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First record of a cluster fly (Calliphoridae: *Pollenia*) in Alaska

by Matt Bowser¹



Figure 1: Adult female *Pollenia vagabunda*, February 17, 2015 (specimen record: KNWR:Ento:10698). Original image: <http://arctos.database.museum/media/10453039>.

During an extended warm period this February, cluster flies (Calliphoridae: *Pollenia*, Figure 1) were one of the

most abundant and conspicuous insects in the vicinity of the Kenai National Wildlife Refuge's headquarters building south of Soldotna. Adam Jewiss-Gaines (Brock University, St. Catharines, Ontario) identified a specimen as *Pollenia vagabunda* (Meigen, 1826). Thirty-five specimens were collected in the Soldotna area 11th of February to the 17th of March, where they were found in spider webs, in buildings, on snow, and sunning on any warm aspect in the afternoons. To the best of my knowledge, this is the first report of a cluster fly from Alaska.

Cluster flies are native to the Old World, but have become established across much of North America. Until recently, all cluster flies collected from the Nearctic were considered to be one species, *Pollenia rudis* (Fabricius), but now six species are recognized from North America (Whitworth, 2006; Jewiss-Gaines et al., 2012). *Pollenia vagabunda* was first collected in North America in 1958 and is now distributed from the East Coast to southern British Columbia (see distribution map of Jewiss-Gaines et al., 2012).

The biology of *P. vagabunda* is unknown. The best-studied species of *Pollenia* are parasites of earthworms, with the third instar larvae sometimes acting as earthworm predators (Rognes, 1987). Honey bees (Ibrahim, 1984) and land snails (Coupland and Barker, 2004) have also been reported as hosts of cluster flies. Two species of *Pollenia*, including *P. vagabunda*, have been reported from noctuid moths of the subfamily Hadeninae: *Pollenia ibalia* Séguy from *Spodoptera exigua* (Hübner) (Rognes, 2010) and

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P. vagabunda from *Sesamia nonagrioides* (Lefebvre) (Rognes, 1992). *Chondrostega maghrebica* De Joannis (Lepidoptera: Lasiocampidae) was given as a host of *Pollenia rudis* by Séguéy (1934).

Some species of *Pollenia* overwinter as adults, often entering buildings in large numbers where they form their namesake clusters of overwintering flies. Adult cluster flies are among the first flies to emerge on early spring days (Jewiss-Gaines et al., 2012). Later in the spring, they can be one of the more abundant pollinators on flowers (Jewiss-Gaines et al., 2012). In Fennoscandia and Denmark *P. vagabunda* has been collected throughout the year (Rognes, 1992).

Specimen records: USA: Alaska: Soldotna, 300 West Marydale Avenue, Soldotna Bible Chapel, 60.495713°N, 151.087998°W ±20m. 15 Feb 2015. Matt Bowser. on outside of building. (♀ KNWR:Ento:10690); Soldotna, Sterling Highway and Kalifornsky Beach Road, Soldotna Visitors Center, 60.476185°N, 151.083799°W ±30m. 17 Mar 2015. Matt Bowser. sunning on side of building. (♀ KNWR:Ento:10728, ♂ KNWR:Ento:10729); Soldotna, Ski Hill Road. Radio tower at shop area, 60.46407°N, 151.081044°W ±20m. 24 Feb 2015. Matt Bowser. sunning on trunk of birch tree near ground. (♂ KNWR:Ento:10710); Soldotna. Ski Hill Road. Kenai NWR shop area, canoe shed, 60.463802°N, 151.080725°W ±15m. 27 Feb 2015. Matt Bowser. equipment shed. (♀ KNWR:Ento:10713, ♀ KNWR:Ento:10714, ♀ KNWR:Ento:10715, ♀ KNWR:Ento:10716, ♂ KNWR:Ento:10717, ♂ KNWR:Ento:10718, ♂ KNWR:Ento:10719, ♀ KNWR:Ento:10720, ♂ KNWR:Ento:10721); Soldotna. Ski Hill Road. Kenai NWR shop area, Biohut, 60.463745°N, 151.080457°W ±15m. 27 Feb 2015. Matt Bowser. equipment shed. (♀ KNWR:Ento:10712); Soldotna, Ski Hill Road. Kenai National Wildlife Refuge headquarters building, 60.464699°N, 151.072967°W ±30m. 11 Feb 2015. Matt Bowser. crawling on snow over grass lawn by building. (♂ KNWR:Ento:10689); 13 Feb 2015. Matt Bowser. dead on ground and in cobwebs on side of building. (♀ KNWR:Ento:10692, ♂ KNWR:Ento:10693, ♂ KNWR:Ento:10694, ♂ KNWR:Ento:10695, ♀ KNWR:Ento:10696); on bare soil at edge of lawn under eave of building. (♀ KNWR:Ento:10691); 17 Feb 2015. Matt Bowser. on side of building. (♀ KNWR:Ento:10697); on snow on lawn by building. (♀ KNWR:Ento:10698); 18 Feb 2015. Matt Bowser. on outside of building. (♂ KNWR:Ento:10699); 19 Feb 2015. Matt Bowser. dead on floor of men's restroom. (♂ KNWR:Ento:10700); 20 Feb 2015. Matt Bowser. dead on sidewalk. (♂ KNWR:Ento:10703, ♀ KNWR:Ento:10704, ♂ KNWR:Ento:10705); 24 Feb 2015. Matt Bowser. dead on snow. (♂ KNWR:Ento:10707, ♀ KNWR:Ento:10708, ♂ KNWR:Ento:10709); Matt Bowser, Todd Eskelin. Sunning on side of building. (♂ KNWR:Ento:10706); 25 Feb 2015. Matt Bowser. sunning on side of building. (♂ KNWR:Ento:10711); 09

Mar 2015. Matt Bowser. sunning on side of building. (♂ KNWR:Ento:10722); 17 Mar 2015. Matt Bowser. sunning on side of building. (♂ KNWR:Ento:10727).

Acknowledgments

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