

Notes

THE FIRST CZECHOSLOVAK EXPEDITION TO HINDUKUSH AND PARASITOLOGICAL RESEARCH

The first Czechoslovak expedition to Hindukush took place in the period between June and September 1965. A 13-member party included a scientific worker of the Institute of Parasitology, Czechoslovak Academy of Sciences, M. Daniel. His participation was secured due to a 5-year cooperation between the Czechoslovak Academy of Sciences and the Czechoslovak Union of Physical Training in the preparations of the expedition.

The goal of the expedition were the East Hindukusch mountains in the north-east part of Afghanistan (Wakhan region). The basic zoological-parasitological research with special regard to small mammals, the possible reservoirs of natural foci diseases and to arthropods parasitic on them was focussed in the same area. The collecting of botanical material which could help characterize individual biotopes was planned as well.

The expedition arrived in Kabul on June 20 but negotiations on the permission to enter the Wakhan region lasted until July 9. In this period the collecting of small mammals was carried out in the vicinity of Kabul and excursions were organized to the Shakar Darrah Valley (Paghman mountains, 30 km northeast of Kabul), to Bamiyan and to the Band-i-Amir lakes (300 km northwest of Kabul). A fine material of pikas (*Ochotona*) was obtained primarily in the vicinity of the Band-i-Amir lakes and in the upland between the lakes and Bamiyan.

On July 9 the expedition left Kabul by truck and covered a distance of nearly one thousand

kilometers passing through Charikar, Salang, Kunduz, Khanabad, Taliq-an, Gumar, Faisabad, Iskashim and Khandut to the village Ishmurkh (July 17). From there the expedition proceeded on horseback and with bearers to a valley of the same name, where a base was set up at the front of glacier at the altitude of 3800 metres (July 21).

In the Ishmurkh valley, the main working territory of the expedition, the collecting of animals was done in the manner which made it possible to study the elevation distribution of hosts and their parasites. The lowest localities where the collecting was carried out were at the altitude of 2750 metres (the village Ishmurkh), the highest — at the altitude of 4500 metres, the elevation difference being 700 metres above the front of glacier. More material was collected during a trip organized for this purpose to the Chap Darrah Valley (3700 m), which lies farther west.

Altogether the expedition spent 42 days in the mountains. However, during a quarter of this period the work was perpetually hindered by bad weather (snowfall). The research yielded 300 hosts captured and examined: 200 specimens of insectivores, rodents (mice and voles), pikas and marmots, 100 specimens of bats (collected on the return journey in Kunduz). The number of parasitic arthropods collected totalled several thousands of ticks, chiggers, gamasid and other parasitic mites, fleas, lice, bed-bugs and parasitic Diptera such as warble flies (*Hypodermatidae*), Pupipara, flies and horse flies (*Tabanidae*).

Material was also obtained for later helminthological investigation and blood smears were taken from some animals captured. Botanical material was also collected in the area investigated.

The participation of a parasitologist in the expedition to Hindukush has continued the tradition and experience acquired by the members of the Institute of Parasitology, Czechoslovak Academy of Sciences, during expeditions organized to the mountains of the Balkan Peninsula (Albania, Bulgaria, Yugoslavia).

The material and knowledge gained can be considered an asset, as until recently no similar research has been carried out in the East Hindukush where the zoogeographical conditions are rather complicated. The material is now being studied by a number of experts from respective institutes of the Czechoslovak Academy of Sciences and the National Museum. A series of articles dealing with parasitological problems will appear subsequently in this journal.

Milan Daniel

INTERNATIONAL SYMPOSIUM ON THE SPECIFICITY OF HELMINTHS, TATRANSKÁ LOMNICE, OCTOBER 12—15, 1965

The Helminthological Institute of the Slovak Academy of Sciences at Košice arranged, in co-operation with the Institute of Parasitology of the Czechoslovak Academy of Sciences and the Parasitological Society, Praha, a Symposium on the Specificity of Helminths. The Symposium was held from October 12—15, 1965 at Tatranská Lomnice, Slovakia.

The Symposium was attended by 231 participants, 118 from foreign countries and 113 from Czechoslovakia. The representation from abroad was as follows: Australia (1), Austria (3), Bulgaria (4), German Democratic Republic (15), Great Britain (6), Hungary (9), Poland (46), Portugal (2), Roumania (1), Senegal (1), Sweden (1), Switzerland (1), United Arab Republic (1), U.S.A. (1), U.S.S.R. (10), Venezuela (1), Yugoslavia (15).

The papers were presented on 6 half-days. The mornings were reserved for contributions to the specificity of helminths, the afternoon papers were dealing with more general problems of veterinary and medical helminthology. The Symposium was concluded with a visit to the Helminthological Institute of the Slovak Academy of Sciences at Košice.

The languages at the Symposium were Russian, English and German and all presentations were simultaneously translated. The total number of papers presented was 75, of which 42 papers were concerned with problems of the specificity of helminths (23 from abroad, 19

from Czechoslovakia), and 33 papers were dealing with a wider range of helminthological problems (20 from abroad, 13 from Czechoslovakia).

The principal assignment of the Symposium was the confrontation of various opinions on the meaning of helminth specificity. In the last 100 years this term has been differently conceived and these different conceptions of specificity influenced the methodical approach to the solution of the fundamental theoretical problems, and with it the practical application.

