The Balkan Peninsula represents one of the hottest biodiversity spots in Europe. However, the invertebrate fauna of this region is still insufficiently investigated, even in respect of such well-studied organisms as Lepidoptera. Here we use a combination of chromosomal, molecular and morphological markers to rearrange the group of so-called anomalous blue butterflies of the genus *Polyommatus* and to reveal its cryptic taxonomic structure. We demonstrate that *P. aroaniensis* (Brown, 1976) has a dot-like distribution range restricted to the Peloponnese Peninsula in South Greece. *Polyommatus orphicus* Kolev, 2005 is a Balkan endemic represented by two subspecies: *P. orphicus orphicus* (Bulgaria) and *P. orphicus elenae* Coutsis & De Prins, 2005 (Northern Greece). *Polyommatus ripartii* (Freyer, 1830) is represented in the Balkans by an endemic subspecies *P. ripartii pelopi*. The traditionally recognized *P. admetus* (Esper, 1783) is shown to be a heterogeneous complex and is divided into *Polyommatus admetus* sensu stricto (the Balkans and west Turkey) and *P. yeranyani* (Dantchenko & Lukhtanov, 2005) (east Turkey, Armenia, Azerbaijan and Iran). *Polyommatus nephohiptamenos* (Brown & Coutsis, 1978) is confirmed to be a species with a dot-like distribution range in Northern Greece. From Central Greece (Tirnavos and Parnassos mountains) we describe *Polyommatus timfristos* Lukhtanov, Vishnevskaya & Shapoval, sp. n. which differs by its haploid chromosome number (n=38) from the closely related and morphologically similar *P. aroaniensis* (n=47–48) and *P. orphicus* (n=41–42).
Editors-in-Chief
Prof. Dr. Valentina G. Kuznetsova
Zoological Institute, St. Petersburg
valentina_kuznetsova@yahoo.com
Dr. Ilya A. Gavrilov-Zimin
Zoological Institute, St. Petersburg
coccids@gmail.com

Managing Editor: Dr. Lyubomir Penev
Language Editors: Robert B. Angus

Comparative Cytogenetics
International Journal of Plant & Animal Cytogenetics,
Karyosystematics, and Molecular Systematics

Subscription for 2014:
The printed version: institutional subscription - € 145.00; individual subscription - € 70.00;
subscribers from Russia - € 120.00.