



The Quarterly Newsletter of the Virginia Society of Landscape Designers

Winter 2011

In this issue:

1. President's Message
2. Lyme Disease Article
3. LED Lighting Article
4. Editor's Notes
5. MAHSC Follow up
6. LGBG Update
7. VNLA Events
8. VSLD Events
9. Board Members and Committees

President's Letter

How quickly a year passes! I have so enjoyed being your president. The benefits of serving on the board are numerous. I have had the opportunity to work with very talented and professional people. It has forced me to "step outside the box" and learn how to use the latest technology. I admit I still have a lot to still learn in that regard. I have met interesting people in other horticultural areas. I have made friends that last a life time. (I still enjoy people who were on the board when I was vice-president back in the early 90's.) Being on the

board helps you develop various skills as well as friendships so I would like to encourage any of you who have not served to give it a try. You will be glad you did.

This past year we celebrated our 50th anniversary.

We started with our annual winter meeting at Gari Melcher's Studio Pavilion in Fredericksburg, Virginia. Kathy Wulf Corker provided a display of VSLD historical items. We had a design contest. Our guest speakers were Joe Eck and Wayne Winterrowd,

"Designing Gardens, the North Hill Way. Thanks to Denise Hargraves for organizing this event.

Our summer tour was a real treat as we spent 2 ½ days in Raleigh, North Carolina. We visited private and public gardens and Tony's Plant Delights Nursery. Great fun was shared by all. Heather Taylor spent many hours planning and organizing this tour, thank you.

Monit Rosendale has made great strides with our website. If you haven't visited it lately you need to see it. She is also the certification committee head. Thank you, Monit for your hard work.

Christie Barry, Terry Tosh and Jane Abbott divided the responsibilities once done by Nanette Parsons. We had no idea how much she was doing by herself! Thank you girls for all the hours you have spent organizing the treasurer's, membership' committee's, and secretary's duties and then doing it! Jane Abbot is stepping down after several years as secretary. Jane, we appreciate all that you have done. Thanks!

Summer Tour is being organized by Yulita Ellis. Thank you.

Chris Coen is the one who keeps us informed. She is the one who sends emails to all the members. She also attends the Virginia Green Industry Council meetings and reports back to us. She has also, been my backup person when I have been out of the area or sick. Thank you for always being there.



As past president, Scott Creery was an invaluable resource person. I could go to him any time and get is advice or opinion. Thanks for the support.

Eve Willis is our booth person. She organizes when and where our booths go, who is manning them, who is picking them up. She has driven many miles to deliver and pick up the booths. We appreciate your efforts.

Brian Bulman has created a very professional newsletter and is our editor. Please feel free to send him articles and pictures. You receive CEUs and you are helping to inform our membership. Thanks, Brian for your time and effort.

Denise Green chairs the publicity committee. She helps us get articles into newspapers and magazines. When you have something to share with the community, send it to her. Thank you, Denise.

Kay Moore is our contact person at the Lewis Ginter Botanical Gardens. When we can partnership with other organizations, we all benefit. Thank you, Kay.

As you can see, it “takes a village” to run VSLD. Please give thought to volunteering your services. As the saying goes; “many hands make little work”.

Article – Lyme Disease

The following is an article originally published in the [Roanoke Times](#). Thanks to Michele Fletcher for bringing this to us with a great foreword by Hugh Perry. For more information and the two follow up articles please visit **Beth Macy's** blog at;

<http://blogs.roanoke.com/lyme/2010/12/salvos-launched-in-lyme-dispute/>

Hugh Perry's Foreword:

Why be serious about Lyme? Here is my experience.

Lyme can affect every system of your body or none at all. It can come on strong immediately after a bite, or years later. Symptoms may also appear gradually and

subtly over many years. I know a doctor who attended my church. His wife and children suffered from chronic Lyme for years (the children caught it from Mom while in the womb). He decided to be tested just in case. The test came back strongly positive and yet he showed no symptoms. And it is not just Lyme we ought to be worried about. The same tick bite can inoculate you with Babesiosis, Ehrlichiosis, Bartonella, Rocky Mountain Spotted fever, and various other co-infections. {These are} very nasty marauders to say the least.

My symptoms appeared gradually over time. I am allergic to ticks. I know when I am bitten within one hour. I Itch and develop a 10-day welt. I never had a rash, nor was any tick ever attached to me for the 48-hour time period certain Physicians claim is required to become ill. If you have a 10-second bite, consider yourself sick. I have kept very good records on my road to recovery. I experienced vision issues, head tremors, hand tremors, numbness, joint pain, joint inflammation, ringing in ears, drenching night sweats, dementia, irritability, brain fog, digestive issues, heart burn (killer, off the scale sort of heart burn), headaches, total body stiffness, difficulty walking, allergic / allergy issues and fatigue among many other more subtle issues. I have never tested positive for Lyme, before, during or after treatment. Yet I am nearly symptom free at this point. Because of the time I spend outdoors, I had myself tested multiple times beginning in the 1990s. My earliest symptoms that I can trace without mistake to Lyme began in 1998. There are other symptoms I strongly suspect are related to chronic Lyme that began in 1986.

I do test positive for Babesiosis, which is a tick borne disease similar to malaria. Most that test positive for Babesiosis also have Lyme. In 2006, I was going through intensive treatment. At that time, conventional (**not LLMD - Lyme literate medical doctor**) Physicians I spoke with indicated I no longer had Babesiosis. They claimed the positive test results confirmed I had Babesiosis in the past, the antibodies in my blood as evidence. According to the CDC {Centers for Disease Control and Prevention}, I recovered on my own. Interestingly enough, my

LLMD claimed I was still ill. I didn't need a doctor to tell me that! As of a few years ago, the Red Cross concurs. They will no longer accept blood donations from any individual ever diagnosed with Babesiosis. Tainted blood will transmit Babesiosis.

