Schulenberg Recital:
A C.P. E. Bach Retrospective
Beverly Woodward

On March 22 David Schulenberg presented a recital at Brandeis University that surveyed the composer’s music for solo keyboard one year after the tercentenary celebrations of 2014. The event was initially supposed to take place in late February, but difficulties related to the weather caused a postponement. The program, which was beautifully played, included the following:

- Sonata in F-sharp minor, W. 52/4 (Berlin, 1744)
- Sonata in C, W. 62/10 (Berlin, 1749)
- Fantasia in D, W. 117/14 (Berlin, 1762)
- La Stahl, W. 117/25 (Berlin, 1755)
- L’Aly Rupalich, W. 117/27 (Berlin, 1755)
- Solfeggio in C minor, W. 117/2 (Potsdam, 1766)
- Sonata in E minor, W. 52/6 (Zerbst, 1758)
- Sonata in C, W. 65/47 (Hamburg, 1775)

From Clavier-Sonaten . . . für Kenner und Liebhaber, volume 2:
- Rondo in A minor, W. 56/5 (Hamburg, 1778)
- Sonata in A, W. 56/6 (Hamburg, 1780)

Schulenberg stated in his program notes: “C.P.E. Bach’s music for solo keyboard instruments, composed during a career that lasted over fifty years...remains the most substantial and influential body of such work between his father’s time and that of Haydn, Mozart, and Beethoven. This program surveys Bach’s output for the keyboard, omitting examples only of early compositions...”

Problems with the university’s heating system created some unwanted background noise at the recital. Fortunately it was possible to record the event. Schulenberg has posted the recording on his website at: http://faculty.wagner.edu/david-schulenberg/works_perfs-html/

Minimizing the Effects of Severe Weather on Keyboard Instruments
Douglas Maple

As members of the Boston Clavichord Society who live in the Northeast can attest, this region was hit especially hard this past winter by lingering intrusions of arctic air. During periods of such harsh weather, owners of clavichords and other wooden keyboard instruments may become quite nervous as they witness obvious signs of the dryness that accompanies the cold winter air: instrument regulation may suffer, keyboards may make a variety of noises, and lids may visibly warp, shrink or show signs of joint separation. Perhaps worst of all, soundboards and case bottoms may develop frightening cracks.

Although members of the BCS are probably already familiar with the basic need to humidify the air in their homes or schools during the winter months, the unusually severe nature of this past winter may have taken some by surprise. Extreme conditions that are normally restricted to Canada and the north central border of the U.S. came much further south and east than usual, exposing music lovers and their instruments to temperatures below freezing. But now that this winter is finally coming to a close, we’ll have the opposite problem in a few months: hot, muggy summer air will invade the region for weeks at a time, bringing with it sluggish keys, sticking jacks, and bulging soundboards.

As an instrument maker and technician, I have often observed that many people do not realize just how great the seasonal expansion and contraction of wood can be in areas with extreme weather conditions, and often seem not to appreciate that this movement can lead to serious damage to their instruments. This article is therefore intended to provide a review of some basic information on how wood responds to changes in the weather, followed by some observations on steps makers and owners can take to protect instruments from damage.

The relationship between atmospheric water and wood movement

The amount of water vapor present in a given volume of air varies in relation to the temperature of the air. The key point to remember is that colder air contains relatively less water vapor than warmer air. The relative humidity (RH) values that we see in our weather reports tell us how much water vapor is present as a percentage of the maximum amount at the current temperature. To illustrate, air at 90°F (32°C) can hold about 36 grams per cubic meter of water; if the water content is only 18 g/m³, we say that the RH is 50%.

Because keyboard instruments are normally kept indoors, however, we need to pay attention to the RH levels that are found in interior spaces. If that exterior air at 90°F (32°C) comes into your home and is cooled down to 70°F (21°C), it can then hold a maximum of only 18 g/m³. The interior RH would therefore rise to around 100%. Conversely, in the winter, exterior air at 0°F (-18°C) and 50% RH holds only 1.15 g/m³ of moisture. As that exterior air seeps into your building and is warmed to 70°F (21°C), it can then hold 18 g/m³. The RH therefore would drop to 6%, if no additional moisture were introduced into the interior spaces. In reality, breathing, cooking, bathing, and plants all add some moisture to the inside air, but the relative humidity in this case

(Continued on p.4)
Fourth Nordic Historical Keyboard Festival

Anna Maria McElwain

Anna Maria McElwain will perform the first recital of the BCS 2015-2016 season on September 13 at Gore Place in Waltham.

