

Tracker News



Microwave Telemetry, Inc.

Back to the Future

Dear Customers and Friends,
 Our last newsletter looked back over the first 20 years of our company and highlighted many of the achievements and discoveries you, our customers, have made during those years. As we begin the next 20 years, our thoughts are "back to the future."

We live in interesting times; as guardians of our planet and everything that lives on it, we scientists have an enormous responsibility to guide the conservation of the many species we encounter. The devices that are produced here at MTI have helped track hundreds of highly migratory species over the last 20 years, revealing the critical habitats of many. These are often the starting points of important conservation efforts.

It has always been our goal to stretch the technology to its limit in order to make smaller and lighter devices, suitable for the study of smaller species. Just as we never imagined it possible 20 years ago to build a 5g PTT, where will advances take us 10 years from now? Presently, the 5g PTT allows birds down to about 150g to be tracked. This is only about 30% of the bird species alive today.

In 2012 we will introduce a smaller (17g) Argos/GPS backpack PTT for birds and a smaller pop-up fish tag, together with a range of GSM devices. As we introduce these new devices we are already working on still smaller, more advanced products for the future. As always, our goal is to help you, the scientists, conserve the life around us.

I would like to thank Chris Hewson for his article on the travels of five European Cuckoos from England to Africa. Frequent updates on their travels by the BBC have gained each bird an enthusiastic "fan club." Thank you also to Fletcher Smith for his fascinating article on tracking the migration of Whimbrels that revealed the hazards of migration are more than the great distances travelled.

John Rodenhause put a lot of effort into taking one of our GSM units for a ride around the Chesapeake Bay watershed. Thank you John, for sharing your story. I look forward to meeting many of you at our conference in March and to discussing your needs, your findings, and how we can help you. Until then, I wish you a happy holiday season and a successful 2012.

Sincerely,
 Paul and the Team at MTI



Photo by Phil Atkinson/BTO

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Microwave Telemetry, Inc.
 8835 Columbia 100 Parkway
 Suites K & L
 Columbia, Maryland 21045
 USA
 Phone 410.715.5292
 Fax 410.715.5295
 Email support@microwavetelemetry.com
www.microwavetelemetry.com

Above:
 Lyster the Cuckoo with a 5g PTT.

Migration of the European Cuckoo from England to Africa

Chris Hewson is a research ecologist at the British Trust for Ornithology where he studies the ecology and conservation of Palaearctic African migratory birds and forest birds worldwide.



Over two billion birds migrate between Europe and Africa each year and, as elsewhere on the globe, many of these long-distance migrants are showing severe population decreases. The British Trust for Ornithology (BTO) has been undertaking a research programme into the ecology and demography of these birds, with the aim of helping to determine the causes of these declines.

When we became aware of the availability of a PTT weighing only 5g from Microwave Telemetry, we were immediately excited by the possibilities that this opened up, with the opportunity of tracking European Cuckoos (*Cuculus canorus*) being a particular highlight. This species tends to be at a low density and is hard to catch, so the numbers banded each year in Britain are low. Consequently, we have very little information on where British birds spend the winter or the routes they take to get there. For instance, there is only one recovery of a British-banded Cuckoo in Africa south of the Sahara—a juvenile ringed in a Pied Wagtail's (*Motacilla alba*) nest at Eaton in 1928 which was recovered in Cameroon in January 1930.



Chris Hewson, Kasper the Cuckoo and Paul Noakes.

With the help of Kasper Thorup and Mikkel Kristensen, a team comprised of BTO researchers and ringing volunteers carried out an initial deployment of five PTTs on male Cuckoos in southern England in May and June 2011. As the tags are towards the upper limit of the

load we would be prepared to ask a bird of the size of a Cuckoo to carry, we tagged only male birds weighing more than 115g.

Initial results have been stunning. As of late October 2011, the tags on all five Cuckoos were still providing regular locations. The annual survival rate of the species is not high, so this presents great results in terms of both bird and tag longevity! Within the first two months, we were able to identify important stop-over locations used by the Cuckoos, notably the watershed of the River Po in northern Italy—an area we suspected was important, based on ringing recoveries. Three of the birds used this area to fatten for 3-4 weeks in July before moving rapidly south over the central Mediterranean and onwards over the Sahara at just about its widest point. Understanding how the use of these stop-overs relates to success in crossing the desert could be an important step to understanding the species' population changes.

