

# JULIE SHAPIRO

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## EDUCATION

Harvard University	Romance Languages and Literatures	B.A.	2010
University of Florida	Interdisciplinary Ecology	Ph.D.	2018

## APPOINTMENTS

Postdoctoral researcher, Centre International de Recherche en Infectiologie, 2018 - 2020  
Institute national de la santé et de la recherche médicale

## PREPRINTS (Under Review)

Rasigade, J.P., Barray, A., Shapiro, J.T., Coquisart, C., Vigouroux, Y., Bal, A., Destras, G., Vanhems, P., Lina, B., Josset, L., Wirth, T. 2020. SARS-CoV-2 phylodynamics differentiates the effectiveness of non-pharmaceutical interventions. medRxiv. <https://doi.org/10.1101/2020.08.24.20180927>

## PUBLICATIONS - PEER REVIEWED

Shapiro, J.T., Leboucher, G., Myard-Dury, A.F., Girardo, P., Luzatti, A., Mary, M., Sauzon, J.F., Lafay, B., Dauwalder, O., Laurent, F., Lina, G., Chidiac, C., Couray-Targe, S., Vandenesch, F., Flandrois, J.P., Rasigade, J.P. 2020. Metapopulation ecology links antibiotic resistance, consumption, and patient transfers in a network of hospital wards. eLife. 9: e54795. <https://doi.org/10.7554/eLife.54795>

Shapiro, J.T., Sovie, A.R., Faller, C.R., Monadjem, A., Fletcher, R.J., McCleery, R.A. 2020. Ebola spillover correlates with bat diversity. European Journal of Wildlife Research. 66: 12. <https://doi.org/10.1007/s10344-019-1346-7>

Shapiro, J.T., Monadjem, A., Roder, T., McCleery, R.A. 2020. Response of bat activity to land-cover and land-use change in savannas is scale-, season-, and guild-specific. Biological Conservation 241: 108245. <https://doi.org/10.1016/j.biocon.2019.108245>

Monadjem, A., Shapiro, J.T., Richards, L.R., Karabulut, H., Crawley, W., Nielsen, I.B., Hansen, A., Bohmann, K., Mourier, T. 2019. Systematics of West African *Miniopterus* with the description of a new species. Acta Chiropterologica 21: 237 – 256. <https://doi.org/10.3161/15081109ACC2019.21.2.001>

Gumbi, B., Shapiro, J.T., Mahlaba, T.A.M., MacFadyen, D., McCleery, R.A., Monadjem A. 2018. Assessing the impacts of domesticated versus wild ungulates on terrestrial small mammal assemblages at Telperion Nature Reserve, South Africa. African Zoology 53: 23 – 29. <https://doi.org/10.1080/15627020.2018.1449665>

Bordignon, M.O., Shapiro, J.T. 2018. Bat Diversity in the western edge of the Pantanal, Brazil. Mammalia 82: 256 – 265. <https://doi.org/10.1515/mammalia-2016-0107>

Simelane, F. N., Mahlaba, T.A. M., Shapiro, J.T., MacFadyen, D., Monadjem, A. 2018. Habitat associations of small mammals in the foothills of the Drakensberg Mountains, South Africa. Mammalia 82: 144 – 152. <http://dx.doi.org/10.1515/mammalia-2016-0130>

