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Secretary's Report

PROGRAM
Arkansas Academy of Science
81st Annual Meeting
April 4-5, 1997
University of Arkansas at Monticello

SCHEDULE OF EVENTS

Friday, April 4, 1997

9:00 a.m. - 4:00 p.m.	Registration	Lobby
1:00 a.m. - 5:00 p.m.	Exhibits	Room A-3
9:00 a.m. - 11:00 a.m.	Executive Committee Meeting	Room A-30
11:00 a.m. - 12:00 p.m.	First Business Meeting	Auditorium
12:00 noon - 1:30 p.m.	Lunch (See dining info at bottom of next page)	
1:30 p.m. - 5:00 p.m.	Refreshments	
1:30 p.m. - 5:00 p.m.	Paper Sessions	
	Chemistry (p. 3)	Room A-1
	Environmental Sciences (p. 5)	Room A-30
	Vertebrate Zoology (p. 7)	Room B-3
	Botany & Applied Plant Sciences (p. 10)	Room B-18
1:30 p.m. - 5:00 p.m.	Poster Session (p. 12)	Room A-3
5:30 p.m. - 7:00 p.m.	Hospitality Gathering	Captain's Table
7:00 p.m. - 9:30 p.m.	Banquet	John F. Gibson Ctr.

Banquet Speaker

Dr. Robert C. Weih, Spatial Analysis Laboratory, School of Forest Resources, University of Arkansas at Monticello

- *Rediscovering our World with Remote Sensing and GIS*

Saturday, 5 April 1997

8:00 a.m. - 10:00 a.m.	Registration	Lobby
8:30 a.m. - 11:30 a.m.	Exhibits	Room A-3
8:30 a.m. - 11:30 p.m.	Refreshments	Room A-3
8:30 a.m. - 11:30 a.m.	Paper Sessions	
	Physics & Geology (p. 13)	Room A-1
	Engineering & Mathematics (p. 15)	Room A-30
	Invertebrate & Aquatic Biology (p. 17)	Room B-3
	Biochemistry, Genetics, Molecular (p. 19)	Room B18
	Biology & Biomedical Sciences	
11:30 a.m. - 12:30 p.m.	Second Business Meeting	Auditorium
Slide Preview Room:	Room B-31	
Sigma XI Breakfast:	The traditional Sigma Xi Breakfast will be held at the El Toro Restaurant at 7:00 a.m. on 5 April 1997.	
Parking Information:	Parking will be available for participants in the parking lots in front of and behind the Science Center.	
Dining Information:	The following restaurants are located on Highway 425 traveling north from UAM: Hunans, Topps (sandwiches & pizza), Piggy Sues (barbeque), Sonic Drive-In, Pizza Hut, McDonalds, Taco Bell, Burger King, Kentucky Fried Chicken, Captain's Table Restaurant, Ray's Drive-In, El Toro Restaurant, Waff-L-Inn, Hardee's, Popeyes, Mazzio's Pizza.	

SECTION PROGRAMS

* Undergraduate **Graduate

PAPER SESSIONS

Chemistry Paper Session
 Location: Science Center Room A-1

Chairperson: Dr. Walter Godwin, Division of Mathematics and Sciences, University of Arkansas at Monticello, Monticello AR 71656.

Time	Abs. No.	Topic		
1:30	CS0 1	* <u>Brant Stanley</u> , Rose McConnell, and Walter E. Godwin. Division of Mathematics and Sciences, University of Arkansas at Monticello, Monticello, AR	1:45	CS02
				* <u>Bradley Phillips</u> , Rose McConnell, and Walter E. Godwin. Division of Mathematics and Sciences, University of Arkansas at Monticello, Monticello, AR 71656. A MOLECULAR MODELING STUDY OF POLYMERS OF SEVERAL SUBSTITUTED FURANS.
			2:00	CS03
				* <u>Karin L. Brasfield</u> , Vipul N. Dholatia Ray Bakhtiar, and Richard B. Walker.

