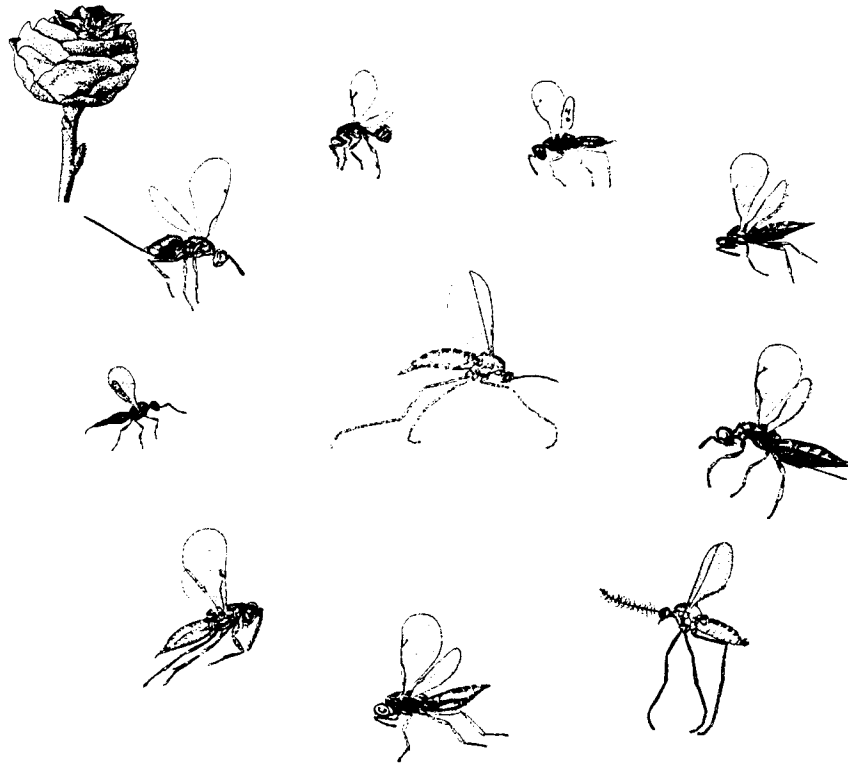
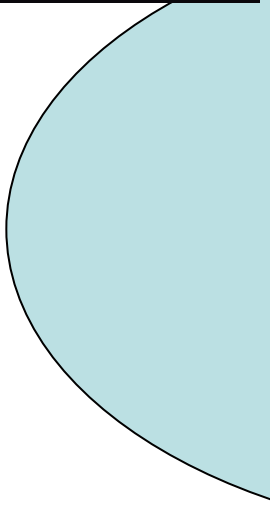


Genus *Rabdophaga* and associated Insects in Alaska





Rabdophaga rosaria



R. rosaria on
Salix glauca



R. rosaria on
Salix barclayi



R. rosaria on *Salix*
babylonica



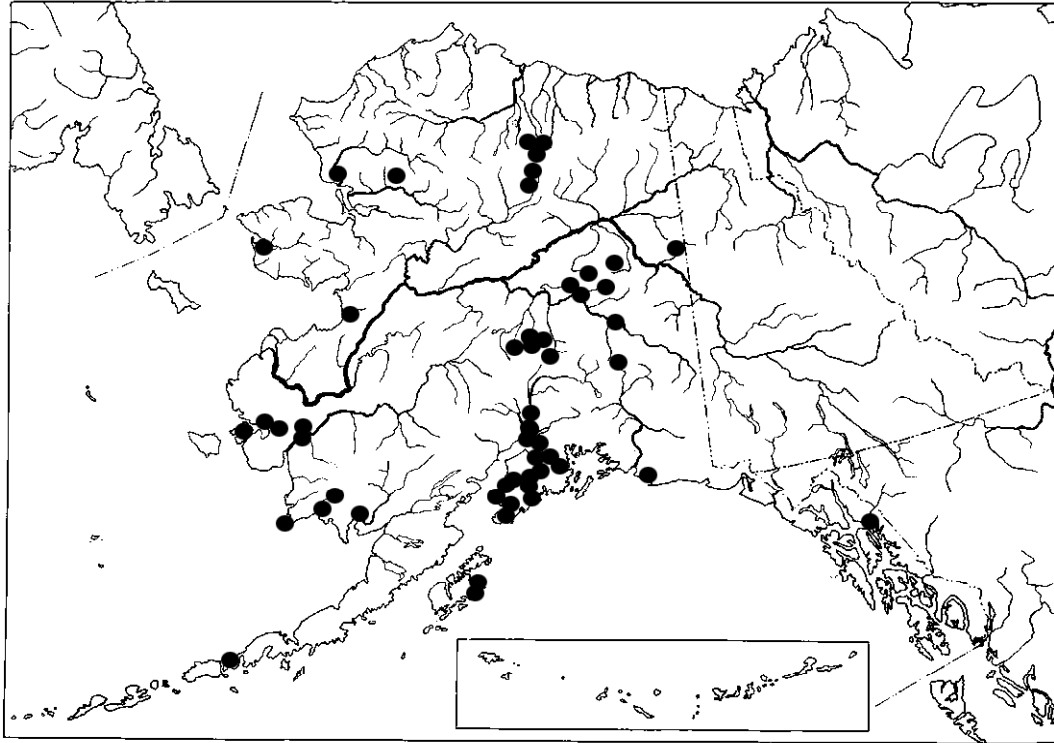
R. rosaria on
Salix bebbiana

Rabdophaga rosaria on
Salix bebbiana.

