

Libin Thaikkattil Louis

Graduate Research Assistant

School of Forest Resources

University of Maine, Orono – 04469 Maine, USA

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Education

PhD, Forestry, (Since 2019)

School of Forest Resources, University of Maine (UMaine), Orono, United States

“Small diameter trees: harvesting cost, productivity, and harvesting constraints in Maine”

Advisors: Dr. Anil Raj Kizha & Dr. Adam Daigneault

MSc, Forestry, (2015 - 2018)

Forest & Conservation Sciences, University of British Columbia (UBC), Vancouver, Canada

“Biodiversity, agricultural productivity, and landscape context in organic vs conventional rice paddy wetlands in Kerala, India” Advisor: Dr. Jeanine Rhemtulla

- Hired undergraduate student Riley Finn from UBC for 4 months in India and successfully supervised his co-op term, coordinated research activities, and completed the work independently.
- Proficient in skills like, Landscape Ecology research, working with remote sensing image classification and analysis.

BSc, Forestry, (2010 - 2014)

Kerala Agricultural University (KAU), Kerala, India

“Diversity and Abundance of Reptiles in Peechi and Vaazhanni Wildlife Sanctuary, Kerala”

Advisor: Dr. Nameer P. Ommer

- Proficient in survey methods for different taxa in the field, through actively involving in research activities, and conducted and took part in nature education.

Work Experience

Graduate Research Assistant, (Since 2019) UMaine, Orono, United States

- Assisted in fieldwork involving four time and motion studies, analyzed data in R studio.

Teaching Assistant (2019, 2020), UMaine, Orono, United States

- SFR 213, 205, field demonstration, assisted in grading, exam proctoring.

Graduate Intern, (2018) Alex Fraser Research Forest UBC, Williams Lake, Canada

- Supervised UBC forestry undergraduate intern Caitlin Laidlaw, who successfully completed two co-op term.
- Mapped the wetland boundary using GPS tracks and successfully incorporated the data map.
- Conducted Post harvest fuel hazard assessment, silvicultural survey of tree planting the forest.
- Successfully involved in planting more than 700 willow whips on fire lines.

Consultant, (2015) Wildlife Trust of India and Kerala Forest Department

- Rehabilitated 350 juvenile Star Tortoises in its natural habitat, seized by forest officials for illegal trafficking.
- Successfully monitored and released more than 50 percent of the juvenile Star Tortoise with minimum mortality rate ever recorded.
- Conducted post release monitoring of the Tortoises by relocating in the natural habitat and checking the health to ensure the success of the project.

Research Assistant, (2014-2015) KAU Kerala, India

- Prepared high-resolution images of the wood discs measured and analyzed the properties of vessels using images for the project “Dendroclimatological investigations on Teak (*Tectoa Grantis* L. f) in Nilambur forest division Kerala” (Dec, 2014 – Feb, 2015).
- Identified and performed field measurements of insects, arthropods, amphibians and birds and assisted in the planning, execution, logistics of sampling, conducted participant interviews and translated between English and Malayalam of 60 fields for the project “Conserving God’s Own Country: Biodiversity in Agroforestry Landscapes of Kerala, India” (Aug, 2015 – Oct, 2015).

Grants & Awards

- Awarded **Graduate Student Government Grant** UMaine 2020 for covering virtual conference registration.
- Awarded **Ralph H. Griffin Memorial Scholarship** UMaine 2020 for meritorious graduate student in silviculture, forest management or forest soils, covering tuition expenses.
- Awarded **Queen Elizabeth II Diamond Jubilee scholarship** UBC 2015 for Green Leaders, covering tuition, living and travel expenses.

