2018 Cal-IPC Symposium, Monterey Hyatt, Nov. 7-10

BioDiversity: Expanding Our Vision

Preliminary Program

July 2, 2018 Version

Overview

Wed., Nov. 7	1:00 – 5:00pm	Trainings (3)	
	6:00 – 8:00pm	DPR Laws & Regs	
Thu., Nov. 8	8:00am	Plenary:	Cal-IPC Update
	8:20 – 9:20am	Plenary:	Invasive Plant Management on the Central Coast
	9:40 – 10:40am	Concurrent:	Native Habitat Recovery after Invasive Plant Management Managing Invasive Plants in Coastal Habitats
	11:00 – noon	Concurrent:	Invasive Plant Management and Fire Managing Invasive Plants in Aquatic Habitats
	1:20 – 2:20pm	Concurrent:	Restoration through Invasive Plant Management Managing Invasive Plants using Biocontrols
	2:40 – 3:40pm	Concurrent:	Managing Invasive Species from Other Kingdoms Mapping & Prioritization for Invasive Plant Management
	3:40 – 5:00pm	Poster Session	
	5:00 – 6:30pm	Social Hour, Silent Auction and Raffle	
	6:30 – 8:30pm	Awards Banquet	
Fri., Nov. 9	8:00am	Plenary:	Invasive Plant Management in Washington State
	8:20 – 9:20am	Plenary:	Engaging Diverse Communities in Invasive Plant Management
	9:40 – 10:40am	Concurrent:	Invasive Plant Management Research I Invasive Plant Management Research II
	11:00 – noon	Discussion Groups	
	Noon – 1:00pm	Student Career Lunch	
	1:00 – 2:00pm	Concurrent:	Outreach & Communications in Invasive Plant Management Planning & Funding Invasive Plant Management Projects
	2:20-3:20pm	Concurrent:	WMAs and the Economic Impact of Weeds Speed Talks
	3:40pm	New Weed Alerts	
	4:00 – 5:00 pm	Plenary:	Restoration in a World of *Phytophthora*
Sat., Nov. 10	8:00am	Field Trips (2 half-day and 2 full-day)	

Wednesday, November 7

12:30 pm Registration

1:00 – 5:00 pm **Training 1: Invasive Plant Management 101** (Room: *TBD*)

Are you new to the field of invasive plant management? Or have gaps in your understanding about how everything ties together? Here's your chance to get a solid foundation from a range of experts in the field. We will cover: the ways that land managers identify, map and prioritize weeds; how weed biology affects weed control methods; the range of control tools and techniques at our disposal as part of the Integrated Pest Management toolbox; strategic approaches for program success; communications, funding, permitting, and more. *Instructors: Rachel Kesel, OneTam; Gina Darin, California Dept. of Water Resources; Jason Giessow, Dendra, Inc; Giselle Block, US Fish & Wildlife Service; Steve Schoenig, California Dept. of Fish & Wildlife (retired).*

1:00 – 5:00 pm **Training 2: Using Calflora's Weed Manager** (Room: *TBD*)

Did you know you can map weeds on your smartphone, using a custom interface designed for your organization? Or that you can record details on field efforts each time you work on an invasive plant population? Calflora's Weed Manager suite of tools is designed to do this and more. Calflora staff and current users will show you how it all works. *Instructors: Cynthia Powell and John Malpas, Calflora.*

1:00 – 5:00 pm **Training 3: Best Management Practices for Controlling *Phytophthora* in Restoration** (Room: *TBD*)

From native plant nursery propagation to trail maintenance to daily worker hygiene, best practices are emerging for land managers looking to address the spread of damaging *Phytophthora* species. This training brings together experts in the field to share best practices, a new diagnostic and sampling guide, and the latest research. Restoration nurseries at the Golden Gate National Parks Conservancy will share practical approaches that nurseries can take to protect their stock from inadvertently spreading pathogens. East Bay Regional Park District land managers will demonstrate techniques they use and discuss how these are integrated into their operations. Many of these methods also reduce the spread of weed seeds and other invasive species. This training will help get you up to speed with what you need to know about this rapidly developing topic in the restoration community. *Instructors: Diana Benner, The Watershed Nursery; Suzanne Latham, California Dept. of Food & Agriculture; Tyler Bourret, UC Davis; Ted Swiecki, Phytosphere Research; Janell Hillman, Santa Clara Valley Water District; Alisa Shor, Danny Franco and Jessica Peters, Golden Gate National Parks Conservancy; Pamela Beitz and Michele Hammond, East Bay Regional Park District; Susan Frankel, USDA Forest Service, Pacific Southwest Research Station.*

