USGS
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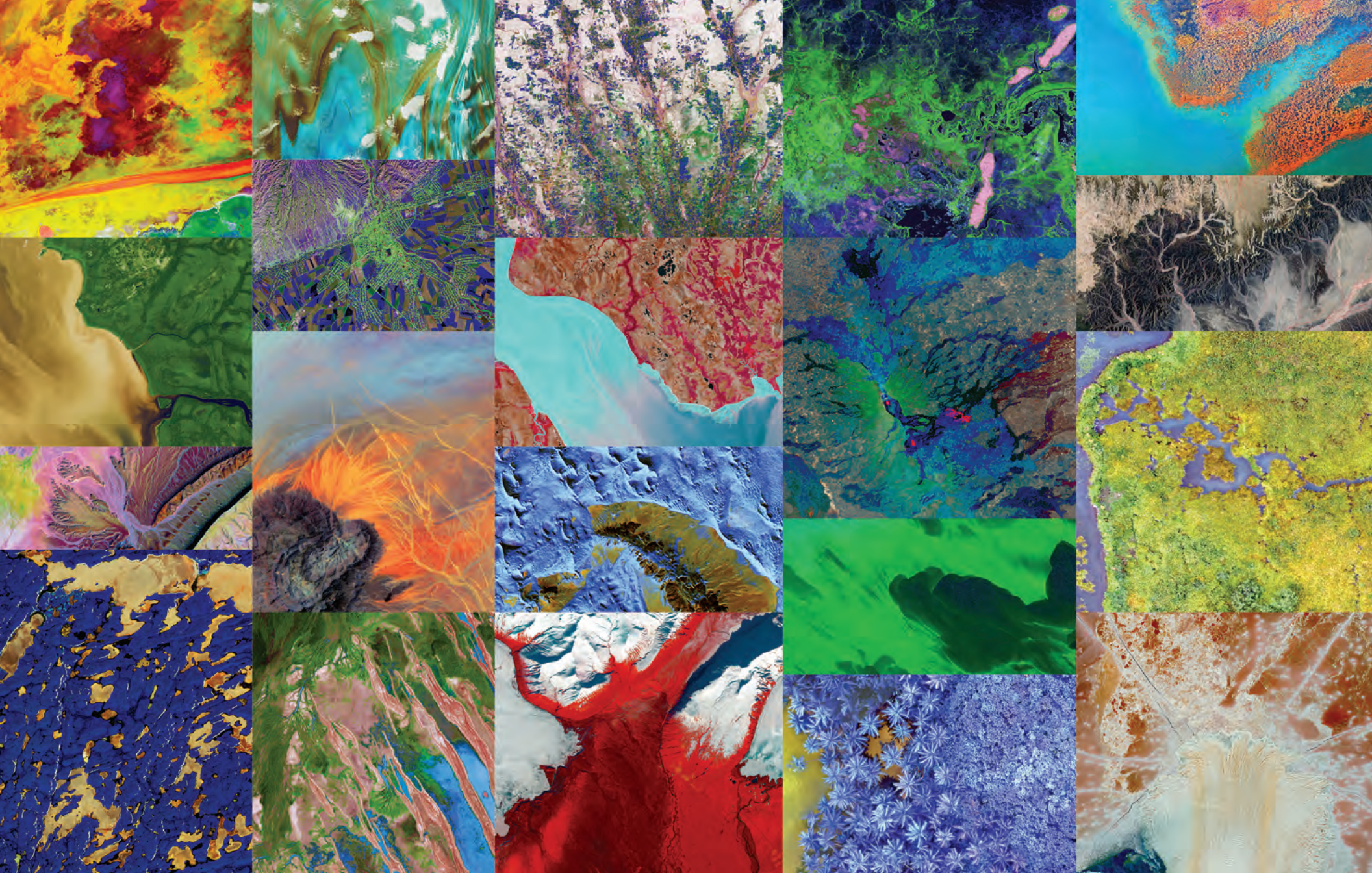
NASA

A UNIQUE AND UNCONVENTIONAL PERSPECTIVE OF THE EARTH'S GEOGRAPHIC ATTRIBUTES

EARTH AS ART 6

General Information Product 194

U.S. Department of the Interior
U.S. Geological Survey



EARTH AS

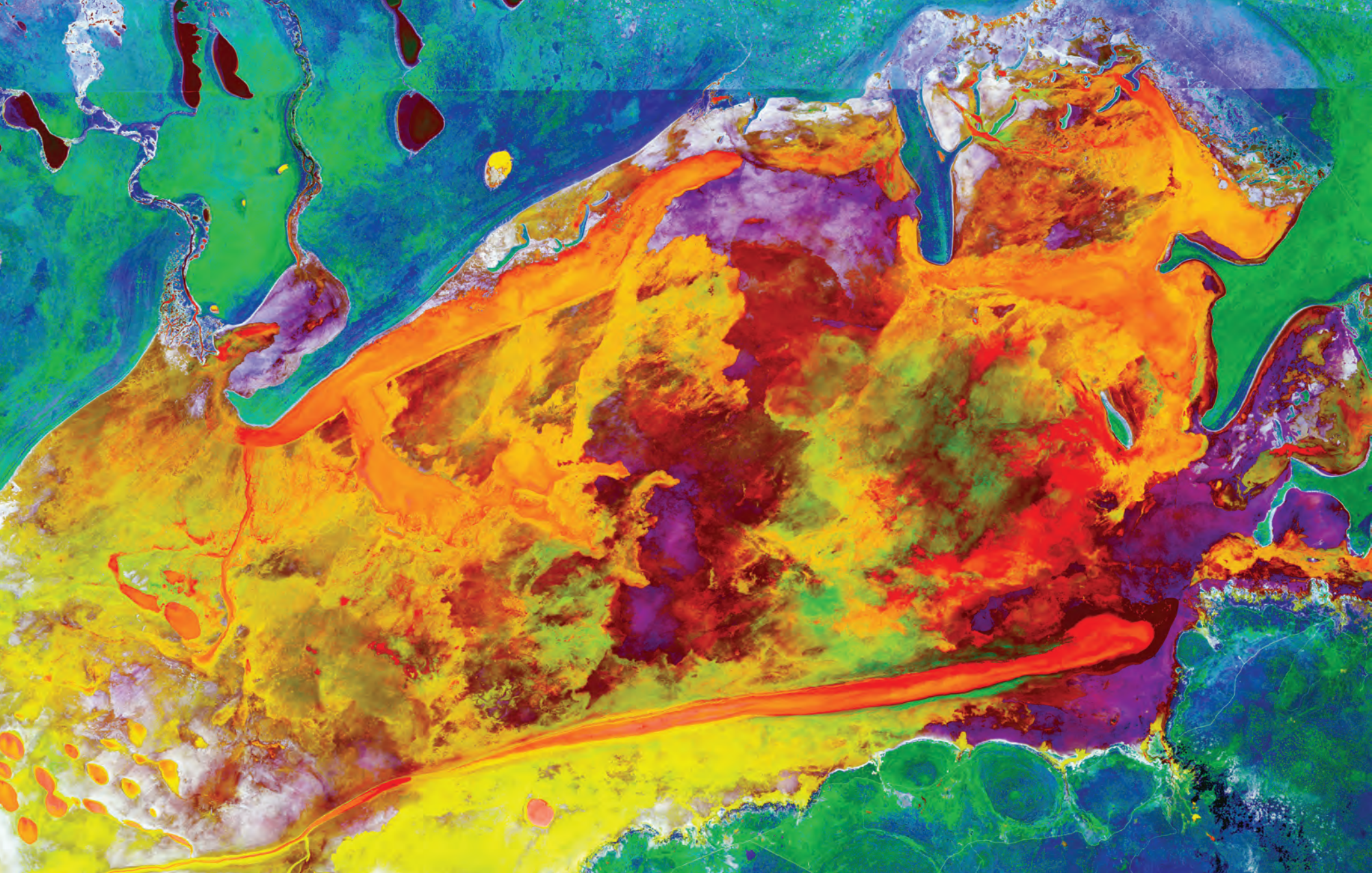
EARTH AS ART 6

Earth has a stunning variety of landscapes. The colors, patterns, textures, and shapes all make for intriguing artwork as seen from the perspective of space.