Peer reviewed article

- **Louis LT** and Kizha AR. *Wood biomass recovery cost under different harvesting methods and market conditions*. International Journal of Forest Engineering. 2020 (in press).
- Kizha AR, Han HS, Anderson N, Koirala A, **Louis LT**. *Comparing Hot and Cold Loading in an Integrated Biomass Recovery Operation*. Forests. 2020 Apr;11(4):385.
- Kizha AR, Nahor ER, Coogen N, George AK, **Louis LT**. 2019. *Residual Stand Damage across Varying Silvicultural Prescriptions*. Forest Ecology and Management (in preparation).
- **Louis LT**, Kizha AR, Daigneault A. 2020. *Stand level variation in Timber Harvesting Cost and Productivity: A Meta-analysis*. Journal of Cleaner Production (in preparation).

Conference proceeding

1. **Louis LT**, Kizha AR. 2019. *Comparing the cost of harvesting sawlog and small-diameter trees from different silvicultural prescriptions utilizing two harvesting methods*. Session: Forest harvesting systems. 42nd Annual Meeting of the Council on Forest Engineering and 52nd International Symposium on Forestry Mechanization (FORMEC), 6-9 October 2019, Sopron, Hungary.

Talks/Field demonstration

1. **Louis LT**. 2020. *Statistics in timber harvesting*. SFR401/502. Timber harvesting. UMaine. (invited lecture).
2. **Louis, L.T**, Kizha, A.R, Daigneault A. 2020. *Predicting Uncertainties in Timber Harvesting Cost and Productivity*. October 30. SAF National Convention (virtual).
3. **Louis, L.T**, Kizha, A.R.. 2020. *Exclusive Product Allocation: Costing Small-diameter Trees in Maine*. October 2. Umaine Student Symposium (virtual).
4. George, A.K., Kizha, A.R., Kenefic, L., **Louis, L.T**. 2019. *Harvest operations on sensitive grounds*. Cooperative Forestry Research Unit Workshop for Prentiss and Carlisle, July 2019. Cooperative Forestry Research Unit. Bangor, ME.
5. George AK, Kizha AR, Kenefic L, **Louis LT**. 2019. *Comparison of Timber Harvesting Costs across Wet and Sturdy Grounds*. High Resolution Wet Areas Mapping Workshop. Cooperative Forestry Research Unit. June 11, 2019. Orono, ME.

6. George, A.K., Kizha, A.R., Kenefic, L., **Louis, L.T.** 2019. *Northern white cedar: Harvesting cost and productivity*. Cedar Club Meeting, April 2019. Quebec City, Quebec, Canada.
7. **Louis LT.** 2017. *Landscape composition and configuration of Organic Vs conventional wetlands in Kerala, India*. University of British Columbia, Vancouver, Canada. (invited lecture).

Abstracts & other publications

1. **Louis LT**, Kizha AR, Daigneault A. 2019. *Global sensitivity analysis of integrated harvesting cost under various stand conditions and machine attributes*. 42nd Annual Meeting of the Council on Forest Engineering and 52nd International Symposium on Forestry Mechanization (FORMEC), 6-9 October 2019, Sopron, Hungary.
2. Nahor E, Kizha AR, **Louis LT.** 2019. *Residual stand damage under different silvicultural prescriptions*. Session: Environmental impacts of forest operations. 42nd Annual Meeting of the Council on Forest Engineering and 52nd International Symposium on Forestry Mechanization (FORMEC), 6-9 October 2019, Sopron, Hungary.
3. **Louis LT.** 2018. *Biodiversity, agricultural productivity, and landscape context in organic vs conventional rice paddy wetlands in Kerala, India*. (Thesis, UBC).
4. **Louis LT**, Rhemtulla J. 2017. *Conserving wetland biodiversity landscape context for reducing biodiversity-productivity trade-off*. International Congress on Conservation Biology. 2017 Book of Abstracts, Cartagena, Colombia, 23-27 July 2017, Page 312.
5. **Louis LT.** 2014. *Diversity and Abundance of Reptiles in Peechi and Vaazhani Wildlife Sanctuary, Kerala*. (Thesis, KAU).

