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# Walking sticks mimic two leafy looks and split their species

**Susan Milius**

A species of walking stick, an insect that pretends it's part of a plant, may be evolving into two species by adapting to different environments.

Sandoval

The insect, *Timena cristinae*, seems to be adapting so that it can hide on either of two species of plants. By doing so, it's probably morphing into two separate species, says Cristina Sandoval of the University of California, Santa Barbara.

Such a process of parallel evolution fits into basic theories of natural selection but few scientists have documented real cases, Sandoval and her colleagues at Simon Fraser University in Burnaby, Canada, say in the May 23 *Nature*. The stickleback fish in North America are the other clear example, they say.

The walking stick, named for Sandoval, comes in two genetically determined color patterns–with or without stripes. In California's Santa Ynez Mountains, the striped insects tend to be more common on a plant called chamise while the unstriped ones predominate on blue lilac.

*SPLITTING STICKS. Striped (top) and nonstriped forms of a walking stick show a rare example of one species splitting into two by adapting to different environments.*
Sandoval

Lizards and birds zestily eat walking sticks of either pattern, so camouflage offers a big advantage. The researchers found that each form of the insect was more likely to blend into the foliage when on its preferred plant species. Mating tests in the lab showed that each insect type preferred mating with one of its own color pattern.

"This is an example of speciation in process," Sandoval says.

***References:***

Nosil, P., B.J. Crespi, and C.P. Sandoval. 2002. Host-plant adaptation drives the parallel evolution of reproductive isolation. *Nature* 417(May 23):440-443. Abstract available at http://dx.doi.org/10.1038/417440a.

***Further Readings:***

Milius, S. 2001. Alarming butterflies and go-getter fish. *Science News* 160(July 21):42. Available to subscribers at http://www.sciencenews.org/20010721/bob13.asp.