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# The Griffin

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- 
- 2** REPORT **President's Report**  
Peter Delefes
- 3** RELIGIOUS BUILDINGS **The Many Chapels of King's College**  
Taunya Dawson
- 6** RELIGIOUS BUILDINGS/BUILDINGS AT RISK **Église Saint Jean-Baptiste, Corberrie**  
Fr. Maurice LeBlanc
- 7** HERITAGE BUILDINGS **The Bandstand in the Halifax Public Gardens**  
Lyndon Watkins
- 8** BUILDER'S MANUAL **The Conservation and Restoration of Stained Glass**  
Norbert Sattler
- 12** ADAPTIVE RE-USE **School's Out! : Breath of Life Comes to Truro's Surplus Schools**  
Janice R. Zann
- 13** INFORMATION/GUIDES **New Means to Explore New Buildings**
- 14** LECTURE **Dr. Paul Bennett: Endangered Schoolhouses: The Palace Schools of Victorian and Edwardian Nova Scotia**  
Janet Morris
- 15** BUILDER'S MANUAL **Diamond-Lock Shingles**  
Bruce MacNab
-

## President's Report

### The Griffin

A quarterly newsletter  
published by  
**Heritage Trust of  
Nova Scotia**

Unless otherwise indicated,  
the opinions expressed  
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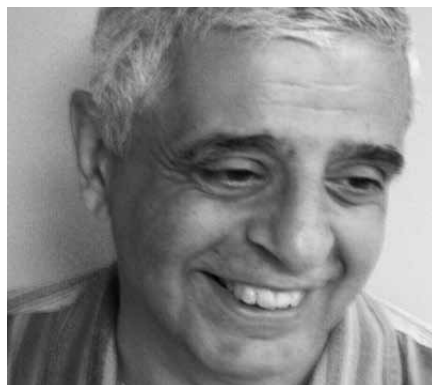
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Fr. Maurice LeBlanc,  
Bruce MacNab, Janet Morris,  
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We welcome submissions.  
Deadline for the next issue:  
April 15, 2011

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*Peter Delefes*

The 2010 Built Heritage Awards were presented at the Halifax Club on Feb. 21, 2011. The Residential Award went to Philip Mitchell and Mark Narsansky, owners of *Morning Tide* on Water Street in Chester. The Commercial Award was presented to Dixel Development Ltd., for *The Lofts at Greenvale*, on Ochterloney Street, Dartmouth. Detailed information on these buildings can be found on the HTNS website ([www.htns.ca](http://www.htns.ca)). Plans are underway for the second Symposium on Religious Buildings to be held at the Atlantic School of Theology on Saturday, April 16. The full-day workshop pertaining to the protection and preservation of historic church buildings includes a performance by Musique Royale. Program information and registration forms can be found on our website.

The last strategic planning exercise undertaken by the Heritage Trust Board was conducted a few years ago. At its last meeting in January, the Board unanimously agreed it was time to review the goals and strategies of the Trust, and set aside a meeting in June, in Sydney, for the purposes of strategic planning. Such matters as a revolving fund for heritage building acquisition, the employment

of a staff person (currently, the Trust has no paid employees), fund-raising and strategies for advocacy and education will be open for discussion. Members of the Trust are welcome to contact me by e-mail ([president@htns.ca](mailto:president@htns.ca)) or by phone (902-826-2087) if they have any comments or ideas they would like to share regarding the purpose, objectives and strategies of Heritage Trust.

We were saddened by the death of one of our long-time members, Bernie Davis, on January 23. At the time of his passing, Bernie was a member of the Board, Chair of the Membership Committee and a member of the Halifax Committee. He was passionate about the preservation of older buildings and owned a number of historic buildings in north-end Halifax. Several members of the Board attended the funeral service for Bernie. Phil Pacey, past-president of the Trust, was one of those asked by Bernie's wife, Margaret Matthews, to deliver a tribute at the service. Bernie's dedication to historic buildings was evidenced by the family's request that donations in Bernie's memory be made to the Morris Building Project.

#### Photo needed of 153 Campbell Road area

Thomas Bell lived at 153 Campbell Rd.  
before the Halifax explosion.  
No photos of this house  
have been found in the NS Archives.  
If you have photos taken in the area,  
please contact  
[shirleytrites@eastlink.ca](mailto:shirleytrites@eastlink.ca)  
or (902) 453-0912.

## The Many Chapels of King's College



*King's College Chapel, Halifax*

*Taunya J. Dawson*

### The Early Days

Since its founding in New York in 1754, under a Royal Charter from King George II, the University of King's College has maintained ties with the Anglican Church. The Rev. Dr. Samuel Johnson, founder of the college, stipulated that the President " ...is to be always a member of the Church of England, and the prayers of the church are always to be used in it."<sup>1</sup> As well as producing Divinity students for ordination up until 1971, student life at King's has always included Anglican worship. Over a period of 250 years and two major relocations, Anglican worship at King's has been centred in seven different locations.

While this article focuses on the two College chapels built at Windsor and Halifax, it is useful to see them in their

historical context. The architecture and furnishings of both buildings reflect not only the Anglican tradition, but also the contemporary doctrines and opinions that shaped them. Both of the buildings that were built as chapels are still in regular use as such.

The first King's students studied in a building near the original Trinity Church, which had been built in 1697 on Wall Street at Broadway. Trinity Church itself served as the Chapel.<sup>2</sup> After fewer than forty years in New York, however, the backlash against the supporters of the Crown after the American Revolution resulted in the removal of King's College to Nova Scotia. The Anglican Church itself became more firmly established in Nova Scotia around that time, with the appointment of Bishop Charles Inglis in 1788.

Inglis was actively involved in plans

to raise funds to build a new King's College in the town of Windsor. The new College was founded in 1789; however, Royal Charter was not obtained until 1802. Christ Church, Windsor (built in 1790) became a temporary chapel for the new College.<sup>3</sup> In the beginning there were only seventeen students, who apparently attended Christ Church every Sunday morning. Funds were a significant problem in the early years and the use of a local church rather than building a chapel was presumably seen as a practical solution.

### The Chapel at Windsor

Early provisions were, however, made for a college chapel in the main building, which had been constructed (like the main King's residence building today) in the Oxford tradition as a series of "bays" built around staircases. Initially

the Chapel was on the ground floor of “North Pole Bay”, at the east end of the building. From 1842, it was relocated to the bay adjacent to the one at the west end that served as the college President’s residence.<sup>4</sup> This bay became known as the Chapel Bay. (A Chapel Bay exists in King’s today – but is ironically the bay farthest away from the Chapel!)

