SURFING MEDICINE

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Issue #10, Spring 1993

1993-94 Directory Issue

Disasters Large and Small –
Shakes, Stings, Bites, Bugs, Breaks, Cuts, Pollution,
SMA Organizational Crisis –
Plus Conference and Activity Reports and more.

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Cover Photo: SMA to the rescue! An unidentified beneficiary of the ad hoc SMA Disaster Relief Team in the wake of Hurricane Andrew in Florida. He was frightened, hungry and needed help, and he'll remember where help came from — the SMA. Photo by Ron Bockhold.

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EDITOR'S NOTES

Disasters can come from the hands of God or Man. Some of the contributions in this, our first Disaster issue, deal with both. Our peripatetic and prolific Florida correspondent Ron Bockhold relates how SMA members were first responders following the devastation of a hurricane; responses to disasters arising from the hazardous beach lifestyle are also explored in both original articles and case reports, as well as in the Surf Docs "Heavy D" contest. And we are pleased to present a reprint and SMA critique of a potentially important paper on how the slow-motion disaster of water pollution might impact on our health as we pursue what used to be, and should still be, the cleanest, healthiest pastime of all. So if you or someone you know — your patients? — have ever had a health episode related to water pollution, complete and mail the Surfrider Foundation's health survey you'll also find reprinted here.

And while you're at it, think of sending us something — some research, a story, a photo — we want to hear from any and all SMA members and might even embarrass you by publishing your stuff!

Steve Heilig & Mark Renneker

Journal Kahuna: Mark Renneker

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Ground zero in Florida City, Florida.

SMA: DEFINING THE CULTURAL HERITAGE

REPORTS

By Ron Bockhold, North Miami Beach, Florida

THE GRIM STATISTICS OF HURRICANE ANDREW:

41 Dead
85,000 Homes damaged or destroyed
2,000 People missing
82,000 Jobs lost
30 Billion dollars in losses
250,000 People homeless
No good rideable surf before or after the storm

"Where the hell is the Cavalry!" Those were the words of Kate Hale, Director of Dade County's Emergency Operations Center. She had just blown up at a recent press conference. This occurred at the height of the crisis in dealing with the storm's aftermath. She was probably referring to the old western movies when, just as the situation seemed most hopeless, the federal troops would ride in on horses, bugles blowing, flags flying, and rescue everyone just in the nick of time. Four days after the greatest natural disaster in U.S. history, the Cavalry had still not arrived in Dade County. Her cry, however, echoed all the way to Washington and then-President Bush - but slowly.

Yet even as Ms. Hale cried out in desperation, she was unaware of the help on the way. Earlier that morning two SMA members were on dawn patrol. We were packing guns - not big wave types, but 9mm semi-automatics. We were armed and dangerous. We were fully prepared to deal with desperate individuals, looters and angry mobs. We were going where few people dare go. Our destination? Ground Zero: The scene of total devastation where the Hurricane eye wall had passed with winds of 180 mph. Our mission? To deliver potable drinking water to the disaster victims of a migrant farm worker labor camp.

We thus attempted to enter this restricted zone in the catastrophic area of the Hurricane Andrew aftermath in Florida. We pulled up to the roadblock of Highway Patrolmen, rolled down the window, and in a most serious demeanor said, "Good Day! We're members of the SMA Disaster Relief Team. We've been authorized to enter this area and provide relief. Where do you want us to proceed?" The police officer was a bit confused, hesitated, and then said, "OK, glad you're here, follow me." So off we went with a flashing light police escort. Surprisingly, no one had ever asked who exactly had authorized us, or exactly what type of relief we were prepared to provide. We raced down the highway, laughing, and just enjoyed one of our SMA privileges.

Our arrival signaled a great sigh of relief to the victims. They wondered who had dispatched this strange contraption known as the "Water Buffalo". Was it the Red Cross, the National Guard, the United Nations? No, we represented the Surfer's Medical Association! The scene was grim at Ground Zero. Mark Castlow maneuvered the "Water Buffalo" into position amidst the piles of rubble. Personal

The "water buffalo" – 500 gallon self-contained water home delivery system. Photo by R. Bockhold

belongings were strewn everywhere. Disaster victims in shock wandered aimlessly around. Armed looters were removing valuables without resistance. It was a flashback to Beirut or Hiroshima. Law and order had broken down. No water, no electricity, no phone, no sanitation. Broken homes and broken lives were the aftermath.

The SMA was there first; the other more mainstream organizations would arrive days later. At this time they were hampered by bureaucratic jurisdictional and organizational problems. What were we doing there? How could we respond so quickly? How could we bypass the logjam of official relief efforts? Perhaps it had something to do with our cultural heritage.

What exactly is this cultural heritage that helps define the SMA? It really has never been studied, understood or documented. It has something to do with the hybridization of generally fun-seeking, irresponsible surfers with generally serious, highly responsible medical professionals. This new subcultural grouping is represented by these highly polarized personality profiles found in SMA members. The SMA membership represents today a very unique test tube for sociological and psychological investigation. Let's take a look at the component profiles of this hybridization.

The historical definition of a surfer's lifestyle is well documented. Surfers have a conscious need to develop a unique style of doing things. They are frequently involved in capers and antics. They order their lives around the ocean's rhythms. They are categorized by non-surfers as compulsive, negative, escapist, and even lazy. They are not ashamed of this behavior outside the mainstream. In fact, they celebrate it and even flaunt it in the face of society. They establish elitist self-esteem. They make statements on the illogic of society blindly following tradition and convention. If short hair and conservative dress is "in", their hair grows long and oversized T- shirts become the fashion, to poke fun at the mainstream. The challenge is to pull it off with style, fun and control. Just like riding a wave, rules seldom apply. They are usually "rewritten" till caught. A casual attitude towards life is paramount. Surfers usually invent innovative solutions to life. Unique modes of transport are utilized; surfboard, skateboard, catamaran. Get there and have fun doing it is the game. They enjoy a spontaneous free and easy life. Travel becomes a necessity. Tasting exotic foods, cultures and waves is the draw. Adherence to rituals - surf checking, waxing up, psyching up are passed from generation to generation. The closeness to nature becomes inherent - being in tune with the tides, the winds and the waves. The ocean teaches them all the great lessons of life. Self-reliance, discipline, humility are some lessons. The sense of challenge and fulfillment and the wisdom of knowing the best things in life are free are other lessons well learned.

Snap your fingers. Flash! You're back in med school. Pull a graduate out of class, any graduate. What's he like? A driven individual for sure. Driven to succeed in academics, personal finances and professional life. The typical graduate displays a mastery of organizational, analytical, concentration and memory skills. He's a thinker, a doer, a problem solver. His judgment, responsibility and knowledge will be relied upon by many trusting souls. A role model to those of lesser achievement. Self motivation, compassion and an understanding of those in need, along with a desire to relieve human suffering, defines this professional.

What can we expect with a combination of these two types of individuals? A hybrid results. The best characteristics of both should evolve into one. We discover that truth. Watch them; they can surf, travel, think and behave outside the norm. At the same time they can pull off worthwhile initiatives and design innovative projects for those in need, with creative flare while having the maximum fun. Their reward is little more than an obscured sense of self satisfaction.

How can we then explain that SMA members have produced so few examples of this? They travel in the third world, see great need and problems but do not yet realize they themselves could be the solution. They may not have yet awakened or understood their great potential. They may not know why they found the SMA but they know they belong there. A few have received their wake up call - more will follow. There are a few examples of this emerging potential. A community health project in Nabila, Fiji, a medical-enviro effort in the Bolivian Andes, a rainforest-iguana conservation program in Costa Rica, a surf clinic in Java. But only a few individuals are responsible for these initiatives.

As I travel throughout the developing world, I observe many things. I see the need is great, the resources are few, and help has not yet arrived. There could be many, many more initiatives, all stamped with that unique hallmark of SMA style. After all, it's part of our Cultural Heritage. As I read through the SMA directory, I see so many names, so many brains, so many resources, so many exotic itineraries. I also see so little help, so few ideas and initiatives for those in need. I can only respond in a cry of desperation to the SMA, "Where the hell is the Cavalry?"

REPORTS

G-LAND GOES OFF

Sean Robertson, DDS, Santa Barbara, California

The 1992 SMA Indonesia Conference was a success on all fronts. From the world class Grajagan barrels to the seminars held each night, everyone left for home with smiles, knowledge, and stories for a lifetime.

The gathering on the first night at the Kuta Seaview Cottage on the island of Bali was diverse. Surf docs from California, Hawaii, and Australia waited for the transport to Java. The all night ride took the group to the west coast of Bali where we caught a ferry to Java, then another drive to Grajagan Bay. When the tide was high enough boats carried everyone and their gear to the camp.

The surf right next to the airport on Bali had been good on arrival. What could we expect at G-land? Perfection was what we got: Lefts barreling for hundreds of yards right in front of the camp, with light offshores all day – every day! The beer flowed until it sputtered and a new keg was tapped. The excellent food was served always with a smile and in large proportions. The music filled in the background while people played billiards or pingpong. Surf videos satisfied those exhausted from the real thing. All of this before, during and after marathon sessions in the water.

Simon Leslie organized the perfect conference. After dinners, presentations were made on topics ranging from first aid to traumatic head injuries to acupuncture. The camp's first aid supply

Mark Metcalf speeding top turn – headin' for "speedies".

Photo by SMA.

Mikale Jones with a pre-breakfast sampler.

was evaluated and restocked. The remoteness of the camp brought home the reality that fellow surfers must be knowledgeable of the treatment of common surf injuries.

For ten days the surf ranged from head high to double overhead. The offshore winds were as consistent as the sun. The coral white beaches were perfect for beachcombing and the lava reef relatively forgiving.

The 1993 trip has already been set for September 20-30. Spaces are already filling up as the camp holds only 40 surfers at a time. For information, contact Dr. Mark Metcalf at (714) 969-0656 or at 8215 Pennington, Huntington Beach, CA, 92646. See elsewhere in this issue for more details, and see you there!

Sean Robertson with the daily catch of blue fin.

Mark Metcalf. Photo by SMA.

TODOS SANTOS TRIPPING

Joseph Hall, San Diego, California

"See you in the morning" rang out in my home as we began our feeble attempts at sleep. The four of us (Mike Perry of Island Tours, Rick Kemp from San Francisco, Bill Updyke from Los Angeles, and myself) having gathered for a one day "pre-SMA" assault on Todos Santos spent the previous hour watching video excerpts from last year's SMA Todos adventure. Now it is 1:00 a.m., we're completely wired with anticipation, and have to go to sleep! Not to mention that our wakeup call is a mere 3-1/2 hours away...

After dragging our sleep-deprived bodies out of bed, we leave my house (5 minutes from the US/Mexico border), pick up photographer Patrick Wheaton, say a quick prayer for safety, then sneak across the border under cover of darkness. I always like to clear TJ before daylight (something about the Policia...). Arrival in Ensenada is right on time (7:00 a.m.) but by now we're really hurting. You see, a nice north northwest swell is pounding the coast and we've just driven past some pretty good looking waves, motivated by the fact that Todos juice is at the end of the line.

We shop in the fresh fish market, deciding to treat ourselves to extra camarones (shrimp) for our first dinner. Loading the boat is a chore as we have not only our gear, but food for 3 days x 20 persons. Heading out of the bay in Ensenada we are immediately teased by large open ocean swells, long lines with deep troughs. About this time Rick, Patrick and I are wondering if we'll get to surf (we don't want to die), while Mike and Bill are drooling over the prospect of 25' Killers. Half way across the channel, with 6 miles to cover, we can see white water off of the island!

Landing on Todos Santos Island is always an adventure. There are no docks, buoys, cranes, or anything else that would ease your disembarking. Nope, at Todos all you have is "The Bay" which is the leeward (eastern) side of the island. Under ideal conditions our ponga pilot would navigate the boat right to the shore where we quickly unload the contents of our strained

The crew. Photo by SMA.

vessel. Not so today... " The Bay" has swell in the 3-5 foot range, a left hander peeling off the point right onto the shore. Great, you might think, and it is, for surfing; but for landing - forget it.

Mike informs us that we'll have to suit up and paddle in since our pilot refuses to draw closer than 100 yards to the shoreline. We decide to take two boards each, suit up and head for shore. I could go on about the landing; suffice it to say that two hours and 15 zodiac trips later we're on the rock with all of the boards and provisions, somewhat damp but nonetheless intact.

We scramble to the old lighthouse where quick decisions are made on bunk assignments (farthest from the generator is best). You see, Todos ain't for sissies... no burgers, fries, cars, phones, down comforters, feather pillows, room service, or anything else that will remind you of the world you've just left behind. Just crystal clear water, huge 20 foot waves and all of the good basic food you can eat.

On our numerous trips transporting the gear to the lighthouse, we were horrified by glimpses of waves at Killers; did I say 20 foot plus? We stopped estimating as one of the day trip surfers drops in on a set wave at least 5 times overhead. We quickly decide that Killers is definitely out of the question today (we're tired you know). Bill and I head to the south end of the island to check out "Rarelys" which we noticed breaking earlier. Rarelys is on the south island, which is a 3/4 mile paddle each way. Looks like we're on it! We paddle over and suddenly realize that the 3-4 foot waves we saw breaking from the north are actually 8-10 foot (faces) and breaking in 2-3 foot depth. While not exactly death defying, this is serious. After catching a few each (and getting cleaned up even more), we decide to leave this shifty peak for the left point breaking in the Bay. Another 3/4 mile paddle and we're lined up, however we both suffer severe leg cramps from fatigue. This doesn't stop us from enjoying shoulder plus lefts breaking 50-100 yards down the line. Of course you must take off right over some protruding boulders, but that's all part of it, right?

Back at the lighthouse Tony (lighthouse keeper/chef/friend) is preparing our "camarones especial" and, believe me, we're ready. I can't remember having better shrimp at any fine

restaurant. We totally scarf, have a couple of cold ones and, by eight p.m., sleep wins the battle.

We awaken at dawn the next morning driven by the knowledge that 16 more surfers (plus any day boats) are heading our way to partake of Todos' wonders. Killers is somewhat calmer this morning with manageable 12-16 foot faces. Both Bill and Mike are on it. Rick and I, having been punished severely on previous trips, opt for the lefts at Urchins, which is immediately opposite Killers. Being goofyfooters, the 6-8 foot left breaking waves of Urchins are much more appealing to us. The session goes full swing for 2-3 hours until the remaining SMA party arrives.

Needless to say everyone is stoked. Just the raw beauty of this setting is enough to captivate you for weeks, not to mention the excellent surf breaking around the island.

Veteran Todos Kahuna, Mark Bracker, quickly dials in, demonstrating his wave knowledge and total lack of gray matter (he's taking off on THAT?). Mike and Bill continue to catch great waves, Patrick gets his share, and the rest of the crew seems content to catch a few, watch, then catch a few more.

We surf all day, eat in-between sessions, then nap. What more can you ask for? By the end of the day we're all totally stoked – surfed out and exhausted. After dinner we all gather in the lighthouse for an excellent presentation on emergency surf medicine hosted by Mark Bracker. Helpful insight is gained by all who may find themselves in a situation requiring management of surf related injuries in a wilderness setting. The SMA has made its mark on the Island Tours operation by providing an excellent and thorough EMS kit to be maintained on the island by Mike Perry.

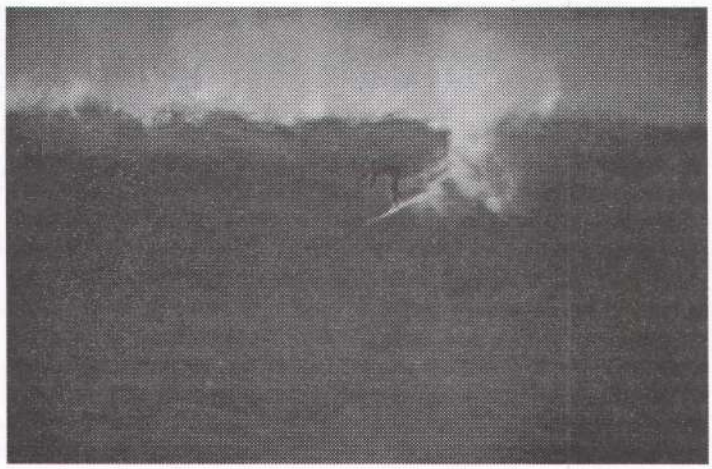
After the presentation we gather around and kindle a bonfire. More cheap cigars (tonight Dr. Jack Daniels is our guest!), then we somehow came around to the old surfers' tale about sacrificing surfboards. As Bill played the bongo drum Ryan Backer (chip off the old block!) danced around the campfire while we burned several half boards destroyed by the waves at Killers.

We awake the following (and final) morning, our prayers answered to find Killers going off again at 12-16 foot, while Urchins is absolutely insane at 8-10.

