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EDUCATION

- **Ph.D. 2013.** Institute of Ecology and Evolutionary Biology. National Taiwan University, Taiwan.
  Long-term Dynamics of Seed Rain and Seedling in a Subtropical Rain Forest, Fushan, Taiwan.
  Committee: Chang-Fu Hsieh (Chair), Kuo-Jung Chao, Yau-Lun Kuo, Yi-Ching Lin, I-Fang Sun
- **M.S. 2004.** Institute of Ecology and Evolutionary Biology. National Taiwan University, Taiwan.
  The Seed Rain in a Subtropical Rain Forest, Fushan, Northern Taiwan.
  Committee: Chang-Fu Hsieh (Chair), Wen-Liang Chiou, Yau-Lun Kuo, I-Fang Sun
- **B.S. 2002.** Department of Botany. National Taiwan University, Taiwan.

RESEARCH & WORK EXPERIENCE

- **Aug. 2018–Present.** Assistant Professor, National Sun Yat-sen University.
- **Sep. 2016–Jul. 2018.** Postdoctoral Researcher, National Dong Hwa University.
  Effect of Global Warming on Taiwan Forest Ecosystems
  PI: I-Fang Sun
- **Aug. 2105–Aug. 2016.** Postdoctoral Researcher, Smithsonian Environmental Research Center.
  Trait-mediated Assembly Mechanisms along an Environmental Stress Gradient
  PI: Sean M. McMahon
- **Aug. 2014–July 2015.** Postdoctoral Researcher, Tunghai University.
  Effects of Deer Browsing on Species Composition in a Karst Forest, Kenting
  PI: Yi-Ching Lin
- **Feb. 2013–July 2014.** Postdoctoral Researcher, National Dong Hwa University.
  Competition, Phylogeny, and Functional Traits in a Subtropical Rain Forest
  PI: I-Fang Sun
- **Aug. 2007–Jan. 2013.** Dissertation Research, National Taiwan University.
  Long-term Dynamics of Seed Rain and Seedling in a Subtropical Rain Forest, Fushan, Taiwan
  Advisor: Chang-Fu Hsieh
- **Jan. 2007–July 2007.** Research Assistant, Taiwan Forestry Research Institute.
  Long-term Dynamics of the Fushan Broad-leaved Forest
  PIs: Tzer-Tong Lin & Sheng-Hsin Su
- **Jan. 2006–Dec. 2006.** Research Assistant, Tunghai University
  Seed Rain and Seedling Demography in a Subtropical Rain Forest, Fushan, Taiwan
  PI: I-Fang Sun
- **July 2004–Dec. 2005.** Research Assistant, National Taiwan University

First Census of the Fushan 25-ha Long-term Plot and Phenology Study

PI: Chang-Fu Hsieh

- **June 2002–June 2004.** Master Thesis Research, National Taiwan University.

  The Seed Rain in a Subtropical Rain Forest, Fushan, Northern Taiwan

  Advisor: Chang-Fu Hsieh

- **May 2001–Apr. 2002.** Undergraduate Independent Research, National Taiwan University.

  Population Structure and Short-term Dynamics of Drypetes karapinensis *in Nanjenshan Tropical Rain Forest*

  Advisor: Chang-Fu Hsieh

GRANTS & FELLOWSHIPS

- **2023-2024.** Research Program Grant, **National Science and Technology Council**, Taiwan. Topic: *The effects of understory cover and biotic neighborhood on forest regeneration dynamics*.
- **2023-2024.** Science and Technology Program Grant, **Forestry and Nature Conservation Agency**, Taiwan. Topic: *Long-term monitoring of seed rain and tree seedling dynamics in the Fushan Forest Dynamics Plot.*
- **2023-2024.** Research Program Grant, **National Nature Park**, Taiwan. Topic: *Long-term monitoring and management of exotic plant species in the Shoushan National Nature Park*.
- **2022-2023.** Research Program Grant, **National Science and Technology Council**, Taiwan. Topic: *The effects of climatic and environmental variation on forest regeneration dynamics*.
- **2021-2022.** Research Program Grant, **Ministry of Science and Technology**, Taiwan. Topic: *Critical life-history stage of trees: Tracking seedling-to-sapling transition using process-based demographic models*.
- **2021-2022.** Research Program Grant, **National Nature Park**, Taiwan. Topic: *Flowering phenology in the Shoushan National Nature Park*.
- **2019.** Research Program Grant, **Ministry of Science and Technology**, Taiwan. Topic: *Proximate cues for flowering in a subtropical rain forest, Taiwan*.
- **2018-2022.** Science and Technology Program Grant, **Taiwan Forestry Bureau**, Taiwan. Topic: *Long-term monitoring of seed rain and tree seedling dynamics in the Fushan Forest Dynamics Plot*.
- **2017.** Postdoctoral Research Fellowship, **Ministry of Science and Technology**, Taiwan.
- **2016.** Postdoctoral Research Fellowship, **Ministry of Science and Technology**, Taiwan.
- **2015.** Postdoctoral Research Abroad Program Fellowship, **Ministry of Science and Technology**, Taiwan.
- **2014.** Postdoctoral Research Fellowship, **Ministry of Science and Technology**, Taiwan.
- **2013.** Science and Technology Program Grant, **Taiwan Forestry Bureau**, Taiwan. Topic: *Vulnerability and risk assessments for biodiversity to climate change: Climatic effects on plant phenology in a subtropical rain forest*.
- **2010.** International Conference Traveling Grant, **Ministry of Education**, Taiwan.
- **2001.** Undergraduate Independent Research Grant, **National Science Council**, Taiwan.

HONORS & AWARDS

- **2023.** Distinguished Course Award. Course: Sustainable Development Issues in the Context of Globalization. **National Sun Yat-sen University**, Taiwan.
- **2022.** Distinguished Course Award. Course: Local Flora. **National Sun Yat-sen University**, Taiwan.
- **2021.** Distinguished Course Award. Course: General Biology (I) & Local Flora. **National Sun Yat-sen University**, Taiwan.

- **2020.** Excellent Mentor Award, College of Science. **National Sun Yat-sen University**, Taiwan.
- **2019.** Distinguished Course Award. Course: General Biology (I) & Local Flora. **National Sun Yat-sen University**, Taiwan.
- **2004.** Excellent Award in Graduate Student Poster Presentation. Institute of Ecology and Evolutionary Biology, **National Taiwan University**, Taiwan.

PUBLICATIONS

Hülsmann, L., Chisholm, R. A., Comita, L., Visser, M. D., de Souza Leite, M., Aguilar, S., Anderson-Teixeira, K. J., Bourg, N. A., Brockelman, W. Y., Bunyavejchewin, S., Castaño, N., ***Chang-Yang, C.-H.***, Chuyong, G. B., Clay, K., Davies, S. J., Duque, A., Ediriweera, S., Ewango, C., Gilbert, G. S., Holík, J., Howe, R. W., Hubbell, S. P., Itoh, A., Johnson, D. J., Kenfack, D., Král, K., Larson, A. J., Lutz, J. A., Makana, J.-R., Malhi, Y., McMahon, S. M., McShea, W. J., Mohamad, M., Nasardin, M., Nathalang, A., Norden, N., Oliveira, A. A., Parmigiani, R., Perez, R., Phillips, R. P., Pongpattananurak, N., Sun, I. F., Swanson, M. E., Tan, S., Thomas, D., Thompson, J., Uriarte, M., Wolf, A. T., Yao, T. L., Zimmerman, J. K., Zuleta, D. & Hartig, F. (2024) Latitudinal patterns in stabilizing density dependence of forest communities. ***Nature***, 627, 564-571. https://doi.org/10.1038/s41586-024-07118-4

