

AWARDS, HONOURS AND ACHIEVEMENTS

- International Temperate Reefs Award for Lifetime Contributions to Marine Science (2006)
- Gilchrist Gold Medal for contributions to marine science (1994)
- University of Cape Town's (UCT) Distinguished Teacher's Award (1984)

DEFINING MOMENT

Publishing *Living Shores* in 1981 was pivotal for two reasons: first, getting our science out to the next generation of scientists and inspiring them, and second, it was the start of a conscious decision to make sure my science gets out to the public.

WHAT PEOPLE MIGHT NOT KNOW

He sang in the Cape Philharmonic Choir for many years.

IN SERVICE OF SOUTH AFRICA'S SHORELINES

George Branch first felt the excitement of discovery on a trip to Cape Town in his childhood. Having grown up in Zimbabwe, while exploring the coast he collected a number of creatures from rock pools and took them to what is now the Iziko Museum, to be identified.

"I showed them to Frank Talbot (who later went on to become a Director of the Smithsonian Institute), and I was clearly a pest to begin with. But he went through what I had brought him and then his eyes lit up," says Branch. "I had found something that had never been seen in South Africa before."

Branch returned to Cape Town as a university student to study botany but was quickly absorbed by his love of the sea. His early research was on limpets and the flat-shelled, seemingly staid molluscs proved pivotal to understanding the ecology of rocky shores. Their study was made all the more attractive by the fact that South Africa has the greatest biodiversity of limpets in the world.

"Limpets in South Africa do some crazy things," he explains. "It's a remarkable story for a group of creatures with no brain to speak of." One group cultivates and tends to gardens of seaweed instead of roaming around rocks feeding on

what they find. They grow specific seaweeds and display behaviour like weeding, fertilising and territorially chasing other herbivores away. Juveniles even grow tiny gardens on the backs of adults until they are large enough to find their own spot.

Another group gives up feeding on the rocky habitat altogether, instead grabbing onto floating blades of kelp – a rich and abundant source of food. Up to 30 individuals can be found feeding cooperatively on a single blade, another unusual behaviour for these normally solitary and aggressive animals.

"Limpets are how I really established my reputation as a scientist. But more importantly, that research set me on the road of deep conceptual thinking about marine ecosystems. I came to the idea of using rocky shores to explore how and why things change around the coast."

As it turns out, South Africa is a fantastic place to do that sort of research, with two contrasting ocean environments on the south-east and the west coast, and plenty of variation in nutrients and habitats along the long coastline from Namibia to Mozambique.

URGENT QUEST TO UNDERSTAND

In the course of his career, marine ecosystems' research has gone from an interesting basic science to an urgent quest to understand our fragile global biosphere and the impact humans are having on it.

When Branch started out, no-one was talking about the effects of commercial fishing on ecosystems, or about ecosystem management, or about the interaction of marine ecosystems and fisheries' policy. But that all started to change, and with that change he was asked to step out of his comfort zone.

"I had begun to work at the interface between applied and basic science, using commercially important species like abalone to probe the ecological significance of commercial activities in the ocean," he explains. "Then after 1994, I was asked to chair the Access Rights Technical Committee to advise



those working on the new fisheries policy on the thorny issue of allocating resources.”

His work with this and other policy bodies in post-apartheid South Africa has shaped the country's marine management policies and helped steer commercial fishing towards being a sustainable and profitable part of the economy. Branch finds policy work challenging, because the success rate is much lower than pure research, but he says it made him realise that he has a responsibility as a scientist to communicate his work to people in power, and make sure the scientific knowledge is applied effectively.

This sense of responsibility to society shows itself in other aspects of Branch's career, most notably in his book, *Living Shores*, which he first published in conjunction with his wife Margo in 1981. The book was originally her idea, but they then worked jointly to write and produce it. The book was a resounding success and became a non-fiction best-seller and remains a common sight on bookshelves around South Africa to this day.

“*Living Shores* was pivotal in two ways – it got our science out to the next generation of scientists. And it was the start of a conscious decision to make sure my science was available to the public.” George and Margo Branch have recently released a second edition of *Living Shores* (2018), and so much has changed in the science of marine ecosystems that they effectively had to start

again and rewrite the book. All those changes in how marine ecosystems are understood and managed had to be incorporated, and of course, the basic science has advanced as well.

Despite retiring several years ago, Branch still supervises postgraduates, and he is fondly remembered by thousands of undergraduate students who passed through his first-year evolutionary biology lectures over the years. He, in turn, loved to teach and cherishes his Distinguished Teacher's Award.

He has spent a great deal of time on outreach, particularly teaching the public about evolution. As a Christian and an evolutionary biologist, he is uniquely suited to reaching out to sceptical or anti-science audiences.

“An undergraduate student in one of my lectures taught me a hard lesson: if you don't respect other people and listen to their views, even if you don't believe them, you're going to be butting heads rather than persuading people to a different view.” He is now a vocal proponent for tolerance, respect and open conversation around controversial ideas, and strongly believes in the importance of talking to all sectors of society about scientific concepts.

Many decades have passed since Branch first took his 'beasties' to the museum, but that sense of curiosity and excitement for the natural world lives on through his scientific contributions, his students and his legacy of teaching and outreach.



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