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Aconitum napellus, an attractive mountain species, benefits from the light that is now available from fallen trees.



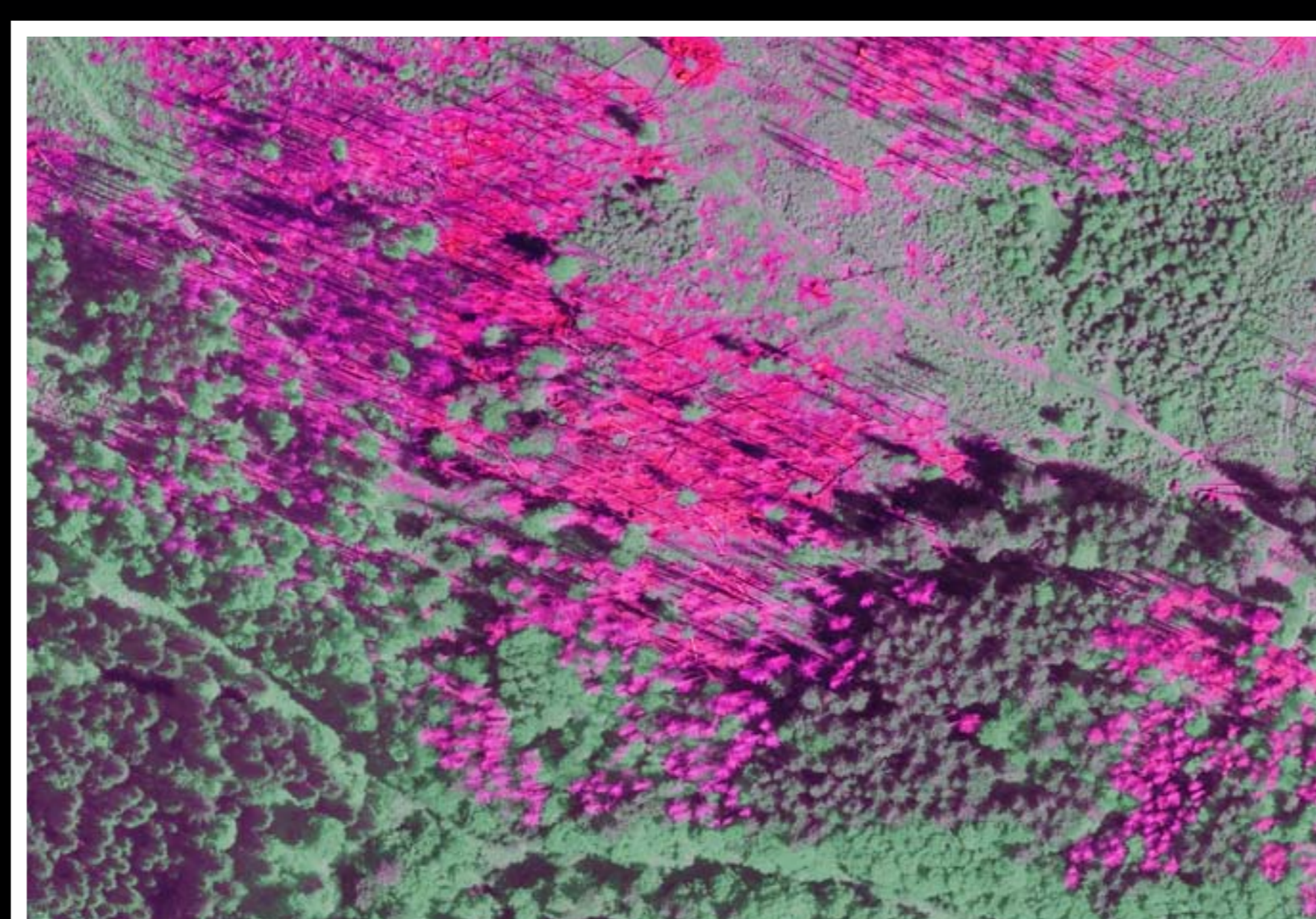
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Bavarian Forest National Park

