Fish biologists and aquatic ecologists in the US Forest Service’s Research and Development organization provide the knowledge and tools to sustain the health, diversity, and productivity of aquatic animals and habitats in the Nation’s forests and grasslands. We conduct basic and applied research on aquatic species and ecosystems to both inform land management and address existing and emerging threats, such as climate change and invasive species. Our research addresses restoration actions and strategies across large landscapes and watersheds; management of aquatic species and habitats under future climate scenarios; development of innovative protocols for inventory and monitoring of fish populations and habitats; and strategies to meet growing demands for water, energy, and other forest-based commodities while ensuring the sustainability and diversity of aquatic species. We emphasize science delivery and work with a diverse group of partners, including Federal, State, and Tribal resource agencies, universities, nongovernmental organizations, and international cooperators.

For more information contact our scientists or John Rothlisberger, National Program Leader for Fish and Aquatic Ecology Research, at jrothlisberger@fs.fed.us.
# Table of Contents

## Southern Research Station

- Susan Adams ................................................................. 4
- Andy Dolloff ........................................................................ 4
- Wendell Haag ...................................................................... 4
- Craig Roghair ....................................................................... 4
- Mel Warren .......................................................................... 4

## Northern Research Station

- Sue Eggert ........................................................................... 5
- Keith Nislow ........................................................................ 5
- Anne Timm ........................................................................... 6

## Rocky Mountain Research Station

- Tom Black ........................................................................... 6
- Dona Horan ......................................................................... 6
- Dan Isaak ............................................................................. 7
- Frank McCormick .............................................................. 7
- David Nagel ......................................................................... 7
- Russ Thurow ......................................................................... 7
- Mike Young .......................................................................... 8

## Pacific Northwest Research Station

- Susan Alexander ............................................................... 8
- Ryan Bellmore ..................................................................... 8
- Pete Bisson *(Emeritus)* ..................................................... 8
- Kelly Burnett *(Emeritus)* .................................................. 8
- Shannon Claeson .............................................................. 8
- Richard Edwards .............................................................. 9
- Rebecca Flitcroft .............................................................. 9
- Alex Foster .......................................................................... 9
- Bruce Hansen ...................................................................... 9
- Sherri Johnson .................................................................... 9
- Deanna Olson ..................................................................... 10
- Brooke Penaluna ................................................................ 10
- Karl Polivka ........................................................................ 10
Gordie Reeves ......................................................................................................................... 10
Ashley Steel ............................................................................................................................. 10
Steve Wondzell ....................................................................................................................... 10

**Pacific Southwest Research Station** .......................................................................................... 11
Bret Harvey .................................................................................................................................. 11
Carolyn Hunsaker ...................................................................................................................... 11
Christina Liang .......................................................................................................................... 11
Richard MacKenzie .................................................................................................................. 12
Kathleen Matthews ................................................................................................................... 12
Karen Pope ................................................................................................................................ 12
Hartwell Welsh, Jr. ..................................................................................................................... 12

**International Institute of Tropical Forestry** ........................................................................... 13
Grizelle Gonzalez ...................................................................................................................... 13
William Gould .......................................................................................................................... 13
Tamara Heartsill-Scalley .......................................................................................................... 13
**Susan Adams**  
SRS (Oxford, MS)  
662-234-2744 ext. 267  
sadams01@fs.fed.us  
http://www.fs.fed.us/research/people/sadams01  
http://www.srs.fs.usda.gov/cbhr/  

**Keywords**: Ecology of stream and river fishes; crayfish distribution, ecology, taxonomy, and conservation; aquatic community responses to disturbance  
**Current projects:**  
- Effects of disturbances on Alabama shad and other fishes in the Pascagoula River, MS  
- Taxonomy and distribution of Mississippi crayfishes, with a goal of creating an identification guide  
- Effects of stream warming on sculpin and dace distributions in Montana streams  
- Landscape-scale assessment of warmwater stream temperatures in relation to fish and crayfish populations and to impoundments  
- Building a better understanding of crayfish ecology and how human activities affect crayfish populations  

