

B Chromosomes in the Eukaryote Genome

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B chromosomes are additional passengers found in the karyotypes of about 15% of eukaryote species. They are best understood as genome parasites exploiting the host genome because of their transmissional advantage, and are frequently deleterious for the organism carrying them. Since the last compilation of B chromosome literature more than 20 years ago, many new findings have contributed to building an increasing body of knowledge of these mysterious genetic elements. This single topic issue of *Cytogenetic and Genome Research* updates these new data in its 40 papers authored by researchers from 19 countries. It provides up-to-date reviews on plants, fish, amphibians and mammals and, for the first time, on *Sternorrhyncha* hemipterans, decapodan crustaceans, helminth parasites and lizards. It also presents new original data on many aspects of B chromosomes including their definition, new occurrences, frequency, structure, composition, origin, effects on the host genome, transmission and population dynamics.

Unique in its field, this publication is recommended reading for cytogeneticists interested in chromosome polymorphisms, for evolutionary biologists interested in selfish genetic elements, and for geneticists interested in the intragenomic conflict.