

GET CHARGED GET CHALLENGED GET FIT

Speedo Fit is a fitness app that's made by swimmers for swimmers. You can set and reach goals, track swims, join challenges, discover pools, and get expert swim tips. It's a fun way to maximize every swim.



for more info visit: speedousa.com/speedofit





I'M PROUD THAT ARENA IS THE **EXCLUSIVE APPAREL** PROVIDER FOR THE **U.S. NATIONAL TEAM**. WHEN OUR ATHLETES STEP UP ON THE PODIUM, THEY PROUDLY PROJECT THE IMAGE OF THE **MOST SUCCESSFUL TEAM** IN THE WORLD. ARENA UNDERSTANDS THE TEAM BUSINESS AND CONSISTENTLY PROVIDES **TOP-OF-THE-LINE** CUSTOMER SERVICE. ARENA IS ALSO ACTIVELY DEDICATED TO **GROWING THE SPORT** AT ALL LEVELS, AND THAT SERVES US ALL.

FRANK BUSCH - USA SWIMMING'S NATIONAL TEAM DIRECTOR





NOVEMBER 2014

FEATURES

013 | BREATHTAKING!

by Michael J. Stott

Four coaches share their thoughts on optimal breathing patterns for, perhaps, the most exciting race in swimming: the 50 free.

018 | 2014 OPEN WATER SWIMMERS OF THE YEAR

by Steven Munatones

The Netherlands' Sharon van Rouwendaal and the USA's Andrew Gemmell earned Swimming World Magazine's honor as its 2014 Open Water Swimmers of the Year.

ON THE COVER

After winning the women's 400 IM at this summer's U.S. nationals, Elizabeth Beisel, 22, received a hug from her mom, Joanie—a USA Swimming official who presented the awards for the event. Two weeks later, Elizabeth led a 1-2 USA finish in the medley at the Pan Pacific Championships in Australia. The 2012 Olympic silver (400 IM) and bronze (200 back) medalist is the second-fastest American in history in the 400 IM and the world's ninth-fastest performer. (See stories, pages 30 and 44.)

[PHOTO BY GRIFFIN SCOTT]

020 | OPEN WATER: TOP STORIES OF 2014

by Jeff Commings

This past year witnessed historic English Channel crossings, a changing of the guard at the European Championships and a changing of the venue for the Pan Pacific Championships that saw the United States continue its dominance since 2006.

022 | FROM SEA TO SHINING SEA

by Jason Marsteller

Pan Pacs 10K champion Andrew Gemmell certainly racked up plenty of frequent flyer miles this summer while competing for Team USA in Australia, then Hawaii, during a three-week period in August.

024 | OCEAN'S SEVEN NO PROBLEM FOR SUPER SIX

by Jason Marsteller

Only six swimmers have completed the Ocean's Seven challenge, a series of long-distance open water adventures around the world that tests one's endurance and fortitude.

030 | SHE STANDS OUT FROM THE CROWD

by Jeff Commings

Elizabeth Beisel is full of energy, funloving, encouraging, a favorite among members of the USA Swimming national team, hard-working, extremely talented... and focused on Olympic gold in 2016 at Rio de Janeiro.

033 | AMONG THE NATION'S BEST

by Erin Quinn

Marilyn Mangels and John Flanagan—veteran coaches at the Tysons Corner site (Va.) of the Nation's Capital Swim Club—know what it takes to help their swimmers continually produce stellar performances.

036 | TOP 10 Triumphs & Tragedies

by Chuck Warner

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: #3 World War II of Sacrifice and Honor Slows the Advance of Swimming.

COACHING

010 | LESSONS WITH THE LEGENDS: BOB STEELE

by Michael J. Stott

012 | TECHNIQUE: RECOVERING From a Missed Turn

by Jeff Commings and Graham Bodner

Every swimmer has botched a freestyle or backstroke turn in his or her swimming career. One reason is because every pool is different. Swimming World asked Graham Bodner to share his thoughts on what swimmers should do if they don't execute their flip turns accurately.

SWIMMING WORLD MAGAZINE (ISSN 0039-7431). Note: permission to reprint articles or excerpts from contents is prohibited without permission from the publisher. The publisher is not responsible for errors in advertisements. Microfilm copies: available from University Microfilms, 313 N. First St., Ann Arbor, MI 48103. Swimming World Magazine is listed in the Physical Education Index. Printed in the U.S.A. © Sports Publications International, November 2014.

016 | SWIMMING TECHNIQUE MISCONCEPTIONS: THE ANCHOR CONCEPT IN SWIMMING

by Rod Havrilukr

A common swimming technique misconception is that the arm "anchors" at the beginning of the pull. An "anchored" arm implies a non-moving object to assist the pull, which can delay the beginning of force generation and inaccurately depict arm motion.



035 | COACH JOHN FLANAGAN'S FAVORITE SETS

by Jeff Commings and John Flanagan

041 | Q&A WITH COACH NED SKINNER by Michael J. Stott

042 | HOW THEY TRAIN COLLIN HIGGINS

by Michael J. Stott

TRAINING

039 | DRYSIDE TRAINING: CONNECTING THE EXTREMETIES

FOR BETTER SWIMMING

by J.R. Rosania

JUNIOR SWIMMER

045 | UP & COMERS

COLUMNS & SPECIAL SECTIONS

008 | A VOICE FOR THE SPORT

026 | HOLIDAY GIFT GUIDE

046 | GUTTER TALK

048 | PARTING SHOT



A Voice for the Sport

SOME OLYMPICS ARE MORE SPECIAL THAN OTHERS BY BRENT T. RUTEMILLER

Have you ever taught a blind person to float or a deaf person to swim? How about watching a young boy throw his crutches to the ground before sliding into the water for a swim lesson? Have you seen a parent crying tears of joy?

I have experienced all of these as a volunteer Special Olympics swim coach. The rewards far outweigh any other thing I have accomplished.

I remember Edson, who asked to be on my S.O.S. swim team (Special Olympics Swimmers). His mom pushed him

onto the deck in a wheelchair. Edson could only propel himself with his arms. His legs dragged toward the bottom as he wiggled through the water. I would

pull him up for air, then let him go back under. He won a medal that summer for the 10-meter assisted swim at the Arizona Special Olympic State Championships.

Today, Edson walks with crutches, swims 400 yards per practice, rides a three-wheel bike and has a room full of swimming medals.

I also remember the day the gate swung open, and in walked a mother with a young teen-age girl named Vanessa. The mother was holding the girl's arm above the elbow. The girl was wav-

ing a cane, left to right, in front of her.

Vanessa lives in a dark world where there is no difference between above and below the surface. It took a whole season to

teach her to float on her back. We created a metronome to send sound waves through the water by using a long pole inserted in the pool and clanking the other side with a metal wrench. Through trust and courage, she learned to take a stroke, then glide with each sound. This

past year, Vanessa won a ribbon in the 25 freestyle for her classification. Her mother proudly walked beside her.

Five years ago, Kyle walked by swinging his hips and dragging one leg. His arms didn't fully extend, mostly because of shortened tendons in his body. He has a mild case of cerebral palsy. He did not

the first four years on the team, Kyle simply did doggie paddle and rolled over on his back for a breath. His legs dragged

know how to swim. For

We decided to buy some arm floaties to put on his feet. Immediately, his body position improved to the point where he is now swimming close to a mile at every practice. Kyle won individual medals this past year, and he proudly took them to his school.

behind him.

At age 5, Eric came to us with no language skills and a tremendous fear of the water. His parents thought he

swim. Communication was more a game of charades and hand signs. But after three years of teaching, Eric (age 8) stood

on the top podium by

would never learn to

himself last month while his extended family snapped photos of him with two arms raised. The moment was tearful.

These are just some of the success stories that come from being a part of this great program. I encourage everyone to donate a few hours each week to those who are less advantaged. If you want to win, first help someone else win!

Brent T. Rutemiller

Publisher of Swimming World Magazine



PUBLISHING, CIRCULATION AND ACCOUNTING OFFICE

P.O. Box 20337, Sedona, AZ 86341 Toll Free in USA & Canada: 800-511-3029 Phone: 928-284-4005 • Fax: 928-284-2477 www.SwimmingWorldMagazine.com

Chairman of the Board, President - Richard Deal DickD@SwimmingWorld.com

Publisher, CEO - Brent T. Rutemiller BrentR@SwimmingWorld.com

Circulation/Art Director - Karen Deal KarenD@SwimmingWorld.com

Circulation Manager - Maureen Rankin

Advertising Production Coordinator - Betsy Houlihan BetsyH@SwimmingWorld.com

EDITORIAL, PRODUCTION, MERCHANDISING, MARKETING AND ADVERTISING OFFICE

2744 East Glenrosa Avenue, Phoenix, AZ 85016 Toll Free: 800-352-7946 Phone: 602-522-0778 • Fax: 602-522-0744 www.SwimmingWorldMagazine.com

EDITORIAL AND PRODUCTION

Editorial@SwimmingWorld.com

Senior Editor - Bob Ingram Bobl@SwimmingWorld.com

Managing Editor - Jason Marsteller JasonM@SwimmingWorld.com

Graphic Designers - Emmi Brytowski, Joe Johnson

Staff Writers - Michael J. Stott

Fitness Trainer - J.R. Rosania

Chief Photographer - Peter H. Bick

SwimmingWorldMagazine.com WebMaster: WebMaster@SwimmingWorld.com

MARKETING AND ADVERTISING

Advertising@SwimmingWorld.com

Marketing Coordinator - Tiffany Elias TiffanyE@SwimmingWorld.com

MULTI-MEDIA

Writer/Producer - Jeff Commings JeffC@SwimmingWorld.com

INTERNATIONAL CORRESPONDENTS

Africa: Chaker Belhadj (TUN)
Australia: Wayne Goldsmith, Ian Hanson
Europe: Norbert Agh (HUN), Camilo Cametti (ITA),
Oene Rusticus (NED), Steven Selthoffer (GER),
Rokur Jakupsstovu (FAR)
Japan: Hideki Mochizuki
Middle East: Baruch "Buky" Chass, Ph.D. (ISR)
South Africa: Neville Smith (RSA)
South America: Jorge Aguado (ARG),
Alex Pussieldi (BRA)

PHOTOGRAPHERS/SWTV

Peter H. Bick, USA Today Sports Images, Reuters, Getty Images











JACOBS AQUATIC CENTER

EVENT

ORANGE BOWL SWIM MEET JANUARY 3, 2015

TIME

Winter Training Dates Available DECEMBER AND JAVARY 2014/2015







Key Largo

The Florida Keys



JACOBS AQUATIC CENTER KEY LARGO, FLORIDA

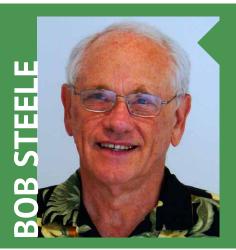
EIGHT LANE, 25 METER, MYRITHA COMPETITION POOL
WWW.JACOBSAQUATICCENTER.ORG
1.305.456-SWIM

LESSONS with the **LEGENDS**

BY MICHAEL J. STOTT

SWIMMING WORLD CONTINUES A SERIES IN WHICH TOP COACHES SHARE SECRETS OF THEIR SUCCESS. THIS MONTH'S FEATURED COACH:





PICTURED > MORE THAN 40,000 COACHES HAVE HEARD BOB STEELE SPEAK AT CLINICS. COUNTLESS OTHERS HAVE COPIES OF HIS ENCYCLOPEDIC BOOK, "GAMES, GIMMICKS AND CHALLENGES." IN HIS 55-YEAR CAREER, HE HAS COACHED AGE GROUP THROUGH OLYMPIC-LEVEL ATHLETES. NINETEEN OF HIS WORLD-RANKED SWIMMERS IN 41 EVENTS PRODUCED TWO AMERICAN RECORDS AND SIX NCAA DIVISION II MARKS; 22 OF HIS HIGH SCHOOL AND 145 D-I AND D-II ATHLETES EARNED ALL-AMERICAN HONORS. AT CAL STATE UNIVERSITY-BAKERSFIELD, HE WON FIVE NCAA DIVISION II NATIONAL CHAMPIONSHIPS IN SEVEN YEARS. HIS SOUTHERN ILLINOIS UNIVERSITY SQUADS WON SIX NATIONAL INDEPENDENT CHAMPIONSHIPS. HE HAS BEEN HONORED FOUR TIMES AS NCAA DIVISION II COACH OF THE YEAR. THESE DAYS, HE SERVES AS A USA SWIMMING MASTER COACH CONSULTANT AND HAS VISITED 165 TEAMS WITH WORLD-RANKED HIGH SCHOOLERS.

Bob Steele concludes that four elements have conspired to make today's swimmers faster than those in years past:

- Coaches
- Swimmers
- Parents
- Equipment

COACHES

"More coaches are more passionate about helping kids reach their potential. And the application of science is really helping," says Steele. "What has changed is the available technical know-how. With the technology we have for videotaping, assessing heart rates, event-specificity training, determining thresholds and training paces, race analysis and software, it's a whole new world. And there is something new all the time."

And even if it isn't new, chances are it is on the Internet...often on video...always in color. The resources are endless, including USA Swimming Webinars—live and archived—ASCA programs and Swimming World content. Still, for Steele, many basics remain immutable. Foremost among them: streamlining ("the greatest skill and the key to faster swimming," he says), kicking and finishing—all which should be continually introduced and promoted in creative ways. "The basis for athletic excellence is fun, fitness and motivation,"

he says. "A coach has to be a Pied Piper in that regard."

SWIMMERS

These days, many of the world's fastest swimmers grew up in swimming and are older and bigger than their predecessors.

"They are more mature and they stay around longer," Steele observes. Financial aid—in the form of athletic scholarships, NGB subsidies (and) corporate sponsorships—has clearly allowed athletes to stick with the sport longer and experiment with a variety of training philosophies.

"Gone (for the most part) are 20,000-yard days. Yet swimmers still have to be serious about challenging sets. We don't get any better unless we extend ourselves," he says. Fun is no longer a foreign word, and the importance of team has enjoyed a resurgence, especially in this era of post-grad programs, he notes.

PARENTS

Parents remain the driving force in a child's early swimming experience. Those children who opt for extended stays have the benefit of committed adults. These adults take their young swimmers to practice and to meets. They also support the child's swimming organization both physically and financially. Most parents live to experience the happy result of sus-

tained excellence envisioned by "The Talent Code" author Daniel Coyle.

