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by **Jeff Commings**

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The hand turn should be executed in as much of a singular motion as possible. The head, arms, torso and legs should work together to get the body around, instead of working in separate phases.

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by **Jeff Commings**

Although 2014 might be viewed as the only "off year" in swimming's quadrennial calendar, plenty of noise was made in July and August at three major international competitions.

ON THE COVER

Michael Phelps, the most decorated Olympian of all time (22 medals, 18 gold) – and pictured on Swimming World's cover a record 12th time – returned to international competition sporting a "water beard" during the finals of the 200 meter IM at this summer's Pan Pacific Championships. The 29-year-old, who was retired from the sport for nearly two years following the 2012 Olympics, showed that he is fully motivated for success in Rio by collecting three gold and two silver medals, including a victory in the 100 fly. (See stories, pages 16 and 21).

[PHOTO BY DELLY CARR]

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Olympic gold medalist Amy Van Dyken, who severed her spinal cord last July, is focused on her goal of beating paralysis.

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Beginning in its April issue and continuing monthly through January 2015, Swimming World Magazine is counting down the top 10 triumphs and tragedies in the history of swimming. This month: #4 Michael Phelps Changes the Sport of Swimming.

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Jacksonville:

Where the Dry Side Meets the Wet Side

BY BRENT T. RUTEMILLER

The center of the swimming world was in Jacksonville, Fla. over a two-week period in September. The locals had no idea that waves of water would be entering into the downtown riverfront convention hotel.

The first wave was an assembly of coaches from 26 countries and aquatic manufacturers from all points of the globe. All had gathered for the 46th annual American Swimming Coaches Association's World Clinic.

As the coaches were heading home, a second wave of officials, volunteers and administrators representing USA Swimming, USA Masters, USA Diving, USA Synchronized Swimming and USA Water Polo came rolling into the venue to attend the U.S. Aquatic Sports (USAS) annual convention. Many of the manufacturers stayed for a second round of surfing.

The coaches gathered in Jacksonville to educate. The administrators and volunteers were there to legislate. It is not too often that both entities meet in the same location. Hurricanes in this part of the world are more predictable.

ASCA offered educational tracks for all levels of swimming from high school to Masters. Coaching certification and pool management courses were offered earlier in the week. Evening socials swelled up everywhere as manufacturers sponsored get-togethers.

The main event of the week was ASCA's awards banquet, where top age group coaches were honored, new coaches were inducted into the Hall of Fame and the Coach of the Year was announced.

Beth Winkowski won Age Group Coach of the Year honors, while Pete Morgan, Dick Fetters and Teri McKeever were inducted into the ASCA Hall of Fame. Bruce Gemmell, coach of Katie Ledecky, was honored as the American Swim Coach of the Year for the second time in a row. It was also a special time for all of us at *Swimming World* as ASCA honored the magazine with a media award for contributions to the sport.

You can see all the banquet awards on tv.swimmingworldmagazine.com/events

THE SECOND WAVE

As *Swimming World Magazine* was going to press, USA Swimming held elections for various positions, including the election of a new president. The volunteer, two-year presidential position will face new challenges, one of which will be succession.

Chuck Wielgus has done a marvelous job leading USA Swimming in many areas. His contract will expire in 2016. USA Swimming's new president will lead the board of directors in either extending Wielgus' contract or seeking new leadership. This issue along with emerging NCAA issues (continual or possible accelerated cuts in Olympic sport programs) and the need to build more swimming facilities across the United States will be top priorities in the not-so-distant future.

Three fine candidates—Jeff Gudman, Jim Sheehan and Mary Jo Swalley—were poised to take over the presidency, only one of which was elected. Visit SwimmingWorld.com to learn more.

All the other sports were slated to have elections, education courses, committee meetings and awards.

The USAS Convention is the blending of all of the aquatic sports. It is not uncommon to find Olympians from past and present decades sharing elevators and tables or mingling with volunteers. The aquatic family is best seen at USAS' annual banquet, where more than 500 people often attend.

The entire two-week experience is a celebration of water. If you are in any way connected to our element, circle the month of September 2015 on your calendar and try to be a part of these wonderful events:

- ASCA 2015: Cleveland, Ohio (Sept. 8-13)
- USAS 2015: Kansas City, Mo. (Sept. 27-Oct. 4) ❖

Brent T. Rutemiller
Publisher of *Swimming World Magazine*



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PERFECTING THE BREASTSTROKE/ BUTTERFLY TURN

BY **JEFF COMMINGS** • PHOTOS BY **CHRISTOPHER RATTRAY**
DEMONSTRATED BY **DARIAN TOWNSEND**

The best swimmers in the world can execute a butterfly or breaststroke turn in less than 9-tenths of a second. The quicker you can transition from touching the wall to planting your feet, the more momentum you carry into the next length of your race. The hand turn should be executed in as much of a singular motion as possible. The head, arms, torso and legs should work together to get the body around, instead of working in separate phases.



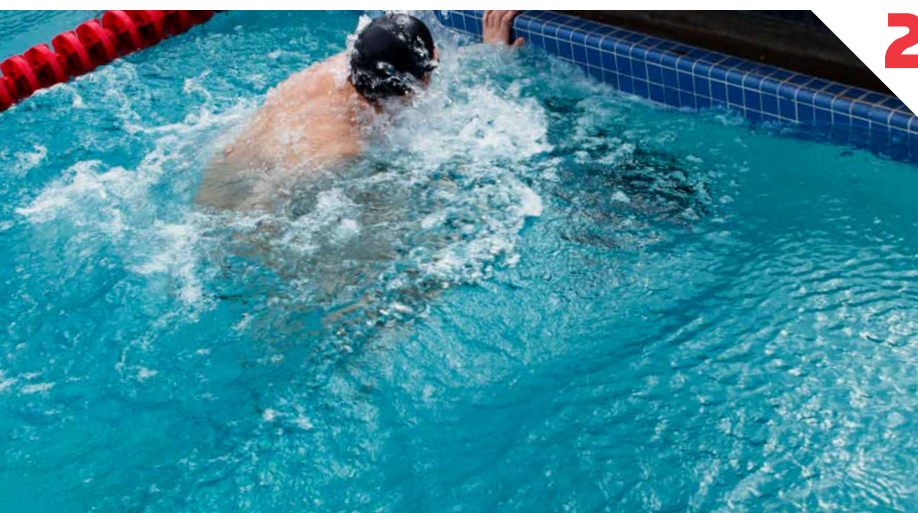
Darian Townsend formerly held the short course world record in the 200 meter individual medley with a 1:51.55 in 2009. He won an Olympic gold medal as part of South Africa's 400 freestyle relay at the 2004 Games in Athens.



1

DON'T LINGER ON THE WALL

Whether dealing with a gutter or a flat wall, don't waste time with both hands on the wall. The instant both hands touch—at the same time—one hand acts as an anchor to set the turn while the other begins to drop underwater by bending the elbow away from the wall. Both arms should have very little elbow bend when the hands touch.



2

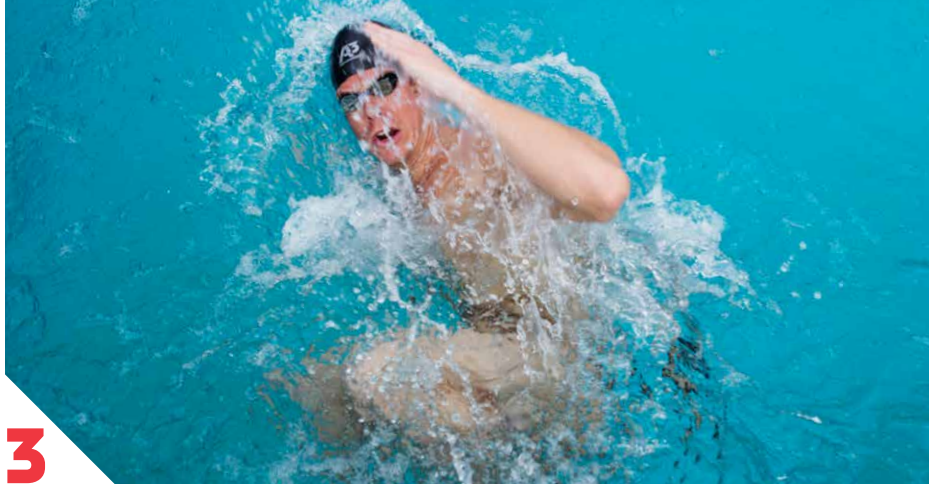
SWING AROUND

Once the leading hand leaves the wall, the knees should curl up into the stomach. If done correctly, the elbow of the leading hand and the knees pass each other at the midpoint. The hand still on the wall begins to push away, and the head stays in line with the spine.

LET IT GO

The following hand is now ready to leave the wall just before the feet are set to hit the wall. Notice that the head is still looking back at the wall, though the body has begun to twist. This will allow more time to get a good intake of air for those underwater dolphin kicks for butterfly or the long glide and pull-out for breaststroke!

3



READY TO PUSH OFF

The feet plant onto the wall while the body fully submerges. Both hands will meet to form a tight streamline. Don't twist onto your stomach at this point. Pushing off on your side is faster than pushing off on your stomach! If you are doing a butterfly turn, you can push off on your side and do several dolphin kicks as you transition to swimming on your stomach. For breaststroke, you must be completely on your stomach before starting the underwater pull. ❖

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STILL GOING STRONG AFTER ALL THESE YEARS

BY MICHAEL J. STOTT • PHOTOS BY GRIFFIN SCOTT

TODAY'S SWIMMERS ARE COMPETING IN THE SPORT MUCH LATER IN LIFE, AND CONSEQUENTLY, THEY HAVE ADOPTED DIFFERENT TRAINING STRATEGIES TO ACCOMMODATE THE LONGER RECOVERY PROCESS REQUIRED BY ADVANCING AGE.

Dr. Brian Campbell, a member of the USA Swimming Sports Medicine Council and a chiropractor and massage therapist at UCLA, notes that training strategies have changed for aging athletes.

New methods include resistance training geared specifically to swimming such as Pilates, yoga, nutrition and massage. "The art of massage and the need to address swimmer soft tissue have expanded recently as has practitioner expertise so that it's much easier to find someone who can fit with an athlete's specific needs," says Campbell.

"In the early '90s, sports massage was essentially a modified form of Swedish massage with a very basic form of deep tissue massage. If more advanced, there was Rolfing or Janet Travell's trigger-point therapy. Today's therapists also utilize techniques developed by chiropractors—such as Active Release, Graston, Osteopathic (Cranial Sacral Therapy, etc.)—in combination to suit the individual athlete," he notes.

For Olympian Nathan Adrian, massage is a twofold training staple: "I use it for faster recovery, hopefully every one to two weeks. Secondly, I use massage together with chiropractic work and physical therapy for injury rehab and prevention.

"With the massive amounts of stress we put on our bodies through training, it is inevitable that some type of injury will occur. Because of the wonderful people regularly treating me, I have been fortunate not to have any injury keep me out of the water for a prolonged period," he says.

MEETING THE SWIMMERS' NEEDS

When North Baltimore's Professional Training Group assembled in September, the first order of business

was a needs analysis that included a training and injury history review and an assessment of how each athlete moved at each joint level. Director of Athlete Services Keenan Robinson and staff prepared individual weight and dryland programs, utilizing Professional Strength Coach of the Year Joe Kenn's Tier System, a structured rotation of exercises based on priority. The goal was to design a template

"AS I HAVE GOTTEN OLDER AND UNDERSTOOD THE SIGNIFICANCE OF RECOVERY, OUT-OF-THE-POOL TRAINING HAS BECOME AS IMPORTANT AS IN-POOL WORK. MASSAGE HELPS ME FEEL RECOVERED AND SMOOTH IN THE WATER. I USE IT ABOUT ONCE A WEEK DURING THE YEAR AND OCCASIONALLY IN CONJUNCTION WITH SOME DMT (DECOMPRESSION MASSAGE THERAPY)."

—CONOR DWYER

that best suits swimmer needs as it correlates to their weekly and quadrennial swim programs.

"This program is a step-by-step approach involving basic exercises and mastery of technique prior to any loading activity," says Robinson. Such an approach works for professionals such as Yannick Angel, who previously had only a remedial weight training program, and for experienced NBAC high school swimmers such as Gillian Ryan or Lauren James.

"All of the swimmers must master hip hinging, squat, vertical and horizontal pushing and pulling movements, isometric trunk stability, extremity movement while maintaining aquatic posture and loaded carries as a prerequisite for progressing," says Robinson.

"With older swimmers, we have

implemented mobility work and Power Plates (a machine used to activate muscles through vibration). For mobility work, I think yoga and Pilates are great for some (athletes). However, given that swimmers are hyper-mobile, both congenitally and through athletic adaptation, further stretching the joint capsules through these modalities is a contraindication," he says.



"As time passes, swimmers gain more range of motion in one direction while losing movement in the opposite direction. That leads to adaptive shortening in the muscle groups surrounding a joint. With our mobility drills, swimmers are able to stabilize the agonist muscle group with isometric muscle contraction while the antagonist muscle group dynamically moves through a given range of motion. Two examples of our mobility drills are scapular wall slides and bear crawling," he says.

"Power Plate is a whole-body vibration tool that enhances neuromuscular function. One benefit is the ability to stimulate the muscle spindles within the shoulder joint to enhance proprioception and stability prior to a swim practice. In addition, the Power Plate enhances blood flow

to the entire body, thus improving extremity movement while stretching. Many swimmers use this routine after a challenging leg lifting routine or prior to a kick set," says Robinson.

One Power Plate proponent is former University of Florida All-American, Olympic gold medalist and now NBAC team member Conor Dwyer. "Power Plate helps increase my strength and mobility. I use it daily for stretching before practice to get the muscles warmed up and once a week for strength training," he says.

