



Musing the Monthly Minutes

By Rick Traver, CGCS
Monticello Country Club

"Apathy", Webster defines it as a "lack of interest", one could also put in that definition MGCSA, but as we discussed at our last board meeting, it really seems to be a larger issue with society than just our organization. As long as a specific issue doesn't seem to affect people immediately they pass it off assuming someone else will handle it. Needless to say, it is causing our Ex-officio some difficulty in trying to find individuals to participate on the Board of Directors. So without getting too preachy, if you have had any interest in getting involved in the MGCSA, please call Paul Eckholm and let him know you are interested. Please also keep in mind that these are not difficult positions, and for the most part require very little extra time.

As far as our last Board of Directors meeting, it was a rather short one that was shortened even more by scheduling conflict with a very attractive Yoga group. We did however get some meaningful business conducted as we met at the barn at Woodhill Country Club on Thursday, September 25 at 8:30 a.m.

In Communications we received several thank you's from the scholarship recipients. We also received a thank you from Dr. Horgan for the support and flowers he received during his latest addition to the family.

The treasurers' report was short, discussing the movement of our Money market account from HD Vest to Wells Fargo. Also according to our accountant the switch in fiscal year should be smooth, requiring only that we file a 7-month return in December to put us on track for a new fiscal year to start January 1.

Rick Fredricksen congratulated Brian Horgan on his new baby and Brian reports that all is well, baby is growing like a weed, and sleep has definitely become a valuable commodity.

Business office introduced a new advertising schedule for Hole Notes. As it currently appears we are losing money due to the taxes and decreased ads since the 9/11. An increase of \$25 across the board would bring us back to break even.

The Industrial Relations committee has booked our meeting MGCSA winter meeting in San Diego. It is at Maloney's Tavern, an establishment in the Gas Lamp District. Details of time and date will be announced.

Bylaws and historical reported that there are several articles changes the membership will have to ratify at the next annual meeting. The first pertains to the fiscal year and how the dues are collected. The second is how the IR candidates are nominated and finally the third is an addition to the membership list of the Facility Membership.

Conference and Education reported all is set for the Expo except the time for the MGCSA annual meeting. After much discussion we decided to keep it on Thursday but try to reduce the time between the closing of the Show Floor and the start time of our meeting.

Editorial reported that it is increasingly difficult to get people to volunteer articles and wondered if we should reduce the number of issues from 10 per year to 6. There was little discussion on this topic, but will be reviewed at the next meeting.

MTGF reported that they are on track to support the U of M through a dual track concept. Supporting both the Troe center and educators in an effort to promote the turf program. With that in mind, Dr. Horgan reported that the provost at the U of M is on board with working on a design for the building at the Troe center, which is a huge step forward.

MTGF also reported that the Clippings is now being delivered electronically, however it is available as a pdf file for those who like to print out a copy and save it.

Research Committee reported that due to the decline in participation and the cost of food at the scramble event it only netted \$2500. It was suggested that this event be held at one of the larger private clubs if at all possible in the future.

Public Relations Committee reported there would be an article in the MN Golfer on frost and its affect on turf. If any one knows of a good topic that can be covered in this publication contact Mike Nelson.

The Aerating Fountain

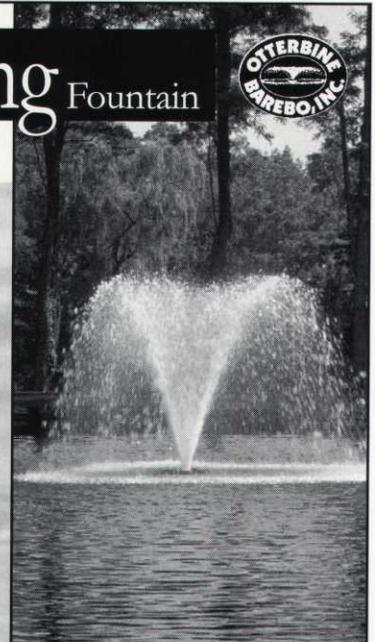
from Otterbine



AT MTI DISTRIBUTING, we know that water quality is equally as important as aesthetics. That's why we offer Otterbine Aerating Fountains to manage your ponds and lakes, as they have been independently tested and proven to create excellent circulation and oxygen transfer. Effective circulation is key in reducing algae and the beauty of an Otterbine spray pattern speaks for itself!