- Lima Junior, M.S.C., Hartkopf, A.C.L., de Souza Tsujisaki, R.A., Teruya Oshiro, E., Shapiro, J.T., Cepa Matos, M.F., Dorval, M.E.C. 2018. Isolation and molecular characterization of *Leishmania infantum* in urine from patients with visceral leishmaniasis in Brazil. *Acta Tropica* 178: 248 – 251. <https://doi.org/10.1016/j.actatropica.2017.12.011>
- Stanton, R., Shapiro, J.T., Laskowski, J., McCleery, R.A. 2017. Dynamic figures should be a central feature of scientific articles. *Frontiers in Ecology and the Environment* 15: 427 – 428. <https://doi.org/10.1002/fee.1532>
- Monadjem, A., Shapiro, J.T., Mtsetfwa, F., Reside, A.E., McCleery, R.A. 2017. Acoustic call library and detection distances for bats of north-eastern Swaziland. *Acta Chiropterologica* 19: 175 – 187. <http://dx.doi.org/10.3161/15081109ACC2017.19.1.014>
- Metzdorf, I.P, Lima Junior, M.S.C., Cepa Matos, M.F., de Souza Filho A.F., de Souza Tsujisaki, R.A., Franco, K.G., Shapiro, J.T., de Almeida Borges, F. 2017. Molecular characterization of *Leishmania infantum* in domestic cats in a region of Brazil endemic for human and canine visceral leishmaniasis. *Acta Tropica* 166: 121 – 125. <http://dx.doi.org/10.1016/j.actatropica.2016.11.013>
- Novaes, R.L.M., Souza, R.F., Felix, S., Siqueira, A.C., Laurindo, R.S., Shapiro, J.T. 2017. Seasonality and habitat influence on bat assemblage structure in an urban Atlantic Forest remnant from Southeastern Brazil. *Mammalia* 81: 265 – 274. <https://doi.org/10.1515/mammalia-2015-0115>
- Shapiro, J.T., Barbier, E., Monadjem, A. 2016. First record of Streblidae, *Raymondia alulata* Speiser (Diptera: Streblidae), in Swaziland and a review of the genus *Raymondia* and their hosts in Africa. *Acta Chiropterologica* 18: 249 – 268. <http://dx.doi.org/10.3161/15081109ACC2016.18.1.015>
- Shapiro, J.T., Monadjem A. 2016. Two new bat species for Swaziland and a revised list for the country. *Mammalia*, 80: 353 – 357. <http://dx.doi.org/10.1515/mammalia-2014-0174>
- Shapiro, J.T., dos Santos, T.M.R., Marchetti, C.R., Bordignon, M.O. 2015. Characterization of fungi associated with the nasal hairs of Molossid bats (*Gervais 1856*), Mato Grosso do Sul, Southwest Brazil. *Fungal Ecology* 18:126 -29. <http://dx.doi.org/10.1016/j.funeco.2015.06.005>
- Fenesi, A., Vagasi, C.I., Beldean, M., Foldesi, R., Kolcsar, L.P., Shapiro, J.T., Török, E., Kovacs-Hostyanszki, A. 2015. *Solidago canadensis* impacts on native plant and pollinator communities in different-aged old-fields. *Basic and Applied Ecology* 16: 335 – 346. <http://dx.doi.org/10.1016/j.baae.2015.03.003>
- Shapiro, J.T., Bordignon, M.O. 2014. Report on the bat (Chiroptera) community in three Cerrado fragments of Mato Grosso do Sul, southwestern Brazil. *Checklist* 10: 1380-1386. <http://dx.doi.org/10.15560/10.6.1380>
- Carvalho N.C., Bordignon, M.O, Shapiro, J.T. 2014. Fast and furious: a look at the death of animals on the highway MS-080, Southwestern Brazil. *Iheringia Série Zoologia* 104: 43-49. <http://dx.doi.org/10.1590/1678-4766201410414349>
- Shapiro, J.T., Baldi, A. 2014. Accurate Accounting: How to Balance Ecosystem Services and Disservices. *Ecosystem Services*. 7: 201-202. <http://dx.doi.org/10.1016/j.ecoser.2014.01.002>
- Shapiro, J.T., Lima Junior, M.S.C., Dorval, M.E.C., França, A.O., Matos, M.F.C., Bordignon, M.O. 2013. First record of *Leishmania braziliensis* presence detected in bats, Mato Grosso do Sul, southwest Brazil. *Acta Tropica* 128: 171-174. <http://dx.doi.org/10.1016/j.actatropica.2013.07.004>
- dos Santos, T.M.R., Shapiro, J.T., Shibuya, P.S., Aoki, C.. 2013. Observation of *Trigona recursa* Smith (Hymenoptera: Apidae) feeding on *Crotalaria micans* Link (Fabaceae: Faboideae) in a Brazilian savanna fragment. *Sociobiology* 60: 210-213. <http://dx.doi.org/10.13102/sociobiology.v60i2.210-213>

