

Samuel N. R. Aruch

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Work History

February 2009-
Present

Natural Resource Data Solutions LLC, Maui, Hawai'i; Managing Member

- Building and implementing custom GIS and database solutions
- GIS (ESRI), GPS (Trimble and Garmin) , and database training
- Collaborative development of interagency data and GIS standards
- Working with various federal, state, and private entities

Lecturer: University of Hawaii Maui College

- Teaching biology 105, Hawaiian Field Biology

Hawai'i Conservation Alliance (HCA): Effective Conservation Project

- Analyzing and integrating state wide conservation data to determine the status of effective conservation

Hawai'i Forest Bird Survey, Hawai'i State Department of Land and Natural Resources, Department of Forestry and Wildlife, Moloka'i and West Maui, Hawai'i

- Coordination of island wide interagency forest bird surveys

Biological Consultant: U.S. Fish and Wildlife Service

- Editing 5-year reviews and updates for listed Hawaiian plants

Database Programmer: Pacific Basin Information Node, USGS Biological Resource Discipline, Maui, Hawai'i

- Building a statewide weed risk assessment database

GIS and Data Coordinator: Lāna'ihale Forest and Watershed Project, Department of Land and Natural Resources, Lāna'i, Hawai'i

- Coordinating natural resource data and GIS collection and reporting

GIS Specialist: Kalaupapa National Historical Park, Moloka'i, Hawai'i

- Developed tools for and organized resource management data

February 2007-
February 2009

Field Operations Supervisor: Pu'u Kukui Watershed Preserve, Maui Land and Pineapple Company, Maui, Hawai'i

- Coordination of diversified field and helicopter logistics
- Coordination of facilities, vehicle, and equipment maintenance
- Ecological monitoring and natural resource management
- Grant writing, project management, and reporting

- Training and supervision of field staff, interns, and volunteers
 - Facilitation of landscape- wide interagency data management systems
- November 2007-
February 2008
- Stream Monitoring Technician: R.M. Towill Corporation, Maui, Hawai'i**
- Measurement and documentation of stream diversions
- October 2006-
February 2007
- GIS Specialist: The Nature Conservancy of Hawai'i, Hawai'i Field Office, Honolulu, Hawai'i**
- Management of statewide ecoregional planning data
 - GIS mapping, analysis, and modeling
 - Database management and implementation
 - Facilitation of statewide user meetings and trainings
- October 2004 -
October 2006
- Assistant Natural Resource Manager: The Nature Conservancy of Hawai'i Moloka'i Program, Moloka'i, Hawai'i**
- Coordination of landscape-wide natural resource management
 - GIS and database management
 - Production of reports and presentations
 - Training and supervision of volunteers, interns, and field staff
 - Chairman of the Molokai/ Maui Invasive Species Committee
- May 2004 -
October 2004
- Ecological Monitoring Database Facilitator: Inventory and Monitoring Program, Haleakalā National Park, Maui, Hawai'i and Kalaupapa National Historical Park, Moloka'i, Hawai'i**
- Database management
 - Review and compilation of resource management related literature
 - Production of resource overview publications
- March 2004-
April 2004
- Logistics Coordinator: Hawai'i Forest Bird Survey, Hawai'i State Department of Land and Natural Resources, Department of Forestry and Wildlife, Moloka'i and West Maui, Hawai'i**
- Coordination of island wide interagency forest bird surveys
- June 2002-
February 2004
- Biological Technician: Avian Disease Survey of Pacific National Parks, US Geological Survey Biological Resources Division (USGS-BRD), Maui, and Moloka'i, Hawai'i (Haleakalā National Park, Kamakou Preserve (TNC), Pelekunu Preserve (TNC), and Kalaupapa National Historical Park)**
- Coordination of a multi site research project and helicopter logistics with federal, state, and private land management agencies
 - Mist netting, banding and jugular bleeding of birds
 - Mosquito collection and surveys
 - Backcountry navigation and camping
 - Production and presentation of peer reviewed scientific reports

- August 2003-
November 2003 **Biological Technician: *Astelia menziesiana* Invertebrate Survey, USGS
BRD: Kamakou Preserve, Moloka'i, Hawai'i**
- Field identification of plants and collection of invertebrates
- August 2003-
November 2003 **Biological Technician: Shoreline Bird Survey, Kalaupapa National
Historical Park: Moloka'i, Hawai'i**
- Census and observation of seabirds and shorebirds
- March 2002 –
May 2002 **Wildlife Conservation Assistant: Palila Restoration Project Predator Crew
USGS-BRD, Mauna Kea, Hawai'i**
- Trapping, humane removal, and necropsy of feral predators
 - Radio tracking endangered birds and feral cats
- September 2001-
December 2001 **Field Research Technician: Kalij Pheasant Monitoring Project,
USGSBRD: Hawai'i Volcanoes National Park, Hawai'i**
- Development of live capture and census techniques
 - Color banding and blood sample collection
 - Production of reports and peer reviewed publications
 - Supervision and training of volunteers and interns
- February 2001-
September 2001 **Volunteer Field Assistant: Biocomplexity of Avian Disease Project,
USGS- BRD: Volcanoes National Park, Hawai'i**
- Mist netting, banding and jugular bleeding of birds
 - Implementation of transects over extremely wet and rugged terrain
 - Mosquito trapping and collection
 - Care of aviary birds

