

OVERVIEW

Is extinction inevitable for the Delta and longfin smelt? Despite extensive efforts investigating potential causes of their decline, their numbers have reached an all-time low; particularly for Delta smelt. These San Francisco Bay-Delta fishes are protected by the federal threatened species listing (Delta smelt) and the State's endangered (Delta smelt) and threatened listing (longfin smelt). Water supply "take restrictions" are directly influenced by their presence near the pumps, and river flows are regulated based on their life-cycle and known distribution.

As species near extinction, research and management priorities must keep pace. This day-long symposium will feature panels updating the species' status, links to population declines, and the exploration of how recovery planning, restoration and decision-making efforts intersect to sustainably manage Delta and longfin smelt.

SYMPOSIUM PLANNING COMMITTEE

Nann Fangué, Symposium Chair, UC Davis
Jim Hobbs, UC Davis
Richard Connon, UC Davis
Peter Moyle, UC Davis
Shauna Oh, UC Davis
Marina Brand, Delta Science Program

ACKNOWLEDGMENTS

The symposium planning committee would like to thank you for joining us today. We also thank the speakers and panelists for taking time out of their incredibly busy lives to enrich today's program and dialogue with their expertise and experience.

The image of the beautiful water color painting of the Delta and longfin smelt, used on the cover of this program, was kindly provided by biologist and artist, René C. Reyes.

And thanks to the work of the UC Davis ATS crew, the video recording of this symposium will soon be available on the symposium web page at <http://cmsi.ucdavis.edu/events/smelt-longfin/index.html>.

We would also like to recognize the partnership and support provided by the Delta Stewardship Council, Delta Science Program and the UC Davis Coastal and Marine Sciences Institute. This joint science symposium would not have been possible without these key contributions and partnerships.

PRESENTED BY



DELTA STEWARDSHIP COUNCIL
DELTA SCIENCE PROGRAM



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Water color painting, "Cousins" with permission from biologist and artist René C. Reyes

CENTER FOR COASTAL OCEAN ISSUES AND DELTA SCIENCE PROGRAM SYMPOSIUM

DELTA & LONGFIN SMELT: Is Extinction Inevitable?

March 29, 2016

UC Davis

Activities & Recreation Center, Ballroom A

8:30 am - 4:30 pm

PRESENTED BY:



DELTA STEWARDSHIP COUNCIL



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8:20 CHECK-IN

8:30 WELCOME
NANN FANGUE, UC Davis Coastal and Marine Sciences Institute
CLIFF DAHM, Delta Stewardship Council, Delta Science Program

8:45 - 9:45 THEME 1: WHAT DO WE KNOW ABOUT DELTA SMELT AND LONGFIN SMELT?
MODERATOR: NANN FANGUE

TED SOMMER, CA Department of Water Resources
The ecology and management of Delta smelt: New insights into the most important non-game fish in the United States

JON ROSENFELD, The Bay Institute
Longfin smelt wonder "Will humans evolve a spine before we fishes go extinct?"

RANDY BAXTER, CA Department of Fish & Wildlife
Slippery Slope - Documenting the declines of smelts in the San Francisco Estuary

MANDI FINGER, UC Davis
Evaluation of effective population size in Delta smelt provides hope for recovery

9:45 -10 BREAK

10 -11:45 THEME 2: CAUSAL LINKS TO POPULATION DECLINES AND DATA GAPS
MODERATOR: JIM HOBBS

RANDY BAXTER, CA Department of Fish & Wildlife
Putting pieces together - MAST conceptual model for investigating the decline of Delta smelt

NANN FANGUE, UC Davis
Why thinking mechanistically matters: Teasing apart multiple and interacting abiotic stressors

TOM CANNON, CA Sportfishing Protection Alliance
Contributing cause of smelt decline: Water exports

BRIAN SCHREIER, CA Department of Water Resources
What have we learned about predation on Delta smelt?

WILLIAM BENNETT, UC Davis
Over under sideways down; inertia of a transforming food web and extinction debt for smelt

RICHARD CONNON, UC Davis
Sublethal effects of contaminants regularly detected in the delta: Risks to smelt

FRED FEYRER, US Geological Survey
The role of ocean conditions on Delta smelt and longfin smelt in the San Francisco Estuary

11:45 - 1 LUNCH BREAK (ON YOUR OWN)
Nearby dining venues on campus include Segundo Dining Commons (located directly northeast of ARC) and restaurants @ the Silo (Gunrock Pub, La Crepe, Starbucks, Carl's Jr., Pizza Hut, Taco Bell, and Grab & Go), including food trucks (Star Ginger Asian Food Truck, Shah's Halal Food Truck).

1 - 2 THEME 2: CAUSAL LINKS TO POPULATION DECLINES AND DATA GAPS CONT'D
MODERATOR: JIM HOBBS

SWEE TEH, UC Davis
A 3-year study of environmental stress on health of endangered Delta smelt

LOUISE CONRAD, CA Department of Water Resources
Drought: Is this the 'final straw'?

LARRY BROWN, US Geological Survey
How will climate change induced warming affect Delta smelt?

JIM HOBBS, UC Davis
Synthesis of the current biology, ecology and status of smelt in the San Francisco Estuary

2 - 2:45 THEME 3: INTERSECTION OF SPECIES' RECOVERY PLANNING, RESTORATION EFFORTS, AND DECISION-MAKING: ADDRESSING HARD QUESTIONS
MODERATOR: RICHARD CONNON

PETER MOYLE, UC Davis
Extinction in California fishes: ecological, biological, legal, real

LENNY GRIMALDO, ICF International
Rearing habitat of larval and juvenile longfin smelt in the San Francisco Estuary: A case to move into uncharted waters

ROSEMARY HARTMAN, CA Department of Fish & Wildlife
Are tidal wetlands the new miracle cure?

2:45 - 3 BREAK

3 - 4:30 PANEL DISCUSSION: WHERE DO WE GO FROM HERE, A PATH FORWARD AMONG CONSIDERABLE UNCERTAINTY?
MODERATOR: PETER MOYLE

SHAWN ACUÑA, Metropolitan Water District of Southern California

DAN CASTLEBERRY, US Fish and Wildlife Service

SCOTT HAMILTON, Center for California Water Resources Policy & Management

TED SOMMER, CA Department of Water Resources

CHRISTINA SWANSON, Natural Resources Defense Council

ERWIN VAN NIEUWENHUYSE, US Bureau of Reclamation

CARL WILCOX, CA Department of Fish and Wildlife