I have also read that two out of three people employed in our field are infected with a tick-borne disease. We gardeners are a hardy bunch in general. We like to get dirty. We are a group that may not show symptoms immediately. The longer you have Lyme, the more difficult the detection and the more difficult the cure. Indeed a cure is not possible for some people with late stage Lyme. Most Physicians are completely mis-guided when it comes to tick-borne illnesses. You must be able to diagnose yourself.

So what do you do? Here is my best advice:

- Find a LLMD near you and establish a relationship.
- Know what a deer tick looks like and check yourself often. You will need mirrors or a good friend to do this. (See the photo to get a better idea of the size of the tick we're talking about.)
- If you are bit, forget the tests, your LLMD will prescribe at least one week worth of Doxy. If they do not, they are not a LLMD. You must begin treatment as soon as possible, within 24 hours is best. This is the best possibility of avoiding infection.
- Know the symptoms.
- If you have symptoms and believe you were bitten recently, your LLMD ought to recommend 30 days or more of Doxy. This is the best possibility of no long term infection.
- Know the high risk areas for ticks and high risk times of year. Spray feet to knees and hands, at a minimum, with Deet.
- Be tick-a-phobic!!! I sure am. I still get bitten each year, even with these precautions.
- If you have symptoms that go way back, try treating Lyme. If there is a change in your condition (better or worse), you have chronic Lyme and a long road ahead. {I am} so sorry for you.



Salvos launched in Lyme debate

The rise of the tick-borne disease in Virginia has created a political and medical divide



As far as the medical establishment is concerned, chronic Lyme disease doesn't exist. But those who fight crushing fatigue and cognitive impairment, such as Blacksburg resident Taylor Albright, left, question that notion. After more than two decades, Taylor and husband Victor Bongard, right, believe they've found a glimmer of hope — long-term intravenous antibiotic therapy — but which is barely covered by insurance. KYLE GREEN | The Roanoke Times

By Beth Macy | 981-3435

www.roanoke.com/lyme

Her husband called her The Tiger. Their colleagues did too.

Taylor Albright was such a fierce lawyer that she once negotiated a land-dispute settlement from \$12,000 down to \$200 — and she'd had the gall to try for \$5.

At the Manhattan law firm where she landed after law school, she wore European designer suits. Her favorite was the brass-buttoned Burberry from London; same tailor as the Queen.

But the suits seemed too flashy for bucolic Blacksburg, where she and her lawyer husband, Victor Bongard, moved in 1999 to be closer to family and where, on nice days, she rode her Harley to work.

It was 2006, the height of the real-estate boom, and the couple were so busy with their practice and title agency — and raising three kids — that frequently they took turns working through the night.

To house their expanding firm, they bought 4.5 acres on the edge of Blacksburg between farmland and commercial property. The development would be green, she told a reporter, something that would “achieve the triple bottom line — environmental

stewardship, social responsibility and economic prosperity.”

But two weeks before the scheduled groundbreaking, The Tiger lost her bite.

Forget the Harley. Try as she might, Taylor could not get out of bed.

For 12 days she was hospitalized with life-threatening blood clots in her lungs. Doctors had initially blamed her pain on stress, but when the X-ray confirmed pulmonary emboli, Taylor was sure the sickness was related to the fatigue, joint pain and tremors she'd experienced off and on for years.

She remembered being so tired in her 43rd-story Park Avenue office a decade earlier that she sometimes hid under her desk to nap. Only her secretary knew.

She never suspected she would come to blame her illness on the black-legged tick — *Ixodes scapularis* — commonly called the deer tick. In its nymphal and most dangerous stage, it's no bigger than the period at the end of this sentence.

She certainly didn't envision being caught in the crossfire of a fight working its way into statehouses, boards of medicine and doctors' offices across the country.

Allegations are fierce: To mainstream doctors, Taylor has a fictional disease, and the doctors treating her are charlatans who should have their licenses revoked. But to the outlier doctors willing to treat such patients, the mainstream physicians are arrogantly putting incomplete science — and their own reputations — ahead of patient health.

Taylor delved into the controversy last year around the same time the Virginia General Assembly got its first look at three of the most contentious words in medicine: chronic Lyme disease.

Capitol Square had rarely seen anything like it: More than 125 chronic Lyme advocates traveled to Richmond to lobby for a bill that would protect doctors who go outside professional guidelines to prescribe long-term antibiotics for treatment. The bill was ultimately shelved, but the size of the crowd, the placards, the fevered exchanges — seasoned observers said only the abortion issue yielded that much emotion.

All this for a tick-borne disease?

As the nymphal ticks emerged from dormancy in late spring 2010, the Virginia Department of Health sent a mass letter to doctors urging them to be vigilant in their treatment and reporting of Lyme. In a June news conference, word filtered down to hikers and suburban gardeners: Lyme disease has seeped into Southwest Virginia, up 500 percent in Montgomery County alone from 2007 to 2008.

It was already a charged issue in Northern Virginia and Tidewater, where most of the state's 1,000 cases were reported this year and where suburbanites worried about exploding deer populations have filled community centers and meeting halls. Statewide, reports of Lyme in Virginia have nearly quadrupled in the past five years.

But a record 65 new cases have been documented this year in the Roanoke region — a place where only a handful was reported just four years ago. More troubling, experts concede that incidence of Lyme is woefully under-reported and can be as much as 10 times higher than the numbers indicate.

