PLATFORM PROGRAM
HOTEL BALLROOM A
THURSDAY, APRIL 12, 2007

7:50–8:00 AM Welcome and Announcements - **John Chick**, MRRC President

SESSION I–SEDIMENTS, NUTRIENTS, ALGAE AND ZOOPLANKTON (Moderator: Steven Zigler, UMESC)

8:00–8:20 AM NUTRIENT DYNAMICS, OXYGEN CONCENTRATIONS AND ECOSYSTEM METABOLISM IN THE UPPER MISSISSIPPI RIVER
J.N. Houser[1], L.A. Bartsch[1], J. Sullivan[2], W.B. Richardson[1], [1]Upper Midwest Environmental Sciences Center, 2630 Fanta Reed Road, La Crosse, WI 54603 [2]Wisconsin Department of Natural Resources, 3550 Mormon Coulee Road, La Crosse, WI 54601

8:20–8:40 AM EFFECTS OF FLOOD PULSES ON NITRIFICATION RATES IN UPPER MISSISSIPPI RIVER FORESTED FLOODPLAINS
T.M. Jicha[1, 2,] B.H. Hill[1], L. Johnson[3], C.M. Elonen[1], and M.S. Pearson[1], [1] US Environmental Protection Agency, Mid-Continent Ecology Division, Duluth, MN. [2] University of Minnesota-Duluth [3] Natural Resource Research Institute, UMN- Duluth, MN

8:40–9:00 AM NITROGEN AND SEDIMENT LOADING TO THE UPPER MISSISSIPPI RIVER: ASSESSMENTS OF 25 WATERSHEDS IN MINNESOTA AND WISCONSIN
E. Mundahl[1] and **N. Mundahl**[2], [1]Michigan Technological University, Houghton, MI 49931 [2]Winona State University, Winona, MN 55987

9:00–9:20 AM EVALUATION OF LIGHT PENETRATION ON NAVIGATION POOLS 8 AND 13 OF THE UPPER MISSISSIPPI RIVER
S. Giblin[1], K. Hoff[1], J. Fischer[2], T. Dukerschein[1], [1]WI Department of Natural Resources, Long Term Resource Monitoring Program, La Crosse, WI 54603. [2]WI Department of Natural Resources, La Crosse, WI, 54601

9:20–9:40 AM ZOOPLANKTON OF THE UPPER MISSISSIPPI RIVER: SPATIAL PATTERNS OF COMMUNITY STRUCTURE AND THE INSHORE RETENTION CONCEPT
A.P. Levchuk and J. H. Chick, Illinois Natural History Survey, Great Rivers Field Station, Brighton, IL 62012

9:40–10:00 AM ZOOPLANKTON IN LAKE PEPIN: SPATIAL AND TEMPORAL RELATIONSHIPS
R. M. Burdis[1] and J. K. Hirsch[2], [1]Minnesota Department of Natural Resources, LTRMP Lake City Field Station, 1801 South Oak Street, Lake City, MN 55041 [2]Minnesota Department of Natural Resources, Ecological Resources, 500 Lafayette Road, St. Paul, MN 55155

10:00–10:20 AM **BREAK**

SESSION II–CONTEMPORARY HEALTH AND HISTORICAL FLOWS (Moderator: Greg Sass, INHS)

10:20–10:40 AM NORTH-TO-SOUTH POSITION OF MISSISSIPPI RIVER STATES AND THEIR HEALTH RANK: A COMMENTARY
J. Hart, Sherman College of Straight Chiropractic**,** P.O. Box 1452, Spartanburg, South Carolina 29304

10:40–11:00 AM RETRO-MODELING THE PHYSICAL TEMPLATE OF THE MISSISSIPPI RIVER SYSTEM
J.W.F. Remo [1, 2] and N. Pinter [1, 2], [1] Environmental Resource and Policy Program and [2] Department of Geology, Southern Illinois University, Carbondale 62901-4324, USA

KEYNOTE PRESENTATION

11:00–11:50 AM WHY NATURALIZE DEVELOPED FLOODPLAINS? AN INTEGRATED ANALYSIS AND RESPONSE
Richard E. Sparks, National Great Rivers Research & Education Center, Godfrey, IL 62035

11:50–1:00 PM **LUNCH** (on your own)

SESSION III–NON-NATIVE SPECIES (Moderator: Jonathan Remo, SIUC)