EQUIPMENT

Equipment/gear is another reason for faster swimmers. There now exists an entire industry dedicated to swim improvement. Engineered suits, swim snorkels, paddles, ergonomic devices, tubing systems, resistance tools ad infinitum all help produce fast athletes. Yet in its most basic form, "all a coach needs to make swimmers faster is a pace clockpreferably digital—and a Tempo Trainer," he says, adding that "there is also a lot of homemade equipment that can correct errors in stroke technique, improve body position and the like—as well as save dollars."

BOTTOM LINE: KEEP IT FUN

Equipment aside, Steele's philosophy remains the same:

"Fun is fun. What I'm trying to do is raise swimmers' self-expectations and aspirations to match that of their coaches. Because if it is fun for the kids to do, it will be fun for us to watch."

Michael J. Stott, one of Swimming World Magazine's USA contributors, is based in Richmond, Va. For more on legendary coach Bob Steele, visit www.gamesgimmickschallenges.com.



RECOVERING FROM A

MISSED TURN

BY JEFF COMMINGS AND GRAHAM BODNER

Every swimmer has botched a freestyle or backstroke turn in his or her swimming career.

Even Michael Phelps, inarguably the greatest swimmer in history, missed his turn in the final of the 100 freestyle at this summer's national championships. Instead of planting his feet solidly on the touchpad after 50 meters, Phelps only managed to get a few toes on the wall and lost the momentum needed to keep up with a field of very talented swimmers. He finished seventh after qualifying third for the final.

His coach, Bob Bowman, said Phelps did not take the time to acquaint himself with the pool markings at William Woollett Aquatic Center in Austin, Texas, site of the summer nationals.

This points out what many swimmers might not know to be an obvious fact: every pool is different. If you are swimming at a pool for the first time, make sure to work on your turns in warm-up in the competition pool. The "T" on the bottom of the pool might be a little bit farther from the wall than what you see daily at your home pool. By preparing for the adjustment in warm-up, you'll reduce the chances of missing a crucial turn.

Swimming World asked Graham Bodner, the lead developmental coach at Franklin Area Swim Team (Murrysville, Pa., located about 20 miles east of Pittsburgh), for his thoughts on what swimmers should do if they don't execute their flip turns accurately. Here's what he had to say:

Missing a turn can cause you to visualize months of training and hard work going down the drain while tension builds in your body. However, there are things you can do to recover your momentum and get back in the race. Key to this one overriding principle: DO NOT PANIC. Stay in the moment and concentrate on what you need to do next.



In accordance with USA Swimming rules 101.4.3 and 101.5.3, some part of the swimmer must touch the wall at the completion of the turn. Make sure you get some part of you on that wall—even if it is that toenail you forgot to clip! Whether it is freestyle or backstroke, get some solid, fast-snapping dolphin kicks going the split-second after you realize you're not going to get that explosive push off the wall. It is important to regain that momentum you had going into that wall...and guickly. Once you have regained some of that momentum, get back to the surface with a solid breakout. For freestyle, keep your head in line with the rest of your body and explode with thunderous flutter kicks. Remember your training basics and do not breathe on the first few strokes out of a turn. For backstroke, get those legs going through your first deep catch and pull. Once on the surface, increase your turnover rate and get yourself back into the race!

I talked with many of my swimmers about how they handled a missed turn and I got a mixed bag of answers. Elise Scalan, one of our senior-level swimmers, had missed two turns in one short course season. The first time it happened, the negative thoughts took control, and she gave up. The second time she missed a turn, she took what she had learned and applied it.

"I knew what I had to do the second time it happened," she said. "I had to stay positive and get kicking. At the end of that race, I actually got a best time! I think it was because I took what I learned from my past experience and stayed positive."

While knowing what you need to do to recover is essential, you must have the correct mindset to implement it. In swimming as in life, you will encounter missteps and adversity. What truly matters is how you respond mentally and physically. •

BREATHTAKING



on Good, former University of Virginia coach, believed that the 50 yard freestyle was "nothing but a start, a turn and a finish." Unstated, but understood, was that breathing was optional.

"I approach 50 breathing patterns on a case-by-case basis," says Princeton women's assistant Suzanne Yee. "As in training, not everyone is the same nor (will he or she necessarily) be fastest by not breathing for a whole 50. Also, the pattern looks different depending on swimmers' use of underwaters on each 25."

Yee cites Lisa Boyce, who went 22.07 to win the 2013 lvy League Championships. Boyce breathed once. "She is a phenomenal underwater kicker and also has exercise-induced asthma," says Yee. "In a race situation, she will break out right before or at 15 meters on the first 25, turn, and go 12 to 15 meters on the second. She will take a breath after her breakout on the second 25-regardless of where she comes up—and is able to accelerate after her breath.

"Megan Waters, who went 22.36 in

2011 and 25.9 long course leading up to 2012 Olympic Trials was a bit different," says Yee. "She had solid underwaters, but would not go as far. (In a short course 50), Megan would either go one down/one back or just one back, based on her tempo and where she came up.

"As I work with a sprinter, we focus on exactly where to take the breath, whether it is one or two. I have had very few athletes swim the 50 in more than two breaths. Long course is a little different, but breathing location is based on their first 15 meters," says

UNDERWATER/HYPOXIC WORK

Getting swimmers to relax in an oxygen-deprived state is a universal issue.

At Stanford, "we devote an entire workout each week to underwater/ hypoxic work," says Tracy Duchac, who was recently promoted to associate head coach of the Stanford women's swimming and diving team after serving two years as an assistant.

"The base we set in early season is just about feeling comfortable holding your breath both underwater and swimming (on the surface). The training is as much mental as physical when it comes to underwaters and swimming with a low- to no-breath count.

"As the season progresses, we increase the intensity of the work. All swimmers have individual benchmarks. We feel it is important to compare 'you-to-you.' This way, swimmers find success and are able to build confidence when doing longer underwaters and limited breathing," she says.

In practice, Stanford coaches are vigilant in analyzing swimmer comfort in short-breath situations.

"We look to see if they tighten up the last 10 yards," says Duchac. "How comfortable are they with hypoxic work in general and with a no-breath 50? I joke that we'd be OK with sprinters breathing every stroke if it were most efficient. We work a lot on taking a fast breath without disrupting individual rhythms.

"Tempo Trainers have been a key. The more efficient the breathing, the better swimmers perform in all their

- continued on 14

BREATHTAKING - continued from 13

freestyle races. With 50 long course or short course, it comes down to one breath or no breath. We work throughout the season to ascertain what is best for each swimmer," she says.

BREATH CONTROL

At the University of Arizona, home to the 2013 NCAA women's 50 free champ (Margo Geer) and the 2014 men's co-champion (Brad Tandy), both swimmers do no-breath 50s well in practice, but generally opt for one breath when competing, says Wildcat coach Rick DeMont.

"Or we might do it with a lot of rest in longer sets such as 10 by 50. On the odd ones, they might be breathing once a 50 and then breathe every four or every six strokes. It depends on how you are working it. Most guys swimming a 50-yard freestyle today are going zero," he says.

SWIMMERS IN CONTROL

At different points in the Princeton season-usually mixed with speed work, 25s or shorter-Yee has swimmers do 50s free on a very relaxed interval or breathing every stroke. "This puts the swimmers in control," she swimmer would take a breath, take three to five breaths or a set rest time (five to 20 seconds, depending on time of year), and restart from a dead stop to FAST until the next breath or 50 is finished," says Yee.

"We ask swimmers to use their ideal race 50 breathing pattern, and if they don't yet know what that is, this is a good way to start them off. This approach helps make the breathing automatic. Going fast from a dead stop puts into perspective how short a 50 is," she says.

"Lisa was able to really learn how to control her breathing—even after a

> FAST effort-and could stretch her distance out between breaths more than anyone else on the team, allowing her more rest in between efforts."

> Here are some examples:

Several Rounds:

- 4 x 25 variables (Fast/ Easy; E/F; F; E) @ :30
- 4 x 25 @ :30

Odds: back half, 100 speed (looking for controlled, easy speed). Evens: fast breakout.

- 50 breathing pattern @ 1:00
- 50 FAST kick @ 1:00
- 50 easy + regroup

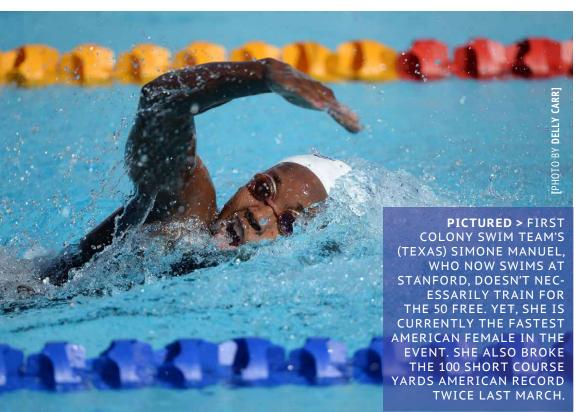
TRAINING (OR NOT?) FOR THE 50

It is possible to be a world-class sprinter

without training for the splash-and-

Simone Manuel is currently the fastest American female in the 50 meter free. She won the event at U.S. nationals in August with a time of 24.56. Interestingly, her former coach, Allison Beebe, at First Colony Swim Team in Texas, says that Manuel doesn't train for the 50.

"With the 100 being her best event-and since she is still relatively young-Simone trains more for the



"The tradeoff, if you breathe, is the possibility of losing your rhythm at the end of the swim. And if you don't breathe, you might start slowing down a bit, so it depends upon how you start off.

"In training, they do pretty well with no-breath 50s if they start off pacing enough in practice. We do a lot of breath control-A LOT. Margo and Brad do 50s both with and without rest—for example, no breath or 3-2-1-0...stuff like that.

says. "It makes them focus on where they need to breathe, why they don't need more air, and it establishes a routine during a race.

"From this exercise, freshmen or swimmers who don't often swim the 50 usually realize that excessive breathing slows them down. We will do broken fast 50s from the blocks, where athletes use BRs (breaths of rest) or a set rest time. Our broken FAST 50s from the blocks include coming to a complete stop, where the

200, knowing that most of her American competitors are better closers. She also knows that she will naturally gain speed as she grows (she's now 5-11) and eventually gets into the weight room....

"Yes, she broke the 100 short course yards American record (46.84 by Natalie Coughlin in 2011) without lifting," says Beebe. And she did it twice last March at the ISCA Junior National Championship Cup in Clearwater, Fla. -46.83 in prelims and 46.75 as a relay leadoff.

Manuel, now a freshman at Stanford, has been promised opportunities to expand her swimming repertoire. At First Colony, where she has trained since she was 11 years old, she didn't focus much on the 50.

"During the short course season on Thursdays, Simone did hypoxic breathing work designed to help her finish her 100," says Beebe. "We used a set of 100s from Eddie Reese, where she swam her first 75 at 85 percent and then went 100 percent on the last 25 in two breaths or less. This really helped with her 100 at the end of the season. I do not know how much transferred to the 50, but that wasn't the focus of the set."

Apparently, it helped enough to set the American record.

"Simone does not breathe on her 50 yard freestyle," says Beebe. "She experimented with a no-breather during the 2013 long course season, but we both thought that taking one breath for the 50 fit her better."

LEARNING TO RELAX

Getting swimmers to relax is a constant issue for coaches. Beebe, now with Santa Clara Swim Club. constantly asks her athletes to be disciplined in their workout habits so as to develop the confidence required in racing settings: "Unfortunately, I have found that a lot of my swimmers do not do a good job of exhaling until they turn to breathe. This leads to longer breaths and late breathing, so we routinely remind swimmers to exhale while their faces are in the water."

At Stanford, Duchac says, "When it comes to race time, we really don't want athletes thinking about the breath much at all. They have a plan, either one breath-knowing exactly where they are going to take it—or no breath.

"With the training behind them, they are physically equipped to do a no-breath 50. But if their breathing is efficient enough and they mentally feel that taking one breath is going to help them, we will put it in.

"We have noticed that if they are stressed over the lack of air, sometimes it is better to just take the breath," she says. *

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



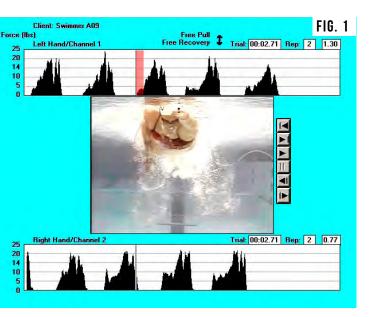
THE ANCHOR CONCEPT IN SWIMMING

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:

A common swimming technique misconception is that the arm "anchors" at the beginning of the pull. An "anchored" arm implies a non-moving object to assist the pull, which can delay the beginning of force generation and inaccurately depict arm motion. This misconception can be applied to all four competitive strokes, but is most frequently applied to freestyle.



THE ANCHOR MISCONCEPTION

One source explains that the swimmer pulls himself forward "by anchoring his hand in front of him" (OSB Multisport, 2014). Another source continues that his "arms are locked onto the water" and his body moves "over his anchored arm" with the water "staying put" (Empfield, 2014). These statements succinctly define the "anchor" misconception.

In reality, the hand must begin moving backward to generate propulsion. Numerous early studies showed that the hand moves backward as the body moves forward (e.g., Counsilman, 1971; Schleihauf, 1979). More current research shows that no substantial force is generated until the hand begins backward motion (e.g., Becker & Havriluk, 2014). In addition, the water does not "stay put" to keep the hand in place.

ANCHORS HOLD SHIPS IN A STATIONARY POSITION

An anchor is designed to hold a ship in a stationary position. Applying an anchor concept to swimming is confusing. When the arm enters the water, it must immediately begin backward motion to generate propulsion. The word, "anchor," may encourage a swimmer to hesitate rather than immediately begin the pull.

Research shows that swimmers waste considerable time at the beginning of the pull—for a variety of reasons. For example, the swimmer in Fig. 1 has 2-tenths of a second of minimal force with her left hand (top graph) because she completed her arm entry with her hand above her shoulder. Taking time to "anchor" the hand would only be an additional waste of time.

After the arm completes the entry, the hand must begin to move backward. The path for the right hand with respect to the body is shown by the red line in Fig. 2 (next page, top right). Because of water resistance, the hand moves backward less with respect to the water than with respect to the body. As the swimmer swims from the position of the left image to the position of the right image, the hand traces the path of the blue line with respect to the water. Typically, the hand moves backward about one-half as much with respect to the water as with respect to the body.

VIRTUAL WALL OF WATER

A more accurate model for the beginning of the pull is to use a "virtual wall of water" as a relatively solid surface for the

FIG. 1 > (LEFT) The red shaded area in the top graph shows that this NCAA Division I freestyler wastes about 2-tenths of a second before her left hand drops below the level of her shoulder.

hand **(see Fig. 3).** The "wall" would encourage swimmers to position the hand effectively as soon as the arm entry is completed. A "virtual" wall would also accurately represent the backward hand motion.