**Andy Dolloff**  
SRS (Blacksburg, VA)  
540-230-8126  
adolloff@fs.fed.us  
http://www.fs.fed.us/research/people/adolloff  

**Keywords**: aquatic organism passage; climate change - effects on ecosystem services and species distribution; habitat inventory and monitoring  
**Current projects:**  
- Climate change: characterization and prediction of water temperature in headwater streams  
- Effect of climate change on transition of aquatic communities from cold-, cool-, and warmwater habitats  
- Influence of disturbances on aquatic organisms  
- American eel freshwater distribution, age & growth, and habitat use  

**Wendell Haag**  
SRS (Frankfort, KY)  
662-234-2744 ext. 245  
whaag@fs.fed.us  
http://www.fs.fed.us/research/people/whaag  

**Keywords**: freshwater mussel ecology and conservation; warmwater fish; influence of life histories on community assembly and vulnerability to extinction; general aquatic ecology and environmental history; applying life history knowledge to management practices  
**Current projects:**  
- Reconstructing environmental history from long-term growth records in mussel shell rings  
- Experimental studies of mussel recruitment and community assembly in hatchery ponds  
- Long-term population dynamics of wild mussels  

**Craig Roghair**  
SRS (Blacksburg, VA)  
540-230-8126  
croghair@fs.fed.us  
http://www.fs.fed.us/research/people/croghair  
http://www.srs.fs.usda.gov/catt  

**Keywords**: science delivery, science-management partnerships, technology transfer, brook trout, headwater mountain streams  
**Current projects:**  
- Center Manager, Center for Aquatic Technology Transfer (CATT)
Mel Warren
SRS (Oxford, MS)
662-234-2744, ext. 246
mwarren01@fs.fed.us
http://www.fs.fed.us/research/people/mwarren01

Keywords: stream fish and mussel ecology; fish and flooded forest interactions; aquatic organism conservation

Current projects:
- North American Freshwater Fishes: Natural History, Ecology, and Conservation (co-editor)
- Landscape-scale stream temperature modeling and population structure, demographics, and genetic conservation of an imperiled darter
- Natural resource climate change assessments for west African countries (Liberia, Ghana)
- Diversity-stability links in freshwater fishes
- Fish-floodplain interactions in a disturbed bottomland hardwood ecosystems

Northern Research Station

Sue Eggert
NRS (Grand Rapids, MN)
218-326-7135
seggert@fs.fed.us
http://www.fs.fed.us/research/people/seggert

Keywords: aquatic-terrestrial linkages; food web ecology of aquatic ecosystems; functional responses of streams and wetlands to disturbance; stream restoration; invertebrate ecology

Current projects:
- Effectiveness of stream simulation design of road-stream crossings on stream food webs and ecosystem function (Wisconsin)
- Effects of whole-system manipulations of terrestrial organic matter inputs on stream function (North Carolina)
- Effects of fine sediment and mining on food webs in a coaster brook trout stream (Michigan)
- Mercury accumulation in peatland and seasonal pond food webs affected by biomass harvesting and climate change (Minnesota)

Keith Nislow
NRS (Amherst, MA)
Team Leader
413-545-1765
knislow@fs.fed.us
http://www.fs.fed.us/research/people/knislow

Keywords: floodplain forest ecology; demographic, population genetic, and ecosystem consequences of barriers to movement in stream networks; effects of climate change and hydrologic alteration on secondary production, population resilience, and biodiversity; forest succession, forest management, and aquatic habitats in the North Atlantic basin; impacts of atmospheric deposition of acid and mercury on aquatic invertebrates and fishes; land use; urban aquatic ecosystems

