

## Karyotypic and Phylogenetic Assessment of an Individual of *Mazama cita sanctaemartae* Allen, 1915, from the Colombian Caribbean

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### INTRODUCTION & AIM

The taxonomic classification of the genus *Mazama* Rafinesque, 1817, has been widely debated due to the presence of homoplastic characters.

In Colombia, six species within this genus have been described morphologically.



Figure 1. Distribution map of the described brocket deer species in Colombia

Integrative analysis (combining genetic and morphological data) is still lacking for the species occurring in the country, including the species *Mazama cita sanctaemartae*.

### METHOD



Figure 2. Individual from the Colombian Caribbean collected in captivity in Barbosa, Antioquia. Collection permit n° 120-COI2405-12384

### Characterization

Morfology

Citogenetics

Molecular phylogenetics

Morphometry and general coloration pattern

Classical banding

Two regions of mitochondrial DNA

Figure 3. Methodological framework

Comparative analysis with other Gray Brocket Deer Species from the genera *Bisbalus*, *Subulo* and *Passalites*

### RESULTS & DISCUSSION

Individual with dull gray coloration, body measurements similar to the description provided by Allen, 1915.

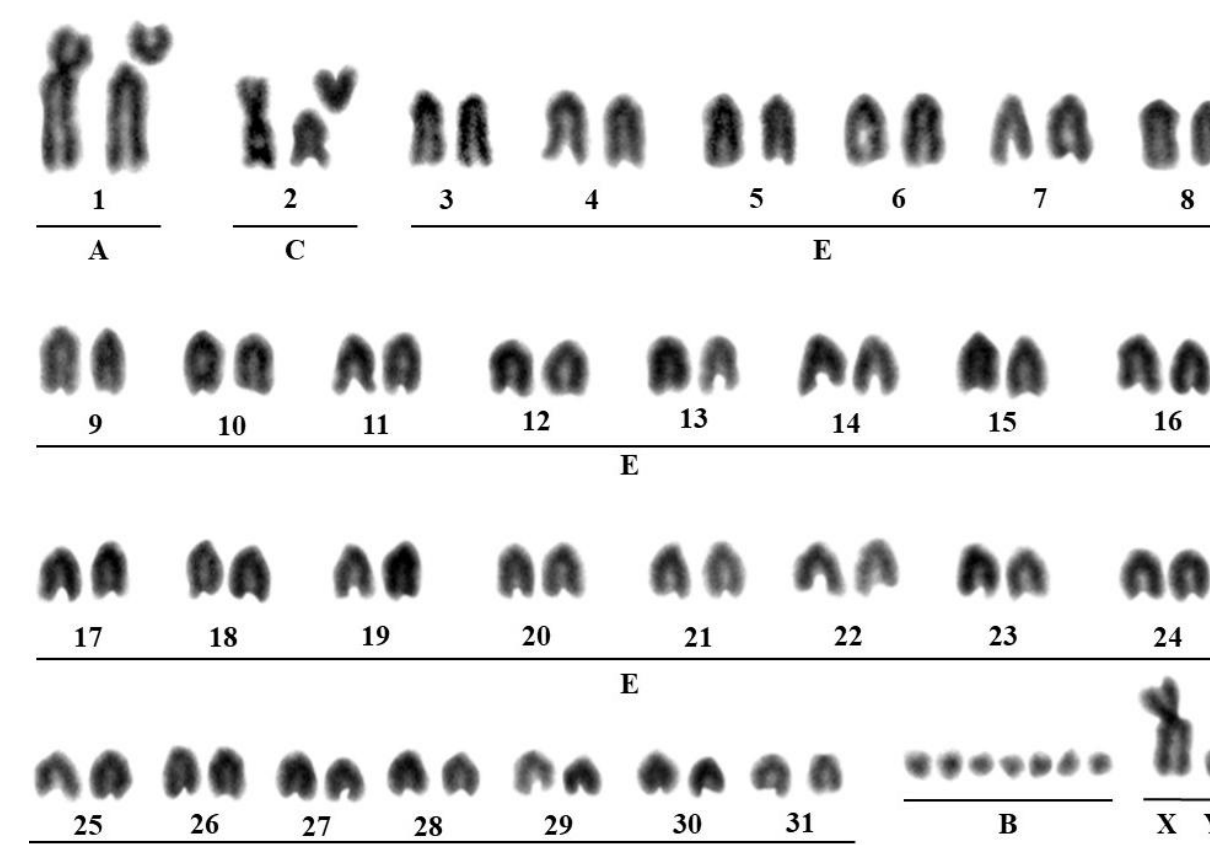


Figure 4. Karyotype obtained using classical Giemsa staining; 2n = 66, NF = 69.

