

Man and Exotic Fish:

Incorporating YouTube Videos and Citizen Science Observations to Explore Spatial and Demographic Patterns of Urban Fishing Behavior and Attitudes Towards Exotic Fish on the Los Angeles River



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Internet videos of fishing activity on the LA River are analyzed along with iNaturalist citizen science observations to describe the experience of those who fish and to better understand how fishing varies along demographic lines.

At present, the fish assemblages of the LA River consist entirely of exotic species. Native species have not been documented in the LA River since 1992.

This project examines patterns of fishing behavior along the LA River from a critical perspective, which situates a complex human-environment interaction within a social justice context.

We describe a novel data source and method for natural resource management.



The Many Los Angeles Rivers – Varying Perspectives and Realities

The Los Angeles River Watershed



“NATURE” / “WILD”



“HUMAN
LANDSCAPE”

“SOCIAL
CONSTRUCT”



“URBAN
PUBLIC SPACE”

The Los Angeles River in Hollywood and the Media: A Representation of the LA River as a Dystopian/Dangerous Place



Shark Caught in Los Angeles River? Yessir.

A few more performances like E. J. Gray's, and fresh-water shark fishing will be one of our foremost outdoor pastimes.

For Mr. Gray, who works at the Los Angeles Gas and Electric Company's pumping station under the Aliso street bridge, caught a shark measuring six-feet three inches from the tip of the nose to the tip of the tail and weighing about seventy-five pounds, in Los Angeles River yesterday morning. All day yesterday the fish lay on the bank of the river outside the pumping station—tern and mangled



Demonization of the LA River



- “River Monsters” – Term used frequently in videos
- Perception of fish as “mutated” by pollution
- Myth that river is full of dead bodies
- Demonization of river led to poor treatment of caught fish (fish not immediately released, fish thrown away, etc.)
- Many fishermen discuss water quality in video or comments
- Fishermen treat catch as farcical – too focused on taking pictures to ethically treat fish
- LA River as urban landscape exemplified by use of rap music in videos
- LA River as dystopian landscape
 - *Helicopter assumed to be LAPD*



Research Statement



History of Exotic Species on the Los Angeles River



Common Carp – Earliest documented release 1909 (LA Times), consumed by transient and immigrant communities along river

Tilapia (Nile and Mozambique) – Released since late 1960's for vector control

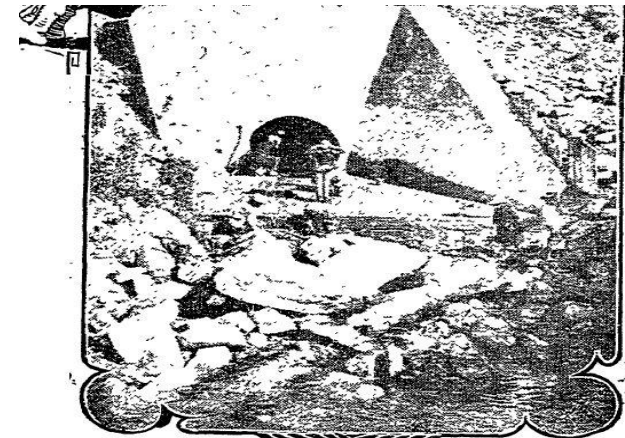
Western Mosquitofish – Released since late 1960's for vector control

Goldfish – Aquarium releases (1990's)

Plecos – Aquarium releases (1990's)

Poor sampling efforts and intermittent sampling frequency leads to poor timeline

Popular notion that fish were void from LA River (1950's – 1990's)



Greatest Fishing Excitement Ever Seen Here.
With hands, pitchforks, clubs and anything but hooks and lines, they were catching 'em in the Los Angeles River below Seventh street yesterday. Hundreds of people landed thousands of carp and goldfish.

History of Exotic Species on the Los Angeles River



Citizen Science Data

iNaturalist is a mobile app that allows people to photograph, locate (GPS), and identify wildlife from their smart phones.



Occurrence data was verified prior to use. Where necessary, correspondence or interviews with observer were conducted to determine the accuracy of observations.

App is multilingual, allowing for more groups to participate in citizen science.

Demographic and language data can be extracted in addition to observations.

Vernacular names often vary – species often lost in translation. Classic example “bream”.





