

Yellow-billed Cuckoo Distribution & Habitat Use in the Rio Grande Basin



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Yellow-billed Cuckoo Ecology

- Arrive on breeding grounds late May to mid-June
- Nest in large, dense patches of riparian vegetation
- Egg laying to fledging: 17 days; Nestling period: 5-8 days
- Diet: caterpillars, cicadas, katydids, other large insects



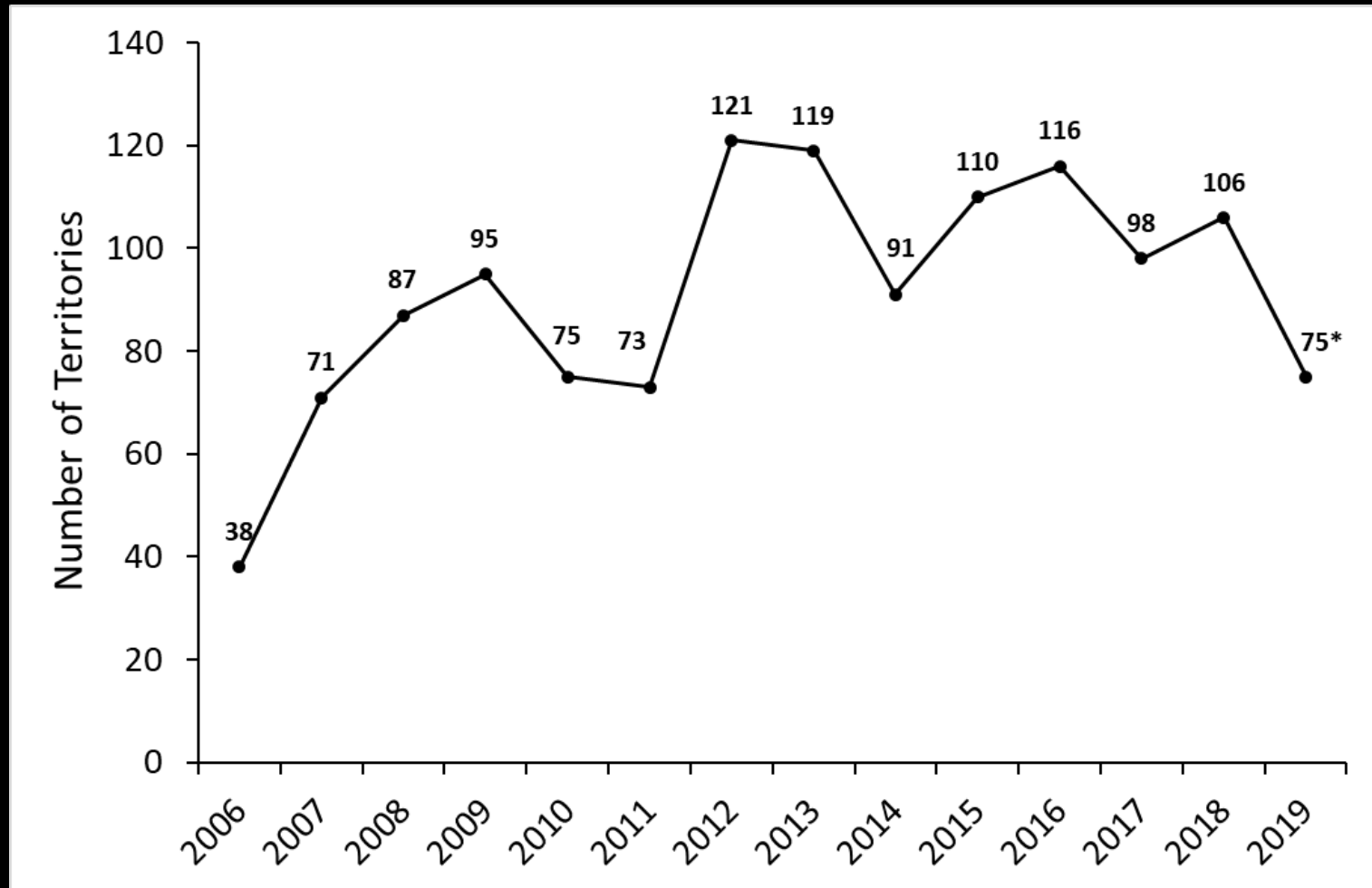
Western DPS Listed as Threatened in 2014

- Largest remaining populations in NM & AZ, 52% decline since 1980.