Baldi, A., Shapiro, J.T. 2013. A reply to Sólymos *et al.* *Frontiers in Ecology and the Environment* 11: 179-180. <http://dx.doi.org/10.1890/13.WB.011>

Shapiro, J.T., Baldi, A. 2012. Lost locations and the (ir) repeatability of ecological studies. *Frontiers in Ecology and the Environment* 10: 235-236. <http://dx.doi:10.1890/12.WB.015>

Shapiro, J.T., Pringle, A. 2010. Anthropogenic influences on the diversity of fungi isolated from caves in Kentucky and Tennessee. *American Midland Naturalist* 163: 76-86. <http://dx.doi.org/10.1674/0003-0031-163.1.76>

## BOOK CHAPTERS

McCleery, R.A., Shapiro, J.T., Bailey, K., Frazer, T. 2019. Getting involved: advice from students and professionals. *In International Wildlife: A Global Perspective*. Eds. John L. Koprowski, Paul R. Krausman, Dun Wang. Baltimore, MD: Johns Hopkins University Press.

## OTHER PUBLICATIONS

### IUCN Recommendations to reduce transmission of SARS-CoV-2 from humans to bats:

Gómez Estrada, L.B., Kading, R., Kingston, T., Mandl, I., Medellín, R., Parsons, S., Russo, D., Shapiro, J.T., Tec Pool, F., Tiburcio Sánchez, I., Vicente-Santos, A., Worledge, L. 2020. IUCN SSC Bat Specialist Group (BSG) recommendations to reduce the risk of transmission of SARS-CoV-2 from humans to bats by cavers. IUCN Bat Specialist Group.

[https://www.iucnbsg.org/uploads/6/5/0/9/6509077/map\\_recommendations\\_for\\_cavers\\_22\\_aug\\_2020.pdf](https://www.iucnbsg.org/uploads/6/5/0/9/6509077/map_recommendations_for_cavers_22_aug_2020.pdf)

Jolliffe, T., Kepel, A., Kingston, T., Mclean, J., Parsons, S., Russo, D., Shapiro, J.T., Worledge, L. IUCN SSC Bat Specialist Group (BSG) recommendations to reduce the risk of transmission of SARS CoV-2 from humans to bats in bat rescue and rehabilitation centers. 2020.

[https://www.iucnbsg.org/uploads/6/5/0/9/6509077/recommendations\\_rehab\\_draft1.pdf](https://www.iucnbsg.org/uploads/6/5/0/9/6509077/recommendations_rehab_draft1.pdf)

Botto Nuñez, G., Cunningham, A., Bakwo Fils, E.M., Frick, W., Islam, N., Jolliffe, T., Kading, R., Kepel, A., Kingston, T., Leopardi, S., Medellín, R., Mendenhall, I., Parsons, S., Racey, P., Russo, D., Shapiro, J.T., Vicente-Santos, A., Viquez-R, L., Dinh, T.V. 2020. IUCN SSC Bat Specialist Group (BSG) Recommended Strategy for Researchers to Reduce the Risk of Transmission of SARS-CoV-2 from Humans to Bats.

[https://www.iucnbsg.org/uploads/6/5/0/9/6509077/map\\_recommendations\\_for\\_researchers\\_v.1.0\\_final.pdf](https://www.iucnbsg.org/uploads/6/5/0/9/6509077/map_recommendations_for_researchers_v.1.0_final.pdf)

### IUCN RedList Species Accounts:

Shapiro, J.T., Cooper-Bohannon, R., Jacobs, D., Cotterill, F.P.D., Taylor, P.J. 2020. *Rhinolophus deckenii*. *The IUCN Red List of Threatened Species* 2020: e.T19537A21979537.

