

# Noticing *Nature*

Over almost 130 years, this journal's appearance has evolved along with changes in design fashions and in the way scientists present their results. The first in a series exploring how science uses visual images.

## Martin Kemp

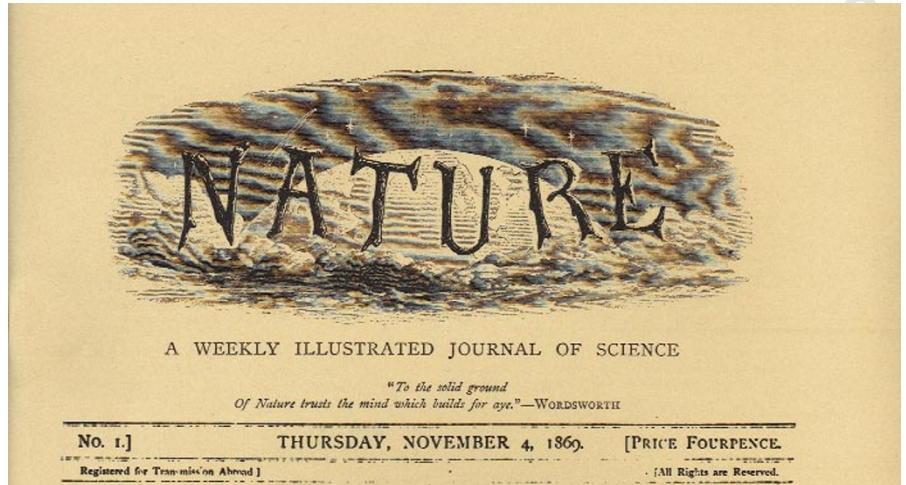
The first issue of *Nature* on 4 November 1869 announced itself as “A Weekly Illustrated Journal of Science”. A letter touting for subscriptions in 1998 extols “*Nature*’s beautiful presentation” and state-of-the-art visuals: “the ‘new-look’ *Nature* now fully exploits modern graphics and typography”. The journal’s emphasis upon the centrality of illustration has remained, but little else is the same. The few constants — most obviously the use of line diagrams — are greatly outweighed by conspicuous changes.

The visual evolution of *Nature* serves to show not only how notions of ‘illustration’ have been transformed over the 129 years, but also how visual styles for the conduct and broadcasting of the sciences have undergone fundamental change. It is easy, at a distance of historical remove, to discern the visual rhetoric appropriate to 1869. We are less alert to our own period style.

The masthead of the newly emergent *Nature* appeared atop two columns of advertisements, including such delights as “Kemble’s Shakespeare Readings”, as well as the expected books of science. It displayed planet Earth rising — presumably not sinking — through celestial clouds against a firmament of twinkling stars, across which sped a comet. “NATURE” is spelt out in the twiggy calligraphy of a rustic gazebo and, nestling in the crook of the ‘U’, Britain is accorded a comfortably secure position in the cosmos of scientific nations.

**As a visual product, it was thoroughly at home on the solid shelves in the library of one of the great Gothic ‘town halls’ built around 1850 for the conduct of science by the universities.**

This present issue’s computerized, full-colour cover sets white or pale-coloured type



Original 1869 masthead: rustic calligraphy, and an image appropriate to a nineteenth-century library.

against the out-of-focus background of a pretty photograph of two hermit crabs in an ‘agonistic encounter’. The lettering is seemingly pushed forward onto an ambiguously positioned ‘window’ in front of the photograph, giving a sense of transparent depth to the cover’s flat surface. The image is brisk, up-to-date and snappy, exuding a sense of high-tech mastery without being too blatant and obvious, which would lose the sense of wonder that recent covers strive to evoke. Vivid contemporary design is intended to make the journal look the part, and ensures that it can compete for notice in an age when every publication shouts for visual attention.

The present design is not the first ‘new-look’ *Nature*. A ‘tidied-up’ version of the globe masthead — with a cleaner Roman typeface and more clearly delineated globe which located Britain in an even more central position — surprisingly survived into the late 1950s. As always, there must have been a tension between updating the image and losing ‘product identification’. For a long time, the familiar image hung on.

**By contrast, *Nature* prepared to enter the 1960s with a radical redesign, led by a punchier two-colour masthead, hugely simplified in keeping with a more modern image.**

The only non-verbal elements were two purposeful arrows, denoting progress and pointing by implication into the optimistic future. The Wordsworth quotation in the original design survived this revolution, repositioned on the title page, only to disappear quietly in 1963. In 1968, the arrows went too. “NATURE, INTERNATIONAL JOURNAL OF SCIENCE” was printed in the starkest possible typeface and forced itself loudly against the margins of its coloured band.

By 1974, the present, more friendly Garamond typeface in democratically trendy lower case was in place, printed in white, generally against orange, and the advertisements had been replaced by a striking photographic image. The present, glamorously integrated covers of words and images, taking advantage of computer design programs, were initiated in 1993.

The visual styles over the years are very much of a piece with the tone of the texts. The capital ‘N’ in the Wordsworthian homily — “To the solid ground of Nature trusts the mind which builds for aye” — is much in keeping with the opening essay commissioned from Thomas Huxley, which was largely given over to his translation of “Aphorisms by Goethe”. Written around 1780, Goethe’s paradoxes of ecstatic wonder are full of what he later admitted was “a sort of Pantheism, to the conception of an unfathomable, unconditional, humorously self-contradictory Being, underlying the phe-



Modern masthead, 1958: punchy, simple, two-colour design, pointing the way to scientific progress.

