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Select publications:

Pickett, S. T. A., Grove, J. M., Boone, C. G., & Buckley, G. L. 2023. **Resilience of racialized segregation is an ecological factor: Baltimore case study.** *Buildings & Cities*.

Grabowski, Zbigniew J., Timon McPhearson, and Steward T. A. Pickett. 2023. **Transforming US urban green infrastructure planning to address equity.** *Landscape And Urban Planning*.

Machlis, G.E., Román, M.O., and Pickett, S.T.A. 2022. **A framework for research on recurrent acute disasters.** *Science Advances*.

Locke, D. H., B. Hall, J.M. Grove, S.T.A. Pickett, et al. 2021. **Residential housing segregation and urban tree canopy in 37 US cities.** *Npj Urban Sustainability*.

Pickett, S.T.A., M.L. Cadenasso, and A.M. Rademacher. 2021. **Coproduction of place and knowledge for ecology with the city.** *Urban Ecosystems*.

Zhou, W., S.T.A. Pickett, and T. McPhearson. 2021. **Conceptual frameworks facilitate integration for transdisciplinary urban science.** *npj Urban Sustainability*.

Grove, J.M., M. Cadenasso, S.T.A. Pickett, G.E. Machlis, and W.R.Jr. Burch. 2015. **The Baltimore School of Urban Ecology.** *Yale University Press*.

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Steward T.A. Pickett, Urban Ecologist

Research mission:

- Discover the origins, dynamics, and applications of ecological heterogeneity
- Investigate dynamic urban regions as social-ecological systems
- Connect ecology and urban planning to create more just and sustainable cities, nationally and globally
- Improve ecological disturbance theory and its application to recurrent social-ecological disasters in the face of climate change

Summary:

Steward Pickett is an expert in the ecology of vegetation, landscapes, and urban ecosystems. The founding director of the Baltimore Ecosystem Study (1997-2016), he also co-directed the Urban Sustainability Research Coordination Network. These projects expanded American urban ecology as an interdisciplinary field, and established lasting connections between urban designers, policymakers, and managers. In addition to co-producing useful ecological knowledge in Baltimore and other cities, the projects serve as models for transdisciplinary social-ecological research and practice.

Pickett's research focuses on the ecological structure and dynamics of vegetated and urban landscapes, with national and global applications. Among his research sites: vacant lots in urban Baltimore, primary forests in western Pennsylvania, post-agricultural fields in New Jersey, China's rapidly urbanizing Yanqi Valley, and riparian woodlands and savannas in Kruger National Park, South Africa. Work on the legacies of

segregation by redlining in Baltimore and 36 other U.S. cities has opened a scientific horizon on ecology of segregation. Recent work on the environmental justice of green stormwater infrastructure in Baltimore and 19 other cities has suggested how to improve equity of municipal stormwater planning.

These past and existing projects are leading Pickett to explore the urban-rural-wild transformations in the Hudson River Valley region that are driven by social, hurricane, and climate-driven disturbances to New York City. The ecological processes supporting water retention, forest biodiversity, and habitat availability are sensitive to those climate-driven disturbances, but remain unexamined across the Hudson Valley region.

By applying new ecologically informed theory to the massive transformations urban regions are experiencing locally and globally, Pickett is working with other Cary scientists to help convert cities and suburbs from ecological liabilities into ecological assets.



Science for environmental solutions