National College of Art & design

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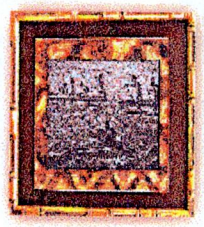

Title of Thesis: Windsurfing, the Modern Surfer

Student: Darren Louet- Feisser

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Acknowledgements

Firstly I would like to thank my tutor Dr Paul O'Brien for his guidance through the whole process of writing this thesis. I would like to thank Surf Dock for helping me find information on the history of surfing. I would also like to thank the windsurfing manufacturers that sent me details of their past and present products.

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Introduction

Surfing, the art of riding the wave, is a sport in tune with the motions of the natural environment and shaped around the posture of the human body. Surfing evolved into not just a world-wide sport, but into a unique culture and a way of life. The question about the origins of surfing can be divided into two parts, " When were the first surfboards ridden?" and " who were the first surfers?" If we posed this question to an experienced surfer, they would say when was the first stoke, but a Hawaiian would call it 'hopupu', a term which also means to be high on life.

Fig 1. Is a painting of some ancient Polynesian surfers experiencing 'hopupu'.

In Western Polynesia around three or four thousand years ago, a sport originated which involved riding a board shaped from wood to catch the rolling waves of an ocean swell. These Polynesian surfers first surfed

the Pacific Ocean around about 1500 B.C Sometime around that period the first surfer took to the seas and created the first 'hopupu' a feeling experienced by many all over the world today. When the British Navigator captain James Cook landed on the island of Tahiti in 1677 he caught his first glimpse of a Tahitian catching a wave with his canoe:

"On walking one day about Matavai Point, where our tents were erected, I saw a man paddling in a small canoe so quickly and looking about him with such eagerness of each side, as to command all my attention.... He went out from the shore till he was near the place where the swell begins to take its rise and, watching its first motion very attentively, paddled before it with great quickness, till he found that it over took him, and acquired sufficient force to carry his canoe along at the same swift rate as the wave, till it landed him upon the beach. Then he started out, emptied his canoe, and went in search of another swell, I could not help concluding that this man felt the most supreme pleasures while he was driven on so fast and so smoothly by the sea " (Http//www.surfart.com, History of surfing)

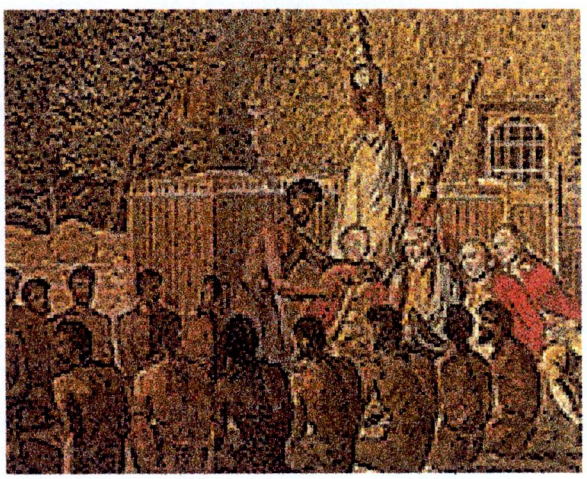


Fig 2. Capt. Cooks arrival in Hawaii

Before the 1700's the only other facts about surfing were obtained from traditional Polynesian chants. From the references to surfing in this oral

history, historians found that surfing was one of Polynesia's most wide spread sports. But it was in the Polynesian triangle made up of Hawaii, Rapa Nui and New Zealand where surfing was at its most advanced. Surfing in western Polynesia on the islands of Melanesia and Micronesia was seen mainly as a sport for young boys. In contrast, the Eastern Polynesians saw it as a sport for both sexes of any age. The central studio for the art of surfing was and will always be Hawaii, home of 'Jaws', the biggest wave in the world. Here he'e nalu reached its highest expression.

Fig 3, is a painting of an ancient Hawaiian catching the famous 'Jaws' wave.

Surfing has strong cultural and spiritual beginnings, which over the years have experienced dramatic changes. The basic sport of surfing has evolved into a highly visual sport called windsurfing and its cultural and spiritual past has been engulfed by high tech modernisation.

This thesis is designed to take a detailed look at how the sport of surfing has changed since its creation 3000 years ago. How did industrialisation and modernisation change surfing, did these elements simply tamper with its packaging and distort the image of surfing without actually changing the basic principals of the sport? To answer this question one has to look at the whole story of surfing, starting from its creation 3000 years ago somewhere in the island abyss of Polynesia and following its development into the 20th Century.

Chapter 1 Polynesia, the Cultural Home of surfing.

We all know that a flower was once just a seed that germinates and blooms, so if we were to assume that surfing just like everything else started off with a basic simple beginning and evolved with time into something more complex, taking Hawaii as the place of origins, then one could suppose that surfing started out something like this.

1) The simplest form of surfing is body surfing, surfing with no board, a human canoe riding a wave, the ancient Hawaiians called this he'eumauma (Hay-ay oo-MAU-ma). (Http//www.legendarysurfers.com)

2) Next came a simple type of surfing thousands of years old but still very popular today. Known today as boogie boarding. This involves a small body board, which is held close to the body for buoyancy and control. This type of surfing was seen as an activity for young Polynesian children. (Http//www.legendarysurfers.com)

3) An adult sport was the next obvious evolution for surfing. A larger board, just big enough for an adult to stand on while riding the wave. The ancient Hawaiians first called this new sport (papa he' nalu) (Http//www.legendarysurfers.com)

4) It was some time after the pap he'nalu that the first surfboard was shaped and surfed down a wave break somewhere in Polynesia. (Http//www.legendarysurfers.com)

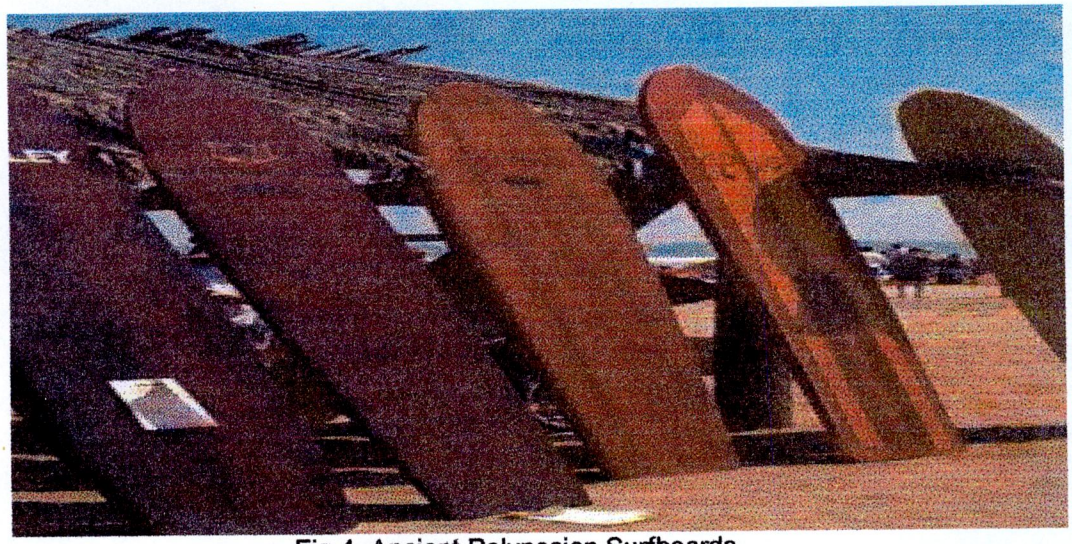


Fig 4, Ancient Polynesian Surfboards.

Various surf historians have noted that the first Polynesian settlers to immigrate to Hawaii probably already practised a simple form of surfing, but as a sport its primary development was in Hawaii, a development that continues to present day. Who knows, the first wave ride-stoke-hopupu could have been experienced all the way back in the Malay Archipelago right at the very start of the Polynesian migration.

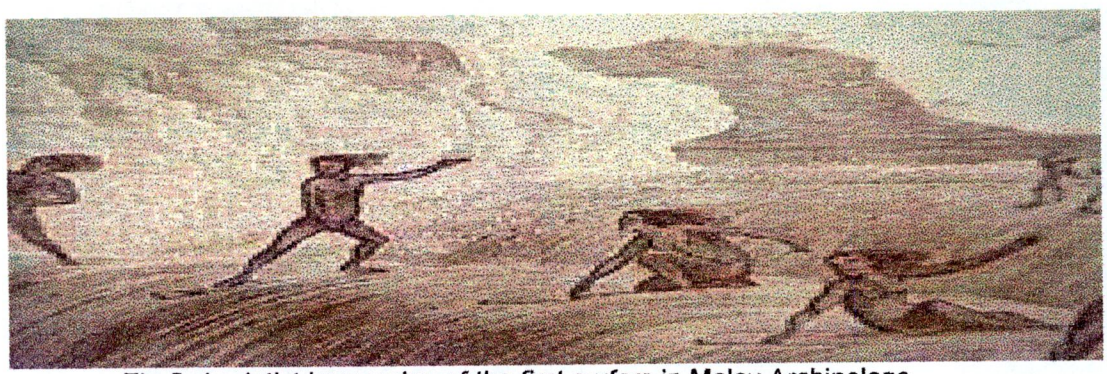


Fig 5. An Artist impression of the first surfers in Malay Archipelago.

Ancient Surfboards

Most of the old wooden Hawaiian wave sliding boards have rotted into oblivion and passed away with them is the wave knowledge of the ancient Polynesians, but the few remaining surf boards show detailed contours with a high degree of sophistication and development in their construction. Historians found that there were four main types of surfboard surfed by ancient Hawaiians: the super long olo (O-lo), the long kiko'o (key-Co-oo), the shorter alaia (ah-LAI-ah) and shortest of all the paipa (pipe-oh) or body board.