Arkansas Academy of Science

		Department of Chemistry, University of Arkansas at Pine Bluff, Pine Bluff, AR 71611. COMPLEXATION OF AN EPHEDRINE PRODRUG WITH CYCLODEXTRINS.		Center, University of Arkansas, Monticello, Arkansas 71656	
			<u>Time</u>	<u>Abs. No.</u>	<u>Topic</u>
2:15	CS04	<u>Walter E. Godwin</u> , Division of Mathematics and Sciences, University of Arkansas at Monticello, Monucello, AR 71656. A VSEPR VISUALIZATION UTILITY USING A WEB BROWSER AND RASWIN.	1:30	ES0 1	<u>David G. Peitz</u> and Philip Tappe. School of Forest Resources, Arkansas Forest Resources Center, University of Arkansas, Monticello, AR 71656. RESPONSE OF SELECTED DEER BROWSE SPECIES TO THINNING OF A NATURAL LOBLOLLY PINE-HARDWOOD STAND.
2:30	Break				
3:00	CS05	* <u>Jerri J. Sykes</u> , Shaheen Khan, and William M. Willingham. Research Center, University of Arkansas at Pine Bluff, Pine Bluff, AR 71601. THE SYNTHESIS OF 5-DI-n-PROPYL SULFONAMOYL SALICYLATOMANGANESE (II) COMPLEX.	1:45	ES0 2	<u>David G. Peitz</u> and Philip Tappe. School of Forest Resources, Arkansas Forest Resources Center, University of Arkansas, Monticello, AR 71656. EFFECTS OF RETAINED PINE AND HARDWOOD BASAL AREA ON PERCENT COVER OF PLANTS UTILIZED BY BOB-WHITE QUAIL.
3:15	CS06	<u>Victor Blunt</u> ¹ , <u>John A. Kuykendall</u> ¹ , <u>William M. Willingham</u> ¹ , and <u>John Sorenson</u> ¹ . University of Arkansas at Pine Bluff, Pine Bluff, AR, 71601. University of Arkansas for Medical Sciences ² , Little Rock, AR 72205. RADIOPROTECTANT ACTIVITIES OF 5-DIETHYL SULFONAMOYL SALICYLATOCOPPER (II) COMPLEX IN LD 50/30 GAMMA IRRADIATED MICE.	2:00	ES0 3	<u>Suzanne Wiley</u> and <u>Robert C. Weih</u> . Spacial Analysis Laboratory, School of Forest Resources, University of Arkansas at Monticello, Monticello, AR 71656. INTEGRATING GIS AND REMOTE SENSING WITH ECOSYSTEM RESEARCH.
3:30	CS07	<u>Samuel M. Terry</u> . Southside High School, Fort Smith, AR 72903. ANTIBIOTIC RESISTANCE: THE EFFECTS OF NEW ANTIBIOTICS AND SYNERGISM ON <i>STREPTOCOCCUS PNEUMONIAE</i> AND <i>ENTEROCOCCUS FAECALIS</i> AND <i>ENTEROCOCCUS FAECIUM</i>.	2:15	ES0 4	<u>Philip A. Tappe</u> . School of Forest Resources, Arkansas Forest Resources Center, University of Arkansas, Monticello, AR 71656. USING A GEOGRAPHICAL INFORMATION SYSTEM TO EVALUATE DEER MANAGEMENT ZONES IN ARKANSAS.
3:45	CS08	<u>Paul Manowitz</u> , <u>Richard Harvey</u> , <u>Paul W. Stoecker</u> , and <u>Alexander M. Yacynych</u> . Department of Chemistry, University of Arkansas at Little Rock, Little Rock AR 72204. DETERMINATION OF SULFATIDE AND GALACTOCEREBROSIDE USING A GALACTOSE OXIDASE COLUMN AND ELECTROCHEMICAL DETECTION.	2:30	ES0 5	<u>Philip A. Tappe</u> ¹ , <u>Ronald E. Thill</u> ² , <u>M. Anthony Melchior</u> ³ , and <u>T. Bently Wigles</u> ⁴ . School of Forest Resources ¹ , Arkansas Forest Resources Center, University of Arkansas, Monticello, AR 71656. USDA Forest Service ² , Southern Research Station, Nacogdoches, TX 75962. Weyerhaeuser Company ³ , Hot Springs, AR 71902. National Council of the Paper Industry for Air and Stream Improvement ⁴ , Department of Aquaculture, Fisheries and Wildlife, Clemson University, Clemson, SC 29634. LANDSCAPE-SCALE RELATIONSHIPS BETWEEN AVIAN COMMUNITIES AND FOREST M MANGEMENT INTENSITY.
4:00	CS08	<u>Frank L. Setliff</u> and <u>Leslie B. Coop</u> . Department of Chemistry University of Arkansas at Little Rock, Little Rock, AR 72204. REDUCTIVE DECHLORINATION OF 2-CHLORONICOTINIC ACID UNDER FINKELSTEIN CONDITIONS.	2:45		Break
			3:00	ES0 6	* <u>J. Scott Covington</u> and <u>John D. Rickett</u> . Department of Biology, University of Arkansas at Little Rock, Little Rock, AR 72204. AN INITIAL ASSESSMENT OF THE WATER CHARACTERISTICS AND AQUATIC BIOTIA OF BLANCHARD SPRING, STONE COUNTY, ARKANSAS.
			3:15	ES0 7	* <u>Demetra O. Salisbury</u> and <u>Ralph K. Davis</u> . Department of Geology, University of Arkansas at Fayetteville, Fayetteville, AR 72701. A HYDROGEOLOGICAL