Cross section showing the
larva



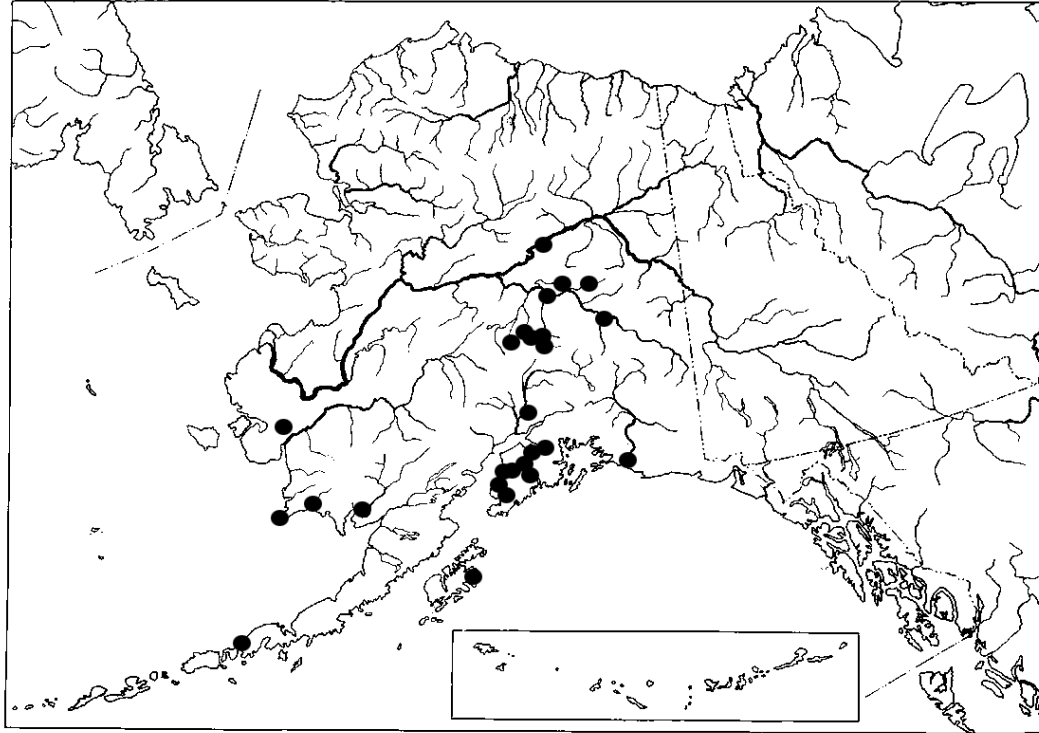
Rabdophaga rosaria



Rabdophaga salicis



Rabdophaga salicis



Rabdophaga rigidae



R. rigidae on
Salix
myrtillifolia



R. rigidae on
Salix bebbiana

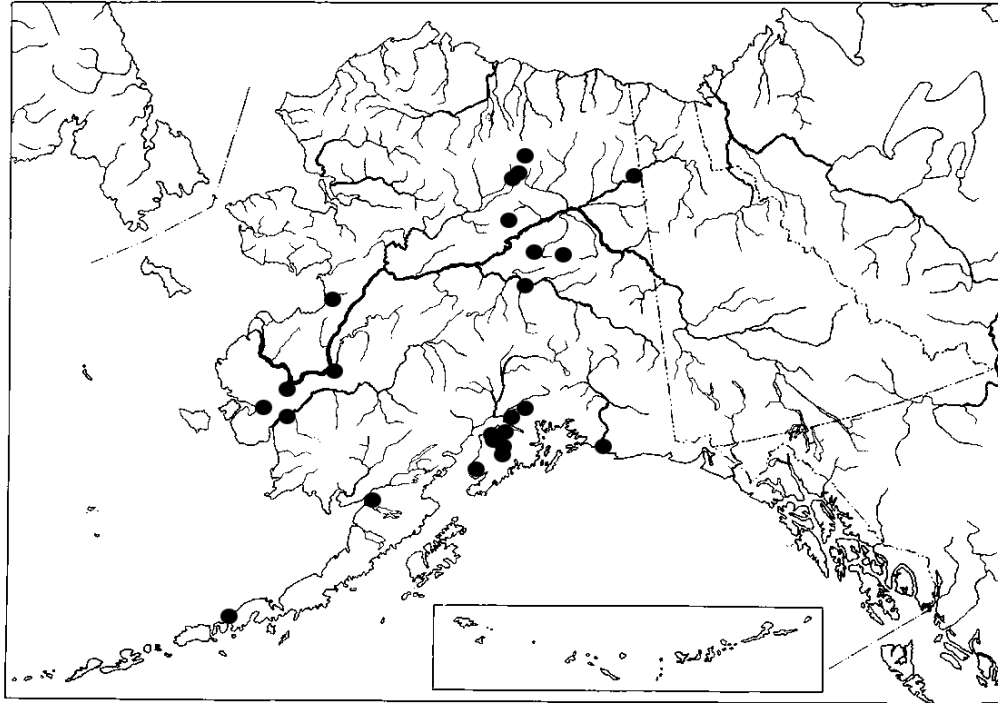


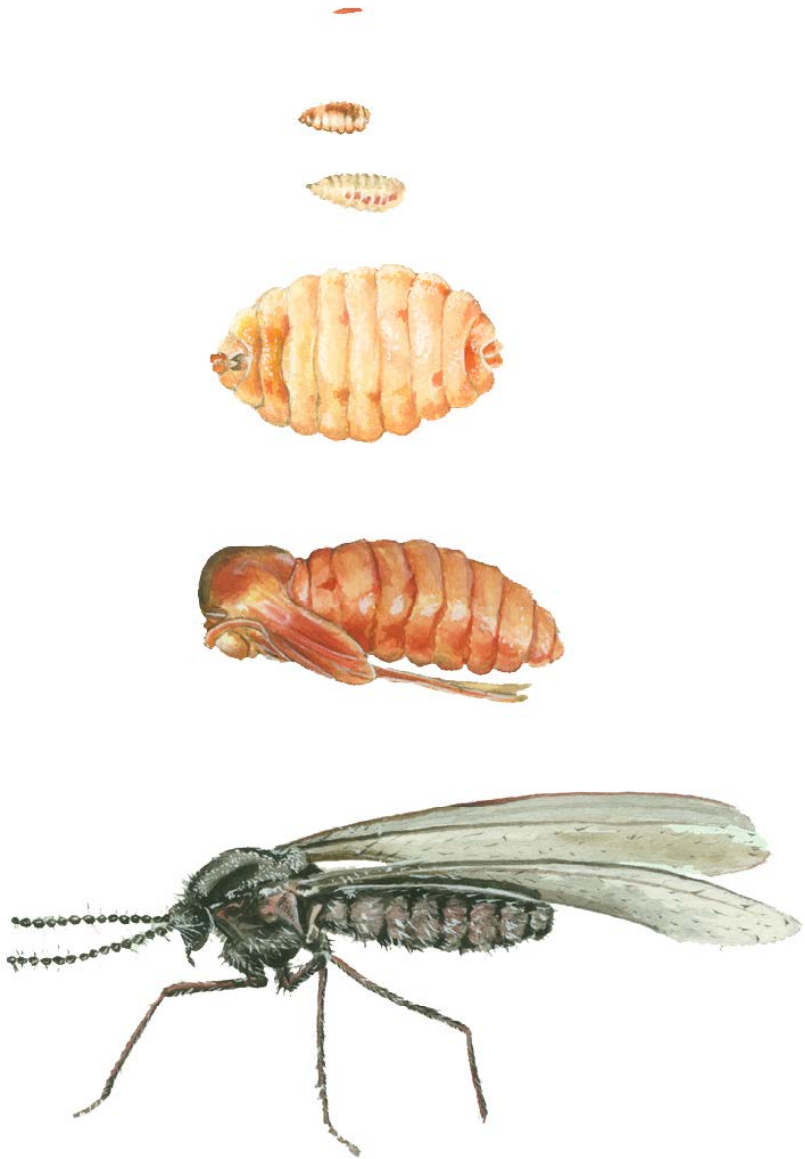
R. Rigidae on
Salix barclayi

Rabdophaga rigidae



Rabdophaga rigidae





*Rabdophaga
rosaria
Life cycle*

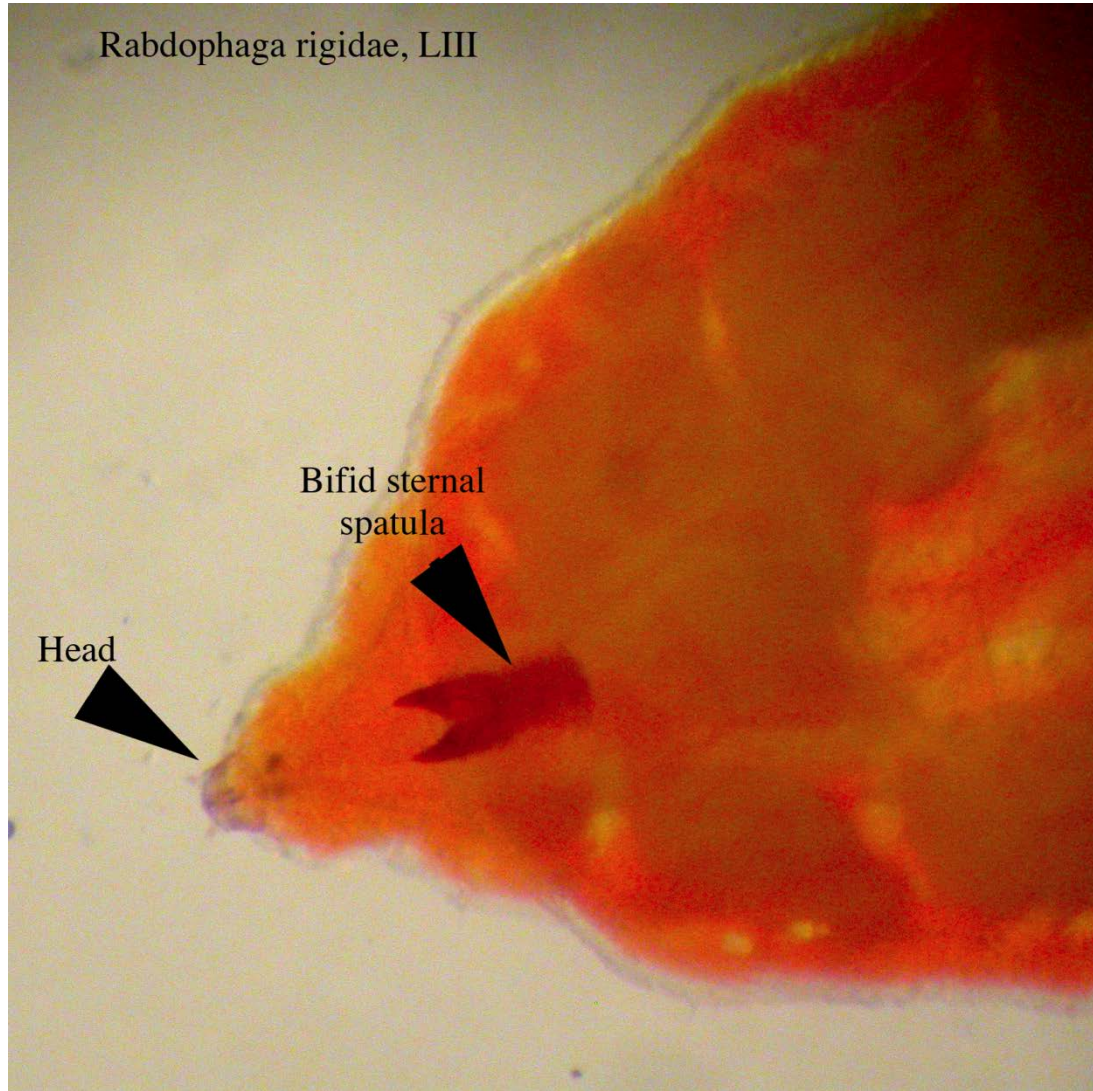
Rabdophaga strobiloides LI feeding
on the meristem inside the forming
rosette gall.



