

Cytogenetic Study of *Somatochlora borisi* MARINOV, 2001 (Odonata: Corduliidae), and Three Relative Species

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In Memory of Dr Eugeny A. Perepelov,
the specialist of dragonflies cytotaxonomy

Abstract: The recently described species *Somatochlora borisi* MARINOV, 2001 (Odonata: Corduliidae), combines morphological characters of two relative corduliide genera, *Somatochlora* and *Cordulia*. In the present study its karyotype was studied for the first time. Routine and differential (C-banding and DNA binding fluorochrome staining) cytogenetic techniques were applied. The chromosome formula of *S. borisi* includes $2n=20+XX/XY$.

For comparison, the male karyotype of *S. metallica* (from Finland), *S. meridionalis* and *C. aenea* (from Bulgaria) were also examined. In a larva of *S. meridionalis*, the spermatogonial metaphases showed 25 chromosomes confirming $2n=24+X$ reported earlier for the species. Some polymorphism of the chromosome size had been observed in the populations examined, but this problem needs a special study. For *S. metallica* and *C. aenea* previously reported for these species the karyotype $2n=24+X$ and the telomeric localization of C-heterochromatin were confirmed.

All the data obtained are discussed in comparison to literature cytogenetic data on the genera *Somatochlora* and *Cordulia*.

The cytogenetic data confirm that *S. borisi* deviates widely from the other *Somatochlora* and *Cordulia* species and provide an additional argument to separate it in a new genus.

Key words: Odonata, East Rhodopes, karyotype, C-banding, fluorochrome staining, *Cordulia*, *Somatochlora*