"As I have gotten older and understood the significance of recovery, out-of-the-pool training has become as important as in-pool work.

"Massage helps me feel recovered and smooth in the water. I use it about once a week during the year and occasionally in conjunction with some DMT (Decompression Massage Therapy) work. During taper and at meets, I use massage therapy every other day. It plays a major role in programs that tend to put in work and have huge drops at the end of the year like those at NBAC," says Dwyer. He also credits good nutrition as a key factor for his success. "Eating right does wonders for my body during training and competition. I eat at Whole Foods a lot, and stay away from fast food."



STAYING IN TOP FORM

Perhaps no aquatic athlete exemplifies the training diversity of a maturing athlete better than 12-time Olympic medalist Natalie Coughlin. Still competitive at 32, Coughlin has definite ideas on massage and

the manipulation required to keep her in top form. To her, massage is an overarching term that "can be applied to many different disciplines of body work. There are many amazing therapists out there and just as many unskilled ones," she says. "The key is to find an experienced therapist who knows how to feel tissue. In conjunction with a good therapist, it is up to the athlete to be able to communicate what he or she needs. It doesn't hurt (the therapist's) feelings if you say you need something different.

"I currently see a PT/ATC (physical therapist/certified athletic trainer) once a week who helps me deal with my chronic issues and, I hope, helps prevent future ones. In addition, I see a massage therapist every other week. This may seem like a lot of body work, but keep in mind that I've been on the national team for nearly 16 years. There's a lot of mileage on this body!

"My PT/ATC does a combination of cupping, Graston (patented, instrument-assisted soft tissue mobilization that helps break down scar tissue and fascial restrictions), ART (active release technique) as well as more traditional Swedish-style tissue work. This work is to combat and target the chronic neck, back and shoulder problems that I have due to scoli-

"MASSAGE IS AN OVERARCHING TERM THAT CAN BE APPLIED TO MANY DIFFERENT DISCIPLINES OF BODY WORK. THE KEY IS TO FIND AN EXPERIENCED THERAPIST WHO KNOWS HOW TO FEEL TISSUE. IN CONJUNCTION WITH A GOOD THERAPIST, IT IS UP TO THE ATHLETE TO BE ABLE TO COMMUNICATE WHAT HE OR SHE NEEDS."

—NATALIE COUGHLIN

osis and overuse. Don't imagine fluffy white towels, aromatherapy and Enya playing in the background," she says. "This work is more painful than relaxing, and I often leave a bruised mess. Despite the pain, I leave feeling much better than I did when we started.

"Every other week, I see a massage therapist who specializes in Swedish massage and Cranial Sacral massage. This 'flush' is a full-body massage that helps stimulate blood flow, work out knots and encourage the body to self-heal. It is much more relaxing and is what most people imagine when they hear the term, massage.

"I started using massage sporadically when I was a teen, but then it was just about feeling good. I had no idea what I needed, let alone the ability to communicate that with a therapist. As I got older, I learned more about anatomy and my body. Consequently, I got much more out of the body work. I've developed a relationship with the people who help me, and they have learned how my body responds to treatment. Everyone is different," says Coughlin.

"Different" would include 22-time Olympic medalist Michael Phelps. Phelps, who works regularly with Robinson, employs a four-step recovery regimen that utilizes active recovery, soft tissue massage, cold water immersion and compression garments. "Over the years, no swimmer has demonstrated a quantifiable benefit of producing, utilizing and then clearing his enzymatic system through lactate monitoring and active swim-downs better than Michael," says Robinson.

"Michael receives a full-body massage, and if necessary, because of adaptive shortening in certain areas, he also receives Graston Technique to alleviate joint range of motion losses. He has also found that seven minutes of cold water immersion (55 degrees) modulates his leg pain and is performance-enhancing on days when he has multiple races. The use of an intermittent pressure garment after massage and (after) cold tub usage assists in the removal of metabolic waste, desensitizes free nerve endings and prevents the pooling of blood in his distal extremities as he naps in between prelims and finals," says Robinson. ❖

Michael J. Stott, one of Swimming World Magazine's USA contributors, is based in Richmond, Va.

IT'S TOO LATE TO CHANGE TECHNIQUE

BY ROD HAVRILUK

Many people believe that the technique of the fastest swimmers is worth copying, resulting in numerous misconceptions. In reality, even the fastest swimmers have technique limitations, but they offset them with strength and conditioning. The purpose of this series of articles is to address scientifically the technique misconceptions that have become “conventional wisdom,” and to present more effective options.

SWIMMING TECHNIQUE MISCONCEPTION:

As opposed to addressing a specific technique element, this month’s article examines a more general technique misconception: that it’s too late to change technique. This applies in two situations: 1) too late in a season, and 2) too late in a career. Conventional wisdom states that it is unwise to make technique changes late in a season, especially during taper. Older and more successful swimmers can be resistant to changes late in a career because they have enjoyed success with their technique. Science provides us with information to address both situations.

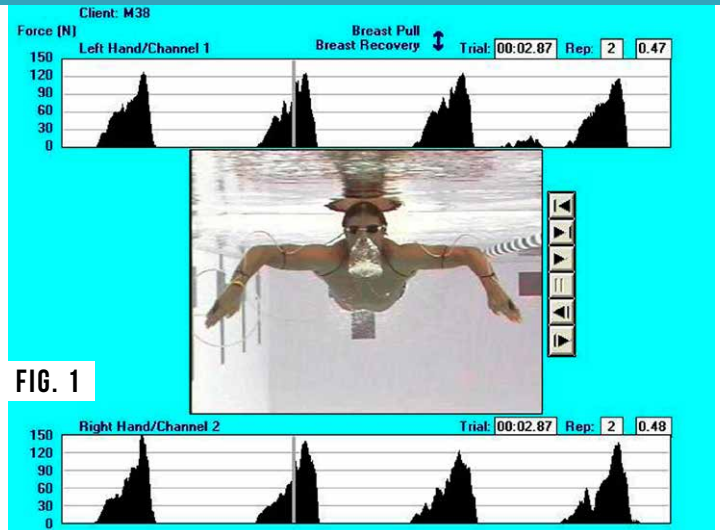


FIG. 1

TOO LATE IN A SEASON TO CHANGE TECHNIQUE?

It’s understandable that a swimmer may be concerned about making a technique change near the end of the season. After competing the majority of the season with a certain technique, a swimmer may fear that a change will make him/her swim slower. Understanding the change process may help with a swimmer’s concerns.

A swimmer must first be convinced that a technique change can only improve performance. If there is a sound scientific basis for the change, then the difference can be explained with facts. For example, an analysis using force data with underwater video is one way to obtain quantitative information to support the value of a change (see Fig. 1). If a swimmer understands that a change will put the arm in a stronger position to generate more force, concerns about the change may be alleviated.

Once the swimmer is motivated to change, there is the time frame to consider. A taper is a small fraction of a season—often lasting one to three weeks. Fortunately, even a relatively short taper can offer a swimmer many thousands of practice stroke cycles to perfect a technique change.

While the number of stroke cycles is an important factor, the swimmer’s focus during each stroke cycle is even more critical. A swimmer may find it difficult to focus effectively during normal team training because of the numerous distractions. The taper environment generally has less commotion. The more re-

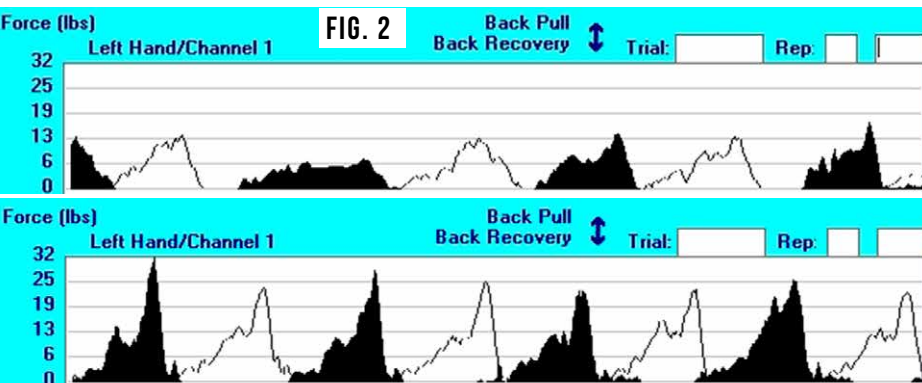


FIG. 1 > (TOP) Underwater video with hand-force data can make effective arm positions more obvious. The vertical gray lines on the force curves are synchronized with the video image.

FIG. 2 > (LEFT) These graphs show a swimmer’s backstroke hand-force curves before (top) and after (bottom) a one-week deliberate practice treatment. Left-hand curves are solid, and right-hand curves are outlined.

TABLE 1. CHARACTERISTICS OF DELIBERATE PRACTICE

| General Characteristics of Deliberate Practice | Specific Characteristics of Deliberate Practice for Swimming |
|---|---|
| CLEAR INSTRUCTIONS | - Images of optimal technique - Precise wording of specific cues |
| APPROPRIATE TASK DIFFICULTY | - Swims with focus on appropriate cues - Drills that isolate focus on select skills |
| SUFFICIENT NUMBER OF REPETITIONS | - Short-distance swims with a slow stroke rate and limited breathing |
| IMMEDIATE FEEDBACK | - Group and individual feedback about compliance with cues |
| INDIVIDUALIZED SUPERVISION | - Reminders before swims - Reinforcement of positive technique elements - Feedback about limiting factors |
| VARIETY OF LEARNING STRATEGIES | - Classroom and poolside instruction and analysis - Analysis of force, video, stroke rate and stroke length - Solo practice with and without a coach |
| MAINTAIN FOCUS IN COGNITIVE AND ASSOCIATIVE LEARNING STAGES | - Reminders before swims to focus on cues on every stroke - Questions about focus on cues following swims - Dialogue between coach and swimmers about the use of cues |
| REPLICATE SUPERIOR PERFORMANCE | - Emphasis on continual control to replicate optimal technique |

laxed schedule offers more opportunity to include the essential components of deliberate practice (DP) that expedite skill mastery.

The accompanying **Table 1** (left) lists the general characteristics of DP (Ericsson, Krampe & Tesch-Römer, 1993) along with specific strategies for swimming.

For example, taper training sets may be designed with short-distance swims at a slow stroke rate that allow for more non-breathing stroke cycles and better visual control. There is often time for individual instruction and analysis. Sometimes a lane is available for solo practice. Short-term (one week) DP treatments that produce dramatic improvements during the season (e.g., Jefferies, Jefferies & Donohue, 2012 as shown in **Fig. 2**, previous page, bottom) may show an even bigger impact during taper.

If a swimmer does not practice a change enough to make it permanent, it will likely have minimal impact on performance. A worst-case scenario is that the swimmer reverts back to his/her best-learned technique.

TOO LATE IN A CAREER TO CHANGE TECHNIQUE?

Older and particularly successful swimmers can be resistant to change technique for at least three reasons. First, they have enjoyed success with the technique they’ve been using. Second, the strength of their habit—given they have probably completed millions of stroke cycles—can make change difficult. And third, training demands can limit their ability to focus on specific technique elements.

Assuming adequate motivation, even a very competitive, older teenager can make a substantial improvement in technique. This was the finding of a recent study conducted with 19 members of a national team with an average age of 17 years (Havriluk, 2014). The swimmers were pretested for their active drag coefficient—the overall best measure of technique.

After the pretest, the swimmers engaged in two days of instructional sessions using the DP strategies specifically designed for swimming. The swimmers then resumed normal training and were asked to continue to use the DP strategies.

After a month, the swimmers were posttested. There was a significant improvement in the active drag coefficient, with the biggest improvements in butterfly and breaststroke (**see Fig. 3**). The results clearly support the value of continuing to improve technique “late in a career.”

SUMMARY

Conventional wisdom advises against changing technique late in a season (because it’s counterproductive) or late in a career (because it’s a waste of time). Science shows that both beliefs are misconceptions.

*Because there are generally less distractions, a taper can actually be the best time to make technique changes. The taper environment is conducive to including DP strategies. In fact, a swimmer may **practice deliberately** on more stroke cycles during a taper than during the entire rest of the season. Similar to “late in the season,” DP strategies were found to be effective with national-caliber swimmers “late in the career.” With the appropriate practice strategies, it may never be too late to improve technique! ❖*

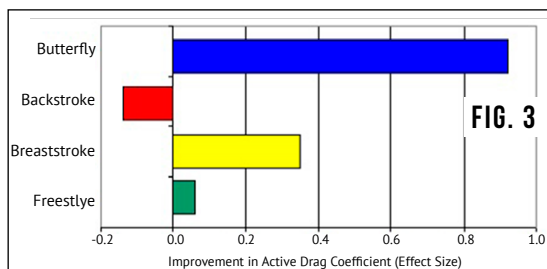


FIG. 3 > (ABOVE) This chart shows technique improvement for national team members using deliberate practice.

Dr. Rod Havriluk is a sports scientist and consultant who specializes in swimming technique instruction and analysis. His strategies provide rapid improvement while avoiding injury. He can be reached at the website for Swimming Technology Research (Tallahassee, Fla.): www.SwimmingTechnology.com.

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to learn more about the references for this article.

WHAT DID WE LEARN?

BY JEFF COMMINGS

ALTHOUGH 2014 MIGHT BE VIEWED AS THE ONLY "OFF YEAR" IN SWIMMING'S QUADRENNIAL CALENDAR, PLENTY OF NOISE WAS MADE IN JULY AND AUGUST AT THREE MAJOR INTERNATIONAL COMPETITIONS.



