



Pennywhistle

Science Instructor Jim DiCarlo will use his flute to teach students about sound waves.

In Jim DiCarlo's physics class, students are instructed to fill a tube with Alka-Seltzer and note where the resonances sound different from when it's filled with air. DiCarlo explains that such differences can indicate the weight of a carbon dioxide molecule, compared with the weight of an air molecule.

"You're actually weighing atoms by listening to them," he says. And for DiCarlo, who plays American and Irish folk music when he's not teaching, it's an exciting chance to merge his interests: "The nerd in me will say, 'Oh the pitch just went down, and I know why that happened!'"

It seems there's music everywhere on campus lately, and not just around the Forrestal-Bowld Music Center. It floats off the patio behind Dunbar on warm days and

out of the main sanctuary of Phillips Church or from the depths of its basement. It spills at unexpected moments from the physics classrooms in Phelps or, monthly, from the Unitarian church hall across from the Elm Street Dining Hall.

Though there may be students involved, the main source of that music is a diverse group of adults, members of Exeter's faculty and staff who've found a way to mix rock 'n' roll with astrophysics, Bruce Springsteen with literature, or singing the national anthem with preaching. It's as natural a part of the day for most of them as it is for DiCarlo, who says he almost always has at hand a pennywhistle that he often plays while thinking about homework assignments. If Science Instructor Brad Robinson is

A man with short brown hair, wearing a green sweater over a plaid shirt and blue jeans, is sitting and playing a silver flute. He is in a classroom setting with a whiteboard in the background and a checkered floor. The word "Physics" is overlaid in large white letters.

MEET THE INSTRUCTORS WHO TEACH BY DAY
AND JAM BY NIGHT

By Sarah Zobel

Physics

free and in his adjoining classroom, he might just come in with his guitar and play, too.

DiCarlo brings all of his instruments — a banjo and a wooden flute, in addition to the pennywhistle — into his classroom, where he teaches both physics and quantum mechanics. Given that waves and sound are two of the fundamental ideas behind physics, music is a logical teaching tool.

“Things wiggle, and when they wiggle, they ring, and when they ring, you hear them,” DiCarlo says. “From the physics point of view, the sounds that things are capable of producing have everything to do with physical properties: How long is it? What’s it made of? What temperature is it? It’s kind of neat that all those physical properties

then come together to determine the tones that an instrument is capable of.”

So holding up his banjo, for example, DiCarlo will ask what can be done to change a note he plays on it (answer: shorten one of the strings, bend it, tighten it, make it heavier, play harmonics on it). Or he’ll talk about frequency and use his flute, noting that every flute that plays a low D, for example, is the same length, a measurement based on the speed of sound. Yet, he points out to his students, if the flute were filled with a different gas, it would play a different note.

DiCarlo does more than use his instruments as

Listen to WPEA online and see a list of shows hosted by faculty, staff and students at www.exeter.edu/wpea.

—PHOTOGRAPHS BY CHERYL SENTER UNLESS NOTED

teaching props. He's been playing folk music since he was a college student — for a time touring with a Maine-based band that performed all around New England before dissolving. He now joins in Irish sessions in area pubs and participates as a longtime member of a group that provides music for a monthly contra dance.

Established about a decade ago, the band, Stone Soup, also counts among its members Robinson on guitar and John Blackwell, chair of the Science Department and director of the Grainger Observatory, on bodhrán, the traditional Irish drum. A few area residents and an assortment of Exonians join them on fiddle, guitar and mandolin. The contra dances are held on Saturdays in the hall next to the Unitarian church on Elm Street, where, DiCarlo says, there are squeaky wood floors and windows that rattle, so the band plays loudly. Given the informal nature of contra dance — a folk-based line dance of jigs and reels whose origins are European but that has a long history of popping up in barns and halls around New England — if attendance is low, the band members sometimes do double duty, stepping out from behind the caller to dance. A small group of Exonians started a contra dance club and they're often in attendance, bringing what DiCarlo calls a "massive infusion of energy."

Blackwell likewise appreciates the break from the rigors of academic life that playing with Stone Soup allows him. It's not his first contra dance experience; he played the bodhrán with other groups in western Massachusetts before coming to Exeter. Like DiCarlo, who started on piano as a kid, Blackwell began with a "should" instrument, the violin, which he says "didn't turn out too well." With an interest in joining a fife-and-drum corps, he thought he'd give the fife a go, but found it challenging. That left drums, which he started banging when he was 9 years old. His family moved temporarily to England, where Blackwell honed his technique in a Dixieland jazz band, and when they returned to the United States, he expanded into other forms of jazz.

Today, Blackwell says he's a "sucker for complicated bebop jazz," and cites King Crimson and Talking Heads as two bands whose music includes the kinds of difficult patterns of syncopation that appeal to him. And like DiCarlo, he's only too happy to mesh music with science.

