

Ample active acoustic space of a frog from the South American temperate forest

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The efficiency of acoustic communication depends on the power generated by the sound source, the attributes of the environment across which signals propagate, the environmental noise and the sensitivity of the intended receivers. *Eupsophus emiliopugini*, an anuran from the temperate austral forest communicates by means of an advertisement call of moderate intensity within the range for anurans. To estimate the range over which these frogs communicate effectively, we conducted measurements of call sound levels and of auditory thresholds to pure tones and to synthetic conspecific calls. The results show that *E. emiliopugini* produces advertisement calls of about 84 dB SPL at 0.25 m from the caller. The signals are affected by attenuation as they propagate, reaching average values of about 47 dB SPL at 8 m from the sound source. Midbrain multi-unit recordings show quite sensitive audiograms within the anuran range, with thresholds of about 44 dB SPL for synthetic imitations of conspecific c