



Feelin' ever so good on a beautifully cooperative Wedge wall, John Wrighton has trouble containing himself. And why bother trying?  
Photo: John Ramuno.

# TOWARD UNENCUMBERED FLIGHT

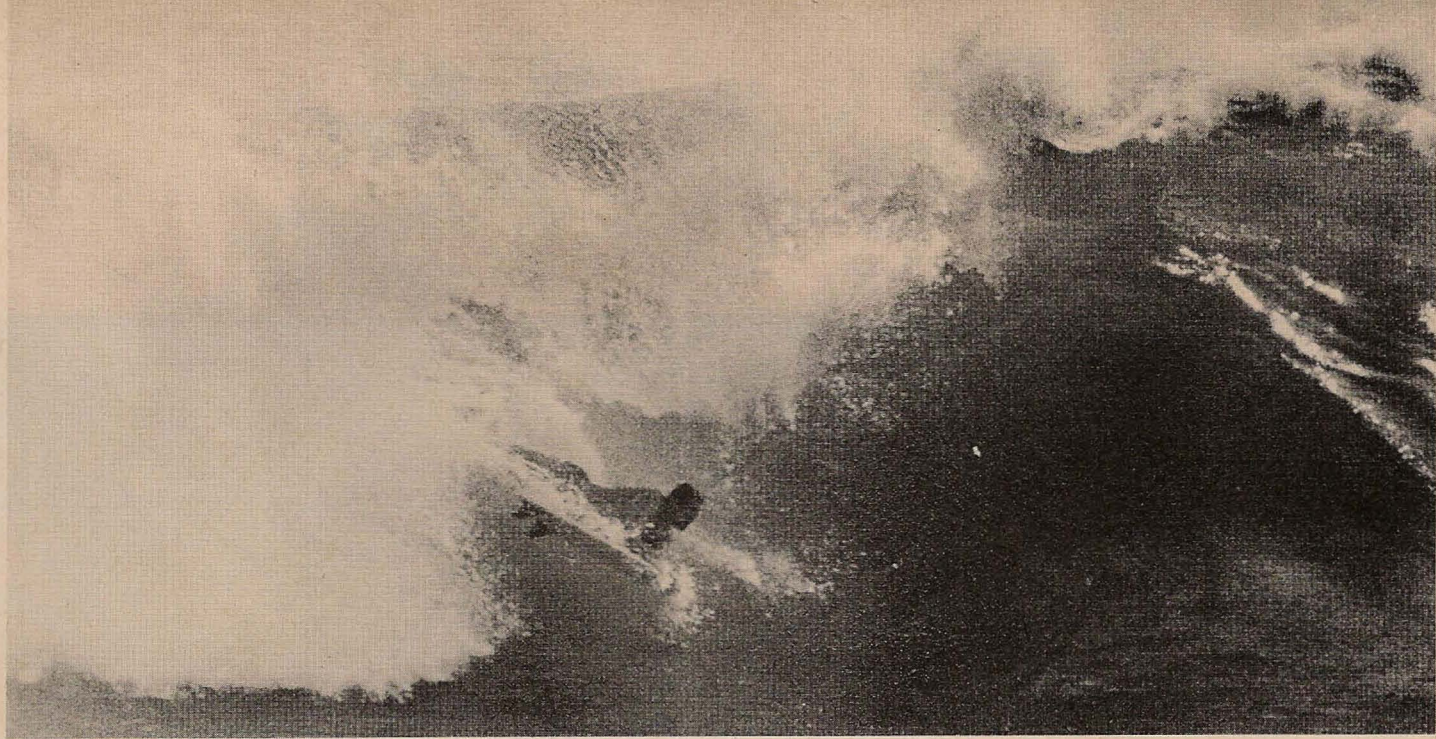


A. Friend underneath one of the most perfect places on earth: the circular hollows of wide open Pipeline. Oh yes! Photo: Art Brewer.

For some, the year of 1969-70 marks a birth or genesis that is no less significant than the fears of Cataclysm. Out on the fringes of surfing the individual is being re-born. Anonymous for a time, he is now ready to assert himself as a totally committed voyager into new surfing dimensions. He is called by many names: bodysurfer, paipoboarder, bellyboarder, kneerider, but names are inadequate. All that is important is that these surfers are individual enough, determined enough, and skillful enough to let their freedom and individuality express itself in a whole new concept of wave rid-

ing. That style is totally committed, totally expressive, and totally unrestricted high performance surfing, whatever the tool, or medium, used.

