



# SWIM-MASTER

VOL III - No 7 THE OFFICIAL PUBLICATION OF THE AAU MASTERS SWIMMING COMMITTEE OCTOBER 1974

## HOW I TRAINED FOR THE 1650 IN 1974

BILL WILLIAMS 1650 RECORD HOLDER  
1974, AGE GROUP 40-44 (18:29.52)

**Goal Setting:** I picked a goal to win in 1975. I decided to try for an average of 30,000 yards a week. At all times I kept in mind that my competition was working just as hard. What I had going for me was superior motivation - I was the chasor, and Burwell Jones was the chasee. Living and working at a higher altitude, I fell, gives me a greater oxygen utilization when I go to sea-level.

**Workouts and Coaching:** I had two young coaches to work with all winter. I placed my trust in them that they would bring me along at the right pace. (They did.) We worked all sets negative splitting; that is, in a set of 5 x 100 on 1:20 or 1:30, we would make the first 100 the slowest (say at 1:11) and try to bring the time down my 1 second each 100 so that the last one was at a 1:05 or 1:06 pace.

### Yardage:

AGE	YEAR	TOTAL	WK AVG	DAILY
39	1970	521,560 yds	10,030	2,006
40	1971	584,110 yds	11,233	2,247
41	1972	837,475 yds	16,106	3,221
42	1973	1,318,405 yds	25,354	5,071
43	1974	680,605 yds	29,692	5,938

(20 wks)

### Times:

AGE	YEAR	1650	400/500	200
39	1970	----	4:54.30	2:15.00
40	1971	----	4:45.50	2:08.70
41	1972	20:20.61	5:50.20	2:10.25
42	1973	19:22.91	5:37.90	2:09.50
43	1974	18:29.52	5:22.83	2:01.06*

\* split 60.2 and 60.8

Pulse Rate:	YEAR	AM	PM
	1973	52	78
	1974	44	70

### 10 Sec Count After Hard Set of 100's

YEAR	After 10 sec	After 60 sec
1973	26-32	16-22
1974	24-30	14-18

### Hard Series of 100's on 1:30:

1973	15/100's	Avg: 1:09
1974	15/100's	Avg: 1:07

**Cycle Training:** M W F: Easy Days; T Th: Hard  
AM Work Outs: 6:00-7:30 Avg 4000 yards

1. Warm up usually 1000 yds like 1 x 400 Fr 10 sec rest, 1 x 300 Back, 10 sec rest, 1 x 200 breast, 10 sec rest, 1 x 100 Fr
2. Hard Series; 1000-1500 yards; typical: 5 x 300  
#1 100 slow, 100 fast, 100 slow  
#2 75-50-75-50-50, 10 second rest  
#3 150-150, 10 sec rest  
#4 6 x 50, 5 sec rest  
#5 1 x 300 for time, even pace
3. Kick 10 x 50 on 1:15
4. Stroke or pull some combination of 1000  
NOON MWF mostly distance; 2 x 1000 some stress; once in awhile 20 x 100 on 1:30.  
PM T-Th, 5:15-7:00; warm up 100 yards, then work in distance lane, usually around 2500-3200 yards. A typical night might include 3 x 800 with 30 sec rest intervals and 4 x 200 on 3 minutes.

Total yds for week would look like this:

Monday	5500
Tuesday	7500
Wednesday	5500
Thursday	7500
Friday	5500
	<u>31,500</u>

**Common To All Workouts:** About 1/4 of total with alternate breathing working on going 4-5 strokes without a breath. Coaches pressed us all the time to take at least one stroke out of the turn before taking a breath. The idea on the first is to push pain limit out further and improve endurance. The turn part was to build speed out of the turn - get out fast.

**Weight:** Gradual loss of weight from 165 in January to 156 in May.

### Problem Areas:

1. Lower leg cramps towards end of workouts or after hypoxic set. Solved this in part by taking 2-3 salt tablets each day.
2. Sore left wrist.
3. Sore right shoulder.
4. Pulled neck muscle (still sore).

Early in buildup (1972-73) felt extreme fatigue usually about two hours after morning workout. Early in 1974 was able to handle 4000-5000 yard workouts without the extreme

fatigue. After especially long days, 8000-9000 yards, it usually took 2-3 days to recover. This coming year I expect to try for at least one 11,000 yard day and several 10,000 yard days. In all likelihood this year and next will be the last two that I will work as hard as I have. When I turn 45 and have a good race with Carl Yates, I will go back to enjoying Masters Swimming. I expect to keep up 4000-5000 yards a day for the rest of my life.

Taper: DATE AM PM TOTAL

Taper:	DATE	AM	PM	TOTAL	WT
	4-29	6000	2000	8000	159
	30	4000	2000	6000	156
	5-01	6000	2000	8000	158
	02	3850	2150	6000	158
	03	5500	1900	7400	157
	04	--	--	--	
	05	--	--	--	
	06	5200	2200	7400	157
	07	3740	--	3740	158
	08	4500	2420	6920	157
	09	3740	--	3740	158
	10	5300	--	5300	157
	11-12	--	--	--	
	13	5000	--	5000	157
	14	4450	--	4450	156
	15	1800	--	1800	?
	16	2000	--	2000	?
	17	2000	1650	3650	?

Comments: Worked to more quality, i.e. hard set of 5 x 100 on 1:15 with lost of rest prior to going for quality 100's at end of workouts. Reversed the cycle from T/Th hard days to M/W/F as hard days to better fit the work/rest/recover cycle and the 1650 falling on Friday fit in perfectly. Worked all 100's at expected sealevel performance level, i.e. 105-106-107's. Major emphasis on negative splitting and knowing exactly what I was doing at all times - not too fast - not too slow.

Altitude Effects: In the 1650 at least 45 to 60 seconds difference. Major benefit of going to sea level from altitude is felt in the second half of the race.

Motivation and goal setting: Set goal to win in 1975 feeling that such a goal in 1974 was not realistic. Frankly I was tired of finishing second and felt that my best chance lay in the 1650. The reason being that I am not an especially strong swimmer - didn't have the bulk muscle nor the personality of a springer. Therefore the 500 or more likely the 1650 seemed best.

I think I benefited primarily from the coaching of Mike Doan and Jim Raily of the Celebrity Swim Team and having other people to swim with. It is hard to say which helped me more.

## National Diving

by JAMES STEVENS

National AAU Wrestling Administrator

The first Masters National AAU Outdoor Diving Championships were held in Raytown, MO on August 24-25. The meet was well-organized, exuded a pleasant, relaxing atmosphere, enjoyed warm, sunny weather, and provided spirited competition.

Bill McAlister and Frank McGuighan (1945 National AAU Diving Champion) were an inspiration to all, and clearly demonstrated their ability to perform such dives as 1-1/2 Somersault with one twist, Back 1-1/2's, Inward 1-1/2's, and 2-1/2 Forward Somersaults, even though they are in their late 50's and early 60's.

Tom Hairabedian was superb in winning both age group titles, the Grand Masters Championship with a point total of 372.35, and further delighted contestants and spectators alike with his individual and team comedy performance.

Iona "Ike" Wade of Brandon, FL, was the only woman entered in this inaugural outdoor national event, and performed very commendably on both boards.

Jim Brinson, who won the 25-29 year old division representing the Oklahoma City Diving Team, was outstanding. The former University of Oregon diver displayed great versatility and control in defeating look-alike brothers Glenn and Ron Hoffman from the New York A.C.

Congratulations are in order for National Chairman Ed Craren, Lincoln, NE, who won both a Silver and Bronze medal; and, to Meet Director Tom Hairabedian for their administrative leadership in conducting these Championships.

By the way, the Judging was of excellent quality and very consistent. KUDOS FOR AQUA AQUATIC SPORTS!

CALIFORNIA MASTERS DIVING: The First Annual California Gold Cup Masters Diving Championship was held Sept. 7th at the Kramer Club in Rolling Hills Estates. Host Lyle Draves led the group of veterans, ranging in age from 28 to 70. California is leading the world in Masters Diving, having held nine meets this year with some 35 divers taking part. Next year's program features 12 meets which includes the Outdoor National Masters Championships. Contact Brud Cleaveland, 1520 Bay Street, Santa Monica, CA 90405 for additional information.



## CHAMPIONSHIPS

The 1974 National A.A.U. Men's and Women's Long Course Masters Swimming Championships were held September 6, 7, and 8 at the Santa Clara International Swim Center. The weather was beautiful, the pool was fast, and the meet was run very well. As of September 28th, I have not yet received the results and so they will not appear in this issue. My thanks to Mildred and Ham Anderson for supplying these photos and some I took. As the three of us were in the 40 and over afternoon group, not many younger people appear. Perhaps some other pictures will be forthcoming.

1 Men's 60-64 100 yard Freestyle: 1st Reg Richardson, 2nd Benton Wood, 3rd Dave Rowan, 4th Ham Anderson, 5th Thomas Monahan and 6th Mel Maxwell.

2 June Krauser and Ransom Arthur presented awards to the great Meet Officials!

3 Some of the 50-year-old and over men entered in the meet.

4 Men 55-59 from one of the Freestyle events won by Jim Welch of Hawaii.

5 Anne Adams, 45-49 Champion discussing the meet.

6 Fred Bradley, 70-74 50 yard Freestyle Champion from Scottsdale, AZ.

7 Ken Pettigrew and Luis Valle from Chicago.

8 Jane Katz, 30-34 Champion from New York.

9 Mildred Anderson of Houston, TX, winner of four firsts and one second; Jane McCollister, 55-59 Champion - winner of five events; and Barbara Reeve of Chicago, 40-44 Champion.

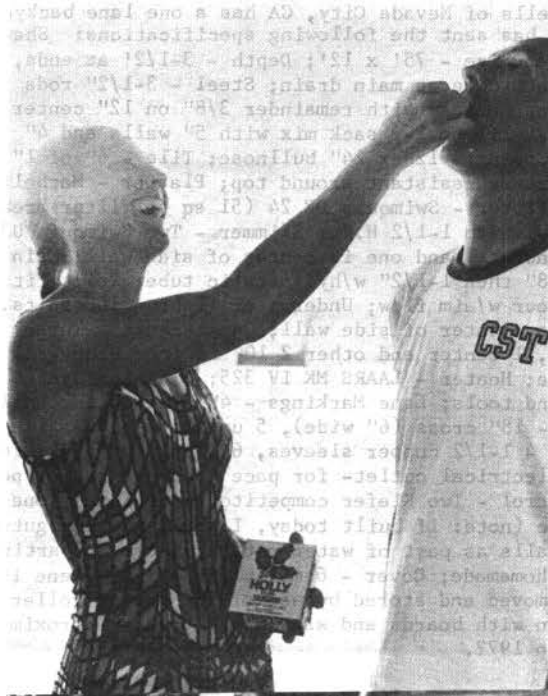
10 Annetta and Walt Pfeiffer of Rosemeade, CA with Mildred Anderson - relaxing under a tree.



- 1 Jim Stevens (AAU House) 40-44 Champion in 1 mtr, 3 mtr, Ind. Clown & Team Clown; Ed Caren, Lincoln, NE, Nat'l. Masters Diving Chairman, 40-44, 2nd 1 mtr & 3rd 3 mtr; Iona "Ike" Wade, Brandon, FL, 40-44 Champion 1 & 3 mtr.
- 2 Tom Hairabedian, Meet Director 50-54 Champion in 1 mtr, 3 mtr, Grand Masters & Team Clown
- 3 Tom Hairabedian (50-54) Raytown, MO & Jim Stevens (40-44) Indianapolis, IN.
- 4 Frank McGrughan, Daly City, CA 55-59 Champion in 1 meter and 3 meter.

- 5 Prof. Ellison Smith, Eng. Dept., Purdue University, 50-54, 2nd place in 1 & 3 meter.
- 6 Bill McAlister, Madera, CA 60-64, Champion in 1 & 3 mtr, Runner-up in Grand Masters.
- 7 Participants in 1974 National AAU Masters Outdoor Diving Championships
- 8 Jack Harbourne, Fairfax, VA, 40-44, 3rd in 1 mtr and 2nd in 3 mtr; Rich Lawlwer, Houston, TX, 35-39 Champion in 1 & 3 meter.
- 9 Jim Londoff, St. Louis, MO, 45-49 Champion in 1 & 3 mtr; Mrs. Londoff; Ed Craren.

PHOTOS BY JIM STEVENS



**TOP: TAKING HIS LUMPS** Kacey Conway of the Denver Athletic Club, gives Bill Williams of the Celebrity Swim Team, a lump of sugar to boost his energy just prior to a race in Denver recently. Both compete in Masters Swimming with Bill being the current national champion in the 40-44 year age group for the 1650 yard free-style, short course.



