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On the use of adaptive resemblance terms in chemical ecology

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Many organisms (mimics) show adaptive resemblance to an element of their environment (model) in order to dupe another organism (operator) for their own benefit. We noted that the terms for adaptive resemblance are used inconsistently within chemical ecology and with respect to the usage in general biology. Here we first present how resemblance terms are used in general biology, and then comparatively examine the use in chemical ecology. As a result we suggest the following consistent terminology: 'chemical crypsis' occurs when the operator does not detect the mimic as a discrete entity (background matching). 'Chemical masquerade' occurs when the operator detects the mimic but misidentifies it as an uninteresting entity, as opposed to 'chemical mimicry' in which an organism is detected as an interesting entity by the operator. The additional terms 'acquired' and 'innate' may be used to specify the origins of mimetic cues.