Birds help keep vineyards pest-free

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Properly functioning ecosystems have their own pest management system – predation – but as new manmade ecosystems develop, these natural maintenance systems are often disrupted. In some cases, though, installing a simple nest box may be all that's needed to restore the balance, and improve avian conservation, according to a new report published Nov. 9 in the online journal *PLoS ONE*.

The researchers, led by Julie Jedlicka of the University of California, Berkeley, monitored the effect of nest boxes in California vineyards. These boxes provide homes for a number of species, including the Western Bluebird, which were the focus of the study. They found that the nest boxes increased the avian species richness by over 50% compared to sites without the boxes, the overall insectivorous bird density nearly quadrupled, and the Western Bluebird abundance increased 10-fold.

"Insectivorous birds are often overlooked as sources of pest predation, however, they are likely providing pest control services in many agricultural fields, we just need to look for it", says Jedlicka.

Importantly, this increase was limited to insectivorous birds, and there was no discernible increase in the abundance of other bird species that sometimes eat grapes. They also found that the sites with nest boxes were better protected from potential pest infestations. These results suggest an effective method for vineyards to simultaneously protect their crop and encourage avian conservation.

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