PICTURED >
MICHAEL PHELPS
FOUND HIMSELF
BACK ON CENTER
STAGE AT PAN
PACS AFTER
WINNING THE
100 METER FLY.

HANCOCK PROSPECTING
PANPACS
Gold Coast, Australia
Swimming Championships

[PHOTO BY DELLY CARR]



The Commonwealth Games in Glasgow kicked off this summer's slate of major international championships, July 24-29, with several nations showing their might two years out from the Olympic Games. One month later, the European Swimming Championships (Berlin, Aug. 18-24) and Pan Pacific Championships (Gold Coast, Australia, Aug. 21-24) created a virtual world championship meet that showcased some past and future stars to keep an eye on as things begin to heat up for Rio.

The worldwide swimming community was abuzz with the great performances across all three meets. Here are six noteworthy items from this summer's major meets:

1 MICHAEL PHELPS IS FULLY MOTIVATED FOR SUCCESS IN RIO.

There's no hiding the fact that Michael Phelps is now focused on swimming at the Rio Olympics. After winning the 100 meter butterfly in Australia, you could see the joy on his face as a gold medal was draped around his neck (even though he didn't swim as fast as he had wanted). Losing the 200 IM to Japan's Kosuke Hagino by 2-hundredths of a second added fuel to his fire.

With a reduced program, Phelps will have a better handle on racing at age 31. The events he'll swim in 2016 are still in flux, but now that he qualified in the 100 fly, 200 IM and (surprise!) the 100 free for the 2015 World Championships in Kazan, Russia, we only wonder if the 200 free will fit into his Olympic schedule.

2 KATIE LEDECKY CONTINUES TO SOAR.

How much lower can Katie Ledecky take the world records in the distance freestyles? In Australia, she nearly broke 3:58 in the 400, and she smashed her 1500 mark by an astounding six seconds! Not even Janet Evans was beating her global competition by five seconds in the 400 and finishing the 1500 a full pool length ahead of second place. Bottom line: Don't put limits on what this 17-year-old is capable of doing because it's clear she hasn't put limits on herself.

Ledecky is also becoming a force in the 200 free, supplanting Missy Franklin as the top American in the event at nationals and winning the event convincingly at Pan Pacs. Though Franklin was dealing with a back spasm suffered two days before the start of the meet in Australia, it's likely we'll see her back in fine form next year to defend her world title. Ledecky, however, is sure to have something to say about that.

3 JAPAN'S RISING SUN WILL BE SHINING BRIGHTLY IN RIO.

We've been watching Takeshi Matsuda, Kosuke Hagino, Ryosuke Irie, Natsumi Hoshi and Daiya Seto continue to dazzle with their flawless mastery in the pool for the past few years. Now, Japan is becoming a more diverse swimming superpower, as evidenced by a silver medal in the men's 800 free relay, bronze in the women's 400 free relay and a 1-2 finish in the women's 200 breaststroke



(Kanako Watanabe and Rie Kaneto) at the Pan Pacific Championships.

Japan won 11 medals at the 2012 Olympics in swimming, but that number should be higher in 2016.

As impressive as the country's team was at Pan Pacs, the true test of Japan's strength will come next year at the World Championships in Russia. Against a true global field, the Japanese should make their presence known in many men's events and show off the hard work they've done in beefing up the women's squad.

4 GREAT BRITAIN'S NEW GENERATION IS GETTING PAST THE DISAPPOINTMENT OF THE 2012 OLYMPICS.

After expectations were dashed at the home Olympics, Great Britain's swim team is preparing to have an excellent showing at the 2016 Games. Led by the resurgences of Fran Halsall, Jazz Carlin and Hannah Miley at the Commonwealth Games, the women's team could reap multiple medals in Rio. The breakthrough performances of Siobhan-Marie O'Connor in Glasgow give the Brits another strong resource in the butterfly and individual medley events as well as in the relays.

For the men, the breaststroke will be an embarrassment of riches. Adam Peaty, Michael Jamieson, Andrew Willis and Ross Murdoch are just four of the names that were ranked in the top 20 in the world in 2014. Peaty made the greatest leaps forward, breaking the world record in the long course 50 at the European Championships and challenging the 100 record. Murdoch upset favorite Jamieson in the 200 breast at the Commonwealth Games with the fastest time of the year (2:07.30)—and fourth fastest in history. Upsetting the Australians in the men's 400 medley relay in Glasgow was a major turning point for Great Britain as it continues to rebound from a disappointing 2012.

5 2014 TURNS OUT TO BE THE YEAR OF THE INJURY.

Competition was greatly affected by injuries this

summer, as five elite athletes either skipped the big meets or their performances were hampered as they struggled through the pain.

Ryan Lochte's knee injury was one of the most followed stories of the year, as the Olympic champion dealt with the highs and lows of rehabbing his MCL after a fan encounter last November. Lochte managed to reach a point where he was able to swim breaststroke, but not training much breaststroke kept him from being his best in the 200 IM. He did manage to secure a spot on the World Championship team and post the second fastest 200 IM of 2014 despite not being 100 percent.

Missy Franklin was on target to enjoy major success at the Pan Pacific Championships, but a back spasm two days before the meet started derailed her preparation. Franklin could have withdrawn completely from the meet, but she decided to swim every event on her program. Leaving the meet with a bronze medal in the 100 back and medals in all three relays is a major accomplishment, given that her back never fully healed during the meet.

Australia's Cate Campbell never let on that during her amazing performances at the Commonwealth Games and Pan Pacific Championships, she was dealing with shoulder pain. Imagine what the sprinter could have accomplished in the 50 and 100 freestyles if she had been anywhere near 100 percent capacity!

Another swimmer who kept his injury relatively quiet was Thiago Pereira, who said after Pan Pacs that he had injured his hip during training, but was focused on

PICTURED > (LEFT) DON'T PUT LIMITS ON WHAT THIS 17-YEAR-OLD IS CAPABLE OF DOING BECAUSE IT'S CLEAR KATIE LEDECKY HASN'T PUT LIMITS ON HERSELF.

PICTURED > (ABOVE) KANAKO WATANABE LED A 1-2 FINISH FOR JAPAN IN THE WOMEN'S 200 BREAST-STROKE AT PAN PACS.

— continued on 18

SUMMER CHAMPIONSHIPS— continued from 17

getting better in time to represent Brazil at the 2016 Olympics. Had he been injury-free, Pereira might have challenged for gold in the individual medleys, and he could be back in the hunt next year.

Christian Sprenger's shoulder injury was so severe that he was forced to withdraw from the Pan Pacs after winning just one medal—a silver in the 400 medley relay—at the Commonwealth Games. Formerly the top-ranked 100 breaststroker in the world this year, the Aussie will look toward 2015 for a chance at redemption.

Another top swimmer forced to withdraw from competition was French backstroker Camille Lacourt, whose hip injury kept him from the European Championships, impacting France's medal tally.

6 SARAH SJOSTROM IS BACK!

Since the 2009 World Championships, Sweden's Sarah Sjostrom has been pegged as "The Next Big Thing," but she had not been able to deliver on that promise at the 2011 Worlds or 2012 Olympics. Winning the 100 fly last year at the World Championships returned her to the top of the global podium, and winning seven medals in August at the European Championships was a big step forward for the 21-year-old. However, never before has she put together two consecutive years at the top of the world rankings, so we're curious to see what she has in store for 2015. ❖




[PHOTO BY SWPIX.COM]

PICTURED > GREAT BRITAIN'S ADAM PEATY BROKE THE WORLD RECORD IN THE LONG COURSE 50 BREAST AT THE EUROPEAN CHAMPIONSHIPS AND CHALLENGED THE 100 RECORD.




[PHOTO BY JOAO MARC BOSCHI]

PICTURED > BRAZIL'S THIAGO PEREIRA (HIP) WAS ONE OF SEVERAL SWIMMERS AROUND THE WORLD WHO SWAM INJURED THIS YEAR.




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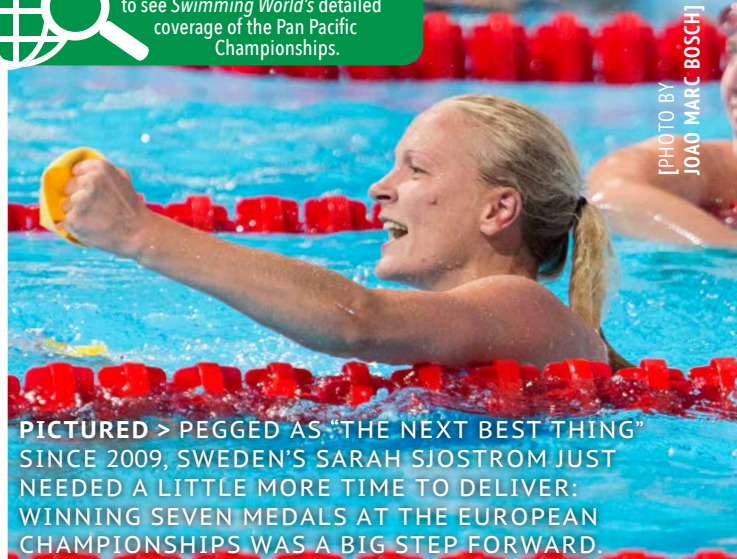
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[PHOTO BY JOAO MARC BOSCHI]

PICTURED > PEGGED AS "THE NEXT BEST THING" SINCE 2009, SWEDEN'S SARAH SJOSTROM JUST NEEDED A LITTLE MORE TIME TO DELIVER: WINNING SEVEN MEDALS AT THE EUROPEAN CHAMPIONSHIPS WAS A BIG STEP FORWARD.

DETERMINED TO

OLYMPIC GOLD MEDALIST AMY VAN DYKEN, WHO SEVERED HER SPINAL CORD LAST JULY, IS FOCUSED ON HER GOAL OF BEATING PARALYSIS.

DEFY THE ODDS

BY JEFF COMMINGS

The accident that rendered Amy Van Dyken-Rouen paralyzed from the waist down on July 6 made her a stronger person, both mentally and physically.

The six-time Olympic champion was already regarded as one of the fiercest competitors and hardest workers the sport has seen. She would not have won four gold medals at the 1996 Olympics and two more at the 2000 Games without a tough-as-nails work ethic. And when she had to re-learn how to do simple acts without the use of her legs while recovering at an Arizona hospital, she surprised the hospital staff with her quick learning curve and determination to defy the odds.

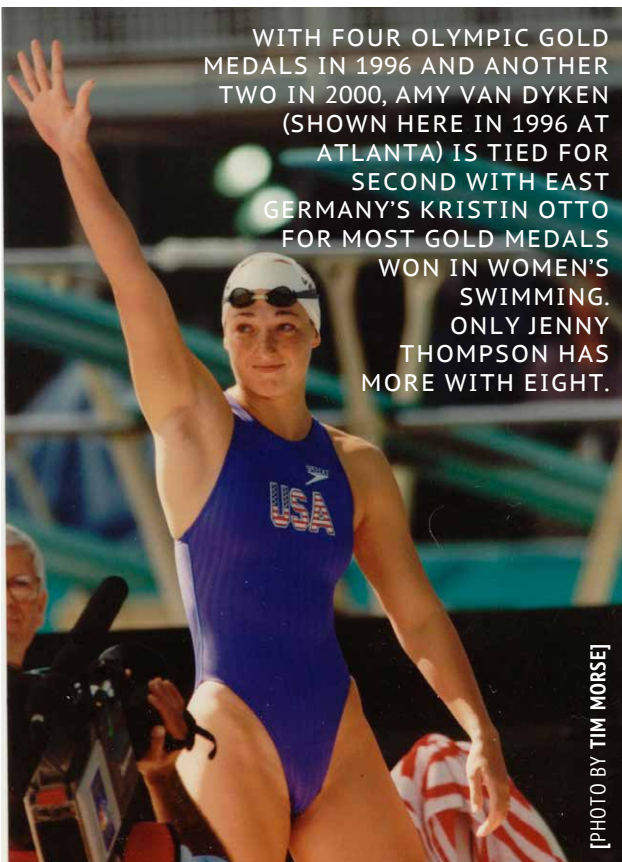
That was also true during her stay at Craig Hospital in Colorado for extensive rehabilitation. Doctors expected her to be able to function on her own by mid-October. She progressed so rapidly that she was able to return to the “real world” in late August, returning to her home in Arizona in early September.

It’s a new life for Van Dyken-Rouen, and one that no one expects to have. But she has been nothing but positive about the road ahead.

“I’m so thankful to be alive,” she said. “That’s why I can be so positive about it.”

THE ACCIDENT

After dinner with her husband, Tom, at a posh golf resort in western Arizona on July 6, Van Dyken-Rouen decided to drive an all-terrain vehicle back to her hotel room. Nothing unusual about that, since ATVs were



WITH FOUR OLYMPIC GOLD MEDALS IN 1996 AND ANOTHER TWO IN 2000, AMY VAN DYKEN (SHOWN HERE IN 1996 AT ATLANTA) IS TIED FOR SECOND WITH EAST GERMANY'S KRISTIN OTTO FOR MOST GOLD MEDALS WON IN WOMEN'S SWIMMING. ONLY JENNY THOMPSON HAS MORE WITH EIGHT.

[PHOTO BY TIM MORSE]

the preferred mode of travel at the resort.

She started to drive the ATV away from the restaurant, and in the blink of an eye, the vehicle lurched forward and headed toward a ravine. The ATV flipped over and threw Van Dyken-Rouen from it, severing her spine. For what seemed like an hour, she laid on the ground unconscious as her husband tried to revive her until medical personnel arrived.

