

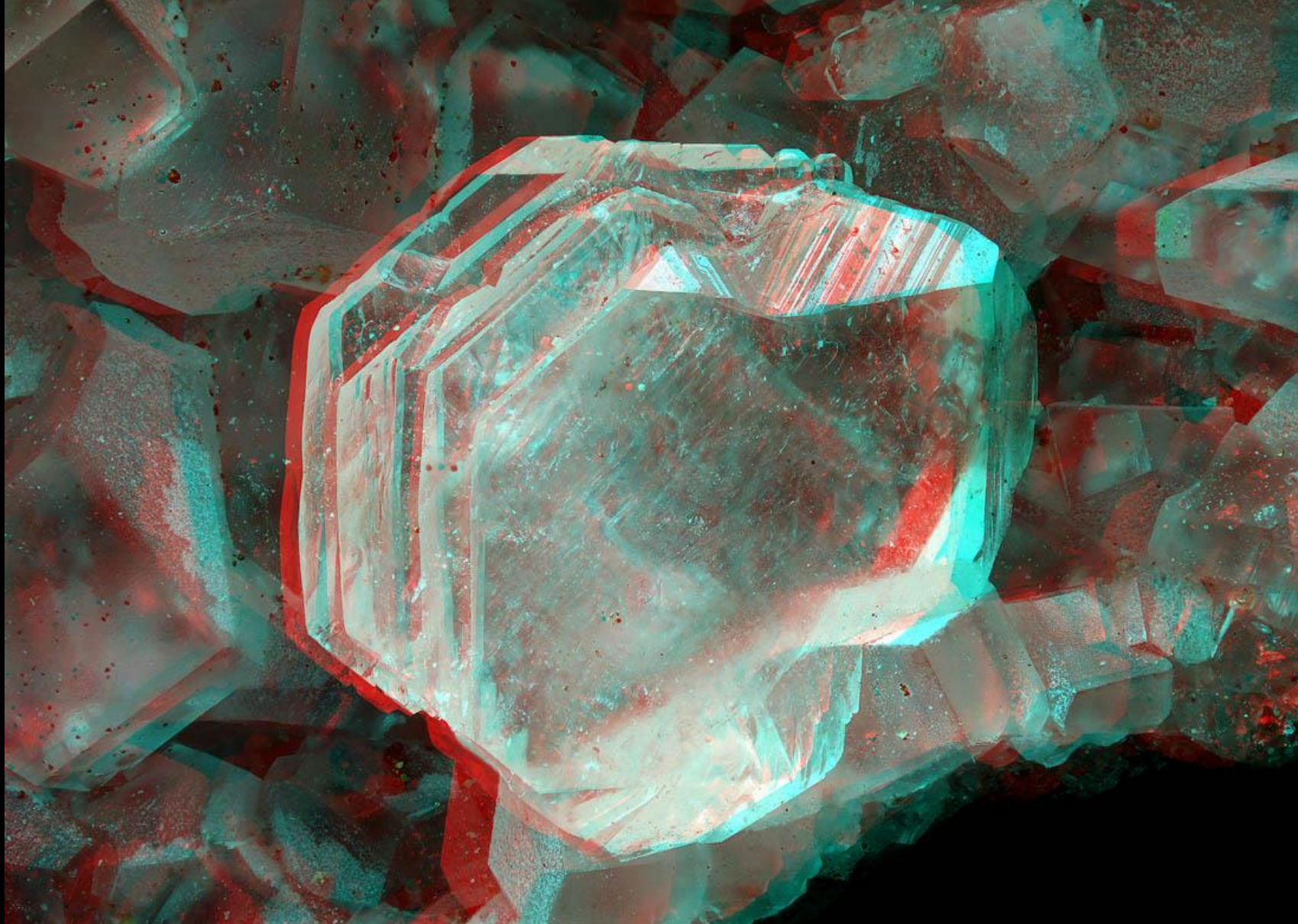
# Steetley Quarry, Derbyshire

3D images

To be viewed through red-cyan spectacles  
with red filter to left eye.

View from about 16" (40 cm) distance.

Figure 4



1 mm

**Baryte** BaSO<sub>4</sub>

Field width 8.5 mm

Group of offset pale yellow-brown tabular crystals on calcite found in mudstone beneath dolomite.

Armstrong Quarry, Steetley Quarry complex SK 549 788, Steetley, Derbyshire.

Specimen: Peter Briscoe collection. Photography: John Chapman.

Canon EOS 5DSr camera with Carl Zeiss (West Germany) Luminar 40 mm objective lens on 130 mm bellows extension, with Schott fibre optic illumination.  
Left + middle stacks of 119 and 104 35-micrometre steps at 4 degrees via Stackshot rail, with Luminar at fully open aperture, combined in CombineZM.



Figure 8



1 mm

Calcite  $\text{CaCO}_3$

Field width 6.7 mm

Tabular crystal with a short hexagonal prism and rhombohedral terminations amongst other forms lining a cavity in marly dolostone, with minor pyrite and a currently unidentified colourless mineral to be seen between the calcite. A ? $\text{CaSO}_4$  nodular replacement.

STQ012b

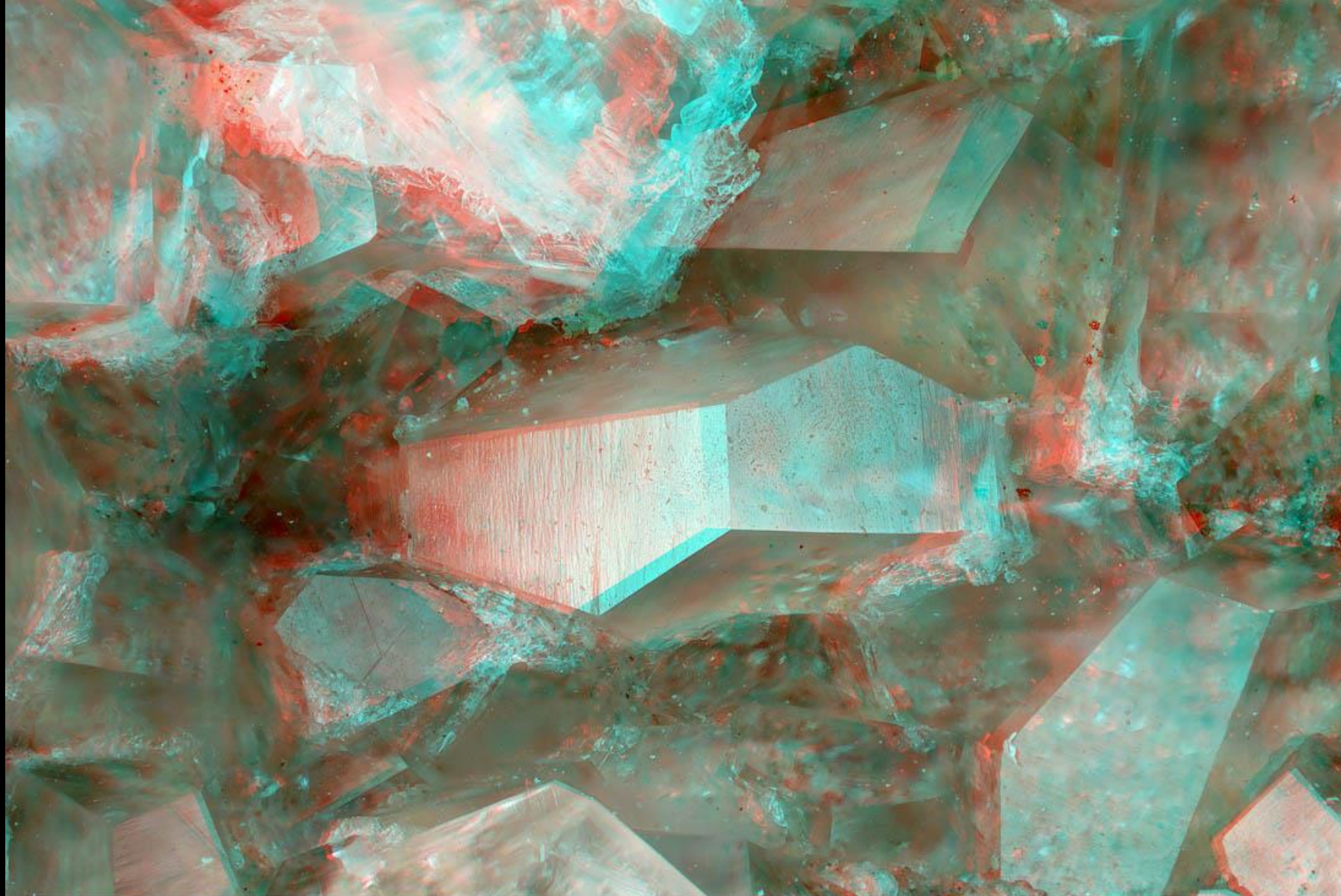
Specimen: Formerly in the Ray Richardson collection. Photography: John Chapman.