Earth As Art shows not only what satellites capture in the visible wavelengths of light you and I can see, but also what's hiding in the invisible wavelengths that Landsat sensors can detect in the infrared part of the electromagnetic spectrum. Those combinations can bring out much more scientific value, but also can produce imagery of breathtaking beauty.

Earth As Art 6 even includes images from U.S. Geological Survey (USGS) Unmanned Aircraft Systems (UAS), commonly known as drones. Sensors attached to a UAS also capture visible and infrared light and have proven their value at monitoring change over time alongside their spaceborne partners. Besides, their images look great, too. Enjoy the latest from Earth As Art!

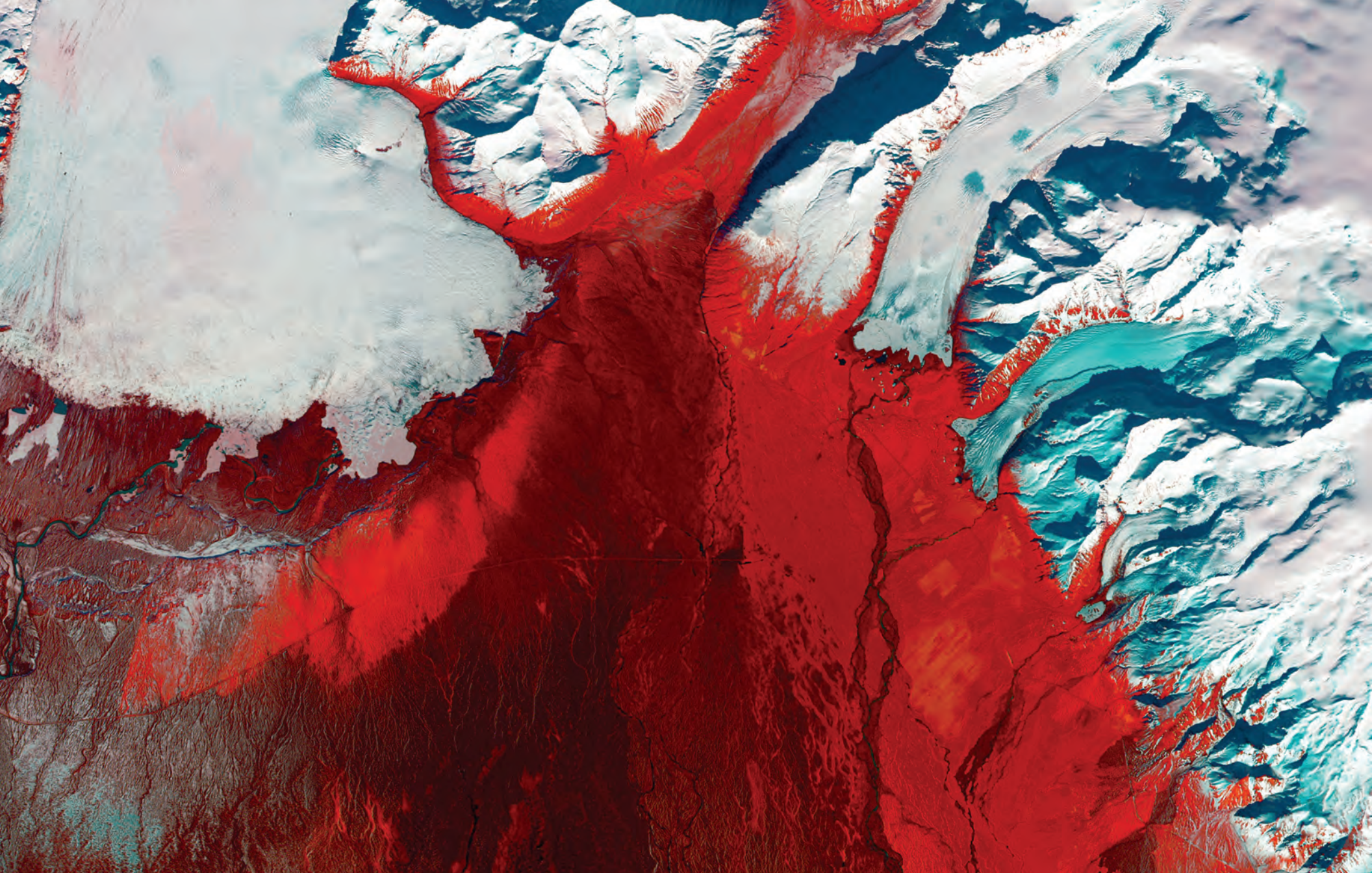
https://eros.usgs.gov/image-gallery/earth-art-6



SALTY DESOLATION

Landsat 8 data acquired on 03 | 04 | 2014

A vast, open expanse in Namibia is one of the largest salt pans in the world. The pan is within Etosha National Park, protected since 1907. The horizontal line across the image is the national park fence. The wild patterns in this infrared interpretation are from numerous episodes of evaporation after seasonal rains. The salt from the water is rearranged into new patterns every time the shallow water dries out. The surrounding blue shades are dry bushland savanna.



OUTBURST

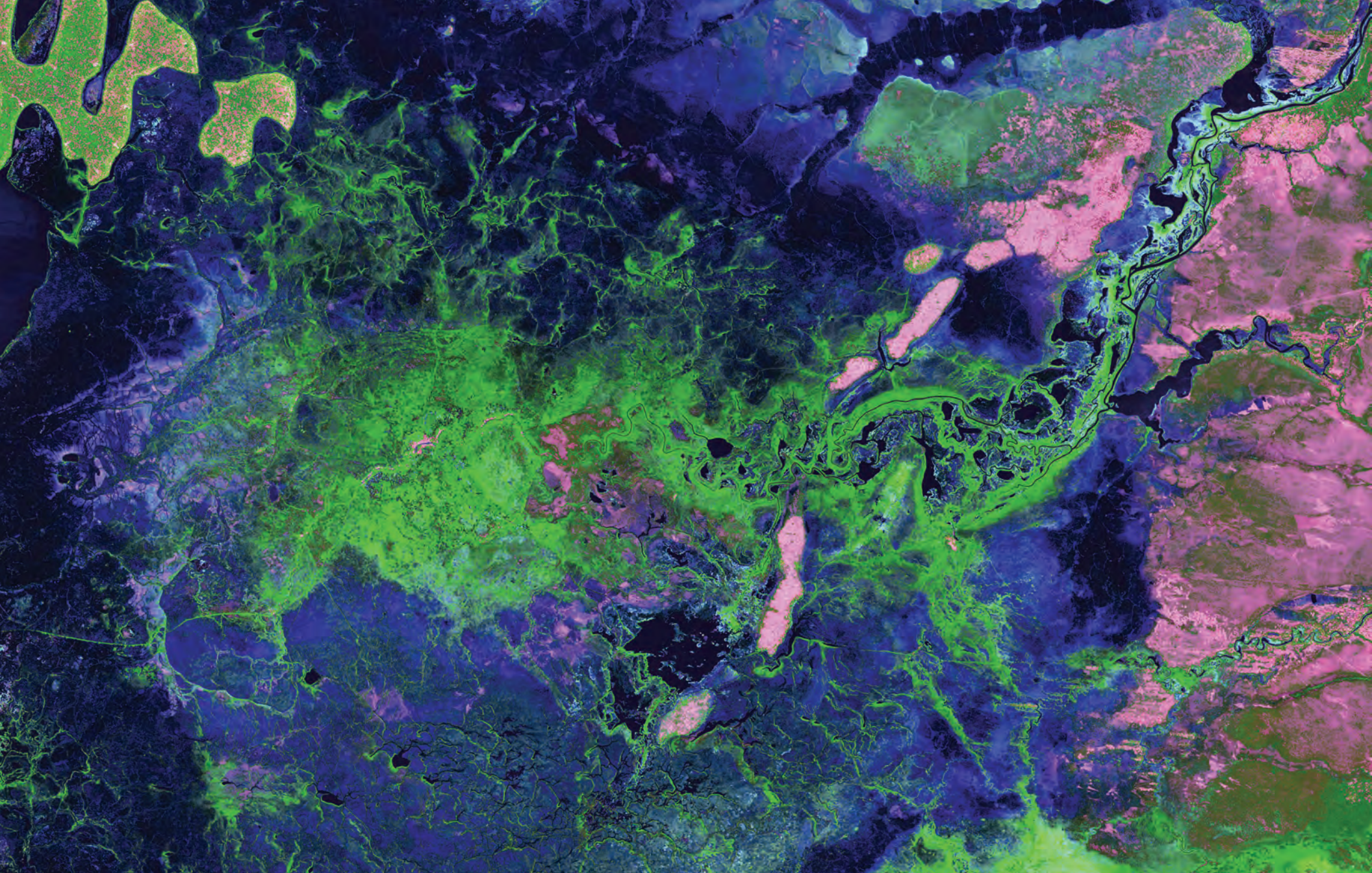
Landsat 8 data acquired on 03 | 22 | 2017