**MIDDLE:** Being legally blind hasn't stopped Don Freeman of Denver's Martin-Marietta swim team from competing in masters swimming. Don can follow the line on the pool bottom if the pool is well-lighted but has trouble finding the end of the pool. As a result, he put a sponge on the end of a long dowel so that a friend can tap him on the head as he hears the wall to alert him to start turning. Here, Ed McVehil, coach of the Pikes Peak Masters team, Colorado Springs, gets ready to alert Don of the pending turn. The action took place at Colorado Springs' Municipal pool. Don competes in the 40-44 year age group.

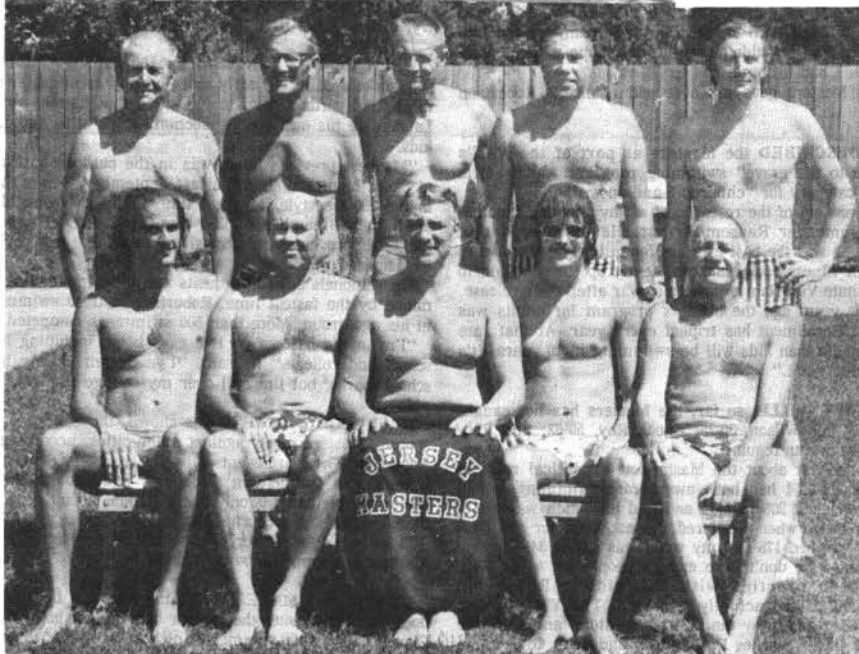
**BOTTOM:** Jersey Masters 10 man relay team. Seated left to right: Bob Walden, Dick Sanborn, Bill Kogen, Gary Knox and Bob Coyle. Standing left to right: Clarence Ross, Osca Sigrist, Austin Newman, Walt Woodruff and Harry Hamilton.

**JERSEY MASTERS ANSWERS THE CHALLENGE**

Recently, the Hawaii Masters Swim Club issued a challenge to other Masters swim teams. They organized a ten-man freestyle relay team, one man from each of the ten age groups between 25 and 79 years. They swam the 1000 meter relay (100 meters per man) in 13:59.58, establishing the standard for this new event.

In response, the Jersey Masters Swim Team formed their own relay team and on August 25, 1974 at the Garden State Swim Bool in Berkeley Heights, NJ they lowered the 1000 meter mark by over 46 sec. The official time was 13:13.37. The team members in the order that they swam are listed below: each man's split is given in parentheses: Clarence Ross 70-79 (1:26.2), Oscar Sigrist 65-69 (1:31.2), Bob Coyle 60-64 (1:41.8), Austin Newman 55-59 (1:19.0), Dick Sanborn 50-54 (1:13.4), Bill Kogen 45-49 (1:10.2), Walt Woodruff 40-44 (1:25.3), Bob Walden 35-39 (1:10.2), Harry Hamilton 30-34 (1:08.2) and Gary Knox 25-29 (1:07.8).

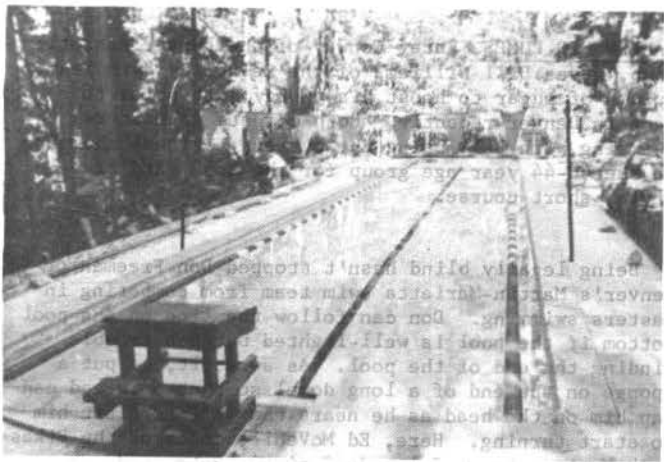
The Jersey team enjoyed this event so much that they would like to see it become a regular part of Masters Swimming. How about including the event in next years SC and LC Nationals?



**TRIM'S ARENA**



"WOW! THAT'S THE FOURTH WORLDS RECORD SET TODAY!"



Walter Wells of Nevada City, CA has a one lane backyard pool and has sent the following specifications: Shape - rectangle; Size - 75' x 12'; Depth - 3-1/2' at ends, 4-1/2' in middle at main drain; Steel - 3-1/2" rods around top in beam with remainder 3/8" on 12" center; Gunite - 4-1/2 to 1-6 sack mix with 5" walls and 4" bottom; Coping - 12" x 24" bullnose; Tile - 6" of 1" square freeze resistant around top; Plaster - Marbolite finish; Filter - Swimquip DE 24 (51 sq ft filter area); Pump - Swimquip 1-1/2 H.P.; Skimmer - Two Swimquip U3, one in end wall and one in center of side wall; Main Drain - 8" then 1-1/2" w/hydrostatic tube; Inlet fittings - Four w/aim flow; Underwater light - 100 volts, 500 watts, center of side wall; Cup anchors - Three each end, 1 center and other 2 10" in from side wall at waterline; Heater - LAARS MK IV 325; Cleaning System - Vacuum and tools; Lane Markings - 4" black tile; Wall targets - 18" cross (6" wide), 5 unglazed black tile 6" x 6", 4 1-1/2 copper sleeves, 6" long for backstroke flage; Electrical outlet- for pace clock at end of pool; Wave control - Two Kiefer competitor lane lines, one each side (note: if built today, I would include gutters in end walls as part of water return system); Starting block - homemade; Cover - 6 mil black polyethylene 16' wide, removed and stored by use of 16' carpet roller, held down with boards and sand bags; Cost - Approximately \$6,000 in 1972.

## THE SPORTING KIND

**Q.** Kathy is on the women's basketball team. Does a man have much of a chance of making it with her the night before a big game?

**A.** Definitely. Most girl athletes now follow the theory that sex will help their abilities rather than hurt them. It used to be that coaches would tell women athletes to stop having sex seven to 14 days before championship competition, but now there is a different attitude. The following is a quotation from a booklet supplied to girl athletes of one European Olympic team: "If you are having troubles in sleeping before competition, it is a good idea to put in a fairly hard workout about five hours before the intended bedtime, followed by a hot drink half an hour before retiring, and a half hour of sexual activity after doing so."



Best Score

**THE FOLLOWING SUMMER** State was placed on probation for four years for basketball recruiting violations, which meant no State athletic team could compete in national events.

Robertson enrolled at Washington and Lee and sat out the required year for transfer students. Then W&L dropped out of the Southern Conference, which finished his collegiate swimming ambitions.

"My aim had been to make the U.S. team for the 1960 Olympics, but I couldn't get into top shape without competition. I had to forget it.

"The Masters gave me a second chance," Robertson added.

**HE DESCRIBED** the Masters as part of the AAU's "cradle to the grave" swimming program which starts with a category for "children 8-and-under."

"It grew out of the research of a Navy doctor, Lieutenant Commander Ransom Arthur. He discovered that swimming was the best exercise for military personnel to get their fitness back quickest. He set up the program to rehabilitate Viet Nam prisoners of war after their release.

"Four years ago the Masters program for adults was started. Enrollment has tripled every year. At that rate more adults than kids will be swimming in 10 years. It's a sleeping giant."

**IN GREENVILLE**, so far, the Masters has not caught on. Only Bob Wilson, 30-35; Chuck Roy, 58-62; and Robertson work out regularly.

"I found out about the Masters at a political rally in October, 1972. I had been away from swimming for 16 years, weighed 208 pounds and had a 38-inch waist. Six months later, when I entered the nationals for the first time, I weighed 178 and my waist was under 34.

"Because we don't have enough people for a Masters, I have to practice with the kids," Robertson continued. "That actually is a help. The YMCA swim team is far and away the best in the state, and I'm able to work under coaches Don Watson and Gary Gibson.

"The kids learn all the strokes and for the first time I'm able to compete in the medley. I'm using strokes I'd never swum before in my life. I won the nationals in the 200 freestyle and I never swam the 200 in high school or college."

**ALTHOUGH ROBERTSON** was a swimmer of first rank, Masters members do not need a background of competitive swimming.

"The Masters stresses physical fitness and fun and doesn't overemphasize the competition. It's not high keyed as in college. Social life is part of the program. Oak Ridge, Tenn., for instance, has 150 members.

"If we had a Masters program here we wouldn't swim the same time as the kids. We could work out at night at the Westside pool or the Y."

He calls the Westside pool the equal of any in the country, including the Hall of Fame pool in Ft. Lauderdale.

**WHEN HE WAS TRAINING** for the nationals, Robertson worked out in the early morning and at night, swimming 7,000 yards a day. He remarked that he took to Ft. Lauderdale his own rooting section — his wife and four kids.

"My best previous finish was in the outdoor nationals at Santa Monica, California, last September. I was third in the 200 freestyle. My best time in the 200 was 2:07.5 and I knew Breen had a 2:02. I won in 2:01.6. That was my biggest improvement, almost six seconds. The fast pool at Ft. Lauderdale helped."

The Nationals are run in heats and the winner is determined by the fastest time. Robertson beat 40 swimmers in his age group. More than 500 swimmers competed.

"I'm in the best shape I've ever been, including high school and college," he said. "I've beaten all my high school marks, but I'm still over my college times."

**IF ENOUGH INTEREST** was shown, the county would sponsor Masters meets against other cities, according to Robertson. These are events in which every one, men and women, can compete in their own age groups. Local meets are for fun. It is only in the nationals that none but the speediest are encouraged to enter.

"I know people in every state that I've met through the Masters program," Robertson said.

**HE MAY NOT MAKE** the All-America team because he does not plan to enter the outdoor championships at Santa Clara, Calif., this summer. Unlike in college where a swimmer automatically qualifies based on his time, the Masters team is selected by a committee.

Being named All-America would be an honor, but regardless how the judgement goes, the important fact is, on his own efforts he won two national championships.



## Swim champ

When Bill Robertson was in high school he dreamed of winning a national championship. What he never dreamed was that he would be 38 years old when he did it.

Robertson swam in the 1974 National AAU Men's and Women's Masters Championship Swim Meet in Ft. Lauderdale, Fla., May 17-19, and took the first-place gold medal in the 100-yard freestyle and the 200-yard freestyle.

One of the swimmers he defeated was George Breen, who was the national champion when he attended Yale. Both competed in the 35-39 age bracket.

The medals were fitting acknowledgment of Robertson's ability, which he never had the opportunity to fully display in college.

Greenville did not have a swimming pool when Robertson was growing up. He had to travel to Spartanburg to practice, and go to Chattanooga, Tenn. to find a high school with a swimming team. He set the school record in every event at McCallie High.

He was unable to compete with the varsity in his first year at N.C. State because of the NCAA rule barring freshman (since repealed).

As a sophomore he was a member of the relay team which set a world record. The Wolfpack ended Yale's seven-year reign by winning the national team title.



GILLIVAN

New Jersey Sports

Mother in the Swim

Special to The New York Times

PRINCETON, Aug. 20—Sarah Bolster, a full-time mother, possesses a full athletic schedule, as well as a nationally ranked masters swimmer, founder and director of the annual East Coast masters invitation swim meet and the competitive promoter for the Princeton Aquatic Association. The 45-year-old Mrs. Bolster, who never swam in a race before 1972, often engages in two-a-day workouts at Princeton University's Dillon Pool, covering between 4,000 and 5,500 meters in each session.

During her spare time, Mrs. Bolster performs domestic duties as the mother of 14, ranging in age from 4 to 20, and all involved in swimming programs.

