

*Hepatocystis* in only 2 *Rhinolophus*, others may also have been doubly infected but with infections too low for us to detect. Gametocytes of *Polychromophilus* were seen throughout the year in *Miniopterus* and *Rhinolophus* which are permanently infested by the nycteribiids *Penicillidia fulvida* Bigot 1885 and *Nycteribia schmidlii scotti* Falcoz 1923. These bats are also fed upon by other blood-sucking arthropods. Numerous dissections of the cavernicolous *Anopheles caroni* Adam 1961 and *A. hamoni* Adam 1962 have only revealed sporogonic stages of *Plasmodium atheruri* and *P. voltaicum*. No Haemosporidan infections were detected in *Phlebotomus gigas* Parrot and Schwarz 1964, *P. wirthi* Parrot and Wenson 1939.

1. One seemed to be an "acute" form. It developed in the parenchymal tissues of liver and lung in cells with hypertrophied nuclei lying eccentrically within the schizont. In the liver of a *Rhinolophus*, the smallest form seen measured  $21 \times 17 \mu\text{m}$ . and lay in an hepatocyte. As they became older the outline of the hepatic schizonts became lobulate and the membrane filled with a colloidal substance. The regularly spaced nuclei of the parasites were rather large in the young schizonts but became small and round as they became older. The cytoplasm had a spongy appearance due to numerous small vacuoles. The largest form seen measured  $123 \times 92 \mu\text{m}$ . and was not quite mature. In the lungs we have seen only large schizonts which seemed to have a synchronous growth. In one *Miniopterus* they measured  $70\text{--}100 \mu\text{m}$ . in diameter. Their outline was typically lobed, sometimes indented; they were filled with an eosinophilic substance with the borders clearly defined and very similar to that seen in some schizonts of *Hepatocystis perronae* Landau and Adam, 1972. The nuclei were small, relatively few in number and irregularly distributed, with areas free from nucleoli. The cytoplasm stained palely. In a second *Miniopterus*, about a dozen mature or almost mature schizonts were found in sections of the lungs. These were mostly elongate and the largest measured  $93 \times 50 \mu\text{m}$ . They were surrounded by a membrane which was thinner and stained less strongly than that of the immature forms. The numerous, tightly packed merozoites were small and round. A cellular reaction by the host was only noted once and this was a moderate reaction around one schizont in the liver.

2. The other type of schizont which lay in the blood vessels of the liver and lungs, are thought to be "chronic" forms. Immature stages were found in the liver of one *Rhinolophus*, and mature forms in the lungs of a second. The immature schizonts lay free in the lumen of the vessels. The actual schizonts measured from  $9.0 \times 7.5 \mu\text{m}$ . to  $20.0 \times 11.0 \mu\text{m}$ . and contained 35 to 85 nuclei. They lay within the host-cell which was itself surrounded by a ring of thick ( $4.5 \mu\text{m}$ .) strongly staining colloid. The nuclei of the host cells were between the parasite and the colloid. 2 mature forms were found which measured  $27 \times 17 \mu\text{m}$ . and  $31 \times 18 \mu\text{m}$ ., and contained 45 and 63 merozoites respectively. They were in vacuoles surrounded by very thick ( $8 \mu\text{m}$ .) colloidal envelopes which also contained the nuclei of the host-cells. The merozoites were elongate, curved and large ( $11 \mu\text{m}$ . when cut