In fact, so pronounced is the trend towards completely new sensual experiences in the water, that this trend threatens to supplant surfing itself as the core of the wave-riding experience. With professionalism and commercialism blighting surfing forever (for some), the alternatives have become clearly apparent: the individual man, by himself, on his own, doing his thing, and having a hell of a lot of fun in the process.



# POTATO CHIP THRILLS IN A WASHING MACHINE

by GARY CRANDALL

Steaming out of a grisly tube on one rail of a potato chip leaves no time for tricks. Like a dragster, the paipo board is built for one thing — speed. Flat-out, tire-smoking acceleration. For those who like the elusive feeling of speed when the cold tubes get hot, I recommend the paipo board. Impossibly hollow sections are left with a thin white scar of surprise.

Winding, turning, carving, dropping, stalling — these are for the stand-up surfboard, the more versatile sports car of the waves. The dragster-paipo uses only the most succulent part of the wall of green. The bite of the rail is hard, clean and minimal. And fast.

A paipo board reduces surfing to its most functional simplicity. Plane enough to lift the body out of the water and no more. Minimal drag and maximum thrust. On a properly critical wave, there is no more than two or three inches of bare, hard edge clinging to the wall. It prefers hard-breaking waves to fat, mushy ones, and because of its specialization — using

the choicest part of the choicest waves — it is often disappointing at a more plodding pace.

My homemade board — L'enfant Terrible — is made of marine ply, five-eighths of an inch thick with a thin coat of paint and resin. The skeg is in the middle where the center of weight lies and where turns, when needed, are cranked out most effectively.

On a board this small, the response to the wall of water is immediate, and all control is performed through movements of the body — the board being, for all practical purposes, part of the body. It is built strictly for aggressive assaults down the center of the tube — like a human projectile coming out of a cannon — Freudian and thrilling. Freudian? Yes, surfing is sex. Life force. Libido. Contact with the wet housing of a wave-wife. Climb, suspension, drop — it follows the same cycle. It's one of the simple things of existence. For a split second in time you are energy, pure energy... and raw abandon.

In a prone position, the wave folds around you, engulfs you. The sensation of speed is intense — just inches from the surface — like opening the car door while speeding down the highway and staring at the ground. The sensation of speed is increased ten-fold.

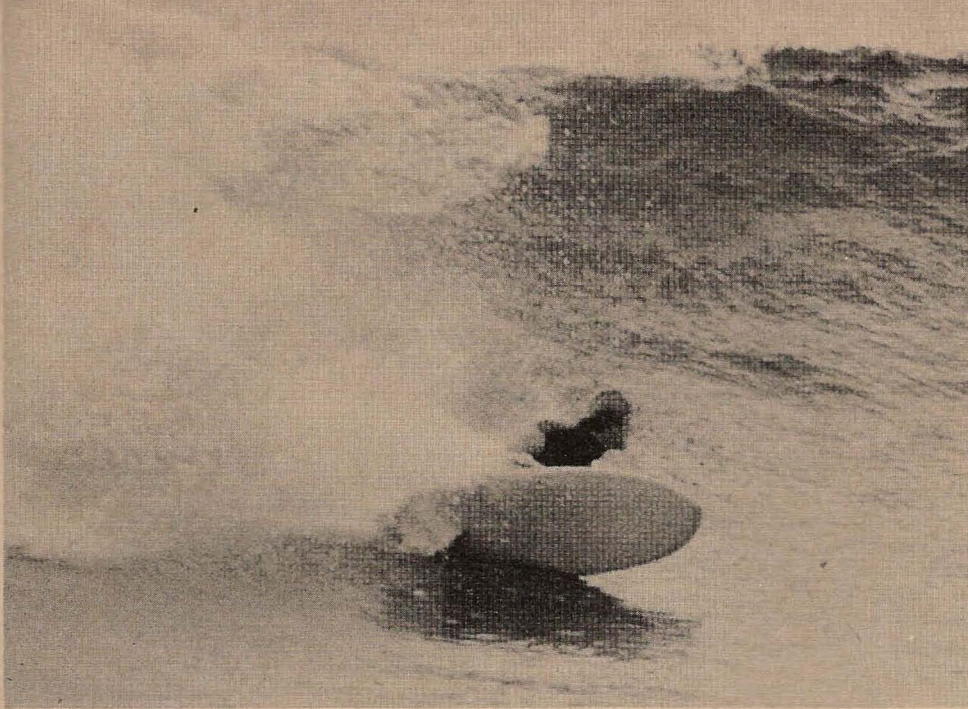
Then there is the freedom of the paipo board. It is so small it becomes a part of you, easily handled and not the cumbersome, separate tool that a surfboard can sometimes become. It rarely gets away from the surfer, and its lack of buoyancy keeps it almost inert so the wave passes by without

carrying it along — saving a lot of long swims. It is interesting to note that as the size of the surfboard approaches the size of the paipo, increased efficiency and hydrodynamics result.