Highlighted features include:

- Unique Mixed-Flow Pumping System
- Eight Interchangeable Spray Patterns
- 5-Year All Inclusive Warranty
- Decorative Float Covers



Brooklyn Center, MN

763-592-5600

800-362-3665

www.mtidistributing.com

Since 1973

HASSAN

Sand & Gravel
Rogers, MN
763-428-2393

Decorative Rock - Black Dirt
Driveway Aggregates - Washed Sand & Rock
Sand & Clay Fill - Golf Course Materials
Pick-Up or Prompt Delivery

13530 Willandale Road Fax 763-428-4710
Rogers, MN 55374 www.hassansand.com

PREVENT WINTER STRESS

For You And Your Turf

Purchase 3 cases (15 Gallons) of Tuff Turf™ and one case of Ultra-Plex™ (5 Gallons) from Precision Turf & Chemical during the months of August, September, or October and receive a complimentary Cinder Creek Shell™ by Columbia Sportswear or a Fleece Liner, a \$125 value!¹

Double your order by ordering 6 cases of Tuff Turf™ and 2 cases of Ultra-Plex™ and receive both the Cinder Creek Shell™ and Fleece Liner!¹



Picture shown may not be exact color and toning.

Cinder Creek Shell™ and/or Fleece Liner

Omni-Tech Fabric

100% Nylon Storm Dry TN With

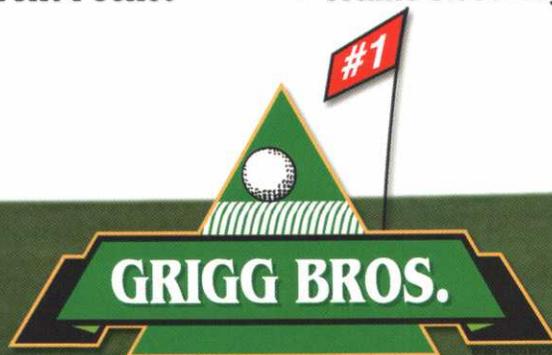
- 100% Polyester Tricot Lining
- Waterproof/Breathable
- Fully Seam Sealed
- Adjustable Hood
- Packable Into Left Front Pocket
- Radial Sleeve



Tuff Turf™ 1-0-14+Si+Micros

Tuff Turf™ represents the most advanced level of foliar applied technology.

- Increased Green Speed
- Color & Quick Ball Mark
- Cold Weather Tolerance
- Turf Blade Hardening & Rigidity
- Traffic Recovery



SAVE THE DATE

Precision Turf and Grigg Brothers present a
FREE seminar for you and your turf.

Subject: Optimum Plant Health

- Working Foliar Feedings Into Your Fertilizer Program
- The Use Of Bio-Amendments

Speaker: Gary Grigg V.P. / Agronomist

Where: Bent Creek Golf Club
14490 Valley View Road
Eden Prairie, MN 55344

When: October 21st @ 8:00 AM

Schedule: 8:00AM – Sign In
8:15AM – Presentation
10:45AM – Questions
11:00AM – Lunch
After Lunch – Free Golf *



Turf & Chemical Inc.

www.PrecisionTurf.com
Email@PrecisionTurf.com
7728 Commerce Circle
Greenfield, MN 55373
Phone: (763) 477-5885
Toll Free: (800) 925-TURF
Fax: (763) 477-6511

Contact Precision Turf to R.S.V.P. for attendance and to reserve a spot for free golf.*
Space is limited so reserve early!

*1 free round of golf is available after lunch for those who request it while placing a reservation. Golf carts are available for a fee of \$17 per person.

¹Offer only valid with original voucher. Ask your Precision Turf representative or contact the office for your copy of this voucher. Offer valid only when product is purchased during August, September, or October 2003. A copy of the qualifying invoice must accompany the voucher. Only one (1) Cinder Creek Shell™ or Fleece Liner per customer, except where a double order is placed.² All vouchers must be received by November 15, 2003 (NO EXCEPTIONS.) • ²When a double order is placed each customer is allowed one (1) Cinder Creek Shell™ and one (1) Fleece Liner.

The Cinder Creek Shell and Columbia Sportswear name are registered trademarks of the Columbia Sportswear Company. The Grigg Bros. Logo, and Tuff Turf name are trademarks of Grigg Brothers. The Precision Turf name and logo are trademarks of Precision Turf & Chemical, Inc.