Patrick is on it and the first wave we see him drop into at Urchins is a good double overhead perfect cylinder. We split the crew between Killers and Urchins and surf at least 4 hours in this session.

Unfortunately all good trips must come to an end. We pack out gear, gather for the SMA photo, then begin our journey homeward driven by the thought of our wives, kids and warm showers! My interviews with the crew yield an overwhelmingly positive response to the trip; great surf, fellowship, food and, most of all, no injuries. (A word to the wise... reserve early for next year's trip as this one sold out almost immediately!)

Having traveled to the island literally dozens of times with various tours, I must confess that the SMA is the best of all. This trip consisted of a great mix of individuals; medical, sales, technical, construction, and student. If you're reading this and are not a member... JOIN!



Bill Updyke. Photos by Pat Wheaton.

Kudos to Mile Perry and Island Tours. Mike's continuous efforts during the past 10 years have made the island a thoroughly wonderful experience. Mike has managed to provide the basic comforts of home (heat, shelter, great food, and good beds) while preserving the island's wilderness feel.

Hope to see you next year for the SMA's 4th annual trip to Todos Santos, Baja, California!

Developing an Emergency Medical Evacuation System for Todo Santos Island, Baja, California

Mark D. Bracker, MD and Scott Willson, MD, San Diego, California

Todo Santos is located 6 miles off the coast of Baja, California, directly west of Ensenada. It has been known for over twenty years to produce some of the biggest waves along the west coast of the United States, frequently rivaling Hawaii for sheer power and size. Over the past few years, stories have drifted north and found their way into various surfing magazines, estimating that over twenty surfers have been killed riding waves at "Killers". After exhaustive discussions with local surfers, Mike Perry and Skip Stotts, who are currently operating a surf camp on the island, to our knowledge no one as yet has suffered a surfing fatality on the island. Last year at our annual Surfer's Medical Association mid-winter retreat at Todo Santos, we had the opportunity to surf particularly large and heavy waves with occasional faces in the 15-25 foot range. During one particular session, a very large clean-up set came through which broke 3 boards and caused one surfer to be held under for perhaps 30 seconds. He was then held under for a succession of 6-8 waves in subsequent sets and came close to drowning. Fortunately, two surfers were able to get out beyond the clean-up sets and discovered this surfer semi-conscious in the inside white-water region, and they performed a surf rescue, evacuating the surfer out to a boat that was in the channel. Fortunately, the surfer did not require CPR and was never fully unconscious. He regained his strength rather quickly and was able to swim into shore with only minimal assistance.

This episode brought to our attention the need for establishing a sound medical emergency evacuation system for the island and this report will detail what lengths we have gone to at this point to assure the safety of future surfers in this area.

Assembling a surfer's emergency beach transport --- an old ladder, ropes, board bags and duct tape. Photo by M. Bracker.

Fortunately, Todo Santos Island is located within reach of the U.S. Coast Guard Service stationed on North Island Naval Air Station in San Diego. A call to Captain Bill Driscoll in the Coast Guard Operations office gave us considerable information regarding emergency evacuations via helicopter in Mexico. Of interest is the fact that because of an agreement between the U.S. and Mexican government, Coast Guard helicopters are technically not allowed to land on Mexican soil. If there was a communication from Todo Santos Island that a surfer was on the island, despite the severity of his injury the helicopter could not be dispatched. If the surfer was in the water or on boat just off the island, however, the helicopter could be dispatched to handle this matter in a routine fashion.

Once the helicopter is in the air, the decision then is up to the pilot on how to best perform the evacuation and he then has the option to land the helicopter on Mexican soil if indicated. This gave rise to three evacuation possibilities which could be conducted under a variety of circumstances. The first being the surfer could be evacuated to a waiting boat if available off shore. From there, the helicopter could drop a long line with basket for retrieval. This type of evacuation is technically difficult and quite dangerous for people trying to retrieve a swinging basket from the bottom of a helicopter. The second option would be to perform a similar line and basket retrieval from land. The third, and perhaps most satisfactory option, would be to have the surfer evacuated to land. The helicopter could then land on the island which is quite smooth with multiple landing sites and then perform a standard evacuation in that fashion.

The reality of the situation on Todo Santos Island is that there are only a few places where a surfer can be safely brought to shore. There are no sand beaches on the island, and the only areas where it is feasible to come in from the surf are covered with very large and

slippery boulders. In addition, if a surfer was brought ashore, the cliffs around the island are in many areas over 52-75 feet and drop vertically down to the rock shore. The only feasible way of doing a land evacuation from the island would be to have a satisfactory gurney where an immobilized surfer could be hand carried in a litter fashion to a suitable area for scaling a relatively accessible part of the cliff.

What we discovered on our most recent trip, where we actually performed a water rescue and land evacuation, is that it takes approximately two adult men to carry a single surfer who is secured in an emergency transport litter a distance of approximately 100 yards over rocky terrain. This would be the minimum evacuation distance required on the island of Todo Santos even under the best of circumstances. We also had to overcome communication barriers between the island mainland, Mexico and United States. A call to PacTel Cellular however generated a very simple solution; that being using a cellular phone. A patch can be made from the island through the Mexican cellular system located in Ensenada which patches through to the cellular system in Tijuana which then patches through to the cellular system in the United States. The access code using either PacTel Cellular or U.S. West is made possible by dialing 95-619 and then the number 295-3121. A very clear communication can then be established between the island of Todo Santos and the emergency Coast Guard dispatcher in North Island Naval Air Station. Once the helicopter is in the air, a marine band radio using channel 16 can then be used to communicate with the pilot directly who then can make decisions regarding the nature of the evacuation to be performed. Again, it is critical under the circumstances to be sure the person communicating to the emergency dispatch person under no circumstances mentions that the surfer is on Mexican soil. It is essential that despite the situation of the injured surfer when the initial communication is made, the person identifies the surfer in trouble either as in the water off of the island, or on a boat off of the island rather than on land.

EVACUATION TEST DRILL

To test the evacuation system we planned a drill to evacuate an injured surfer from the rocky beach just in front of "Killer's" and to carry him alone down the rock beach and up the cliff, to where a helicopter evacuation could then occur. A litter was fabricated using a ladder found in the lighthouse. Two empty surfboard travel bags were then taped to the ladder's surface and a one-inch hemp rope was interlaced through the ladder.

The drill started on a very rocky part of the beach. The surfer was then put into one of the top surfboard bags, strapped in and the entire system was then put into effect and timed. This transport system proved to be exceptionally effective and allowed ten people to carry the 150 lb. simulated injured surfer 100 yards along a rocky stretch of beach and up a 15 foot cliff. The entire procedure took a total of 22 minutes.

The entire group then critiqued this evacuation technique and offered suggestions under different scenarios of different surf conditions, tide, and availability of transport personnel. For the future, a more satisfactory litter carrying device or basket needs to be fabricated and kept on the island.

The final phase of developing emergency medical services for the island was to create a substantial medical kit which would include a variety of medical stabilizing devices such a cervical collars, braces for extremity factors, taping material, gauze, and other types of materials.

CONCLUSIONS

At this time, surfers enjoying the waves at Todo Santos Island can be somewhat reassured that there is a medical evacuation kit for most routine emergencies. In addition, there is an evacuation protocol for either helicopter evacuation for severe emergencies or a land evacuation system arranged through the bi-national emergency medical care committee located in Chula Vista, California. The access number for contacting land evacuations facilitating transfers across the U.S.-Mexican border can be made directly by calling 619-425-5080. There is a 24-hour emergency service available which can arrange all sorts of ambulance transfers, and facilitate moving an injured person expeditiously across the international border.

Developing this system has been an excellent opportunity for the Surfer's Medical Association to lend technical expertise for a surf camp now in operation in Mexico. We assume that more surf camps will evolve over the next several years and this would mean setting up similar operations at each camp, which could save lives in the future.

Todos Santos rescue in progress – unrideable killers" going off in background. Photo by M. Bracker.

DANGERS OF THE BEACH: A CASE OF BROKEN BOTTLES & NASTY DROP-INS

Robert D. Grenfell, MD, Lorne, Victoria, Australia

ABSTRACT

OBJECTIVE - To determine the profile of injuries sustained on a resort beach during the summer holiday period.

DESIGN/SETTING - Information was gathered from patients presenting to the surf club, hospital, surgery and pharmacy with injuries sustained on or around Lorne Beach, Victoria.

RESULTS - 211 injuries were recorded; 37% were lacerations/cuts, 18% were rescues. Of the listed causes of injuries, 20% were from surfboards and 19% were from beach litter.

CONCLUSIONS - An injury profile was developed. The patterns emerging from this profile were used to prepare recommendations for preventative measures.

INTRODUCTION

There have been many studies detailing the injuries sustained by surfers (3,4,5,6,7,12,13), and others concerned with drownings (8,9,10). However, there are only two studies (1,2) rather limited at that, dealing with the overall pattern of beach injuries. As a member of the Surfer's Medical Association and as a coastal resort Family Practitioner, I became interested in total beach morbidity.

This study is an analysis of data gathered over two months of the 1991/1992 summer holiday period at Lorne, Victoria (as the rest of the world is upside down compared to Australia; we have summer in December and January).

There are many surf beaches on the coast of Victoria, of these Lorne is certainly one of the most picturesque. It consists of a sandy cove opening to the south-east, with a rocky point protecting it from the prevailing south-west winds. Over the December-January holiday period the population has been estimated to swell to 20,000; even more on special event days. Lorne generally has a reputation for being a safe family beach. It is the setting of over-confidence that prompted this study. Anecdotal reports of annual drownings, major limb fractures, and extensive lacerations posed questions of how safe a family beach actually is. What was the spectrum of injuries that were caused by a visit to the beach?

METHODS

An area was defined as the beach, being the sand areas, immediate foreshore areas, and the water bounded by such. Data were collected from patient presentations to the Lorne Hospital, the Doctors surgery, the Lifesaving Club rooms and the Lorne Pharmacy, in the period from December 1, 1991 to January 31, 1992. A questionnaire was compiled for each injury that occurred in the defined beach area, detailing the time of injury, the age and sex of patient, the nature of injury, the source and management of injury and the service attending.

Injuries were categorized according to type and body location. In addition, the incidence and types of swimmer rescues by the Lifesaving Club were recorded. These rescues were categorized as either "simple" or "near drowning". A simple rescue was recorded if the patient had flagged for assistance or had been assisted from the surf at the discretion of the lifeguard. A near drowning was recorded if assistance from the surf also involved sufficient water aspiration to require treatment. The questionnaires were coded, entered into a personal computer, and the data were analyzed using the SAS statistical software system.

RESULTS

At the end of the two month study period there were 211 completed questionnaires. These questionnaires provided information concerning injuries incurred by 112 males (56%), 89 females (44%) and 10 patients whose sex was not reported. The attending services for the injuries were Lifesaving Club 106 (50%), Doctors surgery 63 (30%), Pharmacist 40 (19%), Nurse 1 (0.5%) and Ambulance 1 (0.5%). The peak time of injury was in the early afternoon, with 50% of the injuries occurring between 12:30 pm and 3:30 pm. The age spread of the respondents peaked between the ages of 10 to 15 years 69 (34%). The incidence of injuries for other age groups were: 0 to 9 years 25 (12%), 16 to 20 years 50 (25%), 21 to 30 years 27 (13%), 31 to 40 years (8%) and greater than 40 years (6%).

The full spectrum of injuries that were reported has been presented in Table 1. The most frequent reported group of injuries was lacerations with 78 reports, representing 37% of all injuries. Eight of the foot lacerations required suturing, as did the same number of head lacerations.

All of the 39 (18%) surf rescues were of the simple type. A wide assortment of injuries were represented in the six recorded in the "other injuries" group. These included a dog bite, an assault victim, an epistaxis, and an immersion urticaria. A 69 year old man suffered a transient ischaemic episode whilst playing beach cricket. The three groups of injuries associated with lacerations, fractures, and sprains have been tabulated by their source in Table 2. It can be seen that litter was a major cause of cut feet, and that surfboards caused more head lacerations than other sources (surfboards was a rather loose classification meaning surfboards, surfskis and bodyboards).

The nine groups of injuries have been tabulated by the sex of the patient in Table 3. Sun exposure was more of a problem for females, whilst all but one fracture occurred in males. Within the lacerations group, all injuries to the head occurred in males.

A breakdown of the "surfboard/craft" injuries is shown in Table 4. Of interest is the surfboard-caused fracture; a compound mandible fracture sustained after a Malibu rider dropped in on a board rider. The renal contusion was of

a similar situation; a board rider dropping in on a body board rider. The lacerations requiring suture were mainly to the head and lower leg. The jet ski rider sustained a fractured rib when struck by his jet ski and a wave (shame it wasn't worse). The surf boat crew suffered sprained ankles when hit by a wave as they were beaching the craft (a surf boat is an oared competition craft).

DISCUSSION

The interpretation of the results of this study must be tempered by several conditions that were likely to have affected the incidence of injuries; weather, under-reporting and the method of information collection. All of these factors could be expected to reduce the number of reported injuries. The summer of 1991/92 was one of cold and wet proportions; this could have reduced the number of reported injuries due to a reduction in the total number of visitors to Lorne. In addition, there certainly must have been a degree of under-reporting. Many minor injuries, such as sunburn and minor abrasions, may not have presented for treatment in Lorne, if at all. The method of information collection may also have reduced the number of recorded injuries. For example, time constraints were an issue for the Pharmacy, and there were a varying number of lifeguards present over the collection period who required continued prompting about regular reporting. Given these factors, the injuries that were recorded could only be considered as a sample of beach morbidity.

The frequency of sun and heat related problems was lower than might be expected, perhaps due to poor weather or low presentation or, hopefully, perhaps due to the success of anti-cancer education programs (see Table 5).

While no drownings or near-drownings occurred in the study period, the peak age of simple rescues in the 10 to 20 years group (86% of rescues) paralleled the figures of Manolis (9) who noted a peak of drownings in the age range 15 to 24 years. There were no rescues of children less than 5 years of age; drownings in the surf in this age group have been documented as being uncommon (9,10). As rescues were a frequent event, the factors involved should be discussed. The strong relationship between alcohol consumption and drowning has been well described in previous research (8). For example, Howland et al. (11) found that 26% of swimmers had consumed alcohol before or during the activity. Local knowledge of surfing conditions suggests that there are other factors involved in rescues as well. On the Lorne Beach a number of strong rips form on days with South-East winds. On days when such winds are very strong, rips and currents make swimming a treacherous activity for even the strongest of swimmers. The link between weather conditions and rescues needs to be further explored; however a number of self-evident preventative measures can be proposed (see Table 5.)

Beach litter accounted for 19% of all injuries. It is therefore clearly evident that the established approaches to litter control require overhaul (see Table 5). Surfboards accounted for 20% of all injuries. A fractured mandible and a renal contusion were caused by the injured being struck by another surfer's

TABLE 1

REPORTED INJURIES SUSTAINED AT THE LORNE BEACH DURING THE 1991/1992 SUMMER HOLIDAY PERIOD.

	Injury	Frequency	Group Total	Percent
Sunheat:	sunburn	20		
	heat exposure	5		
	eye exposure	4	29	13.7
Insect Bite:		16	16	7.6
Sprain:	ankle	12		
	back	2		
	other	7	21	10.0
Lacerations:	hand	10		
	arm	1		
	foot	44		
	leg	8		
	head	11		
	other	4	78	37.0
Rescue:	simple	39	39	18.5
Fracture:	forearm	2		
	rib	1		
	foot	2		
	clavicle	1		
	mandible	1		
	nose	1	8	3.8
Skin:	infection	3		
	other	3	6	2.8
Eye:	foreign body	6		
	trauma	1		
	irritation	1	8	3.8
Other Injury:		6	6	2.8
TOTAL:		**211**	**211**	**100.0**

TABLE 2

LACERATIONS, FRACTURES, AND SPRAINS CLASSIFIED BY THE SOURCE OF THESE INJURIES

Source of Injury	Laceration			Fracture	Sprain
	Foot	Head	Other		
Surfboards	6	7	5	1	4
Other Surf Craft	3	1	2	1	9
Litter	20	0	3	0	0
Beach Structures	2	1	1	1	1
Rocks	11	0	9	2	2
Other*	2	2	3	3	5
TOTAL:	**44**	**11**	**23**	**8**	**21**

*Other includes fishing gear.

TABLE 3

THE NINE INJURY GROUPS TABULATED BY SEX OF PATIENT

Injury	Male	Female
Sunheat	10	19
Insect Bite	7	9
Sprain	10	11
Laceration	47	31
Rescue	18	11
Fracture	7	1
Skin	4	2
Eye	5	3
Other Injury	4	2
TOTAL:	112	89

board; similar injuries have been reported by Allen (4). Lacerations to the head were related to board use, these have been reported to usually be the result of the injured being struck by their own board (3,6,7). This again brings attention to the measures of helmet-wearing in crowded surf-spots (12), redesigning surfboards such as rounding off the nose and smoothing off the fins (5), and the need for instruction on safe falling (13). One major injury, a tarsal fracture which required internal fixation and grafting, was the direct result of poor foreshore lighting.

