

Babu Panthi

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EDUCATION

2016 – 2020	Ph.D. in Entomology University of Florida, Gainesville, FL
2013 – 2015	M.S. in Entomology University of Florida, Gainesville, FL
2007 – 2011	B.S. in Agriculture (minor in Entomology) Tribhuvan University, Kathmandu, NP

EXPERIENCE

2022-present	Postdoctoral Scholar University of California-Davis, Department of Entomology Research project: <i>Biology and management of swede midge on cole crops</i> <ul style="list-style-type: none">• Maintenance of plant and insect colony• Conduct cage experiments to assess swede midge damage on CA crucifer weeds• Evaluate biological and synthetic pesticides against swede midge
2021 – 2022	Postdoctoral Research Associate University of Georgia, Department of Entomology Research project: <i>Biology and management of spotted wing drosophila (SWD) on berry and cherry crops</i> <ul style="list-style-type: none">• Led a multistate project to evaluate the monitoring traps and lures in capturing SWD and in ability to relate trap captures with fruit infestation• Conducted growth chamber study to test the effect of temperature and relative humidity on SWD physiology• Evaluated the efficacy of insecticides against spotted wing drosophila in field and laboratory conditions in blueberry
2020 – 2021	Postdoctoral Scholar Oregon State University, Crop and Soil Science Department <ul style="list-style-type: none">• Assisted in grant writing, data analysis, and report writing• Wrote a review article on biology and management of red clover casebearer moth• Developed a phenology model of red clover casebearer moth in red clover seed fields• Evaluated bifenthrin insecticide for its resistance development in white clover seed weevil
2016 – 2020	Graduate Research Assistant University of Florida, Gulf Coast Research and Education Center Thesis: <i>Ecology, behavior, and management of chilli thrips in Florida strawberry and blueberry</i> <ul style="list-style-type: none">• Assessed the short-range movement and spread of feeding injury of chilli thrips among strawberry plants

- *Determined that delaying insecticide application is useful in managing chilli thrips in strawberry*
 - *Assessed the spatio-temporal distribution of chilli thrips in strawberry and blueberry crops*
 - *Developed sampling plans of chilli thrips in strawberry and blueberry crops*
 - *Evaluated the efficacy of several insecticides against chilli thrips in strawberry and blueberry fields*
- 2015 – 2016 **Research Assistant**
University of Florida, Entomology and Nematology Department
- *Led a field trial on biological control of flower thrips in blueberries using predatory mite and minute pirate bug*
 - *Involved in monitoring the effect of cover crops on above-ground pests and beneficial insects in organic zucchini*
 - *Involved in evaluating the efficacy of biopesticides on twospotted spider mite in organic strawberry*
 - *Involved in evaluating the effect of companion crops and reduced-risk insecticides on diamondback moth in cabbage crop*
- 2015 **Research Assistant**
University of Florida, Agronomy Department
- *Planting and crop maintenance, data collection, harvesting, and seed processing in wheat and oat breeding program*
- 2013 – 2015 **Graduate Research Assistant**
University of Florida, Tropical Research and Education Center
Thesis: *Biology and population dynamics of melonworm in cucurbit crops*
- *Determined the seasonal abundance and spatial distribution of melonworm in yellow squash in southern Florida*
 - *Determined the host selection, growth, and survival of melonworm in cucurbit crops in southern Florida*
- 2012 – 2013 **Research Assistant**
Nepal Agricultural Research Council, Entomology Division
- *Evaluated the efficacy of several plant extracts against storage grain pests (grain weevil and grain moth) in maize*
 - *Evaluated the efficacy of biological and chemical pesticides against cabbage aphid in cauliflower*
- 2011 **Research Assistant**
Tribhuvan University, Rampur Campus, Chitwan, NP
- *Tested the efficacy of biological and chemical insecticides against Epilachna beetle in bitter gourd*

