

A Checklist of the Bot Flies (Diptera: Oestridae) of British Columbia

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The Family Oestridae (Bot Flies) consists of about 150 species of parasitic flies living across much of the world; it is most diverse in Africa and central Asia. The African Elephant alone supports five species. The four subfamilies noted here sometimes have been treated as separate families. Although all the subfamilies except the Gasterophilinae have native North American representatives, there are only about 40 known species of oestrids on the continent. Thirteen species in five genera are recorded in BC; six of these are introduced. All oestrid species develop in the bodies of mammals. Adults are bee-like flies lacking functional mouthparts.

Flies in the Subfamily Cuterebrinae (New World skin bot flies) have larvae that live in swellings (warbles) under the skin of rodents, lagomorphs, monkeys, livestock, and humans. The unusual *Dermatobia hominis* (Linnaeus) is sometimes brought back to BC as larvae that have burrowed under the skin of unwitting tourists in tropical America. The other species are usually placed in *Cuterebra*, and most develop in rodents and lagomorphs. Three species of these big blackish flies are recorded in BC, including *C. tenebrosa* Coquillett, which develops in packrats, and *C. approximata* Walker and *C. fontinella* Clark, that parasitize *Peromyscus* mice. The subspecies *C. fontinella grisea* Coquillett attacks various mice, voles, and sometimes chipmunks; molecular studies underway will probably determine that this taxon is a full species (Jeff Boettner, University of Massachusetts, pers. comm.).

The Subfamily Gasterophilinae (horse bots) is an Old World group, but three species are now cosmopolitan, having been introduced with the horse to many regions. *Gasterophilus haemorrhoidalis* (Linnaeus), *G. intestinalis* (De Geer), and *G. nasalis* (Linnaeus) all are recorded in the digestive tracts of BC horses. Other species attack species of elephant and rhinoceros. In most species, larvae develop in the host's stomach.

The subfamily Hypodermatinae (Old World skin bot flies) is represented in North America (and BC) by one native species, the Holarctic *Hypoderma tarandi* (Linnaeus), which attacks caribou, and the introduced and cosmopolitan parasites of domestic cattle, *H. bovis* (Linnaeus) and *H. lineatum* (Villers). Larvae develop subcutaneously.

In BC the Subfamily Oestrinae (Nose bot flies) includes four species: *Oestrus ovis* Linnaeus, a grey, black-spotted fly introduced on domestic sheep; *Cephenemyia apicata* Bennett and Sabrosky, ranging from BC and Alberta south to Montana and California on deer; *C. jellisoni* Townsend distributed from BC to Ontario south to Texas and California on moose, elk and deer; and *Cephenemyia trompe* (Modéer) found across the Boreal region on caribou. Larvae develop in the sinus cavities and throats of the host.

Family Oestridae

Subfamily Cuterebrinae

Cuterebra approximata Walker, 1866

Cuterebra fontinella Clark, 1827 (includes subspecies *grisea* Coquillett, 1904; see note above)

Cuterebra tenebrosa Coquillett, 1898

Subfamily Gasterophilidae

Gasterophilus haemorrhoidalis (Linnaeus, 1758)

Gasterophilus intestinalis (DeGeer, 1776)

Gasterophilus nasalis (Linnaeus, 1758)

Subfamily Hypodermatidae

Hypoderma bovis (Linnaeus, 1758)

Hypoderma lineatum (Villers, 1789)

Hypoderma tarandi (Linnaeus, 1758)

Subfamily Oestrinae

Cephenemyia apicata Bennett and Sabrosky, 1962

Cephenemyia jellisoni Townsend, 1941

Cephenemyia trompe (Modéer, 1786)

Oestrus ovis Linnaeus, 1758

References

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