward and generate the force from the ground up. You can also simulate this exercise with a dumbbell or Olympic plate.

Summary

I hope you are not tired of hearing the expression "ground-up" generation of force, because once you grasp it and train it, you will learn to throw the hammer much more efficiently and effortlessly. You will develop the right kind of "strength" and "power" and not just be an upper body dominant "strength thrower". The really successful elite throwers have a relaxed or "loose upper body" that is moving around this tremendous amount of force generated by the lower body while letting the ball be the "engine" around them (another Lance Dealism). Your lifting choices should be predicated upon movements that will improve your throwing. Use controlled, directed movements in your lifting and throwing. Be aware of balance, rhythm and timing in your lifting and throwing. Incorporate plate swings and twists for additional work or specialization. Be a thrower first and then a lifter. Don't let your strength development quantum leap your technique improvement.

Remember, this has come direct to your living room from the "Ironman" who L-O-V-E-S to lift! Lift intelligently and purposely to improve your hammer throwing and develop body awareness of movements in lifting and exercises that mimic positions and aspects of the throw. *LSTJ*

It's In The Mail...

The July issue of LSTJ is always a challenge because the NCAA and USATF Championships fall at the end of June. Gathering all the results, reports and photos in a very short period of time leads to a love/hate relationship with the issue. By the time I proof it at the printers, I never want to see it again.

This was compounded this year by an unexplained, "we make no guarantees", "please fill out this form", non-reimbursable screw-up at my post office of choice. It was bad enough I could not get the July issue in the mail until July 29, but then my eight or nine sacks of mail vaporized for a couple weeks. When I continued getting non-delivery e-mails two weeks later, I made my complaint and got a polite smile, an apology and a few weak suppositions about the fate of the fruits of my "literary genius". Guess I'm grateful. Apparently the sacks were routed to another post office (perhaps the third moon of Uranus?) or sat in a corner gathering dust because my local subscribers did not begin receiving their copies until August 16. Slowly thereafter deliveries were confirmed with me, but I had a couple people tell me in mid-September they had just gotten their copies. One even received a mangled copy in plastic bag with an apology.

Third-class mail should be delivered in 7-10 days, but once again, the U.S. Postal Service makes no guarantees. At this juncture it is the most cost and time efficient option for a publication the size of this one. If you have not received the July issue, please let me know and I will get you a copy.

As always, thanks for your patience and support!

Glenn Thompson
Publisher

Whatever Happened To...

By Glenn Thompson

Since the July issue, I came across a few people items I thought the readership might enjoy hearing about:

Teri Steer

All spring I kept wondering where in the world is Teri Steer, the 2002 USATF outdoor shot put champion. Her name did not show in results nor did it come up in news reports. So I dropped Teri an e-mail shortly after USATF's and got this response.

"I injured my back right before the opening of my indoor season. I have had so many injuries I decided to let my body really rest from this one and get ready for next year. I am now training again and getting ready for next year. I am living in Columbia, Missouri. I moved from the Georgia group and everyone, including myself, thinks I am crazy for doing so. I am closer to my hometown in Nebraska, which is what I have wanted for quite awhile. And I guess you could say a relationship with Christian Cantwell has also moved me to this area."



Steer

I have decided that next year will be my last year of track and field and so I am kind of getting my life ready for what happens after track. I hope 2004 will be my best year yet and a good going away year!"

Al Oerter

Word reached me in July that four-time Olympic gold medallist Al Oerter had fallen into ill health with heart problems. So I dropped him an e-mail as well. Thankfully he was able to answer!

"On March 13 of this year I went down with congestive heart failure. It took the emergency folks some time with the paddles to get my ticker going, but everything seems to be on the mend. My physicians had changed my medication and that seemed to cause the problem. Now that I am on my original stuff, I am feeling okay."



Oerter

Three cardiologists have told me I need a new heart and I am not about to do this. All my life I thought that I would play the hand that I was dealt and this

heart thing is no exception. I think I have it under control with medication and hopefully will be around more than a few years. At least I feel right now even after the fatigue of the trip that this is possible.

We just got back from World Track and Field Championships in Paris and to say the least I was disappointed in the US throwers. It seemed the European throwers were a bit more technically proficient than the Americans. Alekna used his height and wingspan to great advantage and the Hungarian (Fazekas) has phenomenal speed. I believe the American throwers have to knock off some of the heavy lifting and start pounding away in the ring. Pure strength by itself is no longer going to do it. I obviously don't know what was in the mind of our throwers as they got into the ring, but most seemed a bit tentative. Obviously if that was true, it's not a good throwing psychology."

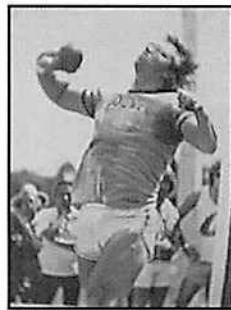
Terry Albritton

Finally, subscriber Donald Hoff contacted me about interviewing his old college teammate, former shot WR holder Terry Albritton. I had contacted Albritton several years ago about doing an interview, but for one reason or another, it never came to fruition. Time had passed, so I figured I would contact Albritton again. I sent an e-mail in July and his response came quickly.

"Write me in a couple of months with your questions. I am moving to Cambodia. After visiting there last summer, I've decided to follow Kurtz into the heart of darkness. After raising two sons that are now on their own, I'm dedicating the rest of my life to my own needs and nature, namely, living on the edge. As you know, throwers by nature are misfits with an extreme dislike for the mundane."

I'm merely moving to a country where everyone is a misfit and there are no rules. Just the law of the jungle."

At this point, I began salivating thinking of the interview possibilities. I dutifully waited the requested two months and sent another e-mail to Albritton at one of his internet addresses. Back came a response from his [former] girlfriend, stating she hadn't heard from him and had more or less lost him to his new culture. At this point I fear this could be one fascinating story that may never be told. ***LSTJ***



Albritton

COACHING THE HIGH SCHOOL DISCUS

By Paul Brueske

Talent Identification:

To establish a successful high school throws program, the first thing a coach must do is find the right type of athletes. Keep in mind that great throwers are also great athletes. It is not advisable to recruit slow, overweight, non-athletic kids for the throwing events.

Power is a key ingredient for success in the throws. Look for athletes with speed, quickness and explosiveness. Besides quickness, look for physical traits such as height, large hands, a long wingspan and large bone structure. However, keep in mind, size alone doesn't necessarily equal to success in the throws.

The following basic physical tests can be useful in indicating potential for success in the throws:

- Overhead backward shot put throw
- Standing long jump
- Vertical jump
- 30 meters sprint

Character traits such as work ethic, commitment, coachability and aggressiveness should also be considered. At the high school level, a mediocre athlete with these qualities can still achieve a relatively high standard of success.

Building solid discus technique can take years. Therefore, it is an advantage to get kids working on technique early in their prep careers. Personally I like to take the biggest freshman sprinter and teach him/her to throw. If your program allows you to work with junior high school students you will gain an even greater advantage.



Entry from the rear of the circle

Quality Repetition

Technical proficiency requires quality repetition on a consistent basis. It is important the athlete becomes comfortable with the proper technical movement patterns with plenty of reps in the circle and through various event specific drills.