Since the paipo is designed for fast, hollow waves, it is always tempting to try its performance on near shore break. It is nearly impossible to punch your way through the back wall once you are locked into a shore-break cruncher; should you succeed, it only ends up sucking you over the falls. Consequently, I have learned to make a quick tuck at the moment of collapse, and roll with the wave. The effect is literally one of a washing machine, and sometimes takes off a bit of skin. But those last few feet of bursting acceleration as the wave zippers shut are too hard to pass up. It's worth it to get shelled once in a while on fun-sized waves. The board is built to take it even if the body isn't.

If there is one thing the paipo has over a surfboard, I would say it is intimacy. An intimacy with the wave that standing up doesn't afford. One could say it is more visceral, closer to the gut of surfing — the involvement of body surfing combined with the speed of a board.

On a sensitive glass wave, back arched and stomach melding with the plane, one hand steering on the outside rail, the other arm thrust forward for weight and balance, the hoarse whisper of the liquid peeling aside and closing behind, one is riding the thin edge of reality. However vague our concepts of fulfillment — this is one aspect of it. Fleeting but essential.



Opposite: Gettin' ready for the soggy potato chip blues. Photo: Kevin Egan.

SURFER photographer Art Brewer up on the edge of his kneerider at Salt Creek. Photo: Steve Trear.

# A WILDERNESS OF KNEES AND SPOONS

by RON ROMANOSKY

September 21 and 22, the weekend of the Huntington contest, will be remembered by most people whose world revolves around the surf simply, I suppose, as the weekend of the Huntington Contest. To some, though, less than a dozen miles south that weekend, another spot was peaking and curling, hissing and crashing with a consistency seen perhaps twice a year. Except for the limitless broken boundaries of fantasy and imagination often seen in print, that weekend, to me, represented the best the Wedge had to offer.

Awesome, yet beautiful, big waves at the Wedge are mentioned in the same breath with the bodysurfers such as Fred Simpson, Ed Stewart, Jim Scandlon, Kevin Egan, and a 17-year-old local named Jeff Daley, to mention a good fraction of those who were Wedge-tuned, know their potential and use it in conquering these waves when they are rideable. They can be ridden as a wave is commonly thought of as being surfed. It is not the head-over-heels free fall of the always present "turkey" who goes back for more, em-

phasizing the nickname and also increasing the probability of being maimed, but the incredibly fast descent on a vertical, or nearly vertical, wave at an angle more or less away from the jetty rocks which are responsible for the wave formation — hence the name "Wedge."