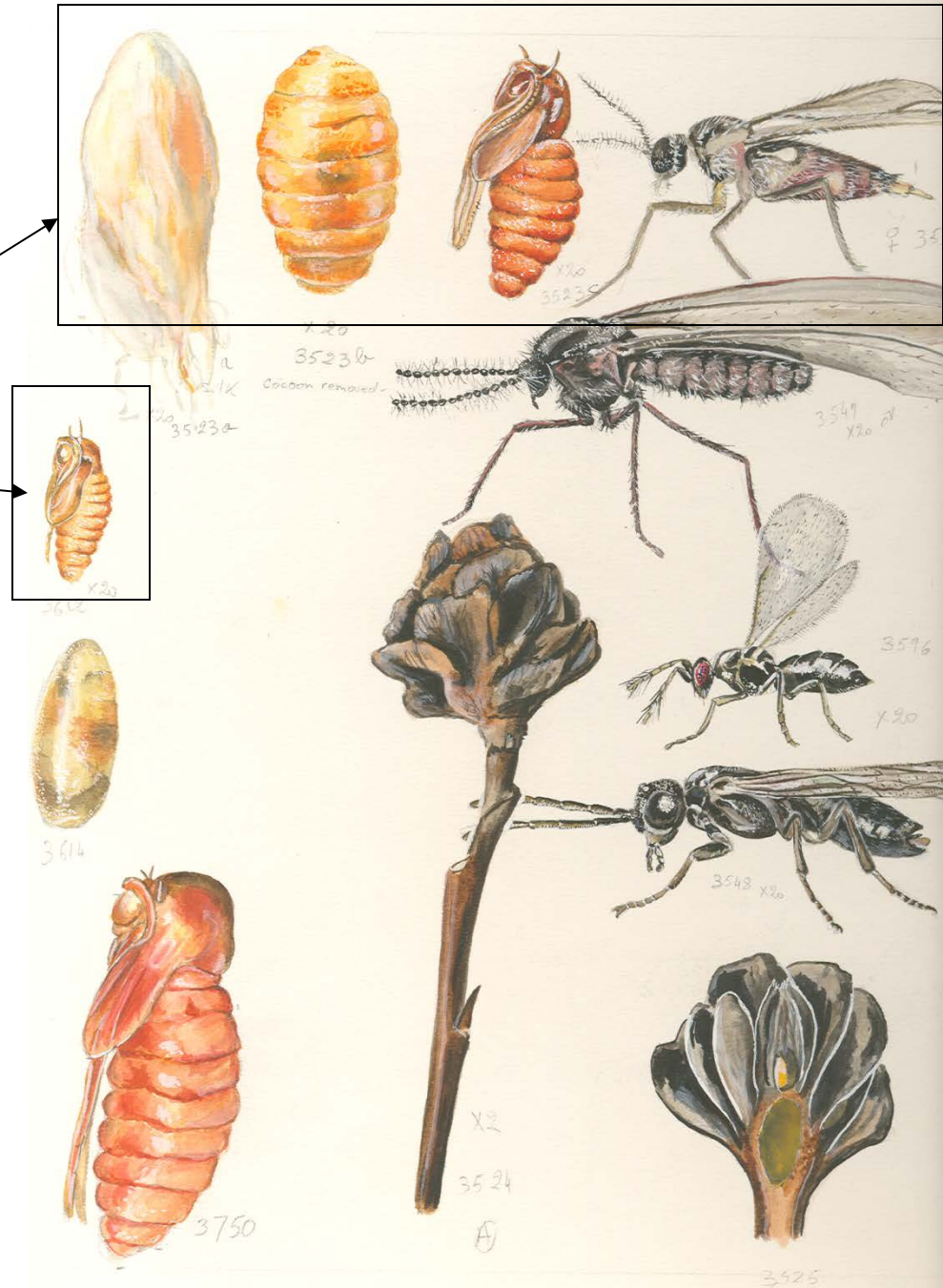
Rabdophaga rigidae, LIII

Head

Bifid sternal
spatula



Rabdophaga
rosaria gall
inquilines



Torymus fuscipes

DC5073B. *Rabdophaga* spp. ectoparasitoid



Gastrancistrus salicis

DC7911G. *Rabdophaga* spp. endoparasitoid



Mesopolobus diffinis.

DC4615B. Ectoparasitoid of *Rabdophaga* spp.



Pseudencyrtus misellus

DC4477A. Gregarious endoparasitoid of *Rabdophaga rosaria*



Eurytoma sp. female.

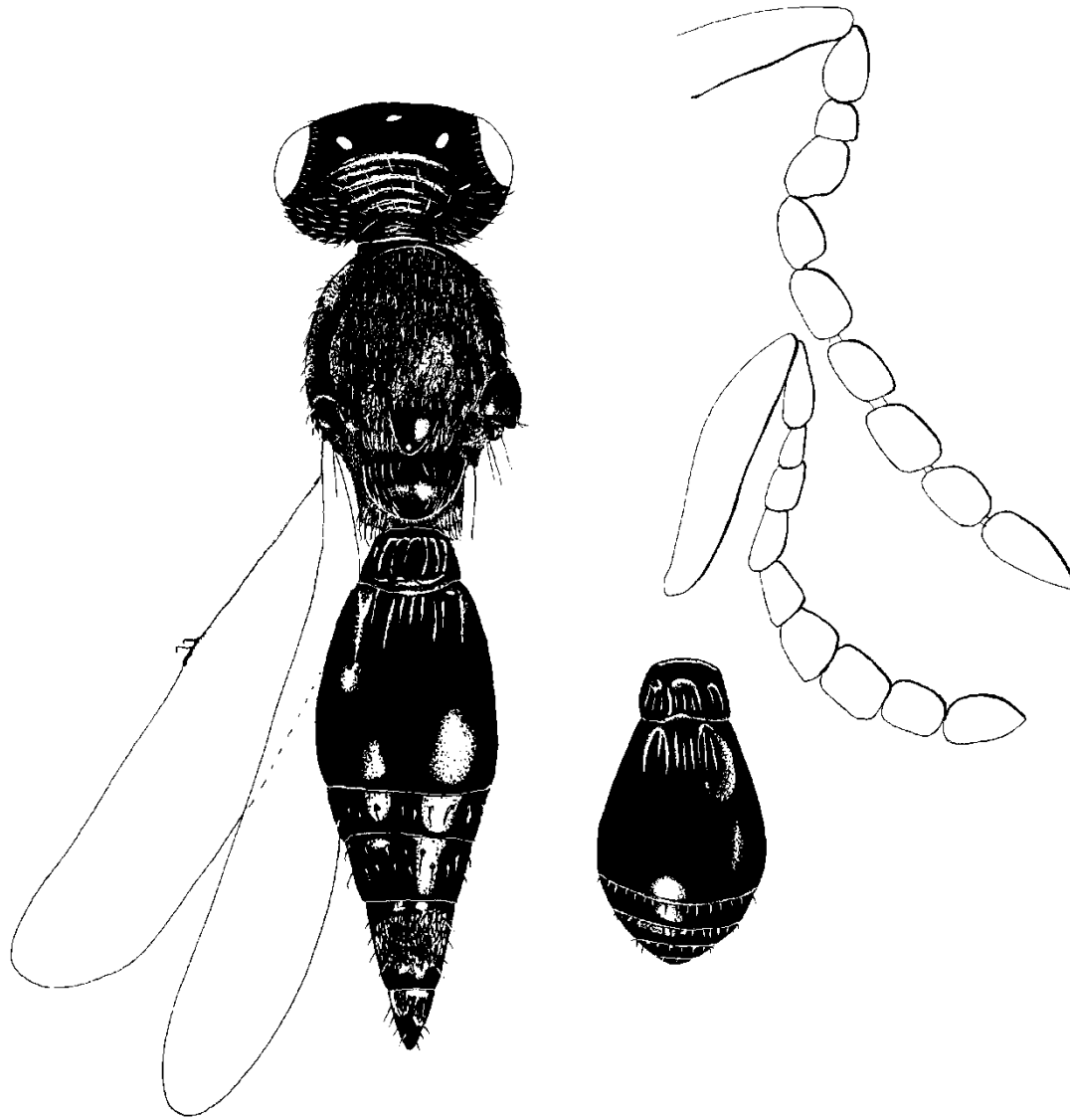
DC 444A. Immatures develop in *Rabdophaga* spp. galls...



