Speaker 1: The Missouri State Journal, a weekly program keeping you in touch with Missouri State University.

Nicki Donnelson: As a butterfly enthusiast for his entire life, Dr. Chris Barnhart remembers collecting caterpillars in a grass-filled Radio Flyer Wagon as a young child. Now a distinguished Professor of Biology at Missouri State University, Barnhart tells me how his hobby turned into an outreach program about a decade ago.

Dr. C. Barnhart: A dear friend, Dr. Bill Roston, told me that he wanted to start a butterfly house. I actually had a little bit to do with the inception of it, but after two or three years it became clear that somebody had to raise butterflies for the Butterfly House. So my wife and I started doing that and we've been doing it ever since.

Nicki Donnelson: He and his wife now run the daily operations of the Butterfly House and are happy to see it attract attention. This year they've already seen nearly 40,000 visitors. One of the things they come to see, monarch butterflies.

Dr. C. Barnhart: They're one of our largest butterflies, and they're bright orange and black and white, and they're trying very hard to be recognizable because they're toxic. They feed on a plant that has toxic chemicals, which is the milkweed family, and they incorporate some of that toxin into their bodies as caterpillar's and as adults. So birds avoid them and they get some protection from that. So they want to be recognized and they're very conspicuous, especially at this time of the year as they start to fly South.

Nicki Donnelson: Barnhart shares about the migration pattern of these beauties.

Dr. C. Barnhart: Each fall at about this time, the entire Eastern North American population funnels down into Texas and into Mexico. And they will eventually focus on just a few mountain tops where there are ancient fir trees, oyamel firs, and they cluster in very dense aggregations on these trees and undergo a dormancy for most of the winter. This is at 10 or 12,000 feet, so it's quite cool, but they're in a protected microclimate because of the trees and they'll rest there. They don't feed, they don't do anything except hang out and occasionally water on a warm day.

Dr. C. Barnhart: But when the spring comes and it starts to warm up, they mate, and they disperse, and they fly North and arrive in Texas in March and April. And actually, a couple of years of the last three, they've made it all the way North to Springfield on that first dispersal North and arrived here from mid to late April. So the first monarchs that we see are old and battered monarchs that have made it all the way back after flying as far as 3000 miles to the South. They can come this far North again on their return flight, but it's unlikely that they make it much further than this. They stop and they reproduce along the way, and the northward migration is continued by the offspring of the the original migrants.

Nicki Donnelson: Though this pattern had been suspected for years, it was officially discovered and publicized in the 1970s.

Dr. C. Barnhart: The August 76 issue of National Geographic had a picture on the front of one of the co-discoverers standing in a grove surrounded by millions of monarchs and draped in monarchs, and it was one of the great natural history discoveries of the age.

Nicki Donnelson: For the last 20 years or so, a program called Monarch Watch has been leading the tagging efforts to track the journeys of these butterflies. Barnhart says citizen scientists make it possible. He invites the public to take part in a tag and release event on September 28th at 2:00 PM.

Dr. C. Barnhart: I believe this is the 10th time that we've done it, and this is under the auspices of Monarch Watch out of KU. They supply the tags and we supply the butterflies, which means that we're going to be interrupting the migration of maybe as many as a hundred or so monarchs as they pass through the gardens. We'll capture them, hold them briefly, and people can attach these tags, tag their own monarch butterfly and then set it loose, and it's really a delight to turn these loose because if you go out into an open area, and particularly if it's later in the day, and you turn them loose and keep an eye on them, you'll see that they had off to the Southwest, they know where they're going.

Dr. C. Barnhart: One of the other really miraculous aspects of monarchs is that they have a homing sense that allows them to find their way all the way from Ontario to a few square miles of habitat in central Mexico, and they'd never been there before.

Nicki Donnelson: For more information on the event, contact the Botanical Garden at 417-891-1515, or friendsofthegarden.org. That was Dr. Chris Barnhart. I'm Nicki Donnelson for the Missouri State Journal.

Speaker 1: For more information, contact the Office of University Communications at 417-836-6397. The Missouri State Journal is available online at ksmu.org.