Plans had been initiated by the Alumni Association as early as 1861 to replace the Chapel in Chapel Bay. Two years later construction began on the College’s Convocation Hall, which was finished in 1867. A greater focus on the Divinity program was perhaps evident when Dr. John M. Hensley was appointed as Professor of Pastoral Theology in 1859. Hensley made arrangements to have the Hall furnished so as to be suitable for Sunday services.<sup>5</sup> (Other sources suggest that the room in Chapel Bay remained in use until 1877.<sup>6</sup>)

Hensley’s enthusiasm for a dedicated place of worship was perhaps a reflection of his Tractarian roots, which he shared with the Right Reverend Hibbert Binney, Bishop of Nova Scotia from 1851 to 1887. Bishop Binney, who became President of the Alumni Association in 1854, helped to raise funds for the construction of a separate Chapel building, which was completed in 1877, and dedicated to the memory of Dr. Hensley, who had died in 1876.

Both Convocation Hall and Hensley Memorial Chapel reflect the early English Gothic style of architect David Sterling. The Gothic features visible from the outside include “...slender lancet windows and a large rose window,” with stained glass typical of the period. (The side windows of the nave feature more recent stained glasswork.) A photograph of the Chapel taken in 1910 clearly shows many interior Gothic features, including Gothic arches, carved pews and other woodwork including a rood screen. The original oak and ash altar donated by alumni would be later widened (from three panels to five) and moved to Halifax following the 1920 fire.

The Gothic design was typical of the 19th century, and also of the Tractarian

preferences of Binney and Hensley. The majority of the seating is in the nave, to the ecclesiastical west of the rood screen, and facing forward, in the manner of most parish churches. A single block of seating faces inward in the chancel. Like many other Nova Scotian churches, however, it is not oriented on a traditional east-west axis (with the altar “pointing towards Jerusalem”).

In 1920, fire destroyed much of the main building in Windsor. Fund-raising efforts to rebuild were made, but not enough support was generated to finance the proposed plans by Andrew Cobb, a Halifax architect. An offer of assistance from the Carnegie Foundation prompted a decision to enter into an agreement with Dalhousie University and relocate to Halifax. King’s moved to Halifax in 1923, but without any new buildings, instead moving into Birchdale, one of the large estates on the North West Arm. At Birchdale, a temporary Chapel was established, which housed various pieces of original furnishings from Windsor, including the carved English oak Eagle lectern.

### The Chapel at Halifax

Eventually, the construction of new College buildings on Coburg Road was completed, designed by Andrew Cobb, the Halifax architect who had planned the rebuilding of the Windsor campus (later rebuilt as King’s College School, and now King’s Edgehill School). The present University of King’s College Chapel was built in 1929-30.

The building was constructed primarily with bluish-gray quartzite. Some red stones were scattered into the exterior wall surface. The peak of the roof was graced with a neolithic-style cross similar to the one on the roof of the Hensley Memorial Chapel. In *King’s College: A Chronicle*, Fenwick Vroom praises the fact that the altar faced east (at least by Halifax street standards) – in contrast to the Hensley Memorial Chapel.

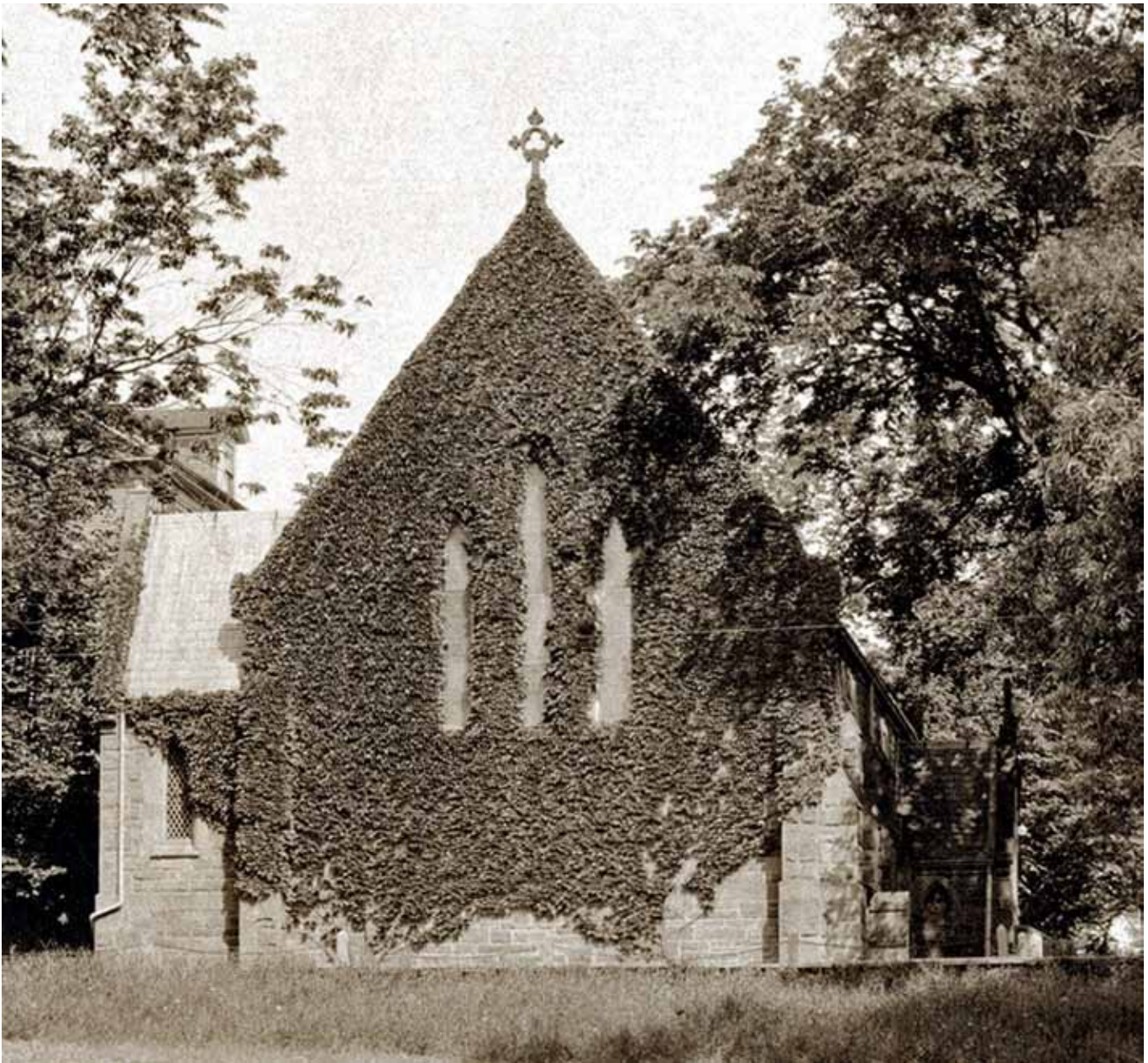
Jean Weir has noted the way in which Cobb interwove the two very different Gothic and Georgian styles. (Such “fusion” architecture would not be

uncommon in the twentieth century!) Thus the current Chapel has a hammerbeam trussed roof reflecting the Gothic influence, but with classical round-arched windows. Classical arches are also found in the rood screen. The pews are less ornate than those in Windsor, featuring flat tops and traditional rectangular panelling. As in Windsor, there are three windows above the altar, but set in Palladian-style mouldings with miniature Doric pilasters rather than the Gothic lancet arches.

