



**SURFING MEDICINE**  
The Online Journal of the  
Surfer's Medical Association

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## **Table of Contents**

### **Preface**

### **Featured Articles**

Competitive Surfing Injuries.....Andrew Nathanson, et al.

Postscript..... Andrew Nathanson

Interview with “Doc Proplug”..... Bill Jones

### **Conference Reports**

Tavarua: 2006.....Mike Rowbotham

Mentawai Memories..... Gary Gluck

### **Archives**

SMA: The First Decade.....Mark Renneker

### **Surfing Medicine in the Media**

Surfer’s Myelopathy.....Todd Thompson, et al.

### **Recent Publications by Our Members**

The Surfer’s Mind, 2<sup>nd</sup> ed.....Richard Bennett

## Preface

This first online edition of SURFING MEDICINE is dedicated to Sova, who was the head of the kitchen staff on Tavarua. She was a fixture on the island for years and paid special attention to the SMA when we were there.

Also remembered are early members of the SMA, as well as a couple of founding members who have passed on to the eternal glassy warm-water wave. Brian Lowdon, Steve Raymond, Tony Moore and Steve Baser are remembered for their involvement in the SMA and the way they touched our lives.

This first website issue is a compilation of old, somewhat old and somewhat new information and articles. There is an article from the SMA Journal, Issue #16 in 1997. "The SMA's First Decade", by Mark Renneker gives insight into the SMA's goals and accomplishments. "Mentawai Memories", by Gary Gluck was never published as the paper journal went underground. It deserves to be read by those who have been to the Mentawais and those who would like to go. "Doc Scott", is a short interview of one of the "silver surfers" who is still riding waves at 80 years old. There is also a report from Mike Rowbotham from the 20<sup>th</sup> Tavarua SMA conference in 2006. Finally, there is a reprint of a very recent article by Andrew Nathanson, MD, et al., about "Competitive Surfing Injuries" that appeared in the January 2007 edition of the American Journal of Sports Medicine. Dr. Nathanson has kindly granted us permission to reprint this article in its entirety plus added a postscript, sharing with us his comments on the media's interest in his landmark study.

SURFING MEDICINE will be refreshed with new content as it becomes available for publication. We are actively seeking publishable material, especially from our members. If you have a research project, a conference report, a travel adventure or any type of textual document relating to the interface between surfing and health care, please submit it to our journal. There's a good chance we will use it and you'll get a publication credit! Please send all material, in digital format, to [bjonesma@yahoo.com](mailto:bjonesma@yahoo.com).

Finally, if you are a new member of the SMA, welcome to the first online edition of SURFING MEDICINE. Please give us old kahunas your input as to how we can improve our publication process.

"till I drop in on you again"

Dr. "Mr. Bill" Jones,  
Editor

# Competitive Surfing Injuries

## A Prospective Study of Surfing-Related Injuries Among Contest Surfers

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**Background:** Surfing is a sport that has been growing rapidly in popularity, yet little is known about surfing injuries.

**Purpose:** To calculate an accurate injury rate for competitive surfing and to describe the relative frequency, mechanisms, and risk factors for acute surfing injuries.

**Study Design:** Descriptive epidemiology study.

**Methods:** This prospective study of acute competitive surfing injuries was carried out at 32 professional and amateur surfing contests worldwide between 1999 and 2005. All acute injuries sustained during competition were recorded by on-site medical personnel. The wave size, type of seafloor, and number of surfing heats were also recorded for each day. The total number of injuries was divided by the total number of athlete exposures to determine injury rates. A multiple logistic regression was used to determine risk factors for injury.

**Results:** There were 116 injuries documented, 89 of which occurred during competition. There were 15 675 athlete exposures, yielding an injury rate of 5.7 per 1000 athlete exposures, or 13 per 1000 hours of competitive surfing. There were 6.6 significant injuries per 1000 hours of competitive surfing. Risk of injury was 2.4 (95% confidence interval, 1.5-3.9) times greater when surfing in waves overhead or bigger relative to smaller waves and 2.6 (95% confidence interval, 1.3-5.2) times greater when surfing over a rock or reef bottom relative to a sandy bottom.

**Conclusion:** There were 13 acute surfing injuries per 1000 hours of competitive surfing. The risk of injury was more than doubled when surfing in large waves or over a hard seafloor.

**Keywords:** surfing; injury; water sports; injury prevention

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Competitive surfing has its roots in ancient Hawaii. Under the influence of Western missionaries, surfing nearly vanished as a competitive and recreational activity, and it was not until the middle of the 20th century that interest in competitive aspects of the sport returned. The first amateur and professional surfing events of the modern era were held in the 1960s in Australia, California, and Hawaii.<sup>11</sup> During the past 2 decades, the sport has enjoyed sustained growth via commercialization of surfing apparel and the surfing lifestyle. In 2004, it was estimated that there were

more than 2.1 million surfers in the United States.<sup>4</sup> Efforts are under way to include surfing as an Olympic sport.

In surfing contests, surfers are generally grouped into 2- to 6-man (or woman) heats lasting 15 to 30 minutes, with the top surfers advancing into the next bracket. Contests are held over "holding periods" lasting from 1 to 10 days, and organizers attempt to run heats when wave conditions are most favorable. The judging criteria state that "a surfer must execute the most radical controlled maneuvers in the most critical section of the wave with speed and power throughout. The surfer who executes such maneuvers on the biggest and best waves for the longest functional distance shall be deemed the winner" (<http://www.surfesa.org/docs/rules.pdf>). A surfer may catch as many as 10 waves in each heat, but typically only the 3 best rides are used for scoring purposes.

Accurate estimates of the incidence of surfing injuries have been hampered by the difficulty in quantifying the

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population of surfers at risk for injury. Recreational surfers come and go as they please, they are often spread out over miles of coastline, and a given surfer may surf in many different locales. Although gathering data on injured surfers (numerator) can be easily accomplished, data regarding the number of surfers at risk for injury (denominator) and their total exposure time to surfing are more difficult to obtain. Most published surfing injury rates have relied on survey data of self-reported injuries, with the inherent problems of recall and responder bias. Many surveys have unacceptably low return rates.<sup>9,10</sup> Survey data also rely on self-estimates of the number of days the respondent has surfed during the past few years, which may also be unreliable.<sup>5</sup>

In 1983, Lowdon et al<sup>9</sup> used a mail-order survey (38% return rate) to poll 346 members of an Australian surfing club and gathered data on self-reported injuries, on how many days they surfed during the 2 years, and the number and types of injuries they incurred. From these data, they calculated an injury rate of 3.5 “moderate to severe” injuries per 1000 days of surfing. Moderate to severe injuries were defined as those resulting in a visit to a physician or resulting in lost days of surfing. In a similar survey-based study, they interviewed 79 elite professional surfers and calculated the injury rate among that group to be 4 moderate to severe injuries per 1000 days of surfing.<sup>10</sup>

In 1977, Allen et al<sup>1</sup> reviewed medical records of all patients hospitalized (N = 36) for surfing-related injuries during a 56-month period at a Kaiser Foundation hospital adjacent to Waikiki beach in Honolulu, Hawaii. They estimated that there were 500 recreational surfers at Waikiki beach each day, leading to a hospitalization rate of 1 per 17 500 surfing days. No attempt was made to look at medical records of other hospitals in Honolulu.

