

## **Heteropterology in Denmark**

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In the early days in the middle of the 19<sup>th</sup> century the leading entomologist of Denmark was JØRGEN CHR. SCHIØDTE. He had a very keen interest in Heteroptera and made some fine collections. The same applied to ROBERT W.T. SCHLICK who was the first chairman of the Danish Entomological Society - and the chairman for almost four decades (Fig. 1).

Around the change of the century and in the early 20<sup>th</sup> century things took off, and several diligent collectors were at play. Among these were ANDERS CHR. JENSEN-HAARUP, CARL C.R. LARSEN and OLUF JACOBSEN.

The next boom was in the 1960's and 70's. In the beginning of this period a young NILS MØLLER ANDERSEN began his formal studies at the University of Copenhagen. He became curator of Heteroptera at the Zoological Museum in Copenhagen for decades until his death in 2004 - and director of the museum from 1982-1986. He is without doubt the most important and most widely known Heteropterologist of Denmark of all times.

His main focus was water bugs and he made several important contributions to the knowledge of water bugs.

The successor of N.M. ANDERSEN as curator is HENRIK ENGHOFF who is an international capacity on Myriapods, but with a passion for Heteroptera - and several publications of these creatures on his CV - mainly from the 1960's and 70's. In the same period SVEN GAUN dedicated a part of his life to the work with Miridae.

In the 1970's and 80's one collector deserves a special mention - HANS THOMSEN SCHMIDT. He made a vast collection of very beautifully preserved specimens - with very informative notes on the labels about host plants, habitats etc. This collection is now part of the collections at the Natural History Museum of Aarhus. Another collector worth mentioning is OTTO BUHL. BUHL mainly collects moths using light traps, but as a bycatch he has also collected species from some other groups of insects including Heteroptera. An investigation of these revealed - among other interesting things - more than 60 species of Miridae (about a third of the Danish species) caught on light in his small suburban garden!

Around the millenium JACOB DAMGAARD was affiliated with the Zoological Museum. Like N.M ANDERSEN his main focus has been on water bugs.

In the latest years sadly nobody has been working professionally with Heteroptera in Denmark.

The main source of knowledge and activity now seems to be centered around nature loving amateurs and social media.

### **Collections**

In Denmark there are two natural history museums with noteworthy collections of Danish Heteroptera, namely the Zoological Museum (ZMUC) - now part of the Natural History Museum of Denmark (SNM) in Copenhagen - and the Natural History Museum of Aarhus (NHMA) - the second biggest city of Denmark.

Both museums are home to fine collections of Heteroptera from Denmark and together they comprise perhaps around 100.000 specimens. The majority of these specimens have been sorted and specified, but only some of the groups have been cataloged. This applies to water bugs, Pentatomoidea, Coreoidea and Pyrrhocoroidea, Piesmatidae and Tingidae. For Miridae the collection of Aarhus has been cataloged. The cataloged specimens account for roughly half of the specimens in the two museums. These records are made available through GBIF (Global

Biodiversity Information Facility).

A few thousand specimens have not yet been sorted and specified - primarily specimens which have come into the custody of the museums in recent years.

Except for the collection made by BUHL (mentioned above) hardly any private collections are worth mentioning. And what is probably the case in many countries, the focus has shifted from collecting bugs to taking photos. This is of course of great value but can not replace the value of real physical specimens.

### **Publications and websites**

The first complete check list of all known true bugs of Denmark was written by SCHIØDTE and published in 1869 with additions in 1870-72. 314 Danish species were included. More than 100 years should pass before the next check list was published - by ANDERSEN & GAUN in 1974. The third list (SKIPPER & TOLSGAARD 2013) was published as a chapter of the book "Danmarks blomstertæger" (SKIPPER 2013) mentioning 539 Danish species. Since then the list has been expanded with another 18 species, so the Danish fauna now includes 557 species.