Affectionately called "Tink" by her friends, whom are reminded of Peter Pan's Tinkerbell, Mrs. Bolster began swimming in the mornings about five years ago at the Princeton Y.M.C.A. along with six of her youngsters. At that point it was strictly for exercise, but with the growing popularity of masters swimming competition, she became curious to see how her times compared with those of nationally ranked swimmers.

The Light Begins to Show

"I discovered that I could have been among the top 10 in some events if I had participated in sanctioned competition," the 5-foot-3 inch, 103-pound Mrs. Bolster said. So, in April of 1972, Mrs. Bolster flew to Denver to participate in her "maiden" meet and placed between second and fourth place in six events.

In 1973, she attained 13 national rankings in the 40-44 age group for women, all between third and eighth place. In addition, she captured seven first places in the East Coast invitation in May, while serving as meet director, and won seven more events at the recent Eastern masters long-course tournament in Philadelphia.

Her swimming fortunes should continue to rise because Mrs. Bolster is now eligible for competition in the age group bracket of 45-49. But the successes have failed to turn her head. "My children are much faster than I am," she insists, "and I can't beat a good 10-year-old."

"I just do it because I love physical fitness," Mrs. Bolster said, explaining that she swam six days a week. "I don't miss a day except Sunday, which is when I go to church to pray for the strength and will to keep it up."

Hargrave wins mile pier swim

Swimming with the grace of a young seal in a burry, Arthur Hargrave, 67, retired resident of Pot Belly Beach in Aptos, churned his way to an overwhelming victory in the "Over 65" bracket of the 2nd Annual Santa Cruz Lifeguard One Mile Swim around the Santa Cruz Pier last Saturday morning.

In the middle 1920s and early in 1930s Hargrave won numerous Pacific Coast, Far Western and National medals while swimming under the colors of the S. F. Olympic Club. His time of 28:58 for the mile Pier swim is a new record for the "Over 65" class.

Fifty-three intrepid sp-

lashers finished the race in times ranging from 19:02 set by first place winner Wayne Colahau, 46, up to 45:03 turned in by the "Grand Daddy Swimmer of Santa Cruz" Joe Weiss, 73.

Nick Roberts, 31, Aptos, took second in the age 30 to 34 group.

Very special among the San Francisco Dolphin Club entries was Harry Cordellos, 36, who has competed in numerous running marathons. He finished 49th ahead of four others. He is totally blind.

Thirty or more Junior, Senior, Boy and Girl Lifeguards provided protection to all swimmers by patrolling the course on surf-boards.

Steve Scheiblaue, chief of the Santa Cruz Lifeguards, was in charge of the event.



RACING GOGGLES in place, Eugene Steinken of Forest Lake is ready to take another few laps at the Beuhler YMCA pool in Palatine. Steinken, 65, broke two national AAU swimming records in YMCA competition recently. He also swam in several marathons during the Depression, including one at the 1933 Chicago World's Fair. A story and more pictures are on Page 21 of today's Herald. (Photo by Scott Sanders)

THE MIAMI HERALD Mon., Sept. 9, 1974

Woman a Victor Over Man In Swim Efficiency Study

BUFFALO, N.Y. — (UPI) — Mark Spitz might be shocked to learn that man is really very inefficient in the water.

But that's one of the conclusions of a three-year study of swimming efficiency by two physiologists at the State University of New York at Buffalo.

Besides finding that man is much less efficient getting around in water than on land, Dr. David Pendergast and Dr. Donald Rennie also have concluded that females are more efficient in water than males.

The two scientists are performing their studies in the world's only 60-meter circular swimming tank. Swimmers are hooked to various energy-measuring devices and as they swim around the donut-shaped pool an observation platform travels above them.



SCIENCE

"IT IS BECAUSE we can remain in continual contact with the swimmer," says Rennie, "that these experiments have been successful in finding out about the amount of energy man expends while swimming."

Rennie likes to compare the swimming observations with automobile proficiency tests, with the human engine's efficiency based on the food it burns, rather than its consumption of gasoline.

"Just like you can categorize cars, you can do the same thing with a group of swimmers. You can tell which are the Edsels, which are the Jaguars — and even throw in a Caterpillar tractor or two," says Rennie.

"We've found man has about a 20 per cent efficiency for walking," says Pendergast. "But the species is considerably less efficient in water. Females are about 5 per cent efficient — and males are only 3 per cent efficient."

THE TWO physiologists think the female's greater amount of adipose, fatty tissues in the chest and legs, make her more buoyant than the male.

Rennie says the lower amount of adipose tissue gives males a water weight twice that of females.

"We think men use a lot of their total energy just to stay horizontal," he said. "But women are already floating and can use their energy to propel themselves."

The scientists say this factor lets females expend 30 per cent less energy while swimming the same distance at the same velocity as males in their studies.

Rennie and Pendergast say their experiments aren't aimed at water safety applications, but that some "common sense rules" became apparent from the studies.

THE MOST important of these rules, says Pendergast, is for swimmers to maintain a constant pace and not to hurry.

"In land terms, 'walk, don't run,' should be the guideline," says Dr. Rennie. "You're not going to get there quicker by hurrying. Chances are you're not going to get there at all."

So far, the scientists have limited their studies to one swimming stroke, the over-arm crawl. Now they are going to begin studies of other strokes, as well as underwater swimming.

They also want to test some of this country's best young swimmers to see how their efficiencies vary from the average person.

# RESULTS

EASTERN L.C. CHAMPIONSHIP  
PHILADELPHIA - JULY 27, 28

<b>Women</b>	
<b>25-29</b>	
<b>50 Meter Free</b>	
M Williams	30.606
D Barnhard	31.304
B Kilgour	31.351
D Florio	34.925
C Lane	35.025
P Brewer	36.455
<b>100 Meter Free</b>	
D Barnhard	1.08.374
B Kilgour	1.10.264
K Szlar	1.21.272
P Brewer	1.25.398
<b>200 Meter Free</b>	
B Kilgour	2.32.699
F Szlar	3.02.456
<b>400 Meter Free</b>	
B Kilgour	5.29.424
K Szlar	6.27.901
<b>100 Meter Back</b>	
M Williams	1.25.803
K Szlar	1.44.616
<b>200 Meter Back</b>	
C Clay	3.03.079
<b>100 Meter Breast</b>	
D Barnhard	1.21.079
C Lane	1.30.136
D Florio	1.37.467
P Brewer	1.49.352
<b>200 Meter Breast</b>	
D Barnhard	3.00.474
C Lane	3.12.939
D Florio	3.29.831
<b>50 Meter Fly</b>	
M Williams	31.365
D Florio	40.869
F Brewer	46.800
<b>100 Meter Fly</b>	
B Kilgour	1.13.061
K Szlar	1.34.010
<b>200 Meter Fly</b>	
D Barnhard	2.44.466
M Williams	2.55.477
D Florio	3.16.381
K Szlar	3.33.978
<b>400 Meter IM</b>	
B Kilgour	6.05.271
<b>30-34 50 Free</b>	
D Todd	30.176
V Pecco	32.516
N Kirkendall	32.853
B Moran	33.389
S Shepherd	34.316
M Kelleher	36.552
<b>100 Free</b>	
D Todd	1.11.367
V Pecco	1.13.686
N Kirkendall	1.15.478
S Shepherd	1.19.250
M Kelleher	1.24.725
<b>200 Free</b>	
B Moran	2.43.753
R Sheehart	2.54.895
N Kirkendall	2.55.115
V Pecco	2.59.805
<b>400 Free</b>	
F Katz	5.50.193
N Kirkendall	6.13.767
S Sheehart	6.23.290
<b>100 Back</b>	
V Kirkendall	1.26.321
F Katz	1.26.745
B Mattson	1.35.868
M Kelleher	1.38.577
<b>200 Back</b>	
N Kirkendall	3.15.967
M Kelleher	3.45.603
<b>100 Breast</b>	
D Todd	1.38.100
V Pecco	1.48.311
S Sheehart	1.57.297
M Kelleher	1.58.976
<b>50 Fly</b>	
F Katz	34.3
D Todd	34.795
V Pecco	35.346
<b>100 Fly</b>	
D Todd	1.25.797
L Joesten	1.25.889
T Joesten	3.73.585
<b>200 IM</b>	
B Moran	2.53.614
<b>400 IM</b>	
F Katz	6.28.928
L Joesten	6.53.500
<b>50 Meter Free</b>	
F Gentile	39.643
J Moeller	41.208
L Rizzuto	43.694
J Morrrells	44.822
<b>100 Meter Free</b>	
J Moeller	1.39.309
F Gentile	1.43.468
J Morrrells	1.44.469
L Rizzuto	1.53.180
<b>200 Meter Free</b>	
F Cura	3.21.476
L Wolf	3.34.315

<b>400 Meter Free</b>	
F Cura	6.43.318
L Rizzuto	8.40.115
<b>100 Meter Back</b>	
F Cura	1.34.703
L Rizzuto	1.58.735
J Morela	2.05.315
<b>200 Back</b>	
F Cura	3.32.547
L Rizzuto	4.13.949
<b>100 Breast</b>	
L Wolf	1.50.835
J Moeller	1.51.676
J Morrrells	2.06.768
<b>200 Meter Breast</b>	
J Moeller	4.13.203
<b>50 Meter Fly</b>	
F Cura	39.421
J Moeller	52.289
P Gentle	1.04.393
<b>100 Meter Fly</b>	
J Moeller	2.14.142
<b>200 Meter IM</b>	
F Cura	3.23.498
<b>40-44</b>	
<b>50 Meter Free</b>	
K Meckelnburg	47.457
<b>100 Meter Free</b>	
K Meckelnburg	1.56.355
<b>200 Meter Free</b>	
K Meckelnburg	2.11.249
<b>400 Meter Free</b>	
K Meckelnburg	4.35.694
<b>50-59</b>	
<b>50 Meter Free</b>	
R Koss	1.00.344
<b>100 Meter Free</b>	
R Koss	2.32.763
<b>200 Meter Free</b>	
R Koss	5.40.637
<b>100 Meter Back</b>	
T Bolster	1.45.267
R Koss	2.05.137
<b>100 Breast</b>	
T Bolster	1.51.290
<b>200 Meter Breast</b>	
T Bolster	4.02.275
<b>50 Meter Fly</b>	
T Bolster	51.483
<b>100 Meter Fly</b>	
T Bolster	1.55.315
<b>200 Meter Fly</b>	
T Bolster	4.25.492
<b>200 Meter IM</b>	
T Bolster	4.05.907
<b>60-64</b>	
<b>50 Meter Free</b>	
G Costello	38.508
P Gallagher	39.514
<b>100 Meter Free</b>	
F Pickens	1.30.817
<b>200 Meter Free</b>	
F Pickens	3.26.131
<b>400 Meter Free</b>	
F Pickens	4.28.800
<b>100 Meter Breast</b>	
G Costello	1.49.058
<b>200 Meter Breast</b>	
G Costello	4.00.539
<b>50 Meter Fly</b>	
G Costello	48.279
<b>100 Meter Fly</b>	
P Pickens	55.888
<b>200 Meter Fly</b>	
F Pickens	2.30.848
<b>65-69</b>	
<b>50 Meter Free</b>	
H Hunner	40.076
<b>100 Meter Back</b>	
H Hunner	1.48.843
<b>200 Meter Back</b>	
H Hunner	4.03.822
<b>50 Meter Fly</b>	
H Hunner	47.8
<b>60-64</b>	
<b>50 Meter Free</b>	
S Thatcher	1.02.281
<b>Men</b>	
<b>25-29</b>	
<b>50 Meter Free</b>	
F Blair	26.462
R Locke	27.291
R Rawstron	27.651
J Lane	27.666
J Platt	27.860
B Peters	29.897
A Blank	31.225
<b>100 Meter Free</b>	
J Lane	1.00.624
F Blair	1.00.744
J Platt	1.01.458
G Henderson	1.03.249
J Robertson	1.04.201
R Rawstron	1.04.534
J Quise	1.05.928
M Henderson	1.07.157
<b>30-34</b>	
<b>50 Meter Free</b>	
T Williams	2.14.428
J Lane	2.14.705
J Platt	2.15.240
F Blair	2.18.619
J Robertson	2.31.377
R Hunson	2.45.630
A Blank	3.10.931
<b>400 Meter Free</b>	
J Lane	4.48.195
F Curry	4.48.520
L Wolf	5.08.124
J Owen	6.55.476