The contributions concerned with helminth specificity from various aspects drew attention to the relations of parasites to the direct or indirect environment and emphasized the necessity of a dynamic approach to the conception of the phenomenon specificity, which comprises a complex of characteristics of the organisms, responsible for parasitism.

In the second part of the Symposium the papers concerned with a wider range of helminthological problems were dealing with the application of specificity to physiology, biochemistry, the cultivation of helminths, histology, histochemistry, morphology and the systematics of helminths. In veterinary helminthology some revealing papers were read on trichinellosis, on helminths of domestic animals and on de-helminthisation. Medical helminthology comprised some contributions to intestinal helminthoses, tropical helminthoses, to the immunology and

the diagnostics of helminthoses and to the prevention and treatment of helminthoses.

The Symposium was held in a friendly atmosphere which led to closer personal contacts among helminthologists from all Continents.

ensuring a friendly international co-operation of helminthologists in the future.

All papers presented at this Symposium will be published in a special edition of the international journal *Helminthologia*.

M. B.

THE SECOND INTERNATIONAL CONFERENCE ON PROTOZOOLOGY, LONDON, JULY 29 - AUGUST 5, 1965

The Second International Conference on Protozoology was held at the Imperial College of Science and Technology, London, from July 29th—August 5th, 1965. It continued in the tradition of international cooperation of all protozoologists created by the First International Conference of Protozoology in Prague 1961.

The Conference, held under the auspices of H. R. H. The Duke of Edinburgh, was presided by the outstanding English parasitologist professor P. C. C. Garnham. Honorary President was the Nestor of the French protozoologists Professor E. Fauré-Fremiet. The English National Organizing Committee aided by an International Advisory Committee organized all the activities of the Conference.

Most of the world's prominent protozoologists were assembled at the Conference, comprising about 450 scientists from 34 countries. This number alone, compared with the number of participants of the Prague Conference (about 200), gives evidence of the increasing interest in protozoology. The U.K. was represented by 155 scientists, the U.S.A. by 112, France by 34, the U.S.S.R. and G.F.R. by 19 each, Switzerland 15, Czechoslovakia 11, Poland 10, Denmark 3, Israel, Japan, Holland (5 each), Belgium, Spain, Sweden, Hungary (4 each), India and Italy (3 each), Kenya and Nigeria (2 each). There was one representative each from the following countries: Egypt, Argentina, Brazil, Bulgaria, Ceylon, Ghana, Iran, Yugoslavia, Canada, Lebanon, Madagascar, San Salvador, South Vietnam, Tanzania, Thailand, Tshad.

The Conference took place on two main sites. The plenary morning sessions dealing with introductory, final and selected papers and lectures about morphogenesis and life cycles, types

and preservation of strains, genetics, biochemistry and physiology, cytology and ultrastructure, locomotion and ecology, were held at the Royal Geographical Society Hall (13 sessions). In the afternoons, there were three parallel sections at the Imperial College Physics Building concerned with special problems such as *Piroplasma*, Marine Protozoa, Gregarines and Coccidia, host-parasite relationships. Protozoa of invertebrates, ciliate morphology, Haematozoa, toxoplasms, rumen ciliates etc.

Almost every evening, protozoological films were shown on parasitic and free-living protozoa (Dr Balamuth, Cleveland, Culbertson, Curds, Dragesco, Grell, Guttes, Jahn, Kehr, Lee, Uhlig, Wichterman and others). The working programme of the Conference comprised a total of 370 lectures concerned with all aspects of protozoology. Besides the official programme three discussions were organised on: The problems of classification of Protozoa; Taxonomy of *Toxoplasma* and *Coccidia* and, Serology of *Toxoplasma*. The Conference languages were English, French and Russian with simultaneous translations into these languages.

A volume of abstracts of all papers, presented at the Conference and printed as a special issue of *Excerpta Medica*, was available to all members on registration. The French group of protozoologists presented to the Conference the new journal "Protistologica", edited by the Centre National de Recherche Scientifique.

The Conference was excellently organized.

There were two receptions in honour of the delegates; one given by the Minister of State, Department of Education and Science, Lord Bowden, and the other by the Vice-Chancellor of the University of London.

The garden-party at Professor Garnham's delightful countryhouse provided a most enjoyable and restful break after the busy days of the Conference. The ladies committee had a variety of entertainments in store for the wives and children of the delegates (a river trip on the Thames, sightseeing tours of London and surrounding, fashion shows etc.).

During and after the Conference visits to various scientific laboratories were arranged for the delegates.

The proposition of the head of the Soviet delegation, Prof. Polyansky, for the 3rd Conference to be held in Leningrad in 1969 was accepted by all delegates at the final session.

The Conference offered a good opportunity to discuss questions concerning the organisation of protozoology. At a luncheon given by the Society of Protozoologists on the occasion of its annual meeting, the representatives of all nations were invited to discuss the structure of the interna-

tional organization body of protozoologists. In the group of French-speaking protozoologists which also held their annual meeting at the Conference, prof. De Puytorac was particularly active in this respect.

From the scientific point of view the Conference was a great success. It clearly demonstrated the rapid development of modern protozoology, especially in the field of electron microscopy, cytology, biochemistry, physiology and biophysics.

The London Conference sets another important milestone in the history of protozoology. The well chosen scientific programme, the excellent organisation and the friendly atmosphere, contributed to the final great success. We all appreciate the effort and perfection of our London hosts, which made the Conference an unforgettable event.

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