

FAST BELLY BOARDS

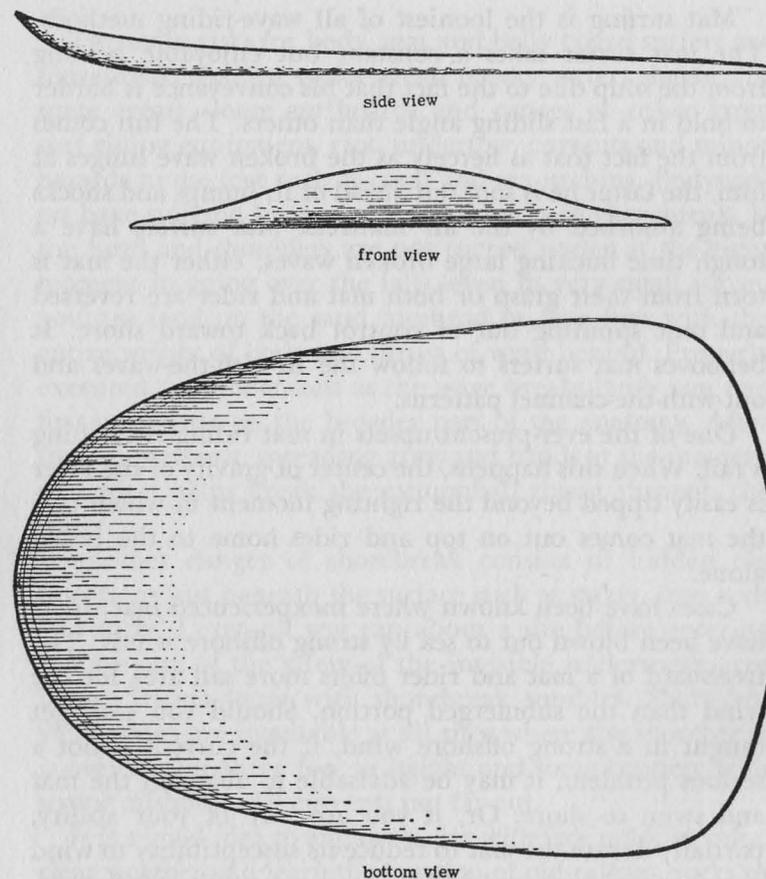
Surfers riding conventional boards not only have to contend with slower bodysurfers nowadays, but with faster belly board riders as well. A new belly board that skims the surface has put in its appearance, first in Hawaii and now spreading to other parts of the world. Developed and perfected by John Waidelich and Jim Growney, it has speed capabilities in excess of the fastest gun surfboard. Until the recent development of the hydroplane surfboard which shares some of the features of the new skim boards, no surfboard rider could keep up with them.

The skim board is very simple in design having a perfectly flat planing surface with sharp breakaway trailing edges. It has no skeg. The size of the skim board is important in relation to the weight of the rider that its lift surface must support. Average dimensions are approximately $3\frac{1}{2}$ to 4 feet in length. The aft end is usually less than 3 feet wide, and it tapers somewhat to a narrower front end which is cambered to prevent digging. Most of them are made of $\frac{3}{8}$ inch plywood, surfaced with the usual fiberglass and resin. The curved front edge may have an elevated rim for gripping.

The riding technique consist of railing the extended aft side-edge of the skim board into the wall for the beginning of the fast slide. This enables ascent to a high position for the drop. On the drop, the board is levelled with the water and tucked beneath the rider's chest, his head and shoulders extending over the front end and legs over the back end but not touching the water. The arm on the side of the slide (left arm on a left slide) extends forward to get it out of the way of any water coming over the side. The

board then assumes a highly efficient planing position and achieves great speed.

On large waves, say twelve to fifteen feet or more, the skim board riders skid down the slopes hitting only the high spots, board and rider being airborne for a good part of the time. Without a skeg and drag produced by side



Skim board; side, front, and bottom views. Approximate dimensions: length 42", width 30", thickness $\frac{3}{8}$ ", bow scoop 3".

pressure thereon, the skim board follows more closely the path of its own inertial flight and thus achieves the highest speed thus far of any wave-riding device.