Technical Outline

The following is a description of an ideal technical throw for a right-handed thrower.

Hold

- The two most common holds:
 - 1) Fingers evenly spaced.
 - 2) Index and middle fingers together for power.
- The athlete should experiment with both holds to determine which is the most comfortable.
- With both holds, the discus is held *not* grasped. The discus should be held slightly to the right of the implement's center. This can vary slightly depending on the size of the athlete's hands. Also, the first joint of the fingers should overlap the edge of the discus.

Preliminary Stance and Wind

- Feet are approximately shoulder width apart with the knees slightly bent.
- Long relaxed arms are held about shoulder level.
- Only one preliminary wind is necessary. More than one wind is wasted effort.
- The action is simple, rhythmic and relaxed. The discus is not forced back.

Entry and Sprint to the middle of circle

- Center of mass is lowered and body weight is shifted over the ball of the left foot.
- Staying slow and level the body turns as a unit on a bent left leg.
- The right leg is swept wide with the inside of the thigh leading.
- Once the left foot has rotated 180 degrees to the direction of the throw, the athlete should sprint off the left leg. Power comes as the left leg pushes forward. A common error is the athlete spins off the left foot instead of sprinting.
- Focal point: left corner of the front of the circle or approximately 10 o'clock. This split second eye contact slows the upper body enough to allow the lower body to get into a leading position.
- The upper body is stretched with the discus carried behind the right hip. It may be helpful for the athlete to think of the right hip as running

away from the discus.

- Turn is close to the ground.

Power Position

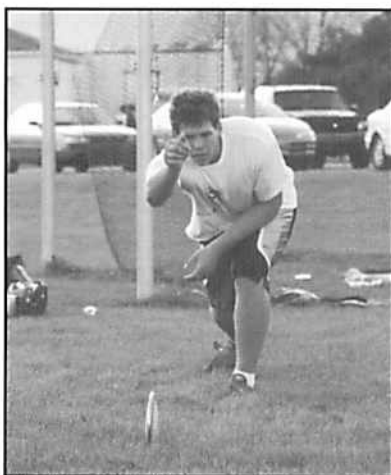
- Backward lean with most of the bodyweight over a bent right leg.
- Heel-toe position: left toe is aligned with the right heel.
- The athlete is on the balls of the feet. The heels never touch the ground.
- A torque or "X" position is achieved in which the lower body is leading the upper body. In other words, the shoulders are facing toward the back while the hips face to the side.

Delivery and Reverse

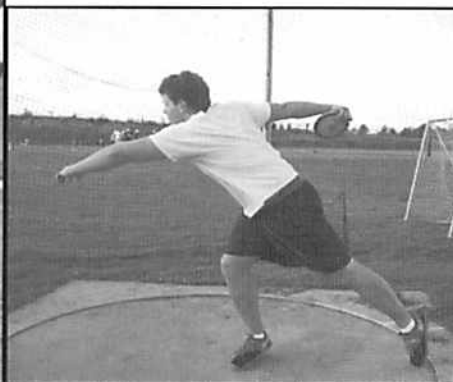
- As the right foot lands, it continues to rotate and pull the right side around a braced left side of the body. This action pulls the discus in a wide arc until it is released in a slinging manner with the palm down.
- The right foot and knee turns inwards as the heel turns out.

This action turns the right hip to the front. The thrower stays up on the balls of the feet. A helpful coaching cue: *"Think of the right foot pivot like grinding a cigarette into the ground."*

- The left arm (non-throwing arm) swings wide so shoulder rotation doesn't exceed hip rotation. When the left hand points to the direction of the throw, the left arm is pulled in tightly to the left side of the body and stops. This left side blocking action causes the right side to accelerate.
- The palm is down at release with the right thumb applying slight pressure to guide the flight of the disc. A helpful coaching cue: *"Keep the thumb down"*
- The discus comes off the hand in a clockwise rotation at shoulder level.
- Following the release, a reversal of the feet can take place to help the athlete from fouling. Keep in mind that many top throwers block so well that they do not reverse their feet. This is especially common with female throwers.



Bowling the discus



Power position

Drills

- **"Bowling" Drill:** Allows the athlete to practice the release of the discus. The discus is bowled forward out of the hand onto the ground in a "clockwise" manner.
- **"Flip" Drill:** Another release drill. Athlete stands upright and flips the discus upward by squeezing the hand in a clockwise manner.
- **Standing Throws:** This drill allows the athlete to focus on the technical aspects of the power position. Stand with the weight over the ball of the right foot with the feet aligned in heel-toe position. Perform the technique of the power position and delivery sections of the technique outline.
- **Sink & Slings:** Start with the feet together with the weight over the right leg and the discus held at the side. The athlete sinks down on the right leg, slides the left leg towards to the front of the circle while the discus is slowly swings back to shoulder level. The athlete performs the technique of the power position and delivery sections of the technique outline.
- **Wheel Drill:** This drill focuses on turning the right foot. Place the right foot in the center of the circle, stay up on the ball of the foot and torque the upper body.

Start the movement by turning the right foot with the heel up. Keep upper body relaxed as the legs move into the power position and throw.

• South African Drill:

This drill teaches the athletes to drive across the circle into the power position. Athlete starts with the left foot facing the direction of the throw (the right leg is behind the left) at the rear of the circle. From this position the athlete sprints across the circle into the power position and throws.

- **Full Throws:** Practicing full throws helps to master the slow to fast rhythm and feel of the complete throw. Many practice throws should be taken with submaximal effort to focus on technique.
- **Balance Drill:** Start with the knees bent in a



Paul Brueske

slightly bow-legged stance at the back of the circle. The athlete rotates 360 degrees on the left leg, with the knees separated, back to the starting position. If the athlete is balanced, they should finish in the same position they started. A beginner may find it difficult to perform a full 360-degree rotation. If this is the case, modify the drill by having them perform quarter turns until they have rotated a full 360 degrees. Once they have mastered the quarter turns, progress into the full 360-degree balance drill.

- **Alternative implement throwing:** Throwing with alternative implements, especially in the pre-season, is a great way to work on technique. It is difficult to correct technical mistakes with an actual discus because things tend to happen very quickly. Alternative implements tend to slow the movement down and help you feel what the body is doing. Examples of alternative implements include light dumbbells, traffic cones, weighted bars, bowling pins, a sock filled with sand and weighted balls.
- **Variable weight throwing:** As an athlete advances, the use of variable weight throwing may be useful. Overweight throwing develops strength and makes the competition implement feel light. Underweight throwing develops release speed. A very important consideration is rhythm and timing is crucial to success in the discus. Therefore, stay within 10-15% of the competition weight to prevent rhythm and timing problems.
- **Throws without a reverse:** Most practice throws are performed without a reverse. It is not necessary to spend a lot of time working on the reverse in training because it is an action that comes naturally to most athletes. Practicing throws without a reverse promotes a strong block and hip drive. Throwing without a reverse also prevents a premature shifting of bodyweight to the left leg. Many top throwers, especially females, throw without a reverse in competition.