Bluebirds—

(Continued from Page 19)

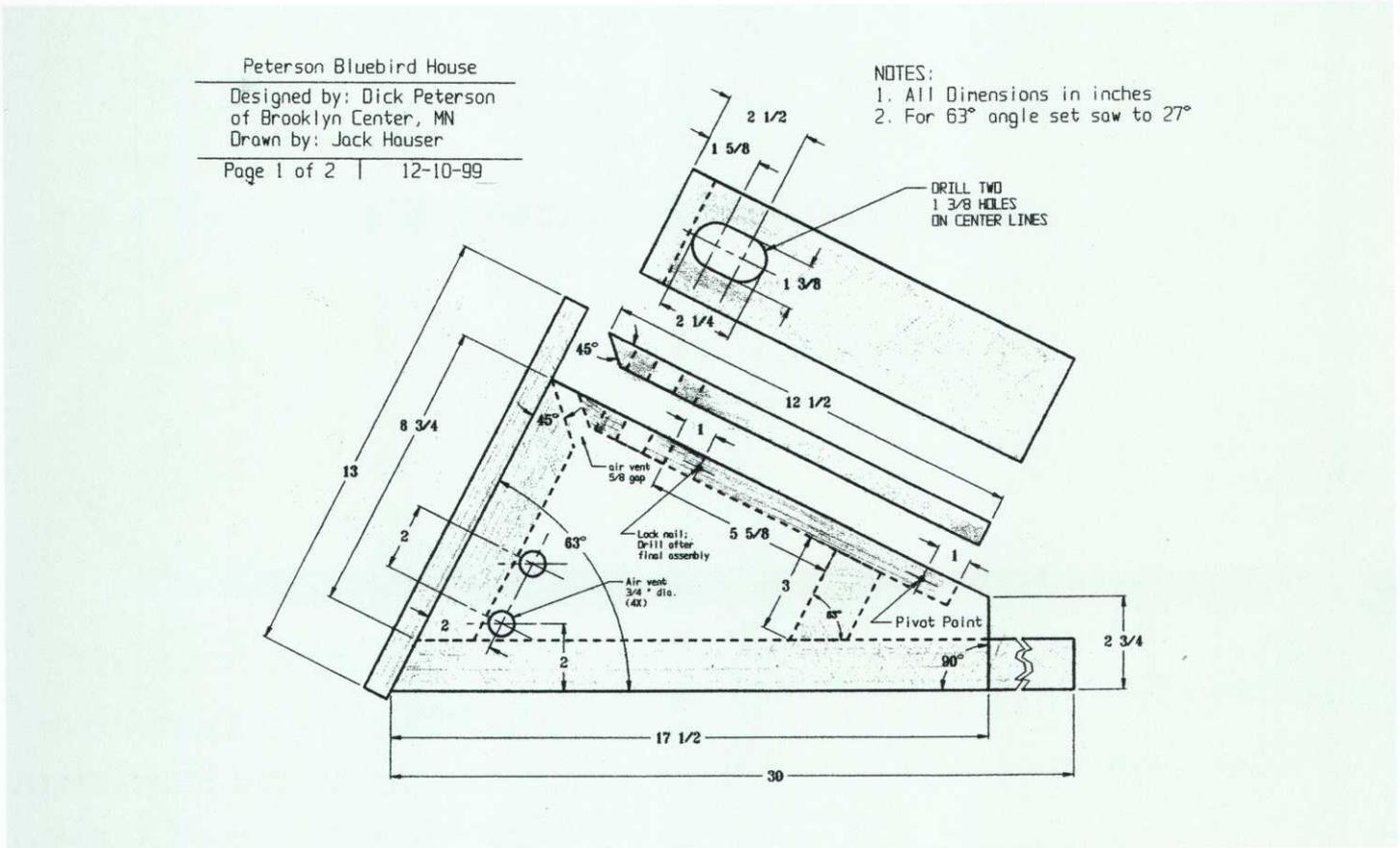
12-14 days old. check for wet nests or blowfly-infected nests, and replace with dry material. Remove unhatched eggs in a clutch of nestlings, and any dead nestling. Clean box as soon as the first clutch has fledged.

9. Help friends and neighbors check their bluebird nestbox-

es. Look for bluebird boxes or martin houses which sparrows are using.

10. Send in a yearly bluebird report with your results and comments. (Tracking statewide bluebird populations ensure a bluebird population for future generations to see and enjoy!)