From 2009 and on an online check list of Danish animals, plants, fungi etc. - thus including Heteroptera -has been maintained by the author in Project "Allearter.dk" (The Natural History Museum of Denmark). At the time of writing this site is being implemented as part of the upcoming official national species portal of Denmark (Artsportalen).

Only one publication includes descriptions of all known true bugs of Denmark - "Tæger" which was written by JENSEN-HAARUP and published in 1912 - more than 100 years ago (Fig. 2). It should be mentioned though that about 200 species have been added to the list since then.

Since the 1970's several books and articles have been published about single families or groups. In 1974 GAUN wrote "Blomstertæger" (Miridae) - in the same series as "Tæger" from 1912 - a series comprising many different species groups in Denmark. The special interest in Miridae of the author of this summary is very much due to the work of GAUN. After 88 volumes - starting in 1907- this series named "Danmarks Fauna" sadly ended with two volumes of aphids in 2004.

Another series about the Danish fauna - "Danmarks dyreliv" came to life in 1984. 15 volumes have been published, but unfortunately also this series has now come to an end. The books were published by Apollo Books - with a name change to Apollo Booksellers after the English-language books were sold to the Dutch publishing house BRILL. Three of the last four volumes were dealing with true bugs: Miridae (SKIPPER 2013), Pentatomoidea, Coreoidea and Pyrrhocoroidea (NIELSEN & SKIPPER 2015) and Lygaeidae s.l. (SKIPPER & NIELSEN 2018) (see the reviews in HETEROPTERON H. 40, 44 and 53, [www.heteropteron.de](http://www.heteropteron.de)).

Pentatomoidea, Coreoidea and Pyrrhocoroidea deserve a special mention since these superfamilies were the focus of an atlas survey from 1992 to 2000 - led by SØREN TOLSGAARD from the Natural History Museum of Aarhus. The results were published in 2001 as a special issue of Entomologiske Meddelelser- the journal of the Danish Entomological Society. The information and the maps from this survey provided crucial information for the above mentioned book about the same groups (NIELSEN & SKIPPER 2015).

The water bugs were treated by JACOB DAMGAARD in Entomologiske Meddelelser in 1997 - and the Gerromorpha also in the booklet "Damtæger"(DAMGAARD 2015). Another two families have been treated in recent year in Entomologiske meddelelser: Aradidae (TOLSGAARD 2011) and Piesmatidae (JENSEN 2018). The latter was part of a thesis in biology by KIMMIE M. JENSEN. Tingidae was also reviewed by JENSEN and the result will probably be published later this year.

In the period from the 1960's to the 1990's a number of individual articles about the local Heteropteran fauna of different parts of Denmark were published.

Many of the recently added species have been announced on the website "Danmarks Fugle og Natur" ([fugleognatur.dk](http://fugleognatur.dk)) which is a very comprehensive site about many aspects of the Danish

nature - including loads of photos, discussions etc. Another website "Danmarks Blomstertæger" (miridae.dk) dealing mainly with Miridae was published in 2008 by the author. This website laid the foundation for the book of the same name (SKIPPER 2013).

A few groups have been evaluated in the latest Danish Red List (2010): water bugs, Pentatomoidea, Coreoidea, Pyrrhocoroidea and Aradidae. These groups comprise 26% of the Danish Heteroptera and of these 22 species have been rated as red listed (RE: 5, CR: 2, EN: 3, VU: 7, NT: 5).

Finally a peculiar fact...

In Denmark true bugs are called "tæger". There is a very common confusion about this name though, so when you talk to average Danes about "tæger" they will often presume you are talking about ticks. This misconception is probably due to the fact that the latter are called ticks, Zecke and teek in English, German and Dutch respectively - names which very much resembles the Danish "tæger".