<https://dx.doi.org/10.2305/IUCN.UK.2020-2.RLTS.T19537A21979537.en>

Shapiro, J.T., Cooper-Bohannon, R. 2020. *Rhinolophus guineensis*. *The IUCN Red List of Threatened Species* 2020: e.T19542A21980043. <https://dx.doi.org/10.2305/IUCN.UK.2020-2.RLTS.T19542A21980043.en>

Shapiro, J.T., Cooper-Bohannon, R. and Fahr, J. 2019. *Rhinolophus maclaudi*. *The IUCN Red List of Threatened Species* 2019: e.T19549A21978925. <https://dx.doi.org/10.2305/IUCN.UK.2019-3.RLTS.T19549A21978925.en>

Shapiro, J.T. 2017. *Mops bakarii*. *The IUCN Red List of Threatened Species* 2017: e.T67363010A67363012. <http://dx.doi.org/10.2305/IUCN.UK.2017-2.RLTS.T67363010A67363012.en>

Monadjem, A. and J.T. Shapiro. 2017. *Hipposideros tephros*. *The IUCN Red List of Threatened Species* 2017: e.T85646524A85646528. <http://dx.doi.org/10.2305/IUCN.UK.2017-2.RLTS.T85646524A85646528.en>

Monadjem, A. and J.T. Shapiro. 2017. *Triaxos afer*. The IUCN Red List of Threatened Species 2017: e.T81081036A95642225. <http://dx.doi.org/10.2305/IUCN.UK.2017-2.RLTS.T81081036A95642225.en>

#### **GRANTS/FELLOWSHIPS/SCHOLARSHIPS/AWARDS**

- Zuckerman Postdoctoral Fellowship (2020)
- Israel Academy of Sciences and Humanities Postdoctoral Fellowship (2020; declined)
- University of Florida Biodiversity Institute Fellowship, Summer 2018
- National Science Foundation Global Research Opportunities Worldwide (NSF-GROW) research visit to Center for GeoGenetics, University of Copenhagen, Denmark 2014, 2015, 2016 / 2017
- American Scandinavian Foundation Fellowship, Amanda Roleson Fund, 2016 / 2017
- The Explorers Club Exploration Fund – Mamont Scholar's Program, 2016
- National Science Foundation Graduate Research Fellowship Program fellow, 2013 – 2016
- Digital Global High Resolution Imagery Grant, 2015
- National Geographic Young Explorers Grant, 2014
- Bat Conservation International Student Research Grant, 2014
- Fulbright Scholar, Brazil, 2012.
- Henry David Thoreau Scholar, 2006 – 2010
- Harvard David Rockefeller Center for Latin American Studies Term-time Research Travel Grant, 2010
- Harvard Thomas T. Hoopes Prize for Senior Honors Thesis, 2010
- Harvard Boothe Fellowship, 2009
- Harvard Office of International Programs Summer Research Grant, 2008
- Harvard University Center for the Environment Undergraduate Summer Research Grant, 2007, 2008
- Harvard Museum of Comparative Zoology Grants for Undergraduate Research, 2007
- Harvard Herschel Smith Summer Undergraduate Research Fund, 2007
- Harvard College Research Program grantee, 2007 – 2009

#### **TRAVEL GRANTS:**

- Société Française de Microbiologie National Conference Travel Award
- ECCMID Young Investigator Travel Grant

#### **CONFERENCE PRESENTATIONS - INVITED**

Shapiro, J.T. Bats and their pathogens: How worried should we be? *Invited keynote*. Student Conference on Conservation Science. Tihány, Hungary. 26 August 2020.

#### **CONFERENCE PRESENTATIONS**

Shapiro, J.T., Leboucher, G., Myard-Dury, A.F., Girardo, P., Luzzatti, A., Mary, M., Sauzon, J.F., Lafay, B., Dauwalder, O., Laurent, F., Lina, G., Chidiac, C., Couray-Targe, S., Vandenesch, F., Flandrois, J.P., Rasigade, J.P. 2019. Metapopulation ecology links antibiotic resistance, consumption and patient transfers in a network of hospital wards. Microbes: National Conference of the Société Française de Microbiologie. Paris, France. 1 October 2019. Oral presentation.

