

# ECISMA Partner Non-native Fish Survey

Jeff Kline-Everglades National Park

23 July 2014

Survey Participants:

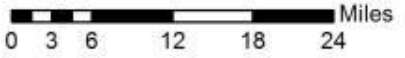
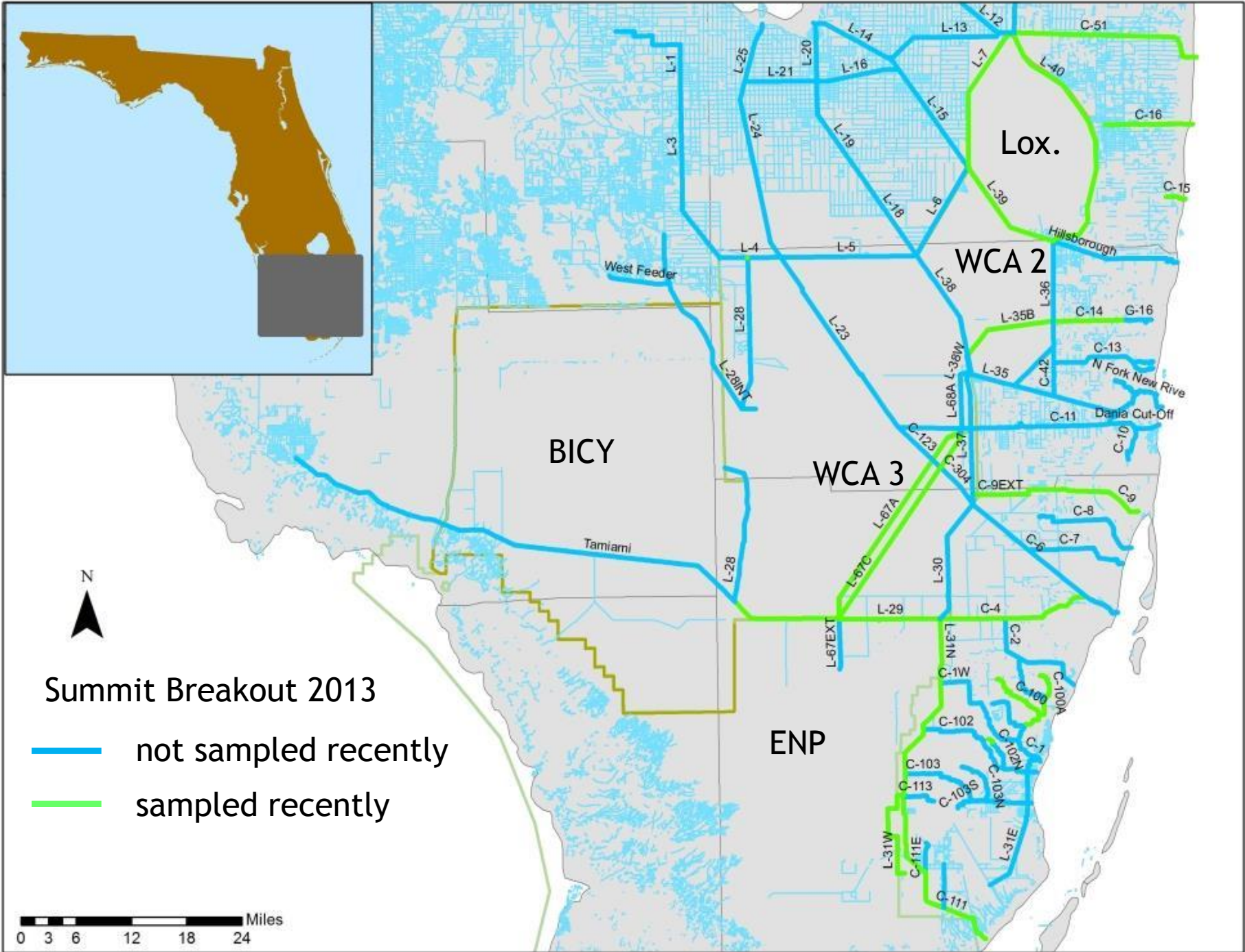
Everglades National Park