(Editor's Note: Anyone interested in having BBRP evaluate an existing Trail or start a new one, should call Jack Hauser at 952-831-8132 for an appointment.)



E. H. Renner & Sons, Inc.

Well Drilling for Five Generations

Winter

*is an excellent time to have work completed
on your well of pumping equipment*

If a deficiency is found repairs can be scheduled for fall or winter

Call Jerry to Schedule.

Phone (763) 427-6100 Fax (763) 427-0533

Toll Free 1-800-409-9355

Nuts for Nuts!

By JACK MacKENZIE, CGCS
North Oaks Golf Club

Are your mowers becoming clogged with copious amounts of acorns in the fall? Does your staff spend an enormous amount of time clearing greens, tees and fairways of Oak tree fruit and walnuts? Are your squirrels getting fat and sassy gathering, eating and burying these nuts in your fine turf?

For two mornings Shane and company removed two pick up truckloads of white and bur fruit from several of my tees and fairways and even clubhouse lawn with no damage to my turf. I was very impressed with his professionalism and the fact that his service was FREE.



Fifteen minutes worth of nuts.

If so, you might be interested in a service provided for FREE by Shane Pinter of Pinter Landscaping. Yes, I said FREE.

The second week of September I was contacted by young nurseryman from Iowa regarding the removal of acorns from my course. Curious as to the "catch" involved in the

process I requested more information. Shane came to my course, introduced himself and asked for the opportunity to harvest oak tree seeds from my course during. He then processes the nuts and offers them to the forestry industry for reforestation projects.

For two weeks each fall Shane and typically one helper, travel progressively north from the southern Iowa border stopping and collecting acorns through out the different growing zones all the way to International falls. From day-break to sun set they use specialized pecan harvest machines to scoop and contain over 30 pick up truck loads, or 800 bushels, of fruit. These acorns, gathered and sorted according to the tree they were taken from, are then washed and "floated" for viability. The healthy crop is then refrigerated until purchased for planting by a variety of state Departments of Natural Resources.

Golf courses are Shane's favorite pickup spot due to the ease of removal and quantity of product.

The benefit to me was the complete clean up of acorns from several nut-infested areas of my course. For two mornings Shane and company removed two pick up truckloads of white and bur fruit from several of my tees and fairways and even clubhouse lawn with no damage to my turf. I was very impressed with his professionalism and the fact that his service was FREE.

(Editor's Note: If you are interested in providing Shane with access to your crop, contact him at Pinter Landscaping, 16267 Yankee Avenue, Cresco, Iowa, 52136.)

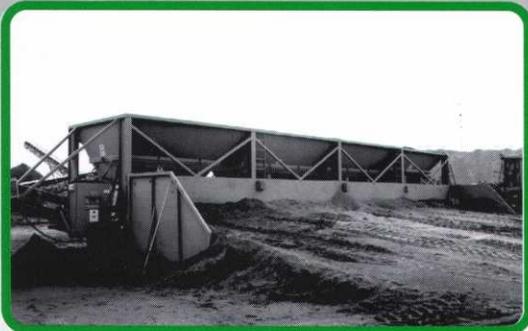


Pinter Landscaping "going nuts!"

Computerized Custom Blending

Consistency • Consistency • Consistency

State of the art computerized mixing machine to achieve the best accurate mix. Light years ahead of mixing with a Bobcat or Powerscreen.



Four bin computerized blending machine with screen deck and conveyor belt.



Computer monitor touch screen.



Blending yard with blender, stacking conveyor and stock piles.



Screen deck and stacking conveyor.



**Plaisted
Companies**
INCORPORATED

P.O. Box 332
Elk River, Minnesota 55330
763.441.1100 • Toll free 1.877.564.8013



P.O. Box 332
Elk River, Minnesota 55330
763.441.8387 • Toll free 1.800.441.1880

Contact: Steve Young (612) 840.3087 (cellular) or Kerry Glader (612) 868.0163 (cellular)