PUBLICATIONS**Referred Journal Articles**

- 2022 **Panthi, B.**, K. Cloonan, C. Rodriguez-Saona, B. Short, D. Kirkpatrick, G. Loeb, N. Aflitto, N. Wiman, H. Andrews, F. Drummond, P. Fanning, E. Ballman, B. Johnson, D. Beal, E. Beers, H. Burrack, R. Isaacs, J. Perkins, O. Liburd, A. Lambert, V. Walton, E. Harris, S. Mermer, D. Polk, A. Wallingford, R. Adhikari, and A. Sial. Using red panel traps to detect spotted wing drosophila and its infestation in US berry and cherry crops. *Journal of Economic Entomology*. toac134. <https://doi.org/10.1093/jee/toac134>
- 2021 **Panthi, B.**, J. Renkema, S. Lahiri, and O. Liburd. Spatio-temporal distribution and fixed-precision sampling plan of *Scirtothrips dorsalis* (Thysanoptera: Thripidae) in Florida blueberry. *Insects*. 12(3): 256. <https://doi.org/10.3390/insects12030256>
- 2020 **Panthi, B.**, J. Renkema, S. Lahiri, and O. Liburd. The short-range movement of *Scirtothrips dorsalis* (Thysanoptera: Thripidae) and rate of spread of feeding injury among strawberry plants. *Environmental Entomology*, 50(1): 12-18. <https://doi.org/10.1093/ee/nvaa149>
- 2017 **Panthi, B.**, D. Seal, G. Nuessly, and J. Capinera. Seasonal abundance and spatial distribution of melonworm, *Diaphania hyalinata* L. (Lepidoptera: Crambidae) on yellow squash in southern Florida. *Florida Entomologist*. 100(3): 647-652. <https://doi.org/10.1653/024.100.0323>
- 2016 **Panthi, B.**, D. Seal, J. Capinera, G. Nuessly, and C. Martin. Host selection, growth, and survival of melonworm, *Diaphania hyalinata* L. (Lepidoptera: Crambidae) on four cucurbit crops under laboratory conditions. *Environmental Entomology* 45(4): 945-951. <https://doi.org/10.1093/ee/nvw067>

Conference Proceedings

- 2020 **Panthi, B.** and J. Renkema. Managing *Scirtothrips dorsalis* Hood (Thysanoptera: Thripidae) in Florida strawberry with flupyradifurone. In: Proceedings, XI North American Strawberry Symposium, 3-6 January 2019, Orlando, FL. *International Journal of Fruit Science*. 0:1-11. <https://doi.org/10.1080/15538362.2020.1755768>

Technical Reports

- 2021 Kaur, N., B.A. Mori, J. Otani, W.R. Cooper, D.L. Walenta, K.C. Tanner, L. Van Slambrook, **B. Panthi**, and N.P. Anderson. Preemptive measures to manage the red clover casebearer moth in Oregon clover seed crops. *2020 Seed Production Research at Oregon State University*. Ext/CrS 164. <https://doi.org/10.13140/RG.2.2.10964.73600>
- 2021 Kaur, N., L. Van Slambrook, **B. Panthi**, S.J. Dorman, and N.P. Anderson. Laboratory bioassays for screening bifenthrin resistance in white clover seed weevil (Year 2). *2020 Seed Production Research at Oregon State University*. Ext/CrS 164. <https://doi.org/10.13140/RG.2.2.24386.50882>
- 2020 **Panthi, B.**, O. Liburd, S. Lahiri, and E. Rhodes. Efficacy test of various insecticides to control *Scirtothrips dorsalis* in southern highbush blueberries. *Arthropod Management Tests*. 45(1): 1-3. <https://doi.org/10.1093/amt/tsaa073>

- 2020 Lahiri, S. and **B. Panthi**. Insecticide efficacy for chilli thrips management in strawberry, 2019. *Arthropod Management Tests*. 45(1): 1-2.
<https://doi.org/10.1093/amt/tsaa046>

Extension Publications

- 2020 Liburd, O., **B. Panthi**, and D. Phillips. 2020. Chilli thrips on blueberries in Florida. University of Florida. *EDIS*. ENY-2053. <https://doi.org/10.32473/edis-in1298-2020>
- 2019 **Panthi, B.**, O. Liburd, and J. Renkema. 2019. *Echinothrips americanus* Morgan. Featured Creatures, University of Florida. *EDIS*. Publication Number: EENY-730.
<https://edis.ifas.ufl.edu/pdffiles/IN/IN124600.pdf>
- 2018 **Panthi, B.**, B. Evans, and J. Renkema. 2018. False chinch bug. Featured Creatures, University of Florida. *EDIS*. Publication Number: EENY-706.
<https://edis.ifas.ufl.edu/pdffiles/IN/IN121200.pdf>

