



Classic Mimbres Period Aviculture at Elk Ridge, New Mexico

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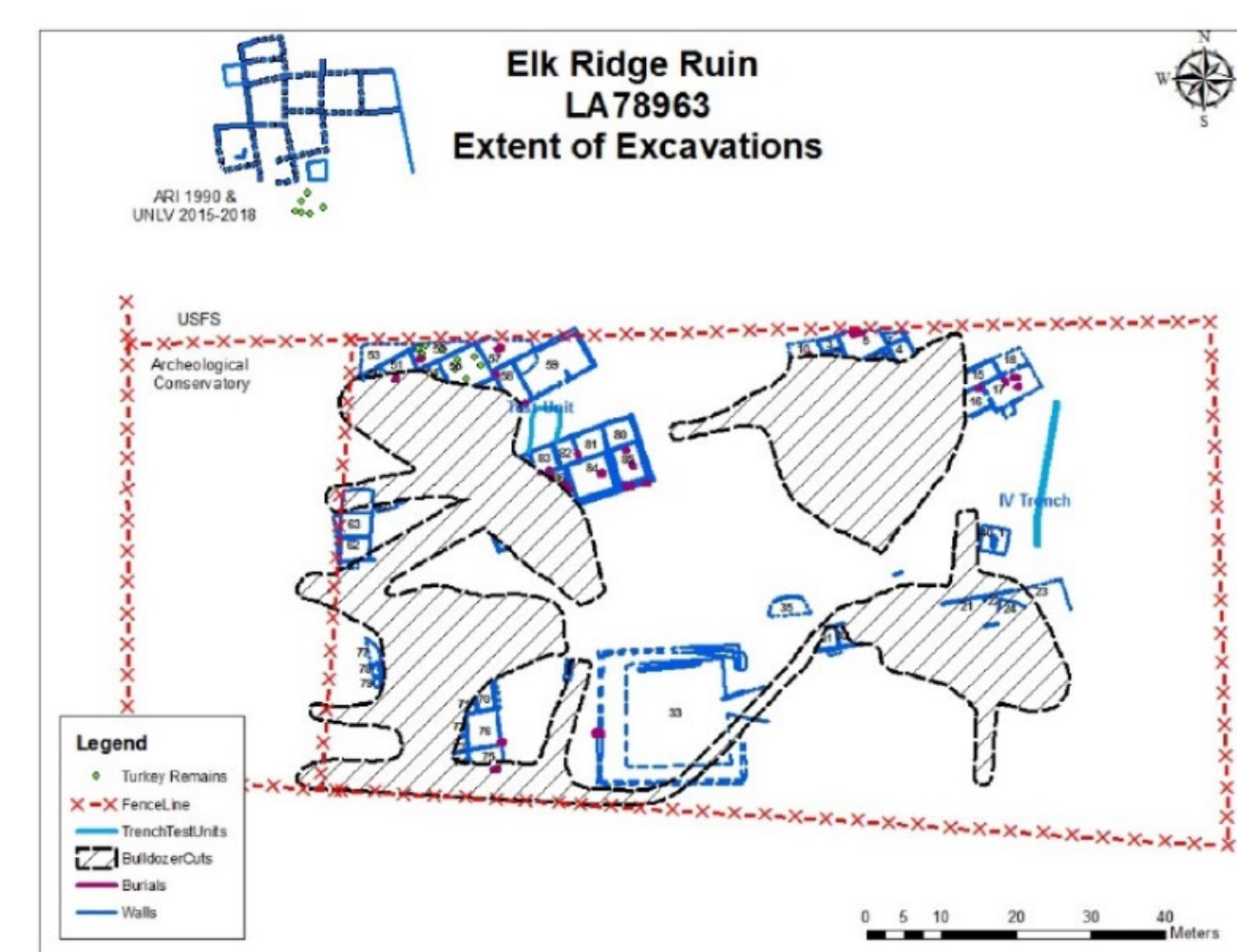
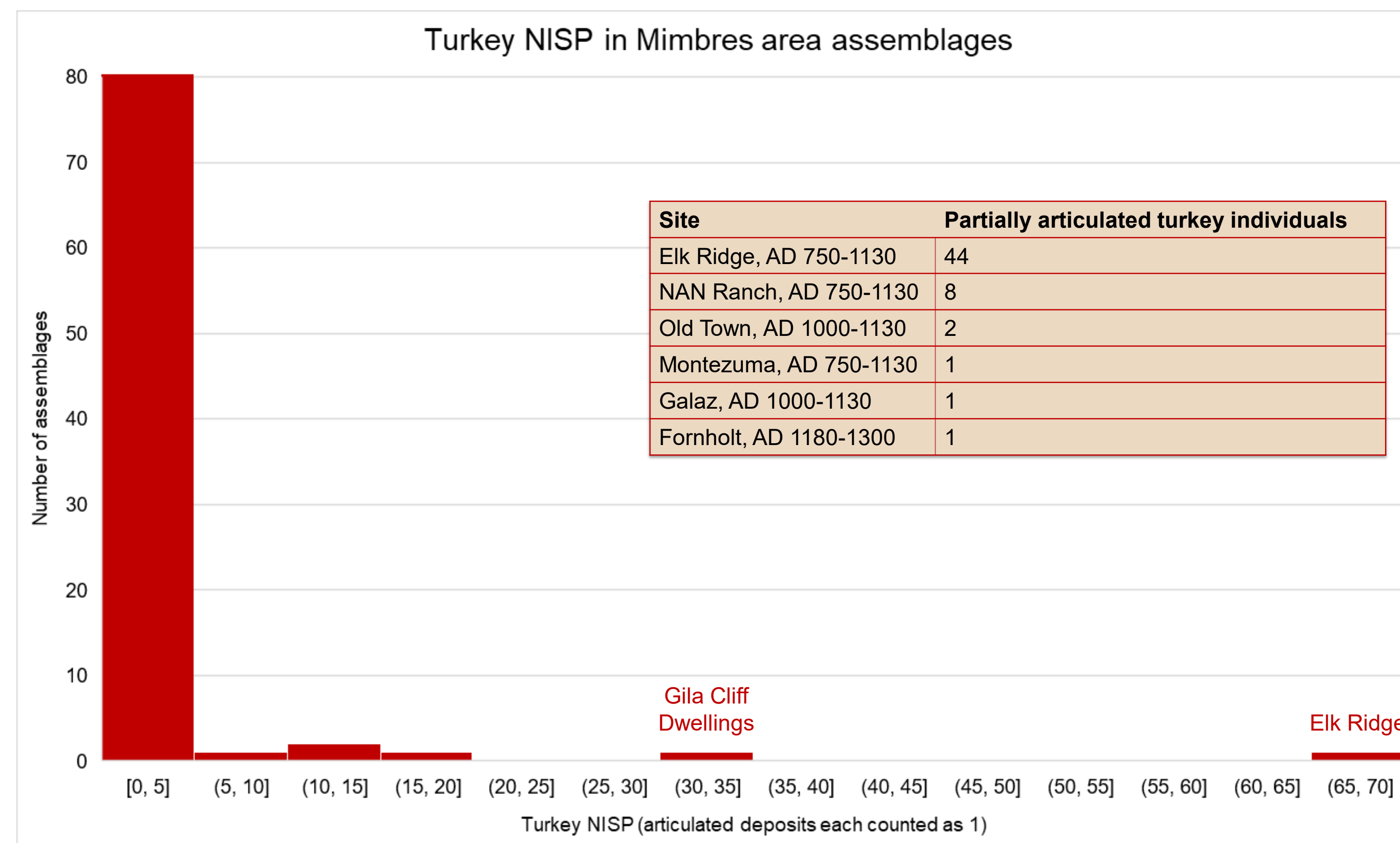