Feeling a "virtual wall" on which to pull and push can be enhanced with hand paddles. A swimmer can position the paddle perpendicular to the direction of body motion as the pull begins. The resistance against the paddle simulates the hand positioned against a wall. The paddle/wall strategy can also help the swimmer maintain the hand perpendicular to the direction of body motion.

SUMMARY

The term, "anchor," has been used to suggest a solid position for a swimmer's hand to begin the pull. The anchor concept can delay the beginning of force generation. In addition, arm motion is inaccurately described.

An alternative is to use a "virtual wall of water" to encourage a swimmer to position the hand effectively at the beginning of the pull and throughout the entire range of motion. The concept also accurately represents the backward hand motion. Hand paddles can enhance a swimmer's perception of the "virtual wall." *

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

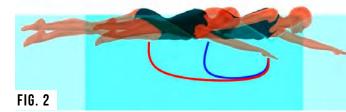




FIG. 2 > **(TOP)** This illustration shows the hand path with respect to the body (red line) and with respect to the water (blue line). The hand moves backward about half as much with respect to the water as the body.

FIG. 3 > (ABOVE) This swimmer positioned her hand against a "virtual wall of water" at the beginning of the pull and continued to push backward against the wall.





2014 OPEN WATER SWIMMERS OF THE YEAR

BY STEVEN MUNATONES

THE NETHERLANDS' SHARON VAN
ROUWENDAAL AND THE USA'S ANDREW
GEMMELL EARNED SWIMMING WORLD
MAGAZINE'S HONOR AS ITS 2014 OPEN
WATER SWIMMERS OF THE YEAR.

SHARON VAN ROUWENDAAL, NETHERLANDS Female Open Water Swimmer of the Year

Following in the footsteps of her Dutch predecessors, Edith van Dijk and Judith van Berkel-de Nijs, Sharon van Rouwendaal has transformed herself from a fast pool swimmer to an open water star.

Like Van Dijk and Van Berkel-de Nijs before her, the 21-year-old's decision to add open water swimming to her repertoire has opened up a whole new chapter in her career. Her coming-out party was at this summer's LEN European Swimming Championships in Berlin, where her five events in the pool and open water resulted in two gold and two silver medals as well as her first-ever selection as *Swimming World Magazine's* Female Open Water Swimmer of the Year.

Her jam-packed schedule started off with an upset victory in the 10K marathon swim and was followed up with a close second in the 5K time trial event. On the fourth day of competition in Regattastrecke Grünau—the rowing basin used in the 1936 Olympics—van Rouwendaal finished her open water events with a gold-medal performance in the 5K team time trial.

Drafting behind her two Dutch teammates, Ferry Weertman and Marcel Schouten, van Rouwendaal paced a fast 55:47 split (2:43 faster than her solo 5K time) to help the Netherlands outswim the more vaunted teams of Greece and Germany.

After a few days of rest, she shifted her sights to the pool and finished fifth in the 800 meter freestyle in 8:28:28. The native from Soest, Netherlands garnered her second silver medal at the end of the 12-day competition with a quick 4:03.76 in the 400 free.

Her four-medal performance in the pool and open water was indicative of the stamina, skills, savvy and speed that her coach Français Philippe Lucas saw in her when she moved to France to train with him.



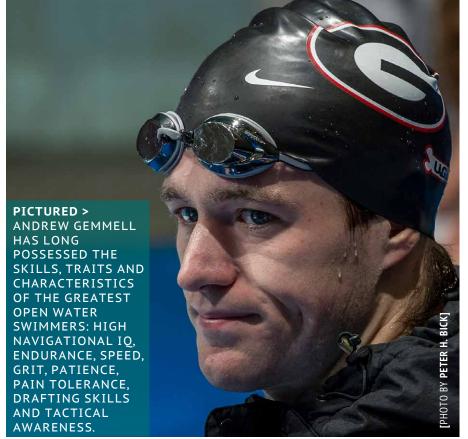
Her 10K marathon swim demonstrated conclusively that her emphasis on hard training along with smart racing was a winning combination. She drafted like a veteran, keeping close tabs on the chase pack during the first half while Italy's Aurora Ponsele built up a 20-second lead. Van Rouwendaal shifted into overdrive on the last loop, as she negative-split and turned the deficit into a fast-closing victory over 2012 Olympic 10K gold medalist Éva Risztov of Hungary.

The former backstroker had placed at the 2010 European Championships and FINA Short Course World Championships in the pool, but always had shown promise in the distance freestyle events. Training out of Narbonne, France, Coach Lucas developed her potential and helped transform her to an elite open water swimmer. Her work ethic and intelligence were two tools in her arsenal that Lucas knew would serve her well.

In June, she won her first 10K swim in Sète at the French nationals over 2008 Beijing 10K Olympian Aurélie Muller by an impressive three minutes. She didn't compete in any FINA 10K Marathon Swimming World Cup or LEN Cup races throughout the summer season, as she put all her focus on the European Championships.

Her victory in the 10K was a bit surprising to her, but she hung with all her more experienced competitors from the European continent in the four-loop course. She handled the physicality of pack swimming with composure and an eye toward qualifying for the 2016 Rio Olympics at the 2015 qualifying race in Russia.

With world-class closing speed and her newly developed racing savvy, van Rouwendaal is an open water talent now fully exposed to her global competition. Combined with her tactical intelligence and composure under the pressure of physicality, she is fully capable of experiencing further success through the 2016 Rio Olympics.



ANDREW GEMMELL, USA Male Open Water Swimmer of the Year

Bob Beamon had it. Michael Jordan exhibited it. Michael Phelps embodied it.

Dominance.

This is precisely what Andrew Gemmell demonstrated throughout the summer of 2014, justifying his selection as 2014 Swimming World Magazine's Male Open Water Swimmer of the Year.

Gemmell has long possessed the skills, traits and characteristics of the greatest open water swimmers: high navigational IQ, endurance, speed, grit, patience, pain tolerance, drafting skills and tactical awareness.

He showed glimpses of his potential and the future back at the 2009 FINA World Championships in Rome, where he placed fifth in the 10K race and captured a silver medal in the 5K. In both races, he came from far back in the pack. But in the midst of a collegiate career at the University of Georgia and sights on making the 2012 London Olympics, his focus was always two-fold.

He just missed the opportunity to qualify for the 2012 Olympics in the 10K, but he made up for it by representing the United States in the 1500.

2014 was a new chapter for the Delaware native with his undergraduate obligations out of the way and his sights set squarely on 2016. Back under the paternal wing of his coach and father, Bruce Gemmell, at the Nation's Capital Swim Club, Gemmell seems to have shifted into another gear in the open water.

His latest gear was on full display at the USA Swimming National Open Water Swimming Championships in Lake Castaic, Calif. After his typical positioning far behind the leaders in the first half of the race, Gemmell eventually turned a tight race into a dominating victory.

In the first half of his competitions-no matter if the race is held in calm lakes or turbulent seas-Gemmell looks almost bored as he rides the wake of others and simply cruises. But underlying his casual veneer is a constant assessment of the speed and shape of the pack.

When the time is right, Gemmell intuitively makes the uncanny decisions at the optimal times to burst through any elite field. With his sub-15 minute 1500-meter speed and hard-nosed mindset, he can just as easily swim through a pack as he can swim around his competition.

"I can adapt to conditions that present themselves," says Gemmell with humility and spot-on accuracy.

The last loop at the USA Swimming national 10K championship was indicative of Gemmell's compo-

sure and competitive nature in the open water.

Caught squarely in the middle of the lead pack of seven swimmers, Gemmell waited until Sean Ryan looked to relinquish his lead. In a split-second decision that immediately transformed the entire race, Gemmell shot through the pack like a 50 freestyler.

It was a pure power move.

Like few others can do at the elite level, Gemmell went from a position of drafting along in casual fashion to sprinting immediately in the lead with a furious six-beat kick and frantically quick 96 strokes-per-minute pace. Only Jordan Wilimovsky was able to hang on for second.

His feat was replicated in Maui at the 2014 Pan Pacific Open Water Swimming Championships, where he initially surrounded himself with Americans, Australians, Japanese and New Zealanders in the first half of the ocean swim.

But when crunch time came along the Hawaiian shores, Gemmell took off and won handily.

His father was justifiably proud. "My dad has been my coach in some capacity since I was about 10," he explains. "And I am mainly focused on open water now."

That comfort zone with his father and his less stressful post-graduate lifestyle is an unbeatable combination empowering the world's top open water swimmer in 2014. *

Steven Munatones writes for the Daily News of Open Water Swimming and created www.openwaterswimming.com and www.openwaterpedia.com.

Open Water: Top Stories of 2014 BY JEFF COMMINGS

Open water swimming had a little bit of everything in 2014: historic swims. popular events cancelled and exciting international competitions. And with the Olympic Games less than two years away, there also was plenty of discussion about whether or not the waters off Copacabana Beach—scheduled site of the 10K marathon swim—would be safe for the athletes.

RECORDS SET IN ENGLISH CHANNEL

The beginning of September was monumental in the history of the English Channel. On Sept. 6, South African Otto Thaning became the oldest person to swim across the waterway. At 73 years 9 months, he crossed the Channel in less than 13 hours to earn a distinction that will be hard to top.

On the opposite end of the age spectrum. American Charlotte Samuels' crossing of the English Channel, Sept. 9, earned her a spot in the exclusive Triple Crown club, reserved for those who have crossed the English Channel and Catalina Channel in addition to swimming around Manhattan Island.

Samuels, just 16, became the

99th-and youngestmember of the club. She is a regular on the marathon swimming circuit, but, surprisingly, Samuels has never competed in a USA Swimming national championship. Perhaps that is next on her list.

PICTURED > THE **USA'S HALEY** ANDERSON ENDURED A LAST-MINUTE TRIP ACROSS THE PACIFIC OCEAN FROM AUSTRALIA TO HAWAII AND WON THE PAN PACIFIC 10K IN MAUI BY JUST ONE SECOND **OVER TEAMMATE** EVA FABIAN. THE EVENT HAD BEEN RESCHEDULED A WEEK LATER DUE TO RAIN AND SHARK-SIGHTINGS IN THE SOUTHPORT SPIT ON AUSTRALIA'S GOLD COAST.

EUROPEAN CHAMPIONSHIPS EXPERIENCE A CHANGING OF THE GUARD

The established hierarchy in European open water swimming took a hit at the European Championships in August, as the legendary Thomas Lurz lost out on his bid to win an unprecedented fourth gold medal in the 10K swim to Ferry Weertman. The unheralded Dutchman overtook Lurz and the rest of the lead pack in the final stretch to win by three seconds. It was his first major open water victory.

The Netherlands made it a sweep when Sharon van Rouwendaal-also a pool swimmer who captured the bronze medal in the 200 back at the 2011 World Championships in Shanghai-took the women's 10K over reigning Olympic champion Eva Risztov. The difference between a gold and silver medal was a mere 1.1 seconds.

RAIN AND SHARK SIGHTINGS FORCE RELOCATION OF THE PAN PACIFIC 10K SWIM

In a span of two days in late August, the field of athletes competing in the 10K open water swim at the Pan Pacific Championships transitioned from preparing to swim in the Southport Spit on Australia's Gold Coast to packing up and heading across the Pacific Ocean for the rescheduled swim. Three days of rain in Australia adversely affected water quality in the Southport Spit, and concerns over a spate of shark sightings prompted organizers to relocate the swim to a nearby lake. But the water there wasn't much better, so the only logical alternative was to hold the event later in the week in Hawaii, site of the Junior Pan Pacific Championships.

The move meant swimmers would be racing in much warmer waters-and in the actual Pacific



Ocean instead of a nearby bay. That didn't seem to affect eventual champions Andrew Gemmell and Halev Anderson, who kept the titles with Team USA in the event's third outing. While Anderson won by just one second over teammate Eva Fabian, Gemmell was a minute clear of runner-up Jarrod Poort of Australia.

The rescheduling of the event meant some newbies to open water swimming, most notably Canadian pool distance star, Ryan Cochrane, had to bow out.

POLLUTION LEVELS PUT **RIO 2016'S 10K SWIM INTO JEOPARDY**

Two years before the start of the Rio Olympics, officials continued to acknowledge the startlingly high levels of pollution in the waters off Copacabana Beach. The famous site is scheduled to host the 10K swim at the Olympics, but environmentalists have warned Rio organizers that athletes could become violently ill after ingesting the toxic chemicals in the water.

For more than two decades, that

area of the Pacific Ocean has been a dumping ground for industrial waste, pesticides and Rio's sewage, dotting the waters with clearly evident signs of hazardous conditions. Though Rio's mayor has expressed his concern that Copacabana Beach's waters may not be safe to swim in by July 2016, organizers continue to stress that the construction and cleanup efforts in the next 18 months will include thorough work on the city's waterways.

No suitable alternate destination in the Rio area appears to be available, as all of Rio's water sources are currently reported to be unsafe for swimming.

RCP TIBURON MILE. LA JOLLA ROUGHWATER **EVENTS CANCELED**

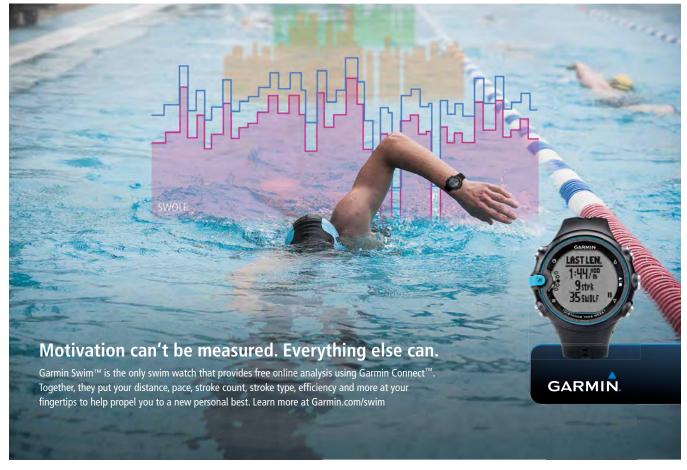
For years, open water enthusiasts could mark the RCP Tiburon Mile and the La Jolla Roughwater Swim on their annual swimming competition calendars. But this year, hundreds were disappointed to learn that both events would not be held, sending many scrambling to find al-

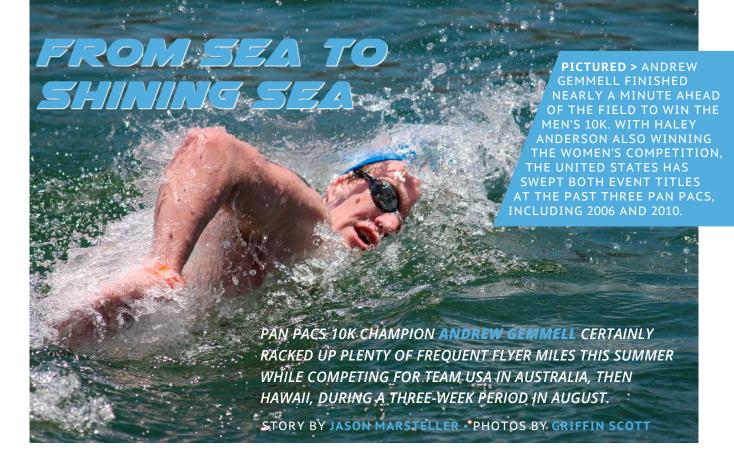
ternate races to fill their need for a top-flight swim in early September.

