PREFACE

This volume contains selected papers of the XIVth International Congress of Genetics (Moscow, August 1978) dealing with animal population, evolutionary and comparative genetics and cytogenetics. The heart of the volume is made up by reports of Symposium S 16 ('Problems in evolutionary and population genetics', excluding the reports on plant genetics) and of Session C 11 ('Animal cytogenetics and karyosystematics'). In addition, some reports of Symposium S 10 ('Genetics of isozymes'), Session C 2 ('Gene structure and gene expression in eukaryotes') and Session C 17 ('Evolutionary and population genetics of animals') are included.

A common feeling at the end of the congress was that the current very rapid development of population and comparative genetics and cytogenetics has caused many concepts formed when geneticists worked with a limited number of objects to be reconsidered. Today a scientist well served in specific, e.g. Drosophila genetics, cannot have a complete knowledge of evolutionary genetic mechanisms unless he makes himself acquainted with the tremendous variety of genetic systems and the recent discoveries in their ways of modification.

Comparative genetics, the new discipline now emerging, though grounded on the specific genetics of individually well studied objects, is becoming more than their mere sum. It uses new methods, some of which are described in the papers presented at the congress sessions mentioned above. As most of these fall within the scope of Genetica, it seemed worthwhile to publish them together in a special volume of the journal.

A number of reports come from institutions in countries that do not usually publish their results in our journal. We have given special attention to their careful presentation, linguistically as well as otherwise, for we consider it of great interest that they should become available to our regular readers. We are very grateful to all those who helped us in our efforts. A. I. Reznikova, secretary of Session C 11, and A. Ya Yakimenko collected and prepared manuscripts; L. I. Khlopkova and T. G. Kotelenets translated some articles, and E. A. Lyapunova helped in many ways. Mr M. Henderson of Junk Publishers kindly corrected the final English texts.

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