FLIES

ORDER: DIPTERA

Volume One

Flies in the order of Diptera have only one pair of wings. They can be divided into two main groups.

Thin Bodied Flies

This includes Crane Flies, Mosquitoes & Midges.

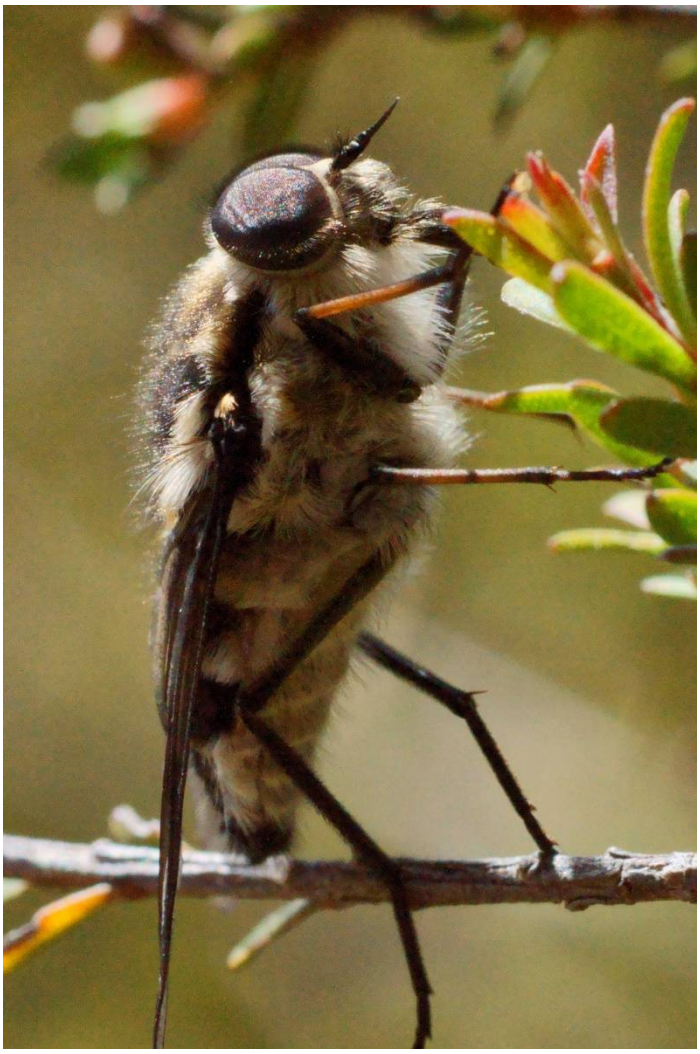
Fat Bodied Flies

This includes Blow Flies, House Flies, Gad Flies

Bush Gad Fly

Scaptia adrel Photo Doris Tutty

Normally found in areas of native forest. The flies breed in damp mud or moss. The fly pictured was found in an area of tussock grasslands containing large areas & surrounding areas of manuka bushes.