The Olo surf board.

The Olo board was seen as the master of all surf boards, a surfer's pride and joy, a chief's Rolls Royce and according to the kapu (taboo) system of Hawaii this board should only be surfed by the alai'i, the higher Hawaiian class. This was because this board was made from a scarce tree called the wili wili. The olo board was much thicker and heavier design then the alaia board, weighing up to 160 pounds and as long as twenty four feet. The size and shape of this board was ideal for the large humping swells which only broke in to a few selected beaches around Hawaii.

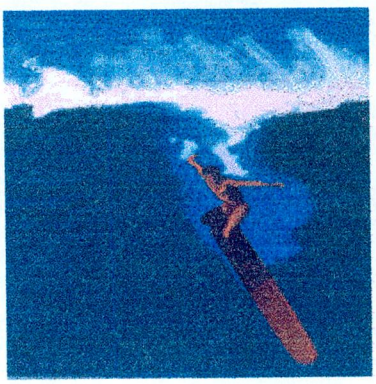


Fig 6. A painting of a Polynesian surfing an Olo board.

Two surfers called Tom Blake and Duke Kahanamoku during the 1920's decided to build and test a board based on the design of the ancient Hawaiian olo board. They built a 16-foot redwood board following specifications of the olo board. They found that when you surfed these boards the ride was very long and manoeuvrability was quite poor. The surfer found it difficult to make fast turn even when the wave was not so steep and its size made it hard to paddle through the break, but its size and bulk allowed it to catch a wave long before it began to peak, further out from the beach. Once the surfer caught the wave, they could keep

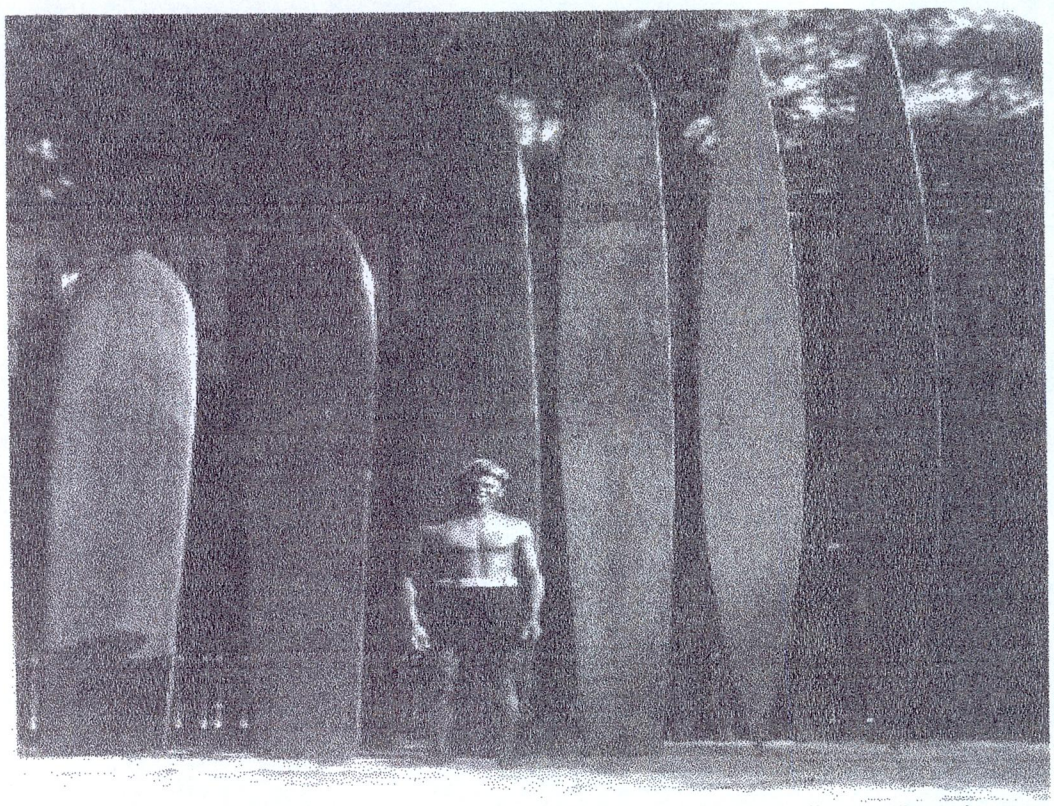


Fig 7. A photo of Tom Blake with his reconstructed ancient Hawaiian surfboards.

on surfing down its line even after it broke and began to flatten out. It is hard to imagine the chiefs of Hawaii only surfed this type of board because of its limitations and rarely in really large surf, however today's big wave boards are quite long compared to other surf boards so there is a link to the past.

The Kiko'o Surfboard

We know the least about this ancient Hawaiian surfboard; a board surfed by all classes in Hawaiian society. It size was smaller than that of an olo board reaching between 12 to 16 foot in length. It also surfed like the olo but with much greater speed on a high wave that was just about to arc, making many surfers afraid of it. The Kiko'o was the radical board of the ancient Hawaiians.

The Alaia surfboard

This was the most popular of ancient surfboards, surfed by all classes, even the alibi were known for their fondness of these boards. These plank-like boards were shorter, broader and less convex when compared to the olo and kiko'o. These boards were the ancestors of modern board design. Their basic features, size, shape, contours and edges were passed down to today's big wave boards and light short boards. The alaia was designed for greater manoeuvrability on steeper, faster breaking surf that form tubes (a tube mainly occurs with big waves, as the wave breaks it arcs over and forms a hollow inside the wave, (this hollow is called the tube of a wave). It was the board's

thinness and shorter length that gave it its handling on sheer wave faces. Its size ranged from six foot for children to twelve foot for the larger adult. The adult board was only one and a half inches thick at its central point and tapers in to the edges. It was designed for rough water and strangely enough for long life, seeing that out of the thirteen ancient boards found in the Bishop Museum Collection, thirteen of them are alaia.

The Paipo Board.

This was the Ancient Hawaiian's version of the modern body board. It was made from breadfruit or wili wili and was the smallest of the ancient Hawaiian surfboard family. Its slightly concave deck shaped rails and nose rocker made it ideal for beginners and children.

Fig 8. An Ancient Hawaiian Painting of a Paipo Board.

Ancient Surfboard Construction

There were three main wood types used in the construction of ancient Hawaiian surfboards -will will, lulu and Koa. Willie willi, the lightest and most buoyant of the three, could only be used by the ali'i, giving them a

clear advantage over the common surfer. In the Old Hawaiian culture a surfboard was a symbol of status, a sign of a person's standing in their community. Polynesians were the true soul surfers, believing that there was great spiritual importance in surfing. Picking the tree for its wood and finally shaping it into a surfboard was almost seen as a religious ritual with many stages. Firstly a shaper would select a suitable tree. He would then catch a red fish called a kuma, procure it and place it in the trunk of the selected tree. The tree could now be felled and as a payment back to mother nature the shaper would place the kuma fish in the ground surrounded by the trees roots and then finish up with a prayer of thanks and dedication. After this ritual the shaper would start chipping away at the tree trunk with only the assistance of stone or bone tools until he reached the approximate size of the surfboard desired. The unfinished board was now taken down to the beach for its final finishing and blessing from the kahuna priest. Here in the halau house on the beach would start the many long hours of shaping and sanding to obtain the final shape and size of the board. Nothing less then perfection was good enough. Pohauka puna, a sort of corrugated coral was used to file away any rough surfaces on the board's surface. Sometimes the sharper in order to obliterate any scratches would bury it in mud near a spring. The mud would fill the cracks in the porous surface. After the board was dried out the mud became hard and solid. As a final polish and waterproof finish the shaper would apply a stain made from the juice of

banana buds and charcoal from burnt pandas leaves toped up with a rub down with of kukui oil for that final glossy finish.

Hawaiian culture was integrated with the gods and spirits of their time. The rituals involved in surfboard preparations show that surfing was more than just a popular sport with the ancient Polynesians. This spiritual importance that the Polynesians associated with surfing did not end as soon as the board was built. The kahuna priests would dedicate special prayers to the surfboard before it was lanced into the Pacific Ocean for the first time. Ancient surfboa+9rds almost had their own unique personalities and the surfer and surfboard were almost like soul mates joined in the experience of wave riding. An ancient Hawaiian after a surf would leave their board to dry in the sun and the rub its surface in coconut oil. Then

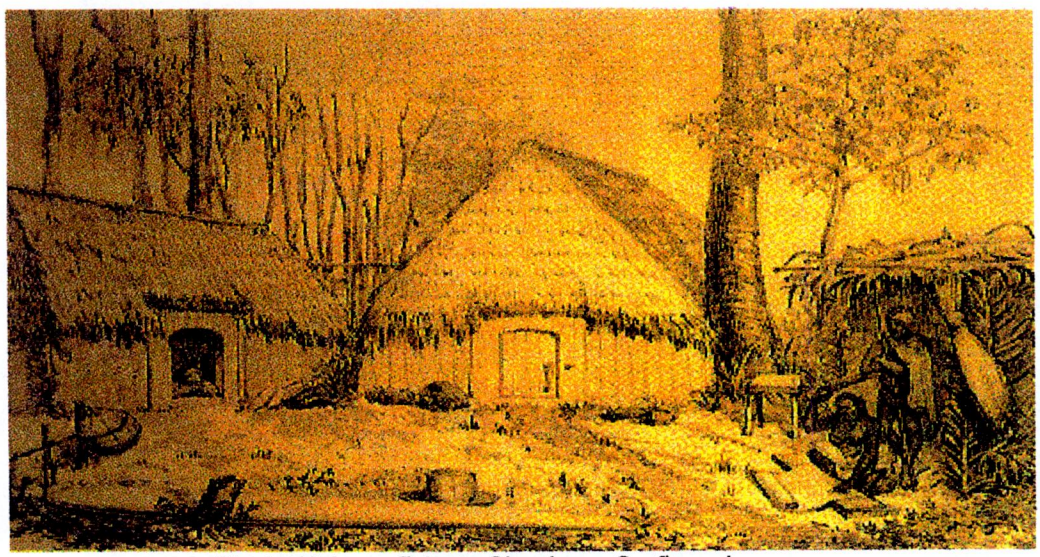


Fig 9. Kahuna Priests Shaping a Surfboard.

the board would be wrapped in tapa cloth and hung inside their hale (house) to protect the wood.

