Bedbugs' evolution is bad news for everyone, except scientists

In the closing sentence of "The Origin of Species," Charles Darwin marvels at the process of evolution, observing how "from so simple a beginning endless forms most beautiful and most wonderful have been, and are being, evolved."

Few people would describe bedbugs as most beautiful or most wonderful. Yet this blood-feeding pest may represent an exceptional chance to observe the emergence of Darwin's "endless forms": New research indicates that some bedbugs are well on their way to becoming a new species.

"For something that is so hated by so many people, it might just be a perfect model organism for evolutionary questions," said Warren Booth, a biologist at the University of Tulsa and a co-author of the new study, published in Molecular Ecology.

Scientists have been very slow to appreciate the biology of bedbugs despite the fact that the insects have infiltrated human shelters for thousands of years. That's because the insects practically vanished at the dawn of modern biology in the 1940s, thanks to the widespread use of DDT.

Bedbugs have returned with a vengeance in recent years, partly because they have evolved resistance to pesticides, and scientists are struggling to learn more about these pests. It's a much bigger challenge than examining, say, monarch butterflies.

"It's very hard to study in them in the wild, because often people don't want you to use their house as a laboratory," said Toby Fountain, a postdoctoral researcher at the University of Helsinki. "They just want to get rid of them as quickly as possible."

Read full, original article: In Bedbugs, Scientists See a Model of Evolution