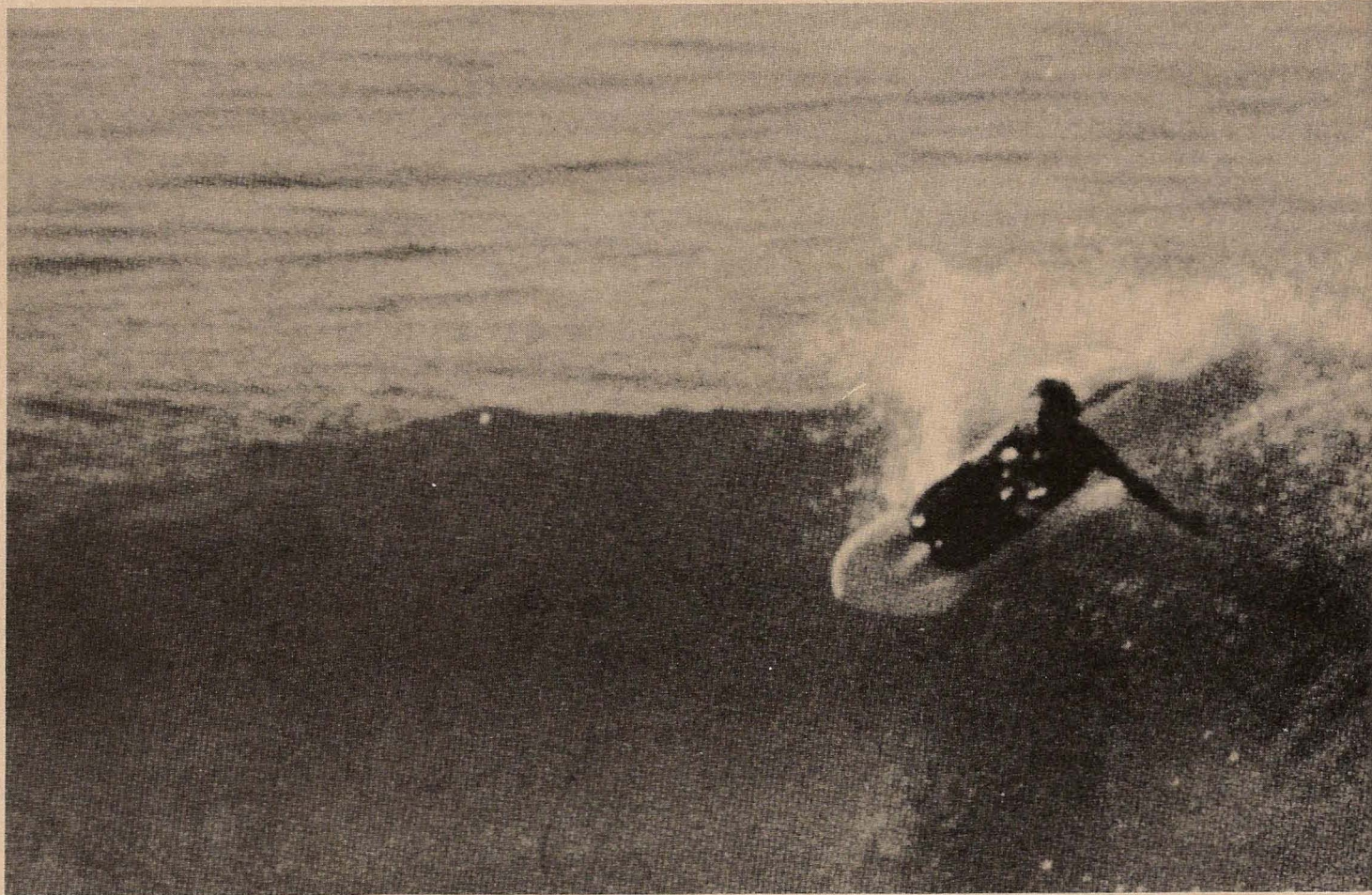
When it comes right down to actually making a good-sized wave—some monster twelve feet or better—the bellyboards have been the going means of transportation and will probably continue to be. Bodysurfing is not being knocked at this point. It is just a fact that a big wave breaks proportionately faster than a small wave, usually erasing the chances of anyone not on a board making a large wave. Names like Chuck Gardner, Bill Sinner and Bob Bell are synonymous with the regular "in" crowd at the Wedge with their bellyboarding. But enough has happened this past year to warrant the statement, now fact, that there has been an evolution.

This evolution, spawned by George Greenough before Bruce Brown's "Endless Summer," has become an intensified movement into something larger than George Greenough probably ever imagined. However it may be billed, this method is neither board surfing nor bellyboarding, and really cannot be called either. It is in between, with assets of both and of *its own*—more speed, more maneuverability and more involvement in the water, whether at Trestles or at the Wedge. This method of involvement, still in an infant stage of development, is knee riding.

Knee riding can be done anywhere, although large Waimea or Sunset Beach waves, at this point, are restricted areas. I feel that even this can be changed, however, but only with a new concept of wave equipment. By "new" I mean new to most—like 99 percent. This new concept is the "spoon," rigid, flex-bodied or otherwise. The goal of knee riding is to get the most from the wave, yet it is a virtual wilderness in relation to what has been done in the spheres of board surfing. I am particularly amazed at the potential of innovation in knee riding. This year we are experiencing the first really big push in this direction. Next year will see an even more intensified drive as these boards will be ridden everywhere and will constantly be improved and evolved into a better thing as a result of deeper wave involvement.

The future will see it out—I know it will—for up until the peak of the September swell, I did not know what could be accomplished on large, critical waves until I knee rode, using different types of boards. Without knowing myself and the waves, I probably would have flipped out of everything I attempted. Just the knowledge that burying the tail and the edge of the left rear rail was necessary on the vertical wave mass on takeoff was the big secret—the pictures I have seen prove that. I also dug my left hand in the wave wall for more control and stability. When I think about it now, it seemed that my body functioned almost instinctively at those moments when it coincided with the wave.

