Assessing cognitive capacity and its association with mate choice behaviour in rosy-faced lovebirds (*Agapornis roseicollis*)

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About the speaker:

Shengyu Wang is a PhD student under the supervision of Dr Simon Sin. He is studying cognition, senses, and sexual selection on rosy-faced lovebirds, seeking to understand how they maximize their fitness through cognitive capacities and mate choice.

Abstract:

Sophisticated cognitive capacity is not exclusive to just primates or mammals. Parrot and corvid are referred to as "feathered apes" owing to their exceptional cognitive skills, which are comparable to those observed in primates. Superior cognitive ability enables individuals to have survival and reproduction benefits and thus confers selective advantage. Consequently, preferences for mates with superior cognitive capacity could be advantageous and may provide direct and indirect benefits, including care, food, and good genes for the offspring. Despite the importance of sexual selection on the evolution of cognitive ability, existing studies seldom discussed this topic in species other than humans. The present study on rosy-faced lovebirds (*Agapornis roseicollis*) encompasses an evaluation of various cognitive domains and their association with mate choice. Specifically, the first chapter of this study investigates the ability of rosy-faced lovebirds in associative symbol learning, inference, and quantity discrimination. The second chapter further studies their associative memory and spatial memory. The third chapter concerns problem-solving, social learning, and their associations with mate preference. Lastly, the fourth chapter aims to investigate how genotypes may influence mate choice behaviour.