Red and black seem to mar the icy, glacial landscape of southern Iceland. The gray-black filaments are past glacial melting outbursts called jökulhlaups. These abrupt floods gush down this outwash plain called Skeiðarársandur, one of the world's largest. The Skeiðarárjökull Glacier extends from the top left of the image. The plain is mostly devoid of vegetation, but red coloring indicates low moss, birch shrub, and other grass species.

PAINTING THE DESERT

Landsat 8 data acquired on 04 | 25 | 2018

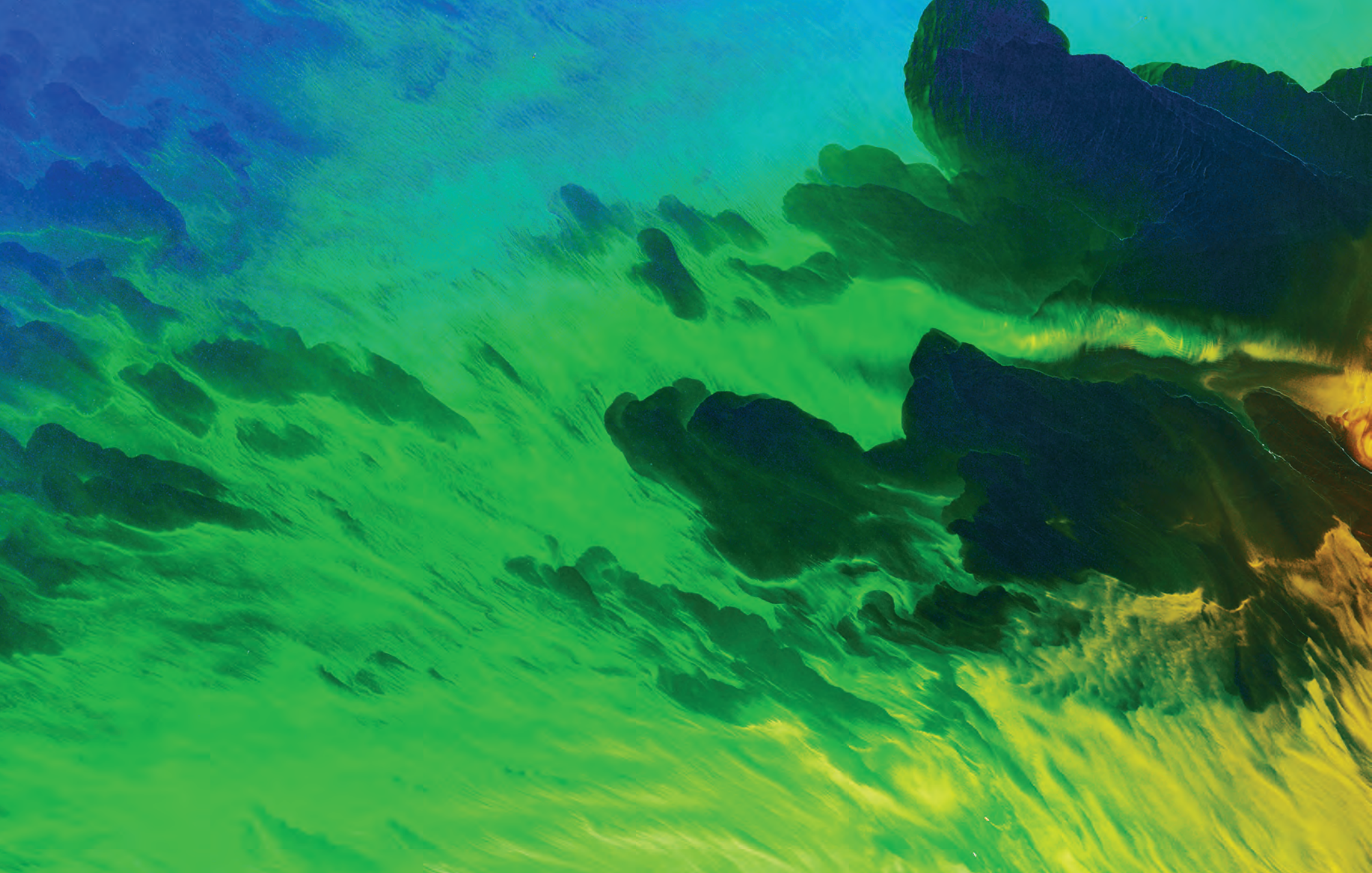
The Lake Eyre Basin is one of the driest places in Australia, but this image features a rare green flush to an otherwise parched landscape. Streams and creeks that drain into the basin are usually dry, but storms in March 2018 delivered water to these braided channels. By April, the floodwater had receded and left a green expanse behind. Scientists use satellites to track such flooding and greening events.



WONDROUS WETLANDS

Landsat 8 data acquired on 05 | 10 | 2018

Seventeen rivers flow into the Bangweulu Wetlands in Zambia, but only one drains out. Green tendrils randomly sweep through the image in a landscape dominated by various grasslands, open water, and dense Papyrus grass and Phragmites reeds. The entire wetland covers an area about the size of Connecticut.



LUMINESCENCE

Landsat 8 data acquired on 02 | 20 | 2015

A mesmerizing plume creates a paradox of light and dark, brilliant and murky. The dark water of the Suwannee River flows from the Okefenokee Swamp in southern Georgia to the Gulf of Mexico in Florida. The river's inky color comes from decaying vegetation at the river's swampy source.

