

Modern Achievements in Population, Evolutionary, and Ecological Genetics : International Symposium, Vladivostok – Vostok Marine Biological Station, September 1–10, 2015 : Program & Abstracts. – Vladivostok, 2015. – 84 p. – Engl. ISBN 978-5-7442-1563-7

HELD BY:

Far Eastern Branch of Russian Academy of Sciences, A.V. Zhirmunsky Institute of Marine Biology FEB RAS, Institute of Biology and Soil Science FEB RAS, Far Eastern Federal University, Administration of Nakhodka City District, Vladivostok Public Foundation for Development of Genetics

SPONSORS: Russian Foundation for Basic Research, Khimexpert Agency, GenoTek Company, SkyGene Company

Editors: Yuri Ph. Kartavtsev, Oleg N. Katugin

Современные достижения в популяционной, эволюционной и экологической генетике : Международный симпозиум, Владивосток – Морская биологическая станция «Восток», 1–10 сентября 2015 : Программа и тезисы докладов. – Владивосток, 2015. – 84 с. – Англ. ISBN 978-5-7442-1563-7

ОРГАНИЗАТОРЫ: Дальневосточное отделение РАН, Институт биологии моря им. А.В. Жирмунского ДВО РАН, Биолого-почвенный институт ДВО РАН, Дальневосточный федеральный университет, Администрация г. Находка, Владивостокский общественный фонд развития генетики ФИНАНСОВАЯ ПОДДЕРЖКА: Российский фонд фундаментальных исследований, ООО «Химэксперт», ООО «ГеноТек», ООО «СкайДжин»

Ответственные редакторы: Ю.Ф. Картавец, О.Н. Катугин

PERICENTROMERIC HETEROCHROMATINE IN *APODEMUS* GENERA (MAMMALIA, RODENTIA)

1 Irina V. Kartavtseva, 2Nikolay B. Rubtsov, 2Tat'ana V. Karamysheva

*1Institute of Biology and Soil Science, Far Eastern Branch of Russian Academy of Sciences, Vladivostok
690022, Russia;*

*2Novosibirsk State University, Faculty of Natural Sciences, Department of Cytology and Genetics,
Novosibirsk 630090, Russia*

The wood and field mice of *Apodemus* species (*A. agrarius*, *A. peninsulae*, *A. speciosus*, *A. argenteus*) are widespread throughout their Far East Asian distribution area. Chromosome numbers vary from 46 to 48, or from 48 to 56. Species have differentiation by number and locality of heterochromatin and nuclear organization on chromosomes. The B chromosomes in amount from 1 to 30 in *A. peninsulae* and from 1 to 2 in *A. argenteus* were described. Cross-hybridization of DNA probes generated from pericentric C-positive blocks of chromosomes of *Silvaemus* species with chromosomes of *Apodemus* species and DNA probes from pericentric C-positive blocks of chromosomes of *Apodemus* species with chromosomes of *Apodemus* and *Silvaemus* species showed diffuse fluorescent signal along whole length of chromosomes except pericentric regions. The B chromosomes of *A. peninsulae* from Siberia have pericentromeric heterochromatin of *A. peninsulae*, while B chromosome's arms contain pericentromeric heterochromatin of *Silvaemus flavicollis*.

These results indicate that level of DNA homology in pericentric chromosome regions of *Apodemus* and *Silvaemus* species decrease, while the level of divergence rises and species become less related to each other.