Education

- Master of Geographic Information Systems; Expected Winter 2011; The Pennsylvania State University, State College, Pennsylvania
- Post Baccalaureate Certificate in Geographic Information Systems; June 2009; The Pennsylvania State University, State College, Pennsylvania
- BS Biology: May 1999; State University of New York College at Geneseo, New York
- High School Diploma May 1995; Herricks High School, New Hyde Park, New York

Computer Programs

Microsoft: Word, Excel, Access, Power Point
 ESRI: ArcGIS 9.3, Arc Pad, ArcPad Application Builder , Spatial Analyst
 Trimble: GPS Pathfinder Office, TerraSync

Certifications and Trainings

- Basic Aviation Safety (OAS B3): current
- Helicopter Sling Load and Hover Hookup (OAS SM2): current
- Water Ditching and Survival (OAS A312): expired
- Helicopter Manager (OAS S372): expired
- NPS ArcGIS Training
- Wildland Fire Fighting (S130) (S190): expired

- NRA Hand Gun Safety Training
- Category 2 Certification for Commercial Applicators of Restricted Pesticides: current
- Wilderness Advanced First Aid (WMA): current
- Hawai'i State Hunter Education
- American Red Cross CPR and First Aid: current

Presentations and Publications

Aruch, Samuel N.R., Jay F. Penniman, Fern P. Duvall II, David C. Duffy. 2010. Assessing Available Spatial Data For 'Ua'u Habitat Management On The Island Of Lāna'i, Hawai'i. Poster presentation at the 2010 Hawai'i Conservation Conference, Honolulu HI.

Aruch, Samuel N.R. , Jill LaBram, Sarah McLane. 2009. The Maui Conservation Data Hui, Adventures in Interagency Collaboration. Oral Presentation at the 2003 Hawai'i Conservation Conference, Honolulu HI.

Aruch, Samuel, Carter T. Atkinson, Amy Savage, Dennis A. LaPointe 2007. Prevalence and Distribution of Poxlike Lesions, Avian Malaria and Mosquito Vectors in Kīpahulu Valley, Haleakalā National Park, Hawai'i , USA. *Journal of Wildlife Diseases*, 43: 567-575.

Aruch, Samuel N.R., Lori L. Buchanan, and Kamalani T. Pali 2006. Miconia Aerial Surveys: Protecting the Integrity of Molokai's Native Wet Forest Through Early Detection. Poster presentation at the 2006 Hawai'i Conservation Conference, Honolulu HI.

Aruch, S. 2006. Appendix A: Haleakala National Park resource overview. In: HaySmith, L., F. L. Klasner, S. H. Stephens, and G. H. Dicus. Pacific Island Network vital signs monitoring plan. Natural Resource Report NPS/PACN/NRR—2006/003 National Park Service, Fort Collins, Colorado.
http://science.nature.nps.gov/im/units/pacn/monitoring/plan/PACN_MP_AppendixA_HALE.pdf

Aruch, S. 2006. Appendix A: Kalaupapa National Historical Park resource overview. In: HaySmith, L., F. L. Klasner, S. H. Stephens, and G. H. Dicus. Pacific Island Network vital signs monitoring plan. Natural Resource Report NPS/PACN/NRR—2006/003 National Park Service, Fort Collins, Colorado.
http://science.nature.nps.gov/im/units/pacn/monitoring/plan/PACN_MP_AppendixA_KALA.pdf

Aruch, Samuel N.R., R. Kallstrom, T. Lau, and W. Moses. 2005. Passive Restoration Through Active Management: Kiawe (*Prosopis pallida*) Removal At Mo'omomi Preserve Moloka'i, Hawai'i. Poster presentation at the 2005 Hawai'i Conservation Conference, Honolulu HI.

Aruch, Samuel, C. T. Atkinson, D. A. La Pointe, and D. Triglia. 2003. Avian Disease Survey in Maui and Moloka'i National Parks. Oral Presentation at the 2003 Hawai'i Conservation Conference, Honolulu HI.

Aruch, Samuel, T. K. Pratt, and J. P. Vetter. 2003. Methods for Capturing and Banding Kalij Pheasants. *North American Bird Bander* 28:111116.

Aruch, Samuel, T. K. Pratt, and J. P. Vetter 2002. Methods for Capturing and Banding Kalij Pheasants. Poster Presentation at the 2002 Hawai'i Conservation Conference, Honolulu,