PAPER SESSIONS

Environmental Sciences Paper Session

Location: Science Center Room A-30

* AEF Undergraduate

Chairperson: Dr. J. Scott McConnell, Southeast Research and Extension

Secretary's Report

		AND HYDRO CHEMICAL CONNECTION BETWEEN CRYSTAL LAKE AND DECATUR CITY SPRING, BENTON COUNTY, ARKANSAS.	2:00	VZ03	Stanley E. Trauth ¹ and David H. Jamieson ² . Department of Biological Sciences ¹ . Arkansas State University, State University, AR 72467. Department of Biology ² , Arkansas State University-Beebe (Newport Campus), Newport, AR 72112. SWIMMING BEHAVIOR IN THE FOX SQUIRREL, <i>SCIURUS NIGER</i> (RODENTIA: SCIURIDAE), FROM NORTHEAST ARKANSAS.
3:30	ES0 8	*V. L. McTolf, J. S. McConnell ¹ , and W. H. Baker ² . Southeast Research and Extension Center ¹ , University of Arkansas, Monticello, AR 71656. University of Arkansas Soil Testing Laboratory ² , Marianna, AR. ACCUMULATION OF NITRATENITROGEN IN AN ALFISOL CROPPED TO CONTINUOUS COTTON.	2:15	VZ04	Roger W. Perry ¹ , Ronald E. Thill ² , Phillip A. Tappe ¹ , and M. Anthony Melchioris ¹ . USDA Forest Service ¹ , Southern Research Station, Hot Springs, AR 71902. USDA Forest Service ² , Southern Research Station, Nacogdoches, TX 75962. School of Forest Resources ³ , Arkansas Forest Resources Center, University of Arkansas, Monticello, AR 71656. Southern Forestry Research Center ⁴ , Weyerhaeuser Company, Hot Springs, AR 71902. PRESENCE OF HANTAVIRUS IN SMALL MAMMALS OF THE OUACHITA MOUNTAINS.
3:45	ES0 9	John Rickett. Department of Biology, University of Arkansas at Little Rock, Little Rock, AR 72204. MORPHOMETRY AND BASIC HYDROLOGY OF STREAMS ON CAMP ROBINSON MILITARY BASE.	2:30	VZ05	Stanley E. Trauth, J. D. Wilhide, and Anthony Holt. Department of Biological Sciences, Arkansas State University, State University, AR 72467. POPULATION STRUCTURE AND MOVEMENTS OF ALLIGATOR SNAPPING TURTLES (<i>MACROCLEMYS TEMMINCKII</i>) FROM NORTHEASTERN ARKANSAS.
4:00	ES0 10	John Rickett. Department of Biology, University of Arkansas at Little Rock, Little Rock, AR 72204. BASIC WATER QUALITY IN STREAMS DRAINING CAMP JOSEPH T. ROBINSON MILITARY BASE.	2:45		Break
4:00	ES0 10	John L. Harris, Peter J. Rust, Alan C. Christian, William R. Posey II, Chris L. Davidson, and George L. Harp. Department of Biological Sciences, Arkansas State University, State University, AR 72467. REVISED STATUS OF RARE AND ENDANGERED MUSSELS (MOLLUSCA: MARGARITIFERIDAE, UNIONIDAE) IN ARKANSAS.	3:00	VZ06	**Jeffrey T. Briggler and Robert C. Dobbs. Department of Biological Sciences, University of Arkansas at Fayetteville, Fayetteville, AR 72701. WATERBIRD UTILIZATION OF TWO NORTHWEST ARKANSAS RESERVOIRS.
VERTEBRATE ZOOLOGY PAPER SESSION					
Location: Science Center Room B-3					
Chairperson: Dr. Henry W. Robison, Department of Biology, Southern Arkansas University, Magnolia, AR 71753.					
Time	Abs. No.	Topic			
1:30	VZ01	David A. Saugey ¹ and Daniel R. England ² . United States Forest Service ¹ , P.O. Box 189, Jessieville, AR 71949. Department of Biology ² , Southern Arkansas University, Magnolia, AR 71753. USE OF ABANDONED WATER WELLS BY RAFINESQUE'S BIG-EARED BAT (<i>CORYNORHINUS RAFINESQUII</i>) IN SOUTHERN ARKANSAS.	3:30	VZ08	Stanley E. Trauth. Department of Biological Sciences, Arkansas State University, State University, AR 72467. FIRST RECORDS OF THE BLACK-MASK RACER (<i>COLUBER CONSTRICTOR LATRUNCULUS</i>) IN EASTERN ARKANSAS.
1:45	VZ02	J.D. Wilhide ¹ , Michael J. Harvey ² , Rick McDaniel ¹ , and Vernon E. Hoffman ¹ . Department of Biological Sciences ¹ , Arkansas State University, State University, AR 72467. Department of Biology ² , Tennessee Technological University, Cookeville, TN 38505. HIGHLAND PONDS UTILIZATION BY BATS IN THE OZARK NATIONAL FOREST, ARKANSAS.	3:45	VZ09	Henry W. Robison. Department of Biology, Southern Arkansas University, Magnolia, AR 71753. STATUS SURVEY OF THE OZARK SHINER, <i>NOTROPIS OZARCANUS</i> MEEK IN ARKANSAS.
			4:00	VZ10	James J. Daly, Jr ¹ , James J. Daly ² , and H. Michael Matthews ¹ . Department of Biology ¹ , Henderson State University, Arkadelphia, AR 71999. Department of