How It Works



■ Benefits

- *More data*
- *Efficient collection*
- *Does not require presence in field*
- *Option for “expert” review – grades of data*

■ Costs

- *Spatial accuracy issues*
- *Multiple/repeat entries for the same fish*
- *Frequent errors in fish identification*
- *Varying units and levels of description*

Fish Surveys – Citizen Science Data



« natureinla's observations

European Carp (*Cyprinus carpio*) · Observed by natureinla · February 14, 2016

☆ Add to favorites 🔍 Identify + Add to project ➦ Share



Photo © NHM Citizen Science Program, some rights reserved



Location: la river, glendale (Google, OSM)
Places: Los Angeles watershed (partial), Los Angeles River, Los Angeles, Southern California, US-CA, US, North America, NA [More...](#)
Lat 34.143283, Lon -118.354321
Accuracy: 877m
Geoprivacy: open
[Hide details](#)

Description

Observation and photo submitted by @steeliechick via Instagram #LARiver

Tags: social media, instagram

Added: Feb. 19, 2016 10:05:00 -0800

[Add/edit more fields](#)

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natureinla's ID:
European Carp (*Cyprinus carpio*)
[Agree?](#)



Community ID:
European Carp (*Cyprinus carpio*)
[About](#)

2 people agree



dreierj's ID:
Typical Carps (Genus *Cyprinus*)

1 person agrees

Identotron

Projects



L.A. Nature Map



California Fish

Added by biohexx1 on February 19, 2016 01:02 PM



Methods and Analyses

Two reviewers conducted qualitative analyses of **22** Youtube videos and their respective comments. A grounded theory approach was used to identify patterns and themes evident in videos.

This method served as an alternative to a survey study. Respondents were reluctant to participate due to fish/game law violations, secrecy surrounding LA River fishing spots and language barriers.

Missing geographic locations of videos were established using landmark recognition.

Fishermen tell fishing stories! The point of this study was to capture the realities and experiences of LA River fishermen in order to describe patterns of fishing behavior, perceptions of the LA River, targeted species, treatment of catch and fate of catch.



Findings : Patterns and Recurring Themes



Major patterns and findings:

- Accessibility of technology
 - *Video technology very accessible (iPhone, GoPro)*
 - *Underrepresented groups (homeless) without access to technology featured in covert videos*
 - *GoPro provides perspective from fishermen's own eyes*
 - *In the past, technology was more restricted to privileged classes*





0 5 10 Miles

★ Internet Video
Filming Locations

0 5 10 Kilometers

LA River Rec. Zone

Findings : Patterns and Recurring Themes



Major difference in Covert vs. Overt videos – Videographer positioning with respect to subject

- *Covert videos – fishermen filmed from afar, fishermen are unaware that they are being filmed*
- *Covert videos reflect a negative attitude towards primitive fishing methods of homeless. Issues of power and class visible.*
- *Use of bluegrass music – denotes association with primitive fishing methods*



Targeted Species

- Fish species targeted – Class and cultural issue
 - Carp (*Cyprinus carpio*) – seen as garbage fish and invasive species in US, prized for sport in Europe, food fish in Latin America and Asia, seen as source of free food for some, fly fishermen target because of size
 - Tilapia (*Tilapia spp.* / *Oreochromis spp.*) – targeted for food on LA River, farmed Tilapia seen in markets



Fishing for LA River Monsters with Brandon Jew (selection)



Fishing for Food on the LA River



People do eat fish caught on LA River! This was not documented in prior studies of the Los Angeles River (City of LA, County of LA, USACE, etc.)

- Despite health risks poor water quality (untreated urban runoff)
- Homeless population using river for sustenance fishing
- Low income and minority communities supplement food with LA River fish
- Consistent with findings of prior studies (West et al. 1995, Hutt and Jackson 2008)



Las tundras Sinaloa 10 months ago
y ustedes se las comen. compa.

“And you eat them friend?”

Reply • 👍 🗨



Luis Alberto Serrano Alonso 10 months ago

No todas, solo las mas grandes pero las desinfectamos con vinagre blanco y luego limon y después a cocinar al vapor

Reply • 👍 🗨



Las tundras Sinaloa 10 months ago

Orale

Reply • 👍 🗨

“Not all, only the largest but disinfected with white vinegar and then lemon and then steamed”

Findings : Patterns and Recurring Themes



Major patterns and findings:

- Fishing on LA River largely varied in terms of behavior, equipment used, and perceptions of nature
 - *Expensive fly fishing equipment vs. spincast gear*
 - *Fishing as farsical vs. fishing for food*
 - *“Drainage ditch” and “sewer” vs. “wilderness” and “nature”*
 - *LA River as forbidden landscape vs. urban nature sanctuary*
- Cultural and linguistic patterns of surrounding local neighborhoods translate to the riverscape
 - *Many videos only in Spanish or multilingual*
 - *Reflection of surrounding city*
- Artifacts of class issues evident in clothing/equipment
 - *Major dichotomy: fly fishermen outfitted with expensive gear, vests, and waders vs. fishermen not dressed for outdoors, equipped with bare basics*
 - *Some fishermen use what they have accessible for bait (ex. Tortillas baked in syrup)*

Findings : Patterns and Recurring Themes



Major patterns and findings:

- African American fishermen not seen in any videos
- While videos describe fishing as a multicultural activity, transcending racial/ethnic lines, fishing on LA River appears to be a segregated activity (homogenous groups)
- Fishing on LA River dominated by men. No women fishing in videos.
- Fishing videos spatially clustered around easy to access reaches
- These areas correspond to soft-bottom reaches with suitable fish habitat
- Almost always near bridge, road or existing trail





QUESTIONS?

