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Scientist Joseph Nagyvary of Texas A&M University tries to recreate the sound of a Stradivarius violin by making violins of wood he soak in a secret concoction of chemicals, to make the wood less porous.

Keywords


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Transcript

Secret of “Strad Sound” Is In the Violin’s Wood, Says Chemist

TOM BROKAW, anchor:
Modern science, high technology, it’s all unlocked so many secrets, but then so many remain. Including the secret of an antique instrument, the Stradivarius violin. A Texas scientist however believes that’s a mystery worth solving. Robert Bazell tonight from college station Texas.

ROBERT BAZELL, reporter:
As part of their current tour, pianist Andre Watt and violinist Charles Trager performed at Texas A&M University. Trager, like many great violinists, plays a Stradivarius made in the 17th Century.

JOSEPH NAGYVARY (Texas A&M University): So there is no more oxygen at the end,

BAZELL: At Texas A&M there is a professor of chemistry, Joseph Nagyvary, who’s dream is to use the principles of chemistry to make a great violin. One with a sound as rich as those made by Antonio Stradivari two hundred and fifty years ago.

NAGYVARY: There’s nothing else in the history of human culture which declined to the degree as has violin making declined in the last two hundred years.

BAZELL: Nagyvary believes the secret is in the wood. He has gotten some wood chips shaved from Stradivari violins during repairs and made electron microscope photographs. These pictures magnify the image hundreds of times and show the wood to be porous. The tiny holes and cracks he believes, eliminate unwanted high-pitched sounds. Wood used in modern violins by contrast does not have as many holes. So in his backyard, Nagyvary soaks pieces of wood in chemical solutions, the contents of which he will not reveal, to try to make them like the wood which Stradivari used in Cremona, Italy, in the 1600’s.

NAGYVARY: There’s no doubt in my mind that this process is the most important in purifying the tone of the instrument in removing the noise.

BAZELL: You mean this dirty looking liquid soaking this wood is the secret to great music.
NAGYVARY: Well, to a great extent.

BAZELL: Before the performance Trager agreed to try two of Nagyvary’s violins while the scientist watched with obvious apprehension.

ANDRE WATT (Pianist): Nice isn’t it?
CHARLES TRAGER (Violinist): Yeah, and it has,
WATT: Yeah, it’s a lot of light.
TRAGER: Yes.
WATT: It’s very comfortable.
TRAGER: I think both of these violins have the, have the potential for development and development in quality.

NAGYVARY: I was quite happy what from what I heard.
WATT: Yeah.
TRAGER: Now these instruments, are they for sale?
NAGYVARY: Of course.
TRAGER: Okay, good.

BAZELL: Nagyvary has not recreated a 17th Century Stradivarius through chemistry, at least not yet. But the musicians were clearly impressed. Robert Bazell, NBC News, College Station, Texas.