Arkansas Academy of Science

Microbiology and Immunology², University of Arkansas for Medical Sciences, Little Rock, AR 72205. **ESTIMATING YELLOW GRUB (*CLINOTOMUM MARGINATUM*) INFECTIONS IN BLACK BASS POPULATIONS IN OZARK AND OUACHITA MOUNTAIN STREAMS BY A NON-INVASIVE TECHNIQUE.**

- 4:15 VZ11 Michael Payne¹ and James J. Daly². Department of Pharmacology¹, University of Arkansas for Medical Sciences, Little Rock, AR 72205. Department of Microbiology and Immunology², University of Arkansas for Medical Sciences, Little Rock, AR 72205. **WATER QUALITY OF THE CADDO RIVER, 1994-1996.**

3:15 BP07

Arkansas Forest Resources Center, University of Arkansas, Monticello, AR 71656. Division of Mathematics and Sciences², University of Arkansas at Monticello, Monticello, AR 71656. **GROUND FLORA COMPOSITION FOLLOWING HARVESTING OF A BOTTOMLAND HARDWOOD FOREST IN THE MISSISSIPPI RIVER-BATTURE LANDS.**

R. Kluender, M. Corrigan, and R. Weih. School of Forest Resources, University of Arkansas at Monticello, Monticello, AR 71656. **USING A PC-BASED GIS SYSTEM TO ASSESS BPM COSTS.**

3:30 BP08

Chris W. Bennett and Robert C. Weih. School of Forest Resources, University of Arkansas at Monticello, Monticello, AR 71656. **A METHODOLOGY FOR INTEGRATING AERIAL PHOTOGRAPHY AND LANDSAT IMAGERY FOR INVENTORY OF FOREST LAND COVER.**

4:00 BP10

Daniel R. White and Staria S. Vanderpool. Department of Biological Sciences, Arkansas State University, State University, AR 72467. **A COMPARISON OF VEGETATIVE GROWTH VS. REPRODUCTIVE EFFORT AS AN APPROPRIATE MEASURE OF ALUMINUM PHYTOTOXICITY IN *BRASSICA RAPA*.

4:15 BP11

Daniel L. Marsh and Timothy A. Golden. Department of Biology, Henderson State University, Arkadelphia, AR 71999. **NEW RECORDS FOR THE DISTRIBUTION OF AN UNUSUAL LIVERWORT, *PETALOPHYLLUM RALFSII* (WILS.) NEES & GOTTSCHKE (FOS-SOMBRONIACEAE).**

4:30 BP12

David L. McDaniel and Daniel L. Marsh. Department of Biology, Henderson State University, Arkadelphia, AR 71999. ***PAR-NASSIA ASARIFOLIA* VENT. (SAXIFRAGACEAE) NEW TO ARKANSAS.**

4:45 BP13

Mohanjeet Brar, Teddy Morelock, and Edwin Anderson. Department of Plant Pathology, University of Arkansas at Fayetteville, Fayetteville, AR 72701. **THE EFFECT OF MEDIA CONSTITUENTS ON IN VITRO CULTURING COWPEA (*VIGNA UNGUICULATA*) SHOOT TIP AND LEAF EXPLANTS.**

BOTANY AND APPLIED PLANT SCIENCES PAPER SESSION

Location: Science Center Room B-18

Chairperson: Dr. Don Culwell, Department of Biology, University of Central Arkansas, Conway, AR 72032