Ancient Hawaiian Surfing Rituals

In times of flat seas the Hawaiian surfers of the past would gather on their favourite surfing beaches with strands of poheuhue (beach morning glory: Ipomoea pescaprae) and brush it against the calm ocean singing in a chorus;

Ina'a 'ohe nalu, a laila aku I kai, penei e hea ai:
(If there is no surf, invoke seaward in the following manner)

Kumai! Kumai! Ka nalu nui mai kahika mai,
Arise! Arise, you great surfs from kahiki, the power curling waves

Alo po'I pu! Ku mai ka pohuehue,
Arise with pohuehue.

Hu1 Kai ko'o loa.
Well up, long raging surf.

(Http//www.surfart.com History of Surfing)

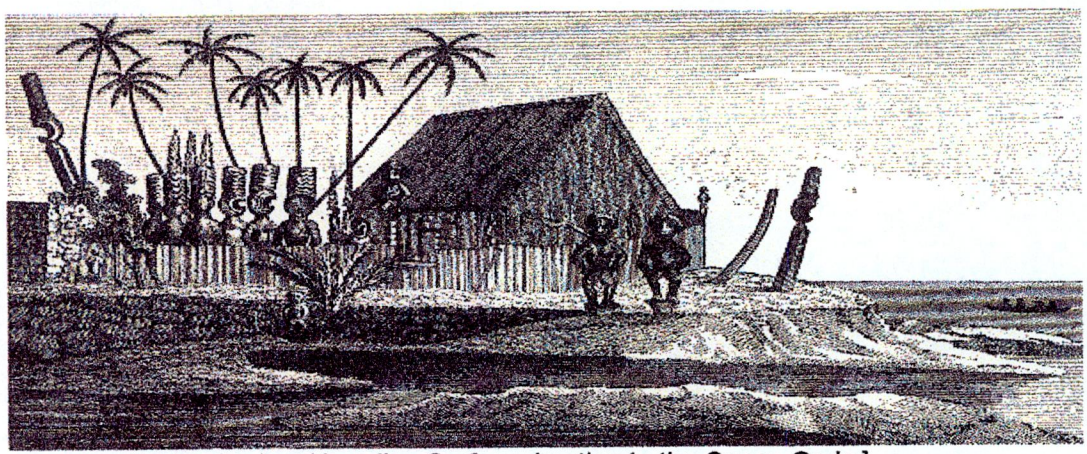


Fig 10. Ancient Hawaiian Surfers chanting to the Ocean Gods.]

Whether or not these spiritual chants would work in our modern world is questionable, but some of today's Hawaiians still believe that their ancestors had the power to make the surf rise out of the deep just by dancing about a beach throwing vines at the ocean. But it was more likely that this ancient people knew by observing the signs given by nature when the next big swell would come. An albatross flying over the land seeking shelter from the storms out at sea and small swells breaking in sets before the big waves rolled in. The ancient kahunas that read these signs were no less superior than any modern expert of the ocean cycles that tries to predict when the next big break will crash on their shores.

The Ancient Hawaiians Surfing Culture

Wave riding-He'e nala and boogie boarding-kaha nalu were integrated into every part of Hawaiian life before the first contact with Europeans in the late 1700's. The ancient Hawaiians were a fun loving people with dancing and surfing as their main priorities in life. Their whole social life was structured around this national pastime. Whole villages would meet on the beach for water festivals and surfing competitions and often during a moment of weakness a Hawaiian Cheif would gamble his entire fortune on a surfing match as sign of his vigour and strong heart and thus face losing his worldly possessions or even his life and liberty. The beach was also the ideal spot for a young surfer engulfed by hormones

to seek a partner of the fairer or rougher sex, relations between sexes were very free and Hawaiians were renowned for their lack of inhibitions. In the Hawaiian language there was no word for orphan and it was unimaginable that a child should be left without a home. The ancient Hawaiians therefore felt that sexual relations had no serious consequences. Hawaiians were fanatical about their sport and during the month of November began the Iluwa, a period of deafening winds, and huge waves, during this time the Polynesians would be over come with hopupu, many men would be lured to the coast leaving their wives and children behind to go hungry, the only appetite they had was for surfing, leaving their farms to pluck ripe banana leaves, ti leaves and ginger to fasten around as a sign of welcome for the fresh feast of November waves that rolled in, brushing the beach before them. The bigger the surf the more exciting the surf and men women and children would go to enjoy themselves in the rising surf that rushed to their beach. This surf was like an ocean beacon calling to a fun-loving people that had a natural instinct to drop everything just to go and enjoy the surf and suddenly they would find that the pressures of the day were eased.

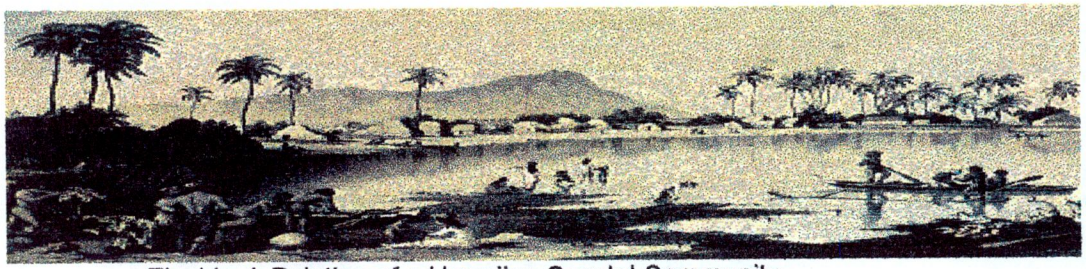


Fig 11. A Painting of a Hawaiian Coastal Community

As soon as they have paddled out into the swell of the ocean a warm feeling of detachment from all land based responsibilities is experienced, they find their concentrations focused on the motions of the ocean, watching the incoming sets and positioning themselves to catch the best wave. Once or twice in a surfer's life will they experience the feeling of true hopupu, suddenly the wave will arc over their head and the surfer finds that they are riding through the hollow of the wave, surrounded by a wall of water in a place many surfers call the blue room, like a bird soaring through a deep ocean sky. They suddenly feel that all the forces of the universe have for just a brief instance aligned and that the motions of land and sea flow together in a powerful logic. Everything else in life seems a million miles away. Here it is easy to see why surfing was seen as such a spiritual experience by the ancient Polynesians. These people would most likely find it very ironic that the carefree culture of surfing has now been turned into an organised social behaviour by the billion-dollar surf industry.

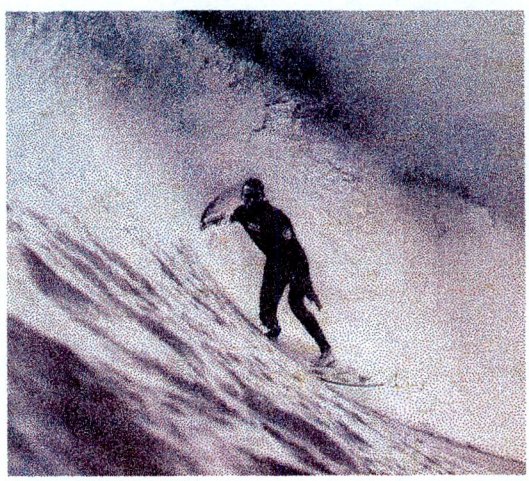


Fig 12. The Blue Room

Chapter 2

The Modernisation of the Surf Board

Just after the war, roughly during the period spanning 1946-50 the surfboard went through a period of evolution, a dramatic change in surfboard design, and a new concept that was to be the foundation of modern board design. How the prototype for today's surfboards came into existence is told by the Malibu Board, the first modern long board. After the Second World War, surfers began to experiment with hydrodynamics and new materials in a quest to develop a lighter surfboard. Materials like fibreglass, resins and Styrofoam, the three main components of the modern surfboard, all three were materials developed for aircraft in the Second World War effort. The first born of the "Malibu Boards was Developed in the summer of 1947 by a surfer called Joe Quigg, one of many surfers who emigrated from California to Hawaii during the mid 1940's.

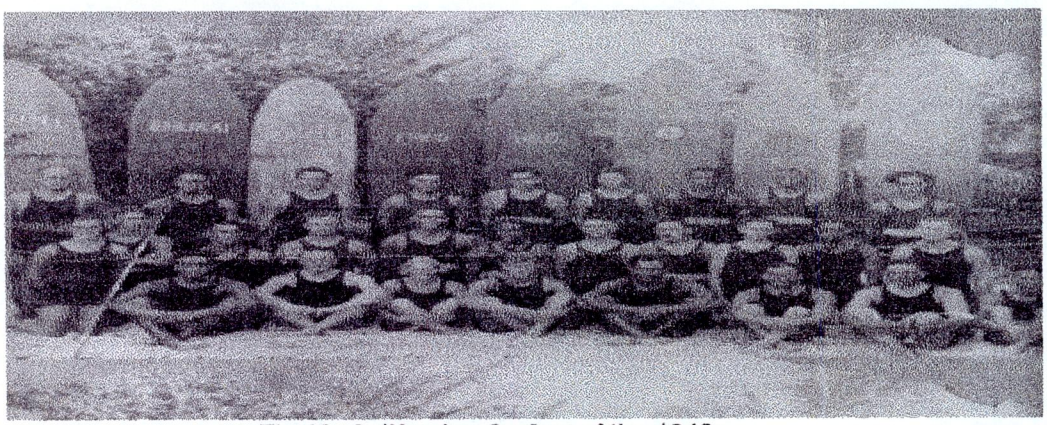


Fig 13. Californian Surfers of the 1940s.