1:00–1:20 PM DISTRIBUTION AND ABUNDANCE OF NON-INDIGENOUS FISHES IN THE GREAT RIVERS OF THE CENTRAL BASIN, USA
M.S. Pearson[1], D. Bolgrien[1], T. Angradi[1], F.H. McCormick[2], T. Jicha[1], D.L. Taylor[1], B.H. Hill[1]. [1]USEPA, ORD, NHEERL, Mid-Continent Ecology Division, Duluth, MN 55804 [2]USFS, Environmental Sciences Research, Olympia, Forestry Sciences Laboratory, Olympia, WA 98512

1:20–1:40 PM LARVAL ASIAN CARP IN THE UPPER AND MIDDLE MISSISSIPPI RIVER: AN INDEX OF ESTABLISHMENT AND DISPERSAL POTENTIAL.
A.M. Lohmeyer, and J.E. Garvey, Fisheries and Illinois Aquaculture Center, Department of Zoology, Life Science II Room 173, Southern Illinois University, Carbondale, IL 62901

1:40–2:00 PM REDUCED CONDITION FACTOR OF TWO NATIVE FISH SPECIES COINCIDENT WITH INVASION OF NON-NATIVE ASIAN CARP IN THE ILLINOIS RIVER: EVIDENCE FOR COMPETITION AND REDUCED FITNESS?
K.S. Irons[1], G.G. Sass[1], M.A. McClelland[1], and J.D. Stafford[2],
[1]Illinois River Biological Station, Illinois Natural History Survey, 704. N. Schrader Ave., Havana, Illinois 62644, USA [2]Forbes Biological Station, Illinois Natural History Survey, P.O. Box 590, Havana, Illinois 62644, USA

2:00–2:20 PM ACTIVE VERSUS PASSIVE MANAGEMENT OF COMMON AND GRASS CARP FOR BACKWATER LAKE NATIVE FISH RESTORATION: A CASE STUDY FROM THE NATURE CONSERVANCY'S EMIQUON PRESERVE
G.G. Sass, K.S. Irons, T. M. O'Hara, T.R. Cook, M.A. McClelland, N.N. Michaels, M.L. Smith, and M.R. Stroub,
Illinois River Biological Station, Illinois Natural History Survey, 704 North Schrader Avenue, Havana, IL 62644

2:20–2:40 PM HYBRIDIZATION BETWEEN SILVER AND BIGHEAD CARP IN THE MISSISSIPPI AND ILLINOIS RIVERS
J.T. Lamer[1], C.R. Dolan[1], J.H. Chick[1], and J.M. Epifanio[2],
[1]Illinois Natural History Survey, Great Rivers Field Station, 8450 Montclair Ave., Brighton, IL 62012. [2]Illinois Natural History Survey, Center for Aquatic Ecology and Conservation, 1816 S. Oak St., Champaign, IL 61820

2:40–3:00 PM **BREAK**

SESSION IV–ENVIRONMENTAL RESPONSES IN MANAGED RIVERS (Moderator: Teresa Newton, UMESC)

3:00–3:20 PM ECOSYSTEM RESPONSES TO AN EXPERIMENTAL DRAWDOWN ON THE UPPER MISSISSIPPI RIVER: A SUMMARY OF FINDINGS
M.D. Delong, Large River Studies Center, Biology Department, Winona State University, Winona, MN 55987

3:20–3:40 PM IDENTIFYING POTENTIAL CONTROLS ON THE DIVERSITY OF FISHES AND ABUNDANCE AND SIZE STRUCTURE OF CENTRARCHIDS IN OFF-CHANNEL AREAS IN THE UPPER MISSISSIPPI RIVER SYSTEM: AQUATIC VEGETATION AND PHYSICAL FEATURES
B.C. Knights, B.S. Ickes, Y. Yin and J.C. Nelson, U.S. Geological Survey, Upper Midwest Environmental Sciences Center, 2630 Fanta Reed Road, La Crosse, WI 54603

3:40–4:00 PM RELATIONSHIP BETWEEN COMMUNITY STRUCTURE OF YOY FISHES AND WATER QUALITY VARIABLES FROM POOL 26 OF THE UPPER MISSISSIPPI RIVER: A CROSS-COMPONENT ANALYSIS OF LTRMP DATA
J.H. Chick, , L.A. Soeken-Gittinger, E.N. Ratcliff, E.J. Gittinger, and B.J. Lubinski, Illinois Natural History Survey, Great Rivers Field Station, 8450 Montclair Ave, Brighton, IL 62012

