

BIOGRAPHICAL SKETCH



Personal Information:

Name: Mohammad Adnan Abu Baker
Nationality: Jordanian
Present address: Department of Biology, The University of Jordan, Amman, Jordan.
Email: ma.abubaker@ju.edu.jo.

Education:

2011 Ph.D., Biological Sciences, **University of Illinois at Chicago**, Chicago, USA (adviser, Joel Brown, co-adviser, Bruce Patterson, Field Museum of Natural History).
2002 M. Sc. Applied Biological Sciences, Jordan University of Science and Technology, Irbid, Jordan.
1998 B. Sc. Applied Biological Sciences, Jordan University of science and Technology, Irbid, Jordan.

Professional experience and positions:

Jan. 2018 – present Assistant Professor, Department of Biology, The University of Jordan, Amman, Jordan
Aug. 2016 – Dec. 2017 Ecologist, Environmatics Co. Environmental Consulting Company. Amman, Jordan.
Sept. 2013 – Jun. 2016 Postdoctoral Researcher, Biology Department, College of Arts and Sciences, Qatar University
Sept 2011 – May 2013 Visiting Assistant Professor, Biology Department, Gustavus Adolphus College.
Aug 2005 – May 2011 Teaching Assistant, Biology Department, University of Illinois at Chicago.
Oct 2004 – Feb 2005 Teaching Assistant, Biology Department, Jordan University of Science and Technology, Irbid, Jordan.
Jan 2003 – Jun 2004 Desert Education Center/Project Coordinator, Badia Research and Development Program, Higher Council of Science and Technology.
Feb 2002 – Dec 2002 Fauna Field Researcher, Research and Surveys Section, the Royal Society for the Conservation of Nature, Amman, Jordan.
Oct 1999 – Feb 2002 Research and Teaching Assistant, Biology Dept, Jordan University of Science and Technology, Irbid, Jordan.
Dec 1998 – Oct 1999 Fauna Field Researcher, Research and Surveys Section, the Royal Society for the Conservation of Nature, Amman, Jordan.

Teaching Experience:

General Biology (Bio101), 2017/2018, Biology Department, University of Jordan.
General Biology Lab (Bio 111), 2017/2018, Biology Department, University of Jordan.
Vertebrate Zoology (Bio242 with lab), Spring 2013, Biology Department, Gustavus Adolphus College.
Animal Behavior (Bio372 with lab), Fall 2012, Biology Department, Gustavus Adolphus College.
Principles of Biology (Bio101, with lab), Fall 2012, Biology Department, Gustavus Adolphus College.
General Ecology (Bio370, with lab), Spring 2012, Biology Department, Gustavus Adolphus College.
Ecology, Evolution and Behavior (Bio202), Spring 2012, 2013, Biology Department, Gustavus Adolphus College.
Biology for non-majors (Bio100 with lab), Fall 2011, Biology Department, Gustavus Adolphus College.
General Ecology Lab (BioS331), Spring 2008, 2009, 2010, Summer 2010, Spring 2011, Biology Department, University of Illinois at Chicago.
Comparative Anatomy of the Vertebrates Lab (BioS272), Fall 2006, 2007, 2008, 2009, 2010, Biology Department, University of Illinois at Chicago.
Ecology of Populations and Communities Lab (BioS101), Fall 2005, Spring & summer 2006, Spring 2007, Department of Biology, University of Illinois at Chicago.

General Biology Laboratory B107, Fall 1999, Spring 2000, Fall 2000, Department of Biology, Jordan University of Science and Technology.

Invertebrates Zoology Lab, Fall 2001, Department of Biology, Jordan University of Science and Technology.

Grants and Awards:

Exchange scholar from the Field Museum of Natural History to conduct collection-based research in the museum's department of Zoology (July 1–August 15, 2004). April 23, 2004. \$2600.

Presenter's Scholarship, Graduate college/UIC. Participate in the Ecological society of America's annual meeting, Memphis; TN. Aug. 6, 2006. \$200.

Student travel award, Biology Department/UIC. Participate in the Ecological society of America's annual meeting, Memphis; TN. Aug. 6, 2006. \$600.

Africa council program/Field Museum of Natural History, Chicago USA. Fund granted to conduct dissertation research in South Africa. Nov. 9, 2006. \$3900.

Idea Wild (research money in the form of equipment) July 20, 2007. \$1400.

