Paria River Ecological Conservation

Mapping Russian Olive and Tamarisk to Inform Invasive Species Management Along the Paria River, Utah

Russian Olive (*Eleagnus angustifolia*):

- Brought to the U.S. for erosion and wind management
- Widely planted in 1940's
- Fourth most common woody riparian species in the Western U.S.
- Due to its adaptability, easily crowds out native riparian species through formation of dense stands

Tamarisk (*Tamarix ramosissima*):

- Brought to the U.S. for erosion control
- Widely planted in early 1900's
- Second most common woody riparian species in the Western U.S.
- Secretes salt through depositions, increasing soil salinity
- High evapotranspiration rate

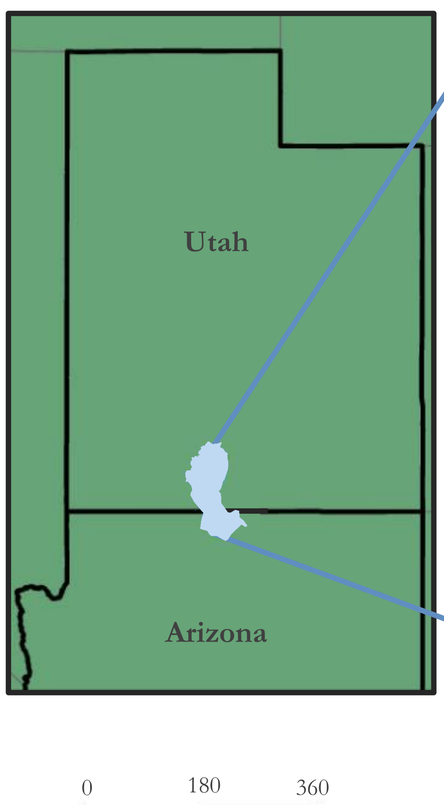
Study Area – Paria River

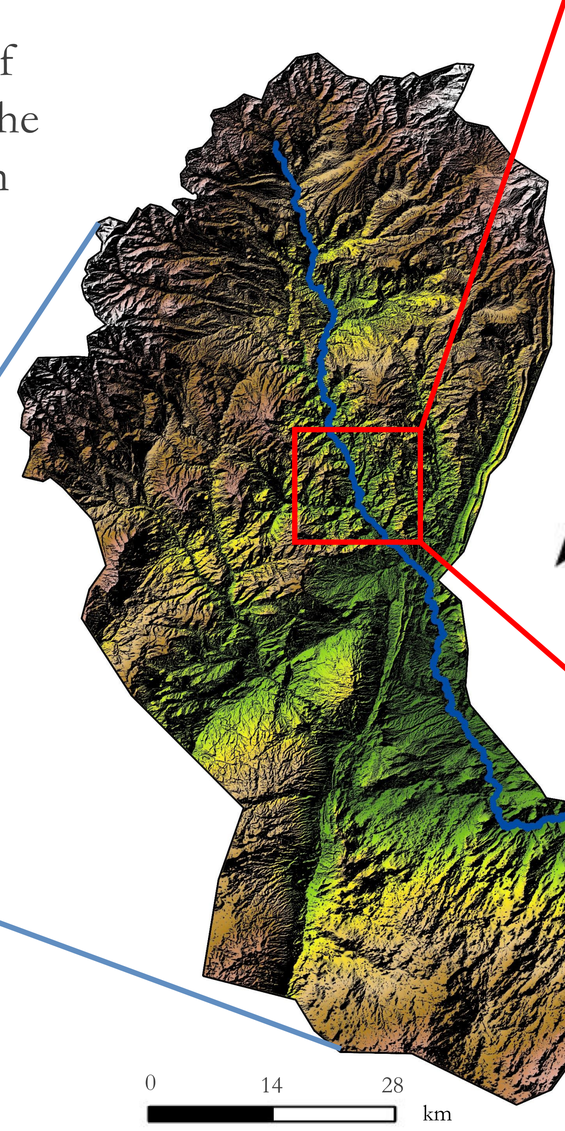
Major tributary of the Colorado River along the UT/AZ border

Passes directly through the Grand Staircase-Escalante National Monument (GSENM; est. 1996)