Probably the most significant difference between the two chapels is in the seating. Brian Cuthbertson notes that in the present King’s Chapel, “...the floor plan is modeled after those of Oxford and Cambridge Colleges in the tradition of medieval monastic chapels,” with the pews facing inward. In effect, the chancel occupies the majority of the floor space, leaving a small nave at the back, where movable seating is normally configured facing the altar. The balance of chancel vs. nave seating is almost the reverse of the Hensley Memorial chapel – perhaps reflecting the greater numbers of members of the College requiring seating. What the two chapels have in common is a very traditional “high church” focus on the altar – the absence of an equally prominent pulpit perhaps reflects a focus on the function of administering the Sacrament rather than on that of preaching.

Chapel furnishings include the lectern and altar from the Windsor chapel, as well as a font made from the Ship’s Bell of HMCS King’s, the “stone frigate” naval training unit that was based in King’s during the Second World War. The White Ensign of HMCS King’s is laid up in the Chapel, together with the Colours and Guidon of the Halifax Rifles. The Chapel features various memorials, including plaques to commemorate the dead of both World Wars, and in honour of the original Founders of the College.

As mentioned previously, the Hensley Memorial chapel is currently the chapel of Kings Edgehill School, an independent school that maintains an Anglican tradition. The King’s Chapel



Hensley Memorial Chapel, Windsor. (Courtesy of NSARM)

continues to hold daily Offices and regular Holy Communion services; although no longer offering degrees in Divinity (now offered through the Atlantic School of Theology), King's still maintains a tradition of Anglican worship. Both buildings provide an interesting insight into the development of both the Anglican church and education in Nova Scotia, and are unique parts of Nova Scotia's diverse heritage of ecclesiastical architecture.

1 Berrian, William, Rev. Dr. *An Historical Sketch of Trinity Church*, New York. New York: Stanford and Swords, 1867, p. 104.

2 Ibid, p. 23.

3 Cuthbertson, Brian. *A Journey Just Begun: A History of the Diocese of Nova Scotia and Prince Edward Island, 1710-2010*. Halifax: Diocese of Nova Scotia and Prince Edward Island, 2010, p. 140.

4 Hathaway, Janet *et al.* "University of King's College Architectural Records

Collection", p. 2.

5 Vroom, Fenwick Williams. *King's College: A Chronicle*. Halifax: The Imperial Publishing Co. Ltd., 1941, p. 129.

6 Hathaway, *op. cit.*, p. 2.

## Église Saint Jean-Baptiste, Corberrie

*Father Maurice LeBlanc*

It is not at all clear when the present church in Corberrie was built. According to a document by historian Placide Gaudet, kept at l'Université Saint-Joseph, now l'Université de Moncton, on September 5th, 1837, Father Jean-Mandé Sigogne\* blessed a cornerstone in that area, for a church dedicated to Saint John the Baptist.

On September 1st, 1841, the church was completed and blessed by Father Jean-Mandé Sigogne. The church was situated on the only road running between Yarmouth and Weymouth, and faced east. Later, the church was oriented towards the south and has remained in that position ever since.

Unfortunately the archives concerning this church were lost in the fire that destroyed the rectory in Church Point in 1893 and for that reason it is not known if the original church was demolished or simply renovated and reoriented on the site it occupies today. During its restoration a steeple was added to the building. Nobody seems to know when and by whom the renovation was done. We know that in 1904, while Father Jérémie Sullivan was pastor of Saint-Bernard, and Saint John the Baptist was a mission of Saint-Bernard [parish], the church was enlarged to its present size.

The church is situated on a level grassy surface, of which a good portion forms the cemetery. Its setting gives the building a certain elegance. As far as the architectural lines are concerned, there is nothing extraordinary: the building is rectangular with a gable roof, the steeple in the front and a sacristy in the rear. The windows, with their semicircular arch, have adopted the Romanesque style. Nevertheless, the spire that surmounts the tower of the steeple has the form of a svelte pyramid, while three walls form the apse. These are the main features of the exterior of the building.

The interior, while modest in its dimensions, does keep to the traditional



formula of three naves, a central one and two aisles, while the vault consists of a flat ceiling.

A kind of triumphal arch frames the sanctuary. The altar and the tabernacle are of simple design and the retable is practically nonexistent. A statue of Saint John the Baptist stands over the tabernacle. The Romanesque lines of the exterior are repeated inside with the grand arcades supported by the columns of the naves and the arch at the entrance of the sanctuary.

The community in the Corberrie area has diminished during these past years and the church has been closed.

The Village Acadien de la Nouvelle-Écosse in West Pubnico would be pleased to inherit this building. It would surely be a great asset to the historical village. Of course all this means money. Will it ever happen? We shall wait and see!

*\* Father Jean Mandé Sigogne was a French priest who fled his country during the French Revolution and went to England. In 1799 he came to Nova Scotia and was a missionary of high repute on the French Shore until he died in 1844.*

## *The Bandstand in the Halifax Public Gardens*

*Lyndon Watkins*

However wonderful it might be, spending half a million dollars to fix the bandstand in the Halifax Public Gardens might seem a trifle excessive. But as the dismantling proceeded late last year it became more and more obvious why the work had to be done. Literally, from top to bottom, the structure was doomed. The ravages of time, and the renovation mistakes of the past, had severely imperilled the structure.

The biggest challenge facing Dora Construction's renovation expert, Ron Cahoon, was overcoming the poor workmanship involved in the "quick fix" approach taken in the previous overhaul in the 1970s. A new concrete foundation was poured at that time, replacing the original stone wall.

When attempting to re-make the upper portion of the bandstand this time, the engineers found a four inch difference in some of the steel columns supporting the roof. Anchor plates securing the metal column had also rusted away to such an extent that they were no longer doing their job. And the immensely heavy red fibreglass roof was literally coming apart at the seams, allowing water to drip into the building's wooden interior and filling the columns with as much as a foot of water.

Avoiding the underlying design and materials problems that allowed the fibreglass roof to cause so much damage was a major challenge. Rather than replace the entire foundation, it was decided to make up for the column discrepancy within the design of the new octagonal roof.

Any change to the roof posed something of a public relations dilemma, the much photographed red dome having become visually synonymous with the Gardens. It was clear from the outset, however, that if the bandstand was to survive for another hundred years, it was imperative that tried and true traditional approaches should be made

in re-constructing the building. No more quick fixes. It was known that some form of metal was used on the bandstand's original roof— copper, zinc, or lead being the most likely. Because of its durability and reliability, 16-ounce sheet copper was chosen this time, to be installed in sections by Ontario sub-contractors Copperworld, and made water-tight by soldered seams.