Committee on Research and Exploration, National Geographic Society (GRANT #8527-08). Fund granted to conduct dissertation research in South Africa. July 16, 2008. \$10,040.

Student travel award, Graduate student council/UIC. Participate in the Ecological Society of America's annual meeting, Albuquerque; NM. Sept. 10, 2009. \$300.

Student travel award, Biology Department/UIC. Participate in the Ecological Society of America's annual meeting, Albuquerque; NM. Sept. 4, 2009. \$300.

Presenter's Scholarship, Graduate College/UIC. Participate in the Ecological Society of America's annual meeting, Albuquerque; NM. Oct. 26, 2009. \$200.

Student travel award, Graduate student council/UIC. Participate in the Ecological society of America's annual meeting, Pittsburgh, PA. Oct. 23, 2010. \$310.

Student travel award, Biology Department/UIC. Participate in the Ecological Society of America's annual meeting, Pittsburgh, PA. Oct. 23, 2010. \$300.

Student Presenter's Scholarship, Graduate College/UIC. Participate in the Ecological Society of America's annual meeting, Pittsburgh, PA. Oct. 23, 2010. \$200.

Claude Leon Post-doctoral Scholarship, University of KwaZulu-Natal, South Africa. Intended supervisor: Dr Adrian Shrader. Offer declined.

Conference presentations, invited talks and training:

Training Services for the GIZ Project "Sustainable Use of Ecosystem Services in Jordan" (EKF-ESS).

2017. Workshop for the Environmental Media on Ecology, Biodiversity & Ecosystem Services.

Abu Baker, M.A. 2017. Biodiversity-Responsible Site Selection for Tourism: a land use perspective.

Workshop for the UNDP Project: Mainstreaming Biodiversity in the Tourism Sector in Jordan on Green Tourism. (talk).

Abu Baker, M.A. 2013. Cape to Cairo: Habitat Selection and Community Structure of South African and Egyptian Small Mammals. Qatar University, Department presentations. (talk).

2012. Cape to Cairo: Habitat Selection and Community Structure of South African and Egyptian Small Mammals. Lawrence University, Recent advances in biology.

2012. Cape to Cairo: Habitat Selection and Community Structure of South African and Egyptian Small Mammals. Gustavus Adolphus College, Ecology, Behavior, and Evolution (Bio202).

Abu Baker, M.A. and Brown, J.S. 2012. Foraging behavior and habitat use of common duikers, *Sylvicapra grimmia* within the Soutpansberg, South Africa. Annual Meeting of the American Society of Mammalogists. (ASM), Reno, NV. (talk).

Abu Baker, M.A. and Brown, J.S. 2010. Foraging, community structure, and landscape ecology of South African granivore communities. Annual Meeting of the Ecological Society of America (ESA), Pittsburgh, PA. (talk).

- Abu Baker, M.A. and Brown, J.S. 2009. Islands of fear: Effects of wooded patches on habitat suitability of the striped mouse (*Rhabdomys pumilio*) in a South African grassland. Annual Meeting of the Ecological Society of America (ESA), Albuquerque, NM. (poster).
- Abu Baker, M.A. and Brown, J.S. 2006. Patch area, substrate depth, and richness effects on the giving-up densities of mourning doves. Annual Meeting of the Ecological Society of America (ESA), Memphis, TN. (poster).
- Abu Baker, M., Al Omari, K., Qarqaz, M., Khaled, Y., Yousef, M. and Amr, Z. 2005. On the Current Status and Distribution of Blanford's Fox, *Vulpes cana* Blanford, 1877, in Jordan. Conservation workshop for the fauna of Arabia, Sharjah, UAE. (talk).

Society membership

National Association of Biology Teachers
The Wildlife Society

Journal Reviews

Canadian Journal of Zoology
American Biology Teacher
Mammalian Biology
Zoology in the Middle East
Mammal Study
Journal of Mammalogy

Publications:

In preparation:

- Abu Baker, M.A.**, Villamil, L.A., Mohedano, I., Reeve, N. Conkey, A.A.T., Macdonald, D.W. & Yamaguchi, N. Winter ecology of free-ranging Ethiopian hedgehogs: thermoregulation, activity patterns, and body weight changes.
- Abu Baker, M.A.**, O'Reilly, C., Mohedano, I., Conkey, A.A.T., Macdonald, D.W. & Yamaguchi, N. Multiple paternity and female mate choice in the Ethiopian hedgehog, *Paraechinus aethiopicus* under a free-choice environment.
- Amr, Z.S., Eid, E., **Abu Baker, M.A.**, El Moghrabi, L., Al Share, T. & Abed, O. National IUCN Red List Status of Jordan's Mammal.
- Abu Baker, M.A.**, Salameh, M. & Amr, Z.S. Biodiversity-responsible land-use planning around protected areas in Jordan: the case of Dibeen Forest Reserve and Wadi Ramm Protected Area.
- Abu Baker, M.A.** Patch use behavior of common duikers, *Sylvicapra grimmia*: the role of diet quality, weather, and moon phase.

In review:

Emerson, S.E., **Abu Baker, M.A.** & Brown, J.S. Nutrient selection and toxin avoidance in a generalist herbivore, *Sylvilagus floridanus*. Mammal Study.

In press:

Abed, O.A., **Abu Baker, M.A.** & Amr, Z.A. Seasonal habitat selection and temporal activity patterns determine the structure of bat assemblages in Dhana Biosphere Reserve, Jordan (Mammalia: Chiroptera). Zoology in the Middle East.

Published:

- Abu Baker, M.A.**, Al Hasani, I. and Amr, Z. S. 2018. Diet of the Long-legged Buzzard *Buteo rufinus*, Jordan. Sandgrouse, 40: 133–137.
- Abu Baker, M.A.**, Villamil, L.A. Reeve, N., Karanassos, C., Mahtab, H. & Yamaguchi, N. 2018. Into the wild: Survival, movement patterns, and weight changes in captive Ethiopian hedgehogs, *Paraechinus aethiopicus* following their release. Journal of Arid Environments, 158: 43–46.