Florida Fish and Wildlife Conservation Commission

Miccosukee Tribe of Indians of Florida

US Fish and Wildlife Service

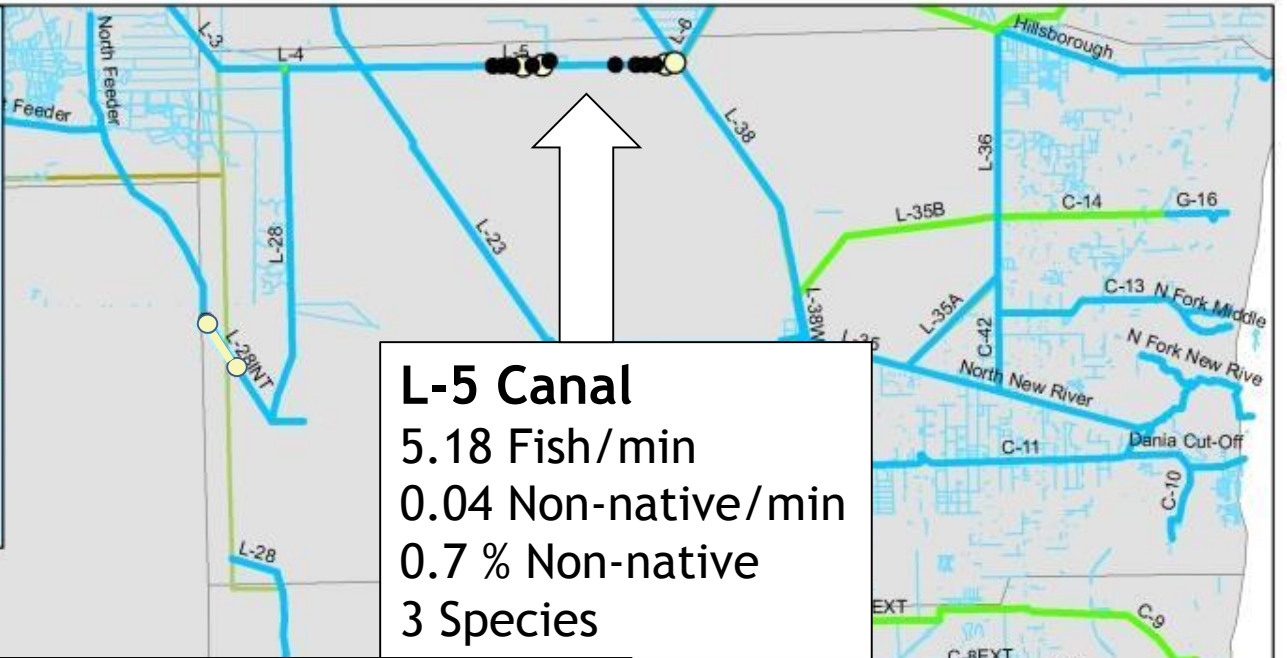




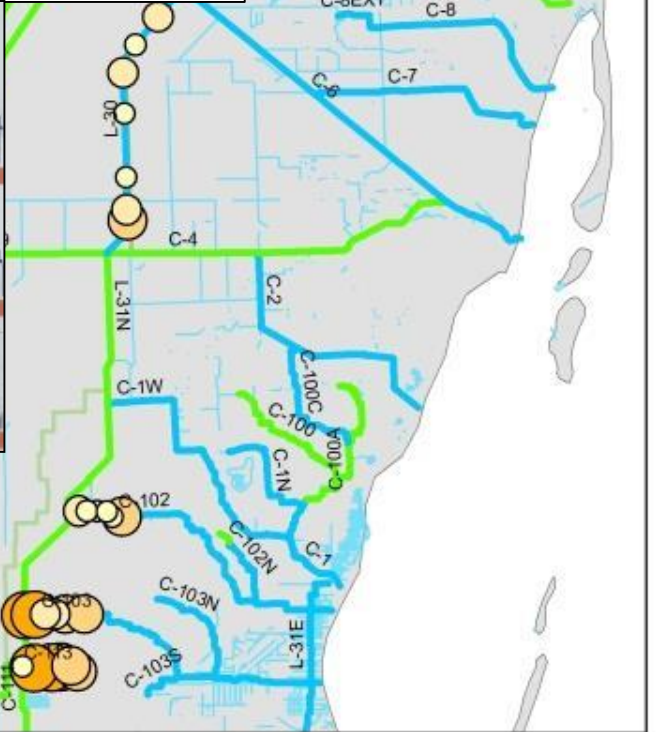
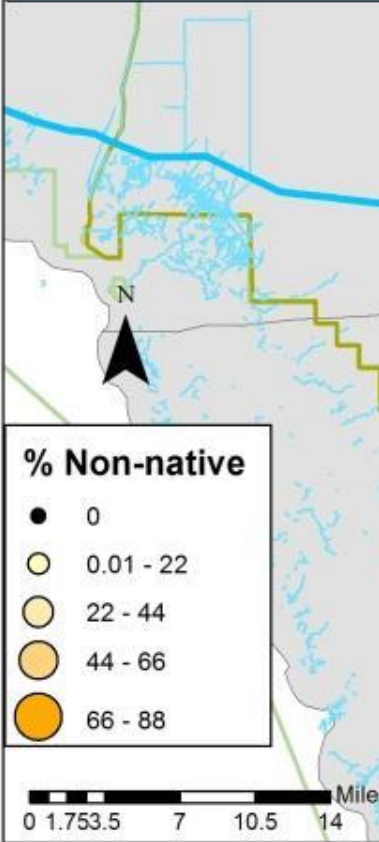