The other two birds did something quite unexpected, leaving Europe by a south-westerly route via Spain; this was unknown on the basis of ringing recoveries. Both of these birds continued south-west once in Africa, heading over the Sahara to the far western part of Africa. Once across, both birds spent some time in Senegal before moving eastward toward the other three Cuckoos and stopping in Nigeria. Previously, it was thought that all Cuckoos in West Africa were of the smaller Iberian race *bangsi* (birds caught here and museum collections suggest this is the case) so this was an unknown migration route for the nominate race.

During October, the three Cuckoos that took the central Mediterranean flyway moved south. One stopped on the northern edge of the Congo rainforest, one deep within it next to a major tributary of the Congo River and one headed straight over to the savannas on its south side. This last bird took a similar route to the Eurasian Hobbies that were tracked from Sweden using the same model PTTs, minimising the width of rainforest that was crossed.



Migration routes of the five Cuckoos. Lyster and Clement took a route via West Africa whereas Kasper, Chris and Martin took a more direct route via Italy to central Africa, covering approximately 2,500km less in the process!

Already the results have revolutionised our understanding of what Cuckoos (at least males...) do once they leave the shores of Britain behind. The coming months should provide more insights into the migration strategies of the Cuckoos. We are interested to see whether the birds that entered Africa via the south-westerly route will eventually follow the other Cuckoos into and beyond the Congo rainforest. In spring, it will be fascinating to see whether the Cuckoos fatten up for migration and leave for Europe from the southern tropics, as historically thought, or move north within Africa first. These sorts of results will have important implications for our understanding of how these birds might be affected by the changing climate, both in Africa and in Europe.

Funding for the BTO's Cuckoo tracking project was provided by the BBC Wildlife Fund and Essex & Suffolk Water, with additional donations from individual and corporate sponsors. The results and more information about the project can be found on the BTO's website - www.bto.org/cuckoos



Photo by Phil Atkinson/BTO

Life Cycle Monitoring of a Long-Distance Migratory Shorebird



Fletcher Smith is a research biologist for The Center for Conservation Biology at The College of William & Mary and Virginia Commonwealth University. His research interests include migration ecology of shorebirds and winter ecology of marsh sparrows. www.ccb-wm.edu

Connecting populations of migratory birds between breeding, migratory, and wintering areas is critical for the long-term conservation of those species. We have tracked 19 Whimbrels between 2008-2011 using MTT's 9.5g solar-powered PTTs with the primary interest of revealing their annual cycle. The Whimbrel (*Numenius phaeopus*) is a large (300-700g) migratory shorebird that breeds in the high arctic region of North America and winters primarily in South America. The North American population is geographically separated between eastern Whimbrels from the Hudson Bay region and western Whimbrels from Alaska and the MacKenzie River Delta. The migration corridors for these populations were long considered to be separate with the eastern population believed to travel along the Atlantic Coast and the western population along the Pacific Coast. Our first PTT tagged Whimbrel reformed this long standing idea as it was tracked from staging grounds in Virginia on a 5 day, 5,000km non-stop journey to the western