Canon EOS 5DSr camera with Carl Zeiss (West Germany) Luminar 40 mm objective lens on 175 mm bellows extension, with Schott fibre optic illumination.

Left + right stacks of 161 and 148 35-micrometre steps at 6 degrees via Stackshot rail, with Luminar at fully open aperture, combined in CombineZM.



No figure



1 mm

Calcite  $\text{CaCO}_3$

Field width 6.7 mm

Tabular crystal with a short hexagonal prism and rhombohedral terminations amongst other forms lining a cavity in marly dolostone, with minor pyrite and a currently unidentified colourless mineral to be seen between the calcite. A ?CaSO<sub>4</sub> nodular replacement.

No. STQ012a Specimen: Formerly in the Ray Richardson collection. Photography: John Chapman.

Canon EOS 5DSr camera with Carl Zeiss (West Germany) Luminar 40 mm objective lens on 175 mm bellows extension, with Schott fibre optic illumination. Left + right stacks of 151 and 150 35-micrometre steps at 6 degrees via Stackshot rail, with Luminar at fully open aperture, combined in CombineZM.



Figure 9



### Calcite $\text{CaCO}_3$

Prismatic hexagonal nailhead crystal, together with other forms, with tiny superficial pyrite crystals.

Armstrong Quarry, Steetley Quarry complex  
SK 55 79, Steetley, Derbyshire.

Specimen: Formerly in the Ray Richardson collection,  
No. STQ012b.

Photography: John Chapman.

Canon EOS 5DSr camera with Carl Zeiss (West Germany) Luminar 40mm objective lens on 175 mm bellows extension, with Schott fibre optic lighting.

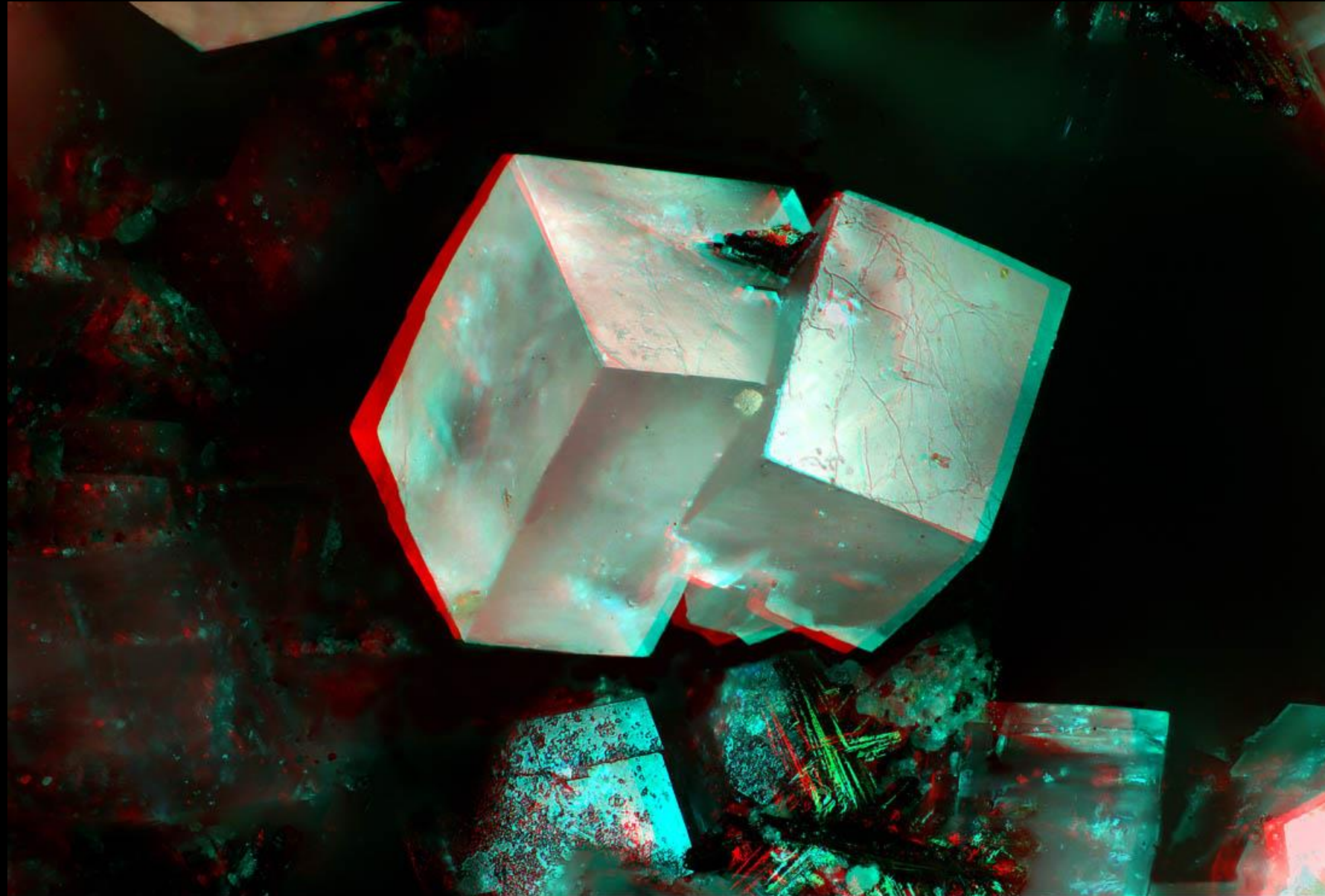
Left + right stacks of 149 and 155 35-micrometre steps at 6 degrees via Stackshot rail, with Luminar at fully open aperture, combined in CombineZM.

1 mm

Field height 5.7 mm



Figure 11



0.1 mm

**Dolomite**  $\text{CaMg}(\text{CO}_3)_2$

Field width 1.25 mm

Two tiny rhombohedral crystals 0.286 mm on edge with minor marcasite.