Current projects:
- Bioenergetics approaches to habitat suitability modeling for juvenile salmonids
- Effects of forest change on aquatic habitats, invertebrates, and fishes
- Using genetic and stable isotope markers to understand Atlantic salmon movement and dispersal between habitats
Role of biotic interactions at local spatial scales in determining growth and survival of juvenile salmonids
- Role of anadromous fish in the transport of nutrients and materials to and from freshwater ecosystems
- Effects of hydrologic alteration on river and floodplain ecosystems
- Effects of acidification on Atlantic salmon
- Develop and apply new techniques and technologies to determine the effects of fragmentation associated with dams and roads on brook trout and other native species
- Develop an adaptive management framework to implement and assess ecologically sustainable flow regimes for northeastern river systems
- Determine the relationship between long-term changes in forest structure and atmospheric emissions and aquatic ecosystems and communities
- Understand the role of habitat-dependent interactions between invasive and native species in structuring aquatic communities

Anne Timm
NRS (Baltimore, MD)
443-543-5385
altimm@fs.fed.us
http://www.fs.fed.us/research/people/altimm

Keywords: applications of aquatic species population genetics; effects of hydrological modification on aquatic communities; aquatic organism passage improvement project effectiveness; effects of aquatic invasive species invasion on aquatic community dynamics

Current projects:
- Regulated water level fluctuation effects on Northern pike breeding habitat in Rainy Lake and Namakan Reservoir
- Quantifying biological structure and function associated with stream simulation design projects in the Great Lakes Region
- Effects of pharmaceuticals and personal care chemical (PPCPs) on aquatic species in the Patapsco River Watershed (Maryland)
- Hydrological and temperature effects of riparian communities on trout stream community productivity in the Driftless Area of SE Minnesota

Rocky Mountain Research Station

Tom Black
RMRS (Boise, ID)
208-373-4399
tblack@fs.fed.us
http://www.fs.fed.us/research/people/tblack

Keywords: effects of disturbance on natural systems; interactions between road systems and stream networks

Current projects:
- Geomorphic Road Assessment and Inventory Package

Dona Horan
RMRS (Boise, ID)
208-373-4399
dhoran@fs.fed.us
http://www.fs.fed.us/research/people/dhoran

Keywords: fish distribution and persistence; effect of climate change on fish movement and habitat quality; stream temperature monitoring

Current projects:
- Helping to develop basin-scale stream temperature models using ArcGIS and spatial statistical models
• Developing documentation to assist resource managers to create stream temperature statistical models in their management areas
• Creating a regional network of ongoing, annual temperature monitoring sites
• Developing simple, cost-effective methods for deploying long-term stream temperature loggers

Dan Isaak
RMRS (Boise, ID)
208-373-4385
disaak@fs.fed.us
http://www.fs.fed.us/research/people/disaak

*Keywords*: predicting and understanding how climate change, disturbance, and biophysical interactions across spatial and temporal scales affect population dynamics and habitat for native fishes in wildland streams

*Current projects:*
  • Regional and river basin scale stream temperature monitoring and modeling
  • Biological responses to climate change

Frank McCormick
RMRS (Fort Collins, CO)
Program Manager
970-498-1175
fmccormick@fs.fed.us
http://www.fs.fed.us/research/people/fmccormick

*Keywords*: ecology and evolution of freshwater species; ecosystem responses to disturbance; responses of aquatic ecosystems to climate change

*Current projects:*
  • Monitoring and assessment of stream restoration
  • Ecosystem services derived from headwater catchments

David Nagel
RMRS (Boise, ID)
208-373-4397
dnagel@fs.fed.us
http://www.fs.fed.us/research/people/dnagel

*Keywords*: development of landscape scale spatial models that impact aquatic biology, stream temperature modelling

*Current projects:*
  • River Bathymetry Toolkit
  • The Rangewide Bull Trout eDNA project
  • Stream temperature modelling website