“There was this whitish green hue around me,” Van Dyken-Rouen told Matt Lauer on NBC’s “Today Show.” Fortunately, her vital signs remained active as she was flown by helicopter back to Phoenix for surgery. The surgery went well, but the prognosis remained problematic. She couldn’t move her legs, which meant life in a wheelchair.

ROAD TO RECOVERY

Van Dyken-Rouen immediately told her doctors she was going to walk again, but accepted the current circumstances. Her surgery wounds healed quickly, allowing her to move to Colorado for rehabilitation early. She learned how to bathe on her own, figured out how to do tricks in a wheelchair and gained confidence on moving around a kitchen.

But perhaps the biggest milestone for Van Dyken-Rouen was taking her first steps on Aug. 21. Attached to a mechanical exoskeleton, she moved her legs and inched forward with a look of excitement—and a bit of trepidation—on her face. What she had dreamed of for weeks was finally happening.

She still has a long way to go before she is walking on a pool deck or red carpet, but the Olympic-level determination keeps Van Dyken-Rouen focused on her goal of beating paralysis. In the meantime, she is embracing the attention she is getting from her new and established fans as she documents her progress on social media. The video she posted on Instagram showing her lifting her right knee a couple of inches garnered thousands of views and hundreds of positive comments from encouraging supporters.

Dubbed “Amy’s Army,” her legion of fans have been a source of energy and inspiration, and will continue to guide Van Dyken-Rouen through the unpredictable path that is recovery, readjustment and rebuilding. ❖



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Beginning in its April issue and running through January 2015, *Swimming World Magazine* is counting down the top 10 triumphs and tragedies in the history of swimming. This month:

PICTURED > SWIMMING HAS HAD ITS SHARE OF SUPERSTARS OVER THE YEARS, BUT NONE OF THESE GREAT ATHLETES HAD THE IMPACT THAT MICHAEL PHELPS HAS HAD.

[PHOTO BY JASON REED, REUTERS]

#04

MICHAEL PHELPS CHANGES THE SPORT OF SWIMMING

BY CHUCK WARNER

Twelve-year-old Michael Phelps had something important to tell his mother. Years later he would describe it as the biggest goal in his life to that date. He wanted to get off the medication, Ritalin, for his ADHD (Attention Deficit/Hyperactivity Disorder).

His mother, Debbie, listened carefully. She agreed to work with him and his doctor to adhere to his request. The seventh-grader was successful in managing his behavior without medication and realized through that process that he could achieve anything if he set his mind to do it.

A few years later, after making his first Olympic team at just 15 years old, he pronounced a new major goal in his life: “to change the sport of swimming.” Michael wanted to bring the sport into homes just like the more traditional major American sports.

Has he succeeded?

Let’s consider what has happened since Michael Phelps set his mind to that goal, how he applied himself to pursue it, and suggest the results.

BEGGING FOR RECOGNITION

One of the reasons that the sport

of swimming has been a beggar for public popularity is the lack of recognizable faces and personalities that are sustained for many years. However, there have been a handful of swimmers who, through prolonged success in swimming, have succeeded in capturing the public’s imagination.

One example is Australia’s Dawn Fraser. In 1956, Fraser set her first world record in the 100 meter free-style, and a few months later, she won the Olympic gold medal. Over the next eight years, the grande dame of Australian swimming broke that record 10 more times and captured the Olympic gold in her specialty in the next two Olympiads. (Fraser probably would have recorded a “four-peat” with a win in Mexico City in 1968 had she not been suspended from the Aussie Olympic team for a rules infraction.)

Only two other swimmers—Hungary’s Kristina Egerzegi (200 back) and Michael Phelps—have stayed on top of the sport long enough to match Fraser’s triple. However, Michael’s “three-peat” came in two Olympic events: the 100 fly and 200 IM.

In the 1920s and ’30s—before TV—swimmers Gertrude Ederle, Duke Kahanamoku and Johnny Weissmuller were genuine superstars. Later, other popular Olympic personalities have included, most notably, Mark Spitz in 1972 as well as Don Schollander in 1964, John Naber in 1976, Matt Biondi in 1988, Amy Van Dyken in 1996 and Ian Thorpe in 2000.

But none of these great athletes had the impact Phelps has had.

BY THE NUMBERS

One of the ways we can measure his impact on exposing swimming to the American public is by considering the audiences the Olympics have drawn in the last 20 years.

After recording a high mark of 209 million American viewers for the 1996 Atlanta Games, the number fell to 185 million for Sydney in 2000. Certainly time zone differences had an impact on those numbers, but as Phelps’ highly publicized pursuit of Mark Spitz’s record of seven gold medals progressed, the audience increased.

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An estimated 203 million Americans viewed the 2004 Athens Games, and in 2008, 215 million watched the Beijing Games. Experts say that on the nights Phelps was pursuing his goal of eight gold medals in China, viewing increased by about 5 million. By London in 2012, 219.4 million watched the Summer Games.

An important consideration in analyzing data from 1992 to 2012 is that the number of channels in cable programming skyrocketed at the same time that viewing on the traditional network television stations plummeted.

Nonetheless, in 1992, the NBC network lost a reported \$100 million in broadcasting the Olympics, while by 2004—when Michael was winning eight medals, six of them gold—they profited \$70 million.

In addition to the impact Phelps has had on the American public's viewing of Olympic swimming, his popularity also has had an impact on other meets. From 2004 to 2008, there was a staggering 91 percent increase in the television viewing of the U.S. Olympic Swimming Trials.

PASSION AND PROCESS OF ACHIEVEMENT

Michael Phelps observed that as a boy, "I could go fast in the pool, it turned out in part, because being in the pool slowed down my mind." His self-control over what had once been a non-stop talking, fiddling and disrupting behavior as a child had turned into athletic achievement that earned worldwide acclaim.

For land lovers, Michael helped transform the sport from medal counts to bearing witness to the purity and depth in his joy of achievement. In Beijing, there was "the touch," just ahead of Michael Cavic in the 100 meter butterfly...and, of course, Michael's exulting roar after the 400 freestyle relay when Jason Lezak's dramatic come-from-behind, "out-of-this-world" anchor leg kept Phelps' eight-gold-medal possibility alive after his quest nearly ended on just the second night of competition!

Understanding Michael's passion and process in preparing for those races can enhance our appreciation of what he's accomplished. There are several books that provide a deeper look into his story, including his best-selling autobiography, "No Limits," but here is a quick look at his development:

From the time Michael was born, he had superb mentors, beginning with his mother, an educator by profession, who became a school principal. In many ways, she parented Michael as if taking care of a baby bird, holding it close enough to keep it safe, but gently enough to allow it to feel its own power, knowing one day it would fly on its own. She held firm expectations for Michael, but never in a way that would crush his spirit. When one teacher told her that her son would never succeed at anything because he couldn't concentrate, she focused on a positive resolution and asked, "What are you going to do about it?"

Michael's second significant mentor was his older sister, Whitney. She was a world-class swimmer in her own right who nearly made the 1996 U.S. Olympic team. Whitney modeled athletic commitment—excellence and fortitude that impacted Michael more than any book or TV broadcast. She was living proof that by applying herself, she could compete with anyone in the world—and, therefore, so could her little brother.

During the same years that Michael was a small boy tackling the challenges of bullying from schoolmates for his big ears, endless curiosity and non-stop motion that frequently left him near tears, there was

a man confronting his own obstacles. He would soon become a third mentor to Michael.

As a young coach in his 20s, Bob Bowman was dismissed twice from the same club. It wasn't that he was



[PHOTO BY JASON REED, REUTERS]

PHELPS HELPED TRANSFORM THE SPORT FROM MEDAL COUNTS TO BEARING WITNESS TO THE PURITY AND DEPTH IN HIS JOY OF ACHIEVEMENT. IN BEIJING, WHO COULD FORGET MICHAEL'S EXULTING ROAR AFTER THE U.S. VICTORY IN THE 400 FREE RELAY, THANKS TO JASON LEZAK'S DRAMATIC COME-FROM-BEHIND, "OUT-OF-THIS-WORLD" ANCHOR LEG?

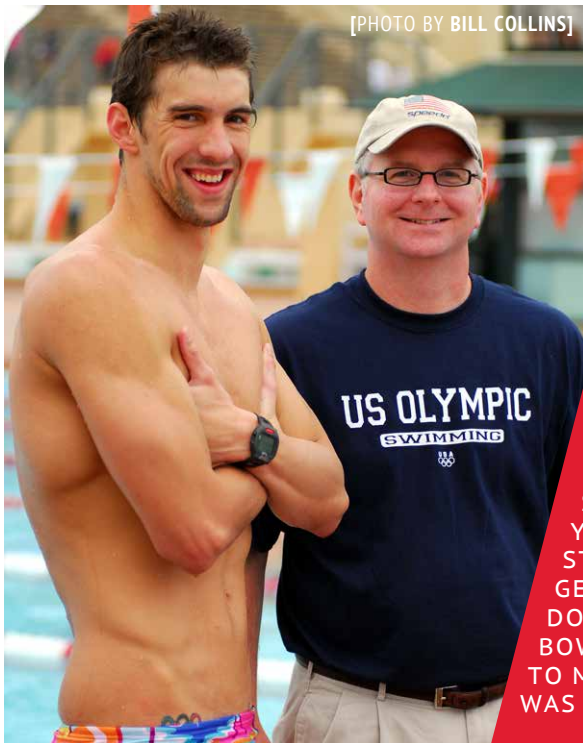
incompetent—in fact, far from it. As a violin-playing, Beethoven-loving young man, he treasured art and organization. But he wasn't the "kid magnet" that typifies most successful age group swim coaches. He did possess many other positive qualities such as detailed planning, organizing and the capacity to firmly challenge teenagers. He was working his way through employment opportunities to find the right match for his unique skill set. His determination to do so is

PICTURED > MICHAEL PHELPS, SURROUNDED BY PHOTOGRAPHERS, IS CONGRATULATED BY HIS MOM, DEBBIE, AND SISTERS, WHITNEY AND HILARY, AFTER WINNING EIGHT GOLD MEDALS AT THE 2008 OLYMPICS IN BEIJING.



[PHOTO BY GARY HERSHORN, REUTERS]

[PHOTO BY BILL COLLINS]



PICTURED > PHELPS HAS BEEN WITH COACH BOB BOWMAN SINCE MICHAEL WAS 11 YEARS OLD. NOTHING STOOD IN THE WAY OF GETTING THEIR TRAINING DONE, AND COACH BOWMAN'S COMMITMENT TO MICHAEL'S SUCCESS WAS WITHOUT LIMITS.

an inspirational story in its own right.

One of the sport's most learned experts is Coach Paul Bergen. His success in helping athletes rise to world record-setting levels dates back to the early 1970s. After a number of opportunities had come and gone, Bob finally went to work with Coach Bergen in Napa Valley (Calif.). Paul was coaching swimming and simultaneously developing his skill at training horses. It was quickly apparent to Bob that if he wanted to learn as much as he could from Coach Bergen, then he would have to spend more time do-

ing what Bergen did. Bob proceeded to shovel manure out of horse stalls, while listening, learning and refining his skill as a swimming coach.

When Michael was 11, Bob encountered another crossroad. He could accept a position as an assistant coach at

Auburn University and enter the farm management program, or he could accept a similar position at the North Baltimore Aquatic Club. He chose the latter. As a result, the qualities of organization and planning met face to face with the energy and talent in Michael Phelps. The young boy once said defiantly to his new coach, "I never get tired!" He soon learned that that would not be the case while training under Bob Bowman.

Over the next four years from 1996-2000, long-time head coach and owner of NBAC, Murray Stephens,

gradually stepped aside from his usual duties as the team's national group coach and opened the door for Bowman to continue to coach Michael into his teens. Bob was as demanding a coach as Murray, perhaps even more so.

From 1998-2003, Michael tells us that he missed three practices. Two were for having his wisdom teeth out and one for a snowstorm. He calculates that he swam 550 times in the pool each year, and between Sydney and Athens, 2,200 pool sessions covering 9,000 miles. School vacation time was often devoted to training trips with Coach Bowman to altitude to enhance his aerobic ability. Endurance blocks of training were commonly 80,000 meters per week for six to seven months a year. Speed blocks of training were 60,000 meters per week. Nothing stood in the way of getting their training done, and Coach Bowman's commitment to Michael's success was without limits.

Bob taught Michael how to tie a tie for his first school dance, and how to drive an automobile. He ingrained in his protégé an approach of, "We do the things others can't do, or won't do." And Michael gave back an incomparable ability to focus on goals in swimming, just as he had done in managing his behavior when he came off of Ritalin.

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DID HE CHANGE THE SPORT?

Twenty-two Olympic gold medals doesn't change a sport, but the publicity that comes along with it has put swimming on ESPN's Sports Center, a long-held goal of Michael's. His rivalry with Ryan Lochte opened the door for Ryan's own TV reality show.

How many children have entered the sport of swimming, wanting to "be like Mike"? That saying was once used for a Michael named Jordan, but not so much anymore—at least not around the pool. USA Swimming reports that athlete membership has grown from 266,000 to 366,000 since Michael set his first world record in 2002. That increase has often been referred to as the "Phelps Factor."

Not only have more kids than ever before entered the sport, but also more *talented* athletes are now swimming. While room exists at the top of the sport for anyone of any size with a work ethic such as Phelps, winners

are becoming taller and taller. Over the last several years, the USA national age group record book has been shredded. Certainly, the "Phelps Factor" is one reason.

His effect has crossed gender lines. A possible heir to the spotlight in swimming, Missy Franklin, has said of Michael, "He has really brought swimming onto the scene and gotten so many more people involved. I don't think his shoes will ever be filled. I think his footsteps are huge. Hopefully, I can make little paths next to his."

