

# INSECTS

## FACTS

- Insects make up about 80% of all the world's known species. More than 900,000 insect species have been recorded worldwide,<sup>108</sup> and scientists estimate that there are two million insect species yet to be named. To put the relationship between insects and humans in perspective, for every human, there exist 200 million insects.<sup>109</sup> Talk about a bug's world!
- Tragically, over the past four decades, scientists have observed a 45% decline in the overall insect population.<sup>110</sup> From Puerto Rico to Brazil to Germany, studies show that insect populations, and the species that depend on them, are in steep decline. German scientists report that their insect populations have declined by 75% in less than 30 years.<sup>111</sup>
- Insects have been part of our Earth forever. Dragonflies have been on earth more than 300 million years and grasshoppers existed before the dinosaurs.



## WHY THEY MATTER

- Insects pollinate most of our plants and flowers and without them, we would not have a stable source of food.
- Insects themselves are a source of food for thousands of other species and humans and without them, our global ecosystems would collapse.
- Insects aerate our soil and aid in the process of recycling nutrients for use by other animals including humans.<sup>112</sup>
- Many insect species play a role in keeping other, more harmful insects from destroying and degrading crops.<sup>113</sup>
- In the United States alone, insects contribute at least \$57 billion to the national economy<sup>114</sup> and worldwide, these same services total around \$1.75 trillion.<sup>115</sup>



## THREATS

**Climate Change:** Of all the species on Earth, insects are the most sensitive and susceptible to the consequences of climate change. Current projections indicate that by the end of the century, nearly half of all habitat for insects would be unsuitable as a result of global warming, creating an “ecological Armageddon.”<sup>116</sup>

**Habitat Loss:** Agricultural expansion, the proliferation of pesticides, pollution from waste facilities, and commercial development are causing irreversible damage to the habitat of insects.<sup>117</sup>

**Pesticide Use:** Widespread and indiscriminate use of pesticides and herbicides kills living insects, their offspring, and their habitat. Some have been banned because they also cause cancer and other fatal illnesses in humans!<sup>118</sup>

**Invasive species:** The introduction of invasive species may lead to significant problems ranging from population declines to habitat destruction and eco-system collapse.<sup>119</sup>



## HOW TO HELP

- **Educate your family, friends, and elected officials:** The global decline of insects worldwide is nothing to celebrate. We depend on insects and so do millions of other species. Use our resources and facts to convince the people in your lives to learn more about how these amazing, beautiful, scary, and (sometimes) ugly insects are saving our lives!
- Sign our [pesticide pledge](#).
- **Natural remedies:** Many natural remedies exist to deal with pests in the ecosystem – none of which require pesticides.<sup>120</sup> For instance, both ladybugs and lacewing larvae consume unwanted insects and provide a net benefit to the local ecosystem in the process.
- **Use and promote organic products:** From food to clothing to garden products that discourage but don't kill bugs, organics avoid the use of pesticides and herbicides and are the way to go to help save insects.
- **Habitat Starts at Home:** In addition to supporting the protection of public lands, there are steps we can take on our own property. For those with an outdoor garden, creating a compost pile provides fertile habitats for insects. Growing plants that are native to your local ecosystem is also a great step to support and attract the local insect population.<sup>121</sup>
- Check out all of Earth Day Network's [resources](#) to help Protect our Species.

# ADDITIONAL RESOURCES

## ARTICLES/BLOGS/READINGS

**The Insect Apocalypse is Here** - *The New York Times*

<https://nyti.ms/2GGdi1t>

Because insects are legion, inconspicuous and hard to meaningfully track, the fear that there might be far fewer than before was more felt than documented. People noticed it by canals or in backyards or under streetlights at night — familiar places that had become unfamiliarly empty. The feeling was so common that entomologists developed a shorthand for it, named for the way many people first began to notice that they weren't seeing as many bugs. They called it the windshield phenomenon.

## VIDEOS

### **What Would Happen if all the Bugs Died?** - *Life Noggin*

<https://www.youtube.com/watch?v=VsXu80J31uc>

Bugs may seem like a common annoyance, but losing them would be a giant mistake.

## STORYTELLING

### **Ted Talk: Mind-Blowing, Magnified Portraits of Insects** - *Levon Biss*

<https://www.youtube.com/watch?v=3o655tLnik0>

Applying his knowledge of photography to subjects just five millimeters long, Biss created a process for shooting insects in unbelievable microscopic detail. He shares the resulting portraits -- each comprised of 8- to 10,000 individual shots -- and a story about how inspiration can come from the most unlikely places.

## OTHERS WORKING ON THIS

### **Save Insects**

<https://saveinsects.com/>

Save Insects objective is to showcase importance of insects in the food cycle, highlight at-risk population from loss of habitat and share the effects from global warming on local insect populations.

## REPORTS

### **The Contribution of Insects to Food Security, Livelihoods and the Environment** - *United Nations*

<http://www.fao.org/3/i3264e/i3264e00.pdf>

This report summarizes how the use of insects as food and feed has many environmental, health and social/livelihood benefits.