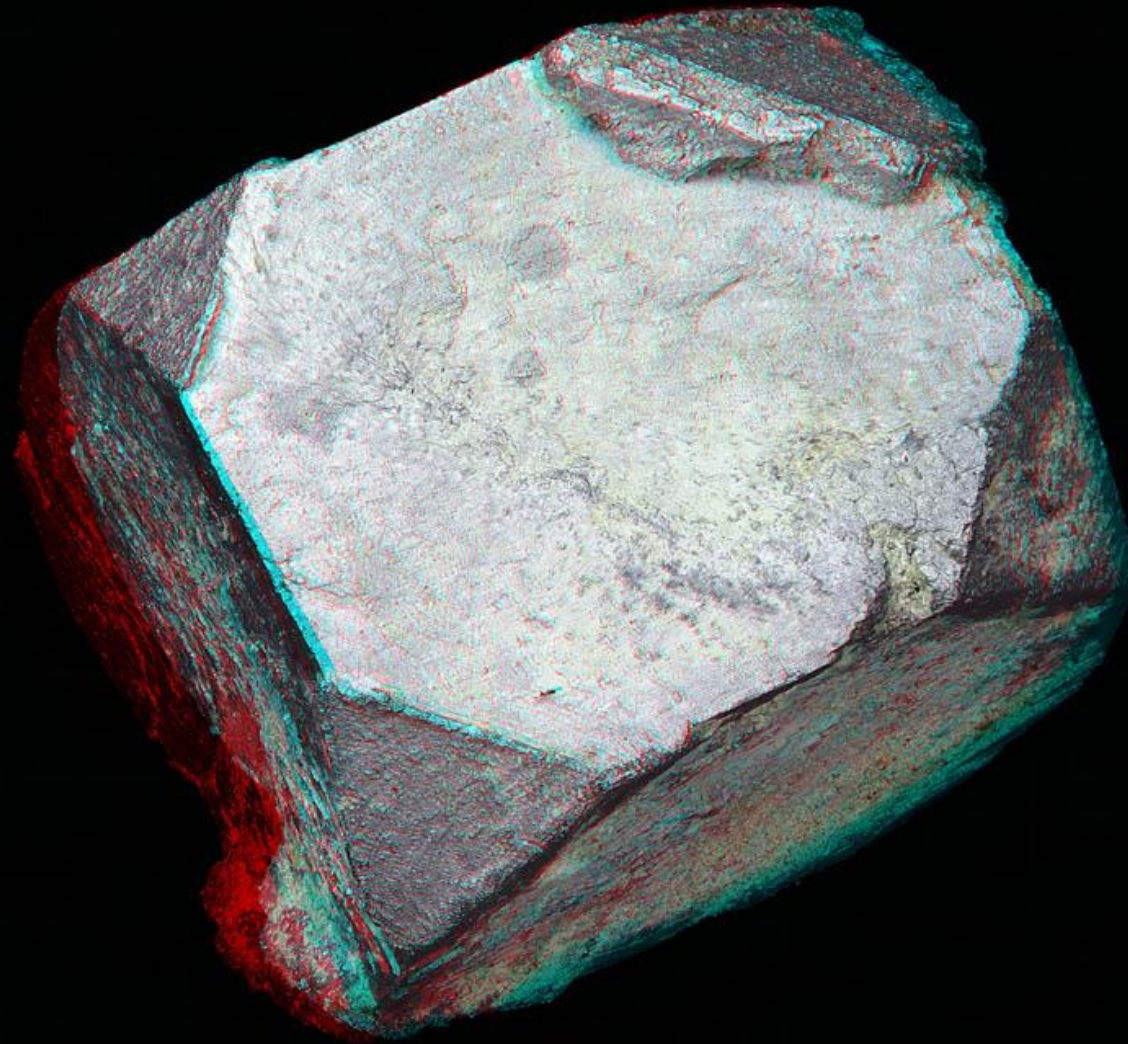
Basal Permian assemblage at Armstrong Quarry, Steetley Quarry complex SK 549 788, Steetley, Derbyshire.

Specimen: formerly in the Ray Richardson collection, No. STQ013. Photography: John Chapman.

Canon EOS 5DSr camera with Leica 140x/0.40 objective lens on 175 mm bellows extension, with Schott fibre optic illumination.

Left + right stacks of 90 and 100 5-micrometre steps at 6 degrees via Stackshot rail, combined in CombineZM and rendered in Stereophotomaker.

Figure 12



1 mm

Galena PbS

Field width 13.5 mm

A matrix free cuboctahedral crystal with minor octahedral overgrowth 6 mm on edge.

Basal assemblage at Armstrong Quarry, Steetley Quarry complex SK 549 788, Steetley, Derbyshire.

Specimen: Peter Briscoe collection, collected in Nov 1999, No. STQ018. Photography: John Chapman.

Canon EOS 5DSr camera with Carl Zeiss (West Germany) Luminar 63 mm objective lens on 130 mm bellows extension, with Schott fibre optic illumination.

Left + right stacks of 84 and 87 75-micrometre steps at 6 degrees via Stackshot rail, with Luminar at fully open aperture, combined in CombineZM.



Figure 13



1 mm

**Galena PbS**

Field width 19.5 mm

Somewhat skeletal cubic crystals to 5 mm with very pale yellow-brown sphalerite in cavity lined with rhombohedral dolomite. Armstrong Quarry, Steetley Quarry complex SK 55 79, Steetley, Derbyshire.

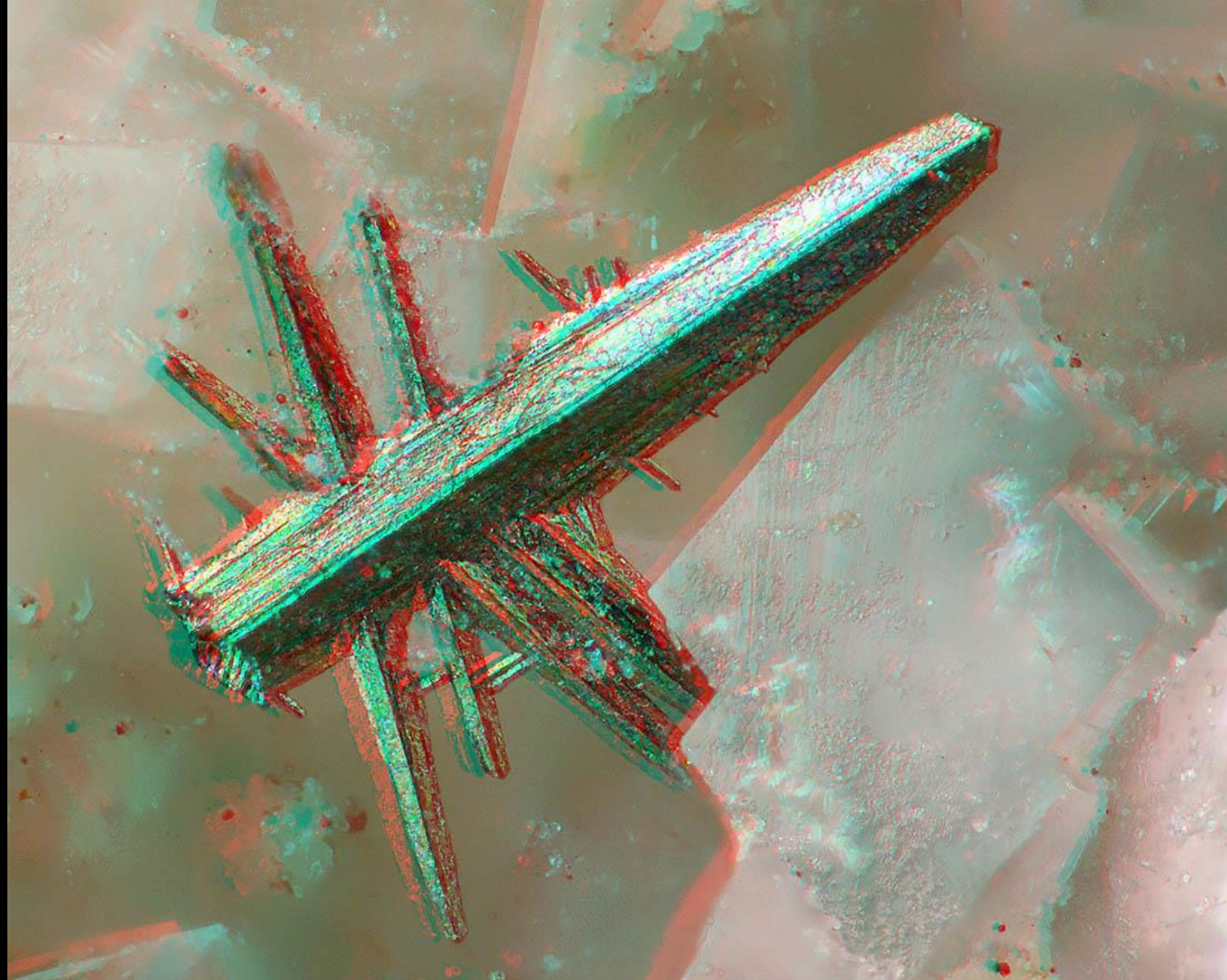
Specimen: formerly in the Ray Richardson collection. Photography: John Chapman.

