Recent changes in the Dutch Heteroptera fauna (Insecta: Hemiptera)

BEREND AUKEMA

Summary

At present 608 species of Heteroptera are recorded from the Netherlands. The database of the Dutch branch of the European Invertebrate survey currently include about 130.000 Dutch records (= combinations of locality and species). The records, however, are strongly biased towards aquatic and semi-aquatic species (72.761 records of 64 species = 1.137 records/species) in comparison with terrestrial species (55.375 records of 544 species = 102 records/species). Although since about 1850 there always have been Dutch heteropterists, collecting efforts show large differences in time and place and it is for instance easy to select both residences and favourite holiday resorts of heteropterists from the distribution maps.

Local faunas are not static, but dynamic: on a local scale species ranges may decrease (local extinction of species) or increase (new arriving species), but species' distribution may also alter within known ranges (changes in occurrence).

Changes in the Dutch Heteroptera fauna were analysed for the period since 1960 and especially before and after 1980. A number of 568 species (93,4% of the Dutch species listed) have been recorded since 1960 and 511 of these (84%) have been recorded regularly since 1960 and are considered "resident species".

The changes documented for the period 1980-2001 concern 57 species:

- 26 species were rediscovered after not having been recorded in the period 1960-1980,
- 7 species were not recorded since 1980
- 24 new arrivals since 1980

From these data it is concluded that the turnover of species since 1980 (57 of 568 species) has been 10% and that the so-called new arrivals outnumber the extinctions (24-7).

Turnover of species of local fauna's is considered a natural process (species come and go continuously), but it is also clear that habitat changes, international trade and global warming have contributed largely to the observed changes in the Dutch fauna. At least 6 of the 24 new arrivals are linked to international trade in plant material and 11 of the new arrivals are supposed to benefit from global warming.

Concerning changes in occurrences of resident species there is a need for better methods eliminating the influence of differences in collecting effort in time and space. A method based on testing the deviation of the regression values of individual species for deviation from the regression line for all species of the group concerned might be a good start.

Anschrift des Autors:
Berend Aukema, Plantenziektenkundige Dienst, Sectie Entomologie, Postbus 9102, NL-6700 HC WAGENINGEN, e-mail: b.aukema@pd.agro.nl

Chemische Kommunikation im Paarungsverhalten der Nabiden

STEFFEN ROTH

Die Endfassung des Artikels ist noch in Arbeit; seine Veröffentlichung in Vorbereitung:

ROTH, S., JANSSEN, A. ♀ SABELIS, M.: Odour-mediated sexual attraction in nabids (Nabidae, Heteroptera). – J. Insect Behav.

Internationaler Kongress der Heteropterologen 2002 in St Petersburg