

INTERNATIONAL SYMPOSIUM ON THE  
"PECULIARITIES OF THE DERMATOGLYPHIC  
FINDINGS IN PATIENTS SUFFERING FROM  
RHEUMATIC DISEASES" HELD IN VILNIUS 1981

The Capital of the Lithuanian Socialist Republic was the venue of an International Symposium dealing with dermatoglyphic peculiarities in patients suffering from rheumatic diseases. The symposium was a fine documentation of co-operation of physicians with anthropologists, namely of rheumatologists with dermatoglyphists. The event was attended by students of the above discipline from all over the Soviet Union, from Bulgaria, Czechoslovakia, German Democratic Republic and Hungary. Most participants of the symposium were members of the project of the "Research into Dermatoglyphs in People Suffering from Rheumatic Diseases", a research programme coordinated by the Institute of Rheumatism of the Academy of Medical Sciences in Moscow.

The papers read at the symposium concentrated also on the Complex Research of Dermatoglyphs in Patients Suffering from Rheumatism, Bechterew's Disease, Lupus Erythematosus and Chronical Juvenile Arthritis. The Czechoslovak representatives presented a paper on the "Dermatoglyphs of Patients with Chronical Juvenile Arthritis and their Correlations with the Clinical Findings" (M. Stloukalová) and "Special Features of Dermatoglyphs in Patients Suffering from Bechterew's Disease" (M. Pospíšil and M. Ondrašík); both papers comprised the results of research realized by a number of Czechoslovak specialists. The panel discussion then dealt with various problems of methodology and organization of dermatoglyphic research of patients suffering from rheumatism. Representatives of all the research institutes directed by the Moscow centre then discussed various problems of co-operation. The dermatoglyphic data obtained at the individual institutes will be sent for statistical processing to the Moscow centre. The event ended with a resolution delimiting the conditions of further co-operation in the given subject.

M. Stloukalová

NEUENTDECKUNG EINES UNTERKIEFERS DES  
HOMO SP. IN ÄTHIOPIEN

Bei einer Forschungskampagne im Jahr 1982 hat J. Chavaillon im äthiopischen Melka Kunturé in der Lokalität Garba IV einen Unterkiefer-Neufund in einer 1.500 000 Jahre alte Oldovanschiebt entdeckt. Ähnliche Schicht in Gomboré hat schon in der Vergangenheit einen Humerus-Distalteil geboten mit Merkmalen, welche darauf hinweisen, daß dieses Bruchstück dem Homo angehörte. Die Robustheit des Humerus hat dann auf den Homo erectus hingewiesen (Senut 1980). Der neue Fund repräsentiert den rechten Teil des Unterkieferkörpers eines Kindes im Alter von 3-4 Jahren. Beide Milchmolaren sind an ihrer Stelle, der erste ist beträchtlich abgetragen. Im Kieferkörper ist die gut sichtbare Krone des ersten Dauermolars erhalten mit einer kurzen, erst sich bildenden Wurzel. Die Krone ist noch tief eingebettet und zeigt, daß sie noch genügend Zeit bis zu ihrem Durchbruch hätte. Ihre Okklusaloberfläche ist reich geriffelt, wie dies oft bei Molaren von Australopitheken zu sehen ist, jedoch ihre Form unterscheidet sich von der Molarform bei den Australopitheken. Das kommt deutlich zum Vorschein beim Vergleich mit dem Unterkiefer aus Taung, wo die Molaren typisch breit und kurz sind. Im Symphysenbereich ist die Alveole geöffnet nach einem mittleren Schneidezahn, der wesentlich größer war, als dies der Fall bei den Australopitheken ist. Hier auf dem Kieferbruch sieht man die Kronen der Dauerzähne I<sub>2</sub> und C gebettet im Kieferkörper. Wenngleich der Kieferkörper besonders im Molarenbereich sehr stark erscheint, ist das Planum alveolare wesentlich schwächer, als dies der Fall bei dem Kiefer aus Taung ist. Es erscheint auch offensichtlich, daß der Kiefer die Form eines geöffneten Buchstabens V und nicht U gehabt hat, was ein weiteres Merkmal ist, welches diesen gemeinsam mit der Morphologie M<sub>1</sub>, der Schneidezahngröße sowie dem kleinen Planum alveolare zu Homo reißt. Man kann vorläufig nicht näher bestimmen, ob es sich um Homo

habilis oder Homo erectus handelt. Ein Humerusfund aus derselben Lokalität mahnt zur Vorsicht. Man muß auch die Existenz von Übergangs-, archaischen sowie progressiven Merkmalen bei einem einzigen Individuum voraussetzen, welche seine taxonomische Eingliederung erschweren. Ein näheres Studium dieses wichtigen Fundes, welches von Y. Coppens durchgeführt wird, wird zweifelsohne weitere Informationen zum Begreifen der Formentwicklung von Frühvertretern der Gattung Homo bringen.