MGCSA Membership Report

September 2003
New Members

Mark Carlson Class A- GCSAA
Pike Lake AAA Golf Course
W: 218-729-8160

Mark Seelen Student
University of Minnesota / Crookston
H: 218-281-8771

Paul Bruns Class C
Legacy Courses at Cragun's
W: 218-825-2751

Jay Hudson Affiliate
Glenn Rehbein Companies
W: 763-484-0657

Joe Gellerman Class C
Legacy Courses at Cragun's
W: 218-825-2752

Richard LaFavor Affiliate
Minnesota Waterlok
W: 763-227-7350

Paul Klugow Class C
Oneka Ridge Golf Course
W: 651-426-6889

Sharon Lucas Affiliate
Encore Technologies
W: 763-577-5958

Brad M. Melsa Class C
Prestwick Golf Club
W: 651-459-0288

Stan Miller Affiliate
Twin Ports Water-Lok
W: 858-427-0541

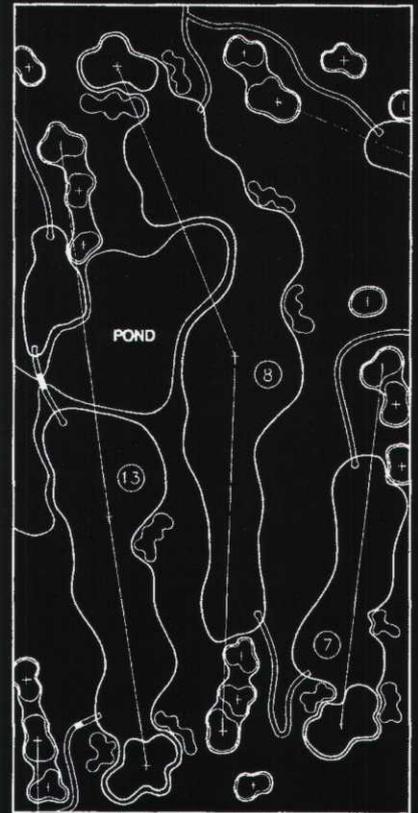
Chad Zachman Class C
Legacy Courses at Cragun's
W: 218-825-2751

Reclassification
Jeff Kelm
Saint Croix National GC C to B - GCSAA

Isaac Risbrudt Class D
Les Bolstad University of Minnesota GC
W: 612-627-4138

*Submitted by Mike Nelson
MGCSA Membership Chairman*

HERFORD • NORBY



GOLF COURSE ARCHITECTURE

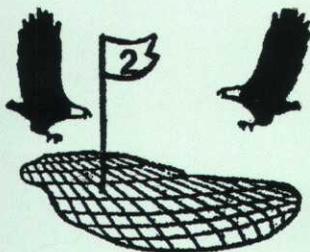


If You'd Like To Get More Involved
In the MGCSA and Would Like To
Become a Board Member?



Contact:
Paul Eckholm
MGCSA Ex-Officio

952-440-6494 or e-mail
epeckholm@msn.com



Mel Strand, CEO
35 Years Experience

Double Eagle Golf Construction

Renovation Experts
...Construct the New

17715 Jefferson St. NE ~ Ham Lake, MN 55304 (763) 434-0054

(952)942-0266 (952)942-0197 Fax

Emerald Ash Borer

Reprinted with permission from *Indiana Woodlands* – a publication of Purdue University

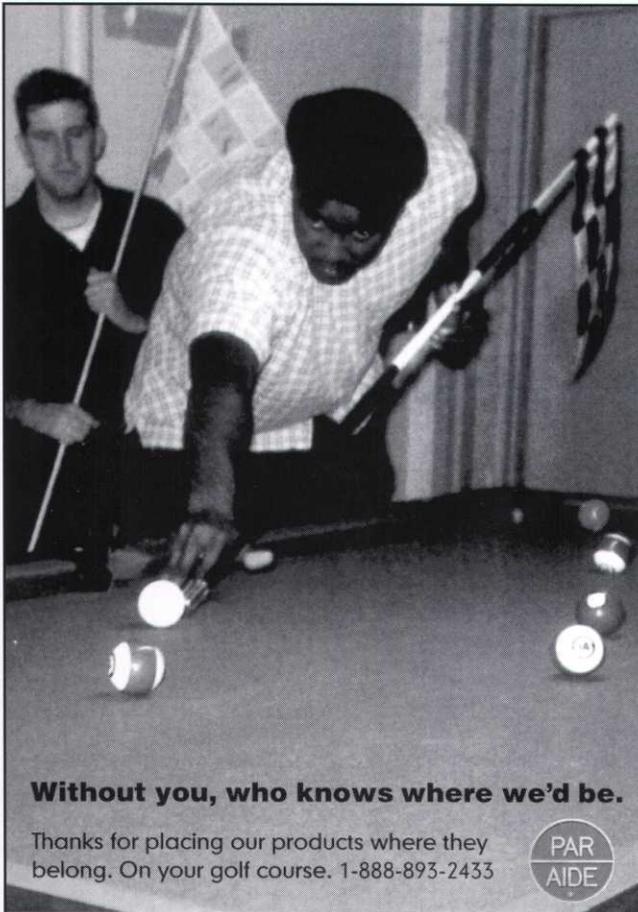
A new exotic beetle from Asia was discovered feeding on ash (*Froxinus* spp.) trees in Southeastern Michigan. It was identified in July 2002 as *Agrilus planipennis* Fairmaire (*Coleoptera: Buprestidae*). Larvae feed in the phloem and outer sapwood, producing galleries that eventually girdle and kill branches and entire trees. Evidence suggests that *A. planipennis* has been established in Michigan for at least five years. Surveys to determine the extent of the infested area are underway.

