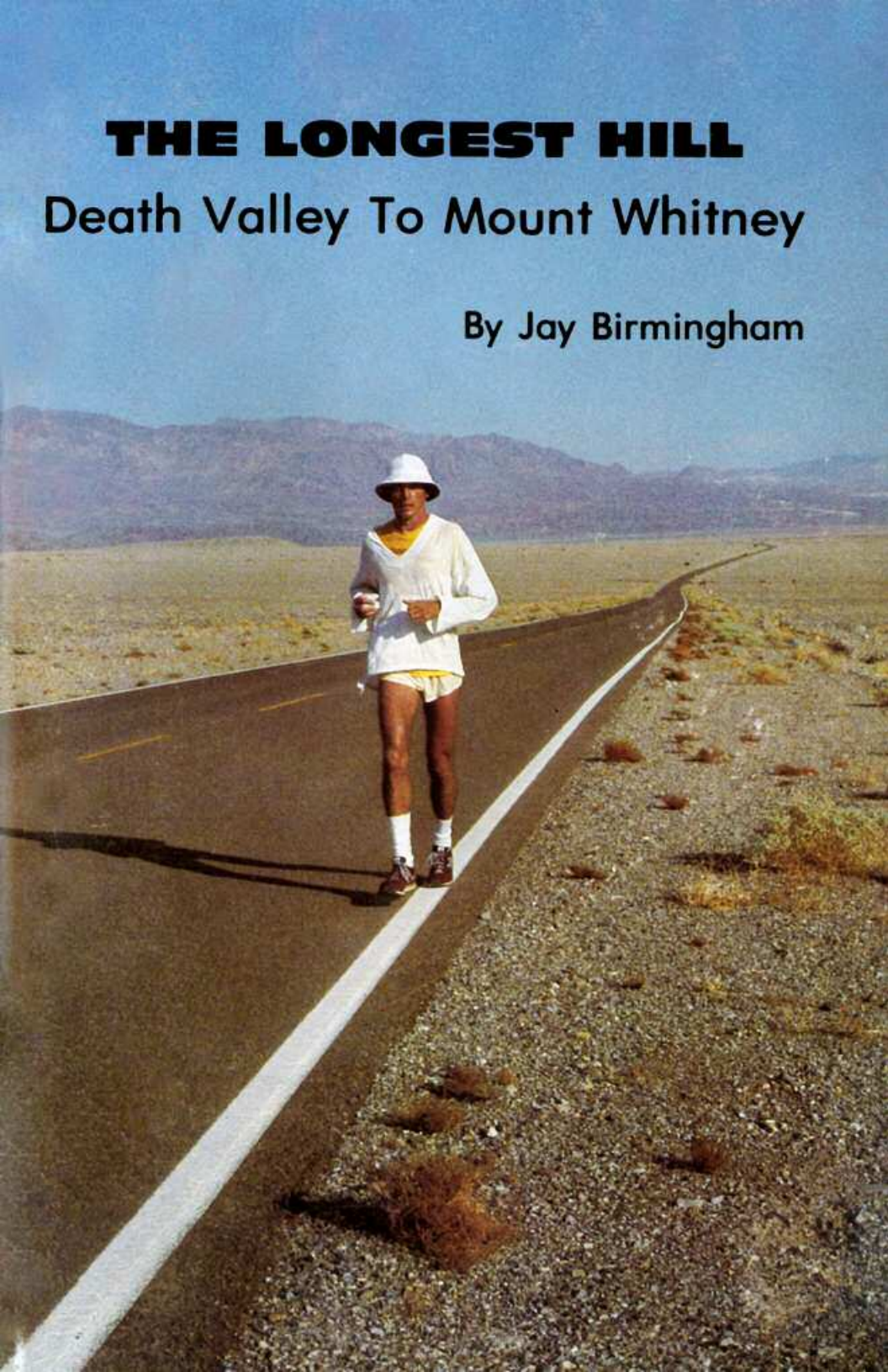
THE LONGEST HILL

Death Valley To Mount Whitney

By Jay Birmingham



" . . . it's four o'clock in Lone Pine and our current temperature is 103," droned the voice on the radio. For 57 hours I had experienced the most grueling running of my life: From the depths of Death Valley, 122 miles ago, across deserts and salt flats, and up mountains totaling 9,200 feet of climb.

I was at the base of Mt. Whitney in California. Twenty-four more miles to go to its summit; 10,766 feet of climb. A record seemed possible but I had underestimated the torture.

I began to jog again, north through Lone Pine, then left up Whitney Portal Road. My weary legs immediately felt the grade and I wondered if I would ever reach the top of the longest hill

PREFACE

This manuscript has been a far more difficult thing to complete than any run on which I have embarked.

My writing, typing and editing skills fall somewhere around those of a one-armed paper hanger.

Lessons are learned from all facets of our lives. If we can apply something we have learned to another sphere of activity, time is saved, mistakes avoided, and results come faster.

Like trying to apply the patience learned on multiple-day runs to everyday life, there are limitations.

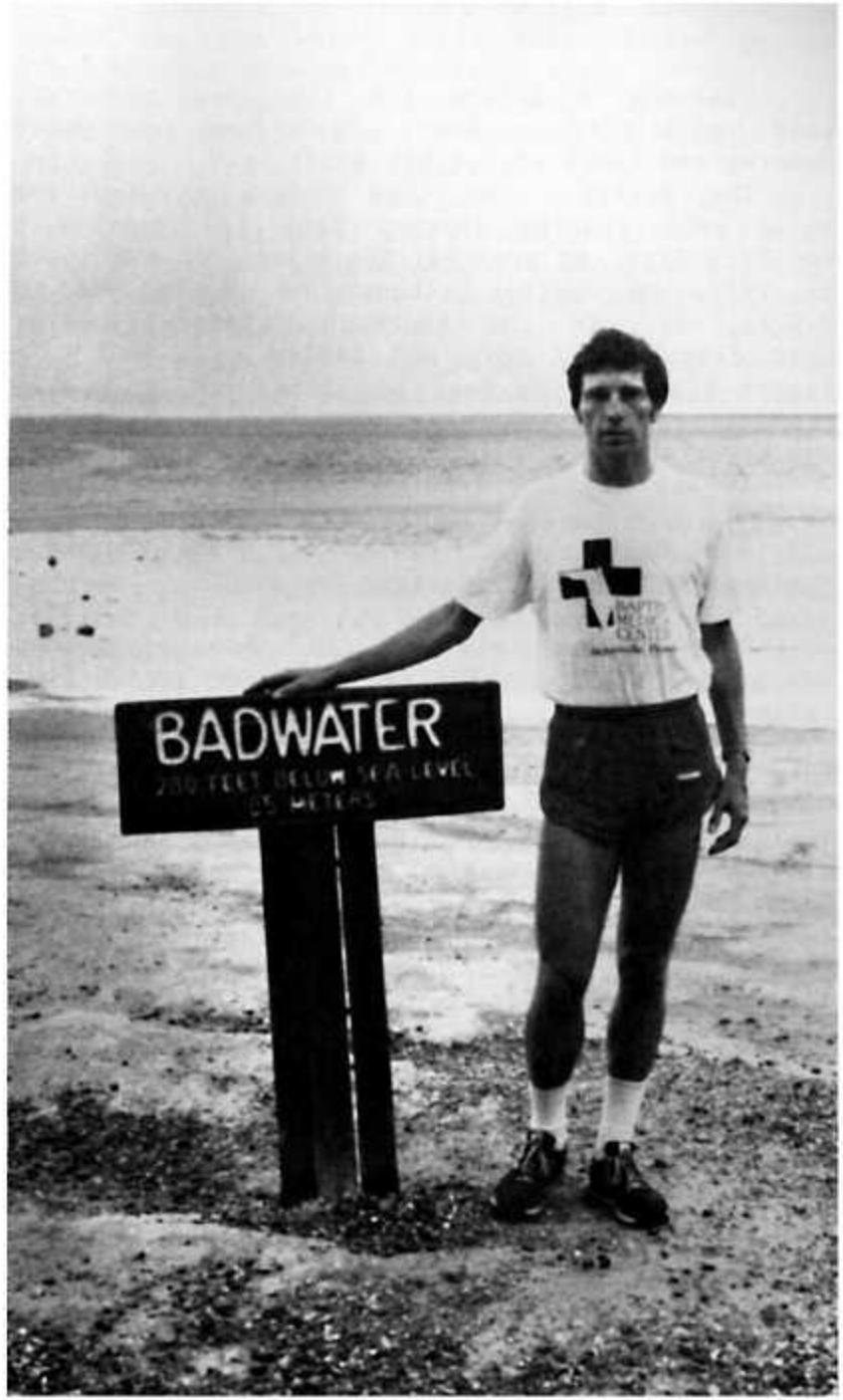
Nevertheless, I hope my persistence in completing this work yields more than just having the project completed.

There are thoughts, ideas, and experiences within this book that apply to your life, not just my run across a desert and up a mountain. I hope you discover something valuable.

Jay Birmingham

Jacksonville, Florida

August, 1983



The Start

ANOTHER MISSION

"There's a fellow I'd like you to meet," said Jon Griffin, my host. "He's done some desert running and knows a good bit about it."

The desert. Two days before my departure on a solo running journey from Los Angeles to New York City, my greatest fears were of the desert. In 1977, on another attempt to run across the U.S.A., it was the southern California desert that crippled my body and killed my dream. The desert blistered my feet and lips, baked my skin, aggravated my swollen tendons, and stopped my run after one week and 238 miles.

It was May 17, 1980. I was back for another try.

Jon Griffin and his wife, Judy, owned a Phidippides Running Center in Marina del Rey.

"Gary Morris will be in this afternoon," Jon said. "He's getting ready to run across Death Valley."

I was impressed. Though I had made myself into a fair hot weather runner, I could not imagine running across deserts. I had read of an eccentric English adventurer named Ken Crutchlow who, along with American Pax Beale, had run relay style in Death Valley. I remembered a TV show about a New Zealander who ran the length of the Valley, turned around, and ran back to where he began. I recalled also that journey runner Bill Emmerton had run Death Valley, sponsored by someone promoting wool sox!

I wasn't even sure where Death Valley was, simply that it wasn't on my route, for which I was grateful.

So this Morris character was going to Death Valley? I was curious to meet him.

Gary came into Jon's store and we were introduced. Jon told him that I'd be starting my 3,000 mile journey on Monday.

"What are you going to wear in the desert?" Gary asked. He was about my size, 5'10", 140 pounds, but far more assured, socially aggressive.

I unzipped my bright yellow backpack and fished out the white dress shirt I had packed. I had thought of everything this time.

"You'll roast in this thing," Gary declared. "This is acrylic--won't breathe, no hood, it'll chafe you. You need a desert shirt!"

Gary said he'd bring one back to the store later. He returned that evening with a white, baggy cotton beach garment with a hood and a pouch.

"Try this," Gary commanded. "It'll be a lot better than yours."

I ran an easy eight miles with Gary and Jon on the eve of my departure for the opposite coast and learned of Gary's plan to assault the Death Valley to Mt. Whitney record.

On May 19, I left Los Angeles City Hall and ran east. I survived a heat wave from Oklahoma to Indiana and lost only one day to a severe shin problem which hampered my progress for two weeks. I completed the run, 2962 miles, on the steps of New York City Hall on July 30, a solo record.

I wore Gary's desert shirt nearly every day of the journey until I reached Indianapolis. Wind got under it, sun bounced off it; it was light and protective. I was grateful for my good fortune.

I returned to Florida and wrote to ask Gary about his run. In a letter dated August 14, 1980, Gary replied:

". . . I am certain you must have gained new and different feelings about life and America following such an undertaking. You are a rare and lucky man, it seems to me.

"Consider the shirt a gift--if it helped in some small way, I shall feel paid.

"I attempted Death Valley/Mt. Whitney run on July 25th, 6 AM. Made it only 57 miles before I was persuaded by crew to stop. That place is tougher than I am--next year I try again, wiser and more humble.

". . . ground temp topped out at 188°, winds blew to 30 miles per hour . . . many problems with water . . . fruit fermented and spoiled. . . host of other problems. Runner magazine is doing an article . . ."