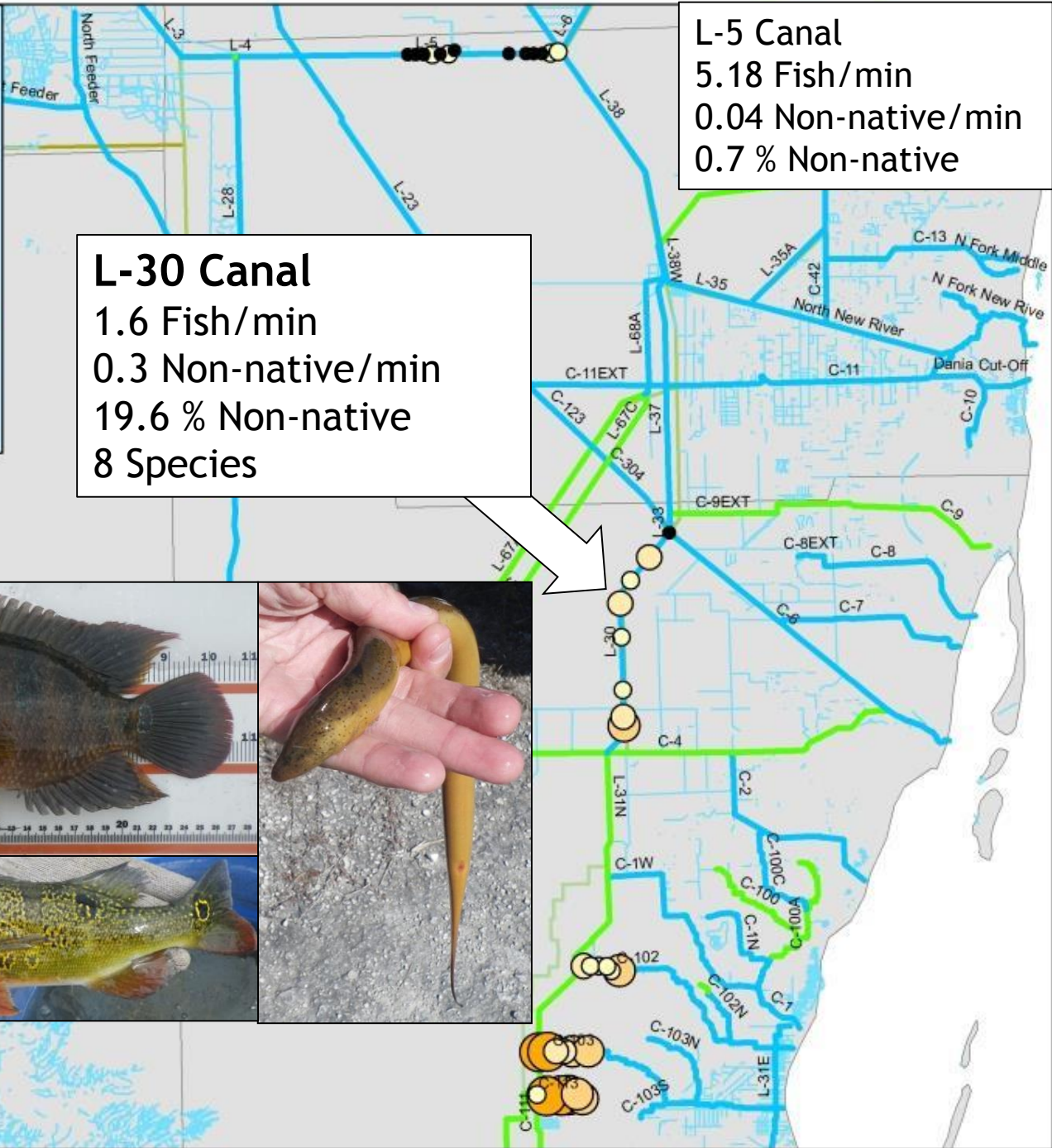






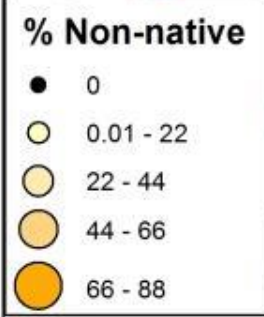
**L-5 Canal**  
5.18 Fish/min  
0.04 Non-native/min  
0.7 % Non-native  
3 Species