An unusual example of aviculture in the Mimbres area of southwestern New Mexico

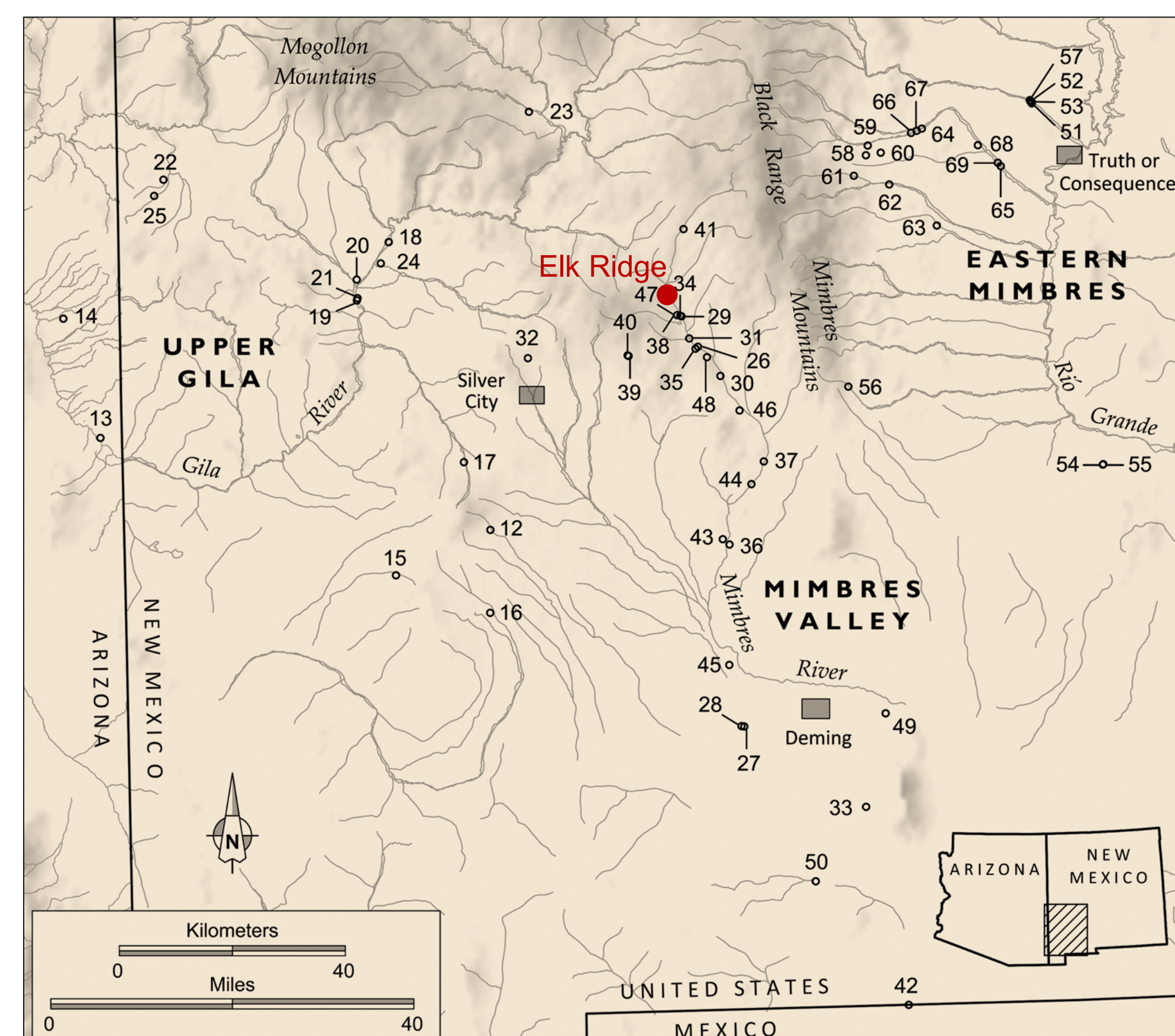
Turkey and parrot remains are uncommon in the Mimbres area. Elk Ridge (LA 78963), a village of over 100 rooms, was partially excavated in the 1990s¹ after being heavily looted by mechanical equipment. Late Pithouse and Classic Mimbres period (AD 750-1000) deposits include:

- One of seven parrots identified in the Mimbres area
 - but no macaws (22 identified in the Mimbres area)
- 517 turkey elements from at least 44 individuals

Elk Ridge has far more turkeys than other Mimbres area assemblages, where these birds are mostly absent or very rare. Most Elk Ridge turkeys are from Classic Mimbres contexts.