"The rhythmic structures of music lend themselves well to a lot of things in astrophysics," says Blackwell, mentioning by way of example the 17th-century astronomer Johannes Kepler, who wrote music based on the motions of planets in their elliptical orbits, which Blackwell demonstrates by whistling what sounds a bit

like a *Twilight Zone* police siren. "I've studied a lot of variable stars — stars that change their brightness over time — and sometimes we can convert the patterns of their variability and brightness over time to musical notes changing over time. Rhythm and nature is a pretty tight thing. The mathematics of music also plays nicely with the mathematics of physics."

Likewise, the physics instructors play nicely with the instructors in other departments, as they do in the faculty band, Double Jack, of which Blackwell is one member, on a standard drum kit. Others include the English Department's Todd Hearon, Duncan Holcomb and Erica Plouffe Lazure. It's a classic rock-oriented group, whose members come and go as their schedules permit; they've been known to play at Shooters, a local bowling alley,

MEMBERS OF EXETER'S FACULTY HAVE FOUND A WAY TO MIX ROCK 'N' ROLL WITH ASTROPHYSICS, BRUCE SPRINGSTEEN WITH LITERATURE, OR SINGING THE NATIONAL ANTHEM WITH PREACHING.

but otherwise largely focus on just having fun together. They played the 2013 faculty party, and it was there that another music-related project was born: "pEa Street," an hourlong radio program on the student-run station WPEA that's hosted by Lazure and Ron Kim, dean of the faculty and, as of July 1, interim assistant principal.

At the faculty party, a rumor floated that there was a contingent of Springsteen fans, all of whom were invited to come onstage and join Lazure and the band on the 1975 hit "Thunder Road." Kim was among them. The following spring, an email Kim sent to some of the participants suggesting a weekly Springsteen-focused show on WPEA was met with interest; but when it came time to learn how to work the motherboard and run a show, only Kim and Lazure showed up. Neither had deejayed before, and though each brought a CD to play, they couldn't get them to function. So they made do, instead spending that first show going through the station's entire library of 10 Springsteen songs, including "Santa Claus Is Coming to Town," and filling the rest of the hour with Springsteen stories.

They've smoothed out the format in the year since. Lazure instituted the idea of themes — in fact, the non-functioning CD she brought that first day was all songs referring to Mary, whether the girl next door, the Virgin

**Science Department
Chair John Blackwell
with the bodhrán, a
traditional Irish drum.**



**WPEA disc jockeys Ron Kim, dean
of faculty, and Erica Plouffe Lazure,
English instructor.**



Mary or some other Mary. Kim, whose own CD was a random assortment of songs, liked the idea of themes, and they've returned to it repeatedly. For their show the week of Martin Luther King Jr.'s birthday, for example, they played Springsteen songs about social justice; during the week that included Valentine's Day, they played songs with a romantic theme; they followed that a week later with a breakup-song theme. During the November elections, they had a show with politically themed songs, in December they focused on darkness, and for their show around the time of Family Weekend, they played family-related songs.

Given her teaching background, it's perhaps no surprise that Lazure's thematic ideas tend to have a literary bent; in the wake of Springsteen's publishing a children's book last fall, for example, a list of his favorite books appeared in the media. In response, Lazure, who also sings bluegrass in the

Bennington College-based Dog House Band, came up with an entire show in which the songs meshed stylistically with the writing in those books.

"Anyone can just listen to a Springsteen album," she says, "but it's what you bring to it — the feelings you have about it, the interest you have in it and the stories you can tell about it — that make it interesting. We aim to give a little context for each song." They do that by researching while the songs are playing, finding fun facts or pertinent quotes from *Rolling Stone* magazine. It doesn't leave them much time to sing along with whatever is playing.

Lazure and Kim say they don't have a huge audience, but admit they haven't worked very hard to promote the show. Lazure says that a couple of times students referenced Springsteen in papers they wrote for her classes. Both times, she confesses, she underscored his name and



Poet and English Instructor Todd Hearon plays in Barn Burners String Band, a Boston-area bluegrass ensemble.

wrote, “Tune in to 90.5!” in the margins.

pEa Street will go on hiatus in the fall, when Lazure heads to Italy for the School Year Abroad program, but for now it can be heard Fridays at 9 p.m. whenever WPEA is in operation. Though Kim and Lazure have worked out many of the kinks since that first show, both say they continue to learn from producing the program, which they record in advance but feels live to them. It’s given them a newfound appreciation for what their students are experiencing in the classroom and elsewhere.

“One thing that’s been fun is when you’re an adult, a teacher, to intentionally put yourself in a vulnerable position where you’re doing something that’s new and different,” Kim says. “I look at the control panel and there are all these lights and things you need to do at certain times in the show, and I’ve messed up numerous times.

Some of the problems that come up are technical failures and some are user failures, but it’s great to be reminded of how it is to be a beginner at something and how nerve-wracking that is.”