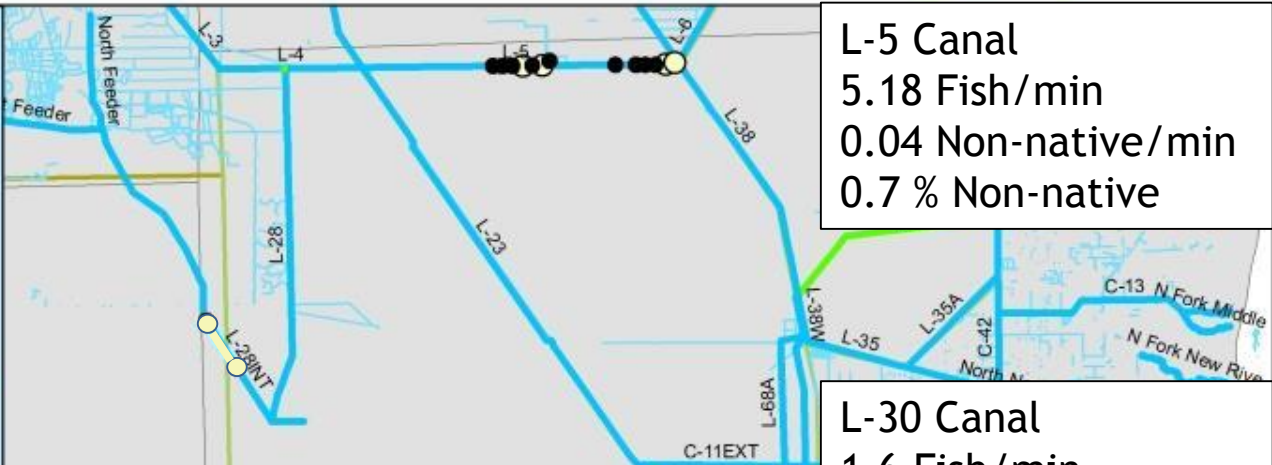




**L-5 Canal**  
 5.18 Fish/min  
 0.04 Non-native/min  
 0.7 % Non-native

**L-30 Canal**  
 1.6 Fish/min  
 0.3 Non-native/min  
 19.6 % Non-native  
 8 Species

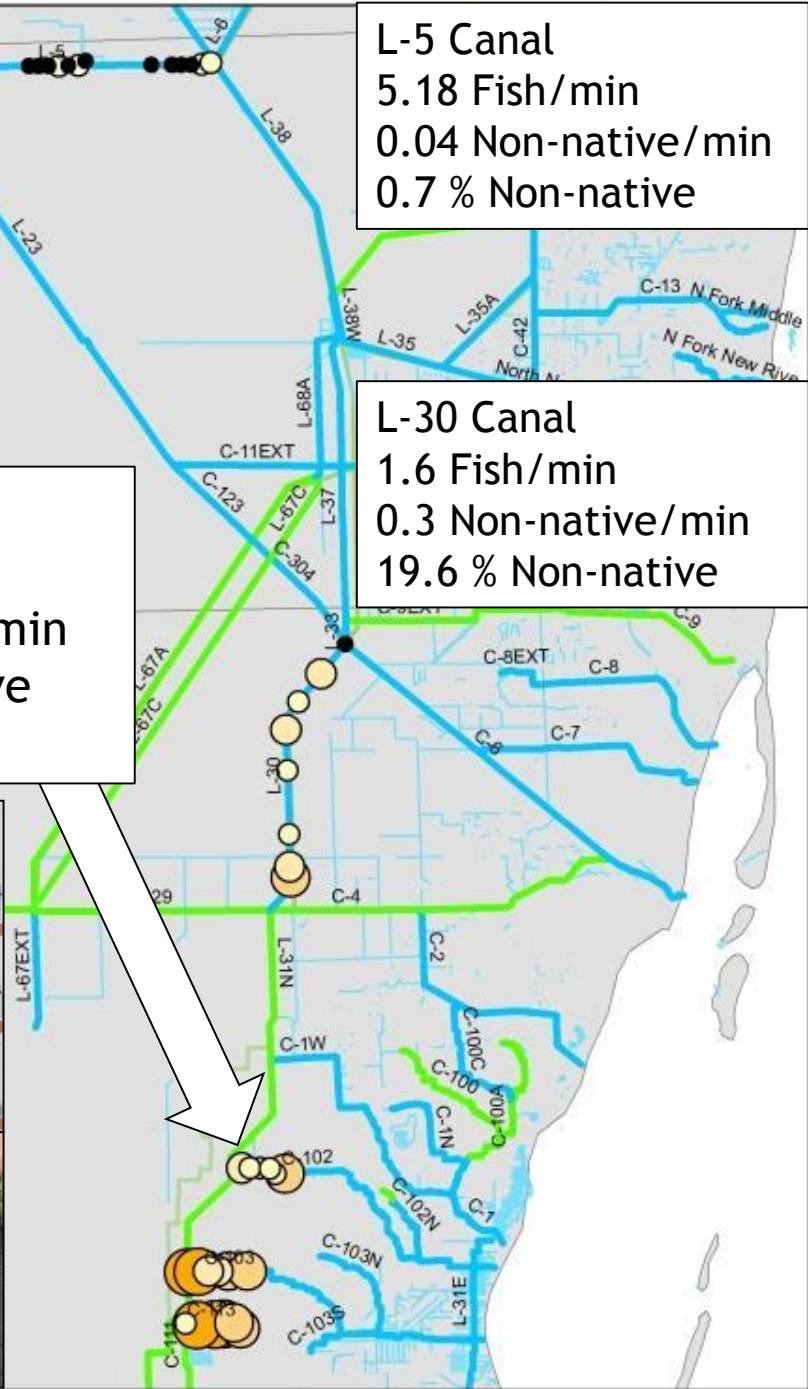
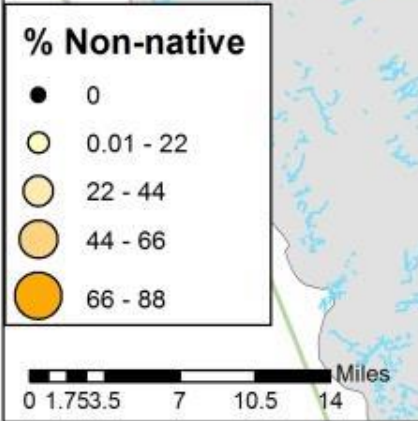


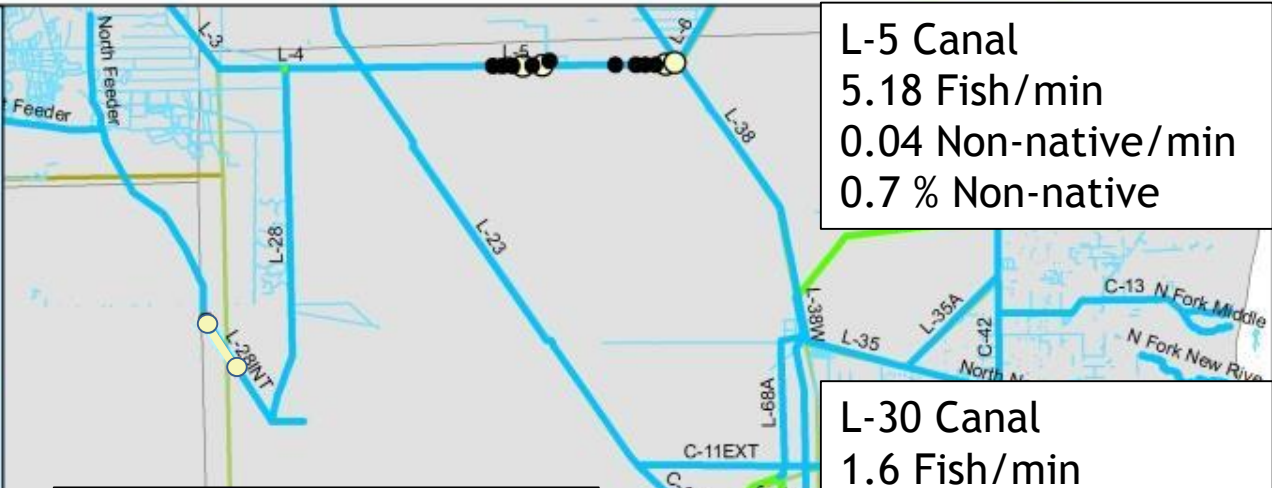


**L-5 Canal**  
 5.18 Fish/min  
 0.04 Non-native/min  
 0.7 % Non-native

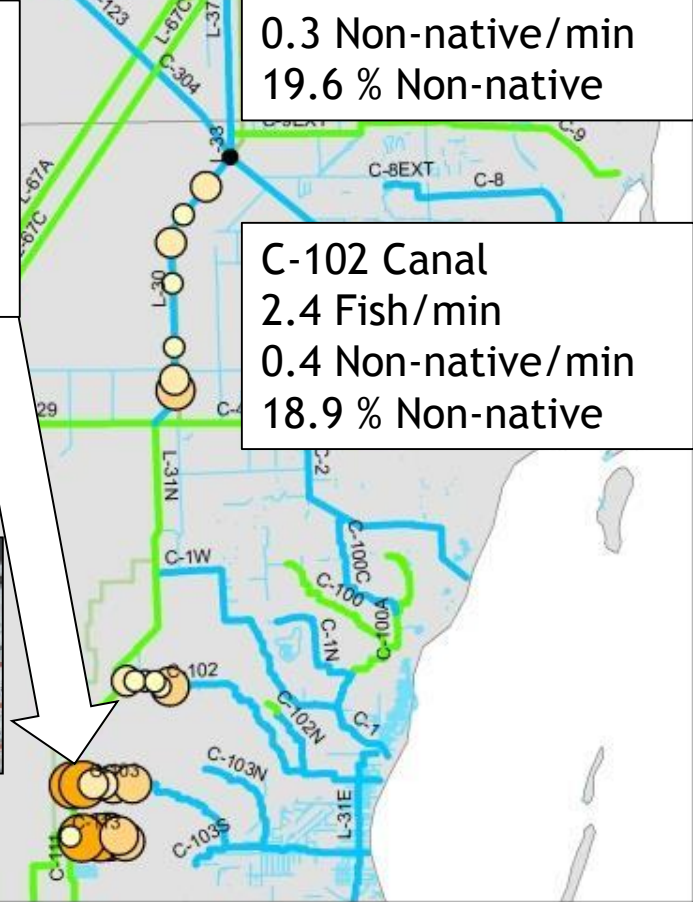
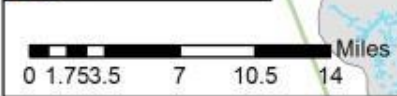
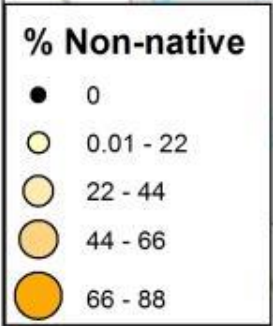
**C-102 Canal**  
 2.4 Fish/min  
 0.4 Non-native/min  
 18.9 % Non-native  
 6 Species