Time	Abs. No.	Topic
1:30	BP01	Phillip E. Hyatt. Kisatchie National Forest, 2500 Shreveport Hwy., Pineville, LA 71360. ARKANSAS <i>CAREX</i> (CYPERACEAE): A BRIEFLY ANNOTATED LIST.
1:45	BP02	Stephen A. Walker and Julian Campbell. The Nature Conservancy, 601 North University Ave., Little Rock, AR 72205. A FLORISTIC SURVEY AND ANNOTATED CHECKLIST OF THE PINE BLUFF ARSENAL.
2:00	BP03	Hal O. Liechty ¹ , and Michael G. Shelton ² . School of Forest Resources ¹ , University of Arkansas at Monticello, Monticello, AR 71656. USDA Forest Service ² , Southern Forest Experiment Station, Monticello, AR 71656. VARIABILITY OF FOREST FLOOR NUTRIENT CONCENTRATION AND CONTENT IN MATURE PINE-HARDWOODS IN THE OUACHITA/OZARK NATIONAL FORESTS.
2:15	BP04	*Kristy Bondurant and Joyce M. Hardin. Department of Biology, Hendrix College, Conway, AR 72032. DNA FINGER-PRINTING OF <i>AZOLLA</i>, AN AQUATIC FERN.
2:30	BP05	**Thomas A. Nelson and Mary Lynn Lambert. Department of Zoology, Eastern Illinois University, Charleston, IL 61920. CHARACTERISTICS AND USE OF CAVITY TREES IN OZARK HARDWOOD STANDS.
2:45		Break
3:00	BP06	James E. Kellum ¹ , Eric Sundell ² , Brian R. Lockhart ¹ . School of Forest Resources ¹ ,

POSTER SESSION

Location: Science Center Room A-3

Time	Abs. No.	Topic
1:30	PS01	Daniel R. England ¹ and David A. Saugey ² . Department of Biology ¹ , Southern Arkansas University, Magnolia, AR 71753.

Secretary's Report

United States Forest Service¹, Jessieville, AR 71949. **A METHOD TO REMOVE BATS FROM CASED WATER WELLS.**

PAPER SESSIONS

PHYSICS AND GEOLOGY PAPER SESSION

Location: Science Center Room A-1

Chairperson: Dr. Edwin Braithwaite, Department of Sciences and Mathematics, Cedarville College, Cedarville, OH 45314

Time	Abs. No.	Topic
8:30	PG01	* <u>Mathues Shane Doss</u> and Mostafa Hemmati. Department of Physical Science, Arkansas Tech University, Russellville, AR 72801. BREAKDOWN WAVES: EFFECT OF CURRENT ON ELECTRON TEMPERATURE AND NUMBER DENSITY.
8:45	PG02	* <u>Nicholas J. Pfister</u> , Sue Ellen McCloskey, and Wilfred J. Braithwaite. Department of Physics and Astronomy, University of Arkansas at Little Rock, Little Rock, AR 72204. CALCULATING TIDAL FORCES WITHIN THE SOLAR SYSTEM.
9:00	PG03	* <u>Danny R. Crawford</u> , Charles W. Ford, Jr., and Wilfred J. Braithwaite. Department of Physics and Astronomy, University of Arkansas at Little Rock, Little Rock, AR 72204. SCIENTIFIC COMPUTING USING LINUX AT UNIVERSITY OF ARKANSAS AT LITTLE ROCK.
9:15	PG04	* <u>Tamra Pool</u> ¹ , Leo Carson Davis ¹ , and Kenneth M. Ball ² . Department of Physical Sciences ¹ , Southern Arkansas University, Magnolia, AR 71753. El Dorado High School ² , El Dorado, AR 71730. ANOMALOUS VERTEBRATE FOSSILS FROM PECCARY CAVE, NEWTON COUNTY, ARKANSAS.
9:30	PG05	<u>Edwin S. Braithwaite</u> ¹ and Wilfred J. Braithwaite ² . Department of Science and Mathematics ¹ , Cedarville College, Cedarville, OH 45314. Department of Physics and Astronomy ² , University of Arkansas at Little Rock, Little Rock, AR 72204. CALCULATING TWO VERTICES FROM COPLANARITY OF EMERGING PAIRS.
9:45		Break
10:15	PG06	<u>Leo Carson Davis</u> ¹ and Kathy Harris ² . Department of Physical Sciences ¹ , Southern Arkansas University, Magnolia, AR 71753. Department of Psychology ² , Emporia State University, Emporia, KS 66801. DISCOVERY OF FOSSIL CRETACEOUS BIRD IN SOUTHWEST ARKANSAS.
10:30	PG07	** <u>H. Eswaran</u> ¹ , J. D. Wilson ¹ , R. M. Hawk ¹ , and C. L. Lowery ² . Department of Applied

