

# Taste responsiveness of black-handed spider monkeys to ten substances tasting sweet to humans



Black-handed spider monkey (*Ateles geoffroyi*).

**Background:** Comparative studies on taste perception in nonhuman primates contribute to a deeper understanding of the evolution of the sense of taste. The study aimed to determine the taste preference thresholds of spider monkeys.

**Methods:** Two-bottle preference tests of short duration (1 min) were performed with four adult spider monkeys.



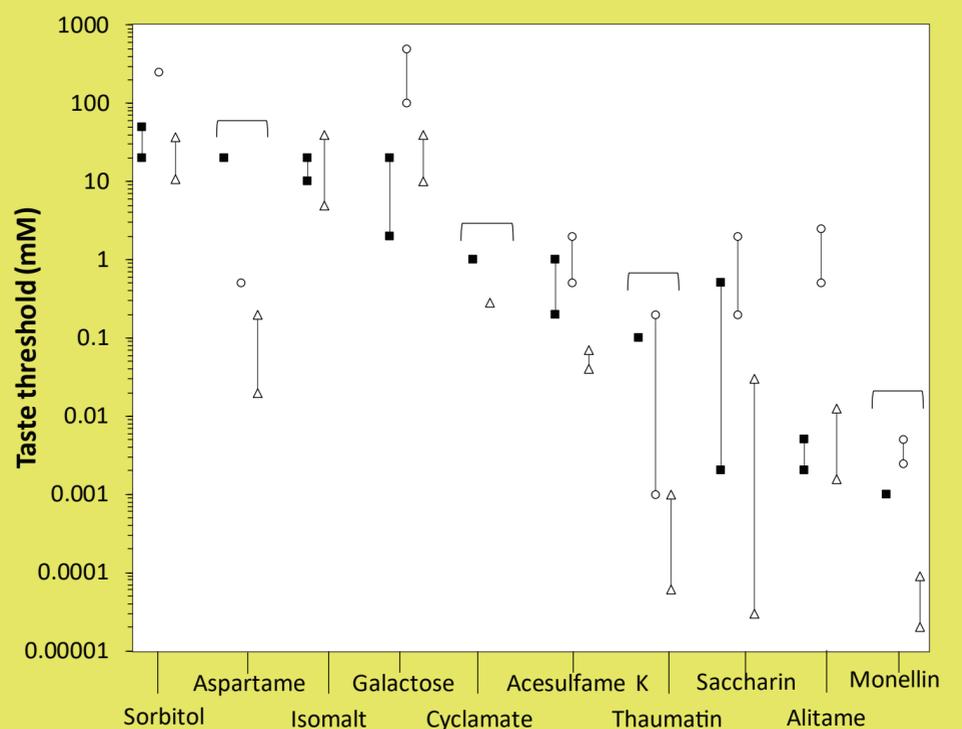
The two-bottle preference test.

**Conclusions:** The higher sensitivity of spider monkeys to sweet substances compared to chimpanzees and humans may be associated with their frugivorous dietary specialization.

The lack of responsiveness to some of the substances supports the notion of a dichotomy in sweet-taste perception within the primate order.

**Results:** With six of the ten tested substances, the spider monkeys' thresholds were generally lower than those of chimpanzees and either similar or lower than those of humans.

Most spider monkeys did not show a preference for aspartame, cyclamate, monellin and thaumatin.



Taste preference thresholds of spider monkeys, chimpanzees<sup>○</sup> and humans<sup>△</sup> for ten substances tasting sweet to humans. The brackets indicate the substances which only one or two spider monkeys preferred over water.