HERU HANDIKA

POSTDOCTORAL ASSOCIATE, UNIVERSITY OF FLORIDA, USA

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Gainesville, FL 32611
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EDUCATION

2025 | PhD in Biological Sciences | Louisiana State University
Dissertation: *In Situ Diversification of Insular Rodents: from Efficient Software to Integrative Empirical Approaches*
Advisor: Dr. Jacob A. Esselstyn

2017 | MS in Zoology (Graduated with distinction) | University of Melbourne
Thesis: *From Hill rats (Bunomys) to Brotherly rats (Frateromys): The geography of diversification among rodents on Sulawesi, Indonesia*
Advisors: Dr. Kevin C. Rowe and Dr. Devi M. Stuart-Fox

2013 | BS in Biology | Andalas University
Thesis: *Small Terrestrial Mammals Community on Mount Singgalang, West Sumatra*
Advisors: Dr. Jabang Nurdin and Dr. Rizaldi

PROFESSIONAL APPOINTMENTS

Postdoctoral Associate, 2025-now
NH-AI Biodiversity Informatics,
Florida Museum of Natural History
University of Florida, USA

Curatorial Assistant, Fall 2018-Fall 2020
Mammal Department
LSU Museum of Natural Science
Louisiana State University, USA

Research student, 2015-2017
Museums Victoria, Australia

UPCOMING MANUSCRIPTS

1. **Handika, H.**, Lürig, M. D., Nichtawitz, K. L., Dobon, O. M., Yarava, V. S., Sobayo, J. K., Shi, B. D., Elliott, M. J., Fortes, J. A. B., Porto, A. In review. BioCosmos: computer vision and large-language models for large-scale image-based biodiversity exploration and trait discovery. *BioScience.* Preprint: https://doi.org/10.32942/X2C11R
2. **Handika, H.,** Moncrieff, A. E., Henderson, C., Dadaian, A., Gordon, C., Canton, R., Chipps, A. S., Inayah, N., Chornelia, A., Rego, M. A., Pérez-Amaya, N., Gan, L. B., Jaiswal, A. T., Lee, D. D., Yu, J., Aravind, A. J., Evangelista, D. R., Rutledge, S. L., Elías, D. J., Troyer, E. M., de Miranda, G. S., Vonnahme, L., Shi, B., Nations, J. A., Del-Rio, G.,

Thom, G., Porto, A., and Esselstyn, J. A. Submitted. NAHPU: An integrated approach to natural history data acquisition and management in the extended specimen era. *Systematic Biology*. Preprint: https://doi.org/10.32942/X21M6D.

3. Del-Rio, G., Rego, M. A., Baumgart, S.L., Randall, Z.S., Kratter, A.W., Keriazes, M., Doyle, Z., Marcelino, R. S., **Handika, H.**, Truong, H. C., Schachner, E.R. Accepted. Integrating specimens' internal anatomy with external morphology in modern ornithological collections. *Ibis.*
4. Chipps, S. A., **Handika, H.**, Achmadi, S. A., Rowe, K. C., Esselstyn, J. A. In revision. The rapid radiation of Sulawesi shrews (Soricidae: *Crocidura*) is characterized by convergent evolution and low levels of gene flow. *Systematic Biology*.