The Nordic Historical Keyboard Festival was founded in 2012 by its artistic directors Dr. Michael Tsalka and Anna Maria McElwain. The fourth annual festival will take place in Kuopio, Finland, from May 26 to June 4. Nineteen concerts, eight of which feature the clavichord, will be presented at thirteen interesting venues. Among these are Kuopio Music Center, Kuopio City Hall, various churches, and Riuttala Farmhouse Museum.

Last year the First International Clavichord Competition, the first known to have taken place in the history of the instrument, was held in Kuopio. This year the 1st and 2nd place winners, Dalyn Cook from the United States and Alexandra Filatova from Russia, will play recitals in the festival. Dalyn Cook’s recital is entitled Musical Portraits and will be held, appropriately, at Kuopio Art Museum. It will include compositions by Froberger, C.P.E. Bach and Mozart. Ms. Cook will play a second recital of compositions composed by, portraying, or in some other way pertaining to women featuring Mozart, Haydn, C.P.E. Bach and Marianna Martines. Alexandra Filatova’s clavichord recital will be played on an unfretted clavichord with short octave and will include works of A. Gabrieli, Frescobaldi, Byrd and Sweelinck. All other clavichord concerts will be played on five-octave unfretted Swedish instruments. As in previous years, the festival will also offer a course in historical keyboards with Dr. Pekka Vapaavuori as the clavichord instructor. The Second International Clavichord Competition is planned for 2016 if there is enough interest.

I will present a clavichord recital of J.S. Bach’s French Suites along with readings of sonnets. Another of my concerts offers compositions from Sweden and Finland: Agrell, Kraus, Byström, C.L. Lithander, and a world premiere of a clavichord piece written for me by Adam Al-Sawad. I will also play the clavichord in a chamber recital with baroque violinist James Hewitt. The program will include Bach and Beethoven sonatas and a world premiere by us of a work composed by Hewitt for clavichord and baroque violin.

The first of the two remaining clavichord concerts will be played by Heli Kantola at the Kuopio City Library. Her program includes music by Böhm, C.P.E. Bach, Scarlatti, and Mozart, as well as three preludes from Aforismos: Twelve Preludes for clavichord by the Mexican composer Leonardo Corala, a work I premiered at the 2013 Nordic Historical Keyboard Festival. Dóra Pétery will play a program with the theme Klänge und Klang: focusing on music with a relation to text. She will play in the Regional State Administrative Agency, the same space where with great enjoyment we heard Peter Sykes, president of the Boston Clavichord Society, perform in 2013.

Other performers include Trio Walter (Helene Joy, traverso, Elina Mattila, cello, Olga Witthauer, fortepiano), Olga Pashchenko (harpischord and fortepiano), Heidi Miettunen (cello), Megumi Tanno (fortepiano and piano), Heikki Mononen (baroque organ), Elena Burundukovskaya (harpischord and baroque organ), Joona Saraste (voice), and János Bali (recorders). The festival has reached a point of maturity. This year every recital without exception exhibits the focus on historical keyboard instruments. The earlier high standards of performance will, we hope, not only be met, but even surpassed this year.

Christopher Hogwood

(1941—2014)

The Boston Clavichord Society mourns the death of Christopher Hogwood on September 24, 2014. Hogwood was a strong advocate for the clavichord. He was a member of the BCS Board of Artistic Advisors from our founding in 1995. He was a co-founder of the International Centre for Clavichord Studies in Magnano, Italy and co-chairman of the International Clavichord Symposia that are held there every two years. An auction of Hogwood’s collection of keyboard instruments, including eleven clavichords, took place on March 12, 2015. The proceeds will help fund scholarships at the Royal College of Music, the Royal Academy of Music, Jesus College (Cambridge), and Pembroke College (Cambridge), as well as provide support for the Academy of Ancient Music.
The Clavichord at the Julliard School

In 2012 the Juilliard School in New York City purchased a five-octave unfretted clavichord after Friederici made by Renée Geoffrion of Pierre-Buffière, France. In September 2014 Peter Sykes was invited to join the faculty as principal teacher of historic keyboard instruments in the Historical Performance Department. Since then, students in the Historical Performance Department have been encouraged to explore the clavichord in repertoire of J. S. Bach, C. P. E. Bach and Haydn, and have taken multiple lessons on the instrument there. On September 11, 2015, members of the Historical Performance faculty will participate in a concert in Paul Hall featuring the music of C. P. E. Bach exclusively, including solo clavichord repertoire.