#### Literature:

- ANDERSEN, N.M. & GAUN, S. (1974): Fortegnelse over Danmarks tæger (Hemiptera, Heteroptera). - Entomologiske Meddelelser **42**, 113-134.
- DAMGAARD, J. (1997): De danske vandtægers udbredelse og status. - Entomologiske Meddelelser **65**, 49-108.
- DAMGAARD, J. (2015): Damtæger. - Natur og museum **54**(4).
- GAUN, S. (1974): Blomstertæger. - Danmarks Fauna vol. **81**. København.
- JENSEN, K.M. (2018): The Danish Piesmatidae - Distribution and identification (Hemiptera, Heteroptera). - Entomologiske Meddelelser **86**, 1-11.
- JENSEN-HAARUP, A.C. (1912): Tæger. - Danmarks Fauna vol. **12**. København.
- NIELSEN, O.F. & SKIPPER, L. (2015): Danmarks bredtæger, randtæger og ildtæger. - Danmarks Dyreliv vol. **13**. Apollo Booksellers, DK-Vester Skerninge.
- SCHIØDTE, J. C. (1869): Fortegnelse over de i Danmark levende Tæger. - Naturhistorisk Tidsskrift **3**, 161-231.
- SCHIØDTE, J. C. (1870): Tillæg til fortegnelsen over de i Danmark levende Tæger. - Naturhistorisk Tidsskrift **3**, 399-401.
- SCHIØDTE, J. C. (1871): Tillæg til fortegnelsen over de i Danmark levende Tæger. - Naturhistorisk Tidsskrift **3**, 540.
- SCHIØDTE, J. C. (1872): Tillæg til fortegnelsen over de i Danmark levende Tæger. - Naturhistorisk Tidsskrift **3**, 480-481.
- SKIPPER, L. (2013): Danmarks blomstertæger. - Danmarks Dyreliv vol. **12**. Apollo Booksellers, DK-Vester Skerninge.
- SKIPPER, L. & NIELSEN, O.F. (2018): Danmarks frøtæger. - Danmarks Dyreliv vol. **15**. Apollo Booksellers, DK-Vester Skerninge.
- SKIPPER, L. & TOLSGAARD, S. (2013): Danmarks tæger - en oversigt. - In: SKIPPER, L.: Danmarks blomstertæger. - Danmarks Dyreliv, vol. **12**. Apollo Booksellers, DK-Vester Skerninge.
- TOLSGAARD, S. (2001): Status over danske bredtæger, randtæger og ildtæger (Heteroptera: Pentatomoidea, Coreoidea & Pyrrhocoroidea). - Entomologiske Meddelelser **69**, 3-46.
- TOLSGAARD, S. (2011): Status over danske barktæger (Heteroptera: Aradidae). - Entomologiske Meddelelser **79**, 45-56.

#### Links:

Apollo Booksellers. <http://www.apollobooks.dk>  
 BRILL. <https://brill.com>  
 Danish Redlist. <https://bios.au.dk/raadgivning/natur/redlistframe>  
 Danmarks blomstertæger. <http://www.miridae.dk>  
 Danmarks Fugle og Natur. <https://www.fugleognatur.dk>  
 Global Biodiversity Information Facility. <https://www.gbif.org>  
 Natural History Museum of Denmark. <https://snm.ku.dk>  
 Natural History Museum of Aarhus. <https://www.naturhistoriskmuseum.dk>  
 Projekt Allearter. <https://allearter.dk>  
 Zoological Museum. <https://zoologi.snm.ku.dk>



Fig.1: Collectors from the early days: ROBERT W.T. SCHLICK, EMIL OLSEN and CARL C.R. LARSEN.



FIG. 2: The only publication with descriptions of all known Danish Heteroptera - more than 100 years old (JENSEN-HAARUP 1912).



Fig. 3: A glimpse into the collections of Heteroptera at the Natural History Museum of Denmark.

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<http://www.miridae.dk>

# ZOBODAT - [www.zobodat.at](http://www.zobodat.at)

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Heteropteron - Mitteilungsblatt der Arbeitsgruppe  
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