PEER-REVIEWED PUBLICATIONS

1. Burgin, C. J., Zijlstra, J. S., Becker, M. A., **Handika, H.**, Widness, J., Liphardt, S., Huckaby, D. G., Upham, N. S. 2025. How many mammal species are there now? Updates and trends in taxonomic, nomenclatural, and geographic knowledge. *Journal of Mammalogy*. https://doi.org/10.1093/jmammal/gyaf047
2. Giarla, T. C., Achmadi, A.S., Fabre, P. H., **Handika, H.**, Chipps, A. S., Swanson, M.T., Nations, J. A., Morni, M. A., William-Dee, J., Inayah, N., Jayanti, E. D., Nurdin, M.R.T.J., Griffin, K. E., Khan, F. A. A., Heaney, L. R., Rowe, K. C., Esselstyn, J. A. 2025. Systematics and historical biogeography of Crunomys and Maxomys (Muridae: Murinae), with the description of a new species from Sulawesi and new genus-level classification. *Journal of Mammalogy, gyaf006. https://doi.org/10.1093/jmammal/gyaf006*
3. Adams, A.L., Achmadi, A.S., Mursyid, A., **Handika, H.**, Nurdin, M.R.T., Esselstyn, J.A., Perkins, S.L., Rowe, K.M., and Rowe, K.C. 2025. Wildlife disease surveillance from village to peak: Trypanosome infections of mammals on Sulawesi revealed higher prevalence in intact montane forests. *THERYA*, 16(1), 125-141.
4. **Handika, H.**, and Esselstyn, J.A. 2024. SEGUL: Ultrafast, memory-efficient, and mobile-friendly software for manipulating and summarizing phylogenomic datasets. *Molecular Ecology Resources*. https://doi.org/10.1111/1755-0998.13964
5. Nations, J.A., Kohli, B.A., **Handika, H.**, Achmadi, A.S., Polito, M.J., Rowe, K.C. and Esselstyn, J. A. 2024. The roles of isolation and interspecific interaction in generating the functional diversity of an insular mammal radiation. *Oikos*, p.e10888. https://doi.org/10.1111/oik.10888
6. Nations, J. A., **Handika, H.,** Mursyid, A., Butsa, R. D., Apandi, Achmadi, A. S. Esselstyn, J. A. 2024. Three new species of shrew (Soricidae: Crocidura) from West Sumatra, Indonesia: elevational and morphological divergence in syntopic, sister taxa. *Journal of Mammalogy. https://doi.org/10.1093/jmammal/gyad126*
7. Mursyid, A., Achmadi, A.S., Novarino, W., Handika, H., Nugroho, H.A., Anita, S., Adams, A.L., Rowe, K.M.C. and Rowe, K.C., 2023. Trypanosoma (Euglenozoa: Kinetoplastea) infections in rodents, bats, and shrews along an elevation and disturbance gradient in Central

Sulawesi, Indonesia. *Records of the Australian Museum*, pp.663-671. https://doi.org/10.3853/j.2201-4349.75.2023.1786

8. Achmadi, A.S., Fahri, F., Gazzard, A., **Handika, H.,** Inayah, N., Kennerley, R.J., Lanusi, A.A., Nangoy, M., Nurdin, M.R.T.J.P. and Rowe, K.C., Sheherazade. 2023. Conservation status and priorities for Sulawesi's unique small mammal fauna. *Oryx*, *57*(6), pp.690-691. https://doi.org/10.1017/S0030605323001059
9. Swanson, M. T., Henson, M. W., **Handika, H.,** Achmadi, A. S., Anita, S., Rowe, K. C., Esselstyn, J. A. 2023. Mycoplasmataceae dominate microbial community differences between gut regions in mammals with a simple gut architecture. *Journal of Mammalogy*. https://doi.org/10.1093/jmammal/gyac098
10. Esselstyn, J.A., Achmadi, A.S., **Handika, H.**, Swanson, M. T., Giarla, T.C. and Rowe, K.C., 2021. Fourteen new, endemic species of shrew (genus Crocidura) from Sulawesi reveal a spectacular island radiation. *Bulletin of the American Museum of Natural History, 454(1)*, pp.1-108. https://doi.org/10.1206/0003-0090.454.1.1
11. **Handika, H.**, Achmadi, A.S., Esselstyn, J.A., and Rowe, K.C. 2021. Molecular and morphological systematics of the Bunomys division (Rodentia: Muridae), an endemic radiation on Sulawesi. *Zoologica Scripta 50(2),* pp. 141–154. https://doi.org/10.1111/zsc.12460
12. Nations, J.A., Mursyid, A., Busta, R.D., Adrian, S.P., **Handika, H.**, Achmadi, A.S. and Esselstyn, J.A., 2021. The first report of albinism in a Sundaland endemic rodent. *Mammalia*, *1 85(2),* pp.168-172. https://doi.org/10.1515/mammalia-2020-0047
13. Winterhoff, M.L., Achmadi, A.S., Roycroft, E.J., **Handika, H.**, Putra, R.T.J., Rowe, K.M., Perkins, S.L. and Rowe, K.C., 2020. Native and Introduced Trypanosome Parasites in Endemic and Introduced Murine Rodents of Sulawesi. *The Journal of Parasitology*, *106*(5), pp.523-536. https://doi.org/10.1645/19-136
14. Harapan, T.S., Agung, A.P., **Handika, H.**, Novarino, W., Tjong, D.H. and Tomlinson, K.W., 2020. New records and potential geographic distribution of Elongated Caecilian, Ichthyophis elongatus Taylor, 1965 (Amphibia, Gymnophiona, Ichthyophiidae), endemic to West Sumatra, Indonesia. *Check List, 16(6)*, pp. 1695-1701. https://doi.org/10.15560/16.6.1695
15. Esselstyn, J.A., Achmadi, A.S., **Handika, H.**, Giarla, T.C. and Rowe, K.C., 2019. A new climbing shrew from Sulawesi highlights the tangled taxonomy of an endemic radiation. *Journal of Mammalogy*, *100*(6), pp.1713-1725. https://doi.org/10.1093/jmammal/gyz077
16. Janra, M.N., Noske, R.A., Chornelia, A., **Handika, H.**, Mursyid, A., Agung, A. and Saputra, A., 2018. A second breeding record of Chestnut-naped Forktails Enicurus ruficapillus in Sumatra, and observations suggesting females alone incubate. *Kukila*, *21*, pp.13-16.
17. Demos, T.C., Achmadi, A.S., **Handika, H.**, Rowe, K.C. and Esselstyn, J.A., 2017. A new species of shrew (Soricomorpha: Crocidura) from Java, Indonesia: possible character displacement despite interspecific gene flow. *Journal of Mammalogy*, *98*(1), pp.183-193. https://doi.org/10.1093/jmammal/gyw183