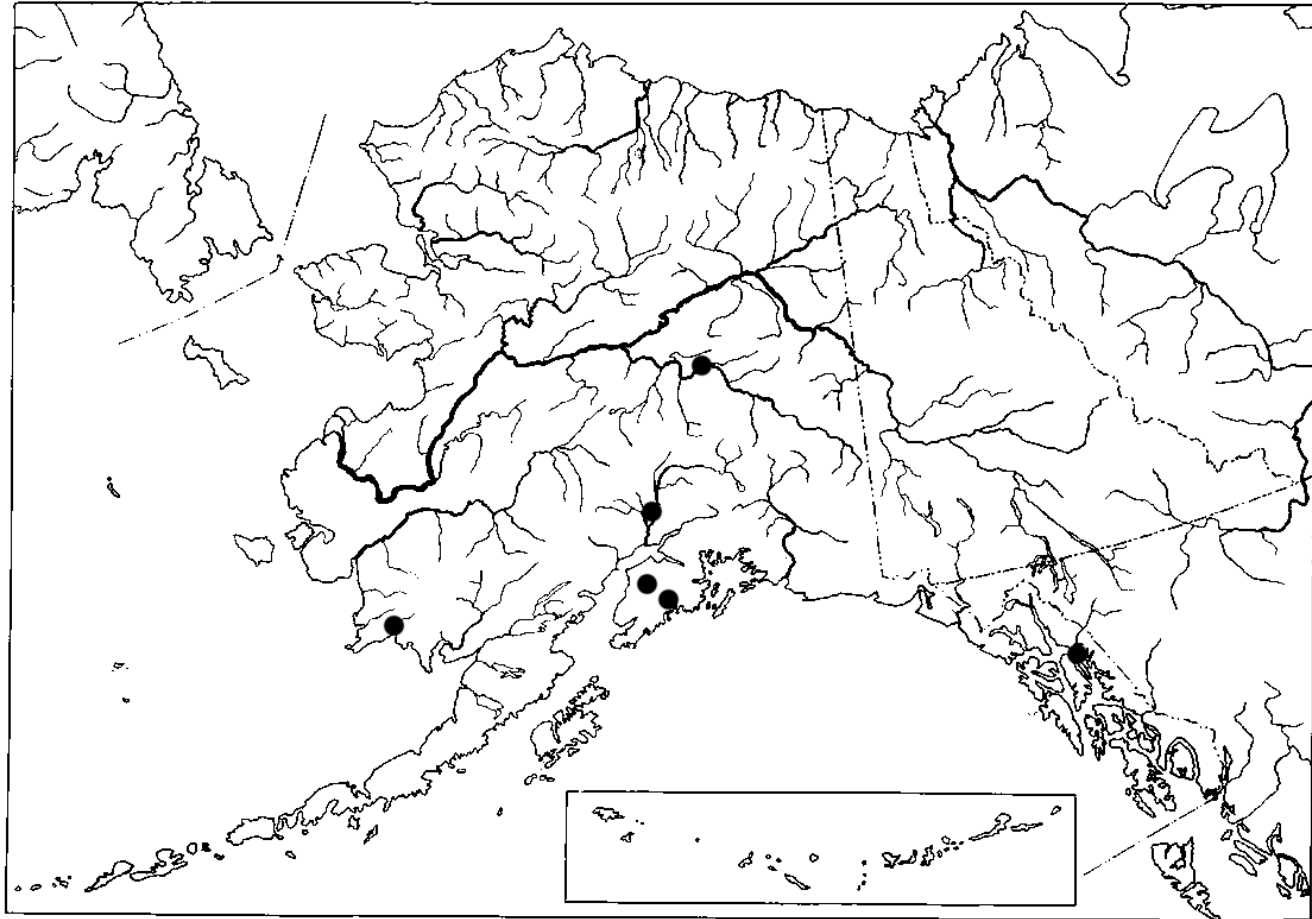
Aprostocetus sp. #1. female.
DC4503A. Predator of *Dasineura* sp.
inquiline in *Rabdophaga rosaria* galls.



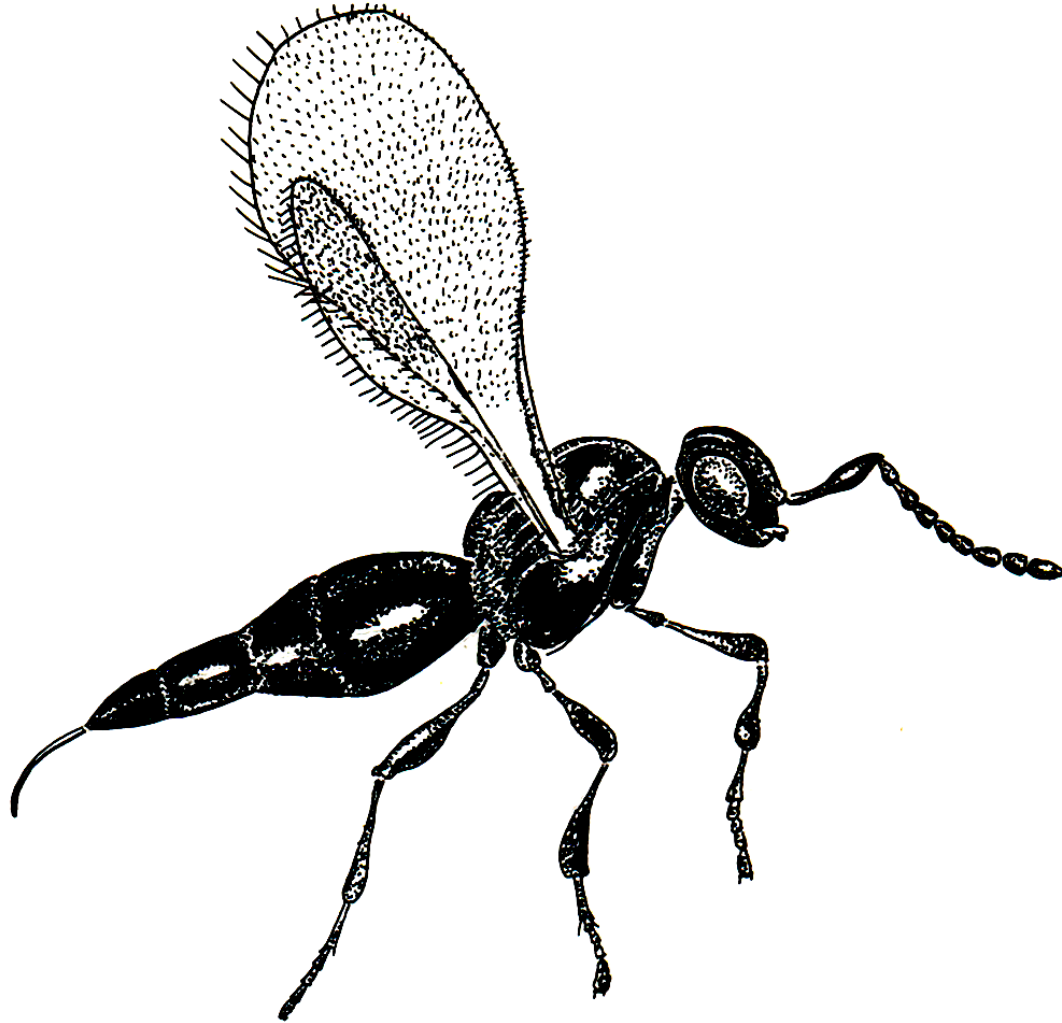
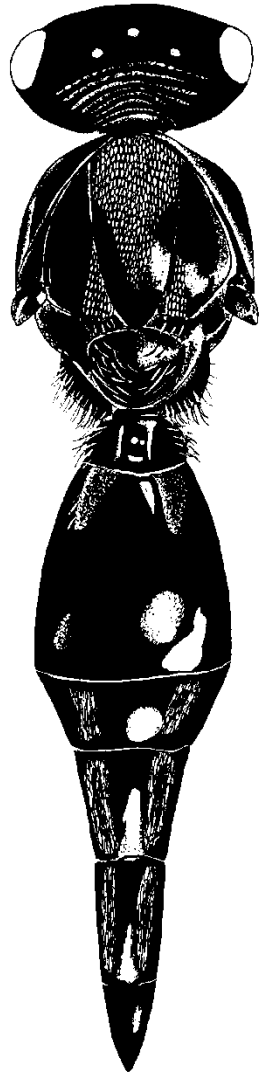
Platygaster sp. #1. Parasitoid of *R.*
rosaria, *R. strobiloides*



