

Some chromosomal aspects
of *Brenthis hecate* [DENIS & SCHIFFERMÜLLER], 1775
from South Altai, USSR
(Lepidoptera, Nymphalidae)

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Summary

Males of *Brenthis hecate* from South Altai, USSR were shown to have an n , 34-karyotype in the primary spermatocytes; the complement comprised several elements which are larger than the rest. The haploid chromosome number established in this study (n , 34) agrees with that recorded by DE LESSE (1961) for males from France.

The nymphalid genus *Brenthis* HÜBNER, [1819] comprises four species (KUDRNA, 1974); *hecate*, *ino* ROTTEMBURG, 1775, *daphne* [DENIS & SCHIFFERMÜLLER], 1775 and *mofidii* WYATT, 1968. Male germ-line chromosomes have so far been examined in three of them (*hecate*, *ino* and *daphne*) (FEDERLEY, 1938; DE LESSE, 1960, 1961; MAEKI, 1961; SAITOH, 1986, 1987; SAITOH *et al.*, 1985). In contrast with *ino* and *daphne*, however, karyological details of *hecate* have not been reported, although its haploid chromosome number only was once preliminarily recorded by DE LESSE (1961). Therefore, the present paper reports some morphological findings of the primary spermatocyte chromosomes of *hecate* sampled in South Altai, USSR.

A total of twelve male adults were captured in June of 1986 in the Ust'-Kamenogorsk District, Kazakhstan, and their testes were fixed in Carnoy (3 : 1). Testis-sections (8 μ m), prepared by the ordinary paraffin method, were stained with Heidenhain's iron haematoxylin.

The field collection of the adults, fixation of their testes and species identification were performed by the second author. All of these specimens are preserved in the Laboratory of Animal Morphology, Department of Biology at Hirosaki University.

Germ-line chromosomes were examined in the primary spermatocyte division and the haploid chromosome number, 34, was determined, based on

counts of 27 metaphases in two males. No variation in the haploid number was observed. The bivalent chromosomes are dot-shaped as usual and the complement is characterized by the inclusion of several elements which are larger than the rest (Figs. 1 and 2).

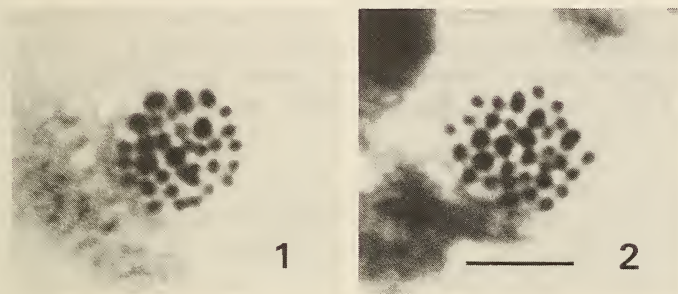


Fig. 1 and 2. Primary spermatocyte chromosomes of *Brenthis hecate* from South Altai, USSR. Haematoxylin-stained. Thirty-four bivalents in each. Scale bar represents ca. 5 μ m.

The haploid chromosome number of the males from South Altai agrees well with that of the males from Alpes-Maritimes, France, previously recorded by DE LESSE (1961), but it is more than twice as many as the haploid numbers ascertained in different populations of *ino* (n , 13 and 14) (MAEKI, 1961 ; SAITOH, 1987) and *daphne* (n , 12 and 13) (DE LESSE, 1960, 1961 ; SAITOH, 1986 ; SAITOH *et al.*, 1985). The high chromosome number (n , 34) of *hecate* might reflect its specific peculiarity in this group. Hence, it is necessary to inquire into chromosome conditions of *mofidii* which is closely related to *hecate*. Analysis of the cytotaxonomic relationship of these two species is essential for a further phylogenetic evaluation of the *Brenthis* fritillaries.

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COMMUNICATION

INTERNATIONAL CONGRESS „FUTURE OF BUTTERFLIES IN EUROPE : STRATEGIES FOR SURVIVAL“
Wageningen, The Netherlands, April 1989.

An international congress on the conservation of butterflies in Europe will be held in Wageningen, The Netherlands, from 12 to 15 April 1989.

The meeting will review the current knowledge on butterflies in order to set up a working programme for their conservation in Europe.

The planned themes are : The status of butterflies in Europe ; Mapping ; Population dynamics ; Isolation ; Monitoring ; Management policy ; Perspectives in conservation.

The congress is being organized by the Department of Nature Conservation of the Wageningen Agricultural University, in cooperation with the Dutch Butterfly Foundation and the Netherlands Entomological Society.

Requests for further details should be directed to the Congress Building, International Agricultural Centre, P.O. Box 88, 6700 AB Wageningen, The Netherlands.

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