Evolution of the Surfboard

Joe Quigg did not intend to rewrite the whole concept of proper board design, he was simply designing and building a novice girls board, short, light and easy to carry and most importantly it must fit in the back of her town and country convertible. The Darrylin Board was designed for Tommy Zahn's girlfriend Darrylin Zanuck, and was shaped out of balsa wood, which was sealed with fibreglass and resin. Darrylin Zanuck lived in Malibu at the time. She was the first of the Malibu girls to buy a surfboard and stick it in the back seat of her convertible and drive up the coast and learn to surf. The board weighed half as much as the old solid wood surf boards. It was nick named Easy Rider and poor Darrylin found that her loving boyfriend couldn't part with her present. To his surprise he noticed its hidden potential when he started pulling turns four times faster and making it into and out of inconceivable situations. In fact many of the local surfers decided to have one built for their girlfriends too!

This board will always be known by the name of the girl it was designed for, the Darrylin Board, the first Malibu Board and soon to follow was the Pintail, a lightweight balsa board with the first Fiberglas fin designed for speed and manoeuvrability.

Surf Boards began to get even lighter when a surfer called Bob Simmons came up with the idea of making hollow plywood rescue boards. Hollow boards weren't as

tough as solid boards, so Simmons started experimenting with styrofoam, sandwiching it between the plywood as a sort of lightweight support. He had always dreamed of making a board simply out of styrofoam but unfortunately found that catalysed resins dissolved styrofoam when applied, it was not until later on that this duo became a viable partnership. Light weight was not the only advancement from using styrofoam, shapers found that they could easily shape styrofoam into complex shapes, and as a result the old plank shaped boards gave way to more modern designs with scarfed noses, pulled down rails, concaves and skegs. Redwood/balsa and its traditional plank surfboards were now being hung up to dry for good. Unfortunately the lifeguards never took to this new board, but the new stream of Californian surfers living in Malibu thought they were the most radical boards around and Simmons sold about 100 boards in the summer of 1949, a record in its time. In the early Californian and Hawaii surfing days there were some small, light, redwood/balsa boards around, but they were seen by the big wave riders as beginners or 'girls boards' and if you were seen riding one you would be chased into the smaller surf to the inside waves. These old fashioned crude surfers could not understand why Simmons started making these new plywood and styrofoam models. They were still in love with the old long wide boards, but when they saw the tricks these new surfers were achieving, every hot surfer wanted one, and the wooden boards of the ancient Hawaiians now became a relic of the past.

Malibu with its machinelike perfect tube waves and quiet beaches was the perfect place to test and develop these new boards. Over the next few years the design of the surfboard evolved dramatically, as when man climbed down from the trees and realised he was taller when he only used his hind legs for walking. By 1950 dramatic changes were taking place, Quigg was designing smaller lighter boards, and by the month he was building progressively lighter boards for his fellow Malibu surfers.

By 1951 the length of the board was down to about 7 feet. Joe Quiggs 7-foot board weighed only 19 pounds and was nick named the egg board because of is geometric elliptical shape. It had a combination of all the basics features still used in modern board design, with the exception

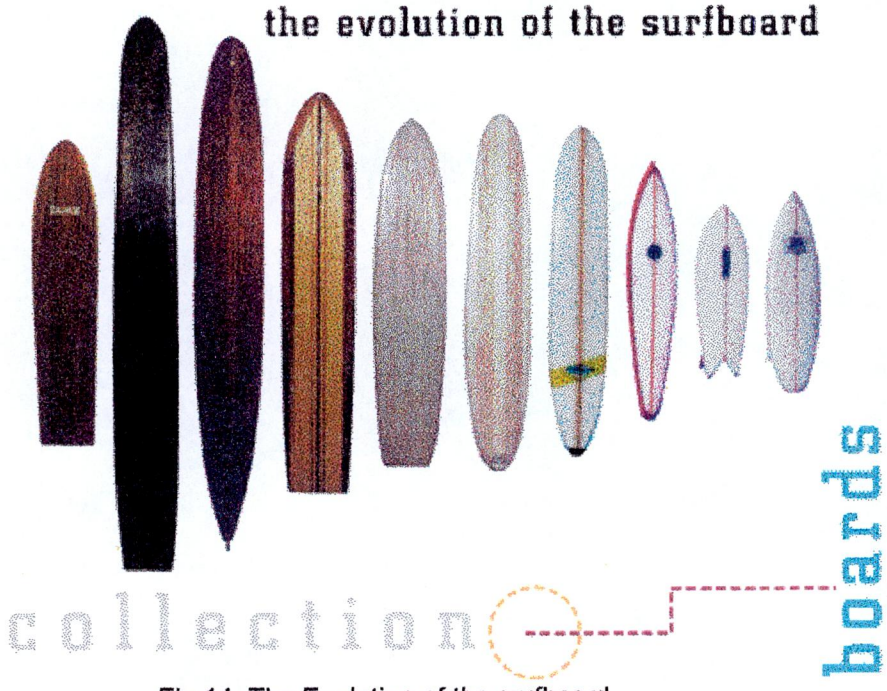


Fig 14. The Evolution of the surfboard.

that balsa and styrofoam core has been replaced by foam and the single fin design has evolved to tri fin thrusters. These new board designs were now being surfed by the new generation of young innovative surfers, who surfed the Californian south coast during the mid 1950s.

The Surf Boom of the Sixties

Hawaii and Southern California were the home of modern surfing. Back in the 1950s it was simply the lifetime obsession of a few local surfers. It was not until the sixties that surfing became an international pastime, after the music scene of America recognised its cult status, bands like the Beach Boys used surfing as the subject for their songs and brought the world to its attention. Surfing first appealed to young men in their teens and soon developed a defined subculture with its own technical jargon, a mix of psychedelic hippie art, Hawaiian images as its graphic style, and a laid-back, no-fear image

Fig 15. Here are three examples of how bright colours were often used in 1960s Surfart

Primitive surf art was made up of many different media; carved rocks found in lava fields and dried mud painted onto rock faces were the first examples of surf art. Many of these petroglyph images were based on the coastal lifestyle of the ancient Hawaiians. Canoes, sails, sea life and a human form standing on a primitive wave slider. These images, unique to Hawaii's ancient culture, merged with the psychedelic hippie era of the 60's creating the new look of modern surfing. As the sport evolved new subgroups began to break from surfing, developing unique sports of their own, but which could have originated only from surfing. Such sports as skateboarding, snowboarding and windsurfing. Today these sports might be seen as unique sports but will always have that radical image first associated with surfing. By the end of the 1970s surfing had evolved into a growing industry no longer focused on a minority group.

Fig 16. Two examples of Ancient Hawaiian surfart.

The Creation of Windsurfing, the Modern surfer

'Individual organisms fortuitously better adapted to their environment than others of their species stood a better chance of surviving and so of passing on their desirable characteristics to the next generation. This process has been called the survival of the fittest' (Charles Darwin, PG 112 The Guinness Encyclopaedia 1990.)

Darwin was right, only the most dominant creatures can venture into the most extreme wind and water conditions. The key to survival is to evolve and adapt to conditions as varied as pounding surf of the Pacific, the diverse elements of the Atlantic, the mellow tropics of the Caribbean, the churning waves of Japan and the Canaries, the fresh lakes of Europe and North America, and the rolling swells of the Columbia Gorge. The story of surfing would show an evolution that would prove to frighten off all fierce competition for the wave on top of the food chain. Surfing was to harness another force of Mother Nature and a new, incredibly visual sport called windsurfing would emerge, a direct and personal challenge to the power of wind and water. The story of windsurfing reads like the story of Rock'n Roll, always outside the mainstream. Both represent a break from the shackles of tradition. To this end they share a common driving force, an emotional need for freedom from the establishment. Windsurfing and surfing are necessary outlets for those driven by this emotional need. For the windsurfer this urge is satisfied only when water is all about them and only the sky is above. In between these infinite masses only you and nothing else, exists. With this kind of evolution,

you got to ask yourself if maybe Darwin was right about natural selection. But were did this sudden evolution in surfing begin?

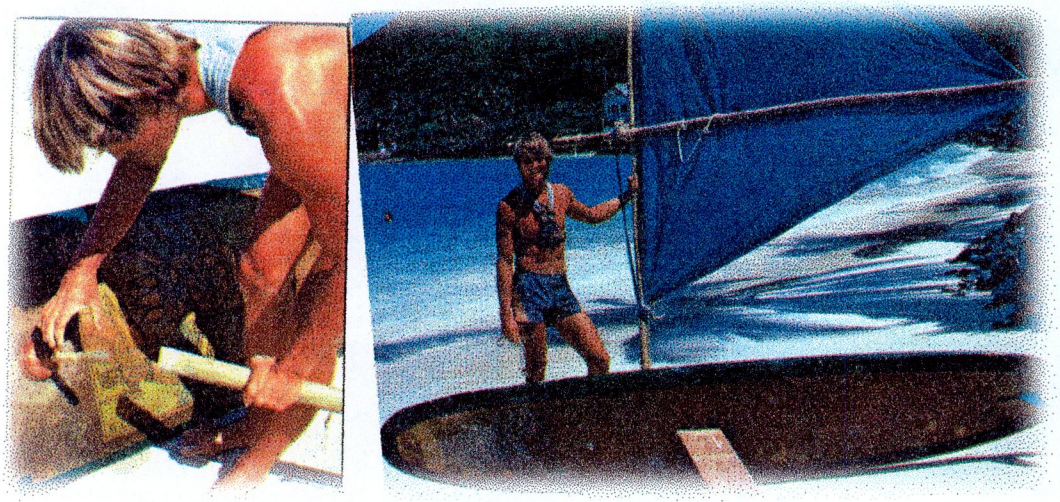


Fig 17. A Surfer from the 1960s experiments with putting a sail on a surfboard.