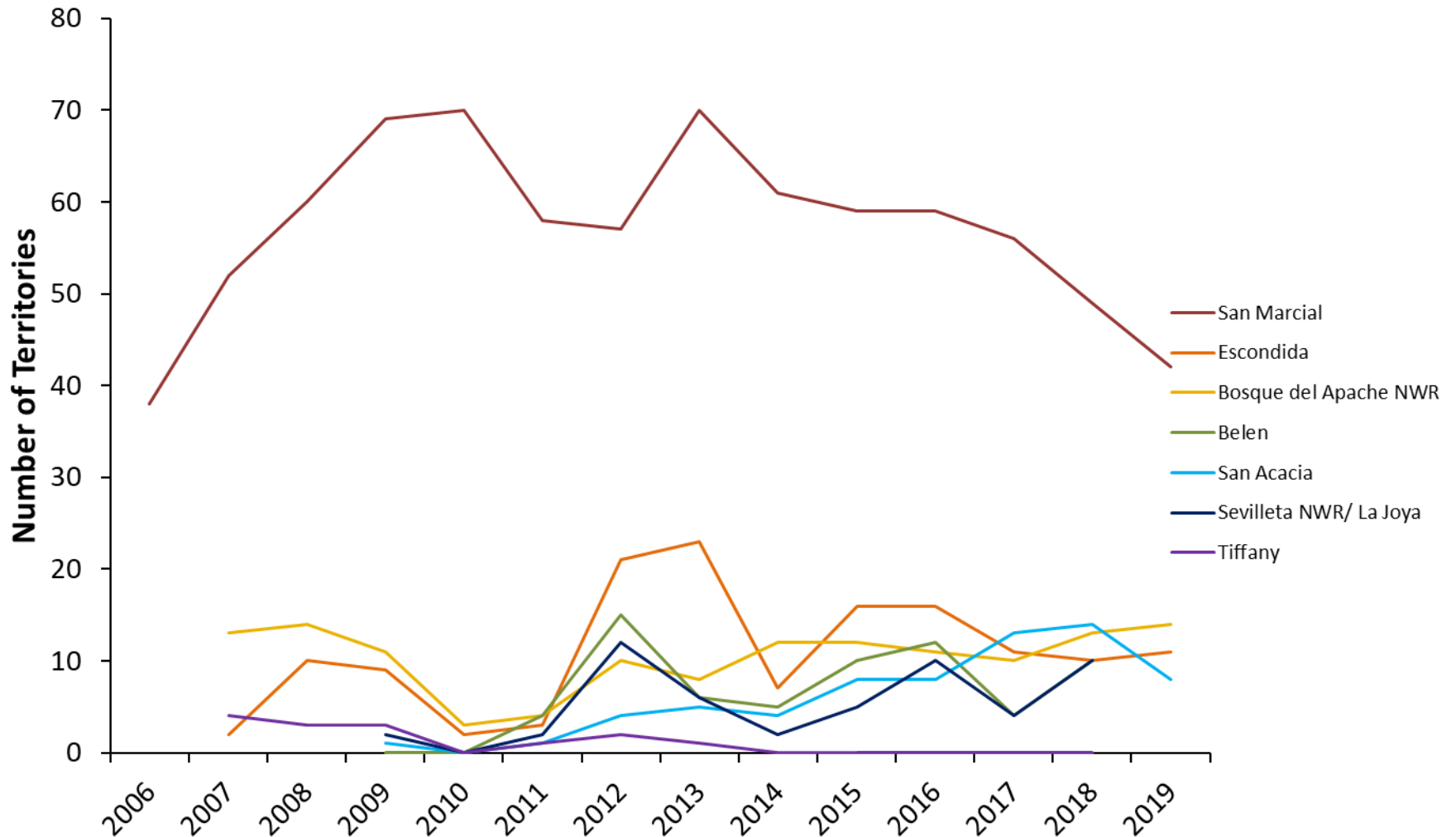




Middle Rio Grande YBCU Population Size



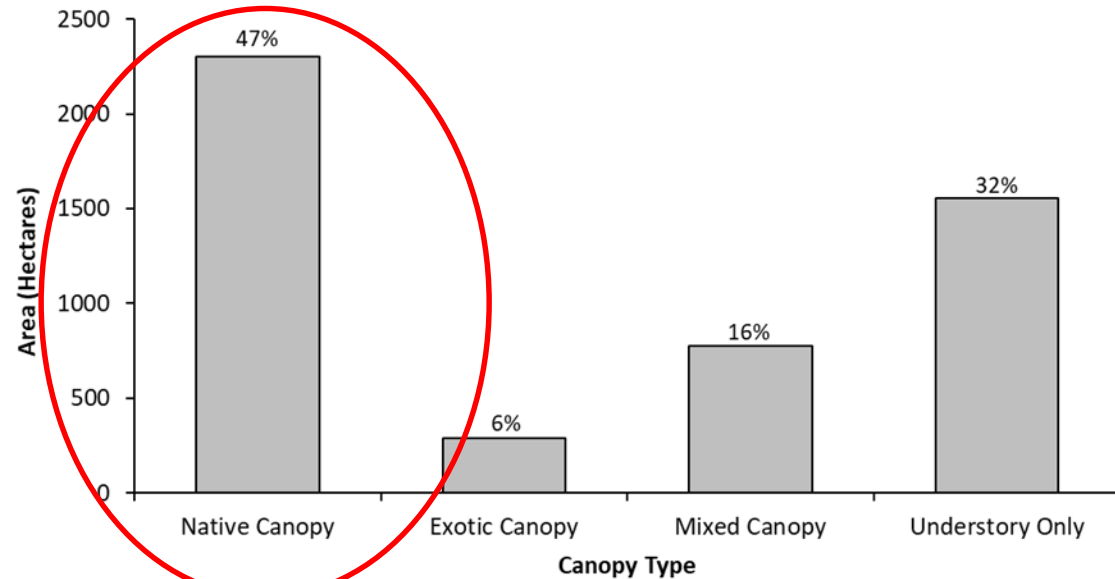
San Marcial Reach Supports Majority of Territories