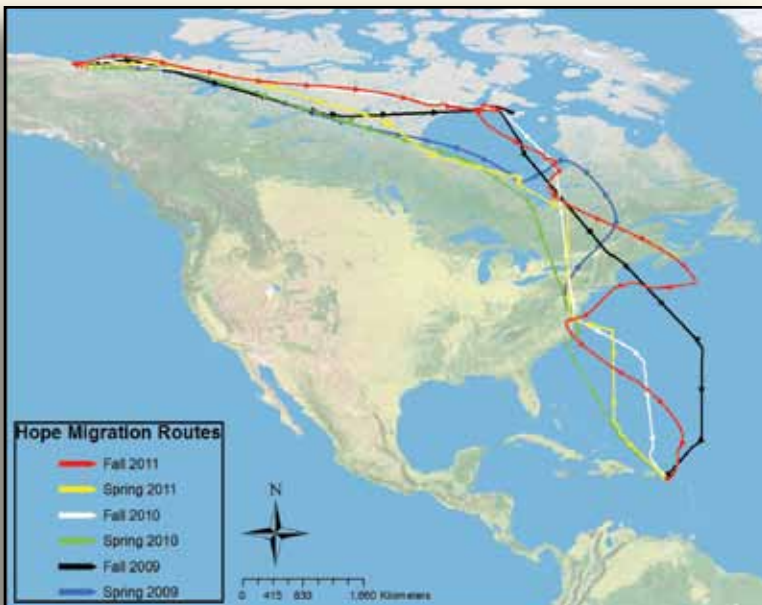


Photo by Bart Paxton

Whimbrel with 9.5g Solar PTT.

breeding grounds. We have subsequently tracked a second Virginia Whimbrel to western breeding grounds and a number of other Whimbrels to the Hudson Bay region.

The implications of these tracking events are critical for long-term conservation of Whimbrels because they indicate that the stopover habitats along the Atlantic Coast are important for both eastern and an unknown proportion of the western populations. Migration population monitoring conducted by The Center for Conservation Biology in Virginia has indicated that the Atlantic Coast migratory population has been in a precipitous decline for over a decade. Taken together, tracking results and migration monitoring highlight the need to determine relative attribution of these declines among the two geographic subpopulations.



Composite view of annual migration events for Hope the Whimbrel 2009-2011. Current location is Great Pond, St. Croix, US Virgin Islands where she has spent three winters.

The autumn migration season of 2011 provided new lines of investigation, including the response of migrating Whimbrels to large storm events. We had been tracking a Whimbrel known as Hope since May 2009. During her third fall migration we tracked her as she flew into the heart of a tropical storm off the coast of Nova Scotia. She averaged 14km/hr for 27 hours flying through the storm before finding tailwinds that pushed her to landfall at a rate of 147km/hr! The next Whimbrel that encountered a storm event occurred when Chinquapin began his fall migration from Coates Island, Nunavut, Canada and made way over the Atlantic Ocean. He flew 5100km in 5 days before encountering category 3 Hurricane Irene. The duty cycle on this bird's PTT was 48hrs off/10hrs on. So, when we received the last data point when Chinquapin was in the eye of the hurricane, we had to wait a full 48 hours to determine if he had successfully navigated the storm. We were relieved to find the bird alive on an island in the Bahamas after the two day wait.



Track of Chinquapin through Hurricane Irene.

But the storm season of 2011 was not over for Whimbrels just yet as Tropical Storm Maria began brewing off the Lesser Antilles in mid-September. This time a third Whimbrel, named Machi, departed Virginia and flew straight into Tropical Storm Maria. Machi was able to prevail over the storm, much as Chinquapin did, and made landfall on Guadeloupe, French West Indies. Unfortunately Guadeloupe is an island where shorebird hunting is very common, and she was shot by a hunter within minutes of arrival. During the previous two fall migrations, Machi flew directly from Virginia to South America, bypassing the Lesser Antilles altogether and likely only stopped due to the storm interaction. A fourth Whimbrel known as Goshen, who had flown through the outer bands of Hurricane Irene the previous week, landed in a hunting swamp on Guadeloupe the same morning as Machi. Goshen was likely shot within hours of arrival, suggesting very high hunting pressure on shorebirds there. The data obtained from these two birds will likely help local conservation officials to begin investigating the role of hunting pressure on population declines and to protect at least some species (including Whimbrel) as they migrate through the gauntlet of storms and hunters. Hope left Virginia shortly after Machi and also encountered Tropical Storm Maria, but was able to fly through the storm and land in her annual wintering location on St. Croix, US Virgin Islands. We have now tracked her for over 64,000km in just over 2.5 years. The story of this wide ranging bird has been used to enable local conservation efforts to protect mangrove wetlands within St. Croix. Partners on this project include US Fish and Wildlife Service, The Nature Conservancy, Georgia Department of Natural Resources, and Manomet Center for Conservation Sciences.