Science¹, University of Arkansas at Little Rock, Little Rock, AR 72204. Department of Ob/Gyn², University of Arkansas for Medical Sciences, Little Rock, AR 72205. **RECORDING OF AUDITORY EVOKED POTENTIALS IN THE HUMAN FETUS.**

10:45 PG08

D. T. C. Yang and C. J. Zhang. Department of Chemistry, University of Arkansas at Little Rock, Little Rock, AR 72212. **ULTRASOUND AND MICROWAVE ASSISTED OXIDATION OF CYCLOHEXANONE TO ADIPIC ACID WITH CHLOROX.**

ENGINEERING AND MATHEMATICS PAPER SESSION

Location: Science Center Room A-30

Chairperson: Dr. Wilfred Braithwaite, Department of Physics and Astronomy, University of Arkansas at Little Rock, Little Rock, AR 72204.

Time	Abs. No.	Topic
8:30	EM01	** <u>Diana Lindquist</u> ¹ , Richard Komoroski ² , and Roger Hawk ¹ . Department of Applied Sciences ¹ , University of Arkansas at Little Rock, Little Rock, AR 72204. Departments of Radiology and Biochemistry ² , University of Arkansas for Medical Sciences, Little Rock, AR 72205. A METHOD TO CORRECT THE VOXEL SIZE IN PRESS.
8:45	EM02	** <u>Sailesh Kumar</u> and Roger M. Hawk. Department of Applied Science, University of Arkansas at Little Rock, Little Rock, AR 72204. THIN FILM DEPOSITION OF SILICON FOR SOLAR CELL APPLICATIONS.
9:00	EM03	** <u>Eric Barnett</u> , Philip Williams, Brian Stanley, Tony Bednar, and Scott Reeve. Department of Chemistry, Biochemistry and Physics, Arkansas State University, State University, AR 72467. HIGH RESOLUTION LASER SPECTROSCOPIC STUDY OF JET COOLED GASES.
9:15	EM04	** <u>Mark-Anthony Conti</u> , Charles R. Bowlus, and Wilfred J. Braithwaite. Department of Physics and Astronomy, University of Arkansas at Little Rock, Little Rock, AR 72204. Department of Biopharmaceutical Sciences ² , University of Arkansas for Medical Sciences, Little Rock, AR 72205. PREDICTION OF POTENTIAL ANTIMIGRAINE ACTIVITY BY USING ARTIFICIAL NEURAL NETWORKS.
9:45		Break
10:00	EM06	<u>Wilfred J. Braithwaite</u> ¹ and Edwin S. Braithwaite ² . Department of Physics and Astronomy ¹ , University of Arkansas at Little Rock, Little Rock, AR 72204. Department of Science and Mathematics ² , Cedarville College, Cedarville, OH 45314.

Arkansas Academy of Science

IDENTIFYING KAONS & PIONS VIA
MOMENTUM CONSERVED MUON
DECAY.