Introducing Historical Keyboards at the Rivers Conservatory

On March 28, while snow was falling, the BCS brought four historical keyboards to the Rivers Conservatory in Weston, MA. The conservatory is a highly regarded center for the musical education of pre-college students. The audience that day was made up of piano students, ages 8-14. The instruments taken for the demonstration were two clavichords, a harpsichord, and a fortepiano. The clavichords were demonstrated by Peter Sykes, the harpsichord by Dale Munsch, and the fortepiano by Sylvia Berry. After the demonstration the students were given a chance to try out the instruments, which they did eagerly. Their teacher, David Tobin, wrote afterwards: “The kids and the parents were more than just fascinated; they were enchanted.”

The Pedal Clavichord at Oberlin

This past semester David Breitman and Jonathan Moyer have been using Oberlin’s pedal clavichord, built by Joel Speerstra, in teaching a course on J.S. Bach’s organ Trio Sonatas. A sonata is first played by a student on the pedal clavichord. After that, the instrument is disassembled and the sonata is performed with each part played on a different component of the instrument.
would still likely be very low.

Like air, wood also normally contains a certain amount of water—in this case, liquid water that is bound to its cell walls. Typical moisture content levels in the U.S. for furniture-grade lumber directly out of a kiln are usually around 7–8% by weight (equivalent to 35–40% RH). However, dried wood will readily re-absorb bound water—even after kiln drying—if it is exposed to a more humid environment. Instrument owners need to understand that wood tries to maintain a moisture content that is in equilibrium with the RH of the space where the instrument is kept. Application of varnish or paint to the wood will slow down the transfer of water molecules to varying degrees, but these finishes do not truly waterproof the wood.

Maps showing typical moisture content levels for interior woodwork in the lower 48 states of the U.S. have been prepared by the U.S. Forest Products Research Laboratory; values range from a low of 4% in the extreme northern corner of North Dakota in January to a widespread high of 12–13% along the Atlantic, Gulf, Pacific, and Great Lakes coasts in July. Values for a number of representative cities are presented in the table below.

<table>
<thead>
<tr>
<th>City</th>
<th>Winter</th>
<th>Summer</th>
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<tr>
<td>Seattle, WA</td>
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<td>Los Angeles, CA</td>
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<td>Albuquerque, NM</td>
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<td>Denver, CO</td>
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<td>Grand Forks, ND</td>
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<td>Buffalo, NY</td>
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<td>Boston, MA</td>
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**Northern Europe**

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<tr>
<th>City</th>
<th>Winter</th>
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<tbody>
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<td>Hamburg and Erfurt, Germany</td>
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<td>10</td>
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<tr>
<td>Malmö, Sweden</td>
<td>6-9</td>
<td>12-15</td>
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<td>Luleå, Sweden</td>
<td>3-6</td>
<td>10-14</td>
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<tr>
<td>Helsinki, Finland</td>
<td>4</td>
<td>6</td>
</tr>
</tbody>
</table>

Approx. conversion factor, if you know RH at 70˚F (21˚C)

- 25% RH = 5% MC
- 35% RH = 7% MC
- 45% RH = 8.5% MC
- 55% RH = 10% MC
- 65% RH = 12% MC
- 75% RH = 14% MC

It can be seen that the northern tier of the U.S. from North Dakota, across the Great Lakes, and on to Boston is a region that has high swings in wood moisture content between the summer and winter seasons. In some years the high and low extremes will be even greater than these averages, further increasing the risk of instrument damage. Having lived and worked as a maker for a number of years in Minnesota, I can personally confirm that it is often impossible in this area to keep the interior RH above 20% when the temperature outside are around -20°F (-29°C). In short, this region can be a challenge for anyone who builds or maintains wooden musical instruments.

Judging from average exterior temperatures and humidity levels available on internet sites, much of western Europe is relatively mild and probably comparable to mid-latitude areas of the eastern U.S. As can be seen in the table, however, cities such as Hamburg and Malmö near the Baltic sea have interior moisture content levels similar to those found in the Great Lakes region of the U.S. And locations in the extreme north, like Helsinki, have a winter dryness that may match that of North Dakota and Canada.

**What instruments makers do to protect against damage**

The basic problem facing makers is that wood changes dimensions substantially across the width of a board, but hardly at all along its length. Structures such as soundboards, which typically have ribs, belly rails, and bridges glued across their width, are often at war with themselves because their natural expansion or contraction is restricted by these cross-grain members. In order to minimize this problem, soundboards are traditionally made of vertical-grain boards, which expand and contract (across the width of the board) roughly half as much as boards where the growth rings are oriented parallel to the face of the board.

