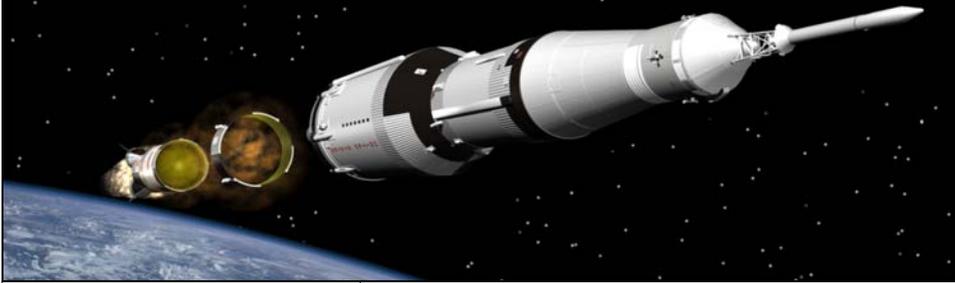


Jackson Model Rocketry Club

JMRC NEWS



Volume 4, Issue 2

November 2010

INSIDE THIS ISSUE:

November launch	1
Upcoming Birthdays	1
2010 Contest	2
Three Oaks	2
Turkey Chute	3
Fred's' level three	3
Building the Skyfish Space Wagon	4
JMRC Vendors	9
FROM the Field	10



**JMRC Christmas
Party December 5**

2010 Launch Dates

- December 4 MIS
Research Launch

NOTE: Launch dates are subject to change without notice. Be sure to call the "launch hotline" at 517.262.0510

NOVEMBER LAUNCH REPORT

The JMRC November launch was held at Michigan International speedway on November 13th. The day started out foggy, but it burned off early and the weather was sunny and in the low forty degrees. The day improved to a high temperature of 61 Degrees. There was some wind, but it was not a major issue. The sky became overcast later in the day but that didn't affect the launch.

Nineteen flyers made a total of sixty nine flights. Both Chris Palmer and Tony Haga made dizzy izzy flights. Chris once again proved he is the champion sky writer. Tony used a small hybrid motor for his flight, with the motor staying lit for the complete flight.

Dale Hodgson launched his rocket "American Pride" as a tribute to Veterans Day. The rocket featured a really beautiful paint job. Unfortunately the parachute did not fully deploy and the rocket suffered some damage.

Roger Sadowski, Carl Wagner and Bob Dickinson all took

some early shots at the turkey. Carl quickly took the lead with a flight of fifteen feet six inches. No one else got close to Carls' shot. Contest details are on page three

Eleven flights were made in the 2010 contest. Eldred still has the best flight if 1859 feet. Jay Calvert came real close with a flight of 2043 feet. Contest details are on page three.

Dave McVeigh of Red Arrow Hobbies donated twelve Estes Rocket kits to the club, plus two boxes of motors. The rockets are ready to fly and are to be given to kids under eighteen to give them a chance to try rocketry.

(continued on page eight)



UPCOMING BIRTHDAYS

The members below have birthdays coming up in the next few months, so if you see them at a launch, be sure to wish them a happy Birthday!

February

Carl Wagner 2/3

Ken Karbon 2/18

DECEMBER

Brian Naverette 12/14

Jim Fustini 12/19

Rob Dickinson 12/21

Art Upton 12/23

January

Gabe Osborn 1/4

Kathy Miller 1/14

Remember, I can only post the birthdays I have, so if you don't see your name here, please let me know your birthday, and I'll get it posted!

Thanks!

Three Oaks

By Rob Dickinson and Scott Miller

3 Oaks Launch report

Scott Miller and Rob Dickinson

The Semi-annual Team 1/Michigania launch at 3 Oaks was held this fall on November 5th, 6th and 7th. For those who attended, it's not sure which will last longer, the memories of the flights, or the mud on their shoes! The field had an inch of snow covering a freshly harrowed field when we arrived, and as the weather warmed during Saturday, the snow melted to add some more water to the already soft conditions. Several drivers didn't even try to get their vehicles onto the field, but instead parked along Avery Road, and walked in! Winds were calm Saturday, and once the cloud cover cleared in the early afternoon, the weather above the ground was great! The winds picked up on Sunday, and even though the thermometer said it was warmer, the Boy scout TARC team was still selling lots of coffee and hot chocolate!