No. STQ01

Canon EOS 5DSr camera with Carl Zeiss (West Germany) Luminar 63 mm objective lens on 90 mm bellows extension, with Schott fibre optic illumination. Left + right stacks of 70 and 76 100-micrometre steps at 6 degrees via Stackshot rail, with Luminar at aperture 2, combined in CombineZM.



Figure 15



0.1 mm

Marcasite  $\text{FeS}_2$

Field width 0.56 mm

Unusual planar crystal group consisting of a large tapering iridescent prismatic crystal with numerous smaller offsets partly embedded in translucent rhombohedral dolomite.

Armstrong Quarry, Steetley Quarry complex SK 55 79, Steetley, Derbyshire.

Specimen: formerly Ray Richardson collection, No. STQ013.. Photography: John Chapman.

Canon EOS 5DSr camera with Leica 140x/0.40 objective lens on 175 mm bellows extension, with Schott fibre optic illumination. Left + right stacks of 106 and 148 10- and 3-micrometre steps at 6 degrees via Stackshot rail, combined in CombineZM and rendered in Stereophotomaker.



No figure



0.1 mm

**Marcasite FeS<sub>2</sub>**

Field width 1.25 mm

Double terminated prismatic crystal tapering to both terminations with numerous smaller offsets partly embedded in translucent rhombohedral dolomite. Armstrong Quarry, Steetley Quarry complex SK 55 79, Derbyshire.

Specimen: formerly in the Ray Richardson collection, No. SRQ013. Photography: John Chapman.

Canon EOS 5DSr camera with Leica 140x/0.40 objective lens on 175 mm bellows extension, with Schott fibre optic illumination.

Left + right stacks of 153 and 155 10- and 5-micrometre steps at degrees via Stackshot rail, combined in Combine ZM.



No figure



0.1 mm

Marcasite FeS<sub>2</sub>

Field width 0.73 mm

Double terminated prismatic crystal tapering to both terminations with numerous smaller offsets partly embedded in translucent rhombohedral dolomite. Armstrong Quarry, Steetley Quarry complex SK 55 79, Derbyshire.

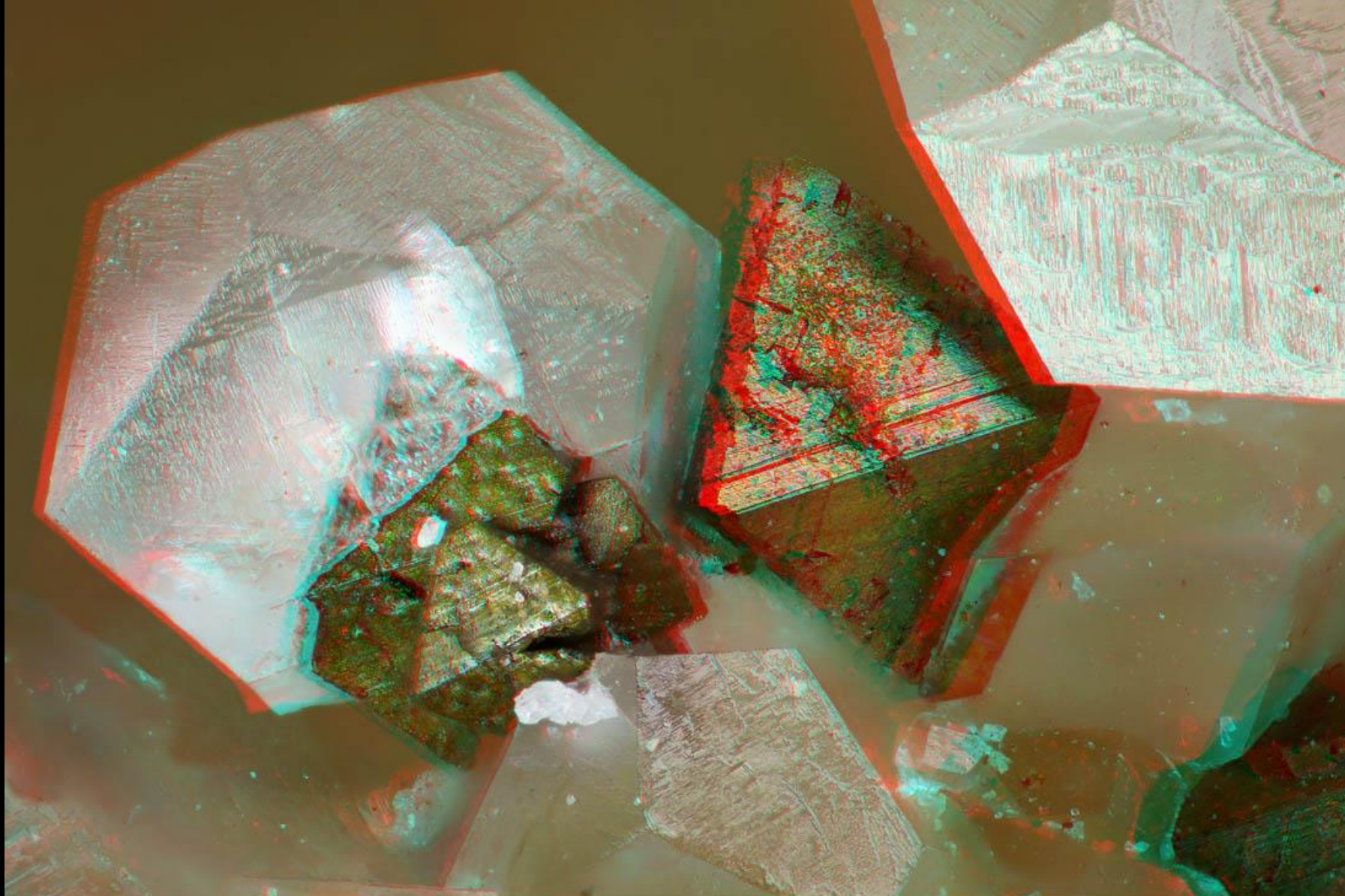
Specimen: formerly in the Ray Richardson collection, No. SRQ013. Photography: John Chapman.

Canon EOS 5DSr camera with Leica 140x/0.40 objective lens on 175 mm bellows extension, with Schott fibre optic illumination.

Left + right stacks of 153 and 155 10- and 5-micrometre steps at degrees via Stackshot rail, combined in Combine ZM.



Figure 16



0.1 mm

**Marcasite** FeS<sub>2</sub>

Field width 1.25 mm

Blocky striated pyramidal crystals with translucent hexagonal calcite, which the marcasite clearly pre-dates.

Armstrong Quarry, Steetley Quarry complex SK 549 788, Steetley, Derbyshire.

Specimen: formerly in the Ray Richardson collection, No. STQ011. Photography: John Chapman.

Canon EOS 5DSr camera with Leica 140x/0.40 objective lens on 175 mm bellows extension, with Schott fibre optic illumination.

Left + right stacks of 123 and 111 5-micrometre steps at 6 degrees via Stackshot rail, combined in CombineZM and rendered in Stereophotomaker.



No figure



1 mm

Pyrite on calcite.

Field width 8.5 mm

Nail-head calcite crystals with minute tadpole-shaped pyrite inclusions with cubic heads, approx. 0.1 mm on edge with occasional octahedral modifications and long tails extending into the underlying calcite crystals.

Armstrong Quarry, Steetley Quarry complex SK 549 788, Steetley, Derbyshire.