5:30 pm Registration

6:00 – 8:00 pm **DPR Laws & Regulations: Updates on pest control regulations**

Room *TBD*. Chair: *TBD*

6:00 *TBD*

6:30 *TBD*

7:00 *TBD*

7:30 *TBD*

7:00 – 9:00 pm **Student Mixer**

Room *TBD*

Thursday, November 8

7:00-8:00 am Registration and Breakfast (subsidized "cash and carry")

8:00 – 8:20 am Opening Plenary Updates from Cal-IPC**.** *Doug Johnson, Executive Director, Cal-IPC*

8:20 – 9:20 am Session 1. Invasive Plant Management on the Central Coast

Room: *TBD*. Chair: *Hannah Wallis, Monterey County Ag Department*

8:20 The abiotic mosaic of the Central Coast: Geologic constraints and opportunities for native and non-native biodiversity. *Doug Smith, CSU Monterey Bay*

8:40 Wrinkles in sea-to-summit gradients and the marvelous mosaic of vegetation types in the Monterey Bay region. *Nicole Nedeff, CSU Monterey Bay*

9:00 Dispatching the Monterey Bay region's mosaic of invasive plants. *Hannah Wallis, Monterey County Dept. of Agriculture*

9:20-9:40 am Break

9:40 – 10:40 am Session 2. Native Habitat Recovery after Invasive Plant Management

Room: *TBD*. Chair: *Heather Schneider, Santa Barbara Botanic Garden*

9:40 Mapping weeds and rare plants to inform management and conservation in the Zaca and Jesusita Fire scars. *Stephanie Calloway, Santa Barbara Botanic Garden*

10:00 Vegetation composition following the manual removal of invasive *Hedera* spp. *Jason Mills, Ecological Concerns Incorporated*

10:20 Native plant recovery in seeded and non-seeded plots following exotic fennel (*Foeniculum vulgare*) control on east Santa Cruz Island – ten years post-treatment. *Paula Power, Channel Islands National Park*

9:40 – 10:40 am Session 3. Managing Invasive Plants in Coastal Habitats

Room: *TBD*. Chair: *Lorraine Parsons, Point Reyes National Seashore*

9:40 Effects of manual and mechanical *Ammophila arenaria* removal on coastal plant communities and dune morphology. *Monique Silva Crossman, Humboldt State University*

10:00 The effectiveness of applied nucleation, seeding, and mowing in restoring California coastal prairies. *Josie Lesage, UC Santa Cruz*

10:20 Restoring critical coastal dune habitat at Point Reyes for threatened and endangered species by removing invasive plants. *Lorraine Parsons, Point Reyes National Seashore*

10:40-11:00 am Break

11:00 – 12:00 pm Session 4. Invasive Plants and Fire

Room: *TBD*. Chair: *Juan de Dios Villarino, California State Parks*

11:00 – 12:00 pm Session 5. Managing Invasive Plants in Aquatic Habitats

Room: *TBD*. Chair: *Drew Kerr, Invasive Spartina Project*

11:00 Lessons learned: Goats, goatgrass, fire, and fuel reduction. *Sarah Minnick, Marin County Parks*

11:20 Targeting bulldozer lines for competitive seeding to suppress postfire invasion in Coastal Sage Scrub. *Noah Teller, UC Riverside*

10:40 Understory diversity and composition changes in prescribe-burned and passively-managed forests over 20 years. *Svetlana Yegorova, California State Parks*

11:00 Pilot project – Ultraviolet light to control invasive aquatic plants in Lake Tahoe. *Nicole Cartwright, Tahoe Resource Conservation District*

11:20 The spread, ecology and challenges to control of the marine invasive seaweed *Sargassum horneri*. *Lindsay Marks, NOAA*

