SOME CHARACTERISTICS OF POPULATIONS OF GRASSLAND AUCHENORRHYNCHA.

N.Waloff (Ascot, England).

1. Populations of some common species of cicadellids and delphacids in an area dominated by Holcus spp. have been studied for 6 years. Manly's (1974) meth was used to estimate the numbers of recruits to a stage and life-tables hav been prepared.

2. Egg populations are less variable than those of the other stages, yet the greatest mortality (the key factor) lies in this stage.

3. Grassland leafhopper populations are labile and it is difficult to identify the natural regulatory processes, as opposed to those causing fluctuations. Mortality in the egg -, nymphal -, and adult - stages of Cicadellidae tends be density-proportional.

4. Some processes causing lability and fluctuations include:-

   (a) Responses of populations to the state of food plant, mainly in variatio in fecundity and in mobility (flight) of adults.

   (b) Effects of arthropod predation, mainly by spiders and nabids. 48 spp. o arthropod predators have been identified by serology (the precipitin test).

   (c) Effects of parasitism by Dryinidae and Pipunculidae. Cicadellid nymphs and adults are parasitised, but the subsequent mortality is usually in the adult stage.

5. Many spp. of Pipunculidae and Dryinidae are polyphagous (non specific). It suggested that the absence of strict host-specificity shown by many spp. of parasitoids has evolved as a response to the lability of the host populatic

6. Complexes of grassland Auchenorrhyncha species are large, yet the common species coexist, and some mechanisms of partitioning their resources have b identified. Availability of 'Time' and 'Oviposition Sites', treated as two resources have been examined with the help of R.M. May's d/w method.

(This work is now being written up for publication.)

Erratum - from N.Waloff

Discussion on 'Fecundity of macropterous and brachypterous Delphacidae'.

Please note:

1. Philip Thompson's Thesis (1978) is devoted to brachypterous forms of Dicranotropis hamata.
   Too few macropters were available to reach any conclusions.
   (apologize for my inaccuracy).

2. However:
   Y.Y.May (1971): 'The Biology and Population Ecology of Stenocranus minutus (Fabricius)(Delphacidae - Hemiptera). Ph.D.Thesis, University of London.

   Yin Yin May examined fecundity in the two forms - macropters and sub-macropters, in detail. She reached the following conclusions:

   Fecundity, rate of maturation, length of oviposition and longevity differ in the two forms, i.e. in macropters and sub-macropters.
   a. In macropters, the rate of maturation is delayed.
   b. In all experimental temperatures, the length of oviposition period was shorter in macropters than in sub-macropters.
   c. The number of eggs per day was lower in macropters than in sub-macropters.
   d. Related to (b) and (c) the fecundity of macropters was lower than in the usual form i.e. in the sub-macropterous females.
   e. Under identical conditions, longevity of macropters is shorter than that of the brachypters.

ECOLOGICAL STUDIES ON LEAFHOPPERS OCCURRING ON STINGING NETTLES (URTICA DIOICA L.)

D.Stilling (Cardiff, U.K.).

1. An account is given of three species of bivoltine leafhoppers of the genus Eupteryx which are regularly found on stinging nettles in South Wales.
2. Laboratory experiments and field observations on adult feeding and oviposition preferences demonstrate that one species, E.aurata (L.) moves onto other host plants in the summer, whilst the other two species, E.urticae (F.) and E.cyclops Matsumara remain on nettles.