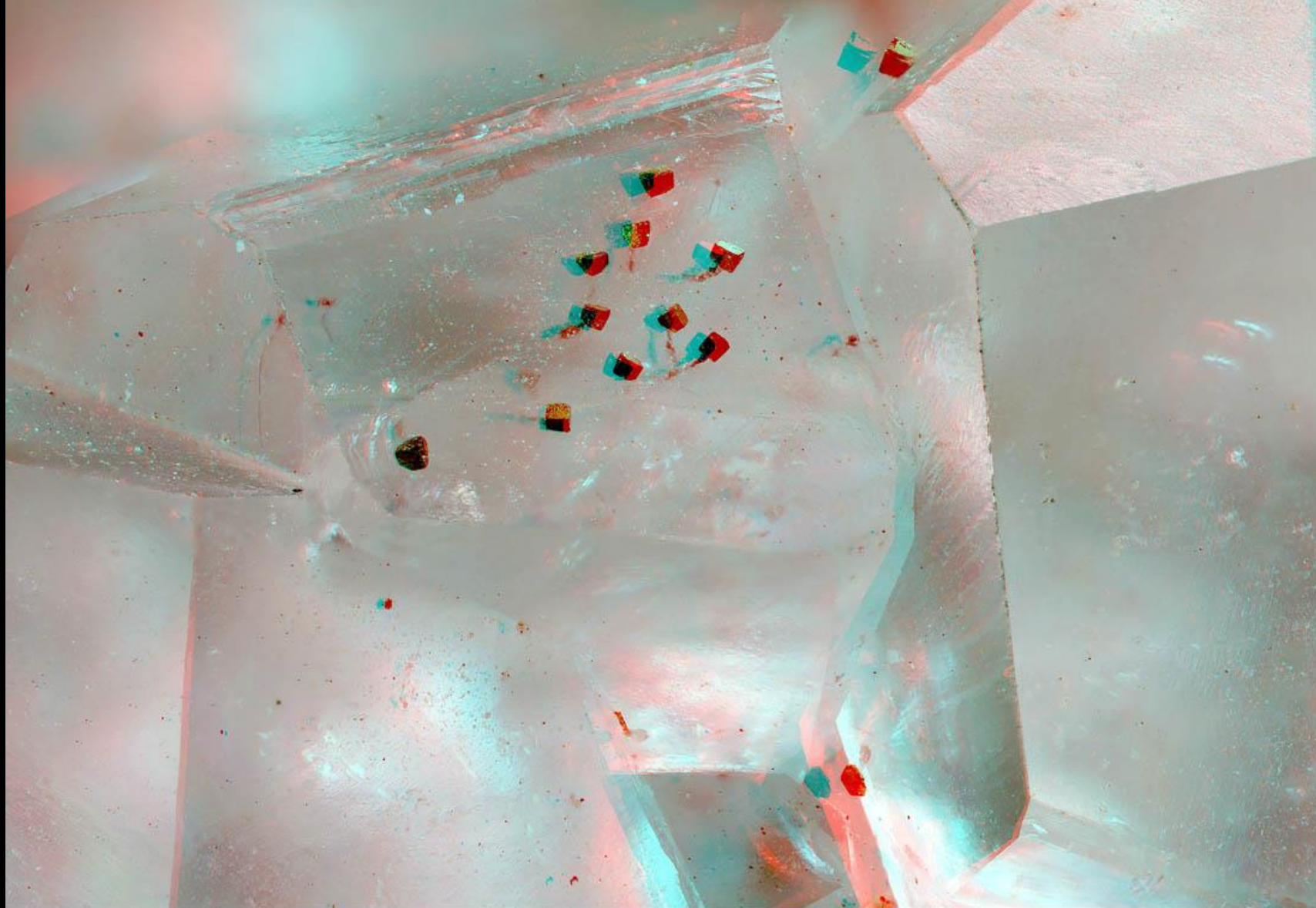
Specimen: Peter Briscoe collection [JD6] No. STQ022. Photography: John Chapman.

Canon EOS 5DSr camera with Carl Zeiss (West Germany) Luminar 40 mm objective lens on 130 mm bellows extension, with Schott fibre optic illumination.

Left + right stacks of 148 and 139 steps at 6 degrees via Stackshot rail, with Luminar at fully open aperture, combined in CombineZM.



Figure 17



1 mm

Pyrite on calcite.

Field width 4.56 mm

Nail-head calcite crystals with minute tadpole-shaped pyrite inclusions with cubic heads, approx. 0.1 mm on edge with occasional octahedral modifications and long tails extending into the underlying calcite crystals.

Armstrong Quarry, Steetley Quarry complex SK 549 788, Steetley, Derbyshire.

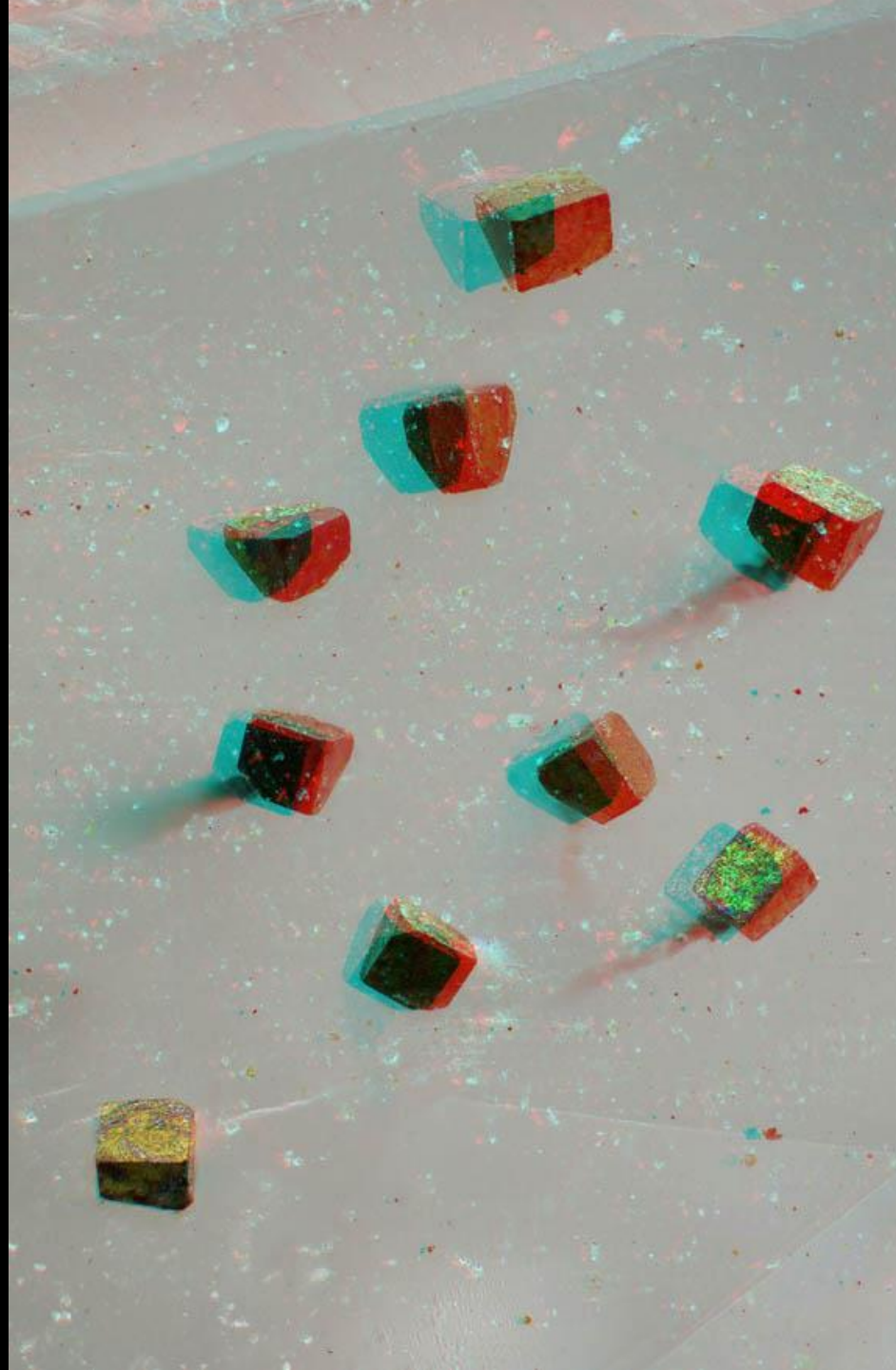
Specimen: Peter Briscoe collection [JD6] No. STQ022. Photography: John Chapman.