Elk Ridge site map, after Laumbach 2022

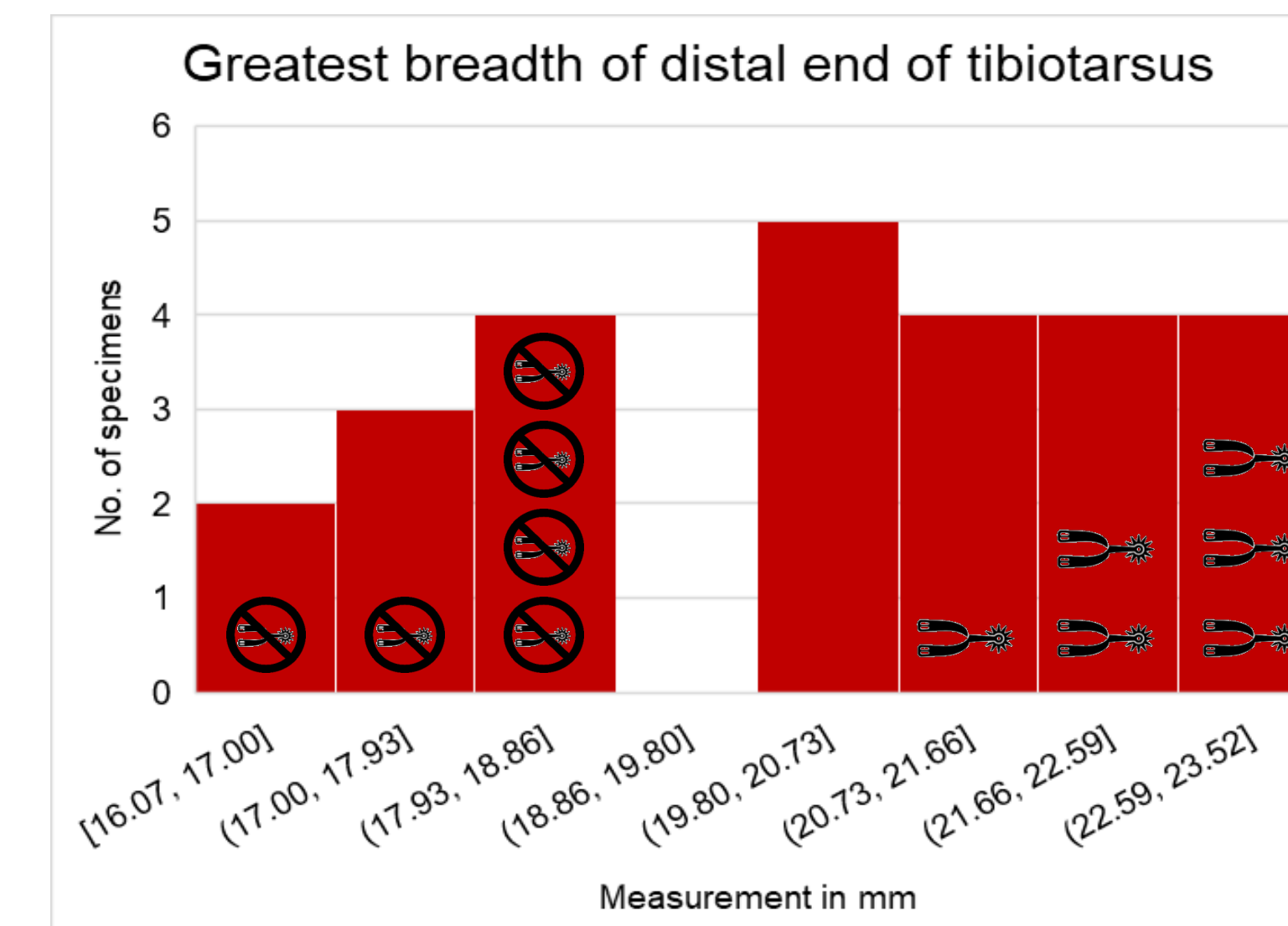


Mimbres area archaeological sites contributing assemblage data to this project. Map by Catherine Gilman, adapted from Schollmeyer 2018.



Elk Ridge turkeys show sexual dimorphism

- Few complete long bones available, so tibiotarsus greatest breadth of distal end² is shown
- All individuals with spurs present on tarsometatarsi measure 20.8mm or larger
- Individuals with tarsometatarsus spurs (likely male) are larger than those without spurs (likely female)



Evidence for turkey husbandry

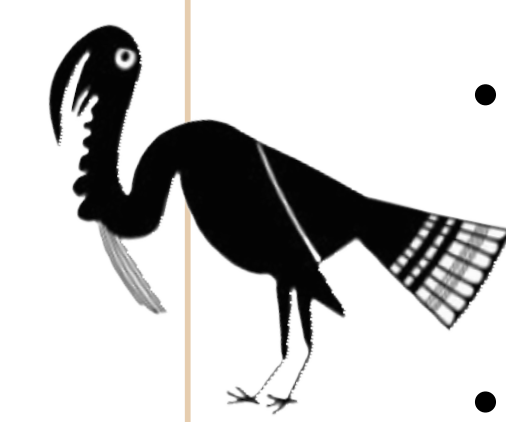
- Recent mtDNA and isotope studies in the Mimbres area by Dolan et al. support interpretations of turkey husbandry at Elk Ridge³
 - Elk Ridge mtDNA shows 5 haplogroup H2 turkeys, and 10 H1 turkeys (a domesticated clade)
 - These 10 individuals are the only known H1 turkeys of 18 sampled in the Mimbres area
 - $\delta^{13}C$ values show 16 of 17 sampled Elk Ridge turkeys consumed a mostly C₄ diet (maize)
 - One of the H2 turkeys consumed mostly C₃ foods
 - Three individuals show healed long bone fractures (1 humerus, 2 tibiotarsi), possibly indicating care or management (two were mtDNA sampled but had no detectable mtDNA preserved)

Feathers, not food

- 493 of 517 turkey elements (95%) were from semi-articulated deposits
- No cut marks were evident macroscopically on any turkey elements; only two were burned
- Turkeys and turkey limbs were deposited on or just above floors in uninhabited rooms
- Context and treatment do not resemble food taxa in Mimbres assemblages (e.g., cottontails)
- Similar to pre-AD 1060 turkey deposits in Ancestral Pueblo assemblages (when turkeys kept for feathers, not as a food source)