Bottoms, lids, and some case joints also typically involve cross-grain construction, and they too are subject to potentially high levels of stress from seasonal movement. Hide glue and wood are both amazingly strong materials that can withstand seasonal stresses to a great degree, but subjecting them repeatedly to prolonged extremes of humidity cycling will often result in problems such as cracks or weakened joints.

Many makers will try to protect their instruments proactively by equilibrating and assembling the case and soundboard parts at humidity levels like those of the area where the instrument will eventually reside. This may be difficult to do if the destination climate is substantially different from that found in the maker’s location, however, and it may require that the construction be carried out within a relatively small window of opportunity made available by seasonal weather patterns. The actual level of dryness chosen for an instrument may vary considerably from one maker to another; if possible, owners should consult their maker about the safe range of humidity for each instrument. Unfortunately, if an instrument is built in a very dry state to protect against winter dryness in the far northern areas (MC = 5–6%), it would then be more prone to damage in humid summer months. It would therefore be important that the owner takes measures to protect the instrument, should the humidity levels become atypically high.

The drying and storage of the wood for use in musical instruments is itself a topic that generates lots of discussion among makers. Many builders prefer to work with air-dried lumber in order to avoid the defects and locked-in stresses that are often found in kiln-dried boards. Air-dried stock tends not to be dry enough to use for the problematic areas of North America, however, unless it undergoes further equilibration at the target.
levels in a humidity-controlled workshop or storage area. This can create logistical problems, since many makers have relatively modest amounts of shop and storage space. In my experience, kiln-dried wood can vary from useless trash to quite acceptable; locating a kiln operator who is able and willing to produce a quality product is important. In any case, the lumber to be used in the next instrument on the schedule still needs to be stored for a time and then worked under controlled humidity conditions.

There are additional strategies that makers can use to maximize stability. For instruments that will live in the problematic northern areas, makers may choose to make case walls and bottoms of boards that are predominantly vertical grain, which will help to minimize wood movement. Frame and panel lids, such as those seen most often in clavichords and fortepianos, are an excellent choice, since they allow the floating lid panels to change size without cracking or warping. Certain species of wood are also more stable than others and may be preferable in areas with extreme climactic shifts; for example, cherry and walnut move much less than oak or beech.

What instrument owners should do to avoid damage

Once an instrument is delivered, it is then the owner’s responsibility to follow the maker’s advice for proper care. During the months with seasonal extremes, owners should get in the habit of monitoring the humidity in their interior spaces; small, reasonably accurate electronic humidity gauges are now readily available for this purpose. When the humidity starts to drop to low levels, a decent humidifier that is reasonably accurate electronic humidity gauges are now readily available for this purpose. When the humidity starts to drop to low levels, a decent humidifier that is the right size for the room should then be put into service. Models with a built-in humidistat are preferable, since they will only run when necessary, eliminating the potential for over-humidification. Over-humidifying does sometimes happen, even in winter, when unregulated humidifiers are run constantly on high settings. In addition to causing problems such as sluggish keys or jacks, too much humidity can be bad for older homes that have inadequate vapor barriers in the ceilings and walls; such structures may allow moisture to seep into the chilled insulation, causing condensation and damaged insulation.

If you live in an older, drafty dwelling, one of the best things you can do is to weatherize the doors and windows as much as possible. Keeping the cold, dry air outside will help minimize the amount of moisture you need to add to the interior spaces. Extreme dryness is often a problem in cities where people live in relatively small spaces with uncontrollable steam heat. Not infrequently, technicians visiting such apartments will observe instruments sitting in close proximity to a very hot radiator with an open window directly above it to keep the room from getting too hot. This setup is an absolute disaster for humidity control, and it must be avoided if at all possible.

Regardless of what type of residence you have, one of the most important things one can do in the winter is simply to keep thermostat settings lower. As discussed earlier, heating the air excessively really makes the RH levels plumper, so putting on a sweater and lowering your thermostat settings will make it much easier to maintain proper humidity levels.