Bob Placak, founder of the Tiburon Mile, announced that he needed to take a yearlong break from the event to devote his complete efforts to his insurance company, as the Affordable Care Act was going into effect. Placak had canceled the event that bears his name's initials, RCP, only once previously. In 2005, family and work demands proved too much for Placak, so he put the Tiburon Mile on hiatus, promising a bigger and better event in 2006. Devotees came swarming back that year, and that's likely to happen again in 2015.

A much more dire set of circumstances prompted the cancellation of this year's La Jolla Roughwater event. The cove in which the 1-mile and 3-mile swims are held was in need of repair, and construction of the renovated area was not scheduled for completion by early September.

The Roughwater swim was last canceled in 1959—only the third time it has been canceled in the 82year history of the annual event. *





Andrew Gemmell definitely had a crazy summer—more specifically, a crazy month of August.

He began his journey in Washington, D.C., training with his club team, Nation's Capital, before heading off to Irvine, Calif., Aug. 3, to compete in the 400 and 1500 meter freestyles at U.S. nationals, where he finished 13th (3:53.02) and fifth (15:07.82), respectively.

Gemmell then boarded a plane, Aug. 11, with Team USA that was headed for the Pan Pacific Championships in Australia. After arriving in Brisbane, Aug. 13, the team took a one-hour bus ride later in the week, Aug. 18, to Gold Coast, where Gemmell placed ninth (15:11.92) in the 1500, Aug. 21.

The night before he was scheduled to take part in the open water competition, Aug. 25, at Pan Pacs, meet organizers determined that conditions were unsafe for competitors. So, the women's and men's 10K races were moved to...Maui, Hawaii, site of the Junior Pan Pacs!

The 2012 Olympian was back on a plane again, Aug. 26, traveling from Brisbane to Los Angeles to Maui, with the final race of his summer season scheduled for Aug. 31. And the

23-year-old ended the month with his best performance yet, winning the Pan Pac 10K race in 1 hour, 51 minutes, 11 seconds—nearly a minute ahead of the field.

Swimming World Magazine recently spoke with Gemmell about his memorable month:

How did you prepare for the original 10K course in Australia?

"The open water training location was the same as the original competition venue in Australia. I had the 1500 as my first event, so I focused on that, and only made it out to the open water venue once.

"Once the rain started really falling, we stayed training at the pool, so I did not make it out to the course after the heavy rains. We visited the backup course the night before the originally planned race, but were not allowed to swim in it because of the water quality issues that eventually forced the change of venue."

What kind of race conditions were you expecting at the original course?

"The original course was in a relatively sheltered bay, meaning the water was salty but also pretty calm. The

main thing about the course was that it was cold—about 62 degrees—which is starting to push the lower range of FINA's acceptable temperature. My main concern was just trying to prepare mentally and physically for that type of temperature."

How did you find out about the venue change from Australia to Hawaii?

"The open water staff pulled us aside during dinner around 8 or 9 the night before the race was scheduled. While it was a little frustrating that the change had to occur, I was glad that swimmer safety was starting to be taken more seriously when deciding where to host races."

With the change to Hawaii, what race plan alterations did you need to make?

"The only real change I had to make was just to make sure I was in a good mindset going forward. While in Hawaii, we did about half our training at the beach, where the race was held. The other half of our training we did in a public pool we found about 30 minutes from our hotel."

What was it like competing at the same venue as Junior Pan Pacs? Did being

around the U.S. team add to or change the dynamic for you compared to competing in Australia?

"Competing with the junior kids did not personally affect my preparation. I made it to a few of the pool sessions to watch them race, which was really fun to see. Those swimmers did a great job of bringing a ton of energy to the pool and representing the U.S. very well.

"As far as the open water race itself, I'm in the habit of staying focused on making sure I'm prepared for my own race. The extra junior swimmers made the race a little bigger than it would have been (in Australia), which I thought was good."

How did the race unfold for you? Any key moments?

"I was pretty comfortable with the way the race unfolded. A few swimmers had a small breakaway when they didn't feed the first lap, but they never got very far, and we were able to catch them before 5K had passed. I was able to do what I needed to do

as far as staying hydrated and saving energy for the end. I put myself in a good position for the last 1,000 meters, and was able to make it work."

Anything else you'd like to add?

"The biggest takeaway for me is that success in open water truly depends on your ability to adapt to changing circumstances. Throughout my career, I've had races moved, races postponed, races with conditions completely different from the day before-you name it. The times I have been most successful have been the times when I was able to adapt best to each given situation.

"Also, while there are still plenty of areas we can improve upon, it was encouraging for me to see athlete safety taken seriously. Yes, open water swimming is about adapting to the elements, but I think every precau-

tion needs to be taken in order to minimize the risk to athlete safety." *

PICTURED > HAVING THE 10K RACE TO HAWAII, GEMMELL LEARNED THAT SUCCESS IN OPEN WATER DEPENDS ON ONE'S ABILITY TO ADAPT TO CHANGING CIRCUMSTANCES.



DIVE INTO ACTION!



Improving Lives Today!

SWIM FOR MS is a national fundraiser in which volunteers are encouraged to create their own swim challenge to support MSAA. Dive into action – it's as easy as 1-2-3!

- 1. Create your own swim activity
- 2. Set a challenge goal
- 3. Recruit family & friends to make donations



SWIM FOR MS DISTRIBUTION SPONSORS:









Top fundraiser each month receives an autographed photo of Missy Franklin, four-time Olympic gold medalist and MSAA's Swim for MS Ambassador!



REGISTER TODAY! Visit SwimForMS.org or call (800) 532-7667 ext. 157

Ocean's Seven No Problem for Super Six

BY JASON MARSTELLER

Only six swimmers have completed the Ocean's Seven challenge, a series of long-distance open water adventures around the world that tests one's endurance and fortitude.

ost swimmers believe that crossing the English Channel is the ultimate open water challenge, but with determination and hard work, they also know that accomplishing that feat is a reachable goal.

Now, multiply that challenge by seven, and you'll get the Ocean's Seven.

Initiated in 2009, the challenge is open water swimming's equivalent of the Seven Summits mountaineering challenge, which consists of climbing the highest mountain on each of the seven continents.

Ocean's Seven requires completing the following long-distance open water swims:

- English Channel (between England and France)
- North Channel (between Northern Ireland and Scotland)
- Cook Strait (between the North and South Islands of New Zealand)
- Molokai Channel (between the Hawaiian islands of Oahu and Molokai)
- Catalina Channel (between the island of Catalina and the Southern California mainland)
- Tsugaru Channel (between the islands of Honshu and Hokkaido in Japan)
- Strait of Gibraltar (between Europe and Africa)

The straight-line distance of these swims adds up to more than 200 kilometers (about 125 miles), which, by itself, is intimidating. Even more daunting is the fact that most of these swims are swum in extremely difficult conditions—such as frigid water temperatures, jellyfish stings, rough currents and unpredictable weather.

And some of the swims, such as the Strait of Gibraltar, include time limits, requiring swimmers to finish before nightfall so that their navigators can "scoop them out of the water."

While more than 300 people have managed to accomplish the Seven Summits challenge, only six—that's six—have completed the Ocean's Seven.

Ireland's Stephen Redmond was the first to complete the feat, while Sweden's Anna-Carin Nordin was the second ever and the first female to finish the swims. Michelle Macy (USA), Darren Miller (USA), Adam Walker (UK) and Kimberley Chambers (NZL) have since completed the circuit.

Three other swimmers are on the cusp of completing the challenge, with Australia's Penny Palfrey only needing to swim the North Channel. The USA's Forrest Nelson and Craig Lenning each have knocked down five of the seven swims.

Here's a look at the Super-Six endurance swimmers:



Stephen Redmond, Ireland

Redmond is from Ireland and previously competed in rugby and triathlons before focusing on special open water endeavors. In 2012, after

completing the Tsugaru Channel in 12 hours 45 minutes, the Irish Long Distance Swimming Association honored him with a special achievement award.



Anna-Carin Nordin, Sweden

Nordin is a marathon swimmer who has competed in the FINA 10K World Cup circuit as well as some of the top world's endurance swims. She began as a pool swimmer until transitioning to Masters swimming in 1997. She then began focusing on open water competitions.



Michelle Macy, United States

Macy has crossed the English Channel three times (2007, 2009 and 2012). She recorded a time of 10 hours 2 minutes in 2007, and the Channel

Swimming Association—one of two governing bodies of the English Channel-presented her with a CSA 2007 Award for "Fastest American Swim." She also established a world record in 2013 for the North Channel crossing in 9 hours 34 minutes.



Darren Miller, United States

Miller, who is a race director and marathon swimmer from the U.S., is the first person to complete each of the seven swims on the first try. He swims on behalf of a non-profit charity called Team Forever and the Forever Fund. The charity helps families in need who are dealing with infant cardiothoracic surgery at the UPMC Children's Hospital in Pittsburgh.



Adam Walker, United Kingdom

Walker, known in the sport as "Mad Adam" and "The Ocean Walker," is one of the more flamboyant of the Ocean's Seven swimmers. He completed his seventh swim last August when he crossed the North Channel, just four months after swimming the Cook Strait. Walker had already crossed the English Channel in 2008, but since Ocean's Seven was created in 2009, he completed the other six swims between June 2012 and August 2014.



Kimberley Chambers, New Zealand

Chambers, a classically trained ballerina, began swimming open water as part of her rehabilitation when she suffered a serious leg injury in 2007 that required multiple surgeries. After taking part in a local bay swim in November 2009, she decided to focus on higher goals. Beginning with the Cook Strait in 2012, Chambers was on her way to becoming the sixth swimmer to complete the Ocean's Seven challenge. She reached her goal last September when she crossed the North Channel. *





















SEIKO & ULTRAK TIMERS

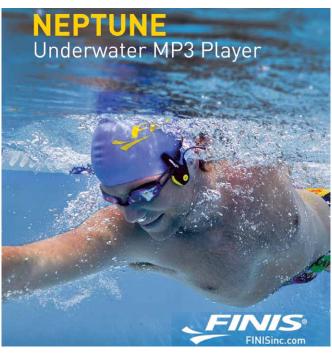
The 300 memory SEIKO S141 is the crown jewel of coaches' stopwatches with its revolutionary multi-mode memory function.....\$198.00

The 100 memory Ultrak 495's exclusive memory function allows users to take splits in recall mode. Includes stroke frequency function......\$40.95

Purchase these and other SEIKO & Ultrak timers at http://www.swimmingworldmagazine.com/swimshop Distributed by CEI - (800) 735-0871













ATTENTION BACKSTROKE SWIMMERS Introducing the Backstroke Start Device An Anti-Slip, Accelerated-Start Device for Backstroke Swimmers · Improves foot grip for backstroke starts · Easy to use · Works with multiple styles of blocks · Attaches with straps or anchors Easily adjustable · Automatically retracts out of the water SPECTRUM Aquatics 800.791.8056 * WWW.SPECTRUMPRODUCTS.COM









ELIZABETH BEISEL
IS FULL OF ENERGY,
FUN-LOVING,
ENCOURAGING,
A FAVORITE AMONG
MEMBERS OF THE
USA SWIMMING
NATIONAL TEAM,
HARD-WORKING,
EXTREMELY
TALENTED...
AND FOCUSED ON
OLYMPIC GOLD
IN RIO.

STORY BY JEFF COMMINGS

was not prepared for the first time I met Elizabeth Beisel.

At the 2008 U.S. Olympic Swimming Trials, Beisel had just secured a spot on the Olympic team with her second-place finish in the 400 individual medley. Beisel descended the staircase that led from the pool deck directly to the mixed zone, ready to talk to the media about fulfilling her dream.

As she made her way down the line of TV cameras, I tried to keep her in sight so I would be able to see her when she approached my section of the mixed zone. Her voice, however, would have been sufficient. That throaty rasp and that hearty laugh rose above the din in an area filled with about 100 shouting reporters.

When she approached my area of the mixed zone, she had essentially already done four interviews. And I'm sure she was in a bit of pain after that 400 IM. But the smile and the laugh never disappeared. She was so full of energy, I feared she would implode from the overload.

PHOTOS BY **DELLY CARR**

A UNIQUE PERSONALITY

Eight years into her elite swimming career, Beisel is still standing out with her unique personality. It's equal parts New England sass, party girl and class clown. You feel like she could go 10 rounds with the best boxer in the world, then take her rival out for an unforgettable night on the town.

Her hard-working attitude has helped her remain the nation's top 400 IMer since 2009, winning five international medals in that event. One of those is a gold medal from the 2011 World Championships. Another one is a silver medal from the 2012 Olympics.

The fun-loving side of her is what makes Beisel a favorite among members of the USA Swimming national team.

Frank Busch, USA Swimming's national team director, enjoys telling the story often of a moment he witnessed at the 2012 Olympic Games. It was about 20 minutes before the start of the women's 200 freestyle final, which would feature Allison Schmitt and

Missy Franklin representing the United States. The two would be racing for the most coveted prize in swimming, but in this particular moment, their faces were red from uncontrollable laughter. Beisel was the culprit, sitting with the two in the team area before their date with destiny.

"Beisel had them in stitches," Busch recalls. "She can read people in a situation and know exactly how to lighten the mood. You can't buy that stuff. It's very genuine."

Schmitt, lovingly called "Schmitty" by teammates, recalls the moment with ease, down to the song Beisel pretended to sing ("Cheers" by Rhianna) and the hairbrush Beisel used as

a makeshift microphone. It wasn't an isolated incident, Schmitt says.

"She's my roommate at these meets, and this is something we do all the time," Schmitt said. "We would not necessarily focus on the fact that we were about to swim, but just keep the mood light and fun. A happy swimmer is a fast swimmer."