4:00–4:20 PM THE EFFECTS OF DROUGHT-LIKE CONDITIONS ON FISH AND WATER QUALITY PARAMETERS IN POOL 26 OF THE MISSISSIPPI RIVER
B.J. Lubinski, E.N. Ratcliff, L.S. Gittinger, and J.H. Chick,
Illinois Natural History Survey, Great Rivers Field Station, 8450 Montclaire Ave. Brighton, IL 62012

4:20–4:40 PM THE EFFECT OF A RECENTLY COMPLETED HABITAT REHABILITATION AND ENHANCEMENT PROJECT (HREP) ON FISH ABUNDANCES IN THE LA GRANGE REACH OF THE ILLINOIS RIVER USING LONG TERM RESOURCE MONITORING PROGRAM (LTRMP) DATA
T.M. O'Hara, M.A. McClelland, K.S. Irons, T.R. Cook and G.G. Sass, Illinois River Biological Station, Illinois Natural History Survey, 704 North Schrader Avenue, Havana, Illinois 62644

4:40–5:00 PM SWAN LAKE HABITAT REHABILITATION AND ENHANCEMENT PROJECT (HREP): POST-PROJECT BIOLOGICAL AND PHYSICAL RESPONSE MONITORING
C.R. Dolan, J.T. Lamer, and J.H. Chick, Illinois Natural History Survey, Great Rivers Field Station, Brighton, Illinois 62012

5:00–6:00 PM **POSTER SESSION**

6:00–8:00 PM **BANQUET**

PLATFORM PROGRAM
HOTEL BALLROOM A
FRIDAY, APRIL 13, 2007

7:50–8:00 AM Morning Welcome and Announcements–**John Chick,** MRRC President

SESSION V–FISH, LANDSCAPES AND BENTHOS (Moderator: Jeff Houser, UMESC)

8:00–8:20 AM EFFECTS OF COMMERCIAL HARVEST ON SHOVELNOSE STURGEON POPULATIONS IN THE UPPER MISSISSIPPI RIVER
J. Koch[1], M.C. Quist[1], and C.L. Pierce[2], [1]Department of Natural Resource Ecology and Management, Iowa State University, Ames, IA. [2]USGS-Iowa Cooperative Fish and Wildlife Research Unit, Iowa State University, Ames, IA

8:20–8:40 AM DEMOGRAPHICS OF SHOVELNOSE STURGEON POPULATIONS IN THE LOWER PORTION THE UPPER MISSISSIPPI RIVER
M.J. Afflerbaugh, T.W. Spier, and M.L. Miller, Western Illinois University Department of Biological Sciences, Macomb, IL 61455

8:40–9:00 AM TRENDS IN LARGEMOUTH BASS AND BLUEGILL POPULATIONS AMONG THE UPPER AND LOWER ILLINOIS RIVER, 1957-2006
M.A. McClelland and G.G. Sass, Illinois River Biological Station, Illinois Natural History Survey, 704 North Schrader Avenue, Havana, Illinois 62644

9:00–9:20 AM FISH MOVEMENT IN THE MISSISSIPPI RIVER
R. Brooks [1], J. Garvey [1], **S. Tripp** [1], M. Hill [1], M. Madegan [1], T. Spier [2], D. Herzog [3], and B. Hrabik [3], [1]Southern Illinois University, Carbondale, IL. [2]Western Illinois University, Macomb, IL, [3]Missouri Long Term Monitoring Station, Jackson, MO

9:20–9:40 AM A PRELIMINARY ANALYSIS OF CHANGES IN LANDSCAPE STRUCTURE FOR THE UPPER MISSISSIPPI RIVER FROM 1989 TO 2000
M.M. Porzky[1], J.C. Nelson[2], R.W. Tyser[1], and C.M. Hupy[3],[1]River Studies Center, University of Wisconsin-La Crosse, 1725 State St., La Crosse, WI 54601 [2]Upper Midwest Environmental Sciences Center, 2630 Fanta Reed Rd., La Crosse, WI 54603 [3]Department of Geography, University of Wisconsin-La Crosse, 1725 State St., La Crosse, WI 54601

9:40–10:00 AM BENTHIC PRODUCTIVITY AND LIFE-HISTORY OF FINGERNAIL CLAMS OF POOL 9, UPPER MISSISSIPPI RIVER
J. Eckblad, M. Hoegh, D. McAdam, B. Reynolds, B. Evans, M. Swenson, K.Swenson, D. Schultz, M. Howie, T. Young, N. Leslein, B. Powell, L. Doerr, K. McVey, Department of Biology, Luther College, Decorah, Iowa 52101