In October, Gov. Bob McDonnell entered the fray,

creating the state's first Lyme Disease Task Force to analyze the diagnosis, treatment and education among doctors and the public at large.

"This disease can cause severe illness in humans," warned a news release announcing the task force. "If untreated or not properly treated, some patients may develop arthritis, neurological problems, and/or heart problems."

Infectious disease experts in Roanoke claimed the governor's move was prompted by politics, not science.

"I think chronic Lyme seems to be an idea that's infectious," said Dr. Stephanie Nagy-Agren of the Veterans Affairs Medical Center in Salem.

Dueling narratives

Back in 2006, Taylor knew nothing about the Lyme wars raging in the Northeast. She knew only that she was very, very sick.

She revised her will, mothballed her Armani and trained her co-workers to do her job. She asked her mom if she would choose a nanny to help Victor raise

the kids when the time came.

Her relatives didn't want to discuss it, but with her shrewd legal eye, The Tiger weighed the evidence in her case — the debilitating fatigue, the recurring blood clots, the fact that one in three people with pulmonary emboli don't survive — and found it incontrovertible.

"I think I'm going to die," she said. She was 41 years old.

Taylor had physical proof that her mystery malaise wasn't all in her head. But it would be three more years before doctors thought to test her for Lyme.

And why would they? She was living in the New River Valley, where health officials counted just one case of Lyme in 2006.

But does she have chronic Lyme disease now? Is the enemy truly the Lyme-carrying bacteria, a tiny wormlike spirochete named *Borrelia burgdorferi*?

Those questions have incited blood-boiling arguments since the discovery of the disease in Lyme, Conn., in 1975. It has pitted doctor against doctor, and

doctor against patient, in a debate that has muddled the usual boundaries of medicine, science and politics. Conspiracy theories abound on both sides.

"I don't remember any other disease in recent history that's caused such an uproar, with the stakes so high on both sides," medical anthropologist Mark Macaуда says. "And they are nowhere close to reaching common ground."

About the only thing they agree on is the existence of acute Lyme disease, a short-lived infection similar to a summer flu. Symptoms, usually appearing between three and 30 days, can vary widely but typically involve joint pain, fevers and a telltale erythema migrans, or bulls-eye rash.

If caught in the acute stage, Lyme is easily eradicated with a short course of doxycycline — a common antibiotic used in the treatment of acne.

But from there the two camps diverge:

Most doctors, citing guidelines issued by the Infectious Diseases Society of America, believe nearly all cases of Lyme are acute, with the exception of a very small number of patients who have post-Lyme

inflammatory illness. They take the position that chronic Lyme disease doesn't exist; that short-term antibiotics decimate the spirochetes in all but the rarest of cases.

Ask them about the debate, and they're likely to hand you copies of *The New England Journal of Medicine*, talk about "evidence-based medicine" and say the crux of chronic Lyme isn't *Borrelia* but rather the vagaries and vicissitudes of middle-aged, middle-class life.

"Why should politics be dictating care?" Nagy-Agren says. "I never had a lawyer teach me in medical school, or a politician teach me how to care for a patient."

But Lyme patients and what they call their "Lyme-literate" doctors spin a different narrative based on evidence of their own. They point to a high rate of false negatives on the two-tiered Lyme test, and the fact that it takes up to a month for the confirmatory antibodies to appear — complications that can lead to delayed treatment or none at all. They cite Centers for Disease Control and Prevention figures stating that 20 percent to 30 percent of cases don't present with the telltale rash.

Left untreated in the initial days and weeks, an acute case of Lyme can develop into a crippling, chronic version of the disease that attacks the body and the brain, they believe. Ask them about the debate, and the response is equally charged. They liken the naysayers to those who first labeled multiple sclerosis the “faker’s disease” — people who called the science wrong, leaving history to tell the tale.

“I think when people in the medical community don’t know the answer, they tend to brush the question aside,” says Roanoker Karen Fralin, who has been treated twice for Lyme in the past six years.

When she first turned up at her doctor’s office in 2004 with Lyme symptoms and a tick sample in hand, he threw the bag away, telling her, “We don’t have Lyme in Virginia,” she says.

But Fralin, the 46-year-old wife of former delegate William Fralin and a strong-minded woman in her own right, didn’t blindly accept her doctor’s opinion. She knew about the controversy and had several friends and a relative who’d sought aggressive treatment outside Roanoke.

When her symptoms worsened, she went to a Washington, D.C., doctor who treated her with three 30-day courses of the antibiotic doxycycline — well beyond what the infectious disease experts recommend. According to Lyme doctors: The longer a Lyme infection is allowed to flourish untreated, the more resistant to antibiotics the *Borrelia* becomes, necessitating longer regimens.

Fralin began to get better after several months, though she says she still has intermittent joint pain and fatigue.

When friends describe having prolonged Lyme symptoms, she advises them to circumvent local doctors and go out-of-state, too.

Such is the not-quite-underground network of middle- and upper-middle class people in the Roanoke area who travel as far away as New York and New Jersey for treatment of what they believe to be chronic Lyme, much of it not covered by insurance: a Presbyterian minister, a Hollins University professor, a Floyd factory owner, a James Madison Middle School student so sick he had to be home-schooled.

In October, a 47-year-old former emergency-room

secretary died of complications her family believes stemmed from chronic Lyme. Johnette Sowder of Back Creek in Roanoke County had been seeing a controversial Lyme doctor since 2003 and had been improving in recent months before her unexpected death.

Fralin believes some local doctors are finally adopting a better-safe-than-sorry approach, even at the risk of overtreating. This year, when she returned to her family doctor exhibiting signs of a second tick bite she'd gotten in her wooded South Roanoke yard — swollen glands and joint pain, but no rash — she was treated immediately for 30 days.