- Amr, Z.S., **Abu Baker, M.A.**, Qumsiyeh, M. & Eid, E. 2018. Systematics, distribution and ecological analysis of rodents in Jordan. *Zootaxa*, 4397 (1): 1–94.
- Farfar, A., Bendjeddou, M.L., Bouslama, Z., Metallaoui, W., Korba, R.A., Amr, Z & **Abu Baker, M.A.** 2017. Bats of the El Kala Biosphere Reserve, northeastern Algeria (Chiroptera). *Lynx*, 48: 79–92.
- Abu Baker, M.A.**, Reeve, N. Conkey, A.A.T., Macdonald, D.W. & Yamaguchi, N. 2017. Hedgehogs on the move: testing the effects of land use on home range size and movement patterns of free-ranging desert-adapted Ethiopian hedgehogs. *PLoS ONE*, 12(7): e0180826.
- Abu Baker, M.A.** & Yamaguchi, N. 2017. On the diet of the little owl, *Athene noctua* from Al Reem Biosphere Reserve in Qatar, with the first record of *Gerbillus henleyi* in the country. *Sandgrouse*, 39: 53–60.
- Abu Baker, M.A.**, Mohedano, I., Reeve, N. & Yamaguchi, N. 2016. Observations on the postnatal growth and development of captive Ethiopian hedgehogs, *Paraechinus aethiopicus*, in Qatar. *Mammalia*, 80(5): 515–520.
- Abu Baker, M.A.**, Reeve, N., Mohedano, I., Conkey, A.A.T., Macdonald, D.W. & Yamaguchi, N. 2016. Caught basking in the winter sun: Preliminary data on winter thermoregulation in the Ethiopian hedgehog, *Paraechinus aethiopicus*, in Qatar. *Journal of Arid Environments*, 125: 52–55.
- Abu Baker, M.A.** 2015. Titrating the cost of plant toxins against predators: a case study with common duikers, *Sylvicapra grimmia*. *Journal of Chemical Ecology*, 41: 924–928.
- Abu Baker, M.A.**, Emerson, S.E. & Brown, J.S. 2015. Foraging and habitat use of eastern cottontails in an urban landscape. *Urban Ecosystems*, 18: 977–987.
- Abu Baker, M.A.**, Emerson, S.E. & Brown, J.S. 2015. Studying foraging ecology on school and college campuses: a practical guide to measuring foraging behavior using urban wildlife. *American Biology Teacher*, 77: 432–438.
- Abu Baker, M.A.** & Brown, J.S. 2014. Foraging and habitat use of common duikers, *Sylvicapra grimmia* in a heterogeneous environment within the Soutpansberg, South Africa. *African Journal of Ecology*, 52: 318–327.
- Abu Baker, M.A.** & Brown, J.S. 2014. Foraging in time and space structure an African granivore community. *Oecologia*, 175: 521–535.
- Abu Baker, M.A.** & Brown, J.S. 2012. Patch use behaviour of *Elephantulus myurus* and *Micaelamys namaquensis*: the role of diet, foraging substrates, and escape substrates. *African Journal of Ecology*, 50: 167–175.
- Abu Baker, M.A.** & Brown, J.S. 2011. Variation of within-day foraging costs in the striped mouse, *Rhabdomys pumilio*. *Mammalian Biology*, 76: 654–656.
- Abu Baker, M.A.** & Patterson, B.D. 2011. Patterns in the local assembly of Egyptian rodent faunas: Co-occurrence and nestedness. *Journal of Arid Environments*, 75: 14–19.
- Amr, Z.S., Mebert, K., Hamidan, N., **Abu Baker, M.** & Disi, A. 2011. Ecology and conservation of the Dice Snake, *Natrix tessellata* in Jordan. *Mertensiella*, 18: 393–400.
- Abu Baker, M.A.** & Brown, J.S. 2010. Islands of fear: Effects of wooded patches on habitat suitability of the striped mouse in a South African grassland. *Functional Ecology*, 24: 1313–1322.
- Abu Baker, M.A.** & Patterson, B.D. 2010. Patterns in the local assembly of Egyptian rodent faunas: areography and species combinations. *Mammalian Biology*, 75: 510–522.
- Abu Baker, M.A.** & Brown, J.S. 2009. Patch area, substrate depth, and richness affect giving-up densities: a test with mourning doves and cottontail rabbits. *Oikos*, 118: 1721–1731.
- Damhoureyeh, S.A., Qarqaz, M.A., **Abu Baker, M.**, Himdan, N., Eid, E. & Amr, Z.S. 2009. Reptiles and Amphibians in Dibbeen Nature Reserve, Jordan. *Vertebrate Zoology*, 59: 169–177.
- Abu Baker, M.**, Khalil, A. Alsheyab, F. & Amr, Z.S. 2009. A karyotypic study of the genus *Gerbillus* (Mammalia: Rodentia: Muridae) from Jordan. *Vertebrate Zoology*, 59: 115–120.
- Abu Baker, M.** & Amr, Z. 2008. Mice of the genus *Apodemus* in Jordan. *Vertebrate Zoology*, 58: 127–135.
- Amr, Z., Shehab, A. & **Abu Baker, M.** 2007. Recent observations on the herpetofauna of Syria with notes on trade in reptiles. *Herpetozoa*, 20: 21–26.