Studies of recreational surfing have shown that the majority of acute injuries are lacerations, contusions, and sprains, most commonly to the head and lower extremities.<sup>14,16,18</sup> Most injuries are caused by contact with the surfboard and, to a lesser extent, the ocean floor. Most surfboards have sharp tails, noses, and fins, yet surfers rarely wear helmets.

The purpose of this study was to calculate an accurate and objective exposure-related injury rate for the sport of competitive surfing. We also hoped to describe the relative frequencies, mechanisms, and risk factors for acute surfing injuries. We chose to study the injury rate at surfing contests prospectively because it gave us access to a captive population of surfers whose exposure time to surfing was reliably quantifiable as an aggregate of all heats in a given competition. Furthermore, data on injuries could be accurately documented by on-site medical support staff.

## MATERIALS AND METHODS

Data were collected prospectively between March 1999 and September 2005 at a convenience sample of 32 surfing contests worldwide by health care professionals (physicians, physician assistants, and nurses) providing on-site medical support. Ten contests were amateur, and 22 were professional (prize money awarded). Contests varied in size from

a 1-day contest with 48 competitors to a 9-day contest with 512 competitors. The professional contests took place in Hawaii, Australia, California, and Tahiti and were sanctioned by the Association of Surfing Professionals. Of the 57 locations that host Association of Surfing Professionals events, Hawaii was overrepresented in our sample. The amateur contests took place in Argentina and along the East Coast of the United States and were sanctioned by the Eastern Surfing Association or the Pan-American Surfing Games. Approval for this study was obtained from the Institutional Review Board at Rhode Island Hospital.

Documentation of every acute surfing injury sustained during competition was collected on an “injury sheet” provided by us that included demographic information such as age, gender, and professional or amateur status. Body part injured, type of injury, mechanism of injury, wave size, treatment, and disposition were also documented. Wave heights, measured from peak to trough, were reported using the commonly accepted comparison to an adult male (eg, waist high, shoulder high, overhead).<sup>3</sup> Injuries that prevented the athlete from surfing for 1 or more days, resulted in transportation to a hospital, or required on-site suturing were classified as “significant injuries”; all others were considered “minor injuries.” Only sudden-onset (acute) injuries that occurred during the contest period were included in the database; chronic injuries and preexisting injuries were excluded.

An “event sheet” designed by us was used to gather information regarding each contest as a whole, such as number and gender of contestants, number and duration of heats, wave size during each day of competition, and type of ocean bottom at the event site. Event sheets were completed by on-site medical personnel and then cross-referenced by the authors with score sheets posted on official contest Web sites to ensure an accurate accounting of the number of surfers in each heat and the number of heats each day.

The total number of acute surfing injuries that occurred during surfing heats (n = 89) was used to calculate injury rates. Injuries that occurred during either heats or practice time (N = 116) were used to calculate the relative frequency of types of injury, body parts injured, and mechanism of injury.

Injury rates were calculated per surfer per 1000 heats and per surfer per 1000 hours. Because 5 minutes were allowed to paddle from the beach out to a contest area, an extra 5 minutes were added to the length of each heat to determine the injury rate per hour (eg, a 25-minute heat was considered 30 minutes of surfing time). For purposes of the study, a 25-minute 4-man heat was counted as 4 surfer heats and 2 surfer hours.

We used the  $\chi^2$  test to bivariate assess the relationship of the outcome “injury sustained during a surfing heat” (89 injuries during 15 675 surfer heats) with each of a set of variables we believed could affect injury occurrence: wave size, bottom type, gender, heat length (minutes), and whether the competition was professional or amateur. A multiple logistic regression analysis employing the same outcome and explainer variables was used to calculate adjusted odds ratios for each risk factor. Although gender and professional

status were not significant in the model, we retained them to adjust the remaining variables for these factors and because we were particularly interested in their influence on injury occurrence. Events that were surfed at a reef break or over a rocky bottom were lumped together as "hard bottom," and these were compared with events surfed over a sandy bottom. Heats surfed on days during which the wave heights were head high or smaller were compared with heats surfed on days that were overhead or higher. All statistical analyses were performed using Stata version 8.0 (Stata Corp, College Station, Tex). We used an  $\alpha$  probability of .05 as the threshold for statistical significance in 2-tailed comparisons.

## RESULTS

### Injury Rates and Risk Factors

The 32 contests resulted in a total of 15 675 surfer heats, or 6784 surfer hours; these were nearly evenly divided between amateur and professional events (amateur events had more competitors and surfer heats per event). Twelve events had a long board (more than 9 ft) division, but more than 95% of heats in the study were surfed on short boards (usually less than 7 ft). Over the course of these contests, 116 injuries were recorded, 89 of which occurred during surfing heats, with the remainder occurring during practice sessions. The injury rate during competition was 5.7 per 1000 heats per surfer, or 13 per 1000 hours of competitive surfing. The incidence of "significant" surfing injuries (unable to continue surfing, required sutures, or were transported to a hospital,  $n = 45$ ) was 2.9 per 1000 heats surfed or 6.6 per 1000 hours of competitive surfing. The mean age of injured surfers was 23.6 years (SD, 7); the youngest was 11 years old, and the oldest was 55 years old.

Bivariate analyses revealed that wave size, bottom type, and heat length, independently, were significantly associated with the occurrence of an injury during a surfing heat (Table 1). The logistic regression analysis demonstrated that the adjusted risk of injury was 2.4 (95% confidence interval [CI], 1.5-3.9) times greater when surfing in waves overhead or bigger relative to waves less than overhead and 2.6 (95% CI, 1.3-5.2) times greater when surfing over a rock or reef bottom relative to a sandy bottom (Table 2). Adjusting for wave size, bottom type, and heat length, there was no statistically significant difference in injury rates between male and female surfers (odds ratio, 0.88; 95% CI, 0.46-1.7) or between professionals and amateurs (odds ratio, 0.69; 95% CI, 0.31-1.5) (Table 2). The observed injury rate at professional contests was 8.7 per 1000 surfer heats, as compared with 2.7 per 1000 surfer heats at amateur contests, but the professional contests were on average held in larger surf, more often over a hard bottom, and longer in duration.

### Injury Type, Location, and Severity

Table 3 summarizes the types of acute injuries recorded and corresponding body part injured. Sprains and strains were most common, followed by lacerations, contusions,

TABLE 1  
Comparisons of Injury Occurrences Between Risk Groups During 15 675 Surfer Heats

Risk Factor (n)	Percentage Injured	P
Gender		.83
Female (2060)	0.53	
Male (13 615)	0.57	
Bottom type <sup>a</sup>		<.001
Hard (5426)	1.16	
Sand (10 249)	0.25	
Wave size <sup>b</sup>		<.001
Large (4506)	1.20	
Small (11 169)	0.31	
Status		<.001
Amateur (7872)	0.27	
Professional (7803)	0.87	

<sup>a</sup>Hard bottoms include rock or reef.

<sup>b</sup>Large waves are overhead or higher.