Several JMRC members were on hand, to either fly, or just observe. Rob Dickinson flew his comic book inspired Skyfish Space wagon on a H-400 Vmaxx motor. A long ejection delay caused the chutes to deploy just before impact, but the mud minimized the damage, and the Space Wagon will fly again. Tom Kureka flew Galactic on a L motor, with a nice flight, and a muddy recovery! Kathy Miller brought out a crayon Fiddle Faddle, which also suffered a long ejection delay, and some fin damage. I'm sure there were other great flights by JMRC members, but it's hard to watch them all!

The flights of the weekend, however, were both from JMRC members. Fred Ziegler and Eldred Pickett both flew picture perfect L3 certification



flights. Scott Miller wrote up the following report of their flights.

Definitely 2 perfect flights, and basically one right after the other when the ceiling broke on Saturday. Eldred was covering LCO duty early on and Fred prepped his 5" bird with a gorgeous paint job for a ride on the M1810 Red Lightning... from his own pad :-)

With everything loaded it was placed on the pad and waited for the cirrus clouds to pass being they were roughly 8K and Fred was going 11K+. After sitting patiently for roughly 45 minutes or so we had blue skies and were given the go ahead from the launch director. Fred's went about as straight as one could hope for and I'm guessing it came close to if not breaking the demon in the sky around MECO; I can't wait to see the speed

reported from his boards. Apogee and Main came just as planned and the bird landed gently in the south part of the field before any of the trees.

After a quick recovery the motor hardware was handed over to Eldred who had his Gi-Normous crayon prepped and awaiting some go-go juice. Eldred loaded the M3100 White Thunder re-load and we lugged the huge 7.5" diameter crayon out to Fred's pad and armed everything up. After removing the lucky oversized penny and arming his onboard camera we made the long muddy walk pack to the spectator area to light it up.

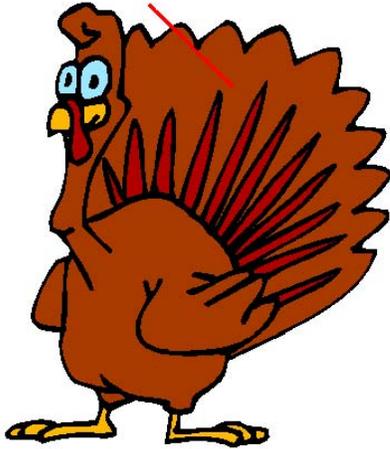


The White Thunder motor made this huge crayon look like a toy, it came off the pad quicker than I could have imagined! Apogee charge hit right at the top for a drogueless deployment followed by a Main right on cue. Nothing better than watching a parachute inflate when it is supposed to on a project and Eldred and Fred nailed them both.

2010 CONTEST

During the launches in September, October, November and December we are having a 2010 contest. The goal of the contest is to have a flight that comes closest to 2010 feet without going over the target. The entry fee is five dollars for each flight. The money should be paid to a Board member before the flight. Entry forms will be available at the registration table. The prize for the contest will be 50% of the entry fees. The flight must have a safe recovery. Two flyers made flights during the September launch. Rob Dickinson and Dale Hodgson both made flights with Dale having the best attempt at 1453 feet. During the October launch eight attempts were made to hit 2010 by six flyers. Jim Fustini flew Burn Notice to 1358 feet. Tom Kureka flew Astrobee to 1726 feet and Blue Phoenix-XL to 3481 feet. Buzz Nau flew his Cherokee Double D to 1835 feet. Eldred Pickett had the best flight of the day. His EZI-65 hit 1859 feet for a new best height for the contest. During the November launch eleven flights were made to try and move Eldred out of first place. Tony Haga overshot the target and with a flight of 2306 feet. Jay Calvert made three tries to better Eldred's flight. His closest shot was 2046 feet. Buzz Nau had flights of 1546 and 2132. Eldred made four tries to better his altitude. He had flights of 1259, 2144, 2233 and 525 feet. The December launch will be the last chance to move Eldred out of first place.

TURKEY CHUTE



Twenty flights were made to try and get close to the Turkey target. Early in the contest Carl Wagner landed his flight fifteen feet five inches from the target, No other fliers were able to get any closer to the Turkey. Roger Sadowski led the contest with a flight of sixty eight feet for a short time but his distance was bettered by Carl. The contest added forty dollars to the club funds and Carl won \$20.00. Chances are he will buy a V-max motor rather than a Turkey! The prize for the contest was donated by DAFS. Jeff Drogowski volunteered to measure and mark the flights.

