Hearing and vocalizations in the orange-fronted conure (*Aratinga canicularis*), a small parrot (A)

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The orange-fronted conure (*Aratinga canicularis*) is a small Neotropical parrot that is the subject of an ongoing study of vocal communication and social organization. Three captive-bred orange-fronted conures were trained to detect pure tones using operant conditioning with a food reward and tested using the method of constant stimuli. These birds were tested at seven frequencies ranging from 0.5 to 8 kHz. The greatest sensitivity was found between 1 and 4 kHz and lower sensitivity outside this region. The shape of the audiogram for this species was similar to those previously found for three other species of small parrots, but the absolute sensitivity for orange-fronted conures was generally lower than these other parrot species at most frequencies. The range of greatest sensitivity in the orange-fronted conures corresponded fairly well with the spectral characteristics of their contact calls. In a sample of 288 contact calls recorded from eight wild birds in Costa Rica, the mean peak frequency of the calls was 3371 Hz with a SD of 341 Hz, and the bulk of spectral energy fell between 2295 and 5231 Hz. [Work supported by NIH Grant No. R01 DC00198 (RJD), NRSA Fellowship Nos. DC00046 and MH12111 (TFW), and a NSF grant (JB and KAP).]