TABLE 2  
Odds Ratios for Sustaining an Acute Injury During a Surfing Heat (N = 15 675 surfer heats)

Factor	Factor Level	Odds Ratio (95% Confidence Interval)	P
Gender	Male vs female	0.88 (0.46-1.7)	.69
Bottom type	Hard vs sand <sup>a</sup>	2.6 (1.3-5.2)	.007 <sup>b</sup>
Wave size	Large vs small <sup>c</sup>	2.4 (1.5-3.9)	.000 <sup>b</sup>
Heat length	Minutes per heat	1.05 (1.0-1.1)	.023 <sup>b</sup>
Status	Professional vs amateur	0.69 (0.31-1.5)	.33

<sup>a</sup>Hard bottoms include rock or reef.

<sup>b</sup>Denotes statistically significant odds ratio ( $P < .05$ ).

<sup>c</sup>Large waves are overhead or higher.

and fractures. Thirty-nine percent of all injuries were to the lower extremity, 25% to the upper extremity, and 25% to the head and neck. Of the 29 head and neck injuries, 11 were to the scalp, 9 were to the face, and 9 were to the neck. The 45 significant injuries included 21 lacerations (most sutured on-site), 5 facial fractures, a severe ocular injury, and 5 shoulder dislocations. Two surfers required water rescue for near drowning after head injuries, and 10 injuries required transportation to a hospital for further evaluation and treatment.

### Mechanism of Injury

Impact with the surfboard caused 29% of all injuries, 24% by contact with the ocean floor, 16% by the surfer's own body motion, and 12% by the hydraulic force of a wave. Less common mechanisms of injury included jellyfish stings, collisions with other surfers, and a collision with a personal water craft. Roughly half of all lacerations ( $n = 35$ ) were

TABLE 3  
Type and Location of Surfing Injuries (N = 116)

	Sprain or Strain	Laceration	Fracture or Dislocation	Contusion	Abrasion	Other <sup>a</sup>	Total (%)
Head/neck	9	9	5	2	0	4	29 (25)
Upper extremity	7	6	5	3	6	2	29 (25)
Torso	9	1	1	2	0	0	13 (11)
Lower extremity	20	19	0	3	0	3	45 (39)
Total (%)	45 (39)	35 (30)	11 (9)	10 (9)	6 (5)	9 (8)	116 (100)

<sup>a</sup>Other includes jellyfish stings, concussion, and tympanic membrane perforation.

caused by impact from the surfer's own board and half by contact with the ocean floor.

One quarter of surfing injuries in this study followed unsuccessful takeoffs, 20% followed turning maneuvers, and 16% were associated with tube riding (riding under the curl of a breaking wave). Other surfing maneuvers associated with injuries included paddling, aerial tricks, duck diving (pushing the board under an oncoming wave to paddle out), and entering or exiting the shore break.

## DISCUSSION

Establishing an accurate injury rate for surfing is not just of academic interest but has implications for the insurance industry and for schools that may want to start a surfing team. Information regarding the injury rate and injury patterns for professional and amateur contests might help predict the needs of a medical support staff and aid in the design of protective equipment.

This study found the overall injury rate to be 13 per 1000 hours of surfing, with 6.6 significant injuries per 1000 hours and 2.9 significant injuries per surfer per 1000 heats. It would come as little surprise to most surfers that the injury rate more than doubles when surfing in overhead surf as compared with smaller waves, as the energy of a wave increases as the square of its height.<sup>6</sup> Precise determination of relative risk between sports is difficult because of the heterogeneous definitions, methods of data collection, and study designs.<sup>8</sup> As a rough comparison between surfing and other sports, Table 4 lists rates of significant injury per 1000 hours (or 1000 athlete exposures) for other sports for which similar definitions of injury and methods of data collection were used. Compared with other sports in which violent collisions occur between players or with the ground, injury rates in surfing are likely tempered by the shock-absorbing properties of water.

This study found that the most common types of injuries among competitive surfers were sprains and strains (39%) and that the lower extremity was the most commonly injured body part (39%). Nineteen percent of all injuries were knee sprains/strains, making this the most common pattern of injury reported in the study. In contrast, studies of recreational surfers have consistently found that lacerations, predominantly to the head and lower extremities, are most common.<sup>9,14,18</sup>

TABLE 4  
Rates of Significant Injury in Selected Sports<sup>a</sup>

Sport	Injury Rate/1000 Hours	Reference
Professional rugby	69	2
College football	33 <sup>a</sup>	15
Men's college soccer	18.8 <sup>a</sup>	15
Men's college basketball	9 <sup>b</sup>	15
Competitive surfing	6.6	
College baseball	5.8	13
Snowboarding	5.4	12
Skiing (recreational)	4-5	7
Softball (recreational)	2.3	17

<sup>a</sup>See Bathgate et al,<sup>2</sup> Hunter,<sup>7</sup> Machold et al,<sup>12</sup> McFarland and Wasic,<sup>13</sup> the National Collegiate Athletic Association,<sup>15</sup> and Shesser et al<sup>17</sup> for complete details.

<sup>b</sup>Injury rate per 1000 athlete exposures.

Most of the knee strains occurred as a result of aggressive turning and aerial maneuvers, which appear to place high stresses on a surfer's knee. These powerful and acrobatic maneuvers, which score highly in competition, are too difficult for the average surfer to execute and may account for the higher proportion of soft tissue knee injuries observed among competitive surfers than in their recreational counterparts.

Although we are confident that number of hours surfed in our calculation of incidence of injury is accurate, it is possible that some injuries escaped the attention of medical personnel at the event. Competitors may have sought care at other medical facilities, and minor injuries may have gone unreported.

Further study is needed to determine the injury rate among recreational surfers and to evaluate the effectiveness of modifications in surfing equipment on reducing the incidence of injury.

## CONCLUSION

Competitive surfing is relatively safe when compared with other sports for which comparable data are available, with a rate of 6.6 significant injuries per 1000 hours of competition. The most common types of acute injuries seen at surfing

contests are sprains and lacerations, predominantly to the extremities. In this study, contact with the surfboard resulted in 28% of all injuries, and 18% occurred when the surfer struck the ocean floor. The incidence of injury is highest when surfing in large waves and over reefs or rocks.

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## **Author's postscript June 2, 2007**

The study "Competitive Surfing Injuries" generated significant worldwide media interest, in part because of a press release circulated by Brown University titled "*Surfing Safer than Soccer*". Stories about the surfing injury study appeared in the New York Times, L.A. Times and in newspapers from non-surfing countries like India, Turkey, and China. While surfing remains a niche sport, people from around the world can directly relate to soccer. Fed footage of big-wave breaks like "Mavericks" and "Jaws", and well publicized reports of shark attacks, the common perception is that surfing is relatively dangerous "extreme sport".

In fact, the overall injury rate for this study of 32 professional and amateur contests worldwide was only 6.6 significant injuries per 1,000 hours of competitive surfing, compared to 18 significant injuries per 1,000 hours for NCAA men's soccer. The surfing study and the NCAA study used similar methodology and a similar definition of "significant injury".

However, a closer reading of the findings reveals another story. While the average injury rate was low, using a logistic regression analysis, we showed that the risk of injury in big waves (overhead or higher) was 2.6 times greater than in smaller waves, and the risk when surfing a reef break was 2.4 times greater than a beach break. These risks are cumulative, so surfing a big reef break, is 6.2 times more dangerous than surfing a small beach break.