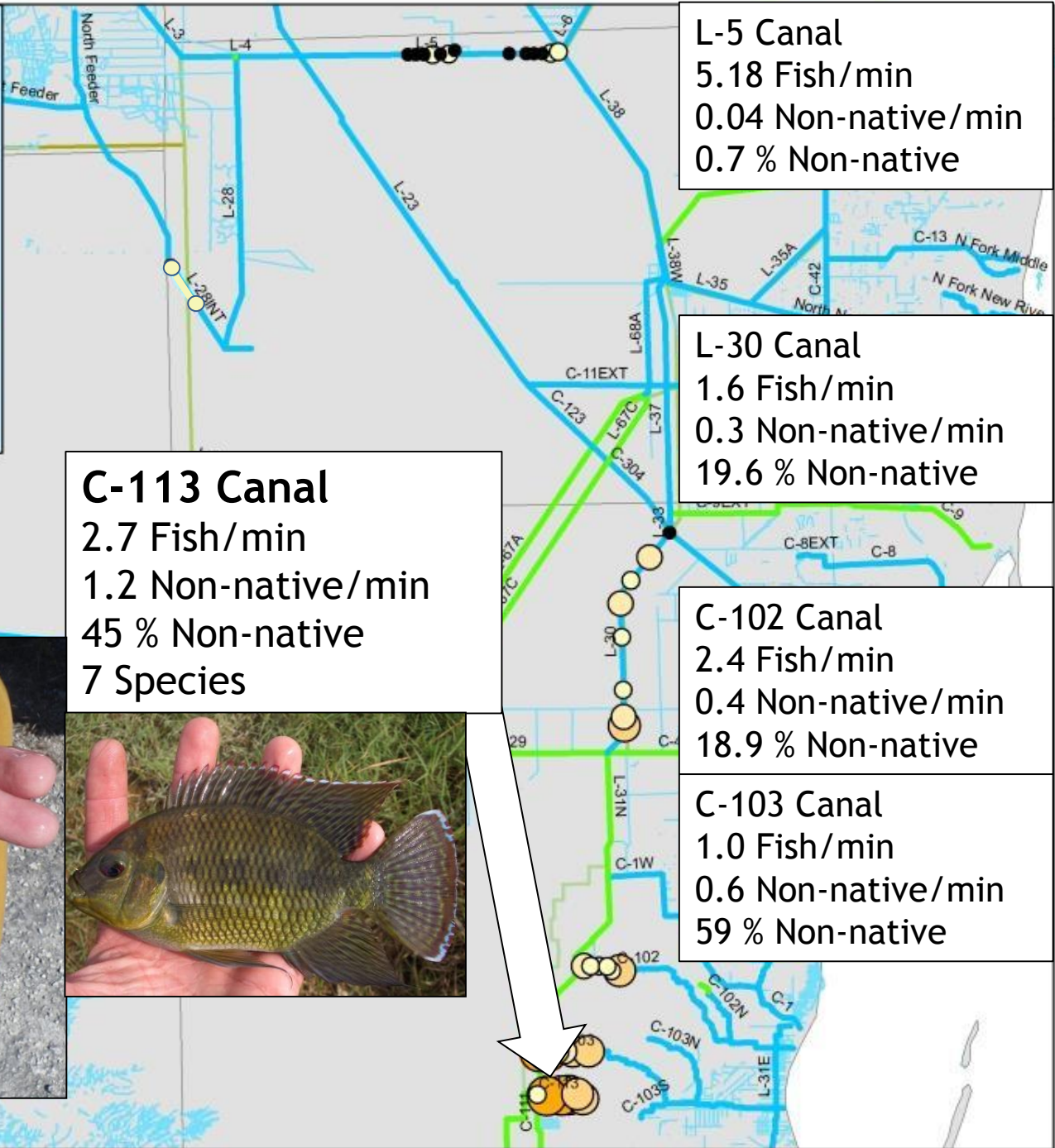
**L-30 Canal**  
 1.6 Fish/min  
 0.3 Non-native/min  
 19.6 % Non-native





**C-103 Canal**  
 1.0 Fish/min  
 0.6 Non-native/min  
 59 % Non-native  
 7 Species





**L-5 Canal**  
 5.18 Fish/min  
 0.04 Non-native/min  
 0.7 % Non-native

**L-30 Canal**  
 1.6 Fish/min  
 0.3 Non-native/min  
 19.6 % Non-native

**C-113 Canal**  
 2.7 Fish/min  
 1.2 Non-native/min  
 45 % Non-native  
 7 Species

**C-102 Canal**  
 2.4 Fish/min  
 0.4 Non-native/min  
 18.9 % Non-native

**C-103 Canal**  
 1.0 Fish/min  
 0.6 Non-native/min  
 59 % Non-native

**% Non-native**

- 0
- 0.01 - 22
- 22 - 44
- 44 - 66
- 66 - 88

0 1.753.5 7 10.5 14 Miles





# ECISMA Nonnative Fish Roundup Results and FWC exotic fish activities

Kelly Gestring and Murray Stanford  
Nonnative Fish and Wildlife Program  
Florida Fish and Wildlife Conservation Commission



**2014**



## **Everglades Non-Native Fish Round Up**

- Most successful to date (55 registrants in Dade, Broward, and Collier counties; 26 weighed in fish)
- Weighed in 580 pounds of fish, 18 different species
- Slam winner caught 13 species
- Bullseye Snakehead in separate category due to large size
- Mayans caught by the most anglers
- Mayans, Midas, Sailfin Catfish by weight; Mayans, Midas and Spotted tilapia by numbers
- More results and pictures at: [evergladescisma.org/](http://evergladescisma.org/)

Big thanks to Tony Pernas, Shea Bruscia, Ian Bartoszek, Rory Feeney, Murray Stanford, and ??