Training played a large portion in quiding Schmitt to the gold medal she would win in the 200 free, but Beisel's successful attempt at levity no doubt went a long way in making it possible.

"If I can make a difference in Schmitty's 200 free or Missy's 200 free, and at least let them have

fun and enjoy what they're doingand then help Schmitty win an Olympic gold medal-it's almost a better feeling than winning a medal for myself," Beisel said. "I wouldn't want any other role."

That applies as well at the University of Florida. Whether serving as team captain or just as another Gator on the side of the pool, Beisel is the resident Energizer Bunny. She's full of unlimited energy and can provide a boost to those who need it most.

"Inside the pool, she lifted me to a new level and taught me how to have more fun with sport, especially during high-intensity swim meets like NCAAs," said 19-time All-American sprinter Natalie Hinds in an e-mail. "Outside the pool, she's provided me with a friendship that I'll always cherish. She's one of the funniest and most positive people ever, and always is able to put me in a great mood."

MOMENTS IN THE SPOTLIGHT

Before Beisel qualified for her first Olympic team in the 400 IM in 2008 and descended that staircase for her

D > BEISEL (RIGHT) RECEIVES A HUG FROM TEAMMATE MAYA DIRADO AFTER BEISEL LED A 1-2 USA FINISH IN THE WOMEN'S 400 IM AT THE RECENT PAN PACIFIC CHAMPIONSHIPS IN AUSTRALIA.

> visit with the media, she had already had a few moments in the spotlight. She was the owner of several national age group records in the 11-12 bracket under the guidance of Bluefish Swim Club (R.I. and Mass.) head coach, Chuck Batchelor. But nothing would portend a second-place finish in the 200 backstroke at the 2006 nationals that would put her on Team USA for the Pan Pacific Championships and

World Championships.

"I could not believe that I had made the team," Beisel recalls. "It was because I literally had no idea what was going on. (The Pan Pacific Championships in Canada) was one of the most fun trips I have been on. I was this girl running around with so much energy."

So when I first encountered Beisel at the 2008 Trials, she was already a well-known and well-liked member of the national team. Her swims at the Olympics that August-where she swam in the 400 IM and 200 back finals-brought her to the public consciousness.

The following year at the long

course Worlds, Beisel earned her first major international medal with a bronze in the 200 back. The turning point came in 2010 at the Pan Pacific Championships, where she won the 200 back and 400 IM. Suddenly, the brass ring was within reach.

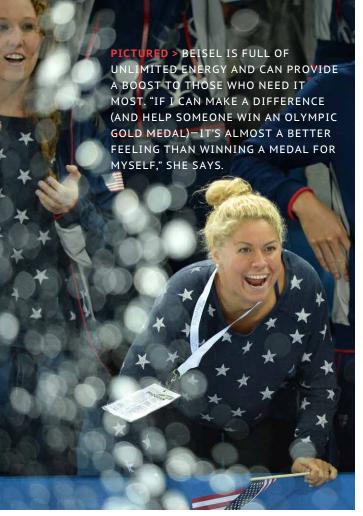
"That was the first time I remember thinking, 'Wow, I could be really good at this," she said. "I was really sad leaving Chuck and club swimming, but because of what I did at Pan Pacs, I was able to win world championships."

In what she called a "domino effect," winning the world title in the 400 IM by 2.5 seconds only made the prospect of Olympic gold stronger.

Everything seemed to be working for Beisel at Florida under Gregg Troy's direction on the road to London.

"Coach Troy is, in my opinion, the best coach in the world," Beisel says without any hint of overhyping the two-time ASCA Coach of the Year. "The fact that I get to swim for him every day and joke around with him every day and just chill in his office is pretty

- continued on 32



ELIZABETH BEISEL — continued from 31

humbling. I love where I am, and that's why I'm staying here."

While most pick a college that has some major differences from what they experienced as an age group swimmer, Beisel gravitated toward Troy's program because it was nearly identical to the Bluefish model, highlighted by seemingly unending hours in the pool. From the outside looking in, one would imagine workouts north of 10,000 yards/meters daily, but Beisel said the average distance is "only" somewhere between 7,000 and 8,000 per workout.

"What we do is nothing astronomical." she said. "I know I can handle it."

Troy said Beisel's ability to bring a high level of excitement to training has helped the two of them stay at a consistent level of excellence in the pool since she arrived on campus in the fall of 2010.

"She understands that her strength is not necessarily stature, physique or those type of tools, but it is the ability to come to practice every day with an attitude to get better," Troy wrote in an e-mail. "She's got a tremendous work ethic that is very consistent."

That has spilled over to her teammates at Florida, Hinds says.

"Whenever (Beisel) was sick or had an injury," Hinds recalled, "she would try that much harder because she didn't want to let the team down-hardest worker ever."

A LOOK AT THE **COMPETITION**

While Olympic gold is certainly on Beisel's mind in these 21 months before the Olympics, getting un-

der 4:31 also is a major goal. Since she first broke 4:32 in 2011, she's been 4:31 five other times. Her fastest swim to date is 4:31.27 when she won the silver medal at the 2012 London Olympics. Chipping away at the barrier is also getting her closer to Katie Hoff's American record of 4:31.12.

Being the second-fastest American in history in the 400 IM and the ninthbest performer in world history are not minor accomplishments. But after her performances in 2011 and 2012, Beisel has some work to do if her goal of Olympic gold is to be reached. She's closing out 2014 ranked fourth in the long course 400 IM, and the three ahead of her will be serious rivals in Rio.

At the top is Ye Shiwen, the reigning Olympic champion and world record holder who notoriously sailed past Beisel on the freestyle leg in the London Games with a 58.68 to become the first woman under a minute at the end of a 400 IM. Though definitely no slouch herself with a 1:02.33 split, Beisel looked like an age group swimmer next to Ye's blazing speed. Controversy arose when it was discovered that Ye had swum faster than all of the men in their event, including champion Ryan Lochte.

Beisel has been asked multiple times since the London Olympics about Ye and that freestyle split that had many wondering if the Chinese teen's performance was boosted by illegal drugs. I had a feeling it wasn't a topic Beisel anticipated discussing in our interview, but after a pause and a chuckle, she talked about it in a way that suggested that time had softened her emotions a bit.

"Obviously, the ultimate goal for me is to win an Olympic gold medal," she said. "What's done is done, and I came out with a silver medal, and that was my first Olympic medal, so it holds a special place in my heart. It is hard having a lot of people asking you all the time about her and what I thought about her last split beating Ryan (Lochte) and Michael (Phelps), but she's been consistently swimming fast, and she's still on the scene.

"I'll chase her hopefully until I can split under one minute in my 400 IM!"

Ye won't be the only one in the medal chase at next year's World Championships and the 2016 Olympics. Hungary's Katinka Hosszu, ranked second in the world in 2014, won both IMs at Worlds last year, where Beisel collected bronze in the 400 IM. Hannah Miley of Great Britain is on an upswing after many years as an also-ran, and there are likely to be a few more who come from nowhere in the next two years.

"You can't really count anybody out these days," Beisel said. "It's more competition for me. It's somebody to chase."

Beisel will descend that staircase once again in the 2016 Olympic Trials, most likely celebrating her third straight Olympic berth. Time will tell if her status in late June 2016 will be as the hunter or the hunted. .

AMONG THE NATION'S BEST

BY **ERIN QUINN**

Marilyn Mangels and John Flanagan—veteran coaches at the Tysons Corner site (Va.) of the Nation's Capital Swim Club know what it takes to help their swimmers continually produce stellar performances.

Nation's Capital Swim Club (NCAP), which recently earned the No. 1 spot in USA Swimming's Virtual Club Rankings, has 14 training sites located in northern Virginia, Washington, D.C. and Maryland. The club is home to approximately 2,000 age group swimmers-not to mention 17-year-old Olympic gold medalist and world record holder Katie Ledecky.

Located just outside of the western edge of the Capital Beltway is NCAP's Tysons Corner site (Va.), led by veteran coaches Marilyn Mangels and John Flanagan, who not only manage and coach 230 age groupers in an old 6-lane YWCA pool, but have produced national age group record holders such as Janet Hu and Andrew Seliskar.

Hu is currently a freshman at Stanford, while Seliskar set the world junior record this summer in the 200 meter butterfly (1:55.92). The Tysons powerhouse site also sent four more age group swimmers to senior nationals this summer—Megan Byrnes, Kylie Jordan, Laura Branton and John Shebat-along with three college swimmers-Ben Southern, Kaitlin Pawlowicz and Chuck Katis-for a total of seven 18-and-unders.

So, what is this dynamic coaching duo doing to produce stellar performances year after year from its 10- to 18-year-olds?

"John and I share the same vision, and we have a continuity that people believe in and respect," says Mangels, who became the head coach of the Tysons site in 1998. The Potomac Valley Age Group Coach of the Year (2006) is in charge of the age group and senior prep programs.

Flanagan adds, "We looked at solid stroke mechanics that we derived from Terry Laughlin's Total Immersion.



PICTURED (ABOVE) > THE NATION'S CAPITAL SWIM CLUB'S TYSONS CORNER SITE (VA.) IS LED BY VET-ERAN COACHES MARILYN MANGELS AND JOHN FLANAGAN.

PICTURED (RIGHT) > THE YWCA POOL AT TYSONS CORNER (VA.) IS JUST ONE OF 14 TRAINING SITES OF THE NATION'S CAPITAL SWIM CLUB.

That balance stuff still works, and it's sound science. Then, we also implemented what the research has dictated and continues to dictate-that we have a small window, from ages 10-14, to give these swimmers the volume they need to be successful."

MANGELS' GROUP

"I created an NCAP Gold Team Patch for all of our swimmers who race each event in their age group," Mangels says. "Because of the incredible success of NCAP swimmers such as Ledecky, Hu and Seliskar, these young swimmers are incredibly motivated to get and wear that patch with pride."

To that end, Mangels has an IM set in every workout she does. She's not about developing one-stroke wonders, but about developing wellrounded age group swimmers who are committed to getting better-and eventually moving into Flanagan's group.

No wonder, then, that her swim-



mers have had top-three finishes in the IMX Extreme Challenge, which requires age groupers to do all strokes/ distances for their particular age aroup.

Among her many top age groupers is Katie Mack, 12, who won several events at last spring's Eastern Zone Championships. She also set a Potomac Valley record in the 200 yard back in an impressive 1:59.03.

"The funny thing about that was Katie broke Janet Hu's Potomac Valley record," offered Flanagan. "Hu had also gone 1:59 as a 12-year-old."

Mangels says her age groupers train 7,000 to 7,500 yards in a twohour morning session. "This includes an 1,800-yard warm-up with emphasis on drill and stroke technique."

Her workouts include a lot of kicking -approximately 700 to 1,000 yardsas well as race-paced underwater work, descending sets, where they have to "go faster, but hold the same stroke

- continued on 34

NATION'S BEST - continued from 33

count, and short-axis workouts that combine breaststroke and butterfly drills, as well as sprints and turn work."

FLANAGAN'S GROUP

Flanagan's senior swimmers have six three-hour practices a week, 10,000 yards or meters a day. They also do three intense dryland sessions at a neighboring fitness club, Sport and Health. Trainers from Explosive Performance work with the kids on flexibility, range of motion, strength, balance, core stability, posture, acceleration and power.



"We're having a round-table discussion about this now," says Flanagan. "This program, run by Kevin Boyle, has produced so much success in our athletes that now every NCAP site is

utilizing it, and we've moved from two times a week to three times a week."

A typical workout might include the following:

- 30 x 100 (10 @1:10, 10@1:05, 10@1:00)
- No less than 1,000 yards of kick (both with and without boards and mono-fins)
- IM work (particularly the 400, with fast repeats of broken 400 IMs)

Flanagan also coaches a morning Masters group.

"I love coaching this group—so many of them were former swimmers of mine," Flanagan says. "It's so fun to watch them go off to college, then come back and swim as postgraduates and into their 40s and 50s. Now I have swimmers in my Masters group who have kids I train. It's very gratifying."

PREPARING FOR THE NEXT LEVEL

Despite Tysons' success in the 100 and 200 fly in every age group, neither Mangels nor Flanagan ever does more than sets of 25 or 50 fly.

"But we might do 32 by 25 fly or 20 by 50 fly at race pace, always designating the number of underwater

PICTURED > (ABOVE, LEFT) MARILYN MANGELS AND JOHN FLANAGAN NOT ONLY MANAGE AND COACH 230 AGE GROUPERS AT THE NCAP TYSONS CORNER SITE (VA.), BUT THEY HAVE PRODUCED NATIONAL AGE GROUP RECORD HOLDERS SUCH AS JANET HU (ABOVE) AND ANDREW SELISKAR. HU IS CURRENTLY A FRESHMAN AT STANFORD UNIVERSITY.

PICTURED > (LEFT) AMONG COACH MARILYN MANGELS' MANY TOP AGE GROUPERS IS KATIE MACK, 12, WHO WON SEVERAL EVENTS AT LAST SPRING'S EASTERN ZONE CHAMPIONSHIPS. SHE ALSO SET A POTOMAC VALLEY RECORD IN THE 200 YARD BACK IN AN IMPRESSIVE 1:59.03.

kicks they have to do (6, 8, 10, 12)," he says. "These kids are cooking. We had some visitors from Australia, and they couldn't believe the level of concentration and focus these kids have, and

the times they were throwing upparticularly Andrew (Seliskar)."

Flanagan gives all the credit to Manaels.

"She has these kids so well-rounded and so motivated that they have no trepidation racing a 200 fly or a 400 IM or a mile. If you can swim the 400 IM, you can swim anything," he says. "We had three 13-year-old girls in a row swim the mile in 16:40.00 or better! One girl went a 16:15.00! You don't wave a magic wand for that to happen.

"That says something about what Marilyn is doing," Flanagan continues. "She has these kids pressing the T or pressing their chest in underwater kick with such regularity that by the time they get to me, Janet Hu can kick 25 yards underwater off the block in 9.9 seconds! Andrew can do it in 9.2! Marilyn works their underwaters from such a young age that they kick like fish!"

TYSONS TRAINING COMPONENTS

As for equipment, Flanagan says that he utilizes kickboards and monofins, but not much else.

"I think I'm going to use paddles and pull buoys more this year," he says. "I had some of my swimmers out in the lake (Lake Thoreau) doing some open water work-8 by 800 metersand I put paddles on them, and they looked so good!

"I know that (Coach) Bruce (Gemmell) has Katie (Ledecky) using paddles and fins 20, 30, sometimes 40 percent of the time, and that's certainly paid off, so I want to incorporate more of that."

That leads to another component of the Tysons site training. Both Mangels and Flanagan are champions of age group open water racing and training. Fortunately, Flanagan lives on Lake Thoreau and has access to open water training for his swimmers.

