SYSTEMATIC RELATIONSHIPS OF FIVE NEWLY SEQUENCED CERVID SPECIES.

Cervid phylogenetics has been puzzling researchers for over 150 years. Molecular systematics has provided new inputs, but many cervid species lack molecular data as they are difficult to access in the wild.

DNA SEQUENCED FOR THE FIRST TIME

by extracting ancient DNA from museum specimens.

Philippine Brown Deer
(*Rusa marianna*)

Peruvian Dwarf Brocket
(*Mazama chunyi*)

Bornean Yellow Muntjac
(*Muntiacus atherodes*)

Cervini

Odocoileini

Muntiacini

Mérida Brocket
(*Mazama bricenii*) holotype

Northern Pudu
(*Pudu mephistophiles*)

RESULTS

The new sequences were used to enrich existing mitochondrial DNA alignments, yielding the most taxonomically complete data set for cervids to date. Phylogenetic analyses provided new information on relationships within deer and potential consequences for future systematics.

Taxon names { **Odocoileina** & **Blastocerina** } **for the two major phylogenetic lineages within New World Deer (Odocoileini) are established.**

1.

Rusa alfredi (Philippine Spotted Deer) is a potential subgroup of *Rusa marianna*.

2.

Muntiacus atherodes is potentially closest relative to *Muntiacus muntjak* (Southern Red Muntjac).

3.

New World Deer genera *Mazama* (brockets) and *Pudu* (pudús) are polyphyletic.

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