Russ Thurow
RMRS (Boise, ID)
208-373-4377
rthurow@fs.fed.us
http://www.fs.fed.us/research/people/rthurow

*Keywords*: patterns of species and life stages; structure of populations; sampling protocols; climate effects

*Current projects:*
  • Spatial and temporal variation in Chinook salmon populations
  • Bias and precision of aerial and ground-based Chinook salmon redd counts
  • Demographic and genetic structuring of Chinook salmon populations
  • Exploring the application of otolith microchemistry to describe life history variation, measure dispersal, and assess climate effects on Chinook salmon
  • Response of Chinook salmon to post-fire debris flows and gravel deposition
  • Geomorphic controls on salmonid habitat at watershed scales
  • Fluvial bull trout movements, spawning, and habitat use
  • Fine-scale characteristics of fluvial bull trout spawning sites and reds
  • Development of protocols for sampling stream dwelling salmonids
  • Effects of environmental and habitat characteristics on sightability of juvenile bull trout
  • Assessing climate effects on the timing and distribution of Chinook salmon spawning
Mike Young
RMRS (Missoula, MT)
406-542-3254
mkyoung@fs.fed.us
http://www.fs.fed.us/research/people/mkyoung

Keywords: broad-scale monitoring and assessment of stream fishes; use of genetic methods for fish and amphibian detection, identification, and monitoring; natural and anthropogenic disturbances: effects and recovery

Current projects:
- Genetic and compositional assessment of the interior Columbia River fauna
- Rangewide assessment of westslope cutthroat trout: evolutionary history, ESU discovery, and current status
- Detecting at-risk or invasive species using environmental DNA
- Influence of climate change, fire, and biotic interactions on fish species persistence
- National Genomics Center for Wildlife & Fish Conservation

Pacific Northwest Research Station

Susan Alexander
PNW (Juneau, AK)
Program Manager
907-586-8809
salexander@fs.fed.us
http://www.fs.fed.us/research/people/salexander

Ryan Bellmore
PNW (Juneau, AK)
907-586-7805
jbellmore@fs.fed.us
http://www.fs.fed.us/research/people/jbellmore

Keywords: salmon and trout food webs; watershed-scale stream energy processes
Current projects:
- Effects of climate change and forest management on fisheries

Kelly Burnett (Emeritus)
PNW (Corvallis, OR)
541-750-7309
kmburnett@fs.fed.us
http://www.fs.fed.us/research/people/kmburnett

Keywords: landscape modeling and decision support tools for streams; understanding the relevance of spatial patterns in stream networks; characterizing and communicating best available science; climate change effects on coastal Pacific salmon populations
Current projects:
- Behavior of debris flows and their effects on mountain streams
- Communication and collaboration networks regarding fire and aquatic resources
- Describe summer and winter habitat conditions and relationships to salmon distribution in the Nome River, Alaska
- Modeling relationships of juvenile coho salmon to spatial heterogeneity in stream habitats and landscape features in the Oregon Coast Range

Pete Bisson (Emeritus)
PNW (Olympia, WA)
360-753-7671
pbisson@fs.fed.us
http://www.fs.fed.us/research/people/pbisson

Keywords: restoration of aquatic habitats; disturbance and recovery cycles in aquatic and riparian ecosystems; emerging threats: invasive species and climate change
Current projects:
- Salmon recovery in the Columbia River Basin
- Risk assessment for invasive riparian plants and non-native fishes
Shannon Claeson  
PNW (Wenatchee, WA)  
509-664-1731  
sclaesons@fs.fed.us  
http://www.fs.fed.us/research/people/sclaeson  

Keywords: Riparian and aquatic systems interactions; role of aquatic invertebrates in stream and lake systems; community ecology; disturbance ecology; food webs; invasive organisms  

Current projects:  
- effects of man-made large-wood structures on fish  
- response of stream biota and channel morphology to dam removal and debris flows  
- development of benthic macroinvertebrate communities in streams and ponds created from the eruption of Mount St. Helens in 1980