As a result of all these efforts, what the public will see of the rebuilt bandstand will appear very close indeed to what Henry Busch, its German-born architect, designed 114 years ago to celebrate Queen Victoria's Diamond Jubilee. Decoratively, it will be as close to the original as historic building conservator, Kellie McIvor, and the five member Dora Construction team could make it. About 75 per cent of the railings and some of the other decorative features are original, and painstaking research will have restored the original muted primary colour scheme. There are two shades of green and a combination of red, blue, white, and ochre.

Beneath the surface the structure is to be almost entirely new. Not everything, however, is quite what it may seem. Were he to attend the Bandstand's grand re-opening in late May, even architect Busch might not spot the faux feature in the new visual conceit. Retained from the 1970s in the "new" bandstand are the fibreglass sleeves that conceal the steel support columns. These were made to resemble the original old pine wooden columns that predated the 1970 fix. They are impervious to weather and did such a good job of appearing to be wooden that Parks Canada, renowned as a purist in demanding the use of historically appropriate materials in National Historic Sites, like the Halifax Gardens, allowed their inclusion in this year's restoration.

Unquestionably, the sensitive combination of old and new building techniques and materials is important in any restoration. Seeing a building's

preservation and knowing that it will last long into the future is what gives Ron Cahoon and his team their greatest satisfaction. In nearly 40 years of work in the field, Ron has been involved in some of the most notable restoration projects in the region. These include the remarkable post-fire restoration of St. George's Round Church in Halifax and St. John's Church in Lunenburg, as well as a general conservation of the Little Dutch church in Halifax.

The city is not alone in seeking to save its revered Victorian bandstand. Elsewhere in the world a rash of similar preservation projects is underway.

Unlike Halifax's bandstand, most of the European structures seem to have used cast iron as their main component. This was certainly the case with the large, amazingly elaborate bandstand built within the City of Derby's famous Arboretum. Conceived and executed in 1827 by the famous landscape architect, Joseph Strutt, the Derby arboretum was the world's first public park. A daring social innovation for its time, its fame spread to North America and was inspirational nine years later in the first tentative steps leading to the eventual establishment of the glorious Halifax Public Gardens. Sadly, the Arboretum's own bandstand, a large and elaborate example of the iron workers' art, was destroyed when Luftwaffe bombs fell on that city in 1941. It was never rebuilt.

*The Friends of the Public Gardens have launched the Victoria Jubilee Campaign to raise funds to help defray the cost of restoring the Bandstand (see [www.halifaxpublicgardens.ca](http://www.halifaxpublicgardens.ca)). A grand re-opening is being planned for Victoria Day, May 23, 2011.*

# The Conservation and Restoration of Stained Glass

Norbert Sattler

## The Art and Craft of Stained Glass Windows

Stained glass windows not only illuminate the sanctuaries of many churches, they also grace windows in private homes and public buildings. They can be figurative, scenic or ornamental and they are an integral part of the buildings they adorn. To that end, they are part of our architectural heritage. In order to understand how stained glass deteriorates, one must first understand the materials and how they are combined to create a window. This article aims to demystify stained glass and thus help proprietors be proactive and informed about the conservation and restoration of stained glass windows.

The tradition of stained glass dates back to the 8th Century when coloured glass was first assembled to create Biblical scenes, which illustrated the gospels for the illiterate. To this day, stained glass is made of molten glass, which has been blown or rolled, and then shaped into sheets. These coloured sheets become the palette from which the glasscutter makes his selection based on the artist's concept. In traditional stained glass windows, the cut coloured glass pieces are often hand-painted with special vitreous glass paints. Depending on the style and purpose of the window, the painting might consist of a simple application of trace lines (black) and silver-stain (yellow), and/or a combination of matting, stippling and back-painting to create a three dimensional effect. The paint is fired into the glass at a very high temperature to permanently fuse the paint to the surface of the glass. The individual glass pieces are *glazed*, or assembled, into panels with lead-came; this is called a lead *matrix*, which is soldered, at the joints. Finally putty is worked under the lead comes, on both sides of the panels, to make them watertight and stable.

While neither the craft of stained glass, nor the tools used, have changed



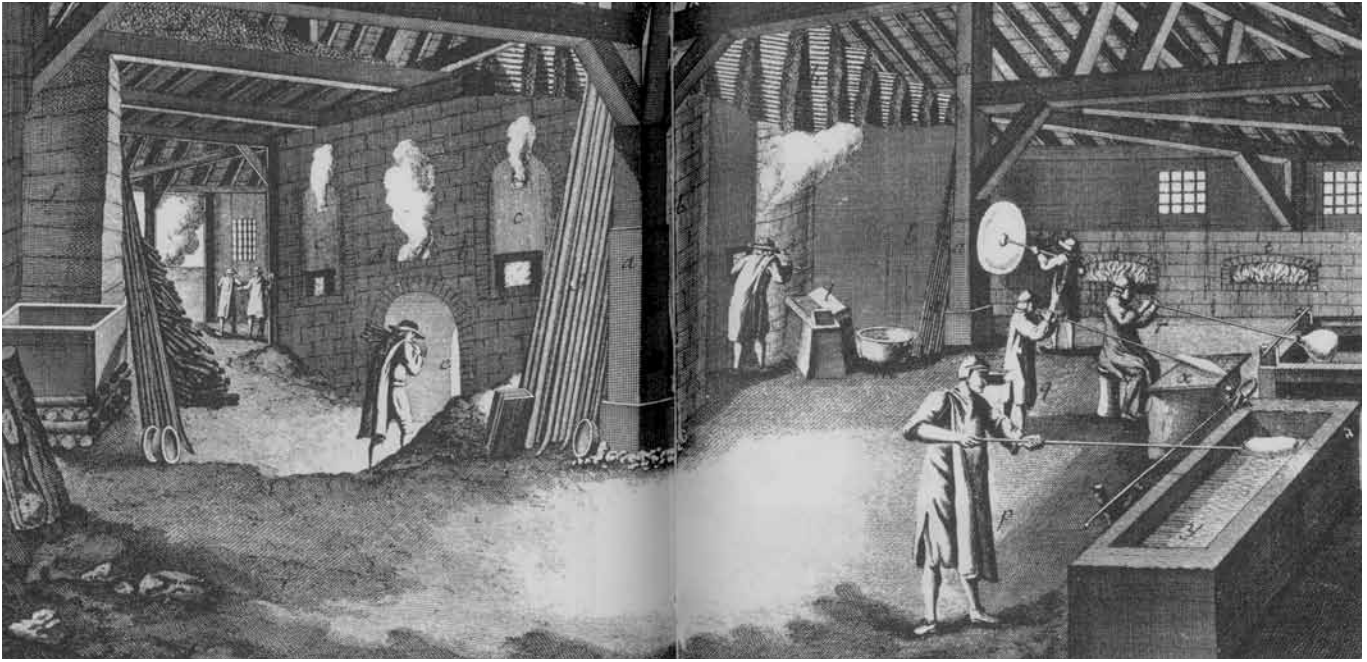
*Glass-making today.*

much since stained glass windows were first glazed, new types of glass have been developed. Nonetheless, mouth-blown glass continues to be made by the oldest known technique for making glass; this glass is therefore known as *antique* glass. The art of blowing glass has its own rich history. Years of training and generations of secrets have culminated in the ability of the glassmakers to make over 6000 different colours through a fusion of quartz sand, limestone and pot-ash and various metal oxides, including gold and silver. Thus, it offers not only the largest spectrum of colours, but also a natural unevenness and texture that creates a "liveliness" unique to this process. As such, *antique* glass remains the finest quality of glass available. It was normally used by European, and some Canadian, studios to make ecclesiastical stained glass windows and is still used by major North American studios today. It is therefore the kind of glass typically required for church restoration work, such as the stained glass window restorations for St. John's Anglican Church in Lunenburg, Nova Scotia.