<b>100 Meter Back</b>	
B Livingston	1.07.706
T Johnson	1.12.191
F Blair	1.14.010
D Clancy	1.25.753
<b>200 Meter Back</b>	
B Livingston	2.32.389
<b>100 Meter Breast</b>	
M Cohen	1.16.897
R Husson	1.18.336
J Robertson	1.21.643
R Peters	1.24.956
A Blank	1.41.037
R Keller	1.52.948
<b>200 Meter Breast</b>	
M Cohen	2.50.302
R Husson	2.56.184
J Robertson	3.01.134
<b>50 Meter Fly</b>	
A Deffaa	28.762
R Locke	29.572
T Johnson	29.712
T Kuntz	29.714
R Livingston	30.523
G Henderson	30.942
J Parker	30.693
J Quise	32.840
D Clancy	33.040
<b>100 Meter Fly</b>	
J Flanagan	1.05.047
A Deffaa	1.07.376
P Blair	1.08.348
J Parker	1.11.592
<b>200 Meter Fly</b>	
J Flanagan	2.34.003
A Deffaa	2.42.500
T Johnson	2.33.620
J Flanagan	2.37.237
J Platt	2.37.251
J Lane	2.41.400
D Cappe	2.45.910
R Husson	2.51.738
D Clancy	3.04.692
<b>400 Meter IM</b>	
J Flanagan	5.41.127
J Platt	6.12.142
<b>30-34</b>	
<b>50 Meter Free</b>	
R Randall	27.783
S Young	27.819
E Snyder	28.391
N McDonnell	28.764
A Walker	30.000
A Hicks	32.800
D Mathews	33.700
<b>100 Meter Free</b>	
S Young	1.01.089
R Randall	1.03.234
E Snyder	1.03.316
N McDonnell	1.04.026
H Hamilton	1.08.187
W Meares	1.08.293
H Carlip	1.13.299
D Mathews	1.18.820
<b>200 Meter Free</b>	
R Randall	2.25.289
H Hamilton	2.29.517
W Meares	2.42.262
H Carlip	2.49.079
<b>400 Meter Free</b>	
H Hamilton	5.23.721
R Randall	5.35.218
H Carlip	6.13.923
C Thornyard	6.18.387
D Mathews	7.03.755
<b>100 Meter Back</b>	
N McDonnell	1.12.364
A Hick	1.20.070
<b>200 Meter Back</b>	
N McDonnell	2.46.742
<b>100 Meter Breast</b>	
W Meares	1.26.729
H Carlip	1.30.487
A Hicks	1.31.210
S Thatcher	1.36.777
D Mathews	1.46.033
<b>200 Meter Breast</b>	
W Meares	3.13.767
H Carlip	3.17.464
A Hicks	3.19.241
<b>50 Meter Fly</b>	
E Snyder	29.859
S Young	30.468
D Mathews	44.610
<b>100 Meter Fly</b>	
S Young	1.10.600
<b>200 Meter IM</b>	
E Snyder	2.41.176
W Meares	2.57.737
S Thatcher	3.06.182
H Carlip	3.10.870
<b>35-39</b>	
<b>50 Meter Free</b>	
G Breen	29.676
G Billett	30.066
M Smith	30.571
J duPont	30.666
R Walden	31.479
F Holgerson	32.996
<b>100 Meter Free</b>	
G Breen	1.06.062
R Walden	1.08.070
J Berthe	1.11.271
B Simon	1.16.750
J Petrakas	1.19.323
T Shue	1.23.071
F Holderson	1.28.693

<b>200 Meter Free</b>	
G Breen	2.21.476
B Walden	2.37.094
J Petrakas	3.04.994
F Holgerson	3.30.286
<b>400 Meter Free</b>	
G Breen	5.04.062
B Walden	5.42.191
Hussan	5.57.101
D Petranecch	6.35.918
J Petrakas	6.40.470
B Simon	6.48.692
T Shue	7.15.799
F Holgerson	7.39.991
<b>100 Meter Back</b>	
G Billett	1.24.284
<b>200 Meter Back</b>	
F Holgerson	4.13.529
<b>100 Meter Breast</b>	
M Smith	1.21.286
<b>200 Meter Breast</b>	
M Smith	3.01.209
D Petranecch	3.51.675
<b>50 Meter Fly</b>	
J Owen	31.493
B Simon	37.321
<b>100 Meter Fly</b>	
D Petranecch	1.36.064
<b>200 Meter Fly</b>	
D Petranecch	3.38.739
<b>200 Meter IM</b>	
D Petranecch	3.19.768
<b>400 Meter IM</b>	
D Petranecch	8.30.135
<b>40-44</b>	
<b>50 Meter Free</b>	
H Begel	27.759
E Mann	32.550
<b>100 Meter Free</b>	
B Mattson	1.04.840
H Begel	1.06.727
E Mann	1.12.989
R Chen	1.18.408
<b>200 Meter Free</b>	
E Mann	2.59.511
K Dawson	3.08.083
<b>400 Meter Free</b>	
E Mann	6.25.301
A Allen	6.48.474
<b>100 Meter Back</b>	
S Monsein	1.17.599
R Chen	1.29.2
K Dawson	1.38.2
E Mann	1.44.0
<b>200 Meter Back</b>	
S Monsein	2.57.044
K Dawson	3.33.942
<b>100 Meter Breast</b>	
B Mattson	1.22.976
E Mann	1.42.452
<b>200 Meter Breast</b>	
B Mattson	3.03.292
R Chen	3.31.055
<b>50 Meter Fly</b>	
H Begel	32.758
<b>100 Meter Fly</b>	
A Allen	1.22.359
<b>200 Meter Fly</b>	
A Allen	7.33.560
<b>200 Meter IM</b>	
B Mattson	2.45.391
A Allen	3.22.522
K Dawson	3.35.561
<b>400 Meter IM</b>	
A Allen	7.05.118
<b>45-49</b>	
<b>50 Meter Free</b>	
R Mackenzie	28.100
S Evans	29.707
T Haartz	30.387
M Flanagan	32.245
A Hausman	32.373
T Dowd	32.427
H Lentzsch	33.381
D Partrick	33.512
<b>100 Meter Free</b>	
R Mackenzie	1.07.079
T Haartz	1.10.467
S Ewan	1.10.660
D Mesirov	1.16.210
T Dowd	1.19.287
<b>200 Meter Free</b>	
R Franks	2.38.826
S Evans	2.39.389
D Mesirov	2.47.037
T Dowd	3.12.425
M Coughlin	3.17.823
J Hodges	3.35.229
<b>400 Meter Free</b>	
R Franks	5.48.900
D Mesirov	5.50.176
S Evans	6.17.794
A Hausman	8.00.590
<b>100 Meter Back</b>	
R Franks	1.21.944
M Coughlin	1.31.161
J Forbes	1.39.117
D Sullivan	1.40.800
A Hausman	1.47.936
<b>200 Meter Back</b>	
R Franks	2.56.926
R Mackenzie	3.13.923
D Sullivan	3.51.101
A Hausman	4.10.883
<b>100 Meter Breast</b>	
T Haartz	1.27.699
M Coughlin	1.32.520
M Flanagan	1.34.071
D Mesirov	1.37.897

G Melick	1.40.966
H Lentzsch	1.41.357
J Hodges	1.42.179
<b>200 Meter Breast</b>	
T Haartz	3.17.343
M Coughlin	3.23.515
M Flanagan	3.30.019
D Mesirov	3.32.866
J Forbes	3.36.420
G Melick	3.44.399
J Hodges	3.45.555
<b>50 Meter Fly</b>	
M Flanagan	34.956
R Mackenzie	39.860
J Forbes	41.194
A Hausman	43.791
<b>100 Meter Fly</b>	
M Flanagan	1.25.368
T Haartz	1.26.793
H Lentzsch	1.26.644
D Sullivan	1.47.685
<b>200 Meter IM</b>	
R Franks	2.59.557
M Coughlin	3.19.604
D Mesirov	3.30.900
J Hodges	3.53.605
<b>400 Meter IM</b>	
R Franks	6.52.164
J Hodges	7.06.482
<b>50-54</b>	
<b>50 Meter Free</b>	
J Woods	30.704
E Reed	32.904
C Vissing	36.477
<b>100 Meter Free</b>	
J Woods	1.08.560
J Edwards	1.11.782
C Reed	1.17.123
<b>200 Meter Free</b>	
J Edwards	2.38.080
J Woods	2.43.192
C Kuntz	2.58.321
E Reed	3.10.945
C Vissing	3.38.770
<b>400 Meter Free</b>	
J Edwards	5.49.982
J Woods	6.07.109
C Kuntz	6.30.261
E Reed	7.13.744
<b>100 Meter Back</b>	
J Woods	1.24.107
J Edwards	1.28.428
C Kuntz	1.28.700
<b>200 Meter Back</b>	
J Edwards	3.10.067
J Woods	3.14.084
C Kuntz	3.18.605
<b>50 Meter Fly</b>	
C Kuntz	34.774
E Ceiss	37.681
E Reed	44.287
<b>100 Meter Fly</b>	
C Kuntz	1.40.199
E Reed	1.55.794
<b>55-59</b>	
<b>50 Meter Free</b>	
H Rawstron	31.340
J Sole	33.200
A Newman	34.434
A McKee	35.300
C Schaeffer	36.797
N Hunt	39.202



65-69

Table of swimming times for 50 Meter Free, 100 Meter Free, 200 Meter Free, 400 Meter Free, 800 Meter Free, 1500 m. freestyle, 50 m. breaststroke, 100 m. breaststroke, 50 m. butterfly, 100 m. butterfly, 200 m. butterfly, 400 m. butterfly, 800 m. butterfly, 1500 m. butterfly, 50 m. backstroke, 100 m. backstroke, 200 m. backstroke, 400 m. backstroke, 800 m. backstroke, 1500 m. backstroke, 50 m. medley, 100 m. medley, 200 m. medley, 400 m. medley, 800 m. medley, 1500 m. medley.

Invitational Masters Swim Meet  
New Britain, Conn. 8/3/74

WOMEN  
25-29  
200 m. freestyle  
Kathie Watson 28 3:11.9  
400 m. freestyle  
Kathie Watson 28 6:44.0  
1500 m. freestyle  
Kathie Watson 28 25:42.6  
100 m. butterfly  
Kathie Watson 28 2:09.2  
30-34  
50 m. freestyle  
(Pamela Bohlen 30 tie 37.2)  
(Stacy Frey 31 37.2)  
Jane Hardy 30 37.6  
Jane Johngren 30 38.7  
Jean Maine 31 42.3  
Laureen Rubino 32 46.0  
100 m. freestyle  
Jane Katz 31 1:15.0  
Jane Johngren 30 1:33.7  
Laureen Rubino 32 1:51.2  
1500 m. freestyle  
Jane Katz 31 23:29.05  
Jane Johngren 30 29:52.6  
50 m. breaststroke  
Jean Maine 31 47.7  
Jane Hardy 30 52.4  
Pamela Bohlen 30 55.6  
Laureen Rubino 32 1:01.0  
100 m. breaststroke  
Jean Maine 31 1:50.8  
Stacy Frey 31 1:57.3  
50 m. backstroke  
Jane Katz 31 39.6  
Jane Johngren 30 44.0  
Laureen Rubino 32 53.1  
Julie Walden 33 1:02.2  
100 m. backstroke  
Jane Hardy 30 1:36.6  
Jane Johngren 30 1:45.3  
Stacy Frey 31 1:45.5  
200 m. backstroke  
Jane Hardy 30 3:28.2  
50 m. butterfly  
Jane Katz 31 34.5  
Stacy Frey 31 40.1  
Pamela Bohlen 30 44.6  
200 m. butterfly  
Jane Katz 31 3:07.6  
35-39  
50 m. freestyle  
Susan Kearney 39 32.4  
Judy Conroy 37 43.5  
Grace Terry 35 49.3  
100 m. freestyle  
Susan Kearney 39 1:16.2  
Gilly Ratcliffe 35 1:20.2  
Frances Cura 36 1:22.4  
Grace Terry 35 1:56.7  
200 m. freestyle  
Frances Cura 36 3:08.7

1500 m. freestyle  
Frances Cura 36 27:16.8  
50 m. breaststroke  
Judy Conroy 37 51.5  
100 m. breaststroke  
Gilly Ratcliffe 35 1:45.9  
Judy Conroy 37 1:58.5  
50 m. butterfly  
Susan Kearney 39 41.0  
Judy Conroy 37 53.0  
100 m. butterfly  
Susan Kearney 39 1:33.1  
50 m. butterfly  
Frances Cura 36 40.0  
G. Ratcliffe 35 41.4  
100 m. butterfly  
Frances Cura 36 1:44.0  
200 m. Ind. medley  
G. Ratcliffe 35 3:33.7