Richard Edwards  
PNW (Juneau, AK)  
907-586-8811 ext. 269  
rtedwards@fs.fed.us  
http://www.fs.fed.us/research/people/rtedwards  

Keywords: Stream ecology, nutrient cycling, carbon cycling, riparian-stream interactions, hydrology and ecology of surface-groundwater interaction zones, global warming and its effects on streams and stream habitat, terrestrial-near shore coastal zone interactions, fate of carbon in streams and estuaries, and the functional role of wetlands in watersheds  

Current projects:  
- Héen Latinee Experimental Forest

Rebecca Flitcroft  
PNW (Corvallis, OR)  
541-750-7346  
rflitcroft@fs.fed.us  
http://www.fs.fed.us/research/people/rflitcroft  

Keywords: stream network analysis; salmon; riverscape-scale; aquatic ecology; estuaries; climate change and rivers  

Current projects:  
- Developing management models and scenarios the consider the effects of fire on fish habitat  
- The effect of eustatic sea-level rise on estuarine rearing habitats for native salmonids

Alex Foster  
PNW (Olympia, WA)  
360-753-7680  
alexfoster@fs.fed.us  
http://www.fs.fed.us/research/people/alexfoster  

Keywords: effects of forest management; forest wetlands; riparian ecosystems  

Current projects:  
- How plant and animal species recolonize a recent debris flow  
- Physical and biological attributes of small forested wetlands  
- Ecology of little-known invertebrates such as mollusks and millipedes

Bruce Hansen  
PNW (Corvallis, OR)  
541-750-7311  
bhansen@fs.fed.us  
http://www.fs.fed.us/research/people/bhansen  

Keywords:  

Current projects:  
- Salmonid and freshwater mollusk life history and habitat associations  
- Effects of road-crossing culverts on aquatic organism passage and population connectivity  
- Aquatic invasive species monitoring and management

Sherri Johnson  
PNW (Corvallis, OR)  
541-758-7771  
scherrijohnson@fs.fed.us  
http://www.fs.fed.us/research/people/sherrijohnson  

Keywords: stream ecosystems; temperature; biogeochemistry; foodwebs  

Current projects:  
- Stream ecosystem responses to forest harvest in the Trask River Watershed (coast range Oregon)  
- Understanding stream food web linkages and trophic dynamics using abundance of natural isotopes (coast range Oregon)
• Climate change influences on phenology of insects and macroinvertebrates (Andrews Experimental Forest)
• Effects of extended reservoir drawdown on carbon and nitrogen fluxes, productivity and food webs (Andrews Experimental Forest)

Deanna Olson
PNW (Corvallis, OR)
541-750-7373
dedeolson@fs.fed.us
http://www.fs.fed.us/research/people/dedeolson

Keywords: amphibians; reptiles; conservation; ecology; riparian management
Current projects:
• Effects of forest thinning and alternative riparian buffer widths on headwater species and habitats
• Spatial and taxonomic patterns of the amphibian chytrid fungus and ranaviruses, Bsal monitoring
• Climate metrics and amphibian and reptile ecology and management

Brooke Penaluna
PNW (Corvallis, OR)
541-758-8783
bepenaluna@fs.fed.us
http://www.fs.fed.us/research/people/bepenaluna

Keywords: ecology of native fishes; patterns and ecological process at the individual, community and population levels; effects of invasive species, eDNA
Current projects:
• Instream cover and emigration as drivers of population dynamics in fish
• Development of environmental DNA (eDNA) techniques to monitor and inventory aquatic species

Karl Polivka
PNW (Wenatchee, WA)
509-664-1736
kpolivka@fs.fed.us
http://www.fs.fed.us/research/people/kpolivka

