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Hearing and vocalizations of wild-caught Australian budgerigars, Melopsittacus undulatus

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Budgerigars (Melopsittacus undulatus) have long been popular subjects for psychoacoustic studies and are now becoming interesting models for the plasticity of vocal learning in adult parrots. Since budgerigars have been domesticated since early in the 19th century, it is not known whether their auditory behavior is representative of the species in the wild. The present study examines the hearing and contact calls of wild-caught Australian budgerigars and makes a comparison to similar data from domesticated budgerigars. The spectral energy in the contact calls of both wild-caught and domesticated budgerigars falls almost exclusively in the frequency of 2-4 kHz. Absolute and masked thresholds of wild-caught budgerigars were the same as those for domestic budgerigars at all frequencies tested. The unusually small critical ratios in domesticated budgerigars between 2-4 kHz is also found in wild-caught budgerigars. These critical ratios seem to relate to the detection, discrimination, and perception of species-specific contact calls. These results show that years of domestication have not affected the vocalizations or basic hearing abilities of budgerigars.

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