FACING THE TIDE

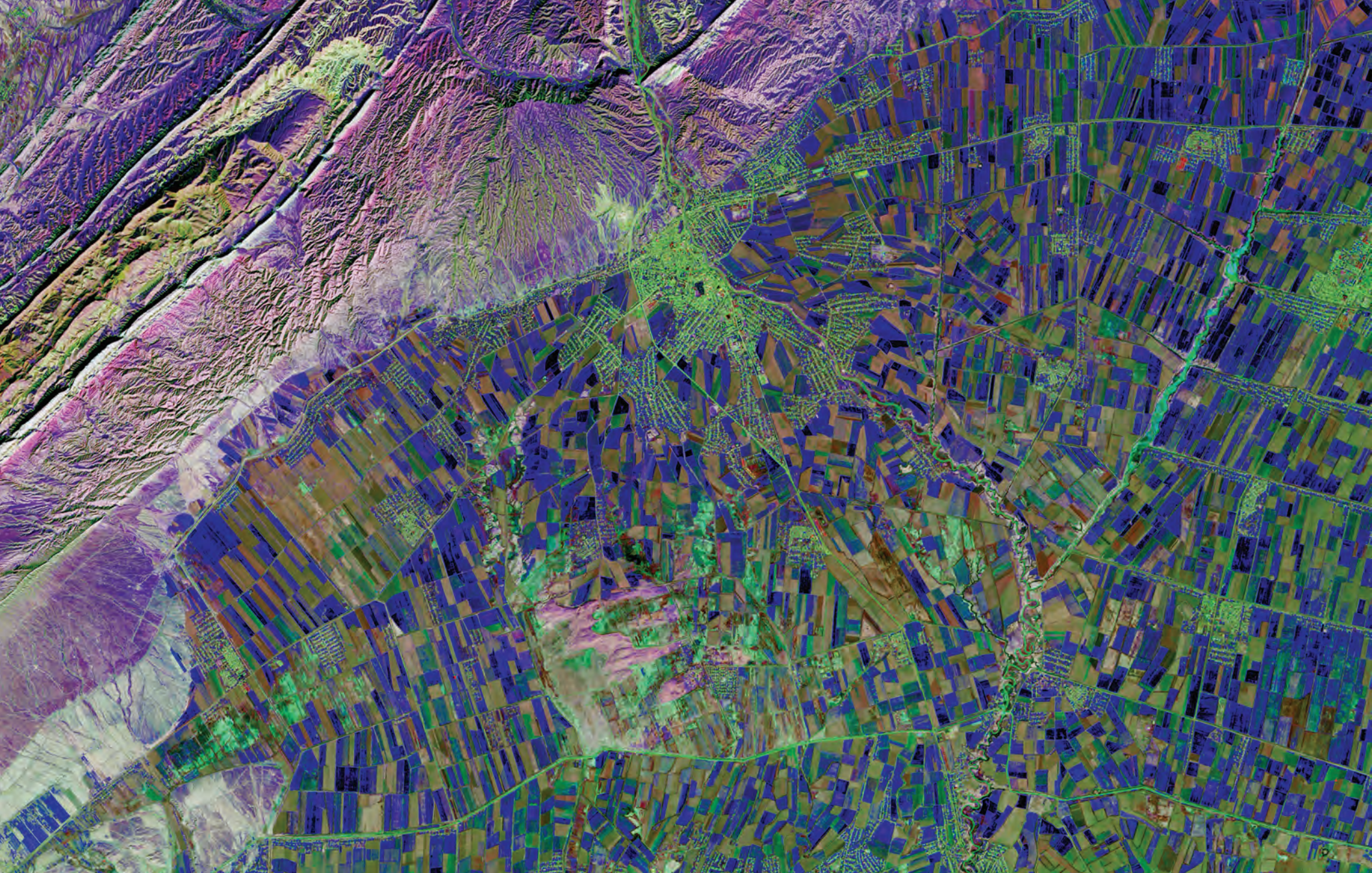
Landsat 8 data acquired on 07 | 30 | 2016

Rupert Bay, an arm of James Bay, extends into Quebec, Canada. Many rivers carry sediment into the bay and combine with seawater coming in from the tide. A prominent sediment stream extends past Stag Island, and a vortex curls off Stag Rock in the middle of the bay. Sediment trails off the islands toward the mainland, indicating the tide was coming in at the time of image acquisition.

MEZEN MIXING

Landsat 8 data acquired on 07 | 19 | 2014

In northern Russia, the freshwater of the Mezen River meets the saltwater of the Arctic Ocean. The funnel-shaped estuary has a strong tidal current that mixes sediment in the water rather than building up a delta. In this colorful composition, the increasing brightness marks an increase in water turbidity.



DEEP BLUE CUBISM

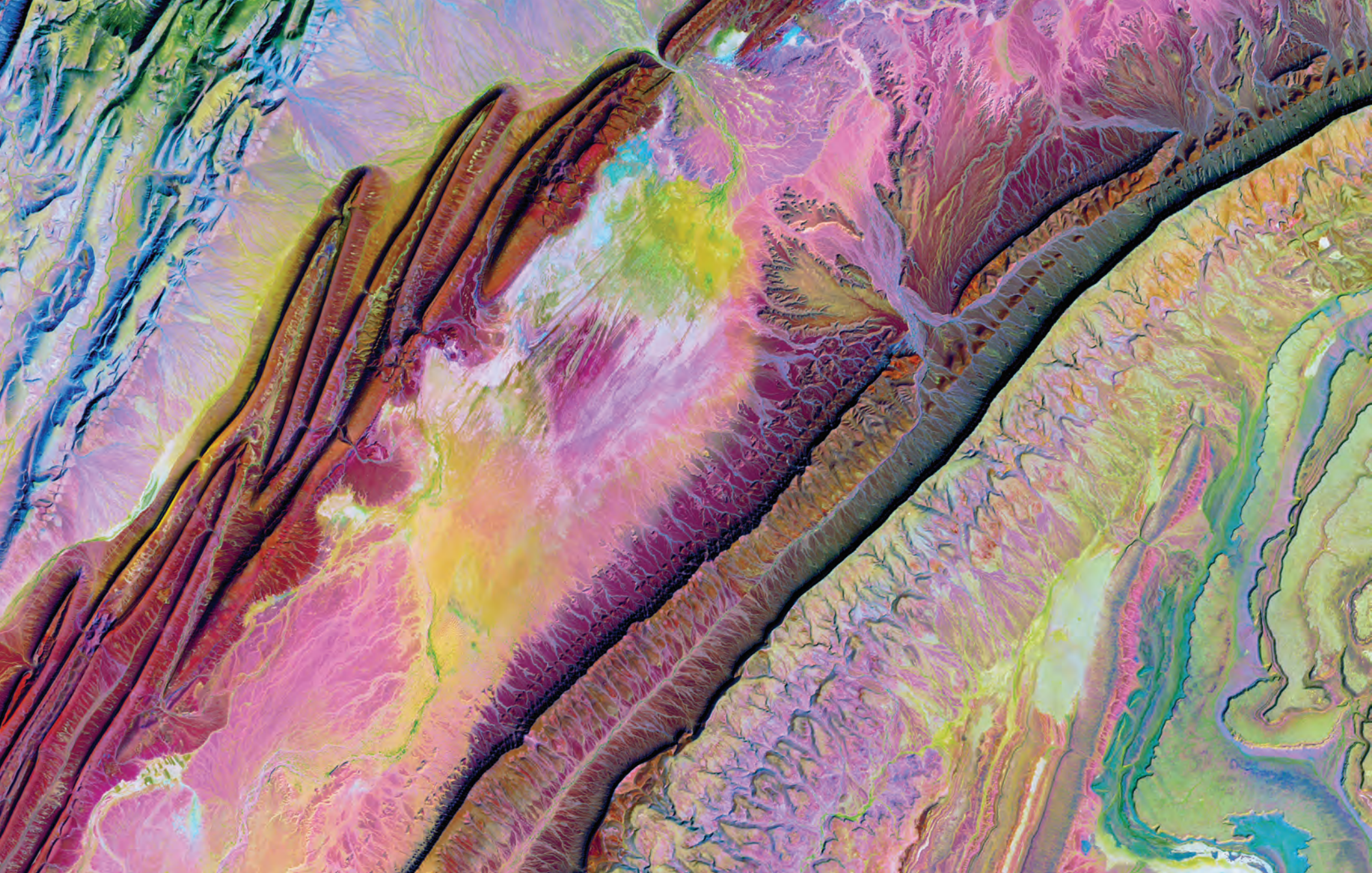
Landsat 8 data acquired on 02 | 22 | 2019

A bit of blue cubism in southern Uzbekistan highlights the intensive irrigation that is common along rivers that flow into the Aral Sea. However, so much water is used for irrigation that little actually reaches the sea. The perplexing variety of blue and green shades are farm fields with actively growing vegetation among the scattered residential zones.