Huang, C.-L., Zelený, D., & **Chang-Yang, C.-H.** (2024). Integrating several analytical methods to assess strength of ecological processes behind metacommunity assembly. ***Oikos***, 2024, e10166. https://doi.org/10.1111/oik.10166

Chang-Yang, C.-H., Chiang, P.-H., Wright, S. J., Hsieh, C.-F., & Sun, I.-F. (2024). Proximate cues of flowering in a subtropical rain forest. ***Biotropica***, 56, 78–89. https://doi.org/10.1111/btp.13282

Qiu, T., Aravena, M.-C., Ascoli, D., Bergeron, Y., Bogdziewicz, M., Boivin, T., Bonal, R., Caignard, T., Cailleret, M., Calama, R., Calderon, S. D., Camarero, J. J., **Chang-Yang, C.-H.**, Chave, J., Chianucci, F., Courbaud, B., Cutini, A., Das, A. J., Delpierre, N., Delzon, S., Dietze, M., Dormont, L., Espelta, J. M., Fahey, T. J., Farfan-Rios, W., Franklin, J. F., Gehring, C. A., Gilbert, G. S., Gratzer, G., Greenberg, C. H., Guignabert, A., Guo, Q., Hacket-Pain, A., Hampe, A., Han, Q., Holik, J., Hoshizaki, K., Ibanez, I., Johnstone, J. F., Journe, V., Kitzberger, T., Knops, J. M. H., Kunstler, G., Kurokawa, H., Lageard, J. G. A., LaMontagne, J. M., Lefevre, F., Leininger, T., Limousin, J.-M., Lutz, J. A., Macias, D., Marell, A., McIntire, E. J. B., Moore, C. M., Moran, E., Motta, R., Myers, J. A., Nagel, T. A., Naoe, S., Noguchi, M., Oguro, M., Parmenter, R., Pearse, I. S., Perez-Ramos, I. M., Piechnik, L., Podgorski, T., Poulsen, J., Redmond, M. D., Reid, C. D., Rodman, K. C., Rodriguez-Sanchez, F., Samonil, P., Sanguinetti, J. D., Scher, C. L., Seget, B., Sharma, S., Shibata, M., Silman, M., Steele, M. A., Stephenson, N. L., Straub, J. N., Sutton, S., Swenson, J. J., Swift, M., Thomas, P. A., Uriarte, M., Vacchiano, G., Whipple, A. V., Whitham, T. G., Wion, A. P., Wright, S. J., Zhu, K., Zimmerman, J. K., Zywiec, M. & Clark, J. S. (2023) Masting is uncommon in trees that depend on mutualist dispersers in the context of global climate and fertility gradients. ***Nature Plants***, 9, 1044-1056. https://doi.org/10.1038/s41477-023-01446-5

Zuleta, D., Arellano, G., McMahon, S. M., Aguilar, S., Bunyavejchewin, S., Castaño, N., **Chang-Yang, C.-H.**, Duque, A., Mitre, D., Nasardin, M., Pérez, R., Sun, I.-F., Yao, T. L., Valencia, R., Krishna Moorthy, S. M., Verbeeck, H. & Davies, S. J. (2023) Damage to living trees contributes to almost half of the biomass losses in tropical forests. ***Global Change Biology***, 29, 3409–3420. https://doi.org/10.1111/gcb.16687

Bogdziewicz, M., Acuña, M.-C. A., Andrus, R., Ascoli, D., Bergeron, Y., Brveiller, D., Boivin, T., Bonal, R., Caignard, T., Cailleret, M., Calama, R., Calderon, S. D., Camarero, J. J., **Chang-Yang, C.-H.**, Chave, J., Chianucci, F., Cleavitt, N. L., Courbaud, B., Cutini, A., Curt, T., Das, Adrian J., Davi, H., Delpierre, N., Delzon, S., Dietze, M., Dormont, L., Farfan-Rios, W., Gehring, C. A.,

Gilbert, G. S., Gratzer, G., Greenberg, C. H., Guignabert, A., Guo, Q., Hacket-Pain, A., Hampe, A., Han, Q., Hoshizaki, K., Ibanez, I., Johnstone, J. F., Journé, V., Kitzberger, T., Knops, J. M. H., Kunstler, G., Kobe, R., Lageard, J. G. A., LaMontagne, J. M., Ledwon, M., Leininger, T., Limousin, J.-M., Lutz, J. A., Macias, D., Marell, A., McIntire, E. J. B., Moran, E., Motta, R., Myers, Jonathan A., Nagel, T. A., Naoe, S., Noguchi, M., Oguro, M., Kurokawa, H., Ourcival, J.-M., Parmenter, R., Perez-Ramos, I. M., Piechnik, L., Podgórski, T., Poulsen, J., Qiu, T., Redmond, M. D., Reid, C. D., Rodman, K. C., Šamonil, P., Holik, J., Scher, C. L., Van Marle, H. S., Seget, B., Shibata, M., Sharma, S., Silman, M., Steele, M. A., Straub, J. N., Sun, I.-F., Sutton, S., Swenson, Jennifer J., Thomas, P. A., Uriarte, M., Vacchiano, G., Veblen, T. T., Wright, B., Wright, S. J., Whitham, T. G., Zhu, K., Zimmerman, J. K., Zywiec, M. & Clark, J. S. (2023) Linking seed size and number to trait syndromes in trees. ***Global Ecology and Biogeography***, 32, 683–694.

Kaewsong, K., **Chang-Yang, C.-H.**, Bunyavejchewin, S., Kraichak, E., Yang, J., Sun, Z., Zhang, C., Li, W., Lin, L. & Sun, I.-F. (2022) Effects of fire disturbance on species and functional compositions vary with tree sizes in a tropical dry forest. ***PeerJ***, 10, e13270.

Qiu, T., Andrus, R., Aravena, M.-C., Ascoli, D., Bergeron, Y., Berretti, R., Berveiller, D., Bogdziewicz, M., Boivin, T., Bonal, R., Bragg, D. C., Caignard, T., Calama, R., Camarero, J. J., **Chang-Yang, C.-H.**, Cleavitt, N. L., Courbaud, B., Courbet, F., Curt, T., Das, A. J., Daskalakou, E., Davi, H., Delpierre, N., Delzon, S., Dietze, M., Calderon, S. D., Dormont, L., Espelta, J., Fahey, T. J., Farfan-Rios, W., Gehring, C. A., Gilbert, G. S., Gratzer, G., Greenberg, C. H., Guo, Q., Hacket-Pain, A., Hampe, A., Han, Q., Hille Ris Lambers, J., Hoshizaki, K., Ibanez, I., Johnstone, J. F., Journé, V., Kabeya, D., Kilner, C. L., Kitzberger, T., Knops, J. M. H., Kobe, R. K., Kunstler, G., Lageard, J. G. A., LaMontagne, J. M., Ledwon, M., Lefevre, F., Leininger, T., Limousin, J.-M., Lutz, J. A., Macias, D., McIntire, E. J. B., Moore, C. M., Moran, E., Motta, R., Myers, J. A., Nagel, T. A., Noguchi, K., Ourcival, J.-M., Parmenter, R., Pearse, I. S., Perez-Ramos, I. M., Piechnik, L., Poulsen, J., Poulton-Kamakura, R., Redmond, M. D., Reid, C. D., Rodman, K. C., Rodriguez-Sanchez, F., Sanguinetti, J. D., Scher, C. L., Schlesinger, W. H., Schmidt Van Marle, H., Seget, B., Sharma, S., Silman, M., Steele, M. A., Stephenson, N. L., Straub, J. N., Sun, I.-F., Sutton, S., Swenson, J. J., Swift, M., Thomas, P. A., Uriarte, M., Vacchiano, G., Veblen, T. T., Whipple, A. V., Whitham, T. G., Wion, A. P., Wright, B., Wright, S. J., Zhu, K., Zimmerman, J. K., Zlotin, R., Zywiec, M. & Clark, J. S. (2022) Limits to reproduction and seed size-number trade-offs that shape forest dominance and future recovery. ***Nature Communications***, 13, 2381.