Underneath view *Scarptia adrel* Photo: Doris Tutty

Top view. Photo: Doris Tutty

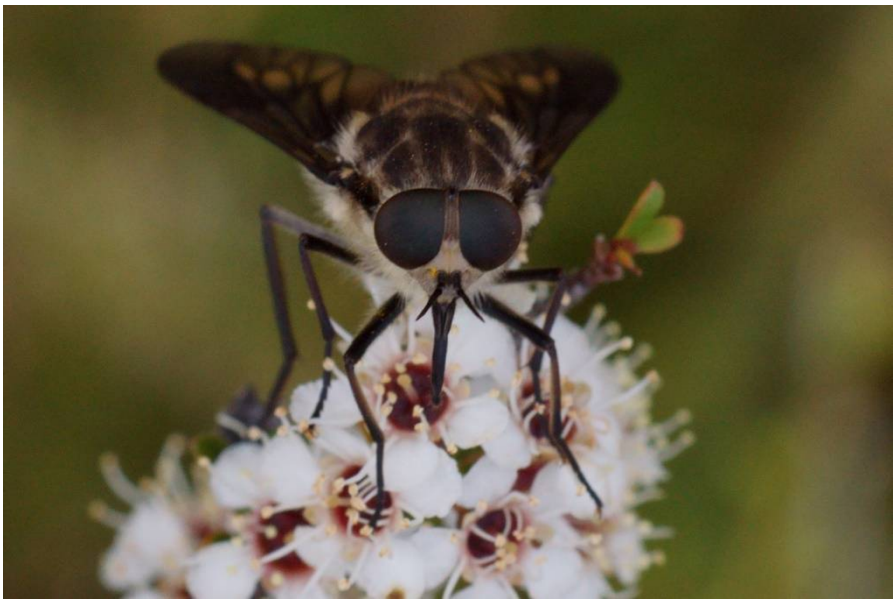


Photo: Doris Tutty

From the front view note the long proboscis. (feeding tube – mouth)

CRANE FLIES

Leptotarsus decoratus Photo: Doris Tutty

Mating Leptotarsus decoratus

Leptotarsus decoratus are identified by the whitish grey of the body. New Zealand has a large number of species of crane flies with over 600 species. I have shown three species to show the diverse range of habitats. Leptotarsus decoratus are found around high country lakes & rivers but have also seen them around Lake Ellesmere.

Leptotarsus virescens

Leptotarsus virescens are found in areas of native bush.

Mountain Crane Fly *Leptotarsus montanus*

Leptotarsus montanus are found on mountain tussock and scree slopes.

ROBBER FLIES, NEOITIMUS

Male: Neoitimus melanopogon *Photo Doris Tutty*

Neoitimus melanopogon with captured fly.

Robber flies capture their prey in flight. They inject digestive juice into the prey that paralyses it. They then suck the internal organs out leaving an empty body shell behind. In the above photo you can see the enlarged mouthpart (the conical proboscis) at the bottom of the face on the captured fly.

Robber flies can capture and carry prey that is larger and heavier than them. Here the robber fly has captured the cicada and flew off with it.

Mating Robber Flies

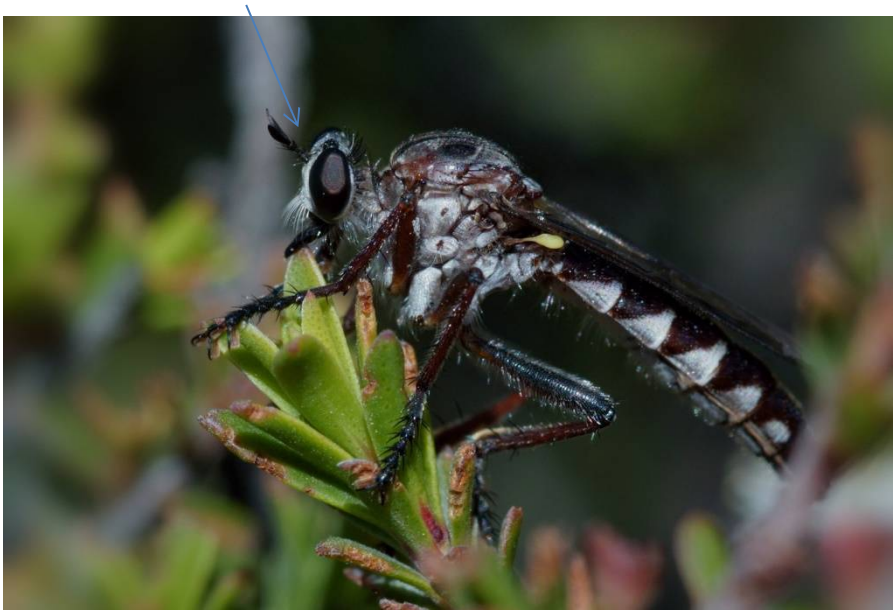
Robber flies are fearsome predators capturing most prey in flight. I have witnessed bushes crawling with manuka beetles and a robber fly waiting nearby. But the moment the beetle starts to fly the robber fly jumps into action at amazing speed to capture the beetle. The above photo shows the reason they wait for the beetle to fly. The beetles hard wing covers are open during flight and this opens up a soft body for the robber flies proboscis to penetrate.

Robber Flies Saropogon

Saropogon antipodes

o 

Saropogon discus.