Why did I knee ride the peaks? That is something I have thought about. I felt it had to be done. Also, I guess it was for the ultimate thrill achieved from sliding so fast to the bottom without being thrown out, and slicing—I mean *slicing*—a bottom turn and making it, not spinning out. Some people will say or think I am mad, but these are the same types (parts of our destiny) who said a dozen years ago that riding the Pipeline could not be done. I feel better for having done it—and that is what motivates me onward.



## SPECIFICATIONS FOR THE REVOLUTION

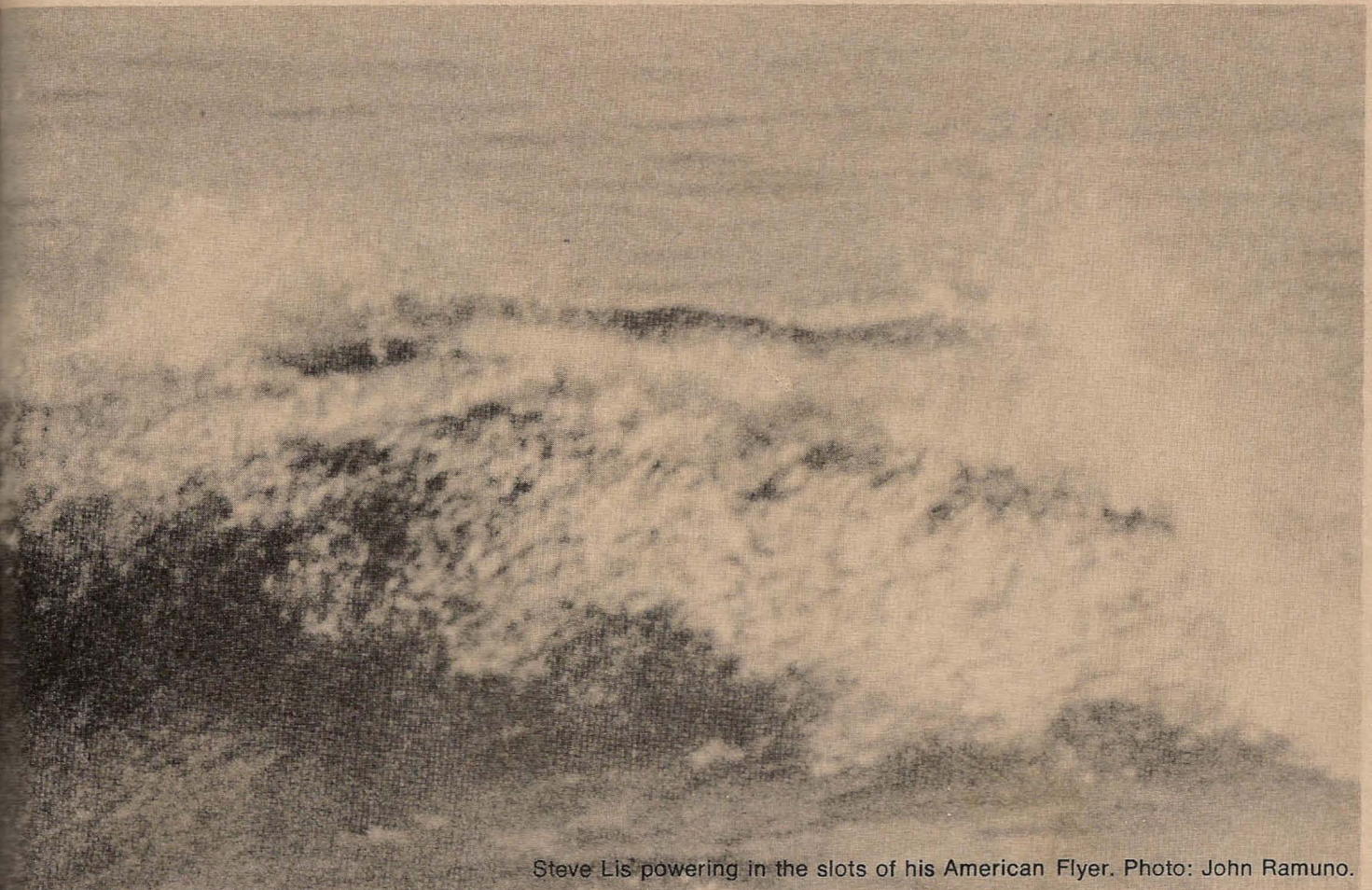
by JOHN RAMUNO



Knee-riding is part of the new surfing revolution. It is not just an easier, more portable way of surfing—like some of the old paipo boarders claim. And it's not just a way of “reducing the medium” to get more involved with the wave. Knee-riding is a highly intricate and sophisticated aspect of surfing. It is changing every day because of the great number of knee-riders who aren't satisfied with what has happened in the past. They are individuals who have separated themselves from traditional knee-boarders and are seeking a new direction in knee riding.