The RUNNER: November 1980

Gary Morris, *a 41-year-old Marina del Rey, California, real estate developer, has for some time aspired to "challenge nature in some bizarre way." The challenge became a 146-mile run from Death Valley to Mt. Whitney, in an attempt to break Al Arnold's 1977 record of 84 hours.*

In accordance with "a Gentleman's Rule" assuring that the run take place under inhospitable desert conditions, Morris and his support crew began to trek early on the morning of July 25. Thirty hours and 56.9 miles later, the odyssey ended due to temperatures reaching 120°. Morris is now planning a 1981 assault.

I recalled an article about Al Arnold and found it in an early issue of MARATHONER, published by Runner's World. Arnold, an adventure runner, tried and failed twice before running from Badwater to the Whitney summit in 84 hours.

The article was rich with photos of the brazen Arnold, running (obviously for the camera at times) in running shoes and white underwear. The more I read, the more the challenge appealed to me.

I had successfully dealt with extreme heat. I had always run better than expected at altitude. What factors were involved in a run from below sea level to a mountain summit over 14,000 feet in a few days' time?

DEATH VALLEY

Many Americans know Death Valley from the long-running television western, "Death Valley Days". An area of deserts and naked mountains, Death Valley has been important for its mineral deposits, mostly borax, and historically because of difficult crossings by pioneers and prospectors.

Located 100 miles west of Las Vegas, Death Valley is entirely in Inyo County, California. Most of the area is now a national monument that stretches 120 miles by 50 miles.

Technically, it is not a valley, the lowest points formed not by water erosion but from fallen crust when nearby mountains uplifted. Aridity and high temperatures have made the area famous but its unique feature is its elevation: its lowest point is 282 feet below sea level, the lowest in the Western Hemisphere.

The low point is Badwater, a depression in the desert floor in an area entirely below sea level. The Valley is flanked by the Panamint mountains on the west and three ranges on the east, the Grapevine, the Funeral, and the Black. Dante's View, less than two miles from Badwater, is 5,475 feet.

Running past the dunes.

MOUNT WHITNEY

Until the annexation of Alaska, Mt. Whitney was the highest point in the United States. Different sources list its elevation at 14,494 to 14,497 feet. A plaque affixed to a rock on the summit claims 14,496 feet.

Mt. Whitney is on the eastern edge of the Sierra Nevada mountians and its western side lies in Sequoia National Park. Its eastern slopes lie in the Inyo National Forest. Lone Pine, California, is the nearest access point. A paved road climbs through the Alabama Hills to Whitney Portal where the John Muir Trail continues through giant trees past mountain lakes to join the Pacific Crest Trail three miles from the summit.

Mt. Whitney, highest point in the contiguous United States, is less than 80 air miles from the lowest point in the Western Hemisphere, a spot near Badwater in Death Valley.

From a postcard by Desert Graphix
Trona, California

AL ARNOLD'S RECORD

In August, 1977, 50-year-old Al Arnold of Walnut Creek, California, ran and walked the 146 miles from Badwater in Death Valley to the summit of Mt. Whitney. His time of 84 hours was a new standard for the route which was usually covered by hikers in a week. His was the first successful solo run, all previous runs having been relays.

Arnold was a big man at 6'5" and 200 pounds, a marathon runner and the director of an athletic club. Having heard of Crutchlow and Beale's run in 1973, he was inspired to have a go at the distance alone. He prepared for the heat by stationary cycling in a sauna, at 200°. Arnold made his first attempt in August, 1974.

After 22 miles in heat reported at 130°, Arnold was dehydrated and sick, so abandoned the run.

August, 1975: Arnold encountered mild 105° temperatures and overcast skies, ideal for an assault. He was just off the highway, posing for pictures, when he broke through the salt crust and hyperextended a knee. Further running was impossible.

The frustrated adventurer returned home, embarassed. He vowed to properly prepare for another attempt.

In August, 1977, Al Arnold went back, accompanied by photographer Eric Rahkonen of the Contra Costa Times who served as Arnold's handler. Glen Phillips, who met Arnold the night before his run began, went along for the first day, then joined Arnold for the final trek up Mt. Whitney. Arnold claimed that he took only three breaks during the trek, totaling one hour. The final eleven-mile ascent of Whitney took about 12 hours. He headed down the trail alone to discover that his pack and gear, left below the summit behind some rocks, had been stolen.

Night descended on the exhausted athlete who spent the night shivering in a plastic bag which he got from a hiker. Next morning, he inched his way down the slope. His ordeal ended almost a day after his record-setting effort.

Dr. David Costill, the country's foremost exercise physiologist and director of the Human Performance Laboratory at Ball State University in Muncie, Indiana, evaluated Arnold's performance.

"From a physiological point of view," he wrote, "the stresses of heat, dehydration, altitude and depletion of body energy stores might easily have doomed the run to failure. Combined, they make Al's accomplishment a superhuman feat."

Costill discussed heat acclimatization and speculated on the volume of fluid Arnold might have lost (17 pounds). Costill contrasted the oxygen uptake values at sea level with those at Whitney Portal (8,400 feet), where a runner could expect a 10% loss of efficiency. At the summit, a 30% loss of efficiency would be experienced.

Total energy requirements for 84 hours was discussed. Costill stressed the importance of both fat metabolism and the reintroduction of carbohydrate for proper nervous system functioning.

Tammy, Bob and Scott at Stovepipe Wells.

In the spring of 1981, I worked to salvage my failing running gear business. I also served as fitness consultant for Jacksonville's largest hospital, Baptist Medical Center.

Baptist organized a running club for its 5,000 employees and hosted a series of running clinics, open to the public. I coordinated the seminars, lined up and introduced speakers, and led casual fun runs.

In May, I wrote to Gary Morris to learn more about the Badwater-Whitney route. I talked with my wife, Anita, about the possibility of combining a vacation with the pursuit of the record. We'd need sponsorship, something I'd had little luck with on the transcontinental run.

On that one, all our funds were exhausted by the time I reached St. Louis. Anita was back in Jacksonville with creditors knocking and the rent to pay; I was on the road with an empty wallet. She borrowed $2,500 from banks and friends to see the project through.

I talked with Greg Larson, a sportswriter with the Florida Times-Union. He had joined me over the final 100 miles of the LA-NYC run (in a car).

Thursday, June 4, 1981 Florida Times-Union

Birmingham sets sights on another endurance record

By Greg Larson
Times-Union Sports Writer

Jacksonville runner Jay Birmingham, who set a transcontinental run record last summer, plans to assault an endurance record of another nature this year.

Birmingham said yesterday he is seeking sponsorship for a run from Death Valley, Calif., to Mt. Whitney, Calif., the lowest and highest geographical points in the continental United States.

. . . Birmingham plans to make his run in mid-August.

Financial benefits are one thing Birmingham didn't gain from the L.A.-New York run.

"I'm still trying to pay off all the bills from last summer," he said. ". . . I'm one of those serious amateur sportsmen. There are other sports . . . where there isn't much to gain other than personal satisfaction."

The article drew an immediate response. Joanelle Mulrain, director of public relations at Baptist, convinced her bosses that since I was already associated with the hospital, their sponsorship would be a natural. She excitedly related the agreement to me. The run was on.

Unfortunately, I was in bad shape. My track coaching duties at Episcopal High School had diverted much time and energy from my own training. My weekly mileage hovered at a whopping 35 per week.

The day Larson's article hit the street, I began training in earnest. I needed ultramarathon endurance, altitude adaptation, and heat acclimatization.

In quick succession, two one-week job opportunities became firm offers: I would work at runners' camps in North Carolina in mid-July and at Pikes Peak the first week of August. I could race the Pikes Peak ascent on August 8 and begin the Death Valley run on August 14, under a full moon.

Just as things began to look incredibly bright, three burglaries in two weeks brought a sudden end to my running shoe business. I had signed a contract to teach biology at Episcopal High in the fall, but there would be no checks until September. Another summer would be spent on borrowed money.

New information that came my way about Death Valley was not encouraging, either.

Gary Morris wrote that the stopper to his run was an inability to keep fluids down. He could not eat or drink without vomiting. He also warned of intense heat buildup on all exposed surfaces.

I learned that Arnold had failed in another run at the Valley. He left a couple hours before Gary had, same day, and was passed en route. Arnold got as far as Townes Pass, 60 miles, before quitting.

Arnold was attempting an out-and-back run. Remembering the wasted eleven miles of descent at Mt. Whitney, Arnold was aiming to round-trip it, from Badwater to Whitney, then back to Badwater. Nausea stopped Arnold's attempt.

Dr. Michael Lusko of Baptist was our speaker on heat stress. An emergency room specialist, he wrote to the University of Florida for research articles. He handed me a large packet of studies with a warning:

"The conclusion to be drawn from the literature," he said, "is that you can't acclimatize to temperatures above body temperature. Fluid loss will always exceed your ability to absorb more."

Thanks, Dr. Lusko.

I have run since 1958 and have always taken an interest in the scientific aspects of the sport. I am trained in biology and read everything available on running physiology.

MUSCLES, OXYGEN AND ENERGY

Let's examine some physiological factors that are involved when a person subjects himself to physically demanding activity.

Put me in a swimming pool and come back in five minutes. You will find an exhausted athlete. The specificity of training is a well-documented truth.

My resting heartrate in the morning is often in the low 40's. At eight-minute-mile pace, it drums along between 80 and 100. Running hard up hills or sprinting will drive it up to 180 beats per minute or more.

Running is my specific activity. Tennis, basketball, swimming and most other sports call on untrained muscles which do not have the same efficiency. The capillaries in those little-used muscles are less numerous. The metabolic pathways in the muscle cells are not geared to high levels of energy production or waste removal. In the water, my arm and shoulder muscles are quickly choked with lactic acid, carbon dioxide and other metabolic wastes. The same heart is beating furiously. The same oxygen-absorbing lungs are sucking air. But there is inefficiency at the point of delivery.

The general rule is this: If you want to run well in the hills, train on hills. Et cetera.

Can substitutions be made? Of course, with reservations. There is value in sand running when no mountains are nearby on which to train. But the demands of sand running may make you into a very good sand runner only. To the extent that those movements are used to ascend a mountain trail, then sand running will help.

Oxygen **utilization** at the cellular level is the key. People stagger about the summits

of Pikes Peak and Mt. Whitney, starving for oxygen. The problem is twofold. Not only is there less oxygen in the air at 14,000 feet, but the blood is not absorbing oxygen in the lungs and/or oxygen in the blood is not transferring efficiently to the cells that need it.

Physiologists have learned that lung capacity and ventilation (the volume of air moved per minute) are far less important than the movement of oxygen and wastes across cell membranes. This efficiency comes through specific training.

Enzymes for the metabolism of glucose (blood sugar), fats and proteins are produced as needed. Stop training for six weeks and the body reverts to its out-of-shape, enzyme-poor base level. It would be more inefficient, however, for the body to maintain a surplus of unused enzymes and stored energy. So surpluses are broken down, converted, metabolized.

Aerobic metabolism (utilizing glucose in the presence of oxygen) is up to 18 times more efficient than anaerobic metabolism. Factors such as high altitude, extreme heat, food in the digestive tract, and rapid movements all increase oxygen needs and hence, plunge the body into oxygen debt. This raises the energy cost for a given unit of exercise.

In 1978, when Don McMahill conducted the runners camp at Catamount Ranch in Colorado, he asked me, "How can you come here from Florida and run so well at altitude?" At the time I thought there might be some residual effect from previous visits to high elevations. I also believed that I had become a better pacer, able to anticipate oxygen debt and slow my pace to avoid it.

Physiologists doubt any residual effects for sea level athletes. Red blood cells are replaced every four months, hemoglobin counts drop quickly after one leaves high country, and the system soon transports oxygen only at the necessary optimum level.

Listening carefully to signs of impending trouble while running up a steep grade at 10,000 feet is a skill. I have learned to ease up (and speed up) at the correct time to improve my total performance.

There is another factor, however. I believe that:

High heat + High humidity = Altitude

The critical factor, as mentioned before, is oxygen utilization. It is not the amount of oxygen in the air, or even in the bloodstream, but the amount of oxygen that arrives at the working muscle and is absorbed.

