In this paper I examine the phonetic origins of voiceless sonorants cross-linguistically within the general framework of Evolutionary Phonology (Blevins 2004, 2006). One common source of voiceless sonorants is coarticulation in \{Rh, hR\} and \{Vh, hV\} clusters. Another phonetic source of voiceless sonorants are laryngeal spreading gestures associated with prosodic domains. In this second case, voiceless sonorants can arise as allophones of their voiced counterparts. While a fair number of languages show voiceless sonorant glides, liquids and nasals phonologized as a consequence of \{Rh, hR\} coarticulation, very few languages show phonologization of voiceless sonorants via the second process. Still more striking is the resistance of voiceless vowels to phonologization despite their common evolution. While Gordon (1998) suggests that the distribution of voiceless sonorants follows from synchronic constraints encoding a conflict between articulatory ease and perceptual saliency, resistance to phonologization follows naturally within Evolutionary Phonology, where the failure to perceive voiceless vowels in, for example, word-final position, is associated with their historical loss.