by dosage of Aotus with various essential amino acids that were known to be of value in treating certain forms of fatty liver in experimental animals. Methionine was the first such amino acid to be considered.

Two splenectomized Aotus trivirgatus were inoculated intravenously with P. falciparum (Vietnam, Smith strain) sporozoites from Anopheles stephensi mosquitoes previously fed on Aotus donors. 50–70 infected salivary glands were dissected in chilled Mosquito Culture Medium (Grand Island Biological Co., Grand Island, N.Y.), triturated and injected into the femoral vein in 1 ml. of solution. One Aotus was treated with methionine and the other served as a control. 0.2 g. of dl-methionine ("Pedameth", Durst Drug Co., Maryland Hghts., Mo.) was administered orally 4 days prior to the sporozoite inoculation and 5 times weekly for the following 30 days. The methionine-treated animal exhibited a patent P. falciparum infection 18 days after sporozoite passage while the control Aotus was negative over a 56 day observation period. Immature and mature falciparum gametocytes appeared 11 and 20 days, respectively, after patency in the treated Aotus, thus confirming the identity of the transmission.

This transmission is of interest as the prepatent period of the Smith strain was 18 days as contrasted to the 36 day period observed by Collins and Contacos (1972) with the Cambodian 1 strain in this host. We believe that the present circumstances of transmission to a methionine-treated animal indicate the metabolic state of the liver may be an important factor in sustaining complete EE development of certain P. falciparum strains.

In conducting the research described in this report, the investigators adhered to the "Guide for Laboratory Animal Facilities and Care", as promulgated by the Committee on the Guide for Laboratory Animal Facilities and Care of the Institute of Laboratory Animal Resources, National Academy of Sciences—National Research Council. We thank D. F. Clyde for providing the parasite strain and S. J. Anderson for veterinary assistance. This is contribution number 1064 from the Army Research Program on Malaria.

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REFERENCES

MICROFILARIAE FROM THE BLACK HEADED SHRIKE

Sir,—Microfilaraemia is observed in the peripheral blood, bone marrow and cerebellum of the black-headed shrike, Lanius schach collurio. The prevalence of occurrence is 66% amongst 24 birds examined. The number of parasites recovered from the peripheral circulation of the neck region is more than that from the wings of the birds exhibiting parasitaemia. Microfilariae are stained with Leishman and also methanol-fixed Giemsa's stains. It is observed that 2 types of microfilariae are present in all the preparations: sheathed (S) and unsheathed (US) forms. The tails of some of the unsheathed microfilariae are relatively longer than their counterparts. The population density of the unsheathed microfilariae per c.mm. of blood is more than the sheathed type. The basic features of all the worms prove them to be conspecific. The following are the standard length, breadth, and the relative positions of fixed points expressed in mm, measured from the cephalic extremity: length 1·20–1·66 (S), 1·29–1·93 (US); breadth 0·032–0·08 (S), 0·04–0·06 (US); cephalic space 0·032–0·044 (US); nerve ring 0·17–0·27 (S), 0·24–0·32 (US); excretory pore 0·32–0·39 (S), 0·40–0·64 (US); anterior border of inner body 0·48–0·64 (S), 0·76–0·84 (US); posterior border of inner body 0·80–0·96 (S), 1·05–1·39 (US); first rectal cell 0·96–1·28 (S), 1·12–1·16 (US); anal pore 1·06–1·49 (S), 1·20–1·76 (US).
In the unsheathed form the cephalic space is distinct while in the sheathed ones this is not recognizable. The nerve ring and the inner body are prominent in both types. Somatic nuclei are numerous and are present throughout the entire length of the microfilariae except the cephalic space when present.

Records on the occurrence of microfilariae in avian hosts are available (Sambon, 1907; Haaland, 1928; Brinkmann, 1950; Gibson, 1968; Anderson and Prestwood, 1969). It is recorded by Anderson et al. (loc. cit.) that, microfilariae in the uteri of Singfilaria hayesi Anderson and Prestwood, 1969, are provided with well developed sheaths, while those on slides, stained with Giemsa's stain, apparently lack sheaths.

Further studies on this aspect and also on the adult filarids of this avian host are in progress and will be published later.

We are grateful to Dr. B. Biswas, Zoological Survey of India, Calcutta, for identifying the birds used in this study. The project is carried out during the tenure of National Associateship, University Grants Commission, India, sanctioned to one of us (G.M.).

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REFERENCES


EXPERIMENTAL INFECTION OF T. EVANSI IN THE CAT

Sir,—Trypanosoma evansi Steel, causing Surra disease in cattle, may also infect other animals, either naturally or experimentally. Hoare (1956) in his "revision of T. evansi" gave some information about infection of T. evansi in dogs. Our earlier report in your Transactions (Choudhury and Misra, 1972) showed that T. evansi may infect tigers under natural conditions at the zoo and wild mongoose experimentally. Further laboratory experiments showed that cats (Felis sp.) are susceptible to T. evansi infection. A strain of T. evansi is being maintained here in guinea-pigs and albino rats. Clean cats were inoculated with T. evansi intraperitoneally. In cats the parasites appear in the circulation 14-15 days after inoculation. Young cats of 3 to 4 months may succumb to the first peak of infection. Cats show some symptoms when T. evansi appears in the circulation. The peak of infection is regular appearing every 14-15 days and each peak lasts for 4 days. During the peak of infection the body temperature rises 2 to 3 degrees centigrade above normal. Victims show loss of appetite and become drowsy. In every peak facial inflammation is a notable feature. T. evansi inoculated in the cat shows polymorphism from the second peak of infection. All the 3 forms undergo division in the peripheral blood. It is interesting that these polymorphic forms are reverted back and become monomorphic when they are transferred to the guinea-pig again. This proves that the polymorphism of T. evansi is inconstant.