Before pursuing this idea further, let's examine the priority system for shunting blood supplies to various systems in the human organism.

Arteries in the body are carriers of blood away from the heart to all other organs. The walls of arteries include layers of muscle which are under control of primitive portions of the brain. These muscles can contract to restrict blood flow to certain areas. The muscles are involuntary; beyond our conscious control.

Over the ages, a system of life-preserving priorities has evolved to supply blood to critical organs at appropriate times. Let's consider voluntary muscles, digestive organs, and skin.

Imagine a primitive man, eating a meal. Suddenly, a growling noise is heard in the nearby brush! Alone, without weapons, the man takes flight. He runs hard for many minutes, out of range of the threat. Then he stops to vomit.

The blood supply necessary to digest the food was diverted to the voluntary muscles to make running efficient to the highest degree. The lost food can be obtained at another time. Another life is hard to come by.

Now, picture a runner jogging across a desert. It is very hot. Voluntary muscles command the blood supply for a time but as the internal temperature rises beyond 100°, some of the blood is shunted to the skin to aid heat loss. Heat is lost to the environment through radiation, transfered to perspiration, which loses more heat when it evaporates.

When humidity is high, evaporation is slow. The body's heat-regulating mechanism is not a casual affair. More and more blood will be diverted from the working muscles in an attempt to keep the body temperature at safe levels. High temperature can kill as certainly as a tiger.

Their blood supply diminished, the muscles work less efficiently and eventually clog with lactic acid and other waste. Exercise stops. Now the body can dissipate the accumulated heat.

Back to our formula:

High heat + High humidity = Altitude

I believe that although the amount of oxygen in my blood in Jacksonville is measurably higher than it is when I am running on Pikes Peak, the heat and humidity combine to divert large amounts of blood from my running muscles. The effect is the same as at altitude: Little oxygen is available to sustain the exercise.

Another factor enters the hot weather picture. It is fluid replacement. Dehydration is as much an exercise stopper as oxygen debt. The principal component of every cell, water must be replaced continually. Water loss of only 7% is considered

hazardous by sports physicians. For a 142-pound runner, that's ten pounds. Weigh yourself after two hours' running in the heat. (Be sure to drink often during the run.) The amount of weight you'll lose may surprise you. Many runners lose 10 pounds or more in a marathon. This is probably the biggest factor, other than inadequate training, in the 'hitting-the-wall' phenomenon.

Dr. David Costill at Ball State University has pioneered running research for nearly 20 years. He has identified a number of factors involved in fluid balance. Because maintenance of body temperature and fluid replacement are absolutely essential, I want to list some factors and summarize what is known.

Sweating rate: The amount of perspiration that can be produced per unit of time under maximal heat stress. This rate can be improved with training. However, for an individual at any given time, there is a maximal rate than cannot be exceeded, regardless of increased internal or external temperature. Having abundant tissue fluid available for producing sweat is essential.

Fluid absorption: The rate at which water or other fluids leave the stomach (and small intestine). This is difficult to measure. Costill and others have placed runners on treadmills, poured fluids in, then aspirated and measured the liquid left in the stomach to determine net absorption. Since much fluid may be absorbed in the small intestine, this is a difficult factor to quantify. High salt and high sugar concentrations retard absorption. Caffeine speeds absorption.

Additional factors in the fluid absorption puzzle are temperature of the fluids (colder is better), volume of fluid ingested (large amounts are absorbed faster), and frequency of 'feedings'.

Kidney and bowel fluid loss: Fluids unavailable for perspiration or rehydration of the tissues. This is hard to quantify, too. Generally, the kidneys concentrate urine under conditions of heat stress, absorbing more water from the collecting tubules before sending urine to the bladder. Caffeine, alcohol and many other chemicals are diuretics and cause more water to depart via the kidneys than usual.

The large intestine is the principal water-absorbing organ in the body. An attack of diarrhea can therefore be hazardous.

These were some of the factors I considered as I prepared for the run. There were psychological considerations, too, but the physiology of the task preyed on my fears.

I had to prepare for 146 miles of running with the complications of heat and altitude. Physical preparedness leads to psychological toughness. No effort of will would suffice on this run.

I dreamed of Hades and prepared to run there.

Townes Pass

I wrote, at Gary Morris' suggestion, to the Lone Pine Chamber of Commerce, the Forest Service at Lone Pine, and to the park office at Death Valley National Monument. I quickly recieved valuable information.

The Chamber, though discounting any authority as "keeper of the record", put me in touch with area media and sent lists of restaurants and motels in the entire region. Included in the material was a profile of the 91 miles from Stovepipe Wells to Whitney Portal and a map of the region.

The U.S. Forest Service controlled access to the trail and camping areas in the Inyo National Forest through which I'd pass over the final eleven miles of the journey. I applied for a trail permit and examined the map of the trails on Mt. Whitney.

I wrote a letter to the Park Service at Death Valley, explaining my record chase and assuring them that I knew what I was doing (?)! I learned years ago that contacting authorities in advance pays off for journey running. By presenting oneself for advice and direction, many hassles are eliminated. Instead of antagonists, they become fans.

Traffic in Death Valley in August would be no problem, they assured me. I was advised of water and food locations in the Valley, advised to acclimate for a few days prior to my run, and sent an array of maps and brochures.

Poring over the pile of data I had accumulated, I realized that the run was no simple run across a desert then up a mountain.

The route began at Badwater, -282 feet, and remained below sea level for over 40 miles. The terrain was gently rolling to flat. Eighteen miles from Badwater was Furnace Creek, a resort community in winter and home for area borax miners

and utility workers. Twenty-five miles later was Stovepipe Wells, elevation 5 feet.

The next miles were a surprise. The Panamint Mountains start at Stovepipe Wells and rise 17 miles without a break to Townes Pass, el. 4,956 feet.

Without a flattening, the road turns down for 13 miles to the Panamint Valley. The dry Panamint Lake's elevation is 1,500 feet.

The road veers upward again for 18 miles, reaching 5,234 feet at Darwin Junction. The next 30 miles are gradually downhill into the Owens Valley which bottoms out beside Owens Lake (dry) about 3,600 feet. A gradual rise leads into Lone Pine.

Lone Pine, at 3,728 feet is the gateway to Mt. Whitney. Thirteen miles of steep climb lead to Whitney Portal (el.8,360 ft.). The remainder of the route is over the John Muir and Sierra Crest trails, 6,136 feet of climb in 11 miles.

A little work with pencil and calculator put the run in numerical form. The grades to be surmounted ranged from 19.9% climb to 18.9% descent. Total climb for the run would be 19,883 feet.

A sheet of average temperatures by month sent by the DV park ranger let me know that the average high temperature in August was a wilting 113.5°; the low averaged 85.5°.

TRAINING

On my run across America, I averaged 41 miles per day. Through Ohio and Pennsylvania, I covered over 50 miles per day in order to get back on record pace.

Preparing for the aborted 1977 trans-USA run, I had logged eight consecutive 200-mile weeks while working full time for a construction firm. In 1980, during the two months prior to departure for Los Angeles, I ran a modest 140 per week. I learned that bulk mileage (assuming one has all day to run it) was possible without extraordinary training. The success factors are proper pacing and listening for signs of physical difficulty.

So, the 146 miles from Death Valley to Mt. Whitney didn't intimidate me. I felt that if I could secure a van and sleep at roadside, I could sleep short stretches and aim for a time of 60 hours.

Heat did concern me. I had no sauna to train in on an exercise bike. I had trained for hot weather races by overdressing on a warm spring day--but how does one simulate Death Valley?

Committed to the run, I began serious training the first week of June.

Three workouts were special: The dunes, the bridges, and Gulf Life Tower.

The dunes course is approximately 5½ miles, encircling an inland sand area near a giant shopping center in Jacksonville. When I moved to the area in 1975, I made an occasional dash through the sand for five minutes, then staggered out, exhausted. But in 1978, to strengthen weak achilles tendons, I carved a route over the powdery sand and dirt roads, including every dune, some of them almost unrunnable. Nevertheless, the course is beautiful, winding through scrub oak, around marshes and ponds. It is a hard, clean, quiet place to train.

The bridges are Jacksonville's best hills. Two giant bridges are reserved for midnight workouts and special races. Two smaller spans in downtown were my training tools. A loop around the Acosta and Main St. bridges covers 1.75 miles and includes sharp ascents and descents of 330 and 440 yards. A bridge workout usually covers four laps, seven miles.

The Gulf Life Tower is a 30-story office building. One cold, rainy February morning in 1978, I drove downtown, skipping my morning run. I must have had Colorado on my mind. I looked up through the fog and proclaimed, "There's my mountain!"

I eluded the building security guards, found the stairwell, and headed up. I was jelly-legged by the tenth floor. But I had discovered a valuable resistance, physical and mental. I went back each week. My times dropped from six minutes to 4:30; the number of times I could run to the top increased to five. I learned to catch the elevator down to shorten my recovery time.

I ran 300 miles in June. Sunday was invariably my 21.5 mile Lydiard course, along the river bluff to catch all the hilly streets. Tuesday was dunes day, Thursday I ran the Gulf Life Tower, and Saturday the bridges. The rest was recovery running.

I rounded into shape quickly. Despite a poor night's sleep on the floor of an apartment, I ran 59:55 for ten miles on Daytona Beach on July 4.

A rare heat wave sat over Jacksonville during July, a good omen for me, I believed. Ten days of the first 18 were over 100°, a record.

Running friend Randy Barnett talked me into a trip to the Grandfather Mountain marathon in Boone, North Carolina, on July 10. I had run there in 1971, prepared with 35 mile per week training, and run 3:56.

Another friend, John Cole, aware of Grandfather's reputation as a slow course, bet us that we couldn't break 3:10. The wager was a dollar a minute: A 2:55 would win us $15; a 3:20 and we'd owe John ten bucks.

Still a bit short on training for a marathon, I ran a careful race. I caught Randy at 24 miles on my way to 3:04:17. I was pleased with my splits of 1:31 and 1:33 and the way I handled the hills.

I felt good enough that evening to jog four miles on hilly roads near Randy's cottage.

Back to the Florida heat for another week, I "crash trained" for fatigue and heat. From July 13 to July 18, I ran five miles in the morning, the dunes or the bridges between noon and two o'clock, and another five miles in the evening.

The dunes runs were grim. There is no water on the course: For fifty minutes or more I hot-footed it through the sand, visions of a hell-like Death Valley burning in my scorched brain.

The bridge runs were easy. I drank at the end of every loop, wet my head, and jogged past the traffic stopped on the bridges, halted by lunchtime congestion. People in sunglasses, in air conditioned cars, gaped at me as I dripped past. I laughed to myself, imagining their dread of leaving their refrigerated cars, offices and homes whenever they had to be outdoors!

I drove to Blue Ridge Assembly on July 19 to serve as program director for Don McMahill's newest running camp. The founder of the Camp Crockett and Catamount Ranch programs in Colorado, Don lacked only high altitude in the North Carolina mountains near Asheville.

Attending camp was my family, Randy, seven other Florida runners, and our guest lecturer, Dick Beardsley from Minnesota.

I had met Dick at the Jacksonville River Run in the spring. Shortly after he agreed to help us at Blue Ridge, he ran a sparkling sub-2:10 marathon in Duluth. He had been besieged since and was glad to escape to the tranquility of the Carolina mountains.

Running trails in the morning and roads in the afternoon, I logged 99 miles that week. Thursday I bashed out a record ascent of High Windy, 28:52 for three miles of climbing. Friday included a hilly 20 mile run on the roads. Saturday morning, I hammered 5½ miles on roads in 33:05. I was feeling fit.

We own a 1976 Toyota Corolla and a 1965 Dodge Coronet. The Toyota is, of course, the more reliable car. The Dodge, however, has traveling room--room for camping gear and three teenagers, so it was my choice for the trip west despite its deteriorating condition. This Death Valley business was going to require a lot of faith, so I put some in the old Dodge. Family and friends were incredulous.

We piled into the Dodge--Anita, Bob, Scott, Tammy and I--and headed to Colorado via Ohio.

Fearing loss of my heat acclimatization, I was happy to return to the heavy humidity of the steamy Ohio summer.

