Christopher B. Anderson, PhD.

Biogeography · Remote Sensing · Forest Carbon · Ecosystem Services

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Education

Stanford University *Stanford, CA, USA*
PhD, Biology *2016 - 2020*
- Advisor: Gretchen C. Daily

University of California, Santa Cruz *Santa Cruz, CA, USA*
BS, Ecology and Evolutionary Biology *2004 - 2008*
- Advisor: Ingrid M. Parker

Professional Experience

2023+	**Lead Scientist, Forest Ecosystems**, Planet Labs PBC
2016-2022	**Co-Founder and CTO**, Salo Sciences
2009-2016	**Research Ecologist**, Carnegie Institution for Science

Publications

Anderson, C. B., Joseph, M.B., Söthe, C., Mendes, F.D.S., Maschler, T., McCarthy, R.C., Mascaro, J., O'Shea, T., Rosenthal, A., & Marvin, D.C. (2025). Forest Carbon Diligence: Digital MRV for Jurisdictional and Voluntary Offsets Markets. *EcoEvoRxiv*

Anderson, C. B. (2025). Designing Multi-Modal Ecosystem Monitoring Technologies: A Network of Networks Approach. *EcoEvoRxiv*

Farner, J. E., Howard, M., Smith, J. R., **Anderson, C. B.**, & Mordecai, E. A. (2025). Local tree cover predicts mosquito species richness and disease vector presence in a tropical countryside landscape. *Landscape Ecology*

Sothe, C., Mccarthy, R., & **Anderson, C. B.** (2024). An Unsupervised Approach to Build a Training Dataset for Individual Tree Crown Delineation Using Airborne Lidar and Field Observations. *International Geoscience and Remote Sensing Symposium 2024*

Anderson, C. B. (2023). *elapid*: Species distribution modeling tools for Python. *Journal of Open Source Software*

Langhans, K. E., Echeverri, A., Daws, S. C., Moss, S. N., **Anderson, C. B.**, Chaplin Kramer, R., Hendershot, J.N., Liu, L., Mandle, L., Nguyen, O. Ou, S.X., Remme, R. P., Schmitt, R. J. P., Vogl, A., & Daily, G. C. (2023). Centring justice in conceptualizing and improving access to urban nature. *People and Nature*

Langhans, K. E., Schmitt, R. J., Chaplin-Kramer, R., **Anderson, C. B.**, Bolaños, C. V., Cabezas, F. V., Dirzo, R., Goldstein, J.A., Horangic, T., Granados, C.M., Powell, T.M., & Daily, G. C. (2022). Modeling multiple ecosystem services and beneficiaries of riparian reforestation in Costa Rica. *Ecosystem Services*

Echeverri, A., Smith, J. R., MacArthur-Waltz, D., Lauck, K. S., **Anderson, C. B.**, Monge Vargas, R., Alvarado Quesada, I., Wood, S., Chaplin-Kramer, R., & Daily, G. C. (2022). Biodiversity and infrastructure interact to drive tourism to and within Costa Rica. *PNAS*

Shocket, M. S., **Anderson, C. B.**, Caldwell, J. M., Childs, M. L., Couper, L. I., Han, S., Harris M. J., Howard M. E., MacDonald A. J., Nova N. & Mordecai, E. A. (2021). Environmental drivers of vector-borne disease. *Population biology of vector-borne diseases*, Oxford University Press

Hendershot, J. N., Smith, J. R., **Anderson, C. B.**, Letten, A. D., Frishkoff, L. O., Zook, J. R., Fukami, T., & Daily, G. C. (2020). Intensive farming drives long-term shifts in avian community composition. *Nature*

Bratman, G. N., **Anderson, C. B.**, Berman, M. G., Cochran, B., De Vries, S., Flanders, J., Folke, C., Frumkin, H., Gross, J. J., Hartig, T., Kahn Jr., P. H., Kuo M., Lawler, J. J., Levin, P. S., Lindahl, T., Meyer-Lindenberg, A., Mitchell, R., Ouyang, Z., Roe, J., Scarlett, L., Smith, J. R., van den Bosch, M., Wheeler, B. W, White, M. P., Zheng, H. & Daily, G.C. (2019). Nature and mental health: An ecosystem service perspective. *Science advances*