I know I'd feel safer on a college soccer field than surfing big Pipe, and a post-hoc analysis of the data confirms my suspicions. Analysis of the four Pipeline contests in the data-base showed that the injury rate there was a whopping 37 significant injuries per 1,000 hours, compared to a rate of 33 injuries per 1,000 hours for NCAA football. Pipe regulars can walk tall (that is, if they can still walk –ed.).

Perhaps the press release should have read, "Pipeline more dangerous than soccer."

**A Conversation  
with  
Dr. Bob Scott, aka “Doc Proplug”**

**Bill Jones**

This interview was conducted in Doc Scott’s home office surrounded by years of surfing memorabilia and the current busy workings of “Doc Proplugs”. I have known Doc for almost 40 years and have seen just a few of the stages he has gone through. Doc’s wife, Jan who keeps Doc in line, joined us part way through the interview and was able to nod to some stories and shake her head at others.

Doc and Jan have been married almost 40 years and have between them five children and now about nine grandchildren, with a couple being competitive surfers. Bob’s daughter Brenda is perhaps best known for her being a top flight competitor in her late teens and early twenties and now is the president/founder of Hotline wetsuits. Son Jeff is a shaper and works out of the house and is noted for shaping boards for the Lane...

The Scott’s home on Lighthouse Avenue in Santa Cruz, just a block from Cowell’s and a couple of blocks from Steamer Lane, has been a beacon for surfers for many years. From topflight professionals to the traveling Aussie bloke or non-English speaking French surfer/premed student. Both Scotts are fluent in several languages and I have had several dinners and happy hours there which have been like a surfer United Nations taking place in their front room.

Bob Scott was born in Warrensburg, New York on June 30, 1927. Warrensburg is nestled in the Adirondack Mountains and was home to Bob and his 10 brothers and sisters. Bob was second to the youngest and was motivated by his parents to become a doctor. Bob ended up going to a unique college to prepare for his medical education. Look up Deep Springs College on the internet and you will discover a most interesting style of education. Bob learned to focus on where he was at and what he was doing at Deep Springs.

From Deep Springs College, Bob transferred to Pasadena City College to complete some of the science classes he needed to get into UCLA. After UCLA, the soon to be Doc Scott, headed to the University of Lausanne Medical School in Switzerland, where he became fluent in French.

While at UCLA, Doc rode his first wave at San Onofre in 1949. He was introduced to surfing by Bill Roth and stood up on a Velzy balsa board that was shellacked. Doc thought for a minute after saying this and wondered how much that board would be worth today.

In the mid to late '60's, a familiar sight at the Lane in Santa Cruz was Doc Scott's big green Dodge camper with the bubble top. Most of the time, Doc would bring over his three girls, Olivia, Leslie and Brenda. All of the girls were exposed to surfing but Brenda made it into a career. Doc's van could be seen up and down the coast at all of the Western Surfing Association (WSA) competitions. Many times, Doc was the announcer, heat organizer, statistician and a judge at these events. He was a one-man show. Doc was also the team physician for Gilroy High School football team. If the surf was good in Santa Cruz and Doc was late, the game could not start, as a medical doctor was needed in order to play. Games were delayed until he arrived and if the surf was good, Doc would lose track of time and be late.

About this time Doc figured that it was time to switch his practice from the lower Santa Clara Valley in Gilroy to the Santa Cruz area. Also at this time there was a beautiful dark-haired woman who started to show up at the surfing events and keep Doc together. Jan became a fixture on the surf-tour circuit and her boys, Doug and Jeff, started to get into surfing. The Scott house on Lighthouse Ave was purchased and this, coupled with his practice in Capitola, meant that Doc was now a true local.

Like many surfers in the water, I knew Doc and I started to see him as my general doctor. Doc would see many surfers, most without insurance or income, but a barter system for Doc's services was not out of the question. Once, I went on rounds with Doc at Dominican and Community Hospitals on a Friday night. I was interested in going to PA (Physician Assistant) school and Doc gave me a test to see if I was really interested. All of his patients loved Doc and he had a great deal of caring for them. He knew them not only as patients and what was wrong with them but he also knew of their interests and their families.

In the late 1970's Doc started to research exostoses or "surfers ear". When Doc looked at my ear in 1979 he noted there was an 80% closure in my right ear. At that time the operation to correct this problem involved a lot of time and a 2 to 3 inch incision made behind the ear and you were out of the water for a couple of months. Doc started to look at preventative measures for exostoses, as well as looking at thousands of ears at surf contests and various beaches. From these informal examinations, Doc came to believe that water, wind and temperature played a big part in the exostoses development in the ear. He postulated that protecting the inner ear would help relieve the problem as well as prevent it from developing.

From this beginning "Doc's Proplug" started to evolve. Doc and I talked about the time he had just about every visitor to his house stringing "Proplugs" as well as experimenting with the best tool to make the opening for the ear hole. Was it a small or large paper clip or a heated needle that made the magic hole? We wondered, as time had erased the perfect solution for the hole maker.

Doc was instrumental in several surf organizations. He was president of the USSA (United States Surfing Association) in 1963. In the late 1960's and early 70's, Doc was

the president of the WSA (Western Surfing Association) and a founding member of the ISA (International Surfing Association).

In the mid eighties, Doc Scott retired from his practice and directed his energies toward the marketing of the "Proplug". Doc started to work with divers, fishermen and others who were in the water a lot. Doc and Jan have been able to circle the world and attend world-class surfing and diving events. As a business, "Doc's Proplugs" is still evolving. Doc now has invented the "aqua lid" which is a great alternative to a cap and can be used under a helmet very easily.

Doc Scott is a person who is totally in the moment and is one of the most focused people, yet he is always thinking ahead and, when this happens, Doc loses track of time. Jan nodded to this and I remembered several dinners, events and birthday parties that started late because Doc was focused on the moment and the surf at "The Lane."

In the past decade or so, Doc has had the experience of being a patient and has had heart bypass, angioplasty and even a tonsillectomy. Doc Scott has also had the procedure done for "surfer's ear" and this one operation prompted the research and start of Doc's Proplugs. Bob Scott has been the inspiration for many people to start surfing and catch the "stoke" that he continues to have today. . In early SMA membership directories after Doc's name is the following: "Life Member. Has helped more surfers in more ways for more years than any other doc." Doc Scott is truly a legend in his own time and an inspiration to surfers in general but more so for surfing doctors.

## **Tavarua Conference: 2006 .....Michael Rowbotham, M.D.**

At the 20<sup>th</sup> annual Tavarua session, a full crew of longterm SMA'ers and recent recruits scored good waves and worked in the clinics of both Nabila and Momi Bay. Ethan Wilson and Mike Rowbotham co-directed this year's meeting, with supervision from our much beloved organizational guru, Paula Smith.

Representing the old guard for the SMA, we had several members who attended the first meeting in Fiji in 1986. Included in this august group were Rym Partridge, Simon Leslie and Geoff Booth.

While the waves at Cloudbreak and Restaurants are wonderfully the same as always, Tavarua has morphed from a sandy palapa outfit into a fullscale resort complete with tennis court, hot tub, and email. Oh, and prices to match. A family could almost share a suite at the Ritz in any European capital for the same \$\$.

Nabila, on the other hand, feels just like it has for 20 years. The village center now has a veranda, there is electricity, but in the overall... it's still Nabila. The kids from two decades ago are, surprise!, grown up. But the new young ones love a Frisbee game just like before. And scabies is still with us. On a more positive note, so are Merewai and Aparosa still with us, running the clinic and serving as our anchors in the village.