Shapiro, J.T., G. Leboucher, A. Luzzatti, B. Lafay, J.F. Sauzon, O. Dauwalder, P. Girardo, C. Chidiac, J.P. Flandrois, J.P. Rasigade. Quantifying the drivers of antimicrobial resistance in a large hospital group: A metapopulation approach. Modeling in Ecology and Evolution Zurich. Zurich, Switzerland. 27 June 2019. Poster presentation.

Shapiro, J.T., G. Leboucher, A. Luzzatti, B. Lafay, J.F. Sauzon, O. Dauwalder, P. Girardo, C. Chidiac, J.P. Flandrois, J.P. Rasigade. Quantifying the drivers of antimicrobial resistance in a large hospital group:

A metapopulation approach. European Congress of Clinical Microbiology & Infectious Diseases. Amsterdam, Netherlands. 16 April 2019. Poster presentation.

Shapiro, J.T., G. Leboucher, A. Luzzatti, B. Lafay, J.F. Sauzon, O. Dauwalder, P. Girardo, C. Chidiac, J.P. Flandrois, J.P. Rasigade. Quantifying the drivers of antimicrobial resistance in a large hospital group: A metapopulation approach. EcoFect Workshop: Evolution of infectious diseases: connecting ecological, molecular and computational approaches. 15 March 2019. Oral presentation.

Shapiro, J.T., C. Barnes, I.B. Nielsen, L. Rasmussen, A. Monadjem, R.A. McCleery, A.J. Hansen. Bats and Their Bacteria in a Changing Savanna Landscape. Young Natural History Scientists Meeting. Paris, France. 13 March 2019. Oral presentation.

Shapiro, J.T., C. Barnes, I.B. Nielsen, L. Rasmussen, A. Monadjem, R.A. McCleery, A.J. Hansen. The effects of land-use on bacterial diversity and community in bats. University of Florida Graduate Student Research Day. Gainesville, FL. 3 April 2018. Poster presentation.

Shapiro, J.T., R.J. Holmes, N. Nguyen, T.A. Hansen, A. Monadjem, R.A. McCleery, A.J. Hansen. Pathogen Detection in Bats of Swaziland. International Bat Research Conference, 2016. Durban, South Africa.

Shapiro, J.T., R.J. Holmes, N. Nguyen, T.A. Hansen, A. Monadjem, R.A. McCleery, A.J. Hansen. Pathogen Detection in Bats of Swaziland. First Annual Symposium of Biodiversity in Swaziland. 25 July 2016.

## **PUBLIC / INVITED TALKS**

“Qu'est-ce que l'écologie nous apprend sur la résistance aux antibiotiques?” Lyon Data Science. June 4, 2019

“Bats in a Mosaic Landscape.” FOR3153C, Forest Ecology (undergraduate course). Nov. 2016

“Landscape Ecology of Bats in Swaziland.” University of Florida in Swaziland field course. May 2016

“Future of Savanna Bats.” Guest Lecture, University of Alberta Field Course. December 2015; March 2016

“Bats in a Mosaic Landscape.” Fireside Talk (Public). Mbuluzi Game Reserve. December 2015

## **SUPERVISION AND MENTORING**

*Undergraduate students:*

José Cordero, University of Florida, summer 2018

Project: Sorting and analysis of acoustic bat data

Hatice Karabulut, Middle East Technical University (Turkey), summer 2017

Project: Meta-barcoding and Sanger sequencing; laboratory work; initial analysis for Sanger sequencing

Nomzamo Wanambisi, University of Swaziland, fall 2015 – summer 2016

Project: Variation in insect abundance and diversity across land-cover types, northeast Swaziland

## **TEACHING**

Scientific Writing Workshop, Student Conference on Conservation Science. Tihány, Hungary. 27 August 2020.

License Professionnel: UE Qualité et analyse de données, Université de Lyon Claude Bernard (26-27, 29 November 2019)

Designed and taught practical laboratory seminar (travaux dirigés) for introductory statistics and R programming

Wildlife Techniques Field Methods, University of Florida (Fall 2016)

Instructed undergraduate students in trapping and handling bats during Ordway-Swisher field trip (2 nights)

Teaching Assistant for Landscape Ecology, Graduate Section, University of Florida (Fall 2016)

Introduction to researching bats, University of Florida in Swaziland field course (May – June 2016)

Instructed students in trapping, acoustic monitoring, and basic analysis of acoustic data

Master's Seminar, University of Eswatini (Swaziland) (Spring 2016)

Assisted with and led discussions, led classes focused on scientific writing, mentored students, assisted students in writing scientific articles. After course, maintained contact with students and assisted with future research and publications.