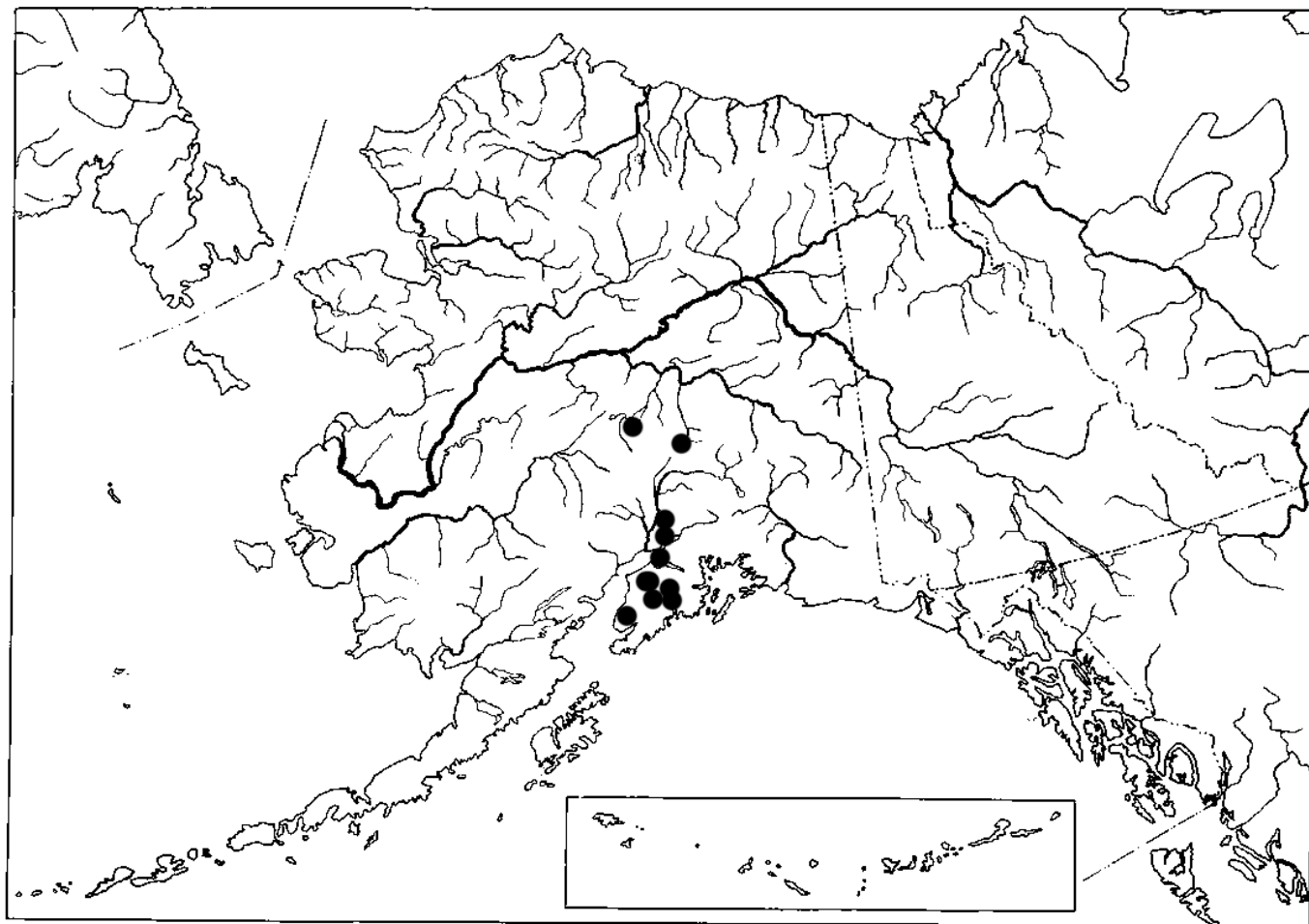
Platygater sp. #1



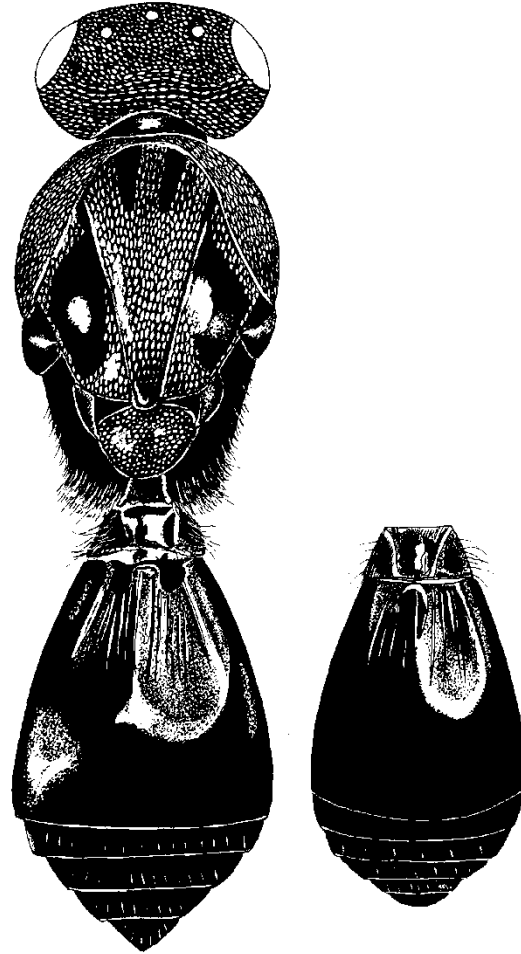
Platygaster sp. #2, *Dasineura* spp. inquiline parasitoid