Saropogon discus. Note the antenna are larger & more prominent than *Neoitimus* – see below.

To distinguish between *Saropogon and Neoitimus* look at the antenna. *Saropogon* is more prominent.

Saropogon. Antennae longer thicker throughout.

Neoitimus . Antennae smaller & taper to point.

Saropogon discus. The halteres (arrowed) are yellow and the wings have a brownish tinge.

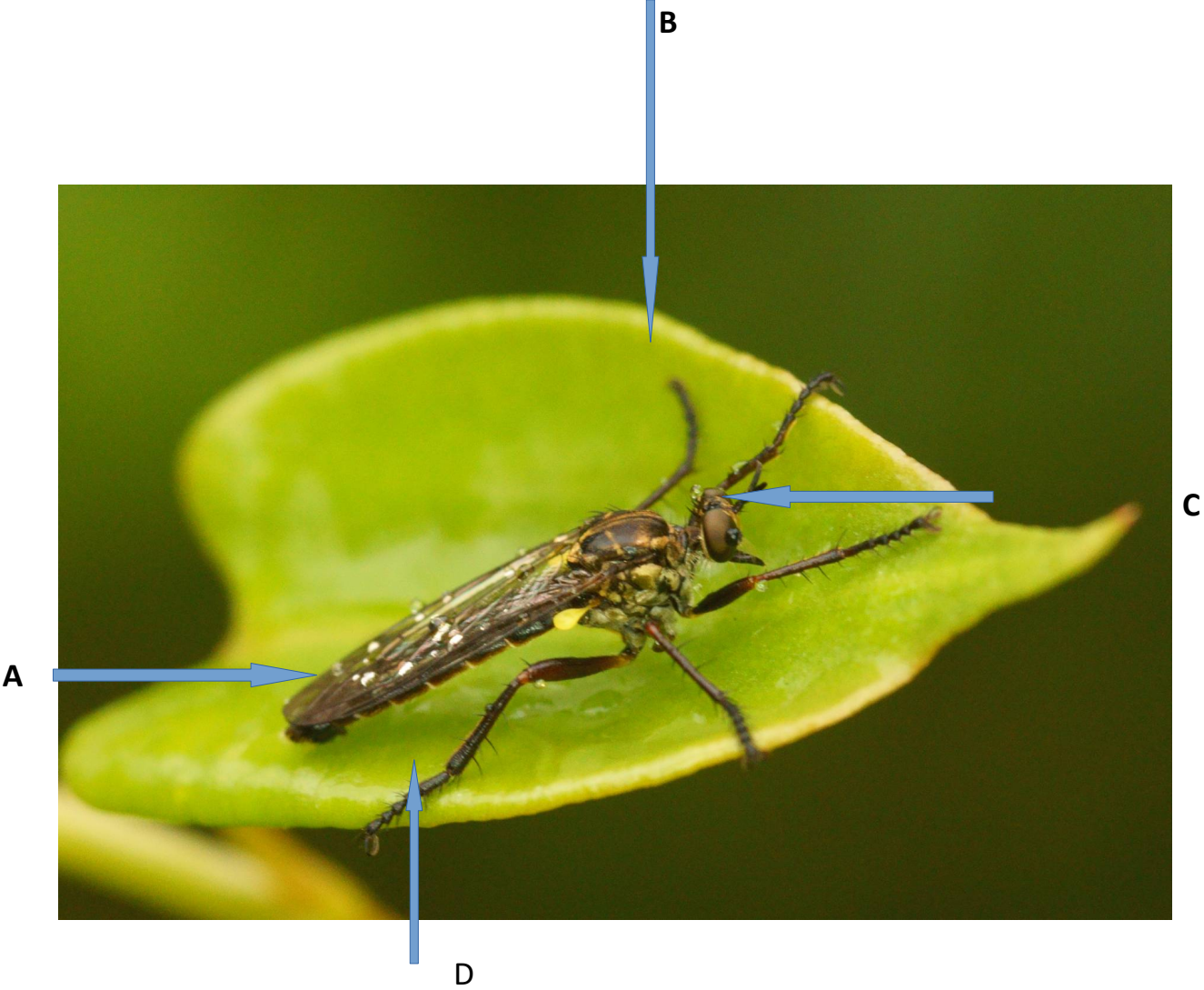
Saropogon discus also have a couple of lines of yellowish white bristles (arrowed) on the thorax.