Training / workshops

1. **Webinar - Imagery and Change Detection: New Advances in Forest Inventory**. November 2020. Esri.
2. **Society of American Foresters – National convention**. (virtual). October 2020.
3. **Student Symposium**. (virtual). University of Maine. October 2020.
4. **Webinar - Dispatches from the Mother Tree Project**. UBC. October 2020
5. **Road Building Toolbox**. Master Logger Certification Program. October 2019.
6. **Exceeding the Vision: Forest Mechanization of the Future. 52. International Symposium on Forest Mechanization (FORMEC)** and 42. Edition of the Council of Forest Engineering (COFE). October 2019.
7. **'R' Workshop**. UMaine. September 2019.
8. **Get It written, Writing Workshop**. UMaine. June 2019.
9. **High Resolution Wet Areas Mapping Workshop**. Cooperative Forestry Research Unit, Orono. June 2019.
10. **Graduate scientific writing workshop**, (August 2019) Folger Library Umaine.
11. **Concur travel training**, (February 2019) Umaine.
12. **Student Symposium (Judge)**. University of Maine. April 2019.
13. **Citation Managers**. UMaine. January 2019.
14. **28th International Congress for Conservation Biology (ICCB), insights for sustaining life on earth**. Cartagena, Colombia (July 2017) Society for Conservation Biology.
15. **Science telling Bootcamp**, (July 2017) National Geographic.
16. **Advanced scientific writing workshop**, (2017) UBC.
17. **Scientific writing and publishing**, (2017) Springer Nature.
18. **Resume Workshop**, (2017) UBC.
19. **Introduction to Mixed Effects Models**, (2017) UBC.
20. **Enhance Operational Efficiencies in Forestry**, (2017) Esri.
21. **Active Shooter Preparedness Workshop**, (2017) UBC.

22. **Preventing and Addressing Workplace Bullying and Harassment Training**, (2017) UBC.
23. **Hazardous Waste Management Refresher Course**, (2017) UBC.
24. **New Worker Safety Orientation**, (2017) UBC.
25. **WHMIS and other Hazard Identification Systems**, (2017) UBC.
26. **Workplace Violence Prevention Training**, (2017) UBC.

Reviewed Articles:

1. **Journal of Tropical Forest Science**. “*Life cycle assessment on log harvesting from natural forest in Peninsular Malaysia*”. Manuscript ID: JTFS 49/2020 #10046. review completed on September 01, 2020.
2. **Forest Science and Technology**. “*Utilization woody pruning residues of apple trees as a wood substitute for particleboard industries*”. Manuscript: ID TFST-2019-0053. review completed on November 22, 2019.
3. **Current World Environment**. “*Analysis of rainfall data for drought in Anand (middle Gujarat): a study case*”. Manuscript number is: CWE/1314/2019. Review completed on February 28, 2019.

Software Worked with:

1. **ENVI**: supervised image classification of landuse from Landsat and Sentinel 2 satellite imageries.
2. **ArcMap**: (version 10 onwards) spatial analysis and mapping techniques.
3. **R studio**: statistical analysis and graphical representation using ggplot2.
4. **FRAGSTATS**: Landscape composition and configuration analysis.
5. **Conefor**: landscape network analysis.
6. **GS+**: geostatistics including semi-variance and spatial autocorrelation.

Membership in professional organization

- **SAF** – Society of American Foresters
- **COFE** – Council of forest Engineers
- **IFSA** – International Forestry Students Association
- **ESA** – Ecological Society of America

Synergetic activity

1. **Volunteer** - Undergraduate orientation in, Collins Center for the Arts UMaine, 2019.
2. **Volunteer** - Let's Talk Science UBC 2017, Successfully planned and performed scientific experiments for 30 elementary students explaining basic scientific principles.
3. **Volunteer** – International Conference on Conservation Biology, Cartagena, Colombia 2017.
4. **Class Representative**, Kerala Agricultural University, Kerala, India March 2012 – June, 2013.

Reference

Dr. Anil Raj Kizha

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