18. Demos, T.C., Achmadi, A.S., Giarla, T.C., **Handika, H.**, Rowe, K.C. and Esselstyn, J.A. 2016. Local endemism and within-island diversification of shrews illustrate the importance of speciation in building Sundaland mammal diversity. *Molecular ecology*, *25*(20), pp.5158-5173. https://doi.org/10.1111/mec.13820
19. Esselstyn, J.A., Achmadi, A.S., **Handika, H**. and Rowe, K.C., 2015. A hog-nosed shrew rat (Rodentia: Muridae) from Sulawesi Island, Indonesia. *Journal of Mammalogy*, *96*(5), pp.895-907. https://doi.org/10.1093/jmammal/gyv093
20. **Handika, H**, Nurdin, J. and Rizaldi. 2013. Small Terrestrial Mammals Community on Mount Singgalang, West Sumatra. *J. Bio. U. A 2*(2), pp.103-109.

MANUSCRIPT IN PREP

5. **Handika, H.**, Rowe, K.C., Achmadi, A.S., Swanson, M. T., and Esselstyn, J.A. In prep. A new species of *Frateromys* from the Northern Peninsula of Sulawesi, Indonesia. *Planned submission to the Journal of Mammalogy.*
6. **Handika, H.**, Rowe, K.C., Achmadi, A.S., Zulkurnia Irsaf, Swanson, M. T., and Esselstyn, J.A. In prep. An island of islands: complex gene tree discordance and local endemism on a recent, rapid rodent radiation on Sulawesi. *Planned submission to Systematic Biology.*
7. **Handika, H.**, Del-Rio, G. D., Esselstyn, J. A. In prep. ULLAR: An Ultrafast, scalable, Accessible, and Reproducible phylogenomic pipeline. *Planned submission to Molecular Biology and Evolution.* https://github.com/hhandika/ullar

BOOK CHAPTER

1. Snider, M., Hernández, L. A., Mweetw, T., **Handika. H.**, Ou, S., Zulian, V. In revision. *Decolonizing the Field: International Perspectives on Equity, Belonging, and Nature in Conservation Science*. In "Inclusive Nature". Editor: Lauren Parr. Johns Hopkins University Press.

