

## **VoiceID in marmoset monkeys: Flexibility and trade-offs in vocal accommodation**

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Marmosets are highly voluble monkeys, renowned for the vocal flexibility. Even though their vocal repertoires are fixed, they engage in some vocal learning in the form of vocal accommodation, i.e. changes in the acoustic structure of their calls. We find that different captive colonies of marmosets have different “dialects”, and translocation experiments where animals are moved from one colony to the other show that these dialects are socially learned. Intriguingly, not all call types accommodate in the same way: long distance contact calls, for which signaling identity is crucial because the animals can not see each other, tend to accommodate less and without compromising individual recognizability of the calls. In contrast, for short distance contact calls, signaling identity is less important because individual recognition is warranted by visual and olfactory cues. These short distance contact calls accommodate more, which leads to a decrease in individual recognizability. These results suggest a trade-off in vocal accommodation, between the need to signal social closeness by becoming more similar to each other and the need to maintain individual recognizability. To further scrutinize these trade-offs, we have developed on the one hand more sensitive ML based approaches to analyze and classify marmoset vocalizations and currently test their generalizability to other primates and mammals. On the other hand, we follow vocal changes in wild marmosets in Brazil during migrations between groups, which allows us to better estimate the ultimate function of vocal accommodation and signaling individuality under natural conditions.