And remember: don’t forget to keep track of the RH in the summer months. If you find that you are uncomfortable from the heat and humidity, then your instrument is probably also stressed. Many people find that compressor-type dehumidifiers are not ideal for living spaces, since they are noisy and pump out large quantities of hot air. Newer models of dehumidifiers that use silica gel to absorb moisture from the air are quieter and save energy, but these still exhaust warm air into the room, which is not what you want in the summer. If you don’t have central air conditioning, the best solution is probably to run a window air conditioner in the room where your instrument lives. In addition to cooling the room, the unit will condense excess moisture from the air and drain it to the outside. Just be sure to do your research and buy one that is the proper size for the room in order to optimize its ability to both cool and dehumidify the air. Don’t run it all the time on the high setting, though. Bringing hot, moist air into the house and cooling it down excessively will significantly increase its RH, thereby working against the unit’s ability to dehumidify.

To summarize: pay attention to the humidity levels in your instrument’s room—especially during periods of extreme weather—and then take the necessary steps to protect your instrument. In my opinion, however, you don’t always need to try to maintain your room at 50% RH. Keeping your humidity levels at moderate levels above the safe lower limit in the winter and below the upper limit in the summer, respectively, will protect your instrument while avoiding energy waste and potential damage to your home.

1 Atmospheric moisture data and wood moisture content levels excerpted from R. Bruce Hoadley, Understanding Wood; Newtown, CT: Taunton Press, 1980. The original U.S. Forest Service maps used by Hoadley to illustrate humidity and MC levels are available at http://workshoppages.com/WS/Articles/USDA-Moisture-Maps-Interior-Woodwork.pdf

Instruments presented at the Rivers Conservatory, Weston, MA, March 2015 (photos on p.3)

• French double manual harpsichord by Earl Russell, Oberlin, OH, 2000, 8'x8'x4'/buff, range FF-f''", after the Henri Hemsch (Paris, 1736) at the Museum of Fine Arts, Boston
• Clavichord by Koen Vermeij, Aerdenhout, Netherlands, 2011. Double-fretted, range FF-f''". Original design after Hubert models.
• Clavichord by Kevin Spindler, Stonington, CT, 2010. Double-fretted, range CC- e"", after an anonymous German instrument c.1740 in the Gemeentemuseum, The Hague.
• Viennese fortepiano by Chris Maene, Brussels, Belgium, 1995, range FF-g"", after Anton Walter 1795 fortepiano at the German National Museum in Nuremberg.

TANGENTS / The Bulletin of the Boston Clavichord Society, Spring, 2015
Sykes Clavichord Recording

Available from www.ravencd.com

This is an admirable and hugely enjoyable recording of the clavichord. In his judiciously chosen programme, Peter Sykes, President of the Boston Clavichord Society, demonstrates his...sensitivity as a clavichordist and the absolute suitability of a clavichord as an ideal medium for these works. From the first notes of BWV 998, the E flat Prelude, Fugue and Allegro, we are drawn into a world of thoughtful fantasy, beautifully drawn lines, and clarity of musical logic and expression in contrapuntal textures. Derek Adlam
[Excerpted with permission from The British Clavichord Society Newsletter, No. 61, February 2015]

Luc Beauséjour at BEMF 2015

The noted Canadian keyboardist Luc Beauséjour will play a clavichord concert at the Boston Early Music Festival on Friday, June 12 at 2:30 pm. The concert will take place in the Harry and Mildred Remis Auditorium at the Museum of Fine Arts in Boston. Beauséjour’s program will include: Handel’s Suite in D Minor and J.S. Bach’s French Suite No. 5 in G major, BWV 816. Beauséjour played clavichord concerts for the Boston Clavichord Society in 2011 and 2014.

INTERNATIONAL CENTER FOR CLAVICHORD STUDIES

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Musica Antica a Magnano
Via Roma 43
13887 Magnano (BI), Italia
TEL: +39 345 910 85 61
FAX: +39 015 258 90 32
info@MusicaAnticaMagnano.com

Carol lei Breckenridge “fringe” recital at BEMF 2015

The concert will take place at the Goethe-Institut, 170 Beacon Street, Boston, on Tuesday, June 9 at 3 pm.
The program will include C.P.E. Bach, Selections from “Für Kenner und Liebhaber,” Joseph Haydn, Andante with Variations in F Minor/Major, H. XVII/6, and W.A. Mozart, Ten Variations on a Theme by C. W. Gluck, K455.
Suggested donation, $10. BCS members, free of charge. www.carolleibreckenridge.com

Renee Geoffrion Recital

J.S.Bach, G. Benda, Cimarosa, Haydn, Mozart, and Rivet

Saturday, May 2, 2015, 8:00 pm
Friends Meeting House,
5 Longfellow Park, Cambridge, MA

General $15 / BCS members $10
Free for students.

Reservations recommended.
Call 781-891-0814