Like coloured *antique* glass, old *clear* glass can also display a variety of textures due to the mouth-blowing technique. Older homes often have clear *antique* glass installed in their windows that often goes unnoticed. In the United Kingdom, clear glass used to be spun into roundels measuring 6 feet in diameter. Each roundel has a circular pattern that centres in the middle, which distinguishes it from other mouth-blown glass. Windows made of these *roundels* are extremely rare and great care should be taken in preserving them, especially because *roundels* of this size are no longer being made. Small roundels are still being fabricated.

Later advancements in the trade of glass making resulted in handmade *rolled* glass, also called *table* or *cathedral* glass, which is made by pouring molten glass onto a flat surface and rolling it out. This process has been mechanized resulting in *machine-rolled* glass, which features more texture, but less colour variety than the *cathedral* glass. *Drawn* glass is available with a variety of patterns, but with limited colour variation.





*Glass-making the old way.*



*Sagging.*



*Norbert Sattler cutting glass.*

Finally, *float glass*, also known as *industrial glass*, is clear glass without texture. It is available in large sizes, and is used today in all window applications.

### Stained Glass Conservation

Sadly, according to Department of Canadian Heritage statistics, in the 30 years from 1970-2000, Canada lost between 21 and 23 per cent of its historic building stock and that unfortunate trend continues unabated. Stained glass windows are another part of our cultural heritage that continues to be threatened by deterioration.

Stained glass windows are, like all other outward-facing parts of a building, subject to the influences of climate and the wear of the window's mechanical uses. Although glass and lead are chemically very durable materials, they are still affected by acid rain, nitric oxide and other harmful emissions. Exposure to fire, as in the windows of St. John's Anglican in Lunenburg, adds yet another dimension to the problem of deterioration in both the lead matrix and the glass.

Many older windows display some signs of deterioration due to age-related fatigue. The lack of proper support between panels and the size of the panels can create problems. In older windows, the lead matrix is weak; the panels are

buckling and sagging; and the putty is brittle and falling out. The main cause of bulging of the panels is the size of the windows and the fatigue of the lead over time. Many windows were originally installed in one piece and the weight of the whole window presses down on the base, causing bulging. Sometimes improper design of the original lead matrix or faulty installation can also contribute to early sagging and bulging.

Fortunately, with some awareness of telltale signs, proprietors of stained glass windows can identify stained glass deterioration. With early intervention and the use of the proper conservation and restoration techniques, the loss of stained glass can be prevented. First and foremost it is advisable to ensure that stained glass windows are documented in order to monitor any changes in the condition of the window. Furthermore, each window should be photographed and a physical inspection should be performed as follows:

- Lead matrix and solder joints: Inspect your panels for general sturdiness. Consider, does the window rattle? Does the matrix have cracks or are sections of the lead came missing? Are any solder joints broken? (This is only visible using surface light.)
- Sagging or bulging panels: Are

there bulges in the panel? Inspect your window, especially the higher panels, for downward movement. Is there a gap between panels or an overlap elsewhere?

- Fading paint: Inspect the glass for faded paint. Consider, is there any paint that is less visible than other parts? Can you only faintly see the outlines of what must have been a figure or ornament?
- Detached copper wire: Inspect the connection between the copper wire and lead came. Are they detached? Is the rod separating from the panel?
- Broken/missing glass: Look for broken or cracked glass. This is especially dangerous if the glass is loose and threatening to fall. Glass often breaks when windows buckle.

In addition to the inspection of the stained glass itself, the frame, the support system and the outside protection and ventilation need to be checked.

Should any one of these signs of deterioration be apparent in the stained glass window, it is advisable to ask a trained professional to assess the degree of deterioration of the window. They will also be able to make a recommendation regarding the best conservation/restoration procedure for the window.

### Stained Glass Restoration

Each restoration and conservation effort has to take into account the immediate technical needs assessment and to consider, as well, the historical and cultural significance of the window and the building. Today, the conservation and restoration of stained glass windows is, just like other art forms, subject to strict guidelines set by conservationists and historians.

The guiding principles of any conservation/restoration project are to take utmost care of the original substance and material, to provide the best possible protection from future anticipated strains and stress and to maximize approximation to the original. Therefore it is important to retain as much as possible of the existing design, material, and esthetic value of the stained glass



*Glass separating from lead came.*



*St. John's, Lunenburg after the fire.*

windows. To return the stained glass window to its original form and design may necessitate the removal of prior unjustified or poorly executed repairs and/or the replication of missing portions of original work. Any treatment should be as minimal as possible and the least invasive necessary, to properly satisfy the needs of the project.

On site, an initial assessment of the windows is made along with photographic documentation. Each window should be labeled according to a floor plan of the building. Before the individual stained glass panels are removed from the frame, they need to be stabilized and then carefully crated to prevent further damage. Upon arrival at the studio, the panels undergo a detailed inspection including the use of a microscope, to analyze the paint,



*St. John's, Lunenburg after restoration.*

the glass and the condition of the lead. This assessment determines how each step of the restoration process will be handled, based on the principles above. The glass is carefully cleaned and any broken glass is either replaced with new glass that has been selected according to colour and type and hand painted, if necessary to match the original, or glued. Alternatively a thin copper foil can be inserted into the crack to

stabilize the piece. When needed, the window is re-glazed and the lead matrix is stabilized with putty. An assessment of the window structure, in relation to its reinstallation, is also made in order to determine if additional measures are needed to securely stabilize the window for future preservation. Copper wires are soldered onto the lead matrix so they can be attached to the reinforcing rod. The individual panels are installed using steel t-bars to support each panel in the frame. The issue of exterior glazing should also be addressed, if none exists. It is usually advisable, but attention must be paid to proper ventilation. Finally all windows should be photographed and a detailed report about the restoration should be filed for future reference.

With attention and proper care, stained glass windows can be preserved for future generations to enjoy and appreciate for their art and craft, and the history they represent.