Within the last year and a half, there has been a change from two small fins to one large fin. The length of the boards has gone from 24 inches to 19 inches. Soft, egg rails have been replaced by thin, hard rails. The bottoms have become very flat to increase speed potential. Fin boxes have been added to the tails, and signature models have crept into the now commercialized knee-board scene.

In spite of all the improvements, the conventional foam knee-board seems



Steve Lis powering in the slots of his American Flyer. Photo: John Ramuno.

to be dying a slow death because of the increased interest and speculation concerning the flexible knee-board. Some say the flex-board is too specialized to make it on a wide-sell basis. Others say the knee-riders are demanding a flexible board whether they know how to use it or not. The general consensus seems to be that foam knee-boards will be around for a while because of their appeal to the novice and average knee-rider, while the flex-board will be more popular with the experienced knee-rider.

There are many types of flexible knee-boards, all seeking the same rainbow — increased speed and maneuverability. Flex-boards are designed to allow the bottom of the board to stay flush against the face of the wave. This is accomplished by allowing the part of the board that is most involved with water contact to flex (bend) with the curvature of the wave. By flexing with the wave, the board eliminates most of the speed-reducing drag that occurs on conventional foam knee-boards. It is said that when a board flexes in the

water, a variable rocker (changing bottom) effect takes place on the bottom of the board. It is important to remember that the amount of flex designed into knee-boards is not the only thing that will determine their speed and maneuverability. Other factors such as rail line, bottom contour, length, width, etc., also play a tremendous part in the way a knee-board will handle.

As a result of extensive experimentation, three major flex-board designs have gained prominence. The first is called the “flex-tail” (Fig. 1). The second is the “rigid center spoon” (Fig. 2). The third is the “shell” or “spoon” flex-board, which is probably the most popular flex-board in use today (Fig. 3).

#### FLEX-TAIL

Of the three most common flex-boards, the flex-tail is probably the simplest to manufacture and easiest to understand. The biggest assets of the flex-tail are its ability to maintain sufficient flotation and still flex in the

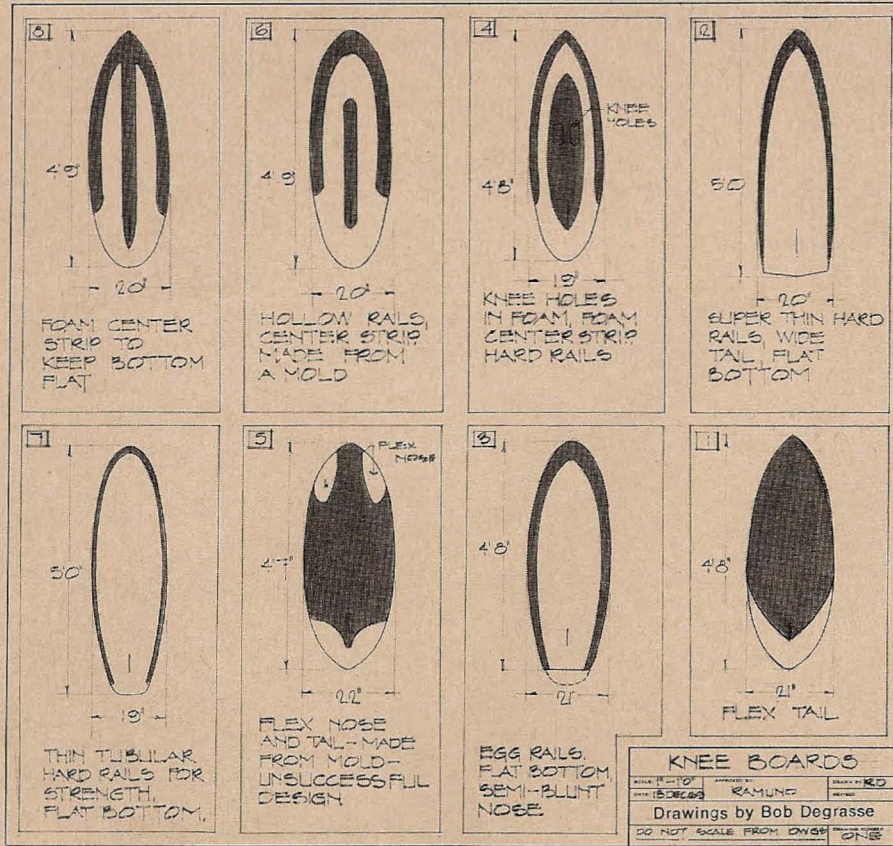
wave. The board is designed so only a small section of the tail area (less than one-fifth of the board) will actually flex. The flexing tail section is about one-sixteenth of an inch thick, and is made of cloth and resin only. No part of the flexing tail section contains any foam. The remainder of the board is exactly like a normal foam knee-board and affords great flotation, unlike spoon knee-boards.