"We have 28 swimmers doing a 5K this week," he says. "It's such a beautiful expression of swimming-seeing these young athletes out there in the open water."

He said he hopes to bring at least seven swimmers to the junior and/or national open water trials this year.

TAPERING AND "FINE-TUNING"

Neither Mangels nor Flanagan believes in tapering their swimmers until the big meets they're targeting-Tom Dolan Invitational (which the club hosts in December), and then usually NCSA Championships in Florida (which NCAP has won year after year), junior nationals or nationals.

"It depends," he says, about deciding for which meet to taper. "For Megan (Byrnes), we didn't want to taper her for Irvine because she had to go to Hungary for the International Open Water race afterward. She raced 5,300 meters in one week. She ended iunior nationals with the mile and started nationals with the mile!"

Flanagan says his team will "shave and taper" for the Tom Dolan Invitational, annually webcast by SwimmingWorld.TV. The meet is almost on a par with junior nationals, with teams such as SwimMac and NOVA competing each year.

"We will also shave and taper for

NCSAs," he added. "Then it depends on the swimmer. We might go unshaved and untapered to two Grand Prix meets, such as Mesa and Austin."

For Mangels, who is dealing with younger swimmers, she doesn't even call it "taper."

"I don't like that word," she says. "Yes, we rest a bit before our big meets such as Dolan. There is some reduction in yardage, but we're really fine-tuning."

MAKING IT WORK

Whatever fine-tuning they're doing, they're certainly doing a great job of

Mangels has to get many of her swimmers ready for Tom Dolan, IMX Extreme Games, Eastern Zones, sectionals, junior nationals and sometimes nationals.

"I can't be at every meet, and I try and make my kids independent so that they know what to do and how to succeed at a meet if I can't be there," Mangels says. "Katie Mack was all alone at Eastern Zones. Of course I wanted to be there—I was so excited for her and proud of her, but you can't be every place at once, and it's important that your swimmers be able to perform their best without you."

Although Flanagan has coached at every level—club, high school, college, international meets—for 40 years, he says that his coaching mentor is Manaels.

"She inspires me every day. She has a way of igniting kids and getting them excited about swimming and working hard. I don't have to look far. The person I respect most is right across the pool deck from me. We've been working together for 19 years now, and it's still exciting...it's still fun!" *

Erin Quinn is the head coach of Hawks Swimming, based out of New Paltz, N.Y., and a free-lance journalist. You can follow her on Twitter @ErinQuinn11.

COACH JOHN FLANAGAN'S FAVORITE SETS

Coach John Flanagan of Nation's Capital Swim Club loves IM training. Most workouts include some form of work on all four strokes, often at race pace, with a sharp focus on the 400 IM.

The following is a perfect example of making IM training challenging and

SAMPLE WORKOUT

Sept. 16, 2014 (SCY)

- 300 swim choice
- 6 x 250 kick on 3:45 (100 using kickboard, 50 flutter kick, 100 IM kick)

Six rounds:

- 1 x 150 free at 75 percent on 1:45
- 1 x 100 on 1:20

(rotating among 100 back, 100 breast and 50 back/50 breast through the rounds and adding a 100 each round) (e.g., 6 x 100 on Round 6)

- 4 x 25 fly kick, 1-3 on :25, 4 on :35 (4, 6, 8, 10 kicks off wall per 25)
- **60 x 50** on 1:00 at race pace done as 15 rounds of the following:
 - 25 fly/25 free
 - 25 back/25 free
 - 25 breast/25 free
 - 50 free

- 8x (4 x 25 kick with soft monofin)
 - #1 kick on right side
- #2 kick on left side
- #3 easy kick on back
- #4 fast kick on front

According to Flanagan, Andrew Seliskar—one of his more notable charges-held the following averages on the 60 x 50 set:

Fly/free: 24.8 Back/free: 24.7 Breast/free: 26.9 Free: 23.6

"And there were witnesses," Flanagan said. *

BY JEFF COMMINGS AND JOHN FLANAGAN



PICTURED > ANDREW SELISKAR (LEFT), WHO SET THE WORLD JUNIOR RECORD THIS SUMMER IN THE 200 METER BUTTERFLY (1:55.92), GETS SOME TRAINING TIPS FROM COACH JOHN FLANAGAN.

03

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:

WORLD WAR II OF STORY BY CHUCK WARNER SACRIFICE AND HONOR SLOWS THE ADVANCE OF SWIMMING PHOTOS PROVIDED BY INTERNATIONAL SWIMMING HALL OF FAME

When the Olympic Games resumed in 1896 in their "modern form," even a visionary such as International Olympic Committee founder, Pierre de Coubertin, would have been hard-pressed to foresee the progress the sport of swimming would make in the years to come.

From that first competition conducted at Athens in the Bay of Zea, the sport grew at such a warp speed that at the 1936 Berlin Games, swimmers raced across a 50-meter pool before a stadium crowd of 25,000 fans.

However, the actions—or might we say, "insanity"—of one of those spectators brought the sport to a slow crawl just a few years later, when his attempt at genocide and world domination prompted virtually the earth's entire human population to choose sides in a massive world war.

FORTY YEAR OF PROGRESS

The growth and development of a sport that combined individual and team performance and the natural element of water traversed by a lightly clothed athlete—and also included the components of both speed and endurance—was destined to become one of mankind's most popular Olympic sports.

From the Bay of Zea open water racing course located at the eastern coast of the Piraeus peninsula in Greece, the Olympics established 100-meter cold water venues in 1900 through 1912. Women's events were added to the quadrennial celebration in 1912. The United States quickly be-

came a power in women's swimming, staving off challenges from Great Britain and Australia to dominate the first 20 years of Olympic swimming.

In 1924, the sport utilized a 50-meter, fresh water Olympic pool for the first time. America's Johnny Weissmuller was the star of the 1924 and 1928 Games. Following his swimming career, the five-time Olympic champion earned the acting role of Tarzan, starring in the 1932 film, *Tarzan the Ape Man*. Audiences jammed movie theatres to see the show. His first of 12 Tarzan films netted nearly \$2 million—a staggering profit in those days.

While Weissmuller benefited from his recognition as a past swim star, others invested in transforming the sport's future. Two primary forces in spreading the merits of swimming—both as a participant or a spectator—were a self-educated physical educator from the USA (Robert J.H. Kiphuth) and the country of Japan (led by a coach named Ikkaku Matsuzawa). When these two sources of vision and energy catalyzed each other in the 1930s, the sport's progress accelerated at, perhaps, the highest rate in history.

KIPHUTH AND JAPAN

Robert John Herman Kiphuth was born in Tonawanda, N.Y., and moved to Connecticut to teach physical education at Yale University. He became a self-educated expert on the anatomy and physiology of the human body. When he became Yale's head swim coach in 1918, Kiphuth simultane-



ously trained his swimmers to excel, educated the world how muscle and mileage could enable swimmers to become faster, promoted swimming competition globally and built the greatest indoor aquatic center on earth to showcase the sport.

Bob Kiphuth was a busy man—perhaps just taking a long nap each night.

During his career, he traveled on ocean liners 33 times on promotional missions for the sport. In the summer of 1930, he brought his alumni-funded Yale squad to Tokyo's Meiji University for an early version of the "Duel in the Pool." A year later, the AAU sent Coach Kiphuth and a team of American all-stars for a return matchup that drew 40,000 spectators.

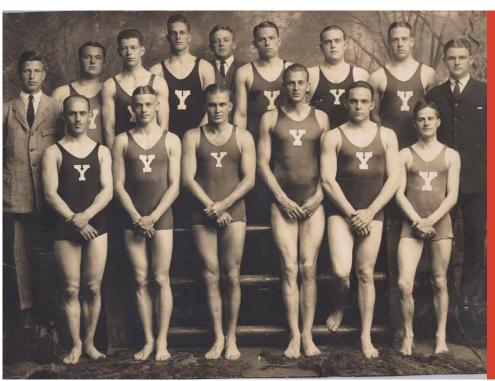
Coach Matsuzawa promoted a Spartan lifestyle for the Japanese swimmers and was noted as a kind, but straightforward coach who required systematic training. He helped organize the Japanese Amateur Swimming Federation in the late 1920s, and in 1929, became the women's national team coach. While Kiphuth emphasized muscular development, Matsuzawa demanded mileage with technique. By the 1932 Games in Los Angeles, the Japanese men ruled the world. In the six-event program, they won five gold medals and swept the

For three months each year, the top Japanese swimmers trained twice a day, covering 6,000 to 7,500 meters. This was an enormous increase from the training volume of 400 meters per day that Weissmuller's coach, Bill Bachrach, had insisted was optimum, or even the mile (1500 meters) per day that Kiphuth had advocated. In the context of the 1930s, the Japanese showed that work...worked—they owned the men's 1500 world record from 1938 to 1956.

In the early '30s, America continued to lead the world of women's swimcoach in 1928, 1932 and 1936. He visited the Pacific Rim at least four times in the 1930s and enjoyed visits with the emperor of Japan. Reports are that on one of his visits to Japan, he was met at the railroad station by approximately 100,000 spectators.

THE TAJ MAHAL OF SWIMMING

Yale needed a new gymnasium for the university, and although short in stature, Kiphuth was not a man to think small. The coach helped design a new gym with a nine-story, Gothicstyle building at the center—and the



PICTURED (PREVIOUS PAGE) >

THE VISIONARY QUALITIES THAT **ENABLED ROBERT JOHN HERMAN** KIPHUTH TO SO POSITIVELY INFLU-ENCE THE SPORT OF SWIMMING BETWEEN 1918 AND 1962 EARNED PRESIDENT JOHN F. KENNEDY'S SELECTION FOR HIM TO RECEIVE THE PRESIDENTIAL MEDAL OF FREEDOM. HE IS THE ONLY PERSON **EVER CONNECTED TO SWIMMING** TO RECEIVE THE HONOR.

PICTURED (LEFT) > KIPHUTH SERVED AS HEAD COACH OF THE YALE UNIVERSITY MEN'S SWIMMING TEAM FROM 1918 TO 1959. DURING HIS 41-YEAR CAREER, HIS TEAMS PRODUCED AN ASTOUNDING 528 **DUAL MEET WINS AGAINST ONLY** 12 LOSSES, AND FOUR NCAA TEAM TITLES (1942, 1944, 1951, 1953).

first two places in the 100 and 1500 freestyles and the 200 breaststroke. The Japanese team also swept the first three places in the 100 backstroke, and left the host country pummeled in men's swimming when they walked away with gold medals in the 800 freestyle relay as well.

What was the secret of the Japanese success?

Studies by Australian coaching legend Forbes Carlile show Japanese coaches teaching the dubious advantage of swimming with short strokes and the time-proven positive effect of having loose ankles to be a good kicker. But the greatest discovery the Japanese seemed to have made was the benefits of hard work.

ming. In the 1932 Games, the USA won four of the possible five gold medals-with Helene Madison taking home three golds. However, by the 1936 Games in Berlin, the Netherlands had overtaken the Americans to dominate women's swimming. The Japanese men remained the best team in the world, though not as dominant as four years prior.

Meanwhile, Coach Kiphuth was busy building a powerhouse program at Yale that eventually produced an astounding 528 dual meet wins against only 12 losses, and four NCAA men's team titles (1942, 1944, 1951, 1953). However, the charismatic leader still saw the world as his stage. He served as the USA's head Olympic cathedral-looking structure had two five-story wings. One of those wings housed the Yale exhibition pool. The remarkable facility not only included a stage to showcase the sport, but also was an engineering marvel. It included innovations to increase swimming speed as well as revolutionize a spectator's environment.

Up until the "Ex Pool" was built, competition pools had never been marked with turning "crosses" at each end to help swimmers see the walls. Kiphuth not only had the construction crew at Yale put tile crosses at the end of each lane, but he also had them turn the tiles backward so the slippery

- continued on 38

side of each tile would be buried in the wall. Previously, lane lines were made of ropes with buoys every few feet to keep them afloat. Kiphuth lined each rope with round cork to discourage washing water from one lane to the next.

Kiphuth observed that gutters had been built with a flat interior wall, and when the water was very turbulent during racing, the wave energy wouldn't be absorbed effectively by existing systems. He helped design a concave gutter so the water washed downward and was carried away and circulated through the filtration system. The pool was also designed with an ultra-deep bottom to decrease water tension, likely making it the fastest pool in the world at that time.

In order to create the best spectator seating in the world, the coach did more than just place 2,187 seats with unobstructed views of the racing course that was as much as three stories below. A series of tunnels was designed to enter the amphitheater so that only 35 spectators would need to use each door, and that guests would only have to traverse a maximum of three steps to find their row of seats. Kiphuth noted that pools were often hot, humid and uncomfortable, so he had air exchangers installed to blow cold air under the spectator seats and warm air out on the pool deck for the swimmers. The swimmers also enjoyed the heated benches on the deck.

After the building was completed in 1932, it also included a five-lane, 50-meter pool on the third floor—another engineering first. More than 20 long course/50-meter world records were set at Yale over the next 20 years, as well as dozens of American records and additional world records when they were recorded in distances in a 55-yard course. Through the 1930s and into the 1960s, the Yale facility became the premiere swimming center in the world.

Kiphuth's annual Swimming Carnival presented aquatic sport with such a multitude of activities that those promoting shows of today-such as "Dancing with the Stars"—would likely have looked to Kiphuth for production ideas. He sold out all seats every year at the Carnival, producing another funding source for his team's travel as well as his personal ambassador role around the world.

In 1951, Kiphuth and his assistant coach, Peter Daland, created Swimming World Magazine and Junior Swimmer. The visionary qualities that enabled Robert John Herman Kiphuth to so positively influence the

sport of swimming between 1918 and 1962 earned President John F. Kennedy's selection for him to receive the Presidential Medal of Freedom. He is the only person ever connected to swimming to receive the honor.



WAR STOPS SWIMMING'S PROGRESS

During the same years that the new Yale facility began to showcase swimming, the world was struggling with global recession. Adolf Hitler was elected chancellor of Germany and manipulated his country's public opinion so they would embrace the fascist Nazi Party, their expansion into Austria and Czechoslovakia, and genocide. While Hitler built up Germany's military might, he was also signing accords with Italy and Japan, and the world was careening toward the bloodiest war in history.

In 1937, the Japanese invaded China, and two years later, Germany invaded Poland. It didn't take long for 30 countries to become actively involved in battle. The 1940 Olympics were cancelled. On Dec. 7, 1941 the Japanese bombed Pearl Harbor, and the Americans joined the war.