40-44  
50 m. freestyle  
Lore Lieb 41 38:2  
D. Edelbaum 40 43:2  
Pat Chenier 43 54:2  
100 m. freestyle  
Lore Lieb 41 1:31:1  
D. Edelbaum 40 1:44:3  
200 m. freestyle  
Lore Lieb 41 3:49.9  
D. Edelbaum 40 3:51.1  
400 m. freestyle  
Rex Ashford 43 9:20.8  
1500 m. freestyle  
D. Edelbaum 40 33:28.5  
Rex Ashford 43 37:19.8  
50 m. breaststroke  
Pat Ashford 43 57.0  
Rex Ashford 43 1:17.0  
100 m. breaststroke  
Lore Lieb 41 1:44.8  
Rex Ashford 43 2:04.7  
D. Edelbaum 40 disq.  
200 m. breaststroke  
Rex Ashford 43 4:27.9

45-49  
50 m. freestyle  
Pat Clinton 46 35:0  
Joan McIntyre 45 39:8  
Grace Derrick 48 46:0  
100 m. freestyle  
Pat Clinton 46 1:20:4  
Joan McIntyre 45 1:32:6  
Grace Derrick 48 1:46:7  
400 m. freestyle  
Pat Clinton 46 6:52:5  
1500 m. freestyle  
Pat Clinton 46 26:32:4  
50 m. backstroke  
Joan McIntyre 45 48:9  
Grace Derrick 48 1:00:3  
100 m. backstroke  
Joan McIntyre 45 1:53:0  
50 m. butterfly  
Pat Clinton 46 43:2

50-54  
50 m. freestyle  
Dot Donnelly 52 35:9  
Jean Pieretti 54 37:7  
Nancy Phillips 53 42:3  
100 m. freestyle  
Dot Donnelly 52 1:23:6  
Jean Pieretti 54 1:26:3  
Nancy Phillips 53 1:38:6  
200 m. freestyle  
Jean Pieretti 54 3:27:3  
Nancy Phillips 53 3:57:0  
400 m. freestyle  
Nancy Phillips 53 8:42:4  
1500 m. freestyle  
Nancy Phillips 53 34:02:0

50 m. breaststroke  
Charlotte 51 47:9  
Costello 51 47:9  
100 m. breaststroke  
C. Costello 51 1:48:0  
100 m. backstroke  
Jean Pieretti 54 1:52:4  
50 m. butterfly  
C. Costello 51 48:8  
200 m. Ind. Medley  
Dot Donnelly 52 4:01:0

60-64  
50 m. freestyle  
Helen Offenhausser 62 54:2  
200 m. freestyle  
H. Offenhausser 62 4:08:1  
400 m. freestyle  
H. Offenhausser 62 8:21:8

1500 m. freestyle  
H. Offenhausser 62 34:13.4  
50 m. backstroke  
H. Offenhausser 62 59:8

65-69  
50 m. freestyle  
Eve Somers 67 64:3  
100 m. freestyle  
Eve Somers 67 2:19:2  
200 m. freestyle  
Eve Somers 67 4:50:6  
400 m. freestyle  
Eve Somers 67 10:04:3  
1500 m. freestyle  
Eve Somers 67 38:50:5

MEN  
25-29  
50 m. freestyle  
Alan Blank 26 32.0  
100 m. freestyle  
Bob Gruters 26 1:05:0  
1500 m. freestyle  
Doug Walther 27 20:51:3  
50 m. breaststroke  
Alan Blank 26 43:2  
Larry Kunak 27 50:5  
100 m. breaststroke  
Larry Kunak 27 1:58:2  
50 m. backstroke  
Alan Blank 26 42:2  
50 m. butterfly  
Alan Blank 26 36:0  
100 m. butterfly  
Doug Walther 27 1:08:5  
200 m. Ind. Medley  
Doug Walther 27 2:41:8  
400 m. Ind. Medley  
Doug Walther 27 6:03:5

30-34  
100 m. freestyle  
Jack Geoghegan 32 1:01:0  
200 m. freestyle  
Jack Geoghegan 32 2:20:0  
Bob Hartman 30 2:42:4  
400 m. freestyle  
Jack Geoghegan 32 5:16:0  
Mike Laux 33 5:51:6  
Angelo Arcocchi 30 6:13:0  
1500 m. freestyle  
Jack Geoghegan 32 21:19:5  
50 breaststroke  
Andrew Cooke 31 37:6  
Phil Whitten 30 37:7  
Mike Laux 33 38:1  
100 breaststroke  
Andrew Cooke 31 1:23:3  
Mike Laux 33 1:29:8  
Bob Hartman 30 1:46:0  
200 m. breaststroke  
Andrew Cooke 31 3:11:0  
50 m. backstroke  
Phil Whitten 30 34:3  
100 m. backstroke  
Bob Hartman 30 1:28:5  
200 m. backstroke  
Phil Whitten 30 2:43:8  
50 m. butterfly  
Bob Hartman 30 33:8  
100 m. butterfly  
Jack Geoghegan 32 1:08:0  
Mike Laux 33 1:12:5  
Angelo Arcocchi 30 1:28:4  
200 m. butterfly  
Angelo Arcocchi 30 3:25:0  
200 m. Ind. medley  
Mike Laux 33 2:47:8

35-39  
50 m. freestyle  
Bob Walden 35 31:3  
Bob Mann 38 33:6  
Tony Mosa 39 35:6  
100 m. freestyle  
Bob Walden 35 1:09:5  
Bob Mann 38 1:23:4  
200 m. freestyle  
Bob Walden 35 2:40:7  
D. Petranec 39 3:07:5  
400 m. freestyle  
Bob Walden 35 5:50:9  
D. Petranec 39 6:30:2  
1500 m. freestyle  
Bob Walden 35 23:27:02  
D. Petranec 39 25:30:0  
George Brunstad 39 n.t.

50 m. breaststroke  
Louis Abel 38 39:2  
Tony Mosa 39 43:6  
100 m. breaststroke  
Louis Abel 38 1:28:9  
Tony Mosa 39 1:40:7

200 m. breaststroke  
Louis Abel 38 3:24:5  
50 m. backstroke  
Bill Murray 37 37:2  
100 m. backstroke  
George Brunstad 39 1:35:1

200 m. backstroke  
Bill Murray 37 3:16:9  
G. Brunstad 39 3:26:2  
50 m. butterfly  
Steve Kurtin 35 31:2  
Bill Murray 37 31:7  
100 m. butterfly  
Bill Murray 37 1:18:5  
Steve Kurtin 35 1:24:5  
200 m. Ind. medley  
G. Brunstad 39 3:31:0  
400 m. Ind. medley  
Louis Abel 38 7:47:4  
Geo. Brunstad 39 8:12:4

40-44  
50 m. freestyle  
Walt Lincoln 41 30:1  
Ham Milroy 43 30:6  
Charles White 43 34:1  
100 m. freestyle  
Walt Lincoln 41 1:09:9  
200 m. freestyle  
Ham Milroy 43 2:53:1  
400 m. freestyle  
Charles White 43 6:55:6  
1500 m. freestyle  
E.C. Haber 41 25:09:3  
50 m. breaststroke  
Ham Milroy 43 45:2  
50 m. butterfly  
Walt Lincoln 41 36:5  
400 m. Ind. medley  
Walt Lincoln 41 7:25:8

45-49  
50 m. freestyle  
Frank Dooley 45 29:5  
J. Nebelung 45 33:7  
Tony Lombard 47 35:5  
M.T. Ergin 47 35:7  
100 m. freestyle  
Len Goldstone 45 1:10:0  
200 m. freestyle  
M. T. Ergin 47 3:14:9  
400 m. freestyle  
Len Goldstone 45 6:08:5  
Frank Randall 45 6:57:3  
M. T. Ergin 47 7:22:8  
1500 m. freestyle  
M. T. Ergin 47 28:58:8  
Dan Herbst 45 38:10:0  
50 m. breaststroke  
J. Nebelung 45 40:1  
Jim Forbes 48 40:9  
Bill Slocum 45 47:1  
Dan Herbst 45 49:5  
M.T. Ergin 47 51:8  
100 m. breaststroke  
J. Nebelung 45 1:30:1  
Jim Forbes 48 1:36:8  
Bill Slocum 45 1:45:4  
Dan Herbst 45 1:52:6  
200 m. breaststroke  
J. Nebelung 45 3:16:0  
50 m. backstroke  
Jim Forbes 48 46:0  
100 m. backstroke  
Bill Slocum 45 1:45:4  
50 m. butterfly  
Len Goldstone 45 34:4  
Jim Forbes 48 42:9  
100 m. butterfly  
Alfred Stein 45 1:25:4  
200 m. butterfly  
Alfred Stein 45 3:22:1  
200 m. Ind. Medley  
Len Goldstone 45 3:06:9  
Bill Slocum 45 3:54:3  
400 m. Ind. Medley  
Alfred Stein 45 7:16:5

50-54  
50 m. freestyle  
Ed Reed, Sr. 54 32:8  
100 m. freestyle  
El. Schofield 51 1:21:8  
200 m. freestyle  
James Edwards 51 2:43:4  
El. Schofield 51 3:07:5  
400 m. freestyle  
James Edwards 51 6:00:1  
El. Schofield 51 6:52:0  
1500 m. freestyle  
El. Schofield 51 27:23:6  
50 m. breaststroke  
Ed Reed, Sr. 54 51:0

55-59  
50 m. freestyle  
Dave Tyler 55 30:3  
Austin Newman 58 34:6  
John Sole 55 35:2  
100 m. freestyle  
Dave Tyler 55 1:11:0  
Austin Newman 58 1:17:5  
200 m. freestyle  
Austin Newman 58 2:59:9  
Harry Bartlett 58 3:09:9  
Dick Guido 57 3:14:0  
400 m. freestyle  
Austin Newman 58 6:30:0  
Dick Guido 57 7:11:6  
1500 m. freestyle  
Dave Tyler 55 24:44:5  
Austin Newman 58 25:49:0  
John Merrill 57 27:56:6  
50 m. breaststroke  
John Sole 55 43:4  
Stan Pudell 58 45:6  
Dick Close 58 50:4  
100 m. breaststroke  
John Sole 55 1:44:8  
Stan Pudell 58 1:48:1  
Dick Close 58 1:55:7  
200 m. breaststroke  
Dick Close 58 4:26:8  
50 m. backstroke  
Dick Guido 57 42:9  
100 m. backstroke  
Dave Tyler 55 1:27:9  
\*new Nat'l record  
Dick Guido 57 1:34:1  
50 m. butterfly  
Dave Tyler 55 \*\* 36:2  
John Sole 55 40:2

60 - 65  
1500 m. freestyle  
Anthony Anastasio 62 35:21:3

65 and over  
1500 m. freestyle  
Oscar Sigrist 66 33:30:2  
50 m. breaststroke  
Oscar Sigrist 66 50:2  
50 m. backstroke  
Oscar Sigrist 66 49:0  
100 m. backstroke  
Oscar Sigrist 66 1:56:0

Relays  
200 m. mixed free relay  
25#  
Jersey Masters 2:10:2  
Conn Masters 2:20:1  
35+  
Conn Masters 2:11:6  
45+  
Conn Masters 2:23:6  
Men's 200 m. free relay  
25+  
Conn Masters 1:54:3  
35#  
N.E. Masters 2:10:7  
"White" Relay 2:13:4  
Conn Masters 2:26:6  
45+  
Conn Masters 2:11:7  
Women's 200 m. free relay  
ACC Gym 2:40:4  
Jersey Masters 2:52:5  
35+  
Conn Masters 2:40:2  
45+  
Conn Masters 2:47:6

CITY OF LOS ANGELES MASTERS INVITATIONAL at Sherman Oaks/Van Nuys  
August 17-18, 1974

