The pebbles of Auchmithie beach in Angus, Scotland are the subject of Niall's latest objectography project.

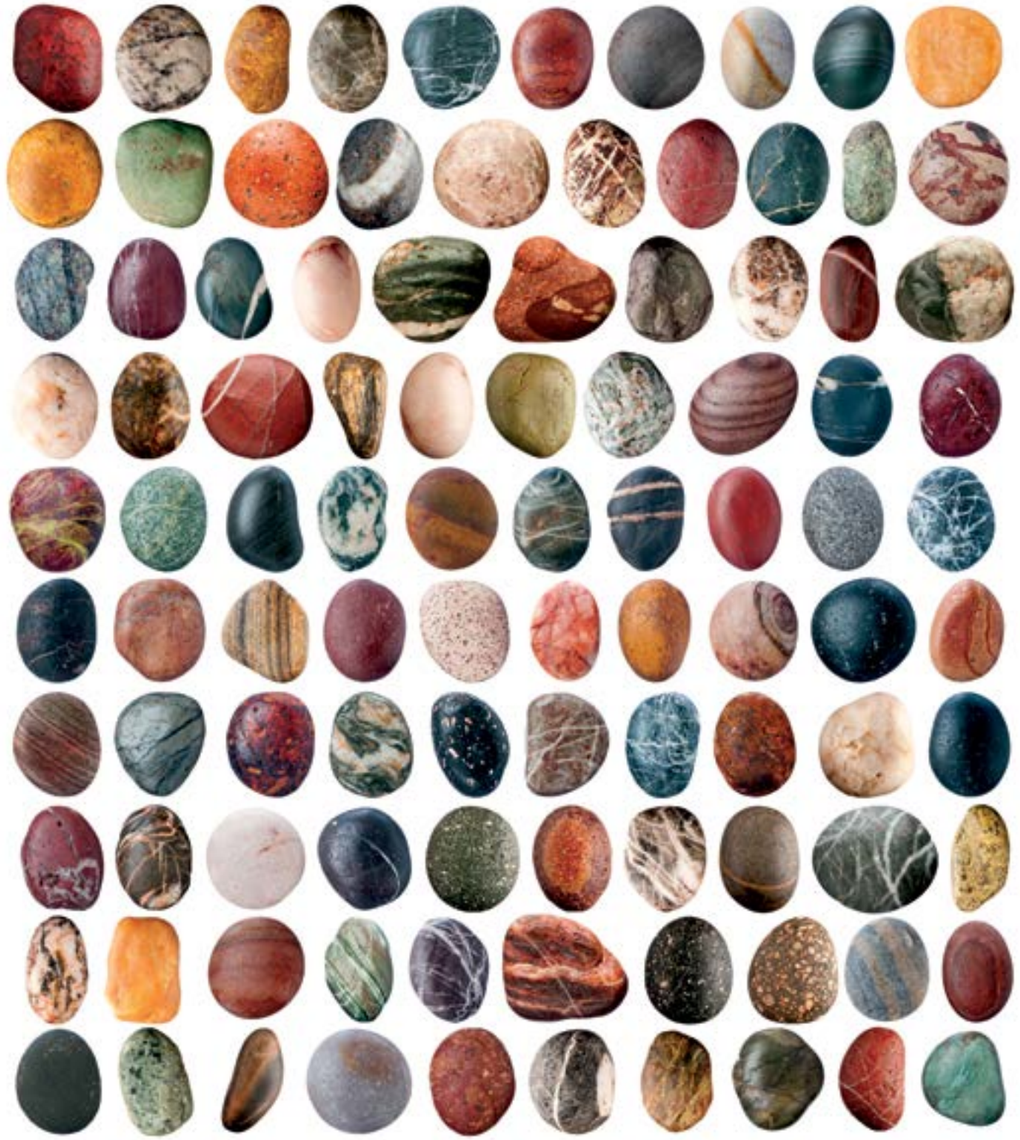
Objects of desire

*Using field studio methods, **Niall Benvie** has found a novel way to reveal the beauty of pebbles on a beach close to his home in eastern Scotland. He explains the idea behind his 'objectography', and how the technique can be applied to a wide range of subject matter*

If there is one thing I've learned over seven years of running Meet Your Neighbours with my colleague, Clay Bolt, it is the value of sharing ideas with other photographers on this worldwide project. We all shoot to the same protocol: against a pure white, backlit background with diffused front lighting, on location. Now, with over 50 contracted photographers and many more devoted followers, I'm seeing the benefit of sharing the details of the technique, as contributors find novel uses for it that I'd never considered.

In spring 2015, Australia-based contributor Lily Kumpe put an image on the Meet Your Neighbours' Facebook page that caught my eye and set off a train of thought. It showed 28 eucalyptus leaves in varying stages of decay, neatly arrayed on four rows. Each leaf had been photographed individually then laid out on a white page to create the composite image. This intrigued me on several levels. Meet Your Neighbours photographers are usually looking for the most perfect specimens, whether they are plants, insects or amphibians, yet Lily had made a very beautiful image of something we'd normally overlook. More importantly, the way they were presented invited examination of each leaf, drawing attention to their singularity in a way that just doesn't happen with ordinary photographic approaches. 'Objectography' seemed like a good term to differentiate this branch of field studio work, whether the composite features are living or inanimate elements. The theme of these images is the diversity that exists where people believe they see only uniformity.

