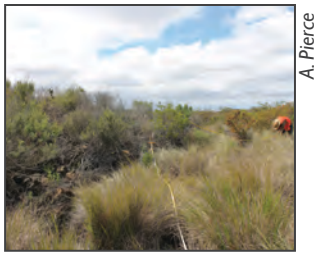
Fire and Fuels



A. Pierce

Our scientists provide scientific findings that will improve management actions intended to enhance resiliency and sustainability of wildland ecosystems affected by fire and reduce the potential for adverse effects resulting from wildland fire, including loss of life and property. Current research seeks to:

- Model and forecast global change impacts and restoration benefits on fire risk and behavior
- Investigate fire threats to Pacific Island communities and native ecosystems altered by exotic fire regimes.

Urban Ecosystems and Social Dynamics

Our scientists conduct research and communicate science needed to understand and enhance the interconnections among ecosystems, people, and societies to resolve issues identified by stakeholders. Current research seeks to:

- Investigate coupled human and natural system dynamics
- Build local capacity through technical transfer, education, and demonstration
- Understand and enhance locally relevant and sustainable agro-forest and bio-energy production systems.

A. Pierce

CONTRIBUTIONS TO EDUCATION AND MANAGEMENT

The Institute offers internships and training opportunities in collaboration with research and conservation institutions. Internship programs seek to develop
the next generation of island scientists and resource managers. Training targets students, early career professionals and continuing education for land managers and state foresters.

In partnership with Region 5 Pacific Southwest Region, grants to state and island forestry agencies help support urban and community forestry, forest stewardship by private landowners, forest health, and fire management assistance.

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USDA United States Department of Agriculture Forest Service

Institute of Pacific Islands Forestry

USDA Forest Service
Pacific Southwest Research Station, Hilo, HI

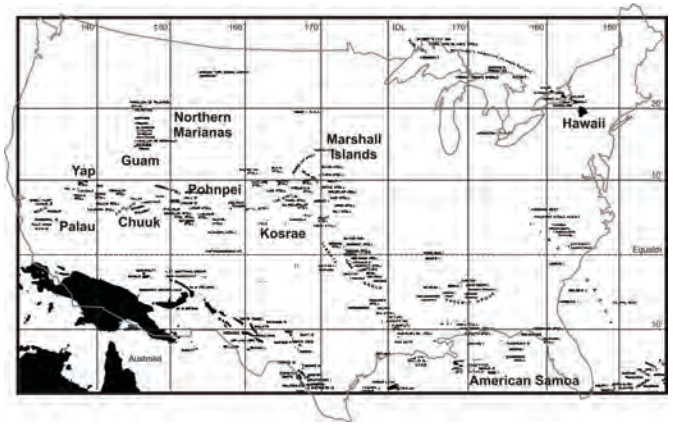
MISSION

Through research, education, and demonstration, we provide scientific and technical information needed to restore, conserve, and sustain tropical forests and wetlands of the Pacific.

Institute of Pacific Islands Forestry

The Institute of Pacific Islands Forestry (IPIF), a unit of USDA Forest Service's Pacific Southwest Research Station, has been a center of research and technology transfer since 1967. The Institute addresses information needs to support the management, conservation, and restoration of natural forest and wetland ecosystems and landscapes throughout the Pacific. The Institute's area of responsibility includes seven U.S.-affiliated political entities in the Pacific: the State of Hawai`i, the Territory of Guam, the Territory of American Samoa, the Commonwealth of the Northern Mariana Islands, the Republic of the Marshall Islands, the Federated States of Micronesia, and the Republic of Palau.

The focus of research and technological assistance centers upon Hawai`i and other islands of the Pacific, but results are applicable to many tropical and temperate ecosystems of the world, including the U.S. mainland.



The Institute conducts research within four program areas:

- Conservation of Biodiversity
- Ecosystem Function and Health
- Fire and Fuels
- Urban Ecosystems and Social Dynamics

Conservation of Biodiversity

Our scientists develop knowledge and tools that support conservation and restoration of biological diversity across all lands, including the identification of current and future conservation challenges and climate adaptation approaches. Current research seeks to:

- Understand invasive species impacts on forest biodiversity
- Identify biocontrol of invasive plant species that impact native ecosystems
- Investigate restoration techniques for tropical ecosystems
- Assess sea-level rise impacts on coastal/mangrove forests and Pacific Island communities.

Ecosystem Function and Health

Our scientists lead the development and communication of knowledge and technology required to sustain, enhance, and restore the function, health, and productivity of ecological, hydrological, and atmospheric systems, and associated benefits to society. Current research seeks to:

L Warman

- Understand climate change impacts on tropical ecosystem form and function

J. Knowlton

- Assess landscape carbon/water levels and their responses to management and climate change
- Identify optimal approaches for forest management, silviculture, tree improvement, and conservation genetics

- Utilize forest monitoring, inventory, and assessment tools and techniques, including remote sensing and plot-based applications.

Hawaii Experimental Tropical Forest (HETF)

Part of the USDA Forest Service Experimental Forest and Range Network, the HETF provides landscapes, facilities, and data/information to support research and education activities that contribute to a better understanding of the biological diversity and functioning of tropical ecosystems and their management.

The HETF is managed cooperatively between the State of Hawai`i Department of Land and Natural Resources – Division of Forestry and Wildlife and the Institute of Pacific Islands Forestry, USDA Forest Service Pacific Southwest Research Station (www.fs.fed.us/psw/ef/hawaii/ and www.hetf.us/).