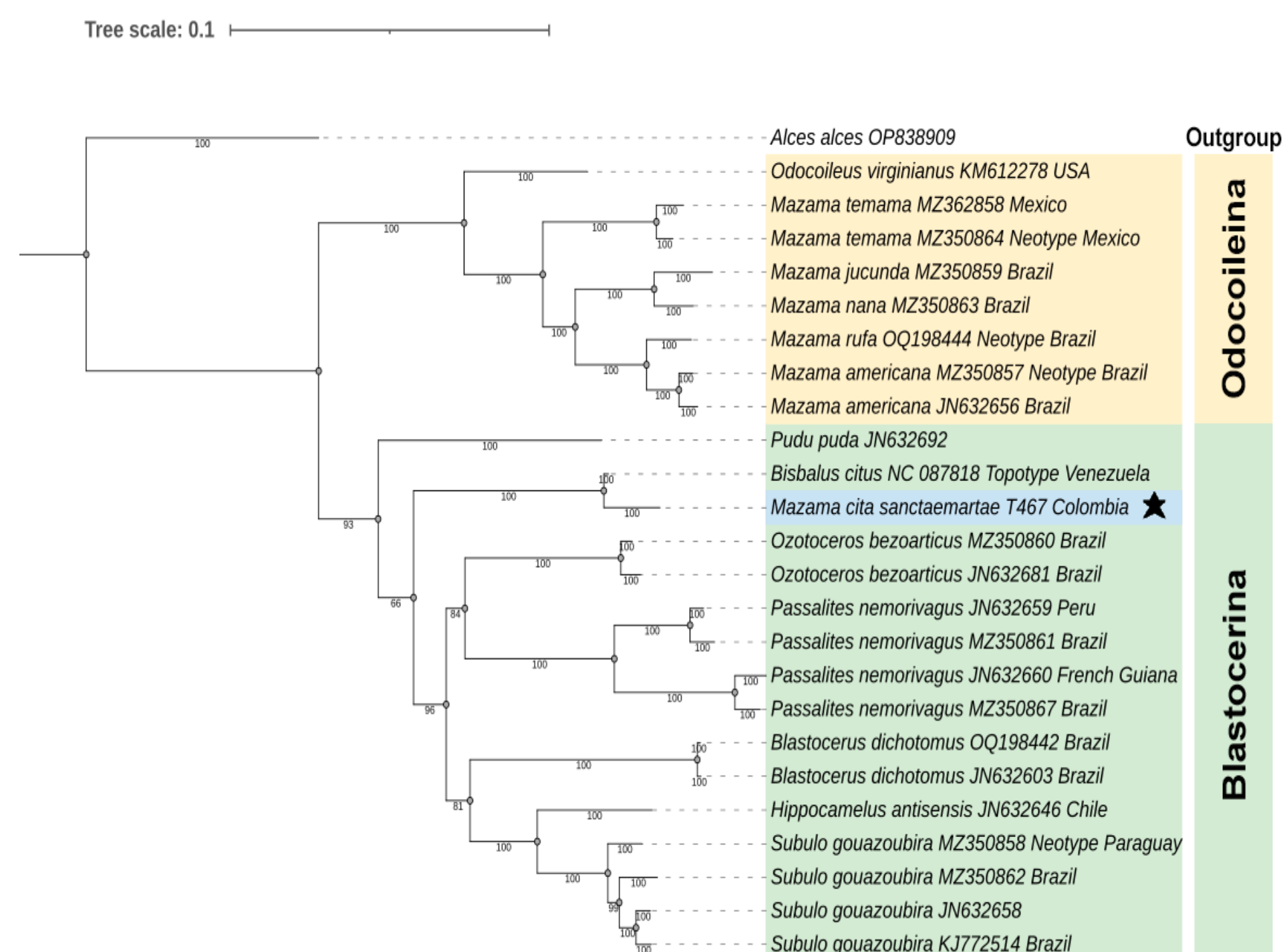


Figure 5. Phylogenetic hypothesis generated from a Bayesian inference analysis using two mitochondrial genome fragments: partial CytB gene (660 bp) and control region D-loop.

### CONCLUSION

This study represents a preliminary approach of the morphologic, cytogenetic and phylogenetic characteristics of one Caribbean Gray Brocket individual (*M. c. sanctaemartae*), serving as a key step, toward resolving its taxonomic status.

### FUTURE WORK / REFERENCES

Allen JA (1915) Notes on American Deer of the genus *Mazama*. Bulletin of the American museum of Natural History. 34:521–553.  
Sandoval E, Jedrzejewski W, Molinari J, Vozdova M, Cernohorska H, Kubickova S, Bernegossi A, Caparroz R, Duarte JMB (2024) Description of *Bisbalus*, a New Genus for the Gray Brocket, *Mazama cita* Osgood, 1912 (Mammalia, Cervidae), as a Step to Solve the Neotropical Deer Puzzle. Taxonomy 4:10–26. doi:10.3390/taxonomy4010002.