We visited family and friends near Springfield and I revisited some old running routes. After three days, we headed west again.

One day's drive took us to St. Louis. We all ran an enjoyable ten miles around an all-weather track north of town. Then Anita and I went to a drive-in theatre to see The Last Flight of Noah's Ark, a Disney movie I had seen on my trans-USA run.

A song in the film, "The Other Half of Me is You" described the relationship we would have at Death Valley. My success would depend entirely on her support. This record chase was a team effort.

Morning and night runs sandwiched the drive to Salina, Kansas. We camped out that night and ran at dawn before pulling stakes and heading for Evergreen, Colorado. A short jog before supper reminded us of the 6,000 feet elevation difference between there and home.

Next morning we were transported up a mountain highway for the Evergreen Town Race. Tammy and Scott raced the 5 Km distance while Bob, Anita and I entered the 10 Km. Tammy placed fourth overall and Bob set a hard-to-beat downhill personal best. Fearing sore quads, I babied my way through a 36:52. That afternoon, we drove to Catamount Ranch, in the shadow of Pikes Peak at 9,600 feet.

Now I planned to do some serious acclimating. I started Sunday with a tough 5-mile race at Green Mountain Falls and added nine more miles later. Monday I ran 12 miles of mountain trails. Tuesday I headed to the Peak. From the base at the cog railroad station, I ran to timberline and back down, a 20-mile roundtrip.

Wednesday, a traditional workout: From the summit, down to timberline, and back up to 14,110 feet. The final three miles reduce most competitors in the race to a slow jog or walking. My best time for the ascent had been 48 minutes from timberline. On this day, I ran 42 minutes.

My first visit to Pikes Peak, 1968, I was treated to a valuable lesson. Arne Richards, a Kansas State University librarian, had come to run the Peak. A voluminous letter-writer, Arne was the Midwest's running source, keeping athletes from Ohio to Colorado abreast of news long before the national running magazines.

Arne was a journeyman runner. Barely sub-3:00 for the marathon, no one expected frail Arne to do much. Ten days before the race, he arrived, caught a ride to the summit, then ran down to see the entire trail. His quads were so sore, he could barely walk for a week!

Lou Fritz of Verdon, Nebraska, and I met Arne every afternoon at the Manitou Springs smorgasbord. Three days before the race, Arne managed a six-mile run up Mt. Manitou and back.

Race day arrived. We clambored up the trail, 80 hardy mountaineers.

Imagine our shock when we saw Arne descending while we were still well below the summit. He recorded one of the fastest ascents of the Peak, was fourth man up, and placed sixth overall!

We all wanted to know Arne's secret.

"Never get in trouble," he explained. During the week of convalescence, the studious Arne had figured that he must avoid oxygen debt at all costs. I should have had more respect for him when he challenged me, and won a contest, to see who could name more Ohio colleges.

"Run until you start to get winded, walk 20 strides, jog 20 strides, then keep going."

His sound advice was simple but went unlearned until this year.

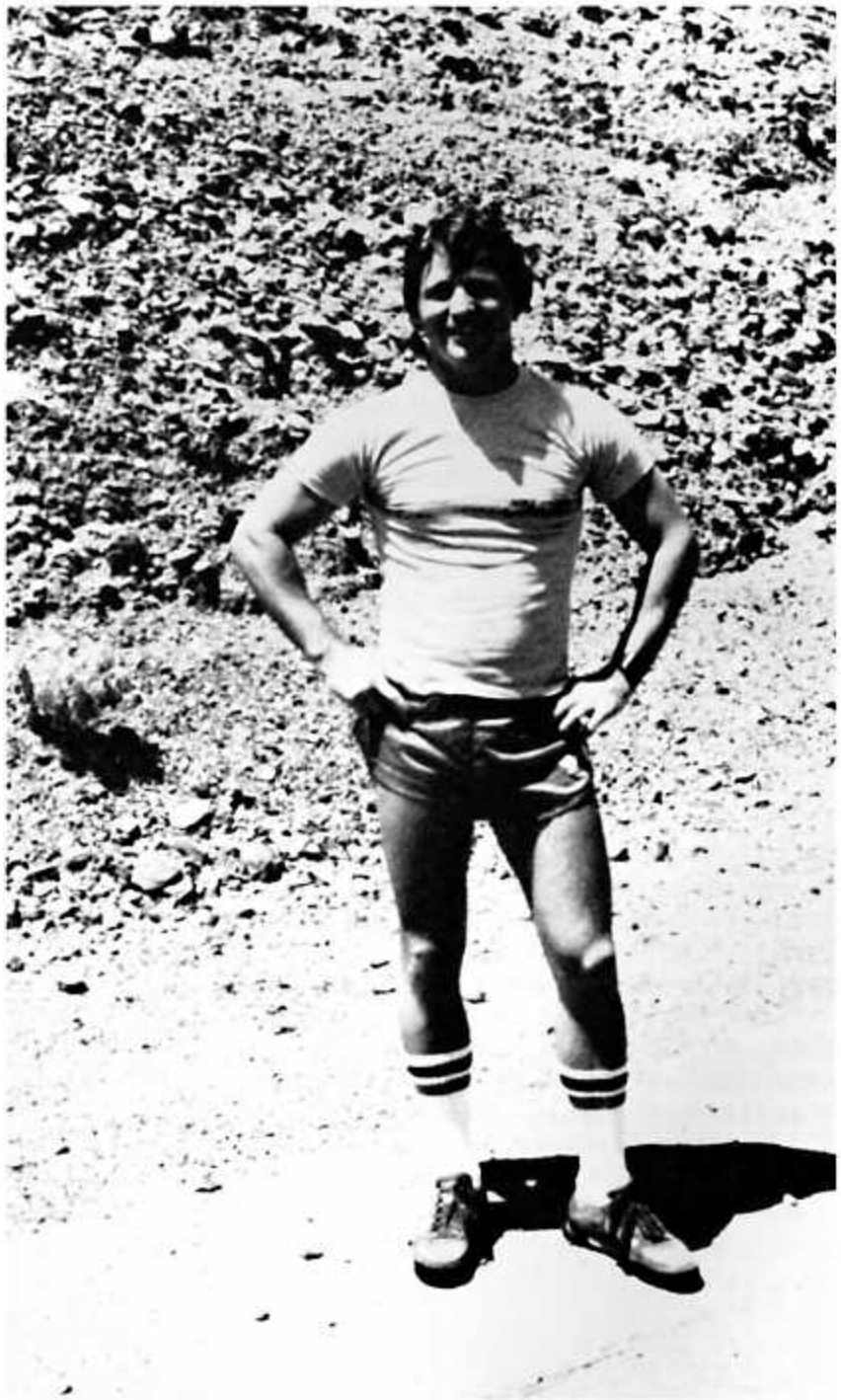
Starting conservatively, I ran the ascent only event on August 8. No one passed me after three miles and I placed 16th overall in a field of 732 with a 2:46 clocking.

Anita beat Tammy and Scott to the summit, 3:57:14 to 3:57:25 to 3:59:30. Anita placed 277th.

Next day, Bob ran the roundtrip. He ascended the Peak just under three hours, then raced down like a mountain goat to finish 56th in the field of 620 with a fine 4:35:12.

I had planned to run the round-trip for training, but with a slight cold, I opted for a low-key run through the Garden of the Gods park, 12 miles.

After a final six miles next morning at Catamount, we packed tents and headed to Green River, Utah. Pursued by hordes of insects, we jogged another six miles before retreating to a restaurant for supper.



Kerry Alsop

We arrived in Las Vegas on August 11. Again, I welcomed the heat, fearful of temperature far more than altitude.

Joanelle of Baptist Medical Center had arranged through Rena Ruby of Sunrise Hospital in Vegas, for us to stay at the Stardust Hotel and Casino.

We drove the battered Dodge up beside Lincolns and Cadillacs, unloaded our raggedy baggage, and wide-eyed, checked into the glittering hotel. Around us, silver dollars trickled into and gushed from slot machines. Fortunes were being won, but mostly lost.

Before running, I went outside to move the car. It lay there in the grand driveway like a lame horse, one of its balding tires flat. Many a slickly-dressed gambler gawked at the skinny runner in shorts who crouched, fixing his stricken automobile.

We ran six miles along The Strip that evening and five miles on a golf course next day.

After breakfast, I rented a Concord station wagon to serve as my primary support vehicle. That freed the Dodge so the kids could drive ahead to lodging, enjoy swimming or television, and give everyone more room. The thought of three bored children baking in the desert for three days was too horrible to contemplate.

We piled into the Concord, drove north from Vegas on U.S. 95, headed for a look at the adversary, Death Valley. About 140 miles later, we arrived at Furnace Creek.

Furnace Creek is the locus of Park Headquarters for Death Valley National Monument and the site of a large resort. It is nearly empty in summer.

A large grove of date palms and an airstrip frame a golf course and mark the edges of the sizeable resort. Furnace Creek Ranch remains open all summer; the resort hotel is open only during the cooler, more popular months.

Near the ranch, a large trailer park houses miners, resort employees and tenders of water, electricity and communications lines to the Valley.

Furnace Creek lies 18 miles north of Badwater, the starting point for the run. We checked our reservations at the Ranch, scouted the restaurant menu, then headed onto the course.

Death Valley was benign that afternoon. The temperature reached a mild 105°. High clouds blunted the sun's sharpness. The smooth, two-lane road stretched across the sagebrush-speckled desert far beyond sight.

We drove to Stovepipe Wells, site of a small general store and a motel. The store clerk, wife of a Death Valley ranger, imparted a sad tale.

"We used to live at Glacier National Park," she said. "Snow, ice, cold all the time. I really looked forward to the warmth. We've been here four years and I'm still not comfortable. I wonder if there's anyplace we could go in between extremes?"

We booked a room at the motel for our first night on the road. We would be the only tenants.

I wanted to see the first climb, up the Panamint Range to Townes Pass. What was it that stopped Al Arnold and Gary Morris on this climb to 60 miles?

The upgrade began immediately at Stovepipe Wells. For 17 miles there seemed to be continuous upgrade. How would my body react after 43 miles of running in the hottest place in America?

Since there was much to do back in Vegas, we ended the tour and drove down. Just beyond Stovepipe Wells, a blinding sandstorm struck.

It was impossible to drive through. We turned on the headlights, rolled up the windows, and crept along at 5 mph, afraid of being struck from behind, afraid to pull off the narrow highway, expecting the car to overheat. We hadn't used the air conditioner until this time, but everyone was roasting. Ten tense minutes passed before we were clear of it.

That night in Vegas, a pair of swim goggles became part of my Death Valley gear.

Our final day in Las Vegas was busy with trips to Sunrise Hospital, stores, banks and the Pepsi Cola bottling works.

Randy Sloan of Pepsi provided us with five cases of Mountain Dew and a case of Pepsi for the journey. Just before leaving the Stardust, we learned that the Las Vegas Track Club president, Larry Clark, had arranged for lodging at the Treasury Hotel/Casino after the run was done.

Before nightfall, we loaded both cars and headed for Furnace Creek. As we left Vegas, a freak thunderstorm hit town. Flash flood and high wind warnings were broadcast on the radio.

We arrived at Furnace Creek at dusk, ate dinner at 9:00 and by 10:30 I was in bed, resting but mostly sleepless. Blasts of arid wind rattled the windows and rainless lightning flashed to illuminate the nearby mountains.

ROADBLOCK

Bobby, Anita and I rose at 4:10 a.m. We packed the Concord with ice, water and other gear, enough for the 18 miles back to Furnace Creek. Destination: Badwater, a spot still unseen by us.

Badwater remained unseen.

Though no rain had fallen in Death Valley, a storm in the mountains to the southeast dumped water on the 6,000 foot mountains and gushed tons of mud down the slopes. Five miles from Furnace Creek, thick purple-brown mud completely covered the road.

With flashlights, we checked ahead. For more than a quarter mile, mud of unknown depth blocked the way.

We pondered alternatives. I could hike in, with water, but the roundtrip would be 26 miles without support. Perhaps the road would soon be cleared.

We drove to Furnace Creek for breakfast and waited for the park office to open.