With the idea sown, I began to look for subjects with which I could create larger panels. In the autumn I gathered almost 400 beech and oak leaves to make six panels. But with the arrival of winter and the end of the normal field studio season, I scratched my head over where to turn next...



The beach

As it turned out, the answer was near at hand. Auchmithie beach looks like others in north-eastern Scotland: a narrow whale-back of grey pebbles backed by low sandstone cliffs recoiling from the North Sea. But it takes only one wave scuttling up the beach to reveal the individuality of these pebbles, their beauty and their extraordinary complexity. What is not evident, however, is the deep history that contributes to the fascination of these stones. They were worked smooth in Cambrian-era rivers and were already ancient – perhaps 100 million years old – when the Devonian sandstones in which they became embedded were laid down over 400 million years ago. It took many more millions of years for their sandstone matrix to be eroded away so that they were once again free, massed on this beach. That such exquisite objects can endure over so much of the Earth's history is an enchanting thought. It's as if they are pacing themselves for eternity.

I'd found my subjects, almost on my doorstep, and resolved to photograph 500 pebbles over five or six sessions.

The method

Earlier experience with shooting the leaves had taught me that I could work more productively if I didn't have to adopt some Guantanamo-type stress position as I took the pictures and that I'd benefit from a rig. Managing the distance between subject and backlit background is vital for this technique to work. Too close and too much light spills forward from the background, degrading the edge of the subject and even causing flare. Too little and the subject's translucent qualities aren't described. Clearly, that wasn't a concern this time, but light licking up round the edges of the stones was. I knew that I would need to position them 70-80cm above the background to get a clean edge and this concern would dictate the design of the rig. An Ikea table frame proved ideal owing to its height and economy. I attached a platform on to which I bolted an old Kaiser copy stand to support the camera and, using a gap in the frame, inserted the stage – a piece of transparent acrylic. The white background itself was a Lastolite reflector lit by an Elinchrom Ranger Quadra flash (you can get just the same effect with a standard flash gun), while front lighting was provided by a second Elinchrom head in a small softbox. I placed a tinfoil flan case opposite to bounce back some light (this has now been replaced by a flexible mirror). I opted for a 150mm macro lens to narrow the background field of view and ensure that I included only the fully lit part of it. The downside was that the camera was then out of reach so I had to plug in a Camranger which, with the camera's live view enabled, allowed me to frame a pebble and operate the camera from an iPad.

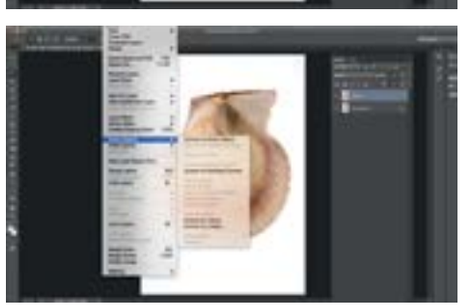
Niall on Auchmithie beach with his studio setup.

The standard method for making field studio exposures applies:

- Set the camera to shoot Raw and the exposure mode on the camera and flash to manual.
- Select ISO 320 (this can vary), an aperture of f/16, and your camera's highest flash sync speed for manual units – 1/200th of a second in my case.
- Set the background flash to about half power and, with the front flash out of the way, take a test exposure. The background should be overexposed (blinking on the back of the camera), but only just. Keep reducing the power until it is no longer overexposed then increase again until it is, but only just.
- Swing the front flash into position and, without changing any of the existing settings, make a test exposure.
- Adjust the flash's output as you need to for more or less front light or, if you can't adjust it independently of the background flash, alter its distance from the subject until the front exposure is good too.
- It should be necessary now to make only small adjustments as you shoot at different magnifications.

The practice

This is all a bit of a rigmarole, but once everything is set up it's a bit like a production line. You can speed things further if you have already gathered a stock of well-patterned, relatively flat pebbles, waiting for you in a humid box. The stones need to be damp enough to display their colours but not so wet as to show excessive reflections. I use a small rubber cup to support the stones as plane to the camera as possible to make the most of available depth of field. If you have a high megapixel-count camera, consider shooting at a lower magnification and cropping to get a depth of field advantage.



Post-production

The images are processed in the normal way in Lightroom, with two caveats: make sure that under Camera Calibration, the Process is reverted to 2010 and the Profile selected is Adobe Standard. Without these settings, you'll find that the in-camera pure white background is no longer such; Lightroom is now way too good at capturing overexposed highlights for field studio work, hence the need to go back to an earlier version of the software.

The reward for your careful attention to background exposure comes now when you composite the image on a single page in Photoshop. You can get rid of excess background by throwing a loose Lasso around the subject on the Background Layer (keep your distance from out-of-focus edges). Next, duplicate that layer, convert the upper layer to a Smart Object then simply drag that layer on to the receiving page. It will blend seamlessly, and because you've cut away excess background you can get in close to other objects on the page. The Smart Object (vector) conversion ensures that you can resize the element without degrading it.

In the end

Open-ended projects like this can be added to or morph into something else. I doubt very much if I've finished with that beach, nor do I doubt I'll get some fresh ideas once I see where others take their own objectography.