Monografiën van de Nederlandsche
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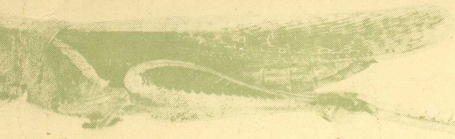
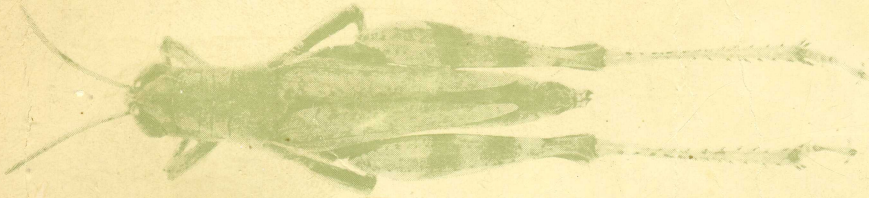
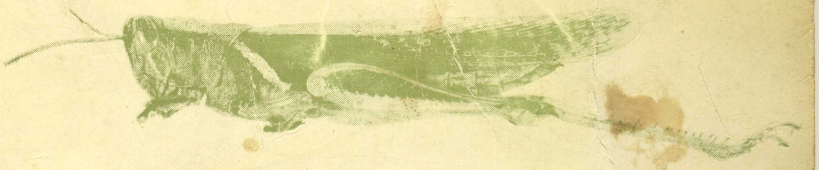




Revision of the Genera Stenocatantops and Xenocatantops (Orthoptera, Acridiidae, Catantopinae)



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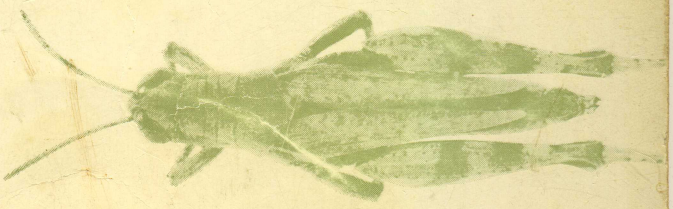

Amsterdam 1968

MONOGRAFIEËN
VAN DE
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No. 4

FER WILLEMSE

Revision of the genera Stenocatantops and Xenocatantops (Orthoptera, Acridiidae, Catantopinae)

AMSTERDAM

1968

REVISION OF THE GENERA STENOCATANTOPS AND XENOCATANTOPS (ORTHOPTERA, ACRIDIIDAE, CATANTOPINAE)

by

FER WILLEMSE

Eygelshoven, Netherlands

SYNOPSIS

The genera *Stenocatantops* and *Xenocatantops* are fully revised and keys are given to the genera, species and subspecies. Using characters of the phallic complex, six apparently new species and one subspecies are distinguished: *Stenocatantops mistshenkoi, cornelii, isolatus, philippinensis, keyi,* and *Xenocatantops d. dirshi* and *X. d. dammerensis*. The distribution of the species proves now to be more in accordance with the general zoogeography of the areas concerned.

CONTENTS

INTRODUCTION

It is the merit of V. M. Dirsh (1956b, etc.) to have demonstrated the importance of the male phallic complex in the taxonomy of the Orthoptera. The present paper illustrates once more the necessity of studying the internal male genital characters in this group.

The greater part of the material examined by the writer had been studied already by one or more previous authors. Five species have so far been distinguished in the genus *Stenocatantops* Dirsh & Uvarov and two in *Xenocatantops* Dirsh & Uvarov. By employing characters of the phallic complex, six apparently new species can now be added to those already known, five being attributed to *Stenocatantops* and one to *Xenocatantops*. With few exceptions they can easily be distinguished by the nature of the apex of phallus. The fact that specimens previously identified with *S. angustifrons* (Walker), prove to belong to four distinct species, is also of zoogeographic interest. Before it was analysed taxonomically, the known range of *S. angustifrons*, originally described from North Australia, extended westwards to Sumatra. Now it appears that the Sumatra, Java and Celebes populations belong to one species (*S. cornelii* spec. nov.), the material from the Lesser Sunda Is. to a second (*X. dirshi* spec. nov.), a pair from the Toekang Besi Is., southeast of Celebes, to yet another species (*S. isolatus* spec. nov.), and finally, the Australian, New Guinean and Western Melanesian material, to *S. angustifrons* (Walker). Similarly the material previously identified with *S. vitripennis* (Sjöstedt) and *S. splendens* (Thunberg), now proves to belong to two and three different species, respectively.