Ramirez-Reyes C., Brauman, K. A., Chaplin-Kramer, R., Galford, G. L., Adamo, S. B., Anderson, C. B., **Anderson, C. B.**, Allington, G. R. H, Bagstad, K. J., Coe, M. T., Cord, A. F., Dee, L. E., Gould, R. K., Jain, M., Kowal, V. A., Muller-Karger, F., Norriss J., Potapov, P., Qiu J., Rieb J. T., Robinson, B. E., Samberg, L. H., Singh, N., Szeto, N. H., Voigt, B., Watson, K., Wright, T. M. (2019). Reimagining the potential of earth observations for ecosystem services assessments. *Science of the Total Environment*

Anderson, C. B. (2018). Biodiversity monitoring, earth observations and the ecology of scale. *Ecology Letters*

Anderson, C. B. (2018). The CCB-ID approach to tree species mapping with airborne imaging spectroscopy. *PeerJ*

Smith, J. R., Letten, A. D., Ke, P. J., **Anderson, C. B.**, Hendershot, J. N., Dhami, M. K., Dlott, Glade A., Grainger, T. N., Howard, M. E., Morrison, B. M. L., Routh, D., San Juan, P. A., Mooney, H. A., Mordecai, E. A, Crowther, T. W., & Daily, G. C. (2018). A global test of ecoregions. *Nature Ecology and Evolution*

Asner, G. P., Martin, R. E., Knapp, D. E., Tupayachi, R., **Anderson, C. B.**, Sinca, F., Vaughn, N. R, & Llactayo, W. (2017). Airborne laser-guided imaging spectroscopy to map forest trait diversity and guide conservation. *Science*

Asner, G. P., Martin, R. E., **Anderson, C. B.**, Kryston, K., Vaughn, N., Knapp, D. E., Bentley, L. P., Shenkin, A., Salinas, N., Sinca, F., Tupayachi, R., Quispe Huaypar, K., Montoya Pillco, M., Cori Álvarez, F. D., Díaz, S., Enquist, B. and Malhi, Y. (2017), Scale dependence of canopy trait distributions along a tropical forest elevation gradient. *New Phytologist*

Asner, G. P., Knapp, D. E., **Anderson, C. B.**, Martin, R. E., Vaughn, N. (2016). Large-scale climatic and geophysical controls on the leaf economics spectrum. *PNAS*

Graves, S. J., Asner, G. P., Martin, R. E., **Anderson, C. B.**, Colgan, M. S., Kalantari, L., & Bohlman, S. A. (2016). Tree Species Abundance Predictions in a Tropical Agricultural Landscape with a Supervised Classification Model and Imbalanced Data. *Remote sensing*

Barbosa, J. M., Sebastián‐González, E., Asner, G. P., Knapp, D. E., **Anderson, C. B.**, Martin, R. E., & Dirzo, R. (2016). Hemiparasite–host plant interactions in a fragmented landscape assessed via imaging spectroscopy and LiDAR. *Ecological Applications*

Asner, G. P., Brodrick, P. G., **Anderson, C. B.**, Vaughn, N., Knapp, D. E., & Martin, R. E. (2016). Progressive forest canopy water loss during the 2012–2015 California drought. *PNAS*

Baldeck, C. A., Asner, G. P., Martin, R. E., **Anderson, C. B.**, Knapp, D. E., Kellner, J. R., & Wright, S. J. (2015). Operational tree species mapping in a diverse tropical forest with airborne imaging spectroscopy. *PloS One*

Asner, G. P., **Anderson, C. B.**, Martin, R. E., Tupayachi, R., Knapp, D. E., & Sinca, F. (2015). Landscape biogeochemistry reflected in shifting distributions of chemical traits in the Amazon forest canopy. *Nature Geoscience*

Somers, B., Asner, G. P., Martin, R. E., **Anderson, C. B.**, Knapp, D. E., Wright, S. J., & Van De Kerchove, R. (2015). Mesoscale assessment of changes in tropical tree species richness across a bioclimatic gradient in Panama using airborne imaging spectroscopy. *Remote Sensing of Environment*

Taylor, P., Asner, G., Dahlin, K., **Anderson, C. B.**, Knapp, D., Martin, R., Mascaro, J., Chazdon, R., Cole, R., Wanek, W., Hofhansl, F., Malavassi, E., Vilchez, B., & Townsend, A. (2015). Landscape-scale controls on aboveground forest carbon stocks on the Osa Peninsula, Costa Rica. *PloS One*

