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Comodulation masking release: a songbird as a model

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Acoustic communication in the natural environment is greatly affected by the ubiquitous background noise. Therefore, vertebrates have evolved mechanisms to efficiently cope with auditory masking by exploiting amplitude fluctuations in background noise. This improvement of signal detection has been termed "comodulation masking release" (CMR). An excellent animal model for studying CMR is the European starling, a songbird exhibiting a substantial CMR in various psychoacoustic experimental paradigms. Neurophysiological recordings in the starling's auditory forebrain reveal that at least a fraction of the neurons could account for the psychophysical performance.