If this "Michael" is going to promote swimming to the extent one of his heroes, Jordan, did with basketball, his biggest impact may still be to come. Phelps' return from "retirement" in 2014 creates the possibility of him swimming into his 30s. This might prove to the world that swimmers can have a 15-year professional career, similar to the careers of athletes in other sports.

Remaining at the top of his sport for so many years also brings with it

the admonition from Greek mythology whispered into the ear of the conqueror, "All glory is fleeting."

Somewhere out there will be a small boy or girl—maybe reading this story—who will take on the same challenge that Michael Phelps took from Mark Spitz and others. And if we live long enough to see it, he or she will succeed in carrying the torch that Michael lit and will continue to show the world how magnificent the sport of competitive swimming truly is.

Thank you, Michael Phelps, for generating and sustaining a career that we believe is one of the greatest triumphs in the history of swimming. ♦

Chuck Warner is a part of Swimming World Magazine's editorial board and author of "Four Champions: One Gold Medal" and "And Then They Won Gold." Both books are available for purchase online at www.SwimmingWorld.com. Next month: "Swimming's Top 10 Triumphs and Tragedies: #3."



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ALL THE WORLD'S A POOL

BY CASEY BARRETT

Team USA may be unmatched atop the Olympic podium, but to find the biggest and best swimming schools on earth, it helps to look overseas...

THE PRIMARY GOAL OF SWIM SCHOOLS IS TO HELP MAKE COUNTLESS CHILDREN WATER SAFE. TO THE KIDS' PARENTS, SWIMMING IS NOT A SPORT—IT'S A LIFE-SAVING SKILL.

Paul Sadler was a special needs teacher, a single dad just trying to support his son. It was the mid-1970s, and every Saturday he would supplement his income by teaching swimming lessons at the local pool in Melbourne, Australia. Before he knew it, his one-man, once-a-week business was bringing in more than his day job. Sadler saw an opportunity.

Forty years later, Paul Sadler Swimland is among the most successful swim schools on earth. Each week, the school welcomes over 28,000 students to its 15 locations in Australia, and over the last few years, has expanded its operations to Canada as well. The company boasts revenues of \$25 million a year and employs around 700 people.

Eye-popping numbers, sure, but it's nothing compared to the countless children that Sadler has helped make water safe over the last four decades. While he cares deeply about his country's competitive excellence, and has an Aussie's pride in their out-

sized achievements in the pool, that has never been the point. Sadler recognized—far sooner than most—that competitive swimming was a luxury that attracted a relatively small number of the overall population, even in swim-mad Australia.

Yet, everyone needed to learn something far more elemental: how not to drown. It doesn't get more basic than that, and few have been more successful at selling this most essential lesson.

THE WORLD'S GOLD STANDARD

When my partner, Lars Merseburg, and I founded our own swim school, Imagine Swimming, 12-1/2 years ago in New York, we looked Down Under for inspiration first. Australia, a country of just more than 20 million people that represents just 0.33 percent of the world's population, remains the world's gold standard when it comes to swim schools. That's no secret, and that's why the first book we bought to study up on our fledgling business

was "Teaching Swimming and Water Safety, Learning Aquatics the Australian Way."

It seemed pretty obvious to seek guidance from the ones who do it best, and we soon discovered not just how much we had to learn, but the massive potential of an industry that is still in its infancy stateside.

It's a curious paradox that the country that remains, by far, the world's leader in competitive swimming success has not led the way in the development of learning to swim. That's not to say that there aren't a number of world-class swim schools across America. La Petite Baleen in the Bay Area and the Hubbard Family Swim School in Phoenix are as good as any school in Australia; they've always been inspirations and sources of generous wisdom. But the owners of these two great institutions will also be quick to point west across the Pacific when discussing their own mentors.

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OVER THE BORDER

The fact that you'll find the best swim schools on the world's largest island shouldn't come as a surprise, yet you don't need to travel across an ocean to find an aquatics juggernaut that outpaces almost any American counterpart. Just take a look over the border.

Down in Mexico, Acuatica Nelson Vargas rivals Paul Sadler's Swimland in both size and scope. Both businesses were founded in the mid-'70s, when the idea of for-profit swim schools was unheard of, and both are pioneers of their nation's aquatic development. Today, ANV (recently rebranded as Nelson Vargas Family Fitness) welcomes more than 20,000 students a week to their 14 locations.

In high school at the Bolles School in Jacksonville, Fla., I had the good fortune to swim alongside Nelson Vargas Jr., who has since joined his father in running his namesake family business. Back then, the idea of

building an aquatics empire around small warm pools was impossible to fathom. Good pools were supposed to be long and wide and deep...and even a little chilly.

As every swim school owner will tell you, those are four qualities you don't want in your teaching pool. These days, I'll take a warm, shallow 50-foot puddle in the right location over any 10-lane long course cathedral—and that warm puddle will be a lot more profitable, too.

Maybe that explains the disconnect that often exists in the States between club swimming and learn-to-swim schools. It's like comparing swimming to diving. Both take place in the same venue—and they're often naturally paired together—but they are two distinct beasts. An Olympic champion who's never worked a job a day in his life is no more prepared to run a swim school than he is to run an Arby's. Yet, that champion could quite easily transition into coaching; it's inherent in his blood.

A LIFE-SAVING SKILL

Swim schools are something else. Ninety-nine percent of your clients have little interest in seeing their children progress onto teams and start dreaming the big Olympic dreams. Some, when informed of the endless weekends spent inside sweaty pools at meets, may even shudder at the thought. And as for the ones who were meant to be swimmers, well, the sport will find them, like it or not.

As Paul Sadler and Nelson Vargas and many others have discovered, it's those other 99 percent who will define your business. For them, swimming is not a sport—it's a life-saving skill. Because, on a planet mostly covered by water, everyone alive wants to learn how not to drown. ❖

Casey Barrett, along with Lars Merseburg, co-founded Imagine Swimming (N.Y.)—for children ages 6 months to 12 years—in 2002.

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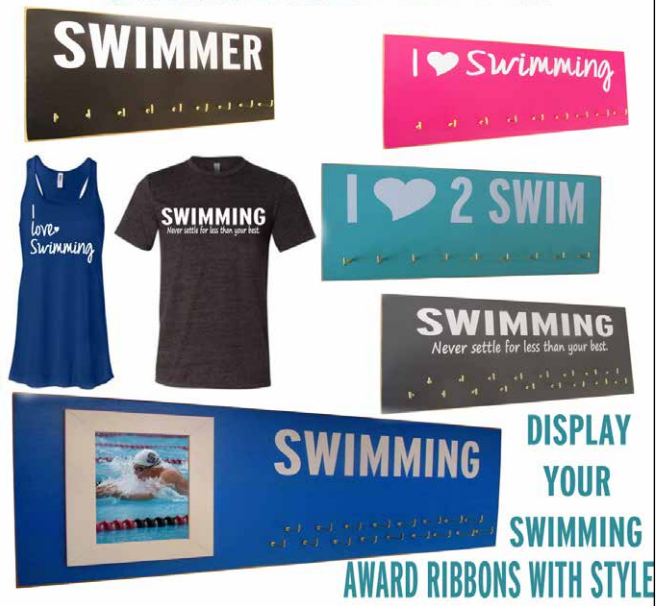


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2 BATTLE GROUP

While in a standing position, hold the battle rope with both hands. Lightly bend over forward and begin alternating arm raises by lifting the rope off the floor and then slamming it back down, continuing with both arms.



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With force, throw the ball down to the floor, keeping the arms semi-straight and the elbows higher than the hands. Follow through by lowering the hands and keeping the elbows high, slamming the ball off the floor as if doing a butterfly pull.

MY 3 NEW FAVORITE “TOYS”!

BY J.R. ROSANIA
PHOTOS BY EMMI BRYTOWSKI
DEMONSTRATED BY TAMMY GOFF
AND MAUREEN RANKIN

Years ago in the world of strength and conditioning, things were pretty simple. We used some weights and a few machines and pulleys to train our athletes, and that was about it.

In the recent decade, different types of exercise equipment are now available. Three of my favorite new “toys” are TRX suspension straps, medicine balls that bounce and ship or battle ropes.

The likes of Dara Torres and Ryan Lochte, among others, have used these pieces of equipment in their swim training. I found that the new equipment enables swimmers to move with resistance in more swim-specific movements. They seem to build strength and biomechanical movements in muscle groups that typically do not get work with traditional exercises.

So, here are some exercises with these pieces of equipment that help improve my swimmers’ performance. Start out with two sets of 12 reps and progress to 15 reps and 20 reps. Then extend to three sets of the same sequencing. ❖

MEET THE TRAINER



J.R. Rosania, B.S., exercise science, is one of the nation’s top performance enhancement coaches. He is the owner and CEO of Healthplex, LLC, in Phoenix. Check out Rosania’s website at www.jrhealthplex.net.

MEET THE ATHLETES

Tammy Goff (TRX straps) is a Masters swimmer and a firefighter from Glendale, Ariz.

Maureen Rankin (SW shirt) is a nine-time All-American swimmer from the University of Arizona and former coach who now swims Masters. She also is an Athletic & Lifestyle model for Sports & Lifestyle Unlimited as well as the circulation manager for Swimming World Magazine.

WHEN IS IT OK TO BE HUNGRY?

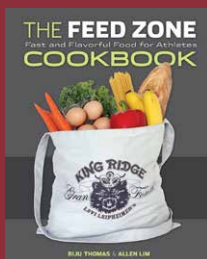
As a general rule of thumb, when you're in a period when you're not training or are training very little, it's OK to be hungry. When you are training, be a little hungry. And when you're getting close to a major competition or event and when you are competing, make sure that you are *not* hungry.

(For more detailed information, pick up a copy of "The Feed Zone Cookbook" by Biju Thomas and Allen Lim. This book and others about nutrition for athletes is available online from VeloPress.com—see ad, page 46.)

• • •

In this month's nutrition column, *Swimming World* continues to provide flavorful, easy recipes for athletes. This month's recipe comes from "The Feed Zone Cookbook," a no-fuss guide to preparing good food that will satisfy an athlete's cravings and prepare the body for top performance.

Try out this sample recipe (at right). Pancakes are one of the most pleasurable ways to get the carbs you need. (TIP: to save time, make a double or triple batch of the dry ingredient mix and store it in an airtight container in your pantry. Scoop out 2 cups of dry mix and then proceed with the recipe.) ❖



Republished with permission of VeloPress from "The Feed Zone Cookbook: Fast and Flavorful Food for Athletes."

BUTTERMILK PANCAKES

DRY INGREDIENTS:

- 1-1/2 cups all-purpose flour
- 2 tablespoons brown sugar
- 1-1/2 teaspoons baking powder
- 1 teaspoon baking soda
- 1 teaspoon ground cinnamon

WET INGREDIENTS:

- 1-1/2 cups buttermilk
(If you don't have buttermilk on hand, add 1 tablespoon of lemon juice to 1-1/2 cups of regular dairy milk; stir, then allow the milk to sit for 5 minutes before using.)
- 2 eggs, lightly beaten
- 1/4 cup butter, melted

DIRECTIONS:

- Combine all the dry ingredients in a large bowl.
- Fold in the wet ingredients, slowly adding milk to achieve desired thickness. Do not overmix.
- Bring a lightly oiled sauté pan to medium-high heat. Pour batter onto pan, forming pancakes of your desired size (be sure to allow room for batter to spread). Flip pancakes after bubbles begin to form along the edges or when first side is golden brown; cook on second side until done.
- Transfer cooked pancakes to plates or a serving platter. Top them off with fruit of your choice. Makes about 6 pancakes.

PER SERVING (3 pancakes):

771 calories, 32 g fat, 519 mg sodium, 96 g carbs, 3 g fiber, 25 g protein



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2014 PREP SCHOOL DIRECTORY

The listings on pages 33-39 are paid advertisements.

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BAYLOR

Swimming World Magazine's 2009, 2011, & 2012 Girls National High School Champions, and 2008-2009 Boys Independent School Champions. For more than 100 years, Baylor School has been one of the leading college preparatory schools in the South. Located on a spectacular 670-acre campus, Baylor provides a challenging curriculum featuring small classes and 19 AP courses. The Class of 2013 was offered over \$12.4 million in merit-based scholarships and were accepted to the country's top universities. Our swimming program has produced an Olympic Gold Medalist, NCAA Champions, National Junior team members and high school All Americans. Our swim teams won 46 Tennessee State Championships. Five Baylor students competed in the 2011 World Junior Championship, and alums competed in the World University Games and World Championships. Both teams were recognized by NISCA for academic excellence in 2013. Baylor's state-of-the-art Aquatic Center features a 50 meter by 25 yard pool, an endless pool, and a \$1.2 million sports performance center. Head Coach Dan Flack has been named Tennessee Men's or Women's Swimming Coach of the Year 10 times since 2007.

See display ad on page 33

EAGLEBROOK SCHOOL

College Preparatory • Boys Boarding and Day school
Grades 6 – 9 • Enrollment: 253



271 Pine Nook Road PO Box 7
Deerfield, MA 01342
Theodore Low – Director of Admissions
413-774-9110 • tlow@eaglebrook.org
www.eaglebrook.org

Bo Tanner, Aquatics Director
Head Coach Swimming, Diving & Water Polo
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Eaglebrook is a world leader in boarding and day school education for middle school boys. Located on 750 acres in historic Deerfield, MA, 100 miles west of Boston, our diverse student body represents twenty-six states and twenty countries. Our students benefit from a vigorous curriculum that prepares them for secondary school; a student to faculty ratio of 5:1; average class sizes of 8 – 12 students; and outstanding secondary school placement assistance. The aquatics center, opened in 1997, has a six-lane twenty-five yard state of the art pool. We have both Junior Varsity and Varsity level teams for Water Polo and Swimming and Diving. Our teams compete with secondary school JV and Varsity teams in the New England Prep School league. The team has earned four Division III championship titles for the Western New England Prep School league Championship, one division II title in

– continued on 34

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PREP SCHOOLS – continued from 33

the same league and one division III Championship title in the New England Prep School Championships. Varsity athletes go on to participate on secondary school varsity teams including Deerfield Academy, Peddie School, Mercersburg Academy, Suffield Academy, Phillips Exeter, Phillips Andover, Choate Rosemary Hall, Hotchkiss and college teams including Harvard, Columbia, Middlebury College, Dartmouth, Bates College, University of Florida, Southern Methodist University, Claremont McKenna and Connecticut College.