Jan Jelínek

THE 4th ALL-STATE CONGRESS OF MEDICAL  
GENETICS IN HRADEC KRÁLOVÉ 1981

The Regional Museum of Hradec Králové hosted the 4th All-state Congress of Medical genetics, attended by numerous Czechoslovak and foreign students of this scientific discipline. They dealt with topical clinical, forensic, population and biochemical genetics, prenatal diagnostic, clinical cytogenetics and mutagenesis, including questions concerning further prospects of medical genetics, a relatively new scientific discipline, whose role in the contemporary medicine is rapidly growing and in which anthropologists also have their say.

After the inauguration ceremony the scientific programme of medical genetics was described by Professor MUDr. O. Stark, DrSc., Chairman of the Czechoslovak Association of Medical Genetics, tackling also the present state and development prospects of medical genetics in Czechoslovakia. After the opening lecture the congress continued with papers and communications concerning general problems of the branch, prospects of molecular genetics in the medicine, bases and results of the genetic control of immunity mechanisms, application of genes in the prenatal development, actual legislative problems faced by genetics, prospects of training and post-gradual training in medical genetics.

The series of papers on clinical genetics started by a survey by V. Izakovič, then followed papers dealing with the individual clinico-genetical units and syndroms. The authors paid attention also to genetics in the forensic practice, psychology and psychiatry, in the genetics of solid human neoplasias and with the problem of orofacial clefts. A special group concentrated on papers dealing with genetic counselling (including several papers by foreign experts).

The introductory paper on the problem of the present state and prospects of population genetics was delivered by V. Ferák. This section was highlighted by a paper presented by J. Kučera on the analysis of teratogenesis and cancerogenesis in the Czech Socialist Republic in the recent 20 years and including also a forecast up to the year 2000. L. Kádasi in his paper concentrated on the share of genetic factors in prenatal mortality and A. Drábková presented the results of her longitudinal genetical studies of twins. The last two sections dealt with the problem of biochemical genetics and with the share of exogenous factors and mutagenes in the origin of developmental defects.

Anthropology in medical genetics is applied practically in two spheres. Firstly, the presence of anthropologists is more and more appreciated in genetic counselling, and secondly, the results of anthropological research are frequently used for the evaluation of the bodily and health condition. Most papers of this highly interesting congress were focussed on these two forms of co-operation and they brought a lot of inspiration for further anthropological research.

M. Stloukalová

EINE WICHTIGE ANTHROPOLOGISCHE  
ENTDECKUNG IM LIBYSCHEN SAHARATEIL

Eine gemeinsame libysch-arabische und italienische Expedition nach dem Acacus, einem Gebirgszug in Südwestlibyen, hat in der Nähe der Oase Ghat menschliche, dem Hirtenzeitabschnitt (Bovidianer) des Saharaneolithikums angehörende Skelettüberreste entdeckt. Der Fund zusammen mit den Felsenmalereien wird von den Findern mit 7000 bis 9000 Jahren datiert, was den bisherigen Kenntnissen nach im Vergleich mit der Situation im algerischen Tassili

ein beträchtlich hohes Datum ist. Wichtig wird die Bestimmung des Rassentypus der Überreste sein, denn die frühbovidianischen Malereien aus Tassili zeigen sowohl negroide als auch europoide Typen auf, während die spätbovidianischen Malereien bislang ausschließlich europoide aufzeigen. Man kann voraussetzen, daß die älteste bovidianische und vorbovidianische Saharakunst in beträchtlichen Maße das Werk von Negroiden war, welche in jener Zeit die Sahara besiedelten. Gerade für die Lösung von Fragen, wer die vollkommeneren Saharafelsenmalereien gemalt sowie wer das Hirtentum und die Viehzucht in der Sahara eingeführt hat, wird die Entdeckung von menschlichen Überresten sowie deren Studium ein wichtiger Schlüssel sein.

Jan Jelinek

THE INTERNATIONAL SYMPOSIUM EVOLUTION  
AND ENVIRONMENT, BRNO, 17.-22. 8. 1981

What is the role of the environment in evolution? Are neo-Darwinists right to see it only as the selector, moulding adaptations out of small, randomly occurring variations, or is it involved in the origin of the variations themselves? And if the latter, how does it act?