Thesis and Dissertation

- 2020 **Panthi, B.** PhD Dissertation: Ecology, behavior, and management of chilli thrips, *Scirtothrips dorsalis* Hood (Thysanoptera: Thripidae), in Florida strawberry and blueberry. *University of Florida*
- 2015 **Panthi, B.** MS Thesis: Biology and population dynamics of melonworm, *Diaphania hyalinata* L. (Lepidoptera: Crambidae), in Florida cucurbits. *University of Florida*

Manuscripts in Preparation

- In prep* **Panthi, B.**, A. Sial. The effect of temperature and humidity on the physiology of spotted wing drosophila. *Journal of Thermal Biology*
- In prep* **Panthi, B.**, J. Renkema, S. Lahiri, and O. Liburd. Determining the critical density, the spatial distribution, and a sequential sampling plan for chilli thrips in Florida strawberry
- In prep* **Panthi, B.**, J. Renkema, S. Lahiri, A. Abd-Elrahman, and O. Liburd. Delayed insecticide application is useful in managing chilli thrips in Florida strawberry

AWARDS AND HONORS

- 2021 Outstanding Leadership Award, Society of Overseas Nepalese Entomologists
- 2020 Megha Parajulee SONE Student Award for Academic Excellence, Society of Overseas Nepalese Entomologists
- 2015 Graduate student of the year award. Tropical Research and Education Center, University of Florida, Homestead, Florida
- 2014 Dade County AgriCouncil Seymour Goldweber Scholarship award, Homestead, Florida
- 2007 – 2011 Merit Scholarship for entire duration of B.S. Agriculture, Tribhuvan University, Nepal

GRANTS

Research Support

- 2021 Kaur, N. (PI), E. Verhoeven (Co-PI), **B. Panthi** (Co- PI). Exploration of native entomopathogenic nematodes associated with sod webworm, *Chrysoteuchia topiaria* (Zeller) (Lepidoptera: Crambidae) in Oregon grass seed crops. Western-IPM center.

Grant award: \$29,961, Oregon State University

- 2021 Kaur, N. (PI), D. Walenta (Co-PI), C. Tanner (Co-PI), **B. Panthi** (Co-PI), N. Anderson (CoPI). Leveraging innovative insect pest management approaches for the management of red clover casebearer moth in Oregon's clover seed crops. Agricultural Research Foundation. Grant award: \$14,981, Oregon State University
- 2019 **Panthi, B.**, J. Renkema, S. Lahiri, and O. Liburd. Determining when to spray insecticide after scouting for *Scirtothrips dorsalis* Hood in Florida strawberry. Florida Entomological Society Student Minigrant. Grant award: \$250, University of Florida
- 2017 **Panthi, B.** and J. Renkema. Developing chilli thrips sampling plan for Florida strawberries. Southern Sustainable Agriculture Research and Education, (SARE) Graduate Student Grant Award: \$16,170 (proposal submitted, not funded), University of Florida

Travel Support

- 2019 Gulf Coast Research and Education Center Student Travel Grant (\$250)
- 2019 Florida Entomological Society Student Travel Grant (\$150)
- 2017 Florida Entomological Society Student Travel Grant (\$150)