I asked Steve Lis (winner of the 1969 Newport and Huntington Beach knee-board contests) why he preferred a flex-tail to a spoon-type knee-board. Steve responded by saying he felt a flex-tail enabled him to make quicker, tighter turns than a spoon. Steve also feels that a flex-tail is a better all-around board and doesn't limit his riding to big, fast waves.

#### RIGID CENTER SPOON

The rigid center spoon is one of the most controversial flex-boards in use today. It is designed to allow the rails and tail section to flex while turning, yet still keep the bottom flat for speed.

# SPECIFICATIONS



Dr. Terry Hendricks (author of "Surfboard Hydrodynamics" articles) is the leading manufacturer of the rigid center spoon. Terry is constantly testing theories dealing with pressure, foam-to-flex ratios, super-flexible resin, knee-board molds, unidirectional cloth, and other precise methods of improving current knee-board designs. Hendricks is a prime example of the movement among knee-riders to find a different direction in knee-riding.

To find out how the rigid center spoon reacts in the water, I talked with Tom Peifer, considered by many to be the best big-wave knee-rider in California. Peifer contends that the rigid center piece up the middle prevents the board from overflexing in the bottom, which may create drag. With the bottom flat, the flexing pontoons (Fig. 4) and tail section will assume the shape of the wave face in the form of a variable rocker.

The rigid center spoon is by no means a simple knee-board to understand, and is still in the early stages of development. Some claim the center

piece defeats the whole purpose of the flex theory; others say it could revolutionize flex-spoons. But whatever happens, the important thing to consider is that the rigid center spoon represents another step in a new direction of knee-board development.

## FLEX-SPOON

The flex-spoon is a very complicated knee-board to understand. No one really knows what design is best, as everyone seems to be testing a multitude of design theories. Of the four major manufacturers I talked with, none of them were in agreement on materials of construction, foam-to-flex ratio, flotation, manufacturing process, wave-riding potential, or even the basic function of a flex-spoon.

