

Temporal selectivity for complex signals by single neurons in the torus semicircularis of *Pleurodema thaul* (Amphibia: Leptodactylidae)

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Responses of auditory neurons in the torus semicircularis (TS) of *Pleurodema thaul*, a leptodactylid from Chile, to synthetic stimuli having diverse temporal patterns and to digitized advertisement calls of *P. thaul* and three sympatric species, were recorded to investigate their temporal response selectivities. The advertisement call of this species consists of a long sequence of sound pulses (a pulse-amplitude-modulated, or PAM, signal) having a dominant frequency of about 2000 Hz. Each of the sound pulses contains intra-pulse sinusoidal-amplitude-modulations (SAMs). Synthetic stimuli consisted of six series in which the following acoustic parameters were systematically modified, one at a time: PAM rate, pulse duration, number of pulses, and intra-pulse SAM rate. The carrier frequency of these stimuli was set at the characteristic frequency (CF) of the isolated units ($n = 47$). Response patterns of TS units to synthetic call variants reveal different degrees of selectivities for each of