At this year's clinic, one of the main foci was scabies treatment and talks by Dr. Karo-Karo. In addition, the annual round of pharmaceuticals was dispensed to both villages. Finally, the inevitable drop-in itinerant clinics were held in both villages. The general impression was that the average state of health is improved, with fewer "trainwreck" endstage presentations of problems. Good on ya, Fiji!

The Momi Bay clinic trip was less successful, with no community health person or village nurse to be found. In fact, it was uncertain if there even was a nurse for the government clinic at the edge of the village because the prior one had not been seen for months. Pharmaceuticals were left to stock the shelves, and a busy clinic was held. Momi is going through major changes right now. A large road for accessing an enormous resort is nearly complete. An area that was mangrove forest at the edge of a muddy bay adjacent to the Disneyland 'Pirates of the Caribbean' ride we've come to love as the access route to the village is in the midst of transformation. Two half-circle jetties enclose an artificial bay with hotel, condos, resort homes for ex-pats, golf, etc. Tellingly, the bures on the jetty all look inward to the fake bay, turning their collective backs to the beautiful islands offshore.....

As we take stock of our trips to Tavi over the years, highlights of our time in the villages include helping to build the community center, building shower and laundry facilities, installing water seal toilets, helping with water supply projects, and (of course) Nabila's celebrated non-smoking pledge. On the highway a new sign proclaims Nabila's success with non-smoking. In years past, the program has made national and international news, even showing up on ABC national news here in the states in a piece on SMA's biggest success story. Then again, we remember ABC's Mike Lee circling Tavi in a helicopter to get air shots of us surfing in knee-high garbage during one of Cloudbreak's rare flat spells.

Back on Tavarua, Ron and Esmeralda held us entranced in a twirling gyration of hips and exotic moves put on by... Ron. Or so they say. The rest of us were watching Esmeralda. Together they danced a spirited salsa, in a fitting celebration of their second anniversary.

Lectures this year covered a broad cross-section of topics: Ocular health (Ron Gallemore), Contrasting the allopathic and chiropractic paradigms (Paul Kratka), Boggle for beginners (Hoser), Home health care: the new Residentialist (Norm Vinn), Dental work impacting self-image (Rymbone), and Physical Medical and Rehab (Boothie). Bob and Marion Speers followed up on their legendary first description ten years ago of the 'Shaken Surfer Syndrome' with a discussion of Surfer's Myelopathy. Paul Hoskins provided a thoughtful and comprehensive review on legal and clinical aspects of airline in-flight emergencies.

As usual, the Tavarua staff were caring and wonderful. The resort is full-service with indoor plumbing and great food. We remember fondly the shower bags from years past. The only downside this year was that the real swell didn't hit until 4 days after we'd gone home. During the first week, we had several days of well-overhead waves out at Cloudbreak, and one day of sizeable Restaurants. Those who stayed on for the second week scored BIG.

# MEMORIES OF THE MENTAWAI, SUMATRA SMA TRIP JULY 2001

Gary Gluck, MD FAAEM

## **Introduction:**

“Better late than never” would be a perfectly appropriate statement. Perhaps I’ve been feeling guilty for failing to close the loop on my SMA surf-trip kahuna duties. Perhaps I wanted to thank the person that really made this trip happen, the legendary Bill Jones. Perhaps I wanted to recognize the accomplishments of this SMA adventure, not only the epic surf and brotherhood, but also the medical education and apparently positive effect we left on this isolated outer-island Indonesian population. Perhaps I wanted to do all these things but also recognize the fine efforts of our friends at Surf-Aid International (SAI) who clearly added to our cultural experience and facilitated our efforts.

This was a truly epic SMA adventure and I hope portrayal of events stimulates future interest in visiting this area and carrying on the efforts started during prior SMA trips and those of SAI.

## **Before:**

Bill Jones officially handed me the reigns 2-3 months prior to the trip. I was a return customer from two prior SMA Mentawai trips and Bill felt I was a good candidate to take the lead in his unplanned absence. He would continue to organize the state-side contingent thru their departure but I would be the traveling kahuna. I was honored and willing to help. I would meet the group in Padang, Sumatra, myself traveling from Guam. We arrived at Padang on 14 July, and met at the Bumiminang Hotel for a cocktail reception with Andy Griffith, Executive Director of SAI.

## **SMA Support of SAI:**

Surf-Aid International is a grass roots organization focused on improving the health care in the Mentawai Islands. SAI was conceived by Dr. Dave Jenkins from New Zealand, who witnessed the profound health care deficiencies in these islands and set out to do something about it. (Sure, he’s a surfer and he gets to surf some of the world’s finest barrels while running SAI, but you have to give him credit for ingenuity!) He believes that the relatively “well-off” visiting surfers who frequent this remote area and utilize its resources, should give something back to the locals in the form of improving their health status.

The status of health care in the Mentawai’s is bleak. The fee-for-service system, provided by the government of Indonesia, is found only in the largest villages of the islands. Basic immunizations can be provided within these major villages, but almost never to areas beyond. Malaria treatment exists but due to the cost, is rarely obtained by the locals. Pediatric mortality averages 50-75%, secondary to common and preventable

diseases such as measles, rubella and tetanus. Smoking and malnutrition are epidemic. tuberculosis is common.

SAI set up an office in Padang, and thru frequent visits to the islands and forming relationships with the government and other key healthcare professionals, they are working to positively affect the health care for these people.

A variety of obstacles to their mission became evident early on. In the Mentawais, the true locals had been brought to new coastal villages to come under better control of their mainland Indonesian government. Transplanted mainland Indonesians to the Mentawais represent a threat to the culture, lifestyle and health of the local Mentawai people. Epidemics of cholera and other diarrheal illnesses occur frequently due to poor or non-existent sanitation systems. The original Mentawai people are pantheistic, and in the views of the mainland muslim population, the pork-eating Mentawai people are primitive and of a lesser class. Occasions of discrimination are common. The locals are hesitant, to say the least, of obtaining their health care from the Indonesian speaking, intruding and dominating government representatives. The Mentawai people, speaking their own dialects, are much more likely to seek the healing hands of the village Shaman or medicine man. Hence, obtaining the confidence of the Mentawai people to make an impact on their health remains the largest obstacle to SAI.

SAI's proposed solution to this problem is to fund the education of two (and perhaps more in the future) Mentawai students to obtain their medical degrees. Individuals are sought who demonstrate a keen interest in returning to the Mentawai Islands and who display steadfast concern for their own people. Once practicing in the islands, it is hoped the Mentawai people will seek care from "their own."

Government disinterest in the welfare of the Mentawai people and widespread corruption are also significant barriers. SAI has significant concern that their gifts and supplies will be returned to Padang and resold for a profit.

SAI is attempting to build the necessary contacts to build a strong and long lasting system to ensure on-going success. They are seeking donations from all sectors. So far, they have secured cooperation from the other Mentawai surf-boat companies, many with donation boxes and split profits from beverage sales. Lonely Planet, Australia has promised a substantial donation and other groups are considering the merits of this new grass-roots organization.