HONORS AND AWARDS

Mary Ross Endowment Award (USD 1,000) 2026
Florida Museum of Natural History

Ernst Mayr Award 2024
The Society of Systematic Biologists (SSB).

Murie Family Conservation Award 2023
The American Society of Mammalogists.

The Ron and Mary Neal Distinguished Graduate Student Fellowship (USD 12,777) 2023
Louisiana State University

Graduate Student Association Award (USD 400) 2023
Louisiana State University

Grants-in-Aid (USD 1,500) 2021
The American Society of Mammalogists

Graduate Student Research Award (USD 3,000) 2021
The Society of Systematic Biologists

Graduate Student Association Award (USD 400) 2019
Louisiana State University

Biodiversity Information Fund for Asia (total EUR 30,000/USD 33,000) 2019
Co-Principal Investigator
The Global Biodiversity Information Facility
Awarded twice (BIFA3_17 and BIFA4_23)

International Post Graduate Coursework Award (~AUD 15,000/USD 10,900) 2015
University of Melbourne
Awarded to distinguished international students enrolling in a coursework program.
Approximately 50 awardees across the university per year (50% tuition fee remission)

Indonesia Endowment Fund for Education (~AUD 74,000/USD 53,773) 2015-2017
The Indonesian Ministry of Finance

Mohammed Bin Zayed Species Conservation Fund (total USD 9,500) 2014 and 2015

Student Creativity Award on Research (IDR 10,000,000/USD 800) 2012
The Indonesian Ministry of Research and Education

STUDENT MENTORSHIP

Fieldwork, field management, survey design, scientific, and/or grant writing

1. Fatimah (BS student in Biology, Andalas University, Indonesia). 2014-2017.
   Received $5,300 from the Mohammed Bin Zayed Conservation Fund to study the Mentawai Langurs
2. Ahmad Mursyid (BS student in Biology, Andalas University, Indonesia). 2012-2018.
3. Zulkurnia Irsaf (BS student in Biology, Tadulako University, Indonesia). 2018-2020.
4. Tri S. Harapan (BS student in Biology, Andalas University, Indonesia). 2020.
5. Fajar Alfitrian (BS student in Biology, Soedirman University, Indonesia). 2023-2025
6. Alfath Fanidya (MS student in Biology, Bogor Agricultural University, Indonesia). 2023-2024.
   Received $13,000 from the Fonseca Species Conservation Fund to study the Javan bamboo rats.
7. Lutfi S. Maulidiyah (BS student in Biology, University of Lampung, Indonesia). 2023-2025.
8. Akbar F. Hilmi (BS student in Biology, University of Lampung, Indonesia). 2023-2025.

Specimen curation

9. Ericka Boyden (BS student in Biology, Louisiana State University). Fall 2019-Spring 2020.
10. Brittany E. Thames (BS student in Biology, Louisiana State University), Spring 2019.
11. Emily A. Bowers (BS student in Biology, Louisiana State University). Fall 2020-Spring 2021.

Genomic analyses

12. Murky Mutchler (BS student in Biology, Louisiana State University/PhD, the University of Chicago). 2021.
    Won a poster award at the 2021 Wilson Ornithological Society Meeting.
13. Ryan Zucker (BS student in Biology, Cornell University). 2024.
14. Indri Lestari (BS student in Biology, Andalas University, Indonesia). Fall 2025.

