

Microwave Telemetry, Inc.



Dear Customers and Friends,

Welcome to our first biannual newsletter. We hope that this will allow us to communicate more effectively with you, our customers.

Our regular features will include new products and development, interesting projects, tips, upcoming events and much more....

We invite you to submit short articles and photos of your research. We would like to thank Jan Kube and Andreas Helbig for their article on tracking gulls included on page three of this issue.

We hope that you enjoy our newsletter and welcome your feedback.

Sincerely,

Paul and the staff at MTI

We're Moving!



After six and a half years at our present address, we are moving to a new location in Columbia, Maryland. We are excited at the prospect of moving to a custom designed space. Our new facility should improve manufacturing and make it easier for us

to serve you, our customers.

So bear with us as we pack and unpack throughout the month of July. Effective August 1 our new address will be:

**8835 Columbia 100 Parkway
Suites K & L
Columbia, MD 21045**

Effective August 1, our new phone numbers will be:

(410) 715-5292

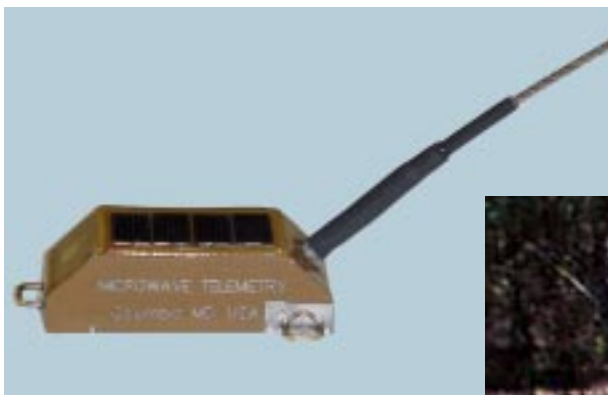
(410) 715-5293

and the fax number will be **(410) 715-5295.**

Be sure to update your records.

If you have any questions, don't hesitate to call us.

New Products New Tiny Solar Powered PTT



Our new tiny solar transmitter, shown here deployed on a Swallow-tailed Kite, will allow you to track smaller birds for a much longer period.



This past year, we have been developing and testing an exciting new model of the PTT-100: a solar powered version weighing less than 20 grams. The prototypes are based on our standard PICO PTT housing and weigh about 18 grams. Over the next few months we will be developing a new housing and expect to reduce the overall weight to about 15 grams. As in our other solar powered PTTs, the lifetime limitation of a lithium battery is eliminated by the solar power source. Some of our larger solar powered units have now been running continuously for over five years!

Useful Tips

Finding a lost PTT

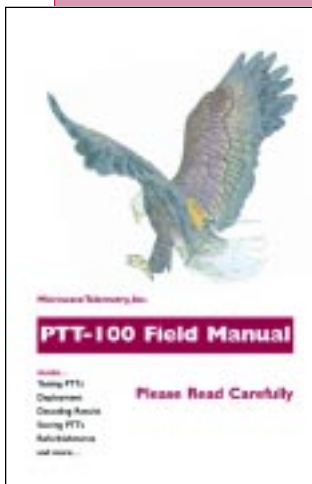
Unfortunately, a PTT is sometimes dropped in the field after becoming detached from a bird or the bird dies. Depending on its orientation on the ground, it may or may not be received well, if at all, by the satellites. We are often asked how to find such a lost PTT. There are several possible techniques depending on how well it is being located by ARGOS and what equipment you have available.

Assuming that ARGOS is providing enough data to give locations, you may be able to enhance the accuracy of the locations by setting the altitude of the PTT in the ARGOS system to the altitude of the location where it is lost. Do this by either calling the ARGOS user office and asking them to set it, or interactively using the "MOD" command – see your ARGOS user manual.

If you have a series of locations, simply mathematically average the latitudes and longitudes. Do this first for the highest class locations and work down to the lowest class. Plot these on a map and if a searchable area is defined, you can organize a search using a GPS receiver as a reference.