11:40 Alligatorweed in the Delta: An early detection/rapid response story. *Jon O'Brien, California State Parks, Division of Boating and Waterways*

12:00 - 1:20 pm Lunch (subsidized "cash and carry")

1:20 – 2:20 pm Session 6. Restoration through Invasive Plant Management

Rom: *TBD*. Chair: *Heather Schneider, Santa Barbara Botanic Garden*

1:20 Restoring for resilience: Successes and challenges of the Kent Island Vegetation Management Project. *Tori Bohlen, Marin County Parks*

1:40 How do invasive grass water-use strategies affect belowground ecosystem services and native shrub re-establishment? *Michala Philips, UC Riverside*

2:00 Can we condition plants to increase stress tolerance and improve restoration success? *Justin Valliere, UCLA*

1:20 – 2:20 pm Session 7. Invasive Plant Management using Biocontrols

Room: *TBD*. Chair: *Lincoln Smith, USDA-ARS*

1:20 The effects of topping and humidity on establishment of the Arundo wasp and scale released to control *Arundo donax*. *Ellyn Bitume, USDA-ARS*

1:40 First release of a shoot-tip galling fly for biological control of Cape-ivy. *Scott Portman, USDA-ARS*

2:00 Recent research on invasive weeds at the European Biological Control Laboratory (EBCL). *Lincoln Smith, USDA-ARS*

2:20 – 2:40 pm Break

2:40 – 3:40 pm Session 8. Managing Invasive Species from Other Kingdoms

Room: *TBD*. Chair: *Valerie Cook-Fletcher, California Dept. of Fish and Wildlife*

2:40 Discovery and management of invasive nutria in California's San Joaquin Valley. *Helen Benson, California Dept. of Fish and Wildlife*

3:00 Eradication efforts for invasive populations of water snakes (*Nerodia* ssp.). *Richard Bireley, California Dept. of Fish and Wildlife*

2:40 – 3:40 pm Session 9. Mapping and Prioritization for Invasive Plant Management

Room: *TBD*. Chair: *Eric Wrubel, National Park Service, 'SF Bay Area Network I&M Program*

2:40 Prioritizing invasive species for eradication in the Bay Area National Parks. *Eric Wrubel, National Park Service*

3:00 Mapping and estimating invasive plant chemical traits in the Sacramento-San Joaquin River Delta using hyperspectral UAS imagery. *Erik Bolch, UC Merced*

3:20 IPM building blocks to control invasive shot hole borers–*Fusarium* dieback complex. *Shannon Lynch, UC Santa Cruz*	3:20 Multi-benefit weed control: The San Joaquin River invasive species management and jobs creation project. *Jason Faridi, River Partners*

3:40 – 5:00 pm Session 10. Poster Session

5:00 – 6:30 pm Social Hour, Raffle & Silent Auction

6:30 – 8:30 pm Awards Banquet

Friday, November 9

7:00 am Registration and Breakfast (subsidized "cash and carry")

7:45 am Announcements

8:00 – 8:20 am **Morning Plenary:** Overview of Washington State's noxious weed program. *Greg Haubrich, Washington State Dept. of Agriculture*

8:20-9:20 am Session 11. Integrating Equity, Diversity and Inclusion into Conservation

Addressing issues of equity, diversity and inclusion goes beyond ethical considerations—it also improves productivity and innovation in accomplishing our conservation missions. Engaging under-represented communities, hiring diverse staff, and fostering an inclusive work environment engages communities in land stewardship while giving organizations the opportunity to incorporate new perspectives and ideas. Success in conservation requires being responsive to shifting demographics and social networks. Our panel of experts will share approaches that individuals and organizations can use to build a stronger conservation community.

Room: *TBD*.