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vanslootenc@fuma.org
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Fork Union Military Academy is one of the premier college preparatory schools in the country. Founded in 1898 the school has a tradition of educating young men in "Body, Mind and Spirit." The Academy is located in Central Virginia near the town of Charlottesville and the University of Virginia. FUMA has been nationally recognized as a sports powerhouse, producing multiple Olympians, two Heisman trophy winners, and over 150 professional football, basketball, and baseball players. Our Swimming & Diving program alone has produced almost three dozen All-Americans, multiple State Champions, current State Record Holders, and National Qualifiers. In 2014, 2013, 2011 and 2010, our team won the Virginia Independent Schools State Championship and Virginia Prep League Swimming & Diving Championship. Our 2009 team also won the Virginia Prep League Swimming & Diving Championship and received the 2009 Virginia State Championship Sportsmanship Award. Between 2005 and 2014, our team had four members named National Commended Scholars, posted an overall team GPA of above 3.40 (five consecutive years), and had over 30 swimmers and divers inducted into the National Honor Society.

See display ad on page 35.

GRANDVIEW PREPARATORY SCHOOL



College Preparatory; Co-Ed Day
Grades: Early Childhood – Grade 12
Enrollment: 265

336 Spanish River Blvd. NW
Boca Raton, FL 33431
Kathleen Prindle, Coach • 561-212-7175
Kathleen_KleinPrindle@hotmail.com
www.GrandviewPrep.net

Grandview Preparatory School is an independent, co-educational day school enrolling 265 students in Early Childhood – Grade 12. Grandview offers student-centered programs, small class sizes, innovative curricular projects, a nationally recognized arts program, a top-ranked athletic program boasting the area's best coaches, and a personalized college counseling program with graduates accepted to top-tier colleges and universities nationwide. Grandview has 100% college placement. Since 2011, 100% of its graduate swimmers have earned NCAA collegiate athletic scholarships. The school features a 6-lane, 25-yard outdoor aquatics facility. The swimming program has produced Academic All-Americans and District and County Champions and has been a consistent high-performer at the FHSAA State Championship level, sending squads to State Finals for 10 consecutive seasons. Grandview swimmers work closely with the Performance Aquatics Swim Club, a USA Swimming club team that utilizes the school facility as a training site, and has developed several national and world-ranked swimmers (including 4 Olympians) since its inception in 2011.

GULLIVER SCHOOLS

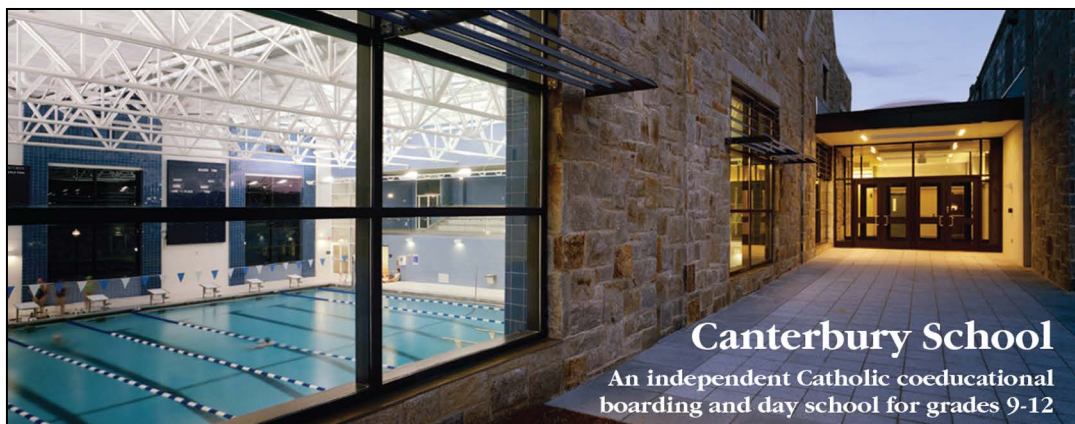
College Preparatory; Co-ed Day
Grades Pre K3 – 12 • 2014 Enrollment: 2,200



6575 North Kendall Drive • Pinecrest, FL 33156
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poppj@gulliverschools.org
www.gulliverschools.org

Established in 1926, Gulliver is a private, non-profit, co-educational college preparatory day school with an international reputation for excellence. Located in metropolitan Miami, the school enrolls more than 2,200 students in Grades PreK3-12, on four campuses. The School's Aquatic Center is a premier training and competition facility with a state-of-the-art Olympic-size pool

– continued on 37



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PREP SCHOOLS – continued from 34

(50 meters x 25 yards) locker rooms, coaches' offices, a classroom with video SMART board technology and a team exercise room. Gulliver and its year-round USA Swimming program, the Gulliver Swim Club, are guided by Head Coach Jeff Poppell, who formerly led the Bolles School to National High School Championships in 2003-2004 and 2005-2006. Poppell was named the National High School Coach of the Year in 2004 and has coached U.S. national champions, athletes ranked in the top 25 in the world and medalists at the European Championships, Commonwealth Games, South American Championships and Southeast Asian Games. **See display ad on page 35.**

MCDONOGH SCHOOL

College Preparatory; Co-ed Day and Five-day Boarding
Grades K-12 • Enrollment: 1,300



8600 McDonogh Road
Owings Mills, Maryland 21117
Steve Birdsall – Associate Director of Admissions
443-544-7027 sbirdsall@mcdonogh.org
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443-544-7161 sward@mcdonogh.org
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On 800 rolling acres in a suburb north of Baltimore, McDonogh School is a vibrant, diverse, family-like academic community. Students are inspired regularly by talented, caring teachers and achievement-oriented classmates. Opportunities abound in academics, arts, athletics, and service. A five-day boarding program is an appealing option for swimmers with early-morning practices. The Henry A. Rosenberg, Jr. Aquatic Center, built in 2006, includes an indoor eight-lane, 50-meter pool, which is home to boys' and girls' swim teams and co-ed water polo teams. Since 2003 the girls' squad have won eight league championships. McDonogh swimmers have risen to the top of the sport. Since 2000 the boys' and girls' teams have had 35 individual High School All Americans totaling 130 All American performances. In 2009, one set a national high school prep record in the 50-free and three participated in the World Trials. Recent graduates have joined top collegiate programs, including Brown, Columbia, Harvard, Stanford, Arizona, Georgia, Purdue, and Johns Hopkins. In 2012 six alumni competed in the US Olympic Trials and three have won NCAA titles. Upper School tuition for day students is \$27,100; \$36,420 for five-day boarding. In 2014, McDonogh awarded more than \$4.8 million in need-based financial aid.

MERCERSBURG ACADEMY

College Preparatory; Co-ed Boarding and Day
Grades 9-12



300 E. Seminary Street
Mercersburg, PA 17236
Tommy Adams – Assistant Head of School
for Enrollment • 717-328-6173
admission@mercersburg.edu
www.mercersburg.edu

Swimming at Mercersburg has a long tradition of excellence. The program has fielded 31 swimming Olympians that have won several medals, including 5 gold medalists. New head coach and former YMCA National Coach of the Year, Glen Neufeld, leads a Mercersburg swimming program that has produced numerous prep school All-Americans and sent countless swimmers to compete at a wide variety of top colleges and universities. Mercersburg also operates a summer swim camp for swimmers ages 8-18. Plans to build a new aquatic center are currently underway. Founded in 1893, Mercersburg offers a rigorous and dynamic curriculum to 430 students from 40 nations and 30 American states. Distinctive features include: over 160 courses, including AP, post-AP, and Honors levels; 74% of faculty hold advanced degrees; demanding curriculum includes 5 foreign languages, robotics, and 2 different senior capstone projects; varied international study opportunities; \$215 million endowment; 26 sports with 25 varsity teams that are recognized regionally and nationally; \$5.9 million in available financial aid; exceptional college counseling. The 300-acre campus is convenient to Baltimore and Washington, D.C., Philadelphia and Pittsburgh and New York City. **See display ad on page 36.**

– continued on 37B



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609-944-7501 admission@peddie.org
Greg Wriede – Director of Competitive
Swimming/ Head Coach
gwriede@peddie.org www.peddie.org

Founded in 1864, Peddie School surrounds Peddie Lake on a beautiful 230-acre campus minutes from Princeton, midway between New York City and Philadelphia. Known nationally for its academic excellence and strong sense of community, Peddie's talented faculty is highly accessible and its technology unsurpassed. The average class size is 12 and the student-to-faculty ratio is 6:1. Peddie's student body represents 24 states as well as 34 foreign countries. A national swimming power, Peddie swimmers have been represented in every Olympics since 1992 which included double-gold medalist Nelson Diebel. BJ Bedford added to Peddie's gold medal tally in 2000 in Sydney. Peddie is consistently at the top of the National High School Mythicals and has placed swimmers on the USA National Junior Team. In 2013 Peddie became one of 3 high schools in the country to crack the magical 3:00 barrier in the boys 400 Free Relay. Recent graduating swimmers went on to Harvard, Princeton, Yale, Stanford, Northwestern, University of Pennsylvania, University of Florida and Auburn. Peddie's substantial endowment provides need-based financial aid for roughly 40 percent of students. **See display ad on page 36.**

CANTERBURY SCHOOL

College Preparatory School; Co-ed Boarding and Day
Grades: 9-12, Enrollment: 350



101 Aspetuck Avenue
New Milford, CT 06776
Matt Mulhern – Director of Admission
admissions@cbury.org
860-210-3836 www.cbury.org

Founded in 1915, Canterbury is a college preparatory, coeducational boarding and day school for students in grades 9-12. The School prides itself on creating a community based on Catholic values, where students and faculty forge lasting bonds and every student experiences a broad and challenging program in a small school setting. The School's educational environment fosters academic rigor, athletic development, artistic enrichment and spiritual growth. Our swimming program competes in the New England Prep School Swimming Association (NEPSSA). Our teams consistently compete with the top competition in the NEPSSA, including recent championships by both our girls (2009) and boys (2010 & 2013) teams. Home to our swim and water polo teams is the William W. Higgins '53 Aquatic Center, which opened in September 2008. This state of the art facility is specifically designed for competitive swimming, diving, and water polo events.

— continued on 38

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180 Main Street Andover, MA 01810
 David Fox – Boys' Coach • dfox@andover.edu
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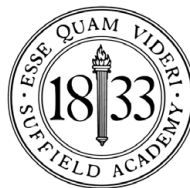


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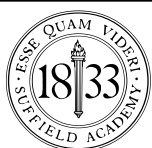
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ED BRENNAN

BY MICHAEL J. STOTT • PHOTO PROVIDED BY UNIVERSITY OF TAMPA

After a distinguished career at Columbia Prep in New York City, Ed Brennan took a winless Fordham team to an undefeated season before moving to the University of Tampa, where he now produces pool and classroom All-Americans.

Q. SWIMMING WORLD: *Thirty-five years in one place. What's been the allure?*

A. COACH ED BRENNAN: Tampa is a wonderful place to live. Our children are here. The school is a very attractive work environment.

SW: *Who got you started?*

EB: I don't think it was any one person. I was never an assistant coach.

SW: *How has D-II swimming changed over the years?*

EB: Well, it sure is faster! Over the years, we've lost some state schools, mostly in California. The influence of international swimmers has been the biggest difference.

SW: *Ever had the urge to move on?*

EB: Sure. When I first came to UT, the athletic department wanted to win a national championship. We were second and third twice at NAAs in the mid-'80s, but administrations and priorities change. When our scholarships were cut in half, I had to work at staying with it. Ultimately, it was more a matter of where I wanted to live than where I could win a national championship. It's not impossible for us to win a national championship, but with our current aid, it is unlikely. What keeps us competitive is the attractiveness of the school and the embarrassment of riches I have when it comes to a staff.

SW: *All of your staffers are former University of Tampa swimmers.*

EB: Like myself, my assistants have an affinity for the school and where we live. Phil Murray and Stephanie Branham were All-Americans at UT. Now as faculty members, they spend as much time on the deck as in the classroom.



Coach Ed Brennan

Men's & Women's Swimming Coach
University of Tampa
Tampa, Florida

Jimi Kiner, our only full-time assistant, is a former D-II national champion and has been with me since 1997. Ryan Gober, our head club coach, also works with the university team.

SW: *What is your overall coaching philosophy and how is that apparent during practices?*

EB: I never take myself too seriously. I'm always willing to do something dumb to get a laugh. In the end, it's a game. You play hard and go home to real life. My mother-in-law once accused me of "playing," not working. She was right!

