

1,541 snout moth species and counting in the United States and Canada

January 19 2016



North American snout moths pinned with their wings spread out flat for study.
Credit: Dr. Alma Solis

The present snout moth list contains a ten-percent increase in the number of species since 1983. For the last thirty-three years snout moth

specialists in the United States and Canada have been describing species new to science and recording species new to these two countries. Scientists have also published studies resulting in major changes to the classification above the species level, for example by studying snout moth "ears" (tympanal organs) and utilizing genes to study their relationships.

This check list was compiled over a three-year period by Dr. Brian Scholtens and Dr. M. Alma Solis. Brian Scholtens is a professor at the College of Charleston, South Carolina, and M. Alma Solis is a research entomologist at the Agriculture Research Service's Systematic Entomology Laboratory, and curator of the U.S. National Pyraloidea Collection located at the Smithsonian Institution, National Museum of Natural History, Washington, D.C. Their results have been published in the open-access journal *ZooKeys*.

"A check list is one of the most important pieces of research, with many applications," says Dr. Solis. "Knowing the fauna of a geographic area makes it possible to track species and, in this case, potential invasive species. The caterpillars of snout moths are economically important worldwide as pests of planted crops for food or biofuel, of forest trees, and of stored products such as wheat and nuts."

"Many species, for example, the stored product pests, occur worldwide, but others, such as pest species of grasses including corn, can be restricted or only exist in certain geographic areas," the scientist further explains. "It is important to be able to recognize as soon as possible that a particular species is not native to the United States or Canada."

Scientists use Latin scientific names as "unique tags" to communicate about the morphological or molecular identity and habits of a species. One of the functions of taxonomists is to determine if a species is new or if it has already been described. Historically, confusion is created when

the same species is described more than once (called a synonym) in other parts of the world.

A regional check list such as this one and a worldwide check list can work together to reinforce precision in the definition and communication about species, especially decreasing confusion about synonyms. Most worldwide check lists exist as online databases that can be updated. Dr. Solis said that they had cited new discoveries relevant to the North American snout moth fauna found in [GLOBIZ](#), or the Global Information System on Pyraloidea, an electronic list of over 15,500 snout moth [species](#) names for which she is a collaborator.

More information: Brian Scholtens et al. Annotated check list of the Pyraloidea (Lepidoptera) of America North of Mexico, *ZooKeys* (2015). [DOI: 10.3897/zookeys.535.6086](https://doi.org/10.3897/zookeys.535.6086)

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