Journé, V., Andrus, R., Aravena, M.-C., Ascoli, D., Berretti, R., Berveiller, D., Bogdziewicz, M., Boivin, T., Bonal, R., Caignard, T., Calama, R., Camarero, J. J., **Chang-Yang, C.-H.**, Courbaud, B., Courbet, F., Curt, T., Das, A. J., Daskalakou, E., Davi, H., Delpierre, N., Delzon, S., Dietze, M., Donoso Calderon, S., Dormont, L., Espelta, J. M., Fahey, T. J., Farfan-Rios, W., Gehring, C. A., Gilbert, G. S., Gratzer, G., Greenberg, C. H., Guo, Q., Hacket-Pain, A., Hampe, A., Han, Q., Hille Ris Lambers, J., Hoshizaki, K., Ibanez, I., Johnstone, J. F., Kabeya, D., Kays, R., Kitzberger, T., Knops, J. M. H., Kobe, R. K., Kunstler, G., Lageard, J. G. A., LaMontagne, J. M., Leininger, T., Limousin, J.-M., Lutz, J. A., Macias, D., McIntire, E. J. B., Moore, C. M., Moran, E., Motta, R., Myers, J. A., Nagel, T. A., Noguchi, K., Ourcival, J.-M., Parmenter, R., Pearse, I. S., Perez-Ramos, I. M., Piechnik, L., Poulsen, J., Poulton-Kamakura, R., Qiu, T., Redmond, M. D., Reid, C. D., Rodman, K. C., Rodriguez-Sanchez, F., Sanguinetti, J. D., Scher, C. L., Schmidt Van Marle, H., Seget, B., Sharma, S., Silman, M., Steele, M. A., Stephenson, N. L., Straub, J. N., Swenson, J. J., Swift, M., Thomas, P. A., Uriarte, M., Vacchiano, G., Veblen, T. T., Whipple, A. V., Whitham, T. G., Wright, B., Wright, S. J., Zhu, K., Zimmerman, J. K., Zlotin, R., Zywiec, M. & Clark, J. S. (2022) Globally, tree fecundity exceeds productivity gradients. ***Ecology Letters***, 25,

1471–1482.

Kambach, S., Condit, R., Aguilar, S., Bruelheide, H., Bunyavejchewin, S., **Chang-Yang, C.-H.**, Chen, Y.-Y., Chuyong, G., Davies, S., Ediriweera, S., Ewango, C., Fernando, E., Gunatilleke, I. A. U. N., Gunatilleke, C. S. V., Hubbell, S., Itoh, A., Kenfack, D., Kiratiprayoon, S., Lin, Y., Makana, J.-R., Mohamad, M., Pongpattananurak, N., Pérez, R., Rodriguez, L., Sun, I.-F., Tan, S., Thomas, D., Thompson, J., Uriarte, M., Valencia, R., Wirth, C., Wright, J., Wu, S.-H., Yamakura, T., Yao, T. L., Zimmerman, J. & Rüger, N. (2022) Consistency of demographic trade-offs across 13 (sub)tropical forests. ***Journal of Ecology***, 110, 1485–1496.

Piponiot, C., Anderson-Teixeira, K. J., Davies, S. J., Allen, D., Bourg, N. A., Burslem, D. F. R. P., Cárdenas, D., **Chang-Yang, C.-H.**, Chuyong, G., Cordell, S., Dattaraja, H. S., Duque, Á., Ediriweera, S., Ewango, C., Ezedin, Z., Filip, J., Giardina, C. P., Howe, R., Hsieh, C.-F., Hubbell, S. P., Inman-Narahari, F. M., Itoh, A., Janík, D., Kenfack, D., Král, K., Lutz, J. A., Makana, J.-R., McMahon, S. M., McShea, W., Mi, X., Bt. Mohamad, M., Novotný, V., O'Brien, M. J., Ostertag, R., Parker, G., Pérez, R., Ren, H., Reynolds, G., Md Sabri, M. D., Sack, L., Shringi, A., Su, S.-H., Sukumar, R., Sun, I.-F., Suresh, H. S., Thomas, D. W., Thompson, J., Uriarte, M., Vandermeer, J., Wang, Y., Ware, I. M., Weiblen, G. D., Whitfeld, T. J. S., Wolf, A., Yao, T. L., Yu, M., Yuan, Z., Zimmerman, J. K., Zuleta, D. & Muller-Landau, H. C. (2022) Distribution of biomass dynamics in relation to tree size in forests across the world. ***New Phytologist***, 234, 1664–1677.

Needham, J. F., Johnson, D. J., Anderson-Teixeira, K. J., Bourg, N., Bunyavejchewin, S., Butt, N., Cao, M., Cárdenas, D., **Chang-Yang, C.-H.**, Chen, Y.-Y., Chuyong, G., Dattaraja, H. S., Davies, S. J., Duque, A., Ewango, C. E. N., Fernando, E. S., Fisher, R., Fletcher, C. D., Foster, R., Hao, Z., Hart, T., Hsieh, C.-F., Hubbell, S. P., Itoh, A., Kenfack, D., Koven, C. D., Larson, A. J., Lutz, J. A., McShea, W., Makana, J.-R., Malhi, Y., Marthews, T., Bt. Mohamad, M., Morecroft, M. D., Norden, N., Parker, G., Shringi, A., Sukumar, R., Suresh, H. S., Sun, I.-F., Tan, S., Thomas, D. W., Thompson, J., Uriarte, M., Valencia, R., Yao, T. L., Yap, S. L., Yuan, Z., Hu, Y., Zimmerman, J. K., Zuleta, D. & McMahon, S. M. (2022) Demographic composition, not demographic diversity, predicts biomass and turnover across temperate and tropical forests. ***Global Change Biology***, 28, 2895–2909.

Martini, F., **Chang-Yang, C.-H.** & Sun, I.-F. (2022) Variation in biotic interactions mediates the effects of masting and rainfall fluctuations on seedling demography in a subtropical rainforest. ***Journal of Ecology***, 10, 762–771.

Chang-Yang, C.-H., Su, M.-H., Chiang, P.-H. & Hsieh, C.-F. (2022) Updating the checklist of the naturalized flora in Taiwan. ***Taiwania***, 67, 1–8.

Zuleta, D., Arellano, G., Muller-Landau, H. C., McMahon, S. M., Aguilar, S., Bunyavejchewin, S., Cárdenas, D., **Chang-Yang, C.-H.**, Duque, A., Mitre, D., Nasardin, M., Pérez, R., Sun, I.-F., Yao, T. L. & Davies, S. J. (2022) Individual tree damage dominates mortality risk factors across six tropical forests. ***New Phytologist***, 233, 705–721.

Chang-Yang, C.-H., Needham, J., Lu, C.-L., Hsieh, C.-F., Sun, I.-F. & McMahon, S. M. (2021) Closing the life cycle of forest trees: The difficult dynamics of seedling-to-sapling transitions in a subtropical rainforest. ***Journal of Ecology***, 109, 2705–2716.