10:15	EM07	*Chris Barber ¹ , R. Engelken ¹ , W. Aleem ¹ , B. Kemp ¹ , I. Khan ¹ , C. Edrington ¹ , M. Buck ¹ , Tom Jakobs ² . Department of Engineering ¹ , Arkansas State University, State University, AR 72467. InvoTek, Inc. ² , Alma, AR. PREPARATION OF POWER PRECURSORS AND EVAPORATION OF PHOTOCONDUCTIVE INDIUM (III) SULFIDE FILMS.	9:15	IA04	TEBRATES OF WARREN PRAIRIE, BRADLEY AND DREW COUNTIES, AKRANSAS.
			9:30	IA05	George L. Harp. Department of Biological Sciences, Arkansas State University, State University, AR 72467. THE ODONATA (DRAGONFLIES) OF THE TROPICAL DRY FOREST. II. THE CHAMELA, MEXICO AREA.
10:30	EM08	*Brandon Kemp, R. Engelken, C. Edrington, W. Aleem, I. Khan, C. Barber, M. Buck. Department of Engineering, Arkansas State University, State University, AR 72467. IODINE ION-BASED IMPROVEMENTS IN CuInS ₂ FILMS ELECTRODEPOSITED FROM THE THREE SOLVENT BATH.	9:45		Thomas M. Buchanan. Department of Biology, Westark Community College, Fort Smith, AR 72913. THE FISH COMMUNITY IN INDIAN BAYOU, A COASTAL PLAIN STREAM OF REMARKABLE SPECIES RICHNESS IN THE LOWER WHITE RIVER DRAINAGE OF ARKANSAS.
			10:00	IA06	Break
10:45	EM09	*Imran Khan, R. Engelken, W. Aleem, C. Barber, C. Edrington, and M. Buck. Department of Engineering, Arkansas State University, State University, AR 72467. FURTHER OPTIMIZATION OF NONAQUEOUS BATHS FOR CHEMICAL PRECIPITATION DEPOSITION OF CdS FILMS.	10:00	IA06	Rosalynne Davis and Ronald L. Johnson. Department of Biological Sciences, Arkansas State University, State University, AR 72467. A STUDY OF AGE, GROWTH AND CONDITION OF LARGEMOUTH BASS, <i>MICROPTERUS SALMOIDES</i> , OF LAKE ASHBAUGH.
11:00	EM10	Sanjay K. Mitra, Qing Luo, and Jerry Darsey. Department of Chemistry, University of Arkansas at Little Rock, Little Rock, AR 72204. ARTIFICIAL NEURAL NETWORKS USED TO PREDICT ELECTRICAL PROPERTIES OF POLYMERS.	10:15	IA07	Renn Tumilson and James Anderson. Department of Biology, Henderson State University, Arkadelphia, AR 71999. APPARENT CHANGES IN THE FISH FAUNA OF THE CADDO RIVER BELOW DEGRAY LAKE OVER A 25 YEAR PERIOD.
			10:30	IA08	**Donna L. Moore and F. W. Spiegel. Department of Biological Sciences, University of Arkansas at Fayetteville, Fayetteville, AR 72701. MICROHABITAT AND HABITAT DISTRIBUTION OF PROTOSTELIDS IN FORESTS AND GRASSLANDS OF NORTHWEST ARKANSAS.
			10:45	IA09	**Rayona Webster. Cossatot Technical College, De Queen, AR 71832. A PROPOSED NEW GENUS & SPECIES <i>SPINEAGLOBULA RECURVATA</i> N. SP. (EUMYCETOZOAN), A BARK INHABITING PROTOSTELIDA.
			11:00	IA10	**Steve P. Phillip and Todd Wiebers. Department of Biology, Henderson State University, Arkadelphia, AR 71999. GROWTH AS A FUNCTION OF DIET IN OSCARS (<i>ASTRONOTUS OCELLATUS</i>).
			11:15	IA11	**Cris L. Davidson, George L. Harp, and John L. Harris. Arkansas State University, Department of Biological Sciences, State University, AR 72467. A SURVEY OF MOLLUSCA (BIVALVIA: UNIONACEA) INHABITING MYATT CREEK, FULTON COUNTY, ARKANSAS.
					*Richard D. Smith ¹ and George L. Harp ² . 44 Spring Grove Dr., Sherwood, AR 72120 ¹ . Department of Biological Sciences ² , Arkansas State University, State University, AR 72467. AQUATIC MACROINVER-

INVERTEBRATE AND AQUATIC BIOLOGY PAPER SESSION

Location: Science Center Room B-3

Chairperson: Renn Tumilson, Department of Biology, Henderson State University, Arkadelphia, AR 71999.

Time	Abs. No.	Topic			
8:30	IA01	*Craig Robert McClain ¹ , Michael Rex ² , and Joyce Hardin ¹ . Department of Biology ¹ , Hendrix College, Conway, AR 72032. University of Massachusetts at Boston ² , Boston, MA 02125. THE RELATION OF SIZE, GRADIENTS WITH LATITUDE IN DEEP-SEA TURRIDS.			
8:45	IA02	*Martha McHenry, Janet Lanza, and Michael Warriner. Department of Biology, University of Arkansas at Little Rock, Little Rock, AR 72204. REPRODUCTION BY <i>PIERIS RAPAE</i> INCREASES WHEN PROVIDED WITH AMINO ACID RICH NECTAR.			
9:00	IA03	*Richard D. Smith ¹ and George L. Harp ² . 44 Spring Grove Dr., Sherwood, AR 72120 ¹ . Department of Biological Sciences ² , Arkansas State University, State University, AR 72467. AQUATIC MACROINVER-			

Secretary's Report

BIOCHEMISTRY, GENETICS, MOLECULAR BIOLOGY AND BIOMEDICAL SCIENCES PAPER SESSION

Location: Science Center Room B-18

Chairperson: Dr. Russell Nordeen, Division of Mathematics and Sciences, University of Arkansas at Monticello, Monticello, AR 71656.