As an opportunity to avoid work on a lazy day on a calm ocean with no surfable waves, Californian surfers of the late 60's often experimented with fixing sails to their surfboards. Many surfers did not like this idea. They saw surfing as a free sport, free from maintenance, set-up time and mechanical complexity. It would take a whole hour just to prepare a boat and to take it apart again when finished, making it impossible for a sailor to go out sailing if they had only one hour to spare. That was one of the freedoms of surfing, you didn't have to spend much time preparing for a surfing session. But in Southern California good surfing conditions were becoming rare. The areas having the best surf were so crowded that fights would occasionally break out between surfers competing for the

best surf. The appeal to sailing was that it was a sport that gave you all the water surface of the world to play on-seven tenths of the world, and a good wind is more common than a good wave. In 1962 a surfer called Hoyle Schweitzer was intrigued by this concept. He believed that sailing a surf board should be done in a standing position, a position that makes surfing and skiing so much fun because your whole body gets into the act of controlling the craft and if the craft was small enough it could be controlled simply by adjusting the position of the sail in relation to the board. To achieve this he invented a universal joint for fixing a sail to a surfboard and the windsurfer was born. The other surfers who were not so pleased with the idea of attaching a sail to a surf board, found themselves charmed by the windsurfers elegant design and even more overwhelmed by the extra-sensation of controlling the power of the wind while riding a wave with a surf board. This new sport got its first foothold in Europe, and soon afterwards the rest of the world would follow in the windsurfing boom, at least wherever there is water and wind.

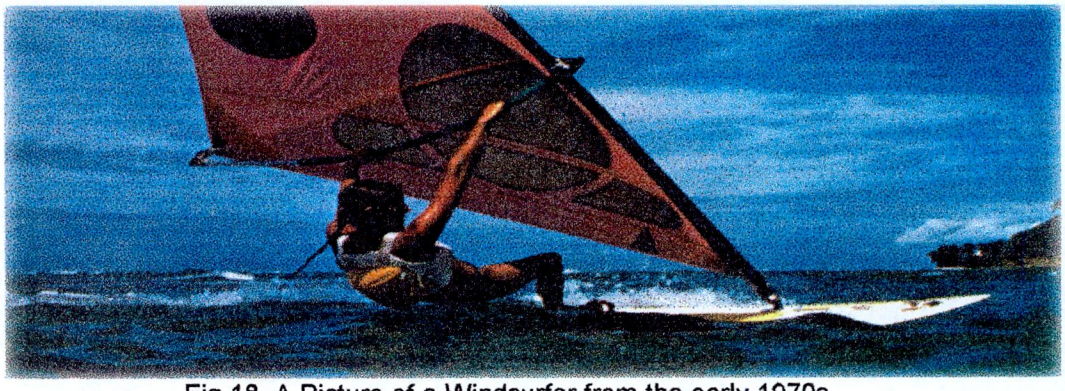


Fig 18. A Picture of a Windsurfer from the early 1970s.

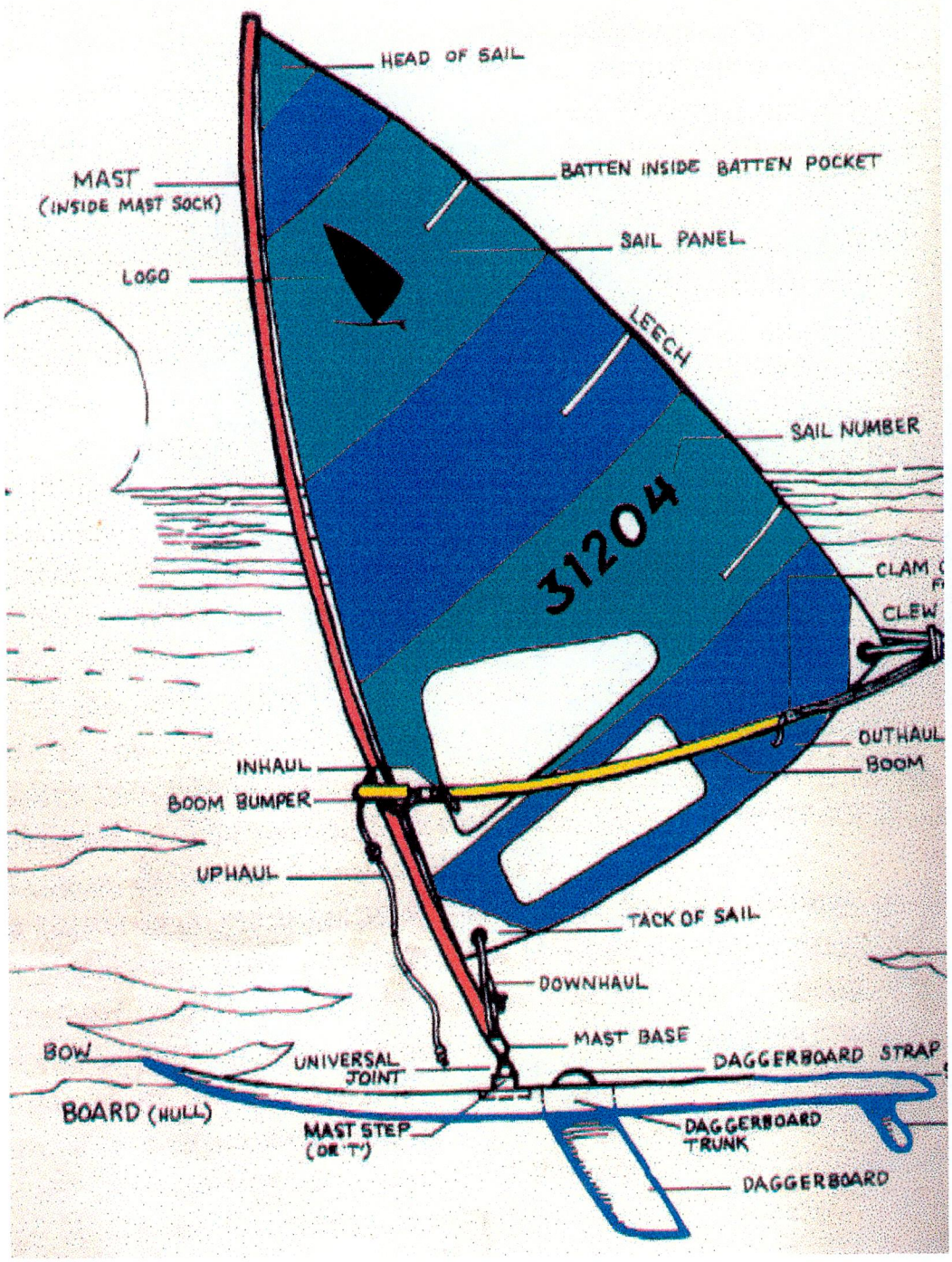


Fig 19. The Basic anatomy of a Sailboard.

Chapter 3 The modern windsurfer

Your average windsurfing entrepreneur must see modern windsurfers as a bottomless pit of gold. Once you have bought your board and wetsuit he is still waiting to sell you clothes, bags, pendants, watches, wallets, everything under the sun with the only limitation that it's got to be pink or lime green, but the one thing the entrepreneur could never quite pin-point was the identity of the windsurfer, the modern surfer. Despite the fact that the latest fashion gear is trust upon the windsurfer by nearly all the manufacturers, despite the fact that there is a whole cult built around the world of loud shorts and coloured total block, the world does not quite know who a windsurfer is. They have completely forgotten about the culture of the windsurfer, a culture that has changed dramatically since the surfing boom of the 60's. The music scene is the only medium that has ever come close. Records by the Beach Boys and Jan and Dean who skipped up the charts back in the early sixties with the likes of 'Surf City' , 'Surfin'USA' and 'Surfin'Sisters'. Oh yes, there was that great 1963 one-off, the classic 'Wipe Out' from the Surfaris which captured the imagination, obviously, of every surfin' teeny bopper of the day. The trouble of course is that those records came out when most windsrfers of the 90's were no more than a twinkle in their mother's eye and windsurfing was simply a term for 'breaking-wind on the face of a wave', and lets face it, by today's standards the first windsurfers were as radical as a two metre rig in a

swimming pool. To the relief of many a windsurfer most entrepreneurs have not the slightest interest in discovering or selling to a new generation of surfers that ride the winds. In Ireland the windsurfing market is like trying to find a needle in a haystack, surfing is seen as so non-1990's, a common euphemism for ' we haven't got a clue how to sell it'. Any one who gives anything more than a glance at the charts knows that George Michael, Boy George and the Rolling Stones are hardly the 90's generation, yet they still manage a sprightly waddle up the charts. But it also means that the industrial monguls consider the cool kiddies of the coast about as marketable as ice in the North Pole.

The cause for this is not due too lack of interest in windsurfing but due to the dramatic changes that have occurred in the sport over the last 20 years. The windsurfing market proved to be very dynamic. Equipment has been improving steadily over the past two decades; the pattern has generally been one of 'breakthrough' followed by refinement and improvement. So in one year we might see new designs and ideas occurring in a particular area of the market, which in the following seasons would be developed. As other manufacturers brought out their own versions or variations of a new theme, slowly but surely, the gaps in the market were spotted and filled.