Key Coaching Points

- **Slow to fast rhythm:** The rhythm of the throw is ooone...two-three. Emphasize the importance of starting under control and gradually accelerating. Don't rush the throw. A helpful coaching cue: "Start slow and low, finish high and fast."
- **Take only one preliminary wind:** Coach athletes

to take no more than one preliminary wind at the back of the circle. Any more than one wind is wasted effort.

- **Summation of forces:** The big, strong, but slower muscles of the lower body start the throw, then the smaller quicker muscles of upper body are used to finish. The lower body should start the turn while a relaxed upper body trails until the very end.
- **Stay on the balls of the feet:** Keep the heels off the ground by staying up on the balls of the feet throughout the throw.
- **Angle of discus at release:** A throw that looks like a "line drive" will go further than one that looks like a "pop fly".¹ It is important to note that the arm carries the disc and slings it out but the legs lift it.²

• **There are many ways to throw far:** Although there are a few general technical principles that are mandatory for elite performance, individuals will interpret technique to their own style. There are as many different technical styles as there are successful throwers. Taller throwers might have more success with a more rotational style used by throwers such as Wolfgang Schmidt.

Shorter throwers may have an advantage throwing with the linear style that John Powell employed. A prep coach be able to distinguish between individualistic style and poor technique. Guide your athletes to success.

- **Teaching progression:** A common mistake made by many prep athletes is trying to use the full spin too soon. Gradually progress into the full throw. Beginners should focus on mastering the standing position throw first then gradually progress to the full throw.
- **Throw at a target in practice:** During practice have the athlete aim for a target in the middle of the sector at a distance that exceeds their personal best by 5-15 feet. It is also helpful to have the foul sector lines marked for practice sessions.
- **Throw multiple events:** At the high school level, encourage athletes to compete and train for the javelin, shot put and discus. Success in multiple events will help score more team points and can help make athletes more attractive to college coaches.
- **Develop overall athleticism:** Make dynamic mobility warm-up/sprint mechanic routines a daily practice procedure for throwers. Activities such as



Beginning position for the wheel drill

Glenn Thompson

short sprints (under 30 meters), a limited volume of ground based plyometrics, and hurdle mobility drills are great training methods to develop quickness, mobility, power and coordination.

- **Know when to stop the throwing session:** When an athlete's technique starts to get sloppy due to fatigue it is time to stop throwing. If an athlete continues throwing they will simply be ingraining poor technical habits.
- **Peaking:** Focus more on quality practice throws versus a quantity of throws towards the end of the season. Reduce the amount overweight throwing and overall volume of practice throws. Moreover, throws with lighter implements can be useful in reaching peak performance at this time.

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Maintaining the Integrity of The Physical System of a Javelin Thrower

By Kurt Dunkel, Throws Coach, Shippensburg University (PA)

For the past decade, I have been very interested in the javelin. As a senior at Altoona Area High School, I had one of the most useful classes I have had my entire life. My high school track coach, Tom Musselman, taught a course, which was entitled "Physics of Sports." As a high school, college, and post-collegiate javelin thrower and as a university throws coach, I have had a keen interest in the factors that contribute to making a javelin thrower excel. I have also had an interest in contributing, in some small way, to the collective pool of information, which exists surrounding this event.

One thing I have found very intriguing concerning the javelin is the fact that there is no set standard for success. I have often seen javelin throwers, who don't look remotely talented or athletic throw extremely far, while those considered very athletic may struggle. I have seen very small javelin throwers excel, while a larger, more muscular, and more powerful counterpart may really struggle with the javelin. It is amazing to see men such as Steve Backley and Jan Zelezny; men who you wouldn't really notice if you passed them on the street, throw well over 300 feet. This in comparison to the obvious double-take one would do if they saw Toth or Alekna in passing. Before assessing the things we can't see so easily with our eyes, what are some of the obvious visible attributes of a highly successful javelin thrower?

Watching a tape of the introduction to the 2000 Sydney Olympic javelin final, I had a wonderful opportunity to see the greatest javelin throwers in the world together in one place. Beside the fact that psychologically, these guys have the ability to handle tremendous amounts of both internal and external stimulation (i.e. Olympic final in front of 100,000 fans and performing at their very highest level physically), they also have some common physical characteristics. First, all are above average in height. Zelezny, the greatest javelin thrower of all time, really is an exception, in that he is 'only' in the 5' 10" to 6' range. Most of the other competitors are in the 6' 2" range. Although they are large men, they are not huge men. It is my estimation that most of the finalists fall in the 195 to 235 lbs. range. So, although smaller javelin throwers can realize a high level of success, we see that the most outstanding javelin throwers are usually of above average height and weight. But, they are not extremely heavy. This would indicate that they do not

have massive frames and dense bones. There seems to be an area of frame size and density that is neither too heavy (and slows the athlete), nor is it too light (which may risk injury due to weak structural integrity and connective tissue). Remember, in addition to accelerating a javelin, these athletes must also accelerate body parts. Hence, the bone density of a Neanderthal is not beneficial to being a high-javelin thrower. Which is fine, because the Neanderthal's main concern with spears is accuracy, not distance.

Next, it is clear that all the Sydney finalists exhibited wonderful posture and fluid movement; with fundamentally sound movements originating from the hips. Their movements showed obvious balance at the core level. This means they had wonderful stability through the postural muscles of the back, abdomen, and both the large and small muscles of the hips. I did not notice the characteristic scoliosis, lordosis, rotated hips, externally rotated drive leg, and muscular imbalances that one can see in so many javelin throwers. What makes these guys so unique? While I address some other issues in this article, I would like to mainly focus on this question. In particular, what are some of the things you as a coach (or athlete) can look for and attempt to develop? I feel there are some things, which are often overlooked. When overlooked, they prevent many javelin throwers from reaching their potential, and also cutting short many careers.

There is a common paradigm, which exists in America, which goes something like this: "It doesn't matter what life has dealt you, it is just a matter of pulling yourself up by the bootstraps and sucking it up." While overachieving is a big part of the American dream, over-achieving can only go so far in athletics. One cannot forget the role of genetics. Needless to say, Jan Zelezny chose good parents! Humor aside, one really can't make themselves taller, nor can they turn their slow twitch muscle fiber into fast twitch. Additionally, someone with extremely poor coordination and balance cannot turn themselves into Dan O'Brien, Michael Jordan, Bruce Lee, Mia Hamm, or Jackie-Joyner Kersee by hard work alone. Sooner or later, we must all face our own limitations. Assessing limitations as well as strengths is the sign of a good athlete. When one can realize what their unique physical and mental gifts are, they can work to develop a style which suits them.

Mechanical principals: first and foremost, throwing the javelin is not a normal movement. The human body was not meant to throw the javelin. If you can take one thing from this article, it is the following: Throwing the javelin twists the body tremendously. Furthermore, if you are not aware of what these patterns of wear are, how to identify them, and how to manage them, you (or your athletes) will never reach your (or their) potential.