Zhong, Y., Chu, C., Myers, J. A., Gilbert, G. S., Lutz, J. A., Stillhard, J., Zhu, K., Thompson, J., Baltzer, J. L., He, F., LaManna, J. A., Davies, S. J., Aderson-Teixeira, K. J., Burslem, D. F. R. P., Alonso, A., Chao, K.-J., Wang, X., Gao, L., Orwig, D. A., Yin, X., Sui, X., Su, Z., Abiem, I., Bissiengou, P., Bourg, N., Butt, N., Cao, M., **Chang-Yang, C.-H.**, Chao, W.-C., Chapman, H., Chen, Y.-Y., Coomes, D. A., Cordell, S., de Oliveira, A. A., Du, H., Fang, S., Giardina, C. P., Hao, Z., Hector, A., Hubbell, S. P., Janík, D., Jansen, P. A., Jiang, M., Jin, G., Kenfack, D., Král, K., Larson, A. J., Li, B., Li, X., Li, Y., Lian, J., Lin, L., Liu, F., Liu, Y., Liu, Y., Luan, F., Luo, Y.,

Ma, K., Malhi, Y., McMahon, S. M., McShea, W., Memiaghe, H., Mi, X., Morecroft, M., Novotny, V., O'Brien, M. J., Ouden, J. d., Parker, G. G., Qiao, X., Ren, H., Reynolds, G., Samonil, P., Sang, W., Shen, G., Shen, Z., Song, G.-Z. M., Sun, I. F., Tang, H., Tian, S., Uowolo, A. L., Uriarte, M., Wang, B., Wang, X., Wang, Y., Weiblen, G. D., Wu, Z., Xi, N., Xiang, W., Xu, H., Xu, K., Ye, W., Yu, M., Zeng, F., Zhang, M., Zhang, Y., Zhu, L. & Zimmerman, J. K. (2021) Arbuscular mycorrhizal trees influence the latitudinal beta-diversity gradient of tree communities in forests worldwide. ***Nature Communications***, 12, 3137.

Wills, C., Wang, B., Fang, S., Wang, Y., Jin, Y., Lutz, J., Thompson, J., Harms, K. E., Pulla, S., Pasion, B., Germain, S., Liu, H., Smokey, J., Su, S.-H., Butt, N., Chu, C., Chuyong, G., **Chang-Yang, C.-H.**, Dattaraja, H. S., Davies, S., Ediriweera, S., Esufali, S., Fletcher, C. D., Gunatilleke, N., Gunatilleke, S., Hsieh, C.-F., He, F., Hubbell, S., Hao, Z., Itoh, A., Kenfack, D., Li, B., Li, X., Ma, K., Morecroft, M., Mi, X., Malhi, Y., Ong, P., Rodriguez, L. J., Suresh, H. S., Sun, I. F., Sukumar, R., Tan, S., Thomas, D., Uriarte, M., Wang, X., Wang, X., Yao, T. L. & Zimmermann, J. (2021) Interactions between all pairs of neighboring trees in 16 forests worldwide reveal details of unique ecological processes in each forest, and provide windows into their evolutionary histories. ***PLoS Computational Biology***, 17, e1008853.

Cao, K., Condit, R., Mi, X., Chen, L., Ren, H., Xu, W., Burslem, D. F. R. P., Cai, C., Cao, M., Chang, L.-W., Chu, C., Cui, F., Du, H., Ediriweera, S., Gunatilleke, C. S. V., Gunatilleke, I. U. A. N., Hao, Z., Jin, G., Li, J., Li, B., Li, Y., Liu, Y., Ni, H., O'Brien, M. J., Qiao, X., Shen, G., Tian, S., Wang, X., Xu, H., Xu, Y., Yang, L., Yap, S. L., Lian, J., Ye, W., Yu, M., Su, S.-H., **Chang-Yang, C.-H.**, Guo, Y., Li, X., Zeng, F., Zhu, D., Zhu, L., Sun, I.-F., Ma, K. & Svenning, J.-C. (2021) Species packing and the latitudinal gradient in beta-diversity. ***Proceedings of the Royal Society B: Biological Sciences***, 288, 20203045.

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Davies, S. J., Abiem, I., Abu Salim, K., Aguilar, S., Allen, D., Alonso, A., Anderson-Teixeira, K., Andrade, A., Arellano, G., Ashton, P. S., Baker, P. J., Baker, M. E., Baltzer, J. L., Basset, Y., Bissiengou, P., Bohlman, S., Bourg, N. A., Brockelman, W. Y., Bunyavejchewin, S., Burslem, D. F. R. P., Cao, M., Cárdenas, D., Chang, L.-W., **Chang-Yang, C.-H.**, Chao, K.-J., Chao, W.-C., Chapman, H., Chen, Y.-Y., Chisholm, R. A., Chu, C., Chuyong, G., Clay, K., Comita, L. S., Condit, R., Cordell, S., Dattaraja, H. S., de Oliveira, A. A., den Ouden, J., Detto, M., Dick, C., Du, X., Duque, Á ., Ediriweera, S., Ellis, E. C., Obiang, N. L. E., Esufali, S., Ewango, C. E. N., Fernando, E. S., Filip, J., Fischer, G. A., Foster, R., Giambelluca, T., Giardina, C., Gilbert, G. S., Gonzalez-Akre, E., Gunatilleke, I. A. U. N., Gunatilleke, C. V. S., Hao, Z., Hau, B. C. H., He, F., Ni, H., Howe, R. W., Hubbell, S. P., Huth, A., Inman-Narahari, F., Itoh, A., Janík, D., Jansen, P. A., Jiang, M., Johnson, D. J., Jones, F. A., Kanzaki, M., Kenfack, D., Kiratiprayoon, S., Král, K., Krizel, L., Lao, S., Larson, A. J., Li, Y., Li, X., Litton, C. M., Liu, Y., Liu, S., Lum, S. K. Y., Luskin, M. S., Lutz, J. A., Luu, H. T., Ma, K., Makana, J.-R., Malhi, Y., Martin, A., McCarthy, C., McMahon, S. M., McShea, W. J., Memiaghe, H., Mi, X., Mitre, D., Mohamad, M., Monks, L., Muller-Landau, H. C., Musili, P. M., Myers, J. A., Nathalang, A., Ngo, K. M., Norden, N., Novotny, V., O'Brien, M. J., Orwig, D., Ostertag, R., Papathanassiou, K., Parker, G. G., Pérez, R., Perfecto, I., Phillips, R. P., Pongpattananurak, N., Pretzsch, H., Ren, H., Reynolds, G., Rodriguez, L. J., Russo, S. E., Sack, L., Sang, W., Shue, J., Singh, A., Song, G.-Z. M., Sukumar, R., Sun, I.

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Su, S.-H., Guan, B. T., **Chang-Yang, C.-H.**, Sun, I.-F., Wang, H.-H. & Hsieh, C.-F. (2020) Multi-stemming and size enhance dominant tree survival in a frequently typhoon-disturbed forest. ***Journal of Vegetation Science***, 31, 429–439.

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Johnson, D. J., Needham, J., Xu, C., Massoud, E. C., Davies, S. J., Anderson-Teixeira, K. J., Bunyavejchewin, S., Chambers, J. Q., **Chang-Yang, C.-H.**, Chiang, J.-M., Chuyong, G. B., Condit, R., Cordell, S., Fletcher, C., Giardina, C. P., Giambelluca, T. W., Gunatilleke, N., Gunatilleke, S., Hsieh, C.-F., Hubbell, S., Inman-Narahari, F., Kassim, A. R., Katabuchi, M., Kenfack, D., Litton, C. M., Lum, S., Mohamad, M., Nasardin, M., Ong, P. S., Ostertag, R., Sack, L., Swenson, N. G., Sun, I. F., Tan, S., Thomas, D. W., Thompson, J., Umaña, M. N., Uriarte, M., Valencia, R., Yap, S., Zimmerman, J., McDowell, N. G. & McMahon, S. M. (2018) Climate sensitive size-dependent survival in tropical trees. ***Nature Ecology & Evolution***, 2, 1436–1442.