5513546



5513556



5513565

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# Nonnative Fish Round Up Challenges

What to do with unwanted fish?



If event takes off, how to handle increased administration and logistics

Boy Scout leaders and fishing club member expressed interest in next year's event

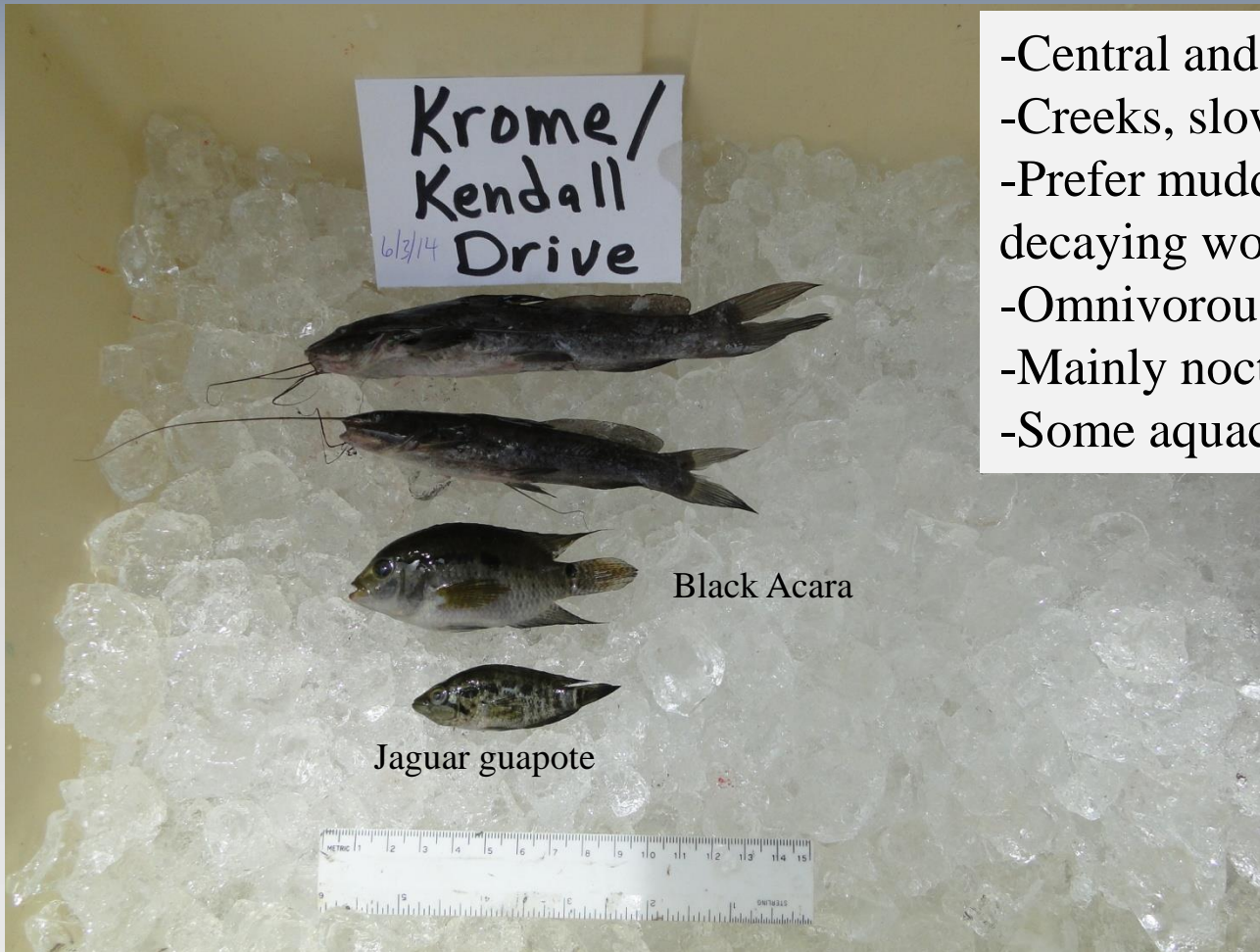
# Marbled Pim (Leiarus marmoratus)



South American pimelodid catfish  
Freshwater lakes and rivers  
Piscivorous  
In ornamental fish trade  
Max 36 inches, 25#

# Silver Catfish (*Rhamdia quelen*)

- Central and South America
- Creeks, slow moving rivers, lakes
- Prefer muddy bottom with decaying wood and leaves to hide in
- Omnivorous
- Mainly nocturnal
- Some aquaculture





Silver Catfish Site;  
Kendall Drive and  
Krome Avenue

Silver Catfish site

C1W near Krome Ave.