An incidental event that occurred towards the end of the study was the Victorian State Government's decision to decrease funding for the Lifesaving Clubs. The number of reported rescues identified by this study would suggest that there might be major health risks associated with any cutback in Surf Lifesaving services. The data collected in this study provide firm support for Pearn's Australia's Lifesaving Association, a largely volunteer organisation.

In all it can be seen that litter is a problem, as is a crowded surf spot, two things very close to the hearts of all members of the SMA. The recommendations of this study could be applied to any coastal resort, we could all look at our area and see how they relate. In the Lorne region the outcome of this study has lead to;

(i) a reinforcement of lifesaving club training programs,

(ii) improvement of foreshore lighting,

(iii) a review of the litter problem.

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TABLE 4

INJURIES CAUSED BY SURFBOARDS / CRAFTS

	Sprain	Simple Cut	Cut Req. Suture	Fracture	Other
Surfboard	2	9	4	1	1a
Body Board	1	0	0	0	0
Surfski	1	1	4	0	0
Jetski	0	0	0	1	0
Surf Boat	5	0	0	0	4b
Other Craft	4	1	1	0	1c

a/ renal contusion
b/ skin chaffing and infections
c/ rescue

TABLE 5

RECOMMENDATIONS FOR PREVENTATIVE MEASURES ARISING FROM THE STUDY

Public Information: The use of clear and visible indicators by Lifesaving Clubs when the surfing environment results in dangerous swimming conditions.

Education: A continuation and strengthening of established public awareness programs designed to increase the awareness of the dangers of sun and heat related injuries, especially amongst young women.

Beach Maintenance: An increase in resources allocated to support regular beach cleaning work, with particular attention being focused on the collection and management of litter likely to cause lacerations.

Surfboard Design: The establishment of guidelines for surfboard manufacturers that will include design rules likely to minimize major injuries arising from collisions in the surf.

Health Risks From Surfing in Possibly Polluted Waters

Brian J. Lowdon, Kenneth Ross, and Tony Scanlon, Geelong, Australia

Ed: The publication of "Health Risks from Surfing in Possibly Polluted Waters" by Brian Lowdon and colleagues has been the subject of some controversy among SMA members and others, who have voiced concerns about the study's methodology and findings. Thus, a review of this paper was made a part of the agenda at the November 1992 SMA Big Flat Conference. The attendees raised a number of points, printed here (in no particular order). This critique is offered in the best tradition of scientific rigor. Lowdon then responded to these questions. The general conclusion is the usual researchers' caveat: That much more work in this area is required before any conclusions can be drawn. See "The Green Room" section in this issue for one possible approach.

INTRODUCTION

Adverse health effects, including gastroenteritis, otitis, conjunctivitis, infectious and allergic skin conditions, in swimmers (2,4,10,13,14,15,17) and windsurfers (7) exposed to sewage-polluted open water have been demonstrated in Europe, USA and Canada. Swimmers have been defined as having had "head immersion" with no reference to frequency of immersion. Some studies (2, 9, 10, 14, 15, 16) followed-up subjects who may have had only a single face immersion during their activity described as swimming. Brown et al. (2) suggested that illness was more likely with increased head immersion. A study of sailboarders (7) showed an increased incidence of illness with increased frequency of falling into polluted waters.

Significant increases in illness symptom rates in swimmers compared with non-swimmers have been demonstrated in water considered to be safe under existing guidelines and standards (4). Cabelli (5) suggested that there was a direct linear relationship between the incidence of gastroenteritis among swimmers and water quality. Birch and Gust (3) recently proposed that the risk of developing infection from exposure to contaminated water would depend on the amount of virus in the water, the volume of water that was ingested and the duration of exposure. Surfers are frequently totally immersed in the water by duck-diving through broken waves while paddling out to the take-off zone and following falls or kick-outs at the finish of a ride. As a typical surf practice day has been found to be for approximately four hours a day (12), it was postulated that this group of water users may be unique in risk to ill health through their immersion in polluted water.

For many years there has been anecdotal reports of ill health amongst surfers following surfing at Thirteenth (13th) Beach in Victoria. These have been directed to coastal medical practitioners surfing and lifesaving clubs, and the press. Since 1916, untreated domestic sewage, as well as industrial and agricultural waste, from the Geelong region, has been discharged into the sea at the western end of the beach. Discharge was at the shoreline until March, 1989, when a screening plant and a 1.2 km submarine discharge pipe off-shore in a southerly direction (6: Figure 7-4) was commissioned. However, reports of ill health of water users continued. Sewage tends to rise to the surface and wind direction is the main factor that determines the direction taken by the resultant plume (1:12). It has been estimated that light onshore winds would take less than 20 minutes to bring the sewage plume into the surf zone at the 13th Beach (6). In comparison, a beach known as "The Spot" at Eastern View in Victoria has no ocean outfall, the nearest outfall being that of a small non-industrial, coastal resort town eight kilometers to the southwest, and has an otherwise similar surfing environment. This venue provided an opportunity to establish a control group of surfers in an unpolluted environment.

Due to limited funding, microbiological testing of water was not carried out on days of subject's surfing. However, as subjects were co-opted following their practice session only on days of onshore winds, it was considered pertinent to evaluate the comparative levels of thalassogenic disease (originating in or related to the sea) associated with surfing in these conditions at the two locations.

The study was considered important because pollution at 13th Beach was a contentious issue involving an issue of public policy, new plant proposals and feasibility studies, resident action groups and public and scientific debate. No tracer study had previously been undertaken to indicate health risks to users of 13th Beach. This pilot study compared the health effects following surfing in water that is possibly polluted (13th Beach) compared with an area that was not polluted (control).

METHOD

Subjects at 13th Beach and the control beach were interviewed following surfing on Saturdays, Sundays and public holidays during the months of May and November, 1990 and February through March, 1992 when the wind had been blowing onshore for at least two hours. The response rate to beach interview was 98 percent. Surfing and climatic data was recorded, including type of surfing, time in water, number of duck dives and falls into the water (wipeouts), areas surfed in previous eight days, details of wind direction and strength, swell size and direction and tide direction.

All subjects were telephoned by one researcher eight to ten days following the beach solicitation. Four surfers from the control area who had surfed at 13th in the intervening eight days were removed from the data pool. Questions were asked about the symptoms related to the ears, eyes, nose, throat, chest, gastrointestinal tract, skin and of general symptoms of tiredness, headache, muscle pain and fever. Where symptoms were found to exist, the effect on daily activities, such as no effect, stayed at home, bed rest required, and type of treatment used or sought were ascer-

tained. Finally subjects were asked about their choice of surfing venue in relation to their knowledge of polluted beaches.

As the main aim of the study was to determine the comparative levels of health problems following surfing at the two study locations, all persons who reported pre-existing symptoms were removed from the analysis. The responses of the remaining subjects were tabulated.

TABLE 1

SURFING DATA ON DAYS OF INITIAL SUBJECT INTERVIEWED (N=192)

	Mean	SD
Number of years surfing	7.6	5.8
Surfing days per month	10.8	7.1
Hours surfing prior to interview	2.1	0.7
Duck dives		
<5	9	
5-10	7	
10-20	26	
>20	147	
Wipeouts		
<5	65	
5-10	51	
>10	71	

TABLE 2

OCEAN AND CLOUD CONDITIONS AT TIME OF SUBJECTS SOLICITATION

Swell direction		
	southeast	27%
	south	55%
	southwest	18%
Swell size		
	<1 metre	45%
	1-2 metre	53%
	>2 metre	2%
Cloud cover		
	no cloud	11%
	1-25%	15%
	26-50%	30%
	51-75%	15%
	76-100%	30%

RESULTS

One hundred and one surfers from 13th Beach and 91 surfers from the control beach were successfully contacted and telephone interviewed (91.8%). Ages ranged from 13 to 50 years (mean 22.2 years) and ninety four percent were male. Surfboard riders comprised 86% of the sample, body boarders 6%, wave skiers 2% and lifesaving craft and wind surfers 6%. Other surfing information reported in Table 1 includes number of years participating in surfing, frequency and duration of practice, and frequency of duck dives and wipeouts.

Surfing conditions, including wind direction, swell direction and size and cloud cover at the time of subjects leaving the water and being solicited to participate in the study, are summarised for the two beaches in Table 2. These conditions would also have an effect on movement of the surface plume from the 1.2 km submarine discharge pipe outlet in relation to the 13th Beach and the resultant pollution levels at that surfing area.

Table 3 reports the surfers in the sample who had symptoms of ill health in the time between the surf session and the follow up phone interview. In order to prevent the possibility of existing medical conditions confounding the results of the study, subjects reporting that they already were suffering from any of the medical conditions covered in the interview were excluded from the analyses.

The almost complete symmetry of the numbers of surfers in the sample reporting health problems to eyes, ears, respiratory tract, gastro-intestinal tract, skin, etc. following surfing at the two beaches investigated in the study, showed that a statistical test between data derived from the two groups was not warranted.

DISCUSSION

The water-time of recreational surfers has been reported previously (12). This sample was similarly involved in their sport in that they participated for approximately 11 days per month with the mean time of surfing being 2.2 hours on the day prior to each interview. The frequency distribution (Table 1) of face immersions following duckdives and falling into the water from their board

TABLE 3

Problem		Number of surfers reporting health problems		Total number of surfers in analysis with no pre-existing condition	
		13th Beach	Eastern View	13th Beach	Eastern View
Ear		4	5	80	80
Eye		17	17	80	80
Respiratory		21	23	60	69
Gastro-intestinal		6	7	83	80
Skin	a. Infected cut	6	5	87	81
	b. other	5	2	79	81
General		4	8	79	81

Legend:

Ear = ache, itchy, discharge
Eye = soreness, redness, itchy, discharge
Respiratory = discharge, itchy, sneezing, cough, wheezing, breathlessness
Gastro-intestinal = ache, cramps, nausea, diarrhea, vomiting
Skin; other = rash, itchiness
General = ache, tired, dizzy, muscle pain, fever

(wipe out) lead one to suspect that there was a high risk of illness if the immersion was into polluted water (2,4).

The climatic conditions that existed at the times of subject solicitation (Table 2) were such that pollution levels at 13th Beach would most probably be higher than at other times,

eg. 1. The winds from the south (72%) would have had a direct influence on moving the pollution plume onto the 13th Beach, while the winds from the west and east would, at best, have had only a marginal effect on the plume movement at 13th Beach.

eg 2. Swell direction and swell size further affect the plume movement. It should be noted that tide direction could also have affected plume movement, however the data were gathered over a number of days that were spaced out over fifteen weeks and therefore this factor was equally distributed during the data collection times.

eg 3. Cloud cover, which slows the breakdown of E. coli on the surface of the ocean (1), was in excess of 25% on three quarters of the days of data collection.

The number of surfers in the sample reporting health problems (Table 3) shows there was no difference between 13th Beach and Eastern View. Within the limitations of the study, this finding suggested that a surfer was placed at no more risk through surfing at 13th Beach compared with Eastern View on days when climatic and surfing conditions favour higher pollution levels at 13th Beach. The authors suggest that this finding be interpreted and treated with caution as the study was undertaken as a pilot study with limited resources and over a limited time period.

It was noted that the majority of surfers at Eastern View tended to avoid surfing at 13th Beach because of their conceived concern of the possible effects on their health; by contrast, the majority of subjects at 13th Beach were unconcerned about the possible problems that surfing in polluted water may cause. Many of these subjects surfed 13th Beach on a regular basis - which raised the issue for possible further study of whether there is an immunity effect from repeated exposure.

It is recommended that this study should be repeated with

(a). A larger sample of surfers, and
(b). Water pollution measurements, with samples taken in the surf zone in contrast to the standard procedure of taking samples close to the shore-line, being integrated into the data analysis.

It should be noted however, that such an extension would require substantial financial resources and involve dealing with the logistic problems of a timely delivery of water samples to an approved laboratory from relatively isolated beaches.

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Surfing goes cellular

POINT / COUNTERPOINT ON LOWDON, ET AL.

SMA QUESTIONS AND COMMENTS

1. There was no water testing for bacteriologicals (nor heavy metals or volatiles); the title of the paper "...Surfing in Possibly Polluted Waters" is the main problem. How can the results even be interpreted as meaningful if it isn't established that the water was polluted?
2. No proof that both spots weren't equally polluted (i.e., again, the water testing is of great importance), which wouldn't be unreasonable, especially given what seems like a fairly high rate of illness in both groups.
3. Assumes 10 days is a sufficient time for illness to develop; what is the basis for that assumption?
4. It's self-reported data on the part of the surfers, which has bias; more objective parameters are needed.
5. No baseline data as to illness rates/prevalence in surfers; no control group of non-surfers in the area.
6. Assumption is made that onshore wind brings in pollution; maybe it disperses it.
7. "Tide direction" - no such thing; currents have directions, not tides, they just go up or down. Was there verification of the currents, measured by what means? Ideally, bacteria counts should have verified the "plume."
8. What about the potential immunity effect of prior exposures leading to surfers developing immunity, so that no effect would be seen in the study group?
9. What was the temperature of the ocean at both sites (at lower temperatures most bacteria become dormant)?
10. No information to verify that sewage was being discharged on those days. If so, was it a constant flow, of what rate, at what volume? (Some discharge is done only at night, or on weekends). How would those rates/volumes compare to other outfalls?
11. No evidence of surfers' bias - their self-perceptions of risks ("Do you believe yourself to be at risk/or of lower risk by surfing there?"), and what does that do to their answers.
12. How dangerous is shit to swim in anyway, especially in developed, treated-sewage countries? The rate of intestinal infections is so very low in such communities, with little hepatitis, shigella, salmonella, etc.
13. Were there any shower facilities at the sites; were surfers questioned as to rinsing off practices, blowing their noses, etc?
14. It was possibly an error to eliminate the group of previously ill surfers, because they were potentially the most susceptible. It could be argued that the study could be done of just them.
15. What are the geographical considerations: water depths and contours of where discharge occurs, submarine canyons, etc.?

[Recorded by Mark Renneker, SMA member participants in the questions and commentary were: David Bender, Andrea Cohen, Marilou Dougherty, Bill Heick, John Lindsey, Mark Massara, Art McLean, Steve Merrill, Rym Partridge, Mark Renneker, Ward Smith, Kevin Starr, Brian Thurmond].

BRIAN LOWDON RESPONDS

SPECIFIC QUESTIONS [point for point]

1. Other investigators have also suggested the comparisons of illness rates may be a better indication of relative pollution than the currently used bacteriological standards. Significant illness may occur in waters which are considered safe under current standards. E. Coli levels may not indicate levels of other pathological organisms. Also, sampling techniques may miss pathogenic organisms which may be more concentrated in rafts of organic material and surfactants that can occur on the surface of the sea. And there is some evidence that organisms may be present in sediments on the sea floor, therefore leading to a high concentration of organisms at the shoreline when there is increased wave action.
2. If there was a significant difference in illness rates at the two spots, this may indicate a difference in pollution. It would have been good to compare bacteriological counts at the two spots to see whether this reflected the difference in illness.
3. This was the most frequently used time period in other studies.
5. Agreed, but we had limited resources and numbers.
6. The reference here is Sharon Beder's 1989 book, Toxic Fish and Sewer Surfing, pp. 85-93 regarding experiments off Sydney beaches.
7. We don't agree. There has to be movement of water in and out; the speed depends upon tidal difference, contour of ocean floor and general direction of prevailing ocean or long-shore currents.
8. Quite possible.
9. Probably relevant only if a significant difference in temperature existed between the two spots.
10. This would be interesting to know.
12. This is one of the reasons for the study. Many studies have shown that shit in the sea in First World countries does not cause illness. Bacteriological standards are said to reflect "safe" levels and these levels have often been extremely high on 13th beach.
13. Showers are not available at either venue (and individual rinsing is doubted - what do you take us Aussies for?). Individual habits would be interesting to know.
14. Agreed, they may be more susceptible to illness. Larger numbers would of course be required.

This was a modest, exploratory study carried out on a shoestring budget. The majority of the SMA Big Flat suggestions we do agree with, but almost all of them imply more research resources. We thus would ask the SMA and/or Surfrider Foundation to come up with a better research design that is within the resource limits we were forced to work under. This is in fact one of the very few - or even the only - paper published in this area, and the findings went against what we expected - but that is precisely what research is about! The contribution of this paper is that, in a very modest way, it opens the lid to a more rational analysis of what has become a rather hysterical debate in Australia and the USA. We have started the ball rolling.

