

Perfecting the art of violinmaking

Biochemist mixes music with science

By Jennifer Gressett
The Battalion

What's the recipe for making beautiful music? Ask Texas A&M University biochemist and violinmaker Dr. Josef Nagyvary and he'll say you need three main ingredients: a bit of chemistry, a dash of physics and a well-made violin.

"Materials are very important determinants of the excellence of the sound," Nagyvary said. "They are just as important to the violin as apples are to apple pie."

Although Nagyvary has spent years studying the materials and construction techniques of great violinmakers such as Antonio Stradivari, he says the preservatives used by Stradivari aren't uncommon today.

"Even my grandmother knew that if she wanted to make apricot preserves, she had to use salicylic acid," Nagyvary said.

Used in the preservation of wood, salicin is a bitter white glucose found in the bark and leaves of willows and poplars. Nagyvary says this type of preservative was widely used in the humid climate of northern Italy, where the first violins were made.

But preservatives alone aren't what saved the Stradivari violins.

Nagyvary said Stradivari only sold his violins to kings and queens, who then stored them in royal cabinets.

"Musicians are the reason that violins are battered and worn throughout the years," Nagyvary said. "But the nobility only allowed musicians to play occasionally as hired



Kyle Burnett/The Battalion

Dr. Josef Nagyvary, a Texas A&M biochemist, records the sound of several notes from a violin outside the Biochemistry Field Laboratory. The old house on Agronomy Road that has

hands, which is why Stradivari's violin has lasted 200 years."

Nagyvary has continued his material analysis because of this wear and tear on the violin. He uses electronic instruments to study the chemical composition as well as the sound spectrum of the violin. This analysis, he said, could improve the techniques of musicians all over the world;

assuming they are willing to learn.

However, just like Picasso, Nagyvary said musicians are single-minded; they like to work alone and they don't want any input.

"The problem is that most violin players quit school at the age of 13 or 14," Nagyvary said. "They have no advanced knowledge of science or math, and they don't want to learn it."

been transformed into a laboratory provides a quiet environment for his research. Nagyvary later analyzes his recordings in the Chemistry Building on campus.

Therefore, in an attempt to inspire those musicians and composers, he formed a lecture tour called "Decoding the Stradivarius: the Materials, the Sound and the Mystique." His tour includes 19 cities in the United States and Europe, most of which are financed by the American Chemical Society.

"The chemists feel that it is their own business to show that chemistry is

important for music and violins," Nagyvary said.

During his recent tour through Europe, Nagyvary visited Budapest where he spent a week at the spring festival in Hungary, his homeland. Not only did he present his violin in a gala concert, but he also donated that violin to the Hungarian Conservatory.

"As with any business, the best way to publicize is to give samples,"

Nagyvary said. "And it was a good feeling to give something back to my country."

But if he's so good at this violin business, why isn't he playing at Texas A&M?

"There simply is no interest in music here," Nagyvary said. "It's just that this university is big enough that it can stand to have a few oddball projects now and then."

Nagyvary said he first became interested in the project when he came to Texas A&M and he needed a hobby. It was just a coincidence that he was also interested in biochemistry, he said.

Presently, Nagyvary is collaborating his research with physics professor Robert Kenefick, who teaches a course in acoustics. They have a joint project analyzing the sound spectrum of the violin.

"If a student can reproduce the spectrum of a Stradivari violin, he or she will sound like a great player," Nagyvary said.

As for the future, Nagyvary and Kenefick say they hope to continue to tell musicians across the world about the new technologies in chemistry and physics. But personally, Nagyvary has goals of his own.

"They say that the great Antonio Stradivari made violins until he was 93 years old," Nagyvary said. "And if I can make violins until I, too, am 93 years old, then I will consider myself a success."

Society works to preserve the past

A&M's SCA chapter keeps Camelot alive

By Paul Neale
The Battalion

Members of the Society for Creative Anachronism bring a piece of Camelot with them every Sunday when they assemble for a time of recreation and re-creation.

The Society for Creative Anachronism (SCA) is an international, educational organization dedicated to the study of the Middle Ages and the Renaissance. Anachronisms, or anything out of its proper time, come alive through society members' medieval costumes, combat, names and games. Members practice the sciences, skills, arts and crafts of the colorful, bygone eras.

Patricia Roberts, SCA's hospitaller, or the Middle Ages' equivalent to a public relations chair, said members of SCA take a hands-on approach to studying the arts and sciences of the two time periods.

"We research history from 600 A.D. to 1600 A.D.," she said. "And we try to learn as much about the time by actually doing the things."

Clothed in a black and white Elizabethan dress (circa 1565) and wrapped in a green corduroy cape, Roberts fills the role of her persona: French noblewoman Isabeau Beauvallet.

SCA members take on a persona from days of yore and register their names and devices, or family symbols, with the College of Heralds, a group that researches personas to make sure they are consistent with the time period.

"If they (members) know anything about their family history, they pick a persona which fits it," Roberts said.