940+ unique species of vegetation within GSENM

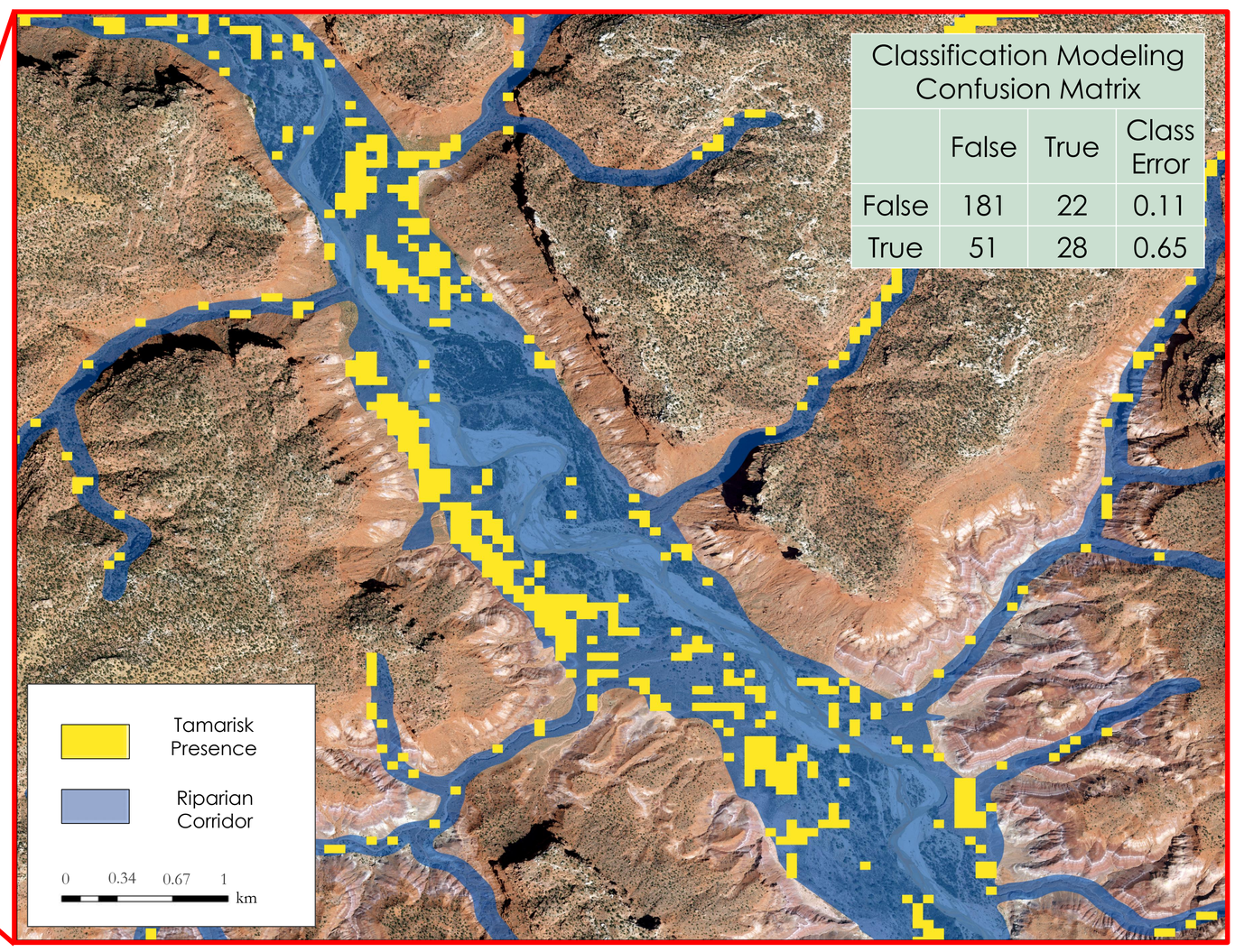
Main source of sediment for the Grand Canyon





Model Input Predictor Variables

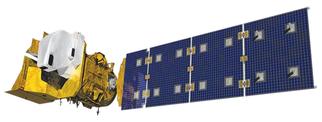
LiDAR Canopy Height | Topography | Spectral Indices



NASA Earth observations used to map **invasive species**, can help stakeholders like the Grand Staircase-Escalante partners identify and prioritize treatment areas

Satellites/Sensors

Landsat 8 OLI



Landsat 9 OLI-2

Shuttle Radar Topography Mission

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Acknowledgements

The team would like to thank everyone who made this project possible:

- Partners: Kevin Berend, Grand Staircase-Escalante Partners
- Advisors: Dr. Paul Evangelista (Colorado State University, Natural Resource Ecology Laboratory), Dr. Catherine Jarnevich (USGS, Fort Collins Science Center), Dr. Anthony Vorster (Colorado State University, Natural Resource Ecology Laboratory), Peder Engelstad (Colorado State University, Natural Resource Ecology Laboratory), Christopher Tsz Hin Choi (Colorado State University, Natural Resource Ecology Laboratory)
- Fellow: Sarah Hettema

25TH DEVELOP ANNIVERSARY

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