The fun loving, carefree image of surfing has been left behind as technological advancements took hold. Simplicity has been sacrificed for

performance, back in the sixties windsurfing was called sailboarding, understandingly so, a sailor simply put a sail on a surfboard and sailed away. But as developments were made in improving the performance of the sport, different styles began to emerge and take hold, sailboarding was suddenly windsurfing which in tern developed into wave-sailing, race-sailing, speed-sailing, indoor and freestyle, the list goes on and on. Each one of these categories has its own board and rig design specifications, making windsurfing a complicated and vast sport with thousands of different models out on the market.

A comparison between modern windsurfing equipment and the equipment of just 20 years ago reveals that this sport has leapt from the stone age to the space age in just two short decades. Manufacturers have often looked to other sports such as hang-gliding and even Formula 1 racing to steal any new ideas that they could apply to windsurfing. Enter any modern windsurfing design office and there will be computers everywhere. The modern windsurfer is designed using state of the art computer - aided design and manufacturing software.

Aerodynamics, computer aided design and a vast understanding of modern materials has improved the performance of equipment. Boards and rigs can offer much greater performance and efficiently.

Developments in Windsurfing Technology

The average weight of a board has more than halved over the last twenty years, due to improvements in both construction techniques and materials. Boards were originally built from polyethylene on a heavy PVC foam, but nowadays the vast majority of boards are built with a skin of high-tech materials around a much lighter foam core, and consequently they weigh far less, while still being very stiff and strong and as a result the average weight of a modern board is under 10kg.

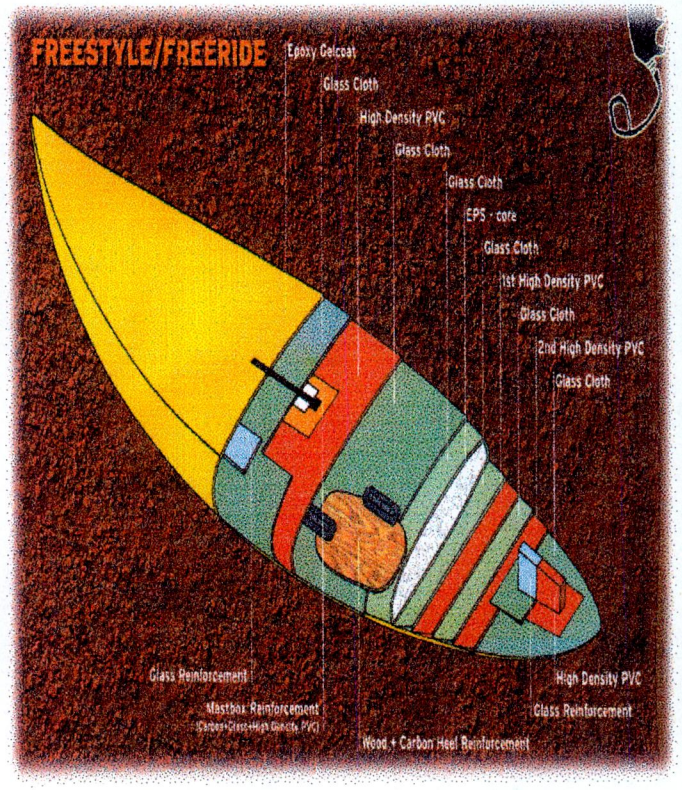


Fig 20. Construction of the Modern windsurfing Board.

There are two factors that paved the way for development in the windsurfing board market 'freeride and competition ' and now the line-up of virtually every manufacturer is split between the 'freeride' and

'competition' line. Its compelling upon any board name to immediately associate it with its family; is it 'free ride or 'competition'?

So what exactly is a freeride board? In the simplest terms a freeride board is a user friendly slalom board, yet still nippy with comfortable high performance. The shape of a freeride board is very smooth, without too many hard edges, offering relatively easy performance and reasonable maneuverability. Many amateurs windsurf just to be free from the pressures of society. To freeride is to get out there and just shred up the waves, this is what this type of sport is all about, no pressures or responsibilities, just tearing up the surf for the love of it, this is what the whole lifestyle of surfing is based on. Freeriding is a lifestyle. This category is made up of 'wave-sailing', 'Cruisers' and 'Freeride'. A competition board on the other hand sacrifices manoeuvrability for performance. Speed and power is all-important in competition board design and as a result these boards became very fast but need an experienced sailor to control them.

In the old days the windsurfing market could be split into three categories. 1) Learning 2) the Slalom board, for virtually any kind of recreational or competitive sailing, and 3) Wave board, for extreme weather conditions. Categories have become so much more complicated, today there are hundreds of different types of boards

available just from the main manufacturers and in order to get a clear understanding of the market, more defined categories are needed. Some of the categories are fairly obvious and clearly different, but others are less clear and arguably artificial. However the following categories have been chosen with the help of results obtained by interviewing windsurfers about their experience with different boards and asking them which types of board feel similar in performance on the water. So here are the categories that detail the particular rolls that different boards on the market fulfil.

Wave-Boards: Waves boards are designed for wave sailing. Wave in a similar way to surfing uses the grace and natural motions of the waves but has the added extra of wind power and as a result the steep arc of a wave becomes a launch pad for a craft that surfs the skies. Wave sailing is a mixture of hangliding, surfing and is seen by most freesports enthusiasts as the most radical way to express personal freedom available. Wave boards form a very distinct category with little over lap. Within the last couple of years most manufacturers have doubled the amount of wave boards that they have on offer. These boards all carry the label of 'Radical' or ' All-round' wave board. The 'Radical' boards are generally 6-10 litres less in volume and up to 1-3 cm in length. The 'all-round' board may have less rocker through the tail. There is a tendency to see the 'radical' board as a front side wave rider and the 'all-round'

board as a cross or side shore board. However this is only partly valid, the sizes are more relevant to the size of the sailor, his or her ability and the strength of the wind they want to use the board in.

Fig 21. A Wave Sailor using a Wave-Board.

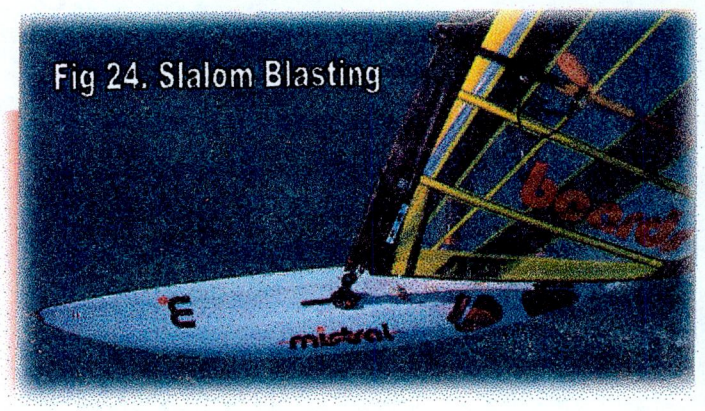
Convertibles: The ' Convertible' is usually close to 2.65m in length with much less rocker through the tail than wave boards. 'Convertible boards are simply that; boards that can be converted from straight-line performance 'slalom' to manoeuvrability for 'wave' sailing by changing

Fig 22. A Convertible Board tuned for Slalom windsurfing.

the foot strap position and fin. The 'freeride' tag isn't really relevant with convertibles since recreation rather than competition must be fairly well taken for granted in this section. Some manufacturers call these boards 'bump and jump' instead of or as well as convertible.

Fig 23. A Convertible Board tuned for Wave-Sailing.

Slalom: Slalom is a competition slalom racing and high-speed drag racing. Many brochures describe these boards as medium wind slaloms or even light wind slaloms, which is a bit misleading. You won't be putting an umbrella up in a wind in which you can hold down a 6.0m sail on one of these boards! Whereas in the past boards of this size were usually quite low in the nose rocker and as a result they were to technical for the average board sailor, particularly when the weather got rough. However since rocker lines now appear to me moderating on



these competition slalom boards they are starting to appeal to the more experienced sailor looking for greater performance.

Freeride: The 'freeride' board is designed for slalom blasting, cruising, gybing and generally for jumping and hopping over small waves.

Fig 25. Freeride

This is a classic category of board. Volumes go from around 95 – 105 litres. This group has always had a huge market, it's the perfect all round size for most recreational sailors. The best of these boards can carry a 4.0m sail in 30 knots of wind and get you planing in approximately 11 seconds. (Planing is a windsurfer's top speed and is the most comfortable position a sailor can be in.)

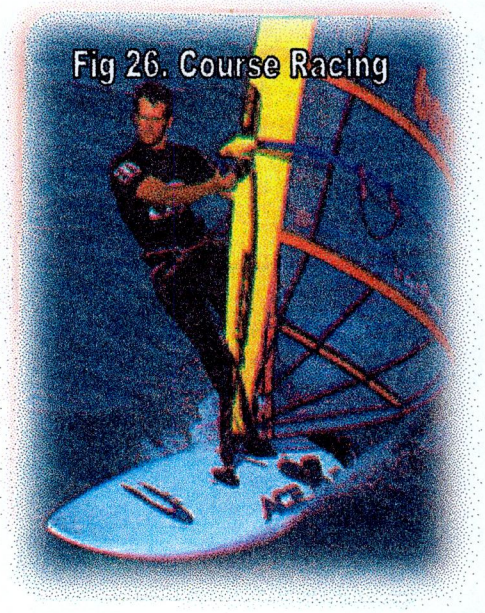


Fig 26. Course Racing

Course Racers: The 'course racer' is for racing in medium strength winds. These boards tend to have a very flat rocker, thick body with hard edged rails to give it that extra edge in racing, but as a result its not particularly exciting to sail. Fortunately new course boards with more moderate rockers and wider tails are beginning to take over. Last year this board established as an exceptional effective racer, particularly in light wind and calm seas, as a result of the greater width in the tail, while still maintaining Very light construction. Most of the new course boards out on the market seem to be going down this road, but have they gone far enough? Resent models suggest that the goal posts are still moving with even greater width and lighter boards along with bigger fins.