One member of the Exeter community who is not new to the music world is the Rev. Robert Thompson ’72, Phelps Minister at Phillips Church, whose rich baritone is heard not only during his own services, but at funerals and weddings, with the occasional ensemble, and at area basketball games. One week in early March saw Thompson singing the national anthem before five games, including one at the University of New Hampshire, all despite having a head cold. (“It’s all about breath control,” he says, brushing off concerns that a stuffy nose would affect his voice.)

As an Exonian, Thompson sang in the glee club



Rev. Bob Thompson's deep, soulful singing moves audiences in Phillips Church, and at basketball games.

and the first mixed-voice choir, and joined in with the Rockingham Choral Society from time to time as well; at the end of his own graduation speech, he sang “Amazing Grace.” Today, his preferred genre remains spirituals, and he’s working to learn all of those arranged by Harry T. Burleigh. Although he has taken singing lessons, Thompson says most of his training was more casual, through the onsite presence of former school organist and harpsichordist Lynda Copeland. She encouraged him in semi-classical and classical music, served as his accompanist as he worked his way through Burleigh’s portfolio, and arranged a concert at UNH’s Institute for the Study of Earth, Oceans, and Space that opened the door to his singing the national anthem.

“I owe a great deal to Lynda that I don’t think I could ever really repay,” Thompson says.

Downstairs, in the church’s basement, English Instructor Todd Hearon is often found playing a different kind of music — bluegrass — with a group of students who’ve named themselves Banjo Clock. In warmer weather, they head to the patio behind Dunbar. But Hearon does his professional playing with the Barn Burners String Band, a rootsy Americana bluegrass ensemble in which he plays mandolin and banjo and sings. Most of the band’s gigs are in the Boston area,

although they have also played at the Stone Church, a live-music venue in Newmarket, New Hampshire.

Hearon isn’t new to the music scene, either: He spent six years after college touring the country with a band that was serious enough to put out three CDs. He also wrote some of the band’s songs, but today he says he prefers to “play other people’s stuff.” A poet, Hearon has collaborated with composers and others to put his poems to music. His “Strange Land” was one of three poems written by PEA faculty, given an original score by composer Kevin Siegfried and performed as part of “Three Horizons” in 2010. Hearon also was behind the modernized PEA production of Aristophanes’ *Lysistrata*, which included song and dance elements. Last November, Hearon’s “Caliban in After-Life,” an imagined monologue delivered by that character after *The Tempest*’s final scene, was set to music by Gregory Brown ’93 and performed as part of a celebration of Shakespeare’s 450th birthday that Hearon helped coordinate.

Meanwhile, very much a part of this millennium, chemistry teacher Sasha Alcott and her husband, Chris Viner, are practicing in an industrial space under a wood-working shop in Newfields, New Hampshire. Their band, When Particles Collide, has made a name for itself not just in New England — winning New Artist of the Year



**Science Instructor
Sasha Alcott and her
husband, Chris Viner,
front the rock band
When Particles Collide.**

JOSHUA PICKERING

at the Boston Music Awards in December — but well beyond, with a touring schedule that has taken the duo to Colorado, California, Texas, New York City and elsewhere, and in 2014 included an eight-week summer tour. They've also self-released several recordings and videos. Alcott, who sings and plays guitar, says she's so busy with teaching and related duties that all she can do is work, write songs and perform — Viner, who plays drums and writes the music, is in charge of the couple's house and finances, as well as the band's tour schedule and social media efforts — and she likens the sleep challenges her life presents to having a newborn.

"It's really, really important to me to be active, to be constantly writing music, practicing, putting out records and performing," Alcott says. "Music is a huge part of my life, so I'm going to make it work." This year's Faculty Follies was *When Particles Collide*'s first performance at PEA. But they were already known to students, who before class sometimes call up the video to their chemistry-centric song "MOLES!" — which includes the catchy refrain "Everything reacts in mole ratios." Alcott says she doesn't use that song in her classes, though she might just as well, for all the equations it includes. It's the lone academics-oriented number for the band, which has gotten plenty of press and plays music that has been described as art-rock

and pop-punk. Students do think it's cool that she's in a band, Alcott says, but they're just as interested to see that her life isn't typical of those of most adults they know.

"I think it's nice for kids to see an adult pursuing their passion while having a responsible adult job," she says. Like so many of her peers, Alcott took piano lessons in her youth, but she neglected to practice adequately. She describes herself as "total DIY," teaching herself guitar and taking a smattering of voice lessons, in contrast with Viner, who did practice for his drum lessons. She says it's a positive balance: He makes her want to improve on her instrument while she shows him that it's OK to let go. The songwriting has also become a collaborative effort, though Alcott remains the lyricist.

Alcott now has dorm duty one weekend a month, but in the fall, she and Viner will take up full-time residence in a dorm. Alcott says she's looking forward to it, even given the potential for challenges in scheduling around the band's tours. Like her colleagues who are able to blend a passion for music with teaching and academic work, Alcott is determined to keep on balancing chemistry and the physics of *When Particles Collide*, finding music both inside the classroom walls and well beyond them. ■