The goal of this particular article is not to discuss in detail training methodologies, training philosophy, or specific workouts. There is a wealth of information available for any coach in important areas such as periodization, weight training, plyometrics, biomechanics, diet/nutrition, technique, and mental preparation. There seems, however, to be a gap in the information available in terms of the unique demands throwing the javelin places on the human structure. My background is not in studying the body from a biomechanical level. My experience comes from throwing the javelin competitively for 8 years and coaching javelin throwers for the past 5 years. I have seen, first hand, how the failure to take into account the imbalances, which develop in the javelin thrower's body, can limit performance, increase injuries, and shorten career. So you may say, "Sure this makes sense theoretically, but what about all this from a practical standpoint?"

From a practical standpoint, this article will focus on two core aspects. First, what is happening to the body as a result of throwing the javelin? Second, what can I, as a coach or athlete, do to reduce the negative effects that javelin throwing can have on the body?

What is happening to the body?

First, it is important to remember that the body is symmetrical. That is, it is balanced, and what we have on one side of our body (usually), we have on the other. Human movement has evolved due to, and corresponding to this notion of symmetry. The javelin throw goes against thousands of years of human development, not only in the movement itself, but also in the intensity and explosiveness of the movement. We see an interesting relationship develop as one progresses as a thrower. It is almost like a threshold. To explain, those who have the physical gifts required to throw extremely far are also most likely the ones who have the genetic gifts necessary to withstand the tremendous forces placed on the body. Conversely, those less gifted may also be more susceptible to injury. However, those that do not throw as far are not putting as much stress on the body (which could skew the equation). Following this logic, we see a relationship as well as a threshold beginning to develop. Simply put, this deals with approaching natural



Backley

limitations of the body. How far can you push your body (with training and throwing) before your genetic limitations prevent further development? As you develop, how aware are you of the very small changes, which may ultimately become (negative) overall bodily patterns of wear? Finally, how can greater awareness and progressive preventative work improve performance, reduce risk of injury, and stretch your natural limits?

Looking at the picture of Steve Backley (above), we see a wonderful example of what the body encounters when the javelin is thrown extremely far and with nearly flawless technique. Needless to say, this position is generating tremendous force and has taken years of training. If we view the body within the framework of symmetry, we see that, in many ways, the body is being developed in opposite ways. From a frontal view, if we imagine the thorax, pelvis, and shoulder girdle in a more simplified manner, it is in essence a capital letter "I"

"I"

In the middle of the vertical portion of the "I" (i.e. the spine), the spine is experiencing an anterior/posterior stretch (reverse C). It is also experiencing a lateral twist. So, obviously the forces on the spine are extremely dynamic and violent. The erector muscles of the spine, quadratus lumborum, serratus, intercostals, the deep & small muscles of the spine, rectus abdominus, and obliques are all experiencing separate and asymmetric movements. So at the center of the "I", there is a pronounced twist.

This twist sees a great degree of its origin in the pelvis, or in this case, the base of the "I". For a right-handed thrower, the left hip will ideally have a great degree of stability, during the throw. Due to simple laws of physics, this stability produces a powerful anterior drive of the opposite hip, and consequently, the torso. Due to the complexity of the pelvic/lumbar

region, this can be one of the most challenging areas to analyze. There are various major, surface muscle groups in this area, but there are also various smaller and deeper (but none-the-less important) muscles in this region. The four quadriceps, hamstrings, adductors, gluteals (medius, minimus, and maximus), tensor fascia latta, the deep hip rotators, and quadratus lumborum all have major roles in not only generating power in the hips, but also creating much needed stability.

As we move up the body, the next component we look at is the top of the "I", or the shoulder girdle. It is clear that the shoulder girdle is also a complex system, which undergoes dynamic physical strain. The picture of Konstantinos Gastoudis (right) shows us the forces the shoulder girdle generates/supports. As you can see, his left shoulder (the left side of the top of the "I") is dropping downward, while at the same time, trying to brace the left side (in conjunction with the left hip). You can also see the tremendous importance of latissimus dorsi to the javelin thrower. In this photo, you can nearly see the attachment site of latissimus on his humerus! Not only is latissimus dorsi being used, so is serratus anterior and pectoralis major. We see that these three muscles are primarily responsible for transferring the power generated in the core into the throwing arm. Of course we cannot forget that the shoulder is a very free moving and complex joint that sees a great connection to the scapula. The second integral point of this particular article deals with the movement of the thrower's scapula. It is the opinion of the author that the movement of the scapula is one of the most integral components of a successful javelin thrower. First, the throwing scapula needs to drop down the back in order to allow the throwing shoulder to roll into position. Proper throwing position requires the armpit area to open. This can be seen in the picture of Backley and Gastoudis. Second the scapula on the block side needs to drop down in order to cause the scapula on the throwing side to drive up and into the throw. Now the key in this scenario is the fact that there must be a delay between the block scapula's movement and the movement of the throwing scapula. This creates the stretch-reflex through the chest.



Gastoudis

This type of movement symbolizes the beauty of the javelin throw. On one hand, one needs explosive, fast-twitch muscle fibers, along with a great deal of flexibility and elasticity. Additionally, one needs the ability to coordinate an array of tensed and relaxed muscle group movements quickly and dynamically. For example, the scapula are closely linked with movement of the thoracic area of the spine. The thoracic area of the spine is located between the cervical (neck) and lumbar areas (lower back). In order for the scapulas to have adequate range of motion as well as stability, the thoracic area must have an equal amount of stability and range of motion. As you can see in the photos, there is a noticeable (yet not extreme) twist in the thoracic spine as the left scapula drops into the block position.

Often we will see very successful javelin throwers wrap the javelin and attempt to bring the delivery arm closer to the center of the system. As we know, the closer the delivery is to the center-line of the body, more power can be generated.

So, we need a body that is flexible, durable, explosive, and coordinated. Additionally, patience is also very important, as successful javelin thrower almost always needs repetition. I felt it important to address what is actually happening at the bodily level before addressing how an athlete or coach can attempt to maintain the integrity of the physical structure. When you develop an awareness of body patterns and the mechanics of the throw, then less of your time

is spent just on your own learning process. Thus, more time is available to focus on how to address the issue of maintaining the health of the body. This is absolutely a critical component of both success and longevity, because often the two are mutually exclusive.

The first part of this article I tried to cover in a very general way, what is happening at a bodily level to a javelin thrower. In the second portion of this article, I will discuss how these patterns are stored in the body and what can be done to prevent these unhealthy patterns. The role of fascia, muscle strength imbalances, structural imbalances, stretching, and manual manipulation of soft tissue will be discussed in greater depth. ***LSTJ***

BIG TURNOUT, BIG PERFORMANCES IN EUGENE



By Glenn Thompson

Masters Outdoor Nationals returned to Track City, USA, Eugene, Oregon, in early August for its 2003 edition, with 1,207 men and women coming to run, jump and throw. First time visitors came to understand the love and respect this sleepy Pacific north-western town has for our sport. Praise of meet administration was nearly unanimous from the competitors.

Given the performances notched by several throwers, Eugene should be known as Track & Field City. Among the more notables, Robert Ward celebrated

graduation to M70 earlier this summer by setting the only throws world record, in the hammer, at 51.89m/170'2" with the 4 kg implement.

