

May we call them 'Pavlov's Cockroaches?'

8 March 2006

Tohoku University scientists in Japan say they've discovered cockroaches have conditioned responses, just like Pavlov's drooling dogs.

The researchers told Yomiuri Shimbun their finding is the first confirmation of the conditioned reflex in an animal other than a mammal.

Associate Professor Makoto Mizunami and colleagues said the experiment involved spraying peppermint on one-inch-long American cockroaches. The scientists found the cockroaches' nervous system was activated by the peppermint odor after they had been conditioned five times by the researchers spraying the peppermint two seconds before feeding them sugar solution, the newspaper reported.

The effect persisted a day later.

Russian physiologist, psychologist and physician Ivan Pavlov discovered the conditioned response in a famous experiment conducted about a century ago. Pavlov found that after dogs were conditioned to hear a bell just before being fed, they drooled whenever they heard a bell -- even when no food was present.

The latest study is detailed in the British Journal of Experimental Biology.

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