Interdisciplinary research and software development

15. Filipe Delgado (MS student in Computer Science, Georgia Institute of Technology). Fall 2025.
16. Cody Henderson (MS student in Computer Science, Georgia Institute of Technology). Fall 2025-now.
17. Lawrence B. Gan (MS student in Computer Science, Georgia Institute of Technology). Fall 2025-now
18. Aakanksha Jaiswal (MS student in Computer Science, Georgia Institute of Technology). Fall 2025-Spring 2026.
19. Kira L. Nichtawitz (BS student in Computer Science, University of Florida). Fall 2025-now.
    Florida Museum Undergraduate Internship Program awardee for Fall 2026.
20. Julian D. Perez (BS student in Computer Engineering, University of Florida). Fall 2025.
21. Ethan E. Wolfe (BS student in Data Science, University of Florida). Fall 2025.
22. Zahara M. Shuemaker (BS student in Computer Science, University of Florida). Fall 2025.
23. Justin K. Sobayo (BS student in Computer Science, University of Florida). Fall 2026-now.
    Florida Museum Undergraduate Internship Program awardee for Fall 2026.
24. Shyaam Shanmugam (BS student in Computer Science, University of Florida). Spring 2026-now.
25. Danna Lee (MS student in Computer Science, Georgia Institute of Technology). Summer 2026-now.
26. Jia Yu (MS student in Computer Science, Georgia Institute of Technology). Summer 2026-now.
27. Phillip Kim (MS student in Computer Science, Georgia Institute of Technology). Fall 2026-now.
28. Eric Wan (MS student in Computer Science, Georgia Institute of Technology). Fall 2026-now.
29. Daniel Y. Cheng (BS student in Computer Science, University of Florida). Fall 2026-now.

TEACHING EXPERIENCE

Teaching Assistant

BIOL 1209	Introduction to Biology, *Louisiana State University, USA*	Spring, 2025
BIOL 2153	Principles of Genetics, *Louisiana State University, USA*	Fall, 2024
BIOL 4141	Mammalogy, *Louisiana State University, USA*	Fall, 2021
BIOL 1209	Introduction to Biology, *Louisiana State University, USA*	Spring, 2021
PAB 505	Taxonomy of Vertebrates, *Andalas University, Indonesia*	2011 – 2012

Instructor

PAB125 Computer Application for Biology, *Andalas University, Indonesia* Fall, 2012

PEDAGOGICAL TRAINING

BASC 7000 Methods of Instruction in College Life Science Laboratories, Louisiana State University Fall, 2019

INVITED WORKSHOP

1. Efficient and reproducible avian and mammalian specimen data acquisition: from fieldwork to museum database. *The Society for the Preservation of Natural History Collections*. May, 2025
2. Molecular Analyses of Indonesian Mammals. *Generasi Biologi, Indonesia*. May, 2024
3. Coding for Conservation: Integrating GitHub to Your Workflow. *Tambora Muda, RLadies Jakarta, and RLadies Bogor with logistical support from the University of Indonesia.* April, 2023
4. Introduction to Phylogenetics. *Andalas University, Indonesia*. January, 2022

INVITED TALKS

External seminars

1. Emerging AI for natural history collection research and management: approaches, challenges, and future directions, *Sam Noble Oklahoma Museum of Natural History, the University of Oklahoma.* 16 November 2026.
2. AI agents for biodiversity data: where we are now, and what's possible, *iDigBio webinar series*. Co-presenter with Michael Elliots, Manny Luciano (University of Florida), and Zehua Zhu (Oregon State University). 3 September 2026.
3. Why are there so many rats on Sulawesi? Integrating software, emerging AI, and collection-based mammalogy, *Department of Biological Sciences, Texas Tech University,* 8 April 2026.
4. Why are there so many rats on Sulawesi? From fieldwork to data-driven software development, *the American Museum of Natural History.* 17 February 2026.
5. Unraveling mammalian diversity in Indonesia: progress, challenges, and approaches, *the American Society of Mammalogists*, *USA. A plenary student speaker,* June 2024.
6. Diversity and Evolution of Indonesia's Rich Mammal Faunas. *Balai Konservasi dan Sumber Daya Alam, Sumatera Selatan, Indonesia.* September 2023.
7. Leveraging the Digital Revolution to Improve Data Acquisition in the Field. *Indonesian Research and Innovation Agency (BRIN), Indonesia.* April 2023.

Departmental seminars

8. Modernizing field data collection in the digital age: An approach to enhance data integrity and research reproducibility. *Florida Museum of Natural History, USA.* September 2025.