JMRC Christmas Party

The JMRC Christmas to be held on Decem-Grotto Club in Jack-include a pot luck meeting and a raffle the club. Don't miss a noon! Saturday De-tentatively scheduled launch. Check the site for further infor-



party is scheduled ber 5, 2010 at the son. The party will lunch, business to raise money for really fun after-ember 4, 2010 is to be a research JMRC group web mation.

Level Three flight—Fred Zigler

As far as the flight, the rocket was a modified Performance Rocketry Intimidator 5 kit. It was the same rocket (then named Cherry Bomb) I made my first attempt with in the spring of '09 at the Oaks that had the CTI M1400 CATO and was destroyed on the flight. I rebuilt the rocket with several new parts, fixed the rest of the parts and loaded it with a CTI M1810 red motor this time, and renamed it RENOVATIO, which means "rebirth" in Latin. It seemed a fitting moniker given the history of the rocket. We loaded RENOVATIO on the away cell just after noon, and waited for the sky to clear from the overcast that was hanging out around 6000 feet. Around one o'clock blue sky moved in overhead and we were given a go. After a 10 count, the rocket lept off the pad to an altitude of 11,600 as reported by the PerfectFlite HI-ALT 45 and 11,588 feet as reported

by the ARTS board. The rocket descended drogueless to 800 feet where the Rocketman main chute was deployed from a Fade to Black Rocket Works kevlar deployment bag. It landed about 700 feet south-east of the flight line in a nice, soft snow covered field, about 40 feet from Avery road. My L3CC

members were Scott Miller and Art Upton, and my support crew included Tony Haga, Bill Poster, Chris Palmer, Kathy Miller, Jim Russell and Scott Miller. (Those there in spirit were my brother Dale, Roger, Buzz and Curt and Cathy. Eldred was busy working on his own L3, but still took a few moments to interject his support as well.) Art and Tom Kureka armed the video cameras, and Tony and Art manned the radios to track the Big Red Bee in case the rocket were to drift out of range. As it turned out, the air, while calm at ground level, was moving at a pretty good clip at altitude with a strong wind from the North-Northwest. At roughly 8K feet, the rocket started to roll into the wind, and the apogee event occurred a good distance downrange. Even drogueless, the rocket drifted past us and was about 500 feet south when the main was deployed. Still, not a bad distance to recovery for a rocket that went darn near 12000 feet up. I owe a lot of thanks to all the JMRC members that helped me both physically and with moral support through this whole adventure. They are definately the best group of folks I've ever had the honor to play with. :-))vvvvvvv



Fred Zigler and Renovatio

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Scott and Eldred taking the Gi-Normas crayon to the away cell. Is there a 12" crayon in Eldreds future?

Building the Skyfish Spacewagon—Rob Dickinson

Like most of my generation, I spent a lot of time growing up following Nasa's exploration of space and the Moon. There was a lot to keep a young mind amused as each flight always seemed bigger and more complex than the last. The rockets kept getting bigger, and the moon landings kept getting more complex and longer. It was a time when 'NEW' was a central theme in space, and everyone was just waiting to see what

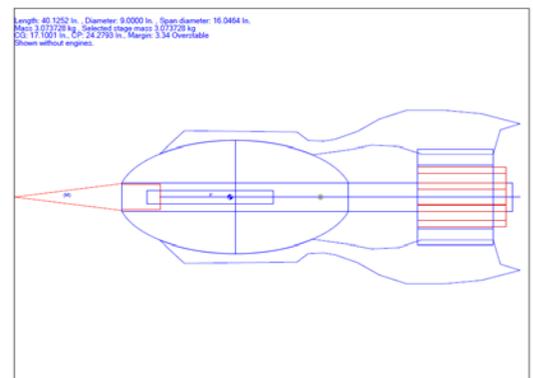


newer, bigger, faster, thing would come next. The fact that Nasa's later moon shots seemed, at least in the public eye, to be more of the same, instead of always bigger and newer, is one of the factors that killed the program in the public's mind. Nasa had simply set a standard of growth that was impossible to maintain.