- Amr, Z.S., Modry, D., **Abu Baker, M.**, Qrqaz, M., Al Zaidanyen, J. & Moravec, J. 2007. First record of *Hemidactylus mindiae* Baha El Din, 2005 from Jordan. *Herpetozoa*, 20: 73–75.
- Amr, Z.S. Eid, E., Qarqaz, M.A. & **Abu Baker, M.** 2006. The status and distribution of the Persian Squirrel, *Sciurus anomalus* (Mammalia: Rodentia: Sciuridae), in Dibbeen Nature Reserve, Jordan. *Zoologische Abhandlungen*, 55: 199–207.
- Amr, Z.S., **Abu Baker, M.A.** & Qumsiyeh, M.B. 2006. Bat diversity and conservation in Jordan. *Turkish Journal of Zoology*, 30: 235–244.
- Abu Baker, M.**, Široký, P., Amr, Z. & Modrý D. 2005. Discovery of a population of *Phrynocephalus maculatus* ANDERSON, 1872 in the Hashemite Kingdom of Jordan. *Herpetozoa*, 18: 107–113.
- Rifai, L., **Abu Baker, M.**, Al Shafei, D. Disi, A., Mahasneh, A. & Amr, Z. 2005. *Pseudopus apodus* (Pallas, 1775) from Jordan, with notes on its ecology. *Herpetozoa*, 18: 133–140.
- Abu Baker, M.**, Qarqaz, M. & Amr, Z. 2005. Small mammal remains recovered from pellets of the Barn Owl (*Tyto alba*) at Shawmari Wildlife Reserve, eastern Jordan. *Journal by the National Museum, Natural History Series*, 174: 125–127.
- Lada Hürková, L., **Abu Baker, M.**, Jirků, M. & Modry, D. 2005. Two new species of *Eimeria* Schneider 1875 (Apicomplexa: Eimeriidae) from the Broad-Toothed Field Mouse, *Apodemus mystacinus* Danford and Alston 1877 (Rodentia: Muridae) from Jordan. *Parasitology Research*, 97: 33–40.
- Amr Z.S., **Abu Baker, M.** & Rifai, L. 2004. Mammals of Jordan. *Denisia*, 14: 437–466.
- Amr Z.S. & Abu Baker, M. 2004. The scorpions of Jordan. *Denisia*, 14: 237–244.
- Qarqaz, M., **Abu Baker, M.** & Amr, Z. 2004. Status and conservation of the Striped Hyaena, *Hyaena hyaena* in Jordan. *Zoology in the Middle East*, 33: 87–92.
- Abu Baker, M.** & Amr, Z. 2004. The rodents (Mammalia: Rodentia) of Wadi Ramm, southern Jordan: new records and notes on their ecology. *Arab Gulf Journal of Scientific Research*, 22: 9–21.
- Abu Baker, M.**, Qarqaz, M., Rifai, L., Hamidan, N., Omari, K., Modry, D. & Amr, Z. 2004. Results of herpetofaunal inventory of Wadi Ramm Protected Area, with notes on some relict species. *Russian Journal of Herpetology*, 11: 1–5.
- Abu Baker, M.**, Al Omari, K., Qarqaz, M., Khaled, Y., Ahmad, Q. & Amr, Z. 2004. On the current status and distribution of Blanford's Fox, *Vulpes cana* Blanford, 1877, in Jordan (Mammalia: Carnivora: Canidae). *Turkish Journal of Zoology*, 28: 1–6.
- Abu Baker, M.A.** & Amr, Z.S. 2003. A Morphometric and taxonomic revision of the genus *Gerbillus* in Jordan with notes on its current distribution, *Zoologische Abhandlungen*, 53: 177–204.
- Abu Baker, M.** & Amr, Z. 2003. Rodent diversity in the Northeastern Desert of Jordan, with special reference on the ecology of *Gerbillus cheesmani* (Mammalia: Rodentia). *Časopis Národního muzea, Řada přírodovědná* (J. Nat. Mus., Nat. Hist. Ser.), 172: 141–152.
- Shehab, A., Mouhra, O., **Abu Baker, M.** & Amr, Z. 2003. Observations on the Forest Dormouse, *Dryomys nitedula* (Pallas, 1779), (Rodentia: Gliridae) in Syria. *Zoology in the Middle East*, 29:4–12.
- Abu Baker, M.** & Amr, Z. 2002. Status of the Eurasian Badger, *Meles meles*, in Jordan (Carnivora: Mustilidae). *Zoology in the Middle East*, 27: 13–20.
- Abu Baker, M.**, Rifai, L., Joger, U., Nagy, Z., Wink, M. & Amr, Z. 2002. Occurrence of *Coluber* (*Hierophis*) *schmidti* Nikolsky, 1909 in Jordan (Squamata: Colubridae). *Herpetozoa*, 15: 29–36.
- Reuther, C., Rifai, L., Qarcas, M., **Abu Baker, M.** & Amr, Z. 2000. Results of an initial field survey for otters (*Lutra lutra*) in Jordan. *IUCN Otter Specialist Group Bulletin*, 17: 75–79.
- Rifai, L., **Abu Baker, M.** & Amr, Z. 2000. Ecology, distribution and status of the Rock Hyrax, *Procapra capensis syriaca* (Schreber, 1784), in Jordan. *Zoology in the Middle East*, 21: 19–26.
- Al-Omari, K., **Abu Baker, M.** & Amr, Z. 2000. First record of the Egyptian Slit-faced Bat, *Nycteris thebaica* E. Geoffroy, 1818, from Jordan. *Zoology in the Middle East*, 21: 5–7.

Books:

- Amr, Z. S., Shehab, A., **Abu Baker, M.** & Al-Oran, R. 2005. *Rodents of Jordan: Their Taxonomy and Ecology*. Al Husain Ben Talal University Press, Ma'an. 180pp. (In Arabic).