Canon EOS 5DSr camera with Carl Zeiss (West Germany) Luminar 25 mm objective lens on 130 mm bellows extension, with Schott fibre optic illumination.

Left + right stacks of 129 and 110 20-micrometre steps at 6 degrees via Stackshot rail, with Luminar aperture reduced to 2, combined in CombineZM.



Figure 18



## Pyrite on calcite

Nail-head calcite crystals with minute tadpole-shaped pyrite inclusions with cubic heads, approx. 0.1 mm on edge, with occasional octahedral modifications and long tails extending into the underlying calcite crystals.

Armstrong Quarry, Steetley Quarry complex  
SK 549 788, Steetley, Derbyshire.

Specimen: Peter Briscoe collection [JD6], No. STQ022.  
Photography: John Chapman.

Canon EOS 5DSr camera with Leica 140x/0.40 objective lens on 175 mm bellows extension, with Schott fibre optic illumination.

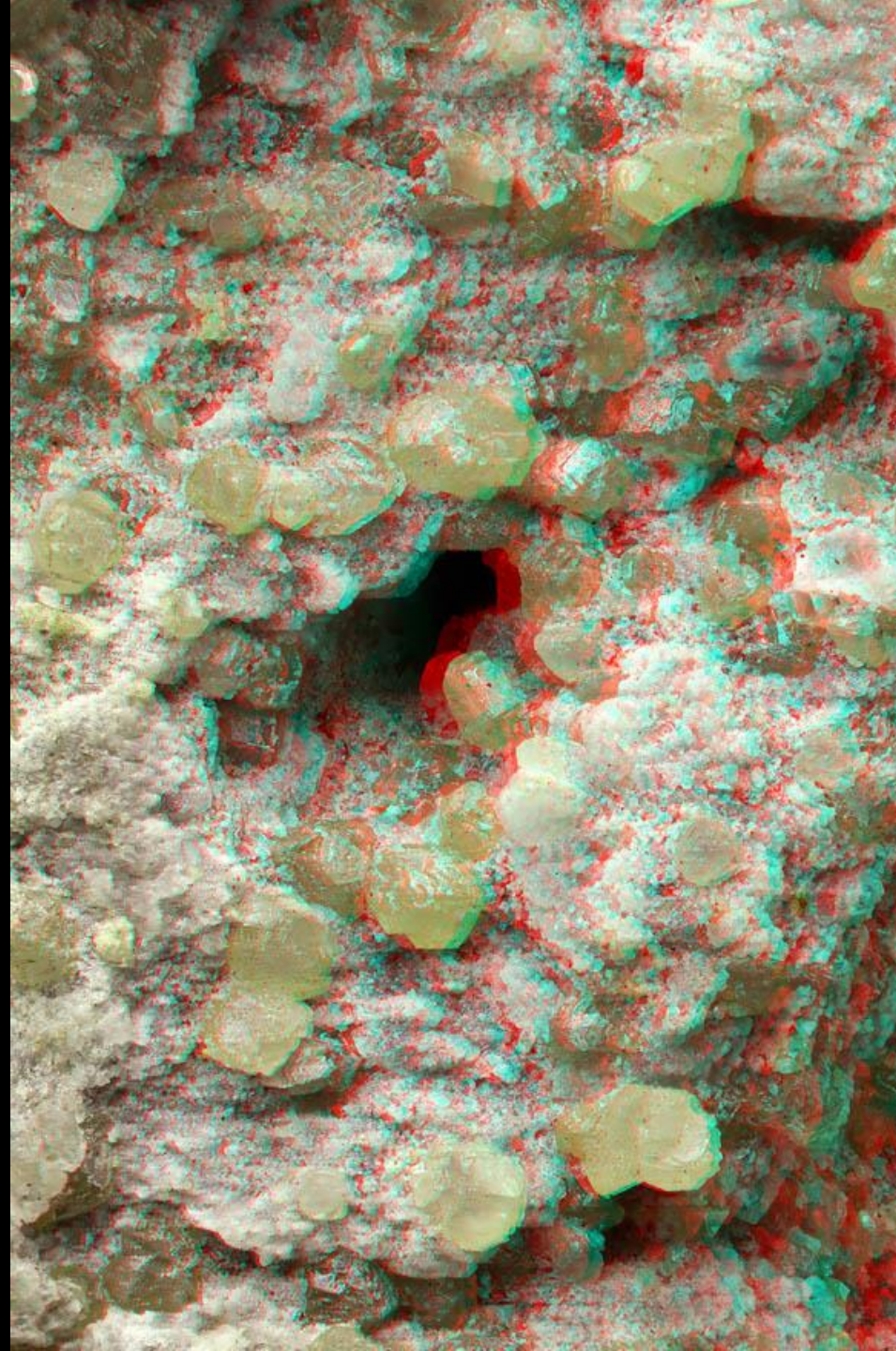
Left + right stacks of 153 and 145 5-micrometre steps at 6 degrees via Stackshot rail, combined in Combine ZM and processed in PhotoShop CS5.

0.1 mm

Field height 1.25 mm



Figure 19



## Sphalerite ZnS

Abundant pale yellow millimetre-size crystals and grains in the outer surface of a thick calcite replacement shell from the Marl Slate Formation at Armstrong Quarry, Steetley Quarry complex SK 549 788, Steetley, Derbyshire.

Specimen: formerly in the Ray Richardson collection, No. STQ021a.  
Photography: John Chapman.

Canon EOS 5DSr camera with Carl Zeiss (West Germany) Luminar 40 mm objective lens on 175 mm bellows extension, with Schott fibre optic lighting.

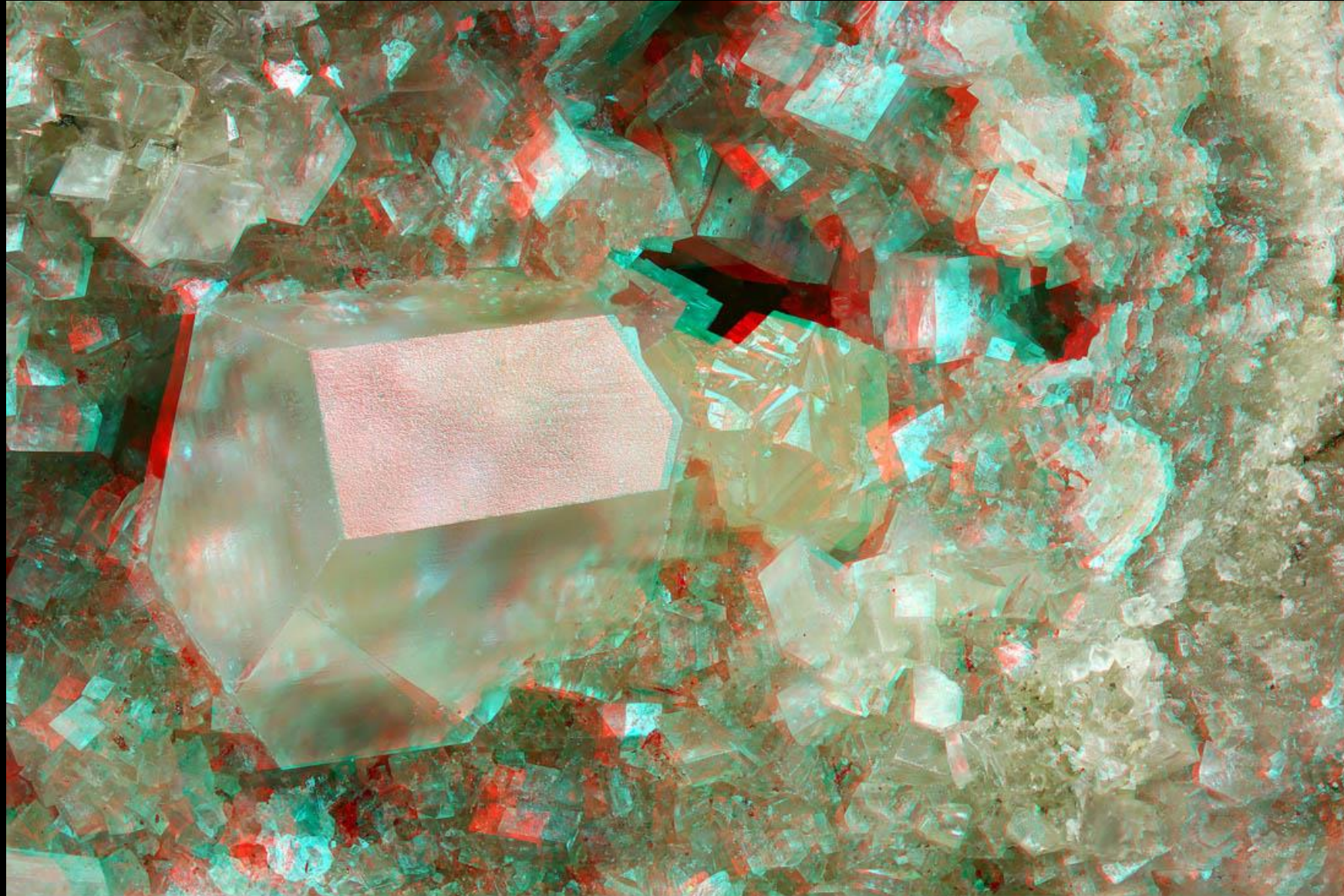
Left + right stacks of 94 and 82 35-micrometre steps at  $\pm$  degrees via Stackshot rail, with Luminar at fully open aperture, combined in CombineZM.