Hogan, J. A., Zimmerman, J., Thompson, J., Uriarte, M., Swenson, N. G., Condit, R., Hubbell, S. P., Johnson, D. J., Sun, I.-F., **Chang-Yang, C.-H.**, Su, S.-H., Ong, P., Rodriguez, L., Monoy, C., Yap, S. & Davies, S. J. (2018) The frequency of cyclonic wind storms shapes tropical forest dynamism and functional trait dispersion. ***Forests***, 9, 404.

Needham, J., Merow, C., **Chang-Yang, C.-H.**, Caswell, H. & McMahon, S. M. (2018) Inferring forest fate from demographic data: from vital rates to population dynamic models. ***Proceedings of the Royal Society B: Biological Sciences***, 285, 20172050.

Usinowicz, J., **Chang-Yang, C.-H.**, Chen, Y.-Y., Clark, J.S., Fletcher, C., Garwood, N.C., Hao, Z., Johnstone, J., Lin, Y., Metz, M.R., Masaki, T., Nakashizuka, T., Sun, I.-F., Valencia, R., Wang, Y., Zimmerman, J.K., Ives, A.R. & Wright, S.J. (2017) Temporal coexistence mechanisms contribute to the latitudinal gradient in forest diversity. ***Nature***, 550, 105–108.

Herrmann, V.M.D, McMahon, S.M., Detto M., Lutz, J.A., Davies, S.J., **Chang-Yang, C.-H.**, & Anderson-Teixeira, K.J. (2016) Tree circumference dynamics in four forests characterized using automated dendrometer. ***PLoS ONE***, 11, e0169020.

Chang-Yang, C.-H., Sun, I.-F., Tsai, C.-H., Lu, C.-L. & Hsieh, C.-F. (2016) ENSO and frost co-determine decade-long temporal variation in flower and seed production in a subtropical rain forest. ***Journal of Ecology***, 104, 44–54.

Chang-Yang, C.-H., Su, S.-H., Wang, H.-H., Lin, T.-T. & Hsieh, C.-F. (2015) Topography and canopy openness influence spatial variations in mortality, recruitment, and growth of a subtropical tree community. ***Taiwan Journal of Forest Science***, 30, 259–269.

Zhong, L., **Chang-Yang, C.-H.**, Lu, P., Gu, X., Lei, Z., Cai, Y., Zheng, F., Sun, I.-F. & Yu, M. (2015) Community structure and species composition of the secondary evergreen broad-leaved forest: the analyses for a 9-ha forest dynamics plot in Wuyanling Nature Reserve, Zhejiang Province,

East China. ***Biodiversity Science***, 23**,** 619–629.

Hu, X., **Chang-Yang, C.-H.**, Mi, X., Du, Y. & Chang, Z. (2015) The influence of climate, phylogeny, and functional traits on flowering phenology in a subtropical evergreen broad-leave forest, east China. ***Biodiversity Science***, 23, 601–609.

Chang-Yang, C.-H., Lu, C.-L., Sun, I.-F. & Hsieh, C.-F. (2013) Long-term seedling dynamics of tree species in a subtropical rain forest, Taiwan. ***Taiwania***, 58, 35–43.

Chang-Yang, C.-H., Lu, C.-L., Sun, I.-F. & Hsieh, C.-F. (2013) Flowering and fruiting patterns in a subtropical rain forest, Taiwan. ***Biotropica***, 45, 165–174.

Su, S.-H., Hsieh, C.-F., **Chang-Yang, C.-H.**, Lu, C.-L. & Guan, B.-T. (2010) Micro-topographic differentiation of the tree species composition in a subtropical submontane rainforest in northeastern Taiwan. ***Taiwan Journal of Forestry Science***, 25, 63–80.

Su, S.-H., **Chang-Yang, C.-H.**, Lu, C.-L., Tsui, C.-C., Lin, T.-T., Lin, C.-L., Chiou, W.-L., Kuan, L.-H., Chen, Z.-S. & Hsieh, C.-F. (2007) ***Fushan Subtropical Forest Dynamics Plot: Tree Species Characteristics and Distribution Patterns***. Taiwan Forestry Research Institute, Taipei, Taiwan.

PRESENTATIONS

2024. Chang-Yang, C.-H. *Long-term dynamics of seedling-to-sapling transitions in tropical and subtropical forests*. **Taiwan Ecological Research Network (TERN) Annual Meeting @ Congress of Animal Behavior and Ecology (CABE)**. Taipei, Taiwan. Invited oral presentation.

2024. Luo, P.-J. & **Chang-Yang, C.-H.** *Relationship between allometries and functional traits in 65 tree species in a subtropical forest in Taiwan*. **Congress of Animal Behavior and Ecology (CABE)**. Taipei, Taiwan. Contributed poster presentation.

2024. Wu, S.-H., Ko, J. C.-J., Lin, R.-S., **Chang-Yang, C.-H.**, & Chang, H.-W. *Evaluating community-wide temporal sampling in passive acoustic monitoring: A comprehensive study of avian vocal patterns in subtropical montane forests*. **Congress of Animal Behavior and Ecology (CABE)**. Taipei, Taiwan. Contributed poster presentation.

2023. Lan, I.-H. & **Chang-Yang, C.-H.** *Diversity and spatial distribution of epiphytes in the Fushan subtropical rain forest*. **Symposium on Sustainable Development of Forest Resources**. Ilan, Taiwan. Contributed poster presentation.

2023. Ku, C.-C., **Chang-Yang, C.-H.**, Song, G.-Z. M., Chao, W.-C., & Chao, K.-J. *The importance of large-diameter trees in subalpine forests to carbon cycle*. **Symposium on Sustainable Development of Forest Resources**. Ilan, Taiwan. Contributed poster presentation.

2023. Chang-Yang, C.-H., Chiang, P.-H., Chao, K.-J., Chao, W.-C., Lin, Y.-C., & Sun I-F. *Temporal dynamics of seedling-to-sapling transition in tropical and subtropical forests*. **Association for Tropical Biology and Conservation (ATBC) 2023 Annual Meeting**. Coimbatore, India. Contributed oral presentation.

2023. Zeng, P.-L. & **Chang-Yang, C.-H.** *Flowering phenology along environmental gradients in Taiwan*. **Congress of Animal Behavior and Ecology (CABE)**. Taichung, Taiwan. Contributed oral presentation.

2023. Teng, Y.-L. & **Chang-Yang, C.-H.** *Trait-environmental interactions on tree recruitment in a subtropical rain forest*. **Congress of Animal Behavior and Ecology (CABE)**. Taichung, Taiwan. Contributed oral presentation.

2022. **Chang-Yang, C.-H.** *Flowering phenology in the Shoushan National Nature Park*. **National Nature Park 3rd Annual Meeting**. Kaohsiung, Taiwan. Invited oral presentation.

2022. Chang-Yang, C.-H. *Reproductive phenology in a tropical seasonal forest*. **Mini-symposium of Taiwan Plant Ecology Working Group 3rd symposium**. National Sun Yat-sen University, Kaohsiung, Taiwan. Invited oral presentation.

2022. Chang-Yang, C.-H., Chiang, P.-H., Hsieh, C.-F., & Sun I-F. *Proximate cues of flowering in a subtropical rain forest*. **Association for Tropical Biology and Conservation (ATBC) 2022 Annual Meeting**. Cartagena, Colombia. Contributed oral presentation.