**Native canopy-
dominated vegetation
communities are
preferred habitat type**

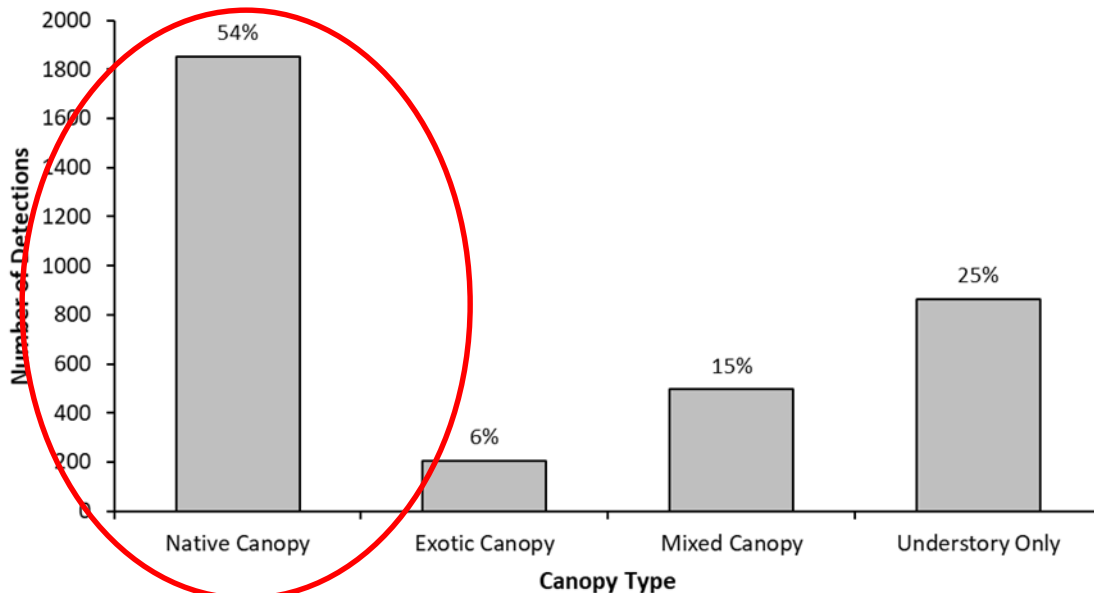
Overstory Vegetation Composition in YBCU Territories