Roanoke County lawyer Matt O'Herron, 39, had a similar experience last summer after rushing to the emergency room with a fever of 106. He'd been cleaning brush in his back yard but saw no evidence of a tick bite until days later, when he noticed a purple welt on his leg.

Instead of waiting for test confirmation, his doctor immediately prescribed a three-week course of antibiotics.

"I couldn't have gotten any luckier," he says of his full

recovery. "I've heard horror stories from friends in Northern Virginia who weren't so lucky."

Either their cases weren't detected early, when short-term antibiotics are deemed effective, or they weren't treated long enough. CDC guidelines call for a regimen of 14 to 28 days, with allowances for a second, 28-day course if conditions don't improve. But in newly endemic areas such as Western Virginia, according to patients and doctors alike, treatment standards seem to be all over the place.

"I wish I could help you with a standard practice, but I am not sure there is one being used regularly," said a Roanoke pediatrician, who asked not to be named for fear of alienating colleagues.

Research gap

This much is certain: There is a gaping disconnect between scientific research and the experiences of people on the ground. Among the 420 New Englanders whom anthropologist Macaуда interviewed for his 2007 dissertation on chronic Lyme, 80 percent of the interviewees believed in the disease.

Of the doctors he interviewed? Just 20 percent.

“With newer diseases, it takes a while for public health to catch up,” said Macaуда, now a University of South Carolina researcher. “The establishment may say no initially, but if more evidence comes up over time, the model can change.”

Macaуда says the medical establishment wisely argues against antibiotic overuse because it fosters drug-resistant infections. Nearly 30,000 Americans die annually from infections of drug-resistant bacteria spread through hospitals and nursing homes.

But he’s equally convinced that chronically ill patients aren’t malingerers whose illness is “all in their heads,” as many doctors allege — “Doxycycline Deficiency Syndrome,” they call it, dismissively.

Connecticut, Rhode Island, California and Massachusetts have gone so far as to pass legislation protecting doctors who prescribe long-term antibiotics after the sanctioning of 30 doctors, several of whom lost their licenses.

In Virginia, the political battle is just beginning, with Del. Tom Rust, R-Fairfax County, planning to revive

his doctor-protection bill in the upcoming session. Two doctors have been investigated by the Virginia Board of Medicine for overtreating Lyme in recent years, including a 73-year-old Eastern Shore doctor who shuttered his practice in September after being put on probation and permanently banned from prescribing narcotics. The other doctor, based in Northern Virginia, was cleared of wrongdoing in 2005.

“I have people coming to me saying their dog can get better treatment than they can,” Rust says. The two Northern Virginia counties he represents reported a combined 436 cases of Lyme last year, nearly half the state’s total. “But I have to convince the medical community that I’m not out here giving a blank check to any doctor who wants to commit malpractice.”

The controversy has had a chilling effect on doctors, and some patients claim to have fallen through the cracks as a result.

For 44-year-old pet groomer Mauricia Shanks, her descent into the land of Lyme began in July 2009 when she discovered an engorged tick in the bend of her leg. She pulled it off and threw it in the yard of her Pearisburg shop. Three days later, she awoke to a

fever so raging that it took a double dose of Tylenol and Motrin to get her out of bed.

At the emergency room, staffers blamed it on a virus and sent her home. By the time her family doctor saw her a week later, she'd developed a rash. The doctor diagnosed Lyme immediately and prescribed three weeks of doxycycline, Shanks says.

But by Labor Day, her symptoms were back — times 10. Her fingers stiffened and curled involuntarily. Every joint in her body ached. It was hard to wake up, hard to think straight. "It was almost like my thoughts were arguing with each other," she says.

Her Lyme test came back resoundingly positive. Rather than consult the CDC's guidelines for subsequent treatment, Shanks says her doctor told her: "As we expected, sweetheart, you've got Lyme — but you've already been adequately treated."

Shanks had never heard of Erin Brockovich, but over the next nine months, her story paralleled that of the feisty environmental activist. She fought repeatedly for treatment, and then fought for her case to be counted by public health officials.

She became the first reported case of Lyme in Giles County, but only because the Northern Virginia doctor she finally coaxed into treating her — with nine months of oral antibiotics — reported the case. Despite Virginia Department of Health guidelines requiring doctors to report Lyme, area health care providers concede there is confusion over whose job that is.

Emergency room director Dr. Robert Dowling of LewisGale Medical Center in Salem knows it isn't his. "The reasonable thing to do is to have the lab that runs the test make the report," he says.

But what happens to suspected cases that are treated preventively, without test confirmation? Those don't fit the CDC surveillance criteria and therefore aren't counted. Salem infectious disease specialist Muddasar Chaudry treats 25 to 30 new Lyme cases a year. And yet most of his patients were not counted last year. He says it's not his job to report them; it's the primary care doctor's.

The state health department counted just one confirmed case of Lyme in Roanoke County in 2009, and zero in Roanoke and Salem. So far this year, Roanoke has reported two confirmed cases in the

region; Roanoke County, four.

But Montgomery County reported 23 — a jump possibly owing to terrain, with the New River Valley comprising more newer developments where deer and humans converge. It may also be related to increased physician education on Lyme led by Dr. Jody Hershey, director of the New River Health District.

“You’re definitely on the cusp [of increased Lyme numbers in Virginia] ... and I know we can do a better job of educating physicians” to diagnose, report and treat Lyme, CDC Lyme spokesman Dr. Kevin Griffith said.

Shanks and other advocates contend that the low numbers undermine public health by giving hunters, hikers and gardeners a false sense of security.