These were some of the questions which were discussed at the recent Brno symposium on Evolution and the Environment. The tone was set by Novak (Prague) in his opening address, in which he maintained that it is impossible to be satisfied with the present state of evolutionary theory. In particular, he urged that what he called the 'dogma of the non-heritability of acquired characters' is not to be accepted uncritically. This may sound heretical, but, as he pointed out, there is really very little direct evidence one way or the other. And as the meeting progressed it became clear that nearly all of those attending also took the view that the relation between the environment and evolution is much subtle and complex than neo-Darwinists suppose.

A recurring theme was that between genome and phenotype there is a long chain of interactions and that this provides many openings for influence from the outside world. As Wolsky (New York) reminded the meeting, even the beginning of the chain, the gene itself, is no longer the bead-like conceptual entity that it was in the 1930's. It is now a real and dynamic thing, interacting with other genes and with the environment, and consequently susceptible to influence from both. One form that this influence might take was suggested by Ruvinskij (Novosibirsk), whose studies on foxes and mice have led him to the hypothesis that 'dormant' genes may be activated by appropriate environmental stimuli.

Hašek (Prague) described his group's attempts to reproduce the findings of Gorczynski & Steele (e.g., *Nature* 289: 678, 1981) on the inheritance of acquired immunological tolerance. So far they have not succeeded, but they are not themselves convinced that their work constitutes a refutation and are continuing their experiments. As Hašek pointed out, if Steele's suggested mechanism for the effect is correct then everything may depend on whether or not the necessary endogenous virus is present in the particular strain of animals that is being used.

The discussion on epigenetics was introduced by Løvtrup (Umeå, Sweden), who strongly opposed the commonly held view that we do not know enough about the subject to use it in evolutionary theory. He argued that our present knowledge is sufficient to establish that large innovations cannot have occurred through the accumulation of small

changes, but must have arisen in large single steps, through macromutations.

Several speakers discussed how the environment influences development. Vasilyeva (Novosibirsk) reported that properly timed temperature changes have been found to affect the formation of the radial wing vein in *Drosophila* and that the resulting variation was inherited for at least another 35 generations in the absence of the stimulus. The importance of the environment in neoteny was outlined by Přívratsky (Prague) with special reference to hominization. Ho (Open University, UK) described experiments designed to extend Waddington's famous work on genetic assimilation in *Drosophila*. Her results suggest that cytoplasmic inheritance may be implicated in canalization.

Of course the environment is not an independent external force directing evolution. It too evolves. In fact, at the present time parts of it are evolving uncomfortably rapidly, on account of human intervention. So the study of evolution has an applied aspect, conservation, and one of the sections of the symposium was devoted to this topic. The discussions were lively and fruitful, and among the main points on which there was agreement was that conservation must be an integral part of overall planning, not simply the setting up of isolated nature reserves and national parks. There was also general concern that tentative scientific theories should not be used as the bases for major management decisions.

A concrete example of what the members of the section had in mind was provided by the critical account by Sternberg (Bekeley) of 'refugial theory'. According to this theory, certain tracts of the Amazon forest have, during past periods of decreased rainfall, remained as forest areas and so served to preserve genetic stocks. If it is correct, and so served to preserve genetic stocks, then at least so far as preserving gene pools is concerned, it can be argued that only the refuges need be kept in their natural state. If it is wrong, or if the refuges have not been accurately identified, then even on this limited criterion such a policy would be disastrous.

The references to Marxism in the recent controversy about evolution in *Nature* and other journals might lead one to expect that the approach to the subject is not the same in Eastern Europe as in the West. On the evidence of this meeting there are some differences, although there was nothing to support the idea that those who have been educated in socialist countries are predisposed to favour explanations in terms of sudden (i.e. revolutionary) changes.

There is, on the other hand, more concern with structure and organization, which contrasts with the neo-Darwinist emphasis on function. Populations genetics appears to play a considerably reduced role; it was striking how seldom the word 'allele' was mentioned. There is also far more interest in theory, and philosophy is seen as having much more immediate relevance to the study of evolution than it does in countries with a more empiricist tradition. It would be wrong, however, to exaggerate these differences; for example, it is interesting that the most ambitious attempt to provide a broad theoretical framework for biology and the social sciences was the Grand Unified Theory of Balda (Southern Methodist University, Texas).

No one at Brno appeared to doubt that natural selection is at least one of the mechanisms of evolution; indeed there were some interesting papers on the topic. But the symposium demonstrated how rich the study of evolution can be when it is not totally dominated by the attempt to interpret all phenomena in terms of the natural selection of random mutations. It also showed that there is a great deal of work going on in Eastern Europe which is not receiving in the West the attention it deserves.

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