SCIENTIFIC PRESENTATIONS

- 2022 Sial, A., A. Babu, **B. Panthi**. Spotted-wing drosophila monitoring and management update. Georgia Entomological Society Annual Meeting, April 13-15. Jekyll Island, GA.
- 2022 **Panthi, B.**, A. Sial. Using red panel traps to detect spotted wing drosophila in blueberry. Joint Southeastern Branch & APS-CD Meeting, March 26-30. San Juan, PR
- 2021 Sial, Ashfaq, A. Babu., **B. Panthi**. Novel strategies for organic management of spotted-wing drosophila, Annual Meeting of Entomological Society of America, Nov 2021. Location: Colorado Convention Center, Meeting Room 102-106. Paper
- 2021 **Panthi, B.**, S. Lahiri, J. Renkema, O. Liburd, A. Abd-Elrahman. Delayed insecticide application is useful in managing *Scirtothrips dorsalis* (Thysanoptera: Thripidae) in Florida strawberry. Annual Meeting of Entomological Society of America, Nov 2021. Location: Colorado Convention Center. Poster
- 2021 **Panthi, B.**, L.G. Van Slambrook, E.C. Verhoeven, J. M. Durringer, N. Kaur. Screening grass cultivars for resistance against sod webworm. Virtual. 80th Annual Pacific Northwest Insect Management Conference. 5 Jan. Paper
- 2020 **Panthi, B.** Ecology, behavior, and management of chilli thrips in Florida strawberry. *Invited speaker*. SONE Webinar Series, Society of Overseas Nepalese Entomologists. 6 Dec. Paper
- 2020 **Panthi, B.**, S. Lahiri, J. Renkema, and O. Liburd. Determining the critical density, the spatial distribution, and a sequential sampling plan for *Scirtothrips dorsalis* (Thysanoptera: Thripidae) in Florida strawberry. 2020 Entomology Virtual Annual Meeting, Entomological Society of America. 11-25 Nov. Paper

- 2020 **Panthi, B.**, S. Lahiri, J. Renkema, and O. Liburd. Biology and management of chilli thrips in strawberry. 2020 Entomology Virtual Annual Meeting, Entomological Society of America. 11-25 Nov. Infographic
- 2020 Lahiri, S. and **B. Panthi**. Thrips management in Florida strawberries. Southeast Regional Fruit and Vegetable Conference, Savannah, Georgia, 9-12 Jan. Paper
- 2019 **Panthi, B.**, S. Lahiri, J. Renkema, and O. Liburd. The short-range dispersal of chilli thrips, *Scirtothrips dorsalis*, among strawberry plants. AgExpo 2019, Gulf Coast Research and Education Center, University of Florida, Wimauma, Florida. 21 Nov. Poster
- 2019 **Panthi, B.**, S. Lahiri, J. Renkema, and O. Liburd. Assessing distribution and critical density of *Scirtothrips dorsalis* in Florida strawberry and blueberry. Entomological Society of America Annual Meeting, St. Louis, Missouri, 16-21 Nov. Paper
- 2019 Lahiri, S. and **B. Panthi**. Current pest management practices and challenges in winter strawberry production in Florida. Entomological Society of America Annual Meeting, St. Louis, Missouri, 16-21 Nov. Paper
- 2019 **Panthi, B.**, S. Lahiri, J. Renkema, and O. Liburd. Optimizing spray timing for chilli thrips management in Florida strawberry. Science Communication Seminar. Gulf Coast Postdoc and Student Association, Gulf Coast Research and Education Center, University of Florida, Wimauma, Florida. 26 Sep. Paper
- 2019 **Panthi, B.**, S. Lahiri, J. Renkema, and O. Liburd. Determining when to spray insecticide after scouting for *Scirtothrips dorsalis* Hood in Florida strawberry. Annual meeting of Florida Entomological Society in Jupiter, Florida. 21-23 Jul. **Invited speaker**.
Symposium on: "Uncharted Territory: Entomology in Support of Florida's Emerging Crops and Production." Paper
- 2019 **Panthi, B.** and J. Renkema. Estimating aggregation and dispersion parameters of chilli thrips, *Scirtothrips dorsalis* (Thysanoptera: Thripidae) in Florida berries. 2019 Graduate Student Research Day, Gulf Coast Postdoc and Student Association, Gulf Coast Research and Education Center, University of Florida, Wimauma, Florida, 4 Apr. Poster
- 2019 **Panthi, B.** and J. Renkema. Behavior and management of chilli thrips in Florida strawberry. North American Strawberry Symposium. Orlando, Florida, 3-6 Feb. Paper
- 2018 **Panthi, B.** and J. Renkema. Assessing spatial distribution of chilli thrips, *Scirtothrips dorsalis* (Thysanoptera: Thripidae) in Florida berries. 92nd Annual Meeting of the Southeastern Branch, Entomological Society of America. Orlando, Florida, 4-7 Mar. **Invited speaker**. Symposium on: "Bridging the Gap in Berry Production and Research in the Southeast: Updates on the Latest Issues." Paper
- 2017 **Panthi, B.** and J. Renkema. Assessing spatial distribution of chilli thrips, *Scirtothrips dorsalis* (Thysanoptera: Thripidae) in Florida berries. Entomological Society of America Annual Meeting, Denver, Colorado, 4-8 Nov. Poster
- 2017 Renkema, J., S. Devkota, **B. Panthi**, O. Liburd, and J. Funderburk. Insecticide rotations for thrips (Thysanoptera: Thripidae) management in Florida strawberry. Entomological Society of America Annual Meeting, Denver, Colorado, 4-8 Nov. Paper
- 2017 **Panthi, B.** and J. Renkema. Chilli thrips, movement among potted strawberry plants.