10:00–10:20 AM **MIDDLE AND HIGH SCHOOL STUDENT POSTERS/BREAK**

SESSION VI–MUSSELS, TURTLES, AND HABITAT ASSESSMENTS (Moderator: Brian S. Ickes, UMESC)

10:20–10:40 AM FACTORS AFFECTING THE NEST SITE SELECTION OF SMOOTH SOFTSHELL TURTLES (APALONE MUTICA)
K.L. Brown, M.A. Romano, and S.T. Meiers, Department of Biological Sciences, Western Illinois University, 1 University Circle, Macomb, IL 61455

10:40–11:00 AM EFFECTS OF A HUMAN-MADE ENVRIONMENTAL BARRIER TO GENE FLOW IN A SEMI-AQUATIC TURTLE, Trachemys scripta ON THE MISSISSIPPI RIVER
L.M. Coghill[1], M.A. Romano[1], B. Sloss[2], and R. Franckowiak[2],
[1]Western Illinois Univeristy, 1 University Circle, Department of Biological Sciences Waggoner Hall, Macomb IL, 61455. [2]College of Natural Resources, Univ. of Wisconsin-Stevens Point 800 Reserve Street, Stevens Point, WI USA 54481

11:00–11:20 AM ENVIRONMENTAL CUES AND RED-EARED SLIDER (TRACHEMYS SCRIPTA ELEGANS) REPRODUCTION
J.K. Tucker, Great Rivers Field Station, Illinois Natural History Survey, 8450 Montclaire Avenue, Brighton, Illinois 62012-2032, USA

11:20–11:40 AM CLIMATIC WARMING, RED-EARED SLIDERS (TRACHEMYS SCRIPTA ELEGANS), AND SEX RATIO
J.K. Tucker[1], C.R. Dolan[1], J.T. Lamer[1], and E.A. Dustman[2],
[1] Great Rivers Field Station, Illinois Natural History Survey, 8450 Montclaire Avenue, Brighton, Illinois 62012-2032, USA; [2]Department of Biology, Southern Illinois University at Edwardsville, Edwardsville, Illinois 62025, USA

11:40–12:00 PM POPULATION ESTIMATES OF NATIVE FRESHWATER MUSSELS IN POOL 5 OF THE UPPER MISSISSIPPI RIVER, 2006
M. Davis[1], J. Kern[2], T. Newton[3], and B. Gray[3], [1]Minnesota Department of Natural Resources, Lake City, MN 55041. [2]Kern Statistical Services, Inc., Sauk Rapids, MN 56379. [3]U.S. Geological Survey, Upper Midwest Environmental Sciences Center, La Crosse, WI 54603

12:00–1:00 PM **LUNCH**

SESSION VII–STATISTICS AND HABITAT ASSESSMENT (Moderator: John Chick, INHS)
1:00–1:20 PM CONCERNS ASSOCIATED WITH SUBSTITUTING AVERAGES FOR SAMPLE DATA
B.R. Gray, U.S. Geological Survey, Upper Midwest Environmental Sciences Center

1:20–1:40 PM A NOVEL APPROACH TO EVALUATE HABITAT QUALITY IN THE UPPER MISSISSIPPI RIVER -- QUANTITATIVE ANALYSIS OF ESSENTIAL FATTY ACIDS
M. Bartsch, L. Bartsch, B. Knights, J. Vallazza, S. Gutreuter, W. Richardson, and T. Newton, U.S. Geological Survey, Upper Midwest Environmental Sciences Center, La Crosse, WI 54603

1:40–2:00 PM HOME ON THE BIG RIVER: ASSESSING HABITAT CONDITION IN THE GREAT RIVERS OF THE CENTRAL UNITED STATES
D.L. Taylor, T.R. Angradi, D.W. Bolgrien, B.H. Hill, T.M. Jicha[1], M.S. Pearson, S.L. Batterman, and M.F. Moffett, USEPA, ORD, NHEERL, Mid-Continent Ecology Division, 6201 Congdon Blvd., Duluth, MN 55804

2:00–2:40 PM **BUSINESS MEETING**

2:40–3:20 PM **RAFFLE AND SILENT AUCTION**

POSTER PRESENTATIONS
THURSDAY, APRIL 12, 2007 12:00 PM–6:00 PM
Authors Present 5:00 PM–6:00 PM
(Listing by Topic)