When thunderstorms do occur . . .
arroyos that are dry most of the
year can suddenly roil in flood.
Life Wilderness Library

Chief Ranger Richard S. Rayner sent me a nice letter on July 17 to thank me for informing the Park Service of my Death Valley plans. He advised me about water, accomodations and medical facilities and enclosed five maps and brochures.

I waited for his arrival this morning of August 14 with apprehension. What could he tell me, encouraging, about the blocked road to Badwater?

"The maintenance folks will evaluate the situation today," Rayner said, after welcoming me to the Park. "If it's blocked in several places, they might close it. There's not much interest in that area in the summer."

We discussed my run, the record chase, but he could offer no assurance that the road would be cleared.

"Check the road later today," he advised.

At 10:30 we drove to the mudslide area.

ROAD CLOSED

A roadblock had been erected five miles from Furnace Creek.

All we could do was wait.

We could not see the first 13 miles of the route, but we could see the other unknown parts.

We returned to the Ranch, reserved a spot for another night, and headed out across the barren desert.

We shunned air conditioning in the car to build tolerance for the century heat. We stopped at Stovepipe Wells to update our reservation, then drove up to Townes Pass.

From there, we tipped downward to the Panamint Valley, a steep descent that worried me. Thirteen miles of downhill running could pound a lot of soreness into my body (assuming I survived Death Valley).

A gentler upgrade followed, up the flanks of the Inyo and Coso ranges toward the small town of Darwin which lay six miles off my course. Eighteen miles of climbing ended with another downturn, a gentle 18 miles of descent to Owens Lake. The lake was mostly dry, white like salt. At its north end was the village of Keeler. Fifteen miles more toward the now-visible Sierra Nevadas was the town of Lone Pine.

Lone Pine was the largest city on the route. We checked at the Forest Service office about our trail permit and updated our reservations at the Dow Villa Motel.

Mt. Whitney stood to the west, flanked by a series of needle-like spires of granite. It would be at least three days before we could see the view from the other end.

We found the narrow Whitney Portal Road that leads through the Alabama Hills to the base of the Mt. Whitney trail. Some grades on this road were almost 20 percent, probably unrunnable when fatigued.

Greenness creeped upon us with the altitude and soon we were among tall conifers and mountain wildflowers.

Our scouting mission complete, we hurried back to sweltering Death Valley (108°) to see if our road was open.

The workmen had moved the barricade two miles--In the wrong direction!

We could drive only three miles from Furnace Creek instead of the five we had covered that morning.

Depressed, I pondered my alternatives.

A) I could wait until the road was cleared. That could be several days. It would be very expensive.

B) I could hike in and hike back out. That would require much water. I still didn't know how I would react to the extreme heat. And I would cover a non-productive 13 to 15 extra miles.

C) Perhaps I could get a jeep or motorcycle to Badwater and hike back out.

D) Since Furnace Creek was below sea level and the Valley was much the same between Badwater and the Ranch, I could shuttle-run from the Ranch to the barricade and back until 18 miles had been covered. The run would be valid for distance but would have an asterisk compared with Arnold's mark.

Just before dinner I jogged three miles on the golf course, made crispy by the relentless sun. I felt woozy and weak though the sun was on the horizon and the temperature was only 101°.

On the way to dinner, I noticed a motorcycle outside one of the trailers nearby. Having nothing to lose, I knocked on the door.

Eric Swanson was a borax miner. He listened to my predicament. Could he help me with a ride to Badwater in the morning?

He agreed to drive out to the mudslide while we ate.

After dinner, I hurried to Swanson's place.

"Can't get through," he told me. "Mud's too deep. Can't drive on the sand. Never know when that crust'll break through. Sorry."

I decided to shuttle-run the first 18 miles. I pictured that Great Record Book in the Sky reading:

Death Valley to Mt. Whitney record *

*same distance, different start.

Anita

At 5:20 a.m., August 15, I rose to begin my assault on the Badwater-Whitney record*.

Following a photo in front of Furnace Creek Ranch, I jogged toward the barricade at 6:05. I'd get water at 3 miles, run to the mudslide and back for 4 more, and continue to shuttle until I reached 18.

Anita drove ahead. Two miles up the highway, I spotted the blue Concord beside a white van. Runners were coming toward me!

A familiar face greeted me--it was Gary Morris! He ran with a slender woman, Molly Thayer.

I had forgotten that the 15th was the target start date for the male/female relay run of Brian Oldham and Molly, both of Mammoth, California.

We chatted just a few seconds.

"Where did you start?" I asked.

"At Badwater," Gary replied. That's where you start these things, Dummy, his voice implied. "'Bout four o'clock."

"The road isn't closed?" I asked. A hint of a squeal.

"No, why?"

Gary and the runners had driven into the Valley that morning.

The maintenance crew had done its work in the cool of the night. I could begin at Badwater. No asterisk on this run!

Anita drove me to Badwater, a low spot beside the narrow road. I tasted the water, "bad but not poisonous" according to a brochure we had. Pretty salty, I thought.

I posed for another START photo. At 6:51, Pacific Daylight Time, I began the run. The sun was up now. The temperature was already 100°.

I dismissed all regrets for a late start and thanked the road crew silently. Miles of training and days of planning could now be applied to the task. I had many things to prove to myself. I suppressed my excitement and tried to attune my body to Death Valley.

Our plan was conservative. I wanted to attack Mt. Whitney if I made it there, to finish strongly, not at a rate of one mile an hour as Arnold had.

On paper, a time of 48 hours seemed possible. That had been Gary Morris's goal in 1980.

In the tranquility of the Florida springtime, I did a lot of scheduling and map reading. The result was two plans: A 60 hour plan and a 76 hour plan.

The 60 hour goal would require reaching Townes Pass in the first 24 hours, arriving in Lone Pine at the end of 48 hours, then running the final 26 uphill miles before sunset the third day.

A less ambitious approach, permitting ample breaks for meals and sleep, was to arrive at Stovepipe Wells on Day 1, reach Darwin Junction on Day 2, hit Whitney Portal by nightfall on Day 3, and climb the 11 miles of trail the next morning.

Wearing mesh shorts and Baptist Medical Center t-shirt, I trotted north, stark brown cliffs to the right and expanses of white, tan, and yellow wasteland to the left. For two hours, the Black Mountains spared me from the sun.

Anita drove to the next mile marker and waited. I stopped for water or a cold washcloth, then jogged on. My pace was 8:30 per mile while running, but I forced myself to walk a few seconds at the start and conclusion of every running segment. My goal was to get back to Furnace Creek in "fresh" condition.

At 9:51 a.m., I arrived back at the ranch. I showered, donned fresh clothes, and walked to the restaurant to chow down on scrambled eggs, toast and cereal. If these guys are stopped by not being able to eat, I thought, I've got to reverse that trend!

Meanwhile, the family packed suitcases and the Dodge for the jump to Stovepipe Wells. Bob and the other kids would check in while Anita and I made our way through the desert, one slow mile at a time.

I returned to the room for an hour nap. I tried to feel the effects of the first 18 miles. The blow-dryer-like heat must hold some subtle power, I thought. I've got to sensitize to negative symptoms before the Valley gets me.

The temperature had risen to 105°.

At 12:35 p.m., I returned to the pavement. I was passed slowly by ranger Randy Larson. He drove his truck ahead to where Anita waited, warned us to always park on the right, then signed my witness book.

This second segment was eleven miles over gently rolling desert, to the Beatty turnoff.

An array of brightly colored rocks lay at the roadside, but more eye-catching were piles of stones wrapped in silver duct tape. A large "80" was taped to the sizzling asphalt beside one of the piles.

By day's end, we learned that the rocks and numbers were checkpoints for auto technicians who occasionally whizzed by in specially equipped Volkswagens. What better place to test cars for heat tolerance and climbing ability?

I slowly gained altitude though still below sea level. The midday sun, which I had feared but chose to face rather than avoid by night running, was bearable. I fought it physically with water, ice, desert shirt and sailor hat. Mentally, I recalled something Percy Cerutty had written.

"A polar explorer must learn to accept cold; an athlete must accept discomfort," he wrote.

A Death Valley runner must accept as normal everything that the lizards and rangers live with, I thought.

Anita held up wonderfully, a serious worry. I thought that a non-loved, non-relative who was tough as beef jerky and mean as a snake would make an ideal support person for this type of run. Anita declined use of the air conditioning, which I never used, either in car or motel.

The Beatty turnoff was reached in two hours, slow going, but careful. Twenty-nine miles gone.

We drove to Stovepipe Wells to find the kids, checked in o.k., but bored. The swimming pool was hot. No TV in the motel room. Like being in the desert.

I took a short nap and at 4:45, resumed running.

Bob had fought his midday boredom with five miles of running from Stovepipe Wells. Now he joined me for seven more before supper.

The sun hung low but hot over the mountains west. Though Bob ran with t-shirt only, I continued to play safe against sunburn with desert shirt and sun-block cream.

We jogged through the seven miles in a tottering 69 minutes, arriving at the junction to Scotty's Castle which lies at the north end of the park.

Runners have run Death Valley end-to-end, from Shoshone to Scotty's Castle, but my desire was to get out of it, soon.

We drove back to Stovepipe Wells, cleaned up, then headed for the only restaurant in the Valley, at Furnace Creek Ranch.

On the way there, we passed a large motor coach, trailing a small group on foot. Who are they?

We arrived at 7:30. When the maitre d' told us there would be a half-hour wait, I abruptly insisted that we be seated quickly. I told him of my run and the need to continue immediately, and to my surprise, he seated us at once.

As usual, when I lose my patience, I felt badly and sheepishly apologized.

I was amazed at the crowd. That afternoon, a busload of German tourists had arrived. Surely Yosemite Valley would be a better tour stop in summer than this place! Someone in Germany could sell coals to the devil, I thought.

I ordered a large cheeseburger platter but could eat but half of the meal. Was I losing my ability to handle food? Fear still prowled inside.

A full moon greeted us as we left the restaurant, one reason for the selection of mid-August for the run. A few miles from my

Jay, Brian Oldham and Molly Thayer

resumption point, we again passed the mystery motor coach. We slowed to a crawl to see a bedraggled man in running shoes, walking. A woman with towel and water bottle walked alongside.

Was this another Badwater-to-Whitney record chaser? How much time had he made up on me? I suppressed the urge to run fast and, decked out in a new reflective vest, trotted toward Stovepipe Wells.

Seven miles to Stovepipe Wells and my night's stop. Or should I continue to Townes Pass? Whoever was behind me had made up considerable ground if he started at Badwater. But he was now reduced to walking. How far could he travel through the night before I got on the road?

Night running fears and the sudden onset of pain in my left heel also pressed on my half-cooked mind. Though I ran with a flashlight and had the moon up there, too, I feared a run-ending stumble into a hole, against a rock, or off the edge of the road. On the trans-USA run, I had had some close calls at twilight and determined to never run at night.

The heel pain was unnerving, too. I limped slightly to keep from hitting it.

I stopped twice to adjust my socks and insoles and arrived at Stovepipe Wells at 10:41 p.m.

The desert was absolutely silent. No wind, no light but the moon's, and the body temperature air felt like no air at all.

I considered continuing through the night, up the Panamint Mountains. Fatigue and the heel pain convinced me to maintain the conservative course I had set. I massaged the heel, soaked it in ice water, and lay down to sleep. I tried to dismiss thoughts of the three mountains ahead and the unknown challenger behind. How was Gary Morris and his team? I had survived an entire day in Death Valley and experienced few problems. How badly damaged is my heel? It was a long time before I slept. . .

On Christmas Day, 1849, a group of weary, discouraged pioneers looked out on this (valley). For months, the '49ers had followed a map of a short cut to the gold fields, only to find that the snow-capped mountains that beckoned them on were not the Sierras, but a vast chain of uncharted mountains barring their way.

Their food supply was dangerously low and starvation threatened. The Jayhawkers, a group of young men from Illinois and Ohio, went northwest toward what appeared to be a natural pass where the Panamint Mountains dip down to merge with the southern end of the Cottonwood Mountains. A slower-moving party of families made the near fatal decision to follow their shortcut map. They went southwest across the salt flats seeking a pass shown on their map. They failed to find it and spent 26 days camped in the valley while John Rogers and William Manly walked 600 miles to bring back supplies.