The countries that became the primary participants in World War II not only put masses of men and women on the front lines, but also their entire economic, industrial and scientific capabilities behind the war effort. For a period of at least six years, through war's end, the distinction between civilian and military resources were erased. The 1943 NCAA Swimming Championships were canceled and so were the 1944 Olympics.

Every sport around the world rightfully stepped back as war overran the globe. Professional sports superstars such as baseball's Ted Williams left their fields of play to go and fight for freedom. Swimmers such as Jim Counsilman honed his leadership skills as a bomber squadron leader, and later returned to become one of the great swimming coaches in history.

> **PICTURED** > TWO PRIMARY FORCES IN SPREADING THE MERITS OF SWIMMING-BOTH AS A PARTICIPANT OR A SPEC-TATOR-WERE ROBERT J.H. KIPHUTH AND THE COUNTRY OF JAPAN, LED BY A COACH NAMED IKKAKU MATSUZAWA (LEFT). WHEN THESE TWO SOURCES OF VISION AND ENERGY CATA-LYZED EACH OTHER IN THE 1930S, THE SPORT'S PROGRESS ACCELERATED AT, PERHAPS, THE HIGHEST RATE IN HISTORY.

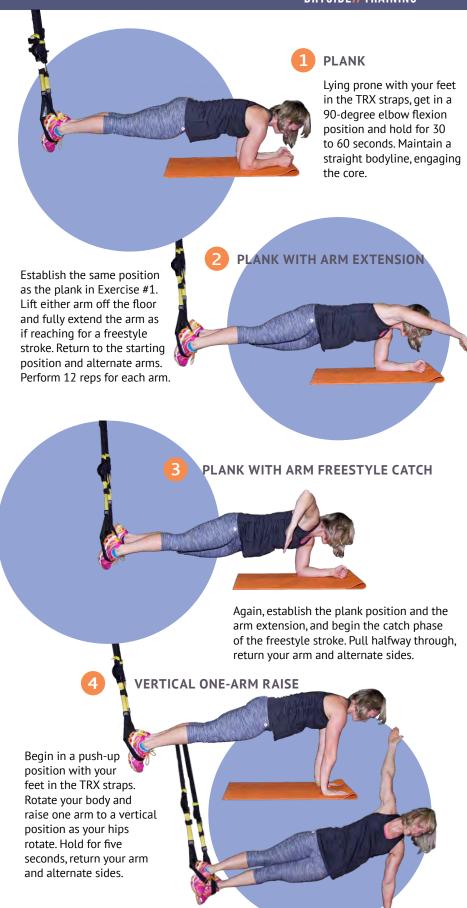
An estimated 50-to-85 million people lost their lives in sacrifice and honor during the war.

The Japanese were banned from the 1948 Olympics. Without their presence, Coach Kiphuth led the American men's squad to an unprecedented, but somewhat hollow sweep of all the gold medals. Sixteen years passed (1936-52) before the world's best swimmers would compete together in the Olympics again.

If the Olympic boycotts of 1980 and 1984 slowed swimming's global progress, the cancellation of the Olympics in 1940 and 1944-in a war-torn world-brought it to a virtual crawl. The years of World War II were not only one of the worst times for humankind, but also for the sport of swimming. *

Chuck Warner is a member 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: #2."

DRYSIDE//TRAINING



CONNECTING THE EXTREMETIES FOR BETTER SWIMMING

BY J.R. ROSANIA PHOTOS BY EMMI BRYTOWSKI DEMONSTRATED BY TAMMY GOFF

As a strength and conditioning expert, I'm always looking for ways to improve an athlete's physical abilities, with the hope it translates into better performance.

With swimmers, the arms and legs seem to do all the work. But the rhythm of a stroke really starts from the body's midsection—the core. I believe the swimmer needs to learn how to "connect the core" to the arms and legs.

This central region of the body is the stabilizer for the swimmer in the water. It helps establish and maintain correct body position and the fastest and most efficient stroke. The core strength also bridges the arms to the legs so that they work in sync to help maintain correct body position. Swimming with arms and legs not in sync will not establish proper technique.

Also, the stronger the core, the less chance there is of fatigue changing the body position and slowing the swim-

The following exercises will help you learn how to "connect your core" to your arms and legs. Perform them with a TRX suspension strap. Do three sets of 12 reps two to three times a week. ❖



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, and has finished the Ironman Triathlon 18 times. He also serves as Swimming World Magazine's fitness trainer and was named one of "America's Top Trainers" by Men's Journal and Vogue magazines. Check out Rosania's website at www. jrhealthplex.net.

MEET THE ATHLETE

Tammy Goff is a Masters swimmer and a firefighter from Glendale, Ariz.



NED SKINNER

PHOTOS COURTESY OF DAVE KNACHEL/VIRGINIA TECH

Ned Skinner has Virginia Tech on a Hokie high, thanks to a new pool, improved recruiting, a 2014 ACC championship and top-25 NCAA finishes

for both his men's and women's teams.

O. SWIMMING WORLD: Your sister, Tara, was a member of those Ohio state championship Worthington High School

A. COACH NED SKINNER: She was! They won state titles in her freshman, sophomore and senior years. She was a senior captain before going to the Univesity of Wyoming and swimming with current head coach Tom Johnson. She is now a doctor in family medicine.

SW: What role did she play in your swimmina career?

NS: A substantial one. She was immediately successful, and sibling rivalry kicked in. We are still in touch with Peggy Reeder, our Olympic Beach summer league coach in Columbus. Tara and I have always been close. She was at ACCs this year when our men captured the title.

SW: You were a captain of an LSU SEC championship team before coaching at Central Connecticut State and William & Mary. What coaching influences did you have?

NS: Skip Runkle, who is coaching in Oregon, inspired me to be good. Jim Callahan, the high school coach in Worthington, taught me about teamwork. Sam Freas, the godfather of motivation and sprinting, shared with me many of his principles I use today.

SW: You pondered a career in law.

NS: Law just didn't work out. Making money was attractive, but the research required and the time behind a desk were not. The great irony is that my wife is a lawyer! I ended up in graduate school at Ohio U., where Scott Hammond helped me understand the rigors of college coaching. I

Coach Ned Skinner Men's & Women's Swimming Coach Virginia Tech Blacksburg, Virginia

knew back then that I wanted to be a head swim coach.

SW: How has your coaching philosophy changed regarding daily practices?

NS: Mentoring young people inspires me. It is gratifying to help studentathletes make adjustments in their lives. I have learned there is a substantial correlation between personal growth and success in the pool. Our program benefits as our swimmers and divers figure that out. I cherish the friendships and seeing my former swimmers have great careers and families.

SW: What is the normal in-water and dryland practice schedule for your teams?

NS: We double on Mondays, Tuesdays and Thursdays. Mornings are 5:30 to 7,

and weights are Monday-Wednesday-Friday in the afternoon before our 3:30 to 5:30 practice. Having a pool in which the entire team can train has been huge. It is much easier for me to give 100 percent to one group for two hours as opposed to two groups for three-and-one-half hours. A typical week flow is:

championships and eight coach-of-the-

- Monday a.m. Glorified wake-up swim. Monday p.m. Distance, 200 free, stroke and IM and sprint groups. Monday is long course all day.
- Tuesday a.m. Key practice. Long course for stroke, sprint and distance groups. Tuesday p.m. is a substantial dryland practice (one hour) followed by kicking groups and power rack and power tower work. Short course, as is the rest of the week during the college season.
- Wednesday p.m. Active recovery. Groups with primary coach.
- Thursday a.m. Key practice. IM, sprint, distance, middle distance and stroke groups. Thursday p.m. is similar to Tuesday p.m.
- Friday p.m. Gender-specific practice. Team bonding while training!

- continued on 43

HOW THEY TRAIN:

BY MICHAEL J. STOTT

PHOTOS COURTESY OF DAVE KNACHEL/VIRGINIA TECH

Virginia Tech senior swimmer Collin Higgins is a leader on deck and in the water. As a SwimMAC club athlete, he won four 100 back and three 200 IM state high school crowns for Charlotte Latin High School (N.C.).

Three years later, he still "works tirelessly to improve, and his actions are contagious," says Coach Ned Skinner. "Collin is a captain for our men's team this year and is a mentor to his teammates through his energy and lifestyle." Higgins credits his teammates—and especially two-time captain, Morgan Latimer—for pushing him in workouts.

"Collin's commitment to greatness and leadership in and out of the pool were significant reasons we won the 2014 ACC men's title," says Skinner. Higgins contributed 65 points to that first Hokie ACC swimming championship before finishing ninth at NCAAs and setting a conference record in the 200 back in 1:40.10.

"The main staple for Collin's dryland is his weight room commitment. He does weights Monday-Wednesday-Friday and dryland on Tuesdays and Thursdays. This past season, he created a complete power rack season plan and performed it religiously after practice. He also spends two additional sessions with med balls and developing his explosive power. He is a tireless worker, and sometimes I worry that he pushes it too hard," says Skinner.

Higgins has greatly improved his underwater kicking and speed. "His older brother, Charlie, was probably our best underwater kicker ever. When Collin arrived, he was more of a long course swimmer with average underwater kicking ability. A big part of Collin's improvement has come from increased strength and riding out his streamlines in practice.

"While swimming four 150s backstroke on two minutes, going 6/8/10 kicks off each wall, sounds simple enough, Collin understands—and commits to—the 10 kicks off each wall on the last 50 that contribute to the development of a strong finish," the coach says.

Skinner has introduced Higgins to IKKOS, a neuroscience-based learning system that has allowed him to refine his body alignment.

"Sometimes, Collin loses his in-line body position with his underwater kicking, and watching the video through the IKKOS goggles is a way he can quickly adjust. The use of double-arm backstroke, with a focus on full rotation, has been a good drill, as it allows Collin to loosen his shoulders and have a more fluid rotation. I also like it because there is a real feeling of power in the pull phase of the drill," says Skinner.

A key to Higgins finishing among the top eight at NCAAs in the 200 back in 2015 will be improved flexibility, notes Skinner. "A massage therapist at NCAAs in Austin showed him how to improve shoulder and hip



flexibility. Then he worked hard this summer improving. I am excited to see how we can apply those changes to short course," he says. "As Collin continues to develop his front-end speed—especially more 'easy speed'—it will really set him up for the back half, where he is very strong."

Higgins' work ethic and commitment to weights and dryland requires special attention when it comes to taper time. "Everything—for example, weights, power rack, med balls—funnels down over the final four weeks heading into our conference championships," says Skinner. "We try to keep some extra aerobic work in the mix so Collin has the energy to recover for his 100 back the day after the 200 IM.

"He is a 1:45-plus 200 IMer, but it takes a lot out of him. As such, he needs to stay involved in all four strokes and transitions. At Virginia Tech—and especially with Collin—we are a race-based program. We balance our inand out-of-water work so the yardage is never extremely high. Collin goes from a high of 6,500 per session down to about 2,500 over a four-week pre-conference period. We use a standard format of one day easy, one day build, one day race," says Skinner.

SAMPLE WORKOUTS

Early Season:

• **6 x 150** @ 2:00

while also doing 4/6/8 kicks off the walls (by 50).

Looking for Higgins to hold 1:37,

- 6 x 100 (paddles) @ 1:15 Hold at 1:00 (smooth and easy), which he did.
- **6 x 50** @ :50 Descend in pairs again. 8 kicks, 10

Prime Season Training:

• **8 x 200 back** @ 2:40

1-6: 150 smooth, 50 fast streamline :30). He held 1:40, then was about

7: Easy choice on 4:00. 8: Swim for time (1:51.5).

- 100 easy
- **12 x 25** @ :30

Odds: 2 breaths, easy free. Evens: All-out fast underwater kick (15-meter dolphin and 8 yards flutter). He held :12+.

Championship Segment:

• **6 x 100** @ 1:30

75 build, 25 hold strong with 10 kicks off last wall. He held:57s with :13+ on last 25.

- 50 easy
- 4 x 50 @ :60 1 smooth, 1 build, 2 hold:25+
- throughout his taper. The closer he he could do the 25s. He did these 50s within 30 minutes of breaking the 200 backstroke ACC record at NCAAs in Austin. 💠

Q&A – *continued from 41*

• Saturday a.m. Race day. Lactate and team set.

SW: What's the kicking-to-swimming ratio?

NS: We committed to more kicking two seasons ago, and it continues to increase. The ratio is about 1-to-4.

SW: How much time is spent on starts? NS: It grows as the season unfolds. We spend more time on starts and relay exchanges as we get into November before our fall invite. We really ratchet up when we return from our January training trip. We have a relay takeover device that has proven effective in helping our swimmers better understand timing and transitioning of speed. This, coupled with filming the takeovers in practice, is very helpful.

SW: How many tapers do you do per season?

NS: We taper for about five days for our fall invite with no shave. We do a full taper for ACC Championships and again for NCAAs.

SW: What about team coaching?

NS: I am a believer, and we all share ideas. We meet on Mondays to confirm the weekly plan, and we make adjustments based on our discussions. Each coach has specific sub-groups for whom he or she writes and implements specific practices.

SW: What has membership in the ACC meant to Virginia Tech swimming?

NS: It has brought us academic and athletic respect, growth and increased competition.

SW: What role has diving played in the ascendancy of VT?

NS: Substantial. Ron Piemonte is entering his ninth year with us, and he represents all that is good with college athletics. He is a well-regarded team player, hungry for success and super-relaxed. We invest in our diving program and work daily at staying true to our motto: swimminganddiving (one word).

SW: There is new respect for Virginia *Tech swimming.*

NS: It didn't happen quickly. Former AD Jim Weaver merits much of the credit. Getting us into the ACC, then supporting our efforts with the new aquatic center have been seminal moments in our growth. Having very good swimmers, divers and assistant coaches has really helped. We have worked hard to have a good product, one in which club coaches feel comfortable in sending their swimmers to our school.

SW: Have you been able to leverage that in recruiting?

NS: Yes. It resonates when we can say we are ACC champions and have three straight top-20 NCAA finishes for the men and three straight top-25 finishes for the women. Our modern facilities are terrific, and few schools can trump our support services for student-athletes.

SW: What did the 2010 opening of the Christiansburg Aquatic Center mean to the VT program?

NS: For the first time in my career, I was able to coach in a pool with windows. A new, bright, 50-meter pool is very exciting. Most importantly, we can train the entire team at the same time, which really bolsters our team dvnamic.

SW: What are you doing differently now than when you started at VT?

NS: I am putting more ownership in the hands of the swimmers. I am listening better and having faith in what they have learned and what they have to say. Our full commitment to the weight room and dryland, along with a complete summer schedule, has also been a substantial part of our growth.

SW: How has the recent conference realignment benefited ACC swimming?