“It infuriates me so bad because if these doctors would report the Lyme they’re seeing, then Richmond would realize we’ve got a problem here in Western Virginia and people would take notice,” she says.

For her part, Shanks passes out Lyme disease fliers to all who enter her grooming shop. She’s starting a

regional support network under the umbrella of the McLean, Va.-based National Capitol Lyme and Tick-Borne Disease Association, the group that organized support for Rust’s bill.

Like Fralin and others, Shanks has become a beacon to people newly diagnosed with Lyme, helping them tap into a network of out-of-town doctors. She has regular telephone debates with the state health department’s top entomologist, David Gaines, over the reality of chronic Lyme.

She tells him: “There are certain things that science is just wrong about, and why people won’t even entertain the fact that this disease can cripple you is beyond me.” Gaines’ take echoes the mainstream medical community’s: “A lot of people are suffering from arthritic or neurological symptoms; they have something. But I can’t say it’s Lyme disease.”

‘On death’s door’

The Tiger didn’t have a beacon like Fralin or Shanks to guide her. She was too enmeshed in her work most of the time to even look for one.

At Duke University Law School and earlier in her

career, she endured periodic bouts of pain and fatigue. In between, she was tired at best, blaming herself for her “lesser constitution” and digging her heels in harder at work.

At her worst, she had body tremors and trouble remembering things — like to turn off a boiling pot on the stove. In her 30s and early 40s, she sought out experts at the Mayo Clinic and Duke. Among the various diagnoses: depression, arthritis, an autoimmune disorder and severe B-12 deficiency.

But no one mentioned Lyme, and Taylor didn’t consider it, either, thinking that fevers were a required symptom.

She laughs when she describes how, after 18 years of trying to unravel her medical mystery, she finally deduced what it was: Her mother-in-law plays bridge with a woman whose daughter-in-law had Lyme, and after hearing about Taylor’s eerily similar symptoms suggested that she get tested for it, too.

In late 2009, she found Dr. Richard Horowitz, a Hyde Park, N.Y., internist who’s treated some 11,000 Lyme patients in 20 years. Her test results indicated

“classic, undiagnosed chronic Lyme,” he told her.

Though rarely traced to Lyme, her blood clots were simply *Borrelia*’s latest, harshest salvo, he said.

Lyme’s attack on her central nervous system was also responsible for her worsening incontinence, a result of misfiring signals between her bladder and her brain. “She was gray, couldn’t get out of bed most days,” her husband says. “She seemed to be on death’s door.”

They were about to embark on one of the most controversial treatments in medicine, one that would try their marriage, cripple their business and nearly bankrupt their family. And before she got better, the doctor warned, Taylor was likely to get worse.

But there was no room for negotiation. If she wanted to live, The Tiger decided, it was time to rise up and fight.

Article – LED Lighting

The following is an article by Mike Gambino reprinted courtesy of Watershapes Magazine. Thanks to Kay Moore for sharing!

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urrents



Light-Emitting Deficiencies

By Mike Gambino

No matter the field, keeping up with the latest product developments is critical to supplying clients with state-of-the-art results. It's also important to track current design and application trends and to distinguish innovations of true value from those that don't add up or aren't far enough along the developmental curve to warrant broad acceptance.

Using my field of landscape lighting as an example, the past quarter century has seen a small clutch of products and technologies that have made the grade – the chief among them being halogen lights for use in low-voltage systems. When these came on the scene about 25 years ago, it was a revolutionary step that set a standard for performance and serviceability that hasn't been topped since.

More recently, I've been watching carefully as the marketplace has been flooded by messages about light-emitting diode (LED) technology, which has for several years now been touted as the *next* great evolutionary step in lighting technology.

It's important to track current design and application trends and to distinguish innovations of true value from those that don't add up or aren't far enough along the developmental curve.

I can also remember 10 or so years ago being told that fiberoptic lighting would replace low voltage landscape lighting systems – something that never came anywhere close to happening. While LEDs may prove worthy someday (perhaps even in the near future), from where I stand today as a quality-oriented landscape lighting designer and installer, I have significant concerns I will be explaining in this edition of my column.

light of day

To be sure, LEDs have gained ground fast for an emerging technology. For all that, however, I see persistent problems that have not been resolved and, more disturbing, marketing messages that seem to misrepresent product performance. On top of that, there are issues related to the fact that the technology is simply so *new* in landscape applications.

Before I get specific, let me note that I have nothing against LED technology *per se*. I've been at it long enough that I'm always open-minded about new technologies, and if LED products were doing everything their manufacturers have been claiming, I might not feel compelled to write this at all.

Indeed, I have used LED technology in limited applications and do *not* dismiss them out of hand. In addition, I've seen some applications beyond landscape lighting (automotive lighting and traffic lights, for example) where LEDs seem to work beautifully. But in my opinion, when it comes to landscape lighting, LED manufacturers and marketers have a way to go before the technology comes close to living up to its promise – or its hype.

I recognize that some will take issue with areas (or even the totality) of this discussion. That's fine by me – and if there are products out there I haven't considered or some major points I've missed, by all means I would love to hear about it.

As I mentioned above, I am not unfamiliar with LEDs. In the past four years or so, I have experimented (on my own property) with a number of sample products I've received and, in some situations, with ones I've purchased and installed on projects. The bottom line is, overall and for a wide range of applications, they just don't meet my standards. Until they do, I will see LEDs

in the landscape as a fringe product with limited utility at best.

Based on what I've observed, the problems with LEDs break down into a range of concerns related to performance, serviceability, energy efficiency and technical support. In no way does it help that manufacturers seem to be continuously changing their products – presumably to address the problems? – which means that nothing on the market has really had a chance to prove itself over time because nothing is ever more than a year or two out of the development cycle at most.

