



American Meteorological Society Wright Memorial Chapter

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Presentations from the 2006 Ohio State Severe Weather Symposium are available for download from <http://geog-www.sbs.ohio-state.edu/metclub/symposium/index.php>

Wright Memorial Chapter AMS members socialize at the 18 May 2006 meeting.

Notes

Ohio State Severe Weather Symposium – 7 April 2006

By Greg Marx.

This was an outstanding meteorological forum. It was organized jointly by the Ohio State University Meteorology Club, Dept. of Meteorology and Dept. of Geography. During the course of the day, virtually every facet of severe weather was addressed from tornadoes and hurricanes to flash floods and even blizzards. Meteorologists, hydrologists and TV weathercasters were well represented among the slate of presenters. Not too surprisingly, the 2005 hurricane season took "center stage" in a number of presentations. We learned about the challenges of forecasting during Hurricane Katrina from Stacy Stewart, Hurricane Specialist and Warning Coordinator at the National Hurricane Center (who has become somewhat of a celebrity at insurance industry gatherings). The TV Weathercaster's perspective was represented by a visiting Broadcast Meteorologist from Charlotte NC. His slides graphically depicted the deplorable conditions in the storm's aftermath.

The keynote speaker was Dr. Charles Doswell of the National Severe Storms Laboratory in Norman OK. He talked about his research on the deadliest tornado in U.S. History- the Tri-State Tornado of 18 March 1925, which had a 219 mile track through Missouri, Illinois and Indiana. There seemed to be many inconsistencies in the post-analysis of this storm. He got eyewitness accounts from people (who were all well into their 80s and 90s) on the tornado in order to reconstruct the synoptic conditions more accurately.

Appropriately enough, central and western OH were under severe thunderstorm warnings and tornado watches by the close of the symposium. How apropos for a gathering of severe weather aficionados like those gathered in Columbus OH on April 7th!

Minutes from 18 May 2006 Meeting



AMS Wright Memorial Chapter meeting of 18 May 2006

Meeting of Chapter with Dr. Karen Kowalewsky, President.

At LaRosa's – Beaver creek, Ohio

Updates to Chapter Constitution

The following changes were voted and accepted to our Chapter Constitution:

Article V __ Officers

Section 4. – Officers shall be able to hold an office for no more than 2 consecutive years.

Election of 2006-7 Officers

The current officers were unanimously voted to remain in the current offices for the next year.

President – Karen Kowalewsky
Vice Present - Paul Gehred
Treasurer – Allison Schauer
Secretary – Mary Bedrick

Future Meetings

Our last meeting of the season will be a lunch meeting on 15 June. Featured speaker will be Mary Bedrick with a talk on Typhoon Paka. Location will be Ban Thai Restaurant, 3230 Seajay Dr in Beavercreek.

Planning is underway for an AMS Wright Memorial Chapter Golf Outing towards the end of June. We will keep you posted. If you have questions, please contact Paul Gehred (paul.gehred@wpafb.af.mil, 904-9783) with comments or questions.

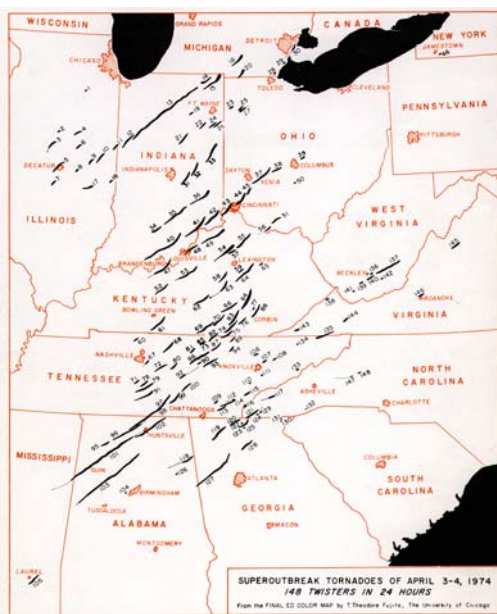
1974 Xenia Tornado



Dr. Fiorino presented an informative and entertaining talk, “The 1974 Xenia Tornado – Perspectives of a 9-yr old weather man, 32 years on...”. The talk was a collection of images, recollections and insights including a discussion of what changes the Xenia Tornado brought about and possible impacts of climate change on strong tornadoes.

Dr. Fiorino prepares for his talk on the 1974 Xenia Tornado as current president, Dr. Kowalewsky, looks on.

The “Super Outbreak” of tornadoes on April 3-4, 1974 boasted 48 twisters in 24 hours in states from Michigan to Southern Mississippi.



Among these tornadoes was a storm that is known as the F5 Xenia tornado. It was followed by a twister that crossed the Ohio River twice (the first time from Indiana into Kentucky and then Kentucky into Ohio proving the myth that tornadoes don't cross rivers wrong. In fact, when this tornado crossed into Ohio it went from increased in strength as the funnel went from river level to the top of the banks.

The severe weather outbreaks have long been studied as textbook cases. They were associated with a strong polar jet and classic severe weather (“tuning fork”) soundings. Satellite images revealed three distinct squall lines while surface analyses revealed the needed Gulf moisture.