*Norbert Sattler is the owner and operator of Sattler's Stained Glass studio and the Maritime Stained Glass Registry. He has over 40 years of experience working on conservation and restoration projects, as well as new stained glass commissions, in Europe, Canada and the United States. He began his career in Germany by completing a formal apprenticeship for stained glass artisans. He then worked for a number of different studios in Europe before eventually becoming a master at the world renowned studio, Mayer's of Munich. In 1980 he opened his own studio near Augsburg and successfully built and operated that for 20 years. Then in 1993, he brought his considerable knowledge and expertise to North America, establishing a studio in West LaHave where he now lives. Recently he was recognized by the Nova Scotia Heritage Trust for his skilful restoration and re-creation of the stained glass windows in St. John's Anglican, Lunenburg, and for his documentation of stained glass windows in Nova Scotia churches (Maritime Stained Glass Registry). His studio also contributes to contemporary art in Nova Scotia by inviting fine artists into the studio to make unique works of art in glass.*

## School's Out!: Breath of Life Comes to Truro's Surplus Schools

Janice R. Zann

Recycling old buildings has been a common practice since time immemorial, particularly in the Old World. Canada has only just begun to connect the idea of recycling buildings with the recycling of our plastic, glass and metals in our daily routines.

Some interesting examples of the adaptation of old buildings to new uses can be seen in Spain, especially in the southern province of Andalucía. The Moors, having occupied Spain for 700 years, left behind a wealth of architectural gems, including mosques scattered throughout the many villages in the Sierras. After the Reconquest by the Christian monarchs, Ferdinand and Isabella, in the late 15th century, these buildings were quickly converted into Christian churches, with the minarets becoming bell towers.

The most notable example of such an adaptation is the conversion of the great Mezquita (Mosque) in Cordoba. There, in the centre of an enormous building constructed between 785 and 787 by Abd al Rahman I, featuring over 850 columns of candy-striped jasper, granite and marble, members of the Hernan Ruiz family began in 1523 to construct a large Catholic cathedral. Stunningly beautiful with its Italianate dome, it is nevertheless located in the wrong place. Even the Holy Roman Emperor, Charles V, was shocked to see that it had spoiled such a unique structure as the Mezquita. However, the columns of the Mezquita had been recycled from a former Visigothic church on the same site. The latter church had originally been a Roman temple.

In the 1960s, many town planners in Nova Scotia felt that anything "old" was worthless and, therefore, had to be torn down. Fortunately, in this 21st century, environmentally-conscious developers are beginning to recycle



Proposed Farmers' Market (Courtesy Paul Zann)

our buildings rather than demolish them. In a recently acquired book, *Re-Use Architecture* by Chris van Uffelen (published by Braun)(www.braun.com), some fascinating examples of adaptive re-use around the world are depicted, many of which could be emulated in Nova Scotia. A school in the Netherlands has been converted into a restaurant and offices, with an enclosed glass roof atrium over the courtyard. In Paris, a 17th century Recollet convent has been converted into the Museum of Architecture. In Newtown, Sydney, Australia, concrete silos and a complex of tall timber storage bins, originally used for the storage of grain, have become *The Silos Apartments*. In Victoria, Australia, former tobacco kilns have been incorporated into a domestic house. In Pamplona, Spain, a medieval palace has become the general Archives of Navarra. In Chile, the new Licanten Public Library was once a metal shop built in 1837 for trains. Creative ideas for adaptation are boundless.

Many developers in Nova Scotia are beginning to see the benefits of re-us-

ing existing architecture for conversion to modern uses, rather than sending masses of material to landfill sites. In Truro, for example, the landmark building of the former Willow Street Elementary School (1915, architect E.D. Vernon) is now sporting a new look – a new copper roof, restored cupola, renovated windows. The resurrected building is now called *Willow Lofts*. Some Italianate influence can still be seen in the round stone arch entrance ways, and stone lintels and sills. This is the brainchild of Truro businessmen, Ron Meech and Garfield Moffatt, who both attended the school when it was a rabbit-warren of classrooms. These two men recognized the "good bones" of the structure, noting that the sandstone and brickwork were in great shape, along with the wide hallways and the four metre high ceilings. They realized its potential for transforming into nine office spaces on the lower level and 10 high-end residential lofts on the upper floor. Their priority was to maintain the original exterior intact as far as possible. The Colchester Regional Development Agency (CORDA) *Busi-*

## New Means to Explore Old Buildings



Photo of Willow Lofts (Courtesy Mike Muggeridge)

*ness Magazine* describes the project as a prime example of how entrepreneurs can tap into what it refers to as the "Silver Economy" (younger working-age entrepreneurs providing services for retirees). Undoubtedly, the location within walking distance of all downtown amenities will make it attractive to seniors and other tenants. Most importantly, this historic building has been saved. Hats off to these two innovative and environmentally-responsible developers.

This is not the only success story for this pair. The abandoned St. Mary's Elementary School they intend to convert into townhouses. Thus, of the five schools made surplus when they were amalgamated into the newly-built Truro Elementary School, only one met the wrecking ball. One is now the Adult High School, while another has become a community recreational centre and home to a branch of Bridgeway Academy. The Provincial Normal College, a Second Empire architectural gem in Truro's historic precinct, opened in 1878 for the education of Nova Scotia's teachers. It is still being considered for a School for the Performing Arts, since a \$60,000 feasibility study resulted in a positive finding. This would be an

enormous economic boon for the town. However, an infusion of cash would be necessary for this project to proceed in this vacant building.

Exciting news this fall was the announcement at the Saturday outdoor Farmers' Market that the former historic Truro Fire Hall (1899) would open in March 2011 as a year-round indoor Market, with facilities for outdoor vendors during the summer months. MLA Lenore Zann announced funding of \$100,000 towards this project. With Truro's state-of-the-art hospital scheduled to open in 2012, and work having commenced on a new Civic Centre adjacent to it, a performing Arts School and a new Library could ensure that Truro would become, even more than it is now, a desirable location for both young and old.

South End Halifax resident and software developer Ian Booth recently published an app [downloadable program for a smartphone] for Android smartphones called *Heritage Buildings of Halifax*.

This app maps over 350 interesting older structures ranging in age from Saint Paul's Church (1750) to the 1930 Bank of Nova Scotia on Hollis Street.

The user's actual location is highlighted on a satellite-view map. Clicking an icon brings up a brief description of the nearest building of interest, usually including the date, style, and architect.

There are reference sections illustrating familiar architectural styles and discussing a half dozen famous local architects.

Ian hopes this app will appeal both to cruise ship visitors and to Halifax heritage buffs, and will increase awareness of the city's older buildings. He has previously published a similar app on the Victorian mansions of Montreal's Golden Square Mile and is completing another on the Halifax Public Gardens.

The app is available for download on the Android Market for \$20.

### Religious Buildings Symposium II

April 16, 2011  
9 am-4:30 pm

#### Atlantic School of Theology

Fee \$60 includes coffee break, lunch and Musique Royale concert (David Greenberg and Chris Norman).

Register by April 8.  
See [www.htns.ca](http://www.htns.ca) for program details or call the Trust office (423-4807).