Most SCA members make their own costumes or buy them from other members. Costuming, Roberts' favorite aspect of SCA, gives members a chance to express their personas.

Like other aspects of SCA, members may carry authenticity as far as they care to, she said.

"Some don't use sewing machines to make their garb," Roberts said. "I'm perfectly happy to go buy my fabric at a cloth store and sew it using all modern equipment."

SCA stresses that it isn't a fantasy



Kyle Burnett/The Battalion

John Steelquist (left), an industrial engineering graduate student, prepares to engage in battle with Jim Wilson during a Society for Creative Anachronism meeting at a local park. Steelquist is the society's chapter president and Wilson is the society's chapter chronicler.

group. Instead, the members are concerned with historical re-enactment and sharing their knowledge at weekly tournaments and guild meetings.

The dance guild, for instance, meets on Sunday nights to practice court and country dances from the Renaissance period. Country dances of that era influenced what is known today as square dancing.

Other examples of guilds include armoring, weaving, and ale brewing. Texas A&M's chapter is currently working to form a scribes guild.

The society also holds fighter practices on Sunday afternoons to teach its members the art of combat. The combatants — suited in armor made each week at the armorer's guild — safely engage in the medieval armored combat

and the Renaissance rapier duello, a style of combat similar to fencing.

The combat was what initially drew the attention of local chapter president John Steelquist. But he emphasized that education is the society's main focus.

"One of the big things we try to stress is that we are a medieval research organization," he said. "The fighting is just a part of the research."

Steelquist, who named his 11th-century Saxon persona "Ustled the Unsteady," has been a member of SCA since high school. An industrial engineering graduate student, Steelquist enjoys SCA's blend of education and entertainment through re-creation of the past.

"I've always liked European history... and that makes it fun," he said.

Jim Wilson, the chapter's chronicler, suited up in almost 70 pounds of armor, credits the society's history of "no serious injuries" to the care taken by members of the armorer's guild. Wilson heads this guild from his shop every week.

"Inferior armor will lead to broken bones," Wilson said. "That's why we're real careful about what we use."

The guild uses aircraft aluminum, stainless steel and leather to fashion its medieval armor.

Wilson, aka Wolfgang Von Hammer of 12th-century Teutonic Germany, displayed his blue and black, 13-pound shield bearing his registered device and its partner, the European longsword.

Wilson said the solid rattan sword, wrapped with leather and duct tape to ensure safety, has been researched and constructed as accurately as possible.

"It'll bend before your bone does," Wilson said.

Although SCA was incorporated in 1968, the society considers a medieval theme party, held on May 1, 1966, to be its beginning. A group of science fiction and fantasy enthusiasts in Berkeley, Calif., threw a Mayday party based on the legends of King Arthur. Keeping step with the Revolutionary and Civil War groups forming at that time, the group organized a medieval re-enactment group. And as the saying goes, the rest is history — or at least a re-creation of it.

SCA welcomes new members and invites anyone interested to join in their weekly events at Brison Park. Extra costumes are on hand in so nobody will be nude, what SCA considers wearing street clothes to the gathering.

Contact John Steelquist at 822-7493 or Patricia Roberts at 776-5491 for more information.

C&W acts play Rudder Wednesday

By Michael Plumer
The Battalion

A country music tripleheader comes to Rudder Wednesday night as Sawyer Brown, Diamond Rio and Tim McGraw hit the stage in a concert presented by MSC Town Hall.

The show was originally scheduled for G. Rollie White Coliseum but was moved to the Rudder venue because of sound system problems. Individual tickets remain for the concert which is scheduled to begin at 7:00 p.m.

McGraw, the son of former major league pitcher Tug McGraw, will lead off the show. His second album, "Not a Moment Too Soon," was released last week and is currently number one on the country charts, bumping John Michael Montgomery from atop the perch he has occupied for the last month.

The first single from the album "Indian Outlaw" shot up the charts where it peaked at number one. Along the way, McGraw received criticism from Native American groups attacking the political correctness of the song.

The second act to take the stage, Diamond Rio, is fast becoming the Alabama of the 1990s. They became the first group in the history of country music to have a debut single reach number one when "Meet in the Middle" pulled the trick in early 1991. They are also touring in support of a second album, "Close to the Edge."

Critics said Diamond Rio, led by lead singer Marty Roe, has overcome the cookie cutter grouping that accompanies most groups. Their stage presence is strong and infectious and crowds usually leave the arena with positive vibes.

The marquee act of the night is another group who has seen some recent success, Sawyer Brown. Their latest release, "Outskirts of Town," has spawned one hit single, "The Boys and Me." The latest cut off the album is the title track; it is a tissue-grabbing ballad about growing up in the country.

Sawyer Brown has had trouble carving its own niche in country music but how can you not like a group who has this lyric in a song: "I ain't first class but I ain't white trash?"

The faster-paced songs are Sawyer Brown's strength and most fans usually find themselves clapping along.

Tickets for Wednesday's show are still available at the MSC Box Office.