As a result, claims about service life can only be considered hypothetical because there's no field history – in real-life, extreme, exposed outdoor conditions within compact landscape lighting fixtures – to back up those claims. Also, there's the nagging fact that LED fixtures cost several times more than their halogen counterparts – an issue that magnifies all of the problems I'll discuss just below.

seeing is believing

Let's start with the most basic elements of lighting performance, beginning with light output – that is, brightness measured in lumens.

► **Output:** In my informal tests, I've found repeatedly – side by side in actual landscapes – that LED lights do not provide the same level of output you find in equivalent halogen wattages.

Moreover, LED systems offer no viable replacement for lamps of 35 watts or greater, which means there's nothing available to light large trees effectively with LEDs. I simply have not been able to create the same range of effects – especially when I try to create dramatic focal points in the landscape – because LED lights are not nearly as bright or as effective as halogen bulbs.

By the same token, I find LEDs to be effective in applications calling for dim or soft light on highly reflective surfaces, as is the case with some path lighting on hardscapes or in illuminating light-colored surfaces such as walls or small statues – applications where all I want to do is wash an area with a hint of light. But when it comes to cre-

ating eye-catching effects that define large trees or dense plants in landscapes at night, LEDs don't perform the way they should and must.

Manufacturers may cry foul at my observation and point to specification sheets that indicate levels of performance equivalent to halogens. As far as I know, however, there's no standardized testing for LEDs that backs up claims about LED suitability for high-output applications.

As I've said in past columns, some clients are more sensitive to brightness than others and might prefer less light. If that's the case, and especially if they're sold already on LED technology, it might be the right call. Even then, however, I'd bring several other factors into consideration before turning to LEDs.

► **Color:** The color balance I have observed in working with LEDs is less than wonderful. Generally the higher the color temperature measured in degrees Kelvin, the higher output the LED. Trouble is, the color of light produced is downright unnatural-looking. For example, there's a marked tendency toward blue and green that can be quite unflattering if you're illuminating light-colored walls, statuary or color-sensitive types of plants.

Hollywood might find this an appealing way to light the set for a horror movie, but for practical purposes it would never be the light color of choice, especially for human skin.

On the flip side, the lower the Kelvin temperature, the more natural-looking the color (leaning toward amber/white) and the lower the light output or brilliance. My own research shows that the color-of-light specifications for LED lamps are not the same when compared against equivalent halogen temperatures. In plain language, they simply do not have an equivalent color or light output.

There's also an issue with color *consistency*. True, this assessment is more subjective than measures of output, but as an expert with a well-trained eye and across a spectrum of products I've evaluated, the color of LED light is far less consistent than is the color of halogen light. Again, side-by-side comparisons tell the tale – but this time it's compar-

ing one LED to another: The colors are noticeably different even when specs tell me that the Kelvin temperature is the same.

I want to attribute these issues to the fact that the technology is still being developed and that the scientists and engineers are still playing with varying combinations of fixtures, reflecting materials and components. Regardless of the reason, however, manufacturer claims of LED color consistency cannot at this point be taken at face value.

► **Green concerns:** It's no secret that incandescent lights are under attack by environmental groups, and it's a fact that these products are being phased out for interior applications. Personally, however, I'm deeply concerned that overzealous regulators will also target incandescent halogens for exterior use as well: That, I think, would be a huge and unfortunate mistake.

In this context, some promote LEDs as the efficient alternative not only to incandescent lamps but also to low-voltage halogen lights. While such a claim may be true in gross terms, it only applies if performance is sacrificed to the perception that something good is being done for the planet.

The energy-consumption picture is somewhat complicated by a surprising misperception that LED fixtures do not require current to the fixture – that they, in other words, are like fiberoptic systems in that no electricity flows to the actual point of light output. That's not the case: LED systems are designed to work in an operating range from 11 to 18 volts, which should tell everyone that these systems draw power.

In addition, some MR-16 LED lamps – designed as substitutes for halogens and marketed as three- or six-watt replacements for 20- and 35-watt halogens – actually consume slightly more than their rated power consumption. Yes, three watts compared to 20 is a significant difference in power consumption per fixture, but it is of little significance if the three-watt lamp comes nowhere close to replicating the light output and color of the 20-watt halogen lamp it is meant

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to replace.

Durability is also a green issue. Today's LED fixtures contain electronic components such as drivers that may not be able to withstand the rigors of outdoor environments, meaning they may fail more quickly at the hands of careless gardeners or simply break down when exposed to the elements such as ambient moisture and heat buildup in diminutive landscape lighting fixtures. In addition, the lighting element in some LED fixtures is integrated into the fixture itself, so when the light dies or light output depreciates or experiences color shift, the entire fixture must be replaced. Not only is this expensive, but it's remarkably wasteful and environmentally unfriendly in and of itself.

In fairness, there are LED retrofits that are made to be inserted into in-

being replaced is the halogen lamp itself – a far greener approach than using a system where you're routinely replacing entire fixtures.

Service and Support: As they now exist and beyond performance, probably my biggest issue with LED lights revolves around service. As mentioned above, nobody really knows how long these products will survive or effectively perform in the field because they haven't been around long enough, so it's impossible (despite manufacturer claims) to set up realistic expectations for service life with clients.

This in turn creates huge problems with manufacturer warranties for product replacement: There's no reliable standard, so everyone is making things up as he or she goes along and the potential for con-

It has been my experience that many homeowners erroneously believe that their landscape lighting systems require no maintenance if they have no burned out bulbs. But fixtures may be knocked out of adjustment, and plant material will definitely grow and change shape and will block and change light output. Lenses also will require scheduled cleanings to maintain light color and output, and whole systems should be checked at least every six months to make sure everything is performing at its best and as designed. At this point, putting a price and even setting a schedule for such service is decidedly difficult when LED systems are in use.