# NATURE

## INTERNATIONAL JOURNAL OF SCIENCE

Ultra-modern masthead, 1968: stark, uncompromising and fashioned in the 'white heat' of the technological age.

nomena of Nature". Although the first published article, "On the Fertilisation of Winter-Flowering Plants" by Alfred Bennett, eschews Goethian rapture in favour of Darwinian sobriety, it is written in the first person (a style that seems to have gone out in the 1950s) and unabashedly uses the epithet 'beautiful'.

By contrast, the tone of the technical contributions to the present issue is doggedly impersonal. Many years of collective effort have gone into the honing of a scientific prose in which an occasional 'we' is sanctioned but in which any personal or collectively enthusiastic voice is systematically repressed.

In this issue, the most prolific users of 'we' appear to be Kulkarni *et al.* on a host galaxy and Schulz *et al.* on climate change — perhaps appropriately in astronomy and geography, in which the role of the observer may still be less readily gainsaid than in many other sciences. More typical in tone are such phrases as "the evidence suggests...", "it is impossible to assess...", "there are only two plausible interpretations..." and "according to the models discussed here..."

**The graphic vehicle is correspondingly clean and business-like, favouring sans-serif typefaces for headers, titles and captions. Its natural visual habitat is the top of a metal desk, beside a computer, or on a modular shelving unit in a modern laboratory.**

This issue has a very different tactile and visual feel from its first predecessor. It is bigger, glossier, thicker, heavier and the range of visual images is far wider. Colour now plays a key role, both decoratively and as a conveyor of information.

All the illustrations in the meagre ration of 11 in 1869 were engraved, two from photographs and one from a spectrometer. The diagram predominated as a conveyor of visual information. The dominant vehicle in this issue is the authoritative graph, in its various forms, of which there are almost 50. Only one image obviously relies on 'drawings' in the traditional sense (page 63), and 'normal' photographs are largely restricted to the News section, Book Reviews and New on the Market. Materials science and genetics help to maintain a decent quotient of sexy visuals,

with the prize for aesthetics going to a reflectance and transmission micrograph of the tip of a diamond (page 47).

Most non-diagrammatic images are generated through the use of devices to detect (and sometimes also to originate) invisible emissions, to do 'perceptual' analysis using computers, and to generate the representations through computer graphics.

The use of machines to perform — in a highly selective way — acts that were formerly the province of human visual perception and hand representation provides the dominant visual tenor of *Nature* in this decade, and perhaps even earlier. Such images breathe an air of non-human objectivity, since our intervention can be minimized during the course of the acts of seeing and showing, but the choices of how the device is designed and operated are no less matters of human judgement than with the hand-drawn image. The key choices now reside at different points in the system and are often less easy to get at for the non-specialist.

Looking at the overall format of the journal, it would be easy to guess that advertisements play an ever greater visual role. However, this guess would be wrong. Not only did the first issue establish the long-term presence of adverts on the cover, but it contained 18 pages of adverts inside compared with 20 of text — to set against the present 36 pages of display adverts, 31 of classified adverts and 99 of text.

The currently fashionable rhetorics of scientific imagery appear in conveniently exaggerated form in the advertisements. Polished photographs of equipment and eager operatives feature, with a lacing of more technical images, such as graphs and the double helix (which must hold the advertisers' record for graphic popularity in this decade). The Eppendorf advert (facing Contents) is particularly telling. Whereas an advert a few years earlier showed the company's pipette with descriptive text, the new Multipette Plus takes second place to an advertising agency's image of thrusting modernity in the form of an ultra-high-speed train, the streamlined profile of which literally outpaces its steam-driven predecessor. Promising to "streamline work in your lab", the Multipette aspires to

"work as reliably and precisely as you yourself" — an oddly inverted compliment, since it will presumably be bought to achieve more precision than is possible with more hand-driven procedures.

The array of advertisements and their disposition reflects a complex series of decisions, based on such factors as historical precedent, willingness to pay premium rates for prime positions, status and leverage, and international sensibilities. Each issue of *Nature* can be seen to embody complex measures of the relative commercial, institutional, personal and national weights that need to be balanced by the editorial and other staff of an international journal of science. Perhaps the only major factors that do not find commensurate visual expression are the huge edifices of the research councils and academic institutions. They tend to feature only through photographs of people and buildings — although, in theory, it should be irrelevant what a major scientist looks like or whether a piece of research originates from an ancient temple or a 1960s greenhouse of glass and steel.

*Nature* in its present guise ensures through its editorial pages that the visual and verbal cultures of scientists play more overt roles than in most specialist journals, yet the dominant feel is of the 'great machine' of science and technology. More traditionally 'subjective' dimensions of the sciences of the natural world — inspirational, passionate, intuitive, poetic, artistic, spiritual, social and political — resurface only as matters of conscious editorial intent, as in the Art and Science series, rather than as part of the integral expression of the substratum of the scientists' mental and material landscapes.

Yet, looking at recent issues of *Nature*, even set beside some of the glossier art periodicals, we are regularly presented with a visual feast which seems to speak of an undiminished aesthetic excitement about acts of observation, analysis, visualizing, modelling and representation. But you would never know from the texts in which the scientists announce their discoveries. □

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