WATCHING WETLANDS

Unmanned Aircraft Systems data acquired on 08 | 15 | 2017

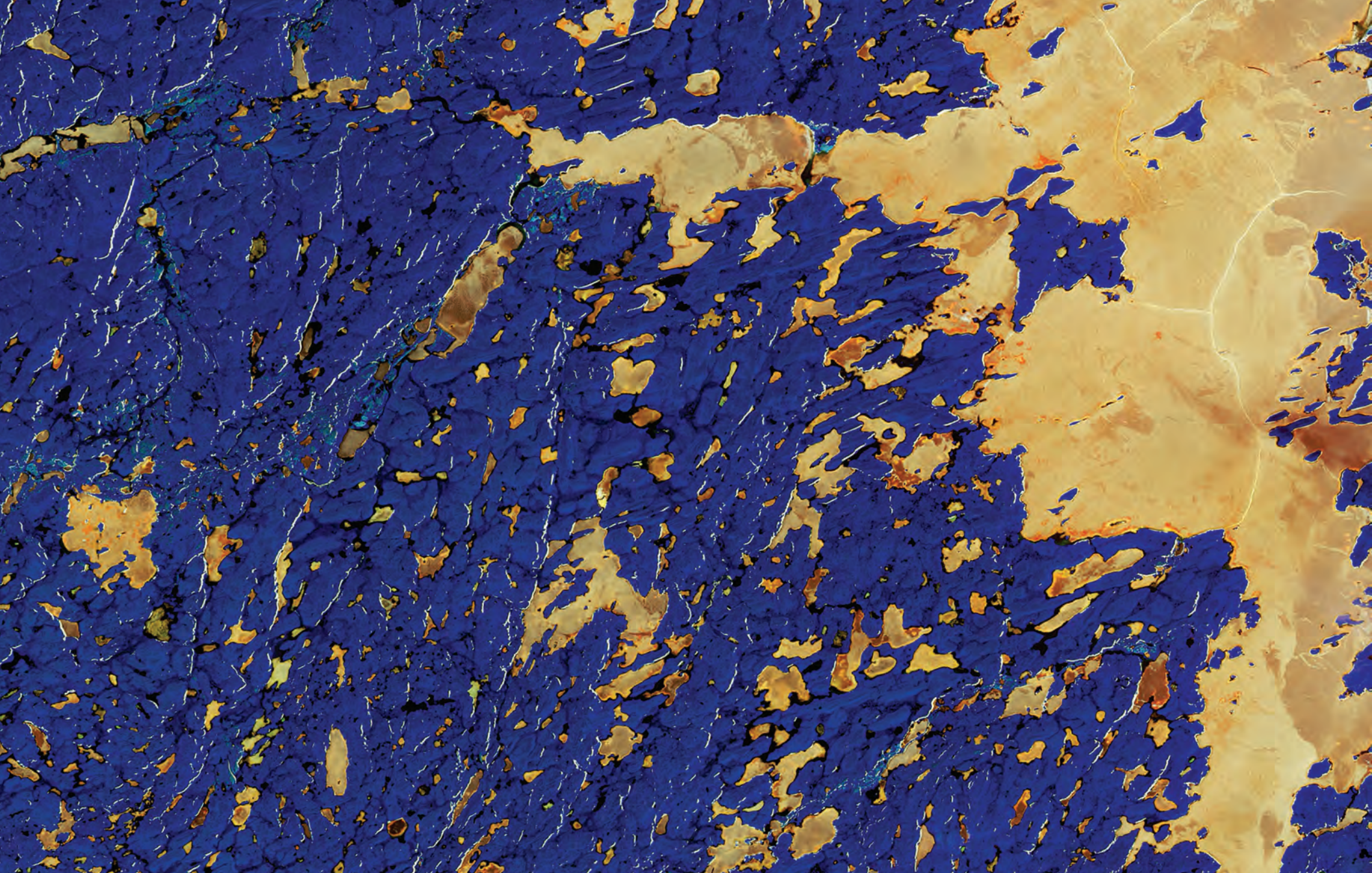
Wetlands have a unique beauty when viewed from above. This natural color drone image shows the intricate interactions of forest and surface water in this high-altitude wetland called a fen in the Rocky Mountains of Colorado. Wetlands enhance water quality and provide habitats for diverse plant and animal species. Drones help with mapping fens for conservation and restoration studies.



DESERT RIBBONS

Landsat 8 data acquired on 02 | 06 | 2019

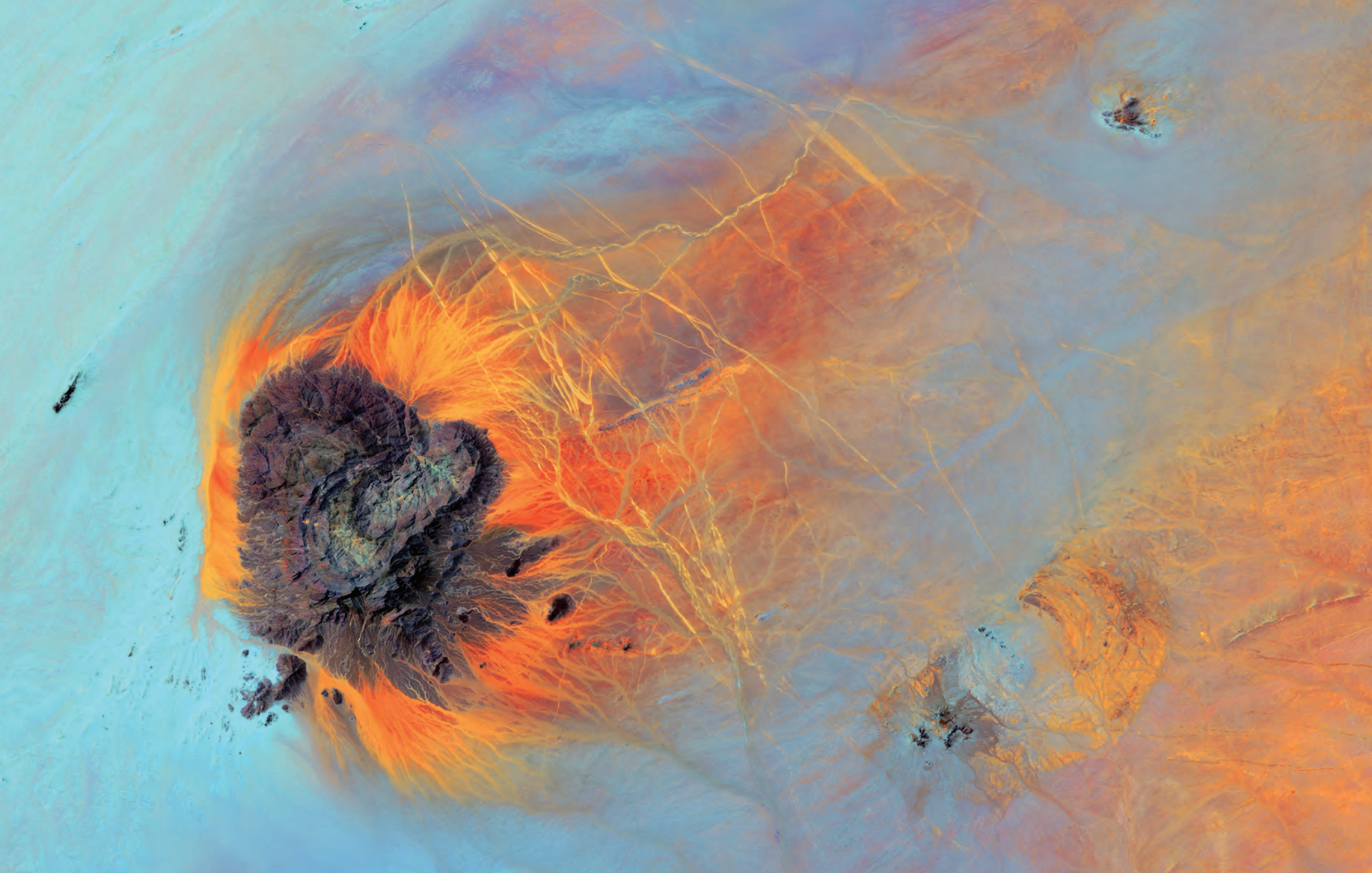
Rock folding on a tectonic scale occurred in northwestern Africa. These motley ribbons dancing across the desert in Morocco are folds caused by the prolonged collision of tectonic plates. The long continuous line is Jbel Ouarkziz, a ridge that rises 200–300 meters above the valley floors.