Finally, LED products are so new that there's no reliable information on how fast deterioration will occur. Even if all you consider is simple things, such as scale build-up from water and other normal types of damage, the products will gradually diminish in terms of light output. When you combine that fact with what is *already* lower light output, these systems will become dim sooner rather than later – and replacing old with new is an expensive proposition.

Some clients are more sensitive to brightness than others and might prefer less light. If that's the case, and especially if they're sold already on LED technology, it might be the right call.

candescent and halogen sockets. In my view, these have the greatest chance of success if the inherent issues with using LED technology outdoors can be resolved.

But it still rankles that some manufacturers are using inferior materials in the construction of their fixtures to offset the higher cost of the LEDs and make the technology friendlier to consumers' pocketbooks. What good is having an LED marketed with a claim that it will last ten years plunked into a fixture that will be lucky to last for three to five years? It's the sort of practice that threatens to send the landscape lighting industry back 20 years to the days of disposable, ineffective, low-quality lighting.

As I noted in my last column, cast-brass lighting fixtures will last indefinitely and can even be reconditioned if ever needed. Thus, the only material

flict shoots over the moon. How are operating hours reliably measured? How can failure from being dropped or rough handling be detected or determined and guaranteed? How will light depreciation over time be guaranteed and gauged? The general lack of answers for these questions is bad for business, and it gets worse when you consider that many of these products come from overseas via circuitous distribution channels with no recognizable brand name.

And given the higher initial cost of LED systems (many times that of an equivalent halogen system), it's asking a lot of clients to commit themselves to routine LED replacement as part of any pre-determined service plan: The cost is remarkably high relative to those for halogen or incandescent systems. Still, such plans are necessary, because (as is also true with halogens) light output will depreciate over time as LEDs age.

technology downgrade

Let me conclude this discussion with a last observation about how these systems are being marketed: Personally, I get concerned when LED advocates try to make it seem acceptable to simplify and downgrade overall electrical system design when you use their technology.

Some say, for example, that you can use smaller transformers and smaller wire compared to halogen systems, or that voltage requirements can range between 11 and 18 volts without affecting fixture performance. To my mind, that is monkey business of the worst kind: an open invitation to substandard wiring and loose system-design practices.

It's also an open invitation to non-passionate and less-than-dedicated landscape lighting installers to get involved in this business as a sideline or occasional pursuit. These operators have no great interest in the long- or short-term performance of what they've installed, do not offer any kind of maintenance ser-

I have no axe to grind against LEDs, and if the products improve I'll be more than happy to embrace them.

vice and are simply in it for a one-time payday – no looking back.

This industry has been significantly damaged by these operators in the past and doesn't need to create new openings for them.


Consumer demand for LED technology in landscape lighting is still relatively low – which is somewhat surprising given how extensively these products are

hyped as being green and ultra-contemporary. Even in the Los Angeles area, where consumers and their architects and contractors are known to pursue the latest and greatest without much reference to practicality, I hear little clamoring for these products.

Ironically, that low profile might end up saving LED technology, because it's giving manufacturers the time they need to resolve some of the issues I've mentioned here. As I said at the beginning, I have no axe to grind against LEDs, and if the products improve I'll be more than happy to embrace them.

My hope is that in the very near future I look back at this article and say, "Wow! Conditions have really improved and my December 2010 column is no longer relevant." Until that day comes, I will continue to ask how LEDs, with their higher

up-front costs and range of performance deficiencies, are made worthy of consideration simply by saving homeowners a bit on their electric bills.

Until that day, I will continue to wish that manufacturers would tone down some of their occasionally outlandish performance claims. For us in the field, I hope we won't get caught up in the hype and will continue choosing the very best for our clients as we carefully evaluate what's new and interesting. 

Mike Gambino owns and operates Gambino Landscape Lighting of Simi Valley, Calif. A licensed lighting contractor since 1990, he has specialized since 1995 on high-performance low-voltage systems. He may be reached via his Web site: www.gambinolighting.com.

Editor's Notes:

Committee News from the Jan. 14th Board Meeting:

Website: Monit Rosendale sent a message that the past twenty VSLD presidents are now listed on the website. Diane asked for ideas on posting on the website and in the newsletter a more complete list of events around the state. It was decided that the president and the newsletter editor should contact regional coordinators every quarter for information.

Booth: Our winter meeting takes place the same weekend as the MAC events /Maymont Home and Garden Show. Since VNLA has volunteered to help our organization in a non-monetary way, Eve will ask their members to man our booth at the Maymont show on Saturday, February 12, 2011. Eve will also

ask to be put on the mailing list for events at the Greater Roanoke Home and Garden Show and at the Meadow Event Park in Doswell in order to make arrangements for more frequent use of our booths. We also expressed interest in having the booth at more Maymont events.

Lewis Ginter Botanical Garden: Kay Moore directed us to the LGBG website to see upcoming events. The Board decided to sponsor at a \$250.00 level Julie Moir Messervy's presentation in April in exchange for room to place our small booth at the event.

Publicity: A half page VSLD ad will come out in the February issue of the Virginia Gardener.