- 100th annual meeting of Florida Entomological Society in San Juan, Puerto Rico. 16-20 Jul. Paper
- 2016 **Panthi, B.,** D. Seal, G. Nuessly, and J. Capinera. Host Selection, growth, and survival of melonworm (Lepidoptera: Crambidae) on four cucurbit crops under laboratory conditions. 90th Annual Meeting of the Southeastern Branch, Entomological Society of America. Raleigh, North Carolina, 13-16 Mar. Poster
- 2014 **Panthi, B.,** D. Seal, G. Nuessly, and J. Capinera. Seasonal abundance and distribution of melonworm *Diaphania hyalinata* L. (Lepidoptera: Crambidae) in cucurbits. 97th Annual Meeting of Florida Entomological Society. Jupiter, Florida. 3-6 Aug. Paper
- 2014 **Panthi, B.,** D. Seal, G. Nuessly, and J. Capinera. Growth response of melonworm, *Diaphania hyalinata* Linnaeus (Lepidoptera: Crambidae) to 4 cultivars of cucurbit grown in South Florida. 127th Annual Meeting of Florida State Horticultural Society. Clearwater Beach, Florida. 1-3 Jun. Paper

TEACHING EXPERIENCE

Mentoring and supervision

- 2021 Levi Miedema (undergraduate student worker). Literature search, experimental design, insecticide formulation and application, data collection and analysis, report writing. Small Fruits IPM Lab, University of Georgia
- 2019 – 2020 Gagandeep Kaur (PhD student), Joseph Montemayor (MS student), Chastity Perry (DPM student), Armand Yambisa (Undergraduate intern), Marissa Cassaway and Daniel Cabral (Lab technicians). Identification and rearing methods of chilli thrips and twospotted spider mites, operation of camera-mounted microscope, growth chambers, data loggers, Potter spray tower, and CO₂-powered backpack sprayer, planning field surveys for chilli thrips sampling, calculation and application of insecticide formulations, bioassays, experimental design, chilli thrips feeding injury scoring, and collection, curation, and analysis of data. Small Fruits IPM lab, University of Florida
- 2019 Ryan Batts (Lab technician). Operation of growth chambers and data loggers and analysis of images of strawberry plant canopies using ImageJ software. Small Fruits IPM lab, University of Florida
- 2018 – 2020 Santosh Sanjel (PhD Student), Jariani Jani (PhD student), Jaqueline Coburn (MS student). Data carpentry and analysis and use of JMP software to produce presentable figures. University of Florida
- 2017 – 2018 Xinjie Yu (MS student). Disease scoring, image analysis using ImageJ software, and curation and analysis of data for screening of resistant pomegranate cultivars to leaf spot disease. University of Florida
- 2015 Zulaikha Mazlan (MS student). Experimental design, insect identification, and collection and curation of data for managing diamond back moth in cabbage with companion crops and reduced-risk insecticides. Fruit and Vegetable IPM lab, University of Florida

LEADERSHIP AND SERVICE**Professional Memberships**

- 2020 – present Association of Nepalese Agricultural Professionals of Americas (NAPA)
- 2014 – present Society of Overseas Nepalese Entomologists (SONE)
- 2014 – present Florida Entomological Society (FES)
- 2012 – present Entomological Society of America (ESA)

Professional Services (c= committee, w= workshop and seminar, m= meeting, v= volunteer)