9. Travelogue: Mammalogy Expedition in Sumatra's Unexplored Mountains: A Four-Month Adventure. *LSU Museum of Natural Science*. *USA*. March 2024
10. Travelogue: Mammalogy Expedition in Java, Indonesia. *LSU Museum of Natural Science*, *USA.* March 2023
11. The Geography of Diversification Among Endemic Island Rodents on Sulawesi, Indonesia. *LSU Museum of Natural Science*, *USA*. September 2018
12. Travelogue: Mt. Talamau Expedition. *LSU Museum of Natural Science*, *USA*. August 2018

CONFERENCE TALKS

1. **Handika, H.** and Esselstyn, J. A. 2024. Rethinking software development for more accessible phylogenomic research and teaching. *3rd Joint Congress on Evolutionary Biology*.
2. **Handika, H.**, Moncrieff, A. E., Del-Rio G., Canton, R., Hernández-Canchola, G., Babb-Biernacki, S. J. Chipps, A. S., Rutledge, S. L., Pérez-Amaya, N., Chornelia, A., Morales-Martínez, D., Thom, G., Esselstyn, J. A. 2023. Leveraging the Digital Revolution to Improve Data Acquisition in the Field. *13th International Mammalogy Congress & 102nd Annual Meeting of The American Society of Mammalogists*.
3. **Handika, H.**, Achmadi, A.S., Rowe, Swanson, M. T., K.C, and Esselstyn, J.A. 2021. In situ diversification of Murine Rodents on Sulawesi, Indonesia. Oral presentation. *100th Annual Meeting of the American Society of Mammalogists,* Virtual.
4. **Handika, H.**, Achmadi, A.S., Esselstyn, J.A., and Rowe, K.C. 2019. In situ diversification of *Bunomys* (Muridae) on the isolated, topographically complex island of Sulawesi, Indonesia. Oral presentation. *99th Annual Meeting of the American Society of Mammalogists*, Washington D.C, USA.
5. **Handika, H.**, Achmadi, A.S., Esselstyn, J.A., and Rowe, K.C. 2017. Sulawesi after Wallace: multiple murine lineages support within island speciation across the northern peninsula of Sulawesi, Indonesia. Oral presentation. *12th International Mammalogical Congress*, Perth, Australia.
6. **Handika, H**. 2017. Cracking Sulawesi Biodiversity Enigma: Veering Indonesian Priorities. Oral presentation. *The 36th Indonesia Forum Postgraduate Roundtable*, Melbourne, Indonesia.
7. **Handika, H.**, Achmadi, A.S., Esselstyn, J.A., and Rowe, K.C. 2016. Biogeography and Phylogeny of the Two Most Diverse Murid Rodent Genera on Sulawesi, Indonesia. Oral presentation. *96th Annual Meeting of the American Society of Mammalogists*, Washington D.C, USA.

PEER REVIEW

Journal of Heredity, Journal of Mammalogy, Journal of Mammalian Evolution, Journal of Ecology and Evolution, BMC Genomics, Frontiers in Bioinformatics, Frontiers in Plant Science, The Raffles Bulletin of Zoology, Biodiversitas Journal of Biological Diversity, and Check List: the Journal of Biodiversity Data

SELECTED FIELDWORK

Field collecting

1. Mt. Patah, Mt. Bandahara, & Mt. Kemiri, Sumatra, Indonesia	August-December 2023
2. Mt. Gede, West Java, Indonesia	February-April 2023
3. Black Gap WMA, Texas, USA	April-May 2022
4. Davis Mountains, Texas, USA	May 2021
5. Mt. Murud, Sarawak, Malaysia	July-August 2019
6. Mt. Galang, Central Sulawesi, Indonesia	July 2018
7. Mt. Talamau, Central Sulawesi, Indonesia	March-April 2018
8. Mt. Torompupu, Central Sulawesi, Indonesia	November-December 2017
9. Mt. Katopasa, Central Sulawesi, Indonesia	August-September 2017
10. Mt. Bawakaraeng, South Sulawesi, Indonesia	October-November 2016
11. Mt. Latimojong, South Sulawesi, Indonesia	July-August 2016
12. Mt. Ambang, North Sulawesi, Indonesia	February-March 2016
13. Mt. Talamau, West Sumatra, Indonesia	June 2015
14. Mt. Tujuh and Mt. Masurai, Jambi, Indonesia	September-October 2014
15. San Rafael and Mt. Huraw, Samar Island, The Philippines	June-July 2014
16. Bangka Island, Indonesia	November-December 2013
17. Mt. Salak, Mt. Ijen, and Mt. Slamet, Java, Indonesia	September-October 2013
18. Mt. Dako, Central Sulawesi, Indonesia	March 2013
19. Mt. Kerinci, Mt. Tujuh and Mt. Masurai, Jambi, Indonesia	January 2013
20. Belitung Island, Indonesia	January 2013
21. Mt. Singgalang, West Sumatra, Indonesia	June-July 2012
22. Mt. Gandang Dewata, West Sulawesi, Indonesia	May-June 2012