The Summer Tour will be in the Lynchburg area July 11-13, 2011

Current Events:

- DC-area Landscape Design Group has extended an invitation to VSLD members to attend a talk sponsored by LDG and featuring Meadowscaping author Katherine Zimmerman. The meeting begins at 7:45PM on February 17 at the River Road Unitarian Church in Bethesda, MD (6301 River Road, Bethesda MD 20817); admission for non-LDG members is \$10.
- Diane Roselius is looking for members interested in helping assemble and man the booth at the Virginia Beach Flower Show March 4,5, and 6. We will only do this if we have enough volunteers. If you are interested please contact Diane at roseliusdesign@charter.net.
- Virginia Cooperative Extension Reorganization: This week, VT president Charles Steger announced to the General Assembly that the planned reorganization of the Cooperative Extension program was to be suspended immediately. More consensus will be sought with their partners in the reorganization process.
- VAC's points of disagreement with the CBF bill include the effective date for the ban on lawn maintenance fertilizer containing phosphorus (CBF bill currently asks for 1/1/13; VAC is lobbying for 1/1/15); VAC also opposes the imposition of increased penalties for violations of regulations by non-agricultural fertilizer applicators and the requirement for mandatory reporting of fertilizer applications.
- Below are VAC's summaries of the now-existing legislation. Remember that VAC is a lobbying organization when you consider the summaries.
- HB 1831 Fertilizer; regulation of application and labeling. Chief patron: Scott, E.T.
Notes: HB1831 (E. Scott) was introduced at the Council's request. Therefore, the Council supports it as it identifies a number of areas that are practical, science-based, and results-oriented that will "move the ball forward" in achieving water quality improvements from reduced nutrients. HB1751 (Plum), HB2348 (Morrissey), and HB2463 (L. Ware) have been "rolled into" this industry supported bill. Discussions continue with interested parties on our disagreements in the bill. Bill [is scheduled to] be heard by House Agriculture Committee [February 2].

Legislative Items:

- TMDL/Fertilizer legislation: The General Assembly, in negotiation with the various parties interested in this issue, has rolled all of the various fertilizer-related bills into two, one each in the House and Senate. The remaining bills are SB1055 (sponsored by the Chesapeake Bay Foundation) and HB1831 (sponsored by the Virginia Agribusiness Council (VAC)). Please remember that, if you have an opinion on this legislation, you need to contact your delegate and senator as soon as possible; things happen very quickly in the General Assembly and, with all the emphasis being placed on this topic, legislation will be passed this year.
- SB 1055 Fertilizer and deicing agents; regulation of application, report. Chief patron: Stuart
Notes: The Council opposes provisions of Chesapeake Bay Foundation supported SB1055 that undo pending regulations related to certified applicators of non-agriculture fertilizer and imposes more stringent requirements; mandates annual reporting by applicators; and restricts retail sale of lawn fertilizers. The bill may be heard by the Senate Agriculture Committee on [January 31].

Other Items:

Thanks to all of you that have generously donated to our scholarship fund! This is an important way for us to support the next generation of Designers and Green Industry leaders.

Thanks once again to Kay Moore and Michele Fletcher for tracking down this issues' reprinted articles!

If you see anything that we can share, articles or otherwise, please don't hesitate to send it to me at bbulman@gdiva.com

MAHSC:

Twenty-two people attended the VSLD Mid-Atlantic Horticultural Short Course in Virginia Beach in January. It was a good time to talk with other designers from VSLD, designers considering joining, and guest speakers Robert McDuffie and Gary Smith. Here are a few photos from the event:



Figure 1 The VSDL Booth



Figure 2 Kay Moore, Cheryl Lajoie & Robert McDuffie



Figure 3 Group Photo

Lewis Ginter Botanical Garden Update

By Kay Moore, VSLD Liaison to LGBG

On March 3rd the garden hosts Andrew Wilson and Andrew Tomlin, designers from the London College of Landscape Design, presenting ideas for obtaining environmental sustainability. This is a 3-hour course in the afternoon followed by a reception and informal conversation with both speakers. "Designing the Future: Developments in Garden Design" will discuss how gardens can help slow down the "global decline of biodiversity in the face of increasing development...."

On March 10th the garden hosts an all-day Tree Care Symposium.

On April 27th, Julie Moir Messervy will be coming to the garden from 5-7pm. She will discuss her work and the influences on her from Eastern traditions. She is probably best known for her work at the Toronto Music Garden. She also is known for her healing gardens and her children's gardens. Her program is "Julie Moir Messervy: Process and Work." The board voted to contribute to the funding of this program and VSLD cosponsors this event.

Information and registration for any of the above programs can be found at www.lewisginter.org

Virginia Nursery & Landscape Association Events:

February 2-4, 2011, **Central Virginia Nursery and Landscape Association Symposium/Winter Short Course 2010** presented by Lewis Ginter Botanical Garden and the Central Virginia Nursery & Landscape Association at the Massey Conference Center, Lewis Ginter Botanical Garden, Richmond, VA

www.lewisginter.org , 804-262-9887x222
www.cvnla.org

February 10, 2011, **ANNUAL CENTRAL VIRGINIA LANDSCAPE MANAGEMENT SEMINAR** sponsored by the Piedmont Landscape Association

Charlottesville, VA Contact:
www.piedmont-landscape.org

March 9, 2011, **VNLA SPRING BOARD MEETING**

Department of Forestry Building,
Charlottesville, VA 10 a.m. - 4 p.m.
Contact: info@vnla.org, 800-476-0055

2011 VSLD Calendar of Events

January 10, 2011 [EXTENDED TO FEBRUARY 7th!]

[Deadline to return your Winter Meeting Registration](#)

February 2 - 4, 2011

Winter Symposium and CVNLA Short Course

Registration form and details: [CVNLA Short Course Registration Docs](#)

February 12, 2011

VSLD Annual Winter Meeting, Norfolk, VA

[Click for details and registration form](#)

July 11-13, 2011

VSLD Summer Tour, Lynchburg, VA Area – More details to follow

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