FISH

1) FISH ASSEMBLAGES WITHIN THE GREAT RIVERS OF THE UNITED STATES
M.A. McClelland, K.S. Irons and **T.R. Cook,** Illinois River Biological Station, Illinois Natural History Survey, 704 North Schrader Avenue, Havana, Illinois 62644

2) EFFECT OF BACKWATER LAKE MANAGEMENT ON HABITAT FOR RIVERINE FISH
T.R. Timmermann, C.R. Dolan, and J.H. Chick, Great Rivers Field Station, Illinois Natural History Survey, Brighton, IL 61012

3) FISH POPULATION DYNAMICS OF AN ANNUALLY-FLOODED SEASONALLY-ISOLATED BACKWATER LAKE OF THE ILLINOIS
M.R. Stroub, G.G. Sass, and K.S. Irons, Illinois River Biological Station, Illinois Natural History Survey, 704 North Schrader Avenue, Havana, Illinois 62644

4) FOOD PREFERENCES AND FEEDING RATES OF SLIMY SCULPIN
D. Mundahl[1] and **N. Mundahl**[2], [1]Winona Senior High School, Winona, MN 55987. [2]Winona State University, Winona, MN 55987

5) SPORTFISH TRENDS IN THE LA GRANGE REACH OF THE ILLINOIS RIVER, 1994-2006
N.N. Michaels, G.G. Sass, and K.S. Irons, Illinois River Biological Station, Illinois Natural History Survey, 704 North Schrader Avenue, Havana, Illinois 62644

6) UPPER MISSISSIPPI RIVER BACKWATERS AS FISH OVERWINTERING REFUGIA: EVIDENCE OF FISH MIGRATION IN LATE FALL
A. Bartels[1] and J. Janvrin[2], [1]Wisconsin Department of Natural Resources, La Crosse, WI 54603. [2]Wisconsin Department of Natural Resources, La Crosse, WI 54601

FOOD WEBS

7) HISTORICAL TIMELINE OF LARGE RIVER FOOD WEBS THROUGH STABLE ISOTOPE ANALYSIS
E.E. Zelenka[1], M.M. Delong[1], and J.H. Thorp[2], [1]Large River Studies Center and Biology Department, Winona State University, Winona, Minnesota 55987. [2]Kansas Biological Survey and Department of Ecology and Evolutionary Biology, University of Kansas, Lawrence, KS 66047

8) EFFECTS OF AN EXPERIMENTAL DRAWDOWN ON FOOD WEBS IN UPPER MISSISSIPPI REACH 5
B. Sheehan and M. Delong, Large River Studies Center, Biology Department, Winona State University, Winona, Minnesota 55987

9) AN ANALYSIS OF CHANGES IN TROPHIC DYNAMCS IN THE ST. CROIX RIVER: A STABLE ISOTOPIC EVALUATION
D. Ramanan[1], M.D. Delong[1], and J.H. Thorp[2], [1]Large River Studies Center and Biology Department, Winona State University, Winona, Minnesota 55987. [2]Kansas Biological Survey and Department of Ecology and Evolutionary Biology, University of Kansas, Lawrence, KS 66047

10) TEMPORAL TRENDS OF THE DIETS OF FISH IN THE OHIO RIVER USING STABLE ISOTOPES
J.M. Hofmann[1], M.D. Delong[1], and J.H. Thorp[2], [1]Large Rivers Studies Center, Biology Department, Winona State University, Winona, MN 55987. [2]Kansas Biological Survey and Department of Ecology and Evolutionary Biology, University of Kansas, Lawrence, KS 66047

11) ISOTOPIC COMPOSITION OF RIVERINE AUTOTROPHS: RELATIONSHIP WITH ISOTOPIC RATIOS OF INORGANIC NUTRIENTS
M.E. Babcock and M.D. Delong, Large River Studies Center, Biology Department, Winona State University, MN 55987

FIELD STATION HIGHLIGHTS

12) DEVELOPMENT OF THE MIDDLE MISSISSIPPI RIVER WETLANDS FIELD STATION: OPPORTUNITIES FOR RESEARCH AND EDUCATION
D.J. Myers and M.R. Whiles, Center for Ecology, Department of Zoology, Southern Illinois University, Carbondale, IL 62901-6501

13) THE GREAT RIVERS FIELD STATION: PAST, PRESENT AND FUTURE HIGHLIGHTS FROM OVER A DECADE OF MONITORING POOL 26 OF THE MISSISSIPPI RIVER