Chair: *Fernando Villalba, Biologist, John Muir National Historic Site*

Panelists: *Marcos A. Trinidad, Director, Audubon Center at Debs Park*

Amanda Rowland, Youth and Volunteer Programs Coordinator, National Park Service, Pacific West Region

Kelli English, Chief of Interpretation, John Muir National Historic Site

9:20 – 9:40 am Break

9:40 – 10:40 am Session 12. Invasive Plant Management Research - I

Room: *TBD*. Chair: *Jen Funk, Chapman University*

9:40 How are functional traits related to the invasibility of a restored plant community? *Jen Funk, Chapman University*

10:00 Warm temperatures increase biomass production of seedlings: implication for management of *Ludwigia hexapetala* and *Ludwigia peploides* subsp. *montevidensis*. *Morgane Gillard, UC Davis*

10:20 Functional trait variation along a climate gradient in invasive wild radish in California. *Shana Welles, Chapman University*

9:40 – 10:40 am Session 13. Invasive Plant Management Research - II

Room: *TBD*. Chair: *Elizabeth Brusati, California Dept. of Fish and Wildlife*

9:40 Soil *Phytophthora* species in restoration sites at Golden Gate National Recreation Area. *Alison Forrestel, National Park Service*

10:00 Persistence of soil legacy effects and the role of secondary invaders in limiting reforestation success following the removal of *Cytisus scoparius* a widespread nitrogen-fixing invasive shrub. *Sara Grove, UC Santa Cruz*

10:20 Temperature dependent influence of fungi on seed mortality suggests differences in seed bank persistence between Sahara mustard in California and Arizona. *Yue "Max" Li, University of Arizona*

10:40 – 11:00 am Break

11:00 am -12:00 pm Session 14: Discussion Groups

1. **Ask the Experts: Control Methods Q&A.** Do you need expert advice on approaches to controlling a particular plant in a particular situation? Come learn from your peers and get your specific control questions answered by our expert panel of seasoned land managers. (Room: *TBD*)
2. **Aquatic Weeds in California.** Water in California is important for humans and wildlife. Aquatic and estuarine environments are among our richest habitats and submerged and emergent invasive plants pose a significant threat. Come discuss the latest invasive plant control methods being used in the Delta, Lake Tahoe, San Francisco Bay and elsewhere. *Led by Drew Kerr, Invasive Spartina Project and Gina Darin, Cal. Dept. of Water Resources.* (Room: *TBD*)
3. ***Arundo donax* Control.** Are you controlling *Arundo* on property you manage? Or planning an *Arundo* control program? Come share your knowledge on *Arundo* control methods (mechanical, chemical, and biological), permitting, funding, monitoring and research, and other topics. *Led by Emily Zefferman, Project Manager for the Resource Conservation District of Monterey County's Arundo Control Program.* (Room: *TBD*)
4. **Equity, Diversity and Inclusion.** The Cal-IPC Board of Directors and staff believe that addressing challenges in social equity, diversity and inclusion can increase the success of land managers. Come provide input on the Cal-IPC's draft Statement on Equity, Diversity and Inclusion (EDI) and how we can put it into action. Share ideas, resources and tools to help land management organizations integrate EDI principles and practices into their operations. *Led by: Fernando Villalba, National Park Service, and Marcos Trinidad, Audubon Center at Debs Park.* (Room: *TBD*)
5. **Controlling *Phytophthora* in Restoration.** *Phytophthora* soil pathogen species have become a major threat to restoration activities in California. How are native plant nurseries and restoration workers addressing this challenge? Come discuss the pathways for spread of pathogens, best practices for mitigating the risk of contamination, and the future directions of restoration. *Led by: Janell Hillman, Santa Clara Valley Water District; Diana Benner, The Watershed Nursery and Alisa Shor, Golden Gate National Parks Conservancy.* (Room: *TBD*)

12:00 – 1:00 pm Lunch (subsidized "cash and carry")

Career Panel Lunch, organized by the Cal-IPC Student Section (Room: *TBD*, lunch provided)

1:00-2:00 pm Session 15. Outreach and Communications in Invasive Plant Management

Room: *TBD*. Chair: *Rachel Kesel, OneTam*

1:00 How to inspire people to pull weeds. *Josie Bennett, Laguna Canyon Foundation*

1:20 What are we trying to say and who's listening? Communication considerations in invasive plant management. *Rachel Kesel, OneTam*

1:40 Communication structures for collaborative invasive plant management: Lessons learned from the Tamalpais Lands Collaborative. *TBD*