Case Reports

CASE REPORT I: LIFE WITH JUNIOR

Edwin R. Salem, San Francisco, California

I have been surfing for about 21 years and I have enjoyed everything about it, although a lot of funny things have happened to me since I have adopted this lifestyle. For instance, I took a surf trip to Costa Rica. There I enjoyed the warm Caribbean waters, the perfect waves at "Salsa Brava" and some wonderful jungle walks with my loyal guide, Babby. He was fully prepared to show me the real rain forest. Every day after surfing perfect 6 foot rights we took long hikes through the jungle. He would wear long pants, a long sleeve shirt, a straw hat, rubber boots, and always carried a good machete. I didn't take the jungle that seriously... I wore my tennis shoes, shorts, a colorful T-shirt and, instead of a machete, carried a Sony handycam. I was very impressed with all the birds, reptiles and weird-weird insects that Babby could see in that dense green environment. He knew it well, and had enough patience to wait until I was able to see and record life in the rainforest.

When I returned home I felt like Lord Livingston when he found the source of the Nile River. But in reality I found an uncomfortable itch on my left leg. I began to scratch it every night while asleep and unconsciously during the day. At first it looked like a mosquito bite but as the days went by it began to look like a small staph infection, the sort that you may get from a scratch on a coral reef. I poured on a bit of rubbing alcohol and didn't give it much thought.

A couple of weeks went by, the magic of the Caribbean started to fade, and the little hole became bigger and bigger. My leg started to lose all the hair around it and a small lump appeared. By then I started to think about it. Nevertheless I kept surfing the cold waters of Ocean Beach.

One day after surfing I saw Mark Renneker who was on his way to some restaurant for lunch. I climbed into his van and asked him to have a look at it. So he did. He said, "It looks like a draining cyst." He examined it and it seemed to have a small tube shape under my skin going towards my foot. He asked me if it drained water, which it did, and occasionally some blood as well. He told me to clean it and that if it did not heal to set an appointment with a surgeon who would open and clean the wound thoroughly in order to heal it. I was ready for it but I had lots of work. The surf was good that week and I never got around to making the call.

One evening my wife woke up as I was having a good nightmare. She told me that I was screaming in Spanish and waving my arms as if I were getting rid of an attack by flying insects. I woke up in a sweat saying, "Get them off me, please get them off me!" My left leg was bleeding and the hole was much wider and the lump bigger.

The next morning, business as usual. I had an appointment at the World Trade Center in San Francisco. I was wearing white pants, a cross-breasted navy blue sport coat, shirt and tie. During the lecture my left leg started to hurt; it felt like the pain moved in an accordion motion. I looked at my leg and noticed a nice bloody stain on my recently ironed pants. I left before anybody noticed it.

Once home I took my clothes off and started to look at the wound, and I was somewhat grossed out by the slime that came out of it. It wasn't just blood, there was a combination of some sticky liquid mixed with it. I took a deep breath and slightly pushed my finger on the side of the hole to clear it. More of the muck came out and a second later a yellowish worm stuck its head out.

I knew then that I had an alien life form in my body.

I was a bit shocked and had to get a hold of the situation. I took another deep breath and this time I squeezed as hard as I could with both thumbs on each side of the hole. This time the worm came out and fell on the chair. I looked at it as it walked away. I felt relieved for a minute but all kinds of thoughts went through my mind. I didn't know what to do. I thought that my blood could be infected and, if so, I would probably need a blood transfusion. Ah, Ah, Ah!!! MaMaaaaaa! My machismo was now wounded. Meanwhile the worm kept walking...

Finally I got a grip on my thoughts and I grabbed it with some toilet paper and put it in a jar. That was all I could do. I couldn't kill it because then nobody would know what happened to me. People would say that I probably dropped acid or watched too many science fiction movies. I called Mark, but he wasn't home so I left a message on his answering machine saying, "I have just given birth to a one inch worm out of my draining cyst." I wondered if I should call myself "Mother" or "Father." I couldn't arrive at a conclusion so I named my newborn "Junior."

A few hours later my wife arrived and saw me scientifically watching Junior. I explained my ordeal and she went pale. Then she avoided getting close to me. Eventually Mark showed up and I introduced him to Junior. He was fascinated! I personally began to feel proud of the little creature and slowly took a liking to it.

The next day, Mark told me to contact the San Francisco Academy of Science and ask for the head person on tropical diseases. So I did. I got hold of an entomologist, Norman Penny, who asked me to describe the worm. I said it was about an inch long with several loops from one end to the other, yellowish in color ,and had dark black hairs around the 3 center loops, with two types of suction probes at one end. He sarcastically answered, "When did you give birth?" I said, "Yesterday afternoon." He responded, "Congratulations!" Then he asked where it was and I said, "In a glass jar."

CASE REPORT 2: THORACIC OUTLET SYNDROME

Martin Rinard, Stanford, California

I immediately sensed that Junior wasn't a menace to me. He said that it was a very common thing in the tropics and nothing was going to happen. I told Mark to call Penny and get the rest of the details because that was as much as I could absorb out of the telephone conversation.

Later that evening I grabbed some grass and twigs from the yard and put it in Junior's jar and moved it closer to the heater so he would feel more at home. A few hours passed and I got a call from Mark who described to me how Junior was conceived. He described Junior as a young Dermatobiahomonis, a butt fly native to Latin American tropics, that uses human flesh (and other warm-blooded creatures) to hatch its young. He said that butt flies lay their eggs on legs of mosquitoes. When the mosquito bites a human the eggs jump off and in seconds, turn into maggots and burrow into the skin. Once inside they kill each other off until only one remains. The surviving maggot then metamorphosizes into a larva inside the human carrier, emerging weeks later. Then it seeks shelter and continues metamorphosis and eventually grows wings and flies away. He then explained that the black hairs stuck out of the creature's body every time I would press on the wound to stay in my body; a sort of gripping device. No wonder it hurt! He also added that the two suction probes were his feeding instruments. I guess my blood wasn't that bad.

Well, I kept a close eye on Junior through his last stages but a few weeks later he died without fully developing. I believe that the cold Ocean Beach environment got the best of him. Nevertheless, he had a very interesting life. He flew without wings in an airbus, got into the USA without a visa, attended business meetings, frequented several good restaurants and night clubs, had the chance to surf some big waves at Taraval Street, and transcended into Surfing History. Rest in Peace, Junior.

[Ed. For those of you who didn't go to medical school, and for those of you who did but were dreaming of waves and not listening when "thoracic outlet syndrome" was mentioned, it refers to an uncommon cause of shoulder and arm pain, numbness, or weakness. It results from compression of the blood vessels and nerves that run between the first rib and the clavicle (collarbone) or between the anterior and middle scalene neck muscles].

This is a chronology of my experiences with surfing and the thoracic outlet syndrome. Here are the main events:

SUMMER 87: Start board surfing after my first year of graduate school.

SUMMER 88: It becomes obvious that I need more upper body strength. So, I start working out. I do 4-6 sets of 20 pushups and 10 pullups every day. One day I skip the pullups. There is a pain in my elbow, where the ulnar nerve goes through, for about an hour afterward.

WINTER 88: Slack off on the workout, but still do some every now and then. Paddling strength is much improved, though.

SUMMER 89: Start computer programming a lot - up to 12 hours a day, 6 days a week. I occasionally wake up at night with numbness in the outer two fingers of my left and (less often) right hand. One night I wake up and it feels like my left arm and hand below the middle of my forearm is dead. I can still move it but I have almost no feeling.

About this time I also have progressive problems with my neck tightening up. The net result is that I can only sleep with one pillow, otherwise my neck hurts. On the advice of my uncle I go see a chiropractor, who takes some back x-rays from a variety of positions and tells me that my thoracic spine is locked up. He adjusts my neck and spine 3 times a week for about a month, 2 times a week for another month, then 1 time every week or two from then on. This more or less solves the problem I have with my neck. Just for the record, I had my first episode of numbness in my hands before I went to the chiropractor.

Finally, I had an unusual experience while surfing Ano Nuevo on a small south swell. Paddling out, a small wave hits my board and shoves it into my left hand. I immediately feel sharp pains going up my arm and into my shoulder. My arm works just fine, but it hurts. After about 10 minutes I can't stand it any more and go in. After about an hour the pain goes away. The next day I go swimming and the same thing happens. The day after that I'm scheduled to see the chiropractor and I tell him what happened. He manipulates my wrist. This kind of thing never happens again.

FALL 89: I stop programming intensively and my symptoms go away.

WINTER 89 - SPRING 90: I start programming more - 6 to 8 hours a day, 5 days a week. Every time I type I get a tingling sensation on the back of both hands. This bothers me, so I try to limit the amount of time I spend at the keyboard. I also notice that my wrists ache after I surf, so I start wearing canvas wrist bands to hold my bones together. This solves the problem. I also go see one of the doctors at the student health center about the tingling in my hands. He tells me to take lots of ibuprofen. This has no effect one way or the other.

FALL 90: I stop programming as intensively, and don't notice many symptoms.

WINTER 90: I start getting more symptoms as I program more. I also notice that my wrists ache. I occasionally get numbness in my hands, sometimes along the distribution of the ulnar nerve, sometimes the median nerve. Both hands are affected. I also notice a bizarre effect while surfing - even though I wear gloves, the tops of my first fingers tend to go numb even though the rest of my hands are not numb. When I get into my car, turn the heat on and drive back, my hands hurt

CASE REPORTS

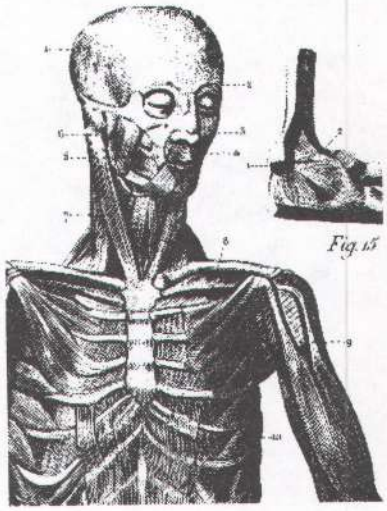
for about 30 minutes as they warm up.

Spring 91: I get tired of trying to avoid programming, so I go to another doctor and describe my symptoms. This guy thinks I might have carpal tunnel syndrome, but he isn't sure and says I should go see an orthopedic surgeon. The orthopedic surgeon tells me he doesn't do diagnoses - I need to go see a neurologist. I see the neurologist. He does a bunch of standard neurological tests - can I touch my fingers together with my eyes closed, do I have reflexes, etc. I'm normal. He then starts testing the nerves in my arm. My left ulnar nerve at my elbow is extremely sensitive to tapping, my right ulnar nerve is also sensitive but less so. Both median nerves are sensitive at the carpal tunnel. By sensitive I mean that when he taps the nerve with his rubber hammer I can feel a painful sensation shoot down into my hand along the distribution of the nerve. He tells me to get an x-ray and come back for an EMG. I get the neck x-ray and there are no extra bones hanging around to irritate my nerves - I'm normal. He does the EMG - tests three things (sensation, something and something) at the carpal tunnel and at the place where the ulnar nerve goes through the elbow. He tells me that my nerves are at the very slow end of normal, and for a guy my age they should be faster. They aren't slowing down in either of the places he tested, though. He sends me off to a hand therapist for ultrasound and general therapy. The physical therapy place is low on hand therapists when I go, so they give me a normal therapist the first few times. This person evaluates my flexibility and balance, and hits the jackpot when she pulls my arm back over my head and my hand goes numb. She suspects thoracic outlet syndrome and does this test called the Adson's maneuver. This involves holding my arm back, taking my pulse then having me turn my head. If my pulse goes away, I'm positive. It turns out I'm positive and she is real surprised. She says she's never seen anyone with a positive Adson's test before, and calls over her student intern to try it too. Every time I see her she stretches my shoulders and arms, trying to loosen me up. When I leave I notice my hands feel noticeably better, even though I hadn't thought they felt abnormal when I went in. She gets me to improve my typing posture and do a bunch of exercises to strengthen my upper back muscles. These involve bending over and lifting weights. I notice a big improvement, so I start stretching on my own by hanging from pullup bars for about 10 or 15 minutes at a time, alternating arms. I also start working out every night on the muscles in my upper back. Things get better fast, my paddling power goes up and my hands feel good for the first time in a long time. I go back to see the neurologist after a month or two, and he tells me I've got thoracic outlet syndrome and to keep stretching and lifting weights. I should say that the whole stretching regime focused on muscles that stretch when you move your arm over your head - pectoral muscles, etc.

Fall 91: I get rear-ended and hurt my neck and upper back. This stops the stretching and weight lifting. My neck and upper back hurt on and off for about a year. I go back to see the chiropractor for a couple of months.

Spring 92: I start getting tingling symptoms in my hands as I type again, and sometimes wake up with a little numbness at night in my hands. I also notice that my wrists are starting to ache after I surf. This is the first time I've had problems surfing - I surfed Ocean Beach for several years with no problem, but now my wrists are starting to give out.

Summer 92: I notice that it hurts more and more to surf. When I go out, my wrists start hurting about 2 hours after I get into the water. They continue to ache (feels like an overuse injury) for about a day or two afterwards. I surf a big south swell in Santa Cruz for several days, and it just isn't worth it any more. By this time Stanford has switched medical providers from the Palo Alto Medical Foundation to the Stanford



Hospital. I go back to see another neurologist, tell him my history and say that it seems to be getting worse. What do I do? He tells me that there is a lot of controversy in the medical profession about the existence of this syndrome, and that I'm the first person he's ever seen who gave him as clear an explanation as I did. He has no advice. I go see another physical therapist and she gives me some exercises from the Mayo Clinic. This physical therapist tells me that scalenes are potentially involved with this syndrome, and has me do some scalene stretching exercises. This helps.

Fall 92: I start using a bodyboard. This helps a lot - I can paddle some of the time and kick with my fins the rest. The problem is that the leash keeps pulling out in Ocean Beach surf. So, I get a kneeboard and I can deal with that OK. This fall I stand-up surf for the last time - Moss Landing, one to one and a half times overhead and clean. It was fun, but I was way out of shape in my upper body and had problems with my paddling power.

Winter 92: I'm working hard finishing my thesis. It has been a bad winter for waves anyway. If I don't type too much my hands are pretty much OK. This summer I'll try to start stretching and working out again. If everything goes OK I may be back to surfing Ocean Beach. Or, failing that, I may take a faculty position on the East Coast or something.

CASE REPORT 3: BEE STING BASICS

Gary Bignami, MS, Waialua, Hawaii

I had an experience several years ago that might be of some value to travelling surfers. Actually, I wasn't on a surf trip this particular time - I was canoeing on the Colorado River with a group of people from UC Santa Barbara. This was when I was studying pharmacology and, as it turns out, I had an opportunity to apply some of my education in an emergency situation.

Most people know someone who is allergic to bee-stings. For some people this allergic response can take on a life-threatening form called 'anaphylactic shock'. Anaphylactic shock is characterized by a rapid drop in blood pressure and difficulty breathing, due to bronchoconstriction. You can die from this. Folks that know they are allergic to bee-stings carry a kit containing a syringe full of epinephrine (adrenaline). A quick intramuscular injection of the epinephrine after the sting usually stops the allergic reaction short of death.

One of the guys on this trip was allergic to bee-stings. Naturally, he forgot to bring his emergency kit and, inevitably, he was stung by a bee. Almost immediately this guy's eyes and throat started swelling and he began to feel lousy. No one knew what to do, We were afraid that he would go into anaphylactic shock and we could do nothing to stop it.

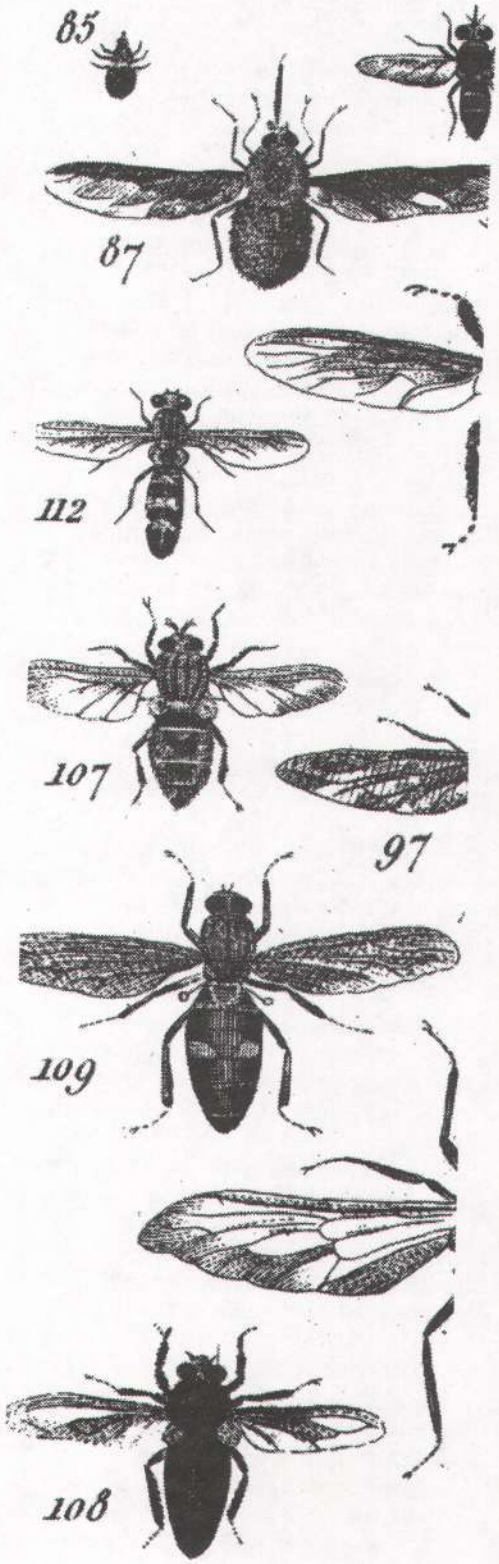
I remembered from my pharmacology classes that the primary cause of allergic anaphylactic shock is the massive release of histamine into the bloodstream. Histamine is a potent vasodilator, which is why anaphylactic shock causes a dangerous drop in blood pressure. This is also why epinephrine is used to counter anaphylactic shock - it is a very potent vasoconstrictor. I reasoned that if histamine was the problem, then an anti-histamine might help our ever-swelling friend. I don't remember which antihistamine I had, but probably one containing chorpheniramine and pseudoephedrine. He took the capsule.