COPPER AND BLUE

Landsat 8 data acquired on 06 | 01 | 2014

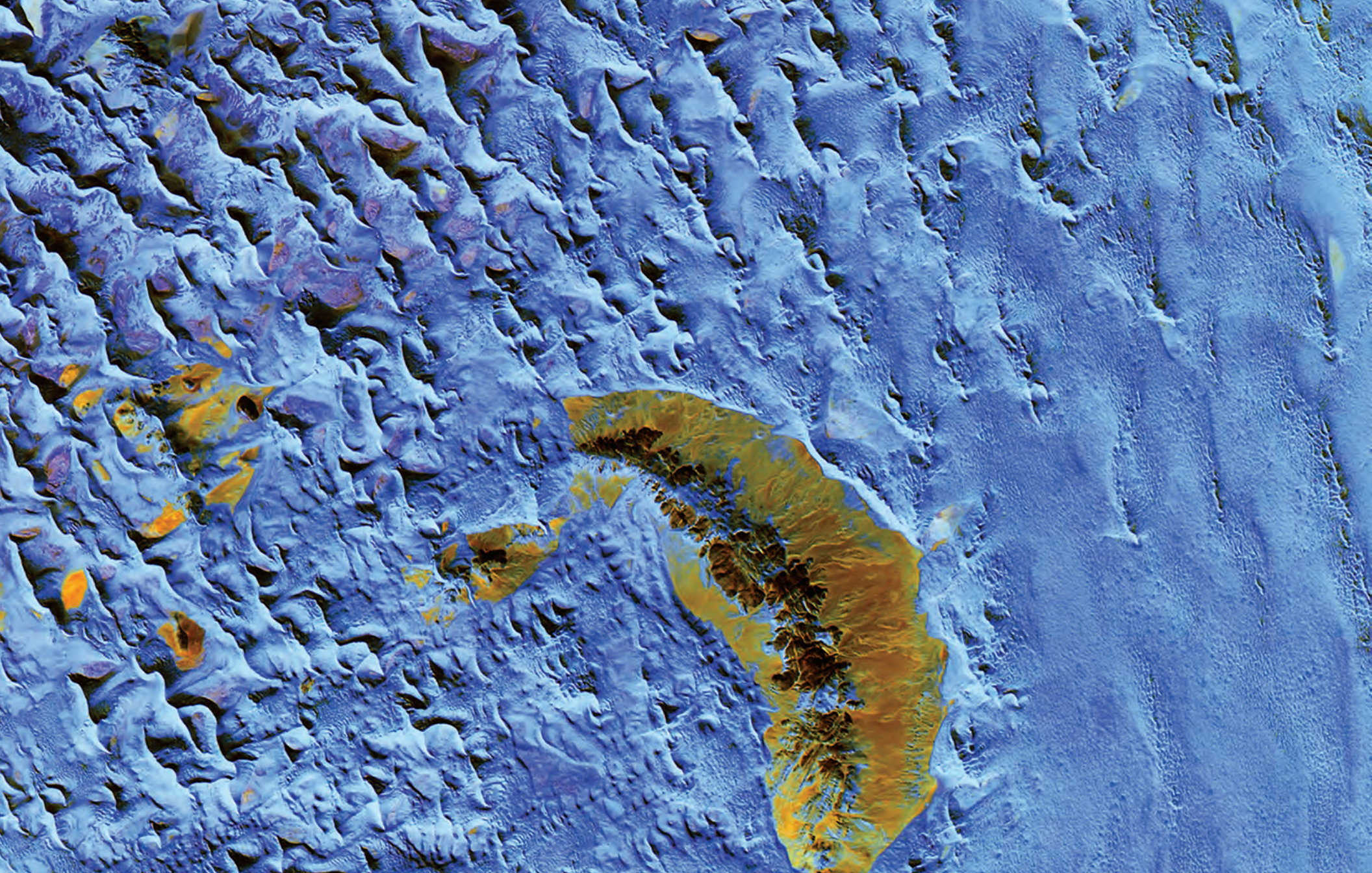
The copper color in this infrared combination is the presence of lake ice in the Northwest Territories in northern Canada. The lake on the right side is Whitefish Lake, in a region with numerous glacial landforms. Bright wrinkle-like lines are eskers, ridges made of sand and gravel formed by glacial sediments deposited by meltwater rivers flowing on the ice. The blue color is land dominated by shrub tundra with some spruce stands.



RE-ENTRY

Landsat 8 data acquired on 04 | 19 | 2019

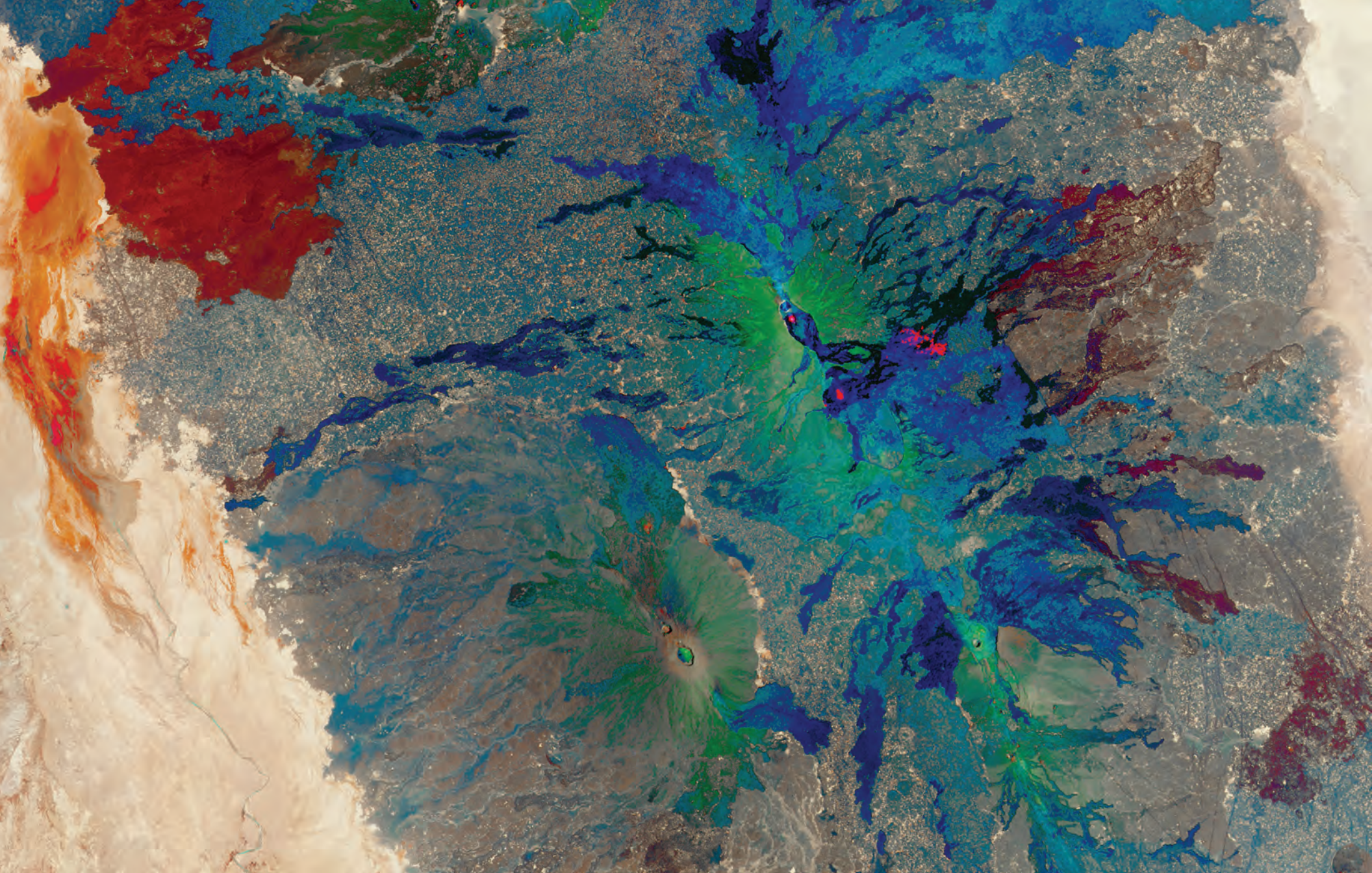
Jebel Kissu, in northwestern Sudan, emerges abruptly like an island in the vast Sahara Desert. The plateau is the eroded remnant of a granite dome. The bright linear features are truck tracks, common in the Sahara where there are no paved roads. Resembling graphic novel art style, this image could be an asteroid hurtling toward Earth, burning across a twilight sky.