2021. Zuleta, D., Arellano, G., McMahon, S. M., Krishna Moorthy, S. M., Muller-Landau, H. C.,

Aguilar, S., Bunyavejchewin, S., Cárdenas, D., **Chang-Yang, C.-H.**, Duque, A., Mitre, D., Nasardin, M., Pérez, R., Sun, I-F., Yao, T. L., Valencia, R., & Davies, S. J. *Damage on living trees contributes to 36% of biomass losses in tropical forests*. **American Geophysical Union (AGU) Fall Meeting 2021**. New Orleans, U.S.A. Contributed oral presentation.

2021. Chang-Yang, C.-H., Chao, K.-J., Ku, C.-C., Chao, W.-C., & Sun, I.-F. *Research on forest dynamics in Taiwan: A brief retrospect and prospect*. **Taiwan Ecological Research Network (TERN) Annual Meeting**. Taichung, Taiwan. Invited oral presentation.

2021. Chang-Yang, C.-H. *Closing the life cycle of forest trees: The seedling-to-sapling transitions in a subtropical rainforest*. **Taiwan Plant Ecology Working Group 2nd symposium**. Tunghai University, Taichung, Taiwan. Invited oral presentation.

2021. Chang-Yang, C.-H. & Lu, C.-L. *Integration and sharing of long-term data on forest dynamics: Fushan Forest Dynamics Plot as an example*. Ecological Informatics Mini-Symposium, Biodiversity Research Center, **Academia Sinica**. Virtual meeting. Invited seminar.

2021. Martini F., **Chang-Yang, C.-H.**, & Sun I-F. *Interannual variation in seedling survival and the strength of density dependence are modulated by abundance of recruits and precipitation*. **Association for Tropical Biology and Conservation (ATBC) 2021 Virtual Meeting**. Contributed oral presentation.

2021. Chang, K.-H. & **Chang-Yang C.-H.** *Drivers of tree growth in a subtropical rain forests: Soil nutrients, topography, and neighborhood crowding*. **Congress of Animal Behavior, Ecology and Environmental Education (CABE)**. Tainan, Taiwan. Contributed poster presentation.

2020. Chang-Yang, C.-H., Chiang P.-H., Hsieh, C.-F., & Sun, I-F. *Proximate cues of flowering in a subtropical rain forest*. **Taiwan Plant Ecology Working Group 1st symposium**. National Dong-Hwa University, Taiwan. Invited oral presentation.

2019. Su, S.-H., **Chang-Yang, C.-H.**, & Wang, H.-H. *Tree survival in a natural broadleaved forest under frequent typhoon disturbances.* **Symposium on Sustainable Development of Forest Resources**. Taipei, Taiwan. Contributed oral presentation.

2019. Chang-Yang, C.-H., Sun, I.-F., Lu, C.-L., & Hsieh, C.-F. *Effects of ENSO and tropical cyclones on the flower and seed production in a subtropical rain forest*. **Association for Tropical Biology and Conservation (ATBC) 56th Annual Meeting**. Antananarivo, Madagascar. Contributed oral presentation.

2018. Chang-Yang, C.-H. *Closing the life cycle of forest trees: Seedling-to-sapling transition in a subtropical rain forest*. **The 6th Taiwan-Japan Ecology Workshop**. Tainan, Taiwan. Invited oral presentation.

2018. Chang-Yang, C.-H., Needham J., Sun I-F., Lu C.-L., Hsieh C.-F., & McMahon S. M. *Diversity Takes Time: Temporal Dynamics of Seedling Demography in a Subtropical Rain Forest*. **Association for Tropical Biology and Conservation (ATBC) 55th Annual Meeting**. Kuching, Malaysia. Contributed oral presentation.

2017. Chang-Yang, C.-H. *Closing the life cycle of forest trees: Seedling-to-sapling transition in a subtropical rain forest*. **MOST Biodiversity Division Workshop**. Taichung, Taiwan. Invited oral presentation.

2017. Lu, J.-W., Fu, Y.-H., **Chang-Yang, C.-H.**, Wu, S.-H. & Lin, Y.-C. Effects of ungulate herbivory on seedling communities of woody plants in the Kenting karst forest. **Symposium on Sustainable Development of Forest Resources**. Ilan, Taiwan. Contributed poster presentation.

2016. Chang-Yang, C.-H. *Seedling-to-sapling transition in a subtropical rain forest*. **The 10th Cross-Strait Symposium on Forest Dynamics Plots**. Beijing, China. Contributed oral presentation.

2015. Chang-Yang, C.-H., Sun, I.-F., Lu, C.-L. & Hsieh, C.-F. *Spatial and temporal variation in seedling recruitment of nine tree species in a subtropical rain forest*. **Ecological Society of America (ESA) 100th Annual Meeting**. Baltimore, USA. Contributed poster presentation.

2014. Chang-Yang, C.-H., Sun, I.-F., Lu, C.-L. & Hsieh, C.-F. *The effects of ENSO and spring frost on flower production in a subtropical rain forest*. **The 4th Taiwan-Japan Ecology Workshop**. Hualien, Taiwan. Invited oral presentation.

2014. Chang-Yang, C.-H. *Interannual variation in seedfall and seedling recruitment in a subtropical rain forest*. **The 8th Cross-Strait Symposium on Forest Dynamics Plots**. Shenyang, China. Contributed oral presentation.

2014. Chang-Yang, C.-H. *Seasonal and interannual variation in plant reproduction in a subtropical rain forest*. **Taiwan Ecological Research Network (TERN) Annual Meeting**. Taipei, Taiwan. Invited oral presentation.

2013. Chang-Yang, C.-H., Lu, C.-L., Sun, I.-F. & Hsieh, C.-F. *Interannual variation in flower and seed production in a subtropical rain forest*. **The 7th Cross-Strait Symposium on Forest Dynamics Plots**. Wenzhou, China. Contributed oral presentation.

2012. Chang-Yang, C.-H., Lu, C.-L. Sun, I.-F., & Hsieh, C.-F. *Flowering and fruiting phenology in a subtropical rain forest, Taiwan*. **Congress on Animal Behavior, Ecology and Global Change (CABE)**. Taipei, Taiwan. Invited oral presentation.

2010. Chang-Yang, C.-H., Lu, C.-L., Sun, I.-F. & Hsieh, C.-F. *Inter-specific variation in recruitment limitation in a subtropical rain forest*. **The 9th National Symposium on the Conservation and Sustainable Use of Biodiversity in China**. Xiamen, China. Contributed oral presentation.

2010. Chang-Yang, C.-H., Lu, C.-L., Sun, I.-F. & Hsieh, C.-F. *Synchronous flowering in a subtropical rain forest, Fushan, Taiwan*. **Ecological Society of America (ESA) 95th Annual Meeting**. Pittsburgh, USA. Contributed oral presentation.

2010. Chen, Y.-C., **Chang-Yang C.-H.** & Lin, Y. K. *Population dynamics and temporal partition of small mammals in Guandu salt marsh*. **Congress on Animal Behavior, Ecology and Biological Education (CABE)**. Changhua, Taiwan. Contributed poster presentation.

2009. Chang-Yang, C.-H., Lu, C.-L., Sun, I.-F. & Hsieh, C.-F. *Tree seedling dynamics over seven years in a subtropical rain forest, Taiwan*. **The 3rd Cross-Strait Symposium on Forest Dynamics Plots**. Guangzhou, China. Invited oral presentation.