SW: *How have you changed as a coach in regard to kicking, strength training, volume and today's social media-driven generation?*

EB: With the staff I have, I get a lot of input into both the daily and the yearly program. I write the afternoon sessions for all groups, but it is often modified with the input of the coach managing that set. Jimi and Ryan write the morning practices. Phil and Stephanie work closely with our strength coach. Our sets are built around the NCAA four-day championship program. For example, our first set of a session could

After stints at Columbia Prep and Fordham University, Brooklyn native Ed Brennan (Long Island University, B.S., health science, '69) moved to Tampa and built a Division II powerhouse that consistently ranks among the nation's top 20. In 1986, he was named the NCAA Division II Women's Coach of the Year. In 2012, his women finished fourth, and in 2013, his women's 800 free relay squad claimed a national title. This year, the ladies placed first at the Sunshine State Conference Championships, adding to their 2011 and 2013 crowns. His men, ninth at this year's NCAA meet, have finished in the top 10 nationally all but one year since 1998. In 2014, his men's relays garnered two thirds, a fifth and two sixths at the national meet.

be "first day events." Swimmers would break into groups of 1000 free, 200 IM, 50 free with a coach or sometimes two running each particular segment.

SW: *What is a normal practice schedule for in-water and dryland?*

EB: In the a.m., we go one hour five days a week with three in the weight room and two in the pool; p.m., we go two hours Monday to Friday. On Saturday, we swim two to three hours, depending on the group.

SW: *What percent of practice is kicking?*

EB: In the p.m., maybe 20 percent is kick, but it's generally intense; a.m., perhaps 30 percent.

— continued on 42

HOW THEY TRAIN:

BY MICHAEL J. STOTT

PHOTO PROVIDED BY
UNIVERSITY OF TAMPA

In many ways Jeremy Parker is a coach's dream. A 6-2, 160-pound junior at the University of Tampa and five-time NCAA D-II All-American, he did not start club swimming (Greater Tampa Swimming Association) until his sophomore year at Plant High School (Fla.), where his club coach, Jimi Kiner, was also an assistant at UT.

"That's partly the reason he's done so well with us," says UT coach Ed Brennan. "It's like coaching an eager 12-year-old. Jeremy has the 'beginner's mind' and expects to swim fast every time out. In his first dual meet at UT, he was four seconds under his best 200 free time. And while his continued improvement has been more modest, it hasn't stopped yet.

"Jeremy is quiet to the point of shy. He is the ultimate team swimmer—humble, but confident—and would much rather swim relays than individual events. His relay splits are way faster than his individual times partly because he still has a lot to learn about starts. He's a great student and a young man. I only wish we had 17 more like him," says Brennan.

A comparison of his conference and NCAA relay times substantiate Brennan's point. Standing start bests for Parker in the 50, 100 and 200 yard freestyles are 20.45, 44.91 and 1:39.1. His relay bests over the same distances are 19.55, 43.43 and 1:37.91.

"Most of our sprinters are more heavily muscled than Jeremy," says Brennan, "and while he trains very hard, he doesn't need a lot of rest to swim fast, which makes him an ideal dual meet swimmer. He works with a great group of sprinters, and they all display a similar work ethic."

PROGRESSION OF TIMES

| SCY | HS | FR | SO |
|----------|---------|---------|---------|
| 50 Free | 21.85 | — | 20.45 |
| 100 Free | 48.15 | 46.40 | 44.91 |
| 200 Free | 1:46.60 | 1:41.41 | 1:39.17 |
| 500 Free | — | 4:40.47 | — |

PARKER'S FAVORITE SETS

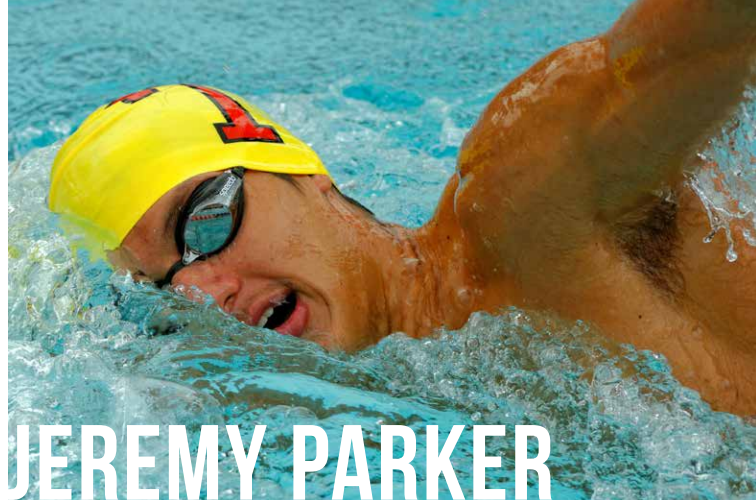
1. 125, 150, 175, 200 (all @ 2:00)

All distances are repeated 3x. Goal is to hold average :28 per 50, :56 on 100 and 1:52 on 200.

2. High-intensity racing with the team's 16 fastest freestylers (2 per lane)

Swim 75 yards, then walk back. Goal is :36+ to :37+ on all swims. Breathe every 4th. Repeat 12x @ 2:00.

3. 3 repeats on power rack, building tempo to race pace 25 all out from blocks, no breath, followed by 125 swim-down. Repeat 5x @ 4:00 early season; 4x @ 5:00 in-season; 3x @ 6:00 pre-taper.



JEREMY PARKER

Tampa swimmers practice 11 times per week. On Saturday, the team swims and/or kayaks for three hours. "The Hillsboro River runs through campus, and the dock is 50 yards from the pool entrance, so all of our swimmers kayak on single or tandem shells," says Brennan. "We can have as many as 23 swimmers on the river at a time.

"We do timed 12-1/2s at least once a week. We also do a weekly cord/buoy set, where we stretch cords across odd lanes at different distances from blocks—for example, 12 feet in lane 1, 11 feet in lane 3, 10 feet in lane 5 and nine feet in lane 7. We have pull buoys at opposite ends in even lanes. Swimmers line up behind odd lanes based on their jumping ability. They start and swim 25 in the odd lane, climb out, dive over the buoy on the pool lip and swim back in the even lane. I think diving over the buoy on the deck teaches them to use their feet and toes on their starts," adds Brennan.

"Jeremy trains with our strength coach three times a week during the school year and also maintains a similar regimen privately with a local trainer." That strength training is regularly tested when Brennan subjects his athletes to power rack sets done in the diving well. The first is done with 20 or 30 pounds with the weight increased by five to 10 pounds on subsequent sets. "Jeremy swims his 25s in 9-plus to 10-plus seconds, depending on where we are in the season," says Brennan.

SAMPLE WORKOUTS

Oct. 10, 2013

- 75 kick with snorkel @ 1:20,
- 25 kick with snorkel @ :20

REPEAT 12x

Jan. 15, 2014

- 3 x 100 free with tennis shoes @ 2:00
- 100 sprint with sprint breathing pattern @ 60 secs.
- 100 swim-down @ 2:00
- 50 swim all out with fins @ 60 secs.

REPEAT ENTIRE SET

Feb. 12, 2014

- 2-turn 35s (start and end outside backstroke flags)
- 2 x 35 @ 60 secs.
- 100 EZ @ 2:00

REPEAT ENTIRE SET 5x ❖

SW: What is a typical taper period for Tampa swimmers?

EB: We generally “rest” during our four-day final exam period in December. We shave and swim very fast at a December invitational that generally follows our final exams—sometimes faster than our conference meet. I believe in two shaves. I don’t want a kid to train for a season, get sick or hurt and lose the entire year.

SW: You’ll have 70 swimmers this fall, which is huge for a college team. Why so large?

EB: We just did too good a job recruiting. Our walk-on standards were USAS AAA times. Swimmers who have those times by a narrow margin aren’t typically offered a swimming scholarship to a competitive program. We have 21 new girls and 18 new guys, and we clearly need to tighten our standards. To accommodate the numbers, we will have to have two morning and two afternoon practices.

SW: Not all swimmers improve in college. How did you recently get four to go from the bottom of the depth chart to NCAA scorers?

EB: It has a lot to do with the attention they get. With five coaches on deck, everyone feels as if they’re being noticed. These are kids who were perhaps the No. 3 or No. 4 swimmers on their club team. Now they’re being coached and encouraged in a very competitive environment.

SW: Your women had an off 2013-14 campaign. What is required for them to rebound?

EB: We graduated four girls who hold individual school records, but we are bringing in a very strong freshman class. Out of the 21 new women coming in, eight will move right into the starting lineup. We have so many “projects” that several are bound to work out well for us.

SW: Eleven CSCAA Academic All-Americans in 2014—that’s a program point of pride.

EB: Our team is definitely a faculty favorite. This year, we had the top student in three departments: finance, math and sports medicine.

SW: A favorite Jeremy Parker set is:

EB: Our 16 fastest freestylers race head-to-head with two swimmers in eight lanes splitting the pool. From a dive, one on each side of the block, they swim three lengths (75 yards) of our pool, breathing every fourth stroke. They climb out and walk back to the start—repeat 12 times at two minutes. It’s very intense. (*Swimming World* readers: take a look at Jeremy Parker’s favorite sets now, shown at the bottom of the first column on page 41 in the “How They Train Jeremy Parker” feature.)

SW: Drury seems to have new blood every semester. What does it take to unseat them?

EB: Perhaps Brian Reynolds retiring? But I think he’s going to outlast me! ❖

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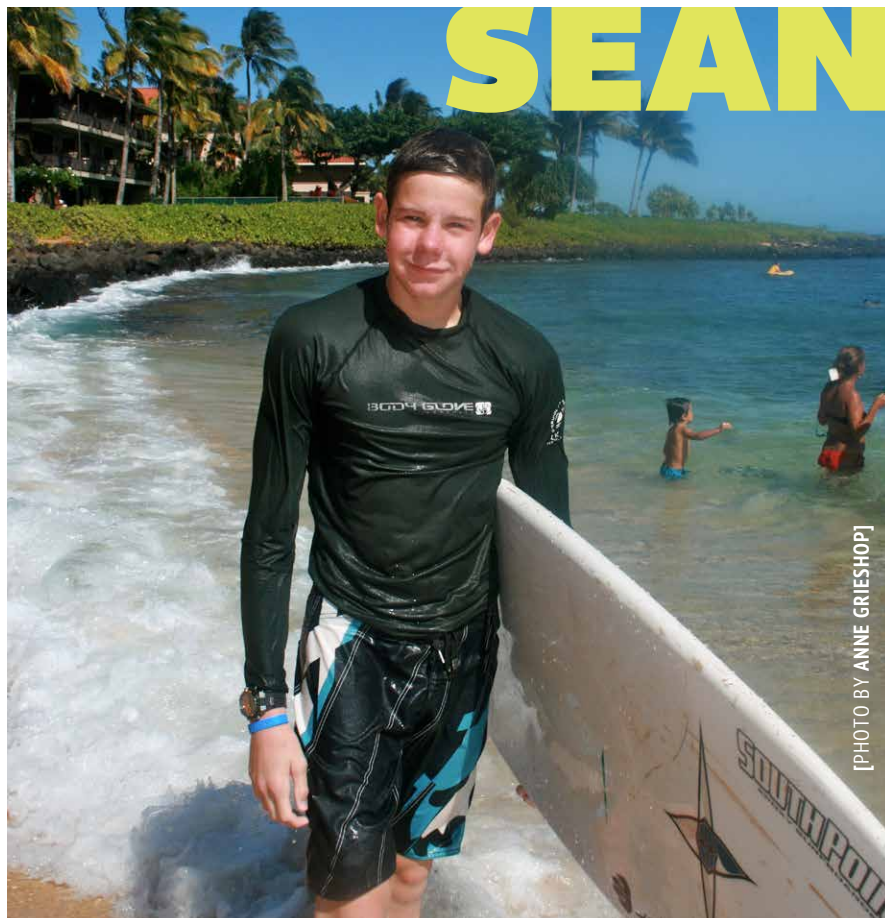
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Michael J. Stott, one of *Swimming World* Magazine’s USA contributors, is based in Richmond, Va.

UP & COMERS

AGE GROUP SWIMMER OF THE MONTH

BY JASON MARSTELLER



GRIESHOP

WHAT IS YOUR BIGGEST STRENGTH IN SWIMMING?

"The thing that I do best in the sport is having fun. I really enjoy every part of swimming and always try to remember that. I always try looking at the positive of a rough, rough race or practice, and I find ways to fix those problems by analyzing it with my coaches, Tim O'Brien and Rob Hastings."

WHAT HAVE BEEN SOME OF YOUR BIGGEST SETBACKS?

"One of the greatest challenges that I had to overcome this season was when I got sick on the first day of nationals. I got a rough case of food poisoning that really knocked me off my feet for the first two days of competition, causing me to scratch one of my best events."

WHO DO YOU LOOK UP TO IN THE SPORT?

"My swimming idol is Michael Phelps because he changed the sport for the better. It sounds quite cliché, but I remember when I was 5 years old and swimming on a summer league team, and I watched him swim in the Olympics in 2004. He was so big and fast, and I always wanted to be just like him. I have followed his career since then, and I am so glad that he is back. And it is so exciting to me that I am now able to race him!"

Sean Grieshop, 15, competes for Nitro Swim Club of Cedar Park, Texas. He trains primarily with Tim O'Brien, who also was the head coach of the U.S. junior national team in 2013.

This summer, Grieshop earned a spot on the U.S. team that competed at the Junior Pan Pacific Championships at Maui, Hawaii, where he finished third in the 1500 free (15:29.87) and ninth in the 400 IM (4:20.25).

At juniors three-and-a-half weeks earlier, he finished second in the 400 and 800 meter free (3:53.54, 8:03.14), 16th in the 200 back (2:04.08) and 24th in the 200 free (1:54.29).

"Sean is an incredibly focused swimmer who trains purposely for his goals, which are also very well-planned and specific," O'Brien says. "He cares about people and is one of the most thoughtful and respectful 15-year-old boys I have ever met.