GERMANY

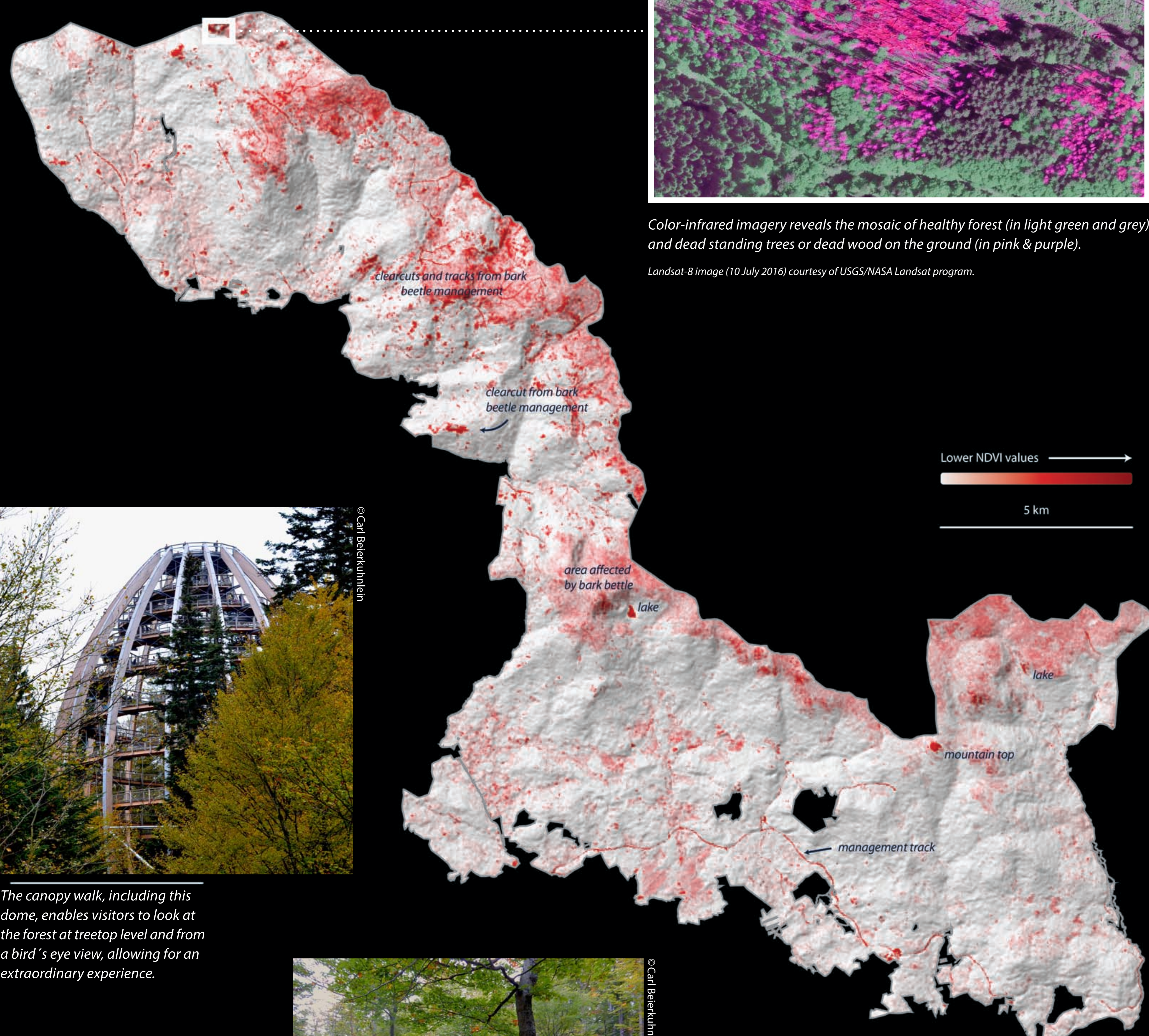
The Normalized Difference Vegetation Index (NDVI) shows the presence and health of vegetation. Slightly red areas, representing lower values, are affected by bark beetle outbreaks.

Landsat-8 image (10 July 2016) courtesy of USGS/NASA Landsat program.



Color-infrared imagery reveals the mosaic of healthy forest (in light green and grey) and dead standing trees or dead wood on the ground (in pink & purple).

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The canopy walk, including this dome, enables visitors to look at the forest at treetop level and from a bird's eye view, allowing for an extraordinary experience.



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Natural dynamics create a highly diverse structure and many habitats for large numbers of animals, plants, and fungi.

The Bavarian Forest National Park (Nationalpark Bayerischer Wald, Germany) and the neighbouring Šumava National Park (Czech Republic) form the largest area of closed forest in Central Europe, and one of the very few natural forest ecosystems remaining in the Central European mountains. Established in 1970, this Protected Area rich in springs, brooks and rivers was the first national park in Germany. Besides its deciduous and coniferous forests, its wetlands and raised bogs are important habitats with high value for nature conservation.

The park's tree species diversity is relatively low due to natural factors. This makes the forest particularly sensitive to changing environmental conditions. For example, in the lower altitudes of the park, former plantations of spruce (which is naturally only dominant on the highest ridges) are exposed to natural dynamics. This is leading to spruce being replaced by deciduous species, mainly beech.

At higher elevations, bark beetle outbreaks in recent decades caused a large-scale breakdown of conifer forests, with mild winters combined with prolonged, warm and dry summers helping support several generations of bark beetles per year. Although natural regeneration and ecological succession are now under way, development is very slow because competitive grasses are inhibiting tree regeneration. Impacts including acid rain, climatic extremes and airborne nitrogen pollution are also hindering progress.

Within the ECO-POTENTIAL project, Earth Observation tools and remote sensing are being used to better understand how vegetation is evolving across the park and over time. Earth Observation is applied to detect patterns of dominant plant species, link habitat characteristics with terrain and track animal movements. The park administration itself is also carrying out intensive research on tree regeneration, the role of dead wood, and the impact of global warming and extreme climatic events on the future development of these ecosystems.



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