It was during the height of the "bigger, faster, newer" phase of Nasa's development, and my childhood interest in rocketry, that I read a Scrooge McDuck comic book that really changed my view. In the story, entitled "Island in the Sky", Scrooge wants to hide his money in the asteroid belt, and takes Donald to the Spaceport to buy a rocketship. They go past all new bigger, faster, better ships, and Scrooge picks a second-hand Skyfish Spacewagon as the rocket he will use to explore the asteroids. It was the first time I had realized that there would be a future time when spaceships would be seen as anything other than new, and it really hit home with me. As I grew up, the Skyfish always stuck with me as the image of what the future of Space exploration could become.

Fast forward 40 years, and my father and I, both BARs, are enjoying high power model rocketry as a hobby. We both enjoy rockets, and it gives us more opportunities to spend time together. As we have advanced our skills in the hobby (we both have our level 3 certifications), we've taken to building our own components, and have created several one-off nosecones and custom parts both for ourselves, and other rocketeers in our Club, the Jackson Model Rocketry Club in Jackson, Michigan. When the Club announced an upcoming science fiction rocket contest, I brought out my Scrooge McDuck com-





ics and asked Dad what he thought about trying to build the Skyfish. A few days later, Dad had designed the rocket in Rocksim, and it seemed stable enough to try to actually build.

The technique we've found works best for us when building nosecones is to cut out discs of foam insulation board, and glue them into a stack on a central spindle. Once the glue sets, the whole thing goes onto Dad's wonderful Rube Goldberg lathe to be worked on. Dad has converted a wood lathe to take work pieces up to 8' long. Once on the lathe, we can turn down the foam to the desired shape, and sand it smooth. For Skyfish, we used a piece of

54mm airframe as the spindle, and glued on the stack of foam discs to form the front "bulb" of the rocket. A bit of turning, and a shower of pink foam particles later, we had the giant Q-tip that would form the core of the rocket.

The tubefin is a piece of 7.5" coupler tube, and the fins are cut from a sheet of 5/32" fiberglass. The two 'side' fins just run up into the body bulb, but the top and bottom fins actually run up over the top of the bulb, to act as guides for creating the "shoulders" on the top and bottom of the rocket. Once I slit the bulb with a saw blade, the fins slid right into place for gluing.



(Builder's tip: When gluing to foam, or building shapes out of pieces of foam, Gorilla brand glue is great. It's actually a water-activated adhesive foam itself. It adheres great to the foam, where as wood glue never dries because there's no air access, and when Gorilla glue foams up and dries, it can be shaped and sanded, just like the foam

The fins run back through the tube fin, and are epoxied to the body tube to hold the rear assembly in place. I cut halfway through the fins and the tube, and once nested together and filleted, gave a very strong, well supported set of fins.

Now it was time to build the upper and lower "shoulders" of the rocket. I had the forward parts of the fins as a height guide, and used expanding 2 part foam to fill the space. I took a long strip of poster board, and taped wax paper to one side. I then taped the strip in place on the rocket, with the wax paper on the inside, to give it a general shape. I made sure I had the entire seam between bulb and poster board well sealed with cellophane tape (which the 2 part foam won't stick to).



Now, I've used two part foam in the past to foam encapsulate fin cans in other rockets, and I know I have LOUSY judgment when it comes to figuring out how much foam I should mix to fill a certain space. I set this up with a clear picture in my mind of mixing WAY too much foam, and having a huge mess that would go everywhere. I know from experience how much it costs to get expanding foam out of carpet, and that's just for the flowers and dinner out!

So I lined everything in reach with newspaper, and started mixing the foam. It worked out perfectly! It took 2 pours to fill each shoulder, and nothing spilled over onto anything my wife cares about! I had a couple of leaks, but those sanded right off, and the ones at the back, by the fins, actually helped fill in that area. Once the first side was dry, I flipped over the rocket, and duplicated the work on the other side. Once the foam had fully cured, I was able to pull off the poster board and wax paper, and I was ready to start shaping.



It was fairly easy, if messy, work to get the foam shaped to what I wanted using a belt sander for the first rough pass, and finer sanders for the

final shaping. The fins I had set into the foam worked perfectly as guides, and both shoulders came out flat and symmetrical.