Keywords: ecology and evolution; habitat selection and foraging behavior of fishes; food webs and aquatic communities
Current projects:
• Individual and population-level responses by fishes to in-stream habitat restoration
• Influence of riparian vegetation and microclimate on the structure of aquatic communities

Gordie Reeves
PNW (Corvallis, OR)
541-750-7314
greeves@fs.fed.us
http://www.fs.fed.us/research/people/greeves

Keywords: aquatic and disease and recovery cycles in aquatic and riparian ecosystems; climate change and potential impacts on Pacific salmon
Current projects:
• Impacts of downscaled climate change projections on aquatic ecosystems on NationalForests in Region 6 and the Copper River Delta, AK
• Evaluation of silvicultural thinning on riparian and aquatic ecosystems

Ashley Steel
PNW (Seattle, WA)
206-732-7823
asteel@fs.fed.us
http://www.fs.fed.us/research/people/asteel

Keywords: landscape; rivers; watershed; temperature; metrics; statistics; network
Current projects:
• Effects of land-use on water temperature and flow
• Modelling coho salmon distribution and their habitats using landscape scale predictors
• Mapping and describing water temperature variance across networks
Steve Wondzell
PNW (Corvallis, OR)
360-758-8753
swondzell@fs.fed.us
http://www.fs.fed.us/research/people/swondzell

Keywords: hyporheic zone; nutrient cycling; stream temperature; riparian management; decision support models; climate change; grazing

Current projects:
- Aquatic-riparian stream network state-and-transition decision support models (Oregon Coast range and the Blue Mountains of eastern Oregon)
- Projecting the influence of future climate on stream temperature (upper Middle Fork of the John Day River, Blue Mountains, OR)

Pacific Southwest Research Station

Bret Harvey
PSW (Arcata, CA)
707-825-2926
bharvey@fs.fed.us
http://www.fs.fed.us/research/people/bharvey

Keywords: individual-based modeling; stream fish ecology; riparian management; fish genetics; monitoring design

Current projects:
- Model-based assessment of habitat restoration for anadromous salmonids in Trinity and Sacramento river tributaries
- Understanding invasion success of fishes in northwestern California
- Quantifying sustainable population sizes for Smith River cutthroat trout

Carolyn Hunsaker
PSW (Fresno, CA)
559-323-3211
chunsaker@fs.fed.us
http://www.fs.fed.us/research/people/chunsaker
www.fs.fed.us/psw/topics/water/kingsriver

Keywords: mountain streams; mountain meadows; terrestrial-aquatic linkages; Sierra Nevada; forest restoration; climate change; water quality; air pollution; Kings River Experimental Watersheds

Current projects:
- Spatial heterogeneity in stream temperature regimes and interactions with salmon life history diversity (Copper River Delta, AK)
- Hydrologic connectivity and carbon transport from hillslopes, through riparian and hyporheic zones, and to streams in a small, forested catchment (western Cascade Mountains)
Christina Liang  
PSW (Hilo, HI)  
808–933–8121 ext. 150  
christinaliang@fs.fed.us  
http://www.fs.fed.us/research/people/christinaliang  

Keywords: Non-native wildlife; Hawaii; amphibians; radio-tracking; landscape genomics  

Current projects:  
- Impacts of non-native coqui frog in forest systems (Hawaii)  
- Effects of non-native predators on pollinators and plant reproduction (Hawaii)  
- Landscape genomics of native tree species (Hawaii, California)  
- Movement and habitat use of the Yosemite toad (California)  
- Density of the non-native black rat (Rattus rattus) in Hawaiian forest ecosystems

Richard MacKenzie  
PSW (Hilo, HI)  
808-933-8121 ext. 116  
rmackenzie@fs.fed.us  
http://www.fs.fed.us/research/people/rmackenzie  

Keywords: fish and invertebrate assemblages; habitat; wetlands; mangroves; streams; climate change; invasive species; Pacific Islands  