WOMEN 25-29	
50 MTR. FREESTYLE	Mimi Fenstermacher 30.4
Chris Morgan 26	30.5
Sally Peterson 27	30.5
Lucy Johnson 27	32.4
Marie Z. Latham 25	33.9
Mary Porter 27	34.7
Cordelia Scott 25	38.5
Karen Vogelsang 27	45.3
100 MTR. FREESTYLE	Sally Peterson 27 1:09.4
Lucy Johnson 27	1:14.7
Marie Z. Latham 25	1:20.5
Cordelia Scott 25	1:33.0
200 MTR. FREESTYLE	Sally Peterson 27 2:36.7
Lucy Johnson 27	2:41.5
Marie Z. Latham 25	2:50.6
400 MTR. FREESTYLE	Marie Z. Latham 25 3:17.8
Kathie Duncan 27	5:44.2
Lucy Johnson 27	6:06.2
Marie Z. Latham 25	7:20.5
1500 YARD FREESTYLE	Mary Porter 27 26:55.0
50 MTR. BACKSTROKE	Mary Porter 27 44.9
Karen Vogelsang 27	57.2
100 MTR. BACKSTROKE	Mimi Fenstermacher 27 1:20.3
Marie Z. Latham 25	1:54.6
50 MTR. BREASTSTROKE	Sally Peterson 27 41.4
Susan T. Winn 27	45.6
Mary Porter 27	48.5
Marie Z. Latham 25	59.3
100 MTR. BREASTSTROKE	Sally Peterson 27 1:32.5
Lucy Johnson 27	34.8
Kathie W. Duncan 27	35.0
Chris Morgan 26	35.5
Marie Z. Latham 25	40.5
100 MTR. BUTTERFLY	Kathie Duncan 27 1:22.3
200 MTR. INDIVIDUAL MEDLEY	Lucy Johnson 27 3:05.9
Marie Z. Latham 25	3:42.6
WOMEN 30-34	
50 MTR. FREESTYLE	Carol Jewell 32 32.7
Janet Royer 33	35.1
Martha Childs 34	37.5
Christine Martin 32	41.0
100 MTR. FREESTYLE	Janet Royer 33 1:24.2
Christine Martin 32	1:36.3
200 MTR. FREESTYLE	Janet Royer 33 3:20.8
Christine Martin 32	3:28.6
400 MTR. FREESTYLE	Christine Martin 32 7:32.4
1500 MTR. FREESTYLE	Christine Martin 32 30:44.2
50 MTR. BACKSTROKE	Martha Childs 34 50.7
Janet Royer 33	55.4
50 MTR. BREASTSTROKE	Martha Childs 34 46.6
Janet Royer 33	48.8
100 MTR. BREASTSTROKE	Martha Childs 34 1:43.0
Janet Royer 33	1:47.7
200 MTR. BREASTSTROKE	Martha Childs 34 3:41.7
50 MTR. BUTTERFLY	Carol Jewell 32 38.7
Janet Royer 33	43.9
Martha Childs 34	44.2
100 MTR. BUTTERFLY	Martha Childs 34 1:44.6
200 MTR. INDIVIDUAL MEDLEY	Martha Childs 34 3:33.9
400 MTR. INDIVIDUAL MEDLEY	Martha Childs 34 7:38.0
WOMEN 35-39	
50 MTR. FREESTYLE	Gladys Bourseau 39 37.6
100 MTR. FREESTYLE	Janet Lamott 38 1:17.5
Gladys Bourseau 39	1:27.1
Sandra Riddle 35	1:27.5
200 MTR. FREESTYLE	Janet Lamott 38 2:56.3
Janice Gray 36	2:59.0
Sandra Riddle 35	3:17.8
400 MTR. FREESTYLE	Betsy Jordan 37 6:35.4
1500 MTR. FREESTYLE	Janice Gray 36 24:45.5
Betsy Jordan 37	25:42.7
50 MTR. BACKSTROKE	Betsy Jordan 37 38.1
Judith Collins 35	46.0
Sandra Riddle 35	46.7
Gladys Bourseau 39	57.6
100 MTR. BACKSTROKE	Betsy Jordan 37 1:24.5
200 MTR. BACKSTROKE	Betsy Jordan 37 3:02.2
Betsy Jordan 37	3:47.7
400 MTR. BACKSTROKE	Sandra Riddle 35 48.9
50 MTR. BREASTSTROKE	Helen H. Geoffrion 35 50.3
Betsy Jordan 37	

50 MTR. BACKSTROKE	
Margaret George 57	53.8
Lorraine I. Peterson 56:1	53.2
100 MTR. BACKSTROKE	Margaret George 57 1:59.1
Annetta Pfeiffer 56	2:05.3
Viola L. Thompson 56	2:07.8
Lorraine I. Peterson 56:2	1:17.9
200 MTR. BACKSTROKE	Margaret George 57 4:16.0
Annetta Pfeiffer 56	4:25.8
Lorraine I. Peterson 56:4	4:48.4
100 MTR. BREASTSTROKE	Rita Simonton 56 2:05.9
Viola L. Thompson 56	2:08.4
Lorraine I. Peterson 56:3	2:10.0
200 MTR. BREASTSTROKE	Rita Simonton 56 4:31.2
Viola L. Thompson 56	51.5
50 MTR. BUTTERFLY	Annetta Pfeiffer 56 1:10.0
Margaret George 57	1:12.0
100 MTR. BUTTERFLY	Viola L. Thompson 56 2:11.7
Annetta Pfeiffer 56	2:44.3
200 MTR. BUTTERFLY	Rita Simonton 56 4:49.8
400 MTR. INDIVIDUAL MEDLEY	Rita Simonton 56 8:46.2
WOMEN 40-44	
50 MTR. FREESTYLE	Helga L. Palmer 44 35.8
Jacqueline D. Smith 43	31.6
100 MTR. FREESTYLE	Helga L. Palmer 44 1:25.0
200 MTR. FREESTYLE	Rita Barbara Mills 43 3:05.0
Rita Barbara Mills 43	3:57.3
400 MTR. FREESTYLE	Helga L. Palmer 44 6:43.3
Jacqueline D. Smith 43	8:28.5
1500 MTR. FREESTYLE	Rita Barbara Mills 43 27:05.0
50 MTR. BACKSTROKE	Jacqueline D. Smith 43 49.6
100 MTR. BACKSTROKE	Oujia Nichols 42 58.6
50 MTR. BREASTSTROKE	Rita Barbara Mills 43 1:57.2
200 MTR. BREASTSTROKE	Rita Barbara Mills 43 4:10.0
50 MTR. BUTTERFLY	Rita Barbara Mills 43 49.6
Jacqueline D. Smith 43	50.9
100 MTR. BUTTERFLY	Oujia Nichols 42 1:07.3
200 MTR. BUTTERFLY	Rita Barbara Mills 43 1:52.3
Jacqueline D. Smith 43	1:52.8
400 MTR. INDIVIDUAL MEDLEY	Rita Barbara Mills 43 4:04.6
Jacqueline D. Smith 43	4:16.0
WOMEN 45-49	
50 MTR. FREESTYLE	Lillian M. Kerr 46 39.1
100 MTR. FREESTYLE	Lillian M. Kerr 46 1:38.4
Betty Talbot 48	1:45.9
200 MTR. FREESTYLE	Betty Talbot 48 3:39.4
1500 MTR. FREESTYLE	Anne Adams 46 26:43.9
Betty Talbot 48	30:31.6
50 MTR. BACKSTROKE	Anne Adams 46 43.5
100 MTR. BACKSTROKE	Anne Adams 46 1:46.0
200 MTR. BACKSTROKE	Betty Talbot 48 4:50.2
100 MTR. BUTTERFLY	Anne Adams 46 1:42.2
400 MTR. INDIVIDUAL MEDLEY	Anne Adams 46 7:13.1
WOMEN 50-54	
50 MTR. FREESTYLE	Tina Dickinson 52 48.6
100 MTR. FREESTYLE	Tina Dickinson 52 1:50.3
200 MTR. FREESTYLE	Lynn G. Orr 50 1:38.9
50 MTR. BACKSTROKE	Bette F. Crowell 54 3:40.1
Lynn G. Orr 50	3:41.6
100 MTR. BACKSTROKE	Bette F. Crowell 54 7:57.0
1500 MTR. FREESTYLE	Lynn G. Orr 50 33:24.2
100 MTR. BUTTERFLY	Bette F. Crowell 54 1:48.1
200 MTR. BUTTERFLY	Bette F. Crowell 54 4:07.0
50 MTR. BREASTSTROKE	Sandy Lewis 50 55.4
Tina Dickinson 52	57.6
Lynn G. Orr 50	1:02.0
100 MTR. BREASTSTROKE	Tina Dickinson 52 2:04.0
Bette F. Crowell 54	4:30.3
200 MTR. INDIVIDUAL MEDLEY	Lynn G. Orr 50 4:31.9
WOMEN 55-59	
50 MTR. FREESTYLE	Rita Simonton 56 41.5
Margaret George 57	42.2
Viola L. Thompson 56	45.0
Lorraine I. Peterson 56	59.0
100 MTR. FREESTYLE	Viola L. Thompson 56 1:44.4
Lorraine I. Peterson 56:2	1:44.4
200 MTR. FREESTYLE	Rita Simonton 56 3:30.4
Margaret George 57	3:48.4
Lorraine I. Peterson 56:4	4:44.1
400 MTR. FREESTYLE	Viola L. Thompson 56 7:49.7
Margaret George 57	7:57.5
Annetta Pfeiffer 56	8:10.5
1500 YARD FREESTYLE	Margaret George 57 30:53.6
Viola L. Thompson 56	31:42.8

50 MTR. FREESTYLE	
Jim McGrath 31	26.2
Jim Loofbourrow 34	27.4
Bambi Kishi 32	29.5
Mark Palmer 33	30.4
Tom Crocker 31	30.5
100 MTR. FREESTYLE	Jim McGrath 31 1:00.4
George S. Hill Jr. 30	1:01.7
Allen Cartwright 32	1:08.2
Dale Scoville 31	1:10.5
Mark Palmer 33	1:16.0
Michael M. Krieger 32	58.8
200 MTR. FREESTYLE	George S. Hill Jr. 30 2:16.6
George T. Warren 30	2:21.1
Dale Scoville 31	2:36.6
Mark Palmer 33	2:44.4
400 MTR. FREESTYLE	George S. Hill Jr. 30 4:54.7
George T. Warren 30	4:58.2
Jim Loofbourrow 34	5:11.2
Jerry Lloyd 33	5:30.0
Tom K. Lieser 32	5:34.7
Tom Crocker 31	5:38.3
Charles A. Maunz 34	5:42.2
Dale Scoville 31	5:44.6
1500 MTR. FREESTYLE	George T. Warren 30 20:01.6
George S. Hill Jr. 30	20:52.2
Tom K. Lieser 32	22:58.6
Tom Crocker 31	23:33.1
50 MTR. BACKSTROKE	Jerry Lloyd 33 35.1
100 MTR. BACKSTROKE	Jim McGrath 31 1:12.6
Dave Frank 30	1:14.6
Jim Loofbourrow 34	1:16.6
Jerry Lloyd 33	1:21.2
Mark Palmer 33	1:27.8
200 MTR. BACKSTROKE	Jerry Lloyd 33 2:55.2
Tom K. Lieser 32	3:01.5
Jim McGrath 31	38.0
Bambi Kishi 32	41.4
50 MTR. BREASTSTROKE	Charles A. Maunz 34 35.4
George T. Warren 30	36.7
100 MTR. BREASTSTROKE	Charles A. Maunz 34 1:20.5
Dave Frank 30	1:20.9
George T. Warren 30	1:21.8
Tom Crocker 31	1:27.5
Mark Palmer 33	1:31.5
200 MTR. BREASTSTROKE	George T. Warren 30 2:58.2
Charles A. Maunz 34	3:10.7
Tom Crocker 31	3:10.8
50 MTR. BUTTERFLY	Jim McGrath 31 26.7
Allen Cartwright 32	29.9
Jim Loofbourrow 34	30.5
Bambi Kishi 32	32.6
Dale Scoville 31	33.7
100 MTR. BUTTERFLY	Allen Cartwright 32 1:06.1
Dale Scoville 31	1:28.6
Jim McGrath 31	1:02.0
200 MTR. BUTTERFLY	Allen Cartwright 32 2:33.0
Tom Crocker 31	3:13.0
200 MTR. INDIVIDUAL MEDLEY	George T. Warren 30 2:41.0
Mark Palmer 33	3:03.4
Dale Scoville 31	3:06.6
400 MTR. INDIVIDUAL MEDLEY	Allen Cartwright 32 5:40.2
George T. Warren 30	5:47.5
MEN 35-39	
50 MTR. FREESTYLE	Burt Kanner 35 27.2
Bill McMaster 35	27.5
Bill Earley 37	27.9
Howard S. Roberts 35	28.0
Keith Martin 37	32.2
100 MTR. FREESTYLE	Burt Kanner 35 1:01.4
Howard S. Roberts 35	1:03.4
Bill McMaster 35	1:03.8
John Daniels 37	1:05.9
John du Pont 35	1:09.5
Daniel J. Kevles 35	1:08.7
David Lamott 39	1:10.6
Keith Martin 37	1:10.7
200 MTR. FREESTYLE	John du Pont 35 2:29.5
John Daniels 37	2:33.4
2:38.5	
400 MTR. FREESTYLE	Burt Kanner 35 4:52.4
John du Pont 35	5:29.6
Keith Martin 37	5:45.4
John Daniels 37	5:49.5
William R. Parks 38	6:09.1
1500 MTR. FREESTYLE	Burt Kanner 35 20:04.8
Burt Kanner 35	23:38.7
Keith Martin 37	
50 MTR. BACKSTROKE	Bill McMaster 35 32.8
Bill Earley 37	32.9
William R. Parks 38	34.4
David Bechtel 37	38.7
John Collins 37	1:02.6
100 MTR. BACKSTROKE	Bill McMaster 35 1:14.3
Bill Earley 37	1:18.0

