

Carole Meredith Solves the Mystery of Zinfandel

printed with permission from The V&E Trellis Wire, Spring 2002

DEPARTMENT PROFESSOR CAROLE MEREDITH, a grapevine geneticist, has confirmed that a Croatian black grape called Crljenak kasteljanski (pronounced tsurl-ye-nak kas-tel-yanskee) is identical to Zinfandel, whose origins have long stumped grape researchers.

Meredith and Croatian collaborators Dr. Edi Maletic and Dr. Ivan Pejic of the University of Zagreb began exploring the Dalmatian Coast of Croatia, including a number of its major coastal islands, in 1998 in an effort to gather information about, and help preserve, the country's ancient wine grapes. Inherent in this project was Meredith's desire to determine Zinfandel's true European identity. In the fall of 2001 the team's efforts paid off: Maletic and Pejic discovered the Crljenak vine, which was then found by Meredith's lab to be identical to Zinfandel.

"The credit for the discovery should go to Dr. Edi Maletic and Dr. Ivan Pejic," says Meredith. "My lab certainly played a significant role, but Edi and Ivan found the vine and were quite certain that it was the one. We were then able to confirm this by DNA analysis in mid-December."

The next challenge will be to look for Zinfandel's mom and dad. "Zinfandel may be so old that its parents are no longer grown anywhere," Meredith speculates. "We've already figured out that Zin is the parent of Plavac mali, a famous Dalmatian grape that is thought to be ancient, so Zin must be even older."

Meredith's grape genetic sleuthing abilities helped her research group to identify the parents of Cabernet Sauvignon in 1997 and Chardonnay and Syrah in 1999.

Maletic sent cuttings of Crljenak kasteljanski to FPMS last winter for quarantine testing. While visiting FPMS this June 2002 Pejic and Maletic discussed their plans to search for more Crljenak kasteljanski vines in Croatia and create a collection of diverse Crljenak kasteljanski/Zinfandel/Primitivo clones.

Negotiations to trade FPMS registered selections in exchange for Croatian clones for the FPMS public collection are in progress. 🍇



Left:
Crljenak kasteljanski, the 'Zin twin.' (Photo courtesy of Carole Meredith)

Below:
Dr. Edi Maletic (left), Dr. Carole Meredith (center) and Dr. Ivan Pejic (right) in the Zinfandel Heritage Vineyard in Oakville, California. (Photo courtesy of Carole Meredith)



Acknowledgement

A large part of the funding for the public FPMS grape program is from an assessment that growers pay when they purchase fruit tree, nut tree, and grapevine planting stock from California nurseries. The California nursery industry sponsored legislation to create the assessment in 1987.

The California Fruit Tree, Nut Tree and Grapevine Improvement Advisory Board (better known as the IAB) makes recommendations to the Secretary of Agriculture for use of the assessment to fund activities that will improve the quality of planting stock produced in our state.

Over the years, the assessment has been used to fund various research projects, support the registration and certification programs, and fund a virus-testing program at the California Department of Food and Agriculture.

A major portion of the assessment funds has been provided to FPMS. This support has made many important FPMS grape program projects possible, such as the expansion of the FPMS collections, annual testing of foundation mother vines, professional variety identification and the development of new disease detection methods.