Higgins, M. A., Asner, G. P., **Anderson, C. B.**, Martin, R. E., Knapp, D. E., Tupayachi, R., Perez, E., Elespuru, N., & Alonso, A. (2015). Regional-scale drivers of forest structure and function in northwestern Amazonia. *PloS One*

Asner, G. P., Martin, R. E., **Anderson, C. B.**, & Knapp, D. E. (2015). Quantifying forest canopy traits: Imaging spectroscopy versus field survey. *Remote Sensing of Environment*

Asner, G. P., Knapp, D. E., Martin, R. E., Tupayachi, R., **Anderson, C. B.**, Mascaro, J., Sinca, F., Chadwick, K.D., Higgins, M.A., Farfan, W., Llactayo, W., & Silman, M. R. (2014). Targeted carbon conservation at national scales with high-resolution monitoring. *PNAS*

Marvin, D. C., Asner, G. P., Knapp, D. E., **Anderson, C. B.**, Martin, R. E., Sinca, F., & Tupayachi, R. (2014). Amazonian landscapes and the bias in field studies of forest structure and biomass. *PNAS*

Asner, G. P., Martin, R. E., Carranza‐Jiménez, L., Sinca, F., Tupayachi, R., **Anderson, C. B.**, & Martinez, P. (2014). Functional and biological diversity of foliar spectra in tree canopies throughout the Andes to Amazon region. *New Phytologist*

Higgins, M. A., Asner, G. P., Martin, R. E., Knapp, D. E., **Anderson, C. B.**, Kennedy-Bowdoin, T., Saenz, R., Aguilar, A. & Wright, S. J. (2014). Linking imaging spectroscopy and LiDAR with floristic composition and forest structure in Panama. *Remote Sensing of Environment*

Asner, G. P., Martin, R. E., Tupayachi, R., **Anderson, C. B.**, Sinca, F., Carranza-Jiménez, L., & Martinez, P. (2014). Amazonian functional diversity from forest canopy chemical assembly. *PNAS* .

Asner, G. P., **Anderson, C. B.**, Martin, R. E., Knapp, D. E., Tupayachi, R., Sinca, F., & Malhi, Y. (2014). Landscape-scale changes in forest structure and functional traits along an Andes-to-Amazon elevation gradient. *Biogeosciences*

Mascaro, J., Asner, G. P., Knapp, D. E., Kennedy-Bowdoin, T., Martin, R. E., **Anderson, C. B.**, Higgins, M., & Chadwick, K. D. (2014). A tale of two "forests": Random Forest machine learning aids tropical forest carbon mapping. *PLoS One*

Asner, G. P., Kellner, J. R., Kennedy-Bowdoin, T., Knapp, D. E., **Anderson, C. B.**, & Martin, R. E. (2013). Forest canopy gap distributions in the southern Peruvian Amazon. *PloS One*

Asner, G. P., Mascaro, J., **Anderson, C. B.**, Knapp, D. E., Martin, R. E., Kennedy-Bowdoin, T., van Breugel, M., Davies, S., Hall, J.S., Muller-Landau, H.C., Potvin, C., Souza, W., Wright, S.J. & Bermingham, E. (2013). High-fidelity national carbon mapping for resource management and REDD+. *Carbon Balance and Management*

Asner, G. P., Knapp, D. E., Boardman, J., Green, R. O., Kennedy-Bowdoin, T., Eastwood, M., Martin, R.E., **Anderson, C. B.**, & Field, C. B. (2012). Carnegie Airborne Observatory-2: Increasing science data dimensionality via high-fidelity multi-sensor fusion. *Remote Sensing of Environment*

Asner, G. P., Martin, R. E., Knapp, D. E., Tupayachi, R., **Anderson, C. B.**, Carranza, L., Houcheime, M., Sinca, F., & Weiss, P. (2011). Spectroscopy of canopy chemicals in humid tropical forests. *Remote Sensing of Environment*

Science Community Contributions

Peer Reviewer For

American Journal of Botany
Biogeosciences
BMJ Global Health
Climate
EcoHealth
Forests
Journal of Ecology
Frontiers in Forests and Global Change
Nature Communications
PNAS
Remote Sensing of Environment
Remote Sensing
Sensors
Sustainability

Professional Memberships

Ecological Society of America
American Geophysical Union