Burt Kanner 35	1:21.2
Dave Bechtel 37	1:29.1
26.2 200 MTR. BACKSTROKE	
27.4 Bill McMaster 35	2:47.1
29.5 Bill Earley 37	2:52.5
30.4 Burt Kanner 35	2:53.2
30.5 William R. Parks 38	3:06.9
David Bechtel 37	3:11.3
58.8 Mark Hoffer 39	3:33.4
1:00.4 50 MTR. BREASTSTROKE	
1:01.7 Howard S. Roberts 35	37.3
1:08.2 William R. Parks 38	39.5
1:10.5 David Lamott 39	41.0
1:16.0 John Schell	45.0
100 MTR. BREASTSTROKE	
Howard S. Roberts 35	1:23.3
William R. Parks 38	1:32.2
200 MTR. BREASTSTROKE	
Howard S. Roberts 35	3:25.6
John Schell	4:25.8
50 MTR. BUTTERFLY	
Burt Kanner 35	29.9
Bill McMaster 35	30.0
John Daniels 37	32.1
Howard S. Roberts 35	32.2
William R. Parks 38	32.2
David Bechtel 37	31.3
David Lamott 39	32.2
400 MTR. INDIVIDUAL MEDLEY	
Burt Kanner 35	5:48.5
MEN 40-44	
50 MTR. FREESTYLE	
Neal R. Palmer 44	28.9
Bob Burnside 42	29.1
Russ LaTelle 43	30.5
Art Welch 41	31.7
Curt Miller 42	32.3
Bob Cannon 44	33.8
100 MTR. FREESTYLE	
Neal R. Palmer 44	1:08.9
E. Fred Brown 41	1:10.9
Art Welch 41	1:14.0
Jerry Vickers 43	1:14.5
200 MTR. FREESTYLE	
Alex Gilbert 41	2:52.8
Jerry Vickers 43	3:00.8
Bruce Cleveland 56	3:21.5
400 MTR. FREESTYLE	
Bob Beach 44	5:22.3
Stan McConnell 42	5:47.3
Art Welch 41	5:56.5
Neal R. Palmer 44	6:09.7
Herb Nakama 44	6:12.8
Alex Gilbert 41	6:14.9
E. Fred Brown 41	6:17.6
1500 MTR. FREESTYLE	
Bob Beach 44	22:11.3
Alex Gilbert 41	24:19.4
Herb Nakama 44	24:34.0
Neal Palmer 44	25:37.1
Don Johnson 42	28:48.5
50 MTR. BACKSTROKE	
Bob Burnside 42	34.3
Art Welch 41	42.1
100 MTR. BACKSTROKE	
Bob Burnside 42	1:18.4
Stan McConnell 42	1:20.5
Art Welch 41	1:30.0
Russell Hawkes 43	1:36.6
E. Fred Brown 41	1:37.0
200 MTR. BACKSTROKE	
Bob Burnside 42	3:01.1
Art Welch 41	3:17.7
Stan McConnell 42	2:57.6
50 MTR. BREASTSTROKE	
Russell Hawkes 43	39.6
Nino Cupaiuolo 40	39.8
Budd Symes 40	40.8
Alex Gilbert 41	42.8
Bob Cannon 44	43.4
Curt Miller 42	44.9
100 MTR. BREASTSTROKE	
Russell Hawkes 43	1:29.7
Bud Schumacher 44	1:30.0
Herb Nakama 44	1:30.7
Budd Symes 40	1:32.2
Alex Gilbert 41	1:36.4
Curt Miller 42	1:40.5
Bob Cannon 44	1:42.7
200 MTR. BREASTSTROKE	
Nino Cupaiuolo 40	3:12.5
Russell Hawkes 43	3:18.3
Budd Symes 40	3:34.4
Alex Gilbert 41	3:34.9
Bob Cannon 44	3:54.0
Herb Nakama 44	3:27.0
50 MTR. BUTTERFLY	
Stan McConnell 42	33.4
Art Welch 41	33.4
Alex Gilbert 41	34.4
Bob Cannon 44	40.2
Russell Hawkes 43	40.9



400 Meters Freestyle
D. Petranec 39 6:30.4
M. Smith 38 6:41.1
50 Meters Backstroke
L. Sharp 35 36.0
D. Drum 39 38.0
R. Cheadle 36 40.5
J. Tourtellotte 39 44.4
100 Meters Backstroke
L. Sharp 35 1:23.6
200 Meters Backstroke
L. Sharp 35 3:15.5
50 Meters Breaststroke
D. Drum 39 39.2
J. Tourtellotte 39 43.8
G. Dick 37 45.7
J. Petrakes 39 46.7
A. Smith 38 46.9
100 Meters Breaststroke
M. Smith 38 1:21.9
G. Dick 37 1:44.3
A. Smith 38 1:47.0
200 Meters Breaststroke
M. Smith 38 3:04.5
D. Petranec 39 3:42.8
G. Dick 37 3:58.8
50 Meters Butterfly
G. Worthington 37 29.9
D. Drum 37 33.0
J. Petrakes 39 42.7
J. Tourtellotte 39 43.9
100 Meters Butterfly
G. Worthington 37 1:12.7
D. Petranec 39 1:35.8
200 Meters Butterfly
D. Petranec 39 3:57.2
200 Meters I.M.
G. Worthington 37 2:53.0
D. Drum 39 3:06.2
D. Petranec 39 3:25.4
400 Meters I.M.
D. Petranec 39 7:07.0
40-44
50 Meters Freestyle
A. Allen 44 30.8
S. Monsein 40 31.2
E. Mann 44 32.0
B. Perry 43 35.8
100 Meters Freestyle
E. Mann 44 1:12.7
200 Meters Freestyle
E. Mann 44 2:57.7
400 Meters Freestyle
S. Monsein 40 6:23.5
E. Mann 44 6:23.7
P. Brey 44 9:30.1
50 Meters Backstroke
S. Monsein 40 34.4
R. Chen 40 40.2
B. Perry 42 47.2
100 Meters Backstroke
S. Monsein 40 1:16.4
R. Chen 40 1:27.8
200 Meters Backstroke
S. Monsein 40 2:55.5
R. Chen 40 3:17.8
50 Meters Breaststroke
R. Chen 40 42.0
E. Mann 44 46.0
100 Meters Breaststroke
R. Chen 40 1:34.1
E. Mann 44 1:41.5
200 Meters Breaststroke
R. Chen 40 3:25.7
E. Mann 44 3:42.3
50 Meters Butterfly
A. Allen 44 34.2
100 Meters Butterfly
A. Allen 44 1:25.7
200 Meters I.M.
A. Allen 44 3:14.0
R. Chen 40 3:15.4
E. Mann 44 3:20.5
400 Meters I.M.
A. Allen 44 7:05.9
45-49
R. MacKenzie 46 28.6
E. Emes, Jr. 45 29.9
J. Kratchman 48 38.4
100 Meters Freestyle
R. MacKenzie 46 1:05.6
E. Emes 45 1:10.6
J. Kratchman 48 1:35.9
200 Meters Freestyle
E. Emes 45 3:30.6
400 Meters Freestyle
J. Rodgers 46 5:58.9
M. Coughlin 46 6:45.3
50 Meters Backstroke
R. MacKenzie 46 35.5
E. Emes, Jr. 45 53.3
100 Meters Backstroke
R. MacKenzie 46 1:22.9
M. Coughlin 46 1:31.6
200 Meters Backstroke
M. Coughlin 46 3:12.2
50 Meters Breaststroke
H. Coughlin 46 1:33.1
200 Meters Breaststroke
H. Coughlin 46 3:24.5
50 Meters Butterfly
E. Emes 45 30.9
R. MacKenzie 46 36.2
100 Meters Butterfly
E. Emes 45 1:22.4
200 Meters Butterfly
J. Rodgers 46 4:13.6
200 Meters I.M.
M. Coughlin 46 3:15.7

200 Meters I.M.
J. Rodgers 46 7:48.2
50-54
100 Meters Freestyle
E. Hallila 53 1:19.9
G. Vissing 50 1:29.6
200 Meters Freestyle
E. Hallila 53 3:18.9
400 Meters Freestyle
J. MacKenzie 50 6:50.9
50 Meters Backstroke
J. MacKenzie 50 51.0
50 Meters Breaststroke
J. MacKenzie 50 43.5
100 Meters Breaststroke
E. Hallila 53 1:56.1
50 Meters Butterfly
J. MacKenzie 50 39.2
200 Meters I.M.
J. MacKenzie 50 3:26.8
55-59
50 Meters Freestyle
N. Hunt 55 38.0
F. Clark 58 40.1
100 Meters Freestyle
N. Hunt 55 1:30.3
F. Clark 58 1:32.7
200 Meters Freestyle
N. Hunt 55 3:41.9
50 Meters Backstroke
F. Clark 58 56.0
50 Meters Breaststroke
N. Hunt 55 59.9
F. Clark 58 1:01.5
60-64
50 Meters Freestyle
J. Lieblein 60 55.0
400 Meters Freestyle
L. Finnegan 60 8:50.5
50 Meters Backstroke
L. Finnegan 60 50.0
100 Meters Backstroke
L. Finnegan 60 1:56.1
65-69
50 Meters Freestyle
S. Craigie 67 34.5
D. McAfee 65 36.5
H. Bender 65 42.0
100 Meters Freestyle
D. McAfee 65 1:25.0
S. Craigie 67 1:25.4
H. Bender 65 1:40.5
200 Meters Freestyle
D. McAfee 65 3:24.7
S. Craigie 67 3:32.0
H. Bender 65 3:46.3
400 Meters Freestyle
D. McAfee 65 7:18.0
S. Craigie 67 7:38.0
H. Bender 65 7:39.6
50 Meters Backstroke
S. Craigie 67 53.9
100 Meters Backstroke
D. McAfee 65 1:56.6
200 Meters Backstroke
D. McAfee 65 4:29.8
RELAYS
200 Meter Freestyle - Men
Follit, Vielhaber, Clancy
Johnston (25+) DOM 1:56.3
Emes, Sharp, Drum,
MacKenzie (35+) DOM 1:54.5
DCM "B" (35+) 2:18.6
DCM "C" (35+) 2:23.1
200 Meter Medley - Men
Sharp, Husson, Vielhaber,
Follit (25+) DOM 2:12.0
Monsein, Smith, Emes,
MacKenzie (35+) DOM 2:08.0
DCM "B" (35+) 2:31.7
Coughlin, MacKenzie, Rodriguez,
Hunt (45+) DOM 2:46.0
200 Meters Mixed
Clancy, Florig, Barnhard,
Deluca (25+) DOM 2:10.0
Petranec, Pirie, Norton
Mann (35+) DOM 2:27.4
Emes, Gimmel, Kreplin,
MacKenzie (45+) DOM 2:23.2
DCM "B" (45+) 2:45.3
Masters Swimming Meet
07-20-74 Santa Barbara, CA
WOMEN 25-29
100 METER FREESTYLE
Susan Sargent 27 1:08.0
Mimi Fenstermacher 27 1:09.5
Sally Peterson 27 1:11.7
200 METER FREESTYLE
Kathy Duncan 27 2:42.9
Debby Doesburg 25 2:42.9
Sally Peterson 27 2:43.0
50 METER BACK A
Mimi Fenstermacher 27 35.2
Janice Draucker 26 40.1
50 BREAST A
Sally Peterson 27 41.5
Mary Porter 26 46.2
100 METER FLY
Susan Sargent 27 1:14.1
Kathy Duncan 27 1:20.6
Debby Doesburg 25 1:26.4
200 METER FLY
Kathy Duncan 27 3:08.8
200 METER IM
Susan Sargent 27 3:00.0
Lucy Johnson 27 3:06.3
Debby Doesburg 25 3:09.1

