

# THE WAVE MAKERS

SURFER-SCIENTISTS KERRY BLACK AND SHAW MEAD DELIVER WORLD-CLASS BREAKS ON DEMAND, NO COAST NECESSARY



## IF YOU'RE A SURFER

prone to hero worship, you don't have to look much further than Kerry Black and Shaw Mead. Both New

Zealanders, both Ph.D.s, both longtime obsessive surfers, the two have devoted the past decade to delivering waves of epic quality to some pretty unlikely places—suburban Orlando, for instance, where their first computer-controlled adjustable reef, the Versareef [see page 87], will debut later this year in a 70-meter-long wave pool.

## REEF RESEARCH

Black, 54, and Mead, 38, first collaborated in the mid-1990s. Black, then Mead's adviser in Waikato University's oceanography program, presented his student with an irresistible doctoral project. Mead would travel to 40 of the world's surfing hotspots to identify precisely what about the seabed shape distinguishes legendary breaks from merely surfable waves. Black's goal was to merge environmental restoration with recreation. He planned to provide the means to build artificial offshore reefs that would fight the growing problem of beach erosion and would double as high-quality surfing breaks.

To gather data, Mead armed himself with a portable depth sounder and a GPS receiver and spent two years circling the Pacific Rim, measuring the seabed beneath some of the world's most coveted surf. He journeyed by kayak, Jet Ski and old fishing dinghies, using the depth sounder to gauge the shape,



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—SHAW MEAD (FRONT)

depth and gradient of the seafloor. He hung out of small planes and helicopters to take the aerial photos the duo needed to determine how seabed shape affects a wave's peel angle and speed. And to get profile shots of the waves actually breaking—essential for studying breaking intensity—Mead jumped in and photographed from the water.

## FROM THE BEACH TO THE 'BURBS

In the late '90s, Mead's findings were used to design the world's largest artificial ocean reef, Narrowneck, on Australia's Gold Coast. At a beachside café in a nearby town called, naturally, Surfers Paradise, Mead convinced his mentor to sideline the academic gig to launch a company devoted to artificial surf. Since then, Artificial Surf Reefs (ASR) has presided over the construction of two dozen dual-purpose artificial reefs worldwide, including one under way in Ven-

tura, California. Using the data about seabed shape to mimic nature's best waves in a pool was a logical next step.

"No one had ever broken waves properly," Mead says. "Until now, surfing in a wave pool has been like riding a bike with flat tires." And riding it up and down the same block. In contrast, the Versareef's adjustable floor allows riders to start the day surfing a slow-breaking California point wave, say, and switch to an Indonesian barrel after lunch.

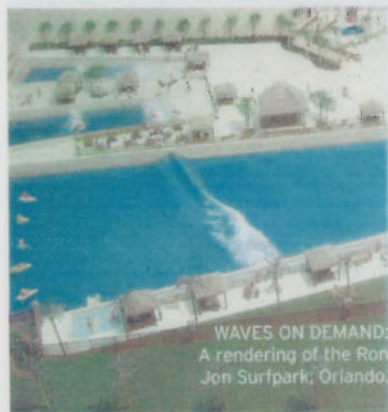
On the verge of the Versareef's 2006 opening at Ron Jon Surf Park in Florida, the surfer-scientists are busy scouting for their next surf-park locale—New York City's Randall's Island is first in line—and dreaming up plans for the Versareef's second phase. "We can transfer the technology to the ocean," says Black with a scientist's certainty, "and have the world's first adjustable ocean reef." —MELISSA WAGENBERG



## 16. KERRY BLACK: WAVE MAKER

### MISSION// SURF INDOORS

WITH A CALIFORNIA point break off his home in Raglan, New Zealand, Kerry Black has little need for artificial waves. But the 54-year-old Ph.D. oceanographer, who's spent more than 20 years computerizing wave mechanics, is creating a wave pool that could be the biggest development in surfing since the wetsuit. Scheduled for completion in Orlando, Florida, as early as next summer, the Ron Jon Surfpark promises to pump out peaks with the power and shape of natural waves—a major achievement, considering that the hundreds of current wave pools deliver mushy rollers. Black's design has compressed air forcing thousands of gallons of salt water down a 300-foot-long basin with converging sidewalls, which preserve the wave's height (up to eight feet), while steel triangles on the bottom can be adjusted to mimic the reefs under 40 of the world's great breaks. New Jersey-based Surfparks, which licensed the concept, has raised \$10 million for the park, while some 4,000 surfers stoked for predictable swells are on a waiting list for annual memberships (up to \$2,400). "Surfers will still travel to waves around the world," says Black, "but I reckon the future of the sport is twice as big now." —MARK SCHROPE



WAVES ON DEMAND:  
A rendering of the Ron  
Jon Surfpark, Orlando.