Two American records were set in the shot (Carol Finsrud- W45, Joanne Grissom- W65), two in the hammer (Tom Gage- M60, Carol Finsrud- W45), and an astounding six in the javelin (Joe Greenberg- M50, Bill Platts- M75, Charles Pistorino- M80, Monica Kendall- W45, Tina Bowman- W50, Dorothy Vander Cruysse- W55). ***LSTJ***

2003 USATF MASTERS OUTDOORS WINNERS

WOMEN'S SHOT

W30 Jacqueline Nasca, 11.18m, W38 Laurie Jenkins, 10.14m, W43 Monica Thornton, 6.64m, W46 Carol Finsrud, 12.70m*, W51 Joan Stratton 11.23m, W56 Lorraine Tucker, 9.58m, W64 Cherrie Sherrard 9.76m, W65 Joann Grissom 9.78m*, W70 Marilyn Gray, 4.62m, W78 Johnnye Valien, 6.36m, W84 *Olga Kotenko, X5.65m, W88 Betty Jarvis, 4.29m

MEN'S SHOT

M31 Chad Lindsay, 15.76m, M36 Mike Curry, 12.17m, M41 Walter Shields, 15.08m, M48 Jim Wetenhall, 12.72m, M50 Ron Summers, 16.07m, M57 Charles Roll, 14.13m, M64 Glen Johnson, 14.59m, M67 Gerald Vaughn, 13.59m, M70 Robert Ward, 13.65m, M75 Hal Wallace, 11.21m, M80 William R. Nettles, 8.92m, M85 David Schlothauer, 6.94m

WOMEN'S DISCUS

W30 Jacqueline Nasca, 39.53m, W38 Brenda Westbrook, 44.76m, W43 Deborah Ecklund, 19.32m, W46 Carol Finsrud, 48.74m, W54 Mary Hartzler, 32.21m, W56 Lorraine Tucker, 23.41m, W60 *Margery Swinton, 23.16m, W66 Tomasa Schultz, 19.09m, W70 Marilyn Gray, 11.25m, W76 Patricia Osmon, 9.77m, W84 *Olga Kotenko, 14.47m, W88 Betty Jarvis, 12.34m

MEN'S DISCUS

M31 Chad Lindsay, 41.30m, M38 Todd Davis, 49.51m, M43 Hank Kraychir, 46.14m, M48 Jim Wetenhall, 41.98m, M54 Valentino Martinez, 48.16m, M55 Thomas A. Fahey, 49.71m, M62 Larry Pratt, 54.51m, M65 Richard Cochran, 53.00m, M70 Wendell Palmer, 40.98m, M75 Hal Wallace, 36.21m, M80 Bill Carter, 29.04m, M85 David Schlothauer, 22.97m

WOMEN'S HAMMER

W30 Jacqueline Nasca, 37.65m, W38 Laurie Jenkins, 33.51m, W43 Deborah Ecklund, 18.66m, W46 Carol Finsrud, 43.62m*, W54 Mary Hartzler, 39.76m, W55 *Liz McBlain, 27.92m, W60 Georgia Cutler, 36.04m, W65 Joann Grissom, 24.92m, W71 Judy Fetherston, 23.90m, W76 Patricia Osmon, 17.85m, W84 *Olga Kotenko, 16.26m*, W88 Betty Jarvis, 12.56m

MEN'S HAMMER

M35 Matt Cavender, 50.91m, M43 Marty Martinez, 40.44m, M45 Kenneth Jansson, 55.13m, M51 Thomas Meyer, 49.50m, M56 Todd Taylor, 51.86m, M60 Thomas Gage, 59.98m*, M67 Bob Humphreys, 38.73m, M70 Robert Ward, 51.69m+, M76 Phillip Brusca, 31.30m, M81 Robert Horsley, 24.69m, M85 David Schlothauer, 24.25m

WOMEN'S JAVELIN

W30 Jacqueline Nasca, 23.10m, W41 Caryl Senn, 34.27m, W47 Monica Kendall, 37.79m*, W50 Tina Bowman, 31.89m*, W57 Dorothy Vander Cruysen, 23.39m*, W64 Becky Sisley, 28.20m, W68 Christel Donley, 24.17m, W78 Johnnye Valien, 15.42m, W84 *Olga Kotenko, 15.90m*, W85 Katharine Gradick, 11.12m

MEN'S JAVELIN

M31 Ryan Weidman, 65.10m, M39 Daniel Scott, 43.56m, M42 Jason Bender, 59.29m, M45 Michael Janusey, 52.40m, M53 Joseph Greenberg, 60.21m*, M55 Drew Stevick, 47.49m, M61 Doug Appel, 47.35m, M66 Wayne A Morris, 40.59m, M72 Larry Horine, 38.19m, M75 Bill Platts, 40.70m*, M80 Charles Pistorino, 27.86m*, M85 David Schlothauer

* American Record

+ World Record

*Non-U.S. citizen

PATIENCE AND PERSISTENCE

By Lane Dowell

My dad was a well-respected elementary principal in our tiny lumbering community. While in single digits, he imparted some very sage advice to his number one son. My father felt the "P words" (Patience, Persistence, Poise, Pride = Progress) were very important to success in athletics and life.

Dad's wisdom was re-enforced upon numerous occasions during the growing years. None drove the nail deeper than a professor of history at good ole' Ivy Covered Walls U. Dr. Dry hammered into the far reaches of impressionable minds, struggling for a state of alertness, that Rome was not built in a day. Geez, I can still hear those words uttered with that slightly tainted English accent in that cool, poorly lighted, musty smelling lecture hall. Yikes, pass the No Doze! Thank goodness for the good looking blonde two rows in front. Hmmm, that's another story.

In October 2002 many in our youth hammer community were reeling at the apparent rejection by the Washington Interscholastic Activities Association's (the governing body of secondary school activities in our state) Executive Board of a proposal from the Washington State Track and Field Coaches Association to have the hammer throw contested at both of our state's prep track and field championships as an exhibition event.

Dang-it, many of us worked tirelessly to push the hammer measure through the WSTFCA Convention in January of 2002. Even the legendary Hal Connolly made a special trip to the Northwest to keynote the convention and help carry the day. We had built a lot of positive momentum. The coaches voted by more than a two to one majority to champion our cause.

The last hurdle was the acceptance of the hammer measure by the WIAA Executive Board in July. Centralia High's throws coach, John Schultz, came up big. Coach Schultz put together a very positive PowerPoint presentation that we knew would sell the board. The assembled administrators appeared impressed, but not enough bought the message.

Kevin Griffin, the Assistant Executive Director of the WIAA is a likeable young man that I have grown to know and trust. After a meeting of the WSTFCA Executive Board last October, Kevin took me aside and reinforced my Dad's words. "Lane," said Griffin, "down the road in four or five years things may be different and our state might be ready for the event.

However, you need to educate a lot more people (kids, coaches and administrators). You need to show them that this is a worthwhile activity that can be safely administered and will not be a drain on budgets."

It has been a year since the frustration of the WIAA Executive Board decision visited the hammer community. Did we sack-up our bats and go home? No way! Have we clung to our goal of recognition of this unique event for our high school kids? Definitely!