Described by F. W Hutton 1900 (Translated to common language.)

Body; purplish black above & reddish-brown below. Thorax (arrowed) two stripes of yellowish white hair bristles. Legs brown, lower legs with feet black in the female. For the male the whole of the legs are blackish. Wings slightly tinged with brownish.

Saropogon Fugiens

Saropogon fugiens Photo: Doris Tutty



Identification Arrows:

A: Wings slightly tinged with brown.

B: Golden hairs on shoulders.

C: Golden hairs on face.

D: Lower leg with foot black.

Small Headed Flies

Genus Ogcodes. *Photo:Doris Tutty*

Small headed flies also known as bladder flies are spider parasitoids. The female fly lays eggs on grass stalks or fence wires. The eggs hatch and the grubs set about finding spiders, crawling up their legs and entering the spider's body. Once inside the body, they start eating the internal organs of the spider and eventually killing the spider.

They are widespread throughout the country but are not commonly seen as they are very small. They are more likely to be found in areas with a large population of spiders .

Ocodes sp. *Photo: Doris Tutty*

The fly has laid eggs, the small black dots around the spider's egg sac.

Stiletto Flies

Stiletto Fly *Anabarhynchus sp.*

Genus *Anabarhynchus.*

There are two genus of stiletto flies in New Zealand, *Anabarhynchus* and the beach stiletto fly *Megathereva bilineata* . They look like Robber Flies but lack the stiff proboscis (mouth) that robber flies use to stab and suck out the innards of captured insects.

The above photos were taken in Kaituna Bush and appear for a short season of November/December. There appears to have been little study of stiletto flies. The iNaturalist site lists nine species of stiletto flies but have no observation for most of the identified listed species. Likewise Land Care Research has little information listing only the information of Hutton 1901.

In the first real taxonomic treatment of New Zealand therevids, Hutton (1901) recognised nine species, placing all of them in Anabarhynchus. Six species maori, exiguus, nebulosus, castaneus, micans, and cupreus were described as new. The first three names are valid in Anabarhynchus. Information; LandCare Research.

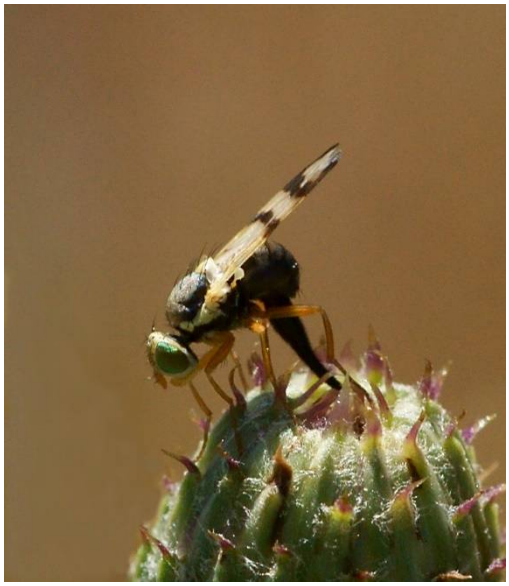
Anabarhynchus sp. Photo: Doris Tutty

The above photo was taken at Porters Pass.

NODDING THISTLE GALL FLY

Urophora solstitialis *Photo:Doris Tutty*

The smaller male is on top of the larger female fly and the spike at the rear of the female is the ovipositor that is used for laying eggs as well as for mating.



Gall Fly laying eggs in the nodding thistle head. Photo: Doris Tutty

Gall flies were introduced into the country to control the following thistles – Scotch thistle, nodding thistle and Californian thistle. There is a specific *Urophora* gall fly for each thistle species. The emerging larvae eat the seeds.

Hatching Nodding Thistle Gall Flies.

The black patterns on the wings identify these Gall flies as *Urophora solstitialis.*

Urophora stylata *Urophora solstitialis* *Urophora cardui*

Information source : Landcare Research NZ Ltd.

Gall flies for nodding thistle and scotch thistle are established around Lincoln and Lake Ellesmere.