- 2021 Organizer, ESA Organized Meeting, Society of Overseas Nepalese Entomologists Annual Meeting, Denver, Colorado^m
- 2020 – 2021 President, Society of Overseas Nepalese Entomologists^c
- 2019 – 2020 President-Elect, Society of Overseas Nepalese Entomologists^c
- 2019 Organizer and Moderator, ESA Organized Meeting, Society of Overseas Nepalese Entomologists Annual Meeting, St. Louis, MO^m
- 2019 Organizer, Graduate Student Research Day, Student Poster Competition, Gulf Coast Postdoc and Student Association, University of Florida
- 2019 Organizer, Workshop on “Scientific Poster and Abstract Writing: Translating Science Across Different Audiences”. Gulf Coast Postdoc and Student Association, University of Florida^w
- 2018 – 2019 Treasurer, Society of Overseas Nepalese Entomologists^c
- 2018 – 2019 Secretary, Nepalese Student Association, University of Florida^c
- 2018 Organizer and Moderator, Seminar on “Three Years in Industry: Observations of a Reformed Graduate Student”, Nepalese Student Association and Society of Overseas Nepalese Entomologists, University of Florida^w
- 2018 Organizer, ESA Organized Meeting, Society of Overseas Nepalese Entomologists Annual Meeting, Vancouver, Canada^m
- 2018 Organizer, Workshop on “Understanding your Evolving Role: Leadership and Teamwork in the Workplace”. Gulf Coast Postdoc and Student Association, University of Florida^w
- 2018 Organizer, Workshop on “The Science of Science Communication”. Gulf Coast Postdoc and Student Association, University of Florida^w
- 2017 – 2018 Organizer, GCPSA Bi-monthly Research Seminar Series, Gulf Coast Postdoc and Student Association, University of Florida^w
- 2017 – 2018 Marketing and Communication Officer, Gulf Coast Postdoc and Student Association, University of Florida^c
- 2017 – 2018 Webmaster and Communication Officer, Society of Overseas Nepalese Entomologists^c
- 2017 – 2018 Executive Committee Member, Nepalese Student Association, University of Florida^c

- 2016 – 2017 Executive Committee Member, Society of Overseas Nepalese Entomologists^c
- 2012 Editor, Graduate's Profile 2011 published by Institute of Agriculture and Animal Science, Tribhuvan University, Nepal^v
- 2011 Coordinator, a research on “Performance of different rice varieties under direct seeded rice technique at inner terai region of Nepal” conducted at Institute of Agriculture and Animal Science, Tribhuvan University, Nepal^v

Community Service and Outreach

- 2021 Grower's Field Day, Biology and management of spotted wing drosophila and blueberry bud mite in GA blueberries. Dec 3. MBG Marketing Group, Satilla REMC, Alma, GA.
- 2016 – 2020 Diagnosis of insect pests and damage on plant samples sent to Plant Diagnostics Clinic, Gulf Coast Research and Education Center, University of Florida
- 2018 Middle School STEM Tour, Gulf Coast Research and Education Center, University of Florida
- 2017 Field Day, Florida Strawberry Growers Association, Dover, FL
- 2017 GCREC AgExpo 2017, Gulf Coast Research and Education Center, University of Florida
- 2016 Entomology Booth, Florida State Fair, Tampa, FL
- 2015 Grower's Field Day, Tropical Research and Education Center, University of Florida

Certifications, Workshops, and Training

- 2019 – 2023 Pesticide Applicator License (Certified). Florida Department of Agriculture and Consumer Services. University of Florida
- 2019 UF/IFAS Grantsmanship Workshop. University of Florida
- 2019 Workshop on Scientific Poster and Abstract Writing: Translating Science Across Different Audiences, Gulf Coast Research and Education Center, University of Florida
- 2018 Workshop on Understanding your Evolving Role: Leadership and Teamwork in the Workplace, Gulf Coast Research and Education Center, University of Florida
- 2018 Workshop on The Science of Science Communication, Gulf Coast Research and Education Center, University of Florida
- 2015 Workshop on Strategy and Practical Approaches to Managing Vegetable Pests, UF/IFAS Miami-Dade County Extension, University of Florida

Design

- 2017 Logo design of Gulf Coast Postdoc and Student Association, University of Florida
- 2017 Graphic design of T-shirt for promoting Nepalese Student Association, University of Florida
- 2014 Logo design of Nepalese Student Association, University of Florida
- 2010 Graphic design of T-shirt to represent students of Paklihawa Campus of Tribhuvan University