Progress in the Evergreen State...

The Athletes:

Since I have relied on family advice to help with the focal points of this article, I will throw one more into the sector. My dear, old-country grandmother used to say that the proof is in the puddin'. In Washington our coaches continue to mix a pretty good batch which seems to be growing and getting better, and better, and BETTER.

In the past four seasons, the Evergreen State has developed a reputation as a fertile breeding ground for young hammer throwers. Seven of our girls are competing at major universities on scholarships, while eight boys are plying their love of the ball and wire in return for a college education. The 2003 additions are Jessica Beach (155' 4") who hails from Olympia's Capital High and is now enrolled at Cal. St. Northridge and Centralia's Theresa Schultz (153' 1") now attending Cal. St. Sacramento.

On the boy's side of the ledger is the mountainous lad with the curly mop from Shelton High, Nick Owens (231' 11"). This last Spring Nick followed the footsteps of the 2002 season's best prep in America, Adam Midles (University of Southern California), to the top of Bob Gourley's national leader board. Owens, who placed second at the 2003 National Junior Championships at Stanford, is now throwing for the Tar Heels at the University of North Carolina.

To further illustrate the quality and depth of Washington's preps, one needs look no farther than Gourley's rmgourley@fctvplus.net U.S. High School Hammer Update. The competition should be fierce for the top male high-schooler in the Evergreen State in 2004. The combatants will be between Inglenoor (Kenmore) Senior Nate Rolfe (215' 8") and Capital High's Junior, Zack Midles (208' 3"). Rolfe, who finished as the fourth best in the U.S. this season

past, will resume the struggle with the National Youth Champion, Midles, who finished an excellent 2003 as the fifth best teen in America.

Many throwing aficionados, including a certain Olympic Silver Medalist coaching at the hotbed of track and field in our Pacific Northwest, are amazed at the meteoric rise of Rolfe in the hammer and would love to have him dawn their colors. The gentlemanly youngster credits his quick success to a passion for throwing, persistence in pursuit of his goals, keeping it fun, and attending some excellent clinics. Rolfe says, "It doesn't hurt to get advice from one of America's all-time best, Hal Connolly. Recently, we have been sending videos to him for a critique."

Zack Midles broke his brother's state sophomore record by over seven feet. Midles, who qualified for the finals at the World Youth Championships this summer, looks forward to the locking-of-horns with the Inglesmoor senior. Zack won most of the contests with Nate in 2003 and feels that a season of head-to-head competition will push both to greater marks.

Rolfe and Midles are the two top returning underclass high school hammer throwers in the U.S.A. Three consecutive years for a prep from Washington on top of the national leader board?

Like their brethren, a duo of Evergreen State girls will be pitted in what should be a year to remember. Camas High Senior, Alayna Mills (137' 9") and Olympia High Junior, Shannon Harvey (141' 4") will step into the spotlight recently vacated by Beach and Schultz. Mills came on like gang busters at the completion of last season, while the venerable Harvey, who has smashed the state freshman and sophomore records, just keeps on going. Both will vie for the title of best ever from our state held by Lewis and Clark's (Spokane) Britney Henry (166' 10"). Oh, by the way, Henry was just edged out of second place at this year's National Junior Championship by Alabama frosh, Beth Mallory.

In the cases of Rolfe, Henry and Harvey and many others from our PNW, one can only wonder how good these kids would be if they had the benefit of consistent, good coaching through their growing years.

Education:

Hal Connolly is relentless in his pursuit of his passion and helping bring the benefits of it to our nation's youth. Our last Olympic gold medalist in the hammer (1956) will again traverse the nation to present another clinic to the coaches of the Pacific Northwest in late October (25 and 26). Connolly has just returned from Hungary where he observed some of that nation's

leading coaches teaching the youth hammer. The four-time Olympian will present to coaches only in Centralia at the new hammer facility built by John Schultz. For more information contact Dwight Midles DMIDLES@simpson.com

Facilities:

The photo of National Youth Champion Zack Midles and Centralia Throws Coach John Schultz jschultz@centralia.wednet.edu was taken inside of the new Centralia High hammer cage built with a lot of hustle for next to no cost. One can see that this is a very substantial facility designed to provide the utmost in safety for our young throwers. Schultz pieced this venue together for less than \$200. Where there is a will, there is a way!

Three Washington high schools (a fourth is on the way) have now built hammer cages on school property. Others have renovated throwing facilities to safely accommodate the hammer. Some use alternate throwing devices (hammer simulations) which can be obtained for a very reasonable fee from companies like Springco and Gill. These alternate devices are thought to be safer in existing cages than discs.

Before we dismiss the good works of Coach Schultz we should mention that three years ago Schultz started a freshman invitational in Centralia. This is a very popular and growing event.

It's spreading:

When a very worthwhile project is taken on with a positive outlook, persistence, a passion for the cause, and the noblest of reasons, to give youngsters opportunities, it will grow. And in the Pacific Northwest, GROW it has!

A wider variety of schools and more students will throw the hammer in our state this season than last.

More of our fine track and field coaches are learning and teaching this highly technical event.

More schools are building and improving facilities to give their student-athletes the opportunity to experience this unique activity which may provide access to furthering their education.

Two of the better throwers in this neck-of-the-woods are from Oregon. Marcus Mattox of Hermiston High threw 194' 9" last season while Audrey Oswald who prepped at Sam Barlow High just east of Portland spun the ball and chain 165' 11" and was the top female high school thrower in the northwest. Oswald was ranked #5 in all of America and competed in the

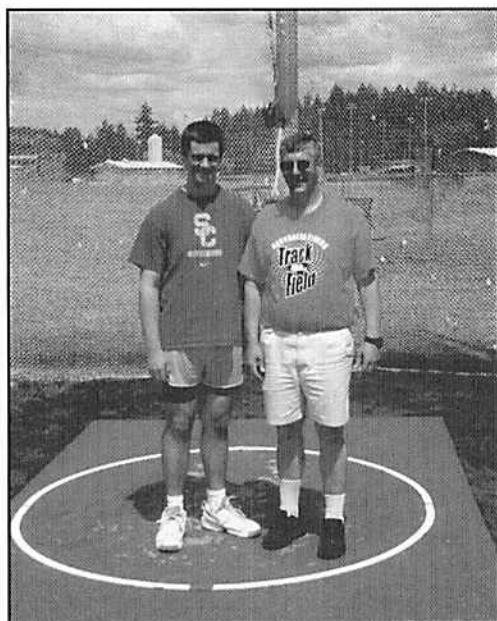
National Junior Championships this past June.

At the third annual Meet of Champions (Washington vs. Oregon high school all-star meet) both states fielded full hammer squads.

One of our most attended Hammer competitions this past season was held as part of the 44th Shelton Invitational. High school athletes from Washington, Oregon and California composed very large fields.

This December the National Youth Committee of USATF will vote to sanction the Hammer throw for youth competition in the USA. When this happens, "Katy, bar the door." Washington's throwers say, "Try it. You'll like it!"

We may not be to the point of acceptance yet, but



Zack Midles (left) and John Schultz

we're pulling into the station.