ARGOS-CLS has a direction finding receiver known as a "Gonio" that can be used to track down a PTT on the ground and also receive data from PTTs locally. Using a Gonio you can direction find on a lost PTT that is transmitting too weakly to be received by the satellites. Contact ARGOS for more information about these receivers.

Next issue: using a scanner receiver on the ground to find a PTT.



Now Available!

We have two new instruction manuals— one for our bird transmitters and one for fish pop-up tags.

If you would like a copy, please e-mail us (microwt@aol.com) with your address and we will be glad to mail you one.



Returning PTTs to Us

Occasionally, PTTs need to be returned for battery change, reprogramming, etc. Please notify us if you plan to return your PTTs to us for refurbishment or any other reason. Package the PTTs well, preferably in the original boxes. Ship via Federal Express, our preferred carrier, or U.S. Priority Mail.

International Returns

International customers must first contact us for specific instructions before returning PTTs. In the past, we have been levied duties and taxes because the paperwork accompanying the PTTs did not state that the goods were manufactured in the United States by us. Dealing with the Customs Clearance Department of certain carriers (e.g., Federal Express, DHL, etc.) takes up a lot of our valuable time. **ANY PACKAGE CONTAINING PTTs BEING RETURNED TO US WITHOUT THE PROPER PAPERWORK WILL BE RETURNED TO THE SENDER AT THE SENDER'S EXPENSE.**

A sample 'Declaration of Origin' is reproduced in our product manuals now included with every order. Type or print this sample on your letterhead and include

it with commercial invoices on the box. This Declaration of Origin lists all the specific information that Customs requires to allow shipments of our PTTs to return to the United States duty free. **INCLUDE THE COMPLETED DECLARATION OF ORIGIN EACH TIME YOU RETURN PTTs FOR REFURBISHMENT.**

If you need further assistance in completing this required form or need further information please do not hesitate to contact us. We will be glad to fax you a copy of the Declaration of Origin form or send a copy of our product manual upon request (see ad on this page).

In Brief...

Notify us that you will be returning PTTs

Package PTTs well—preferably in original boxes

Use Federal Express

Include Declaration of Origin with paperwork on the box (international customers only)

First in a series of *Feature Articles*

(Reprinted with permission)

Hop or jump: Autumn migration strategies of Lesser Black-backed Gulls *Larus fuscus* as revealed by satellite trackingKube, J.¹, A.J. Helbig¹, R. Juvaste², K. Pedersen³, C. Rahbek³ & P. Sauro²¹University of Greifswald, Vogelwarte Hiddensee, D-18565 Kloster, Germany²Zoological Museum, University of Helsinki, P. Rautatiekatu 13, SF-00100 Helsinki, Finland³Zoological Museum, Universitetsparken 15, DK-2100 Copenhagen, DenmarkTransmitter attachment tests in captive *Larus argentatus*K. Pedersen and C. Rahbek catching *L. f. intermedius* Saltholm Island, Denmark*L. f. intermedius* "Benny" with 20g PICO PTT of Microwave Telemetry, Inc. USA