Many SMA members feel similarly to Dave Jenkins and would gladly support the efforts of this "in-country" effort to improve the locals' health care. But what else could this visiting band of surfers do to help less than 12 days? Advertising their cause and supporting their efforts, both financially and with manpower, seemed like a reasonable start. In addition, we would conduct a clinic in the village of Taileleo, Siberut (near E-Bay) and provide requested training to the village clinic nurses.

### **Financial Support to SAI:**

Each participant on the 2001 Mentawai SMA trip contributed \$100.00 USD to SAI. The SMA donation to SAI of \$1200.00 would purchase the following goods:

- 1) Permethrin for the Malaria Control Program, to be used to impregnate mosquito nets to be distributed to the villagers of the Mentawais. Additional funds would be used to

support a visit by the Malaria Control Board to conduct studies on Malaria prevalence and resistance spectrum.

- 2) Equipment for the Taileleo clinic, including infant and adult scales, stethoscopes, blood pressure cuffs, and thermometers. SAI had asked the clinic nurses what they needed. These items were requested, in addition to training in advanced suturing techniques.
- 3) Medical Supplies were purchased in Padang to support a one day clinic at Tailaleo by the SMA medical crew members. Additional supplies were given to SAI to ensure appropriate distribution and to ensure gifts were not turned around and sold for a profit.
- 4) Additional funds would be used to support further equipment purchases for the clinics, after additional groundwork was laid to ensure proper distribution and usage.

### **SMA Office Hours in Taileleo, Siberut:**

After a heavy session at Burgerworld, the crew was shuttled to the beach at Taileleo to set up at the village clinic. The existing medical clinic consisted of one examination room, a waiting room, a pharmacy and a supply room. The nurses were one female nurse from the islands, and one mainland-trained male nurse. Approximately 20 patients were evaluated by our three Emergency Medicine physicians and Ophthalmologist. Additional consultation was obtained from our Anesthesiologist and Nurse Anesthetist.

Significant difficulty was experienced in communicating with the Mentawai people. We had our Indonesian deckhand who translated English to Indonesian. Then the nurses would translate from Indonesian to Mentawai. This cumbersome system required a tremendous amount of time to see patients. In most cases, every effort was made to educate the nurses on our findings and support the nurses in their diagnosis and treatment. We wanted to support the local healthcare system by building local confidence in the nurses through agreement with their diagnosis and treatment.

We saw a variety of febrile, wasting diseases that likely represented chronic malaria, tuberculosis, malnutrition, or a combination of these. Most were referred to the major villages for definitive diagnosis and treatment. We saw a variety of interesting skin conditions and helminth disease. Lastly, there were a few ophthalmologic ailments such as glaucoma and cataracts.

After the clinic was concluded, we instructed the nurses on suturing techniques. The nurses were able to demonstrate excellent suturing skills and knot-tying ability. We left them with suturing equipment to augment their limited supplies.

### **The “Doctor’s Boat” On-Duty:**

Additional medical assistance presented itself to the SansSouci as the “doctor’s boat” made its rounds in the islands. We received our first request for medical assistance from the Christine, an Indonesian surf charter boat that had a customer with an eye injury. A displaced Wyoming cowboy had his sunglasses shattered from a bungee cord incident and sported a retained piece of plastic in his cornea. Our ophthalmologist stole the show by extracting the foreign body and patching the eye for comfort. As his boat would be

heading north and ours south, we made plans for a radio follow-up to ensure he was healing appropriately by the next morning.

We received a local islander with a one-week-old moray eel bite to his ankle that was now bleeding uncontrollably. After local injection with Lidocaine with epinephrine, a wide-based pressure dressing was applied proximal to the wound, stopping the bleeding and offering a chance to explore the wound. After debridement of necrotic tissue, a vessel was isolated and an absorbable stitch was placed. A clean dressing was applied and the islander was instructed to have daily dressing changes at the clinic in a village approximately 1 hour away by boat. Our Indonesian deckhand assisted us in writing a note to the clinic nurse to describe the potential for further bleeding and care for the stitched vessel. The islander expressed his gratitude and departed for the village.

Lastly, a surfer presented with a pruritic rash and multiple boat members received reef rash from blunt encounters.

### **The Conference:**

Each evening meal was concluded with a presentation from each of our participants. Emphasis was on tropical, travel and surfing-related medical problems.

Bob Speers, renowned SMA Tavarua kahuna entertained us with an interactive discussion on “Surfing Safety.” A variety of topics were covered including nose guards, leash quick releases, soft edged fins, sun protection, buddy system, reef protection, and surf spot reconnaissance and safety.

“Surfing related eye injuries” was covered by our Ophthalmologist, Marjorie Canby. We discussed pterygiums, cataracts, UV protection, refractive surgery and implications for surfing and diving.

We enjoyed a presentation from our Nurse Anesthetist, Tom Cozad, who saved a drowning victim in rural Costa Rica. From initial CPR on the beach to follow-up with the successfully resuscitated Costa Rican, we were enthralled by the drama and challenge of his experience.

Our Guam-based Emergency Medicine Physician, Jim Murphy, presented a case of major blunt trauma from a surfing accident. The individual who was surfing a typhoon swell over shallow reef sustained a concussion, rib fractures, bilateral acetabular fractures, and other extremity fractures. The surfer recovered from his surfing injuries only to be later struck by a car and catch cerebral malaria, both of which he also survived.

A thorough and intriguing presentation on Malaria (titled “foul air”) was provided by Darin Garner, Emergency Medicine Physician. “In-flight Emergencies” was presented by Capt. Dan Wood, pilot for America West Airlines. Walt Brannan, Anesthesiologist, presented “Surfing Related Ear Problems,” including a thorough presentation of ear protection currently available on the market. I presented my usual favorite: “Sharks, and Other Painful Ocean Encounters.”

Lastly, Frank Ono shared his moving story of his fatherly experiences with a child diagnosed with leukemia.

We all came away having learned a lot of valuable lessons and clearly gained from the group cohesion, brotherhood and medical expertise on-board.

### **The Surf:**

Did I mention the surf was “EPIC?” This was my fifth trip to Indonesia, and we had the largest, heaviest and most consistent surf of all. Sure we had the usual head-high and over-head and a half days at Nyang-Nyang, Bang-Bang, Pit-Stops and Lance’s Left. Npussy was double over-head on the sets and a small crew enjoyed the head-high dredging rights of Bintang’s, just west of Lance’s Left. Then the swell hit.

We shared double over-head Thunders with Aaron Chang, Hurley, and Ryan Bracker. Everyone charged it and scored beautiful, glassy, hollow lefts. This provided a good warm-up for what was to come....

After an evening session at Thunders, we decided to head south/east for less frequented spots. We arrived at “The Hole” first thing in the morning. This was the heaviest break of the trip. This break offered sucking and dredging, freight train lefts, doubling up out of deep water and exploding over the shallow reef. This was any accomplished tube-riding surfer’s dream wave, except the wave never backed off in the channel. It just reeled right onto dry reef after a long and memorable tube ride.

Clearly “The-Hole” divided the camp between the chargers and those interested in living another day. Walt and Matt Brannan rode epic barrels. Frank Ono scored a couple dream waves. Dan Wood also proved willing to charge. The rest of us caught the occasional screamer, and chose survival.

In the afternoon, we moved over to “Lighthouse Rights.” This deep water powerhouse wave was double to triple overhead on sets. Occasional sections and a shallow inside suck-out added to the thrill.