Cruiser: The 'Cruiser' is designed for light windsailing and for learning to sail. Its has a lot of volume and generous width. It is generally used by newcomers to windsurfing and for the part-time sailor who prefers to windsurf in light winds on inland waters. These boards have that little extra length and volume than the 'freeride', a trait that suits the less

ambitious sailor and can soothe the pain of learning stages. Yet they still maintain quite good performance to satisfy the sailor who needs the occasional adrenaline rush.

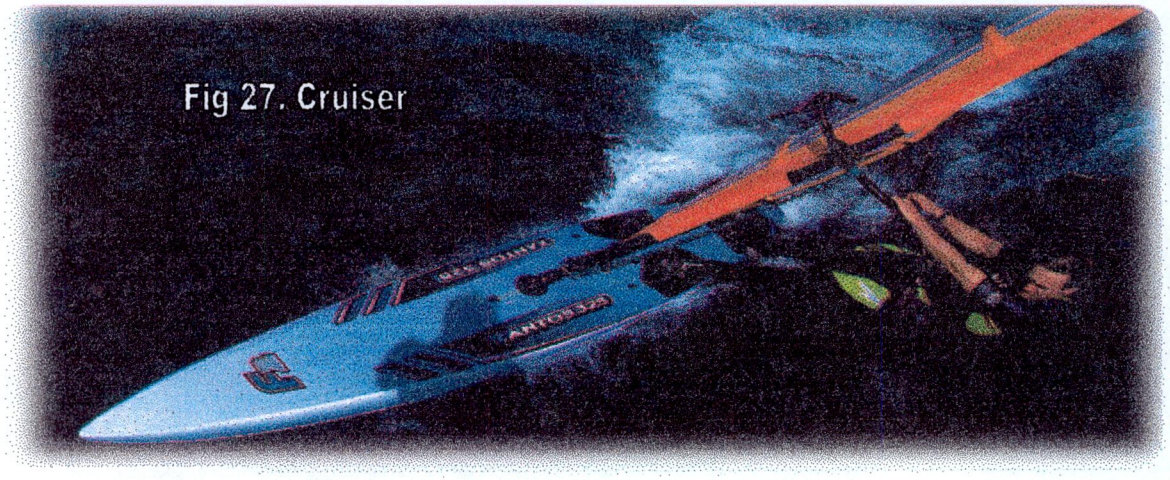


Fig 27. Cruiser

The Planer: The Planer is designed for early planing and is the widest board on the market. This is the latest board design out on the market and is new breakthrough in board design. This board did not mess around with an odd few millimetres of extra width, but goes straight to an extra 11 centimetres increase, that's nearly 20% bigger. Most windsurfers I talked to seem to think this new design works, they love this boards undreamed


Fig 28. The Wide Planer

extra feature of early planing performance. This section of the markets is tipped to grow rapidly over the next few years.

The draw back, if it can be called that, is that it complicates the picture hugely making the windsurfing market even more confusing. Making a board wider increases its weight–carrying and sail–carrying capacity, while generally reducing the top end comfort slightly. In other words, it means the wider boards offer equivalent performance to something traditional and longer.

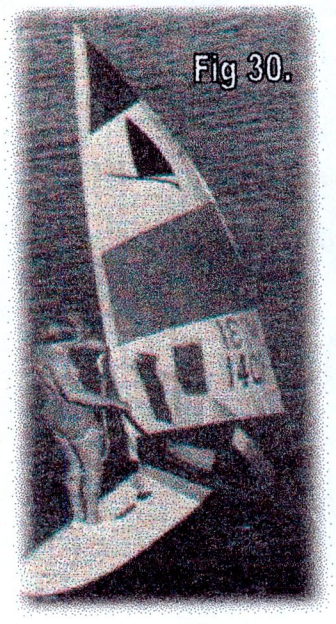
No longer can we think in terms of length, until a board consensus is yet again reached on the best width and volume for a given length, all three parameter must now be considered together when assessing the suitability of a new board. The details of each board shows how the amazing variations that now exist; things really have got very confusing when trying to compare boards.

Fig 29. Wide Style, the Wide Planer Board

The 1976 windsurfing rig was an extremely simply cumbersome creature. Sails were made of very heavy materials, which were a direct descent of basic dingy sail, as no - one had any better ideas at the time. These 'dingy' windsurfing sails were twitchy, unstable, heavy on the hands (particularly for pulling out of the water) and generally very unforgiving to use, especially in stronger winds.

Nowadays advanced aerodynamics and the realisation of modern materials have been applied to the construction of sails making them lighter, more stable and efficient. The elongated triangle shape of 1976 is long gone, replaced with a design resembling a modern aircraft wing.

Fig 30. An old photo showing how floppy and unstable sails were.



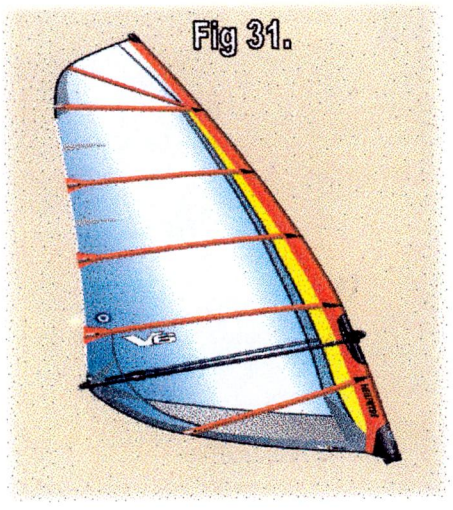


Fig 31. A Picture showing the solid Sail of the modern Windsurfer.

In 1976 masts were fibreglass and weighed a great deal compared to their modern day equivalents. The industry flirted briefly with materials such as aluminium in an effort to reduce weight whilst maintaining the bend and stiffness characteristics necessary for the sail. However aluminium brought problems of its own, so now all mast are still built with in epoxy resin fibreglass construction but with the added extra of carbon fibre, which provides a very light yet extremely strong structure, with very precisely tuned bending characteristics, to suit exactly the requirements of the sail. Masts are also slightly smaller in diameter, in a further move to shed weight. Many modern masts now weigh substantially less than 2kg. They are also invariably two – piece, for easier carrying and storage.

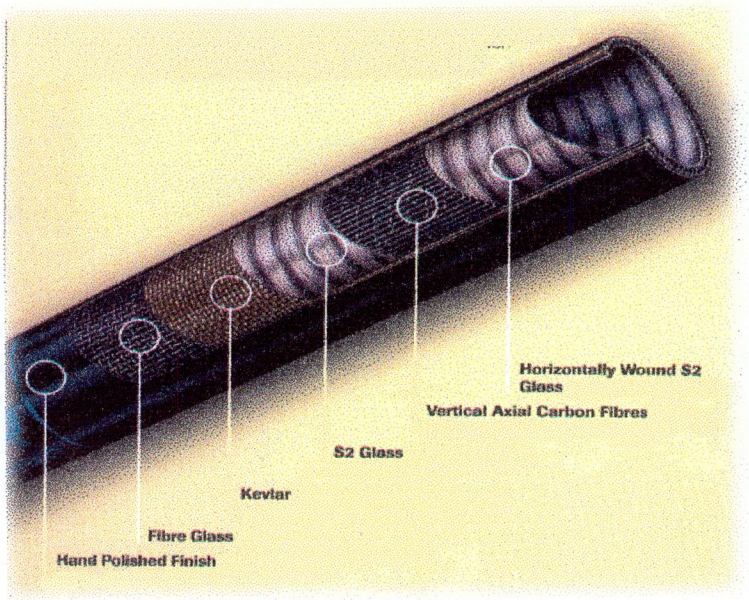
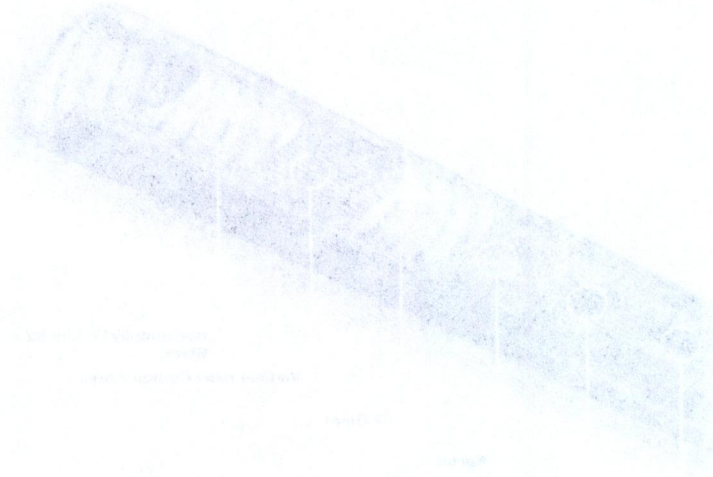


Fig 32. Modern Mast Construction.



In 1976 your average boom was 3m long, made of wood and held onto the mast by a rather Health – Robinson rope lashing method. The use of a metal boom arms brought a big improvement, but it was not until the late 1980's that the frosting and very unreliable tie-it-on-with-a-bit-of-rope technique was replaced with the introduction of boom clamps, which simply clip onto the mast by means of a plastic, lever operated clamp. Now it only takes a few seconds to clamp the boom on to the mast, and its height can be adjusted easily and exactly, as required. Most modern sails of 6.0m and under feature a boom length under 2m, which is incomparably easier to control than the huge 3m+ booms of the 1970s.