The Human Experience of Being Tracked Using New Technology—the GSM/GPS Transmitter



Shortly after graduating from Pennsylvania State University, John Rodenhausen sailed on the waters of the Chesapeake, Atlantic and Caribbean. He has been a captain and educator at the non-profit Chesapeake Bay Foundation since 1998. John enjoys spending most of his time on the water.

I am not sure how a shark or an osprey feels with a tag attached to it, but I do have some experience being tracked. I am keenly aware that as a human I am not the first choice of species for this line of tracking technology. However, when Lance Jordan and Lucy Howey-Jordan sat down with us at the Chesapeake Bay Foundation (CBF) to brainstorm ways to work together, there was a natural fit. They had a prototype of MTI's 70g solar GSM/GPS transmitter (*see page 6 for details*) in need of field testing just as my colleague, Dr. Beth McGee, and I were about to ride our bicycles on a 1300 mile circumnavigation of the Chesapeake Bay Watershed. What better way to accurately map our progress than to utilize this technology?

The Chesapeake Bay watershed has the largest estuarine land-to-water volume ratio in the world. In fact, 64,000 square miles of land drain into a shallow 200 mile long bay. This small puddle at the bottom of a very big hill is susceptible to a flood of various types of pollution, specifically nitrogen and phosphorus.



John's day in the office as a CBF educator.

Photo by Chesapeake Bay Foundation

Despite these conditions, or perhaps because of them, it has been my career goal to improve the water quality of the Chesapeake. I have worked to promote habitat restoration and environmental education, so that we may all realize the recreation and economic benefits a healthy resource will bring. Our goal in riding our bikes through the states of MD, PA, VA, WV and DE was simple: raise awareness and funds for cleaner water and two other causes close to our hearts.

So on July 30 we departed Annapolis, MD heading north. By day 4 we had followed the mighty Susquehanna River through Pennsylvania and crossed the border into New York. The first major victory of the trip came on day 5 as we pedaled into Cooperstown to pay homage to the headwaters of the Bay watershed. From there it would be 400 plus miles until our next turning point at the south side of Shenandoah National Park. Then we would make our way to Virginia Beach and onto the eastern shore of Virginia. It would be another several hundred miles until we reached the Bay Bridge that would lead us home. Each day MTI emailed us a satellite image that clearly showed our progress in hourly segments. Through the valleys and the mountains that define each river basin of the watershed, I knew MTI was always there. I have to admit it was both comforting and a little spooky to know that our whereabouts were always known by someone in an office hundreds of miles away. Nonetheless, at the end of 3 weeks we pulled into CBF headquarters in Annapolis for a welcome home fit for a king and queen. We were greeted

by many colleagues, friends and family including our new friends at Microwave Telemetry. The support and enthusiasm Lance, Lucy and the MTI staff provided was invaluable.



John, Paul and Lance fitting the transmitter to the bike hours before his send-off.

Photo by Lucy Howey-Jordan

The final map they produced with data collected from the transmitter emphasized the importance of this technology. Most of our supporters had little to no idea how large an area we had proposed to cover during our ride. It is challenging for just about anybody to visualize an area the size of this watershed but the clear maps showing our locations along our journey were breathtaking for many, especially for my mom. And just for the record; the tag was attached to the bike, not me!

Beth and I were proud of many parts of this ride but it is the distinction of being the first humans tracked by MTI using this new technology that is particularly nice. Their transmitter played a valuable role in our mission by allowing us to create an accurate map that was effective in communicating our position to our supporters. With many generous gifts, we were able to raise over \$11,300 in donations for CBF and another \$10,300 to between split by Johns Hopkins University and the American Diabetes Association. We also garnered media hits in 34 markets from San Francisco to Maryland. For photos and more information about the Chesapeake Watershed Ride feel free to visit our blog: <http://chesapeakewatershedrideblog.tumblr.com>



The complete track of John's circumnavigation of the Chesapeake Bay watershed. Data missing from first two days is due to John accidentally resetting the transmitter.