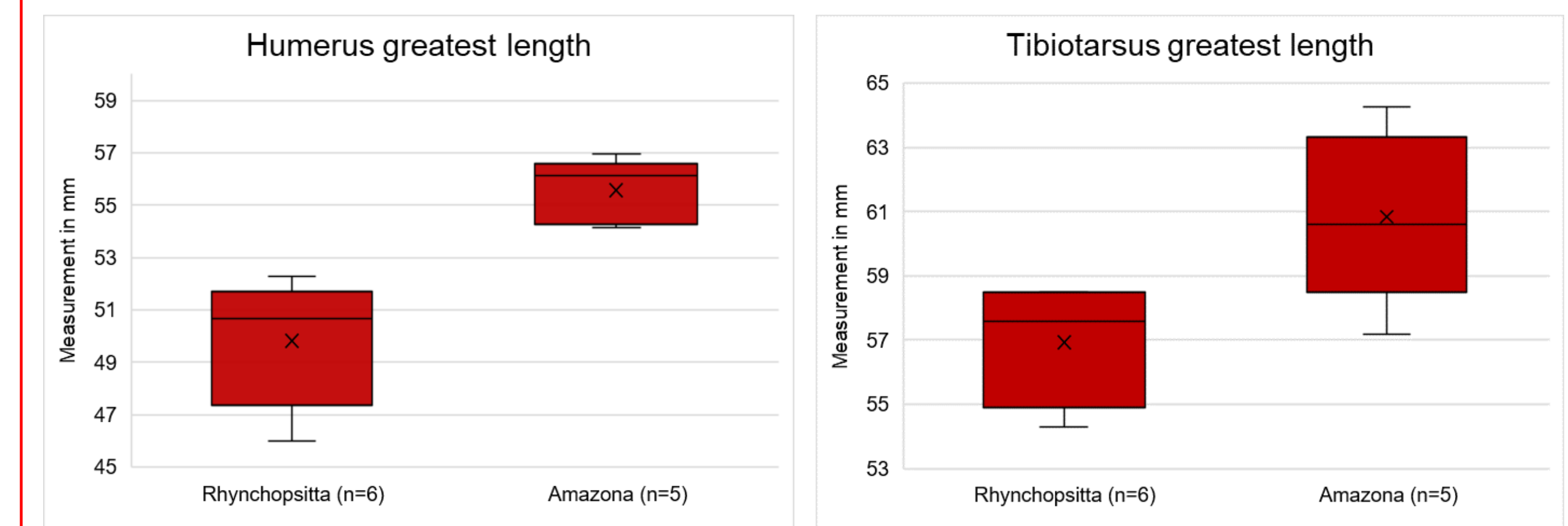
Turkey production: serving a larger area

- Evidence suggests turkey husbandry was practiced at Elk Ridge on a scale not seen at any other Mimbres area site
- Turkeys were raised for feathers, and perhaps Elk Ridge supplied other villages with feathers or feather goods
- This is consistent with other evidence for inter-village variability in the production of some goods (including pottery and wild grape products)



Identifying parrots in the ancient US Southwest

- Non-macaw parrot remains have been attributed to two genera:
 - *Amazona* species native to deciduous forests in coastal west and northwest Mexico
 - *Rhynchopsitta* species native to high elevation pine forests in northern Mexico, and historically southeastern Arizona and possibly southwestern New Mexico
- Previous identifications were based on size differences without published measurements (and limited comparative collections)
- Measurements of comparative specimens show overlap in many elements, very small differences in others (2mm or less)



Morphological characteristics are more promising

- Elk Ridge tarsometatarsus specimen is *Rhynchopsitta* sp.
- Research on morphological characteristics and reexamination of ancient Southwestern parrots in progress



Note more angular shape of proximal end in *Rhynchopsitta*

Implications of parrot taxon identifications

- Did *Rhynchopsitta* parrot range once extend to a larger area in what is now southern Arizona and New Mexico?
- Were *Amazona* parrots transported with macaws in other parts of the US Southwest?

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¹Analysis of a separate 2015-18 excavation project is ongoing.

²Measurements were collected according to Von den Driesch, Angela (1976) *A Guide to the Measurement of Animal Bones from Archaeological Sites*. Harvard University, Peabody Museum Bulletin No. 1.

³Dolan, Sean G., Andrew T. Ozga, Karl W. Laumbach, John Krigbaum, Aurelie Manin, Christopher W. Schwartz, Anne C. Stone, and Kelly J. Knudson (2023) Turkey Iconography, Domestication, and Husbandry in the Mimbres Valley, New Mexico, AD 1000-1130. *American Antiquity* 88:41-61.

Elk Ridge turkeys were first reported in Morrison, Michael J. (2002) A Report on Turkey Remains Recovered from Elk Ridge Ruin. In *Mogollon Archaeology: Collected Papers from the Eleventh Mogollon Conference: 20th Anniversary 1980-2000*, edited by Patrick H. Beckett, pp. 137-163. COAS Publishing and Research, Las Cruces, New Mexico.