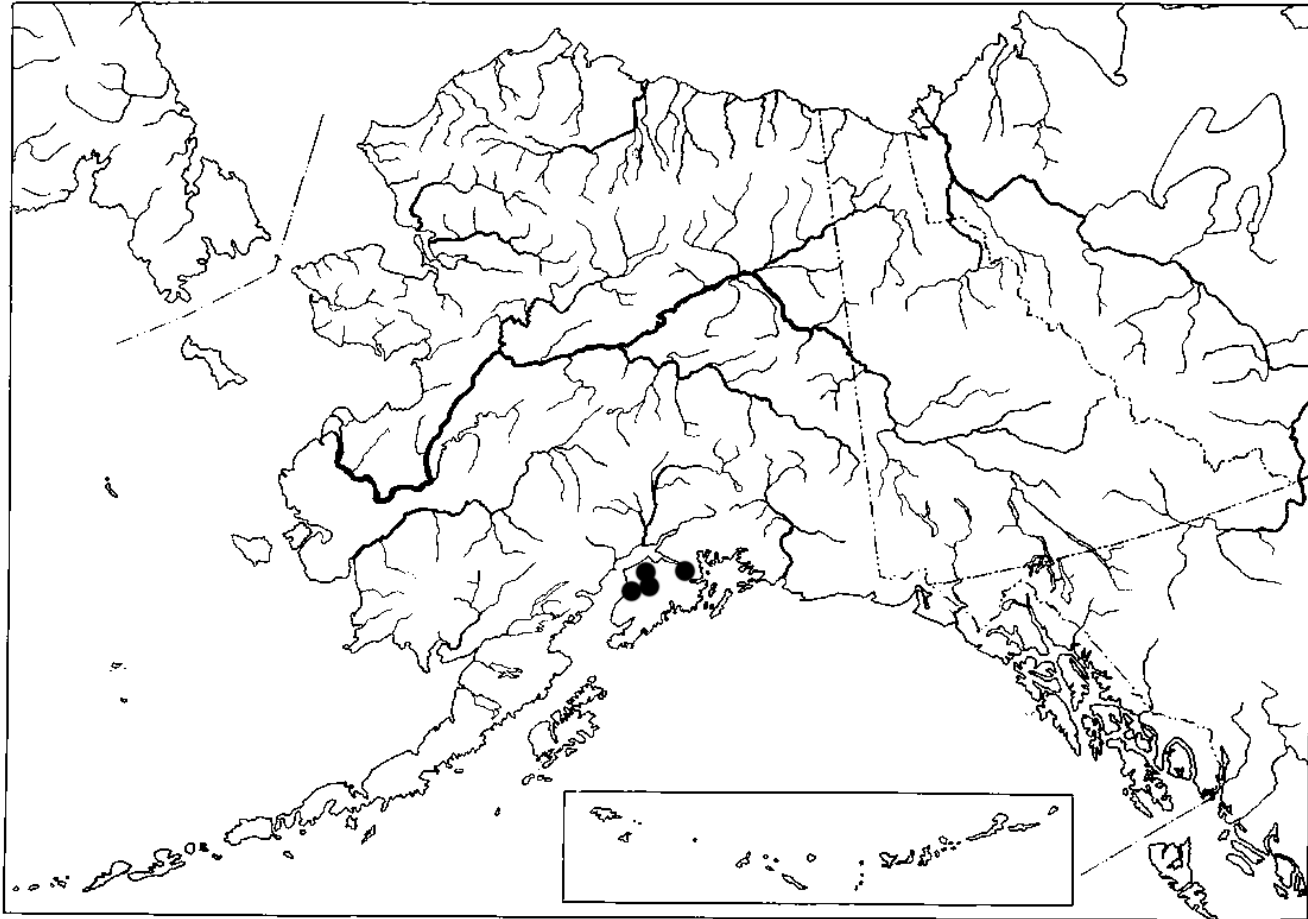
Platyvoaster sn #2



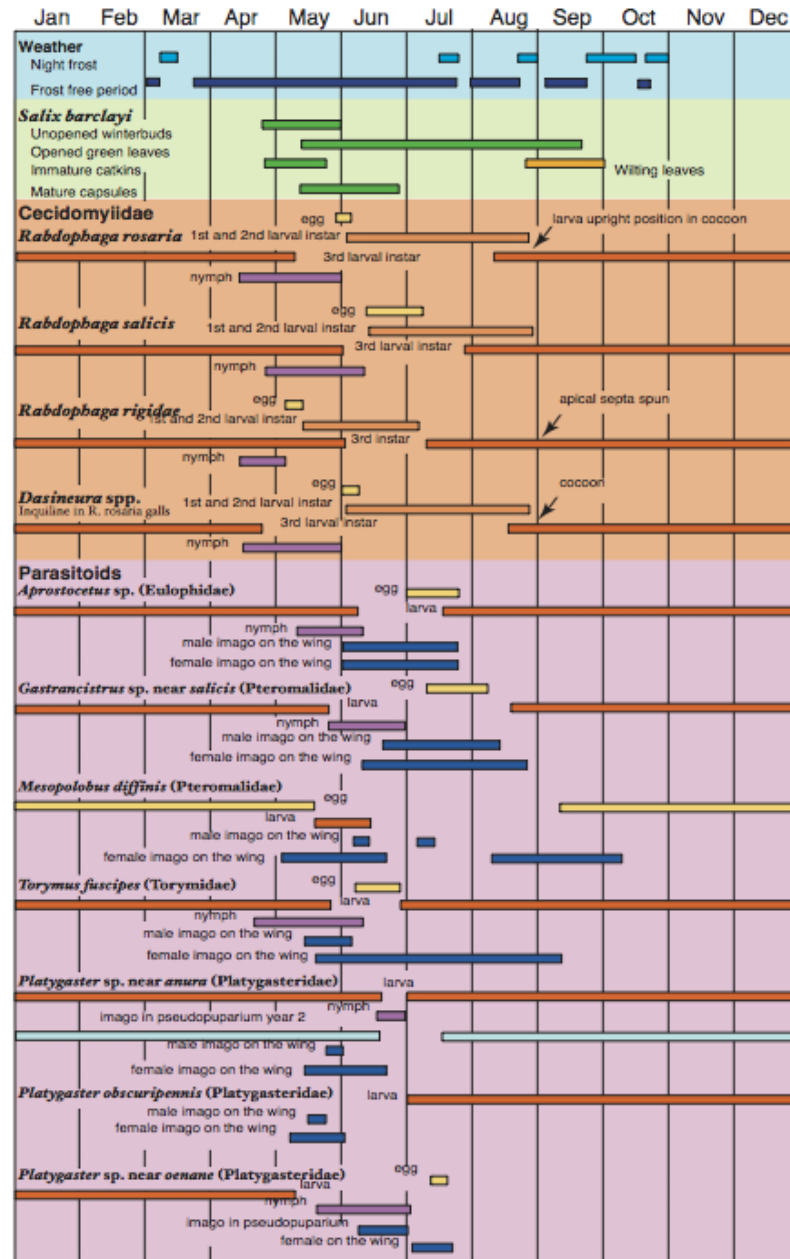
Platygaster sp. #3 near
obscuripennis: Parasitoid of *R.*
rosarai, *R. rigidae*