The next morning, the swell was really cranking. We checked Rags Right which was triple overhead plus. There were a couple interested parties but in general the crowd had enough of life-threatening conditions after “The Hole,” so we moved on to Macaronis.

We arrived at Macaronis at 9am and surfed all day. This included a foray out to Linguini’s rights and the rarely witnessed “Margie’s peak” on the inside of the bay. There was a good time enjoyed by all. The next day, we had Macaronis with only one other boat, so we surfed all day. The next morning we left “Maca’s” and arrived at “RC’s” right. We all enjoyed the big, fun, down-the-line right-hander. With only one more session left for the trip, we quickly packed up and headed north to “Hollow Trees.” We arrived at “HT’s” with side-shore winds and slightly bumpy conditions and no other boats in sight. We hit it for a fun surf and purchased all of our trinkets from the locals at Katiet village.

### **The Fishing:**

I wouldn’t usually include this section but the fishing was, by the SansSouci crew’s account, “the best they have ever seen.” Leaving Burgerworld, we picked up a 20# spanish mackerel and leaving the Playground, a 15# dogtooth tuna. Arriving at Thunders, we scored a 40# giant jack trevally, skillfully landed by Jim Murphy.

The biggest score was a triple sailfish hook-up near the south-west tip of South Pagi Island. Jim Murphy and I caught and released two at the boat. The third broke off after a long fight by the elated shipboard cook. The entire boat was awestruck.

The next big score occurred during the channel crossing over to HT’s. The 12.5” Top-Gun “Nightmare” lure sequentially landed a 50# wahoo and a 30# dogtooth tuna. The

wahoo provided an awesome meal for all. The dogtooth tuna was inadvertently returned to the depths after Frank Ono caught it on his leash while jumping off the boat at HT's. Perhaps this represented our sacrifice to the wave and fish Gods for such a fruitful trip.

On future trips, bring 30-50# test trolling gear, with lots of flashy, splashing flat-head and plunging lures.

### **The End:**

The trip was concluded by a horrendous night-time channel crossing through stormy, 10 foot wind swell. Little sleep was secured. The participants tiredly parted ways in Padang, all satiated from an intense Mentawai adventure.

### **Acknowledgements:**

I would like to thank Bill Jones for organizing the trip. Without his efforts, the trip would not have happened. I would like to thank Andrew Griffith and Dave Jenkins of Surf Aid International who have dedicated themselves to improving the health care of the Mentawai people and who made our village clinic visit possible. Andrew provided the background information on SAI and status medical care in the Mentawais. I would like to thank all participants for their generous contribution to the trip and their educational presentations. Lastly, I would like to thank the generous crew of the SanSouci and Great Breaks International for their excellent support, and Mother Ocean for all she provided.



# The SMA's First Decade

by Mark Renneker, M.D.,  
San Francisco, California

## Introduction

Have you ever seen the green flash? It's a rare meteorological phenomenon involving atmospheric solar refraction, the appearance of which is a splendid viridescence of the horizon whence the sun sets? I first heard about it when I was sixteen, and thereafter I stared closely at every sunset I was lucky enough to observe. Years passed without seeing it, but many were the sunsets I expectantly viewed, particularly while surfing the last waves of the day. If anyone was nearby, I'd opine that we might see the green flash; such incredulity I encountered, and never one who had actually seen it! I was not disbelieving. I was intrigued by the idea of something that could reilluminate the darkening sky.

Finally, the day came in March 1989, while on Tavarua for the 4th annual Surfer's Medical Association conference. For a week straight we had been surfing the best and biggest swell ever (Tavarua old-timers who were there readily will attest to this), and then it happened. We had gathered on the beach on the west side of the island to watch the sunset, too exhausted to surf anymore that day. There was a divine sense of fulfillment: the awesome swells wrapping past us, the realization that we were being treated to what would likely turn out to be the best waves of our lives, plus our work in Nabila had been going particularly well (the theme of the conference was "Making Yourself Useful in the Third World"). The earth turned those last seconds of an arc away from the sun; the sun appeared to have set into the ocean. About half a minute later an emerald glint began creeping back up from the sea. It brightened and then began broadening as molten green light poured up from the horizon, finally forming into a brilliant green obelisk. It hovered over the water for almost a minute. What a sight! We cheered and hooted, and when it was over we were silent, struck dumb by profundity. We had witnessed something miraculous.

## Ten Years Ago

In September, 1986, a group of twenty surfer-health professionals gathered on Tavarua to hold a medical conference on surfing - the first one ever. Days were spent surfing, nights were for seminars. The surf was unreal, the exchange of ideas hot... the Surfer's Medical Association was born.

Simultaneously, during that first conference there was an intense and totally unexpected kinship that developed between the SMA members and the native Fijians in the nearby village of Nabila. From the outset it was a healing-based relationship, the nature of which became something of a divining rod for the SMA, an amalgam of self-centeredness and altruism that is uniquely SMA. It was best summed up by founding member Ryn Partridge, D.D.S., when he said: "Let's go surfing and then heal some people." (Note the sequencing of activities, decidedly a reversal of the usual selfless-doctor shtick, reflecting more than just the surfer in us but also the realization that we give better care when we care for ourselves.)

On return to our respective locales - Australia, Hawaii, the west and east coasts of the U.S. - interest in the SMA spontaneously blossomed. The surfing world was openly welcoming of us, it was evident that we were something long needed. The surfing magazines, the local and national lay and medical media (over 100 publications in the first two years) played us up as the curiosity that we are. The memberships began rolling in. Within a year there were 200 members, 400 by year two, finally settling into a comfortable 600-700 by the end of year three. The growth of the SMA was not due to an "outreach plan," but seemed due to the infectious nature of the ideas and the spirit of the SMA.

Although the SMA had a set of agreed-upon

goals and objectives (listed below), there was a deliberate lack of plan or structure to accomplish those aims. A horizontal rather than vertical organizational structure was chosen upon. There would be no officers or governing boards; members would be honor-bound to each other by virtue of two simple "laws": (1) any SMA member can initiate any project - just run it by other SMA members to make it better, and (2) the only excuse for not doing the SMA project you've taken on is if you went surfing.

The goals and objectives of the SMA, as put forth in the SMA's first year, are as follows. As you read them begin gauging if and to what extent they have been or are being met:

**First Wave:** The number one goal of the Surfer's Medical Association is to educate surfers so they can spend minimal time hassling with doctors and maximal time surfing.

**Second Wave:** To conduct and support research and educational activities on surfing and health.

**Third Wave:** To represent the sport of surfing in the fields of medicine and science.

**Fourth Wave:** To teach physicians about the unique health problems of surfers, and how to better care for surfers.

**Fifth Wave:** To create a network of barefoot doctors and surfing health professionals around the world.

**Sixth Wave:** To protect and preserve the surfers' natural environment: the waves, the ocean, and our beaches.

## Ten Years After

So, what can be said about the SMA ten years later? Evaluating something as nebulous as the SMA is not easy. The fact that the SMA is still in



existence says something, given the travails of most such well-intentioned non-profit organizations. Most would agree that we get an "A" if only for the fact that not once in our ten-year existence has there been an event that could be construed as a "fundraiser;" the perpetual bane of virtually all other organizations.