Amr, Z. S., **Abu Baker, M.** & Al-Oran, R. 2005. Venomous Animals in Jordan. Part II. The Scorpions. Al Husain Ben Talal University Press, Ma'an. 120pp. (In Arabic).

Technical reports:

- Wildlife Monitoring In: The University of Jordan (UoJ) 2017. Monitoring and evaluation of the community action plan projects. Ministry of Environment, Project Management Unit-Badia Restoration Program.
- Ecology In: Kadhema, Scientific Consultancy and Services, 2017. Environmental and Social Assessment for Nuwaisib Thermal Power Plant and Distillation. Ministry of Electricity and Water, Kuwait.
- Ecology & Wildlife In: Environmental and Socioeconomic Impact Assessment Study for the Upgrading of Three Airports. 2017. Ramboll Middle East.
- Consolidated Consultants & Enviromatics Co. 2015/2016. Biodiversity-Responsible Land Use Planning for the Buffer Zone of Dibeen Forest Reserve, Unpublished report, Consolidated Consultants Group, Amman.
- Dar Al Omran and Enviromatics Co. 2015/2016. Biodiversity-Responsible Land Use Planning for the Buffer Zone of Wadi Rum UNESCO Site and Protected Area, Unpublished report, Dar Al Omran Infrastructure & Environment, Amman.
- Enviromatics Co. 2015/2016. Petra Archeological Park Natural heritage, Ecological surveys & Site Nomination File for the designation of Petra as natural protected area &. Unpublished report, Enviromatics, Amman.
- Enviromatics Co. 2015. Ecological and Endangered Species Study for Jordan Nuclear Power Plant Project Site, Preliminary Assessment Report as input to the Site Acceptability Report and the EIA Scoping Process. Unpublished report, Enviromatics, Amman.
- RSCN. 2005. Dibeen Forest Reserve, Ecological Baseline Surveys, Reptiles Baseline Survey. Unpublished report, Royal Society for the Conservation of Nature, Amman.
- RSCN. 2005. Dibeen Forest Reserve, Ecological Baseline Surveys, Small Mammals Baseline Survey. Unpublished report, Royal Society for the Conservation of Nature, Amman.
- RSCN. 2003. Distribution, Ecology and Conservation of the Striped Hyena (*Hyaena hyaena* L., 1758) in Jordan. Unpublished report, Royal Society for the Conservation of Nature, Amman.
- RSCN. 2002. Shaumari Wildlife Reserve, Ecological Baseline Surveys. Unpublished report, Royal Society for the Conservation of Nature, Amman.
- RSCN. 2000. Rum Nature Reserve, Ecological Baseline Surveys, Rodents and Reptiles Baseline Survey. Unpublished report, Royal Society for the Conservation of Nature, Amman.
- RSCN. 1999. Mujib Nature Reserve, Ecological Baseline Surveys, Rodents and Bats Baseline Survey. Unpublished report, Royal Society for the Conservation of Nature, Amman.
- RSCN. 1999. Rum Nature Reserve, Ecological Baseline Surveys, Carnivore Baseline Survey. Unpublished report, Royal Society for the Conservation of Nature, Amman.

References:

- Joel S. Brown, Ph.D., Department of Biological Sciences, University of Illinois at Chicago, 845 W. Taylor St. Chicago, IL 60607, USA. Email: squirrel@uic.edu. Phone: 312 996 4289.
- Bruce D. Patterson, Ph.D., MacArthur Curator of Mammals, Department of Zoology, Field Museum of Natural History. Chicago IL 60605. Email: bpatterson@fieldmuseum.org. Phone: 312 665 7750.
- Zuhair S. Amr, Ph.D., Department of Applied Biology, Faculty of Science and Arts, Jordan University of Science and Technology. P.O. Box 3030, 22110 Irbid, Jordan. Email: amrz@just.edu.jo. Phone: (+962)2-7201000 Ext: 23468.
- Nobuyuki Yamaguchi, Ph.D., Department of Biological and Environmental Sciences, Qatar University, P.O. Box 2713, Doha, Qatar. Email: yamaguchi@qu.edu.qa. Phone: (+974) 4403 4538.
- Chris J. Whelan, Ph.D., University of Illinois at Chicago and The Illinois Natural History Survey, Midewin National Tallgrass Prairie, 30071 S. Rt. 53, Wilmington, Illinois 60481 USA. Email: whelanc@uic.edu. Phone: 312 355 0990.

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