Dr. Fujita's Final Color Map of the 3-4 April 1974 Severe Weather Outbreak.

The view on Xenia's Main St, looking toward the courthouse, was a chaotic mix of rescue units, overturned freight cars, and a demolished Kroger supermarket.



Dr. Fujita's Research on damage descriptions had just been published in 1971 with a scale reaching from F0 to F12, with F6-F12 damage listed as inconceivable with winds from 143 m/s to sonic speeds. Dr. Fujita's scale was based on damage to timber frame construction of mid-western origin... Xenia proved an ideal site for

assessing damage on the newly developed scale. It has since been suggested that the Xenia tornado should have been classified as an F6. Since the scale had just been published, it was thought there shouldn't be a storm so strong so soon. There has been talk of reclassification of the Xenia tornado. Another interesting feature of the Xenia tornado was the triple beak in the tree line as it passed through Xenia. This lead credence to Fujita's theory of a tornado with multiple suction vortices.

The destruction in Xenia was mind boggling. Trees were stripped bare of their branches. Freight cars from a train were thrown across Main St, and local businesses were destroyed. One tree on Main St managed to survive the wrath of the tornado but 30 years later not the wrath of a chain saw.

An entertaining look at how tornado safety changed in the years surrounding the Xenia Tornado was made. Guidance in the years prior to the Xenia Tornado suggested opening the windows to your house to let the pressure equalize. It was thought that the extreme low pressure of the vortex would cause your house to explode. By 1976, the guidance given in the local Ohio papers did away with this silly notion to come in line with the guidance we have today (don't open your windows, just locate to the basement or interior lowest room). In fact, the Tornado precautions listed in the February 24, 1976 issues of the Beaver Creek Daily News are remarkably similar to the tornado safety tips provided by the Ohio Committee for Severe Weather Awareness today.

The talk then steered toward climatology, and the question, "Why haven't we seen any F5 tornadoes since 1999?" The answer may be in part to due to greater warming at the poles with less warming at the equator and mid-latitudes. The reason that the poles are experiencing greater heating than other regions of the globe is due to the low water vapor content of the air. Since water vapor is a very strong greenhouse gas, when it is in abundance the effects of other trace gases are not felt. So the greatest heating due to increasing carbon dioxide and other trace gases would be greatest at the poles and barely noticed in low latitude high humidity areas.

The greater heating at the poles and less around the equator would lead to a smaller temperature gradient over the globe and therefore a weaker polar front jet. Strong polar jets are associated with the strong severe weather outbreaks while weaker jets are associated with the cutoff lows

Historical information about the 1974 Xenia Tornado and other significant southwest Ohio weather can be found at:

<http://www.ohiohistory.org/etcetera/exhibits/swio/>

that we have been experiencing in the last few weeks.

Attendees

Karen Kowalewsky, President	Paul Gehred, Vice President
Allison Schauer, Treasurer	Mary Bedrick, Secretary
Steve Fiorino	John & Dorothy Turnbull
Mike Haap	Mike Abel
DeLeon Narcisse	

Calendar of Upcoming Events

June

15 June 2006 – 11:30 am – Last meeting of season. Location: Ban Thai Restaurant, 3230 Seajay Dr., Beaver creek OH.

TBA – 1st AMS- Wright Memorial Chapter Golf Outing. Contact Paul Gehred for details.

October

14-15 October 2006 – 1st annual Lake Effect Conference, SUNY Oswego, Oswego, NY http://www.oswego.edu/news_weather/weather/conference/

Forecast Contest

May Contest

This will be the final forecast contest of the 2005-2006 AMS season. It is a simple one this time! Predict the high and low temperature for Wright-Patterson AFB for the first day of summer, June 21 2006.

See our website for more details (<http://www.ametsoc.org/chapters/wrightmem>) and the official form. Send your forecasts to John Turnbull via mail (799 Spinning Rd. Dayton OH 45431) or via email to john.turnbull@wpafb.af.mil by **2 June 2006**.

Place points for month and year to date results

	OCT	NOV	JAN	FEB	MAR	TOTAL
Mary Bedrick	80	100	70	74	90	414
Paul Gehred	40	52	80	87	60	319
Jim Lane	60	0	100	61	0	221
Greg Marx	0	64	60	0	90	214
John Turnbull	100	28	20	48	0	196
Jeff Martin	0	88	50	35	0	173
Karen Kowalewsky	20	76	0	22	0	118
Kevin Keefer	0	0	0	100	0	100
Gary DesCombes	0	0	90	0	0	90
Dorothy Turnbull	0	14	10	0	40	64
Nick Scurman	0	0	40	0	20	60
Kirk Lehneis	0	40	0	9	0	49
Allison Schauer	0	0	30	0	0	30

If you have any suggestions for the chapter or this newsletter, please forward them to the Secretary, Mary Bedrick (mary.bedrick@wpafb.af.mil)

Picture of the Month



Photograph by Paul Gehred. Double Rainbow evening of 18 May 2006, Beavercreek, OH.

AMS – Wright Memorial Chapter

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We're on the Web!
www.ametsoc.org/chapters/wrightmem/index.html