

Influence of burrow acoustics on sound reception by frogs *Eupsophus* (*Leptodactylidae*)

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The effect of burrow acoustics on the reception of sounds by a leptodactylid frog, *Eupsophus emiliopugini*, from Southern Chile was investigated. Burrows occupied by *E. emiliopugini* males amplified vocalizations produced by conspecific individuals calling nearby and conspecific calls played back through a speaker positioned in the vicinity of the burrow by 5.2 dB (N = 4) and 4.3 dB (N =5) on average, respectively. The spectral contents of calls recorded from inside burrows matched the resonant frequencies of the cavities measured with pure tones. Playback calls of a sympatric species, *Batrachyla antartandica*, which have spectra that do not overlap *E. emiliopugini* calls, were not amplified inside burrows to the same extent. Amplification of conspecific calls inside burrows may influence vocal interactions in chorusing assemblages of *E. emiliopugini*. © 1996 The Association for the Study of Animal Behaviour.