ACKNOWLEDGEMENTS AND MATERIAL

For the present study 2979 specimens were examined, viz. 1326 males and 1653 females. Access was gained to all the type specimens that still are available. In addition to my own collection (CW), I received material from the sources listed below (abbreviations as used throughout the text, in parentheses).

My thanks are due to the following persons for sending me material from their respective institutions: D. Ragge, British Museum (Natural History) (BM); M. Beier, Natuurhistorisches Museum, Vienna (VM); M. Descamps, Muséum National d'Histoire Naturelle, Paris (PM); P. H. van Doesburg, Rijksmuseum van Natuurlijke Historie, Leiden (LM); D. G. Montagne, Natuurhistorisch Museum, Maastricht (MM); P. O. Persson, Naturhistoriska Riksmuseet, Stockholm (SM); L. Hedström, Zoological Institute of the Uppsala University (UM); the late H. J. Grant Jr., Academy of Natural Sciences, Philadelphia (ASP); F. Keiser, Naturhistorisches Museum, Basel (MB); E. Morales Agacino, Instituto Español de Entomología, Madrid (MEM); H. Weidner, Zoologisches Museum, Hamburg (HM); K. H. L. Key, Australian National Insect Collection, Canberra (CSIRO); E. Petersen, Universitetets Zoologiske Museum, Copenhagen (KM); D. K. McE. Kevan, Macdonald College, Canada (MC); J. de Wilde, Laboratorium voor Entomologie van de Landbouwhoogeschool, Wageningen (LEW); C. A. W. Jeekel, Zoölogisch Museum van de Universiteit, Amsterdam (AM); H. Schröder, Senckenberg Museum, Frankfurt a.M. (SMF); Fr. Kühlhorn, Zoologische Staatssammlung, München (SSM); the late W. Richter, Staatliches Museum für Naturkunde, Stuttgart (SN); K. K. Günther, Zoologisches Museum of the Humboldt University, Berlin (BMH); L. L. Mistshenko, Zoological Institute of the Academy of Sciences of the

U.S.S.R., Leningrad (AN); A. Cejchan, Hradec Kralové Museum, Czechoslovakia (KMC); B. Nagy, Országos Magyar Természettudományi Museum Allatar, Budapest; and M. J. Cooreman, Institut Royal des Sciences Naturelles de Belgique, Brussels (BIR); Museu e Laboratorio Zoologico of the University of Coïmbra (CUM).

My special thanks are due to V. M. Dirsh, D. Ragge, C. A. W. Jeekel, M. A. Lieftinck and A. Diakonoff, for their interest and help during the preparation of this paper.

Furthermore, I gratefully acknowledge the grants of the Netherlands Organisation for the Advancement of Pure Research (Z.W.O., No. P. 954-60) and the Uyttenboogaart-Eliasen Stichting, which made publication of this paper possible.

ALPHABETICAL LIST OF THE SOURCES OF MATERIAL

AM	Zoölogisch Museum, Amsterdam.
AN	Zoological Institute of the Academy of Sciences of the U.S.S.R., Leningrad.
ASP	Academy of Natural Sciences, Philadelphia.
BIR	Institut Royal des Sciences Naturelles de Belgique, Brussels.
BM	British Museum (Natural History), London.
BMH	Zoologisches Museum of the Humboldt University, Berlin.
CSIRO	Australian National Insect Collection, Canberra.
CUM	Museu e Laboratorio Zoologico of the University of Coïmbra.
CW	Author's collection.
HM	Zoologisches Museum, Hamburg.
KM	Universitetets Zoologiske Museum, Copenhagen.
KMC	Hradec Kralové Museum.
LEW	Laboratorium voor Entomologie van de Landbouwhoogeschool, Wageningen.
LM	Rijksmuseum van Natuurlijke Historie, Leiden.
MB	Naturhistorisches Museum, Basel.
MC	Macdonald College, Quebec.
MEM	Instituto Español de Entomología, Madrid.
MM	Natuurhistorisch Museum, Maastricht.
PM	Muséum National d'Histoire Naturelle, Paris.
SM	Naturhistoriska Riksmuseet, Stockholm.
SMF	Senckenberg Museum, Frankfurt a. M.
SN	Staatliches Museum für Naturkunde, Stuttgart.
SSM	Zoologische Staatssammlung, Munich.
UM	Zoological Institute of the Uppsala University.
VM	Naturhistorisches Museum, Vienna.