Identification

Adults are larger and a brighter green than any of the native North American species of *Agrilus* (Figure 1). The slender, elongate adults are 7.5 to 13.5 mm long, and females are larger than males. The adult body is brassy or golden green overall, with darker,



Figure 1. *Agrilus planipennis* Fairmaire



metallic, emerald green wing covers, or elytra. The top of the abdomen under the elytra is metallic coppery red (seen only when the wings are spread). The prothorax, to which the first pair of legs is attached, is slightly wider than the head but the same width as the base of the elytra. The back edges of the covering on the prothorax are sinuate or wavy, and the top is sculptured with tiny, transverse wavy edges. The surfaces of the elytra are granularly roughened. Tips of the elytra are rounded with small teeth along the edge.

Larvae reach a length of 26 to 32 mm, are cream-colored and dorso-ventrally flattened (Figure 2). The brown head is mostly retracted into the prothorax and only the mouth-parts are visible externally. The 10-segmented abdomen has a pair of brown, pincer-like appendages on the last segment.

Biology

The emerald ash borer appears to have a one year life cycle in southern Michigan but could require two years to complete a generation in colder regions. Adult emergence begins in mid to late May, peaks in early to mid June, and continues into late June (Figure 3). The adults are active during the day, particularly when conditions are warm and sunny. Most beetles remain in protected locations in bark crevices or on foliage during rain, heavy cloud cover, high winds, or temperatures above 32°C (90 °F). Chinese literature indicates that beetles usually fly within 2 meters of the ground. The likelihood of long distance flights is

Emerald Ash Borer –

(Continued from Page 28)

known. Adults, which are present into August, feed on up to 0.45 cm² of foliage per day, leaving irregularly-shaped patches of leaf tissue with jagged edges.

Information from China indicates that male adults live an average of 13 days and females live about 21 to 22 days. Females can mate multiple times and oviposition begins 7 to 9 days after the initial mating. Females lay 65 to 90 eggs during their lifetime. Eggs are deposited individually on the bark surface or in bark crevices on the trunk or branches. In southeastern Michigan, the oviposition period likely extends into mid to late July.

Eggs hatch in 7 to 10 days. After hatching, first instar larvae chew through the bark and into the cambial region. Larvae feed on phloem and the outer sapwood for several weeks. The S-shaped feeding gallery winds back and forth, becoming progressively wider as the larva grows. Galleries are packed with fine frass. Individual galleries usually extend over an area that is 20 to 30 cm in length, though the length of the affected area can range from 10 to 50 cm. In some areas, woodpeckers feed heavily on larvae.

The insect overwinters as a full-grown larva in a shallow chamber excavated in the sapwood. Pupation begins in late April or early May. Newly enclosed adults may remain in the pupal chamber for 1 to 2 weeks before emerging head-first through a D-shaped exit hole that is 3-4 mm in diameter.

Distribution and Hosts

The emerald ash borer is indigenous to Asia and is known to occur in China, Korea, Japan, Mongolia, the Russian Far East, and Taiwan. A Chinese report indicates high populations of the borer occur primarily in *Fraxinus chinensis* and *F. rhynchophylla* forests. Other reported hosts in Asia include *F. mandshurica* var. *japonica*, *Ulmus davidiana* var. *japonica*, *Juglans mandshurica* var. *sieboldiana*, and *Pterocarya rhoifolia*. In Michigan, this borer has been observed only on ash trees. It has killed green ash (*F. pennsylvanica*), white ash (*F. americana*), and black ash (*F. nigra*), as well as several horticultural varieties of ash.

