## A SOLITARY WASP (APHILANTHOPS FRIGIDUS F. SMITH) THAT PROVISIONS ITS NEST WITH QUEEN ANTS<sup>1</sup>

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Several years ago a correspondent sent me a few specimens of a beautiful black and yellow wasp, Aphilanthops frigidus F. Smith, each mounted on a pin with a winged queen of the typical Formica fusca L. These specimens were collected August 21, 1903, at Silver Creek, Baraga County, in northern Michigan, by Mr. Morgan Hebard. Although it seemed very probable that the ants had been taken as the prey of the wasps, I was not sure of this fact till the past summer, when I was able to study the habits of these insects in the neighborhood of Boston. During this season, in fact, they seem to have been so abundant as to have attracted the attention of other entomologists in New England and Canada.

The nearctic genus Aphilanthops was first separated from the closely related Philanthus by Patton in 1880 and based on Ph. frigidus F. Smith as the type. Since that time Cresson (1865), Fox (1894), Baker (1895), Cockerell (1895, 1896) and Dunning (1896, 1898) have described a number of additional species. Eleven of these altogether are enumerated by Dunning in his monograph of the genus (1898), all confined to the western states, except the type A. frigidus. This was originally described from Nova Scotia, but is now known to range over Ontario and New England, as far west as Illinois and Chicago and as far south as New Jersey. Two other species from Mexico have been referred to the genus Aphilanthops by Cameron, but Cockerell believes that they really belong to the genus Eucerceris.

Concerning the habits of *Aphilanthops* nothing has been published, except the following observations by Ainslee (1909) on *A. taurulus* Ckll.: "Early in August, 1908, while marooned at

<sup>&</sup>lt;sup>1</sup>Contributions from the Entomological Laboratory of the Bussey Institution, Harvard University, No. 71.