(n = 1004 territories)



Detection Distribution by Dominant Canopy Type

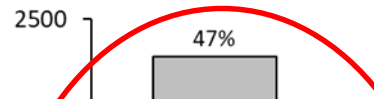
(n = 3417)



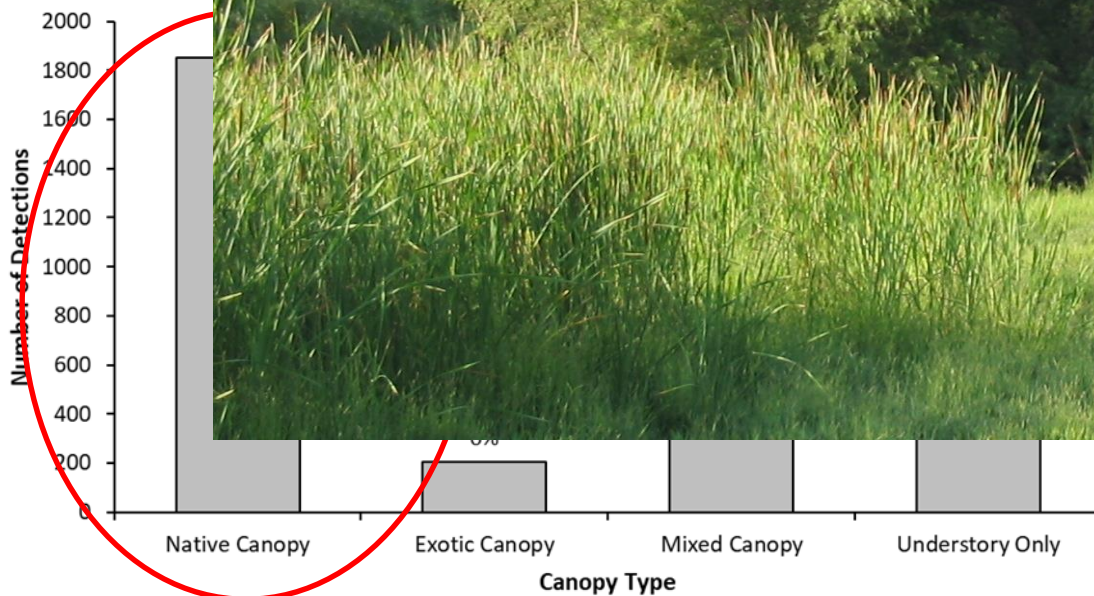
Native canopy-
dominant territories
comprised of
preferred

Overstory Vegetation Composition in YBCU Territories

(n = 1004 territories)



Detection



RADIO TELEMETRY STUDY

2017-present



OBJECTIVES:

Determine home range and habitat use to improve population estimates and model carrying capacity.