Update on Post-Tsunami Relief Efforts on the Juan Fernández Islands

Peter Hodum co-directs the Juan Fernández Islands Conservancy (JFIC), an Oikonos project. In our spring 2010 newsletter Peter wrote about his ongoing pink-footed shearwater satellite tracking project based on the Juan Fernandez Islands, Chile, and the effects of the tsunami on the community there. We asked him to update us on relief efforts.



On 27 February 2010, a powerful tsunami struck the Juan Fernández Islands, devastating the small island community on the main island of Robinson Crusoe. Immediately following the tsunami, Oikonos established a charitable fund and began to seek donations to contribute to community reconstruction. Through the generosity of colleagues, collaborators, businesses, family and friends, hundreds of donations were received. Thus far, funds have been used to support reconstruction efforts, including hiring local residents to organize initial cleanup efforts immediately following the disaster, restoring the community's



Photo by Peter Hodum

Juan Fernandez Islands fishermen with donated buoys to be used in their artisanal lobster fishery.

cemetery and providing educational resources for the school that was destroyed in the tsunami. In addition, in a collaborative effort with several Pacific Northwest fishing associations, a complementary fund was established to help the artisanal fishing community of the islands recover their significant losses of material and equipment. Through this effort, every boat was able to begin the fishing season in Sept. 2010. Although reconstruction is ongoing and the Chilean government is providing good support, a number of projects identified by the local community as priorities are currently unfunded. Thus, Oikonos remains committed to continuing to raise funds for the Juan Fernández community as there are important needs that remain unmet.



Photo by Peter Hodum

An appreciative lobster fisherman who received new equipment.

PTTs for School Program Winners!

Congratulations to the 2011 winners of our **PTTs for Schools Program**. We are pleased to award a total of 15 transmitters to four research groups spanning several continents. The recipients have the choice of any of our current models. Thus, we have a wide range of taxa represented, including bats, birds and sharks.



Photo by RSPB

The RSPB has allowed over 20,000 students up-close encounters with birds of prey.

Fiona Corner and Stuart Benn will be working with 4-12 year olds at the Maryburgh Primary School to track Red Kites with 22g Argos/GPS PTTs in the Scottish highlands. Their organization, the Royal Society for the Protection of Birds, has a long-standing record for successful

conservation programs and has delivered outdoor learning experiences to over 20,000 school age children.

Using X-Tags, Edd and Annabelle Brooks will be working with 16 year old science students to track Caribbean reef sharks at The Island School in Eleuthera, The Bahamas. The Island School is a unique program that brings together students from schools in US, Canada and The Bahamas to face challenging situations in a non-traditional educational environment. Environmental education and science are major components in the students' curriculum at The Island School.



Photo by The Island School

Edd and Annabelle Brooks with their shark class.

Billie Roberts from Griffith University and the students from Maclean High School will be using a specially modified version of our 9.5g PTT to track grey-headed flying foxes in eastern Australia. This threatened species has been subject to urban development of roost areas and has become a source of conflict within the community. Billie's organization, the Maclean Flying-Fox Working Group, hopes to foster co-existence between humans and flying foxes encouraging their conservation in this area.



Photo by Billie Roberts

The grey-headed flying fox community on the Maclean High School grounds.

Maximiliano Adrián Galmes and local students will be tracking a pair of Crowned Solitary Eagles and their fledgling in Central Argentina with 70g Argos/GPS PTTs. They also plan to distribute informational pamphlets and make educational videos about the Crowned Solitary Eagle since it is a poorly understood species with a false reputation for disturbing livestock.



CECARA has been conducting research on the ecology and conservation of the Crowned Eagle since 1999.

Good luck to all our winners and we look forward to working with you in the coming year!

Coming Soon...New Products and Advances

As our 20-year celebration winds down, we are pleased to announce that several new products will be unveiled at our conference in March 2012.

17g Solar Argos/GPS

Our 22g solar Argos/GPS bird transmitter released in 2007 allowed for examination of fine-scale movement and migration patterns of birds weighing down to 700g. Deployments of prototypes of a new 17g solar Argos/GPS PTT have been extremely successful. This 17g version has the same capabilities as its larger cousins, and will now allow fine scale studies of species down to 500g.