I was concerned that a capsule full of antihistamine would either not be powerful enough to block the shock syndrome, or that the drug wouldn't get into the bloodstream fast enough. Apparently it worked though because the symptoms stopped progressing and within an hour or so he was back to normal. I think we all would have felt better if he had brought his emergency kit but, short of that, the antihistamine seemed to help. Of course we had no way to know how bad it would have been without the antihistamine. Medical students are taught that antihistamines are of little value in the treatment of anaphylactic shock because the syndrome is caused by the release of a number of substances into the bloodstream - not just histamine. But, antihistamines may be somewhat effective if they are administered before the complete absorption of the venom. (1) They are probably better than nothing, in any case.

This story should be relevant to travelling surfers, not only because of the threat of bee-sting. If I'm not mistaken, many of the same people who react to bee-stings also react to coelenterate stings such as jellyfish, coral, and sea anemones. For a surfer, especially in tropical areas, jelly fish and coral are probably a more common threat than bees. So if you're allergic to bees, carry your emergency kit - you might need it if you get stung by a jellyfish. As a backup, it might also be a good idea to carry some antihistamine capsules.

If you're going to a foreign country, be sure to find out the laws regarding bringing in prescription and over-the-counter drugs. Some customs officials are not sympathetic to foreigners bringing in loaded syringes and needles or tablets, no matter what they contain.

1. Miller, R.L., Insel, R.A., and Melmon, K.L. (1978) "Inflammatory Disorders", Chapter 13, pp. 689-690. In: Clinical Pharmacology: Basic Principles in Therapeutics, 2nd Ed. Melmon and Morrelli, eds. Macmillan Publishing Co., Inc. New York.



CASE REPORT 4:
Protection Against Jellyfish Stings

Danny Estrella, MA, Foster City, California

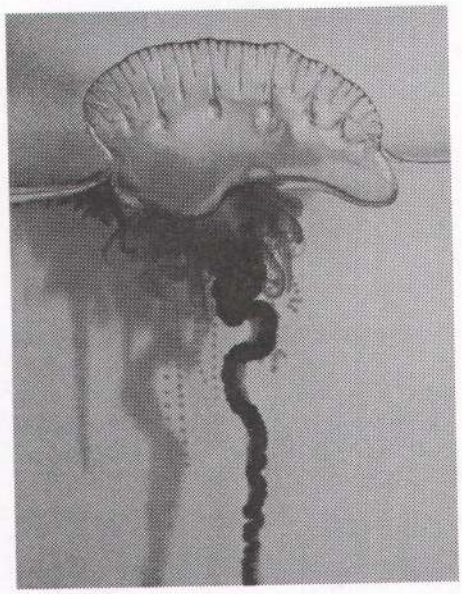
[Ed. Small world? Surfer magazine received this jellyfish protection piece earlier in the year, and forwarded it to me for possible inclusion in the Surf Docs column. It didn't seem quite right for "Surf Docs," but perfect for "Surfing Medicine," and I put it in the hopper for this next issue. However, I forgot to let the author know of its status (bad, bad editor!). Three months later, April 3, fifteen to twenty foot Mavericks, 3 of us out. A boat appeared in the channel and began taking photos. A three-wave, over 20-foot, completely top-to-bottom set step-laddered in, snapped my leash (dashing my gorgeous 10'10" gun into the horrendous bus-sized boulders), decimated Three-Piece (a downtown lawyer with a propensity for breaking boards into three pieces), and pulverized SMA-member Andy Lillestol (who has a seizure disorder, had seized the day before, and was on his first go-out at Mavericks!). When the set had passed, the boat swooped in to pick us up, and we gratefully accepted a ride back to the harbor. We introduced ourselves en route. Upon hearing my name the photographer said: "Hey, aren't you the guy who ended up with my jellyfish article?"]

In tropical and subtropical regions of the world, jellyfish stings cause fatalities by means of venom-injecting nematocysts. The nematocysts are found in the jellyfish's tentacles, and the venoms are considered to be among the most potent of all known venoms. The venom is released from tubules or small rod-like structures which actually penetrate skin on contact. The effects of the venoms range from local swelling of the skin to long-term reactions such as loss of pigmentation, or even death. The toxic effects vary according to jellyfish species, duration of contact with the nematocysts, amount of skin area affected and individual susceptibility of the victims.

Researchers at the University of Kiel in Germany (1) were interested in finding protection against jellyfish stings. In order to test whether skin care products can product against nematocyst discharge, they tested two sun screens and one lotion applied to pieces of live human skin exposed to Cyanea capillata tentacles. In those tests, 100% of nematocyst tubules had discharged venom upon contact with unprotected skin. However, the percentage of discharged nematocysts observed on skin surfaces protected by the test products ranged from only 7.7% to 38.2%. In addition to this marked reduction in nematocyst discharge, the relatively few discharged tubules on the protected skin showed malfunctions and a failure to penetrate the skin. These results indicate that human skin may be protected against nematocyst discharge of jellyfish venom with the application of sunscreen or lotion.

Last July, while surfing in the Cabo San Lucas Area at the tip of Baja California, Mexico, I was stung by jellyfish of the Physalia physalis variety, commonly known as Blue-bottle (see photo). The body of the jellyfish was about 3 cm in diameter, resembled a bubble floating on the water, and had a thin, beaded-thread-like tail approximately 50 cm in length. However, the sting was much less severe or absent in the areas where I applied a water-resistant sunscreen (Durascreen). My personal experience thus supports the German research and I recommend using a waterproof sunscreen to protect against jellyfish stings.

1. Heeger T, Moller H, Mrowietz U: Protection of human skin against jellyfish stings. Marine Biology 1992; 133:669-678.



Physalia physalis: Ouch!

CASE REPORT 5:
Arm Trauma

George Piche, Gilford, New Hampshire

I had an interesting injury last June. Paddling out through a long and tiring shorebreak, I was knocked sideways, and the following wave ripped the board from under me. The board flipped, and as I grabbed for it, one of the thruster fins hit the underside of my arm. It felt like a good solid punch, and I stuffed the board back underneath me and paddled back outside.

A few minutes later, the pain was not subsiding and the power not returning to my arm, so I turned and surfed in to the beach. I could feel a fair-sized swelling under my wetsuit (3 mm smoothskin in that area), and after removing the suit a cleft about 1 1/2" deep was visible in the belly of the long head of the triceps muscle. Both the wetsuit and my skin were unmarked. I spent a few days in a fiberglass splint until the swelling went down, and then wore an Orthoplast splint, long arm, fixed at 45 degrees. I was forbidden to do resistive exercises for three weeks, and then only allowed to increase slowly.

I resumed swimming the day after the incident, doing the breast stroke with one arm, half a mile a day, and was only marginally slower than with both arms. A week after the incident, I bought a new 48" swallowtail skimboard and learned to throw it without that arm, more or less. Didn't venture out into the break much. Back to surfing after six weeks.

Nine months later the cleft is still very visible with the elbow at full extension; only slightly visible at flexion. During pressing exercises with weights, there is a "pulling" sensation, and the muscle feels unbalanced. I have been warned that I could eventually finish the job and tear the muscle in half. It was mentioned to me that such injuries (usually limited to the tendons) were often linked to steroid use. I pointed out that at 5'10" and 150 pounds, if I were using steroids I sure wasn't getting my money's worth.

See you in the water, George.

SURF DOCS
"HEAVY D" CONTEST WINNERS

Dear Readers,

We challenged you to send us your tales of self-survival and medical catastrophe, and you have delivered! We received scores of incredible stories, each with powerful lessons that bear re-telling. Some of the clear winners are presented here. Each will receive the highly coveted "Surfer's Medical Association" T-shirt (not sold, only earned!). We're sorry we couldn't vote in some of the more innovative letters, such as the melted surf wax cure for hemorroids. Maybe next time.

"DESCENDED TESTICLE"

Dear Surf Docs,

It was early A.M. at 1st Point Malibu on a somewhat sizeable day in January of '64. I was wearing a short Farmer John wetsuit. I took off pretty deep on my first wave and ran to the nose of my 8'6" G&S. My fin snagged kelp and my board abruptly stopped. I grabbed for the nose of my surfboard, and over the falls we went. With the board submerged, it suddenly shot skyward with the fin slicing between my legs. I surfed a while longer, having a great session.

I had noticed a nagging pain in my groin area and headed back to shore. Opening the leg of my wetsuit to let the water out, my leg turned blood red! I ran to the bathroom to check it out. I peeled my suit down and to my SHOCK, my left testicle unraveled downward towards the ground!

It was like when you're a kid and you peel off all the white on a golf ball. The inside... the inside was like rolled up rubber bands. I was fourteen years old and tried to remain calm, but I FREAKED! I gathered up the bloody mess in a paper towel and literally held my future in my hands. WOW! What was I to do? Finally my buddy René comes in to see if I am all right. He sees my face white as a sheet, looks down and we both freak! He drives me to some Malibu emergency facility. It wasn't open, so we wait in his car, while I bleed. Well, after a lot of pain and five shots in my other nut, they fixed me as good as new. I really don't even have a scar since the balls are so wrinkled anyway. Funny thing - my wetsuit wasn't even cut.

Larry
Fort Point, San Francisco, CA

P.S. Sometimes I wonder if I should invent a cup for surfing, considering today's boards have so many fins!

Dear Larry,

Glad you survived. A few points bear emphasizing:

(1) Your wound was back in 1964, when the water at Malibu was presumably cleaner. Nowadays it appears that such wounds often become infected. Before you let any doctor sew up a surfing-related cut, be sure the wound is thoroughly flushed and cleaned (we'd recommend at least 5 minutes of flushing with a sterile solution - set your watch while they're doing it).

(2) It is surprisingly common for wetsuits not to be sliced in such situations, but for the underlying skin to be cut. This is a testimonial to how flexible and resilent wetsuit material is compared to our skin. If you are struck hard through your wetsuit by a sharp or hard object while surfing, and the wetsuit doesn't seem damaged, peel it up and look under it to be sure you are okay.

(3) The scrotum, the medical name for the wrinkly skin sack that contains the testes (balls), is nature's own "protective cup." But, as your case demonstrates, it sometimes isn't enough. We would recommend for male surfers to use any and all groin protection to be taken, especially if you are learning how to surf. This could range from the simple act of wearing speedos or trunks under your wetsuit to a jock strap or a protective cup (as is worn by athletes in many other sports). If not wearing a wetsuit, wear trunks that have some degree of protective support (or, again, a protective cup).

"CLIFF DWELLERS"

¡Ola! Surf Docs,

Six of us Trilogy Club members (Phil Traeger, Phubba Hogan, Joost Van Adelsberg, Gary Kime, Mark Paulson, y yo) were on a three day bachelor party trip camping out at Punta San Jose, Baja California Norte on labor day weekend of '88. After an incredibly fine thunder-storm afternoon, several surf sessions, flash floods, many stories, and a huge spaghetti dinner, a neighbor wandered over to our camp to say "Hey, Howdy," and promptly walks off a sixty foot cliff! "OUCH! Hey, I'm BOUNCING!..." Head meets rock.

Well. The six of us put down dinner and said "Where's the flashlight? First aid kits? Ah, Heck, we gotta save this dude and we never even met him!" The first crew sprints down the quarter-mile trail with duct tape and first aid kits. Phubba and I ready his new Vanagon Westfalia for ambulance duty.

The guy is semi-conscious, both jaws broken, possible internal, spine, and head injuries. We immobilize him as best we can on Phil's 8'4". The guy weighs about 220 lbs.! We have to carry him 300 yards back to the car, trying not to drop him, and hey, did I mention that we had quaffed a few freshies ourselves that day?

OK! It takes 45 minutes to get to Santos Tomas over the wet Baja desert. Then on pavement, another hour to Ensenada. He's bleeding and throwing up all over Phil's van. We had to stop twice on the way to the hospital to see about a pulse. So somehow, he lived. We definitely saved his life. But we had a heck of a time getting the blood and pellets out of our ambulance.

Joe Bob, the Cliff Dweller
Hermosa Beach, CA

P.S. There are many more details to this story. Strong first aid knowledge

SURF DOCS

and common sense of our crew was critical. In Baja and other remote areas, people should act less crazy, not more! And yes, I myself fell off a cliff of considerable height as a U.C. Santa Barbara freshman!

Dear Joe Bob,

It is a little recognized fact that cliffs and the hazards they pose play a big role in the life of the hard-core surfer. If the waves look good enough, surfers can be among the finest rock climbers in the world, and they do it in slaps and one-handed (board under the other arm).

Every once in awhile, someone takes the plunge. Luckily, you guys were there, and knew the right things to do. Using duct tape and a surfboard to immobilize and carry him out of the there was brilliant. We assume you used the tape to strap his head and neck in a immovable position, so that when you transported him there would be less chance of worsening a spinal cord injury (if present).

Quickly transporting him to the hospital, even if it was a long distance, and in Mexico, was also good-thinking. Some surfers might have been inclined to wait and see how he was before deciding to hit the road. If a person has suffered a head injury and is only semi-conscious, or if internal or spinal injuries are suspected, waste no time. Get moving. Things can go from bad to worse in minutes.

We haven't heard of any good courses teaching common sense, but all surfers should be inspired by your example and be sure to have basic and preferably advanced first aid and CPR training. Emergency medical technician (EMT) training is worth considering - it only takes 6 weeks, and whether you go to work as an EMT, at some point later in your life, you will use what you learn to save someone else's life. To find out more about it, call your local Red Cross or ask at the nearest fire station.

Finally, your point about acting less crazy in remote places deserves underscoring. Especially dangerous is getting drunk. It sound as if quaffing freshies was the major cause of this poor sot's fall.

As for your own fall in Santa Barbara, maybe we'll send you our special SMA T-shirt with a built in roll-bar!

[Published May '93 Surfer, vol. 34, no. 5]

"SUFFOCATING SEAWEED"

Dear Surf Docs,

I can recall one particular self-survival incident that occurred a few years back at D Street, near my house. During a rough winter storm, the waves had pushed piles of rocks all along the north counties and changed the coastline. It was complete "Victory at Sea" conditions, with constant close-outs and shore dumpers, making it extremely difficult to get out.

My friend and top bodyboarder, Paul Roach, was one of only maybe three guys out. At the time he was younger, but he had much more experience than most of the kids. His endurance and ocean knowledge allowed him to catch a few and actually make something out of the soup.

I watched him paddle for a large double-up close out, but as he took off, an extremely large clump of seaweed floated up the face, and he got sucked over the falls inside of it! Paul was known to get held under for lengths of time, but this was different. I started running down to the water immediately.

I saw only one flipper sticking out of the mass of kelp. It was kicking from side to side. Then the clump, with Paul in it, got sucked over another wave! He was trapped underwater, in it, for about one minute, maybe even longer. Then suddenly he burst up, his face lobster red, clumps of seaweed in each hand. Then he spit a little kelp out - he told me he'd had to bite his way through the tangles of kelp! He hadn't panicked. It was a smart move in a dangerous situation.

Chris,
Encinitas

Dear Chris,

Big-wave riders will tell you that the key to surviving a lengthy hold-down is to stay calm. To panic is to lose the ability to find a way out of a dire predicament. Your friend, Paul, didn't panic, and he saved his own life. Arms and legs bound up, he had his wits about him, and realized that the only tools he had for getting free were his chompers, and he used them. That's survival!

It appears that we humans are genetically programmed to panic in the face of new and frightening situations. The "fight or flight" adrenalin surge can be life-saving: muscles get a burst of power, reflexes speed up, we feel no pain. However, the body's demand for oxygen steps up incredibly - just what you don't want to happen when you're trapped underwater. Precious oxygen reserves are used up in seconds if you begin thrashing and flailing to get to the surface during a hold-down.