## *Endangered Schoolhouses: The Palace Schools of Victorian and Edwardian Nova Scotia*

*Janet Morris*

As the Province faces threats of budget cuts to the school system, this retrospective look at the history of publicly-funded school buildings by Dr. Paul Bennett becomes particularly intriguing.

When schools first became publicly funded or supplemented by a public tax, there was an outcry as some taxpayers didn't want to fund this new social initiative. The schools had previously been religious or private initiatives, and the ubiquitous little white schoolhouse (later painted red) dotted the province. Though remembered with nostalgia, the one-room schoolhouses tended to do little to address children's needs. They were often small, stuffy, ill-lit, and had inadequate basic facilities (like plumbing or heating), not to mention a lack of recreational facilities. The 1870s to 1930s saw new public schools become the subject and object of civic pride. These large scale projects were contentious – taxpayers often resisted them.

When the "Palace Schools" were first designed there was no recognizable archetype, and architects like Henry F. Busch and Harry Mott worked from models of British Grammar schools of Gothic style illuminated with dim light (like churches), and designed for adult eyes. Gradually a modern progressive school archetype developed, breaking from the Gothic revival style, and more attuned to students' needs. Felix Clay was a leader in this break, followed on the national scale by Walter Lachance, who introduced better ventilation.

An early example of a Palace School was undertaken in Saint John, New Brunswick by Harry Mott. In Halifax, Henry Busch took the leading role as the architect for the Halifax County Academy, which opened in 1878. Civic argument churned over, "How can we afford such a building?" and "Should a

school be situated on 'Knock'em down Row'?" as the south end of Brunswick Street was known. Also opening in 1878 and designed by Henry Busch, the Truro Normal School was very similar in design to the Halifax Academy. It served as a teachers' training school from 1878 until 1961, and is now a National Historic Site.

Some academies were located in park-like settings, after the philosophy of Hodgins and Ryerson. The sites themselves spoke of power, influence and the importance of the edifice. Charlottetown's Prince Street School sported two acres of playground, pathways, and a fountain. The Yarmouth Academy was grandly situated on Parade Street. In Lunenburg, the Academy was built on a magnificent site at the top of the hill (formerly known as Gallows Hill). Opened in 1894, the Academy is scheduled to close its doors in June.

The first thirty years of the twentieth century were a golden age for Palace Schools. The buildings demonstrated the value placed on education and the sites chosen were strategic, important locations. Walter Busch (son of Henry) devoted a considerable portion of his work to school design and during his career he built ten schools. The priority was quality. His work included a school on Kaye Street (destroyed in the Halifax Explosion), the Oxford St. School, St. Patrick's School, Tower Road School, Bloomfield School (also lost in the Halifax Explosion) and Chebucto School (which survived the explosion). Another architect who devoted much work to school design was Leslie Fair of Wolfville, active in the 1920s.

The growth and expansion of school boards led to homogenization of school design, as well as internal bureaucratization. Private architectural design was replaced by institutional design. As the twentieth century advanced, school boards became more cost conscious,

and schools assumed a more institutional look and a more bureaucratic interior. They evolved into low-rise institutions with little embellishment and a forgettable aspect. Bennett noted that now location turns on what property is available and the cost of land. In considering the future of education Bennett opined that bigness and bureaucracy are probably here to stay, but the possibility exists that smaller schools will ultimately triumph, or perhaps "schools within a school" will evolve. In 1961 the grant system for schools changed, such that school boards got much more money for construction of new schools than for renovation of existing buildings. Bennett noted that there is no inventory of school houses built in Nova Scotia – this would be a monumental task, as in the 1940s the province had 1700 school boards (today there are eight).

While in places like Boston some of the 1850s public school structures are still in use as schools, in Nova Scotia old schools tend to be decommissioned. The oldest public school buildings now in operation were built in 1922. Many of the old schools were lost to fire, including the original Lunenburg Academy, the Liverpool Academy and the Yarmouth Academy – some were certainly victims of arson. Others have been demolished, and some have seen adaptive re-uses, such as two schools awarded our Built Heritage Award. The Liverpool School is now the Rossignol Cultural Centre and Greenvale School, designed in 1915 by Andrew Cobb, forms part of an apartment complex called *The Lofts at Greenvale*.

It is apparent that the subject of school building types - which has surely crossed the minds of everyone who has attended a public school - has attracted limited study, and we are grateful to our speaker for his work on this subject, to be further expounded in his book due in April, 2011.

## Diamond-Lock Shingles: This brilliant design was a best friend for Nova Scotia roofs

*Bruce MacNab*

Nova Scotia is one of the windiest places in North America. This is great for windmills. But it's hellish for roof shingles. Centuries ago, carpenters realized that a roof in Nova Scotia must be designed and installed with care. Over time, roofs covered with slate, wooden shingles, copper and lead gave way to asphalt shingles.

Asphalt shingles have undergone quite an evolution of their own. Some of the early products were marketed as "Diamond-Locks." These shingles were well suited for Nova Scotia's windy climate. And the proof is in the pudding. Across our province, you will still find roofs that were covered with these diamond-shaped shingles about 50 years ago. And often, not a single shingle is missing.

The secret to the success of diamond-locks was the lower edge which tucked in under the adjacent shingles. This "lock" made it difficult for wind to lift the shingle. These shingles worked so well that locals even used them on exterior walls in place of traditional wooden sidings.

Eventually, three-tab shingles replaced diamond locks as the most



*These vintage 12 inch diamond-lock asphalt shingles are actually square in shape but are installed in a diamond pattern. Location: Oxner's Barrel Factory, Chester Basin.*

popular choice. The three-tabs were easier to install but had no built-in lock to secure the exposed edges. Instead, three-tab shingles needed to be glued down with tar to keep the tabs secured in wind storms. Manufacturers started adding a row of tar that would self-seal shingles in the heat of summer. To prevent shingles from sticking to each other in the bundles, a strip of plastic or paper was placed over each row of tar. In the old days carpenters had to peel these strips before installing the shingles. Today, the plastic strips are placed on the back of the shingles and don't need to be removed.

Roof shingles continue to evolve.



*The bottoms of diamond-lock shingles were notched to lock into the adjacent shingles, providing maximum protection from wind.*

Many modern shingles no longer feature the popular three-tab design. Likewise, many roof shingles now offer fiberglass reinforcement. Even with these improvements, there are still many roof problems in our windy province.

Self-sealing shingles work well except for installations in cold temperatures. In the winter months, today's carpenters must still glue down roof shingles with tar. In spite of modern materials and everybody's best efforts, the tar seal often fails in Nova Scotia. When this happens, shingles will flap in the wind and the lower portion of the shingle can break off below the nail line. The traditional three-tab shingle offers a natural breaking point for when this happens. This sacrifices part of the shingle in order to save the rest. This is disappointing, but at least you still have the upper portion of the shingle nailed to your roof. This will effectively keep the water out of your house while you schedule roof repairs.