Solar GSM/GPS

While the Argos satellite system has allowed for ground breaking research on bird migration, radio interference in some parts of the world makes the Argos system unsuitable for many studies. Over the last three years we have been working on a range of transmitters using the worldwide GSM system. Deployed prototypes have given very reliable results. In 2012, we will introduce GSM versions of our existing GPS enhanced units. A total of five models similar to our Argos/GPS PTTs will be available.



E-Tag

Production prototypes of the long-awaited "E-Tag" are now being evaluated. Smaller than the X-Tag, this new archival tag will allow smaller fish to be satellite tagged. The E-Tag will also allow for multiple, sequential pop-off locations on larger species. It will first be available in limited quantities starting March 30, 2012.

X-Tag

The X-Tag is presently the smallest and most advanced device for satellite tracking of marine fish migration. The latest upgrades to the X-Tag include the addition of the "Big Eye"™ light sensor to the nose of the tag, similar to our larger standard archival pop-up tag. This overcomes biofouling of the original, smaller light sensor encountered in some studies. Together with an enhanced dawn and dusk sensing algorithm, these modifications have resulted in more accurate light-level measurements, leading to better geolocation estimates



and hence, better tracks. Additionally, the dynamic depth sensor scaling has been further enhanced to reduce future "Delta limited" depth readings caused by a rapidly diving or ascending fish—by scaling the resolution to accommodate the highest rate of depth change in that particular data packet.

MTI Travels to India...

The Government of India has begun a study to examine yellowfin tuna (*Thunnus albacares*) migration from offshore waters using X-Tags. In order to help familiarize the multi-institutional group with the technology, Lance Jordan and Lucy Howey-Jordan traveled to the port city of Visakhapatnam for a two-day training workshop. MTI is grateful for the kindness and hospitality of INCOIS, CMFRI, and FSI. It was truly an amazing experience – we wish them a successful project!



Lucy, Lance and the group of researchers after the tagging demonstration.



Tagging practice on yellowfin tuna specimens.



2012 MTI Avian and Marine Tracking Conference

Conference Objective

To promote a global exchange of scientific information among researchers using satellite telemetry.

Date: March 27, 2012 through March 30, 2012

The conference will be held at the Sheraton Columbia Town Center Hotel in Columbia, Maryland.

There will be three themes for the conference: Avian Tracking, Marine Tracking and Technical Information. The Technical Information session is intended to cover common aspects for both of the other sessions.

Tuesday will feature avian tracking presentations. Wednesday and Thursday morning will feature both avian and marine tracking presentations. Thursday afternoon will include technical presentations pertaining to both bird and fish tracking, the Argos system, and new products being released. Friday morning will feature a marine geolocation workshop. Space for this workshop is limited.

Call for Abstracts

Abstracts are being accepted for presentations describing the use of our PTTs in avian and marine tracking. The deadline for abstracts is January 31, 2012.

Scholarship for Two Students

In keeping with our ideal of promoting satellite telemetry for the next generation of scientists, we would like to sponsor two students to attend the conference by providing their registration, food and lodging. Please see our website for details and application; selection will be made by a committee. Students are to provide their own transportation.

Registration Information

All conference attendees, including speakers, are required to register. Registration entitles attendees to all sessions, a copy of the conference abstracts and admission to the welcome dinner reception on Wednesday evening. A hosted breakfast and lunch will be provided each day.

There is a \$50 fee for registration payable in U.S. dollars at conference check in. Use our convenient on-line form on our website to register.

Accommodations

The conference will be held at the Sheraton Columbia Town Center Hotel at 10207 Wincopin Circle, Columbia, MD 21044. A block of rooms has been reserved for conference attendees at a rate of \$129 (plus hotel and local tax) per night. There is a deadline of March 11, 2012 to make your discounted reservation. Allocation is on a first-come, first-served basis.

After registering for the conference, you will be sent a link to the secure on-line Sheraton reservation site, especially configured for our company at the discounted rate.