The way to overcome the instinctual drive to panic is to practice; rehearse frightening situations, make them familiar. For instance, with each wipe out (the bigger the wave, the better), consciously focus on making yourself as limp as possible - not struggling in any way, just letting the white water take you. And then, after it has let up, stay under for an additional five seconds. Make yourself count the seconds. Control your urge to bolt for the surface.

The full exercise is to practice staying under so long that a second wave passes over you, a rehearsal for one of

SURF DOCS

the most dreaded occurrences in surfing: the two (or more) wave hold-down. Prove to yourself that you can survive it, and then if it actually happens, you'll be far less likely to panic.

[Submitted February '93, to be published]

"Heavy D Superman"

Dear Surf Docs:

About two years ago, a couple of friends and I took a surf trip up the coast to Northern California. One day we found an empty stretch of sand and decided to pull over and check out the conditions. The morning air was damp and the road gleamed from the night's rain. We stared down an embankment and watched sets peal off. Just as we turned around to get our gear from the van, a lady in an early model jeep squealed around the bend, lost control, streamed off the side of the road and landed on the beach. I yelled for my friend Eric to run down the road and find the paramedics, and Tom and I ran down the embankment to see what we could do. The jeep was upside down but the woman was still alive. But the seatbelt trapping her in the seat made it impossible to get to her.

Suddenly this military guy comes running up the beach at full throttle. This is where the story turns amazing. This "soldier" starts to push on the jeep and within seconds has it back on its wheels. I couldn't believe it. This average-sized guy lifted a vehicle ten times his weight and with virtually no effort.

I instructed Tom to get two pieces of wood and something to tie them together with. Our mystery man removed the woman from the jeep and laid her on the sand. He explained he didn't know what to do next. I told him to take off his sweatshirt and stick it under her head. She had a fractured leg and a decent cut on her arm. I told the guy to apply direct pressure to the cut and to watch for signs of shock. Tom ran up with some wood and a surfing leash, and I splinted the leg and tied it down with the leash. Margie was doing fine as Eric returned with the paramedics. She thanked us as they took her away. I smiled to her as the cops asked about our "soldier" and I turned to look for him. He was gone! Our Superman left just as quickly as he came. I guess that adrenaline stuff really works.

I talked to Margie a couple weeks later and she was recovering nicely. She asked about the stranger. I told her about his mysterious exit and she was convinced he was sent by God. I don't know about that, but I know we couldn't have done it without him. So if you're out there mystery man, I thank you and so does Margie.

Big Wave Dave
Encinitas, California

Dear Big Wave Dave:

Your letter brings up all kinds of interesting points. First off, your letter is the third "Heavy D" letter about car accidents. Surfers love to talk of the hazards of big waves, sharks, and crowded surf, but the reality is that automobiles pose a hazard to surfers that pales everything else by comparison. Surfing is safe; it's driving that is dangerous. Buckle up, minimize your driving, and look for thrills in the water instead of on the pavement.

It is interesting that you had a good idea of what to do; how to apply direct pressure and how to splint a fracture; also very nice use of surf gear as medical equipment. It sounds like you've had some training. Surfers seem to happen upon an unusually high number of accidents, probably because they spend so much time cruising around looking for surf. We strongly recommend that surfers get as least some first aid training, perhaps even EMT certification. We've said this before, but it's worth saying again: a surfer with EMT training is more useful at the scene of an accident than the average doctor.

One thing that makes us nervous is the way your "superman" removed Margie from the jeep. You don't give much detail, but yanking somebody from wreckage without protecting the neck and head can lead to spinal cord injury and paralysis. Virtually every car wreck generates forces that could cause spine injury. Removing somebody from a car without tweaking the neck or back is an art; it's worth getting some training. Call your local Red Cross.

Finally, it is amazing but not surprising that the mystery man was able to lift the jeep. In an emergency, your body releases two kinds of chemicals to help you cope: adrenalin and endorphins. Adrenaline gives muscles a burst of power; endorphins are natural pain killers. In turns out that our muscle strength is limited by pain, and people who are feeling no pain (like users of the drug PCP) can crank muscles so hard that they break their own bones. Adrenalin and endorphins allow us to go beyond normal limits but there is a price to pay: once the emergency is over, the result is often torn muscles, strained ligaments, and sore tendons. We wouldn't be surprised if superman spent the next day at the doctor's office.

[Submitted February '93; to be publsihed]

"Heavy D Father and Son"

Dear Surf Docs:

It was Christmas 1967, and I was 14. My dad had just made the long cross-country drive from Texas to Acapulco, Mexico with my 9'4" Rick longboard racked on top of our Cadillac (all Texans drove Caddies before the price of oil went down). That board had the most beautiful deep transparent blue glass job. I used to stare at it for hours. Anyway,

SURF DOCS

my mother, sister and I met him at the Acapulco airport, which was adjacent to a then-mostly deserted stretch of beach where we were renting a small cottage. I had been surfing about two years and was a little leery of tackling the six-to-eight foot Puerto Escondido-like waves in front of the house. When one of those waves closed out, you could feel it shake the beach even in the yard.

One morning we watched as fisherman lit sticks of dynamite and threw them into the shallows to stun the fish. They would wade out and pick them up. Pretty soon some fairly large sharks showed up for breakfast and chased the fisherman out of the water. I was now doubly unsure about going out!

About this time, a man came running down the beach from the north, waving and shouting. As it turned out, children had been wading in the shallows in their inner tubes and had been swept out by the rip. My dad and I and a Mexican teenager humped it about a quarter mile up the beach with my 26-pound longboard. Sure enough there were three little girls, aged 3 to 5, crying and screaming just inside the main break. My dad swam out and I paddled out with the teenager hanging on. I managed to grab two of the girls by hooking my hands through their tubes; the teenager got the other one. Then we had to rescue the fisherman who were tired from the heavy surf. Pretty soon there were eight people hanging on my board. Slowly we swam it in. When we got to the beach, the father threw up. There was a lot of emotional exhaustion and everyone just lay down. The father tried to pay us but my dad refused it.

The funny thing about this experience is that I never felt like I did anything special for years afterward. I just forgot about it. Then, while I was going through the agony of separation from my wife and children, I was trying to rebuild my sense of self-respect by writing a letter to a woman in a class I was taking and I remembered it out of all my accomplishments. For so long I had thought my surfing was not of serious value in life, and then all of a sudden I was finding so much value and dignity in it. It was my interest in surfing that was directly responsible for saving the lives of those children and quite possibly of their father and a few fisherman as well.

I hope all heavy locals remember this the next time a Cadillac with Texas plates pulls up at their local spot.

Curtis, Texas

Dear Curtis:

We hear lots of stories of surfers rescuing people in the ocean; riptide-swept tourists, plane crash victims, other surfers. It seems that surfers are uniquely equipped for such duty because they are in shape, they know the ocean, and most have an attitude that makes it impossible for them to resist attempting a rescue. Most surfers are comfortable in the water and intuitively use their boards and bodies well there, but it's worth learning the techniques of single-surfer rescue - see Jim Bradley's article in the December 1987 issue of Surfer magazine.

Your experience rescuing those people in Mexico was a dramatic example of the value of surfing in your life, but it's sad that it took such an event to let you see it. Sure, an ocean rescue highlights the value of surfing skills, but you don't need a rescue to find value in the surfing life. Consider:

(1) Surfing is a great way to stay physically fit. The fun of surfing provides its own motivation and being in the ocean keeps you out of dangerous places like aerobics classes and fitness clubs.

(2) Surfing keeps you happy. The stoke of surfing spreads to the rest of your life, making you healthier and more productive. Nothing lowers your stress level like a good session, and lower stress means less heart disease, cancer, depression, and a host of other modern ailments.

(3) Surfing provides a natural rhythm and a link to the natural world. It provides a break from the artificial routines of life, a chance to become immersed in the natural rhythms of tide and swell.

We could go on about the spiritual value of surfing, the value of the surfing community in an alienating society, or the health effects of having a sense of freedom and control over your own life. The point is this, though: There is a disturbing sense of puritanism to the notion that surfing becomes valuable only when it leads to a socially-applauded event like a rescue. The truth is that surfing, by giving you a rich and ongoing source of stoke and beauty, leaves you happier, healthier, and ultimately more useful to yourself and those around you.

[Submitted February '93; to be published]

"A Note of Appreciation"

Dear SMA:

I would like to thank Drs. Mark Renneker and Tony Moore plus all of the other contributing physicians to both the SMA and the Surf Docs column for the advice given to me and to countless others.

A number of months ago, I wrote into the Surf docs column regarding diabetes (IDDM) and the implications that it had placed upon my surfing. Their advice and recommendations have made a world of difference for me. I am truly grateful for their service and appreciate the time they took to write me back and explain in detail all of the interventions to be taken in order to help alleviate my situation. I find the Surf Docs column to be extremely interesting and I always look forward to reading it in each and every issue. Thank you again fro all of your help and keep up the good work!

Sincerely,
J.M. Bennett

LETTERS

FRED'S PEAK

AW, SHUCKS

Dear SMA:

The Gretchen story (Issue #9) brought tears again, but not only to me. I got a letter from an Australian who couldn't get past the 2nd paragraph.

However, this letter is not about me. It is about the wonderful people who put together SMA. I have been very touched by the things the SMA has done in countries that our government seems to completely neglect while sending large quantities of food and other sundries to those places where the publicity is good. None of you has done anything but put forth in love. None of you are the typical medical people who are mostly worried about hurrying to buy a paper and check the Dow Jones averages, or to invest in something quickly so the government does not take the excess of profit that many doctors reap.

The SMA jumps in and saves people, extends love to those who are lacking, and does not ask for anything in return. It is not a religious organization and perhaps that is one reason for its purity. The people in the organization are far more in touch with the universality of all, the oneness of the Universe than any church dogma.

It has always touched me how being a surfer and professional person cuts through the up-tightness immediately. There is something magic about devoted surfers coming upon a scene. I never wanted to belong to any organizations, but cherish my honorary membership in the SMA. It's like the old San Onofre Club membership. When people got divorced they fought more over the membership than money or kids.

Your conferences in Northern California mostly impress me. They touch of years I grew up in and was fortunate enough to know that it would not be that way forever. I cherished it while it lasted: the redwoods, the streams filled with trout and salmon, the virgin surf spots, abalone reefs, Steamer Lane, San Francisco and many others. NO CROWDS! No board manufacturers, no rules on the beach. You could build a fire and camp wherever. You could let your dog shit and run wild and if the dog bit someone you didn't get sued. My favorite time of all was when I built a place right in the sand dunes, when they existed, near Santiago Street. Those little mounds that are now called dunes just do not cut it. We used to take barrel staves, tie them on our feet, and ski down some of the sand dune slopes.

Take a bow all you great members of the SMA!

Fred Van Dyke
Kailua, Hawaii

THE FRENCH CONNECTION?

Dear SMA,

Medisurf is an organisation of Health Service Professionals based in Biarritz, France. There are members from all over France (N.W. France, Lillie, St Malo...)

Our membership fees:

Life Member:	$100
Supporter:	25
Health Professional:	20
>60 years old:	Free
Baby:	10
Opportunist:	25

We would like Medisurf to become the SMA affiliate in France (or in Europe). How do we go about it? Do you have a contract of adhesion? What are the conditions (costs, benefits, obligations)?

For the moment we are a small group (12 members), and don't have many resources. But maybe if we belonged to SMA we would have more to offer our Health Professionals (magazine, trips... etc.), and they wouldn't hesitate to pay their dues each year.

We hope to hear from you soon. Our address in Biarritz is:

Medisurf
44 rue Luis Mariano
64200 Biarritz, France

Catch a few for us.

Docteur D. McNary
GAEL
35 1 03200 8

LISTE MEDISURF ADHERENTS 1993

CLARKE Phillipe, medecin
47/131 Louviere 59 800 LILLE
Tel: 20 55 64 48 (500 f, a vie)

DARRIEUSSECQ Jean, pharmacien
Residence Le practice Bat A avenue du golf 64600 ANGLET
Tel: 59 22 07 65 et 59 03 59 69

DUCOUDRE Michael, cardiologue
Belvedere A1 all Aristide Brillant 64600 Anglet (a vie)
Tel: 59 03 28 12

DOASSANS-CAZABAN Olivier, Radiologue
8 rue du roi soleil 64000 Pau tel: 59 30 64 64 (O), 59 30 73 15 (H) (500 f a vie)

GARMS Phillipe, Radiologue
Villa Baccharis, Chemin des Falaises
64210 Guethary Tel: 59 27 65 60 (O), Tel: 59 27 30 08 (H)

LONGUEFOSSE Olivier, ophtalmologiste
109 avenue du marechal Gallieni 33700 Merignac Tel: 56 24 92 62 (a vie)

MCNARY Dennis, medecin
rue de las liberation 35290 Gael
Tel: 99 07 72 13 (100 f)

NOEL alain, dentiste
105 rue Laharpe 33110 Le bouscat
Tel: 56 08 37 77 et 56 08 02 97 (100 fr)

LETTERS

TULOUP Patrick
2 Avenue Paul Deroulede 35 400 St. Malo
Tel: 99 40 84 28 (O) Tel: 99 40 12 56 (H)

TARDIEU, Charles, medecin
7 bis lot Lesbactes 40440 Ondres
Tel: 59 45 33 86 et 59 45 32 82 (250 fr)

VINCENT Pierre, medecin
44 rue luis Mariano 64200 Biarritz
Tel: 59 23 22 61 (a vie)

YOH, Phillipe, Dentiste
24, avenue Victor hugo 64200 Biarritz
Tel: 59 22 02 52 (O), 59 03 68 50 (H)

[Ed. A couple of years ago, one of the French surf docs, Pierre Vincent, wrote with a similar inquiry, and was advised that while they were welcome to organize themselves in any way they wished, there was no means within the SMA to create sub-divisions, that our strength lay in being truly international. To receive the journal and invites to conferences they needed to become dues-paying members of the SMA; if they wanted to have separate dues for their own group, that was up to them.]

PHOTO CONTEST: NAME THIS SPOT

Dear SMA:

Here's a photo contest for you. The prize for the winner will be something between nothing and a free trip to Fiji.

Question: Name the location of this well-known third world watering hole overlooking a surf break. Visitors leave their calling cards on the board, and if you're a "SURF DOC" it seems you power in and cover up twenty other cards. Hint: Mushroom tea is served at every full moon party.

PS: Any SMA members with a New York address are disqualified.

Sincerely,
Ron Bockhold

LETTERS

DR. JOEL

Dear SMA:

How are you? Here is an update about my work with surf medicine and the SMA in Brazil since May 1992.

Early last year, inspired by the SMA column in the USA and Dr. Geoff in Australia, I initiated a medical column in *Inside Surf* Magazine, a monthly produced in Santa Catarina and distributed around Brazil. In the September edition, I formally introduced the SMA, and have been developing a first aid course for Brazilian surfers. I was also invited to talk on two Brazilian TV stations about the SMA.

I would like to introduce you to the idea of an SMA conference in Brazil. There are two locations that could handle it. The first is in the south in Florianopolis City in the state of Santa Catarina. Florianopolis is a small island with 42 beaches and some great waves. There is good touristic infrastructure and it is quite safe. The best time of the year is spring (September/October). The second location is the island of Fernando de Noronha – the "Brazilian Hawaii" - and offshore island in the Northeast state of Fernambuco. I think it would be possible to organize a meeting there; the best time of year there is summer (January/February).

At this time I would like to renew my affiliation with SMA. Please let me know your thoughts about an SMA conference in Brazil... I could coordinate the participation of a Surfrider Foundation team at this meeting.

Keep in touch, and Good Waves,

Dr. Joel Steinman
Alameda Dos Aicas 392 ap. 55
Sao Paulo S.P. BRAZIL 04018-001
Phone/Fax 0132 864423


DOCTOR

ASSOCIAÇÃO MÉDICA DOS SURFISTAS

SURFING MEDICINE

Grande Kalawa da medicina do surf

SURFER'S MEDICAL ASSOCIATION
PRINCIPAIS OBJETIVOS

JOEL STEINMAN é medico e estudante pela Faculdade de Ciencias Medicas da Santa Casa de Sao Paulo, tendo exercido a medicina e surfado no Brasil, França, Indonesia, Chile, Hawaii e Austrália.

THE GREEN ROOM

BLUE WATER TASK FORCE HEALTH SURVEY

The Surfrider Foundation is compiling data regarding the health effects related to swimming or surfing in polluted water. Would you take a minute to answer a few questions? Thank you, in advance, for your time.