Rogers and Manly guided the Bennetts and Arcanes out, and high on a ridge of the Panamints one of the party looked back on the fearful valley and solemnly said, "Goodbye Death Valley."

It has been Death Valley ever since.

--from "Badwater"
published by the
Death Valley Natural History Assn.

The Alabama Hills

The five o'clock alarm rings and snaps me back to consciousness. I am five feet above sea level in Stovepipe Wells, Death Valley, and the clock is running. I limp to the bathroom in the dark motel, massage my sore heel, replace the innersoles and walk into the morning. The moon is hung over the Panamints while the sun lurks opposite, waiting for me to start up the mountain before she leaps up to batter me again. At 5:31 a.m., August 16, I move west again toward Mt. Whitney.

The pain in my left heel was considerable. I walked the first two miles upgrade then tried another combination of insoles when Anita joined me.

I began an experimental program of walking and jogging, mixing equal amounts at first, then increasing the run time. The pain ate at my optimism.

My thoughts flew to the top of the pass and I worried about descending.

In the fifth mile, I saw a sign of progress: Elevation 1000 Feet.

I looked back at the Valley which expanded with the altitude, and was thankful to have been spared sandstorms and 130° temperatures.

The road turned steeper now and sliced through cliffs and boulders. Vegetation was more abundant and slightly greener.

Creosote shrubs and mesquite punctuated the always present sagebrush. Lizards darted among rocks, hunting insects. Unidentified birds flitted a few feet above ground.

Another 1000 feet gain over the next two miles left my thighs more weary than the night before.

At 7:45, I reached the Emmigrant Pass ranger station, the last restroom and water for a while.

Copies of a brochure, "Death Valley Survival Hints", were there for sojourners. The cartoon on the cover looked too much like our family, baked to skeletons, driving a decrepit car.

The ranger was due to show up at eight, so I rested and waited, just to let him know what I was doing. During my break I wolfed a banana and yogurt, adjusted my shoes, and read the maps.

The ranger was late for work so I hit the road again without a meeting.

The grade remained steep so I settled into a two-minute walk/four-minute run routine. Every two cycles I would complete a mile, drink water, mop my brow, then continue up the four to nine percent grade.

At 9:57 a.m., I crested Townes Pass, elevation 4956 feet. One Death Valley and one mountain down!

The temperature, 97° at the motel, rose little during the morning because of the increase in altitude. The sun felt hot but the gain of 5000 feet dropped air temperatures 15 to 25 degrees.

Planning the run, I toyed with quantifying all aspects of the run: Fluid intake and loss, ground and air temperatures, time spent covering each mile, etc. For reasons I detail later, I abandoned plans to measure everything.

We drove back to Stovepipe Wells to rest, load the Dodge and kids, and check out. Bobby drove the old car to Townes Pass and waited with Tammy and Scott until we arrived a few minutes later.

The Dodge heated up on the long climb. Tammy convinced Bob to stop at one of the roadside water tanks to give the old crate a drink. Inexperienced with hot radiators, Bob scalded most of his right arm while removing the cap.

We arrived, Anita administered first aid (Solarcaine, icy towels and asprin) and we sent them on the way to Lone Pine, 64 miles distant.

Recovered from the climb of the Panamints, I headed down the mountain toward the saltflats of the Panamint Valley.

Caution signs advised the use of low gear on the steep 9 percent downgrade, so I down-shifted.

I practiced my best non-pounding technique for downhill running: Bring the feet through low, as in ice skating. On steep slopes, run a serpentine path, back and forth across the highway.

Traffic was sparse. Occasionally a VW whizzed by, en route to Whitney Portal.

At 1:26 p.m., the camper we had seen the night before stopped on the highway before me. Kerry Alsop, a stocky runner in his mid-twenties, stepped out and asked what I was up to.

Kerry left Jubilee Pass at dawn the day before and covered 75 miles to Stovepipe Wells in 22 hours, 35 minutes. His goal had been 100 miles but the Valley had taken its toll. I understood.

Kerry and his family lived in Stockton, California, and knew Al Arnold.

"It's even hotter down in the Panamint Valley," Kerry warned. "It's heat plus climbing from here on. You've got a long way to go."

His warnings seemed tinged with an "I bet you don't make it" attitude, possibly due to loyalty to Arnold and his own experience with Death Valley.

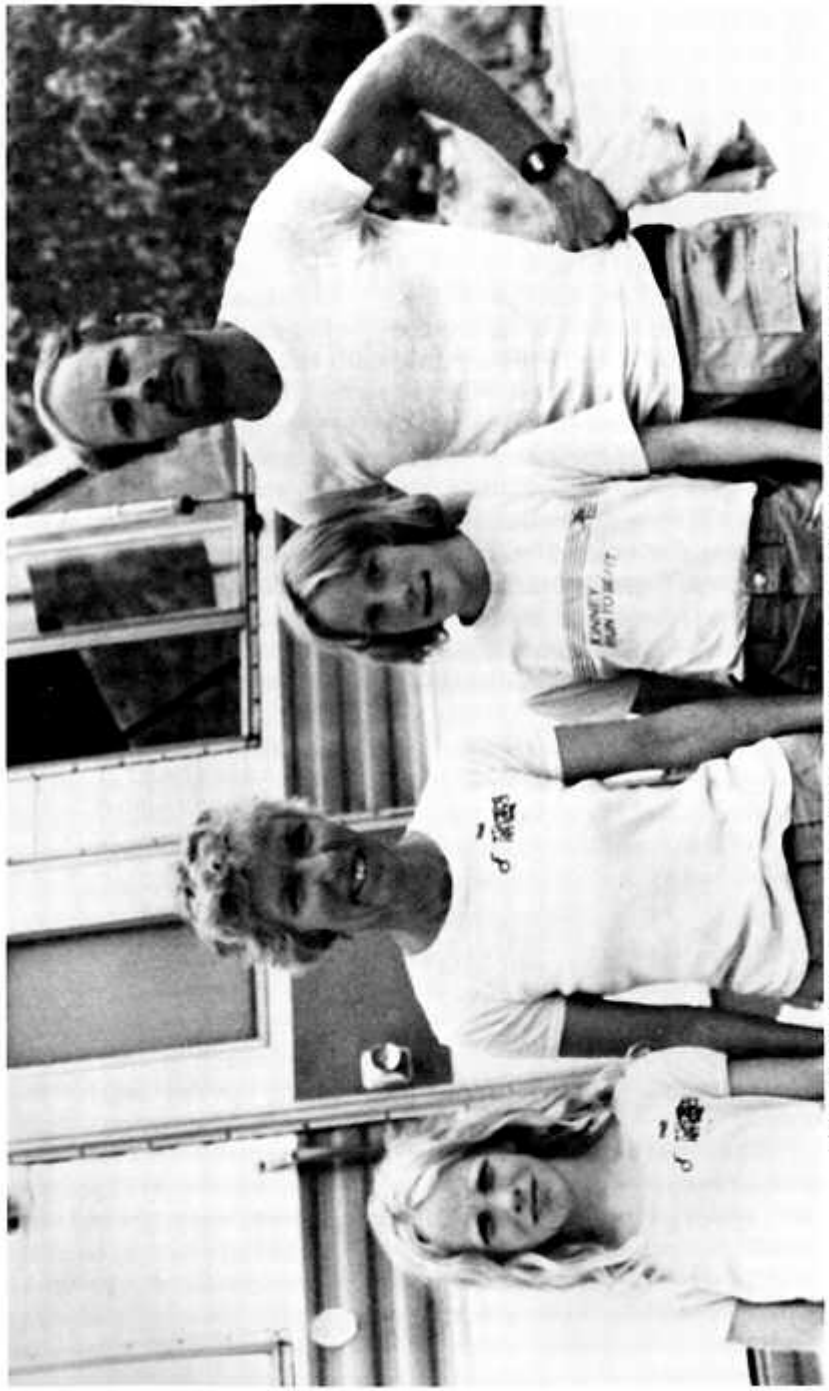
Kerry signed my witness book, wished me luck, and in seconds the camper was gone. Quiet again.

I ran down the mountain road, relieved to know I was not chasing a person but just the clock. Kerry's skepticism stirred my resolve to succeed.

The descent into Panamint Valley was without further incident. Moving carefully on still-sore feet, I covered the 13 miles in 2:20.

An excerpt from Anita's diary describes a hazard of handling an ultrarunner:

In my attempts to keep Jay "moist" for this particular segment of the run, I find it not easy to meet his requirements. I either do not start to spray him early enough to facilitate dispensing sufficient water before he takes off again, or I over-spray and he becomes easily chilled before setting his warm body into motion again. Picky, picky!



The Brandenstein Family: Catherine, Mary, Marion and Bill

Three miles above the valley floor, the yellow-white salt flats were visible. The highway mile markers were a blessing under those circumstances when one's destination appears close when it lies miles ahead.

At the edge of the saltflats a huge sign warned motorists (and runners) of possible sonic booms from jet aircraft which were tested in this desolate California wasteland.

At the far side of the flats stood the Panamint Springs resort, a cluster of trees and small cottages, used by wintertime tourists.

Gary Morris had warned us to not stop in the Panamint Valley.

"The Manson gang hung out near there several years back," he had told me that spring in a phone conversation. "Folks there shoot first and ask questions later. They don't like strangers."

After crossing the torrid valley, however, we were in dire need of liquids and ice. Lone Pine was more than fifty miles away. Anita stayed in the car while I walked cautiously to the door of the little gas station.

A weathered little woman of sixty sat behind the counter and gazed at me suspiciously. I told her I was running to Mt. Whitney and purchased four cans of soft drinks and two peanut candy bars.

"Do you have any water?", I asked. "We're almost out."

"Shure, young man," she said slowly. "Bring in yer jugs and we'll fill 'em fer ya. Jimmy, come here and git some water fer these folks!"

Jimmy, a hulking teenager, followed me to the car, took the two gallon plastic jugs, and in a minute, returned with them brimming with ice water.

The soft drinks were a strange brand I had never seen before. Was the water poisoned? Would they whip out their shotguns when we turned to leave?

I dismissed my apprehensions. Good people, helpful people, live everywhere.

I lay in the shade beside the cottages for over an hour. The temperature was 115° according to a shaded thermometer on the gas station porch.

I set my mind to the task of the next 18 miles.

We had descended to 1500 feet. The top of the next range was 5234 feet. The heel pain was a slight nuisance now but my fatigue was serious. Both thighs ached and my calves were hard from the morning climb.

I approached the 18 miles as four units of four miles plus two. Allowing for my fatigue and the heat, I would cover four miles, then break for 15 minutes.

This road, still part of state route 190, was the narrowest and steepest yet. Around every bend, I expected to find the Dodge and the kids draped over the edge or wedged against a cliff. The stillness of the desolate mountains enabled me to hear approaching traffic long before it confronted me at roadside.

The first ten miles were painfully steep but the miles run in the Appalachian and Rocky Mountains paid off.

At 4,000 feet elevation, the grade eased. I was tired and feeling sorry for myself, running to beat the fall of night.

Anita was tired, too, but without complaints. She had scrambled for water, ice, spray bottle, dry socks, food, the camera, searched for safe spots to stop, busy almost without a break since sunup. I realized that the venture would have been impossible without her.

We arrived suddenly at a rocky promontory which looked back on the Panamint Valley. A monument and cross were erected there honoring the "Padre of the Desert", Father Crowley.

The priest had ministered to Indians and pioneers in the area for many years, starting in the late 1800's. It hurt me that the plaque was defaced by rifle fire.

Running toward the sunset, I noticed figures standing on the horizon, a startling sight in this land. I ran for ten minutes before I got close enough to identify the strangers as Joshua trees. These tall desert plants are adapted for the dry climate by having leaves that lie flat against the scraggy branches.

The road climbed gently in the early evening coolness and I ran along comfortably. This ain't so bad, I cracked to myself. Both legs ached from the 35 miles of climbing and 13 of downhill pounding. My feet were blistered, one heel was injured, but I knew that I had got through this day!