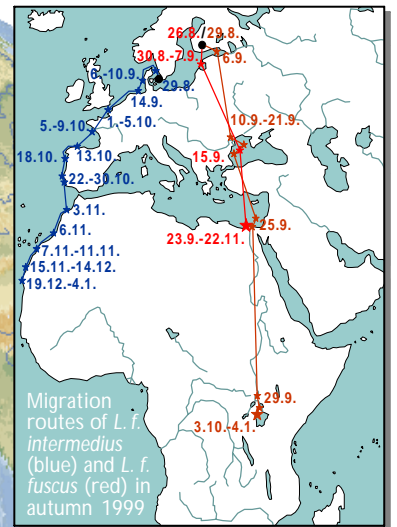
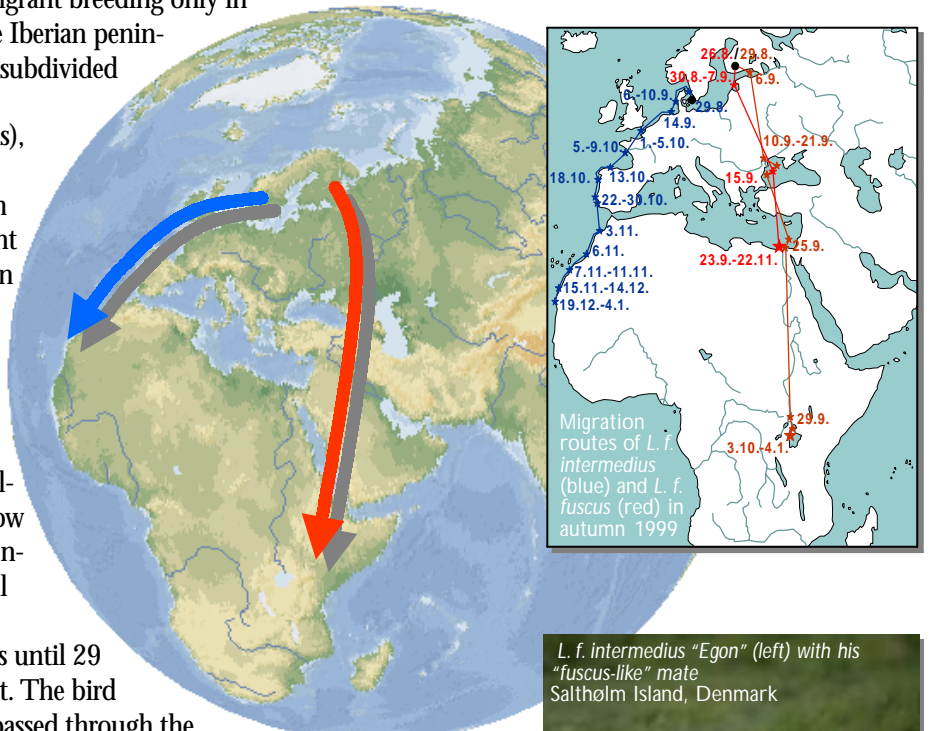
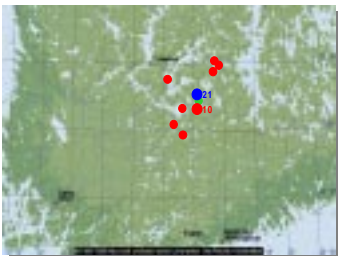
The Lesser Black-backed Gull is a long-distance migrant breeding only in North and West Europe from the White Sea to the Iberian peninsula and wintering mostly in Africa. The species is subdivided into three subspecies:

- *Larus f. fuscus* (northern Norway and eastwards),
- *L. f. intermedius* (southern Scandinavia), and
- *L. f. graellsii* (Wadden Sea and westwards) with *L. f. graellsii* being only a short distance migrant wintering along the East Atlantic coast between Britain and Morocco.

Three breeding males of the subspecies *L. f. intermedius* in Denmark (Saltholm Island, Øresund) and another three breeding males of the subspecies *Larus f. fuscus* in Finland (Iso-Roinevesi, freshwater lake near Tampere) were fitted with satellite transmitters during the hatching period to follow their autumn migration. Three birds, one from Denmark and two from Finland, could be tracked until December 1999.

All three birds remained in their breeding areas until 29 August. The Danish *L. f. intermedius* migrated west. The bird stayed in the Wadden Sea until late September. It passed through the Channel, across Brittany and along the coast of the Iberian Peninsula during October. The wintering quarter North of Banc d'Arguin, Mauritania, was reached in late November.

The Finnish *Larus f. fuscus* migrated south. They spent a week in the Gulf of Finland before flying nonstop to the northwestern Black Sea on 10 September. Both birds stayed offshore there for ten days. The Delta of the River Nile, Egypt, was reached in late September. One individual stayed near Alexandria, apparently its final destination. The other bird went further south to Lake Victoria. It reached its wintering grounds near Kampala, Uganda, on 29 September. Its final nonstop journey of about 3500 km lasted 92 hours (38 km/h).

