# Cornell University research reveals complex vocalizations in Bornean orangutans



A research team led by Cornell University has discovered complex vocalizations in Indonesia's Bornean orangutans. Over three years, they collected a dataset of 117 recorded "long calls" from 13 male orangutans, involving 1,033 distinct pulses and 46 acoustic measurements. Published in PeerJ Life & Environment on Tuesday, the study found that these vocalizations exhibit a continuous gradation of sounds, suggesting that orangutans can modulate their voices very precisely.

Using a combination of artificial intelligence methods, including supervised and unsupervised machine learning approaches, the team identified three distinct pulse types: "Roar," "Sigh," and "Intermediate." These findings indicate that the orangutans' long calls likely communicate complex messages across vast distances in dense rainforests.

Lead author Dr. Wendy Erb, a primatologist at Cornell's K. Lisa Yang Center for Conservation Bioacoustics, highlighted the significance of the discovery but also noted that much complexity remains to be unpacked in the orangutans' vocal system. The research marks an important step in understanding the communication of these great apes, with potential implications for future studies on animal vocal repertoires.