Strong winds will sometimes lift entire shingles off a roof. When this happens, it is usually due to inadequate or improper nailing. Years ago, carpenters used six nails to fasten each shingle. Nowadays, four nails has become the norm. This reduction in nails happened while shingles increased in size  
*continued on page 16*



*It's better to lose a tab (above) rather than the entire shingle. The six nail pattern used here is called storm-nailing. Note: Dimes used as nails. (Not recommended for installations!)*

## Diamond-Lock Shingles

from three feet to one meter in length. This double-whammy effectively placed an extra 56% wind resistance burden on each nail area. Not surprisingly, roofing manufacturers still recommend six nails per shingle for high wind areas.

You don't have to be a shingle scientist to know why using six nails per shingle instead of four is sometimes called "storm-nailing." Perhaps it's time for Nova Scotia building codes to require storm-nailing in our windy province. Or maybe it's time for Diamond-Lock shingles to make a dazzling comeback.

*Bruce MacNab is a Red Seal journeyman carpenter who has taught apprenticeship and communications at NSCC. Coming soon: houseprofessor.ca  
All photos by author.*

### HTNS Illustrated Public Lectures

Thursday, 17 March at 7:30 pm  
**Graeme Duffus**

~ **History of Masonry and  
Architecture:**  
Stirling, Cobb, and Duffus

Thursday, 21 April at 7:30 pm  
**Iris Shea**

~ **The Pool House in Jollimore:**  
Uncovering the Mystery of  
this 19th Century House,  
its Original Location and Owners

Thursday, 19 May at 7:30 pm  
**Conrad Byers**

~ **The Role of Building Civic Pride  
through Buildings**

Museum of Natural History  
(Auditorium),  
Summer Street, Halifax.  
For more information,  
please call 423-4807.

## Programs Sponsored by Other Societies

### Canadian Archaeological Association

May 18-22, Annual Meeting in Halifax.  
Advance, senior, and student discounts.  
Pre- and post-conference tours.  
<http://novascotiaheritage.ca/caa2011/>

### Celts in the Americas Conference, Antigonish

June 29-July 2, hosted by St FX and CBU.  
[www.mystfx.ca/academic/celtic-studies/conf2011.html](http://www.mystfx.ca/academic/celtic-studies/conf2011.html).

### Central Chebogue United Baptist Church Spring Tea

April 16, 2-4 pm, by donation.  
Virginia Kleiner, 742-9333.

### Cobequid Planters 250 Conference

June 11, Marigold Cultural Centre, Truro.  
Marking the 250th anniversary of the arrival of settlers from Ireland and New England and the founding of Truro, Onslow and Londonderry Townships.  
<http://colchesterhistoreum.ca/planters-conference/>  
<http://colchesterhistoreum.ca/planters250/>

### Dartmouth Heritage Museum

Evergreen House, 26 Newcastle Street  
Tues.-Sat., 10-5 pm, \$2.  
To April 21, *Blades of Steel: Dartmouth's History on Ice.*  
May 3-28, *Brush In Hand: An Exhibit of Art and Decorative Art by the Bluenose Decorative Artists.*  
[www.dartmouthheritagemuseum.ns.ca](http://www.dartmouthheritagemuseum.ns.ca),  
464-2300.

### DesBrisay Museum

130 Jubilee Rd., Bridgewater  
March 3, 7-9 pm, John G. Langley, QC,  
"Steam Lion, a Portrait of Samuel Cunard."  
April 17, 9-4 pm, Easter willow basket workshop, \$30. Pre-register.  
May 8, 2-4 pm, "Mother Knows Best," Storyteller Clara Dugas will regale the audience with motherhood stories, light refreshments, \$10 in advance.  
[www.desbrisaymuseum.ca](http://www.desbrisaymuseum.ca), 543-4033.

### Friends of the Public Gardens

May 23 (Victoria Day) time TBA, Free Bandstand concert.  
[www.halifaxpublicgardens.ca](http://www.halifaxpublicgardens.ca).

### Heritage Officers Conference, Truro

June 1, Prof. Dev. Day, technology and internet tools and workshop for HAC members.  
June 2-3, concurrent sessions, open to interested members of the public. Reg. req'd.  
Info. Pam Macintosh [PMACINTOSH@colchester.ca](mailto:PMACINTOSH@colchester.ca).

### Industrial Heritage of NS

Maritime Museum of Atlantic, 7:30 pm.

March 7, Laura deBoer, "Shipwreck recording in the Sydney Tar Ponds."

April 4, Jay Underwood, "Railway innovation in Nova Scotia."

May 2, David Rollinson, "The Industrial Heritage of Rum."

[www.industrialheritagens.ca](http://www.industrialheritagens.ca).

### Mainland South Heritage Society

Captain William Spry Library  
To March 12, "A Pictorial Walking Tour of Mainland South, from Armdale to Pennant."

### Musée acadien & Centre de recherche, West Pubnico

March 15, 7 pm, Our history in stories, Laurent d'Entremont and others, \$3.

March 17, 1:30 - 3:30 pm, Francophonie Days, Craft demonstration and sale.

March 29, 1:30 pm, Storyteller Clara Dugas reading from her latest book.

April 4, May 2, 7:30 - 9:30 pm, Soirée de Musique / Kitchen Party, music by local artists with sing-song of Acadian Songs. Tea, coffee or juice, \$5.

April 22, Earth Day, 10-3 pm, "Gardening in the Acadian garden" and 7-9 pm, attracting birds, organic gardening and birdhouses.

[www.museeacadien.ca](http://www.museeacadien.ca), [museeacadien@ns.sympatico.ca](http://museeacadien@ns.sympatico.ca), 762-3380.

### NS Archaeology Society

Rm. 165, Sobeys Bldg, SMU, 7:30 pm.  
March 22, Charles Burke, Parks Can., "New Information from Fort Gaspereau National Historic Site."  
April 26, TBA.  
May 24, TBA.  
[www.novascotiaarchaeologysociety.com](http://www.novascotiaarchaeologysociety.com).

### Royal NS Historical Society

Public Archives of NS  
Meets third Wednesday of month, 7:30 pm.  
March 16, William Laurence, NS Dept. of Justice, "Learning the Law: William Young's Legal Apprenticeship in Early Nineteenth-Century Halifax."  
April 20, (Annual Dinner, location TBA), AnneMarie Jonah, Parks Can., "Small Pleasures: Gifts and trade in personal correspondence between France and Louisbourg."  
May 18, Peter Twohig, SMU, "An immediate solution to our nurse shortage?: Nova Scotia nurses confront medicare."

### Yarmouth County Historical Society

22 Collins Street  
March 2, 2-4 pm, Abigail Robbins, Grantee #1, and John Crawley, land surveyor, "Whose land grant do you live on?" (examining the 1767 grants of all the land in Yarmouth Twp., now Yarmouth Municipality and Town, to 150 people).

### Yarmouth 250

<http://yarmouth250.com/events/>