

Microwave Telemetry, Inc.



Around the world in 100 minutes

Dear Customers and Friends,

On December 27, 1831, Charles Darwin set sail aboard the HMS Beagle on a nearly five-year circumnavigation of the globe, collecting data on many species along the way. Forty years later, Jules Verne wrote his famous novel portraying the adventures of Phileas Fogg on his 80-day trip around the world. On Christmas Day 2003, the Beagle II spacecraft is due to land on Mars in search of life after its six-month journey from earth.

Today, each of the six operational Argos receivers is carried around the world in about 100 minutes aboard the NOAA satellites. During every orbit, each receiver collects data from animals in many countries and the oceans below. We are privileged to play a small part during this exciting time in the history of biological research. Over the last twelve years, our transmitters have been shipped to over forty countries and have sent data back from all seven continents and more than one hundred countries.

We present here, as we sweep west from the international dateline, a collection of short articles on the research of some of our customers from around the world (actually about halfway around the world—watch for Part 2 in the spring newsletter). We would like to thank each and every one of them for their contribution.

We wish you joy, peace and happiness this holiday season and all the best in 2004.

*Sincerely,
Paul and the staff at MTI*



Australia

Tracking flying foxes in eastern Australia

The grey-headed flying-fox, *Pteropus poliocephalus*, is endemic to coastal eastern Australia (from 25°32'S to 37°50'S) and is classified as a nationally Vulnerable species. It roosts during the day in camps that can contain up to 100,000 individuals and flies during the night into the surrounding areas to feed, mainly on eucalyptus blossom, but also on the flowers and fruit of native and introduced plants. While it was known from radio-tracking that individuals can move hundreds of kilometers within the range, the timing and extent of the movements were unknown until some were satellite-tracked.

Two flying-foxes flew about 1000 km and >4° of latitude north from 37°50'S, where they were trapped, and another flew the same distance south from its trap site, 28°48'S. Two returned to the camp where they were trapped after five to six months and the third, three months after leaving Melbourne, has not yet returned. All left camps that remained occupied by large numbers of flying-foxes. Some daytime locations were not in known camps and it is possible that the satellite flying-foxes roosted alone, within a small group or were in an unknown camp.

Although only a few flying-foxes have been tracked, the results show that flying-foxes can cover 400 kms in a couple of nights and that they probably move these distances using favorable winds. They move back and forth across state borders, so a national management strategy is needed to manage this Vulnerable species that appears to have its population wandering over its range—probably in response to fluctuations in blossom abundance.



John Nelson attaches a collar-mounted 18g solar PTT to a flying-fox



Flying-fox collared with an 18g solar PTT

Photos courtesy of John Nelson and Michael Kidman, respectively

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John Nelson, School of Biological Sciences, Monash University