"(One thing) that stands out about Sean is his flat-out competitiveness," O'Brien adds. "He also knows the value of training sets, and is not afraid to race his teammates—even in off events. He doesn't take sets off, and he raises the bar in practice for all his teammates. Sean simply makes others better daily." ❖

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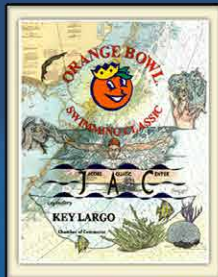
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FAVORITE Summer Memories

With the summer now behind us, *Swimming World Magazine* asked a few of the “bright lights” in the sport what their favorite memories were from this past summer. Here are some of the best responses:

BY JASON MARSTELLER



[PHOTO BY BILL COLLINS]

GREG MEEHAN

Coach Meehan had a tremendous long course season, coaching four swimmers onto the U.S. national team as well as being a member of the Team USA coaching staff at Pan Pacs.

“As Coach Frank Busch told Team USA after Pan Pacs, ‘These were our midterm exams.’ To me, it’s not so much about how individuals performed this summer as it is about what we need to do moving forward toward Kazan in 2015 and Rio in 2016.

“That said, there were plenty of impressive performances—especially for the group in Australia, given the difficult conditions there versus the perfect conditions at Europeans. I think this says a lot about the athletes and their level of toughness.

“In talking with several other U.S. coaches, we were very impressed with the team from Japan. Their pre-meet core activation work is far superior to anything I’ve seen here in the States. In long course racing, I believe this is something helping them to be competitive on the world stage.

“Their success in the stroke events coupled with handling back-to-back races so quickly was eye-opening: for example, (Kosuke) Hagino winning the (men’s) 400 IM and then leading off Japan’s 4-by-200 relay in a 1:46.1 just 15 minutes later! “At the Europeans, the versatility and proficiency of Katinka Hosszu and Mireia Belmonte Garcia really stood out to me.”



[PHOTO PROVIDED BY KATINKA HOSSZU]

KATINKA HOSSZU

Hosszu not only had a strong meet at the European Championships, but she also set five short course world records in the FINA World Cup.

“My favorite memory from this summer would have to be the entire month of August. It’s just so hard to choose

between winning two European titles in the same night and then stepping up on the relay to help get a medal for Hungary (versus) breaking five world records at the World Cup. Personally, I just really love to race, and August was awesome, as it provided a lot of opportunities to get up and race in peak form.

“My other favorite memory from this summer was the launching of my logo and Iron Lady brand! It was so fun to release it to the public. It seems like there has been nothing but a positive response to all of it, and my hope is that it is just the beginning of the brand. There are already a few things in the pipeline for the future, and it is just so exciting to be able to do things like this.”

– continued on 46

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[PHOTO BY DELLY CARR]

CAMMILE ADAMS

Adams had a strong summer with a win in the 200 fly at the Pan Pacific Championships.

“My favorite memory from this past summer would have to be celebrating with sweet Katie McLaughlin after our swims at Pan Pacs. Kathleen Hersey really took me under her wing

throughout 2012 and especially during the Games to kind of show me the ropes of the national team. This summer, I really wanted to do the same for Katie.

“When we touched the wall during the final of the 200 fly, I saw that I had won, but the next thing I looked for was Katie’s time, and she finished third for a bronze medal. Being able to sing the national anthem with her was such a humbling experience. It made this summer one I will never forget.”



[PHOTO BY GRIFFIN SCOTT]

ANDREW GEMMELL

Gemmell overcame a last-minute venue change from Gold Coast, Australia to Maui to win the Pan Pacs open water 10K swim.

“My favorite memory from this summer is something most people probably wouldn’t expect. I remember watching Katie Ledecy’s 1500 at The Woodlands in

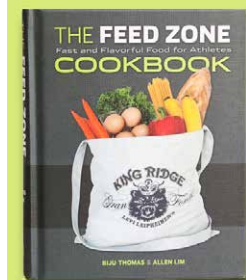
June, when she first broke the world record this summer.

“I was getting ready to swim the 800 in the next heat, but I remember looking at her splits at the 400 and 500, and thinking, ‘Wow, this could be special.’ I got in to swim in the diving well, and I made sure I saw every one of her 100 splits.

“By about the 1200, the rest of the (people at the) pool had figured out what was going on, and everyone was going nuts. When she touched under the record, it was just awesome to see. The energy level was just through the roof—not something you see very often in a mid-June distance session!” ❖

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FOR THOSE THAT DO!

“My Olympic Story”

Jeff Farrell’s “My Olympic Story” is a marvelous tale of inspiration and education. It’s also a historical treasure.

REVIEW BY **CHUCK WARNER**

How is it possible that a young man who joins the Navy two years prior to the 1960 Olympics ends up competing at the U.S. Olympic Trials? How is it possible that a young man that has an appendectomy six days before his first swimming event is able to still dive off of a starting block, let alone swim a race?

If you’re a land animal, don’t worry. Jeff will teach you about what it is like to love the water, when he writes, “Anyone who has spent time in the water knows how it feels to float and propel oneself in this liquid world. It is a liberation from gravity, a feeling of lightness, that can only be experienced in such a medium.”

And he will tell you a story of his life that might have similarities to your own: what it’s like to come home again to face a turning point in your existence. You see, Jeff was born in Detroit, but he grew up in Oklahoma. Serendipitously, it was Detroit where he returned to face the crossroads to his future.

His path was unusual to becoming the first swimmer ever to receive the AAU Swimming Award (now the USA Swimming Award) presented annually for the “individual or organization making the most outstanding contribution to swimming.” His courage and excellence made such an impact in the sports world that he finished third in the 1961 Sullivan Award voting as the most outstanding amateur athlete in the United States, behind household names of the day, Rafer Johnson and Wilma Rudolph.

Farrell weaves you back and forth between the heart-pounding six days to achieving his legend with a summary of his family life that provides

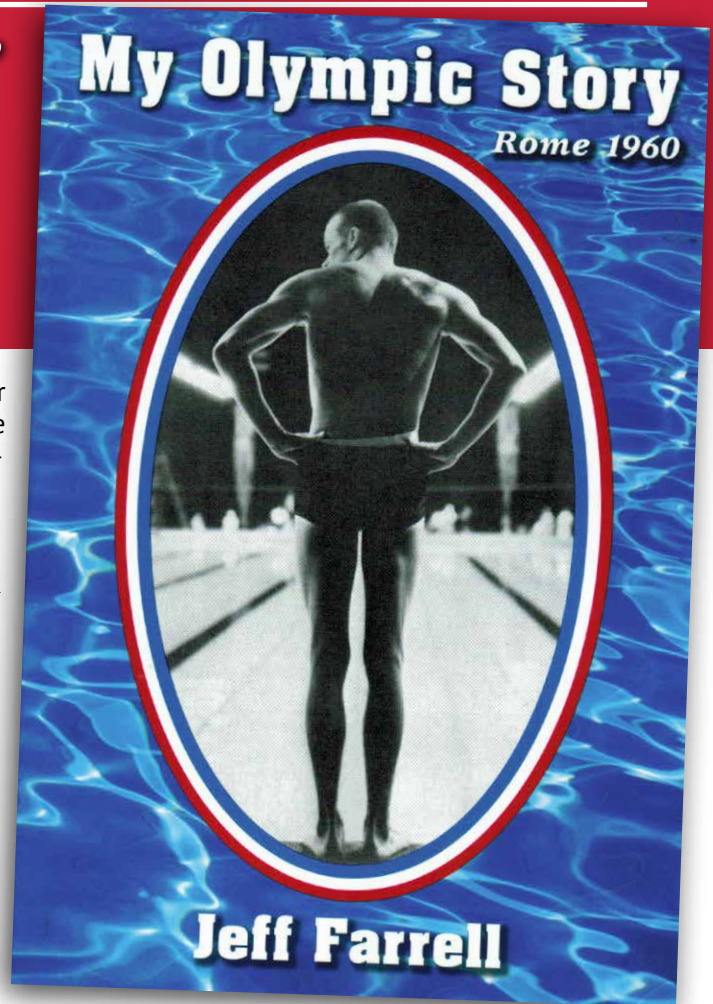
the reader a better understanding of the source of his courage.

He takes you on an experience like Forest Gump took stumbling through icons of swimming history:

- You’ll bump into 11-year-old Richard Quick, who later became a six-time USA Olympic coach.
- You will spend some time with Coach Matt Mann, who coached his teams to 13 NCAA championships, and learn some of his euphemisms such as the importance of “being a ‘backbone’ rather than a ‘wishbone’ athlete.” Or, “You can’t get a 10-cent cup of coffee for five cents. You’ve got to pay the price.”

- Also joining Farrell’s adventure when his Naval assignment takes him to Hawaii is Coach Soichi Sakamoto, the first coach ever to enter the International Swimming Hall of Fame.

- “My Olympic Story” will help you get to know the only “swimming person” ever to win the Presidential Medal of Freedom, Robert John Herman Kiphuth. Coach Kiphuth, though never graduating from college, was a leading sports pioneer for nearly 50 years. He shows us how logic and practical knowledge can interface with science and medicine to facilitate Jeff Farrell’s amazing achievement.



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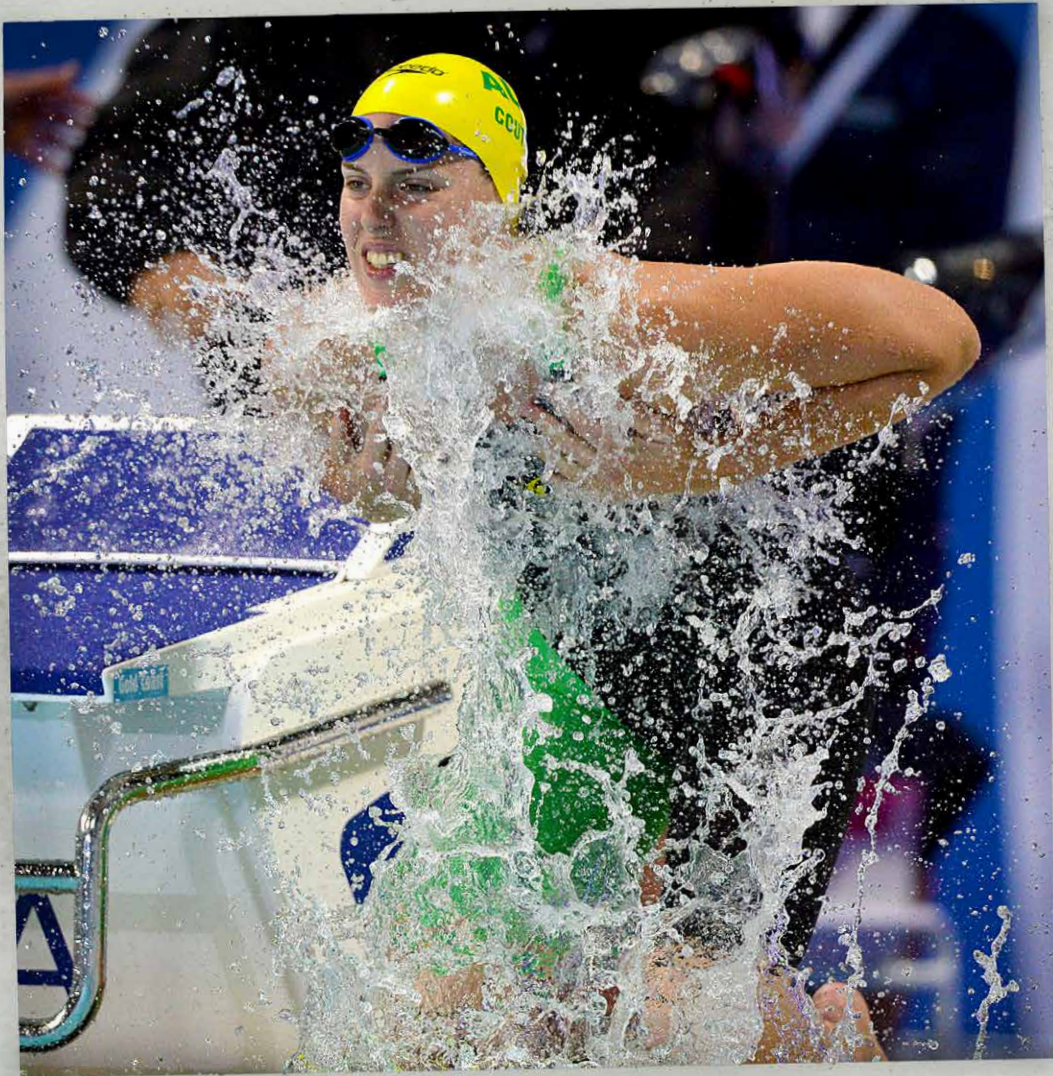
My one criticism, Jeff, is that I wish the book were longer, but what a wonderful visit to your journey it is!

Come learn about one of the great sports stories of all time. Be inspired. And be reassured that looking forward in one’s life can be daunting, but looking back, there seems to be an order to the events we encounter.

If you’re able to meet Jeff’s challenge that it’s not what happens to you, but what you do with what happens to you, perhaps you, too, will succeed in your own personal way just as Jeff Farrell did in front of the world.

Read “My Olympic Story.” ❖

Chuck Warner is a part of Swimming World Magazine’s editorial board and author of “Four Champions: One Gold Medal” and “And Then They Won Gold.” Both books are available for purchase online at www.SwimmingWorld.com.



PARTING SHOT

[PHOTO BY DELLY CARR]

PICTURED > AUSTRALIA'S ALICIA COUTTS MADE A "BIG SPLASH" AT THE PAN PACIFIC CHAMPIONSHIPS IN AUGUST BY WINNING GOLD MEDALS IN THE 100 FLY AND 400 MEDLEY RELAY AND FINISHING RUNNER-UP IN THE 200 IM.