Anita scouted ahead in the dark for Darwin Junction, aka Talc City Cutoff. She reported that there were two roads, the cutoff being closer by a few hundred yards. I ran the final mile, slumped into the car, and through half-open eyes, strained for a look at Mt. Whitney as we drove to Lone Pine.

Lone Pine was large and sophisticated by this trip's standards. The motel had a whirlpool and a swimming pool, the TV reception was good, and a restaurant stood a few feet from our room.

The children had enjoyed the ride to the Dow Villa Motel in Lone Pine. Tammy (with no driver's license) drove most of the way when Bob complained of severe pain from the burned arm.

We showered about 10 o'clock and I hobbled to Marietta's Restaurant. I nearly fell asleep over a few potatoes and a couple bites of steak.

I ached all over but was confident that a night's rest would pump strength back into me.

Now things looked too good. Thirty-three more miles and I'd be heading up Whitney. How hot would the Owen's Valley be? What is the fate of Brian and Molly?

Anita wrote:

Jay spends a restless night,
even to the point of making
a 180° turn (with his feet
where his head used to be).

Eleven miles to go.

I wanted to hit the road at 5:00 a.m. but Anita rose quietly and prepared the ice chests and car to let me sleep an extra hour.

I was irritated to have lost an hour of relative coolness, but quickly realized that I was better rested and we were ready to go. Anita, doubtless feeling unappreciated, sped to Talc City Cutoff in 32 minutes and pushed me out of the car!

During the first mile, pain returned to my left heel. I checked the shoe for the Nth time and discovered beneath the foam insole a large bubble of hard glue. I was comfortable in my right shoe, so I left it on and replaced only the left. I selected a two-week-old New Balance 730. Normally, I wouldn't trust a shoe that new for ultradistances, but since I could change to something else if I had a problem, the experiment posed little risk.

Anita drove ahead and attempted to excise the offending glob from the old shoe, to no avail. Had heat from the highway caused the eruption, like a little volcano inside the super-heated shoe? I felt stupid to have not noticed the bubble 'til now.

I ran the empty road to Lone Pine, one shoe red, the other blue.

We came upon two cattle on the open range, the first we'd seen. I tried to get close for a photo with some success.

The vegetation reverted to grey-green sagebrush and the mountains fell away behind us. Before me lay massive, dry Owens Lake. West of the lake, still a hazy silhouette, stood the Sierra Nevadas and Mt. Whitney.

The day was perfect for running. The sun did not seem hot except on the back of my neck. Anita fashioned a hood for the back of my sailor hat, wide enough to protect my shoulders.

I ran the first nine miles in 1:45, counting breaks for cookies, bananas and blueberry yogurt. No problems with food for me!

At eleven miles I found a large iron ball which weighed a couple pounds. By the time I reached the car, it seemed to weigh 25. I let Anita haul it the rest of the journey.

We came upon a double gravesite, a memorial to a mother and infant named Larkin who died in 1876. The white cross was visible for half-a-mile. Plastic wreaths added gay colors to the sobering site.

Twelve miles of running brought me to the junction of California Routes 136 and 190. We had followed 190 since Furnace Creek Ranch. One map showed it continuing to Lone Pine. Reality was that 190 turned southwest to Olancha. We took 136 the remaining 19 miles to Lone Pine. Maps and reality are sometimes different, a lesson learned from the 49ers.

An hour later, on a ridge above Owens Lake, we reached Keeler, a tiny salt-mining village. No stores were close to the highway, but we spotted a phone and Anita jogged back to call a progress report to Jacksonville.

As I waited by the car, eating and drinking, a small green car whipped alongside.

It was Brian and Molly! Anita ran back to us and we filled them in on our progress.

They had covered 97 miles, six miles down from Talc City Cutoff. They had run for 22 hours. Blisters, stomach cramps and leg soreness combined to stop their pioneering effort at a male-female relay record. Their goal had been 36 hours.

They accompanied me for a few miles running then made entries in my journal:

> *BRIAN OLDHAM--Jay is looking great and running strong. Looks like he will be the 2nd human being to make it and the 1st to do it on the 1st attempt. After 2 summers in Death Valley I can attest that this performance is <u>amazing</u>. Hats off to a <u>great</u> distance runner.*

> *MOLLY THAYER--Brian Oldham's partner in 2 person relay attempt. Jay and Anita, you are both most inspirational to us. You're doing something brilliant. Keep it up.*

Molly rode with Anita to the next water stop. They pulled behind Brian's car and into soft sand, stuck. Brian helped Anita work out of it with the help of some cardboard. Molly ran three miles with me, carrying water, and told me about the mountain.

Brian was tremendously encouraging. Gary, Molly and he hiked to the Whitney summit the day before. My plan to ascend the next morning met with Brian's approval:

"Never any bad weather up there in the morning," he assured. "Watch for storms in the afternoon, though."

After much well wishing, they departed and I was alone with my thoughts. How disappointed they must be!

Control. Patience. I resolved to continue the approach that had brought me thus far, albeit slowly.

Three miles from the junction with U.S. 395, an oasis appeared. Like an emerald in the desert, green trees and lush grasses sprung from the ground. Nature takes every opportunity to produce lushness.

Route 395 is a major road from the Southern California deserts up the east edge of the Sierra Nevadas. Beside the highway runs the Los Angeles Aqueduct which splits from the Owens River 50 miles north of Lone Pine.

Farms with livestock, fruit trees and hay stand along the concrete waterway, each commanding its share of water destined for the City of Angels.

I run into Lone Pine, elevation 3728 feet. Bobby sits in the shade, nursing his scalded arm. Tammy and Scott loll in the pool. It is two o'clock and I have run 33 miles with 13 remaining to Whitney Portal. I eat a BLT sandwich at Marietta's and hear on the radio that the temp is 103°. I try to nap but the mountain beckons.

At 4:09 p.m., I trot from the motel, looking for Whitney Portal Road.

I ran north on the main street in Lone Pine, then east up a narrow asphalt road with crumbling edges. The sharp peaks of the Mt. Whitney group stared down at me. I jogged steadily through the Alabama Hills, an impressive array of foothills used often in Hollywood westerns.

The road was thick with vacationers in vans, campers and cars and it was difficult for Anita to serve up my drinks on a schedule. The steep gradient had me huffing and puffing. That, plus the dry air and my cumulative dehydration, had me needing water more than ever.

Despite the grade of sometimes greater than 15%, I ran more strongly than ever on the journey. All five of us will hit the trail tomorrow, I thought, and these may be my last running miles of the climb.

Mountain wildflowers and tall conifers seemed to call for my best efforts. Invigorated by the record chase and the cooler air, I responded as in a race.

Three miles from Whitney Portal, we met the Brandenstein family of Ellicott City, Maryland. As they waited for their overheated camper to cool, they signed my witness book and offered us some of their turkey dinner.

I dined on a Mountain Dew and a soggy Payday candy bar instead and pushed the final three miles, hoping to beat them to the campground.

At one point near the Portal, I looked back to the valley below. The view was startling. The Alabama Hills were flattened by my vantage point above them, the road a slender wiggle of spaghetti toward Lone Pine, now invisible. Owens Lake was a yellowish saucer to the south and the mountains where the day began looked a hundred miles away.

Half a mile from the portal, the steaming Brandenstein RV heaved up beside me and stopped.

Bill jumped out to join me over the final yards and I broke into a happy though weary run to the trailhead. The running day ended at 6:45 p.m. with 46 miles covered.

I posed beside a trail sign for a snapshot: **SUMMIT 11 Mi.** In ten hours, we would be back to climb there.

Anita bought me peanut butter cookies at the trailside store. By 7:30 we were back at the motel.

I did a good job on a trout dinner that night at Marietta's and by 11 p.m., we hit the hay.

The moment of arrival.

Four a.m. The jangling motel phone rocked us from our sound sleep. Al Arnold was on the Whitney summit and I had to get there before 6:51 p.m.

Five veterans of Pikes Peak loaded minimal gear into the rented Concord and headed for the trail. At 5:15 a.m., we struck out for the top.

Scott, Bob and I wore warmup pants and windbreakers; the two ladies went barelegged. Bob and I wore small daypacks with food and clothing, Scott carried the flags to unfurl at the summit, Tammy carried water and Anita toted the camera. For an hour we used flashlights up the unfamiliar trail.

The first three miles lulled us into thinking that the eleven miles would be easier than Pikes Peak. We zipped along at 20 minutes per mile, following Tammy's pace. We casually splashed through several small creeks and puddles. Only Bob and I escaped with dry feet.

Large birds, resembling grouse, walked among the rocks and underbrush. They were so unperturbed that we could almost touch them.

We strode past Lone Pine Lake and through the heavily used Outpost Camp. Bacon crackled on a couple campfires, and the aroma tugged on me, as it does on a Sunday morning run in winter.

At four miles we came upon moss green Mirror Lake. Giant sequoias marched up both sides of the trail with us.

Gradually the towering evergreens gave way to scrub by the time we reached Trail Camp at 6 miles. Our pace had dwindled to 25 minutes per mile. The trail was now rocky, alpine flowers signaled that timber line had been reached, and we asked every hiker we saw if we were still on the correct trail. The cloudless sky grew dark and distant rumblings signaled foul weather.

We had been on the John Muir Trail since the trailhead. One mile before it reached Trail Crest Pass, the rocks grew to bowling ball size. At length, we reached the Pass, linking to the Sierra Crest Trail.

"Been up to the summit?" I asked a pair of rugged mountaineers decked out in boots and foul weather gear.

"It's too stormy," one replied. "Hard to stay on the trail. We're goin' back to camp!"

Great, I thought. Three miles from the summit and we'll get lost. We encountered more hikers, all coming down, and they confirmed the route.

We had been hiking on the east face of the mountian but now dropped over to the west side, to work our way behind the "needles" that lead to Mt. Whitney. The cool air was now frigid. We unpacked all extra gear and put it on. Tammy had brought nothing for her legs.

"I'm not cold," she said, but the goose bumps gave her away.

Wind whipped across the face of the rocks. Snow that felt like sand began to fall.

Lightning flashed and thunder crashed about us: I tried to appreciate the spectacle, as John Muir would have done, but fear was stronger than awe at that point.

Anita described the final hour in her journal:

...snow on the rocks made them extremely slippery; it clung to the tops of our shoes, still wet from the mountain streams below, and combined with the severe cold, provided arctic-like conditions for our toes. (It required) us to tolerate a different level of pain.

Jay had carried both water jugs the last few miles, making us drink to fight dehydration, but without gloves, he stashed them in the rocks at last.

All along the way I inquired of Jay's condition, knowing his feet and legs had already recieved a tremendous amount of pounding and abuse

from his previous days' performance.

But he seemed able to recover overnight each time and I was constantly amazed at his "drive" and determination to complete each day's pre-planned mileage. It was this same stamina and relentless willpower that was now prodding him along. Through his strength, the rest of us were somehow able to shuffle along despite the blizzard conditions.

Tammy's pace slowed to a crawl as the wind punished us with more snow and blasts of frigid air. It seemed there would be no end to this self-imposed predicament. An occasional glance upwards did little to inspire us to press onward in search of the still-obscured summit.

Suddenly, with a mile or so to go, Jay decided to take the lead and attempt to break 75 hours. Bobby was to go with him with the camera to record the event. Before abandoning us, however, Jay is foresightful in distributing the remaining garments in his pack...

Almost as quickly as Jay's decision to increase the pace surfaced, another one took its place. He reasoned that leaving most of his family behind in order to gain at best 30 minutes in his favor toward setting a record was not worth it.

Bobby and I took the lead while Jay stayed behind to assist and encourage Scott and Tammy who were feeling the altitude and cold.

Half an hour later, we set eyes on our goal. The summit of Mt. Whitney seems to be simply a pile of rocks. We walked to the summit plaque, affixed to a rock, and helped a pair of hikers with a photograph.

I arrived on the summit a few minutes later, at 10:25 a.m. Elapsed time since Badwater: 75 hours, 34 minutes. Anita took a few photographs in the driving snow as I unfurled flags of the U.S.A., Baptist Medical Center, and the City of Jacksonville.

