

Invasive parasitic fly on Galapagos Islands probably came from mainland Ecuador

April 17 2015



This is a lateral view of a *Philornis downsi* adult. Credit: Entomological Society of America

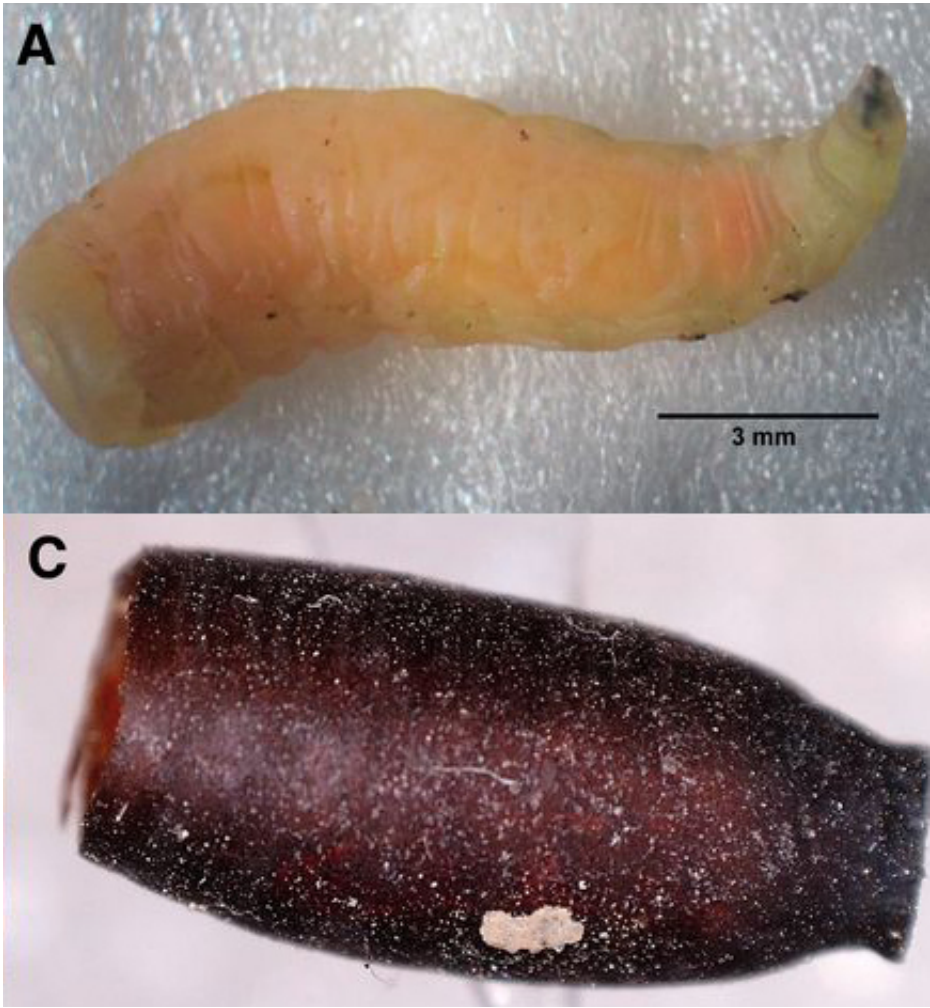
Philornis downsi is a parasitic muscid fly that is native to mainland South America. Decades ago, it was accidentally introduced to the Galápagos Islands, where it harms Darwin's finches and other land birds.

Females lay eggs inside active bird nests, and then the resulting larvae feed on the nestlings. The first-instar larvae feed inside the nares

(nostrils) of the baby birds, while the second and third instars feed by scratching the birds' skin and ingesting the blood and other bodily fluids.

No one knows exactly how the flies were introduced to the Galápagos, or where they came from, but scientists have hypothesized that they probably came from mainland Ecuador, even though they have never been found there. Now research reported in the *Annals of the Entomological Society of America* seems to support that hypothesis, as scientists have documented the presence of *P. downsi* at two sites near Ecuador's coast. In addition, they found two new species of [birds](#) that were previously unknown to be attacked by the flies—the streak-headed woodcreeper (*Lepidocolaptes souleyetii*) and the fasciated wren (*Campylorhynchus fasciatus*)—bringing the total number of host species to 37.

There may also be some good news, as the researchers also discovered evidence of at least one parasitoid wasp that attacks the flies. However, further research on the parasitoid would be necessary before biological-control releases could be contemplated.



This image shows *Philornis downsi* larva (top) and pupa (bottom). Credit: Entomological Society of America



House wrens (*Troglodytes aedon*) are shown in a nest with a *Philornis downsi* pupa (lower right). Credit: Entomological Society of America

More information: *Philornis downsi* (Diptera: Muscidae), an Avian Nest Parasite Invasive to the Galápagos Islands, in Mainland Ecuador," *Annals of the Entomological Society of America* First published online: 8 April 2015. [DOI: 10.1093/aesa/sav026](https://doi.org/10.1093/aesa/sav026)

Provided by Entomological Society of America

Citation: Invasive parasitic fly on Galapagos Islands probably came from mainland Ecuador (2015, April 17) retrieved 23 April 2024 from <https://phys.org/news/2015-04-invasive-parasitic-galapagos-islands-mainland.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.