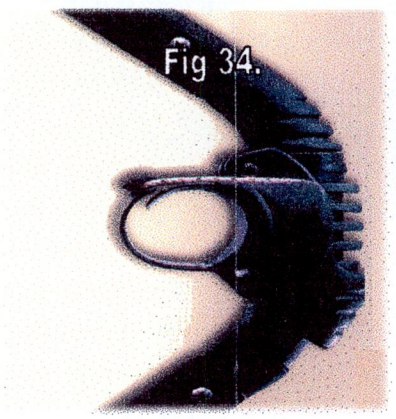


Fig 33. Is an example of how a boom was attached to a mast in the 1970s.

Fig 34. A modern boom clamp.

The factor that makes windsurfing different from any other sailing sports (apart from the fact that you are doing it standing up!), is that the rig is free to pivot in any direction, connected to the board by a 'universal joint', and it is by moving the rig that you steer the board, accelerate, decelerate or whatever. The modern rig is very light yet very strong, and breaks into small component parts, which are easily carried and fit comfortably into the back of a car, again unlike virtually any other sailing sport!

Windsurfing sails are typically made up of a combination of Monofilm (a clear PVC film), Dacron (woven polyester) and Mylar (polyester film sandwich) panels, which are cut into specific shapes and sewn or taped together. Like boards sails come in different shapes and sizes. However, unlike boards, it is not a matter of ' big is beautiful' for a beginner. You simply want a sail that delivers enough power to move you around, but not enough to give you a hard time, or to be too heavy to lift out of the water. A good all-round sail size for most people is 5.5-6.3m squared in surface area, suitable for winds up to force 4-5. However, if the wind strength increases further than ultimately it will create too much power and will pull the sail out of control. The point at which this happens is very much determined by your own body weight and strength – a heavier and/or stronger sailor can hold onto a bigger sail in stronger winds than a smaller person, using their weight and strength with the harness to

balance against the force of the wind. But ultimately all sailors have to 'change down' to smaller sail as the wind gets stronger.

This is why more experienced windsurfer own quite a few different sizes of sail, in order to have the right size for what ever the wind condition. There are sails available in all sizes from as small as 2.5 m squared to as large as 10m squared. Many of these are designed as specialist sails – the very small sizes are for the experienced wave sailors sailing in gale force conditions, and the very big ones are generally for racers wanting to go as fast as possible in very light winds. The point is that there are a large variety of sails available but choosing one for you is not as complicated as choosing a board and a sailor should always be able to find a size that suits their ability, stature and requirements.

There is also a wide range of sail styles. The simplest kind of sail (often favoured by windsurfing schools) has no fibre glass battens to support it. Consequently it is light in the hands for learning and ideal for light breezes, but soon loses its shape and becomes flappy and unstable as soon as the wind picks up. A sail with battens is more stable and powerful – full-length battens are used to support extra area in the bottom (foot) and the back end, or 'trailing edge' of a sail (the leech), and can transform the sail into something that performs like a solid wing. Modern sails with full-length battens 'rotate', whereby the battens flip from one side of the mast to the other when you turn the sail around and thus change the side of the sail that the wind is blowing onto. Allowing

the sail to always lie on the leeward side of the mast where it is aerodynamically most efficient.

Windsurfing Stereotypes

The people who windsurf come in more shapes and sizes than the equipment they sail, it is a sport which is practised by many different cultures all over the world. But no matter where they are from or what are their beliefs they always seem to get branded by one of the four main stereotypes associated with windsurfing.

The first is the Fanatic windsurfer.

This windsurfer that has no other priority in life, and no other reason for living. This stereotype is so focused on windsurfing that he almost sees himself in a sort of religious cult, a cult whose sole purpose is to pray to their god by windsurfing. This surfer drifts from beach to beach in their beaten up multi-make van, which is covered in windsurfing stickers which hide rust patches and keep the van intact. They find themselves incapable of settling down or holding on to a steady job, They live in any left over space available in their vehicle that is jammed with all the windsurfing kit

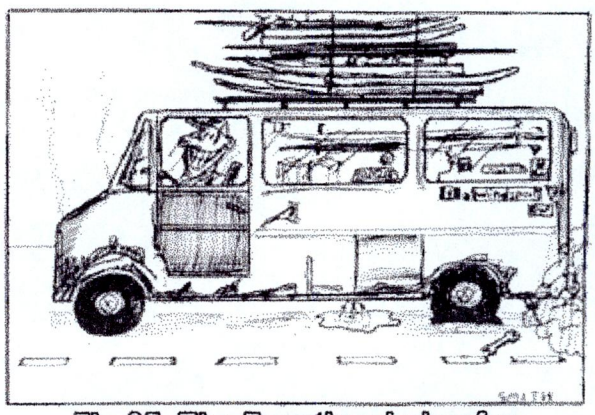


Fig 35. The Fanatic windsurfer.

possible. The only skill they require in life is to windsurf. How could they have time to learn another?

The Career Professional-Windsurfer

This group of windsurfer probably started windsurfing at college as a means to unwind after a hard day at the office. Their first priority in life was a professional career that was before they discovered windsurfing. They suddenly found their priorities pulling in two different directions, tearing their lives apart. When they're in the office they often find themselves staring dreamily at trees bending in the wind, agonising to get out on the water. If spotted, steer well clear, for they are possessed and will stop at nothing to get their fix. They are often seen tearing toward the beach in a brand new Jeep packed with all the latest board and sail designs in a panic to get on and off the water between meetings.

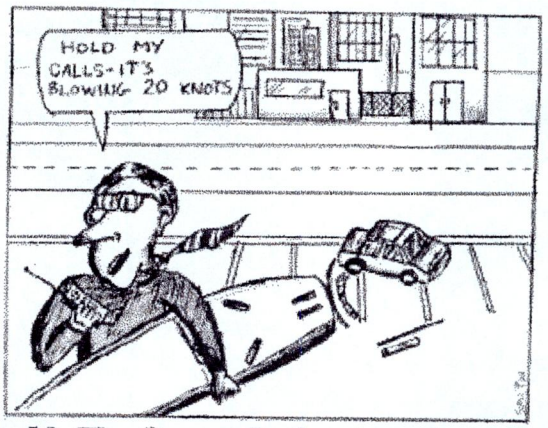


Fig 36. The Career-Profession windsurfer

Windsurfing professionals

This windsurfer probably started out as an extremist board head but is at the mercy of generation that has to have it all, a generation that needs to succeed financially in life. They've lived every extremist dream; they get paid big money to windsurf. Often seen in a 210van given to them by their sponsors with only the latest prototype gear stacked neatly on top.

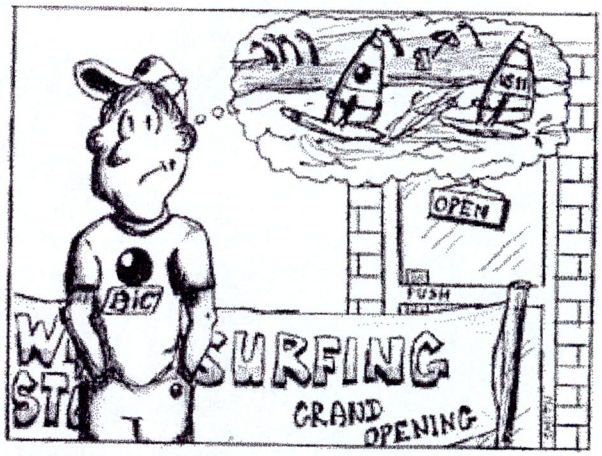


Fig 37. The Windsurfing Professional.

The Weekend Recliner

This group of windsurfer's first priority is not windsurfing. A family person whose choice of pastimes is not dominated by just one sport. They dabble around in any sport which takes their fancy for the afternoon, in fact their weather beaten kit probably only sees the water once ever few years, and when it does wind and waves are only looked at with frustration as they struggle to get standing on the board.

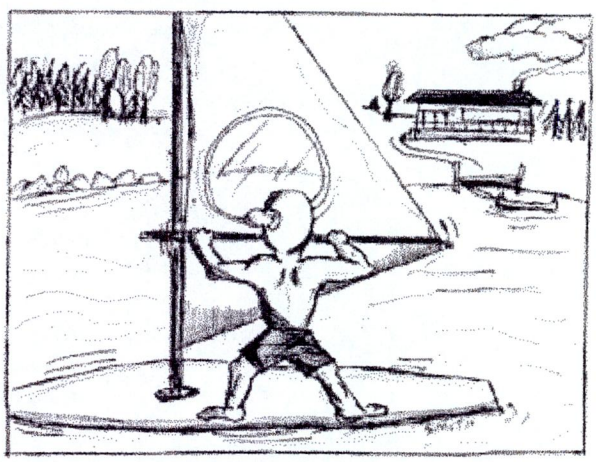


Fig 38. The Weekend Recliner

Conclusion

Windsurfing (modern surfing) when compared to the surfing of the ancient Polynesians is so complicated and technical, in fact, the sport has become so complicated that even experienced surfers often scratch their heads with bewilderment when a new concept is put out on the market. Just looking at the variety of boards on the market today shows how diverse and varied the sport has become, and as a result the people who windsurf are as varied as the product they sail. Therefore you can't really stereotype the people who windsurf. The stereotypes given in the last chapter are the generalisations that society has placed on windsurfing in an attempt to label the sport. It is the people who take part in a sport are the same people that give that sport its image. The surfing of 1500B.C. was spiritual and cultural because the Polynesian People themselves were full of spirit and culture and the same goes for modern windsurfing, it is only as technical and as complex as the modern society that take part in it. Modern materials, high-tech manufacturing processes and marketing are all major elements of our modern society and if surfing did not incorporate these elements into its evolution than the sport would not have survived 3000 years. Everything changes with time but their basic principals almost always stay the same! The sport of windsurfing has always tried to hang onto its romantic past, even though modernisation has taken away its simplicity.

But amidst all the confusion of windsurfing technology the modern windsurfer rides the ocean waves looking for that same feeling of 'hopupu' experienced by those first Polynesian surfers that surfed the Pacific around about 1500B.C.

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