C1W intersect with L31N (north section)



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# Silver catfish canal connections

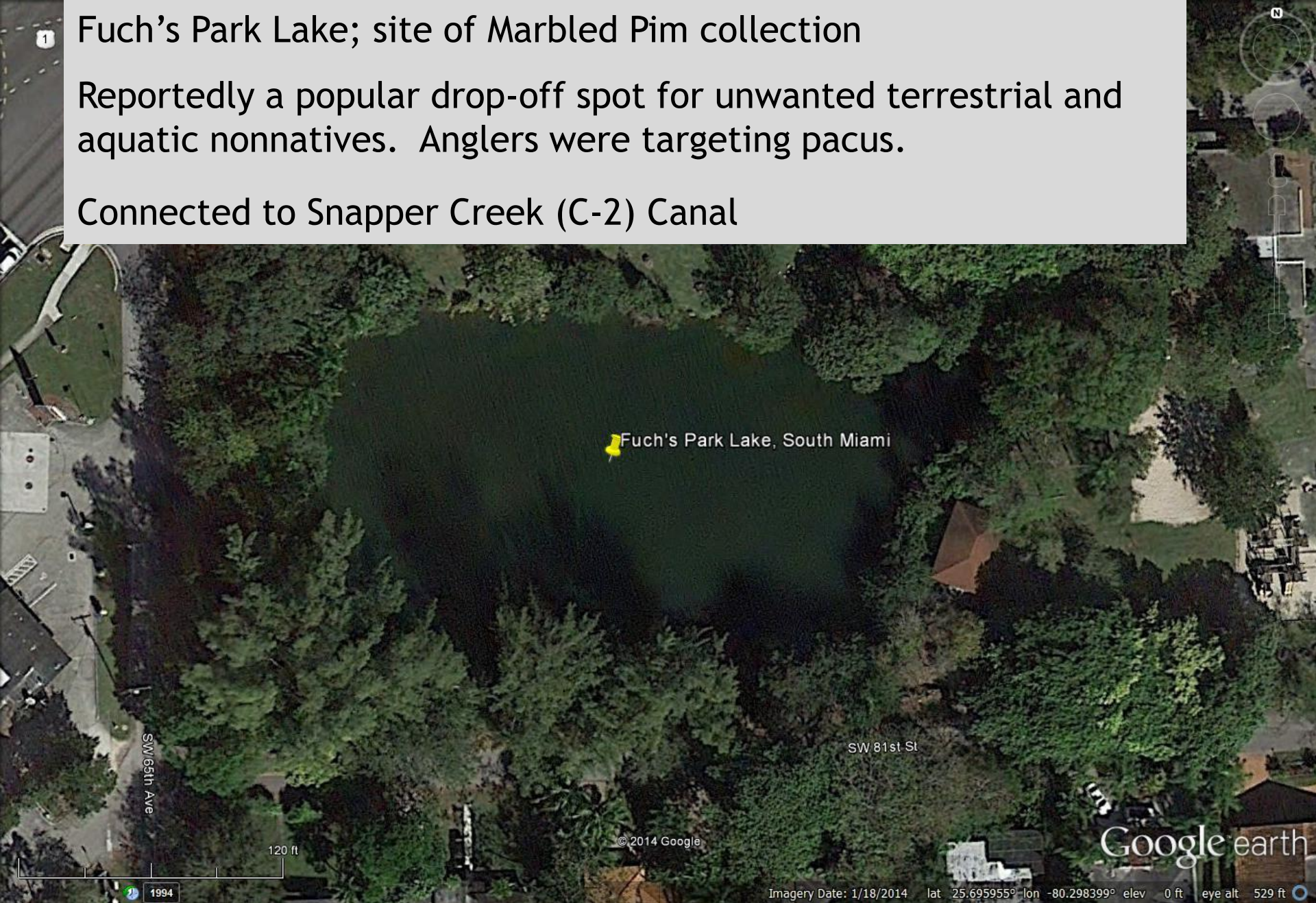


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# Fuch's Park Lake; site of Marbled Pim collection

Reportedly a popular drop-off spot for unwanted terrestrial and aquatic nonnatives. Anglers were targeting pacus.

Connected to Snapper Creek (C-2) Canal





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6/13/14  
Krome/  
Kendall  
Drive

6/13/14  
Fuchs  
Pond



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AskFWC question of the day:

“I'M CLOSING DOWN MY FISH POND, HAVE ABOUT 100 CYCLETS , I CAN'T FIND ANYONE TO TAKE CARE OF THEM AND NOT EVEN THE PET STORE THAT I BOUGHT THEM FROM WANTS THEM, CAN I RELEASE THEM IN A NEAR BY FRESH WATER CANAL ? PLS. LET ME KNOW .”



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**EVERGLADES CISMA**



**EVERGLADES CISMA**



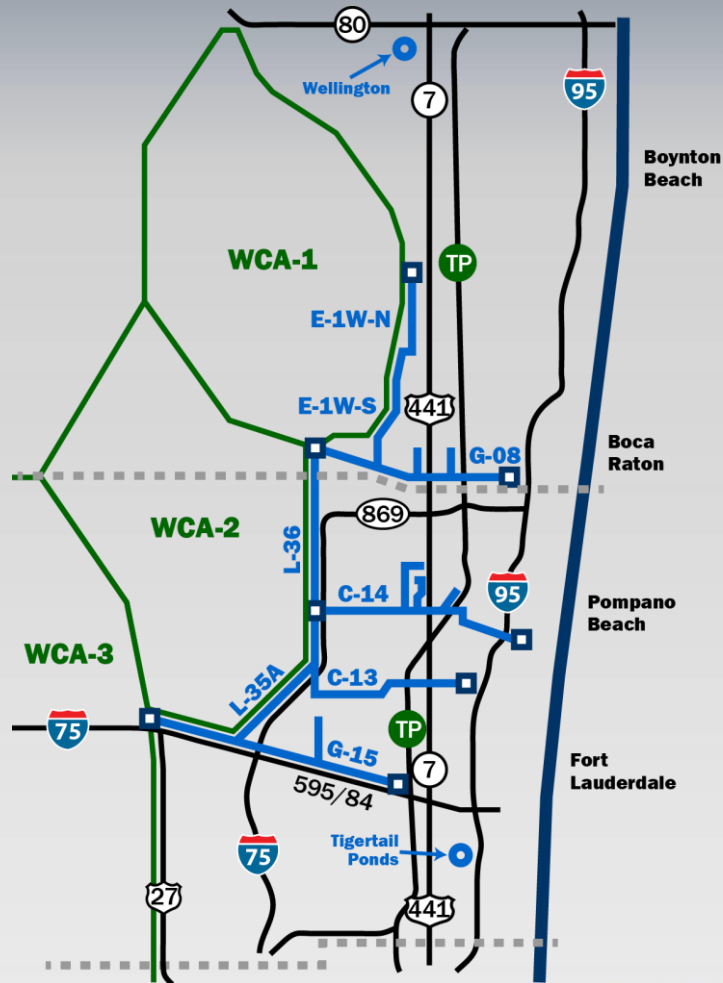
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Blue Zebra (Blue Mbuna) rock cichlids from Lake Malawi  
N = 501 Collected