1 mm

Field height 6.7 mm



Figure 21



1 mm

**Calcite  $\text{CaCO}_3$  and sphalerite  $\text{ZnS}$ .**

Field width 4.5 mm

The translucent hexagonal calcite crystal has a rhombohedral termination, next to a very pale yellow-brown complex sphalerite crystal, both overlying colourless rhombohedral dolomite crystals from a cavity in the basal Permian series. Armstrong Quarry, Steetley Quarry complex SK 55 79, Steetley, Derbyshire.

No. STQ01

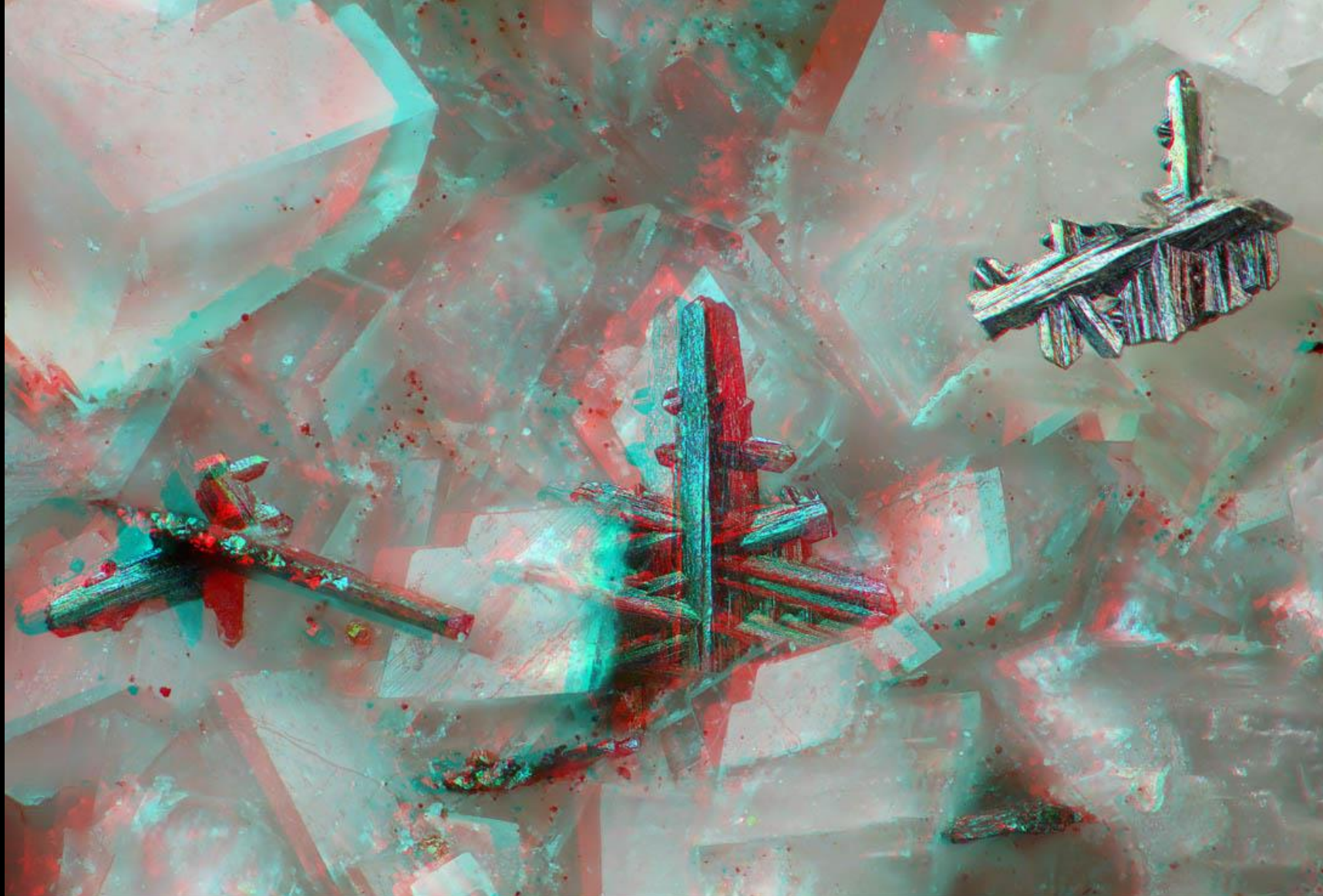
Specimen: formerly in the Ray Richardson collection. Photography: John Chapman.

Canon EOS 5DSr camera with Carl Zeiss (West Germany) Luminar 25 mm objective lens on 130 mm bellows extension, with Schott fibre optic illumination.

Left + right stacks of 99 and 88 25-micrometre steps at 6 degrees via Stackshot rail, with Luminar at fully open aperture, combined in CombineZM.



Figure 24



0.1 mm

**Marcasite** FeS<sub>2</sub>

Field width 1.25 mm

Unusual planar crystal groups consisting of large iridescent prismatic crystals with numerous smaller offsets partly embedded in translucent rhombohedral dolomite.