A rough stone shelter near the summit provided a break from the wind. Anita and Tammy had numb hands and feet; Scott seemed to be most affected by the altitude. It was below freezing; thunder clapped around us and echoed on the cliffs. Our ordeal, as Al Arnold's did not end at the summit. Thoughts turned to survival.

Anita wrote:

The bleak surroundings, the lack of additional warm clothing and the thought of having to face the raging storm again to make our descent were suddenly too much for me to bear. Tears welled in my eyes and I began shaking uncontrollably. Instinctively I reached for Jay and clung for a few moments, hoping to regain some of that much needed strength and confidence which helped me make it this far. Jay must have sensed how desperate I was for comfort and reassurance. I felt a kiss of congratulations was surely due him but I think it was as much for my own salvation as it was his reward.

I searched for scraps of wood and paper to build a fire, then remembered, of course, that we had no matches. Miraculously, Anita pulled a book of matches from her jacket pocket! A last-second impulse caused her to pocket them that morning at the motel. With renewed vigor, we scouted for flammables.

In best Scout fashion, I lit the little pile of paper, twigs and scraps and in minutes, the cold shrunk back a few feet. We choked on the smoke which had difficulty leaving the stone shelter, but our fingers and toes warmed a bit.

To ensure that our few pieces of large wood ignited, I included the two felt flags among the kindling, saving only the stars and stripes.

We waited nearly an hour for the weather to improve but new snow kept the summit blanketed. We were all warmer and stronger and at 11:30,

we began our descent.

We expected to come down quickly. Cold winds and rain followed us the entire 11 miles to the trailhead, however, and we descended in 5:03, a scant seven minutes faster than our ascent.

We bought coffee, hot chocolate and cookies at the trail store then piled into the car for the drive to Lone Pine. Wet and bedraggled, we agreed that the desert was the place to be!

Whitney Summit

Australian running coach Percy Cerutty observed that success in sport came from high intelligence coupled with allowing one's 'instincts' to dictate a proper approach. An over-intellectualized, too-scientific approach to training, competing, or life, generally, was to be avoided.

Since junior high school, I was interested in science and sports: Quantification, analysis and interpretation of factors that produce great physical performance. Yet, I've been torn between applying the scientific tools available and letting my own feelings, as to the rightness of things, take charge. Evidence, scientific and empirical, indicate that there is much beyond physiology that affects performance.

Arthur Lydiard, coach of New Zealand's stable of medalists in the Olympic Games of the 60's, opted for his "green finger" approach to training.

An athlete would show up for practice a couple days after his last hard session.

"How do you feel?" asked Lydiard. If the runner felt fine, more hard work was prescribed (the green finger). If he felt unrecovered, another easy day of running was ordered. No pulse taken, no blood analysis, no arbitrary schedule.

Dr. David Costill analyzed the results of tests on dozens of class athletes from the late 1960's and early 1970's. Oxygen uptake per kilogram of weight, the VO2 max, was determined to be a reliable indicator of performance.

Ted Corbitt, 50 years old, was analyzed as one of the least efficient runners ever tested at the Ball State facility. Nevertheless, Corbitt was a multiple national champion and record holder at distances from 30 Km to 24 hours.

Corbitt went to the starting line unaware, throughout his career, that the physiological cards were stacked against him. He posessed the intangible mental strength to make the most of his resources.

Only the foolish shut out valuable information on personal health and environment. It seems, however, that there is a land in the mind that is beyond science; a place for spirit, inspiration, motivation, passion.

Most of my learnings have come during difficult times: After reaching exhaustion miles from the finish of a run. Or waking up some mornings on the transcontinental run with no desire to log the required forty miles that day. At times like those, I learned to reach deeper.

I believe that we have abilities to far exceed our percieved limits of endurance. The threshold of those reserves cannot be anticipated. Even when each step feels like it must be the last, there is no measuring the depth of the reserve.

Running through the "pain barrier" to effortless running has never been my experience. For me, the place is neither painless nor effortless.

The ability to endure beyond percieved limits requires a desire to continue. But now, rather than an act of will, such excursions are an act of faith. Now, I <u>know</u> there are untapped abilities within. I <u>expect</u> them to be reachable. I anticipate that as more tolerance for discomfort is needed that I will have it.

I also know that psychological pain can be more devastating than physical discomfort. Loneliness, heartbreak, loss of desire to name but three. But there are reservoirs of strength to cope with these, too.

Lest you think that I have "arrived", I still have setbacks. I fall apart in races. I quit pursuing in disgust when the pace is too fast for me. I sometimes sleep in when I should be training.

But I am better than before. I am also convinced that I have only scratched the surface.

Never a natural athlete, because I have discovered these things, I believe they lie within us all.

SOME THOUGHTS ON FLUIDS

I believe water is the most underemphasized factor in long distance performance. Even on cold, rainy days, large quantities of water are lost from sweating, breathing, and occasionally, diarrhea. Water consumption must be a top priority in training and racing.

My own best performances have come when fluids were abundant and consumed. Fluid loss has been a major factor in most of my failures to finish and other poor runs.

Several times I mentioned Mountain Dew, a citrus flavored soft drink produced by Pepsi Cola. Heavily sugared, it contains orange juice and caffeine. Of course, it is mostly water. Once I have been running for an hour, the sugar, which would usually bother me if consumed before I ran, has only a beneficial effect.

I've drunk Mountain Dew in ultras and training runs and find it a tremendous supplement to water.

I discovered the value of citrus sodas (Mello Yello and Squirt are also good) on the transcontinental run. After hours of agitation and heat in my backpack, most drinks were all bubbles and unrefreshing. The less-carbonated citrus drinks went down well even when warm. The calories in the gallons of soda I drank probably helped me maintain my weight on that 72-day trek.

Frank Shorter drank de-fizzed Coca-Cola in his marathons. Ultramarathon guru Tom Osler recommends heavily-sugared tea. I suggest an additional experiment may be in order.

DEATH VALLEY NOTES

The highest temperature recorded in the United States was in Death Valley, 134.6°, in 1913. The ground temperature stood at 190°. The daily average July temperature at Furnace Creek is 116°.

Despite an annual rainfall of only 1.7 inches, Death Valley supports over 600 species of plants and 200 species of animals. A fish, the Salt Creek pupfish, lives in salt water pools. Coyotes, wild burros, ravens and jackrabbits live among the water-hoarding plants like saltbush, pickleweed, desert holly and creosote bush.

The starkness is beautiful; the colors an unexpected symphony of variations on themes of brown, lavender and red.

Summary of Death Valley to Mt. Whitney Run

August 15, 1981

6:51 a.m.	Start run at Badwater	
9:51 a.m.	Arrive at Furnace Creek Ranch	18 (18)
12:35 p.m.	Resume run	
2:34 p.m.	Arrive at Beatty turnoff	11 (29)
5:06 p.m.	Resume run	
6:15 p.m.	Arrive at Scotty's Castle turnoff	7 (36)
9:17 p.m.	Resume run	
10:41 p.m.	Arrive at Stovepipe Wells	7 (43)

August 16, 1981

5:31 a.m.	Resume at Stovepipe Wells	
7:45 a.m.	Arrive at Emmigrant Pass	
8:05 a.m.	Resume run	
9:57 a.m.	Arrive at Townes Pass	17 (60)
12:30 p.m.	Resume run	
2:50 p.m.	Arrive in Panamint Springs	13 (73)
4:31 p.m.	Resume run	
9:11 p.m.	Arrive at Talc City Cutoff	18 (91)

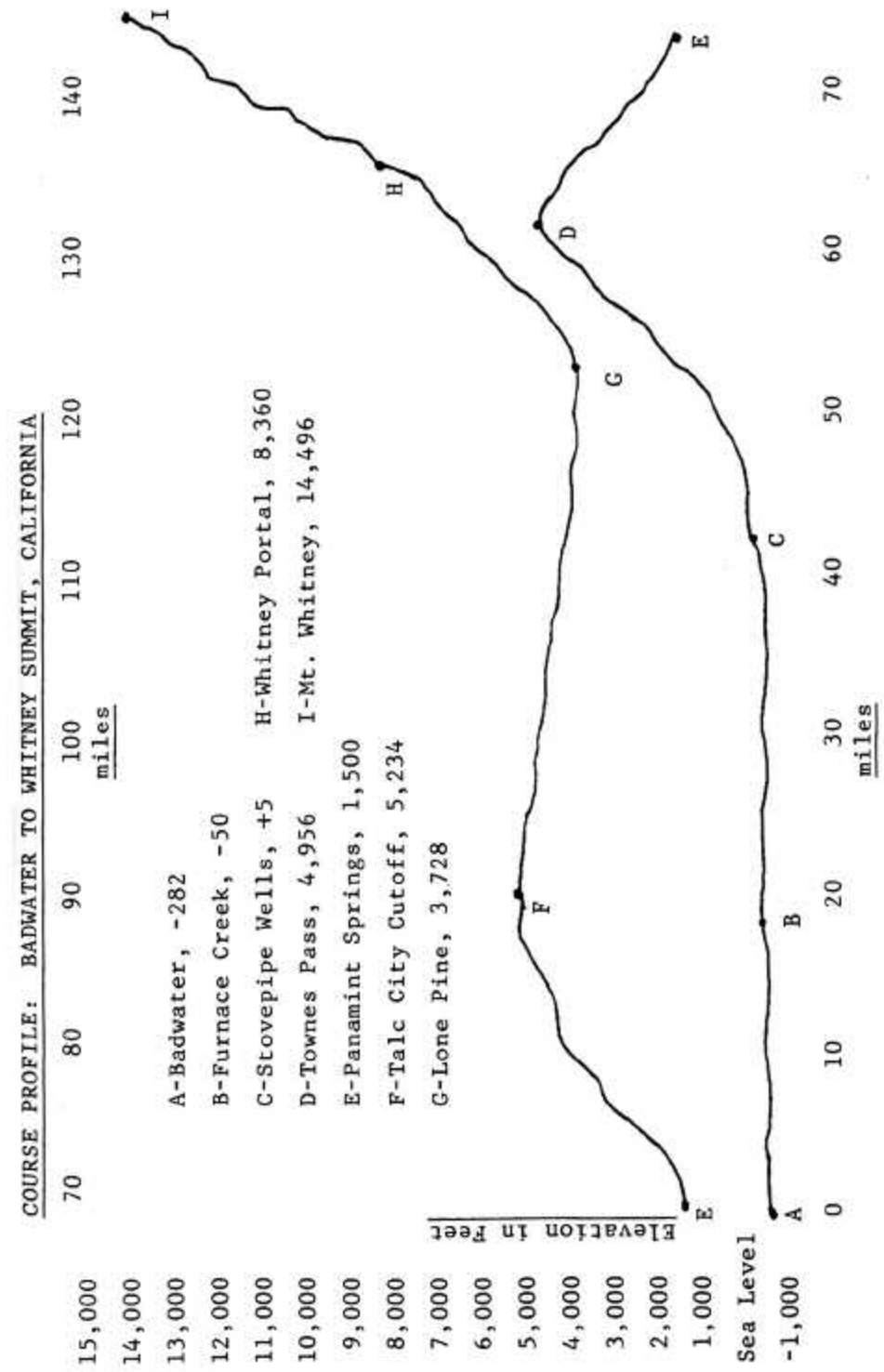
August 17, 1981

6:59 a.m.	Resume at Talc City Cutoff	
2:00 p.m.	Arrive in Lone Pine	33 (124)
4:09 p.m.	Resume run	
6:45 p.m.	Arrive at Whitney Portal	13 (137)

August 18, 1981

5:15 a.m.	Resume at Whitney Portal	
10:25 a.m.	Arrive on Mt. Whitney summit	11 (148)

Elapsed time: 75 hours, 34 minutes



POSTSCRIPT

On August 24, 1982, Max Telford of New Zealand, an ultradistance runner with several records to his credit, completed the Badwater to Whitney summit route in 56 hours, 33 minutes, reducing the record by 19 hours, 1 minute.

I believe that it is possible to run to Townes Pass in the first 14 hours, rest for 8 hours; continue to Lone Pine in the next 14 hours then rest for 8 hours; thus leaving 12 hours to run to the summit of Mt. Whitney for a time of 56 hours even.

N.B.: Distances and elevations listed are not uniformly marked on maps, brochures or by highway markers.