

Twist seashe

Deborah Smith
SCIENCE EDITOR

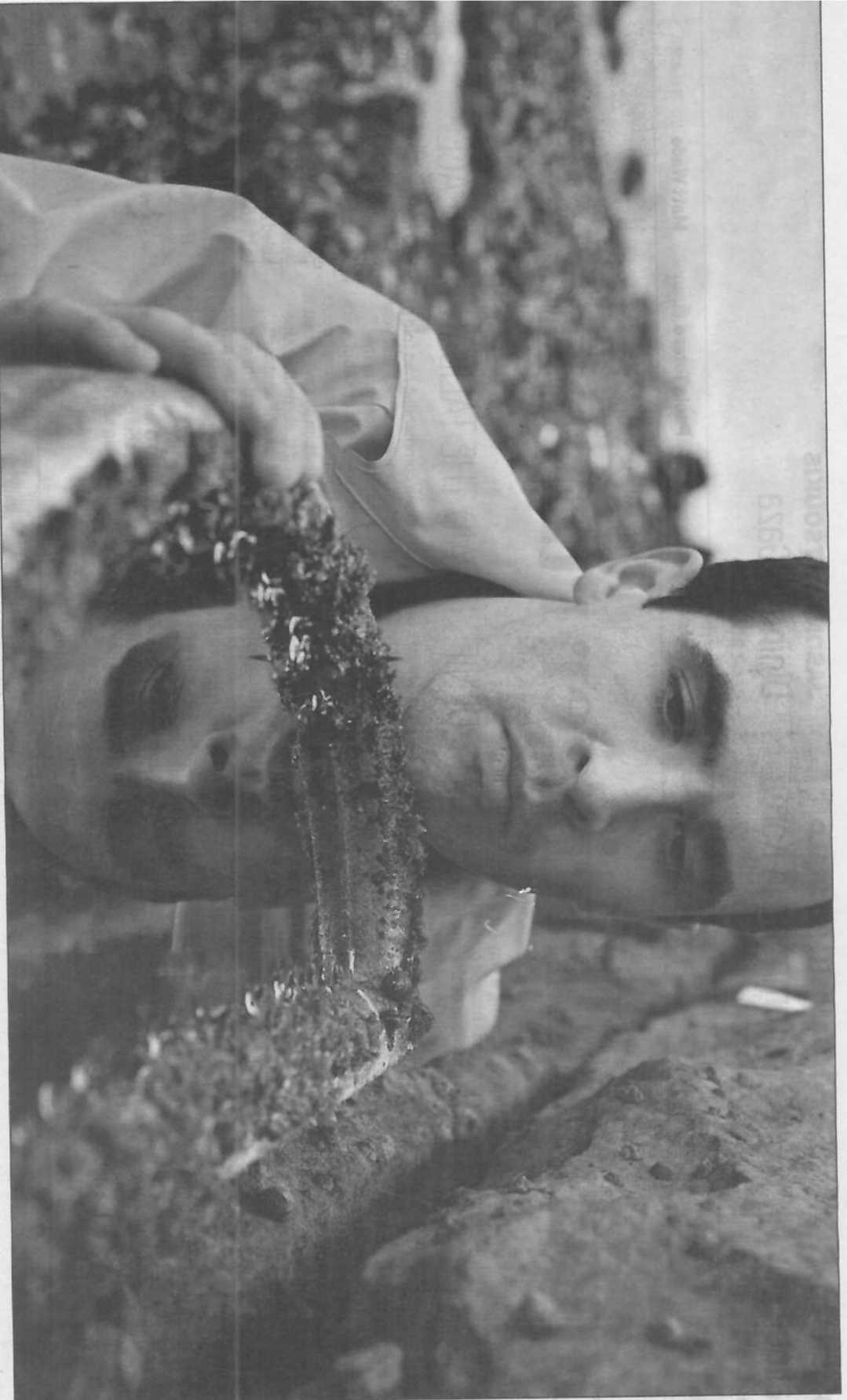
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Not so potty ... Dr Mark Browne with containers he has installed below the high-tide mark to provide habitat for sea creatures on man-made sea walls. Photos: Jon Reid



Twist on nature: he grows seashells by the sea shore

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A SEA wall in Sydney Harbour may seem a strange place to hang some flower pots, but they have become home to life of a different kind.

The concrete pots help recreate rock pools lost when sea walls are built, said Mark Browne, an ecologist who has found that this new habitat can more than triple the marine species living there.

Dr Browne, of the Centre for Research on the Ecological Impacts of Coastal Cities at the University of Sydney, said the number of coastal defences being erected around the world is growing, due to increases in population, sea level rises and the prospect of bigger storms as the climate changes.

Replacing natural shores with walls has "huge ecological impacts", he said. "But in many parts of Australia, Asia, North America and Europe sea walls have replaced more than 50 per cent of the natural coastline."

Natural rocky shores in Sydney have well over 10 metres



Return ... some molluscs.

of inter-tidal habitat, including many crevices and pools, he said. When this is reduced to less than two metres of sea wall the amount of animals and plants that can live there is greatly reduced.

Research by Dr Browne and his colleague, Professor Gee Chapman, has shown that at two sites on the harbour shore near Neutral Bay the rock walls are largely bare, with algae and creatures such as limpets and snail; only covering about 35 per cent of the man-made habitat.

Six months after attaching about two dozen pots at each of the sites, the number of different

creatures has increased by between three and five times. New species have also settled there, including red and green algae, small crustaceans, grazing snails and sponges.

"We are finding crabs in the pots and getting species of starfish and snails that we've never seen in the habitat before," said Dr Browne, whose research is also a collaboration with engineers at North Sydney Council and pot manufacturers Antique Stone and ECS Services.

Previous research by the team has shown that little cavities built into new sea walls as they are constructed can act as rock-pools too, and boost biodiversity. The flower pots appear to be a cheap and effective way to improve the amounts of biodiversity living on existing walls, said Dr Browne, who reported his findings at the British Ecological Society's annual meeting held at the University of Hertfordshire last month.

He said more research needs to be carried out on the best way to attach the pots because some had been washed away by waves from ferries and other passing boats.



Photos: Jon Reid

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