Once I had it roughly where I wanted it, I used light-weight spackle to fill in divots the sanders left, and

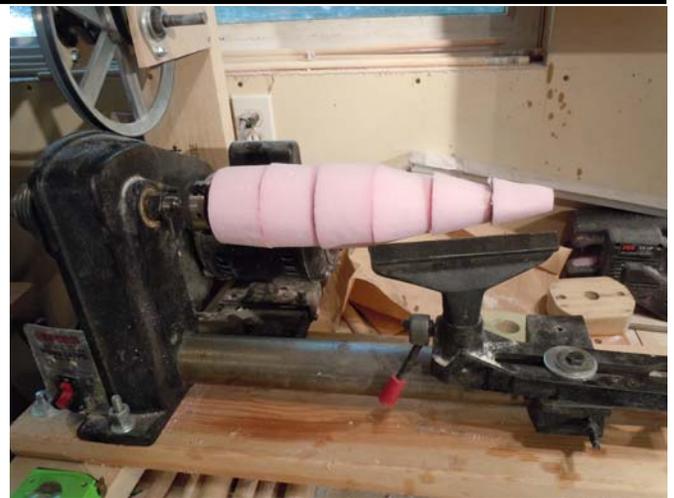


got the surface roughly level and smooth. I had originally considered fiberglass coating the body, but was worried about stability and weight, and so left the body as foam for this first rocket. Although I saved some weight, I found that it was very hard to get a nice smooth final surface, and sand-

ing one area seemed to cause divots elsewhere. Dad and I are currently thinking about a 2X up-scale, and that will definitely have the body coated in fiberglass.

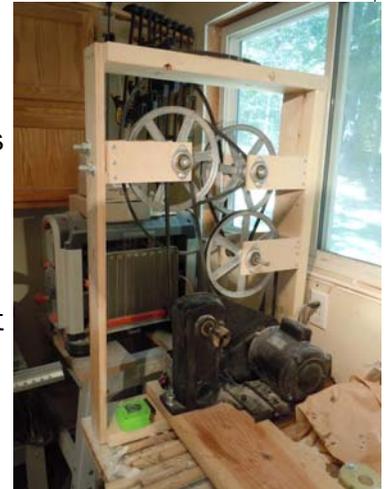
Next up was the hole for the launch rod. I had tested some scrap foam, and knew a hot piece of metal would melt right through, and leave a decently clean hole. So I took a 1/4" launch rod, heated its end up with a torch, and just slid it up through the foam along the body tube. It melted a nice round hole through the foam, and using the body tube as a guide kept it nice and straight.

While I was working on the body, Dad was kind enough to build the nosecone. He turned down a stack of foam discs on his lathe, then covered the



foam with fiberglass to build it out to the final dimensions. Dad

uses fiberglass cloth cut to the outline of the nosecone, which gives nice clean lines and minimal seams and wrinkles. Dad built a set of pulleys into his lathe to enable pieces to turn at roughly 1 RPM, and it makes a great glassing work bed as the piece slowly rotates without any drips or runs. Once it's dry, he uncouples the pulleys from the drive system, and the piece turns fast again for sanding. Dad's lathe is a bit scary to look at, but it works REALLY well at making rocket parts!



Once I got the nosecone, I filled it with lead shot and epoxy, and set the cone in a pitcher of water to draw off excess heat as it cured. Rocksims showed that the rocket was stable without all the nose weight, but I was still concerned about the effects of the bulb body and the shoulders as the rocket increased speed, and wanted to weigh things as heavily in my favor as I could. The nosecone weighs about as much as the rest of the rocket, and that formula, even if overkill, seems to work.

My final construction job was the fake rocket motor tubes that go inside the ring fin. In the comic, these are, of course, working, and I briefly considered using at least some of them as actual motor tubes for a cluster launch, but decided I had



pushed the envelope plenty far enough just with the body shape, and stuck with using the 54MM body tube as the single motor

mount. 29MM tubes gave me the look I wanted for these fake motors, and they epoxied into place with no trouble, using the sides of the main fins as guides. The PML 54MM retainer does hurt the look of the final rocket a bit, but I'm willing to make that trade in exchange for the safety of a good solid motor retainer.

With the rocket done, it was just primer and paint (being sure to test each against a scrap of foam first to make sure the solvents in the paint wouldn't eat the foam), and I was ready for decals. I made my own decals using decal printer paper, and they came out OK, but the flight did partially peel some of them off. For the upscale, I'll get a set of strong vinyl decals from a vendor.