Symptoms

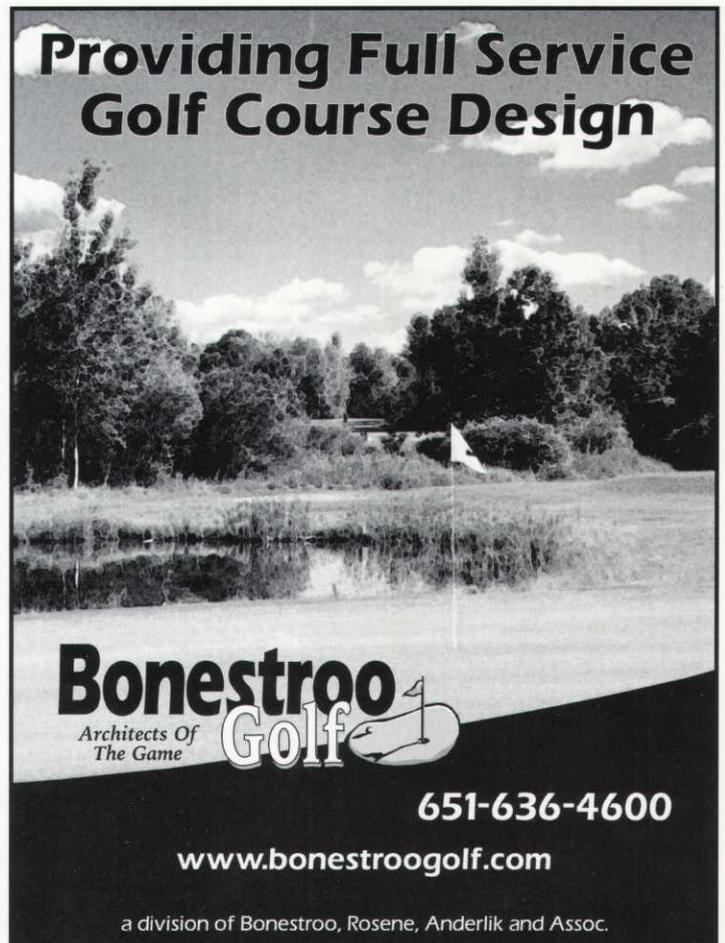
Infestations of emerald ash borer can be difficult to detect until canopy dieback begins. Evidence of infestation includes D-shaped exit holes on branches and the trunk. Callus tissue produced by the tree in response to larval feeding may cause vertical splits 5-10 cm in length to occur in the bark above the gallery. Distinct, frass-filled larval tunnels etch the outer sapwood and phloem of the trunk and branches. An elliptical area of discolored sapwood, likely a result of secondary infection by fungal pathogens, sometimes surrounds larval feeding galleries in live trees.

Infested branches in the canopy die when they are gir-

dled by the serpentine tunnels excoved by feeding larvae. Many trees appear to lose about 30 to 50 percent of the canopy in one year and the tree is often killed after 21-3 years of infestation. Frequently a profusion of epicormic shoots arises at the margin of live and dead tissue on the trunk. When trees die, dense root sprouting occurs.

Emerald ash borer killed trees of various size and condition in Michigan. Larvae successfully developed on trees as small as 5 cm in diameter, but pole-sized and sawtimber-sized trees were also killed. Stress likely contributes to vulnerability of ash trees and recent summer droughts may have contributed to high emerald ash borer populations in southeastern Michigan. However, emerald ash borer attacked and killed apparently vigorous trees in woodlots and urban trees under regular irrigation and fertilization regimes.

(Editor's Note: the following sources were used: Yu, Chengming. 1992. *Agrilus marcopoli* Obenberger. In Xiao, G., ed. *Forest insects of China*. 2nd ed. Beijing, China: China Forestry Publishing House; 400-401. Jendek, E. 2002. *Agrilus planipennis* fact sheet. PDF file provided by Eduardo Jendek, Institute of Zoology, Slovak Academy of Sciences, Bratislava, Slovak Republic.)



**Providing Full Service
Golf Course Design**

Bonestroo
Architects Of
The Game **Golf**

651-636-4600
www.bonestroogolf.com

a division of Bonestroo, Rosene, Anderlik and Assoc.