Name_____ Date_____
Address_____ Birth Date_____
City _____ St_____ Zip_____ Sex (Male)_____(Female)_____
Phone (____)_____

Within one week after swimming in the ocean, have you ever experienced any of the following conditions? (If you have never heard of the diagnosis, check "no".) Time of Year

			Jan/Mar	Apr/June	Jul/Sept	Oct/Dec
1.	an ear infection	yes____ no____				
2.	a sinus/nose infection	yes____ no____				
3.	diarrhea/nausea/vomiting	yes____ no____				
4.	a skin infection	yes____ no____				
5.	pink eye (conjunctivitis)	yes____ no____				
6.	swollen lymph nodes (glands)	yes____ no____				

If "yes" on any of the above, at what beach? What were the weather conditions? Please describe:

In the past year, has the doctor ever told you that you had any of the following?

7.	leptospirosis	yes____ no____
8.	yellow jaundice	yes____ no____
9.	shistoma	yes____ no____
10.	heart infection	yes____ no____
11.	brain infection (meningitis)	yes____ no____
12.	cholera	yes____ no____
13.	hepatitis	yes____ no____
14.	sinusitis (sinus infection)	yes____ no____
15.	viral gastroentenitis (stomach flu)	yes____ no____
16.	otitis media (middle ear infection)	yes____ no____
17.	otitis extema (external ear infection)	yes____ no____
18.	viral upper respiratory infection (cold/flu)	yes____ no____
19.	If you answered "yes" on any of the above, do you mind if a Surfrider physician calls you ? Yes_____ No_____	
20.	Do you consider yourself a consistent surfer? Yes_____No_____ At what age did you start surfing?_____	

Please answer the following questions in relation to the past twelve months:

21. On the average, how many times a month did you go surfing?
(Jan-Mar)_____(April-June)_____(Jul-Sept)_____(Oct-Dec)_____
22. How many hours a day do you normally spend in the water?_____
23. Have you ever NOT gone surfing because you were sick? Yes____ No____
If yes, how many times during the past twelve months?_____
24. Do you ever swallow water when you swim? Yes_____No_____ Surf? Yes _____No_____

The Surfrider Foundation is an environmental organization dedicated to the preservation and enhancement of our waves and beaches through conservation, research, education and local activism.

Surfrider Foundation 122 S. El Camino Real #67 San Clemente,CA 92672 Ph:7 14/492-8170 Fax: 714/492-8142

SMA CROSS-CURRENTS

[Ed. Over the almost 7 years that the SMA has been in existence there have been remarkably few organizational crises, but we face one now. It deals with the intentions of a group of SMA members who were in attendance at the recent SMA Tavarua conference. Whether what they are proposing is revolutionary or counterrevolutionary (or unimportant either way) will depend on your point of view. Since there are no identified proponents - only a nameless committee - I asked Bill Jones, the coordinator of fhe conference, and Paula Smith, our sole staff member, both of who were in attendance at the conference, to describe what occurred from their point of view. I then present my point of view.]

WAVES OF CHANGE AT THE 1993 TAVARUA CONFERENCE

Bill Jones, Monterey, California

As with all organizations, change occurs. An ad hoc committee of SMA'ers held discussion about developing a more organized approach to SMA operations. There were a few founding members and some new blood and some with experienceat several different SMA conferences. A lot was discussed and a proposal to develop an official SMA Board was brought forth, with a list of people who attendees felt might be interested in serving on the board to develop policy, programs, ideas, etc. that might enhance SMA.

This is an issue that involves you and what you think the direction of SMA should be. So any active members who want to be heard might want to write a letter regarding what you believe the direction of the SMA might be. This would help in developing your organization.

[Bill then included some bits of news about the Nabila Project and other Tavarua events, all will be covered in detail in the next issue of this journal.]

A NOTE FROM SMA HEADQUARTERS

Paula Smith, SMA Central

Members: At the recent annual meeting on Tavarua, the members present unanimously agreed on the formation of an SMA advisory board. They felt this would be of great benefit to our organization. The board would be composed of 15-20 members and meet twice yearly; its purpose would be to serve as a format for discussing where SMA is going, for encouraging input from members, brainstorming ideas, providing guidance for me, and of course, for socialization, fun, and surfing together.

Those present at Tavarua suggested names of those members who they thought might be interested in serving on the board, and those members have already been sent a letter inviting them. However, participation will not be limited to those members already identified. If you have a desire to participate on this board and could attend two meetings a year in various locations, please drop me a line ASAP so that a flyer can be sent to with the specific time and place for meetings. The first meeting will be held in Santa Cruz, CA on June 12-13, 1993.

If you are unable to attend this formative meeting but are interested in having some input into the organization of this advisory board, please send your ideas to me at SMA Central and I will pass them on to those in attendance.

THE CHOOSING FEW OR THE CHOSEN MANY - SMA ORGANIZATIONAL CHOICES

Mark Renneker, San Francisco, CA

Dear SMA Members, I write directly to you, via our journal, because I fear that the waves of change, described above by Bill Jones , are not from a true, whole ocean swell, but rather from a local windstorm. The result for the SMA, I fear, will be hopeless, onshore, organizational slop. Check out the following letter, referred to by Paula.

Dear Active SMA member,

At the annual SMA business meeting in Tavarua, Fiji, March 15-29, 1993, the formation of a 15 member SMA advisory board was unanimously approved.

The function of the board is to help set policy, procedures and fundraising for all SMA projects. An executive committee of 3 members will provide specific direction to the SMA Executive Director.

The reason for this change is to more evenly distribute the increasing workload of running the organization and to address the changes that are being realized by members.

We would like you to consider being a member of this board. We will meet two times a year. The first meeting will be in Santa Cruz on June 12-13, 1993 and further information will be sent to you. The second meeting date will be determined by the board.

Please respond in writing to SMA Central, whose address is on the letterhead, within 30 days.

Sincerely,

The Temporary "Stormin Norman Vinn" ad hoc Tavarua Committee

I received a copy in early April, and at first thought someone was pulling my leg, that it was a parody of how many organizations have shifted to the right and come to embrace corporate structure and language (check out the letter: "business meeting," "set policy, procedures," "executive committee," "Executive Director"). Not so, this letter, I found out was for real.

I called Paula to see who had sent the letter - she had. I asked who had written it - various of the people at the Tavarua meeting. I asked how many of the letters were sent out - 24, which included only those people at the conference and those they could think of

SMA UPDATES

who were active members of the SMA. I asked if consideration had been given to airing the plan to the whole membership, through the journal - she said, yes, but that they felt **they didn't have to if they didn't want to.**

Needless to say, I am aghast at the letter and the process by which it came to be sent. Although Paula's above "Note from SMA Headquarters" states that "participation will not be limited to those members already identified," that statement was not part of the letter sent - it is her statement - and wouldn't have been made at this time to the general membership had I not asked Paula for something to be written for this issue of our journal. Also, note that from Paula's viewpoint and the Stormin' Norman committee, you don't have a choice as to whether the Board is implemented - that is presented as a fait accompli.

What most upsets me about the letter (and what it is proposing) is that it is so exclusionary: if you did not receive a copy, it means you are not considered an active SMA member.

The rolls of names who were <u>not</u> sent the letter are legion, including, probably, you and virtually every active member of the SMA, past, present, and future. For starters, Australians Geoff Booth, Brian Lowdon, Simon Leslie, Jim Bradley, all founding SMA members or SMA conference organizers (I don't think any non-US members were invited to be on this new "board"); Kevin Starr (co-editor of the Surf Docs column), Steve Heilig (who puts out this journal for us!), Craig Wilson (our ever Nabila kahuna), Tony Peckham (who puts out the Directory for us). I happen to believe that if you are a dues-paying SMA member and are reading this letter, you are an active SMA member.

So, how did this happen? The surfers' explanation, in my mind, was that the surf couldn't have been very good at Tavarua for this past conference, i.e., they were bored or dispirited. Maybe, on reaching the 3rd flat day in a row, a dejected attendee said: "Mr. Chairman, I would like to make a motion that we approve the following amendment to our Bylaws, 'that all SMA conferences shall have at least 6-8 foot surf.'" Of course, then there was an hour of discussion before it was decided a Task Force needed to be appointed to study the issue, and to make recommendations at a later date to the Board.

The more likely explanation is that some people at the meeting were feeling uncomfortable about the seeming lack of structure within the SMA. Adding to that, possibly, would be the fact that for the first time since the SMA began, I was not at the Tavarua meetings, creating a kind of void. This assumes that what happened there isn't in response to my well-known and obvious drive for power, as shown by my not being there and by my having found other SMA members to take over or share or expand all of the work that I previously handled for the SMA: coordinating the Tavarua conferences, editing and publishing the journal, membership and financial management, legal and accounting management, editing and developing the Surf Docs column.

I asked Paula if there had been specific problems raised, ones that people had unsuccessfully tried to address through the journal or by other means, and she said, no, other than that she felt the need to have more SMA members helping her make decisions, and that was the basic idea behind the board.

My hope is that the group who issued the letter are acting with good intentions, however ill-conceived. Since no one signed the letter, it means there isn't anyone you or I can write or call to discuss it.

Paula did say that many at the conference, including herself, had no real idea about the history and the structure of the SMA, and how it was able to proceed for these past years in such an unstructured way. It would seem time, then, to briefly go over that history.

In the beginning, the SMA did have a formal committee structure, including officers. Hell, I was the President, Brian Lowdon was the Vice-President, and there was a nicely composed international Executive Committee. It lasted less than a year. The SMA, and that structure, arose out of a flurry of organizational enthusiasm one afternoon back in 1986, on the last day of the first Tavarua conference. Immediately after we all went surfing, and for the first time in two weeks there were divisions among us: those who had been chosen to be officers or on the executive committee were all abuzz and surfing at one peak together, while the others - those unchosen - seemed to be grumbling about at a different peak. I pointed this out to anyone who would listen, and raised the possibility that we could just as easily disband what we had just created, in the interests of keeping ourselves together, not separated; that there was no real precedence in the world of surfing for the kind of typical business and corporate structure that we were - I thought - unawarely assuming we should adopt.

We had a local get-together a few weeks after the first conference, and then the following spring, we had an organizational retreat at Asilomar, attended by most every California member, plus Brian Lowdon from Australia and Gary Ryan from Hawaii, and we began to approach the practical issues of how our association would conduct itself. Simple policies emerged, mainly based on seeking ways of increasing communication and connection between members (e.g., a newsletter was proposed, which grew into this journal), achieving equality among members (seeking to lessen the opportunities for members to use the SMA for their personal gain), and maintaining objectivity (that the SMA be a neutral scientific sounding board and watch-dog for surfing).

Then we had, in 1987, the second Tavarua conference, and at that meeting we had the first, and only, meeting of the Executive Board of the SMA. Brian Lowdon wanted to press forward with

more structure, bylaws and the such, while the others present (myself, Geoff Booth, Craig Wilson, Don Wagner, Gary Ryan, and Rym Partridge, who took "minutes") felt more inclined to find a way to model the SMA organizational structure after the world of surfing and the Fijian way of life. What happened was reported on in the next SMA journal: (from the 2nd SMA journal, p. 6, Winter 1988, written/edited by me and Kevin Starr)

Anathema: Getting Organized

Get the gun and put the SMA out of its misery if it ever becomes a rigid, self-serious organization - that's just not the surfer's way. To qualify for status as a non-profit corporation, however, we have had to sell our soul somewhat - on our terms, with a minimum of corporate bullshit. We've adapted the Fijian and islanders' village-model, with the hope of creating a simple, fluid, non-heirarchial way of doing things. So, there are now official papers that describe our organization as being run by "kahunas."

If there's something that you think the SMA should be doing (but isn't), it's up to you to take care of it - don't just talk about it or say that someone else should do it. Just try to run your plan by other SMA members to make it stronger. A kahuna, then, is any SMA member who has committed him or himself to perform a specific roll or project. If you want to be a kahuna, just let it be known what you intend to do, but bear in mind that a kahuna's word is one of honor. [There was then a list of about 20 SMA members who had taken on various kahuna functions, i.e., "Accounting Kahuna - Tom Kever," etc.]

The formal titles and positions (President, Vice-President, Executive Board) spontaneously bestowed at the First Tavarua conference, September 1986, were to last two years. But at the Second Tavarua conference, June 1987, at the one-and-only Executive Meeting of the SMA, a formal non-surfers' organizational structure was voted out. The above "kahunas" structure has come to take its place.

Realizing that sometimes we have to interface with the Parliamentarian world, everyone who wants to call themselves a President, Vice-President, of Executive of this-or-that is welcome to the title, and should use it as needed.

What happens in the SMA, our "village," is up to you. Some of us have stuck our necks out as far as legal responsibility for the SMA goes, but, other than that, the functioning of our village depends upon everyone doing some work - even if it's only putting money into the village pot. Remember, the village's money principally comes from dues, which probably will continue to just cover the expenses of mailings, telephone, organizational costs, etc. And, for any member who wants to put an issue before the village, just do it (everyone has the same mailing list, the right to organize a meeting, and access to whatever dues money is available to cover such costs).

Remember, there are only two basic rules in the SMA:

1. Anyone can initiate any project - just run it by other SMA members to make it better, and

2. The only excuse for not doing SMA work is if you went surfing.

What emerged in the ensuing years - to the present - was a true association, rather than an institution; not an actual entity, but interactions and communications (the "association") between a number of highly individualistic people who have in common an interest in surfing and health.

The "bottom-line" in support of our abolishing formal organizational structure in 1987 is is that six years later (1) the SMA has grown from about 50 members to over 800, with the most common types of replies from joining members to the question on the membership application "What stokes you most about the SMA?" being that it isn't like other organizations, that they like its looseness and irreverance; (2) the SMA has not had ongoing or serious internal organizational crises (not 1/1000th of what the traditionally structured Surfrider Foundation is enduring); (3) the SMA has been fiscally sound from day one (see Kahuna Tom's "Treasurer's Report in this journal; again, compare that to Surfrider Foundation which is ever floundering in the red), and (4) the SMA, goofy kahuna structure and all, has continued to be found legit by the State of California; and, perhaps, most importantly, (5) SMA members have rarely, if ever, violated the implicit trust that we have in each other (re-read Ron Bockhold's Hurricane Andrew article in the front of this journal; could he have done what he did, in the name of the SMA, and been the first organization in to provide relief, if he'd had to, for instance, get the SMA Board to grant approval first?), and (6) the SMA has spent the bare minimum of time and money on organizational crap like committees and business meetings.

That said, there is a clear need for more local gatherings, as a way for SMA members to better associate, stoke each other, go surfing, etc. Rym used to hold semi-annual SMA get-togethers at his house in Santa Cruz, which were happily attended by many California members, especially those who couldn't find the time or money to go to Tavarua or other exotic conference sites. If the meeting being planned for June 12-13 in Santa Cruz serves that function, then that is fantastic. If however, it is setting a precedence, that of a twice yearly Board meeting, which is designed to serve only a minority of members (those on the board), then I want to speak vigorously against it.

As for the need that Paula feels, of having an identified advisory group, or sounding board, that she or any SMA member can easily call on for guidance or help, then, great, let's set it up. Just be sure it is truly representative of the SMA (i.e., includes non-California and non-USA members; with phone and fax, everyone doesn't have to be physically in one place), and consider looking to the Fijian model of The Elders as a guiding principle for who to have serve. By that

SMA UPDATES

model, those who are oldest or most experienced are relied upon to provide guidance and to advise the village. The number of Elders in the SMA is significant; draw on their experience.

One point that I don't think the "Stormin Norman" group considered is, who is going to organize the Santa Cruz meeting, and the subsequent meetings? It's a lot of work. Should Paula do it? Perhaps, but for what she is paid by the SMA ($600/month) she feels she has her hands full just handling membership matters (renewals, etc.) and helping with conferences.

On the other hand, the less-work, more-consistent-with-SMA-history-and-principles approach can be taken right now: **any SMA member who feels that they are an Elder, or at least somewhat knowledgeable about the SMA (i.e., have been a member for some time and have actively read the journal, attended conferences, or been involved in other ways with the SMA), please write/call/fax Paula to say you would be willing to be on a "Sounding Board," which means that she or other SMA members (the list of Sounding Board members will be published in the next journal) can call on you as needed for questions or problems as they arise.**

Your choice then:

(1) Call/write/fax SMA Central to say you believe the SMA needs to have regularly scheduled organizational meetings, and you would perhaps like to serve on the Board (maybe you'll be popular enough to get on the 3-member Executive Committee!), or

(2) Call/write/fax SMA central to say you oppose the SMA shifting towards mainstream conservatism by resorting to a formal board and executive structure.

If #2, indicate if you would also be willing to "serve" on a SMA Sounding Board, that other SMA members (and Paula) can call on you for advice as needed, particularly if questions arise that are up your alley or in your area of expertise.

SMA, PO Box 1210, Aptos, Ca. 95001-1210 USA phone/fax (408) 684-0916

RANDOM SMA MEMBER PROFILE
Robert Scott, MD, esteemed inventor of Pro-plugs (prototype pictured here). An argument for or against helmets? — (Members: send a photo for glory and ridicule here!) Photo by Sato.