50 METER BREASTSTROKE
Fred Shaw 28 36.5
Thomas Thomson 29 37.5
Michael Stefanko 26 37.5
Donald Taylor 25 38.3
200 METER BREASTSTROKE
Fred Shaw 28 2:56.6
Thomas Thomson 29 3:08.3
Glyn Davies 29 3:08.4
50 METER BUTTERFLY
John Shea 25 34.3
100 METER BUTTERFLY
Gary Langendon 28 1:02.4
Ken Krueger 28 1:08.1
John Porter 27 1:08.2
200 METER BUTTERFLY
John Porter 27 2:54.8
200 METER IM
Edwin Duncan 28 2:38.9
Fred Shaw 28 2:41.9
Glyn Davies 29 2:45.3
Dennis McGowan 28 2:45.3
MEN 30-34
100 METER FREESTYLE
Burt Kanner 34 1:01.4
Dave Frank 30 1:02.9
James Shaw 33 1:07.0
200 METER FREESTYLE
Burt Kanner 34 2:20.5
James Shaw 33 2:30.6
John Bushman 32 2:37.6
50 METER BACKSTROKE
James Shaw 33 35.6
Jerry Lloyd 33 36.2
50 METER BREASTSTROKE
Ken Doesborg 30 34.0
Dave Frank 30 35.9
Charles Maunz 34 36.4
200 METER BREASTSTROKE
Charles Maunz 34 3:07.1
50 METER BUTTERFLY
John Friedman 35 35.2
100 METER BUTTERFLY
Burt Kanner 34 1:08.1
200 METER BUTTERFLY
Burt Kanner 34 2:34.3
200 METER IM
Ken Doesburg 30 2:58.6
Mark Palmer 33 3:07.9
Dennis Holst 33 3:32.5
MEN 35-39
100 METER FREESTYLE
D.J. Kevies 35 1:09.9
200 METER FREESTYLE
D.J. Kevies 35 2:43.0
Keith Martin 37 2:46.2
John Friedman 35 2:52.6
50 BREASTSTROKE
Keith Martin 37 41.5
200 METER BREASTSTROKE
Keith Martin 37 3:29.8
50 METER BUTTERFLY
John Friedman 35 35.2
200 METER BUTTERFLY
John Friedman 35 3:35.0
200 METER IM
D.J. Kevies 35 3:14.9
MEN 40-44
100 METER FREESTYLE
Neal Palmer 43 1:07.5
Buddy Belshe 40 1:07.9
200 METER FREESTYLE
Alex Gilbert 41 2:42.0
Rick Roland 40 2:51.0
50 METER BACKSTROKE
Bob Burnside 42 34.2
Stan McConnell 42 36.1
Neal Palmer 43 37.2
200 METER BACKSTROKE
Stan McConnell 42 3:00.0
Buddy Belshe 40 3:02.5
Bob Burnside 42 3:05.8
200 METER IM
Buddy Belshe 40 2:54.4
Stan McConnell 42 2:58.5
Alex Gilbert 42 3:06.5
50 METER BREASTSTROKE
Russell Hawks 43 41.5
Alex Gilbert 41 41.7
200 METER BREASTSTROKE
Russell Hawks 43 3:23.1
Alex Gilbert 44 3:26.0
Herb Nakama 41 3:29.3
50 METER BUTTERFLY
Rick Rowland 40 38.0
Bob Cannon 44 41.5
100 METER BUTTERFLY
Art Welch 41 1:18.3
Alex Gilbert 41 1:19.0
Stan McConnell 42 1:23.3
200 METER BUTTERFLY
Art Welch 41 3:05.8
MEN 45-49
100 METER FREESTYLE
Duane Draves 48 1:08.8
Larry Larrimore 46 1:12.2
Norm Buwick 49 1:15.9
200 METER FREESTYLE
Duane Draves 48 2:33.6
Jim Marius 49 2:47.4
200 METER BACKSTROKE
Duane Draves 48 2:54.1
Jim Marius 49 3:13.5
50 METER BREASTSTROKE
Larry Larrimore 46 42.1
Norm Buwick 49 44.4
200 METER BREASTSTROKE
Jim Marius 49 3:44.0

50 METER BUTTERFLY
Norm Frieze 46 39.1
Cheston Cannon 49 54.0
100 METER BUTTERFLY
Larry Larrimore 46 1:29.4
Duane Draves 48 1:30.6
200 METER BUTTERFLY
Larry Larrimore 46 3:26.4
Jim Marius 49 3:32.5
Norm Frieze 46 3:47.3
200 METER IM
Duane Draves 48 2:54.5
Jim Marius 49 3:18.3
MEN 50-54
100 METER FREESTYLE
George Olden 53 1:14.1
Breckler 54 1:16.4
200 METER FREESTYLE
Briker 54 2:56.2
Jack Bargan 51 3:07.6
George Olden 53 3:17.9
200 METER BACKSTROKE
Briker 54 3:29.0
50-METER BREAST STROKE
Jack Bargan 51 41.7
200 METER BREASTSTROKE
Jack Bargan 53 3:42.7
E.W. Neben 51 3:45.4
50 METER BUTTERFLY
George Dowell 50 41.5
George Olden 53 44.6
100 METER BUTTERFLY
Briker 54 1:30.0
200 METER BUTTERFLY
Jack Bargan 51 3:58.4
200 METER IM
E.W. Neben 53 3:36.8
MEN 55-59
100 METER FREESTYLE
Martin Foster 55 1:09.1
Lyle Felderman 55 1:13.0
John Mc Kenzie 57 1:27.3
200 METER FREESTYLE
Martin Foster 55 2:39.6
John Mc Kenzie 57 3:34.9
50 METER BACKSTROKE
John Mc Kenzie 57 47.4
200 METER BACKSTROKE
John Mc Kenzie 57 4:11.5
MEN 60-64
100 METER FREESTYLE
Reg Richardson 62 1:16.2
Melvin Maxwell 62 1:22.7
200 METER FREESTYLE
Reg Richardson 62 2:56.8
Melvin Maxwell 62 3:27.0
50 METER BREASTSTROKE
Walter Pfeiffer 60 44.9
Rufus Clark 63 46.3
Reg Richardson 62 46.5
200 METER BREASTSTROKE
Walt Pfeiffer 60 3:38.3
Rufus Clark 63 3:44.5
200 METER BUTTERFLY
Walt Pfeiffer 60 3:39.9
200 METER IM
Reg Richardson 62 3:41.9
MEN 65-69
50 METER BACKSTROKE
Frank Walton 65 41.7
200 METER BACKSTROKE
Frank Walton 65 3:46.8
MEN 70 - UP
Gerhard Mauric 71 4:14.0

SWIM-MASTER
THE OFFICIAL PUBLICATION OF THE
AAU MASTERS SWIMMING COMMITTEE
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# MASTERS SWIMMING NOTES

87TH ANNUAL CONVENTION of the Amateur Athletic Union of the U.S., Inc., will be held in Washington, D.C., on October 13-19, at the Shoreham Americana Hotel. Each delegate, committeeman and guest attending the annual convention will pay a registration fee. The delegate's fee is \$35 which includes: cocktail party, banquet, either the Aquatics or non-Aquatics awards luncheon, ladies activities, portfolio, & souvenirs. Others who are national committee members or guests can register for the \$12 fee, or pay \$35 for all functions. The \$12 fee includes: cocktail party, ladies activities, portfolio and souvenirs. At all meetings, only members of the committee are permitted to vote. Association members have the right to attend all meetings and shall have no voice, unless recognized by the committee chairman. The following Aquatic Schedule has been set:

Mon. Oct. 14	9:00 - 12:00	Swim Officials
	2:00 - 4:00	Swim Officials
	9:30	New Delegates
Tue. Oct. 15	9:00 - 12:00	Age Group/JO
	2:00 - 4:00	Senior Swimming
	6:30	Reception
Wed. Oct. 16	Noon	Aquatics Lunch
	2:00 - 5:00	Competitive Swim.
	8:00	Masters Swimming
Thu. Oct. 17	9:00 - 12:00	Competitive Swim.
	2:00 - 5:00	Competitive Swim.
Fri. Oct. 18	9:00 - 12:00	Bd. of Governors
	2:00 - 5:00	Bd. of Governors
Sat. Oct. 19	9:00 - 12:00	Bd. of Governors
	2:00 - 5:00	Bd. of Governors
	7:00	Grand Banquet

The Masters Swimming Committee Meeting will be held in the Cabinet room of the Shoreham. EVERYONE is welcome to attend.....

SPORTSWOMAN ARTICLE: To those persons asking for information on the article in the July-August issue of the Sportswomen concerning the US Masters International Swimming trip please send 75¢ or \$4.50 for a year's subscription to: Marlene Jensen, Jensen-Fane Publications, Inc., P.O. Box 2611, Culver City, CA 90230.....

DICK GUIDO OF GLEN COVE, NY, a Masters Swimmer who returned to competition in 1974, has been appointed Chairman of the Masters Swimming program of the New York Metropolitan AAU. Dick was captain of the Brooklyn College swimming team in the 40's, and later played water polo with the New York A.C. He is planning a Masters Swim Program encompassing

the entire metropolitan area - including the five boroughs of New York City, Nassau and Suffolk Counties on Long Island, and the northern counties that comprise the metropolitan area. He would like to hear from Masters people active in these areas - particularly those who would like to serve as regional commissioners. Dick Guido is planning a series of Masters meets for the winter, and a full program of outdoor meets for the summer of '75. The program will include at least one indoor and one outdoor meet in each of the counties that comprise the metropolitan area. "The first step in our program is to develop an active Commissioner of Masters swimming in each area, who will assume responsibility for getting the program started there", says Guido. "We are looking for only one indoor and one outdoor meet a year as a starter. We are not asking for too much". All those interested either in working with him in organizing an active metropolitan area Masters program - or who want to become part of the Masters program as competitors, should write to Dick Guido at his office -- Concepts Co., 4250 Hempstead Turnpike, Bethpage, NY 11714.....

MASTERS OF RECORDS: One of the most active couples in the Michigan AAU Masters Swim program are Joyce and Bill Burrell, of the Oak Park Village Athletic Club in Lansing. During the 1973-74 indoor season the Burrells set four international, four national and 12 state records. The Burrells worked out twice a day in the last month of the season. In their second workout they trained with the Michigan State team under the supervision of Spartan Coach Dick Fetters. Bill and Dick were rival coaches in Florida during the 1950's. Fetters also was instrumental in getting the Burrells interested in the Masters Swimming program.....



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# SWIM MEET SCHEDULE

OCT 12-13*	Houston Masters Meet - Ham Anderson, 506 Bolivar, Bellaire, TX 77401
OCT 13	Cal Tech Masters "A" - Anne Adams, 17432 Osborne St., Northridge, CA 91324
OCT 13	Leatherstocking Open - Pat Clinton, Alfred Corning Clark Gym, Cooperstown, New York, 13326
OCT 20	Cal Tech Masters "B" at Pasadena - Anne Adams (above)
NOV 2-3	Southeastern Championships - Bobbi Smith, 456 East Dr., Oak Ridge, TN 37830
NOV 3	Masters SC at Palomar College- Betsy Jordan, 5842 Corral Way, La Jolla, CA
NOV 10	North/South Dual Meet at East L.A. City College - Anne Adams (above)
NOV 16-17*	San Marcus, TX - Ronald Austin, 516 Burleson, San Marcus, TX 78727
NOV 23	West Essex YMCA - Joe Twaits, Lakeland Hills YMCA, Mountain Lakes, NJ
DEC 1*	Gold Coast Masters at NPB - Nancy Barnette, 1715 N. "K" St., Lake Worth, FL
DEC 7	Long Beach Masters at Lakewood - Anne Adams (above)
DEC 7-8	Lakeland Hills YMCA, Mountain Lakes, NJ - Joe Twaits (above)
JAN 11	Mid-Winter Inv. - Daniel Davis, 51 Kaye-Vue Dr., Hamden, CT 06514
JAN 11	Hackensack YMCA, Hackensack, NJ - Joe Twaits (above)
FEB 1	West Essex YMCA, Livingston, NJ - Joe Twaits (above)
FEB 16-17*	Del Mar College - Charles B. Teas, 413 Claremore, Corpus Christi, TX 78412
FEB 22	Hackensack H.S., Hackensack, NJ - Joe Twaits (above)
MAR 15	Cranford Comm. Center Pool, Cranford, NJ - Joe Twaits (above)
MAR 22-23	Alamo Heights, TX - Joanita Reed, Rt #2, Box 208KK, San Antonio, TX 78218
APR 5	Lakeland Hills YMCA, Mountain Lakes, NJ - Joe Twaits (above)
APR 20	Cranford Comm. Center Pool - Relay Carnival - Joe Twaits (above)
MAY 2-3	Princeton University East Coast Masters Inv. - Joe Twaits (above)

\* Dates Tentative

### AMERICANS REAFFIRM WORLD SUPREMACY

by June Krauser

I had the honor of chaperoning the USA Team that competed in a dual meet against the German Democratic Republic in Concord, CA on Aug. 31 and Sept. 1. After the USA's narrow victory in last year's World Championships, it was time to reaffirm - the notion of world supremacy. That notion was reaffirmed with

the USA winning 198 to 145! The USA Team was selected from the National Senior Championships also held at Concord the previous week. The USA Men won all 15 events with the USA Women winning only 4 of 14 events. 7 World Records were broken and 2 tied. 16 American Records were set and one tied. Every winning time at the meet in Leipzig (1971) was beaten. The kids were great; the coaches were super; and everyone was relaxed & happy.

