

## THE EDUCATIONAL ASPECT

### The Jerusalem- Biblical- Zoological Garden, Israel

The Biblical Zoo was established with the intention of repairing the scarcity of visual material available for the study of nature. It was at first a collection of animals existing in Israel today. As the number of exhibits increased, so did the number of visitors from Jerusalem and other parts of the country. The ratio of organized class visits also grew in proportion. To assist the pupils, the Zoo posted explanatory signboards but being of cheap material for lack of funds, they were soon damaged. There were no zoo-keepers available with sufficient knowledge to provide the pupils with proper guidance, and teachers themselves were worried that they might not be able to answer their pupils' questions. For these reasons the number of class visits began to decline.

An attempt was made to overcome these obstacles by initiating meetings with the teachers, but lacking official institutional backing, participants were few. A radical change took place three years ago when the Ministry of Education and Culture appointed someone to be responsible for educational activities at the zoo. A short time afterwards the head of the Pedagogic Secretariat held a meeting to appoint a committee of Zoo representatives and science teachers who would draw up a programme of nature studies requiring a visit to the Zoo at least once a year. The Jerusalem, Tel Aviv and Haifa zoos were to be directly involved in the preparation of such a program. Mr. G. Bergson, district head of the Ministry of Education and Culture, appointed a group of Jerusalem educators under the auspices of which guidance material was prepared for two age-groups - 10 to 12 year olds and 14 to 15 year olds. This material is now made available to teachers prior to their class visits to the Zoo and includes an introductory lecture by the teacher, questionnaires based on a specific topic, an independent walk through the Zoo and a concluding discussion to be continued in the classroom. A visit of this type may also provide a basis for homework and additional classwork. As a rule, teachers who prefer organised tours may arrange for them.

The Zoo's present day educational activities are a direct continuation of the nature workshops for youth organized by the "Agudat Eig" nature sciences society from 1937 to 1939. These workshops, headed by young scientists and students of the Hebrew University, have been held from time to time ever since the establishment of the Zoo.. One of the first counsellors of the Agudat Eig workshops was Professor Ephraim Katzir, the fourth President of Israel. Topics dealt with have included comparative and functional morphology of animals, animal behaviour and environmental adjustment, social relationships within families, poisonous animals and the effects of their poisons, and animal feeding.

The Biblical Zoo is becoming increasingly important as a place for independent study and research. Studies carried out by students have dealt with the development of the egg of wingless birds (ostrich and emu), the biology and effects of the poison of black widow spiders, comparative animal morphology, the biology and poison of scorpions, the study of animal noises and the relationships between female baboons and their offspring.

A unique experiment carried out at the Zoo involved the rehabilitation of high-school dropouts, who had turned to delinquency, through a special one-year course for Zoo attendants. The project was initiated by Mr. Y. Maiden and supported by Mr. Yigal Allon, then Minister of Education and Culture. Participants in the course were selected through the assistance of Mr. N. Mizrahi, of the Youth Employment Bureau. The course began with sixteen boys and girls who were given courses in basic chemistry, mathematics, geography and animal development. Mathematics studies involved calculation of the amounts of food given to animals and their nutritional value; chemistry took the form of the physiology of digestion; physics was taught by examination of the flight of birds and insects; geography concentrated on the distribution of animals. Mrs. Devora Ben-Shaul and Mr. Pinhas Amitai, the course leaders, did their best to interest the youngsters and create an atmosphere of discipline and study. By the time the course was over, potential juvenile delinquents had been transformed into useful members of society who were later integrated into University and Government laboratories. Four of the participants even continued to study independently and sat for matriculation examinations.

The holding of public exhibitions has been a tradition ever since they were begun by "Agudat Eig" long before the actual establishment of the Zoo. The first exhibition was set up in 1937 in the basement of a building near the old Knesset on King George Avenue and was devoted to snakes. This was the first attempt to impart an understanding of nature to members of the "old Yishav" (pre-World War 1) in Jerusalem. A few people even brought bags of earth which they wanted the guides to feed the snakes in keeping with the passage in the Bible "and earth shall ye eat". Another exhibit focused on butterflies and other insects.

The Agricultural Settlement Department of the Jewish Agency financed two travelling exhibits dealing with rodents and weeds assembled by teachers of zoology and botany in Tel Aviv and at the Hebrew University. One exhibit was brought to 64 different places in 1938 and the second to 132 in 1939. Heading this project were Mr. Yerahmiel Naftali and Dr. E. Gordin, both to become senior officials at the Israel Ministry of Agriculture later on. Despite the difficulties, two other displays were set up, one of parasitic worms and the other of agricultural pests. Both were housed in a shack which was the only existing building at the Shmuel Hanavi Street zoo. When the Vivarium was erected on the present Zoo site, exhibits became more complex; they were set up in such a way as to appeal to the public on two levels large explanatory charts with clear illustrations for the majority of visitors and more detailed information printed for teachers, nature lovers and outstanding students. These exhibits are generally opened around holiday time so as to be available to the largest number of visitors. Topics have included snakes, the underwater life of the Red Sea, locusts, harmful insects, the "Ten Plagues" of Egypt and so on.

Special guided tours of the Zoo at sunrise, sunset or at night are available, and there are tours designed for groups of blind people, the elderly, and children from the Alyn Crippled Children's Home. During the summer vacation, nature films were lent by the American, British and Dutch Consulates. This project had to be discontinued, however, because the films attracted many more people than could be accommodated in the small space of the Vivarium.

At present a complex of classrooms is being constructed at the Zoo in memory of Uri Maimon. It was he who had been responsible for making the necessary contacts between the Jerusalem Zoo and Ministry of Education and Culture for the implementation of educational activities. These classrooms will be used for lectures, film screenings and special-interest workshops at the Zoo. For the past two years the Zoo has become a centre for university lectures and demonstrations in such fields as comparative animal morphology and the anatomy of vertebrates. Students of psychology and animal behaviour often come to carry out observation on which to base their theses.

An important part in the education of young nature lovers is played by the organized summer camps at the Zoo supported by the Jerusalem Municipality. Participants in these camps hear lectures on zoological topics, build nature corners, learn to care for the animals and report on their findings in papers. At the end of the summer they put out a newspaper summarizing their activities.

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