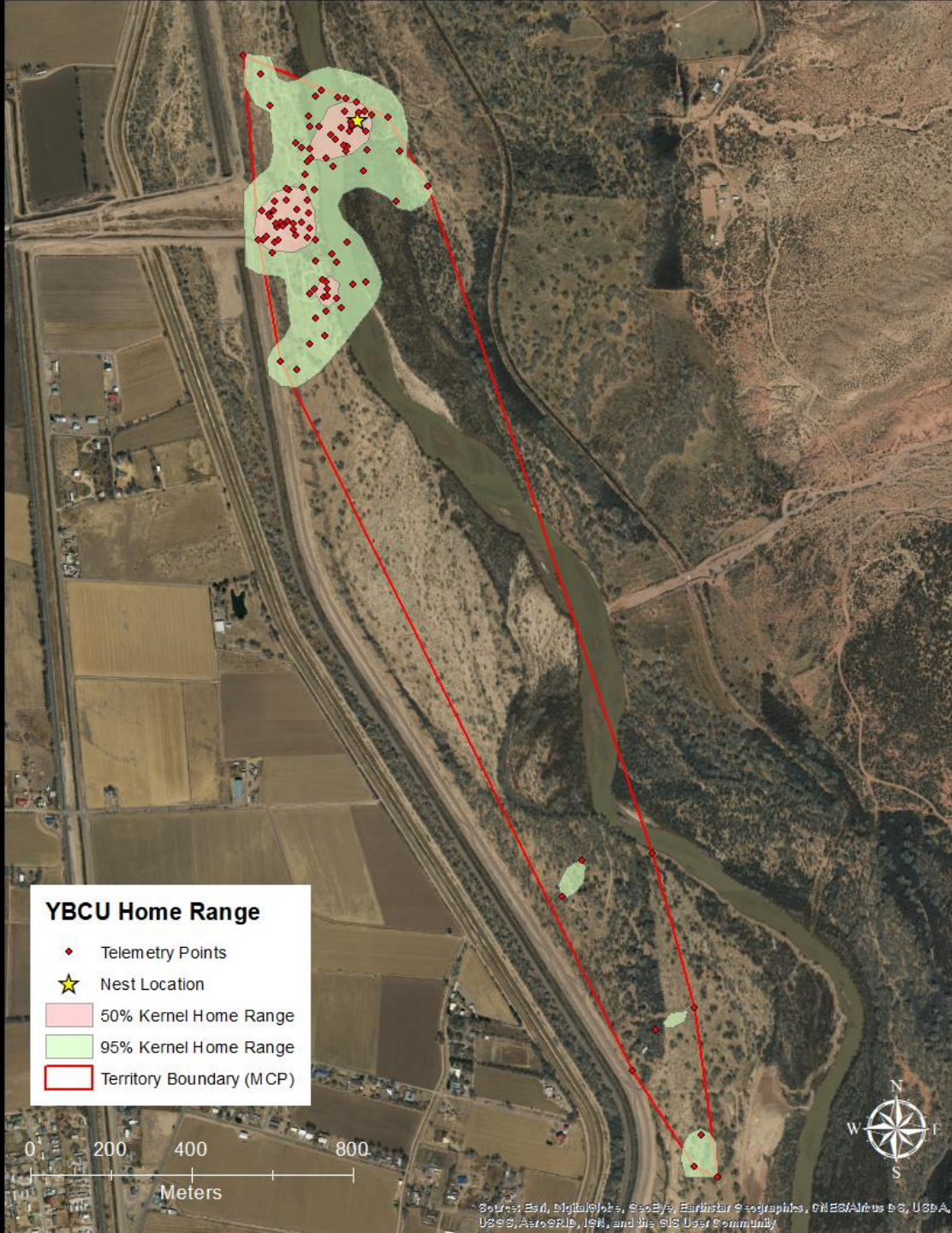


Cuckoo #1

Nesting Female

Territory Size (MCP):
97 ha

Core Use Area (50% KHR):
4 ha



Cuckoo #1

Nesting Female

95% KHR:

52% Native Component
in Overstory

16% Exotic Overstory

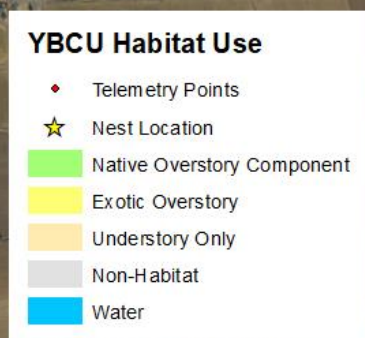
33% Understory Only

50% KHR:

69% Native Component
in Overstory

13% Exotic Overstory

18% Understory Only

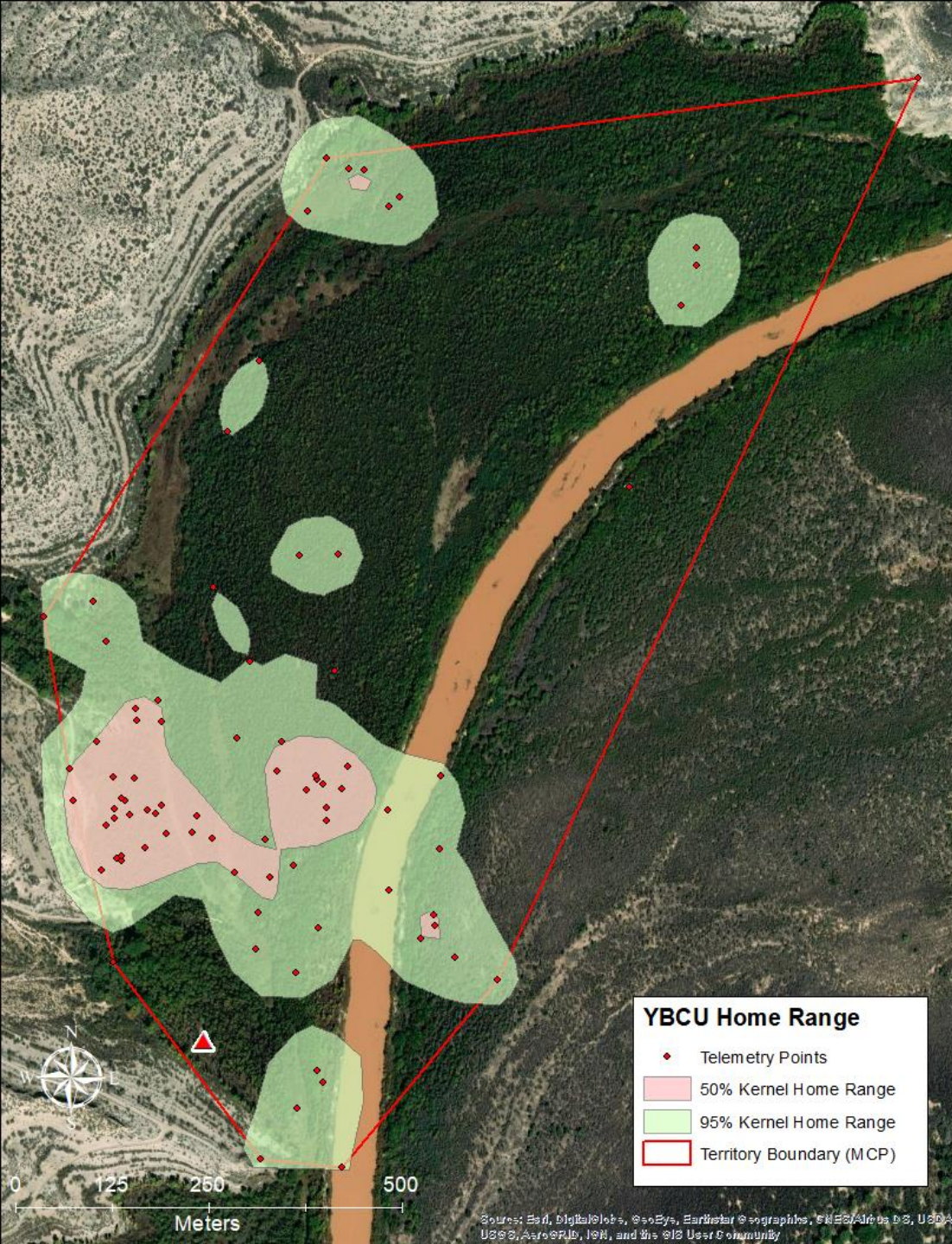


Cuckoo #2

*Female – Pair Status
Unknown*

Territory Size (MCP):
87 ha

Core Use Area (50% KHR):
6 ha



Cuckoo #2

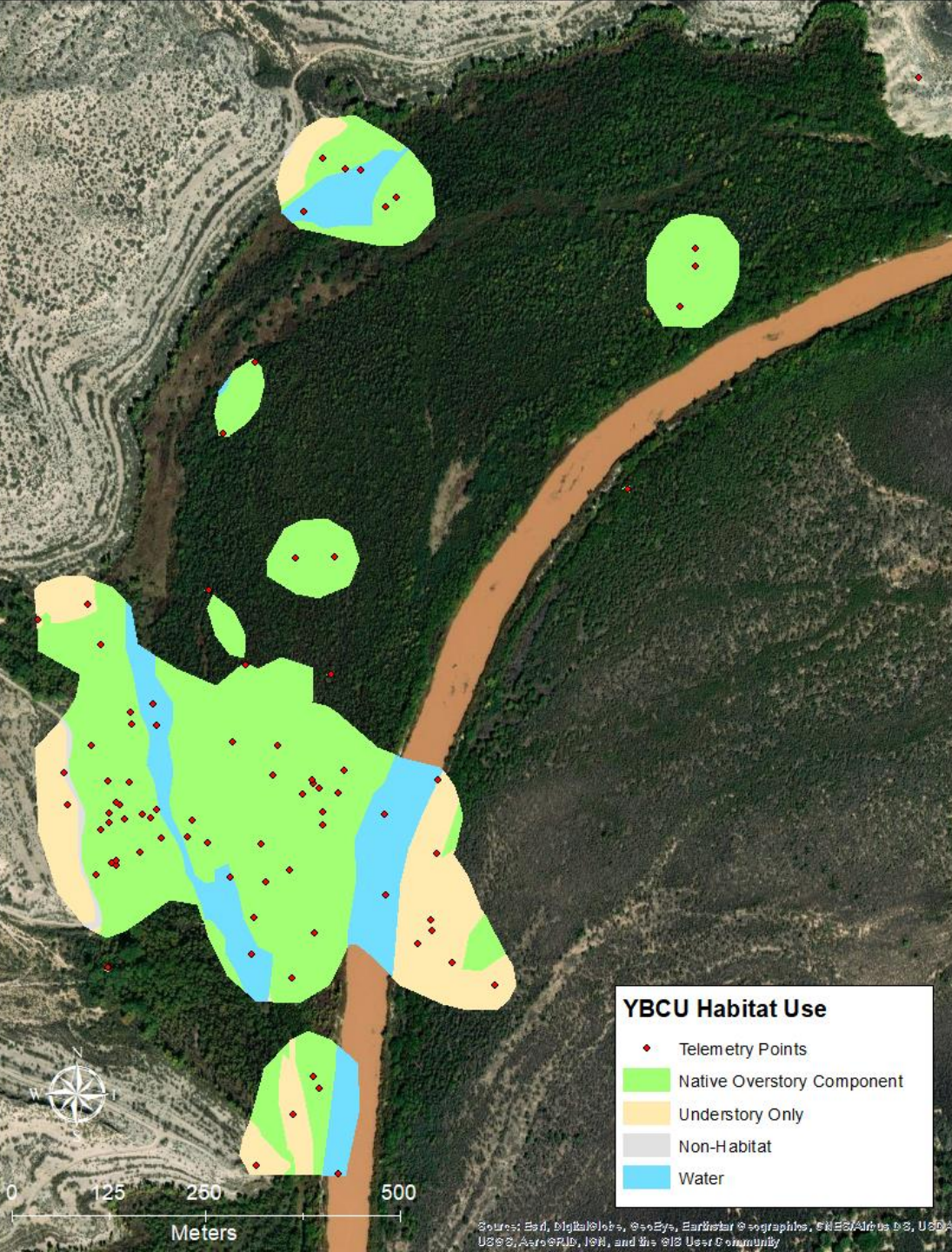
*Female – Pair Status
Unknown*

95% KHR:

78% Native Overstory
6% Understory Only

50% KHR:

94% Native Overstory
6% Understory Only



Cuckoos Have Large Area Requirements

2017-2019 Telemetry Results (n=14)

- Avg Max Seasonal Distance Traveled = 2.5 km
- Avg Max Daily Distance Traveled = 891 m (> 1/2 mile!)
- Avg Territory Size (MCP) = 171 ha
- Avg Core Area (50% KHR) = 8 ha



1 Day Old Nestlings



5-6 Day Old Nestling



Examples of Suitable YBCU Habitat

Cottonwood/Goodding's willow overstory w/ native understory



Cottonwood/ Goodding's willow overstory with Russian olive & native understory

**Native Canopy alone accounts for only
about 5-6% of use**

Approx. 7m in height



Ideal Minimum Breeding Habitat Requirements (based on MRG YBCU habitat use)

- 1) Native overstory vegetation component with understory structure
- 2) Goodding's willow component
- 3) Patch size >8 ha
- 4) Patch width >30m



