

adaptive radiation on islands, patterns in the adaptation to island life, assembly of island communities — and sad stories of the demise of unique island life brought about by humans and human companions from the mainlands.

As islands have a limited area, island populations have a limited size. One fascinating topic that Whittaker does not discuss — probably for lack of primary research — is the question of the survival and evolution of small populations on islands. Have some island populations the means of surviving in spite of small population size, and if so, what are these means?

Island Biogeography will satisfy those looking for a comprehensive text on island ecology, but it offers no surprises. Whittaker's 'disturbed island ecology' does not really take off. Nature is complex, but merely exposing complexity is not enough — I will keep wiping the dust off my copy of *The Theory of Island Biogeography*. □

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New Journals

This year, *Nature's* annual New Journals review supplement will appear in the issue of 2 September. Publishers and learned societies are invited to submit journals for review, as well as details of any eligible electronic journals, taking note of the following criteria:

- Journals must have first appeared during or after June 1997 and issued at least four separate numbers by the end of May 1999.
- Journals covering any aspect of science are eligible, although those dealing with clinical medicine and pure mathematics are excluded, as are newsletters and publications of abstracts.
- Frequency of publication must be at least three times a year.
- The main language must be English.
- Deadline for submission is 28 May.

Please send at least four different issues (the first, the most recent and any two others) of each eligible title, together with full details of subscription rates, to: Isobel Flanagan, *Nature*, Porters South, Crinan Street, London N1 9XW, UK. Tel: +44 (0)171 843 4542. e-mail: i.flanagan@nature.com

Science in culture

Glazes from deep time

The ceramic imagery of Joan Lederman
Martin Kemp

Ceramic vessels have borne profound meaning for many cultures and civilizations, and are not merely functional objects that, at their best, aspire to a modest kind of beauty. In modern Western culture a pot tends to be a pot, and the person who makes it a potter, a craftsperson. Joan Lederman calls herself a "potter and imagineer". The extended title is well deserved; she is creating a form of ceramic art that resounds thrillingly across time and space.

On 16 July 1996, Chris Griner, an able-bodied seaman in the palaeoclimate research team at the Woods Hole Oceanographic Institution on Cape Cod, brought to Lederman's "The Soft Earth"

studio a bucket of sediment

raised from the Atlantic floor east of Virginia (latitude 32° 21' N, longitude 68° 50' W) at a depth of 4,500 m — some two miles.

Fired in her kiln at 1,100 °C, lava-like, it congealed.

Three months later, Lederman experimented with

the mud as a glaze for stoneware vessels. Thinned gently with water but otherwise unmodified and applied evenly over the clay bodies, the fired sediments wondrously metamorphosed from a uniform layer into modelled patterns and beguiling arrays of colour.

A series of experiments followed in a new, hotter kiln using mud not only from the waters around the United States but also from such far-flung sources as the Arabian and Indian Oceans, the latter found by carbon dating to be 35–40 million years old. The example illustrated, which used sediments brought back to Woods Hole by the research vessels *Knorr* and *Oceanus*, shows how the resulting glazes "seem to have a life of their own — like a fingerprint".

While the "glazes that humans have concocted are often exquisite ... they have a different voice. They are more contrived from nature than they are released by nature."

Lederman sees herself as "a channel for what the sea muds might do ... I adjust the form, the application, the thickness, the claybody, the firing, the juxtaposition to other glazes, to make what could happen actually emerge."

What emerges, most notably with sediments that are dense in foraminifera, as on the inside of the bowl, are beautiful variations on dendrite formations, seemingly rising and ramifying, brought, from within the inferno of Lederman's kiln, to new life after aeons of remote stillness in the depths of the sea. On one level, we can see the results as beguiling examples of the potter's art, but on another they carry an extraordinary *frisson*. To cradle one of Lederman's vessels in one's hands is an evocative, even eerie experience, akin to holding a fragment of meteorite or peering at a sample of Moon rock.

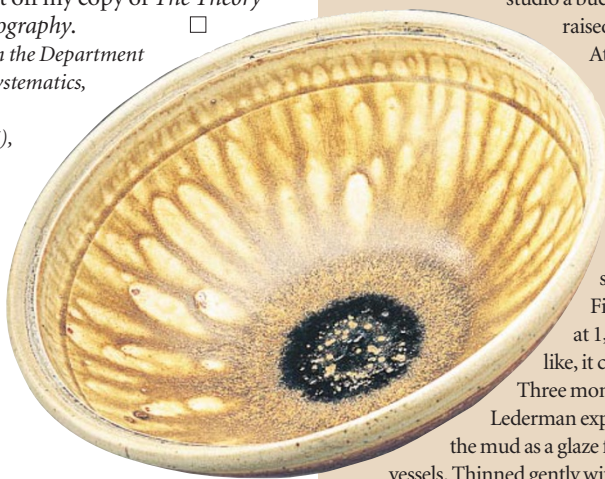
Visually, the emergent patterns resonate with the dendritic forms that comprise one of the recurrent organizational configurations in nature, ranging from roots of nerve cells to river deltas. And they can now be modelled on computer through diffusion-limited aggregation, in which particles in Brownian motion adhere successively around a fixed particle to generate fern-like radiations.

Lederman is knowingly leaving the field for perception and interpretation open, creating "holistic experiences that call people to the learning that is alive for them". But in her collaboration with the ancient muds that hold the secrets of palaeontological climates, she is actively inducing us to share her sense of wonder at the way earth, fire and water — the very stuff of the potter's art — speak of elemental forces that have repeatedly attracted human creators across distant times and spaces. □

Joan Lederman's ceramics can be seen in the New England Aquarium, Boston, Massachusetts 02110, USA, and at

<http://www.arts-cape.com/sofearth/>
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Inner and outer views of the North Atlantic Deep Sea Bowl, glazed with sediments recovered by the research vessels *Knorr* and *Oceanus*, July 1998.



JOAN LEDERMAN