SAND WAVES

Landsat 8 data acquired on 07 | 05 | 2018

Resembling choppy waters in a rough sea, this image is an infrared exposition of a sand sea in Namibia. Sand dunes surround a crescent-shaped rocky hill. This inselberg is hard rock that resisted the erosion that took place over time around it. The inselberg disrupts the deposition of sand, changing the dune pattern.



TORN APART

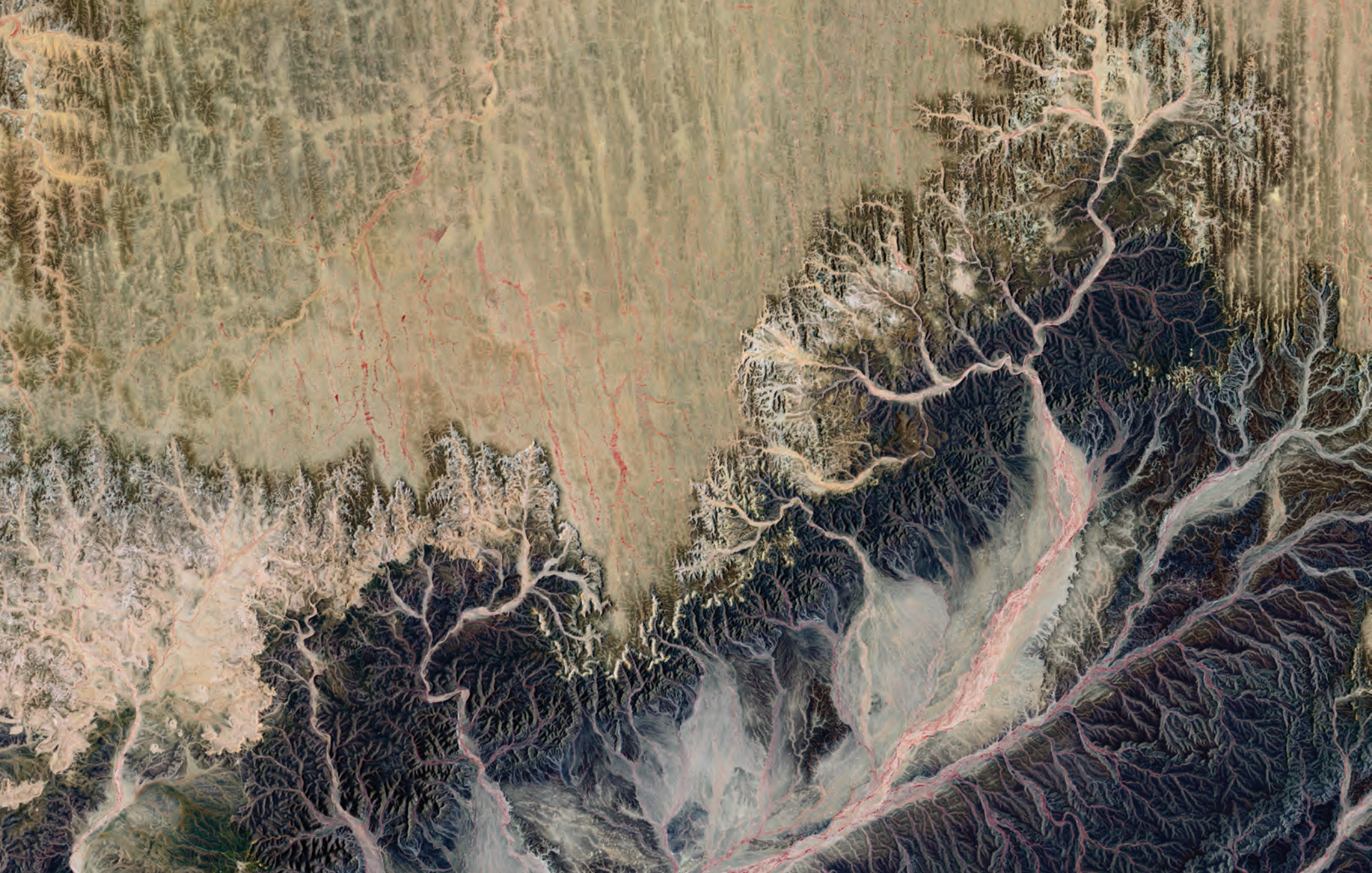
Landsat 8 data acquired on 03 | 31 | 2017

A frantic-looking scene in northeastern Ethiopia shows the location of three tectonic plates shifting away from each other. In this region, Earth's crust is rifting at 1 to 2 centimeters per year. New fissures opened in the Erta Ale shield volcano in January 2017, and this image from March 2017 shows the locations of the fresh lava. The shapes streaking away from the center are previously erupted, cooled, and solidified lava flows.

A STUDY IN ALGAE

Unmanned Aircraft Systems data acquired on 09 | 14 | 2016

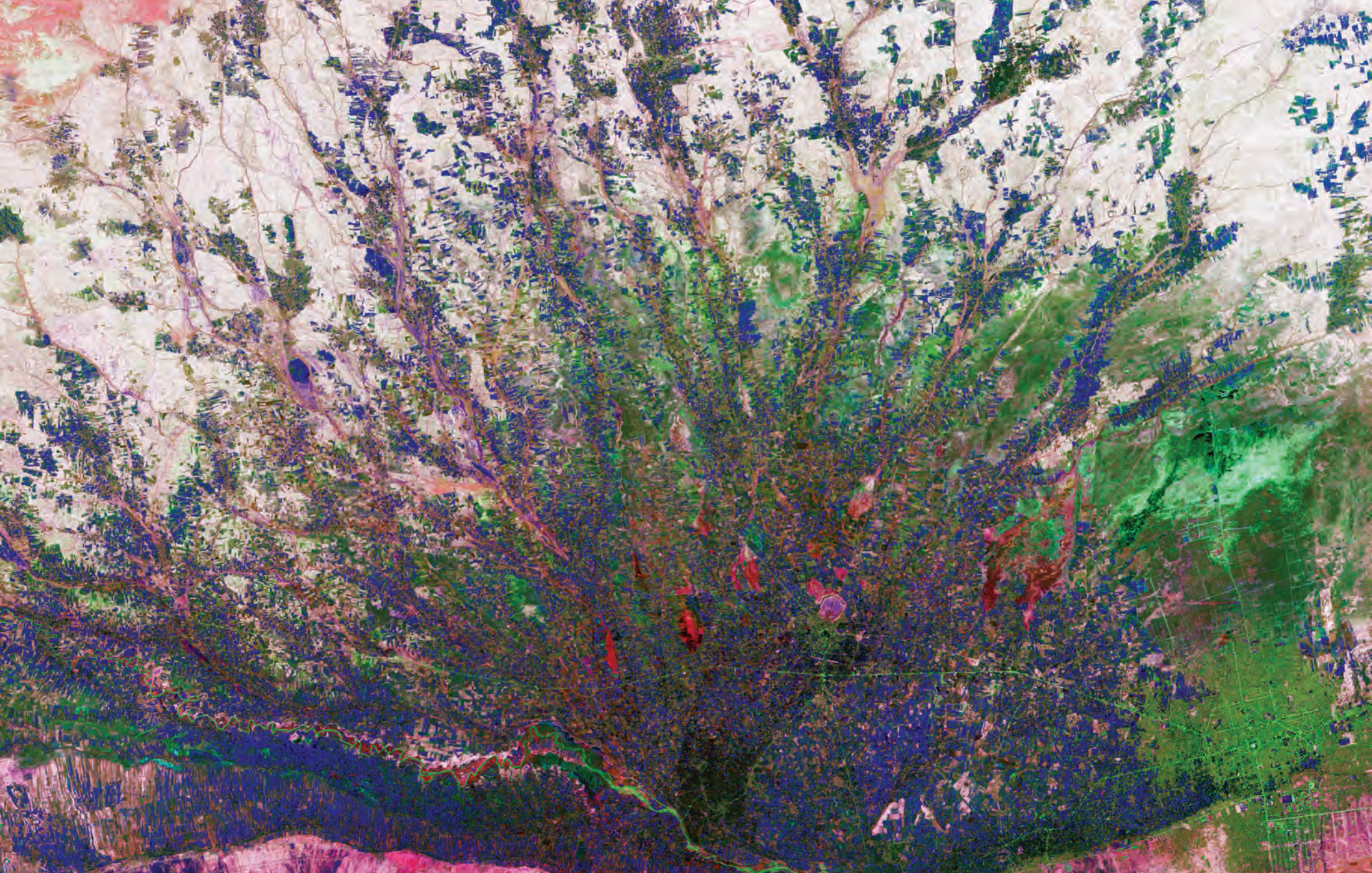
Algal blooms occur annually on Milford Lake in the summer and can be harmful to fragile wetland ecosystems. The USGS Kansas Water Science Center uses multispectral sensors on board drones to identify harmful algal blooms and study how they affect local businesses and human and animal health.