Platygaster sp. #3

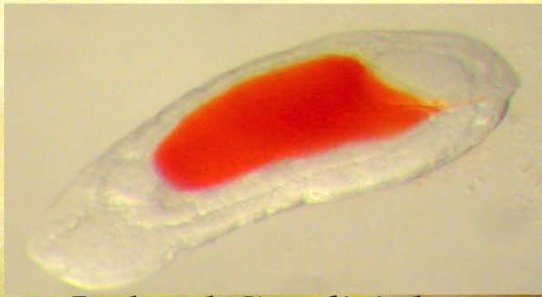


Phenology of
Rabdophaga
 spp. at the
 Gann site,
 Kenai
 Peninsula,
 Alaska



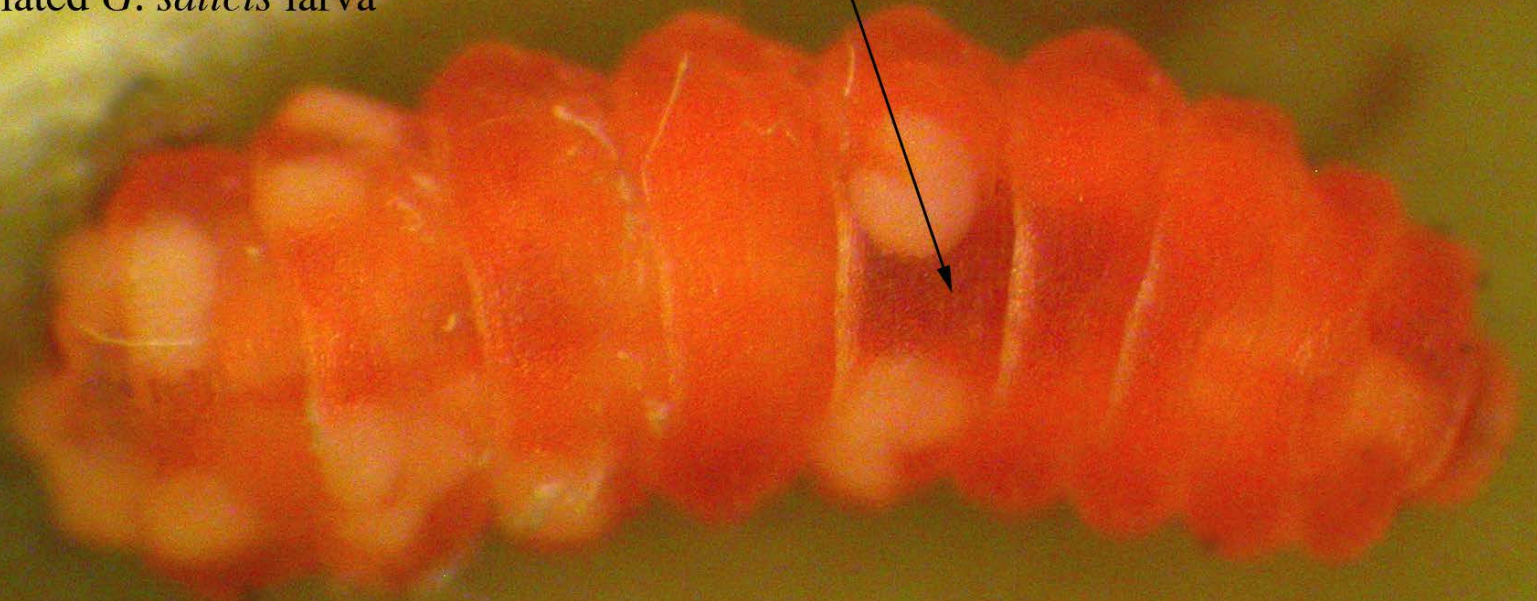
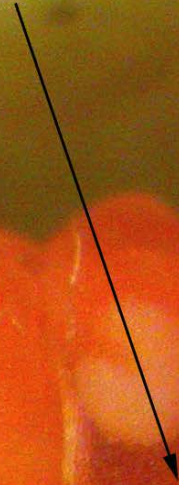


Ecto and
endoparasites



Isolated *G. salicis* larva

Gastrancistrus salicis
larva inside host



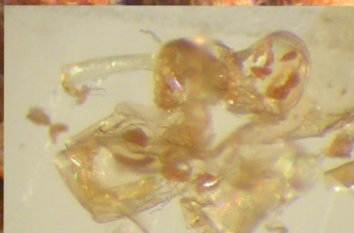
Rabdophaga rigidae LIII





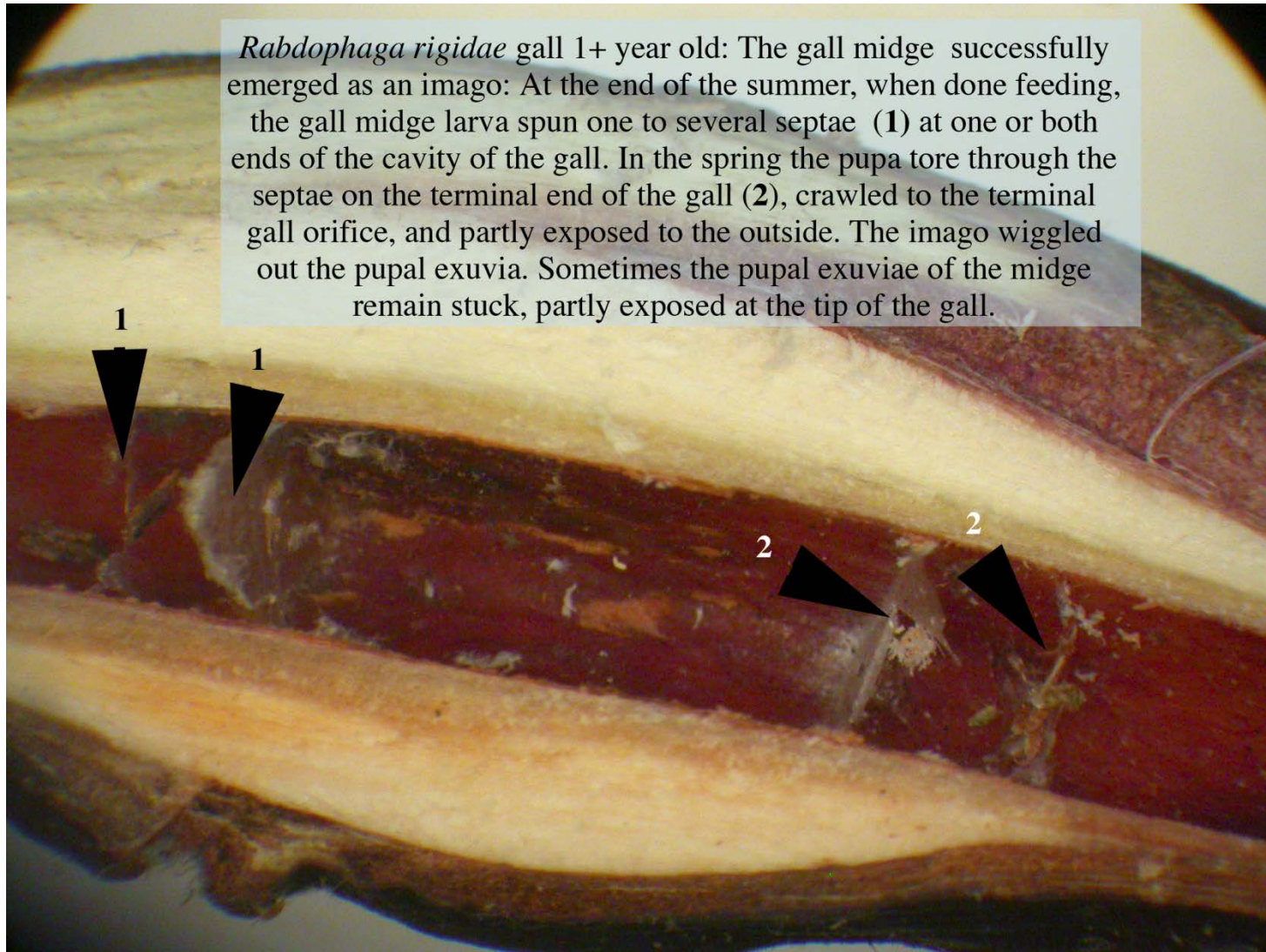
Post mortem

Rabdophaga strobiloides gall 1+year : The gall midge has been parasited by a *Pseudencyrtus* that succesfully exited the-gall. The endoparasitoid emerged the host and from its own pupal exuvia while inside the chamber and chew its way trough the gall. Frass, pieces of the exuviae and chewed off gall material are found inside the chamber. Because there is no cocoon, the gall midge larva was killed before the autumn. The small fecal pellets are the signature of *Pseudencyrtus* sp. (VERIFY NOTES!)



Broken *Pseudencyrtus* exuviae pieces removed from the chamber.

Rabdophaga rigidae gall 1+ year old: The gall midge successfully emerged as an imago: At the end of the summer, when done feeding, the gall midge larva spun one to several septae (1) at one or both ends of the cavity of the gall. In the spring the pupa tore through the septae on the terminal end of the gall (2), crawled to the terminal gall orifice, and partly exposed to the outside. The imago wiggled out the pupal exuvia. Sometimes the pupal exuviae of the midge remain stuck, partly exposed at the tip of the gall.