1:00-2:00 pm Session 16. Planning and Funding Invasive Plant Management Projects

Room: *TBD*. Chair: *Bobbi Simpson, National Park Service*

1:00 Evolution of an invasive plant control program, the adoption of early detection and rapid response. *Milan Mitrovich, Natural Communities Coalition*

1:20 Partnerships lifeline: Navigating private and public land projects with competing interests and a diversity of stakeholders. *Bobbi Simpson, National Park Service*

1:40 Regional Conservation Investment Strategies Program – a new tool for regional conservation. *Ron Unger, California Dept. of Fish and Wildlife*

2:00 – 2:20 pm Break

2:20-3:20 pm Session 17. *WMAs and the Economic Impact of Weeds*

Room: *TBD*. Chair: *Steve Schoenig, Independent consultant*

2:20 Brief history and current status of California's Weed Management Areas (WMAs). *Steve Schoenig, California Dept. of Fish & Game (retired)*

2:35 WMA case study: Putting the not in knotweed and other regional early detection/rapid response targets in northwestern California. *Amy Eberwein, Redwood Community Action Agency*

2:50 WMA case study: Placer-Nevada WMA regional invasive plant control in the central Sierra. *Ed King, Placer County Dept. of Agriculture*

3:05 The economic impact of selected invasive species to Washington State. *Greg Haubrich, Washington Dept. of Agriculture*

2:20-3:20 pm Session 18. Speed Talks

Room: *TBD*. Chair: *TBD*

2:20 New tools for thoroughwort management. *Alison Forrestel, National Park Service*

2:25 Integration of propagule pressure and functional traits to promote restoration through native annual forb reestablishment. *Sierra Lauman, Cal Poly Pomona*

2:30 Mapping waterhyacinth (*Eichhornia crassipes*) drift and dispersal in the San Joaquin Delta using GPS drogues. *John Miskella, USDA-ARS*

2:35 Ecological impacts and management of the Argentine ant (*Linepithema humile*, Mayr) in California. *Korie Merrill, Center for Natural Lands Management*

2:40 Restoring a coastal oak woodland on Santa Cruz Island by removing invasive eucalyptus. *Paula Power, National Park Service.*

2:45 The U.S. Marine Corps versus the Sahara mustard. *Jim Malusa, University of Arizona.*

	2:50 Hand-removal method impacts on labor effort, Sahara mustard and native species: To bag or not to bag? *Lynn Sweet, UC Riverside Center for Conservation Biology* *More speed talks TBD*

3:20 – 3:40 pm Break

3:30 pm Contest winners announced

Student Paper and Student Poster Contests; Photo Contest

3:40 – 4:00 pm New Weed Alerts

Room: *TBD*.

Dean Kelch and Genevieve Walden, California Dept. of Food & Agriculture

Reporting new non-native plants spreading in California's wildlands.

4:00 – 5:00 pm Session 19. Restoration in a World of *Phytophthora*

Room: *TBD*. Chair: *Susan Frankel, USDA Forest Service, Pacific Southwest Research Station*

4:00 *Phytophthora* threats to native vegetation and land manager response. *Susan Frankel, USDA Forest Service, Pacific Southwest Research Station*

4:20 *Phytophthora* impacts to endangered pallid manzanita in the East Bay Regional Park District. *Michele Hammond, East Bay Regional Parks District*

4:40 Assessment of soilborne *Phytophthora* pathogens at restoration sites in the Midpeninsula Regional Open Space District. *Ebba Peterson, Oregon State University*

5:00 pm Adjourn (Field Trip participants meet)

Saturday, November 10

[All field trips meet at 8:00 am]

