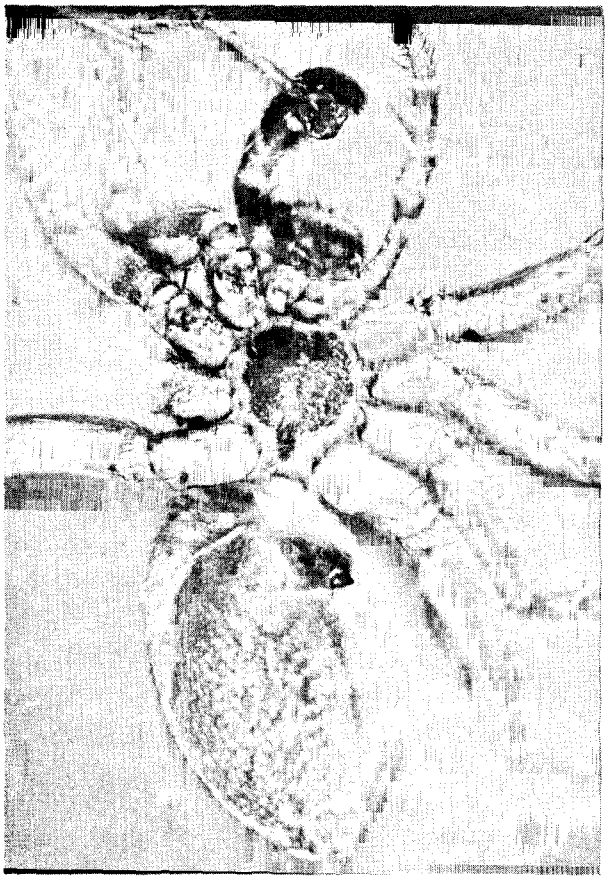

Fig. 1 Ventral view of spider showing male half on left and female half on right.

Fig. 2 Dorsal view of cephalothorax and palps.

Fig. 3 Ventral view of epigynal area.

A GYNANDROMORPH OF LYCOSA MONTICOLA (CLERCK)

A GYNANDROMORPH LYCOSID SPIDER

by D.W.MACKIE.

Among spiders collected by Dr.E.Duffey from pitfall traps at Foxhole Heath, West Suffolk on 31st May 1966 there were a large number of specimens of Lycosa monticola (Clerck). One of these proved to be a gynandromorph when examined.

This gynandromorph is of the bilateral form, the right side (when viewed dorsally) being male and the left side female. Gynandry is a condition where the spider possesses both male and female characteristics, each confined to certain portions of the body only. In this specimen the spider is of a different sex on either side of a median line from the caput to the spinnerets, so that one side carries all the male features and the other side the female features. As a result the two palps are of different sexes and only half of the epigyne has developed on the underside of the abdomen. There are also differences in the contour of the abdomen, markings on the cephalothorax, annulations of the legs and other features where the male of this species differs from the female.

Savory (1928) mentions that whilst gynandromorphs are well known among certain insects, they are comparatively rare in spiders. In Drosophila (Diptera) he mentions that "....it has been shown that the cause of gynandry is the failure of an X chromosome to keep pace with the others, so that in early division of the egg it is dropped from one of the cells. This cell and all its decendants have thus one X chromosome fewer than the others; they show male characters while the rest show female characters. Thus the resultant insect is a mosaic of male and female features". However, Hackman (1951) mentions that the Drosophila type of gynandry seems to be less likely in the case of spiders, and refers to the paper by Holm (1941) who points out that certain cases reported as gynandromorphs could be interpreted as intersexes, which could arise in spiders as a result of infection with Mermis worms.

I am indebted to Dr.E.Duffey for the loan of this specimen and also Mr.F.Wanless who took the photographs. A number of references to papers on this subject are given below.

References.

HULL,J.E. 1918: Gynandry in Arachnida. Journ.Genet., 7 : 171-181.

SAVORY,T.H. 1928: The Biology of Spiders. London. p.263.

RABAUD,E. & MILLOT,J. 1933: Anomalies sexuelles chez les Araignées. Arch.zool.expér., 75 : 267-281.

BONNET,P. 1934: Le gynandromorphisme chez les Araignées. Bul.biol.Fr.Belg., 68 (2) : 168-187.

EXLINE,H. 1938: Gynandromorph Spiders. Journ.Morph.,63(3):441-472.

HOLM,A. 1941: Über Gynandromorphismus und Intersexualität bei den Spinnen. Zool.Bidr.fr. Uppsala, 20.

HACKMAN,W. 1951: A Gynandromorph of the spider Troxochrus scabriculus Westr. Mem.Soc.pro Fauna et Flora Fenn. 27: 67-69.

****