Since the nosecone and rocket weight roughly the same, and having only a 54MM tube for chute storage, I decided to bring the two pieces down separately, each on it's own 40" chute. The chutes pack well in the tube, and each chute works well with it's roughly 3 lb. load. On launch day, I had previously decided to use a high impulse H motor, to just punch it up into the air, and deploy the chutes quickly. However, my motor vendor, Scott Miller, of Miller Motor Works, was out of those motors.

For some unknown reason, whenever I ask Scott for a motor recommendation, I end up with a larger motor than I intended to use! In this case, A CTI J357 Blue Streak motor. However, the day

was nice and clear, and the wind was very still, so I felt we could put the rocket up that far and still recover on the field with just motor ejection. I cut the delay down to 8 seconds, put in some dog barf, packed the chutes, and we were ready to fly!

As this was the first flight of a very unusual rocket, this was the definition of a heads-up flight, and we used the far-away pad to give as much failure space as possible. Our LCO made sure all eyes were on the pad, and Skyfish took flight. The rocket flew straight up, without any detectable spin, and deployed right at apogee. Both parts came down in the field, and landed with no damage. A member of our Club, Tom Kurecka, took an



excellent video of the flight, and it's posted on Myspace. Just search in videos for "Skyfish", and you should find it. I couldn't be more pleased with its flight characteristics.

I'm extremely pleased with the way the Skyfish Spacewagon came out, and I've already mentioned that Dad and I have plans for at least 1 upscale. I don't know when it will actually get built, as we have several other rockets in the works as well, including a 1/4 scale, 16" diameter V2 that has been waiting patiently for 2 years now for its turn to fly. Whatever we choose to make or fly next, I know it will be fun!



Justin Florkowski was at the launch with his Dad. Roger gave him a kit and several motors and he spent the day launching the rocket and helping Roger and Art at the LCO table. At the end of the day Justin teamed up with Chris Palmer for his last flight. His rocket left the area in a hurry, never to be seen again.

Eldred flew his crayon on a stick for a real neat flight. The rocket



was stable through most of the lift, and recovered with no problem. Matt Schottler, a University of Michigan student flew his rocket "Death Roh" for a level two flight. He used a J275W-9 with apogee deployment. Scott and Dale spent quite a bit of time with Matt and his friends from U of M explaining the practical effects of wind on a rocket compared to what the students had read. After agreement



was reached, the rocket was launched. The flight was great, and after a short search it was recovered for a successful certification. Matt also became the newest member of JMRC.

Carl Wagner launch his porta potty from the low power rack. The potty stayed on the rack but the motor made a great flight.

Pinky did her usual fine job providing lunch at the JMRC café.

Roger and Jeff also built a fire in the fire pit and forks were provided for anyone who wanted to roast their own hot dog.



ROCKET SCIENTISTS AT WORK



Buzz with a beautiful rocket

VENDORS AT THE NOVEMBER LAUNCH



MILLER MOTOR WORKS

BOOSTER VISION



RED ARROW HOBBIES

IMPULSE BUYS



LOOKING and LEARNING



Tony Haga—fledgling photog

Jackson Model Rocketry Club

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We're on the Web!
www.jmrconline.org

Blast off with Rocketry!

The Jackson Model Rocketry Club (JMRC) is a prefecture of the Tripoli Rocketry Association (Prefecture 96), and the National Association of Rocketry (Club 620). JMRC is a 501(c)3 tax-exempt organization, and donations to the club are federally tax-deductible.

Prefect—Scott Miller

Vice Prefect—Roger Sadowsky

Secretary—Rob Dickinson

Treasurer— Bob Dickinson

JMRC holds launches monthly (weather permitting) year-round from two primary fields in the Jackson area. The club has launch equipment sufficient to launch any rocket from the smallest Estes model to large high power rockets, including hybrids. Waivers are 5,000 ft. AGL or 9,000 ft. AGL, depending on location. To find our next launch, or for more information on JMRC, see our website, www.jmrconline.org, or call Roger Sadowsky at 517.764.7514.

OUR MEMBERS IN THE FIELD...



Photos by:
 Eldred Pickett
 Buzz Nau
 Bob Dickinson
 Rob Dickinson