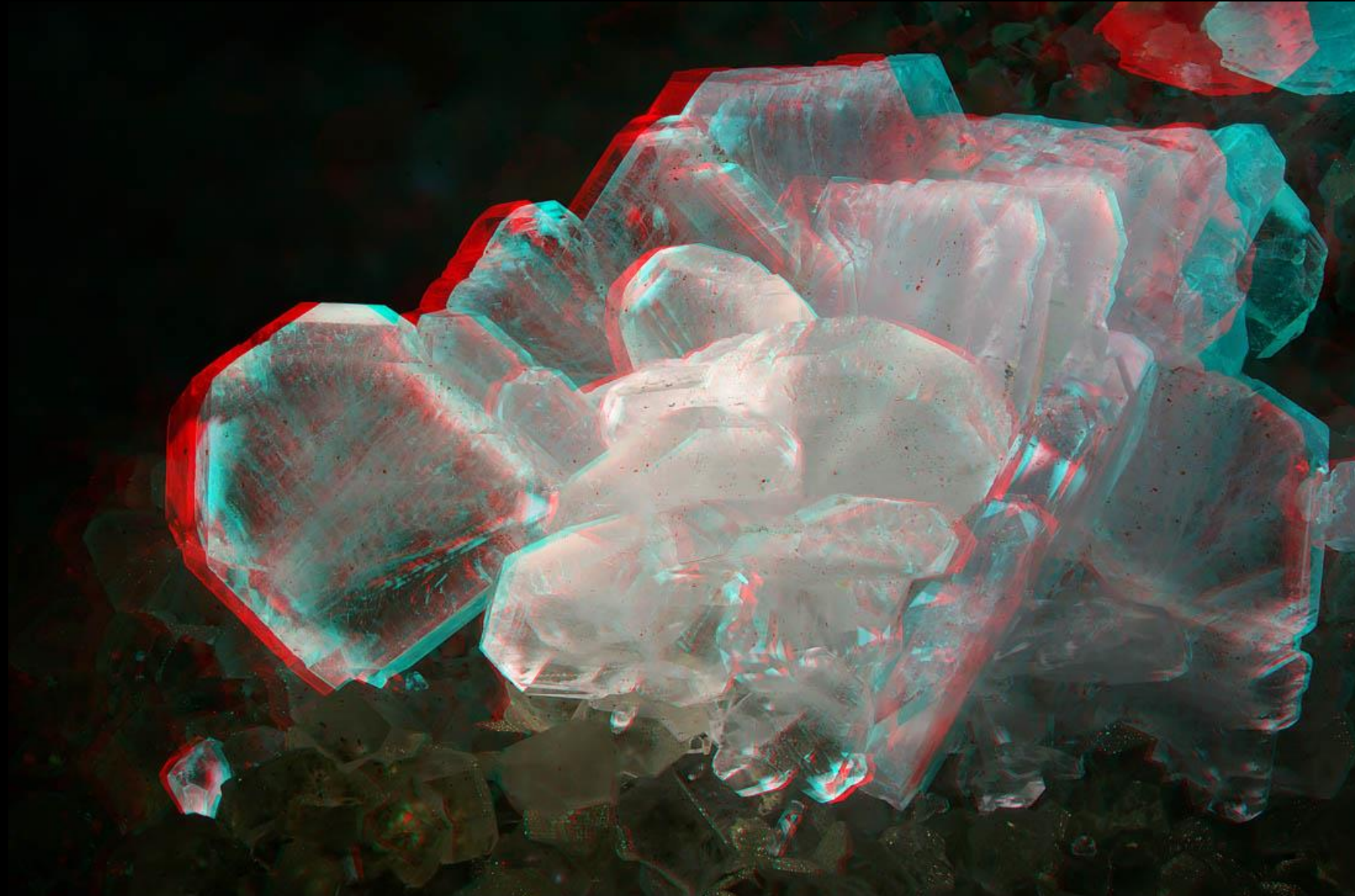
Armstrong Quarry, Steetley Quarry complex SK 55 79, Steetley, Derbyshire.

Specimen: formerly Ray Richardson collection, No. STQ013. Photography: John Chapman.

Canon EOS 5DSr camera with Leica 140x/0.40 objective lens on 175 mm bellows extension, with Schott fibre optic illumination. Left + right stacks of 119 and 151 10- and 3-micrometre steps at 6 degrees via Stackshot rail, combined in CombineZM and rendered in Stereophotomaker.



Figure 25



1 mm

10 mm

Baryte BaSO<sub>4</sub>

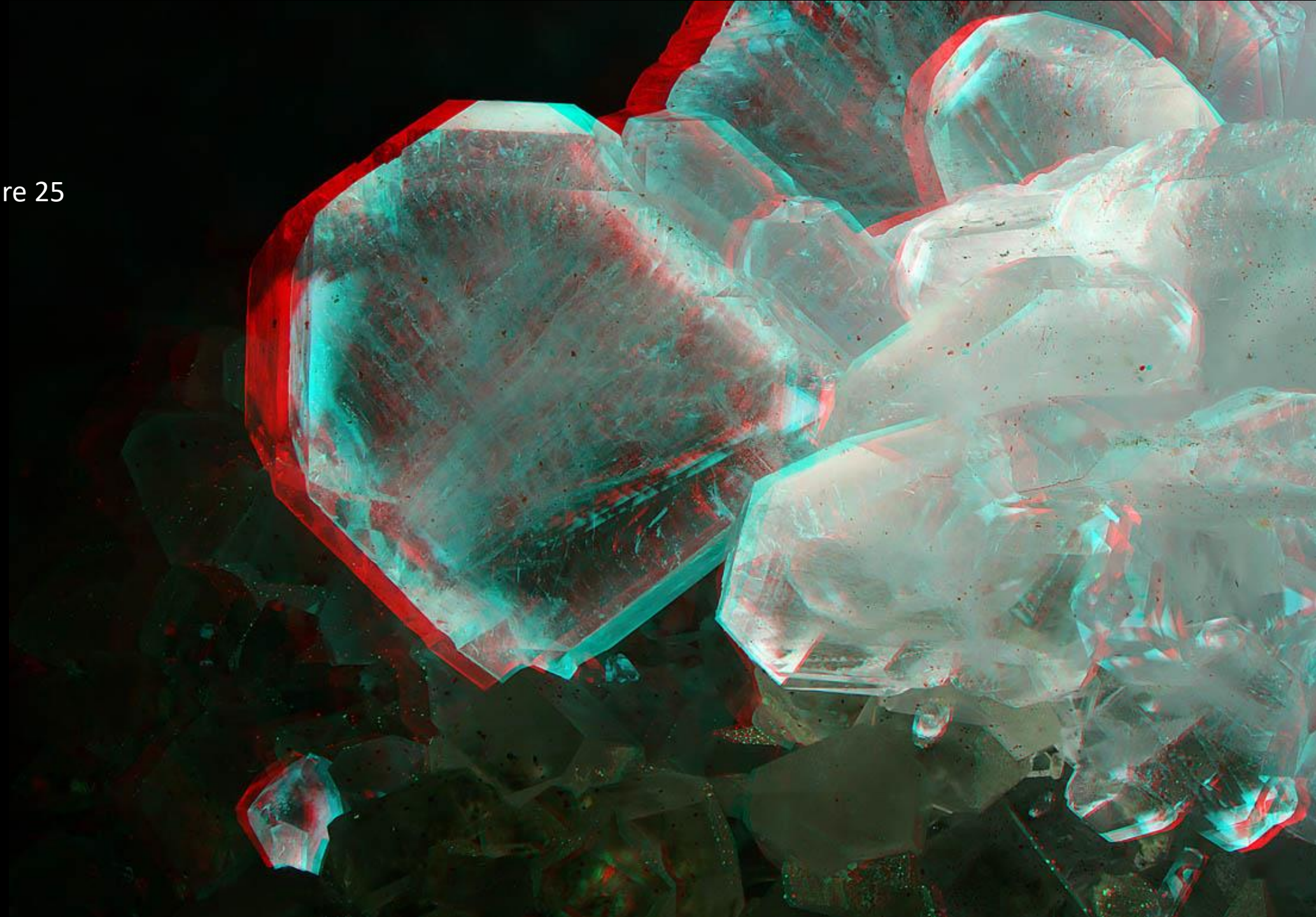
Field width 30 mm

Group of tabular crystals on calcite photographed in ultraviolet light, fluorescing white, the calcite fluorescing dull yellow-brown. Armstrong Quarry, Steetley Quarry complex SK 549 788, Steetley, Derbyshire.

Specimen: Peter Briscoe collection (found in mudstone/marl beneath dolomite 6/3/1984), No. STQ026. Photography: John Chapman. Canon EOS 5DSr camera with Carl Zeiss (West Germany) Luminar 63 mm lens on 50 mm bellows extension. Convoy S2+ UV torch with UG1 excitation filter and LP 397 interference filter. Left + right stacks of 135 and 125 0.2 mm steps at 6 degrees via Stackshot rail, combined in CombineZM.



Figure 25





End of the Steetley Quarry 3D images.

A selection of 3D images for the Sunnyside Deposit  
and for Whitwell Quarry is also available  
on the Russell Society website.