Introduction to Bat Acoustic data (spring 2015) – instructed and supervised undergraduate students at the University of Florida in processing bat acoustic data

## **OUTREACH ACTIVITIES**

Comptoir des Sciences (2020 – present) – virtual presentations for school classes in France

Déclics, Ambassadeur (2019 – present) – presentations for school classes in Lyon, France

DéMesures, Member (2019 – 2020) – outreach activities, presentations, participation in public science events (Conferences Embarquées, Festival Pop'Sciences, Fête de la Science) in Lyon, France.

Skype A Scientist, Participant (2018 – present) - 2-4 virtual presentations for school classes per semester

University of Florida Natural Resources Diversity Initiative, Advisory board (2016-2018), Member (2013 – 2015) – Participates and organizes activities to increase the exposure of diverse groups to the natural resource fields through activities at the University of Florida (career panels, workshops, job fairs, etc.), and outreach events with local schools, community centers, after-school programs, and summer camps in Gainesville, Florida

Op-Ed Project: Building a Better Society Through Science – Editor (2017)

Gator Handler – trained by the Florida Wildlife Commission in handling alligators for education and outreach events.

Science Outreach in Brockton, MA – organized several presentations for middle and high school students in Brockton, MA on science and research careers

Fulbright Program Presentations – Presents information on opportunities with the Fulbright program in Brazil and Swaziland.

## **PEER REVIEW**

Reviewer for *Ecography*, *PLoS One*; *Journal of Microbiology, Immunology, and Infection*; *Ecosystem Services*; *Biological Conservation*; *Acta Chiropterologica*; *Mammalia*; *African Journal of Zoology*; *Natural Areas Journal*; *Barbastella: Journal of Bat Research*; and *Caribbean Naturalist*

## **PROFESSIONAL SERVICE ACTIVITIES**

National Geographic Early Career Grant reviewer; IUCN Bat Specialist Group Covid-19 Working Group; Organizer University of Florida Natural Resources in Africa Working Group (2013 – 2018)

## **PROFESSIONAL ORGANIZATION MEMBERSHIP**

IUCN Bat Specialist Group Commission Member

## **RELEVANT WORK EXPERIENCE**

Consultant for ArcelorMittal Liberia Bat Mitigation project (February 2017)

Hungarian Academy of Sciences, Budapest, Hungary – science writer and editor (Sep. 2011-Feb. 2012, May – Aug. 2013)

Ben-Gurion University, Israel – lab and field technician (Jun. – Sep. 2010)

Pringle Lab, Harvard University, Cambridge, MA – lab technician (Jan. 2007 – Apr. 2009)

Oregon Bureau of Land Management, Lakeview, OR – Bat Grid Intern (Jun. – Aug. 2006)

Mammoth Cave National Park, KY – Science and Resource Management Intern (Jul. – Aug. 2005)

## **PROFICIENCIES/TRAININGS**

- Programming in R
- Remote Sensing
- Geographic Information Systems
- Basic programming in Python
- Certificate of Proficiency in Portuguese Language (*Certificado de Proficiência em Língua Portuguesa para Estrangeiros*), Brazilian Ministry of Education
- Fluency in French, Spanish, Portuguese

## **OTHER WORK EXPERIENCE**

Next Step Living, Boston, MA – Canvasser (Feb. – April 2013)

Judaica Division, Widener Library, Harvard University, Cambridge, MA – Cataloging assistant (Jan. 2009 – May 2010, Jun. – Aug. 2011)

LISE Café, Cambridge, MA – Barista (Sep. 2007 – Jan. 2008)

Hemenway Gym, Cambridge, MA – Fitness staff (Sep. 2006 – Jan. 2007)