

Violent love rivals go for the kill



BEARING FRUIT: Dr Stuart West has discovered the orgy among wasp family members

Wasp study has a sting in the tail

It is one of the most violent struggles in the natural world, with brother fighting brother in a desperate attempt to mate with a female.

Edinburgh scientists who have studied wasps that live and breed inside fig fruit have found the disturbing evidence of the internecine wars.

In a frantic struggle for the affections of the female wasps, the males sever each other's heads and kill their brothers in a bid to win the female's affections.

Tropical

The surprising result of the project on the wasps that live in the Philippines and North America runs counter to the conventional theory that family members stick together among the species.

Researchers Martyn Murray, Ashley Griffen and Stuart West from Edinburgh University teamed up with American colleagues Carlos Machado of Rutgers University and Edward Herre of the Smithsonian Institute to carry out the extensive study.

The majority of the work was carried out at the Smithsonian's tropical research institute in Panama which stores a large number of fig wasps.

Unlike the common yellow and black wasp seen in British summers, the fig wasp is small, black and vicious. The angry male is

By STEPHANIE TODD

smaller and wingless.

A small ratio of females to males has encouraged a deadly battle between brothers in a bid to find a mate.

Dr Stuart West, of the Institute of Cell, Animal and Population Biology at Edinburgh University, noted that the race among the males to reproduce was intense and that battles were usually over in a short period of time.

He said: "Figs and fig wasps have a remarkable relationship. Everything happens within the fig in just a couple of days as the males seek to mate with the females before the females leave. It is one big incestuous orgy with a lot of aggression. The males only have a couple of days so they tend to go hell for leather."

There are around 1000 kinds of edible fig and each species has its own type of fig wasp to act as pollinator. In return, the fig provides a home for the wasps as they continue to grow.

The mother wasp will lay her eggs then die, leaving her offspring to battle it out for survival.

The critical factor in the study, according to researchers, was the number of females that develop inside the fruit - with fewer females resulting in more violent and bloody battles amongst the males desperate to mate.

Dr West added: "The males will chew a hole in the fig through which all the females leave. All the

males die. At this stage the fig swells and ripens with the dead males inside and would probably be eaten by monkeys and bats.

"There is nothing more for the males to do so they just die.

"The first time I opened a fig to look at the fighting, all the males were dead and just the biggest one was left."

The research also showed that some species of fig wasp had even evolved as a result of the infighting, growing body armour and tough mandibles as weapons to increase their advantage.

It is thought the results of the study may also have implications for other animals, bacteria and even humans since it demonstrates the basic principle of self-preservation.

Aggressive

Last year a species of wasp dubbed "Euro Killer" was found in the Lothians for the first time. It had been thought that Median wasps as they are officially known only lived in a part of southern England they colonised in the 80s.

Larger than average household wasps, the Euro Killers are two inches long, highly aggressive and deliver an excruciatingly painful sting. The insect, which carries up to 100 different toxins in their painful sting, was first spotted in Penicuik last August.

Members of the public were warned not to annoy the wasps as they become very aggressive if disturbed.