IRRITATED

Landsat 8 data acquired on 02 | 06 | 2019

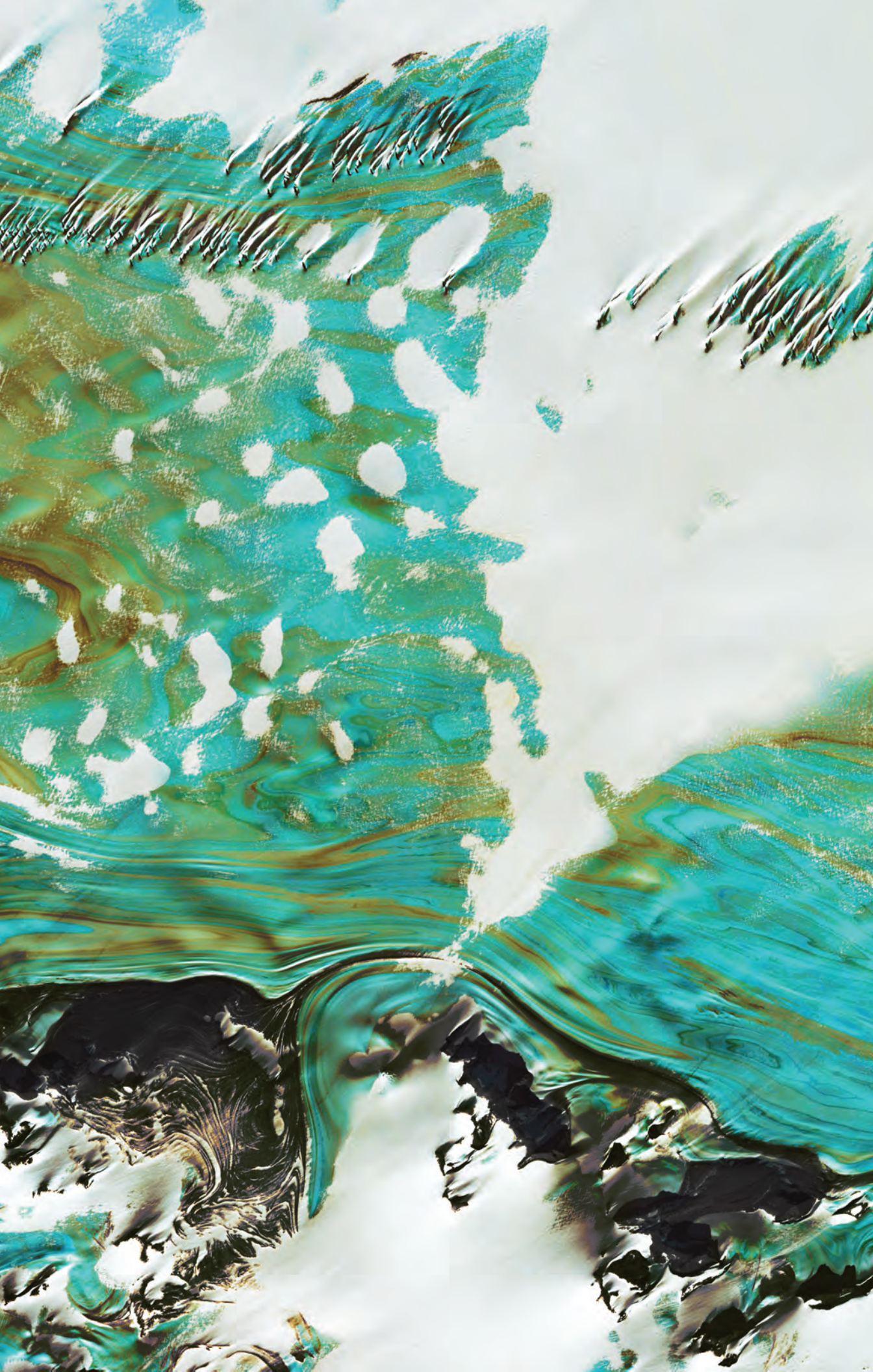
This natural landscape might appear more like a medical illustration of itchy nerve endings. In Western Sahara, Africa, an intense network of wadis drains toward the west, eventually reaching the Atlantic Ocean. These drainage courses are almost always dry in this remote part of the Sahara Desert.



FANNED OUT

Landsat 8 data acquired on 02 | 22 | 2019

Water from the Balkh River fans out into an agricultural area toward an arid region in northern Afghanistan, part of an ancient region called Bactria. Near the border with Uzbekistan and Turkmenistan, extensive irrigation produces melons, almonds, apricots, and grains. Mazar-e Sharif is the urban area that dominates the lower right corner of the image.



BLUE ICE

Landsat 8 data acquired on 02 | 18 | 2018

Near the Queen Fabiola Mountains, also called the Yamato Mountains, is a classic example of blue ice in Antarctica. Blue ice emerges where wind scours glaciers clean of snow and forms when air bubbles are squeezed out of layers of partially compacted snow left over from previous seasons. The ice appears blue because red and yellow wavelengths of light are absorbed. Deeply penetrating light is uniformly scattered at blue wavelengths by the enclosed air bubbles.

PALMYRA

Unmanned Aircraft Systems data acquired on 10 | 21 | 2016

Palmyra Atoll is an ancient volcanic remnant about 1,000 miles from Hawaii. The Nature Conservancy, along with the U.S. Fish and Wildlife Service, manages the atoll as a science and research station. Multispectral sensors on drones efficiently capture high-resolution images of land and coral reefs. This part of the atoll is an islet named Pelican Island and shows green vegetation as blue.

RAPID ICE MOVEMENT

Landsat 8 data acquired on 06 | 24 | 2018

One glacier on Russian islands in the Arctic Ocean surprised scientists with its rapid change. After decades of normal, slow movement, an outlet glacier draining Vavilov Ice Cap sprang forward, accelerating rapidly after 2013. This fast movement is extremely rare for cold-based glaciers. In 5 years, the ice tongue doubled in size. In this inverted rendition, land is blue and fractured sea ice appears tan across the top of the image.

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