METHODS

For reasons of uniformity, the terminology of the phallic complex as well as of the external morphology and sequence of characters in the descriptions are mainly those proposed by Dirsh (1965).

The whole phallic complex has been dissected in a great number of males, the apex of the phallus, however, was studied in almost all specimens. The female subgenital plate and spermatheca were dissected in fewer individuals.

Abbreviations used in the phallic complex figures are as follows: *Ac* — arch of cin-

gulum; *Ap* — apical valve of penis; *Apd* — apodeme of cingulum; *Bp* — basal valve of penis; *Br* — bridge of cingular valves; *Cv* — cingular valve; *Ectm* — ectophallic membrane; *Ejd* — ejaculatory duct; *Ejs* — ejaculatory sac; *Fx* — flexure of penis valves; *Gpr* — gonopore process; *Rm* — ramus of cingulum; *Scl* — sclerite without special terminology; *Sps* — spermatophore sac; *Srm* — supra ramus of cingulum; *Vlb* — ventral lobe; *X* — "sheath of penis"; *Zyg* — zygoma of cingulum. Epiphallus: *A* — ancora; *Ap* — anterior projection; *B* — bridge; *L* — lophus; *Lp* — lateral plate.

Measurements of the various body parts were taken in the following way. Body length: from apex of frontal ridge to tip of abdomen. Width of body: greatest distance between ventral edges of metepimera. Length of hind femur: greatest distance between anterior margin of upper basal lobe and apex of knee lobe. Width of hind femur: maximum width between upper and lower carinae. Length of elytron: from posterior margin of lateral pronotal lobe at origin of medial area to apex of elytron.

Of every species is given a list of references, synonymy, description and, where necessary, the variation of characters. This is followed by a list of the material studied, a comparative discussion of interrelationship, distribution, previous records, bionomical data etc.

In order to make the survey of the specific distribution as complete as possible, I have discussed the material at hand in combination with specimens not studied on the present occasion. Part of the latter has already been recorded by previous authors: this is indicated by an asterisk (*) in the list of references under the heading of the species concerned.

Key to the genera *Xenocatantops* and *Stenocatantops*

1. Prosternal process not or scarcely compressed laterally, being more or less acutely conical; pronotum slightly constricted in the middle; body and hind femora wider. . . . . *Xenocatantops* Dirsh & Uvarov, p. 54
— Prosternal process more or less compressed laterally; pronotum not constricted in the middle; body and hind femora slender . . *Stenocatantops* Dirsh & Uvarov, p. 8

The exact position of the genera *Xenocatantops* and *Stenocatantops* among allied genera is not discussed, the present paper dealing with the species only.

Stenocatantops Dirsh & Uvarov, 1953

Stenocatantops Dirsh & Uvarov, 1953: 237; Dirsh, 1956a: 15, 120—128, 150, fig. 423—458.

Catantops (*Stenocatantops*): C. Willemse, 1957f: 465, v.

Type-species: *Gryllus splendens* Thunberg, 1815 (by original designation).

Redescription

General appearance similar to *Catantops,* but more slender. Integument finely punctate, pronotum, pleurae and frontal ridge distinctly punctate. Antennae filiform, length varying among species, longer or shorter than length of head and pronotum together; length/width ratio of middle segments variable, square to elongate.

Fastigium of vertex in dorsal aspect fan-shaped with indistinct carinulae. Frons moder-