Biodiversity surveys with limited collecting

23. Solok Selatan, West Sumatra, Indonesia	October 2017
24. Grampians National Park, Victoria, Australia	November 2016
25. Grampians National Park, Victoria, Australia	November 2015
26. Runtu, Central Kalimantan, Indonesia	December 2014
27. Cirebon, West Java, Indonesia	May 2014
28. Kota Waringin Barat, Central Kalimantan, Indonesia	June-July 2013

Biodiversity surveys

29. Wilson Promontory National Park, Victoria, Australia	June 2017
30. Mt. Malintang, West Sumatra, Indonesia	April 2012
31. Marak Island, West Sumatra, Indonesia	October 2011
32. Siberut Island, West Sumatra, Indonesia	October 2010
33. Mt. Sago, West Sumatra, Indonesia	September 2010
34. Angkola, North Sumatra, Indonesia	July 2010
35. Mt. Merapi, West Sumatra, Indonesia	June 2009

SOFTWARE

Key skills

1. Mobile, desktop, command-line, and web application development
2. Adaptive and accessible graphical user-interface software design
3. Large-scale data analytics and genomics
4. Continuous integration and continuous delivery (CI/CD)
5. AI software development (embedded and cloud-based)

Most familiar languages and frameworks

Rust, C++, C, Go, Dart, Flutter, Python, R, TypeScript, Next.js, Astro, and Shell.

Most familiar databases

SQLite, LanceDB, DuckDB, and PostgreSQL

Selected software

1. SEGUL
   High-performance, memory-efficient phylogenomic command-line app and programming language libraries. Written in Rust. Install links: https://www.segul.app/docs/installation/install_gui
2. SEGUI
   A cross-platform GUI app built on top of SEGUL's high-performance phylogenomic software. Aimed at improving the accessibility of phylogenomic studies. Written in Dart, Flutter, and Rust. Install links: https://www.segul.app/docs/installation/install_binary
3. PySEGUL
   A Python wrapper of SEGUL's phylogenomic software. Aimed to provide high-performance, memory-efficient phylogenomic tools to Python programmers. Written in Python and Rust. Install links: https://www.segul.app/docs/api-usage/python/intro
4. NAHPU
   A cross-platform GUI app to streamline natural history data collection from fieldwork to the museum database. Written in Dart, Flutter, SQLite, and Rust. Install links: https://nahpu.app/get-started/
5. ULLAR (beta)
   An ultrafast and scalable phylogenomic pipeline. Command-line app to simplify phylogenomic data analyses for students and researchers with limited bioinformatic training. Written in Rust. Install links: https://github.com/hhandika/ullar
6. MDD app
   A cross-platform app version of the Mammal Diversity Database (MDD), a curated database of mammalian taxonomy. Provide offline access, custom data export, advanced searching, and many other features to supplement the MDD website. Written in Dart, Flutter, and Rust. Install links: https://github.com/mammaldiversity/mdd_app/releases/latest
7. BIOCOSMOS (beta)

An AI-powered web-based platform for large-scale trait exploration and trait discovery. Modeled using butterfly image databases and written in TypeScript, NextJS, Python, LanceDB, and FastAPI. Co-developed with members of Porto's lab at the University of Florida. Web link: https://lepiverse.com/

NEWS MEDIA PROFILES

1. The Indonesian Ministry of Finance Magazine, Media Keuangan, June 2017
2. DetikNews-ABC Australia Plus, 16 Januari 2017.