NS: The addition of Notre Dame and Pittsburgh—and now, Louisville—has kept our conference viable in this period of unprecedented change. Our conference is deep and strong, and it keeps us all on our toes. It also keeps swimming and diving relevant in the eyes of athletic directors. Not surprisingly, it has raised the bar, so we know we have to improve, evolve and continue to put forward our best effort. .

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

OUR KIDS INITIATIVE: Putting Our Kids First

BY JAY THOMAS

As swimmers have transitioned into short course season, so have many USA Swimming officials. This is the time of year when officials start working at meets that are sanctioned under different governing bodies with different rules.

As officials, we need to take some extra time to reacquaint ourselves with the different rules. Fortunately, the differences between the organizations today are minimal compared to 10 years ago, thanks to the Our Kids Initiative (OKI).

The Our Kids Initiative is a cooperative effort of the leadership from the swimming member organizations in "Putting ALL of Our Kids First." The goal of the OKI committee is to find ways for competition to be as fair as possible, regardless of the organization the swimmer is representing. Additionally, members are working together to find ways to help each other in making swimming in the USA the best activity for all Americans.

The OKI rule-making organizations include FINA, USA Swimming, NCAA, YMCA, NFHS, USP and USMS. The non-rule making organizations include ASCA, CSCAA, CSOA and NISCA. All have a seat at the table, and all work collaboratively for "Our Kids."

Over the past several years, OKI has spent considerable time working together to bring more commonality between the rules of each organization. It has also made it easier for officials to transition between governing organizations.

It has prepared two invaluable documents, which are posted on the OKI website, www.ourkidsinitiative.org: the "OKI Rules Differences Summary Chart" and the "OKI Water Depth Summary Chart."

You will also find rule interpretations from the governing bodies posted. For all of us who officiate meets under different organizations, please take the time to review and be very careful to apply the rules as appropriate for the meet you are working—we owe that to the "kids."

Nobody will ever criticize an official for reversing a call because they accidentally applied a rule incorrectly—admit the error and fix the call.

Hopefully, these efforts will help you to "Put ALL of Our Kids First." If you have any questions, please contact Jay Thomas at jayfthomas@gmail.com. •

Jay Thomas is the chair of USA Swimming's Rules And Regulations Committee as well as the OKI Committee.



EXCELLENCE AWARD

JOANIE BEISEL

Joanie Beisel has contributed to New England Swimming for more than 20



years. She is not only a highly qualified national official, but she is also very dedicated to her LSC. You will see her volunteering at several meets each season. Beisel is always more than willing to accept projects when asked by the Officials Committee and/or chair. She is involved in training both new and seasoned officials throughout the LSC in all positions, especially chief judge. She instructs and mentors whenever she is on deck, and she is a facilitator who presents several clinics each year. Beisel, a past member of the New England Officials Committee, is tireless in her patience with new officials and plays a very important role in New England Swimming.

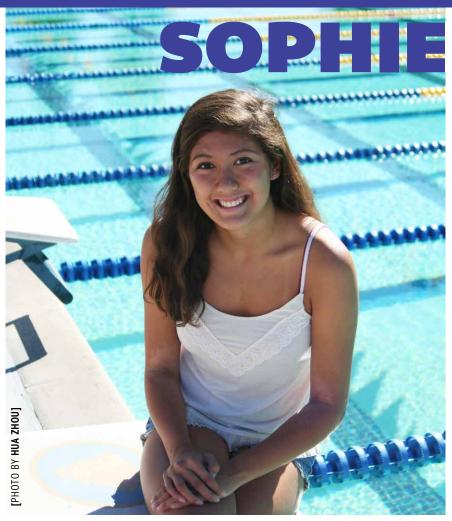
PROUD SPONSOR OF THE MAXWELL EXCELLENCE AWARD

Call for your free full-color Maxwell catalog: 1.800.331.1383



UP & COMERS

AGE GROUP SWIMMER OF THE MONTH



Sophie Krivokapic-Zhou, 15, who trains with CEO/Head Coach John Bitter at Santa Clara Swim Club, Calif., excelled in both short course and long course in 2014.

"Sophie loves to race, and she likes to win," Bitter says. "She is highly competitive by nature, and she is not afraid to stand up on the blocks and go for it. She (is also) willing to step up and be more of a leader to the younger groups. She takes instruction really well, and she enjoys tinkering with her stroke in order to make it better."

While swimming for Santa Clara High as a freshman at the CIF Central Coast Section Championships, she finaled in one of the fastest 200 yard IM heats in the nation with a third-place 1:59.85. She also claimed second in the 100 back (54.08).

Krivokapic-Zhou also had a breakthrough season in long course, setting a couple of lifetime bests at the Arena Grand Prix in Mesa, Ariz., with a 57.67 in the 100 free and a 2:18.56 in the 200 back.

"Sophie has a wonderful feel for the water—she can put her hand into the water and move her body past that entry point with ease," Bitter adds. "She has an appreciation for how her body feels and moves throughout the water, and she is able to talk about it after a set or race, which allows for a positive postrace evaluation." .

KRIVOKAPIC-ZHOU BY JASON MARSTELLER

WHAT ARE SOME OF YOUR SWIMMING

STRENGTHS?

"My underwaters and positive attitude." During the past couple of years, I have tried to focus a lot more on my walls and underwaters, which has helped me have very strong short course seasons. A positive attitude helps me work hard in practice and have successful meets."

WHAT'S THE TOUGHEST OBSTACLE YOU'VE HAD TO OVERCOME?

"Two years ago, I dislocated my knee and was out of the pool for a few months. Getting back into practice and meets was really hard, as I was out of shape and not really confident of my ability to swim fast anymore. The dislocation also negatively impacted my IMs-my best events-because I was unable to swim breaststroke for a year. Fortunately, I was able to overcome this with the support of my coaches, teammates and family."

WHAT ARE YOU LOOKING FORWARD TO IN THE UPCOMING YEAR?

"After this long course season, I evaluated the things I could improve. I plan to work on these little details so my coming short course season can be even better than the last. I am looking forward to improving on my technique, and I hope it shows through my times."

WHAT DO YOU DO WHEN YOU **AREN'T IN THE POOL?**

"When I'm not swimming, I enjoy hanging out with my friends, reading and paddle-boarding plus other beach activities."





A SOCIAL MEDIA

EXPLOSION FOLLOWED

NEWS OF MICHAEL

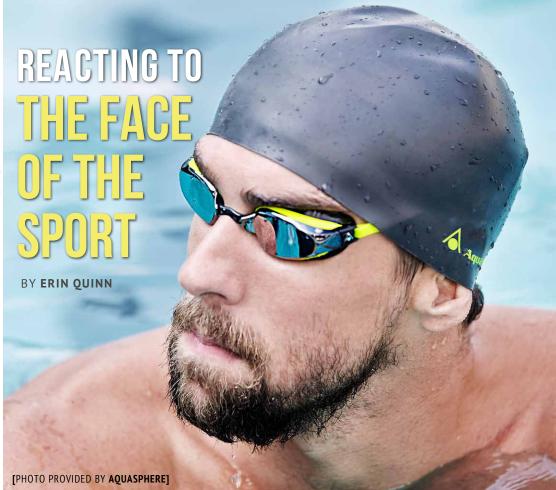
PHELPS' RECENT

ARREST FOR DUI—HIS

SECOND—WITH A

RANGE OF REACTIONS,
INCLUDING SHOCK,
SADNESS, SUPPORT,
DISAPPOINTMENT AND

CONDEMNATION.





ews broke early Sept. 30 that Michael Phelps, the most decorated Olympian of all-time, had been arrested for DUI by Maryland Transit Authority police. He was charged with driving under the influence, excessive speed (84 mph in a 45 mph zone) and crossing double lane lines in the Fort McHenry Tunnel on I-95 in Baltimore.

The arrest was Phelps' second for DUI—the first coming in 2004 when he was 19. Five years later, with the release of pictures showing him smoking marijuana, Phelps suffered public humiliation, the loss of a Kellogg's sponsorship as well as a three-month ban from USA Swimming.

Both times, Phelps vowed that he would not make the same mistakes again.

Now, at the age of 29—nearly six months removed from a worldwide celebration of his return to the sport following a 20-month retirement—Phelps was arrested again after winning five medals at the Pan Pacific Championships a month earlier.

The response to Phelps' arrest was immediate.

Rowdy Gaines, an Olympic gold medalist and an NBC commentator who has called nearly all of Phelps' Olympic races throughout the years, felt ambushed by the news.

"I felt sick to my stomach," Gaines told *Swimming World*.
"That might seem overly dramatic, but he is the face of our sport. He has done more for our sport to grow our sport than any other individual, agency or organization in history.

"In order for him to repair the damage he has done—not once, but twice—he will have to make restitution, ramp up his sincerity level tenfold and mean it," Gaines continued.

"He'll need to go to schools, touch his young fan base (and go to) MADD meetings as often as he can and deliver a heart-felt message: 'I made a mistake, I made it twice, this is what it cost me-and you don't have to make that mistake."

Phelps will have some work to do to convince Mothers Against Drunk **Drivers** (MADD) of his genuine regret, based on its statement following Phelps' second arrest: "It was our hope that Mr. Phelps, after his previous conviction in 2004, would have learned the significance of his poor, unsafe decision to drink and drive.... A first instance of drunk driving is unacceptable, let alone repeat occurrences."

Jon Urbanchek, former coach at the University of Michigan and now an assistant to Dave Salo at USC, also spoke with Swimming World. He has known Phelps since he was a boy. "Michael is a good man, a warm person, so giving to his young fans, inspiring to new members of the national team," Urbanchek said. "But he made a mistake-a really stupid mistake. Michael is a smart man, but that smart voice inside his head was not there because of alcohol."

Offering a parents' perspective, Kathy and Richard Carroll, who have kids in USA Swimming, told the magazine: "He is lucky that he didn't cross the double lane line into another car and kill or seriously injure someone. As parents, we can't help but think what is going through the minds of our children, who, along with the rest of the world, revere Michael Phelps for his accomplishments.

"Do they think that because Michael Phelps does it, it must be OK, or are they scandalized and vow never to do something similar? We would like to think the latter. Like it or not, he is a role model for our kids, and he should be taking that more seriously."

Five days after the arrest, Phelps tweeted a statement, Oct. 5, indicating he would be entering a six-week rehab program.

"The past few days have been extremely difficult," Phelps tweeted. "I recognize that this is not my first lapse in judgment, and I am extremely disappointed with myself. I'm going

to take some time away to attend a program that will provide the help I need to better understand myself. Swimming is a major part of my life, but right now I need to focus my attention on me as an individual, and do the necessary work to learn from this experience and make better decisions in the future."

The next day, **USA Swimming** suspended Phelps for six months (until April 6, 2015) and forced him to withdraw from the 2015 World Championships in Russia next August. The sport's national governing body also took away his monthly funding stipends during the suspension. •

Erin Quinn is the head coach of Hawks Swimming, based out of New Paltz, N.Y., and a free-lance journalist. You can follow her on Twitter @ErinQuinn11.







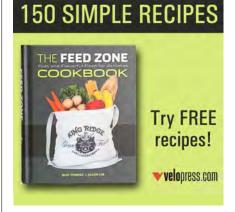


M°DONOGH SCHOOL THE OPPORTUNITIES ARE ENDLESS. www.mcdonogh.org

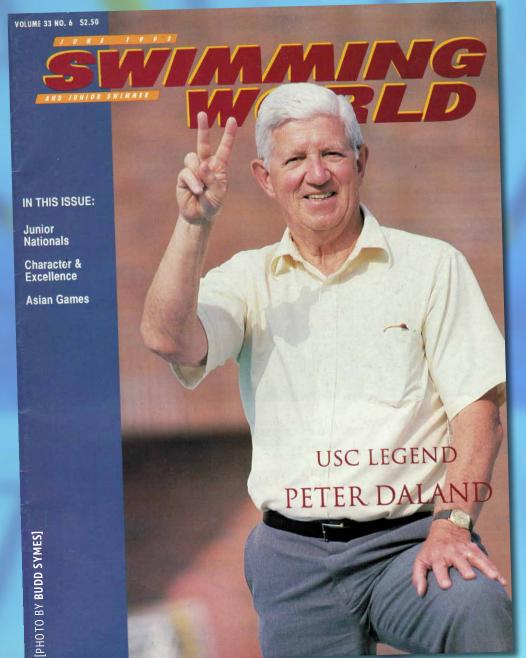
ADVERTISING OPPORTUNITIES

Contact Swimming World Magazine At: Advertising@SwimmingWorldMagazine.com

Or Call: 602.522.0778 **800.511.3029** (Toll Free in USA & Canada)







PARTING SHOT

PETER DALAND

APRIL 12-13*, 1921 - OCTOBER 20, 2014

* = PETER DALAND'S BIRTHDATE
WAS APRIL 13, 1921. WHEN
HIS PARENTS DIED, HE WAS
CLEANING OUT THEIR HOME,
AND HE FOUND HIS ORIGINAL
BIRTH CERTIFICATE, WHICH
STATED THAT HE WAS BORN ON
APRIL 12. AFTER CELEBRATING
APRIL 13 FOR 50-PLUS YEARS,
HE DECIDED NOT TO CHANGE
HIS BIRTHDATE. INSTEAD, HE
ADDED APRIL 12. SO...PETER
ALWAYS CELEBRATED HIS
BIRTHDAY ON BOTH APRIL 12
AND 13!

PICTURED > LEGENDARY COACH PETER DALAND PASSED AWAY OCT. 20 AT THE AGE OF 93 OF ALZHEIMER'S DISEASE. WHILE COACHING THE MEN'S SWIMMING TEAM AT THE UNIVERSITY OF SOUTHERN CALIFORNIA FOR 35 YEARS (1958-92), THE TROJANS CAPTURED NINE NCAA TEAM TITLES. HE ALSO COACHED THE U.S. WOMEN'S OLYMPIC TEAM IN 1964 AND THE MEN'S IN 1972. DALAND, SHOWN HERE ON THE COVER OF SWIMMING WORLD MAGAZINE (JUNE 1992) UPON HIS RETIREMENT FROM USC, ALSO WAS THE MAGAZINE'S CO-FOUNDER IN 1951, ALONG WITH ROBERT J.H. KIPHUTH. FOR MORE DETAILED INFORMATION, GO TO SWIMMINGWORLDMAGAZINE. COM AND ENTER THE FOLLOWING LINK: HTTP://WWW.SWIMMINGWORLDMAGAZINE.COM/NEWS/SWIMMING-WORLD-MAGAZINES-CO-FOUNDER-USC-LEGEND-PETER-DALAND-PASSES-AWAY.