MAT SURFING

Mat surfing is the looniest of all wave-riding methods. The mat surfer takes a constant but enjoyable beating from the soup due to the fact that his conveyance is harder to hold in a fast sliding angle than others. The fun comes from the fact that as fiercely as the broken wave lunges at him, the faster he is shot out ahead of it, bumps and shocks being absorbed by the air mattress. Mat surfers have a tough time bucking large broken waves; either the mat is torn from their grasp or both mat and rider are reversed and sent spinning out of control back toward shore. It behooves mat surfers to follow the in-with-the-waves and out-with-the-channel patterns.

One of the ever-present upsets in mat riding is catching a rail. When this happens, the center of gravity of the rider is easily tipped beyond the righting moment in which case the mat comes out on top and rides home to the beach alone.

Cases have been known where inexperienced mat riders have been blown out to sea by strong offshore winds. The freeboard of a mat and rider offers more sail area for the wind than the submerged portion. Should you ever get caught in a strong offshore wind, if the current is not a serious problem, it may be advisable to abandon the mat and swim to shore. Or, if you are sure of your ability, partially deflate the mat to reduce its susceptibility to wind pressure and kick and paddle to shore partly submerged. Above the water, you are more subject to the wind and

below the water, to the current, if there is any. The third alternative is to stay with the mat and wait to be rescued. In any case, as the Hawaiian saying goes, "Cool head, main t'ing!"

SAFETY HINTS

The main risks for body, mat and belly board surfers are shorebreak, shallow rocky areas, murky water, sharks (in some areas), loose surfboards and canoes or other large surf riding equipment, rips, undertow, currents and minor hazards to the feet such as coral and sea urchins. Bodysurfers have suffered broken necks and backs in shorebreak. If the head and shoulders are not tucked under at the right moment in going over the falls, even in very small waves, you can land on the sand forehead or face first with the entire weight of body and thrust of wave behind. Properly executed, a sommersault as the wave breaks lands you feet first or at least on the broader part of the anatomy. After the sommersault, spreading arms and hands at the moment of impact helps break the cannonball thrust through the water.

Another danger of shorebreak consists of hidden obstructions just beneath the surface such as stakes, iron rods and rocks. Learn all you can about a site before entering and be sure of the safety of the invisible underwater area before letting loose with shorebreak tumbles. Short but vicious rips are inevitable at all sites where the shorebreak is over two or three feet in height and some connect with strong offshore tidal currents not far out.

It is a good idea to explore a site with face mask in calm, clear weather and learn the location of old pilings, rocks or coral heads. Murky water increases the hazard from mov-

ing objects too—especially the ones with teeth. A good rule for all surf sport enthusiasts is to use the buddy system. Choose a companion with similar interests and capabilities.

Bodysurfing, mat surfing and belly board surfing are safer, easier, and more fun when the rider uses swim fins. All three are among the most healthful of water sports. At their simplest, you need only baggies or a bikini, some waves and a little free time to have just loads of good clean fun.

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Big Surf

SINCE THE OCEAN IS A FREE, UNLICENSED PLAYGROUND, ANYBODY can enter and unknowingly expose himself to its changeable ways and dangers. Big surf is one of these dangers. And of all the things to be said about surf sports, the most important are those that increase knowledge and safety. For, while the sport is fun, what is dearer than life itself?

Consider that deep-water swells travel at approximately 30 to 40 knots (nearly 50 miles per hour). The energy of a swell only 10 feet high is 400,000 pounds per linear foot of its crest, its impact pressure from 250 to 1,150 pounds per square foot. (You can recite these figures while in orbit next time you go over the falls!)

Surfboards, reinforced with wooden spines and covered with tough hard fiberglass and resin often are broken like matchsticks by the impact pressure of breaking waves. The