OPN PROMOTER IN 3T3 CELLS.

Time	Abs. No.	Topic	Time	Abs. No.	Topic
8:30	BB01	John T. Daniels and Russell O. Nordeen. Division of Mathematics and Sciences, University of Arkansas at Monticello, Monticello, AR 71656. ANALYSIS OF TRANSPOSON MUTAGENESIS OF THE TOMATO PATHOGEN <i>PSEUDOMONAS SYRINGAE</i> . PV TOMATO.	10:30	BB08	*Torrance Walker, Christy Washington, Dedric Hayes, B. Hwflich, B. Green, and Y. Yerokun. Research Center, University of Arkansas at Pine Bluff, Pine Bluff, AR 71601. National Center for Toxicological Research, Jefferson, AR 72079. CHARACTERIZATION FOR THE RECOMBINANT VECTORS EXPRESSING THE SULFONOTRANSFERASE GENE TRANSFECTION INTO MAMMALIAN CELLS.
8:45	BB02	Xin Y. Li ¹ , Feng H. Huang ¹ , and Edward Gbur, Jr. ² . Department of Horticulture ¹ , University of Arkansas at Fayetteville, Fayetteville, AR 72701. Agricultural Statistics Lab ² , University of Arkansas at Fayetteville, Fayetteville, AR 72701. EFFECTS OF ACETOSYRINGONE, pH AND GLUCOSE ON TRANSIENT TRANSFORMATION EFFICIENCY OF POPULAR HYBRID.	10:45	BB09	Lynita M. Cooksey ¹ , Stacy L. Bearden ² , and Larry R. Hilburn ² . Department of Biological Sciences ¹ , Arkansas State University, State University, AR 72467. Department of Entomology ² , Louisiana State University, Baton Rouge, LA 70803. Black River Technical College ³ , Pocahontas, AR 72455. GENETIC VARIATION IN POPULATIONS OF <i>ANOPHELES QUADRIMACULATUS</i> AND <i>PSOROPHORA COLUMBIAE</i> IN NORTHEASTERN ARKANSAS.
9:00	BB03	Vipul N. Dholakia and Richard B. Walker. Department of Chemistry, University of Arkansas at Pine Bluff, Pine Bluff, AR 71611. EFFECTS OF BETA-HYDROXYPROPYL CYCLODEXTRIN ON THE CENTRAL STIMULANT EFFECTS OF (-)-EPHEDRINE AND AN EPHEDRINE PRODRUG IN RATS.	11:00	BB10	Timothy Hodge and Ronald L. Johnson. Department of Biological Science, Arkansas State University, State University, AR 72467. GENETIC DISTANCE BETWEEN THE LARGEMOUTH, SMALLMOUTH AND SPOTTED BASSES (GENUS <i>MICROPTERUS</i>) AS DETERMINED BY MITOCHONDRIAL DNA ANALYSIS.
9:15	BB04	*Dwight D. Thomas, Mattie M. Glover, Clifton Orr, and Cynthia D. Burroughs. Department of Biology, University of Arkansas at Pine Bluff, Pine Bluff, AR 71601. SENSITIVITY OF HUMAN BLADDER CANCER CELLS TO PLATINUM ANTICANCER DRUGS.	11:15	BB11	Stephen R. Skinner ¹ , and Robert D. Skinner ² . University of Arkansas at Fayetteville ¹ , Fayetteville, AR 72701. University of Arkansas for Medical Sciences ² , Little Rock, AR 72205. ENTRAINMENT OF THE RESPIRATORY SYSTEM DURING CYCLING EXERCISE.
9:30	BB05	*Jennifer R. Powell and Joyce M. Hardin. Department of Biology, Hendrix College, Conway, AR 72032. CHARACTERIZATION OF A MUTATION IN THE hPPT GENE CAUSING INFANTILE NEURONAL CEROID LIPOFUSCINOSIS (INCL).			
9:45		Break			
10:00	BB06	*Utah W. Nickel ¹ , Hong Zhang ² , Joyce M. Hardin ¹ . Department of Biology ¹ , Hendrix College, Conway, AR 72032. Texas Tech University ² , Lubbock, TX 79409. INDUCTION PATTERN OF <i>APX3</i> IN <i>ARABIDOPSIS</i> .			
10:15	BB07	*Rob C. Baker ¹ , Joyce M. Hardin ¹ , and Mike Ostrowski ² . Department of Biology ¹ , Hendrix College, Conway, AR 72032. Ohio State University ² , Columbus, OH 43210. ACTIVATED RAS INDUCES TRANSCRIPTION OF THE -88/+79			