SURFER'S MEDICAL ASSOCIATION

1993 TREASURER'S REPORT

Prepared by Tom Kever, SMA Accounting Kahuna

[Ed. The following report was submitted on March 3, 1993, to the Internal Revenue Service. Our advance ruling period as a tax exempt non-profit organization ended December 31, 1992, and we were then eligible to apply for final approval, which we have done, thanks to Tom Kever, who has been scrupulously keeping our books since the Dawn of the SMA (1986). Our budgetary reporting was submitted with a requisite hopelessly bureaucratic letter; herewith and pursuant to, that letter is not included here - as a measure of our sanity - but is available to any SMA member masochistic enough to want to read it. We anticipate receiving final approval from the IRS, and will look forward to reporting on that milestone in the next issue of our journal. The bottom line to our accounting and 1993 budget is that we are quite solvent, so long as members pay their dues and periodically go to conferences.]

SURFER'S MEDICAL ASSOCIATION
REVENUES AND EXPENDITURES
FOR THE YEARS ENDING 1986, 1987, 1988, 1989, 1990, 1991, AND 1992
ACTUALS FOR THE YEARS ENDING DECEMBER 31,

					Budget			
	1986	1987	1988	1989	1990	1991	1992	1993
Resources								
Contributions-Special			$2440		$585	$650	$149	$500
Contributions-Membership Dues	$275	$6952	$7932	$12743	$10799	$11603	$9420	$11500
Revenue from S.M.A. Activities								
Conference	990	3545	8747	3971	8502	7102	10742	8000
Publications (Surf Doc)	25	1207	3463	3100	3125	3416	1000	1000
T-Shirts and Decals		369	129		327	800	938	1000
Cost of S.M.A. Activities (conferences, column, shirts, etc.)		<5397>	<7182>	<2605>	<5342>	<4967>	<1891>	<2000>
Interest		147	182	232	393	377	183	100
Total Resources	1290	6623	15711	19443	18389	18981	20541	20100
Expenditures								
S.M.A. Journal (Printing, Graphics)		1979	3876	4672	6974	5533	9231	7300
Telephone, Postage, Fax, and Secretarial		1147	3372	4990	4310	4173	4470	4500
Fellowship		425	2354	3264	——	——	——	—0—
Professional Services/ Contract Administration		972	1450	2215	6328	8018	8200	7200
Office Supplies/Computer Services		293	779	1185	1822	689	631	1000
Nabila Project			2000	1190	——	——	——	——
	—0—	4816	13831	17516	18434	18413	22532	20000
Net Income (Loss)	1290	1807	1880	1927	<1045>	568	<1991>	100
Cash (Cumulative)	1290	3097	4977	6904	5859	6427	4436	4536
Liabilities	—0—	—0—	—0—	—0—	—0—	—0—	—0—	—0—
Fund Balance								
Beginning	—0—	1290	3097	4977	6904	5859	6427	4436
Net Income (Loss)	1290	1807	1880	1927	<1045>	568	<1991>	100
Ending	1290	3097	4977	6904	5859	6427	4436	4536
Total Liabilities and Fund Balance	1290	3097	4977	6904	5859	6427	4436	4536

Upcoming Conferences

4th Southern Hemisphere SMA Conference

GRAJAGAN, JAVA
SEPTEMBER 20TH TO 30TH 1993

For this third G-Land conference the SMA has exclusive booking on the entire camp for the best 10-day period of the season. Tides, wind and swell probability have all been taken into account. G-Land never goes flat and has the best down the line left-handers in the world. Food, service and hospitality is second to none.

The theme again will be Surf Camp and Travel Medicine. G-Land is the first surf camp that the SMA will be staffing full time and we need to consolidate our experiences in provision of medicine both to the traveling surfer and to the indigenous populations. Fiji has been our training ground but is barely Third World compared to the malaria and tiger-infested remoteness of Grajagan.

Going to G-Land is a full-on adventure and to share it with a diverse group of like-minded colleagues will be an experience that you will never forget!

Interested?

Contact the conference coordinator, Mark Metcalf, DDS, 8215 Pennington Drive, Huntington Beach, CA, USA 92646. Phone (home) 714/969-0656; (fax) 714/772-0661; (work) 714/772-0654 as soon as possible, as we are required to pay a hefty deposit to secure the camp. We plan to have 30 places available and partners are welcome. (G-Land can handle 30 surfers with ease.) Contributions to the academic content of the conference are hoped for from each participant and early submission of brief abstracts would be desirable to facilitate conference planning. Non-health professional SMA members, worry not; we will work with you to figure out a topic or presentation that's up your alley.

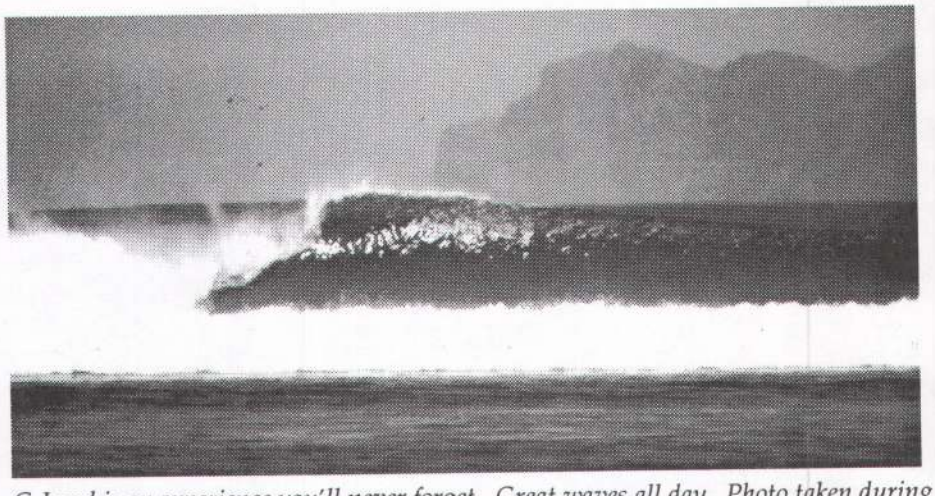
Topics could include:

- Travel Medicine
- Tropical Medicine
- Surf injuries and their management in remote areas (can include case histories presented by non-doctor SMA members)
- Early management of severe trauma
- Problems of and solutions to medical evacuation in the tropics
- Biomechanics of surfing and its relevance to injury and injury prevention
- Ecological consequence of surf camp development and measures for control
- Medical, legal and political consequences of health care interventions in foreign countries

Conference costs are exclusive of airfare to Denpasar, Bali, but inclusive of Bali G-Land transport, food, accommodation and surf while in Grajagan. All interested parties will be sent full details on receipt of their expressions of interest.

CONFERENCE COST:

$750.00 single; $1400.00 couple, plus a conference fee of $250.00 per person. The conference fee, which will be fully refunded if for some reason the conference does not go ahead, should be forwarded to the above address no later than June 15th both to secure your place and to secure our place in G-Land. Places will be filled on a first-come, first-served basis — so be early! Group airline bookings will be made to reduce costs. Call or fax quick! For group flight booking (discounts!) out of CA, San Francisco or Honolulu call, Fountain of Youth Travel. Ask for Tom, (310) 592-1001.



G-Land is an experience you'll never forget. Great waves all day. Photo taken during a typical day during last year's trip.

Tavarua, Todos Santos & Big Flat

These meetings are all in the formative stage. For information on **Tavarua**, call Bill Jones at (408) 373-2209.

For **Todos Santos**, call Mark Bracker at (619) 270-7569.

Big Flat probably will host a meeting in November. Call Ward Smith at SMA Central to discuss.

House Swap Wanted

SMA member with Victorian in the heart of wine country between San Francisco and uncrowded Northern California spots is looking to house swap with a Hawaiian member.

Call Dan Sooy (707) 431-2627

FLASH UPDATE

IN MEMORIAM - STEVE BASER, ESQ.

On Monday, May 3, SMA member Steve Baser died of a cardiac arrest while working out in a gym in Los Angeles. Readers are directed to last issue's (#9) article by Steve on his experiences with epilepsy and surfing. Steve was a born-again surfer after visiting the Nabila project in Fiji, where he was stoked not only by the waves but by the kids of Nabila. His twin brother Mike notes that Steve had surfed the day before or morning of his death. In honor of this very special guy, we encourage fellow members to send a donation to the Steve Baser Childrens' Medical Nabila Fund, c/o the SMA headquarters, and we will make sure that appropriate use of this money is made to benefit the kids of Nabila. Other expressions of sympathy for Steve's family may be directed to Mike Baser, 11746 Bellagio Rd., Apt., 308, Los Angeles, CA 90049. A memorial for Steve on Fiji will be planned for a future date.

Steve Baser at G-Land 1992

IRS GRANTS SMA TAX-EXEMPT STATUS

On April 28th, 1993, the U.S. Internal Revenue Service granted the SMA its final approval (after a 3-year advance ruling period) as a Section 501(A)(2) publicly-supported, tax-exempt organization. Kudos and thanks to Mark Renneker and Tom Kever, the SMA kahunas who successfully negotiated for all of us a lengthy series of bureaucratic hurdles.

SURFING MEDICINE: A Pier-Reviewed Journal

Here's your chance to add a significant publication to your resume: consider making a submission to the Journal of the Surfer's Medical Association. Send us your surfing related case reports, research, proposals for upcoming trips or projects, stories, and anything else you feel is relevant to surfing and medicine.

Rules for Submission:

1. Send material in early -- next deadline June 30, 1993.
2. Include pertinent references and slides/prints (yourself surfing?).
3. We'll love you forever if you put your material on a Mac disc, using Microsoft Word.
4. Include any graphics and photos (especially surf pics, particularly if they are of you).
5. Proof-read your stuff a couple of times -- have your kids correct your spelling and punctuation.
6. We'll publish anything sent in that looks good and passes peer-pier review (we pass it around to SMA members and other derelicts hanging out under the pier; if it meets their rigorous standards, it's in).
7. Mail to: Editor Surfing Medicine, 2396—48th Ave., San Francisco, CA 94116

MEMBERSHIP INFORMATION

Memberships are for one year unless otherwise specified, and include a decal, a bi-annual membership directory, a journal every 6-8 months, and invites to all SMA conferences. Membership is a way of both joining and contributing to the SMA. Choose your category accordingly.

Life Member: Totally Committed and has some bucks — pay once and you belong forever. $500

Charter Member: Wants to be a Heavy Local in the organization. $100

Health Professional Member: the Surf Doc Membership — for those who spent too much time going to school and now want to surf more. $50

Professional Member: for non-health professionals with real jobs. $50

Barefoot Doctor Member: the Surfer's Membership — for surfers interested in learning how to take better care of themselves and others. $20

Gremmies Member: for beginning or young surfers. $10

Silver Surfer Member: for the elders of our sport (over 60) No charge.

Corporate Sponsor: philanthropy has its costs...$500 and up.

Corporate Guilt Member: for those who have exploited surfing for personal gain — you know who you are, now pay up. $1000

The John Cherry "I Won't Join Anything" Membership: for the truly hard-core non-joiner. $109.95

Life's A Beach Member: for wealthy patrons who believe the surfer's lifestyle should be supported to the max. $100

Illegal Member: $100 cash or equivalent. Anonymity guaranteed (unless Nancy Reagan wants to know).

Surf Parent Member: for those who want to see Johnny come home in one piece. $30

Surf Family Membership: the family that surfs together, stays together. $30 ($60 if any family member puts a degree down after their name).

Surf Widow Membership: for spousal equivalents of surfers — the SMA can help! $10

I'll Join Anything Member: for non-surfers who think it would be cool to join a surfing medical association. $19.95

Join Now, Pay Later Member: send us your hard-luck story. $0

Organizational Member: let's trade memberships to keep each other up-to-date. $0

Surf Professional Member: for career surfers — you endorse us, we endorse you. (the SMA supports pro surfing). $0, and maybe an occasional favor.

Hodad: interested in joining, hasn't paddled out yet.

Shoulder-hopper: those who drop-in on the SMA without paying their dues.

Snake: a flagrant, chronic shoulder-hopper (always promising to pay their dues)

After-Life Membership: for Life Members, a chance to surf in the hereafter — the SMA will do everything possible to see that your organs are donated to surfers, and we'll provide a lovely surfboard tombstone for your grave. $1000

T-shirts: $15.00@, M-L-XL, include SASE (8 oz.@, 9 x 12 in. envelope)
Decals: $2.00@, include SASE (1/2 oz.@, 7 x 10 in. envelope)
Wall Diplomas: $5.00@, include SASE (1/2oz., 9 x 12 in. envelope)

TO RENEW: When did you first join, or last renew? Was it a one-year membership? Figure it out (reminders abound). Consider Life Membership to simplify things in the future.

TO JOIN: Choose your membership category, fill out this form, make out a check payable to the Surfer's Medical Association (in U.S. dollars), and mail to: Surfer's Medical Association, P.O. Box 1210, Aptos, CA 95001-1210. Phone/FAX (408) 684-0916. Be patient if you don't hear back from us right away (especially if the surf is good).

PLEASE SEND US THIS INFORMATION

copy or Xerox if you don't want to disfigure your journal

Date _____

New Member ◯ Renewal ◯

Name _____

Address _____

City/State _____

Zip _____ Country _____

Work phone _____

Home phone _____

Membership Category _____

Amount [Fees as of Sept. 1st, 1991] $ _____
Non U.S. Members add $10

Type of surfer (stand-up, boogie, etc.) _____

Years surfing experience _____

Present number of go-outs per month _____

Your worst surfing injury _____

_____

_____

Type of work/specialty _____

Job title/Academic position _____

What about the SMA stokes you the most _____

_____

_____

Name/address of a surfing buddy(s) who you think would appreciate being invited to join the Surfer's Medical Association:

_____

_____

SUMMER TRAVEL SEASON IS COMING!

Give YOURSELF and others SMA GIFTS!!

(And be donating to the SMA at the same time!!!)

T-Shirts

High-quality (Hanes), colorful SMA logo on back and front pocket, short-sleeve in bone color only. Medium - Large - Extra Large, include self-addressed, stamped envelope (they weigh about 8 oz. each, and one will easily fit into a 9 x 12 in. envelope). Classic gifts. The medium is fairly small, and reasonably fits children and smaller adults. $15.00 each.

Number of shirts: _____

Size(s): _____

$ Enclosed: _____

Must include SASE.

SMA MEMBERSHIPS

A fantastic gift - join someone up to the SMA (or renew or upgrade your membership). See the listing of membership categories on the reverse of this page, and complete the membership form. Indicate if a gift membership on the membership form (don't worry if you don't have all the relevant information; just put the name, address, and type of membership - we'll have them fill in the rest later).

Decals

Torquoise-blue SMA logo on white mylar, about 5 x 6 in., perfect for surfboards, car bumpers, windows, notebooks, and office doors. Include self-addressed, stamped envelope (1/2 oz. each, 7 x 10 in. envelope so they won't have to be folded). $2.00 each.

Number of decals: _____

$ Enclosed: _____

Must include SASE

Wall Diplomas

To place alongside your other diplomas, whether from high school or medical school, this signed, slightly surf-motif'ed diploma officially confers upon whomever you indicate "the rights and privileges thereto pertaining to membership" in the Surfer's Medical Association. Get it framed, and give it as a gift! Include self-addressed, stamped envelope (1/2 oz., 9 x 12 inch envelope, so they won't have to be folded). $5.00 per diploma. Diploma in what name(s):

_____

_____

Number of diplomas: _____

$ enclosed: _____

Must include SASE

Books: The Collected Surf Medicine Works

Volumes 1, 2, and 3

Each volume is about 300 pages, in a 3-ring binder with **Collected Surf Medicine Works** on the spine. They will look handsome on any bookshelf, and be a powerful reference and educational tool. Each volume costs $35.00, plus $2.40 postage (first class, U.S.), or $18.00 foreign (if air mail) or calculate sea-mail foreign postage costs for two pounds per volume. Or, order all three volumes for $100 and the SMA will throw in the postage for free (if U.S.). Vols. 1 & 2 ready for delivery. Vol. 3 still in press.

Volume 1: World Literature on Surfing and Medicine $35 each # _____

Volume 2: The Complete Dr. Geoff and Dear Surf Docs $35 each # _____

Volume 3: Handbook of Surf Medicine - $35 each # _____

Complete set of all 3 volumes $100 # sets _____

Postage amt. $ _____

Total amount $ _____

Instructions

Follow the above instructions per item ordered, and make your check out to the SMA. Mail to:

Surfer's Medical Assocation P.O. Box 1210

Aptos, CA 95001-1210

These items are only available to SMA members.

Total amount enclosed (all of above) $_____

Surfer's Medical Association
P.O. Box 1210
Aptos, CA 95001-1210 USA

Bulk Rate
U.S. Postage
PAID
So. San Francisco, CA
Permit 655