Tony Pernas adopted 12, we kept 11 for  
identification, remainder were destroyed



# Bullseye Snakehead Range Expansion



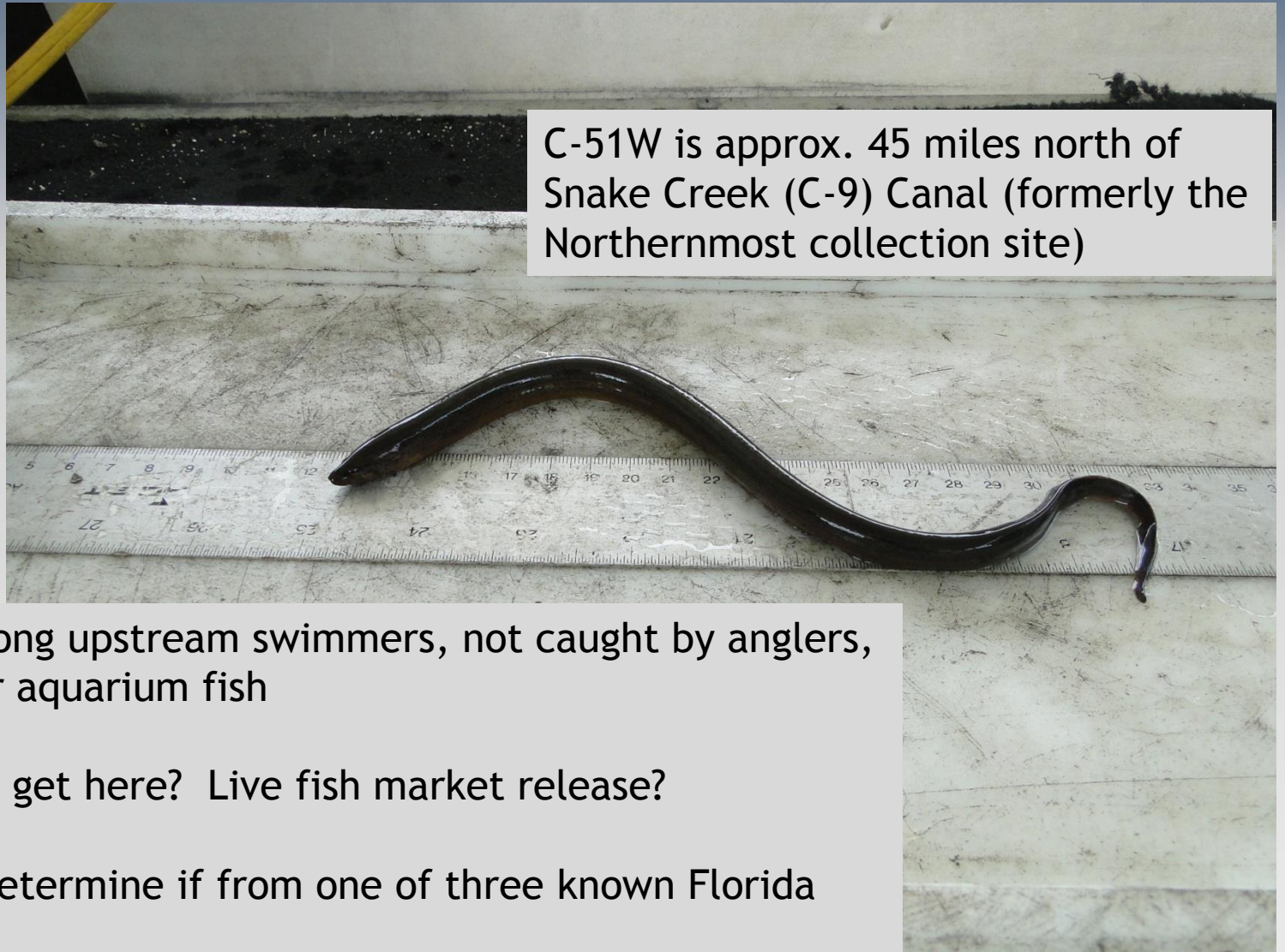
First documented in 2000 in Tamarac, slowly moving north

Angler caught fish from Wellington represents a 12 mile jump from northernmost location

Likely the result of illegal bucket biology

Wellington canal system drains into C-51W Canal with access to Lake Okeechobee and west coast

## Asian Swamp Eel (*Monopterus albus*)



C-51W is approx. 45 miles north of Snake Creek (C-9) Canal (formerly the Northernmost collection site)

SWEE not strong upstream swimmers, not caught by anglers, not a popular aquarium fish

How did they get here? Live fish market release?

Run DNA to determine if from one of three known Florida populations

Paraneotroplus sp. (Blackbelt cichlid)



First discovered in Biscayne Canal (C-8) in 2001 but present in low numbers.

Occasionally caught by anglers

C-51W site is approx. 50 miles from C-8 Canal

# Pinecrest Gardens

(formerly Parrot Jungle)



Site has long history of illegal terrestrial and aquatic nonnative species releases

# Petenia splendida (bay snook)

Central American cichlid  
Freshwater lakes and rivers  
Piscivorous  
Max TL = 20 inches  
Survived 2010 cold front  
Salinity tolerance = ??



Brought to our  
attention by Jeff  
Kline (ENP)

Pinecrest Gardens = former site of Parrot Jungle

Bay snook in Turtle Pond

Bay snook in entrance pond

103 ft

1994

Imagery Date: 1/18/2014 17 R 571786.15 m E 2839267.17 m N elev 6 ft eye alt 444 ft

Pinecrest Gardens High Water Outflow





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# ECISMA Nonnative Fish Workday?

## Objectives:

1. Remove as many Bay Snook as possible in 1-day effort.
1. Reduce biomass of unwanted nonnative fish, primarily spotted tilapia.