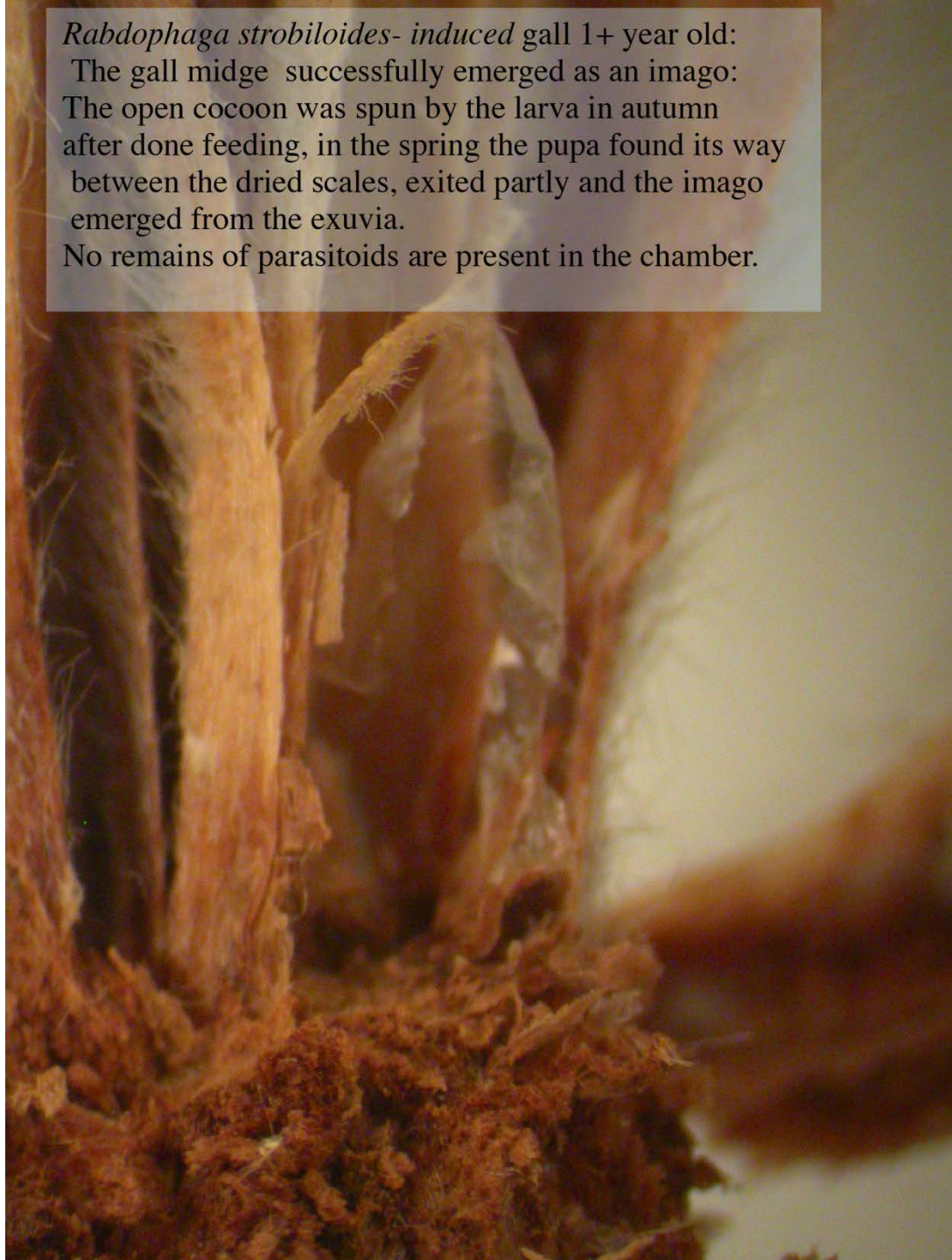


Rabdophaga strobiloides- induced gall 1+ year old:

The gall midge successfully emerged as an imago:

The open cocoon was spun by the larva in autumn after done feeding, in the spring the pupa found its way between the dried scales, exited partly and the imago emerged from the exuvia.

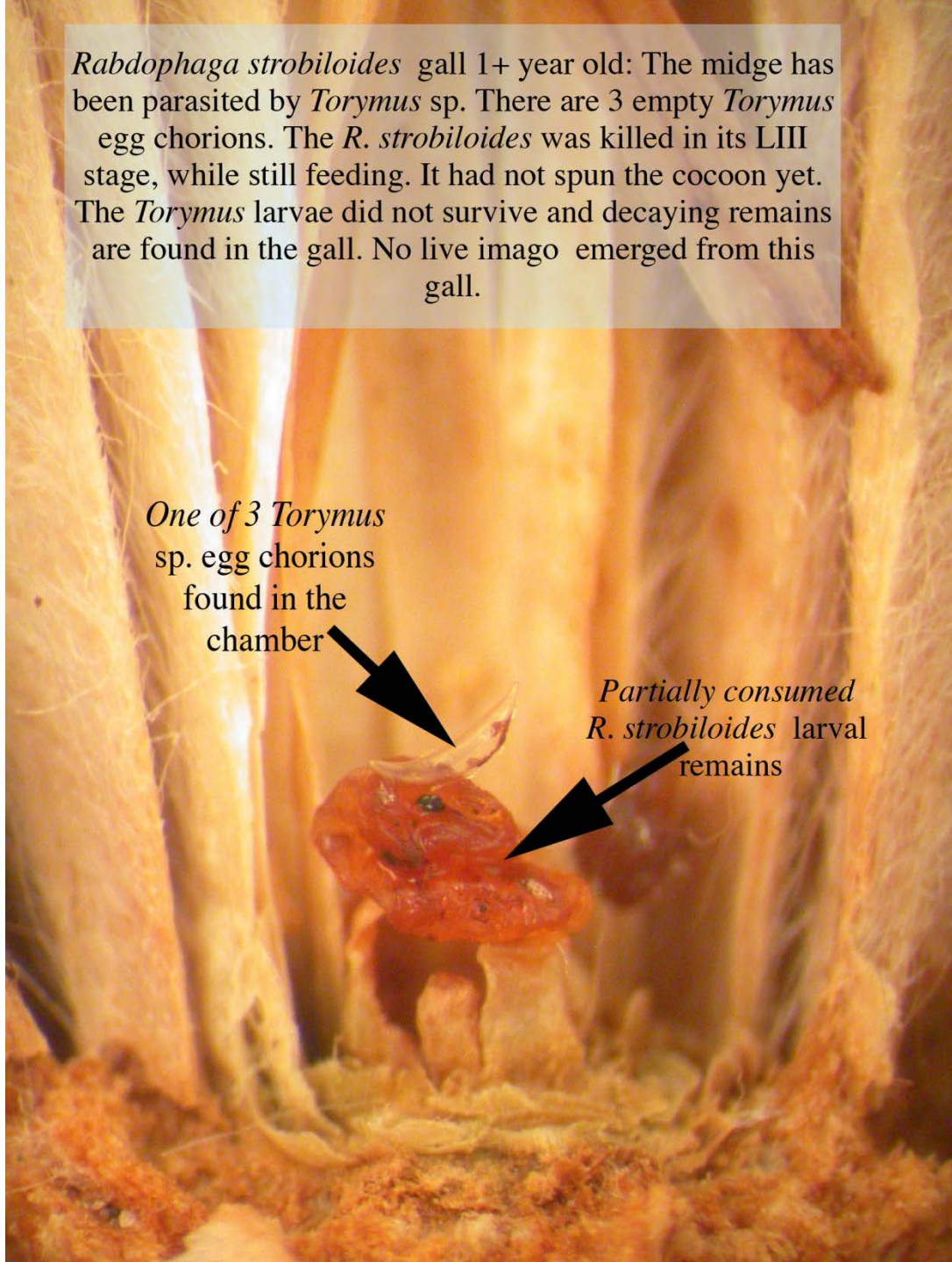
No remains of parasitoids are present in the chamber.



Rabdophaga strobiloides gall 1+ year old: The midge has been parasitized by *Torymus* sp. There are 3 empty *Torymus* egg chorions. The *R. strobiloides* was killed in its LIII stage, while still feeding. It had not spun the cocoon yet. The *Torymus* larvae did not survive and decaying remains are found in the gall. No live imago emerged from this gall.

One of 3 *Torymus*
sp. egg chorions
found in the
chamber

Partially consumed
R. strobiloides larval
remains



Aprostocetus sp.

DC4553k5. Hyperparasitoid of Cecidomyiidae “T” galler on stems of *Salix sitchensis*. Male emerged from *Platygaster* sp. pseudopuparium found inside the chamber of “T” galler.