Current projects:  
- Impacts of climate change and invasive species on Pacific Island water resources  
- Impacts of increased nitrogen loading to coastal ecosystems  
- Increasing resiliency of mangroves to sea level rise  
- Determining effective strategies to eradicate of control exotic fish in tropical wetlands

Kathleen Matthews  
PSW (Albany, CA)  
510-559-6454  
kmatthews@fs.fed.us  
http://www.fs.fed.us/research/people/kmatthews  
www.fs.fed.us/psw/programs/snrc/aquatic  

Keywords: amphibian declines in the Sierra Nevada; climate change and invasive trout-effects on native amphibian and fish in the Sierra Nevada; wilderness protection for aquatic species  

Current projects:  
- California golden trout stream temperature vulnerability study  
- Restoring Sierra yellow-legged frog high elevation aquatic ecosystems  
- Long-term demographic study of the Sierra yellow-legged frog

Karen Pope  
PSW (Arcata, CA)  
707-825-2957  
kpope@fs.fed.us  
http://www.fs.fed.us/research/people/kpope  

Keywords: amphibian conservation ecology; community ecology of freshwater and adjacent terrestrial systems; impacts of aquatic invasives; effectiveness of aquatic restoration  

Current projects:  
- Impacts of a fungal pathogen and contaminants on amphibians of northern California  
- Ecological effectiveness of meadow restoration  
- Sierra Nevada amphibian monitoring GTR  
- Projected climate change effects to amphibians at range edges
Hartwell Welsh, Jr.
PSW (Arcata, CA)
707-825-2956
hwelsh@fs.fed.us
http://www.fs.fed.us/research/people/hwelsh
http://www.fs.fed.us/psw/topics/wildlife/herp/

**Keywords:** amphibians; reptiles; herpetofauna; forest ecosystems; ecological roles, habitat associations, stream network dynamics; ecosystem services

**Current projects:**

- Determining multi-scale spatial relationships of herpetofaunal metacommunities of whole catchments
- The ecology and conservation of western pond turtle (Actinemys marmorata) populations
- Unifying the perspectives of fluvial networks, land/water interfaces, disturbance processes, and the non-equilibrium nature of ecosystems, with the distributions of amphibians and reptiles
- Examining water temperatures and amphibian assemblages of headwater streams over a decade in a mid-latitude catchment in northern California: is there evidence of change due to climate warming?

---

**International Institute of Tropical Forestry**

Grizelle Gonzalez
IITF (Rio Piedras, PR)
787-764-7800
ggonzalez@fs.fed.us
http://www.fs.fed.us/research/people/ggonzalez

**Keywords:** soil ecology and biology; ecosystem ecology; tropical ecology; earthworm ecology

**Current projects:**

- Luquillo - Long Term Ecological Research Program
- Ecological Gradient Analyses in Tropical Ecosystems
- Earthworm Effects on Ecosystem Processes

William Gould
IITF (Rio Piedras, PR)
787-764-7790
wgould@fs.fed.us
http://www.fs.fed.us/research/people/wgould
http://prgap.org/

**Keywords:** conservation ecology; remote sensing; species distribution modeling; habitat mapping

**Current projects:**

- Modeling future habitat scenarios
- Puerto Rico and USVI freshwater, marine, and aquatic gap analyses projects
- Assessment of mitigation in a mixed land cover headwater catchment
- Export of coarse particulate organic matter from headwater streams
- Land cover and stream water quality parameters

---

Tamara Heartsill-Scalley
IITF (Rio Piedras, PR)
787-764-7769
theartsill@fs.fed.us
http://www.fs.fed.us/research/people/theartsill

**Keywords:** ecosystem services of riparian zones and streams; riparian vegetation and stream dynamics in headwater catchments; ecosystem responses to disturbance; knowledge and perceptions of wetlands by adjacent communities and stakeholders

**Current projects:**

- Export of coarse particulate organic matter from headwater streams
- Land cover and stream water quality parameters