2008. Chang-Yang, C.-H., Lu, C.-L., Sun, I.-F. & Hsieh, C.-F. *Flowering patterns in a subtropical rain forest, Fushan, Taiwan*. **Taiwan Ecological Research Network (TERN) Annual Meeting**. Taichung, Taiwan. Invited oral presentation.

2008. Chang-Yang, C.-H., Lu, C.-L., Sun, I.-F. & Hsieh, C.-F. *Flowering patterns in a subtropical rain forest, Fushan, Taiwan*. **The 2nd Cross-Strait Symposium on Forest Dynamics Plots and Information Management**. Hangzhou, China. Invited oral presentation.

2007. Chang-Yang, C.-H., Lu, C.-L., Sun, I.-F. & Hsieh, C.-F. *Flowering and fruiting phenology of a subtropical rain forest, Fushan, Taiwan*. **The 1st Cross-Strait Symposium on Forest Dynamics Plots**. Taipei, Taiwan. Invited oral presentation.

2007. Chang-Yang, C.-H., Lu, C.-L., Sun, I.-F. & Hsieh, C.-F. *Flowering and fruiting phenology of a subtropical rain forest, Fushan, Taiwan*. **Symposium on Frontiers of Plant Science**. Taipei, Taiwan. Invited oral presentation.

2006. Chang-Yang, C.-H., Lu, C.-L., Sun, I.-F. & Hsieh, C.-F. *The Seed rain and seedling dynamics in the Fushan subtropical rain forest*. **Taiwan Ecological Research Network (TERN) Annual Meeting**. Taipei, Taiwan. Contributed oral presentation.

2006. Chang-Yang, C.-H., Lu, C.-L. & Hsieh, C.-F. *The seed rain and the seedling dynamics in the Fushan subtropical rain forest*. **Taiwan Forest Dynamics Plot Network Symposium**. Taichung, Taiwan. Invited oral presentation.

2006. Chang-Yang, C.-H., Lu, C.-L., Su, S.-H. & Hsieh, C.-F. *Regeneration strategies of dominant tree species in a subtropical rain forest in northern Taiwan*. **Association for Tropical Biology and Conservation (ATBC) Annual Meeting**. Kunming, China. Contributed poster presentation.

2005. Chang-Yang, C.-H., Lu, C.-L. & Hsieh, C.-F. *The seed rain and seedling establishment in the Fushan subtropical rain forest*, Taiwan. **Ecological Society of America (ESA) 90th Annual Meeting**. Monteral, Canada. Contributed poster presentation.

2005. Lu, C.-L., **Chang-Yang**, **C.-H.** & Hsieh, C.-F. *The seed rain and seedling establishment of tree species in a subtropical rain forest in Fushan*, northern Taiwan. **Center for Tropical Forest Science (CTFS) Symposium**. Panama City, Panama. Contributed poster presentation.

2004. Chang-Yang, C.-H. & Hsieh, C.-F. *The seed rain in a subtropical rain forest, Fushan, northern Taiwan*. **Center for Tropical Forest Science (CTFS) Symposium**. Taipei, Taiwan. Contributed poster presentation.

INVITED SEMINARS

2024. Chang-Yang, C.-H. *Plant diversity in the Shoushan tropical seasonal forest*. Faculty of Biomedical Science and Environmental Biology, **Kaohsiung Medical University**. Kaohsiung, Taiwan. Invited seminar.

2023. Chang-Yang, C.-H. *The forest(s) they are a-changin*. Department of Chinese Literature, **National Sun Yat-sen University**. Kaohsiung, Taiwan. Invited seminar.

2023. Chang-Yang, C.-H. *Forests of Taiwan under climate change*: *Long-term dynamics in the Fushan subtropical rain forest*. Center for General Education, **National Cheng Kung University.** Tainan, Taiwan. Invited seminar.

2023. Chang-Yang, C.-H. *Effects of climate change on forests in Taiwan*. The Pathways to the University: Campus Life Orientation Camp, Si Wan College, **National Sun Yat-sen University**. Invited lightning talk.

2023. Chang-Yang, C.-H. *Long-term dynamics of seed rain and seedling in a subtropical rain forest*. **International Ecology School**. Ilan, Taiwan. Invited seminar.

2023. Chang-Yang, C.-H. *Natural history of the Shoushan tropical seasonal forest*. Taiwan Studies Program, **University of Washington**. Kaohsiung, Taiwan. Invited seminar.

2023. Chang-Yang, C.-H. *Plant diversity and reproductive phenology in the Shoushan tropical seasonal forest.* Faculty of Biomedical Science and Environmental Biology, **Kaohsiung Medical University**. Kaohsiung, Taiwan. Invited seminar.

2022. Chang-Yang, C.-H. *Effects of climate change on forests in Taiwan*. Department of Forestry, **National Pingtung University of Science and Technology**. Pingtung, Taiwan. Invited seminar.

2022. Chang-Yang, C.-H. *Taiwan's forests under climate change*. **Citizen of the Earth**. Kaohsiung, Taiwan. Invited seminar.

2022. Chang-Yang, C.-H. *Long-term ecological research in the Fushan Forest Dynamics Plot*: *More than 1000 weeks of seed rain censuses, 20 years of seedling dynamics, 170 thousand trees' demography*. Fushan Research Center, **Taiwan Forestry Research Institute**. Ilan, Taiwan. Invited seminar.

2022. Chang-Yang, C.-H. *The difficult dynamics of seedling-to-sapling transitions in a subtropical rainforest.* **International Long-term Ecological Research (ILTER)** Webinar. Invited seminar.

2022. Chang-Yang, C.-H. *The difficult dynamics of seedling-to-sapling transitions in a subtropical rainforest*. Institute of Tropical Plant Sciences and Microbiology, **National Cheng Kung University**. Tainan, Taiwan. Invited seminar.

2020. Chang-Yang, C.-H. *The forest(s) they are a-changin*. Institute of Ecology and Evolutionary Biology, **National Taiwan University**. Taipei, Taiwan. Invited seminar.

2020. Chang-Yang, C.-H. *Long-term dynamics in a subtropical rain forest, Fushan, Taiwan*. Center for Essential Education, **National Sun Yat-sen University**. Kaohsiung, Taiwan. Invited seminar.

2020. Chang-Yang, C.-H. *Mechanisms of species diversity maintenance*. Gifted Education Program for High School Biology, **National Sun Yat-sen University**. Kaohsiung, Taiwan. Invited seminar.

2020. Chang-Yang, C.-H. *Latitudinal patterns of biodiversity*. Department of Geography, **National Taiwan Normal University**. Taipei, Taiwan. Invited seminar.

2019. Chang-Yang, C.-H. *Climate fluctuations, extreme weather events, and forest dynamics: Lessons from the long-term ecological monitoring in Fushan*. Graduate Institute of Bioresources, **National Pingtung University of Science and Technology**. Pingtung, Taiwan. Invited seminar.

2019. Chang-Yang, C.-H. *Climate fluctuations, extreme weather events, and forest dynamics: Lessons from the long-term ecological monitoring in Fushan*. Department of Life Science, **National**

Taiwan University. Taipei, Taiwan. Invited seminar.

2018. Chang-Yang, C.-H. *Effects of ENSO and typhoons on the flower and seed production in a subtropical rain forest*. Global Change Research Center, **National Taiwan University**. Taipei, Taiwan. Invited seminar.

2017. Chang-Yang, C.-H. *Climate fluctuations, extreme weather events, and forest dynamics: Lessons from the long-term ecological monitoring in Fushan*. Department of Life Science, **National Taiwan Normal University**. Taipei, Taiwan. Invited seminar.