MEDIA INTERVIEWS

1. Science Next: "What Could Recovery Look Like for Blazing Australia?", 27 January 2020.
2. Kompas.Com-ABC Australia Plus: "Kisah Mahasiswa Indonesia Terlibat Penemuan Tikus Hidung Babi" [The Story of an Indonesian Student Involved in the Discovery of the Hog-Nosed Rat], 26 November 2015.

POPULAR ARTICLES

1. Republika-ABC AustraliaPlus: "Hal yang Perlu Dilakukan agar Kuliah S2 di Luar Negeri" [Things to Do to Study for a Master's Degree Abroad], 16 February 2017.
2. DetikNews-ABC AustraliaPlus: "Langkah-Langkah Kuliah ke Luar Negeri: Dari A-Z" [Steps to Study Abroad: From A-Z], 7 June 2016.
3. Republika-ABC AustraliaPlus: "Menentukan Topik Penelitian: Dilema Kecepatan Tamat dan Kualitas Penelitian" [Determining a Research Topic: The Dilemma of Graduating Quickly vs. Research Quality], 10 May 2016.
4. TribunNews-ABC AustraliaPlus: "Pengalaman Heru Handika Menyikapi Kerja Sama Dengan Peneliti Asing" [Heru Handika's Experience Collaborating with Foreign Researchers], 8 May 2016.
5. DetikNews-ABC AustraliaPlus: "Jurus Kuliah ke Luar Negeri Berkat Jaringan Pertemanan" [Tips for Studying Abroad Thanks to Friendship Networks], 15 April 2016.
6. Republika-ABC AustraliaPlus: "Kiat Meningkatkan TOEFL Melebihi 550" [Tips for Increasing a TOEFL Score Above 550], 7 March 2016.
7. DetikNews-ABC AustraliaPlus:"Mengenal LoA dan Cara Mendapatkan 'Surat Sakti' S2/S3 di Luar Negeri" [Getting to Know the LoA and How to Get the 'Magic Letter' for Master's/PhD Studies Abroad], 3 February 2016.
8. Republika-ABC AustraliaPlus: "Bagaimana Menulis Esai Untuk Mendapatkan Beasiswa LPDP" [How to Write an Essay to Get an LPDP Scholarship], 11 January 2016.

OUTREACH

1. Mammalian collection tours, LSU Museum of Natural History, USA 2018-2025
2. Research Talk Show, Gita Bangsa Middle School, Indonesia 23 August 2021
3. Personal Development Talk Show,

KCA-LH Rafflesia FMIPA Unand Conservation Club, Indonesia 18 October 2020

4. Getting to know neglected flora and fauna in Indonesia, Tambora Muda, Indonesia 22 May 2020
5. Night at the Museum, LSU Museum of Natural History, USA 14 November 2019
6. Night at the Museum, LSU Museum of Natural History, USA 11 August 2018
7. Meet the Scientists, Museums Victoria, Australia 22 August 2015
8. Earth Day Celebration, KCA-LH Rafflesia FMIPA Unand Conservation Club, Indonesia 2009-2020

MEMBERSHIPS & SERVICE

- IUCN SSC Small Mammal Specialist Group, 2017-Present
    - Contributed to the IUCN RedList assessments of 76 small mammal species native to Sulawesi, Indonesia
- The American Society of Mammalogists, 2016-Present
    - Biodiversity committee (2024-present)
    - Mammal diversity database curation team (2024-present)
- The Society of Systematic Biologists, 2020-Present
    - Ernst Mayr Award judge (2025)
- KCA-LH Rafflesia Nature Conservation Club, Andalas University, permanent member since 2009
    - Secretary (2011-2012)
    - Training undergraduate student members on jungle survival, land navigation, search and rescue, and tropical forest ecology.
    - Led and participated in mountain and cave expeditions across Sumatra, Indonesia.
    - Led and participated in organizing conservation training and seminars for students, faculty, and the public.
- Student Association of the Indonesian Endowment Fund in Victoria, Australia, 2015-2017
    - Mentorship programs for new Indonesian students studying in Melbourne, Australia
    - Developing guidelines for Indonesian students to study in Melbourne, Australia.