Field Trip 1: From Bombs to Biodiversity: Transforming the Fort Ord Military Base to a Park and Monument through Two Decades of Weed Control and Restoration. (Full-day, 8:30 am-5 pm) Visit Fort Ord National Monument to learn about 20 years of invasive weed management, habitat restoration, coastal grassland grazing and maritime chaparral fire ecology. Since receiving land from the former Fort Ord Military Base in the mid-1990's both California State Parks and the Bureau of Land Management (BLM) have put considerable effort into restoration projects including invasive plant control. While learning about these efforts there will be an opportunity to see a variety of habitats including coastal dunes, maritime chaparral and grasslands. The trip will start at Fort Ord State Park for a visit to a current restoration project in the dunes, learning about State Park's work to control iceplant and other invasive plants and the special status species present there. Then we will move to Fort Ord National Monument managed by the BLM and the U.S. Army. The former artillery range is closed to the public because the U.S. Army is still cleaning up ordnance so this is a rare opportunity to visit this beautiful area. We will visit a large-scale jubatagrass control project and have an opportunity to learn about conducting weed control in an area where ordnance removal is ongoing. Following lunch we will visit the site of a successful hoary cress control project and a grassland site to learn about controlling yellow starthistle and non-native perennial grasses. We will discuss restoring grasslands using sheep and goat grazing, and discuss fire ecology at a site that burned in 2017. *Leaders: Amy Palkovic, California State Parks, Susan Hubbard and Bruce Delgado, Bureau of Land Management, Bart Kowalski, U.S. Army*.

Field Trip 2: Salt Water to Fresh Water and Everything in Between: Weed Management in Elkhorn and Watsonville Sloughs. (Full-day, 8:30 am-5 pm) The wetlands and coastal habitat of central Monterey Bay are well known for their rich animal life and birdwatching opportunities. We will begin the day with a two-hour kayak trip up Elkhorn Slough. Guides will discuss various control efforts on iceplant, European beachgrass, perennial pepperweed and yellow starthistle using mechanical removal, herbicide application, and competitive replanting with natives. We will stop to discuss eucalyptus removal/biochar production and a large-scale salt marsh restoration project on the Slough's margin. After the paddle, we'll visit Pajaro Valley farm conversion sites where Watsonville Wetlands Watch has been working on creation of seasonal ponds and wetland and upland restoration efforts using mowing, discing, herbicide application, broadcast seeding and planting. *Leader: Andrea Woolfolk, Stewardship Coordinator, Elkhorn Slough National Estuarine Research Reserve*.

Field Trip 3: From Char to Verdant: Soberanes Wildfire Recovery at Big Sur Land Trust's Mitteldorf Preserve. (Half-day, 8:30am-1 pm) Visit the Mitteldorf Preserve, which was completely burned during the 132,000-acre Soberanes Fire in 2016. Land managers are now in their second year of vegetation monitoring post-fire, and working to curtail invasive plant spread. We will address how the fire—and fire suppression activities—affected weed populations, and the process of creating a response plan with weed management priorities based upon site dynamics and invasive species characteristics. We will visit an erect veldtgrass control site in redwood understory, where we will present the results from our Fusilade foliar herbicide application. At the Redtail overlook we will discuss the progression of fire recovery for redwood, grassland, madrone, and chaparral habitats and results from a post-fire vegetation study. *Leader: Patrick Riparetti, Big Sur Land Trust*.

Field Trip 4: Righting the Upside-Down River: Restoring the Salinas through Collaborative "Win-Win" Management Strategies. (Half-day, 8:30am-1 pm) Visit a cutting-edge partnership between the Resource Conservation District (RCD) of Monterey County, The Nature Conservancy, large agricultural operations, and government agencies to restore the Salinas River and control the state's second largest *Arundo donax* infestation, a bane to both farmers and conservationists alike. This is a rare opportunity to visit private lands and explore the unique ecosystem of the Salinas River. The Salinas is nicknamed the "upside-down river" because it flows south to north and sometimes only underground. It is the longest river in California's Central Coast, stretching 175 miles through San Luis Obispo and Monterey Counties before emptying into Monterey Bay. We will discuss the collaborative programs that are allowing Arundo treatment to happen, as well as the treatment techniques being used. The program is targeting approximately1,500 acres of *Arundo donax* along the Salinas River, along with scattered tamarisk and tree tobacco. Since the program began in 2014, the RCD has mowed over 300 acres of Arundo and is following up with herbicide treatments. As we ride through scenic Steinbeck country you will see the rolling hills of the Sierra de Salinas and Gabilan Range, and vast expanses of some of the most productive farmland in California, the "Salad Bowl of America." *Leader: Emily Zefferman, Resource Conservation District of Monterey County*.