2017. Chang-Yang, C.-H. *Climate fluctuations, extreme weather events, and forest dynamics: Lessons from the long-term ecological monitoring in Fushan*. Department of Biological Sciences, **National Sun Yat-sen University**. Kaohsiung, Taiwan. Invited seminar.

2015. Chang-Yang, C.-H. *Effects of ENSO and spring frost on flower and seed production in a subtropical rain forest*. Department of Biological Resources, **National Chiayi University**. Chiayi, Taiwan. Invited seminar.

2014. Chang-Yang, C.-H. *Long-term dynamics of seed rain and seedling in a subtropical rain forest*. Department of Life Science, **Tunghai University**. Taichung, Taiwan. Invited seminar.

2014. Chang-Yang, C.-H. *Interannual variation in seedfall and seedling recruitment in a subtropical rain forest*. **Center for Tropical Forest Science-Smithsonian Institute Global Earth Observatory (CTFS-SIGEO) Analytical Workshop**. Xishungbanna, China. Invited seminar.

2013. Chang-Yang, C.-H. *Long-term dynamics of seed rain and seedling in a subtropical rain forest*. Institute of Ecology and Evolutionary Biology, **National Taiwan University**. Taipei, Taiwan. Invited seminar.

2009. Chang-Yang, C.-H., Lu, C.-L., Sun, I.-F. & Hsieh, C.-F. *Seed rain and tree seedling dynamics in a subtropical rain forest, Taiwan*. Department of Life Science, **National Yang-Ming University**. Taipei, Taiwan. Invited seminar.

2006. Chang-Yang, C.-H., Lu, C.-L., Su, S.-H. & Hsieh, C.-F. *The seed rain and the seedling dynamics in the Fushan subtropical rain forest*. Faculty of Biomedical Science and Environmental Biology, **Kaohsiung Medical University**. Kaohsiung, Taiwan. Invited seminar.

TRAINING WORKSHOPS

- **June 2019.** Nanyang Technological University

  Center for Tropical Forest Science-Smithsonian Institute Global Earth Observatory (CTFS-SIGEO) Analytical Workshop, Singapore.

  Mentors: Sean M. McMahon

- **July 2015.** Smithsonian Tropical Research Institute, Smithsonian Institute.

  Center for Tropical Forest Science-Smithsonian Institute Global Earth Observatory (CTFS-SIGEO) Analytical Workshop, Panama.

  Mentors: S. Joseph Wright & Liza S. Comita

- **July 2014.** Xishungbanna Tropical Botanical Garden, Chinese Academy of Science.

  Center for Tropical Forest Science-Smithsonian Institute Global Earth Observatory (CTFS-SIGEO) Analytical Workshop, China.

  Mentors: Sean M. McMahon, Sabrina E. Russo, & Stuart J. Davies

- **July 2013.** Smithsonian Conservational Biology Institute, Smithsonian Institute.

  Center for Tropical Forest Science-Smithsonian Institute Global Earth Observatory (CTFS-SIGEO) Analytical Workshop, USA.

  Mentors: S. Joseph Wright & Helene C. Muller-Landau

- **May 2013.** National Dong Hwa University.

  International Workshop on Ecological Statistics, Taiwan.

  Instructor: Pierre Legendre

- **June 2012.** National Dong Hwa University.
  Workshop on Ecological Statistical Modelling, Taiwan.
  Instructor: Jesse R. Lasky
- **May 2012.** National Dong Hwa University.
  Phylogenetic and Functional Trait Analyses of Communities Workshop, Taiwan.
  Instructor: Nathan G. Swenson
- **Apr. 2009.** Tunghai University & Taiwan Forestry Research Institute.
  Workshop on Likelihood Methods, Taiwan.
  Instructor: Charles D. Canham
- **Apr. 2008.** Tunghai University & Smithsonian Tropical Research Institute.
  Workshop on Plant Functional Traits and Carbon Budget, Taiwan
  Instructors: S. Joseph Wright & Helene C. Muller-Landau
- **Aug. 2007.** Research Center for Biodiversity, Academia Sinica.
  Analytical Workshop on Quantitative Ecology, Taiwan.
  Instructor: Pierre Legendre, Daniel A. Griffith, & Fangliang He
- **June 2005.** Smithsonian Tropical Research Institute, Smithsonian Institute.
  Center for Tropical Forest Science Analytical Workshop, Panama.
  Instructor: Richard Condit

TEACHING & MENTORING EXPERIENCE

- **2002–2024.** Instructor. *Research Experience in Forest Dynamics for Undergraduates*. Fushan Research Center & Fushan Forest Dynamics Plot, Taiwan.
- **2022.** Instructor. *Git & GitHub mini-workshop*. National Sun Yat-sen University, Taiwan.
- **2019.** Instructor. *Advanced Field Ecology: Forest Ecosystems in Taiwan – Tropics to Treeline.* Nanyang Technological University, Singapore.
- **2018.** Instructor. *Advanced Field Placement in Ecology and Society (Taiwan Ecology Field Course).* Nanyang Technological University, Singapore.
- **2007–2012.** Teaching Assistant. *Service Education: Herbarium Specimen Archive*, Department of Life Science, National Taiwan University, Taiwan. (seven semesters)
- **2008.** Teaching Assistant. *Service Education: Campus Grasslands Survey*, Department of Life Science, National Taiwan University, Taiwan. (one semester)
- **2008.** Teaching Assistant. *General Biology Lab*. Department of Life Science, National Taiwan University, Taiwan. (one semester)
- **2007.** Teaching Assistant. *Service Education: Environmental Consciousness*, Department of Life Science, National Taiwan University, Taiwan. (one semester)
- **2003.** Teaching Assistant. *Flora and Vegetation of Taiwan*, Department of Botany, National Taiwan University, Taiwan. (one semester)

COURSES

Biostatistics and Practice I & II. 2022–onward. National Sun Yat-sen University.

Computer Intensive Statistics in Ecology with R. 2024. National Sun Yat-sen University.

Forest Ecology. 2020–2021. National Sun Yat-sen University.

General Biology I. 2018–onward. National Sun Yat-sen University. Co-Instructor with Dr. Shen-Horn Yen.

Local Flora. 2018–onward. National Sun Yat-sen University.

R Basics for Ecologists. 2019–2021. National Sun Yat-sen University.

Quantitative Ecology. 2019–2022. National Sun Yat-sen University.

Statistical Rethinking: Bayesian statistics with R. 2021. National Sun Yat-sen University.

Studies in Ecological Methodology. 2021–onward. National Sun Yat-sen University.

Sustainable Development Issues in the Context of Globalization. 2022–onward. National Sun Yat-sen University.

SERVICES

Scientific Journals Peer Review

Applied Vegetation Science (1)
Biodiversity and Conservation (1)
Biodiversity Data Journal (1)
Biological Reviews (1)
Biotropica (4)
Botanical Studies (2)
Ecology Letters (1)
Ecological Research (1)
Ecology and Evolution (3)
Forest Ecology and Management (1)
Heliyon (4)
Journal of Ecology (5)
Journal of Marine Science and Technology (1)
Journal of Vegetation Science (2)
New Phytologist (2)
PeerJ (2)
PLoS ONE (2)
Plant Ecology (1)
Population Ecology (1)
Taiwan Journal of Forest Science (9)
Taiwania (12)

Grant Review

National Science and Technology Council (NSTC) project proposal review (6)

National Science and Technology Council (NSTC) undergraduate study proposal review (10)

Chinese Taipei Biology Olympiad Committee, Taiwan: Ecology Group. 2018–Present

Early Career Scientist Committee, Association for Tropical Biology and Conservation. 2020–Present

National Nature Park Consultative Committee. 2019–2021