*L. f. intermedius* "Egon" (left) with his "fuscus-like" mate Saltholm Island, Denmark

Breeding area: Locations recorded by satellite telemetry of Lesser Black-backed Gulls *L. f. intermedius* (left) and *L. f. fuscus* (right). Records of individual birds are shown either by blue ("Egon" left, "Jaska" right) or red dots ("Benny" left, "Eero" right). Only high quality locations from June to August with an accuracy better than 10 km are shown. Locations of the breeding colony are marked by a green dot. Both *L. f. intermedius* were feeding at sea, sometimes far away from their colony. Both *L. f. fuscus* were feeding at freshwater lakes close to their colony.

Wintering area: Locations recorded by satellite telemetry of two Lesser Black-backed Gulls *L. f. intermedius* (left) and *L. f. fuscus* (right). The *L. f. intermedius* "Benny" was migrating until late November. The *L. f. fuscus* "Jaska" reached its final destination already on 29 September 1999. Daytime-records (squares) and nighttime-records (triangles) are presented separately for October (blue), November (red), and December (grey). Only high quality locations with an accuracy better than 10 km are shown.

Teflon Ribbon

Some of you have asked us where to obtain Teflon ribbon for making bird backpack harnesses. Teflon ribbon can be ordered directly from:

Bally Ribbon Mills
23 N 7th Street
Bally, PA 19503, USA
phone—610 825-2211
fax—610 845-8013
The web address is
www.ballyribbon.com

We do not usually stock Teflon ribbon but will always be glad to order some for you. Please make your request at least one month ahead of desired delivery date. You will be charged the cost of the ribbon plus shipping.

Enter Our Photo Contest!

We're running a photo contest and your best picture might just grace the cover of our new catalog. Even better, the winner will receive a free transmitter.

Submit pictures or 35 mm slides before October 31, 2000—we'll announce the winner in the December issue of our newsletter.

Images can be scanned and sent via e-mail as an attachment. If you prefer to send originals just send them by mail—all originals will be returned promptly.

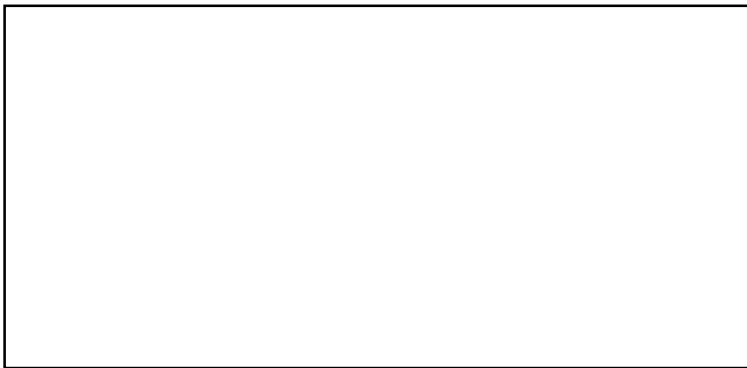
Dr. Michael Wallace of the San Diego Zoo was our first winner with his stunning picture of an Andean Condor. Mike's picture was featured on the cover of our current catalog and he has already deployed his free transmitter!



Storing your PTTs

If your PTT is not going to be used for more than four days, we recommend that it be turned off by placing the magnet over the word "STOP" located on the side of the transmitter. Store in a cool, dry place e.g., a refrigerator. This is beneficial for the batteries. If your PTT is to be switched off for a long period, allow it to transmit for one hour every two weeks to prevent passivation of the Lithium batteries. Solar PTTs should be periodically exposed to sunlight (four hours each month) to maintain a charge in the batteries.

Address Correction Requested



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Don't forget—as of August 1, 2000 our new address will be
8835 Columbia 100 Parkway
Suites K & L
Columbia, MD 21045, USA
new phone numbers—
(410) 715-5292
(410) 715-5293
new fax number—
(410) 715-5295



Microwave Telemetry, Inc.
10280 Old Columbia Road, Suite 260
Columbia, MD 21046, USA