E.J. Gittinger, R.J. Cosgriff, L.A. Gittinger, B.J. Lubinski, E.N. Ratcliff, J.K. Tucker, and J.H. Chick**,** Illinois Natural History Survey, Great Rivers Field Station, 8450 Montclaire Ave, Brighton, IL 62012

TURTLES

14) CLIMATIC WARMING AND RED-EARED SLIDER (*TRACHEMYS SCRIPTA ELEGANS*) NATURAL HISTORY

J.K. Tucker[1], C.R. Dolan[1], J.T. Lamer[1], and E.A. Dustman[2], [1] Great Rivers Field Station, Illinois Natural History Survey, 8450 Montclaire Avenue, Brighton, Illinois 62012-2032, USA; [2]Department of Biology, Southern Illinois University at Edwardsville, Edwardsville, Illinois 62025, 54603

15) COMMON SNAPPING TURTLE (*CHELYDRA SERPENTINA*) SEX DETERMINATION AND DEMOGRAPHICS

E.A. Dustman[1], J.K. Tucker[2], C.R. Dolan[2], and J.T. Lamer[2], [1]Department of Biology, Southern Illinois University at Edwardsville, Edwardsville, Illinois 62025, USA; [2]Great Rivers Field Station, Illinois Natural History Survey, 8450 Montclaire Ave., Brighton, Illinois 62012 USA

INVERTEBRATES

16) POTENTIAL WOOD EXCAVATION BY COMMON NET-SPINNING CADDISFLIES IN POOL 8, UPPER MISSISSIPPI RIVER

R.J. Haro[1], W.B. Richardson[2], and R.M. Northwick[1,2], [1]River Studies Center, University of Wisconsin-La Crosse, La Crosse, WI 54601. [2]U.S. Geological Survey, Upper Midwest Environmental Sciences Center, La Crosse, WI 54602

PHYTOPLANKTON

17) ARE MIGRATING WATERFOWL TRANSPORTING *CHARA* AS THEY MIGRATE?

R. Smith, and S.T Meiers, Department of Biological Sciences, Western Illinois University Macomb Illinois 61455

ECOSYSTEM ASSESSMENT

18) UTILIZATION OF WATER QUALITY INDEX TO ASSESS THE OVERALL WATER QUALITY IN UPPER MISSISSIPPI RIVER

V. Kimler, and C. Kim, Department of Natural and Applied Science, University of Dubuque, Dubuque, IA 52001

19) EXPLORATORY ANALYSIS OF INDEX OF BIOTIC INTEGRITY SCORES CALCULATED FROM DATASETS OBTAINED FROM THREE DIFFERENT DAY ELECTROFISHING PROTOCOLS

A. Bartels[1], **T. Dukerschien[1]**, and B.S. Ickes[2], [1]Wisconsin Department of Natural Resources Field Station, 2630 Fanta Reed Road, La Crosse, WI 54603; [2]USGS Upper Midwest Environmental Sciences Center, 2630 Fanta Reed Road, La Crosse, Wisconsin 54603

GEOGRAPHIC INFORMATION SYSTEMS

20) A GEOGRAPHIC INFORMATION SYSTEM FOR THE MINES OF SPAIN RECREATION AREA, DUBUQUE, IA

C. Moonen[1], J.J. White[1], G.L. Zuercher[1], D.H. Easley[1], and W. Buchholtz[2], [1] Department of Natural and Applied Sciences, University of Dubuque, 2000 University Avenue, Dubuque, IA 52001. [2] Mines of Spain Recreation Area, E.B. Lyons Interpretive Center, 8991 Bellevue Heights Road, Dubuque, IA 52003

MAMMALS

21) WHITE FOOTED MICE (PEROMYSCUS LEUCOPUS) AT MINES OF SPAIN RECREATION AREA, IOWA

J.J. White[1], C. Moonen[1], G.L. Zuercher[1], D.H. Easley[1], and W. Buchholtz[2], [1] Department of Natural and Applied Sciences, University of Dubuque, 2000 University Avenue, Dubuque, IA 52001. [2] Mines of Spain Recreation Area, E.B. Lyons Interpretive Center, 8991 Bellevue Heights Road, Dubuque, IA 52003

SEDIMENT

22) A GIS TECHNIQUE FOR ASSESSING SEDIMENT HARDNESS IN A MANAGED ILLINOIS RIVER BACKWATER

J.T. Lamer, C.R. Dolan, and J.H. Chick, Great Rivers Field Station, Illinois Natural History Survey, Brighton, IL 62012