2012 MTI Conference site:
The Sheraton Columbia Town Center Hotel.

For more information on the conference, contact us by phone at +1 410.715.5292 or email us at support@microwavetelemetry.com. Details are also available on our website at www.microwavetelemetry.com



Attendees of our 2009 conference in front of our facility.

Recently Published Papers

Meyburg, B., Howey, P.W., Meyburg, C., and Fiuczynski, K.D. 2011. Two complete migration cycles of an adult Hobby tracked by satellite. *British Birds*, 104, 2-15.

Saunders, R.A., Royer, F., and Clarke, M.W. 2011. Winter migration and diving behaviour of porbeagle shark, *Lamna nasus*, in the Northeast Atlantic. *ICES Journal of Marine Science*. 68, 166-174.

Smith, C.S., Epstein, J.H., Breed, A.C., Plowright, R.K., Olival, K.J., Carol de Jong, C., Daszak, P., and Field, H.E. 2011. Satellite telemetry and long-range bat movements. *PLoS ONE*. 10.1371/journal.pone.0014696.

Vardanis, Y., Klaassen, R., Strandberg, R., and Alerstam, T. 2011. Individuality in bird migration: routes and timing. *Biology Letters*. 7, 502-505.

Visit our website for a complete list of recent papers using MTI technology. Please email us your 2011/2012 papers for us to add to our library – we greatly enjoy seeing your hard work in print.



Challenge 2011: MTI Goes Green

One of our morning meetings during our biennial retreat in July held a big surprise for the staff—that very day, they would be competing in the MTI Challenge. In the past, the MTI Challenge has brought together two teams over several weeks to use their critical thinking and planning to solve an engineering problem. The teams have built robots to water our plants and transfer toy fish from one bowl to another. This year the game changed slightly when the teams were asked to brainstorm and develop a plan of action to convert MTI to a “green” facility. The teams were given 2.5 hours and a packet of information about reducing environmental impact and the current energy usage throughout the building. In two hours, the teams were asked to write a grant proposal including a financial



The Blue Team presenting their proposal to the judges.

report for the proposed changes to the facility. The teams had to research the feasibility of the proposed changes and provide technical information in a PowerPoint presentation to the judges.

Both teams prepared resourceful and inventive suggestions for the judges. The Red Team suggested turning our roof into a “green roof” complete with various species of native plants. Both teams suggested hand dryers for the bathrooms and a more comprehensive recycling program. In addition, the Blue Team suggested motion-activated lights and a program to reuse packing materials.

Ultimately, the judges decided that the Blue Team would win the challenge on the basis of complete-

ness of their financial report and presentation. We would like to thank the judges, Karen Holweck and Tom and Michelle Ervin, for their fair and enthusiastic assessment of our proposals.



The Blue Team with the Challenge cup.

The Blue Team was rewarded with a day off to spend on a team activity. They decided to visit the White House and go for lunch in Washington, D.C. They were even given a behind-the-scenes tour by a family member of the staff. However, in the end, we all won since the changes around the office will benefit everyone.



The Red Team working on their proposal.

Suggestions from both teams have already been implemented. A new recycling dumpster has been placed outside the facility, making recycling much easier for the staff. Last month we underwent the complicated and expensive process of having a new energy efficient roof installed on our building. Additionally, we are looking into the possibility of installing hand dryers in our bathrooms. To reduce paper usage, we have already started the process of going paperless by scanning office documents, emailing invoices and creating electronic customer files.



The Blue Team at the White House.

If you would like to help our effort and “opt out” of receiving a paper copy of our newsletter please let us know. Being an environmentally conscious company, we are all excited to execute our ideas and make a little bit of change every day.



Bits & Pieces

A reminder: To meet demands for new orders, we are only accepting bird PTT refurbishments from August to February.

Please update your address books with our new email: support@

microwavetelemetry.com

Production slots are filling up quickly for spring 2012, so keep us informed of any potential orders.

Remember we will not begin work on your order until we have your completed Production Form and Purchase Order.

If you would like to receive an electronic copy instead of a paper copy of our newsletter, please let us know via email.