A couple of years ago Lance Deal uttered some very meaningful words to this aging coach. Deal said, "I hope that the hammer continues to grow in Washington. Perhaps, the next USA Olympic Gold medallist will be from your state." Chills run down my back.

Fade to the 2008 or 2012 Olympic Games, which may be held in New York City. Public Address Announcer..."Now ascending the awards stand to receive the gold medal from the United States of America (____ ? ____, Washington)...(____ name

? __)."

Fade out to the strains of "Oh, say can you see..."

I hope I live to see it. ***LSTJ***

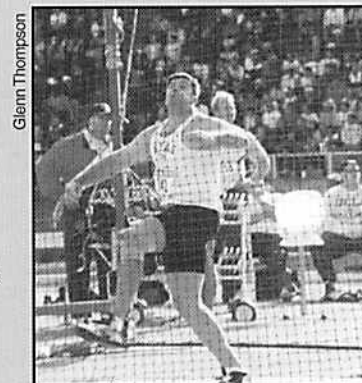
Are You Addicted To Throwing?

By Kevin Fitzpatrick

Do you find yourself...

- o picking up your wife's/mother's good China plates and holding them like a discus?
- o taking your wife's wicker woven balls, that she got at Pier 1 for \$15.00 ea., and putting them to your neck like a shot put?
- o trying on dress shoe's and checking out how good the right foot pivots?
- o manipulating every action figure and/or Barbie doll through technical phase of a throw?
- o doing turns on the kitchen floor with that same China plate?
- o going clothes shopping with you wife just to check a technical position in the 3 way mirror?
- o being glued to a 10,000m race on TV just to catch a glimpse of the hammer competition?
- o looking for throwing cages every time you drive by a high school stadium?
- o holding your child by the arms and swinging them around in a circle, then realizing that you're doing hammer turns?

Just a few thoughts that went through my mind after watching a news segment on Chris Leaks, now a freshman quarterback at Florida. They were talking about how the team was going to do this year and showing the team during practice. It was an interesting piece until I saw a discus cage in the background and my attention went straight to that. What kind of circle was it, it looks like a nice cage, how far do the throwers throw there, do they have a good coach, blah, blah, blah. After seeing the cage I remembered nothing about the news segment. Then I thought, after I retire from throwing I am going to need some serious professional help. ***LSTJ***



Kevin Fitzpatrick

Confessions of a Rookie Coach

By Gabe Garza

This was my first year training students other than my own son, Greg. I was having such success training Greg, the head track coach at the high school he attends asked if I would train/coach the other throwers (boys and girls).

I thought that I could use the same training methods, drills, techniques and requirements and receive the same results. I met with the students that said they had an interest in learning and laid the ground rules. I not only showed them the drills, but wrote them down and planned out their drill/strength workout for each day (two weeks worth).

Well, it didn't work out as smoothly as I thought. At this high school track and field is a class (6th period). If they wanted to do the homework (drills) it was up to them. You can't kick them off the team. And you can't redirect them to long distance or high jump, because most of them have already been redirected to the "throws" from the other coaches.

Since I work full time outside the school I could only show up for practice after work.

I coordinated practices so the student would do the drills during 6th period, then together we would hone the technical aspects of throwing after the school day when I arrived after work. I asked them in the beginning to meet me halfway.

I believe a good coach/student training method includes:

1. A coach who is a student of the sport (constantly learning useable training methods). The knowledge that is gained is so the coach can effectively communicate to the trainee.
2. A coach that can communicate effectively with the student (each student sees the same thing differently). Help the student set reachable goals and together write them down. This way the student will realize that you're helping them in obtaining their goals. Also, in time the student will realize that this is how life is: setting goals, doing drills, honing the techniques, obtaining the goals. You can't hit your target if you don't aim at it.
3. This coach/student relationship will work

effectively if the percentage effort is clearly understood by both parties. The student should realize that this isn't like McDonalds or the microwave you have at home., It takes a little longer to get back what you put into it.

- o In new throwers the percentage effort should be 60% effort by coach, 40% by the student. This is the encouraging year.
- o Second year the percent effort should be 50/50. The deciding year.
- o Third year 40/60. The developing year.
- o Fourth year 30/70. The year of accountability.

In the fourth year, the student should be critiquing their own skills, watching themselves on video and comparing it to the model technique, seeing their own faults. The coach should be telling the student what they're doing correctly. This way it cuts down on the question, "What I am I doing wrong?", and promotes praise from the coach.

4. I believe above all the coach should make the practice enjoyable: have fun. This might be the only time the student has someone that will listen to them, pays any attention to them or praises them. I brought sodas, water and treats to practice. I also had contests with my son after practice. We would see who could throw the discus, shot put or javelin with our opposite hand further (best of three throws).

Also one thing on cell phones. It seems everyone has one (coaches and students). When I am talking to someone or listening to a student and my phone rings, I let the phone ring. No one is more important than the person I am facing (listening or talking to). I let the student know that their time is important to me.

I believed I failed at utilizing #3 and #4. I forgot how Greg (180' thrower) and I started, having fun. I was trying to use the same training methods and expectations with a beginner as I was using with an experienced thrower. I did learn how not to train students, and if I should take up this challenge again, I'll be better equipped. ***LSTJ***

The Highland Experience Abroad



By Harrison Bailey III

Heavy athletic competitions have been conducted for thousands of years, in one form or another. They are a test of familial, national, and individual pride displayed through intense competition, limitless athleticism, and an undeniable determination to be the best. With all the differences that we choose to see throughout the world, these athletic ideals are constant and transcend all time periods, cultures, and individuals.

As a Scottish highland games athlete, I have had the honor of representing our country internationally. During this spring and summer I competed in six highland games in three foreign countries. While in Canada I threw against the worlds best at the World Championships in Antigonish, Nova Scotia and Fergus, Ontario. During my ten days in northern Scotland, I competed in the legendary Halkirk Games and two other festivals. My final journey took me to Rio DeJaneiro, Brazil for a their annual Highland Games and Strongman competition. In all three countries some common themes were clear: athletic brotherhood, love of sport, and the profound connection between children and athlete.

Heavy athletics is one of the few individual sports in which the athletes openly encourage and motivate their competitors to reach for new personal records that may be beyond their own performances. I have noticed this trait in heavy events athletes from all over the world. A perfect example of this occurred in the Halkirk games in Scotland. The competition was a three person, three team event including a Scottish team, a U.S. team, and an international team. As the Scots and the Yanks battled it out for first place, we cheered each other on until the end. No one truly cared about who won or lost. It was about digging deep in the pouring rain and pulling that 56 lb. weight over the bar. Whether you are from Waipu, New Zealand or Broken Arrow, Oklahoma, these games have a way of knocking down barriers, opening hearts, and pushing men to the limit.

No matter where on earth you go, people love to see sports. It is a common thread that pulls people together who can't even speak the same language. In each country I visited, people seemed to be filled with excitement to watch the "big men throw heavy things". The reactions I witnessed in Rio were second to none. During my first day, the legendary Francis Brebner and myself were challenged to turn a caber on the beautiful Copa Cabana beach as a demonstration. This event seemed to bring all types of people from the streets, beaches, and hotels. I suppose it was truly a sight to see. I was a 280 lbs. African-American man in a Scottish kilt, running with a 17 foot tree, on a Brazilian beach. It was safe to say futbol was not on the agenda that day.