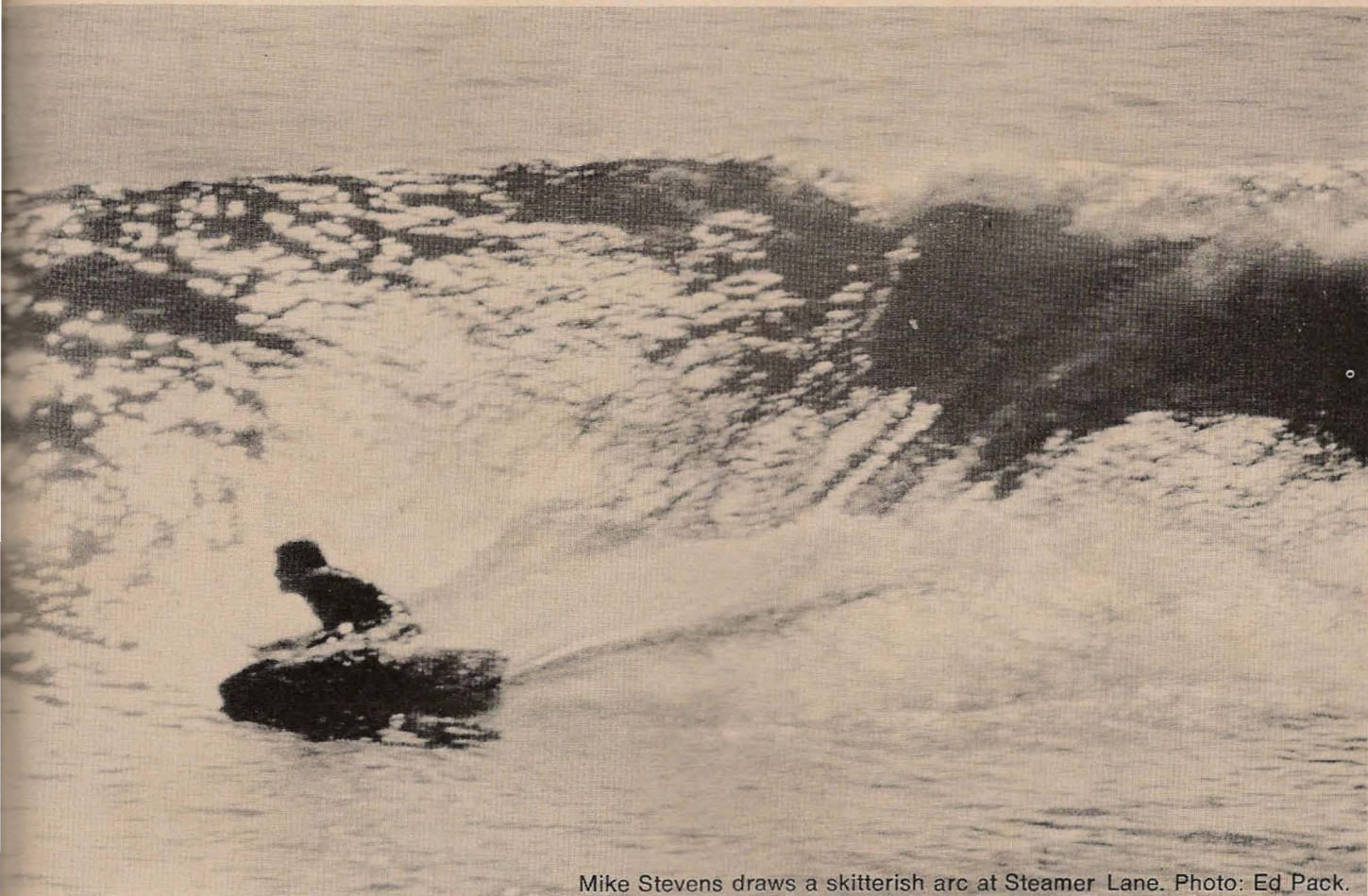
As we've stated previously, a flex-board is designed to allow the bottom of the board to stay flush against the wave to increase speed and maneuverability. There are several current spoon designs that allow for these qualities.

One way to build a more flexible

spoon is by leaving the pontoons thin (2 or 3 inches wide; Fig. 5). The thinner the pontoons, the more the board will flex. Another method of increasing flexibility is to shorten the length of the pontoons, leaving a few inches of pure flex in the tail section (Fig. 6).

Now if we took these two basic designs and applied different foam-to-flex ratios, what would happen? Increased foam width in the *longer* pontoons would tend to decrease flexibility. But if we increased foam width and shortened pontoon length, we would increase flexibility because of the added pure flex area in the tail. We again must realize that other design factors will play a big role in determining the overall performance of the board.

One of the most important changes in spoon design has been in the rail flow pattern. The rail design has gone from the soft, egg-type to a constant low flowing rail from nose to tail. Some said it would never work until Bob Bolen designed a pontoon that made it feasible.



Mike Stevens draws a skitterish arc at Steamer Lane. Photo: Ed Pack.

Bolen shaped a tall (2 inch), narrow (3 inches at widest point), tubular pontoon. This type of pontoon increases strength, flexible body area and torsional (corner to corner) as well as longitudinal (nose to tail) flex by eliminating flex-detering foam (Fig. 7). In the past, spoons tended to release poorly on bottom turns if the rail was too hard. The design of the tall, narrow, tubular pontoon allows for increased speed, due to the constant low rail line, and better release for recovery maneuvers because of the softness on the top of the pontoon.

Probably the biggest advantage a flex-spoon has over knee-boards with solid foam centers or rigid center pieces is its ability to flex longitudinally as well as torsionally. Stiff-centered boards may eliminate longitudinal and torsional flex because of their extreme rigidity. Some claim it is necessary to the basic function of a flex-spoon for it to flex longitudinally and torsionally. This enables the board to plane on the face of the wave, rather than drag through the water.

#### MOVIN' ON

As knee-riding continues to develop, it is evident that there is no longer one person who dominates all thoughts on design theory. George Greenough is a fantastic knee-rider and a profound contributor to the surfing world — to whom we should all be deeply grateful. But we must now acknowledge the hundreds of knee-riders who are trying to improve on Greenough's technical genius. The once misunderstood and stereotyped sport has blossomed into a highly individual and creative experience.

Knee-riding is truly advancing in a new direction.

