

# In the Balkans, resilience is rooted in knowledge of wild plants

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Traditional communities living in isolated, rural areas with little money or infrastructure tend to have one thing in common: Resilience rooted in intricate knowledge of their natural environment, especially plants.

This knowledge may be relevant to some of biggest problems in plant science, including climate change, conservation biology, food security and [human health](#), says Cassandra Quave, an ethnobotanist at Emory University.

Quave led an ethnobotanical study centered on a remote corner of the Balkans that was published in the journal *Nature Plants*. Her co-author is Andrea Pieroni from the University of Gastronomic Sciences in Pollenzo, Italy.

"Ethnobotany is the study of the interactions of people and [plants](#)," Quave says, "but it has also been described as 'the science of survival.' People's knowledge of which plants are beneficial, and how to harvest and preserve those plants, can make a huge difference in the overall well-being of a community."

Emory's Center for the Study of Human Health funded the study, with additional support from the University of Gastronomic Sciences.

The study compared how two different cultures used plants in the Gora region of northwestern Albania, near the border with Kosovo. The researchers focused on a rural district of Gora that is one of the most

economically disadvantaged in Albania.

The two cultures in the study, Albanians and the Gorani ethnic minority, were both Muslim and subsisted primarily on small-scale agricultural, especially potato farming.

The area is mountainous and many "roads" are unpaved, rocky paths. Some communities can be cut off completely from the outside world by heavy snows during the long winters.

"This area was heavily affected by the Balkan conflict of the 1990s," Quave says. "The adults there have living memories of extremely challenging times. Even in peace time, life is difficult."

The researchers conducted interviews with more than 100 residents about 104 different species of plants in their local [environment](#). They recorded 418 uses of these plants for a broad spectrum of food, health, ritual and economic purposes.

The plant uses of the two cultures tended to overlap when it came to food, the study showed.

Stinging nettle, for example, is a dietary staple among both the Albanians in the study and the Gorvani. "They boil nettle and use it the way we would spinach," Quave says, sometimes mixing it with cheese, and baking it into local pastries known as byrek or pita.

The researchers also found 77 divergent uses for plants between the two cultures, including 43 plant species. "Culture affects the way people view the natural environment," Quave says. "And those views can affect everything from home healthcare practices to diet and local economies and conservation issues."

The Albanians in the study, for example, reported less of an affiliation with a species of willow tree known as *Salix alba*, while the Gorani often choose to plant this tree around their homes and have many uses for it.

"It's what we call a cultural keystone species because it is so entwined with their way of life," Quave says.

When a Gorani man wants to propose marriage to a woman, he may dig up a willow sapling and place it by her front door. If the woman accepts the proposal, the family plants the sapling in their field. If she rejects the suitor, the sapling becomes firewood.

Both the Gorani and Albanians use willow branches with leaves as protective amulets over their doors. And they add willow leaves to the fodder of their livestock once a year, along with some other plants, because they believe it helps keep the animals safe and healthy, Quave says.

Another example of a tradition used primarily by the Gorani involves the use of the plant *Nepeta cataria*, commonly known as catnip, to treat fright. "If a child has a nightmare," Quave says, "they might brew a cup of catnip tea to soothe them."

To store up supplies for winter months, both the Albanians and Gorani in the study use lactic fermentation to preserve food. If they need starter culture for fermentation, they use the roots from certain plants.

"They have a great deal of knowledge about their local environment that has been handed down to them through generations," Quave says.

It's important to record that knowledge, she says, both because it could have possible relevance for science and because it could help communities improve their well-being.

"A lot of international attention has been focused on the Balkans to try to support reconciliation and development," she says. "If you really want to help local communities in a way that's sustainable and culturally sensitive, it's important to have a detailed understanding of how they interact with their environment."

**More information:** A reservoir of ethnobotanical knowledge informs resilient food security and health strategies in the Balkans, [DOI: 10.1038/nplants.2014.21](https://doi.org/10.1038/nplants.2014.21)

Provided by Emory University

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