In Bounds

By Jack MacKenzie, CGCS
North Oaks Golf Club

It is never too early to reflect upon a golf season. With all of its challenges, 2003 appears to be one that will be chalked up as a success. On a frosty morning such as this, I am able to think about the lessons learned through managing a golf course during another atypical year.

Perhaps my most brilliant moment was the concept and use of an electrically operated 215 mile per hour leaf blower to keep my VFD irrigation control panel functional when both internal cooling fans went out during the tail end of the drought. Of course the issue reared itself on a Saturday morning when electrical engineers are both elusive and very, very expensive! The problem to overcome involved creating a powerful stream of airflow over the heat dispersion fins inside and behind the control panel.

Regular household fans didn't cut it and, although effective temporarily, a gas operated blower just wasn't consistent enough for overnight use. Not to mention the death trap created by the CO2 buildup inside my pump house. Thus for under 60 dollars I was able to obtain a directional super powered electric leaf blower/ control panel cooler. Ironic, however, that my pump house is slated for demolition the first of November and my course is replacing pumps used when it was opened in the early 1950's.

My chemical program can also be claimed as a template for future years. The fungicide motto will be, "start early, spray often and use light applications". This year the fairway plant protectant program included a variety of chemistries sprayed on two week intervals beginning the third week of May, the greens and tee program commenced the last week of April. I cannot say enough about the phosphorus acid products. This program limited my exposure to almost all externally caused damage with the exception of ball marks, divots, bug repellent over spray and of course, knees and toes and knees and toes and palms!

To reduce Poa mortality upon the fairways during the heat of the day, a "five plus five to stay alive" attitude was maintained. Evening irrigation was limited to under ten minutes

per station. And once daytime temperatures achieved Poa damaging levels, we implemented a late morning/early afternoon, five-minute shot of moisture upon the fairways. My assistant was able to time the short irrigation cycles behind the last morning group and ahead of the first afternoon group. This program is a carryover from experiments we did last year. We also include par three tee boxes for the recovery of divots.

Speaking of divots, every blemish upon my tees and fairways was seeded late, late last fall and I was surprised by the quick recovery I saw early on in the spring. I plan to incorporate this post-growth seeding program onto my greens after I aerify late this month.

...But Not All Moments Were Spectacular This Summer

The early season was plagued with hydraulic leaks. You know, the kind that occur inside the protective cover shroud and can't be seen, except of course when you turn around for your next pass. In one case I must commend the quick thinking operator who pulled onto a cart path to wrap a towel around the leak and slow the flow. I sort of wish he had brought the unit in after that, rather than mow some more!

And can you say irrigation challenges? Between the holes we created last fall while deep tining our greens and collars, the pipe that shattered when firing up the system while still frozen and the failure of multiple "T"s, my staff and I were kept in high heaven laying pipe.

And finally, my frustration got the best of me one fine morning watching my lads apply fertilizer to the new first cut sod. The direction included double downing at half rates for a total of two pounds of N per thousand. The instruction also mentioned putting down a full rate once over the "apron" portion of the new first cut, again for a total of two pounds of N per 1,000 square feet.

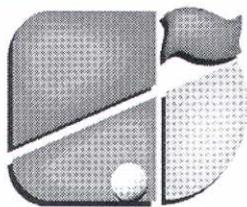
Somewhere along the line the communication broke down and a double application of product was applied for a total of four pounds of N per thousand on the first cut apron. This event happened on the 11th of June and I thought we would be witnessing massive turf mortality during the predicted warm spell. In a fit of anger I attempted to vent my frustration by clashing the aluminum cup I had in my left hand with the aluminum cup setter in my right hand, making a loud noise and thus release my tension.

The only loud noise heard during those few moments was generated by my mouth after I miscalculated the point of contact

and proceeded to destroy the tip of my left thumb and thumbnail! At that time I uttered words unheard by my ears since leaving my position at the White Bear Yacht Club twenty years ago.

And talk about a waste of energy. We soon discovered that the touted slow release product was indeed sloooow release. Not a blemish could be found, but boy did we cut some grass!

In closing, it was a good year. My staff kept me on my toes, the weather forecasters were consistently wrong and the grass grew in spite of what I did. - JM



GILL MILLER INC.
Golf Course Architects

Design • Renovation • Master Planning • Practice Centers

122 North 2nd Street • River Falls, WI 54022 • 715-425-9511 • e-mail: info@gillmiller.com

visit our website www.gillmiller.com

Member: American Society of Golf Course Architects