The zeitgeist of the SMA, at least to me, is that of stability and flexibility. In other words, the SMA is unbelievably healthy. The elements contributing to that assessment are as follows:

1. We are duly registered as a tax-exempt, non-profit educational corporation in the State of California, since 1989, and have never run afoul of that charter or responsibility, whether financially, legally, or ethically. It's more than looking good on paper; we really are good - fully legit and above board.

2. Financially, the SMA has operated in the black from day one. We average about \$7000 in the bank, swelling higher after each conference (a hearty chunk of conference fees constitute our "fundraising"), and dipping a bit lower after the publication and mailing of each issue of this journal.

As surfers, our natural inclination towards prospective analysis (where to paddle to, anticipating when a wave is going to jack up, how not to get caught inside, etc.) has served the SMA well. We do regularly look into the SMA's future to chart our path; thus far we've been able to anticipate and prevent problems quite successively.

3. Our membership has been rock steady at between 600 and 700; few quit or don't renew. There are undoubtedly hundreds if not thousands more surfing health professionals (and surfer-health professional students) and bare-foot doctors out there, but we haven't yet needed to have a membership drive. Financially we haven't needed more members than we have, but our Treasurer Kahuna, Tom Kever, tells us that we are nearing that point: the almost 100 non-dues paying Life Members (who paid \$250 up until about 1992, or \$500 since) are beginning to weigh us down a bit. Either moving towards requesting of Life Members some token

annual dues, or recruiting approximately 100 new members is needed. An additional conference each year would also make up the difference, but the membership money is "hard" money compared to the softer conference money (only about 4 out of 5 SMA conferences make money).

4. We have been able to afford a part-time "staff" person - the Executive Kahuna - for the past 6 years, whose job is to provide continuity and facilitation to the membership. Initially, Tony Peckham served in that role, then Paula Smith inherited the mantle. It wouldn't appear that we need more staff time, but Paula is certainly due for a raise. The Executive Kahuna pay is the same now as it was in 1990, \$600 per month.

5. We continue to put on two to four conferences per year, averaging about 20 attendees per conference. The conferences have taken place in Western Australia (the Bluff, crystalizing SMA Australia), Costa Rica (Pavones, on coastal and rain-forest ecology), the North Shore (Sunset Beach, with a comprehensive surfer's health screening and research project), Big Flat (wilderness surf medicine), Puerto Rico (psychopathology of surfers), Todos Santos (northern Baja, wilderness and marine surf medicine), Magdalena Bay (southern Baja, eye and ear-focused), Indonesia (G-Land, surf camp medicine), and always the annual (except one year) Tavarua conference.

6. In the second year, there was the creation of this biannual journal, "Surfing Medicine," and the publication thereafter of many original papers and other sundry tidbits. It's safe to say, that despite the plethora of other organizations' desktop-published journals, newsletters, and zines, ours is in a league by itself: serious but funny, straight but quirky, academic but irreverent. We are now in our 16th issue, averaging 40 pages per issue, with a larger membership directory issue every two years. It remains the principal means of communication between members, and has stimulated umpteen projects and publications. We have an enthusiastic managing editor, Steve Heilig, who

is paid \$1000 per issue to put it all together (way underpaid given how much work it is), and a publishing and art kahuna, David "Homeboy" Bender, who also has done it all at far below usual and customary fees.

7. We continue to have a consulting role with numerous surfing magazines on surfer's health problems. In 1987, we initiated the "Dear Surf Docs" column with Surfer magazine, modelled after Dr. Geoff's column with Tracks. That ran steadily for 7 years, until the columns were published as a book - Sick Surfers, Ask the Surf Docs, and interest waned from our end to continue to publish the column. That is not to say, however, that Surfer magazine wouldn't like to still run it. At this point, it is up to whomever might want to pursue it (give me a call to discuss it - see Updates in back of this issue). The SMA's column with Surfer magazine earned a nice chunk of dough monthly for the SMA. Members have published similar columns with various of the Australian, French, and Brazilian surf magazines. SMA members have continued Dr. Geoff's column with Tracks as Dr. Bob, etc., but to my knowledge none of these columns' resulted in donated royalties/buyouts to the SMA. Not an issue though.

8. More recently, we have begun moving towards an on-line Surf Docs service via Surfer magazine, spearheaded by virtual surf doc SMA member Robert Budman, M.D.

9. We have had a number of internal publications, notably the Collected Surf Medicine Works, a compilation of everything ever published on surfing and health in the world's medical and surfing literature (volumes 1 and 2), as well as the draft of SMA members' own Handbook of Surf Medicine (volume 3).

10. We have ongoing collaboration with other surfing-related organizations, notably the environment-focussed Surfrider Foundation and Surfer's Environmental Alliance. Our Sixth Wave is the one goal that the SMA could be said to have not accomplished, relying instead on our sister organizations; it is interesting to note that our Sixth goal was not initially formulated at the first, founding conference, but was an after thought, added on later in the first year.

11. We continue to provide medical backup to both professional and amateur surfing contests, most recently to the World Surfing Games as a prelude to Olympics participation.

12. The SMA continues to be listed by and referred to in the sports medicine journal, The Physician and Sports Medicine, as the consulting body for the sport of surfing in the field of sports medicine. Many presentations on surf medicine have been made by SMA members at local, national, and international sports medicine conferences.

13. SMA members continue to publish papers in various scientific and medical journals on work done by or in conjunction with the SMA, for instance the recently published (and lauded) paper on the smoking cessation project in Nabila.

14. The Nabila Project remains the most significant achievement of the SMA. For those of us who were there in the beginning seeing lines and lines of sick Fijians hoping to have us cure them, that we so swiftly - within 10 years, that is - helped them establish a sustainable way to care for their own health problems (creating a village health committee, training village health workers, building a community health center), to have returned this year and find no one there needing to be seen by us was astonishing! Man, did we do the right thing! Couple that with the Steve Baser Memorial Educational Fellowships, which is sending two Nabilan girls to high school, one of whom wants to go on and become a nurse for the village (the first Nabilan to ever go to college, much less to become a health professional), and, well, we're really doing it right - making good in Steve Baser's name.

15. There have been many other SMA projects and activities over these past ten years, beyond those listed above, but one that could escape microanalysis is simply that the creation and the ongoing existence of the SMA has led to its members surfing more and better waves (at least those who have come to an SMA conference!). If that were our only accomplishment, it would be reason enough for the SMA to exist.

#### The Future

If it weren't for the SMA, I seriously doubt if I would have ever seen the green flash; it was the SMA that had brought me to Tavarua, it was the SMA and the good work we'd been doing in Nabila - truly I believe this - that had brought such incredible surf, and it was the SMA that had me sitting there on the beach with the other members so that when the green flash appeared, we all saw it together. I see the green

flash story in the context of the SMA because wondrous things beget wondrous things. As a side-note, in reading more about the green flash, I discover now that it can occur just before sunrise as well, so, twice the opportunity!

What does the future hold for the SMA? Well, "as we approach the 21st century," we whole-

heartedly intend not to build a bridge to it. We'll leave that bullshit talk to the corporate-bureaucratic-politician hacks. We have a good thing going here. We're stable and flexible, we trust each other; there ain't much that could unseat us. So long as we keep on surfing and healing some people, the SMA will continue to thrive.