To prove their dedication to the sport, Antigonish, Nova Scotia, poured the most money ever spent on a world championship into their games. They had participants and fans fly in from all over the world to make the oldest highland games in North America a success.

The unbelievable connection that exists between heavy events athletes and children is truly special. It is often easy to forget that athletes are tremendously influential role models. During my competition in Brazil, we competed simultaneously with the televised Brazilian Strongman National Championships. Literally busloads of small children came to watch their local heroes pull cars and flip truck tires. I was truly impressed to see such a young sport, in their country, have such monumental adolescent support. Each time I go to a games and a young child wants to shake my hand, get my autograph, or take a picture with me, I am reminded of my responsibility. Each moment we are in the spotlight, we have the opportunity to positively affect children and share our personal gifts.

Heavy athletics is one of the many connections that help to bring people together. During my travels this year, I have come to see that common threads within athletics can be found all over the world. It is our duty as athletes and citizens of the world to utilize these common threads to guide all the children and make this world a better place.

Train hard and throw far! **LSTJ**



Bailey, far left, is part of a crew you don't see on the Rio beaches everyday.

Courtesy of Harrison Bailey

Classroom Without Pencils

By Tiffany Kovacevich

The unorthodox approach the John Powell Associates used in their summer throwing camp upset and puzzled me at first. I could not understand why I was going to a camp to learn how to throw the discus and there were not any implements in sight. I was beginning to have second thoughts on why I had just paid \$450 for this camp, when I was introduced to one of the greatest teaching instruments ever, the "Powerball." The plastic ball filled with six pounds of sand forever changed the way I looked at and practiced discus technique. The unusual approach taken by the camp, not throwing an implement for a week, had an infinite amount of positive aspects and effects on the technique of throwing the discus.

There were many aspects of the camp that I thought were useful and effective teaching tools. The idea of using the power balls instead of implements is a concept that I have grown very fond of. Not having the discus in my hand allowed me to focus on the actual timing and technique of the spin. Holding on to the Powerball throughout the technique allowed me to experience how the spin is supposed to feel, and the torque that was caused by the Powerball was incredible. It made me realize why coaches are always saying, "Keep the discus up and back!" The weight of the power ball made you lock your triceps and develop the feeling of the right position of the discus in the spin or the "Spanky." Also when you do not throw implements there is no waiting in line to get into the ring or the potential threat of getting hit in the head by a discus flying out on control. Having your own Powerball allowed you to be able to practice the spin technique anywhere and at any time.

Another aspect of the camp that I liked was that the throwing sessions varied from day to day. At every session we went through the basic and key movements of the spin. The drill work we did every day helped develop the muscle memory for the spin. The repetition helped me understand how the body moves throughout the spin and in the ring. However, none of the sessions were exactly the same. At one station the footwork would be changed around to challenge the thrower and make them work harder. There was a great emphasis on doing things the correct way. You were not allowed to move on until you got it right. The mixed age of the coaching staff was another great

aspect of the sessions. The older coaches know the technique of the spin like it is nothing new, and can correct anything in about twenty minutes, while I feel the younger coaches were easier to relate to on how the spin was supposed to look and feel.

Another excellent aspect of the camp was the location. There was great food, which is always important, and there were nice facilities for every type of training. Outside there were lots of fields and rings for throwing, and lots of hills for running and throwing the power balls up them. The inside facilities were nice too. There was an indoor track complex with lots of room for drill work and a great pool to loosen up in after a couple days of rough training.

Another aspect I liked about the camp was that we did not only learn the discus technique by drill work, but we also learned it through videos that we watched over the course of the camp. The videos allowed me to see what the technique is supposed to look like after you have mastered the spin. The videos also re-emphasized what we had learned in the sessions that day. It was also a nice change of pace from the sometimes monotonous drill work.



Campers head out to a throwing session

Overall I would have to say that the camp was an enriching experience. I received instruction from great coaches, learned things about the spin technique that I never even knew existed, and most importantly I learned how to throw the discus consistently farther and

with the proper technique. I came out of the camp a week later throwing fifteen to twenty feet farther on average. I also had a greater understanding of how the spin was supposed to feel and how the discus was supposed to fly through the air. The repetition, which seemed endless at times, helped me learn the correct way to spin and connect my body and mind in the ring. I recommend this camp to all throwers who are serious and willing to work hard to achieve their goals, whether it is throwing 100 feet or breaking the world record.

One last thought. I know there are many people who did not like their experience at the camp, but remember, your experiences in life are determined by your attitude and outlook towards them. So remember to stay positive and strong through the hardest of times, and most importantly, THROW FAR! ***LSTJ***

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NATIONAL THROWS COACHES ASSOCIATION

MEMBERSHIP IS FREE

Dear Coach,

I would like to take this opportunity to welcome you to membership in the National Throws Coaches Association. This organization started with approximately 100 coaches at the end of October, 2002, and has already grown to over 2,500 members. Our main goal in starting the NTCA is to promote the throwing events at all levels of instruction and competition. As our membership expands the NTCA will be offering free newsletters, a free annual clinic and conference for coaches, a free web site, and other exciting benefits. If you have any ideas to further facilitate the goal of the NTCA please share them with us and your fellow members. The NTCA is open to all coaches at all levels of track & field. Please fill out the below registration form to join.

Registration Form: National Throws Coaches Association

Name: _____ School/Club/Team: _____

Coaching Position: _____ E-mail Address: _____

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Office Phone #: _____ Office Fax #: _____

Home Address: _____ City: _____ State: _____ Zip: _____

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PLEASE FAX OR EMAIL THIS FORM TO ROB LASORSA
USA TF THROWS DEVELOPMENT COMMITTEE
FAX: 1-800-859-4335 (toll free); EMAIL: rob.lasorsa@mfathletic.com

Mailing Address:

National Throws Coaches Association, Attn: Rob Lasorsa, PO Box 14114, Palm Desert CA 92255-4114

**** Annual NTCA Clinic/Conference: September 28-30, 2003** Renaissance Esmeralda
Resort and Spa Indian Wells, California**

Dear Coach,

We are proud to announce that the 2nd annual National Throws Coaches Association Conference and Clinic will be September 28-30, 2003, at the luxurious Indian Wells Renaissance Esmeralda Resort just outside of Palm Springs, California. The annual conference will be free for all members (obviously, members will have to take care of their hotel & travel expenses, but there will be no fees to attend the conference & clinic). Hotel charges at the Renaissance Esmeralda will be \$115 per night. To make reservations at the hotel call (760) 773-4444 and ask for the National Throws Coaches Association rate. Hotel reservations must be made by August 28, 2003. We are expecting the hotel to be sold out for the conference so please make your reservations early. Specific clinic & conference schedules will be available in the near future. If you have any questions please call (888) 527-6772 or send an email to rob.lasorsa@mfathletic.com

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