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The wind dancer

Crypsis (being well hidden within one's habitat) is a common anti-predatory strategy for insects; one such example is the camouflage displayed by the curve-lined owlet (*Phyprosopus callitrichoides*), a moth species commonly found in forests of the southeastern US. During the larval stage, caterpillars feed exclusively on the bright, evergreen leaves of the greenbriar (*Smilax* spp). Their body color ranges from shades of orange to greenish-black, which might render an individual rather conspicuous on *Smilax* leaves. However, their peculiar morphology effectively mimics the climbing greenbriar vines, which readily grow modified stems as tendrils to support expansion onto nearby plants, including the trunks of trees. As the caterpillar grasps on to a stem of the plant, its curved dorsal appendages give the appearance of the greenbriar's coiled tendrils, which dry to a rusty color as they harden.

Older stems of the plant also become woody, taking on a darker brown coloration, which would provide even better camouflage for owlet caterpillars. However, the majority of greenbriar leaves are on younger, supple, green stems where the caterpillar would need to be located to feed. Thus, these caterpillars also engage in behavioral crypsis. When disturbed, the caterpillar sways slowly from side to side

on two prominent prolegs, mimicking a leaf wavering in the breeze. If predation shaped the natural selection of this behavioral adaptation, would there be variation in the dancing trait in different environments? Beyond predation or attack by visually oriented parasites, what other selective forces could add to these cryptic morphologies and behaviors? What is the role of genetic drift or random chance in the evolution of traits that contribute to these putative adaptations?

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doi:10.1002/fee.2026